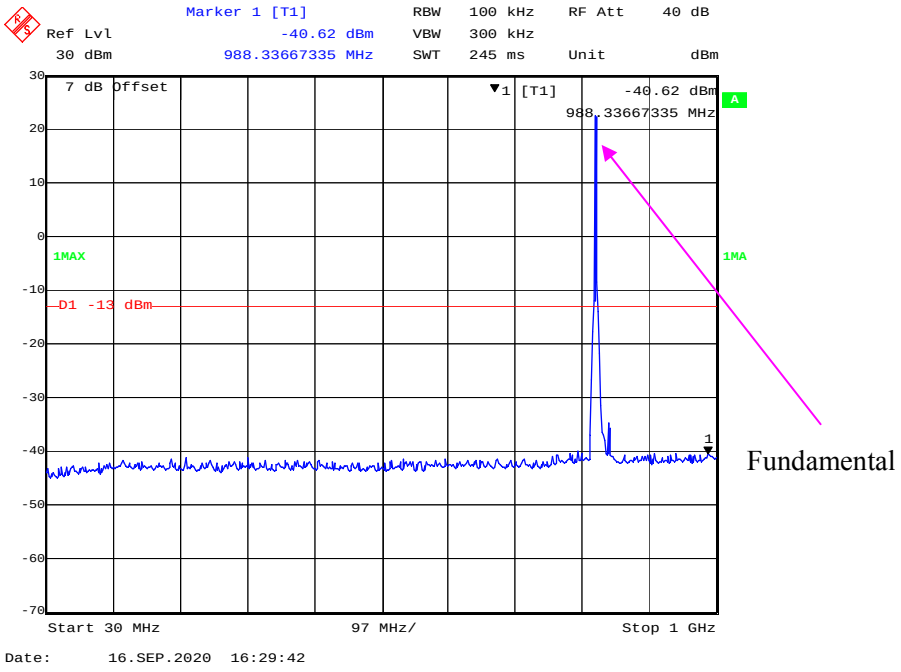
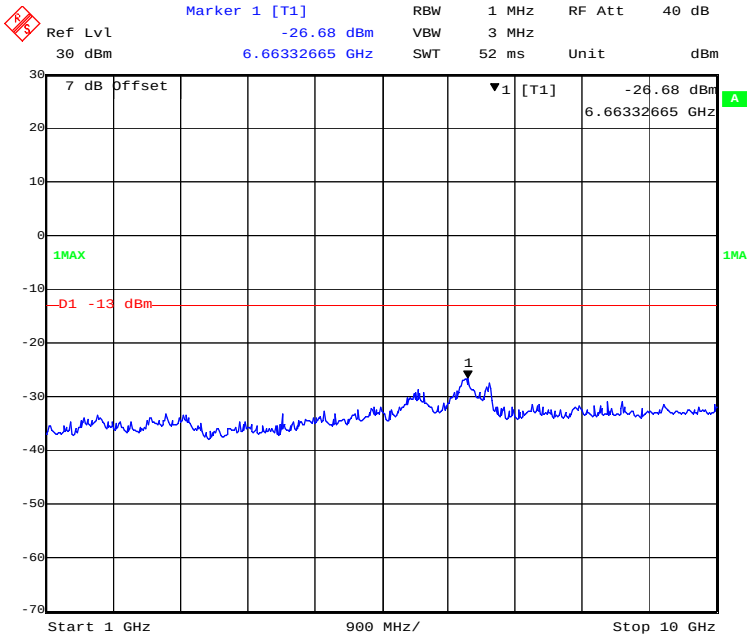
30 MHz - 1 GHz (QPSK, 3.0 MHz, Low Channel)



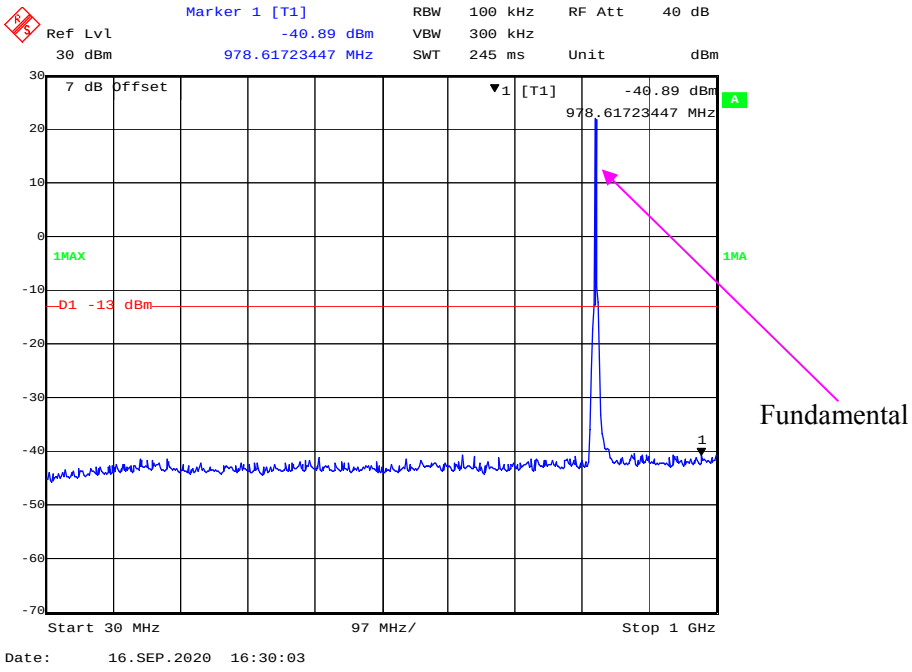
Date: 16.SEP.2020 16:29:42

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

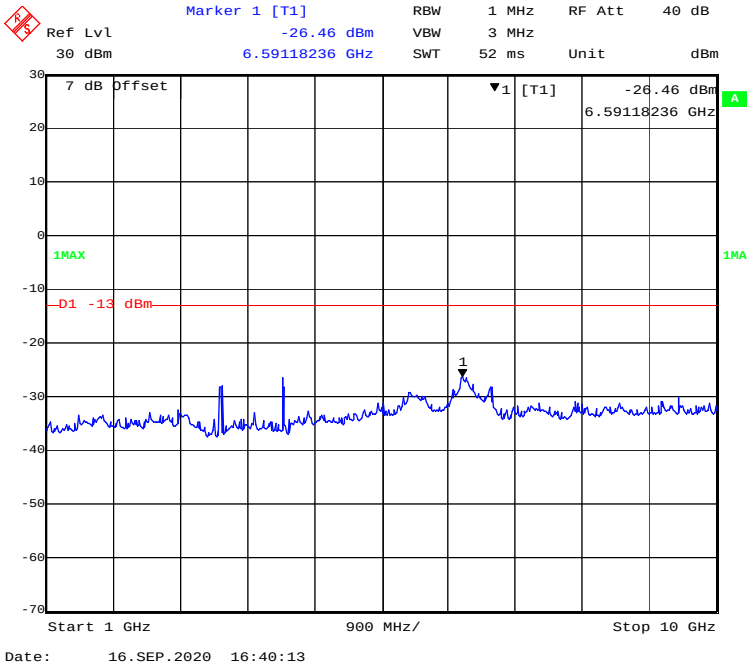


Date: 16.SEP.2020 16:40:36

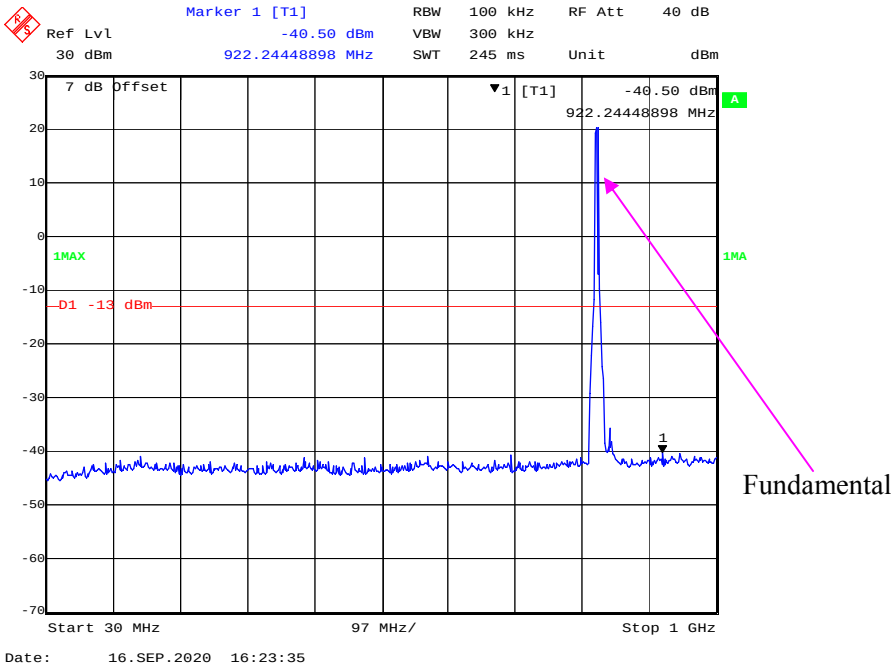
30 MHz - 1 GHz (16QAM, 3.0 MHz, Low Channel)



1 GHz – 10 GHz (16QAM, 3.0 MHz, Low Channel)

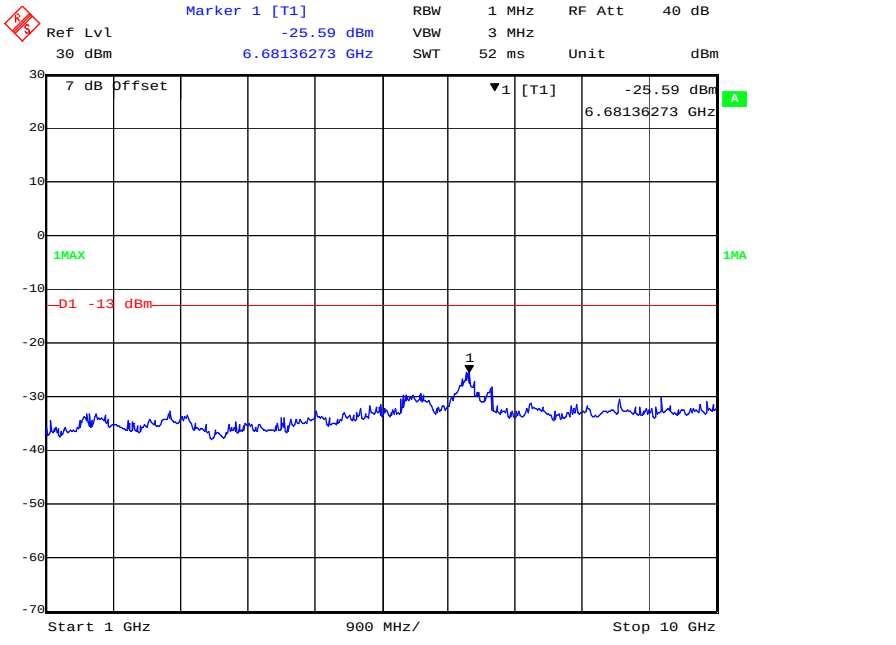


30 MHz - 1 GHz (QPSK, 5.0 MHz, Low Channel)



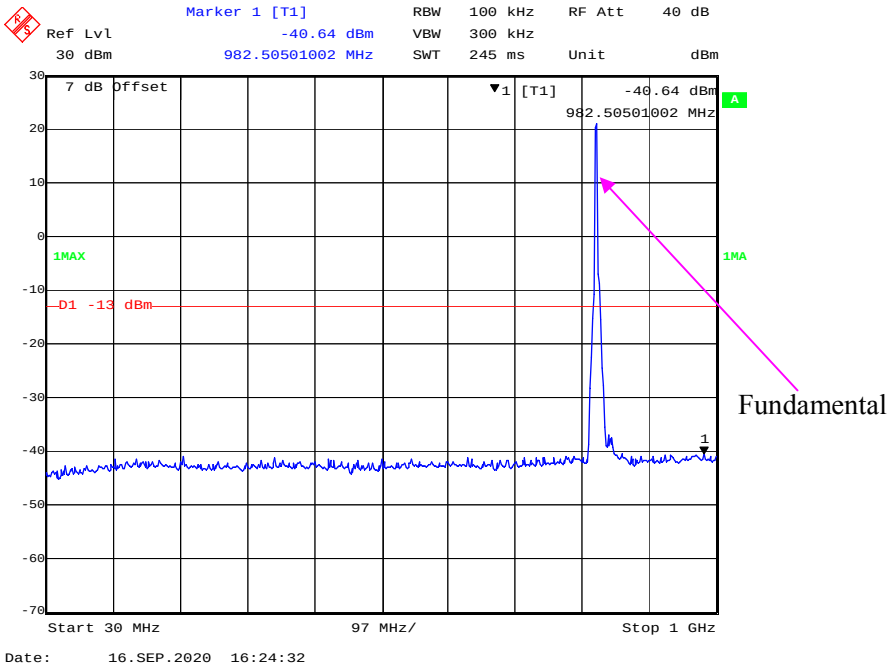
Date: 16.SEP.2020 16:23:35

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



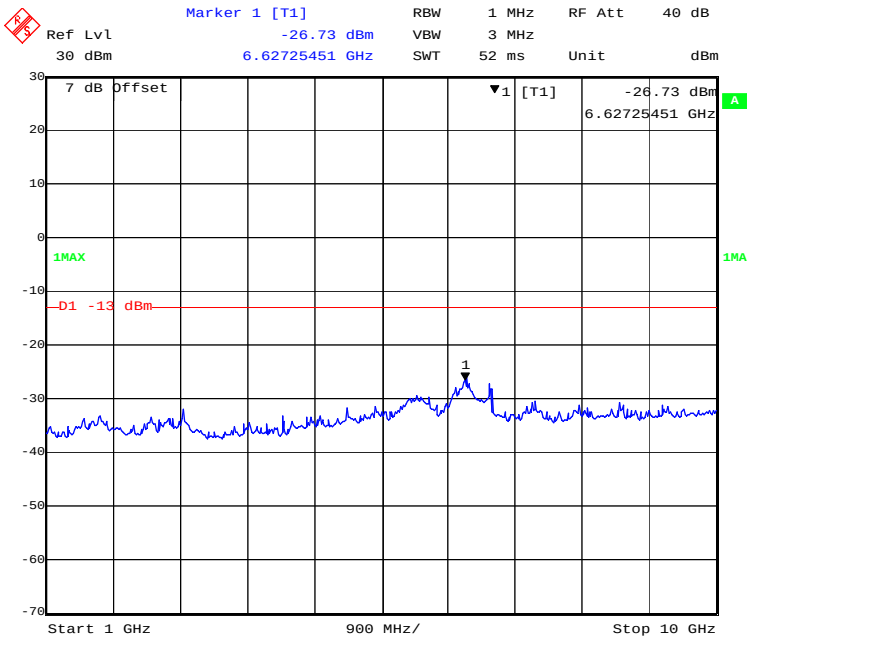
Date: 16.SEP.2020 16:42:36

30 MHz - 1 GHz (16QAM, 5.0 MHz, Low Channel)



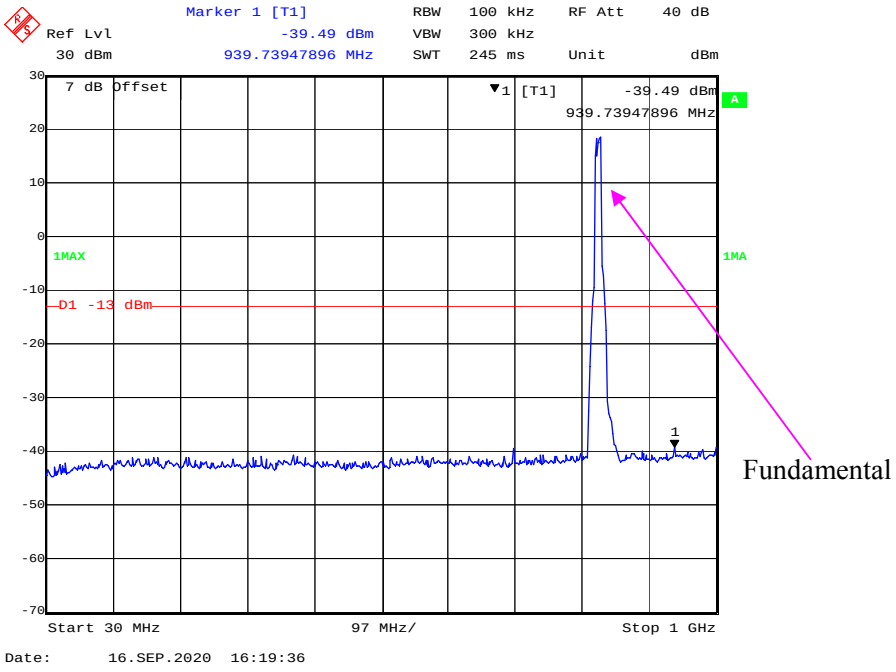
Date: 16.SEP.2020 16:24:32

1 GHz – 10 GHz (16QAM, 5.0MHz, Low Channel)



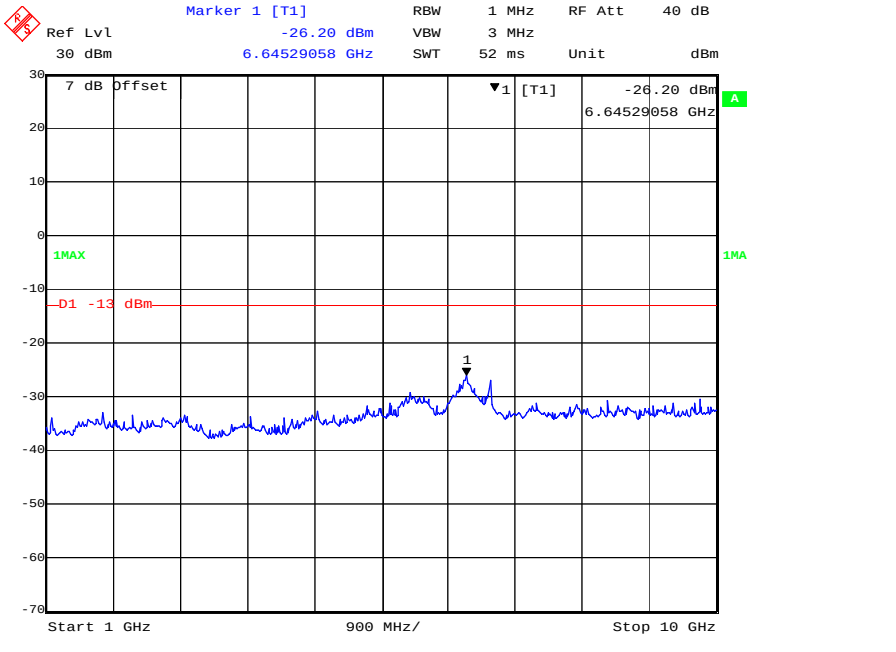
Date: 16.SEP.2020 16:42:18

30 MHz - 1 GHz (QPSK, 10.0 MHz, Low Channel)



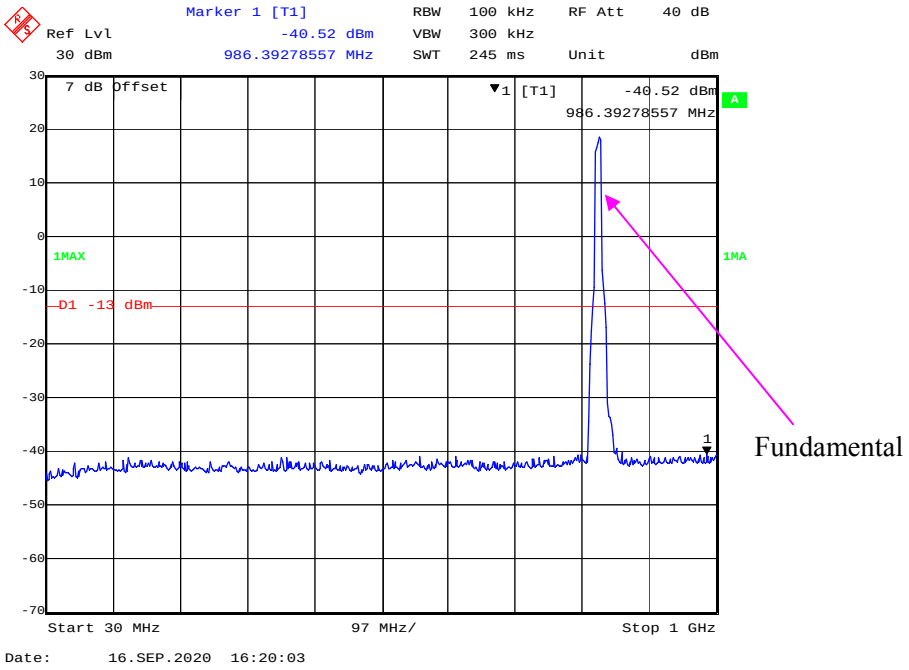
Date: 16.SEP.2020 16:19:36

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



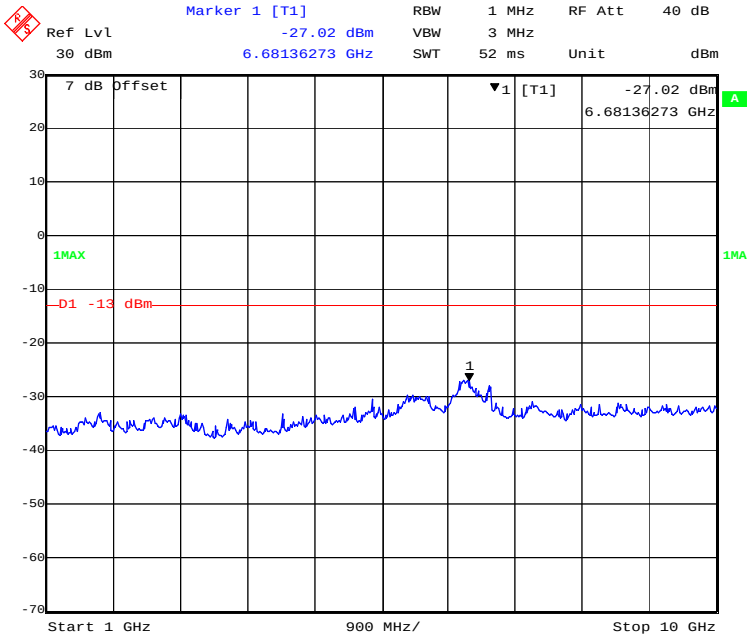
Date: 16.SEP.2020 16:44:46

30 MHz - 1 GHz (16QAM, 10.0 MHz, Low Channel)



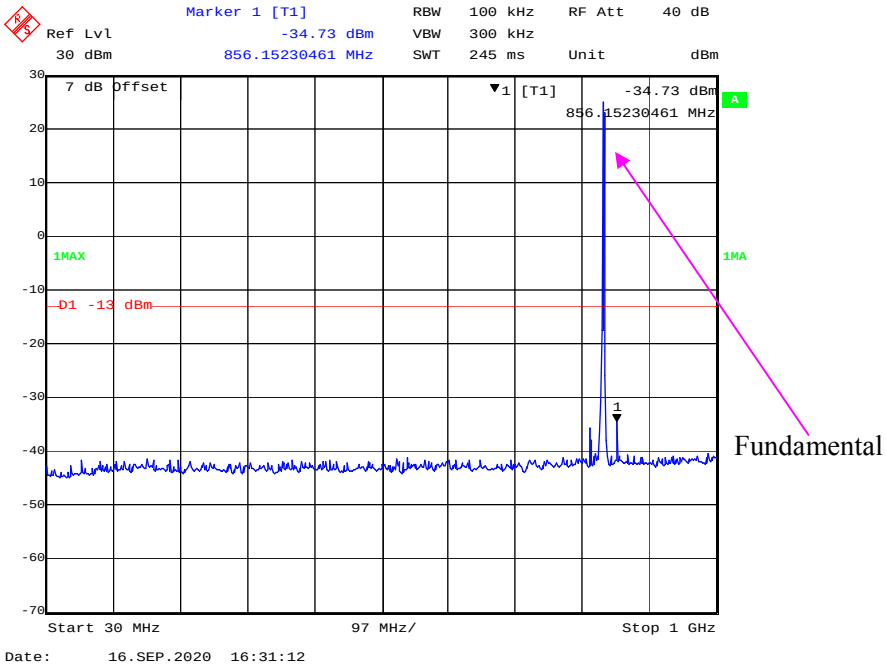
Date: 16.SEP.2020 16:20:03

1 GHz – 10 GHz (16QAM, 10.0 MHz, Low Channel)



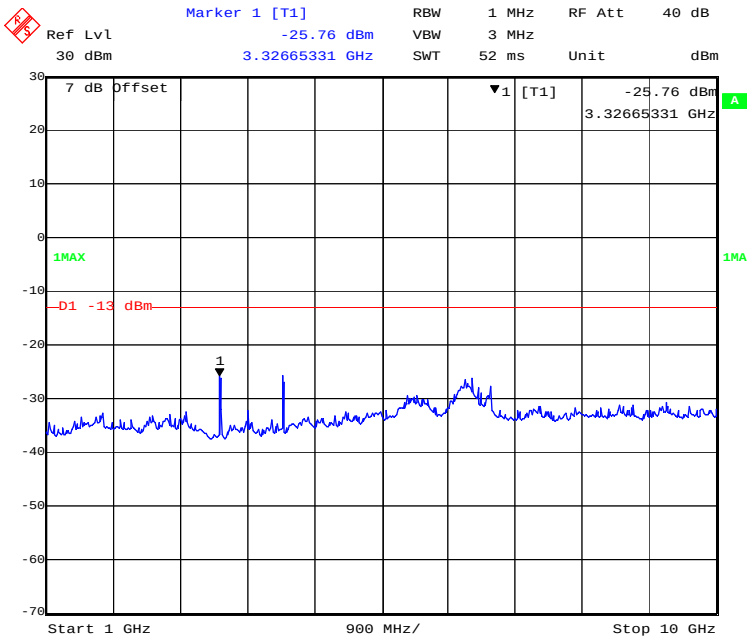
Date: 16.SEP.2020 16:44:24

30 MHz - 1 GHz (QPSK, 1.4 MHz, Middle Channel)



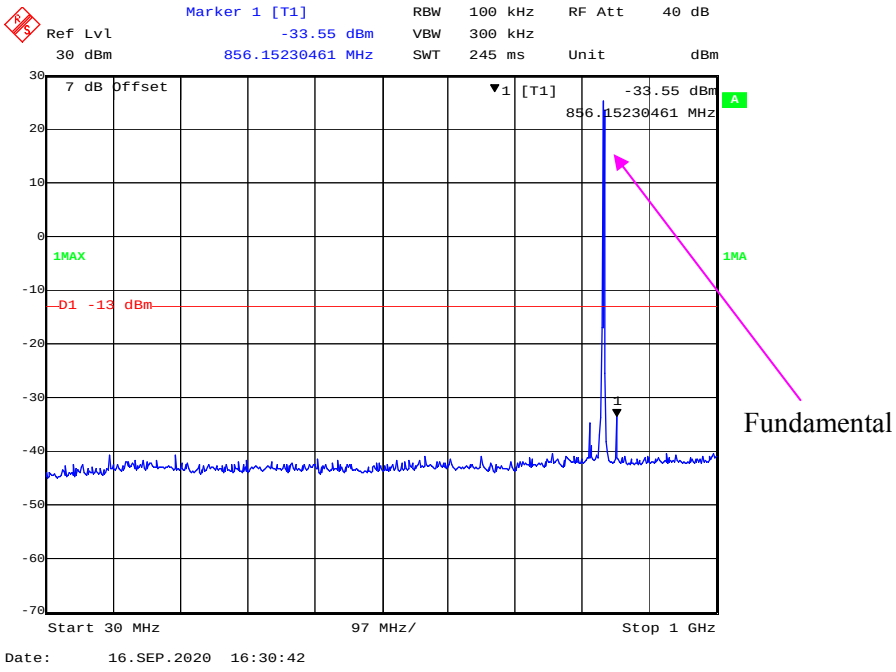
Date: 16.SEP.2020 16:31:12

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



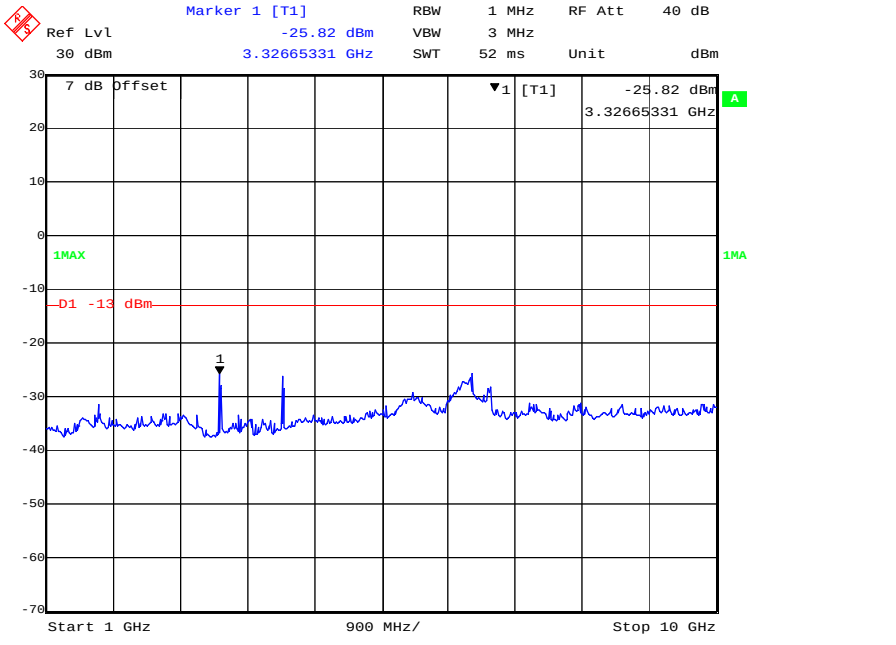
Date: 16.SEP.2020 16:39:16

30 MHz - 1 GHz (16QAM, 1.4 MHz, Middle Channel)



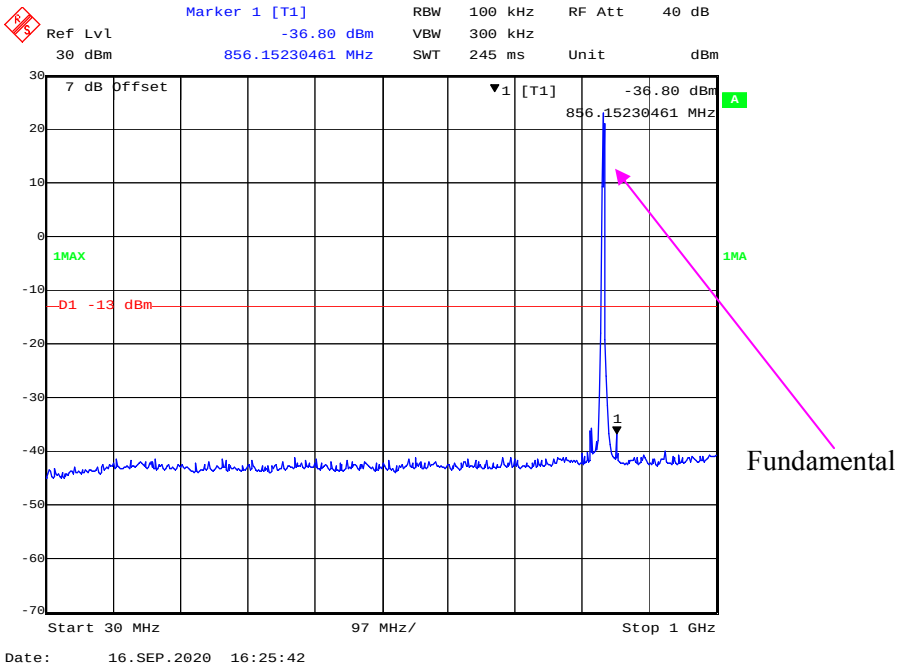
Date: 16.SEP.2020 16:30:42

1 GHz – 10 GHz (16QAM, 1.4 MHz, Middle Channel)



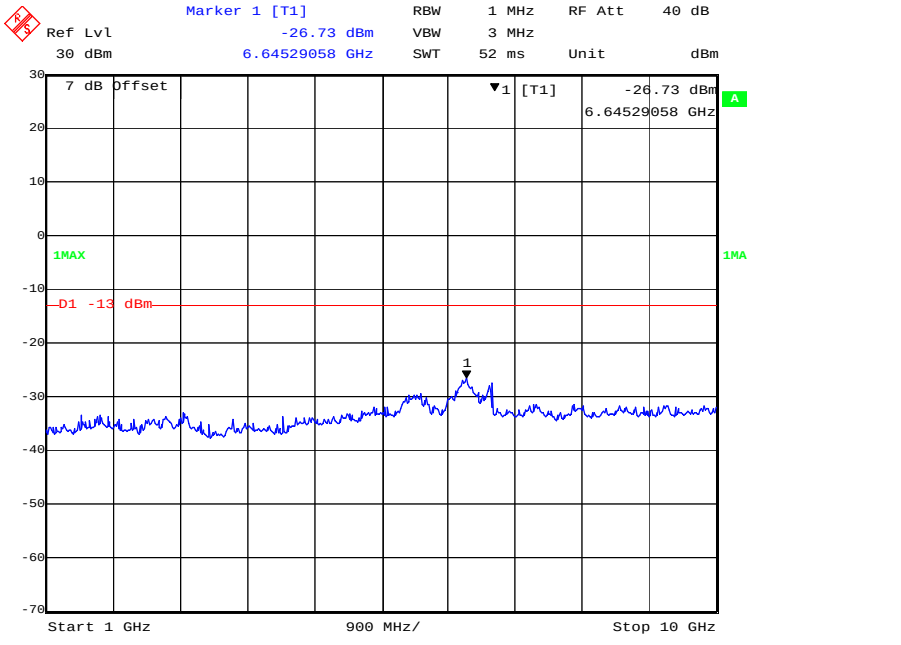
Date: 16.SEP.2020 16:38:59

30 MHz - 1 GHz (QPSK, 3.0 MHz, Middle Channel)



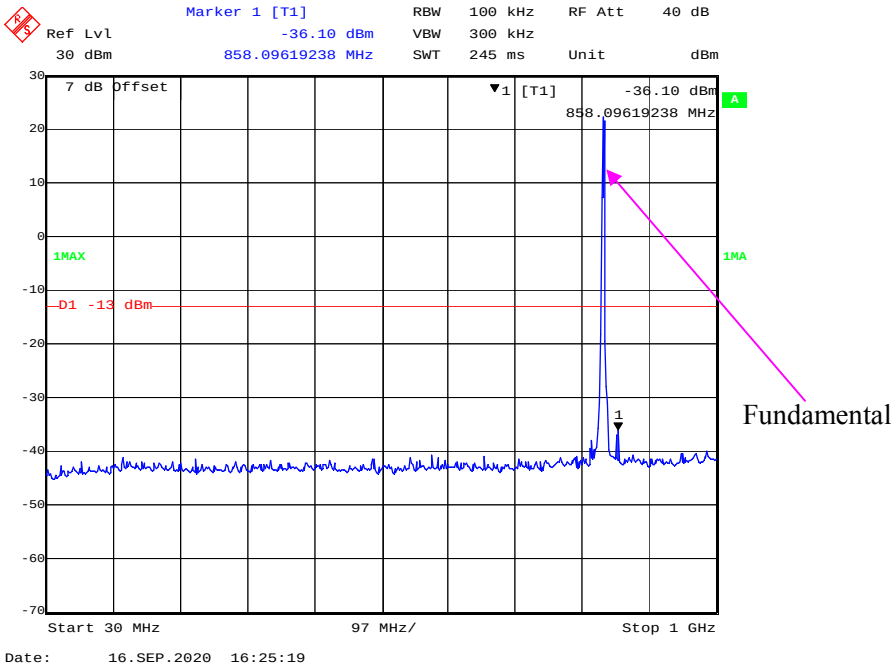
Date: 16.SEP.2020 16:25:42

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



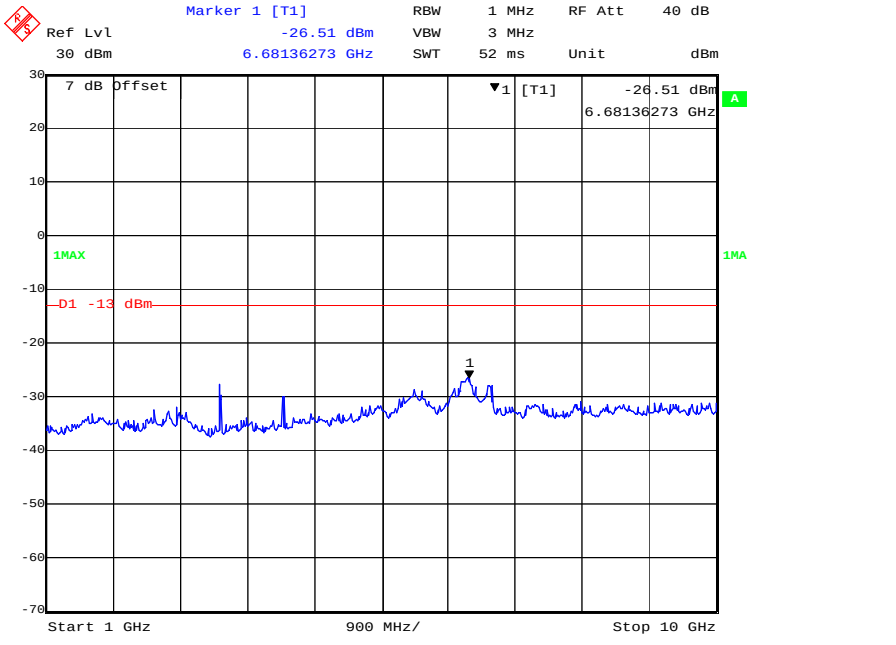
Date: 16.SEP.2020 16:41:15

30 MHz - 1 GHz (16QAM, 3.0 MHz, Middle Channel)



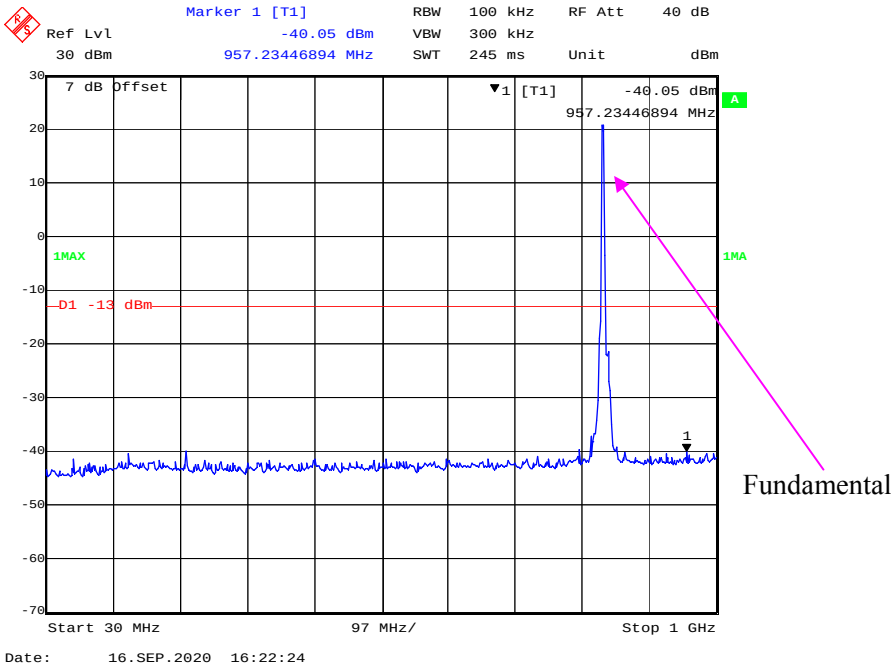
Date: 16.SEP.2020 16:25:19

1 GHz – 10 GHz (16QAM, 3.0 MHz, Middle Channel)



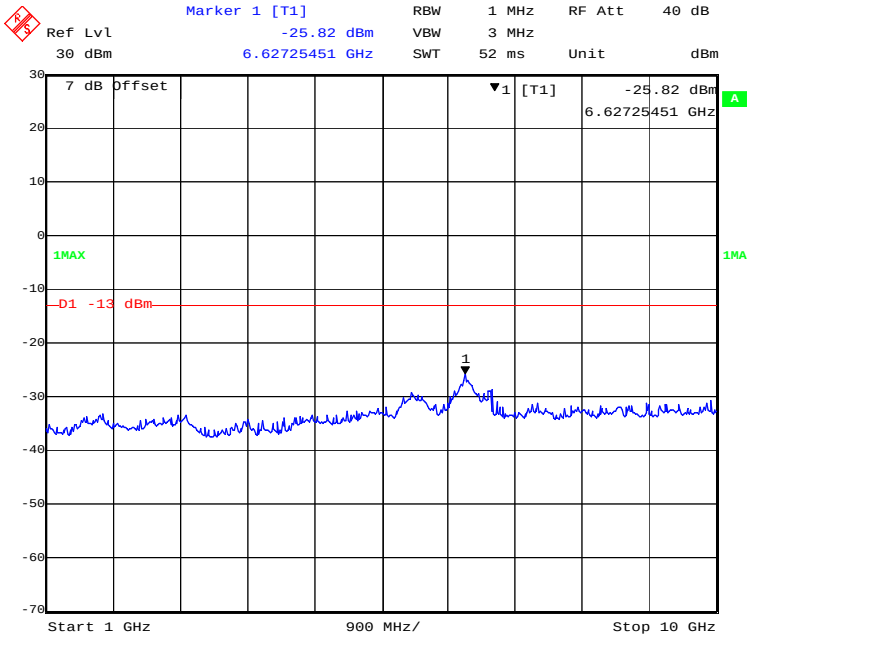
Date: 16.SEP.2020 16:40:58

30 MHz - 1 GHz (QPSK, 5.0 MHz, Middle Channel)



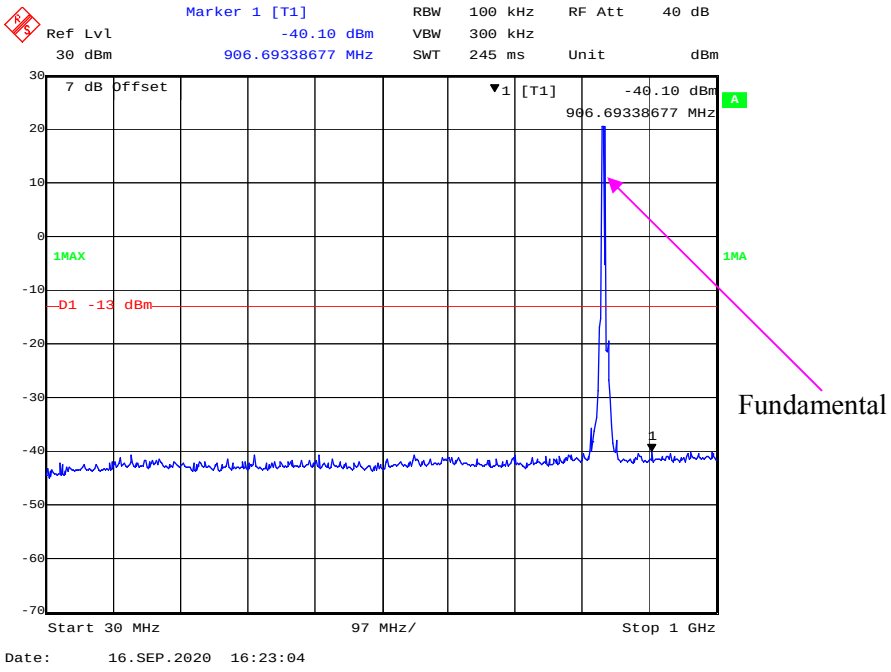
Date: 16.SEP.2020 16:22:24

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



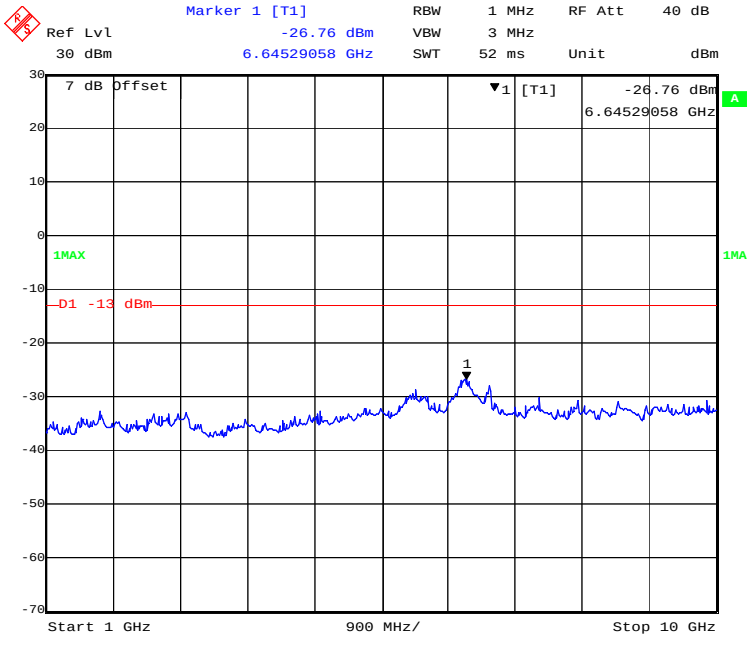
Date: 16.SEP.2020 16:43:16

30 MHz - 1 GHz (16QAM, 5.0 MHz, Middle Channel)



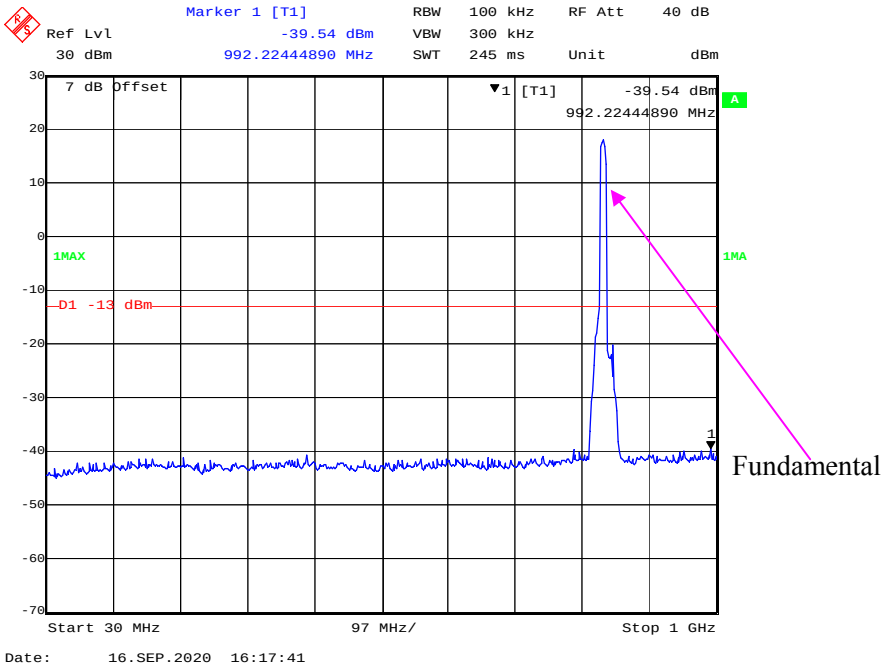
Date: 16.SEP.2020 16:23:04

1 GHz – 10 GHz (16QAM, 5.0MHz, Middle Channel)



Date: 16.SEP.2020 16:42:56

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



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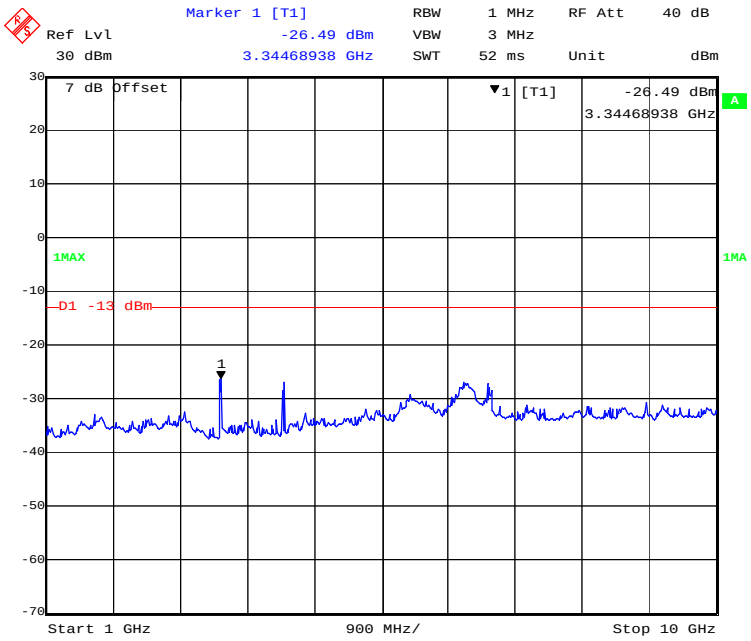
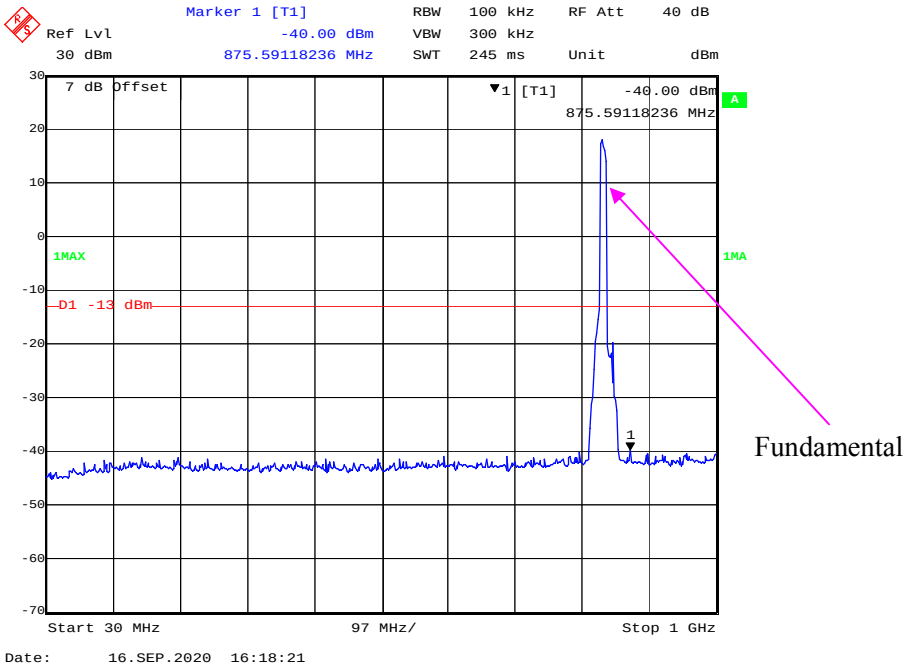
1 GHz – 10 GHz (QPSK, 10.0 MHz, Middle Channel)



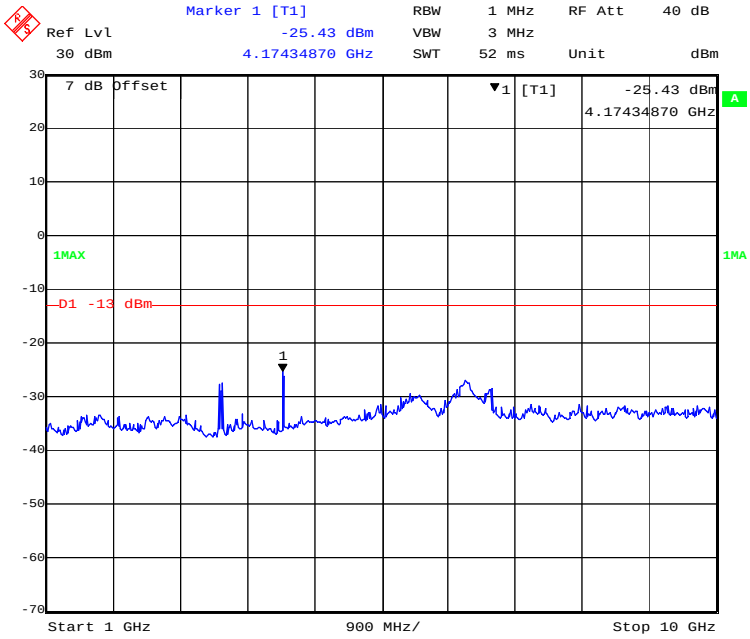
Date: 16.SEP.2020 16:45:23

30 MHz - 1 GHz (16QAM, 10.0 MHz, Middle Channel)



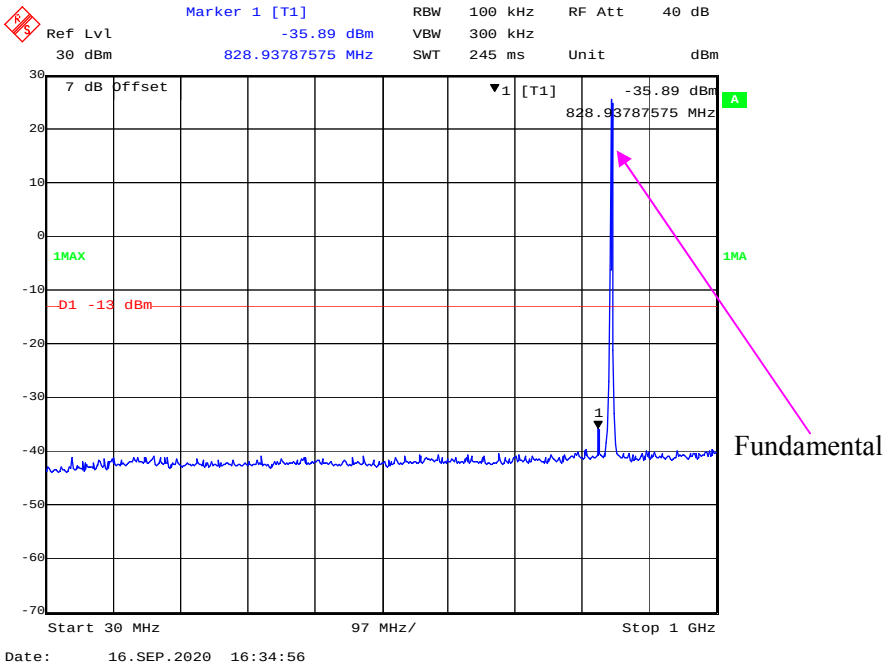
Date: 16.SEP.2020 16:18:21

1 GHz – 10 GHz (16QAM, 10.0 MHz, Middle Channel)

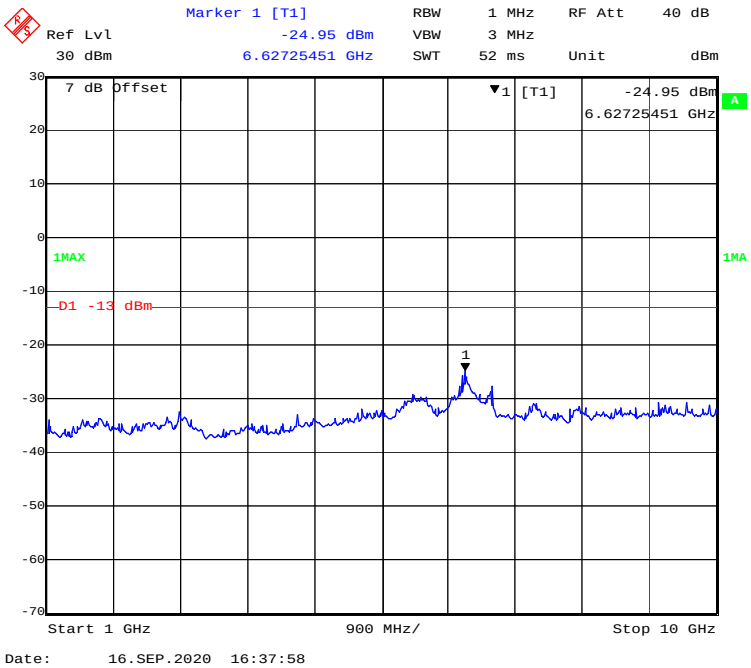


Date: 16.SEP.2020 16:45:02

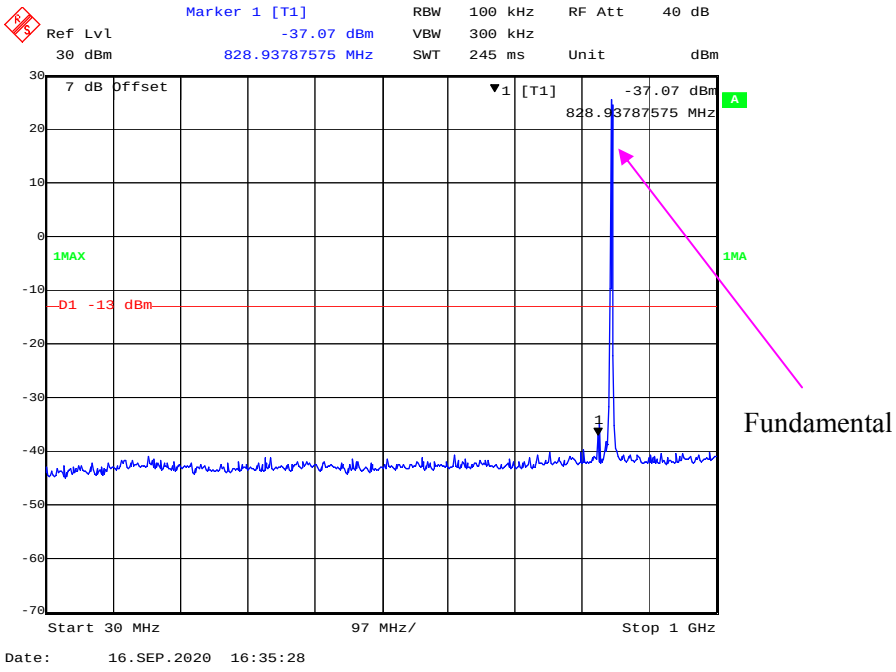
30 MHz - 1 GHz (QPSK, 1.4 MHz, High Channel)



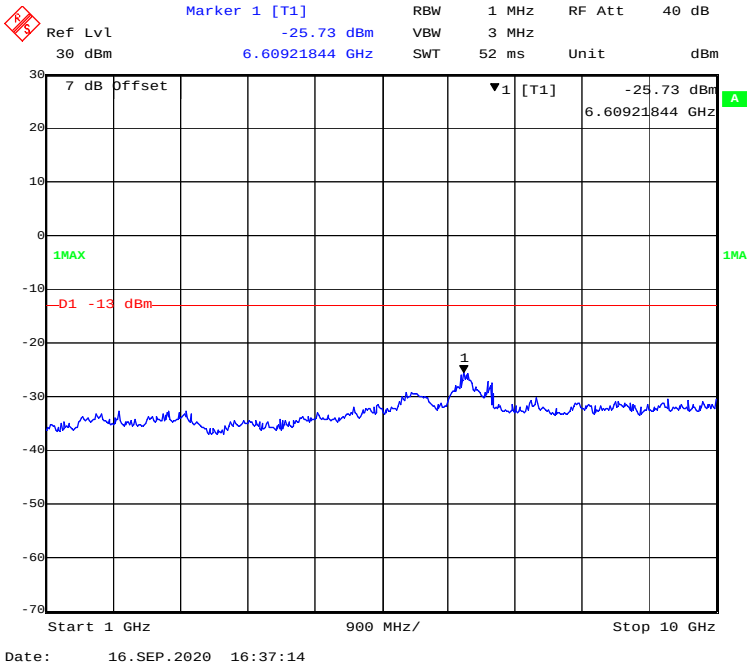
1 GHz – 10 GHz (QPSK, 1.4 MHz, High Channel)



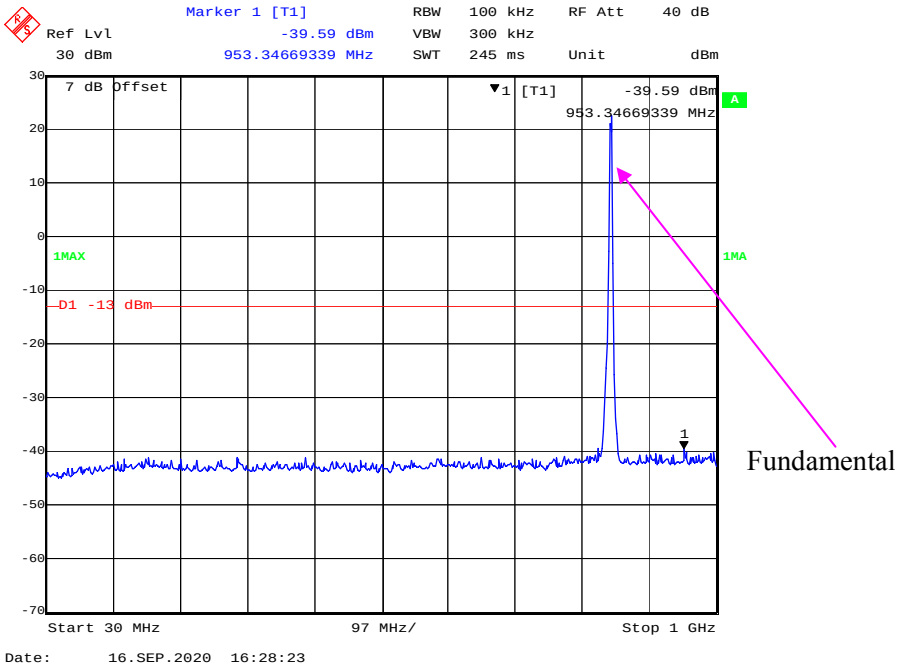
30 MHz - 1 GHz (16QAM, 1.4 MHz, High Channel)



1 GHz – 10 GHz (16QAM, 1.4 MHz, High Channel)



30 MHz - 1 GHz (QPSK, 3.0 MHz, High Channel)



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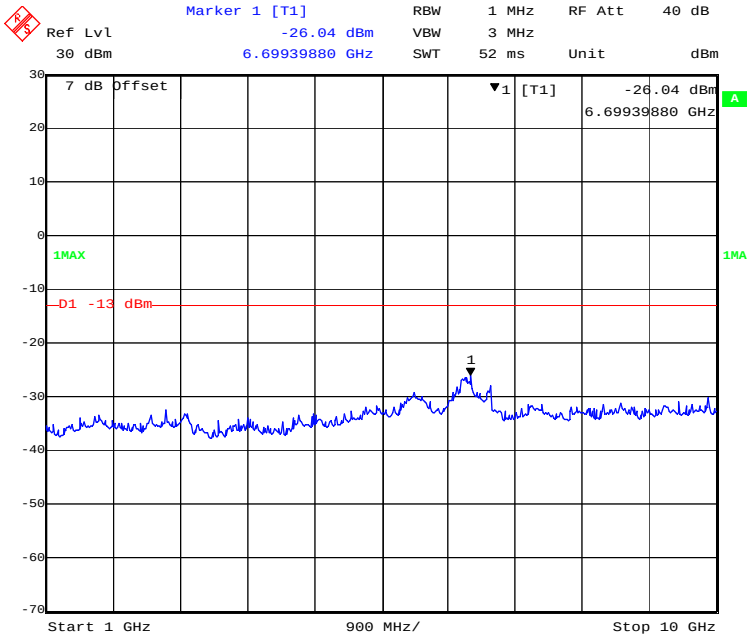
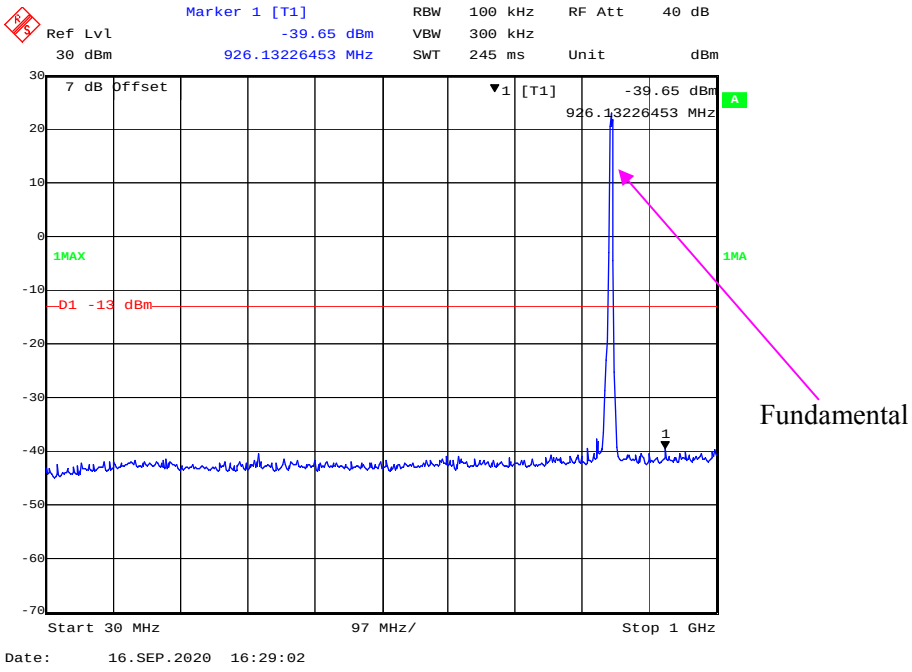
1 GHz – 10 GHz (QPSK, 3.0 MHz, High Channel)



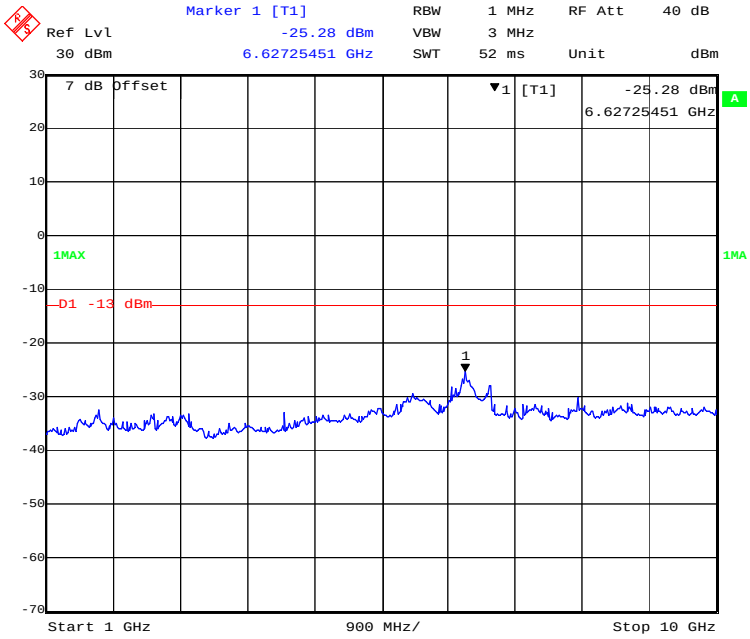
Date: 16.SEP.2020 16:39:51

30 MHz - 1 GHz (16QAM, 3.0 MHz, High Channel)



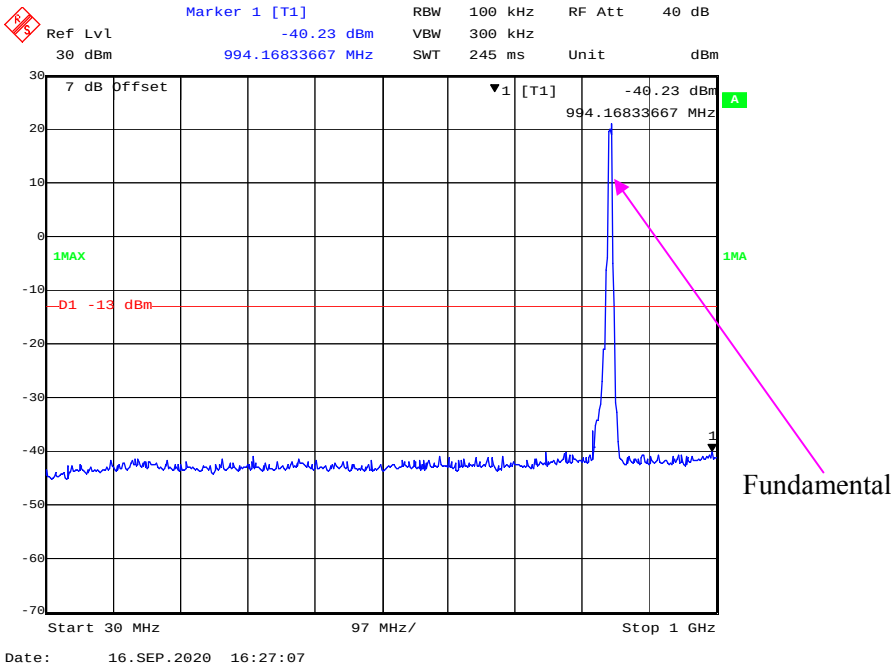
Date: 16.SEP.2020 16:29:02

1 GHz – 10 GHz (16QAM, 3.0 MHz, High Channel)



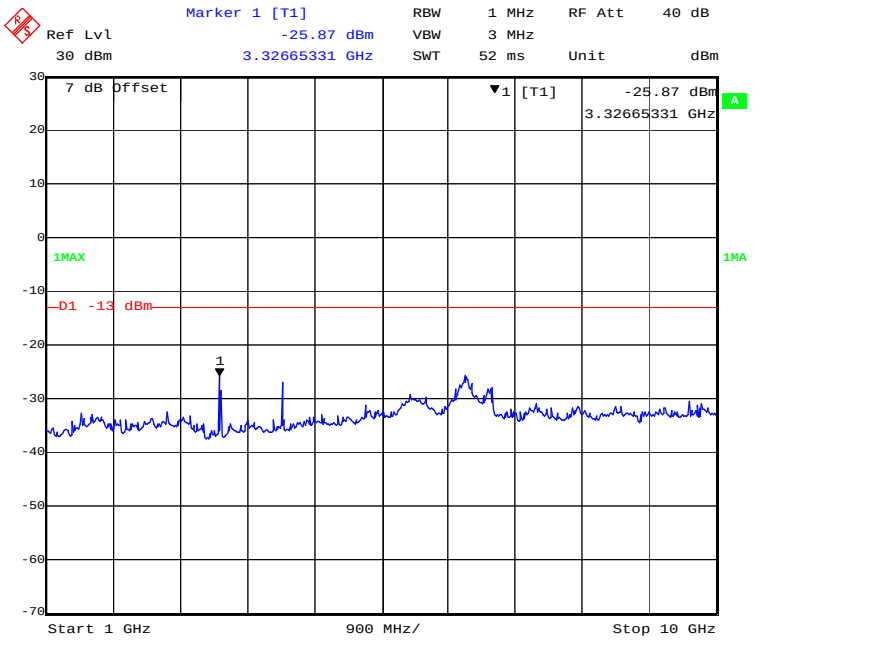
Date: 16.SEP.2020 16:39:32

30 MHz - 1 GHz (QPSK, 5.0 MHz, High Channel)



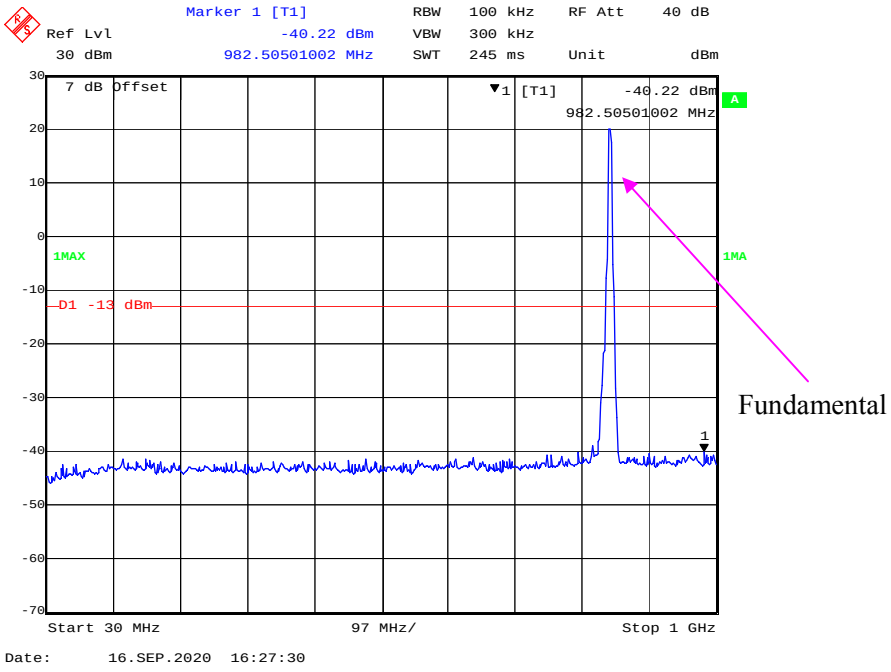
Date: 16.SEP.2020 16:27:07

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



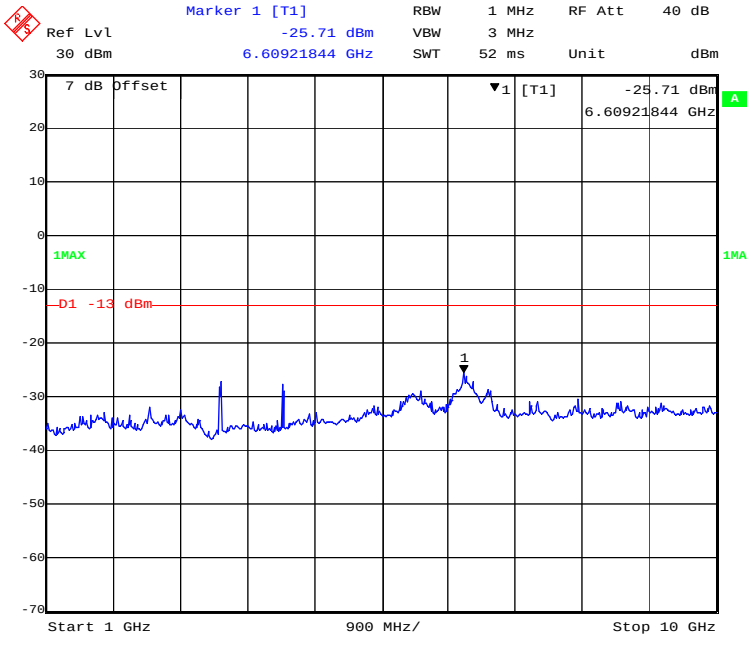
Date: 16.SEP.2020 16:41:55

30 MHz - 1 GHz (16QAM, 5.0 MHz, High Channel)



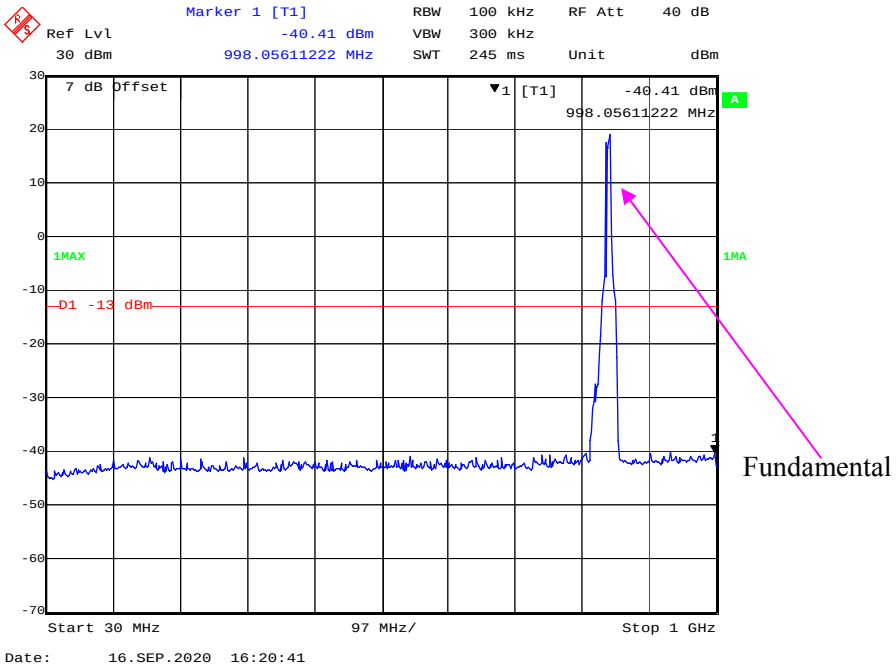
Date: 16.SEP.2020 16:27:30

1 GHz – 10 GHz (16QAM, 5.0MHz, High Channel)



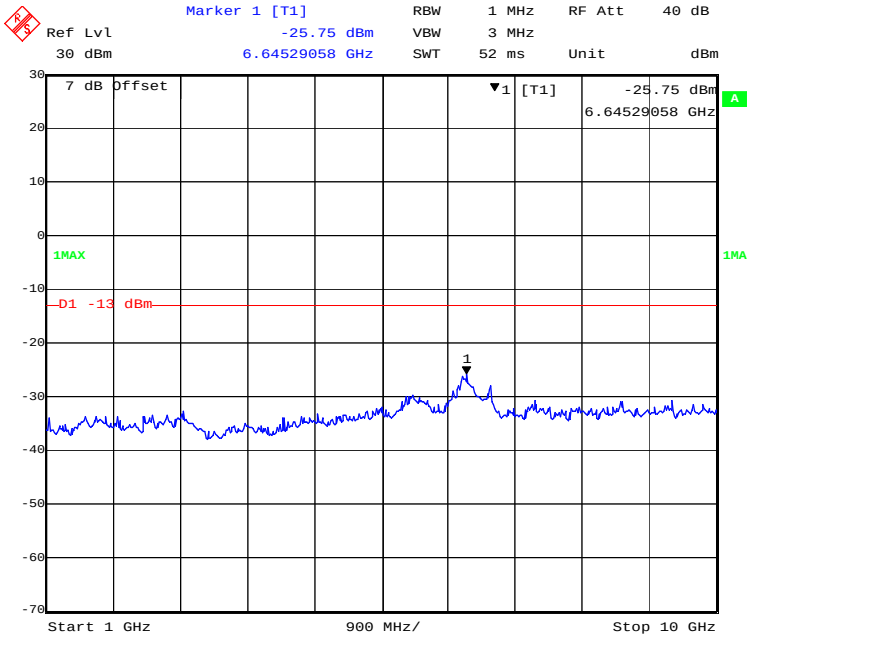
Date: 16.SEP.2020 16:41:31

30 MHz - 1 GHz (QPSK, 10.0 MHz, High Channel)



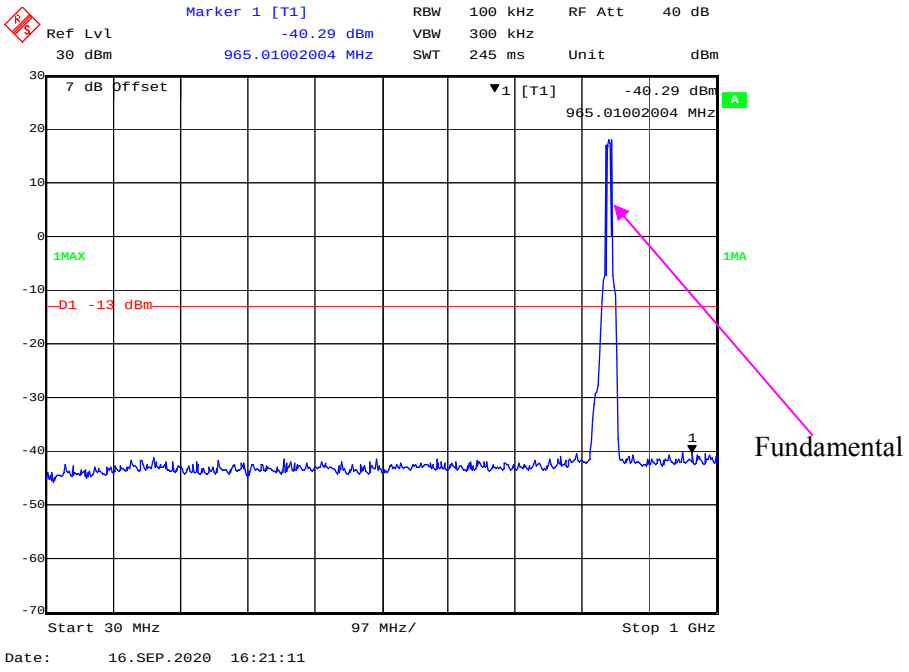
Date: 16.SEP.2020 16:20:41

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



Date: 16.SEP.2020 16:44:01

30 MHz - 1 GHz (16QAM, 10.0 MHz, High Channel)



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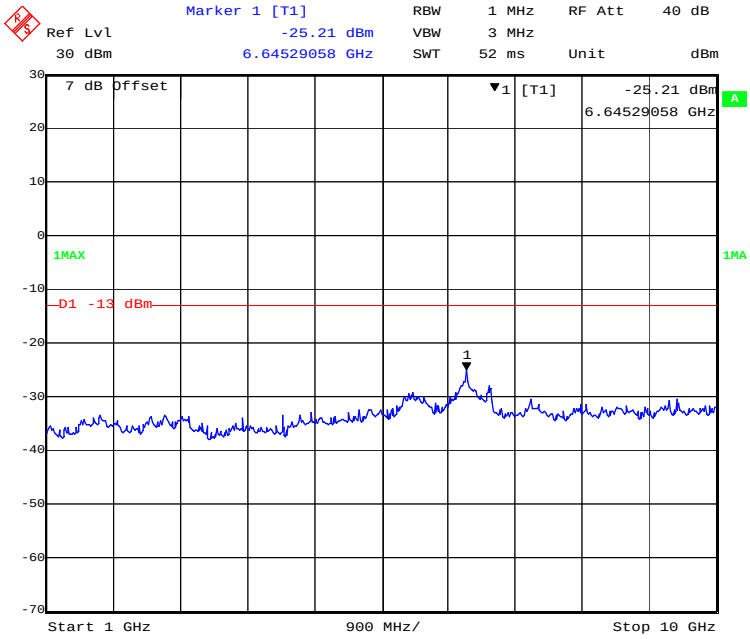
1 GHz – 10 GHz (16QAM, 10.0 MHz, High Channel)



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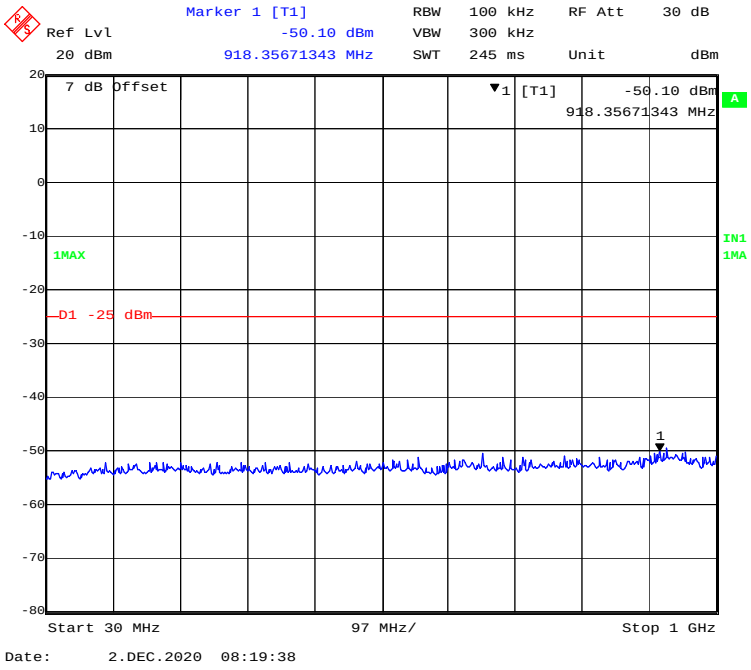
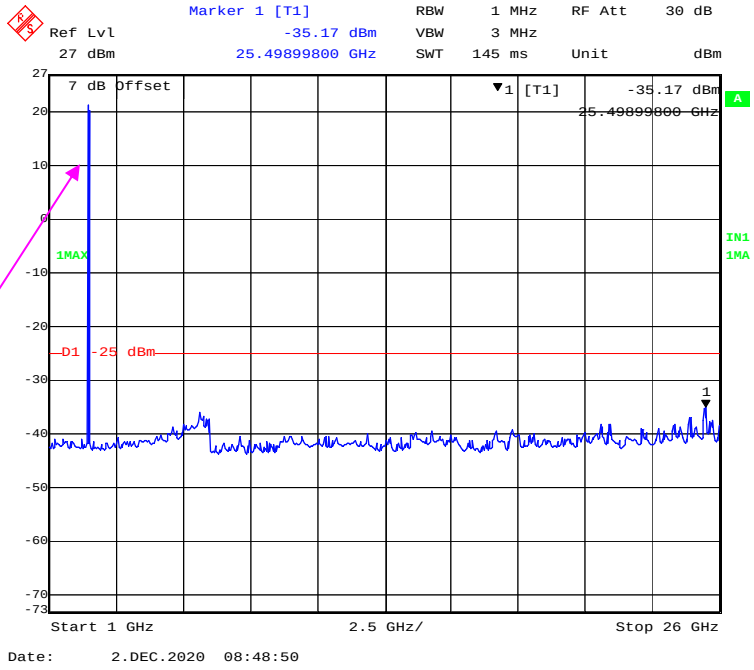
LTE Band 7

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

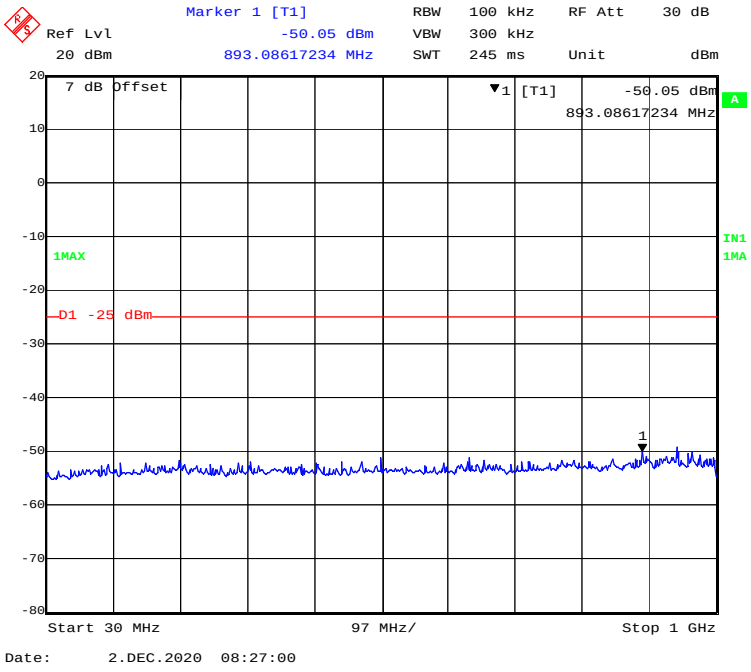


1 GHz – 26 GHz (QPSK, 5.0 MHz, Low Channel)

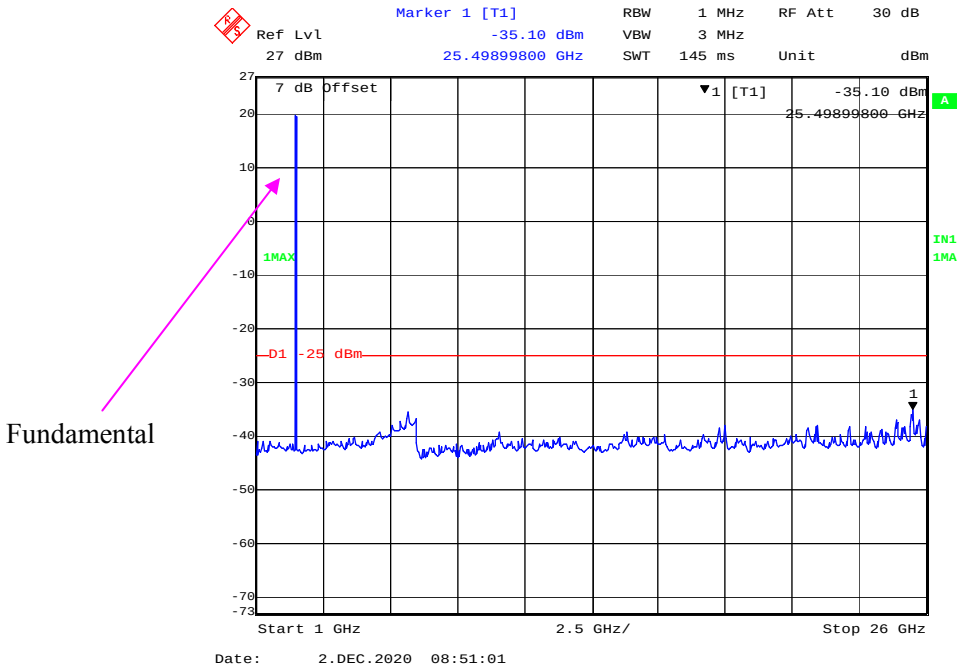


Fundamental

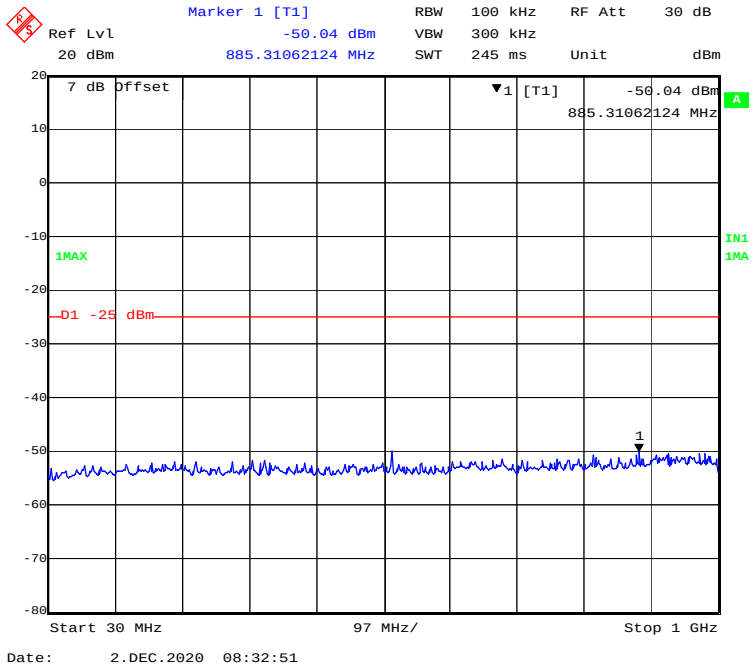
30 MHz – 1 GHz (QPSK, 10.0 MHz, Low Channel)



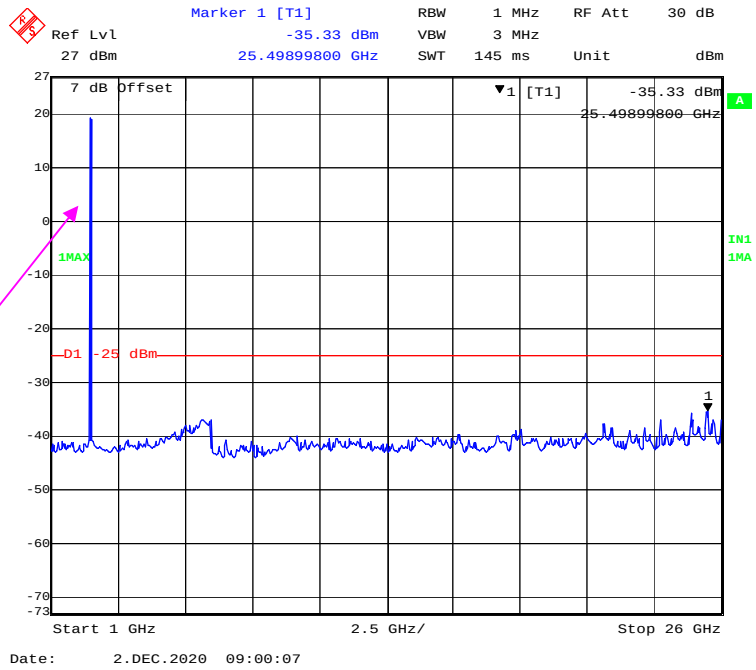
1 GHz – 26 GHz (QPSK, 10.0 MHz, Low Channel)



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

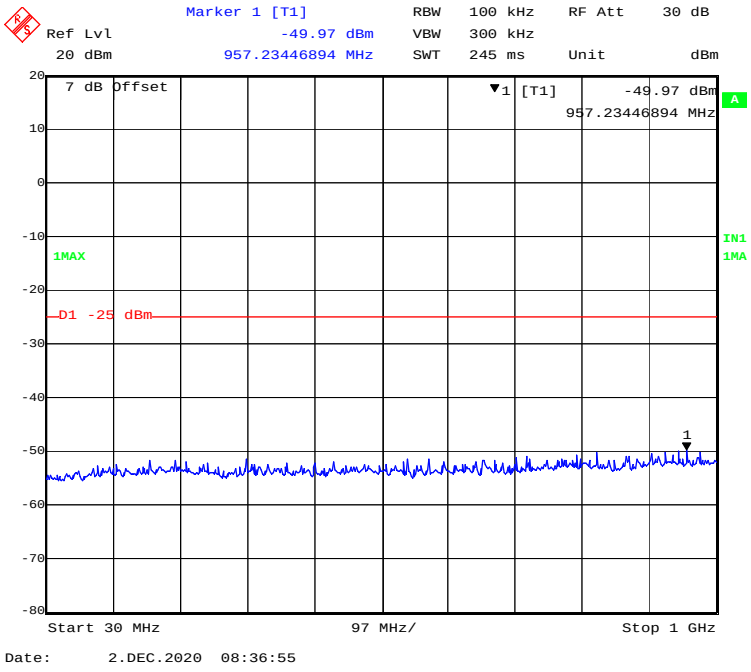


1 GHz – 26 GHz (QPSK, 15.0MHz, Low Channel)

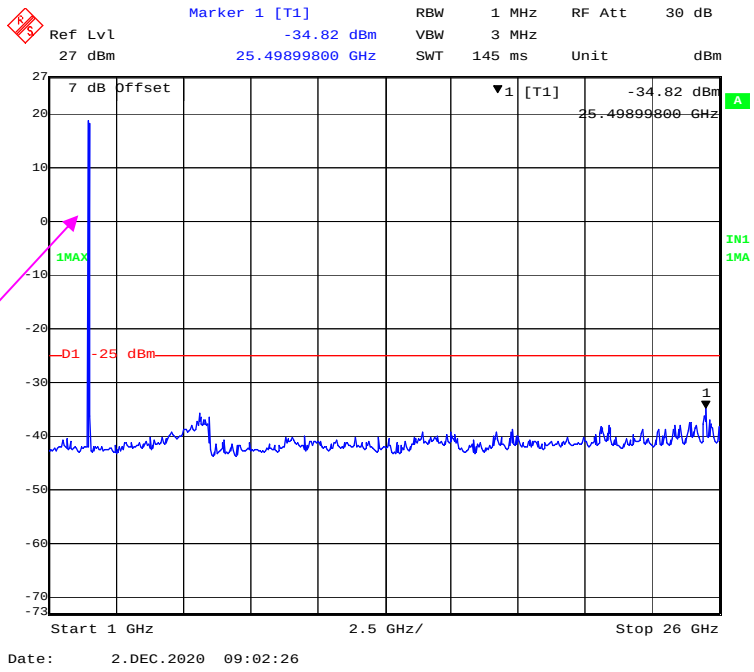


Fundamental

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

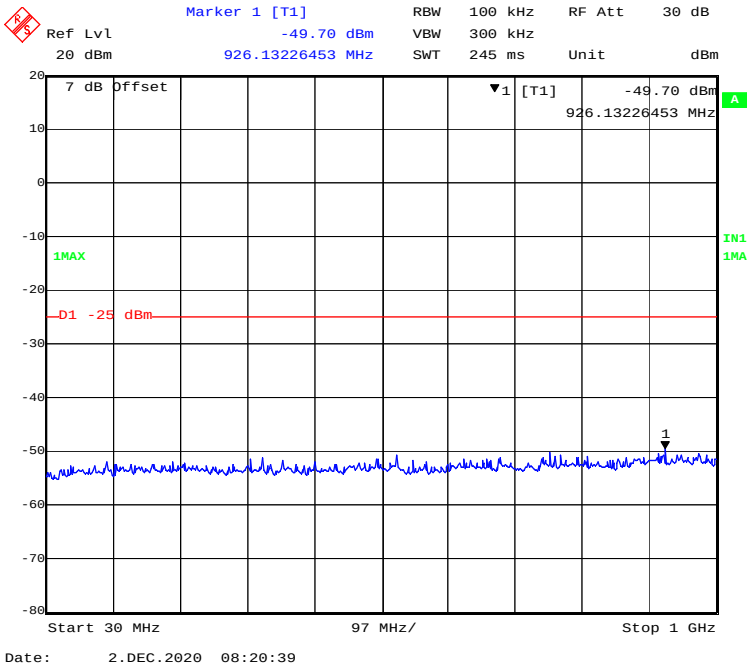


1 GHz – 26 GHz (QPSK, 20.0 MHz, Low Channel)

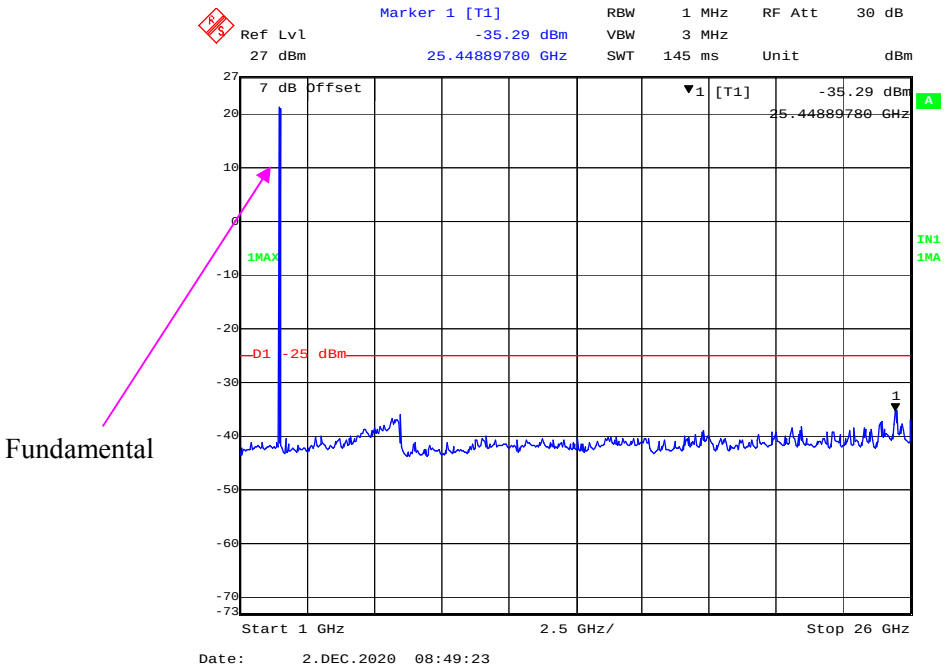


Fundamental

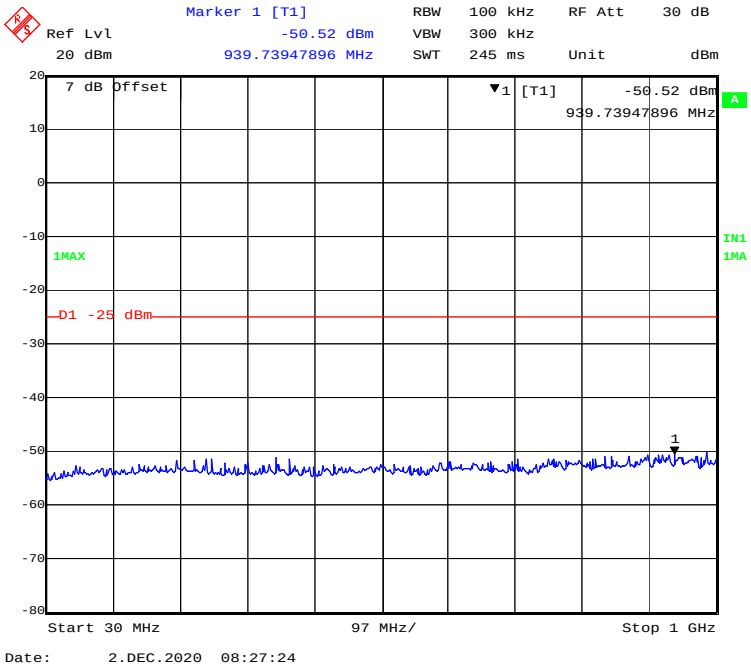
30 MHz – 1 GHz (16QAM, 5.0 MHz, Low Channel)



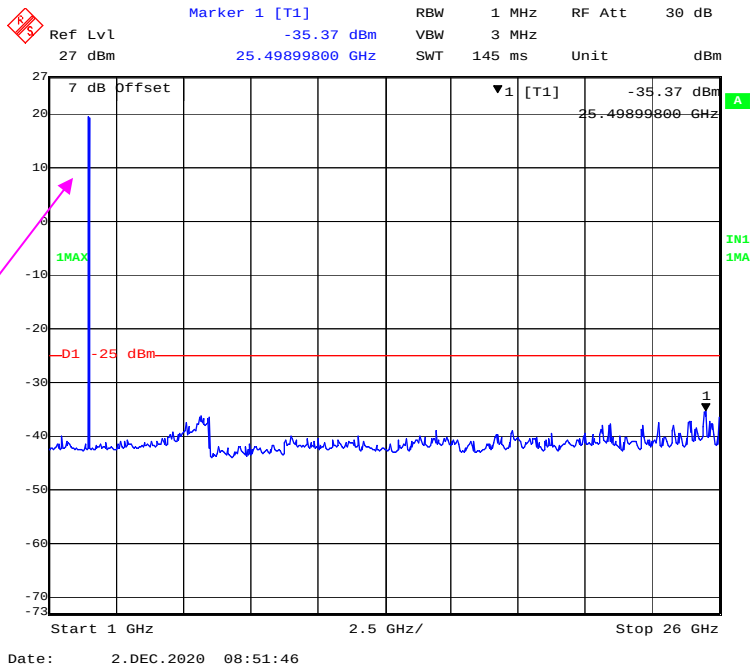
1 GHz – 26 GHz (16QAM, 5.0 MHz, Low Channel)



30 MHz – 1 GHz (16QAM, 10.0 MHz, Low Channel)

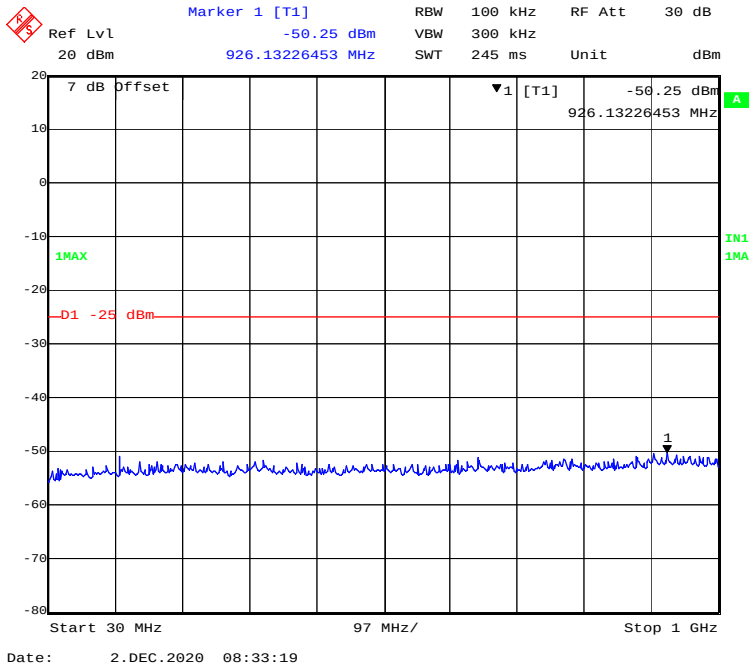


1 GHz – 26 GHz (16QAM, 10.0 MHz, Low Channel)

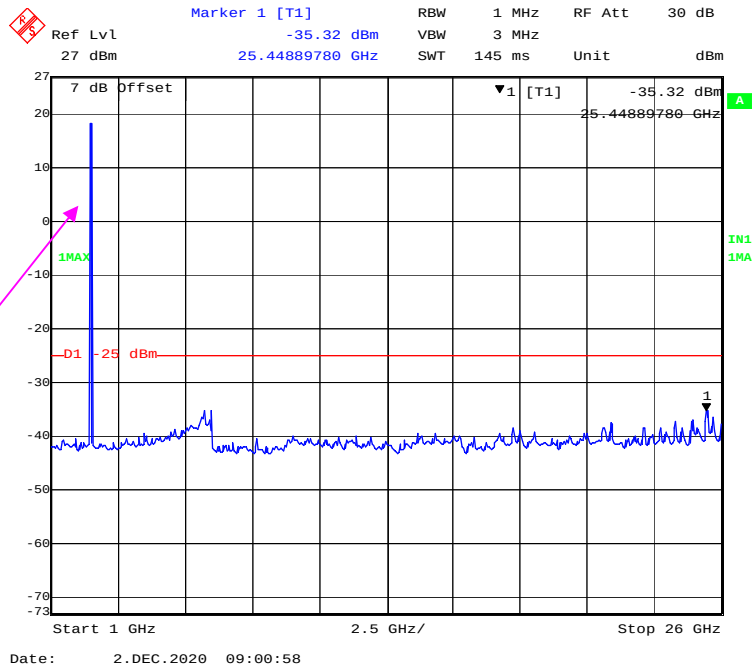


Fundamental

30 MHz – 1 GHz (16QAM, 15.0 MHz, Low Channel)

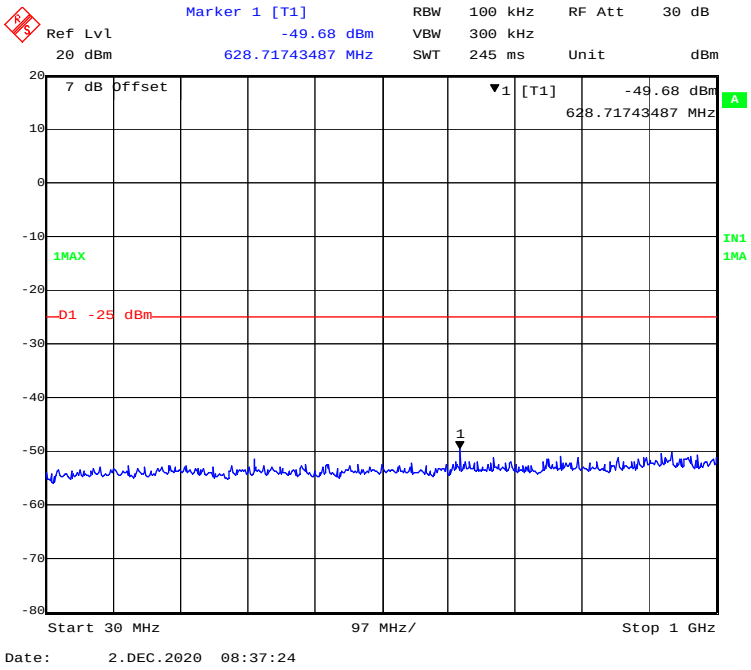


1 GHz – 26 GHz (16QAM, 15.0MHz, Low Channel)

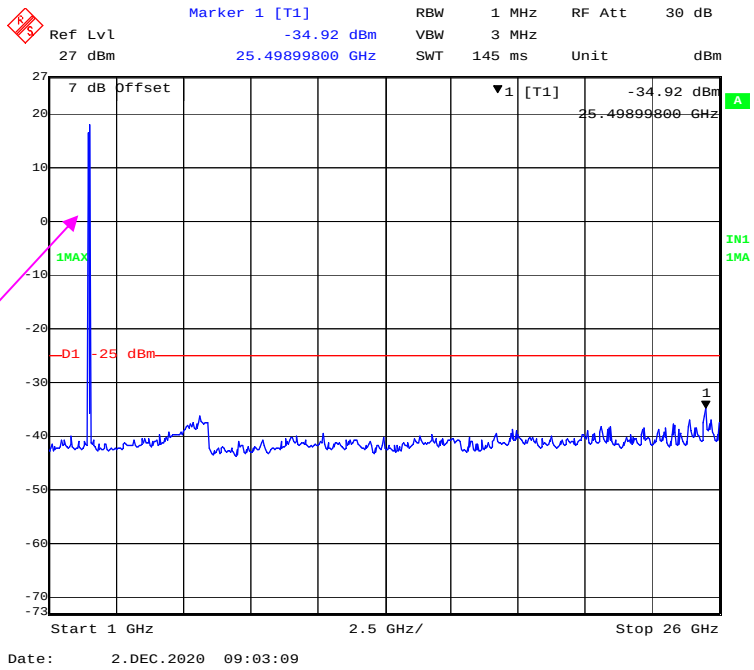


Fundamental

30 MHz – 1 GHz (16QAM, 20.0 MHz, Low Channel)

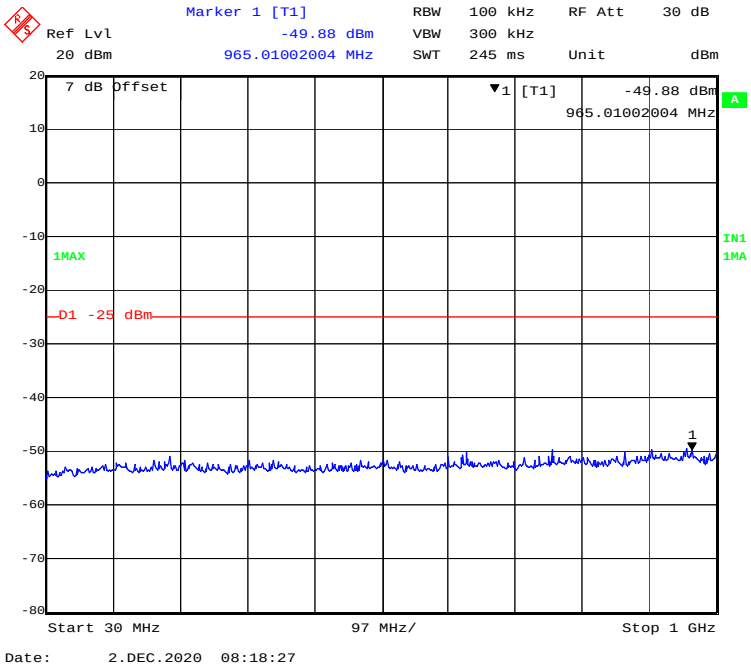


1 GHz – 26 GHz (16QAM, 20.0 MHz, Low Channel)

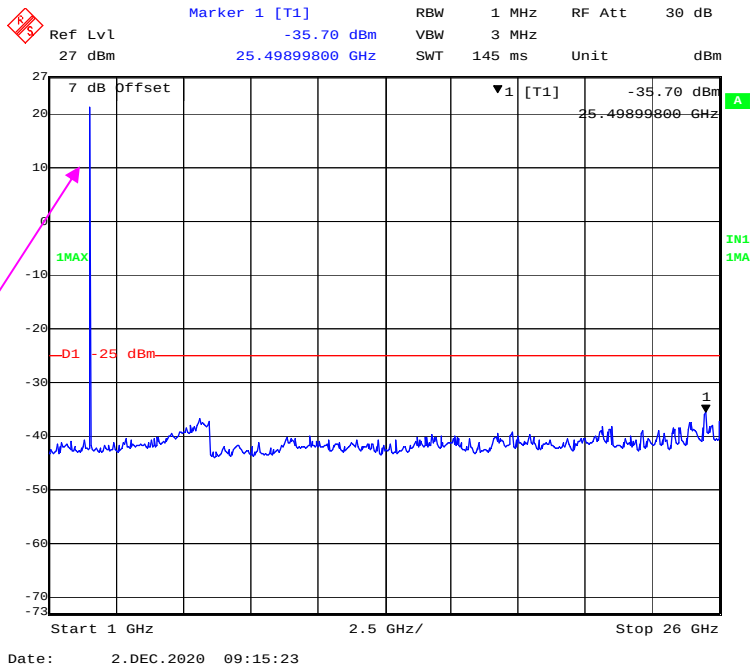


Fundamental

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

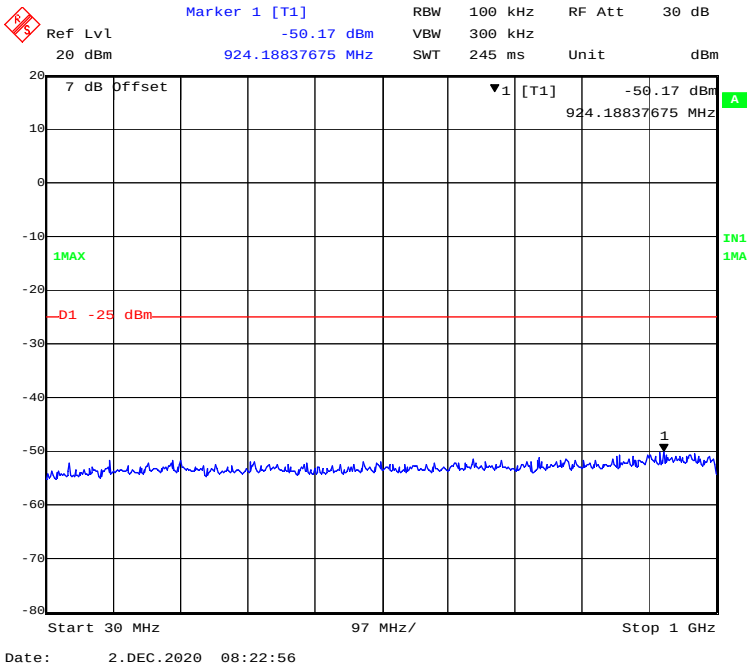


1 GHz – 26 GHz (QPSK, 5.0 MHz, Middle Channel)

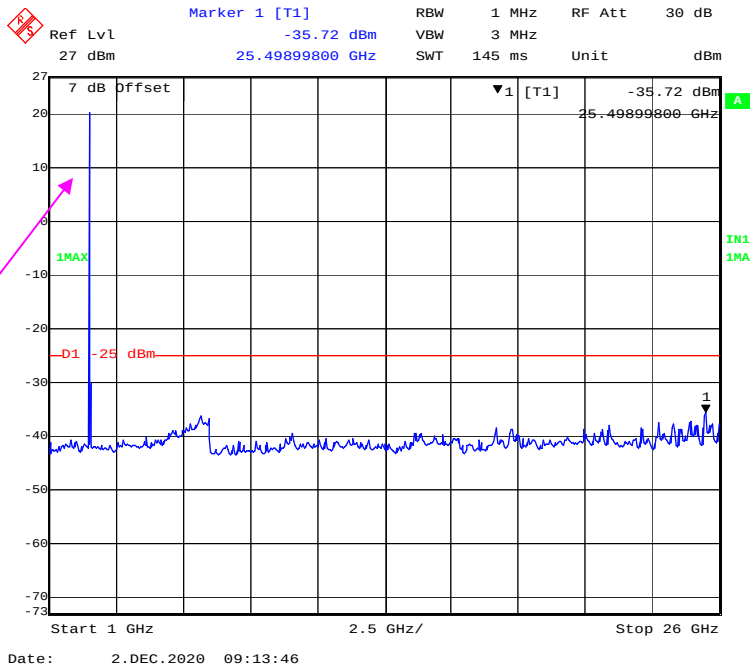


Fundamental

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

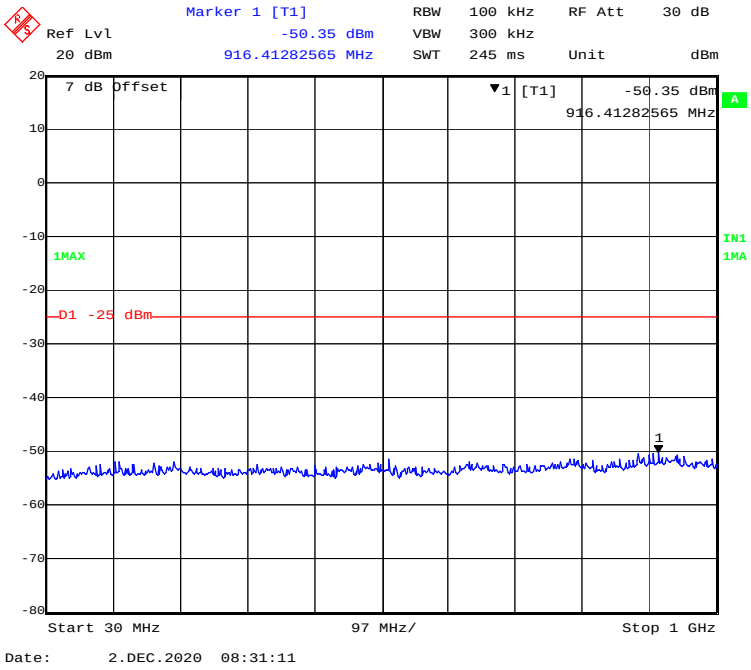


1 GHz – 26 GHz (QPSK, 10.0 MHz, Middle Channel)

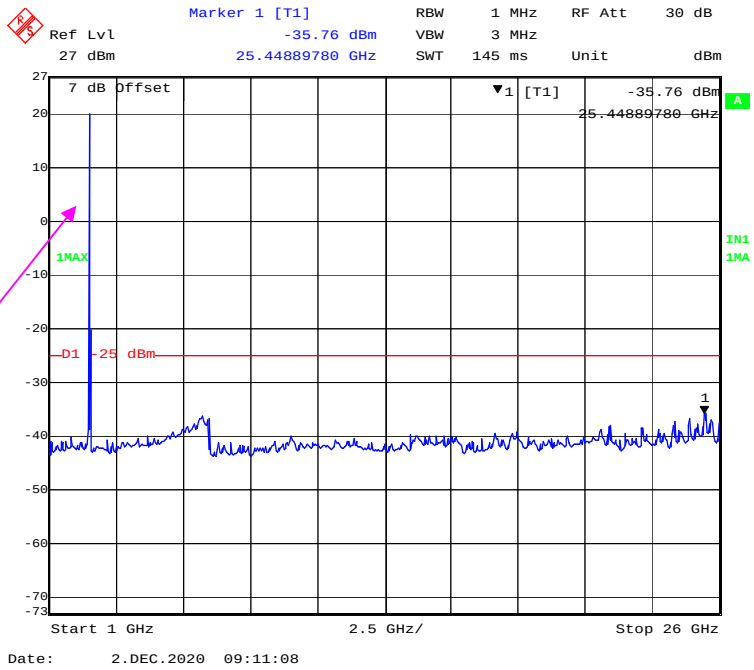


Fundamental

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

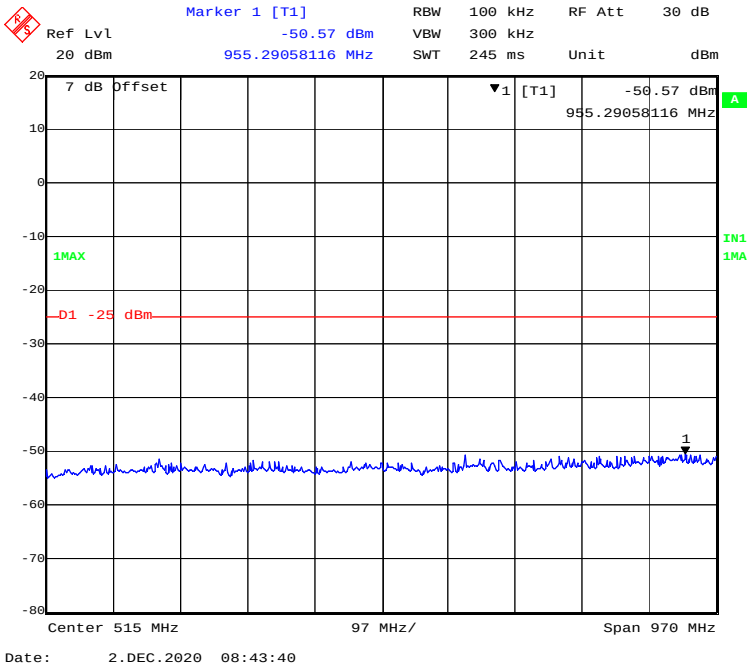


1 GHz – 26 GHz (QPSK, 15.0MHz, Middle Channel)

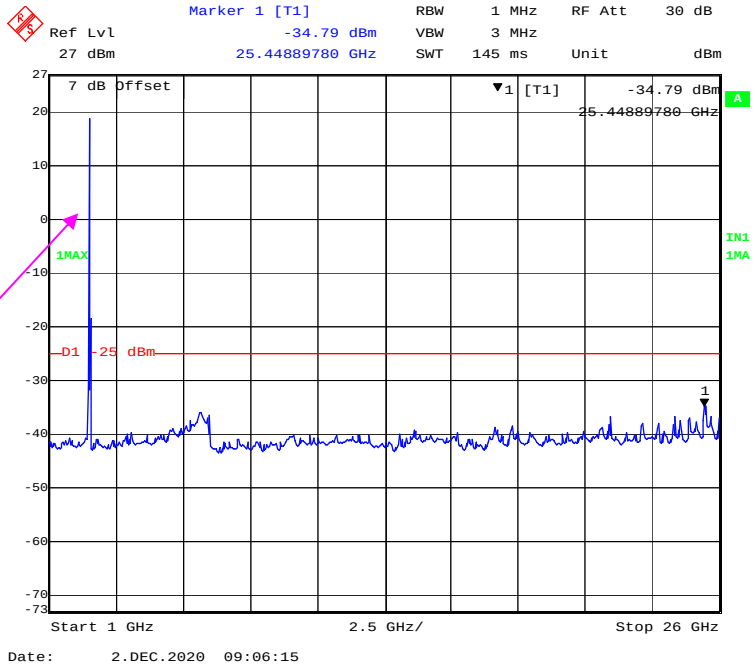


Fundamental

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

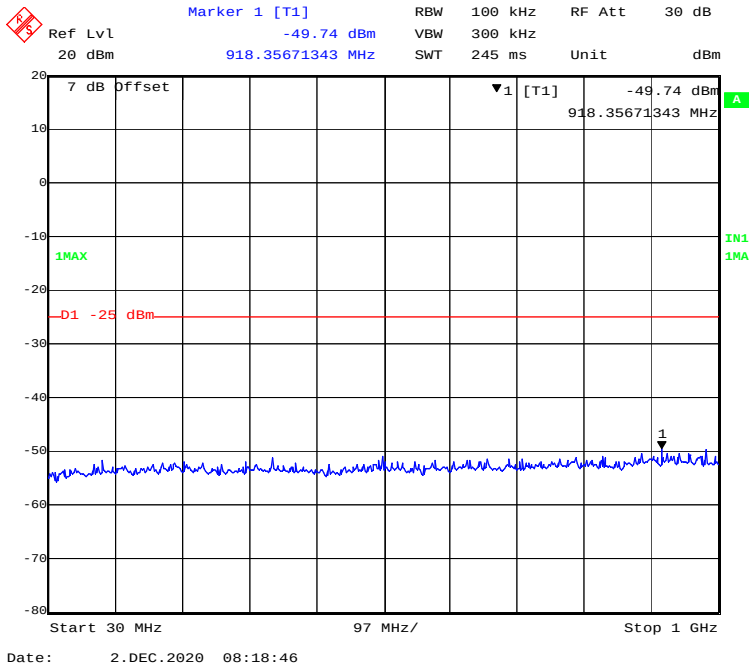


1 GHz – 26 GHz (QPSK, 20.0 MHz, Middle Channel)

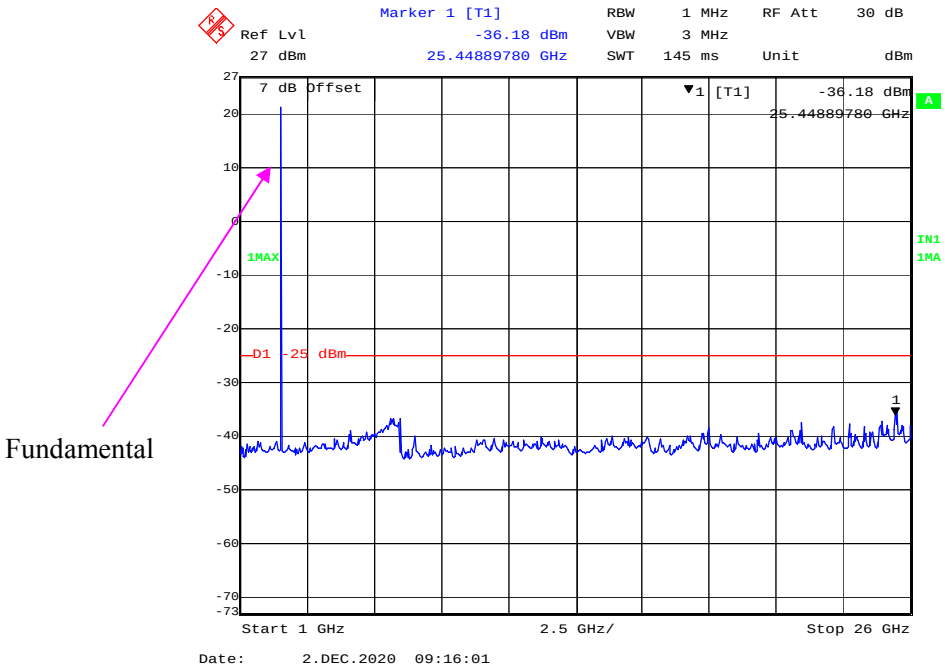


Fundamental

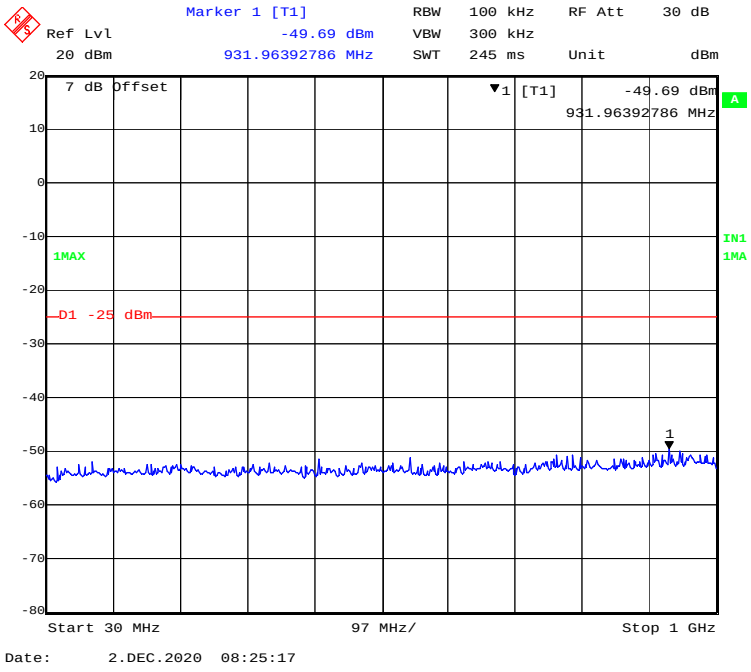
30 MHz – 1 GHz (16QAM, 5.0 MHz, Middle Channel)



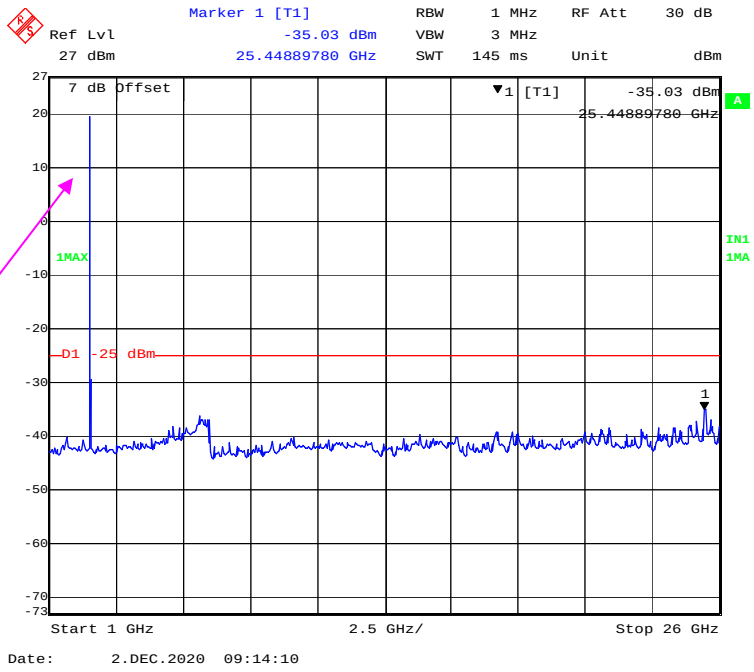
1 GHz – 26 GHz (16QAM, 5.0 MHz, Middle Channel)



30 MHz – 1 GHz (16QAM, 10.0 MHz, Middle Channel)

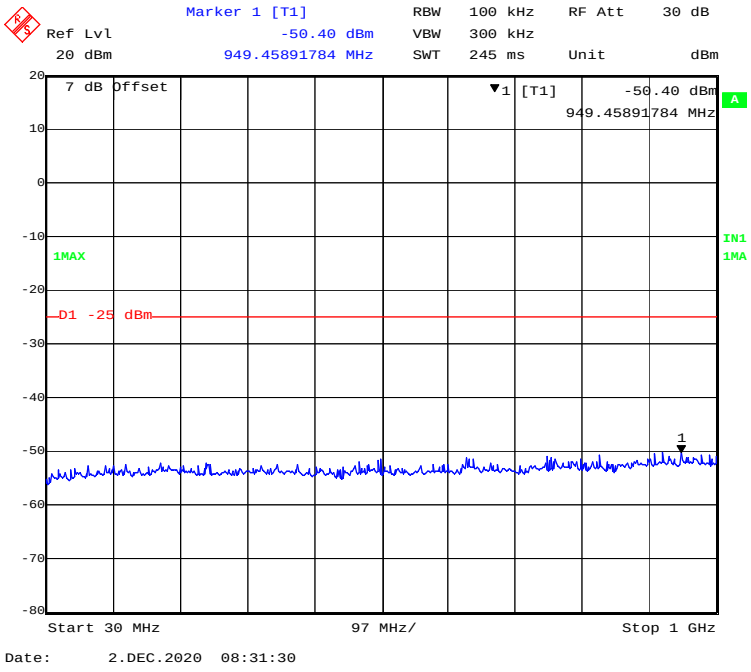


1 GHz – 26 GHz (16QAM, 10.0 MHz, Middle Channel)

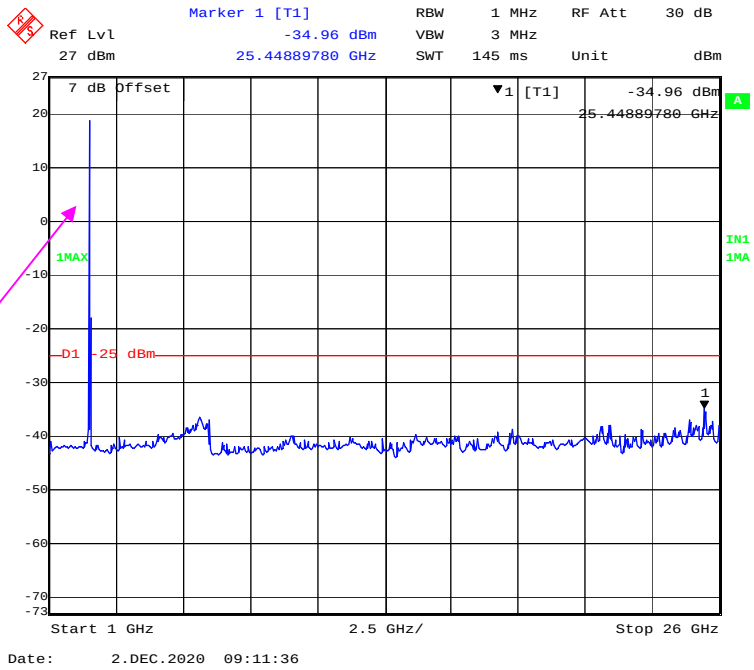


Fundamental

30 MHz – 1 GHz (16QAM, 15.0 MHz, Middle Channel)

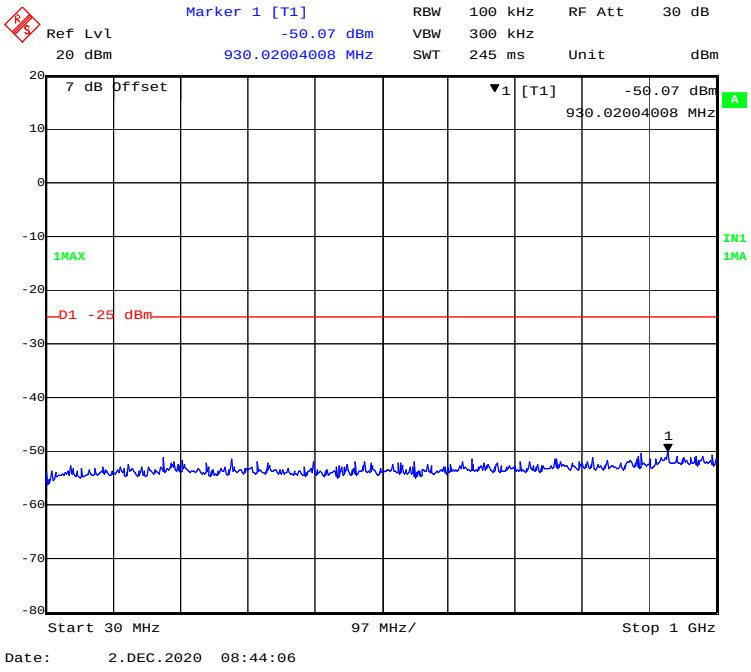


1 GHz – 26 GHz (16QAM, 15.0MHz, Middle Channel)

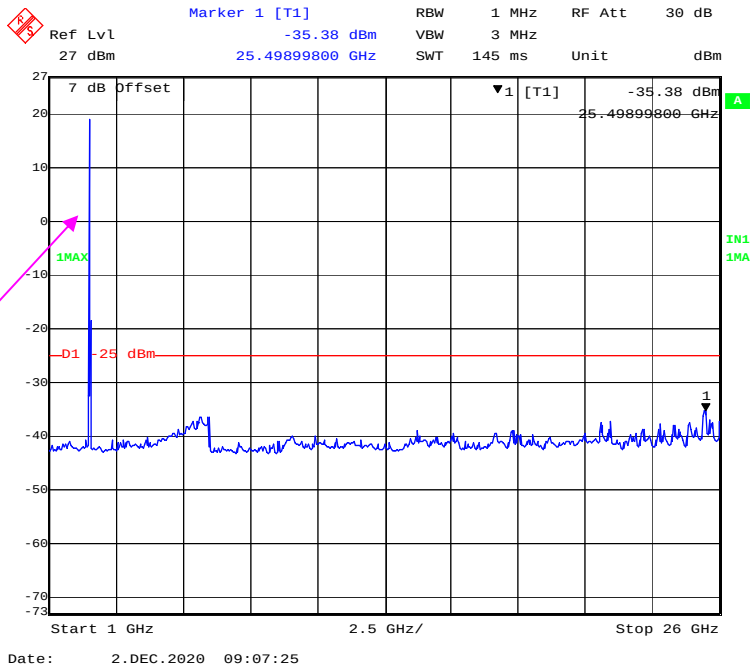


Fundamental

30 MHz – 1 GHz (16QAM, 20.0 MHz, Middle Channel)

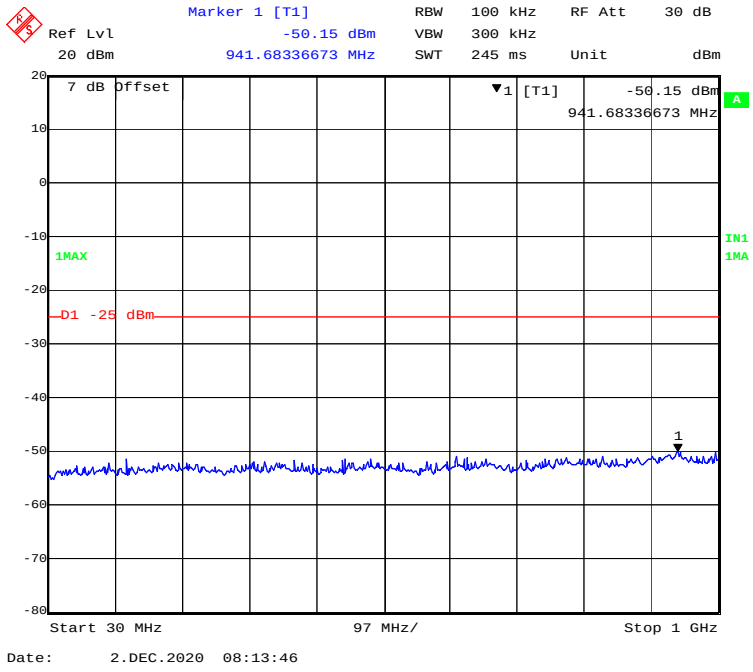


1 GHz – 26 GHz (16QAM, 20.0 MHz, Middle Channel)

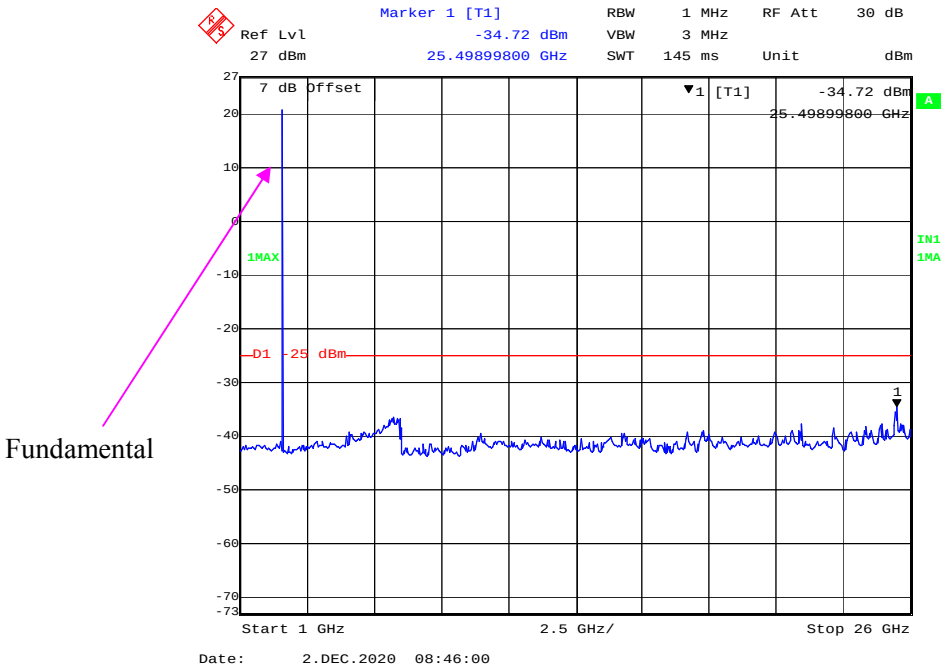


Fundamental

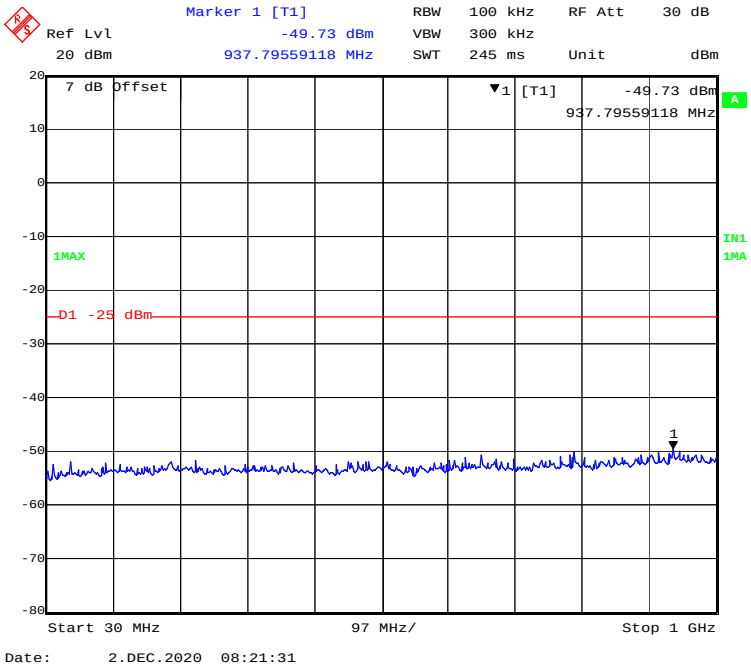
30 MHz – 1 GHz (QPSK, 5.0 MHz, High Channel)



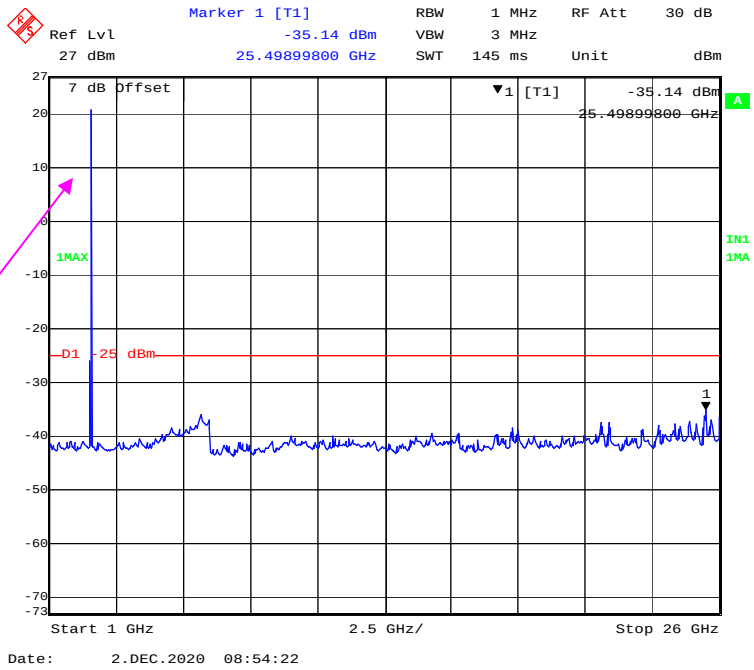
1 GHz – 26 GHz (QPSK, 5.0 MHz, High Channel)



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

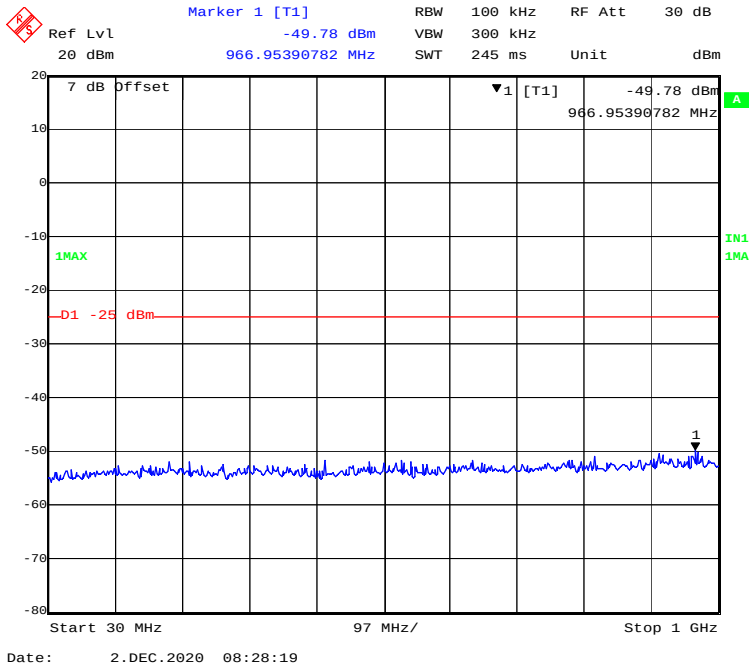


1 GHz – 26 GHz (QPSK, 10.0 MHz, High Channel)

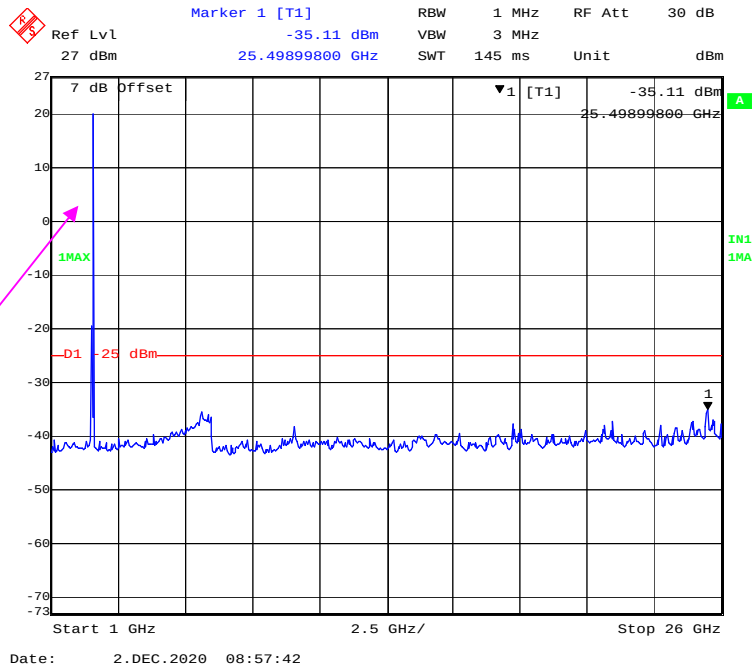


Fundamental

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

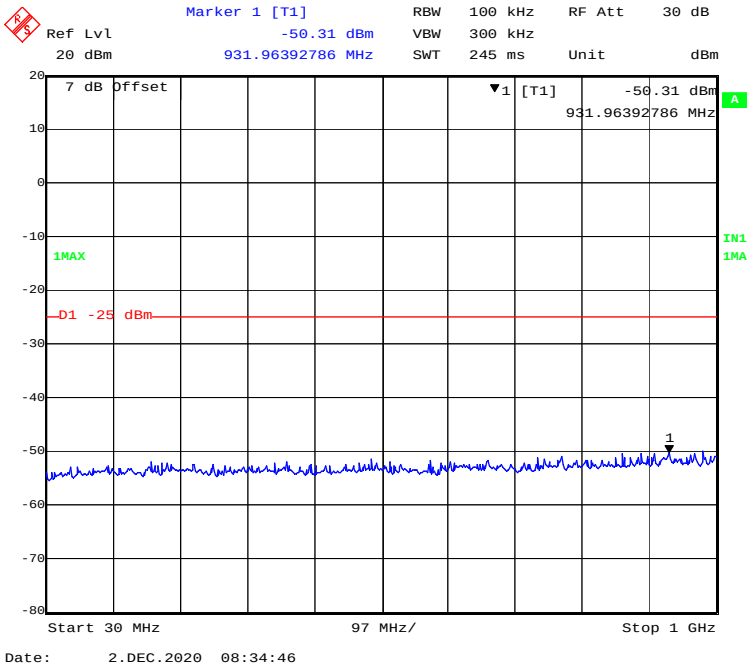


1 GHz – 26 GHz (QPSK, 15.0MHz, High Channel)

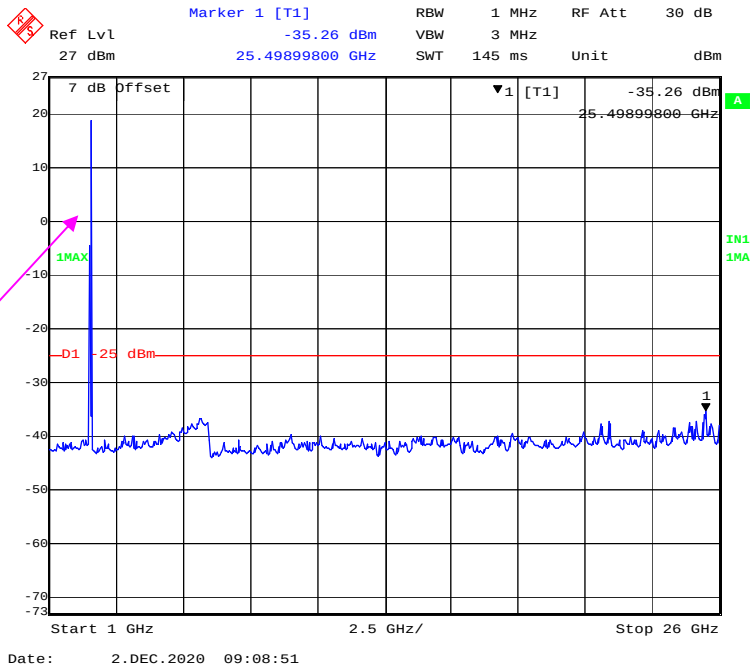


Fundamental

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

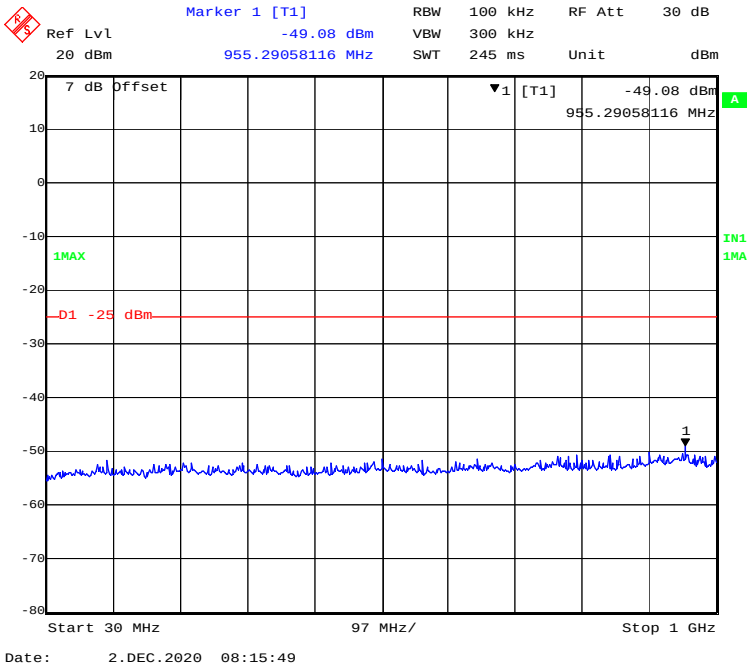


1 GHz – 26 GHz (QPSK, 20.0 MHz, High Channel)

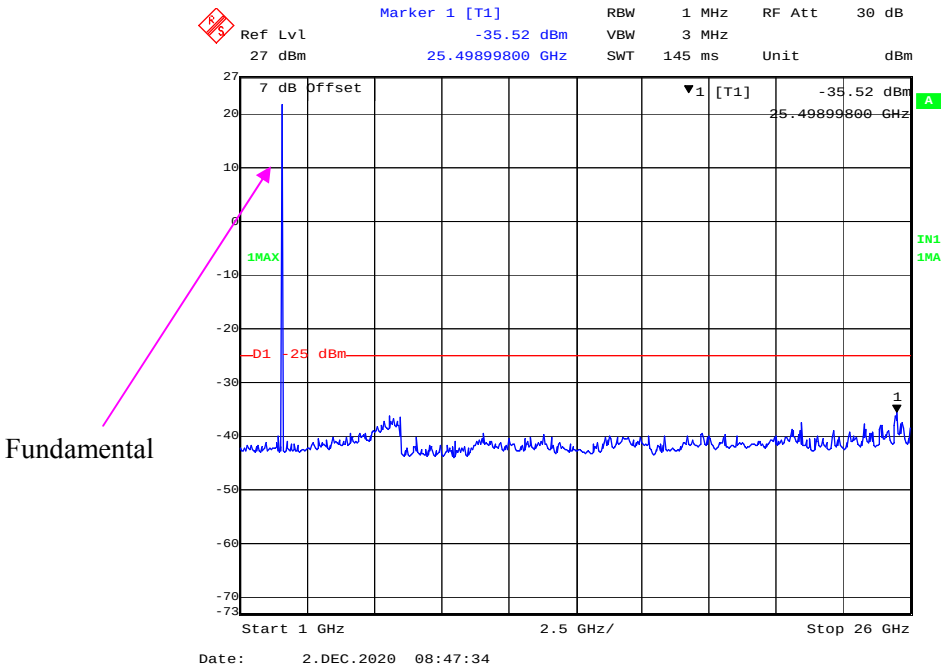


Fundamental

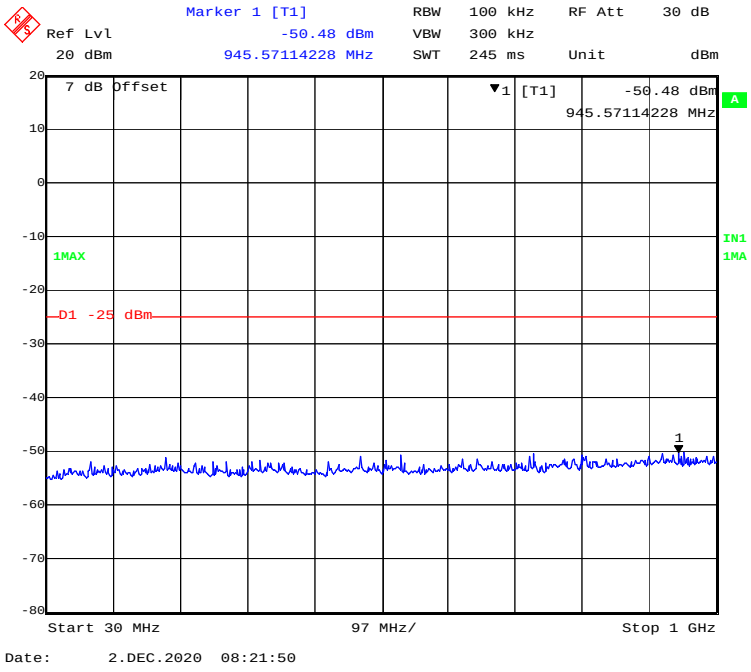
30 MHz – 1 GHz (16QAM, 5.0 MHz, High Channel)



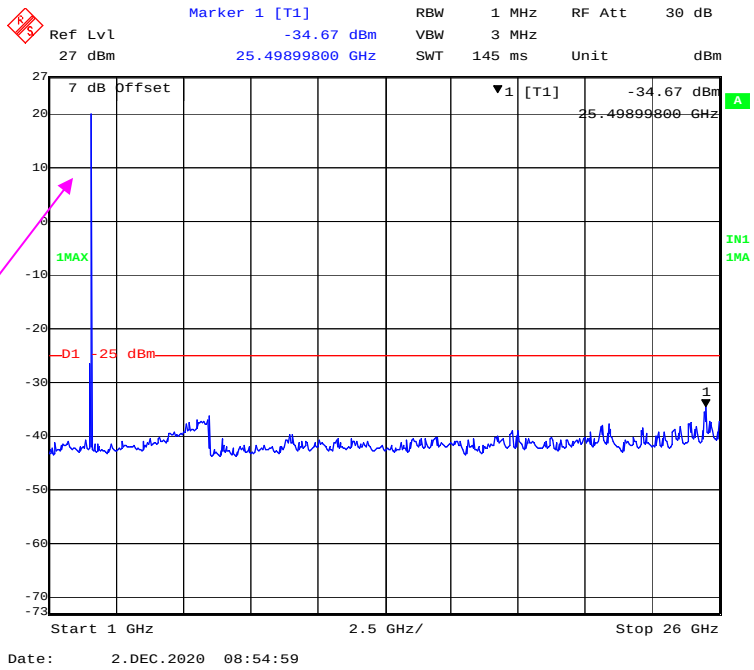
1 GHz – 26 GHz (16QAM, 5.0 MHz, High Channel)



30 MHz – 1 GHz (16QAM, 10.0 MHz, High Channel)

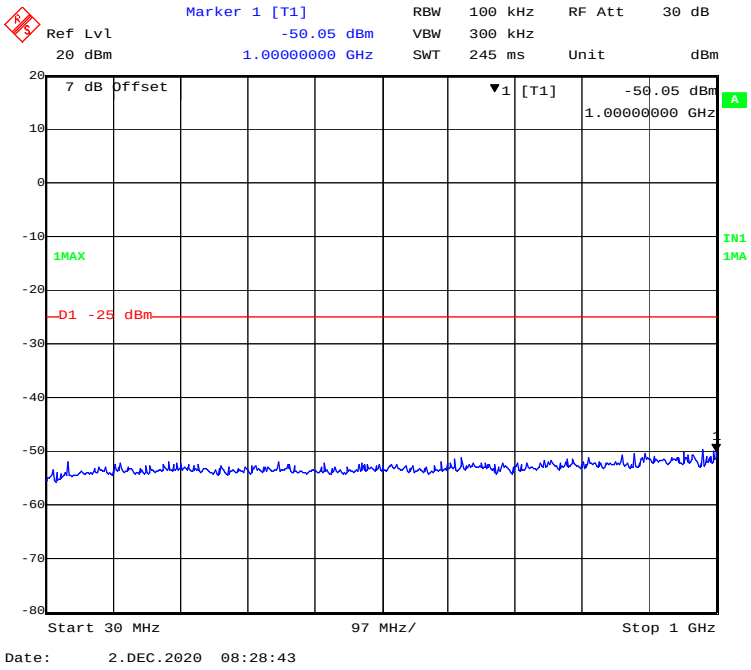


1 GHz – 26 GHz (16QAM, 10.0 MHz, High Channel)

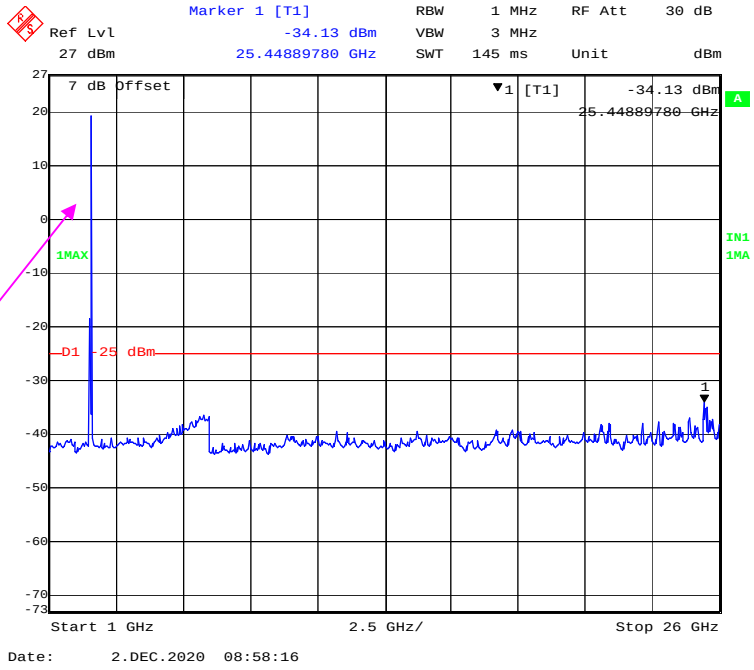


Fundamental

30 MHz – 1 GHz (16QAM, 15.0 MHz, High Channel)

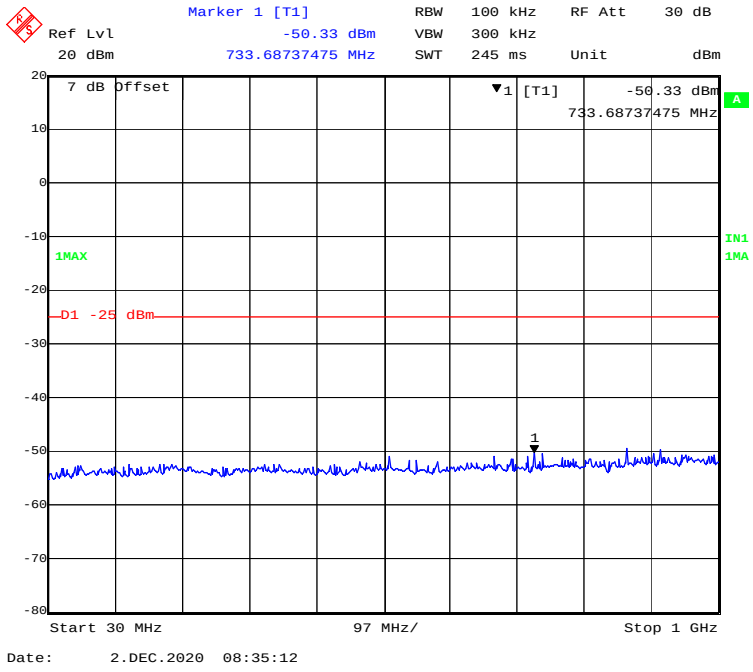


1 GHz – 26 GHz (16QAM, 15.0MHz, High Channel)

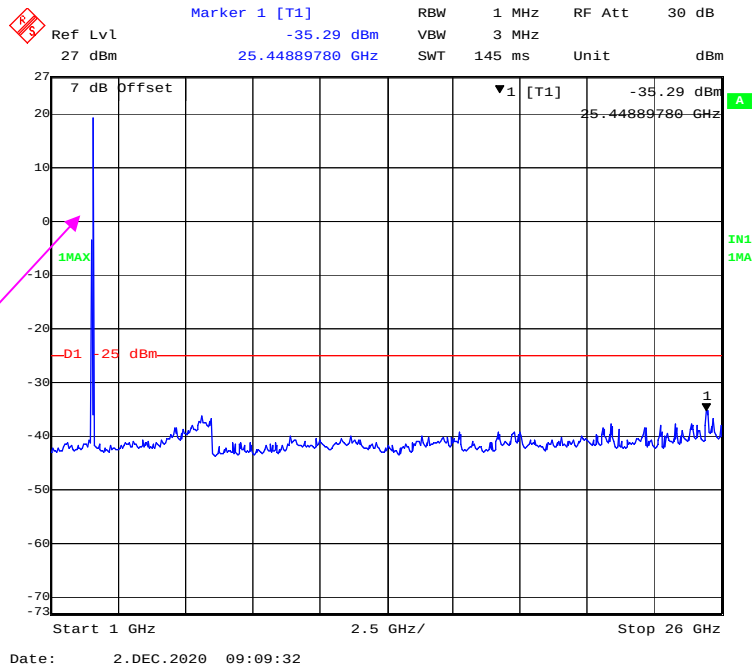


Fundamental

30 MHz – 1 GHz (16QAM, 20.0 MHz, High Channel)



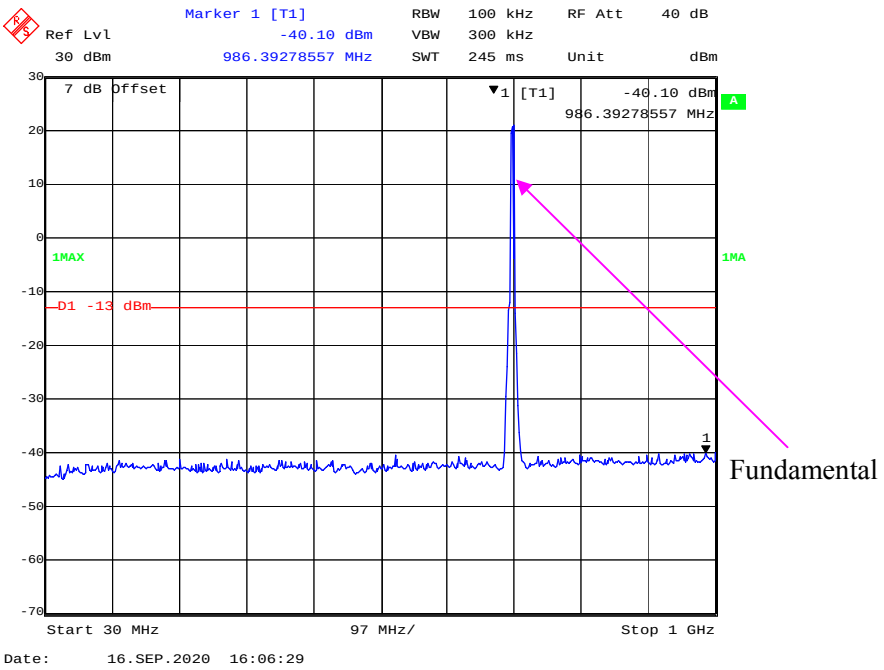
1 GHz – 26 GHz (16QAM, 20.0 MHz, High Channel)



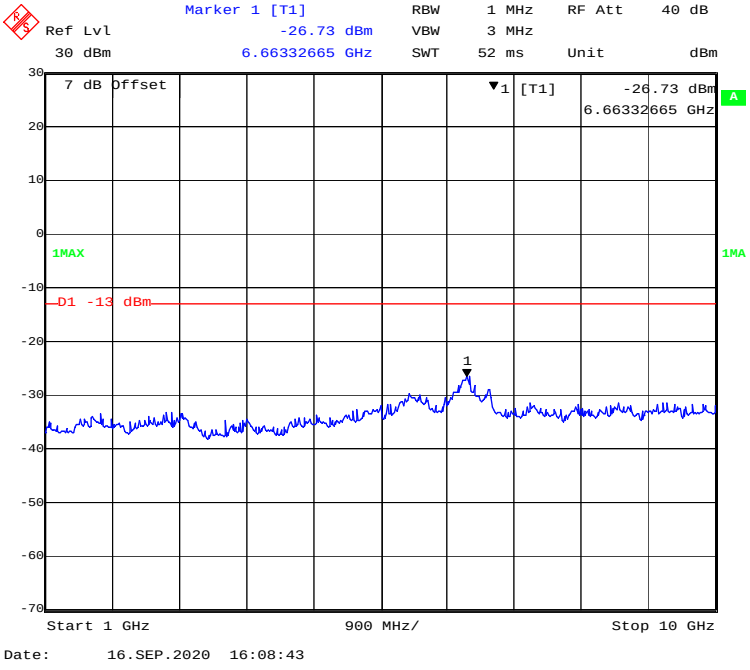
Fundamental

LTE Band 17:

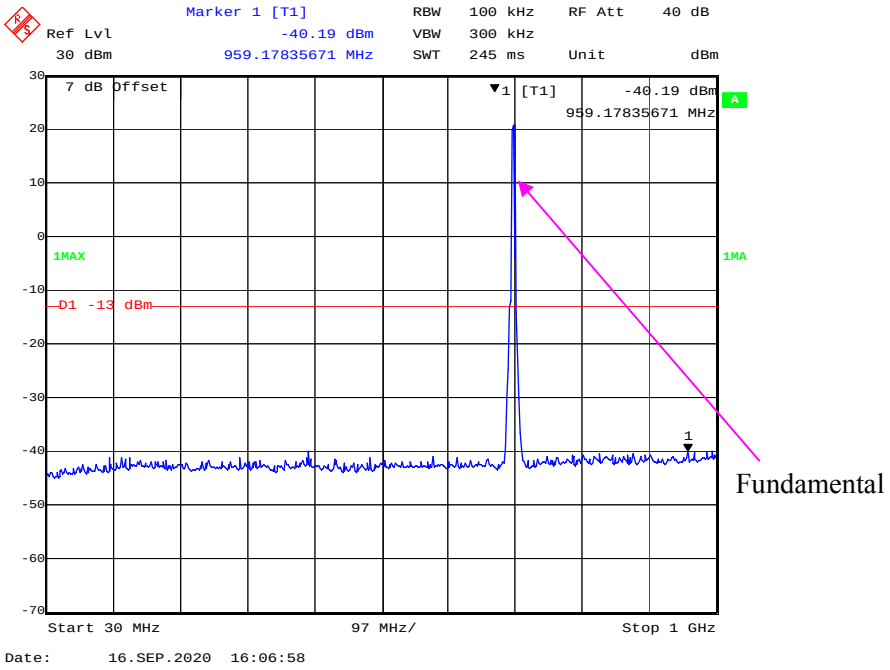
30 MHz - 1 GHz (5 MHz, QPSK, Low Channel)



1 GHz – 10 GHz (5 MHz, QPSK, Low Channel)

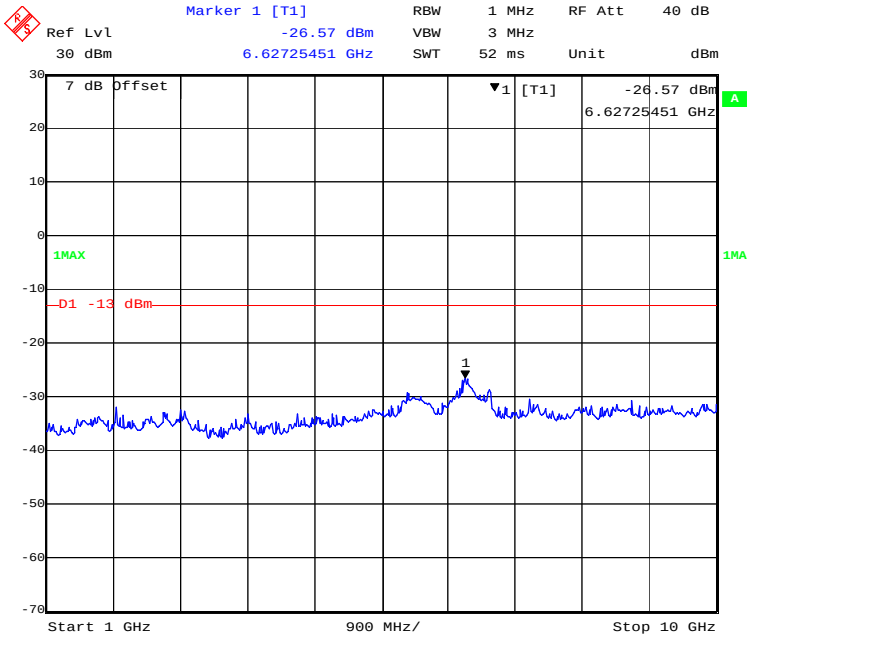


30 MHz - 1 GHz (5 MHz, 16-QAM, Low Channel)



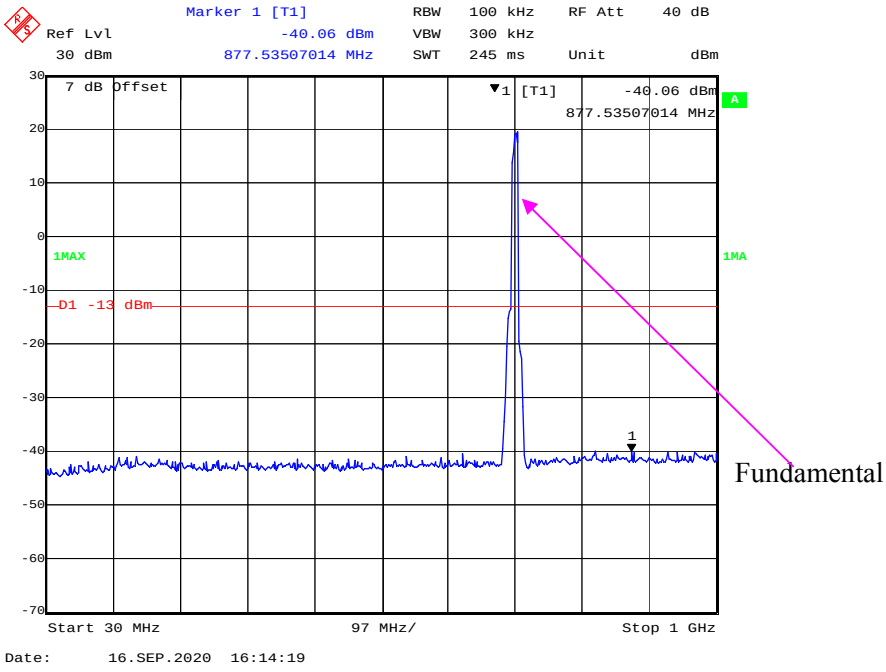
Date: 16.SEP.2020 16:06:58

1 GHz – 10 GHz (5 MHz, 16-QAM, Low Channel)



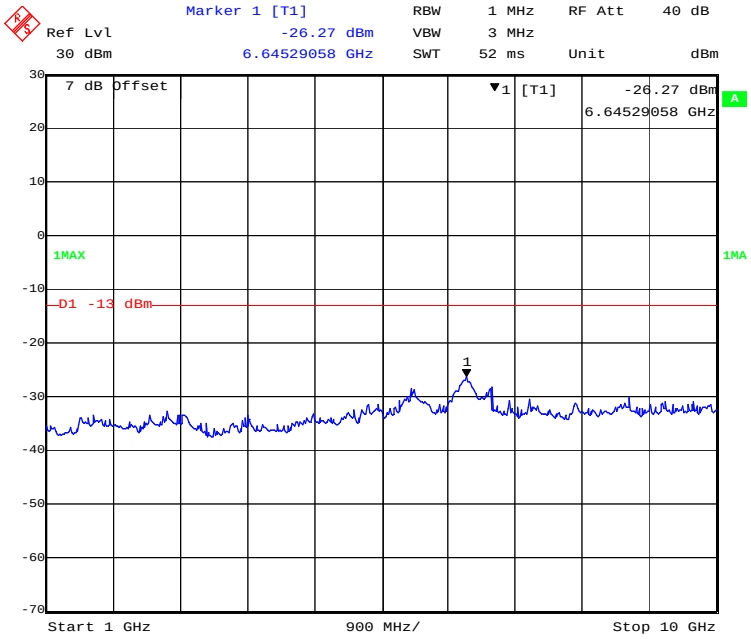
Date: 16.SEP.2020 16:08:26

30 MHz - 1 GHz (10 MHz, QPSK, Low Channel)



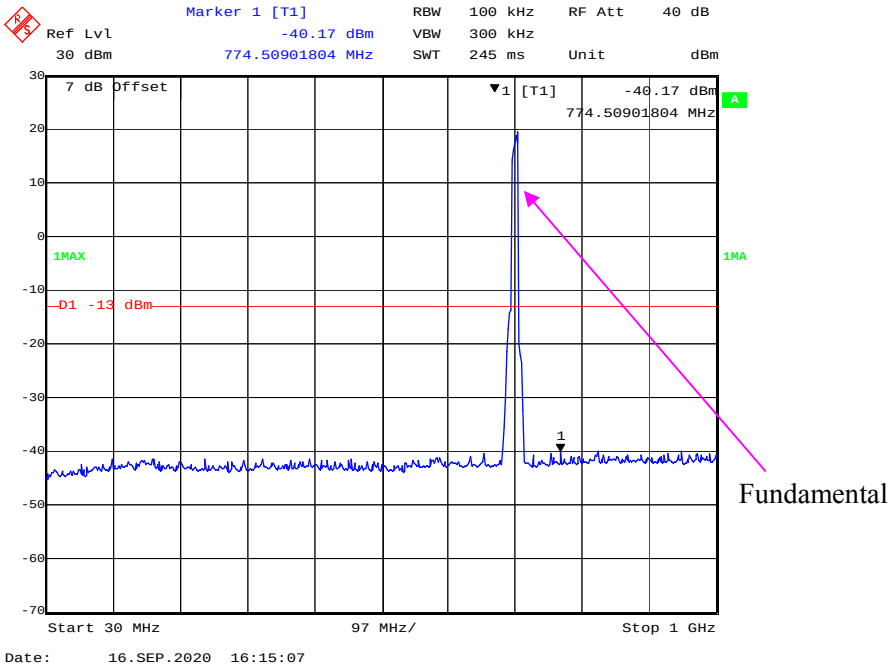
Date: 16.SEP.2020 16:14:19

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



Date: 16.SEP.2020 16:10:29

30 MHz - 1 GHz (10 MHz, 16-QAM, Low Channel)



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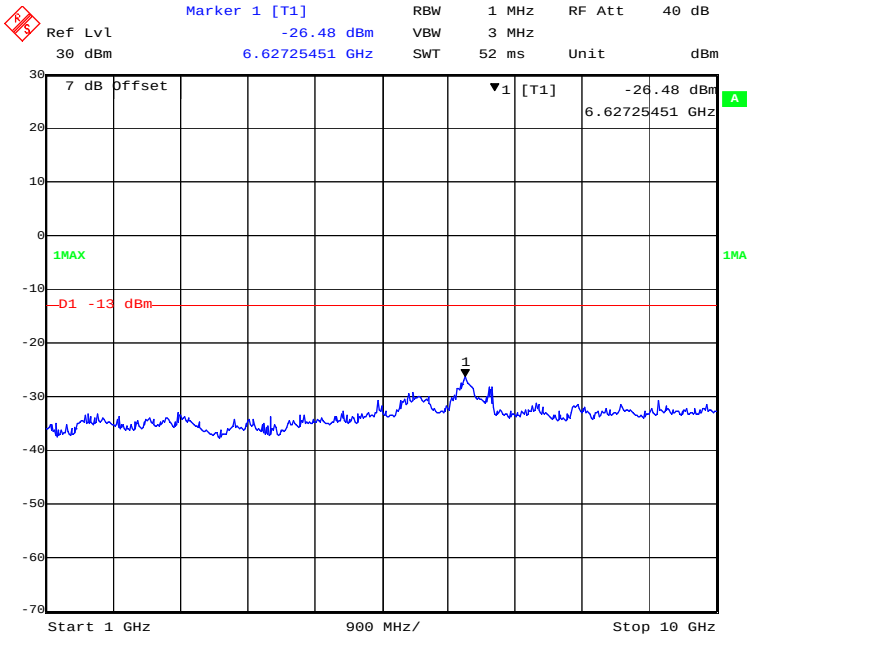
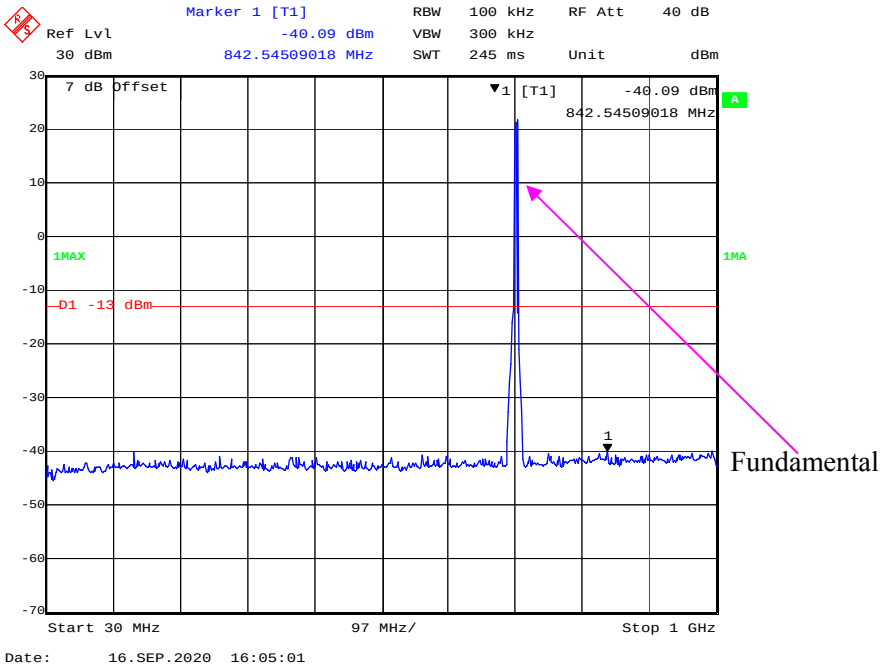
1 GHz – 10 GHz (10 MHz, 16-QAM, Low Channel)

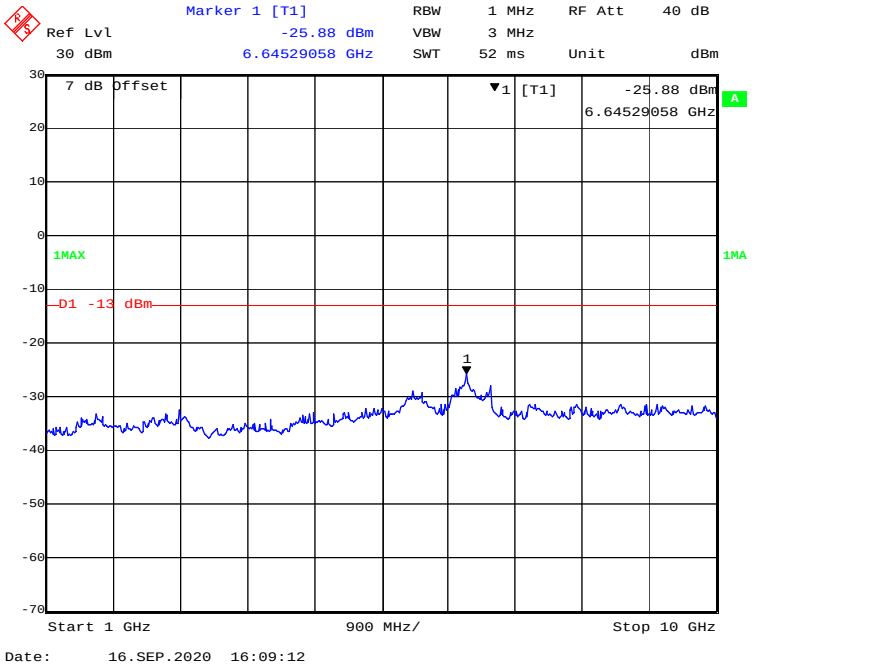


Date: 16.SEP.2020 16:10:56

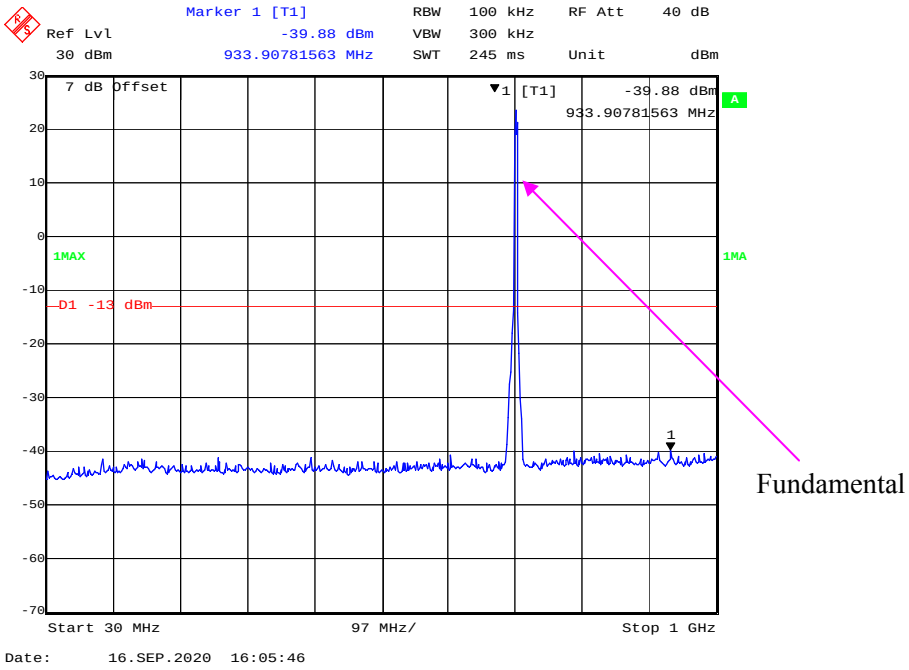
30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)



1 GHz – 10 GHz (5 MHz, QPSK, Middle Channel)



30 MHz - 1 GHz (5 MHz, 16-QAM, Middle Channel)



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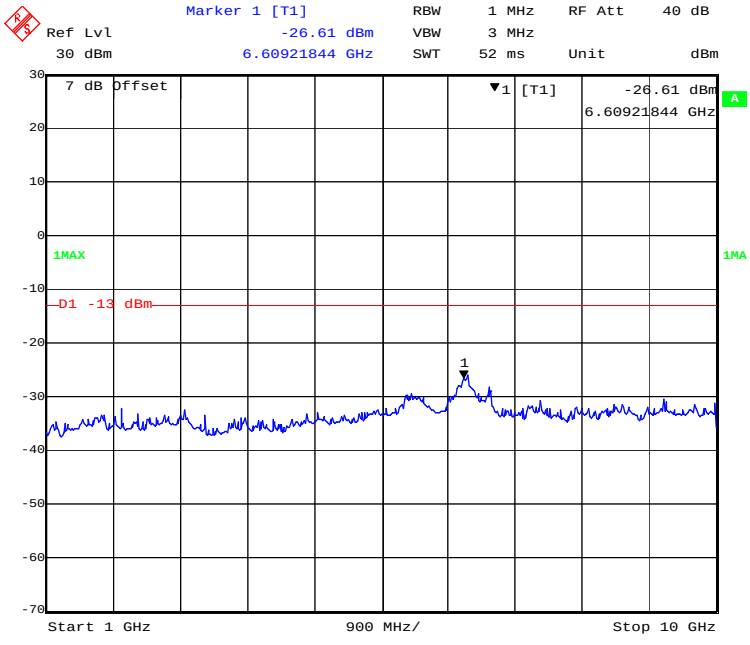
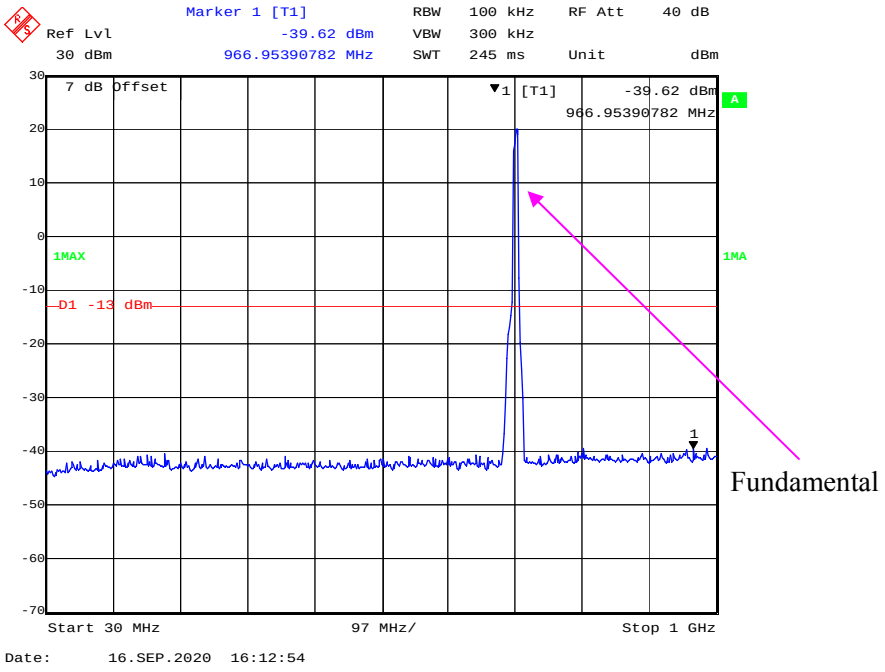
1 GHz – 10 GHz (5 MHz, 16-QAM, Middle Channel)



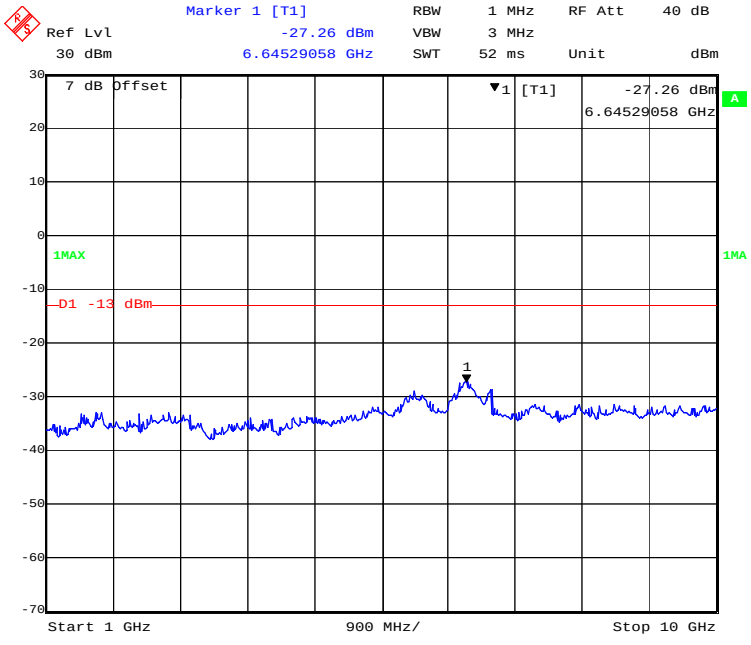
Date: 16.SEP.2020 16:08:57

30 MHz - 1 GHz (10 MHz, QPSK, Middle Channel)



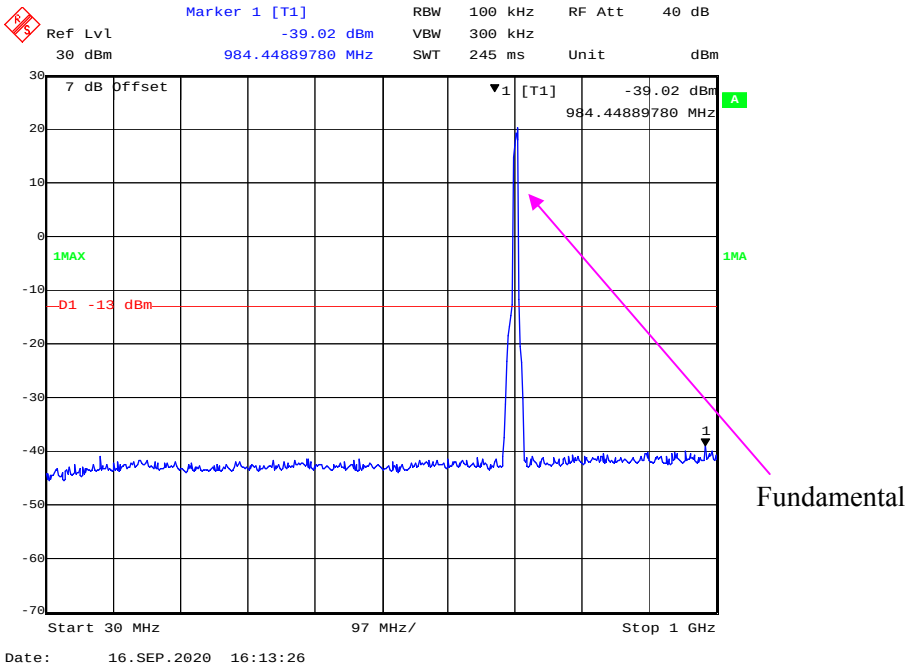
Date: 16.SEP.2020 16:12:54

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



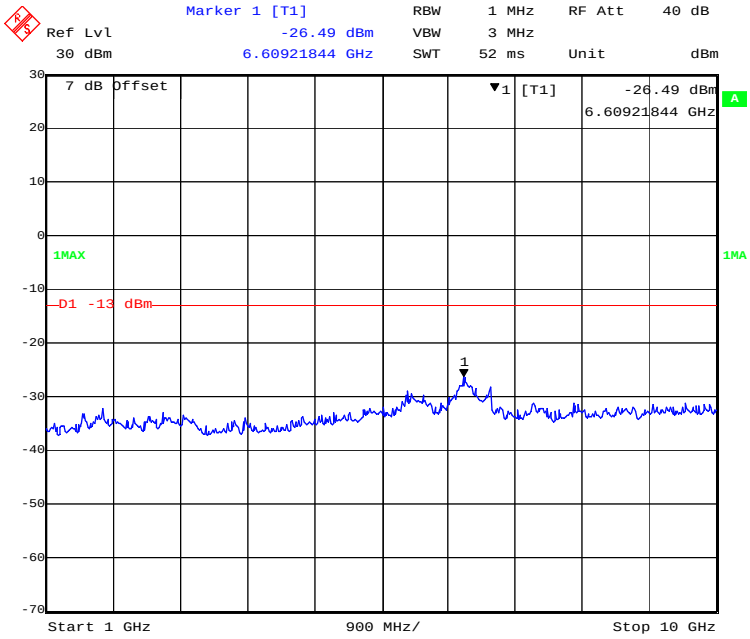
Date: 16.SEP.2020 16:09:36

30 MHz - 1 GHz (10 MHz, 16-QAM, Middle Channel)



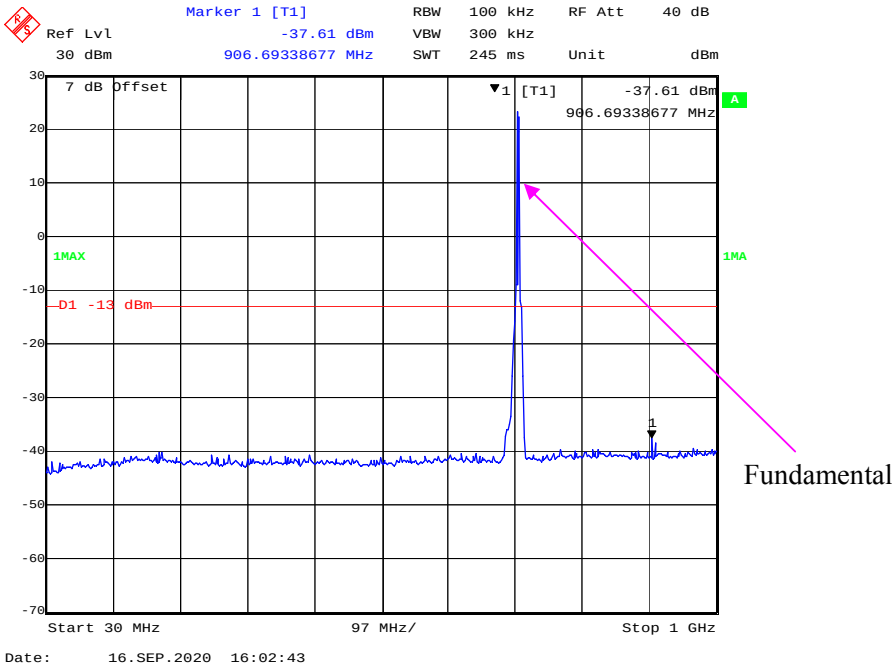
Date: 16.SEP.2020 16:13:26

1 GHz – 10 GHz (10 MHz, 16-QAM, Middle Channel)



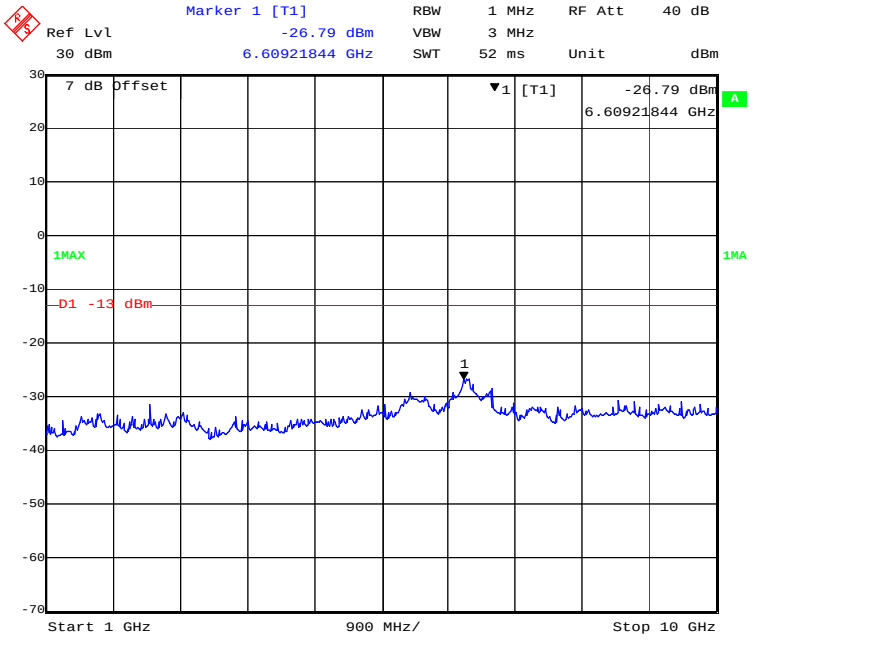
Date: 16.SEP.2020 16:10:01

30 MHz - 1 GHz (5 MHz, QPSK, High Channel)



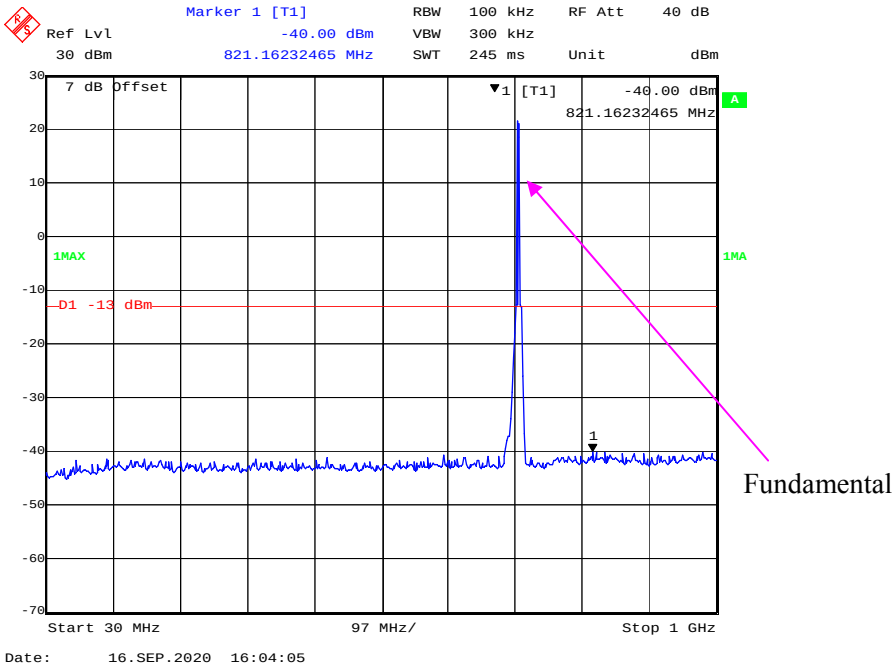
Date: 16.SEP.2020 16:02:43

1 GHz – 10 GHz (5 MHz, QPSK, High Channel)

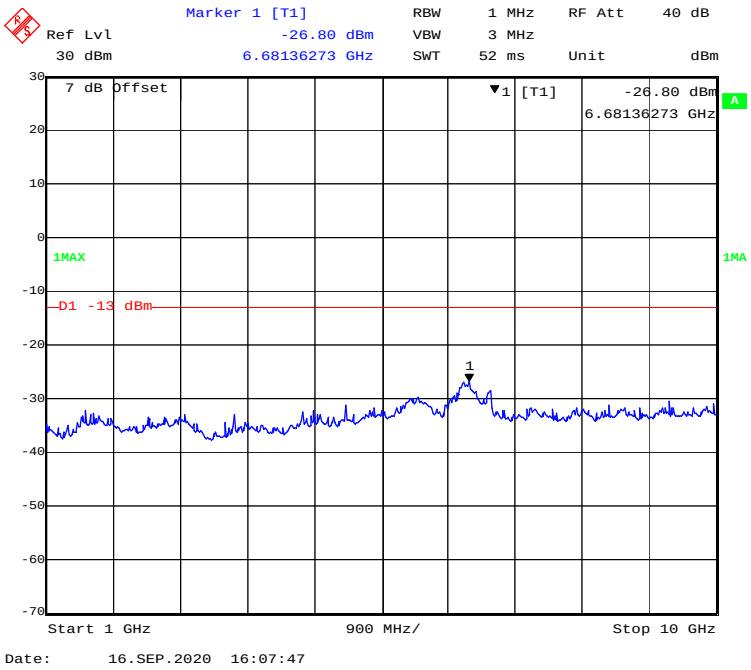


Date: 16.SEP.2020 16:08:12

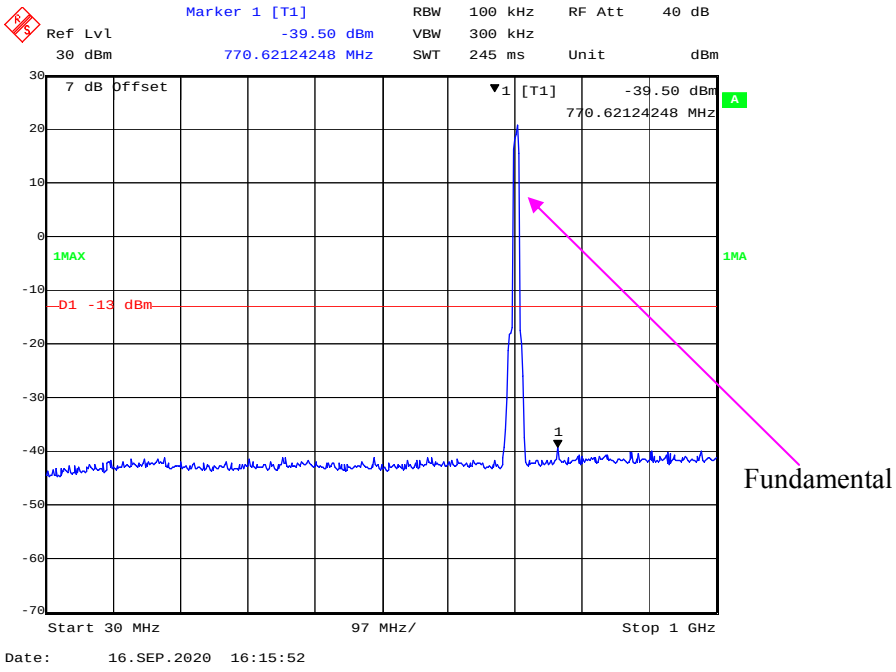
30 MHz - 1 GHz (5 MHz, 16-QAM, High Channel)



1 GHz – 10 GHz (5 MHz, 16-QAM, High Channel)

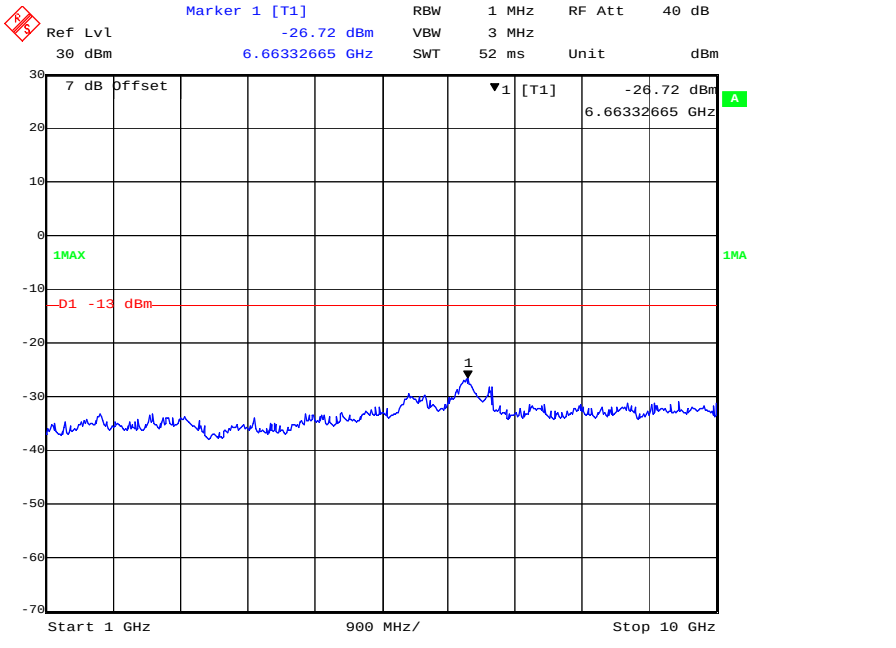


30 MHz - 1 GHz (10 MHz, QPSK, High Channel)



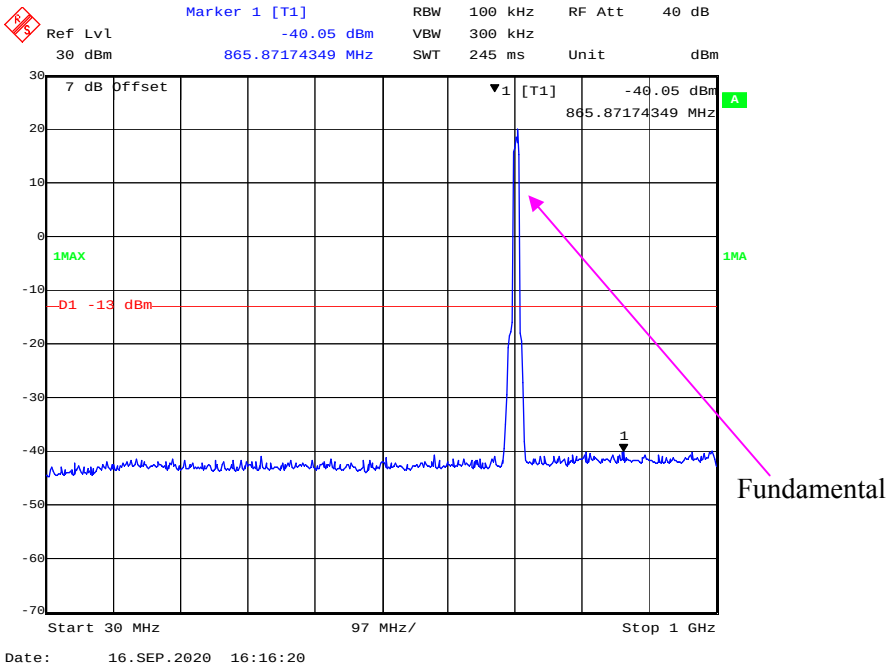
Date: 16.SEP.2020 16:15:52

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



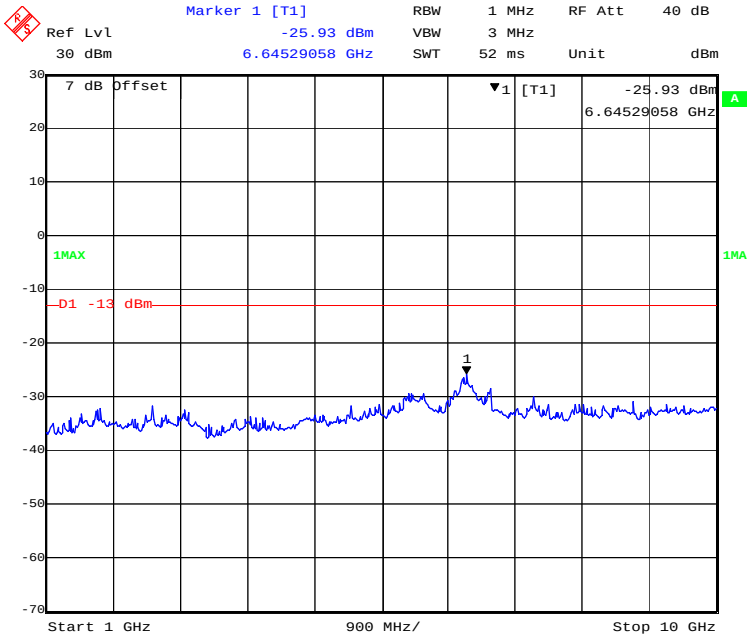
Date: 16.SEP.2020 16:11:32

30 MHz - 1 GHz (10 MHz, 16-QAM, High Channel)



Date: 16.SEP.2020 16:16:20

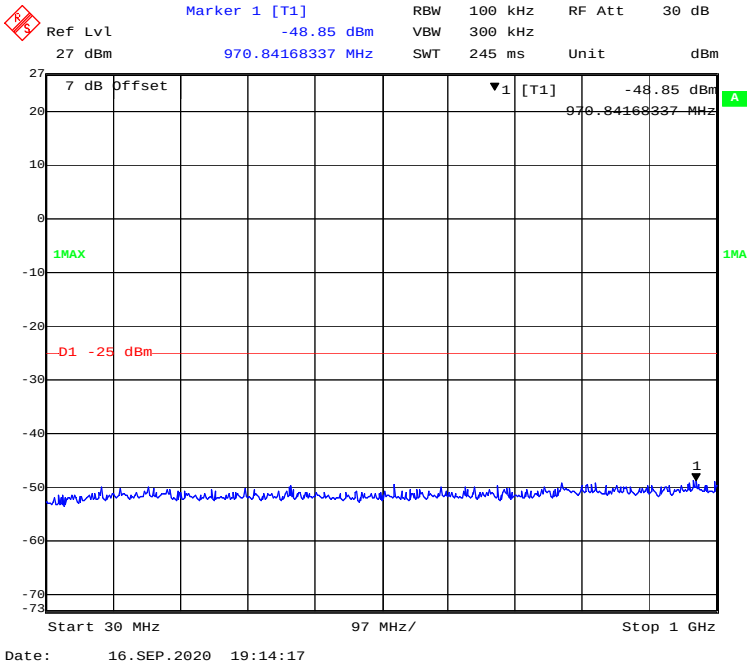
1 GHz – 10 GHz (10 MHz, 16-QAM, High Channel)



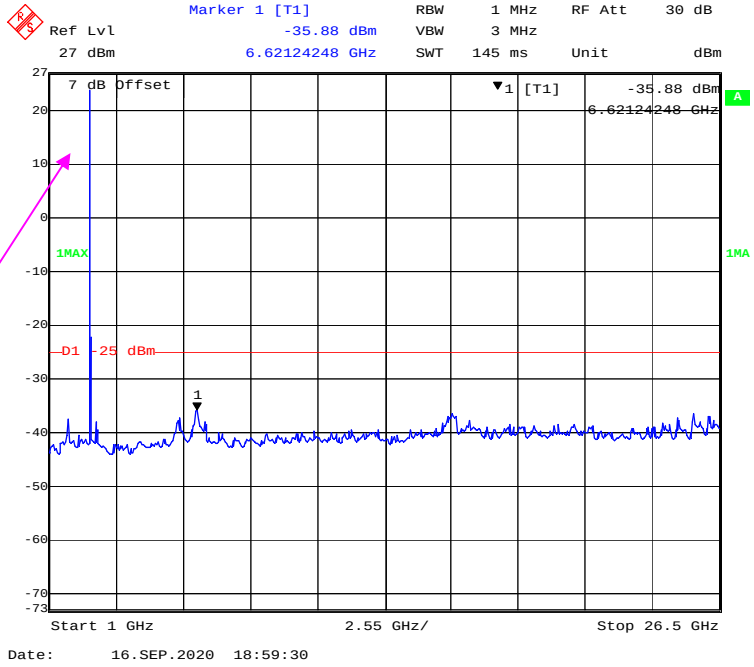
Date: 16.SEP.2020 16:11:55

LTE Band 41:

30 MHz - 1 GHz (5 MHz, QPSK, Low Channel)

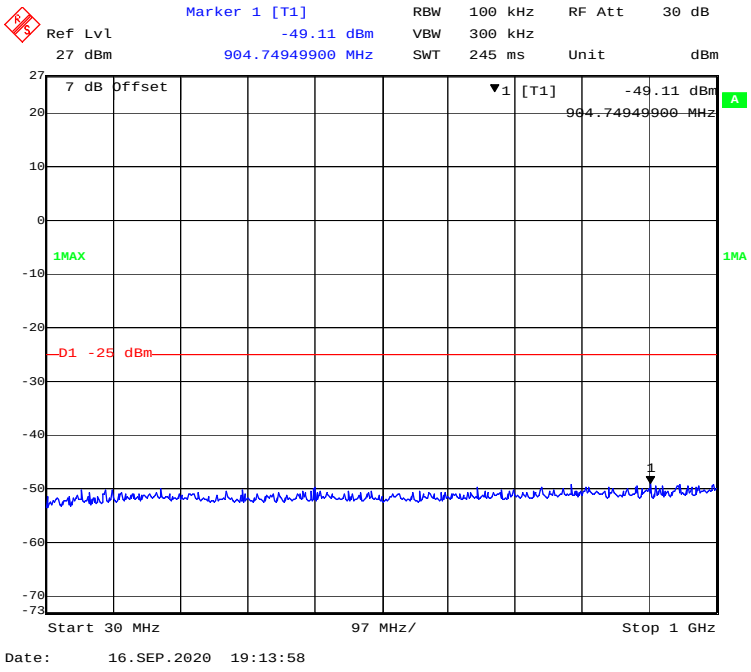


1 GHz – 26.5 GHz (5 MHz, QPSK, Low Channel)

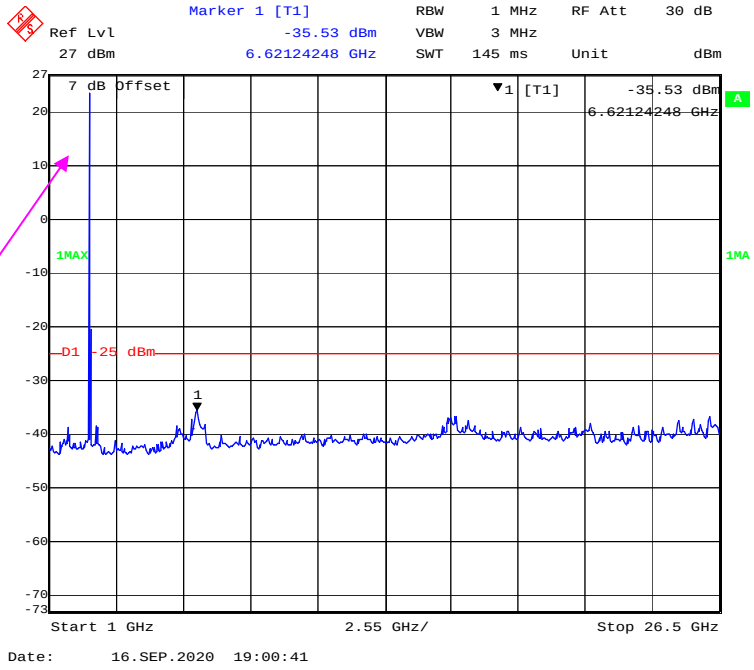


Fundamental

30 MHz - 1 GHz (5 MHz, 16-QAM, Low Channel)

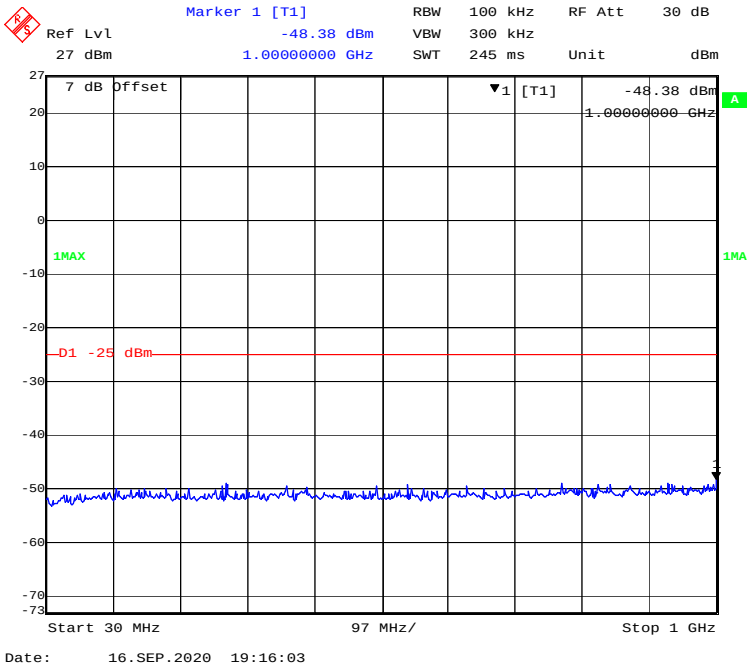


1 GHz –26.5 GHz (5 MHz, 16-QAM, Low Channel)

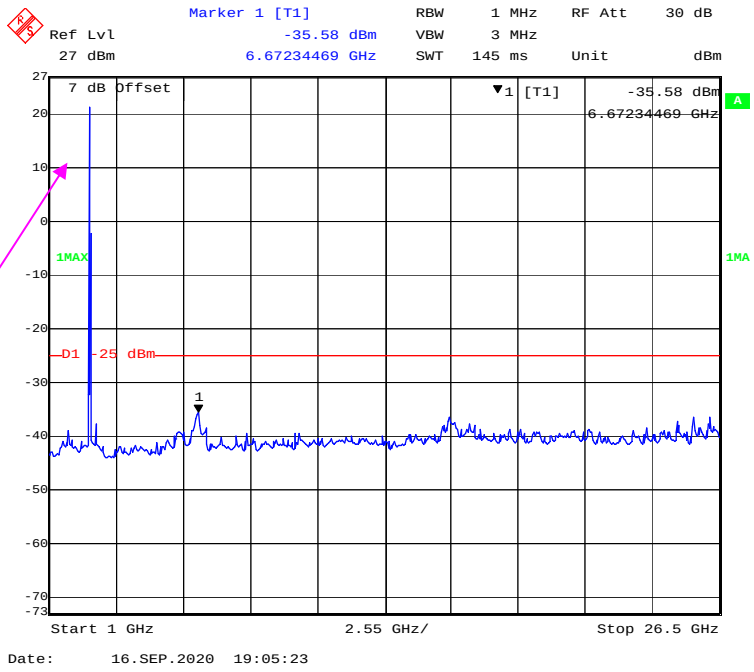


Fundamental

30 MHz - 1 GHz (10 MHz, QPSK, Low Channel)

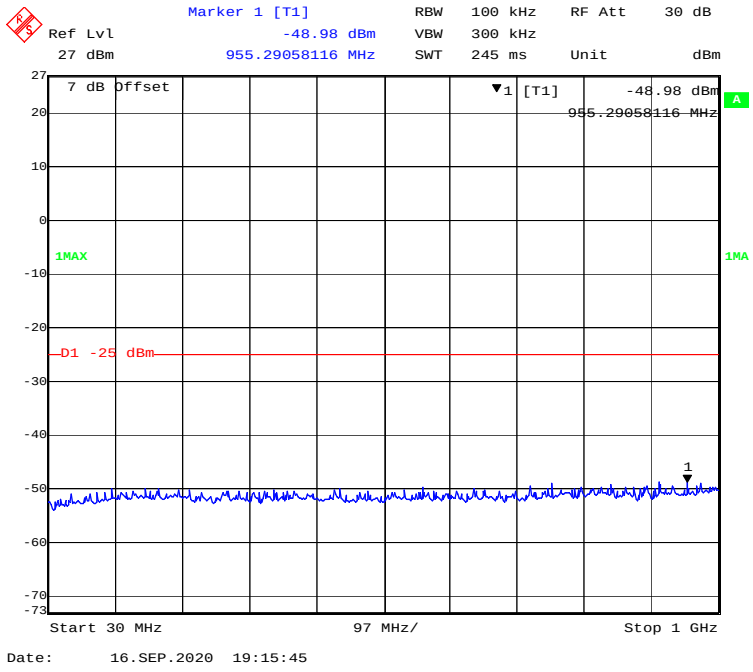


1 GHz –26.5 GHz (10 MHz, QPSK, Low Channel)

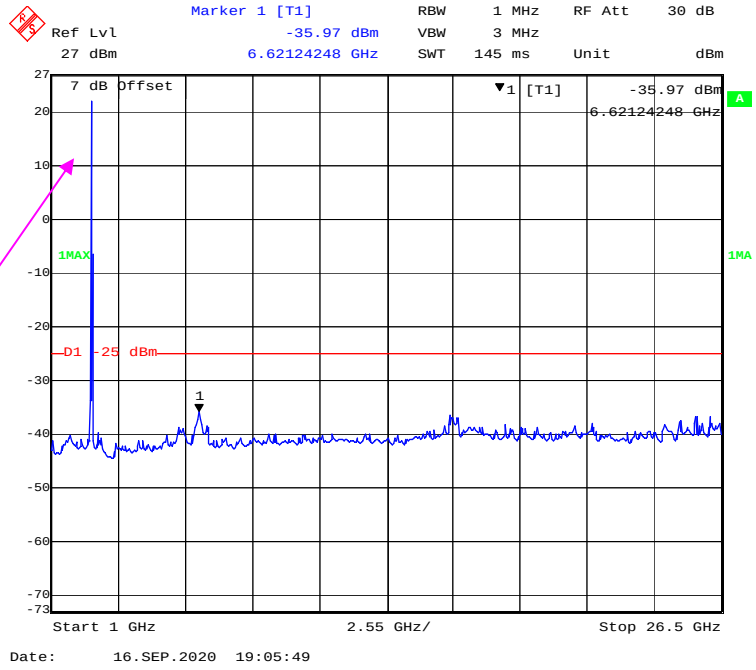


Fundamental

30 MHz - 1 GHz (10 MHz, 16-QAM, Low Channel)

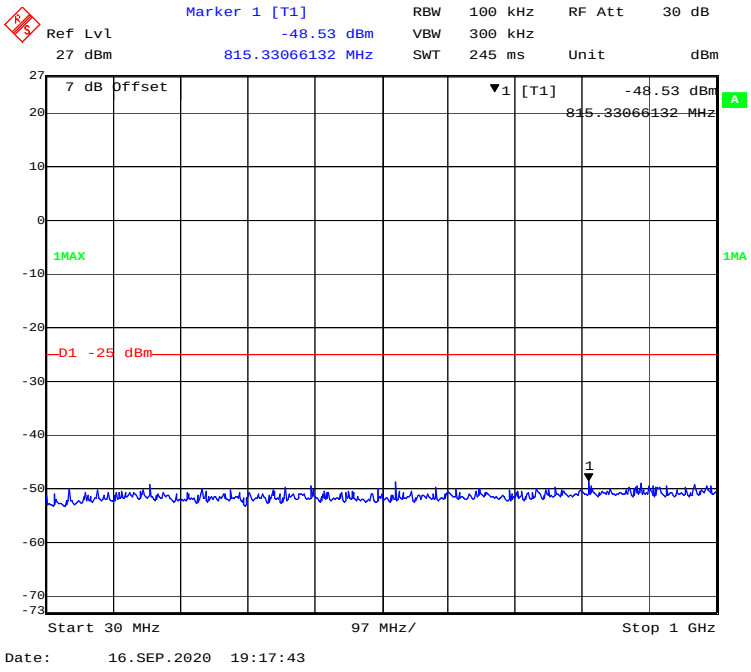


1 GHz –26.5 GHz (10 MHz, 16-QAM, Low Channel)

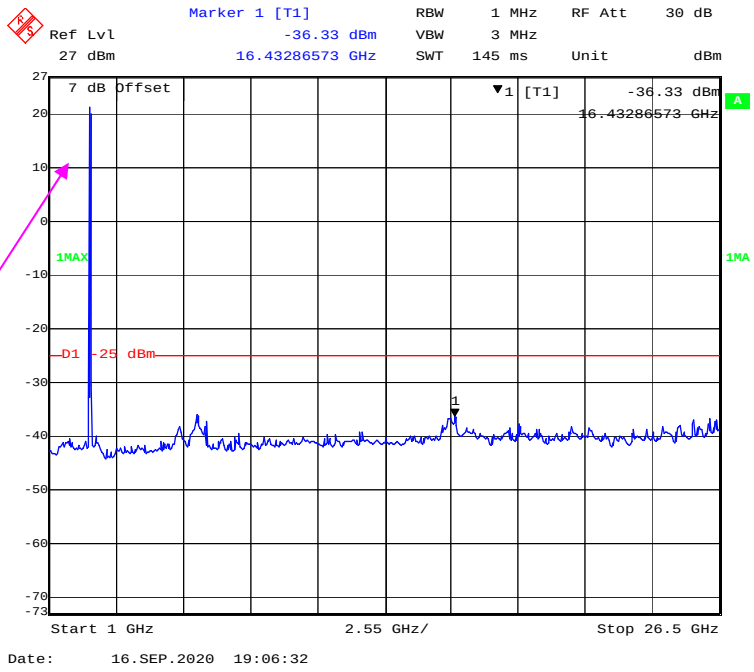


Fundamental

30 MHz - 1 GHz (15 MHz, QPSK, Low Channel)

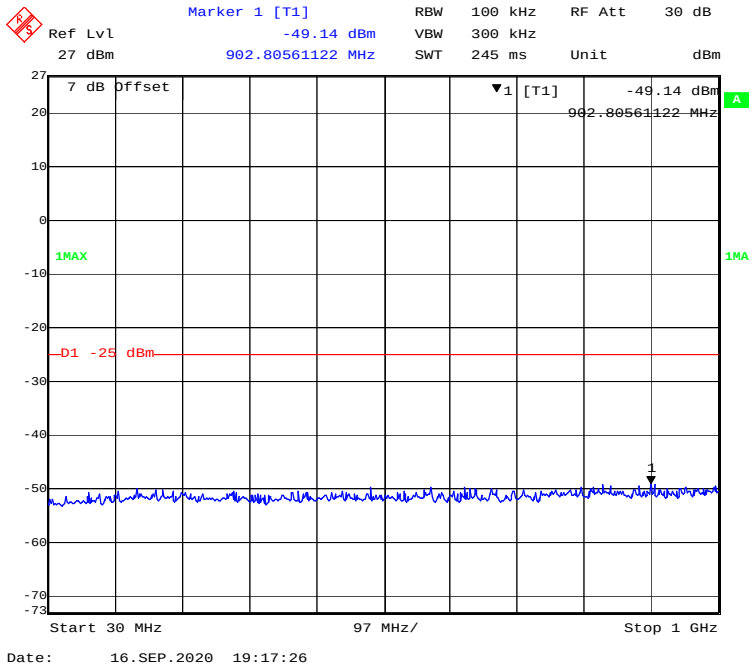


1 GHz –26.5 GHz (15 MHz, QPSK, Low Channel)

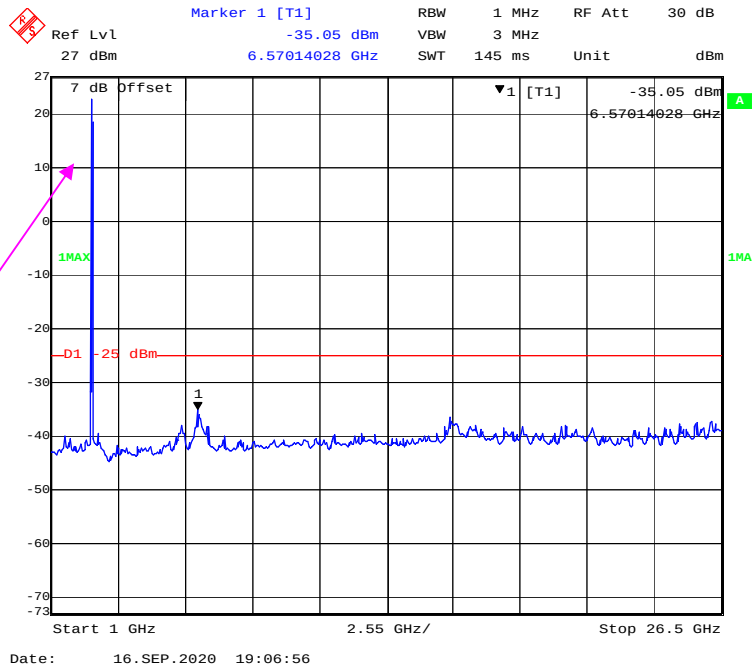


Fundamental

30 MHz - 1 GHz (15 MHz, 16-QAM, Low Channel)

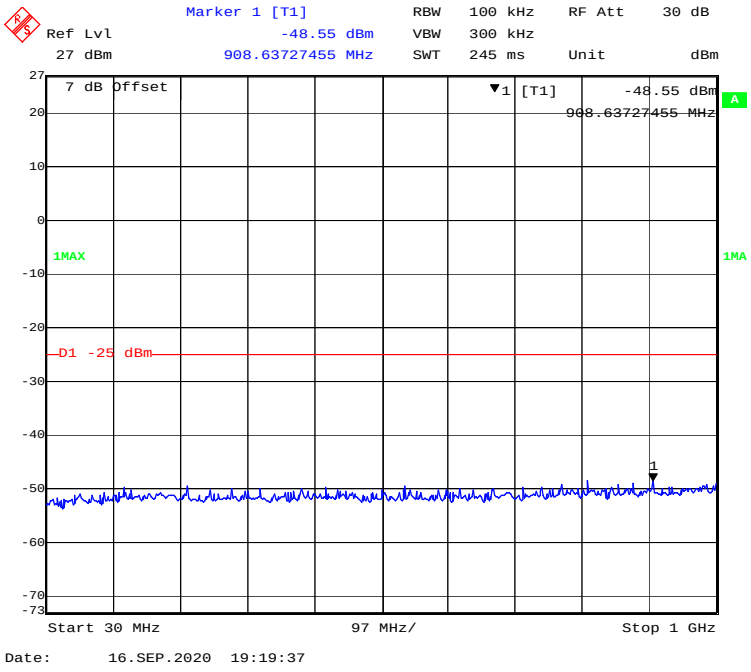


1 GHz –26.5 GHz (15 MHz, 16-QAM, Low Channel)

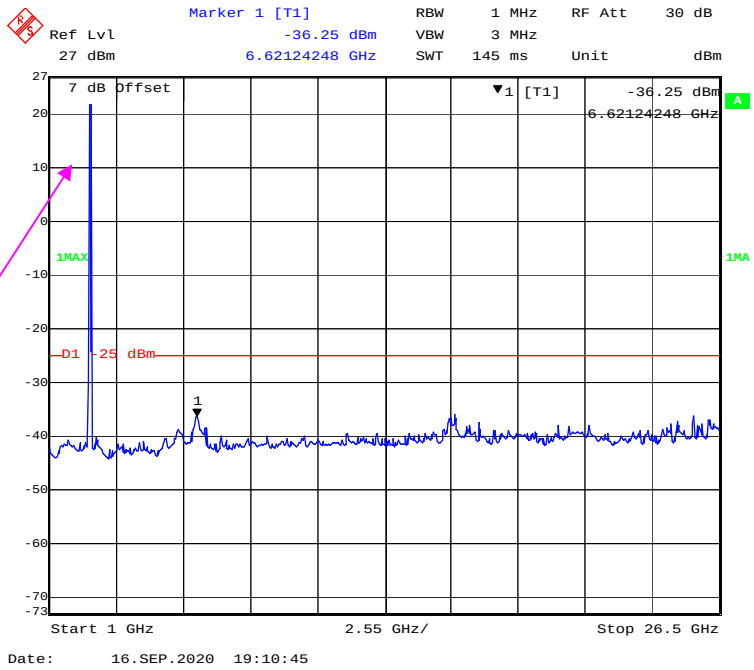


Fundamental

30 MHz - 1 GHz (20 MHz, QPSK, Low Channel)

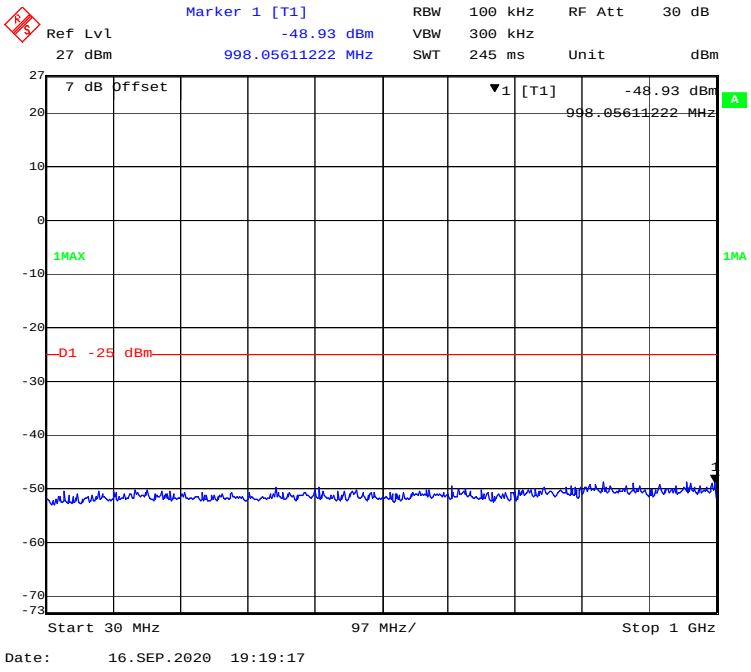


1 GHz –26.5 GHz (20 MHz, QPSK, Low Channel)

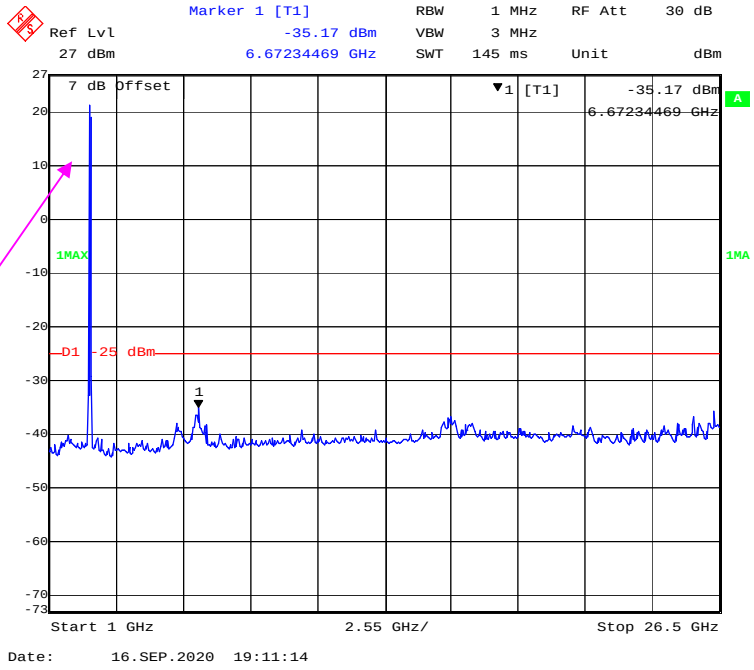


Fundamental

30 MHz - 1 GHz (20 MHz, 16-QAM, Low Channel)

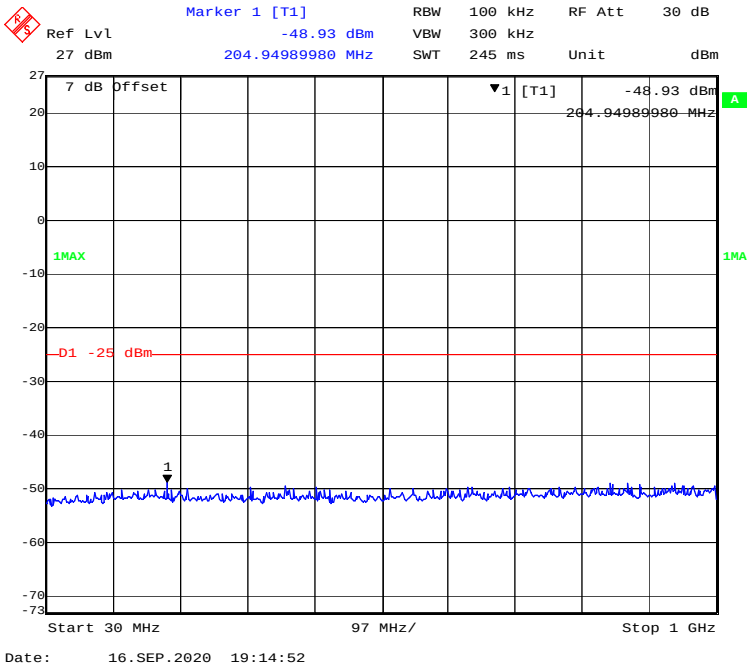


1 GHz –26.5 GHz (20 MHz, 16-QAM, Low Channel)

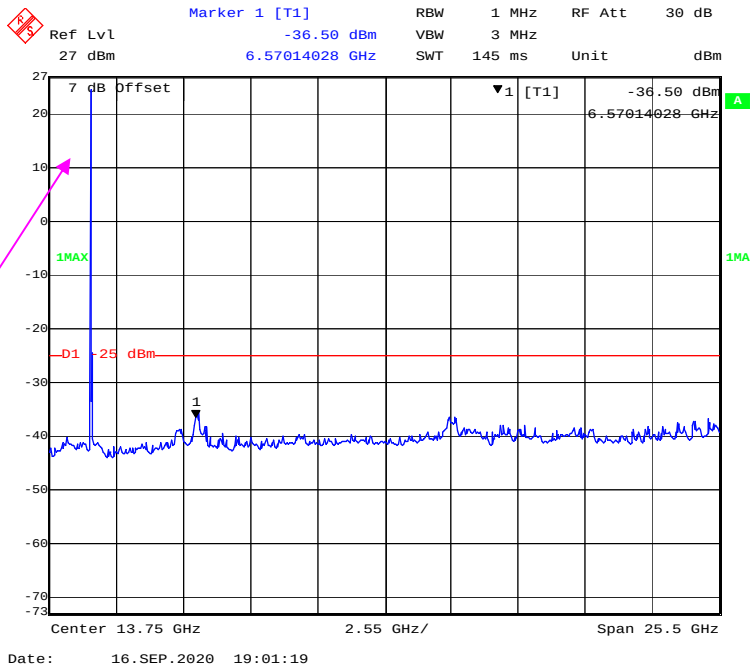


Fundamental

30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)

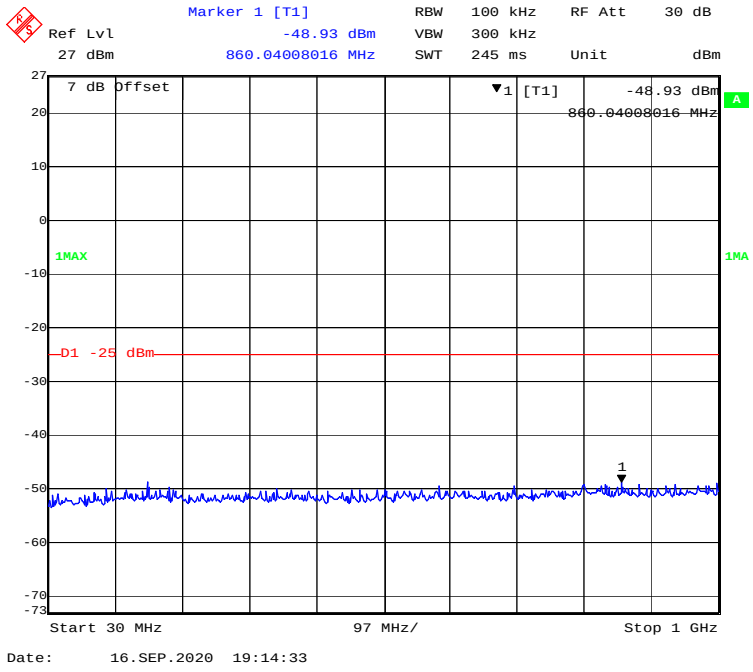


1 GHz –26.5 GHz (5 MHz, QPSK, Middle Channel)

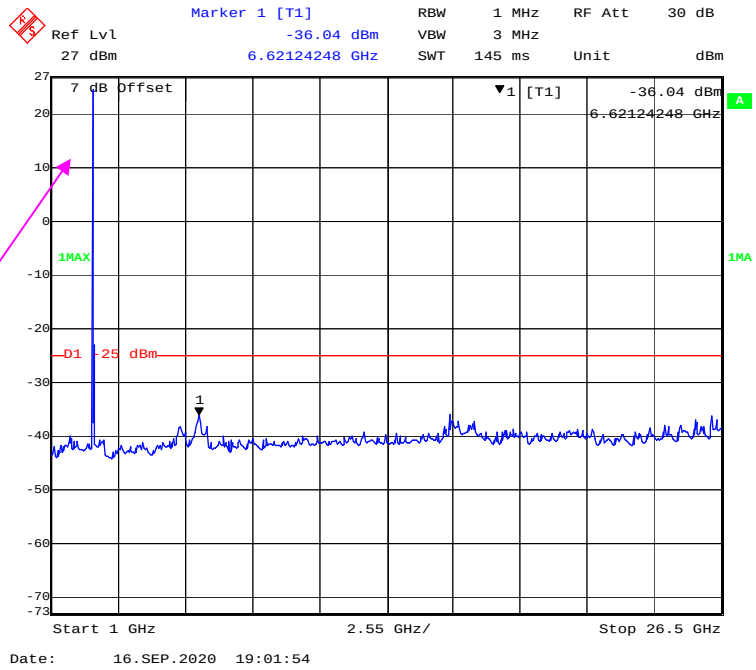


Fundamental

30 MHz - 1 GHz (5 MHz, 16-QAM, Middle Channel)

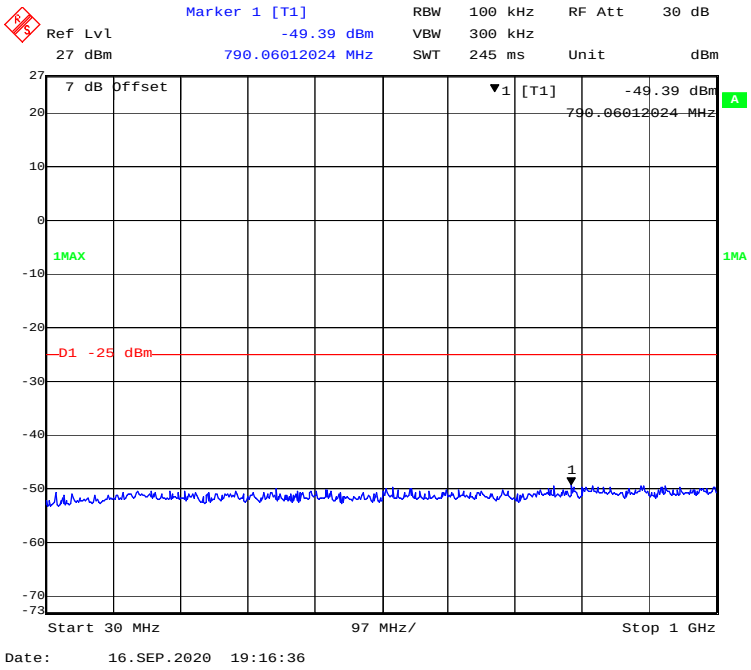


1 GHz –26.5 GHz (5 MHz, 16-QAM, Middle Channel)

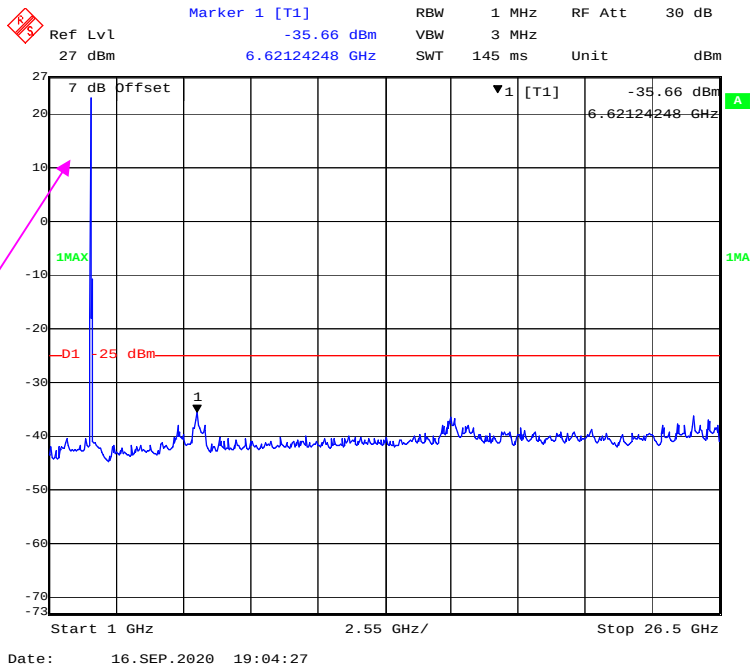


Fundamental

30 MHz - 1 GHz (10 MHz, QPSK, Middle Channel)

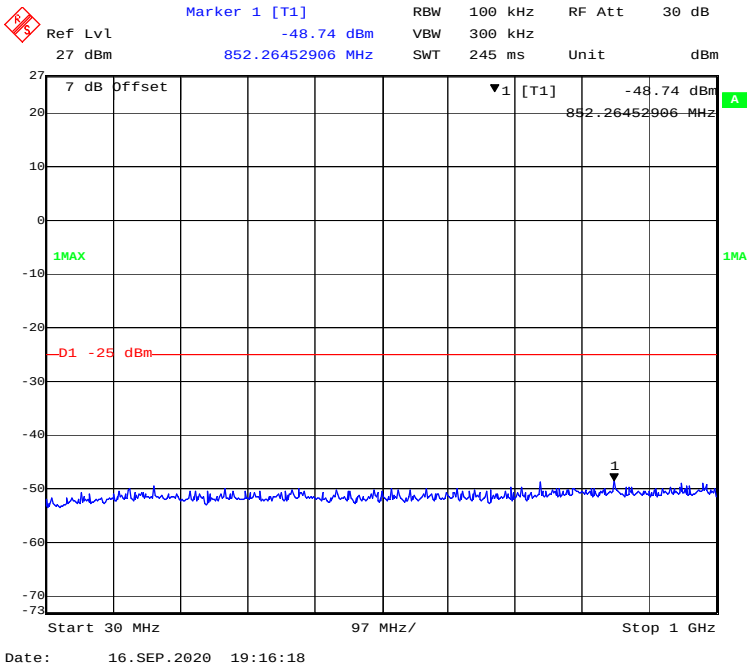


1 GHz –26.5 GHz (10 MHz, QPSK, Middle Channel)

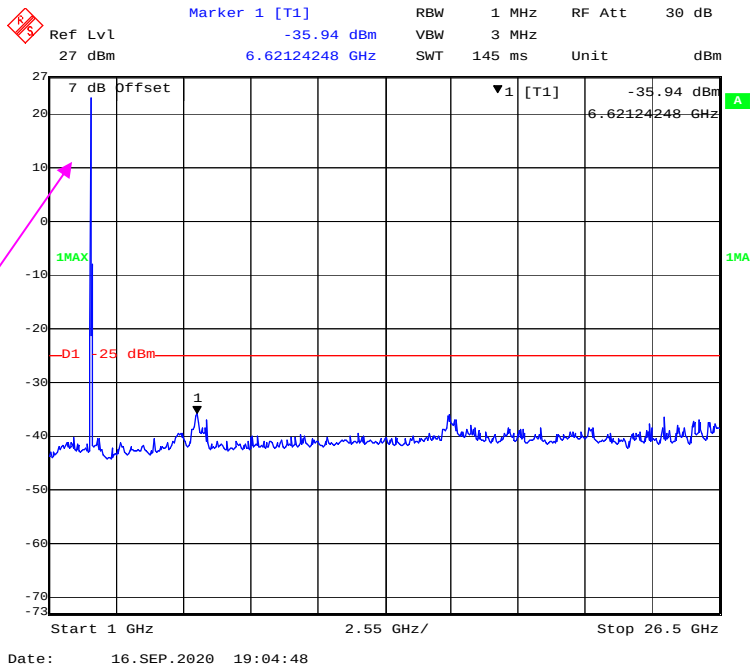


Fundamental

30 MHz - 1 GHz (10 MHz, 16-QAM, Middle Channel)

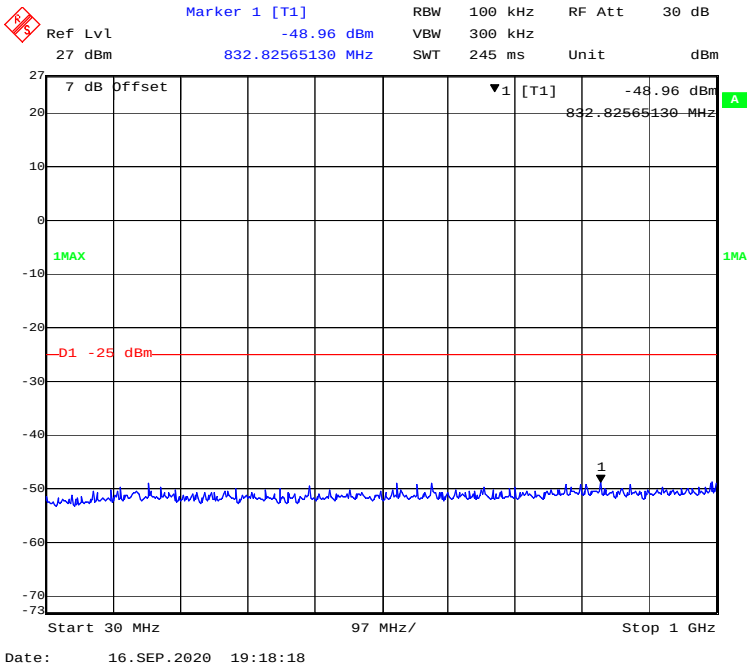


1 GHz –26.5 GHz (10 MHz, 16-QAM, Middle Channel)

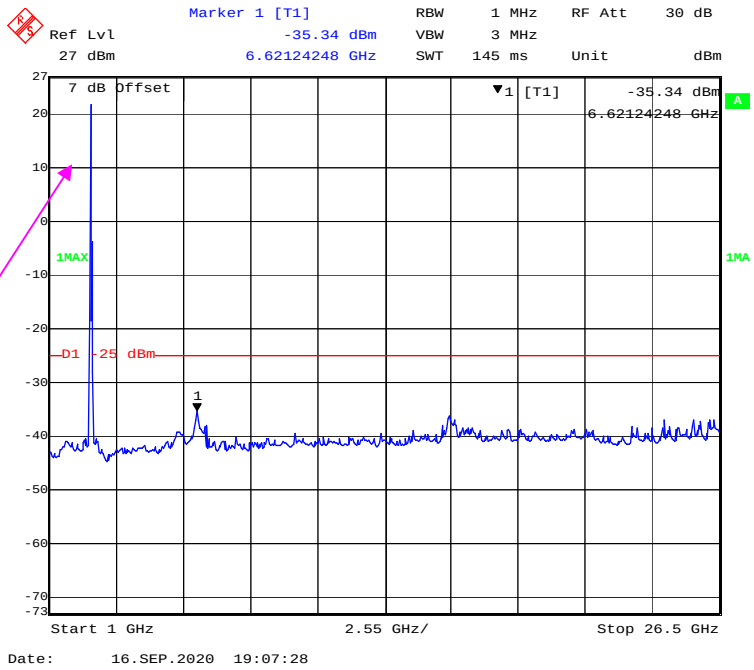


Fundamental

30 MHz - 1 GHz (15 MHz, QPSK, Middle Channel)

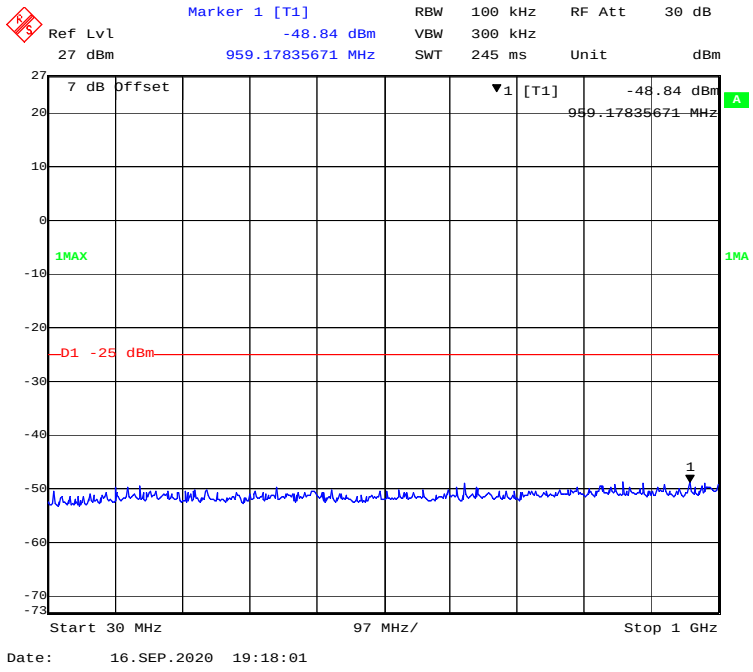


1 GHz –26.5 GHz (15 MHz, QPSK, Middle Channel)

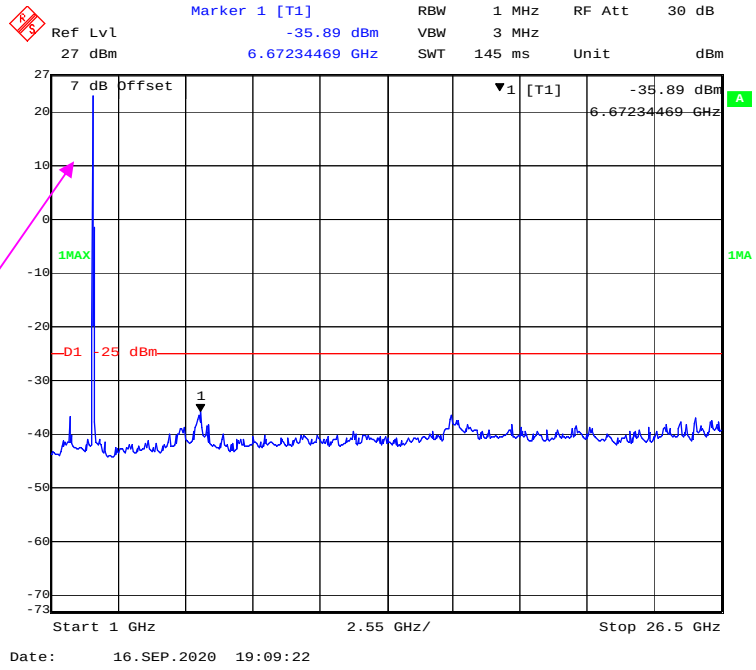


Fundamental

30 MHz - 1 GHz (15 MHz, 16-QAM, Middle Channel)

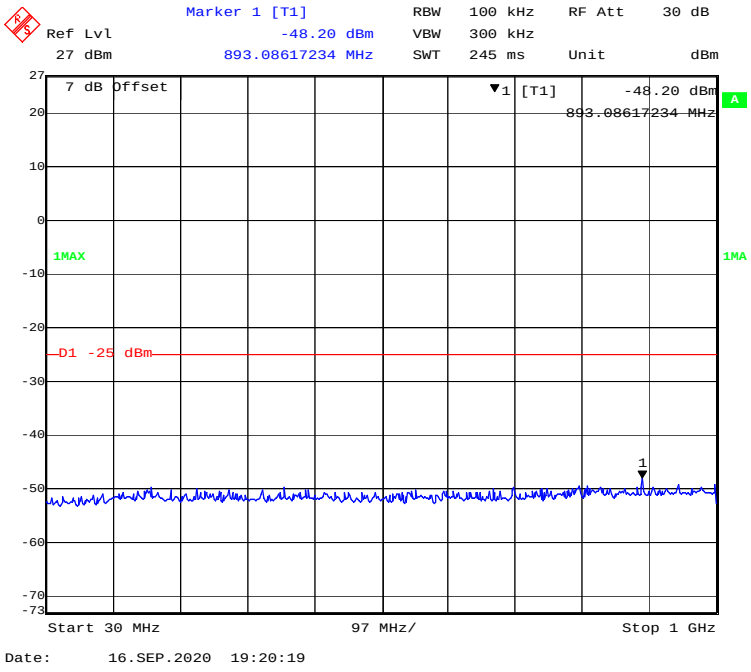


1 GHz –26.5 GHz (15 MHz, 16-QAM, Middle Channel)

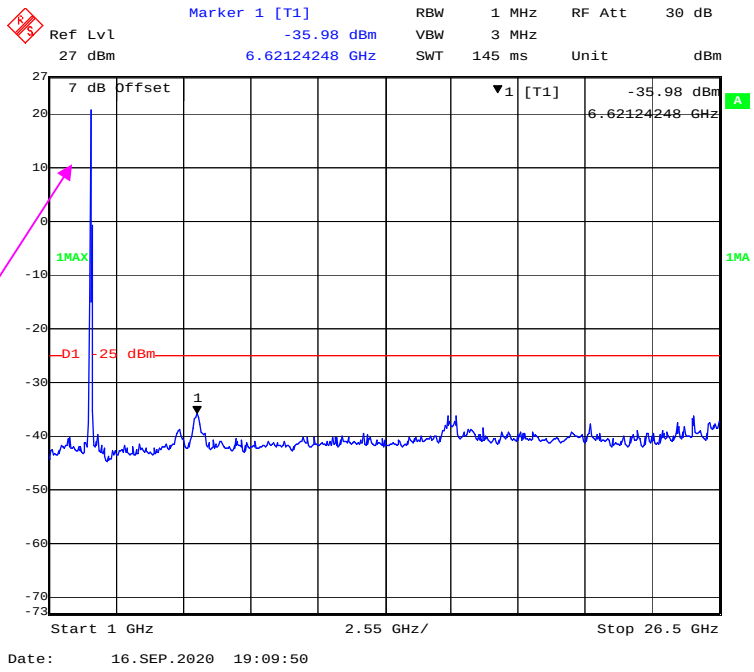


Fundamental

30 MHz - 1 GHz (20 MHz, QPSK, Middle Channel)

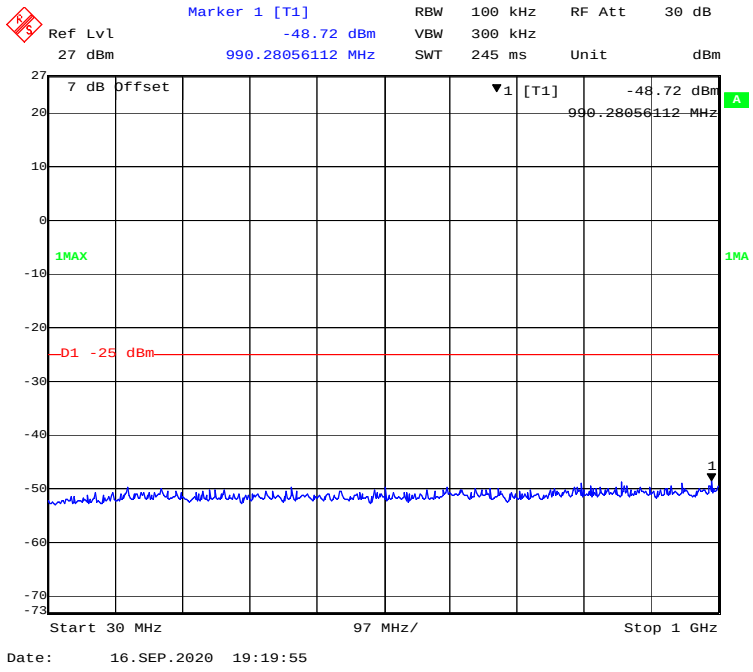


1 GHz –26.5 GHz (20 MHz, QPSK, Middle Channel)

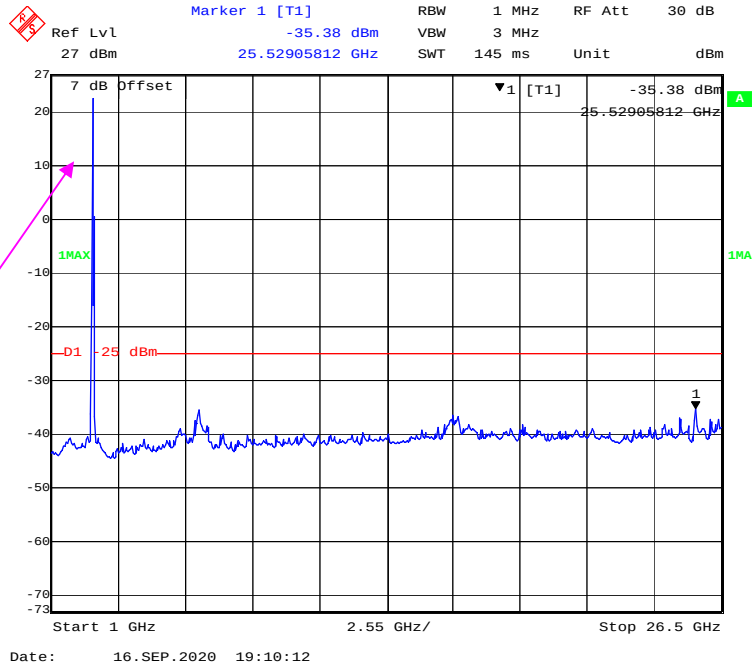


Fundamental

30 MHz - 1 GHz (20 MHz, 16-QAM, Middle Channel)

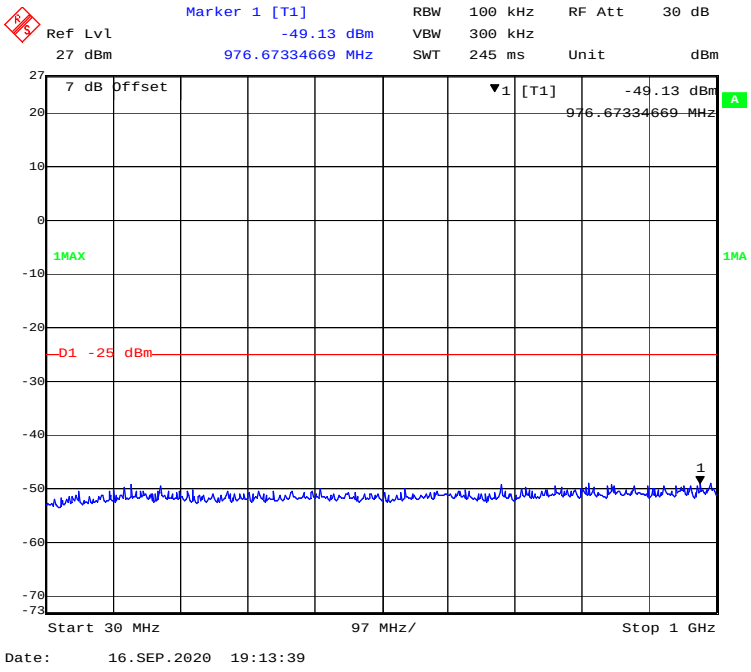


1 GHz –26.5 GHz (20 MHz, 16-QAM, Middle Channel)

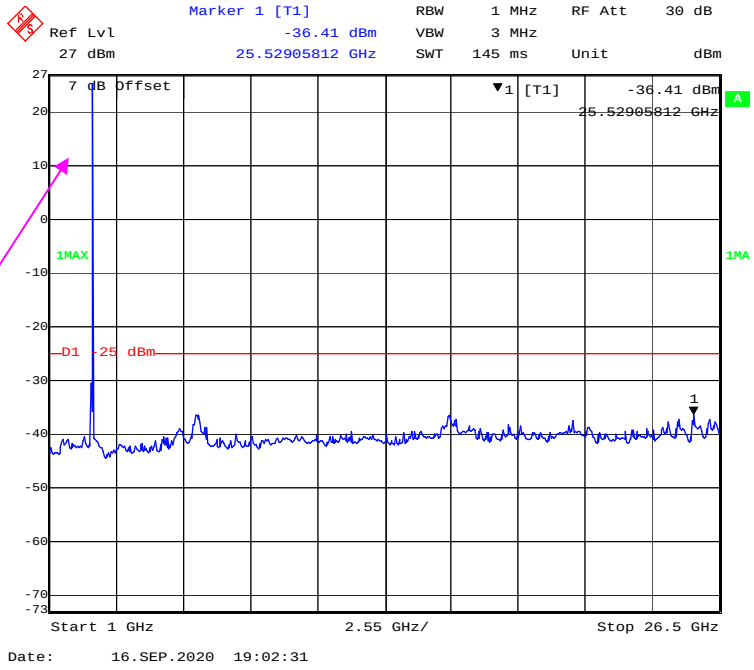


Fundamental

30 MHz - 1 GHz (5 MHz, QPSK, High Channel)

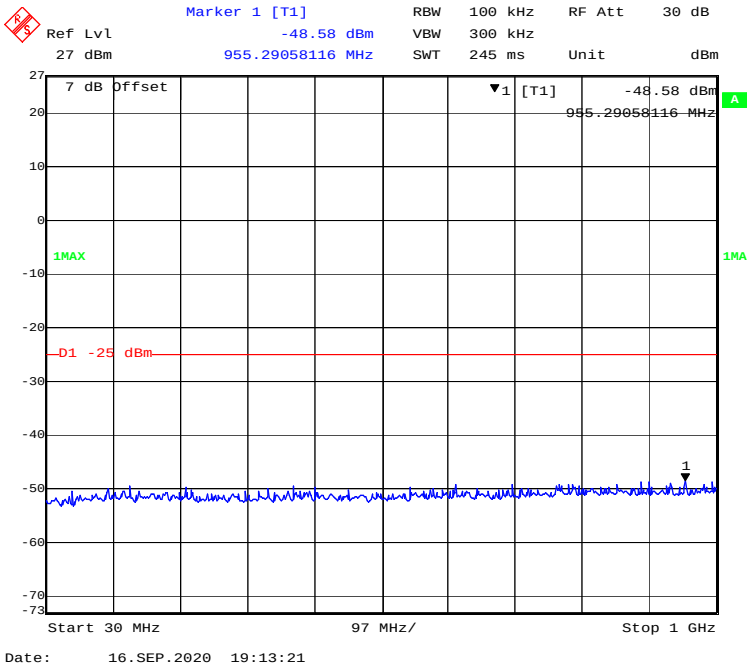


1 GHz –26.5 GHz (5 MHz, QPSK, High Channel)

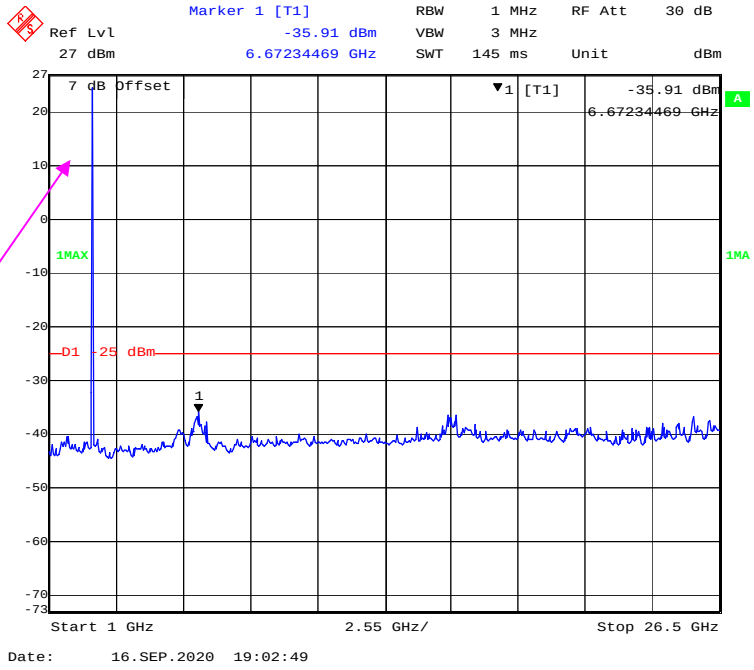


Fundamental

30 MHz - 1 GHz (5 MHz, 16-QAM, High Channel)

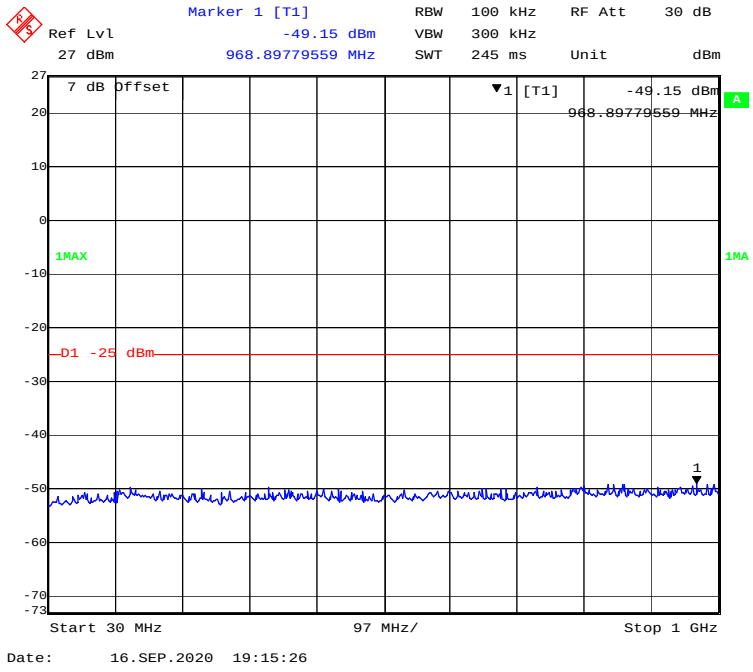


1 GHz –26.5 GHz (5 MHz, 16-QAM, High Channel)

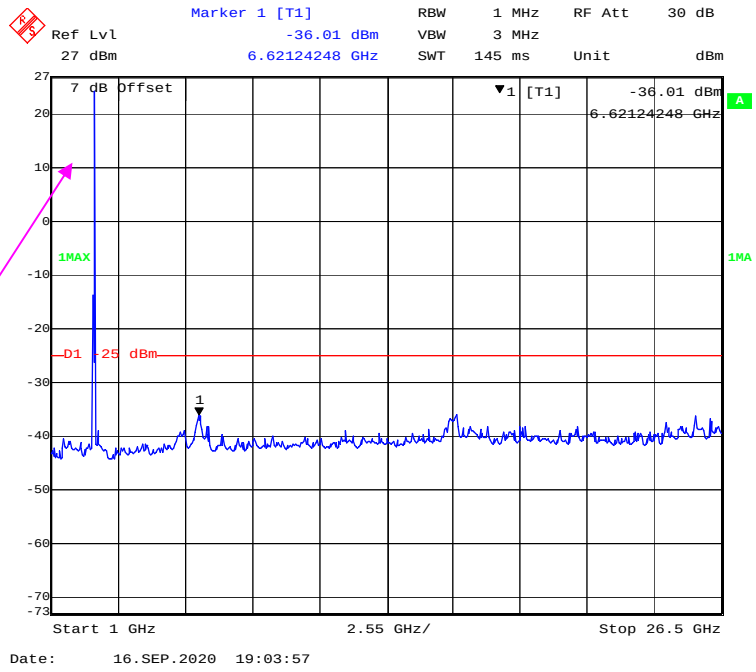


Fundamental

30 MHz - 1 GHz (10 MHz, QPSK, High Channel)

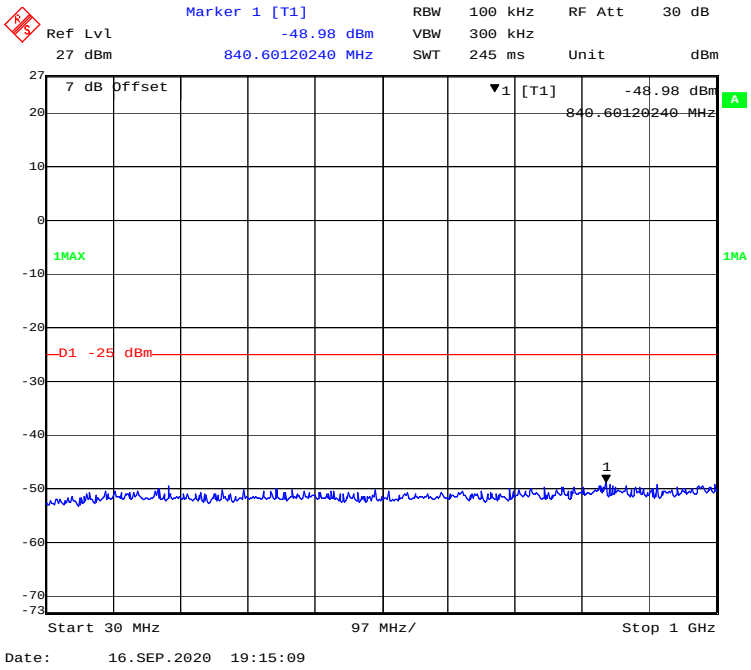


1 GHz –26.5 GHz (10 MHz, QPSK, High Channel)

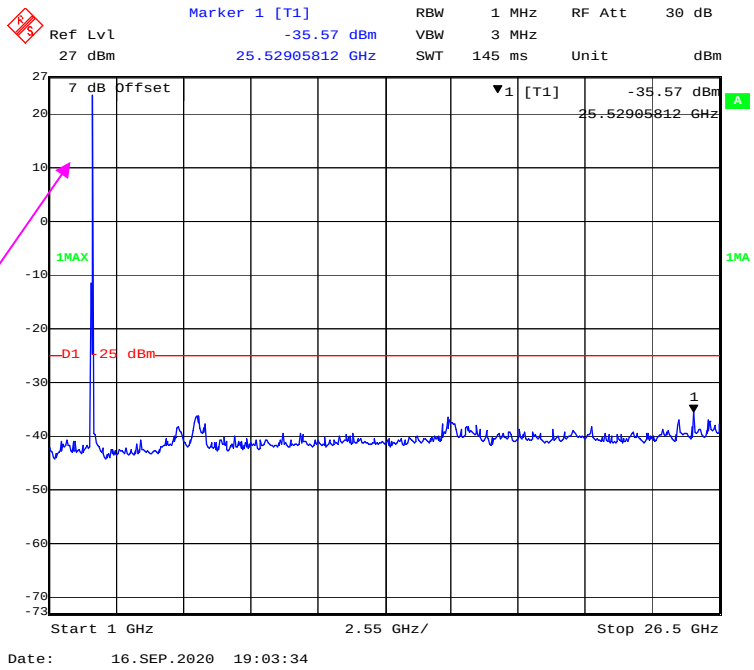


Fundamental

30 MHz - 1 GHz (10 MHz, 16-QAM, High Channel)

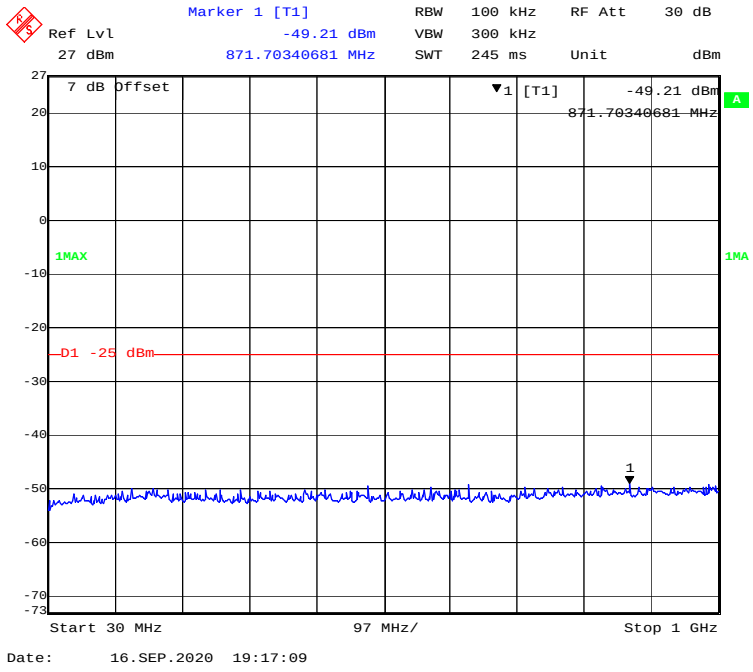


1 GHz –26.5 GHz (10 MHz, 16-QAM, High Channel)

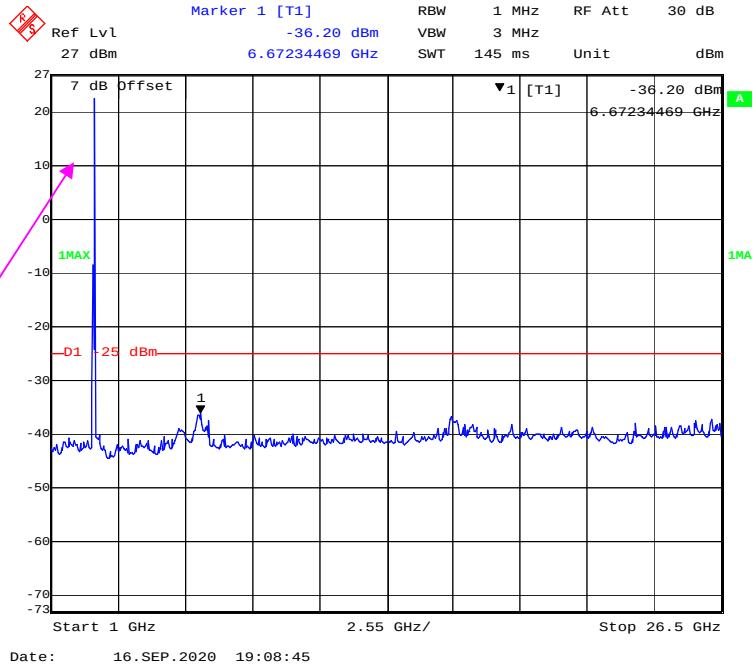


Fundamental

30 MHz - 1 GHz (15 MHz, QPSK, High Channel)

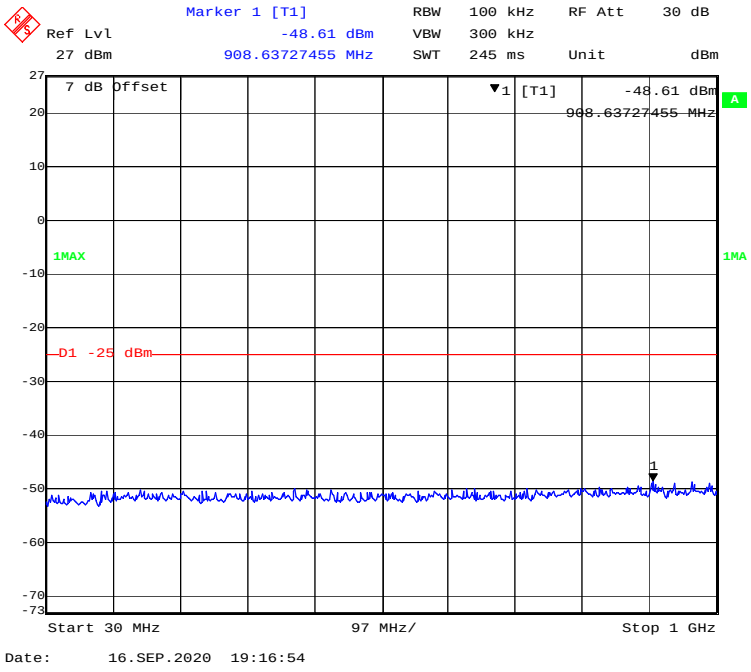


1 GHz –26.5 GHz (15 MHz, QPSK, Middle Channel)

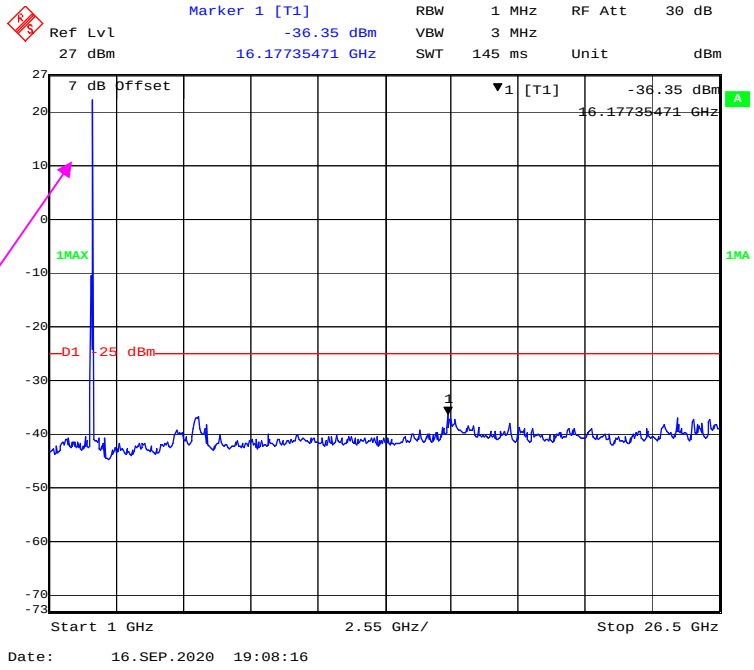


Fundamental

30 MHz - 1 GHz (15 MHz, 16-QAM, High Channel)

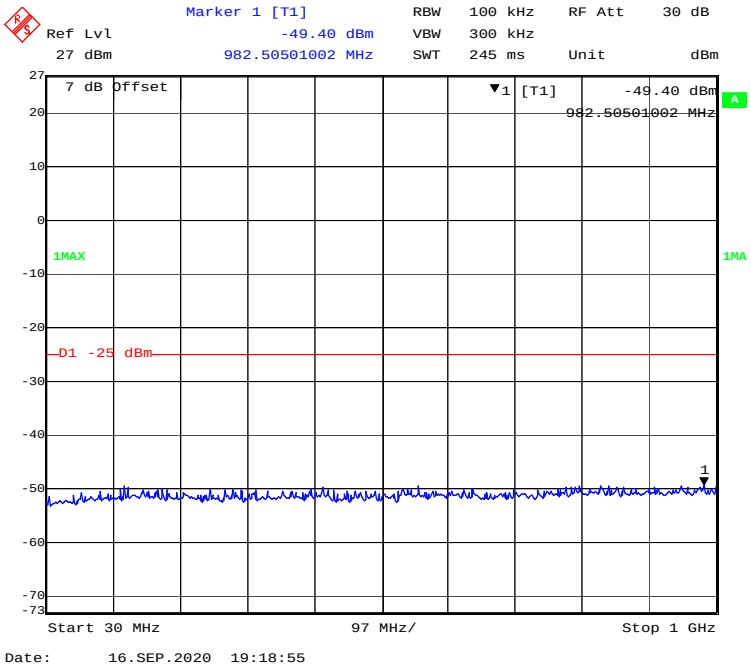


1 GHz –26.5 GHz (15 MHz, 16-QAM, High Channel)

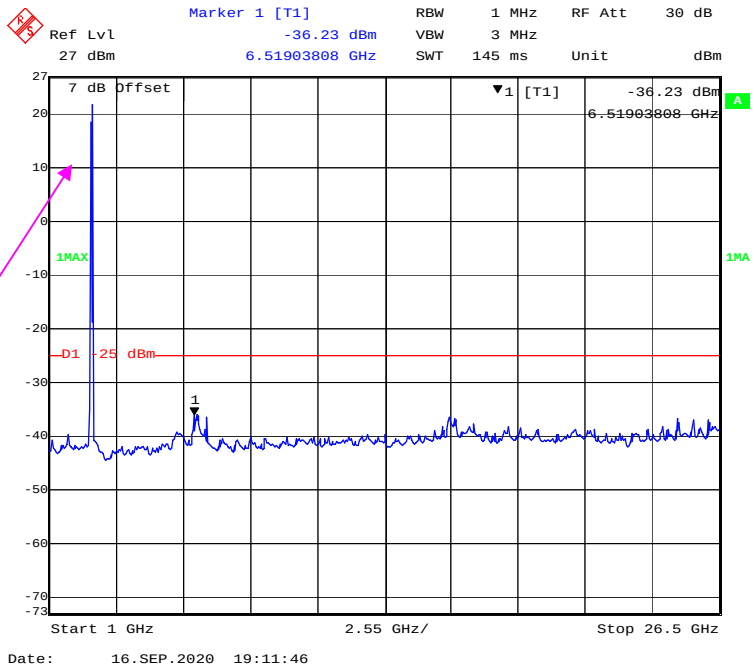


Fundamental

30 MHz - 1 GHz (20 MHz, QPSK, High Channel)

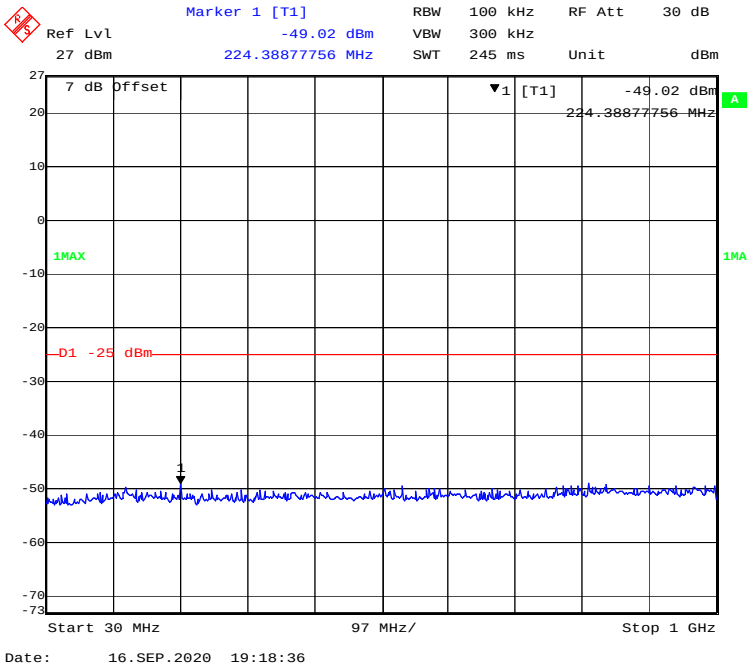


1 GHz –26.5 GHz (20 MHz, QPSK, High Channel)

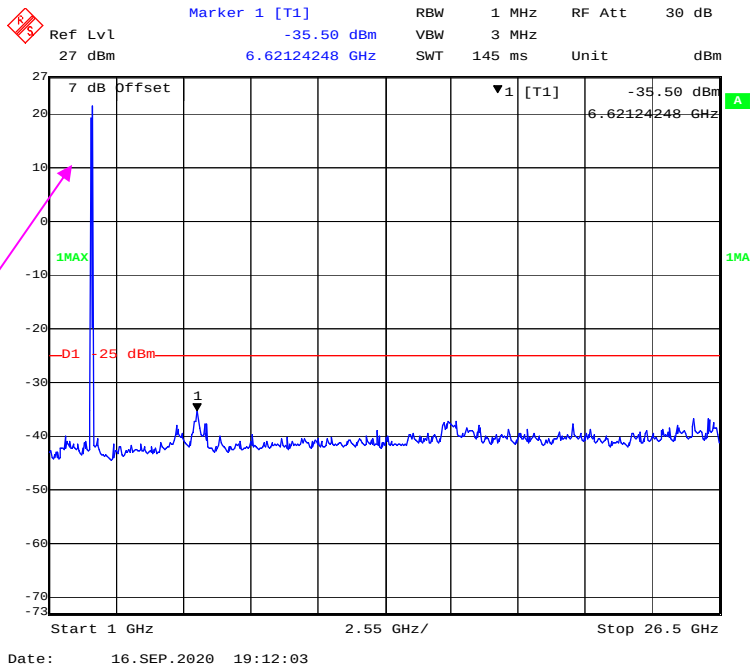


Fundamental

30 MHz - 1 GHz (20 MHz, 16-QAM, High Channel)



1 GHz –26.5 GHz (20 MHz, 16-QAM, High Channel)



Fundamental

FCC § 2.1053; § 22.917 (a); § 24.238 (a); §27.53 (h) (m) - SPURIOUS RADIATED EMISSIONS

Applicable Standards

FCC § 2.1053, §22.917(a) ,§ 24.238(a) and § 27.53(m)

22.917 (a) Out of band emissions. 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.

24.238 (a) Out of band emissions. 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.

27.53(h) (m), 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 that 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 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 (TX pwr in Watts/0.001) – the absolute level

Spurious attenuation limit in dB = 43 + 10 Log_{10} (power out in Watts)

Test Data

Environmental Conditions

Temperature:	23.1-24.9 ℃
Relative Humidity:	48-52 %
ATM Pressure:	101.3-101.9 kPa

The testing was performed by Jack Jiao from 2020-10-17 to 2020-12-10.

Test mode: Transmitting

30 MHz ~ 10 GHz:

GSM 850 Band

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
GPRS Mode, Low channel										
296.99	55.76	195	210	H	-51.11	0.46	-2.16	-53.73	-13	40.73
296.99	55.11	56	158	V	-51.76	0.46	-2.16	-54.38	-13	41.38
1648.40	50.21	78	125	H	-63.14	0.84	8.44	-55.54	-13	42.54
1648.40	50.00	96	139	V	-63.35	0.84	8.44	-55.75	-13	42.75
GPRS Mode, Middle channel										
296.99	55.94	7	100	H	-50.93	0.46	-2.16	-53.55	-13	40.55
296.99	55.05	288	150	V	-51.82	0.46	-2.16	-54.44	-13	41.44
1673.20	55.70	312	150	H	-47.69	0.84	8.48	-40.05	-13	27.05
1673.20	55.56	312	150	V	-47.83	0.84	8.48	-40.19	-13	27.19
GPRS Mode, High channel										
296.99	55.17	195	210	H	-51.70	0.46	-2.16	-54.32	-13	41.32
296.99	55.11	56	158	V	-51.76	0.46	-2.16	-54.38	-13	41.38
1697.60	50.28	78	125	H	-62.73	0.84	8.52	-55.05	-13	42.05
1697.60	49.46	96	139	V	-63.55	0.84	8.52	-55.87	-13	42.87

WCDMA Band V

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
WCDMA Mode, Low channel										
335.30	55.93	341	150	H	-52.15	0.48	-1.87	-54.50	-13	41.50
335.30	55.63	25	150	V	-52.45	0.48	-1.87	-54.80	-13	41.80
1652.80	36.40	148	100	H	-71.76	0.84	8.44	-64.16	-13	51.16
1652.80	36.51	280	100	V	-73.42	0.84	8.44	-65.82	-13	52.82
WCDMA Mode, Middle channel										
335.30	55.16	320	150	H	-52.92	0.48	-1.87	-55.27	-13	42.27
335.30	55.55	133	150	V	-52.53	0.48	-1.87	-54.88	-13	41.88
1673.20	36.23	83	100	H	-72.76	0.84	8.48	-65.12	-13	52.12
1673.20	36.01	278	100	V	-73.10	0.84	8.48	-65.46	-13	52.46
WCDMA Mode, High channel										
335.30	55.83	82	150	H	-52.25	0.48	-1.87	-54.60	-13	41.60
335.30	55.29	206	150	V	-52.79	0.48	-1.87	-55.14	-13	42.14
1693.20	36.50	108	100	H	-73.86	0.84	8.51	-66.19	-13	53.19
1693.20	36.56	356	100	V	-73.50	0.84	8.51	-65.83	-13	52.83

CDMA850 Band

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
EVDO Mode, Low channel										
711.18	59.64	281	150	H	-40.93	0.62	-1.69	-43.24	-13	30.24
711.18	59.93	9	150	V	-40.64	0.62	-1.69	-42.95	-13	29.95
1649.40	39.40	55	200	H	-65.03	0.93	9.83	-56.13	-13	43.13
1649.40	39.69	298	100	V	-64.76	0.93	9.83	-55.86	-13	42.86
EVDO Mode, Middle channel										
711.18	59.79	51	150	H	-40.78	0.62	-1.69	-43.09	-13	30.09
711.18	59.18	44	150	V	-41.39	0.62	-1.69	-43.70	-13	30.70
1673.04	39.04	183	200	H	-65.52	0.93	9.87	-56.58	-13	43.58
1673.04	39.35	271	100	V	-65.43	0.93	9.87	-56.49	-13	43.49
EVDO Mode, High channel										
711.18	59.71	311	150	H	-40.86	0.62	-1.69	-43.17	-13	30.17
711.18	59.11	2	150	V	-41.46	0.62	-1.69	-43.77	-13	30.77
1696.62	39.99	38	200	H	-65.80	0.93	9.90	-56.83	-13	43.83
1696.62	39.57	155	100	V	-66.16	0.93	9.90	-57.19	-13	44.19

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
1xRTT Mode, Low channel										
711.18	59.24	128	150	H	-41.33	0.62	-1.69	-43.64	-13	30.64
711.18	59.01	94	150	V	-41.56	0.62	-1.69	-43.87	-13	30.87
1649.40	39.54	115	200	H	-65.03	0.93	9.83	-56.13	-13	43.13
1649.40	39.47	284	100	V	-64.76	0.93	9.83	-55.86	-13	42.86
1xRTT Mode, Middle channel										
711.18	59.07	139	150	H	-41.50	0.62	-1.69	-43.81	-13	30.81
711.18	59.53	98	150	V	-41.04	0.62	-1.69	-43.35	-13	30.35
1673.04	39.02	328	200	H	-65.52	0.93	9.87	-56.58	-13	43.58
1673.04	39.33	268	100	V	-65.43	0.93	9.87	-56.49	-13	43.49
1xRTT Mode, High channel										
711.18	59.37	291	150	H	-41.20	0.62	-1.69	-43.51	-13	30.51
711.18	59.17	325	150	V	-41.40	0.62	-1.69	-43.71	-13	30.71
1696.62	39.89	139	200	H	-65.80	0.93	9.90	-56.83	-13	43.83
1696.62	39.26	268	100	V	-66.16	0.93	9.90	-57.19	-13	44.19

30 MHz ~ 20 GHz:

PCS 1900 Band

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
GPRS Mode, Low channel										
296.99	55.70	55	145	H	-51.17	0.46	-2.16	-53.79	-13	40.79
296.99	55.63	302	156	V	-51.24	0.46	-2.16	-53.86	-13	40.86
3700.40	42.40	225	189	H	-64.57	0.95	9.78	-55.74	-13	42.74
3700.40	42.83	110	200	V	-64.14	0.95	9.78	-55.31	-13	42.31
GPRS Mode, Middle channel										
296.99	55.25	103	100	H	-51.62	0.46	-2.16	-54.24	-13	41.24
296.99	55.74	94	100	V	-51.13	0.46	-2.16	-53.75	-13	40.75
3760.00	55.44	193	200	H	-51.34	0.95	9.74	-42.55	-13	29.55
3760.00	55.70	293	200	V	-51.40	0.95	9.74	-42.61	-13	29.61
GPRS Mode, High channel										
296.99	55.41	55	145	H	-51.46	0.46	-2.16	-54.08	-13	41.08
296.99	55.92	302	156	V	-50.95	0.46	-2.16	-53.57	-13	40.57
3819.60	42.26	225	189	H	-64.33	0.96	9.71	-55.58	-13	42.58
3819.60	41.96	110	200	V	-64.63	0.96	9.71	-55.88	-13	42.88

WCDMA Band II

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
WCDMA Mode, Low channel										
557.43	53.39	263	150	H	-51.24	0.58	-1.20	-53.02	-13	40.02
557.43	53.12	305	150	V	-51.51	0.58	-1.20	-53.29	-13	40.29
3704.80	37.76	340	200	H	-70.22	0.95	9.78	-61.39	-13	48.39
3704.80	37.17	318	100	V	-69.02	0.95	9.78	-60.19	-13	47.19
WCDMA Mode, Middle channel										
557.43	53.77	351	150	H	-50.86	0.58	-1.20	-52.64	-13	39.64
557.43	53.59	184	150	V	-51.04	0.58	-1.20	-52.82	-13	39.82
3760.00	37.68	66	200	H	-69.10	0.95	9.74	-60.31	-13	47.31
3760.00	37.22	152	100	V	-68.92	0.95	9.74	-60.13	-13	47.13
WCDMA Mode, High channel										
557.43	53.80	94	150	H	-50.83	0.58	-1.20	-52.61	-13	39.61
557.43	53.13	47	150	V	-51.50	0.58	-1.20	-53.28	-13	40.28
3815.20	37.59	341	200	H	-69.24	0.96	9.71	-60.49	-13	47.49
3815.20	37.18	229	100	V	-68.24	0.96	9.71	-59.49	-13	46.49

Note:
1) Absolute Level (dBm) = Submitted Level (dBm) - Cable loss (dB) + Antenna Gain (dBd/dBi)
2) Margin (dB) = Limit (dBm) - Absolute Level (dBm)

30 MHz ~ 10 GHz:

LTE Band 2:

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Low Channel										
296.99	54.63	219	150	H	-52.24	0.46	-2.16	-54.86	-13	41.86
296.99	55.99	91	150	V	-50.88	0.46	-2.16	-53.50	-13	40.50
3701.40	41.18	177	200.0	H	-65.78	0.95	9.78	-56.95	-13	43.95
3701.40	40.50	203	200.0	V	-66.46	0.95	9.78	-57.63	-13	44.63
16-QAM 1.4MHz Bandwidth Low Channel										
296.99	54.08	219	150	H	-52.79	0.46	-2.16	-55.41	-13	42.41
296.99	55.40	91	150	V	-51.47	0.46	-2.16	-54.09	-13	41.09
3701.40	41.39	298	200.0	H	-65.57	0.95	9.78	-56.74	-13	43.74
3701.40	41.06	218	200.0	V	-65.90	0.95	9.78	-57.07	-13	44.07

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Middle Channel										
296.99	54.99	219	150	H	-51.88	0.46	-2.16	-54.50	-13	41.50
296.99	55.21	91	150	V	-51.66	0.46	-2.16	-54.28	-13	41.28
3760.00	32.26	201	200.0	H	-65.72	0.95	9.74	-56.93	-13	43.93
3760.00	31.80	120	200.0	V	-66.18	0.95	9.74	-57.39	-13	44.39
16-QAM 1.4MHz Bandwidth Middle Channel										
296.99	54.62	219	150	H	-52.25	0.46	-2.16	-54.87	-13	41.87
296.99	55.96	91	150	V	-50.91	0.46	-2.16	-53.53	-13	40.53
3760.00	32.72	200	200.0	H	-65.26	0.95	9.74	-56.47	-13	43.47
3760.00	31.33	278	200.0	V	-66.65	0.95	9.74	-57.86	-13	44.86

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth High Channel										
296.99	54.55	219	150	H	-52.32	0.46	-2.16	-54.94	-13	41.94
296.99	55.70	91	150	V	-51.17	0.46	-2.16	-53.79	-13	40.79
3818.60	41.15	205	200.0	H	-65.45	0.96	9.71	-56.70	-13	43.70
3818.60	40.03	136	200.0	V	-66.57	0.96	9.71	-57.82	-13	44.82
16-QAM 1.4MHz Bandwidth High Channel										
296.99	54.61	219	150	H	-52.26	0.46	-2.16	-54.88	-13	41.88
296.99	55.95	91	150	V	-50.92	0.46	-2.16	-53.54	-13	40.54
3818.60	41.58	268	200.0	H	-65.02	0.96	9.71	-56.27	-13	43.27
3818.60	39.95	140	200.0	V	-66.65	0.96	9.71	-57.90	-13	44.90

30 MHz ~ 20 GHz:

LTE Band 4:

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Low Channel										
296.99	54.47	219	150	H	-52.40	0.46	-2.16	-55.02	-13	42.02
296.99	55.64	91	150	V	-51.23	0.46	-2.16	-53.85	-13	40.85
3421.40	42.46	350	200.0	H	-65.48	0.93	9.82	-56.59	-13	43.59
3421.40	41.28	163	200.0	V	-66.66	0.93	9.82	-57.77	-13	44.77
16-QAM 1.4MHz Bandwidth Low Channel										
296.99	54.46	219	200	H	-52.41	0.46	-2.16	-55.03	-13	42.03
296.99	55.99	91	200	V	-50.88	0.46	-2.16	-53.50	-13	40.50
3421.40	42.73	51	150.0	H	-65.21	0.93	9.82	-56.32	-13	43.32
3421.40	41.80	34	150.0	V	-66.14	0.93	9.82	-57.25	-13	44.25

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Middle Channel										
296.99	54.10	219	150	H	-52.77	0.46	-2.16	-55.39	-13	42.39
296.99	55.10	91	150	V	-51.77	0.46	-2.16	-54.39	-13	41.39
3465.00	34.88	185	200.0	H	-63.93	0.93	9.87	-54.99	-13	41.99
3465.00	36.41	146	200.0	V	-62.40	0.93	9.87	-53.46	-13	40.46
16-QAM 1.4MHz Bandwidth Middle Channel										
296.99	54.68	219	200	H	-52.19	0.46	-2.16	-54.81	-13	41.81
296.99	55.71	91	200	V	-51.16	0.46	-2.16	-53.78	-13	40.78
3465.00	35.67	181	150.0	H	-63.14	0.93	9.87	-54.20	-13	41.20
3465.00	36.10	110	150.0	V	-62.71	0.93	9.87	-53.77	-13	40.77

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth High Channel										
296.99	54.85	219	150	H	-52.02	0.46	-2.16	-54.64	-13	41.64
296.99	55.57	91	150	V	-51.30	0.46	-2.16	-53.92	-13	40.92
3508.60	44.45	175	200.0	H	-63.12	0.93	9.90	-54.15	-13	41.15
3508.60	44.64	64	200.0	V	-62.93	0.93	9.90	-53.96	-13	40.96
16-QAM 1.4MHz Bandwidth High Channel										
296.99	54.57	219	200	H	-52.30	0.46	-2.16	-54.92	-13	41.92
296.99	55.90	91	200	V	-50.97	0.46	-2.16	-53.59	-13	40.59
3508.60	44.54	226	150.0	H	-63.03	0.93	9.90	-54.06	-13	41.06
3508.60	44.64	151	150.0	V	-62.93	0.93	9.90	-53.96	-13	40.96

LTE Band 5:

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Low Channel										
296.99	54.31	219	150	H	-52.56	0.46	-2.16	-55.18	-13	42.18
296.99	56.00	91	150	V	-50.87	0.46	-2.16	-53.49	-13	40.49
1649.40	49.17	130	200.0	H	-64.17	0.84	8.44	-56.57	-13	43.57
1649.40	47.76	46	200.0	V	-65.58	0.84	8.44	-57.98	-13	44.98
16-QAM 1.4MHz Bandwidth Low Channel										
296.99	54.74	219	150	H	-52.13	0.46	-2.16	-54.75	-13	41.75
296.99	55.39	91	150	V	-51.48	0.46	-2.16	-54.10	-13	41.10
1649.40	49.66	245	200.0	H	-63.68	0.84	8.44	-56.08	-13	43.08
1649.40	47.88	207	200.0	V	-65.46	0.84	8.44	-57.86	-13	44.86

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth Middle Channel										
296.99	54.71	219	150	H	-52.16	0.46	-2.16	-54.78	-13	41.78
296.99	55.11	91	150	V	-51.76	0.46	-2.16	-54.38	-13	41.38
1673.00	39.77	64	200.0	H	-65.76	0.84	8.48	-58.12	-13	45.12
1673.00	38.63	282	200.0	V	-66.90	0.84	8.48	-59.26	-13	46.26
16-QAM 1.4MHz Bandwidth Middle Channel										
296.99	54.80	219	150	H	-52.07	0.46	-2.16	-54.69	-13	41.69
296.99	55.40	91	150	V	-51.47	0.46	-2.16	-54.09	-13	41.09
1673.00	39.11	31	200.0	H	-66.42	0.84	8.48	-58.78	-13	45.78
1673.00	38.66	4	200.0	V	-66.87	0.84	8.48	-59.23	-13	46.23

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4MHz Bandwidth High Channel										
296.99	54.21	219	150	H	-52.66	0.46	-2.16	-55.28	-13	42.28
296.99	55.32	91	150	V	-51.55	0.46	-2.16	-54.17	-13	41.17
1696.60	45.18	237	200.0	H	-67.83	0.84	8.51	-60.16	-13	47.16
1696.60	45.97	220	200.0	V	-67.04	0.84	8.51	-59.37	-13	46.37
16-QAM 1.4MHz Bandwidth High Channel										
296.99	54.65	219	150	H	-52.22	0.46	-2.16	-54.84	-13	41.84
296.99	55.32	91	150	V	-51.55	0.46	-2.16	-54.17	-13	41.17
1696.60	45.85	298	200.0	H	-67.16	0.84	8.51	-59.49	-13	46.49
1696.60	46.85	56	200.0	V	-66.16	0.84	8.51	-58.49	-13	45.49

30MHz~26GHz:

LTE Band 7:

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Low Channel										
559.98	54.24	47	200	H	-50.26	0.58	-1.17	-48.51	-25	23.51
559.98	55.11	313	200	V	-49.39	0.58	-1.17	-47.64	-25	22.64
5005.00	44.92	25	100	H	-61.07	1.08	10.30	-51.85	-25	26.85
5005.00	43.29	179	150	V	-62.70	1.08	10.30	-53.48	-25	28.48
16-QAM 5MHz Bandwidth Low Channel										
559.98	54.29	352	100	H	-50.21	0.58	-1.17	-48.46	-25	23.46
559.98	55.17	33	150	V	-49.33	0.58	-1.17	-47.58	-25	22.58
5005.00	44.68	295	150	H	-61.31	1.08	10.30	-52.09	-25	27.09
5005.00	45.03	282	200	V	-60.96	1.08	10.30	-51.74	-25	26.74

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Middle Channel										
559.98	54.96	130	200	H	-49.54	0.58	-1.17	-47.79	-25	22.79
559.98	55.37	168	200	V	-49.13	0.58	-1.17	-47.38	-25	22.38
5070.00	44.12	19	100	H	-61.51	1.09	10.30	-52.30	-25	27.30
5070.00	44.92	138	150	V	-60.71	1.09	10.30	-51.50	-25	26.50
16-QAM 5MHz Bandwidth Middle Channel										
559.98	54.91	60	100	H	-49.59	0.58	-1.17	-47.84	-25	22.84
559.98	55.86	281	150	V	-48.64	0.58	-1.17	-46.89	-25	21.89
5070.00	43.53	34	150	H	-62.10	1.09	10.30	-52.89	-25	27.89
5070.00	45.32	85	200	V	-60.31	1.09	10.30	-51.10	-25	26.10

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth High Channel										
559.98	54.49	122	200	H	-50.01	0.58	-1.17	-48.26	-25	23.26
559.98	56.00	185	200	V	-48.50	0.58	-1.17	-46.75	-25	21.75
5135.00	43.50	124	100	H	-61.77	1.10	10.30	-52.57	-25	27.57
5135.00	45.04	211	150	V	-60.23	1.10	10.30	-51.03	-25	26.03
16-QAM 5MHz Bandwidth High Channel										
559.98	54.21	209	100	H	-50.29	0.58	-1.17	-48.54	-25	23.54
559.98	55.76	198	150	V	-48.74	0.58	-1.17	-46.99	-25	21.99
5135.00	43.40	44	150	H	-61.87	1.10	10.30	-52.67	-25	27.67
5135.00	44.97	14	200	V	-60.30	1.10	10.30	-51.10	-25	26.10

30 MHz ~ 10 GHz:

LTE Band 17:

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Low Channel										
296.99	54.89	65	100	H	-51.98	0.46	-2.16	-49.36	-13	36.36
296.99	55.40	218	200	V	-51.47	0.46	-2.16	-48.85	-13	35.85
1413.00	55.45	183	150	H	-59.52	0.83	8.06	-52.29	-13	39.29
1413.00	56.45	353	100	V	-58.52	0.83	8.06	-51.29	-13	38.29
16-QAM 5MHz Bandwidth Low Channel										
296.99	54.69	312	150	H	-52.18	0.46	-2.16	-49.56	-13	36.56
296.99	55.09	33	150	V	-51.78	0.46	-2.16	-49.16	-13	36.16
1413.00	55.70	173	200	H	-59.27	0.83	8.06	-52.04	-13	39.04
1413.00	56.60	121	200	V	-58.37	0.83	8.06	-51.14	-13	38.14

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Middle Channel										
296.99	54.17	87	100	H	-52.70	0.46	-2.16	-50.08	-13	37.08
296.99	55.84	308	200	V	-51.03	0.46	-2.16	-48.41	-13	35.41
1420.00	54.85	11	150	H	-60.07	0.83	8.07	-52.83	-13	39.83
1420.00	55.94	127	100	V	-58.98	0.83	8.07	-51.74	-13	38.74
16-QAM 5MHz Bandwidth Middle Channel										
296.99	54.39	29	150	H	-52.48	0.46	-2.16	-49.86	-13	36.86
296.99	55.05	8	150	V	-51.82	0.46	-2.16	-49.20	-13	36.20
1420.00	55.44	202	200	H	-59.48	0.83	8.07	-52.24	-13	39.24
1420.00	56.11	221	200	V	-58.81	0.83	8.07	-51.57	-13	38.57

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth High Channel										
296.99	54.34	68	100	H	-52.53	0.46	-2.16	-49.91	-13	36.91
296.99	55.53	246	200	V	-51.34	0.46	-2.16	-48.72	-13	35.72
1427.00	54.68	160	150	H	-60.20	0.83	8.08	-52.95	-13	39.95
1427.00	55.94	67	100	V	-58.94	0.83	8.08	-51.69	-13	38.69
16-QAM 5MHz Bandwidth High Channel										
296.99	54.17	338	150	H	-52.70	0.46	-2.16	-50.08	-13	37.08
296.99	55.01	122	150	V	-51.86	0.46	-2.16	-49.24	-13	36.24
1427.00	55.47	134	200	H	-59.41	0.83	8.08	-52.16	-13	39.16
1427.00	56.12	319	200	V	-58.76	0.83	8.08	-51.51	-13	38.51

30 MHz ~ 26.5 GHz:

LTE Band 41:

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Low Channel										
296.99	54.93	231	200	H	-51.94	0.46	-2.16	-49.32	-25	24.32
296.99	55.09	16	200	V	-51.78	0.46	-2.16	-49.16	-25	24.16
5115.00	44.32	115	100	H	-61.06	1.09	10.30	-51.85	-25	26.85
5115.00	42.69	128	150	V	-62.69	1.09	10.30	-53.48	-25	28.48
16-QAM 5MHz Bandwidth Low Channel										
296.99	54.86	239	100	H	-52.01	0.46	-2.16	-49.39	-25	24.39
296.99	55.89	248	150	V	-50.98	0.46	-2.16	-48.36	-25	23.36
5115.00	43.76	72	150	H	-61.62	1.09	10.30	-52.41	-25	27.41
5115.00	44.83	105	200	V	-60.55	1.09	10.30	-51.34	-25	26.34

Frequency (MHz)	Receiver Reading (dBµV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth Middle Channel										
296.99	54.04	201	200	H	-52.83	0.46	-2.16	-50.21	-25	25.21
296.99	55.02	146	200	V	-51.85	0.46	-2.16	-49.23	-25	24.23
5180.00	43.50	65	100	H	-61.52	1.10	10.30	-52.32	-25	27.32
5180.00	43.96	290	150	V	-61.06	1.10	10.30	-51.86	-25	26.86
16-QAM 5MHz Bandwidth Middle Channel										
296.99	54.03	37	100	H	-52.84	0.46	-2.16	-50.22	-25	25.22
296.99	55.38	228	150	V	-51.49	0.46	-2.16	-48.87	-25	23.87
5180.00	42.87	127	150	H	-62.15	1.10	10.30	-52.95	-25	27.95
5180.00	44.46	28	200	V	-60.56	1.10	10.30	-51.36	-25	26.36

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable Loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5MHz Bandwidth High Channel										
296.99	54.44	319	200	H	-52.43	0.46	-2.16	-49.81	-25	24.81
296.99	55.47	258	200	V	-51.40	0.46	-2.16	-48.78	-25	23.78
5305.00	42.58	346	100	H	-61.74	1.12	10.30	-52.56	-25	27.56
5305.00	43.35	129	150	V	-60.97	1.12	10.30	-51.79	-25	26.79
16-QAM 5MHz Bandwidth High Channel										
296.99	54.62	39	100	H	-52.25	0.46	-2.16	-49.63	-25	24.63
296.99	55.17	121	150	V	-51.70	0.46	-2.16	-49.08	-25	24.08
5305.00	42.71	194	150	H	-61.61	1.12	10.30	-52.43	-25	27.43
5305.00	43.78	99	200	V	-60.54	1.12	10.30	-51.36	-25	26.36

Note:
1) Absolute Level (dBm) = Submitted Level (dBm) - Cable loss (dB) + Antenna Gain (dBd/dBi)
2) Margin (dB) = Limit (dBm) - Absolute Level (dBm)

FCC § 22.917 (a); § 24.238 (a); §27.53 (m) - BAND EDGES

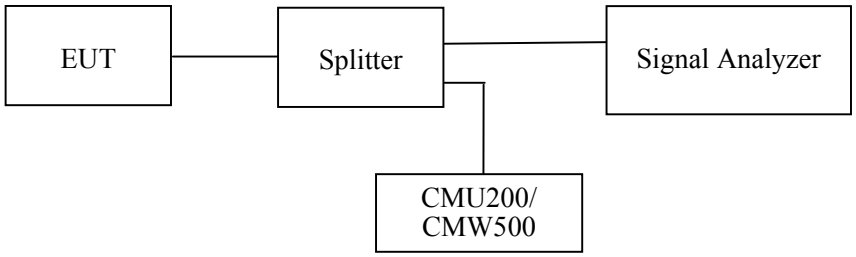
Applicable Standards

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.
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 that 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.
FCC §2.1051.The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

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 Data

Environmental Conditions

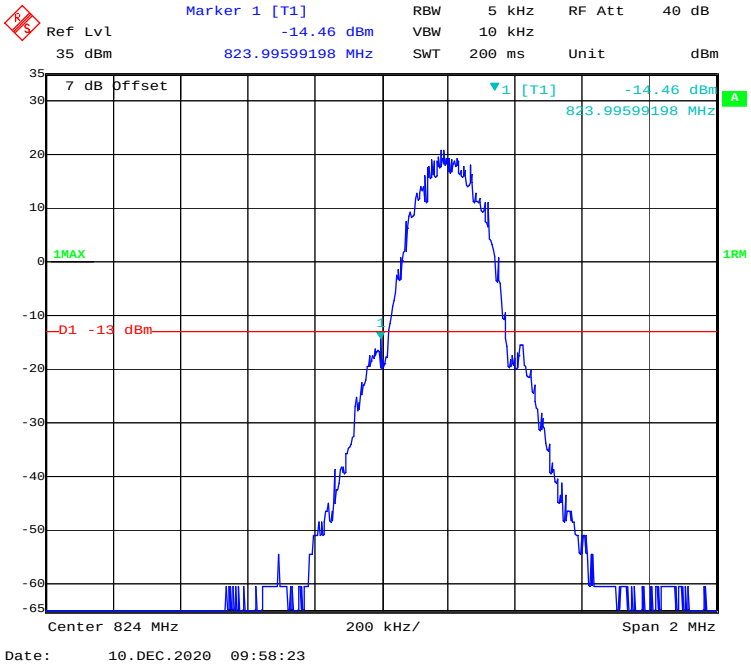
Temperature:	24.9~25.3 ℃
Relative Humidity:	50~52 %
ATM Pressure:	100.7~102.9 kPa

The testing was performed by Jack Jiao from 2020-09-16 to 2020-12-10

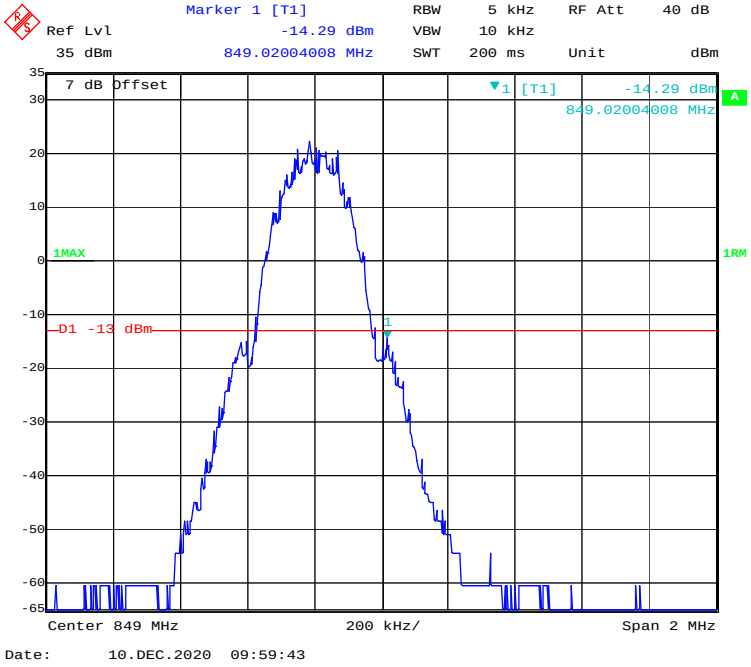
EUT operation mode: Transmitting
Test Result: Compliant.

GSM 850 Band:

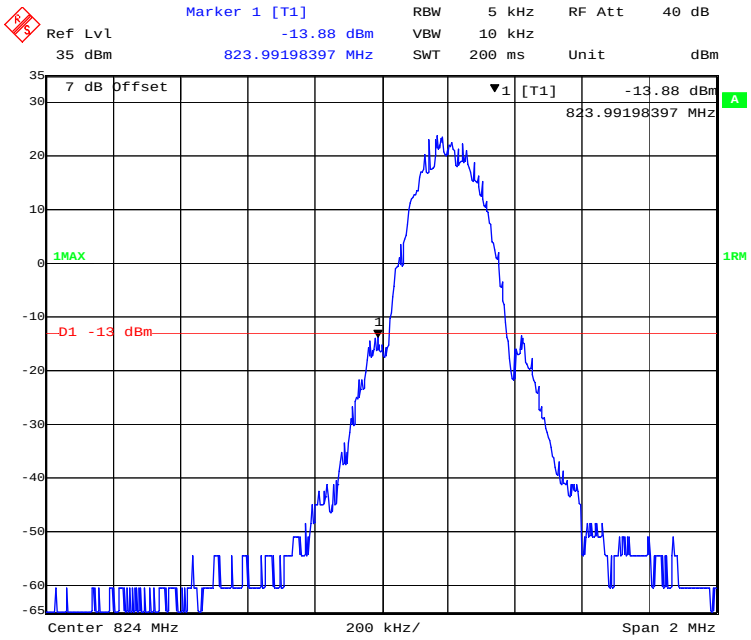
GSM Mode, Left Band Edge



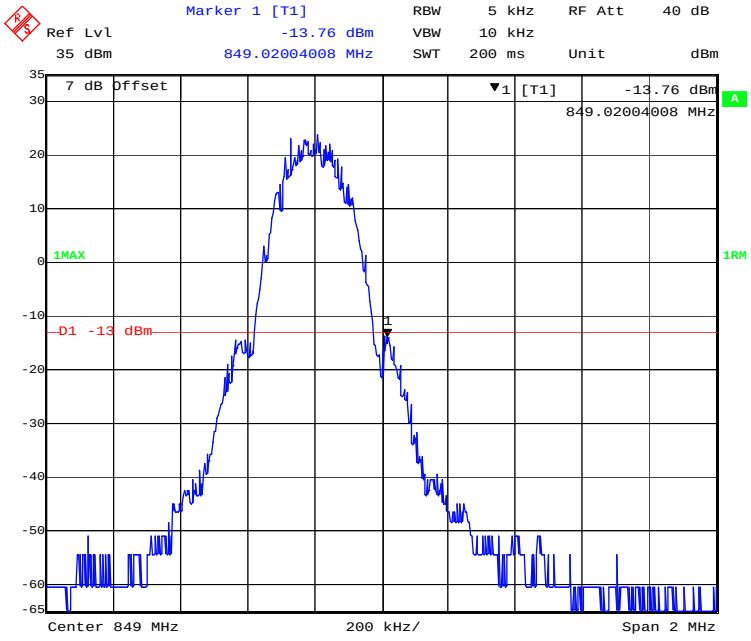
GSM Mode, Right Band Edge



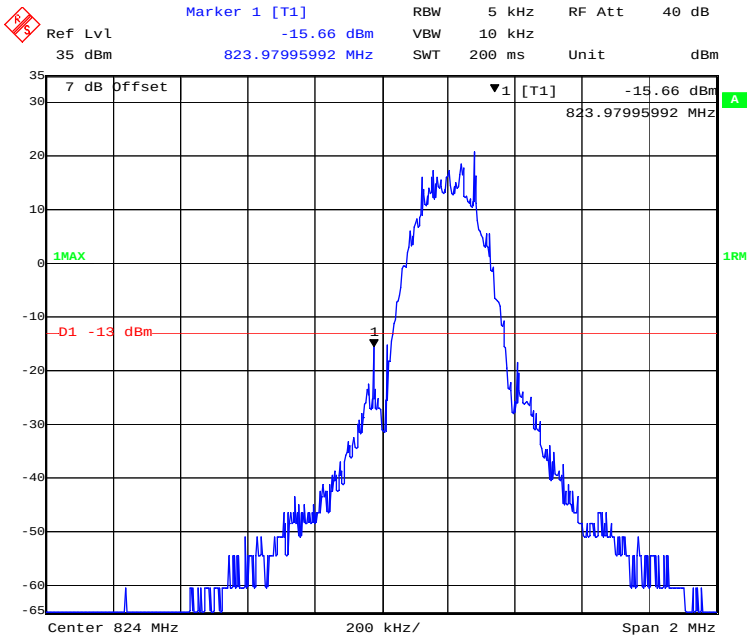
GPRS Mode, Left Band Edge



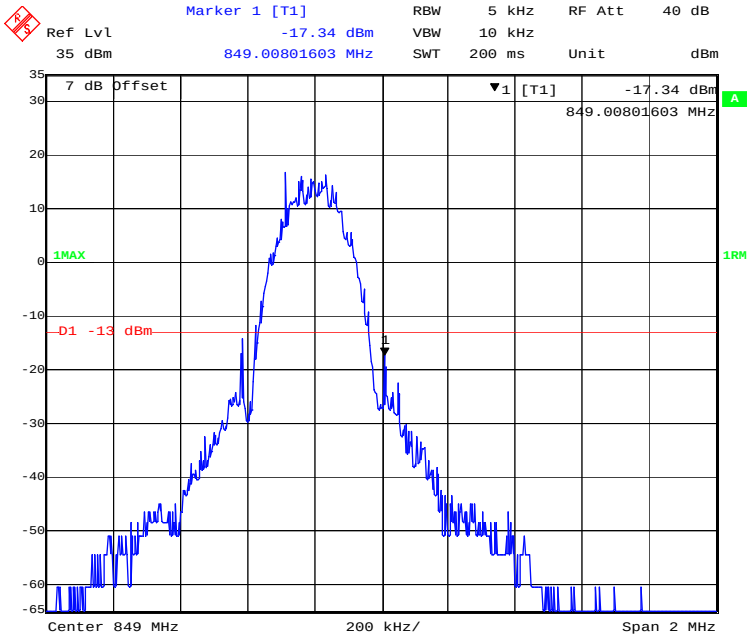
GPRS Mode, Right Band Edge



EGPRS Mode, Left Band Edge

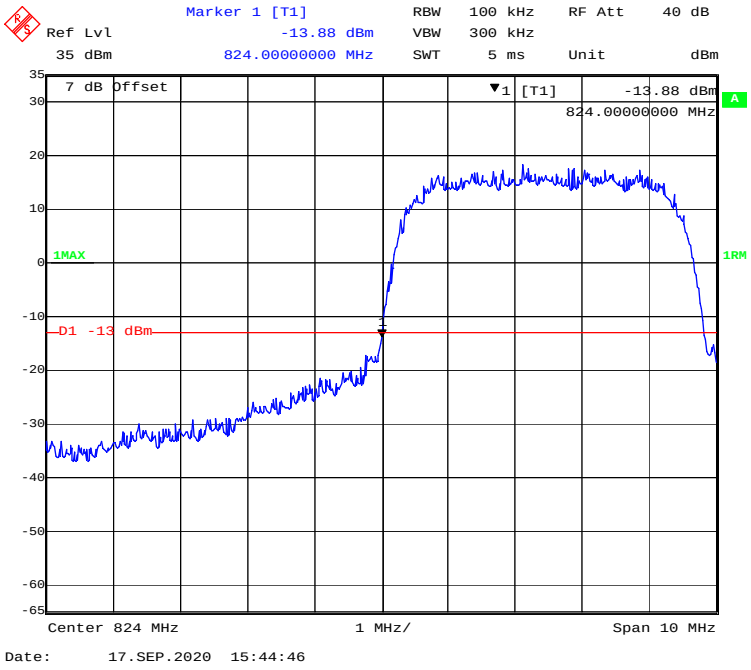


EGPRS Mode, Right Band Edge

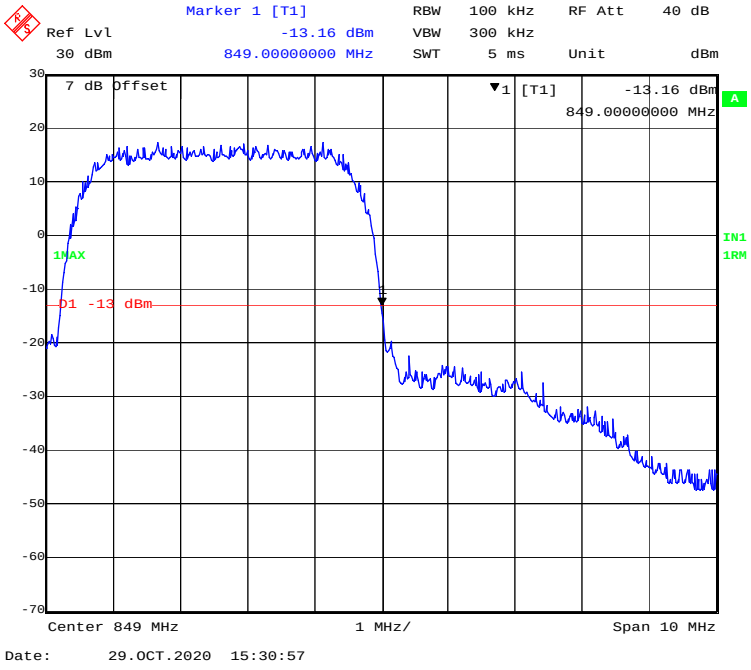


WCDMA Band V

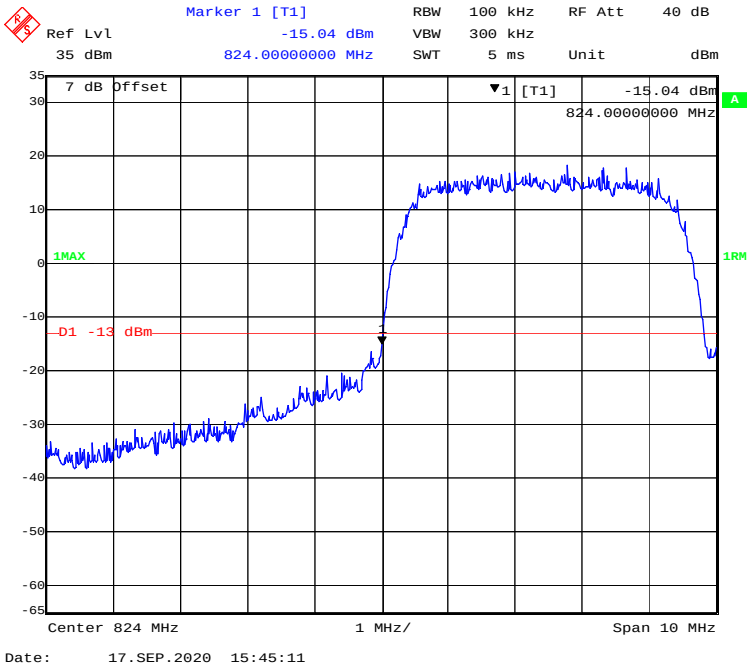
WCDMA (Rel 99) Mode, Left Band Edge



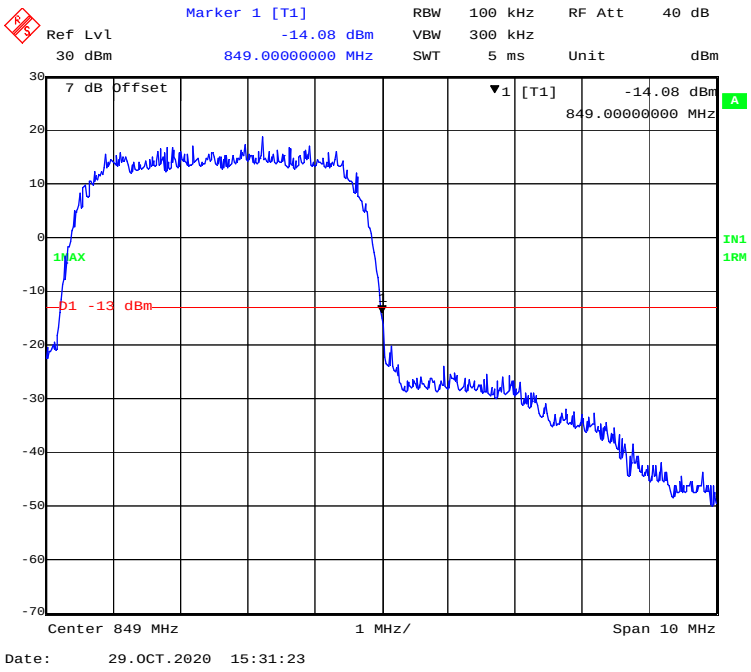
WCDMA (Rel 99) Mode, Right Band Edge



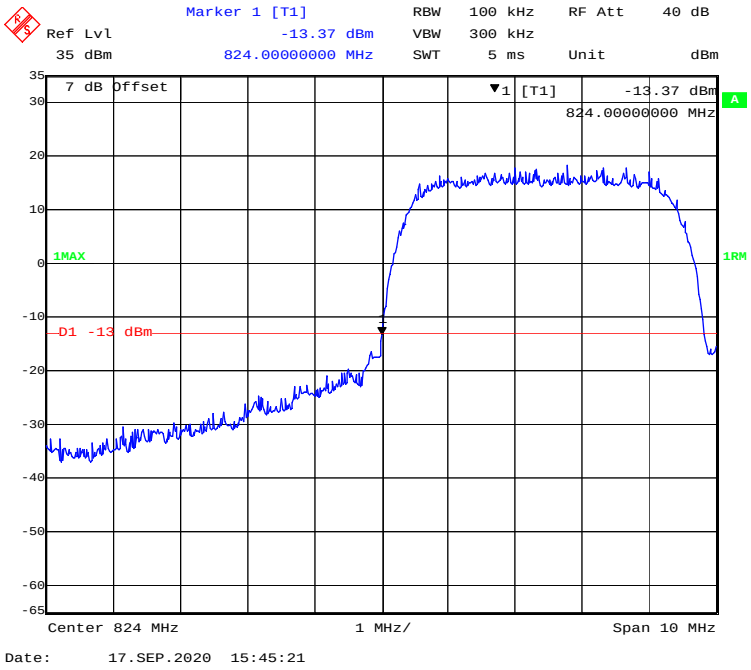
WCDMA (HSDPA) Mode, Left Band Edge



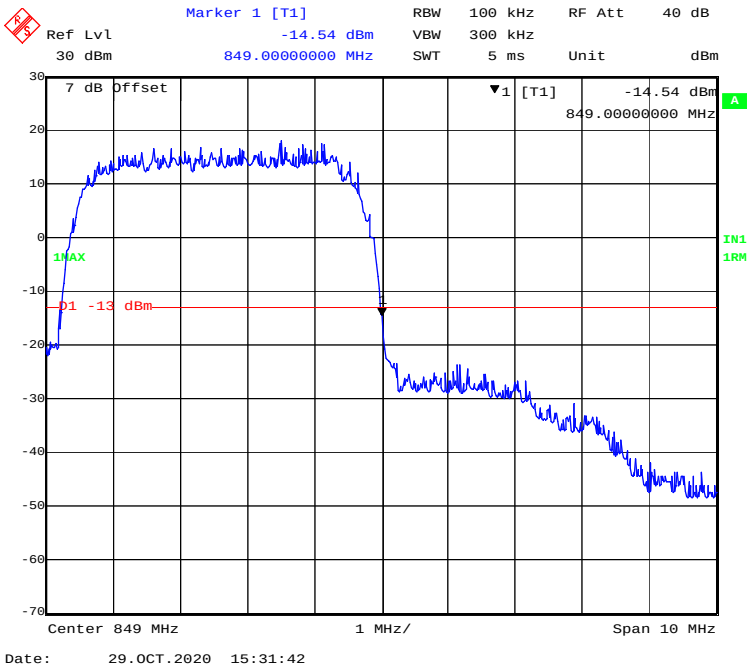
WCDMA (HSDPA) Mode, Right Band Edge



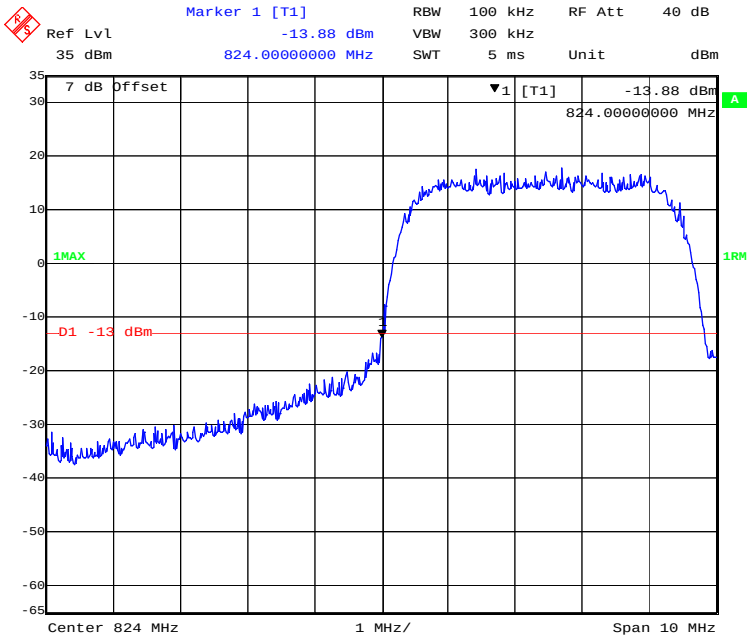
WCDMA (HSUPA) Mode, Left Band Edge



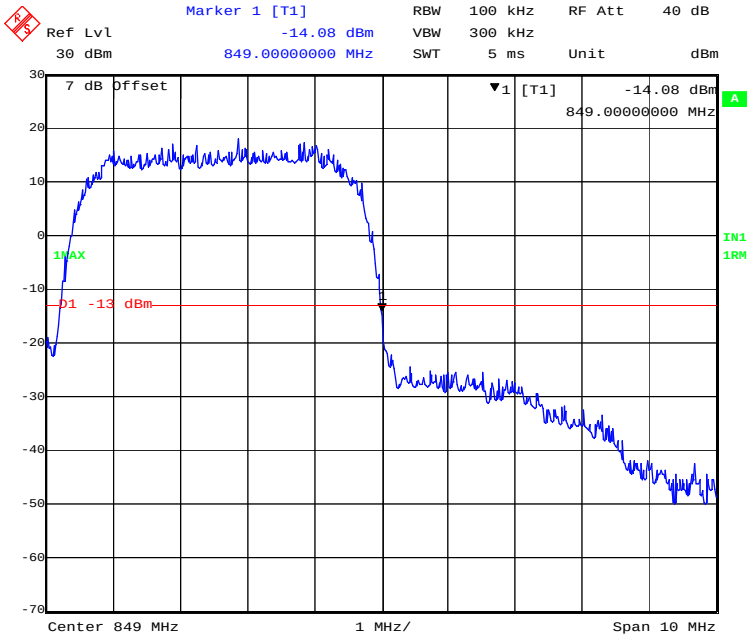
WCDMA (HSUPA) Mode, Right Band Edge



WCDMA (HSPA+) Mode, Left Band Edge

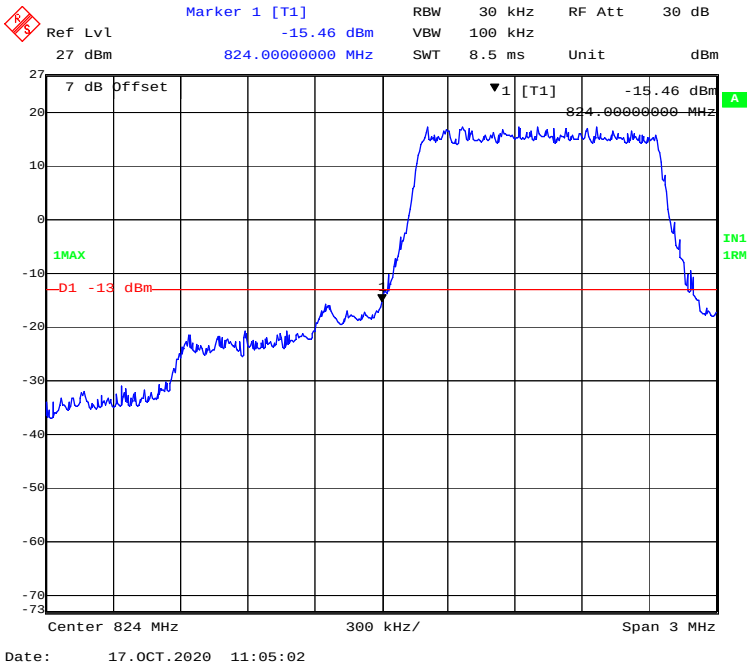


WCDMA (HSPA+) Mode, Right Band Edge

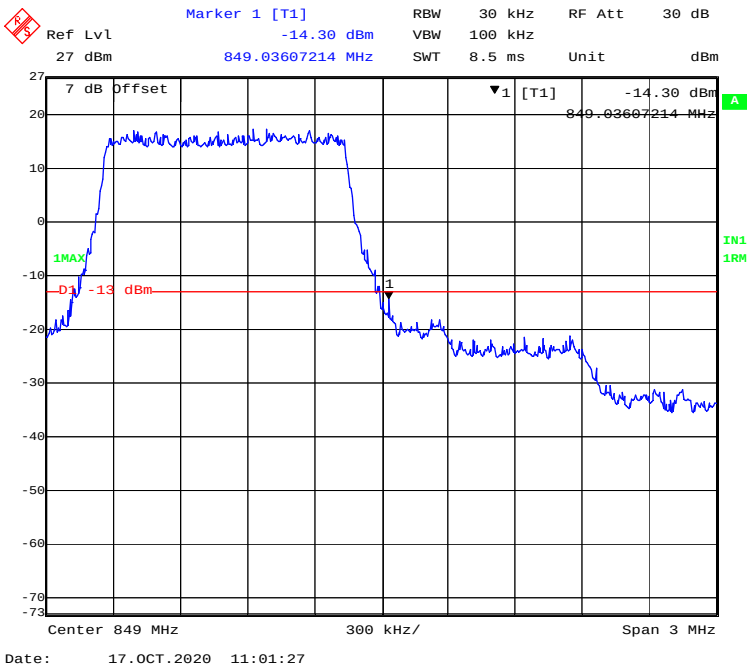


CDMA850 Band:

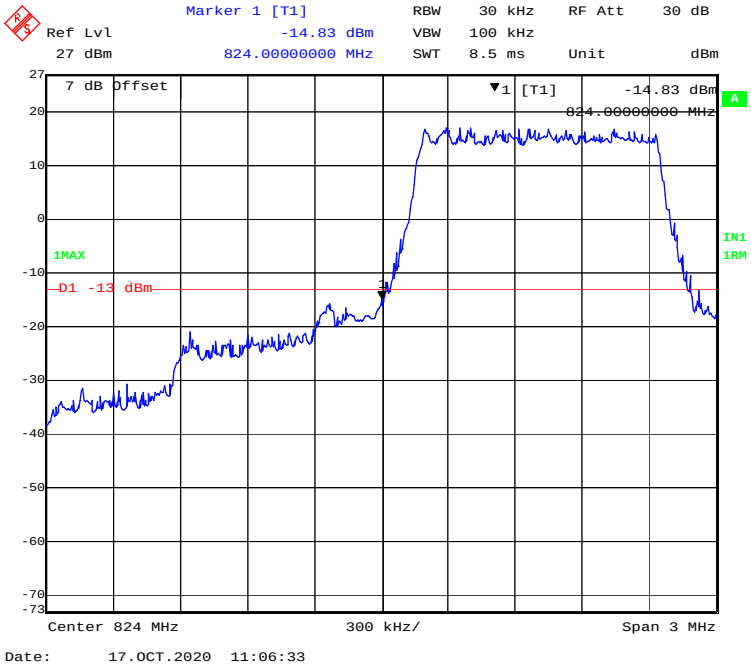
EVDO Mode, Left Band Edge



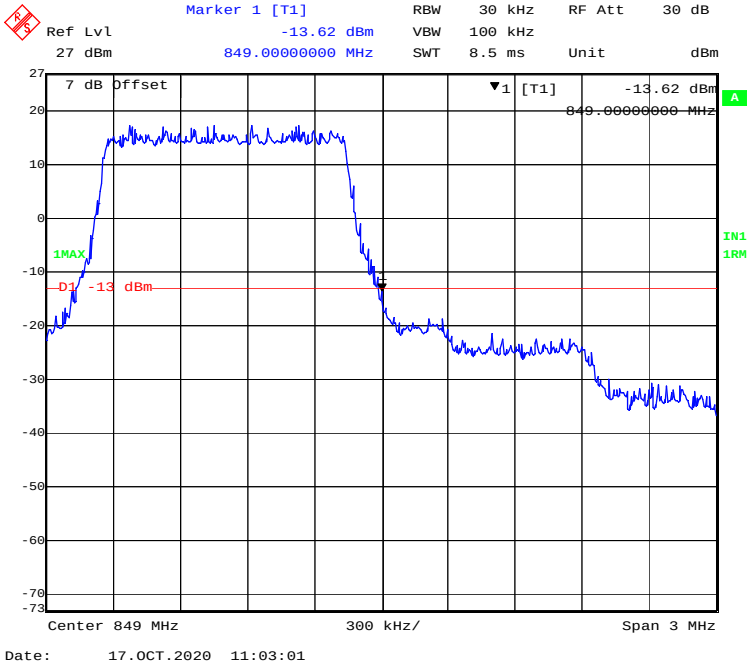
EVDO Mode, Right Band Edge



1xRTT Mode, Left Band Edge

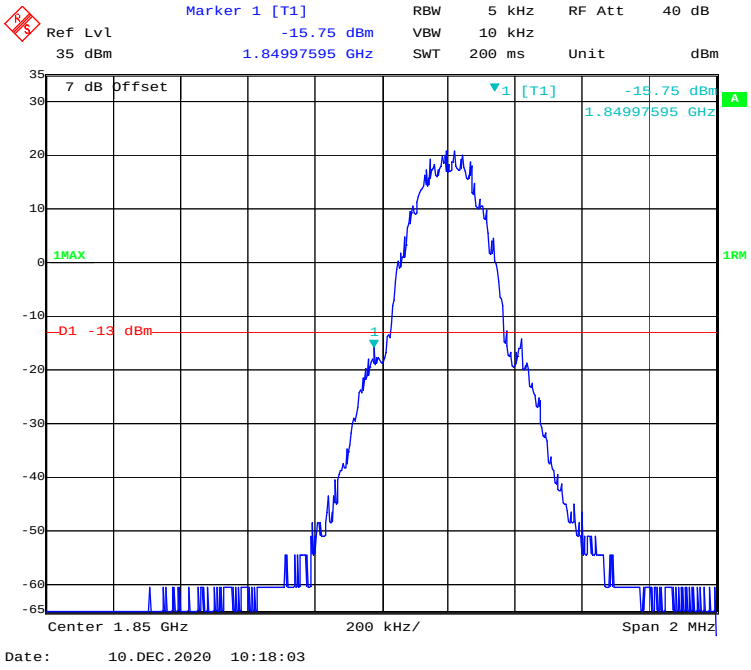


1xRTT Mode, Right Band Edge

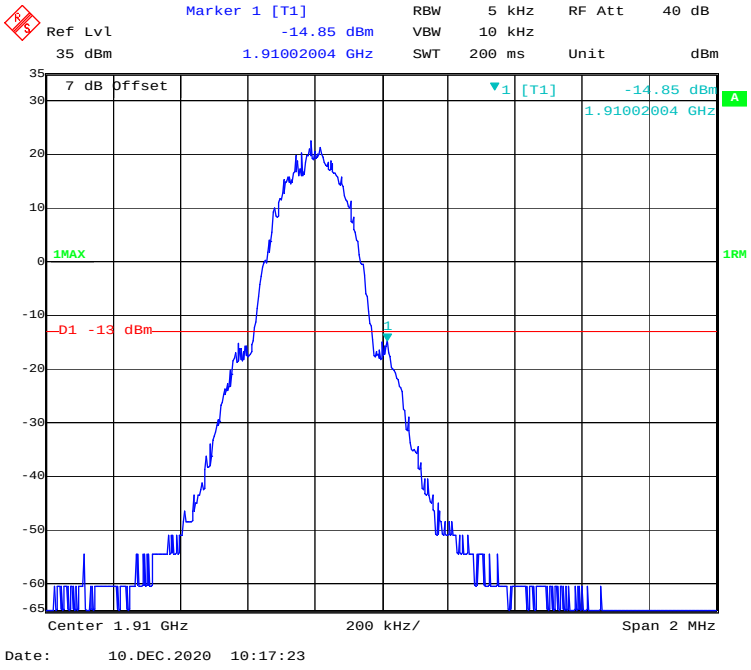


PCS 1900 Band:

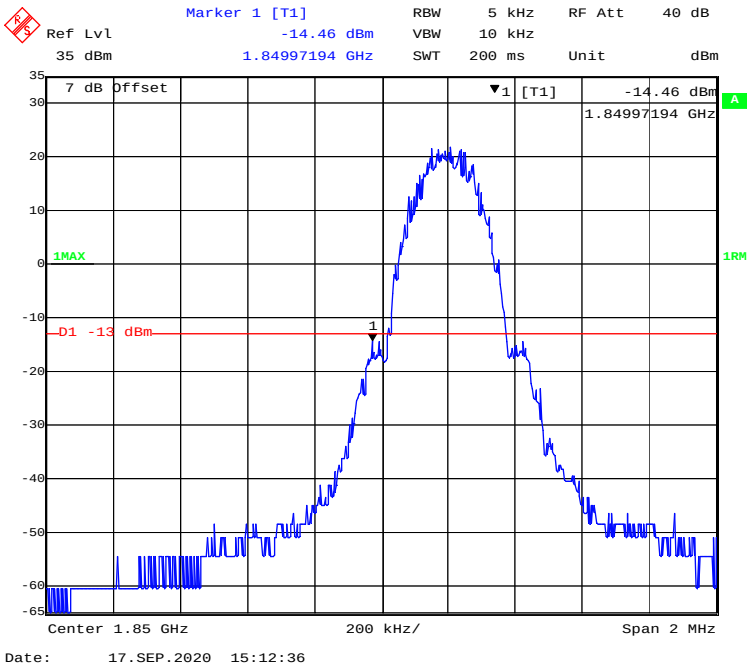
GSM Mode, Left Band Edge



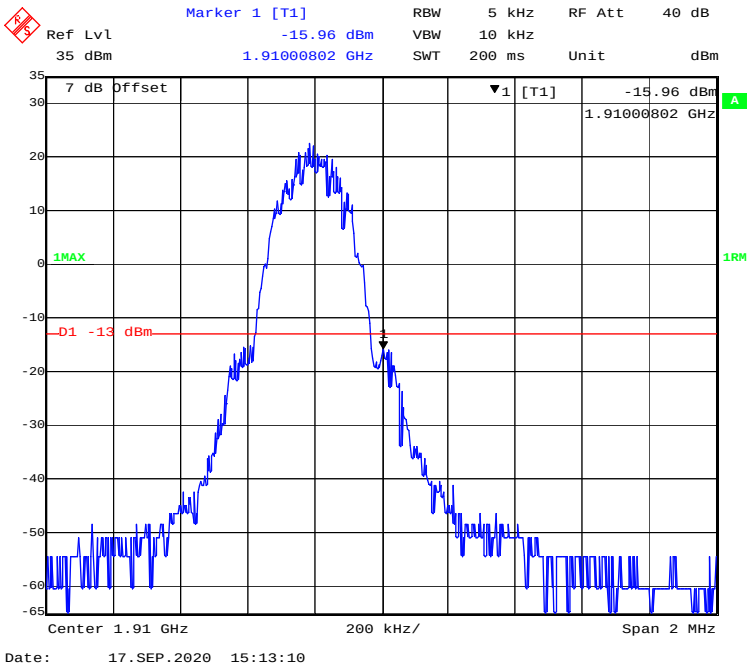
GSM Mode, Right Band Edge



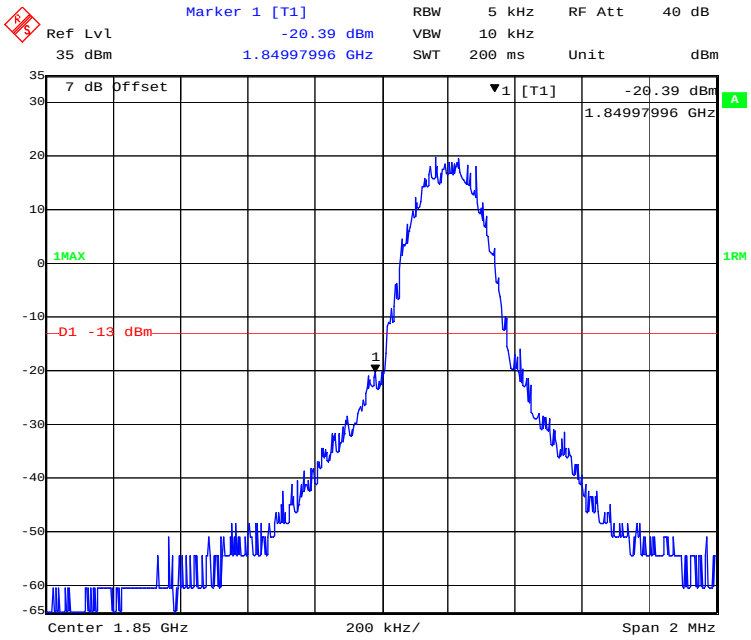
GPRS Mode, Left Band Edge



GPRS Mode, Right Band Edge

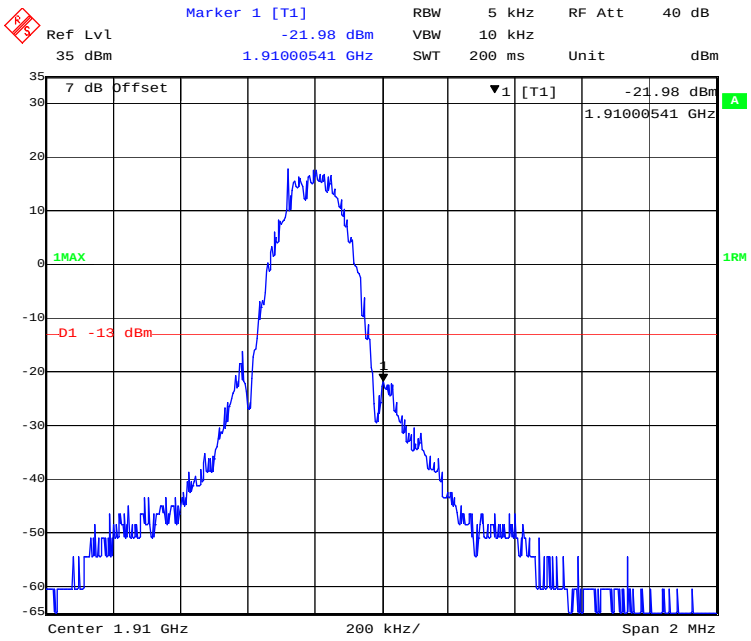


EGPRS Mode, Left Band Edge



Date: 17.SEP.2020 14:59:00

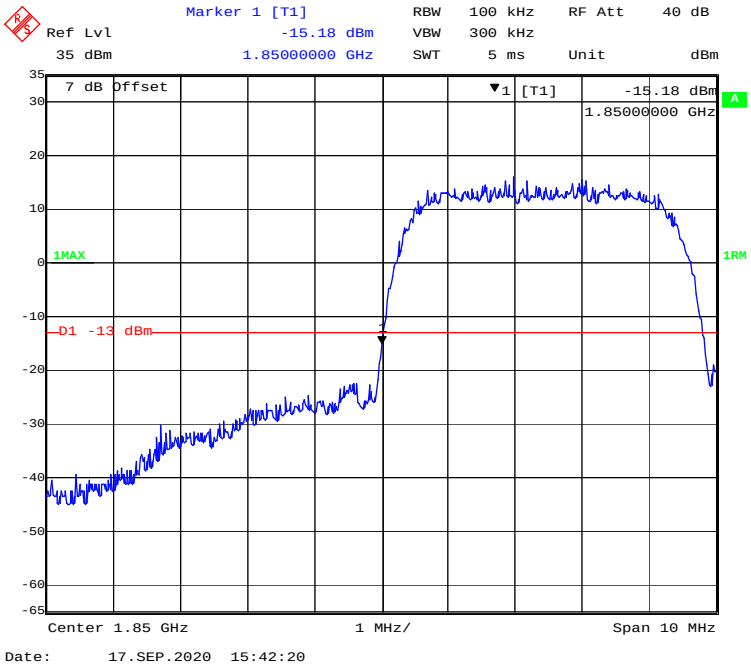
EGPRS Mode, Right Band Edge



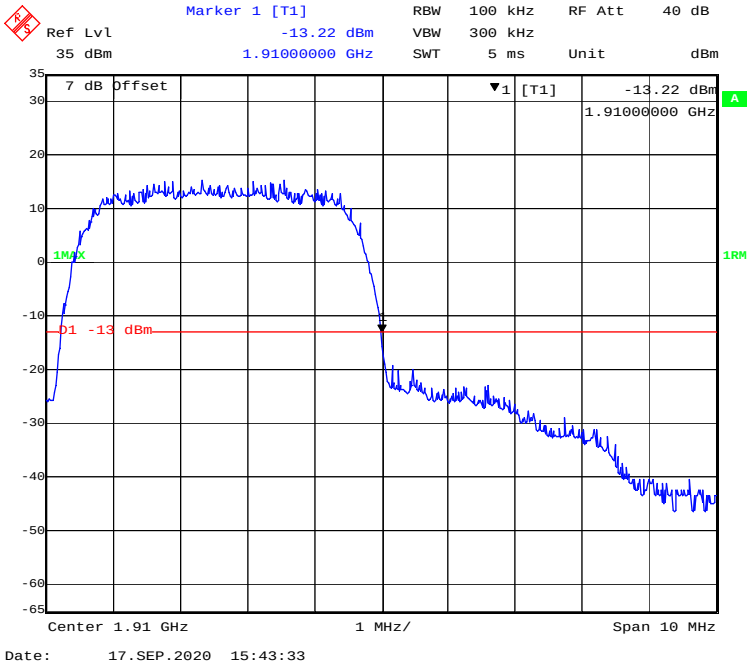
Date: 17.SEP.2020 14:58:05

WCDMA Band II

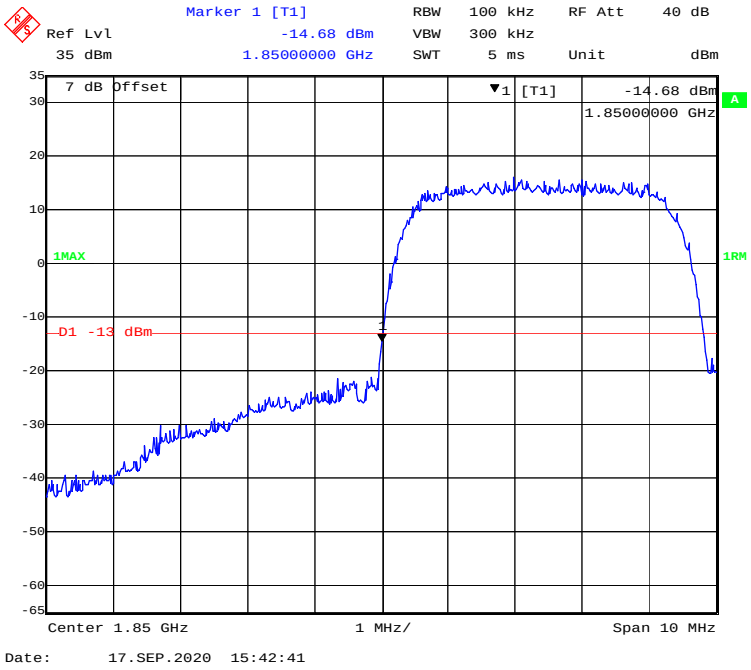
WCDMA (Rel 99) Mode, Left Band Edge



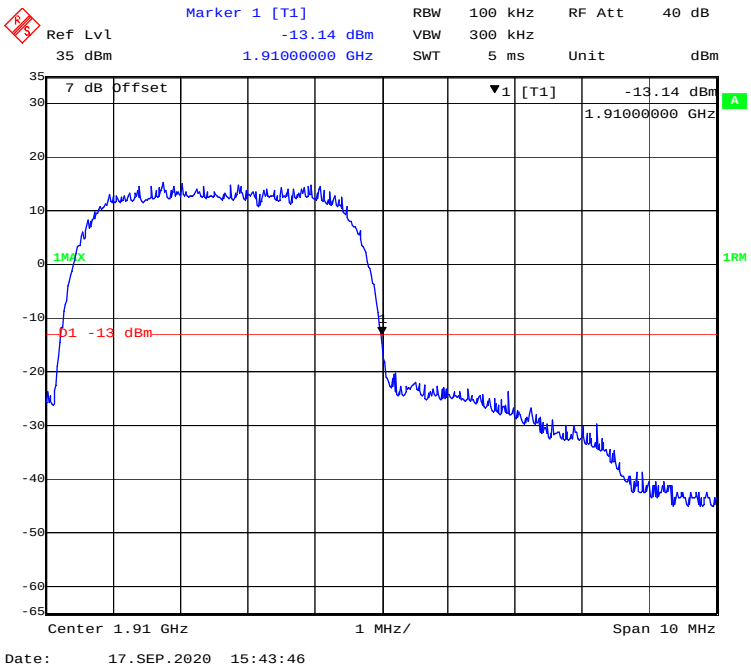
WCDMA (Rel 99) Mode, Right Band Edge



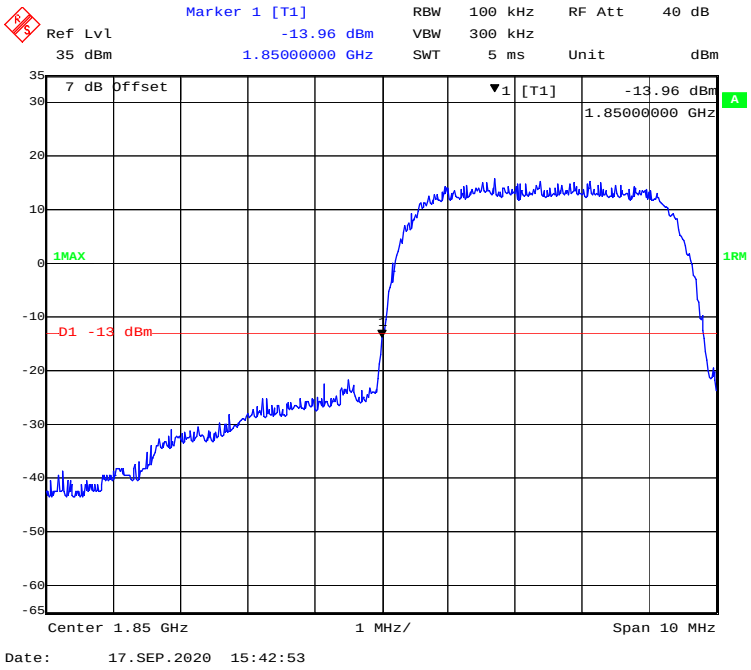
WCDMA (HSDPA) Mode, Left Band Edge



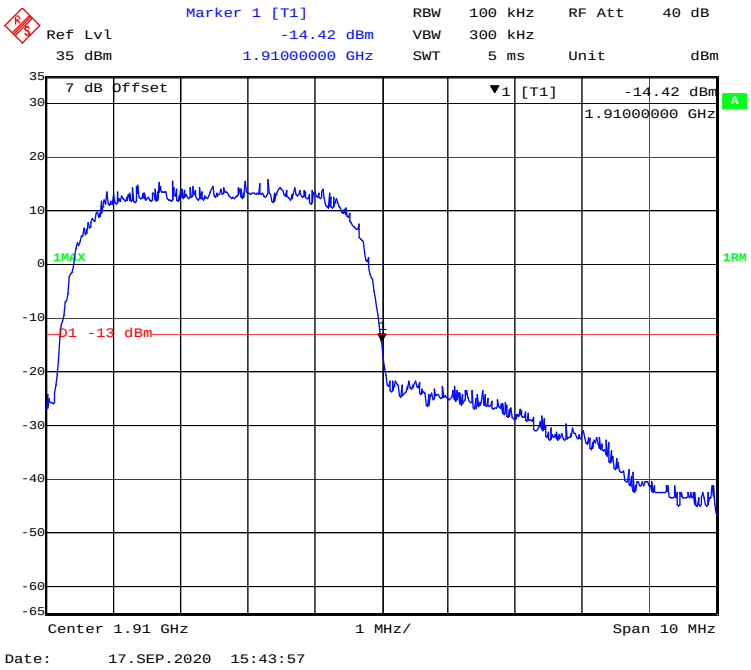
WCDMA (HSDPA) Mode, Right Band Edge



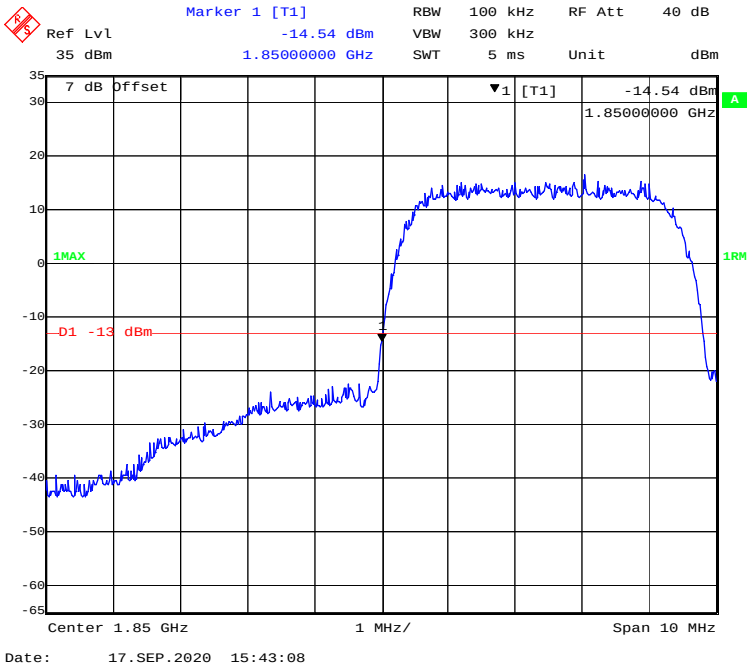
WCDMA (HSUPA) Mode, Left Band Edge



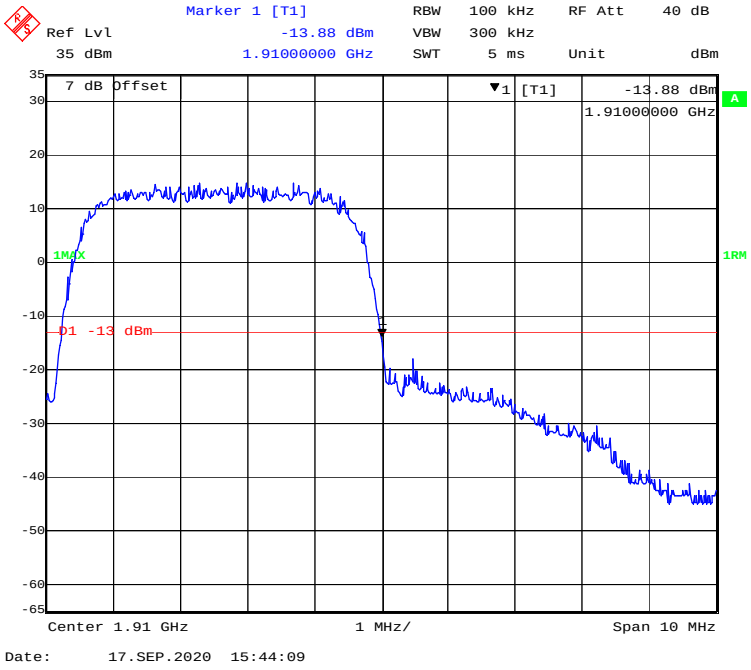
WCDMA (HSUPA) Mode, Right Band Edge



WCDMA (HSPA+) Mode, Left Band Edge

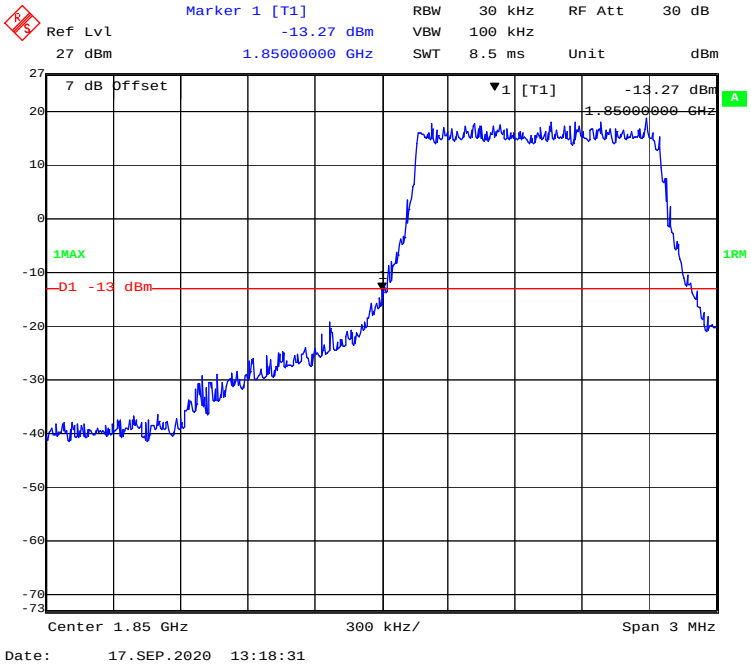


WCDMA (HSPA+) Mode, Right Band Edge

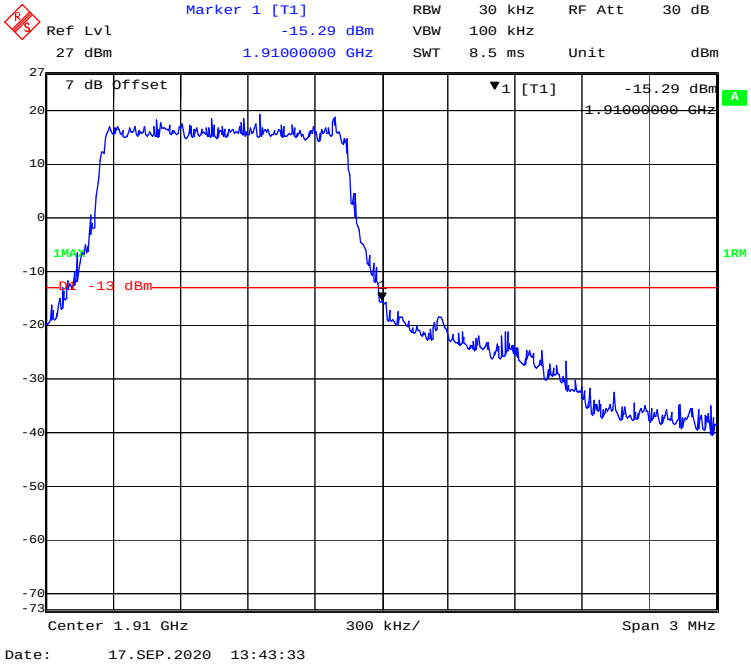


LTE Band 2:

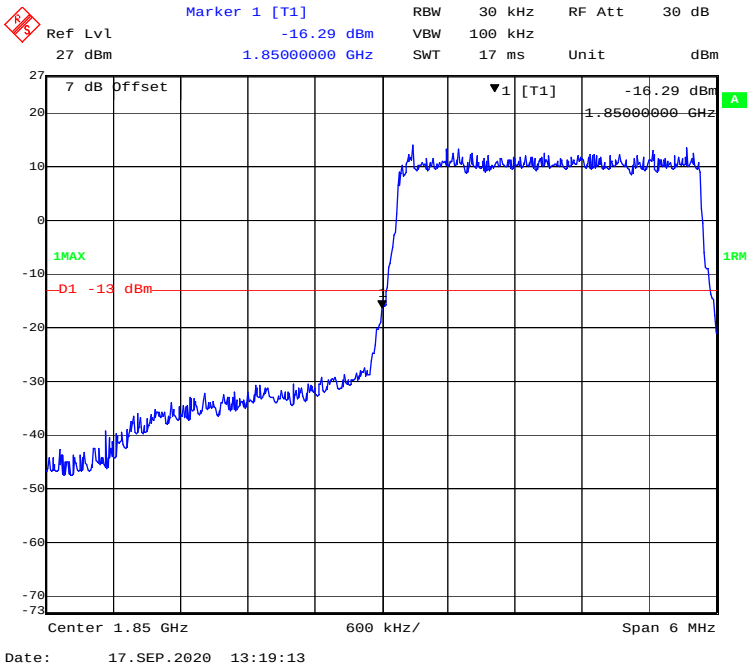
QPSK (1.4 MHz, FULL RB) - Left Band Edge



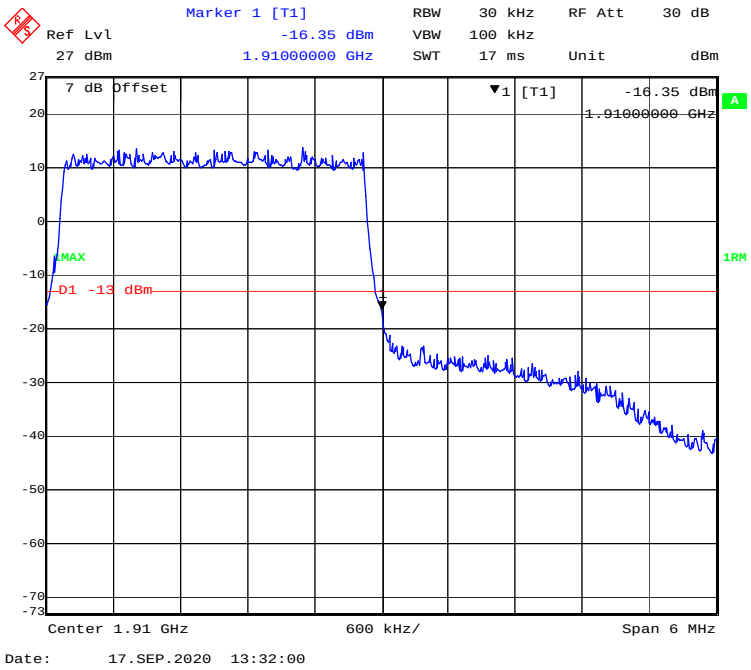
QPSK (1.4 MHz, FULL RB) - Right Band Edge



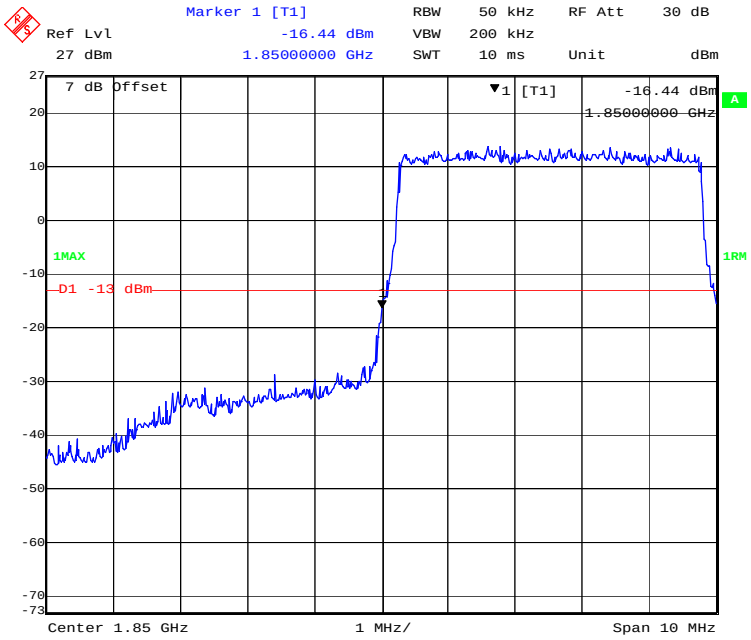
QPSK (3 MHz, FULL RB) - Left Band Edge



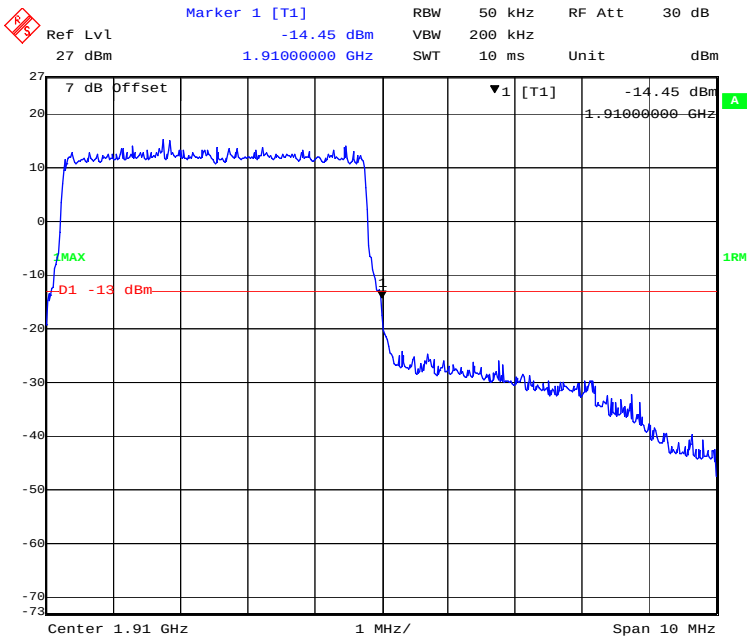
QPSK (3 MHz, FULL RB) - Right Band Edge



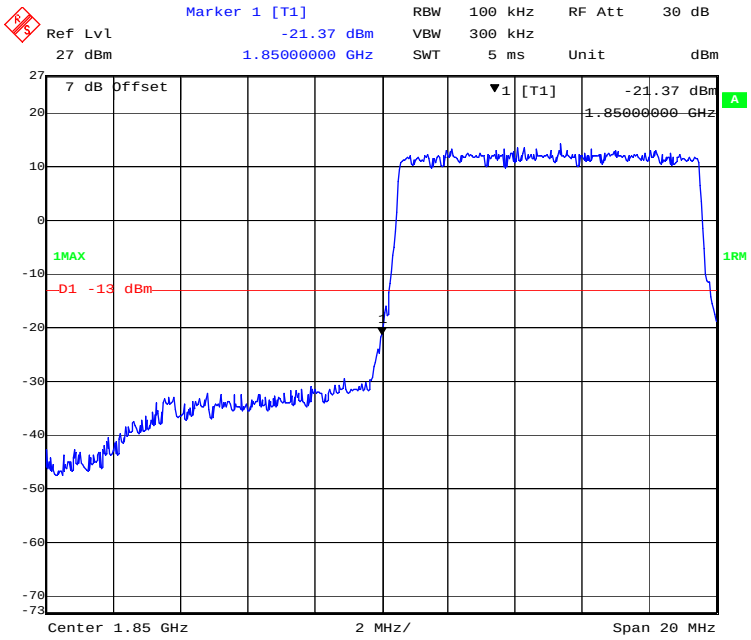
QPSK (5 MHz, FULL RB) - Left Band Edge



QPSK (5 MHz, FULL RB) - Right Band Edge

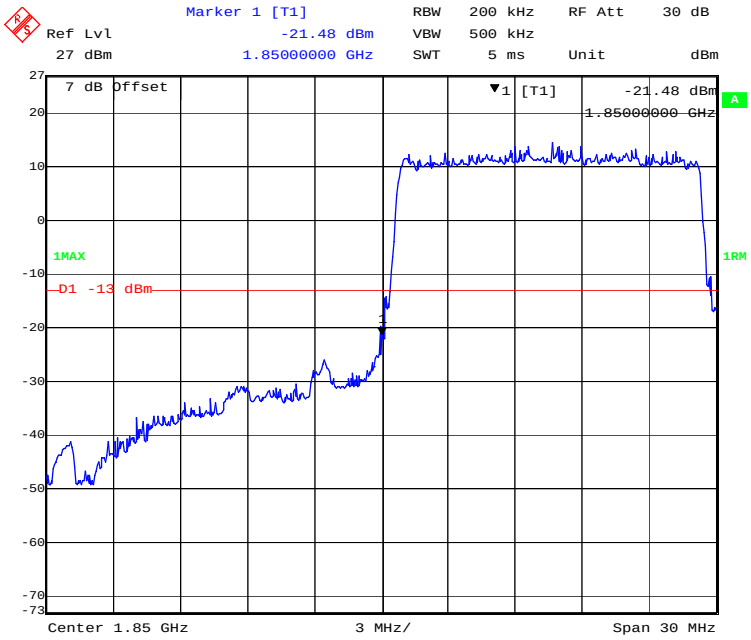


QPSK (10 MHz, FULL RB) - Left Band Edge



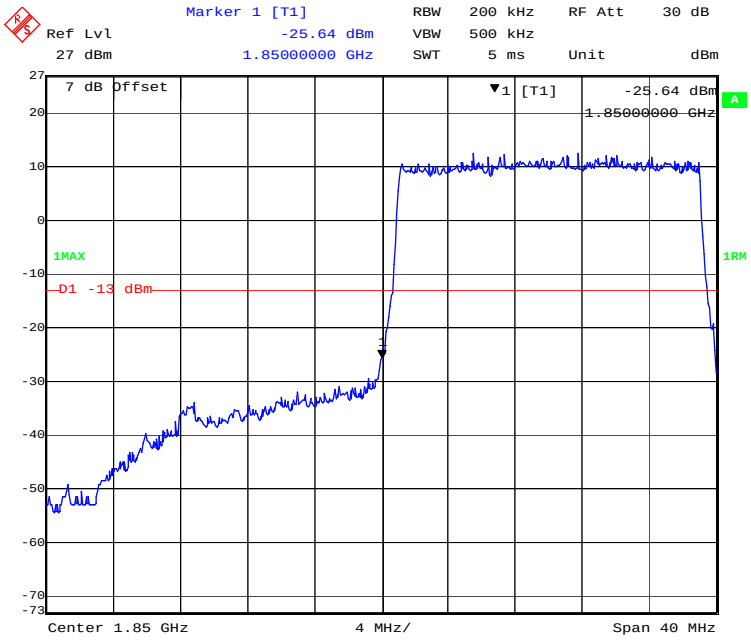
QPSK (10 MHz, FULL RB) - Right Band Edge

QPSK (15 MHz, FULL RB) - Left Band Edge

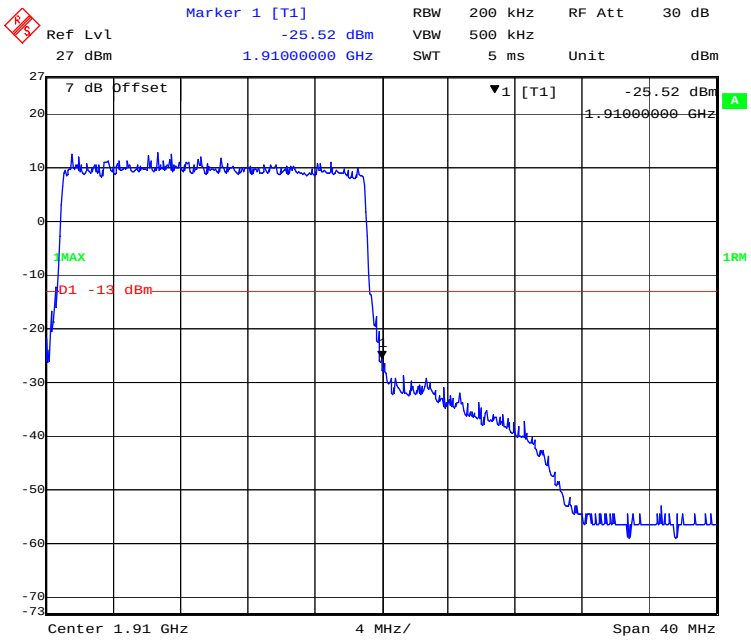


QPSK (15 MHz, FULL RB) - Right Band Edge

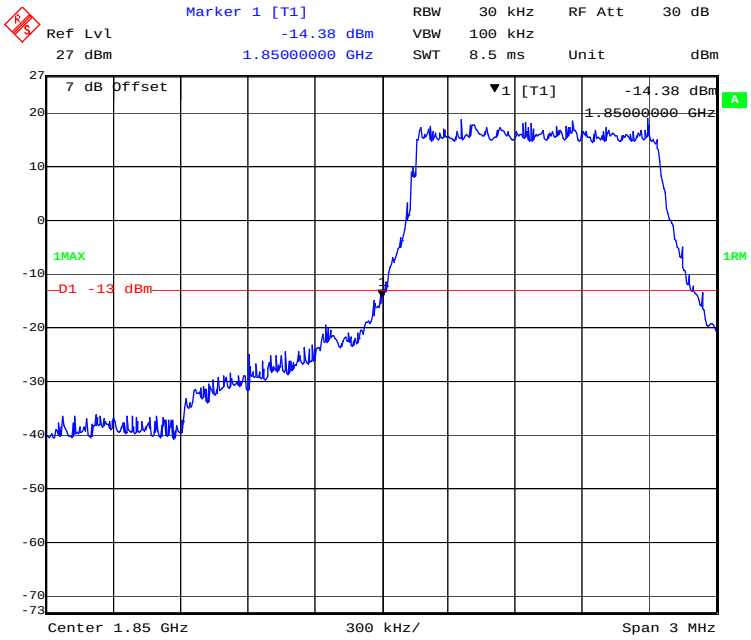
QPSK (20 MHz, FULL RB) - Left Band Edge



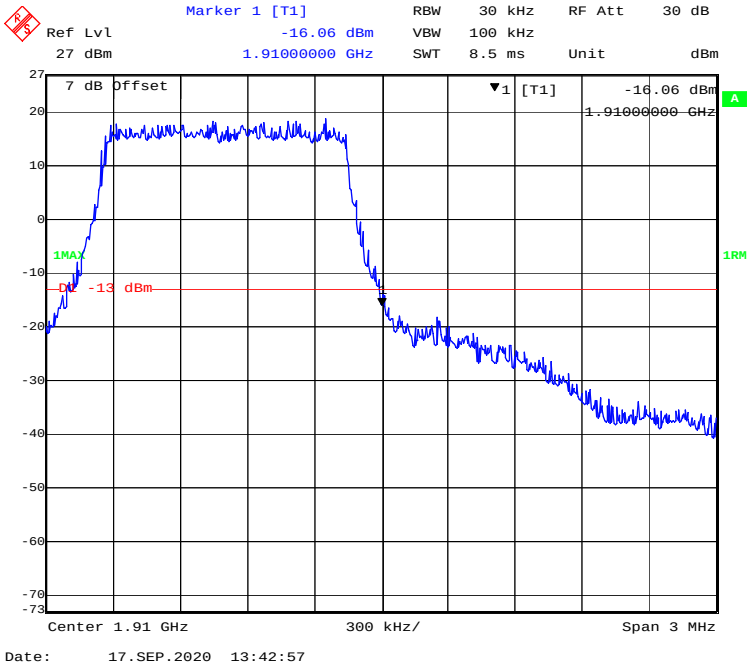
QPSK (20 MHz, FULL RB) - Right Band Edge



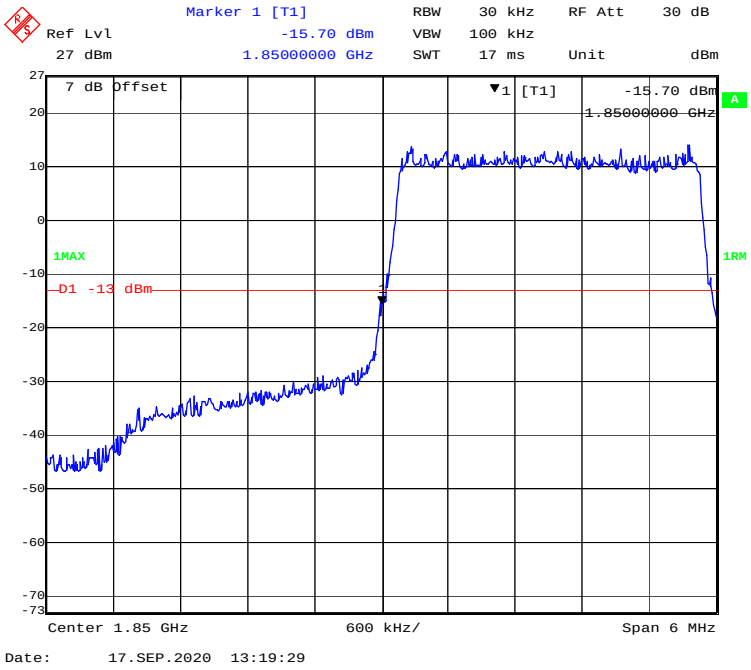
16-QAM (1.4 MHz, FULL RB) - Left Band Edge



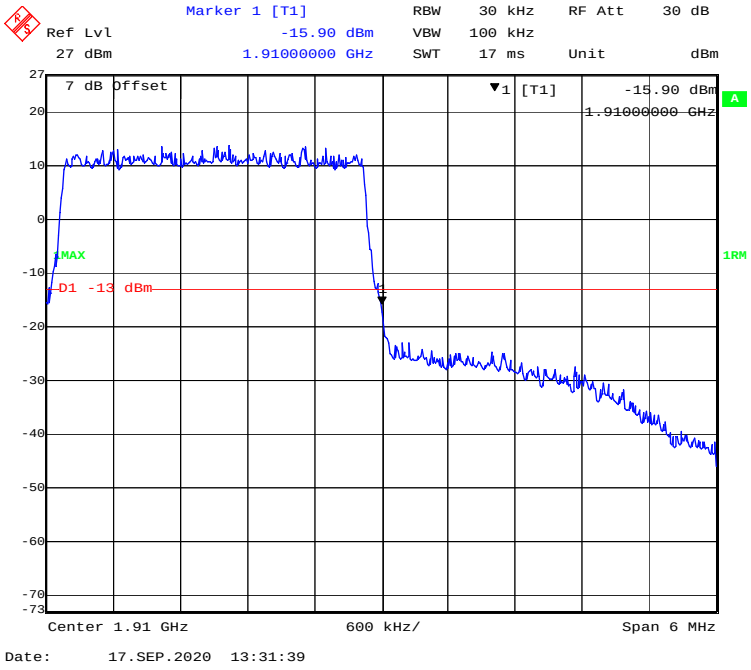
16-QAM (1.4 MHz, FULL RB) - Right Band Edge



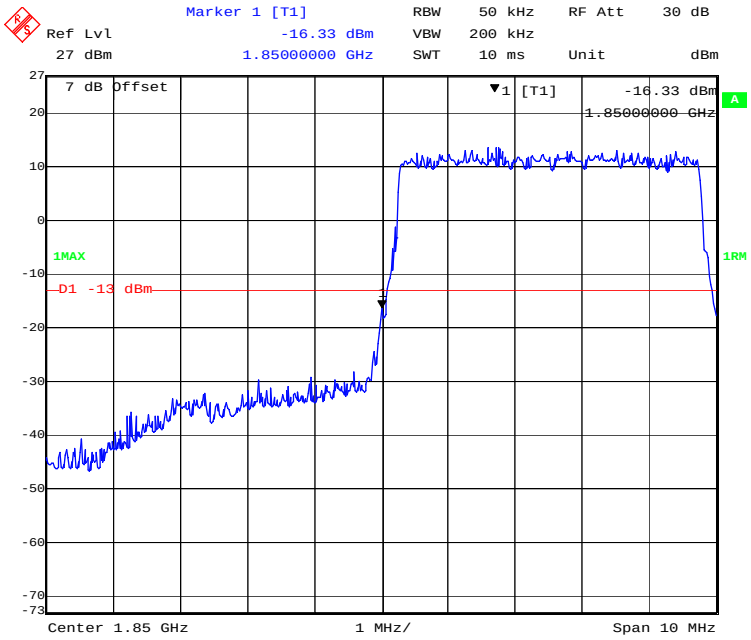
16-QAM (3 MHz, FULL RB) - Left Band Edge



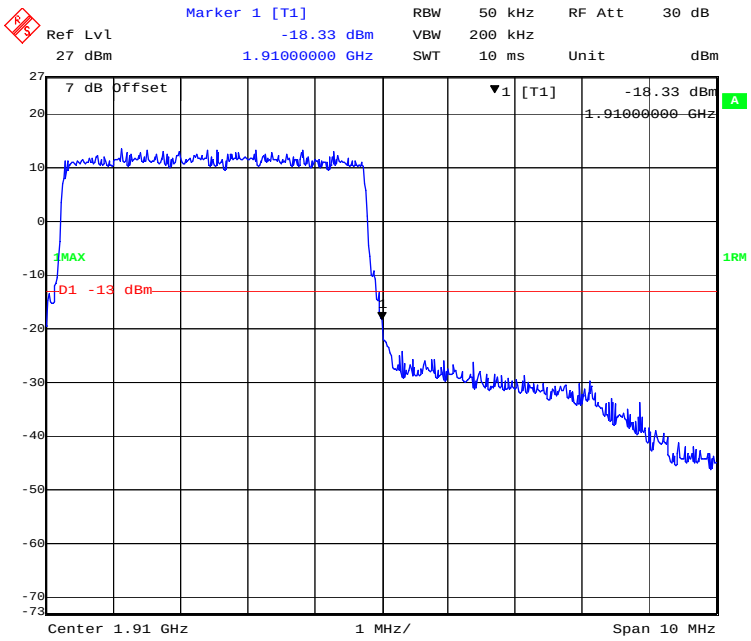
16-QAM (3 MHz, FULL RB) - Right Band Edge



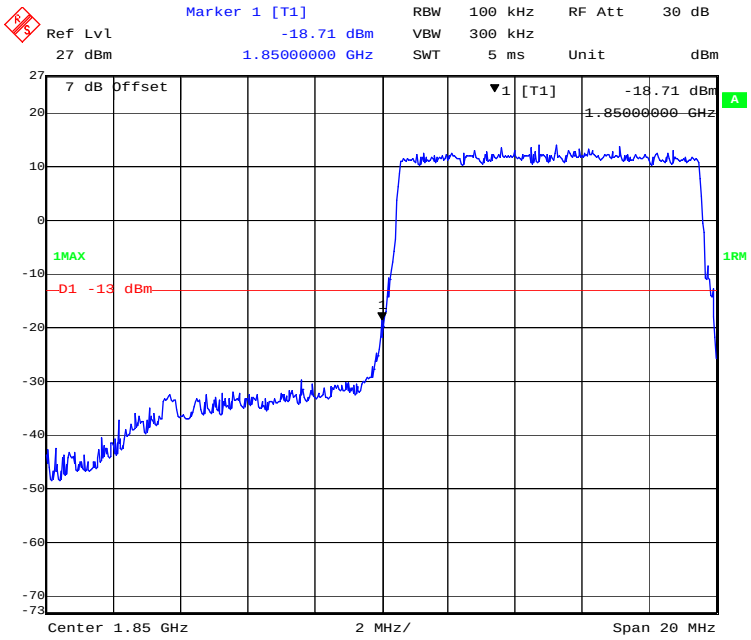
16-QAM (5 MHz, FULL RB) - Left Band Edge



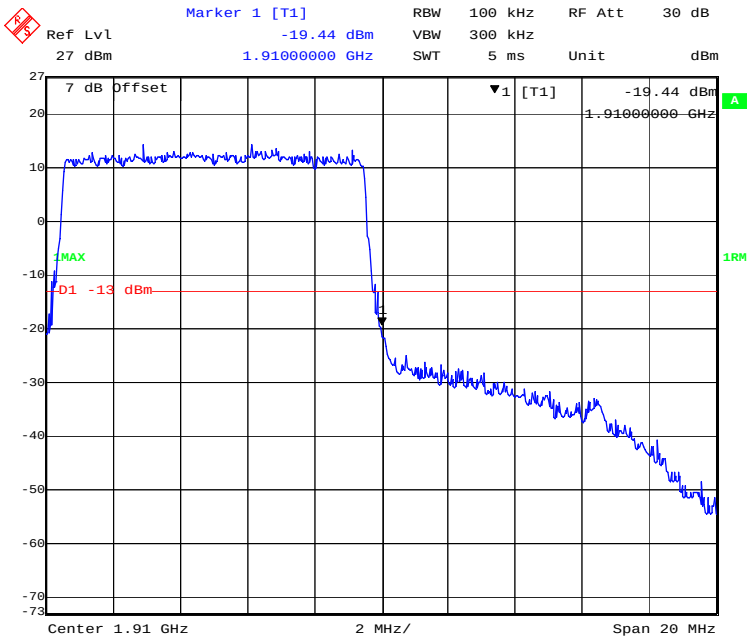
16-QAM (5 MHz, FULL RB) - Right Band Edge



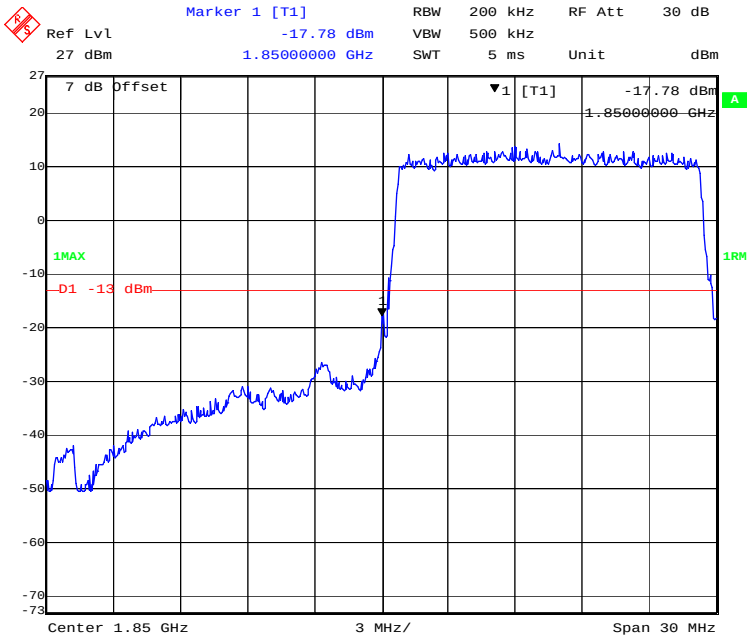
16-QAM (10 MHz, FULL RB) - Left Band Edge



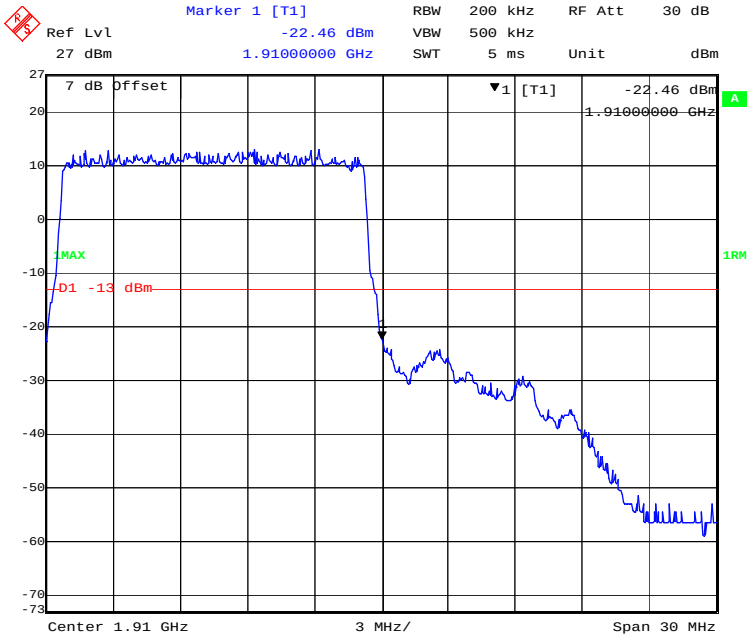
16-QAM (10 MHz, FULL RB) - Right Band Edge



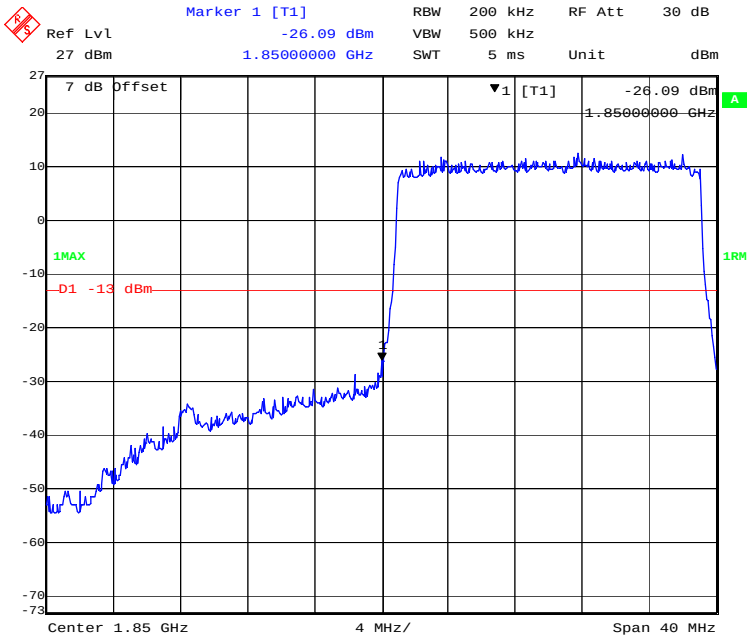
16-QAM (15 MHz, FULL RB) - Left Band Edge



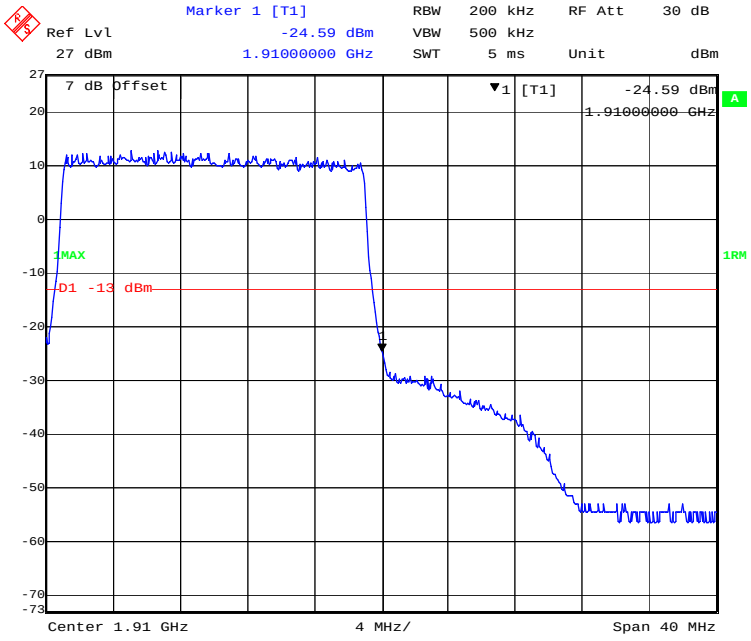
16-QAM (15 MHz, FULL RB) - Right Band Edge



16-QAM (20 MHz, FULL RB) - Left Band Edge

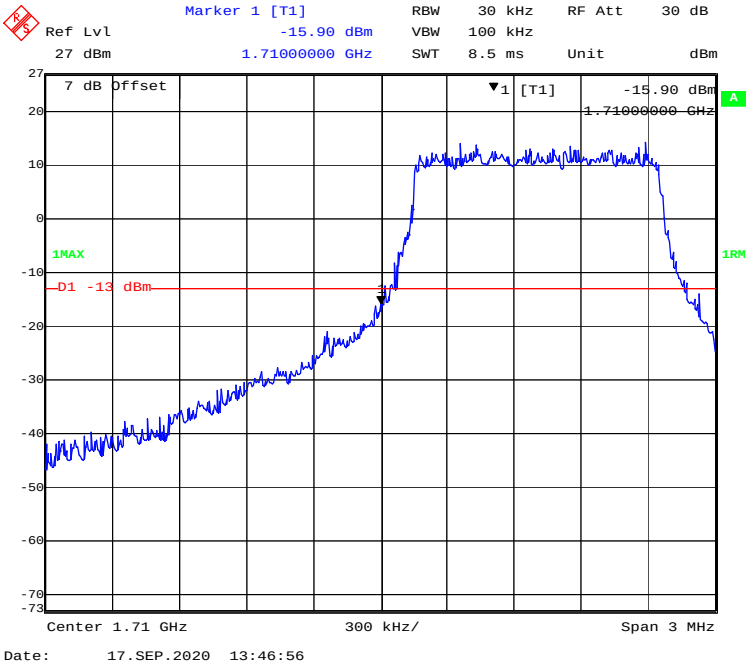


16-QAM (20 MHz, FULL RB) - Right Band Edge

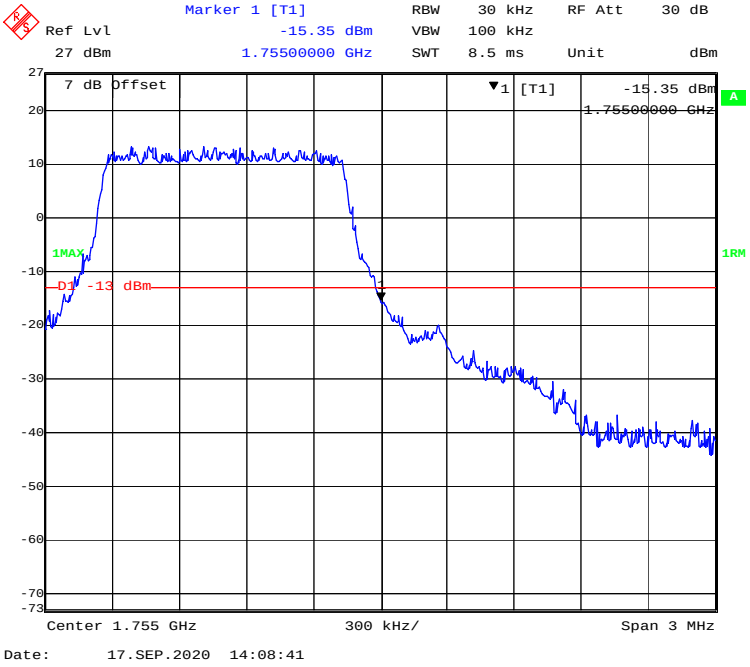


LTE Band 4:

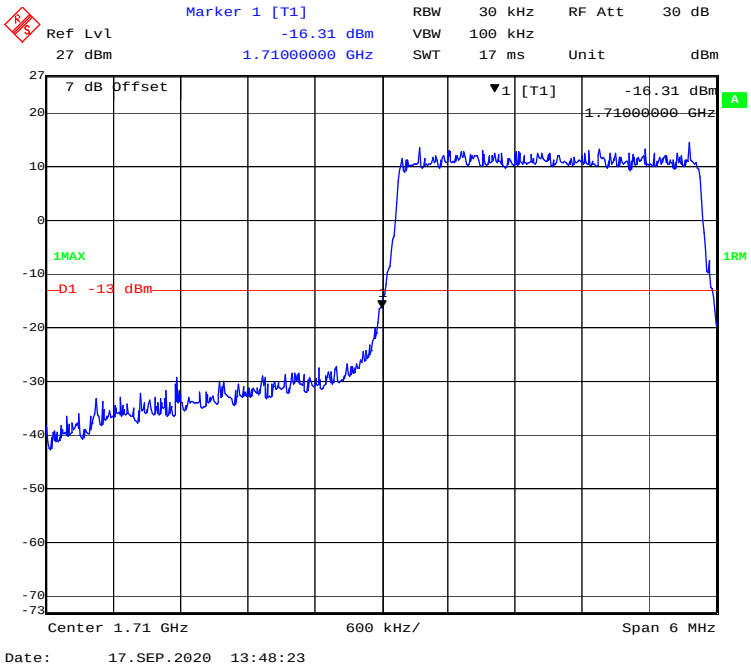
QPSK (1.4 MHz, FULL RB) - Left Band Edge



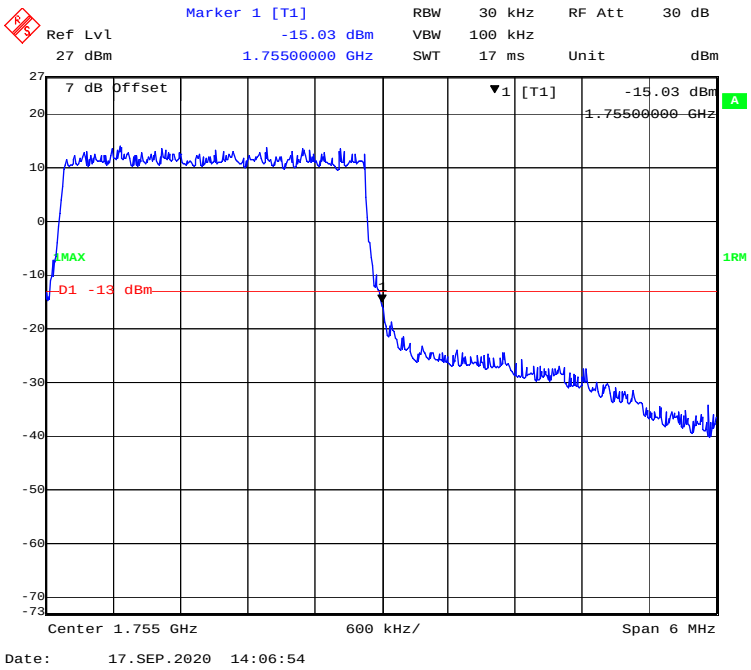
QPSK (1.4 MHz, FULL RB) - Right Band Edge



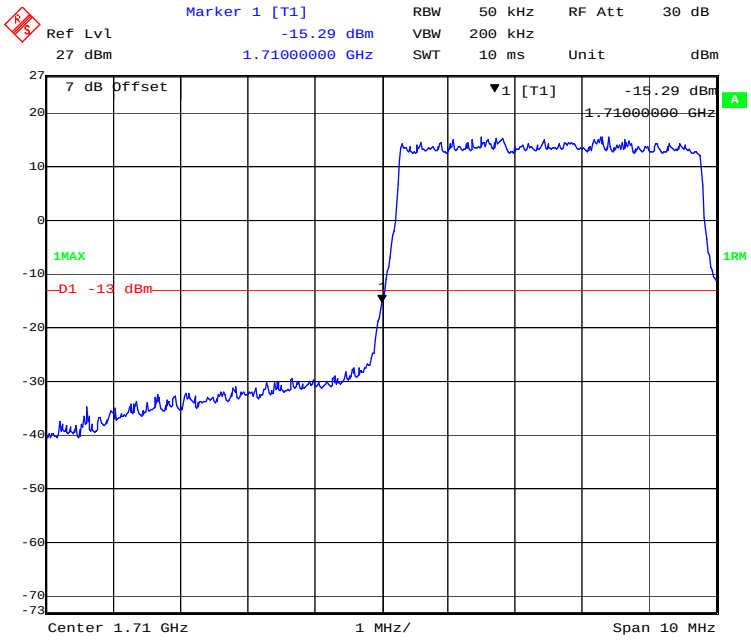
QPSK (3 MHz, FULL RB) - Left Band Edge



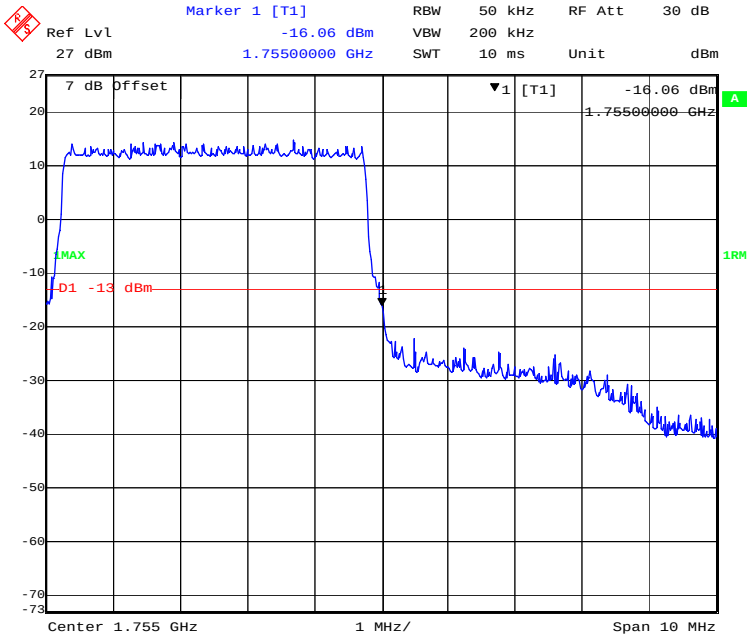
QPSK (3 MHz, FULL RB) - Right Band Edge



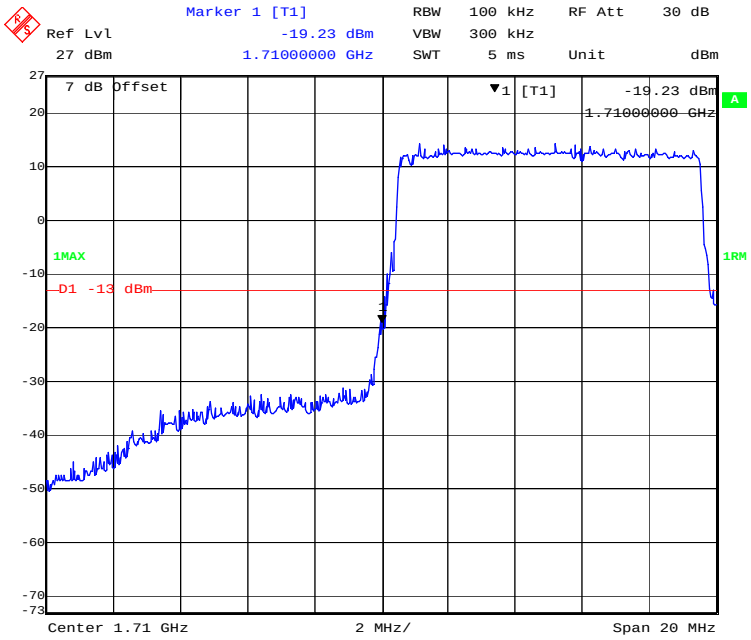
QPSK (5 MHz, FULL RB) - Left Band Edge



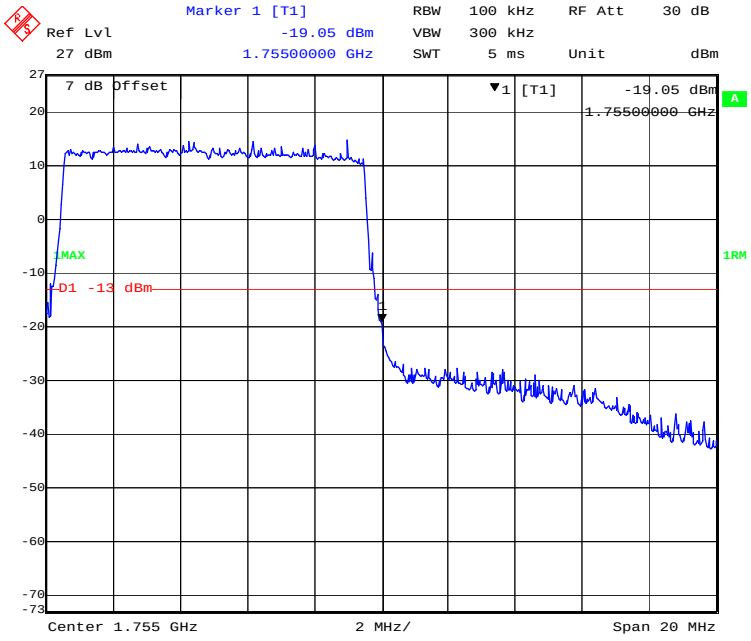
QPSK (5 MHz, FULL RB) - Right Band Edge



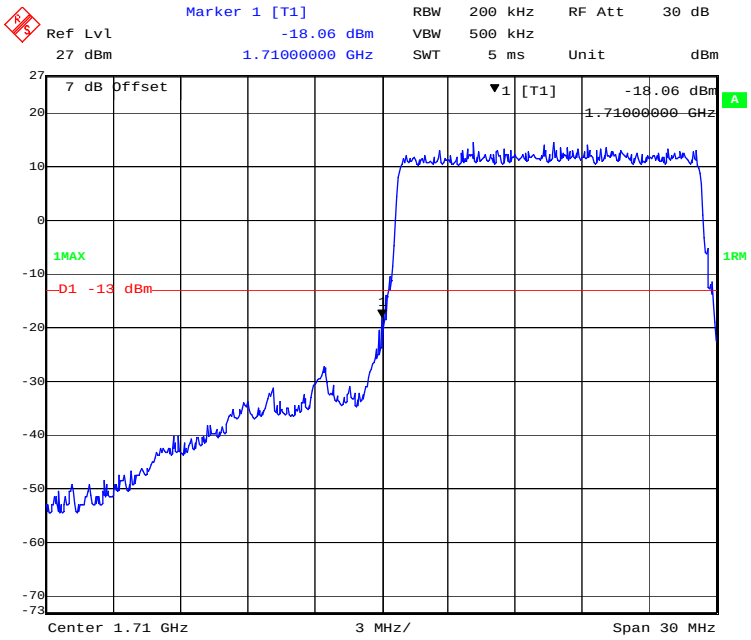
QPSK (10 MHz, FULL RB) - Left Band Edge



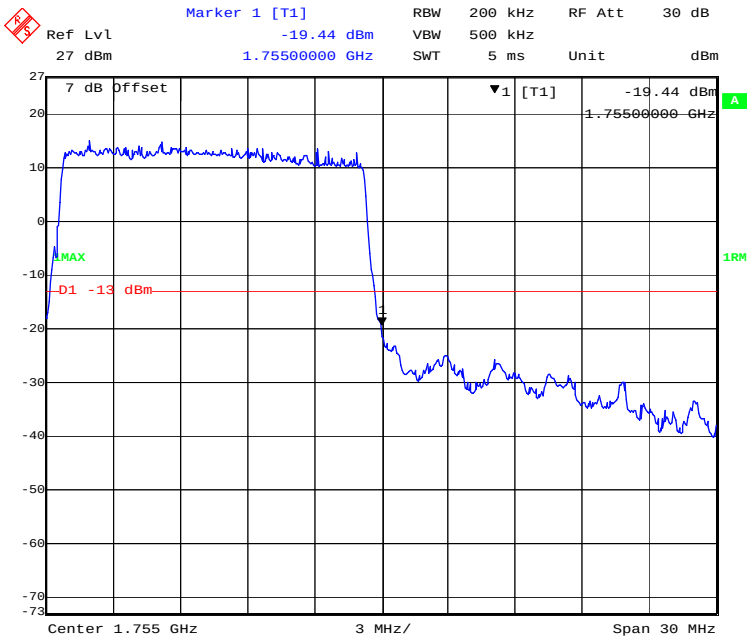
QPSK (10 MHz, FULL RB) - Right Band Edge



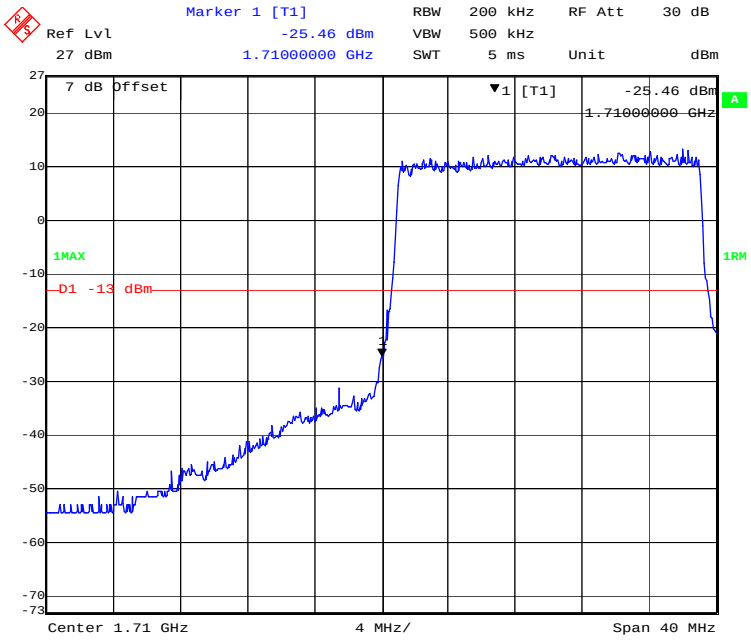
QPSK (15 MHz, FULL RB) - Left Band Edge



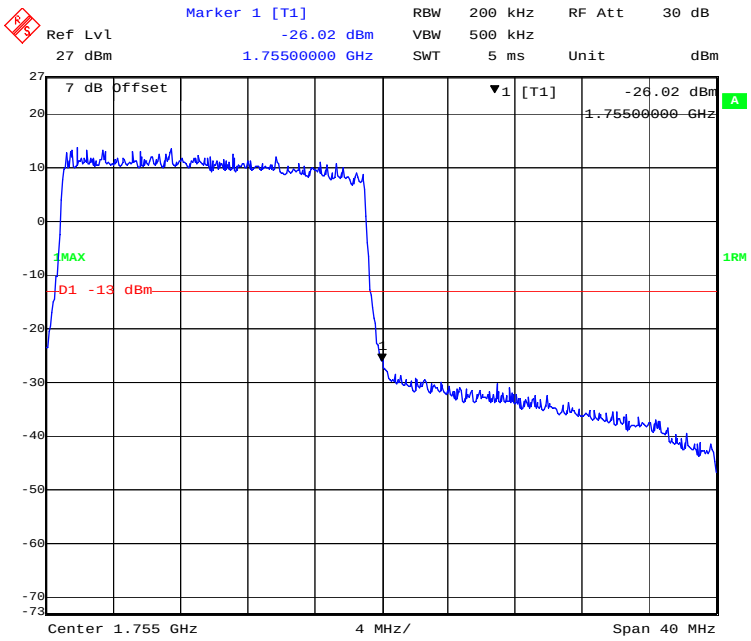
QPSK (15 MHz, FULL RB) - Right Band Edge



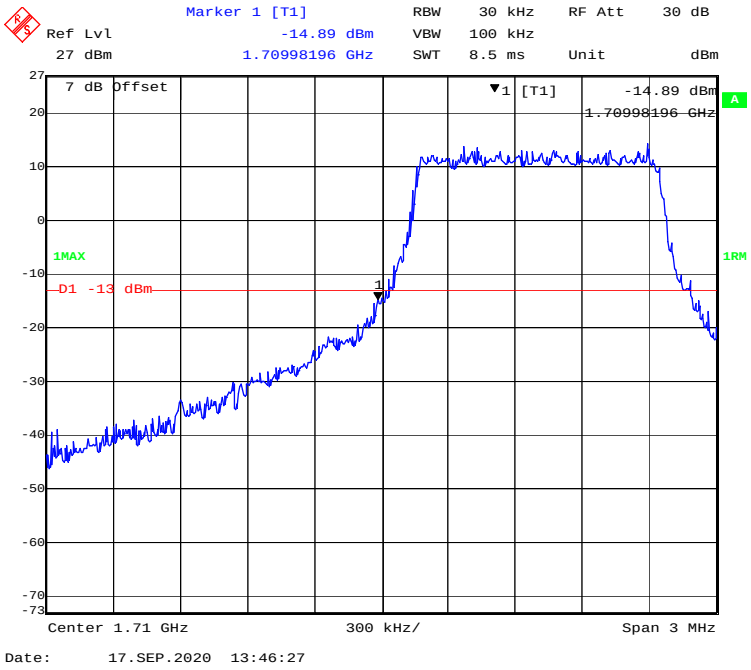
QPSK (20 MHz, FULL RB) - Left Band Edge



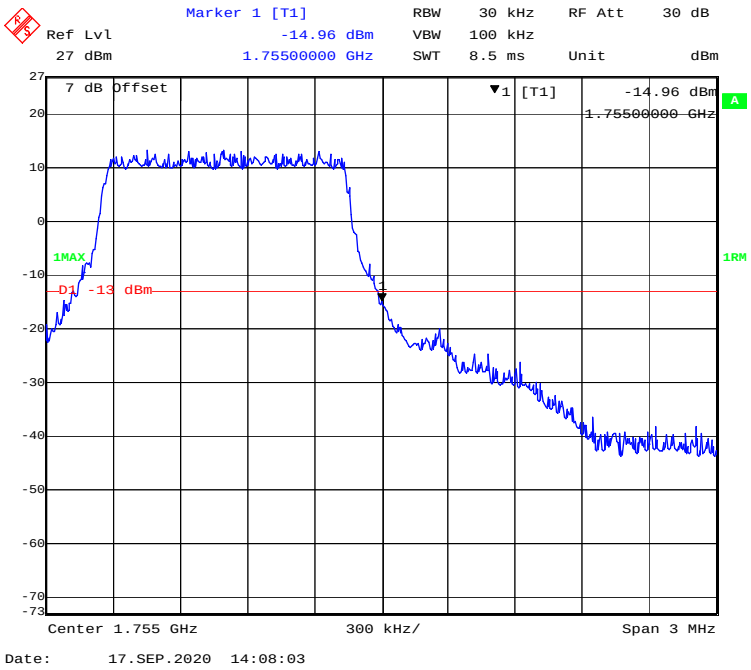
QPSK (20 MHz, FULL RB) - Right Band Edge



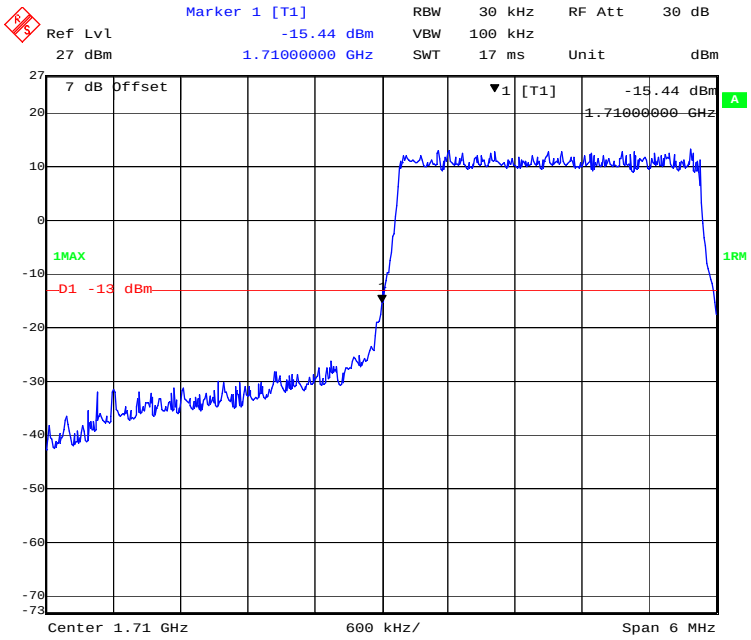
16-QAM (1.4 MHz, FULL RB) - Left Band Edge



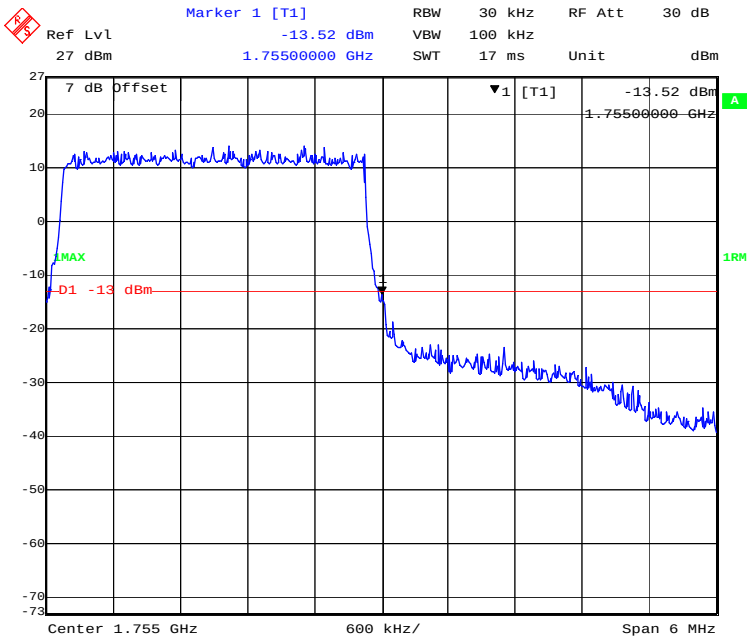
16-QAM (1.4 MHz, FULL RB) - Right Band Edge



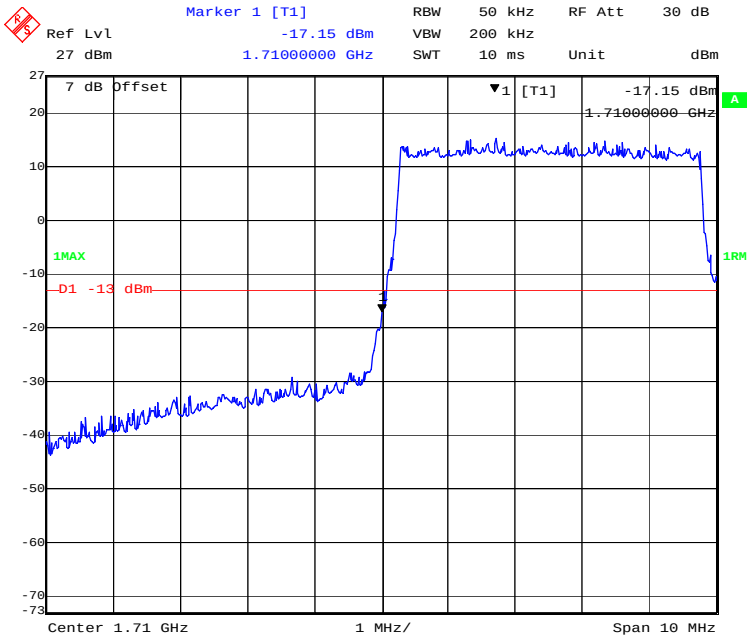
16-QAM (3 MHz, FULL RB) - Left Band Edge



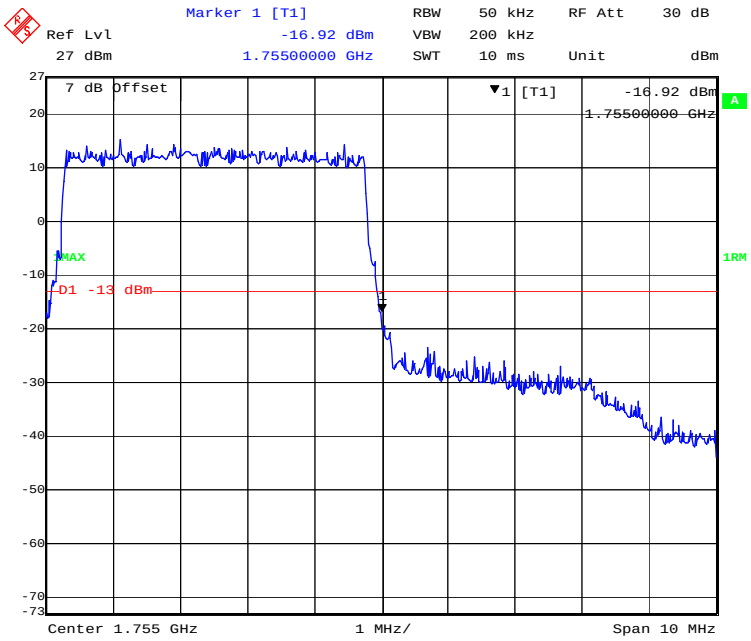
16-QAM (3 MHz, FULL RB) - Right Band Edge



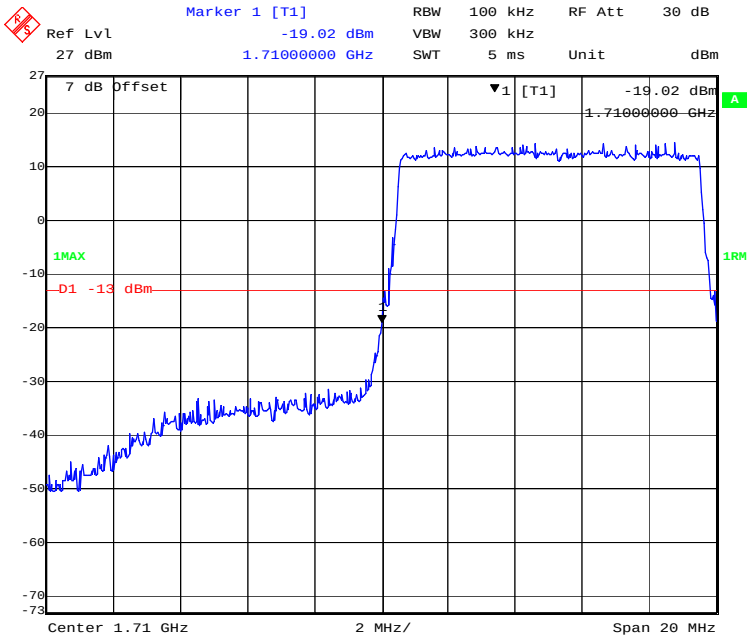
16-QAM (5 MHz, FULL RB) - Left Band Edge



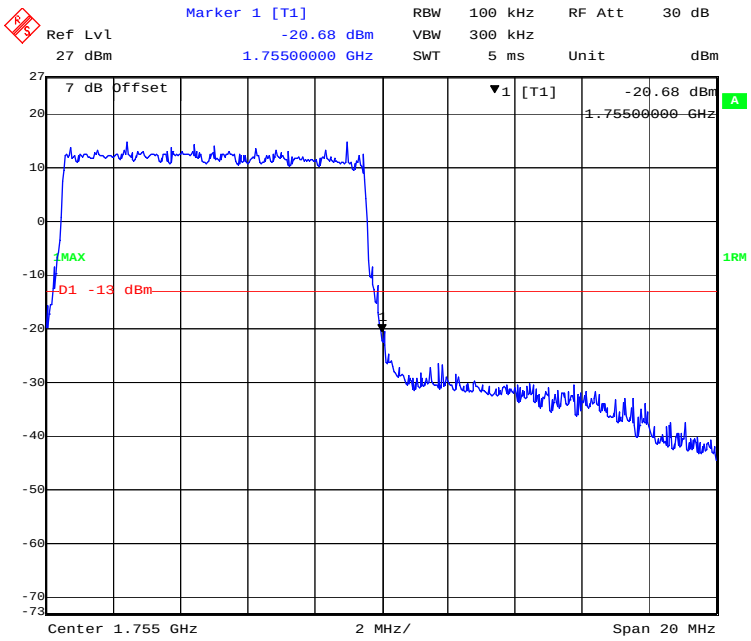
16-QAM (5 MHz, FULL RB) - Right Band Edge



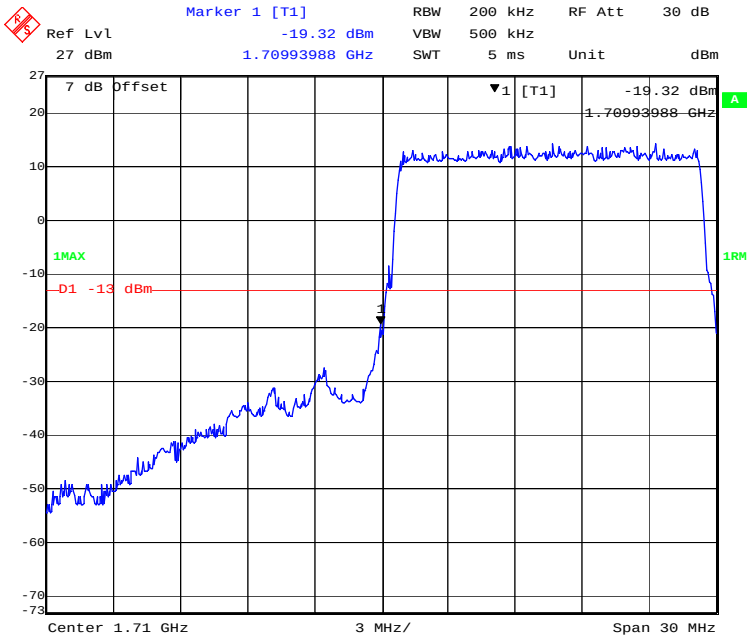
16-QAM (10 MHz, FULL RB) - Left Band Edge



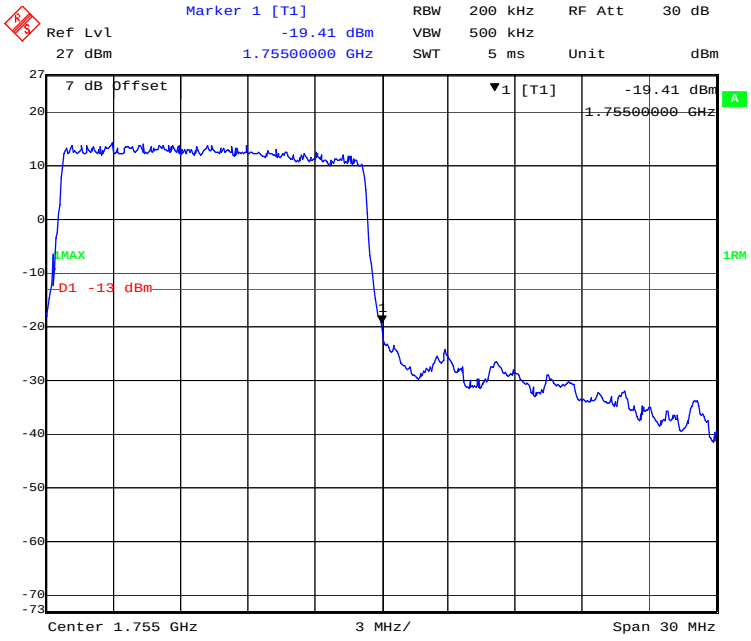
16-QAM (10 MHz, FULL RB) - Right Band Edge



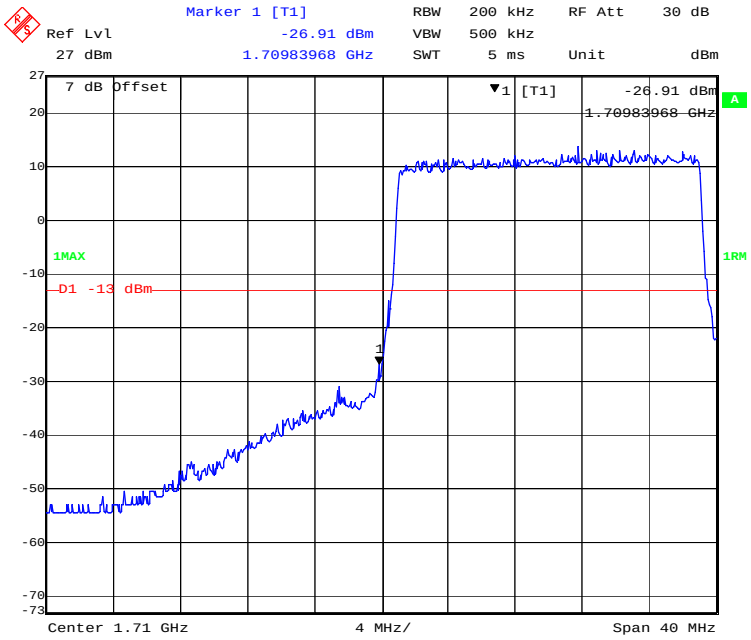
16-QAM (15 MHz, FULL RB) - Left Band Edge



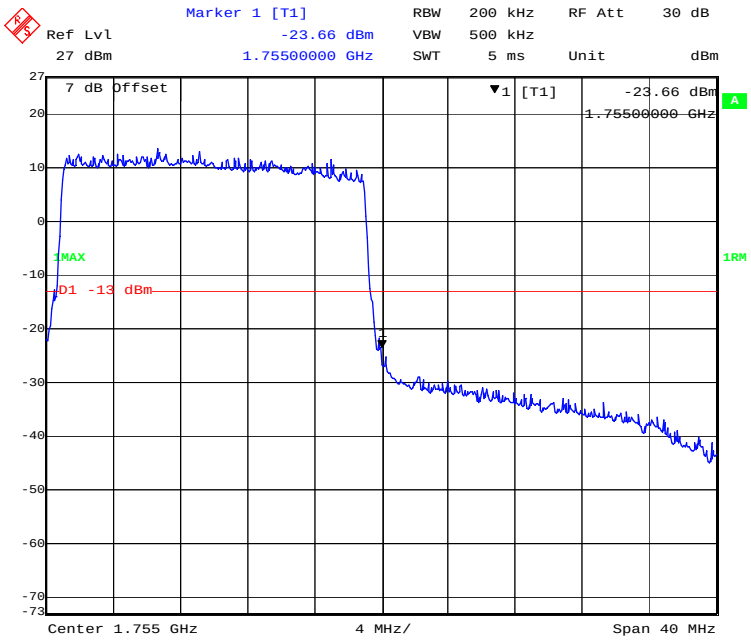
16-QAM (15 MHz, FULL RB) - Right Band Edge



16-QAM (20 MHz, FULL RB) - Left Band Edge

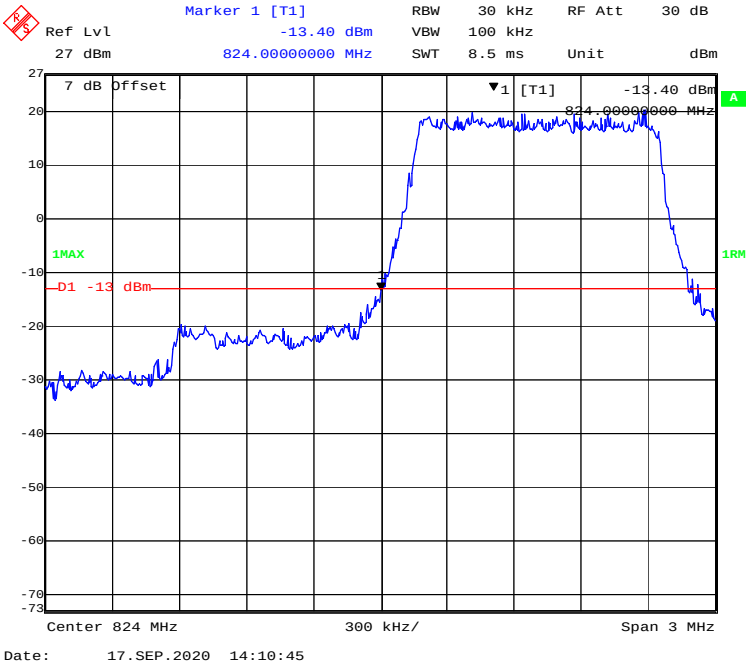


16-QAM (20 MHz, FULL RB) - Right Band Edge



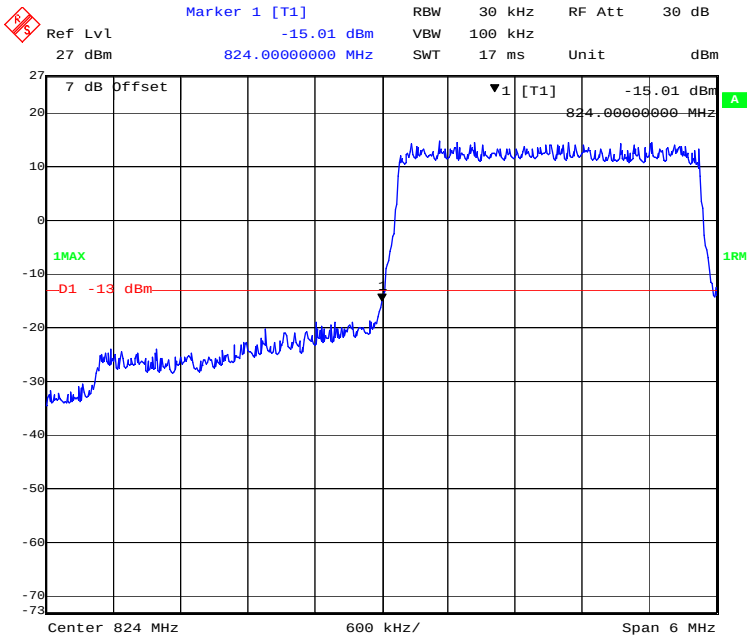
LTE Band 5:

QPSK (1.4 MHz, FULL RB) - Left Band Edge

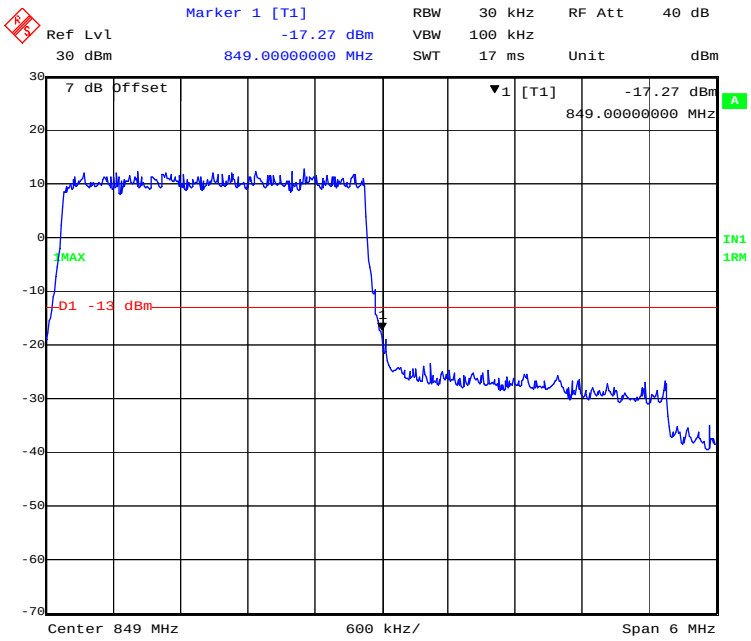


QPSK (1.4 MHz, FULL RB) - Right Band Edge

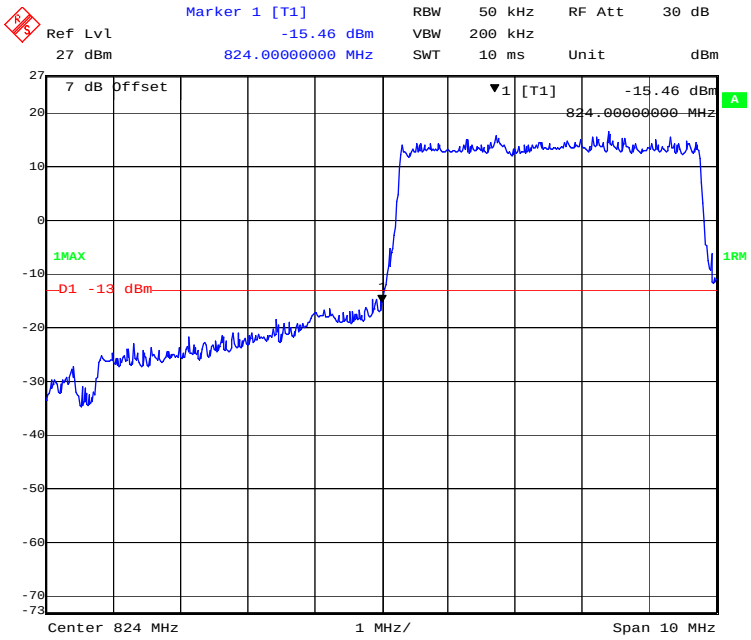
QPSK (3.0 MHz, FULL RB) - Left Band Edge



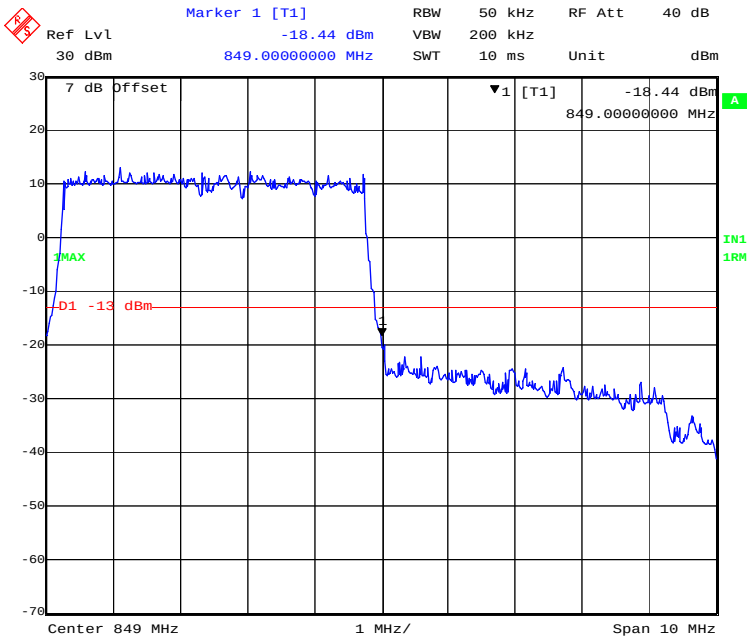
QPSK (3.0 MHz, FULL RB) - Right Band Edge



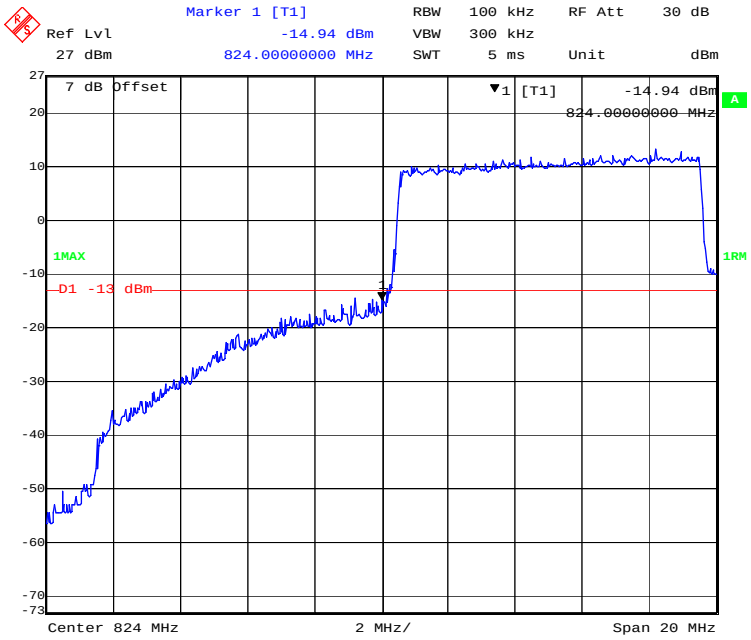
QPSK (5.0 MHz, FULL RB) - Left Band Edge



QPSK (5.0 MHz, FULL RB) - Right Band Edge

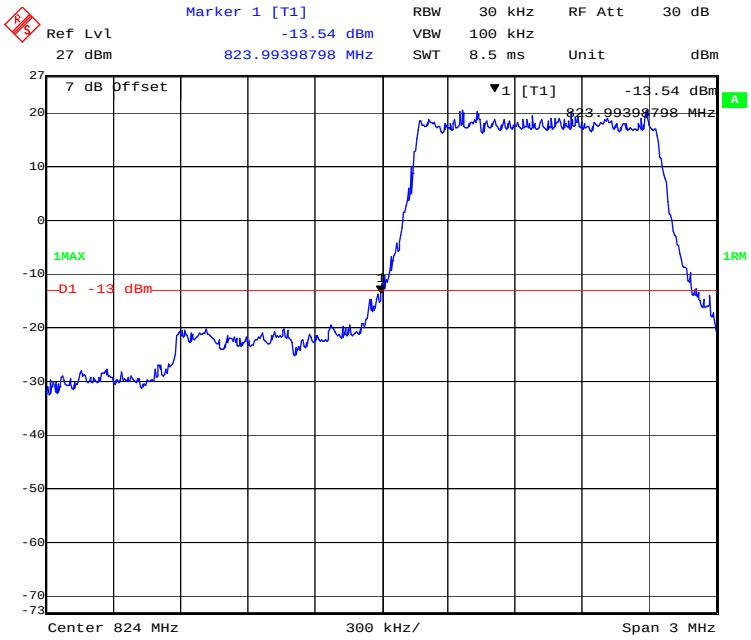


QPSK (10.0 MHz, FULL RB) - Left Band Edge



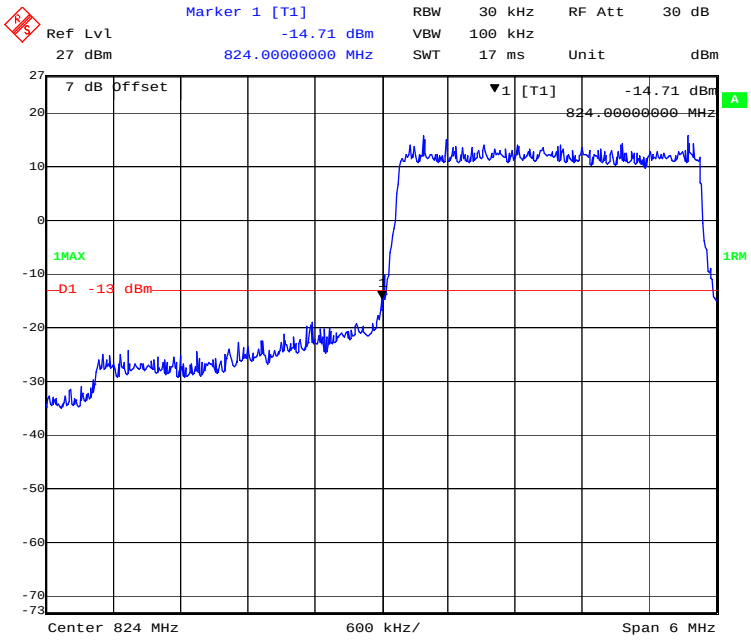
QPSK (10.0 MHz, FULL RB) - Right Band Edge

16-QAM (1.4 MHz, FULL RB) - Left Band Edge

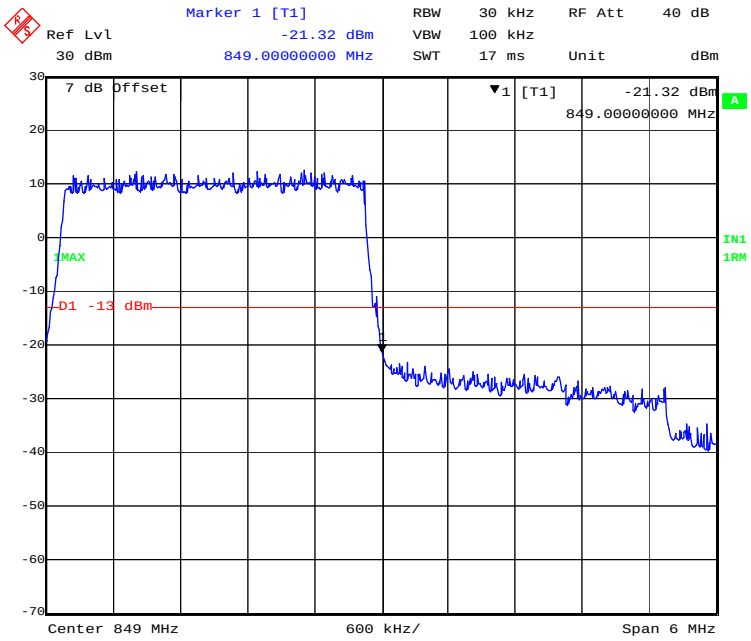


16-QAM (1.4 MHz, FULL RB) - Right Band Edge

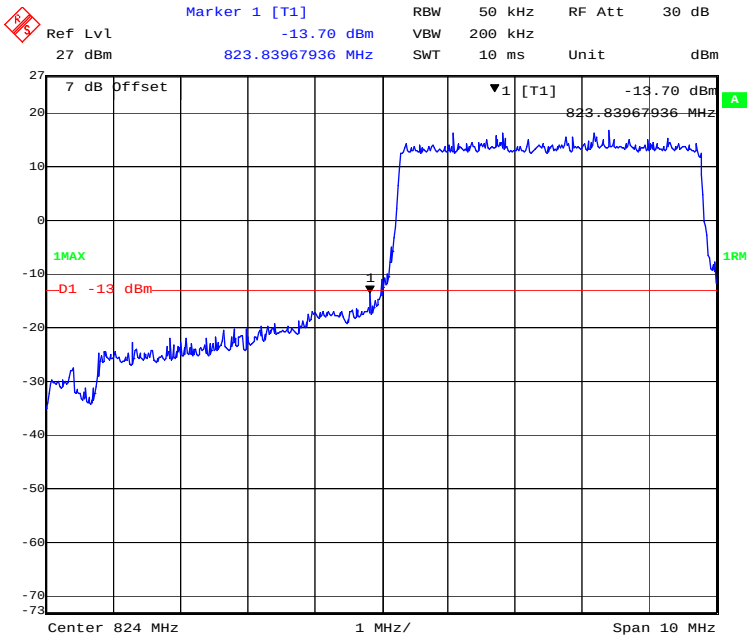
16-QAM (3.0 MHz, FULL RB) - Left Band Edge



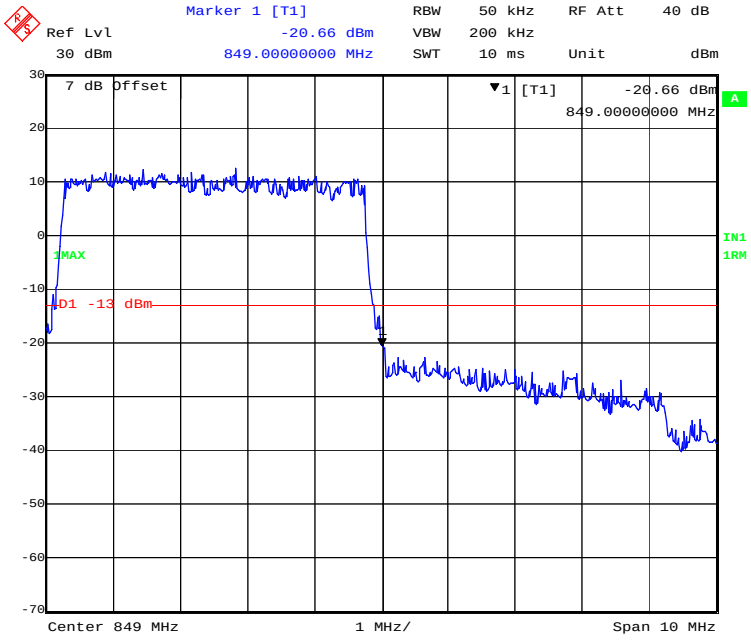
16-QAM (3.0 MHz, FULL RB) - Right Band Edge



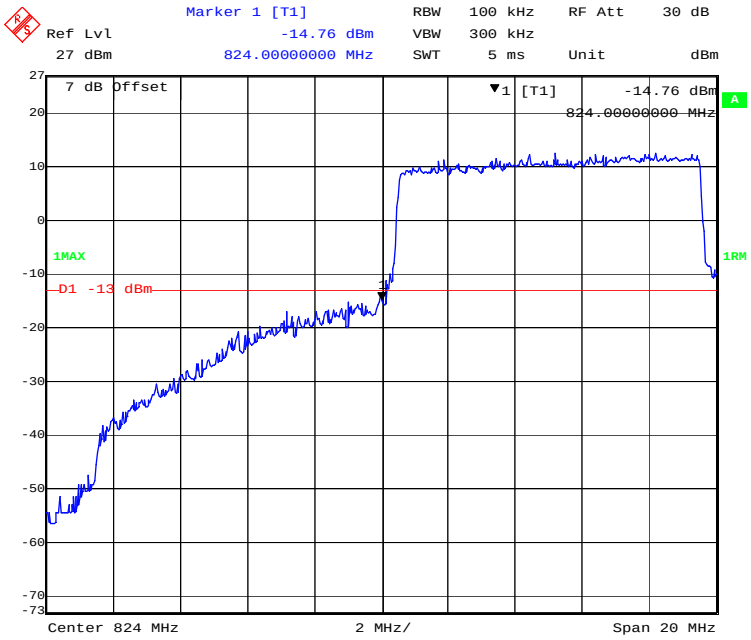
16-QAM (5.0 MHz, FULL RB) - Left Band Edge



16-QAM (5.0 MHz, FULL RB) - Right Band Edge



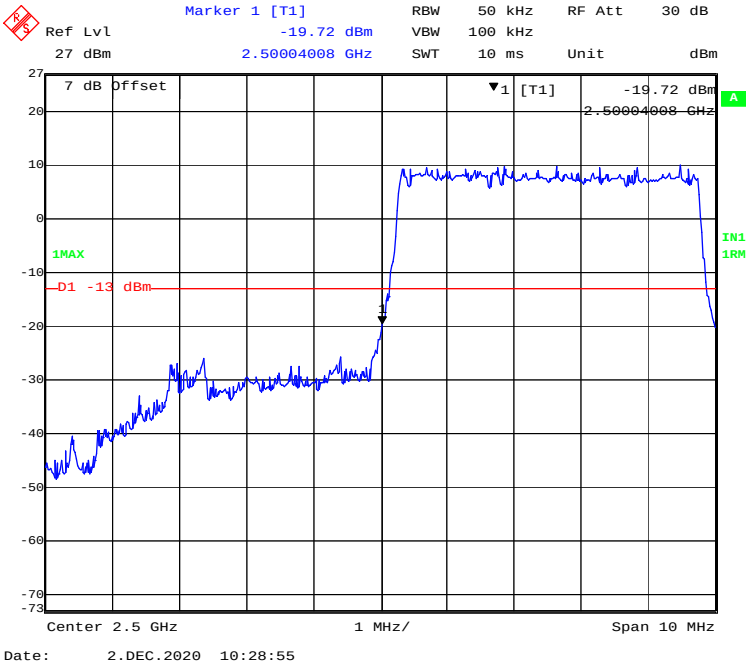
16-QAM (10.0 MHz, FULL RB) - Left Band Edge



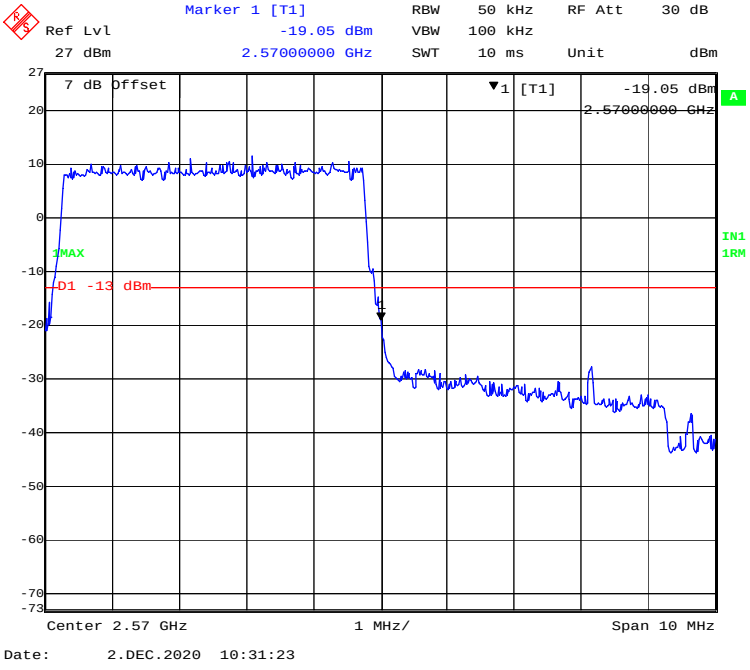
16-QAM (10.0 MHz, FULL RB) - Right Band Edge

LTE Band 7:

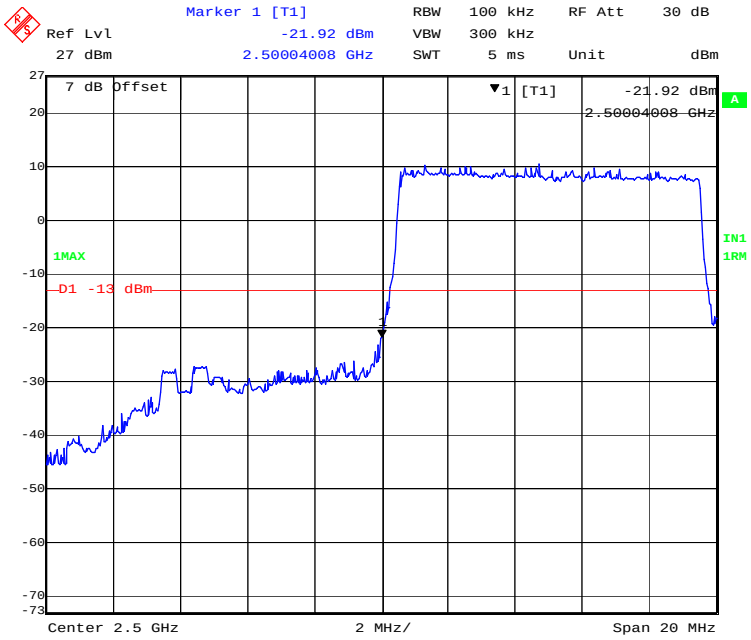
QPSK (5.0 MHz, FULL RB) - Left Band Edge



QPSK (5.0 MHz, FULL RB) - Right Band Edge

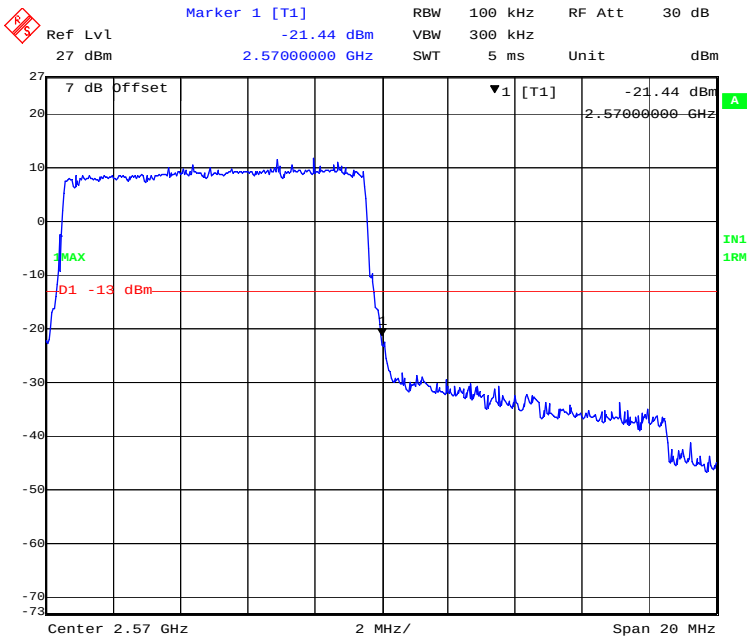


QPSK (10.0 MHz, FULL RB) - Left Band Edge



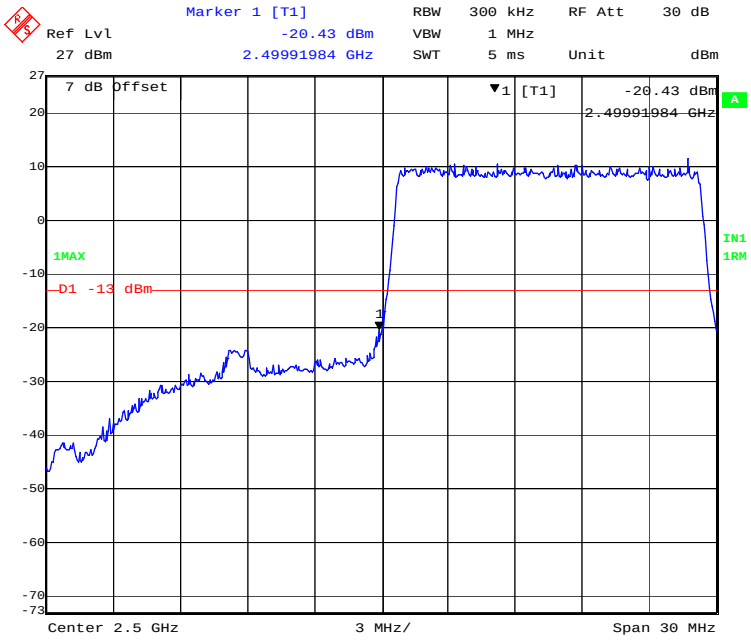
Date: 2.DEC.2020 10:26:59

QPSK (10.0 MHz, FULL RB) - Right Band Edge

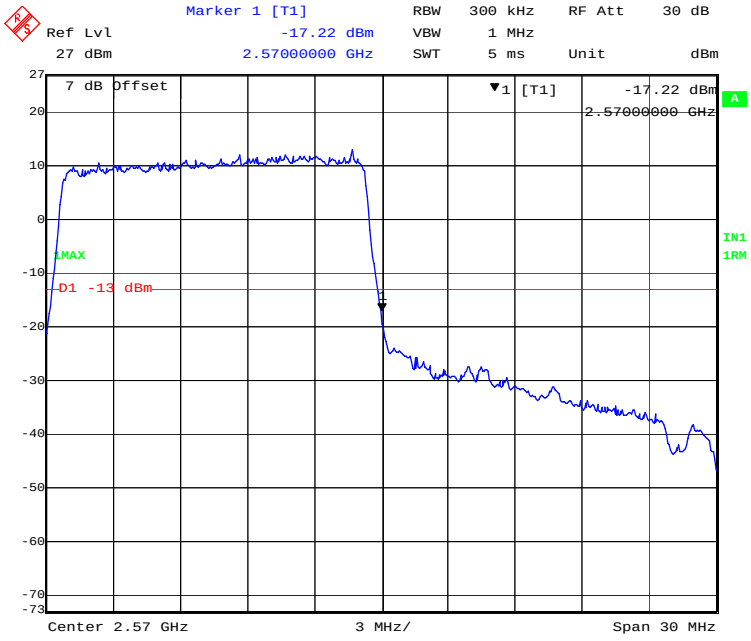


Date: 2.DEC.2020 10:33:31

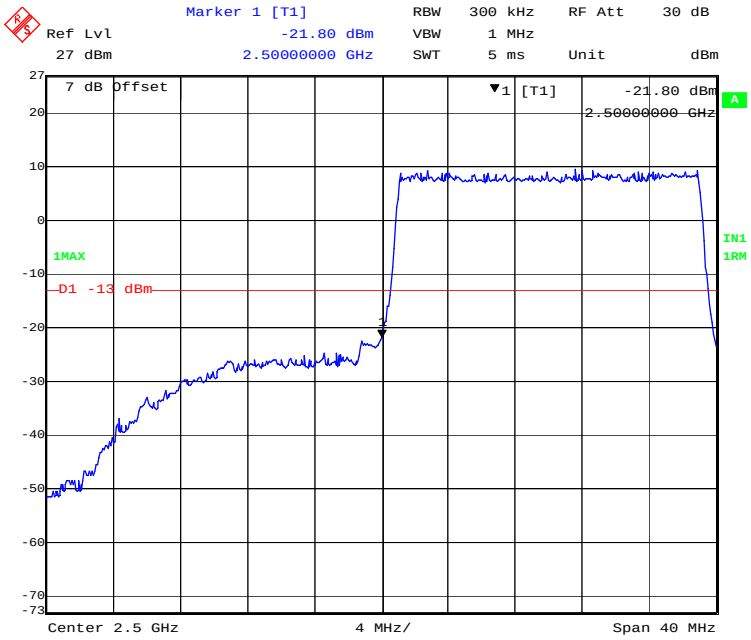
QPSK (15.0 MHz, FULL RB) - Left Band Edge



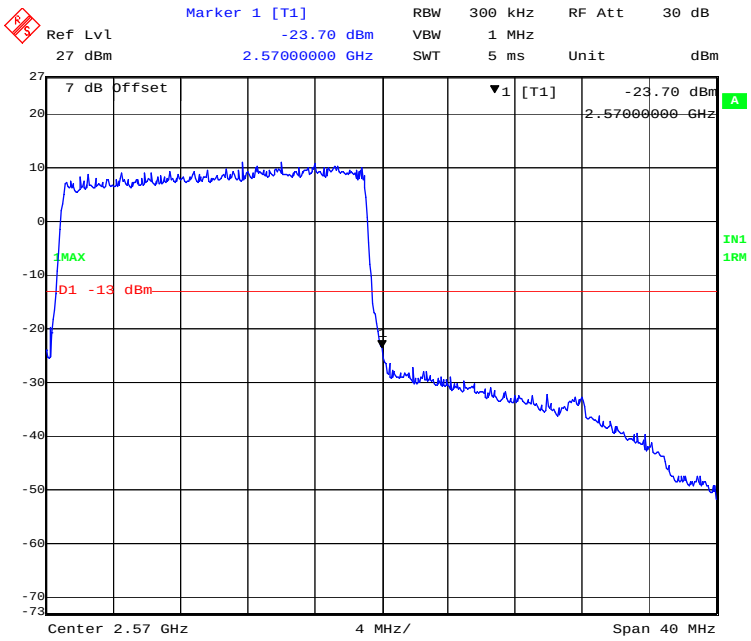
QPSK (15.0 MHz, FULL RB) - Right Band Edge



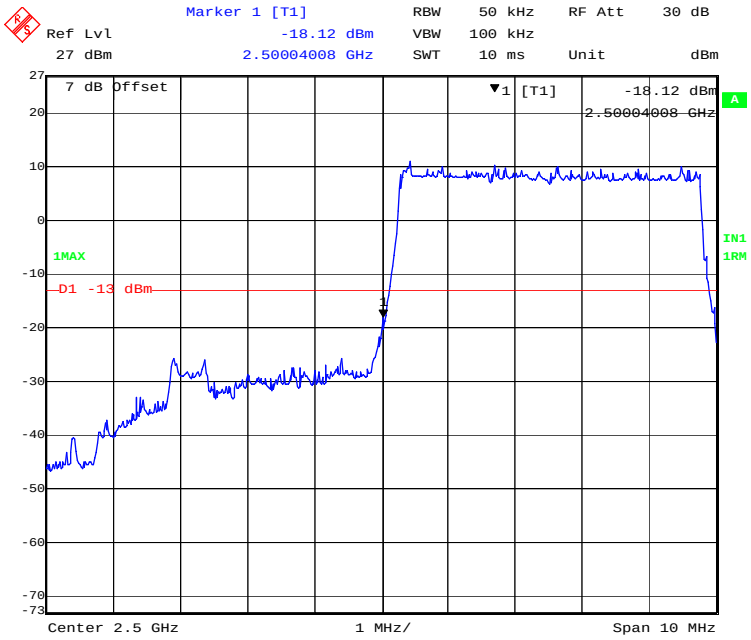
QPSK (20.0 MHz, FULL RB) - Left Band Edge



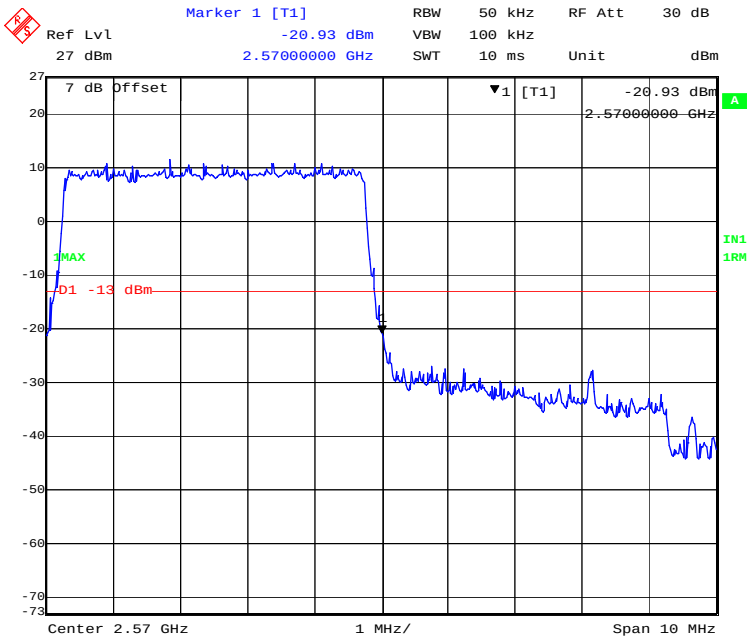
QPSK (20.0 MHz, FULL RB) - Right Band Edge



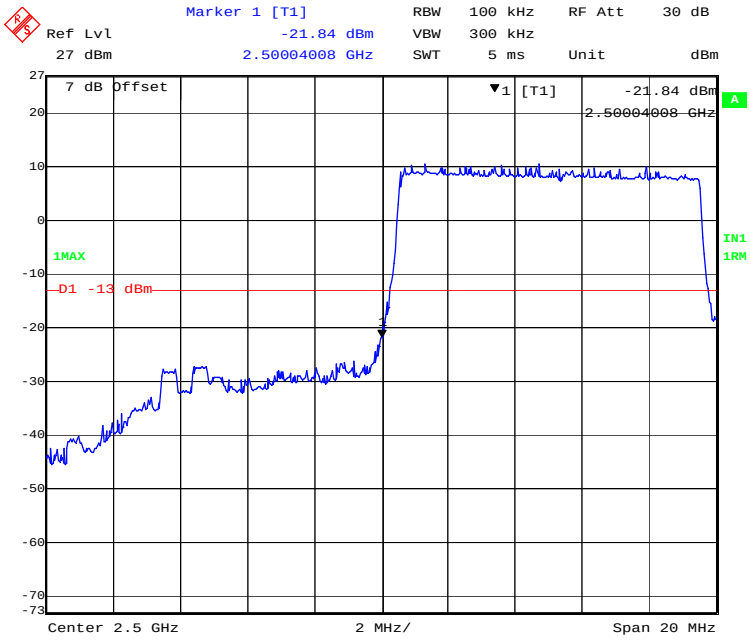
16-QAM (5.0 MHz, FULL RB) - Left Band Edge



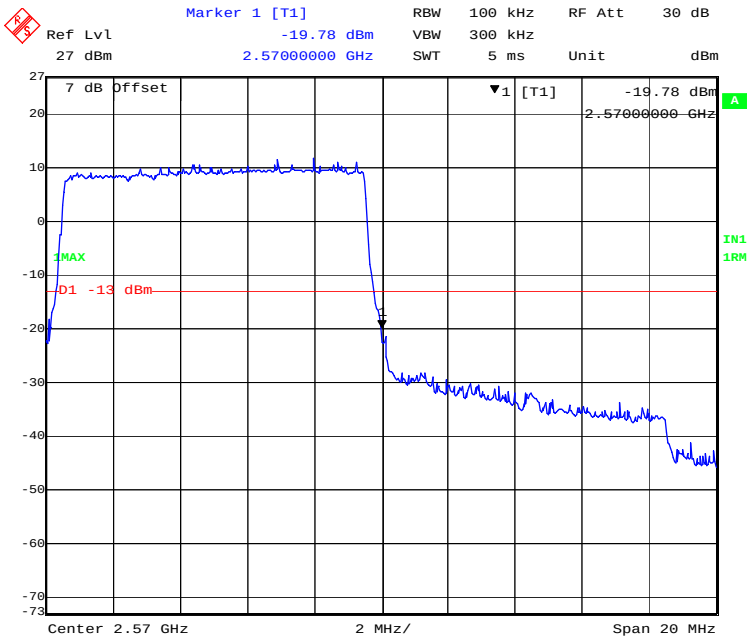
16-QAM (5.0 MHz, FULL RB) - Right Band Edge



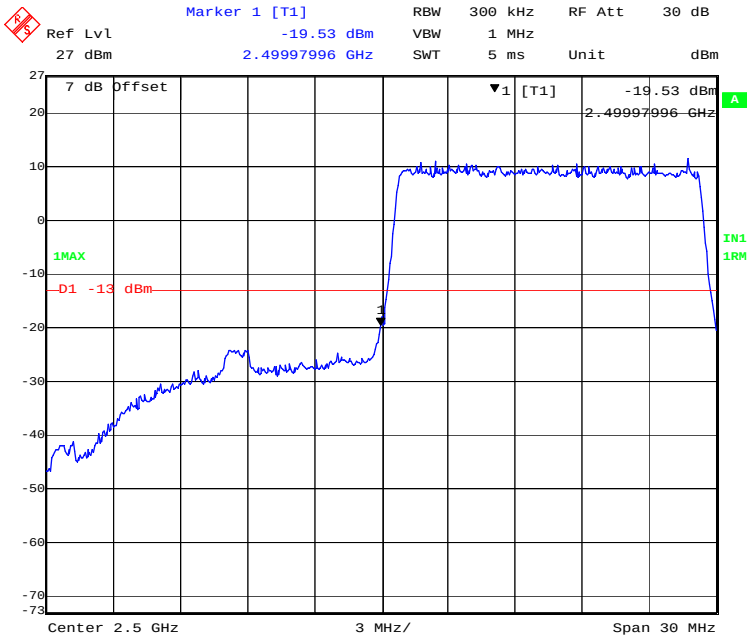
16-QAM (10.0 MHz, FULL RB) - Left Band Edge



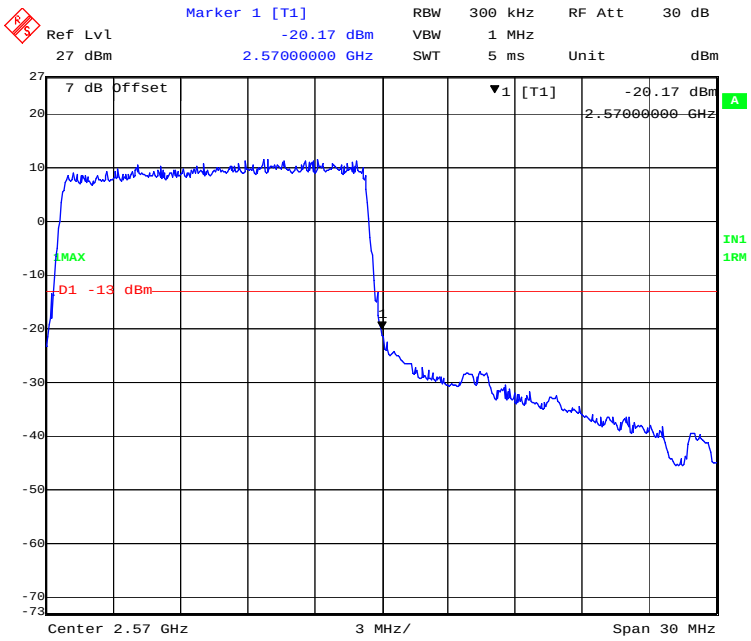
16-QAM (10.0 MHz, FULL RB) - Right Band Edge



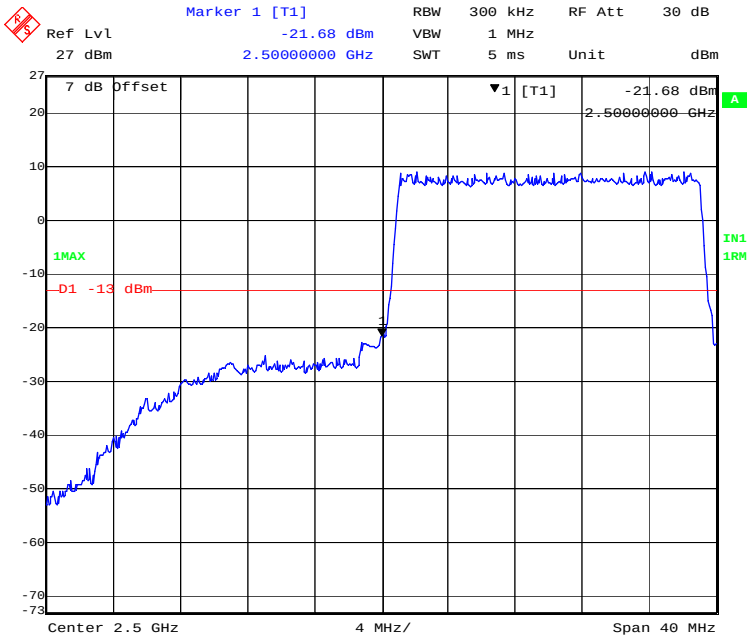
16-QAM (15.0 MHz, FULL RB) - Left Band Edge



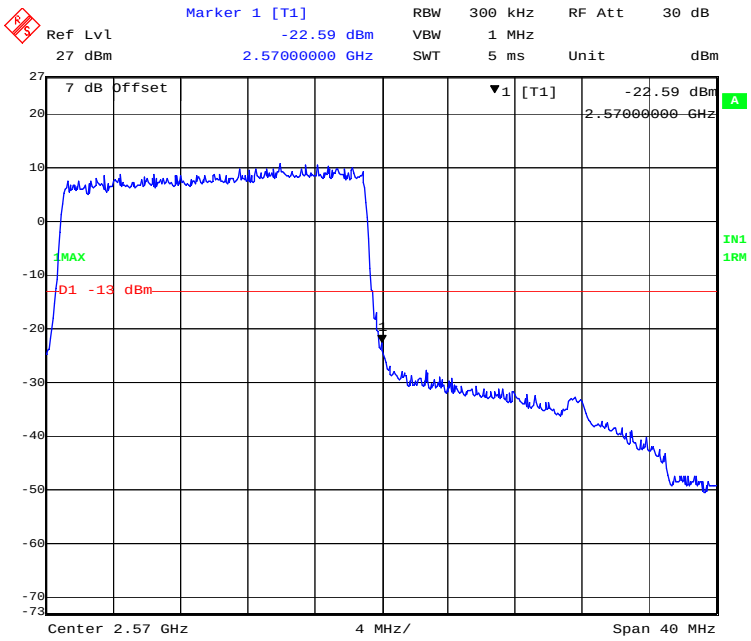
16-QAM (15.0 MHz, FULL RB) - Right Band Edge



16-QAM (20.0 MHz, FULL RB) - Left Band Edge

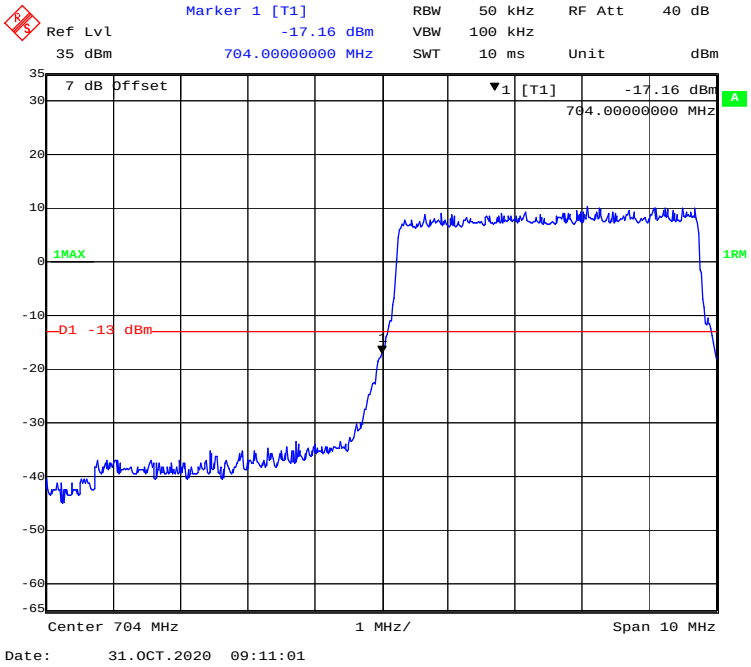


16-QAM (20.0 MHz, FULL RB) - Right Band Edge

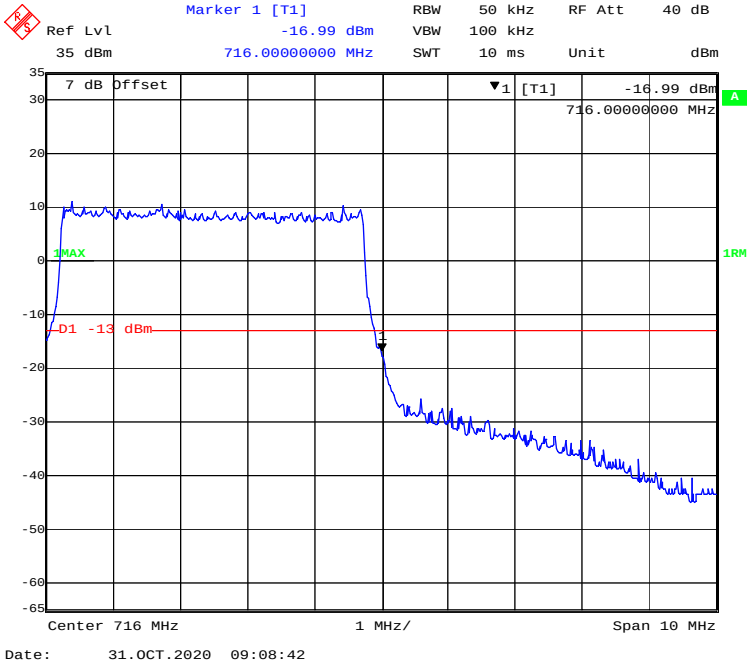


LTE Band 17:

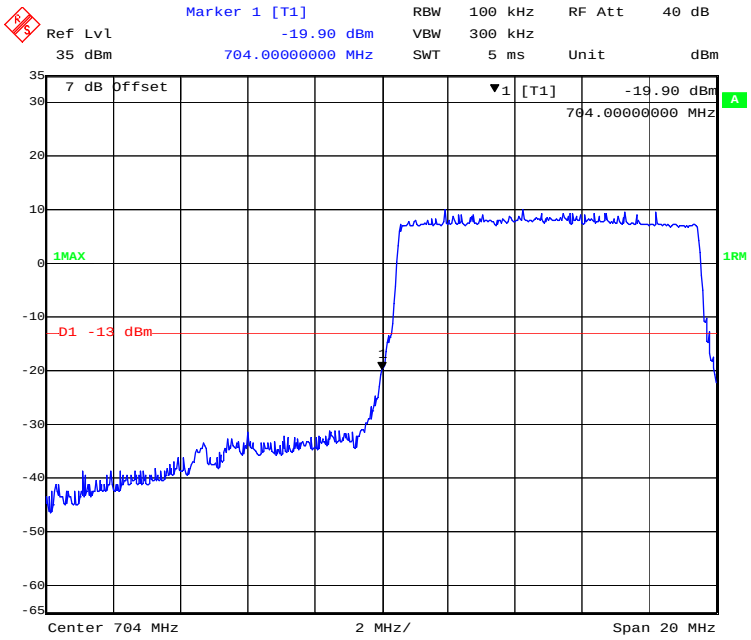
QPSK (5 MHz, FULL RB) - Left Band Edge



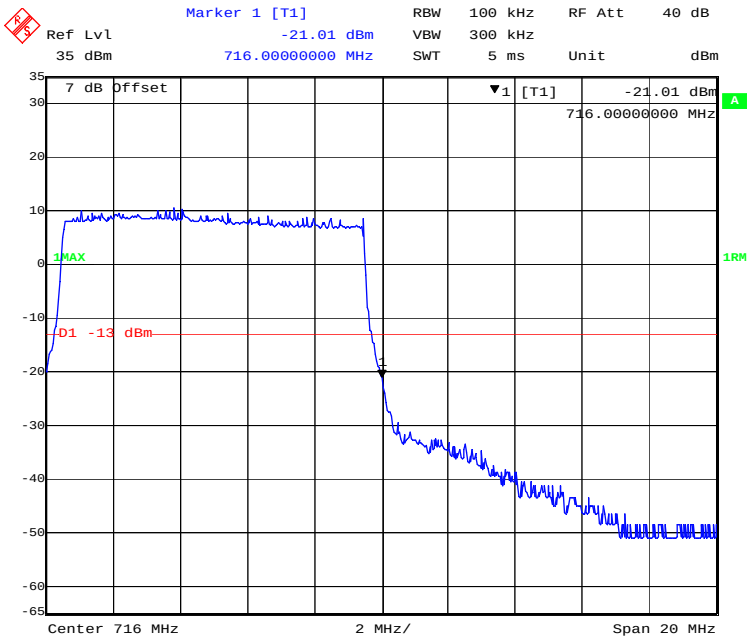
QPSK (5 MHz, FULL RB) - Right Band Edge



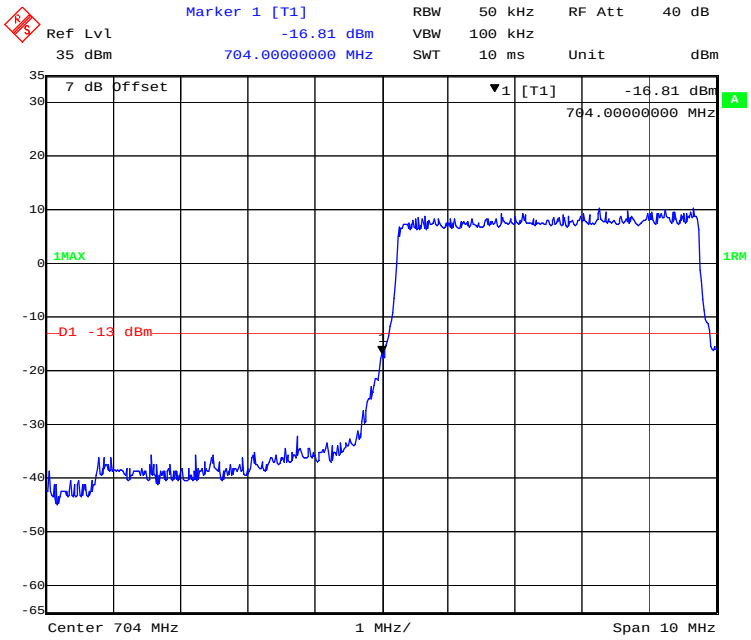
QPSK (10 MHz, FULL RB) - Left Band Edge



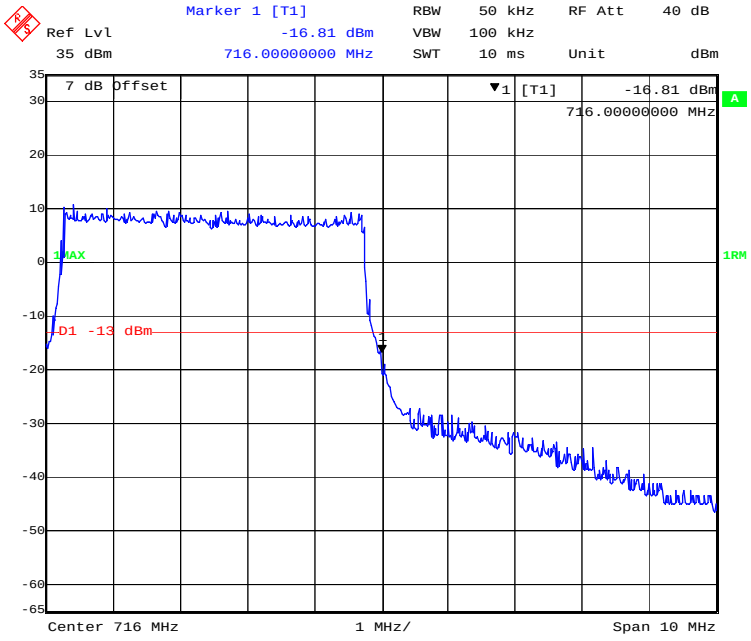
QPSK (10 MHz, FULL RB) - Right Band Edge



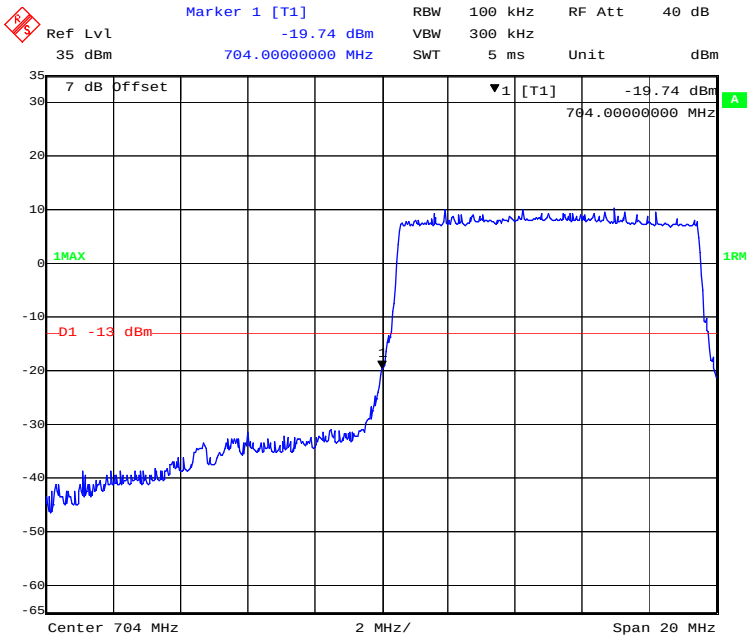
16-QAM (5 MHz, FULL RB) - Left Band Edge



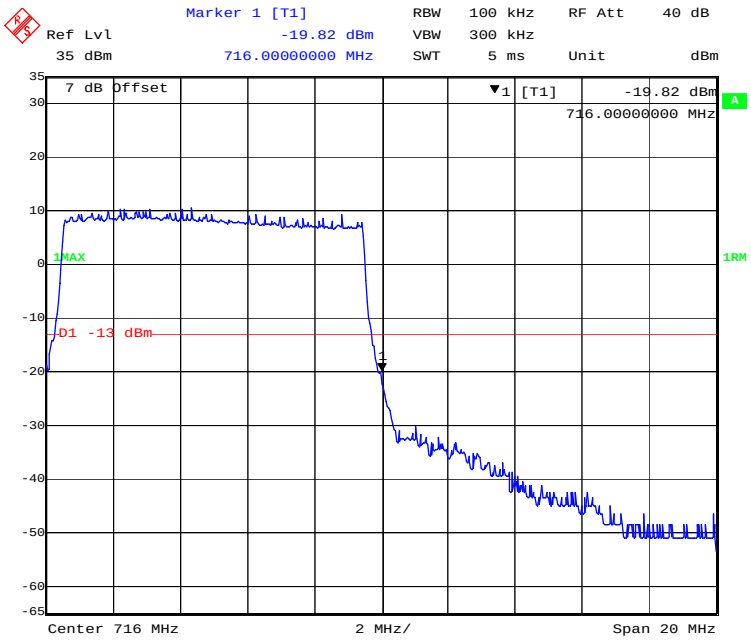
16-QAM (5 MHz, FULL RB) - Right Band Edge



16-QAM (10 MHz, FULL RB) - Left Band Edge

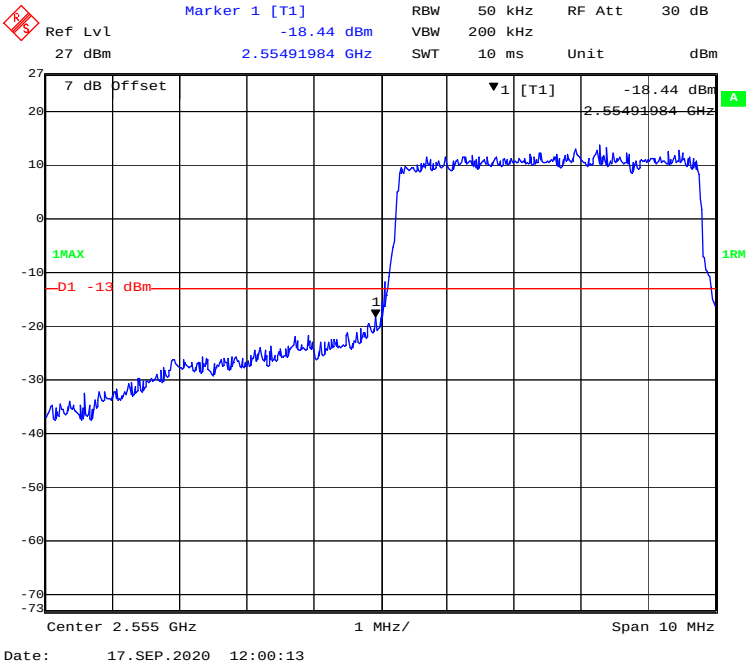


16-QAM (10 MHz, FULL RB) - Right Band Edge

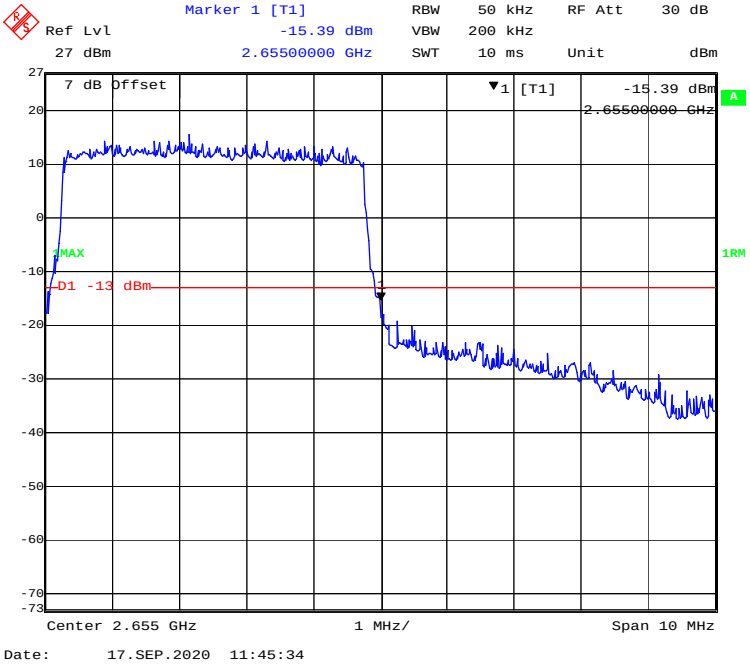


LTE Band 41:

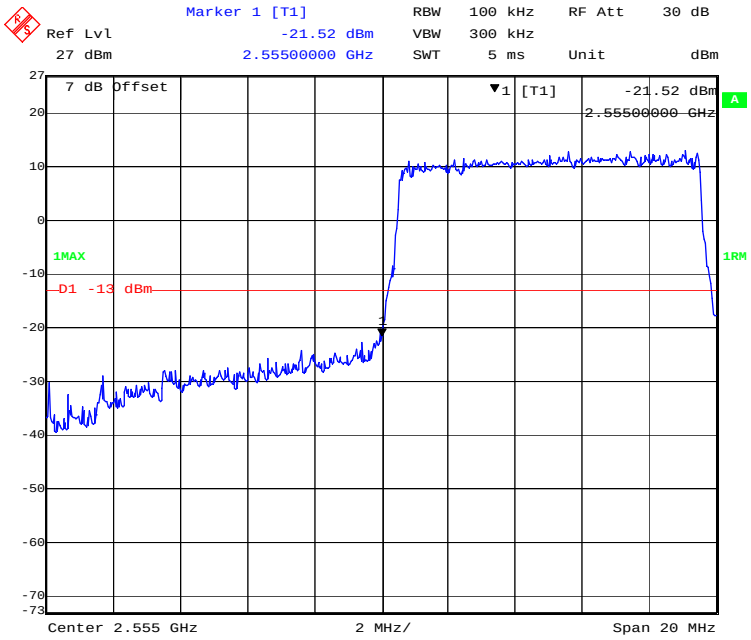
QPSK (5 MHz, FULL RB) - Left Band Edge



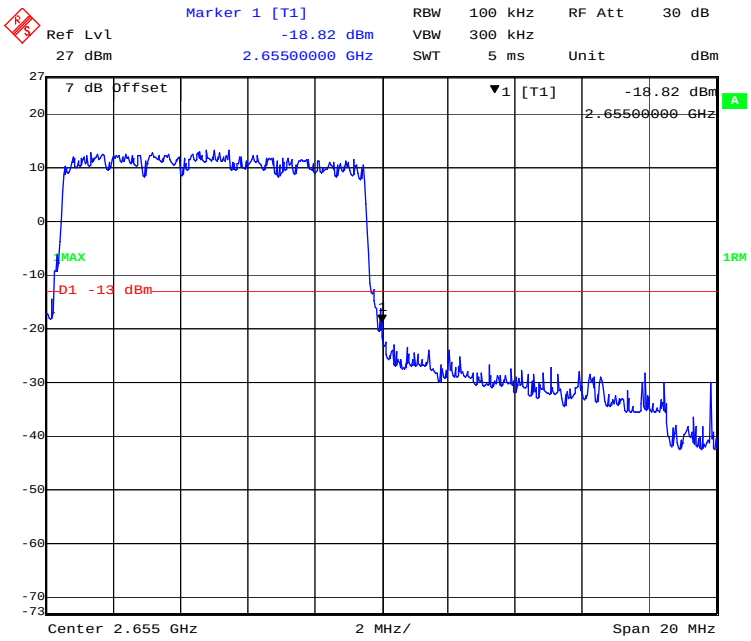
QPSK (5 MHz, FULL RB) - Right Band Edge



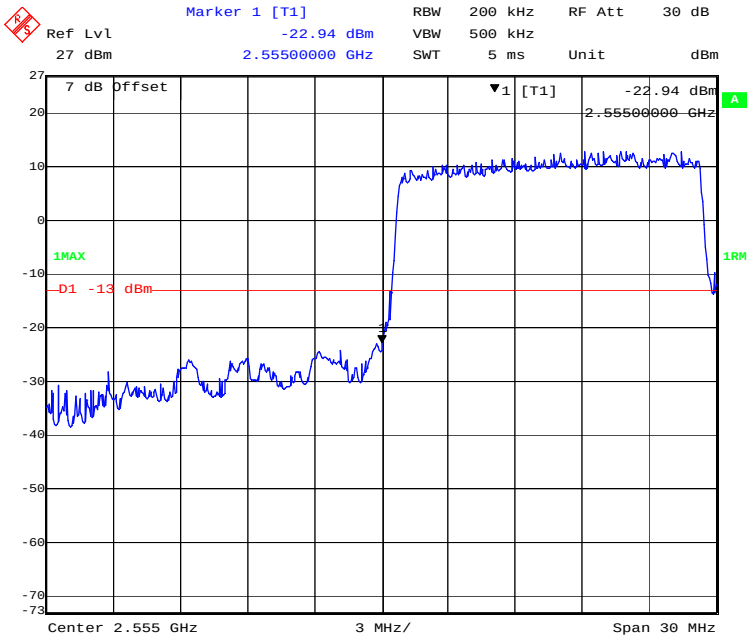
QPSK (10 MHz, FULL RB) - Left Band Edge



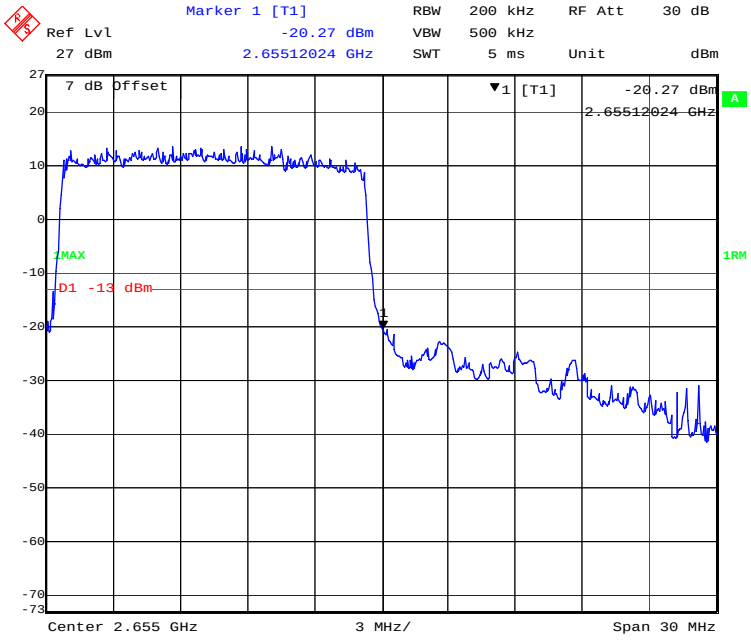
QPSK (10 MHz, FULL RB) - Right Band Edge



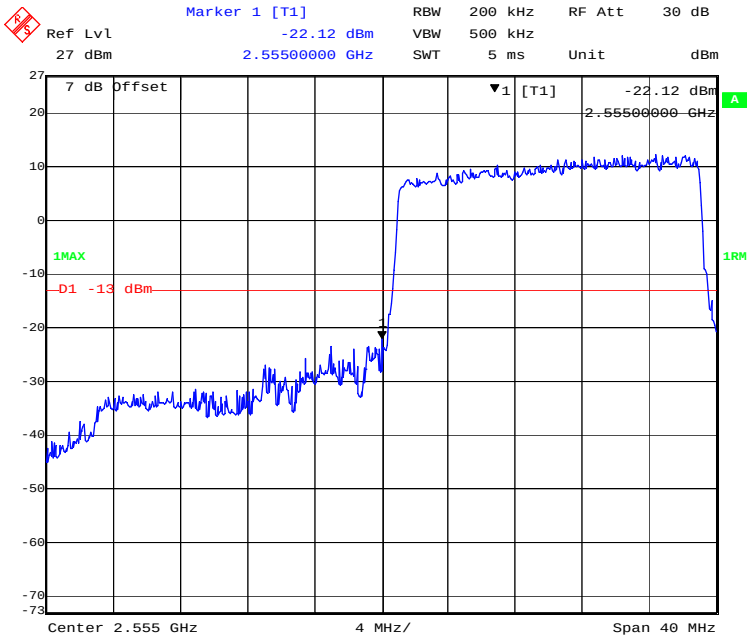
QPSK (15 MHz, FULL RB) - Left Band Edge



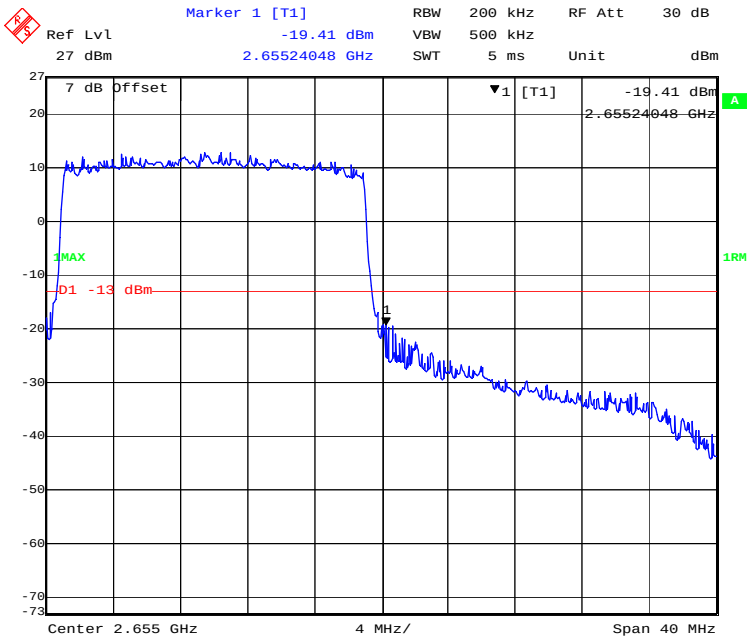
QPSK (15 MHz, FULL RB) - Right Band Edge



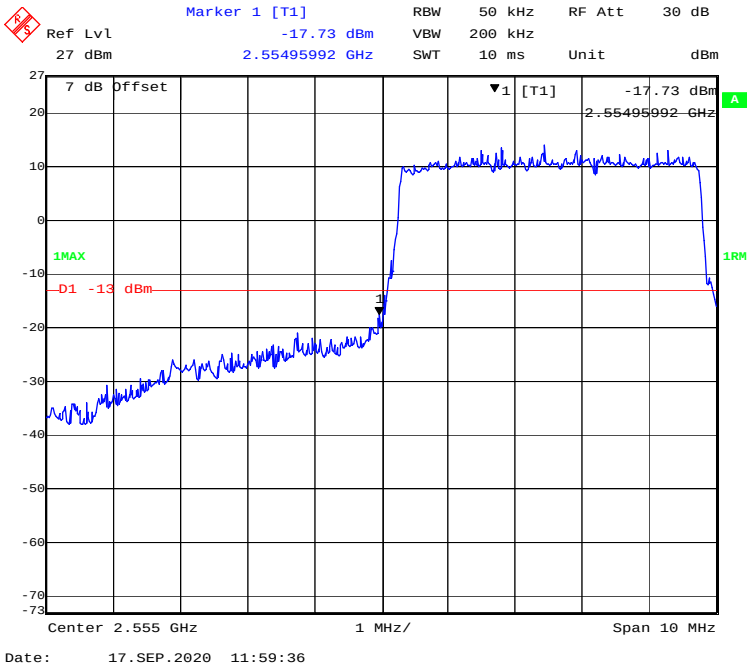
QPSK (20 MHz, FULL RB) - Left Band Edge



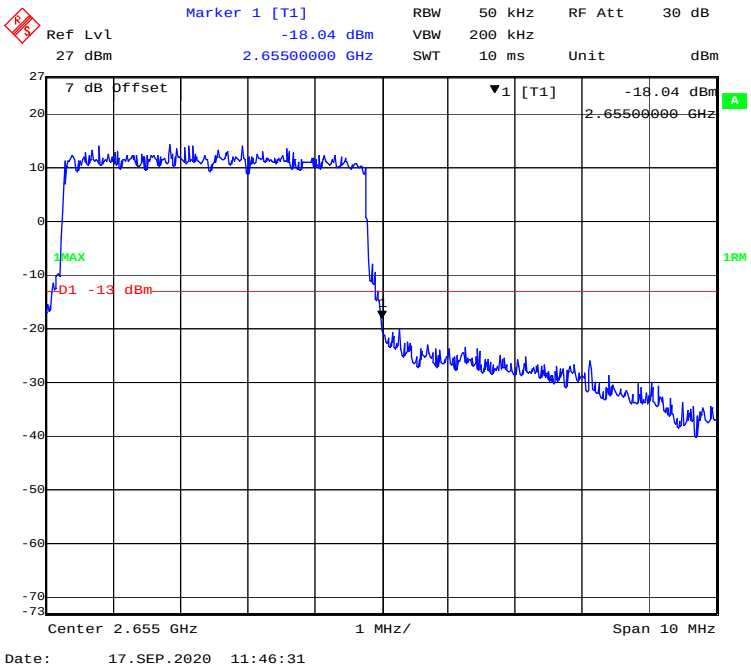
QPSK (20 MHz, FULL RB) - Right Band Edge



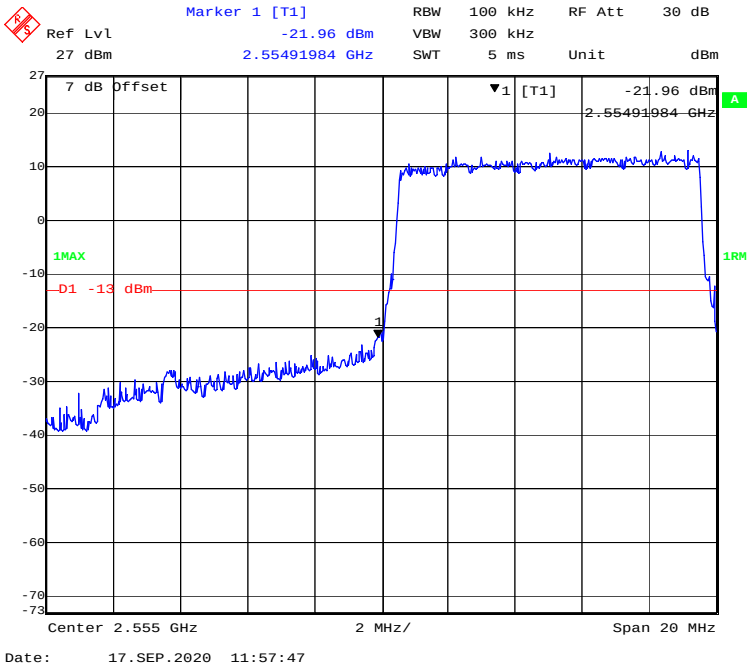
16-QAM (5 MHz, FULL RB) - Left Band Edge



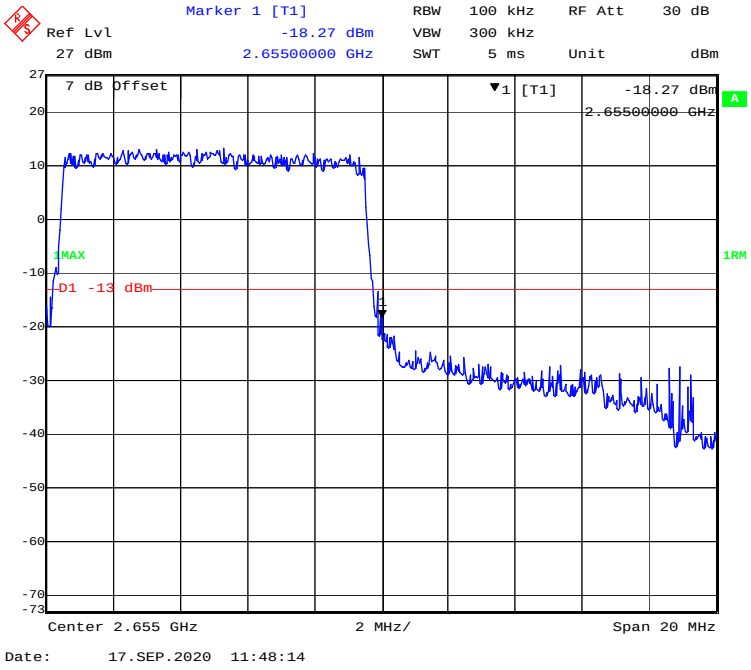
16-QAM (5 MHz, FULL RB) - Right Band Edge



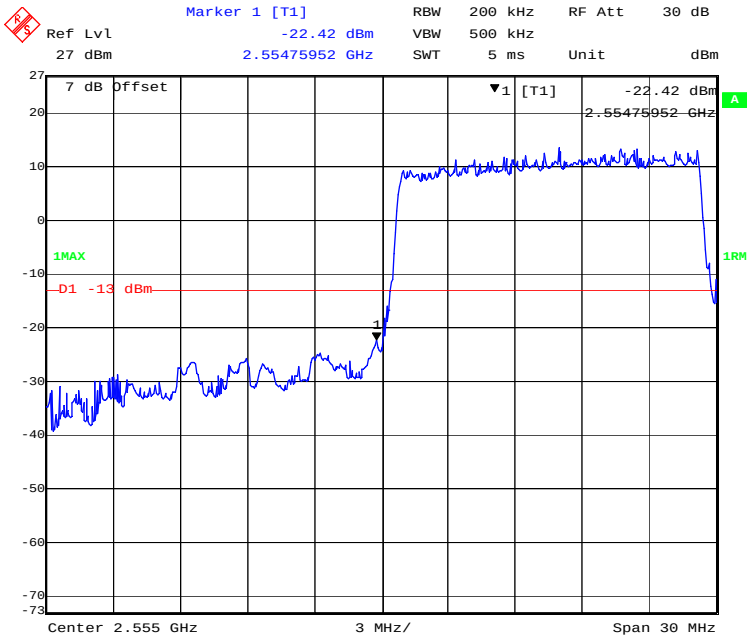
16-QAM (10 MHz, FULL RB) - Left Band Edge



16-QAM (10 MHz, FULL RB) - Right Band Edge



16-QAM (15 MHz, FULL RB) - Left Band Edge

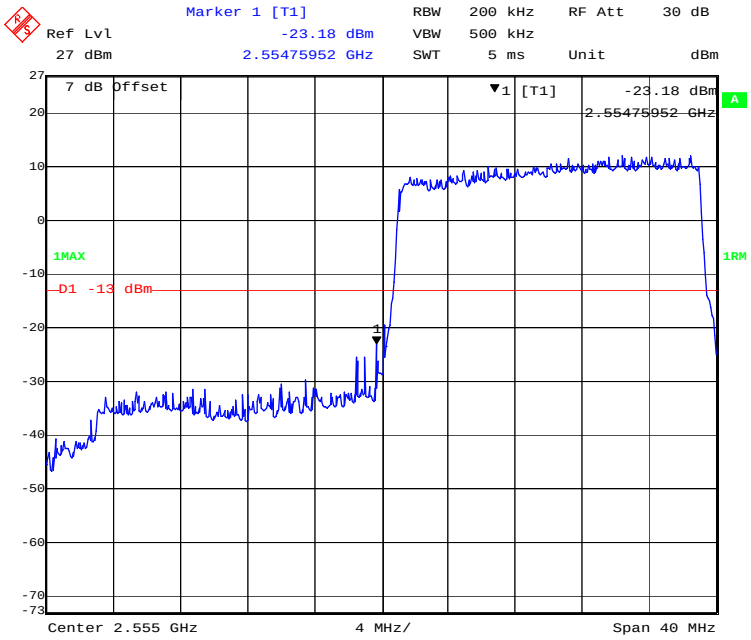


Date: 17.SEP.2020 11:55:25

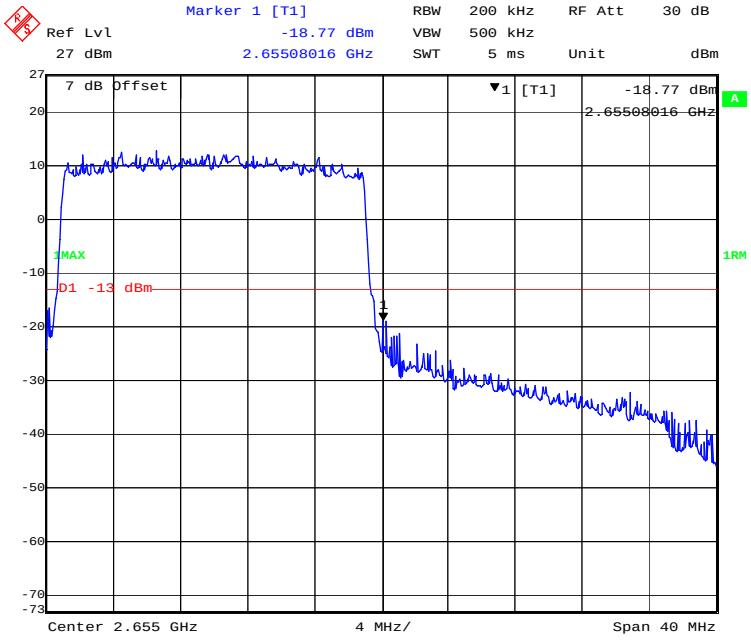
16-QAM (15 MHz, FULL RB) - Right Band Edge

Date: 17.SEP.2020 11:49:15

16-QAM (20 MHz, FULL RB) - Left Band Edge



16-QAM (20 MHz, FULL RB) - Right Band Edge



FCC § 2.1055; § 22.355; § 24.235; §27.54 - FREQUENCY STABILITY

Applicable Standards

FCC § 2.1055, §22.355, §24.235 and §27.54.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

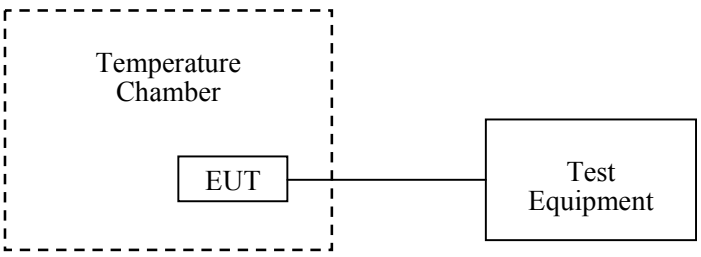
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

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

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

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	23.2-24.9 ℃
Relative Humidity:	48-52 %
ATM Pressure:	101.3-101.9 kPa

The testing was performed by Jack Jiao from 2020-10-17 to 2020-12-10.

EUT operation mode: Transmitting

Test Result: Compliant.

GSM 850 Band:

GSM Mode, Middle Channel, f_o =836.6 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.8	9	0.010758	2.5
-20		19	0.022711	2.5
-10		7	0.008367	2.5
0		11	0.013148	2.5
10		13	0.015539	2.5
20		11	0.013148	2.5
30		10	0.011953	2.5
40		16	0.019125	2.5
50		14	0.016734	2.5
20	V min.= 3.5	10	0.011953	2.5
20	V max.= 4.35	18	0.021516	2.5

GPRS Mode, Middle Channel, f_o=836.6 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.8	7	0.008367	2.5
-20		11	0.013148	2.5
-10		17	0.020320	2.5
0		18	0.021516	2.5
10		19	0.022711	2.5
20		10	0.011953	2.5
30		6	0.007172	2.5
40		14	0.016734	2.5
50		12	0.014344	2.5
20	V min.= 3.5	8	0.009563	2.5
20	V max.= 4.35	10	0.011953	2.5

EGPRS Mode, Middle Channel, f_o=836.6 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.8	14	0.016734	2.5
-20		12	0.014344	2.5
-10		12	0.014344	2.5
0		16	0.019125	2.5
10		7	0.008367	2.5
20		12	0.014344	2.5
30		16	0.019125	2.5
40		18	0.021516	2.5
50		11	0.013148	2.5
20	V min.= 3.5	13	0.015539	2.5
20	V max.= 4.35	11	0.013148	2.5

WCDMA Band V:

WCDMA Mode, Middle Channel, f_o = 836.6 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.8	15	0.017930	2.5
-20		9	0.017930	2.5
-10		13	0.015539	2.5
0		15	0.017930	2.5
10		13	0.015539	2.5
20		10	0.011953	2.5
30		14	0.016734	2.5
40		16	0.019125	2.5
50		11	0.013148	2.5
20	V min.= 3.5	20	0.023906	2.5
20	V max.= 4.35	7	0.008367	2.5

CDMA850 Band:

EVDO Mode, Middle Channel, f_o=836.52 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.8	16	0.019127	2.5
-20		10	0.016736	2.5
-10		12	0.015541	2.5
0		14	0.016736	2.5
10		13	0.015541	2.5
20		9	0.010759	2.5
30		11	0.013150	2.5
40		15	0.017931	2.5
50		6	0.007173	2.5
20	V min.= 3.5	19	0.022713	2.5
20	V max.= 4.35	8	0.009563	2.5

1xRTT Mode, Middle Channel, f_o=836.52 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	3.8	6	0.007173	2.5
-20		18	0.020322	2.5
-10		14	0.013150	2.5
0		17	0.020322	2.5
10		11	0.013150	2.5
20		12	0.014345	2.5
30		12	0.014345	2.5
40		17	0.020322	2.5
50		13	0.015541	2.5
20	V min.= 3.5	16	0.019127	2.5
20	V max.= 4.35	22	0.026299	2.5

PCS 1900 Band

GSM Mode, Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.8	16	0.008511	pass
-20		15	0.007979	pass
-10		19	0.010106	pass
0		18	0.009574	pass
10		17	0.009043	pass
20		15	0.007979	pass
30		9	0.004787	pass
40		15	0.007979	pass
50		9	0.004787	pass
20	V min.= 3.5	11	0.005851	pass
20	V max.= 4.35	16	0.008511	pass

GPRS Mode, Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.8	17	0.009043	pass
-20		12	0.006383	pass
-10		13	0.006915	pass
0		11	0.005851	pass
10		15	0.007979	pass
20		12	0.006383	pass
30		15	0.007979	pass
40		18	0.009574	pass
50		12	0.006383	pass
20	V min.= 3.5	12	0.006383	pass
20	V max.= 4.35	9	0.004787	pass

EGPRS Mode, Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.8	16	0.008511	pass
-20		20	0.010638	pass
-10		12	0.006383	pass
0		8	0.004255	pass
10		14	0.007447	pass
20		14	0.007447	pass
30		13	0.006915	pass
40		16	0.008511	pass
50		10	0.005319	pass
20	V min.= 3.5	15	0.007979	pass
20	V max.= 4.35	12	0.006383	pass

WCDMA Band II:

WCDMA Mode, Middle Channel, f_o = 1880.0 MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.8	13	0.006915	pass
-20		16	0.008511	pass
-10		15	0.007979	pass
0		14	0.007447	pass
10		7	0.003723	pass
20		18	0.009574	pass
30		15	0.007979	pass
40		15	0.007979	pass
50		11	0.005851	pass
20	V min.= 3.5	7	0.003723	pass
20	V max.= 4.35	20	0.010638	pass

LTE Band 2:

Middle Channel, f_o =1880.0 MHz (QPSK)/Channel Bandwidth:20MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.8	14	0.0074	pass
-20		6	0.0032	pass
-10		19	0.0101	pass
0		12	0.0064	pass
10		13	0.0069	pass
20		7	0.0037	pass
30		17	0.0090	pass
40		11	0.0059	pass
50		18	0.0096	pass
20	V min.= 3.5	12	0.0064	pass
20	V max.= 4.35	17	0.0090	pass

Middle Channel, f_o =1880.0 MHz (16-QAM)/Channel Bandwidth:20MHz				
Temperature (℃)	**Power Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	3.8	15	0.0080	pass
-20		14	0.0074	pass
-10		13	0.0069	pass
0		17	0.0090	pass
10		20	0.0106	pass
20		14	0.0074	pass
30		12	0.0064	pass
40		16	0.0085	pass
50		15	0.0080	pass
20	V min.= 3.5	19	0.0101	pass
20	V max.= 4.35	13	0.0069	pass

LTE Band 4:

Low Channel & High Channel (QPSK) /Channel Bandwidth:20MHz					
Temperature	**Power Supplied**	**F_L**	**F_H**	**F_L Limit**	**F_H Limit**
(℃)	**(V_{DC})**	**(MHz)**	**(MHz)**	**(MHz)**	**(MHz)**
-30	3.8	1710.0420	1754.9495	1710	1755
-20		1710.0455	1754.9440	1710	1755
-10		1710.0430	1754.9488	1710	1755
0		1710.0495	1754.9440	1710	1755
10		1710.0469	1754.9463	1710	1755
20		1710.0448	1754.9498	1710	1755
30		1710.0410	1754.9417	1710	1755
40		1710.0485	1754.9405	1710	1755
50		1710.0443	1754.9466	1710	1755
20	V min.= 3.5	1710.0486	1754.9429	1710	1755
20	V max.= 4.35	1710.0417	1754.9460	1710	1755

Low Channel & High Channel (16-QAM) /Channel Bandwidth:20MHz					
Temperature	**Power Supplied**	**F_L**	**F_H**	**F_L Limit**	**F_H Limit**
(℃)	**(V_{DC})**	**(MHz)**	**(MHz)**	**(MHz)**	**(MHz)**
-30	3.8	1710.0425	1754.9454	1710	1755
-20		1710.0418	1754.9474	1710	1755
-10		1710.0432	1754.9494	1710	1755
0		1710.0432	1754.9410	1710	1755
10		1710.0464	1754.9438	1710	1755
20		1710.0464	1754.9431	1710	1755
30		1710.0405	1754.9474	1710	1755
40		1710.0440	1754.9425	1710	1755
50		1710.0400	1754.9471	1710	1755
20	V min.= 3.5	1710.0459	1754.9466	1710	1755
20	V max.= 4.35	1710.0409	1754.9491	1710	1755

LTE Band 5:

Middle Channel, f_o = 836.5 MHz (QPSK) /Channel Bandwidth:10MHz				
Temperature	**Power Supplied**	**Frequency Error**	**Frequency Error**	**Limit**
(℃)	**(V_{DC})**	**(Hz)**	**(ppm)**	**(ppm)**
-30	3.8	10	0.0120	2.5
-20		10	0.0120	2.5
-10		15	0.0179	2.5
0		16	0.0191	2.5
10		12	0.0143	2.5
20		16	0.0191	2.5
30		13	0.0155	2.5
40		10	0.0120	2.5
50		19	0.0227	2.5
20	V min.= 3.5	14	0.0167	2.5
20	V max.= 4.35	13	0.0155	2.5

Middle Channel, f_o = 836.5 MHz (16-QAM) /Channel Bandwidth:10MHz				
Temperature	**Power Supplied**	**Frequency Error**	**Frequency Error**	**Limit**
(℃)	**(V_{DC})**	**(Hz)**	**(ppm)**	**(ppm)**
-30	3.8	11	0.0132	2.5
-20		14	0.0167	2.5
-10		16	0.0191	2.5
0		13	0.0155	2.5
10		12	0.0143	2.5
20		12	0.0143	2.5
30		19	0.0227	2.5
40		15	0.0179	2.5
50		13	0.0155	2.5
20	V min.= 3.5	12	0.0143	2.5
20	V max.= 4.35	10	0.0120	2.5

LTE Band 7:

Low Channel & High Channel (QPSK) /Channel Bandwidth:20MHz					
Temperature	**Power Supplied**	**F_L**	**F_H**	**F_L Limit**	**F_H Limit**
(℃)	**(V_{DC})**	**(MHz)**	**(MHz)**	**(MHz)**	**(MHz)**
-30	3.8	2500.0525	2569.9503	2500	2570
-20		2500.0510	2569.9544	2500	2570
-10		2500.0567	2569.9579	2500	2570
0		2500.0508	2569.9588	2500	2570
10		2500.0533	2569.9597	2500	2570
20		2500.0565	2569.9521	2500	2570
30		2500.0574	2569.9515	2500	2570
40		2500.0521	2569.9579	2500	2570
50		2500.0597	2569.9553	2500	2570
20	V min.= 3.5	2500.0524	2569.9545	2500	2570
20	V max.= 4.35	2500.0575	2569.9562	2500	2570

Low Channel & High Channel (16-QAM) /Channel Bandwidth:20MHz					
Temperature	**Power Supplied**	**F_L**	**F_H**	**F_L Limit**	**F_H Limit**
(℃)	**(V_{DC})**	**(MHz)**	**(MHz)**	**(MHz)**	**(MHz)**
-30	3.8	2500.0577	2569.9542	2500	2570
-20		2500.0522	2569.9583	2500	2570
-10		2500.0514	2569.9553	2500	2570
0		2500.0591	2569.9514	2500	2570
10		2500.0515	2569.9500	2500	2570
20		2500.0588	2569.9592	2500	2570
30		2500.0525	2569.9573	2500	2570
40		2500.0584	2569.9514	2500	2570
50		2500.0534	2569.9529	2500	2570
20	V min.= 3.5	2500.0569	2569.9553	2500	2570
20	V max.= 4.35	2500.0581	2569.9556	2500	2570

LTE Band 17:

Low Channel & High Channel (QPSK) /Channel Bandwidth:10MHz					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(℃)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	3.8	704.2851	715.8630	704	716
-20		704.0712	715.6839	704	716
-10		704.3615	715.9544	704	716
0		704.3575	715.7978	704	716
10		704.0284	715.6281	704	716
20		704.3848	715.8563	704	716
30		704.3355	715.8056	704	716
40		704.3047	715.7234	704	716
50		704.3450	715.6534	704	716
20	V min.= 3.5	704.2187	715.8166	704	716
20	V max.= 4.35	704.2960	715.7631	704	716

Low Channel & High Channel (16-QAM) /Channel Bandwidth:10MHz					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(℃)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	3.8	704.2469	715.6873	704	716
-20		704.2598	715.9116	704	716
-10		704.0918	715.9216	704	716
0		704.1785	715.7511	704	716
10		704.1632	715.6253	704	716
20		704.1525	715.8605	704	716
30		704.3919	715.9445	704	716
40		704.2913	715.6438	704	716
50		704.3975	715.7966	704	716
20	V min.= 3.5	704.1161	715.8745	704	716
20	V max.= 4.35	704.0812	715.9427	704	716

LTE Band 41:

Low Channel & High Channel (QPSK) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(℃)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	3.8	2555.0526	2654.9523	2555	2655
-20		2555.0531	2654.9546	2555	2655
-10		2555.0509	2654.9539	2555	2655
0		2555.0551	2654.9551	2555	2655
10		2555.0554	2654.9590	2555	2655
20		2555.0546	2654.9598	2555	2655
30		2555.0521	2654.9537	2555	2655
40		2555.0516	2654.9503	2555	2655
50		2555.0540	2654.9502	2555	2655
20	V min.= 3.5	2555.0516	2654.9539	2555	2655
20	V max.= 4.35	2555.0570	2654.9518	2555	2655

Low Channel & High Channel (16-QAM) /Channel Bandwidth:20MHz					
Temperature	Power Supplied	F_L	F_H	F_L Limit	F_H Limit
(℃)	(V_{DC})	(MHz)	(MHz)	(MHz)	(MHz)
-30	3.8	2555.0535	2654.9563	2555	2655
-20		2555.0596	2654.9552	2555	2655
-10		2555.0573	2654.9595	2555	2655
0		2555.0507	2654.9523	2555	2655
10		2555.0549	2654.9528	2555	2655
20		2555.0555	2654.9579	2555	2655
30		2555.0559	2654.9561	2555	2655
40		2555.0525	2654.9564	2555	2655
50		2555.0572	2654.9570	2555	2655
20	V min.= 3.5	2555.0501	2654.9536	2555	2655
20	V max.= 4.35	2555.0519	2654.9535	2555	2655

Declarations

1: BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

2: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

3: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

4: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

5: This report cannot be reproduced except in full, without prior written approval of the Company.

6: This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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