

FCC PART 27
FCC PART 22H, PART 24E
TEST REPORT

For

Beijing Wiseasy Technology CO., Ltd.

7th Floor, Block B, Wangxin Mansion, No.28 Xiaoyun Road, Chaoyang District, 100027, Beijing, China

FCC ID: 2AXOJ-WPOS-3

Report Type: Original Report	Product Type: WPOS Intelligent Business Terminal
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TABLE OF CONTENTS

GENERAL INFORMATION.....	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
OBJECTIVE	4
RELATED SUBMITTAL(S)/GRANT(S).....	4
TEST METHODOLOGY	5
MEASUREMENT UNCERTAINTY	5
TEST FACILITY	5
SYSTEM TEST CONFIGURATION.....	6
JUSTIFICATION	6
CHANNEL LIST	6
EQUIPMENT MODIFICATIONS	9
SUPPORT EQUIPMENT LIST AND DETAILS	9
EXTERNAL I/O CABLE.....	9
BLOCK DIAGRAM OF TEST SETUP	10
SUMMARY OF TEST RESULTS.....	12
TEST EQUIPMENT LIST	13
FCC §1.1307(B) & §2.1093 - RF EXPOSURE INFORMATION.....	15
TEST RESULT	15
FCC §2.1047 - MODULATION CHARACTERISTIC	16
FCC §2.1046; § 22.913 (A); § 24.232 (C); §27.50 (C) (D) - RF OUTPUT POWER.....	17
APPLICABLE STANDARDS.....	17
TEST PROCEDURE	17
TEST DATA	18
FCC §2.1049, §22.917, §22.905 & §24.238; §27.53 - OCCUPIED BANDWIDTH.....	59
APPLICABLE STANDARDS.....	59
TEST PROCEDURE	59
TEST DATA	59
FCC § 2.1051; § 22.917 (A); § 24.238 (A); §27.53 (G) (H) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	157
APPLICABLE STANDARDS.....	157
TEST PROCEDURE	157
TEST DATA	157
FCC § 2.1053; § 22.917 (A); § 24.238 (A) ; § 27.53 (G) (H) - SPURIOUS RADIATED EMISSIONS	326
APPLICABLE STANDARDS.....	326
TEST PROCEDURE	326
TEST DATA	327
FCC § 22.917 (A); § 24.238 (A); §27.53 (G) (H)- BAND EDGES	338
APPLICABLE STANDARDS.....	338
TEST PROCEDURE	338
TEST DATA	338
FCC § 2.1055; § 22.355; § 24.235; §27.54 - FREQUENCY STABILITY	395
APPLICABLE STANDARDS.....	395

TEST PROCEDURE	395
TEST DATA	396

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Beijing Wiseasy Technology CO., Ltd.
Tested Model:	WPOS-3
Product Type:	WPOS Intelligent Business Terminal
Power Supply:	DC 5.0V from adapter and DC 3.7V from battery
RF Function:	GPRS/EGPRS, WCDMA, LTE
Operating Band/Frequency:	GPRS/EGPRS 850: 824-849 MHz(TX), 869-894 MHz(RX) GPRS/EGPRS 1900: 1850-1910 MHz(TX), 1930-1990 MHz(RX) WCDMA Band II: 1850-1910 MHz(TX), 1930-1990 MHz(RX) WCDMA Band V: 824-849 MHz(TX), 869-894 MHz(RX) LTE Band 2: 1850-1910 MHz(TX), 1930MHz-1990 MHz(RX) LTE Band 4: 1710-1755 MHz(TX), 2110-2155 MHz(RX) LTE Band 5: 824-849 MHz(TX), 869-894 MHz(RX) LTE Band 12: 699-716 MHz(TX), 729-746 MHz(RX) LTE Band 17: 704-716 MHz(TX), 734-746 MHz(RX)
Modulation Type:	GPRS/EGPRS: GMSK/8PSK WCDMA: BPSK,QPSK,16QAM LTE: QPSK,16QAM
Antenna Type:	FPC Antenna
*Maximum Antenna Gain:	GPRS/EGPRS 850: 1.0 dBi WCDMA Band II/ Band V: 1.0 dBi LTE Band 2/4/5/12/17: 1.0 dBi

Note: The antenna gain was provided by the applicant.

**All measurement and test data in this report was gathered from production sample serial number: 20200927001. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-09-27)*

Objective

This type approval report is prepared on behalf of *Beijing Wiseasy Technology CO., Ltd.* in accordance with Part 2, Part 22-Subpart H and Part 24-Subpart E, Part 27 of the Federal Communication Commission's rules.

The objective is to determine the compliance of EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability, and band edge.

Related Submittal(s)/Grant(s)

FCC Part 15.247 DSS submissions with FCC ID: 2AXOJ-WPOS-3
FCC Part 15.247 DTS submissions with FCC ID: 2AXOJ-WPOS-3
FCC Part 15.407 NII submissions with FCC ID: 2AXOJ-WPOS-3
FCC Part 15.225 DXX submissions with FCC ID: 2AXOJ-WPOS-3

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-Part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services
Part 27 – Miscellaneous wireless communications services

Applicable Standards: ANSI C63.26-2015.

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	30MHz~1GHz	5.91dB
	1GHz~6GHz	4.68dB
	6GHz~18GHz	4.92dB
	18GHz~40GHz	5.21dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliant Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01 and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to ANSI C63.26-2015.

The final qualification test was performed with the EUT operating at normal mode.

Channel List

Mode		Channel		Frequency (MHz)
GPRS/EGPRS 850		Low	128	824.2
		Middle	190	836.6
		High	251	848.8
GPRS/EGPRS 1900		Low	512	1850.2
		Middle	661	1880.0
		High	810	1909.8
WCDMA Band II		Low	9262	1852.4
		Middle	9400	1880.0
		High	9538	1907.6
WCDMA Band V		Low	4132	826.4
		Middle	4183	836.6
		High	4233	846.6
LTE Band 2	1.4M	Low	18607	1850.7
		Middle	18900	1880.0
		High	19193	1909.3
	3M	Low	18615	1851.5
		Middle	18900	1880.0
		High	19185	1908.5
	5M	Low	18625	1852.5
		Middle	18900	1880.0
		High	19175	1907.5
	10M	Low	18650	1855.0
		Middle	18900	1880.0
		High	19150	1905.0
	15M	Low	18675	1857.5
		Middle	18900	1880.0
		High	19125	1902.5
	20M	Low	18700	1860.0
		Middle	18900	1880.0
		High	19100	1900.0

Mode		Channel		Frequency (MHz)
LTE Band 4	1.4M	Low	19957	1710.7
		Middle	20175	1732.5
		High	20393	1754.3
	3M	Low	19965	1711.5
		Middle	20175	1732.5
		High	20385	1753.5
	5M	Low	19975	1712.5
		Middle	20175	1732.5
		High	20375	1752.5
	10M	Low	20000	1715.0
		Middle	20175	1732.5
		High	20350	1750.0
	15M	Low	20025	1717.5
		Middle	20175	1732.5
		High	20325	1747.5
	20M	Low	20050	1720.0
		Middle	20175	1732.5
		High	20300	1745.0
LTE Band 5	1.4M	Low	20407	824.7
		Middle	20525	836.5
		High	20643	848.3
	3M	Low	20415	825.5
		Middle	20525	836.5
		High	20635	847.5
	5M	Low	20425	826.5
		Middle	20525	836.5
		High	20625	846.5
	10M	Low	20450	829.0
		Middle	20525	836.5
		High	20600	844.0
LTE Band 12	1.4M	Low	23017	699.7
		Middle	23095	707.5
		High	23173	715.3
	3M	Low	23025	700.5
		Middle	23095	707.5
		High	23165	714.5
	5M	Low	23035	701.5
		Middle	23095	707.5
		High	23155	713.5
	10M	Low	23060	704.0
		Middle	23095	707.5
		High	23130	711.0

Mode		Channel		Frequency (MHz)
LTE Band 17	5M	Low	23755	706.5
		Middle	23790	710.0
		High	23825	713.5
	10M	Low	23780	709.0
		Middle	23790	710.0
		High	23800	711.0

Equipment Modifications

No modifications were made to the EUT.

Support Equipment List and Details

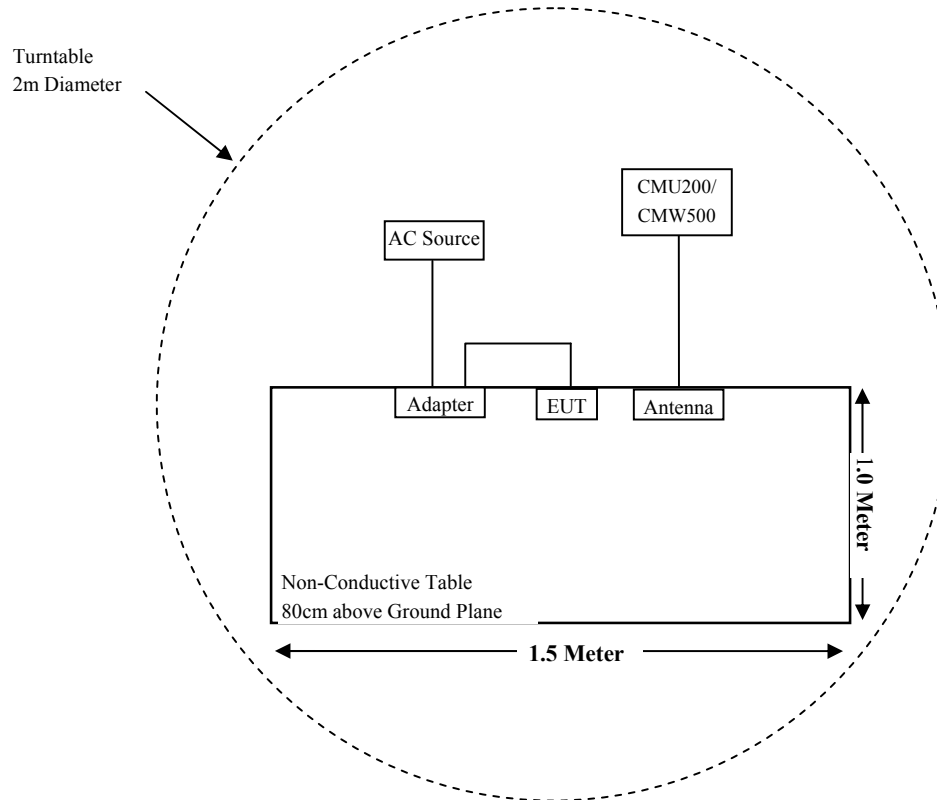
Manufacturer	Description	Model	Serial Number
Aihuaxin technology	Antenna	/	/
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478

External I/O Cable

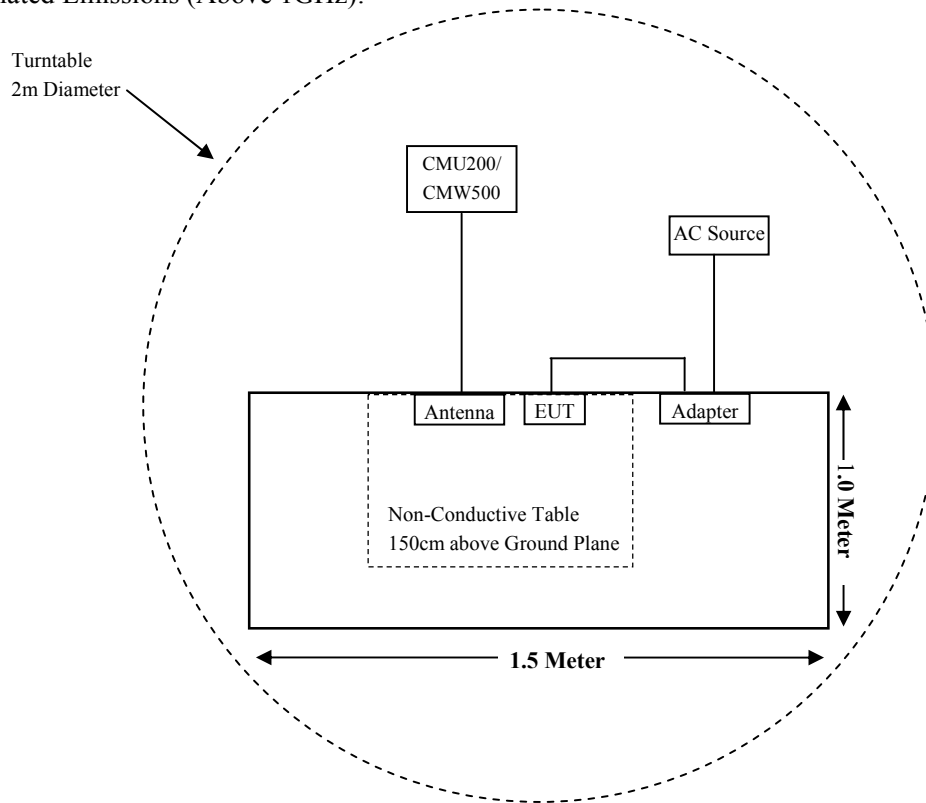
Cable Description	Length (m)	From Port	To
Power Cable	1.0	EUT	Adapter
Power Cable	1.0	Adapter	LISN/AC Source

Block Diagram of Test Setup

For Radiated Emissions (Below 1GHz):



For Radiated Emissions (Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307(b)(1)& §2.1093	RF Exposure Information	Compliant
§2.1046; § 22.913 (a); § 24.232 (c); § 27.50 (c) (d)	RF Output Power	Compliant
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliant
§ 2.1051; § 22.917 (a); § 24.238 (a); §27.53 (g) (h)	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53 (g) (h)	Spurious Radiated Emissions	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 (g) (h)	Band Edge	Compliant
§ 2.1055; § 22.355; § 24.235; §27.54	Frequency stability	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber 1#)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2019-12-14	2020-12-13
HP	Signal Generator	N5183A	MY51040755	2019-12-14	2020-12-13
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2017-12-26	2020-12-25
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2019-01-09	2022-01-08
Sonoma Instrunent	Pre-amplifier	310N	171205	2020-08-14	2021-08-13
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-8	008	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2020-08-15	2021-08-14
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605	2020-04-01	2021-03-31
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2020-08-05	2021-08-04
Radiated Emission Test (Chamber 2#)					
HP	Signal Generator	N5183A	MY51040755	2019-12-14	2020-12-13
Rohde & Schwarz	EMI Test Receiver	ESU40	100207	2020-04-01	2021-03-31
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2020-07-15	2023-07-14
ETS-LINDGREN	Horn Antenna	3115	6229	2020-01-10	2023-01-09
ETS-LINDGREN	Horn Antenna	3116	00084159	2019-10-18	2022-10-17
ETS-LINDGREN	Horn Antenna	3116	2516	2020-01-17	2023-01-16
A.H.Systems,inc	Amplifier	PAM-0118P	512	2020-02-20	2021-02-19
EM Electronics Corporation	Amplifier	EM18G40G	060726	2020-03-22	2021-03-21
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-11	011	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-12	012	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-13	013	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-16	016	2020-08-15	2021-08-14
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605	2020-04-01	2021-03-31
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2020-08-05	2021-08-04

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSIQ26	836131/009	2019-12-14	2020-12-13
Rohde & Schwarz	EMI Test Receiver	ESIB26	100146	2019-12-14	2020-12-13
Narda	Attenuator	10dB	010	2020-08-15	2021-08-14
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605	2020-04-01	2021-03-31
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2020-08-05	2021-08-04
Mini-Circuits	Power splitter	ZFRSC-14-S+	SF019411452	2019-11-10	2020-11-09
BACL	Temperature & Humidity Chamber	BTH-150	30023	2019-12-20	2020-12-19
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2020-10-10	2021-10-09
Beijing Wiseasy	RF Cable	Beijing Wiseasy C01	C01	Each Time	/

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

FCC §1.1307(b) & §2.1093 - RF EXPOSURE INFORMATION

Applicable Standard

FCC§1.1307,§2.1093.

Test Result

Compliance, please refer to the SAR report: RKSA200927001-26

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E, Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC §2.1046; § 22.913 (a); § 24.232 (c); §27.50 (c) (d) - RF OUTPUT POWER**Applicable Standards**

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts (38.45dBm).

According to FCC §2.1046 and §24.232 (c), mobile and portable stations are limited to 2 watts (33dBm) EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

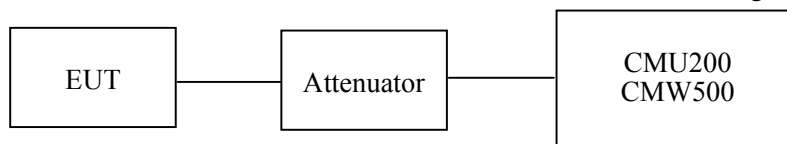
According to §27.50(d), the maximum EIRP must not exceed 1Watts (30dBm) for 1710-1755MHz.

According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

Test Procedure**Conducted method:**

The RF output of the transmitter was connected to the CMW500/CMU200 through sufficient attenuation.

**Radiated Output Power:**

The measurements procedures specified in ANSI C63.26-2015 were applied.

a) Connect the equipment as illustrated. Mount the equipment with the manufacturer specified antenna in a vertical orientation on a manufacturer specified mounting surface located on a non-conducting rotating platform of a RF anechoic chamber (preferred) or a standard radiation site.

b) Key the transmitter, then rotate the EUT 360o azimuthally and record spectrum analyzer power level (LVL) measurements at angular increments that are sufficiently small to permit resolution of all peaks. If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading at each angular increment. (Note: several batteries may be needed to offset the effect of battery voltage droop, which should not exceed 5% of the manufactured specified battery voltage during transmission).

c) Replace the transmitter under test with a vertically polarized half-wave dipole (or an antenna whose gain is known relative to an ideal half-wave dipole). The center of the antenna should be at the same location as the center of the antenna under test.

d) Connect the antenna to a signal generator with a known output power ,If a standard radiation test site is used, raise and lower the test antenna to obtain a maximum reading and adjustment signal generator level, make the value of the spectrum analyzer equal to the test value of step b (LVL), record this value as submitted Level (dBm).

$$\text{ERP/ EIRP (dBm)} = \text{Submitted Level (dBm)} - \text{Cable loss(dB)} + \text{Antenna Gain(dBd/dBi)}$$

Test Data

Environmental Conditions

Temperature:	24.7~24.9 °C
Relative Humidity:	52~53 %
ATM Pressure:	101.7~101.9 kPa

The testing was performed by CK Huang from 2020-11-20 to 2020-11-26.

Conducted Power:

GPRS/EGPRS 850 Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.20	33.10	32.43	31.11	30.48	38.45
	190	836.60	33.99	32.69	31.88	30.79	38.45
	251	848.80	33.59	32.87	31.98	30.66	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.20	28.56	27.97	26.73	25.61	38.45
	190	836.60	28.58	27.38	26.17	25.78	38.45
	251	848.80	28.81	27.61	26.33	25.57	38.45

WCDMA Band V

Mode	Test Condition	Test Mode	3GPP Sub Test	Average Output Power (dBm)		
				Low Frequency	Middle Frequency	High Frequency
WCDMA (Band V)	Normal	Rel 99	1	22.65	22.45	22.59
		HSDPA	1	22.03	22.13	22.18
			2	22.08	22.07	22.16
			3	22.06	21.98	22.26
			4	22.13	21.96	22.07
		HSUPA	1	21.99	22.09	22.10
			2	22.13	22.05	22.16
			3	22.08	22.02	22.24
			4	21.99	22.06	22.27
			5	21.93	22.09	22.22
		HSPA+	1	22.13	21.95	22.02

PCS 1900 Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	31.52	29.56	27.25	25.62	33
	661	1880.0	31.44	29.00	27.07	25.52	33
	810	1909.8	31.38	29.68	27.53	25.53	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	25.38	24.67	23.74	22.86	33
	661	1880.0	25.81	24.80	23.13	22.96	33
	810	1909.8	25.56	24.27	23.19	22.44	33

WCDMA Band II

Mode	Test Condition	Test Mode	3GPP Sub Test	Average Output Power (dBm)		
				Low Frequency	Middle Frequency	High Frequency
WCDMA (Band II)	Normal	Rel 99	1	20.84	20.65	20.58
		HSDPA	1	20.33	20.17	20.06
			2	20.28	20.04	20.22
			3	20.24	20.02	20.15
			4	20.30	20.05	20.11
		HSUPA	1	20.17	20.03	20.08
			2	20.34	19.98	20.13
			3	20.33	19.92	20.15
			4	20.22	20.06	20.04
			5	20.36	19.96	20.23
		HSPA+	1	20.23	20.13	20.20

Maximum Output Power:**LTE Band 2**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	20.59	20.66	20.84
		1#3	20.60	20.66	20.77
		1#5	20.55	20.52	20.71
		3#0	20.54	20.55	20.73
		3#1	20.54	20.50	20.75
		3#3	20.60	20.42	20.67
		6#0	20.61	20.39	20.74
	16-QAM	1#0	20.54	20.39	20.72
		1#3	20.53	20.35	20.75
		1#5	20.56	20.37	20.75
		3#0	20.64	20.35	20.77
		3#1	20.60	20.35	20.79
		3#3	20.67	20.44	20.92
		6#0	20.67	20.33	20.92
3M	QPSK	1#0	20.62	20.38	20.90
		1#7	20.61	20.36	20.86
		1#14	20.61	20.27	20.93
		8#0	20.65	20.22	20.95
		8#4	20.75	20.25	20.97
		8#7	20.77	20.18	20.92
		15#0	20.71	20.17	20.95
	16-QAM	1#0	20.76	20.06	20.98
		1#7	20.76	20.07	20.94
		1#14	20.75	20.02	20.92
		8#0	20.73	20.02	20.98
		8#4	20.69	20.97	20.96
		8#7	20.71	20.92	21.06
		15#0	20.71	20.80	21.05

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	20.77	20.89	20.94
		1#12	20.8	20.81	20.98
		1#24	20.87	20.83	21.05
		12#0	20.77	20.78	21.16
		12#6	20.80	20.76	21.15
		12#11	20.80	20.67	21.12
		25#0	20.69	20.66	21.08
	16-QAM	1#0	20.79	20.69	20.94
		1#12	20.88	20.72	21.02
		1#24	20.87	20.71	20.98
		12#0	20.93	20.7	20.97
		12#6	20.83	20.72	21.02
		12#11	20.88	20.81	20.94
		25#0	20.79	20.80	20.99
10M	QPSK	1#0	20.87	20.85	20.97
		1#24	20.82	20.75	20.96
		1#49	20.79	20.72	20.99
		25#0	20.74	20.78	21.04
		25#12	20.73	20.74	20.91
		25#24	20.60	20.66	20.81
		50#0	20.61	20.68	20.89
	16-QAM	1#0	20.61	20.71	20.82
		1#24	20.54	20.69	20.81
		1#49	20.46	20.63	20.86
		25#0	20.37	20.59	20.87
		25#12	20.34	20.64	20.90
		25#24	20.25	20.63	20.91
		50#0	20.23	20.55	20.85

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	20.26	20.49	20.82
		1#37	20.27	20.52	20.72
		1#74	20.31	20.47	20.78
		36#0	20.23	20.42	20.73
		36#17	20.32	20.50	20.72
		36#35	20.35	20.57	20.74
		75#0	20.35	20.63	20.69
	16-QAM	1#0	20.24	20.6	20.67
		1#37	20.20	20.55	20.60
		1#74	20.22	20.56	20.59
		36#0	20.18	20.52	20.54
		36#17	20.29	20.56	20.56
		36#35	20.28	20.59	20.54
		75#0	20.31	20.53	20.51
20M	QPSK	1#0	20.98	21.20	20.92
		1#49	20.75	20.92	20.82
		1#99	20.24	20.35	20.44
		50#0	20.19	20.39	20.56
		50#24	20.21	20.53	20.63
		50#49	20.22	20.53	20.59
		100#0	20.27	20.53	20.59
	16-QAM	1#0	20.23	20.52	20.48
		1#49	20.25	20.53	20.56
		1#99	20.20	20.62	20.64
		50#0	20.24	20.59	20.54
		50#24	20.37	20.58	20.60
		50#49	20.27	20.58	20.63
		100#0	20.15	20.57	20.60

LTE Band 4

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	20.87	20.96	20.98
		1#3	20.75	21.01	21.05
		1#5	20.81	20.97	21.06
		3#0	20.77	20.88	21.03
		3#1	20.87	20.81	21.03
		3#3	20.88	20.87	21.03
		6#0	20.94	20.86	21.12
	16-QAM	1#0	21.06	20.86	21.20
		1#3	21.02	20.92	21.21
		1#5	21.00	20.93	21.24
		3#0	20.96	20.92	21.28
		3#1	20.91	20.97	21.20
		3#3	20.90	21.10	21.26
		6#0	20.91	21.04	21.16
3M	QPSK	1#0	20.89	21.07	21.18
		1#7	20.90	21.14	21.23
		1#14	20.82	21.07	21.27
		8#0	20.90	21.11	21.31
		8#4	21.01	21.14	21.32
		8#7	20.92	21.06	21.33
		15#0	20.86	21.14	21.31
	16-QAM	1#0	20.86	21.26	21.38
		1#7	20.81	21.29	21.49
		1#14	20.88	21.30	21.51
		8#0	20.88	21.18	21.39
		8#4	20.97	20.97	21.38
		8#7	20.91	20.92	21.48
		15#0	20.91	20.80	21.37

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	20.93	20.89	21.49
		1#12	20.99	20.81	21.50
		1#24	20.98	20.83	21.48
		12#0	20.90	20.78	21.41
		12#6	20.79	20.76	21.36
		12#11	20.82	20.67	21.34
		25#0	20.84	20.66	21.26
	16-QAM	1#0	20.90	20.69	21.29
		1#12	20.85	20.72	21.23
		1#24	20.80	20.71	21.24
		12#0	20.70	20.70	21.29
		12#6	20.69	20.72	21.38
		12#11	20.70	20.81	21.29
		25#0	20.79	20.80	21.28
10M	QPSK	1#0	20.76	20.85	21.22
		1#24	20.68	20.75	21.24
		1#49	20.75	20.72	21.36
		25#0	20.71	20.78	21.38
		25#12	20.68	20.74	21.36
		25#24	20.70	20.66	21.41
		50#0	20.71	20.68	21.51
	16-QAM	1#0	20.74	20.71	21.51
		1#24	20.66	20.69	21.63
		1#49	20.67	20.63	21.77
		25#0	20.76	20.59	21.74
		25#12	20.76	20.64	21.66
		25#24	20.85	20.63	21.66
		50#0	20.88	20.55	21.72

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	20.95	20.49	21.81
		1#37	20.92	20.52	21.80
		1#74	20.88	20.47	21.91
		36#0	20.84	20.42	21.93
		36#17	20.73	20.50	21.91
		36#35	20.63	20.57	21.92
		75#0	20.73	20.63	21.88
	16-QAM	1#0	20.76	20.60	21.94
		1#37	20.79	20.55	22.04
		1#74	20.79	20.56	21.92
		36#0	20.80	20.52	21.85
		36#17	20.77	20.56	21.84
		36#35	20.84	20.59	21.94
		75#0	20.78	20.53	21.97
20M	QPSK	1#0	20.80	22.07	22.00
		1#49	20.74	21.38	22.03
		1#99	20.62	21.44	21.94
		50#0	20.63	20.39	21.93
		50#24	20.69	20.53	21.96
		50#49	20.72	20.53	21.93
		100#0	20.63	20.53	21.91
	16-QAM	1#0	20.71	20.52	21.92
		1#49	20.66	20.53	22.02
		1#99	20.79	20.62	22.06
		50#0	20.84	20.59	22.03
		50#24	20.78	20.58	22.00
		50#49	20.91	20.58	22.03
		100#0	20.96	20.57	22.03

LTE Band 5

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	21.93	21.98	21.37
		1#3	22.03	21.96	21.46
		1#5	22.16	22.08	21.44
		3#0	22.12	22.07	21.45
		3#1	22.06	22.12	21.47
		3#3	22.18	22.05	21.47
		6#0	22.17	22.09	21.56
	16-QAM	1#0	22.16	21.99	21.62
		1#3	22.18	22.07	21.7
		1#5	22.15	22.03	21.64
		3#0	22.08	22.06	21.53
		3#1	22.11	22.08	21.52
		3#3	22.03	22.08	21.56
		6#0	22.14	22.18	21.62
3M	QPSK	1#0	22.11	22.13	21.58
		1#7	22.19	22.09	21.44
		1#14	22.15	22.07	21.44
		8#0	22.17	22.1	21.36
		8#4	22.11	22.03	21.4
		8#7	21.99	22.09	21.37
		15#0	21.94	22.07	21.43
	16-QAM	1#0	21.96	22.1	21.48
		1#7	21.94	22.12	21.61
		1#14	22.03	22.16	21.53
		8#0	22.03	22.14	21.55
		8#4	21.99	22.11	21.63
		8#7	22.01	22.2	21.63
		15#0	21.9	22.31	21.67

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.89	22.25	21.77
		1#12	21.99	22.26	21.9
		1#24	22.05	22.24	21.91
		12#0	22.08	22.16	21.88
		12#6	21.98	22.14	21.91
		12#11	21.93	22.11	21.85
		25#0	21.93	22.14	21.87
	16-QAM	1#0	21.92	22.13	21.85
		1#12	21.89	22.08	21.92
		1#24	21.85	22.04	21.81
		12#0	21.91	22.04	21.76
		12#6	21.9	22.09	21.72
		12#11	21.84	22.07	21.73
		25#0	21.72	22.16	21.75
10M	QPSK	1#0	21.78	22.54	21.65
		1#24	21.75	22.19	21.63
		1#49	21.65	22.25	21.69
		25#0	21.52	22.36	21.77
		25#12	21.57	22.47	21.78
		25#24	21.6	22.45	21.79
		50#0	21.68	22.48	21.73
	16-QAM	1#0	21.63	22.5	21.73
		1#24	21.73	22.52	21.79
		1#49	21.86	22.43	21.82
		25#0	21.89	22.51	21.79
		25#12	21.86	22.53	21.68
		25#24	21.8	22.51	21.64
		50#0	21.84	22.49	21.75

LTE Band 12

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	21.86	22.2	21.6
		1#3	21.87	22.16	21.58
		1#5	21.89	22.26	21.53
		3#0	21.81	22.27	21.49
		3#1	21.89	22.28	21.42
		3#3	21.87	22.19	21.46
		6#0	21.97	22.16	21.49
	16-QAM	1#0	22.06	22.04	21.56
		1#3	22.15	21.91	21.63
		1#5	22.09	21.89	21.55
		3#0	22.19	21.77	21.68
		3#1	22.17	21.75	21.57
		3#3	22.21	21.76	21.64
		6#0	22.19	21.74	21.63
3M	QPSK	1#0	22.26	21.76	21.55
		1#7	22.31	21.74	21.58
		1#14	22.29	21.79	21.6
		8#0	22.37	21.82	21.68
		8#4	22.28	21.9	21.69
		8#7	22.34	21.87	21.72
		15#0	22.43	21.81	21.75
	16-QAM	1#0	22.48	21.79	21.77
		1#7	22.56	21.74	21.75
		1#14	22.52	21.62	21.82
		8#0	22.49	21.57	21.86
		8#4	22.49	21.52	21.95
		8#7	22.52	21.5	21.97
		15#0	22.57	21.44	21.99

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	22.41	21.41	21.97
		1#12	22.57	21.49	22.02
		1#24	22.59	21.51	21.92
		12#0	22.60	21.54	21.83
		12#6	22.50	21.59	21.87
		12#11	22.50	21.50	21.86
		25#0	22.28	21.56	21.87
	16-QAM	1#0	22.29	21.52	21.89
		1#12	22.30	21.61	22.00
		1#24	22.41	21.67	22.01
		12#0	22.57	21.73	22.05
		12#6	22.24	21.70	22.05
		12#11	22.25	21.71	22.15
		25#0	22.34	21.72	22.10
10M	QPSK	1#0	22.45	22.61	22.07
		1#24	22.29	21.75	22.05
		1#49	22.11	21.84	22.08
		25#0	22.14	22.39	22.00
		25#12	22.02	21.90	22.05
		25#24	22.39	21.96	22.08
		50#0	22.45	22.49	22.02
	16-QAM	1#0	22.04	21.88	21.98
		1#24	22.44	21.87	22.07
		1#49	22.36	21.90	22.17
		25#0	22.35	21.86	22.13
		25#12	22.26	21.84	22.09
		25#24	22.12	21.88	22.10
		50#0	22.22	21.90	22.20

LTE Band 17

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.68	21.85	21.82
		1#12	21.68	21.93	21.80
		1#24	21.68	21.93	21.74
		12#0	21.65	21.96	21.79
		12#6	21.67	21.88	21.68
		12#11	21.68	21.92	21.72
		25#0	21.70	21.85	21.61
	16-QAM	1#0	21.71	21.80	21.64
		1#12	21.66	21.69	21.65
		1#24	21.63	21.74	21.74
		12#0	21.62	21.75	21.67
		12#6	21.65	21.75	21.70
		12#11	21.78	21.77	21.73
		25#0	21.72	21.77	21.63
10M	QPSK	1#0	21.72	21.76	21.75
		1#24	21.85	21.74	21.70
		1#49	21.88	21.65	21.76
		25#0	21.86	21.76	21.78
		25#12	21.94	21.88	21.75
		25#24	21.96	21.83	21.72
		50#0	22.07	21.89	21.64
	16-QAM	1#0	22.12	21.95	21.60
		1#24	22.06	21.91	21.53
		1#49	22.05	21.97	21.58
		25#0	22.05	22.05	21.48
		25#12	22.04	22.08	21.51
		25#24	22.11	22.14	21.51
		50#0	22.07	22.02	21.50

Peak-to-average ratio (PAR):**GPRS/ EGPRS 850 Band**

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	2.15	≤ 13
	Middle	2.06	≤ 13
	High	2.07	≤ 13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	2.00	≤ 13
	Middle	2.20	≤ 13
	High	2.03	≤ 13

WCDMA Band V

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	2.13	≤ 13
	Middle	2.11	≤ 13
	High	2.21	≤ 13
WCDMA (HSDPA)	Low	2.00	≤ 13
	Middle	2.16	≤ 13
	High	1.98	≤ 13
WCDMA (HSUPA)	Low	2.19	≤ 13
	Middle	2.09	≤ 13
	High	2.25	≤ 13
WCDMA (HSPA+)	Low	2.16	≤ 13
	Middle	1.98	≤ 13
	High	1.98	≤ 13

PCS 1900

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	2.21	13
	Middle	2.05	13
	High	2.03	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	2.07	13
	Middle	2.21	13
	High	2.16	13

WCDMA Band II

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	2.02	≤ 13
	Middle	2.03	≤ 13
	High	2.15	≤ 13
WCDMA (HSDPA)	Low	2.08	≤ 13
	Middle	2.12	≤ 13
	High	2.26	≤ 13
WCDMA (HSUPA)	Low	2.13	≤ 13
	Middle	2.02	≤ 13
	High	2.02	≤ 13
WCDMA (HSPA+)	Low	2.19	≤ 13
	Middle	2.05	≤ 13
	High	1.96	≤ 13

LTE Band 2

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)
QPSK	1 RB	20M	3.15	3.16	3.12	13
	100 RB		5.16	5.10	5.19	13
16-QAM	1 RB	20M	4.15	4.18	4.19	13
	100 RB		6.01	6.08	6.18	13

LTE Band 4

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	3.08	3.15	3.03	13
	100 RB		5.08	5.00	5.11	13
16-QAM	1 RB	20M	4.03	4.13	4.07	13
	100 RB		6.11	6.10	6.17	13

LTE Band 5

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.17	3.15	3.14	13
	50 RB		5.04	5.16	5.08	13
16-QAM	1 RB	10M	4.20	4.15	4.18	13
	50 RB		6.07	6.02	6.07	13

LTE Band 12

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.02	3.13	3.04	13
	50 RB		5.01	5.10	5.19	13
16-QAM	1 RB	10M	4.15	4.08	4.05	13
	50 RB		6.09	6.17	6.08	13

LTE Band 17

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.18	3.09	3.08	≤ 13
	50 RB		5.14	5.01	5.10	≤ 13
16-QAM	1 RB	10M	4.08	4.17	4.08	≤ 13
	50 RB		6.20	6.08	6.07	≤ 13

Radiated Power:**GPRS/EGPRS Mode**

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 850, Low Channel (ERP)										
824.20	98.90	77	200	H	34.1	0.62	-1.18	32.3	38.45	6.15
824.20	99.12	310	157	V	34.32	0.62	-1.18	32.52	38.45	5.93
EGPRS 850, Low Channel (ERP)										
824.20	93.61	56	152	H	29.95	0.62	-1.18	28.15	38.45	10.30
824.20	94.13	254	175	V	30.47	0.62	-1.18	28.67	38.45	9.78
GPRS 1900, Low Channel (EIRP)										
1850.20	91.21	225	198	H	19.29	0.84	8.76	27.21	33.00	5.79
1850.20	90.53	350	174	V	18.61	0.84	8.76	26.53	33.00	6.47
EGPRS 1900, Low Channel (EIRP)										
1850.20	87.10	275	163	H	16.18	0.84	8.76	24.1	33.00	8.90
1850.20	89.50	300	112	V	18.58	0.84	8.76	26.5	33.00	6.50

GPRS/EGPRS Mode

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 850, Middle Channel (ERP)										
836.60	98.02	80	100	H	33.16	0.63	-1.14	31.39	38.45	7.06
836.60	99.85	253	150	V	34.99	0.63	-1.14	33.22	38.45	5.23
EGPRS 850, Middle Channel (ERP)										
836.60	93.10	7	150	H	28.24	0.63	-1.14	26.47	38.45	11.98
836.60	94.72	351	100	V	29.86	0.63	-1.14	28.09	38.45	10.36
GPRS 1900, Middle Channel (EIRP)										
1880.00	91.67	89	150	H	21.54	0.85	8.81	29.50	33.00	3.50
1880.00	90.26	90	100	V	20.13	0.85	8.81	28.09	33.00	4.91
EGPRS 1900, Middle Channel (EIRP)										
1880.00	87.40	183	150	H	17.27	0.85	8.81	25.23	33.00	7.77
1880.00	89.25	319	100	V	19.12	0.85	8.81	27.08	33.00	5.92

GPRS/EGPRS Mode

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 850, High Channel (ERP)										
848.80	98.75	77	200	H	36.21	0.63	-1.1	34.48	38.45	3.97
848.80	99.40	310	157	V	36.86	0.63	-1.1	35.13	38.45	3.32
EGPRS 850, High Channel (ERP)										
848.80	93.19	56	152.00	H	30.65	0.63	-1.10	28.92	38.45	9.53
848.80	94.15	254	175.00	V	31.61	0.63	-1.10	29.88	38.45	8.57
GPRS 1900, High Channel (EIRP)										
1909.80	91.75	225	198	H	20.21	0.85	8.85	28.21	33.00	4.79
1909.80	90.91	350	174	V	19.37	0.85	8.85	27.37	33.00	5.63
EGPRS 1900, High Channel (EIRP)										
1909.80	87.95	275	163	H	17.41	0.85	8.85	25.41	33.00	7.59
1909.80	90.00	300	112	V	19.46	0.85	8.85	27.46	33.00	5.54

WCDMA Mode

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 Band V, Low Channel(ERP)										
826.40	87.46	229	200	H	22.60	0.63	-1.17	20.80	38.45	17.65
826.40	88.66	233	150	V	23.80	0.63	-1.17	22.00	38.45	16.45
WCDMA Band II, Low Channel(EIRP)										
1852.40	86.26	189	200	H	16.13	0.84	8.76	24.05	33.00	8.95
1852.40	85.40	7	150	V	15.27	0.84	8.76	23.19	33.00	9.81

WCDMA Mode

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 Band V, Middle Channel(ERP)										
836.60	87.51	319	200	H	22.65	0.63	-1.14	20.88	38.45	17.57
836.60	88.28	33	150	V	23.42	0.63	-1.14	21.65	38.45	16.80
WCDMA Band II, Middle Channel(EIRP)										
1880.00	85.93	254	200	H	15.80	0.85	8.81	23.76	33.00	9.24
1880.00	85.67	22	150	V	15.54	0.85	8.81	23.50	33.00	9.50

WCDMA Mode

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 Band V, High Channel(ERP)										
846.60	87.91	123	200	H	23.05	0.63	-1.11	21.31	38.45	17.14
846.60	86.90	110	150	V	22.04	0.63	-1.11	20.30	38.45	18.15
WCDMA Band II, High Channel(EIRP)										
1907.60	86.20	46	200	H	16.07	0.85	8.85	24.07	33.00	8.93
1907.60	87.41	133	150	V	17.28	0.85	8.85	25.28	33.00	7.72

EIRP:**LTE Band 2**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Low Channel								
1850.7	H	89.24	14.51	0.84	8.76	22.43	33	10.57
1850.7	V	88.80	14.07	0.84	8.76	21.99	33	11.01
16-QAM 1.4M BW Low Channel								
1850.7	H	89.67	14.94	0.84	8.76	22.86	33	10.14
1850.7	V	88.88	14.15	0.84	8.76	22.07	33	10.93
QPSK 3M BW Low Channel								
1851.5	H	89.88	15.15	0.84	8.76	23.07	33	9.93
1851.5	V	88.01	13.28	0.84	8.76	21.2	33	11.80
16-QAM 3M BW Low Channel								
1851.5	H	89.57	14.84	0.84	8.76	22.76	33	10.24
1851.5	V	88.74	14.01	0.84	8.76	21.93	33	11.07
QPSK 5M BW Low Channel								
1852.5	H	89.07	14.34	0.84	8.76	22.26	33	10.74
1852.5	V	88.03	13.30	0.84	8.76	21.22	33	11.78
16-QAM 5M BW Low Channel								
1852.5	H	89.79	15.06	0.84	8.76	22.98	33	10.02
1852.5	V	88.78	14.05	0.84	8.76	21.97	33	11.03
QPSK 10M BW Low Channel								
1855.0	H	89.10	14.37	0.84	8.77	22.3	33	10.70
1855.0	V	88.88	14.15	0.84	8.77	22.08	33	10.92
16-QAM 10M BW Low Channel								
1855.0	H	89.84	15.11	0.84	8.77	23.04	33	9.96
1855.0	V	88.06	13.33	0.84	8.77	21.26	33	11.74
QPSK 15M BW Low Channel								
1857.5	H	89.85	15.12	0.84	8.77	23.05	33	9.95
1857.5	V	88.47	13.74	0.84	8.77	21.67	33	11.33
16-QAM 15M BW Low Channel								
1857.5	H	89.64	14.91	0.84	8.77	22.84	33	10.16
1857.5	V	88.56	13.83	0.84	8.77	21.76	33	11.24

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW Low Channel								
1860.0	H	89.32	14.59	0.84	8.78	22.53	33	10.47
1860.0	V	88.05	13.32	0.84	8.78	21.26	33	11.74
16-QAM 20M BW Low Channel								
1860.0	H	89.16	14.43	0.84	8.78	22.37	33	10.63
1860.0	V	88.81	14.08	0.84	8.78	22.02	33	10.98

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Middle Channel								
1880	H	89.00	14.27	0.85	8.81	22.23	33	10.77
1880	V	88.33	13.60	0.85	8.81	21.56	33	11.44
16-QAM 1.4M BW Middle Channel								
1880	H	89.76	15.03	0.85	8.81	22.99	33	10.01
1880	V	88.06	13.33	0.85	8.81	21.29	33	11.71
QPSK 3M BW Middle Channel								
1880	H	89.80	15.07	0.85	8.81	23.03	33	9.97
1880	V	88.44	13.71	0.85	8.81	21.67	33	11.33
16-QAM 3M BW Middle Channel								
1880	H	89.30	14.57	0.85	8.81	22.53	33	10.47
1880	V	88.02	13.29	0.85	8.81	21.25	33	11.75
QPSK 5M BW Middle Channel								
1880	H	89.4	14.67	0.85	8.81	22.63	33	10.37
1880	V	88.72	13.99	0.85	8.81	21.95	33	11.05
16-QAM 5M BW Middle Channel								
1880	H	89.30	14.57	0.85	8.81	22.53	33	10.47
1880	V	89.00	14.27	0.85	8.81	22.23	33	10.77
QPSK 10M BW Middle Channel								
1880	H	89.81	15.08	0.85	8.81	23.04	33	9.96
1880	V	88.10	13.37	0.85	8.81	21.33	33	11.67
16-QAM 10M BW Middle Channel								
1880	H	89.05	14.32	0.85	8.81	22.28	33	10.72
1880	V	88.48	13.75	0.85	8.81	21.71	33	11.29
QPSK 15M BW Middle Channel								
1880	H	89.29	14.56	0.85	8.81	22.52	33	10.48
1880	V	88.82	14.09	0.85	8.81	22.05	33	10.95
16-QAM 15M BW Middle Channel								
1880	H	89.83	15.10	0.85	8.81	23.06	33	9.94
1880	V	88.32	13.59	0.85	8.81	21.55	33	11.45

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW Middle Channel								
1880	H	89.12	14.39	0.85	8.81	22.35	33	10.65
1880	V	88.42	13.69	0.85	8.81	21.65	33	11.35
16-QAM 20M BW Middle Channel								
1880	H	89.12	14.39	0.85	8.81	22.35	33	10.65
1880	V	88.46	13.73	0.85	8.81	21.69	33	11.31

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW High Channel								
1909.3	H	89.25	14.52	0.85	8.85	22.52	33	10.48
1909.3	V	88.42	13.69	0.85	8.85	21.69	33	11.31
16-QAM 1.4M BW High Channel								
1909.3	H	89.63	14.9	0.85	8.85	22.9	33	10.10
1909.3	V	88.99	14.26	0.85	8.85	22.26	33	10.74
QPSK 3M BW High Channel								
1908.5	H	89.07	14.34	0.85	8.85	22.34	33	10.66
1908.5	V	88.55	13.82	0.85	8.85	21.82	33	11.18
16-QAM 3M BW Low Channel								
1908.5	H	89.07	14.34	0.85	8.85	22.34	33	10.66
1908.5	V	88.11	13.38	0.85	8.85	21.38	33	11.62
QPSK 5M BW High Channel								
1907.5	H	89.93	15.2	0.85	8.85	23.2	33	9.80
1907.5	V	88.32	13.59	0.85	8.85	21.59	33	11.41
16-QAM 5M BW High Channel								
1907.5	H	89.06	14.33	0.85	8.85	22.33	33	10.67
1907.5	V	88.18	13.45	0.85	8.85	21.45	33	11.55
QPSK 10M BW High Channel								
1905.0	H	89.92	15.19	0.85	8.85	23.19	33	9.81
1905.0	V	88.75	14.02	0.85	8.85	22.02	33	10.98
16-QAM 10M BW High Channel								
1905.0	H	89.19	14.46	0.85	8.85	22.46	33	10.54
1905.0	V	88.84	14.11	0.85	8.85	22.11	33	10.89
QPSK 15M BW High Channel								
1902.5	H	89.82	15.09	0.85	8.84	23.08	33	9.92
1902.5	V	88.72	13.99	0.85	8.84	21.98	33	11.02
16-QAM 15M BW High Channel								
1902.5	H	89.74	15.01	0.85	8.84	23.00	33	10.00
1902.5	V	88.61	13.88	0.85	8.84	21.87	33	11.13

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW High Channel								
1900.0	H	89.99	15.26	0.85	8.84	23.25	33	9.75
1900.0	V	88.17	13.44	0.85	8.84	21.43	33	11.57
16-QAM 20M BW High Channel								
1900.0	H	89.83	15.10	0.85	8.84	23.09	33	9.91
1900.0	V	88.37	13.64	0.85	8.84	21.63	33	11.37

LTE Band 4

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Low Channel								
1710.7	H	89.54	13.79	0.84	8.54	21.49	30	8.51
1710.7	V	88.51	12.76	0.84	8.54	20.46	30	9.54
16-QAM 1.4M BW Low Channel								
1710.7	H	89.45	13.70	0.84	8.54	21.4	30	8.60
1710.7	V	88.49	12.74	0.84	8.54	20.44	30	9.56
QPSK 3M BW Low Channel								
1711.5	H	89.64	13.89	0.84	8.54	21.59	30	8.41
1711.5	V	88.96	13.21	0.84	8.54	20.91	30	9.09
16-QAM 3M BW Low Channel								
1711.5	H	89.71	13.96	0.84	8.54	21.66	30	8.34
1711.5	V	88.21	12.46	0.84	8.54	20.16	30	9.84
QPSK 5M BW Low Channel								
1712.5	H	89.49	13.74	0.84	8.54	21.44	30	8.56
1712.5	V	88.00	12.25	0.84	8.54	19.95	30	10.05
16-QAM 5M BW Low Channel								
1712.5	H	89.02	13.27	0.84	8.54	20.97	30	9.03
1712.5	V	88.09	12.34	0.84	8.54	20.04	30	9.96
QPSK 10M BW Low Channel								
1715.0	H	89.03	13.28	0.84	8.54	20.98	30	9.02
1715.0	V	88.10	12.35	0.84	8.54	20.05	30	9.95
16-QAM 10M BW Low Channel								
1715.0	H	89.53	13.78	0.84	8.54	21.48	30	8.52
1715.0	V	88.62	12.87	0.84	8.54	20.57	30	9.43
QPSK 15M BW Low Channel								
1717.5	H	89.55	13.80	0.84	8.55	21.51	30	8.49
1717.5	V	88.62	12.87	0.84	8.55	20.58	30	9.42
16-QAM 15M BW Low Channel								
1717.5	H	89.74	13.99	0.84	8.55	21.7	30	8.30
1717.5	V	88.78	13.03	0.84	8.55	20.74	30	9.26

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW Low Channel								
1720.0	H	89.92	14.17	0.84	8.55	21.88	30	8.12
1720.0	V	88.93	13.18	0.84	8.55	20.89	30	9.11
16-QAM 20M BW Low Channel								
1720.0	H	89.70	13.95	0.84	8.55	21.66	30	8.34
1720.0	V	88.24	12.49	0.84	8.55	20.2	30	9.80

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Middle Channel								
1732.5	H	89.74	13.99	0.84	8.57	21.72	30	8.28
1732.5	V	88.72	12.97	0.84	8.57	20.7	30	9.30
16-QAM 1.4M BW Middle Channel								
1732.5	H	89.48	13.73	0.84	8.57	21.46	30	8.54
1732.5	V	88.24	12.49	0.84	8.57	20.22	30	9.78
QPSK 3M BW Middle Channel								
1732.5	H	89.39	13.64	0.84	8.57	21.37	30	8.63
1732.5	V	88.99	13.24	0.84	8.57	20.97	30	9.03
16-QAM 3M BW Middle Channel								
1732.5	H	89.39	13.64	0.84	8.57	21.37	30	8.63
1732.5	V	88.72	12.97	0.84	8.57	20.7	30	9.30
QPSK 5M BW Middle Channel								
1732.5	H	89.23	13.48	0.84	8.57	21.21	30	8.79
1732.5	V	88.44	12.69	0.84	8.57	20.42	30	9.58
16-QAM 5M BW Middle Channel								
1732.5	H	89.47	13.72	0.84	8.57	21.45	30	8.55
1732.5	V	88.03	12.28	0.84	8.57	20.01	30	9.99
QPSK 10M BW Middle Channel								
1732.5	H	89.77	14.02	0.84	8.57	21.75	30	8.25
1732.5	V	88.67	12.92	0.84	8.57	20.65	30	9.35
16-QAM 10M BW Middle Channel								
1732.5	H	89.51	13.76	0.84	8.57	21.49	30	8.51
1732.5	V	88.07	12.32	0.84	8.57	20.05	30	9.95
QPSK 15M BW Middle Channel								
1732.5	H	89.89	14.14	0.84	8.57	21.87	30	8.13
1732.5	V	88.69	12.94	0.84	8.57	20.67	30	9.33
16-QAM 15M BW Middle Channel								
1732.5	H	89.49	13.74	0.84	8.57	21.47	30	8.53
1732.5	V	88.38	12.63	0.84	8.57	20.36	30	9.64

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW Middle Channel								
1732.5	H	89.58	13.83	0.84	8.57	21.56	30	8.44
1732.5	V	88.53	12.78	0.84	8.57	20.51	30	9.49
16-QAM 20M BW Middle Channel								
1732.5	H	89.58	13.83	0.84	8.57	21.56	30	8.44
1732.5	V	88.95	13.20	0.84	8.57	20.93	30	9.07

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW High Channel								
1754.3	H	89.18	13.43	0.84	8.61	21.20	30	8.80
1754.3	V	88.16	12.41	0.84	8.61	20.18	30	9.82
16-QAM 1.4M BW High Channel								
1754.3	H	89.62	13.87	0.84	8.61	21.64	30	8.36
1754.3	V	88.28	12.53	0.84	8.61	20.30	30	9.70
QPSK 3M BW High Channel								
1753.5	H	89.07	13.32	0.84	8.6	21.08	30	8.92
1753.5	V	88.94	13.19	0.84	8.6	20.95	30	9.05
16-QAM 3M BW High Channel								
1753.5	H	89.62	13.87	0.84	8.6	21.63	30	8.37
1753.5	V	88.20	12.45	0.84	8.6	20.21	30	9.79
QPSK 5M BW High Channel								
1752.5	H	89.91	14.16	0.84	8.6	21.92	30	8.08
1752.5	V	88.55	12.80	0.84	8.6	20.56	30	9.44
16-QAM 5M BW High Channel								
1752.5	H	89.30	13.55	0.84	8.6	21.31	30	8.69
1752.5	V	88.15	12.40	0.84	8.6	20.16	30	9.84
QPSK 10M BW High Channel								
1750.0	H	89.50	13.75	0.84	8.6	21.51	30	8.49
1750.0	V	88.01	12.26	0.84	8.6	20.02	30	9.98
16-QAM 10M BW High Channel								
1750.0	H	89.13	13.38	0.84	8.6	21.14	30	8.86
1750.0	V	88.63	12.88	0.84	8.6	20.64	30	9.36
QPSK 15M BW High Channel								
1747.5	H	89.44	13.69	0.84	8.6	21.45	30	8.55
1747.5	V	88.25	12.50	0.84	8.6	20.26	30	9.74
16-QAM 15M BW High Channel								
1747.5	H	89.46	13.71	0.84	8.6	21.47	30	8.53
1747.5	V	88.80	13.05	0.84	8.6	20.81	30	9.19

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW High Channel								
1745.0	H	89.22	13.47	0.84	8.59	21.22	30	8.78
1745.0	V	88.05	12.30	0.84	8.59	20.05	30	9.95
16-QAM 20M High Channel								
1745.0	H	89.05	13.3	0.84	8.59	21.05	30	8.95
1745.0	V	88.20	12.45	0.84	8.59	20.20	30	9.80

LTE Band 5

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Low Channel								
824.7	H	90.86	26.99	0.62	-1.18	25.19	38.45	13.26
824.7	V	88.97	25.10	0.62	-1.18	23.30	38.45	15.15
16-QAM 1.4M BW Low Channel								
824.7	H	90.35	26.48	0.62	-1.18	24.68	38.45	13.77
824.7	V	88.94	25.07	0.62	-1.18	23.27	38.45	15.18
QPSK 3M BW Low Channel								
825.5	H	90.02	26.15	0.63	-1.17	24.35	38.45	14.10
825.5	V	88.25	24.38	0.63	-1.17	22.58	38.45	15.87
16-QAM 3M BW Low Channel								
825.5	H	90.53	26.66	0.63	-1.17	24.86	38.45	13.59
825.5	V	88.76	24.89	0.63	-1.17	23.09	38.45	15.36
QPSK 5M BW Low Channel								
826.5	H	90.50	26.63	0.63	-1.17	24.83	38.45	13.62
826.5	V	88.95	25.08	0.63	-1.17	23.28	38.45	15.17
16-QAM 5M BW Low Channel								
826.5	H	90.17	26.30	0.63	-1.17	24.5	38.45	13.95
826.5	V	88.84	24.97	0.63	-1.17	23.17	38.45	15.28
QPSK 10M BW Low Channel								
829.0	H	90.59	26.72	0.63	-1.16	24.93	38.45	13.52
829.0	V	88.47	24.60	0.63	-1.16	22.81	38.45	15.64
16-QAM 10M BW Low Channel								
829.0	H	90.15	26.28	0.63	-1.16	24.49	38.45	13.96
829.0	V	88.35	24.48	0.63	-1.16	22.69	38.45	15.76

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Middle Channel								
836.5	H	90.33	26.46	0.63	-1.14	24.69	38.45	13.76
836.5	V	88.66	24.79	0.63	-1.14	23.02	38.45	15.43
16-QAM 1.4M BW Middle Channel								
836.5	H	90.44	26.57	0.63	-1.14	24.8	38.45	13.65
836.5	V	88.55	24.68	0.63	-1.14	22.91	38.45	15.54
QPSK 3M BW Middle Channel								
836.5	H	90.28	26.41	0.63	-1.14	24.64	38.45	13.81
836.5	V	88.24	24.37	0.63	-1.14	22.60	38.45	15.85
16-QAM 3M BW Middle Channel								
836.5	H	90.45	26.58	0.63	-1.14	24.81	38.45	13.64
836.5	V	88.69	24.82	0.63	-1.14	23.05	38.45	15.40
QPSK 5M BW Middle Channel								
836.5	H	90.35	26.48	0.63	-1.14	24.71	38.45	13.74
836.5	V	88.1	24.23	0.63	-1.14	22.46	38.45	15.99
16-QAM 5M BW Middle Channel								
836.5	H	90.08	26.21	0.63	-1.14	24.44	38.45	14.01
836.5	V	88.08	24.21	0.63	-1.14	22.44	38.45	16.01
QPSK 10M BW Middle Channel								
836.5	H	90.09	26.22	0.63	-1.14	24.45	38.45	14.00
836.5	V	88.62	24.75	0.63	-1.14	22.98	38.45	15.47
16-QAM 10M BW Middle Channel								
836.5	H	90.12	26.25	0.63	-1.14	24.48	38.45	13.97
836.5	V	88.49	24.62	0.63	-1.14	22.85	38.45	15.60

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW High Channel								
848.3	H	90.85	26.98	0.63	-1.11	25.24	38.45	13.21
848.3	V	88.32	24.45	0.63	-1.11	22.71	38.45	15.74
16-QAM 1.4M BW High Channel								
848.3	H	90.10	26.23	0.63	-1.11	24.49	38.45	13.96
848.3	V	88.65	24.78	0.63	-1.11	23.04	38.45	15.41
QPSK 3M BW High Channel								
847.5	H	90.84	26.97	0.63	-1.11	25.23	38.45	13.22
847.5	V	88.82	24.95	0.63	-1.11	23.21	38.45	15.24
16-QAM 3M BW High Channel								
847.5	H	90.09	26.22	0.63	-1.11	24.48	38.45	13.97
847.5	V	88.16	24.29	0.63	-1.11	22.55	38.45	15.90
QPSK 5M BW High Channel								
846.5	H	90.93	27.06	0.63	-1.11	25.32	38.45	13.13
846.5	V	88.32	24.45	0.63	-1.11	22.71	38.45	15.74
16-QAM 5M BW High Channel								
846.5	H	90.94	27.07	0.63	-1.11	25.33	38.45	13.12
846.5	V	88.51	24.64	0.63	-1.11	22.90	38.45	15.55
QPSK 10M BW High Channel								
844.0	H	90.25	26.38	0.63	-1.12	24.63	38.45	13.82
844.0	V	88.02	24.15	0.63	-1.12	22.40	38.45	16.05
16-QAM 10M BW High Channel								
844.0	H	90.60	26.73	0.63	-1.12	24.98	38.45	13.47
844.0	V	88.06	24.19	0.63	-1.12	22.44	38.45	16.01

ERP:**LTE Band 12**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Low Channel								
699.7	H	88.43	22.79	0.62	-1.75	20.42	34.77	14.35
699.7	V	87.97	22.33	0.62	-1.75	19.96	34.77	14.81
16-QAM 1.4M BW Low Channel								
699.7	H	88.61	22.97	0.62	-1.75	20.60	34.77	14.17
699.7	V	87.47	21.83	0.62	-1.75	19.46	34.77	15.31
QPSK 3M BW Low Channel								
700.5	H	88.38	22.74	0.62	-1.75	20.37	34.77	14.40
700.5	V	87.44	21.8	0.62	-1.75	19.43	34.77	15.34
16-QAM 3M BW Low Channel								
700.5	H	88.50	22.86	0.62	-1.75	20.49	34.77	14.28
700.5	V	87.91	22.27	0.62	-1.75	19.90	34.77	14.87
QPSK 5M BW Low Channel								
701.5	H	88.67	23.03	0.62	-1.74	20.67	34.77	14.10
701.5	V	87.53	21.89	0.62	-1.74	19.53	34.77	15.24
16-QAM 5M BW Low Channel								
701.5	H	88.09	22.45	0.62	-1.74	20.09	34.77	14.68
701.5	V	87.70	22.06	0.62	-1.74	19.70	34.77	15.07
QPSK 10M BW Low Channel								
704.0	H	88.21	22.57	0.62	-1.73	20.22	34.77	14.55
704.0	V	87.80	22.16	0.62	-1.73	19.81	34.77	14.96
16-QAM 10M BW Low Channel								
704.0	H	88.96	23.32	0.62	-1.73	20.97	34.77	13.80
704.0	V	87.36	21.72	0.62	-1.73	19.37	34.77	15.40

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Middle Channel								
707.5	H	88.16	24.67	0.62	-1.71	22.34	34.77	12.43
707.5	V	87.16	23.67	0.62	-1.71	21.34	34.77	13.43
16-QAM 1.4M BW Middle Channel								
707.5	H	88.21	24.72	0.62	-1.71	22.39	34.77	12.38
707.5	V	87.34	23.85	0.62	-1.71	21.52	34.77	13.25
QPSK 3M BW Middle Channel								
707.5	H	88.46	24.97	0.62	-1.71	22.64	34.77	12.13
707.5	V	87.36	23.87	0.62	-1.71	21.54	34.77	13.23
16-QAM 3M BW Middle Channel								
707.5	H	88.16	24.67	0.62	-1.71	22.34	34.77	12.43
707.5	V	87.46	23.97	0.62	-1.71	21.64	34.77	13.13
QPSK 5M BW Middle Channel								
707.5	H	88.46	24.97	0.62	-1.71	22.64	34.77	12.13
707.5	V	87.25	23.76	0.62	-1.71	21.43	34.77	13.34
16-QAM 5M BW Middle Channel								
707.5	H	88.19	24.70	0.62	-1.71	22.37	34.77	12.40
707.5	V	87.48	23.99	0.62	-1.71	21.66	34.77	13.11
QPSK 10M BW Middle Channel								
707.5	H	88.49	25.00	0.62	-1.71	22.67	34.77	12.10
707.5	V	87.05	23.56	0.62	-1.71	21.23	34.77	13.54
16-QAM 10M BW Middle Channel								
707.5	H	87.89	24.40	0.62	-1.71	22.07	34.77	12.70
707.5	V	86.30	22.81	0.62	-1.71	20.48	34.77	14.29

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW High Channel								
715.3	H	88.74	22.82	0.62	-1.67	20.53	34.77	14.24
715.3	V	87.31	21.39	0.62	-1.67	19.10	34.77	15.67
16-QAM 1.4M BW High Channel								
715.3	H	88.38	22.46	0.62	-1.67	20.17	34.77	14.60
715.3	V	87.87	21.95	0.62	-1.67	19.66	34.77	15.11
QPSK 3M BW High Channel								
714.5	H	88.28	22.36	0.62	-1.68	20.06	34.77	14.71
714.5	V	87.93	22.01	0.62	-1.68	19.71	34.77	15.06
16-QAM 3M BW High Channel								
714.5	H	88.32	22.40	0.62	-1.68	20.10	34.77	14.67
714.5	V	87.10	21.18	0.62	-1.68	18.88	34.77	15.89
QPSK 5M BW High Channel								
713.5	H	88.99	23.07	0.62	-1.68	20.77	34.77	14.00
713.5	V	87.88	21.96	0.62	-1.68	19.66	34.77	15.11
16-QAM 5M BW High Channel								
713.5	H	88.28	22.36	0.62	-1.68	20.06	34.77	14.71
713.5	V	87.07	21.15	0.62	-1.68	18.85	34.77	15.92
QPSK 10M BW High Channel								
711.0	H	88.43	22.51	0.62	-1.7	20.19	34.77	14.58
711.0	V	87.10	21.18	0.62	-1.7	18.86	34.77	15.91
16-QAM 10M BW High Channel								
711.0	H	88.30	22.38	0.62	-1.7	20.06	34.77	14.71
711.0	V	87.85	21.93	0.62	-1.7	19.61	34.77	15.16

ERP:**LTE Band 17**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5M BW Low Channel								
706.5	H	88.50	23.34	0.62	-1.72	21.00	34.77	13.77
706.5	V	87.83	22.67	0.62	-1.72	20.33	34.77	14.44
16-QAM 5M BW Low Channel								
706.5	H	88.96	23.80	0.62	-1.72	21.46	34.77	13.31
706.5	V	87.59	22.43	0.62	-1.72	20.09	34.77	14.68
QPSK 10M BW Low Channel								
709.0	H	88.13	22.97	0.62	-1.71	20.64	34.77	14.13
709.0	V	87.76	22.60	0.62	-1.71	20.27	34.77	14.50
16-QAM 10M BW Low Channel								
709.0	H	88.83	23.67	0.62	-1.71	21.34	34.77	13.43
709.0	V	87.21	22.05	0.62	-1.71	19.72	34.77	15.05

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5M BW Middle Channel								
710.0	H	88.86	22.87	0.62	-1.7	20.55	34.77	14.22
710.0	V	87.05	21.06	0.62	-1.7	18.74	34.77	16.03
16-QAM 5M BW Middle Channel								
710.0	H	88.18	22.19	0.62	-1.7	19.87	34.77	14.90
710.0	V	87.85	21.86	0.62	-1.7	19.54	34.77	15.23
QPSK 10M BW Middle Channel								
710.0	H	88.89	22.90	0.62	-1.7	20.58	34.77	14.19
710.0	V	87.15	21.16	0.62	-1.7	18.84	34.77	15.93
16-QAM 10M BW Middle Channel								
710.0	H	88.96	22.97	0.62	-1.7	20.65	34.77	14.12
710.0	V	87.71	21.72	0.62	-1.7	19.40	34.77	15.37

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5M BW High Channel								
713.5	H	88.03	23.21	0.62	-1.68	20.91	34.77	13.86
713.5	V	87.12	22.30	0.62	-1.68	20.00	34.77	14.77
16-QAM 5M BW High Channel								
713.5	H	88.35	23.53	0.62	-1.68	21.23	34.77	13.54
713.5	V	87.60	22.78	0.62	-1.68	20.48	34.77	14.29
QPSK 10M BW High Channel								
711.0	H	88.44	23.62	0.62	-1.7	21.30	34.77	13.47
711.0	V	87.92	23.10	0.62	-1.7	20.78	34.77	13.99
16-QAM 10M BW High Channel								
711.0	H	88.45	23.63	0.62	-1.7	21.31	34.77	13.46
711.0	V	87.18	22.36	0.62	-1.7	20.04	34.77	14.73

Note:

All above data were tested without amplifier.

Absolute Level (dBm) = Submitted Level (dBm) - Cable loss (dB) + Antenna Gain (dBd/dBi)

Margin (dB) = Limit (dBm) - Absolute Level (dBm)

FCC §2.1049, §22.917, §22.905 & §24.238; §27.53 - OCCUPIED BANDWIDTH

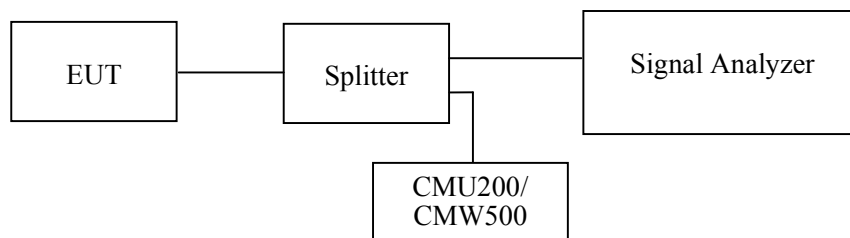
Applicable Standards

FCC 47 §2.1049, §22.917, §22.905 & §24.238 and §27.53.

Test Procedure

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

The resolution bandwidth of the spectrum analyzer was set at 5 kHz (Cellular /PCS) & 100 kHz (WCDMA) & 30 kHz/50 kHz/100 kHz/300 kHz (LTE), and the 26 dB & 99% bandwidth was recorded.



Test Data

Environmental Conditions

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

The testing was performed by Jack Jiao from 2020-10-13 to 2020-12-02.

EUT operation mode: Transmitting

Test Result: Compliance.

GSM 850 Band

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
GPRS (GMSK)	824.2	0.315	0.244
	836.6	0.317	0.242
	848.8	0.321	0.244
EGPRS (8PSK)	824.2	0.325	0.246
	836.6	0.311	0.242
	848.8	0.317	0.244

WCDMA Band V

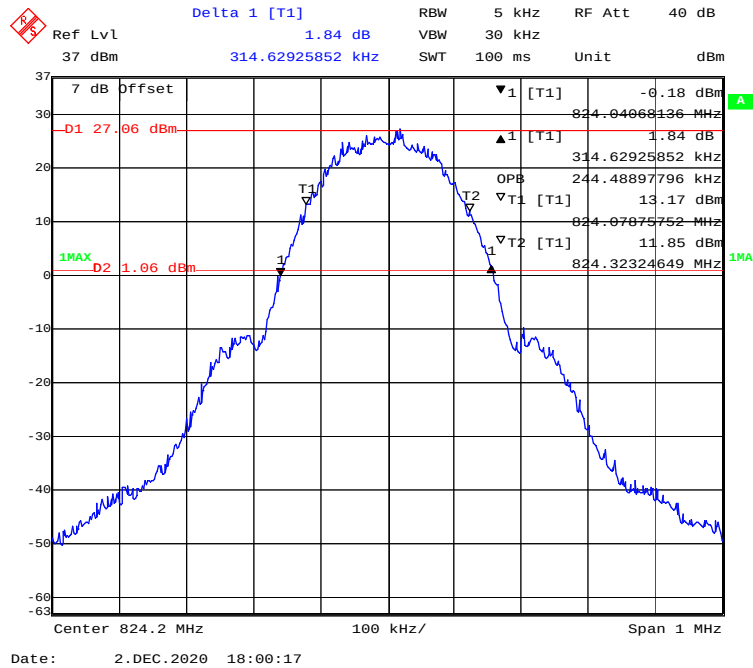
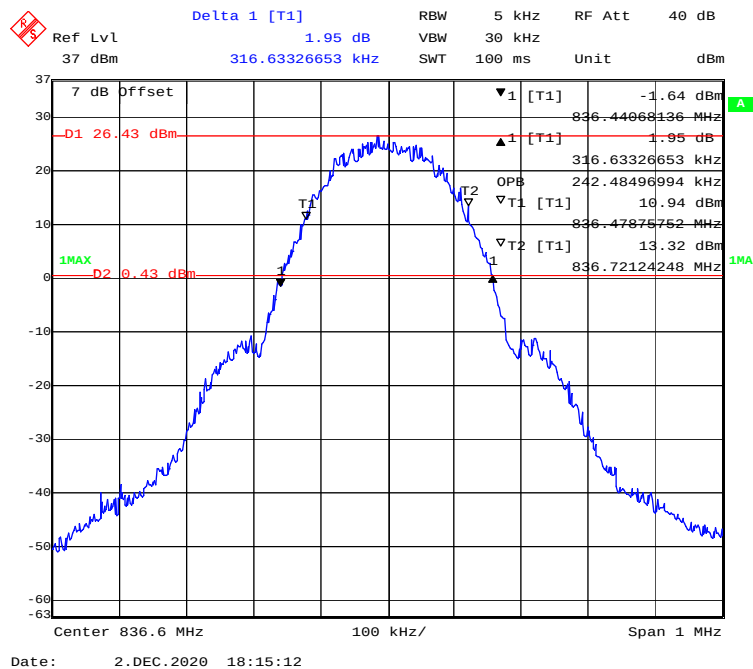
Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	826.4	4.749	4.148
	836.6	4.729	4.148
	846.6	4.770	4.168
WCDMA (HSDPA)	826.4	4.770	4.168
	836.6	4.749	4.148
	846.6	4.749	4.168
WCDMA (HSUPA)	826.4	4.749	4.168
	836.6	4.749	4.148
	846.6	4.749	4.128
WCDMA (HSPA+)	826.4	4.770	4.148
	836.6	4.749	4.148
	846.6	4.770	4.148

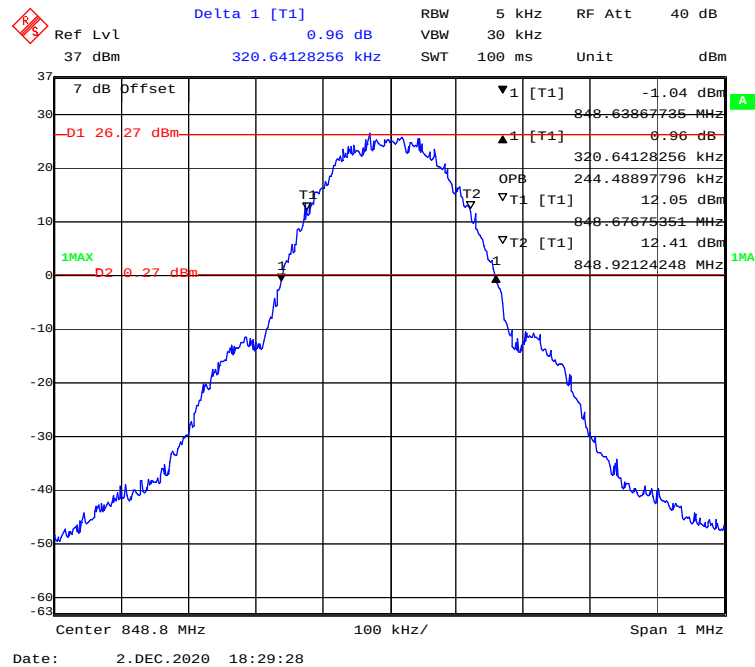
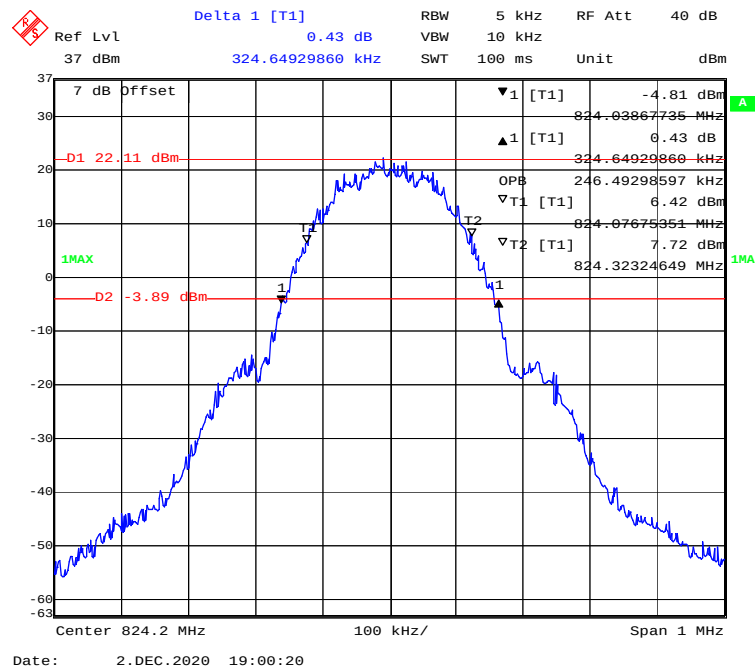
PCS 1900

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
GPRS (GMSK)	1850.2	0.317	0.246
	1880.0	0.321	0.244
	1909.8	0.319	0.242
EGPRS (8PSK)	1850.2	0.317	0.248
	1880.0	0.321	0.246
	1909.8	0.319	0.244

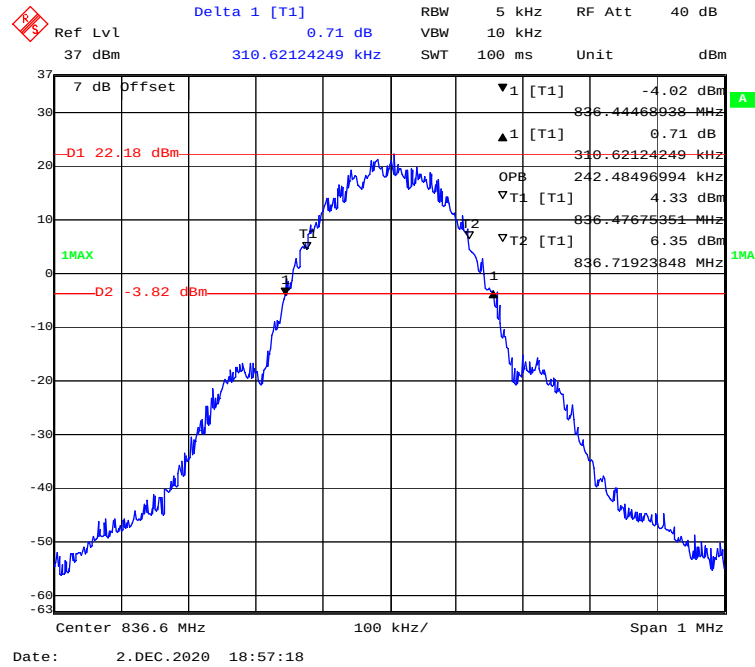
WCDMA Band II

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	1852.4	4.749	4.168
	1880.0	4.770	4.168
	1907.6	4.729	4.168
WCDMA (HSDPA)	1852.4	4.729	4.168
	1880.0	4.749	4.168
	1907.6	4.749	4.168
WCDMA (HSUPA)	1852.4	4.749	4.148
	1880.0	4.729	4.128
	1907.6	4.749	4.148
WCDMA (HSPA+)	1852.4	4.749	4.128
	1880.0	4.729	4.128
	1907.6	4.749	4.148

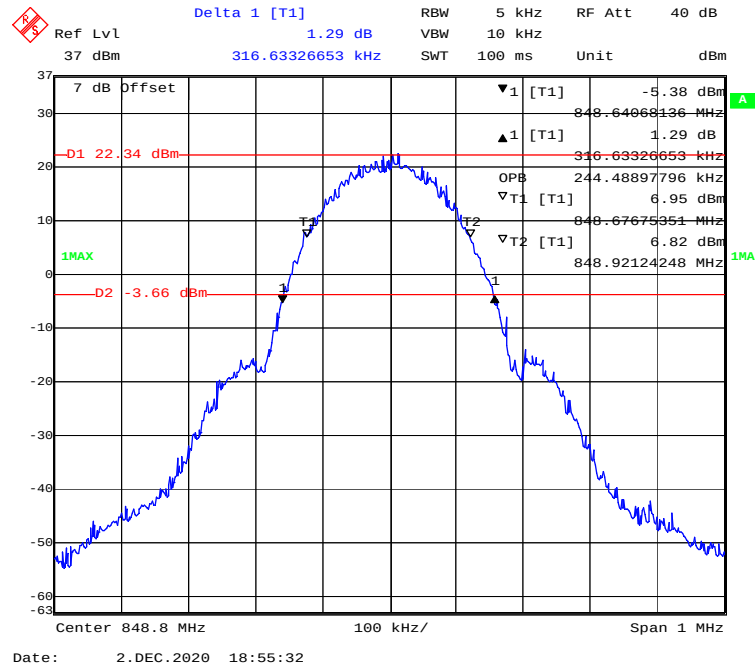
GSM 850 Band**99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Low channel****99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Middle channel**

99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) High channel**99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) Low channel**

99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) Middle channel

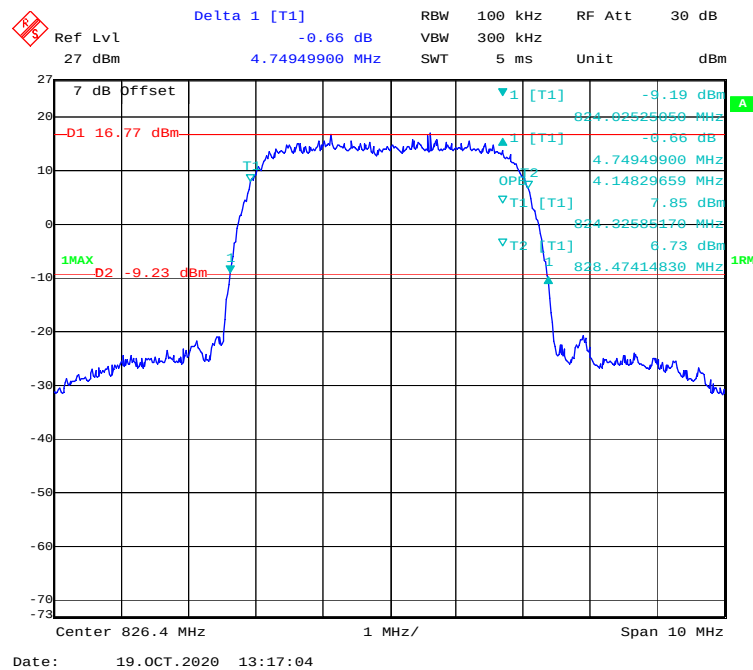


99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) High channel

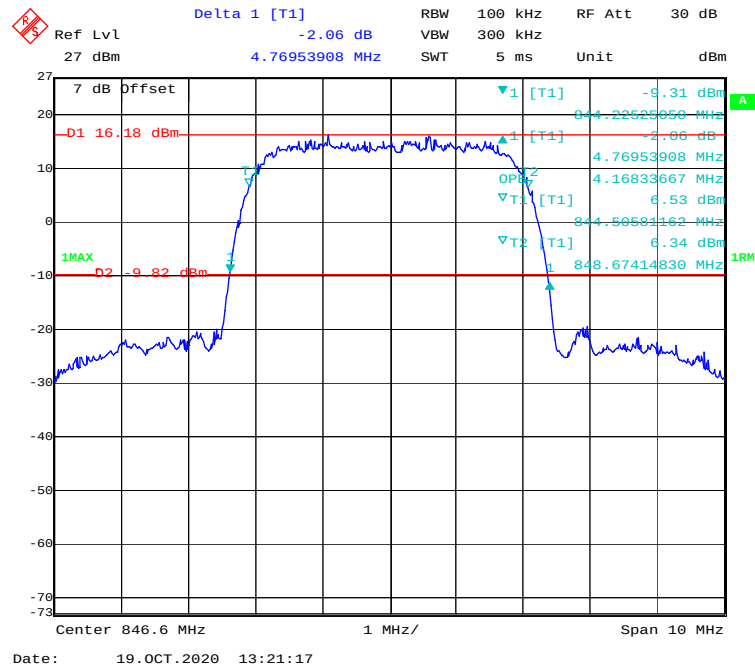


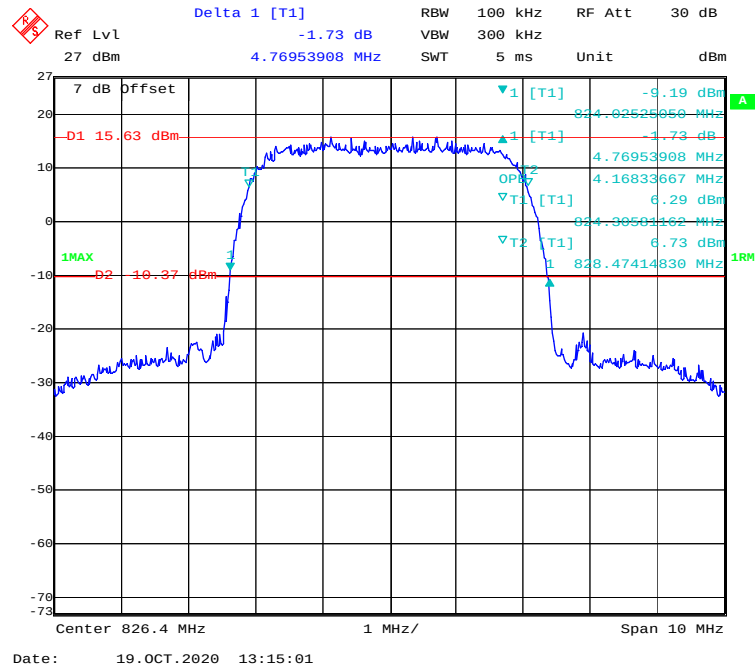
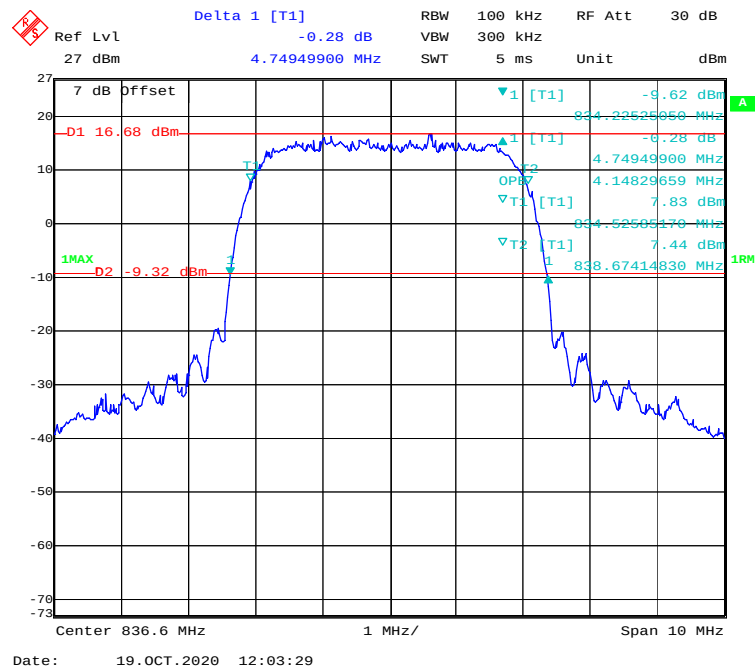
WCDMA Band V

99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Low channel

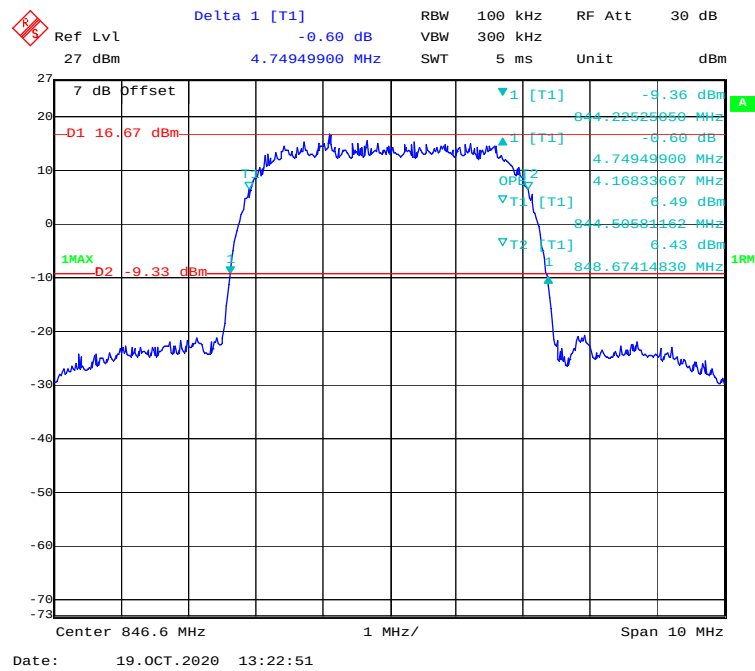


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel



99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Low channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Middle channel**

99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) High channel



[illegible]

Ref Lvl 30 dBm

Delta 1 [T1] 1.26 dB

RBW 100 kHz

RF Att 40 dB

30 dBm

4.74949900 MHz

SWT 5 ms

Unit dBm

7 dB Offset

D1 17.28 dBm

1MAX

D2 -8.72 dBm

▼1 [T1] -9.37 dBm

▲1 [T1] 1.26 dB

OPB2 4.74949900 MHz

▽T1 [T1] 4.14829659 MHz

▽T2 [T1] 7.43 dBm

1 838.69418838 MHz

IN1 1MA

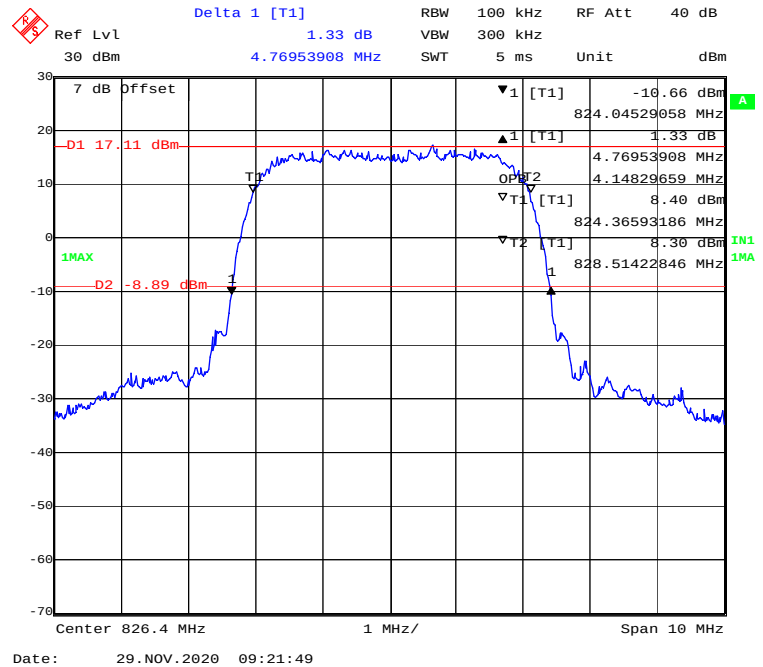
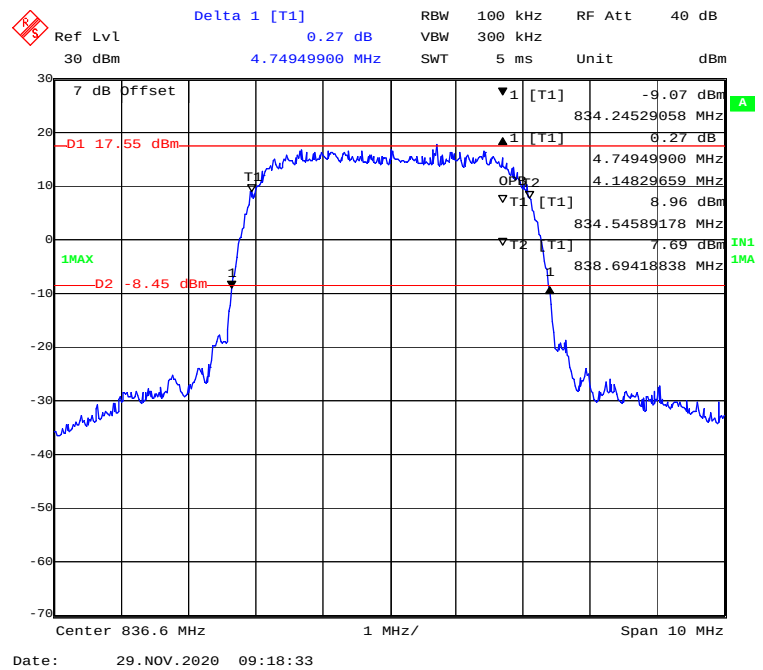
Center 836.6 MHz

1 MHz/

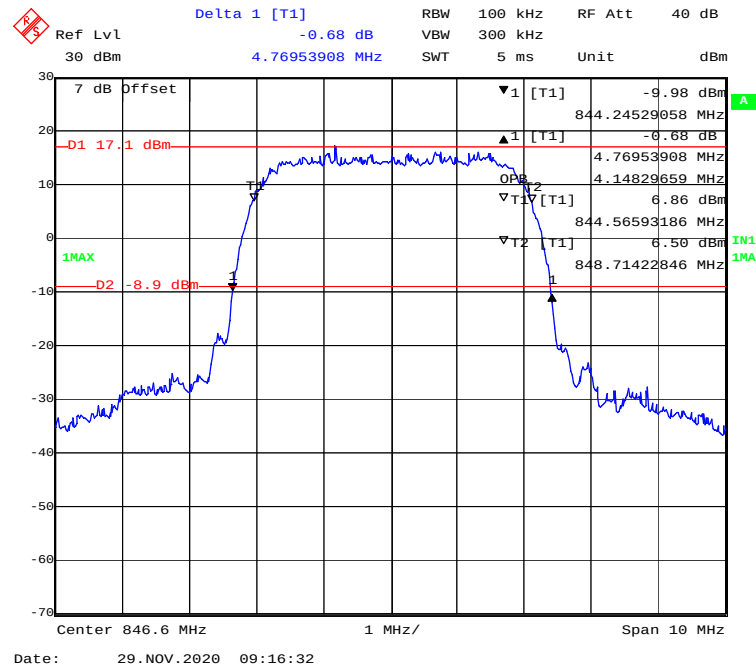
Span 10 MHz

Date: 29.NOV.2020 09:17:41

Ref Lvl 30 dBm
 RBW 100 kHz
 SWT 5 ms
 RF Att 40 dB
 Unit dBm
 Marker 1 [T1] -10.26 dBm
 844.24529058 MHz
 7 dB Offset
 D1 17.07 dBm
 D2 -8.93 dBm
 1MAX
 IN1 IMA
 Center 846.6 MHz
 1 MHz/
 Span 10 MHz
 Date: 29. NOV. 2020 09:14:43

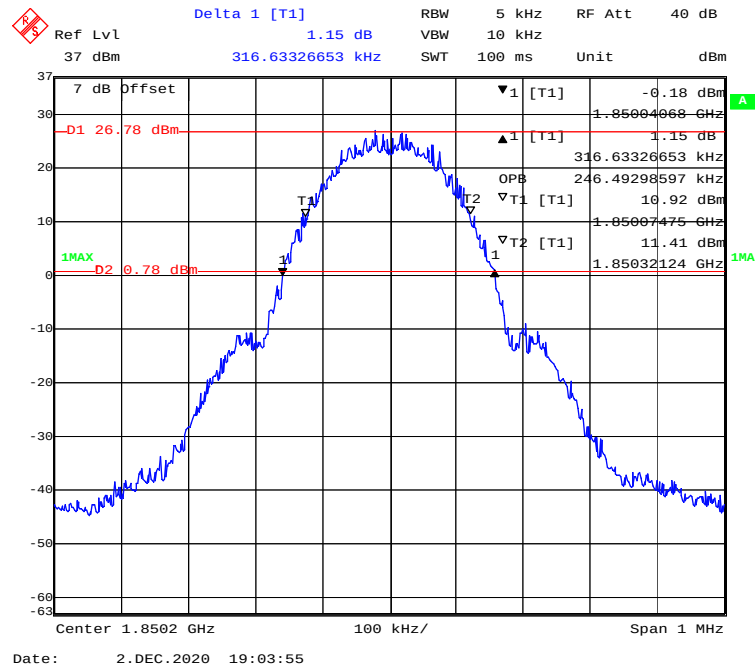
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Low channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Middle channel**

99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) High channel

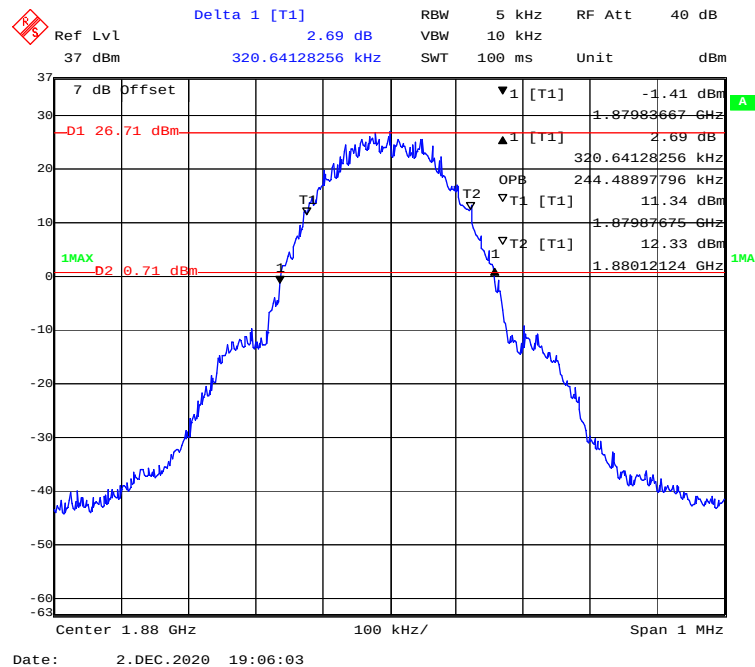


PCS 1900 Band

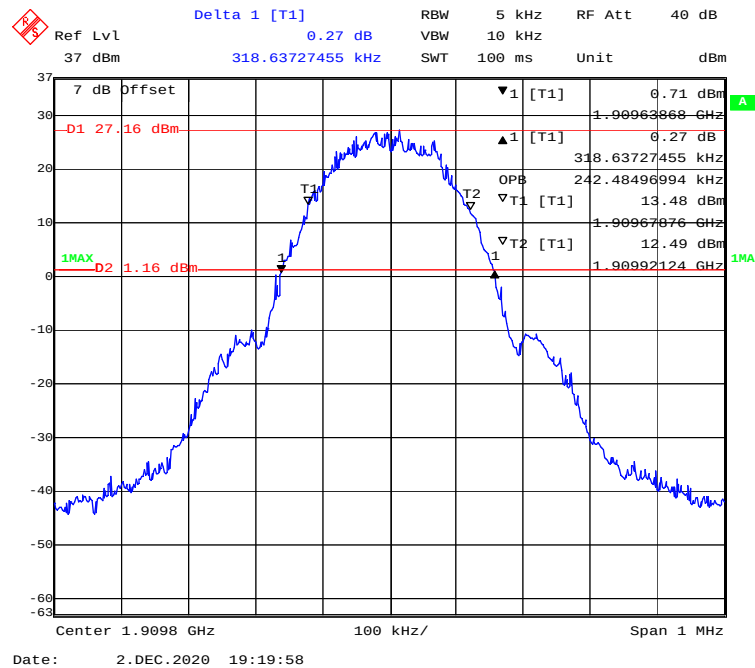
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Low channel



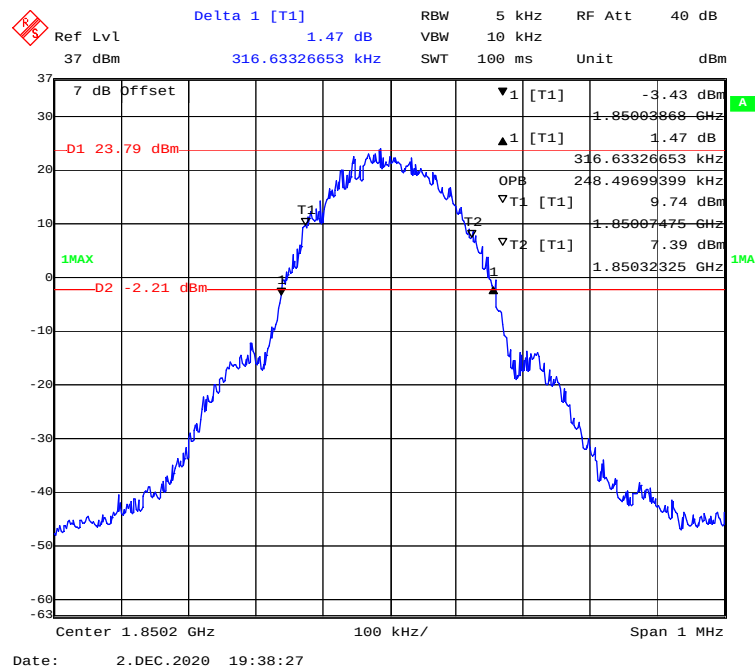
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Middle channel



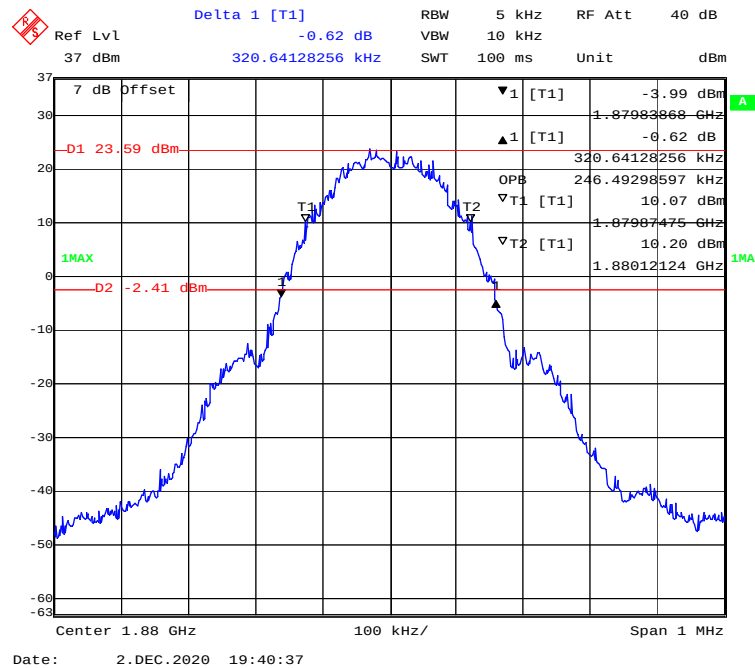
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) High channel



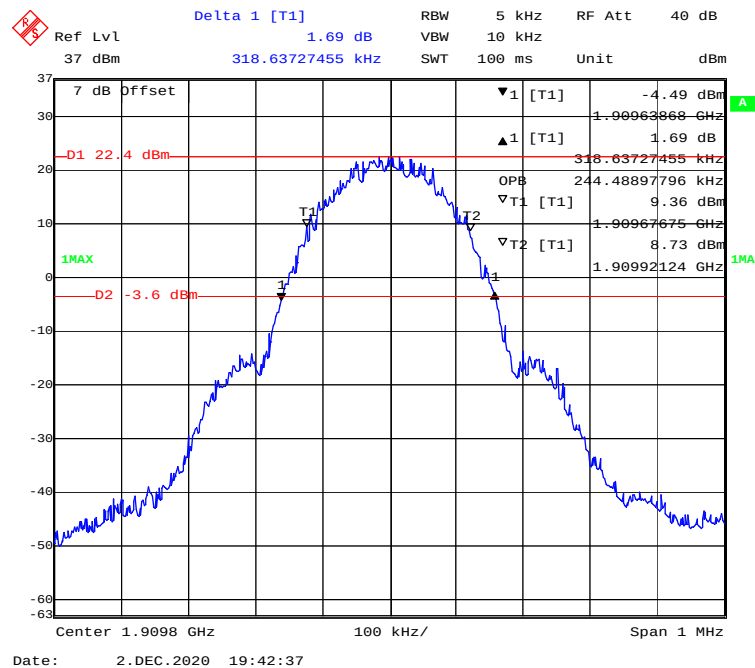
99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) Low channel



99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) Middle channel

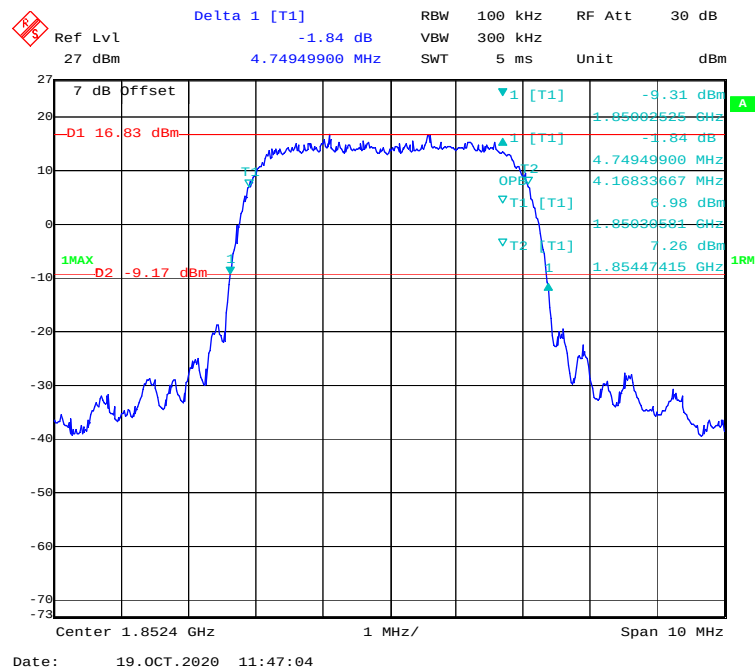


99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) High channel

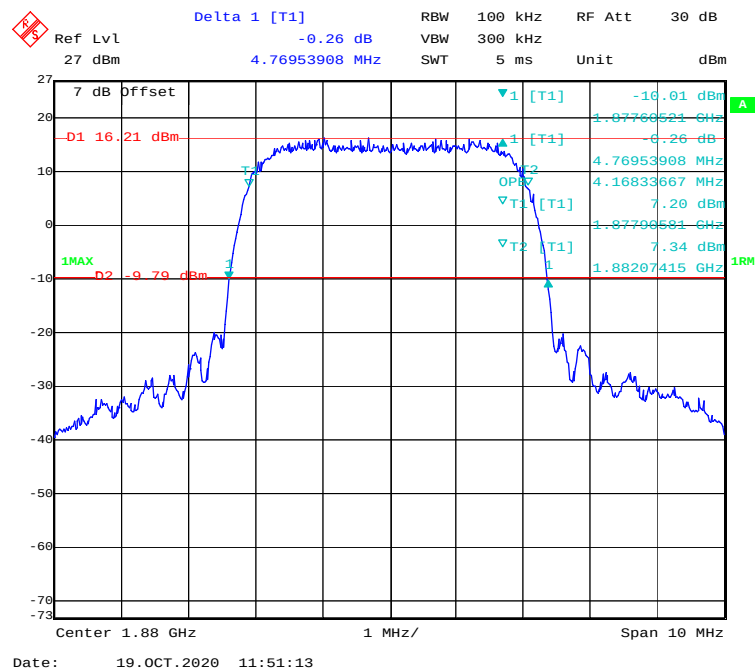


WCDMA Band II

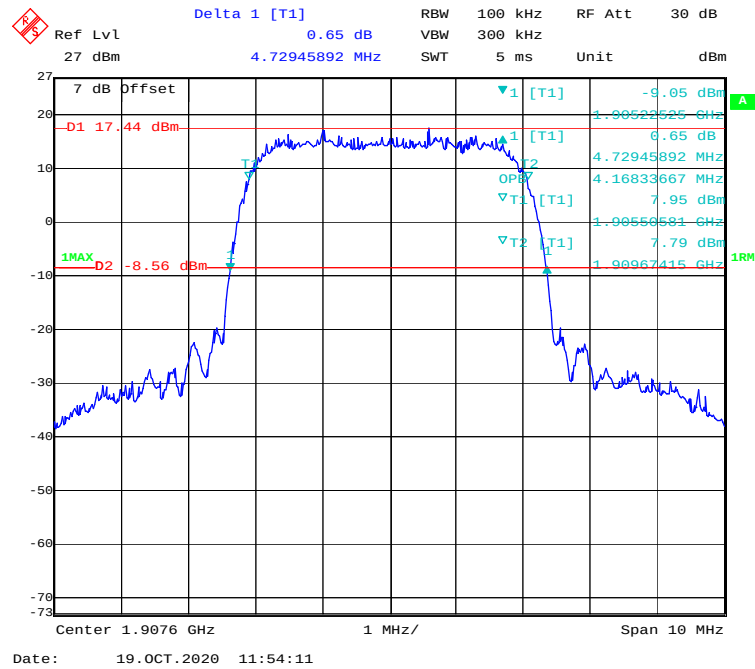
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Low channel



99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Middle channel



99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel



[illegible]

Delta 1 [T1]

Ref Lvl -1.35 dB

27 dBm

4.74949900 MHz

RBW 100 kHz

RF Att 30 dB

SWT 5 ms

Unit dBm

7 dB Offset

D1 16.8 dBm

1MAX D2 -9.2 dBm

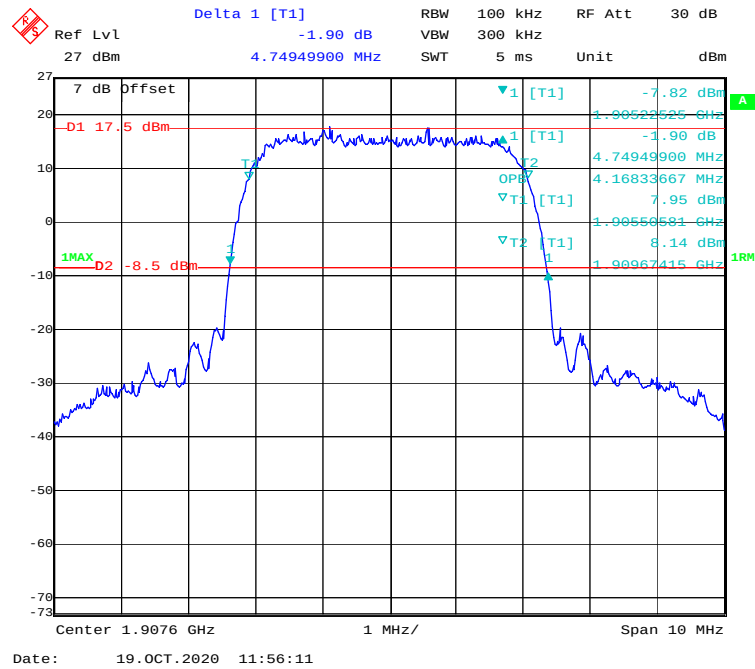
1.88 GHz

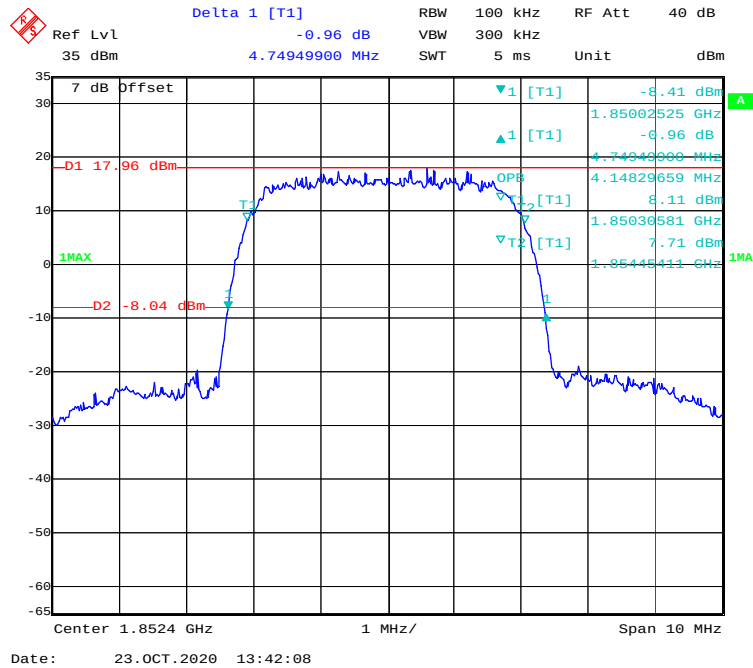
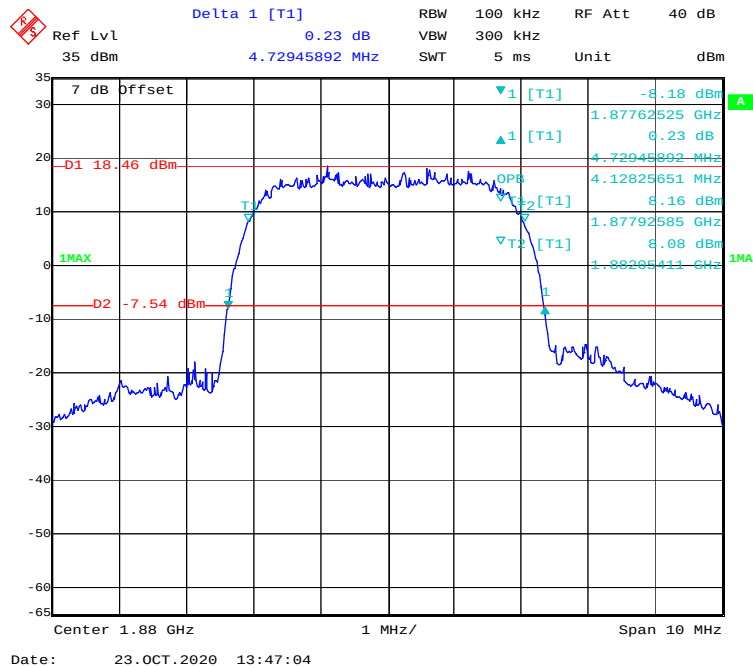
1 MHz/

Span 10 MHz

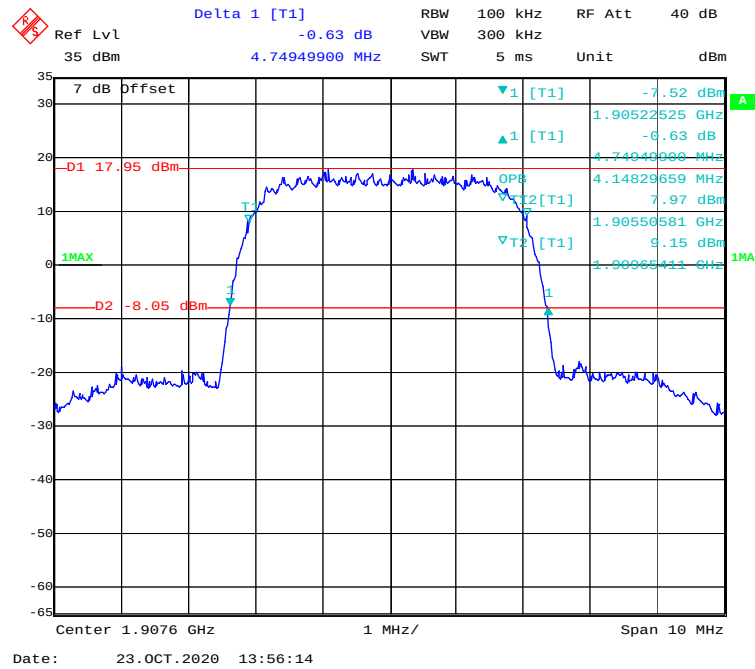
Date: 19.OCT.2020 11:52:21

99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) High channel



99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Low channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Middle channel**

99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) High channel



Delta 1 [T1] -1.58 dB
 RBW 100 kHz RF Att 40 dB
 Ref Lvl 35 dBm VBW 300 kHz
 35 dBm 4.74949900 MHz SWT 5 ms Unit dBm

7 dB Offset
 -D1 18.06 dBm
 1MAX
 -D2 -7.94 dBm
 T1
 T2 [T1]
 T2 [T1]
 T2 [T1]
 1

-7.79 dBm
 1.85002525 GHz
 -1.58 dB
 4.74949900 MHz
 4.12825651 MHz
 8.68 dBm
 1.85032585 GHz
 9.05 dBm
 1.85445411 GHz
 1MAX

Center 1.8524 GHz 1 MHz/ Span 10 MHz
 Date: 23. OCT. 2020 13:42:56

Ref Lvl 35 dBm
Delta 1 [T1] 0.23 dB
RBW 100 kHz
RF Att 40 dB
35 dBm
4.72945892 MHz
SWT 5 ms
Unit dBm

7 dB Offset

D1 18.56 dBm

D2 -7.44 dBm

1MAX

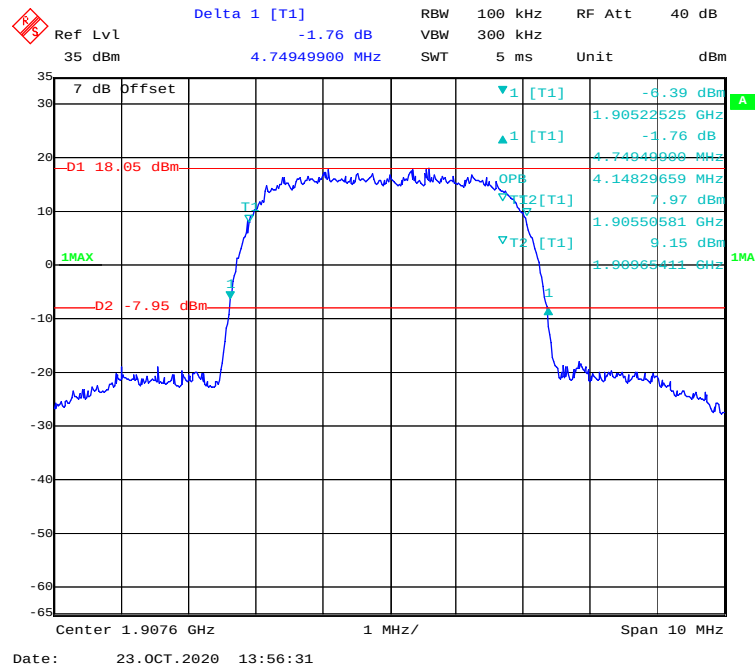
1

1.87762525 GHz
0.23 dB
4.72945892 MHz
8.16 dBm
1.87792585 GHz
9.07 dBm
1.88205411 GHz

Center 1.88 GHz
1 MHz/
Span 10 MHz

Date: 23.OCT.2020 13:47:28

99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) High channel

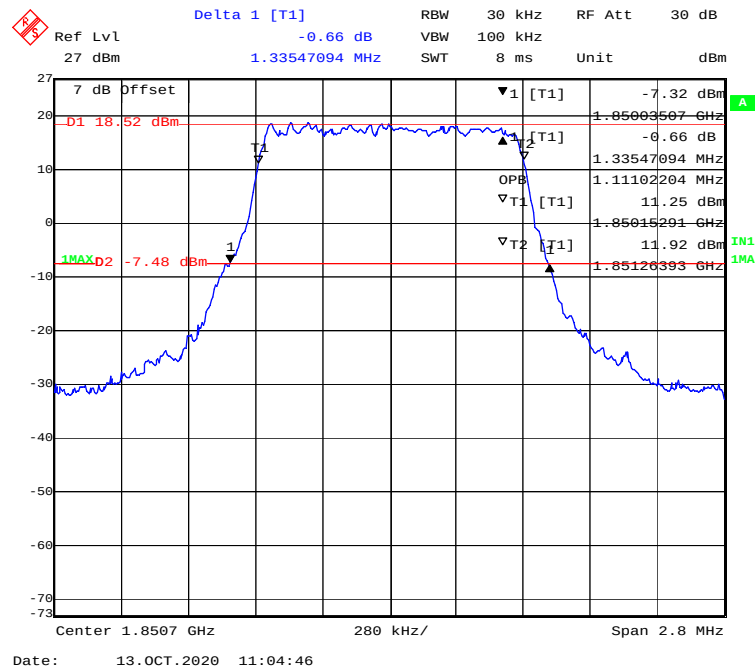


LTE Band 2:

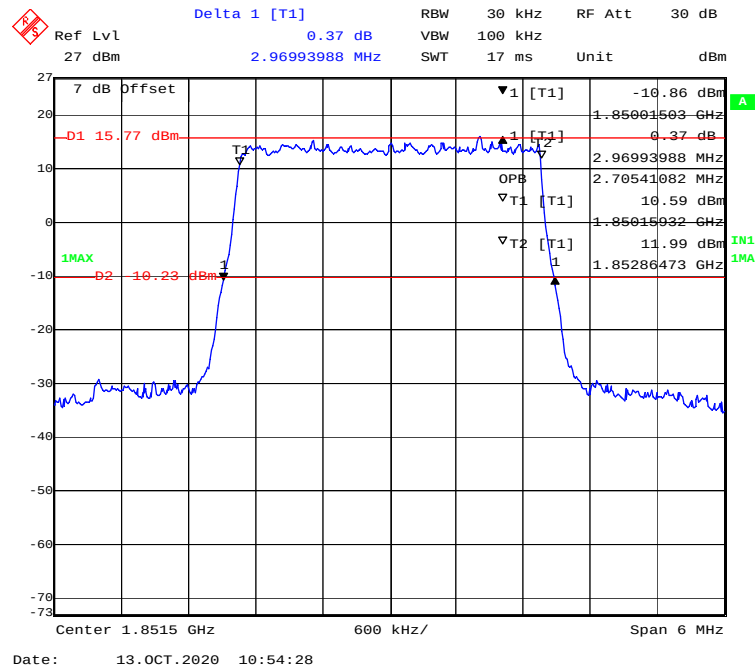
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.335	1.111
	3M		2.970	2.705
	5M		4.930	4.509
	10M		10.301	9.058
	15M		15.030	13.587
	20M		19.559	17.956
	1.4M	Middle	1.324	1.111
	3M		2.958	2.693
	5M		4.950	4.489
	10M		9.820	8.978
	15M		14.910	13.467
	20M		19.559	17.956
	1.4M	High	1.358	1.111
	3M		2.934	2.705
	5M		4.950	4.509
	10M		9.940	8.978
	15M		15.030	13.587
	20M		19.479	17.956

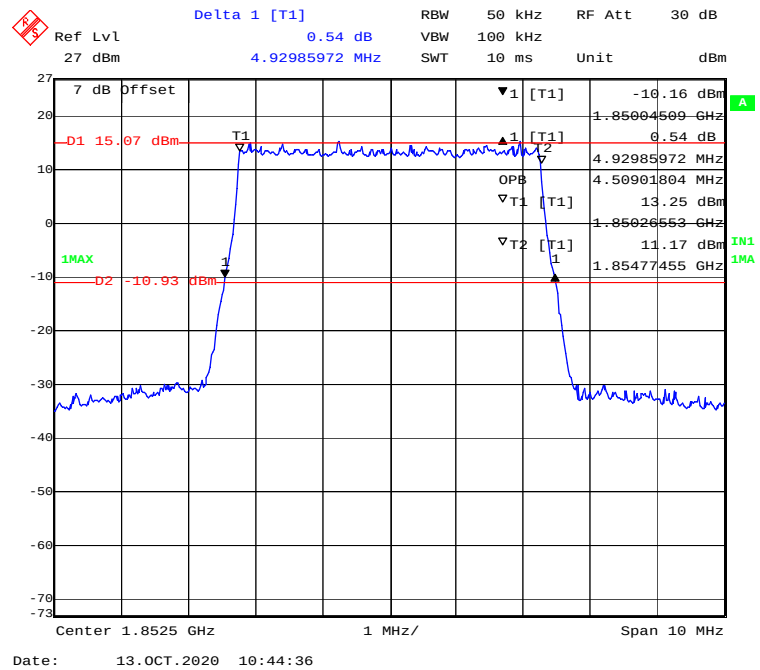
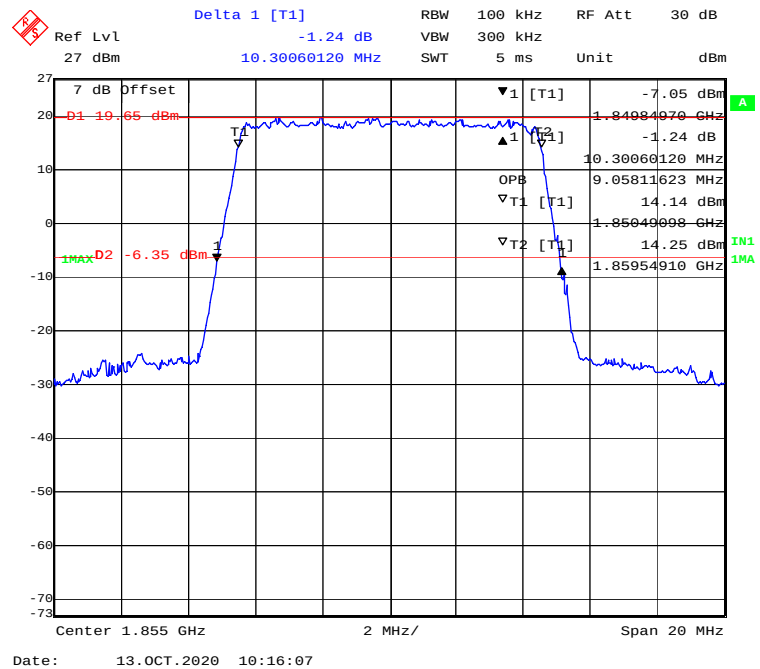
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
16-QAM	1.4M	Low	1.324	1.105
	3M		2.970	2.705
	5M		4.930	4.509
	10M		10.301	9.058
	15M		15.090	13.587
	20M		19.559	17.956
	1.4M	Middle	1.313	1.105
	3M		2.970	2.693
	5M		4.950	4.489
	10M		9.820	8.978
	15M		14.910	13.467
	20M		19.559	17.956
	1.4M	High	1.330	1.105
	3M		2.946	2.705
	5M		4.970	4.509
	10M		9.900	8.978
	15M		15.030	13.527
	20M		19.639	17.956

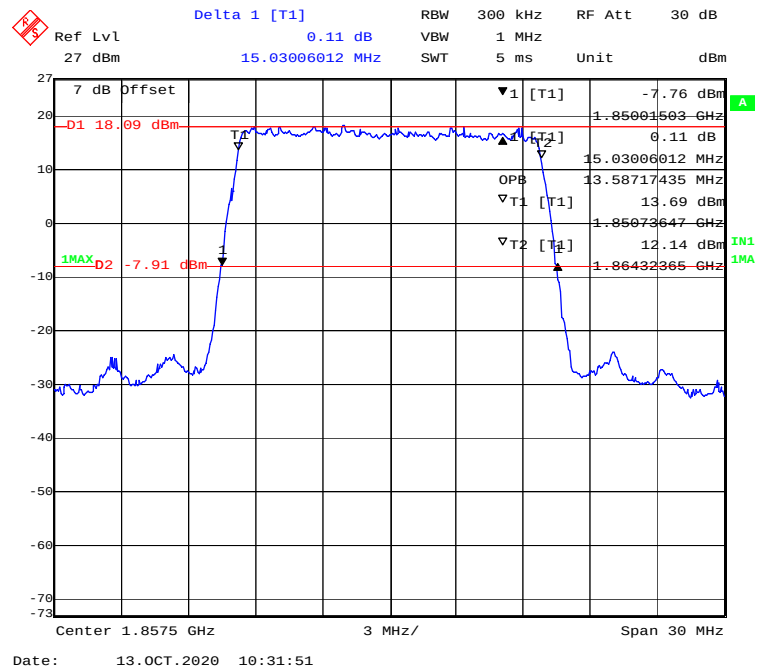
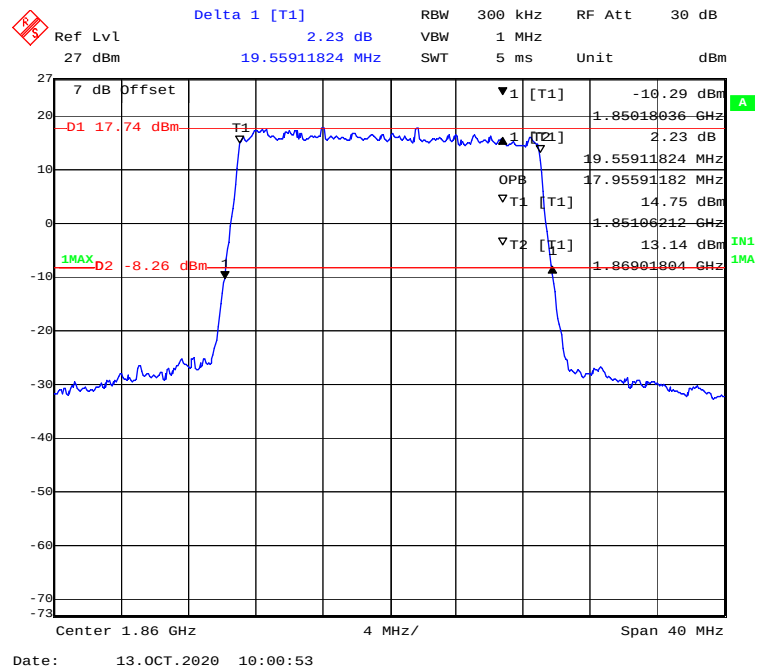
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

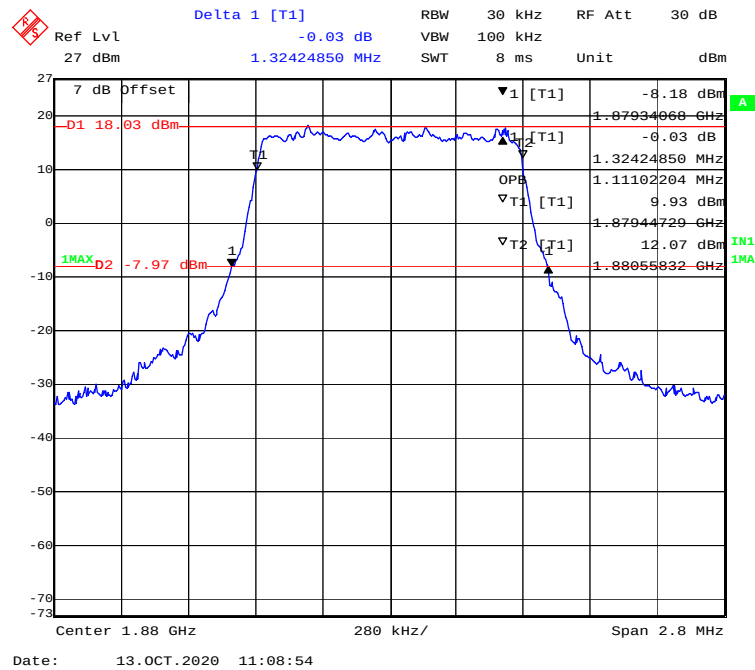
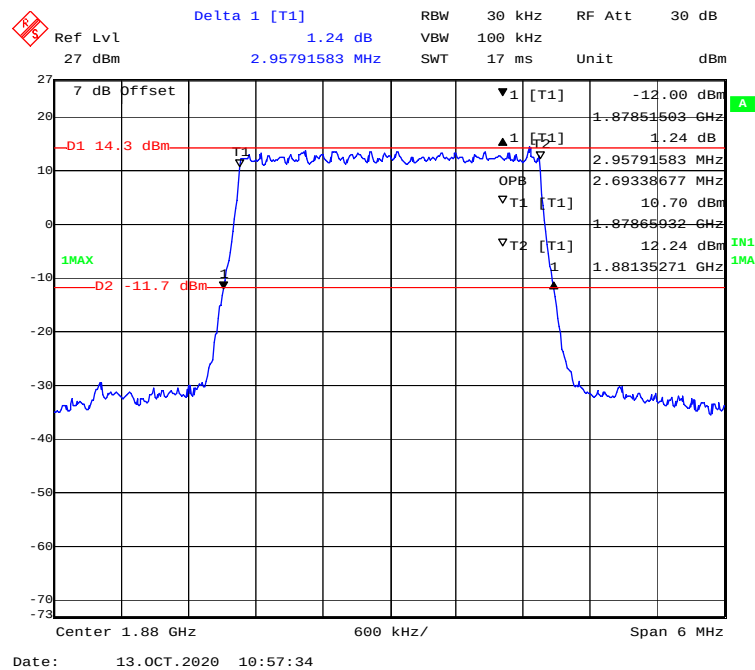


QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

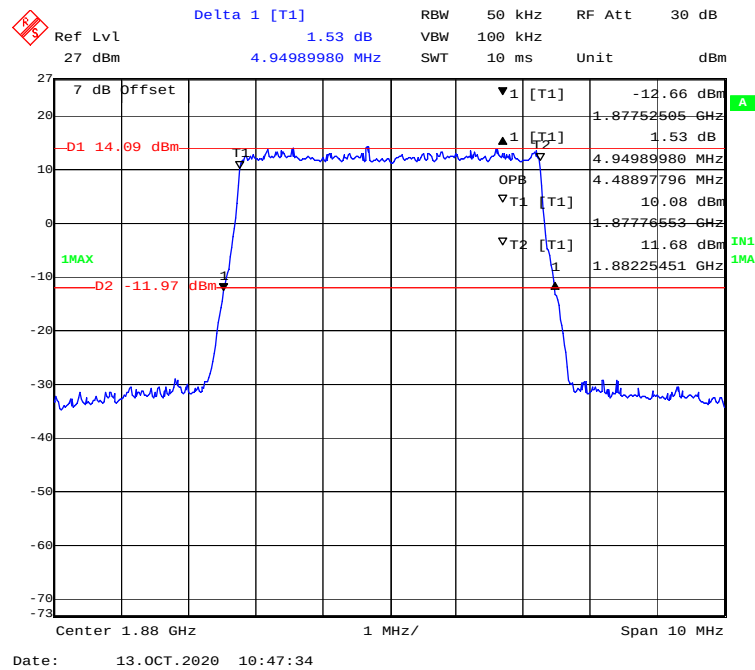


QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

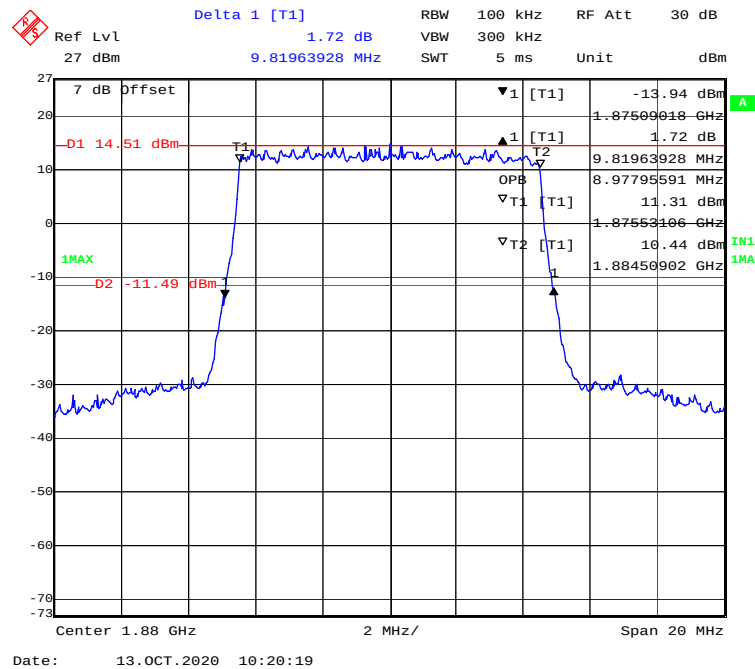
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

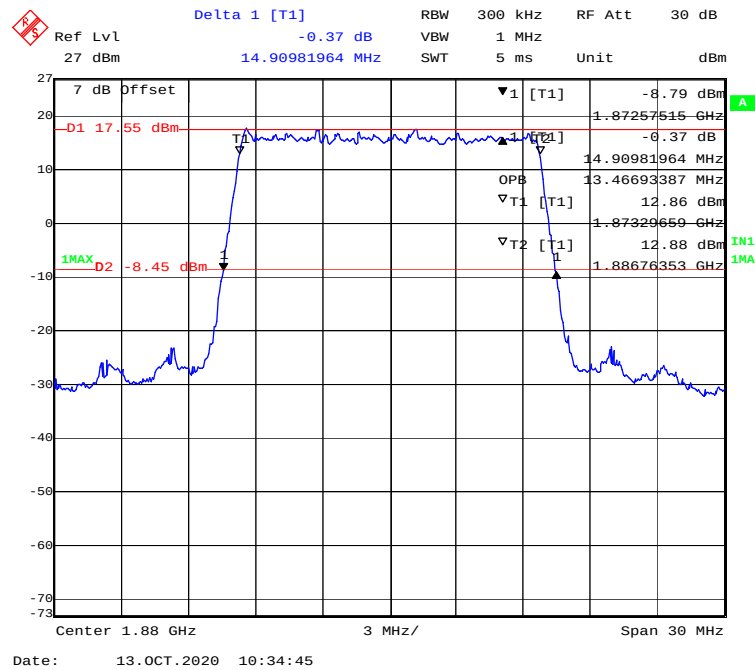
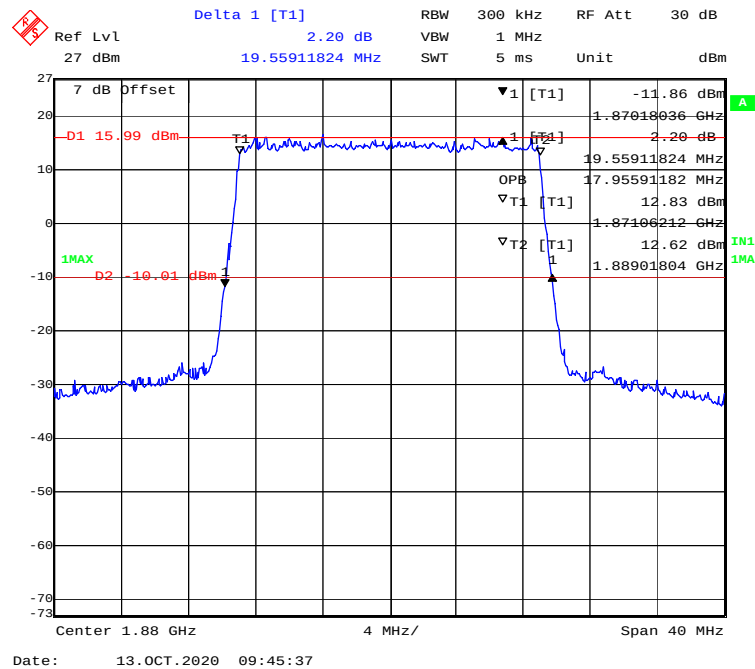
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

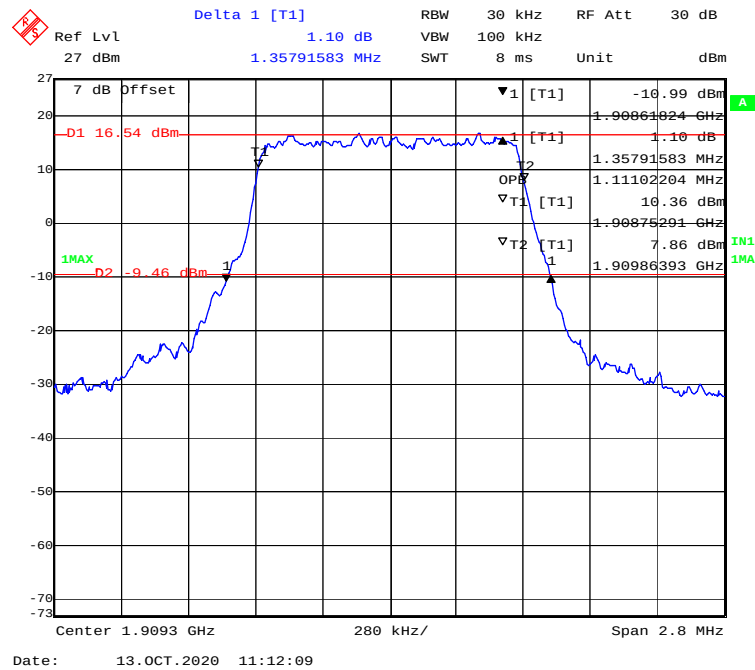
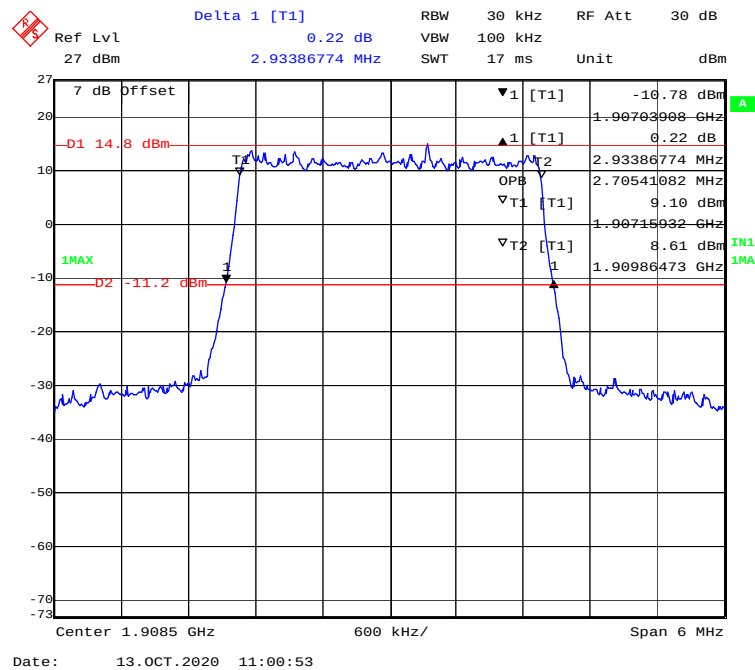
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

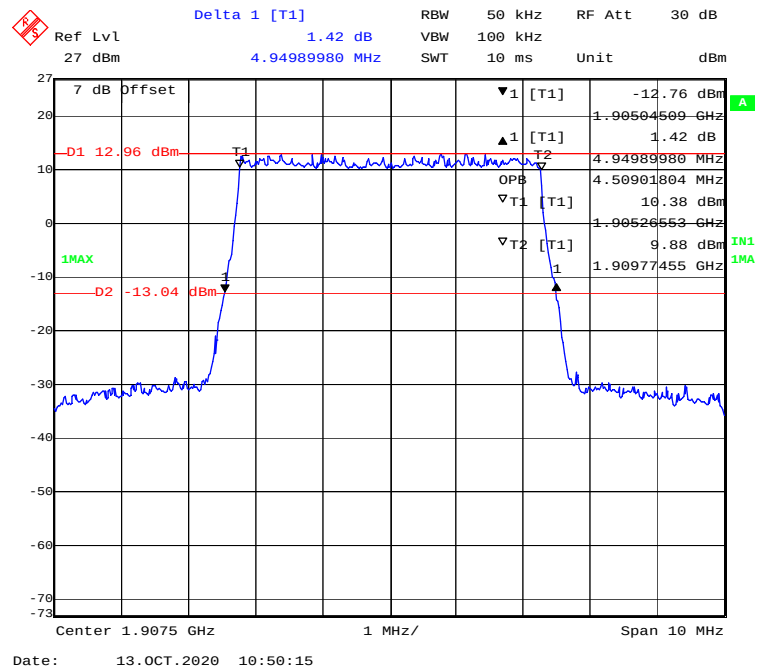
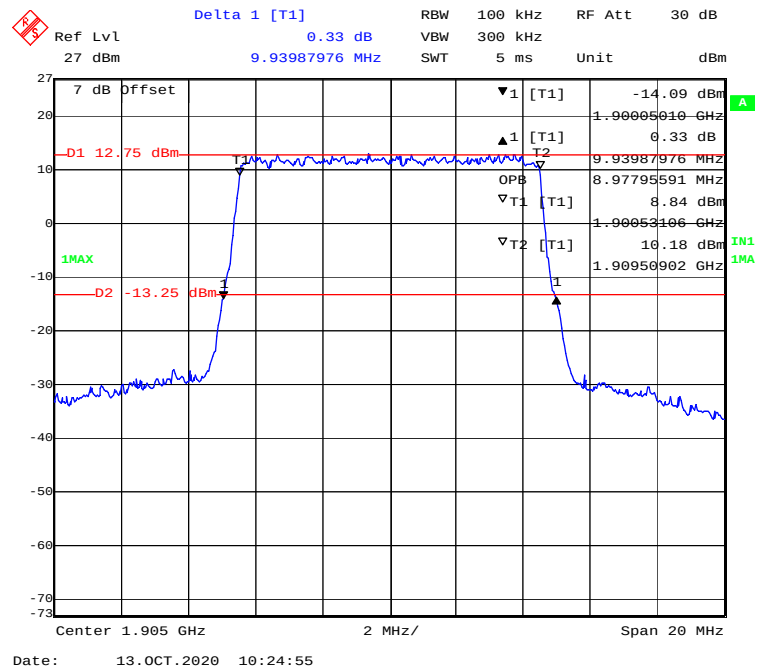


QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

Delta 1 [T1]

Ref Lvl 27 dBm

-1.14 dB

VBW 1 MHz

SWT 5 ms

Unit dBm

300 kHz

RF Att 30 dB

7 dB Offset

D1 16.33 dBm

T1

1

1MAX

D2 -9.67 dBm

▼1 [T1]

1 [T1]

OPB

▼T1 [T1]

▼T2 [T1]

1

-8.87 dBm

1.89495491 GHz

-1.14 dB

15.03006012 MHz

13.58717435 MHz

11.47 dBm

1.89573647 GHz

11.31 dBm

1.90932365 GHz

IN1

1MA

Center 1.9025 GHz

3 MHz/

Span 30 MHz

Date: 13.OCT.2020 10:39:46

[illegible]

A

Parameter	Value
Ref Lvl	27 dBm
Delta 1 [T1]	0.93 dB
RBW	30 kHz
RF Att	30 dB
SWT	8 ms
Unit	dBm

Center 1.8507 GHz 280 kHz/ Span 2.8 MHz

Date: 13.OCT.2020 11:03:19

Delta 1 [T1] 0.04 dB

Ref Lvl 27 dBm

2.96993988 MHz

RBW 30 kHz

SWT 17 ms

RF Att 30 dB

Unit dBm

7 dB Offset

D1 15.08 dBm

D2 -10.92 dBm

1MAX

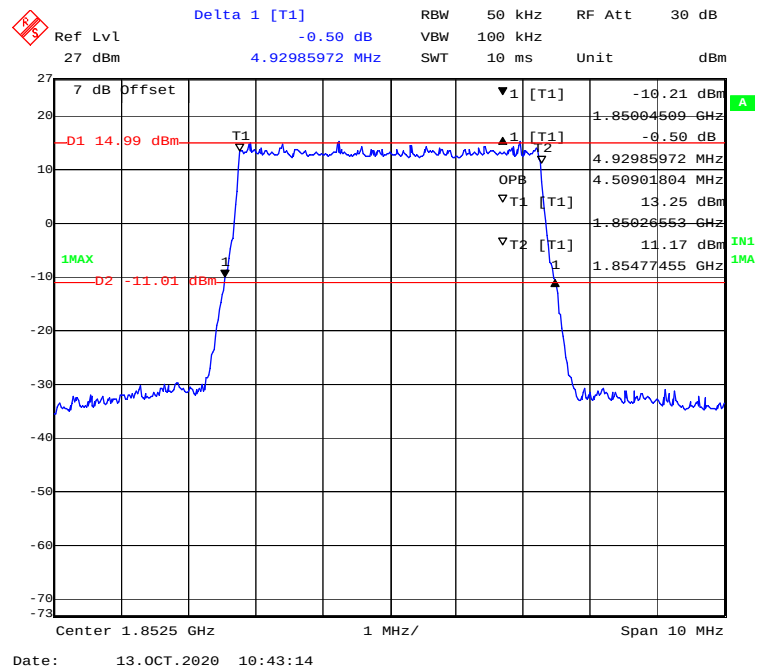
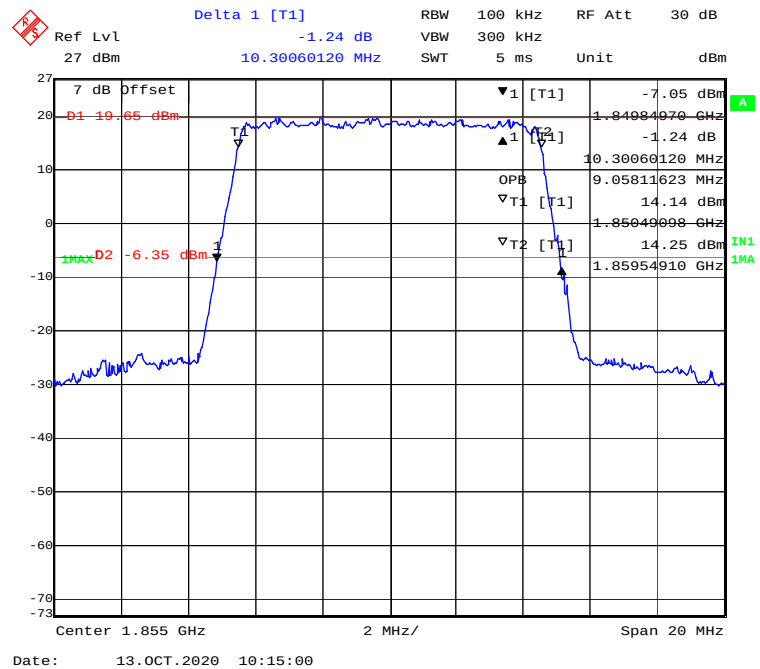
1MIN

Center 1.8515 GHz

600 kHz/

Span 6 MHz

Date: 13.OCT.2020 10:53:23

16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

Delta 1 [T1] 1.14 dB

Ref Lvl 27 dBm

15.09018036 MHz

RBW 300 kHz RF Att 30 dB

SWT 5 ms Unit dBm

7 dB Offset

D1 17.14 dBm

1MAX D2 -8.86 dBm

▼1 [T1] -8.80 dBm

1.84995491 GHz

1.14 dB

15.09018036 MHz

OPB 13.58717435 MHz

▼T1 [T1] 13.69 dBm

1.85073647 GHz

▼T2 [T1] 11.88 dBm

1.86432365 GHz

Center 1.8575 GHz

3 MHz/

Span 30 MHz

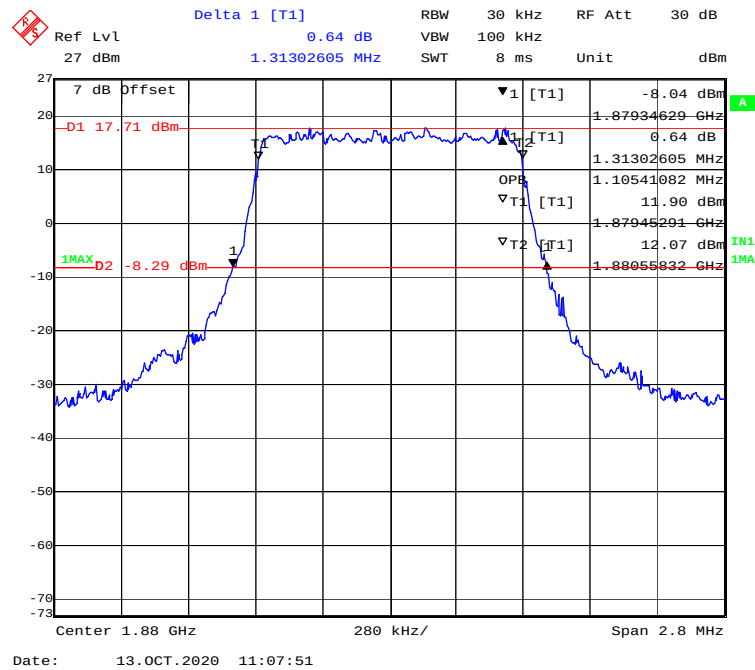
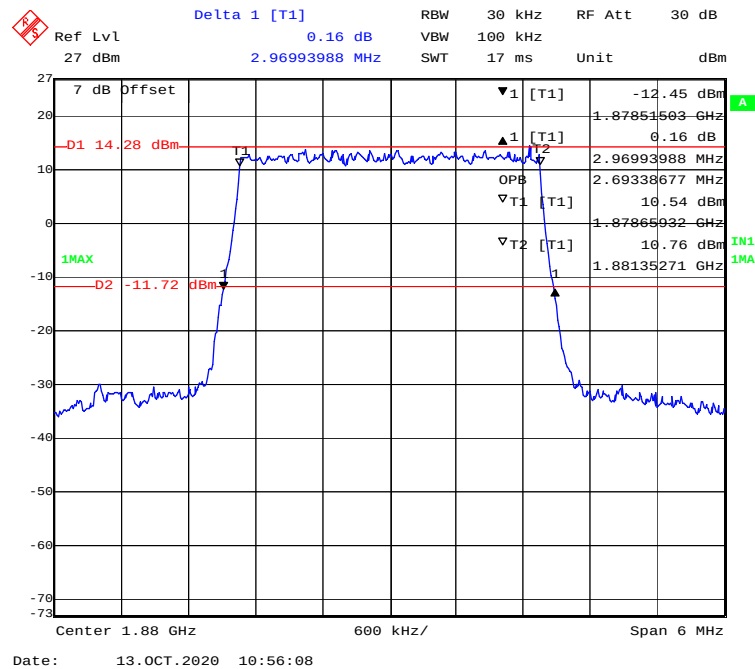
Date: 13.OCT.2020 10:30:25

Delta 1 [T1] 2.23 dB
 RBW 300 kHz RF Att 30 dB
 Ref Lvl 27 dBm
 VBW 1 MHz
 SWT 5 ms Unit dBm
 19.5591824 MHz

7 dB Offset
 D1 17.74 dBm
 T1
 1.85918036 GHz
 2.23 dB
 19.5591824 MHz
 OPB 17.95591182 MHz
 T1 [T1] 14.75 dBm
 1.85106212 GHz
 T2 [T1] 12.91 dBm
 1.86001804 GHz
 D2 -8.26 dBm
 1MAX
 IN1
 1MA

Center 1.86 GHz 4 MHz/ Span 40 MHz

Date: 13.OCT.2020 09:56:22

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

Delta 1 [T1]
 Ref Lvl 27 dBm
 0.27 dB
 4.94989980 MHz
 RBW 50 kHz
 VBW 100 kHz
 SWT 10 ms
 RF Att 30 dB
 Unit dBm

7 dB Offset
 -12.66 dBm
 1.87752505 GHz
 0.27 dB
 4.94989980 MHz
 4.8897796 MHz
 9.56 dBm
 1.87776553 GHz
 11.55 dBm
 1.88225451 GHz

D1 13.29 dBm
 D2 -12.71 dBm

1MAX
 IN1
 1MA

Center 1.88 GHz
 1 MHz/
 Span 10 MHz

Date: 13.OCT.2020 10:46:08

A

Parameter	Value
Ref Lvl	27 dBm
Delta 1 [T1]	1.71 dB
RBW	100 kHz
RF Att	30 dB
VBW	300 kHz
SWT	5 ms
Unit	dBm

Center 1.88 GHz 2 MHz/ Span 20 MHz

Date: 13.OCT.2020 10:18:51

Delta 1 [T1]

Ref Lvl -0.11 dB

27 dBm 14.90981964 MHz

RBW 300 kHz RF Att 30 dB

VBW 1 MHz

SWT 5 ms Unit dBm

7 dB Offset

D1 17.42 dBm

1MAX D2 -8.58 dBm

▼1 [T1] -9.05 dBm

1.87257515 GHz

OPB 13.46693387 MHz

▽T1 [T1] 12.86 dBm

1.87320659 GHz

▽T2 [T1] 12.88 dBm

1.88676353 GHz

Center 1.88 GHz 3 MHz/ Span 30 MHz

Date: 13.OCT.2020 10:33:35

Delta 1 [T1] 0.03 dB

Ref Lvl 27 dBm

RBW 300 kHz RF Att 30 dB

19.55911824 MHz

SWT 5 ms Unit dBm

7 dB Offset

D1 15.83 dBm

1MAX

D2 -10.17 dBm

▼1 [T1] -10.61 dBm

1 [T1] 0.03 dB

OPB 17.955911824 MHz

▽T1 [T1] 11.94 dBm

▽T2 [T1] 12.42 dBm

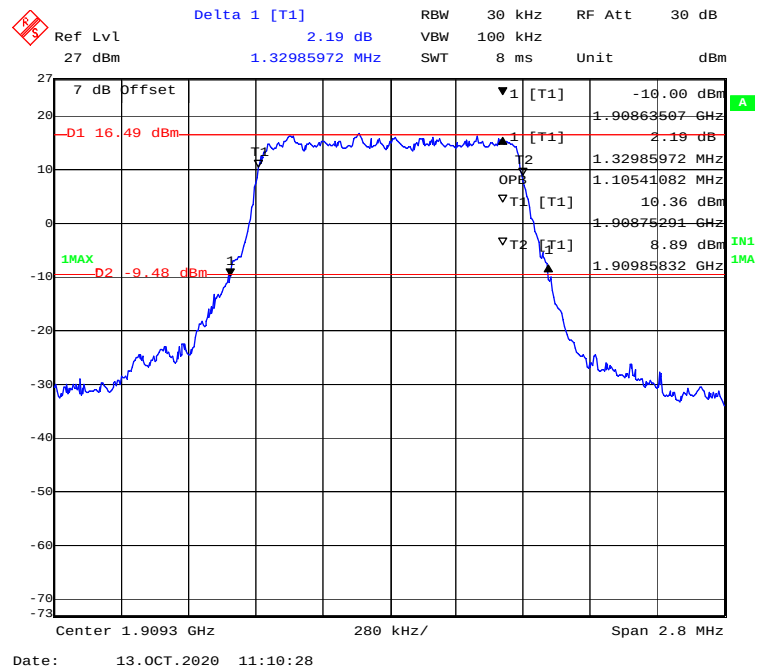
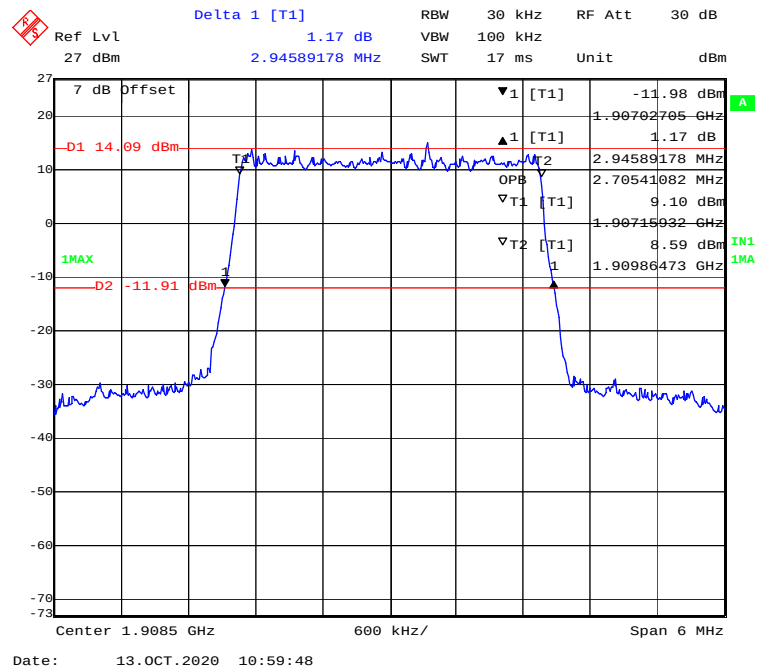
1.87026052 GHz

1.87106212 GHz

1.88901804 GHz

Center 1.88 GHz 4 MHz/ Span 40 MHz

Date: 13.OCT.2020 09:47:17

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

Delta 1 [T1] 1.31 dB
 RBW 50 kHz RF Att 30 dB
 VBW 100 kHz
 SWT 10 ms Unit dBm

Ref Lvl 27 dBm
 Center 1.9075 GHz 1 MHz/ Span 10 MHz

7 dB Offset
 D1 12.43 dBm
 D2 -13.57 dBm
 1MAX
 IN1 1MA

T1
 T2
 OPB
 T1 [T1]
 T2 [T1]

-13.77 dBm
 1.90502505 GHz
 1.31 dB
 4.96993988 MHz
 4.50901804 MHz
 9.57 dBm
 1.90526553 GHz
 8.55 dBm
 1.90977455 GHz

Delta 1 [T1] 1.53 dB

Ref Lvl 27 dBm

RBW 100 kHz RF Att 30 dB

SWT 5 ms Unit dBm

7 dB Offset

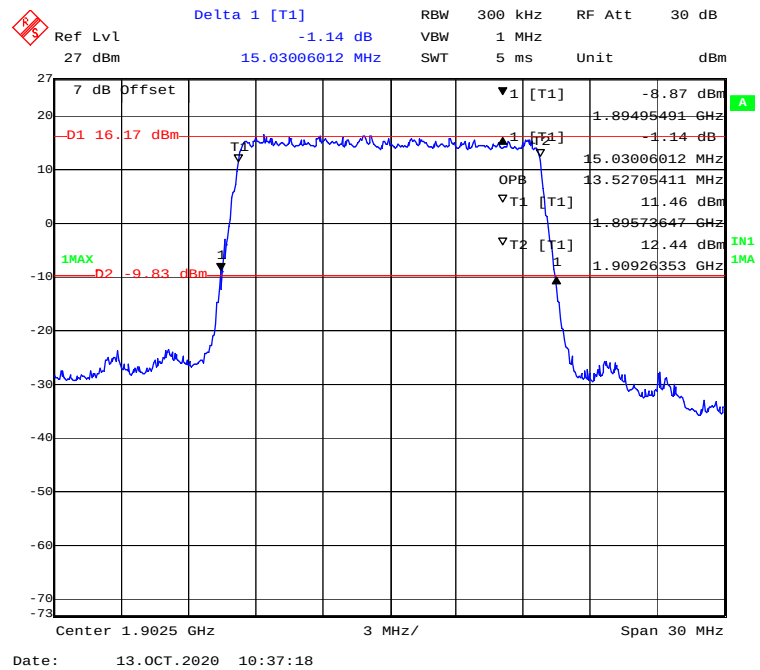
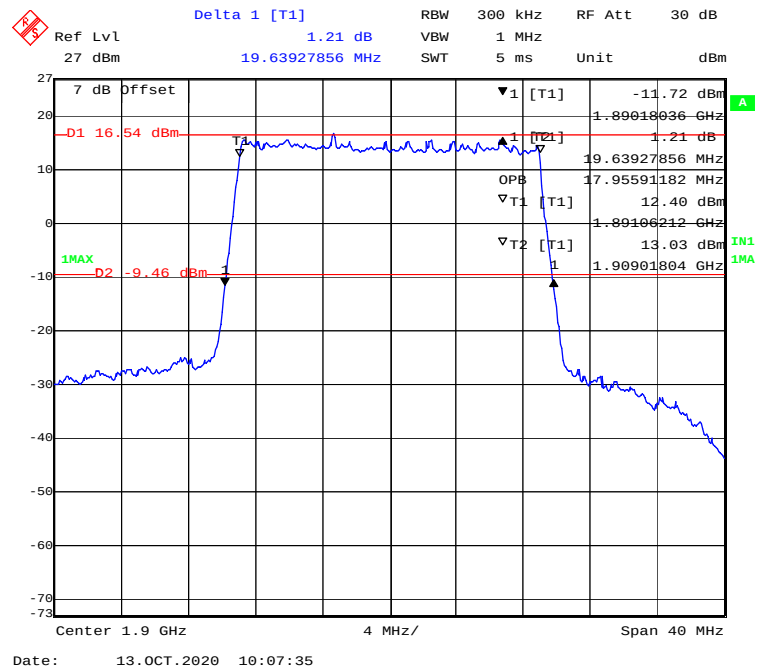
D1 12.74 dBm

D2 -13.26 dBm

IN1 1MA

Center 1.905 GHz 2 MHz/ Span 20 MHz

Date: 13.OCT.2020 10:22:23

16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

LTE Band 4:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.324	1.111
	3M		2.958	2.693
	5M		4.95	4.509
	10M		9.78	8.978
	15M		15.15	13.647
	20M		19.639	18.116
	1.4M	Middle	1.296	1.111
	3M		2.97	2.705
	5M		4.97	4.509
	10M		9.82	8.978
	15M		14.97	13.587
	20M		19.399	17.956
	1.4M	High	1.313	1.105
	3M		2.982	2.693
	5M		4.93	4.509
	10M		9.82	8.978
	15M		15.03	13.647
	20M		19.639	18.036

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
16-QAM	1.4M	Low	1.307	1.111
	3M		2.946	2.693
	5M		4.930	4.509
	10M		9.860	8.978
	15M		14.970	13.647
	20M		19.639	18.116
	1.4M	Middle	1.285	1.111
	3M		2.958	2.705
	5M		4.950	4.509
	10M		9.820	8.978
	15M		14.970	13.587
	20M		19.319	17.876
	1.4M	High	1.324	1.105
	3M		2.982	2.693
	5M		4.970	4.489
	10M		9.820	8.978
	15M		15.030	13.587
	20M		19.639	17.956

Delta 1 [T1] 2.24 dB
 Ref Lvl 27 dBm
 1.32424850 MHz
 RBW 30 kHz
 VBW 100 kHz
 SWT 8 ms
 Unit dBm

7 dB Offset
 -D1 13.8 dBm
 1MAX
 -D2 -12.2 dBm
 1

Center 1.7107 GHz
 280 kHz/
 Span 2.8 MHz

Date: 13.OCT.2020 11:16:47

Ref Lvl 27 dBm

Delta 1 [T1] -0.59 dB

RBW 30 kHz

VBW 100 kHz

SWT 17 ms

RF Att 30 dB

Unit dBm

7 dB Offset

D1 12.04 dBm

D2 -13.96 dBm

1MAX

IN1 1MA

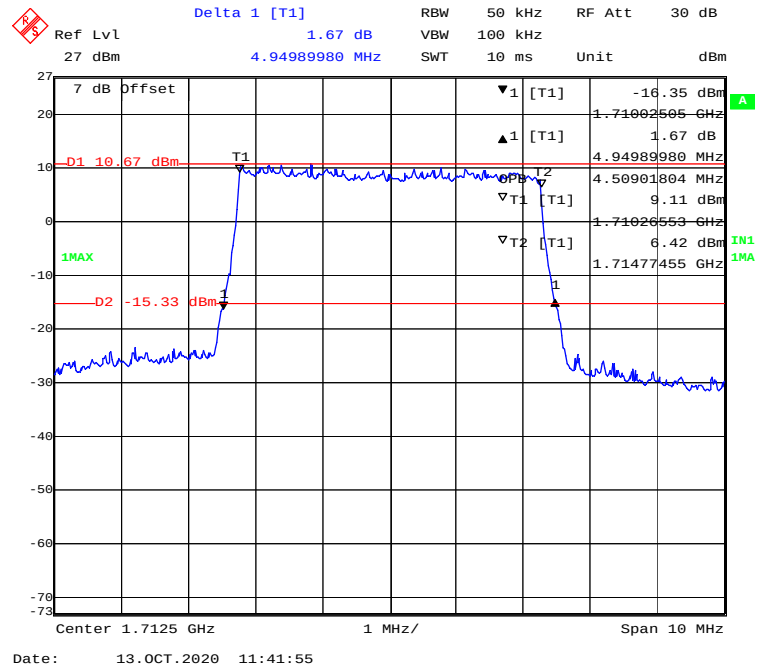
Center 1.7115 GHz

600 kHz/

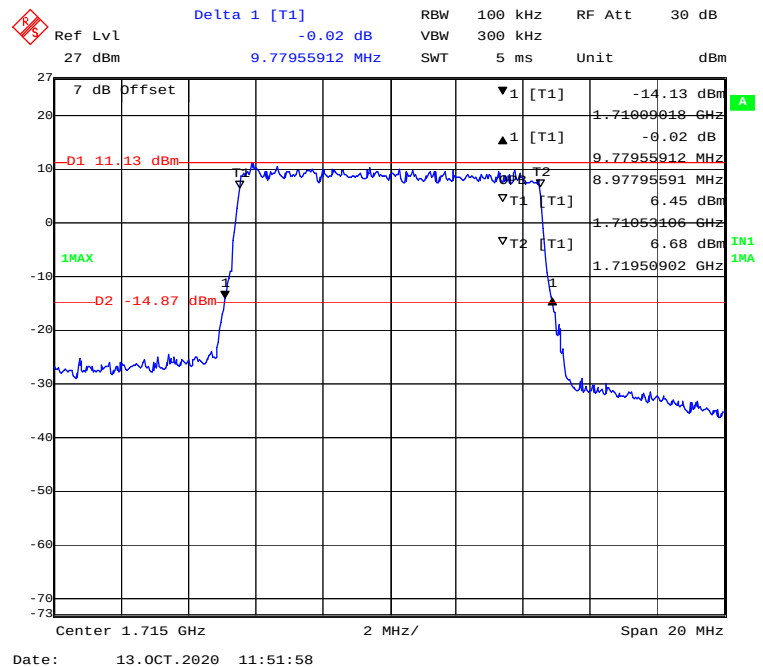
Span 6 MHz

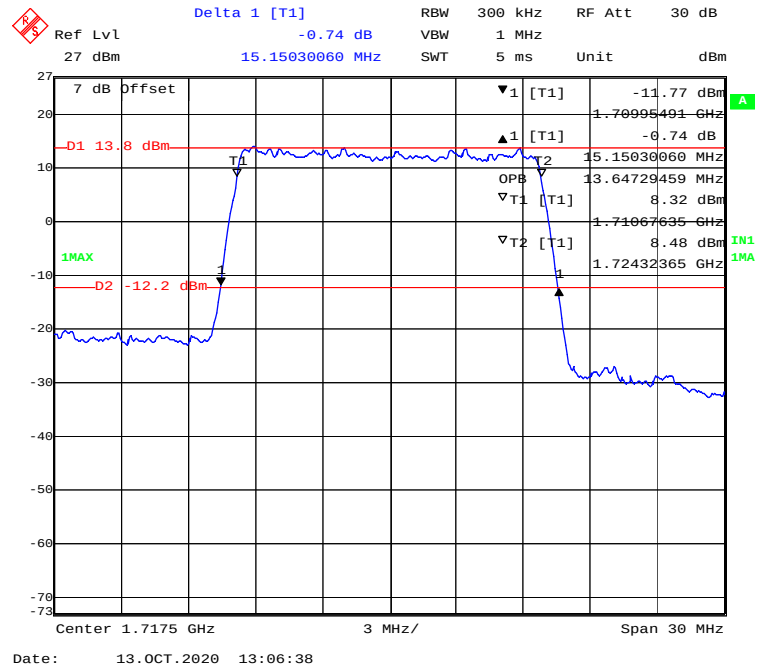
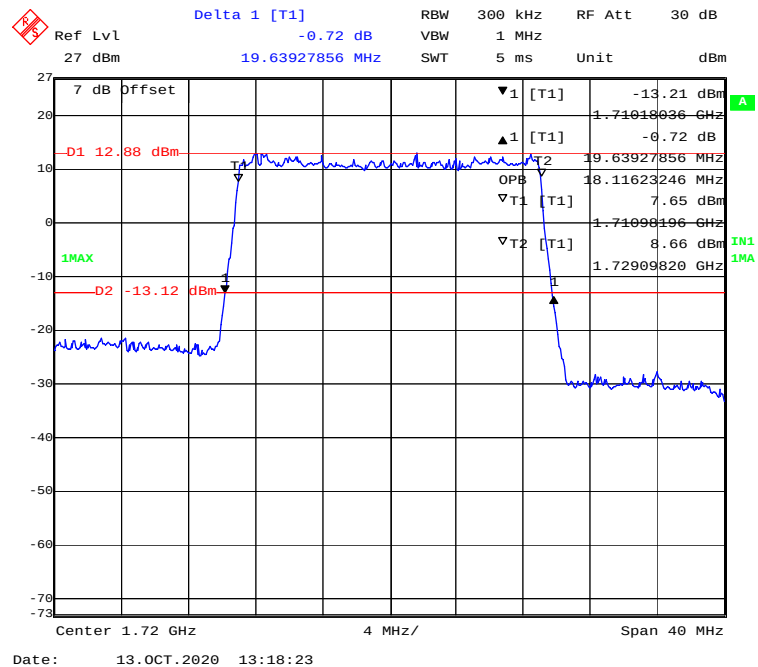
Date: 13.OCT.2020 11:27:47

QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

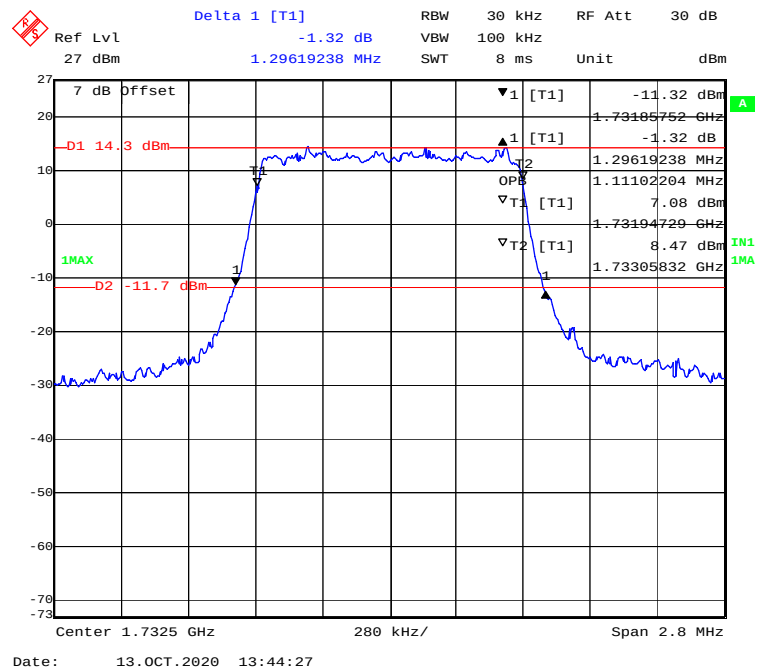


QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

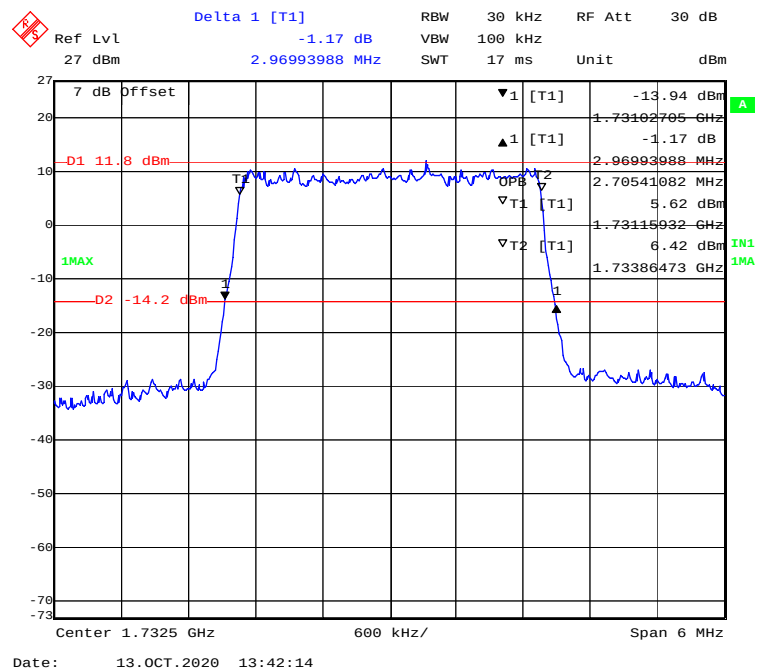


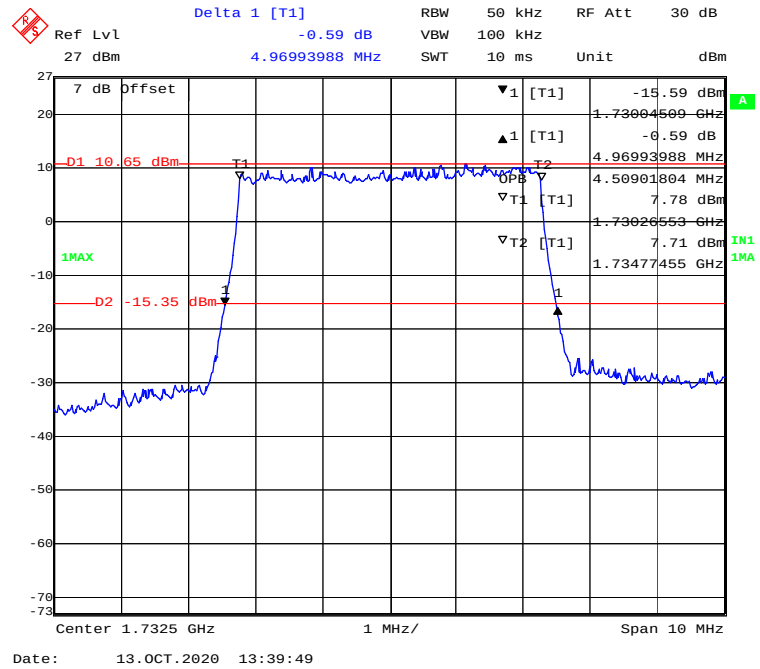
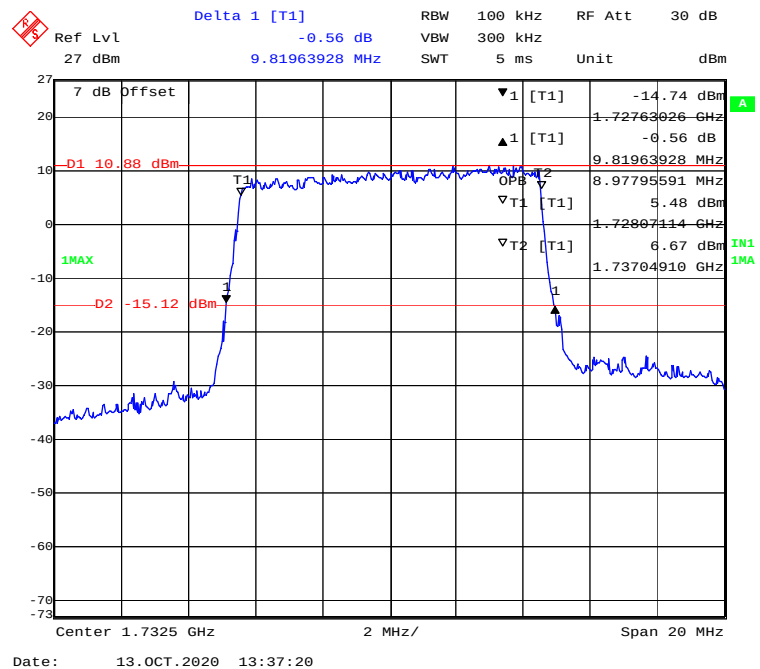
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

Ref Lvl 27 dBm
Delta 1 [T1] 0.72 dB
RBW 300 kHz
RF Att 30 dB
VBW 1 MHz
SWT 5 ms

Unit dBm

7 dB Offset
-D1 15.06 dBm
1MAX
-D2 -10.94 dBm

▼1 [T1] -11.29 dBm
1 [T1] 0.72 dB
T2 14.96993988 MHz
OPB 13.58717435 MHz
▽T1 [T1] 7.86 dBm
▽T2 [T1] 1.72579659 GHz
1 1.73938377 GHz

Center 1.7325 GHz
3 MHz/
Span 30 MHz

Date: 13. OCT. 2020 13:34:44

[illegible]

Ref Lvl 27 dBm

Delta 1 [T1] 0.82 dB

RBW 30 kHz

RF Att 30 dB

Unit dBm

7 dB Offset

D1 15.55 dBm

1MAX -10.45 dBm

IN1 1MA

Center 1.7543 GHz

280 kHz/

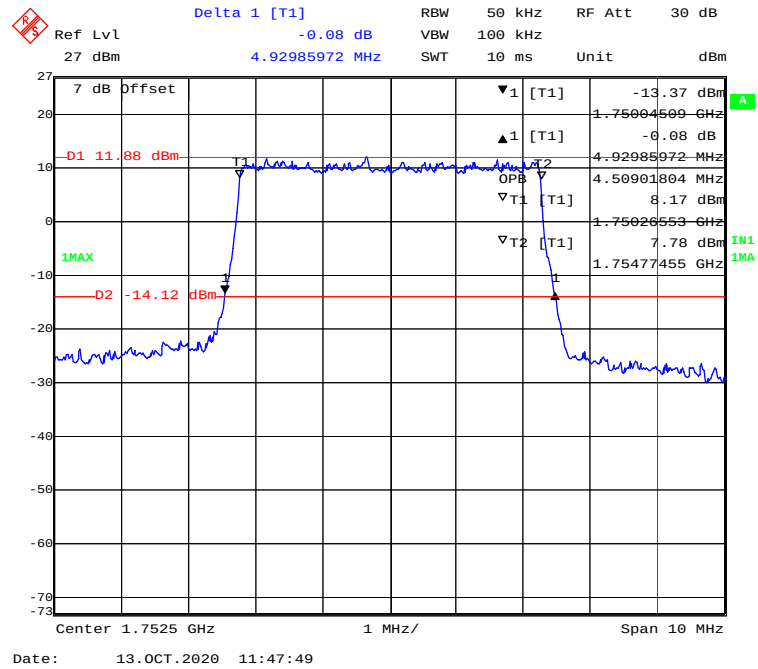
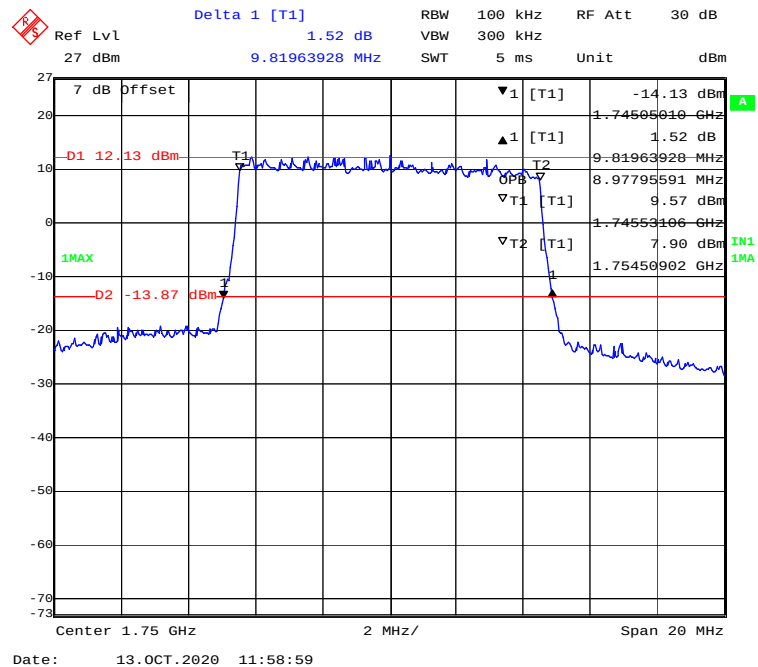
Span 2.8 MHz

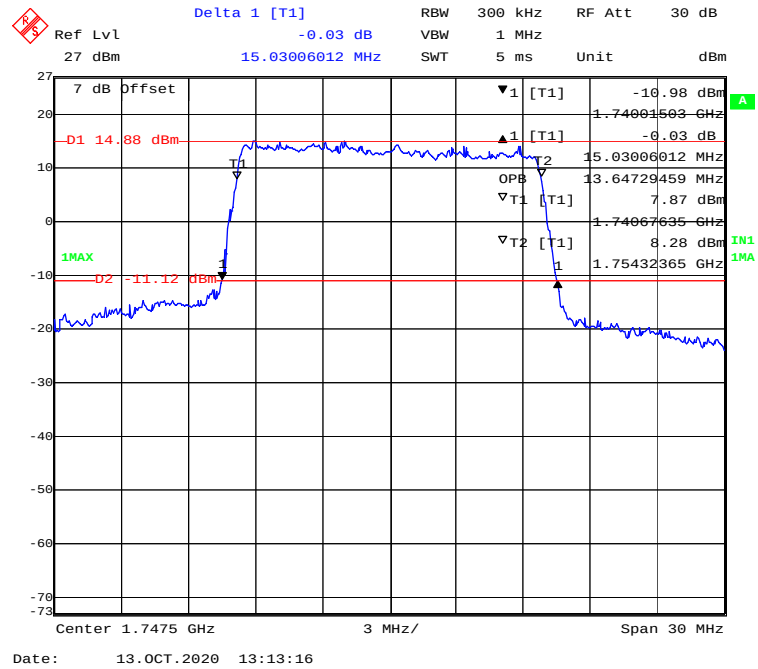
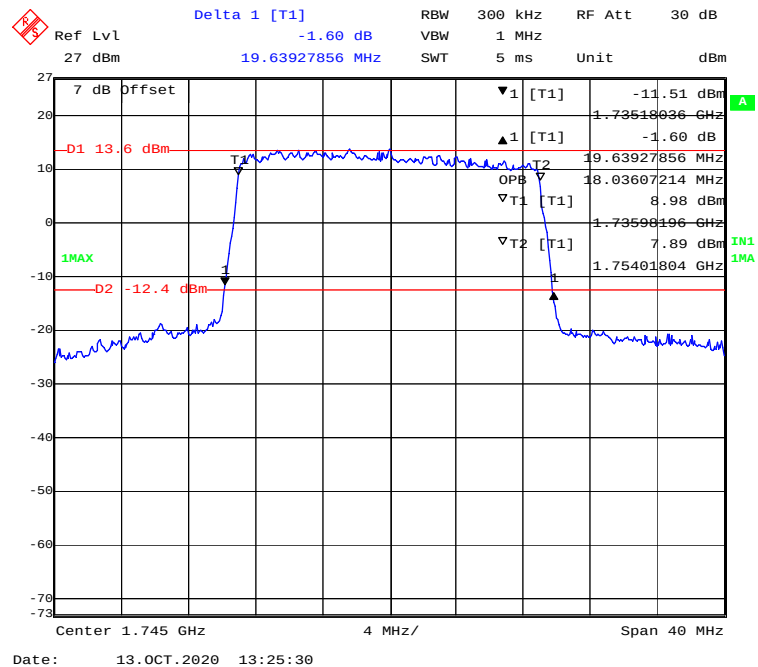
Date: 13.OCT.2020 11:23:43

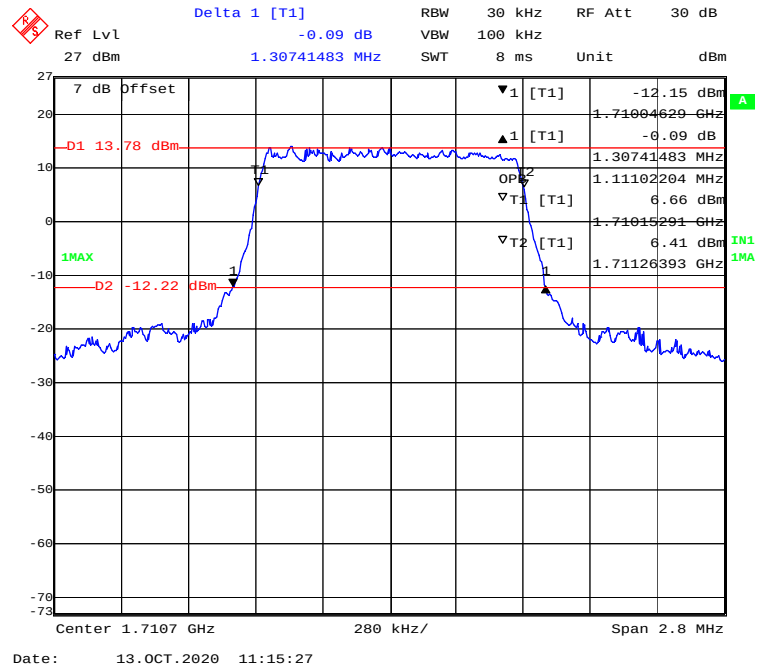
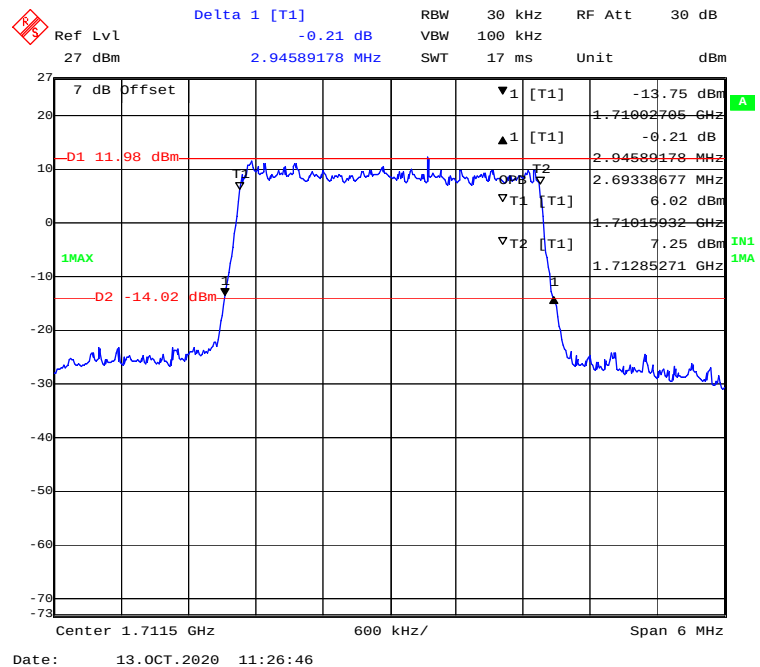
Ref Lvl 27 dBm
 Delta 1 [T1] 0.05 dB
 RBW 30 kHz
 RF Att 30 dB
 27 dBm
 2.98196393 MHz
 SWT 17 ms
 Unit dBm

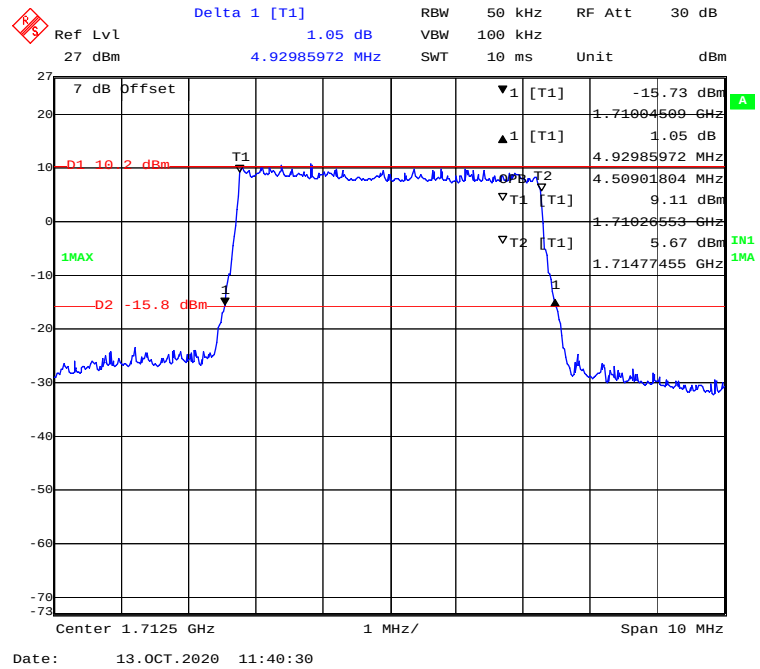
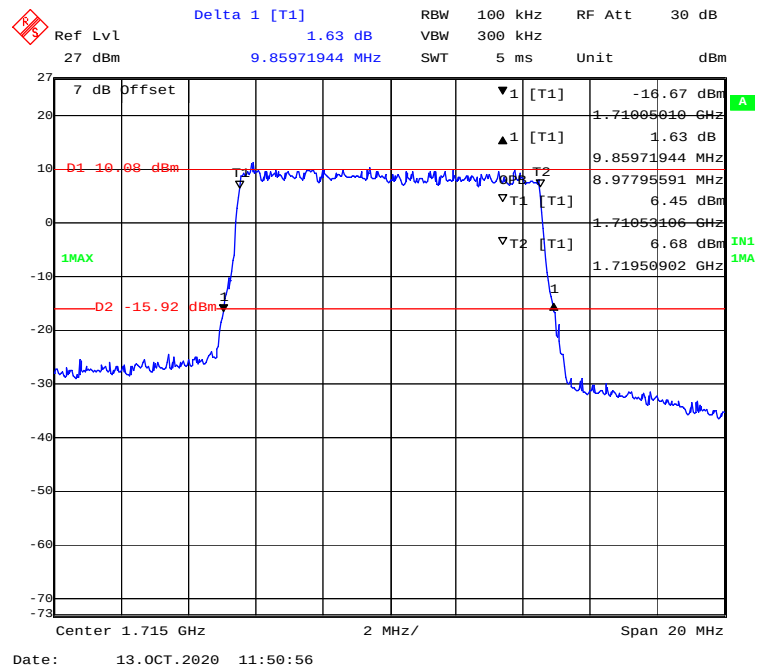
7 dB Offset
 D1 12.1 dBm
 1MAX
 D2 -13.9 dBm
 T1
 T2
 OPB
 T1 [T1]
 T2 [T1]
 -14.68 dBm
 1.75201503 GHz
 0.05 dB
 2.98196393 MHz
 2.69338677 MHz
 8.53 dBm
 1.75215932 GHz
 9.71 dBm
 1.75485271 GHz
 IN1 1MA

Center 1.7535 GHz
 600 kHz/
 Span 6 MHz
 Date: 13.OCT.2020 11:32:56

QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

Delta 1 [T1] -1.80 dB

RBW 300 kHz RF Att 30 dB

Ref Lvl 27 dBm SWT 5 ms Unit dBm

7 dB Offset

-D1 13.55 dBm

1MAX

-D2 -12.45 dBm

▼1 [T1] -11.95 dBm

▲1 [T1] -1.80 dB

OPB ▽ 13.64729459 MHz

▽T1 [T1] 7.60 dBm

▽T2 [T1] 7.35 dBm

1.71007515 GHz

1.96993988 MHz

1.71067635 GHz

1.72432365 GHz

IN1 1MA

Center 1.7175 GHz 3 MHz/ Span 30 MHz

Date: 13.OCT.2020 12:01:10

Delta 1 [T1] -0.72 dB

RBW 300 kHz RF Att 30 dB

Ref Lvl 27 dBm VBW 1 MHz Unit dBm

SWT 5 ms

7 dB Offset

-D1 12.86 dBm

1MAX

-D2 -13.14 dBm

▼1 [T1] -13.21 dBm

▲1 [T1] -0.72 dB

OPB 18.11623246 MHz

▽T1 [T1] 7.65 dBm

▽T2 [T1] 8.66 dBm

1.71018036 GHz

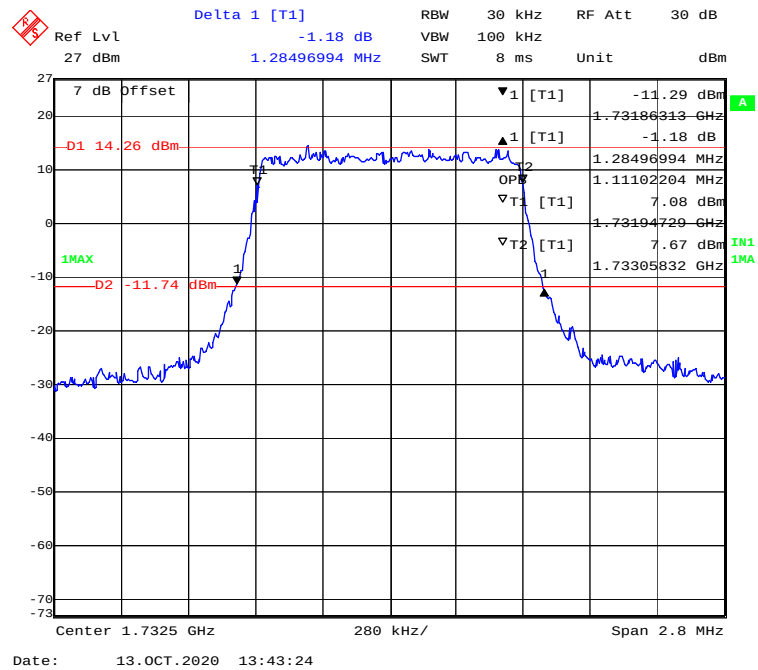
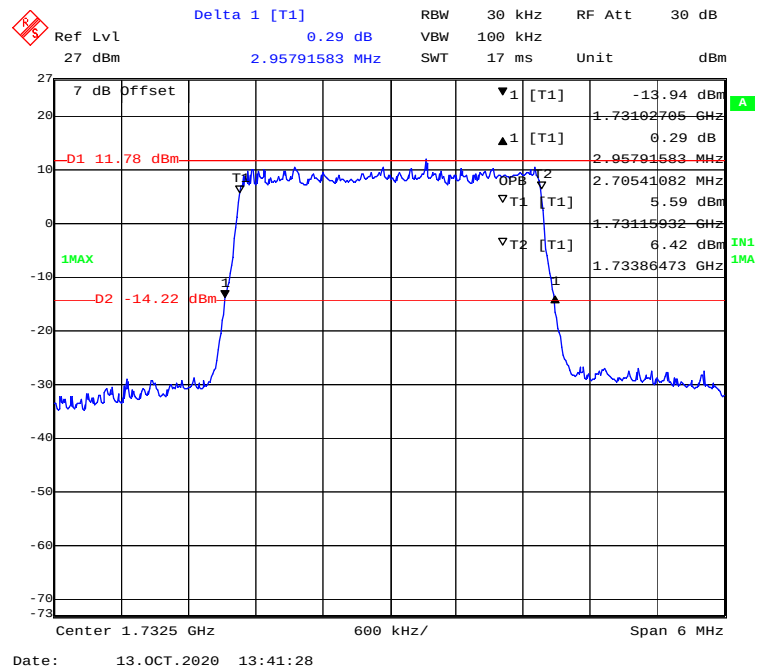
19.63927856 MHz

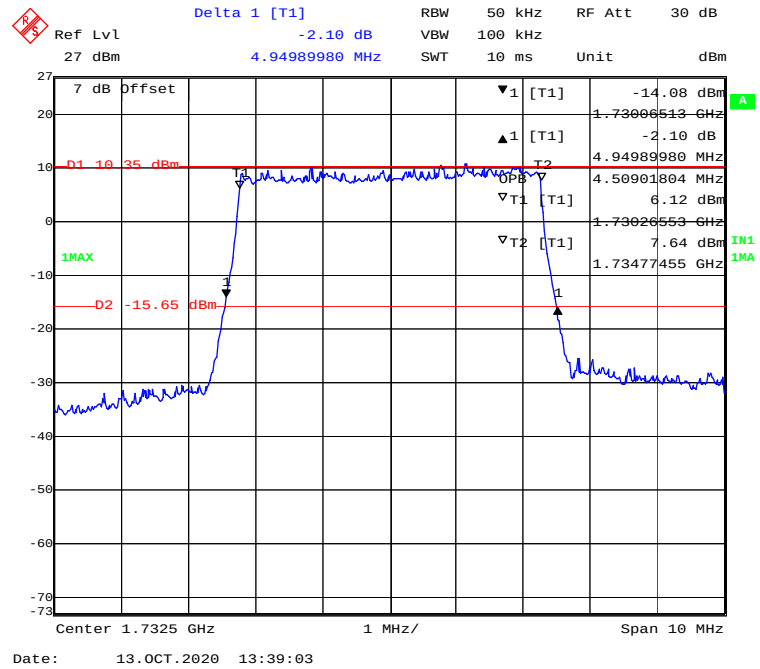
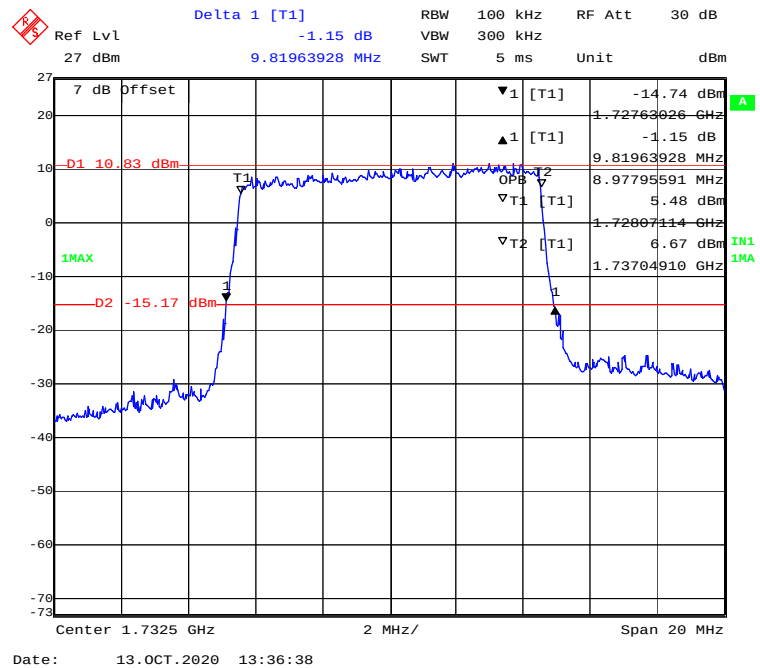
1.71098196 GHz

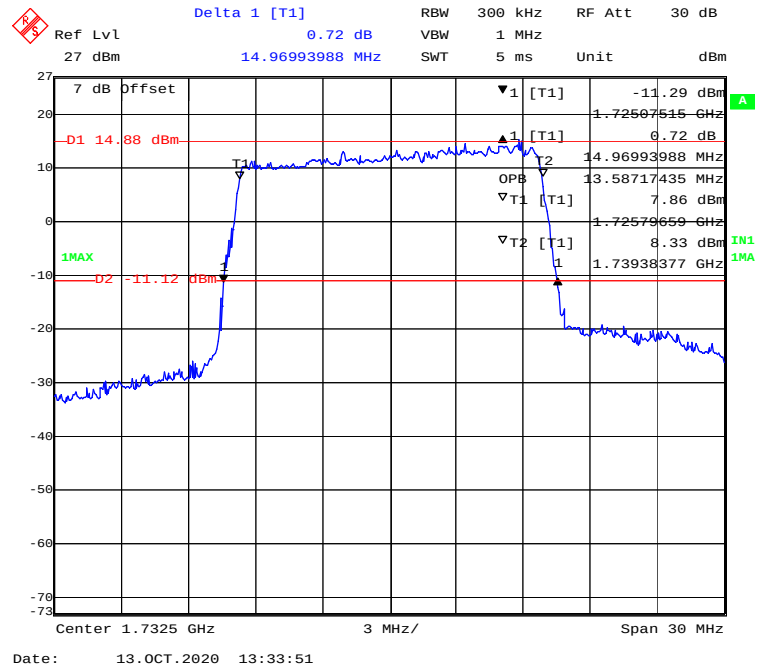
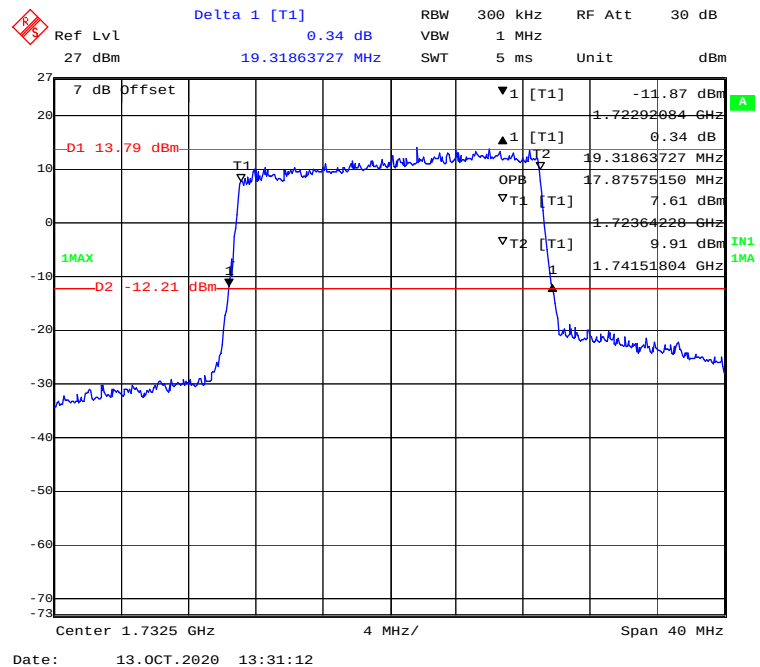
1.72909820 GHz

Center 1.72 GHz 4 MHz/ Span 40 MHz

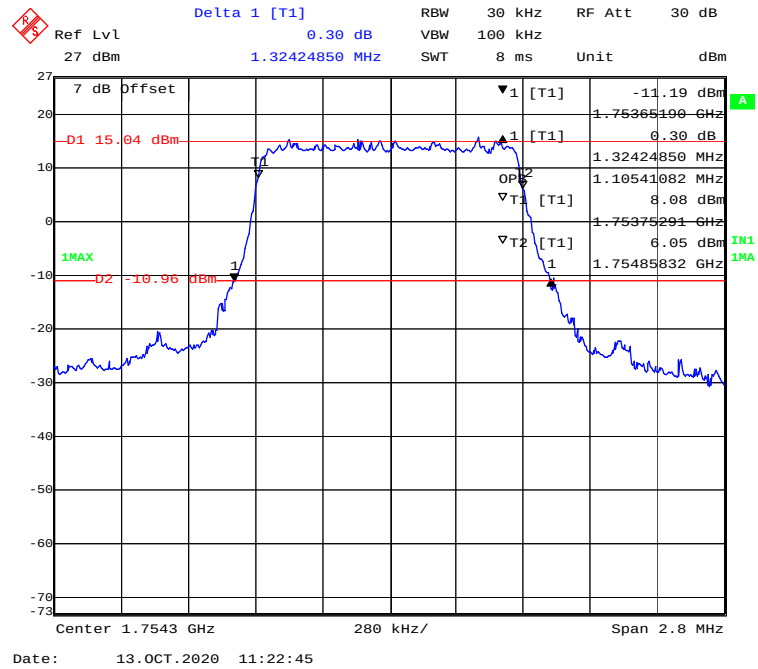
Date: 13.OCT.2020 13:17:11

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

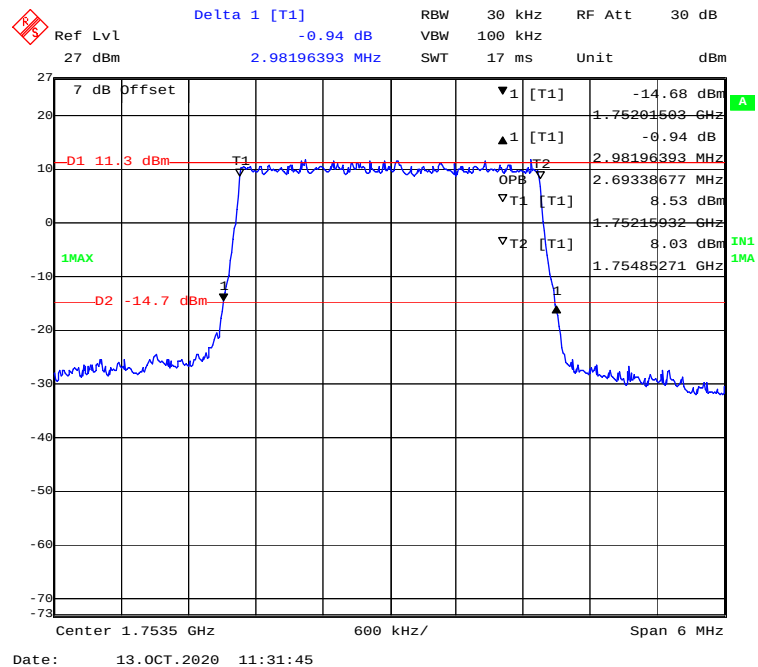
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



Ref Lvl 27 dBm Delta 1 [T1] 1.30 dB RBW 50 kHz RF Att 30 dB VBW 100 kHz SWT 10 ms Unit dBm

7 dB Offset

D1 10.83 dBm

1MAX

D2 -15.17 dBm

▼1 [T1] -16.14 dBm

▲1 [T1] 1.75002505 GHz

T2 1.30 dB

4.96993988 MHz

OPB 4.48897796 MHz

▽T1 [T1] 7.67 dBm

▽T2 [T1] 1.75026553 GHz

9.35 dBm

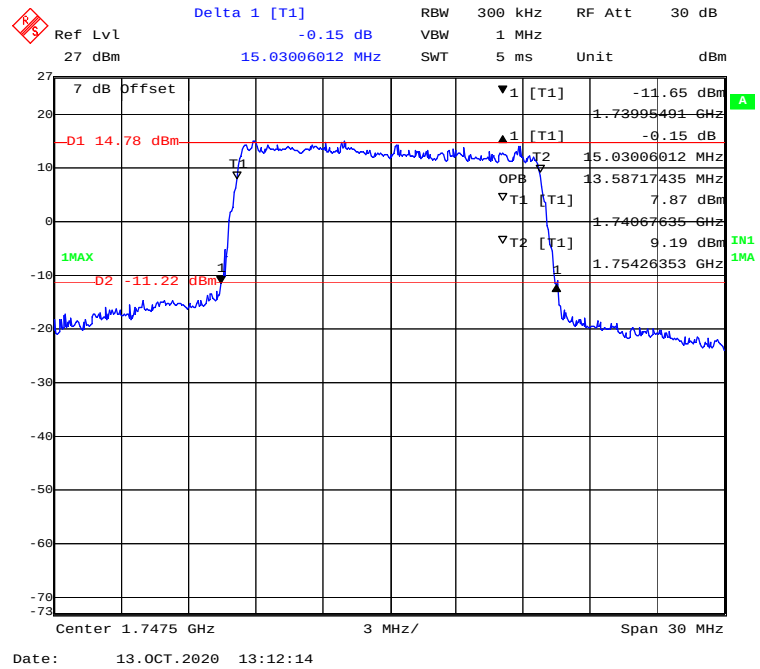
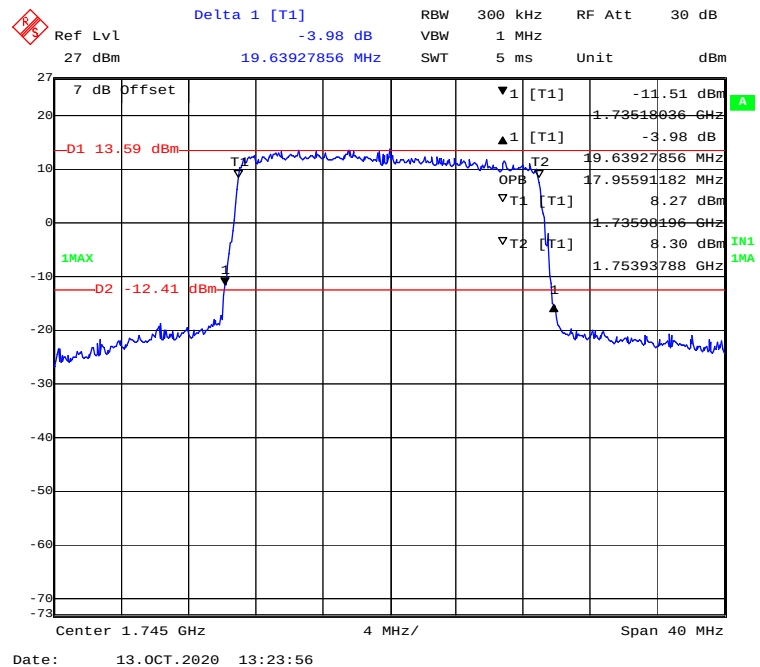
1 1.75475451 GHz

IN1 1MA

Center 1.7525 GHz 1 MHz/ Span 10 MHz

Date: 13.OCT.2020 11:46:33

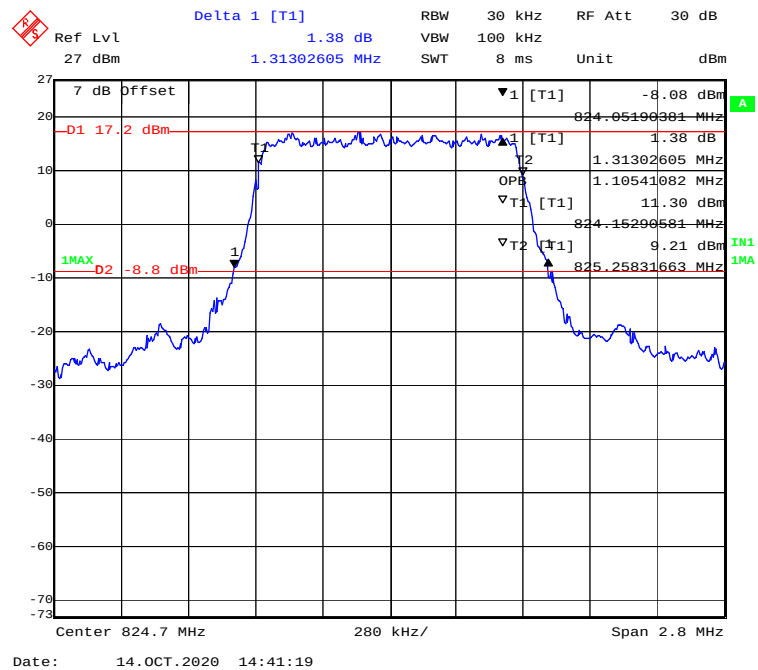
Delta 1 [T1] -1.34 dB
 RBW 100 kHz RF Att 30 dB
 Ref Lvl 27 dBm SWT 5 ms Unit dBm
 7 dB Offset
 D1 11.82 dBm
 T1
 1MAX
 D2 -14.18 dBm
 T2
 1
 Center 1.75 GHz 2 MHz/ Span 20 MHz
 Date: 13.OCT.2020 11:56:50

16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

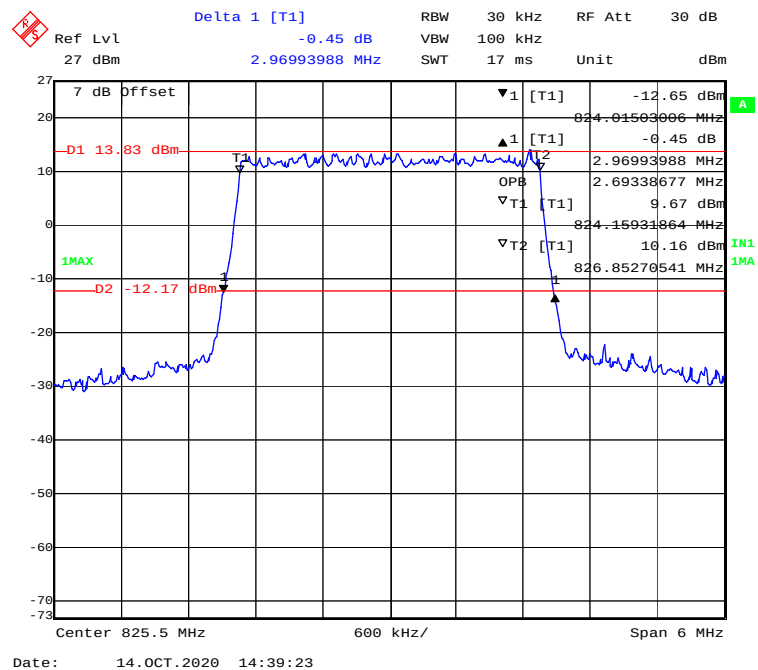
LTE Band 5:

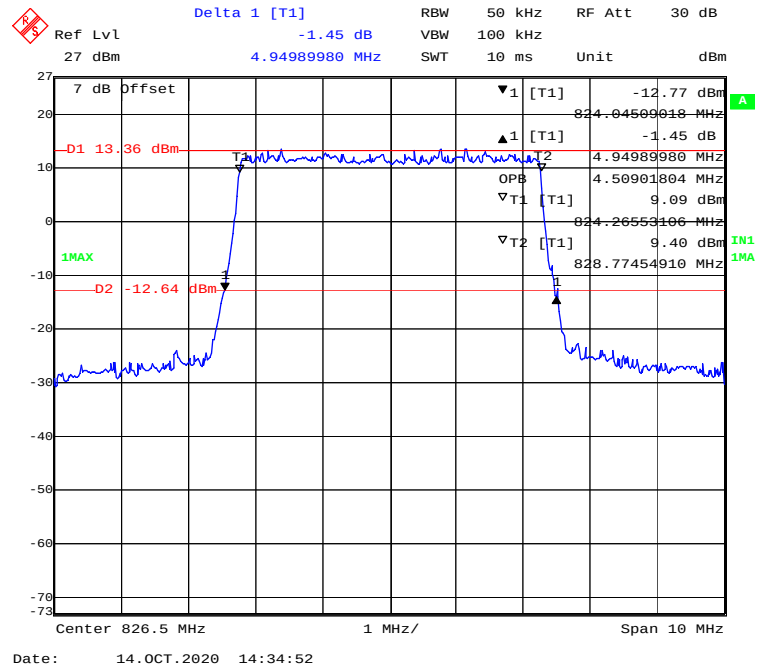
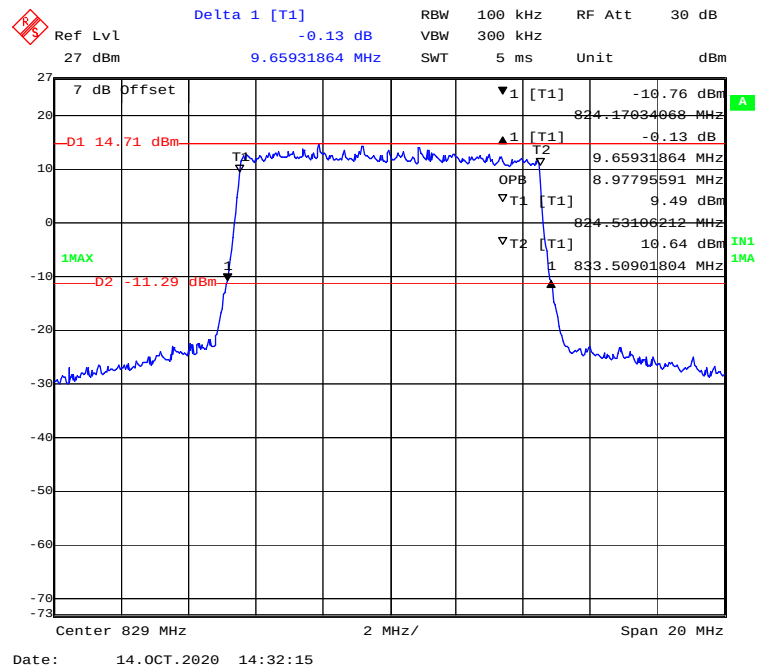
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.313	1.105
	3M		2.970	2.693
	5M		4.950	4.509
	10M		9.659	8.978
	1.4M	Middle	1.335	1.105
	3M		2.946	2.705
	5M		4.970	4.509
	10M		9.860	8.978
	1.4M	High	1.330	1.111
	3M		2.958	2.705
	5M		4.970	4.509
	10M		9.900	8.978
16-QAM	1.4M	Low	1.330	1.105
	3M		2.970	2.693
	5M		4.970	4.509
	10M		9.739	8.978
	1.4M	Middle	1.324	1.105
	3M		2.958	2.705
	5M		4.950	4.509
	10M		9.860	8.978
	1.4M	High	1.341	1.111
	3M		2.946	2.705
	5M		4.990	4.509
	10M		9.820	8.978

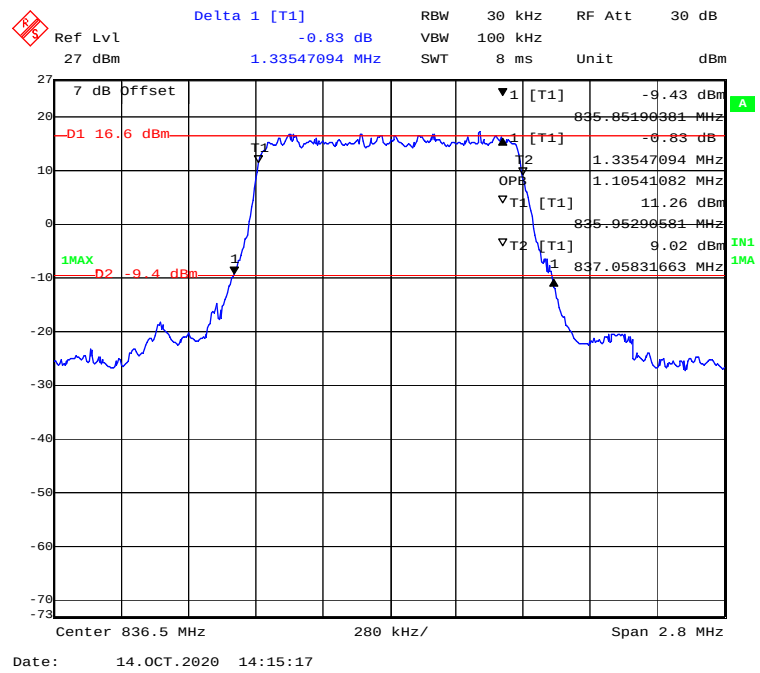
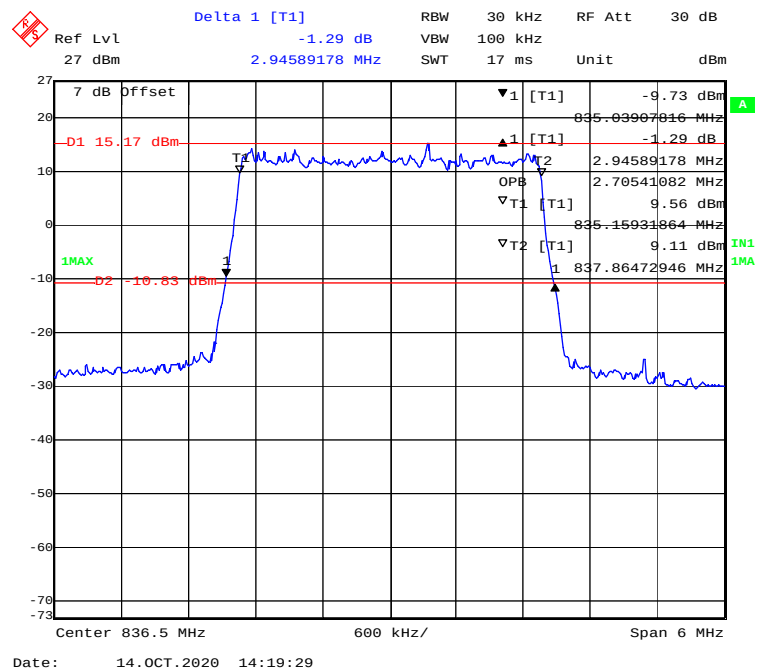
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

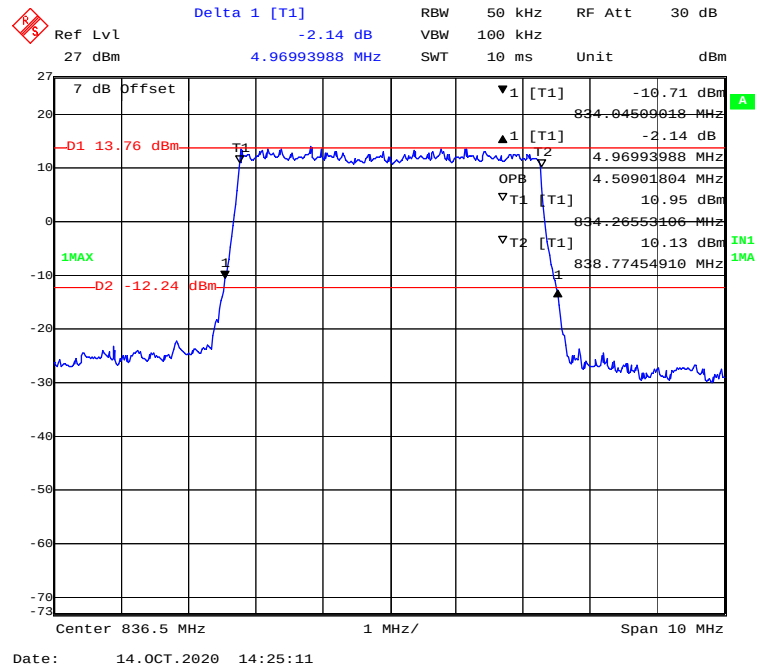
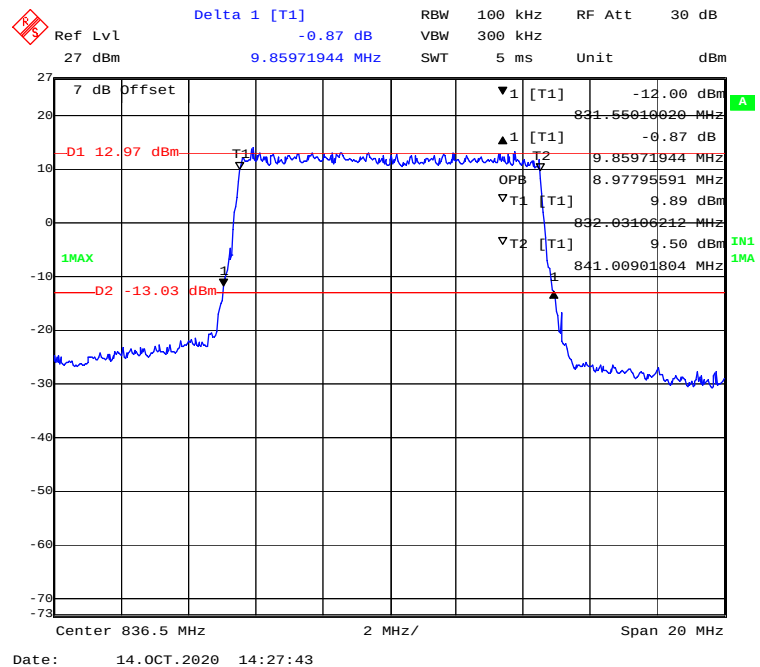


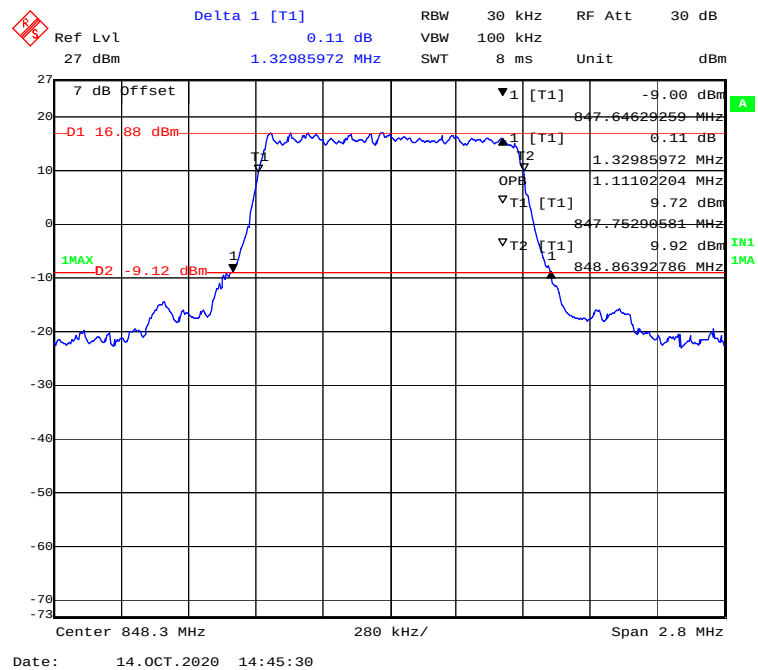
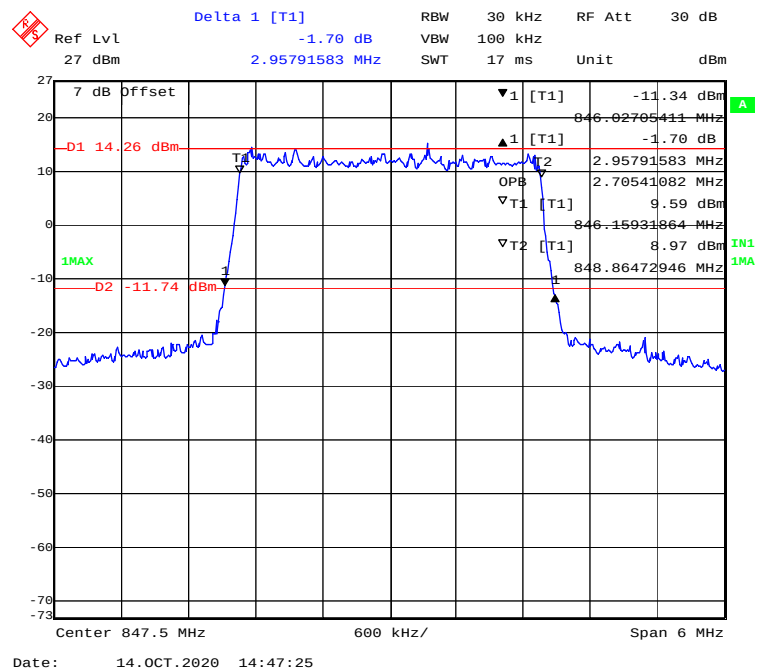
QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

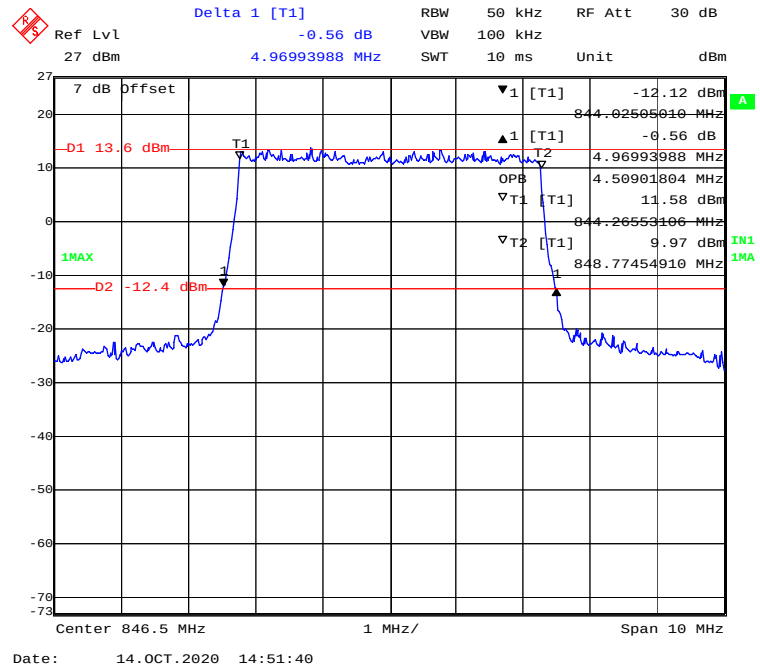
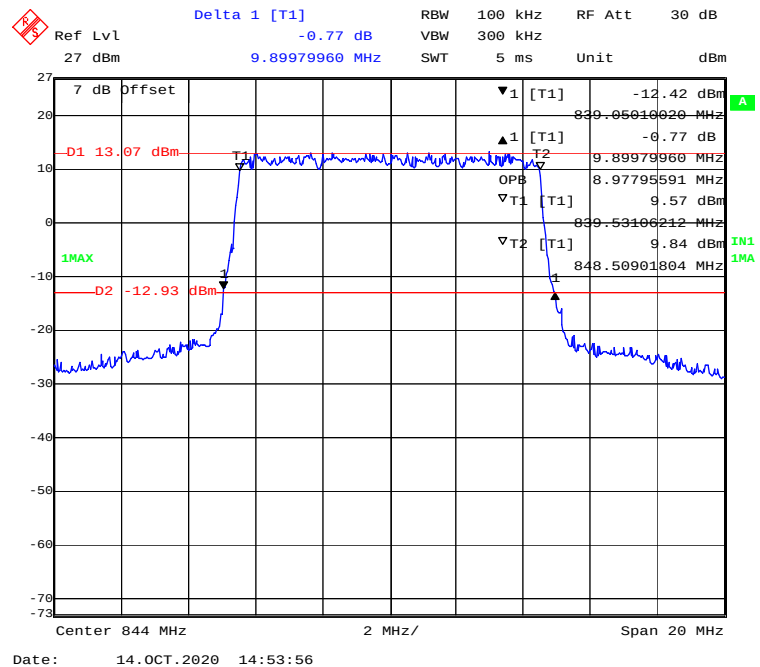


QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

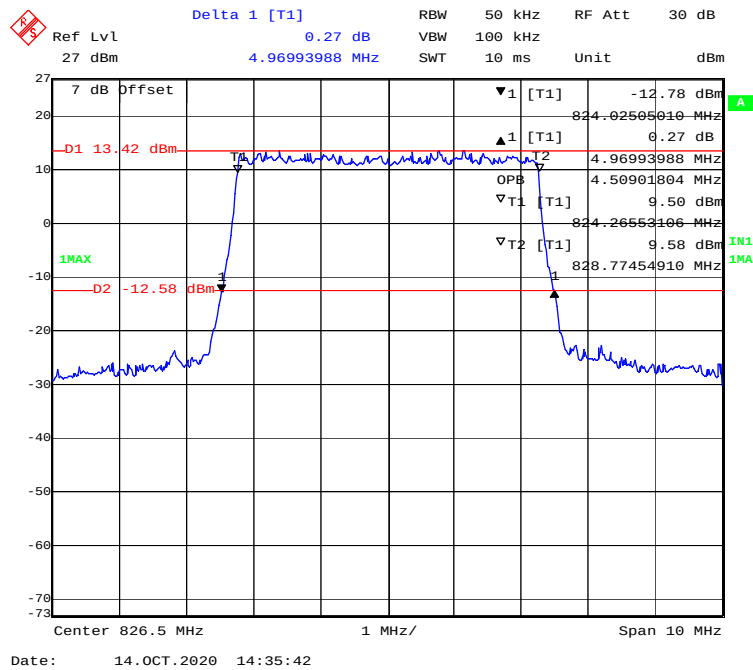
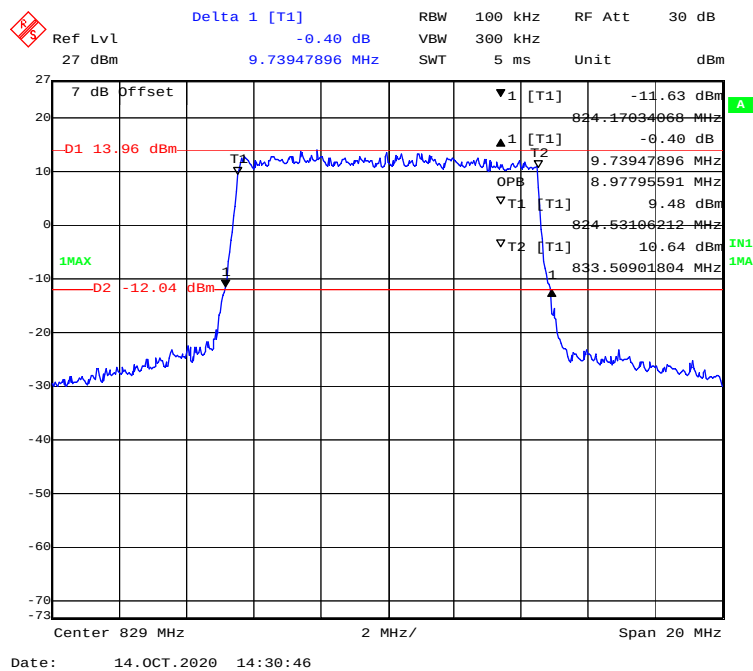
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

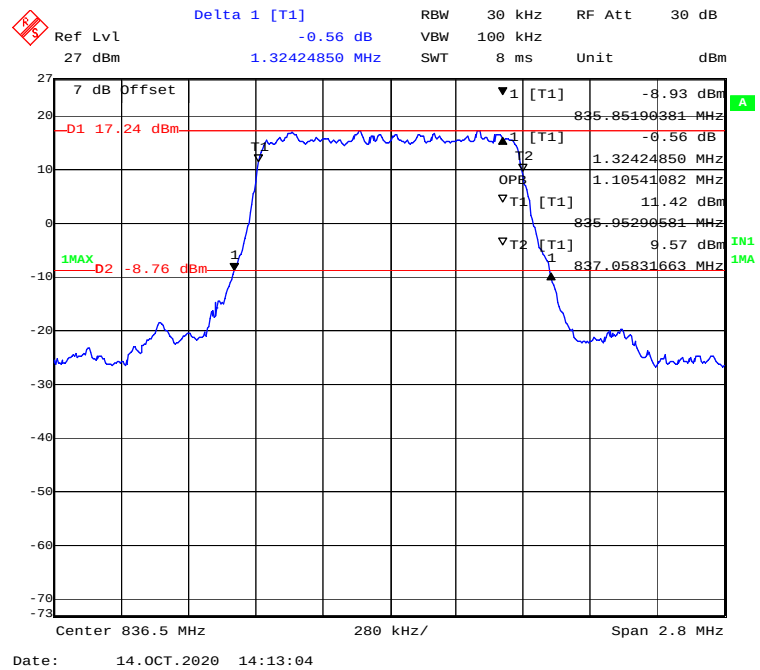
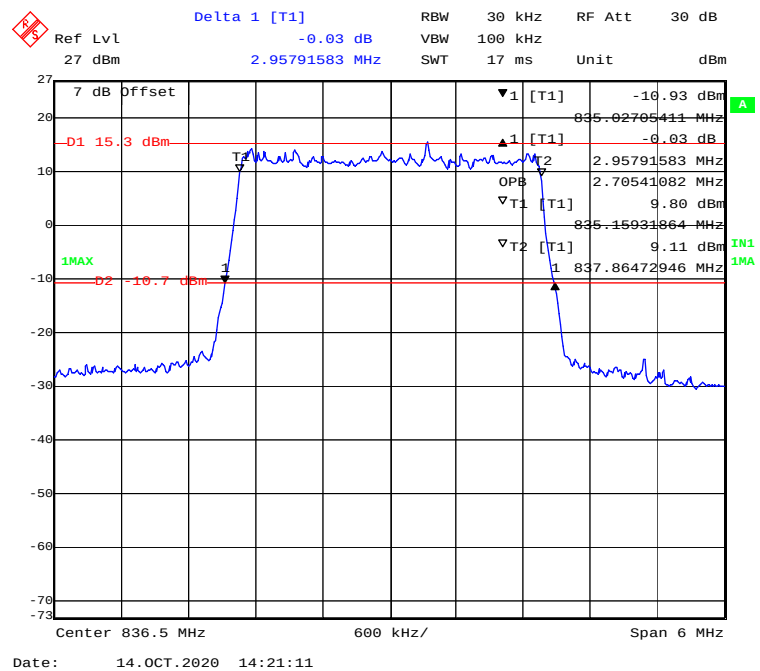
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

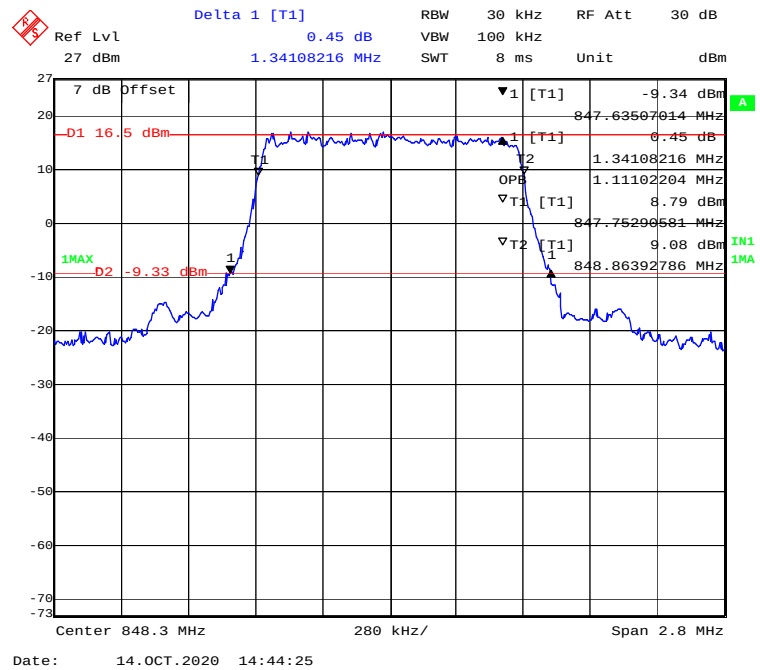
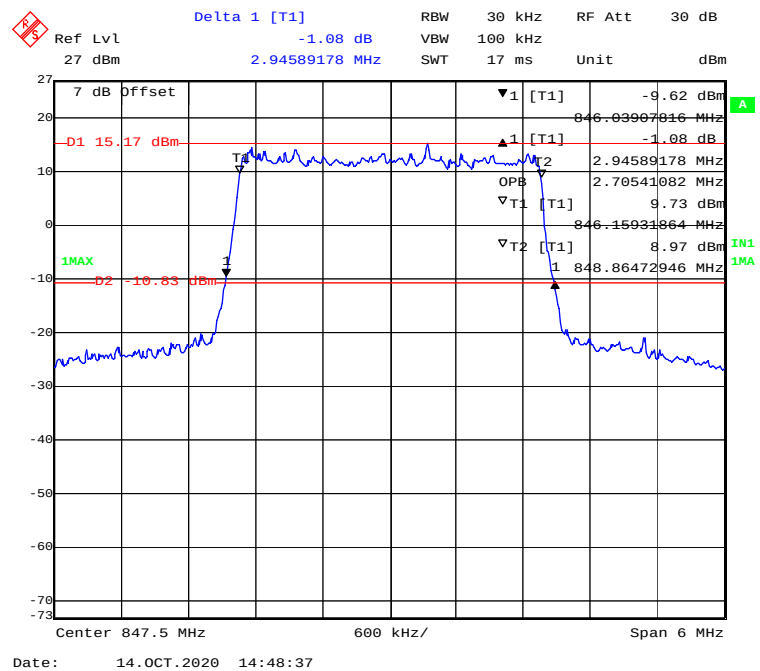
[illegible]

16-QAM (5.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

[illegible]

Delta 1 [T1] -0.87 dB
 RBW 100 kHz RF Att 30 dB
 Ref Lvl 27 dBm
 7 dB Offset
 D1 13.89 dBm
 D2 -12.11 dBm
 1MAX
 T1
 T2
 OPB
 T1 [T1]
 T2 [T1]
 831.55010020 MHz
 8.97795591 MHz
 9.85971944 MHz
 832.03106212 MHz
 841.00901804 MHz
 11.77 dBm
 0.87 dB
 9.89 dBm
 10.22 dBm
 1MA
 IN1
 1MA
 Center 836.5 MHz 2 MHz/ Span 20 MHz
 Date: 14.OCT.2020 14:28:50

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

The screenshot displays a spectrum analyzer interface with a blue trace showing a signal. Two horizontal red lines mark specific levels: D1 at 12.98 dBm and D2 at -13.02 dBm. The signal is centered at 846.5 MHz with a 1 MHz span. The y-axis represents power in dBm, ranging from -73 to 27. The x-axis represents frequency in MHz. The interface includes a top status bar with various parameters: Ref Lvl (27 dBm), Delta 1 [T1] (-0.33 dB), RBW (50 kHz), RF Att (30 dB), VBW (100 kHz), and Unit (dBm). The bottom status bar shows the date and time: 14.OCT.2020 14:50:43.

Measurement	Value
Ref Lvl	27 dBm
Delta 1 [T1]	-0.33 dB
RBW	50 kHz
RF Att	30 dB
VBW	100 kHz
Unit	dBm
Center	846.5 MHz
Span	10 MHz
D1	12.98 dBm
D2	-13.02 dBm
1MAX	-13.02 dBm
1MIN	-13.02 dBm
1A	-13.02 dBm
1B	-13.02 dBm
1C	-13.02 dBm
1D	-13.02 dBm
1E	-13.02 dBm
1F	-13.02 dBm
1G	-13.02 dBm
1H	-13.02 dBm
1I	-13.02 dBm
1J	-13.02 dBm
1K	-13.02 dBm
1L	-13.02 dBm
1M	-13.02 dBm
1N	-13.02 dBm
1O	-13.02 dBm
1P	-13.02 dBm
1Q	-13.02 dBm
1R	-13.02 dBm
1S	-13.02 dBm
1T	-13.02 dBm
1U	-13.02 dBm
1V	-13.02 dBm
1W	-13.02 dBm
1X	-13.02 dBm
1Y	-13.02 dBm
1Z	-13.02 dBm

Delta 1 [T1]

Ref Lvl 27 dBm

0.55 dB

9.81963928 MHz

RBW 100 kHz

VBW 300 kHz

RF Att 30 dB

SWT 5 ms

Unit dBm

7 dB Offset

D1 13.26 dBm

D2 -12.74 dBm

1MAX

1MA

▼1 [T1]

▲1 [T1]

OPB

▽T1 [T1]

▽T2 [T1]

844.05010020 MHz

9.81963928 MHz

8.97795591 MHz

9.42 dBm

848.53106212 MHz

9.24 dBm

848.50901804 MHz

Center 844 MHz

2 MHz/

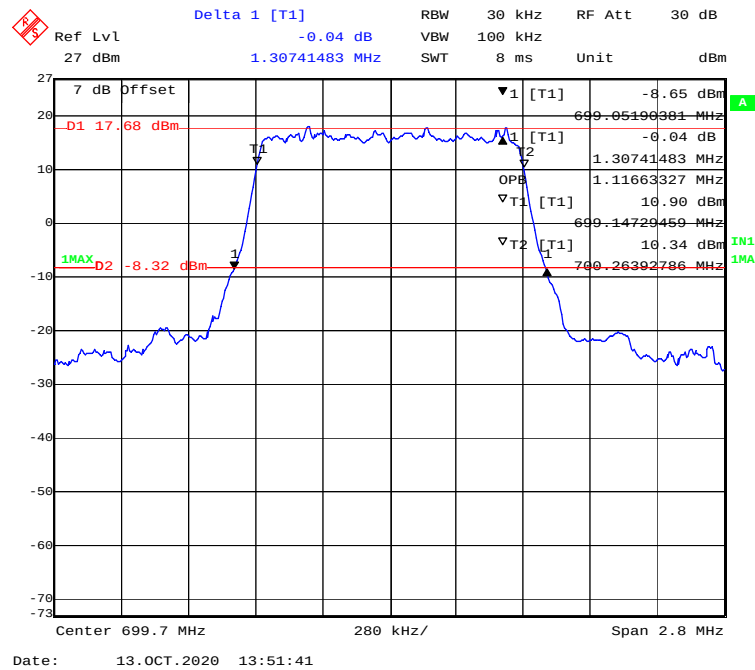
Span 20 MHz

Date: 14.OCT.2020 14:55:08

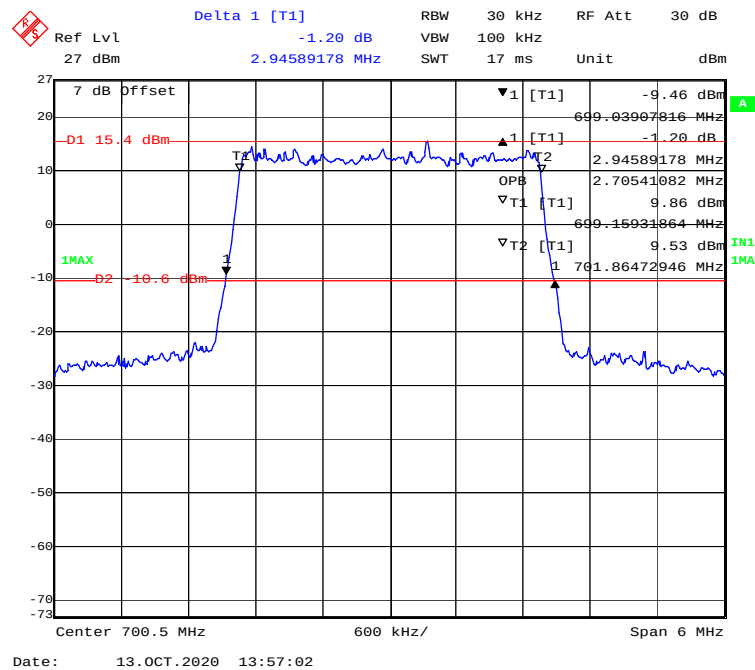
LTE Band 12:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.307	1.117
	3M		2.946	2.705
	5M		4.990	4.509
	10M		9.860	8.978
	1.4M	Middle	1.324	1.105
	3M		2.946	2.705
	5M		5.050	4.549
	10M		9.780	8.978
	1.4M	High	1.319	1.105
	3M		2.946	2.705
	5M		4.970	4.509
	10M		9.900	9.018
16-QAM	1.4M	Low	1.296	1.117
	3M		2.946	2.693
	5M		4.970	4.509
	10M		9.780	8.978
	1.4M	Middle	1.324	1.105
	3M		2.946	2.705
	5M		5.070	4.549
	10M		9.820	8.978
	1.4M	High	1.313	1.105
	3M		2.946	2.705
	5M		4.970	4.509
	10M		9.820	8.978

QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



[illegible]

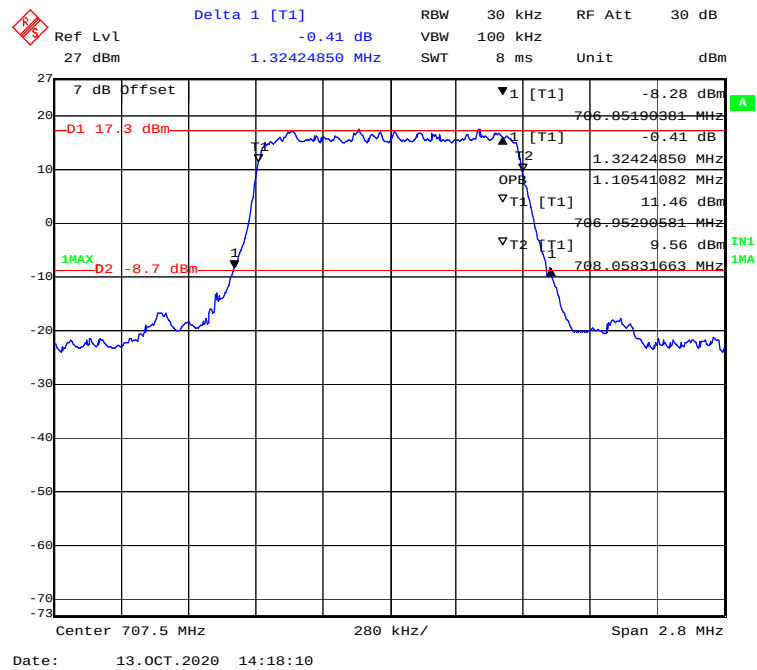
Ref Lvl 27 dBm
 Delta 1 [T1] -0.84 dB
 RBW 100 kHz
 RF Att 30 dB
 VBW 300 kHz
 Unit dBm
 SWT 5 ms

7 dB Offset
 D1 13.7 dBm
 1MAX
 D2 -12.3 dBm
 1
 1 [T1] -11.62 dBm
 699.09018036 MHz
 9.85971944 MHz
 OPB 8.97795591 MHz
 T1 [T1] 9.79 dBm
 699.53106212 MHz
 T2 [T1] 10.48 dBm
 708.50901804 MHz
 1MAX

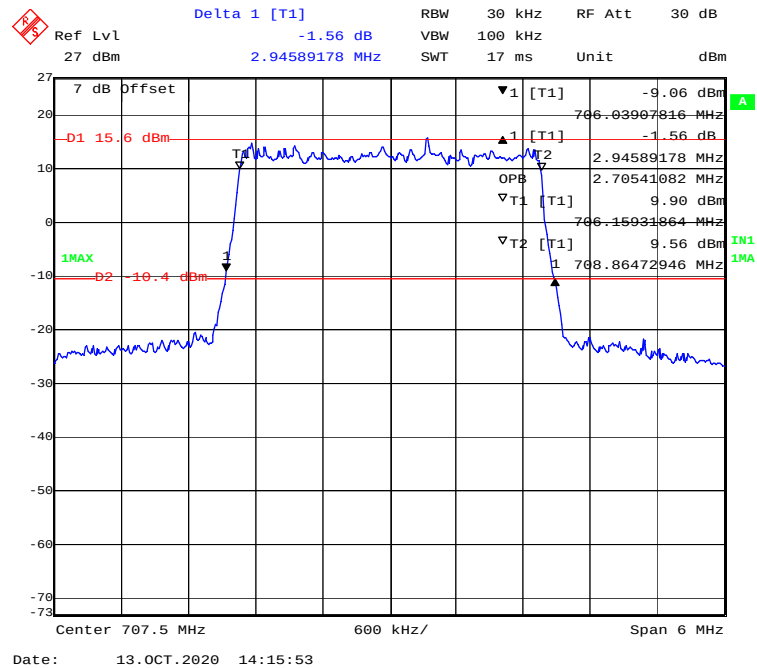
Center 704 MHz
 2 MHz/
 Span 20 MHz

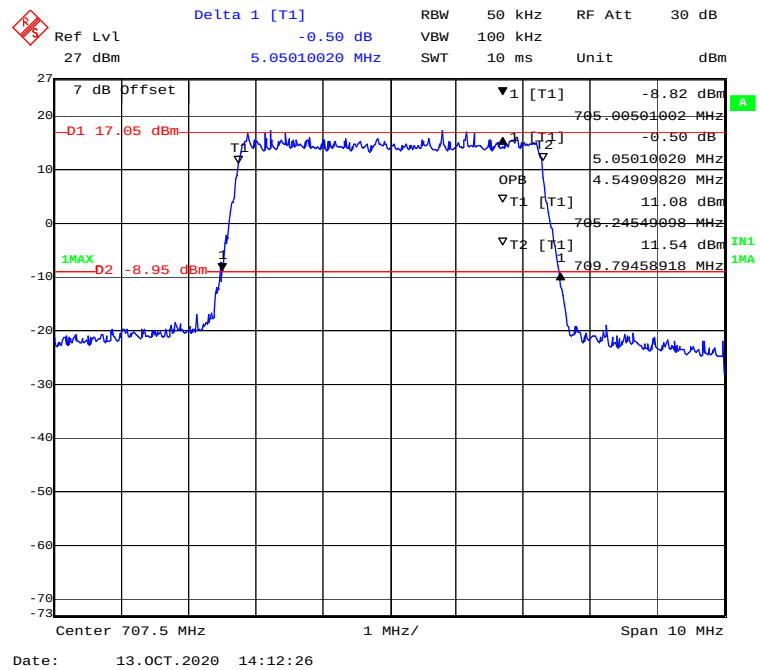
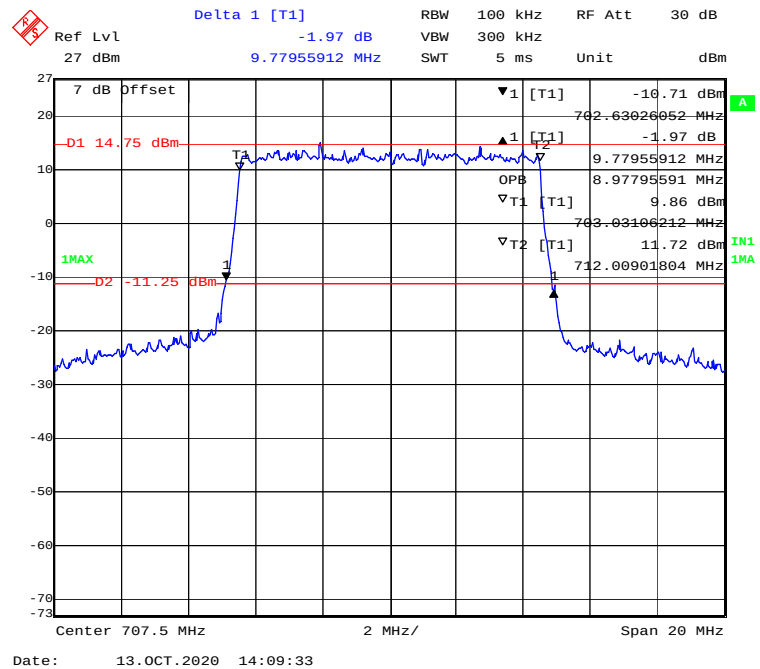
Date: 13.OCT.2020 14:05:53

QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

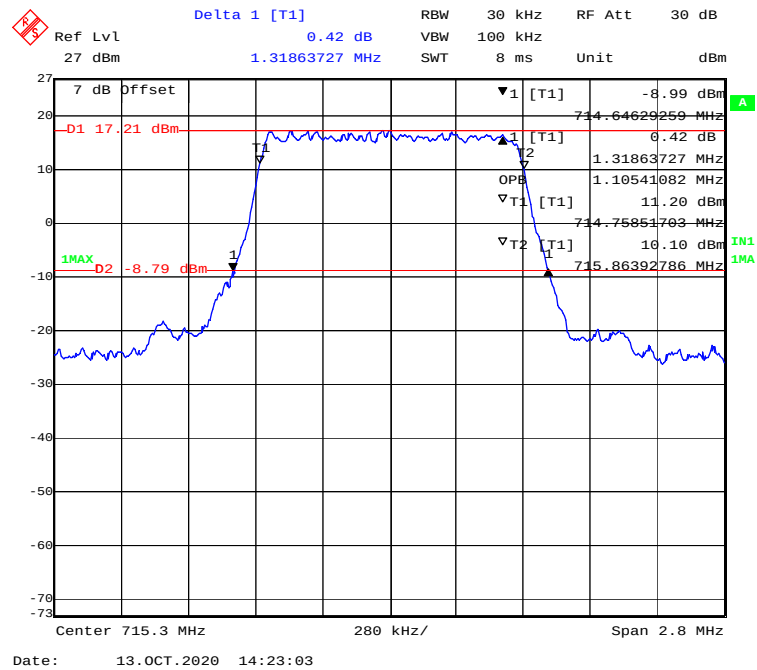


QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

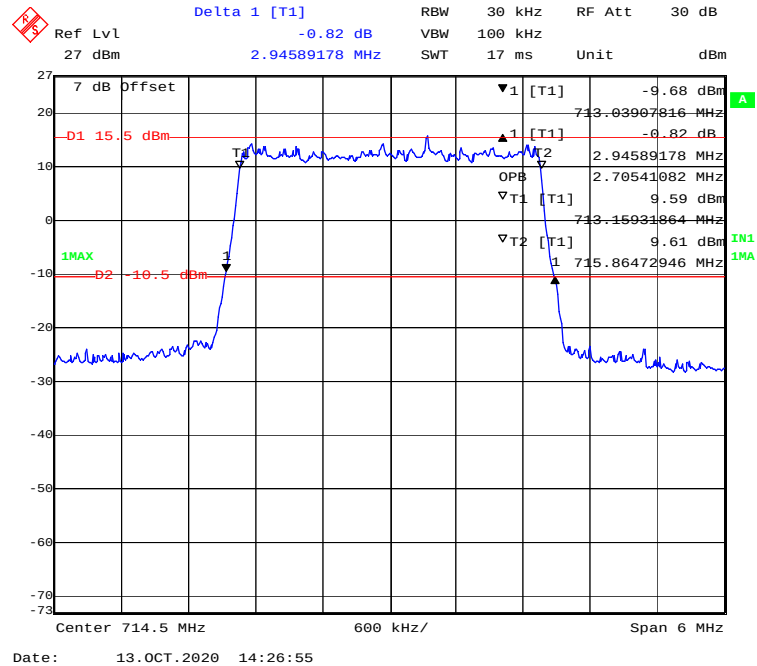


QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



[illegible]

Delta 1 [T1]

Ref Lvl -0.42 dB

RBW 100 kHz

RF Att 30 dB

27 dBm

300 kHz

5 ms

Unit dBm

7 dB Offset

D1 13.7 dBm

1MAX

D2 -12.3 dBm

IN1 1MA

Center 711 MHz

2 MHz/

Span 20 MHz

Date: 13.OCT.2020 14:34:42

Delta 1 [T1] -0.24 dB
 Ref Lvl 27 dBm
 1.29619238 MHz
 RBW 30 kHz
 VBW 100 kHz
 SWT 8 ms
 RF Att 30 dB
 Unit dBm

7 dB Offset
 D1 17.53 dBm
 1MAX D2 -8.47 dBm
 1
 T1
 1
 T1
 2
 T1
 OPB
 T1 [T1]
 16.90 dBm
 T2 [T1]
 16.17 dBm
 699.05751503 MHz
 1.29619238 MHz
 1.11663327 MHz
 699.14729459 MHz
 700.26392786 MHz

Center 699.7 MHz
 280 kHz/
 Span 2.8 MHz

Date: 13.OCT.2020 13:49:05

Delta 1 [T1]
 Ref Lvl -0.82 dB
 27 dBm 2.94589178 MHz
 RBW 30 kHz RF Att 30 dB
 SWT 17 ms Unit dBm

7 dB Offset
 D1 15.34 dBm
 1MAX
 D2 -10.62 dBm
 1MIN

Center 700.5 MHz 600 kHz/
 Span 6 MHz

27
 20
 10
 0
 -10
 -20
 -30
 -40
 -50
 -60
 -70
 -73

▼1 [T1]
 1 [T1]
 OPB
 ▼T1 [T1]
 ▼T2 [T1]
 1

-9.84 dBm
 699.03907816 MHz
 -0.82 dB
 2.94589178 MHz
 2.69338677 MHz
 9.41 dBm
 699.15931864 MHz
 16.80 dBm
 761.85270541 MHz

Delta 1 [T1] -0.14 dB
 RBW 50 kHz RF Att 30 dB
 VBW 100 kHz
 SWT 10 ms Unit dBm

Ref Lvl 27 dBm
 7 dB Offset
 27 dBm
 20
 10
 0
 -10
 -20
 -30
 -40
 -50
 -60
 -70
 -73

Center 701.5 MHz 1 MHz/ Span 10 MHz

D1 13.66 dBm
 D2 -12.34 dBm
 1MAX
 T1
 T2
 OPB
 T1 [T1]
 T2 [T1]
 IN1
 1MA

-11.98 dBm
 699.04509018 MHz
 -0.14 dB
 4.96993988 MHz
 4.50901804 MHz
 11.15 dBm
 699.26553106 MHz
 10.71 dBm
 763.77454910 MHz

Date: 13.OCT.2020 14:00:46

Delta 1 [T1] -1.26 dB

RBW 100 kHz RF Att 30 dB

Ref Lvl 27 dBm SWT 5 ms Unit dBm

7 dB Offset

D1 13.7 dBm

1MAX

D2 -12.3 dBm

▼1 [T1] -12.40 dBm

▲1 [T1] -1.26 dB

OPB 8.97795591 MHz

▽T1 [T1] 9.77955912 MHz

▽T2 [T1] 10.48 dBm

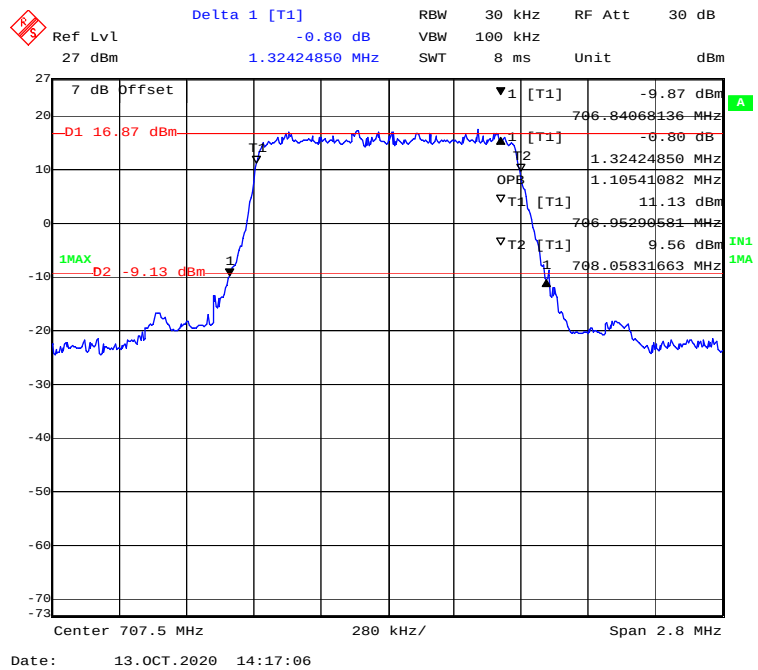
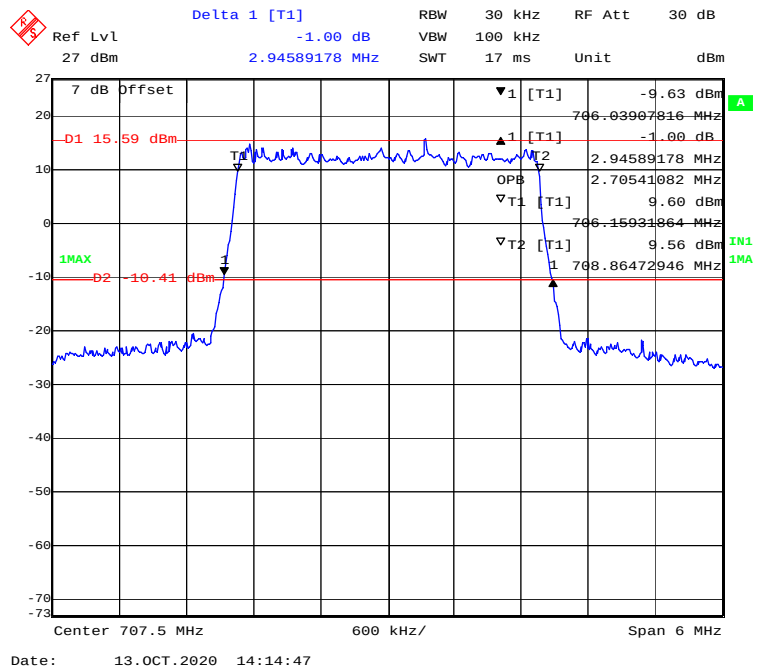
699.17034068 MHz

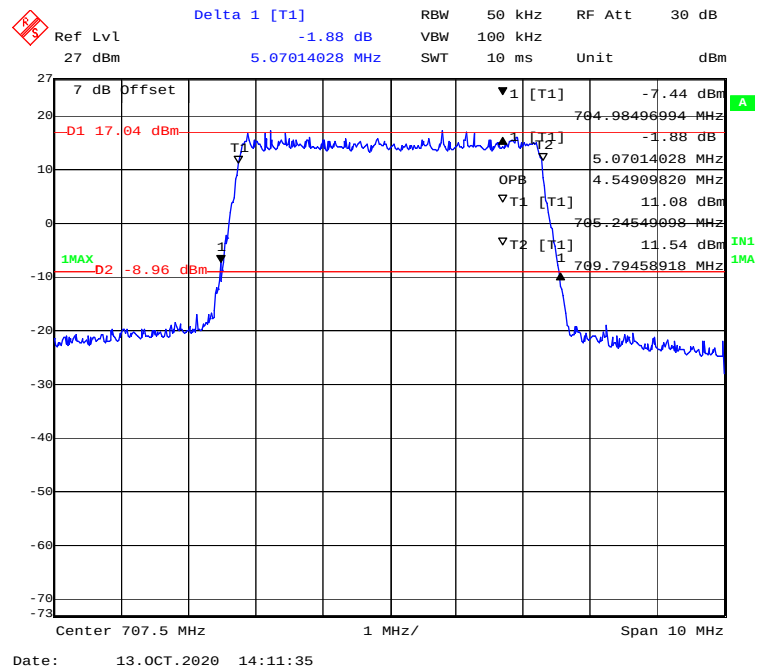
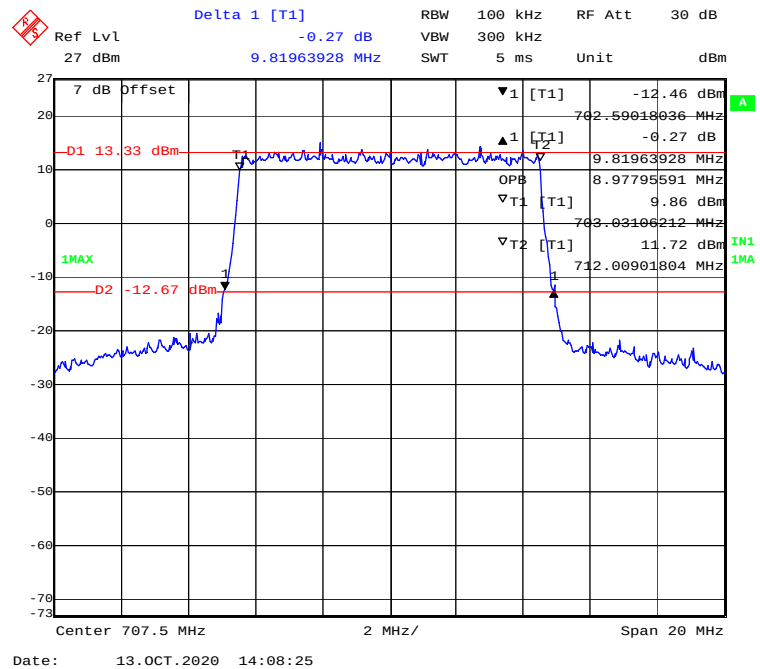
699.53106212 MHz

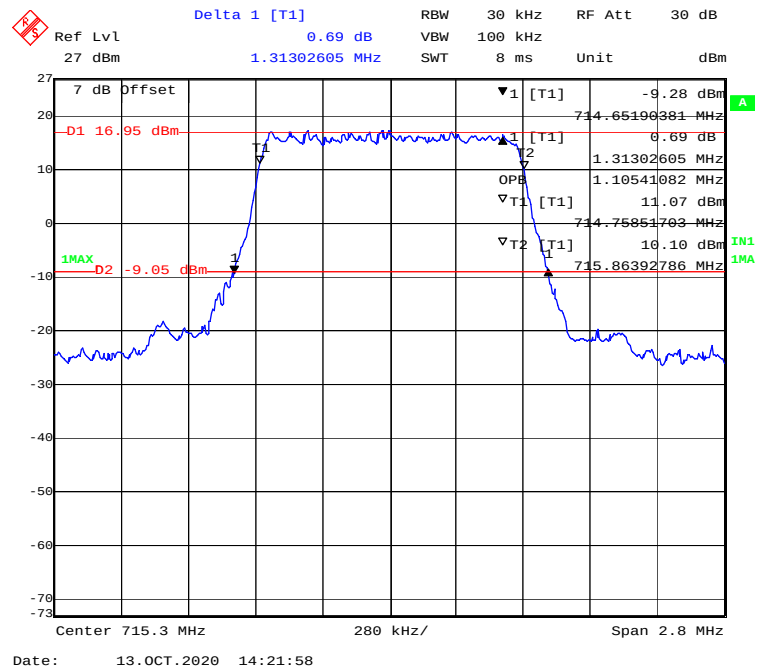
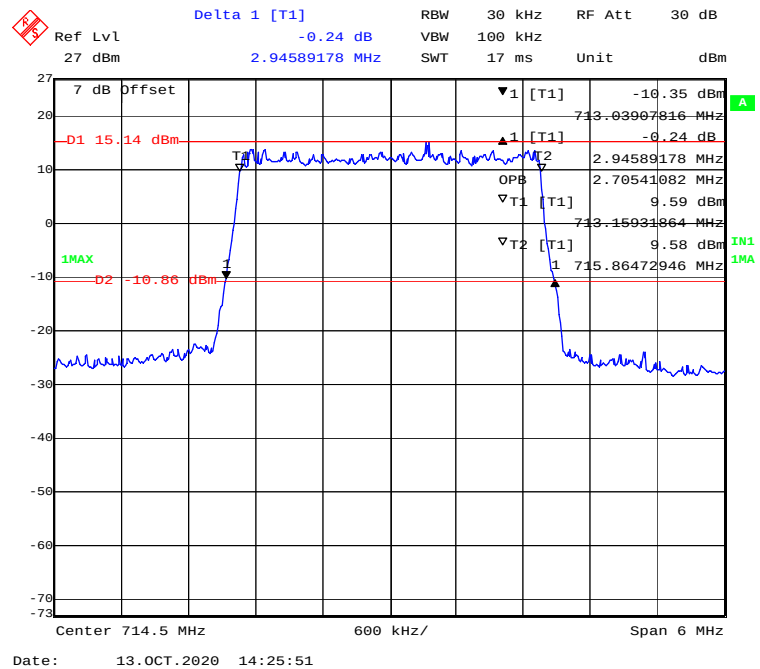
708.50901804 MHz

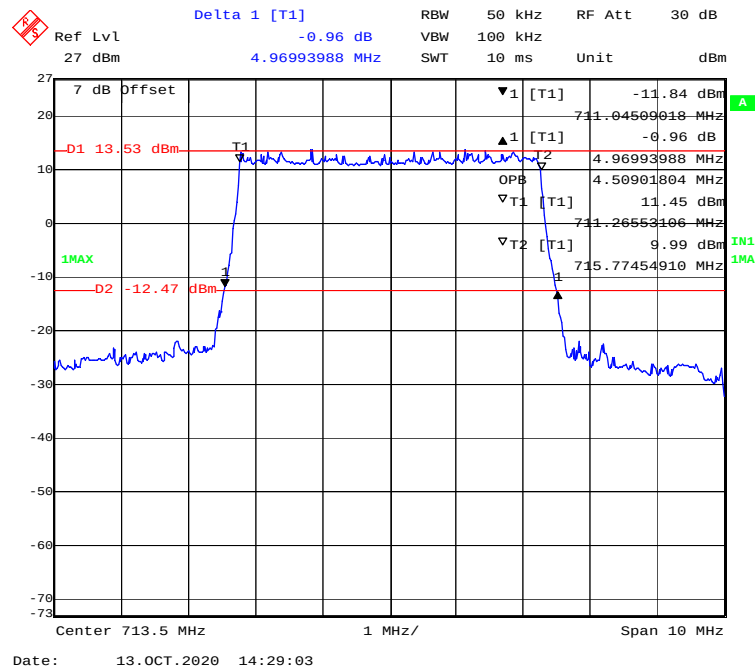
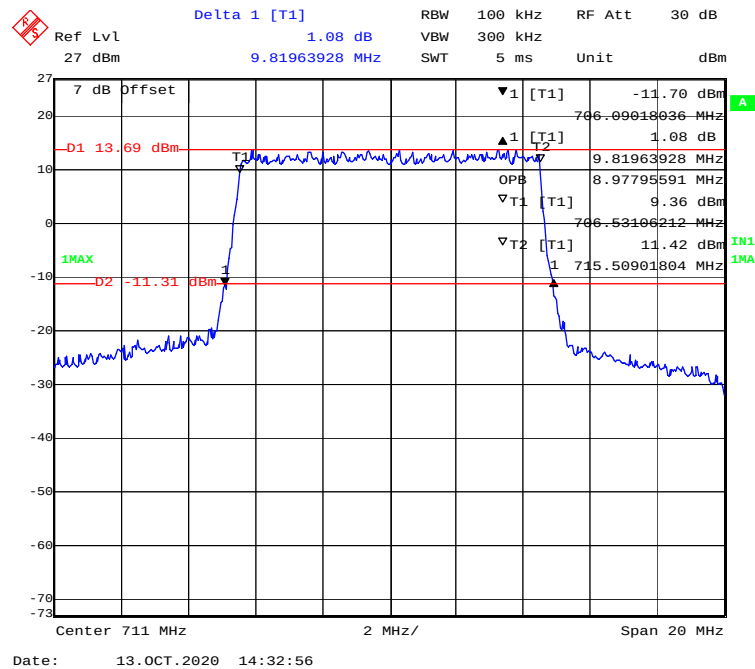
Center 704 MHz 2 MHz/ Span 20 MHz

Date: 13.OCT.2020 14:04:55

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

LTE Band 17:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	5M	Low	4.970	4.489
	10M		9.860	8.978
	5M	Middle	4.930	4.509
	10M		9.900	8.978
	5M	High	4.990	4.509
	10M		9.860	8.978
16-QAM	5M	Low	4.950	4.489
	10M		9.900	8.978
	5M	Middle	4.930	4.509
	10M		9.900	8.978
	5M	High	4.990	4.509
	10M		9.860	8.978

Delta 1 [T1] -0.96 dB

Ref Lvl 27 dBm

RBW 50 kHz

RF Att 30 dB

SWT 10 ms

Unit dBm

7 dB Offset

D1 14.58 dBm

1MAX

D2 -11.42 dBm

▼1 [T1] -11.94 dBm

1 [T1] -0.96 dB

OPB 4.96993988 MHz

▼T1 [T1] 11.20 dBm

▼T2 [T1] 11.62 dBm

764.02505010 MHz

764.26553106 MHz

768.75450902 MHz

Center 706.5 MHz

1 MHz/

Span 10 MHz

Date: 13. OCT. 2020 14:44:21

Ref Lvl 27 dBm Delta 1 [T1] -1.35 dB RBW 100 kHz RF Att 30 dB
 27 dBm 9.85971944 MHz VBW 300 kHz SWT 5 ms Unit dBm

7 dB Offset

D1 14.61 dBm

D2 -11.39 dBm

1MAX

Measurement	Value
▼1 [T1]	-10.07 dBm
764.09018036 MHz	
▲1 [T1]	-1.35 dB
9.85971944 MHz	
OPB	8.97795591 MHz
▼T1 [T1]	10.62 dBm
764.53106212 MHz	
▼T2 [T1]	11.83 dBm
713.50901804 MHz	

Center 709 MHz 2 MHz/ Span 20 MHz

Date: 13. OCT. 2020 14:40:59

A

Ref Lvl 27 dBm Delta 1 [T1] -1.94 dB RBW 50 kHz RF Att 30 dB
 27 dBm 4.92985972 MHz SWT 10 ms Unit dBm

7 dB Offset

D1 14.72 dBm T1 -1.94 dB 707.56513026 MHz
 OPB 4.92985972 MHz
 T2 4.50901804 MHz
 T1 [T1] 10.23 dBm
 T2 [T1] 707.76553106 MHz
 D2 -11.28 dBm 712.27454910 MHz

1MAX IN1 1MA

Center 710 MHz 1 MHz/ Span 10 MHz

Date: 13.OCT.2020 14:47:27

Delta 1 [T1] -0.64 dB
 Ref Lvl 27 dBm
 9.89979960 MHz
 RBW 100 kHz
 RF Att 30 dB
 SWT 5 ms
 Unit dBm

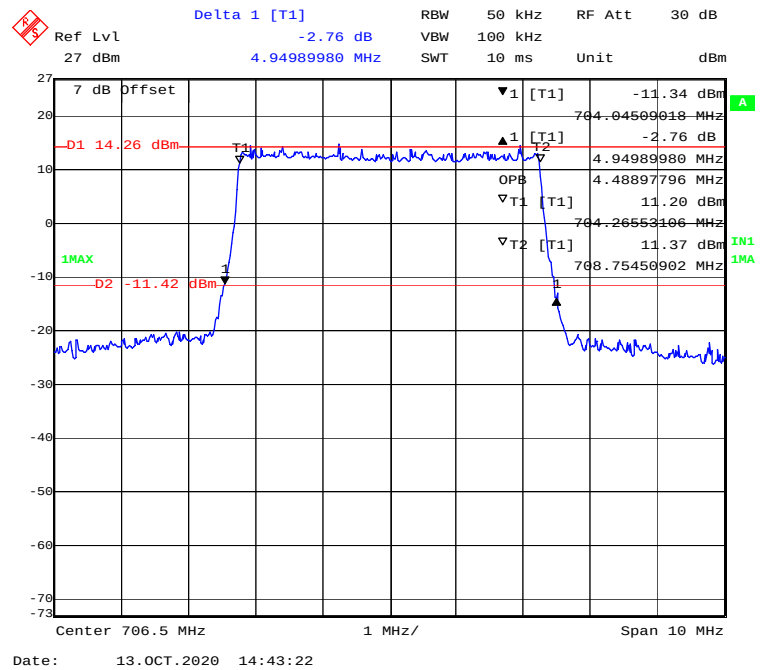
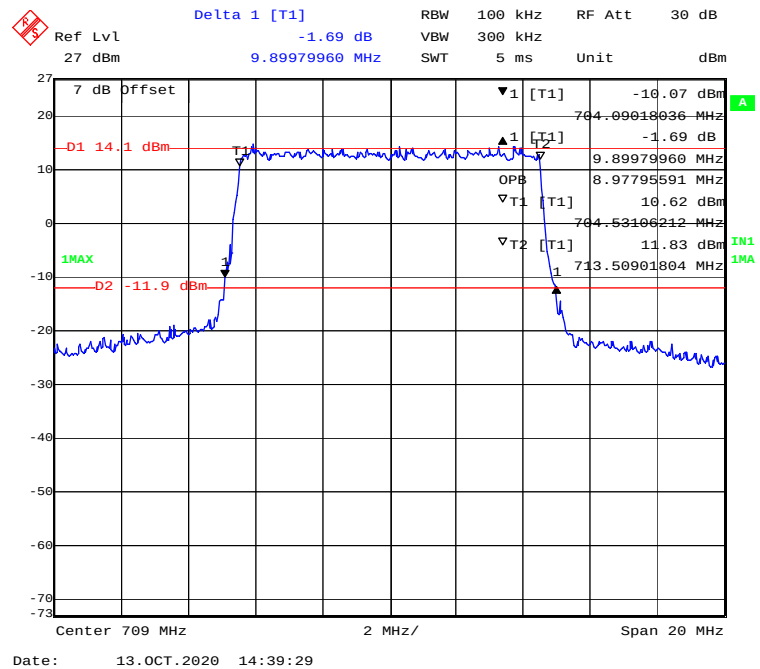
7 dB Offset
 -D1 14.09 dBm
 1MAX
 -D2 -11.91 dBm
 Center 710 MHz
 2 MHz/
 Span 20 MHz

▼1 [T1] -11.76 dBm
 ▲1 [T2] -0.64 dB
 9.89979960 MHz
 8.97795591 MHz
 OPB
 ▼T1 [T1] 9.76 dBm
 705.53106212 MHz
 ▼T2 [T1] 12.26 dBm
 714.50901804 MHz

IN1
 1MA

[illegible]

Delta 1 [T1] 0.01 dB
 Ref Lvl 27 dBm
 9.85971944 MHz
 RBW 100 kHz
 VBW 300 kHz
 RF Att 30 dB
 Unit dBm
 7 dB Offset
 D1 15.18 dBm
 D2 -10.82 dBm
 1MAX
 T1
 1 [T1]
 OPB
 T1 [T1]
 T2 [T1]
 1 [T1]
 -10.77 dBm
 706.09018036 MHz
 8.97795591 MHz
 10.90 dBm
 706.53106212 MHz
 11.53 dBm
 715.50901804 MHz
 Center 711 MHz
 2 MHz/
 Span 20 MHz
 Date: 13.OCT.2020 14:55:28

16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

A

Parameter	Value
Ref Lvl	27 dBm
Delta 1 [T1]	-1.76 dB
RBW	50 kHz
RF Att	30 dB
VBW	100 kHz
SWT	10 ms
Unit	dBm

Center 710 MHz 1 MHz/ Span 10 MHz

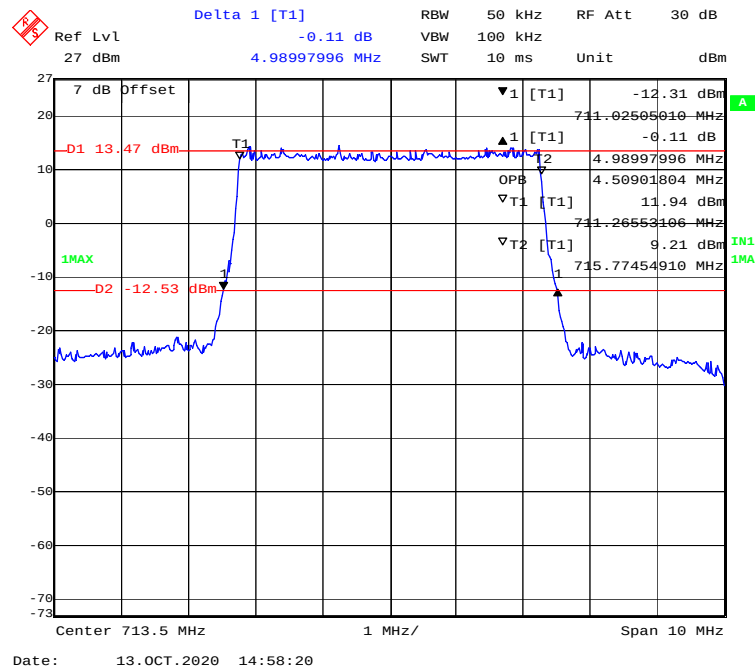
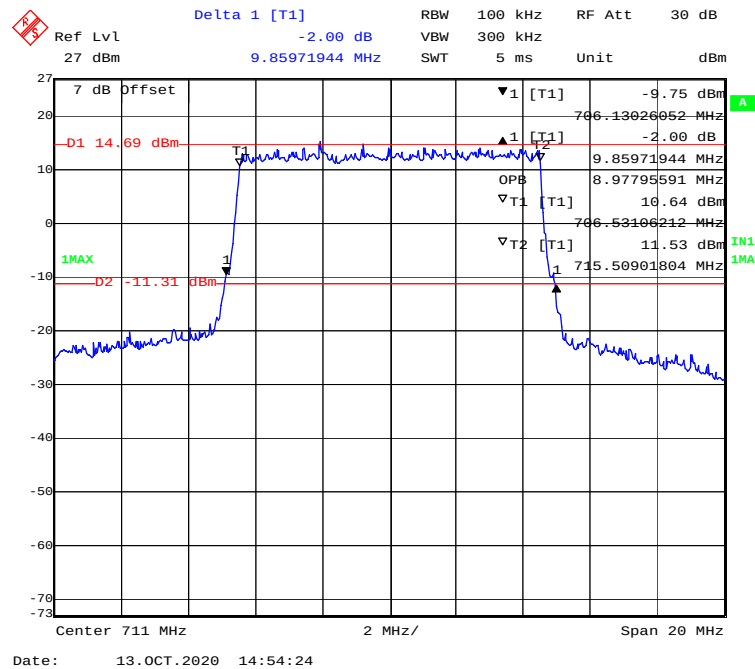
Date: 13.OCT.2020 14:46:25

A

Parameter	Value
Ref Lvl	27 dBm
Delta 1 [T1]	-0.31 dB
RBW	100 kHz
RF Att	30 dB
SWT	5 ms
Unit	dBm

Center 710 MHz 2 MHz/ Span 20 MHz

Date: 13.OCT.2020 14:52:03

16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

FCC § 2.1051; § 22.917 (a); § 24.238 (a); §27.53 (g) (h) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standards

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

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

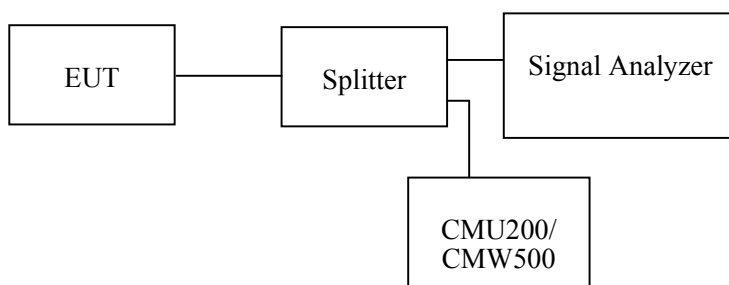
According to §22.917(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

(g) For operations in the 600 MHz band and the 698-746 MHz band, 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.

(h) For operations in the 1710-1755 MHz, 1755-1780 MHz, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ dB.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz for below 1GHz & 1MHz for above 1GHz. sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Test Data

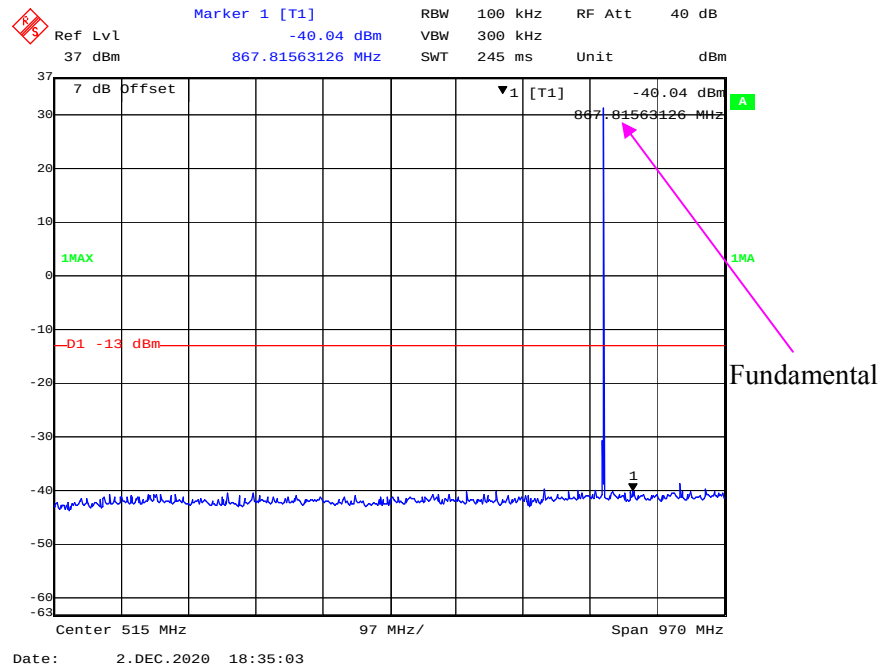
Environmental Conditions

Temperature:	23.5~24.9 °C
Relative Humidity:	50~52 %
ATM Pressure:	100.7~101.9 kPa

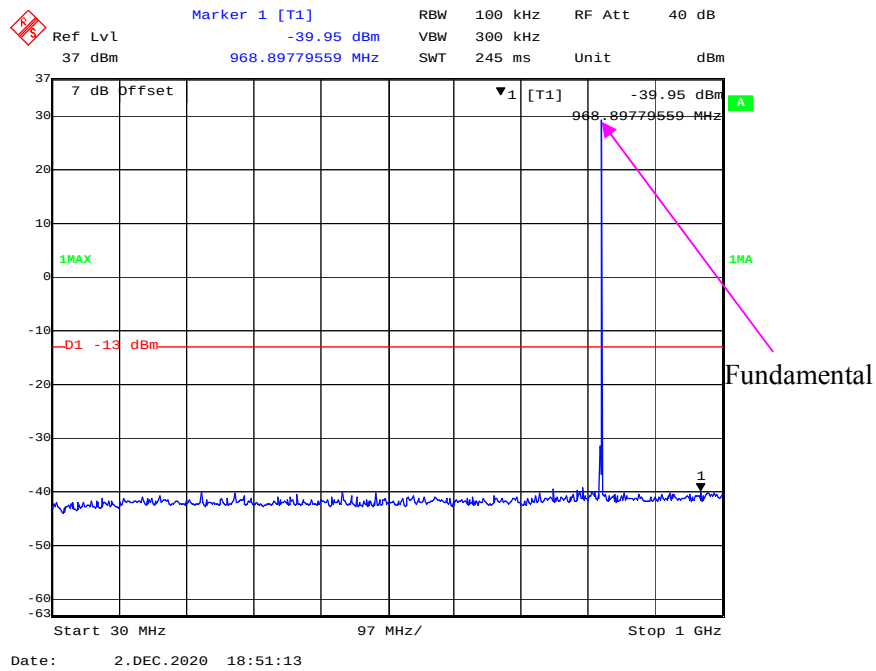
The testing was performed by Jack Jiao from 2020-10-13 to 2020-12-02.

EUT operation mode: Transmitting

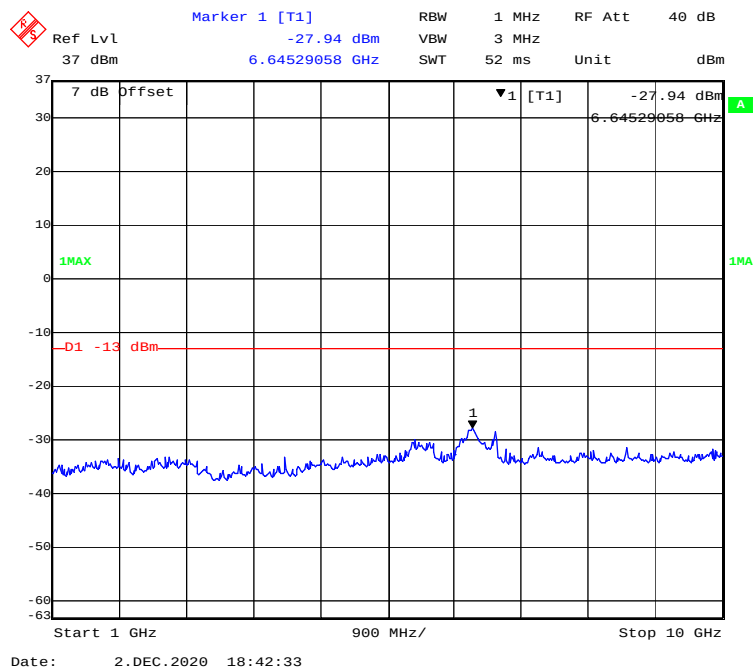
Test Result: Compliance.

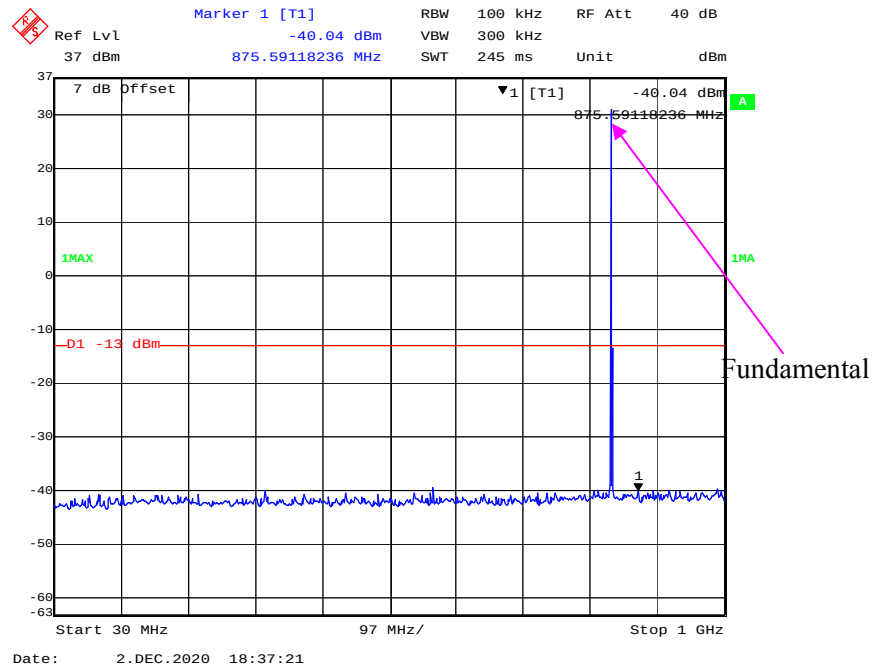
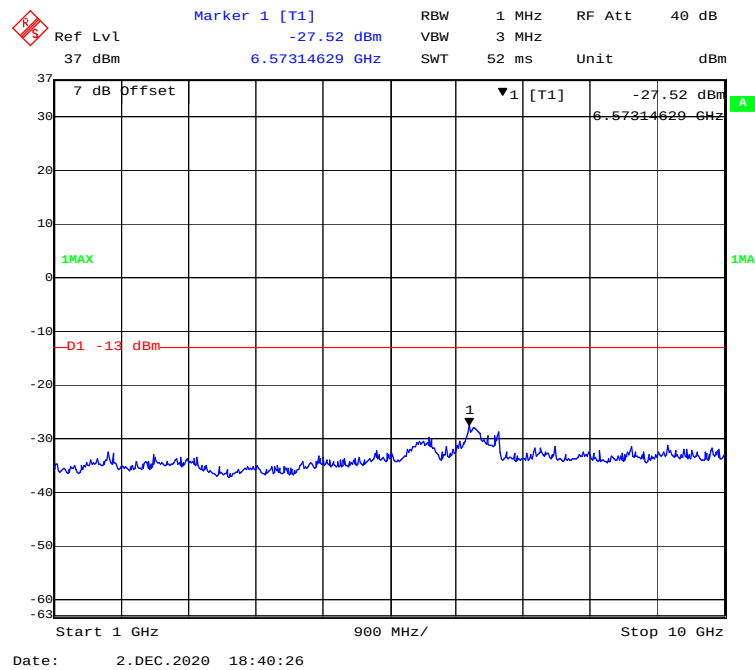
GSM 850 Band:**30 MHz – 1GHz(GPRS Mode), Low channel****1 GHz – 10 GHz (GPRS Mode), Low channel**

30 MHz – 1GHz(EGPRS Mode)), Low channel

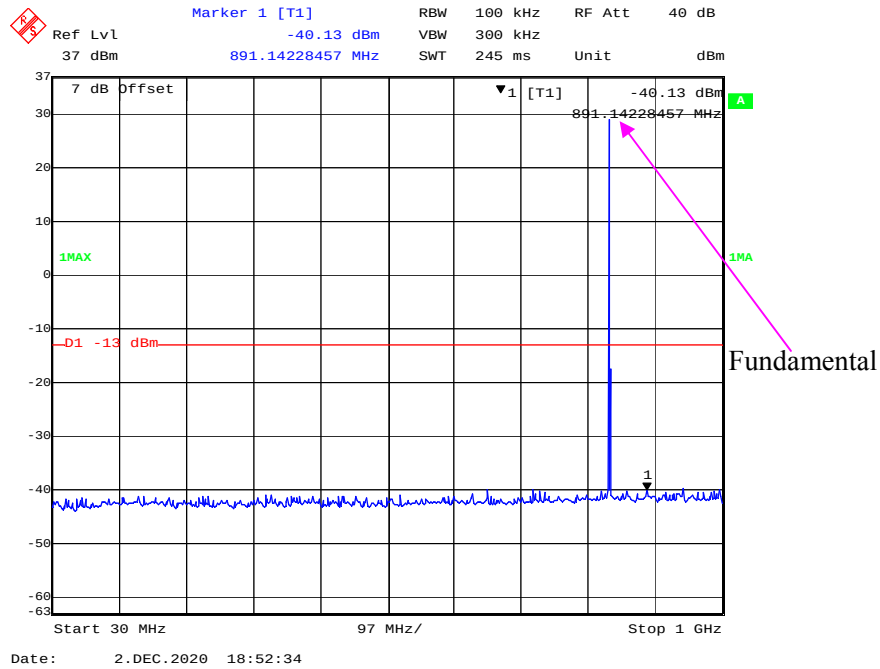


1 GHz – 10 GHz (EGPRS Mode)), Low channel

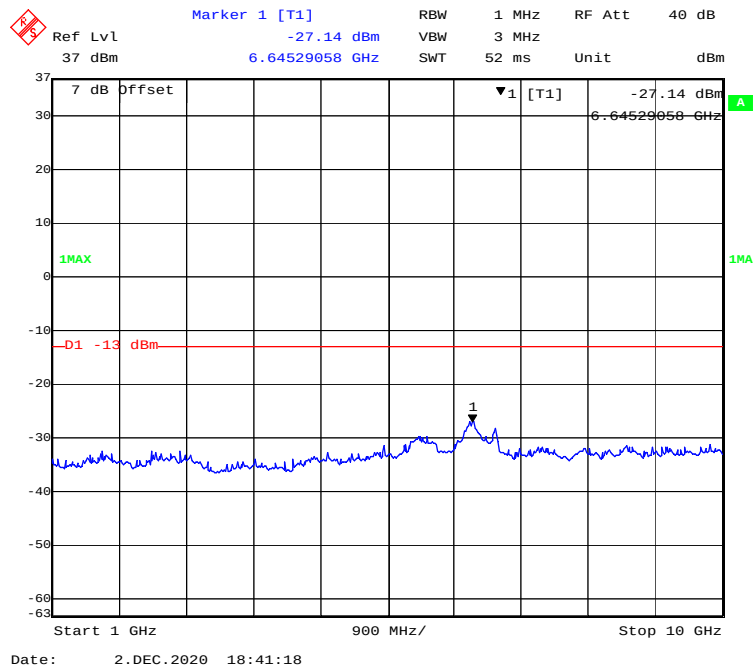


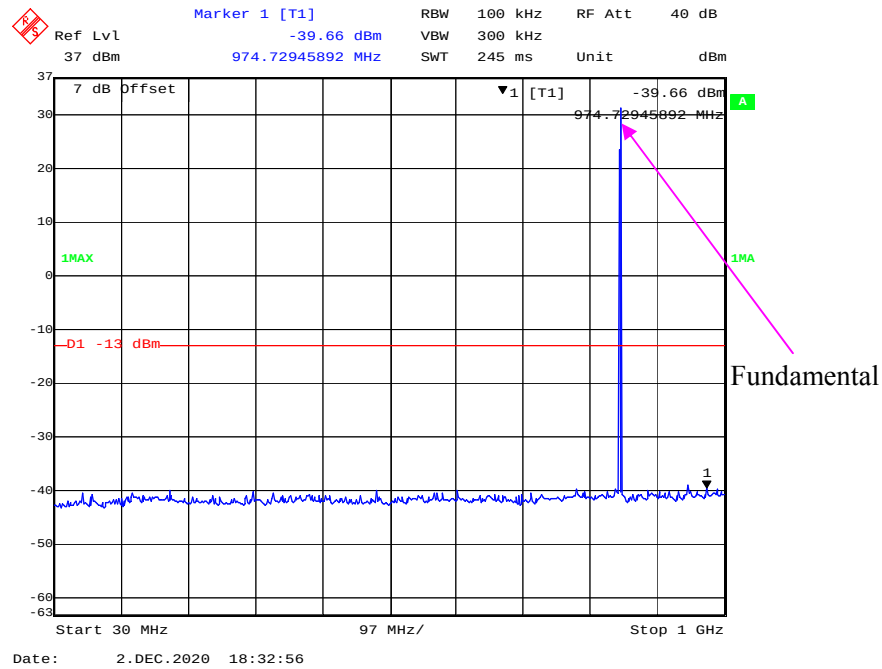
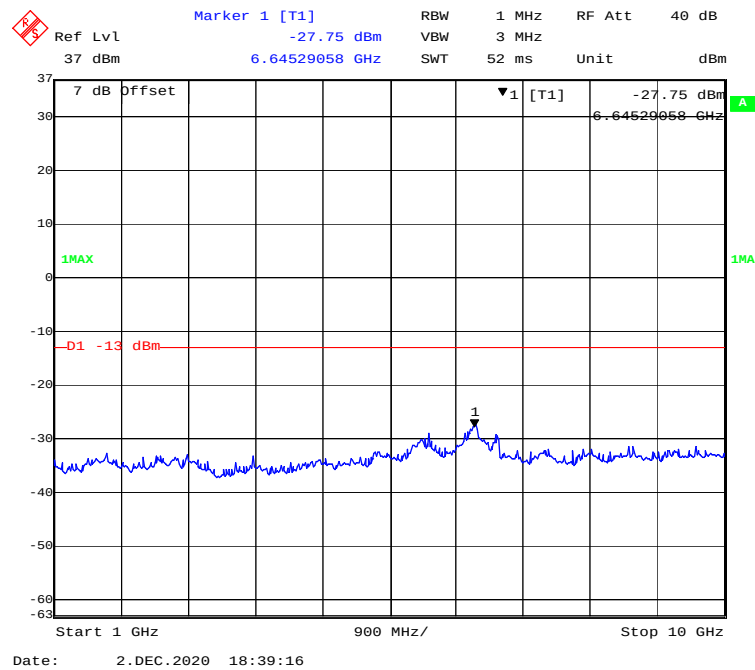
30 MHz – 1GHz(GPRS Mode)), Middle channel**1 GHz – 10 GHz (GPRS Mode)), Middle channel**

30 MHz – 1GHz(EGPRS Mode) , Middle channel

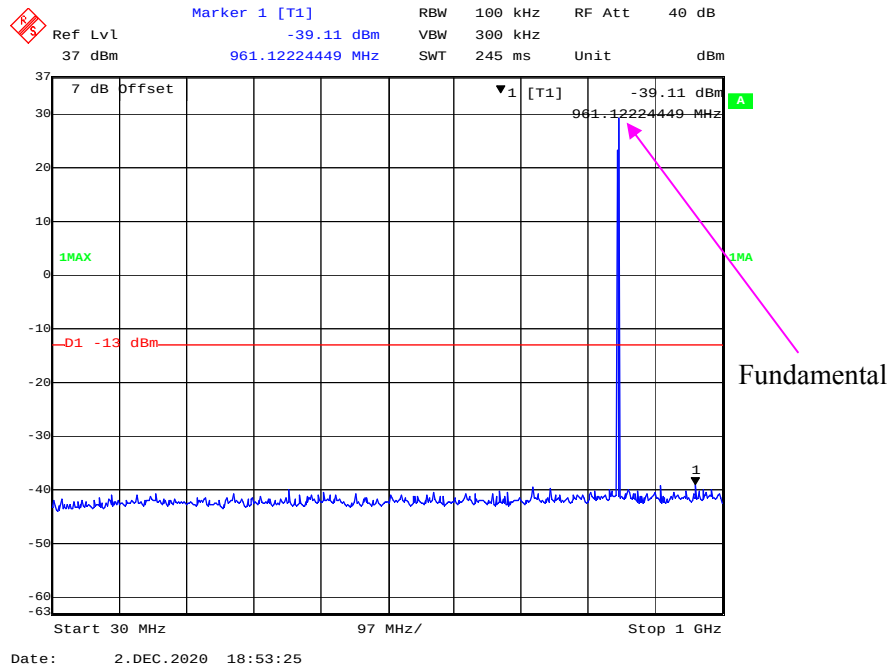


1 GHz – 10 GHz (EGPRS Mode), Middle channel

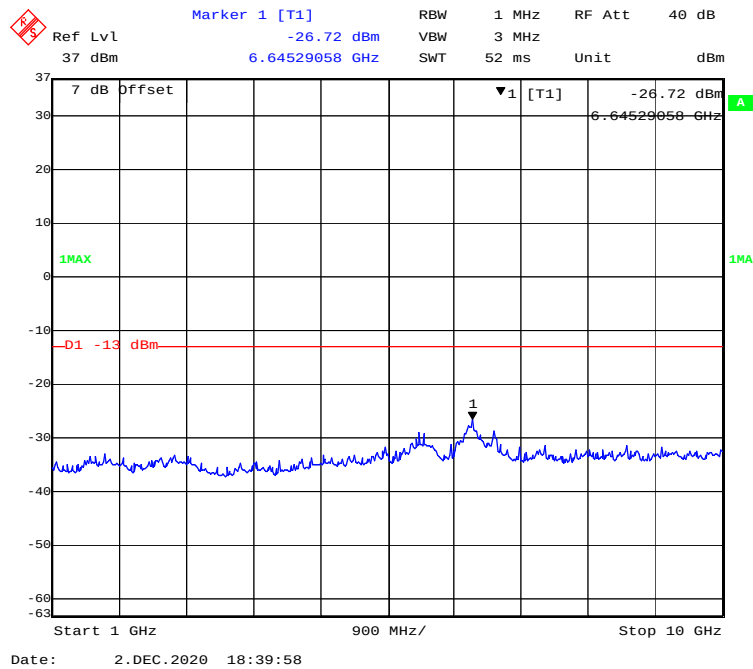


30 MHz – 1GHz(GPRS Mode), High channel**1 GHz – 10 GHz (GPRS Mode), High channel**

30 MHz – 1GHz(EGPRS Mode), High channel

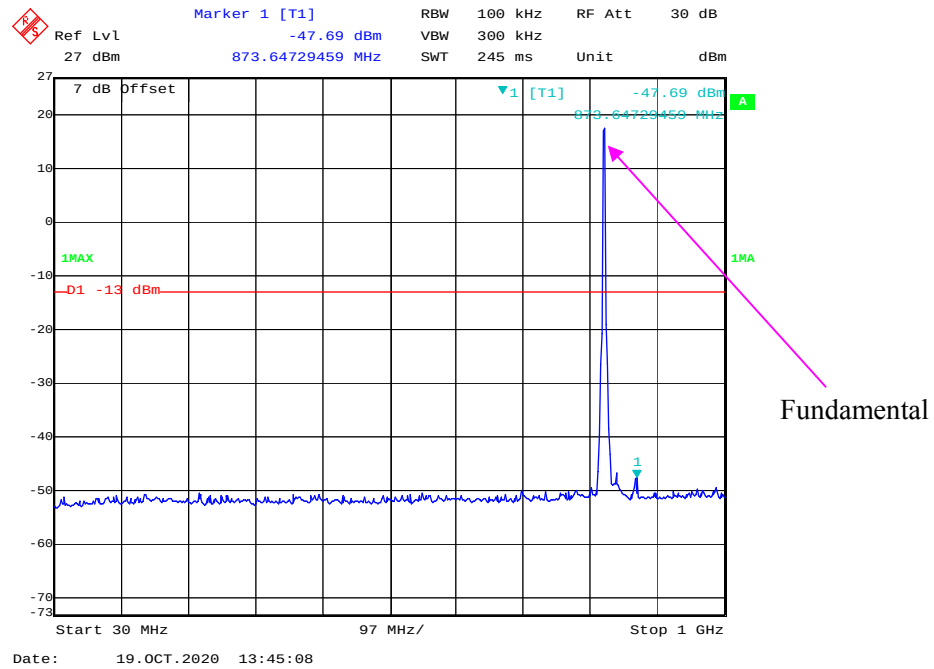


1 GHz – 10 GHz (EGPRS Mode), High channel

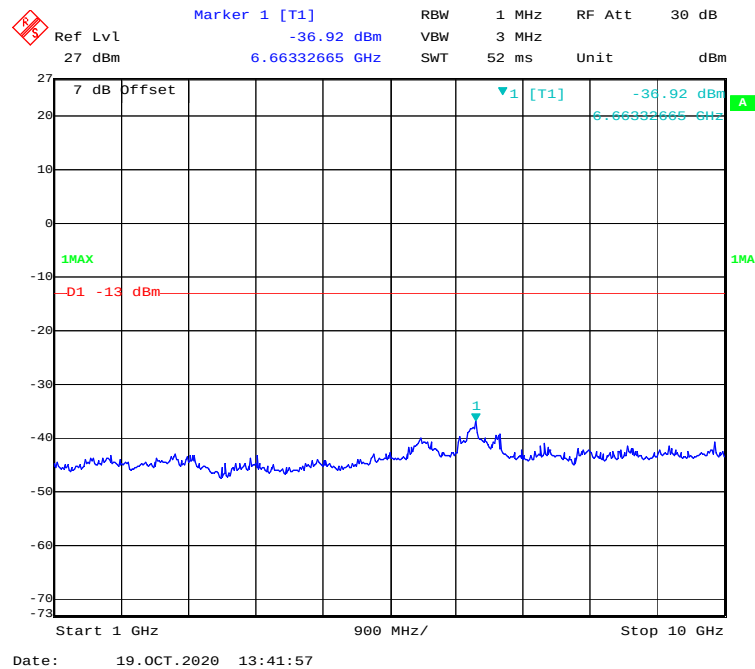


WCDMA Band V:

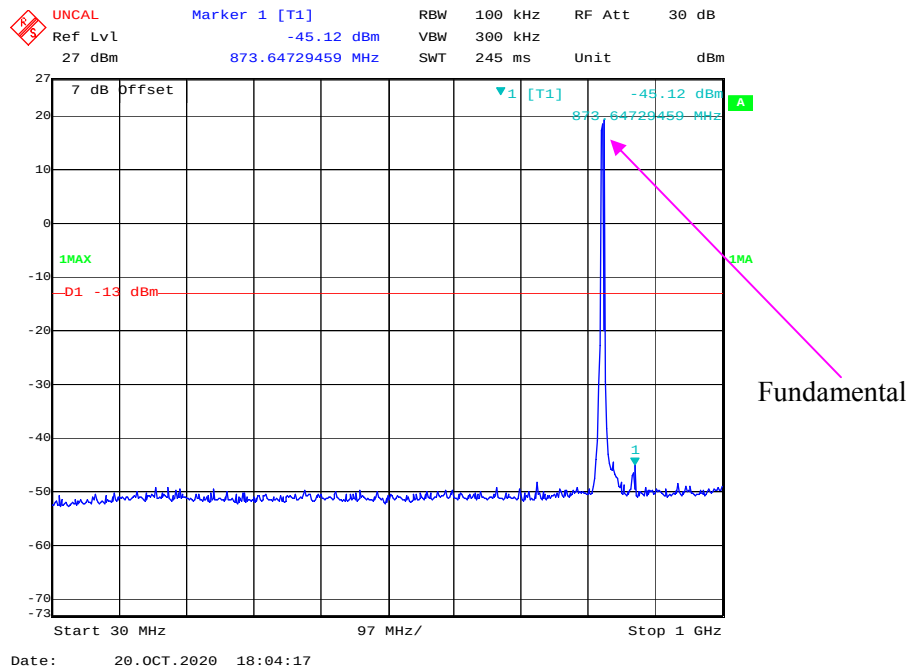
30 MHz – 1GHz WCDMA (Rel 99) Mode, Low channel



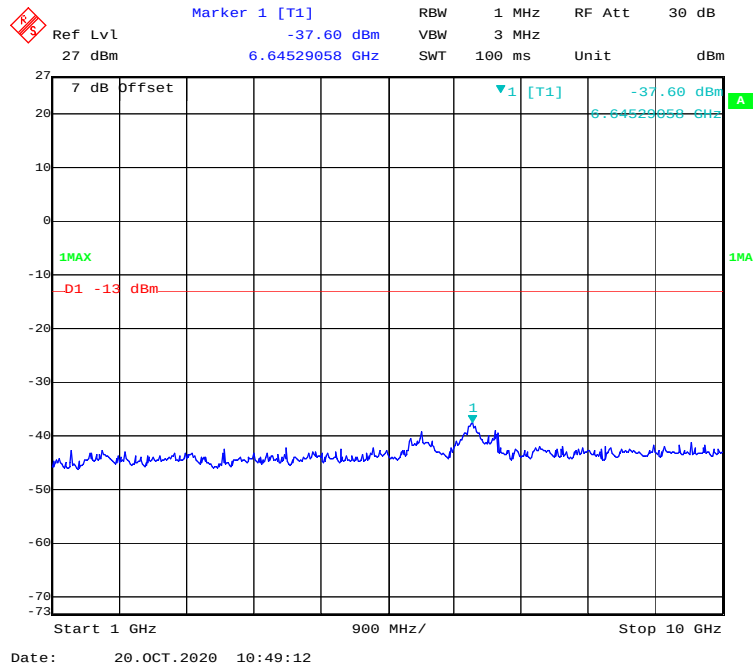
1 GHz – 10 GHz WCDMA (Rel 99) Mode, Low channel



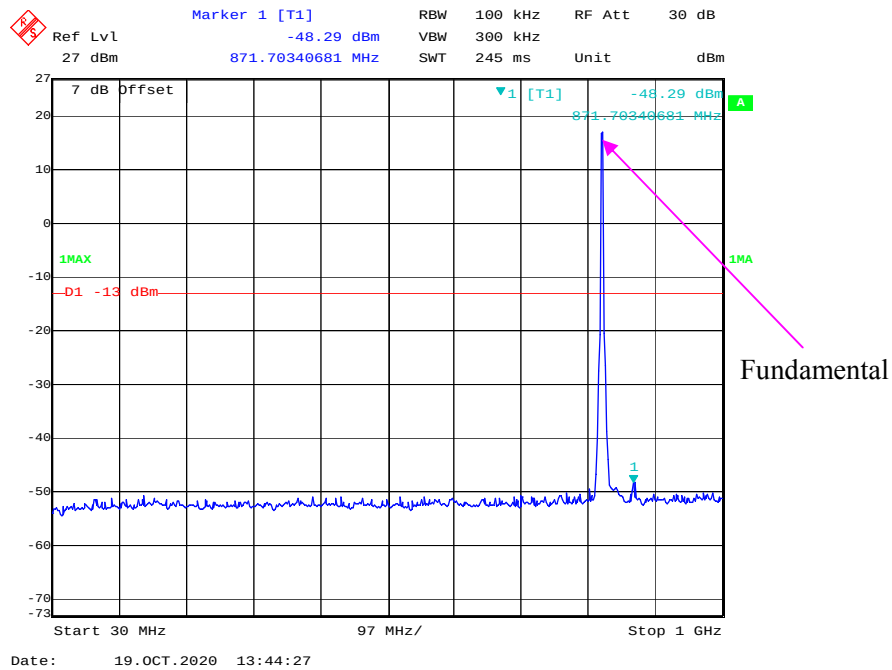
30 MHz – 1GHz WCDMA (HSDPA) Mode, Low channel



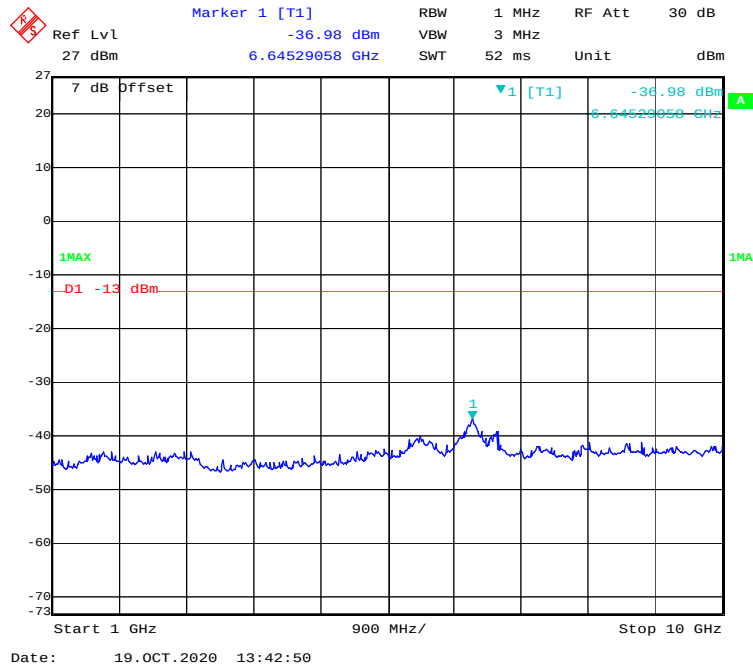
1 GHz – 10 GHz WCDMA (HSDPA) Mode, Low channel

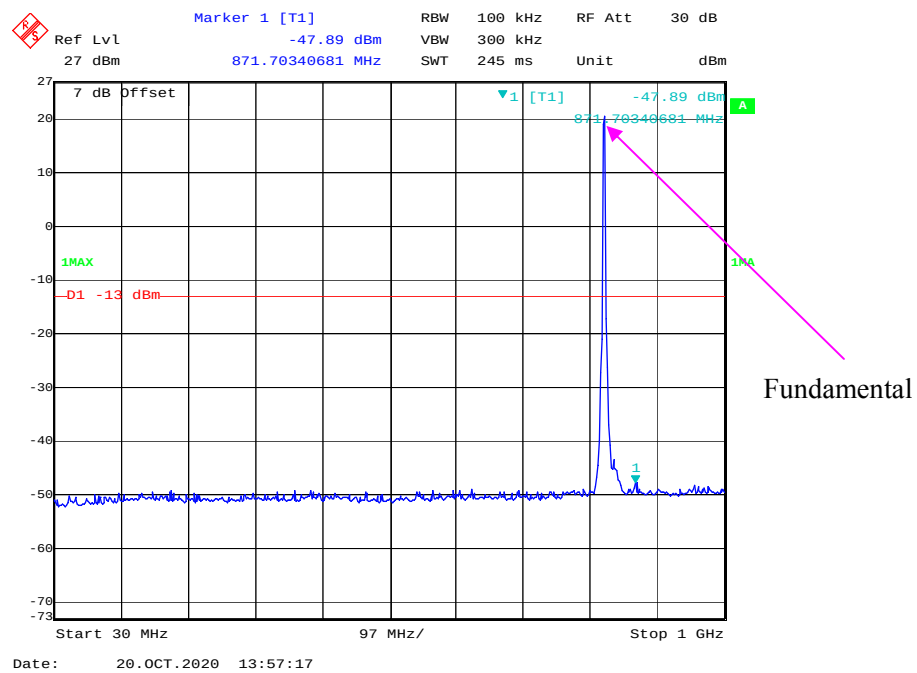
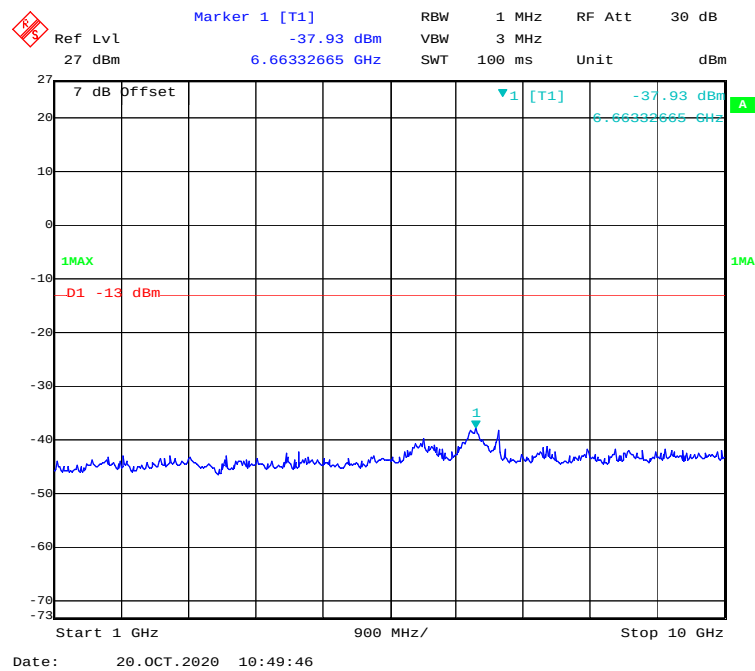


30 MHz – 1GHz WCDMA (HSUPA) Mode, Low channel

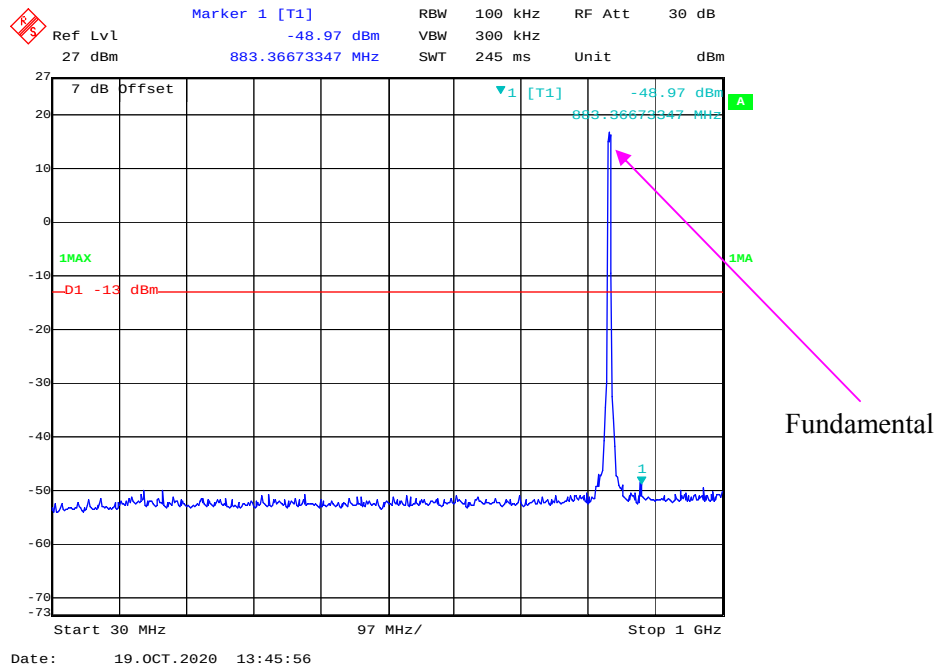


1 GHz – 10 GHz WCDMA (HSUPA) Mode, Low channel

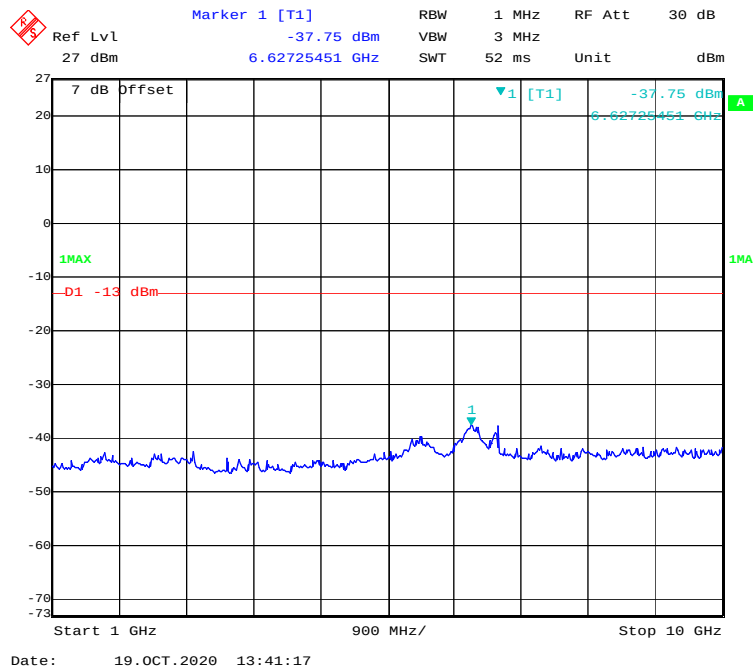


30 MHz – 1GHz WCDMA (HSPA+) Mode, Low channel**1 GHz – 10 GHz WCDMA (HSPA+) Mode, Low channel**

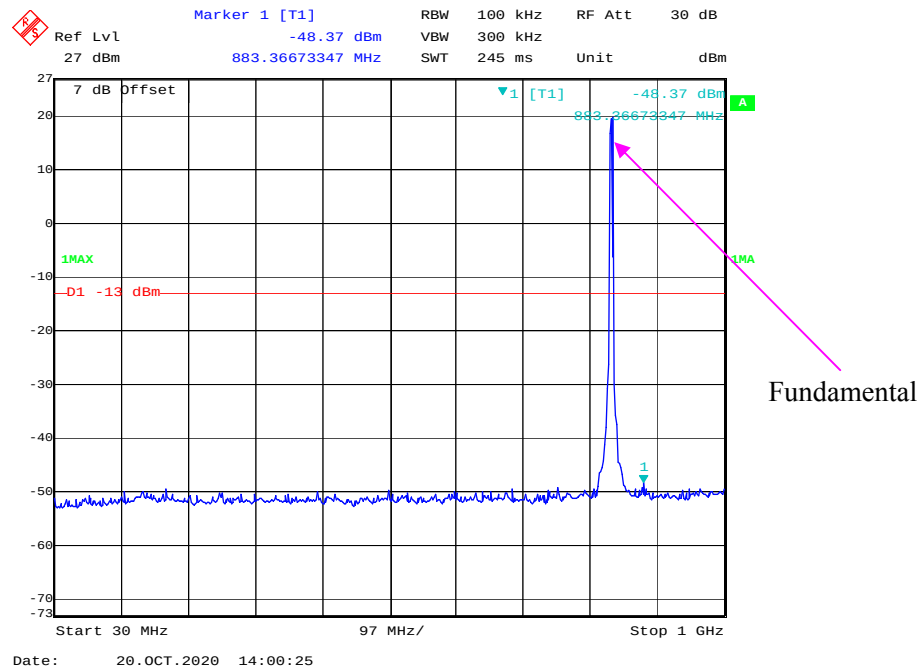
30 MHz – 1GHz WCDMA (Rel 99) Mode, Middle channel



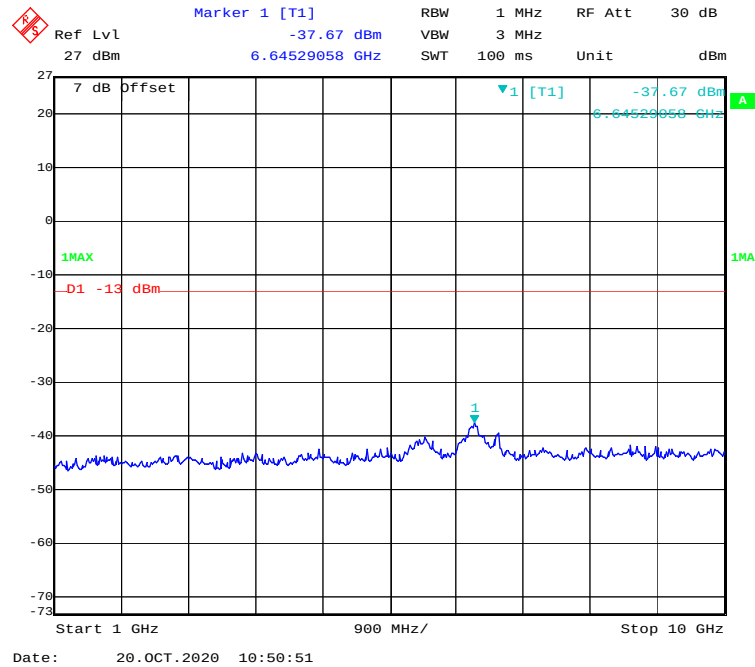
1 GHz – 10 GHz WCDMA (Rel 99) Mode, Middle channel



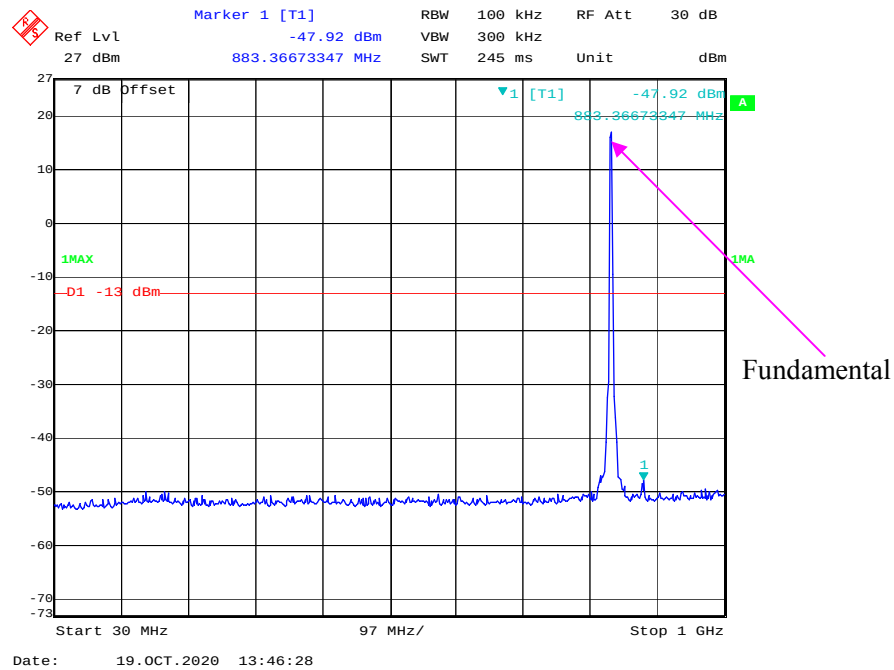
30 MHz – 1GHz WCDMA (HSDPA) Mode, Middle channel



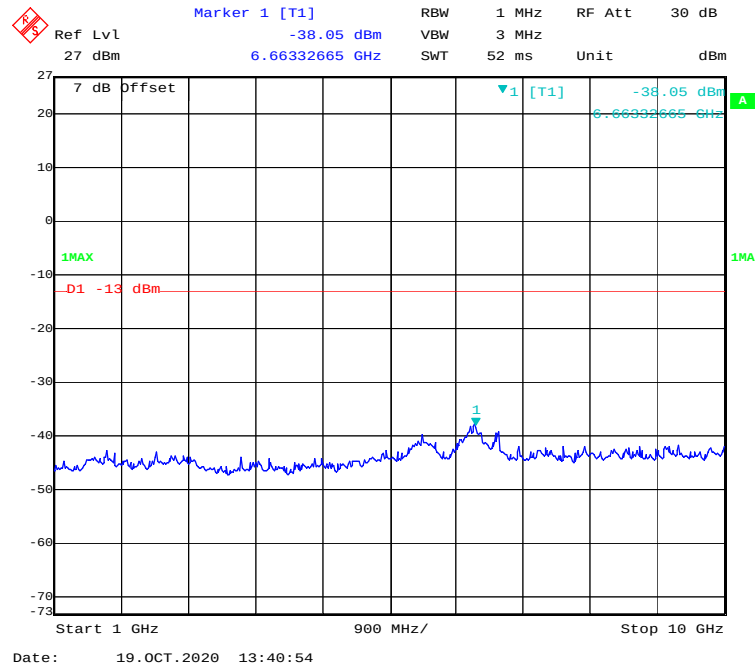
1 GHz – 10 GHz WCDMA (HSDPA) Mode, Middle channel

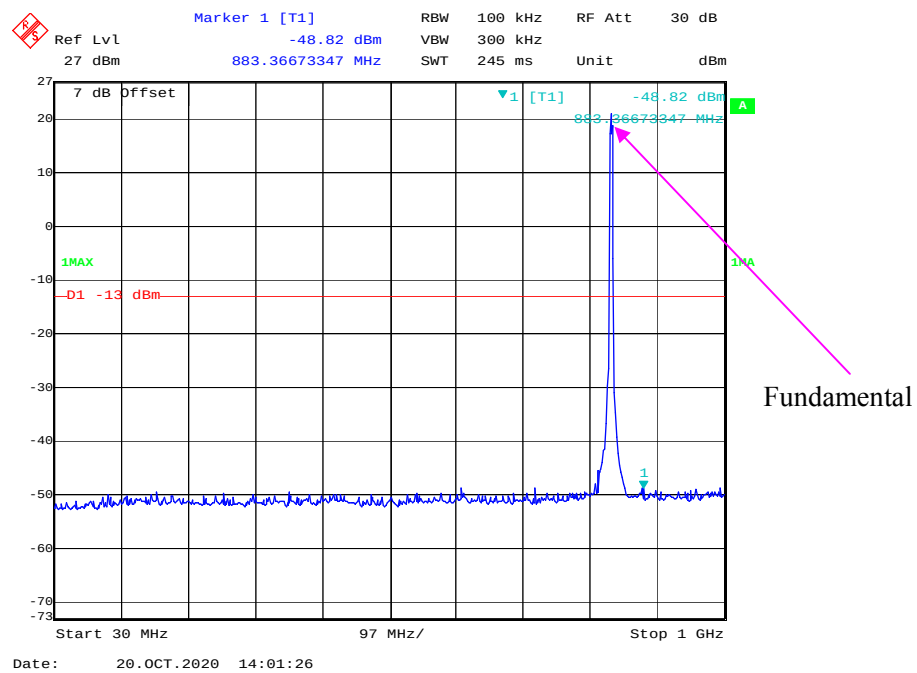
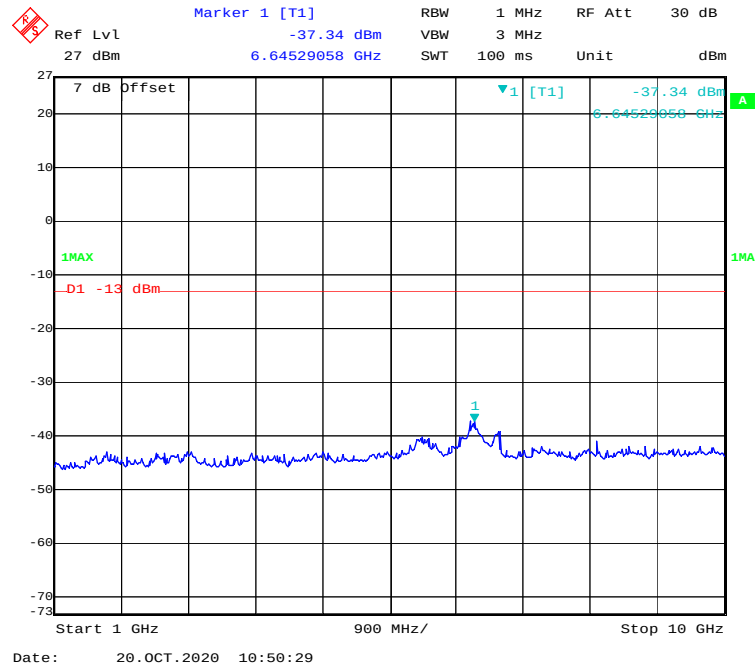


30 MHz – 1GHz WCDMA (HSUPA) Mode, Middle channel

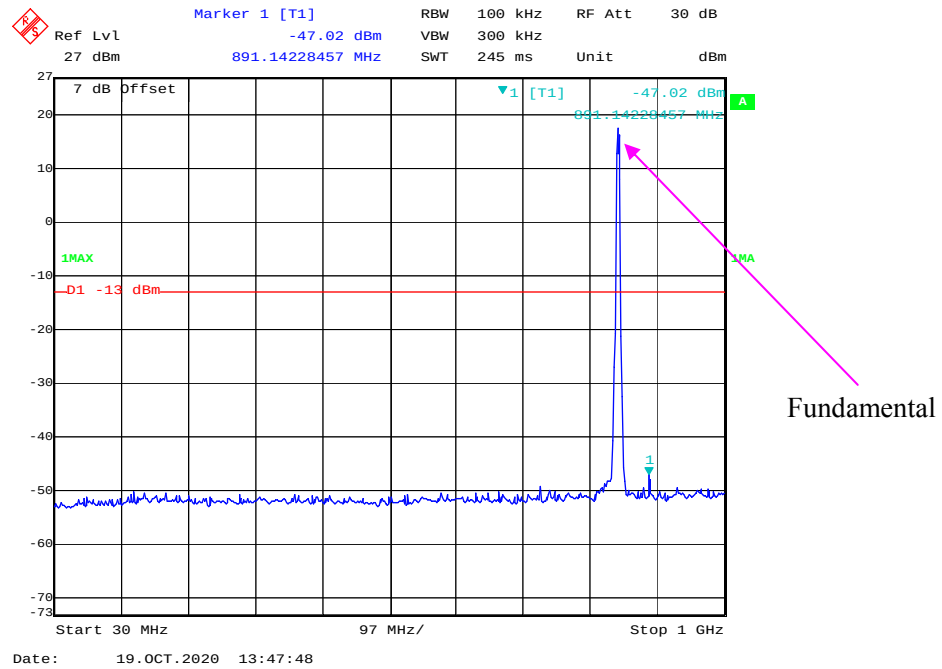


1 GHz – 10 GHz WCDMA (HSUPA) Mode, Middle channel

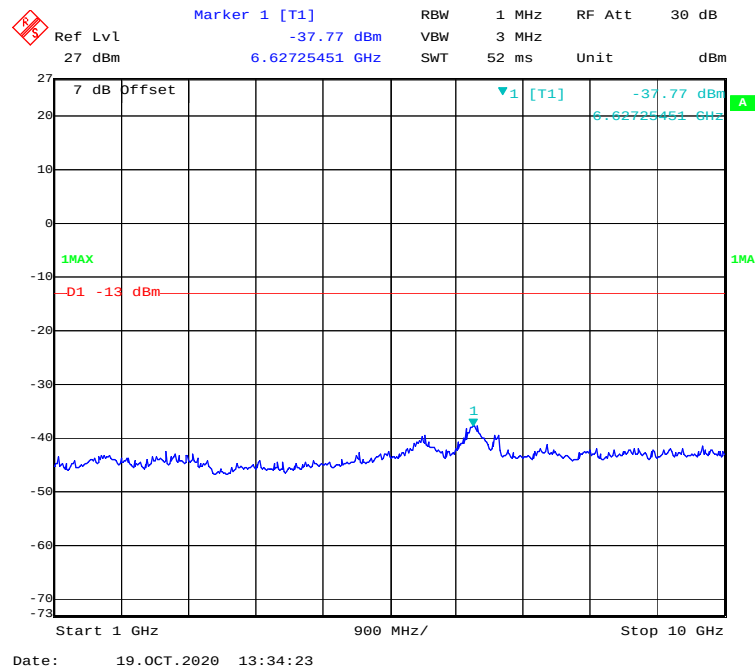


30 MHz – 1GHz WCDMA (HSPA+) Mode, Middle channel**1 GHz – 10 GHz WCDMA (HSPA+) Mode, Middle channel**

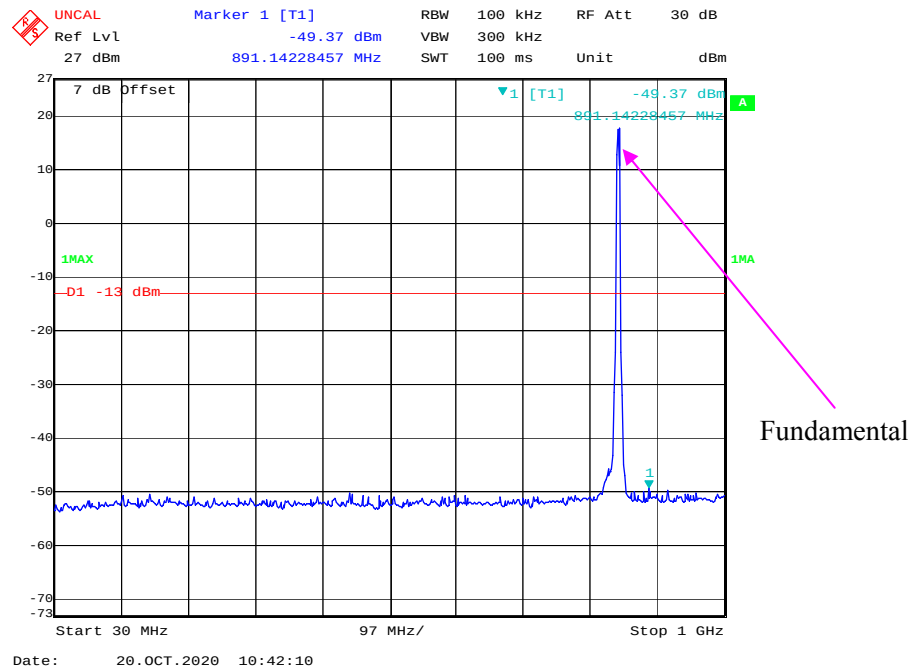
30 MHz – 1GHz WCDMA (Rel 99) Mode, High channel



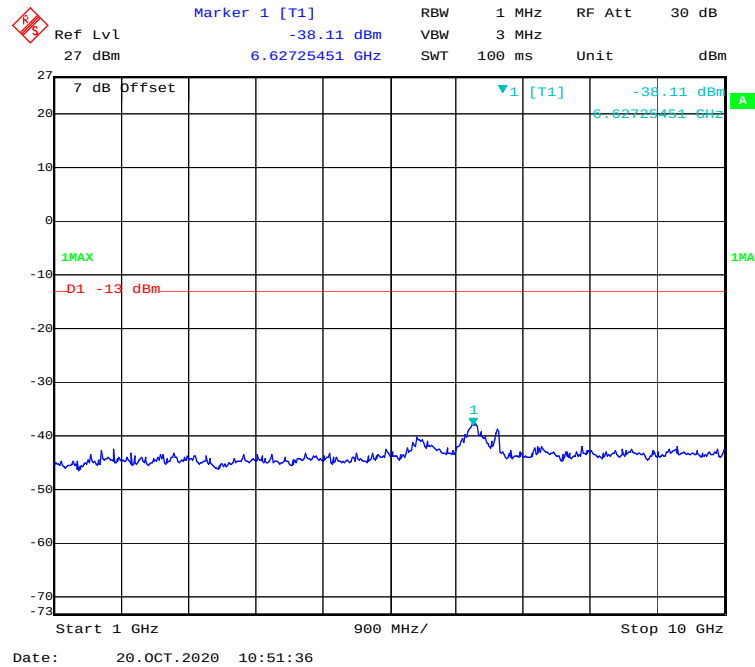
1 GHz – 10 GHz WCDMA (Rel 99) Mode, High channel



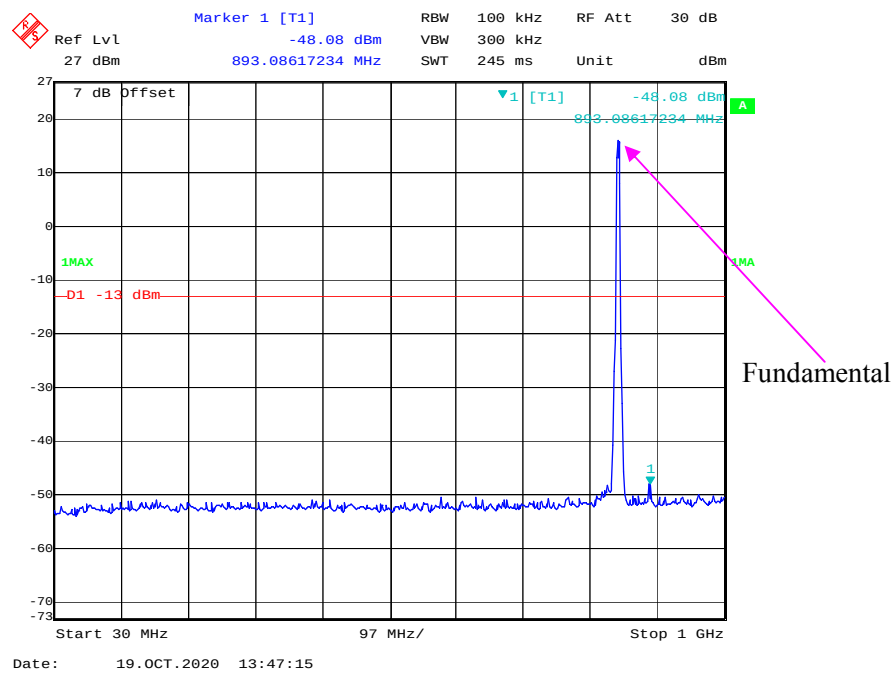
30 MHz – 1GHz WCDMA (HSDPA) Mode, High channel



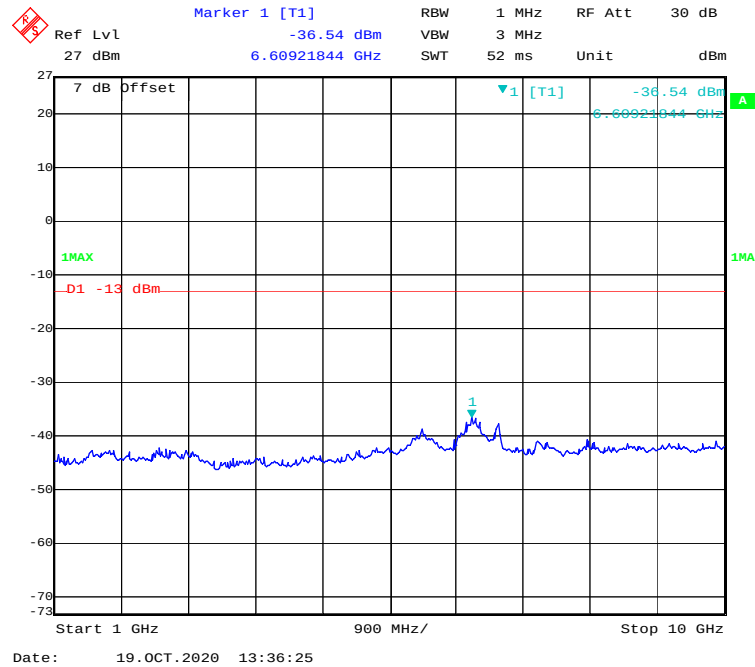
1 GHz – 10 GHz WCDMA (HSDPA) Mode, High channel

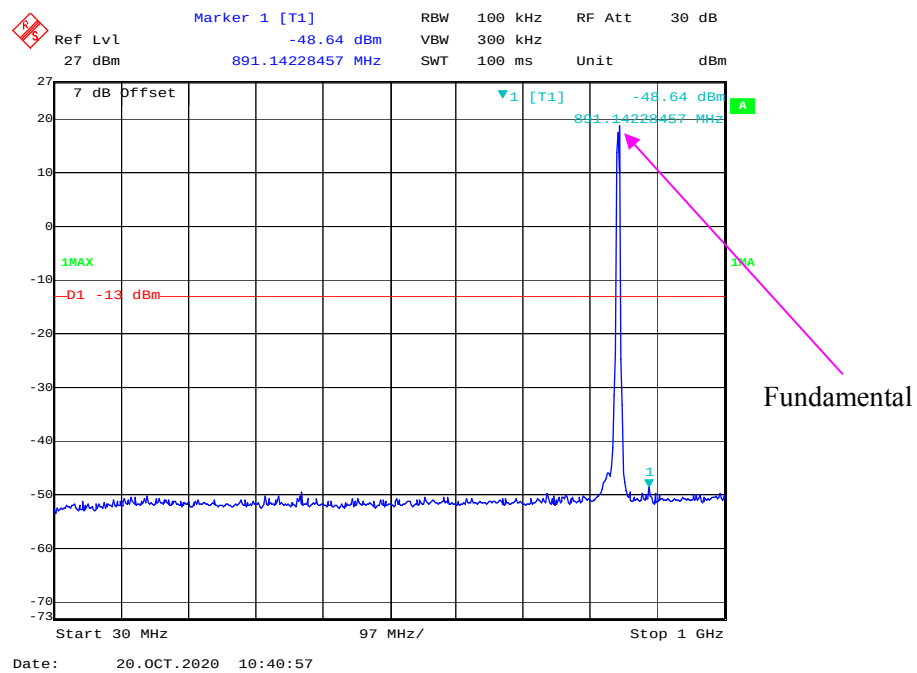
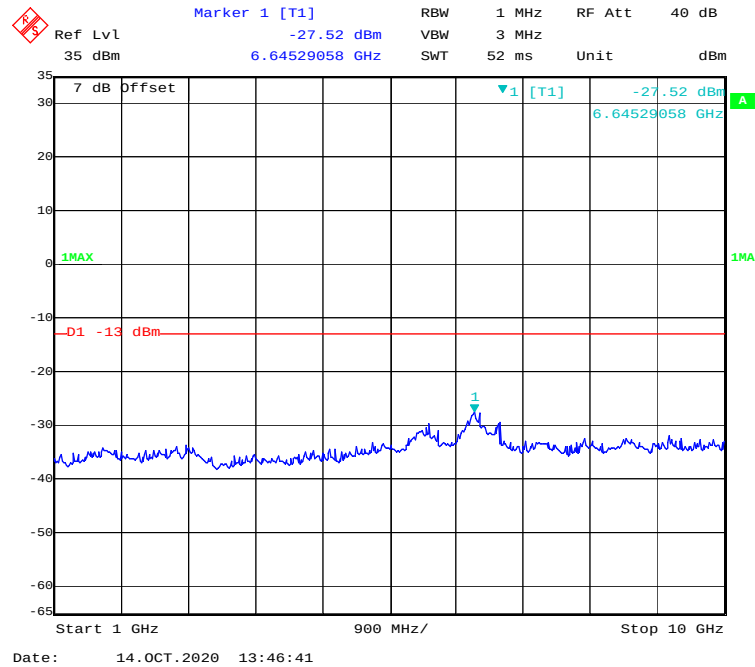


30 MHz – 1GHz WCDMA (HSUPA) Mode, High channel



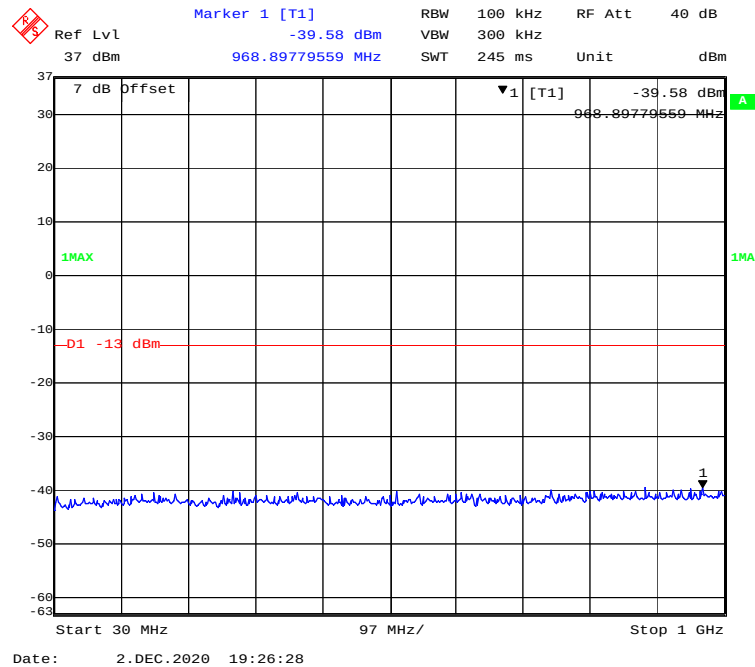
1 GHz – 10 GHz WCDMA (HSUPA) Mode, High channel



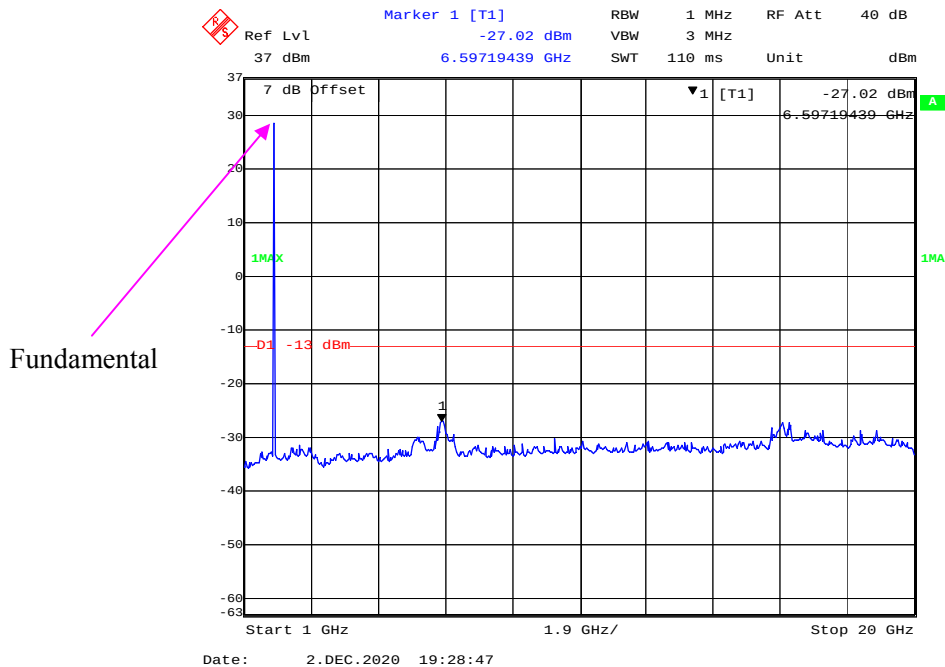
30 MHz – 1GHz WCDMA (HSPA+) Mode, High channel**1 GHz – 10 GHz WCDMA (HSPA+) Mode, High channel**

PCS 1900 Band:

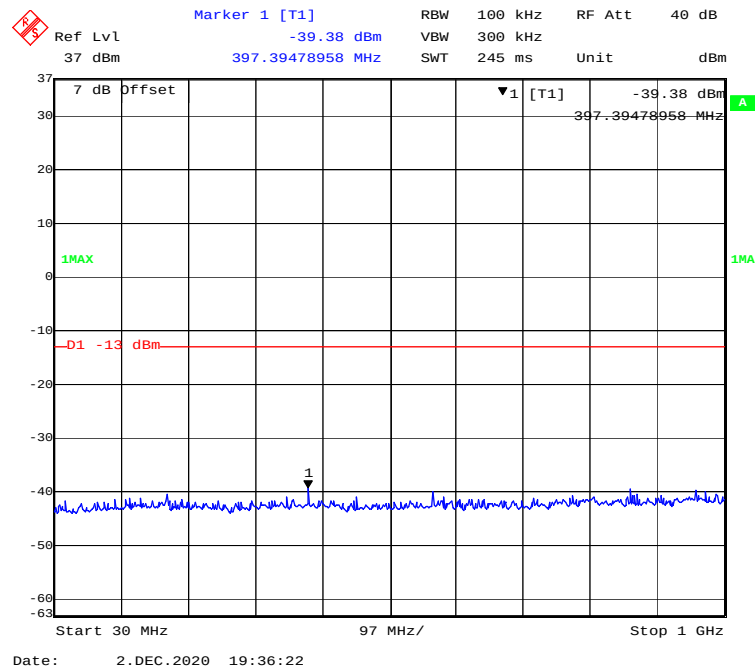
30 MHz – 1GHz(GPRS Mode) , Low channel



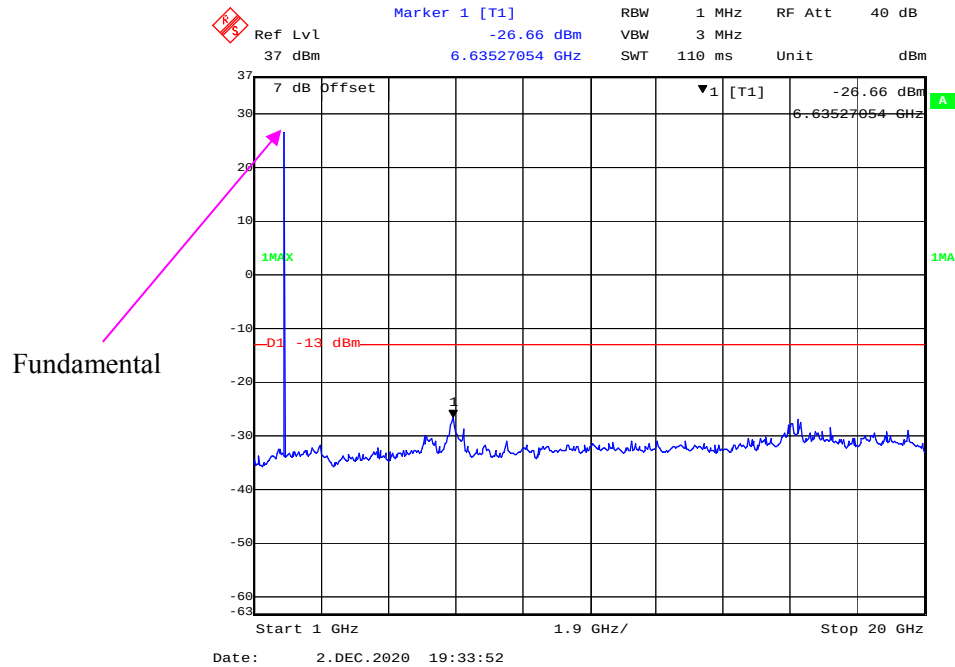
1 GHz – 20 GHz (GPRS Mode) , Low channel

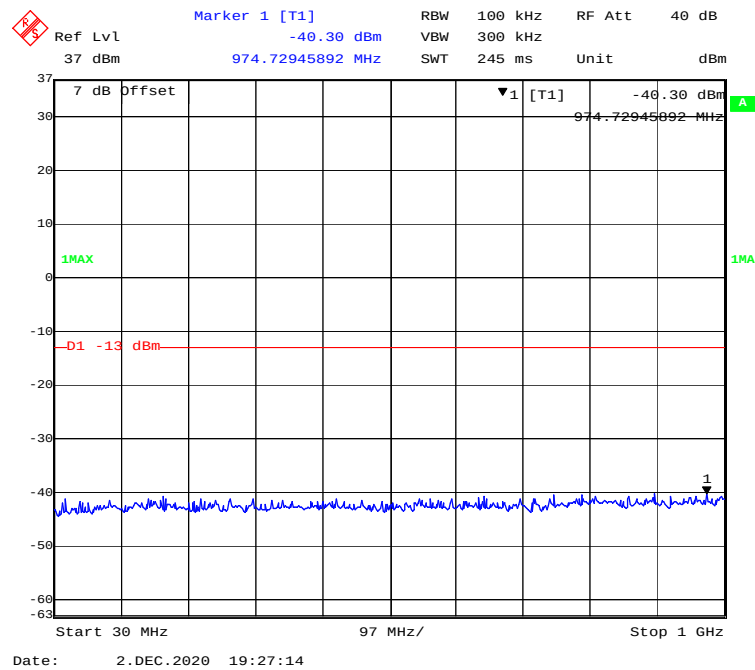
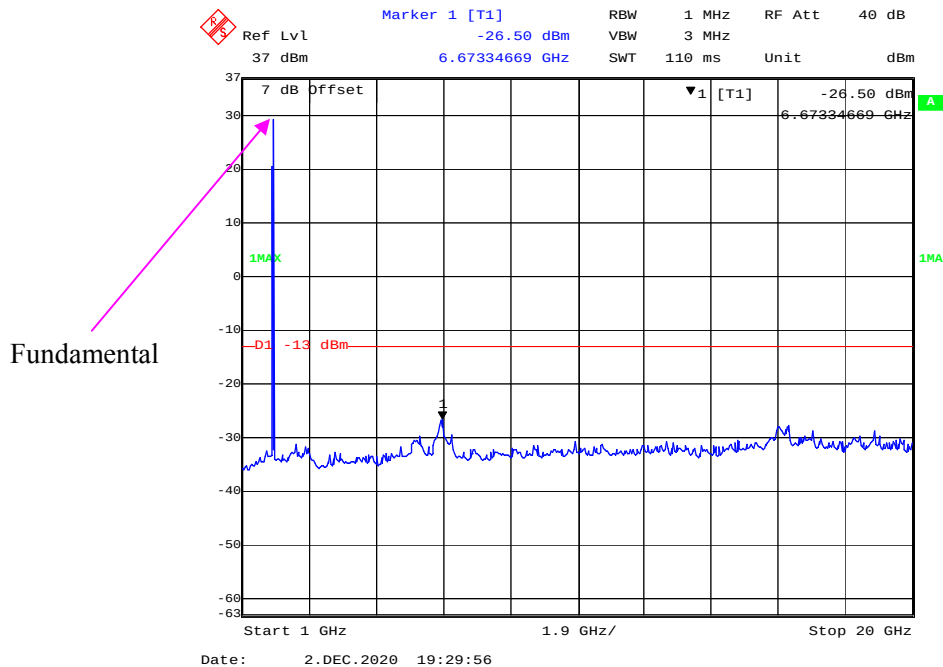


30 MHz – 1GHz(EGPRS Mode) , Low channel



1 GHz – 20 GHz (EGPRS Mode) , Low channel



30 MHz – 1GHz(GPRS Mode) , Middle channel**1 GHz – 20 GHz (GPRS Mode) , Middle channel**

RBW 100 kHz RF Att 40 dB
 Ref Lvl 37 dBm Marker 1 [T1] -39.18 dBm
 965.01002004 MHz Unit dBm
 7 dB Offset
 1MAX
 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 2.DEC.2020 19:36:57

Ref Lvl 37 dBm

Marker 1 [T1] -27.06 dBm

RBW 1 MHz RF Att 40 dB

VBW 3 MHz

SWT 110 ms Unit dBm

7 dB Offset

▼1 [T1] -27.06 dBm

16.45891784 GHz

1MAX

D1 -13 dBm

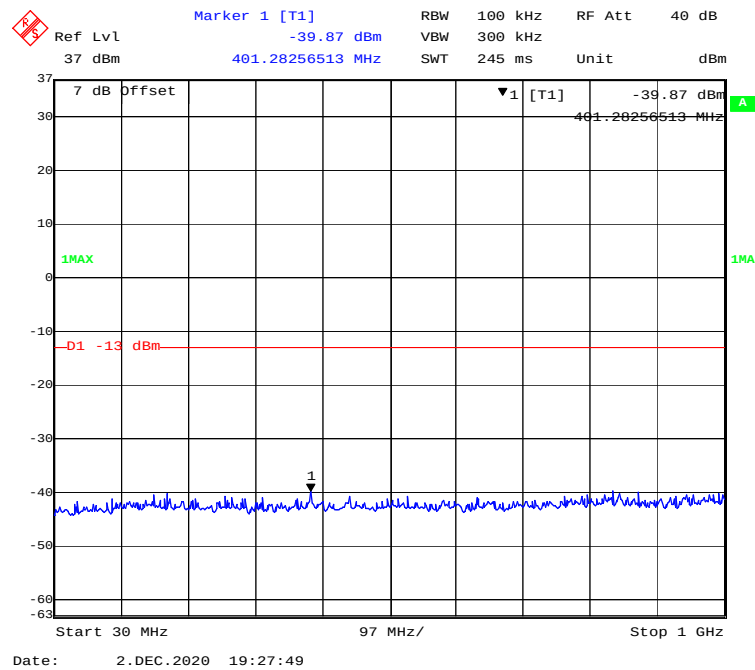
1

Start 1 GHz 1.9 GHz/ Stop 20 GHz

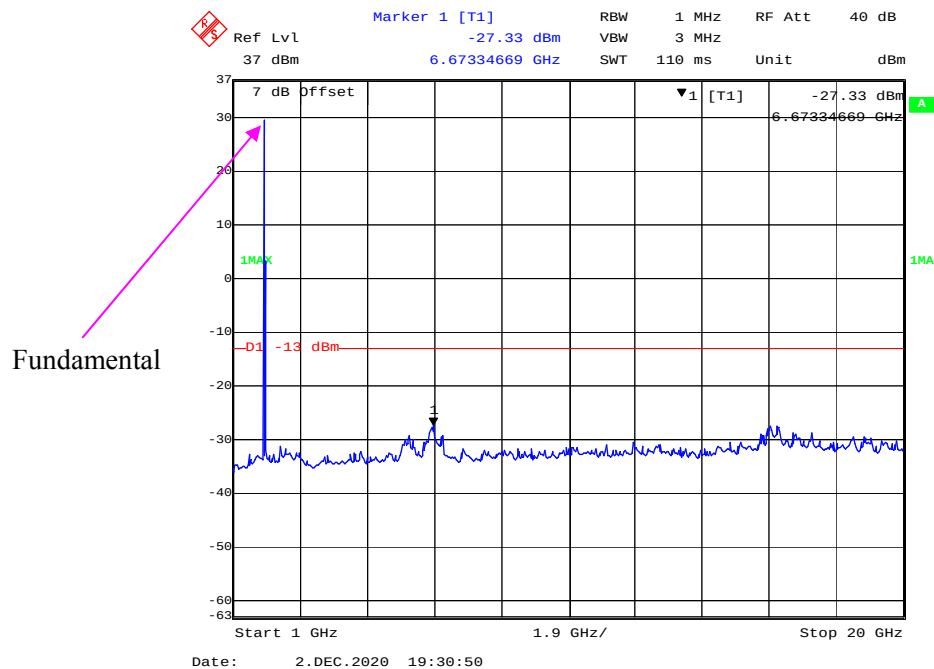
Date: 2.DEC.2020 19:33:08

Fundamental

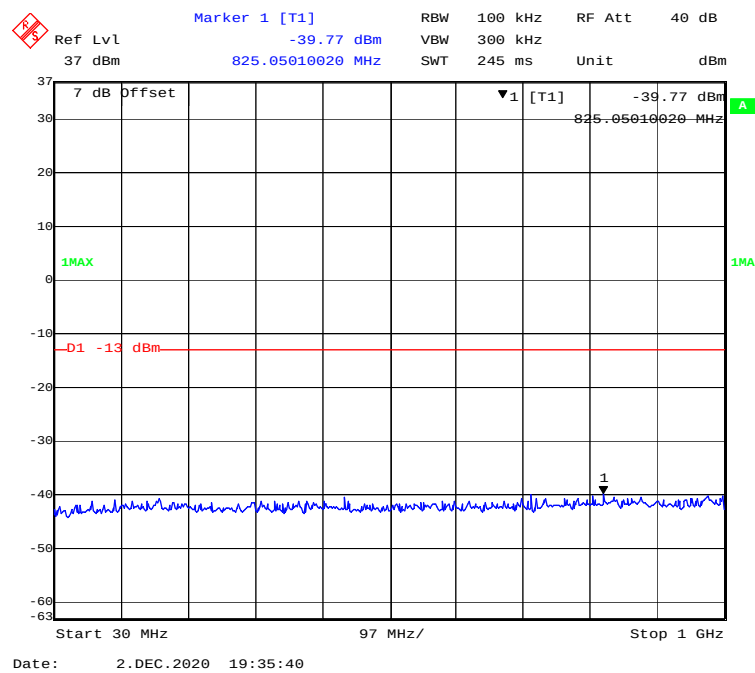
30 MHz – 1GHz(GPRS Mode) , High channel



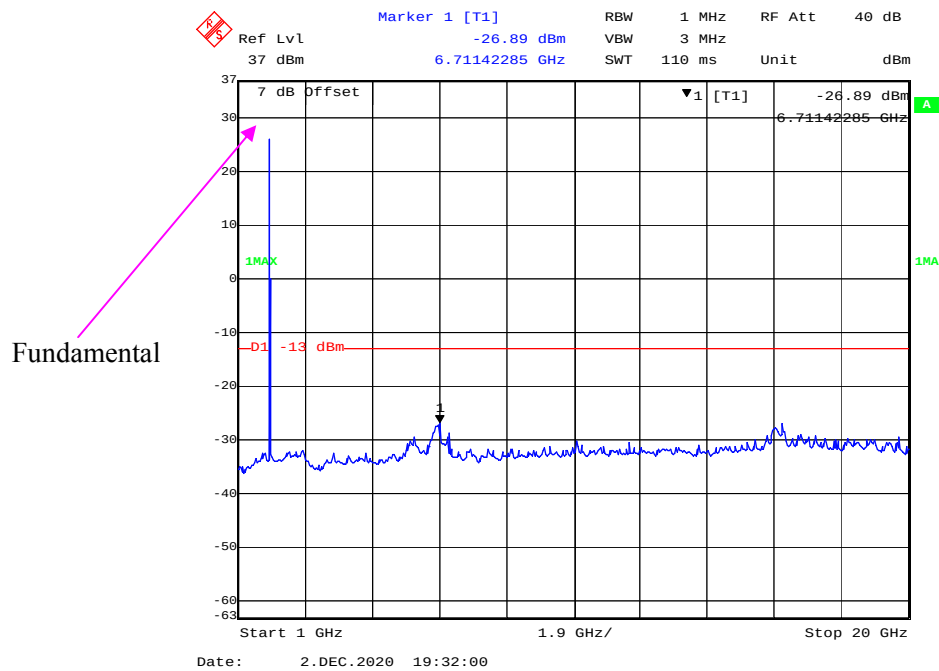
1 GHz – 20 GHz (GPRS Mode) , High channel

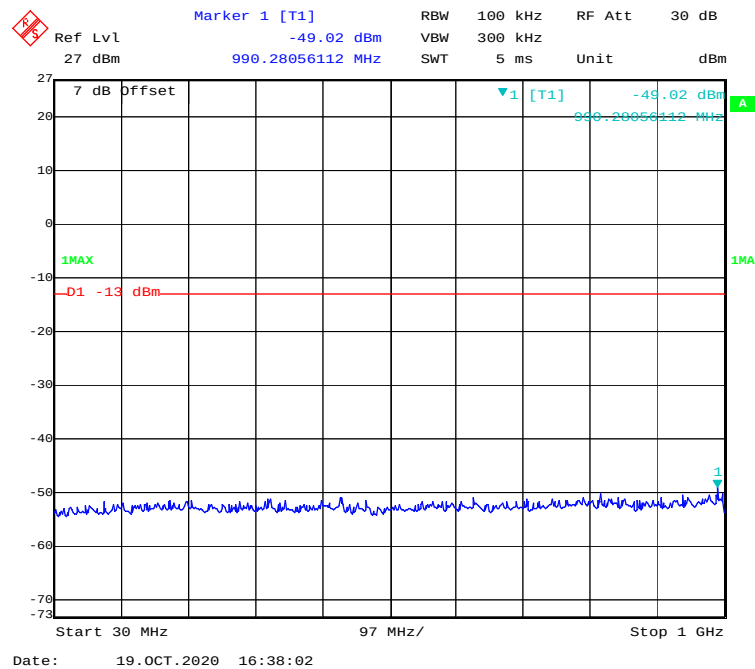
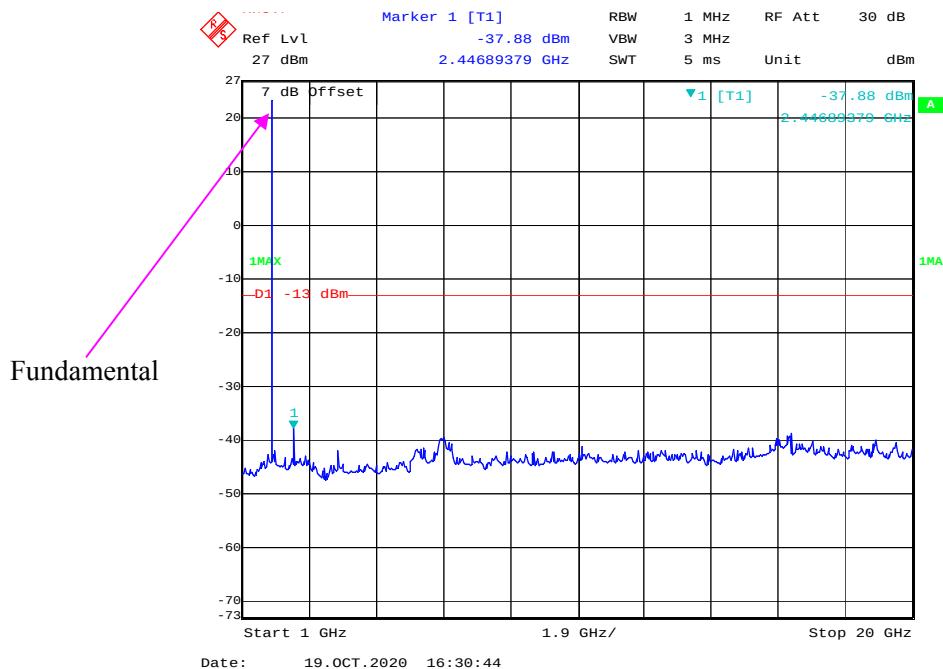


30 MHz – 1GHz(EGPRS Mode) , High channel

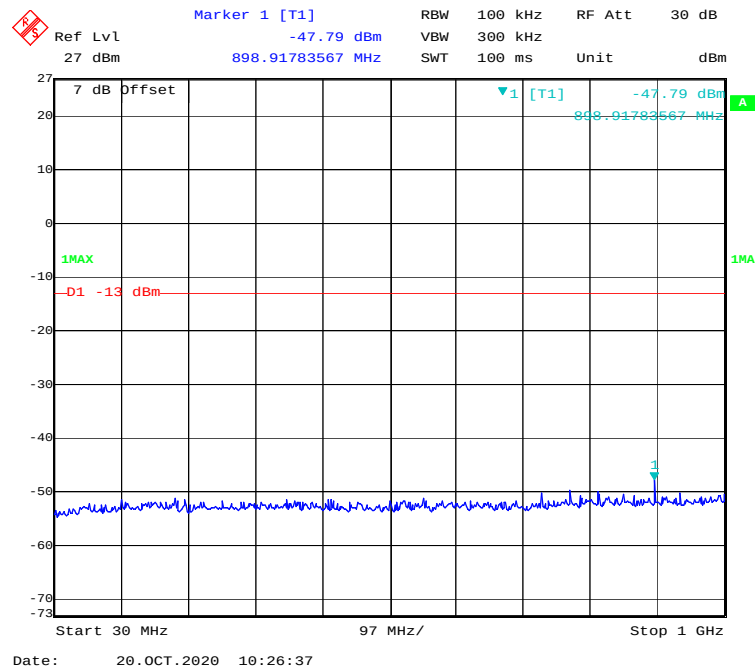


1 GHz – 20 GHz (EGPRS Mode) , High channel

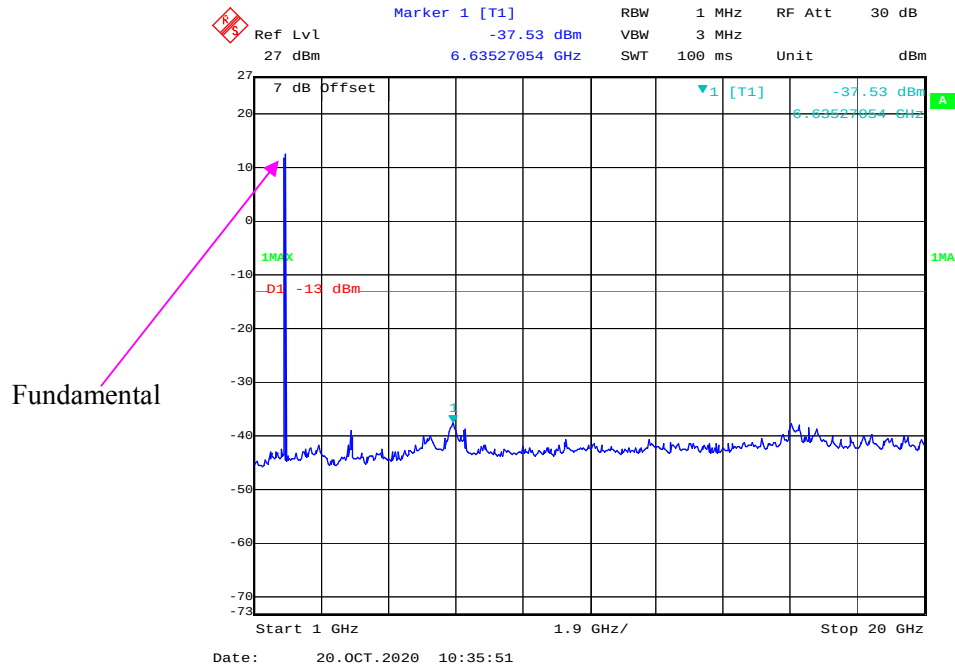


WCDMA Band II:**30 MHz – 1GHz WCDMA (Rel 99) Mode , Low channel****1 GHz – 20 GHz WCDMA (Rel 99) Mode , Low channel**

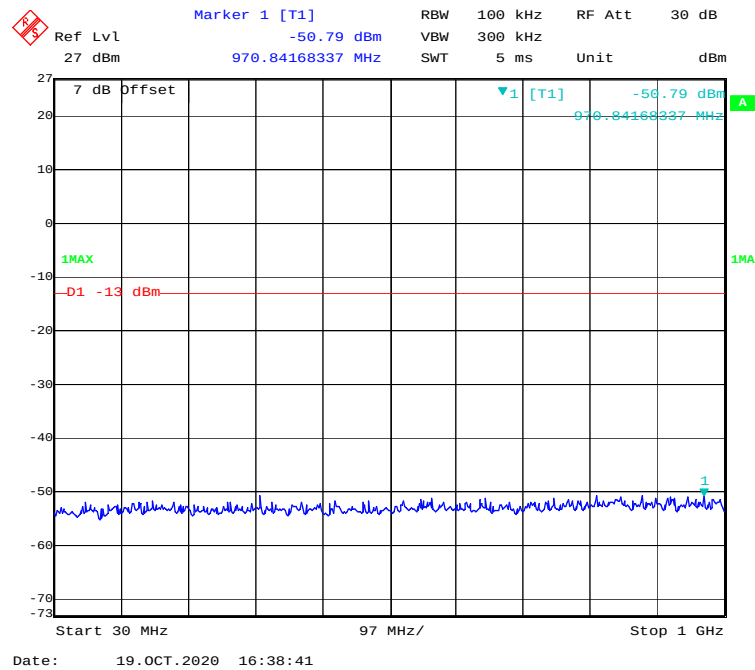
30 MHz – 1GHz WCDMA (HSDPA) Mode , Low channel



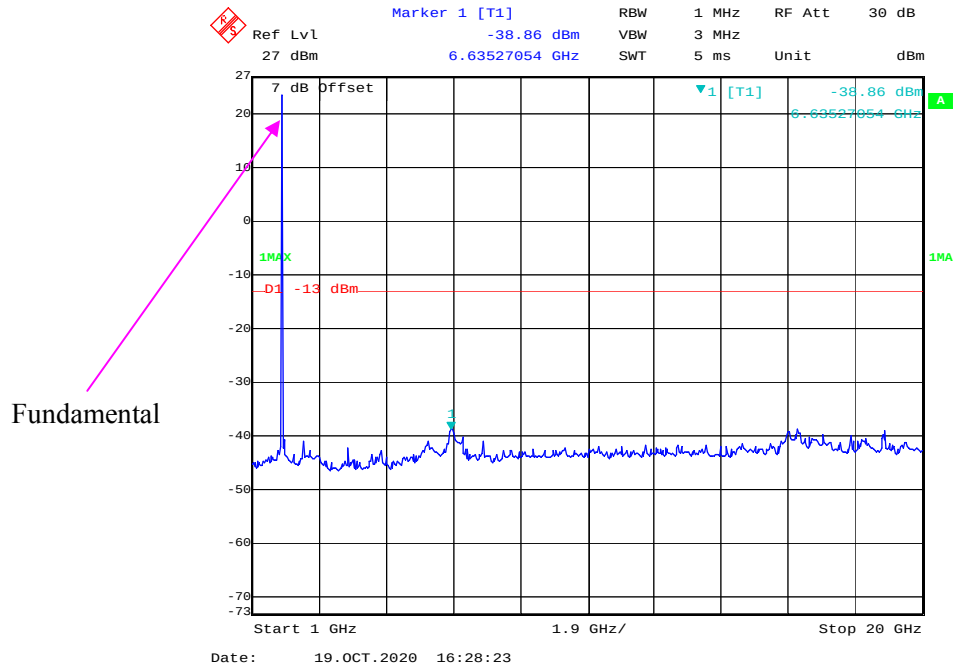
1 GHz – 20 GHz WCDMA (HSDPA) Mode , Low channel



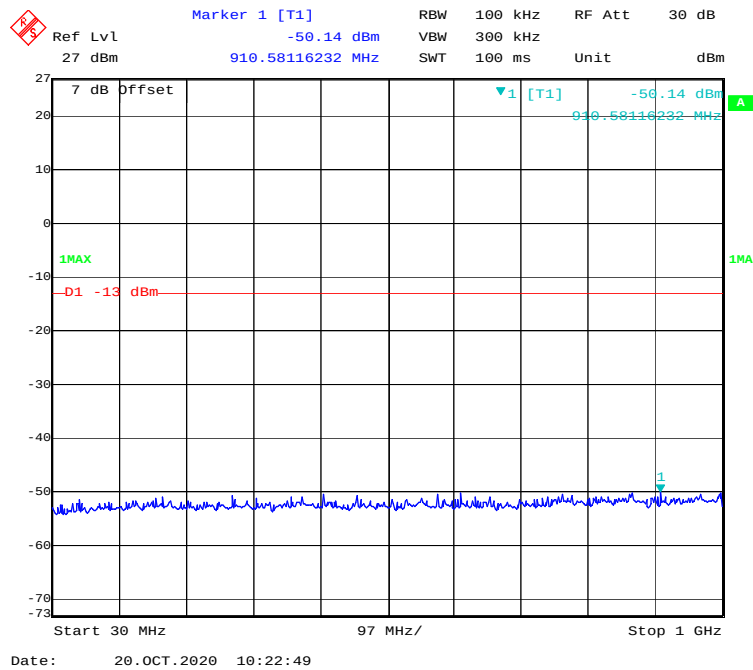
30 MHz – 1GHz WCDMA (HSUPA) Mode , Low channel



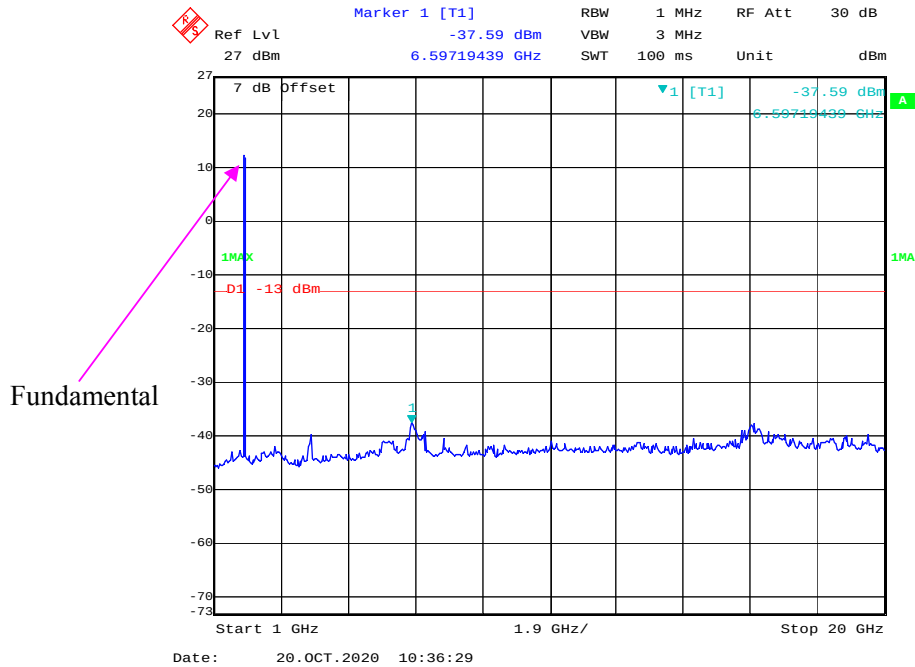
1 GHz – 20 GHz WCDMA (HSUPA) Mode , Low channel



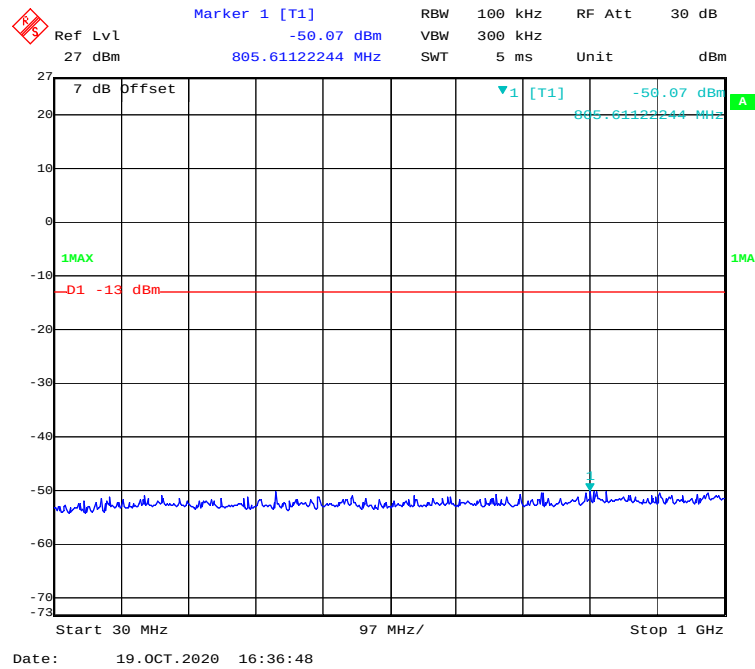
30 MHz – 1GHz WCDMA (HSPA+) Mode , Low channel



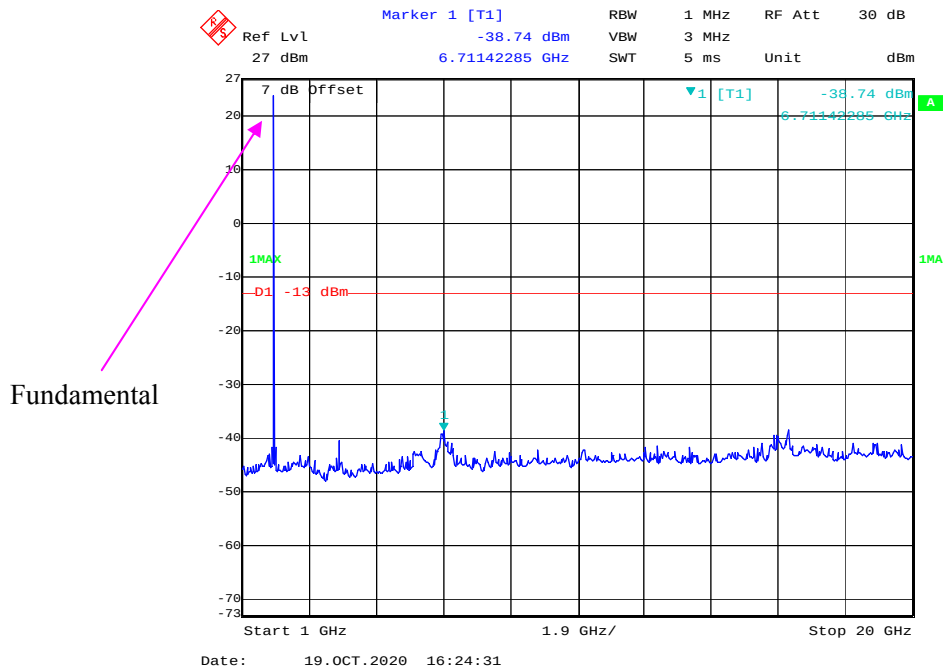
1 GHz – 20 GHz WCDMA (HSPA+) Mode , Low channel



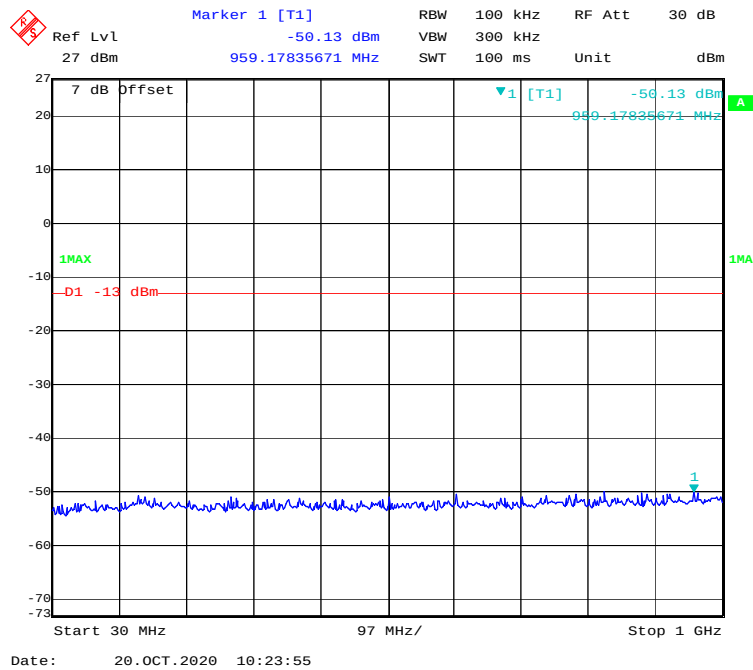
30 MHz – 1GHz WCDMA (Rel 99) Mode , Middle channel



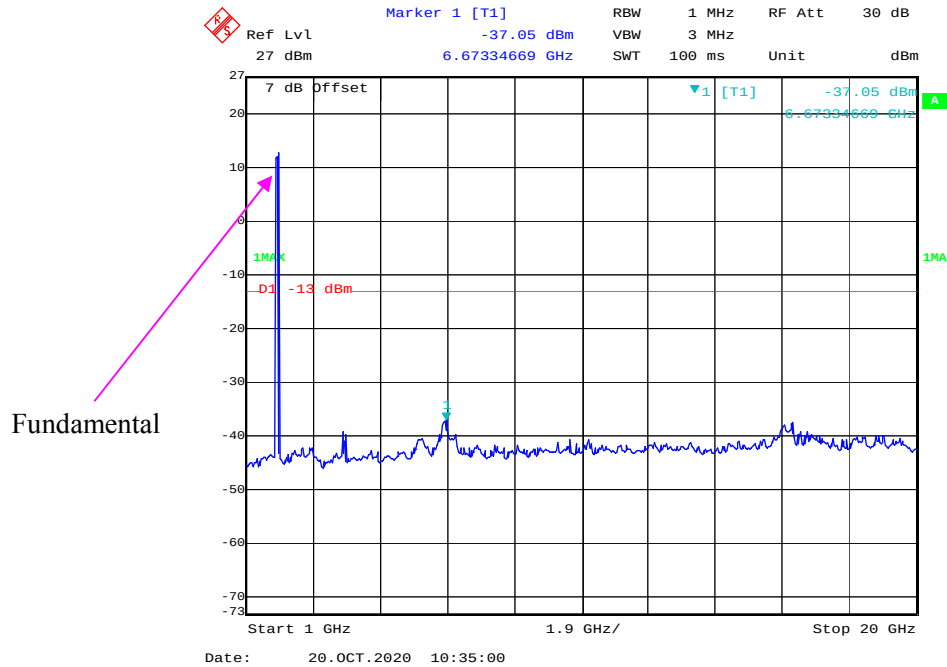
1 GHz – 20 GHz WCDMA (Rel 99) Mode , Middle channel



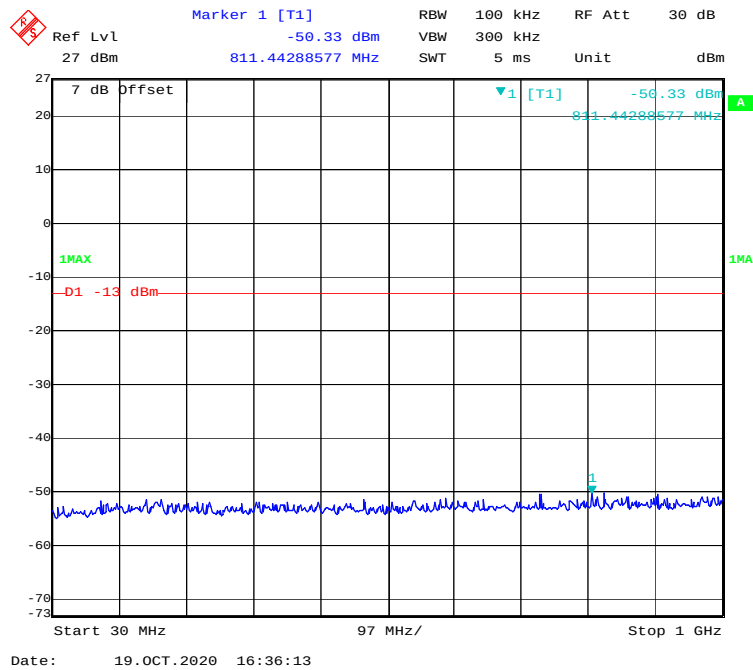
30 MHz – 1GHz WCDMA (HSDPA) Mode , Middle channel



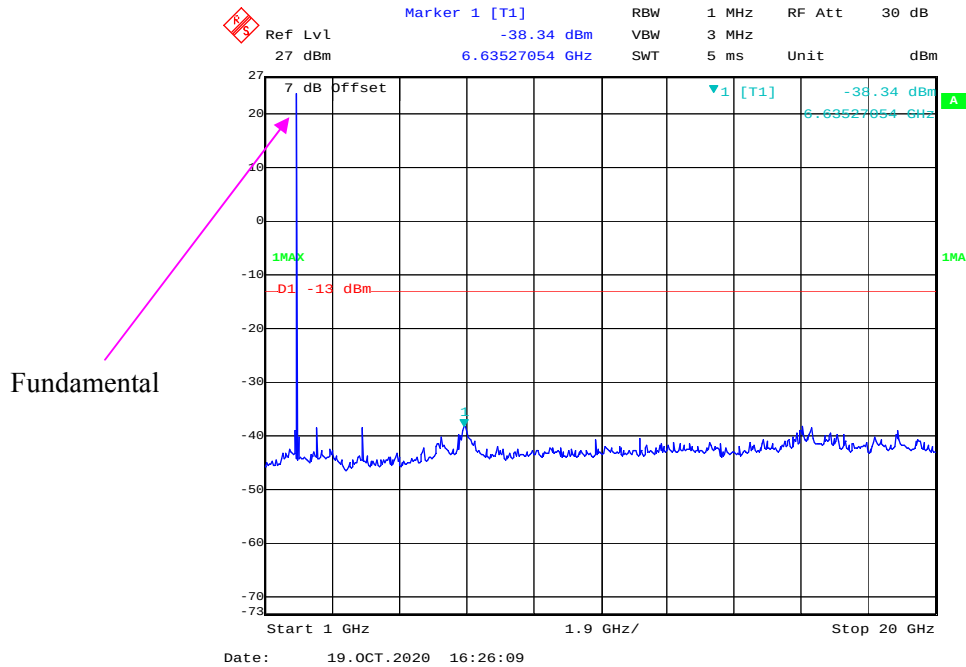
1 GHz – 20 GHz WCDMA (HSDPA) Mode , Middle channel



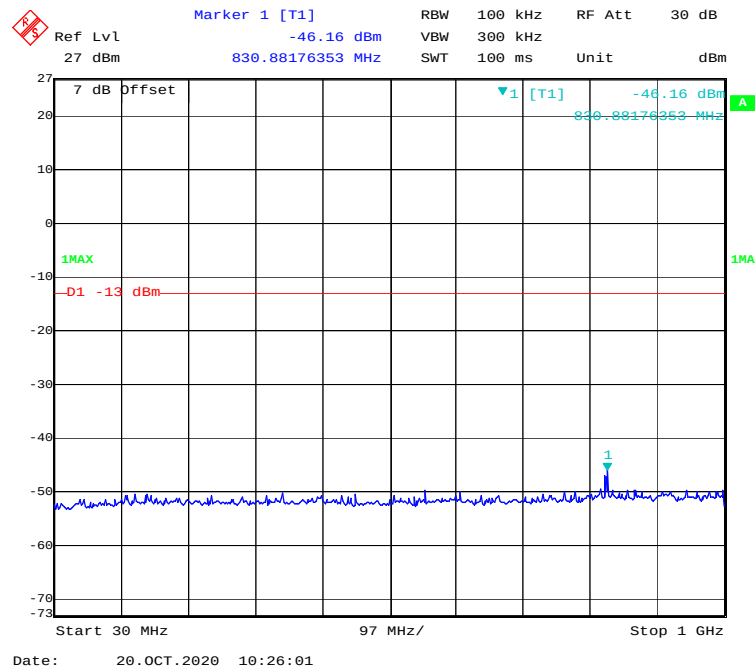
30 MHz – 1GHz WCDMA (HSUPA) Mode , Middle channel



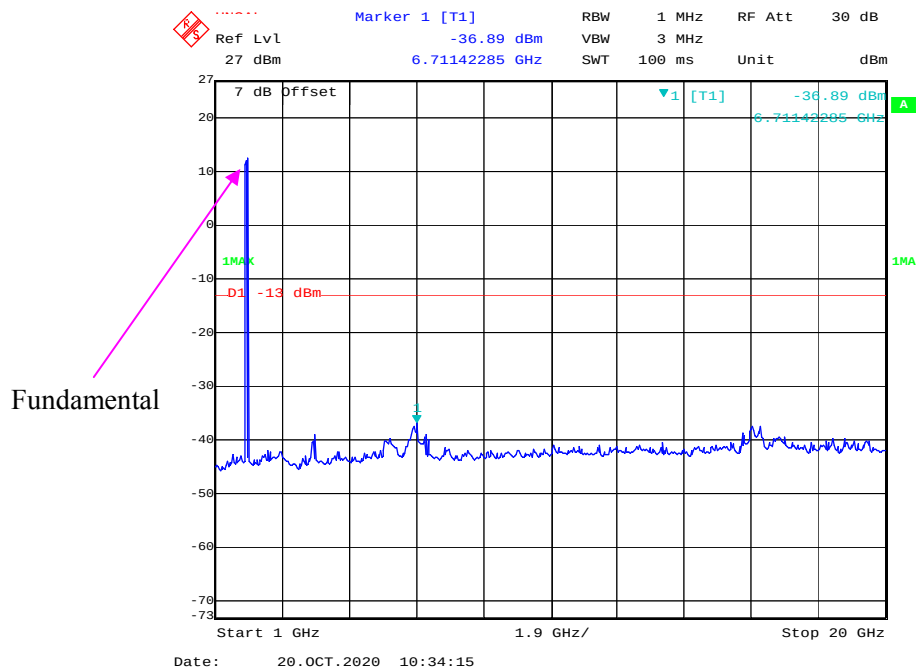
1 GHz – 20 GHz WCDMA (HSUPA) Mode , Middle channel



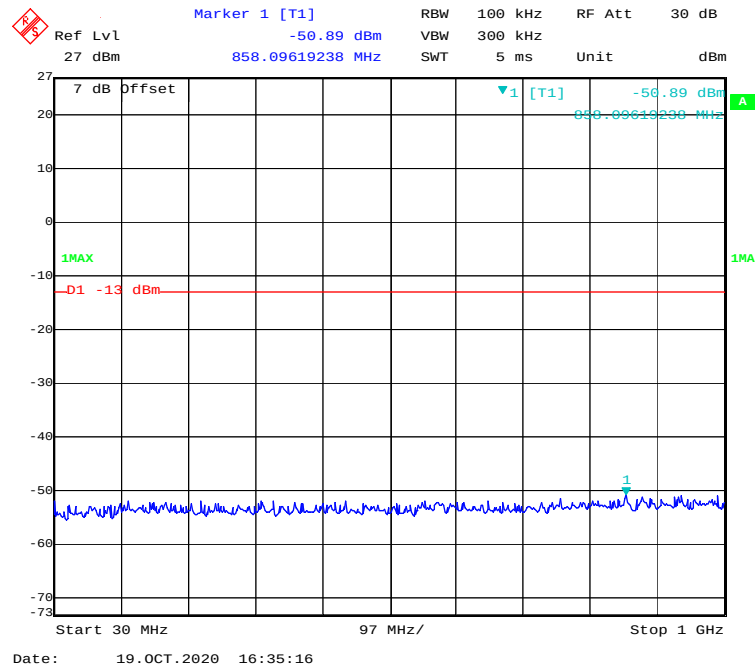
30 MHz – 1GHz WCDMA (HSPA+) Mode , Middle channel



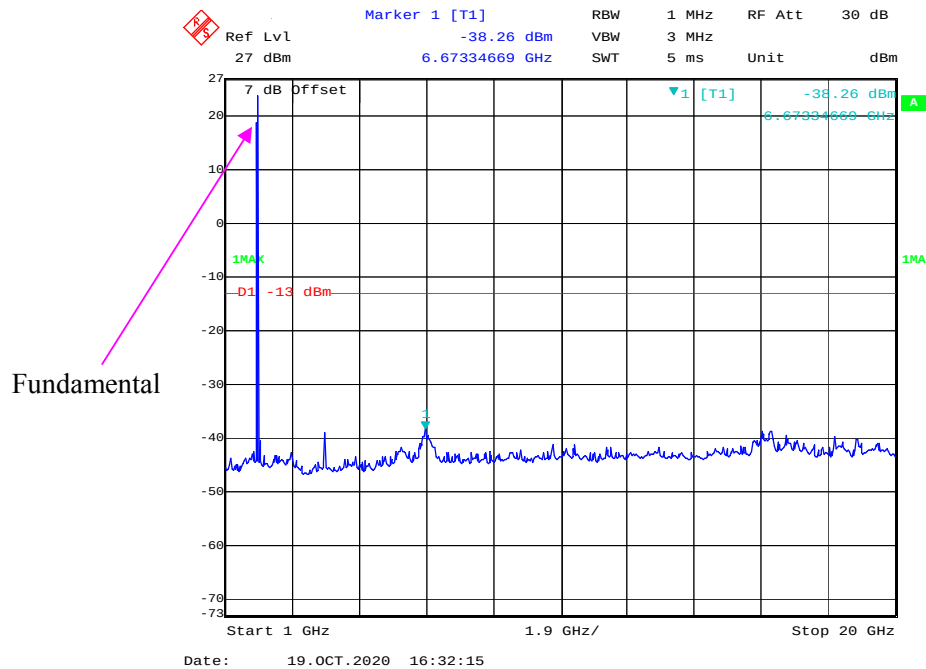
1 GHz – 20 GHz WCDMA (HSPA+) Mode , Middle channel



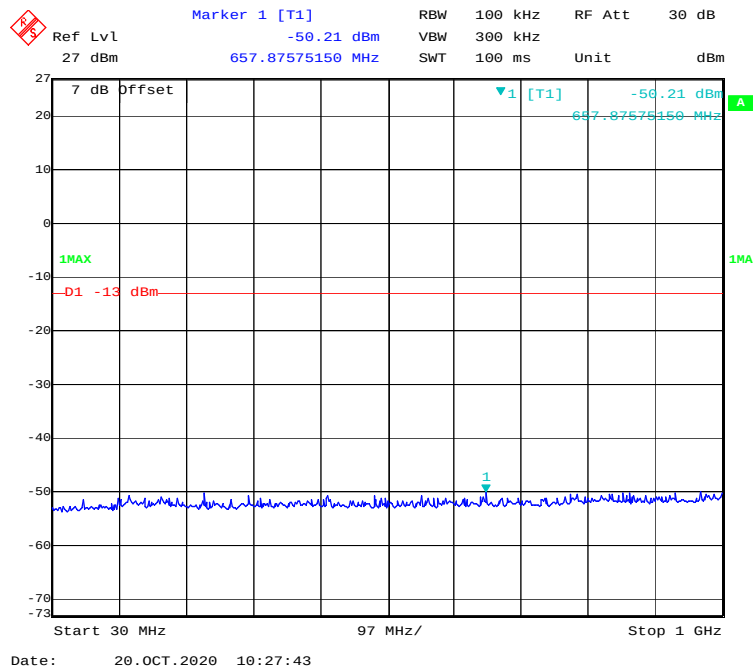
30 MHz – 1GHz WCDMA (Rel 99) Mode , High channel



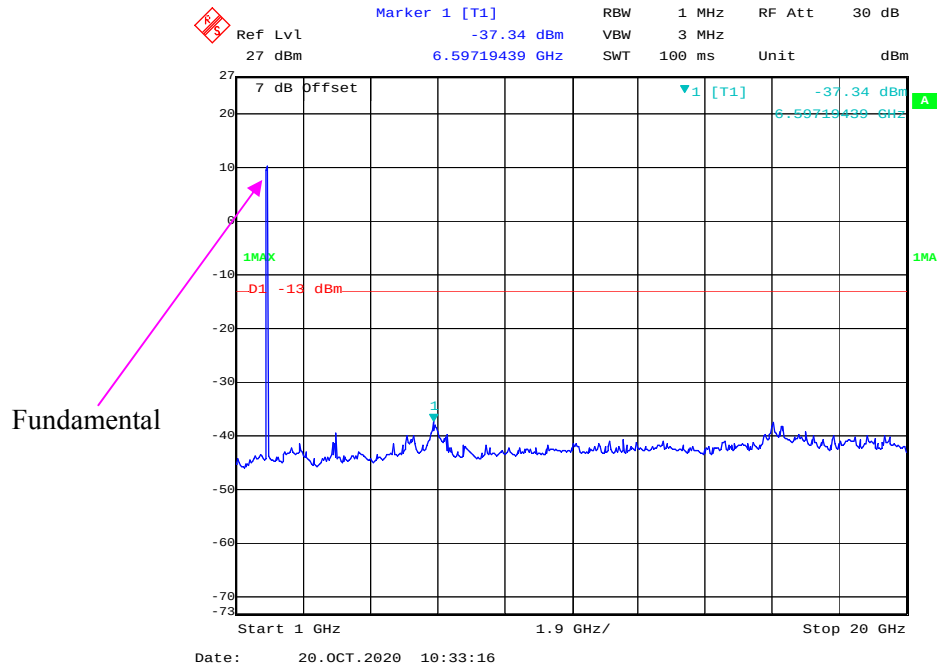
1 GHz – 20 GHz WCDMA (Rel 99) Mode , High channel

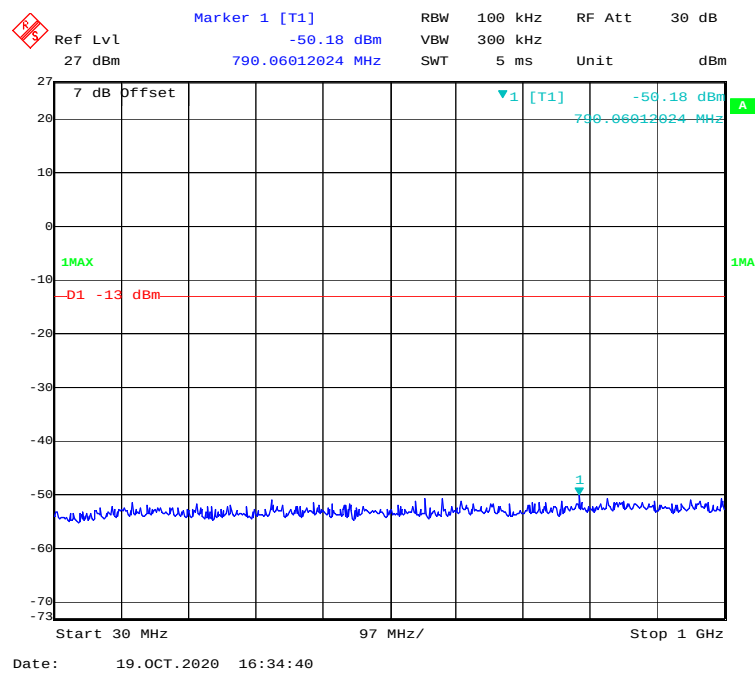
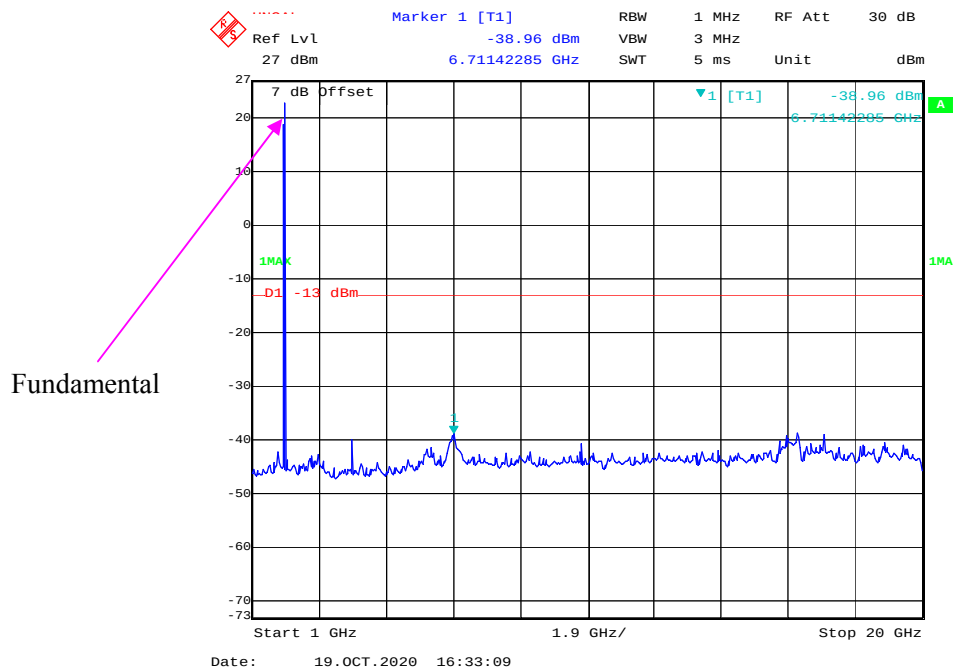


30 MHz – 1GHz WCDMA (HSDPA) Mode , High channel

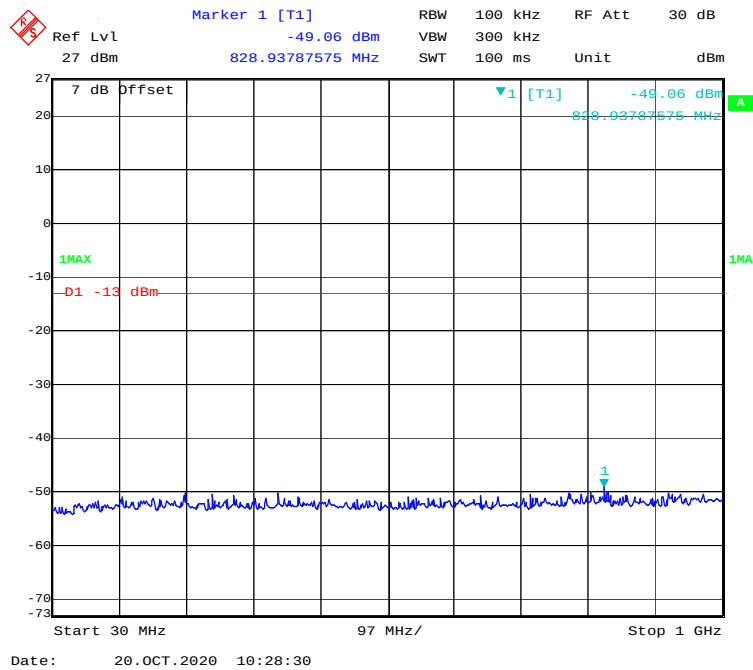


1 GHz – 20 GHz WCDMA (HSDPA) Mode , High channel

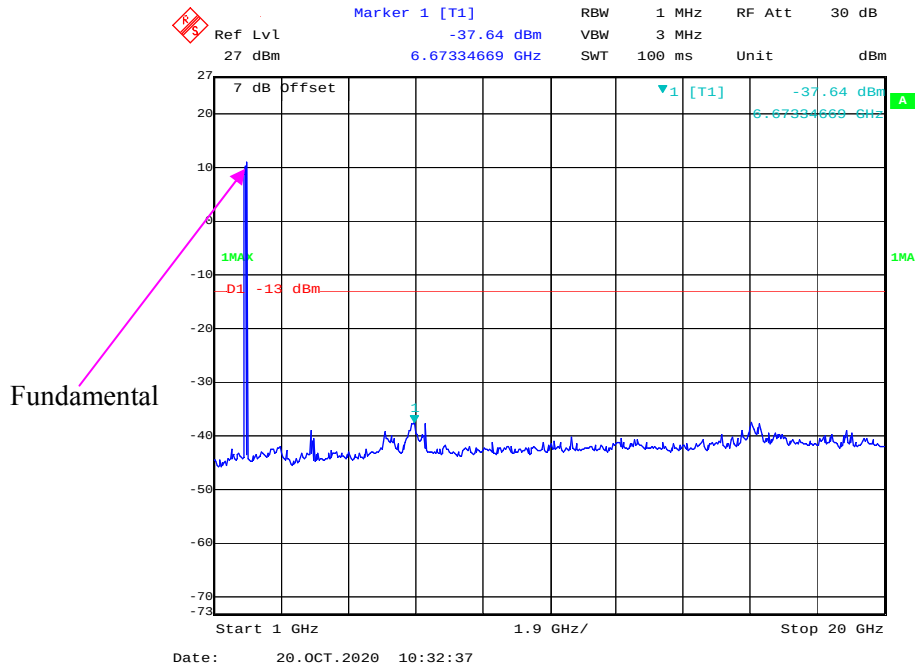


30 MHz – 1GHz WCDMA (HSUPA) Mode , High channel**1 GHz – 20 GHz WCDMA (HSUPA) Mode , High channel**

30 MHz – 1GHz WCDMA (HSPA+) Mode , High channel

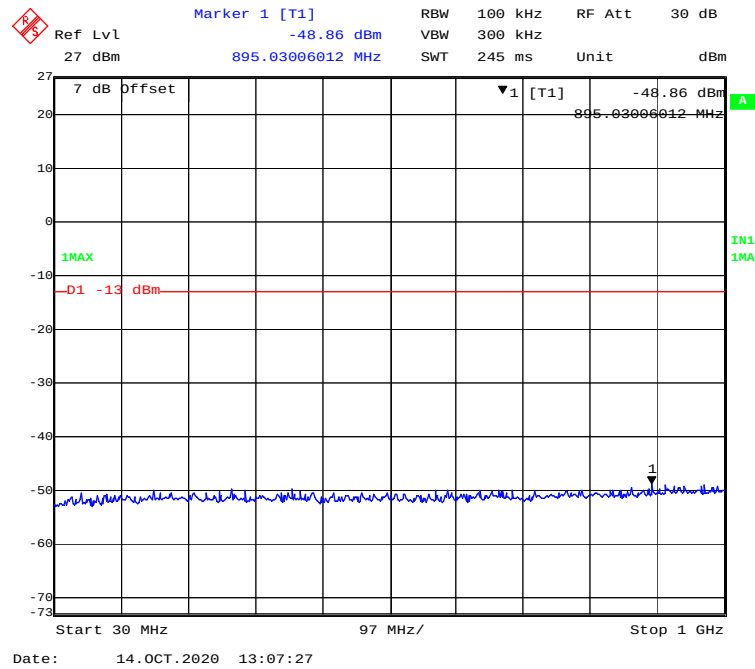


1 GHz – 20 GHz WCDMA (HSPA+) Mode , High channel

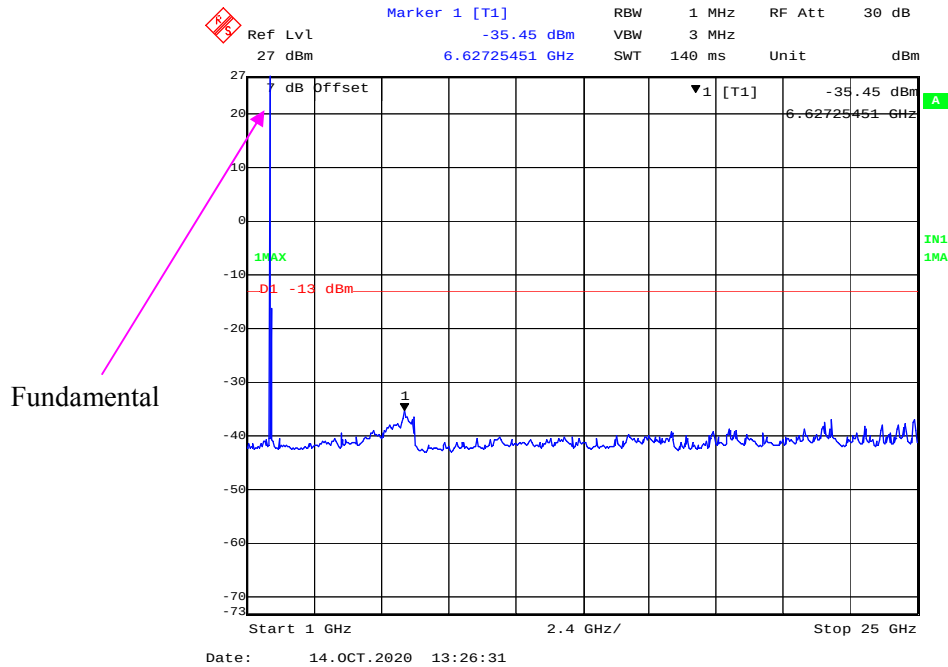


LTE Band 2:

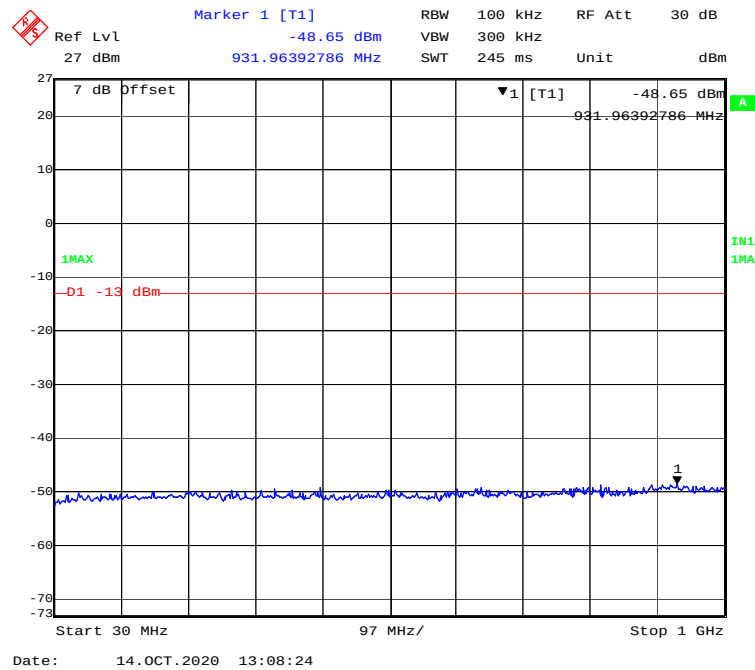
30 MHz - 1 GHz (1.4 MHz, QPSK, Low Channel)



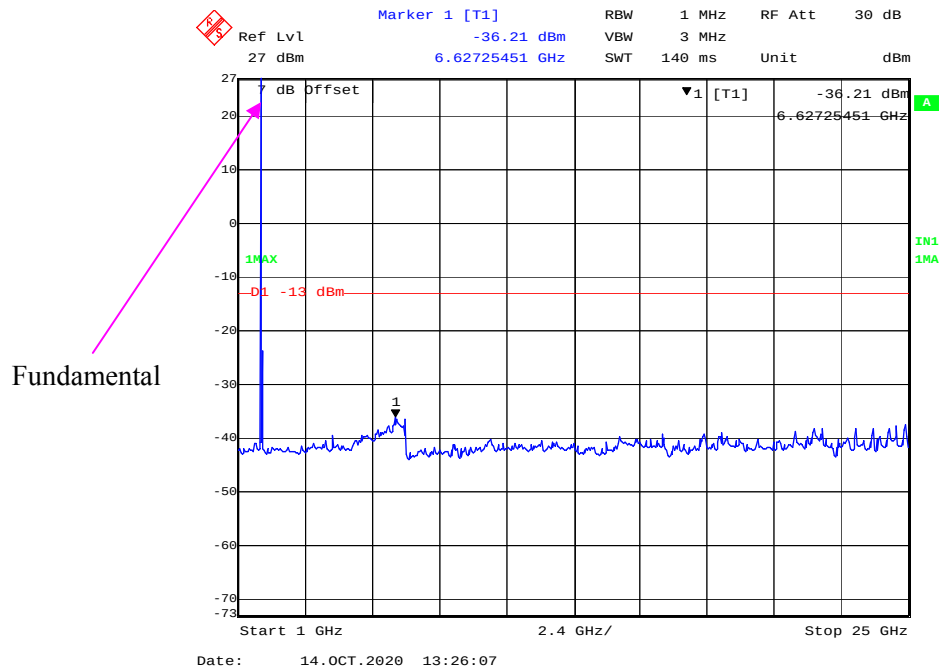
1 GHz – 20 GHz (1.4 MHz, QPSK, Low Channel)



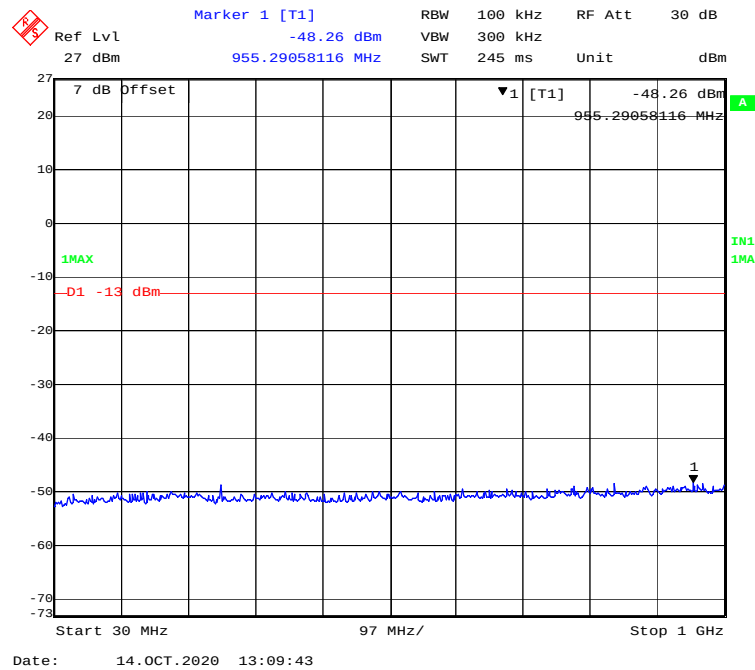
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Low Channel)



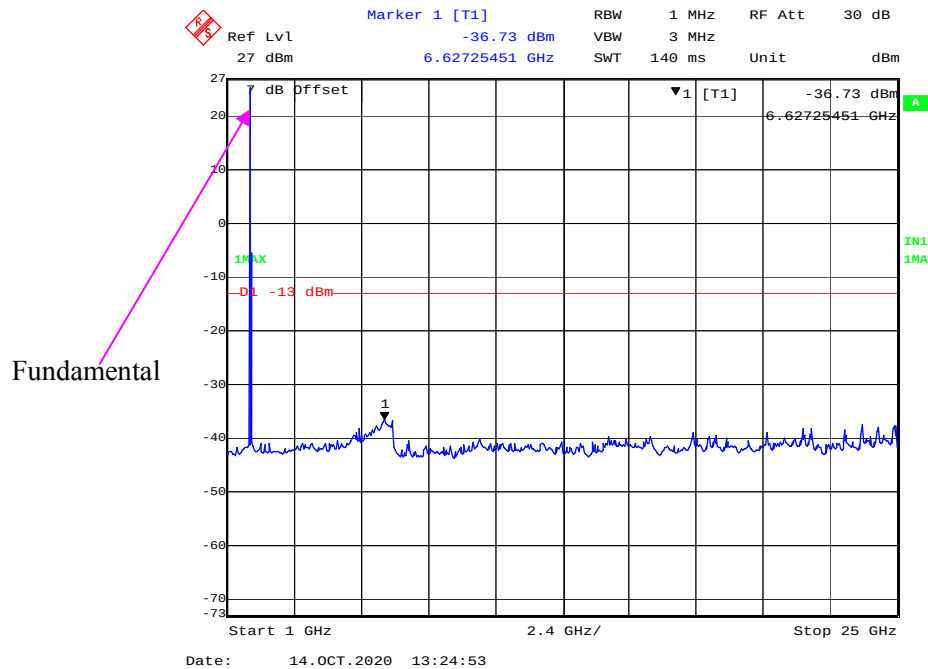
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Low Channel)



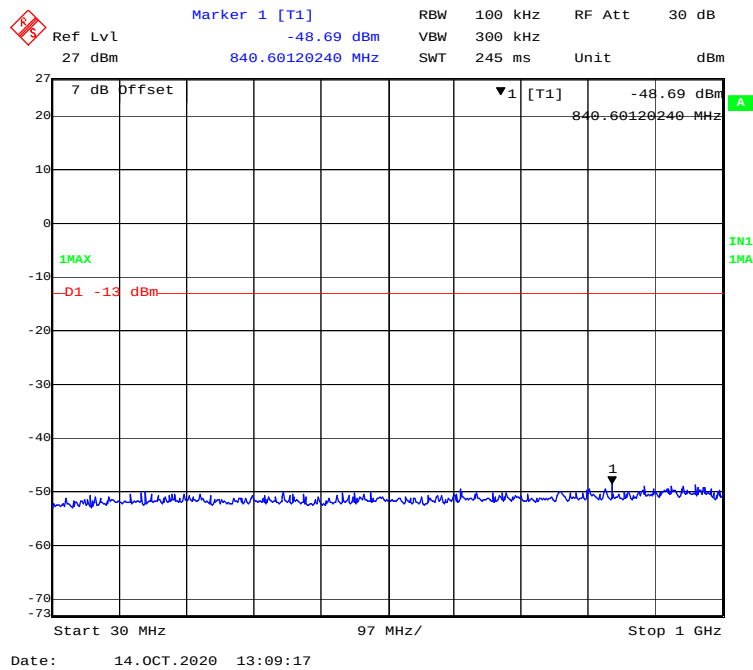
30 MHz - 1 GHz (3 MHz, QPSK, Low Channel)



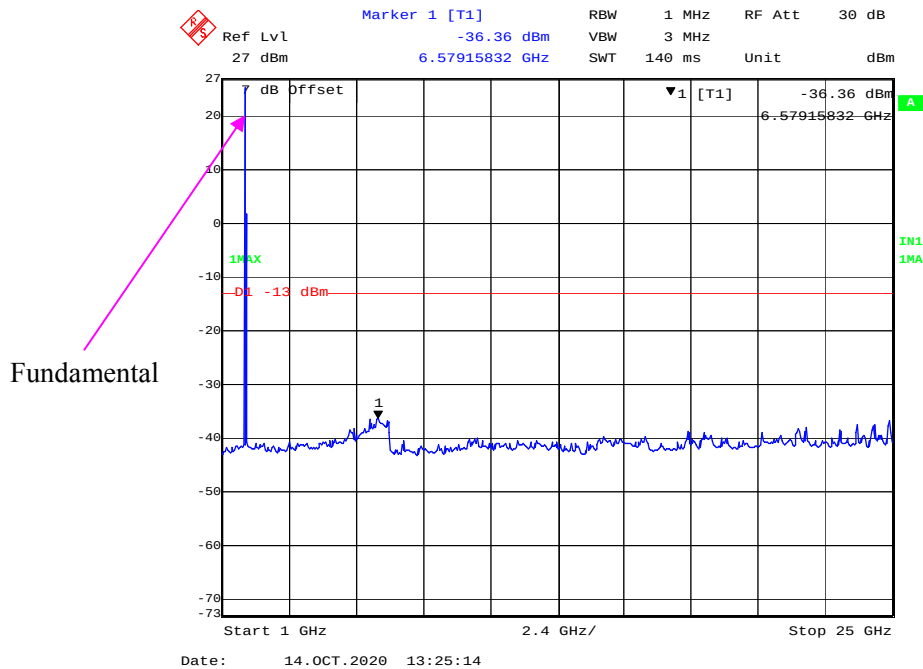
1 GHz - 20 GHz (3 MHz, QPSK, Low Channel)



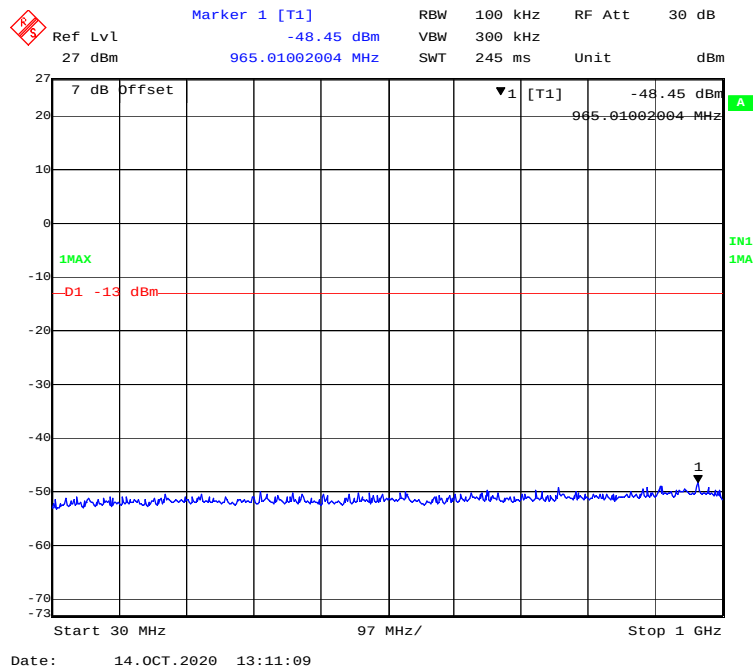
30 MHz - 1 GHz (3 MHz, 16-QAM, Low Channel)



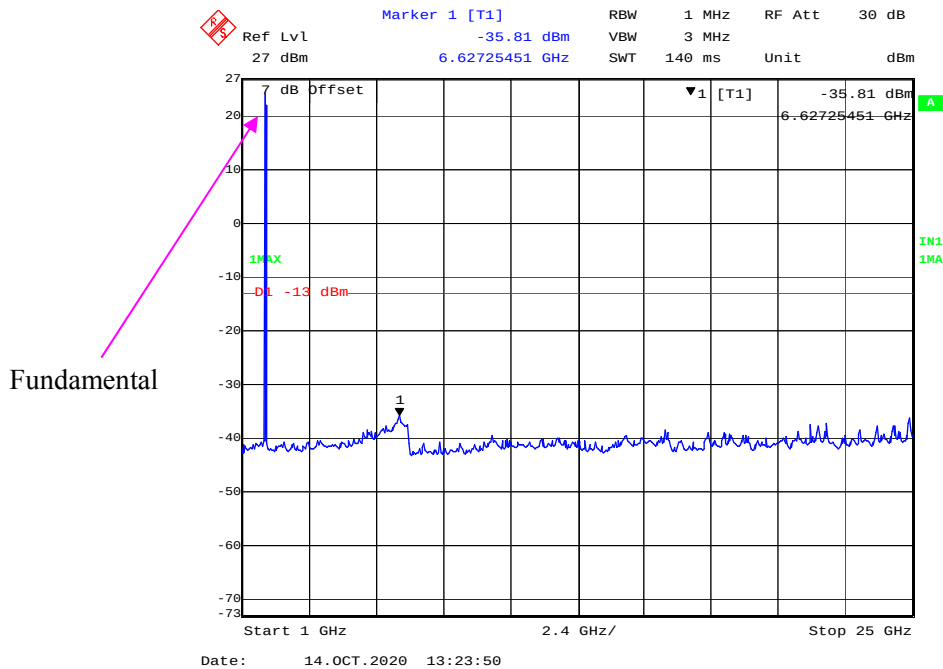
1 GHz – 20 GHz (3 MHz, 16-QAM, Low Channel)



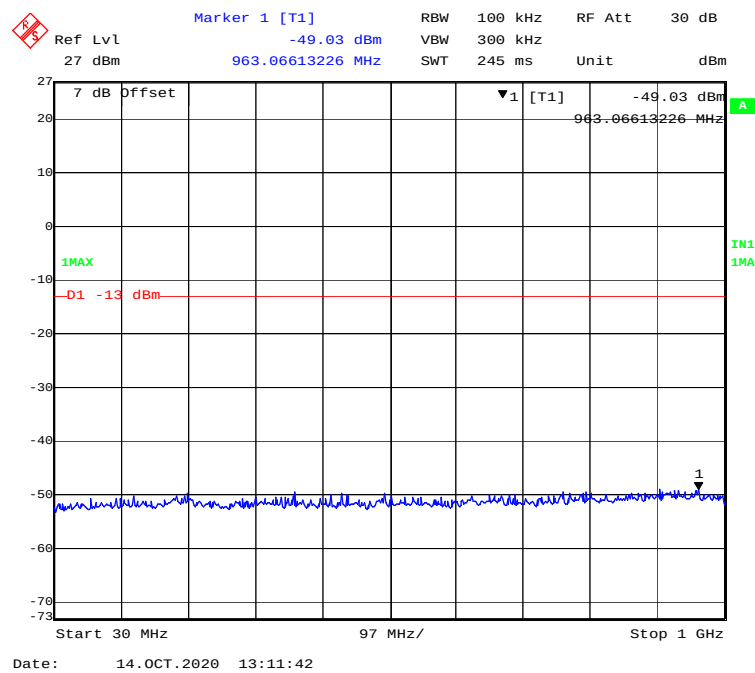
30 MHz - 1 GHz (5 MHz, QPSK, Low Channel)



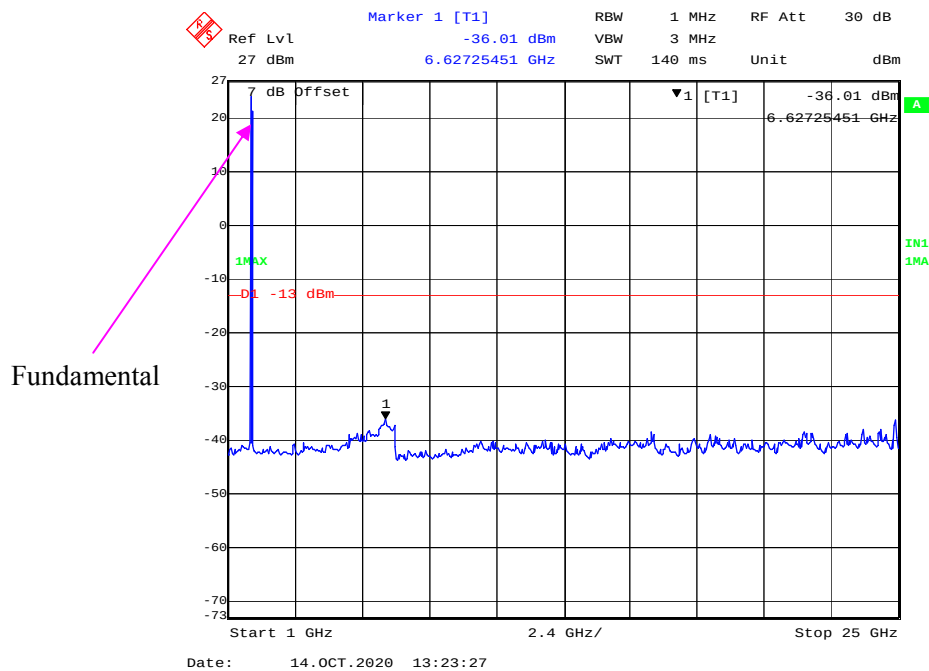
1 GHz – 20 GHz (5 MHz, QPSK, Low Channel)



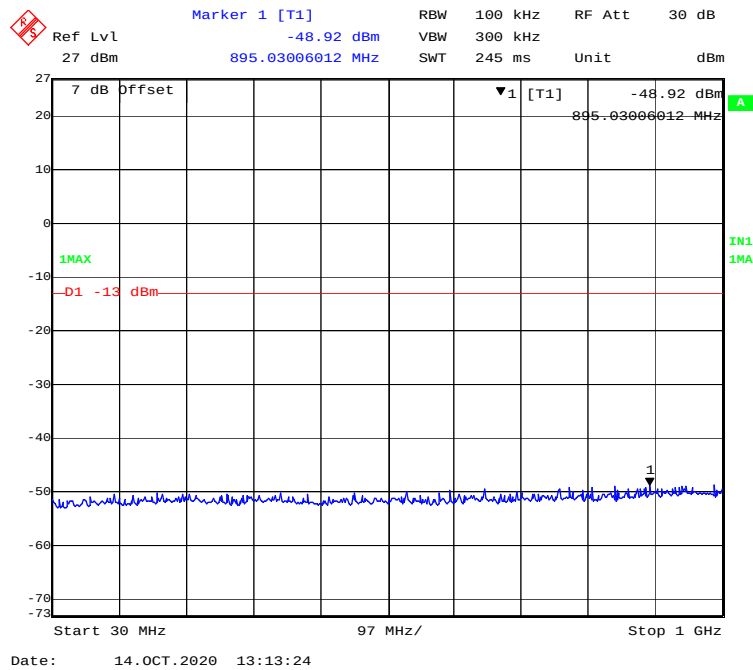
30 MHz - 1 GHz (5 MHz, 16-QAM, Low Channel)



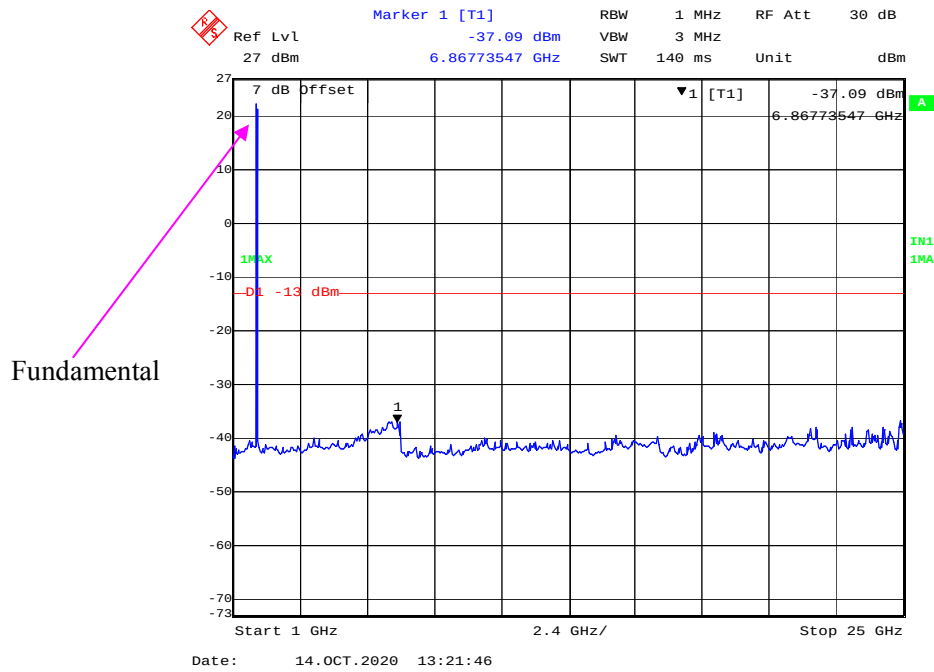
1 GHz – 20 GHz (5 MHz, 16-QAM, Low Channel)



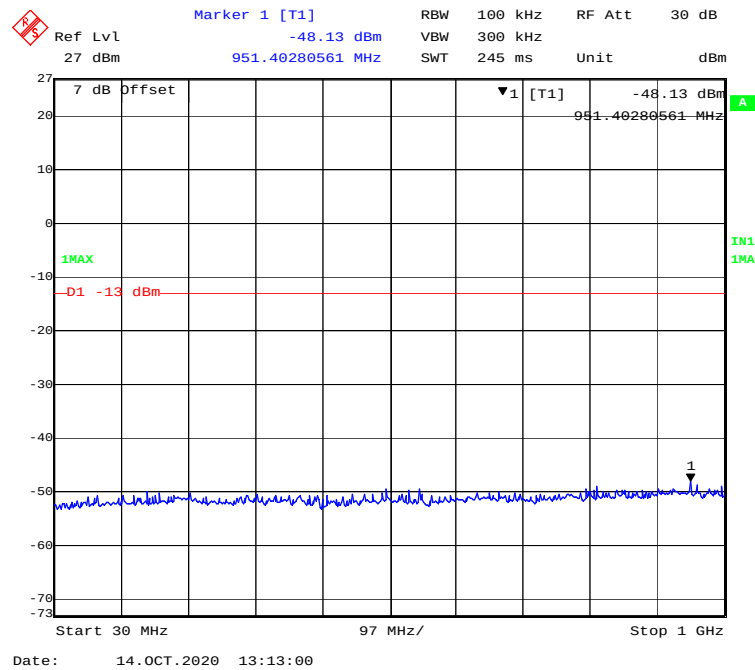
30 MHz - 1 GHz (10 MHz, QPSK, Low Channel)



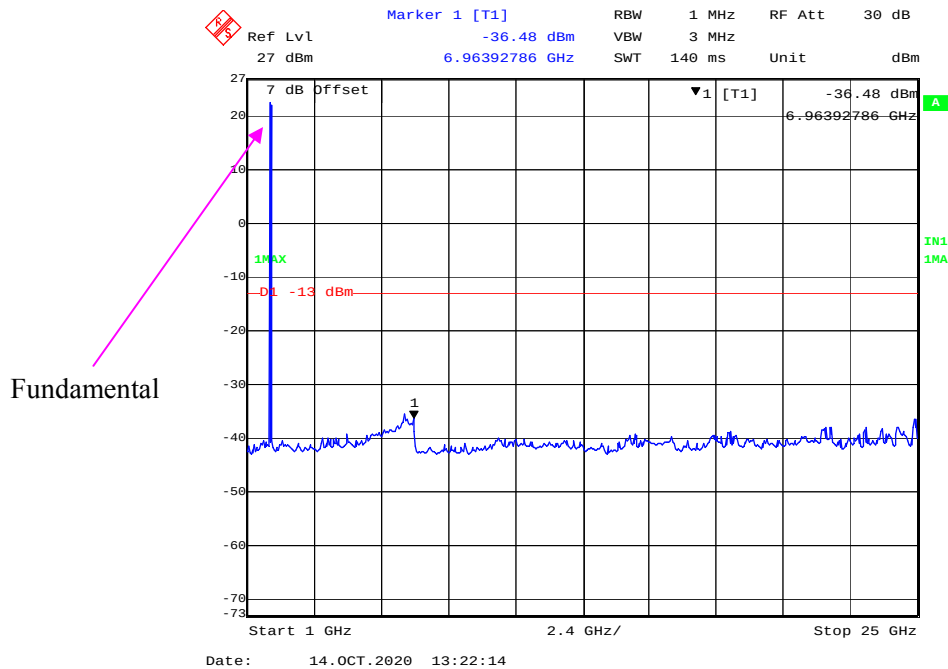
1 GHz – 20 GHz (10 MHz, QPSK, Low Channel)



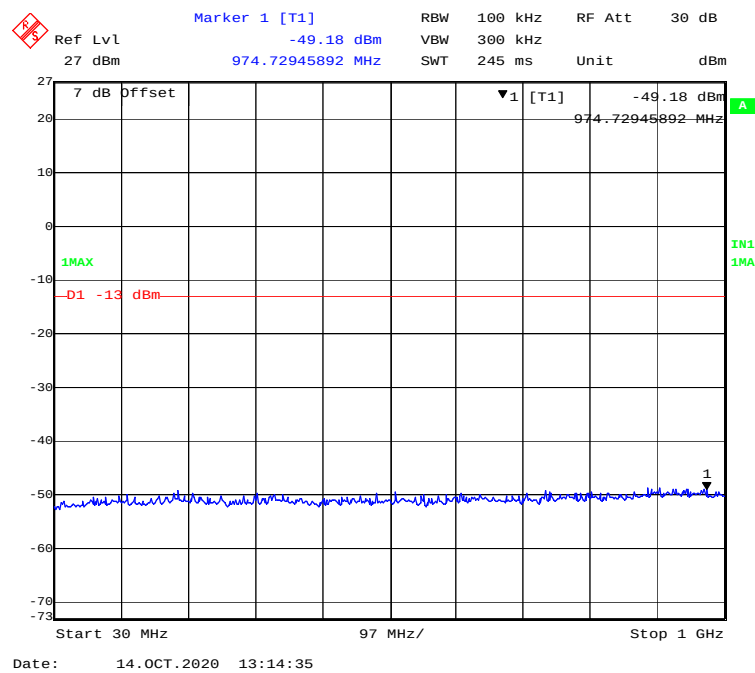
30 MHz - 1 GHz (10 MHz, 16-QAM, Low Channel)



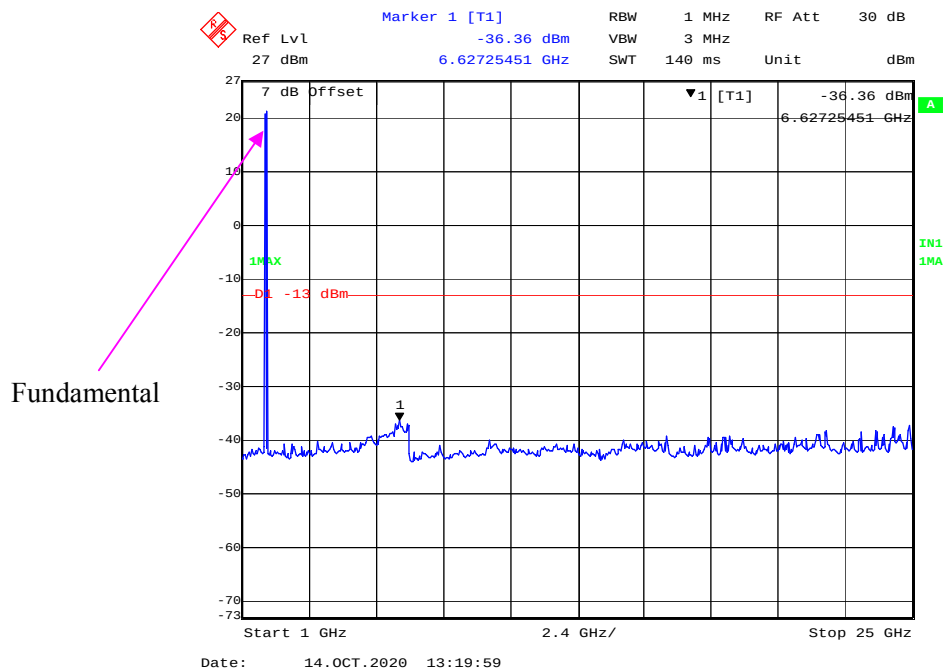
1 GHz – 20 GHz (10 MHz, 16-QAM, Low Channel)



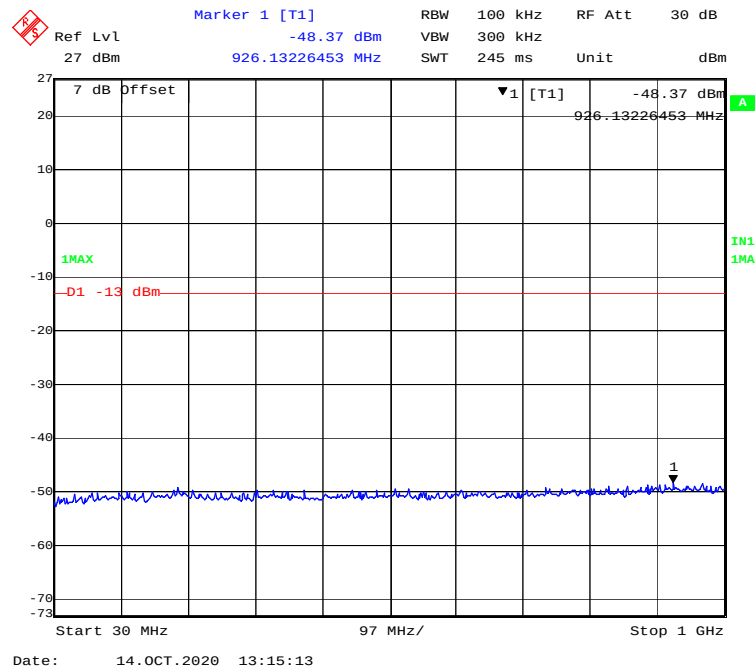
30 MHz - 1 GHz (15 MHz, QPSK, Low Channel)



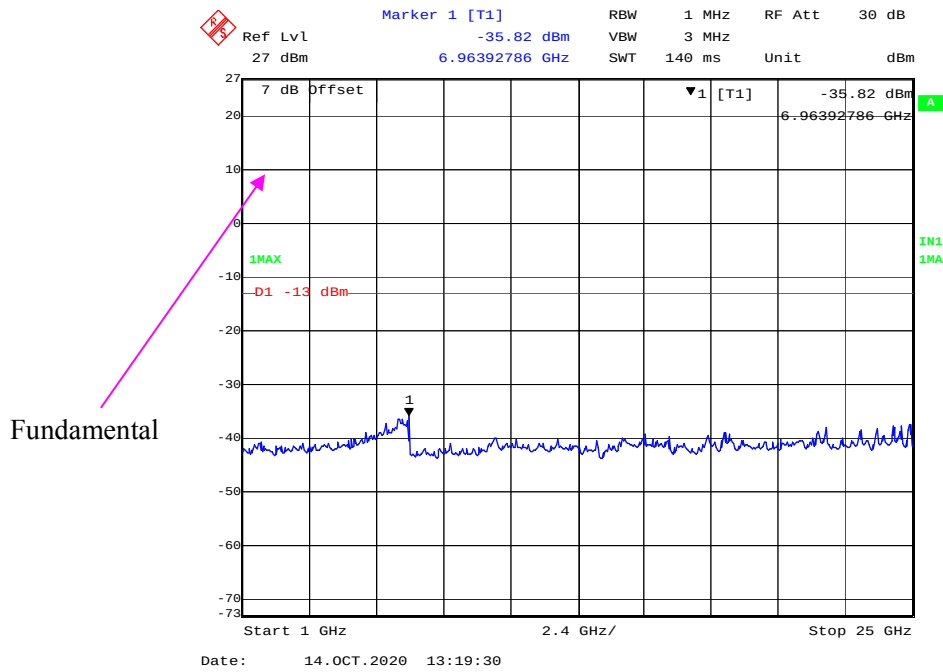
1 GHz – 20 GHz (15 MHz, QPSK, Low Channel)



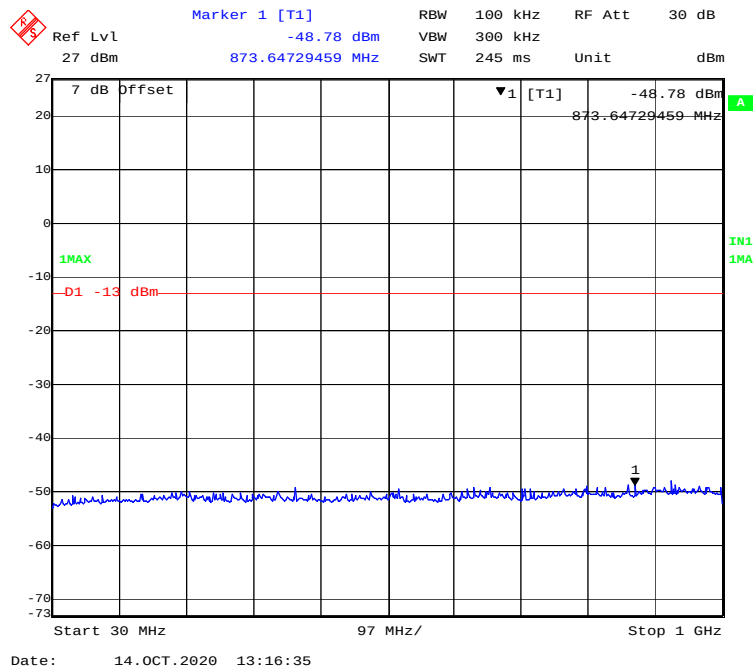
30 MHz - 1 GHz (15 MHz, 16-QAM, Low Channel)



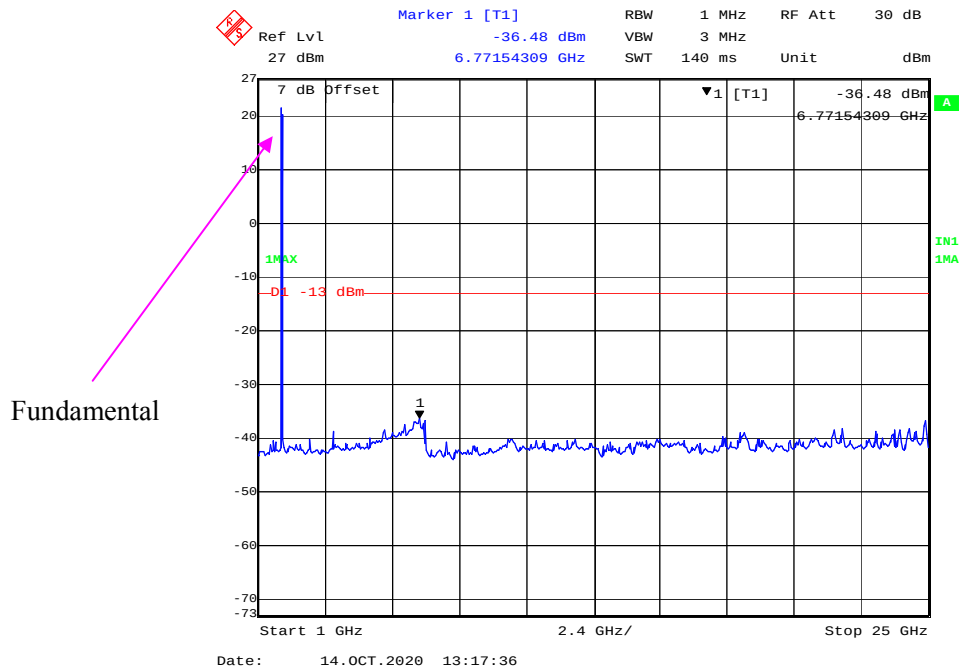
1 GHz – 20 GHz (15 MHz, 16-QAM, Low Channel)



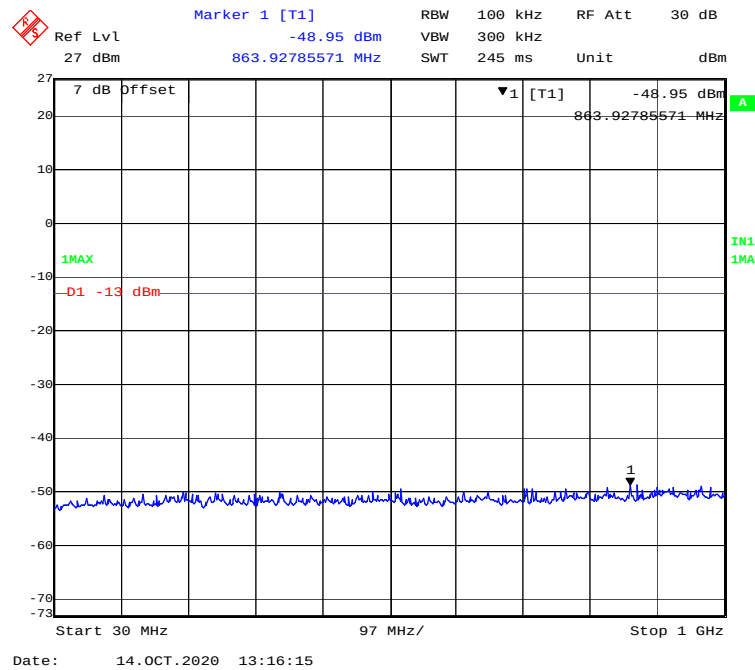
30 MHz - 1 GHz (20 MHz, QPSK, Low Channel)



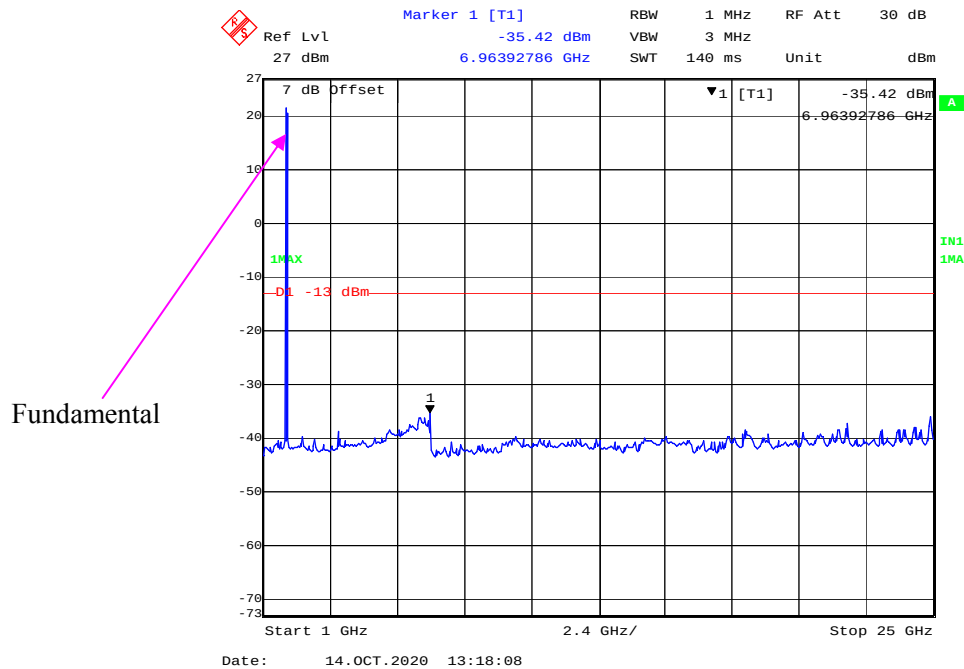
1 GHz – 20 GHz (20 MHz, QPSK, Low Channel)

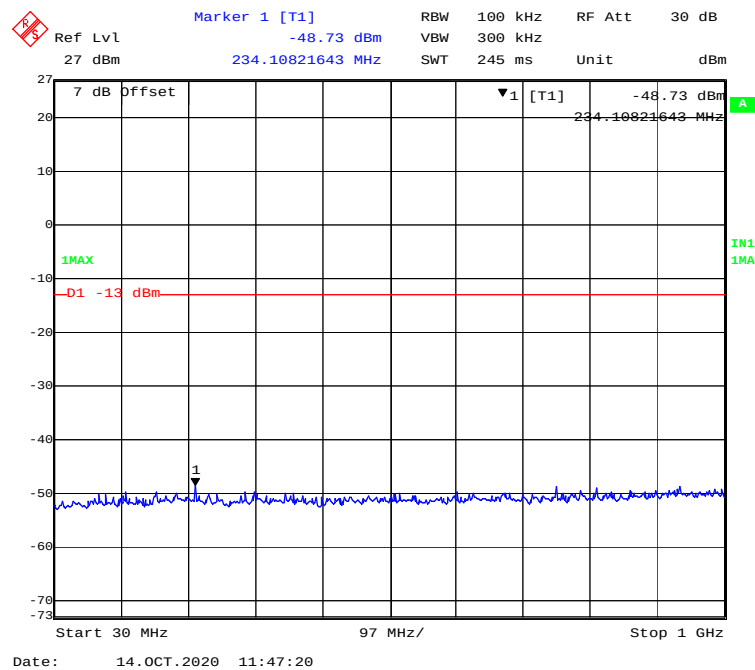
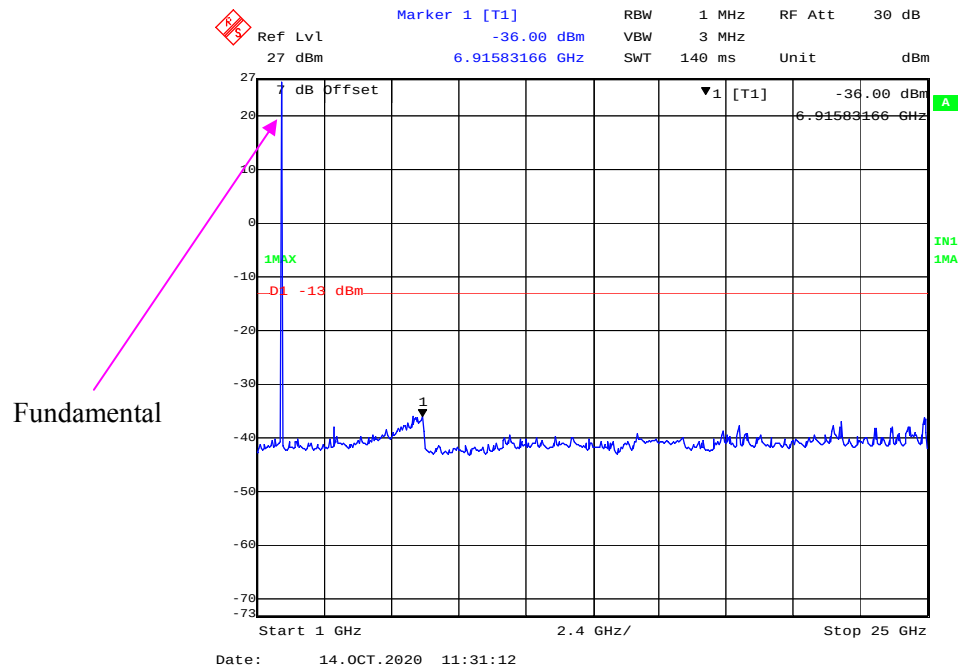


30 MHz - 1 GHz (20 MHz, 16-QAM, Low Channel)

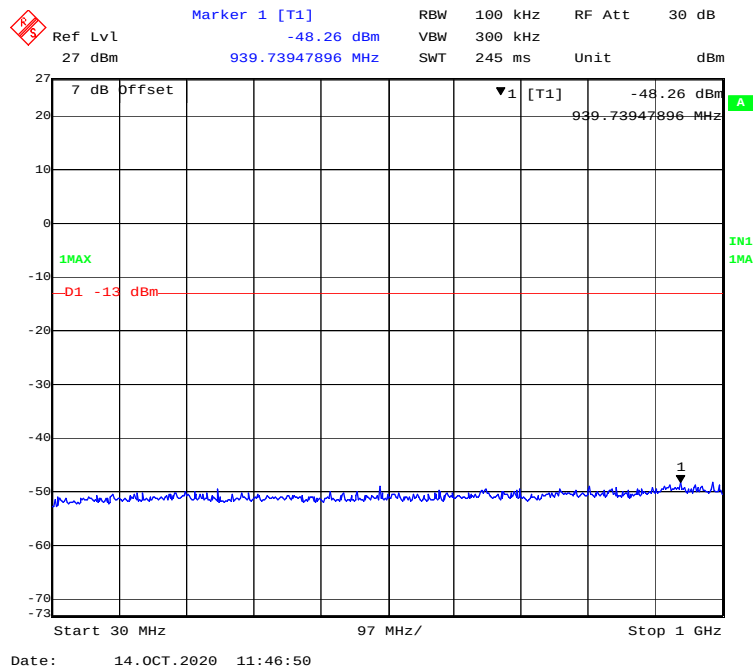


1 GHz – 20 GHz (20 MHz, 16-QAM, Low Channel)

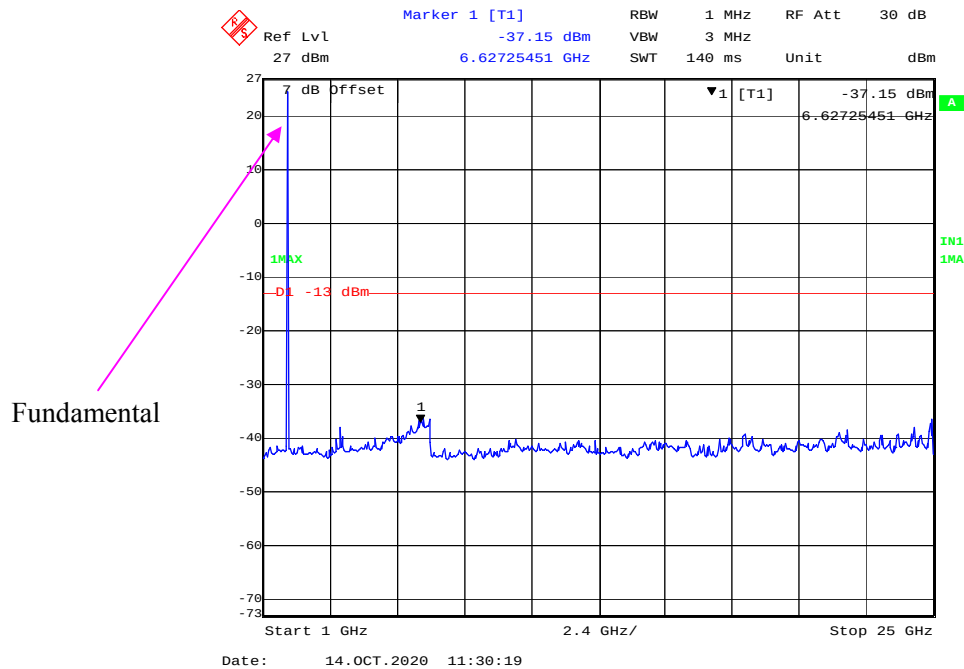


30 MHz - 1 GHz (1.4 MHz, QPSK, Middle Channel)**1 GHz – 20 GHz (1.4 MHz, QPSK, Middle Channel)**

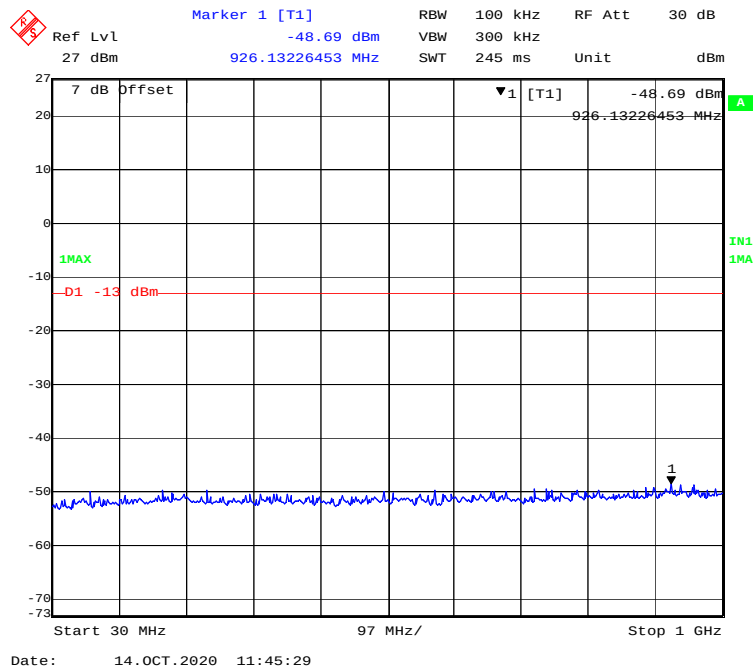
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Middle Channel)



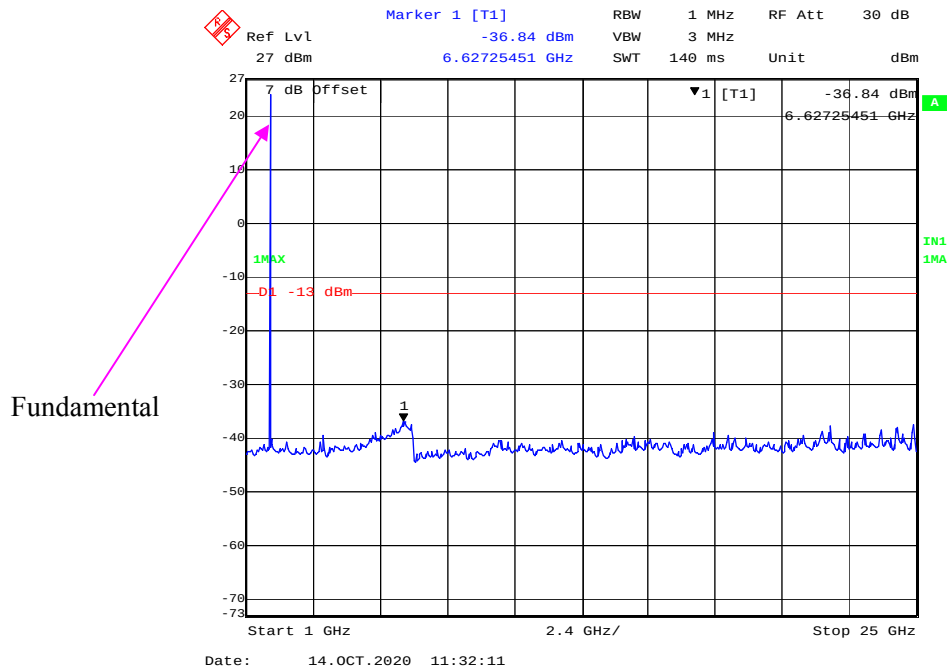
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Middle Channel)



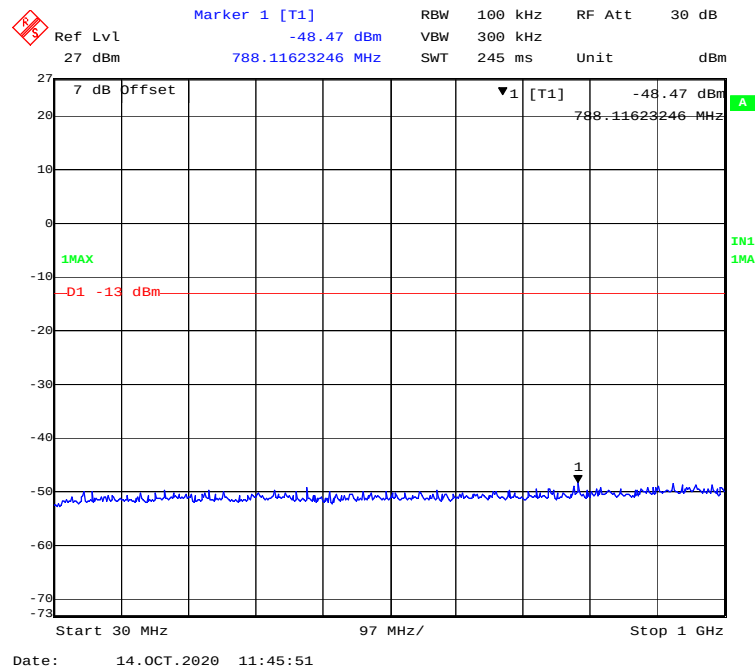
30 MHz - 1 GHz (3 MHz, QPSK, Middle Channel)



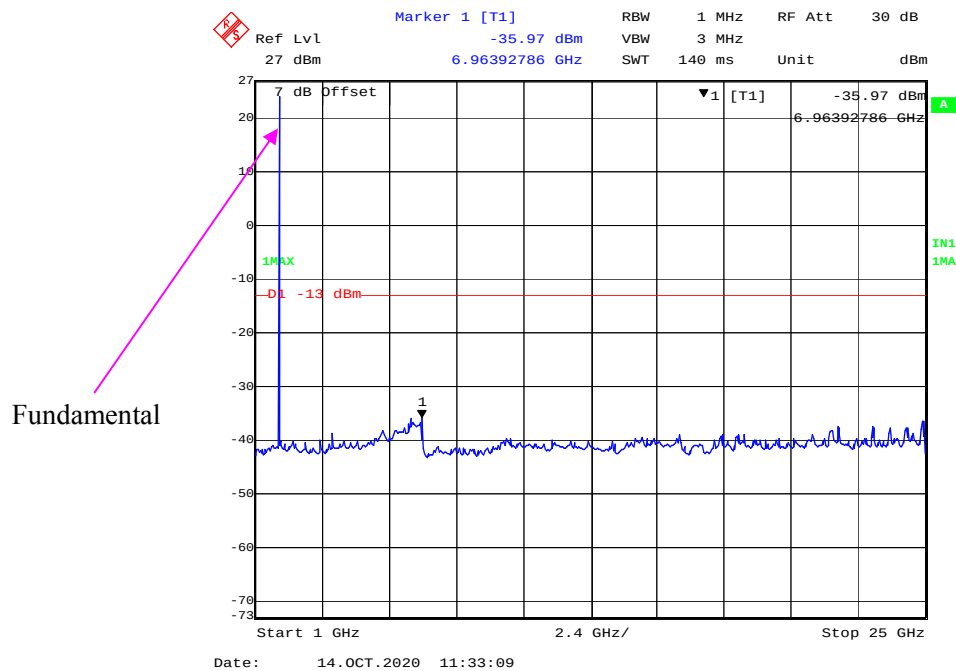
1 GHz – 20 GHz (3 MHz, QPSK, Middle Channel)



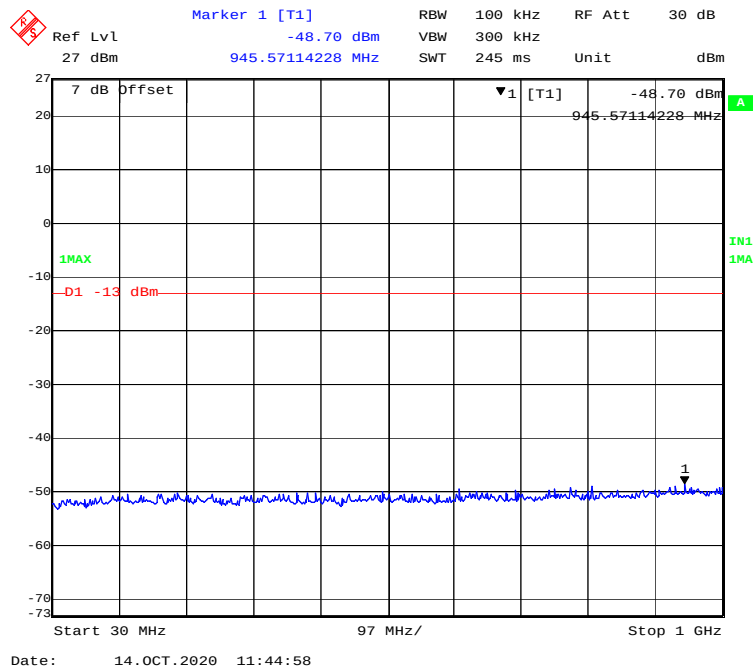
30 MHz - 1 GHz (3 MHz, 16-QAM, Middle Channel)



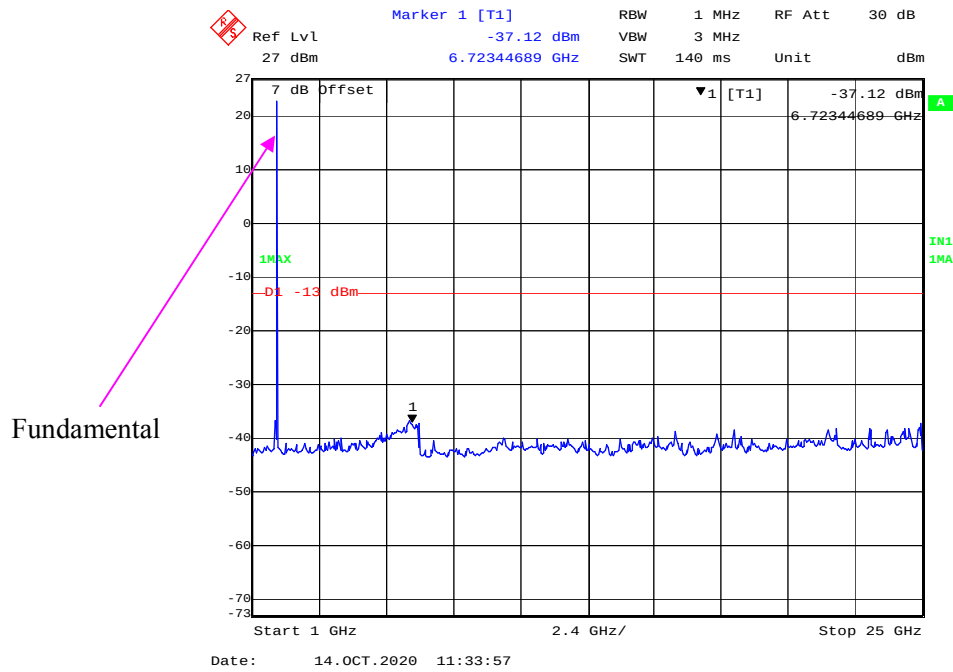
1 GHz – 20 GHz (3 MHz, 16-QAM, Middle Channel)



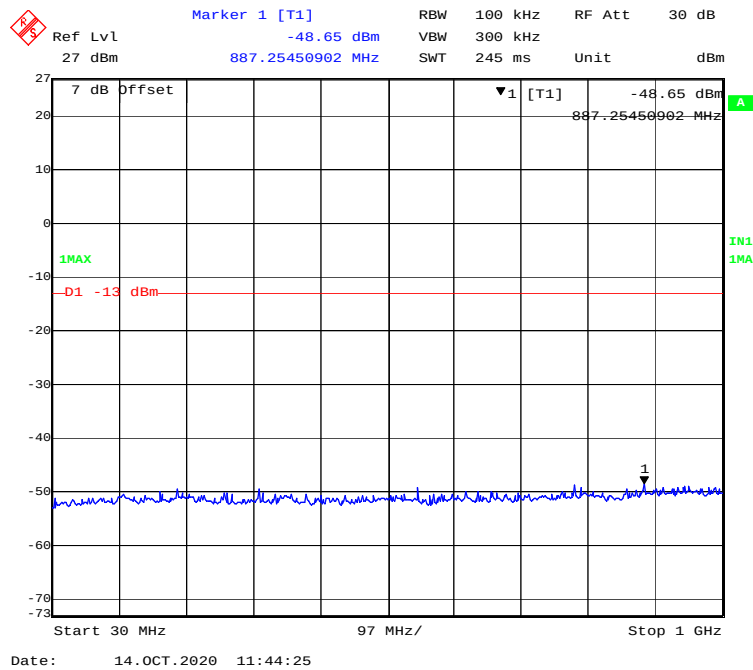
30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)



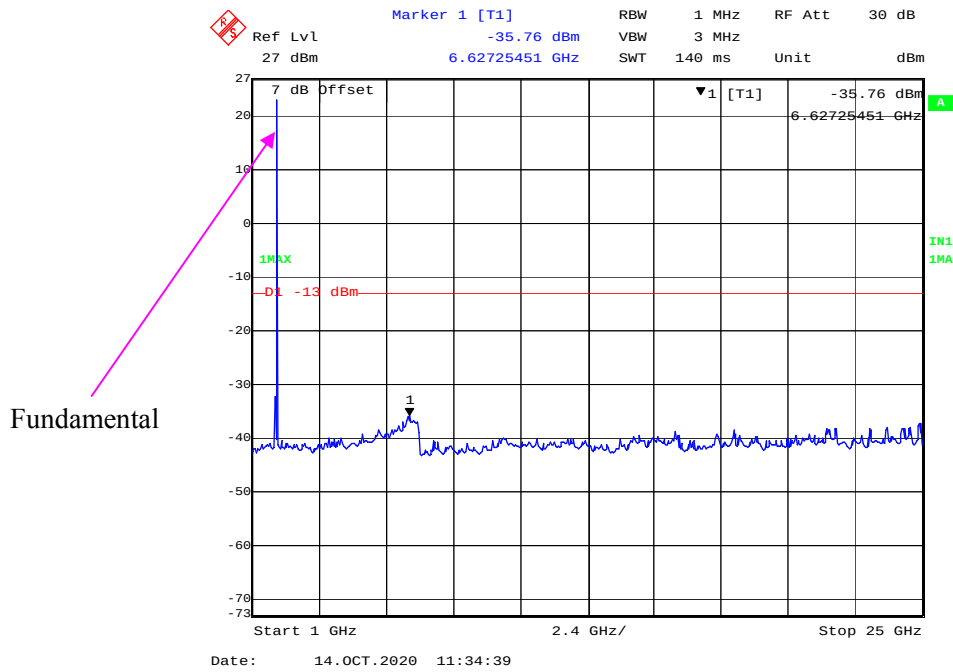
1 GHz – 20 GHz (5 MHz, QPSK, Middle Channel)



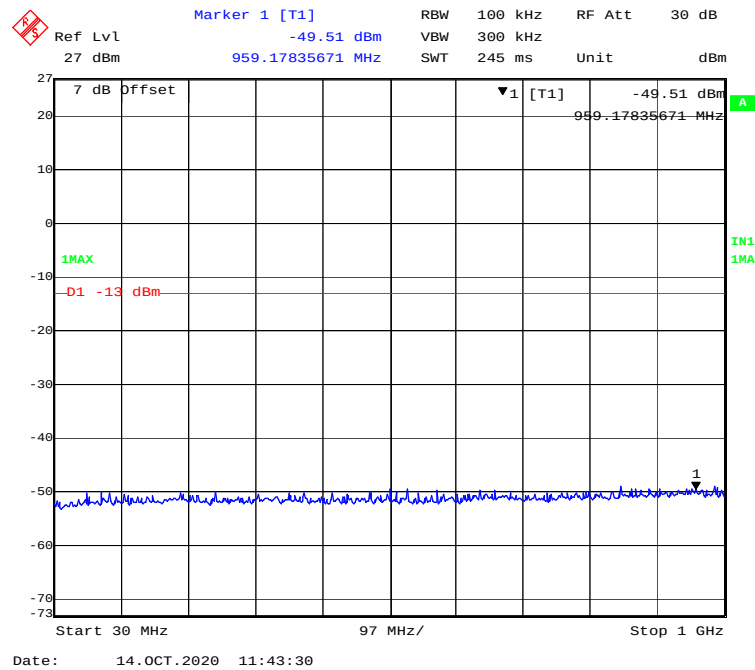
30 MHz - 1 GHz (5 MHz, 16-QAM, Middle Channel)



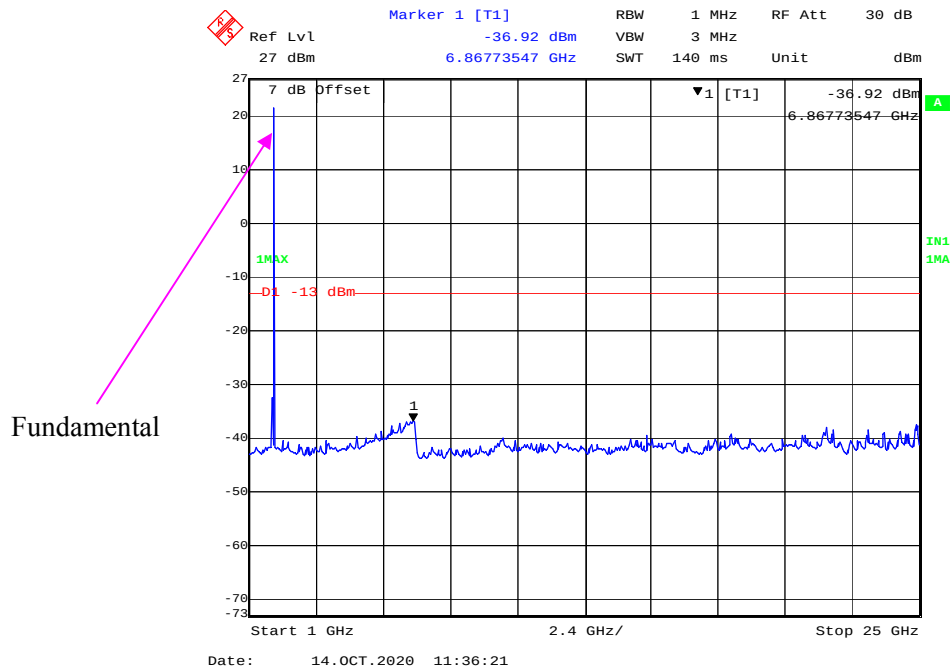
1 GHz – 20 GHz (5 MHz, 16-QAM, Middle Channel)



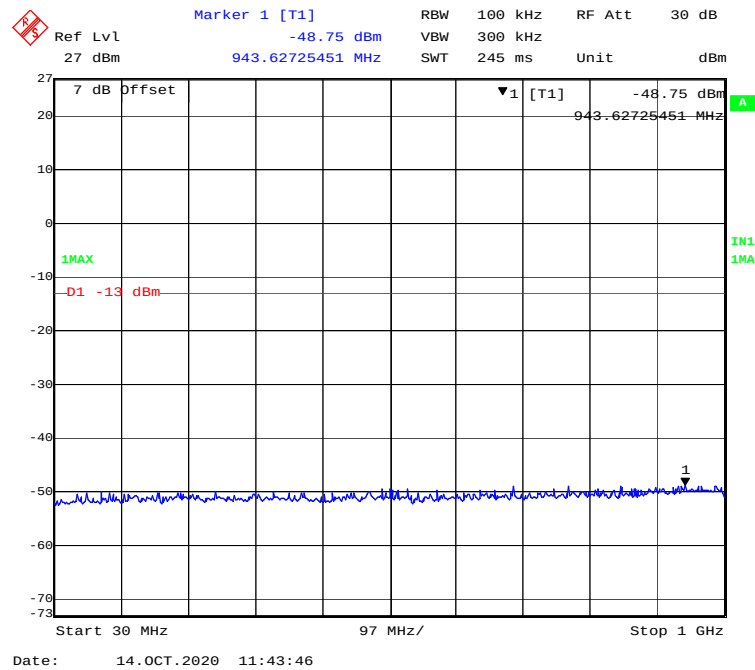
30 MHz - 1 GHz (10 MHz, QPSK, Middle Channel)



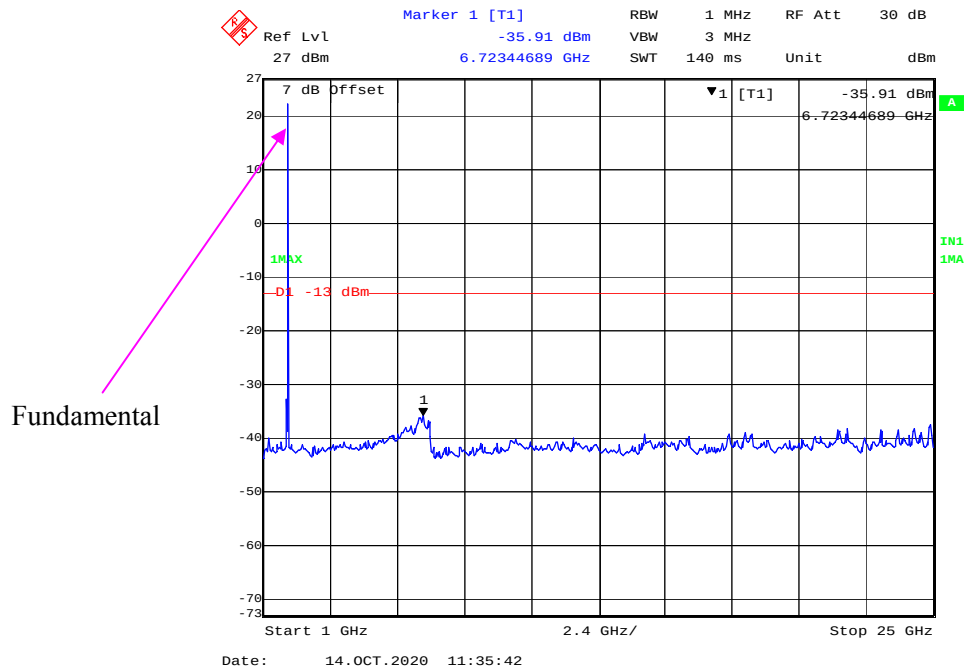
1 GHz – 20 GHz (10 MHz, QPSK, Middle Channel)



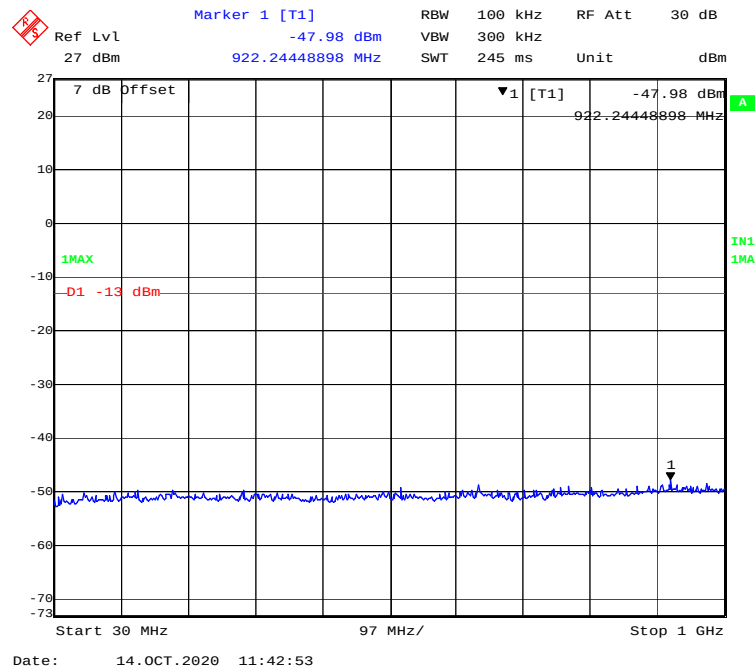
30 MHz - 1 GHz (10 MHz, 16-QAM, Middle Channel)



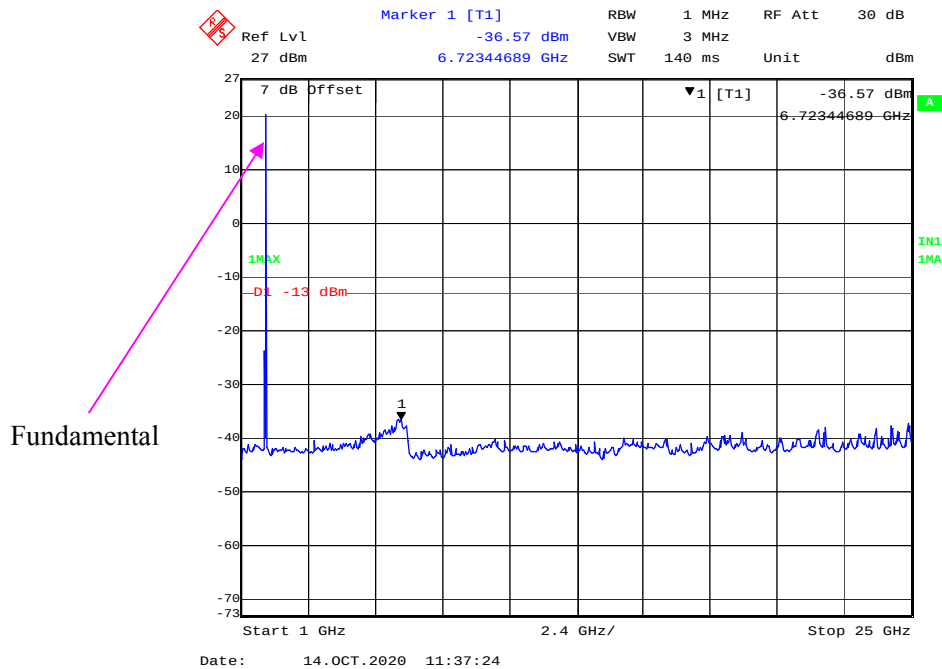
1 GHz – 20 GHz (10 MHz, 16-QAM, Middle Channel)



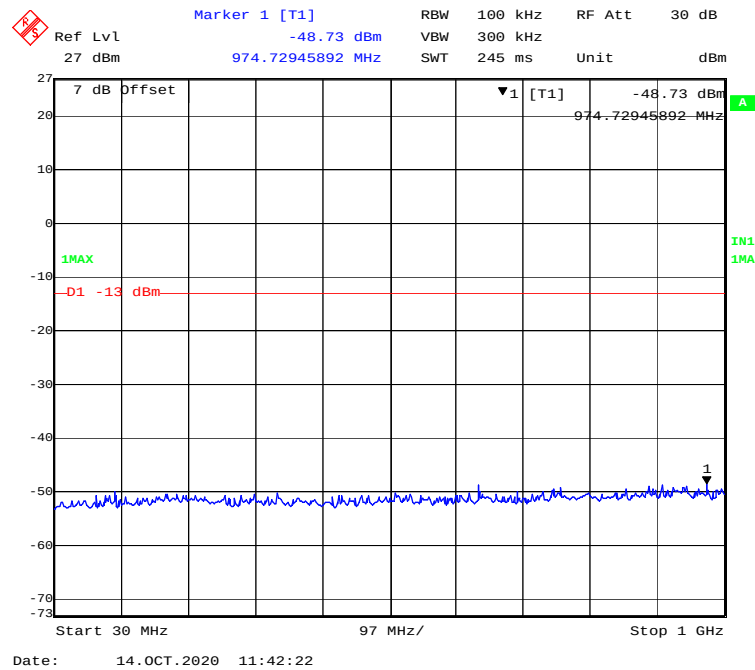
30 MHz - 1 GHz (15 MHz, QPSK, Middle Channel)



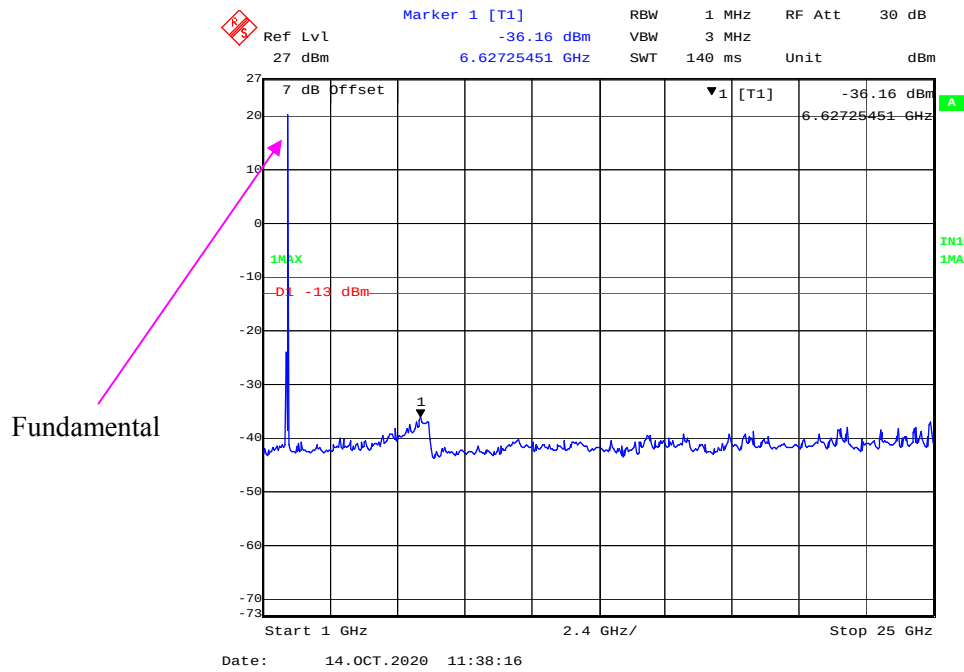
1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



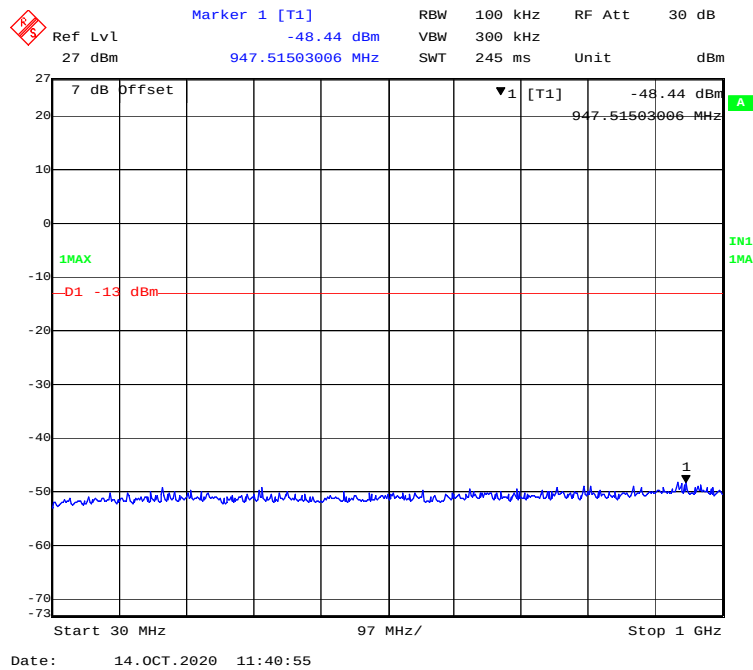
30 MHz - 1 GHz (15 MHz, 16-QAM, Middle Channel)



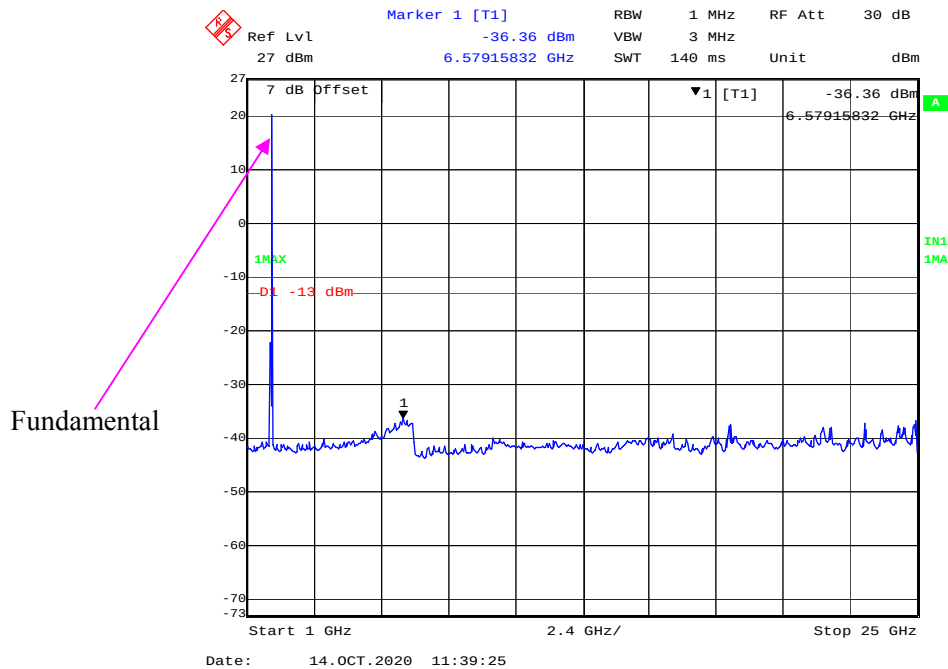
1 GHz – 20 GHz (15 MHz, 16-QAM, Middle Channel)



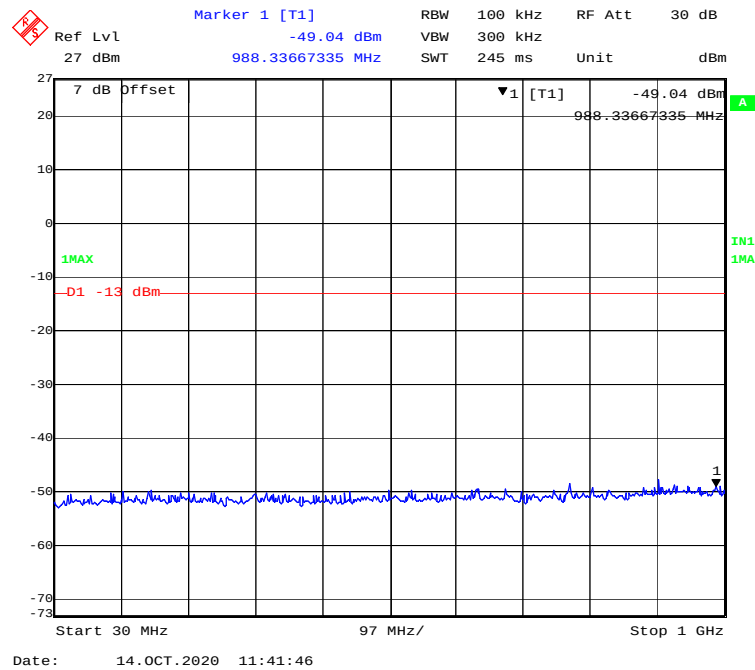
30 MHz - 1 GHz (20 MHz, QPSK, Middle Channel)



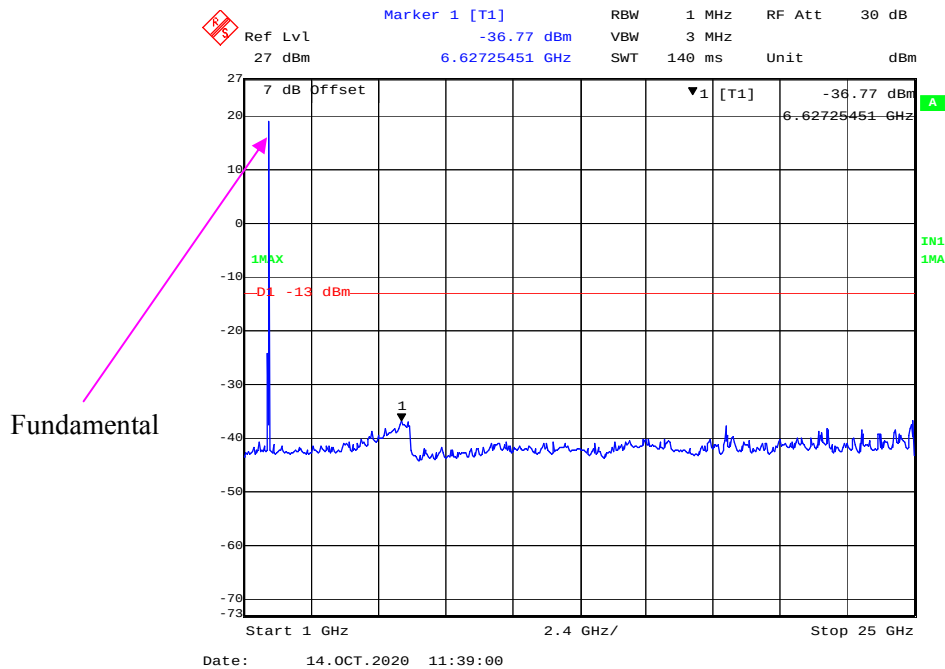
1 GHz – 20 GHz (20 MHz, QPSK, Middle Channel)



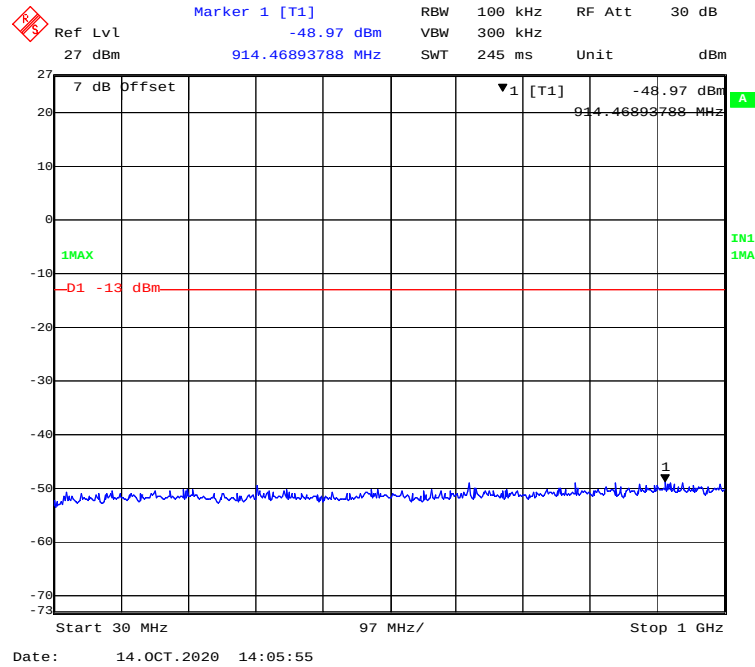
30 MHz - 1 GHz (20 MHz, 16-QAM, Middle Channel)



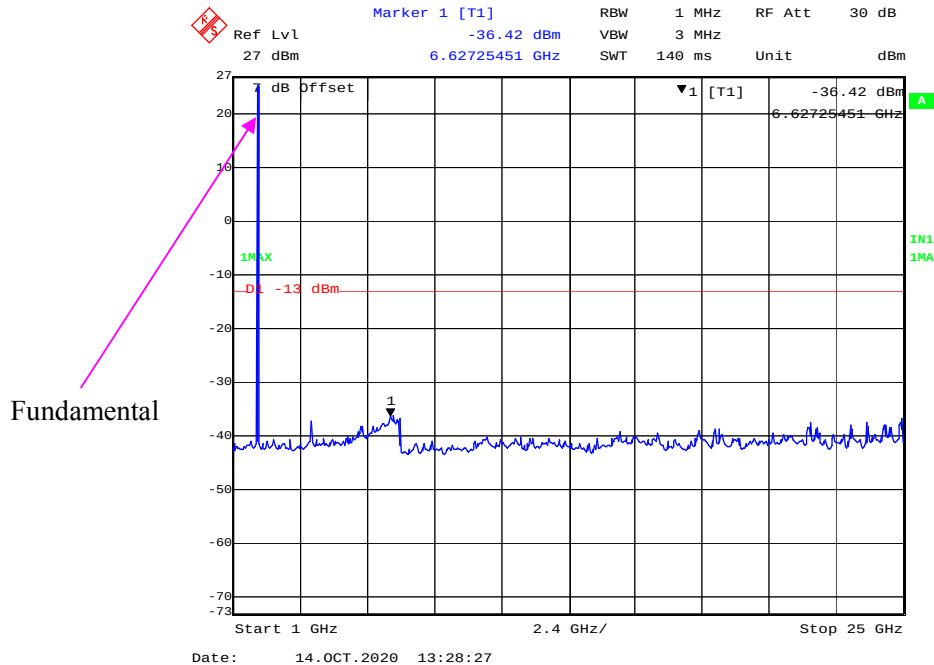
1 GHz – 20 GHz (20 MHz, 16-QAM, Middle Channel)



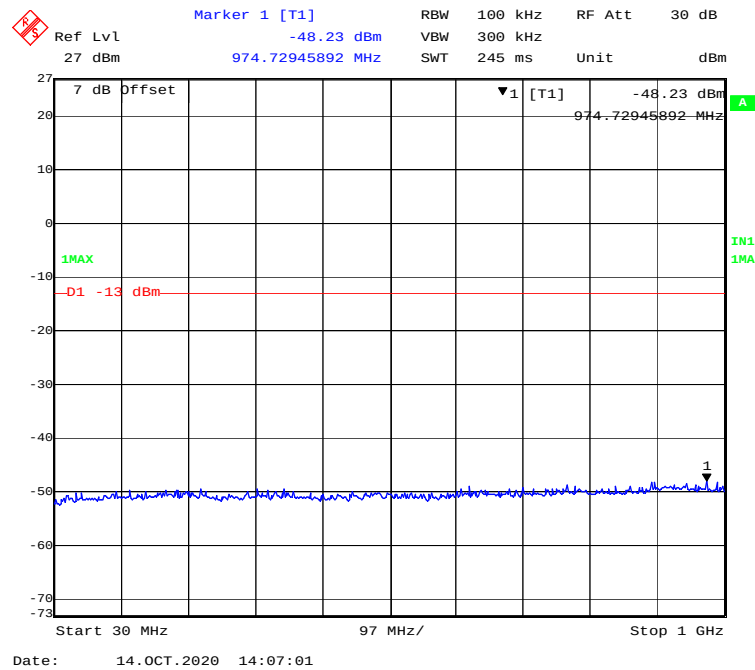
30 MHz - 1 GHz (1.4 MHz, QPSK, High Channel)



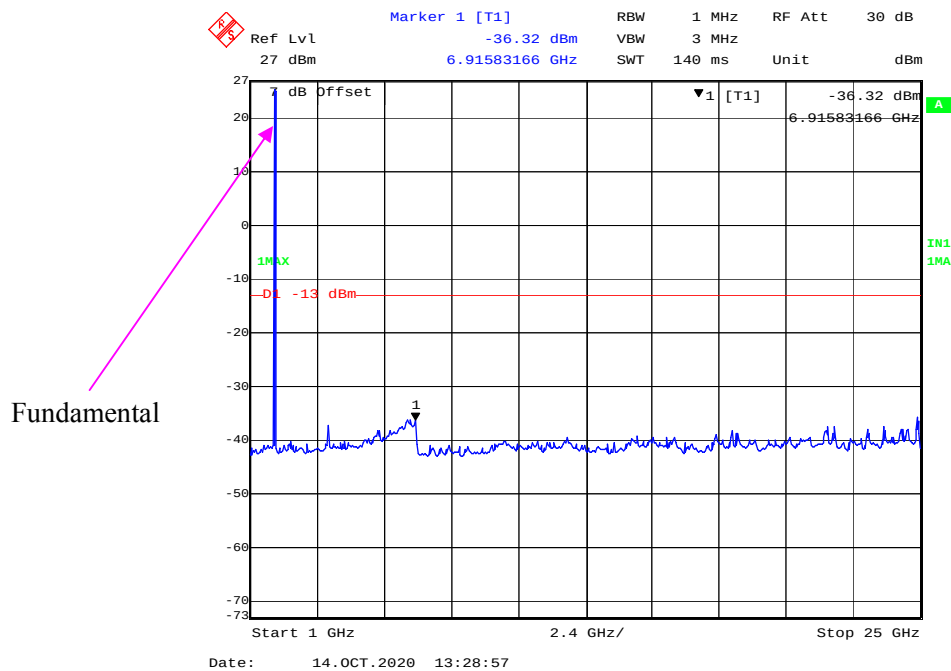
1 GHz – 20 GHz (1.4 MHz, QPSK, High Channel)



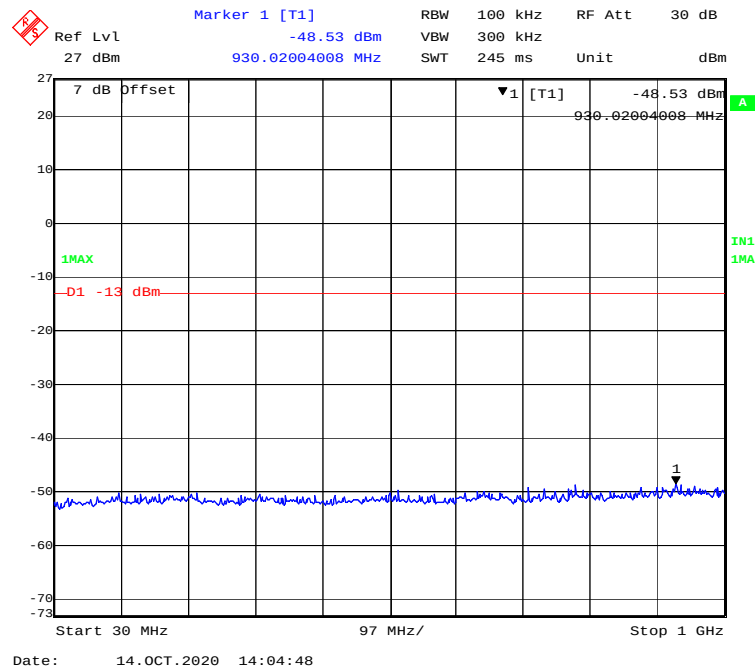
30 MHz - 1 GHz (1.4 MHz, 16-QAM, High Channel)



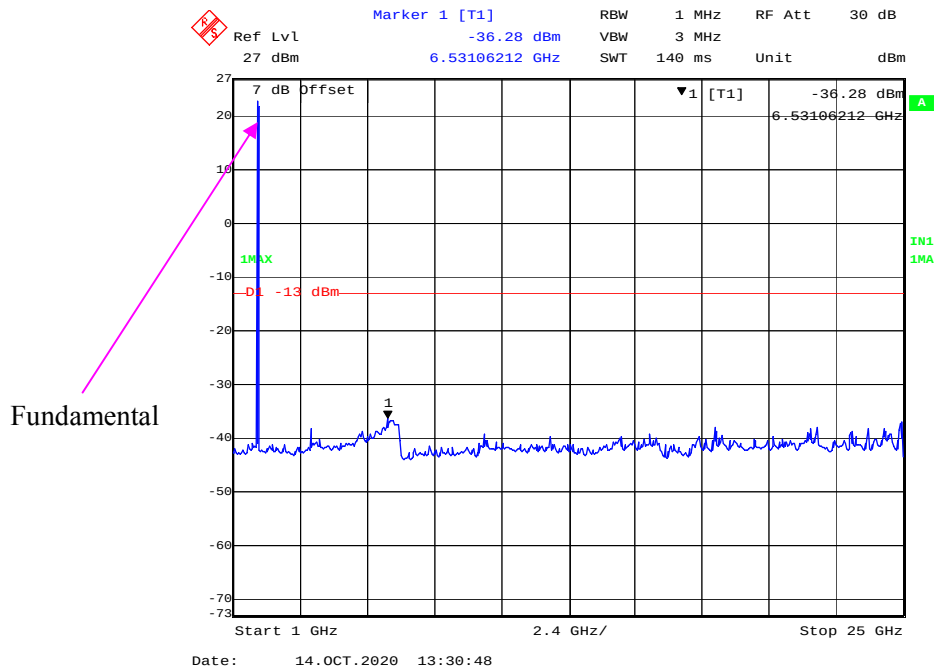
1 GHz – 20 GHz (1.4 MHz, 16-QAM, High Channel)



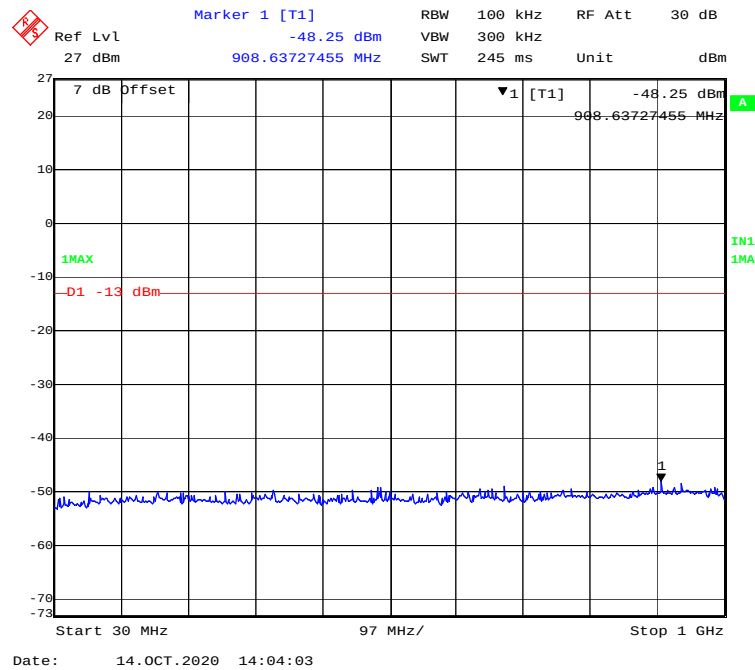
30 MHz - 1 GHz (3 MHz, QPSK, High Channel)



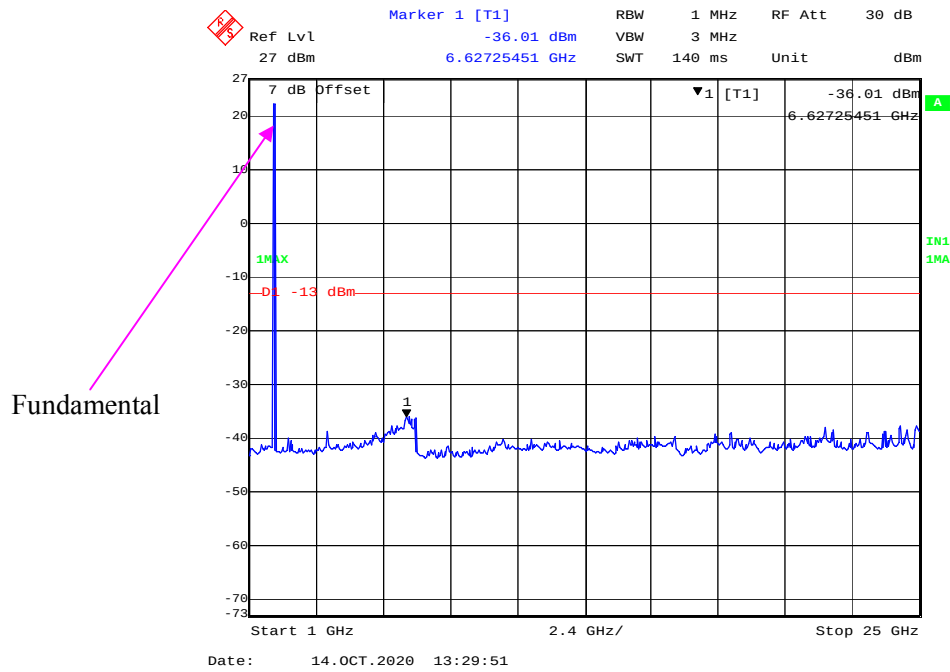
1 GHz – 20 GHz (3 MHz, QPSK, High Channel)



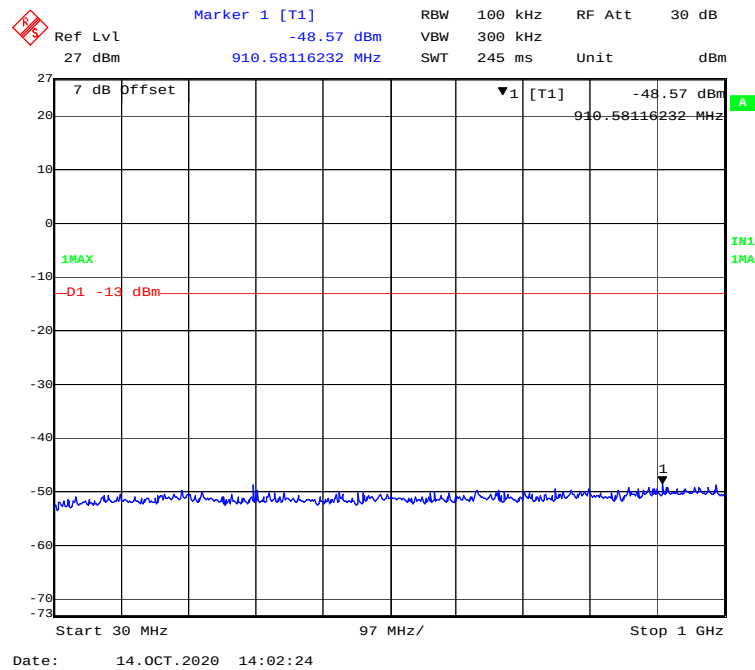
30 MHz - 1 GHz (3 MHz, 16-QAM, High Channel)



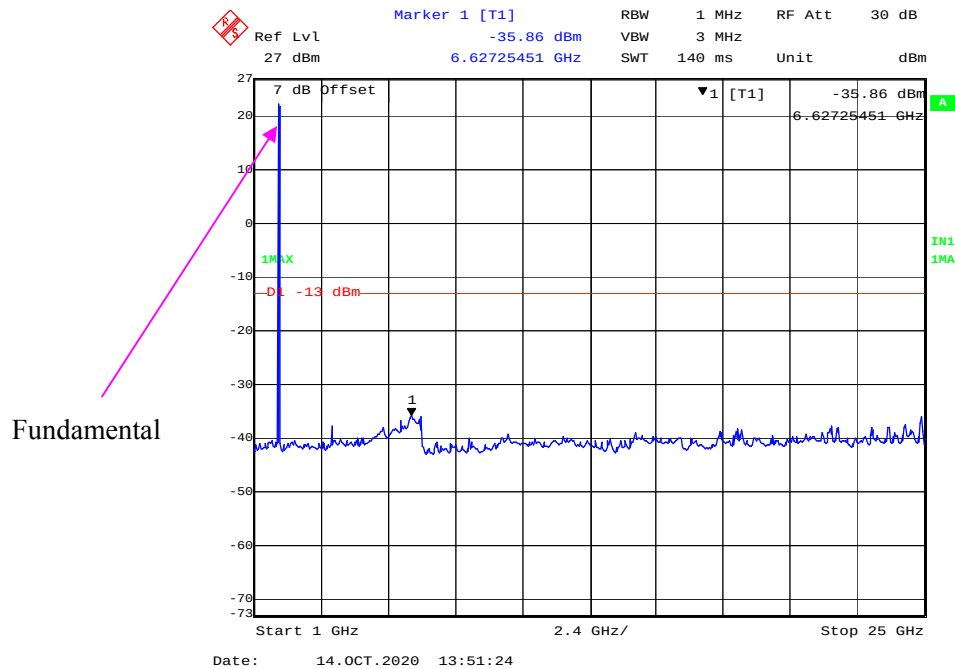
1 GHz – 20 GHz (3 MHz, 16-QAM, High Channel)



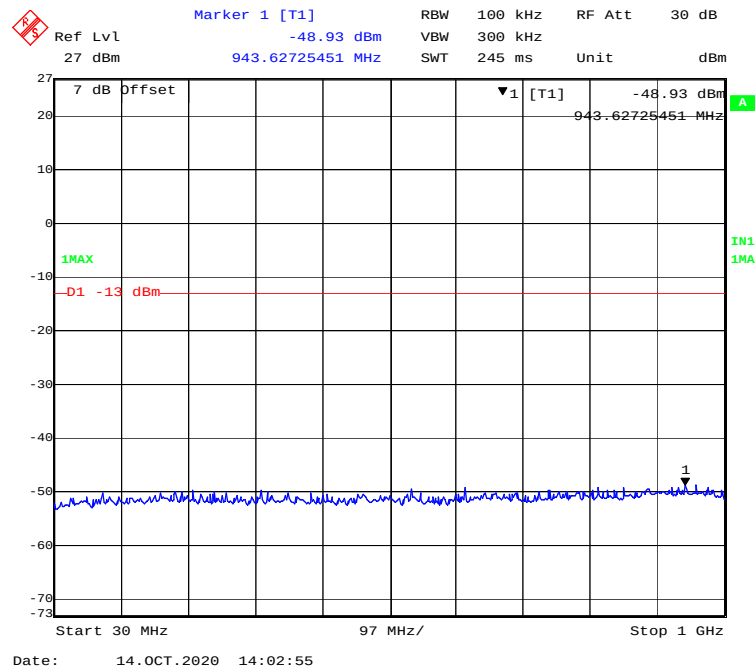
30 MHz - 1 GHz (5 MHz, QPSK, High Channel)



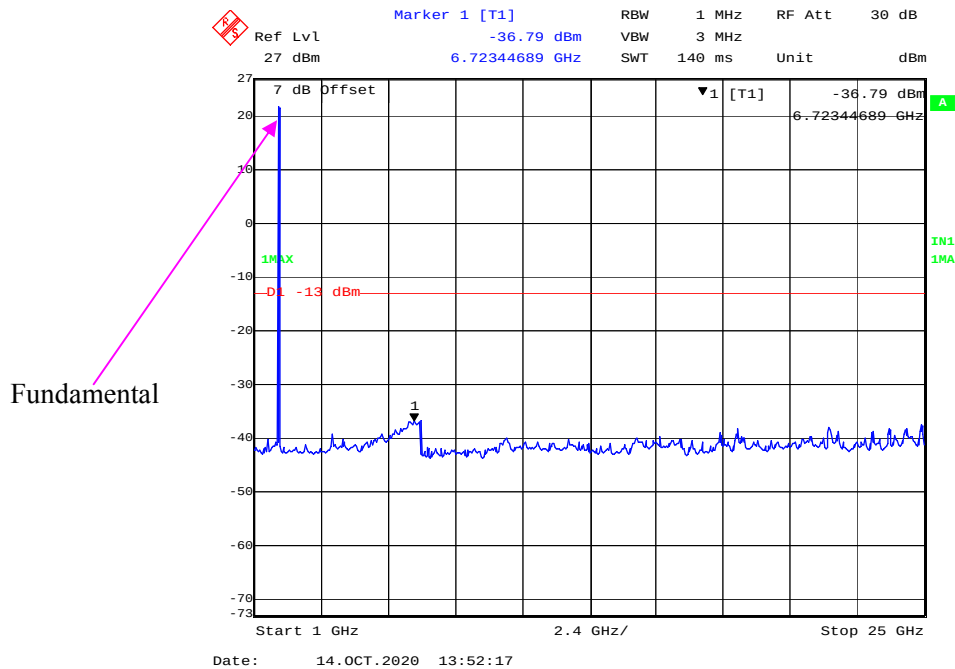
1 GHz – 20 GHz (5 MHz, QPSK, High Channel)



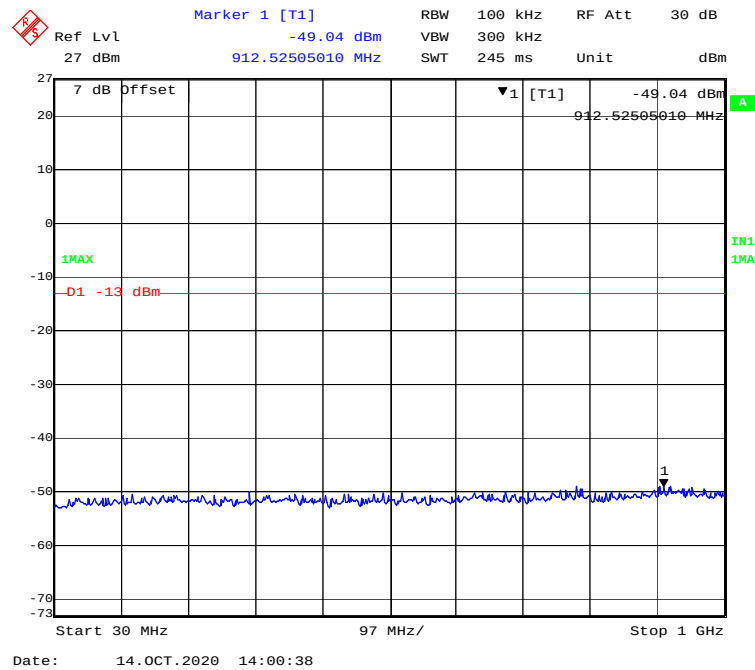
30 MHz - 1 GHz (5 MHz, 16-QAM, High Channel)



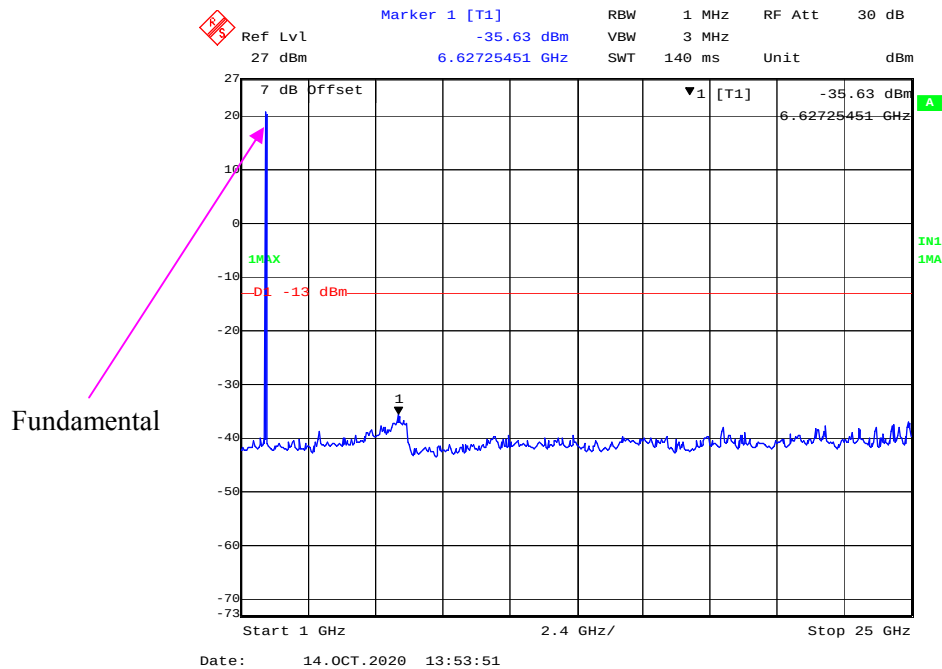
1 GHz – 20 GHz (5 MHz, 16-QAM, High Channel)



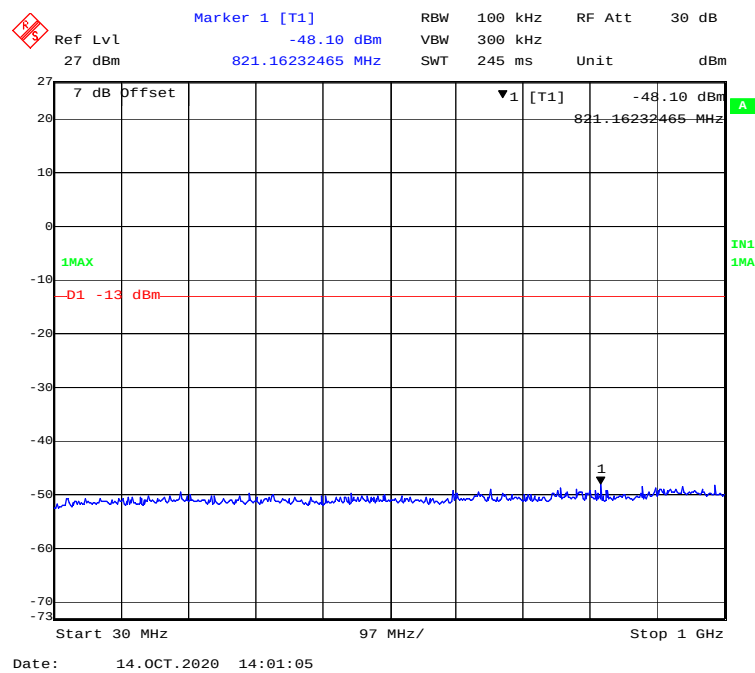
30 MHz - 1 GHz (10 MHz, QPSK, High Channel)



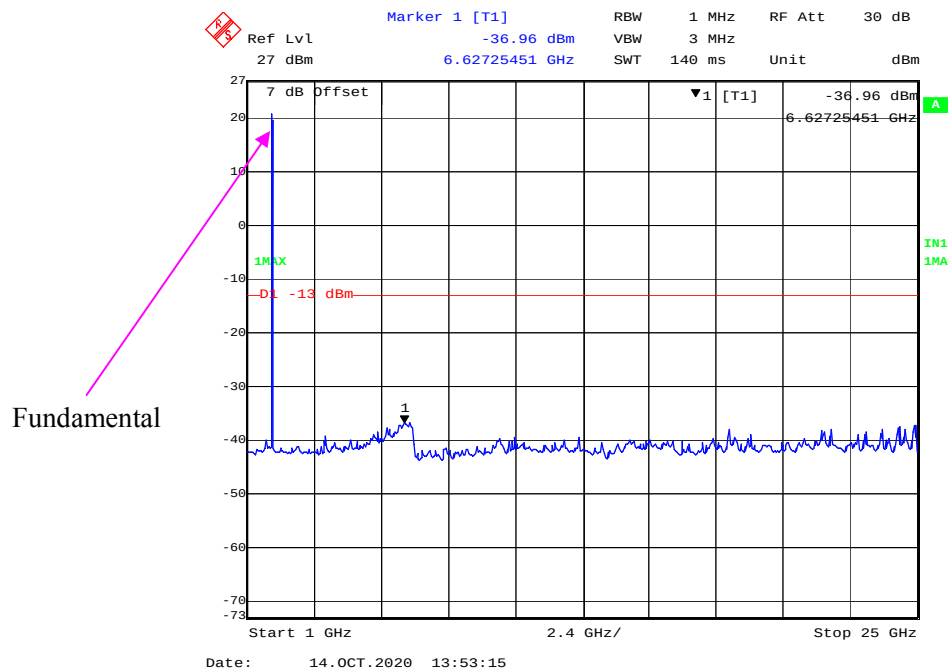
1 GHz – 20 GHz (10 MHz, QPSK, High Channel)



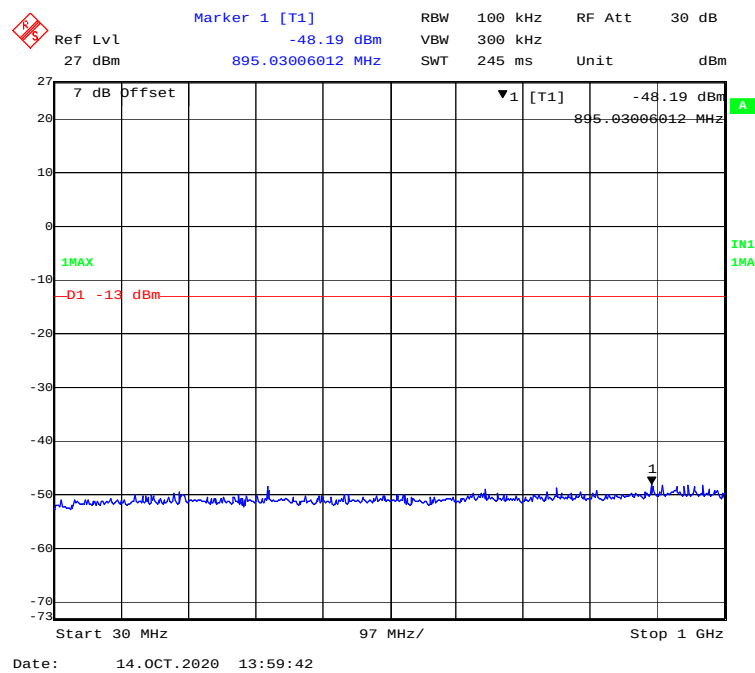
30 MHz - 1 GHz (10 MHz, 16-QAM, High Channel)



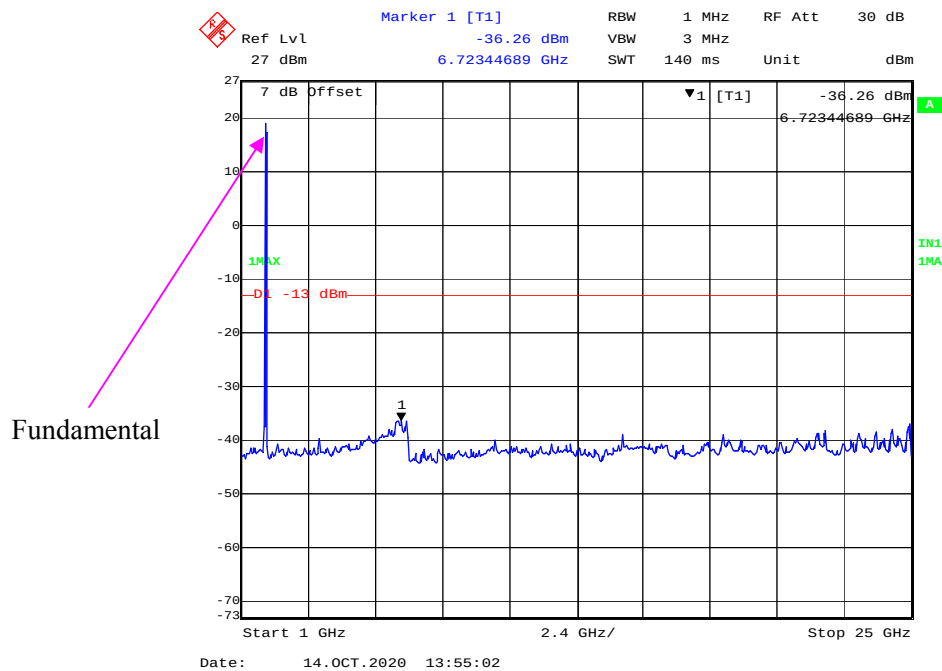
1 GHz – 20 GHz (10 MHz, 16-QAM, High Channel)



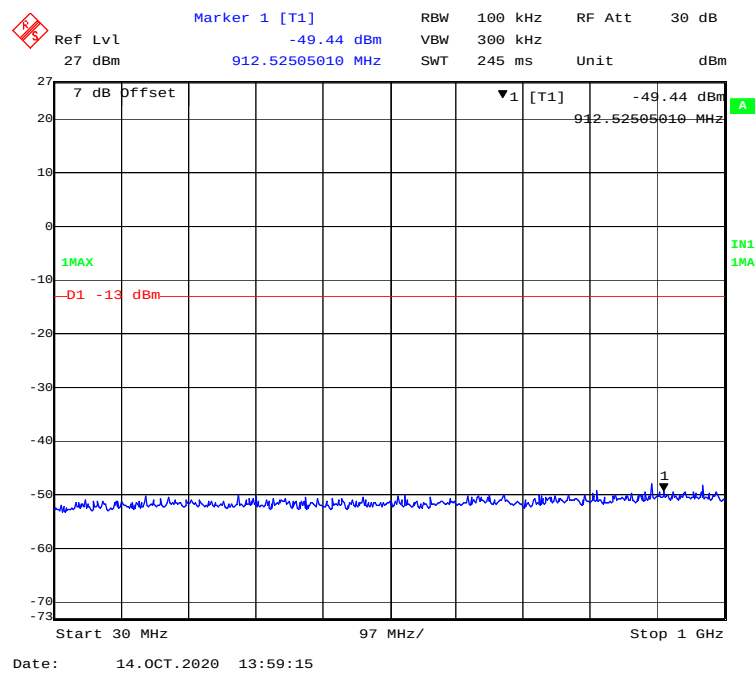
30 MHz - 1 GHz (15 MHz, QPSK, High Channel)



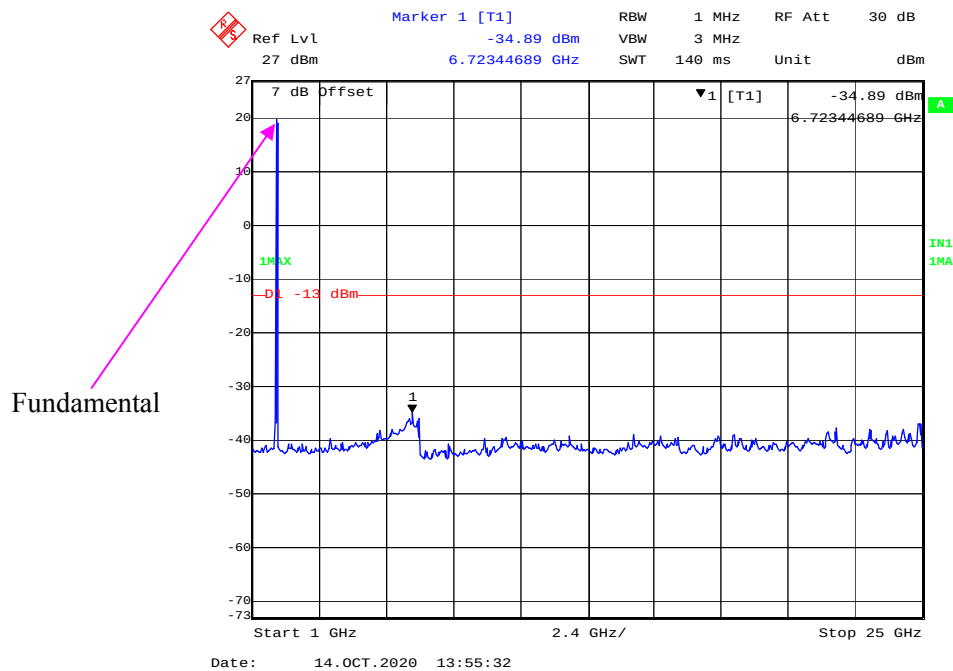
1 GHz – 20 GHz (15 MHz, QPSK, High Channel)



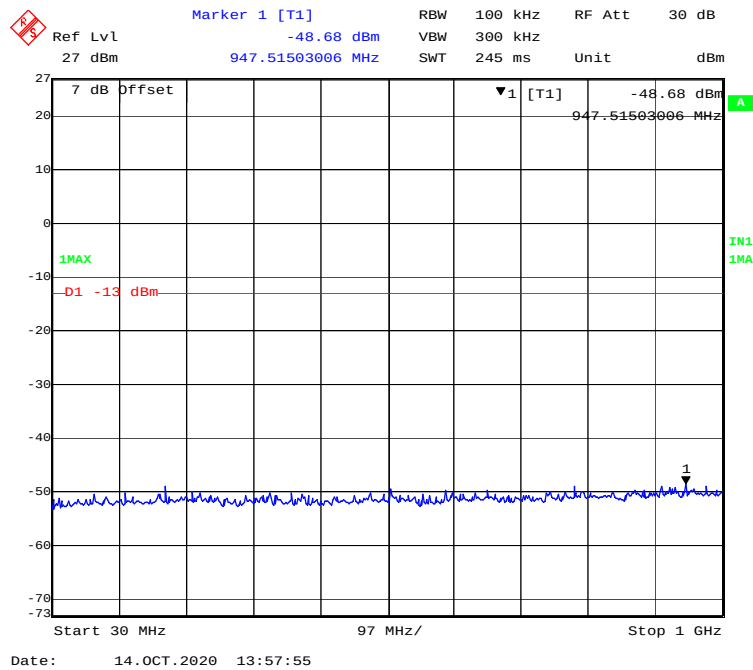
30 MHz - 1 GHz (15 MHz, 16-QAM, High Channel)



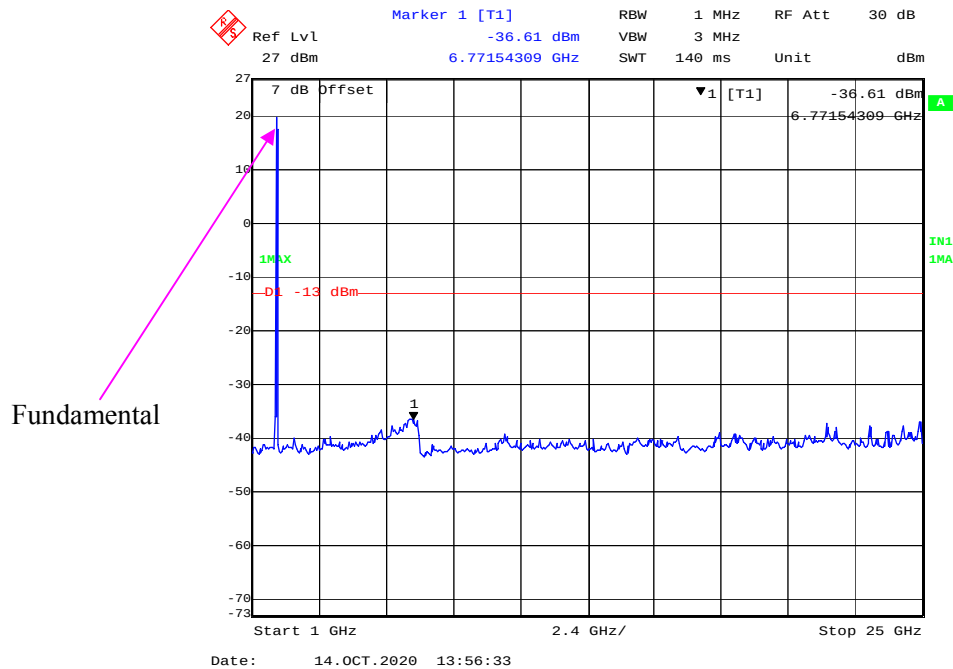
1 GHz – 20 GHz (15 MHz, 16-QAM, High Channel)



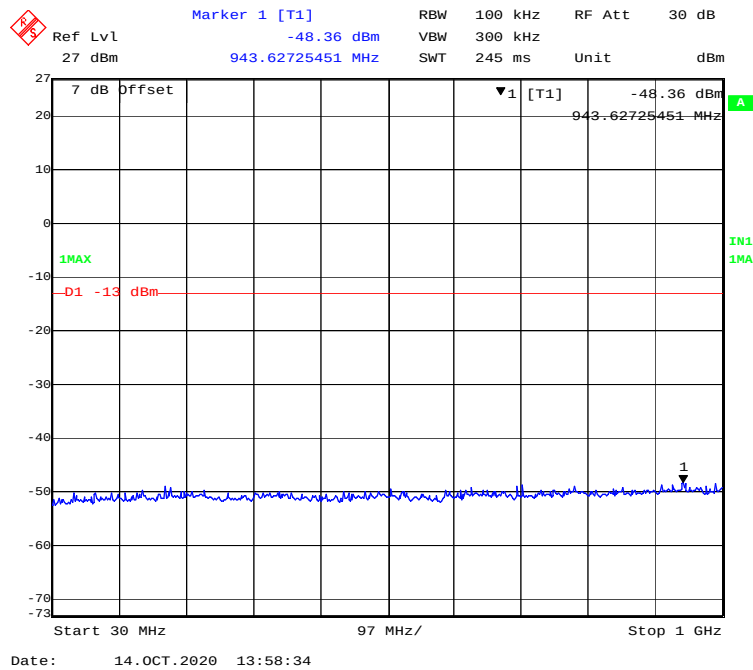
30 MHz - 1 GHz (20 MHz, QPSK, High Channel)



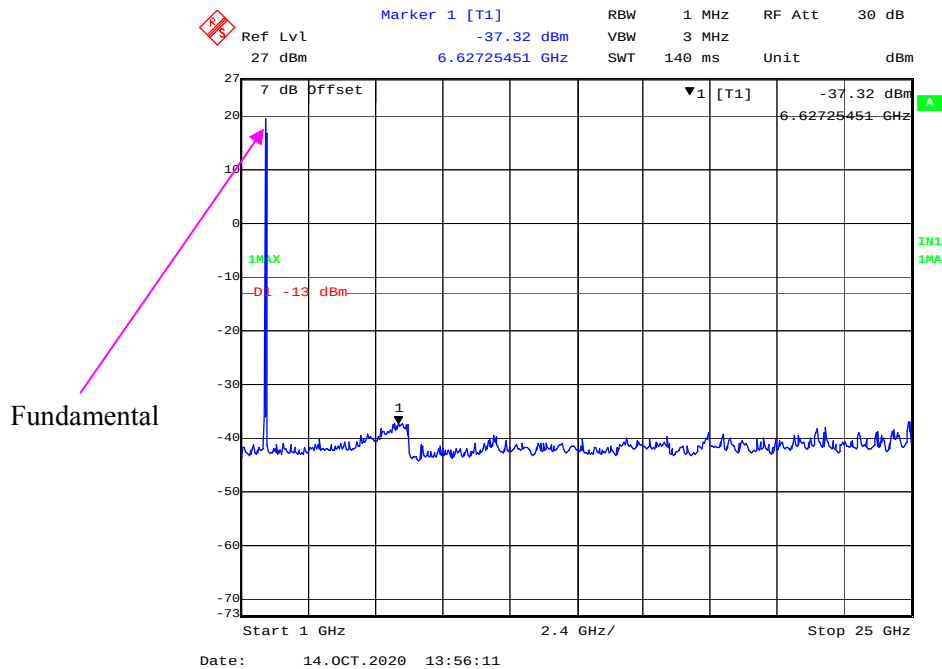
1 GHz – 20 GHz (20 MHz, QPSK, High Channel)



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

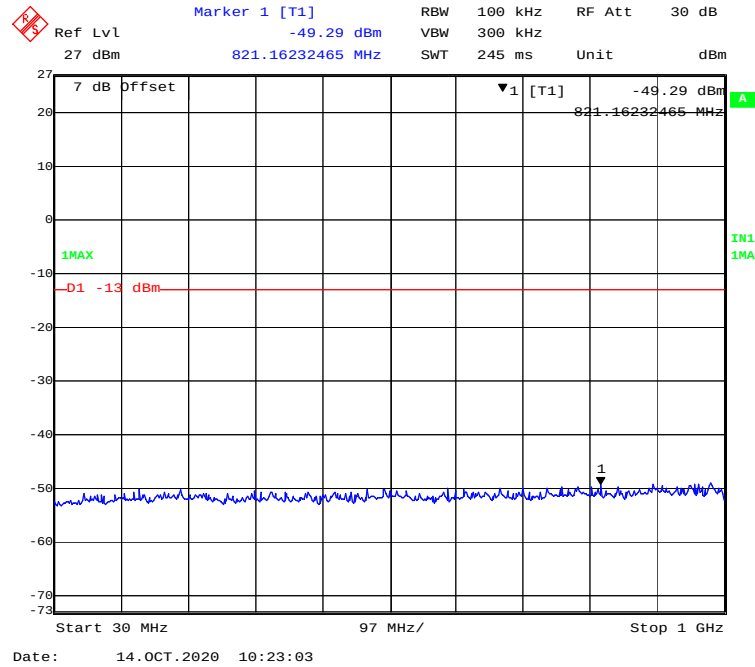


1 GHz – 20 GHz (20 MHz, 16-QAM, High Channel)

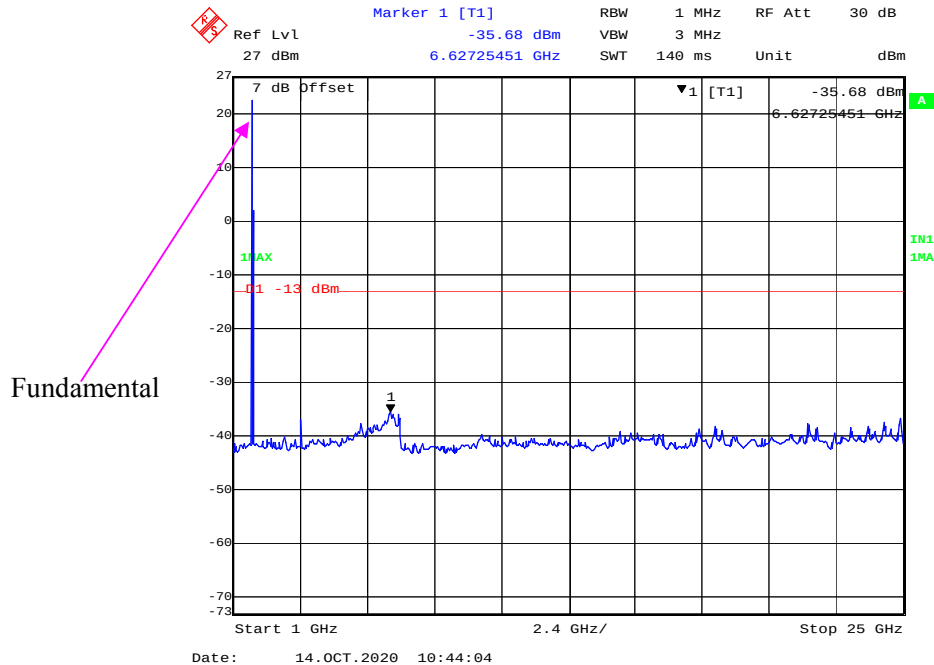


LTE Band 4:

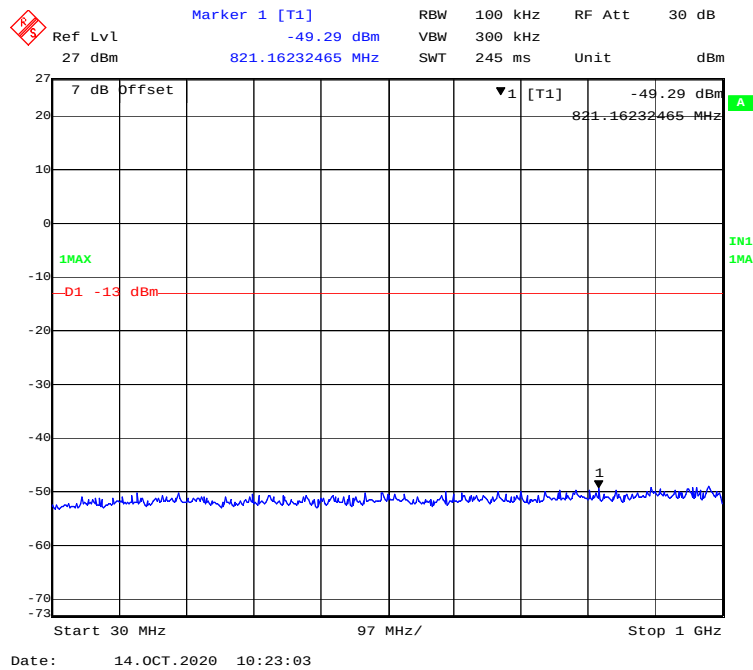
30 MHz - 1 GHz (1.4 MHz, QPSK, Low Channel)



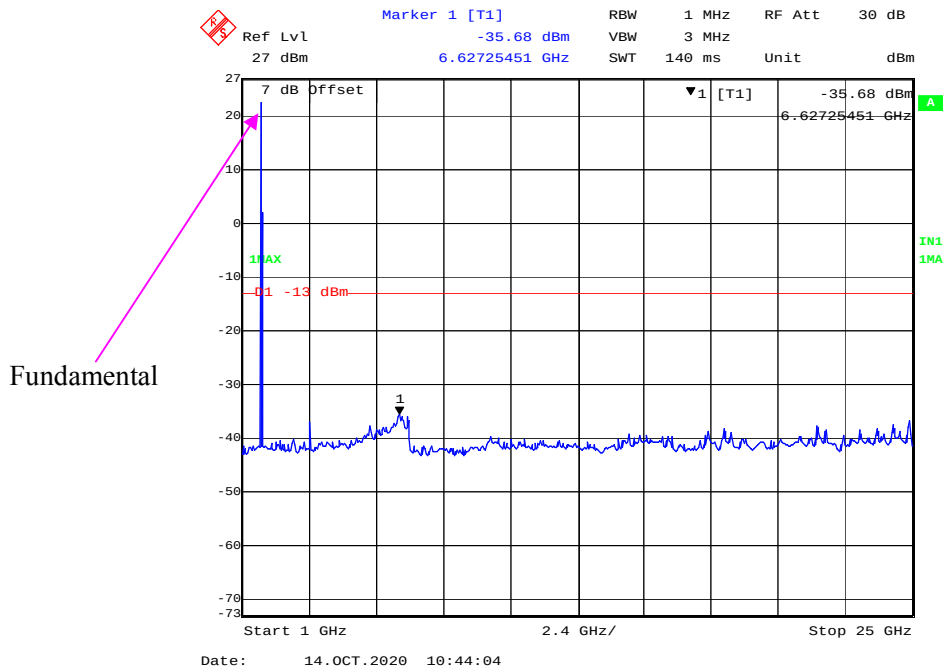
1 GHz – 20 GHz (1.4 MHz, QPSK, Low Channel)



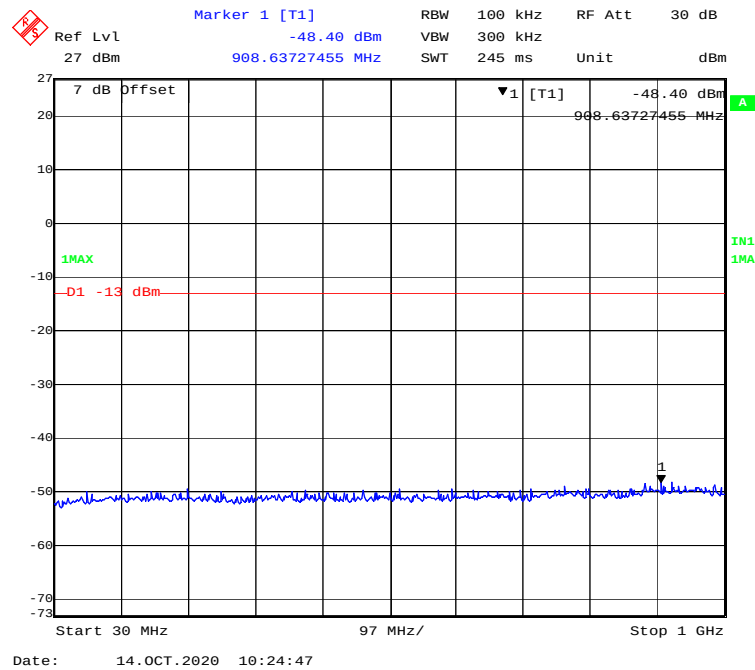
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Low Channel)



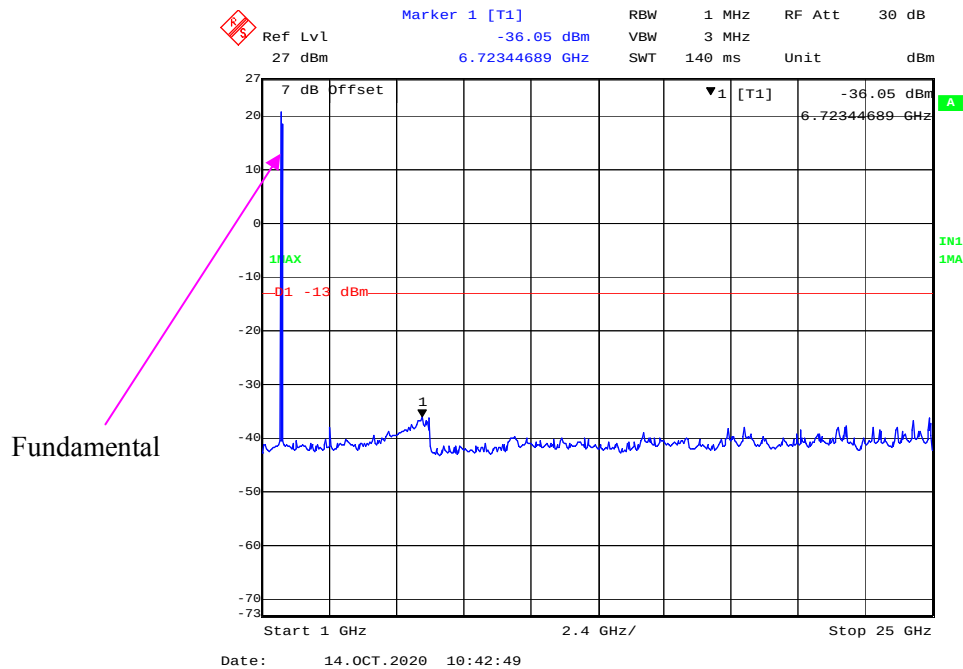
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Low Channel)



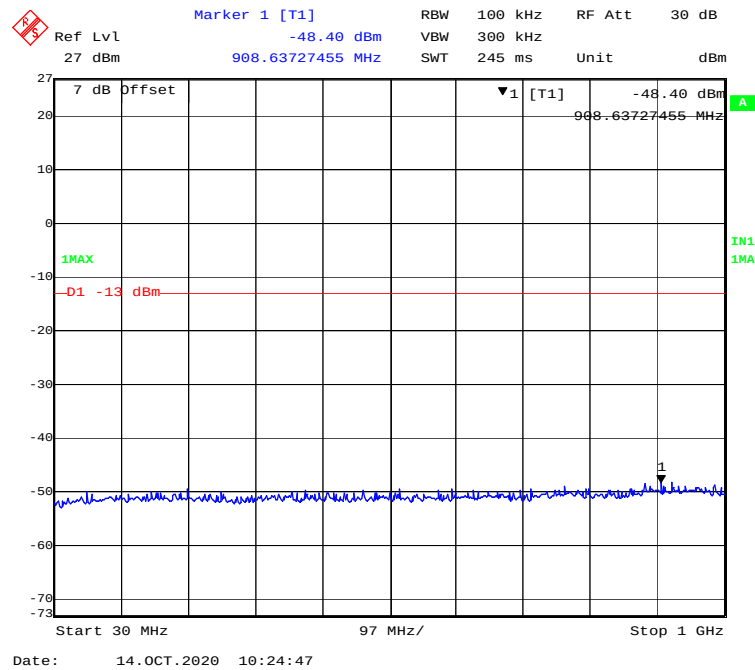
30 MHz - 1 GHz (3 MHz, QPSK, Low Channel)



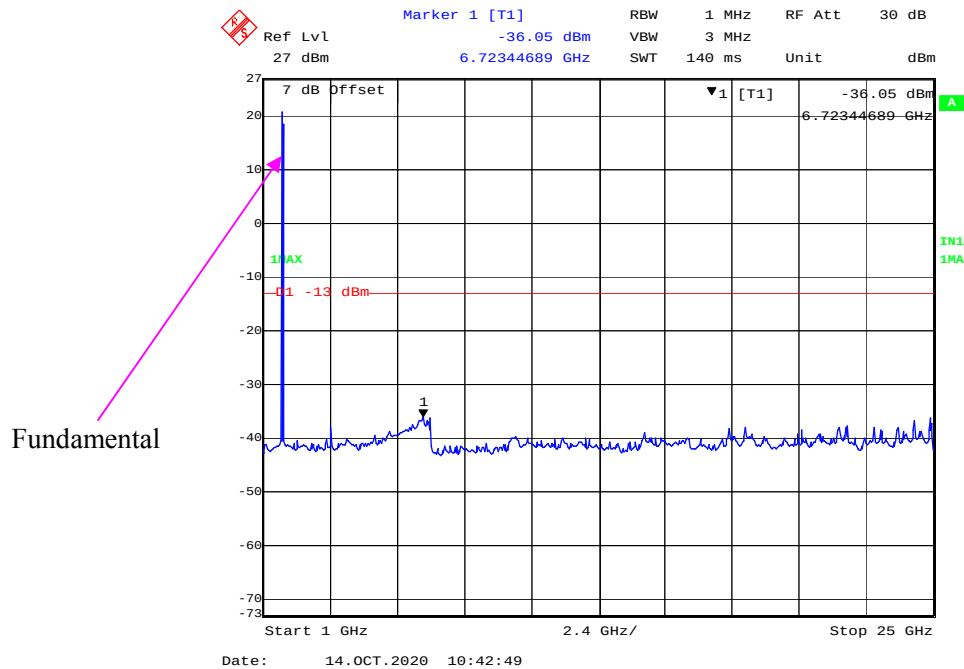
1 GHz – 20 GHz (3 MHz, QPSK, Low Channel)



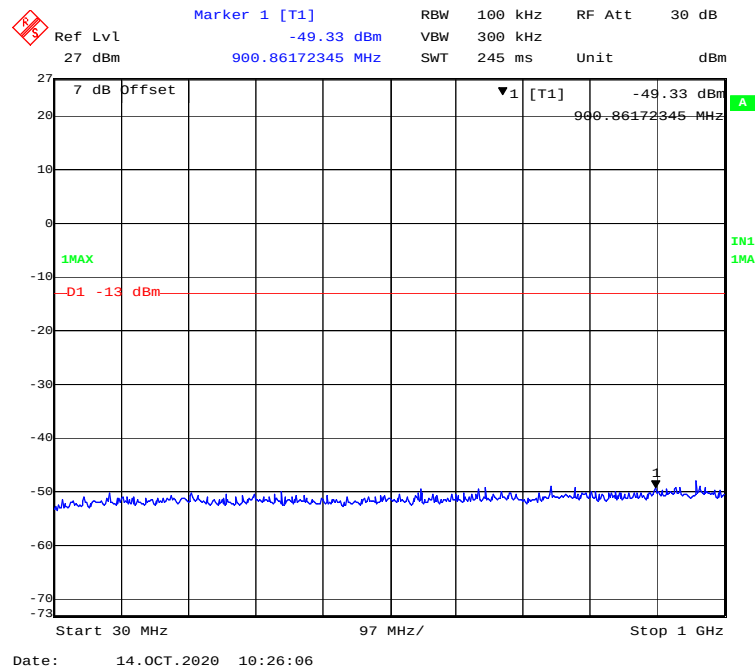
30 MHz - 1 GHz (3 MHz, 16-QAM, Low Channel)



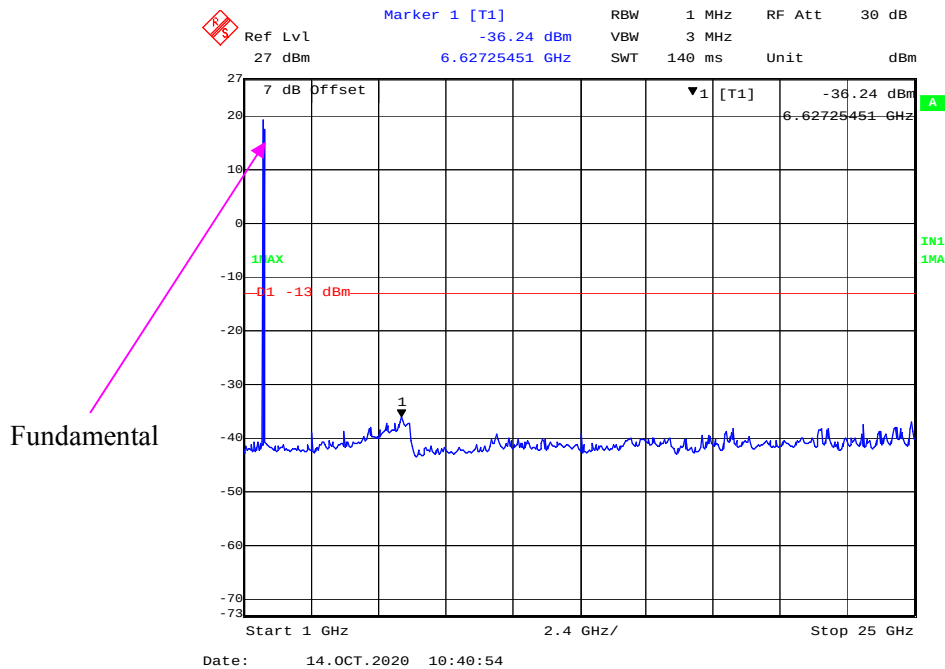
1 GHz – 20 GHz (3 MHz, 16-QAM, Low Channel)



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



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



Ref Lvl 27 dBm
 Marker 1 [T1] -49.33 dBm
 900.86172345 MHz
 RBW 100 kHz
 VBW 300 kHz
 SWT 245 ms
 RF Att 30 dB
 Unit dBm

7 dB Offset
 1MAX
 -D1 -13 dBm
 -49.33 dBm
 900.86172345 MHz
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz

Date: 14.OCT.2020 10:26:06

Ref Lvl 27 dBm

Marker 1 [T1] -36.24 dBm

RBW 1 MHz RF Att 30 dB

VBW 3 MHz

SWT 140 ms Unit dBm

7 dB Offset

▼1 [T1] -36.24 dBm

6.62725451 GHz

11AX

11 -13 dBm

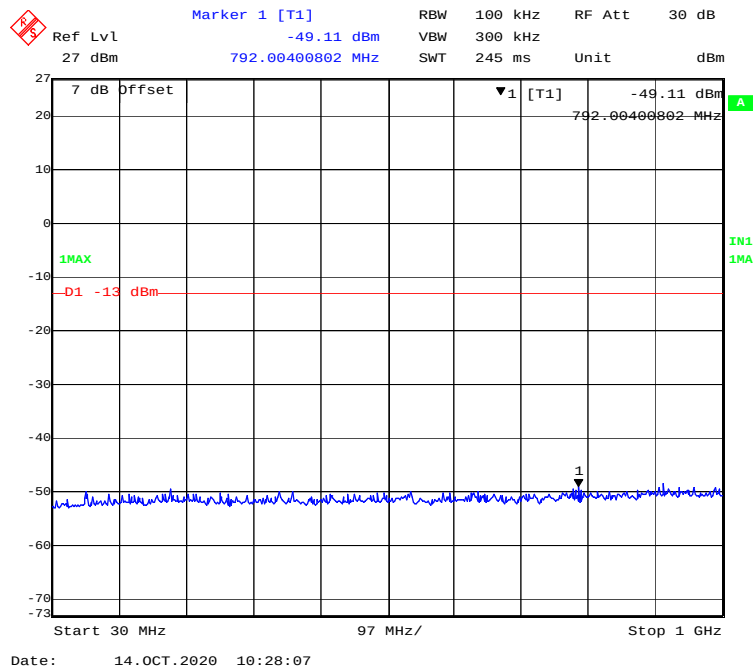
1

Start 1 GHz 2.4 GHz/ Stop 25 GHz

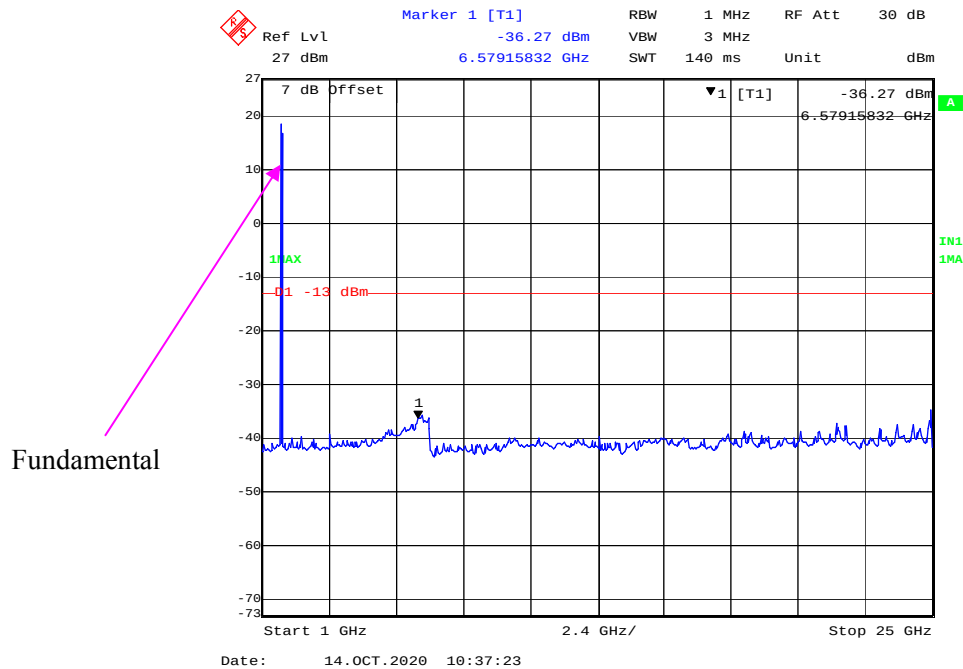
Date: 14.OCT.2020 10:40:54

Fundamental

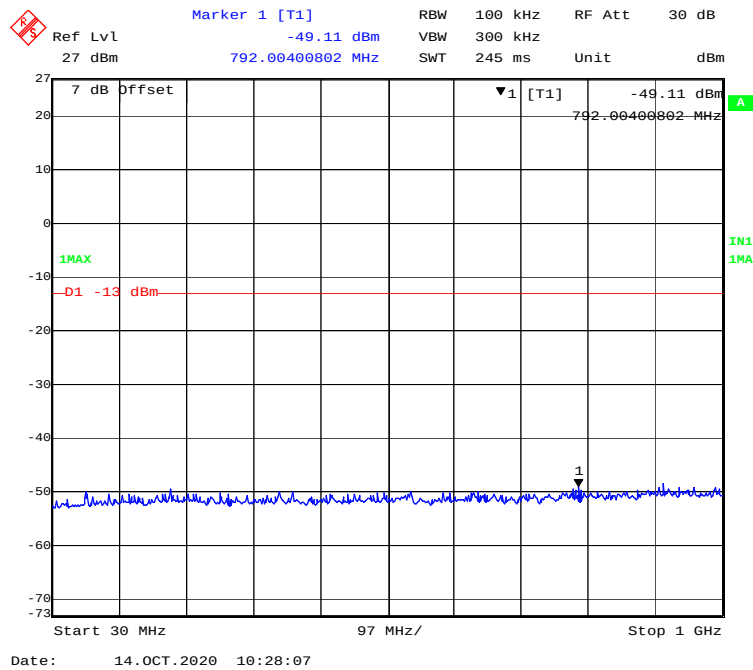
30 MHz - 1 GHz (10 MHz, QPSK, Low Channel)



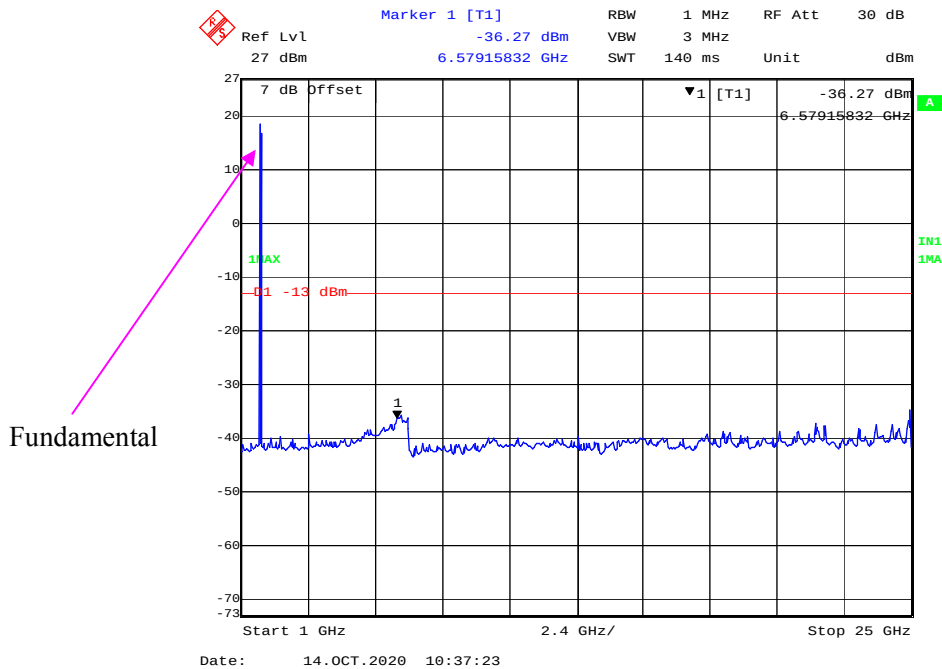
1 GHz – 20 GHz (10 MHz, QPSK, Low Channel)



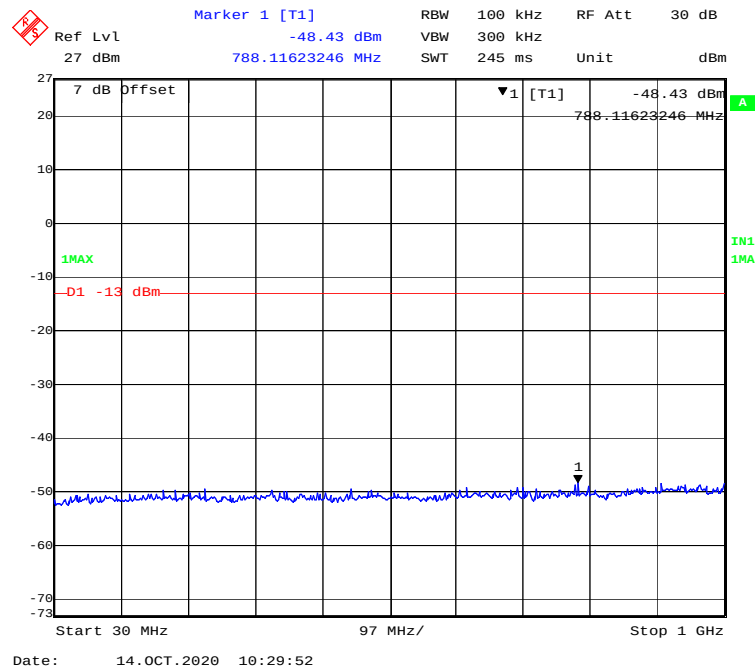
30 MHz - 1 GHz (10 MHz, 16-QAM, Low Channel)



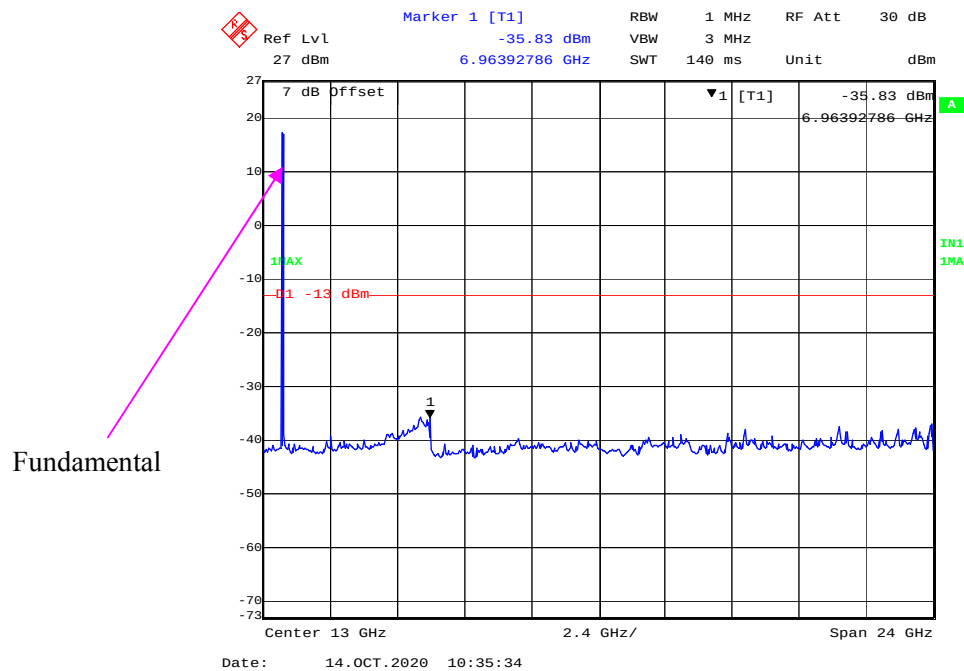
1 GHz – 20 GHz (10 MHz, 16-QAM, Low Channel)



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



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



Marker 1 [T1]
 Ref Lvl -48.43 dBm
 27 dBm 788.11623246 MHz
 RBW 100 kHz RF Att 30 dB
 VBW 300 kHz
 SWT 245 ms Unit dBm

7 dB Offset
 1 [T1] -48.43 dBm
 788.11623246 MHz
 1MAX
 -D1 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 14.OCT.2020 10:29:52

Ref Lvl 27 dBm RBW 1 MHz VBW 3 MHz SWT 140 ms RF Att 30 dB Unit dBm

Marker 1 [T1] -35.83 dBm 6.96392786 GHz

7 dB Offset

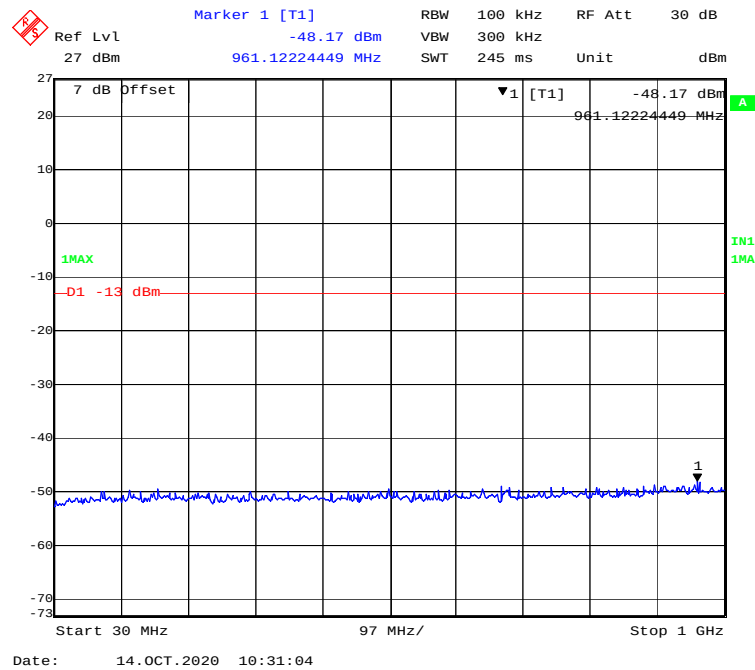
IN1 1MA

Center 13 GHz 2.4 GHz/ Span 24 GHz

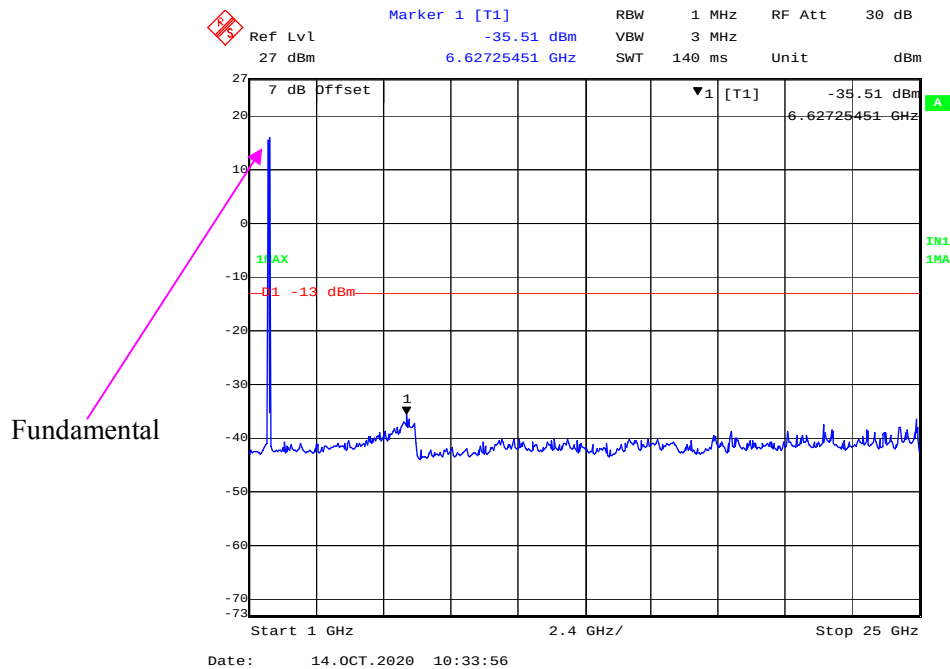
Date: 14.OCT.2020 10:35:34

Fundamental

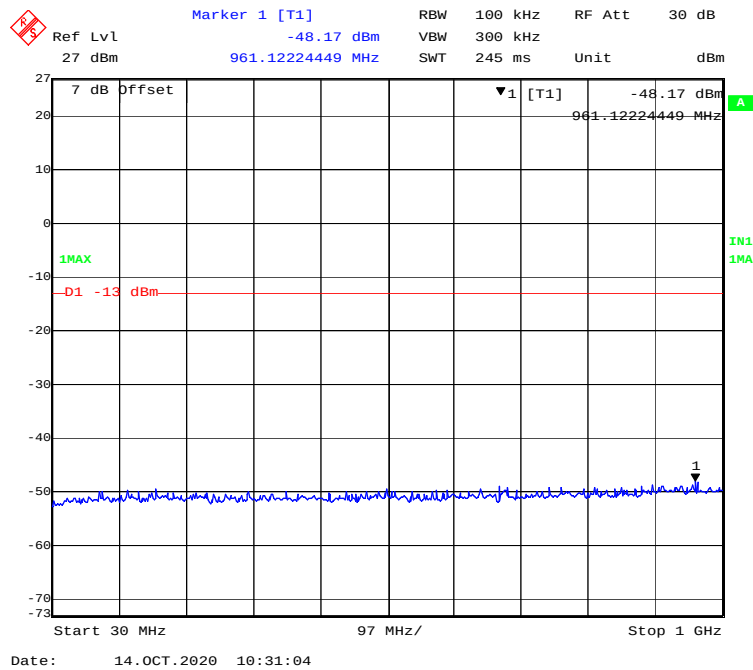
30 MHz - 1 GHz (20 MHz, QPSK, Low Channel)



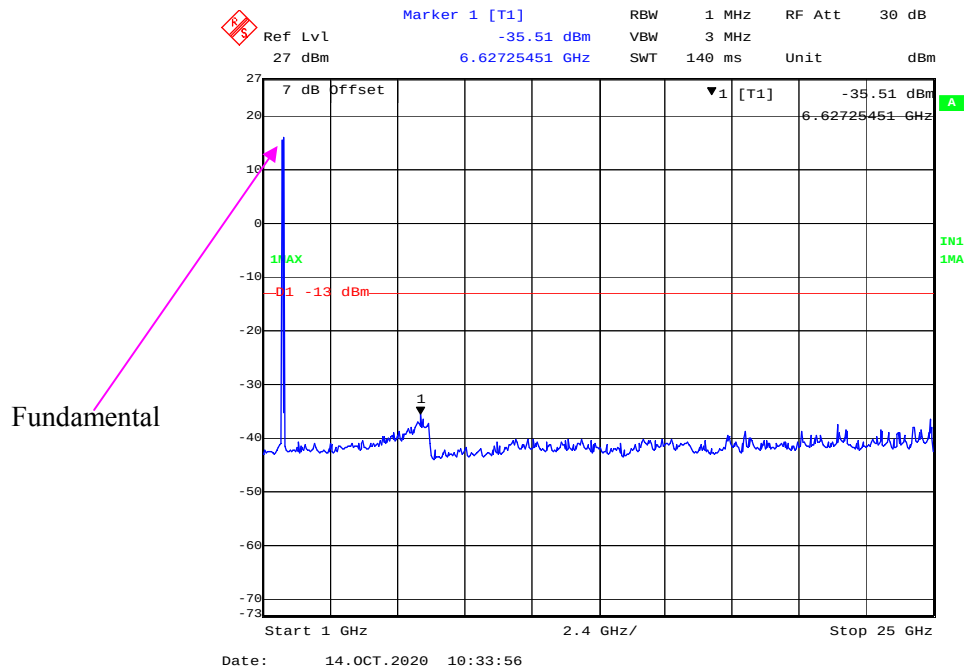
1 GHz – 20 GHz (20 MHz, QPSK, Low Channel)



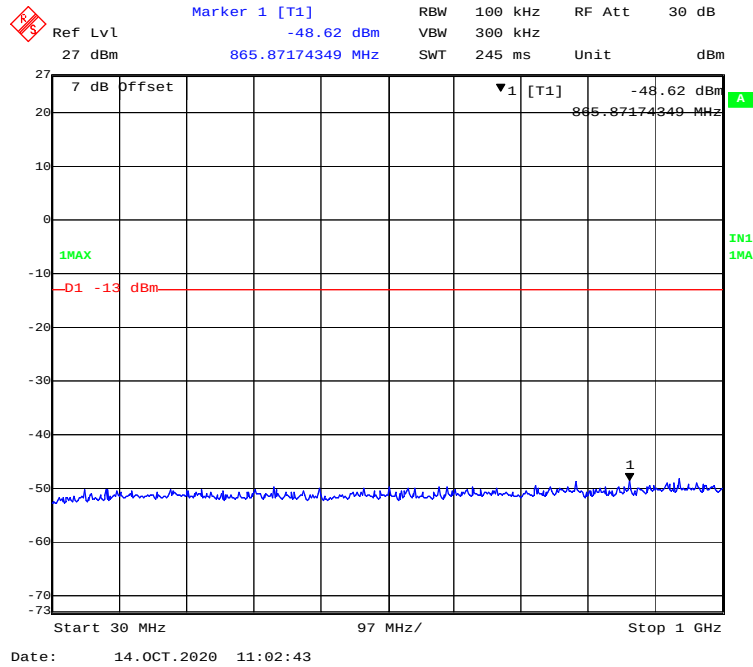
30 MHz - 1 GHz (20 MHz, 16-QAM, Low Channel)



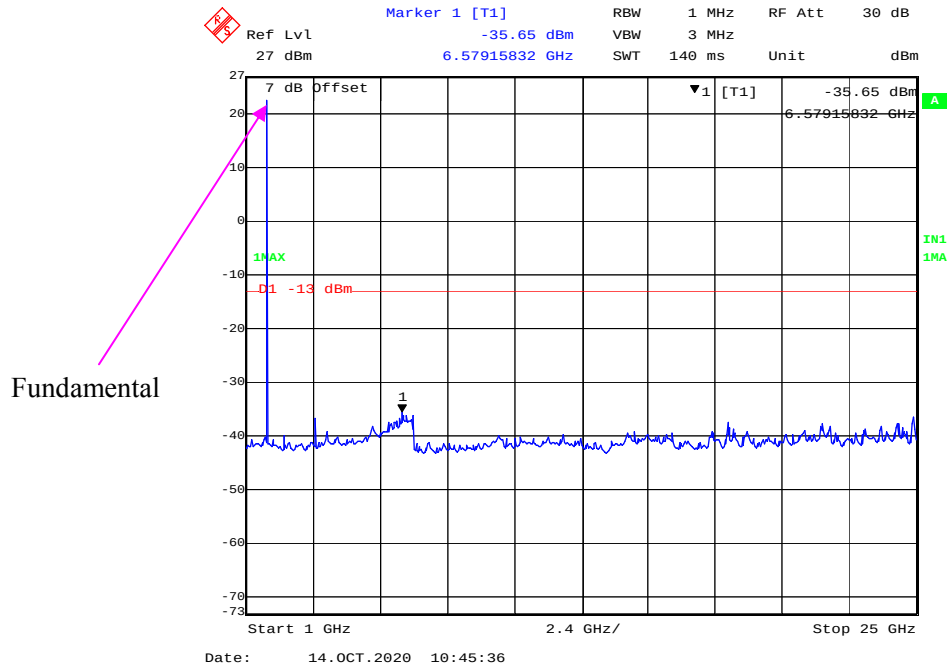
1 GHz – 20 GHz (20 MHz, 16-QAM, Low Channel)



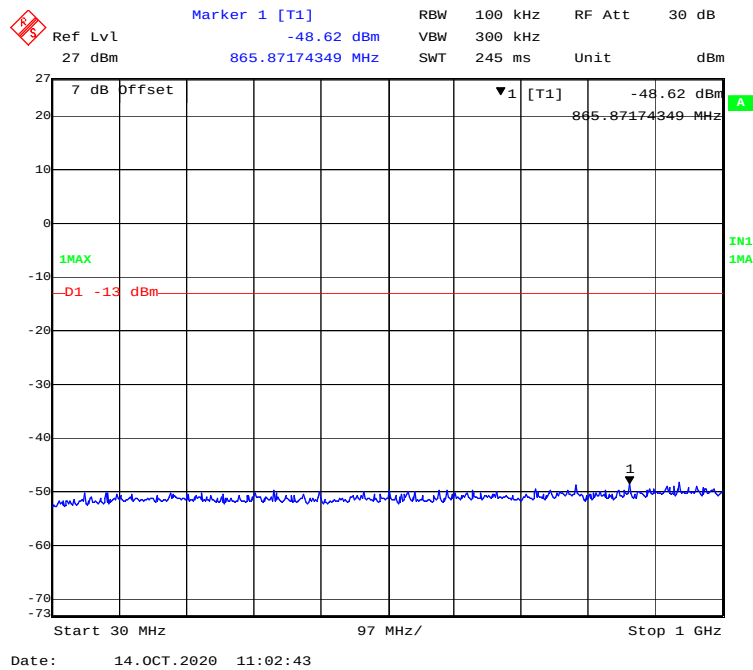
30 MHz - 1 GHz (1.4 MHz, QPSK, Middle Channel)



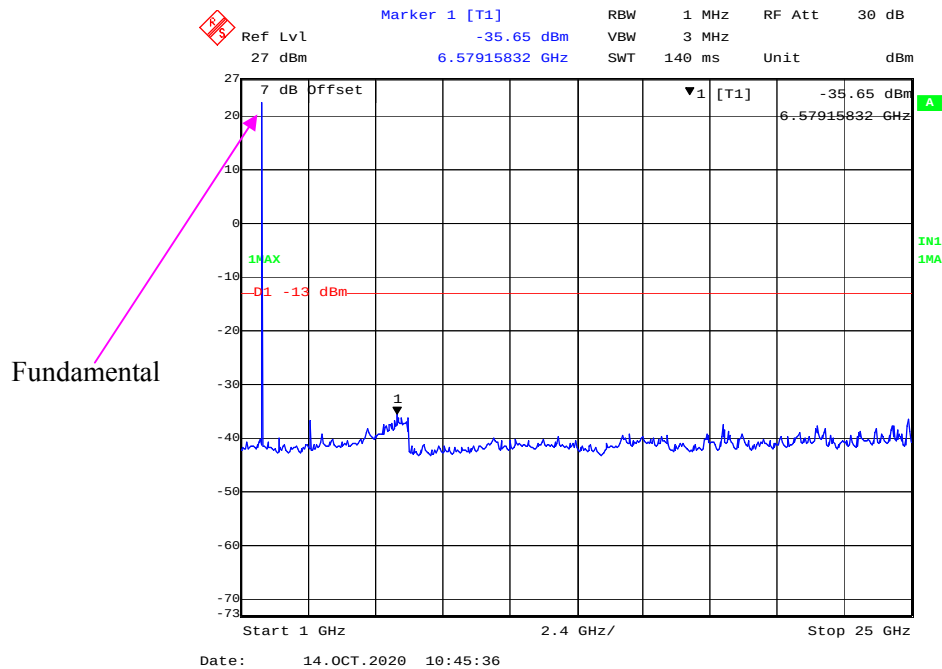
1 GHz – 20 GHz (1.4 MHz, QPSK, Middle Channel)



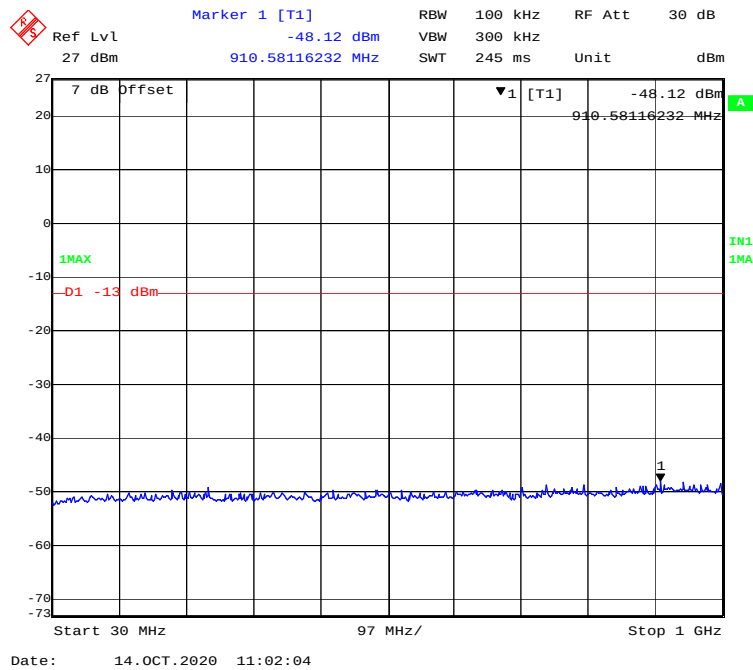
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Middle Channel)



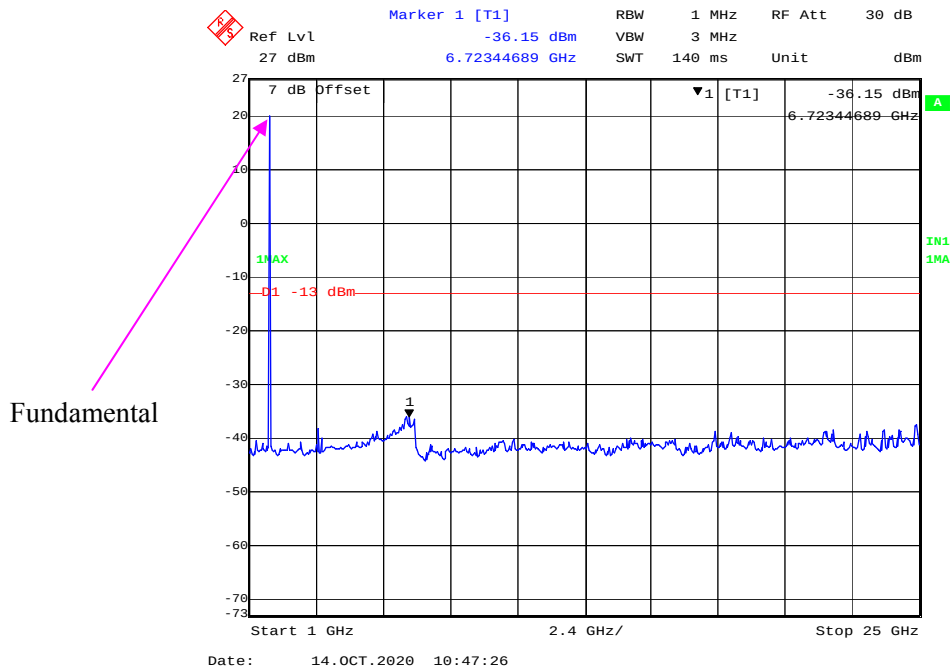
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Middle Channel)



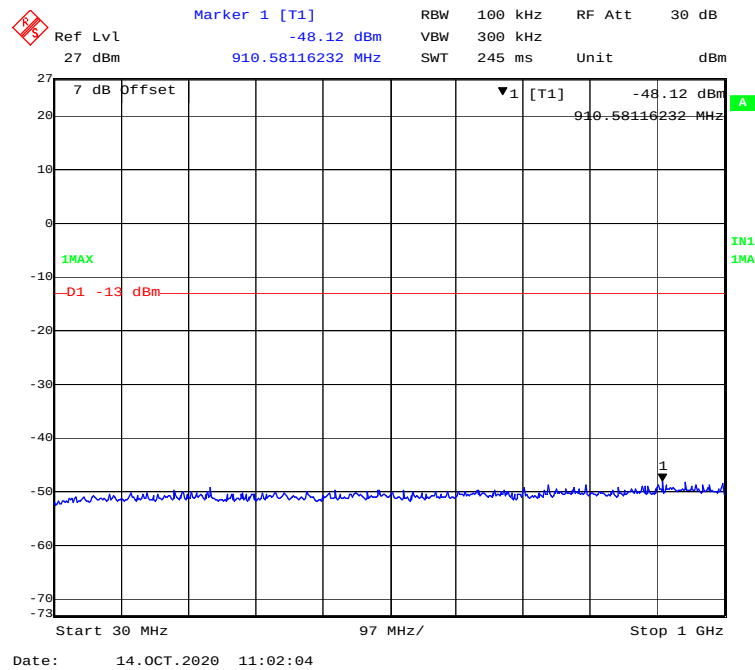
30 MHz - 1 GHz (3 MHz, QPSK, Middle Channel)



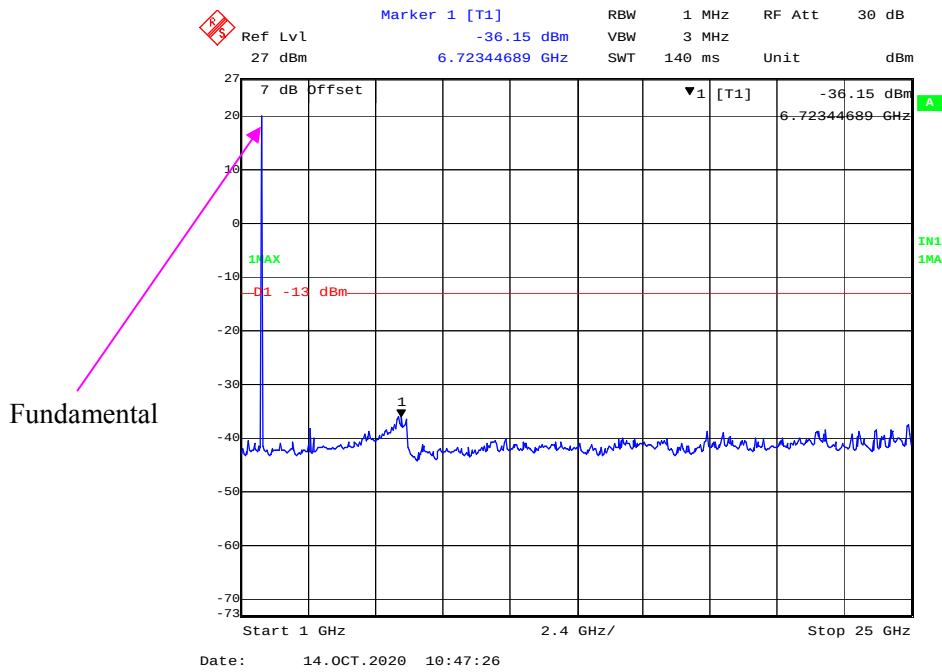
1 GHz – 20 GHz (3 MHz, QPSK, Middle Channel)



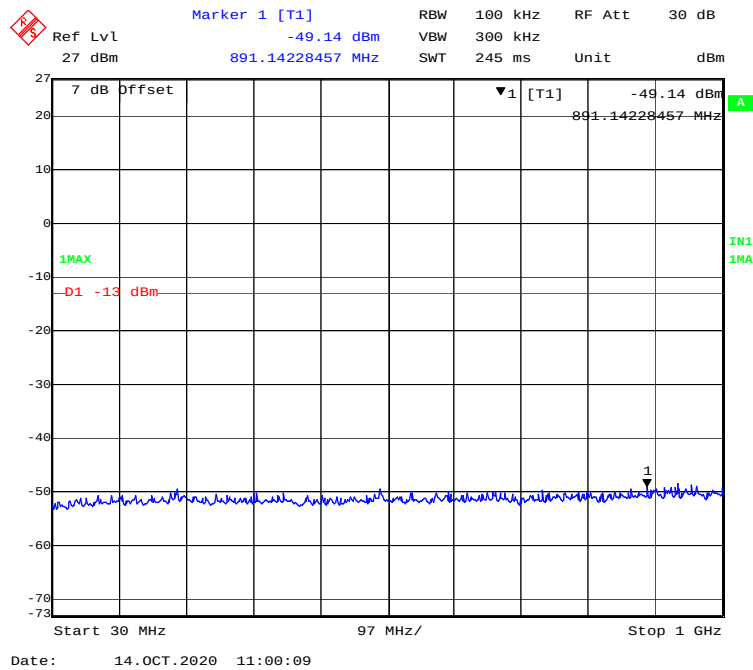
30 MHz - 1 GHz (3 MHz, 16-QAM, Middle Channel)



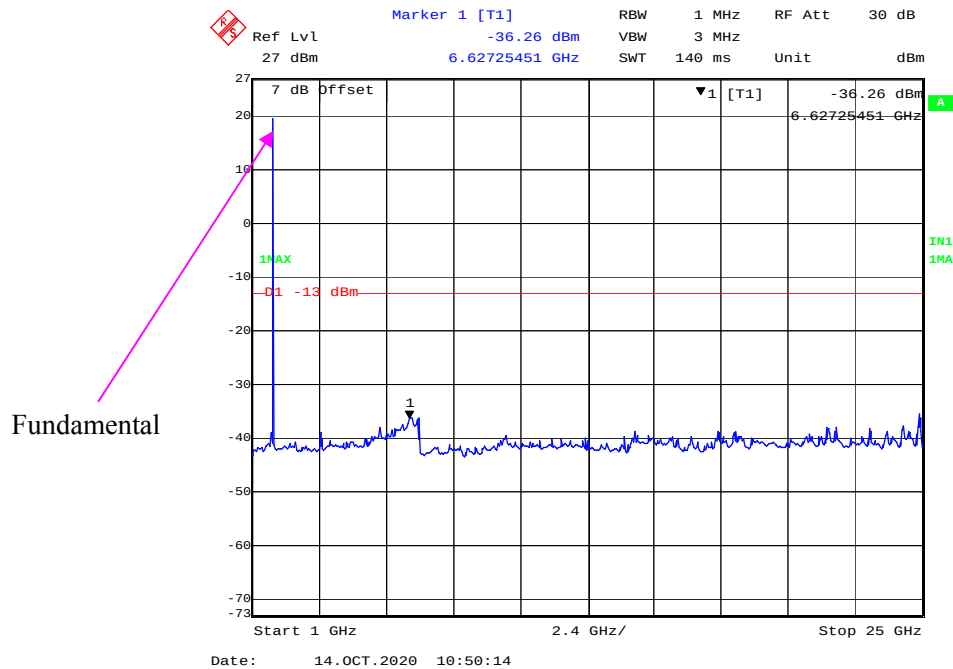
1 GHz – 20 GHz (3 MHz, 16-QAM, Middle Channel)



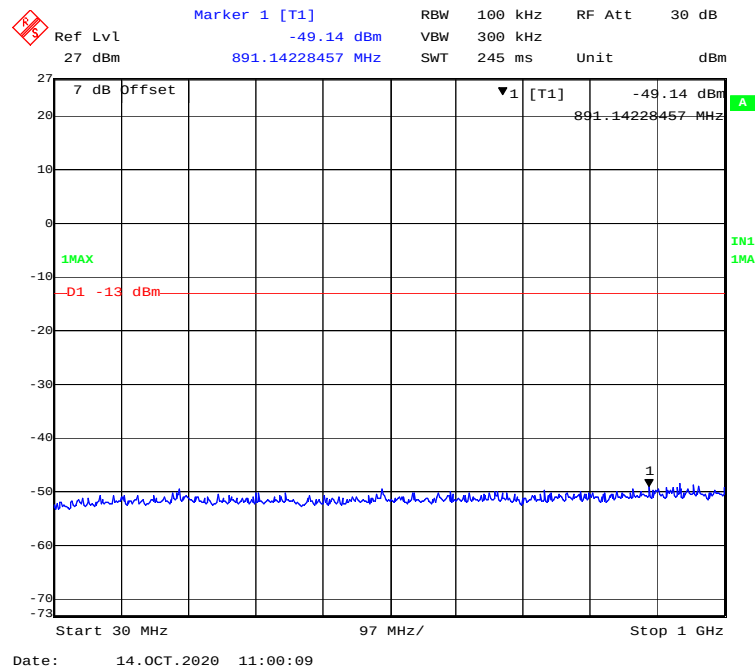
30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)



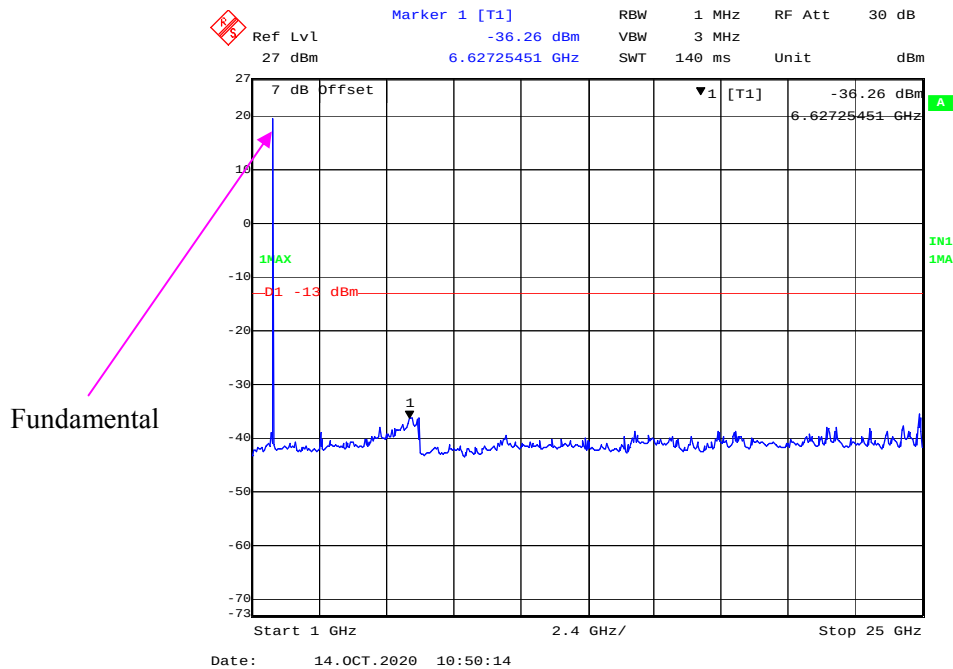
1 GHz – 20 GHz (5 MHz, QPSK, Middle Channel)



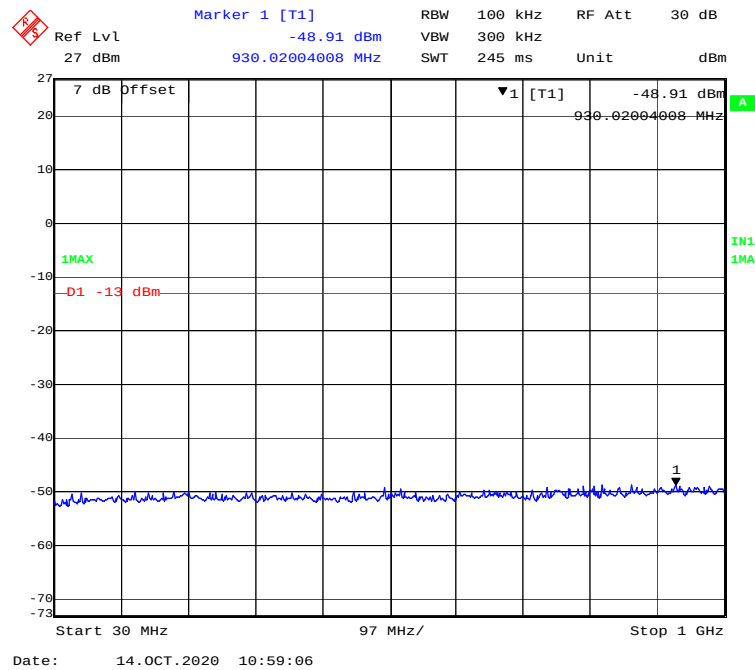
30 MHz - 1 GHz (5 MHz, 16-QAM, Middle Channel)



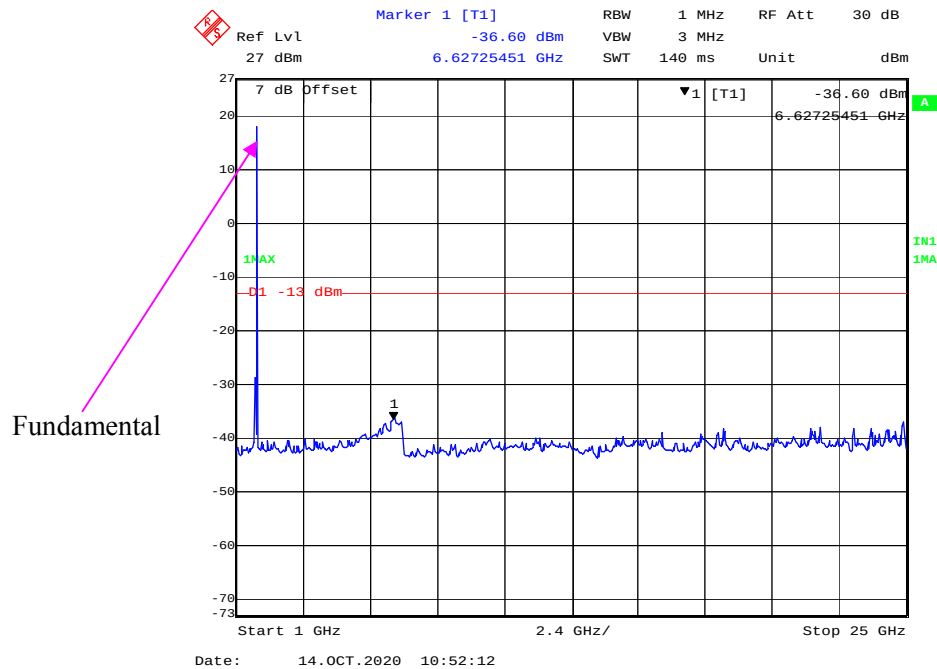
1 GHz – 20 GHz (5 MHz, 16-QAM, Middle Channel)



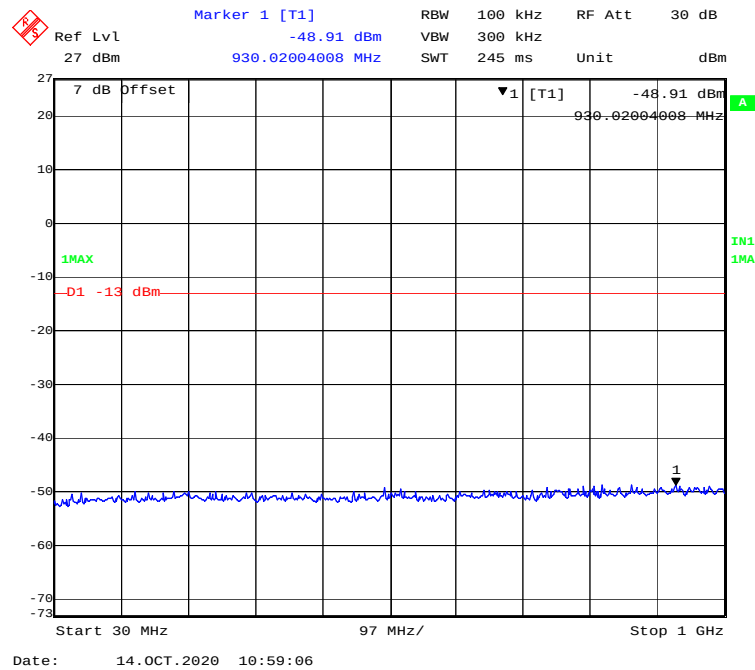
30 MHz - 1 GHz (10 MHz, QPSK, Middle Channel)



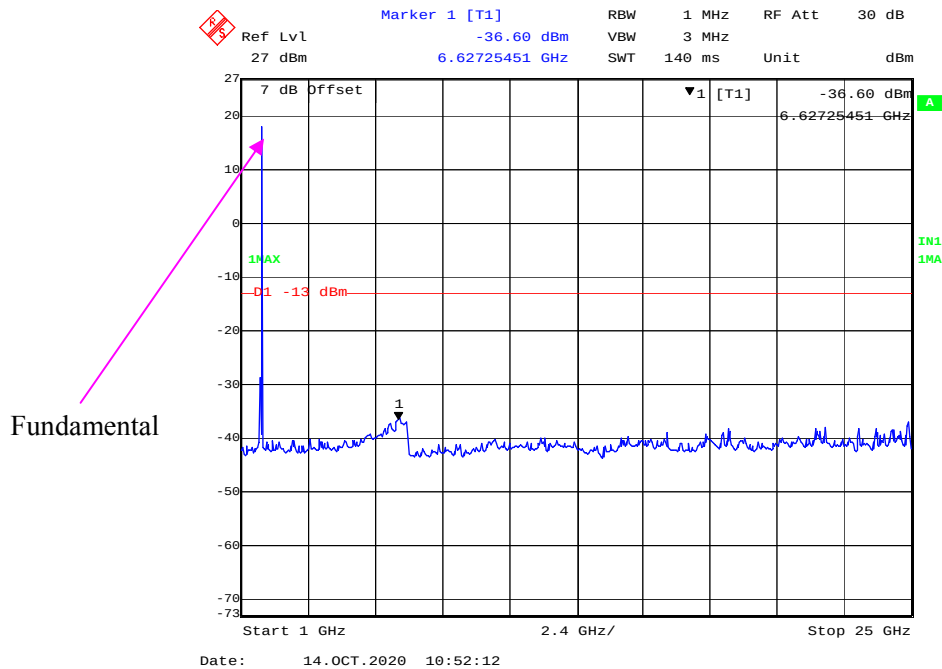
1 GHz – 20 GHz (10 MHz, QPSK, Middle Channel)



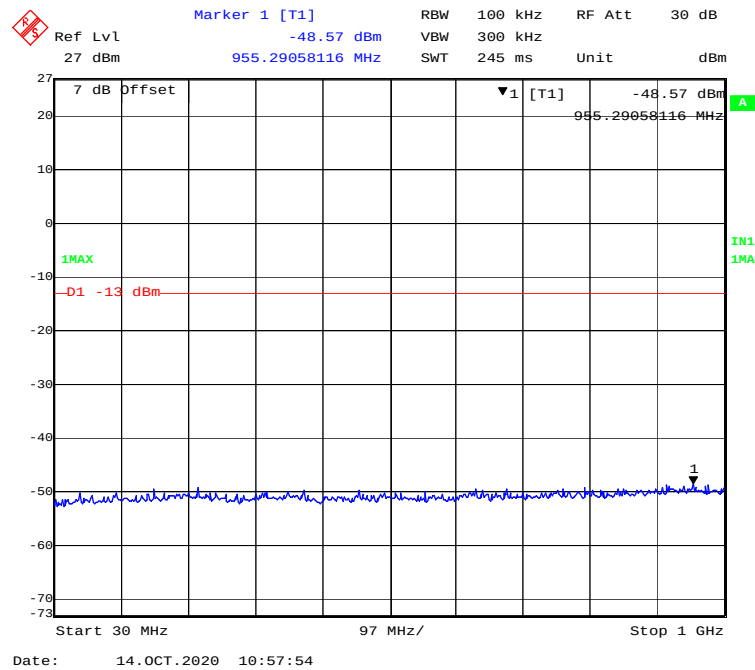
30 MHz - 1 GHz (10 MHz, 16-QAM, Middle Channel)



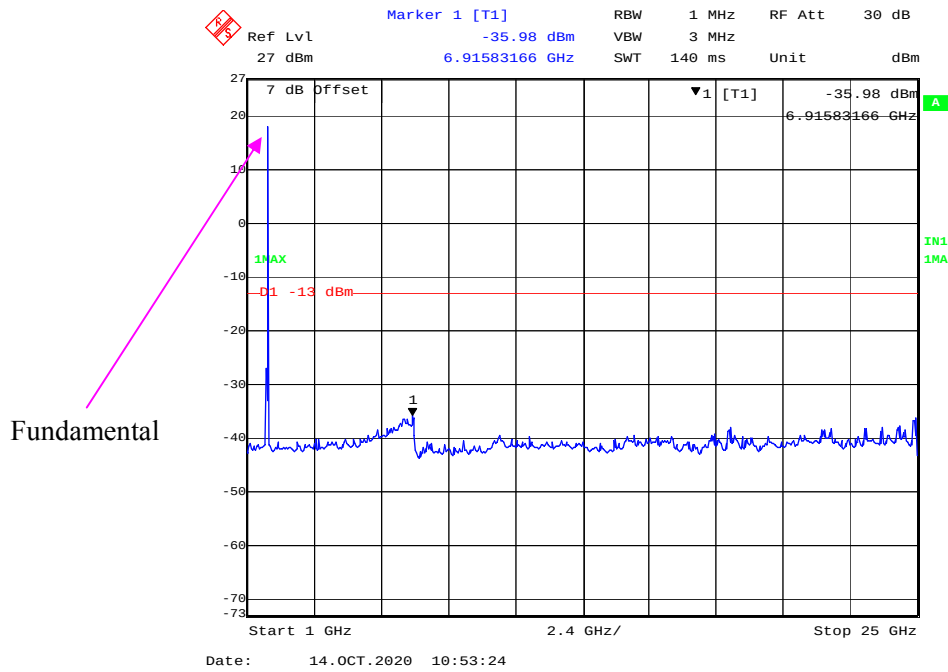
1 GHz – 20 GHz (10 MHz, 16-QAM, Middle Channel)



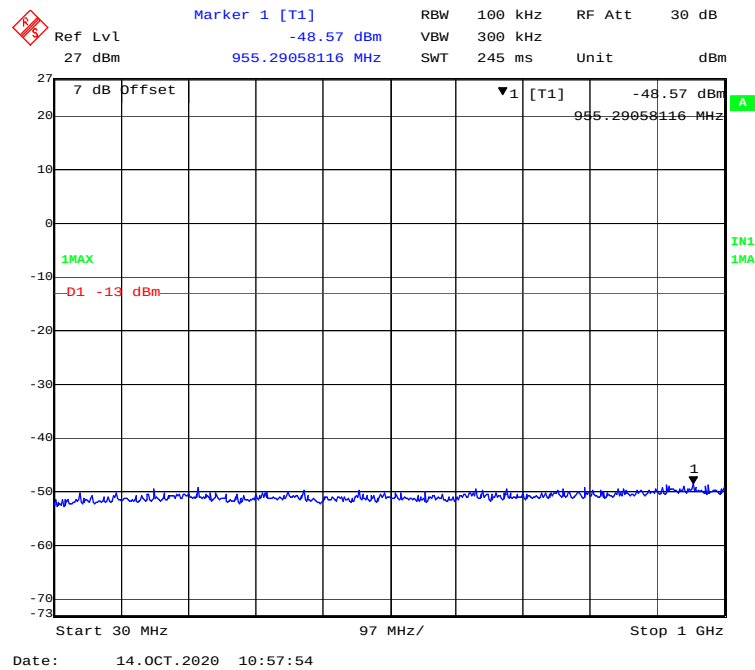
30 MHz - 1 GHz (15 MHz, QPSK, Middle Channel)



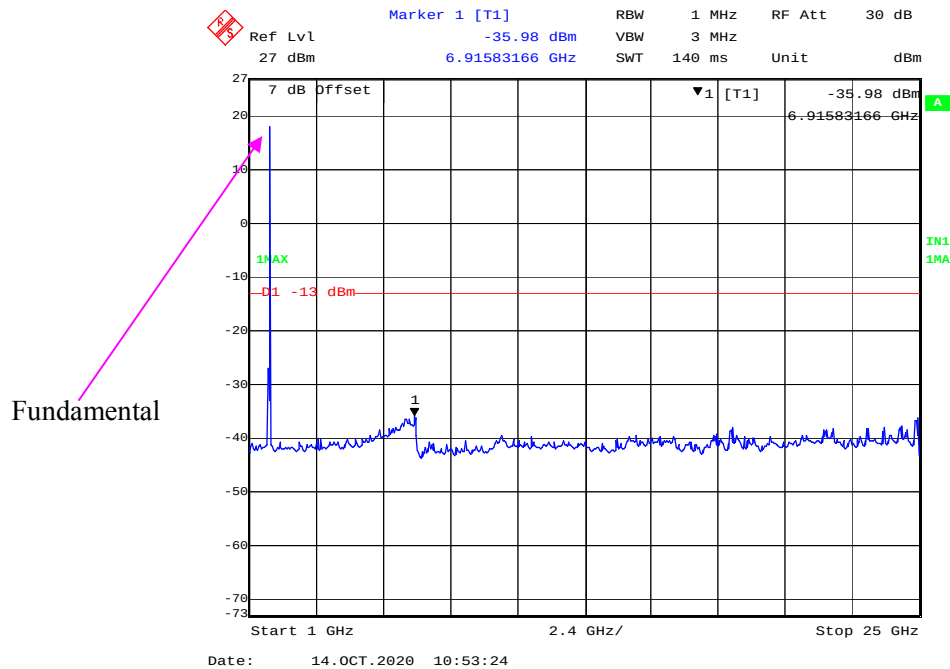
1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



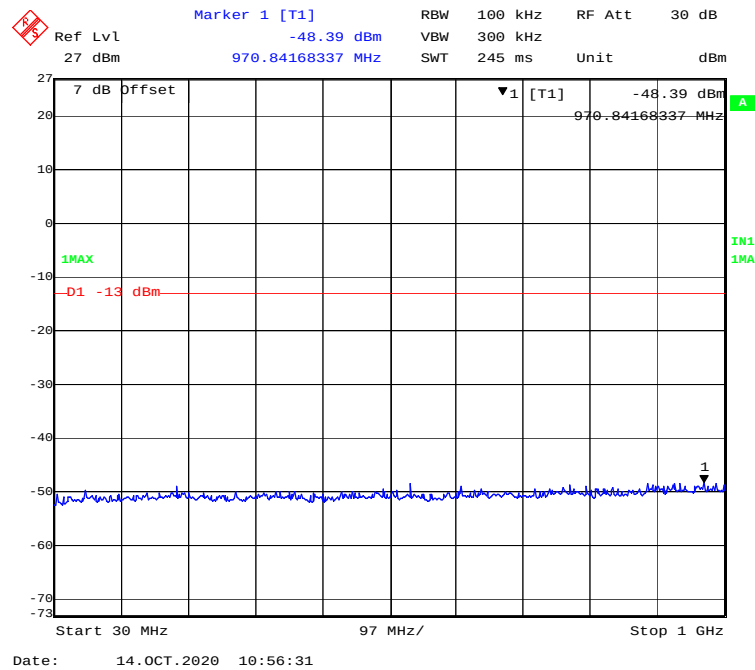
30 MHz - 1 GHz (15 MHz, 16-QAM, Middle Channel)



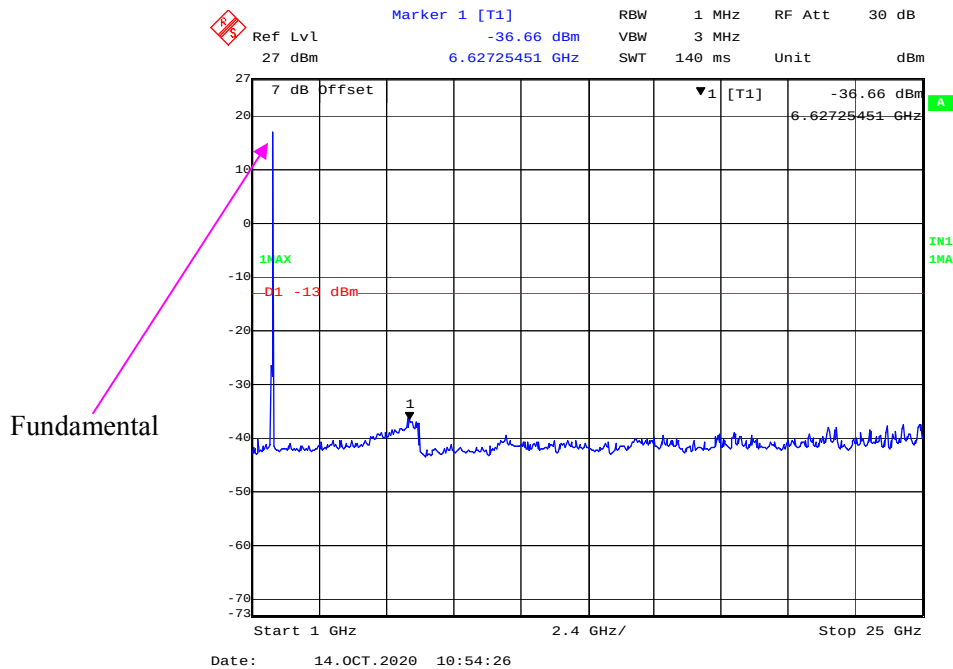
1 GHz – 20 GHz (15 MHz, 16-QAM, Middle Channel)



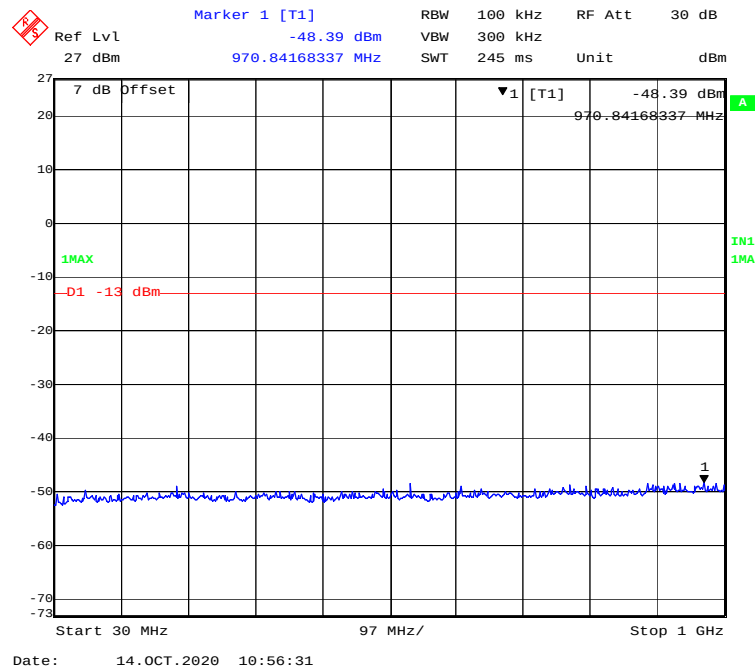
30 MHz - 1 GHz (20 MHz, QPSK, Middle Channel)



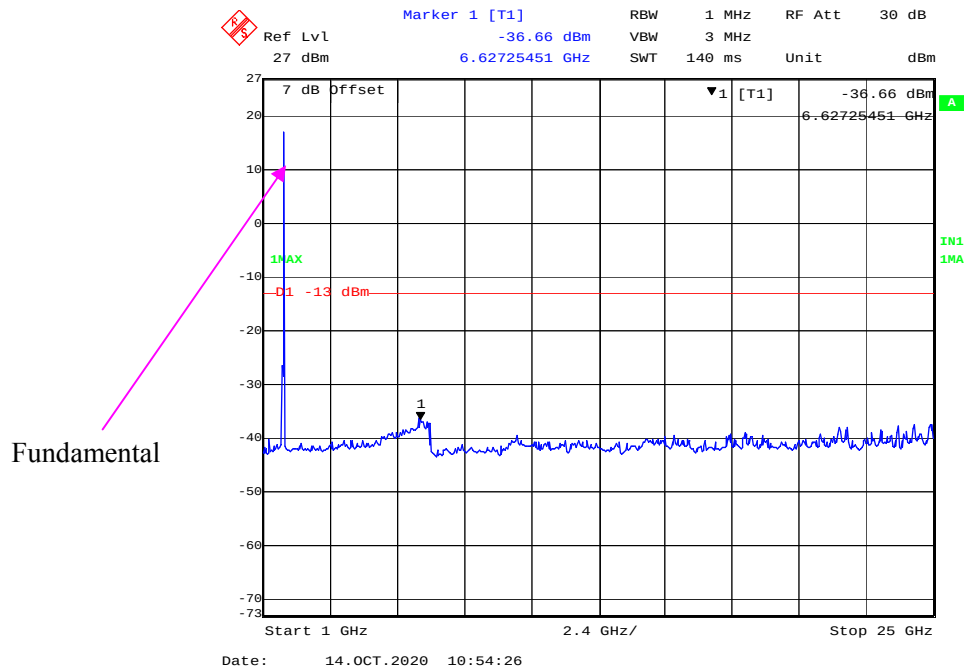
1 GHz – 20 GHz (20 MHz, QPSK, Middle Channel)



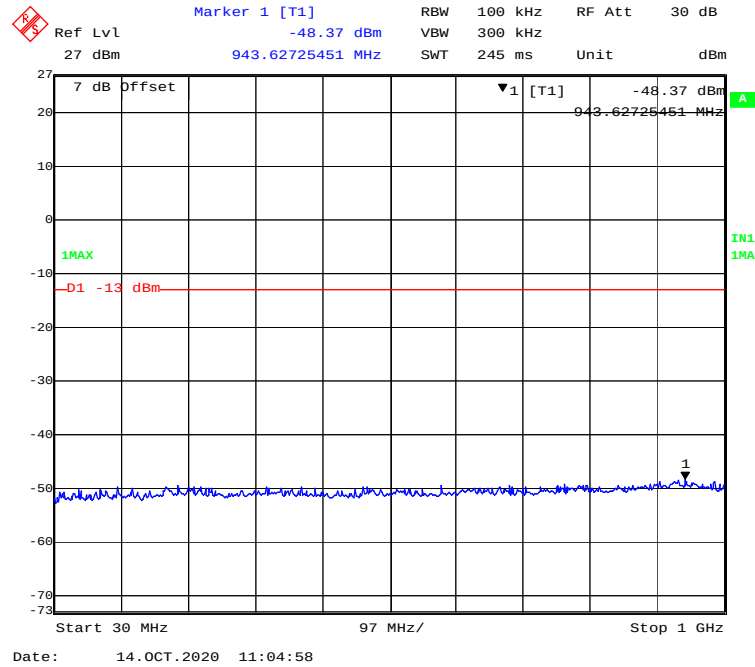
30 MHz - 1 GHz (20 MHz, 16-QAM, Middle Channel)



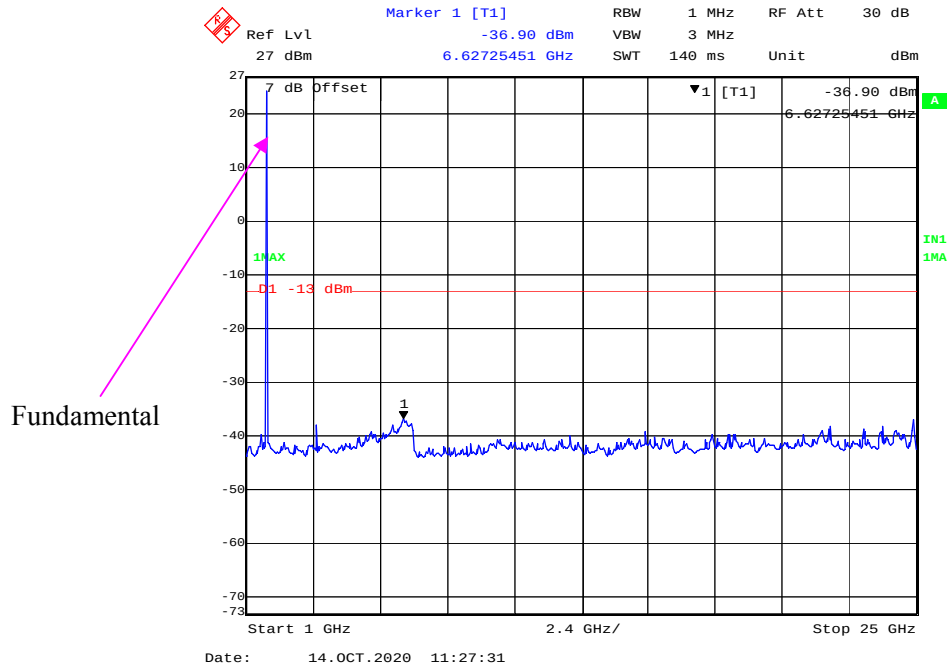
1 GHz – 20 GHz (20 MHz, 16-QAM, Middle Channel)



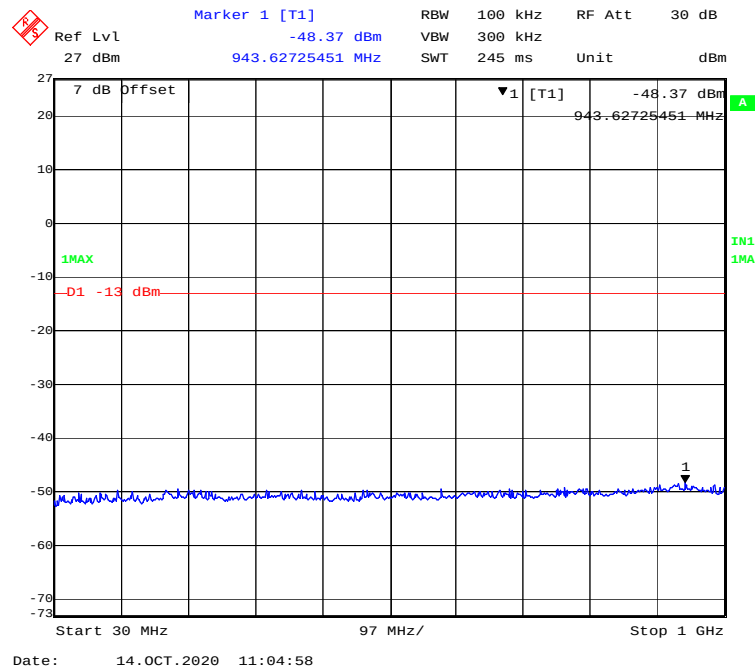
30 MHz - 1 GHz (1.4 MHz, QPSK, High Channel)



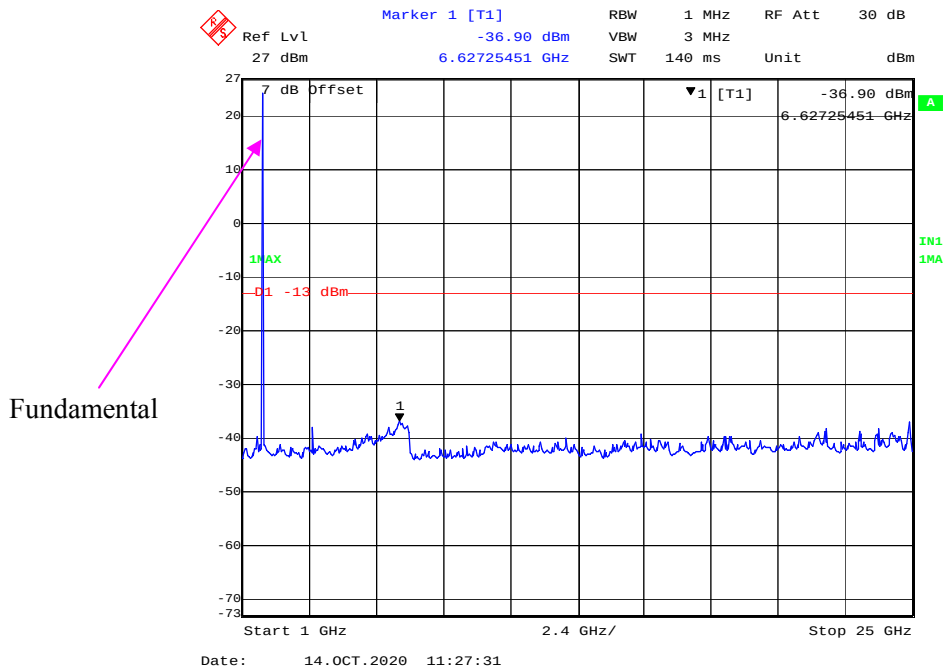
1 GHz – 20 GHz (1.4 MHz, QPSK, High Channel)



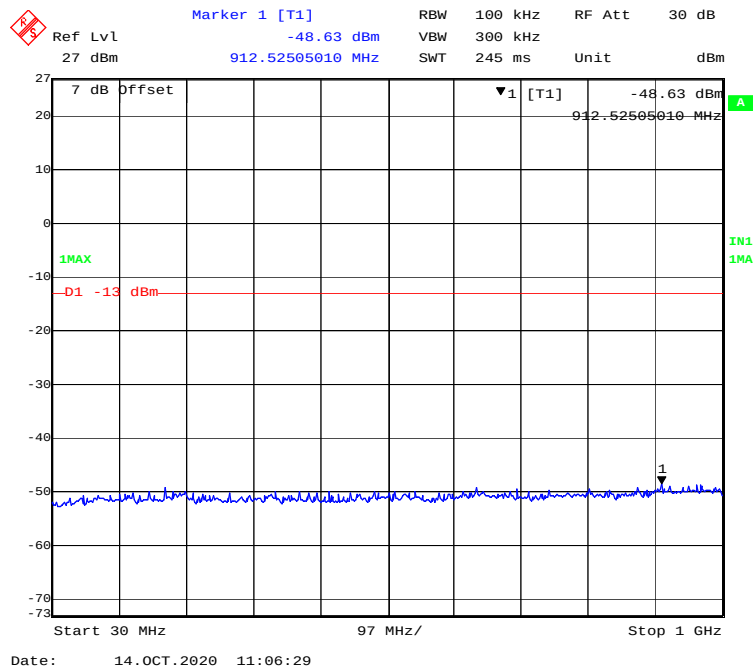
30 MHz - 1 GHz (1.4 MHz, 16-QAM, High Channel)



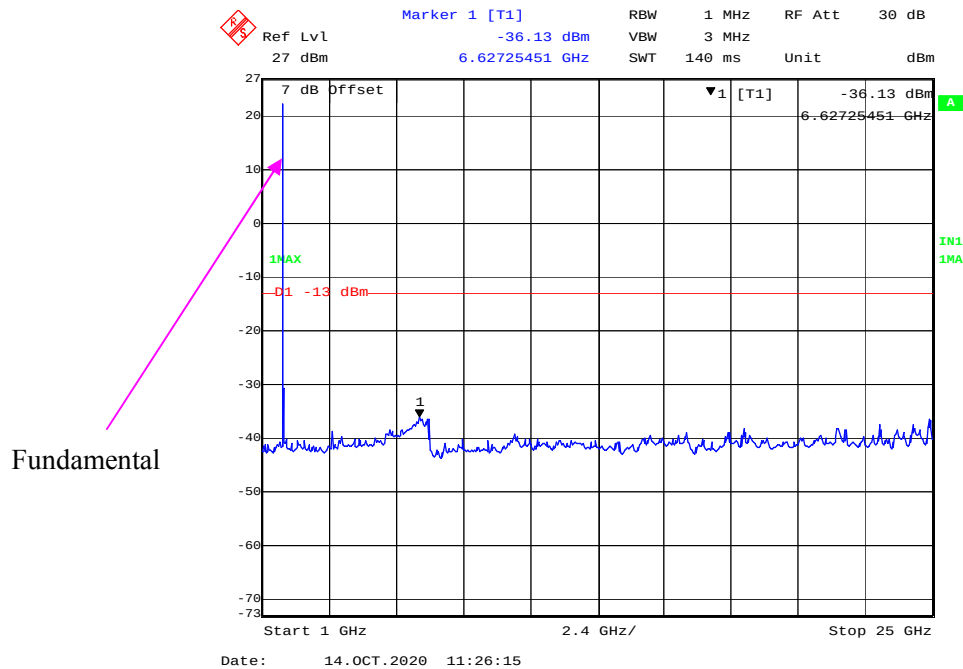
1 GHz – 20 GHz (1.4 MHz, 16-QAM, High Channel)



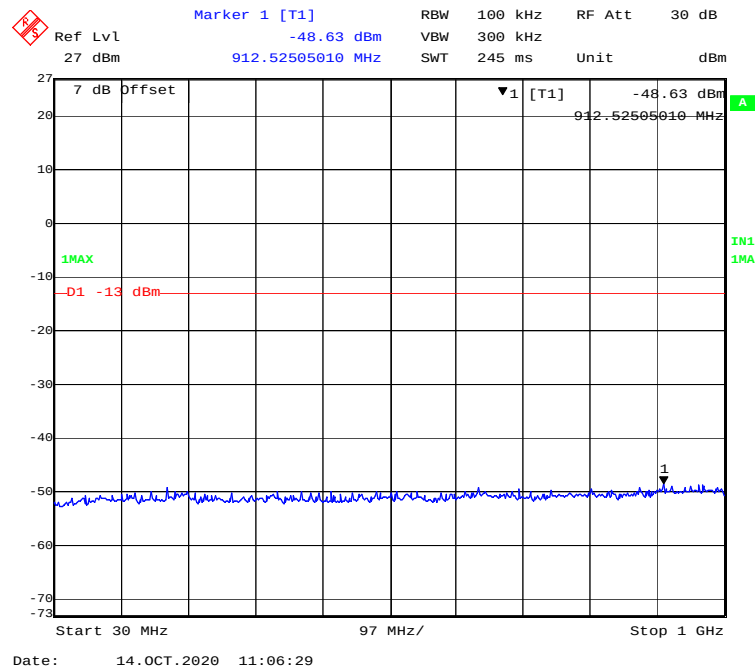
30 MHz - 1 GHz (3 MHz, QPSK, High Channel)



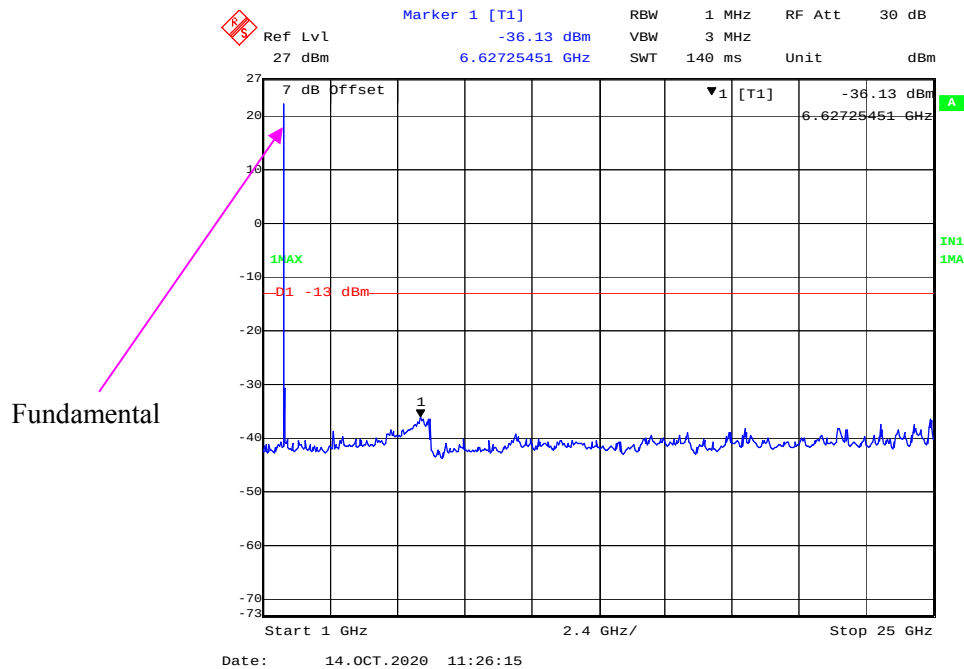
1 GHz – 20 GHz (3 MHz, QPSK, High Channel)



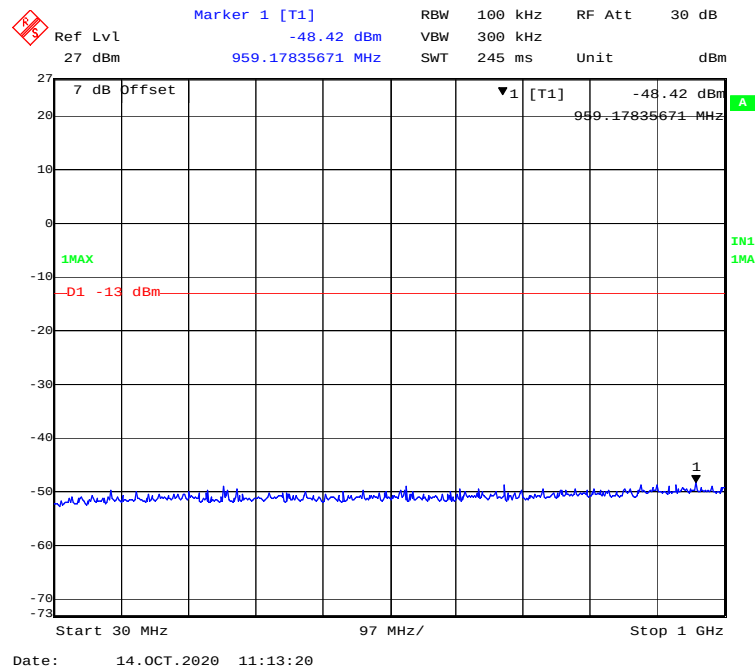
30 MHz - 1 GHz (3 MHz, 16-QAM, High Channel)



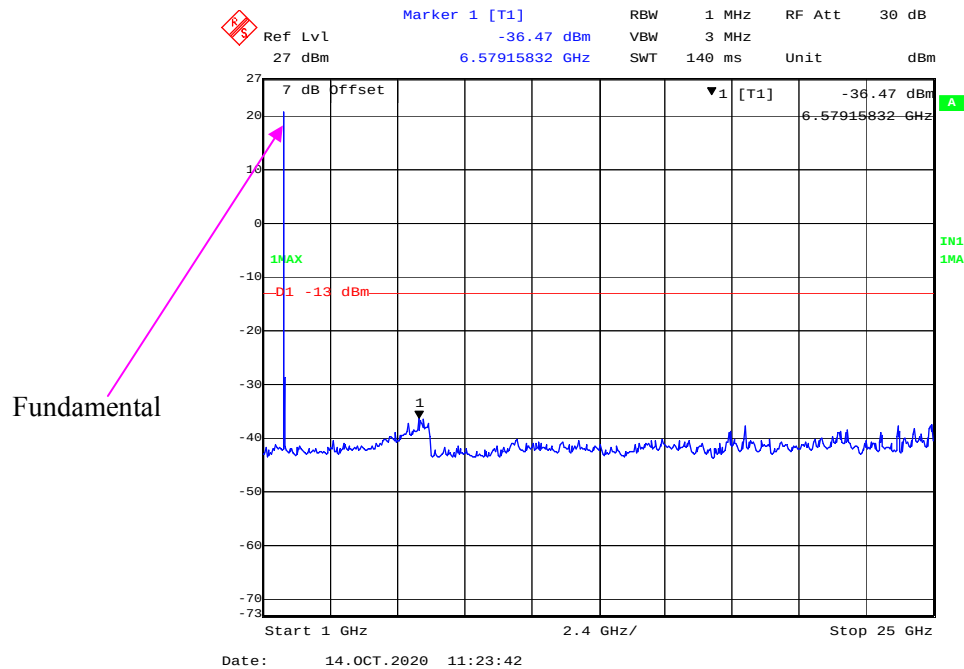
1 GHz – 20 GHz (3 MHz, 16-QAM, High Channel)



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



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



Ref Lvl 27 dBm
 Marker 1 [T1] -48.42 dBm
 959.17835671 MHz
 RBW 100 kHz
 VBW 300 kHz
 SWT 245 ms
 RF Att 30 dB
 Unit dBm

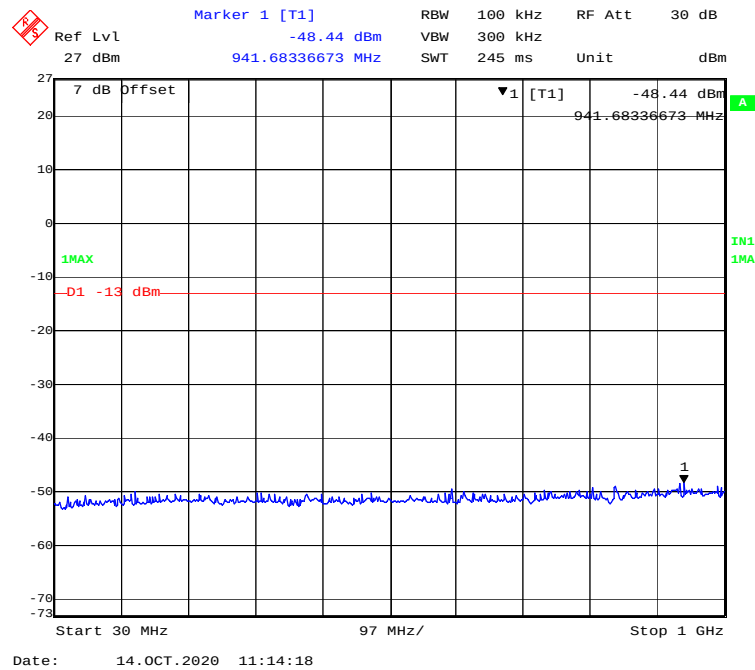
7 dB Offset
 ▼1 [T1] -48.42 dBm
 959.17835671 MHz
 1MAX
 D1 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 14.OCT.2020 11:13:20

Ref Lvl 27 dBm
 Marker 1 [T1] -36.47 dBm
 RBW 1 MHz
 VBW 3 MHz
 SWT 140 ms
 RF Att 30 dB
 Unit dBm

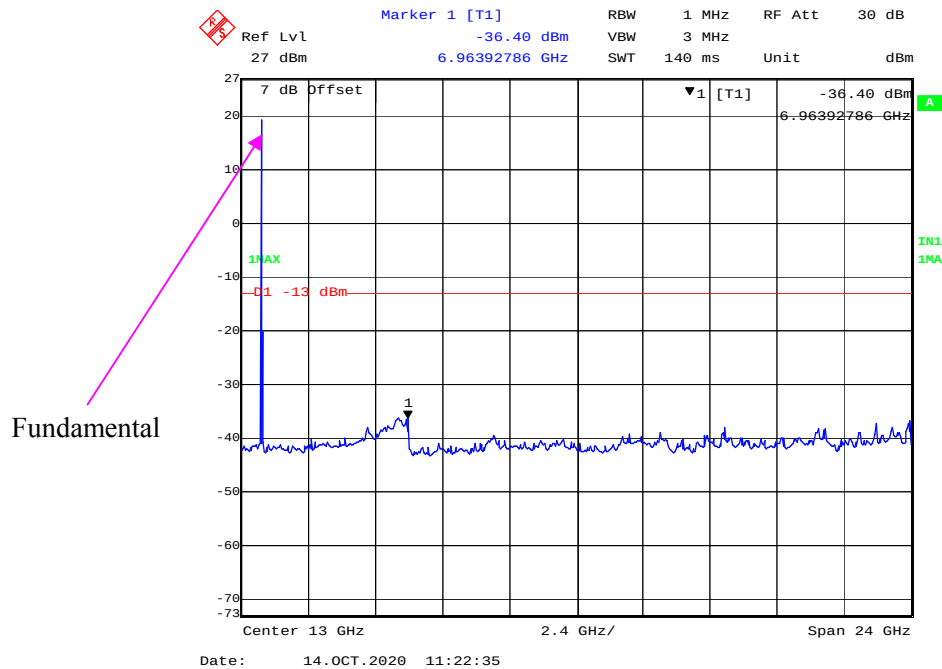
7 dB Offset
 1MAX
 D1 -13 dBm
 1
 Start 1 GHz
 2.4 GHz/
 Stop 25 GHz
 Date: 14.OCT.2020 11:23:42

Fundamental

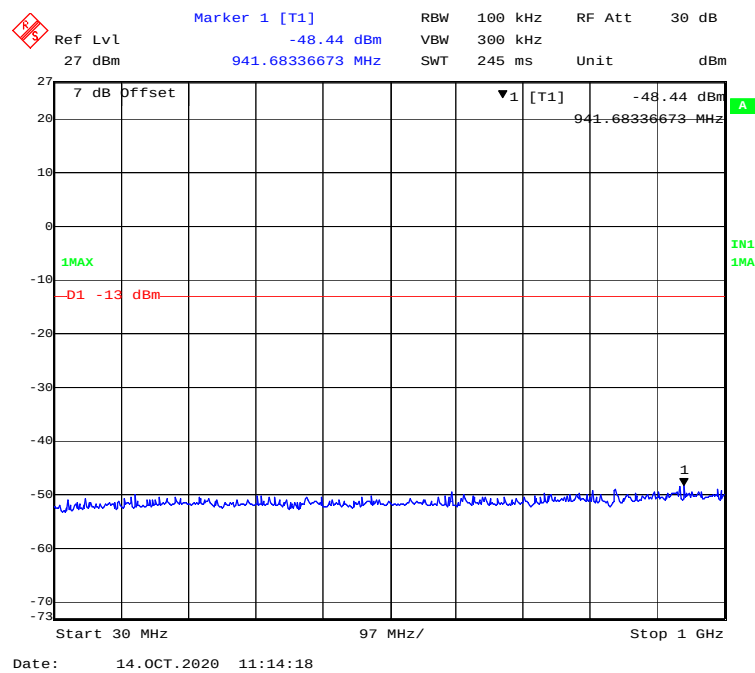
30 MHz - 1 GHz (10 MHz, QPSK, High Channel)



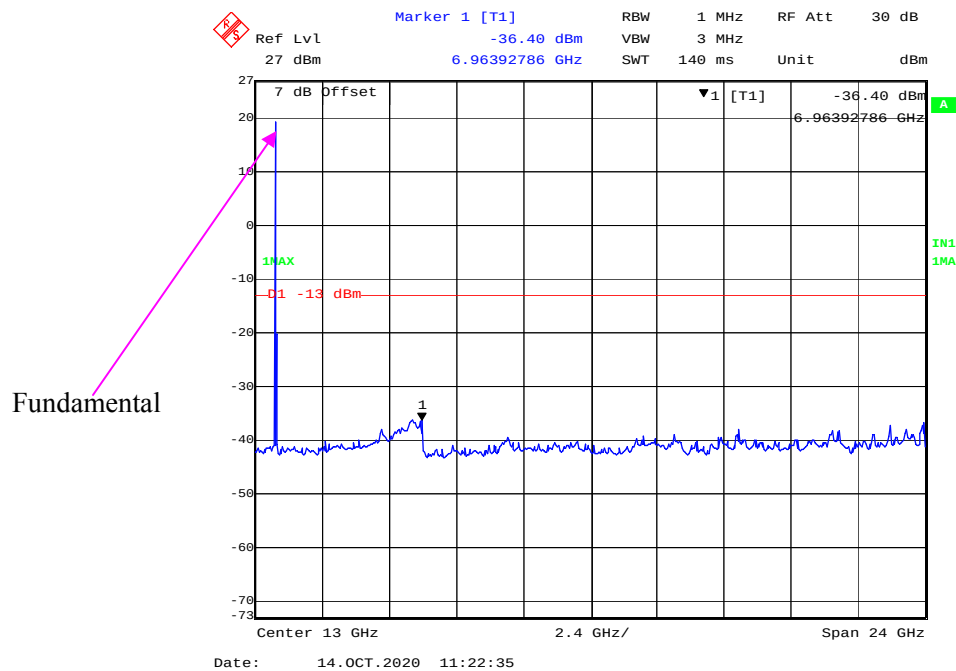
1 GHz – 20 GHz (10 MHz, QPSK, High Channel)



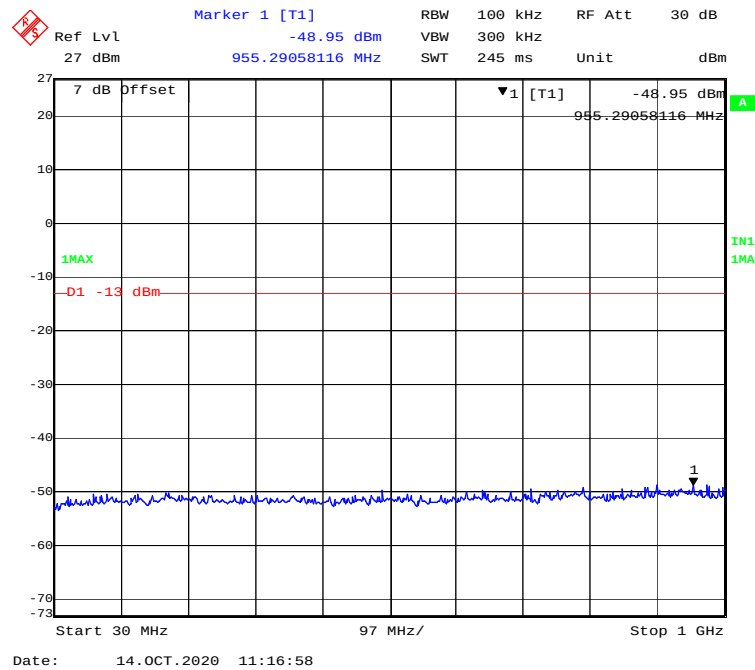
30 MHz - 1 GHz (10 MHz, 16-QAM, High Channel)



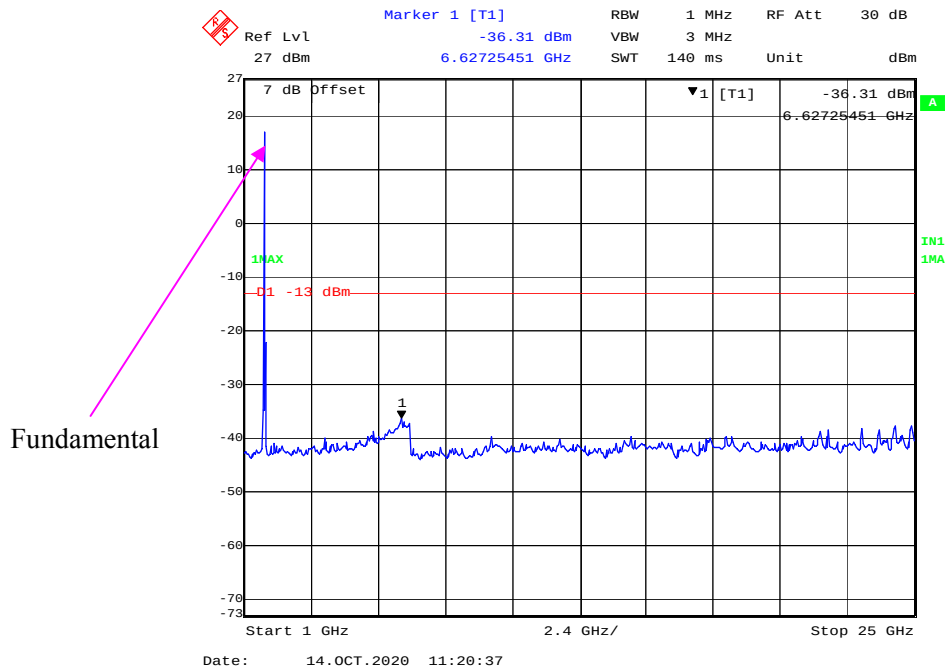
1 GHz – 20 GHz (10 MHz, 16-QAM, High Channel)



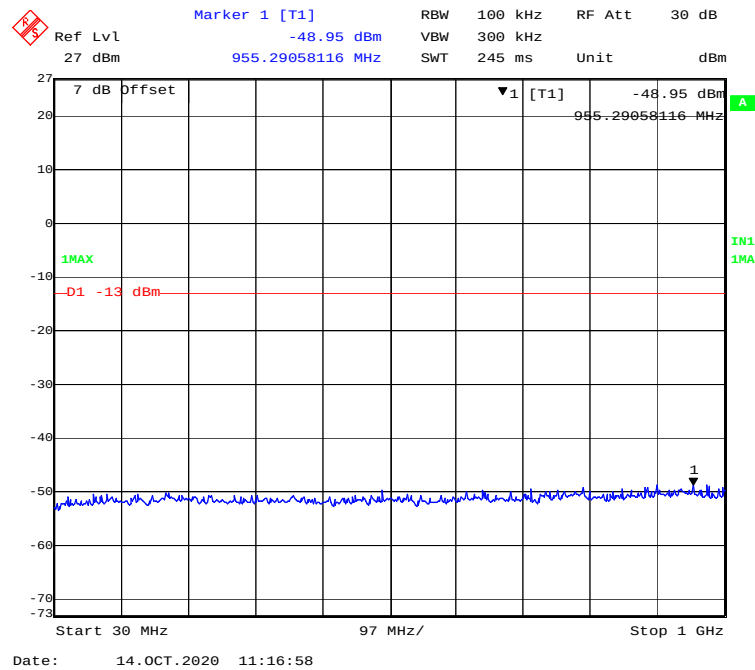
30 MHz - 1 GHz (15 MHz, QPSK, High Channel)



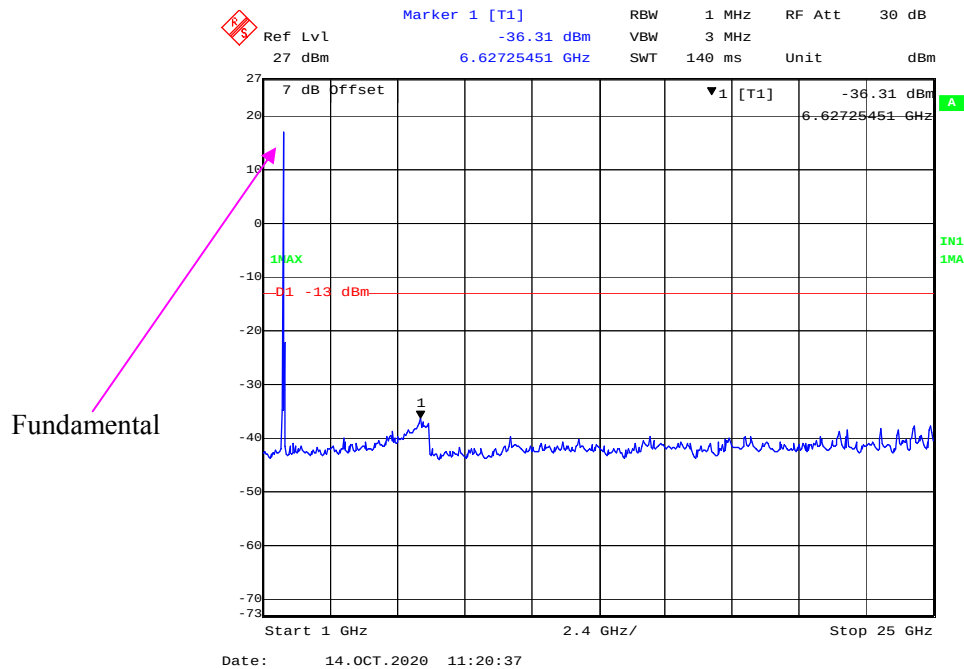
1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



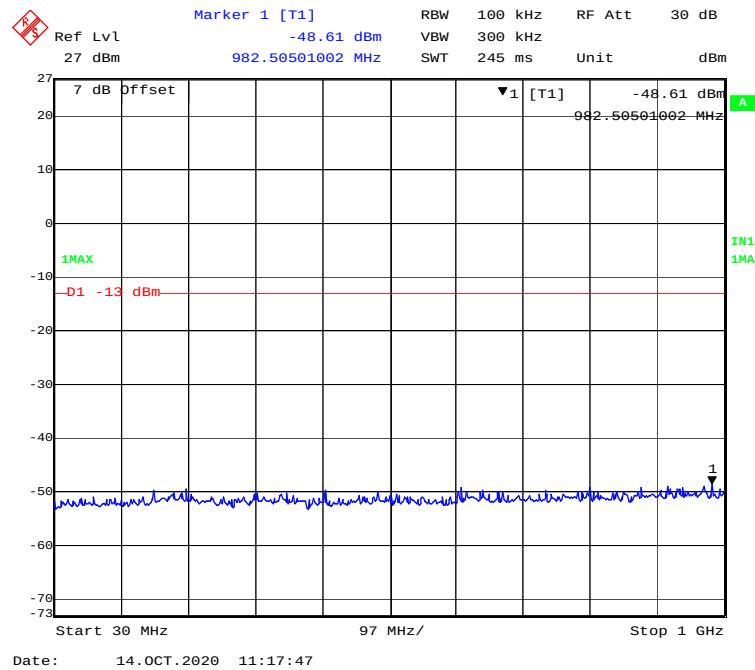
30 MHz - 1 GHz (15 MHz, 16-QAM, High Channel)



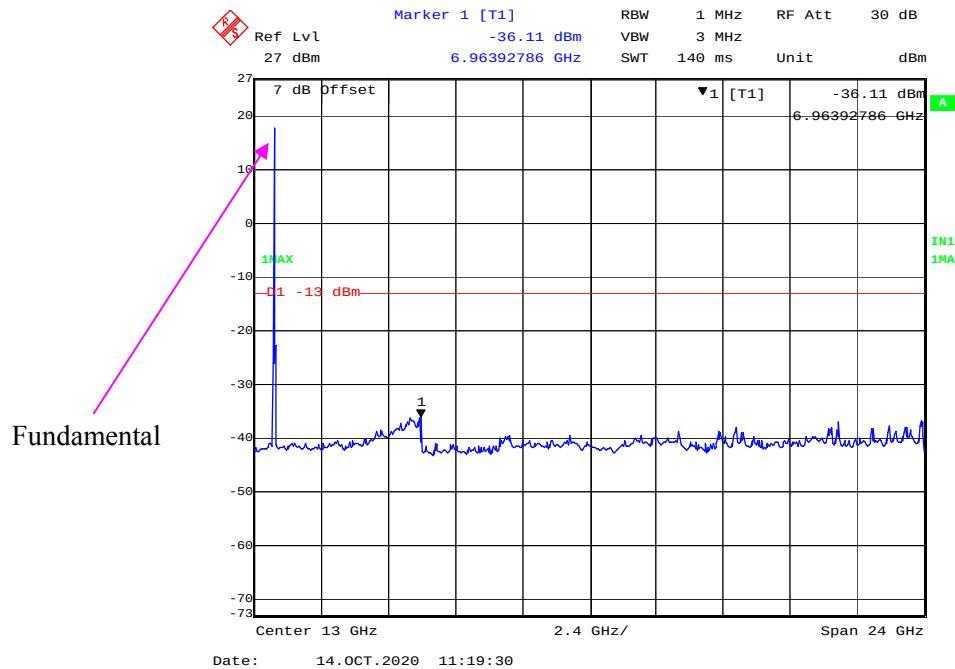
1 GHz – 20 GHz (15 MHz, 16-QAM, High Channel)



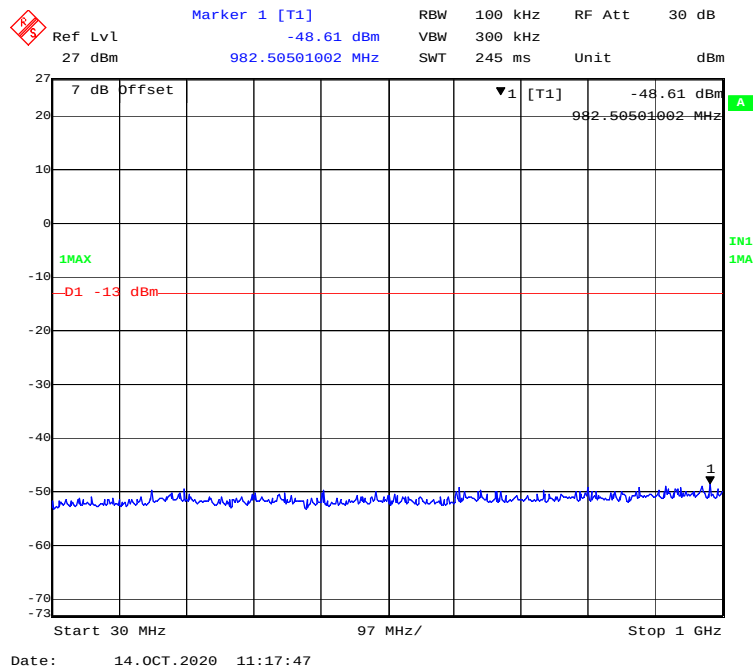
30 MHz - 1 GHz (20 MHz, QPSK, High Channel)



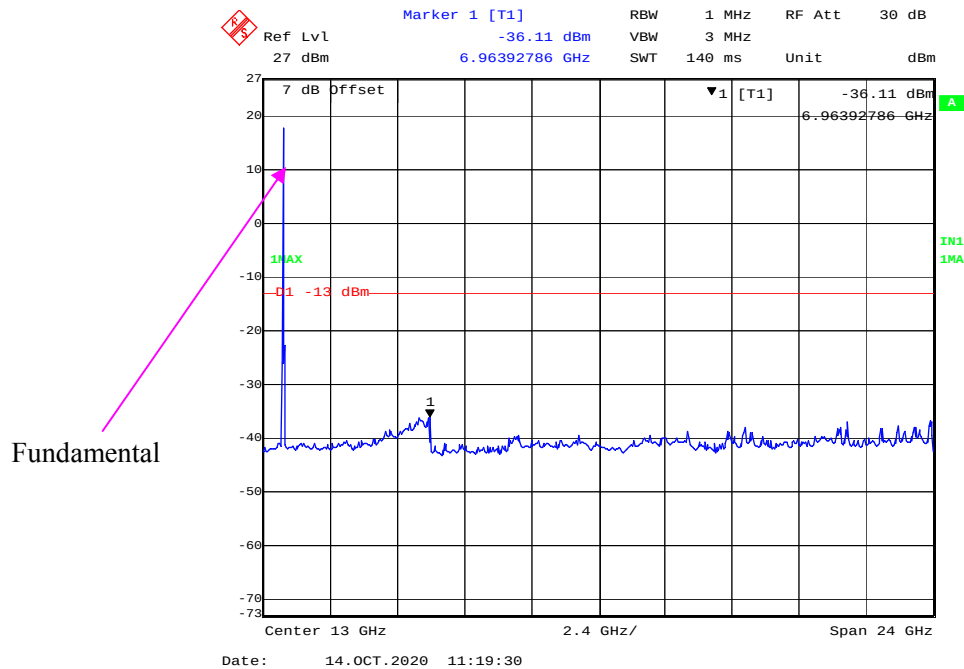
1 GHz – 20 GHz (20 MHz, QPSK, High Channel)



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

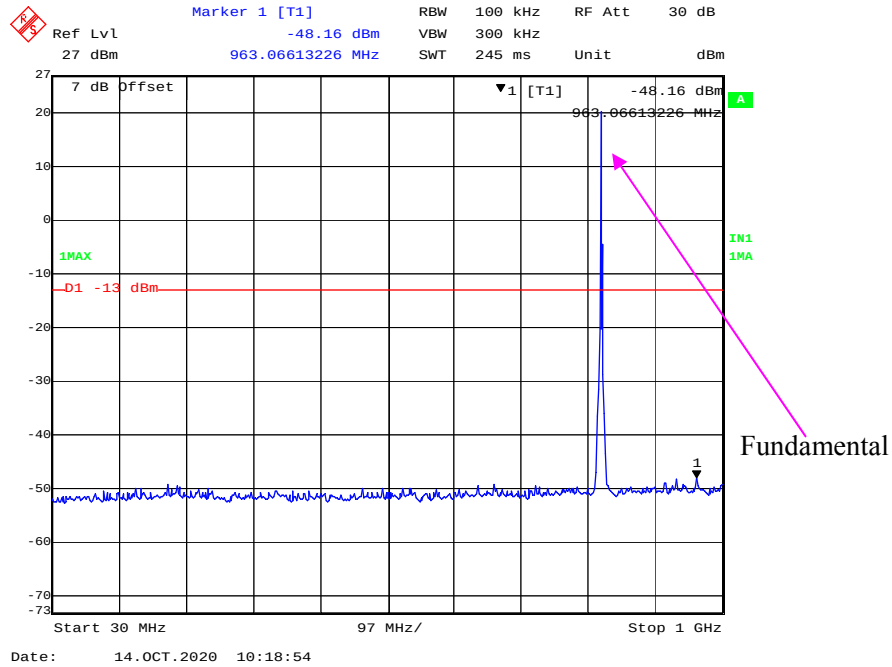


1 GHz – 20 GHz (20 MHz, 16-QAM, High Channel)

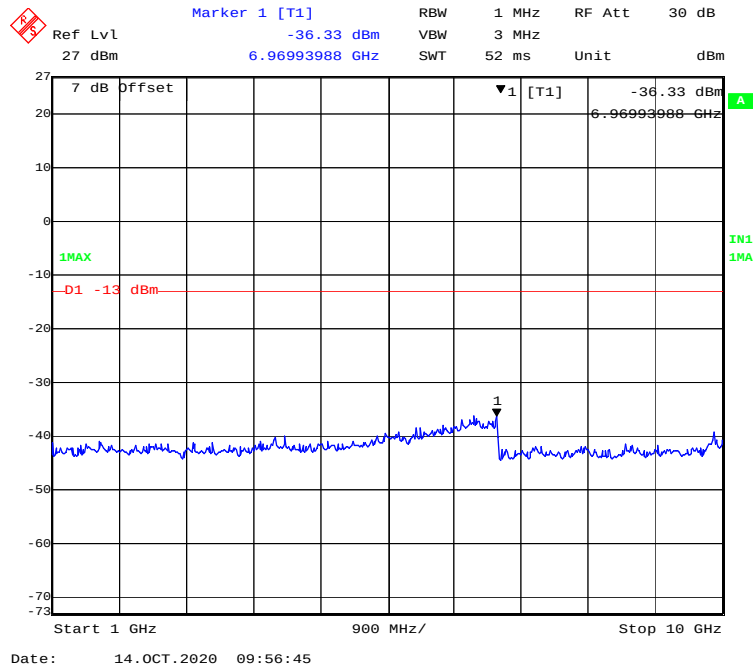


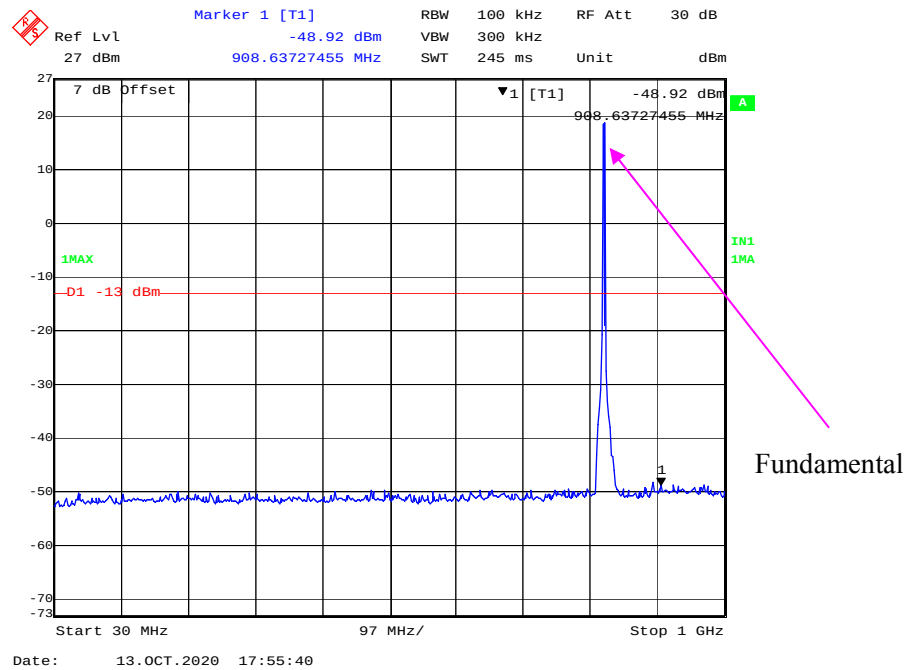
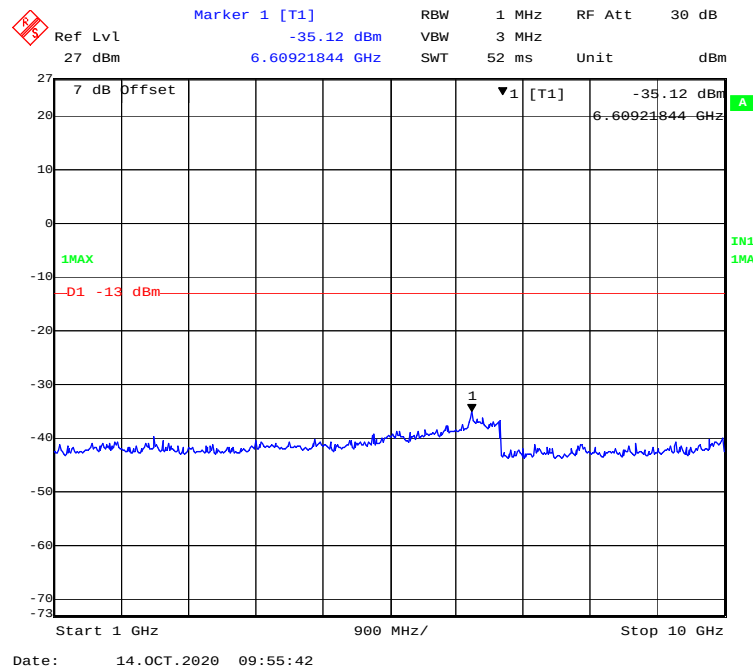
LTE Band 5:

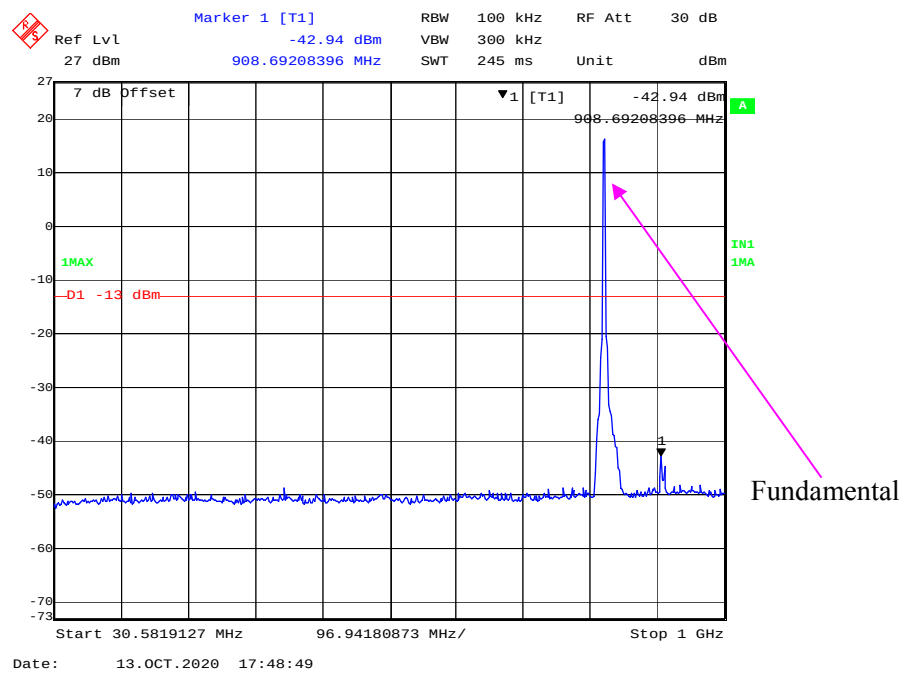
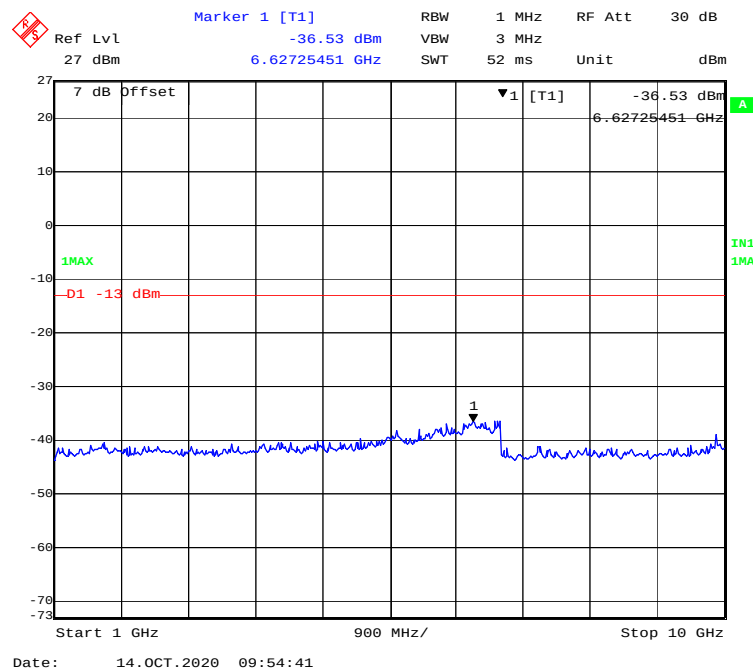
30 MHz - 1 GHz (QPSK, 1.4 MHz, Low Channel)



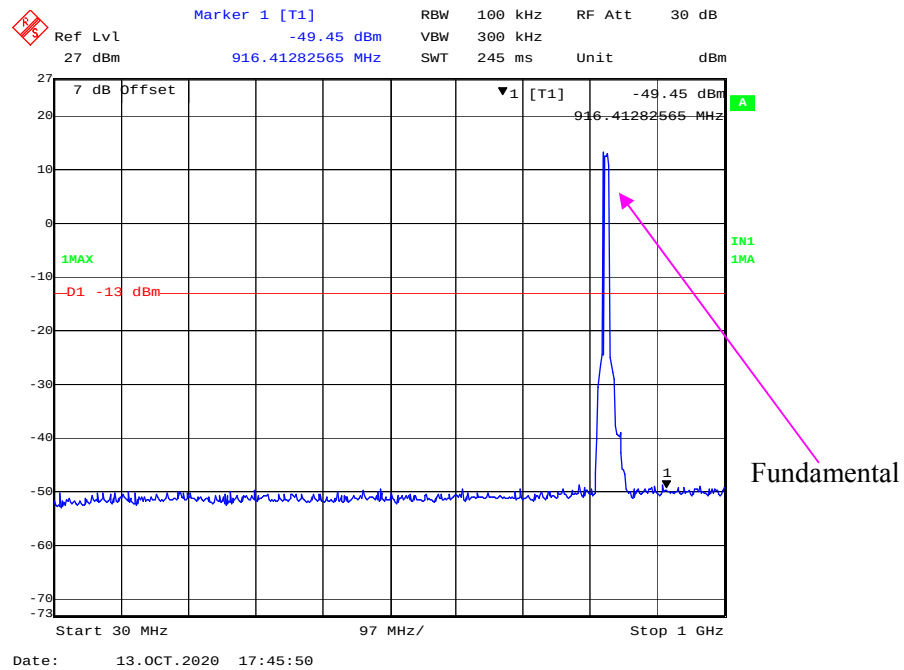
1 GHz – 10 GHz (QPSK, 1.4 MHz, Low Channel)



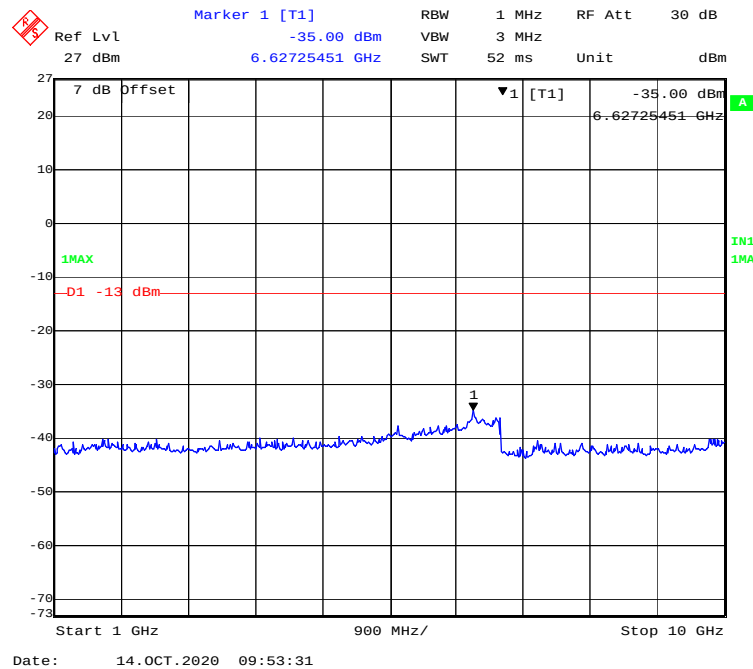
30 MHz - 1 GHz (QPSK, 3.0 MHz, Low Channel)**1 GHz – 10 GHz (QPSK, 3.0 MHz, Low Channel)**

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

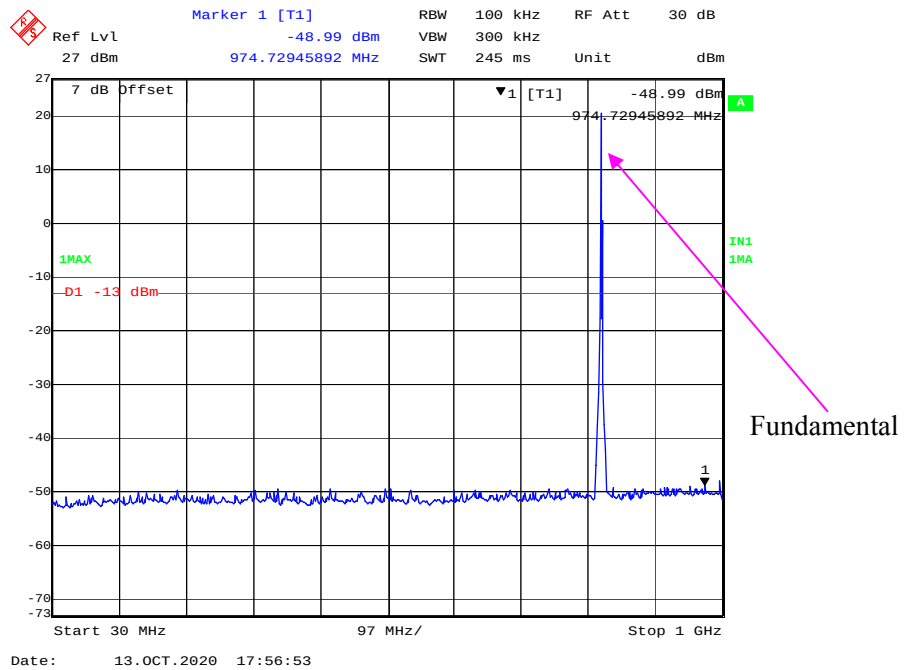
30 MHz - 1 GHz (QPSK, 10.0 MHz, Low Channel)



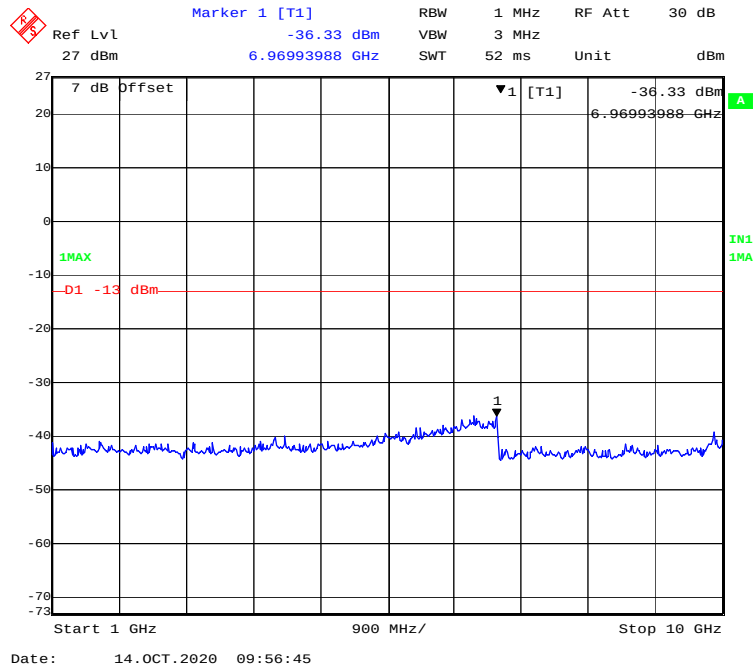
1 GHz – 10 GHz (QPSK, 10.0 MHz, Low Channel)

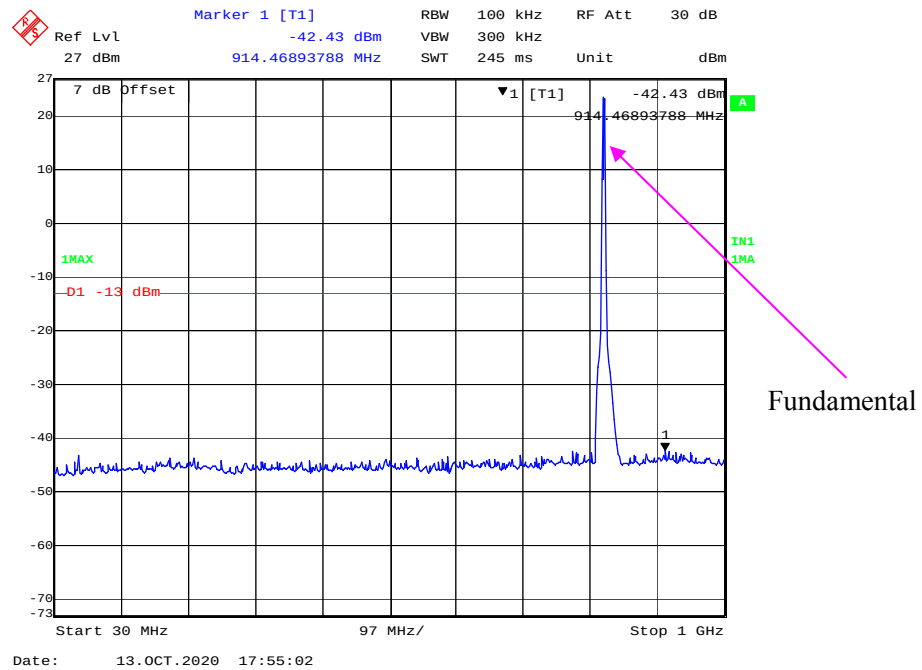
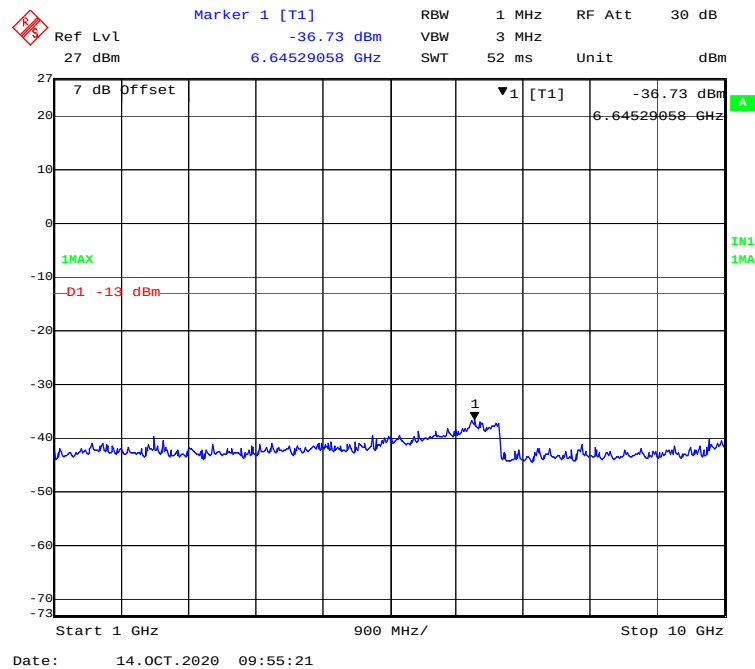


30 MHz - 1 GHz (16QAM, 1.4 MHz, Low Channel)

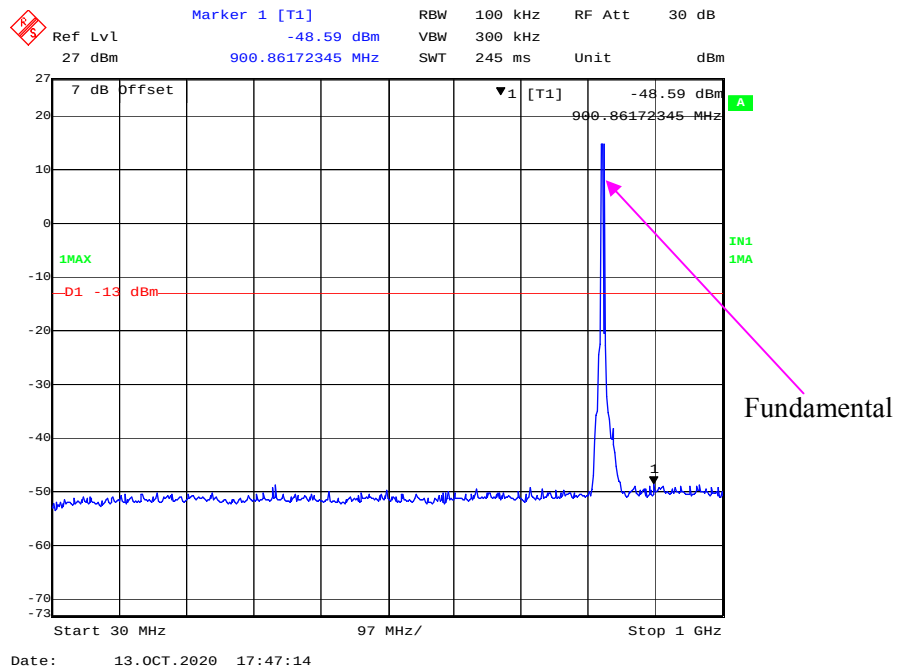


1 GHz – 10 GHz (16QAM, 1.4 MHz, Low Channel)

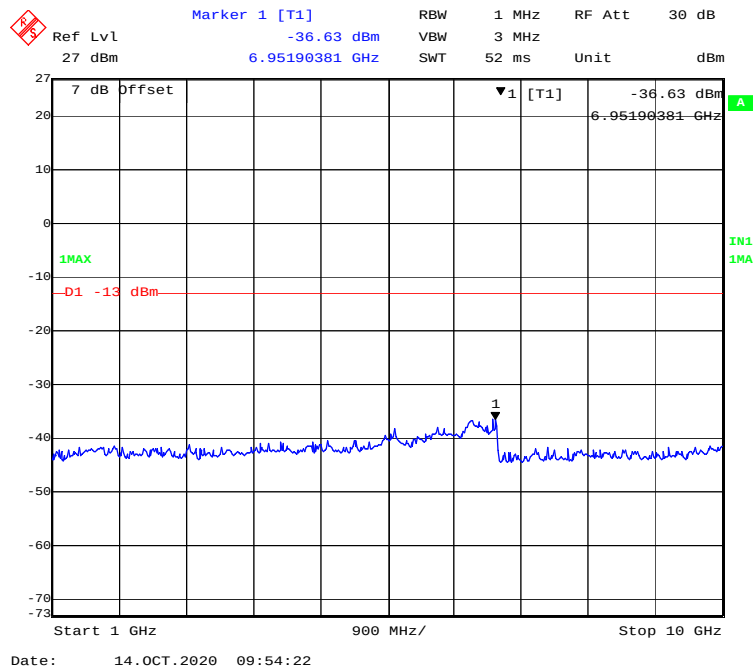


30 MHz - 1 GHz (16QAM, 3.0 MHz, Low Channel)**1 GHz – 10 GHz (16QAM, 3.0 MHz, Low Channel)**

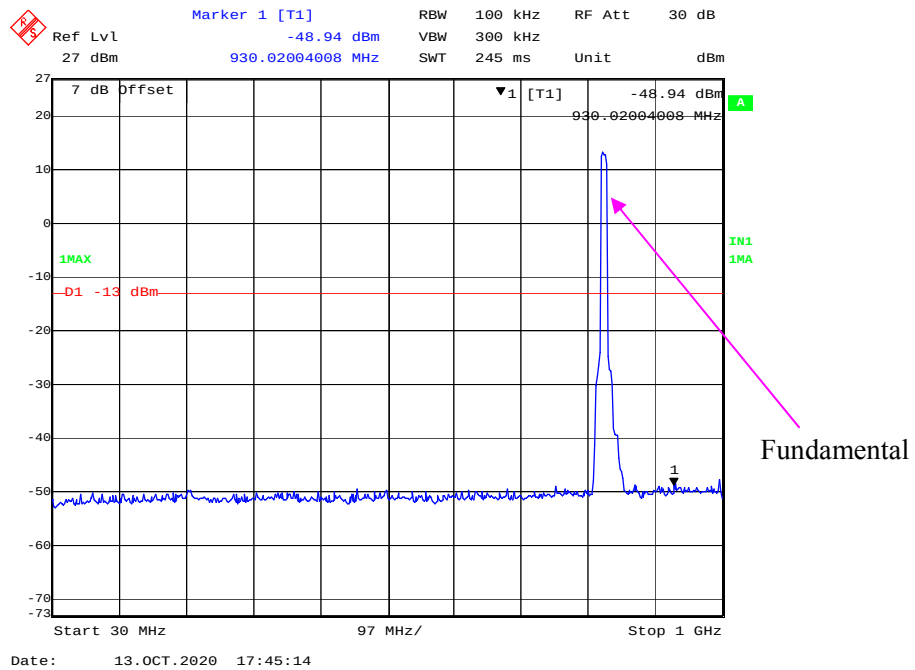
30 MHz - 1 GHz (16QAM, 5.0 MHz, Low Channel)



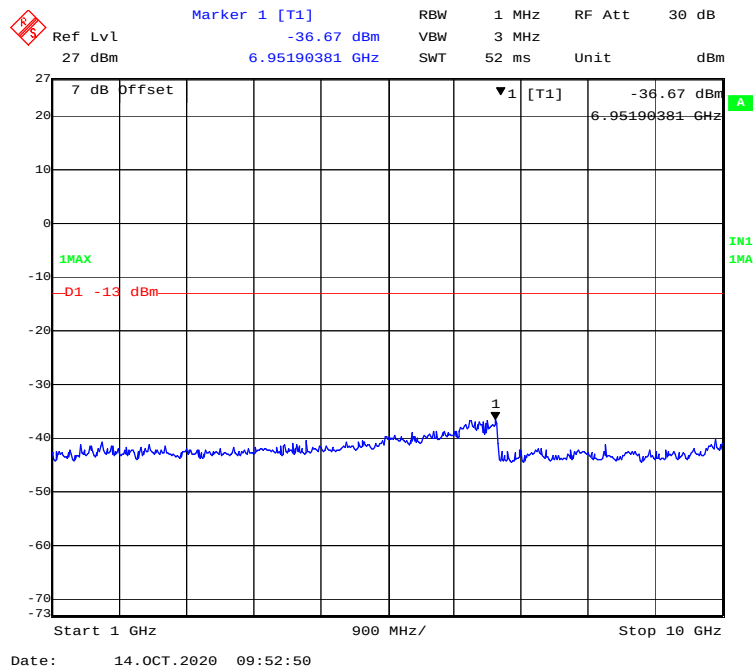
1 GHz – 10 GHz (16QAM, 5.0MHz, Low Channel)

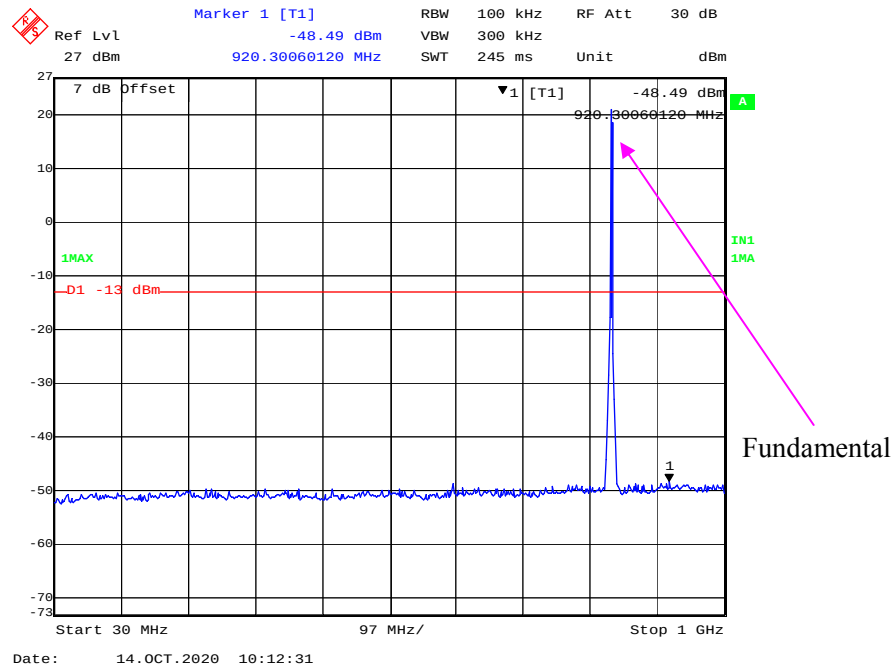
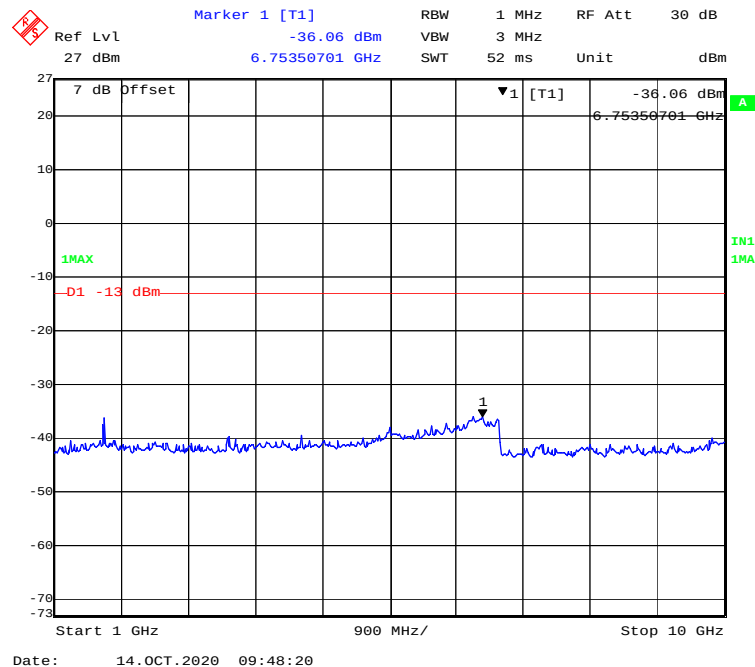


30 MHz - 1 GHz (16QAM, 10.0 MHz, Low Channel)

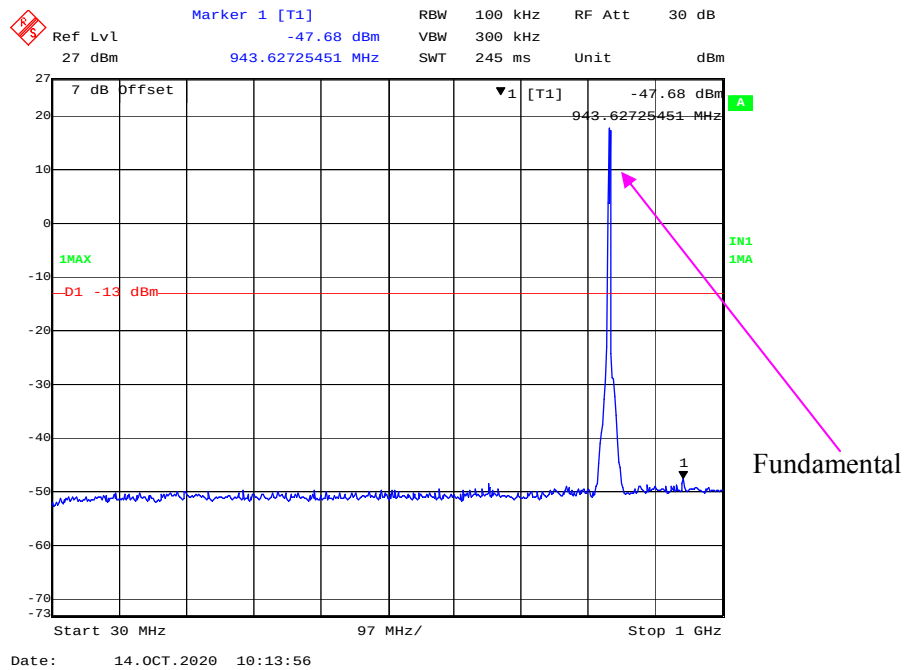


1 GHz – 10 GHz (16QAM, 10.0 MHz, Low Channel)

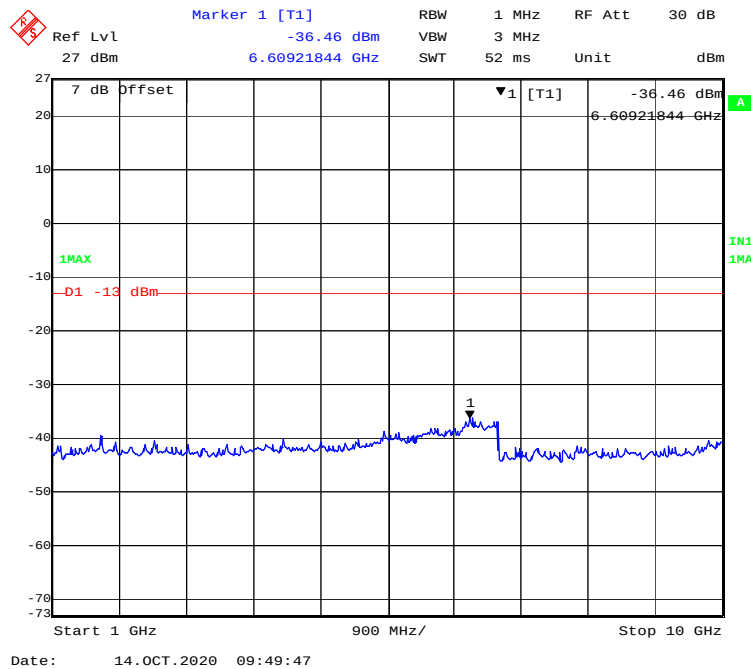


30 MHz - 1 GHz (QPSK, 1.4 MHz, Middle Channel)**1 GHz – 10 GHz (QPSK, 1.4 MHz, Middle Channel)**

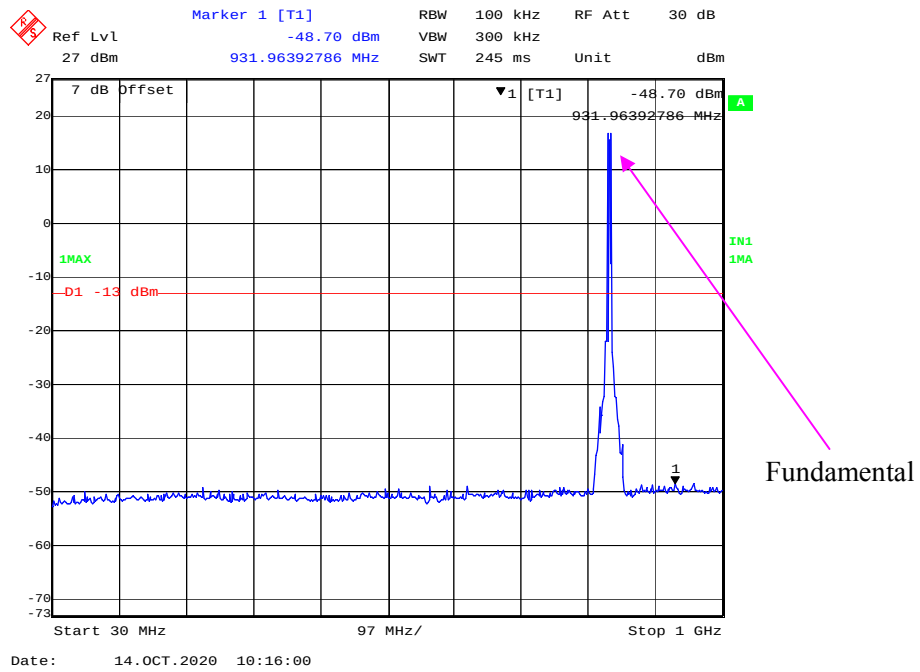
30 MHz - 1 GHz (QPSK, 3.0 MHz, Middle Channel)



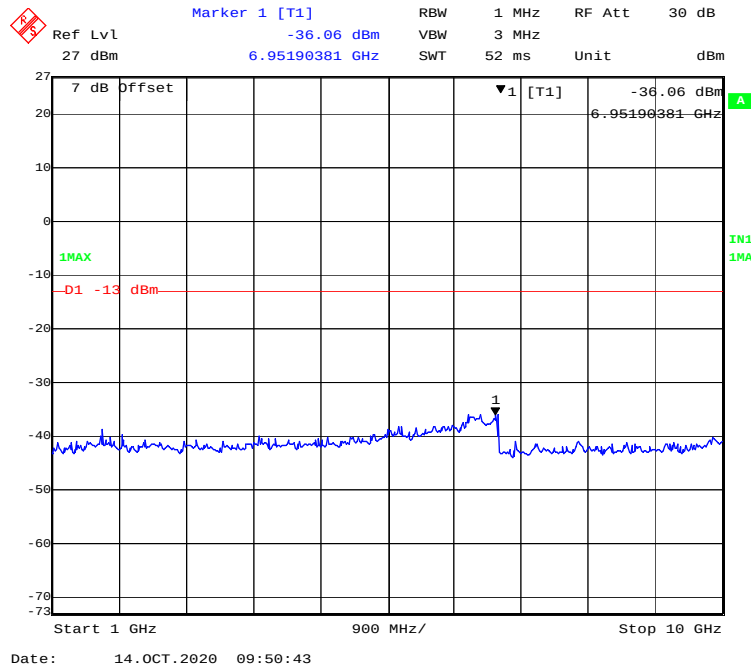
1 GHz – 10 GHz (QPSK, 3.0 MHz, Middle Channel)



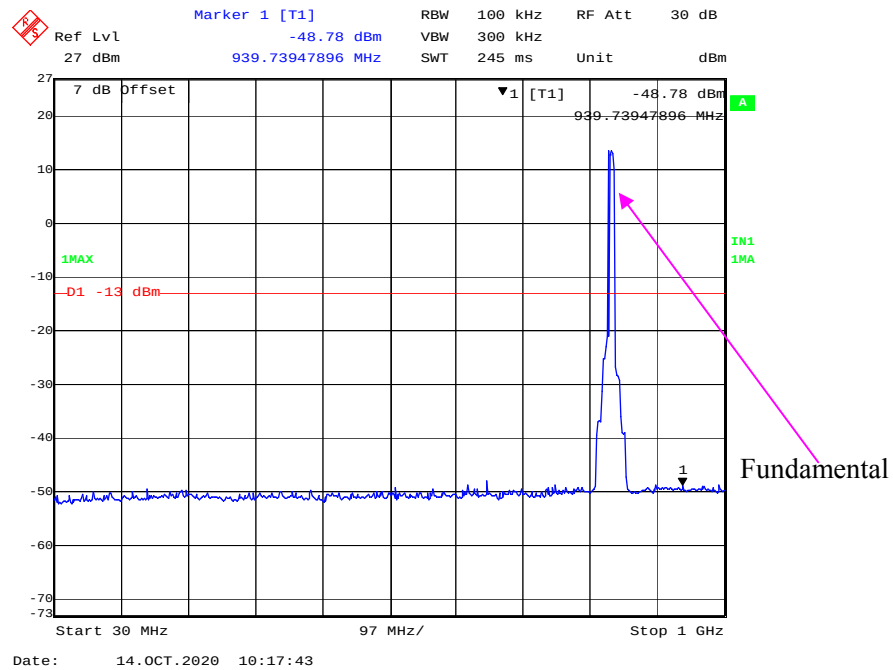
30 MHz - 1 GHz (QPSK, 5.0 MHz, Middle Channel)



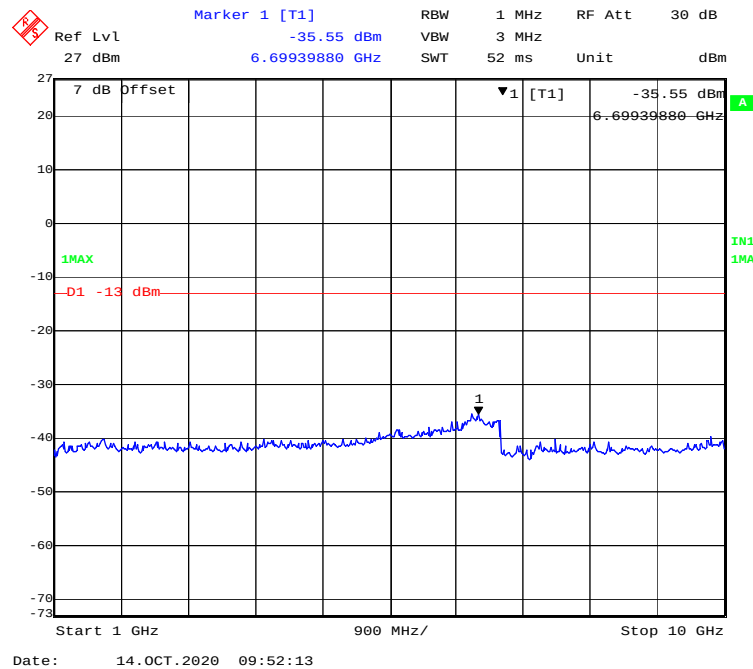
1 GHz – 10 GHz (QPSK, 5.0MHz, Middle Channel)



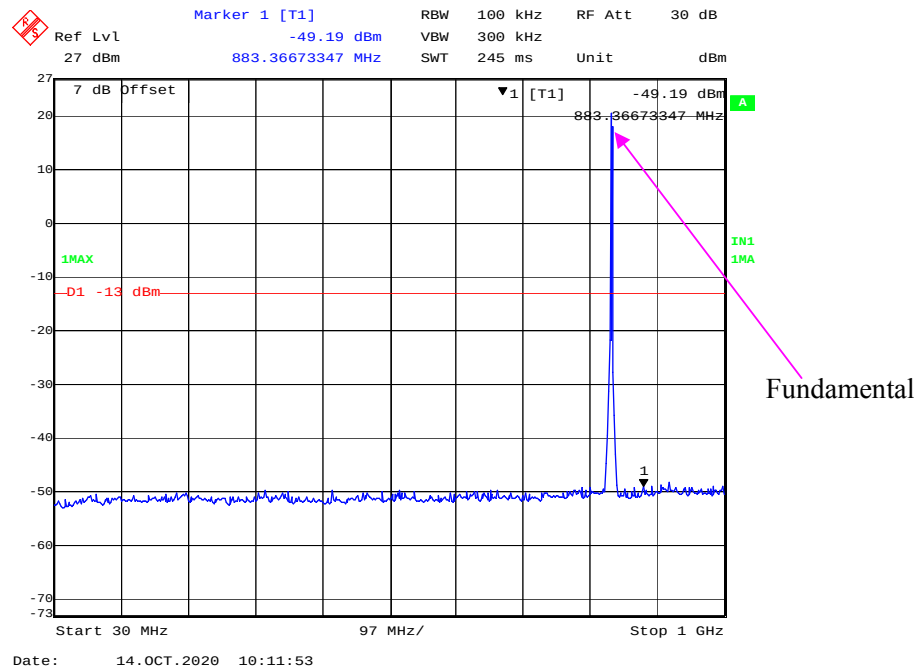
30 MHz - 1 GHz (QPSK, 10.0 MHz, Middle Channel)



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



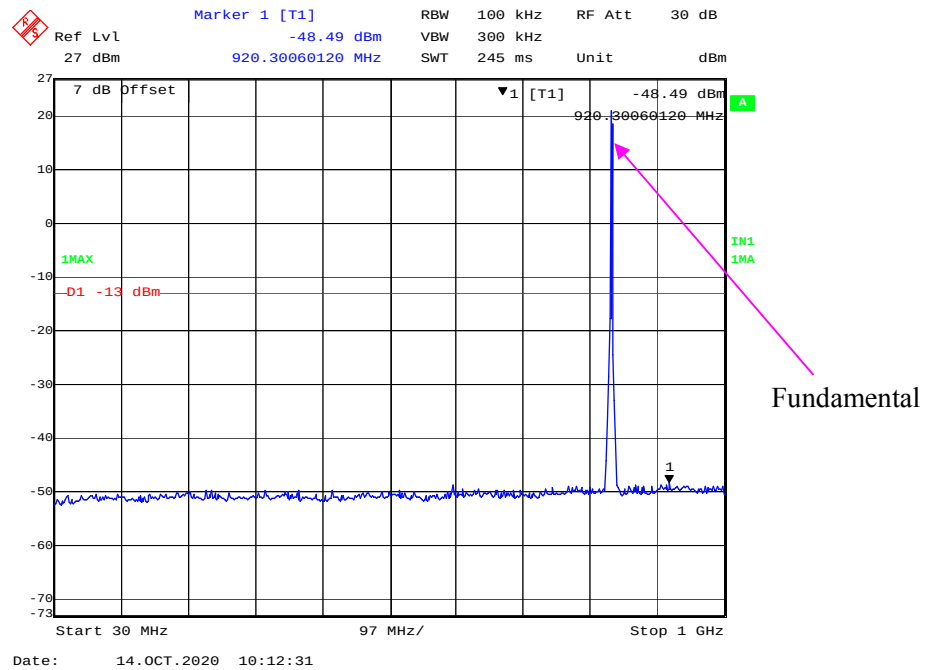
30 MHz - 1 GHz (16QAM, 1.4 MHz, Middle Channel)



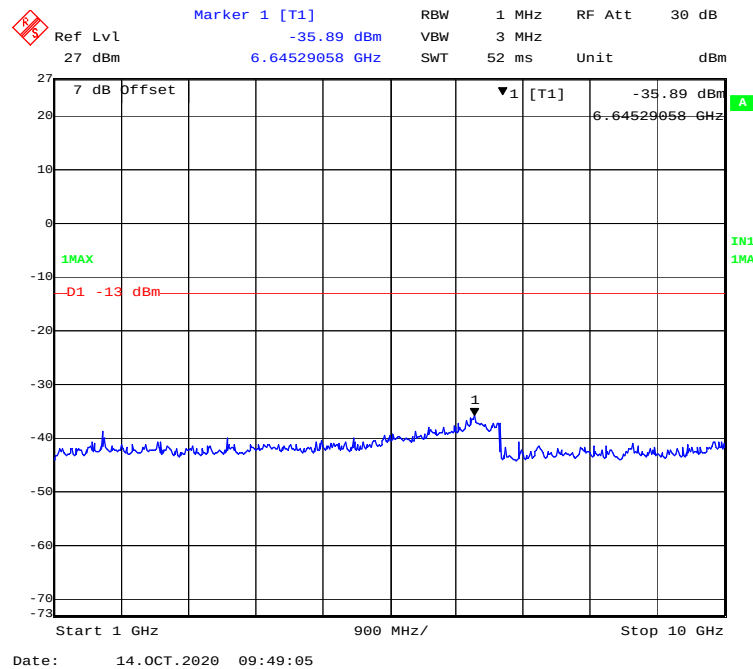
1 GHz – 10 GHz (16QAM, 1.4 MHz, Middle Channel)



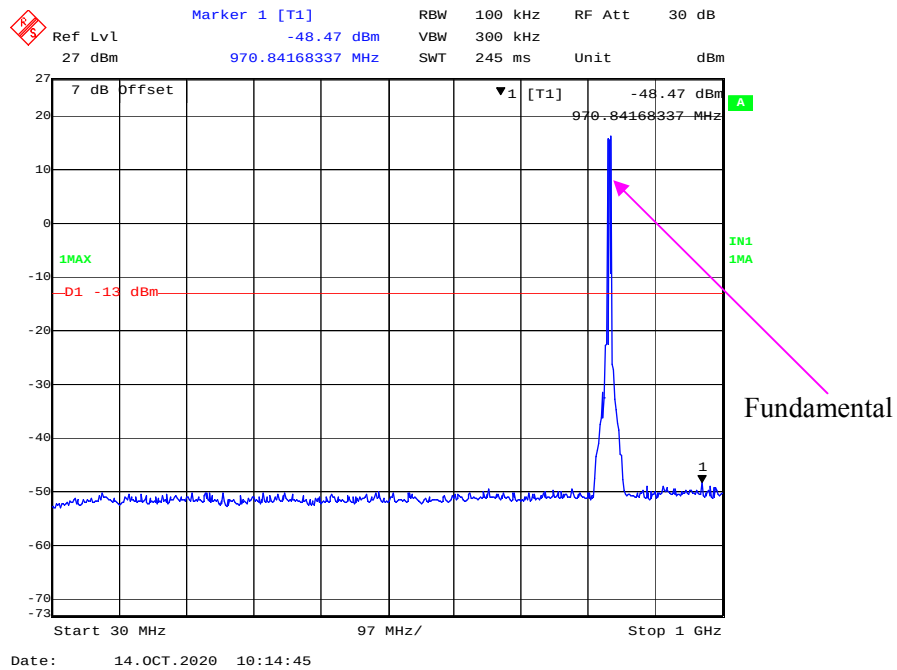
30 MHz - 1 GHz (16QAM, 3.0 MHz, Middle Channel)



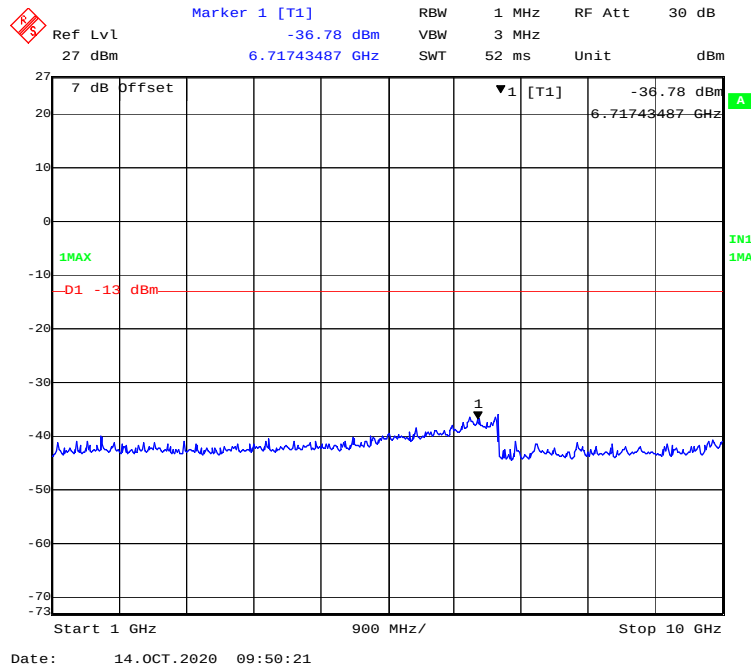
1 GHz – 10 GHz (16QAM, 3.0 MHz, Middle Channel)



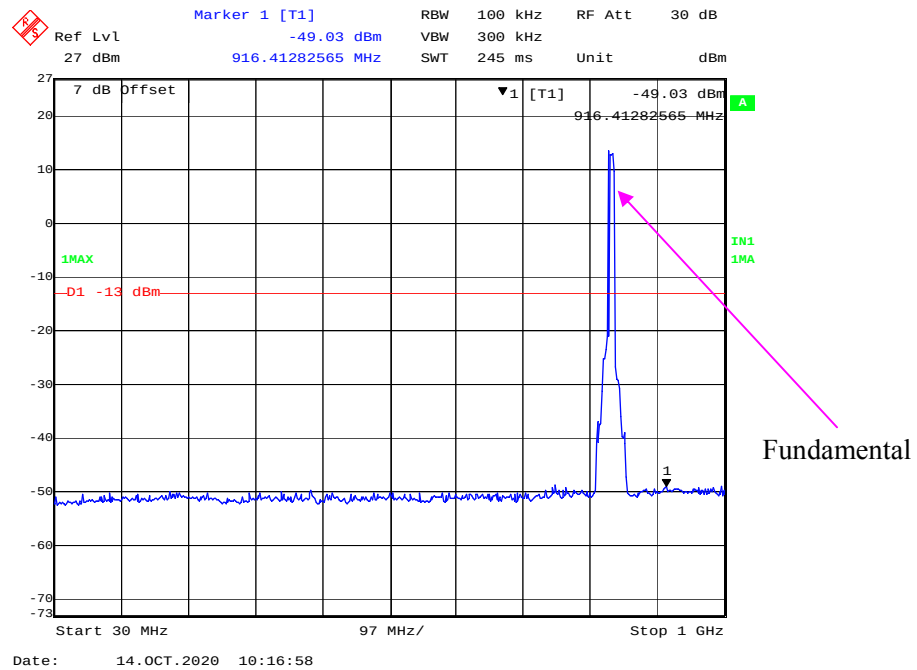
30 MHz - 1 GHz (16QAM, 5.0 MHz, Middle Channel)



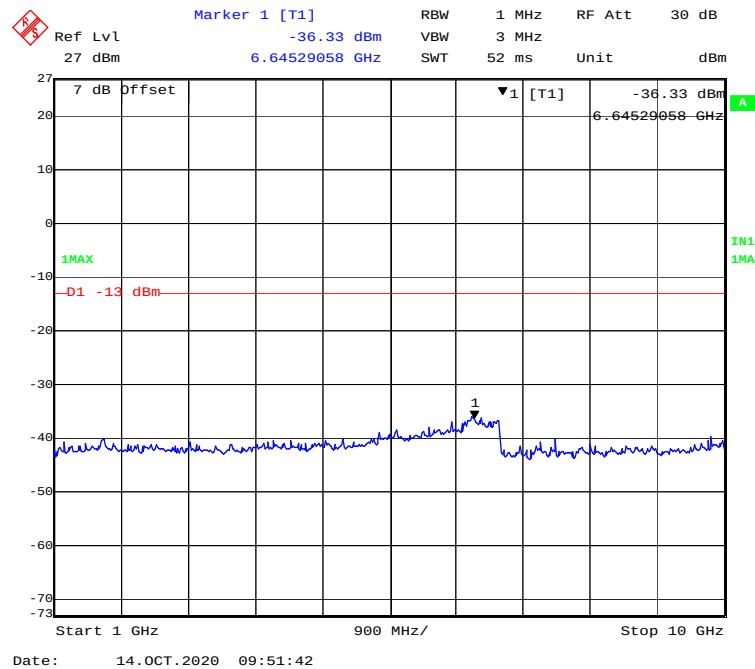
1 GHz – 10 GHz (16QAM, 5.0MHz, Middle Channel)

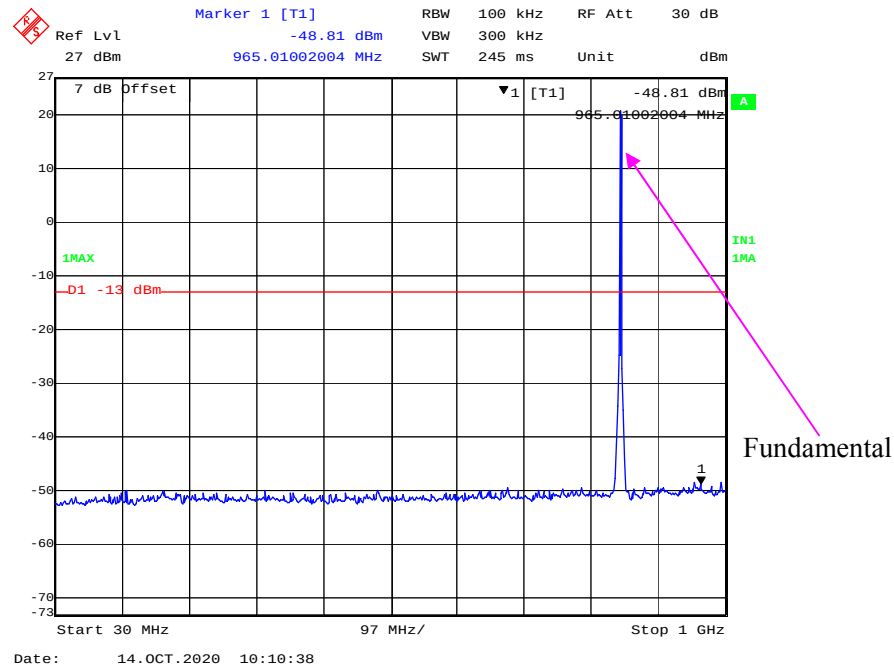
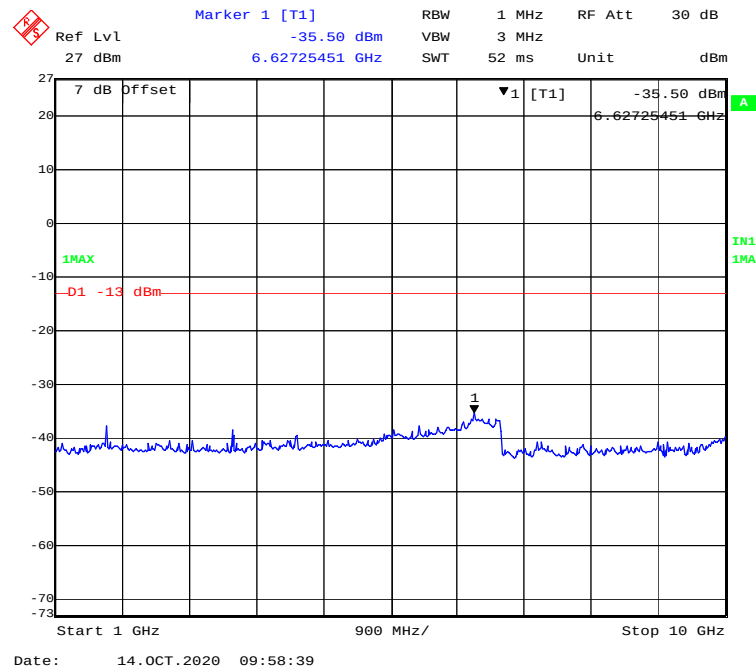


30 MHz - 1 GHz (16QAM, 10.0 MHz, Middle Channel)

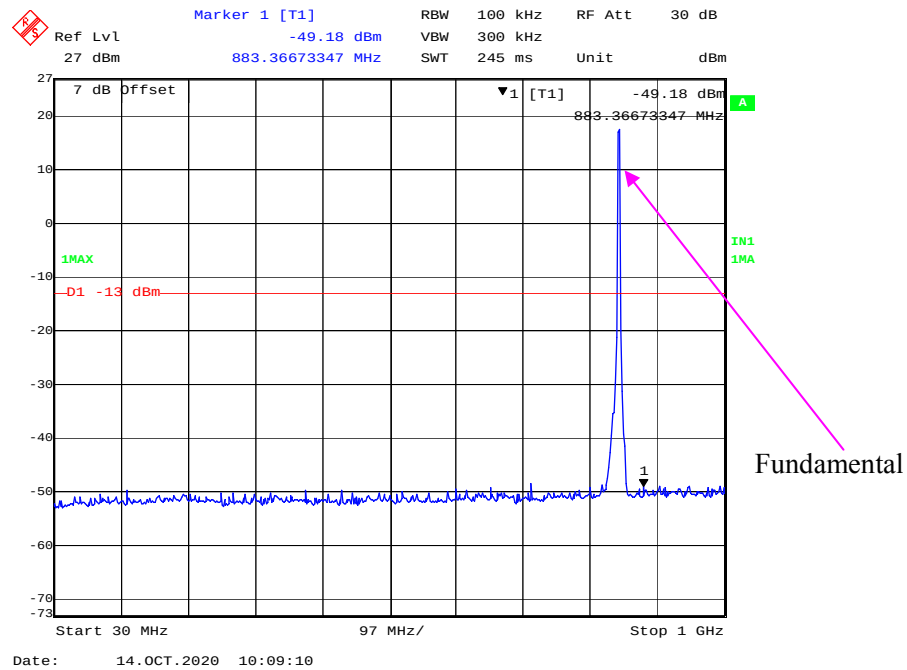


1 GHz – 10 GHz (16QAM, 10.0 MHz, Middle Channel)

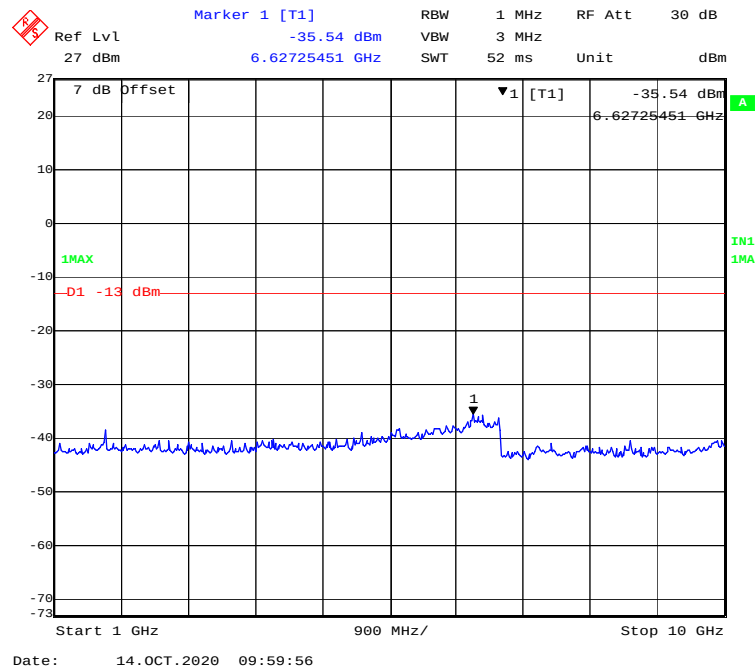


30 MHz - 1 GHz (QPSK, 1.4 MHz, High Channel)**1 GHz – 10 GHz (QPSK, 1.4 MHz, High Channel)**

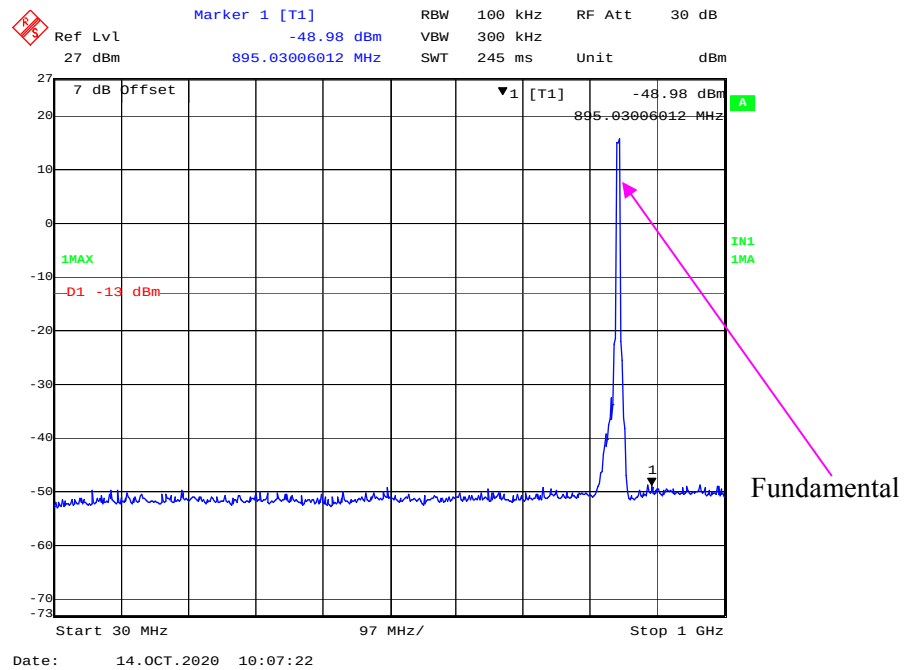
30 MHz - 1 GHz (QPSK, 3.0 MHz, High Channel)



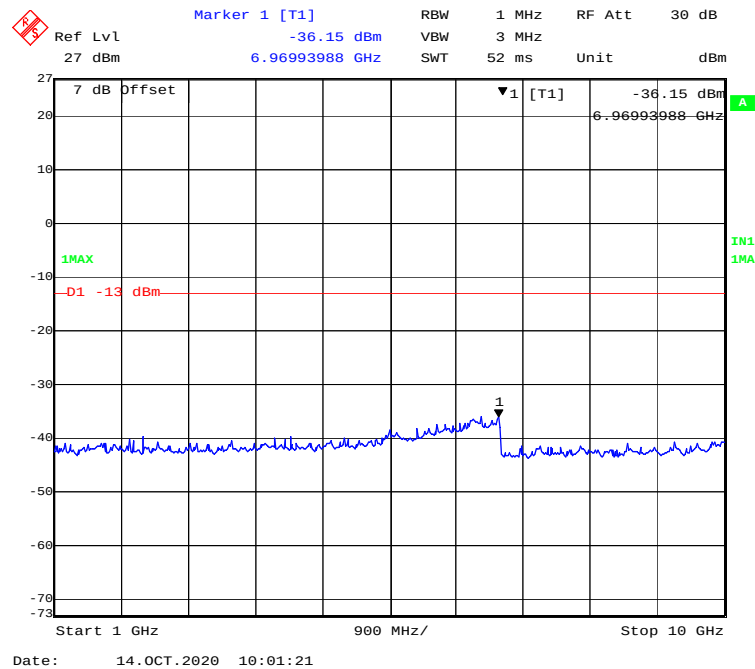
1 GHz - 10 GHz (QPSK, 3.0 MHz, High Channel)



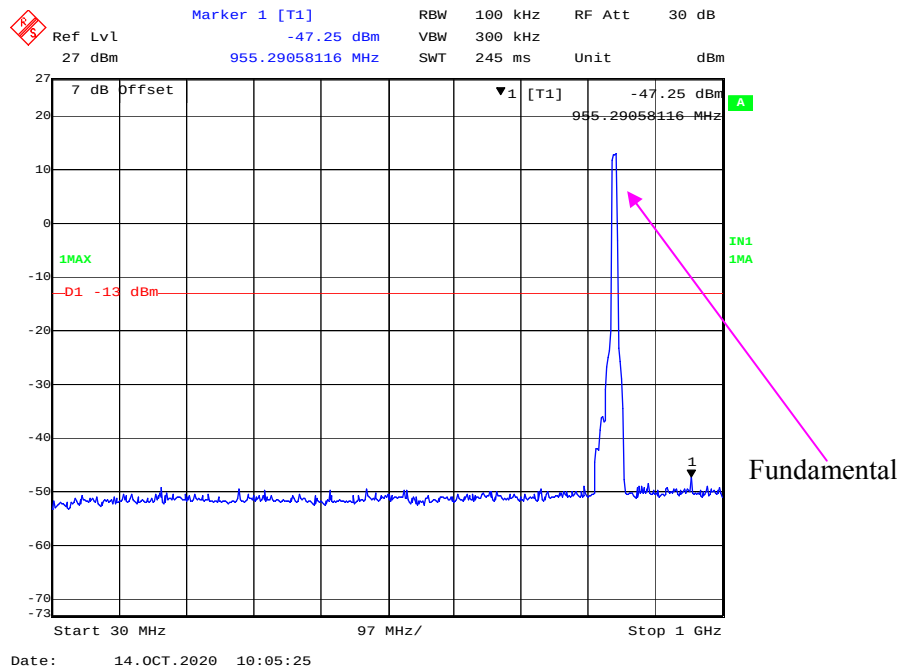
30 MHz - 1 GHz (QPSK, 5.0 MHz, High Channel)



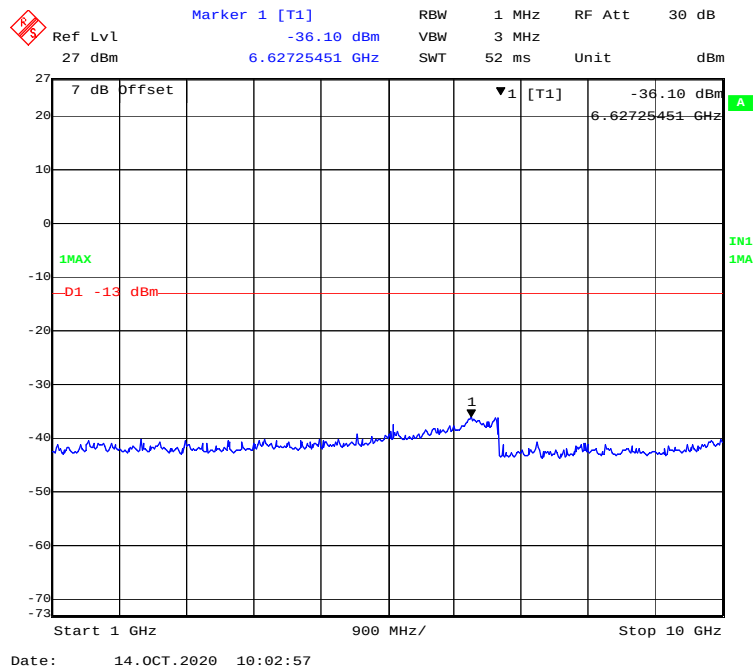
1 GHz – 10 GHz (QPSK, 5.0MHz, High Channel)

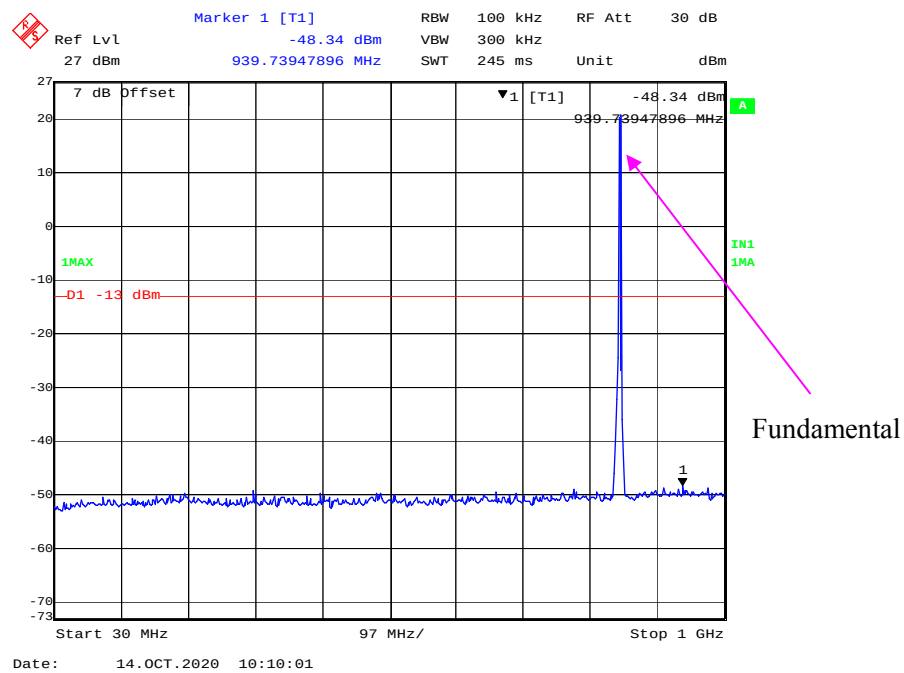
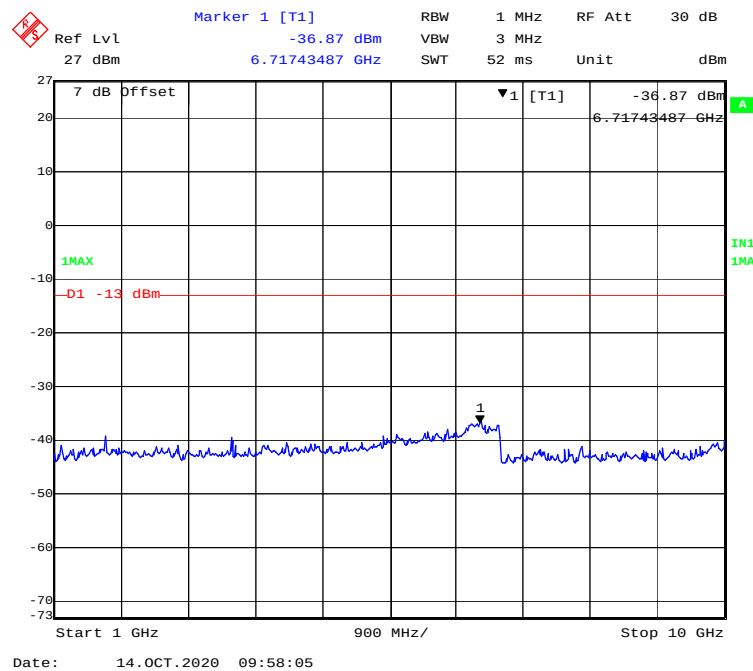


30 MHz - 1 GHz (QPSK, 10.0 MHz, High Channel)

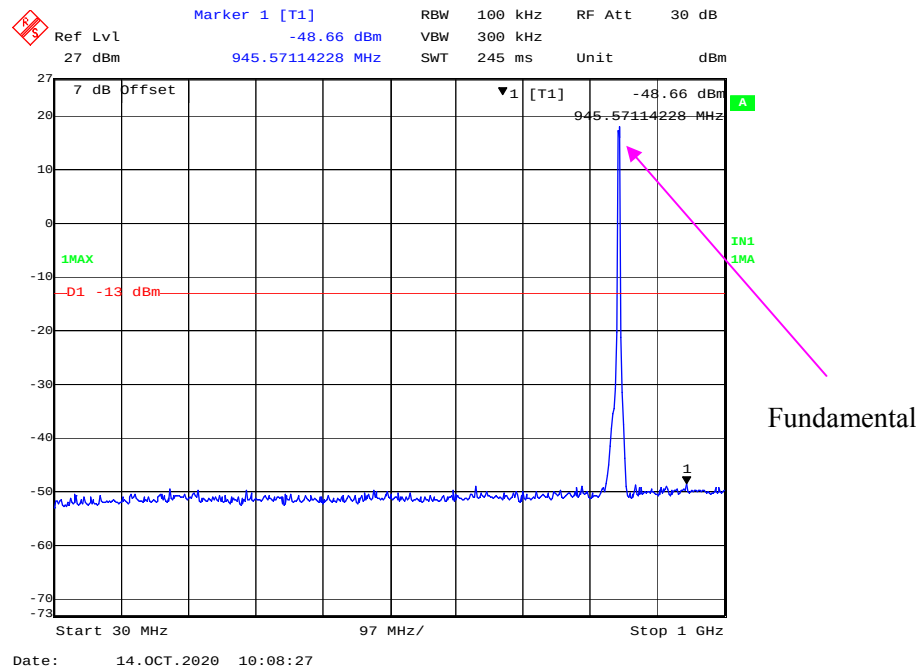


1 GHz – 10 GHz (QPSK, 10.0 MHz, High Channel)

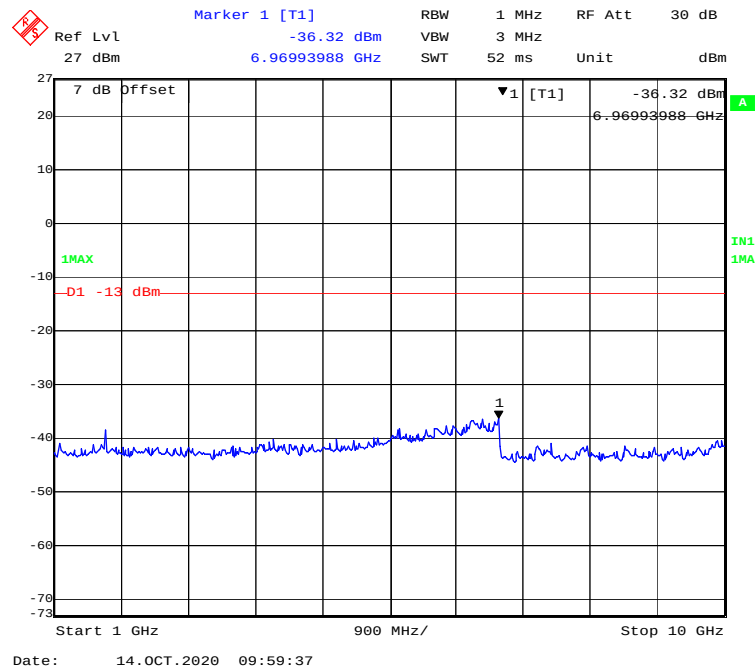


30 MHz - 1 GHz (16QAM, 1.4 MHz, High Channel)**1 GHz – 10 GHz (16QAM, 1.4 MHz, High Channel)**

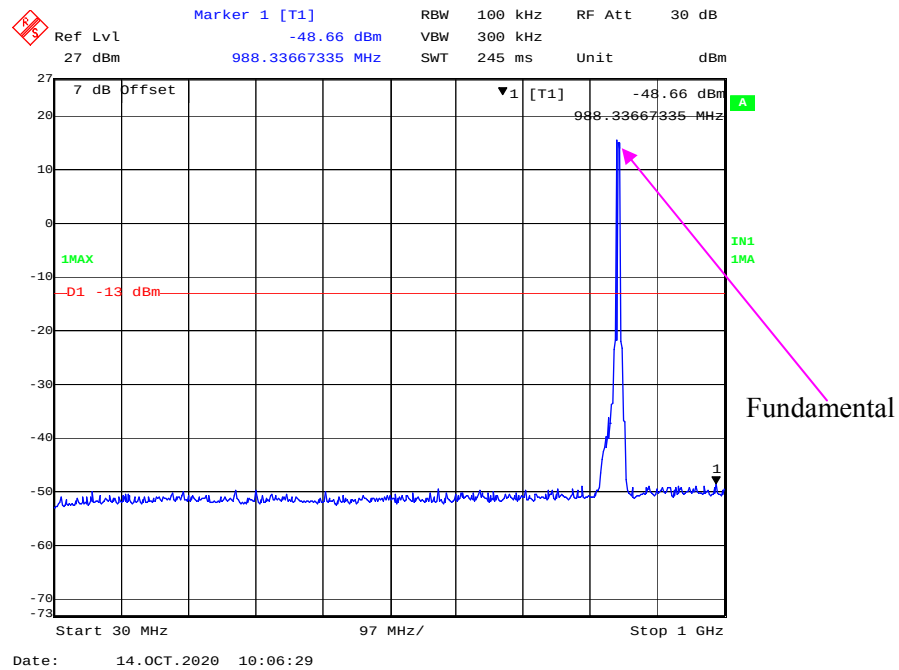
30 MHz - 1 GHz (16QAM, 3.0 MHz, High Channel)



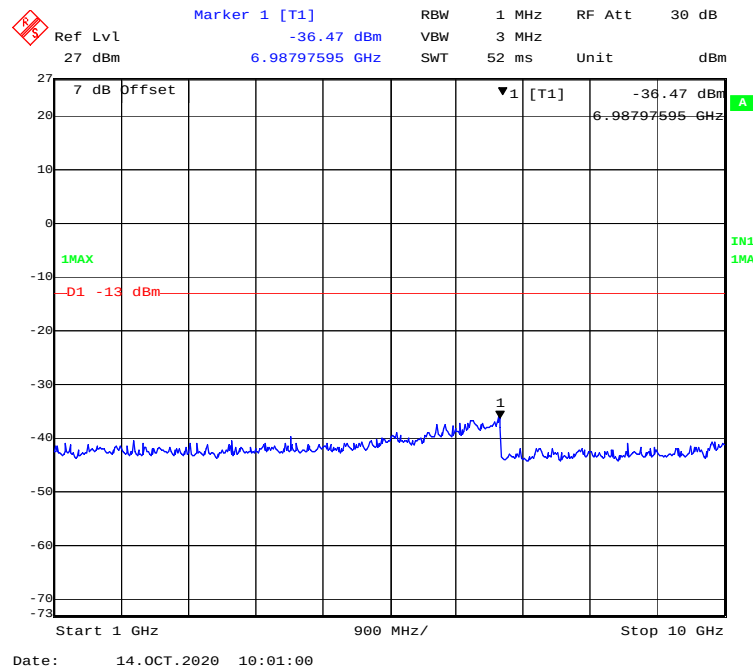
1 GHz – 10 GHz (16QAM, 3.0 MHz, High Channel)



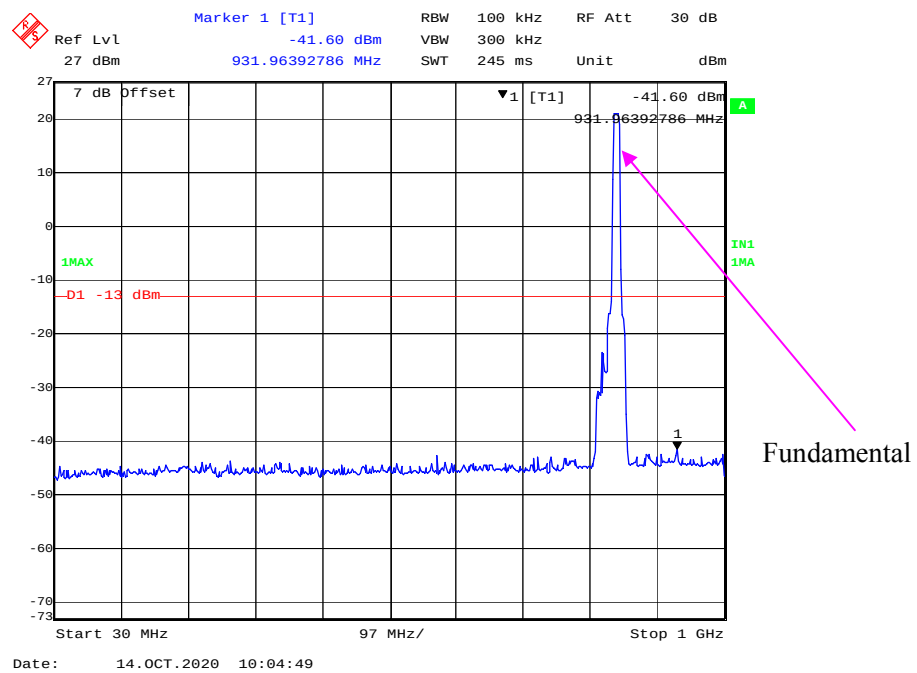
30 MHz - 1 GHz (16QAM, 5.0 MHz, High Channel)



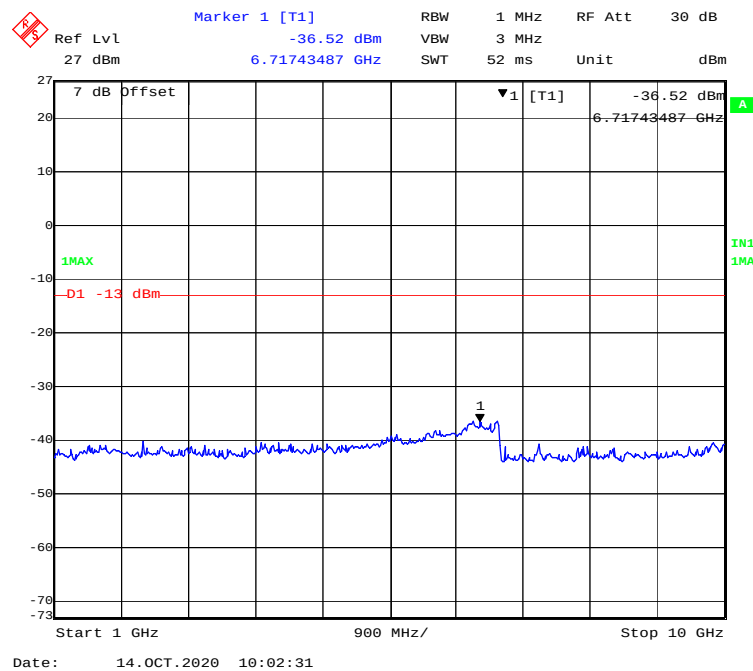
1 GHz – 10 GHz (16QAM, 5.0MHz, High Channel)

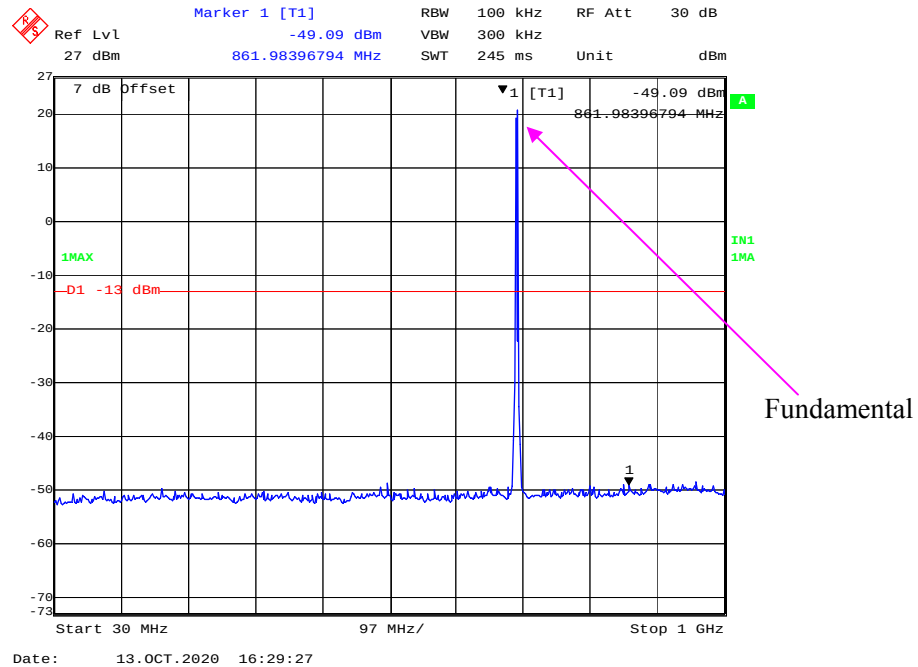
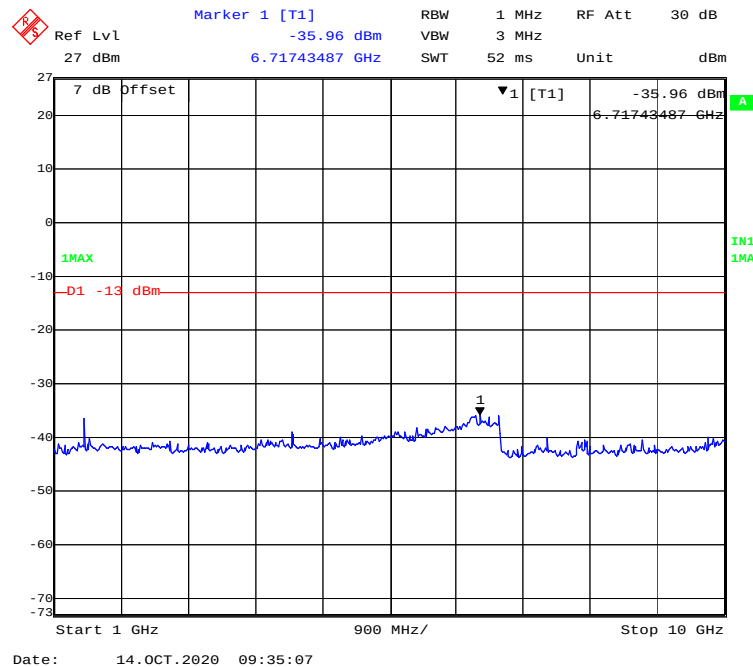


30 MHz - 1 GHz (16QAM, 10.0 MHz, High Channel)

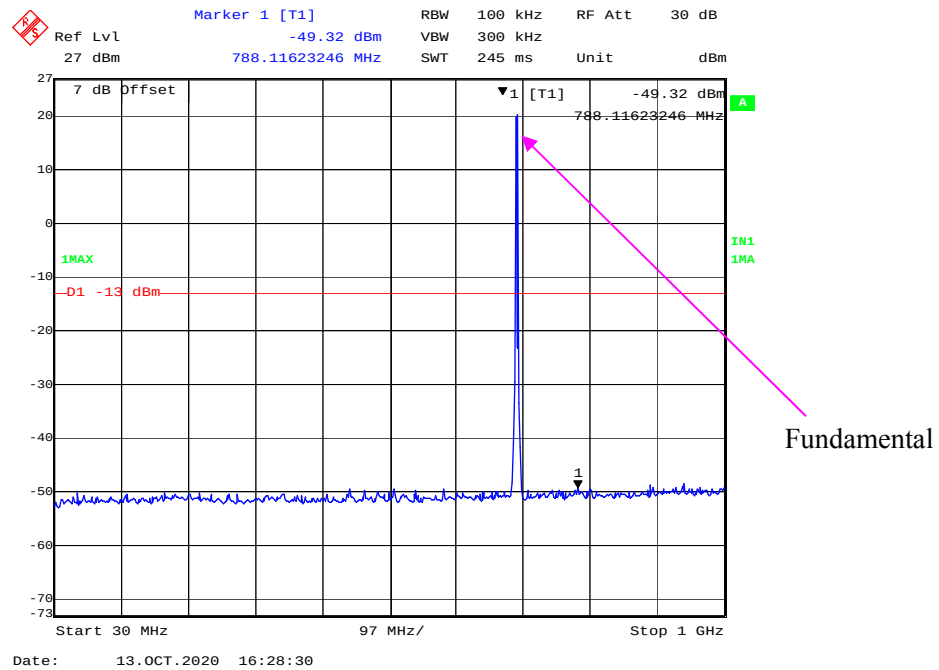


1 GHz – 10 GHz (16QAM, 10.0 MHz, High Channel)

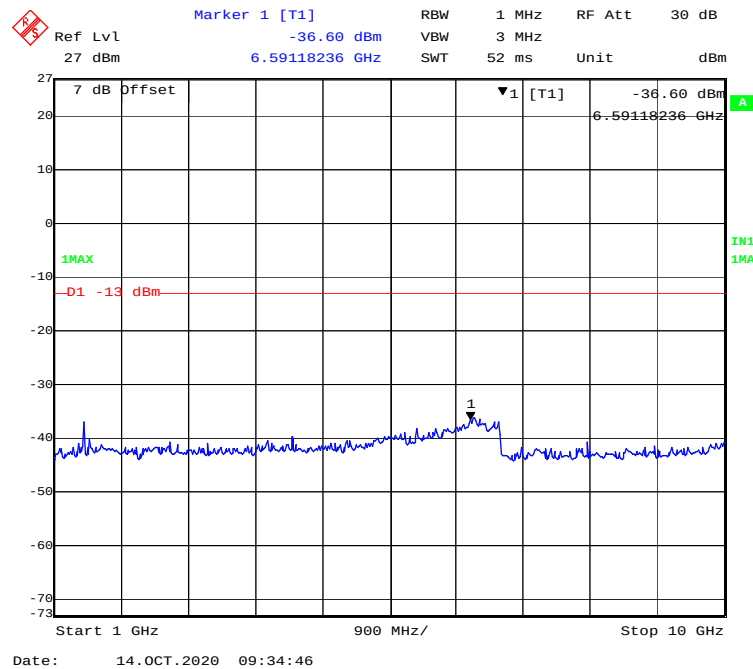


LTE Band 12:**30 MHz - 1 GHz (1.4 MHz, QPSK, Low Channel)****1 GHz – 10 GHz (1.4 MHz, QPSK, Low Channel)**

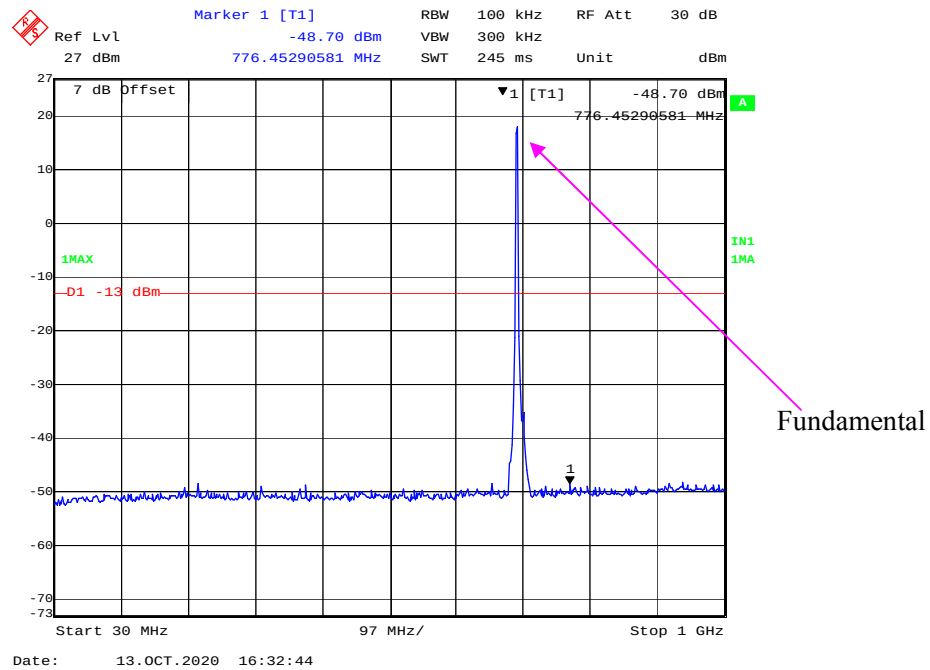
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Low Channel)



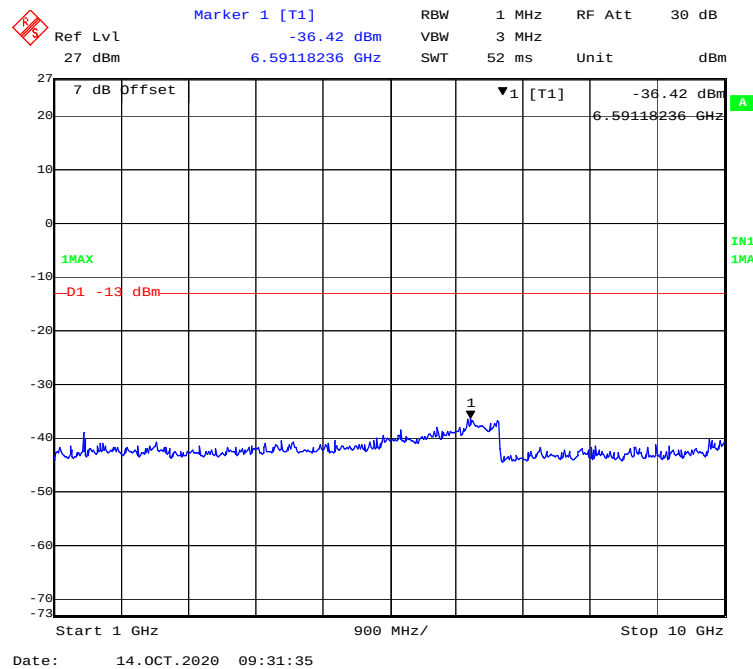
1 GHz – 10 GHz (1.4 MHz, 16-QAM, Low Channel)



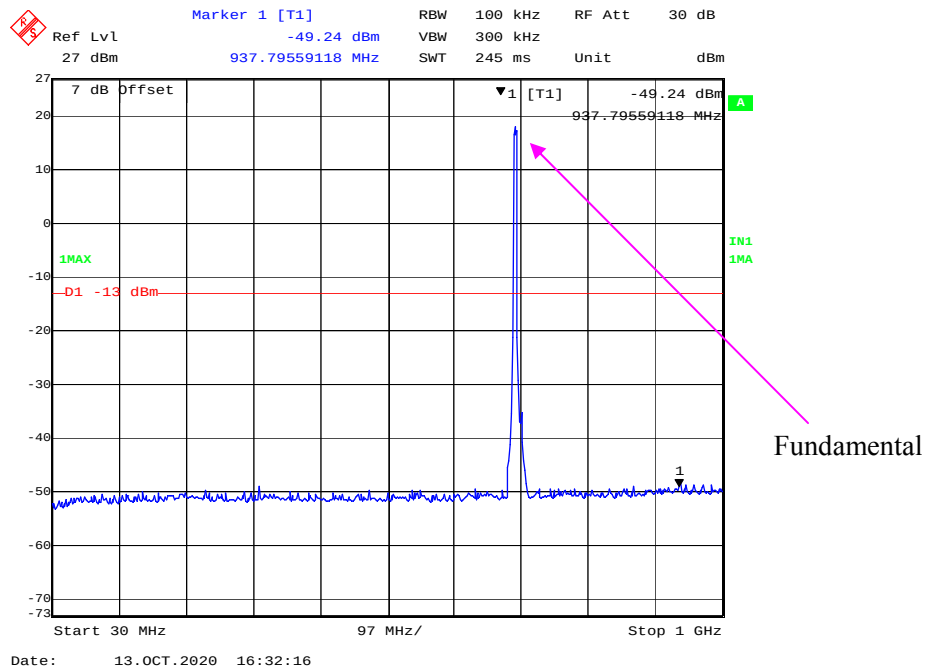
30 MHz - 1 GHz (3 MHz, QPSK, Low Channel)



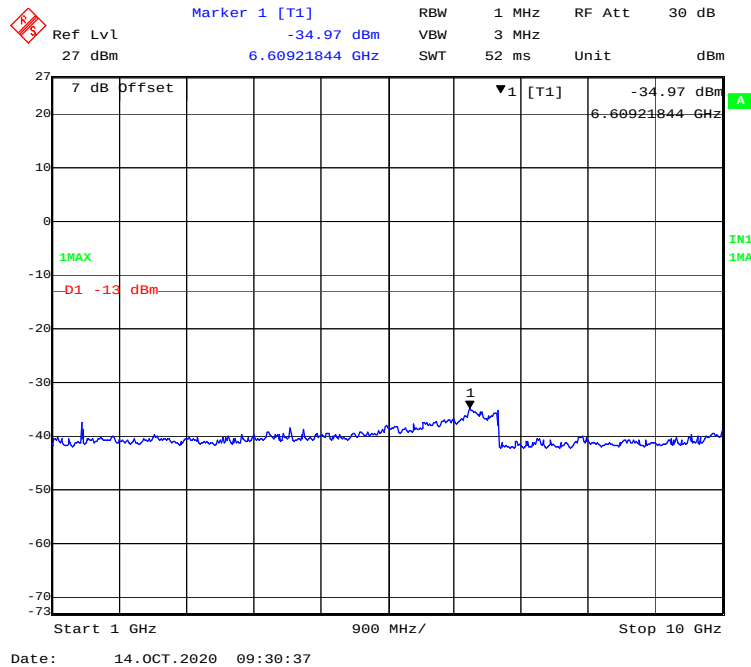
1 GHz - 10 GHz (3 MHz, QPSK, Low Channel)



30 MHz - 1 GHz (3 MHz, 16-QAM, Low Channel)



1 GHz - 10 GHz (3 MHz, 16-QAM, Low Channel)



Marker 1 [T1] -49.22 dBm

RBW 100 kHz RF Att 30 dB

VBW 300 kHz

SWT 245 ms Unit dBm

Ref Lvl 27 dBm

27 dBm

861.98396794 MHz

7 dB Offset

1MAX

D1 -13 dBm

IN1 1MA

▼1 [T1] -49.22 dBm

861.98396794 MHz

1

Fundamental

Start 30 MHz 97 MHz/ Stop 1 GHz

Date: 13.OCT.2020 16:39:21

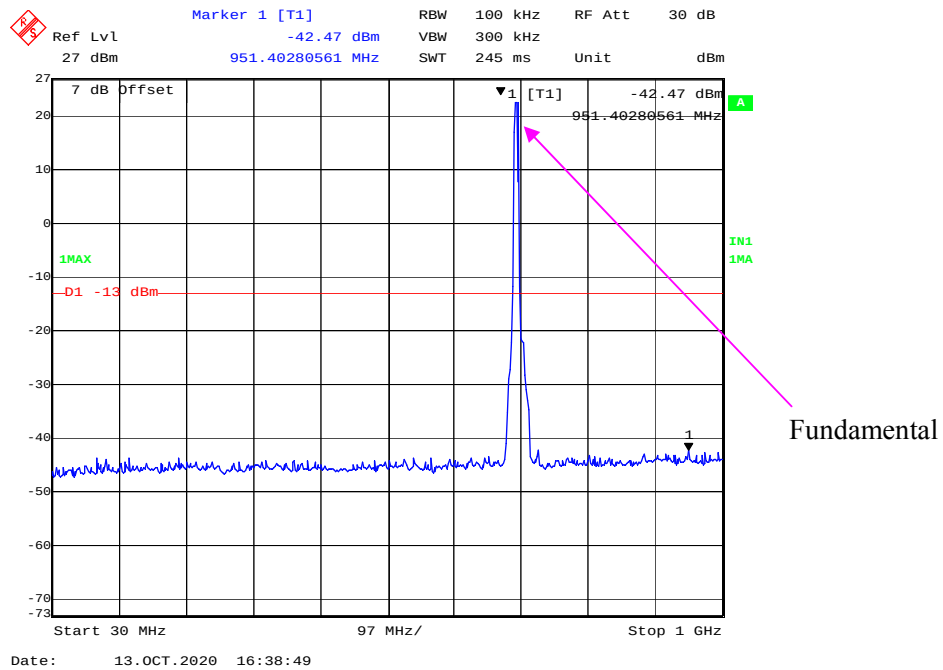
Ref Lvl 27 dBm
 Marker 1 [T1] -35.35 dBm
 RBW 1 MHz
 VBW 3 MHz
 SWT 52 ms
 RF Att 30 dB
 Unit dBm

7 dB Offset
 1MAX
 -D1 -13 dBm
 1
 -35.35 dBm
 6.62725451 GHz

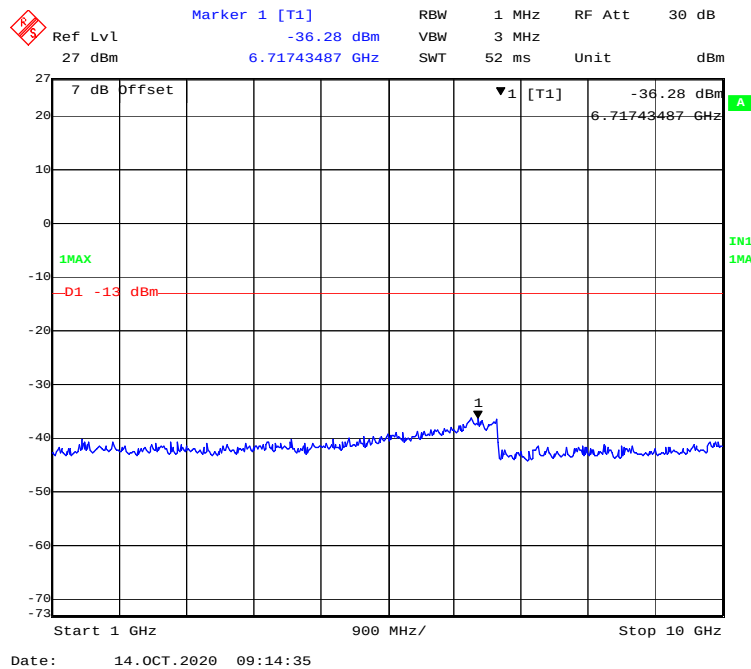
Start 1 GHz
 900 MHz/
 Stop 10 GHz

Date: 14.OCT.2020 09:15:00

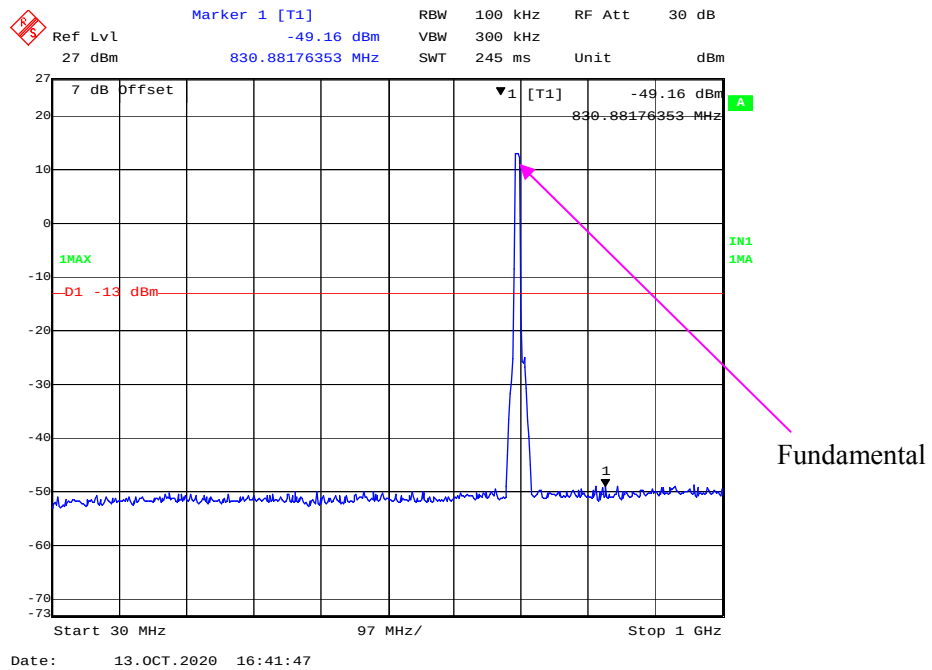
30 MHz - 1 GHz (5 MHz, 16-QAM, Low Channel)



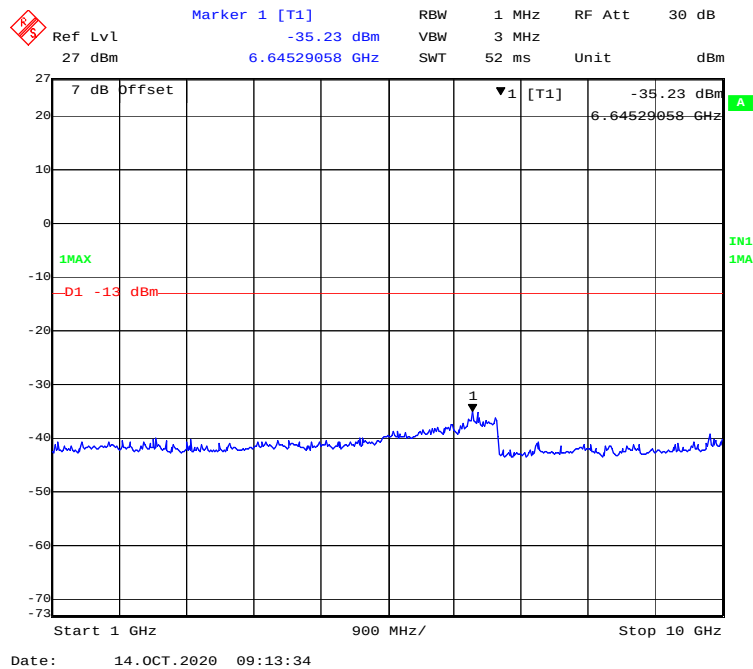
1 GHz - 10 GHz (5 MHz, 16-QAM, Low Channel)



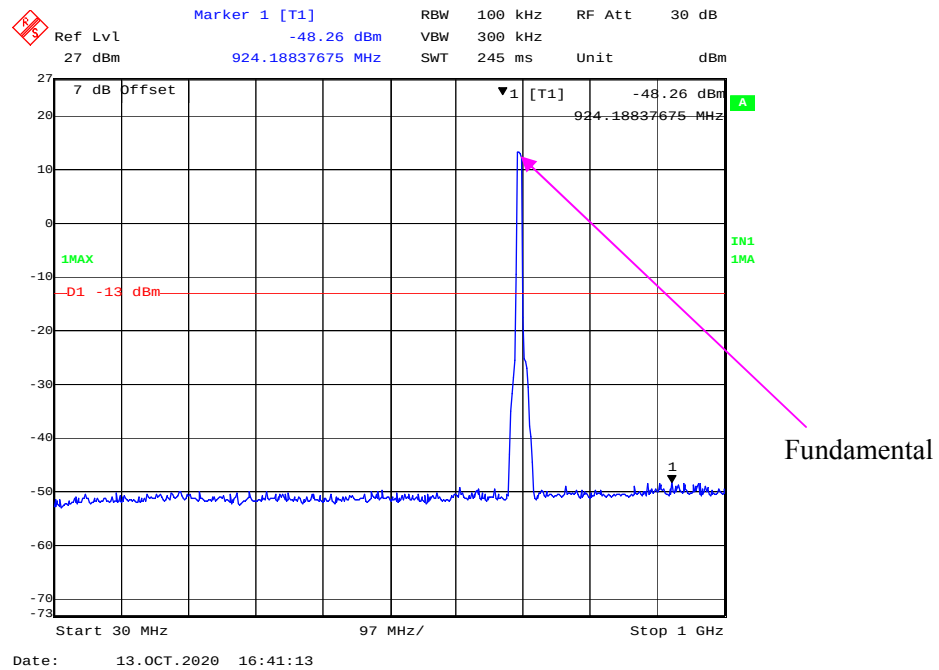
30 MHz - 1 GHz (10 MHz, QPSK, Low Channel)



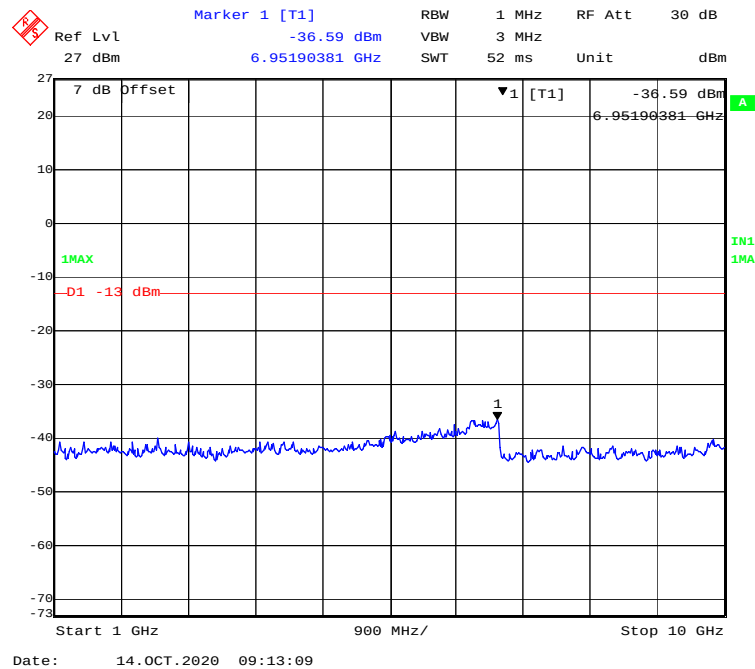
1 GHz – 10 GHz (10 MHz, QPSK, Low Channel)



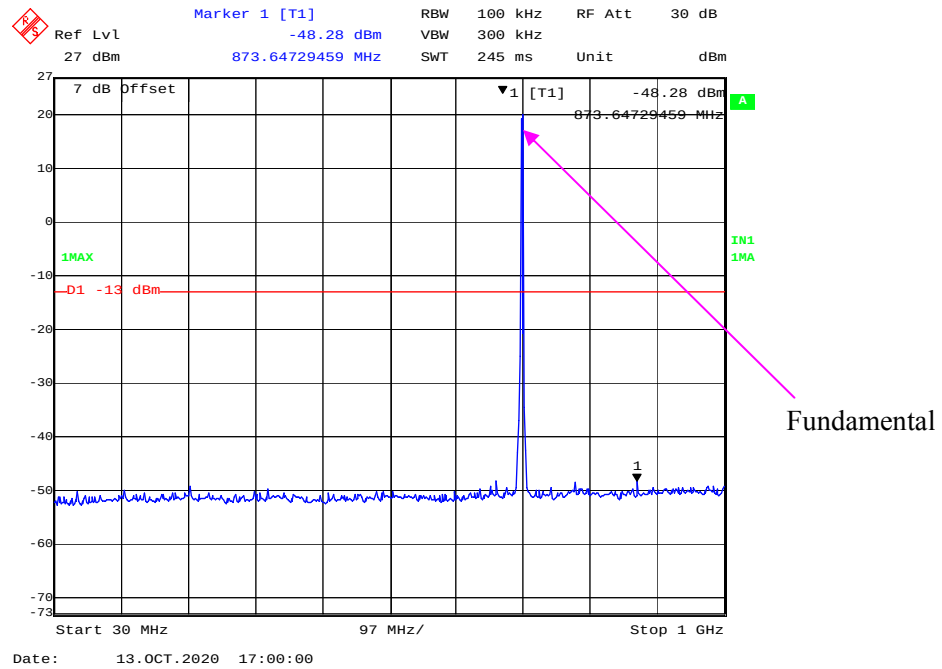
30 MHz - 1 GHz (10 MHz, 16-QAM, Low Channel)



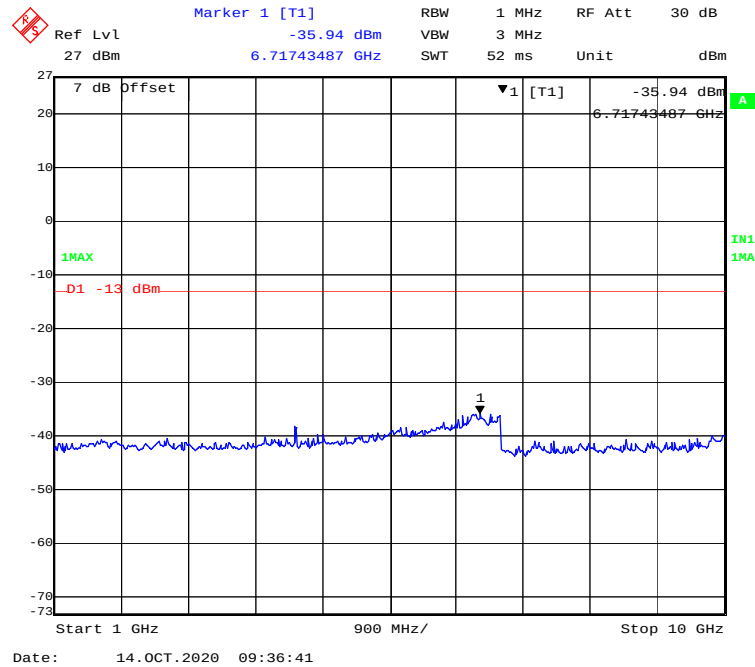
1 GHz – 10 GHz (10 MHz, 16-QAM, Low Channel)

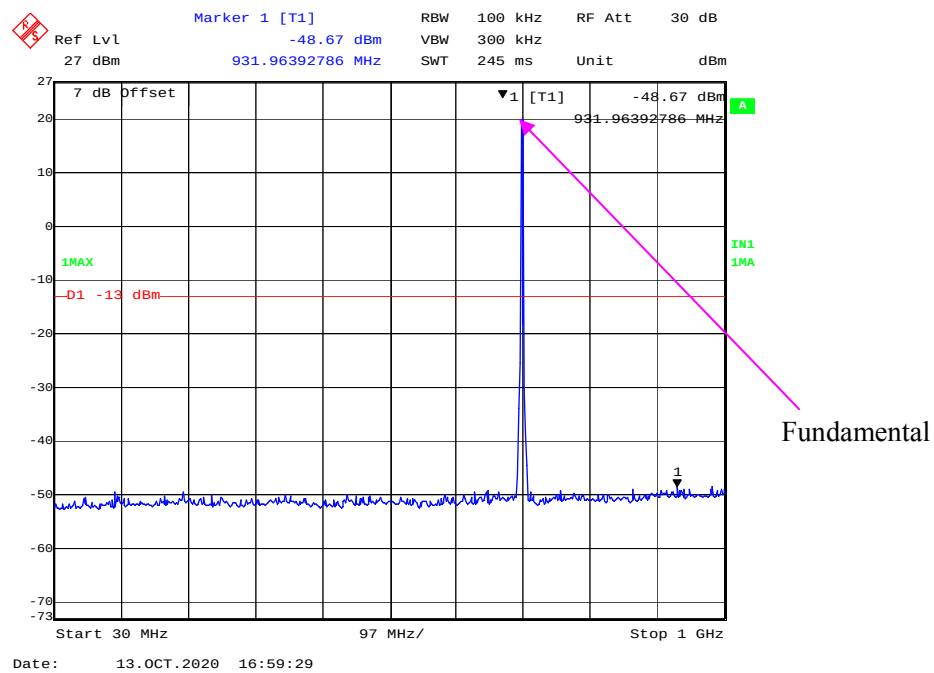
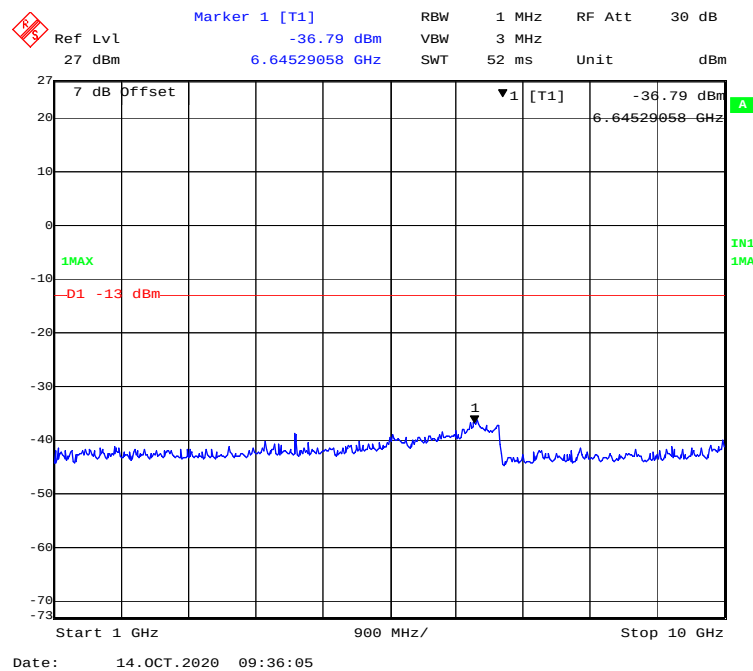


30 MHz - 1 GHz (1.4 MHz, QPSK, Middle Channel)

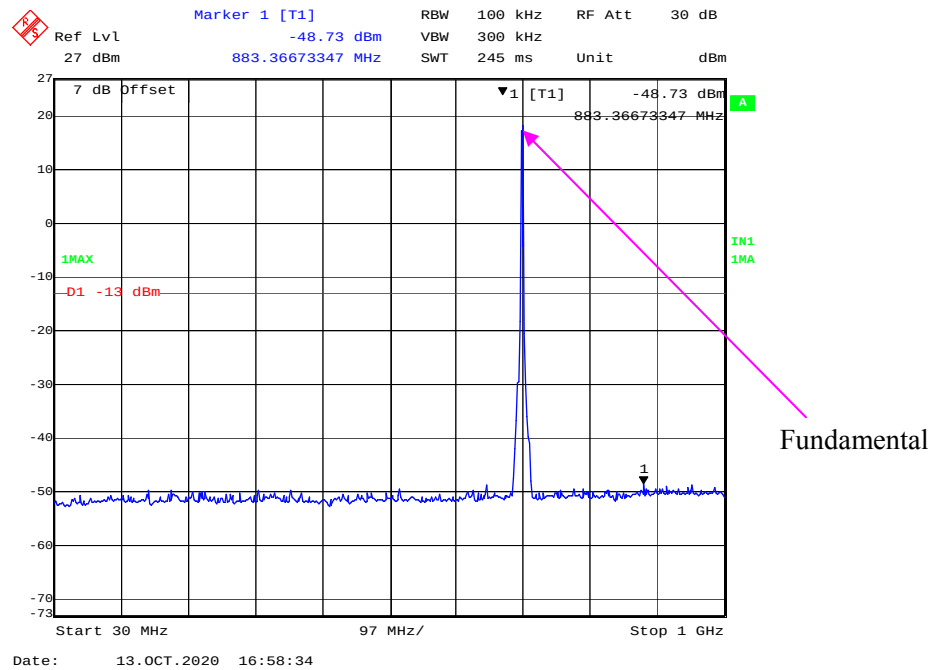


1 GHz – 10 GHz (1.4 MHz, QPSK, Middle Channel)

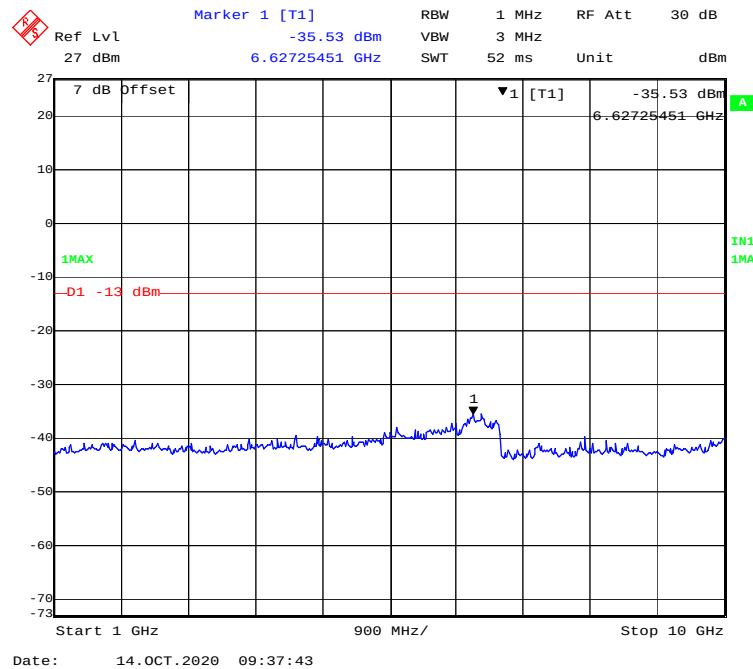


30 MHz - 1 GHz (1.4 MHz, 16-QAM, Middle Channel)**1 GHz – 10 GHz (1.4 MHz, 16-QAM, Middle Channel)**

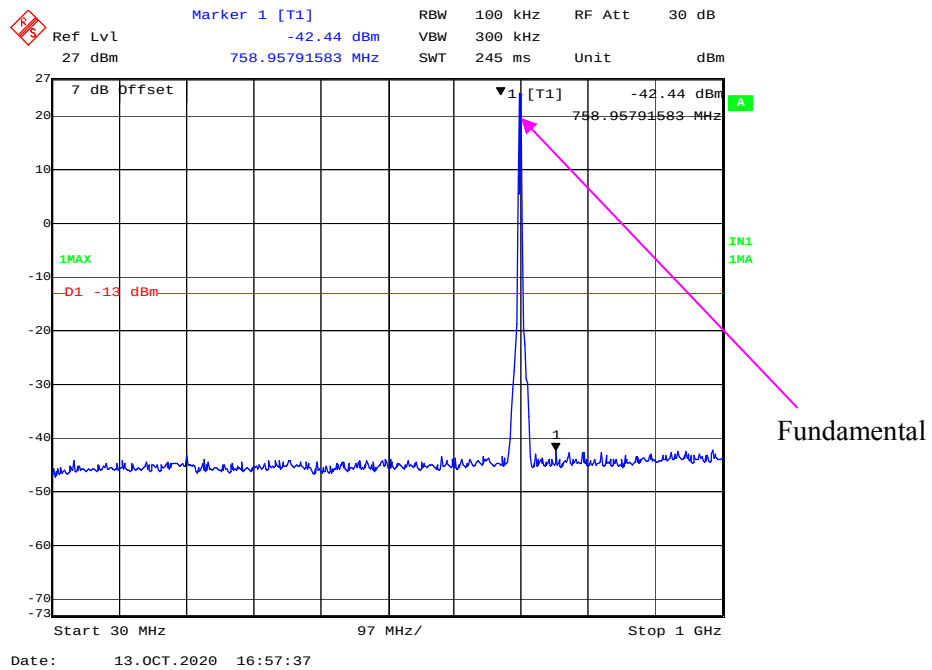
30 MHz - 1 GHz (3 MHz, QPSK, Middle Channel)



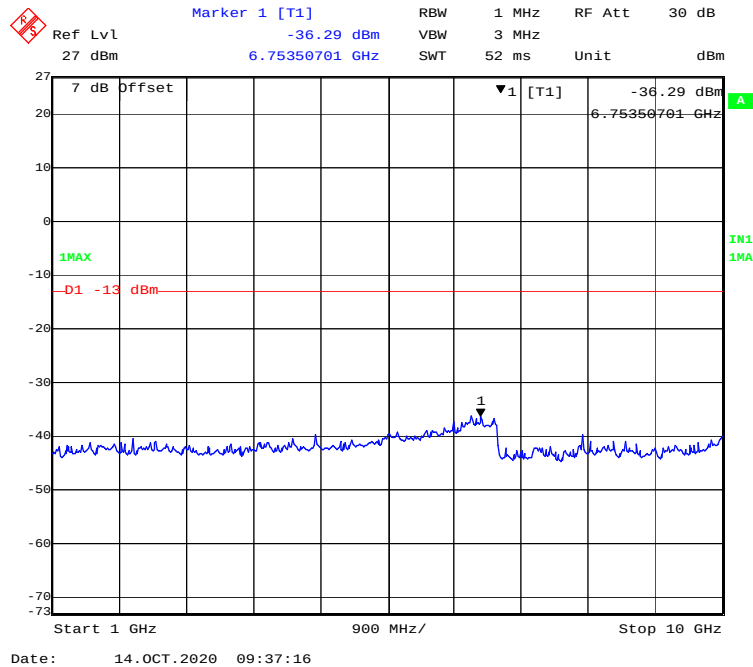
1 GHz – 10 GHz (3 MHz, QPSK, Middle Channel)



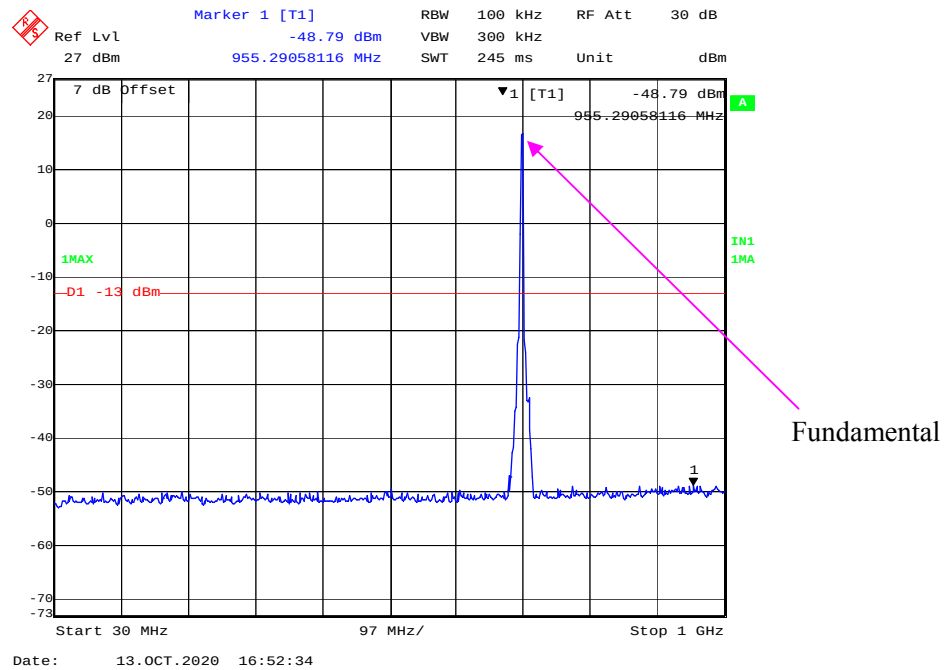
30 MHz - 1 GHz (3 MHz, 16-QAM, Middle Channel)



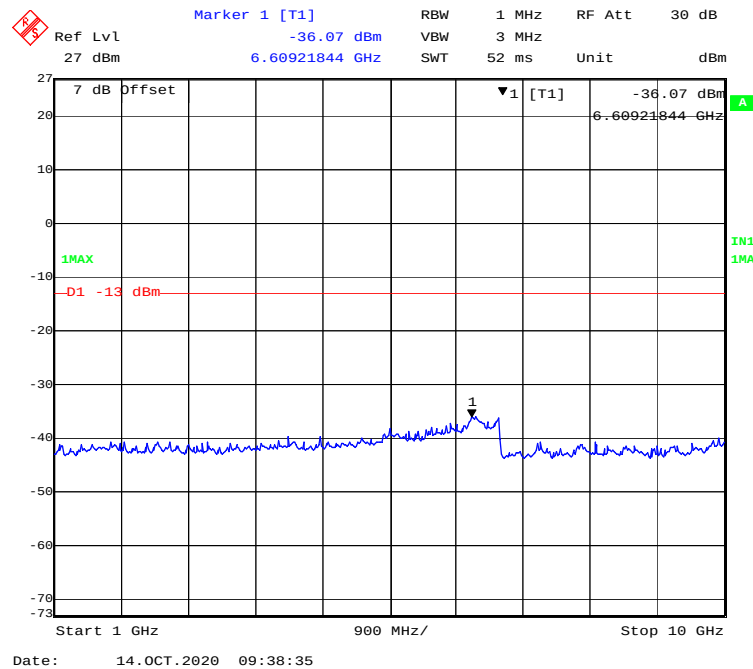
1 GHz – 10 GHz (3 MHz, 16-QAM, Middle Channel)



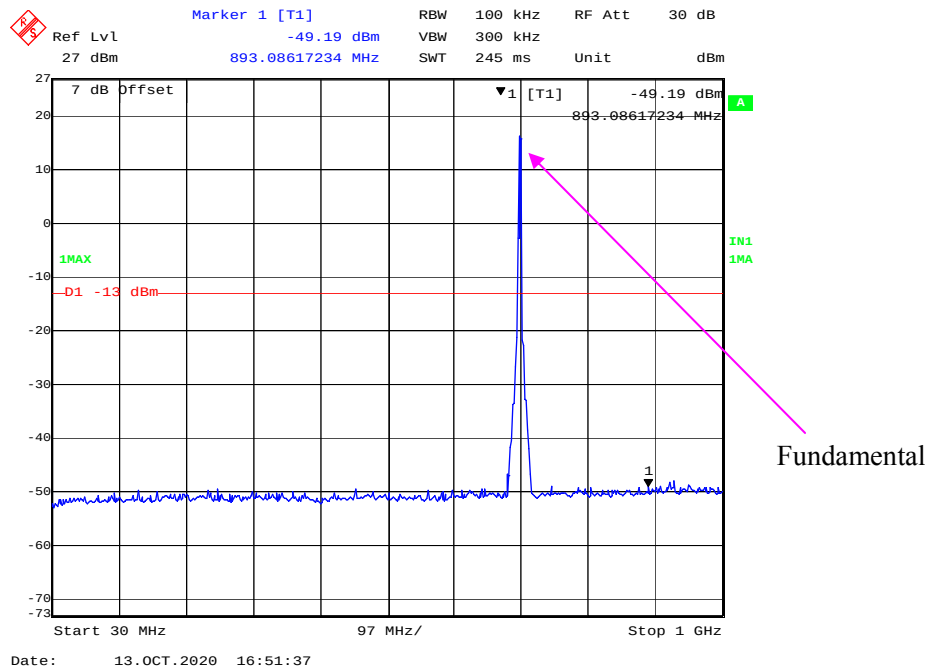
30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)



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



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



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

