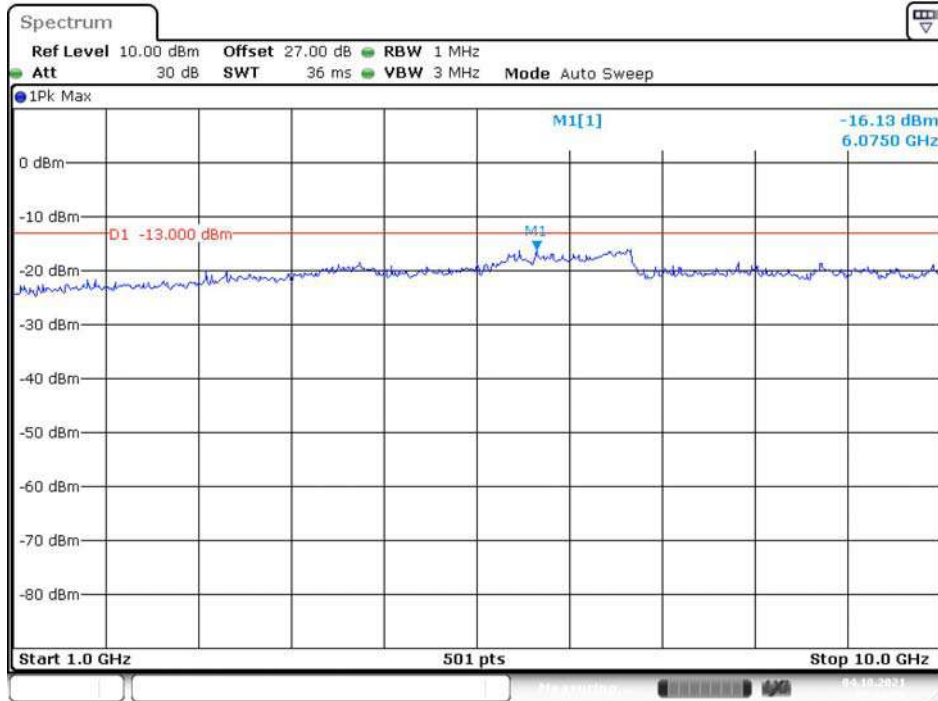
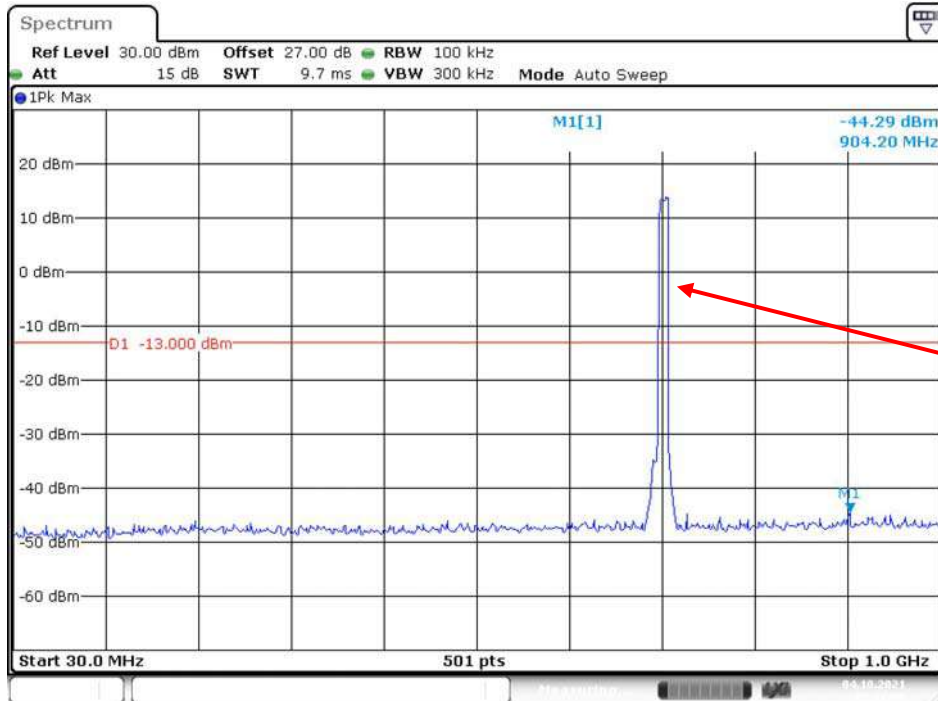


### 1 GHz – 10 GHz (QPSK, 5.0MHz, Middle Channel)



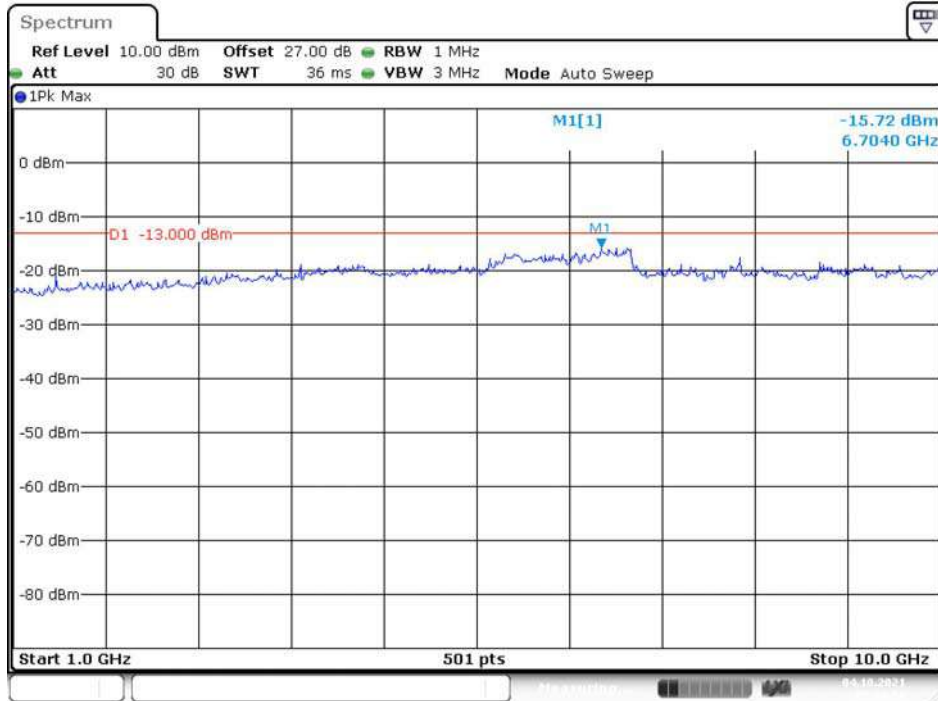
Date: 4.OCT.2021 13:34:31

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, Middle Channel)



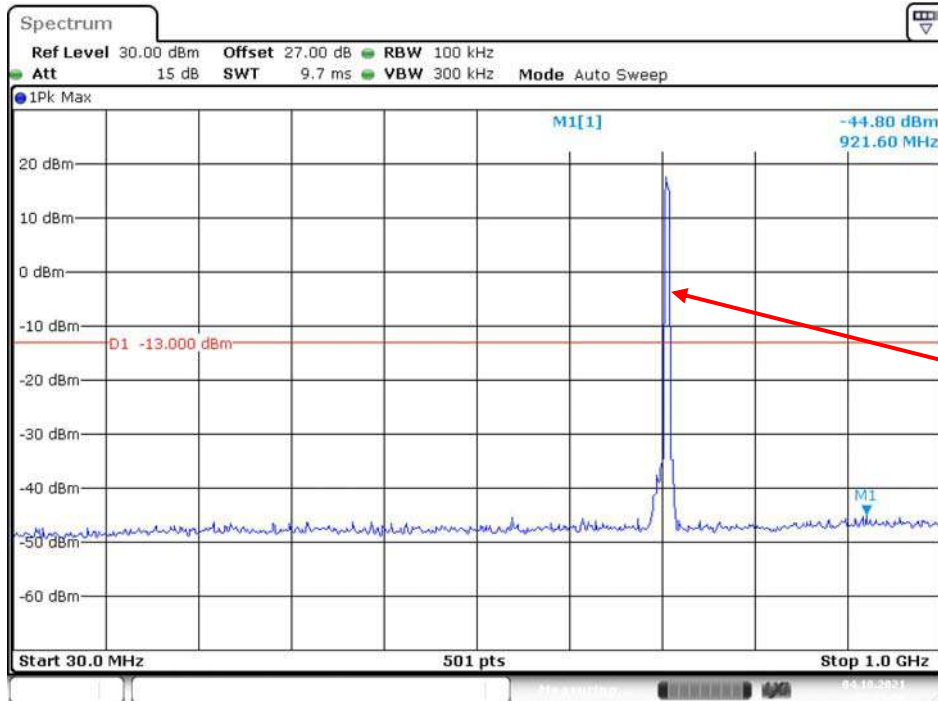
Date: 4.OCT.2021 13:37:50

### 1 GHz – 10 GHz (QPSK, 10.0 MHz, Middle Channel)



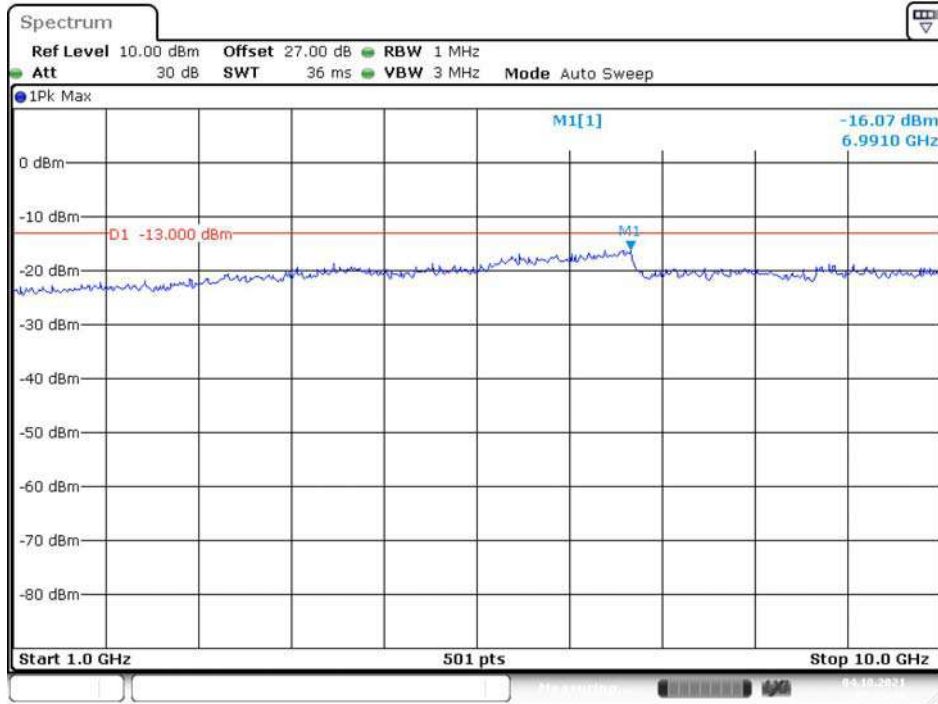
Date: 4.OCT.2021 13:38:15

### 30 MHz – 1 GHz (QPSK, 5.0 MHz, High Channel)



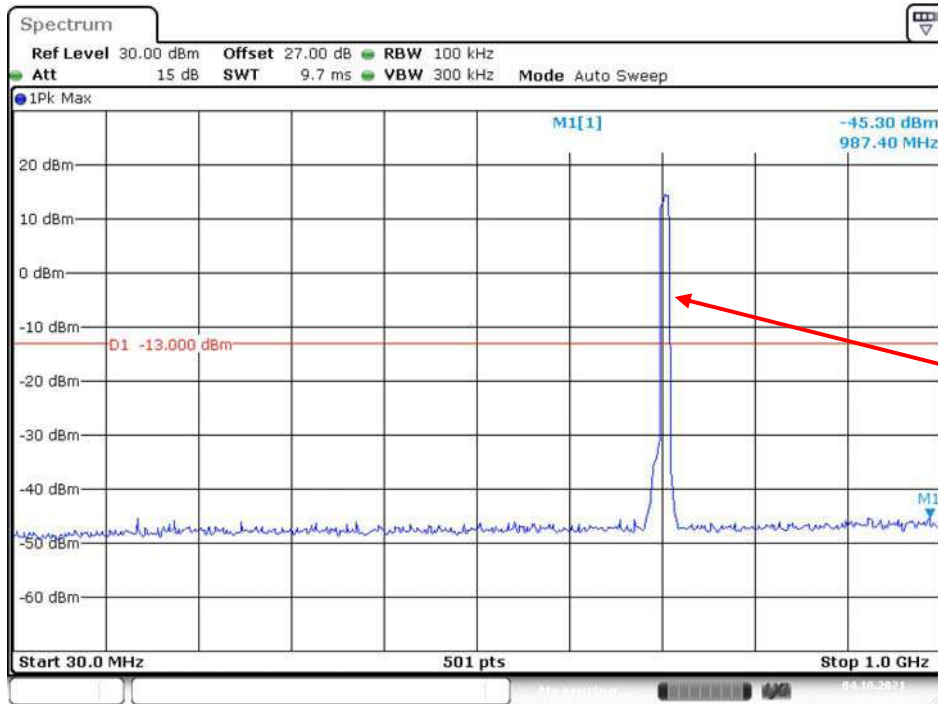
Date: 4.OCT.2021 13:35:00

### 1 GHz – 10 GHz (QPSK, 5.0MHz, High Channel)



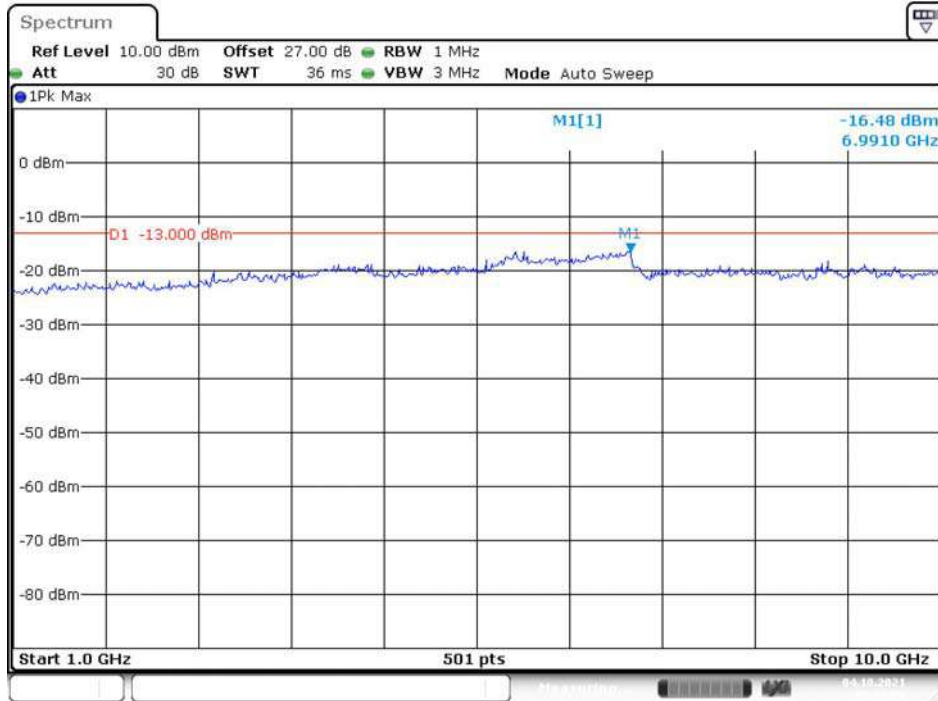
Date: 4.OCT.2021 13:35:41

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, High Channel)



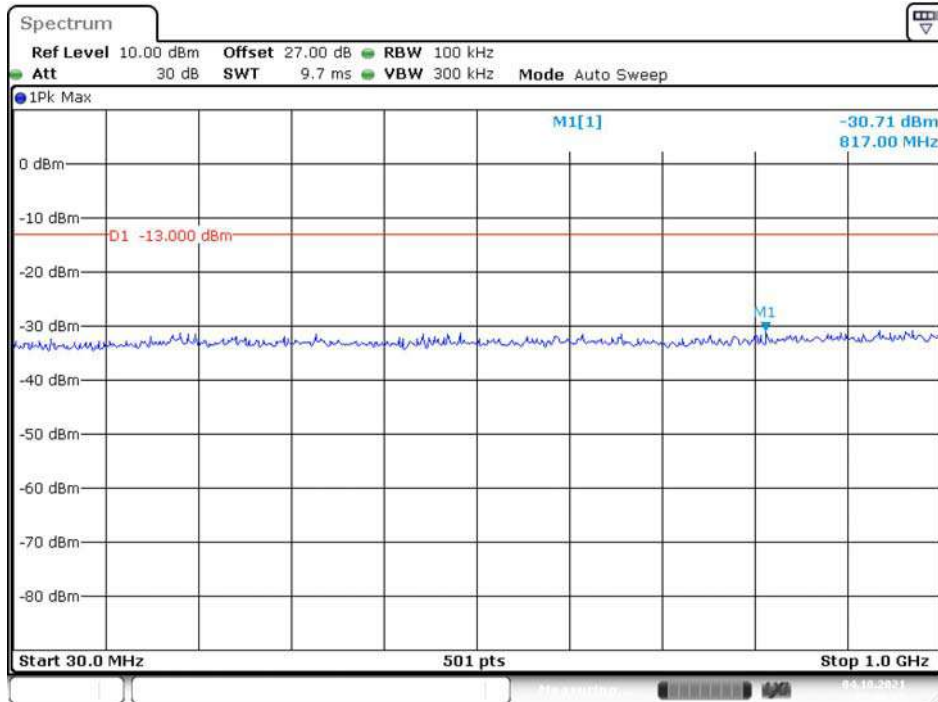
Date: 4.OCT.2021 13:38:59

### 1 GHz – 10 GHz (QPSK, 10.0 MHz, High Channel)



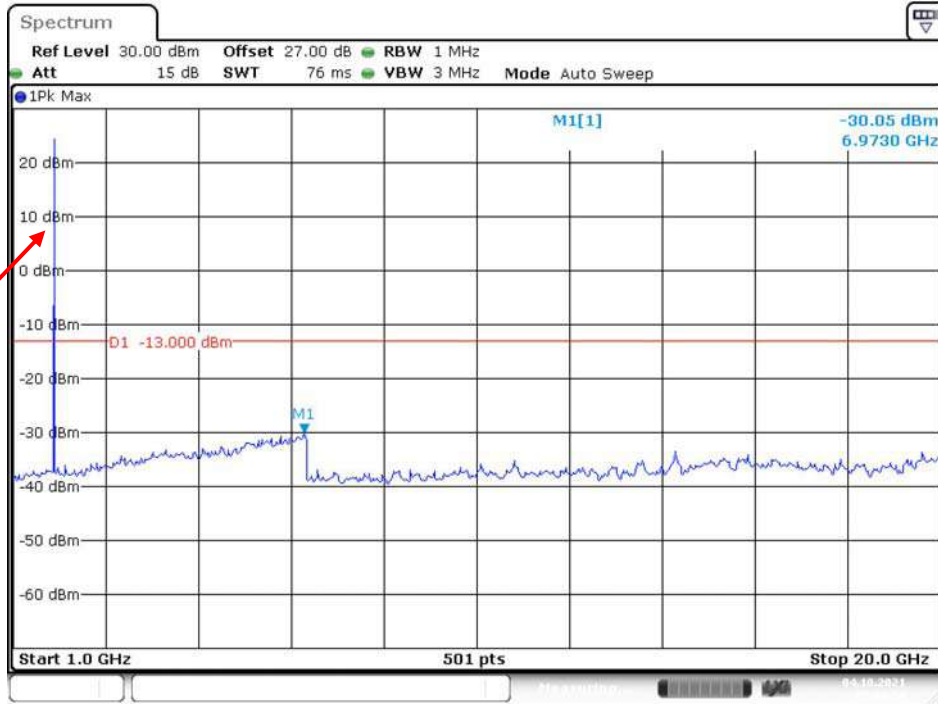
Date: 4.OCT.2021 13:39:31

### LTE Band 25: 30 MHz – 1 GHz (1.4 MHz, QPSK, Low Channel)



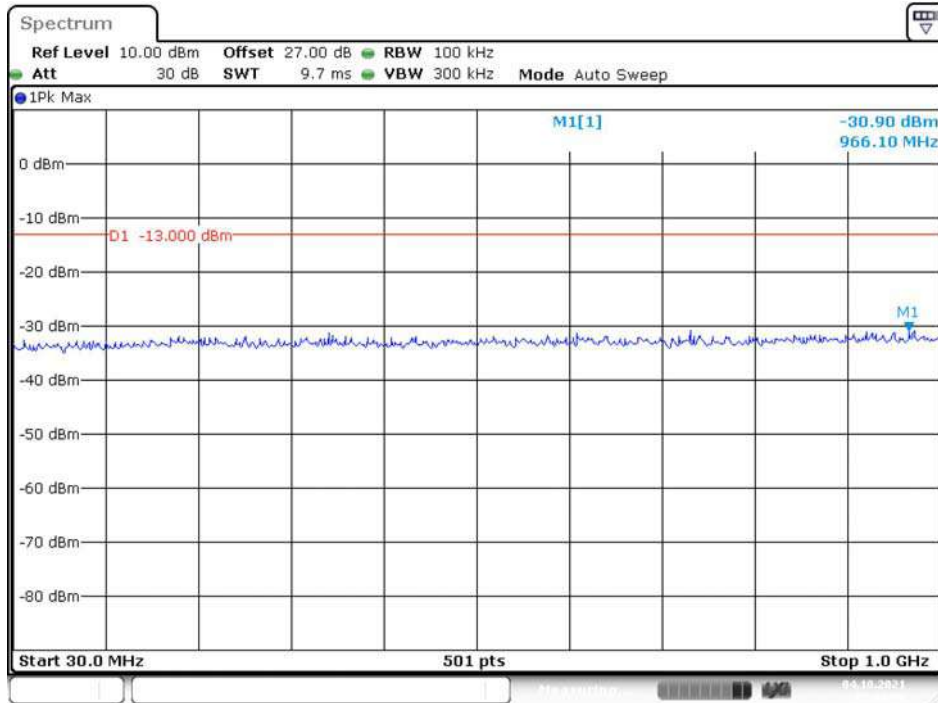
Date: 4.OCT.2021 13:40:15

### 1 GHz – 20 GHz (1.4 MHz, QPSK, Low Channel)



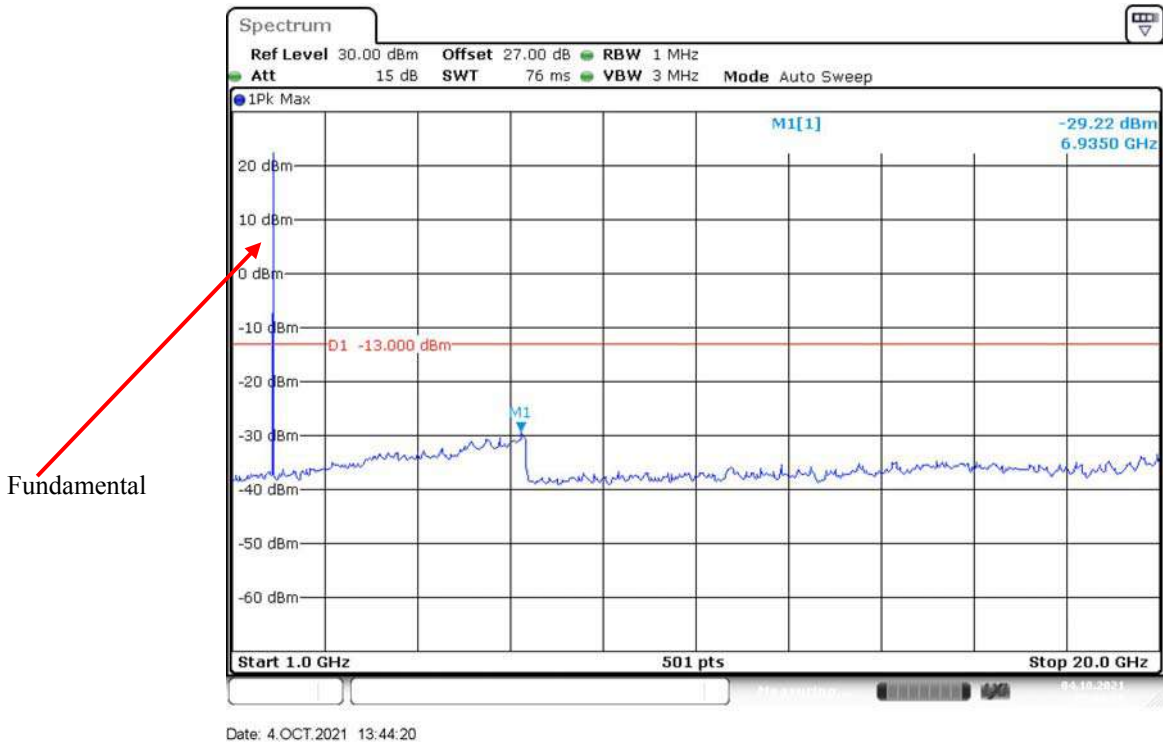
Date: 4.OCT.2021 13:40:54

### 30 MHz – 1 GHz (3 MHz, QPSK, Low Channel)

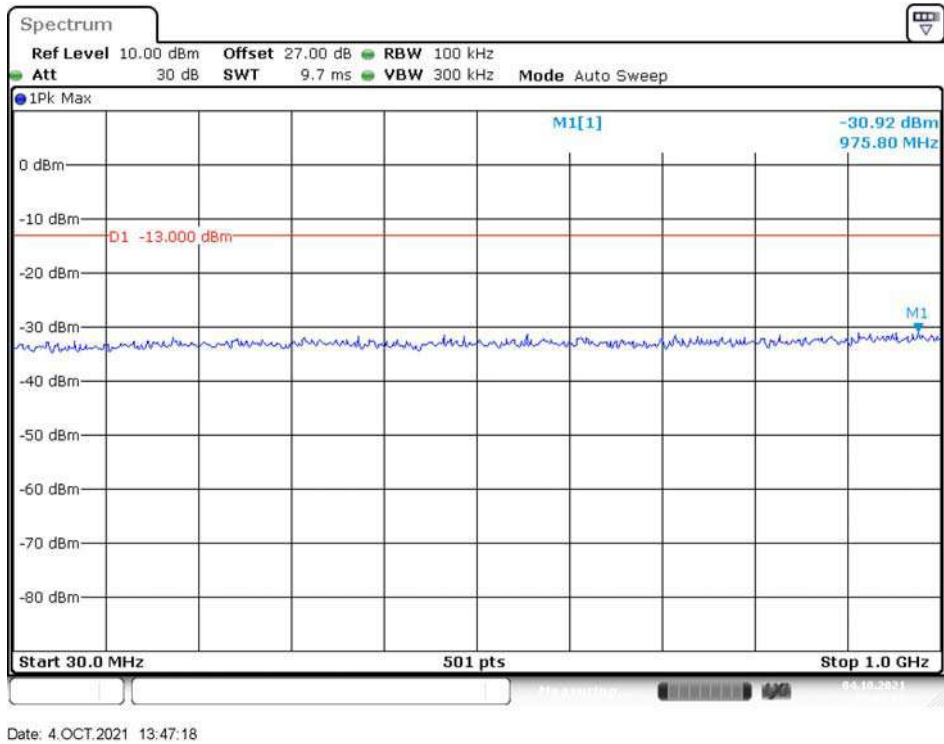


Date: 4.OCT.2021 13:43:48

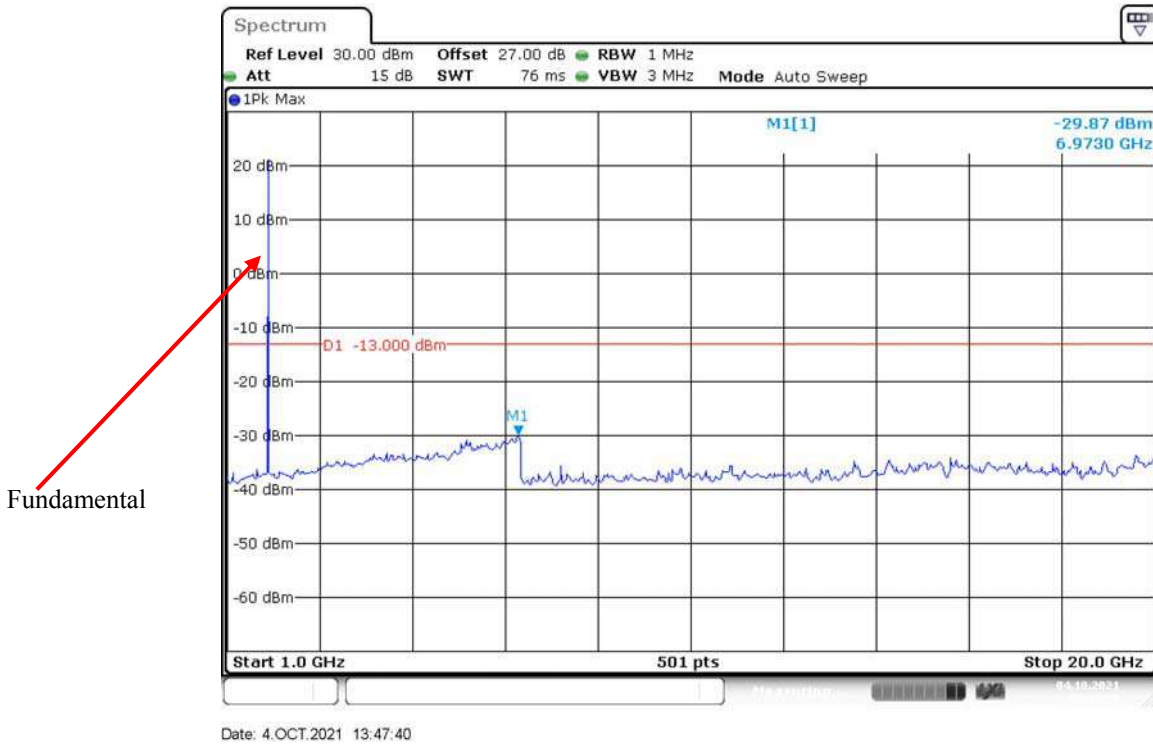
### 1 GHz – 20 GHz (3 MHz, QPSK, Low Channel)



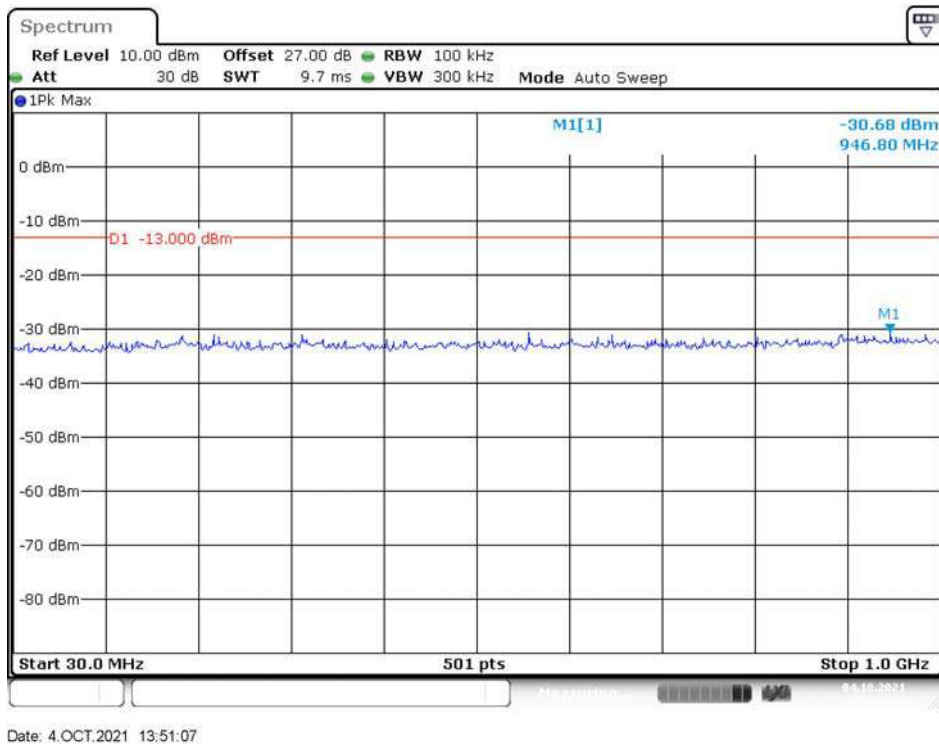
### 30 MHz – 1 GHz (5 MHz, QPSK, Low Channel)



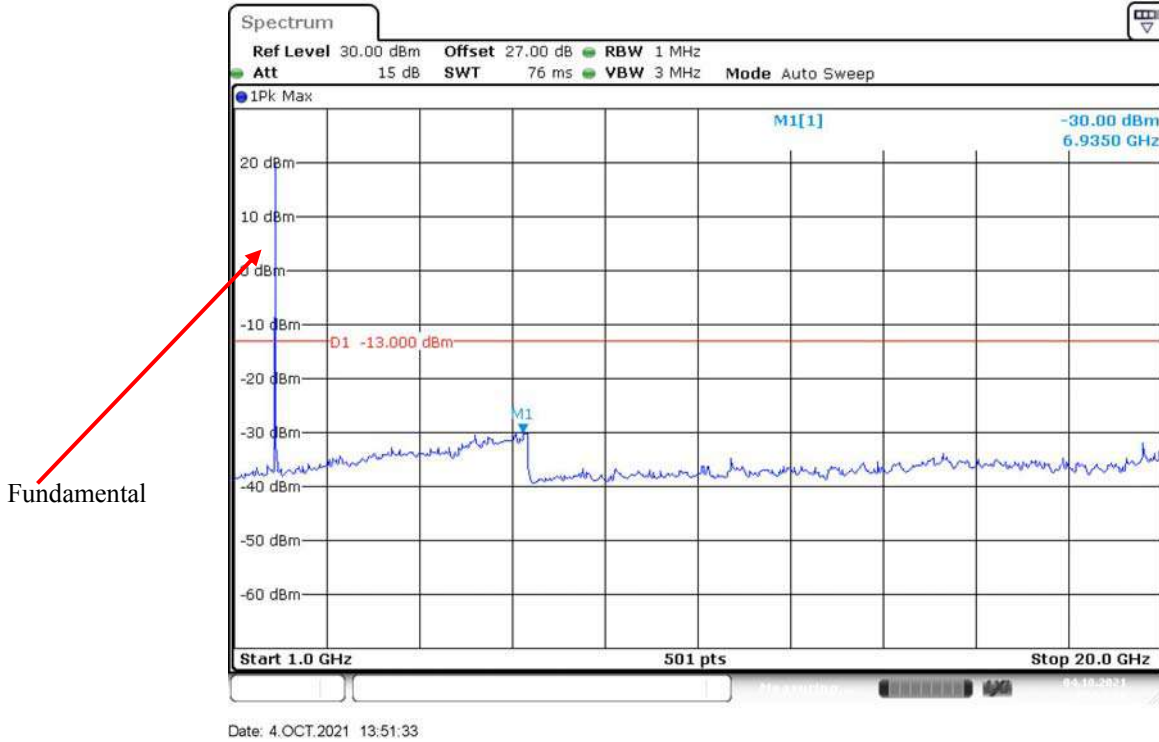
### 1 GHz – 20 GHz (5 MHz, QPSK, Low Channel)



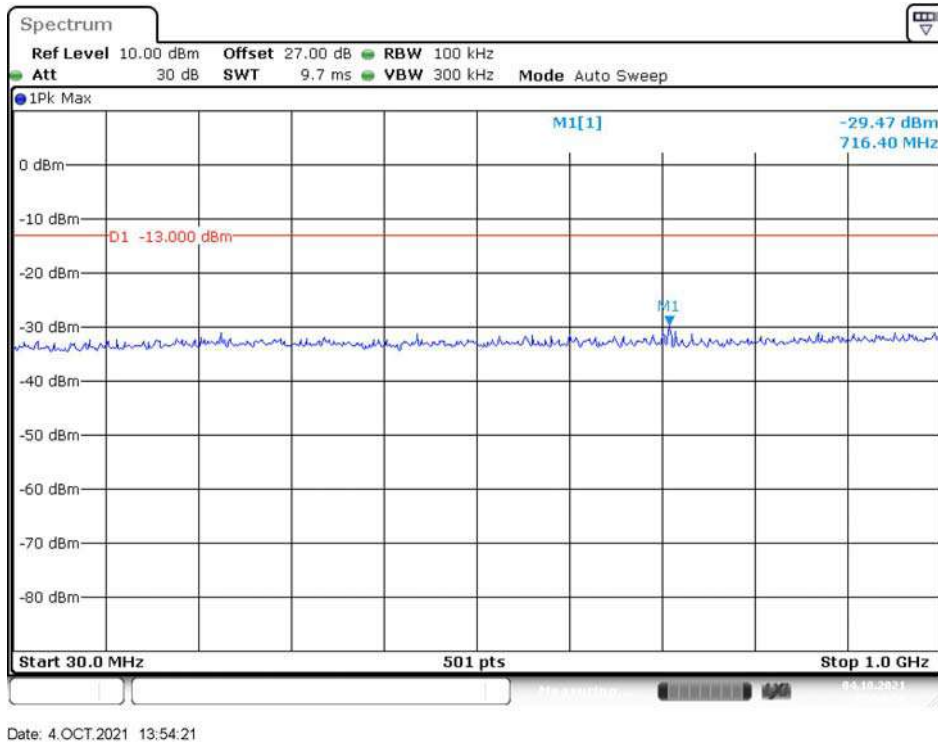
### 30 MHz – 1 GHz (10 MHz, QPSK, Low Channel)



### 1 GHz – 20 GHz (10 MHz, QPSK, Low Channel)

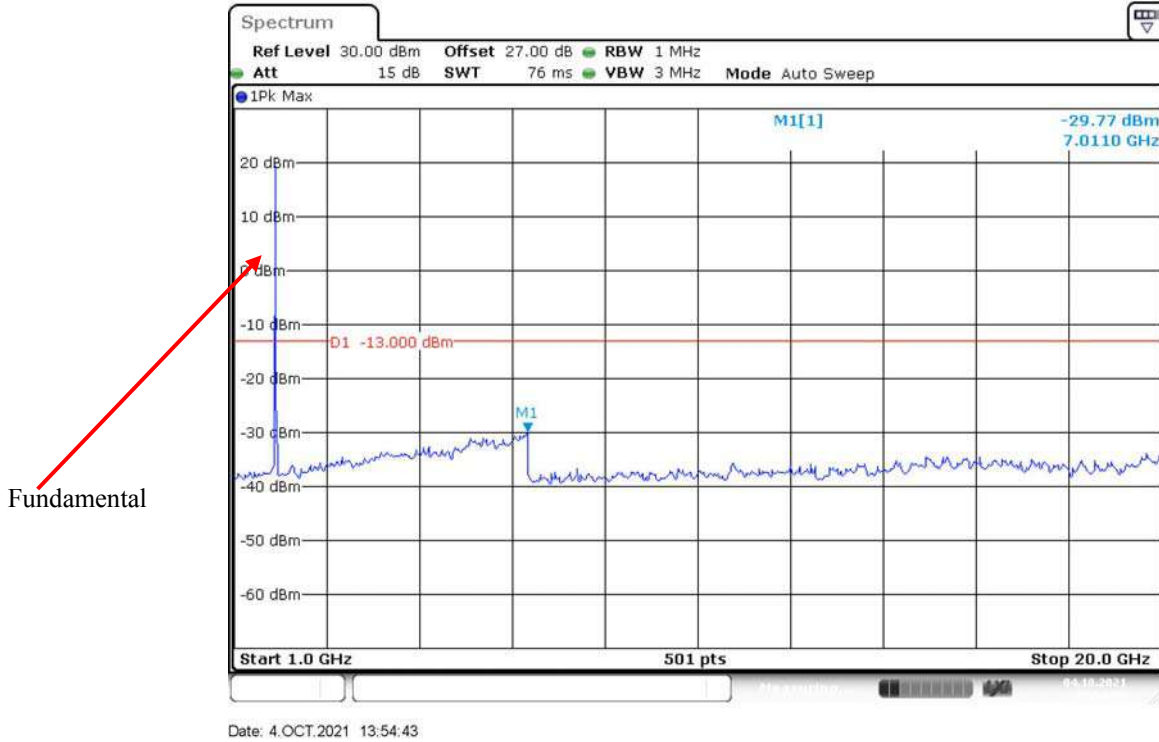


### 30 MHz – 1 GHz (15 MHz, QPSK, Low Channel)

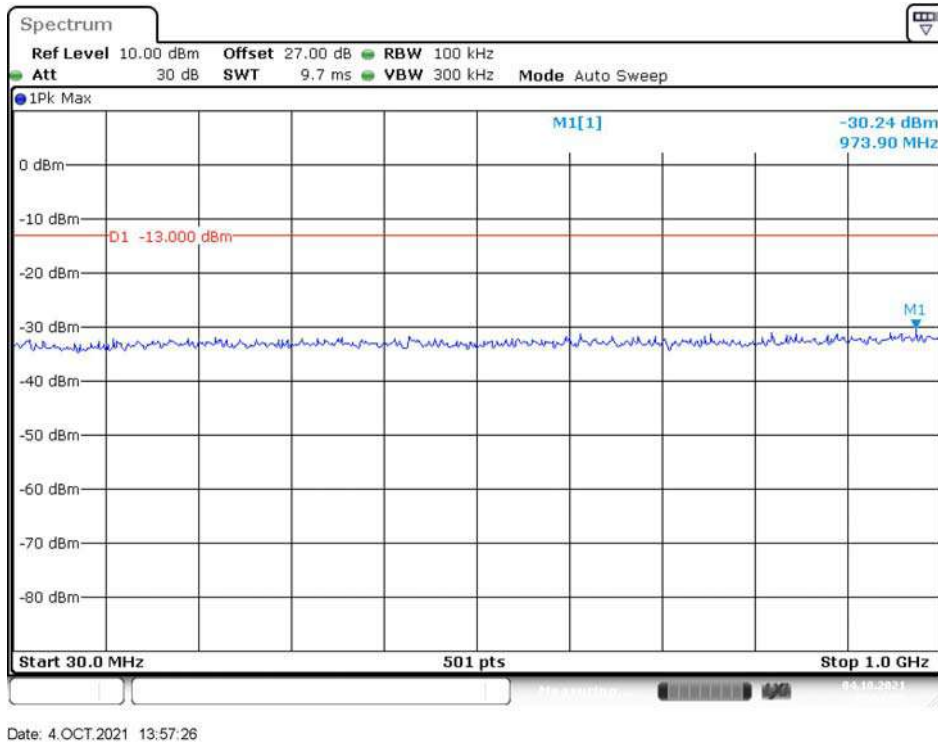




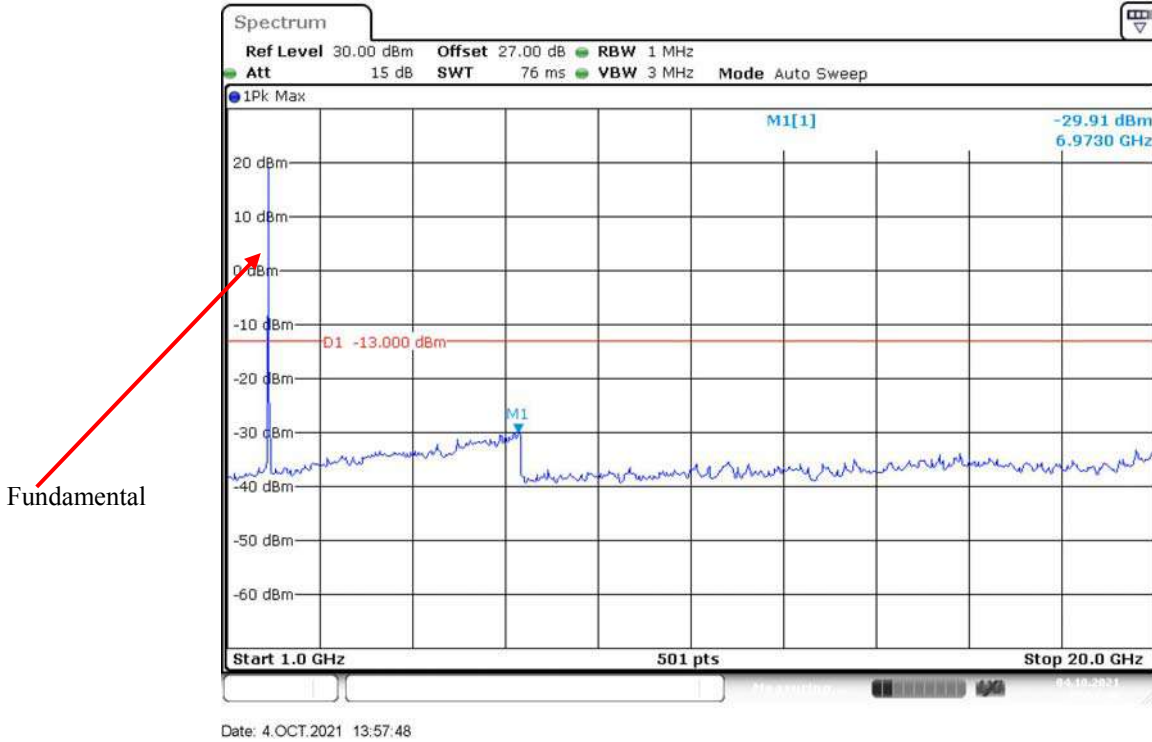
### 1 GHz – 20 GHz (15 MHz, QPSK, Low Channel)



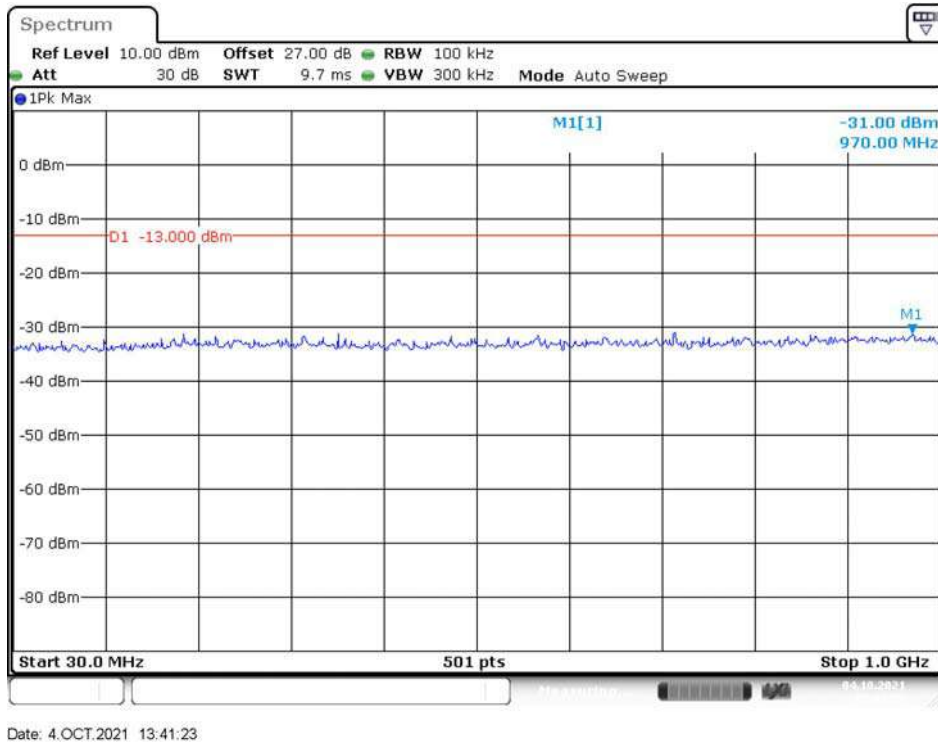
### 30 MHz – 1 GHz (20 MHz, QPSK, Low Channel)



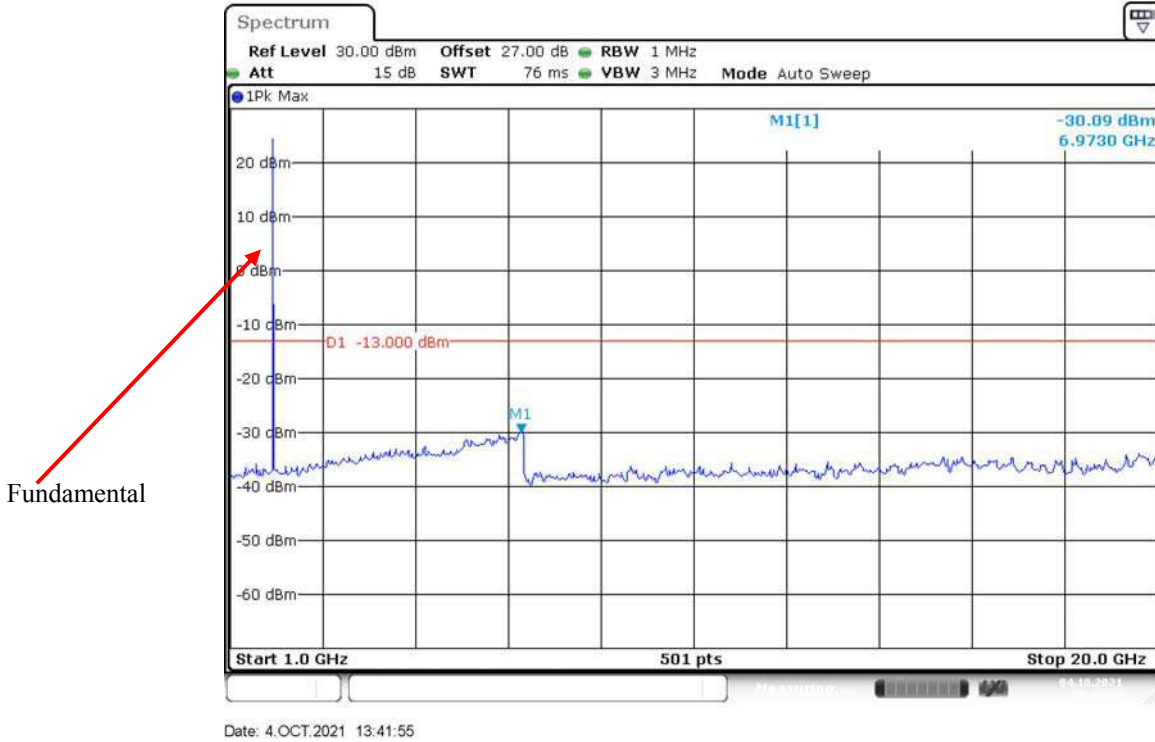
### 1 GHz – 20 GHz (20 MHz, QPSK, Low Channel)



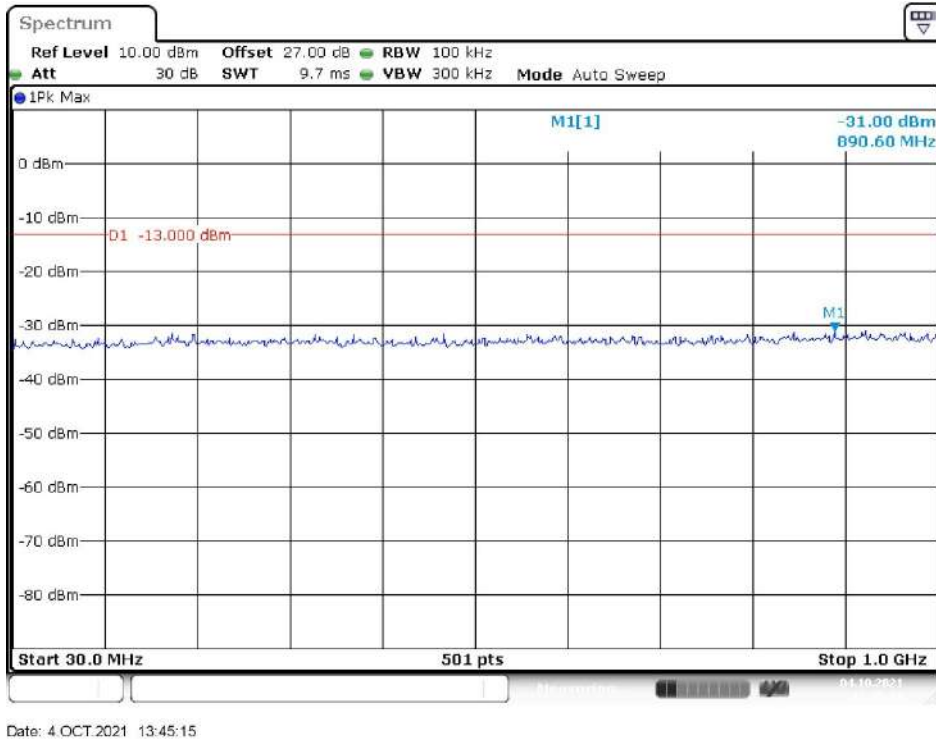
### 30 MHz – 1 GHz (1.4 MHz, QPSK, Middle Channel)



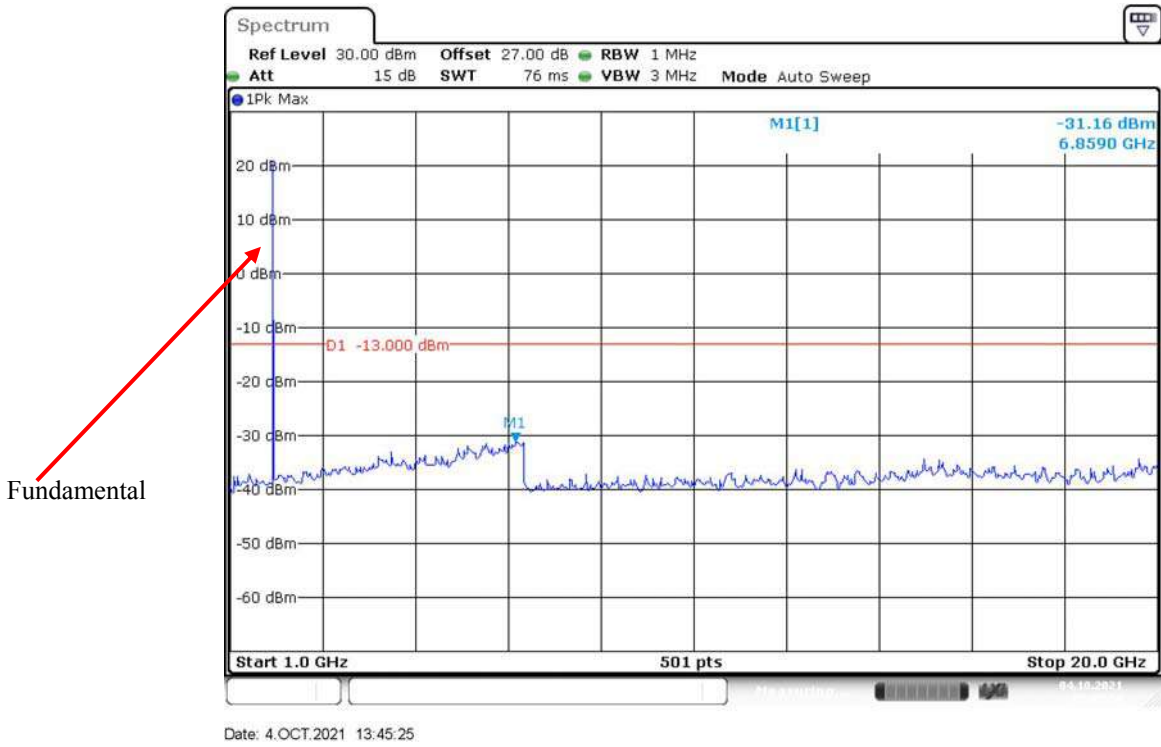
### 1 GHz – 20 GHz (1.4 MHz, QPSK, Middle Channel)



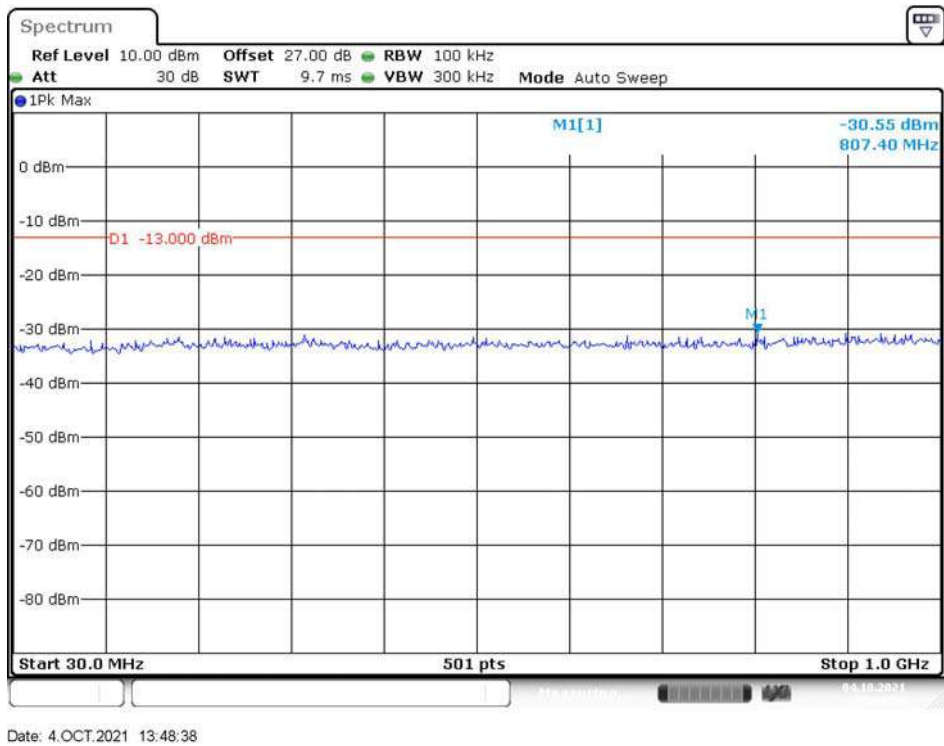
### 30 MHz – 1 GHz (3 MHz, QPSK, Middle Channel)



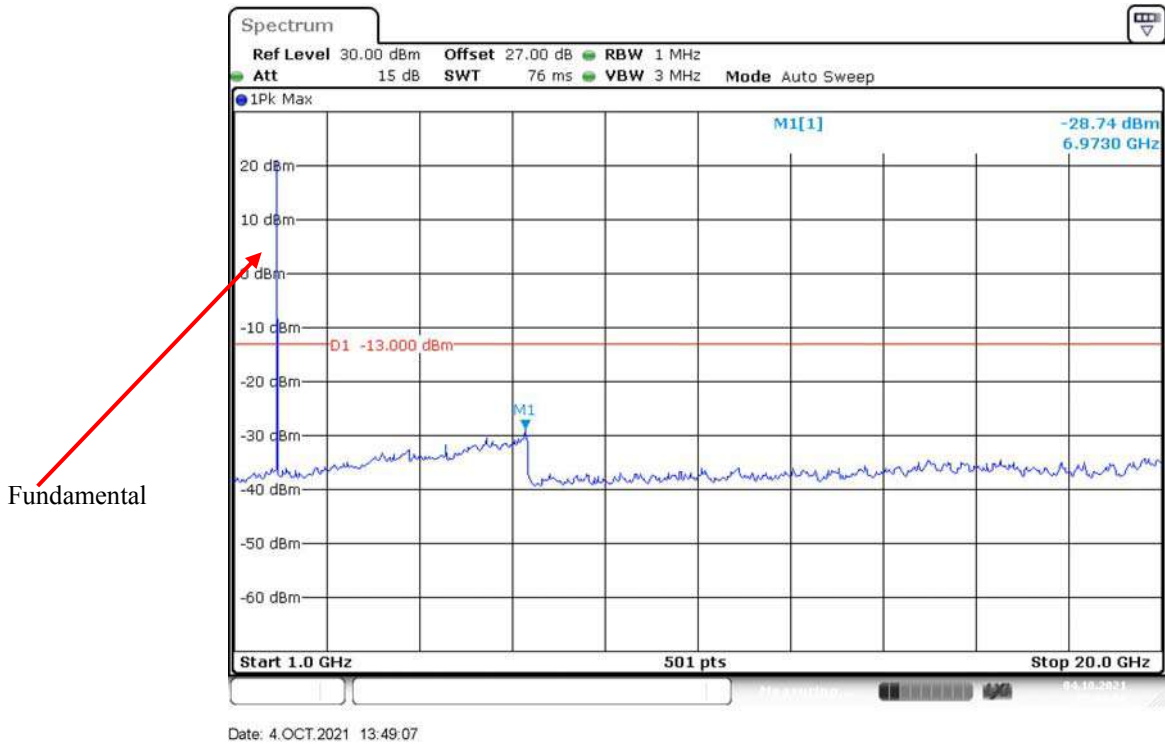
### 1 GHz – 20 GHz (3 MHz, QPSK, Middle Channel)



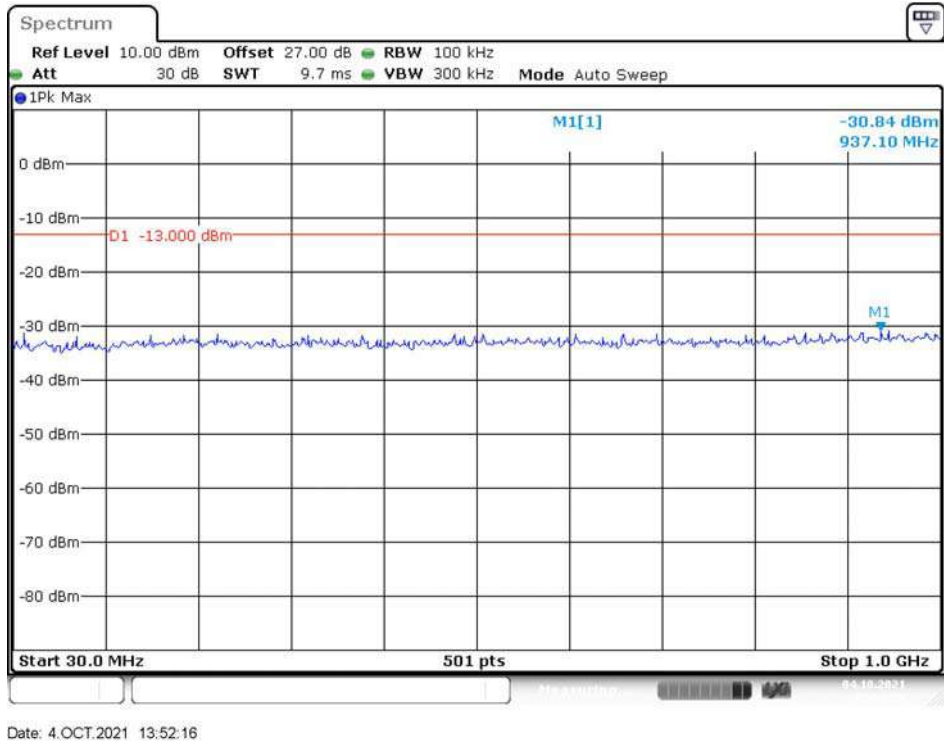
### 30 MHz – 1 GHz (5 MHz, QPSK, Middle Channel)



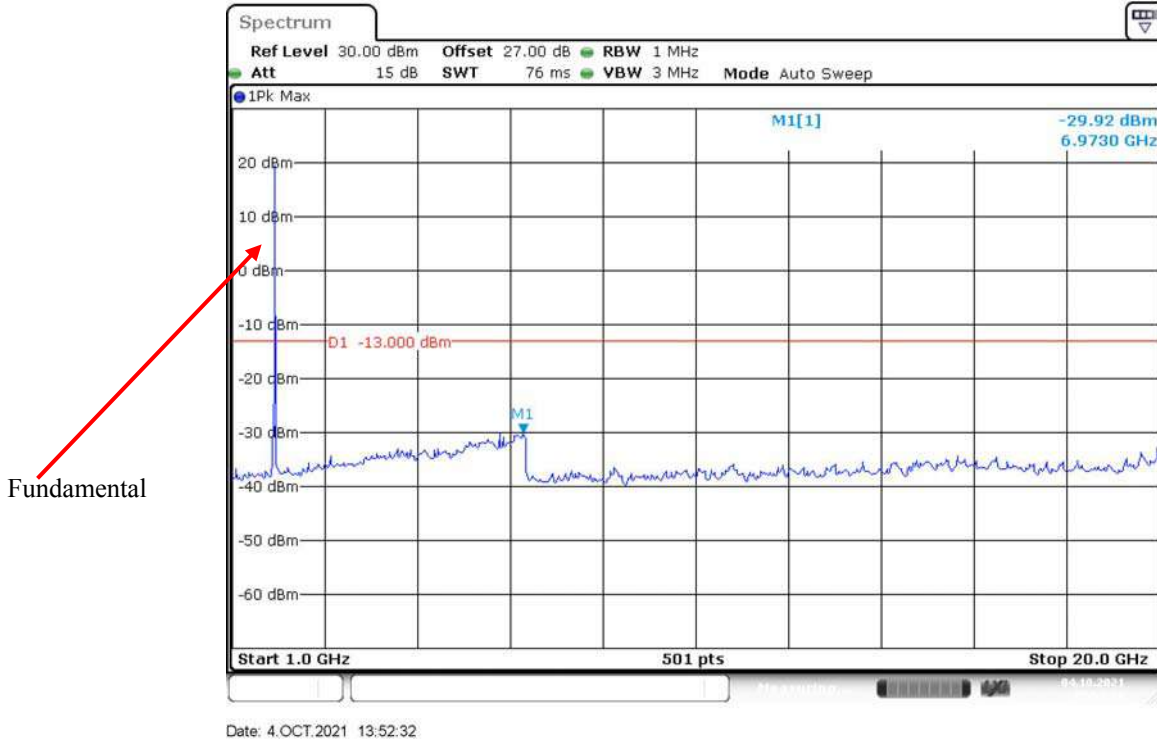
### 1 GHz – 20 GHz (5 MHz, QPSK, Middle Channel)



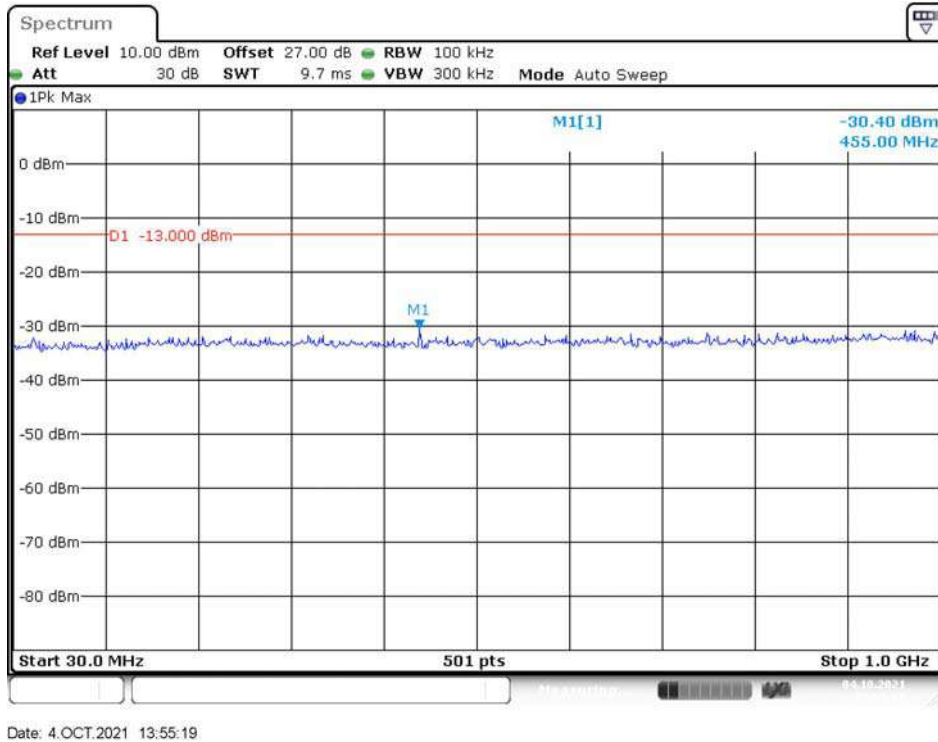
### 30 MHz – 1 GHz (10 MHz, QPSK, Middle Channel)



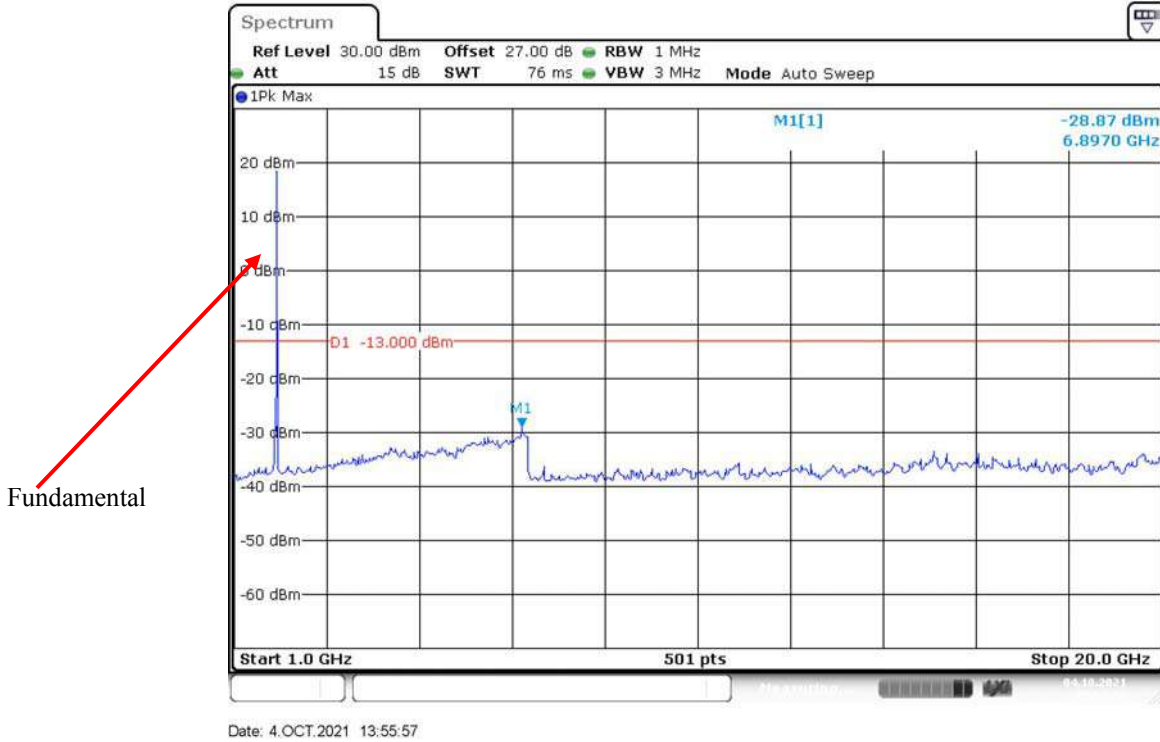
### 1 GHz – 20 GHz (10 MHz, QPSK, Middle Channel)



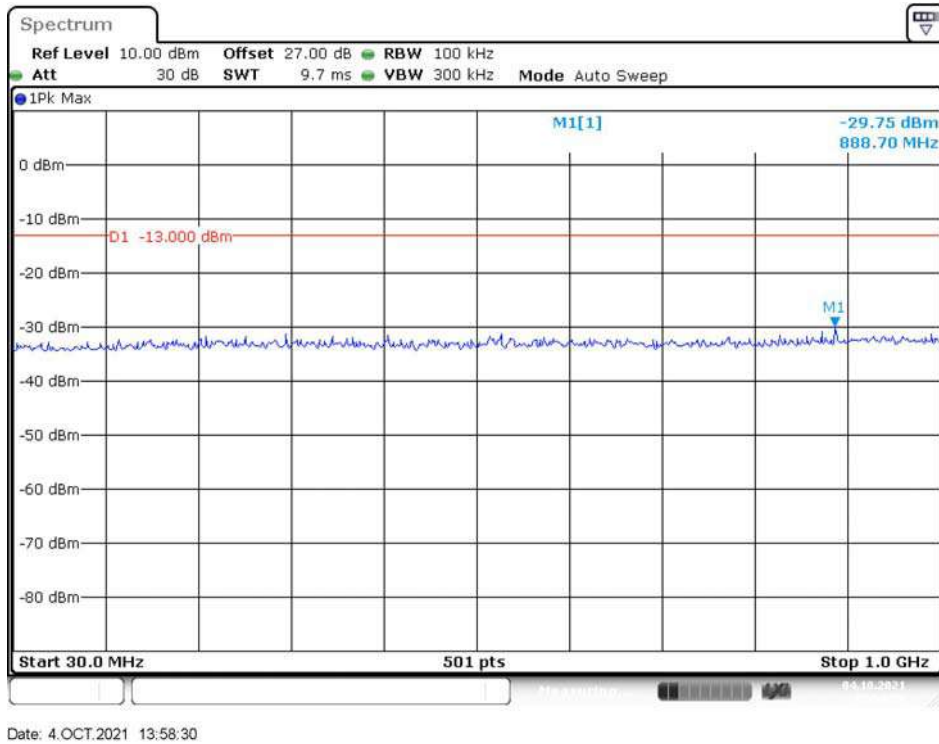
### 30 MHz – 1 GHz (15 MHz, QPSK, Middle Channel)



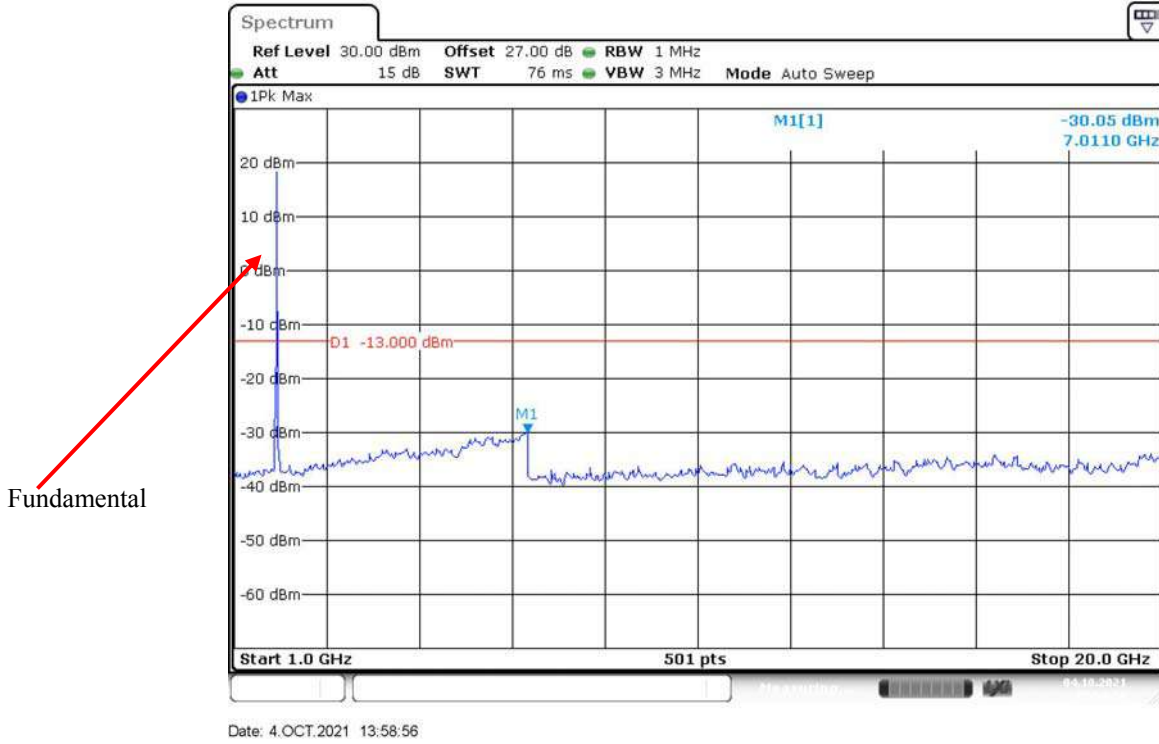
### 1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



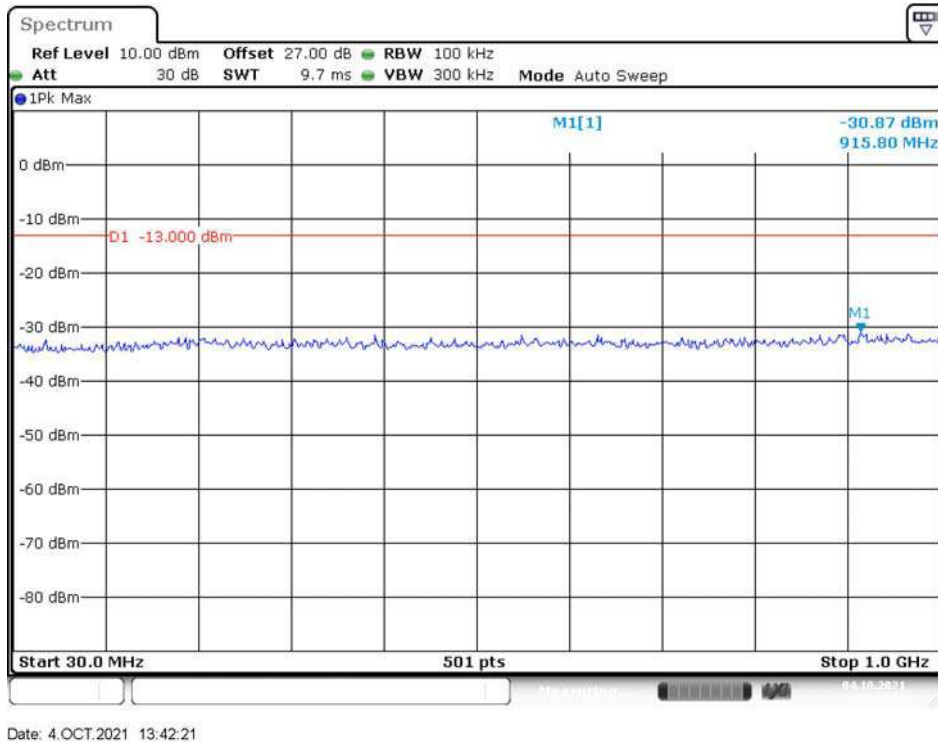
### 30 MHz – 1 GHz (20 MHz, QPSK, Middle Channel)



### 1 GHz – 20 GHz (20 MHz, QPSK, Middle Channel)

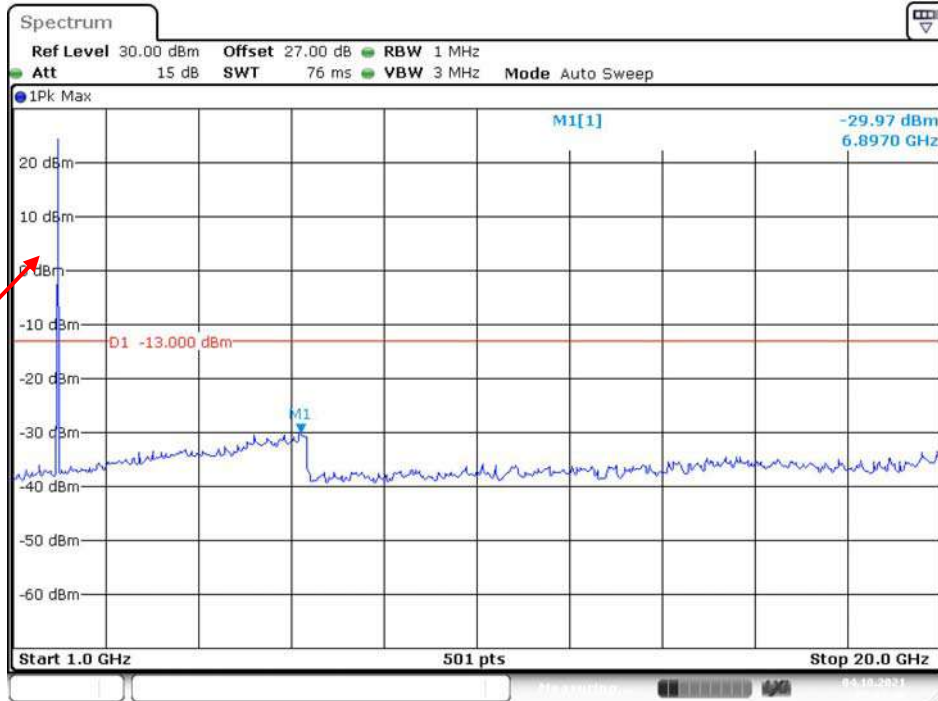


### 30 MHz – 1 GHz (1.4 MHz, QPSK, High Channel)





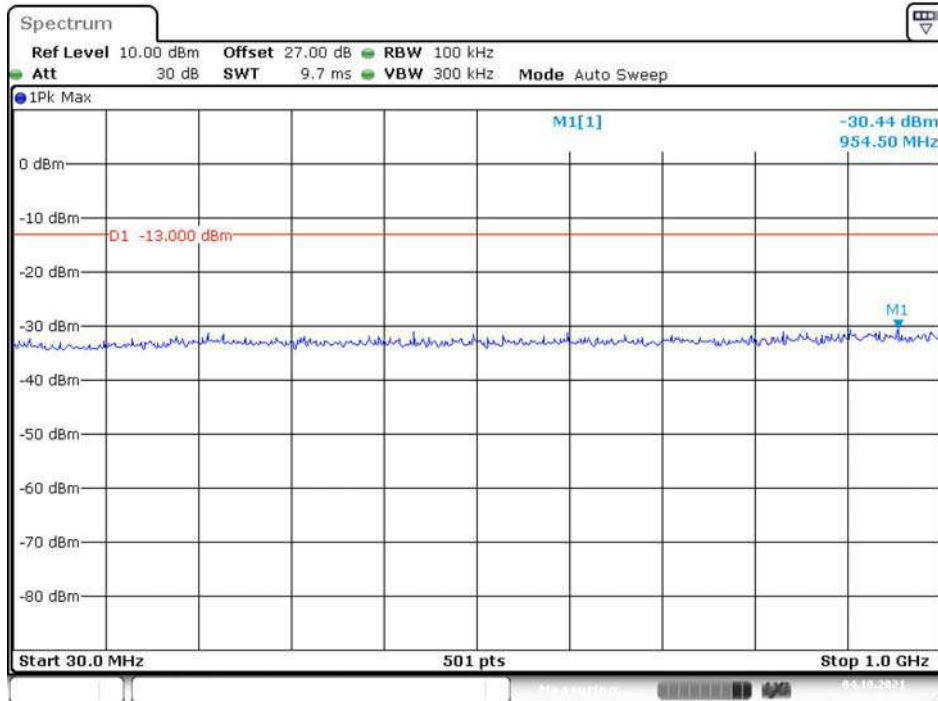
### 1 GHz – 20 GHz (1.4 MHz, QPSK, High Channel)



Fundamental

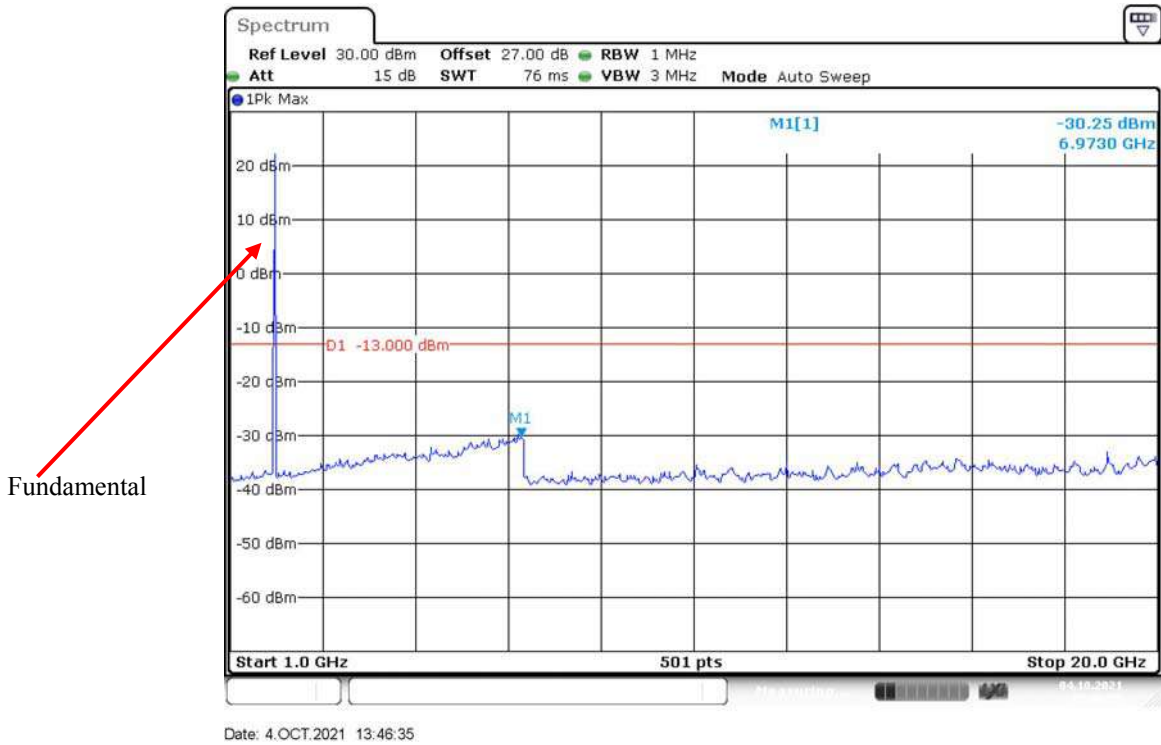
Date: 4.OCT.2021 13:42:47

### 30 MHz – 1 GHz (3 MHz, QPSK, High Channel)

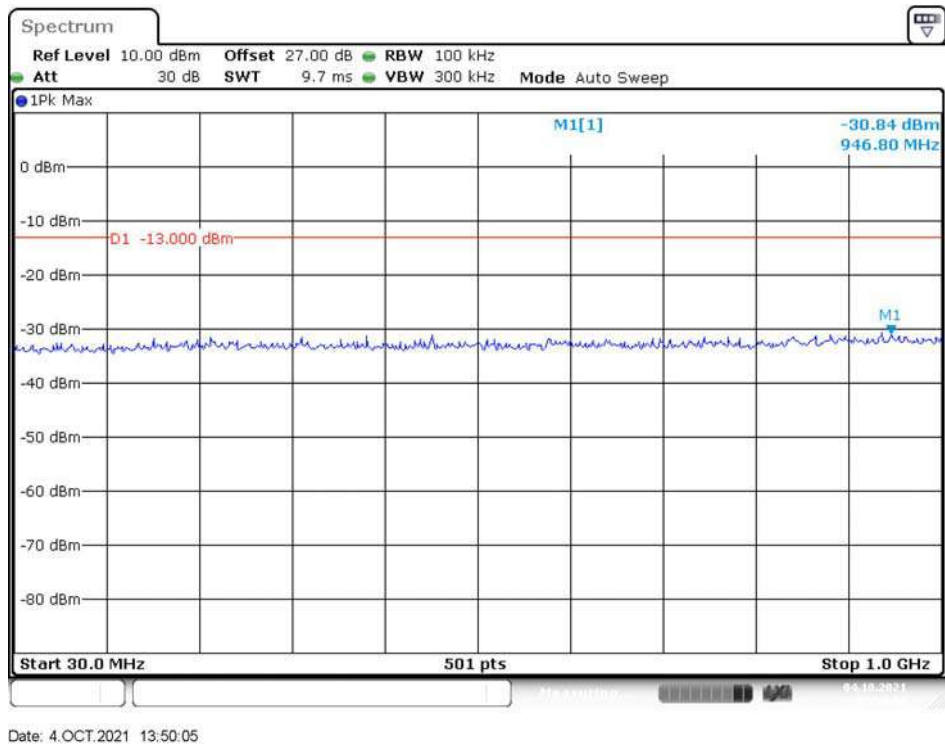


Date: 4.OCT.2021 13:46:04

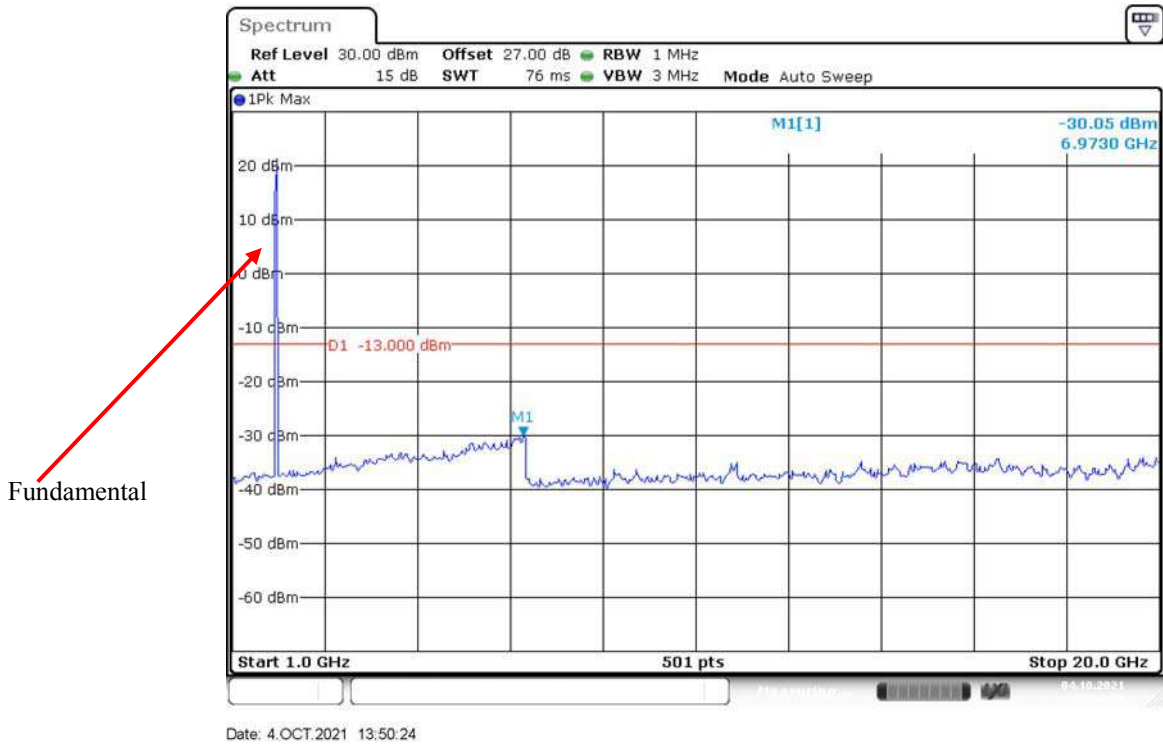
### 1 GHz – 20 GHz (3 MHz, QPSK, High Channel)



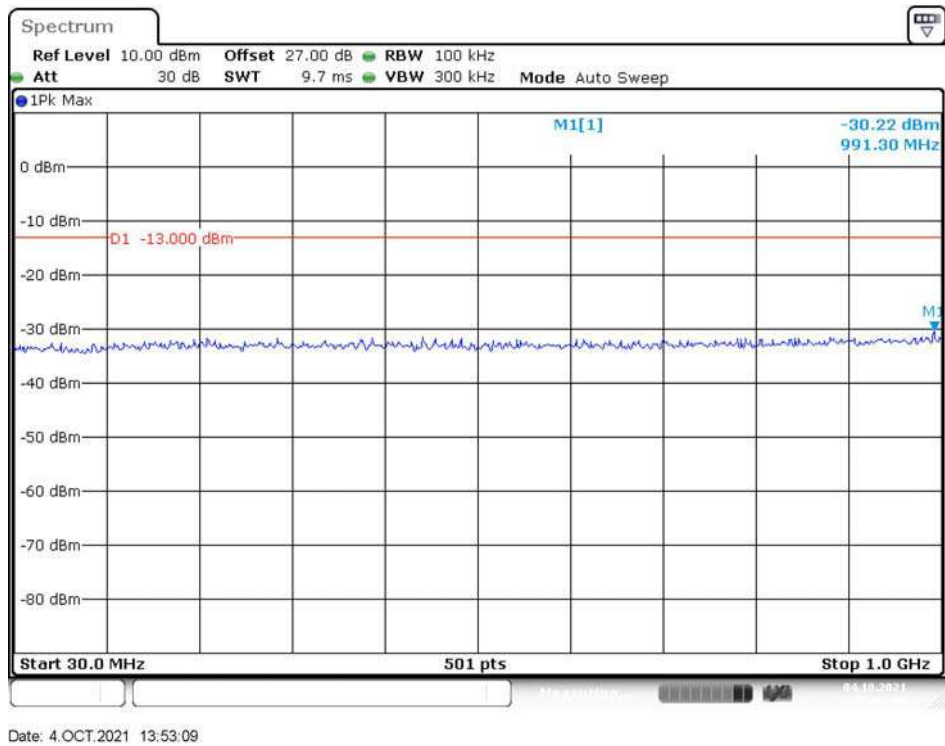
### 30 MHz – 1 GHz (5 MHz, QPSK, High Channel)



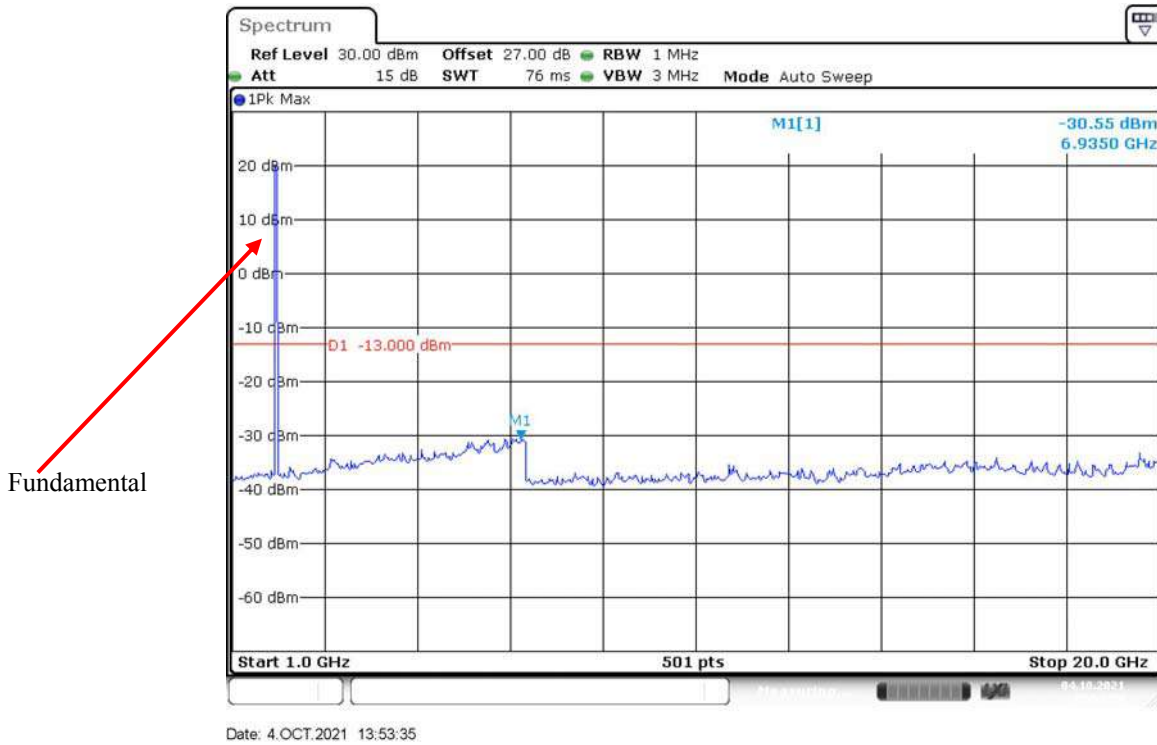
### 1 GHz – 20 GHz (5 MHz, QPSK, High Channel)



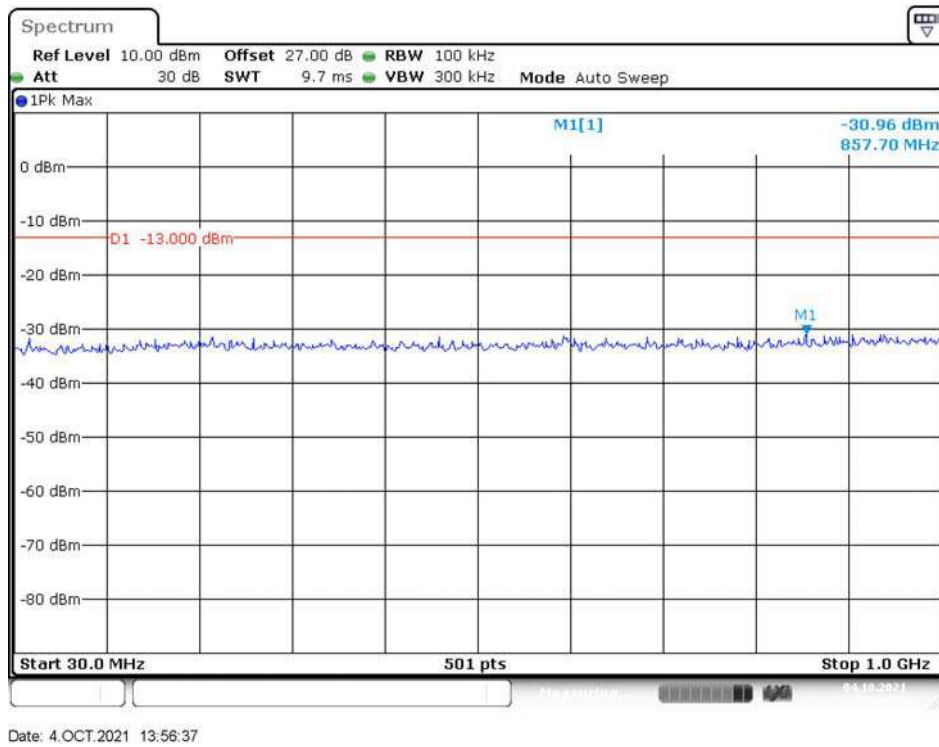
### 30 MHz – 1 GHz (10 MHz, QPSK, High Channel)



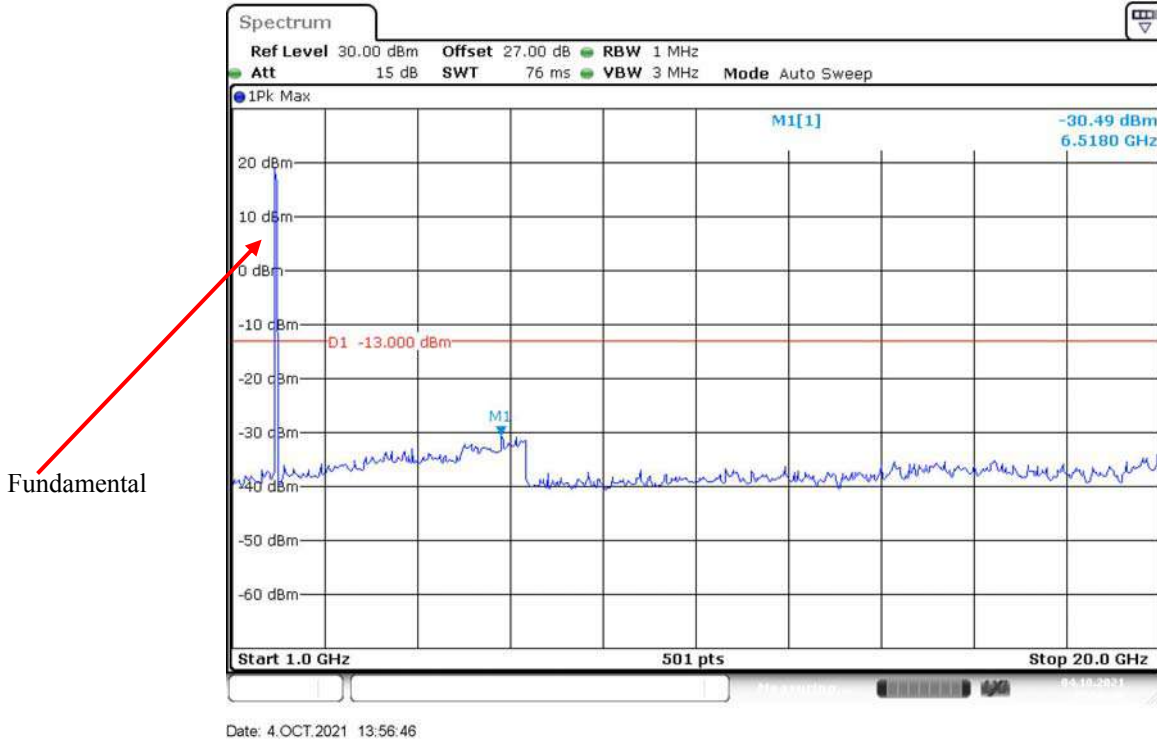
### 1 GHz – 20 GHz (10 MHz, QPSK, High Channel)



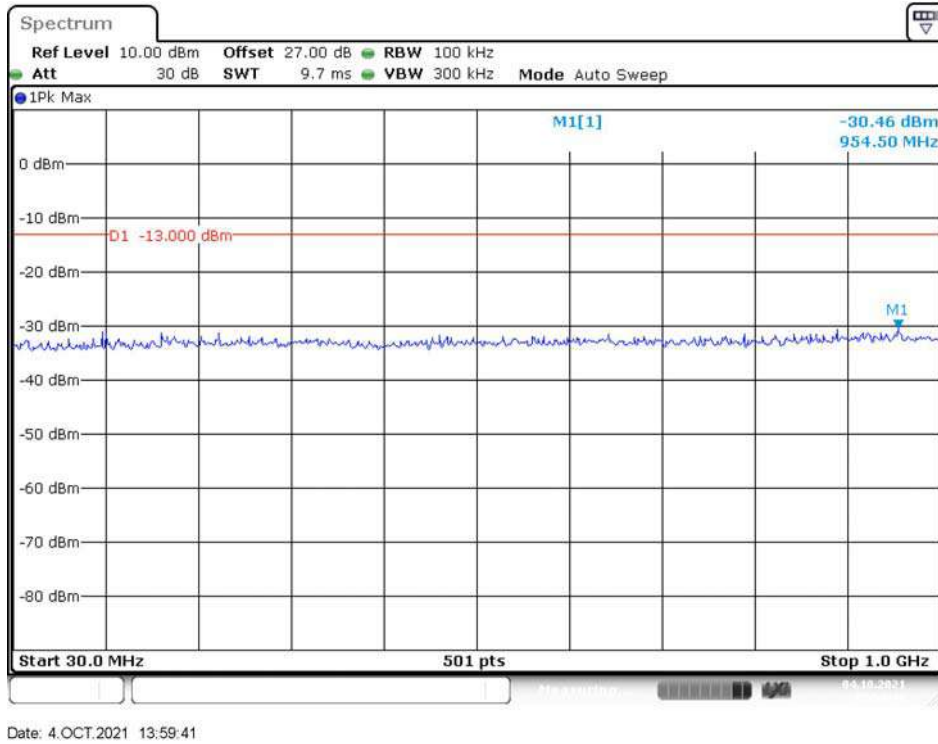
### 30 MHz – 1 GHz (15 MHz, QPSK, High Channel)



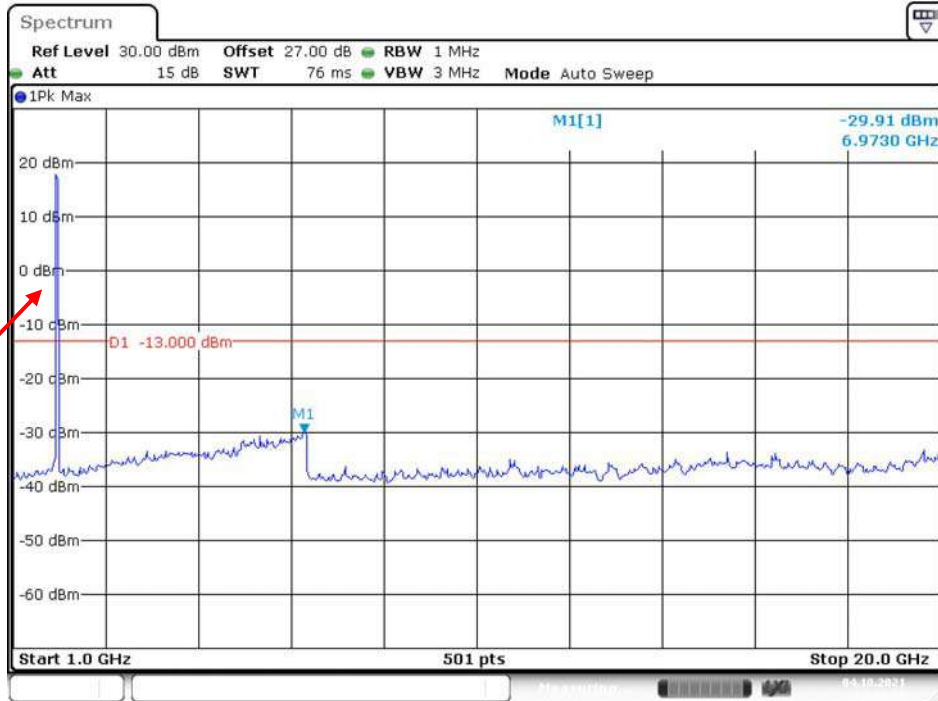
### 1 GHz – 20 GHz (15 MHz, QPSK, High Channel)



### 30 MHz – 1 GHz (20 MHz, QPSK, High Channel)



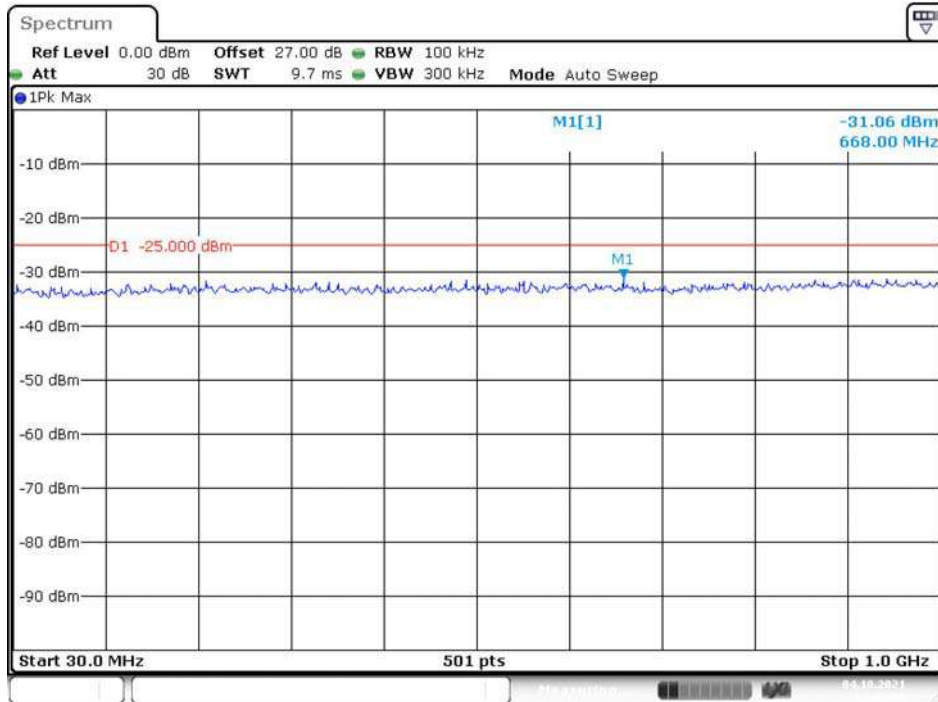
### 1 GHz – 20 GHz (20 MHz, QPSK, High Channel)



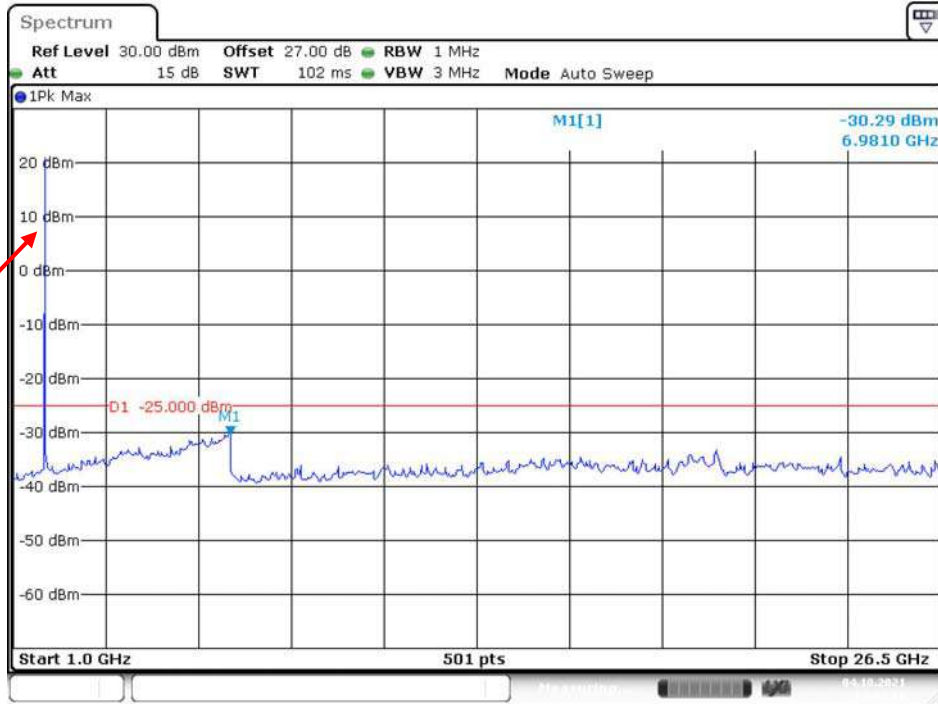
Fundamental

### LTE Band 41

### 30 MHz – 1 GHz (QPSK, 5.0 MHz, Low Channel)



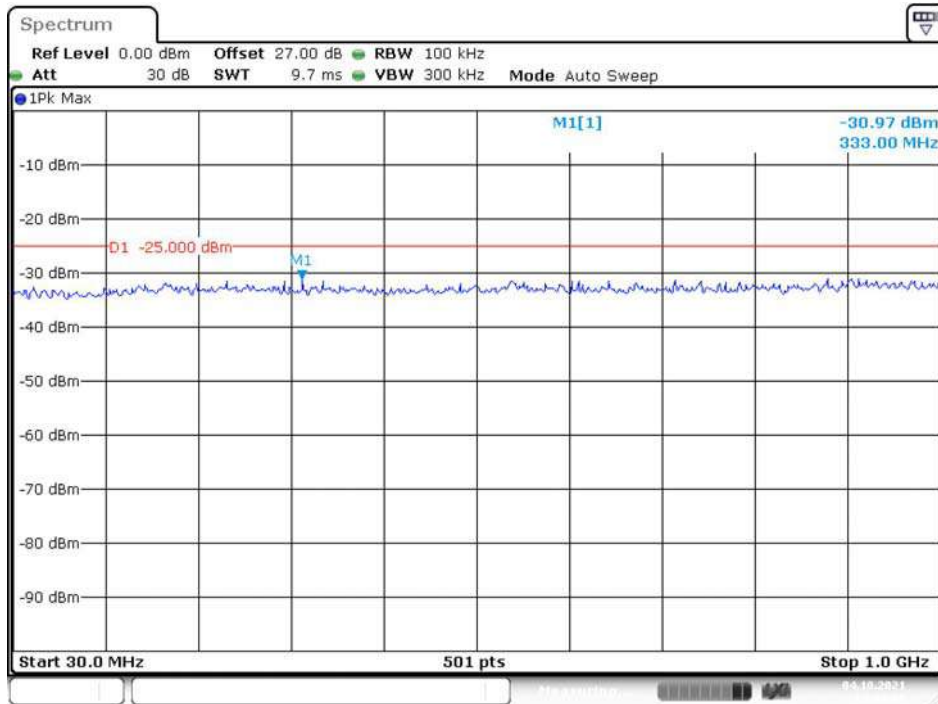
### 1 GHz – 26.5 GHz (QPSK, 5.0 MHz, Low Channel)



Fundamental

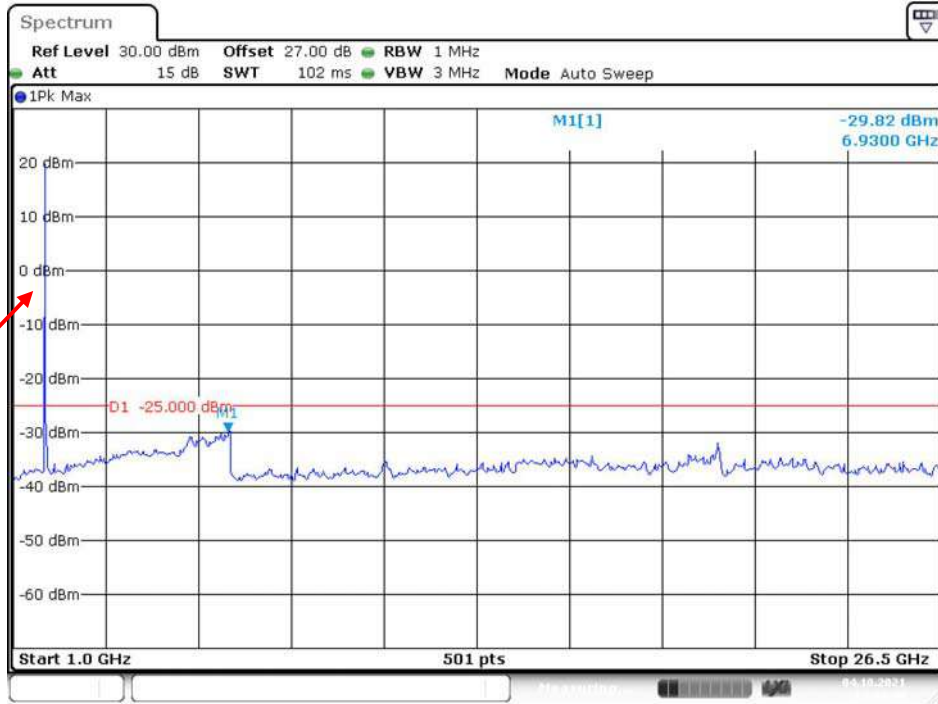
Date: 4.OCT.2021 14:01:12

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, Low Channel)



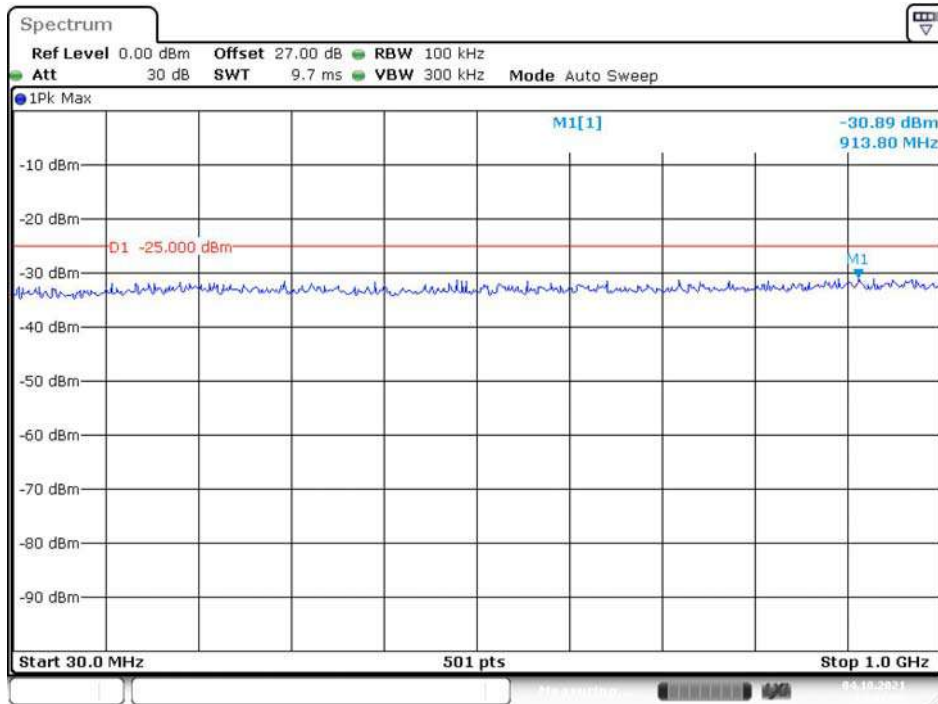
Date: 4.OCT.2021 14:04:09

### 1 GHz – 26.5 GHz (QPSK, 10.0 MHz, Low Channel)



Date: 4.OCT.2021 14:04:44

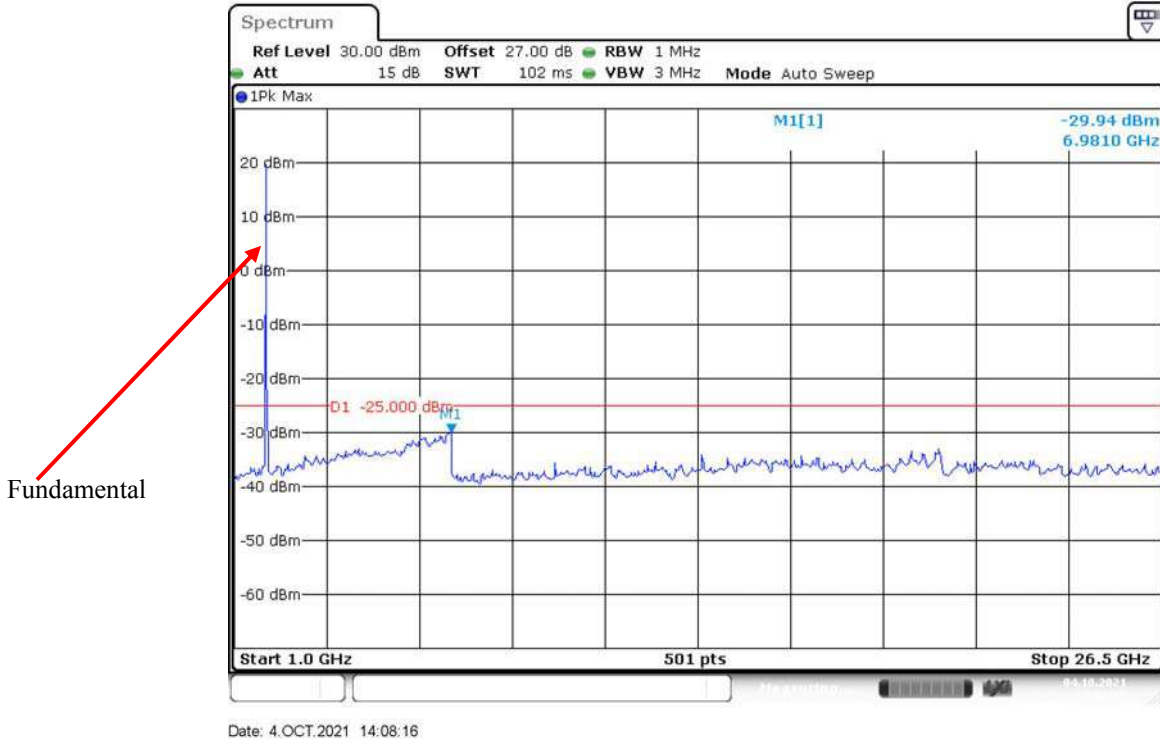
### 30 MHz – 1 GHz (QPSK, 15.0 MHz, Low Channel)



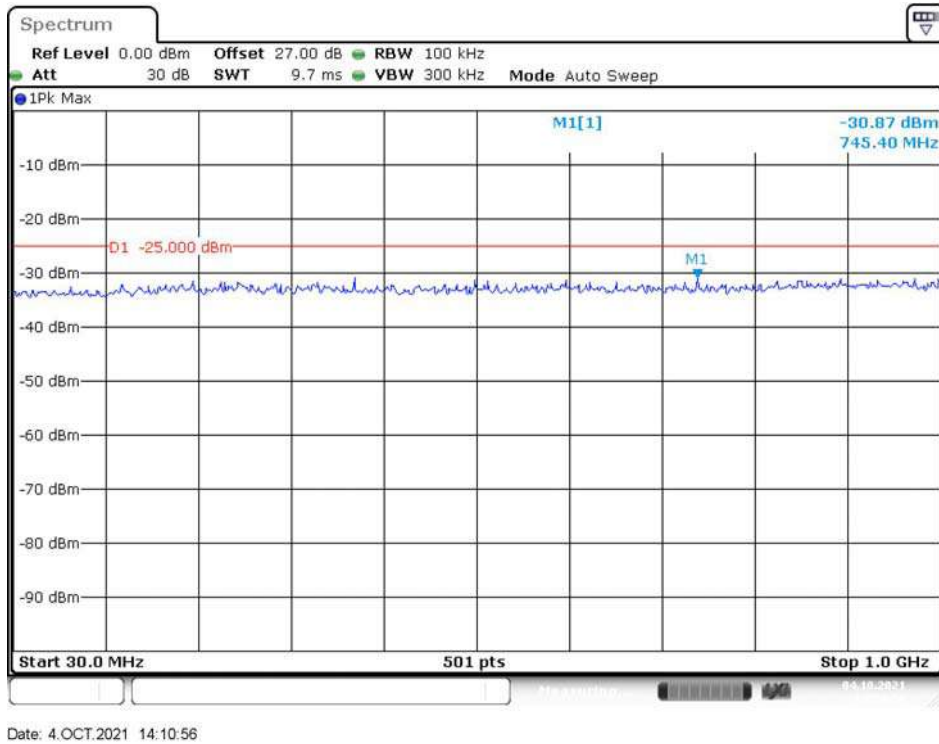
Date: 4.OCT.2021 14:07:47



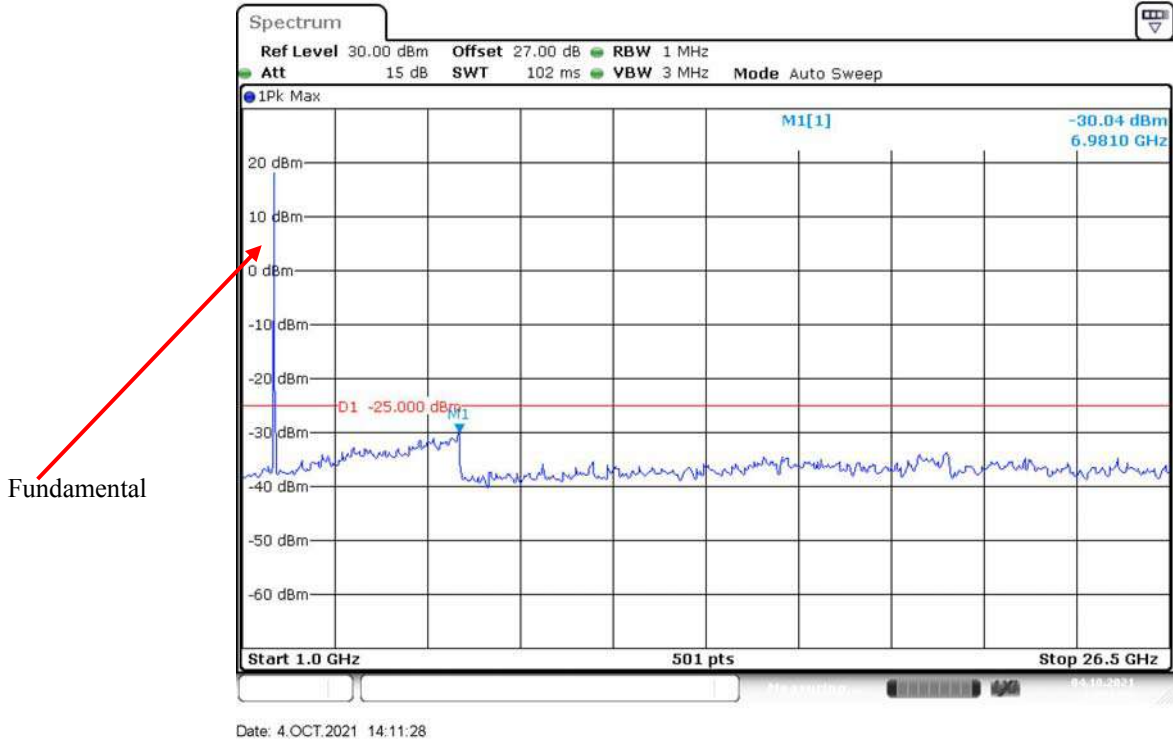
### 1 GHz – 26.5 GHz (QPSK, 15.0MHz, Low Channel)



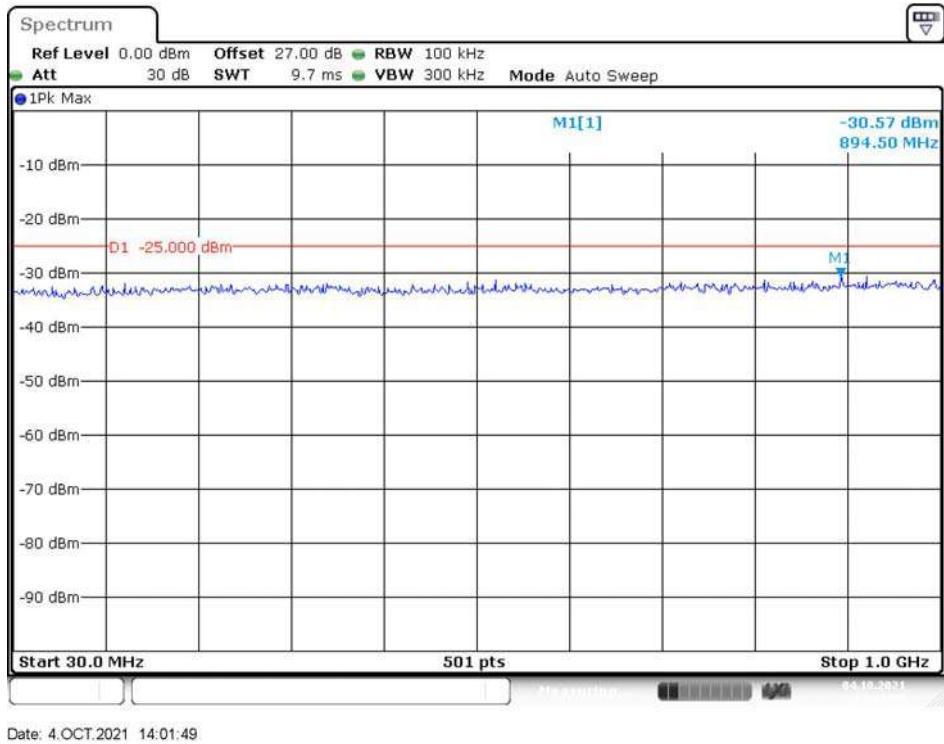
### 30 MHz – 1 GHz (QPSK, 20.0 MHz, Low Channel)



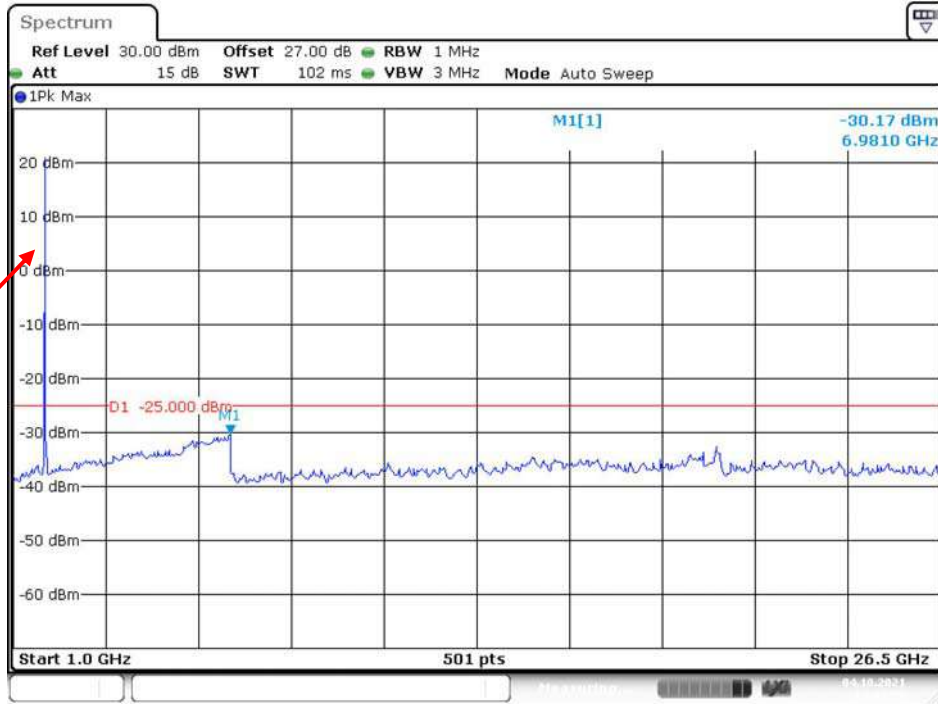
### 1 GHz – 26.5 GHz (QPSK, 20.0 MHz, Low Channel)



### 30 MHz – 1 GHz (QPSK, 5.0 MHz, Middle Channel)



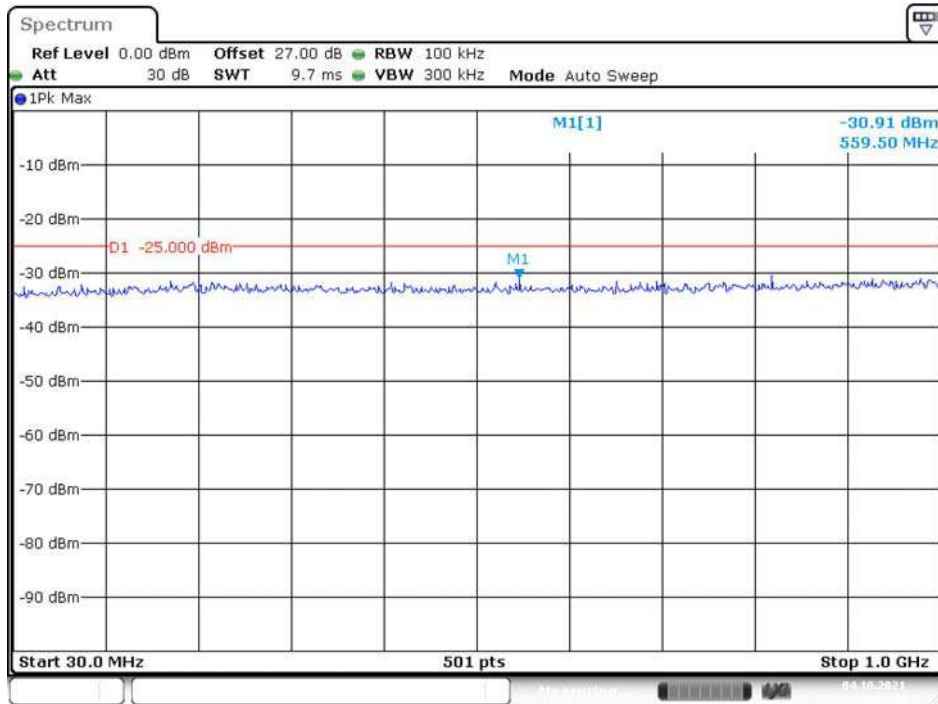
### 1 GHz – 26.5 GHz (QPSK, 5.0 MHz, Middle Channel)



Fundamental

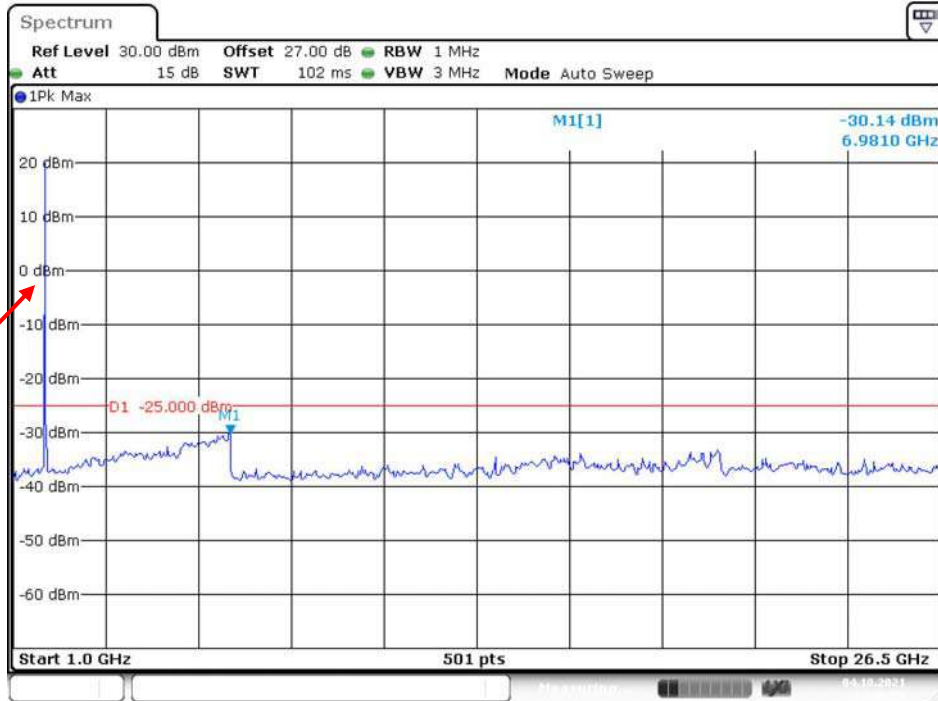
Date: 4.OCT.2021 14:02:24

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, Middle Channel)



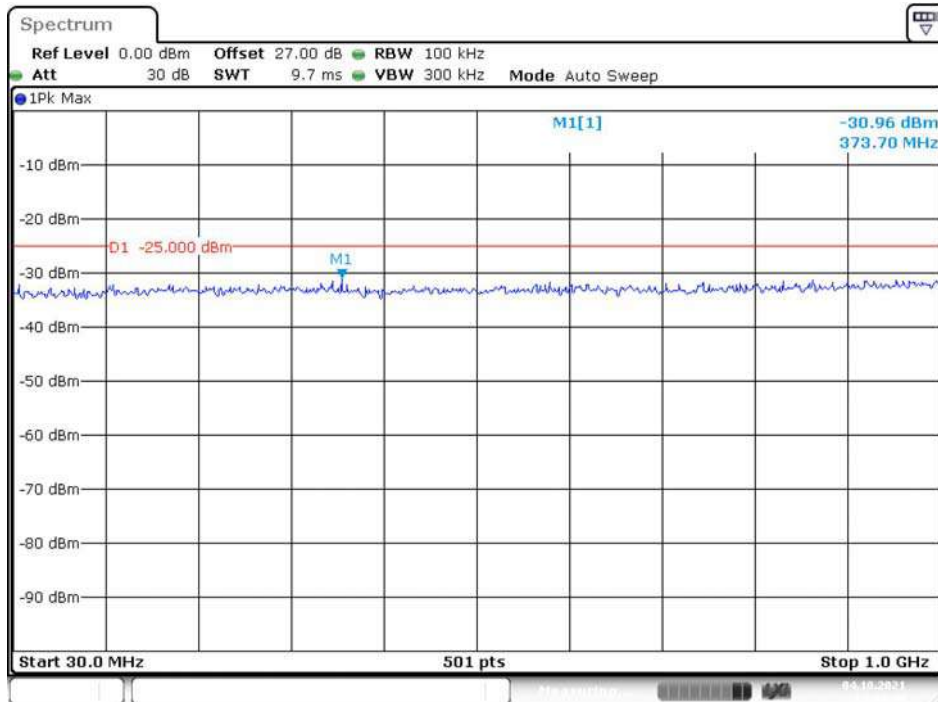
Date: 4.OCT.2021 14:05:45

### 1 GHz – 26.5 GHz (QPSK, 10.0 MHz, Middle Channel)



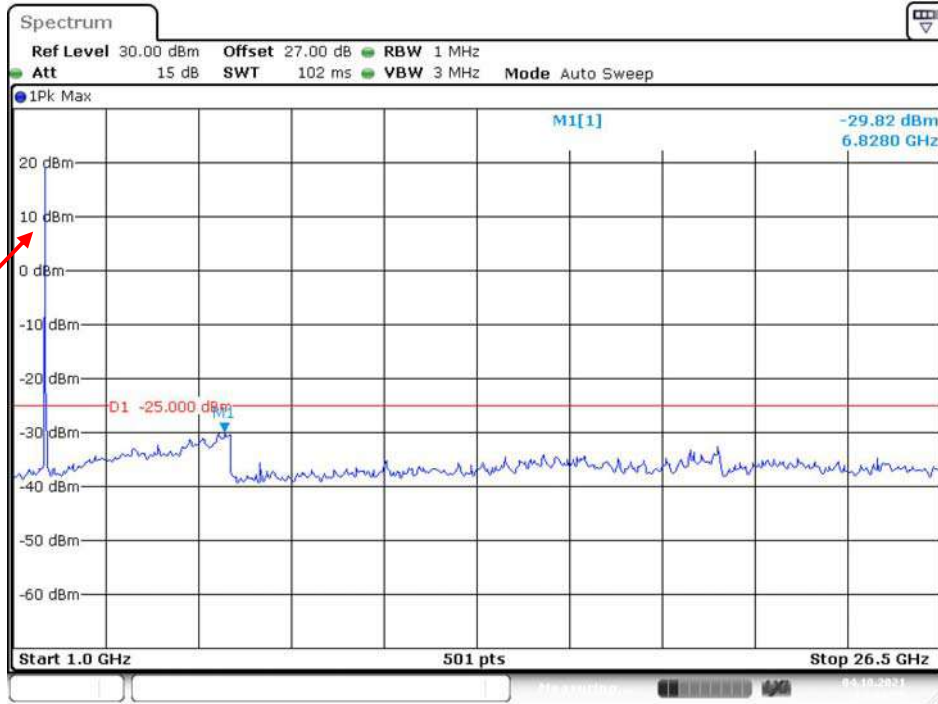
Date: 4.OCT.2021 14:06:14

### 30 MHz – 1 GHz (QPSK, 15.0 MHz, Middle Channel)



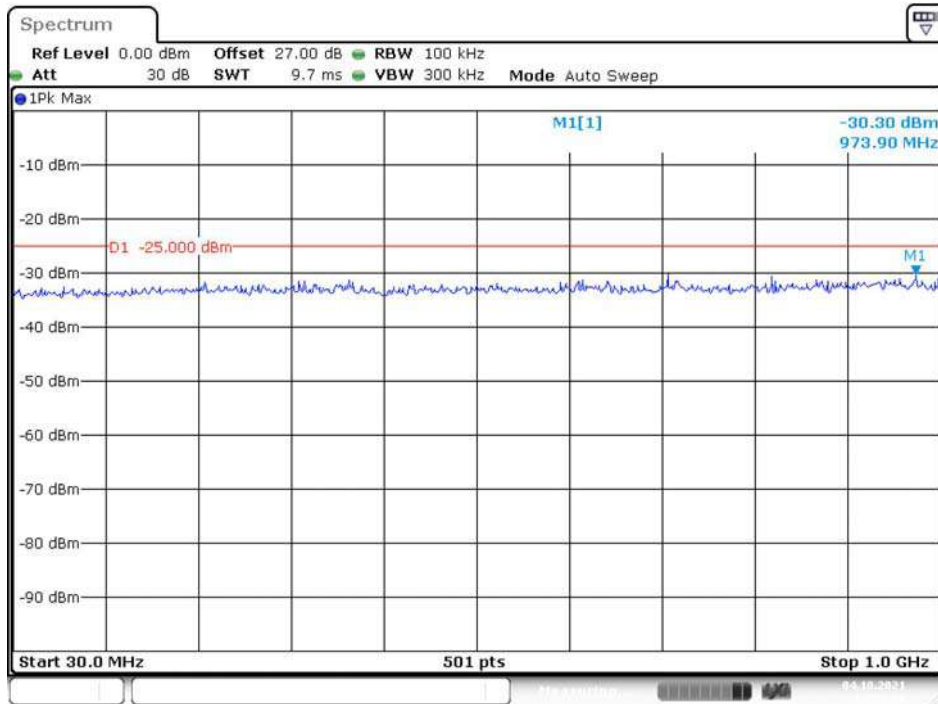
Date: 4.OCT.2021 14:08:45

### 1 GHz – 26.5 GHz (QPSK, 15.0MHz, Middle Channel)



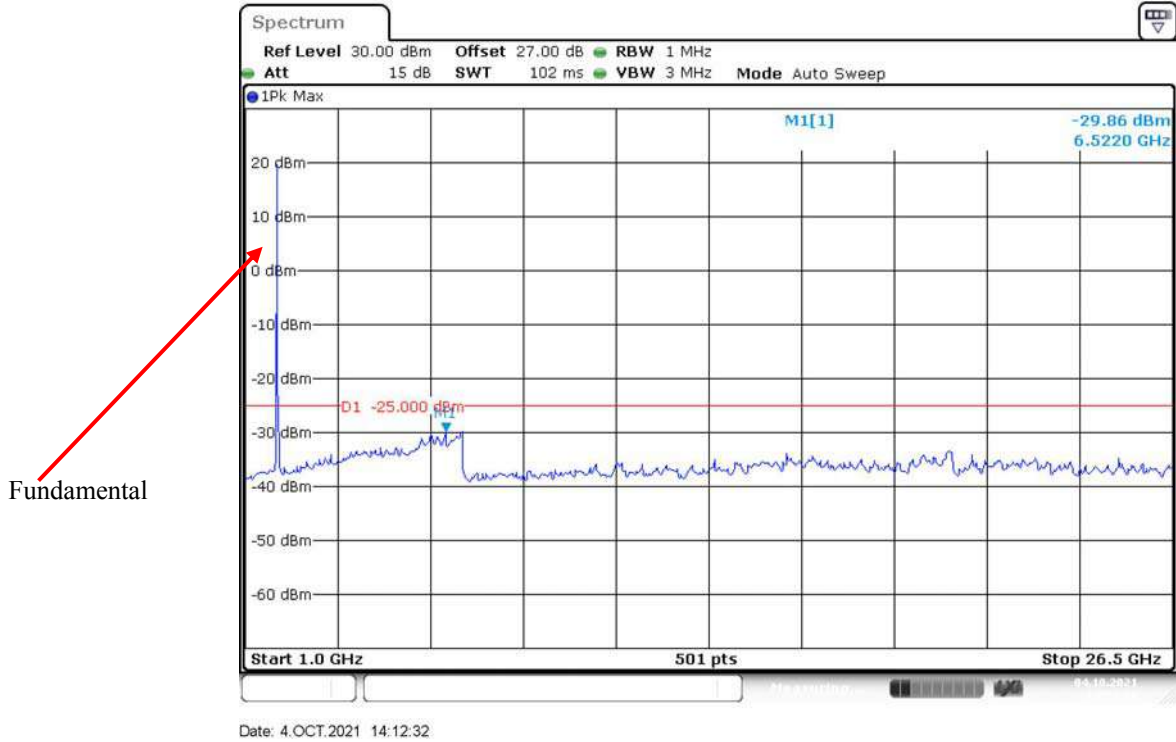
Date: 4.OCT.2021 14:09:35

### 30 MHz – 1 GHz (QPSK, 20.0 MHz, Middle Channel)

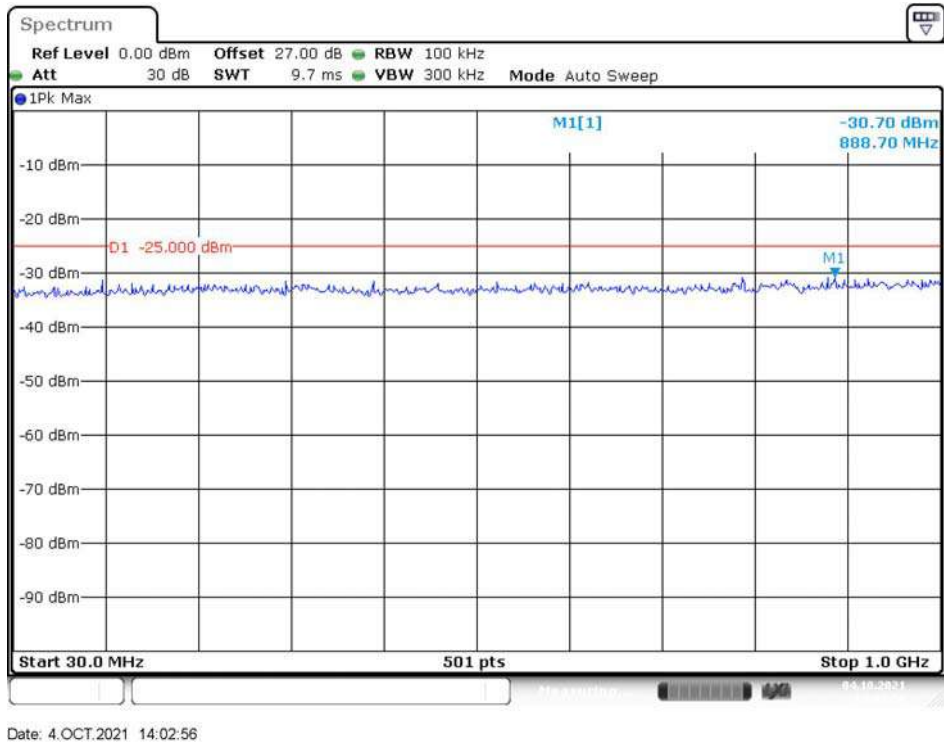


Date: 4.OCT.2021 14:12:03

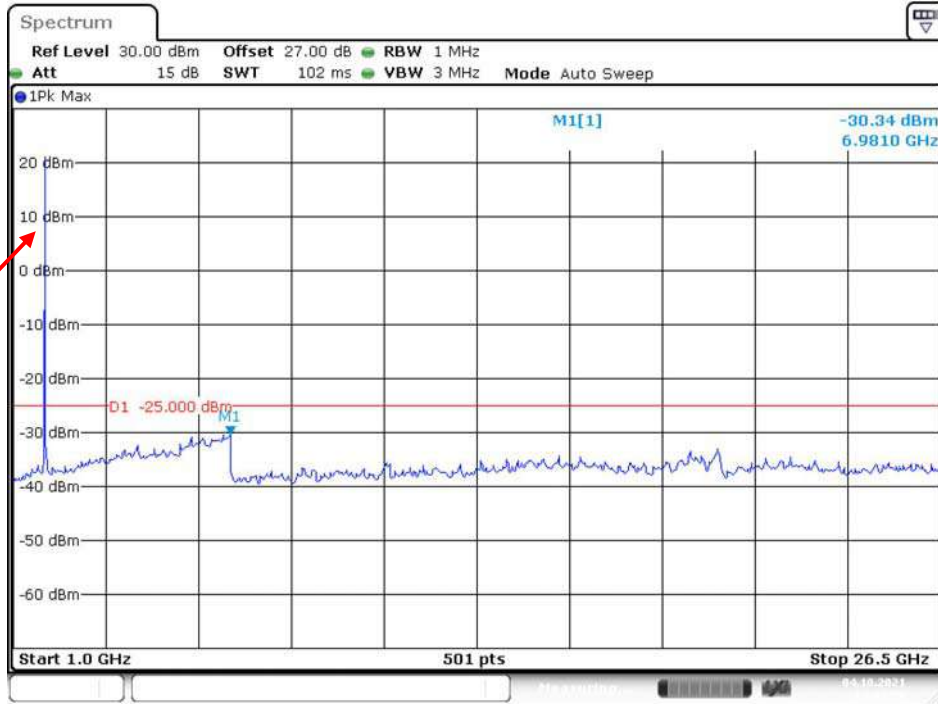
### 1 GHz – 26.5 GHz (QPSK, 20.0MHz, Middle Channel)



### 30 MHz – 1 GHz (QPSK, 5.0 MHz, High Channel)

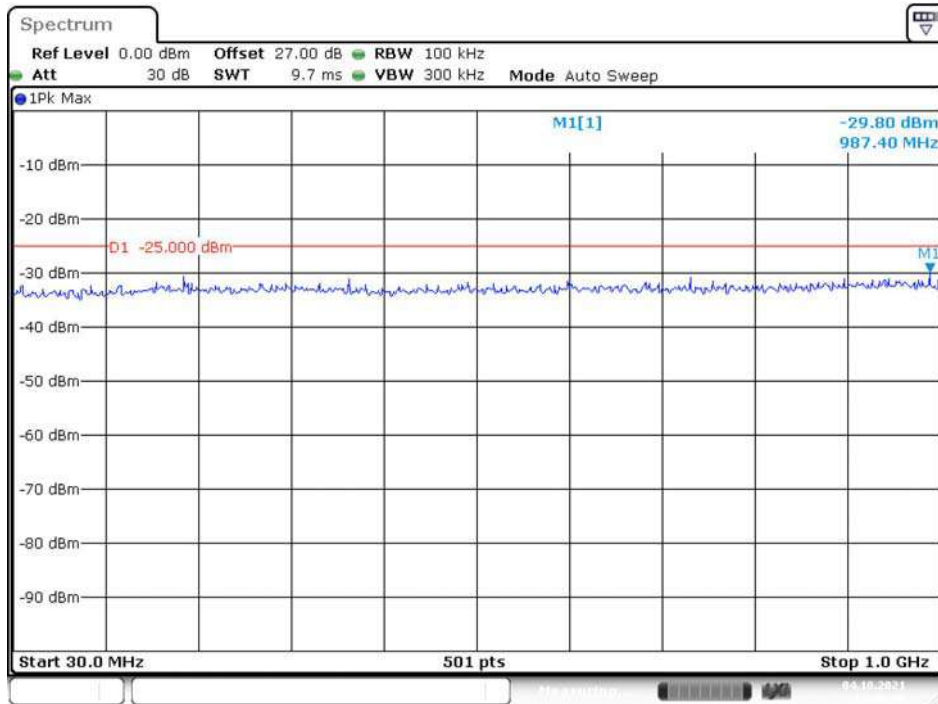


### 1 GHz – 26.5 GHz (QPSK, 5.0 MHz, High Channel)



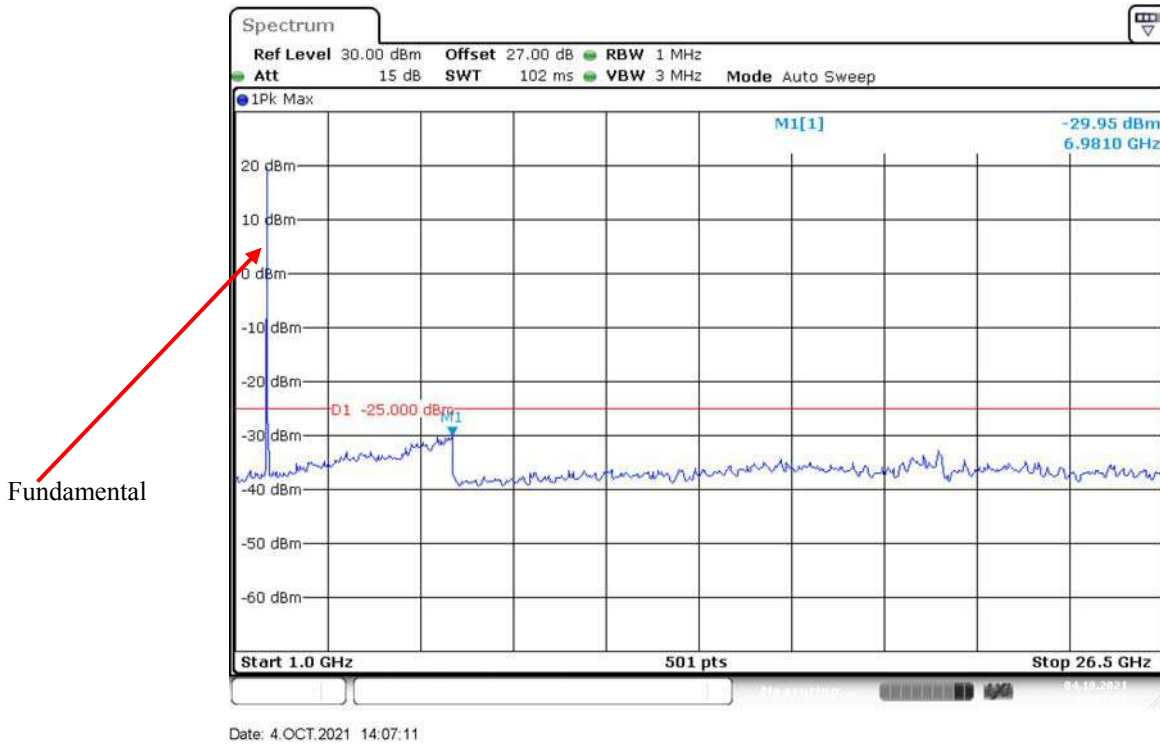
Date: 4.OCT.2021 14:03:31

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, High Channel)

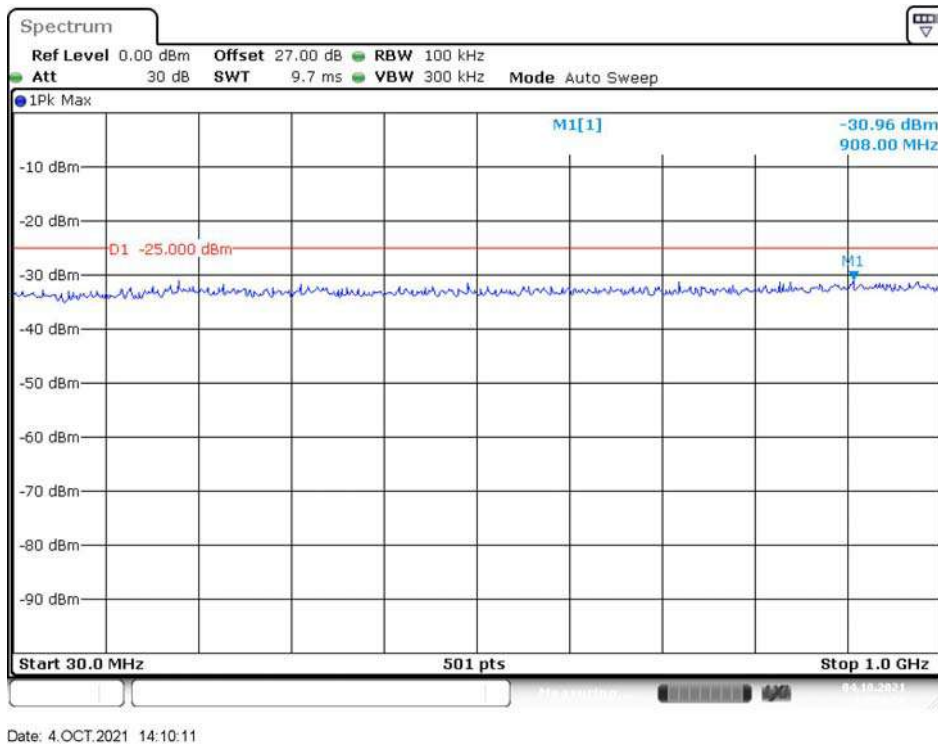


Date: 4.OCT.2021 14:06:49

### 1 GHz – 26.5 GHz (QPSK, 10.0 MHz, High Channel)

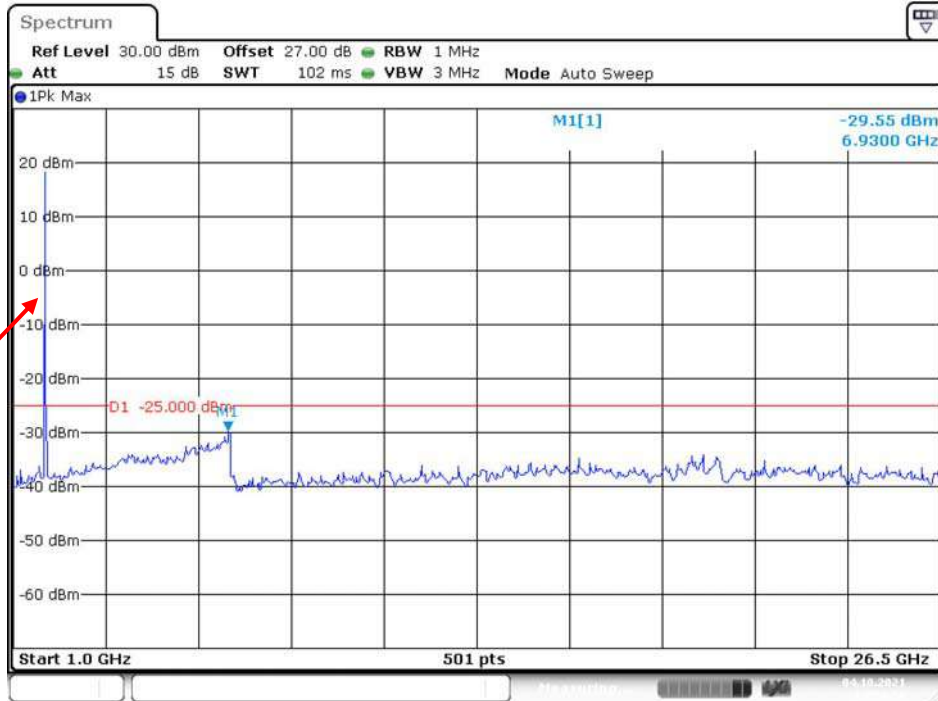


### 30 MHz – 1 GHz (QPSK, 15.0 MHz, High Channel)





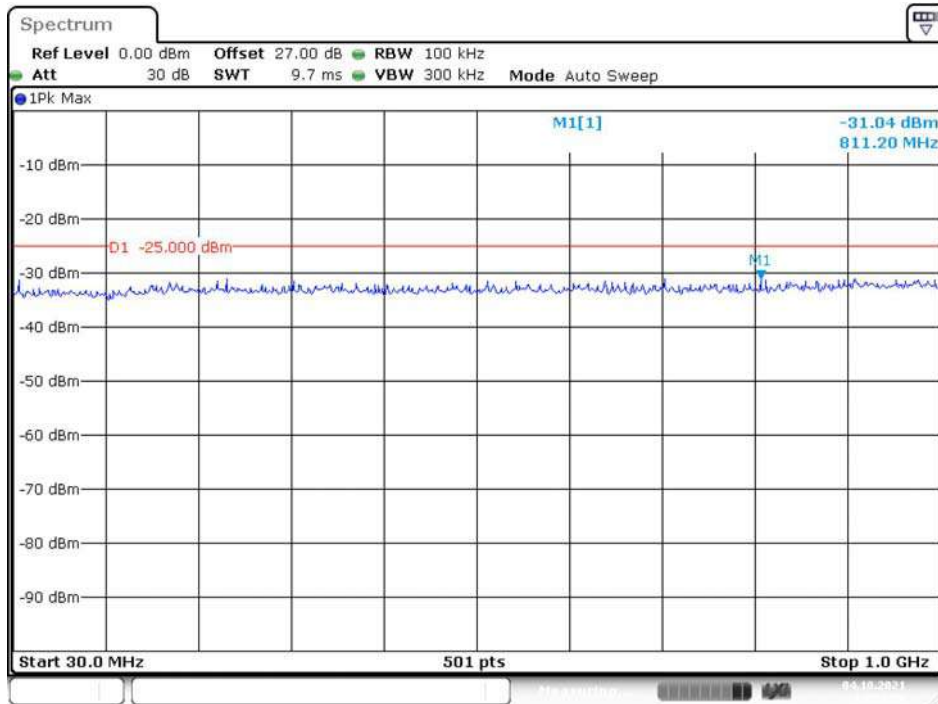
### 1 GHz – 26.5 GHz (QPSK, 15.0MHz, High Channel)



Fundamental

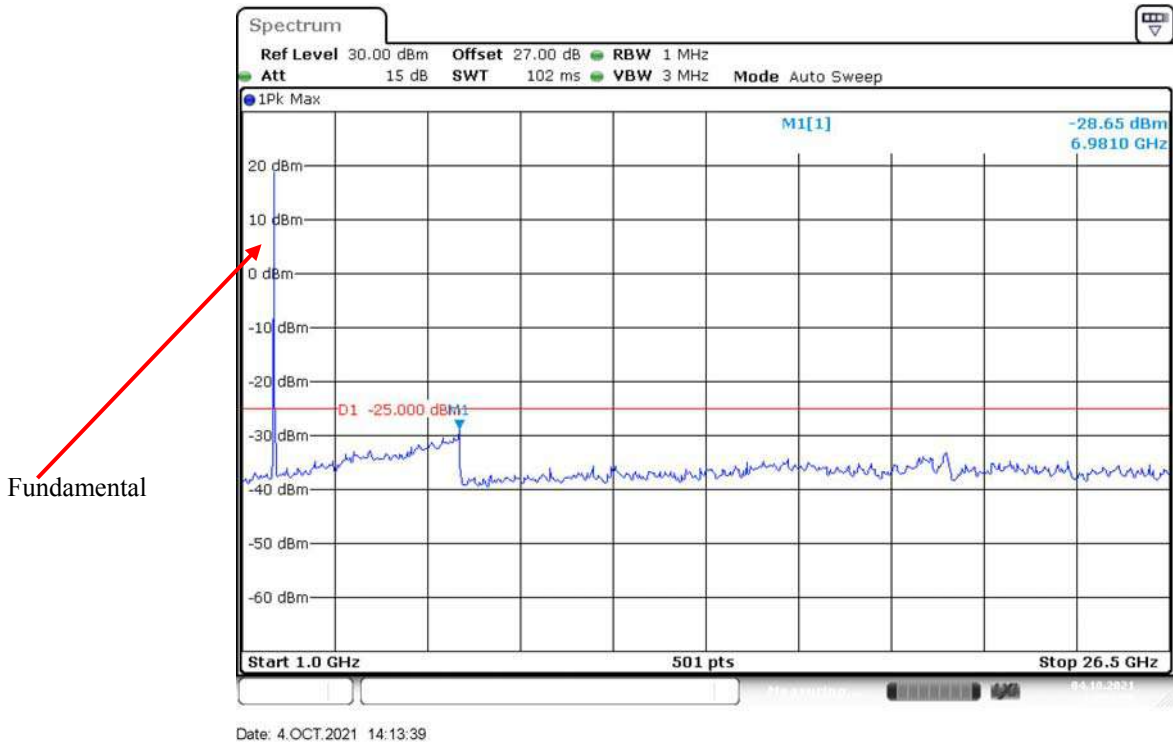
Date: 4.OCT.2021 14:10:20

### 30 MHz – 1 GHz (QPSK, 20.0 MHz, High Channel)



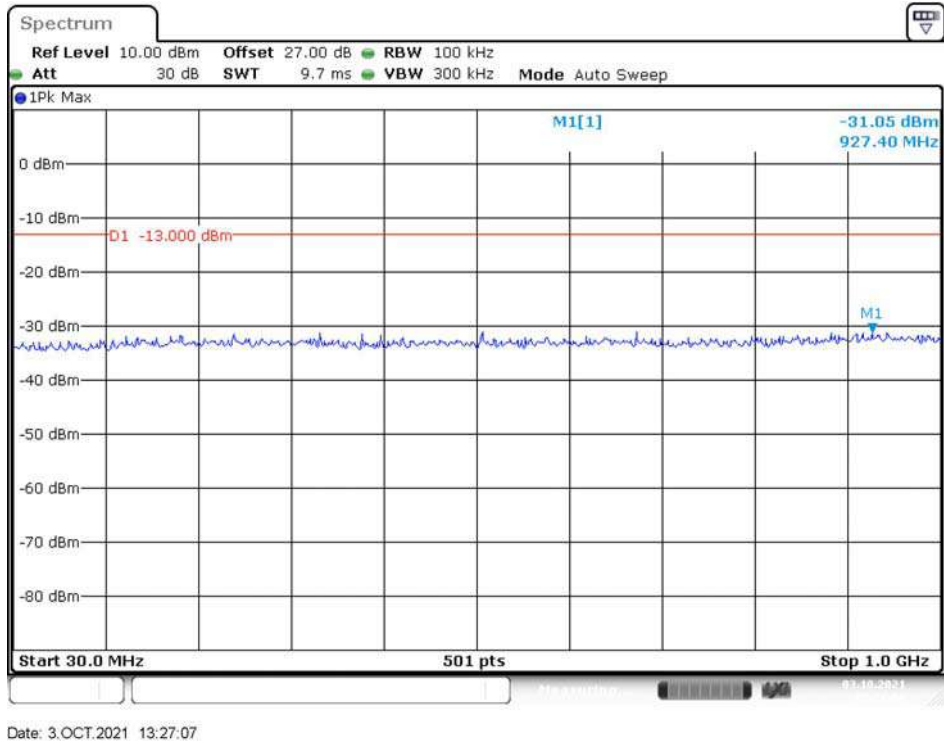
Date: 4.OCT.2021 14:13:16

### 1 GHz – 26.5 GHz (QPSK, 20.0 MHz, High Channel)

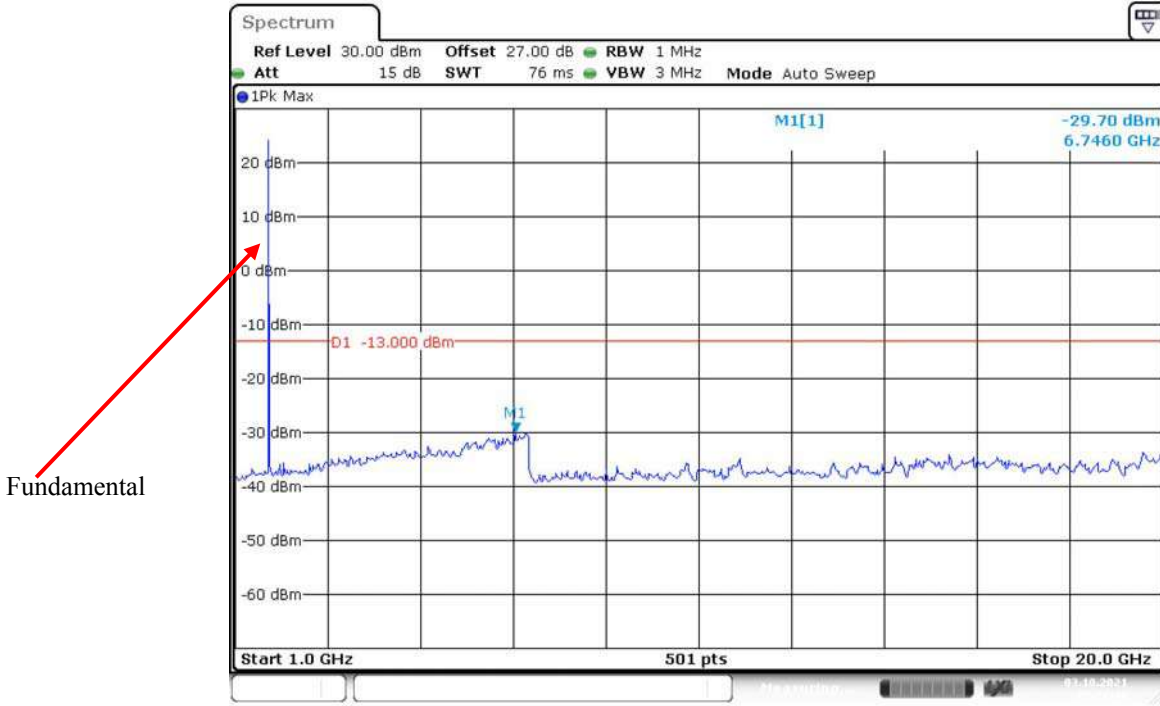


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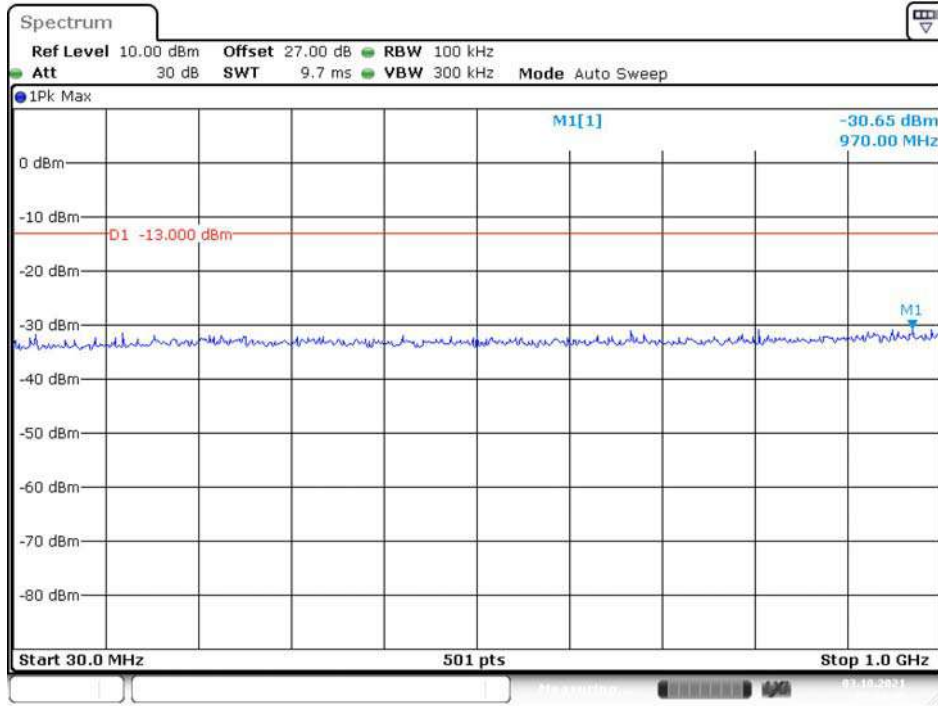
### 30 MHz – 1 GHz (QPSK, 1.4 MHz, Low Channel)



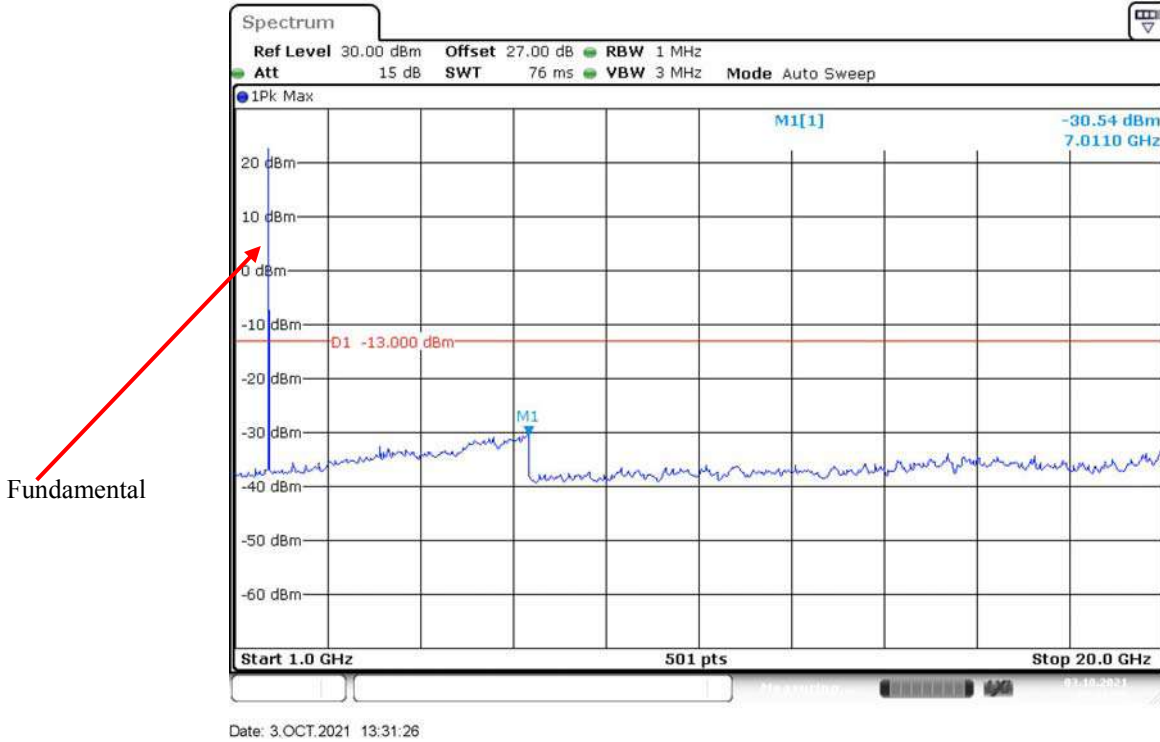
### 1 GHz – 10 GHz (QPSK, 1.4 MHz, Low Channel)



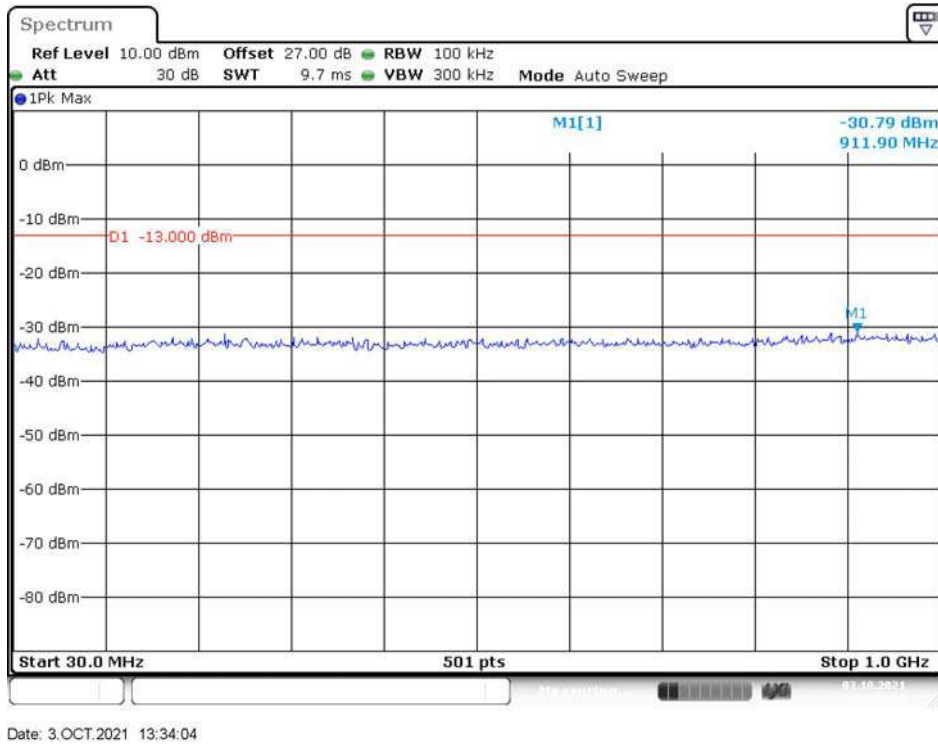
### 30 MHz – 1 GHz (QPSK, 3.0 MHz, Low Channel)



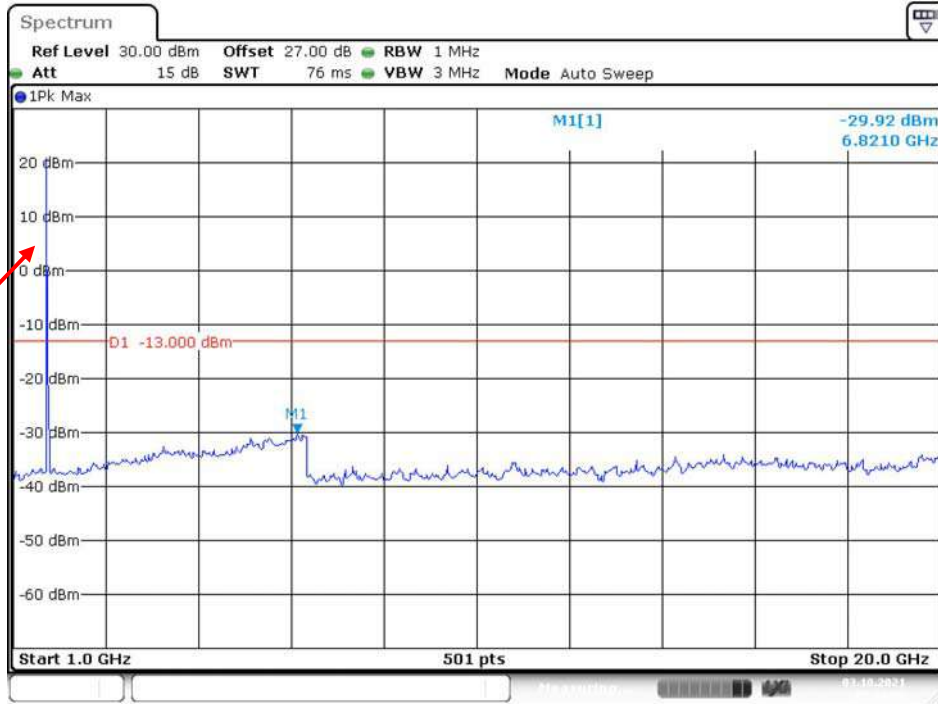
### 1 GHz – 10 GHz (QPSK, 3.0 MHz, Low Channel)



### 30 MHz – 1 GHz (QPSK, 5.0 MHz, Low Channel)

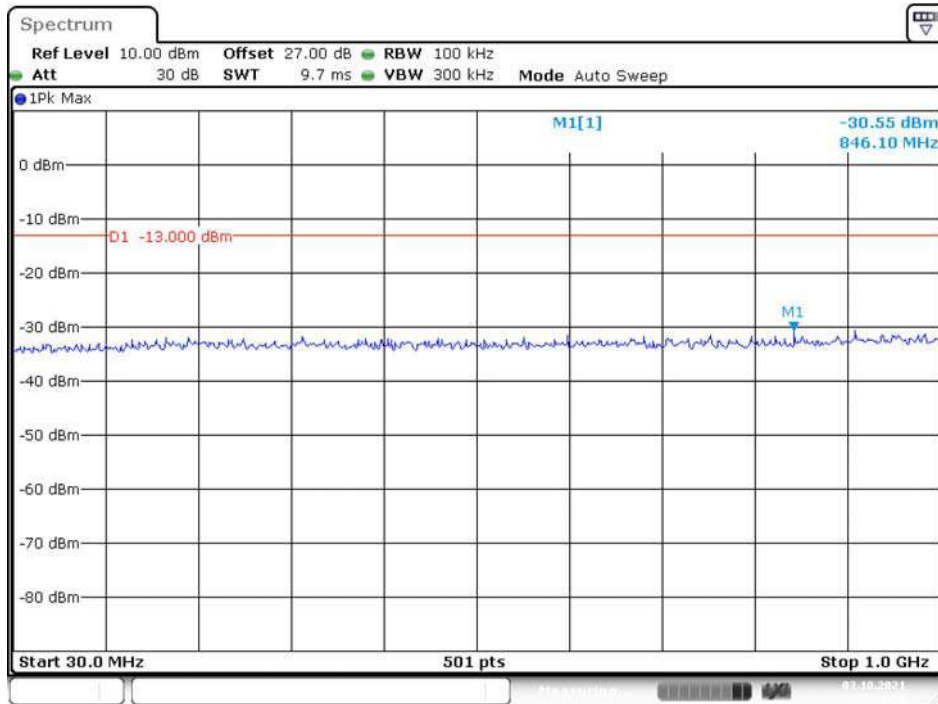


### 1 GHz – 10 GHz (QPSK, 5.0 MHz, Low Channel)



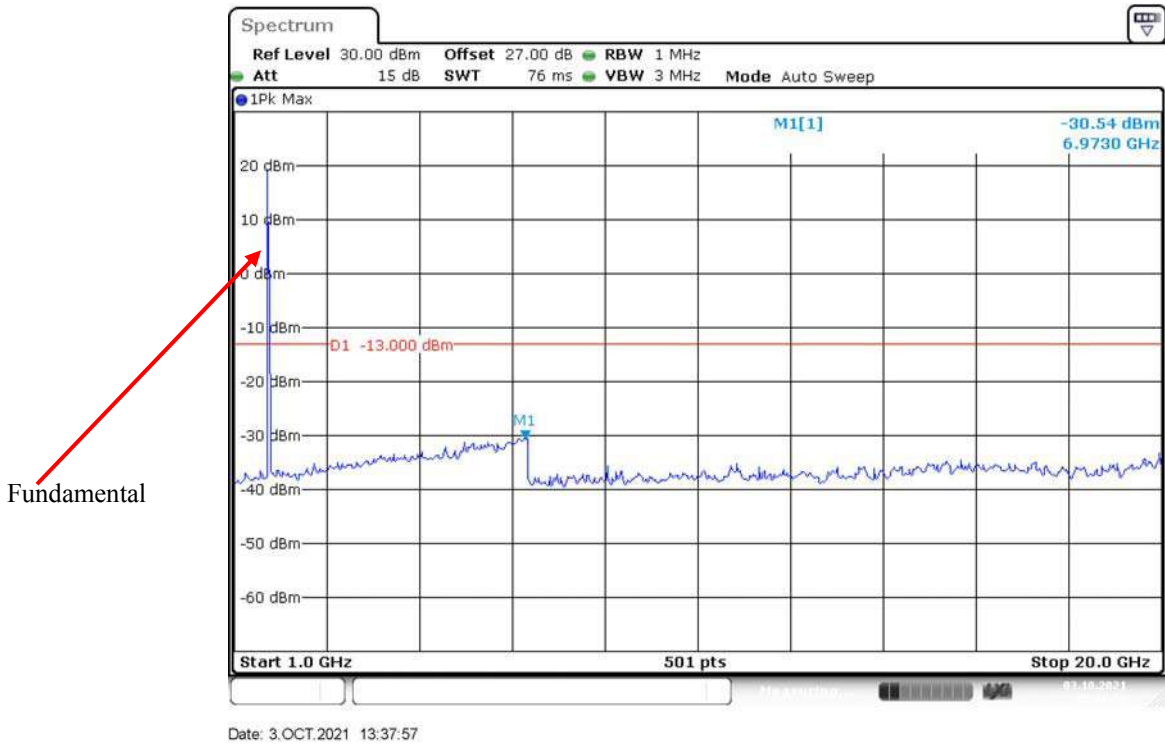
Date: 3.OCT.2021 13:34:42

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, Low Channel)

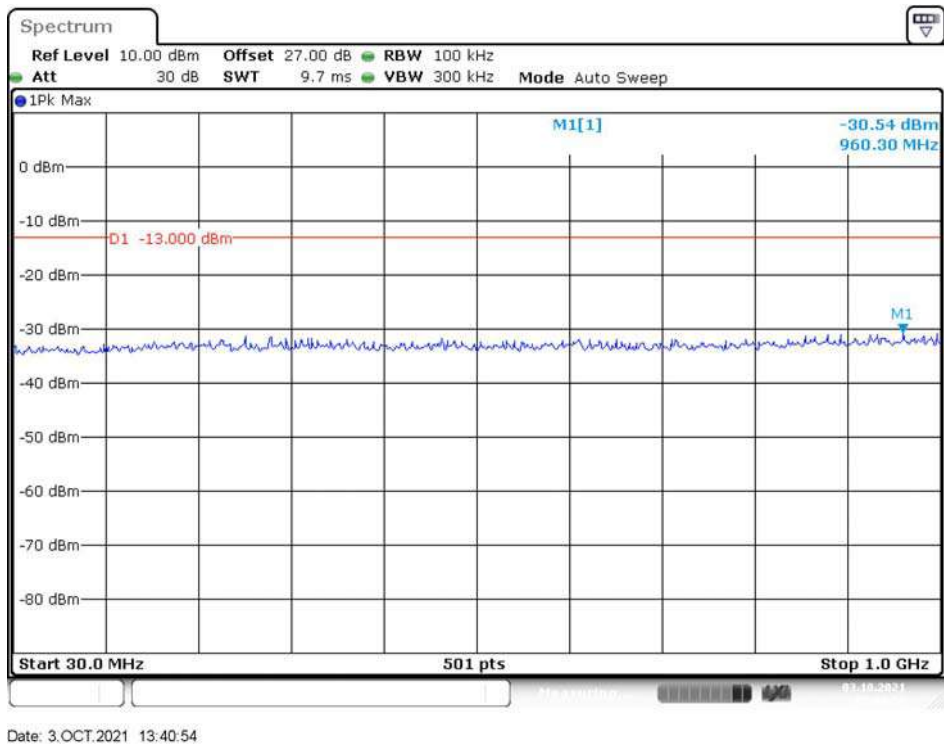


Date: 3.OCT.2021 13:37:19

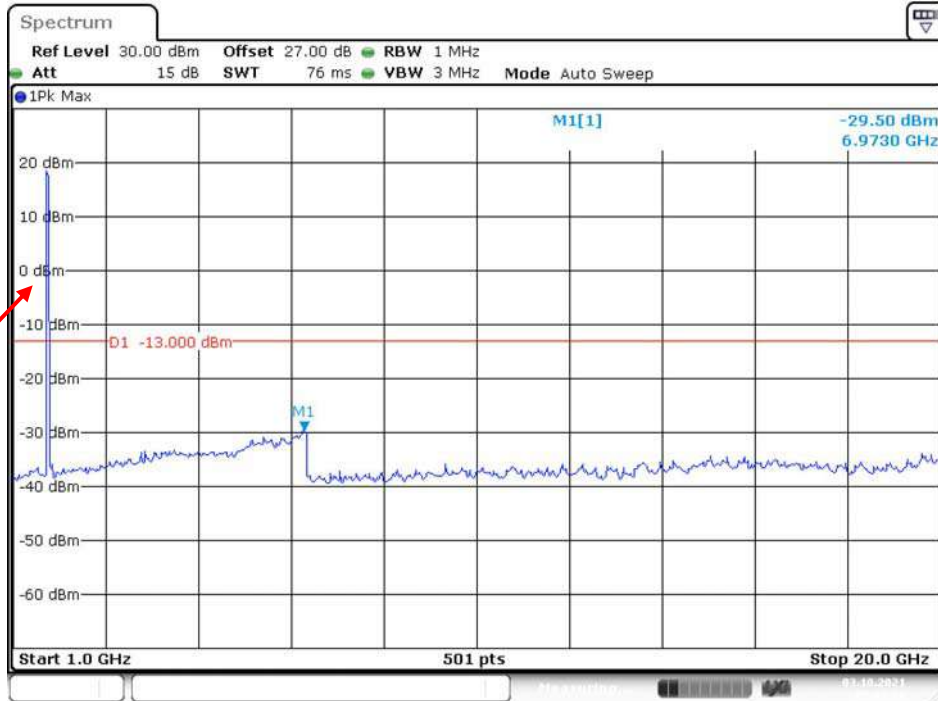
### 1 GHz – 10 GHz (QPSK, 10.0 MHz, Low Channel)



### 30 MHz – 1 GHz (QPSK, 15.0 MHz, Low Channel)



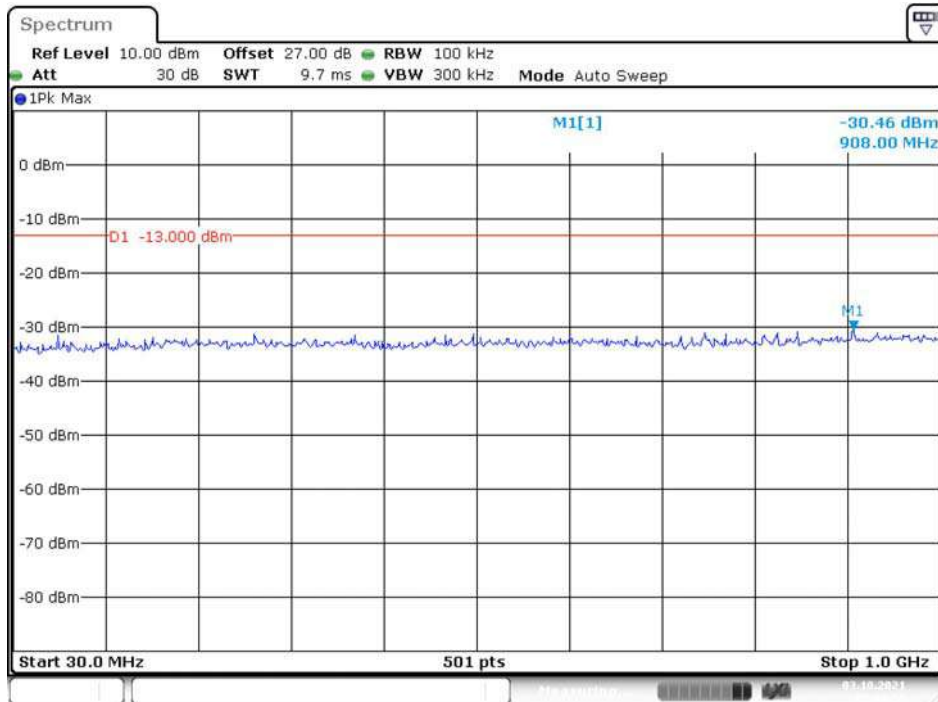
### 1 GHz – 10 GHz (QPSK, 15.0 MHz, Low Channel)



Fundamental

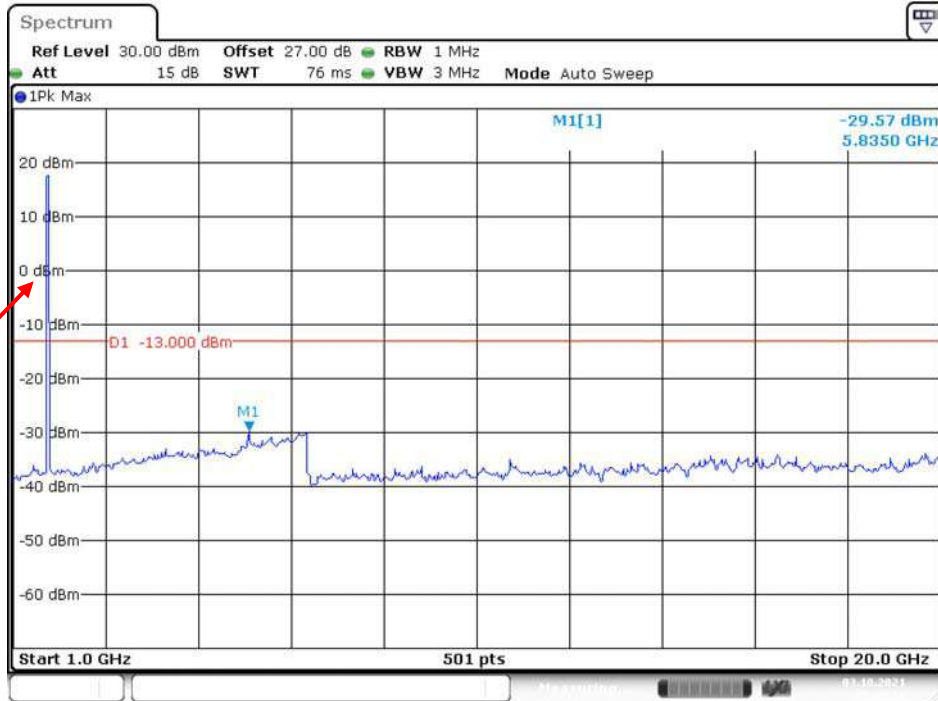
Date: 3.OCT.2021 13:41:32

### 30 MHz – 1 GHz (QPSK, 20.0 MHz, Low Channel)



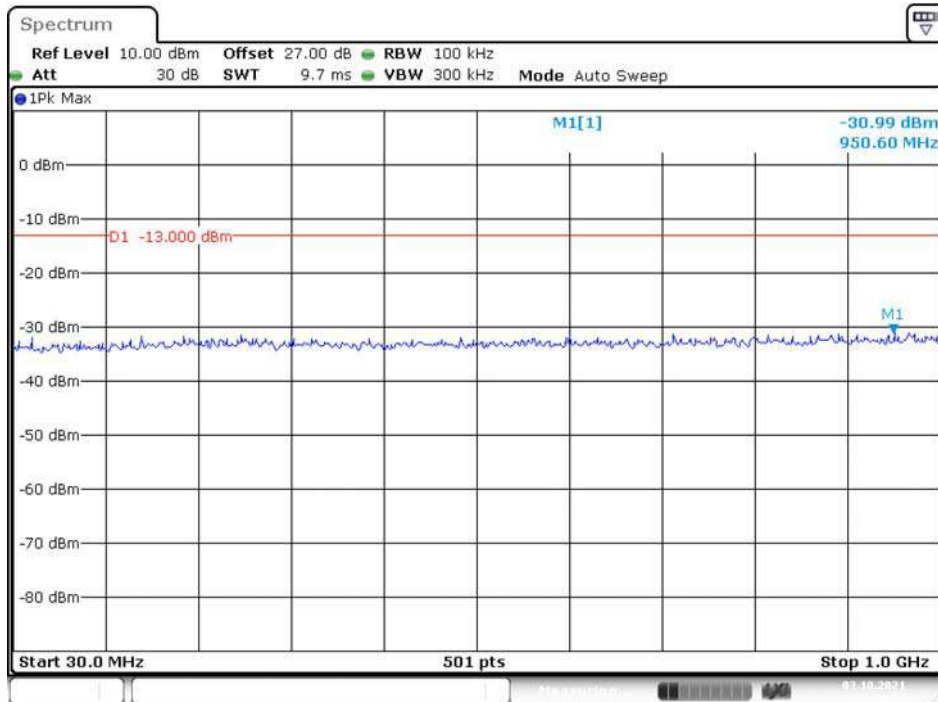
Date: 3.OCT.2021 13:44:55

### 1 GHz – 10 GHz (QPSK, 20.0 MHz, Low Channel)



Date: 3.OCT.2021 13:45:20

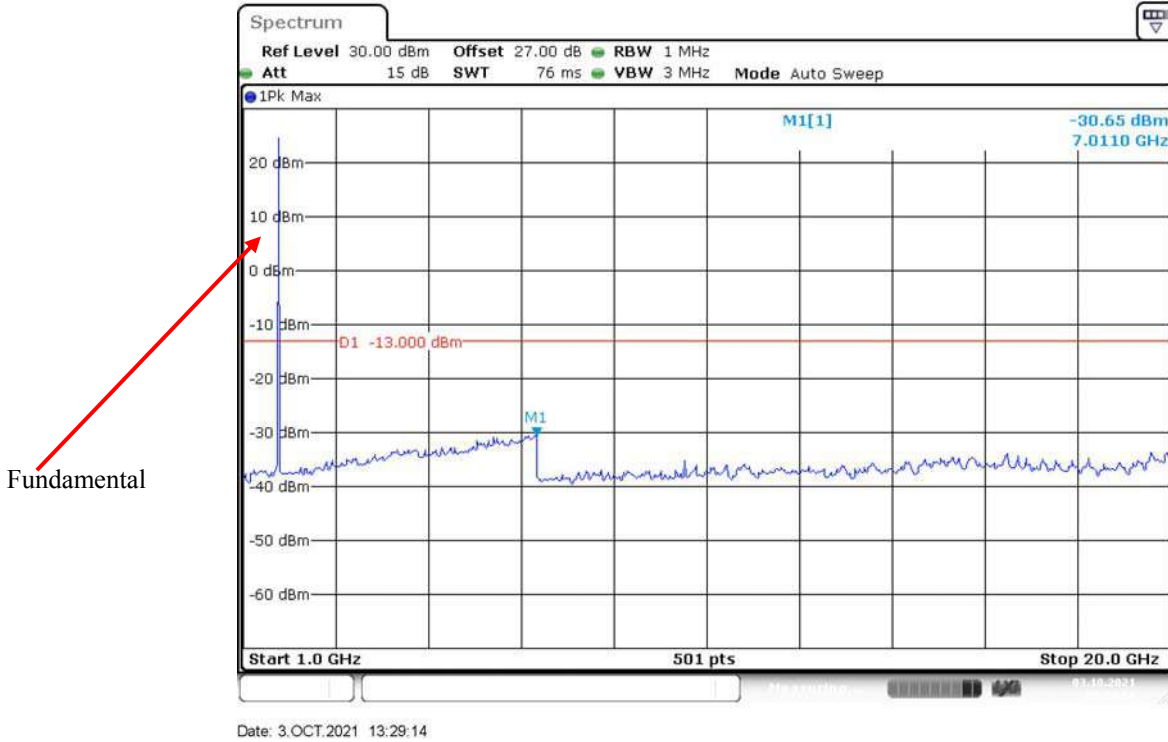
### 30 MHz – 1 GHz (QPSK, 1.4 MHz, Middle Channel)



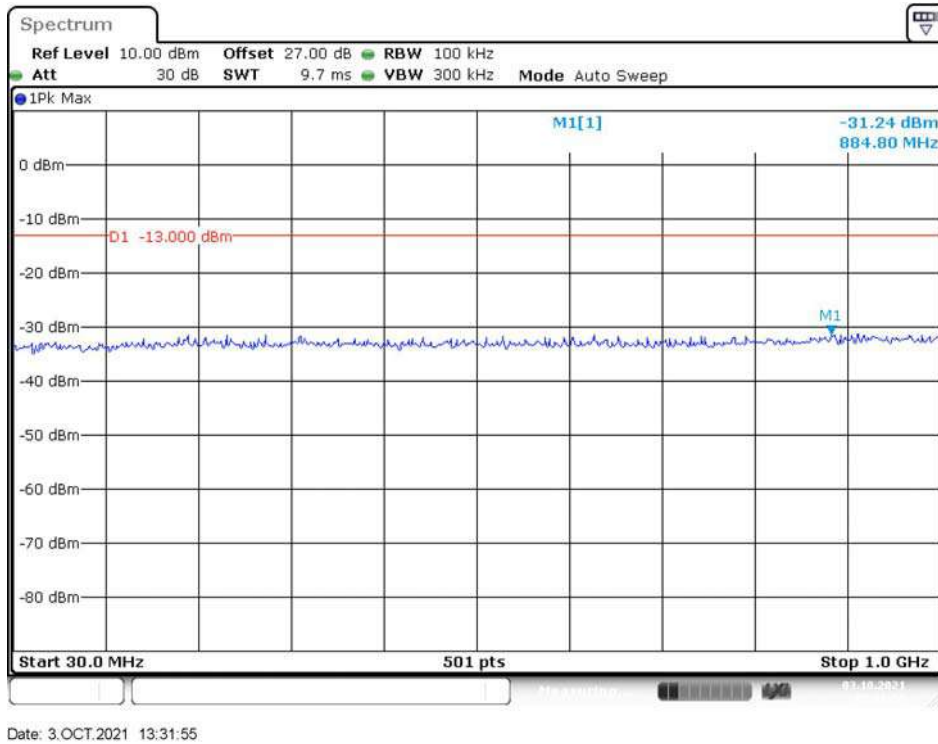
Date: 3.OCT.2021 13:28:33



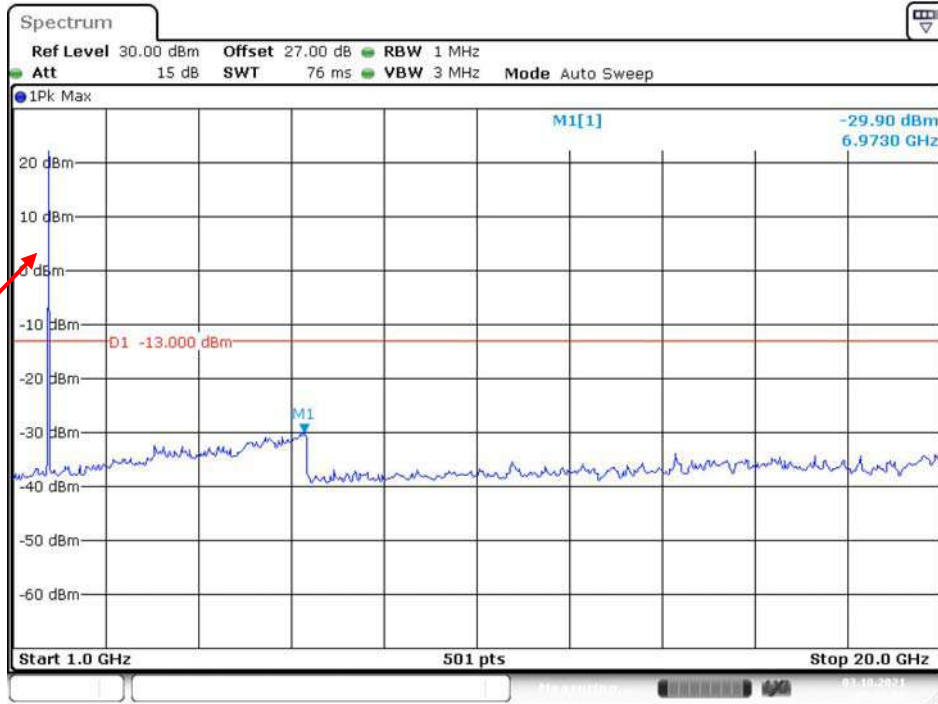
### 1 GHz – 10 GHz (QPSK, 1.4 MHz, Middle Channel)



### 30 MHz – 1 GHz (QPSK, 3.0 MHz, Middle Channel)

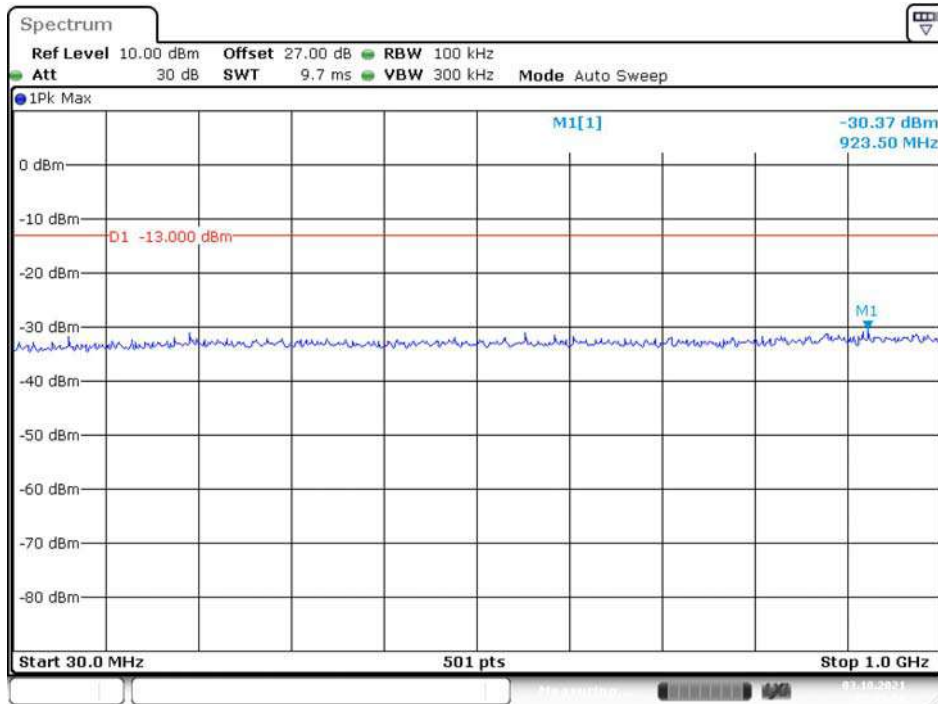


### 1 GHz – 10 GHz (QPSK, 3.0 MHz, Middle Channel)

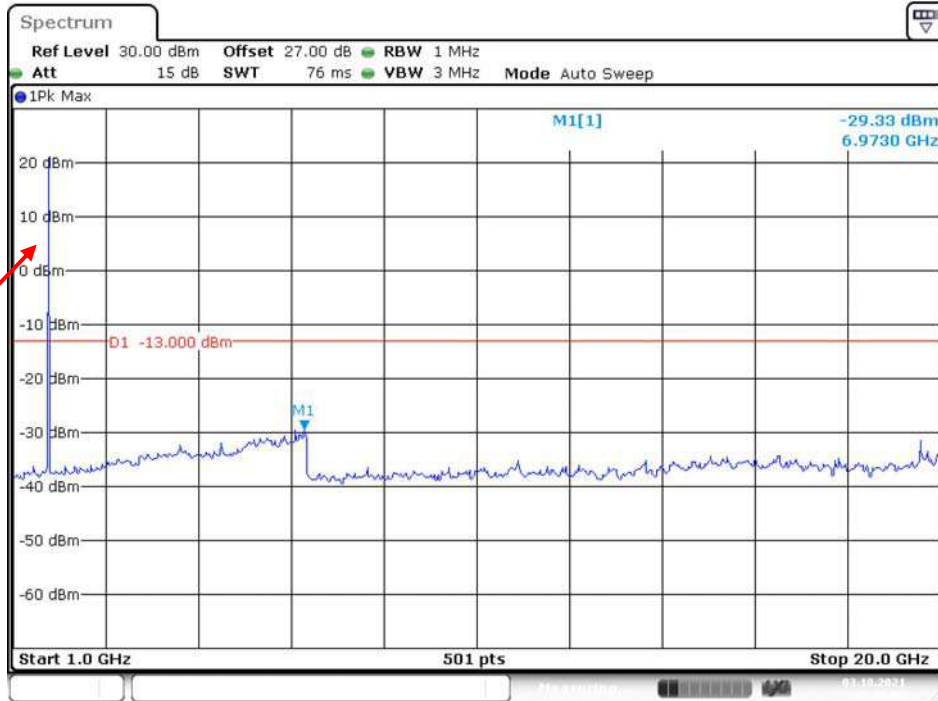


Fundamental

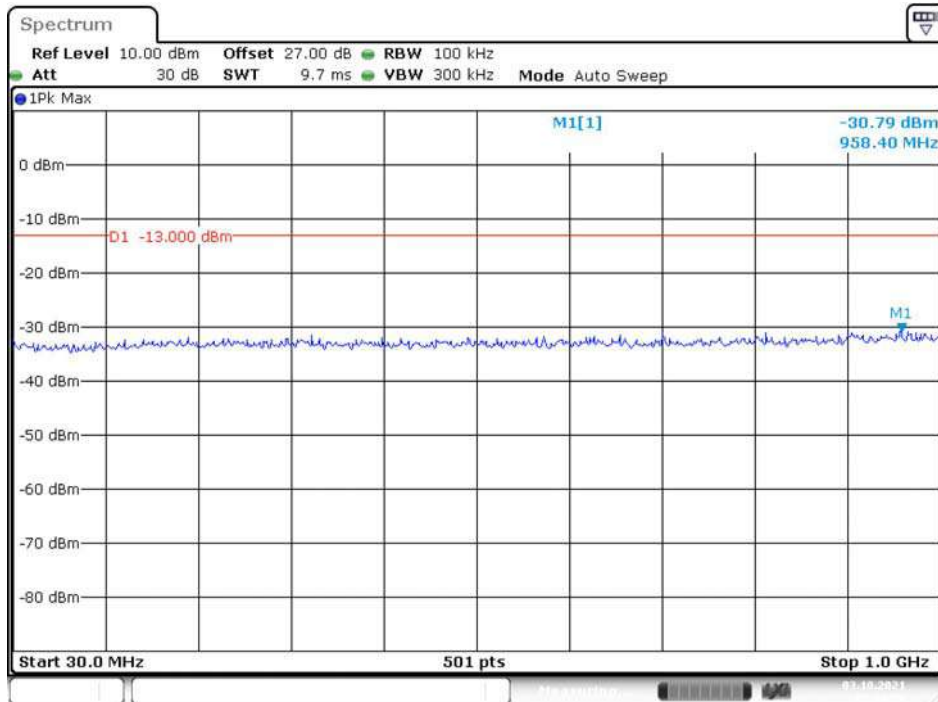
### 30 MHz – 1 GHz (QPSK, 5.0 MHz, Middle Channel)



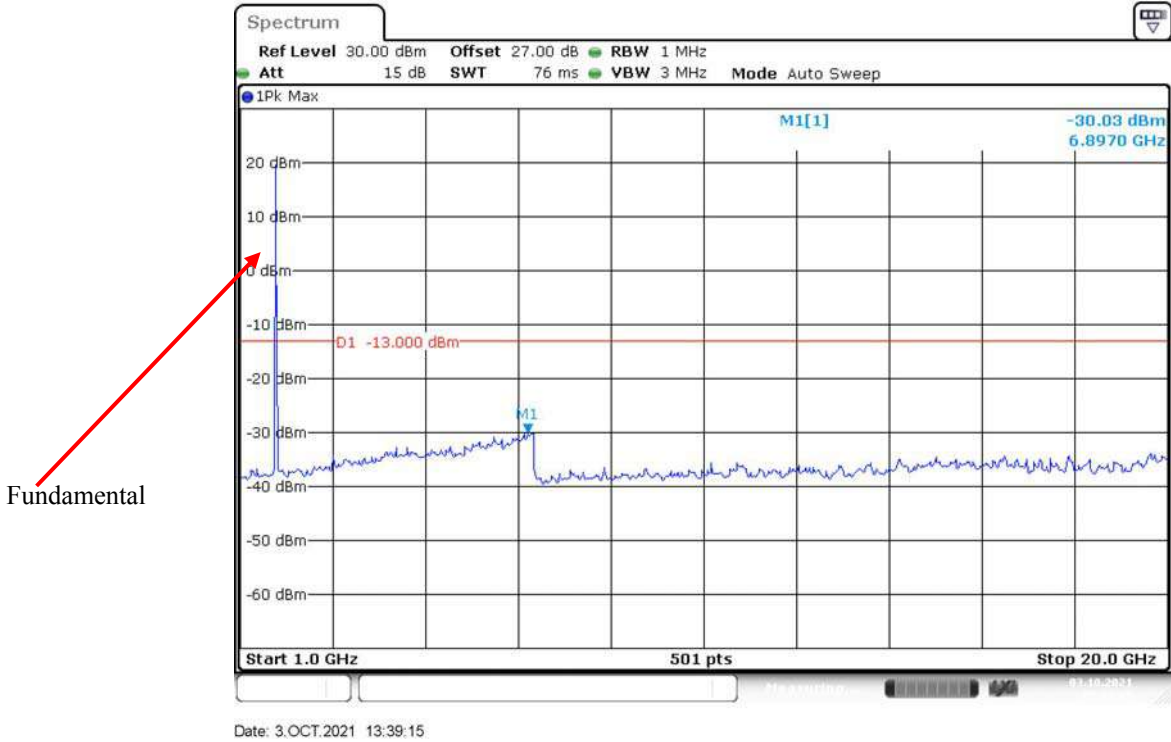
1 GHz – 10 GHz (QPSK, 5.0 MHz, Middle Channel)



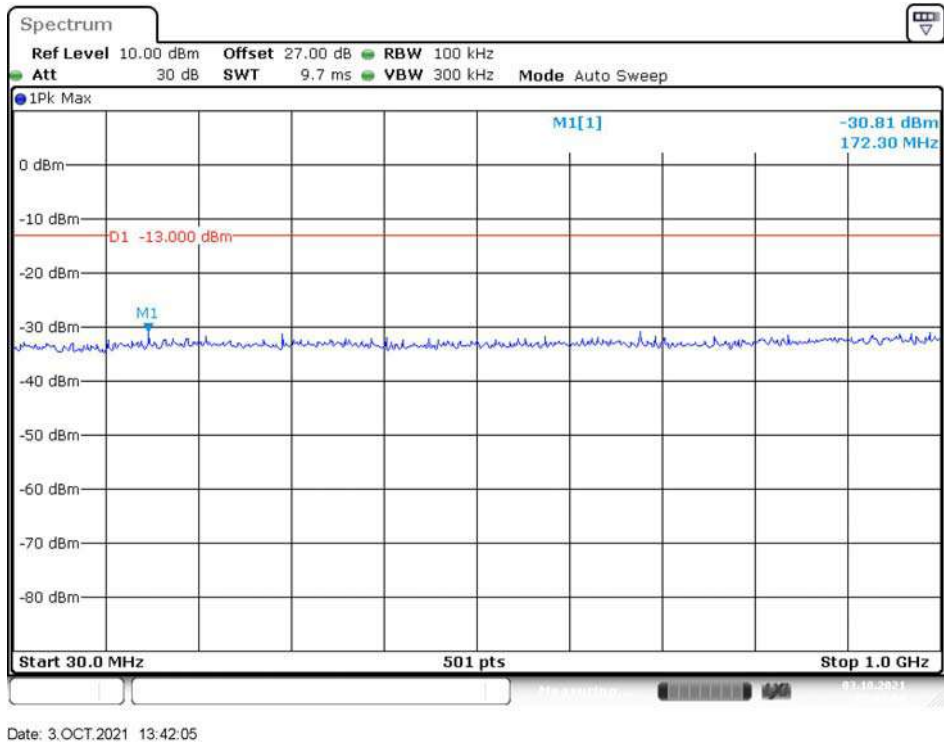
30 MHz – 1 GHz (QPSK, 10.0 MHz, Middle Channel)



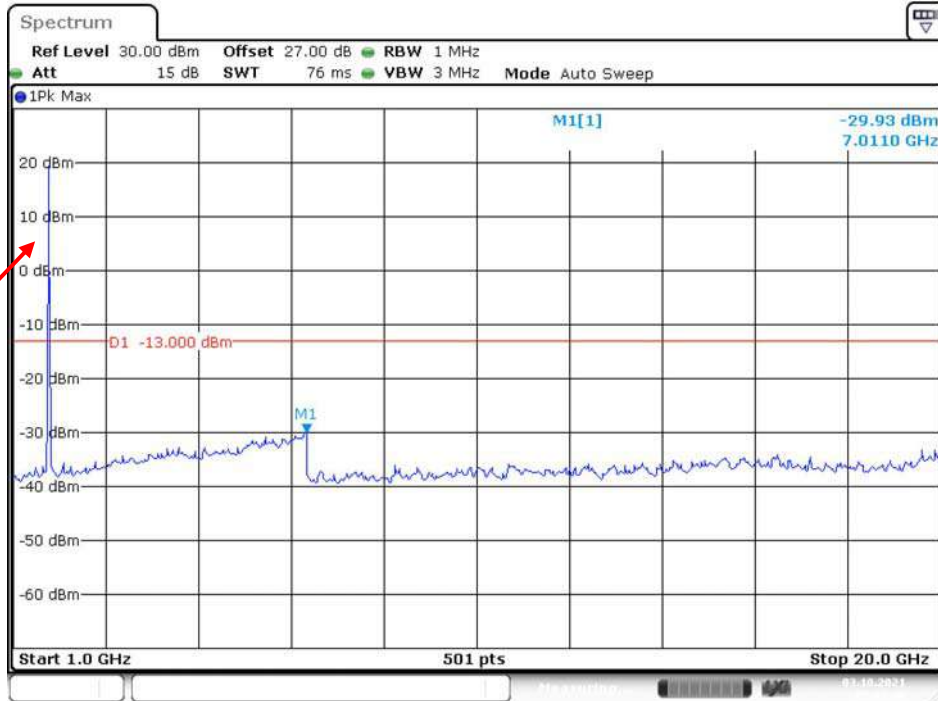
### 1 GHz – 10 GHz (QPSK, 10.0 MHz, Middle Channel)



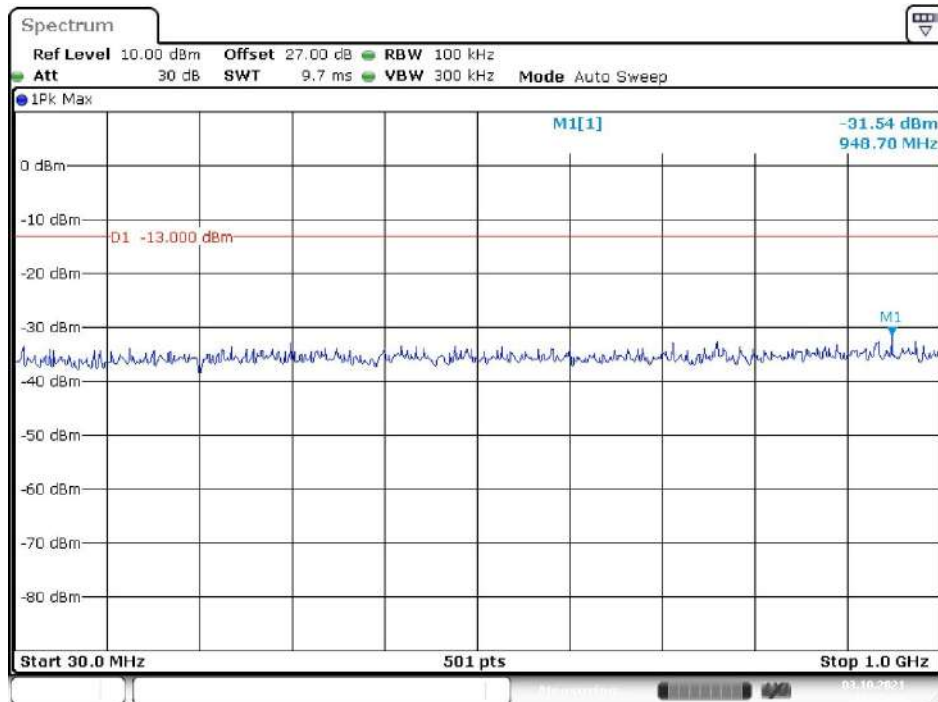
### 30 MHz – 1 GHz (QPSK, 15.0 MHz, Middle Channel)



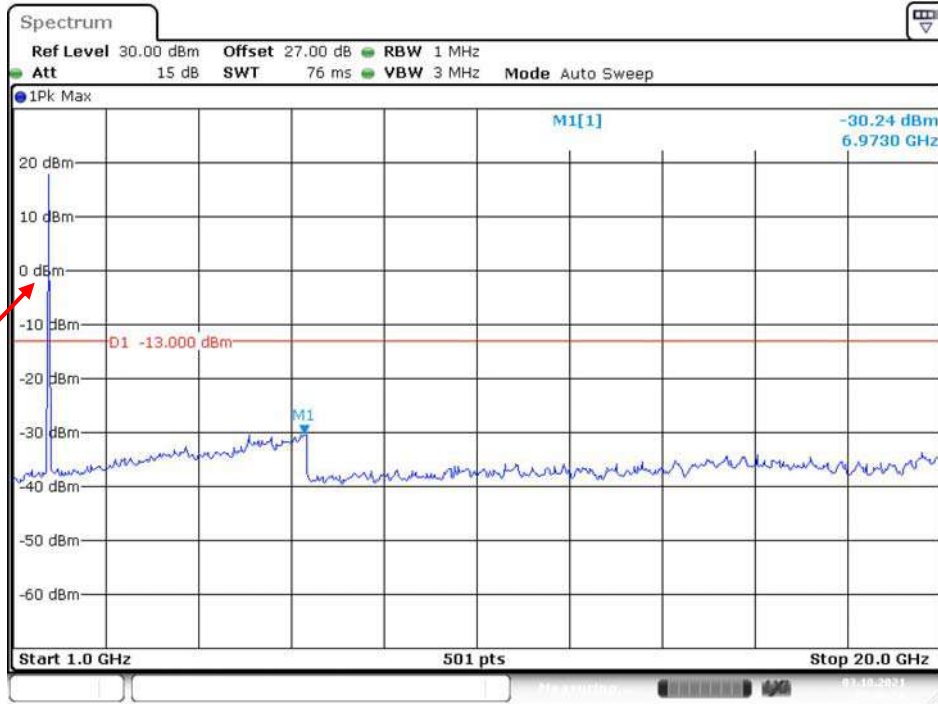
### 1 GHz – 10 GHz (QPSK, 15.0 MHz, Middle Channel)



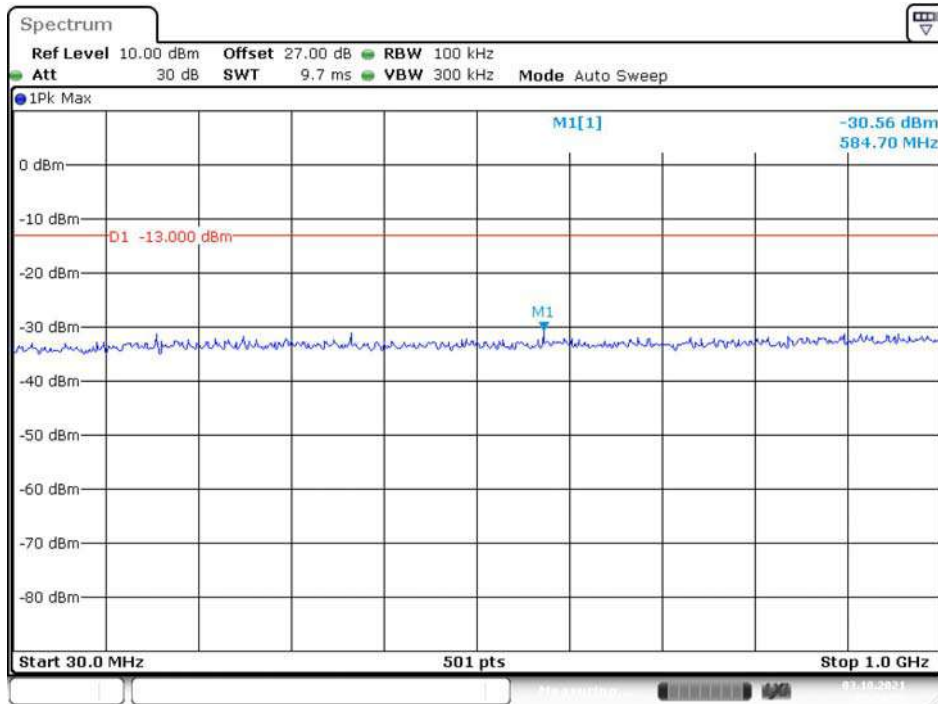
### 30 MHz – 1 GHz (QPSK, 20.0 MHz, Middle Channel)



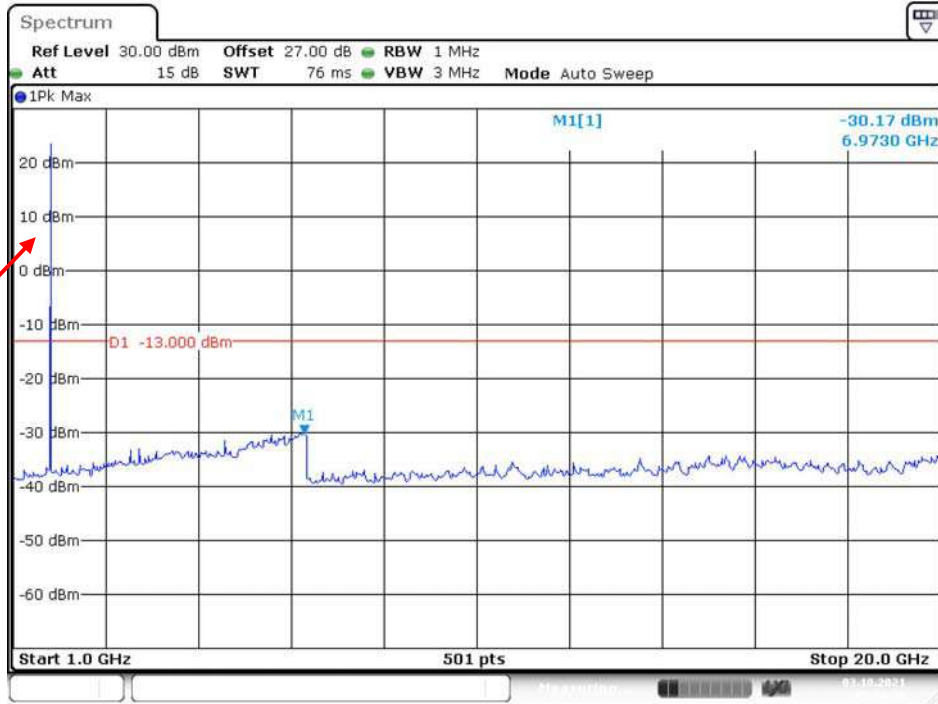
### 1 GHz – 10 GHz (QPSK, 20.0 MHz, Middle Channel)



### 30 MHz – 1 GHz (QPSK, 1.4 MHz, High Channel)

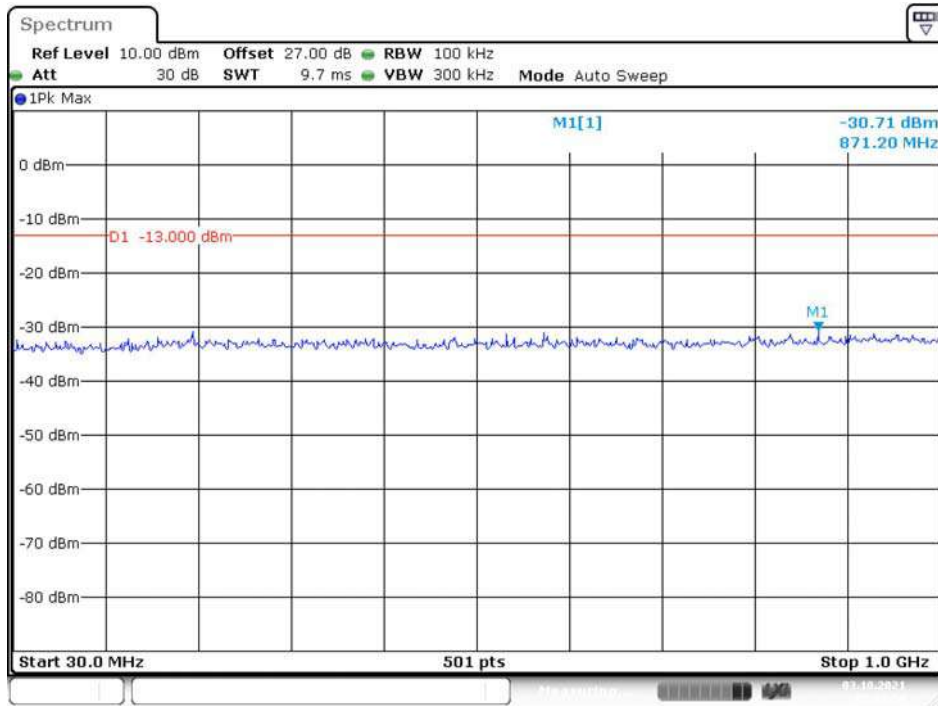


### 1 GHz – 10 GHz (QPSK, 1.4 MHz, High Channel)



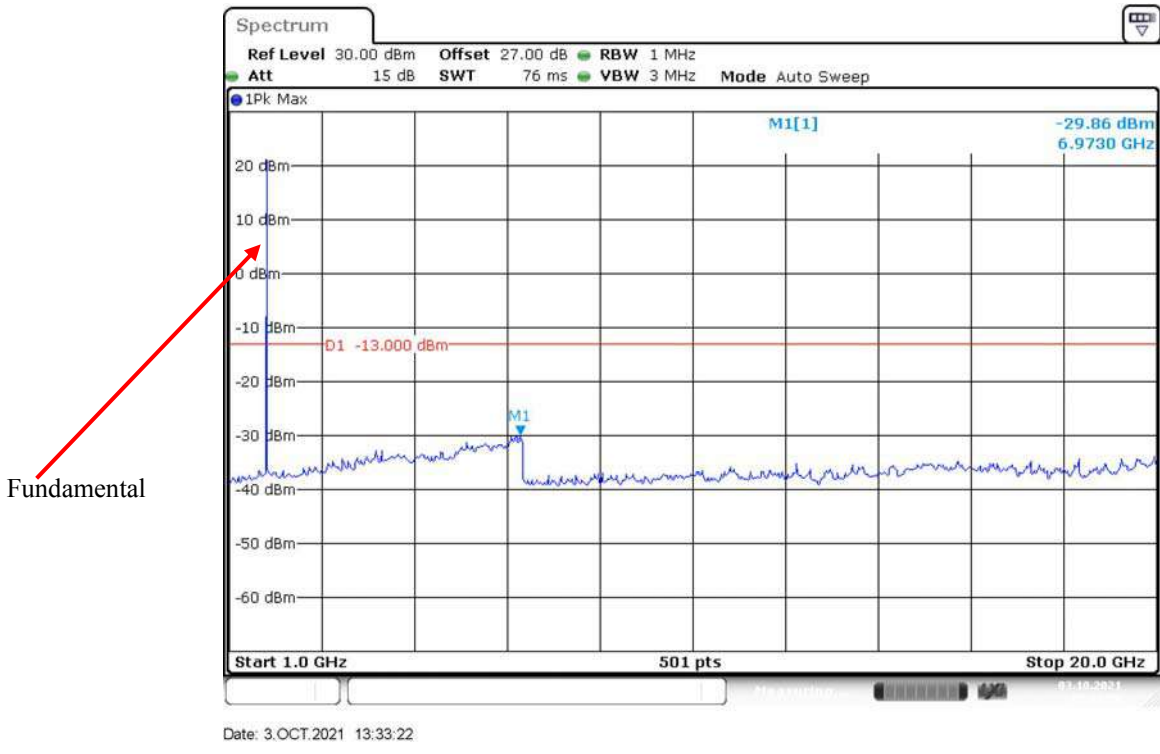
Date: 3.OCT.2021 13:30:03

### 30 MHz – 1 GHz (QPSK, 3.0 MHz, High Channel)

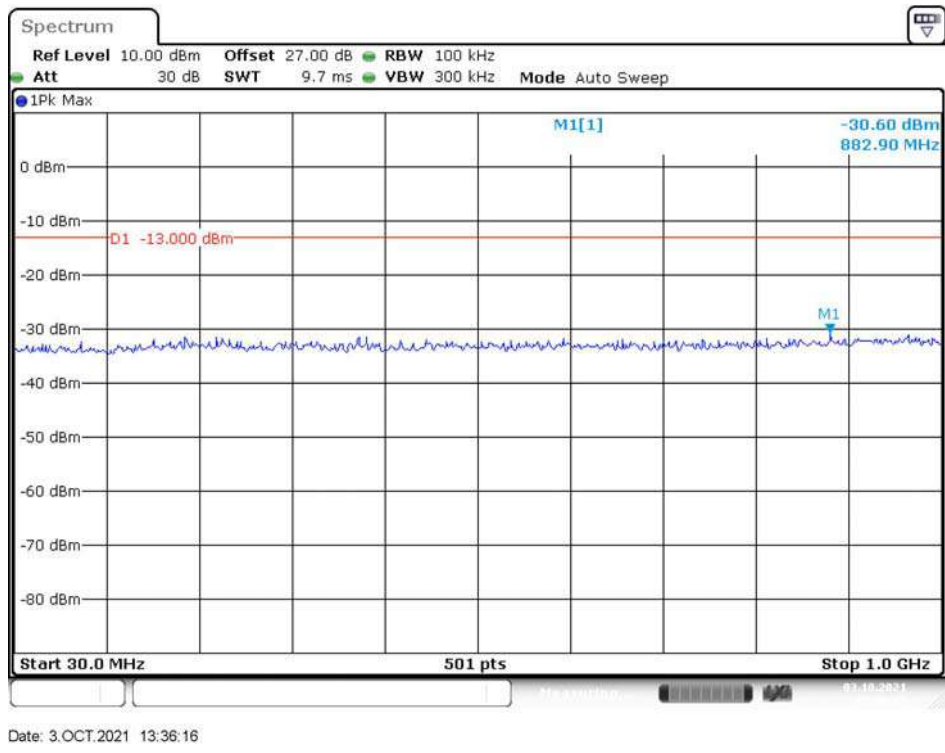


Date: 3.OCT.2021 13:32:53

### 1 GHz – 10 GHz (QPSK, 3.0 MHz, High Channel)

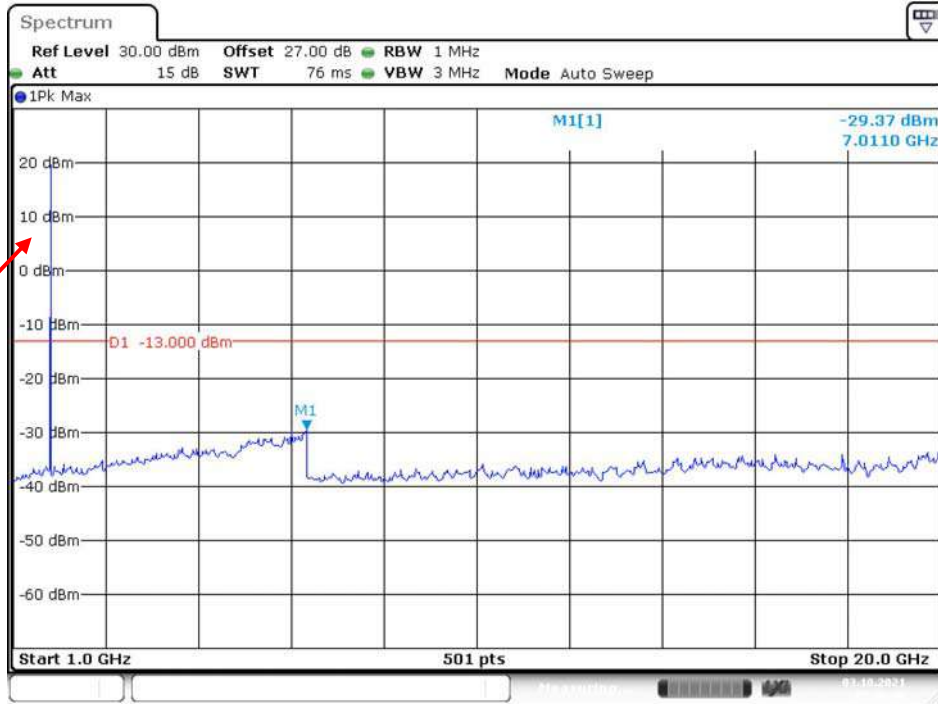


### 30 MHz – 1 GHz (QPSK, 5.0 MHz, High Channel)



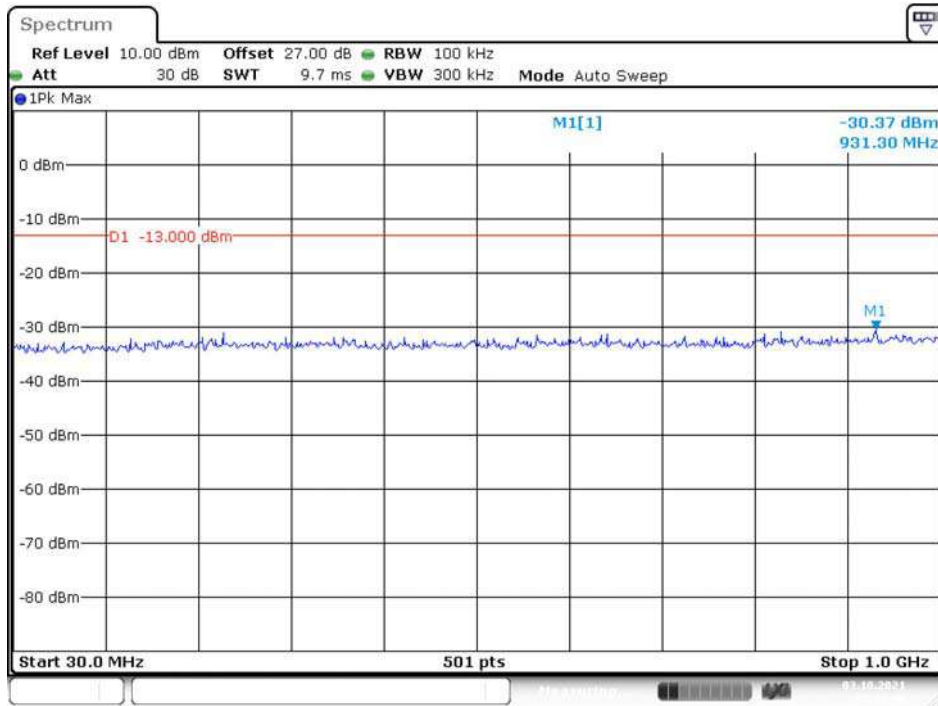


### 1 GHz – 10 GHz (QPSK, 5.0 MHz, High Channel)

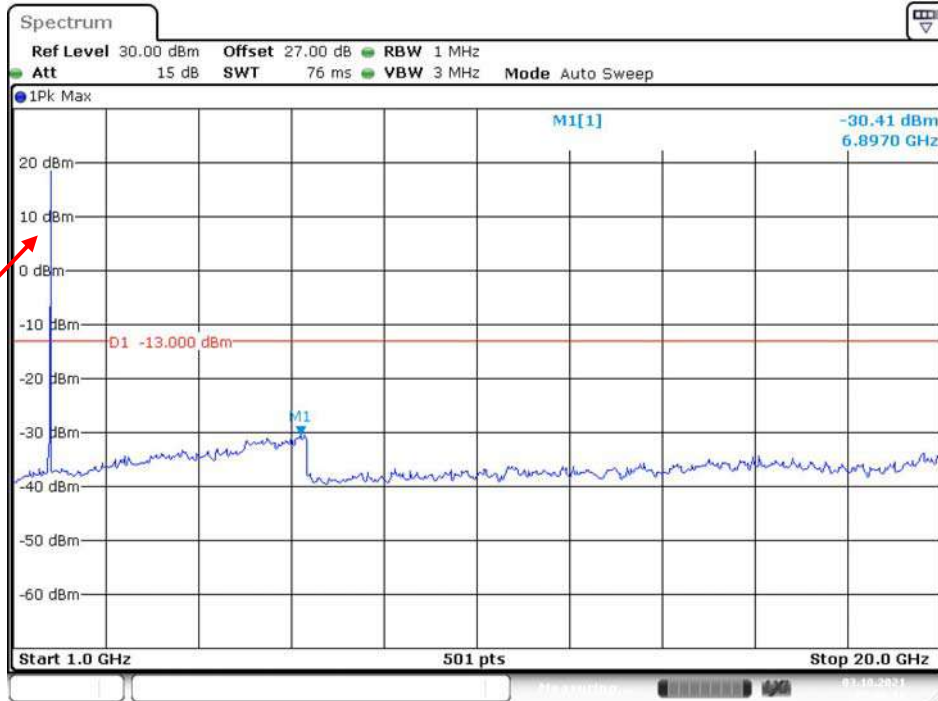


Fundamental

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, High Channel)



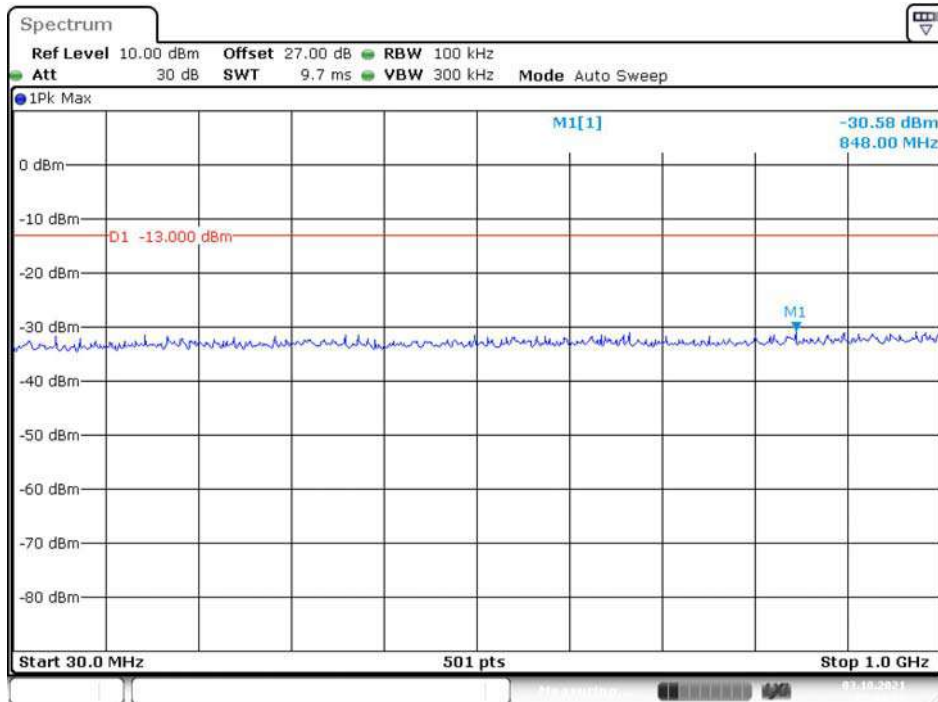
### 1 GHz – 10 GHz (QPSK, 10.0 MHz, High Channel)



Fundamental

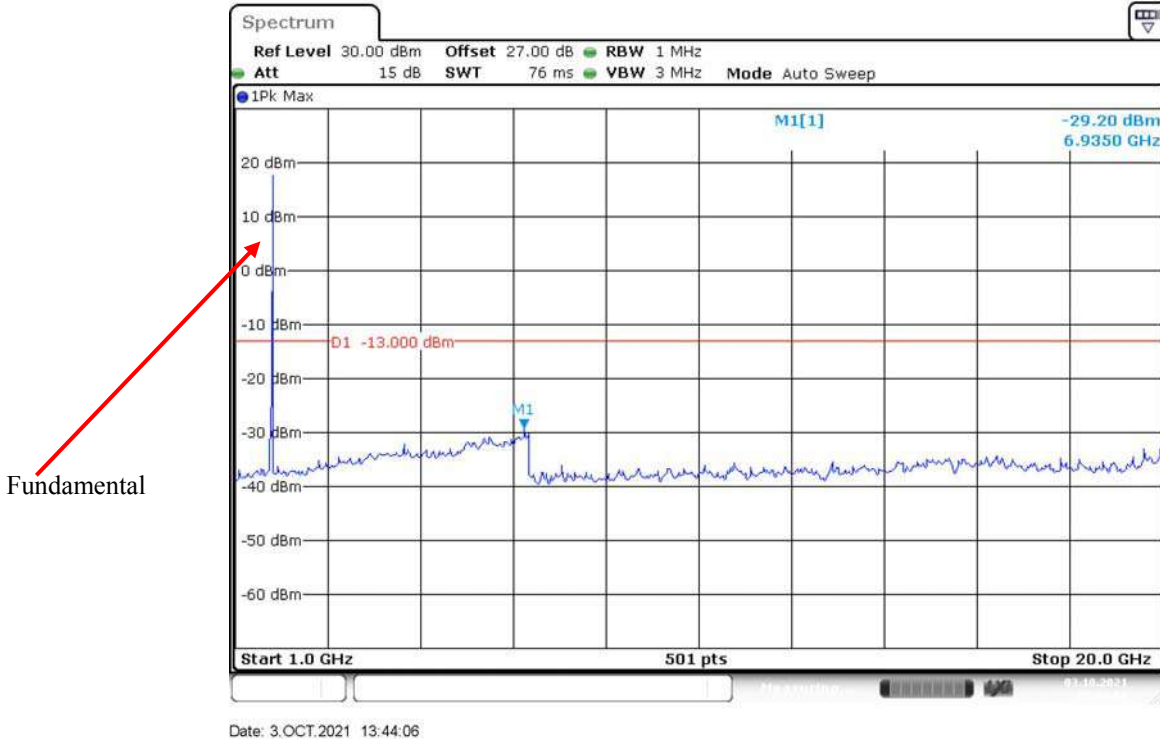
Date: 3.OCT.2021 13:40:11

### 30 MHz – 1 GHz (QPSK, 15.0 MHz, High Channel)

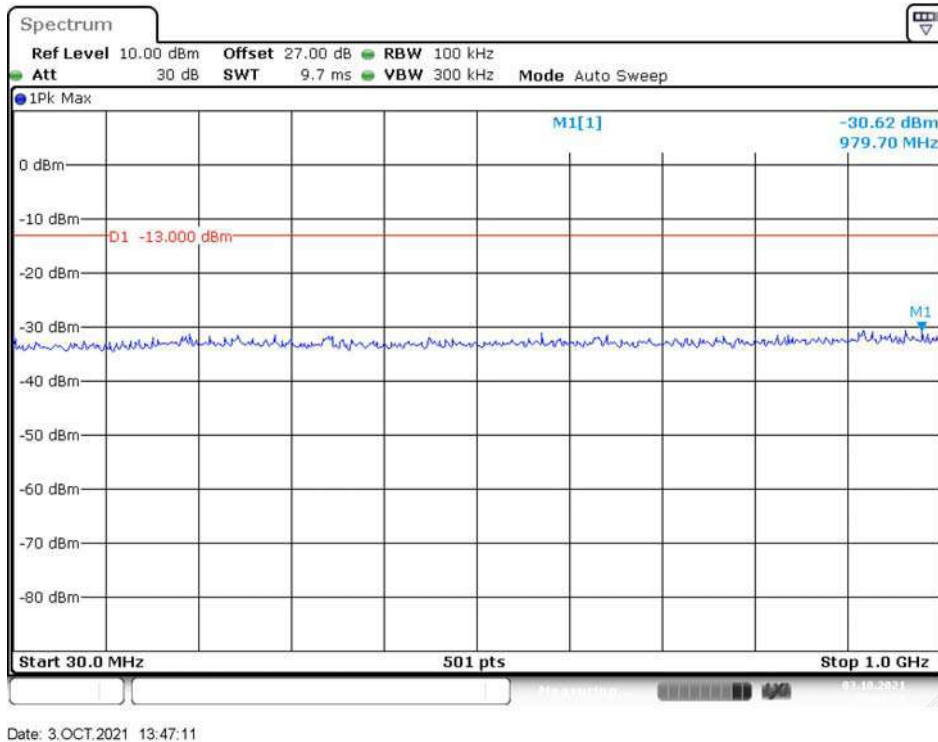


Date: 3.OCT.2021 13:43:34

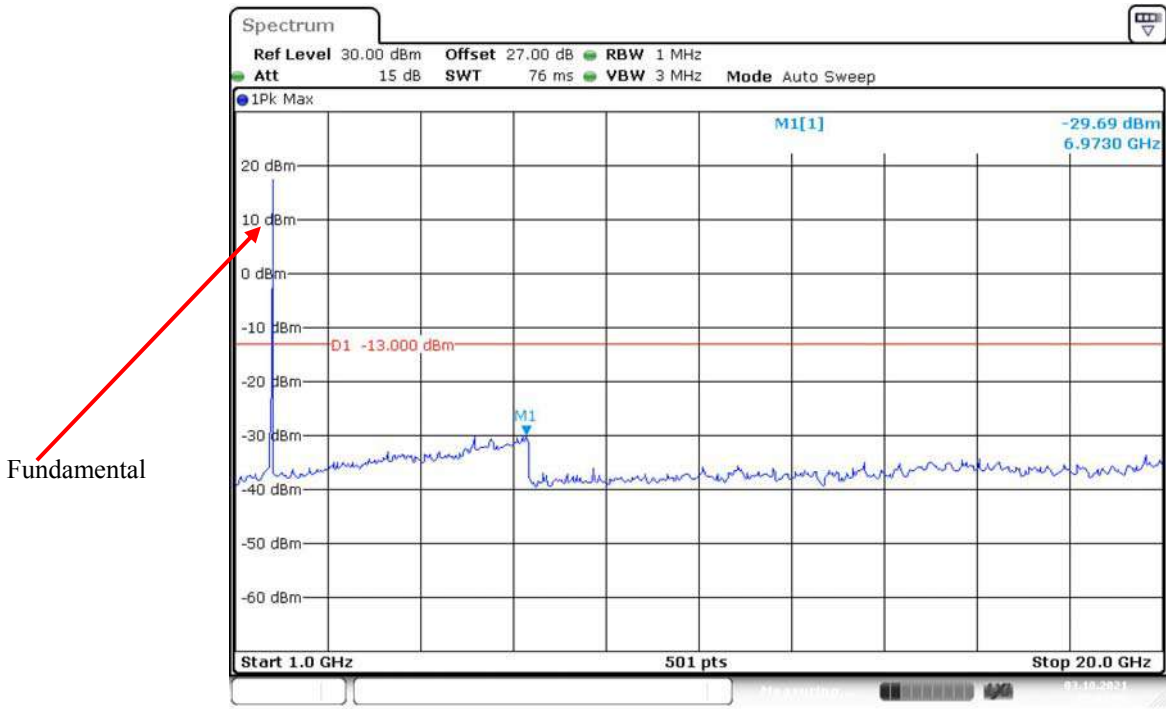
### 1 GHz – 10 GHz (QPSK, 15.0 MHz, High Channel)



### 30 MHz – 1 GHz (QPSK, 20.0 MHz, High Channel)

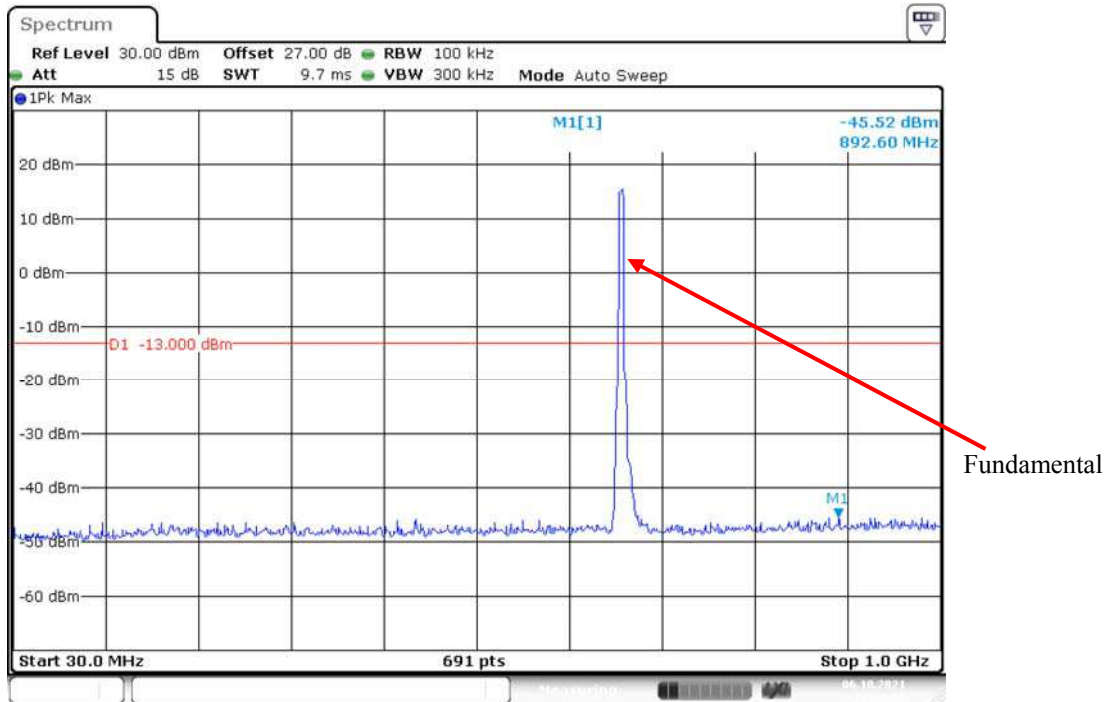


### 1 GHz – 10 GHz (QPSK, 20.0 MHz, High Channel)

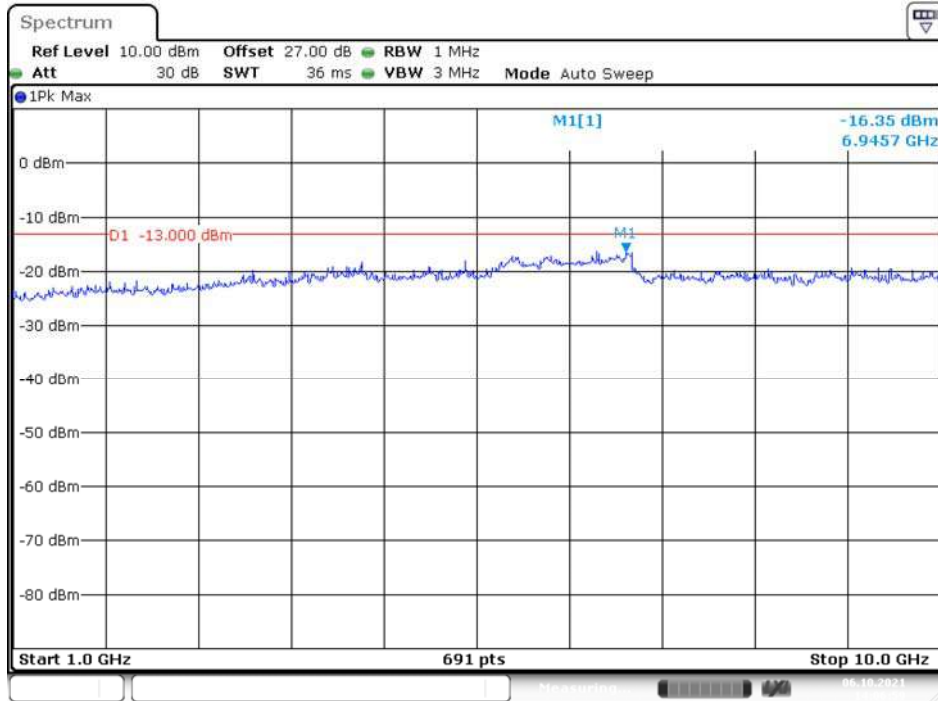


### LTE Band 71

### 30 MHz – 1 GHz (QPSK, 5.0 MHz, Low Channel)

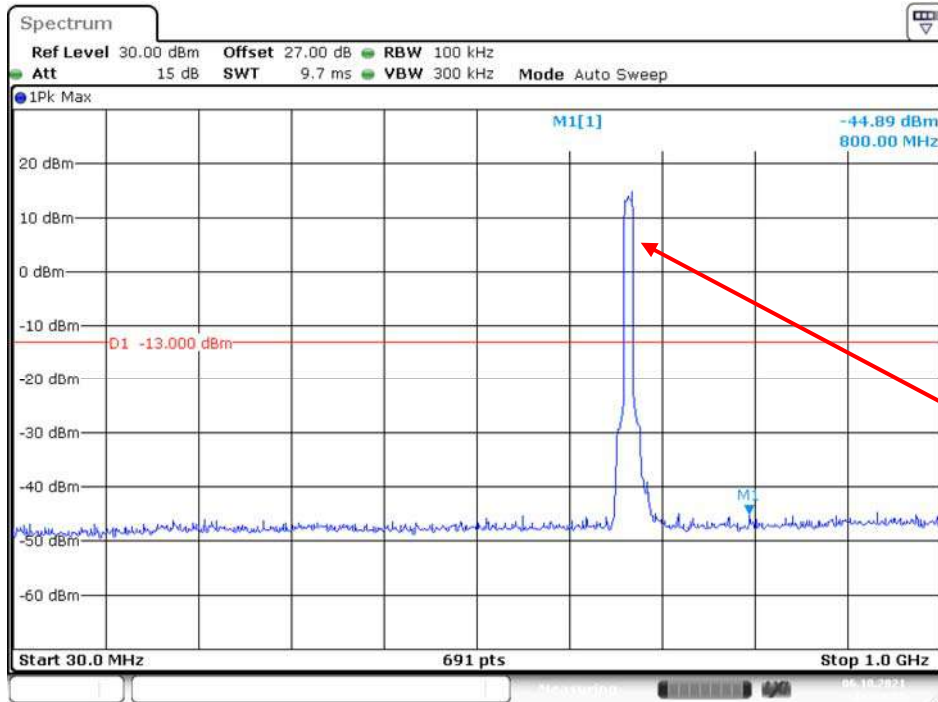


### 1 GHz – 10 GHz (QPSK, 5.0 MHz, Low Channel)



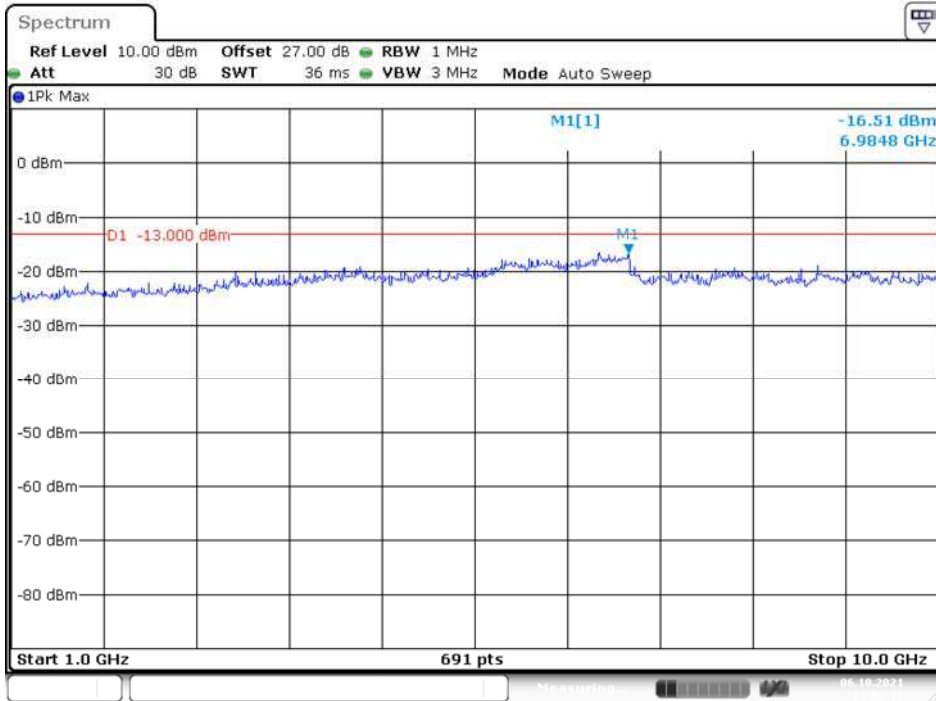
Date: 6.OCT.2021 14:07:00

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, Low Channel)



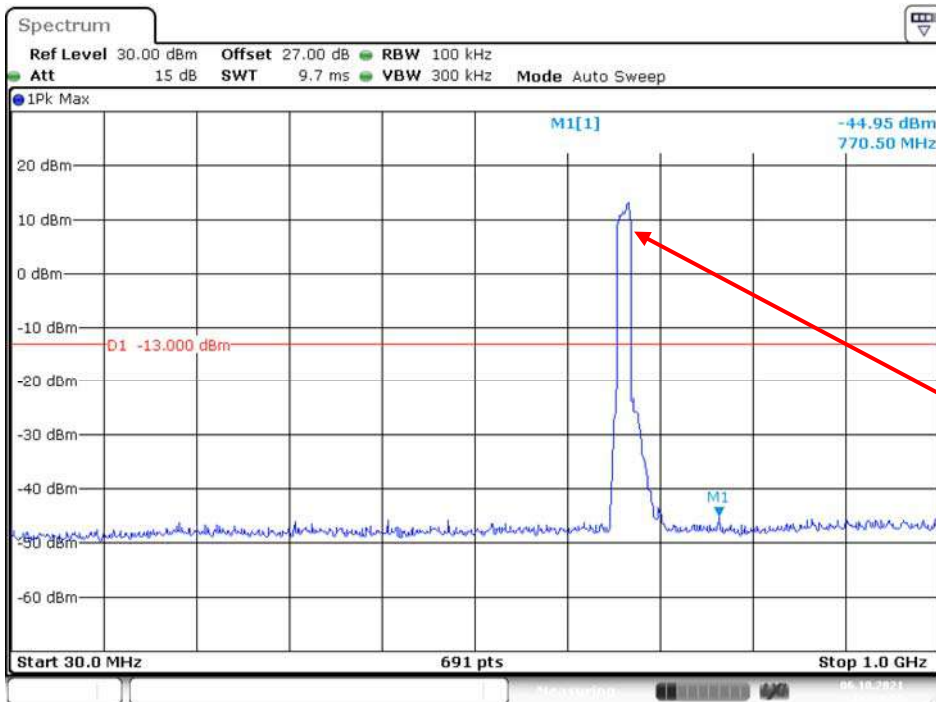
Date: 6.OCT.2021 14:18:23

### 1 GHz – 10 GHz (QPSK, 10.0 MHz, Low Channel)



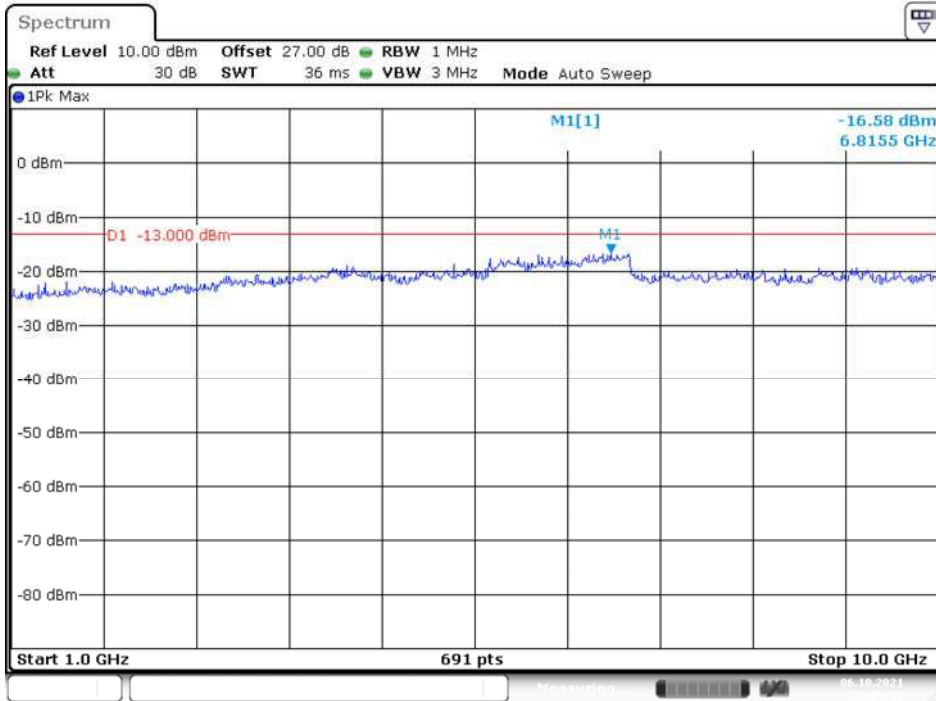
Date: 6.OCT.2021 14:08:19

### 30 MHz – 1 GHz (QPSK, 15.0 MHz, Low Channel)



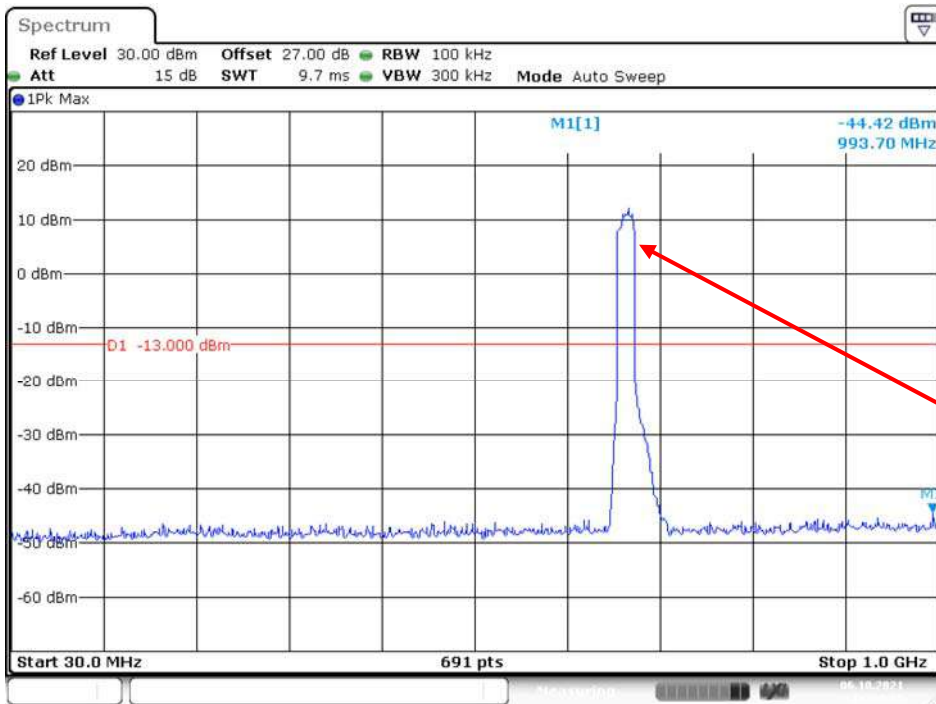
Date: 6.OCT.2021 14:28:04

### 1 GHz – 10 GHz (QPSK, 15.0 MHz, Low Channel)



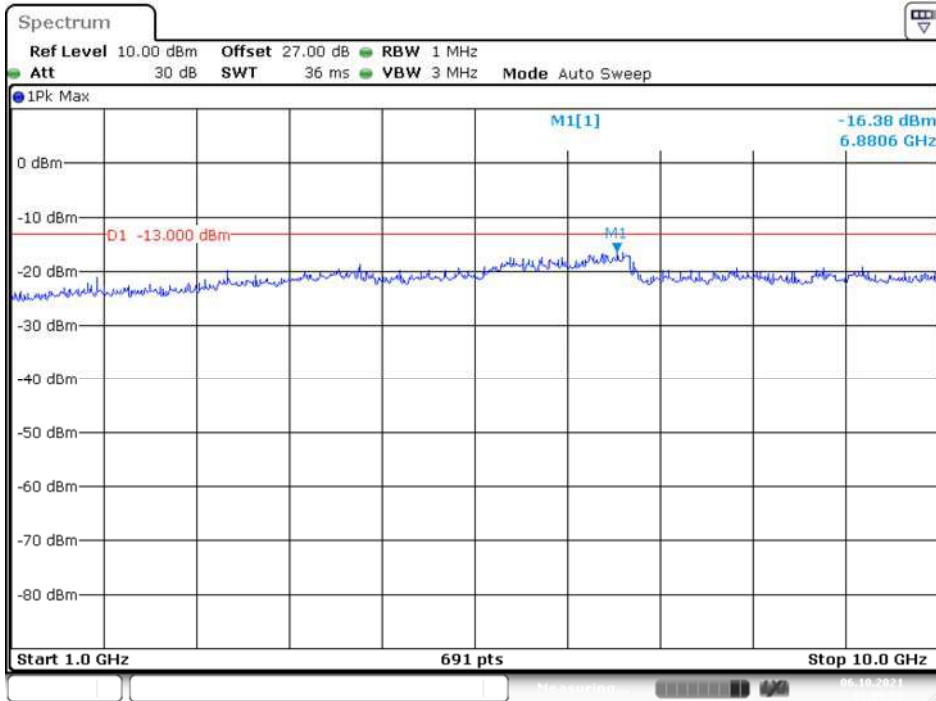
Date: 6.OCT.2021 14:09:12

### 30 MHz – 1 GHz (QPSK, 20.0 MHz, Low Channel)



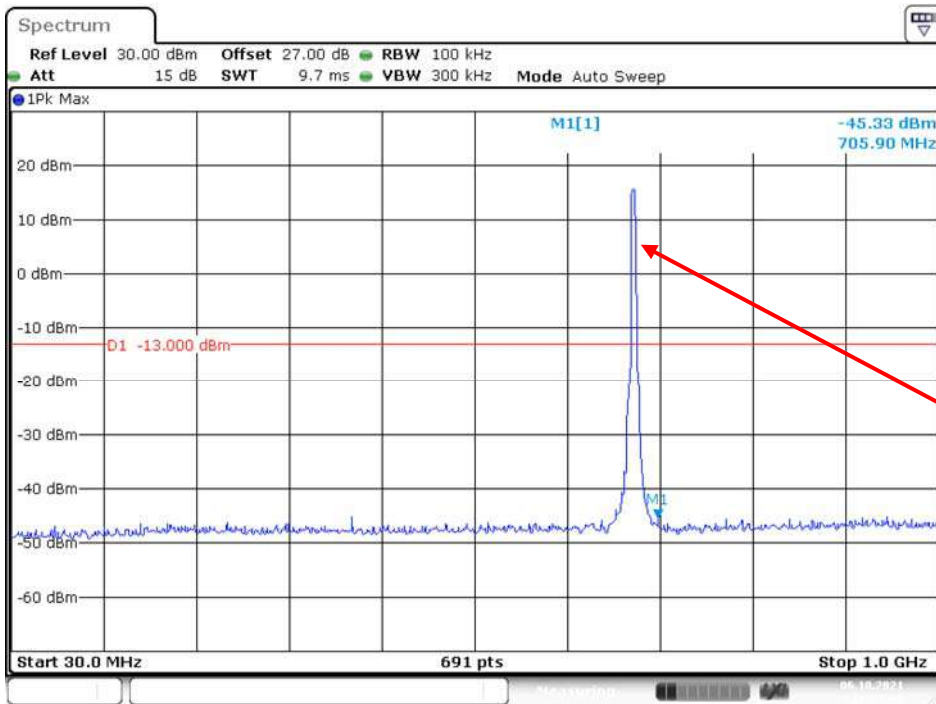
Date: 6.OCT.2021 14:30:34

### 1 GHz – 10 GHz (QPSK, 20.0 MHz, Low Channel)



Date: 6.OCT.2021 14:10:00

### 30 MHz – 1 GHz (QPSK, 5.0 MHz, Middle Channel)

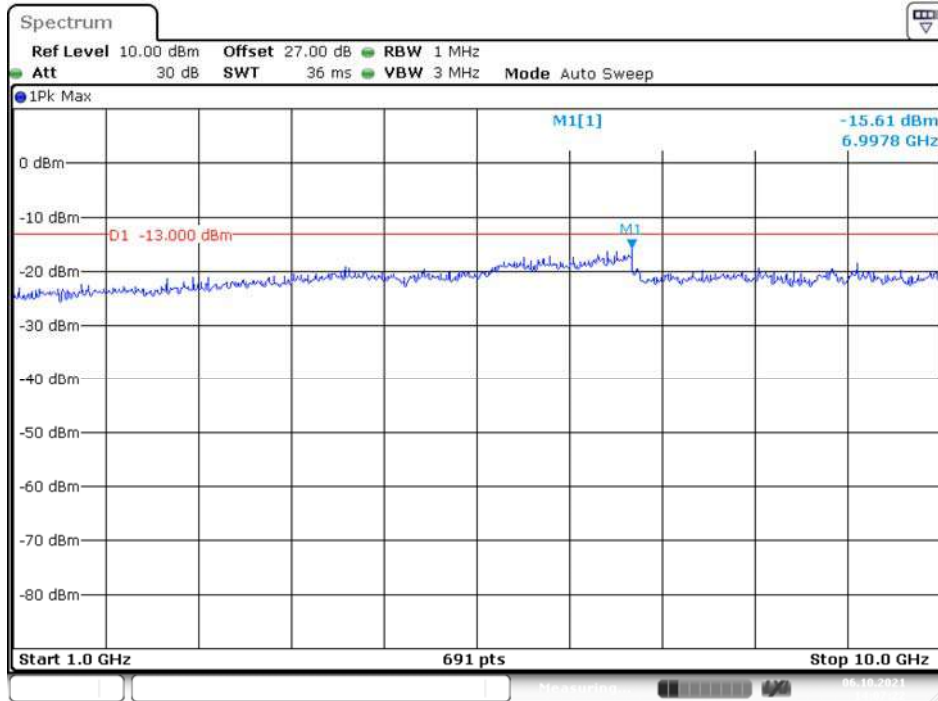


Date: 6.OCT.2021 14:21:49

Fundamental

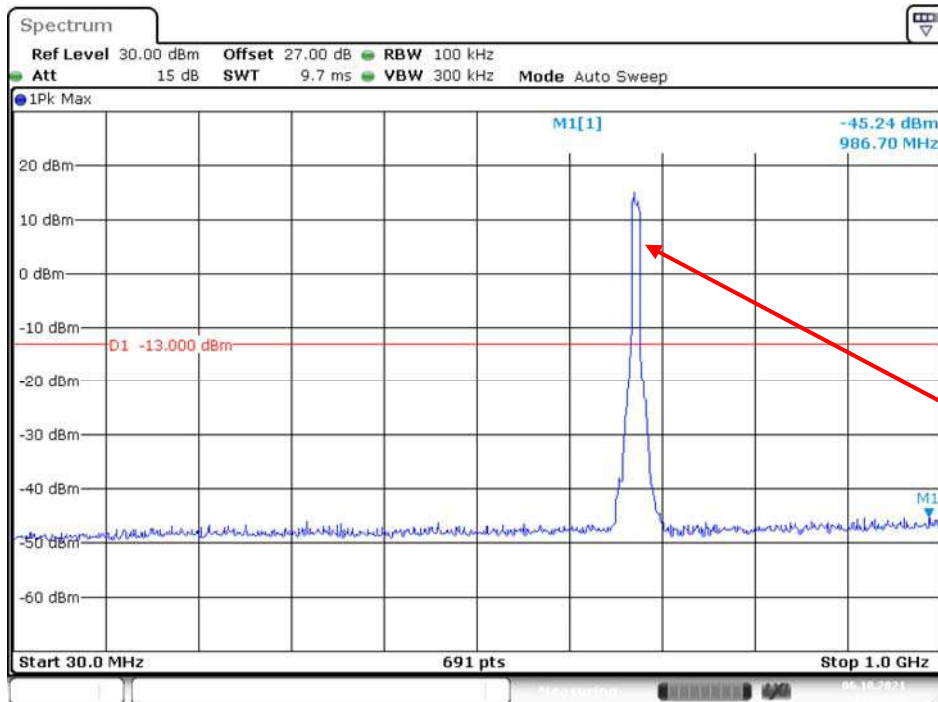


### 1 GHz – 26.5 GHz (QPSK, 5.0 MHz, Middle Channel)



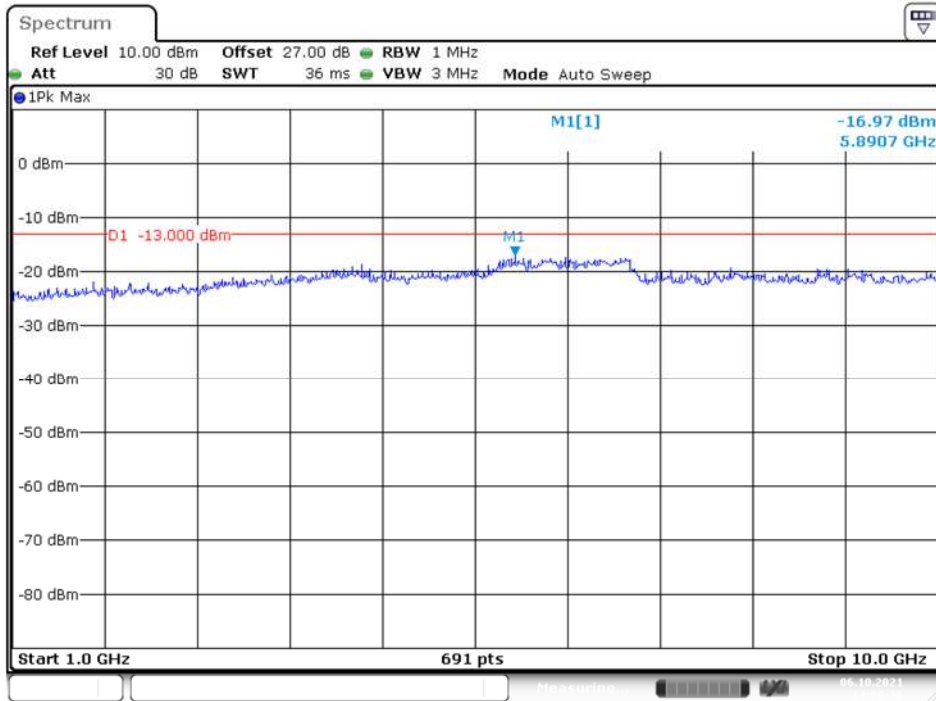
Date: 6.OCT.2021 14:07:22

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, Middle Channel)



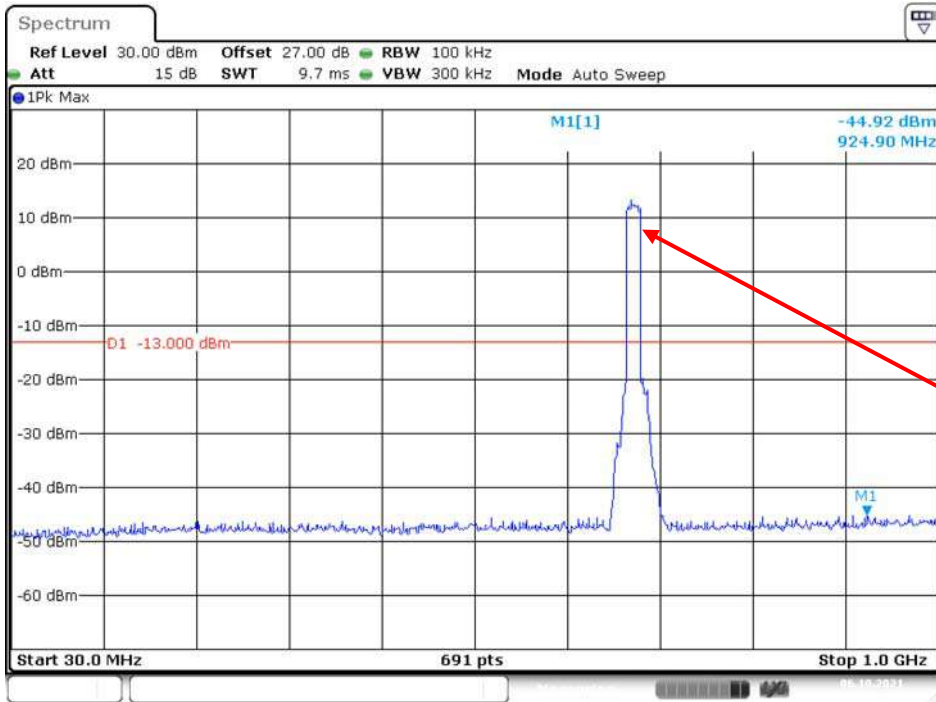
Date: 6.OCT.2021 14:17:18

### 1 GHz – 26.5 GHz (QPSK, 10.0 MHz, Middle Channel)



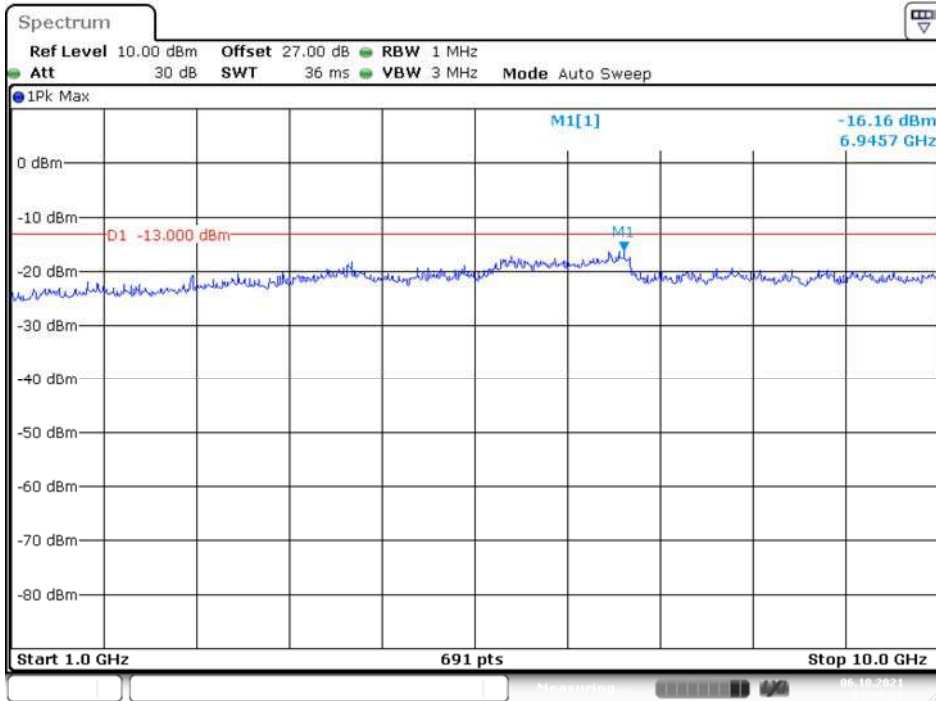
Date: 6.OCT.2021 14:08:36

### 30 MHz – 1 GHz (QPSK, 15.0 MHz, Middle Channel)



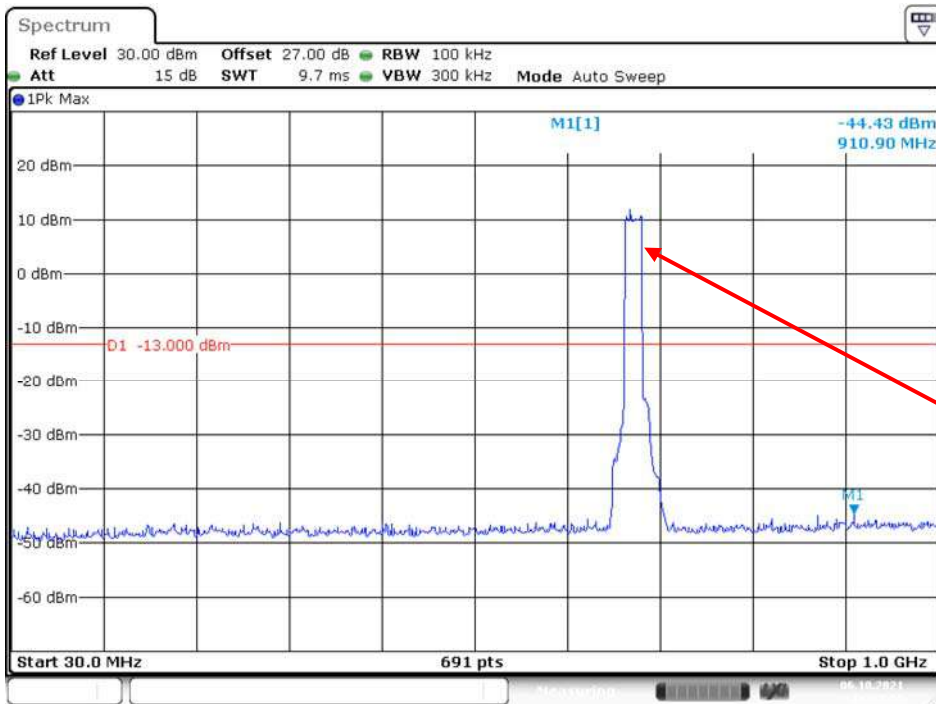
Date: 6.OCT.2021 14:27:19

### 1 GHz – 26.5 GHz (QPSK, 15.0 MHz, Middle Channel)



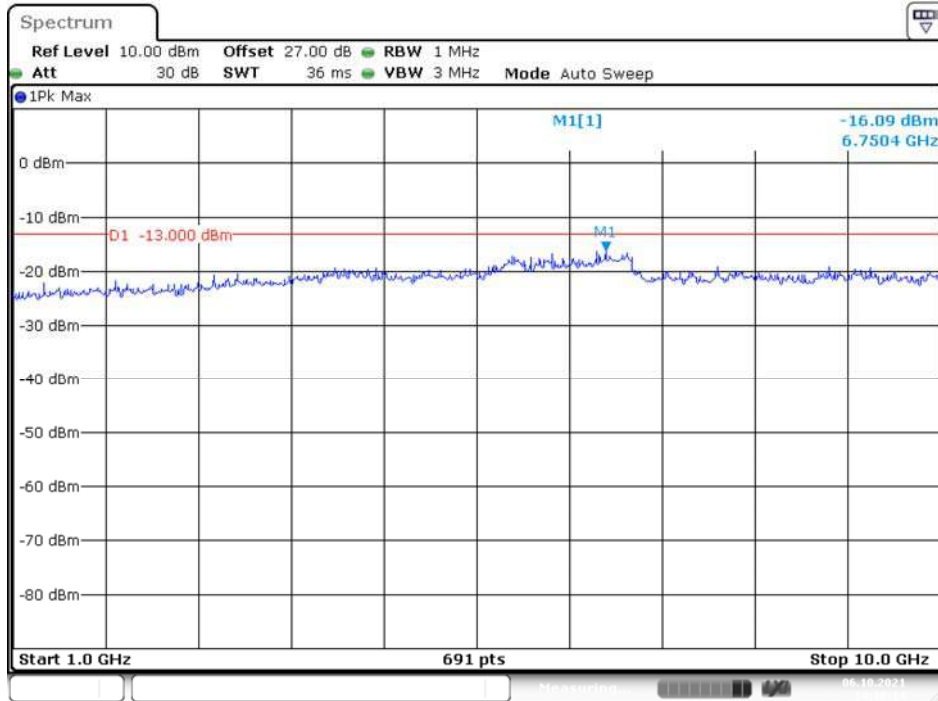
Date: 6.OCT.2021 14:09:26

### 30 MHz – 1 GHz (QPSK, 20.0 MHz, Middle Channel)



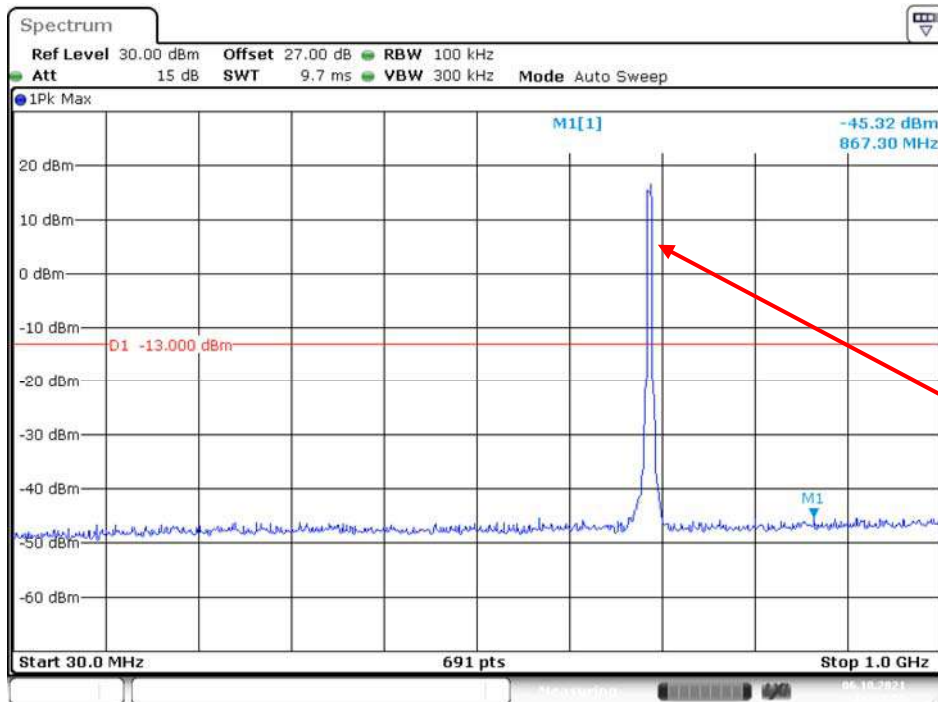
Date: 6.OCT.2021 14:31:03

### 1 GHz – 26.5 GHz (QPSK, 20.0 MHz, Middle Channel)



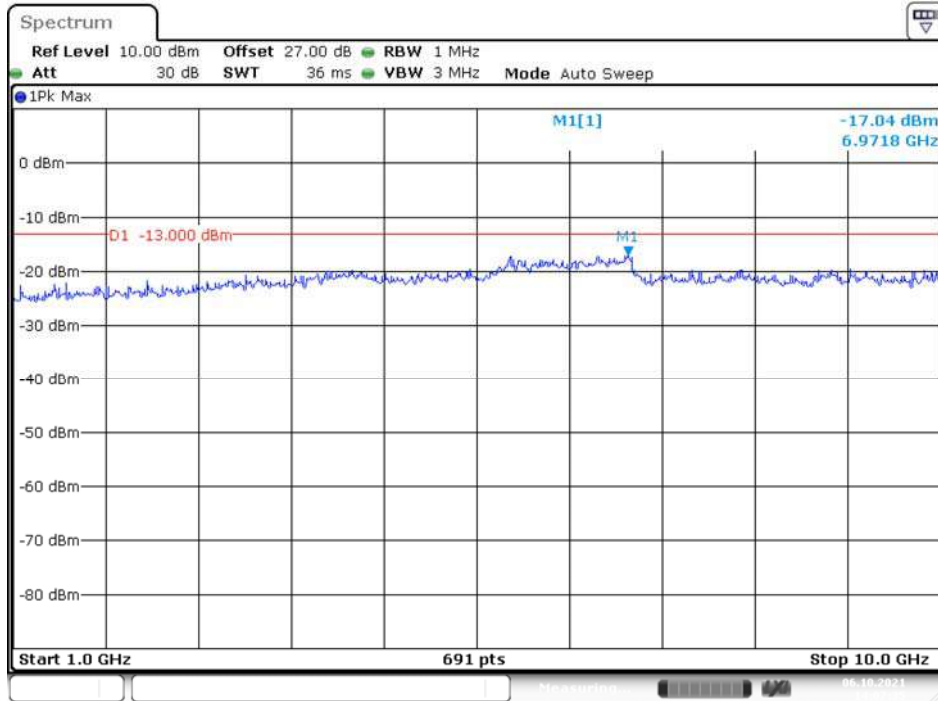
Date: 6.OCT.2021 14:10:14

### 30 MHz – 1 GHz (QPSK, 5.0 MHz, High Channel)



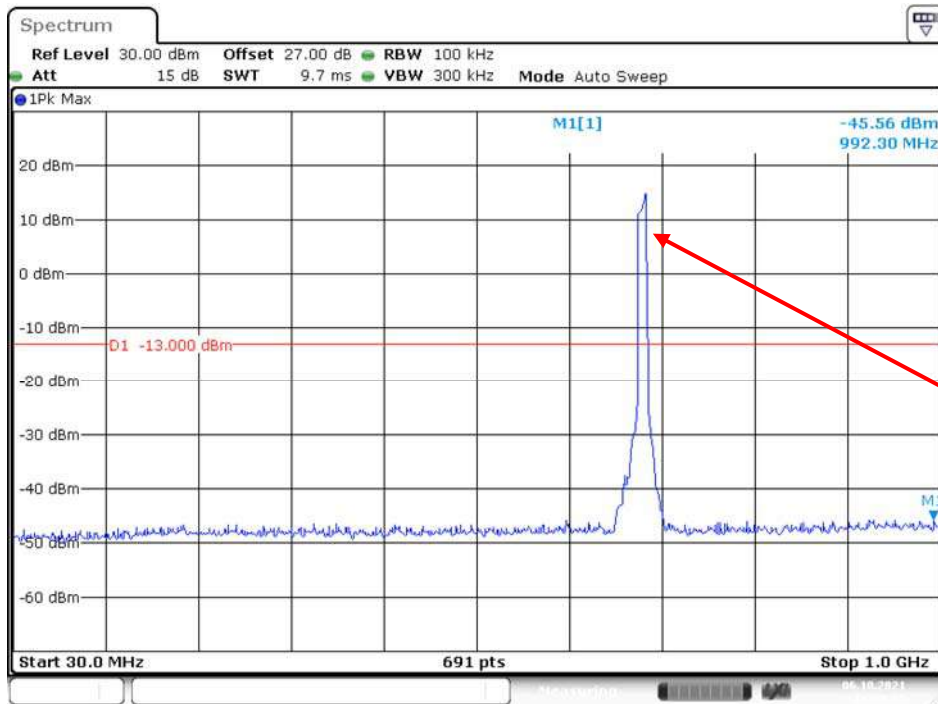
Date: 6.OCT.2021 14:22:55

### 1 GHz – 26.5 GHz (QPSK, 5.0 MHz, High Channel)



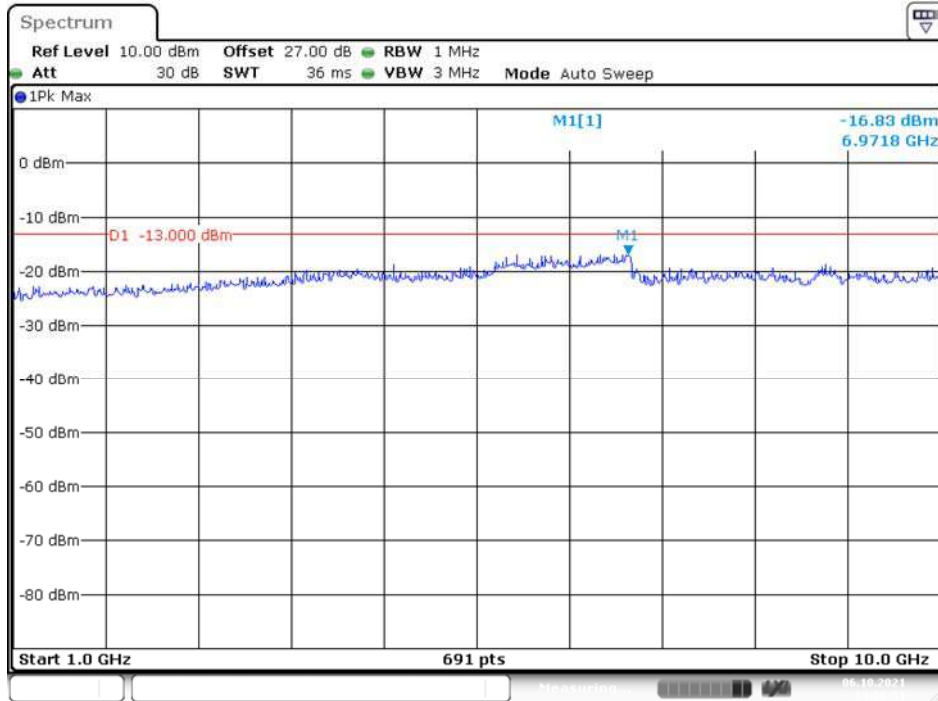
Date: 6.OCT.2021 14:07:35

### 30 MHz – 1 GHz (QPSK, 10.0 MHz, High Channel)



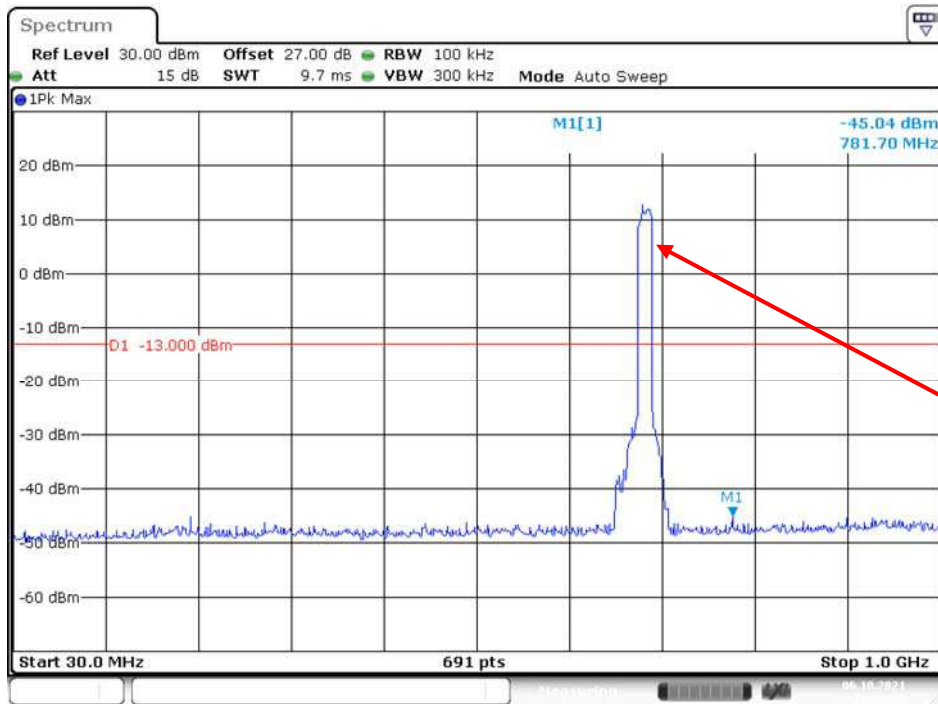
Date: 6.OCT.2021 14:16:33

### 1 GHz – 26.5 GHz (QPSK, 10.0 MHz, High Channel)



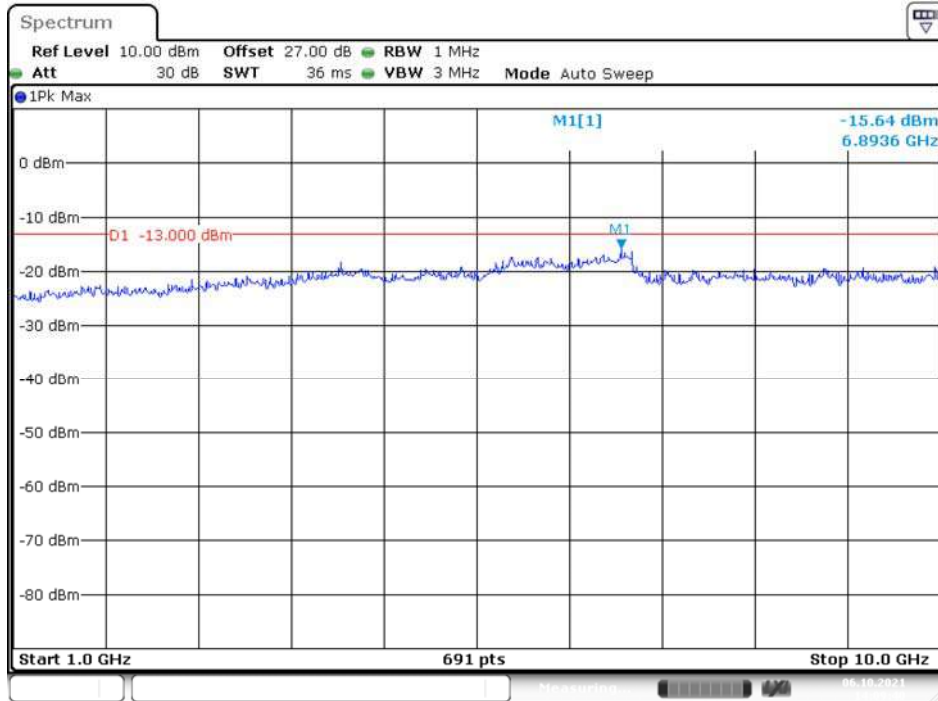
Date: 6.OCT.2021 14:08:52

### 30 MHz – 1 GHz (QPSK, 15.0 MHz, High Channel)



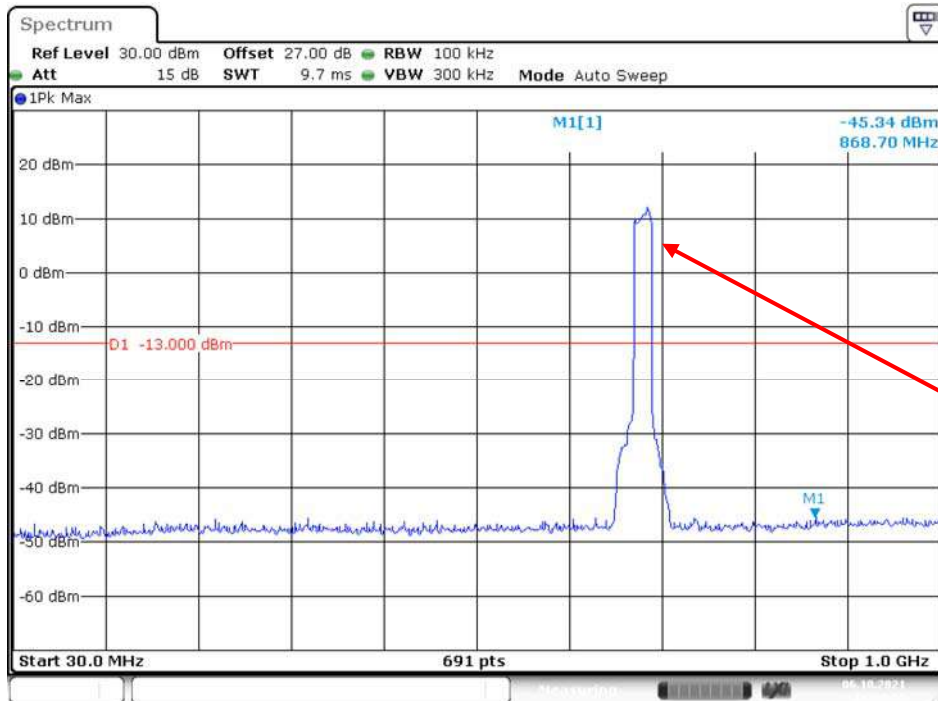
Date: 6.OCT.2021 14:28:36

### 1 GHz – 26.5 GHz (QPSK, 15.0 MHz, High Channel)



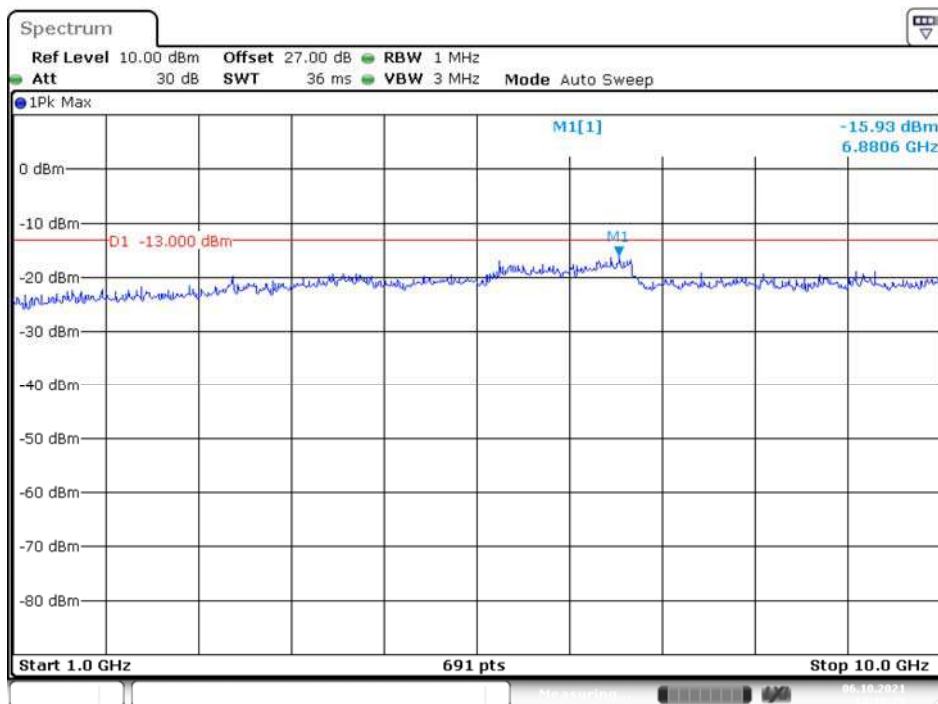
Date: 6.OCT.2021 14:09:41

### 30 MHz – 1 GHz (QPSK, 20.0 MHz, High Channel)



Date: 6.OCT.2021 14:30:07

### 1 GHz – 26.5 GHz (QPSK, 20.0 MHz, High Channel)



Date: 6.OCT.2021 14:10:29



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**FCC§2.1053, §22.917 & §24.238 & §27.53 – Spurious Radiated Emissions**

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**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 =  $10 \lg(\text{TX pwr in Watts}/0.001)$  – the absolute level

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

Spurious attenuation limit in dB =  $55 + 10 \text{Log}_{10}(\text{power out in Watts})$

Test Mode: Transmitting

**WCDMA Band II**

**30 MHz ~ 1GHz**

**Horizontal**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
1852.4 MHz								
40.6700	-47.73	0.62	-18.74	-67.09	-13.00	-54.09	100	312
50.3700	-57.14	0.69	-10.5	-68.33	-13.00	-55.33	100	74
87.2300	-70.14	0.91	-4.93	-75.98	-13.00	-62.98	100	54
121.1800	-62.65	1.09	-8.29	-72.03	-13.00	-59.03	100	135
153.1900	-68.36	1.22	-4.9	-74.48	-13.00	-61.48	100	154
343.3100	-74	1.84	-0.06	-75.90	-13.00	-62.90	100	111
1880 MHz								
40.6700	-47.64	0.62	-18.74	-67.00	-13.00	-54.00	100	110
86.2600	-68.56	0.91	-5.06	-74.53	-13.00	-61.53	100	123
122.1500	-63.29	1.09	-8.23	-72.61	-13.00	-59.61	100	24
157.0700	-68.76	1.24	-4.52	-74.52	-13.00	-61.52	100	74
262.8000	-75.56	1.6	-0.58	-77.74	-13.00	-64.74	100	96
346.2200	-72.21	1.84	-0.06	-74.11	-13.00	-61.11	100	241
1907.6 MHz								
50.3700	-57.38	0.69	-10.5	-68.57	-13.00	-55.57	100	200
56.1900	-65.18	0.73	-9.53	-75.44	-13.00	-62.44	100	164
86.2600	-69.24	0.91	-5.06	-75.21	-13.00	-62.21	100	95
122.1500	-62.75	1.09	-8.23	-72.07	-13.00	-59.07	100	146
160.9500	-70.08	1.25	-4.13	-75.46	-13.00	-62.46	100	22
383.0800	-73.52	1.94	0.09	-75.37	-13.00	-62.37	100	163

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**Vertical**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
1852.4 MHz								
46.4900	-48.76	0.66	-13.64	-63.06	-13.00	-50.06	100	241
88.2000	-62.02	0.92	-4.8	-67.74	-13.00	-54.74	100	24
97.9000	-63.65	0.97	-5.89	-70.51	-13.00	-57.51	100	74
121.1800	-60.86	1.09	-8.29	-70.24	-13.00	-57.24	100	124
158.0400	-65.49	1.24	-4.42	-71.15	-13.00	-58.15	100	85
186.1700	-68.25	1.35	-2.21	-71.81	-13.00	-58.81	100	195
1880 MHz								
46.4900	-49	0.66	-13.64	-63.30	-13.00	-50.30	100	20
88.2000	-60.52	0.92	-4.8	-66.24	-13.00	-53.24	100	52
97.9000	-63.5	0.97	-5.89	-70.36	-13.00	-57.36	100	195
122.1500	-60.97	1.09	-8.23	-70.29	-13.00	-57.29	100	74
153.1900	-65.7	1.22	-4.9	-71.82	-13.00	-58.82	100	35
193.9300	-68.74	1.38	-2.42	-72.54	-13.00	-59.54	100	222
1907.6 MHz								
46.4900	-50.01	0.66	-13.64	-64.31	-13.00	-51.31	100	20
121.1800	-61.16	1.09	-8.29	-70.54	-13.00	-57.54	100	185
283.1700	-73.48	1.67	-0.57	-75.72	-13.00	-62.72	100	324
321.9700	-72.11	1.78	-0.21	-74.10	-13.00	-61.10	100	241
419.9400	-70.79	2.04	0.02	-72.81	-13.00	-59.81	100	159
496.5700	-71.57	2.21	-0.02	-73.80	-13.00	-60.80	100	96

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**1GHz ~ 20GHz**

**Horizontal**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
1852.4 MHz								
3704.800	-62.25	6.35	10.88	-57.72	-13.00	-44.72	142	283
5557.200	-56.83	7.43	11.31	-52.95	-13.00	-39.95	156	129
1880 MHz								
3760.000	-61.41	6.33	10.6	-57.14	-13.00	-44.14	152	99
5640.000	-56.63	7.49	11.4	-52.72	-13.00	-39.72	155	257
1907.6 MHz								
3815.200	-60.63	6.34	10.37	-56.60	-13.00	-43.60	141	227
5722.800	-56.31	7.46	11.29	-52.48	-13.00	-39.48	158	192

**Vertical**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
1852.4 MHz								
3704.800	-61.61	6.35	10.88	-57.08	-13.00	-44.08	125	267
5557.200	-57.38	7.43	11.31	-53.50	-13.00	-40.50	141	130
1880 MHz								
3760.000	-61.33	6.33	10.6	-57.06	-13.00	-44.06	150	177
5640.000	-56.95	7.49	11.4	-53.04	-13.00	-40.04	143	306
1907.6 MHz								
3815.200	-59.55	6.34	10.37	-55.52	-13.00	-42.52	156	316
5722.800	-57.54	7.46	11.29	-53.71	-13.00	-40.71	142	139

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**WCDMA Band V****30 MHz ~ 1GHz****Horizontal**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
826.4 MHz								
50.3700	-56.37	0.69	-10.5	-67.56	-13.00	-54.56	100	265
83.3500	-71.04	0.89	-5.45	-77.38	-13.00	-64.38	100	41
122.1500	-62.91	1.09	-8.23	-72.23	-13.00	-59.23	100	96
153.1900	-67.66	1.22	-4.9	-73.78	-13.00	-60.78	100	184
240.4900	-74.63	1.54	-0.18	-76.35	-13.00	-63.35	100	165
349.1300	-72.61	1.85	-0.06	-74.52	-13.00	-61.52	100	111
836.6 MHz								
50.3700	-58.34	0.69	-10.5	-69.53	-13.00	-56.53	100	125
84.3200	-73.42	0.9	-5.32	-79.64	-13.00	-66.64	100	36
143.4900	-70.25	1.18	-6.05	-77.48	-13.00	-64.48	100	195
158.0400	-71.47	1.24	-4.42	-77.13	-13.00	-64.13	100	96
257.9500	-77.59	1.58	-0.35	-79.52	-13.00	-66.52	100	174
345.2500	-76.43	1.84	-0.06	-78.33	-13.00	-65.33	100	111
846.6 MHz								
50.3700	-57.95	0.69	-10.5	-69.14	-13.00	-56.14	100	95
83.3500	-71.42	0.89	-5.45	-77.76	-13.00	-64.76	100	163
122.1500	-62.44	1.09	-8.23	-71.76	-13.00	-58.76	100	85
154.1600	-68.04	1.23	-4.81	-74.08	-13.00	-61.08	100	185
201.6900	-75.03	1.41	-2.69	-79.13	-13.00	-66.13	100	196
263.7700	-74.53	1.6	-0.63	-76.76	-13.00	-63.76	100	91

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**Vertical**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
826.4 MHz								
52.3100	-53.23	0.7	-10.18	-64.11	-13.00	-51.11	100	209
88.2000	-61.95	0.92	-4.8	-67.67	-13.00	-54.67	100	154
105.6600	-63.51	1.01	-7.19	-71.71	-13.00	-58.71	100	185
122.1500	-62.37	1.09	-8.23	-71.69	-13.00	-58.69	100	81
153.1900	-65.54	1.22	-4.9	-71.66	-13.00	-58.66	100	132
418.9700	-69.97	2.04	0.02	-71.99	-13.00	-58.99	100	115
836.6 MHz								
52.3100	-53.47	0.7	-10.18	-64.35	-13.00	-51.35	100	200
88.2000	-61.35	0.92	-4.8	-67.07	-13.00	-54.07	100	254
105.6600	-63.57	1.01	-7.19	-71.77	-13.00	-58.77	100	196
122.1500	-61.87	1.09	-8.23	-71.19	-13.00	-58.19	100	115
154.1600	-65.73	1.23	-4.81	-71.77	-13.00	-58.77	100	85
421.8800	-69.9	2.04	0.02	-71.92	-13.00	-58.92	100	173
846.6 MHz								
52.3100	-53.45	0.7	-10.18	-64.33	-13.00	-51.33	100	201
89.1700	-61.88	0.93	-4.67	-67.48	-13.00	-54.48	100	152
121.1800	-59.77	1.09	-8.29	-69.15	-13.00	-56.15	100	174
151.2500	-66.28	1.21	-5.1	-72.59	-13.00	-59.59	100	165
263.7700	-72.52	1.6	-0.63	-74.75	-13.00	-61.75	100	187
419.9400	-69.54	2.04	0.02	-71.56	-13.00	-58.56	100	112

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**1GHz ~ 10GHz**

**Horizontal**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
826.4 MHz								
1652.800	-68.24	4	9.51	-62.73	-13.00	-49.73	124	265
2479.200	-63.49	4.97	9.12	-59.34	-13.00	-46.34	138	107
836.6 MHz								
1652.800	-66.37	4	9.51	-60.86	-13.00	-47.86	144	63
2479.200	-66.08	4.97	9.12	-61.93	-13.00	-48.93	127	274
846.6 MHz								
1693.200	-68.47	4.04	9.59	-62.92	-13.00	-49.92	141	226
2539.800	-64.51	5.04	9.14	-60.41	-13.00	-47.41	150	52

**Vertical**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
826.4 MHz								
1652.800	-67.1	4	9.51	-61.59	-13.00	-48.59	133	207
2479.200	-65.67	4.97	9.12	-61.52	-13.00	-48.52	125	192
836.6 MHz								
1652.800	-67.08	4	9.51	-61.57	-13.00	-48.57	149	331
2479.200	-65.73	4.97	9.12	-61.58	-13.00	-48.58	157	142
846.6 MHz								
1693.200	-68.46	4.04	9.59	-62.91	-13.00	-49.91	15	96
2539.800	-65.61	5.04	9.14	-61.51	-13.00	-48.51	147	200

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**LTE Band:**

*Pre-scan with Low, Middle and High channel, the worst case as below:*

*Pre-scan with all the bandwidth, worse case as below:*

**Horizontal**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
LTE Band 2, QPSK 20MHz Bandwidth Low channel (30MHz-20GHz)								
53.2800	-60.2	0.71	-10.02	-70.93	-13.00	-57.93	100	125
74.6200	-69.01	0.84	-6.62	-76.47	-13.00	-63.47	100	119
127.9700	-69.24	1.12	-7.88	-78.24	-13.00	-65.24	100	315
201.6900	-65.59	1.41	-2.69	-69.69	-13.00	-56.69	100	183
231.7600	-73.15	1.51	-0.37	-75.03	-13.00	-62.03	100	12
674.0800	-68.31	2.58	0.55	-70.34	-13.00	-57.34	100	85
3720.000	-60.66	6.34	10.8	-56.20	-13.00	-43.20	150	114
5580.000	-56.6	7.48	11.36	-52.72	-13.00	-39.72	150	91
LTE Band 4, QPSK 20MHz Bandwidth Middle channel (30MHz-20GHz)								
52.3100	-60.28	0.7	-10.18	-71.16	-13.00	-58.16	150	103
73.6500	-66.09	0.83	-6.75	-73.67	-13.00	-60.67	150	131
126.0300	-69.51	1.11	-8	-78.62	-13.00	-65.62	150	167
203.6300	-67.81	1.41	-2.21	-71.43	-13.00	-58.43	150	204
351.0700	-72.43	1.85	-0.06	-74.34	-13.00	-61.34	150	347
787.5700	-66.82	2.8	0.51	-69.11	-13.00	-56.11	150	229
3465.000	-62.32	6.12	10.49	-57.95	-13.00	-44.95	142	33
5197.500	-55.34	7.18	10.59	-51.93	-13.00	-38.93	140	128
LTE Band 5, QPSK 10MHz Bandwidth High channel, (30MHz-10GHz)								
52.3100	-60.7	0.7	-10.18	-71.58	-13.00	-58.58	150	134
75.5900	-67.5	0.84	-6.49	-74.83	-13.00	-61.83	150	109
127.9700	-68.02	1.12	-7.88	-77.02	-13.00	-64.02	150	127
204.6000	-67.95	1.41	-1.96	-71.32	-13.00	-58.32	150	39
225.9400	-75.03	1.49	-0.44	-76.96	-13.00	-63.96	150	185
254.0700	-75.73	1.57	-0.17	-77.47	-13.00	-64.47	150	3
1688.000	-68.1	4.04	9.58	-62.56	-13.00	-49.56	139	205
2532.000	-65.76	5.04	9.13	-61.67	-13.00	-48.67	156	84
LTE Band 7, QPSK 20MHz Bandwidth Middle channel, (30MHz-26.5GHz)								
51.3400	-60.26	0.7	-10.34	-71.30	-25.00	-46.30	150	120
75.5900	-66.19	0.84	-6.49	-73.52	-25.00	-48.52	150	344
127.9700	-68.69	1.12	-7.88	-77.69	-25.00	-52.69	150	140
202.6600	-66.87	1.41	-2.45	-70.73	-25.00	-45.73	150	35
238.5500	-73.3	1.53	-0.23	-75.06	-25.00	-50.06	150	25
288.0200	-75.37	1.68	-0.44	-77.49	-25.00	-52.49	150	356
5070.000	-57.6	7.23	10.27	-54.56	-25.00	-29.56	122	286
7605.000	-53.4	8.9	10.79	-51.51	-25.00	-26.51	156	197

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.



Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
LTE Band 12, QPSK 10MHz Bandwidth High channel, (30MHz-10GHz)								
52.3100	-60.04	0.7	-10.18	-70.92	-13.00	-57.92	150	120
76.5600	-65.62	0.85	-6.36	-72.83	-13.00	-59.83	150	141
123.1200	-68.85	1.1	-8.17	-78.12	-13.00	-65.12	150	157
202.6600	-67.49	1.41	-2.45	-71.35	-13.00	-58.35	150	36
228.8500	-74.43	1.51	-0.42	-76.36	-13.00	-63.36	150	17
343.3100	-73.85	1.84	-0.06	-75.75	-13.00	-62.75	150	321
1422.000	-66.2	3.7	8.28	-61.62	-13.00	-48.62	142	33
2133.000	-42.67	4.59	8.7	-38.56	-13.00	-25.56	111	254
LTE Band 13, QPSK 10MHz Bandwidth Middle channel, (30MHz-10GHz)								
51.3400	-58.41	0.7	-10.34	-69.45	-13.00	-56.45	150	128
74.6200	-66.27	0.84	-6.62	-73.73	-13.00	-60.73	150	140
129.9100	-68.68	1.13	-7.77	-77.58	-13.00	-64.58	150	340
204.6000	-67.61	1.41	-1.96	-70.98	-13.00	-57.98	150	28
288.0200	-75.15	1.68	-0.44	-77.27	-13.00	-64.27	150	106
349.1300	-74.58	1.85	-0.06	-76.49	-13.00	-63.49	150	274
1564.000	-65.64	3.89	9.22	-60.31	-13.00	-47.31	147	258
2346.000	-64.37	4.82	9.36	-59.83	-13.00	-46.83	152	241
LTE Band 17, QPSK 10MHz Bandwidth High channel, (30MHz-10GHz)								
51.3400	-59.9	0.7	-10.34	-70.94	-13.00	-57.94	150	131
74.6200	-67.26	0.84	-6.62	-74.72	-13.00	-61.72	150	138
125.0600	-68.67	1.11	-8.06	-77.84	-13.00	-64.84	150	127
204.6000	-67.76	1.41	-1.96	-71.13	-13.00	-58.13	150	36
288.0200	-75.78	1.68	-0.44	-77.90	-13.00	-64.90	150	360
400.5400	-73.08	1.98	0.19	-74.87	-13.00	-61.87	150	0
1422.000	-67.25	3.7	8.28	-62.67	-13.00	-49.67	141	22
2133.000	-42.27	4.59	8.7	-38.16	-13.00	-25.16	145	285
LTE Band 25, QPSK 20MHz Bandwidth Middle channel, (30MHz-20GHz)								
51.3400	-60.37	0.7	-10.34	-71.41	-13.00	-58.41	150	142
75.5900	-66.56	0.84	-6.49	-73.89	-13.00	-60.89	150	133
95.9600	-72.04	0.96	-5.56	-78.56	-13.00	-65.56	150	140
127.9700	-68.54	1.12	-7.88	-77.54	-13.00	-64.54	150	325
202.6600	-67.59	1.41	-2.45	-71.45	-13.00	-58.45	150	27
256.9800	-75.26	1.58	-0.31	-77.15	-13.00	-64.15	150	11
3760.000	-60.84	6.33	10.6	-56.57	-13.00	-43.57	144	22
5640.000	-58.45	7.49	11.4	-54.54	-13.00	-41.54	174	258

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
LTE Band 41, QPSK 20MHz Bandwidth High channel, (30MHz-10GHz)								
51.3400	-60.59	0.7	-10.34	-71.63	-25.00	-46.63	150	128
74.6200	-66.44	0.84	-6.62	-73.90	-25.00	-48.90	150	345
141.5500	-70.79	1.18	-6.29	-78.26	-25.00	-53.26	150	302
202.6600	-67.52	1.41	-2.45	-71.38	-25.00	-46.38	150	36
253.1000	-74.65	1.57	-0.13	-76.35	-25.00	-51.35	150	16
329.7300	-74.15	1.81	-0.07	-76.03	-25.00	-51.03	150	334
5186.000	-56.54	7.2	10.56	-53.18	-25.00	-28.18	127	283
7779.000	-52.06	9.04	10.62	-50.48	-25.00	-25.48	155	179
LTE Band 66, QPSK 20MHz Bandwidth Middle channel, (30MHz-20GHz)								
51.3400	-60.04	0.7	-10.34	-71.08	-13.00	-58.08	150	128
73.6500	-67.48	0.83	-6.75	-75.06	-13.00	-62.06	150	171
127.0000	-69.13	1.11	-7.94	-78.18	-13.00	-65.18	150	117
205.5700	-67.8	1.42	-1.72	-70.94	-13.00	-57.94	150	34
234.6700	-74.71	1.52	-0.31	-76.54	-13.00	-63.54	150	40
344.2800	-73.62	1.84	-0.06	-75.52	-13.00	-62.52	150	335
3490.000	-63.21	6.15	10.57	-58.79	-13.00	-45.79	128	116
5235.000	-57.57	7.23	10.74	-54.06	-13.00	-41.06	153	283
LTE Band 71, QPSK 20MHz Bandwidth Low channel, (30MHz-10GHz)								
52.3100	-61.18	0.7	-10.18	-72.06	-13.00	-59.06	150	131
74.6200	-66.59	0.84	-6.62	-74.05	-13.00	-61.05	150	125
127.0000	-68.05	1.11	-7.94	-77.10	-13.00	-64.10	150	352
202.6600	-67.86	1.41	-2.45	-71.72	-13.00	-58.72	150	200
243.4000	-76.3	1.54	-0.12	-77.96	-13.00	-64.96	150	10
274.4400	-75.09	1.64	-0.8	-77.53	-13.00	-64.53	150	40
1346.000	-68.24	3.6	7.83	-64.01	-13.00	-51.01	126	99
2019.000	-63.16	4.45	7.67	-59.94	-13.00	-46.94	153	324

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

**Vertical**

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
LTE Band 2, QPSK 20MHz Bandwidth Low channel, (30MHz-20GHz)								
52.3100	-52.29	0.7	-10.18	-63.17	-13.00	-50.17	100	283
72.6800	-64.08	0.83	-6.88	-71.79	-13.00	-58.79	100	154
110.5100	-65.64	1.03	-7.93	-74.60	-13.00	-61.60	100	203
202.6600	-68.25	1.41	-2.45	-72.11	-13.00	-59.11	100	101
238.5500	-74.98	1.53	-0.23	-76.74	-13.00	-63.74	100	65
406.3600	-72.19	2	0.08	-74.11	-13.00	-61.11	100	205
3720.000	-60.41	6.34	10.8	-55.95	-13.00	-42.95	150	321
5580.000	-56.34	7.48	11.36	-52.46	-13.00	-39.46	150	111
LTE Band 4, QPSK 20MHz Bandwidth Middle channel, (30MHz-20GHz)								
51.3400	-54.29	0.7	-10.34	-65.33	-13.00	-52.33	150	228
74.6200	-64.03	0.84	-6.62	-71.49	-13.00	-58.49	150	316
109.5400	-67.38	1.03	-7.83	-76.24	-13.00	-63.24	150	351
200.7200	-66.31	1.4	-2.94	-70.65	-13.00	-57.65	150	3
250.1900	-74.5	1.56	0.01	-76.05	-13.00	-63.05	150	186
824.4300	-65.95	2.85	0.39	-68.41	-13.00	-55.41	150	116
3465.000	-61.52	6.12	10.49	-57.15	-13.00	-44.15	148	257
5197.500	-55.73	7.18	10.59	-52.32	-13.00	-39.32	155	203
LTE Band 5, QPSK 10MHz Bandwidth High channel, (30MHz-10GHz)								
53.2800	-55.09	0.71	-10.02	-65.82	-13.00	-52.82	150	232
74.6200	-63.58	0.84	-6.62	-71.04	-13.00	-58.04	150	127
118.2700	-67.64	1.07	-8.28	-76.99	-13.00	-63.99	150	141
203.6300	-67.29	1.41	-2.21	-70.91	-13.00	-57.91	150	161
250.1900	-74.06	1.56	0.01	-75.61	-13.00	-62.61	150	195
526.6400	-69.42	2.28	0.12	-71.58	-13.00	-58.58	150	10
1688.000	-68.9	4.04	9.58	-63.36	-13.00	-50.36	142	211
2532.000	-65.94	5.04	9.13	-61.85	-13.00	-48.85	148	309
LTE Band 7, QPSK 20MHz Bandwidth Middle channel, (30MHz-26.5GHz)								
53.2800	-55.04	0.71	-10.02	-65.77	-25.00	-40.77	150	245
73.6500	-64.3	0.83	-6.75	-71.88	-25.00	-46.88	150	339
101.7800	-68.86	0.99	-6.54	-76.39	-25.00	-51.39	150	37
203.6300	-67.45	1.41	-2.21	-71.07	-25.00	-46.07	150	147
248.2500	-76.07	1.56	-0.02	-77.65	-25.00	-52.65	150	187
396.6600	-73.2	1.97	0.19	-74.98	-25.00	-49.98	150	133
5070.000	-56.45	7.23	10.27	-53.41	-25.00	-28.41	176	221
7605.000	-52.3	8.9	10.79	-50.41	-25.00	-25.41	152	78

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
LTE Band 12, QPSK 10MHz Bandwidth High channel, (30MHz-10GHz)								
52.3100	-54.93	0.7	-10.18	-65.81	-13.00	-52.81	150	216
73.6500	-64.25	0.83	-6.75	-71.83	-13.00	-58.83	150	268
117.3000	-67.01	1.07	-8.24	-76.32	-13.00	-63.32	150	92
202.6600	-67.67	1.41	-2.45	-71.53	-13.00	-58.53	150	140
269.5900	-74.56	1.62	-0.9	-77.08	-13.00	-64.08	150	209
336.5200	-74.37	1.82	-0.07	-76.26	-13.00	-63.26	150	122
1422.000	-67.04	3.7	8.28	-62.46	-13.00	-49.46	120	324
2133.000	-46.27	4.59	8.7	-42.16	-13.00	-29.16	150	254
LTE Band 13, QPSK 10MHz Bandwidth Middle channel, (30MHz-10GHz)								
53.2800	-55.02	0.71	-10.02	-65.75	-13.00	-52.75	150	256
74.6200	-62.69	0.84	-6.62	-70.15	-13.00	-57.15	150	166
95.9600	-69.21	0.96	-5.56	-75.73	-13.00	-62.73	150	223
201.6900	-66.29	1.41	-2.69	-70.39	-13.00	-57.39	150	146
249.2200	-74.94	1.56	0	-76.50	-13.00	-63.50	150	183
336.5200	-74.44	1.82	-0.07	-76.33	-13.00	-63.33	150	31
1564.000	-66.21	3.89	9.22	-60.88	-13.00	-47.88	154	33
2346.000	-64.41	4.82	9.36	-59.87	-13.00	-46.87	147	241
LTE Band 17, QPSK 10MHz Bandwidth High channel, (30MHz-10GHz)								
52.3100	-54.57	0.7	-10.18	-65.45	-13.00	-52.45	150	255
74.6200	-63.61	0.84	-6.62	-71.07	-13.00	-58.07	150	151
118.2700	-67.61	1.07	-8.28	-76.96	-13.00	-63.96	150	59
203.6300	-68.17	1.41	-2.21	-71.79	-13.00	-58.79	150	153
252.1300	-74.23	1.57	-0.08	-75.88	-13.00	-62.88	150	176
451.9500	-70.44	2.11	-0.01	-72.56	-13.00	-59.56	150	347
1422.000	-66.65	3.7	8.28	-62.07	-13.00	-49.07	125	31
2133.000	-47.42	4.59	8.7	-43.31	-13.00	-30.31	128	21
LTE Band 25, QPSK 20MHz Bandwidth Middle channel, (30MHz-20GHz)								
52.3100	-54.6	0.7	-10.18	-65.48	-13.00	-52.48	150	238
74.6200	-63.38	0.84	-6.62	-70.84	-13.00	-57.84	150	173
105.6600	-67.99	1.01	-7.19	-76.19	-13.00	-63.19	150	136
203.6300	-67.32	1.41	-2.21	-70.94	-13.00	-57.94	150	16
249.2200	-74.77	1.56	0	-76.33	-13.00	-63.33	150	93
340.4000	-74.8	1.83	-0.06	-76.69	-13.00	-63.69	150	81
3760.000	-59.76	6.33	10.6	-55.49	-13.00	-42.49	125	33
5640.000	-58.57	7.49	11.4	-54.66	-13.00	-41.66	147	214

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

Frequency (MHz)	S.G. (dBm)	Cable loss(dB)	Ant.Gain (dBd/dBi)	Result (dBm)	Limit (dBm)	Margin (dB)	Heigh ( cm )	Degree ( ° )
LTE Band 41, QPSK 20MHz Bandwidth High channel, (30MHz-10GHz)								
53.2800	-55.37	0.71	-10.02	-66.10	-25.00	-41.10	150	209
74.6200	-64.35	0.84	-6.62	-71.81	-25.00	-46.81	150	327
111.4800	-67.81	1.04	-7.98	-76.83	-25.00	-51.83	150	349
202.6600	-67.01	1.41	-2.45	-70.87	-25.00	-45.87	150	358
252.1300	-75.21	1.57	-0.08	-76.86	-25.00	-51.86	150	155
378.2300	-72.8	1.93	0.03	-74.70	-25.00	-49.70	150	252
5186.000	-55.91	7.2	10.56	-52.55	-25.00	-27.55	152	231
7779.000	-51.39	9.04	10.62	-49.81	-25.00	-24.81	136	102
LTE Band 66, QPSK 20MHz Bandwidth Middle channel, (30MHz-20GHz)								
52.3100	-55.06	0.7	-10.18	-65.94	-13.00	-52.94	150	275
73.6500	-63.71	0.83	-6.75	-71.29	-13.00	-58.29	150	172
99.8400	-68.65	0.98	-6.21	-75.84	-13.00	-62.84	150	322
203.6300	-66.63	1.41	-2.21	-70.25	-13.00	-57.25	150	143
253.1000	-74.39	1.57	-0.13	-76.09	-13.00	-63.09	150	164
343.3100	-74.92	1.84	-0.06	-76.82	-13.00	-63.82	150	135
3490.000	-62.19	6.15	10.57	-57.77	-13.00	-44.77	158	122
5235.000	-57.52	7.23	10.74	-54.01	-13.00	-41.01	146	227
LTE Band 71, QPSK 20MHz Bandwidth Low channel, (30MHz-10GHz)								
53.2800	-55.05	0.71	-10.02	-65.78	-13.00	-52.78	150	252
73.6500	-63.82	0.83	-6.75	-71.40	-13.00	-58.40	150	172
108.5700	-68.24	1.02	-7.67	-76.93	-13.00	-63.93	150	189
203.6300	-67.55	1.41	-2.21	-71.17	-13.00	-58.17	150	129
256.0100	-74.35	1.58	-0.26	-76.19	-13.00	-63.19	150	199
357.8600	-74.6	1.87	-0.07	-76.54	-13.00	-63.54	150	285
1346.000	-68.13	3.6	7.83	-63.90	-13.00	-50.90	146	228
2019.000	-64.55	4.45	7.67	-61.33	-13.00	-48.33	155	143

Result = S.G - Cable loss + Antenna gain

Margin = Result – Limit

S.G. = Result + Cable loss - Antenna gain

Spurious emissions more than 20 dB below the limit were not reported.

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**FCC§22.917(a) & §24.238(a) & §27.53 – Band Edges**

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**Applicable Standard**

FCC §22.917, § 24.238, § 27.53

According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

According to FCC §27.53 (h) (m), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

For mobile digital stations, the attenuation factor shall be not less than  $40 + 10 \log (P)$  dB on all frequencies between the channel edge and 5 megahertz from the channel edge,  $43 + 10 \log (P)$  dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and  $55 + 10 \log (P)$  dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than  $43 + 10 \log (P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log (P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees

**Test Procedure**

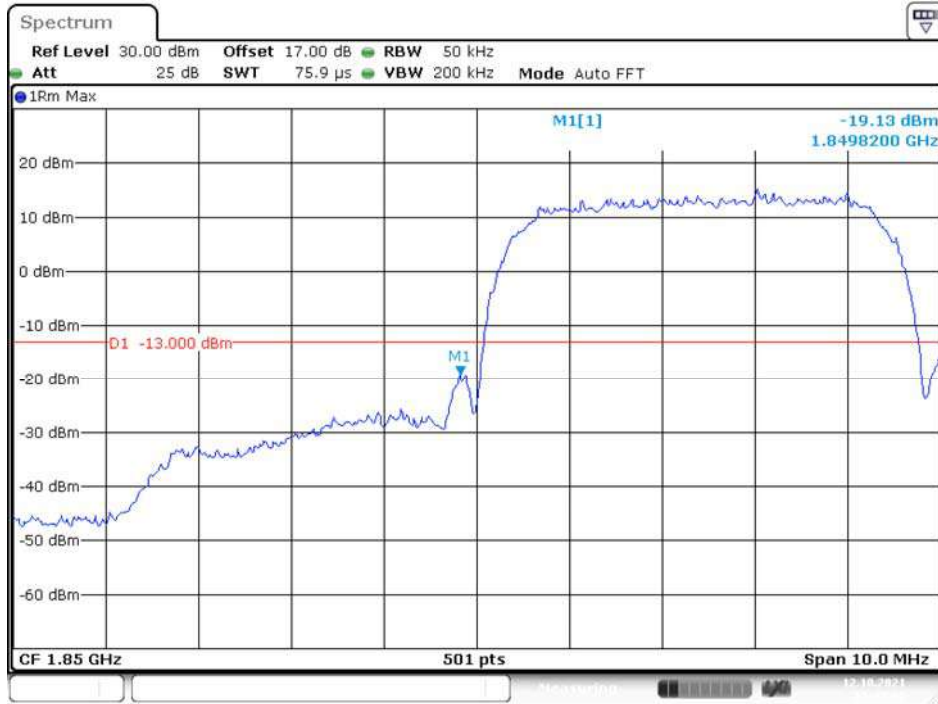
The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

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

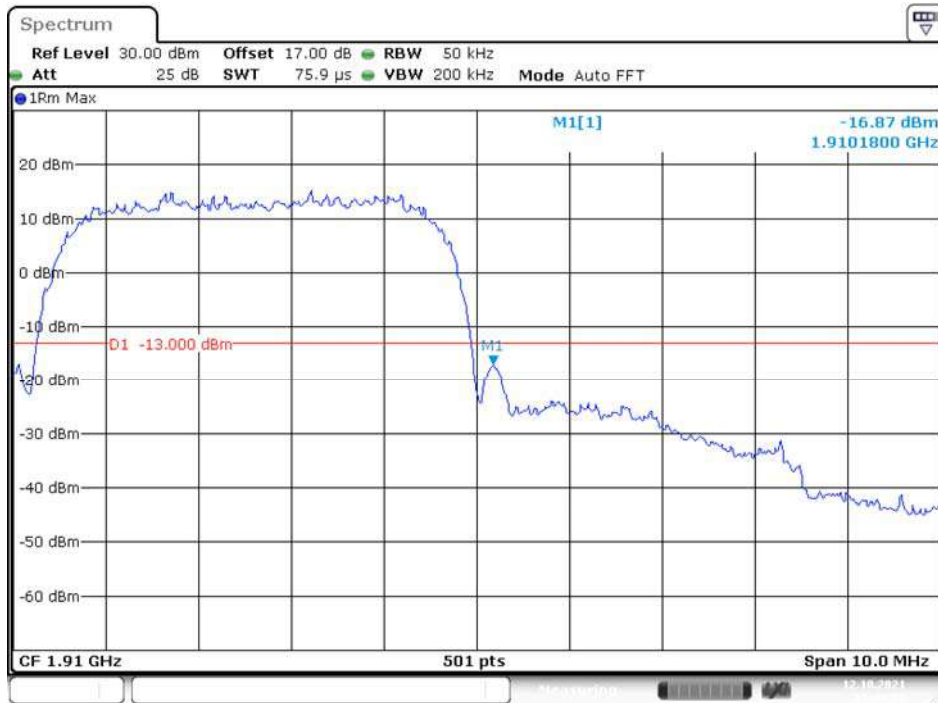
**Test Results**

Please refer to the following plots

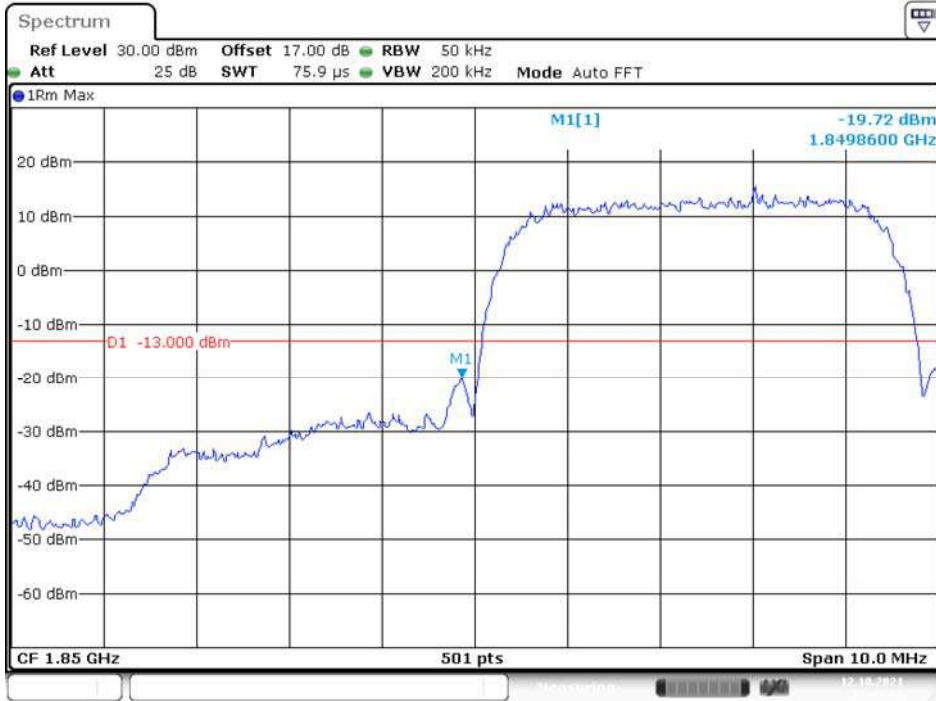
### WCDMA Band II WCDMA (Rel 99) Mode, Left Band Edge



### WCDMA (Rel 99) Mode, Right Band Edge

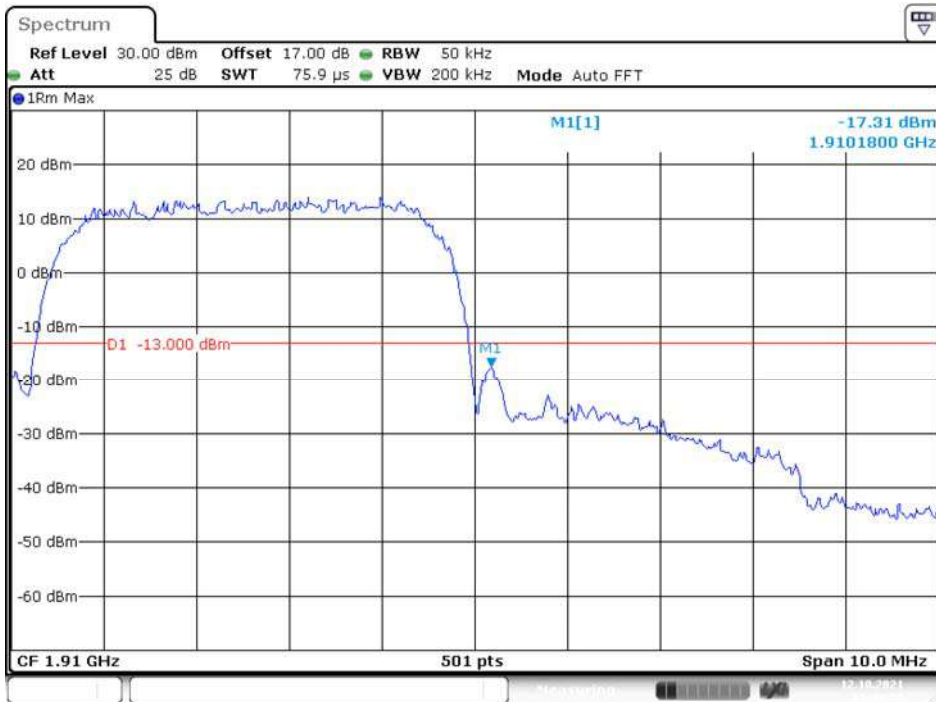


### WCDMA (HSDPA) Mode, Left Band Edge



Date: 12.OCT.2021 11:45:10

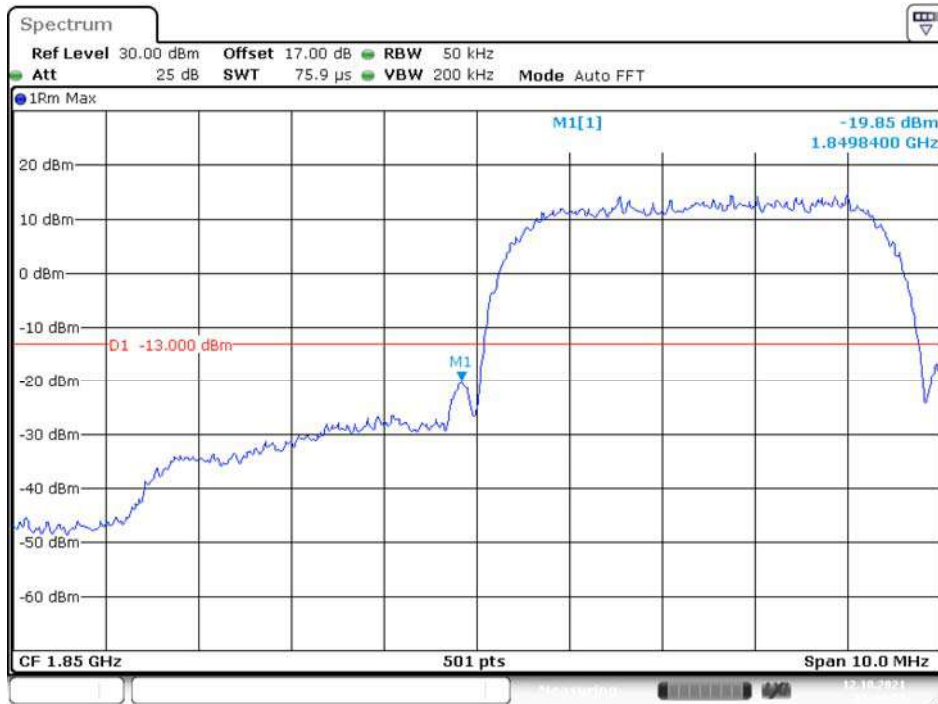
### WCDMA (HSDPA) Mode, Right Band Edge



Date: 12.OCT.2021 11:49:52

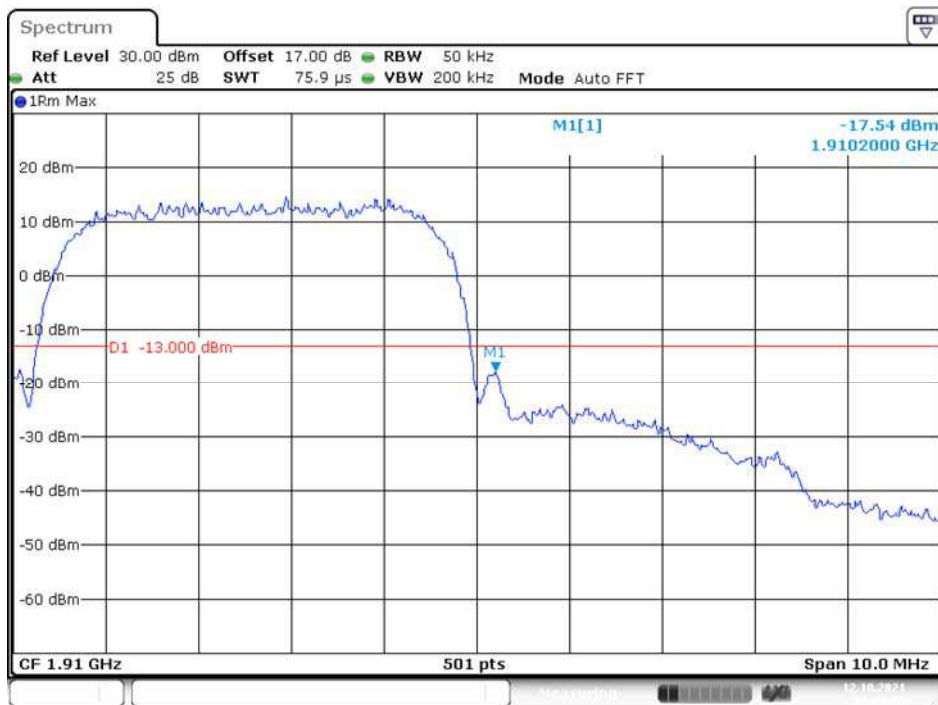


### WCDMA (HSUPA) Mode, Left Band Edge



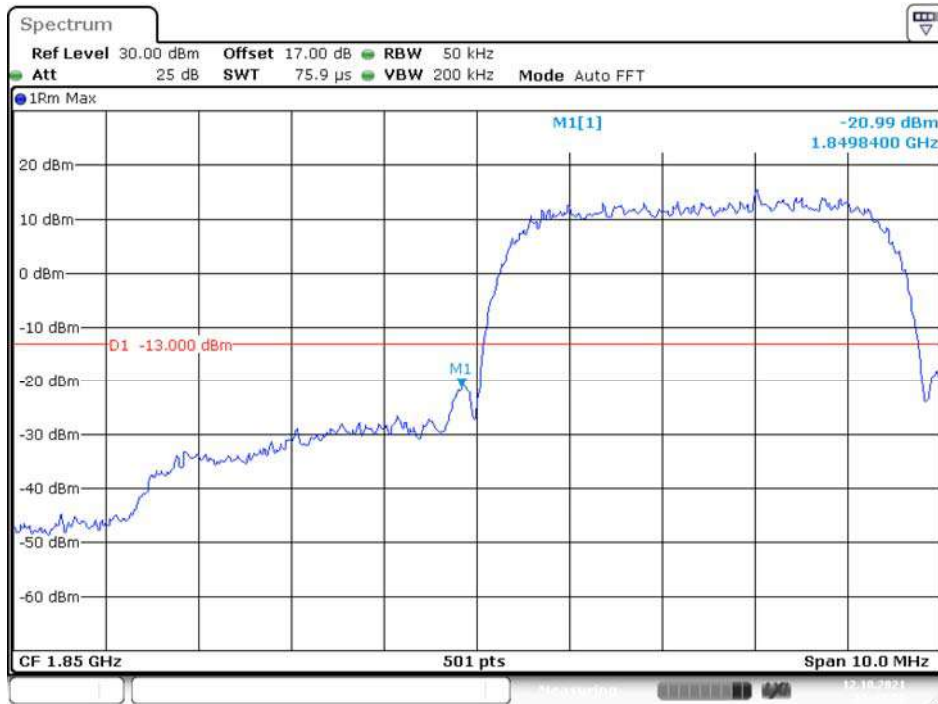
Date: 12.OCT.2021 11:44:52

### WCDMA (HSUPA) Mode, Right Band Edge



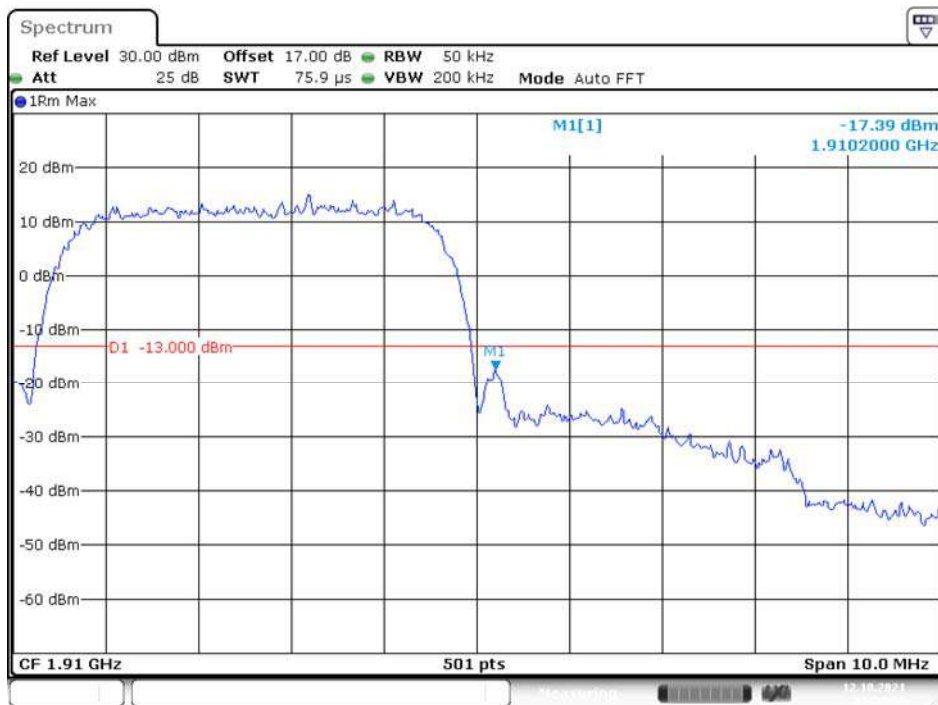
Date: 12.OCT.2021 11:49:05

### WCDMA (HSPA+) Mode, Left Band Edge



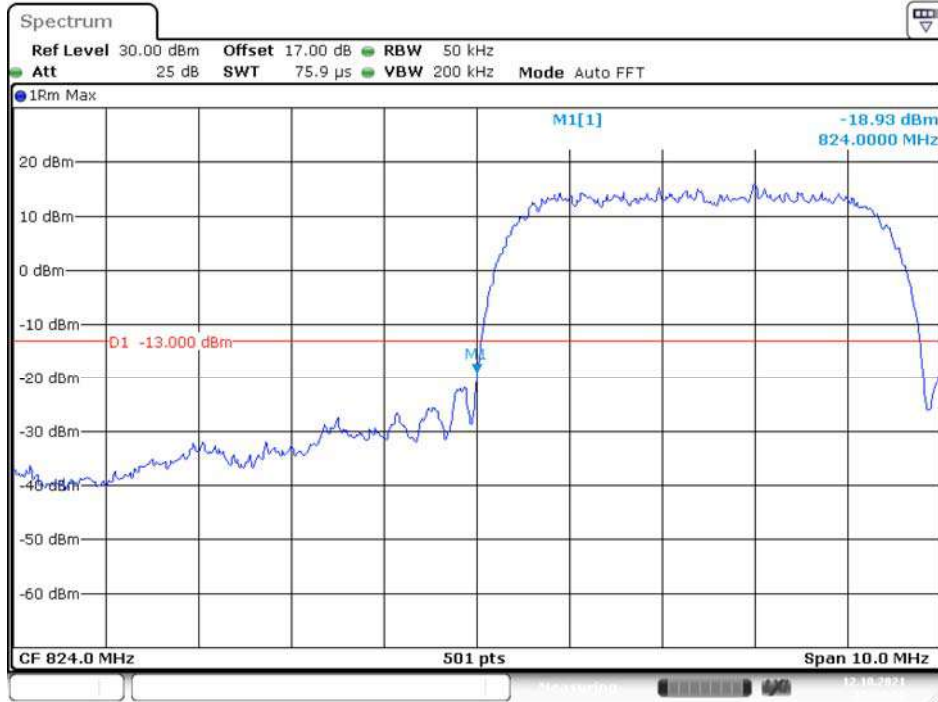
Date: 12.OCT.2021 11:45:58

### WCDMA (HSPA+) Mode, Right Band Edge



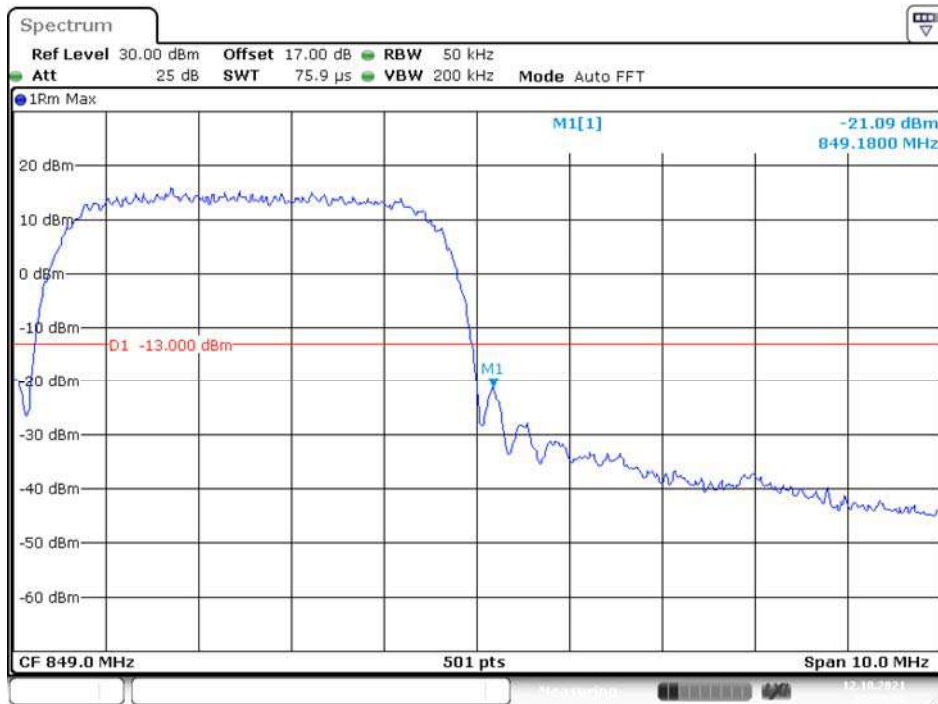
Date: 12.OCT.2021 11:50:14

### WCDMA Band V WCDMA (Rel 99) Mode, Left Band Edge



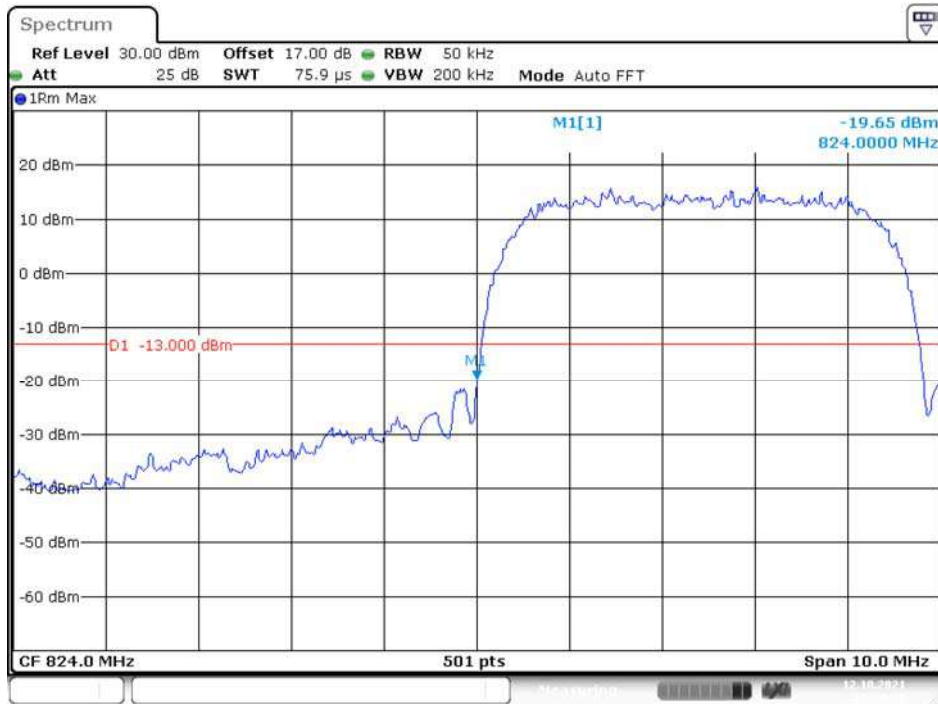
Date: 12.OCT.2021 15:30:12

### WCDMA (Rel 99) Mode, Right Band Edge



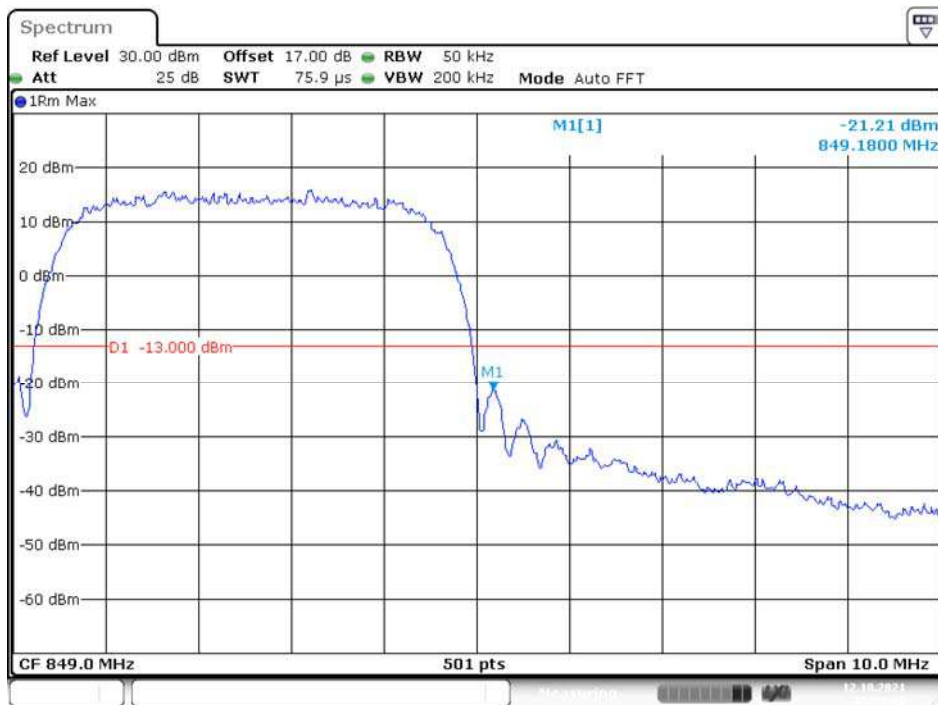
Date: 12.OCT.2021 15:28:19

### WCDMA (HSDPA) Mode, Left Band Edge



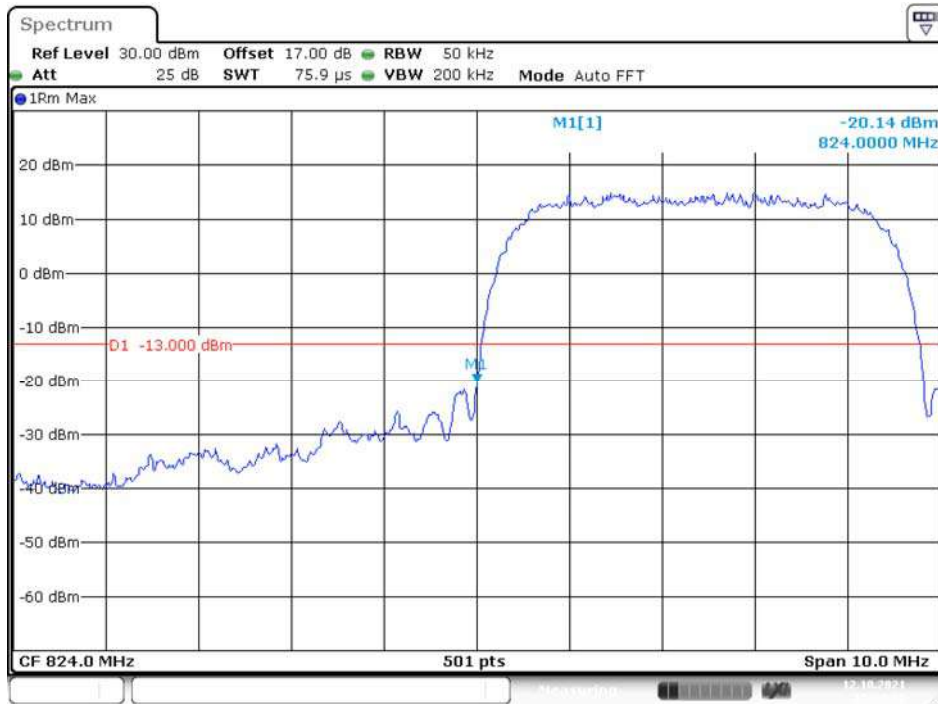
Date: 12.OCT.2021 15:30:26

### WCDMA (HSDPA) Mode, Right Band Edge



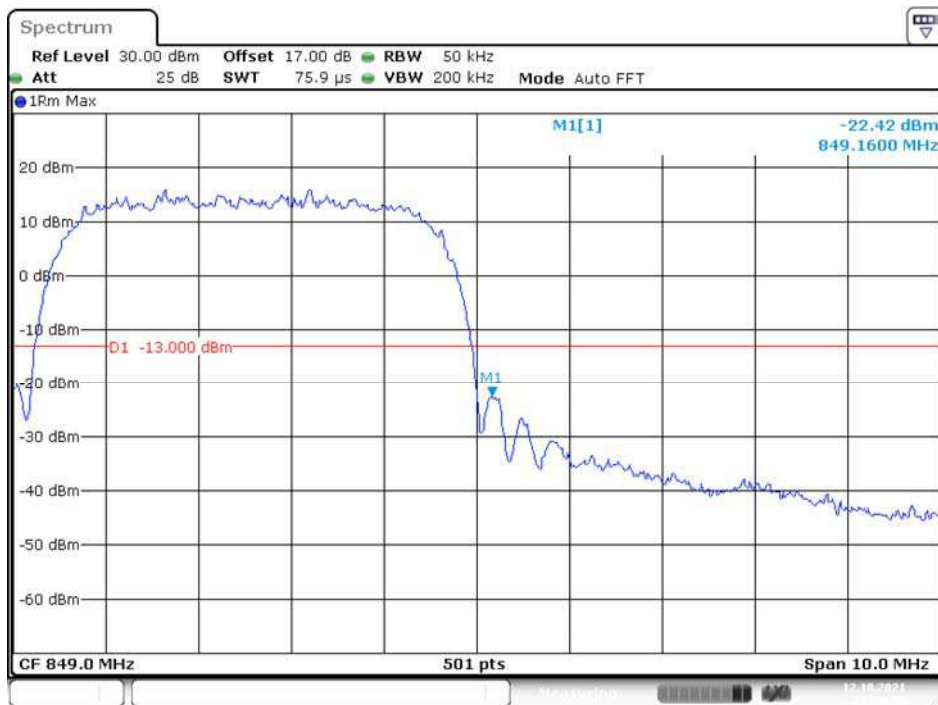
Date: 12.OCT.2021 15:28:41

### WCDMA (HSUPA) Mode, Left Band Edge



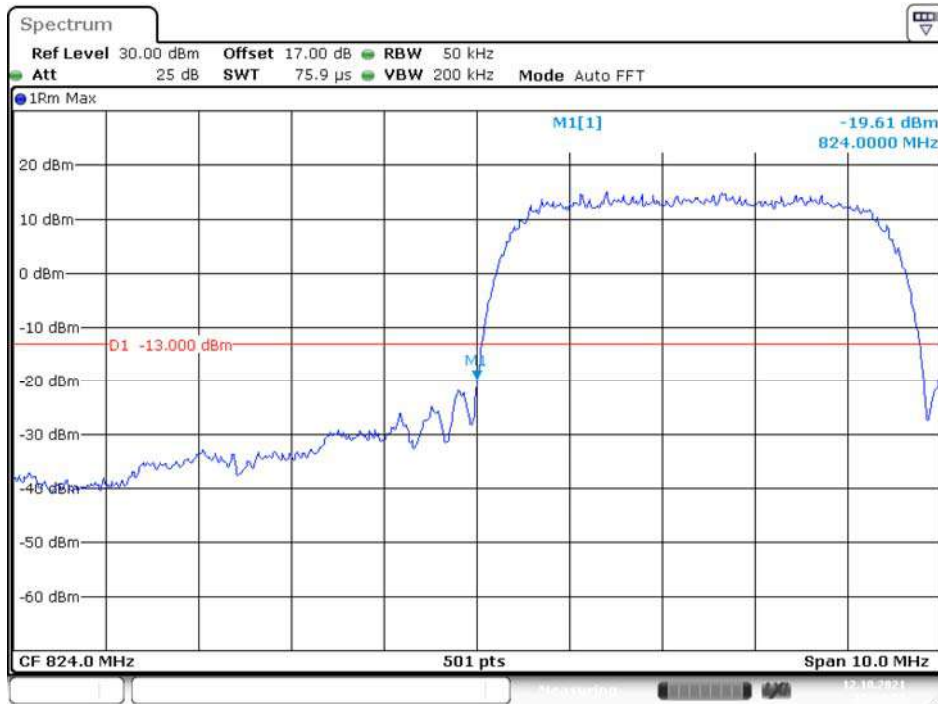
Date: 12.OCT.2021 15:30:38

### WCDMA (HSUPA) Mode, Right Band Edge



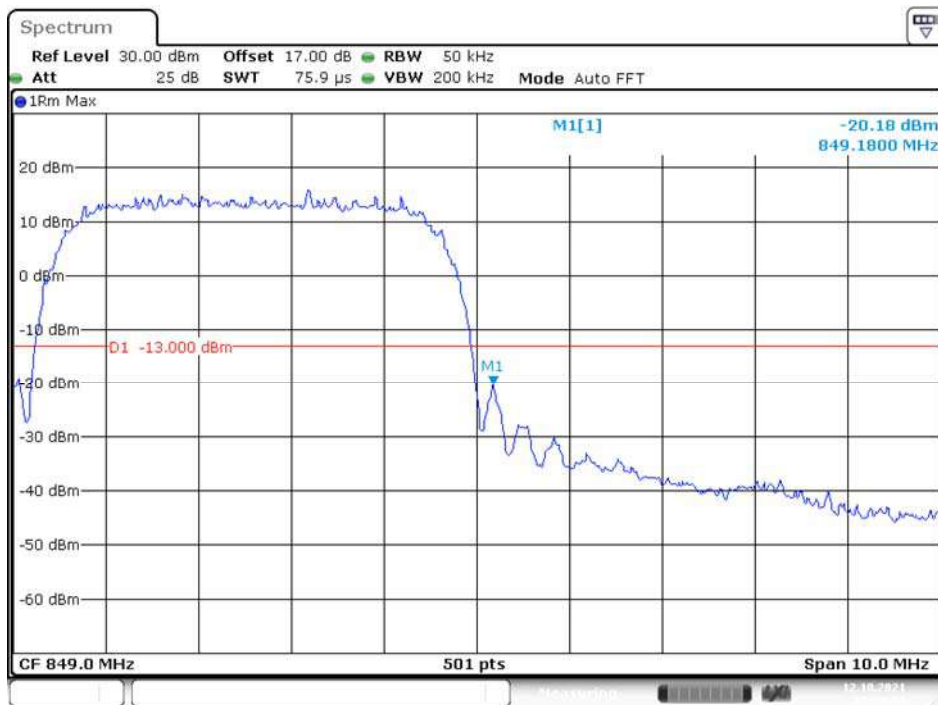
Date: 12.OCT.2021 15:28:55

### WCDMA (HSPA+) Mode, Left Band Edge



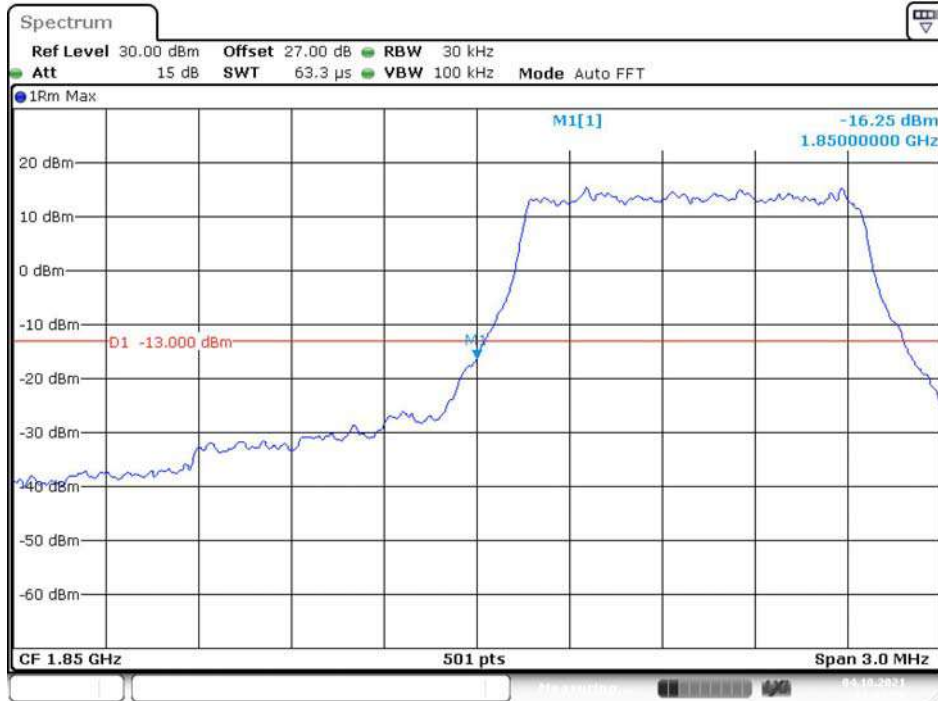
Date: 12.OCT.2021 15:30:51

### WCDMA (HSPA+) Mode, Right Band Edge



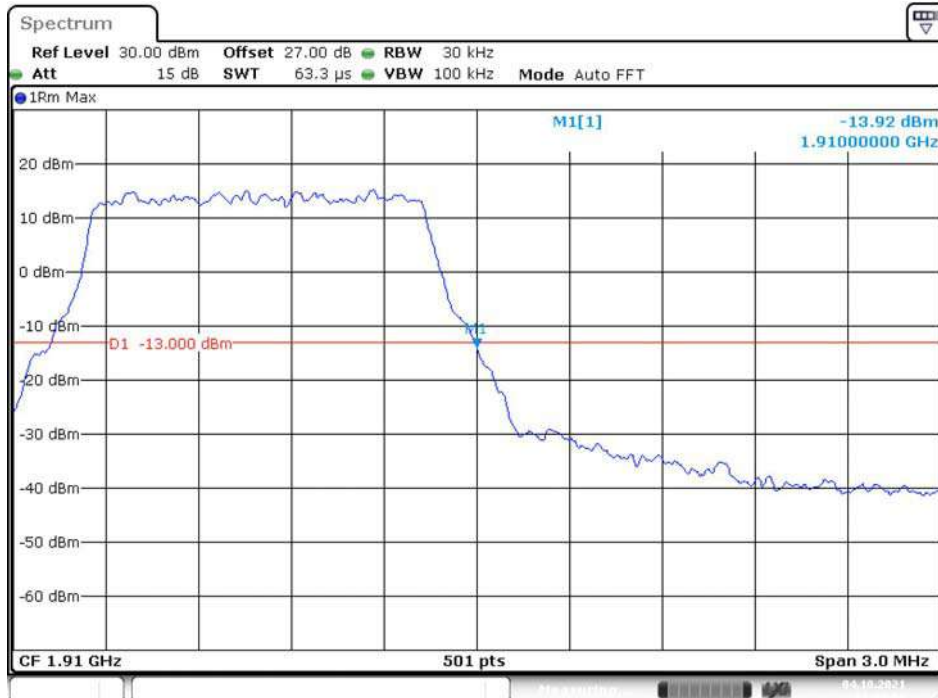
Date: 12.OCT.2021 15:29:12

### LTE Band 2 QPSK (1.4MHz, RB6) – Left Band Edge



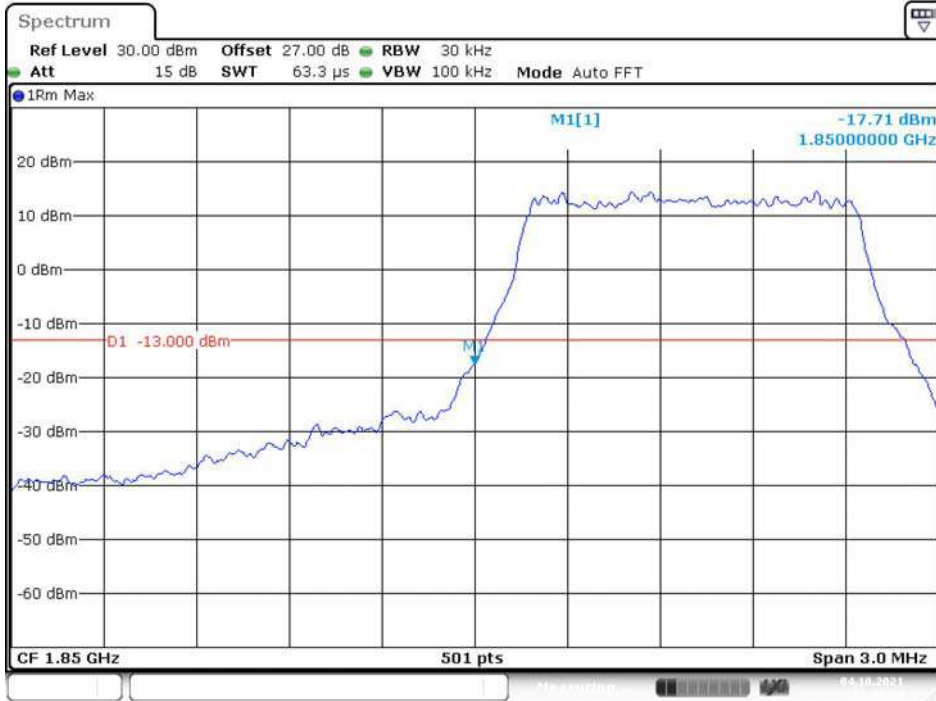
Date: 4.OCT.2021 11:03:37

### QPSK (1.4MHz, RB6) – Right Band Edge



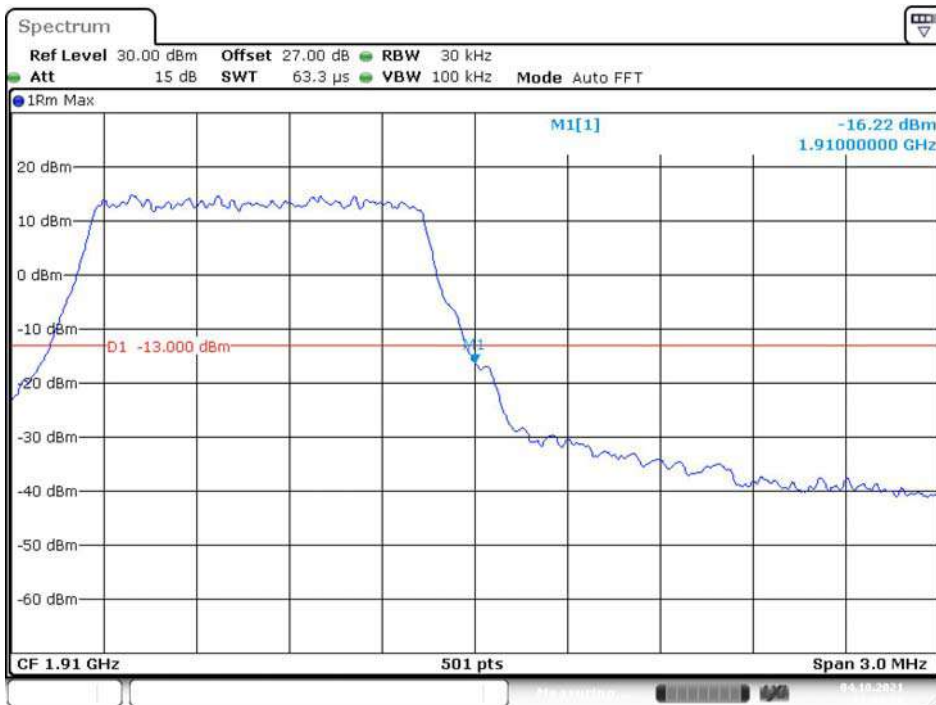
Date: 4.OCT.2021 11:04:09

### 16QAM (1.4MHz, RB6) – Left Band Edge



Date: 4.OCT.2021 11:03:54

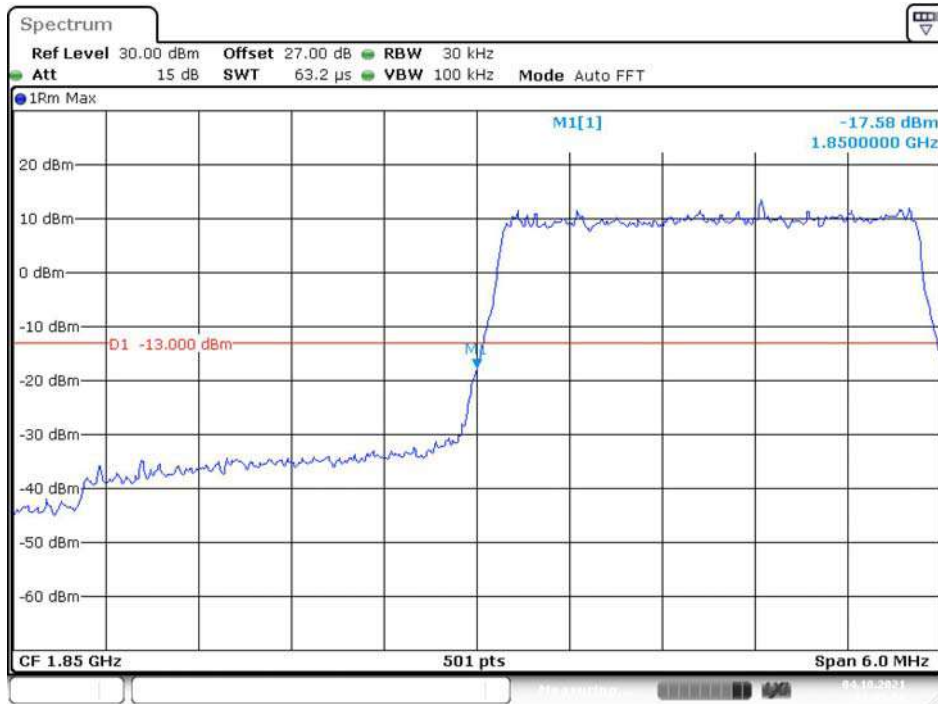
### 16QAM (1.4MHz, RB6) – Right Band Edge



Date: 4.OCT.2021 11:04:32

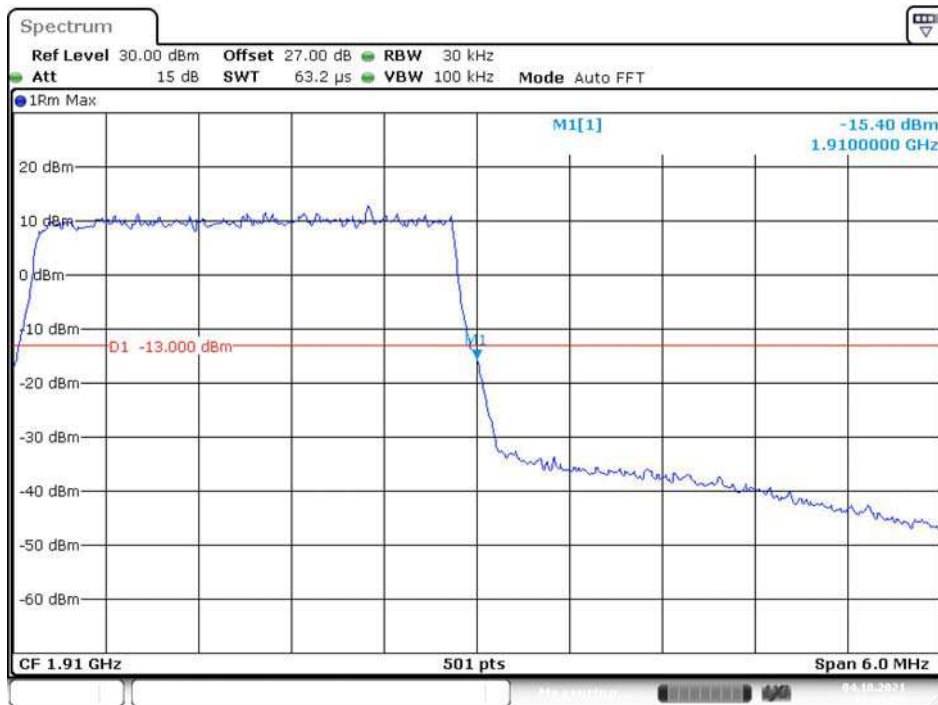


### QPSK (3MHz, RB15) – Left Band Edge



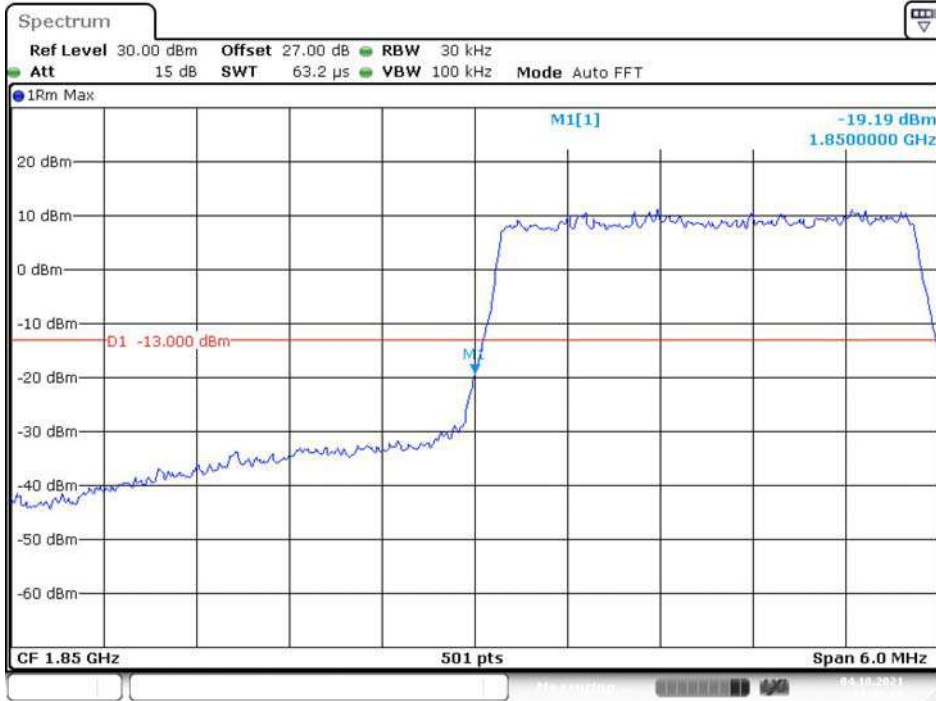
Date: 4.OCT.2021 11:05:02

### QPSK (3MHz, RB15) – Right Band Edge



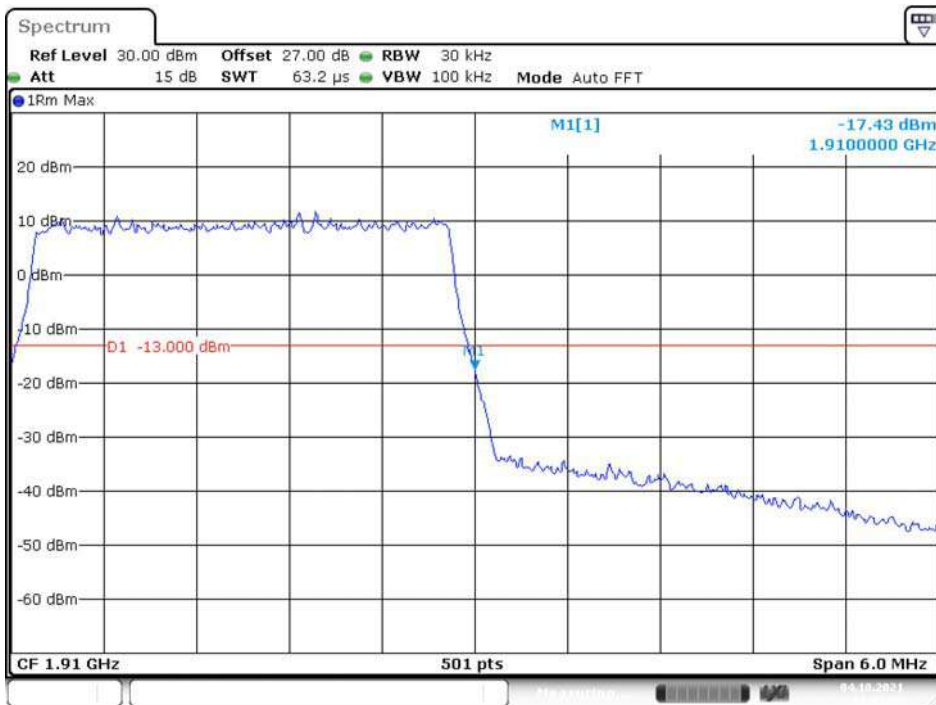
Date: 4.OCT.2021 11:05:34

### 16QAM (3MHz, RB15) – Left Band Edge



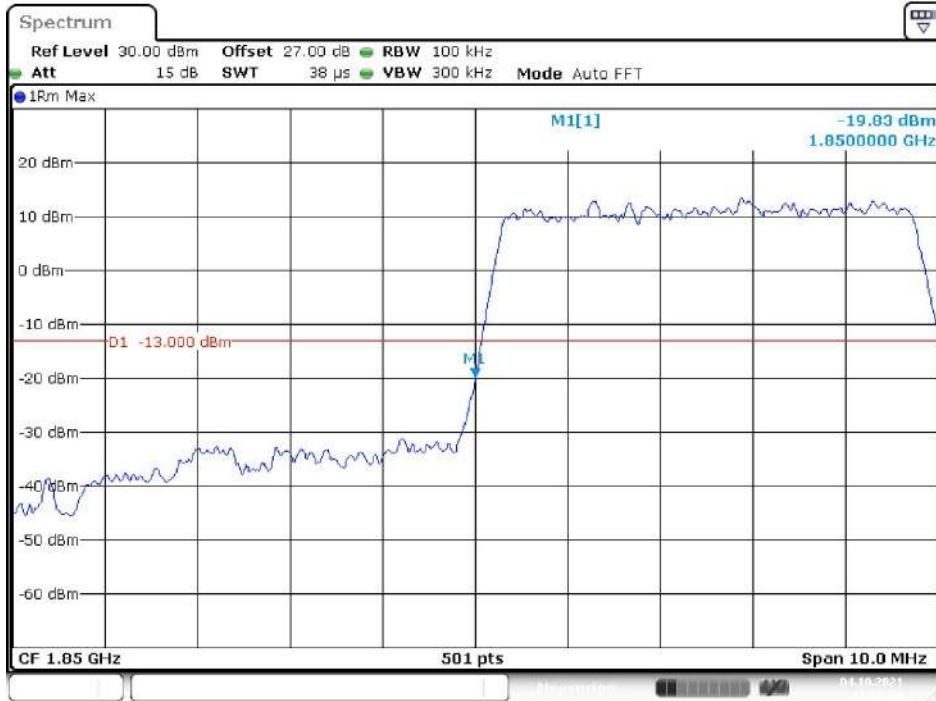
Date: 4.OCT.2021 11:05:19

### 16QAM (3MHz, RB15) – Right Band Edge



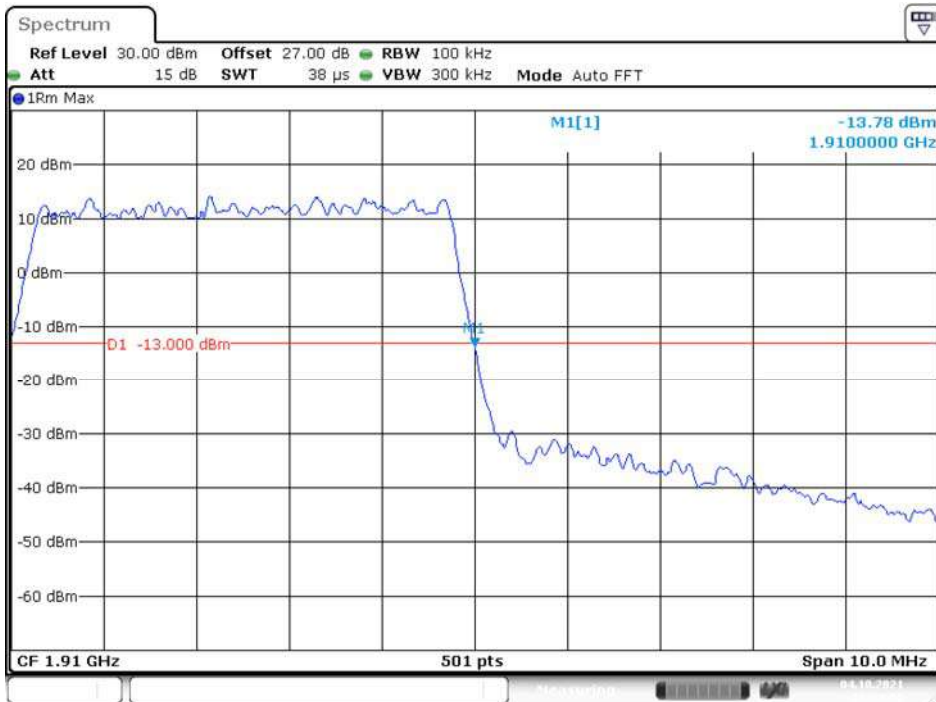
Date: 4.OCT.2021 11:05:47

### QPSK (5MHz, RB25) – Left Band Edge



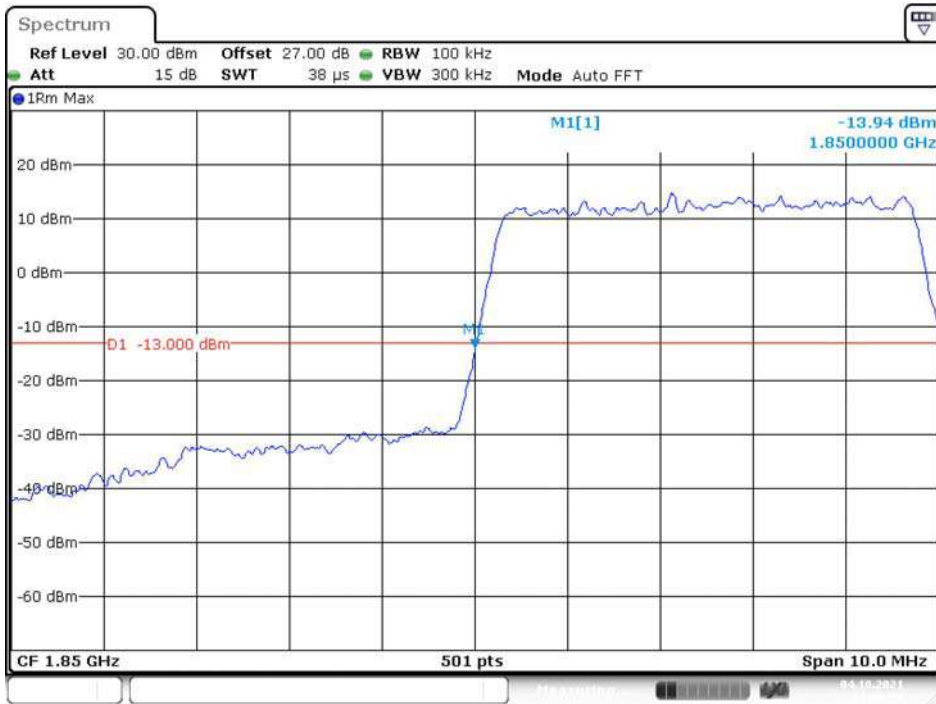
Date: 4.OCT.2021 11:06:14

### QPSK (5MHz, RB25) – Right Band Edge



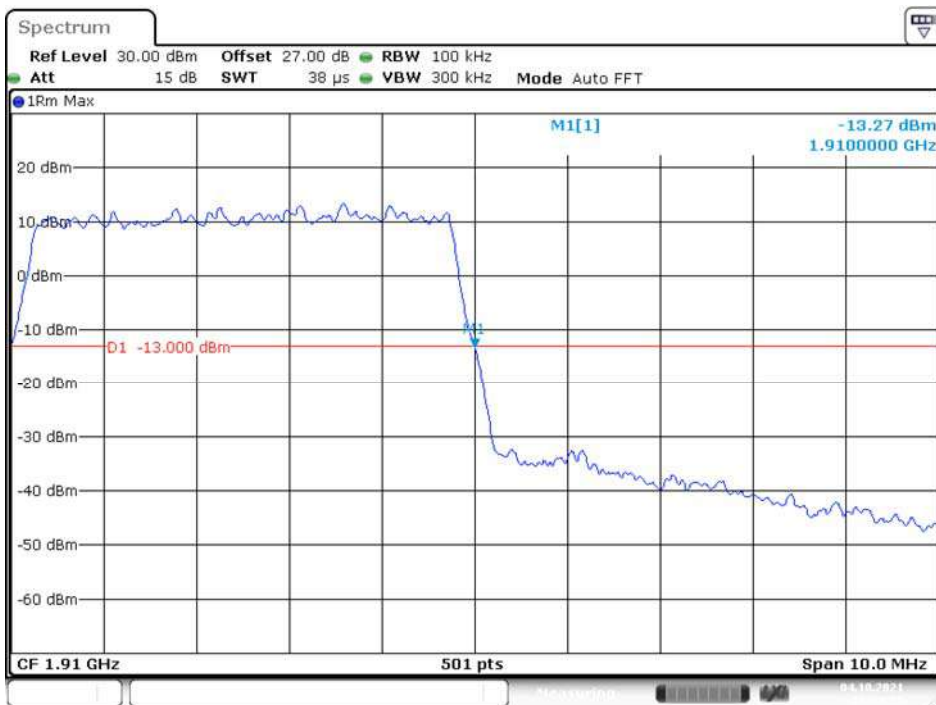
Date: 4.OCT.2021 18:39:06

### 16QAM (5MHz, RB25) – Left Band Edge



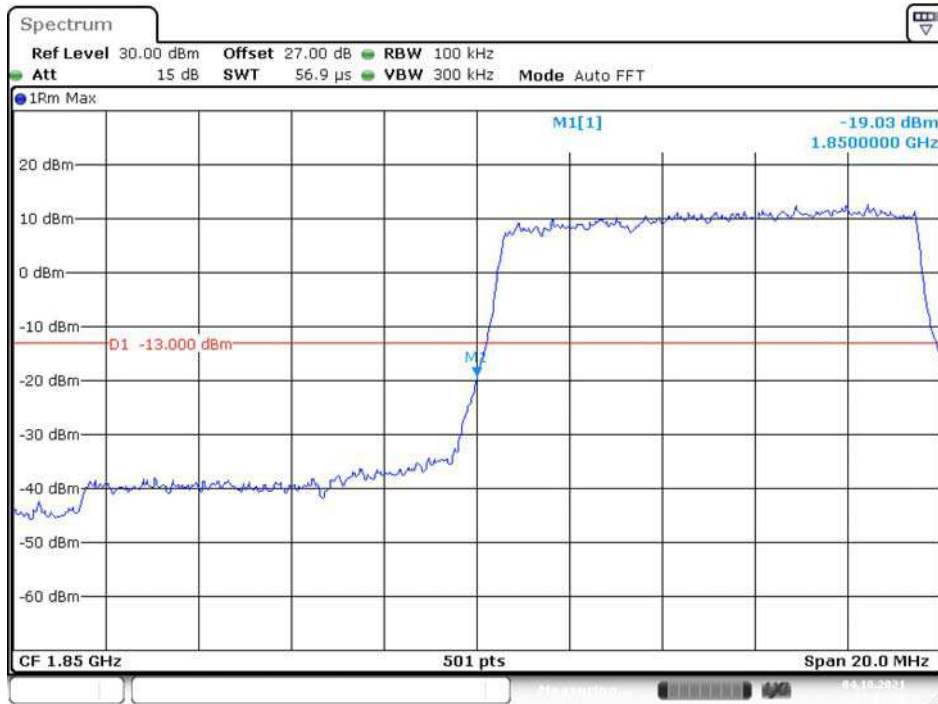
Date: 4.OCT.2021 11:06:35

### 16QAM (5MHz, RB25) – Right Band Edge



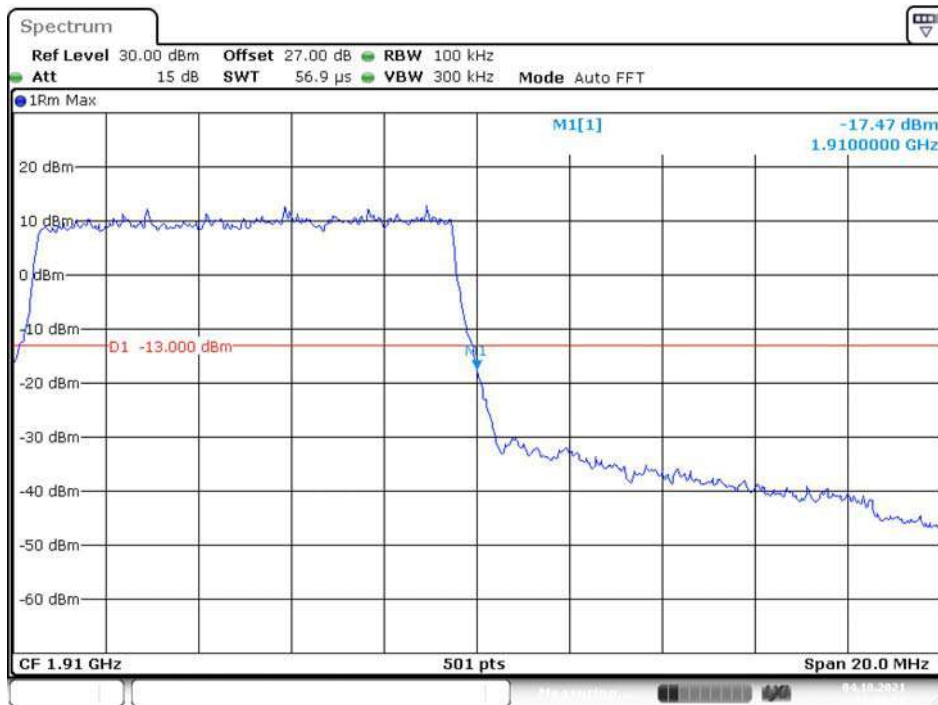
Date: 4.OCT.2021 18:39:28

### QPSK (10MHz, RB50) – Left Band Edge



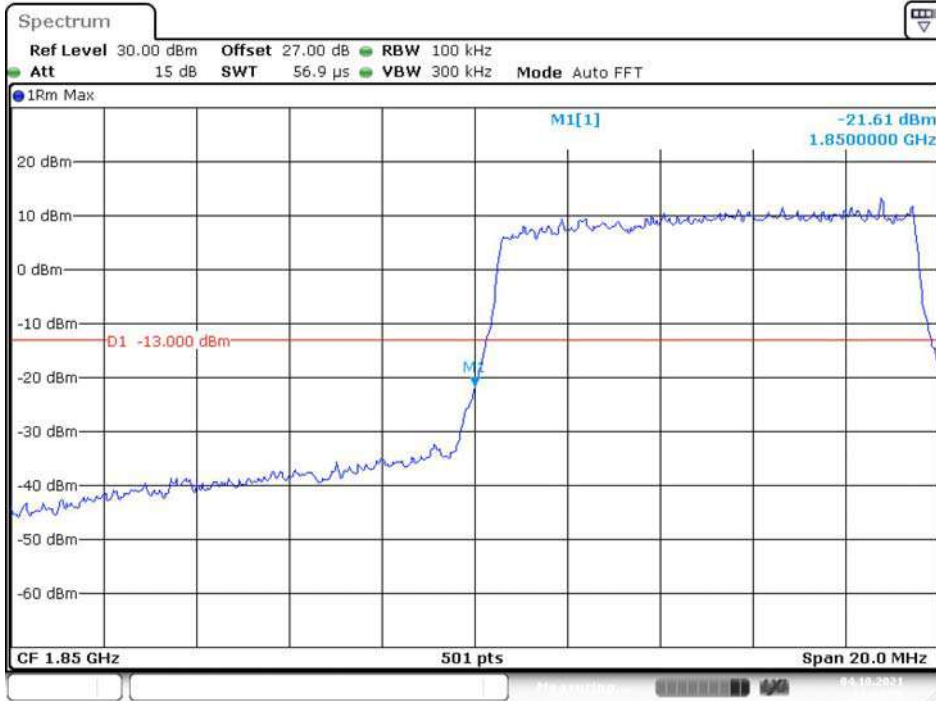
Date: 4.OCT.2021 11:07:58

### QPSK (10MHz, RB50) – Right Band Edge



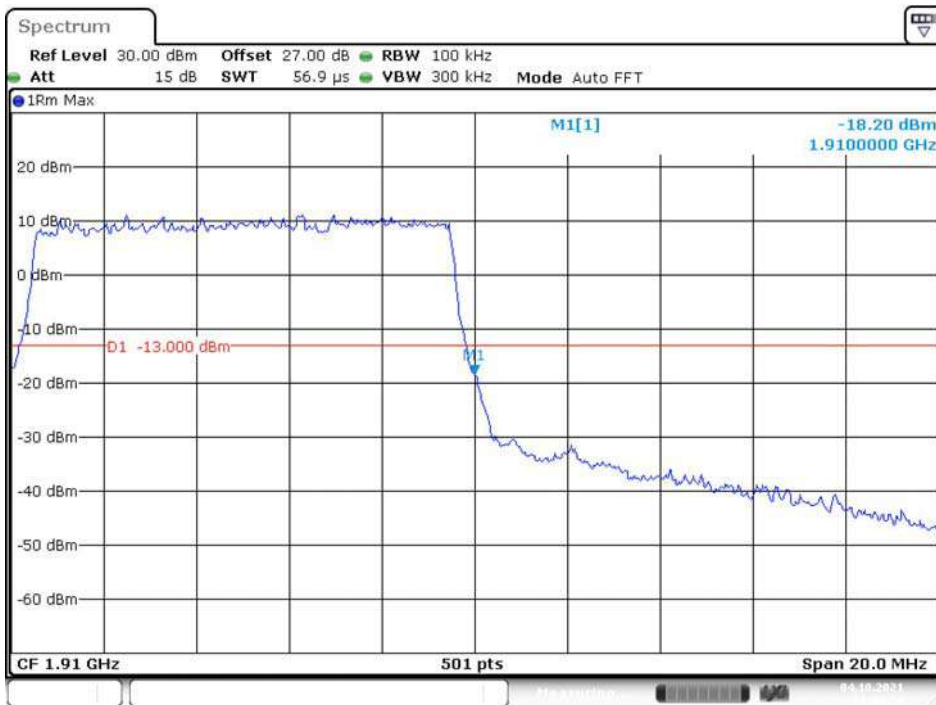
Date: 4.OCT.2021 11:08:51

### 16QAM (10MHz, RB50) – Left Band Edge



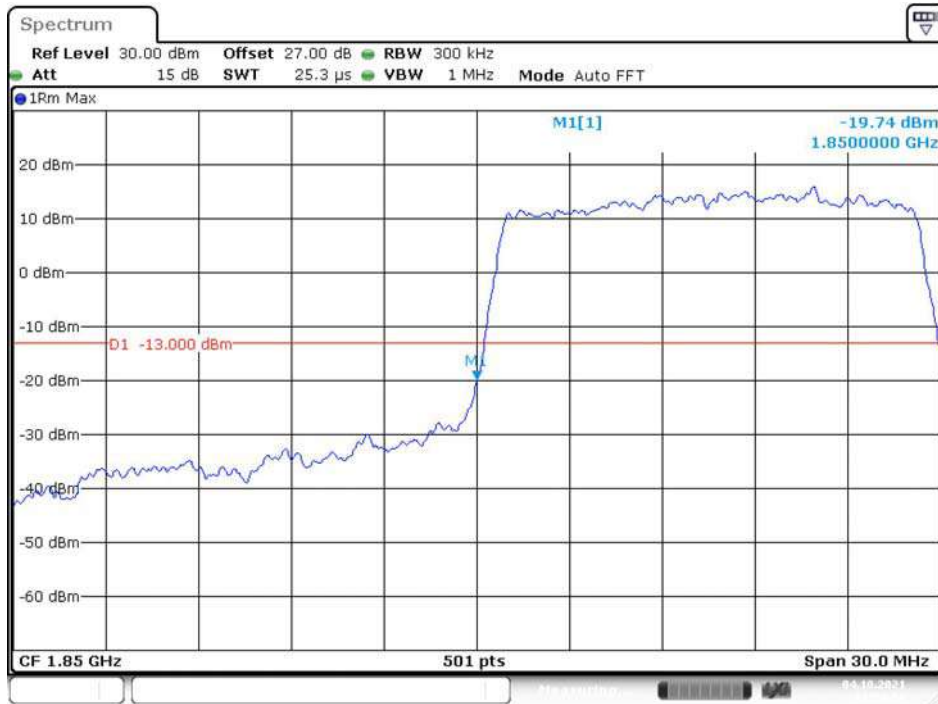
Date: 4.OCT.2021 11:08:22

### 16QAM (10MHz, RB50) – Right Band Edge



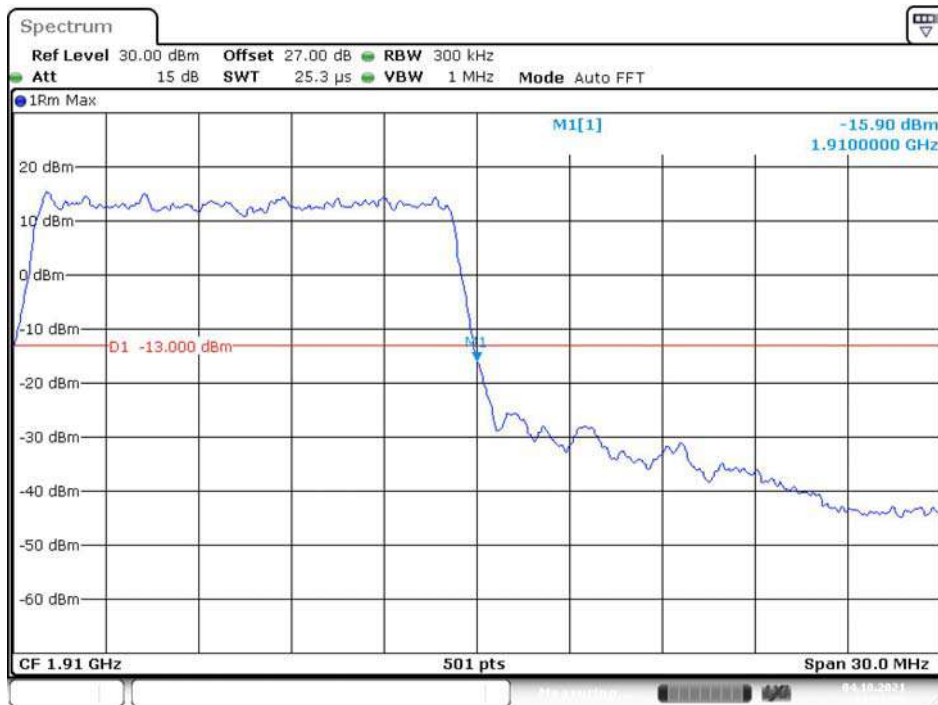
Date: 4.OCT.2021 11:09:24

### QPSK (15MHz, RB75) – Left Band Edge



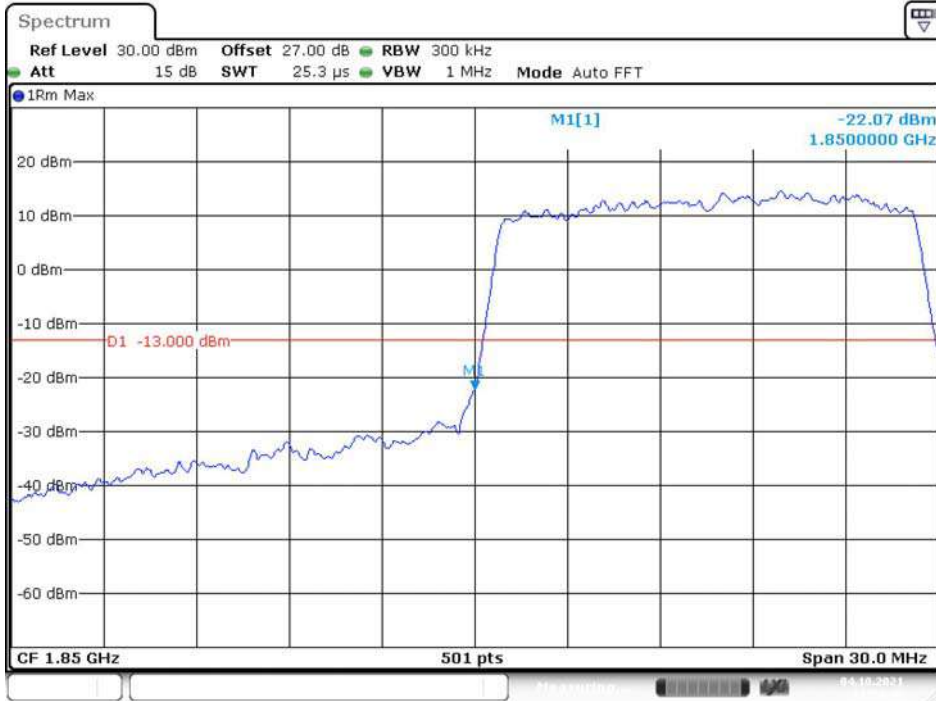
Date: 4.OCT.2021 11:10:14

### QPSK (15MHz, RB75) – Right Band Edge



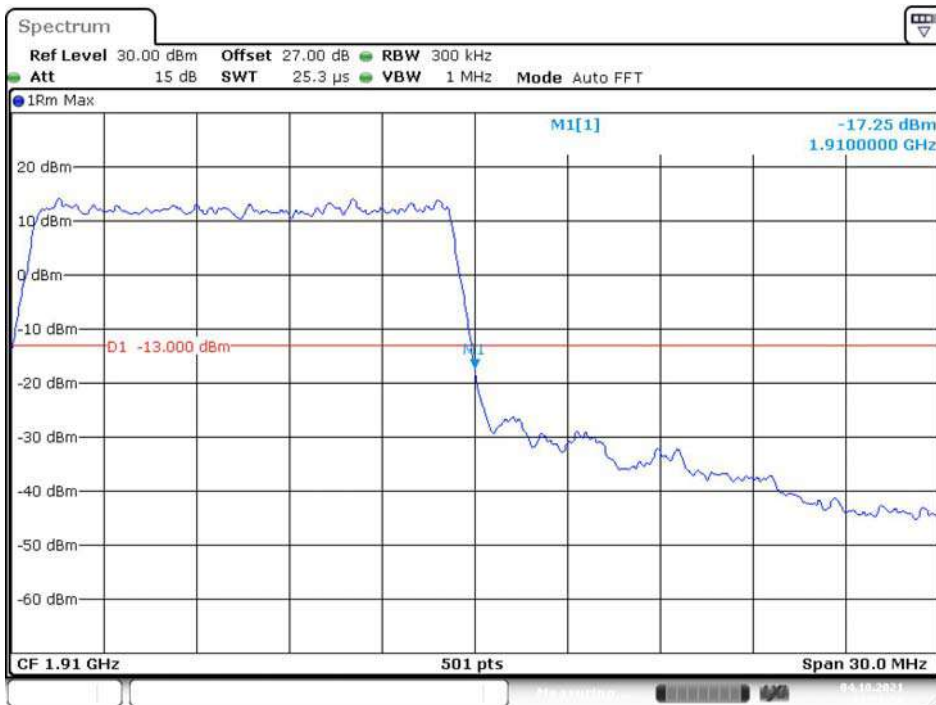
Date: 4.OCT.2021 11:11:27

### 16QAM (15MHz, RB75) – Left Band Edge



Date: 4.OCT.2021 11:10:44

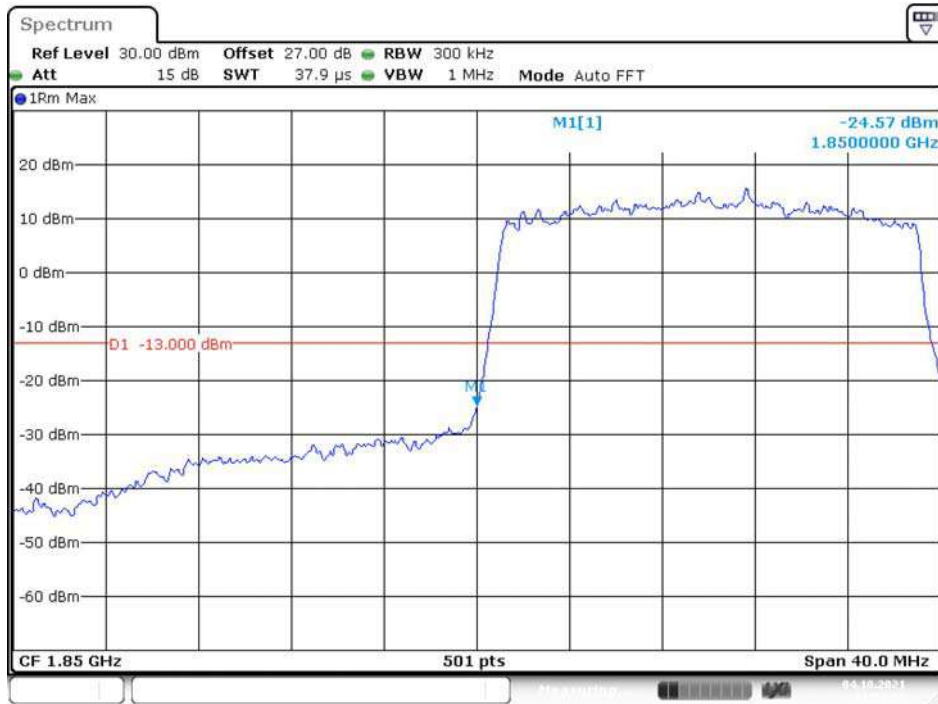
### 16QAM (15MHz, RB75) – Right Band Edge



Date: 4.OCT.2021 11:11:56

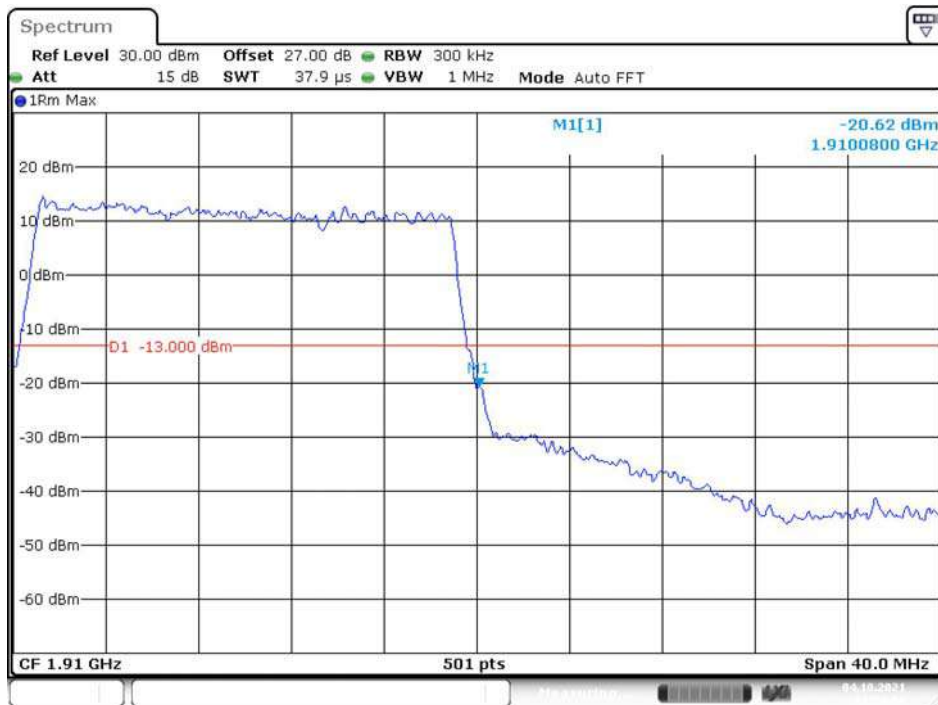


### QPSK (20MHz, RB100) – Left Band Edge



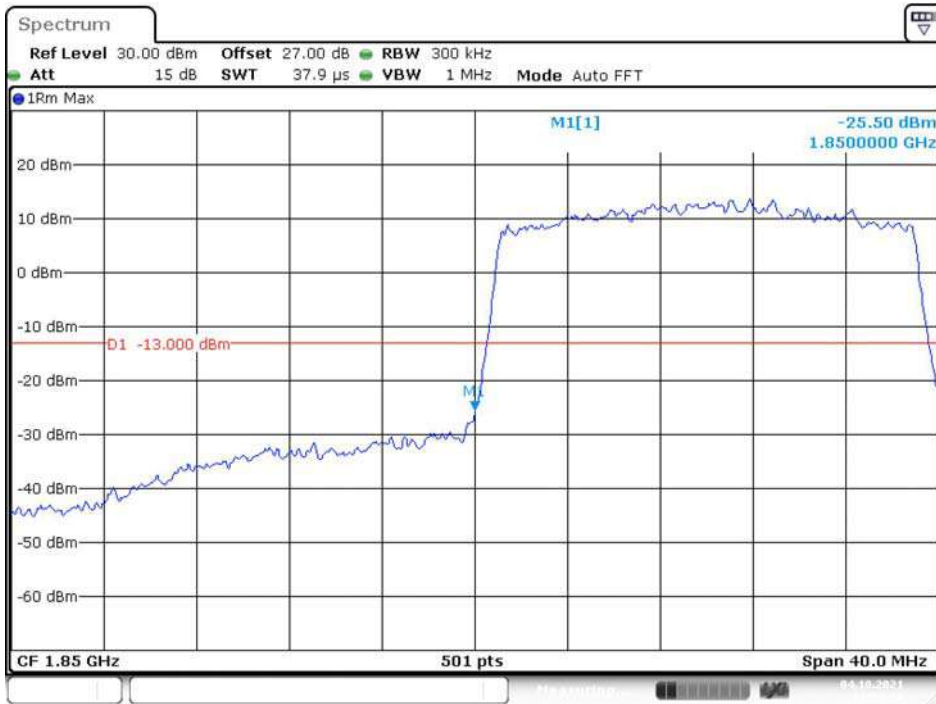
Date: 4.OCT.2021 11:12:57

### QPSK (20MHz, RB100) – Right Band Edge



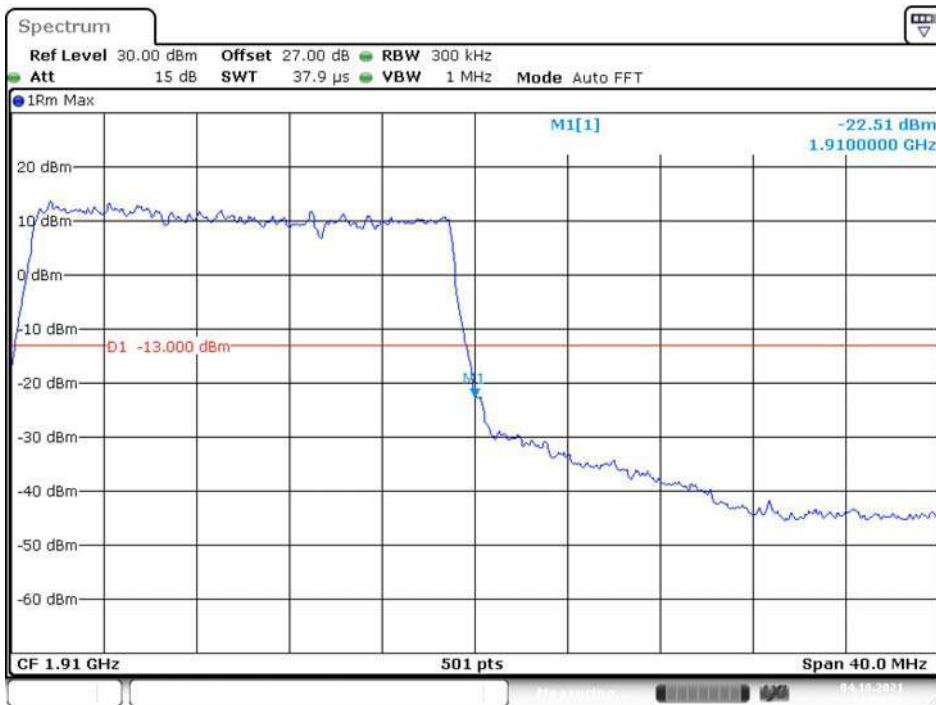
Date: 4.OCT.2021 11:14:01

### 16QAM (20MHz, RB100) – Left Band Edge



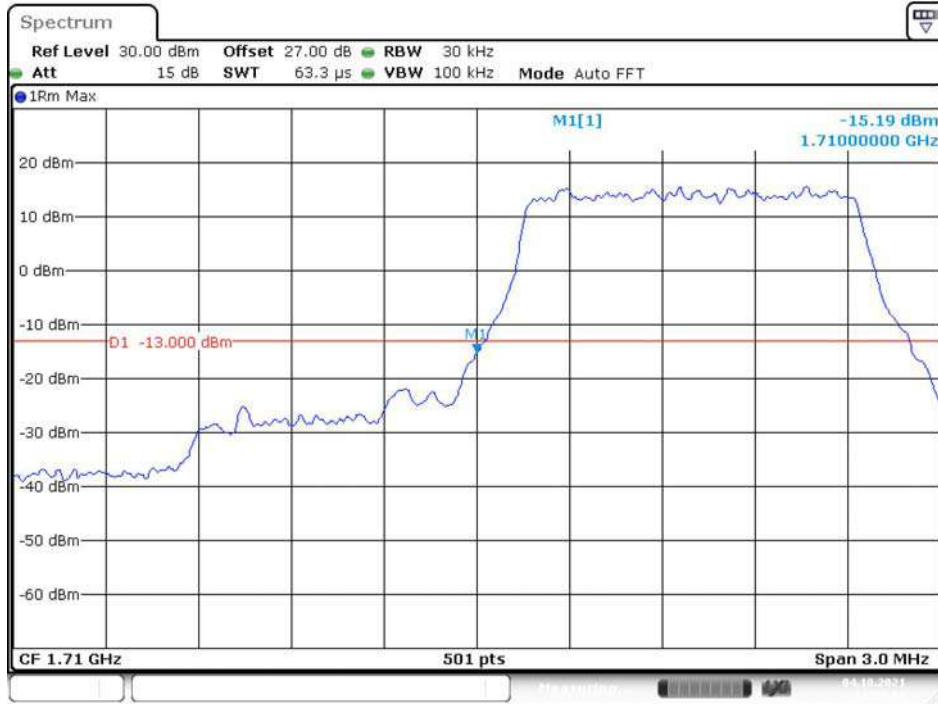
Date: 4.OCT.2021 11:13:27

### 16QAM (20MHz, RB100) – Right Band Edge

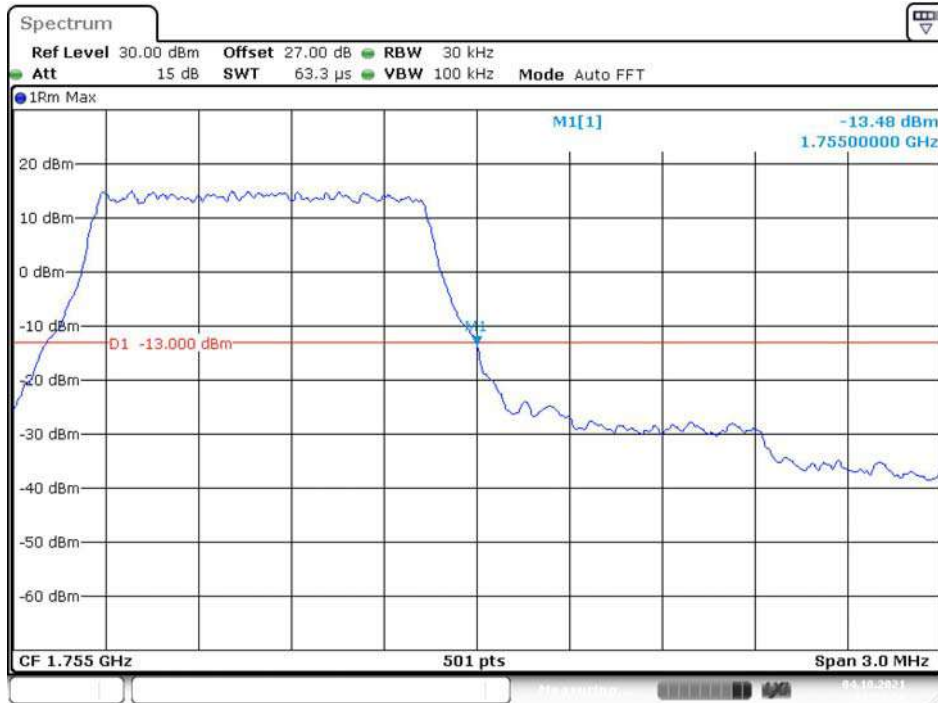


Date: 4.OCT.2021 11:14:30

### LTE Band 4 QPSK (1.4MHz, RB6) – Left Band Edge



### QPSK (1.4MHz, RB6) – Right Band Edge

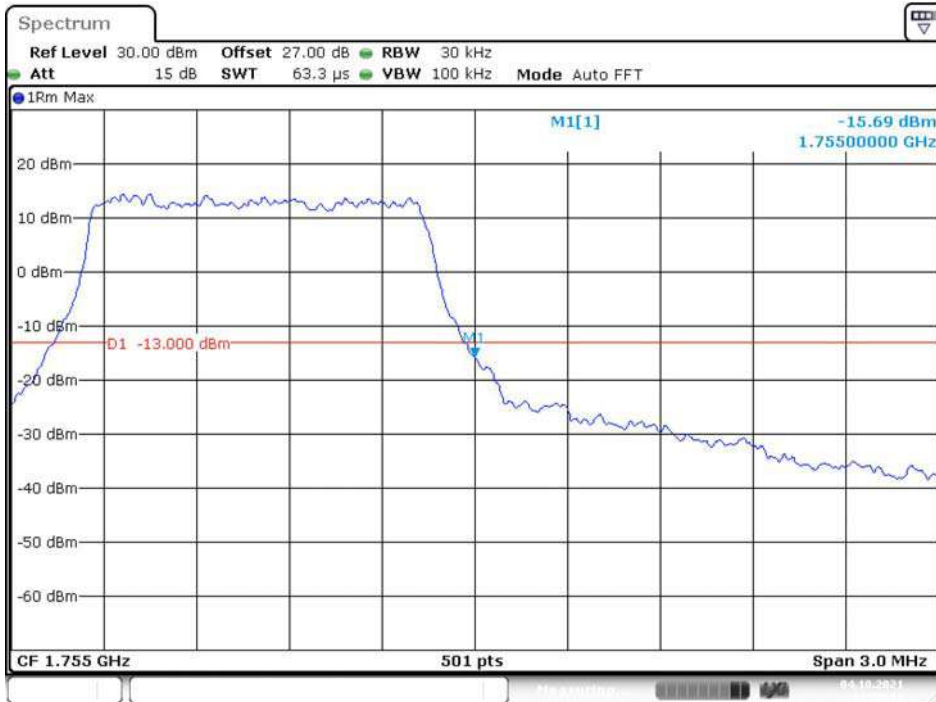


### 16QAM (1.4MHz, RB5) – Left Band Edge



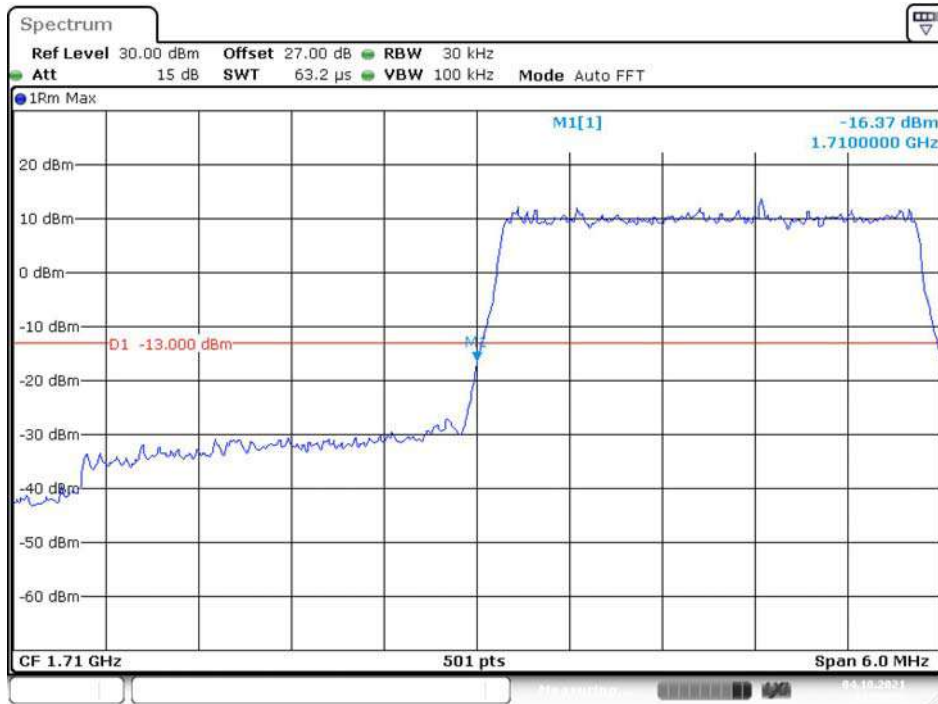
Date: 4.OCT.2021 11:15:24

### 16QAM (1.4MHz, RB5) – Right Band Edge



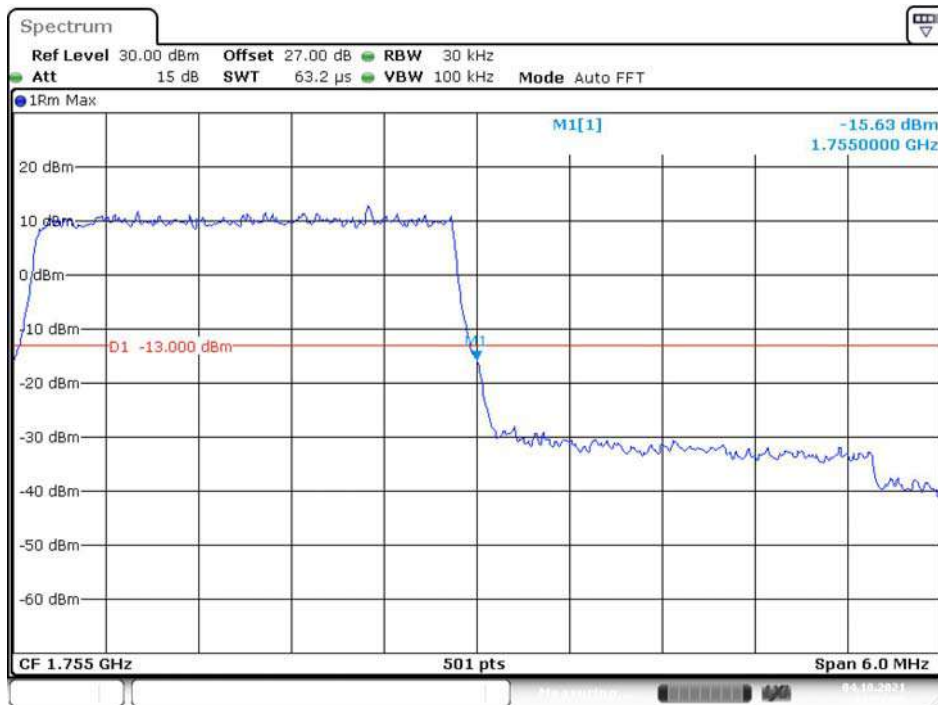
Date: 4.OCT.2021 11:16:11

### QPSK (3MHz, RB15) – Left Band Edge



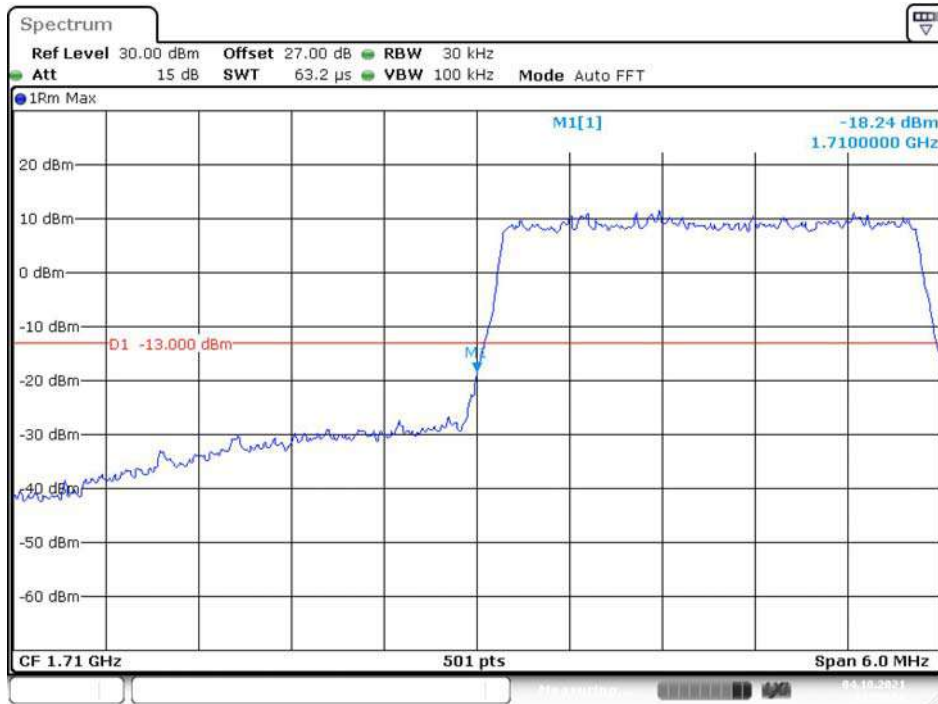
Date: 4.OCT.2021 11:16:38

### QPSK (3MHz, RB15) – Right Band Edge



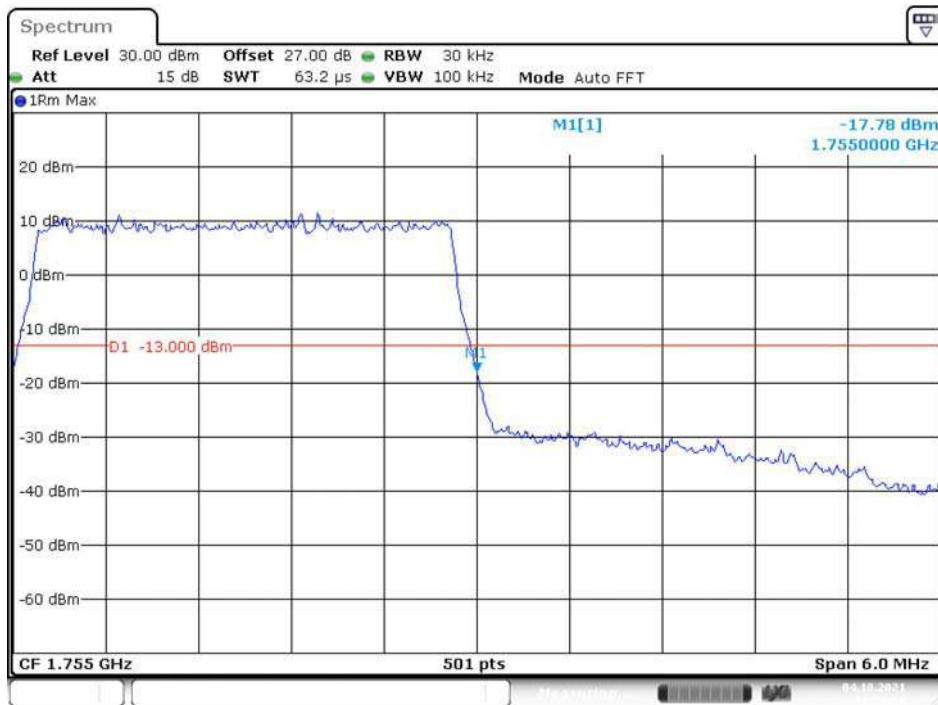
Date: 4.OCT.2021 11:17:06

### 16QAM (3MHz, RB15) – Left Band Edge



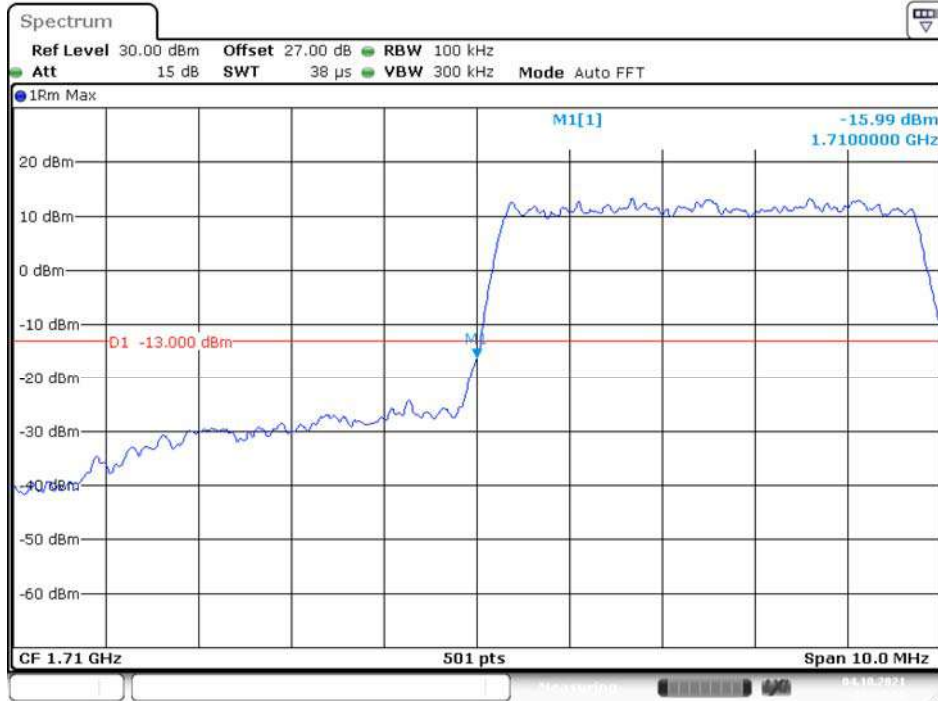
Date: 4.OCT.2021 11:16:52

### 16QAM (3MHz, RB15) – Right Band Edge



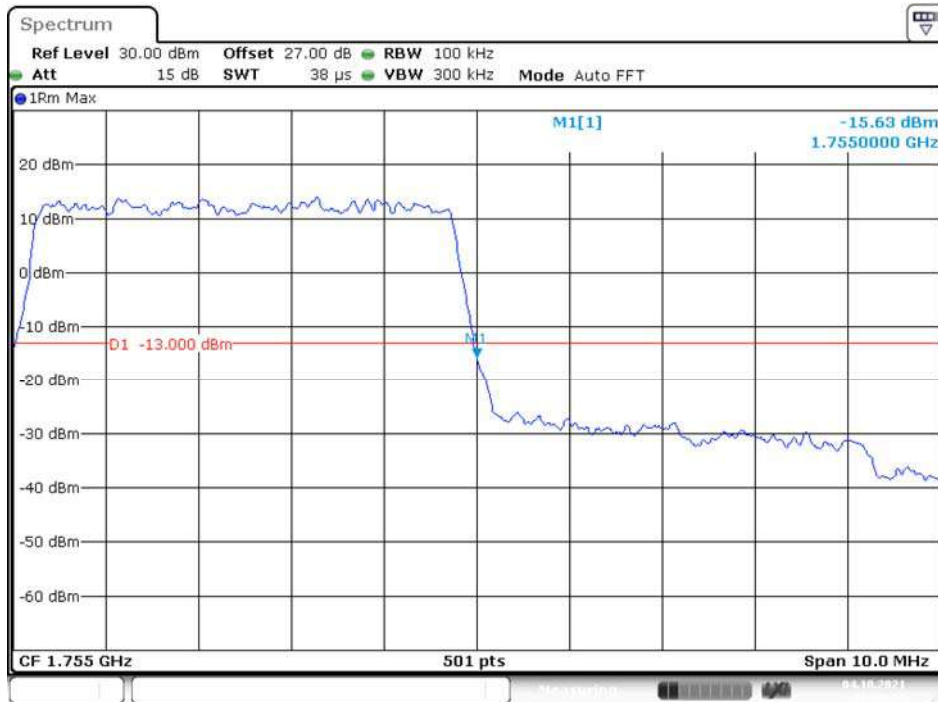
Date: 4.OCT.2021 11:17:20

### QPSK (5MHz, RB25) – Left Band Edge



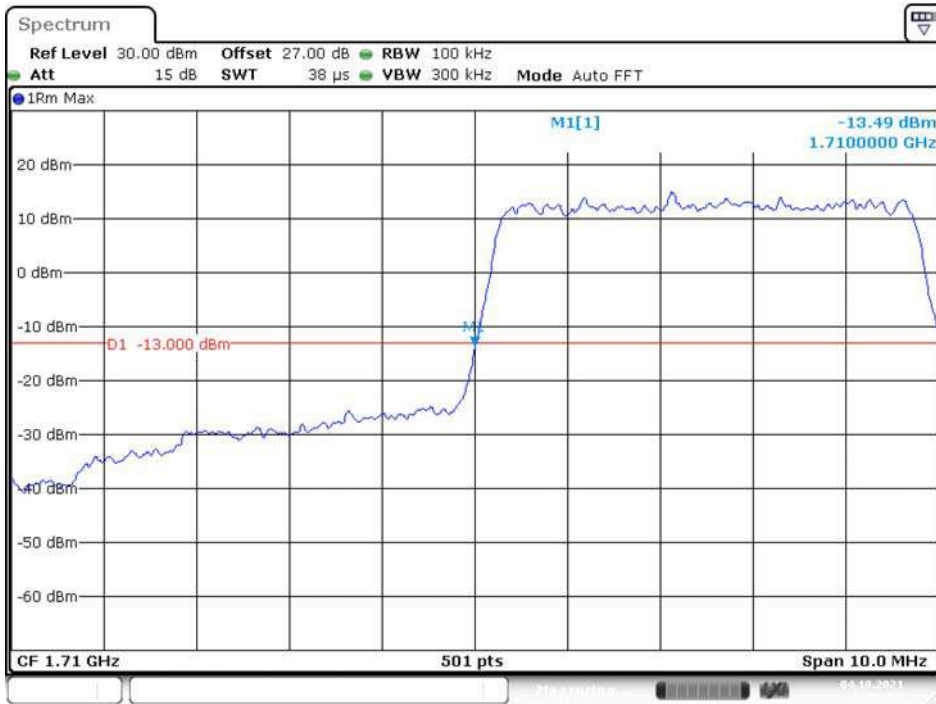
Date: 4.OCT.2021 18:37:19

### QPSK (5MHz, RB25) – Right Band Edge



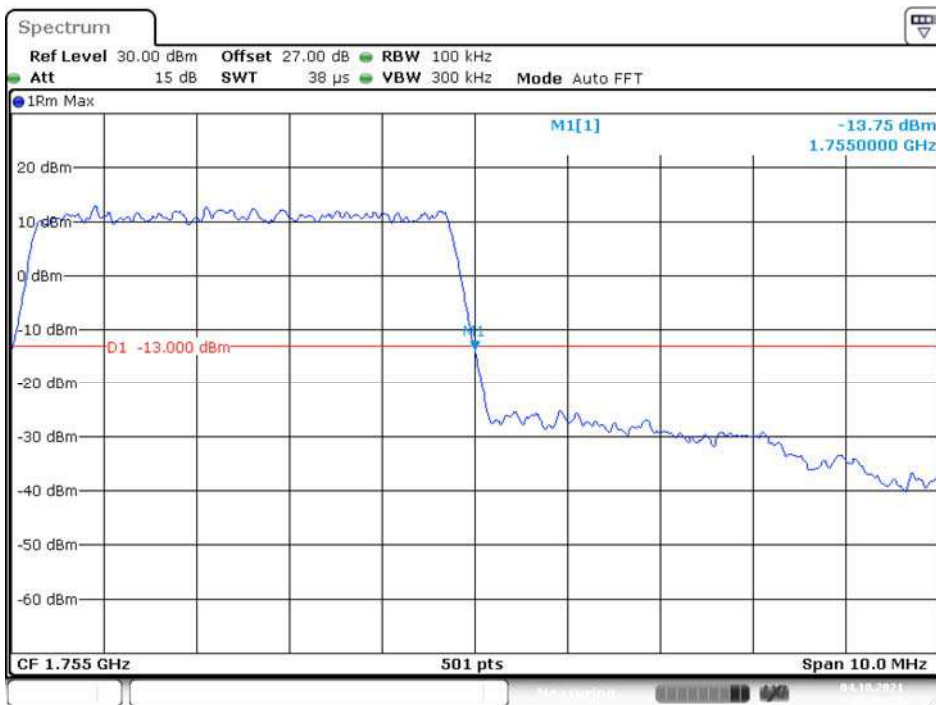
Date: 4.OCT.2021 18:36:08

### 16QAM (5MHz, RB25) – Left Band Edge



Date: 4.OCT.2021 11:18:16

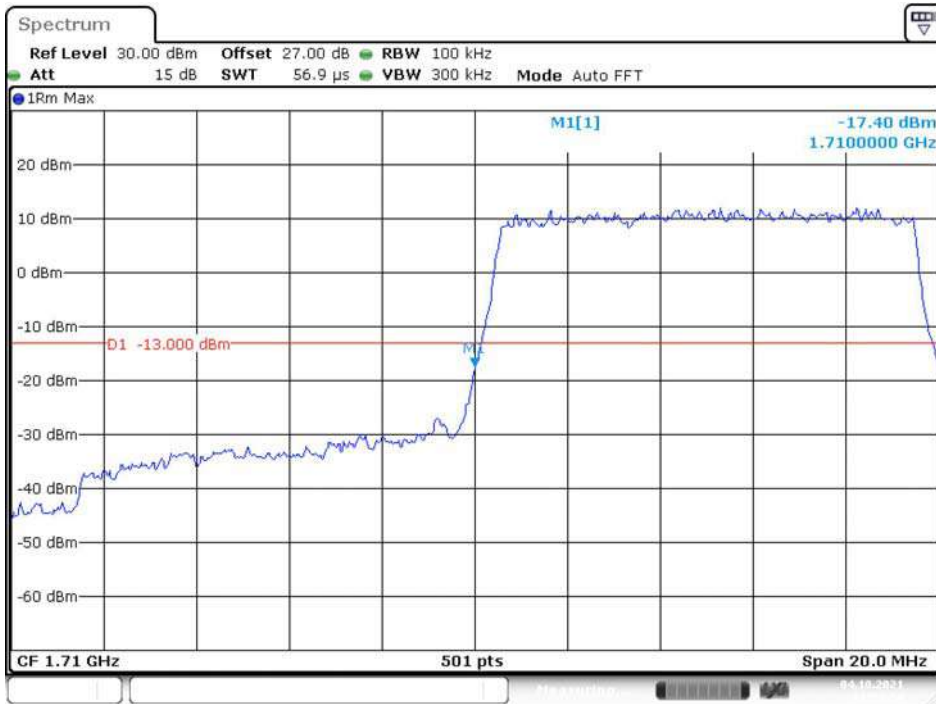
### 16QAM (5MHz, RB25) – Right Band Edge



Date: 4.OCT.2021 18:36:27

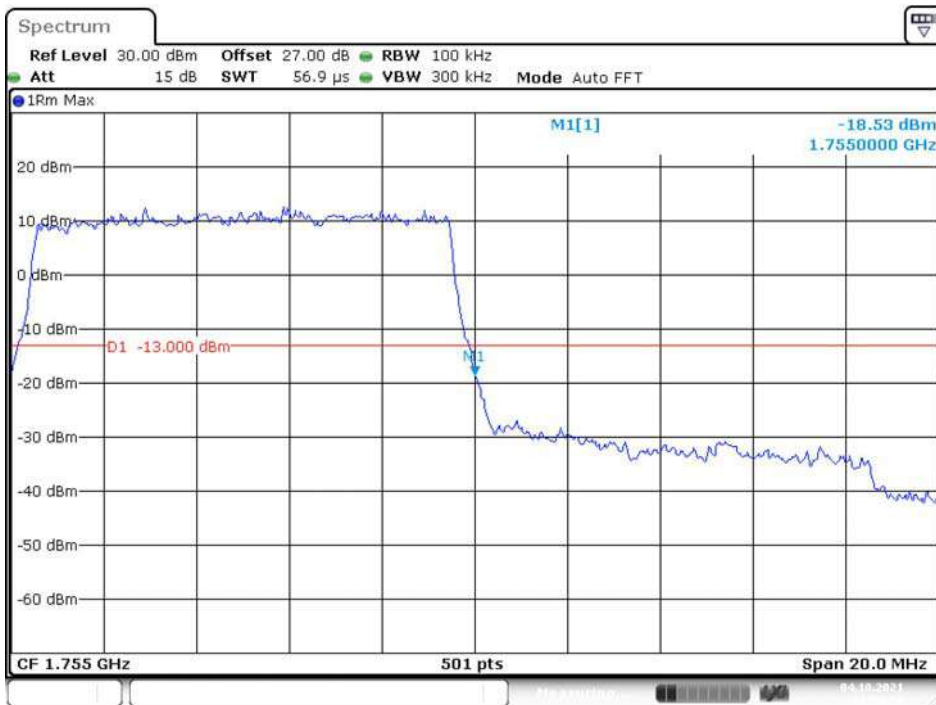


### QPSK (10MHz, RB50) – Left Band Edge



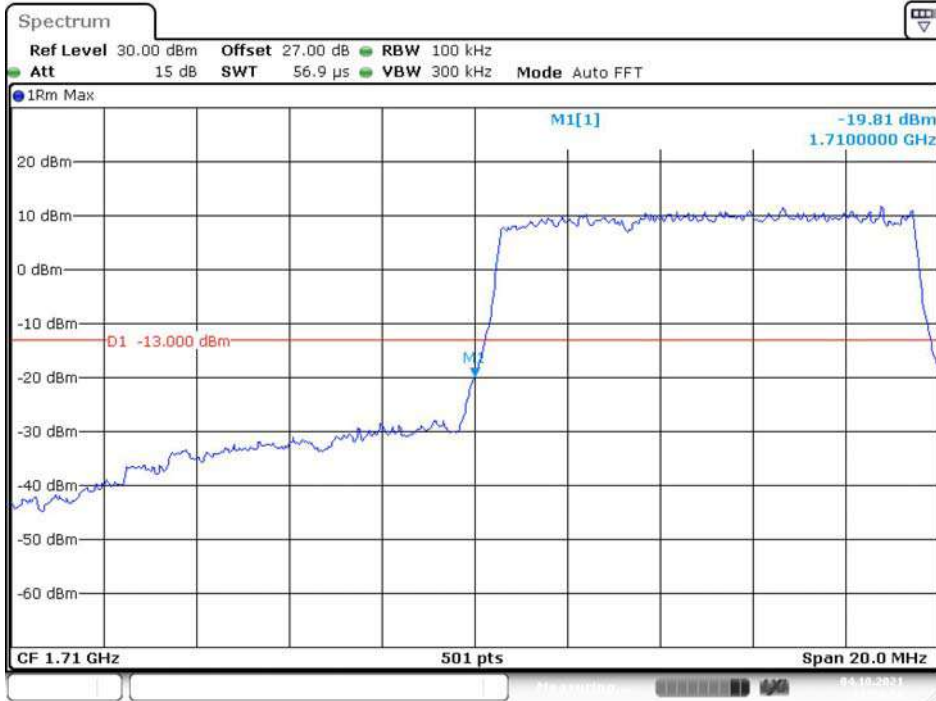
Date: 4.OCT.2021 11:19:54

### QPSK (10MHz, RB50) – Right Band Edge



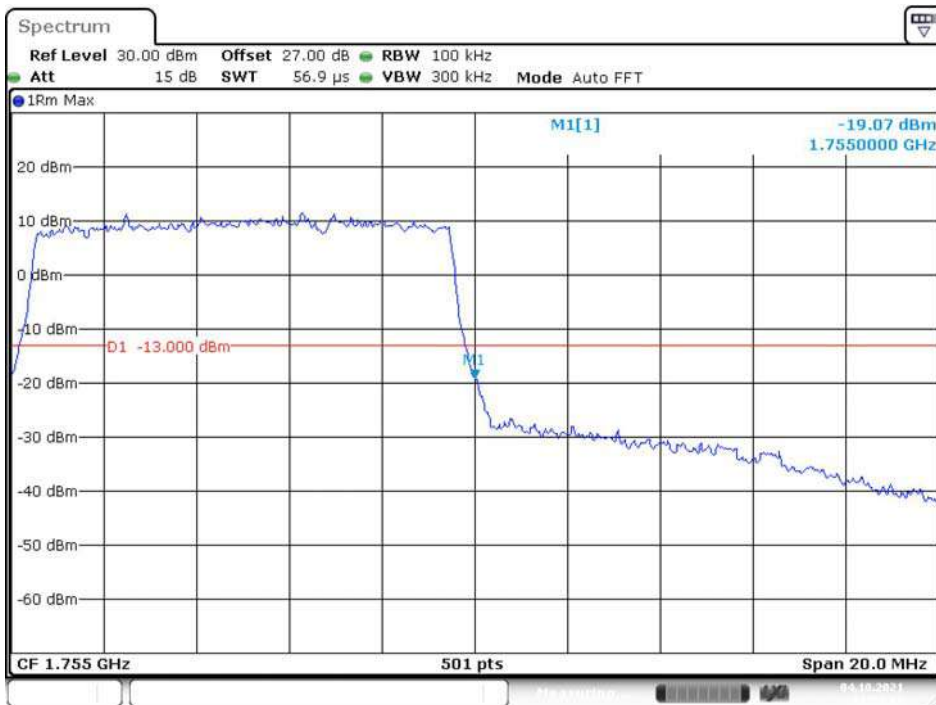
Date: 4.OCT.2021 11:20:50

### 16QAM (10MHz, RB50) – Left Band Edge



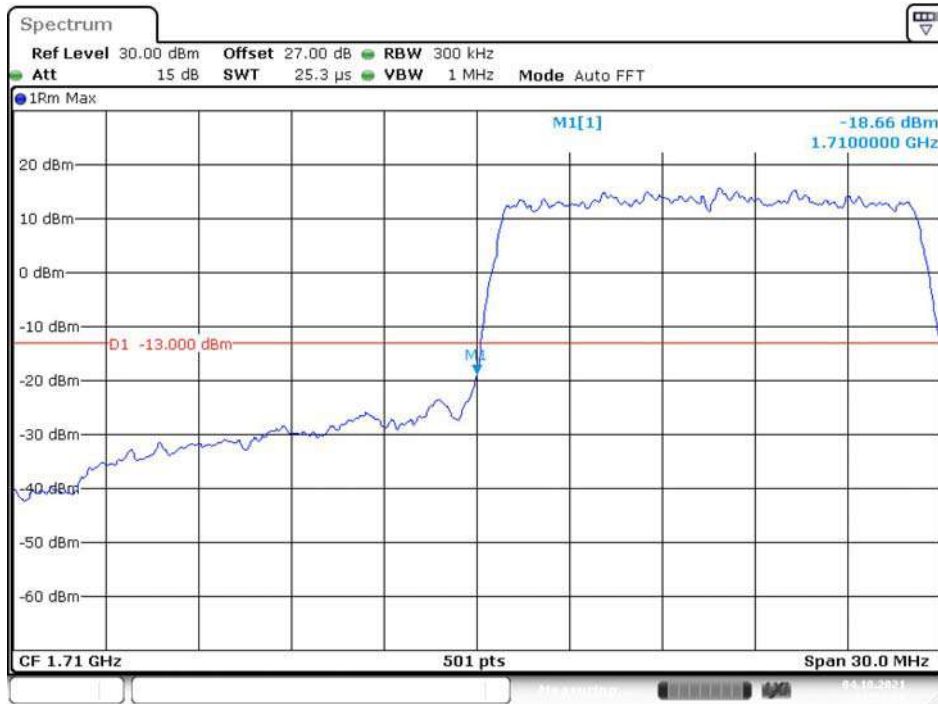
Date: 4.OCT.2021 11:20:21

### 16QAM (10MHz, RB50) – Right Band Edge



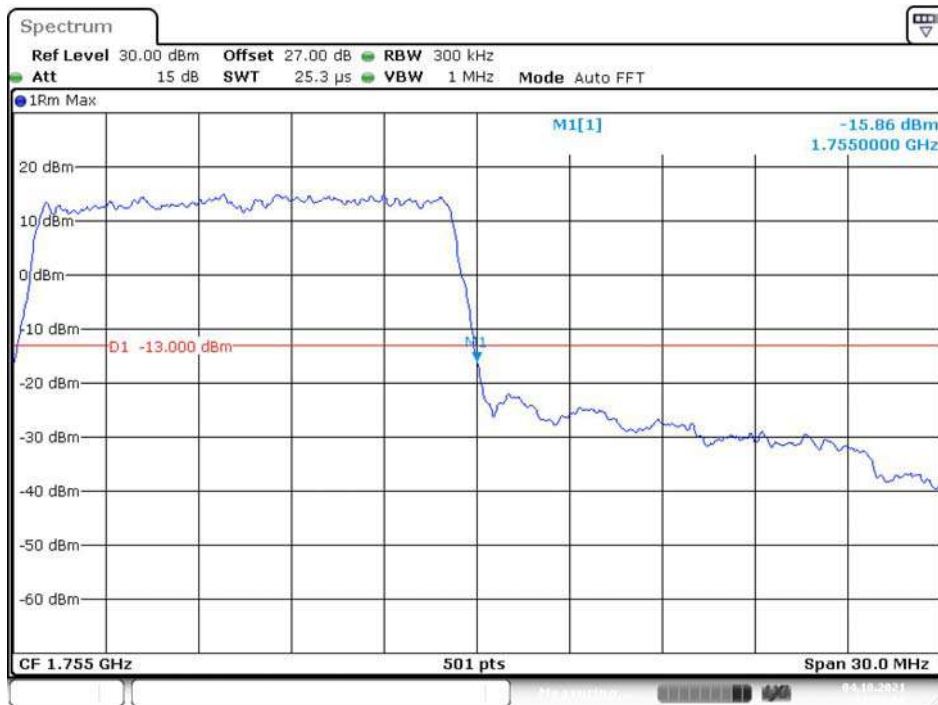
Date: 4.OCT.2021 11:21:17

### QPSK (15MHz, RB75) – Left Band Edge



Date: 4.OCT.2021 11:22:10

### QPSK (15MHz, RB75) – Right Band Edge



Date: 4.OCT.2021 11:23:07

### 16QAM (15MHz, RB75) – Left Band Edge



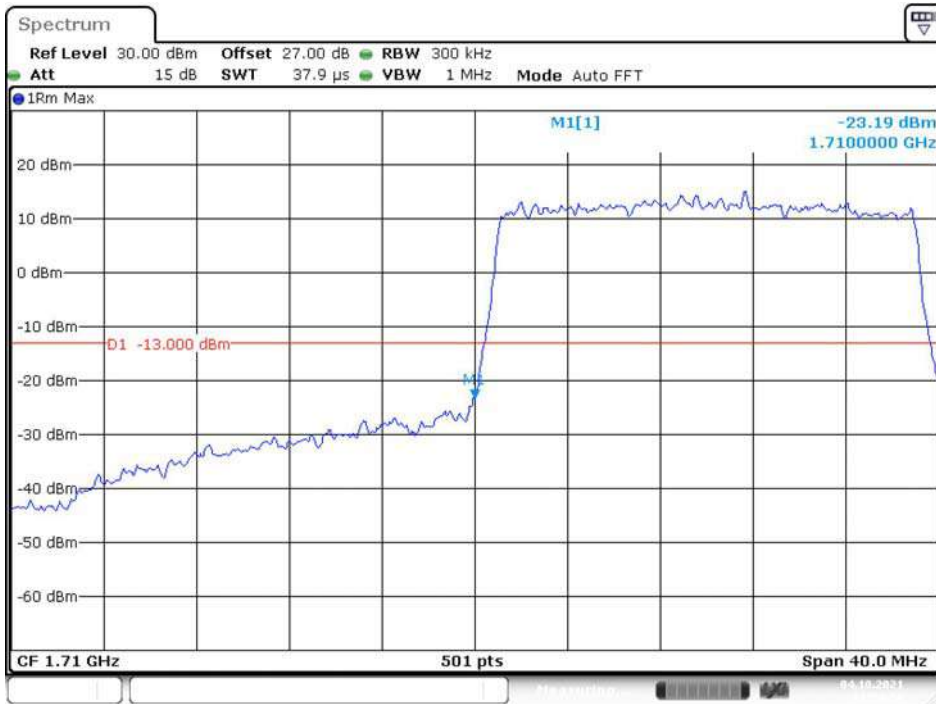
Date: 4.OCT.2021 11:22:36

### 16QAM (15MHz, RB75) – Right Band Edge



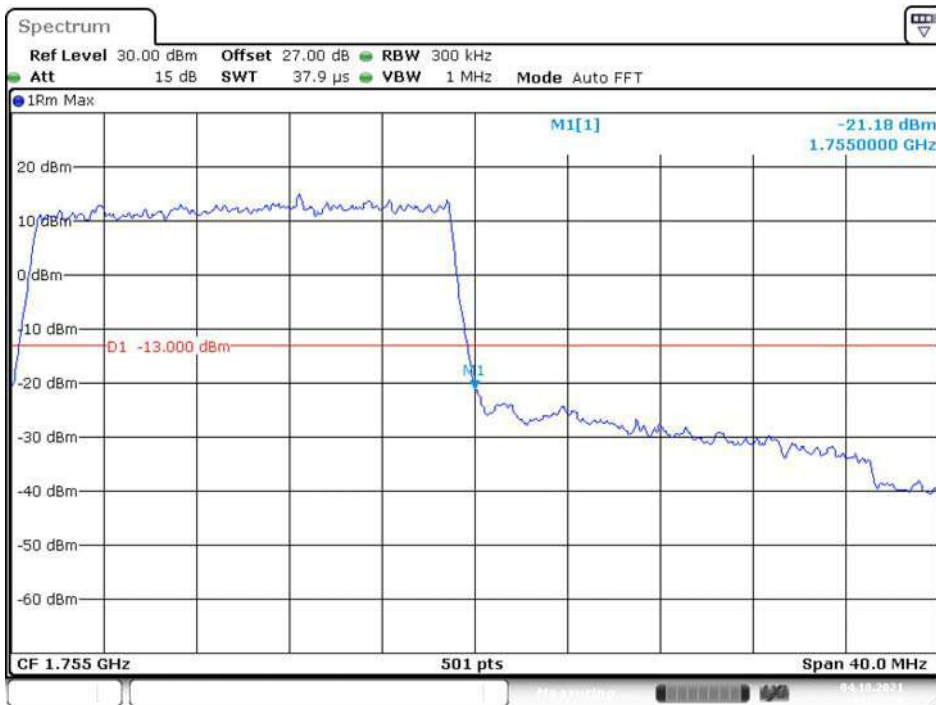
Date: 4.OCT.2021 11:23:39

### QPSK (20MHz, RB100) – Left Band Edge



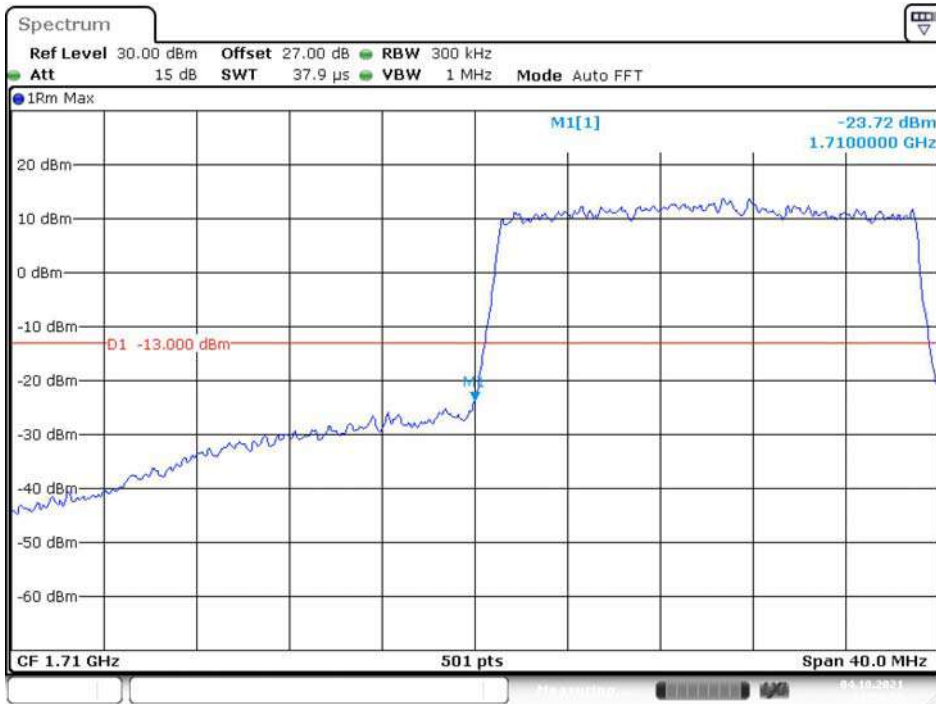
Date: 4.OCT.2021 11:24:26

### QPSK (20MHz, RB100) – Right Band Edge



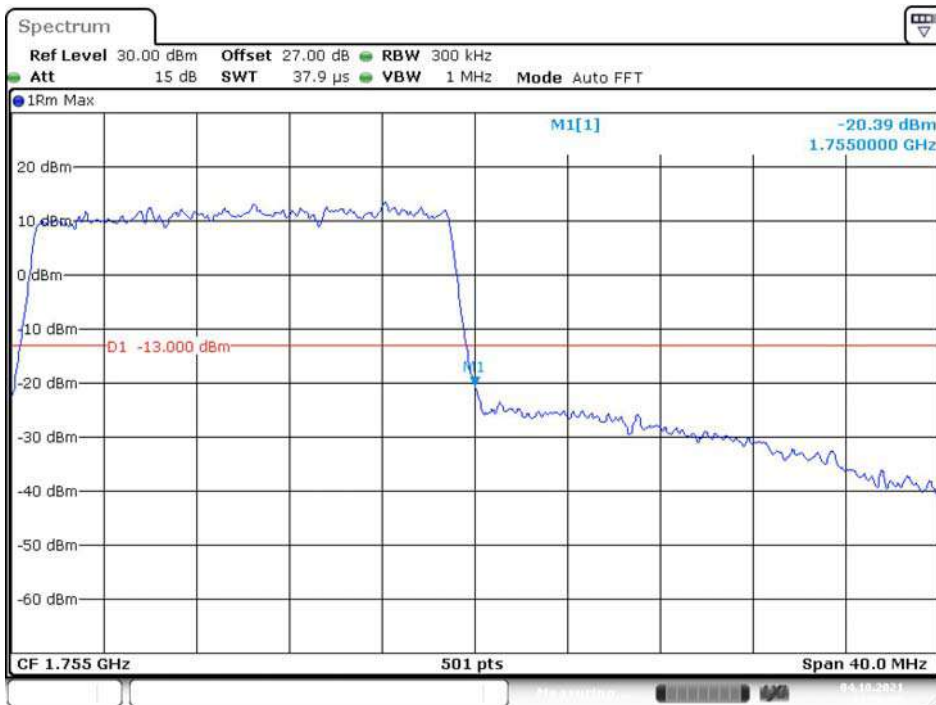
Date: 4.OCT.2021 11:25:38

### 16QAM (20MHz, RB100) – Left Band Edge



Date: 4.OCT.2021 11:24:55

### 16QAM (20MHz, RB100) – Right Band Edge



Date: 4.OCT.2021 11:26:05