

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

For

Shanghai ZoomSmart Technology Co., Ltd

Room 802 Hengxi Road No.809 Pujiang Town Minhang district, Shanghai, 201114 China

FCC ID: 2AUFL-LT702

Report Type: Original Report	Product Type: Rugged Tablet
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RSHD200817001-00E	Original Report	2020-12-11
1	RSHD200817001-00EM1	Revised Report (See Note)	2021-02-08

Note: Updated the ERP and EIRP in report

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Shanghai ZoomSmart Technology Co., Ltd
Tested Model:	LT702
Product Type:	Rugged Tablet
Power Supply:	DC 3.8V from battery and DC 5V from adapter
RF Function:	GSM/GPRS/EGPRS, WCDMA, CDMA, LTE
Operating Band/Frequency:	GSM/GPRS/EGPRS 850: 824-849 MHz(TX), 869-894 MHz(RX) GSM/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) CDMA850 Band: 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 7: 2500-2570 MHz(TX), 2620-2690 MHz(RX) LTE Band 17: 704-716 MHz(TX), 734-746 MHz(RX) LTE Band 41: 2555-2655 MHz(TX), 2555-2655 MHz(RX)
Modulation Type:	GSM/GPRS/EGPRS: GMSK,8PSK WCDMA: BPSK,QPSK,16QAM CDMA: BPSK,QPSK,16QAM LTE: QPSK,16QAM
Antenna Type:	FPC antenna
*Maximum Antenna Gain:	GSM/GPRS/EGPRS 850: -1.15 dBi GSM/GPRS/EGPRS 1900: 0.55 dBi WCDMA Band II: 0.55 dBi WCDMA Band V: -1.15 dBi CDMA850 Band: -1.15 dBi LTE Band 2: 0.55 dBi LTE Band 4: -0.41 dBi LTE Band 5: -1.15 dBi LTE Band 7: -0.52dBi LTE Band 17: -2.4 dBi LTE Band 41: -0.74 dBi

Adapter Information:

Model: P12DUSB050200 US

Input: AC 100-240V, 50/60Hz, 0.3A

Output: DC 5.0V, 2.0A

Note: The Maximum Antenna Gain was declared by the manufacturer.

*All measurement and test data in this report was gathered from production sample serial number: RSHD20200817001-1. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-08-17)

Objective

This type approval report is prepared on behalf of *Shanghai ZoomSmart 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 Submittal with FCC ID: 2AUFL-LT702
FCC Part 15.247 DTS Submittal with FCC ID: 2AUFL-LT702
FCC Part 15.407 NII Submittal with FCC ID: 2AUFL-LT702
FCC Part 15.225 DXX submissions with FCC ID: 2AUFL-LT702

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℃
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)
GSM/GPRS/EGPRS 850		Low	128	824.2
		Middle	190	836.6
		High	251	848.8
GSM/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
CDMA850 Band		Low	1013	824.70
		Middle	384	836.52
		High	777	848.31
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 7	5M	Low	20775	2502.5
		Middle	21100	2535.0
		High	21425	2567.5
	10M	Low	20800	2505.0
		Middle	21100	2535.0
		High	21400	2565.0
	15M	Low	20825	2507.5
		Middle	21100	2535.0
		High	21375	2562.5
	20M	Low	20850	2510.0
		Middle	21100	2535.0
		High	21350	2560.0

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
LTE Band 41	5M	Low	40265	2557.5
		Middle	40740	2605.0
		High	41215	2652.5
	10M	Low	40290	2560.0
		Middle	40740	2605.0
		High	41190	2650.0
	15M	Low	40315	2562.5
		Middle	40740	2605.0
		High	41165	2647.5
	20M	Low	40340	2565.0
		Middle	40740	2605.0
		High	41140	2645.0

Equipment Modifications

No modifications were made to the EUT.

Support Equipment List and Details

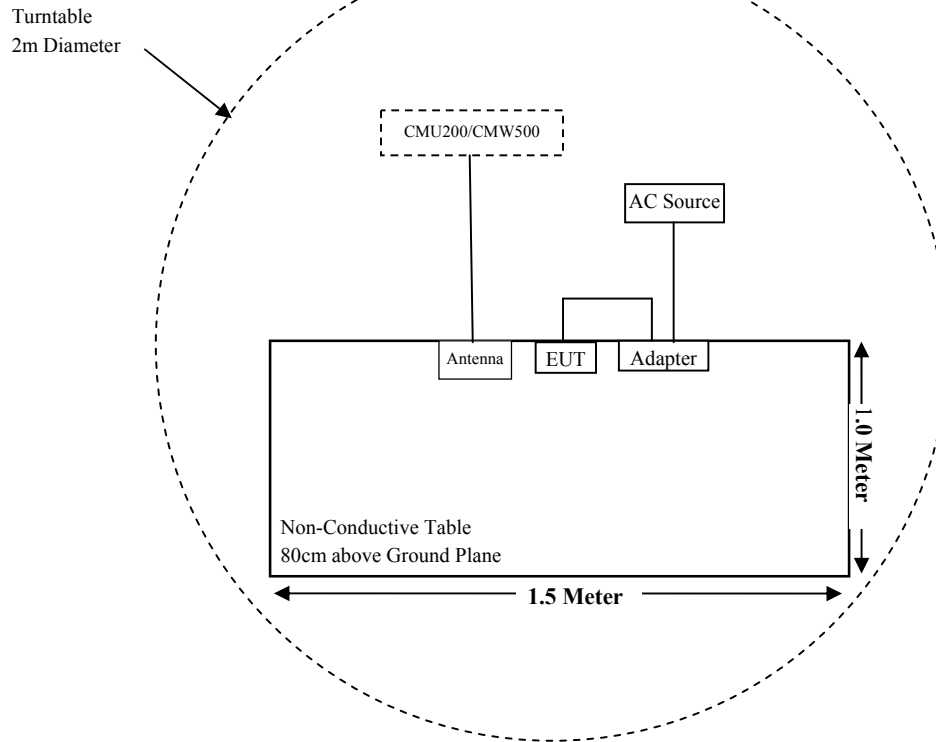
Manufacturer	Description	Model	Serial Number
Aihuaxin technology	Antenna	/	/
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478

External I/O Cable

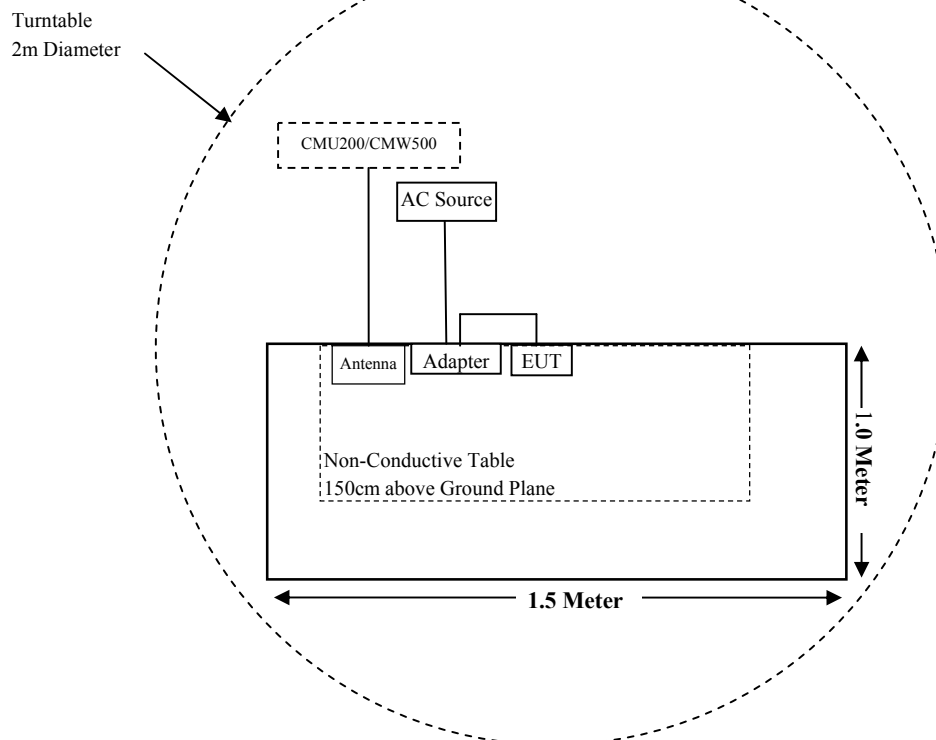
Cable Description	Length (m)	From Port	To
USB Cable	1.0	EUT	Adapter
Power Cable	1.0	Adapter	LISN/AC Source

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) (h)(2)	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 (m)	Spurious Emissions at Antenna Terminal	Compliant
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53 (m)	Spurious Radiated Emissions	Compliant
§ 22.917 (a); § 24.238 (a); §27.53 (m)	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
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2020-12-14	2021-12-13
HP	Signal Generator	N5183A	MY51040755	2019-12-14	2020-12-13
HP	Signal Generator	N5183A	MY51040755	2020-12-14	2021-12-13
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2017-12-26	2020-12-25
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2020-12-26	2023-12-25
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2019-01-09	2022-01-08
Sonoma Instrument	Pre-amplifier	310N	171205	2020-08-14	2021-08-13
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
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
HP	Signal Generator	N5183A	MY51040755	2020-12-14	2021-12-13
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	2019-12-12	2022-12-11
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	2019-12-12	2020-12-11
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-12-12	2021-12-11
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	6dB	006	2020-01-10	2021-01-09
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
Mini-Circuits	Power splitter	ZFRSC-14-S+	SF019411452	2020-11-10	2021-11-09
BACL	Temperature & Humidity Chamber	BTH-150	30023	2019-12-20	2020-12-19
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2019-10-10	2020-10-09
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2020-10-10	2021-10-09
ZOOMSMART	RF Cable	ZOOMSMART 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: RSHD200817001-20B

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) (h)(2) - 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(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.

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

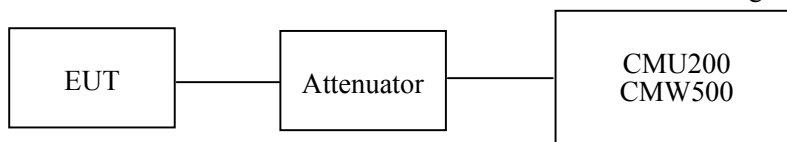
According to §27.50(h) (2), Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

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).

ERP/EIRP (dBm) = Submitted Level (dBm) –Cable loss(dB)+ Antenna Gain(dBd/dBi)

Test Data

Environmental Conditions

Temperature:	24.9-25.1 °C
Relative Humidity:	49-53 %
ATM Pressure:	101.5-101.9 kPa

The testing was performed by Jack Jiao from 2020-10-13 to 2020-02-07.

Conducted Power:

GSM 850 Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
GSM	128	824.2	33.48	38.45
	190	836.6	33.36	38.45
	251	848.8	33.19	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.20	32.02	31.20	30.27	29.34	38.45
	190	836.60	32.26	31.55	30.63	29.56	38.45
	251	848.80	32.31	31.68	30.47	29.40	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.20	25.99	25.05	24.04	22.90	38.45
	190	836.60	26.23	25.32	24.19	23.09	38.45
	251	848.80	26.25	25.30	24.23	23.10	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	22.32	22.54	22.28
		HSDPA	1	22.04	22.01	22.19
			2	21.96	22.03	22.07
			3	22.09	21.93	22.00
			4	22.08	22.03	22.12
		HSUPA	1	22.00	22.10	22.14
			2	22.02	22.09	22.17
			3	21.95	22.11	22.08
			4	22.03	22.09	22.16
			5	22.02	22.01	22.11
		HSPA+	1	22.06	22.08	22.09

CDMA850 Band

Mode	Test Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
CDMA	EVDO (BC0)	1013	824.70	22.19	38.45
		384	836.52	22.31	38.45
		777	848.31	22.13	38.45

Mode	Test Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
CDMA	1xRTT	1013	824.70	22.02	38.45
		384	836.52	22.06	38.45
		777	848.31	21.98	38.45

PCS 1900 Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
GSM	512	1850.2	30.58	33
	661	1880	30.64	33
	810	1909.8	30.98	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.34	28.84	27.84	26.68	33
	661	1880.0	28.96	28.70	27.70	26.75	33
	810	1909.8	28.67	27.93	26.86	25.77	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	24.97	23.94	22.88	21.77	33
	661	1880.0	24.69	23.60	22.46	21.35	33
	810	1909.8	24.54	23.42	22.33	21.08	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	20.91	20.66	20.97
		HSDPA	1	20.8	20.65	20.77
			2	20.82	20.58	20.58
			3	20.72	20.59	20.68
			4	20.71	20.45	20.69
		HSUPA	1	20.71	20.56	20.74
			2	20.75	20.51	20.61
			3	20.78	20.58	20.66
			4	20.64	20.67	20.71
			5	20.67	20.58	20.65
		HSPA+	1	20.83	20.42	20.66

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	20.78	20.88	21.46
		1#3	20.96	21.03	21.21
		1#5	20.86	20.47	21.5
		3#0	21.25	20.46	20.42
		3#1	21.42	20.89	20.65
		3#3	20.93	21.29	20.53
		6#0	21.13	21.22	21.23
	16-QAM	1#0	21.11	20.93	20.55
		1#3	21.65	21.01	20.66
		1#5	21.64	20.57	20.62
		3#0	20.87	20.42	21.16
		3#1	21.5	21.36	21.43
		3#3	21.69	20.5	21.38
		6#0	21.4	20.72	20.36
3M	QPSK	1#0	21.53	21.39	21.17
		1#7	21.35	21.48	20.95
		1#14	21.44	20.8	20.48
		8#0	20.92	21.3	21.37
		8#4	21.7	20.82	21.22
		8#7	20.89	21.14	20.64
		15#0	21.26	20.94	20.89
	16-QAM	1#0	21.4	21.34	20.63
		1#7	21.46	21.45	20.77
		1#14	20.74	20.54	20.5
		8#0	20.88	21.21	20.94
		8#4	21.21	20.84	20.73
		8#7	21.39	20.94	20.74
		15#0	20.94	21.26	21.02

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.57	20.64	20.64
		1#12	21.02	20.54	20.66
		1#24	21.31	20.76	20.76
		12#0	21.14	20.66	21.41
		12#6	21.82	20.43	20.99
		12#11	21.11	20.62	21
		25#0	21.15	21.18	20.69
	16-QAM	1#0	20.92	20.59	21.27
		1#12	21.6	20.79	21.21
		1#24	21.58	21.27	20.63
		12#0	21.44	20.88	20.57
		12#6	21.79	20.79	20.68
		12#11	21.37	20.69	20.56
		25#0	21.79	20.85	21.03
10M	QPSK	1#0	21.55	21.36	20.94
		1#24	21.34	20.89	21.15
		1#49	21.79	21.11	21.04
		25#0	20.92	20.44	21.39
		25#12	21.05	21.02	20.66
		25#24	21.77	21.16	20.84
		50#0	21.83	20.39	21.54
	16-QAM	1#0	21.33	20.66	21.46
		1#24	21.58	20.44	20.88
		1#49	21.32	21.03	20.85
		25#0	21.69	21.24	21.33
		25#12	21.45	21.1	20.95
		25#24	21.54	20.5	21.27
		50#0	21	20.52	21.16

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.87	21.93	21.22
		1#37	21.85	21.38	21.07
		1#74	21.97	21.29	21.06
		36#0	21.33	21.48	21.08
		36#17	21.94	21.38	20.94
		36#35	21.9	21.29	21.16
		75#0	21.64	21.8	21.55
	16-QAM	1#0	21.38	21.66	21.68
		1#37	21.28	21.9	20.85
		1#74	21.46	21.4	21.15
		36#0	21.79	21.58	21.08
		36#17	21.83	21.68	21.36
		36#35	21.64	21.71	20.79
		75#0	21.3	21.95	21.17
20M	QPSK	1#0	21.88	22.09	21.99
		1#49	21.16	21.76	21.54
		1#99	21.76	21.75	21.7
		50#0	21.6	21.63	21.56
		50#24	21.95	21.45	21.46
		50#49	21.41	22.07	21.44
		100#0	21.36	21.43	21.08
	16-QAM	1#0	21.94	21.56	21.38
		1#49	22.04	21.4	21.22
		1#99	21.61	21.79	20.74
		50#0	21.21	21.97	20.77
		50#24	21.79	21.6	21.35
		50#49	21.73	22.02	21.68
		100#0	21.88	21.53	21.27

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	20.82	20.69	21.05
		1#3	20.93	21.3	21.45
		1#5	21.51	21.49	21.66
		3#0	20.89	21.6	21.48
		3#1	21.81	21.08	21.6
		3#3	21.25	20.89	21.83
		6#0	21.27	21.41	21.11
	16-QAM	1#0	21.25	21.06	21.73
		1#3	21.38	20.87	21.74
		1#5	21.47	20.85	21.36
		3#0	21.06	21.33	21.86
		3#1	21.57	20.69	21.8
		3#3	21.79	21.27	21.31
		6#0	21.7	21.01	21.6
3M	QPSK	1#0	21.19	21.02	21.31
		1#7	21.09	21.14	21.81
		1#14	21.45	21.64	21.56
		8#0	21.49	21.12	21.85
		8#4	21.6	21.52	21.56
		8#7	21.7	21.25	21.35
		15#0	21.65	20.75	21.44
	16-QAM	1#0	21.66	21.39	21.29
		1#7	21.62	21.65	21.82
		1#14	21.62	21.38	21.37
		8#0	20.96	20.73	21.22
		8#4	20.93	20.85	21.86
		8#7	21.5	21.67	21.7
		15#0	21.04	20.72	21.27

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	20.68	20.79	20.79
		1#12	21.31	21.63	21.31
		1#24	21.16	21.25	21.32
		12#0	20.72	21	21.4
		12#6	20.8	20.91	21.73
		12#11	21.65	21.61	21.8
		25#0	21.29	21.1	21.35
	16-QAM	1#0	21.55	21.17	21.49
		1#12	20.86	20.86	21.77
		1#24	21.08	21.33	21.56
		12#0	20.74	21.22	21.74
		12#6	20.72	20.99	21.01
		12#11	21.57	21.61	21.15
		25#0	21.43	21.52	21.05
10M	QPSK	1#0	21.14	21.66	21.04
		1#24	21.58	21.15	21.45
		1#49	21.48	21.3	21.42
		25#0	21.47	21.73	21.43
		25#12	21.02	21.69	21.48
		25#24	20.8	21.57	21.55
		50#0	21.47	21.53	21.32
	16-QAM	1#0	20.76	20.92	21.34
		1#24	21.1	21.68	21.64
		1#49	20.79	21.19	21.05
		25#0	20.93	21.46	21.37
		25#12	21.69	21.1	21.22
		25#24	20.76	20.94	21.05
		50#0	21.41	20.89	21.52

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.16	20.79	20.69
		1#37	20.83	21.04	21.49
		1#74	21.11	21.52	21.03
		36#0	20.98	20.71	21.21
		36#17	21.75	20.86	21.16
		36#35	20.83	21.45	21.6
		75#0	21.37	21.32	21.48
	16-QAM	1#0	21.32	21.1	21.67
		1#37	21.29	21.21	21.59
		1#74	20.99	21	21.08
		36#0	20.84	20.75	21.45
		36#17	21.5	21.51	21.71
		36#35	20.98	20.94	21.75
		75#0	21.31	21.31	21.42
20M	QPSK	1#0	21.41	21.78	21.66
		1#49	21.53	21.45	21.55
		1#99	21.25	21.34	21.39
		50#0	21.08	21.33	21.17
		50#24	20.89	21.29	20.94
		50#49	21.62	20.93	21.19
		100#0	21.01	21.26	21.16
	16-QAM	1#0	21.59	20.64	21.75
		1#49	21.05	20.67	21.26
		1#99	21	20.82	21.32
		50#0	21.29	20.77	21.36
		50#24	21.45	20.98	21.53
		50#49	21.62	20.98	21.72
		100#0	21.52	20.93	21.21

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	23.46	23.09	23.49
		1#3	24.06	24.15	23.56
		1#5	23.87	23.74	23.36
		3#0	24.29	23.58	23.20
		3#1	23.46	23.88	23.56
		3#3	24.17	23.56	23.30
		6#0	23.93	23.28	23.62
	16-QAM	1#0	24.25	24.05	24.08
		1#3	24.17	24.01	23.70
		1#5	23.86	23.39	23.53
		3#0	23.86	24.01	23.48
		3#1	23.94	24.05	23.48
		3#3	23.77	24.04	23.81
		6#0	23.44	23.55	23.83
3M	QPSK	1#0	23.96	23.91	23.63
		1#7	23.63	23.67	23.34
		1#14	23.87	23.54	23.65
		8#0	24.16	23.92	23.26
		8#4	23.40	24.12	23.47
		8#7	23.55	23.68	23.20
		15#0	23.73	24.16	23.62
	16-QAM	1#0	23.46	23.74	23.63
		1#7	24.30	23.77	24.07
		1#14	24.00	23.73	23.92
		8#0	23.90	23.88	23.58
		8#4	24.23	23.65	23.95
		8#7	24.02	23.29	23.97
		15#0	23.68	23.61	23.44

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	23.19	23.43	23.29
		1#12	23.72	23.80	23.81
		1#24	23.67	23.63	23.78
		12#0	24.23	23.68	23.38
		12#6	24.13	24.14	23.74
		12#11	24.04	23.71	23.56
		25#0	23.59	23.69	23.76
	16-QAM	1#0	24.09	23.95	23.58
		1#12	23.89	23.90	23.83
		1#24	24.09	23.67	23.51
		12#0	24.00	24.24	23.63
		12#6	23.87	23.83	24.12
		12#11	23.71	23.51	23.67
		25#0	24.09	23.89	24.30
10M	QPSK	1#0	24.28	24.34	24.32
		1#24	23.56	23.33	24.14
		1#49	24.21	23.48	23.98
		25#0	23.72	23.86	23.74
		25#12	23.75	23.48	24.02
		25#24	23.71	23.59	24.21
		50#0	23.54	23.82	23.76
	16-QAM	1#0	23.66	23.75	23.84
		1#24	23.92	23.82	24.13
		1#49	24.04	24.15	23.38
		25#0	23.89	23.60	23.46
		25#12	24.30	23.84	24.01
		25#24	23.89	23.60	23.93
		50#0	23.53	24.19	23.84

LTE Band 7

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.22	21.58	21.74
		1#12	21.53	20.77	21.32
		1#24	21.56	20.93	21.62
		12#0	21.70	21.03	21.25
		12#6	21.63	21.41	21.09
		12#11	21.29	21.38	21.14
		25#0	21.58	21.12	21.28
	16-QAM	1#0	21.29	20.73	21.52
		1#12	21.34	20.89	21.71
		1#24	21.66	21.48	21.45
		12#0	20.98	20.9	21.49
		12#6	21.45	21.14	21.35
		12#11	21.3	21.45	21.46
		25#0	21.22	20.84	21.36
10M	QPSK	1#0	21.4	20.74	21.15
		1#24	21.04	21.38	21.49
		1#49	21.61	21.64	21.12
		25#0	21.68	21.12	21.27
		25#12	21.33	20.99	21.19
		25#24	21.67	21.56	21.69
		50#0	21.76	21.37	21.7
	16-QAM	1#0	21.32	21.01	21.55
		1#24	21.49	21.13	21.46
		1#49	21.18	20.98	21.41
		25#0	21.28	21.14	21.56
		25#12	21.18	21.45	21.06
		25#24	21.44	20.75	21.70
		50#0	21.27	20.89	22.02

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	21.16	21.63	21.93
		1#37	21.32	21.18	21.27
		1#74	21.16	20.91	21.55
		36#0	21.41	21.4	21.65
		36#17	21.54	20.94	21.3
		36#35	21.65	21.15	21.37
		75#0	21.28	21.12	21.1
	16-QAM	1#0	20.95	20.72	21.85
		1#37	21.49	21.69	21.65
		1#74	21.15	21.31	21.95
		36#0	21.25	21.09	21.93
		36#17	21.63	21.62	21.86
		36#35	21.5	21.1	21.16
		75#0	20.94	21.35	21.06
20M	QPSK	1#0	21.7	21.71	21.63
		1#49	21.31	21.05	21.21
		1#99	21.43	21.19	21.2
		50#0	21.14	21.73	21.48
		50#24	21.47	21.62	21.52
		50#49	20.85	21.24	21.56
		100#0	20.82	21.53	21.11
	16-QAM	1#0	21.44	21.28	21.72
		1#49	20.89	21.05	21.68
		1#99	21.26	21.45	21.52
		50#0	21.72	21.65	21.56
		50#24	21.35	21.24	21.32
		50#49	21.66	21.17	21.11
		100#0	21.52	21.47	21.34

LTE Band 17

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.58	21.95	21.16
		1#12	22.22	21.47	21.42
		1#24	21.92	21.15	21.15
		12#0	21.28	21.14	21.34
		12#6	21.77	21.24	21.04
		12#11	21.57	21.43	21.29
		25#0	21.90	22.06	21.23
	16-QAM	1#0	21.44	21.63	21.84
		1#12	22.01	21.45	21.47
		1#24	22.04	21.89	21.69
		12#0	22.08	22.00	21.73
		12#6	21.46	21.62	21.28
		12#11	21.39	22.09	21.38
		25#0	22.09	22.10	21.11
10M	QPSK	1#0	21.33	21.58	21.58
		1#24	21.48	21.64	21.31
		1#49	21.86	21.57	21.21
		25#0	21.45	21.48	21.38
		25#12	21.48	21.19	21.67
		25#24	21.53	21.28	22.15
		50#0	21.47	21.71	21.94
	16-QAM	1#0	21.67	21.41	21.72
		1#24	21.66	21.70	21.33
		1#49	21.48	21.81	21.61
		25#0	22.04	21.76	21.63
		25#12	21.69	21.38	21.81
		25#24	21.42	21.88	21.84
		50#0	22.01	21.17	22.08

LTE Band 41

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.75	21.87	21.94
		1#12	21.54	21.61	21.54
		1#24	21.63	21.84	21.66
		12#0	21.51	22.09	21.97
		12#6	22.03	21.43	21.39
		12#11	22.02	22.11	21.59
		25#0	21.63	21.46	21.04
	16-QAM	1#0	22.12	21.28	21.93
		1#12	21.84	21.40	21.63
		1#24	22.12	21.59	21.04
		12#0	21.47	21.13	21.91
		12#6	22.00	21.70	21.44
		12#11	21.39	21.88	21.35
		25#0	22.13	21.29	21.73
10M	QPSK	1#0	21.78	22.01	21.35
		1#24	22.09	21.41	21.91
		1#49	21.37	21.92	21.26
		25#0	21.58	21.38	21.34
		25#12	21.38	21.16	21.37
		25#24	21.28	21.79	21.67
		50#0	21.60	21.44	21.72
	16-QAM	1#0	21.47	22.00	22.11
		1#24	21.99	21.79	21.47
		1#49	21.65	21.92	22.14
		25#0	21.73	22.09	21.26
		25#12	21.82	21.77	21.92
		25#24	21.41	22.09	22.08
		50#0	21.31	22.05	21.89

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	22.06	22.02	21.18
		1#37	22.21	21.28	21.36
		1#74	22.02	21.36	21.10
		36#0	21.73	21.17	21.80
		36#17	21.52	21.35	21.67
		36#35	21.62	21.15	21.74
		75#0	22.09	21.61	21.29
	16-QAM	1#0	21.87	21.48	21.26
		1#37	21.96	21.65	21.68
		1#74	21.37	21.84	21.87
		36#0	21.81	21.28	21.82
		36#17	21.34	21.87	21.41
		36#35	21.74	21.57	21.58
		75#0	21.45	22.09	21.94
20M	QPSK	1#0	21.55	21.84	21.20
		1#49	22.03	21.27	21.31
		1#99	21.17	21.45	21.36
		50#0	21.45	21.61	21.49
		50#24	22.03	21.42	21.80
		50#49	21.19	21.82	21.59
		100#0	22.14	21.50	21.33
	16-QAM	1#0	21.37	21.22	21.67
		1#49	21.71	21.85	21.68
		1#99	22.08	21.24	21.89
		50#0	22.05	21.87	21.53
		50#24	21.44	22.00	21.57
		50#49	21.83	21.31	21.27
		100#0	21.18	21.21	21.55

Peak-to-average ratio (PAR):**GSM 850 Band**

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	2.03	≤ 13
	Middle	1.94	≤ 13
	High	2.05	≤ 13

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	2.19	≤ 13
	Middle	2.10	≤ 13
	High	2.12	≤ 13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	2.07	≤ 13
	Middle	1.95	≤ 13
	High	2.14	≤ 13

CDMA850 Band

Mode	Channel	PAR (dB)	Limit(dBm)
EV-DO (BC0)	Low	2.11	≤ 13
	Middle	2.15	≤ 13
	High	2.08	≤ 13

Mode	Channel	PAR (dB)	Limit(dBm)
1xRTT	Low	2.15	≤ 13
	Middle	2.23	≤ 13
	High	2.02	≤ 13

WCDMA Band V

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	2.15	≤ 13
	Middle	2.07	≤ 13
	High	2.17	≤ 13
WCDMA (HSDPA)	Low	2.14	≤ 13
	Middle	2.26	≤ 13
	High	2.11	≤ 13
WCDMA (HSUPA)	Low	2.16	≤ 13
	Middle	2.09	≤ 13
	High	2.20	≤ 13
WCDMA (HSPA+)	Low	2.07	≤ 13
	Middle	2.26	≤ 13
	High	2.15	≤ 13

PCS 1900

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	2.07	≤ 13
	Middle	2.18	≤ 13
	High	2.25	≤ 13

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	2.07	≤ 13
	Middle	2.01	≤ 13
	High	2.05	≤ 13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	2.25	≤ 13
	Middle	2.25	≤ 13
	High	2.10	≤ 13

WCDMA Band II

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	2.21	≤ 13
	Middle	2.15	≤ 13
	High	2.05	≤ 13
WCDMA (HSDPA)	Low	2.01	≤ 13
	Middle	1.98	≤ 13
	High	1.97	≤ 13
WCDMA (HSUPA)	Low	2.26	≤ 13
	Middle	2.03	≤ 13
	High	2.20	≤ 13
WCDMA (HSPA+)	Low	1.97	≤ 13
	Middle	1.95	≤ 13
	High	1.99	≤ 13

LTE Band 2

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)
QPSK	1 RB	20M	3.14	3.03	3.10	≤ 13
	100 RB		5.06	5.14	5.18	≤ 13
16-QAM	1 RB	20M	4.03	4.15	4.01	≤ 13
	100 RB		6.20	6.16	6.01	≤ 13

LTE Band 4

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	3.14	3.09	3.17	≤ 13
	100 RB		5.02	5.12	5.10	≤ 13
16-QAM	1 RB	20M	4.17	4.11	4.04	≤ 13
	100 RB		6.19	6.16	6.14	≤ 13

LTE Band 5

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.01	3.16	3.08	≤ 13
	50 RB		5.10	5.02	5.13	≤ 13
16-QAM	1 RB	10M	4.06	4.03	4.03	≤ 13
	50 RB		6.12	6.17	6.10	≤ 13

LTE Band 7

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	3.08	3.07	3.11	≤ 13
	100 RB		5.17	5.13	5.09	≤ 13
16-QAM	1 RB	20M	4.18	4.11	4.03	≤ 13
	100 RB		6.09	6.13	6.02	≤ 13

LTE Band 17

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.07	3.14	3.13	≤ 13
	50 RB		5.20	5.09	5.18	≤ 13
16-QAM	1 RB	10M	4.06	4.09	4.19	≤ 13
	50 RB		6.04	6.01	6.04	≤ 13

LTE Band 41

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	3.04	3.15	3.19	≤ 13
	100 RB		5.00	5.16	5.10	≤ 13
16-QAM	1 RB	20M	4.10	4.09	4.02	≤ 13
	100 RB		6.14	6.20	6.01	≤ 13

Radiated Power:**GSM 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)			
GSM 850, Low Channel (ERP)										
824.2	93.72	52	200	H	31.18	0.62	-1.18	29.38	38.45	9.07
824.2	90.23	117	150	V	27.69	0.62	-1.18	25.89	38.45	12.56
GPRS 850, Low Channel (ERP)										
824.2	93.83	100	200	H	31.29	0.62	-1.18	29.49	38.45	8.96
824.2	90.81	351	157	V	28.27	0.62	-1.18	26.47	38.45	11.98
EGPRS 850, Low Channel (ERP)										
824.2	89.54	136	152	H	27	0.62	-1.18	25.20	38.45	13.25
824.2	85.96	156	175	V	23.42	0.62	-1.18	21.62	38.45	16.83
GSM 1900, Low Channel (EIRP)										
1850.2	85.03	296	100	H	11.63	0.84	8.76	19.55	33	13.45
1850.2	81.36	12	150	V	7.96	0.84	8.76	15.88	33	17.12
GPRS 1900, Low Channel (EIRP)										
1850.2	85.54	197	198	H	12.14	0.84	8.76	20.06	33	12.94
1850.2	81.36	106	174	V	7.96	0.84	8.76	15.88	33	17.12
EGPRS 1900, Low Channel (EIRP)										
1850.2	82.58	89	163	H	9.18	0.84	8.76	17.10	33	15.9
1850.2	79.27	182	112	V	5.87	0.84	8.76	13.79	33	19.21

GSM 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)			
GSM 850, Middle Channel (ERP)										
836.6	93.77	346	100	H	31.23	0.63	-1.14	29.46	38.45	8.99
836.6	90.22	44	150	V	27.68	0.63	-1.14	25.91	38.45	12.54
GPRS 850, Middle Channel (ERP)										
836.6	93.55	224	100	H	31.01	0.63	-1.14	29.24	38.45	9.21
836.6	90.47	177	150	V	27.93	0.63	-1.14	26.16	38.45	12.29
EGPRS 850, Middle Channel (ERP)										
836.6	89.53	4	150	H	26.99	0.63	-1.14	25.22	38.45	13.23
836.6	85.59	226	100	V	23.05	0.63	-1.14	21.28	38.45	17.17
GSM 1900, Middle Channel (EIRP)										
1880	85.73	30	150	H	12.33	0.85	8.81	20.29	33	12.71
1880	81.43	95	100	V	8.03	0.85	8.81	15.99	33	17.01
GPRS 1900, Middle Channel (EIRP)										
1880	85.44	342	150	H	12.04	0.85	8.81	20.0	33	13
1880	81.47	52	100	V	8.07	0.85	8.81	16.03	33	16.97
EGPRS 1900, Middle Channel (EIRP)										
1880	82.21	157	150	H	8.81	0.85	8.81	16.77	33	16.23
1880	79.04	98	100	V	5.64	0.85	8.81	13.6	33	19.40

GSM 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)			
GSM 850, High Channel (ERP)										
848.8	93.6	41	200	H	31.06	0.63	-1.1	29.33	38.45	9.12
848.8	90.63	337	150	V	28.09	0.63	-1.1	26.36	38.45	12.09
GPRS 850, High Channel (ERP)										
848.8	93.45	253	200	H	30.91	0.63	-1.1	29.18	38.45	9.27
848.8	90.22	46	157	V	27.68	0.63	-1.1	25.95	38.45	12.5
EGPRS 850, High Channel (ERP)										
848.8	89.65	261	152	H	27.11	0.63	-1.1	25.38	38.45	13.07
848.8	85.96	152	175	V	23.42	0.63	-1.1	21.69	38.45	16.76
GSM 1900, High Channel (EIRP)										
1909.8	85.99	189	200	H	12.59	0.85	8.85	20.59	33	12.41
1909.8	81.43	187	150	V	8.03	0.85	8.85	16.03	33	16.97
GPRS 1900, High Channel (EIRP)										
1909.8	85.9	223	198	H	12.5	0.85	8.85	20.5	33	12.5
1909.8	81.19	213	174	V	7.79	0.85	8.85	15.79	33	17.21
EGPRS 1900, High Channel (EIRP)										
1909.8	82.67	186	163	H	9.27	0.85	8.85	17.27	33	15.73
1909.8	79.56	1	112	V	6.16	0.85	8.85	14.16	33	18.84

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	89.82	194	200	H	24.35	0.63	-1.17	22.55	38.45	15.90
826.40	82.39	317	150	V	16.92	0.63	-1.17	15.12	38.45	23.33
WCDMA Band II, Low Channel(EIRP)										
1852.40	77.5	344	200	H	4.41	0.84	8.76	12.33	33	20.67
1852.40	80.9	218	150	V	7.81	0.84	8.76	15.73	33	17.27

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	89.79	229	200	H	24.32	0.63	-1.14	22.55	38.45	15.9
836.60	82.91	103	150	V	17.44	0.63	-1.14	15.67	38.45	22.78
WCDMA Band II, Middle Channel(EIRP)										
1880.00	77.28	166	200	H	4.19	0.85	8.81	12.15	33	20.85
1880.00	80.17	43	150	V	7.08	0.85	8.81	15.04	33	17.96

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 (dBi)			
WCDMA Band V, High Channel(ERP)										
846.6	89.3	271	200	H	23.83	0.63	-1.11	22.09	38.45	16.36
846.6	82.75	242	150	V	17.28	0.63	-1.11	15.54	38.45	22.91
WCDMA Band II, High Channel(EIRP)										
1907.6	77.45	72	200	H	4.36	0.85	8.85	12.36	33	20.64
1907.6	80.8	269	150	V	7.71	0.85	8.85	15.71	33	17.29

CDMA850 Band

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
EVDO mode, Low Channel(ERP)										
824.70	84.89	218	200	H	22.35	0.62	-1.18	20.55	38.45	17.90
824.70	85.59	259	150	V	23.05	0.62	-1.18	21.25	38.45	17.20
EVDO mode, Middle Channel(ERP)										
836.52	85.75	198	200	H	23.21	0.63	-1.14	21.44	38.45	17.01
836.52	84.55	43	150	V	22.01	0.63	-1.14	20.24	38.45	18.21
EVDO mode, High Channel(ERP)										
848.31	86.19	37	200	H	23.65	0.63	-1.1	21.92	38.45	16.53
848.31	85.02	98	150	V	22.48	0.63	-1.1	20.75	38.45	17.70

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
1xRTT mode, Low Channel(ERP)										
824.70	84.74	236	200	H	22.20	0.62	-1.18	20.40	38.45	18.05
824.70	85.35	162	150	V	22.81	0.62	-1.18	21.01	38.45	17.44
1xRTT mode, Middle Channel(ERP)										
836.52	85.57	120	200	H	23.03	0.63	-1.14	21.26	38.45	17.19
836.52	84.71	184	150	V	22.17	0.63	-1.14	20.4	38.45	18.05
1xRTT mode, High Channel(ERP)										
848.31	86.94	226	200	H	24.4	0.63	-1.1	22.67	38.45	15.78
848.31	85.45	229	150	V	22.91	0.63	-1.1	21.18	38.45	17.27

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	78.78	5.69	0.84	8.76	13.61	33	19.39
1850.7	V	82.78	9.69	0.84	8.76	17.61	33	15.39
16-QAM 1.4M BW Low Channel								
1850.7	H	78.27	5.18	0.84	8.76	13.10	33	19.90
1850.7	V	82.04	8.95	0.84	8.76	16.87	33	16.13
QPSK 3M BW Low Channel								
1851.5	H	78.7	5.61	0.84	8.76	13.53	33	19.47
1851.5	V	82.64	9.55	0.84	8.76	17.47	33	15.53
16-QAM 3M BW Low Channel								
1851.5	H	78.95	5.86	0.84	8.76	13.78	33	19.22
1851.5	V	82.8	9.71	0.84	8.76	17.63	33	15.37
QPSK 5M BW Low Channel								
1852.5	H	78.01	4.92	0.84	8.76	12.84	33	20.16
1852.5	V	82.72	9.63	0.84	8.76	17.55	33	15.45
16-QAM 5M BW Low Channel								
1852.5	H	78.09	5.00	0.84	8.76	12.92	33	20.08
1852.5	V	82.83	9.74	0.84	8.76	17.66	33	15.34
QPSK 10M BW Low Channel								
1855.0	H	78.17	5.08	0.84	8.77	13.01	33	19.99
1855.0	V	82.49	9.40	0.84	8.77	17.33	33	15.67
16-QAM 10M BW Low Channel								
1855.0	H	78.71	5.62	0.84	8.77	13.55	33	19.45
1855.0	V	82.76	9.67	0.84	8.77	17.6	33	15.4
QPSK 15M BW Low Channel								
1857.5	H	78.93	5.84	0.84	8.77	13.77	33	19.23
1857.5	V	82.8	9.71	0.84	8.77	17.64	33	15.36
16-QAM 15M BW Low Channel								
1857.5	H	78.78	5.69	0.84	8.77	13.62	33	19.38
1857.5	V	82.67	9.58	0.84	8.77	17.51	33	15.49

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	78.31	5.22	0.84	8.78	13.16	33	19.84
1860.0	V	82.01	8.92	0.84	8.78	16.86	33	16.14
16-QAM 20M BW Low Channel								
1860.0	H	78.51	5.42	0.84	8.78	13.36	33	19.64
1860.0	V	82.51	9.42	0.84	8.78	17.36	33	15.64

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 1.4M BW Middle Channel								
1880.0	H	78.90	5.81	0.85	8.81	13.77	33	19.23
1880.0	V	82.06	8.97	0.85	8.81	16.93	33	16.07
16-QAM 1.4M BW Middle Channel								
1880.0	H	78.60	5.51	0.85	8.81	13.47	33	19.53
1880.0	V	82.14	9.05	0.85	8.81	17.01	33	15.99
QPSK 3M BW Middle Channel								
1880.0	H	78.15	5.06	0.85	8.81	13.02	33	19.98
1880.0	V	82.37	9.28	0.85	8.81	17.24	33	15.76
16-QAM 3M BW Middle Channel								
1880.0	H	78.91	5.82	0.85	8.81	13.78	33	19.22
1880.0	V	82.15	9.06	0.85	8.81	17.02	33	15.98
QPSK 5M BW Middle Channel								
1880.0	H	78.13	5.04	0.85	8.81	13.00	33	20.00
1880.0	V	82.4	9.31	0.85	8.81	17.27	33	15.73
16-QAM 5M BW Middle Channel								
1880.0	H	78.46	5.37	0.85	8.81	13.33	33	19.67
1880.0	V	82.06	8.97	0.85	8.81	16.93	33	16.07
QPSK 10M BW Middle Channel								
1880.0	H	78.59	5.50	0.85	8.81	13.46	33	19.54
1880.0	V	82.74	9.65	0.85	8.81	17.61	33	15.39
16-QAM 10M BW Middle Channel								
1880.0	H	78	4.91	0.85	8.81	12.87	33	20.13
1880.0	V	82.57	9.48	0.85	8.81	17.44	33	15.56
QPSK 15M BW Middle Channel								
1880.0	H	78.84	5.75	0.85	8.81	13.71	33	19.29
1880.0	V	82.68	9.59	0.85	8.81	17.55	33	15.45
16-QAM 15M BW Middle Channel								
1880.0	H	78.46	5.37	0.85	8.81	13.33	33	19.67
1880.0	V	82.91	9.82	0.85	8.81	17.78	33	15.22

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								
1880.0	H	78.13	5.04	0.85	8.81	13.00	33	20.00
1880.0	V	82.63	9.54	0.85	8.81	17.50	33	15.50
16-QAM 20M BW Middle Channel								
1880.0	H	78.82	5.73	0.85	8.81	13.69	33	19.31
1880.0	V	82.07	8.98	0.85	8.81	16.94	33	16.06

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	78.09	5.00	0.85	8.85	13.00	33	20.00
1909.3	V	82.75	9.66	0.85	8.85	17.66	33	15.34
16-QAM 1.4M BW High Channel								
1909.3	H	78.64	5.55	0.85	8.85	13.55	33	19.45
1909.3	V	82.59	9.50	0.85	8.85	17.50	33	15.50
QPSK 3M BW High Channel								
1908.5	H	78.48	5.39	0.85	8.85	13.39	33	19.61
1908.5	V	82.13	9.04	0.85	8.85	17.04	33	15.96
16-QAM 3M BW High Channel								
1908.5	H	78.48	5.39	0.85	8.85	13.39	33	19.61
1908.5	V	82.42	9.33	0.85	8.85	17.33	33	15.67
QPSK 5M BW High Channel								
1907.5	H	78.74	5.65	0.85	8.85	13.65	33	19.35
1907.5	V	82.06	8.97	0.85	8.85	16.97	33	16.03
16-QAM 5M BW High Channel								
1907.5	H	78.02	4.93	0.85	8.85	12.93	33	20.07
1907.5	V	82.62	9.53	0.85	8.85	17.53	33	15.47
QPSK 10M BW High Channel								
1905.0	H	78.01	4.92	0.85	8.85	12.92	33	20.08
1905.0	V	82.24	9.15	0.85	8.85	17.15	33	15.85
16-QAM 10M BW High Channel								
1905.0	H	78.23	5.14	0.85	8.85	13.14	33	19.86
1905.0	V	82.8	9.71	0.85	8.85	17.71	33	15.29
QPSK 15M BW High Channel								
1902.5	H	78.1	5.01	0.85	8.84	13.00	33	20.00
1902.5	V	83	9.91	0.85	8.84	17.90	33	15.10
16-QAM 15M BW High Channel								
1902.5	H	78.64	5.55	0.85	8.84	13.54	33	19.46
1902.5	V	82.13	9.04	0.85	8.84	17.03	33	15.97

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	78.34	5.25	0.85	8.84	13.24	33	19.76
1900.0	V	82.02	8.93	0.85	8.84	16.92	33	16.08
16-QAM 20M BW High Channel								
1900.0	H	78.58	5.49	0.85	8.84	13.48	33	19.52
1900.0	V	82.32	9.23	0.85	8.84	17.22	33	15.78

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	77.32	4.25	0.84	8.54	11.95	30	18.05
1710.7	V	83.73	10.66	0.84	8.54	18.36	30	11.64
16-QAM 1.4M BW Low Channel								
1710.7	H	77.43	4.36	0.84	8.54	12.06	30	17.94
1710.7	V	83.81	10.74	0.84	8.54	18.44	30	11.56
QPSK 3M BW Low Channel								
1711.5	H	77.82	4.75	0.84	8.54	12.45	30	17.55
1711.5	V	83.74	10.67	0.84	8.54	18.37	30	11.63
16-QAM 3M BW Low Channel								
1711.5	H	77.46	4.39	0.84	8.54	12.09	30	17.91
1711.5	V	83.81	10.74	0.84	8.54	18.44	30	11.56
QPSK 5M BW Low Channel								
1712.5	H	77.34	4.27	0.84	8.54	11.97	30	18.03
1712.5	V	83.2	10.13	0.84	8.54	17.83	30	12.17
16-QAM 5M BW Low Channel								
1712.5	H	77.05	3.98	0.84	8.54	11.68	30	18.32
1712.5	V	83.78	10.71	0.84	8.54	18.41	30	11.59
QPSK 10M BW Low Channel								
1715.0	H	77.31	4.24	0.84	8.54	11.94	30	18.06
1715.0	V	83.55	10.48	0.84	8.54	18.18	30	11.82
16-QAM 10M BW Low Channel								
1715.0	H	77.78	4.71	0.84	8.54	12.41	30	17.59
1715.0	V	83.27	10.20	0.84	8.54	17.90	30	12.10
QPSK 15M BW Low Channel								
1717.5	H	77.55	4.48	0.84	8.55	12.19	30	17.81
1717.5	V	83.06	9.99	0.84	8.55	17.70	30	12.30
16-QAM 15M BW Low Channel								
1717.5	H	77.66	4.59	0.84	8.55	12.30	30	17.70
1717.5	V	83.07	10.00	0.84	8.55	17.71	30	12.29

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 20M BW Low Channel								
1720.0	H	77.43	4.36	0.84	8.55	12.07	30	17.93
1720.0	V	83.11	10.04	0.84	8.55	17.75	30	12.25
16-QAM 20M BW Low Channel								
1720.0	H	77.92	4.85	0.84	8.55	12.56	30	17.44
1720.0	V	83.14	10.07	0.84	8.55	17.78	30	12.22

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	77.97	4.90	0.84	8.57	12.63	30	17.37
1732.5	V	83.61	10.54	0.84	8.57	18.27	30	11.73
16-QAM 1.4M BW Middle Channel								
1732.5	H	77.9	4.83	0.84	8.57	12.56	30	17.44
1732.5	V	83.54	10.47	0.84	8.57	18.20	30	11.80
QPSK 3M BW Middle Channel								
1732.5	H	77.54	4.47	0.84	8.57	12.20	30	17.80
1732.5	V	83.69	10.62	0.84	8.57	18.35	30	11.65
16-QAM 3M BW Middle Channel								
1732.5	H	77.93	4.86	0.84	8.57	12.59	30	17.41
1732.5	V	83.59	10.52	0.84	8.57	18.25	30	11.75
QPSK 5M BW Middle Channel								
1732.5	H	77.03	3.96	0.84	8.57	11.69	30	18.31
1732.5	V	83.76	10.69	0.84	8.57	18.42	30	11.58
16-QAM 5M BW Middle Channel								
1732.5	H	77.37	4.30	0.84	8.57	12.03	30	17.97
1732.5	V	83.34	10.27	0.84	8.57	18.00	30	12.00
QPSK 10M BW Middle Channel								
1732.5	H	77.02	3.95	0.84	8.57	11.68	30	18.32
1732.5	V	83.99	10.92	0.84	8.57	18.65	30	11.35
16-QAM 10M BW Middle Channel								
1732.5	H	77.3	4.23	0.84	8.57	11.96	30	18.04
1732.5	V	83.9	10.83	0.84	8.57	18.56	30	11.44
QPSK 15M BW Middle Channel								
1732.5	H	77.21	4.14	0.84	8.57	11.87	30	18.13
1732.5	V	83.22	10.15	0.84	8.57	17.88	30	12.12
16-QAM 15M BW Middle Channel								
1732.5	H	77.5	4.43	0.84	8.57	12.16	30	17.84
1732.5	V	83.76	10.69	0.84	8.57	18.42	30	11.58

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	77.9	4.83	0.84	8.57	12.56	30	17.44
1732.5	V	83.73	10.66	0.84	8.57	18.39	30	11.61
16-QAM 20M BW Middle Channel								
1732.5	H	77.76	4.69	0.84	8.57	12.42	30	17.58
1732.5	V	83.65	10.58	0.84	8.57	18.31	30	11.69

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	77.21	4.14	0.84	8.61	11.91	30	18.09
1754.3	V	83.15	10.08	0.84	8.61	17.85	30	12.15
16-QAM 1.4M BW High Channel								
1754.3	H	77.17	4.10	0.84	8.61	11.87	30	18.13
1754.3	V	83.78	10.71	0.84	8.61	18.48	30	11.52
QPSK 3M BW High Channel								
1753.5	H	77.33	4.26	0.84	8.6	12.02	30	17.98
1753.5	V	83.02	9.95	0.84	8.6	17.71	30	12.29
16-QAM 3M BW High Channel								
1753.5	H	77.74	4.67	0.84	8.6	12.43	30	17.57
1753.5	V	83.65	10.58	0.84	8.6	18.34	30	11.66
QPSK 5M BW High Channel								
1752.5	H	77.27	4.20	0.84	8.6	11.96	30	18.04
1752.5	V	83.01	9.94	0.84	8.6	17.70	30	12.30
16-QAM 5M BW High Channel								
1752.5	H	77.31	4.24	0.84	8.6	12.00	30	18.00
1752.5	V	83.93	10.86	0.84	8.6	18.62	30	11.38
QPSK 10M BW High Channel								
1750.0	H	77.27	4.20	0.84	8.6	11.96	30	18.04
1750.0	V	83.01	9.94	0.84	8.6	17.70	30	12.30
16-QAM 10M BW High Channel								
1750.0	H	77.7	4.63	0.84	8.6	12.39	30	17.61
1750.0	V	83.25	10.18	0.84	8.6	17.94	30	12.06
QPSK 15M BW High Channel								
1747.5	H	77.03	3.96	0.84	8.6	11.72	30	18.28
1747.5	V	83.01	9.94	0.84	8.6	17.70	30	12.30
16-QAM 15M BW High Channel								
1747.5	H	77.04	3.97	0.84	8.6	11.73	30	18.27
1747.5	V	83.02	9.95	0.84	8.6	17.71	30	12.29

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 20M BW High Channel								
1745.0	H	77.15	4.08	0.84	8.59	11.83	30	18.17
1745.0	V	83.65	10.58	0.84	8.59	18.33	30	11.67
16-QAM 20M High Channel								
1745.0	H	77.88	4.81	0.84	8.59	12.56	30	17.44
1745.0	V	83.57	10.50	0.84	8.59	18.25	30	11.75

ERP:**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	92.52	27.74	0.62	-1.18	25.94	38.45	12.51
824.7	V	89.02	24.24	0.62	-1.18	22.44	38.45	16.01
16-QAM 1.4M BW Low Channel								
824.7	H	92.67	27.89	0.62	-1.18	26.09	38.45	12.36
824.7	V	89.74	24.96	0.62	-1.18	23.16	38.45	15.29
QPSK 3M BW Low Channel								
825.5	H	92.62	27.91	0.63	-1.17	26.11	38.45	12.34
825.5	V	89.94	25.23	0.63	-1.17	23.43	38.45	15.02
16-QAM 3M BW Low Channel								
825.5	H	92.87	28.16	0.63	-1.17	26.36	38.45	12.09
825.5	V	89.96	25.25	0.63	-1.17	23.45	38.45	15.00
QPSK 5M BW Low Channel								
826.5	H	92.31	27.69	0.63	-1.17	25.89	38.45	12.56
826.5	V	89.33	24.71	0.63	-1.17	22.91	38.45	15.54
16-QAM 5M BW Low Channel								
826.5	H	92.7	28.08	0.63	-1.17	26.28	38.45	12.17
826.5	V	89.1	24.48	0.63	-1.17	22.68	38.45	15.77
QPSK 10M BW Low Channel								
829.0	H	92.74	28.35	0.63	-1.16	26.56	38.45	11.89
829.0	V	89.88	25.49	0.63	-1.16	23.70	38.45	14.75
16-QAM 10M BW Low Channel								
829.0	H	92.08	27.69	0.63	-1.16	25.90	38.45	12.55
829.0	V	89.7	25.31	0.63	-1.16	23.52	38.45	14.93

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	92.11	26.64	0.63	-1.14	24.87	38.45	13.58
836.5	V	89.79	24.32	0.63	-1.14	22.55	38.45	15.90
16-QAM 1.4M BW Middle Channel								
836.5	H	92.44	26.97	0.63	-1.14	25.20	38.45	13.25
836.5	V	89.57	24.10	0.63	-1.14	22.33	38.45	16.12
QPSK 3M BW Middle Channel								
836.5	H	92.04	26.57	0.63	-1.14	24.80	38.45	13.65
836.5	V	89.48	24.01	0.63	-1.14	22.24	38.45	16.21
16-QAM 3M BW Middle Channel								
836.5	H	92.73	27.26	0.63	-1.14	25.49	38.45	12.96
836.5	V	89.48	24.01	0.63	-1.14	22.24	38.45	16.21
QPSK 5M BW Middle Channel								
836.5	H	92.99	27.52	0.63	-1.14	25.75	38.45	12.70
836.5	V	89.52	24.05	0.63	-1.14	22.28	38.45	16.17
16-QAM 5M BW Middle Channel								
836.5	H	92.06	26.59	0.63	-1.14	24.82	38.45	13.63
836.5	V	89.21	23.74	0.63	-1.14	21.97	38.45	16.48
QPSK 10M BW Middle Channel								
836.5	H	92.08	26.61	0.63	-1.14	24.84	38.45	13.61
836.5	V	89.99	24.52	0.63	-1.14	22.75	38.45	15.70
16-QAM 10M BW Middle Channel								
836.5	H	92.09	26.62	0.63	-1.14	24.85	38.45	13.60
836.5	V	89.19	23.72	0.63	-1.14	21.95	38.45	16.50

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	88.87	26.25	0.62	-1.11	24.52	38.45	13.93
848.3	V	87.49	24.87	0.62	-1.11	23.14	38.45	15.31
16-QAM 1.4M BW High Channel								
848.3	H	88.73	26.11	0.62	-1.11	24.38	38.45	14.07
848.3	V	87.64	25.02	0.62	-1.11	23.29	38.45	15.16
QPSK 3M BW High Channel								
847.5	H	88.08	25.39	0.63	-1.11	23.65	38.45	14.80
847.5	V	87.95	25.26	0.63	-1.11	23.52	38.45	14.93
16-QAM 3M BW High Channel								
847.5	H	88.38	25.69	0.63	-1.11	23.95	38.45	14.50
847.5	V	87.99	25.30	0.63	-1.11	23.56	38.45	14.89
QPSK 5M BW High Channel								
846.5	H	88.20	25.42	0.63	-1.11	23.68	38.45	14.77
846.5	V	87.45	24.67	0.63	-1.11	22.93	38.45	15.52
16-QAM 5M BW High Channel								
846.5	H	88.03	25.25	0.63	-1.11	23.51	38.45	14.94
846.5	V	87.35	24.57	0.63	-1.11	22.83	38.45	15.62
QPSK 10M BW High Channel								
844.0	H	88.92	25.91	0.63	-1.12	24.16	38.45	14.29
844.0	V	87.21	24.20	0.63	-1.12	22.45	38.45	16.00
16-QAM 10M BW High Channel								
844.0	H	88.68	25.67	0.63	-1.12	23.92	38.45	14.53
844.0	V	87.44	24.43	0.63	-1.12	22.68	38.45	15.77

EIRP:**LTE band 7**

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK 5M BW Low Channel								
2502.5	H	76.18	6.75	0.89	10.10	15.96	33	17.04
2502.5	V	81.16	11.73	0.89	10.10	20.94	33	12.06
16-QAM 5M BW Low Channel								
2502.5	H	76.84	7.41	0.89	10.10	16.62	33	16.38
2502.5	V	81.88	12.45	0.89	10.10	21.66	33	11.34
QPSK 10M BW Low Channel								
2505.00	H	76.63	7.20	0.89	10.09	16.40	33	16.60
2505.00	V	81.94	12.51	0.89	10.09	21.71	33	11.29
16-QAM 10M BW Low Channel								
2505.00	H	76.92	7.49	0.89	10.09	16.69	33	16.31
2505.00	V	81	11.57	0.89	10.09	20.77	33	12.23
QPSK 15M BW Low Channel								
2507.50	H	76.08	6.65	0.89	10.09	15.85	33	17.15
2507.50	V	81.2	11.77	0.89	10.09	20.97	33	12.03
16-QAM 15M BW Low Channel								
2507.50	H	76.81	7.38	0.89	10.09	16.58	33	16.42
2507.50	V	81.77	12.34	0.89	10.09	21.54	33	11.46
QPSK 20M BW Low Channel								
2510.00	H	76.14	6.71	0.89	10.09	15.91	33	17.09
2510.00	V	81.13	11.70	0.89	10.09	20.90	33	12.10
16-QAM 20M BW Low Channel								
2510.00	H	76.8	7.37	0.89	10.09	16.57	33	16.43
2510.00	V	81.04	11.61	0.89	10.09	20.81	33	12.19

LTE band 7

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK 5M BW Middle Channel								
2535.00	H	76.09	6.66	0.89	10.05	15.82	33	17.18
2535.00	V	81.71	12.28	0.89	10.05	21.44	33	11.56
16-QAM 5M BW Middle Channel								
2535.00	H	76.72	7.29	0.89	10.05	16.45	33	16.55
2535.00	V	81.39	11.96	0.89	10.05	21.12	33	11.88
QPSK 10M BW Middle Channel								
2535.00	H	76.4	6.97	0.89	10.05	16.13	33	16.87
2535.00	V	81.33	11.90	0.89	10.05	21.06	33	11.94
16-QAM 10M BW Middle Channel								
2535.00	H	76.42	6.99	0.89	10.05	16.15	33	16.85
2535.00	V	81.92	12.49	0.89	10.05	21.65	33	11.35
QPSK 15M BW Middle Channel								
2535.00	H	76.14	6.71	0.89	10.05	15.87	33	17.13
2535.00	V	81.45	12.02	0.89	10.05	21.18	33	11.82
16-QAM 15M BW Middle Channel								
2535.00	H	76.13	6.70	0.89	10.05	15.86	33	17.14
2535.00	V	81.25	11.82	0.89	10.05	20.98	33	12.02
QPSK 20M BW Middle Channel								
2535.00	H	76.05	6.62	0.89	10.05	15.78	33	17.22
2535.00	V	81.53	12.10	0.89	10.05	21.26	33	11.74
16-QAM 20M BW Middle Channel								
2535.00	H	76.23	6.80	0.89	10.05	15.96	33	17.04
2535.00	V	81.77	12.34	0.89	10.05	21.50	33	11.50

LTE band 7

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
QPSK 5M BW High Channel								
2567.50	H	76.96	7.53	0.89	10.01	16.65	33	16.35
2567.50	V	81.61	12.18	0.89	10.01	21.30	33	11.70
16-QAM 5M BW High Channel								
2567.50	H	76.93	7.50	0.89	10.01	16.62	33	16.38
2567.50	V	81.9	12.47	0.89	10.01	21.59	33	11.41
QPSK 10M BW High Channel								
2565.00	H	76.62	7.19	0.89	10.01	16.31	33	16.69
2565.00	V	81.89	12.46	0.89	10.01	21.58	33	11.42
16-QAM 10M BW High Channel								
2565.00	H	76.58	7.15	0.89	10.01	16.27	33	16.73
2565.00	V	81.47	12.04	0.89	10.01	21.16	33	11.84
QPSK 15M BW High Channel								
2562.50	H	76.86	7.43	0.89	10.01	16.55	33	16.45
2562.50	V	81.68	12.25	0.89	10.01	21.37	33	11.63
16-QAM 15M BW High Channel								
2562.50	H	76.57	7.14	0.89	10.01	16.26	33	16.74
2562.50	V	81.97	12.54	0.89	10.01	21.66	33	11.34
QPSK 20M BW High Channel								
2560.00	H	76.48	7.05	0.89	10.02	16.18	33	16.82
2560.00	V	81.84	12.41	0.89	10.02	21.54	33	11.46
16-QAM 20M BW High Channel								
2560.00	H	76.52	7.09	0.89	10.02	16.22	33	16.78
2560.00	V	81.31	11.88	0.89	10.02	21.01	33	11.99

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	80.55	15.12	0.62	-1.72	12.78	34.77	21.99
706.5	V	83.9	18.47	0.62	-1.72	16.13	34.77	18.64
16-QAM 5M BW Low Channel								
706.5	H	80.31	14.88	0.62	-1.72	12.54	34.77	22.23
706.5	V	83.82	18.39	0.62	-1.72	16.05	34.77	18.72
QPSK 10M BW Low Channel								
709.0	H	80.42	14.99	0.62	-1.71	12.66	34.77	22.11
709.0	V	83.11	17.68	0.62	-1.71	15.35	34.77	19.42
16-QAM 10M BW Low Channel								
709.0	H	80.35	14.92	0.62	-1.71	12.59	34.77	22.18
709.0	V	83.31	17.88	0.62	-1.71	15.55	34.77	19.22

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	80.63	15.20	0.62	-1.7	12.88	34.77	21.89
710.0	V	83.81	18.38	0.62	-1.7	16.06	34.77	18.71
16-QAM 5M BW Middle Channel								
710.0	H	80.54	15.11	0.62	-1.7	12.79	34.77	21.98
710.0	V	83.52	18.09	0.62	-1.7	15.77	34.77	19.00
QPSK 10M BW Middle Channel								
710.0	H	80.95	15.52	0.62	-1.7	13.20	34.77	21.57
710.0	V	83.97	18.54	0.62	-1.7	16.22	34.77	18.55
16-QAM 10M BW Middle Channel								
710.0	H	80.03	14.60	0.62	-1.7	12.28	34.77	22.49
710.0	V	83.31	17.88	0.62	-1.7	15.56	34.77	19.21

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	80.63	15.20	0.62	-1.68	12.90	34.77	21.87
713.5	V	83.95	18.52	0.62	-1.68	16.22	34.77	18.55
16-QAM 5M BW High Channel								
713.5	H	80.59	15.16	0.62	-1.68	12.86	34.77	21.91
713.5	V	83.88	18.45	0.62	-1.68	16.15	34.77	18.62
QPSK 10M BW High Channel								
711.0	H	80.43	15.00	0.62	-1.7	12.68	34.77	22.09
711.0	V	83.17	17.74	0.62	-1.7	15.42	34.77	19.35
16-QAM 10M BW High Channel								
711.0	H	80.34	14.91	0.62	-1.7	12.59	34.77	22.18
711.0	V	83.76	18.33	0.62	-1.7	16.01	34.77	18.76

EIRP:**LTE Band 41**

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								
2557.5	H	79.59	9.29	0.89	10.02	18.42	30	11.58
2557.5	V	84.82	14.52	0.89	10.02	23.65	30	6.35
16-QAM 5M BW Low Channel								
2557.5	H	79.85	9.55	0.89	10.02	18.68	30	11.32
2557.5	V	84.8	14.50	0.89	10.02	23.63	30	6.37
QPSK 10M BW Low Channel								
2560	H	79.48	9.18	0.89	10.02	18.31	30	11.69
2560	V	84.05	13.75	0.89	10.02	22.88	30	7.12
16-QAM 10M BW Low Channel								
2560	H	79.87	9.57	0.89	10.02	18.70	30	11.30
2560	V	84.23	13.93	0.89	10.02	23.06	30	6.94
QPSK 15M BW Low Channel								
2562.5	H	79.04	8.74	0.89	10.02	17.87	30	12.13
2562.5	V	84.81	14.51	0.89	10.02	23.64	30	6.36
16-QAM 15M BW Low Channel								
2562.5	H	79.65	9.35	0.89	10.02	18.48	30	11.52
2562.5	V	84.53	14.23	0.89	10.02	23.36	30	6.64
QPSK 20M BW Low Channel								
2565	H	79.9	9.60	0.89	10.02	18.73	30	11.27
2565	V	84.67	14.37	0.89	10.02	23.50	30	6.50
16-QAM 20M BW Low Channel								
2565	H	79.53	9.23	0.89	10.02	18.36	30	11.64
2565	V	84.72	14.42	0.89	10.02	23.55	30	6.45

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 5M BW Middle Channel								
2605.0	H	79.11	8.81	0.9	9.95	17.86	30	12.14
2605.0	V	84.19	13.89	0.9	9.95	22.94	30	7.06
16-QAM 5M BW Middle Channel								
2605.0	H	79.58	9.28	0.9	9.95	18.33	30	11.67
2605.0	V	84.64	14.34	0.9	9.95	23.39	30	6.61
QPSK 10M BW Middle Channel								
2605.0	H	79.35	9.05	0.9	9.95	18.10	30	11.90
2605.0	V	84.56	14.26	0.9	9.95	23.31	30	6.69
16-QAM 10M BW Middle Channel								
2605.0	H	79.06	8.76	0.9	9.95	17.81	30	12.19
2605.0	V	84.75	14.45	0.9	9.95	23.50	30	6.50
QPSK 15M BW Middle Channel								
2605.0	H	79.15	8.85	0.9	9.95	17.90	30	12.10
2605.0	V	84.17	13.87	0.9	9.95	22.92	30	7.08
16-QAM 15M BW Middle Channel								
2605.0	H	79.52	9.22	0.9	9.95	18.27	30	11.73
2605.0	V	84.17	13.87	0.9	9.95	22.92	30	7.08
QPSK 20M BW Middle Channel								
2605.0	H	79.61	9.31	0.9	9.95	18.36	30	11.64
2605.0	V	84.11	13.81	0.9	9.95	22.86	30	7.14
16-QAM 20M BW Middle Channel								
2605.0	H	79.79	9.49	0.9	9.95	18.54	30	11.46
2605.0	V	84.22	13.92	0.9	9.95	22.97	30	7.03

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								
2652.5	H	79.47	9.17	0.9	9.89	18.16	30	11.84
2652.5	V	84.88	14.58	0.9	9.89	23.57	30	6.43
16-QAM 5M BW High Channel								
2652.5	H	79.84	9.54	0.9	9.89	18.53	30	11.47
2652.5	V	84.85	14.55	0.9	9.89	23.54	30	6.46
QPSK 10M BW High Channel								
2650.0	H	79.23	8.93	0.9	9.89	17.92	30	12.08
2650.0	V	84.9	14.60	0.9	9.89	23.59	30	6.41
16-QAM 10M BW High Channel								
2650.0	H	79.6	9.30	0.9	9.89	18.29	30	11.71
2650.0	V	84.95	14.65	0.9	9.89	23.64	30	6.36
QPSK 15M BW High Channel								
2647.5	H	79.21	8.91	0.9	9.89	17.90	30	12.10
2647.5	V	84.29	13.99	0.9	9.89	22.98	30	7.02
16-QAM 15M BW High Channel								
2647.5	H	79.42	9.12	0.9	9.89	18.11	30	11.89
2647.5	V	84.18	13.88	0.9	9.89	22.87	30	7.13
QPSK 20M BW High Channel								
2645.0	H	79.8	9.50	0.9	9.89	18.49	30	11.51
2645.0	V	84.41	14.11	0.9	9.89	23.10	30	6.90
16-QAM 20M High Channel								
2645.0	H	79.67	9.37	0.9	9.89	18.36	30	11.64
2645.0	V	84.78	14.48	0.9	9.89	23.47	30	6.53

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

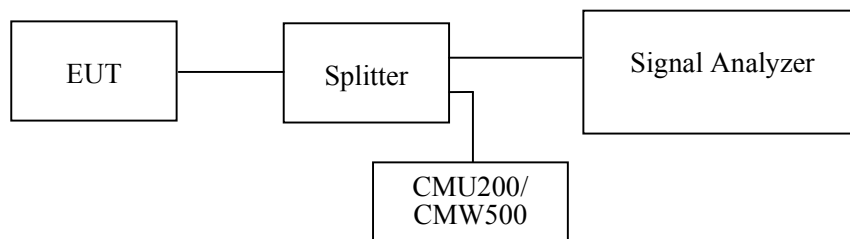
Applicable Standards

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 (CDMA) & 30 kHz/50 kHz/100 kHz/200 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 2020-09-16 to 2020-12-10.

EUT operation mode: Transmitting

Test Result: Compliant.

GSM 850 Band

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
GSM (GMSK)	824.2	0.321	0.244
	836.6	0.315	0.248
	848.8	0.323	0.246
GPRS (GMSK)	824.2	0.321	0.244
	836.6	0.319	0.244
	848.8	0.323	0.244
EGPRS (8PSK)	824.2	0.315	0.246
	836.6	0.311	0.255
	848.8	0.317	0.242

WCDMA Band V

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	826.4	4.770	4.148
	836.6	4.749	4.148
	846.6	4.870	4.208
WCDMA (HSDPA)	826.4	4.749	4.148
	836.6	4.729	4.128
	846.6	4.870	4.228
WCDMA (HSUPA)	826.4	4.770	4.148
	836.6	4.729	4.108
	846.6	4.990	4.248
WCDMA (HSPA+)	826.4	4.810	4.148
	836.6	4.749	4.108
	846.6	4.970	4.228

CDMA850 Band

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
EVDO(BC0)	824.70	1.317	1.106
	836.52	1.311	1.106
	848.31	1.323	1.106

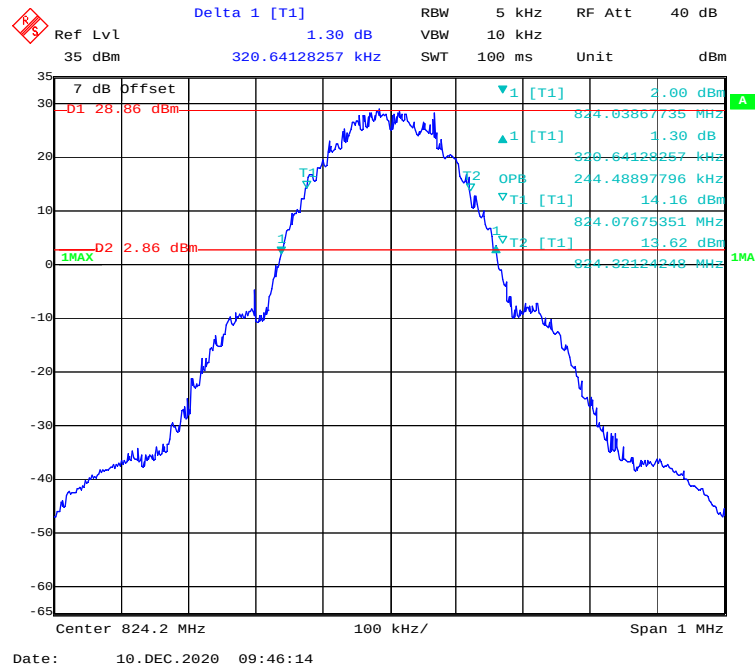
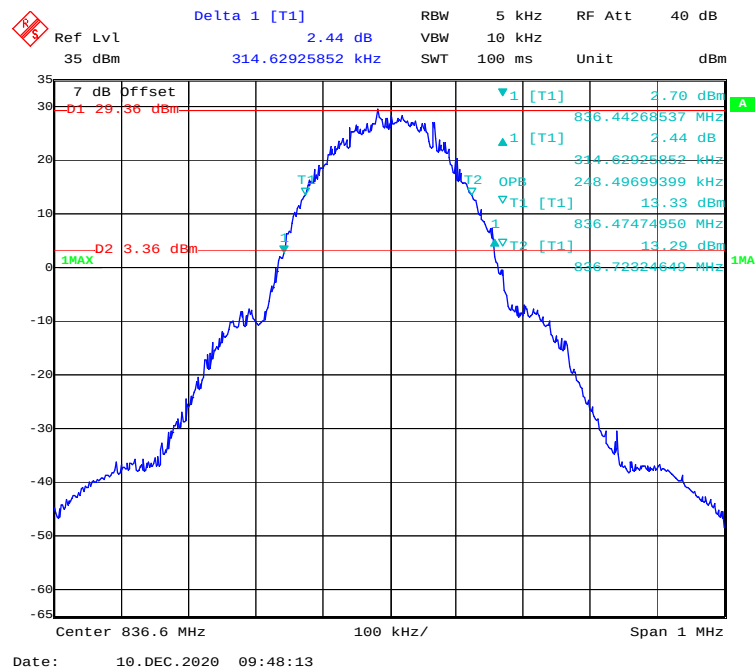
Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
1xRTT	824.70	1.317	1.106
	836.52	1.305	1.106
	848.31	1.317	1.106

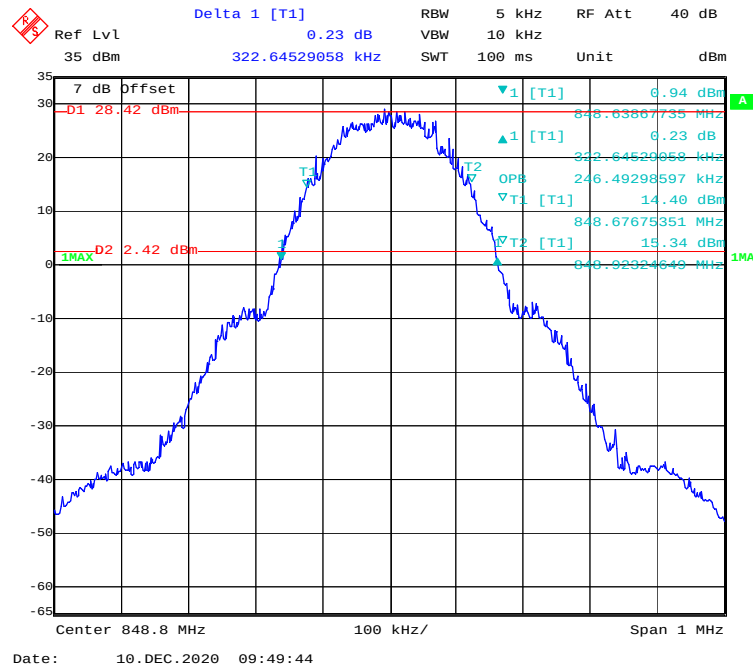
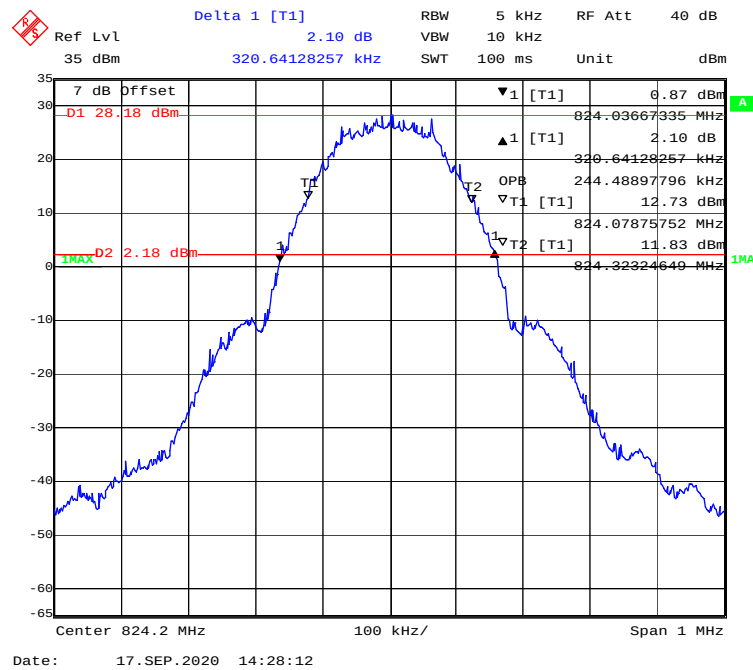
PCS 1900

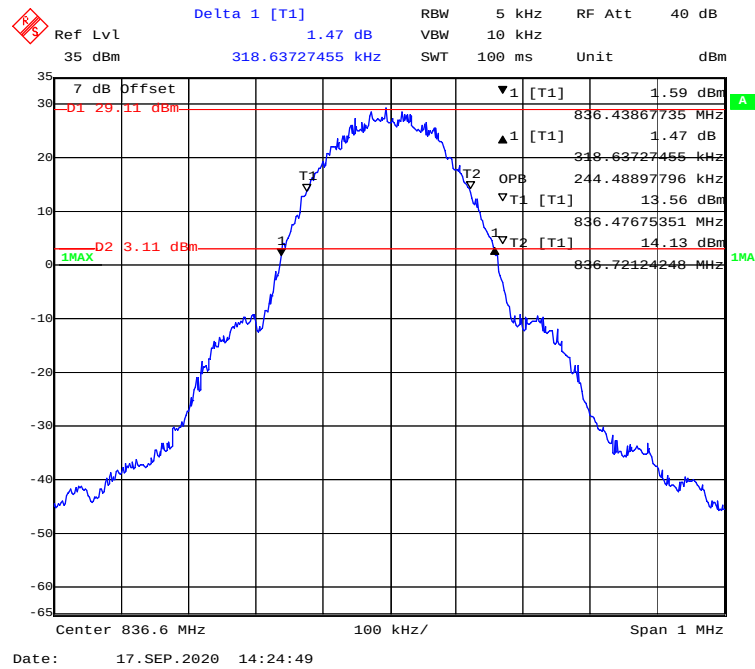
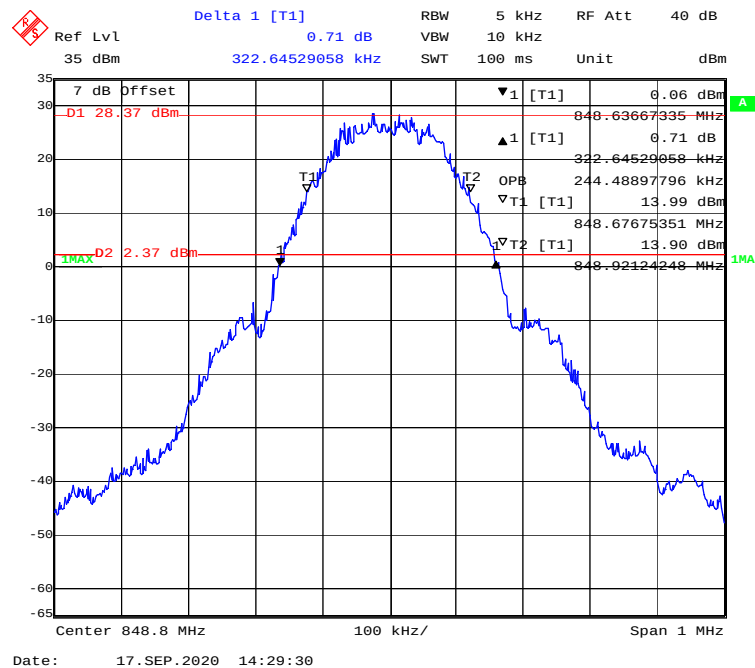
Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
GSM (GMSK)	1850.2	0.319	0.246
	1880.0	0.317	0.248
	1909.8	0.319	0.248
GPRS (GMSK)	1850.2	0.315	0.242
	1880.0	0.321	0.244
	1909.8	0.319	0.244
EGPRS (8PSK)	1850.2	0.327	0.251
	1880.0	0.331	0.261
	1909.8	0.311	0.244

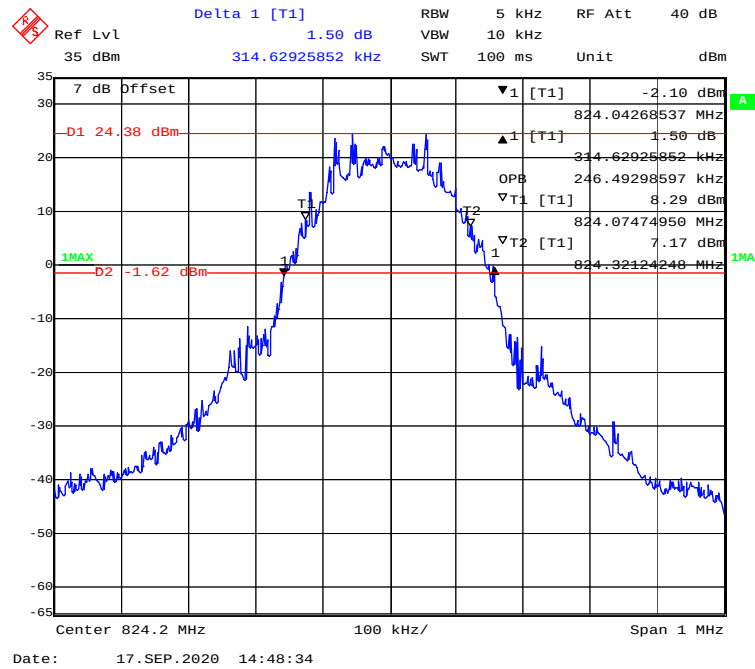
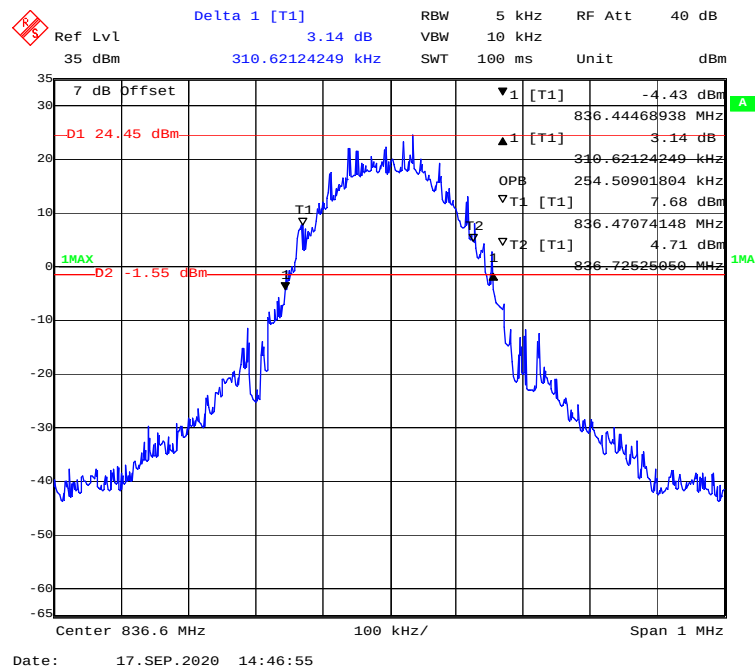
WCDMA Band II

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	1852.4	4.749	4.148
	1880.0	4.729	4.148
	1907.6	4.749	4.128
WCDMA (HSDPA)	1852.4	4.770	4.148
	1880.0	4.770	4.148
	1907.6	4.749	4.148
WCDMA (HSUPA)	1852.4	4.729	4.128
	1880.0	4.729	4.128
	1907.6	4.749	4.128
WCDMA (HSPA+)	1852.4	4.770	4.128
	1880.0	4.770	4.148
	1907.6	4.790	4.148

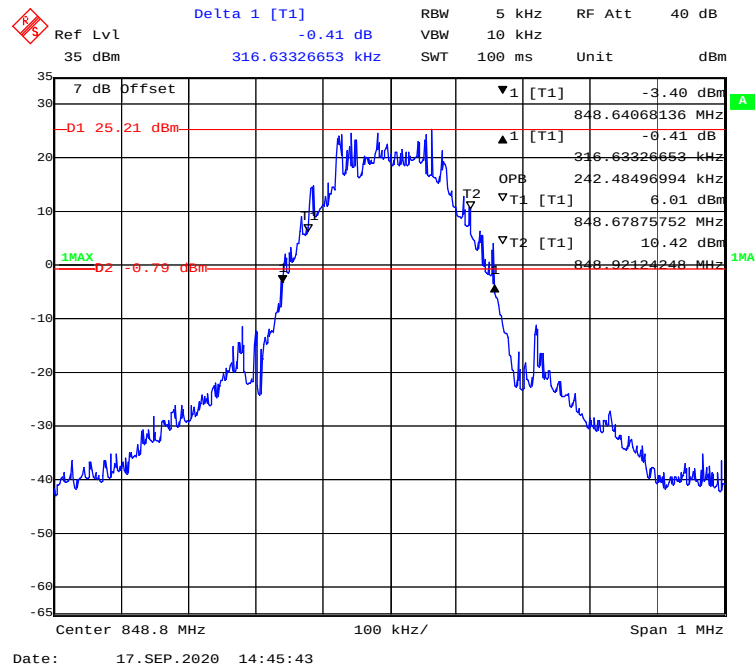
GSM 850 Band**99% Occupied & 26 dB Emissions Bandwidth for GSM (GMSK) Low channel****99% Occupied & 26 dB Emissions Bandwidth for GSM (GMSK) Middle channel**

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

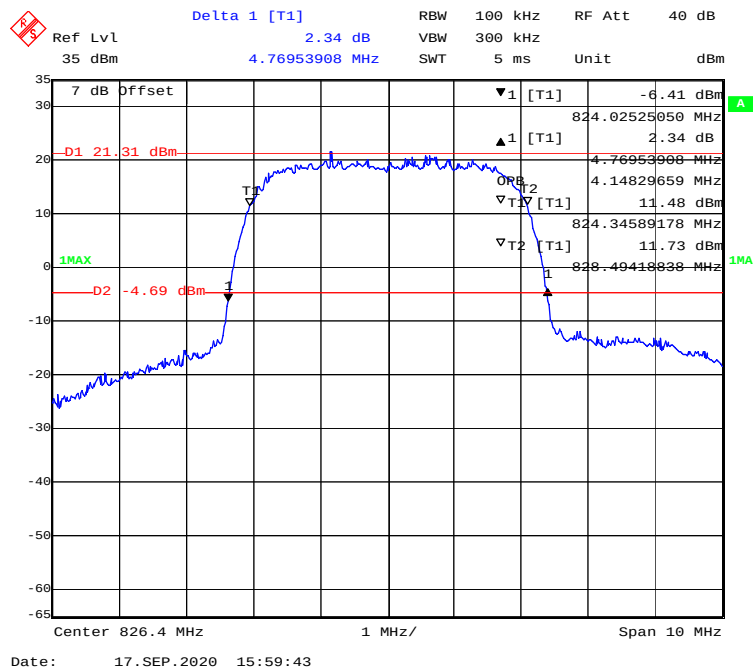
99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) Low channel**99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) Middle channel**

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

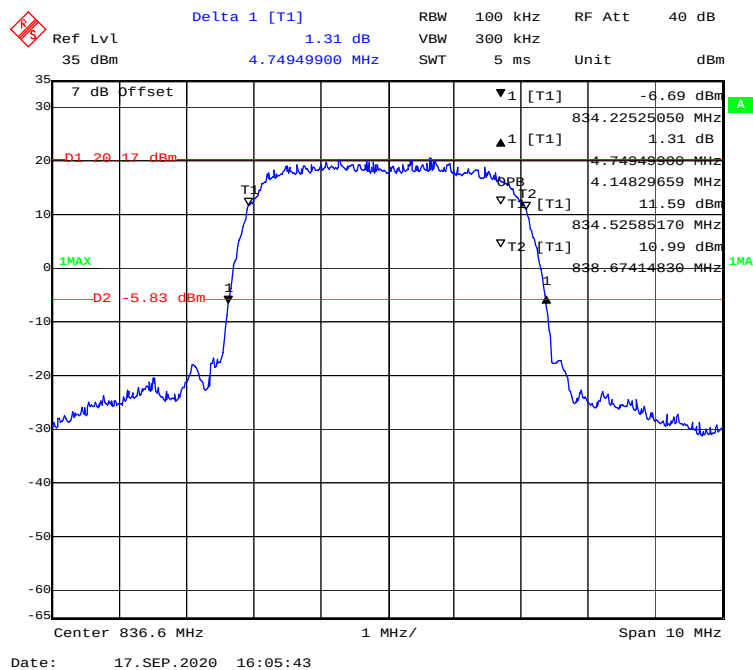


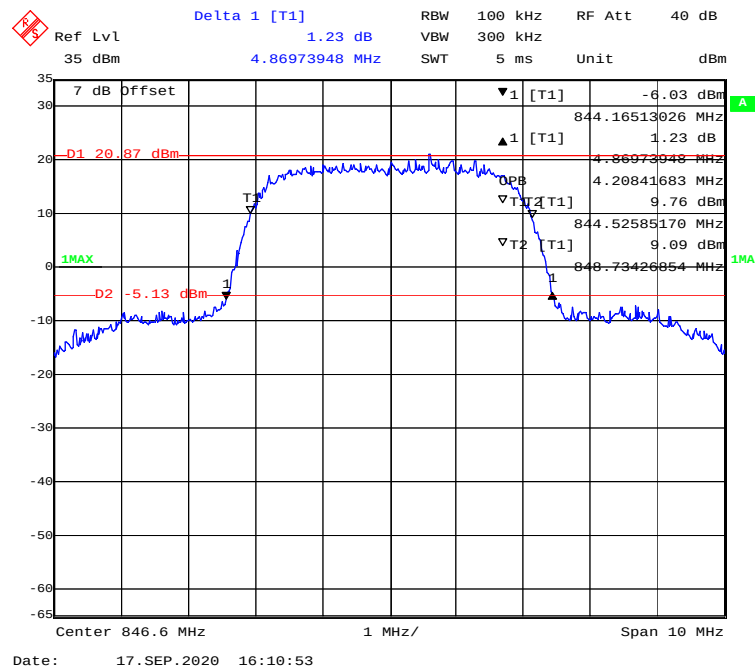
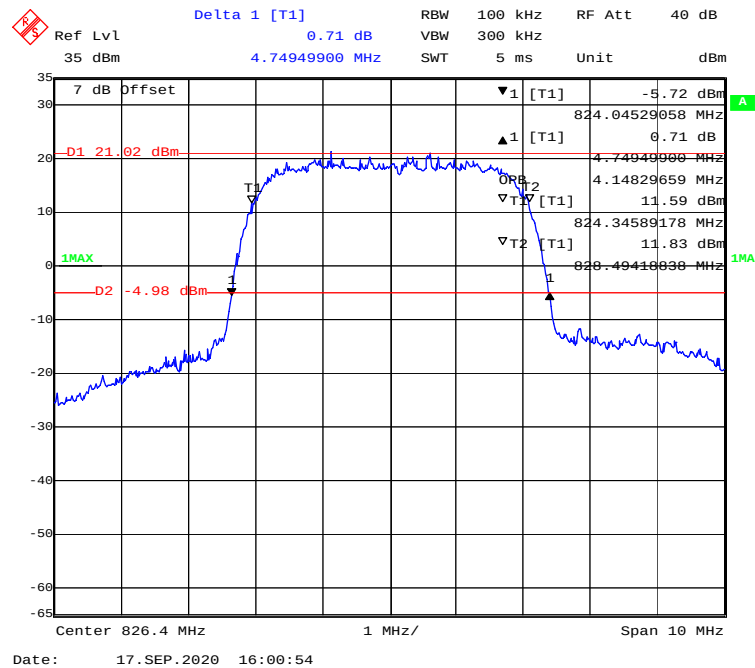
WCDMA Band V

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

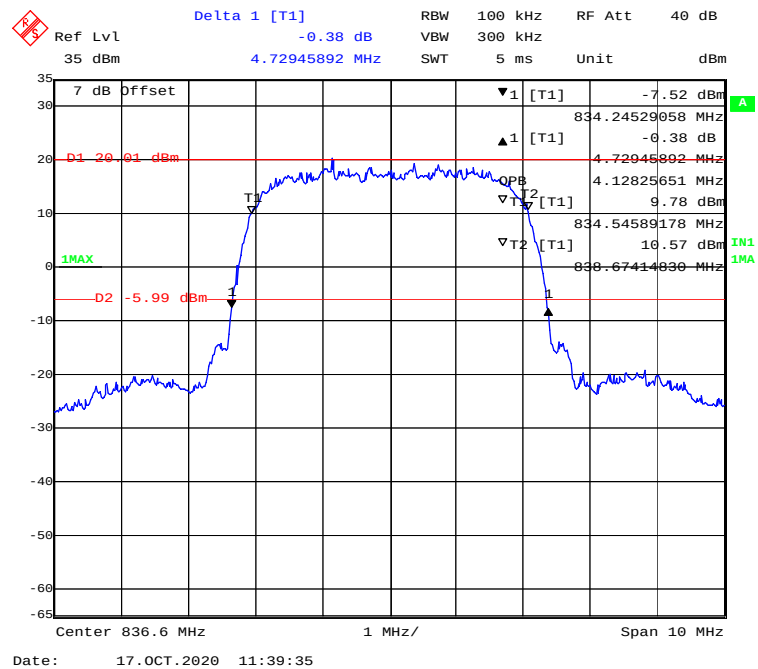


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Middle channel

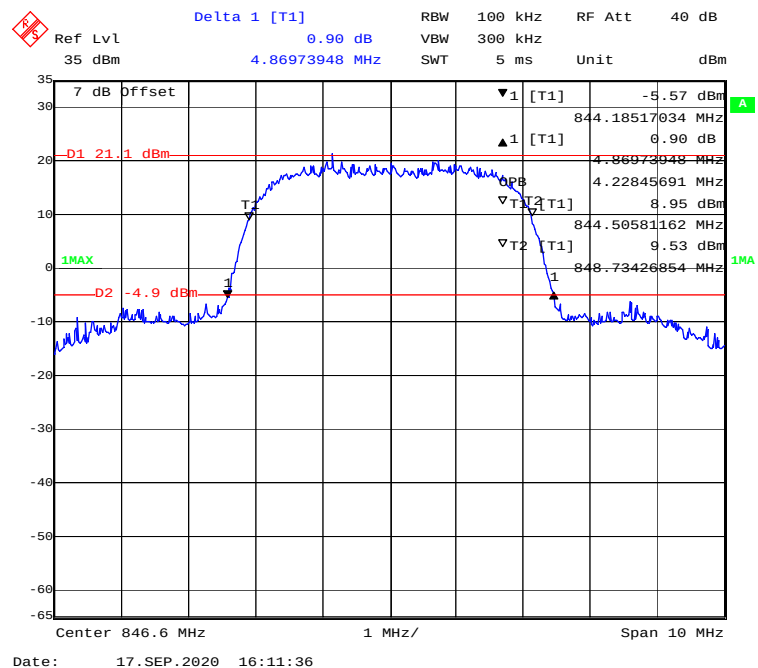


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Low channel**

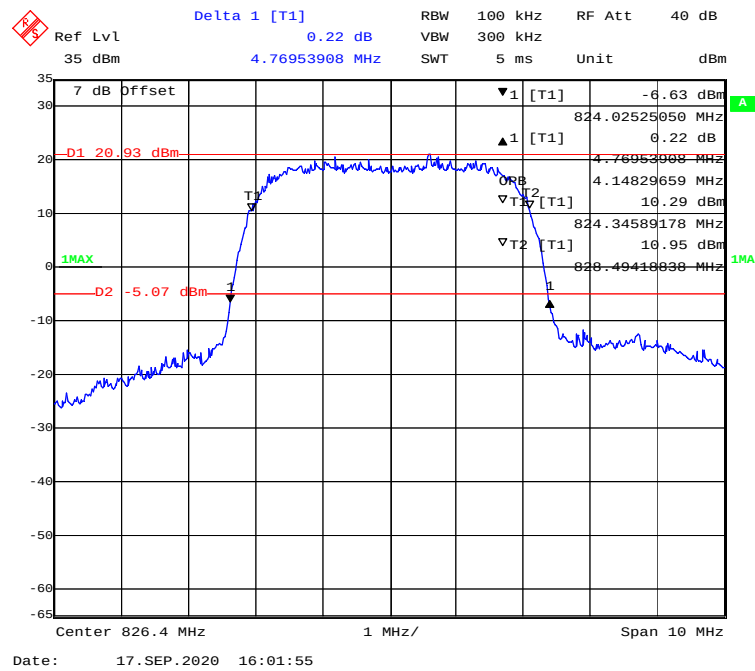
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Middle channel



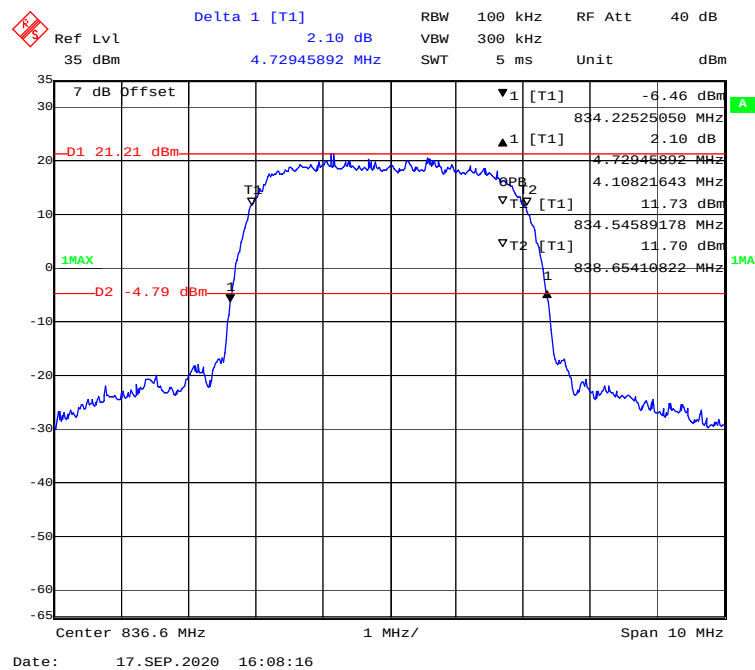
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) High channel



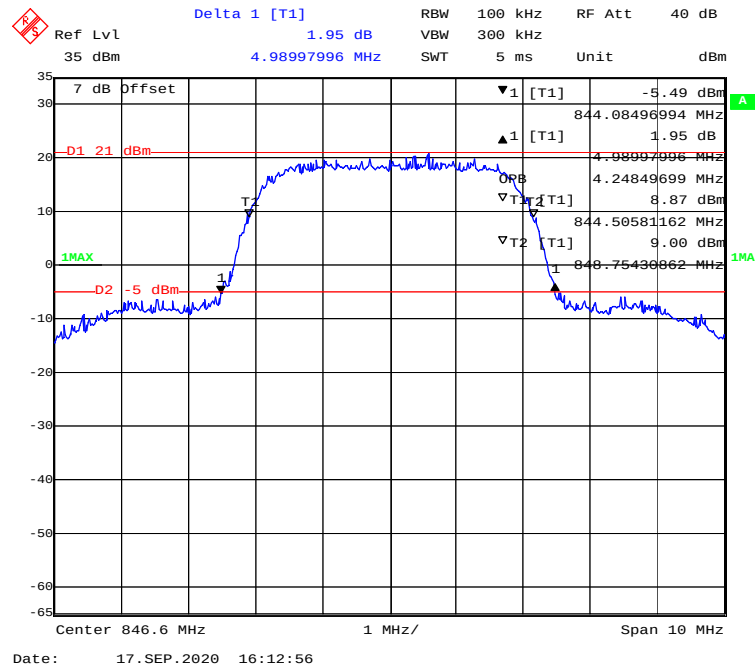
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Low channel



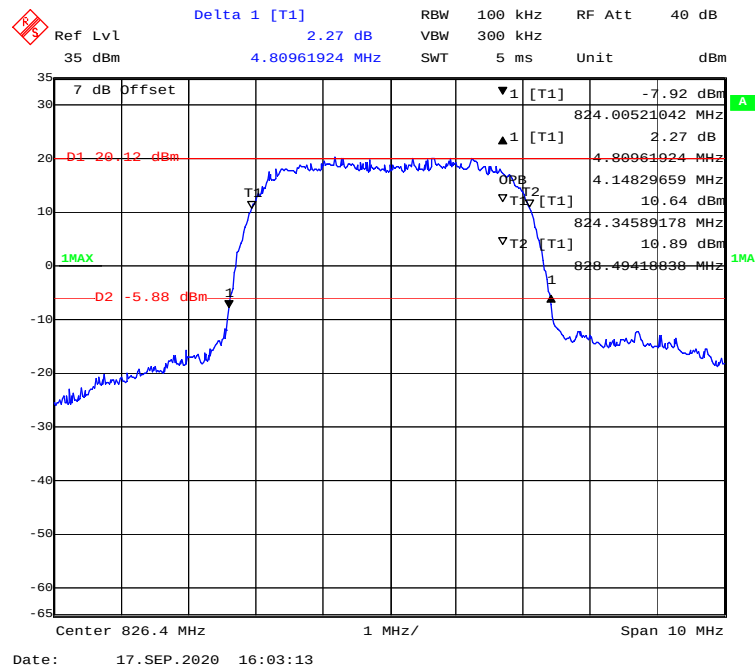
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Middle channel

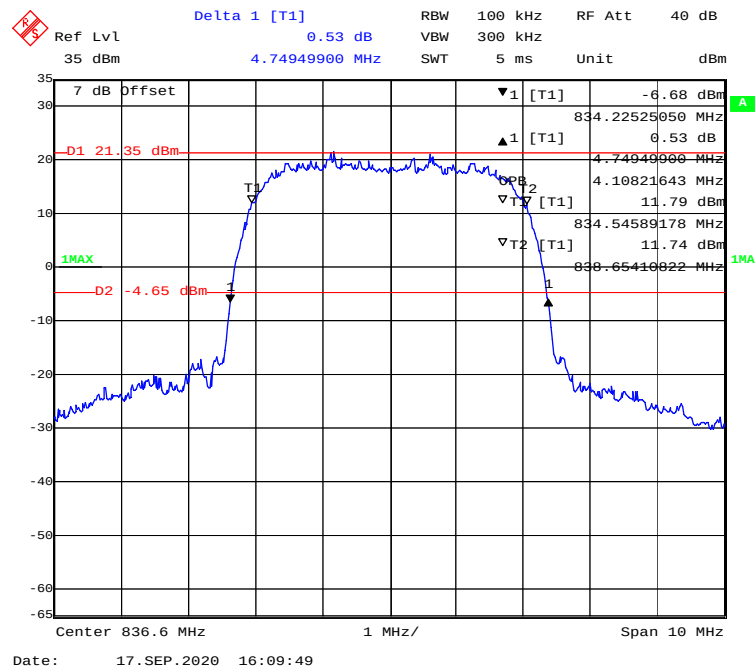
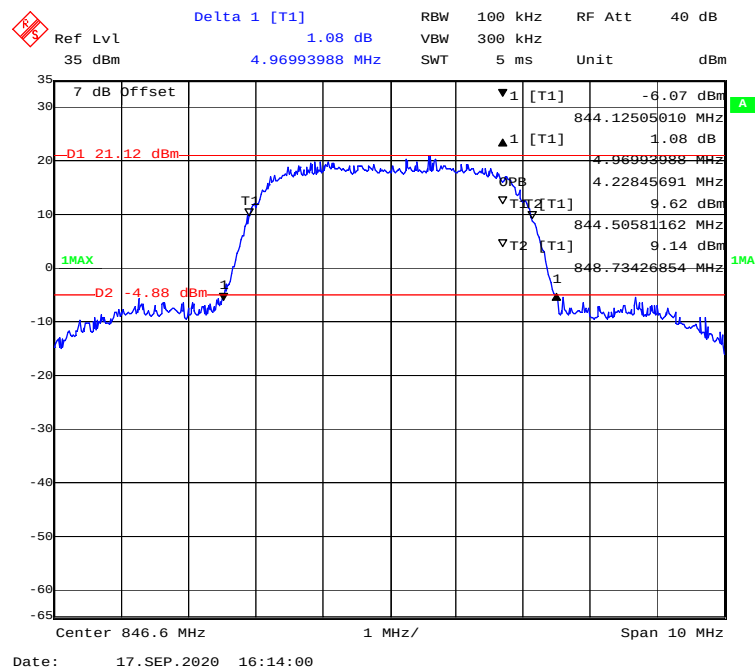


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) High channel



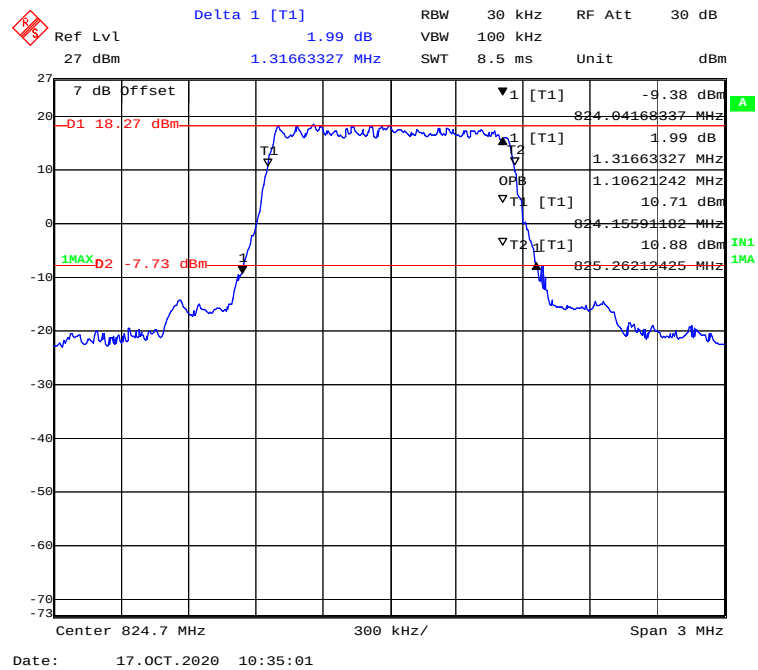
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Low channel



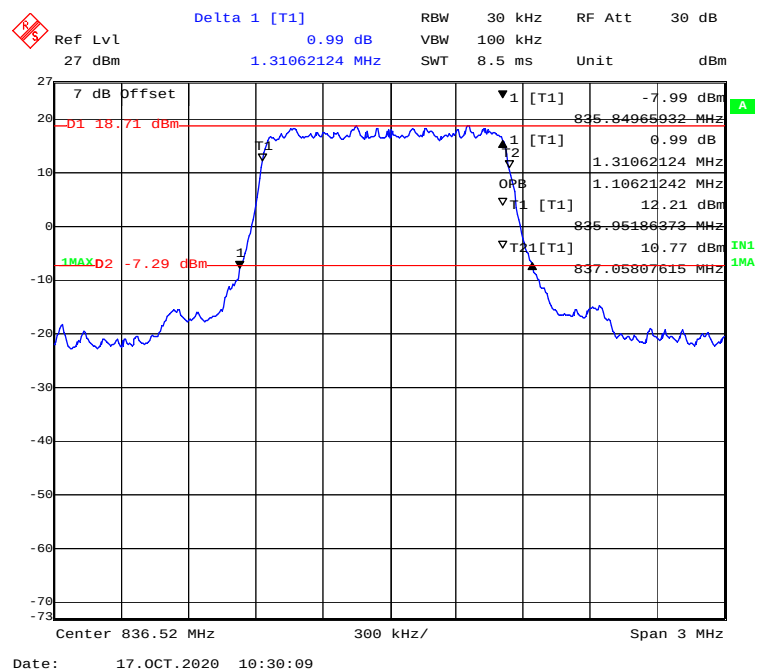
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Middle channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) High channel**

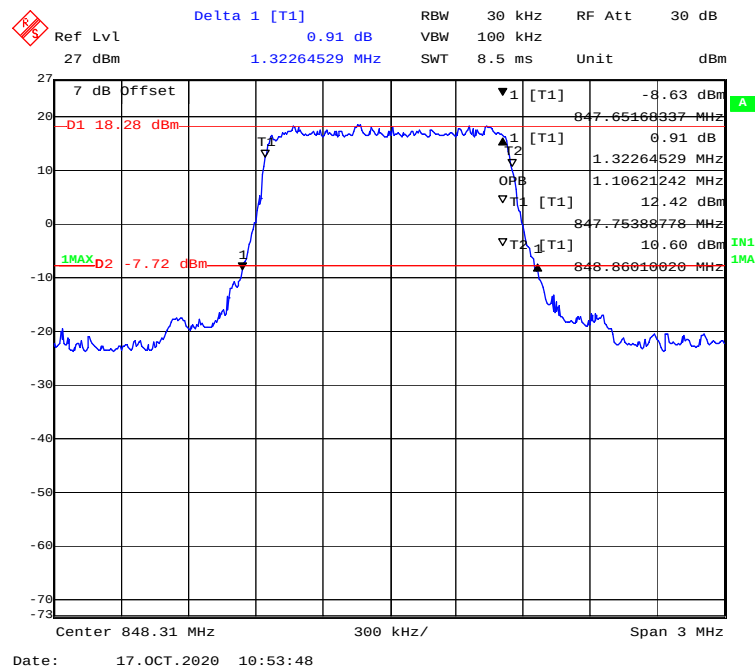
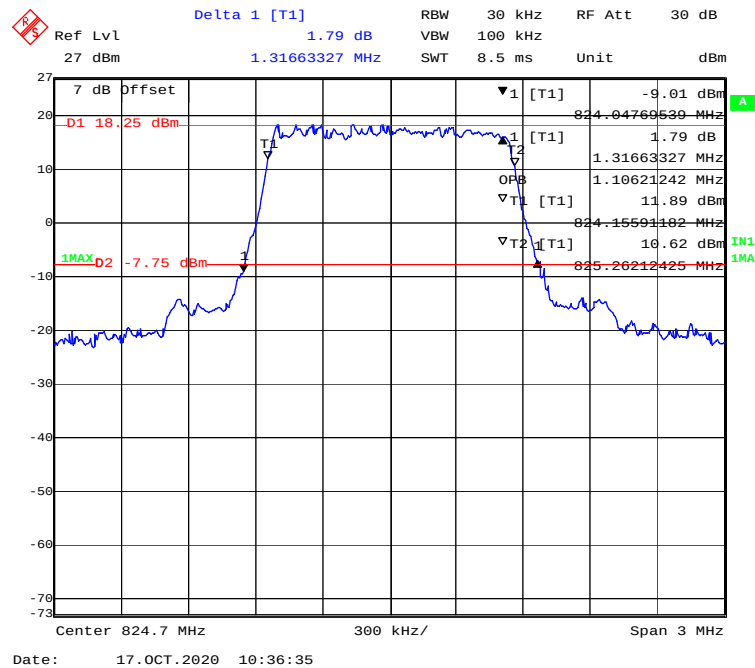
CDMA850 Band

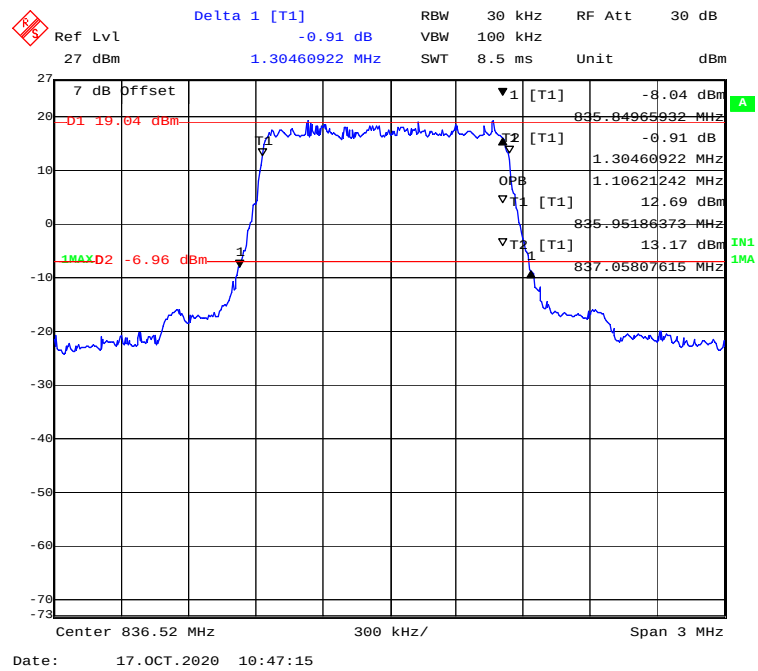
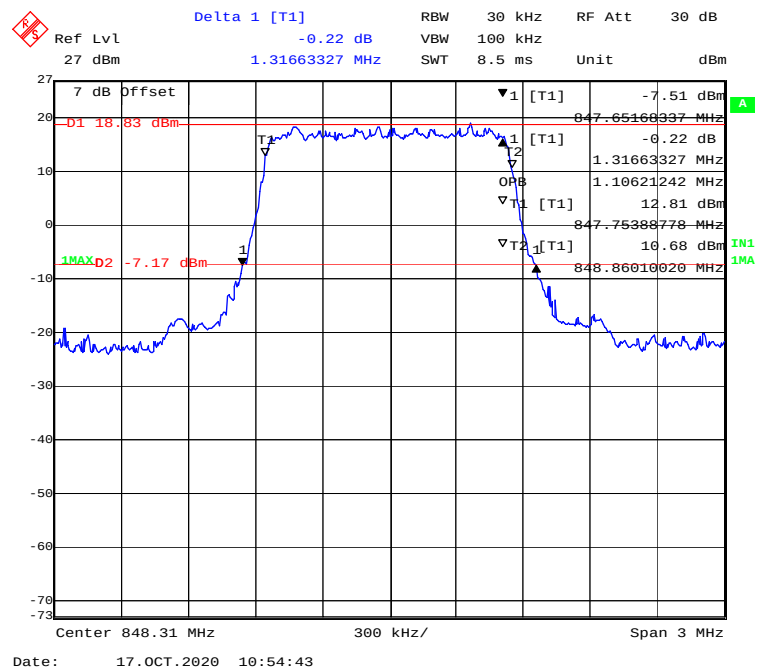
EVDO mode, 99% Occupied & 26 dB Emissions Bandwidth Low channel



EVDO mode, 99% Occupied & 26 dB Emissions Bandwidth Middle channel

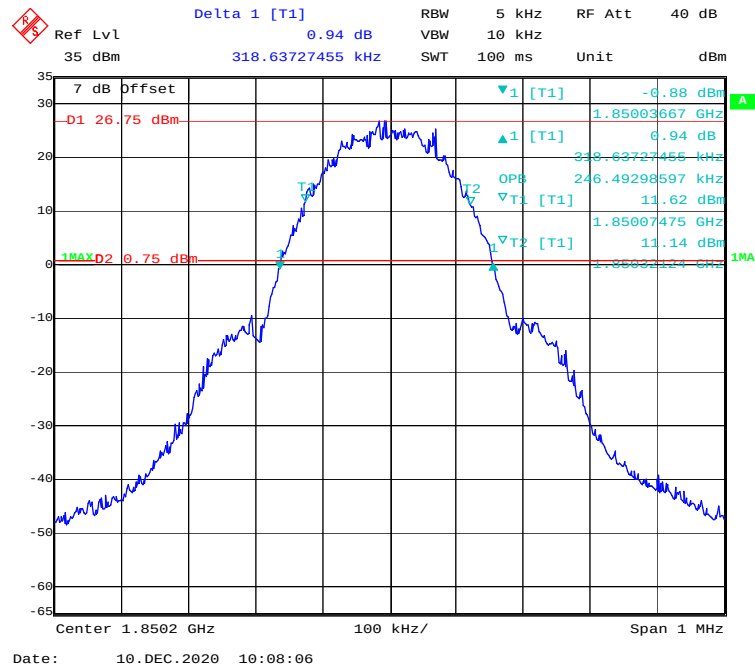


EVDO mode, 99% Occupied & 26 dB Emissions Bandwidth High channel**1xRTT mode, 99% Occupied & 26 dB Emissions Bandwidth Low channel**

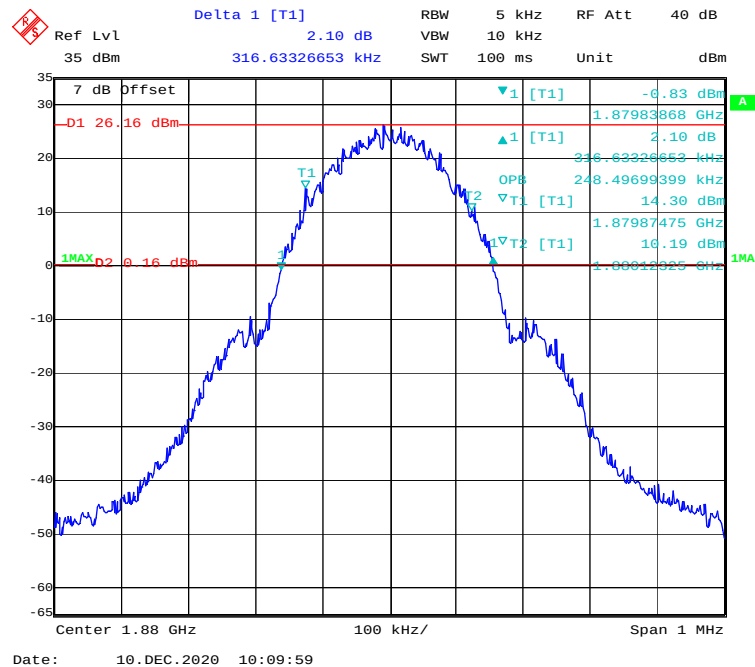
1xRTT mode, 99% Occupied & 26 dB Emissions Bandwidth Middle channel**1xRTT mode, 99% Occupied & 26 dB Emissions Bandwidth High channel**

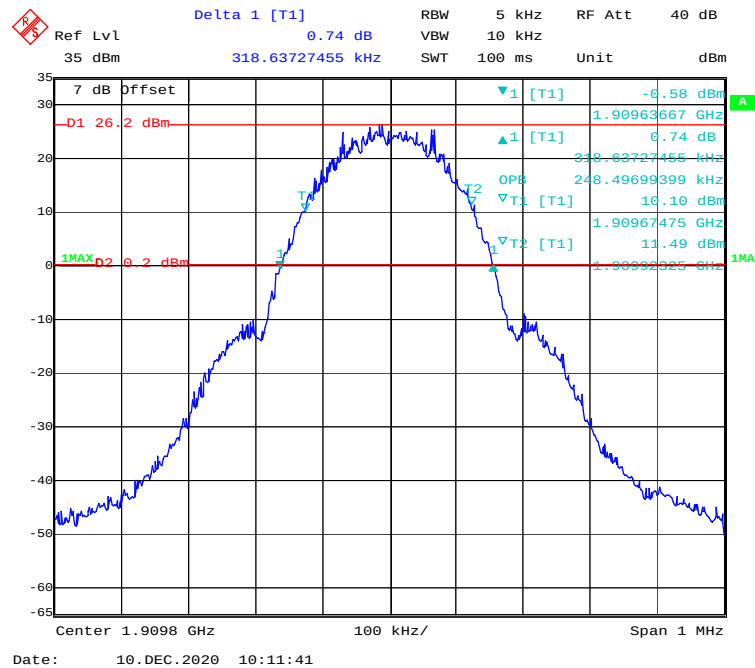
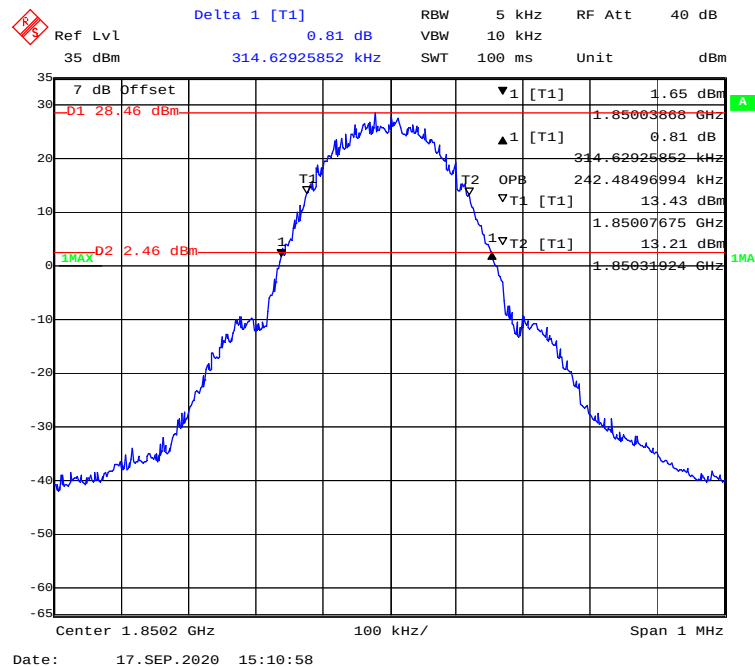
PCS 1900 Band

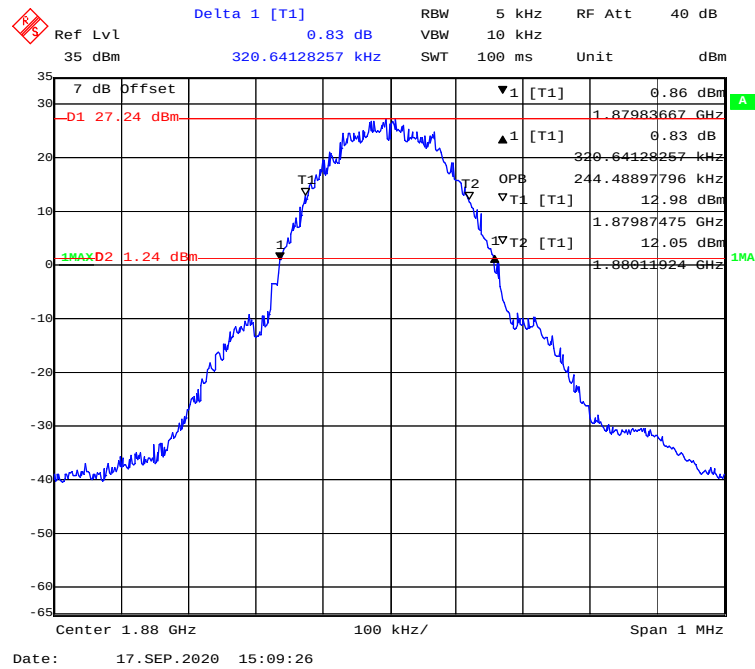
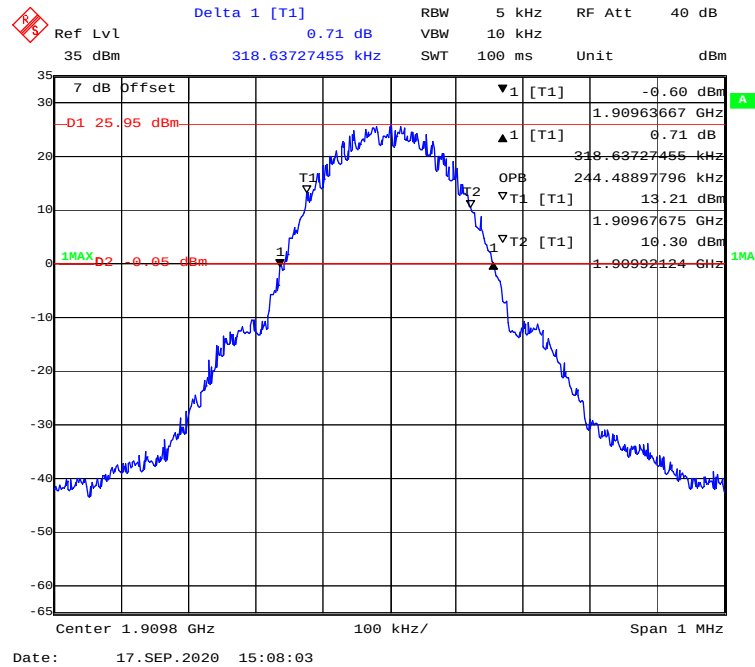
99% Occupied & 26 dB Emissions Bandwidth for GSM (GMSK) Low channel



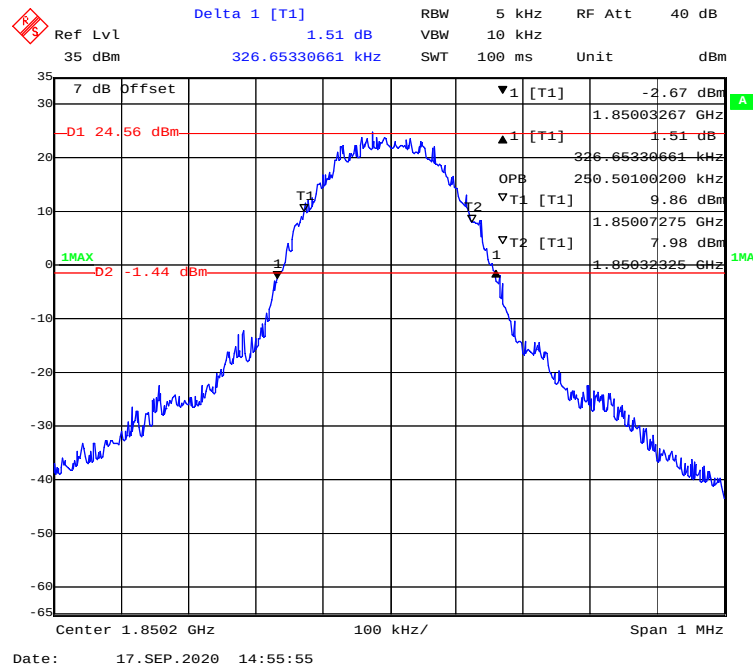
99% Occupied & 26 dB Emissions Bandwidth for GSM (GMSK) Middle channel



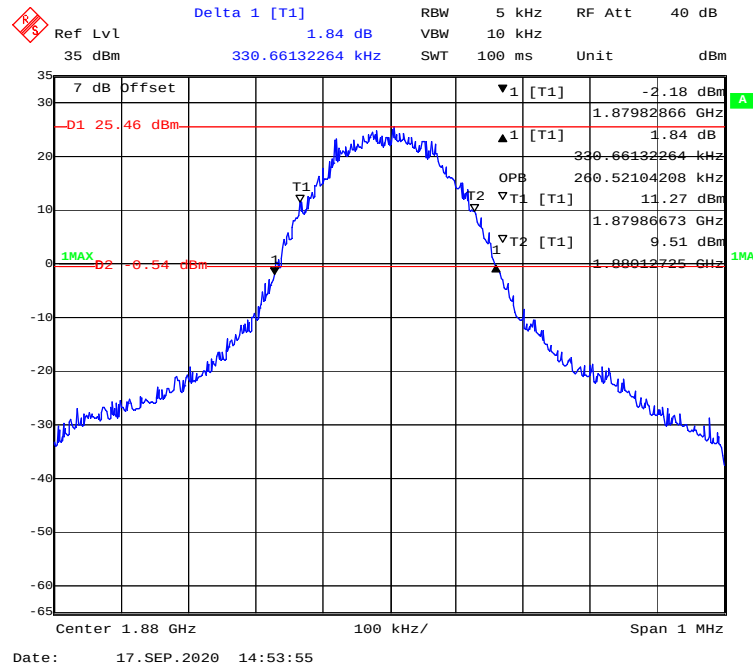
99% Occupied & 26 dB Emissions Bandwidth for GSM (GMSK) High channel**99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Low channel**

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

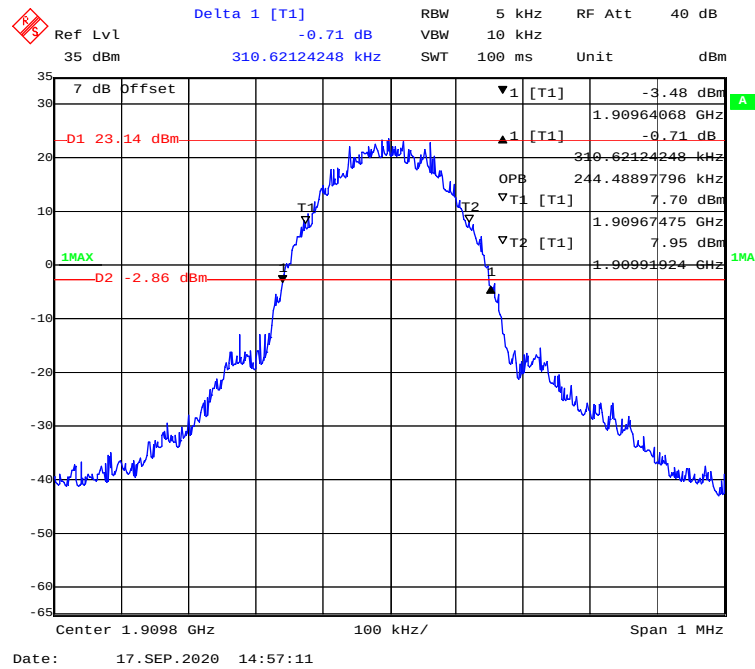
99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) Low channel



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

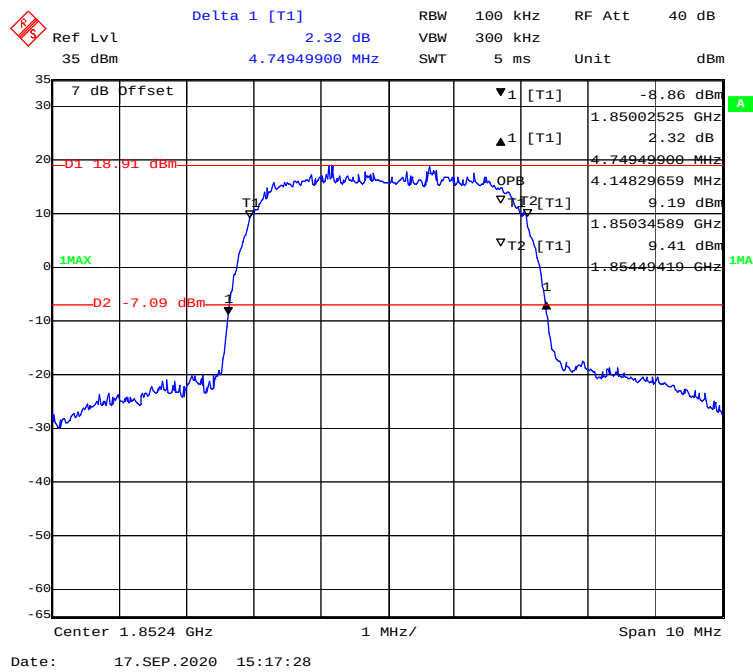


99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) High channel

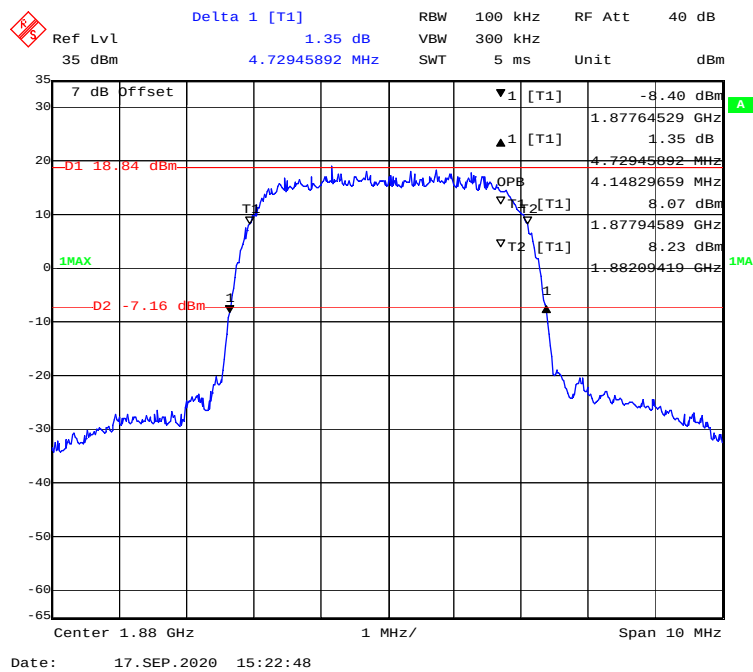


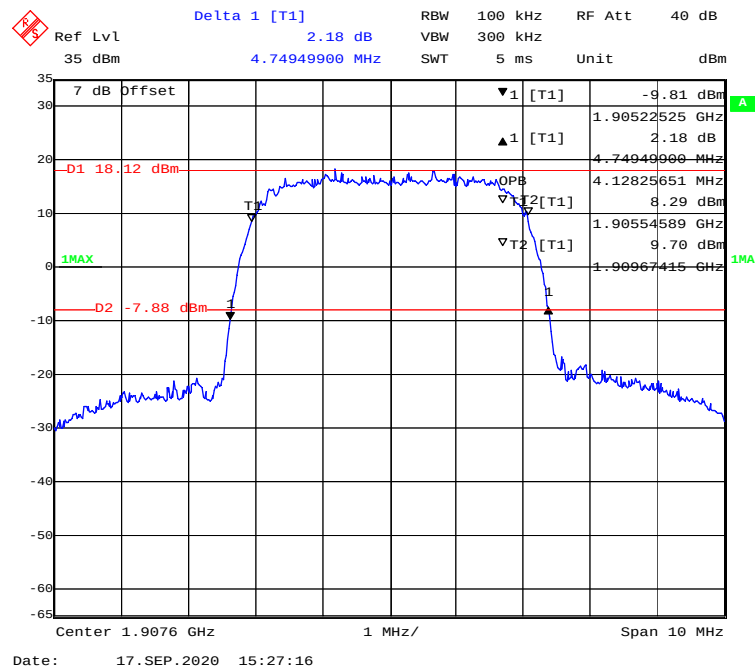
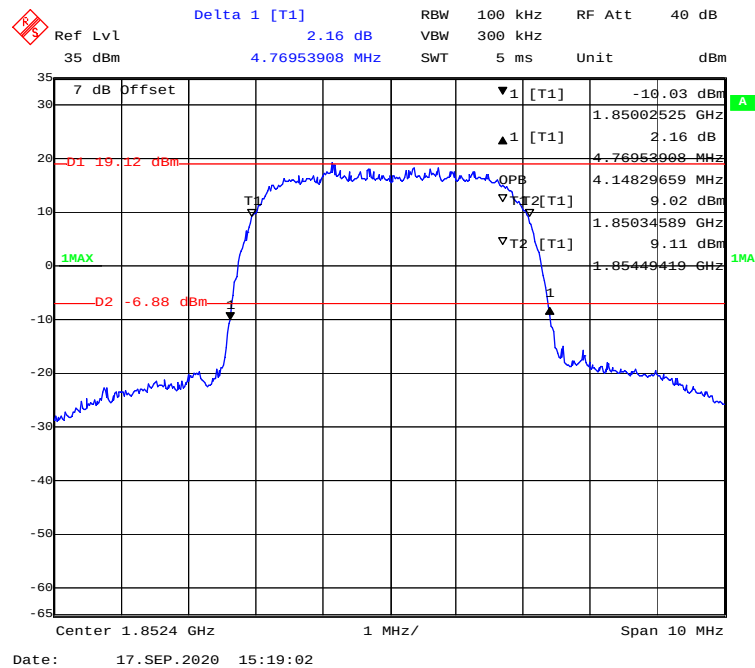
WCDMA Band II

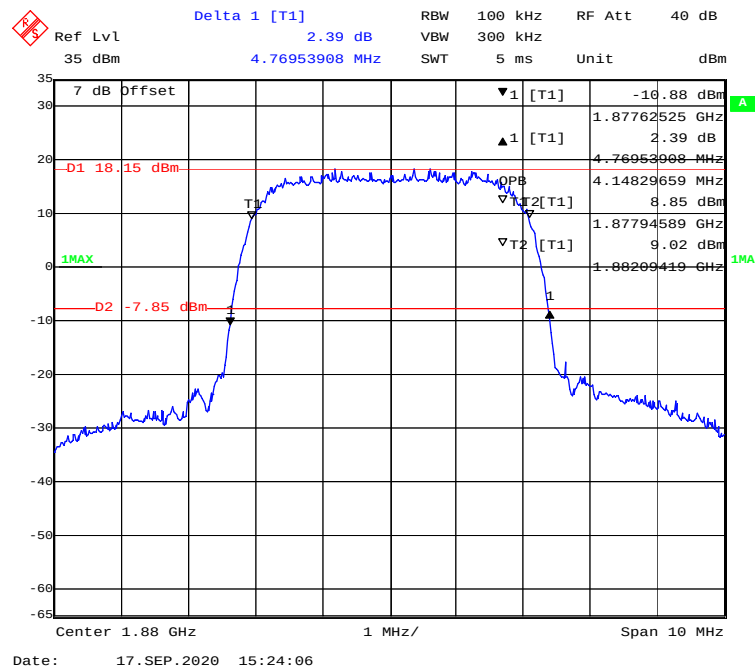
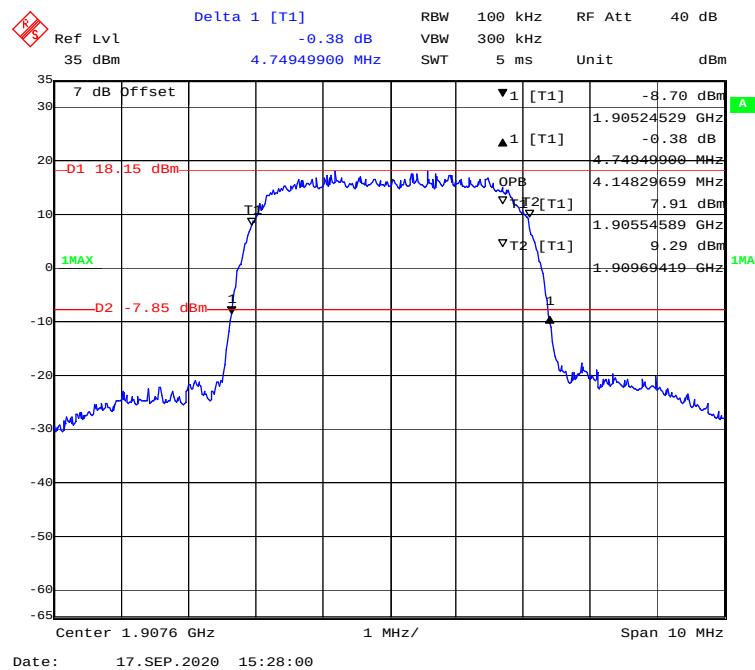
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Low channel

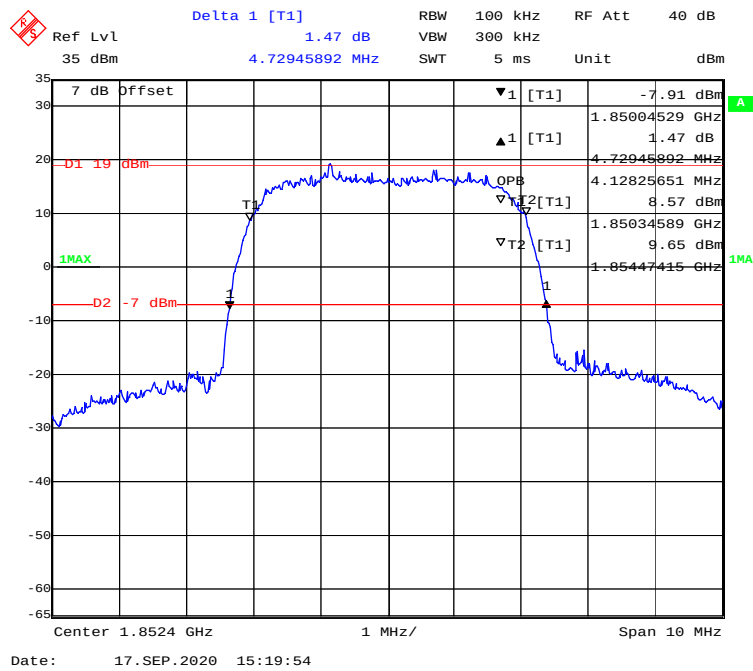
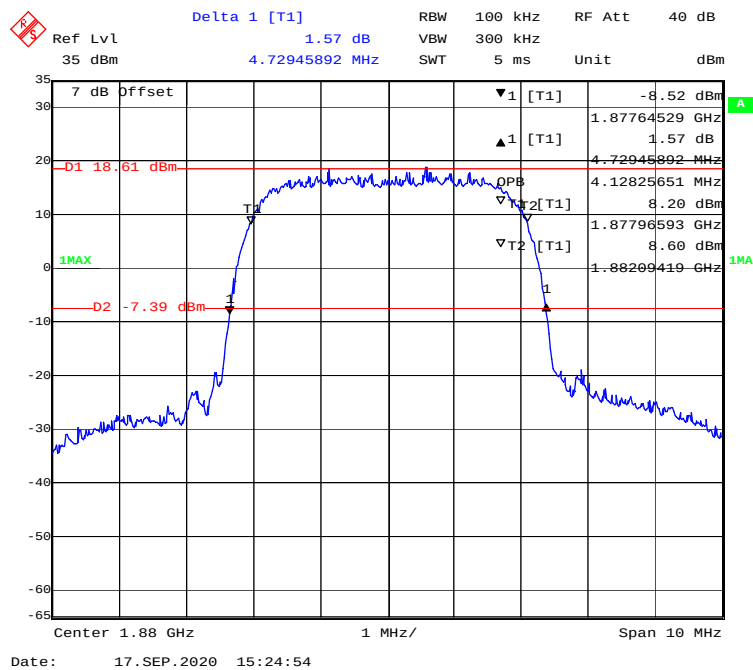


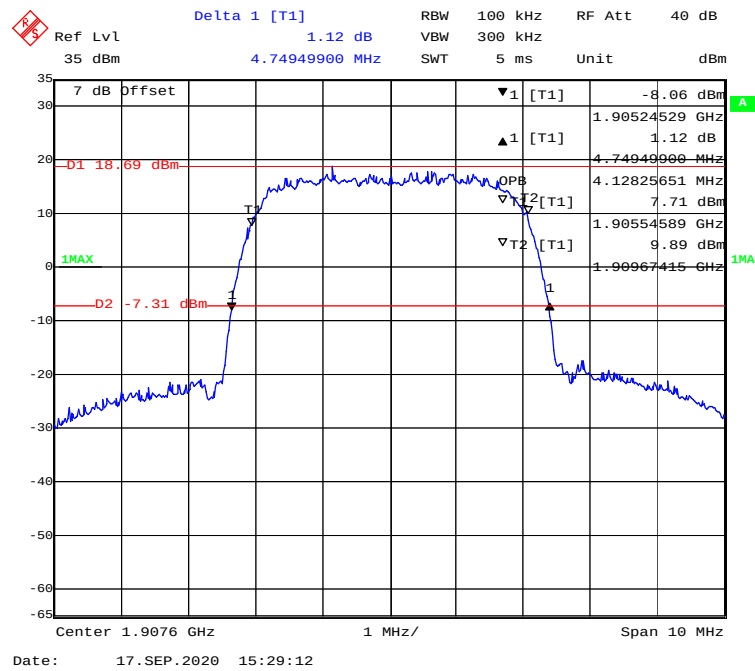
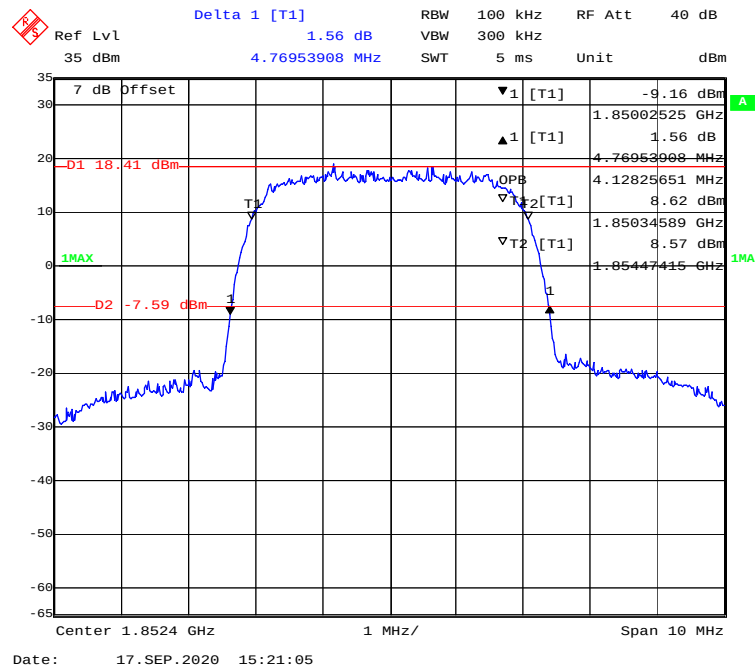
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Middle channel

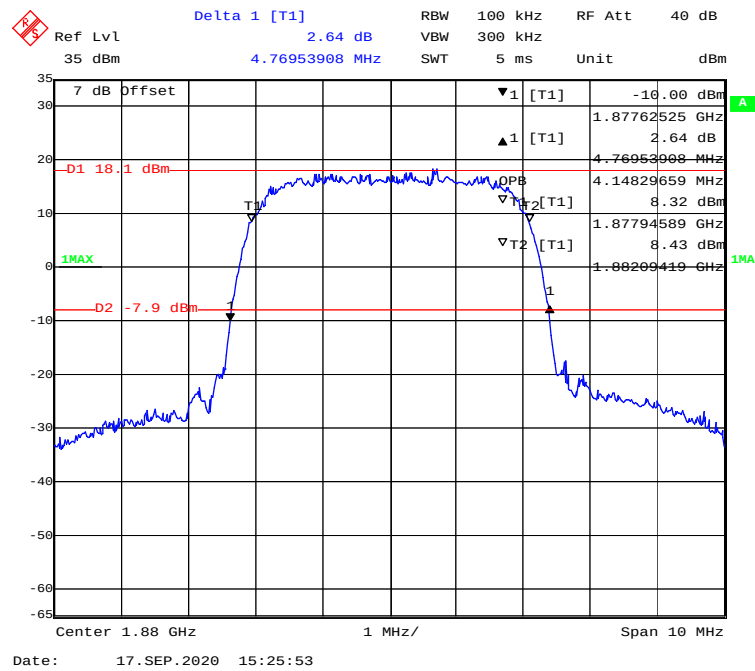
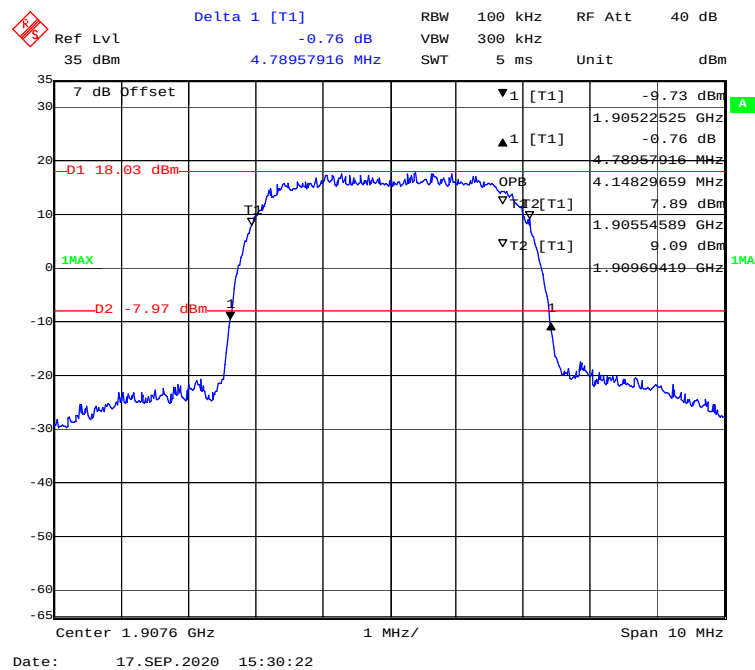


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Low channel**

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

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

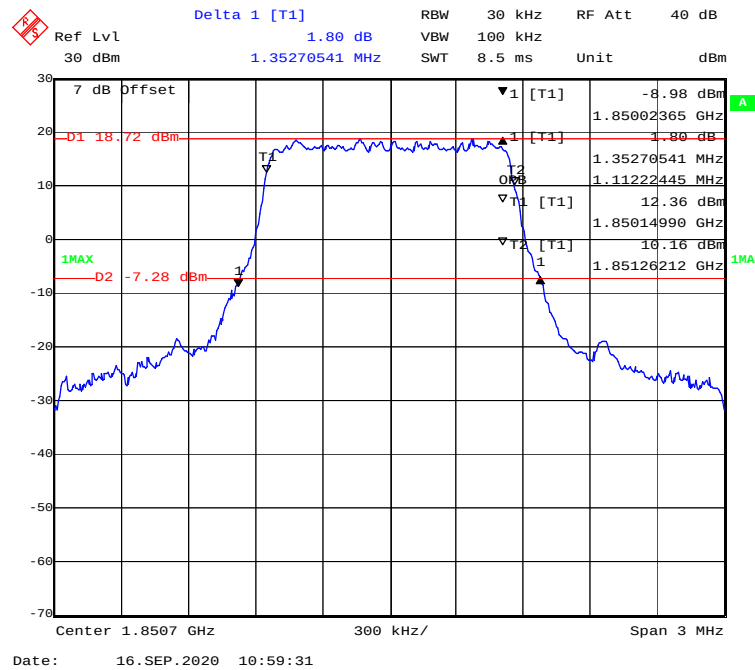
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Middle channel**99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) High channel**

LTE Band 2:

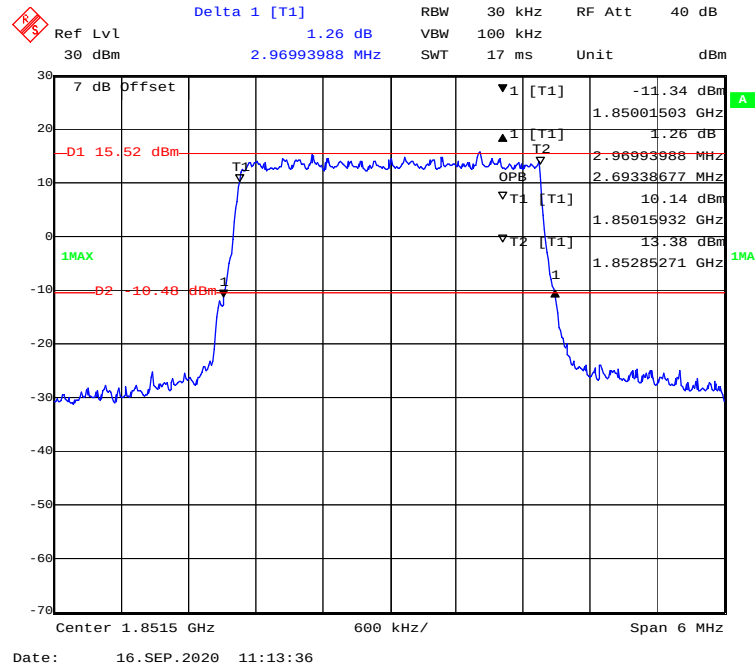
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.353	1.112
	3M		2.970	2.693
	5M		4.910	4.469
	10M		9.860	8.978
	15M		14.729	13.467
	20M		19.559	17.956
	1.4M	Middle	1.329	1.112
	3M		2.946	2.693
	5M		4.930	4.469
	10M		9.780	8.978
	15M		14.729	13.467
	20M		19.479	17.956
	1.4M	High	1.341	1.106
	3M		2.982	2.693
	5M		4.890	4.469
	10M		9.699	8.978
	15M		14.729	13.467
	20M		19.639	18.036

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
16-QAM	1.4M	Low	1.329	1.106
	3M		2.970	2.693
	5M		4.890	4.489
	10M		9.780	8.978
	15M		14.669	13.467
	20M		19.559	17.956
	1.4M	Middle	1.329	1.118
	3M		2.958	2.693
	5M		4.890	4.489
	10M		9.900	8.978
	15M		14.729	13.467
	20M		19.399	17.956
	1.4M	High	1.311	1.100
	3M		2.994	2.693
	5M		4.870	4.469
	10M		9.820	8.978
	15M		14.790	13.407
	20M		19.639	18.036

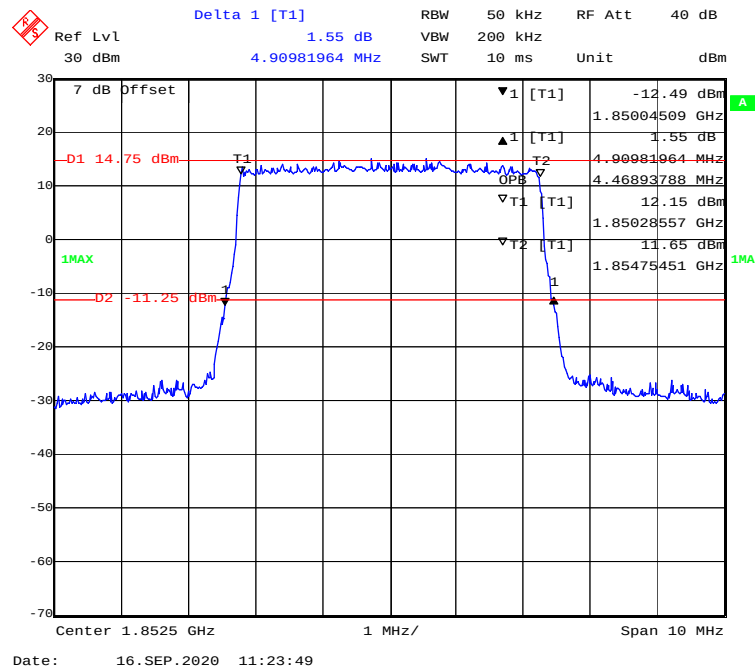
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



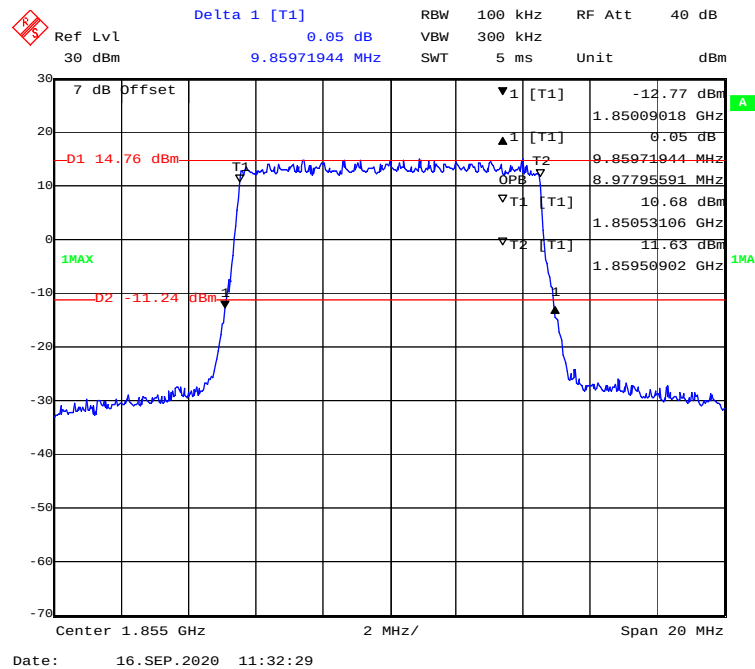
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

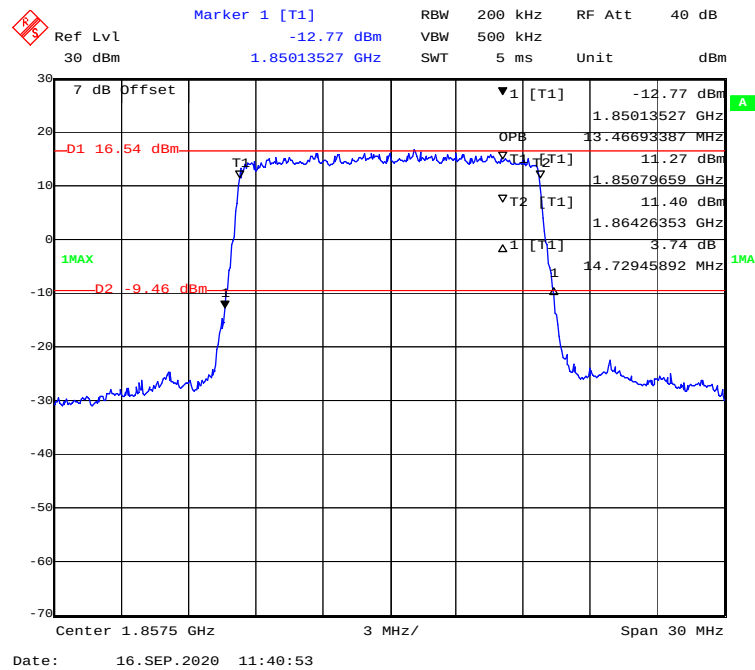
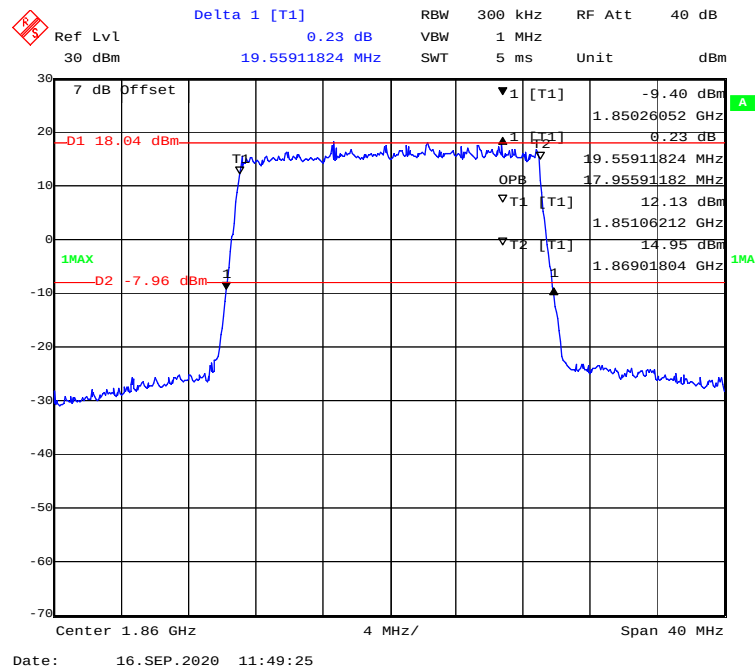


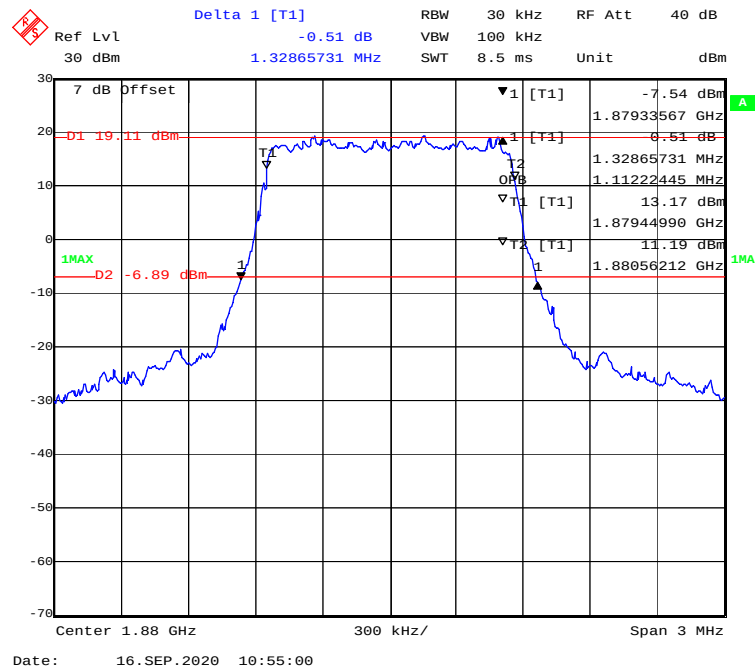
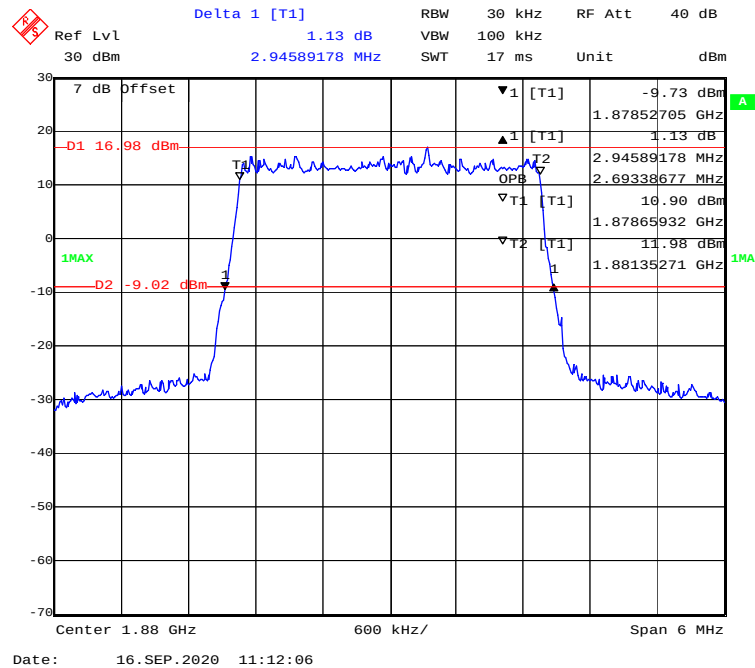
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

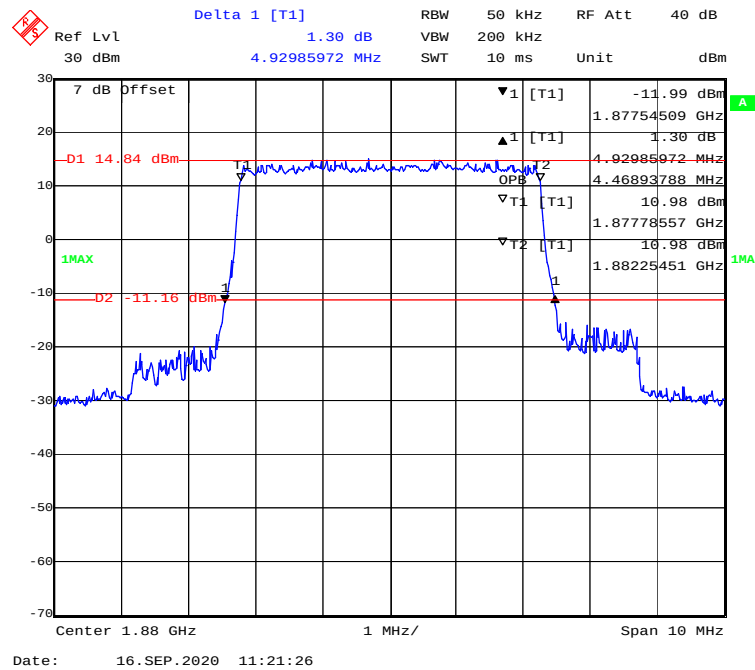
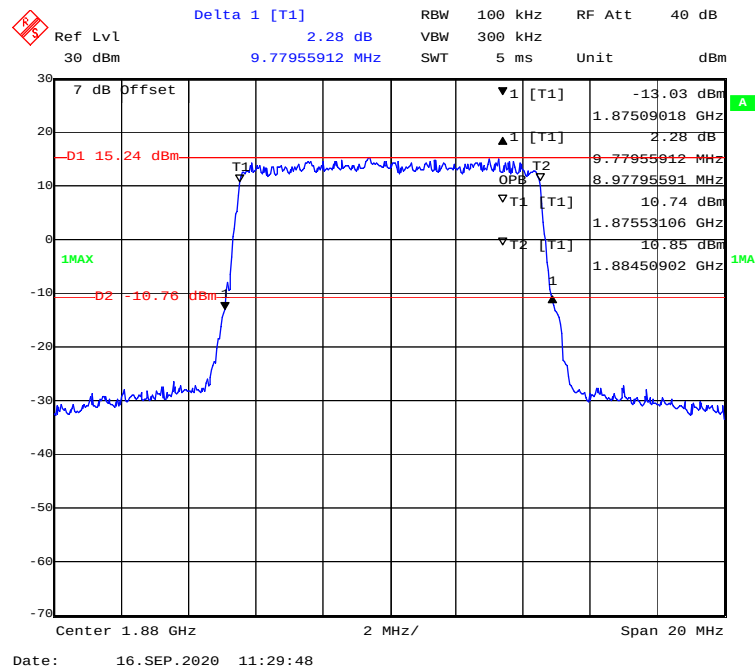


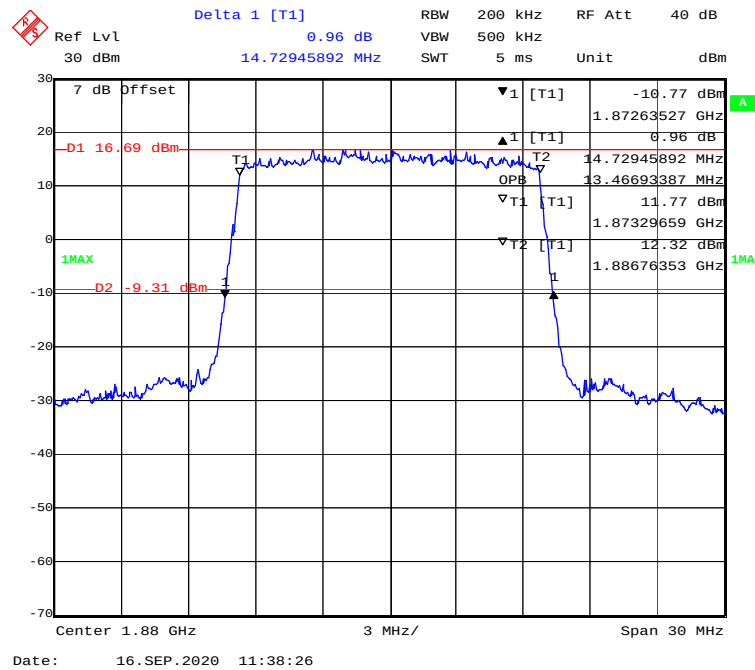
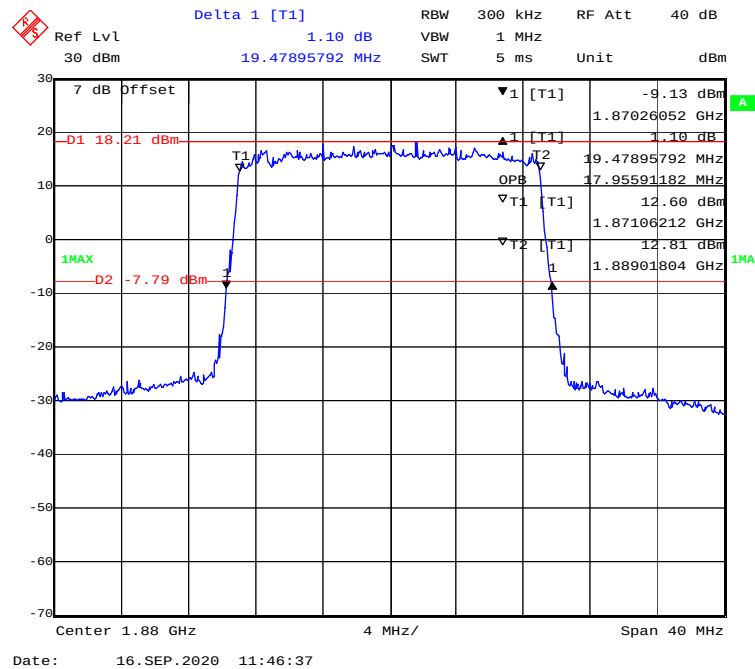
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

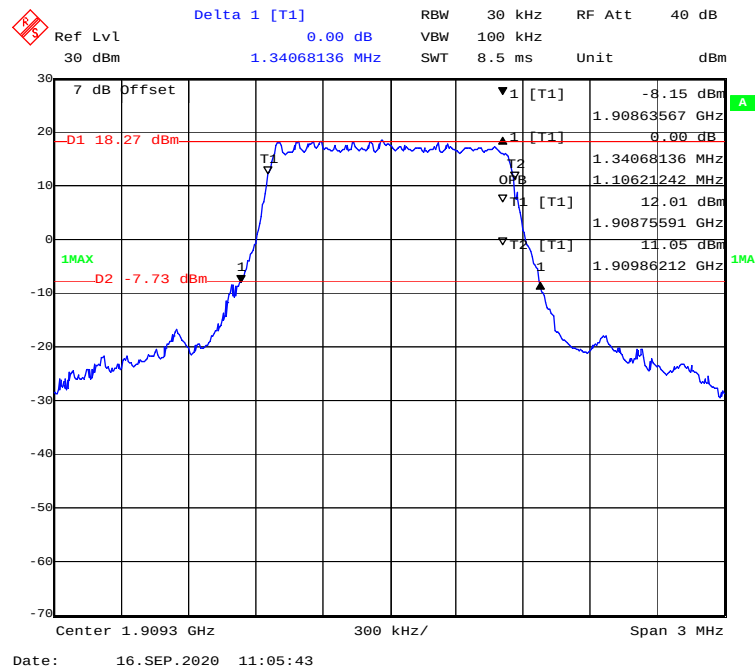
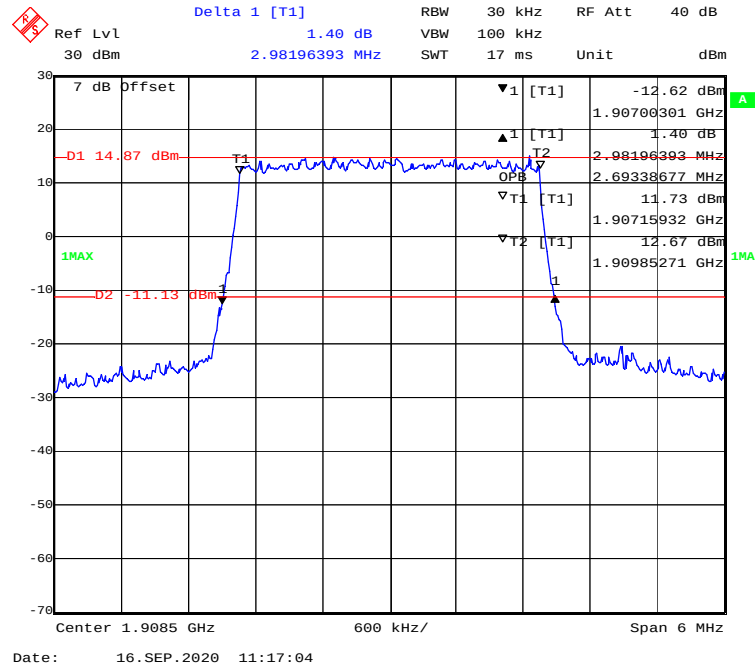


QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

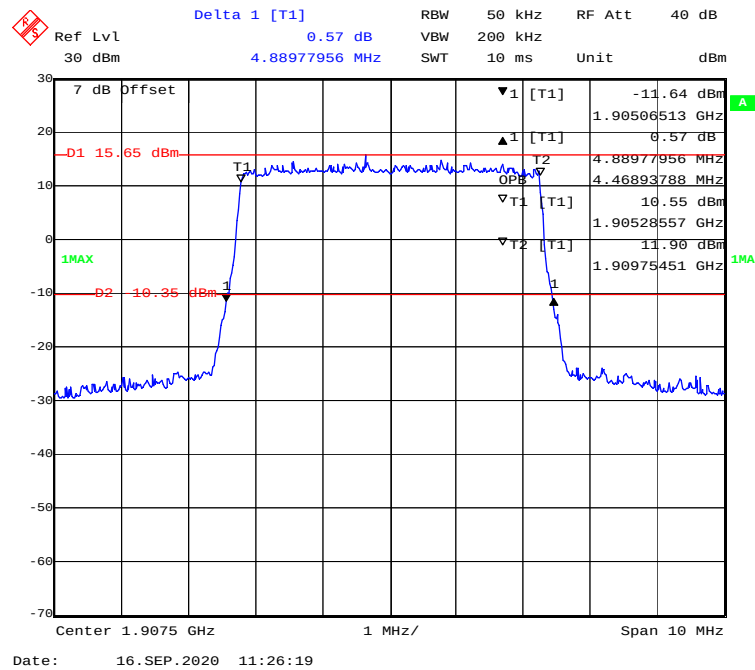
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

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

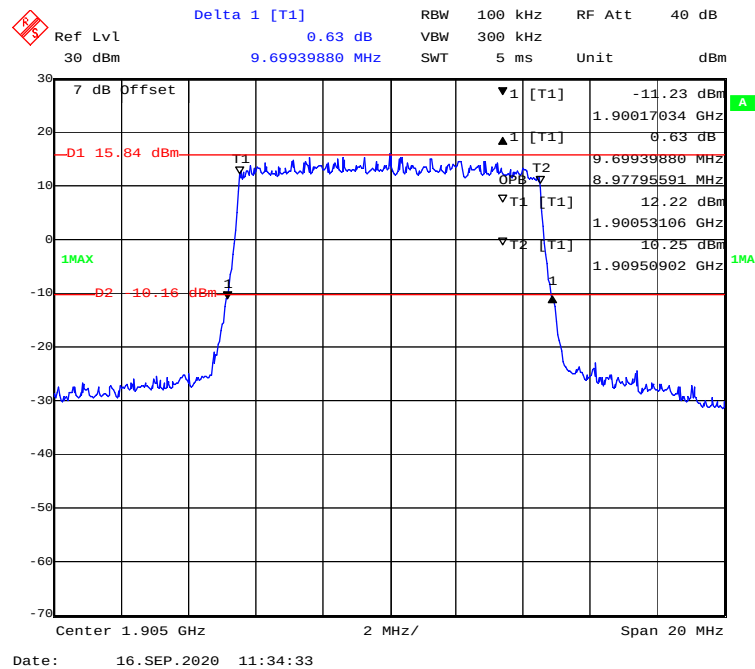
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

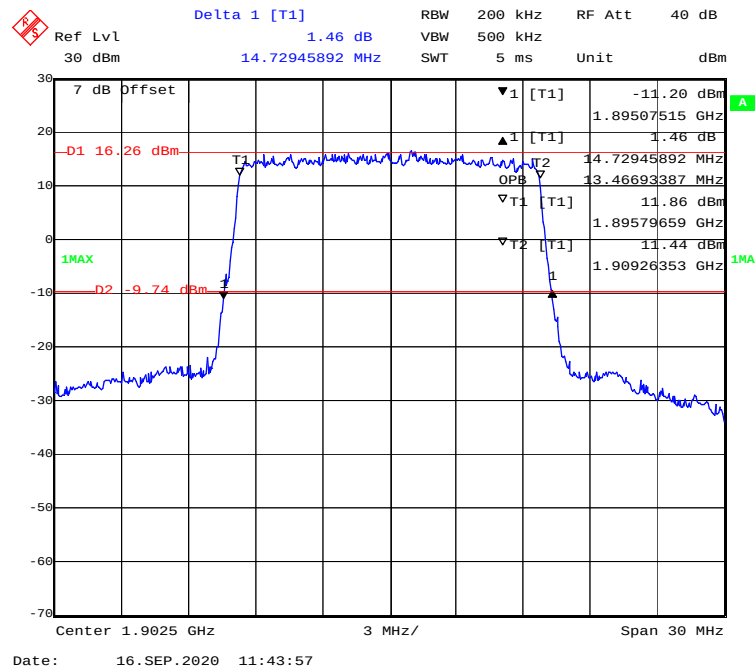
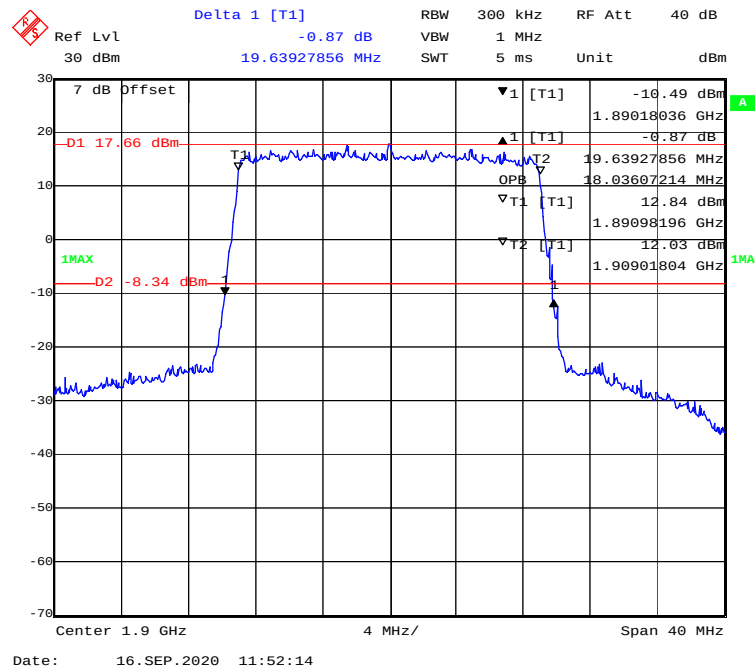
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

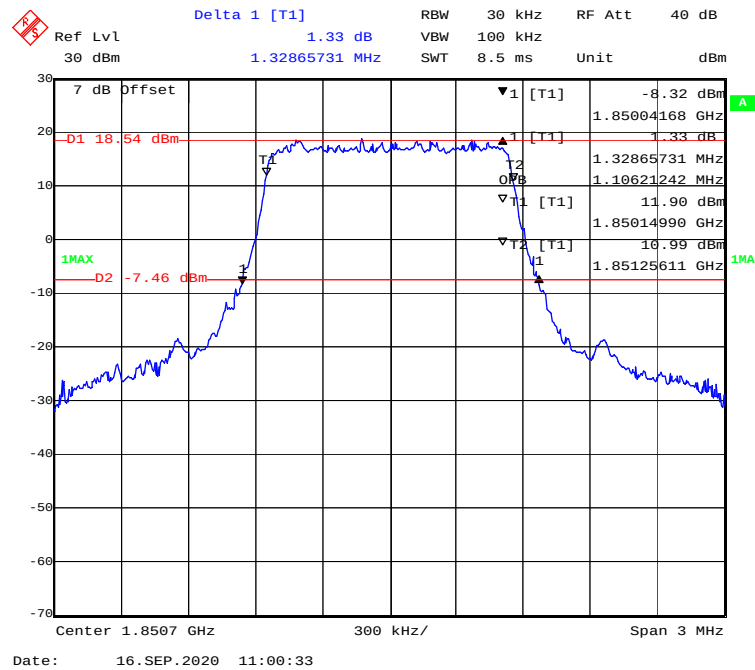
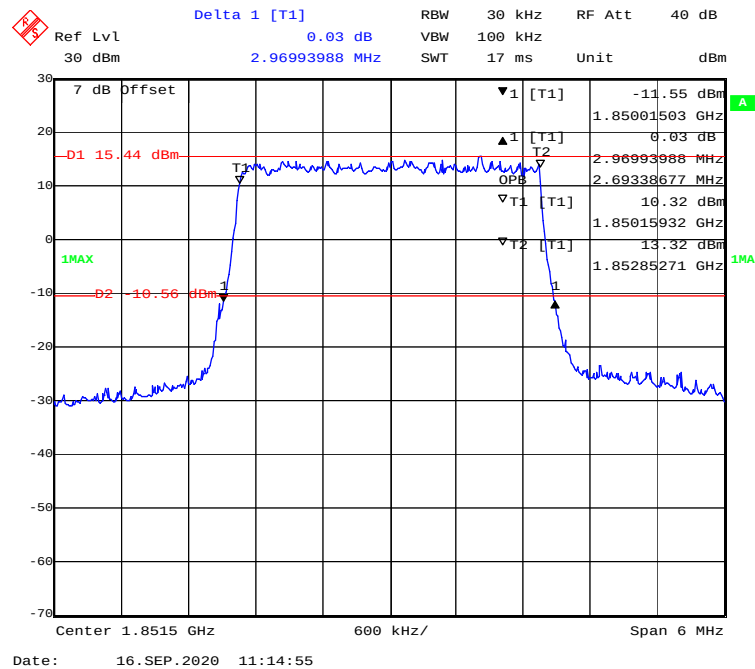
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel

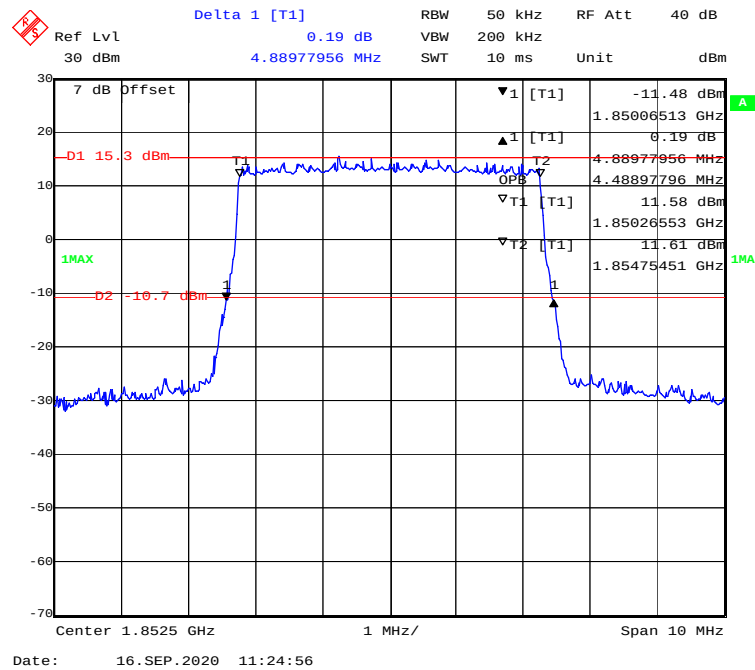
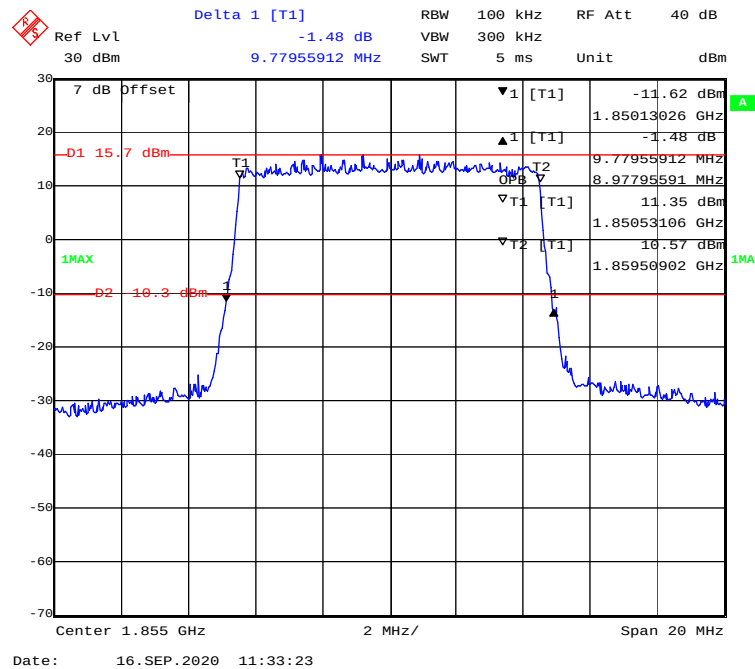


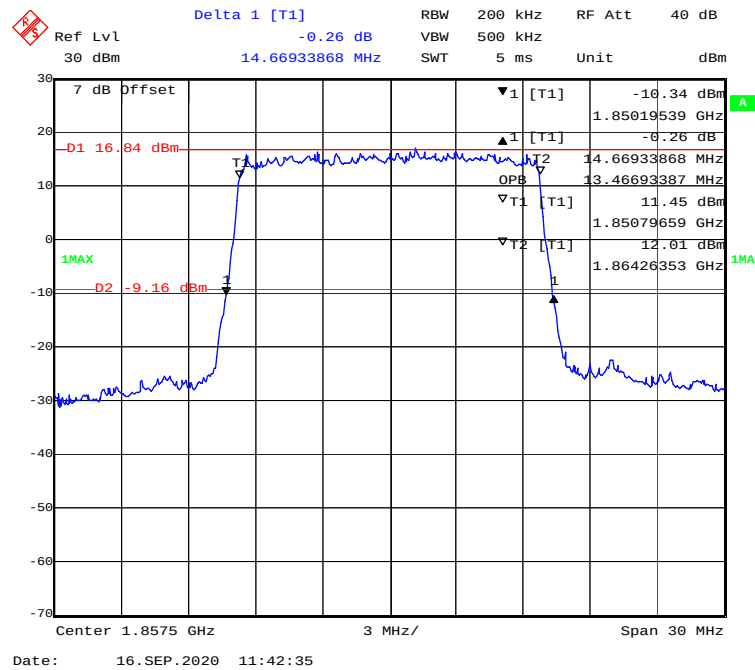
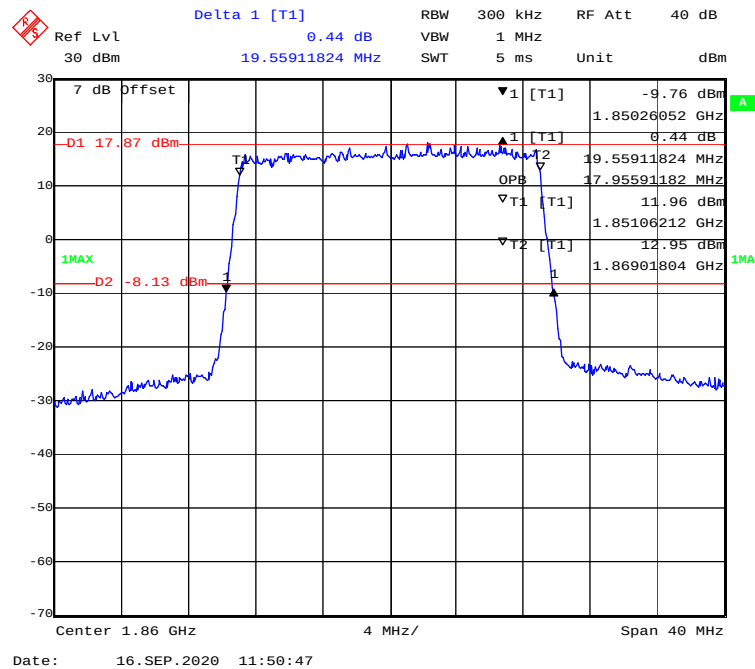
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel

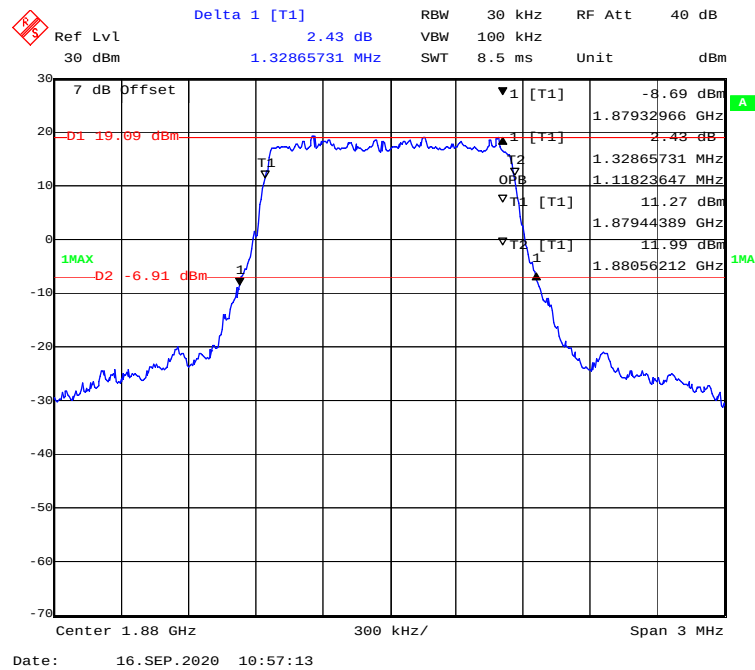
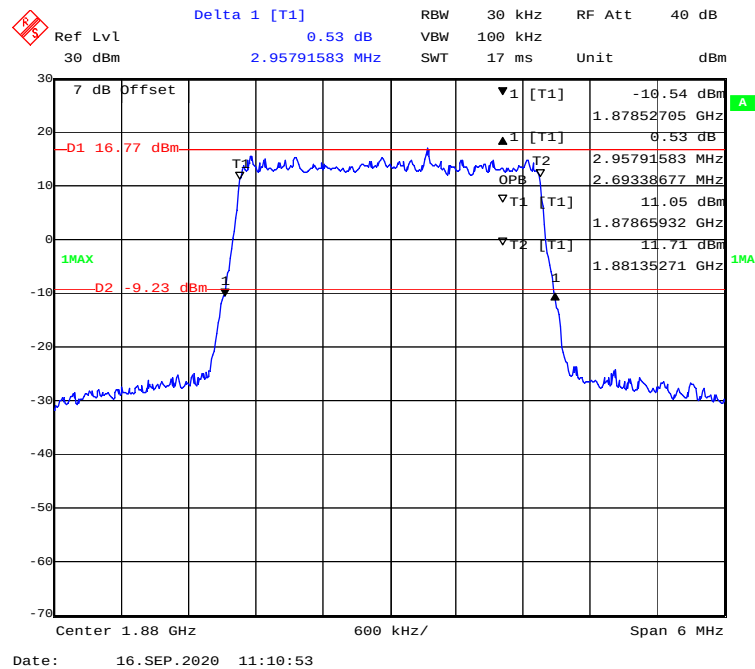


QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

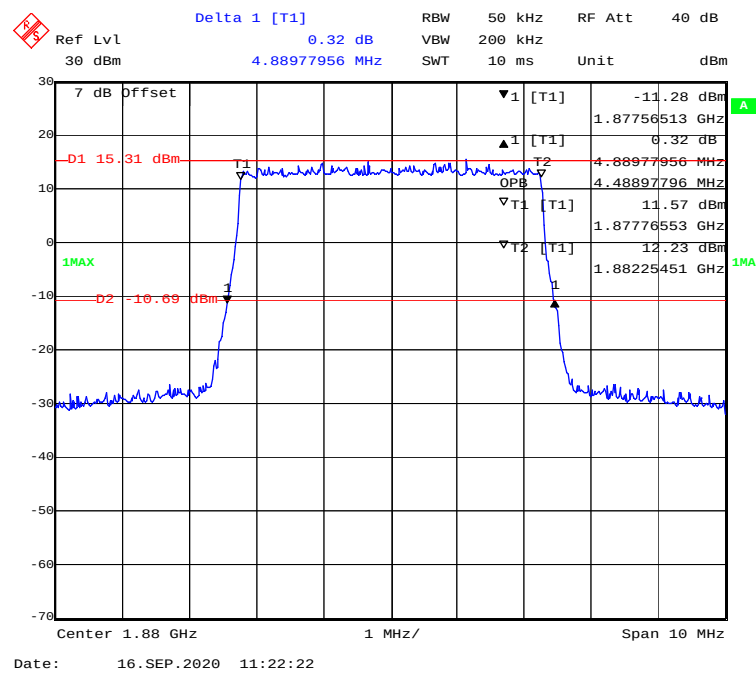
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

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

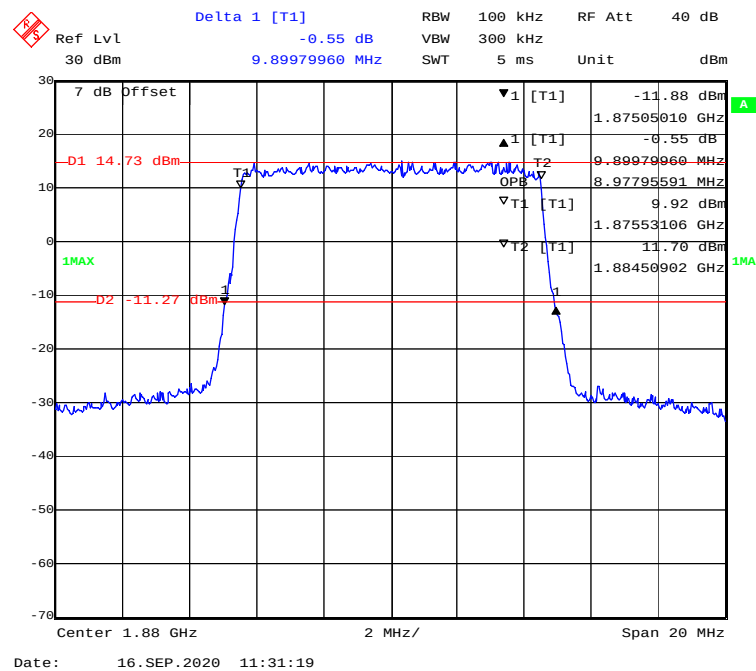
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

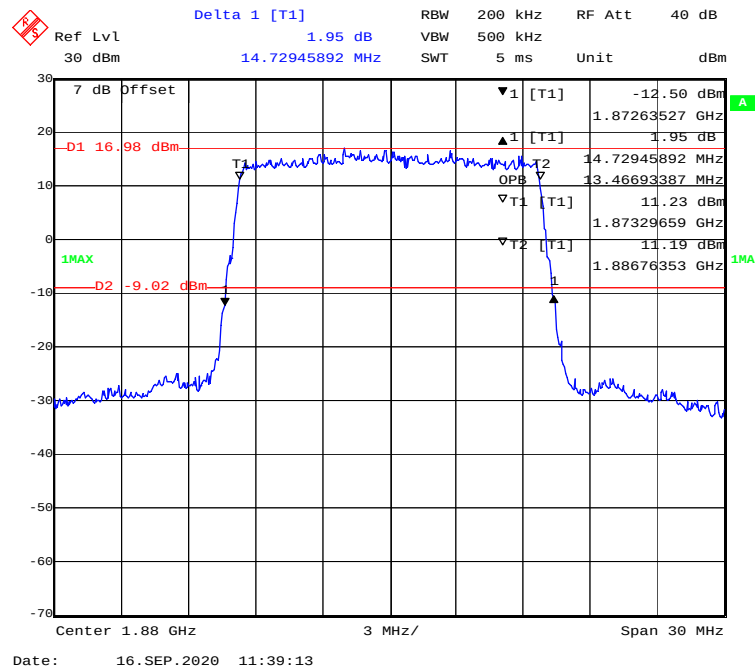
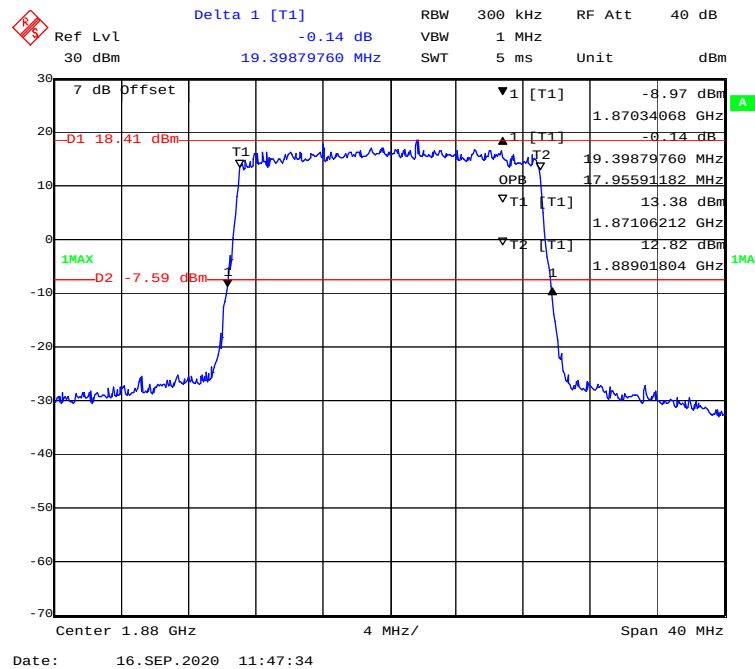
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

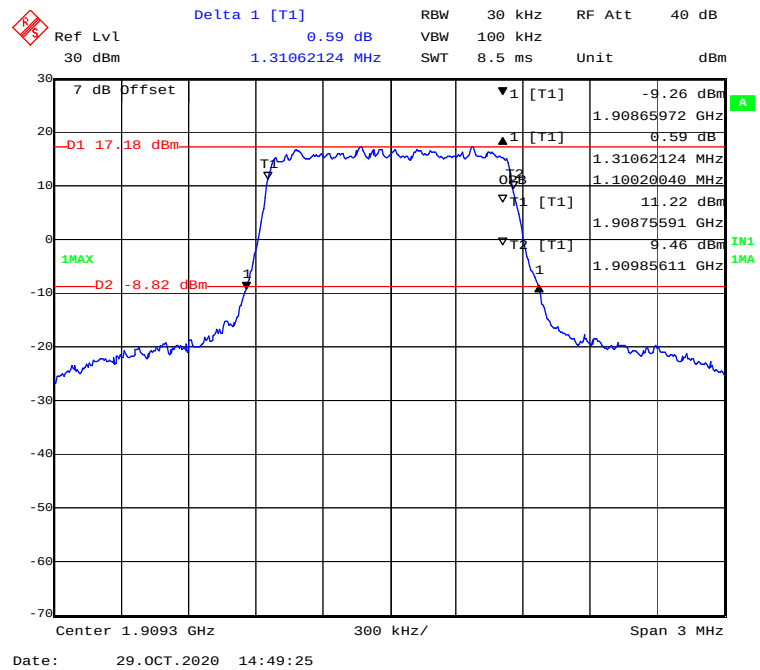
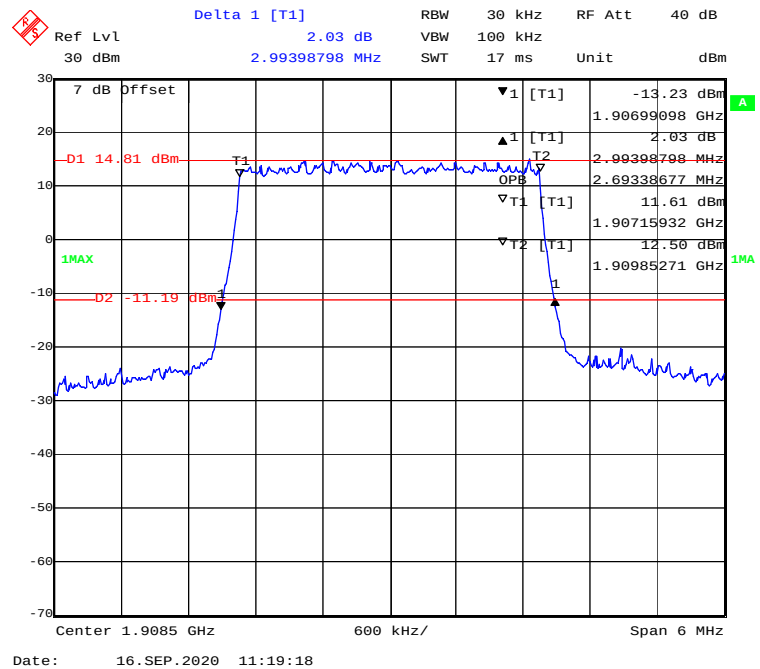
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



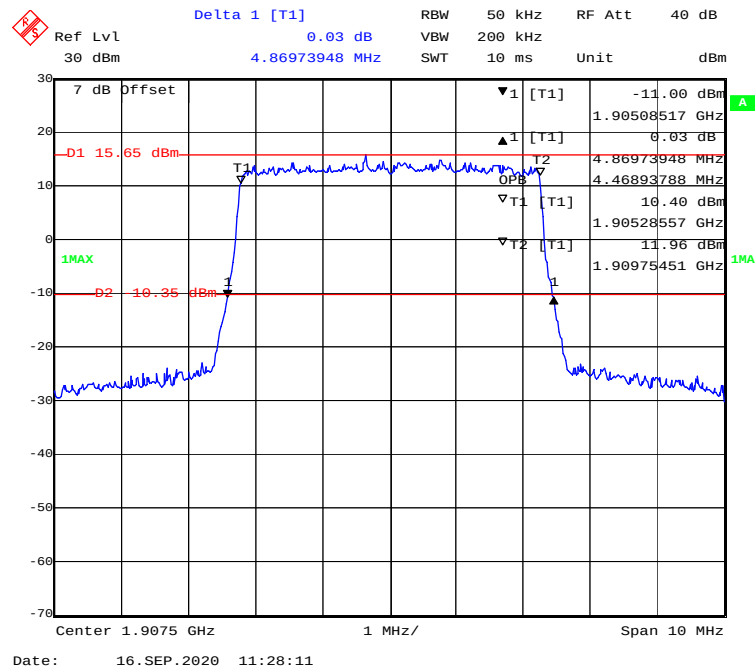
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



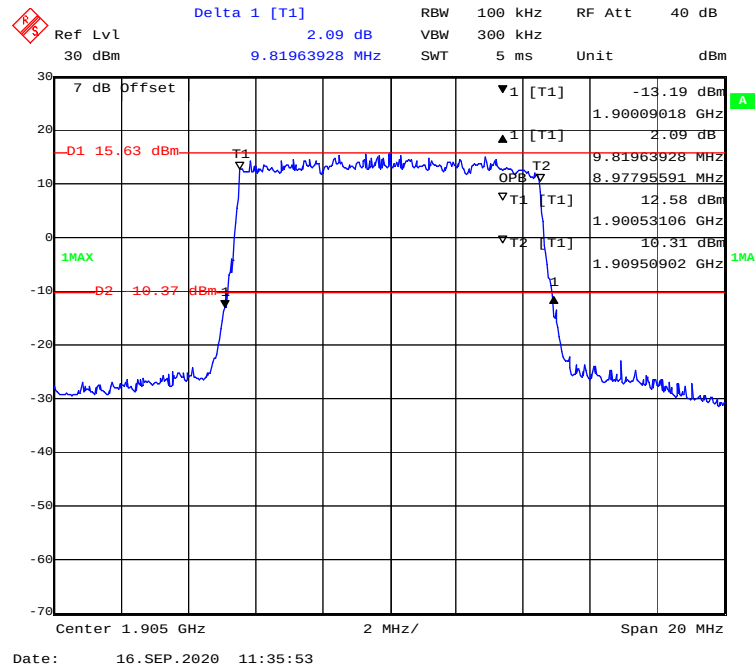
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

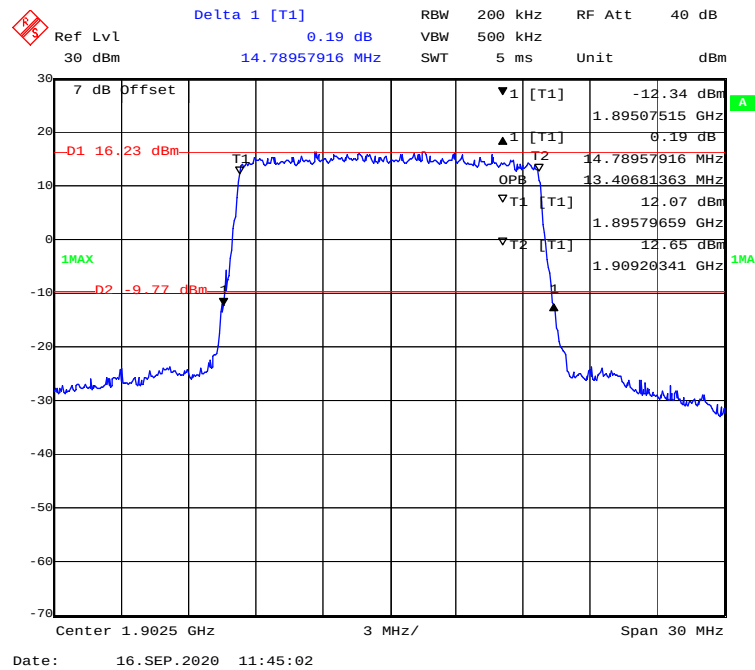
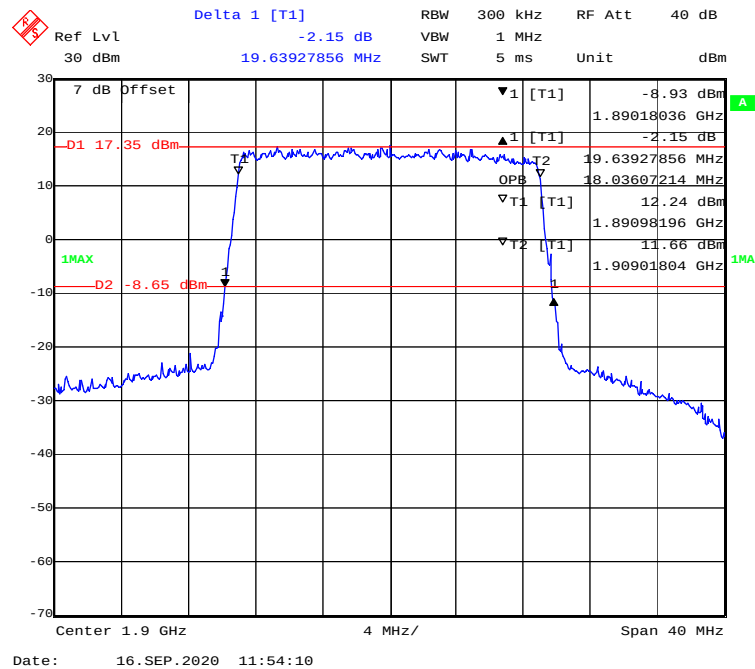
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

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



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



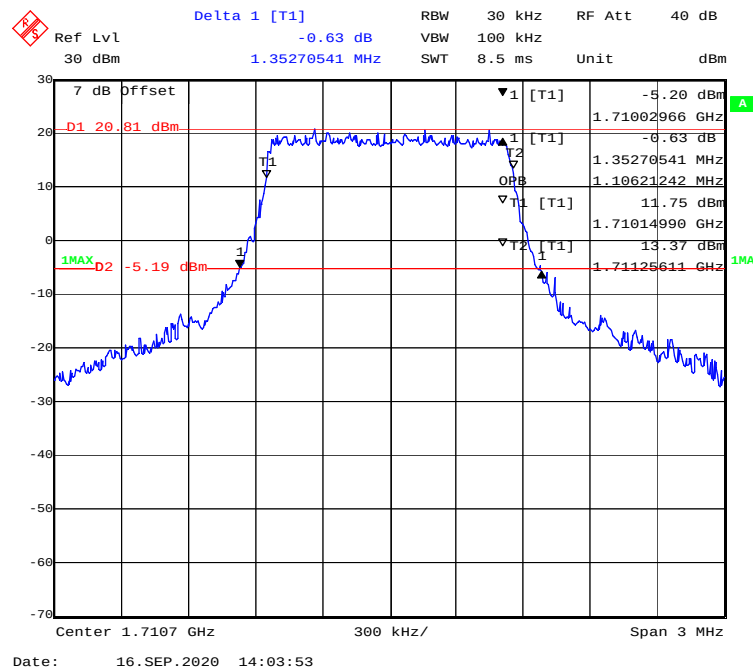
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

LTE Band 4:

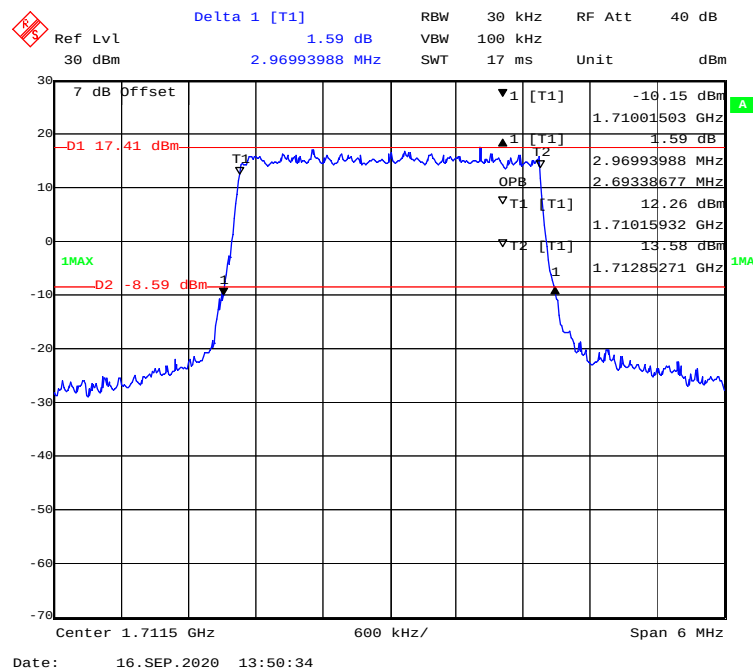
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.353	1.106
	3M		2.970	2.693
	5M		4.890	4.469
	10M		9.739	8.978
	15M		14.729	13.467
	20M		19.399	17.956
	1.4M	Middle	1.377	1.112
	3M		2.946	2.693
	5M		4.830	4.489
	10M		9.780	8.938
	15M		14.669	13.467
	20M		19.319	17.796
	1.4M	High	1.389	1.112
	3M		3.030	2.693
	5M		4.950	4.509
	10M		9.739	8.978
	15M		14.669	13.407
	20M		19.399	17.876

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
16-QAM	1.4M	Low	1.395	1.112
	3M		2.970	2.693
	5M		4.890	4.489
	10M		9.780	8.938
	15M		14.790	13.467
	20M		19.479	17.956
	1.4M	Middle	1.383	1.106
	3M		2.970	2.705
	5M		4.910	4.469
	10M		9.860	8.938
	15M		14.669	13.467
	20M		19.319	17.876
	1.4M	High	1.401	1.112
	3M		2.994	2.693
	5M		4.910	4.469
	10M		9.739	8.978
	15M		14.609	13.407
	20M		19.559	18.036

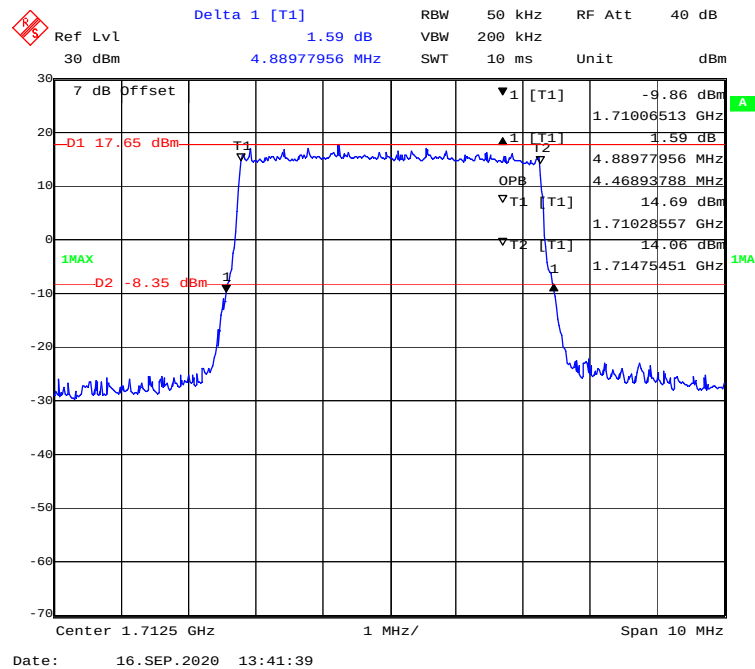
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



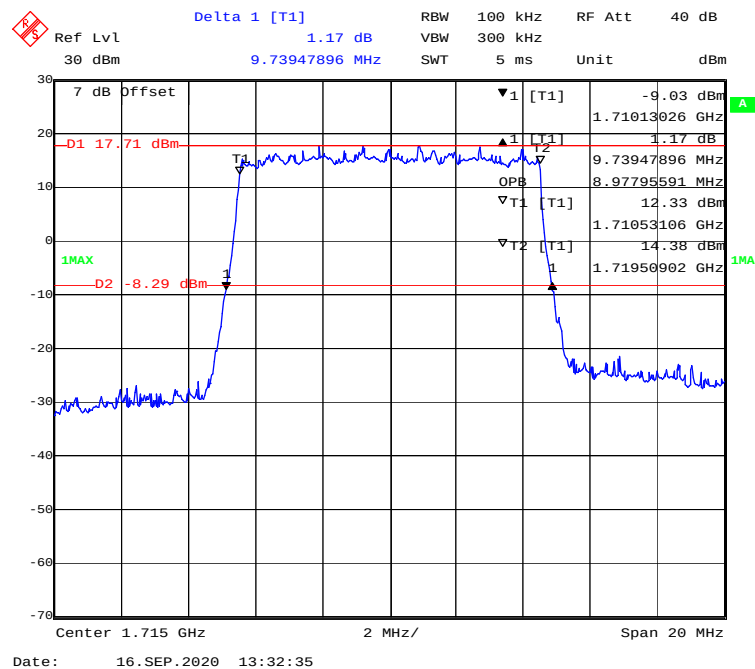
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

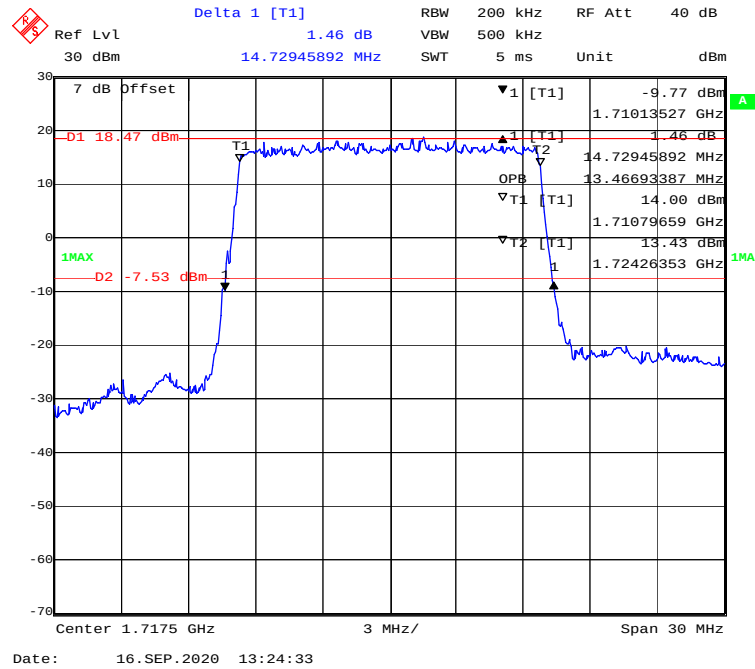
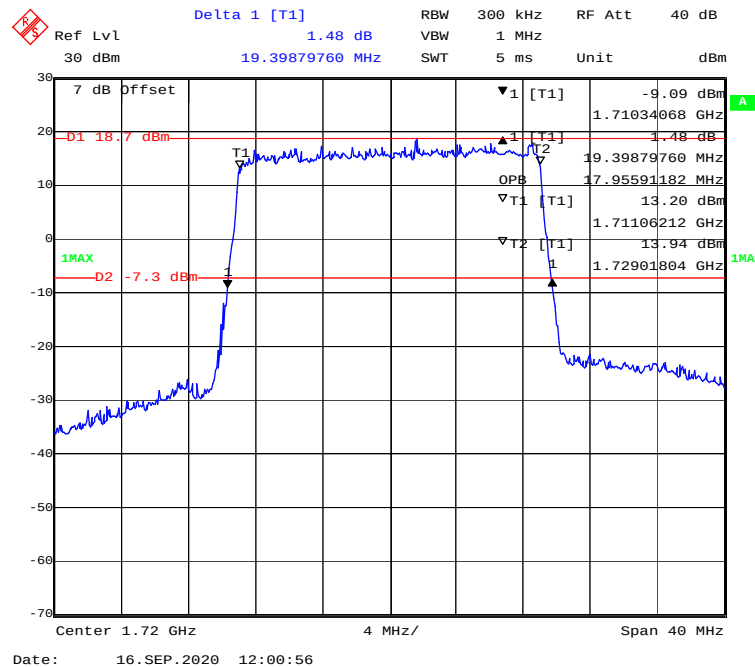


QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

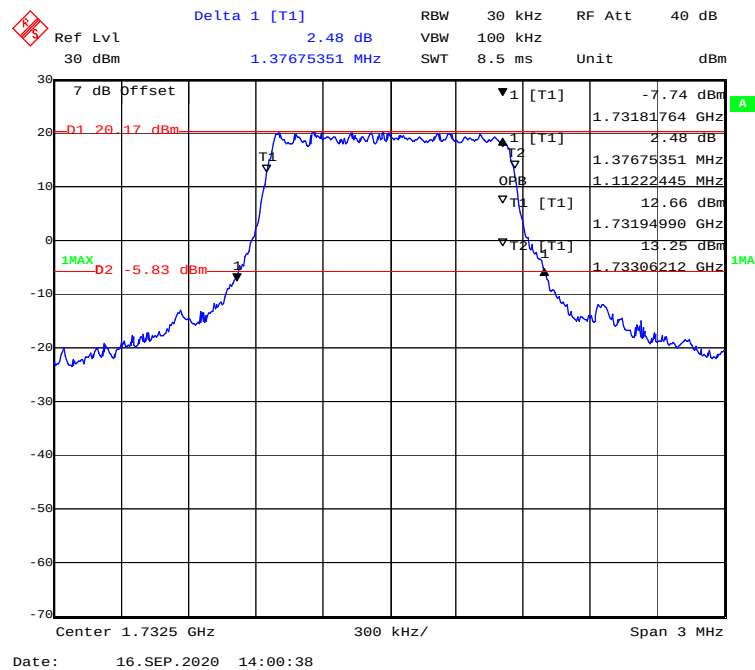


QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

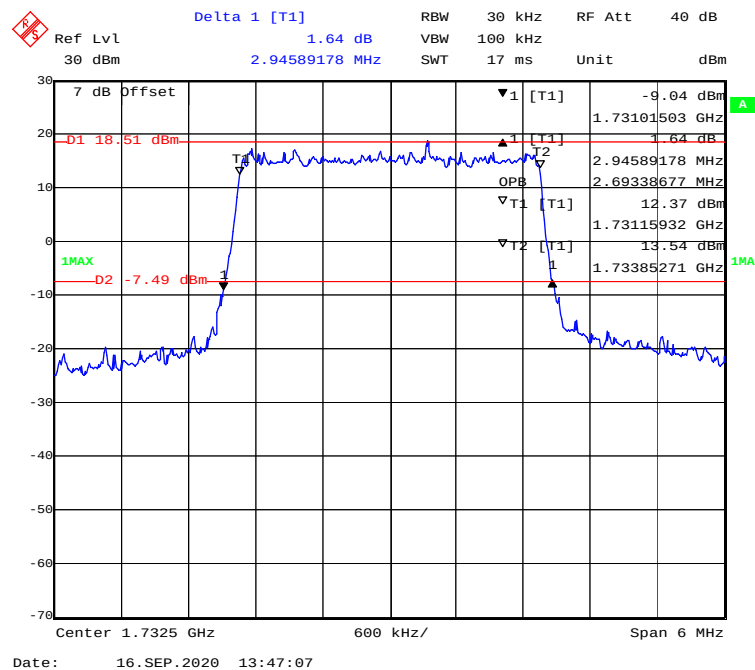


QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

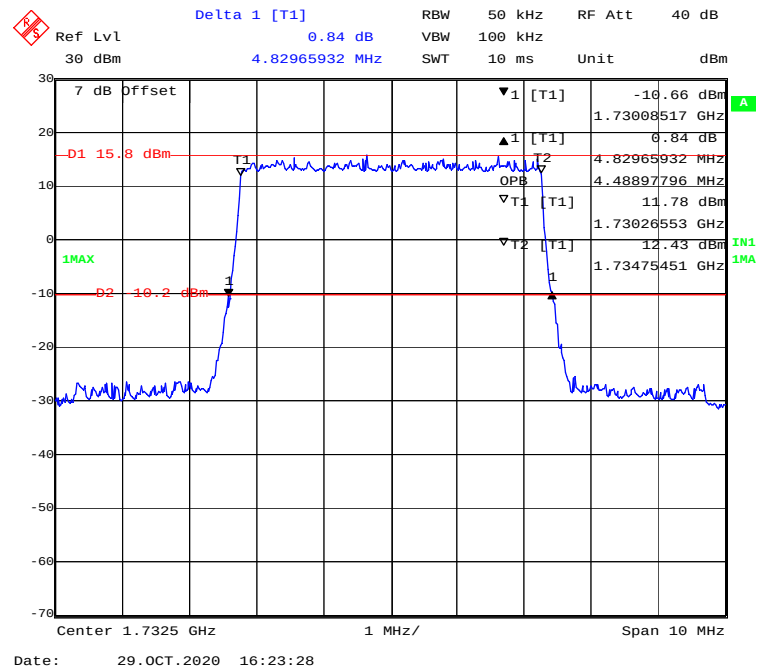
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



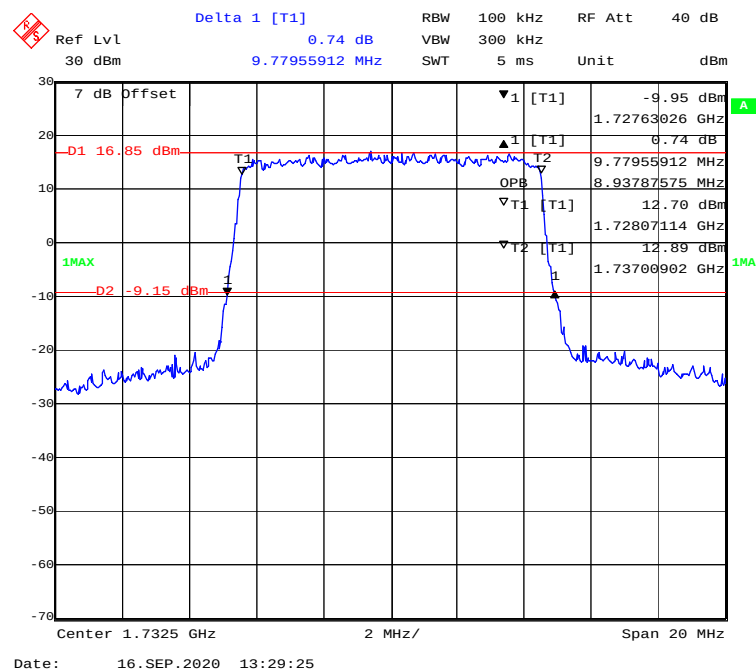
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

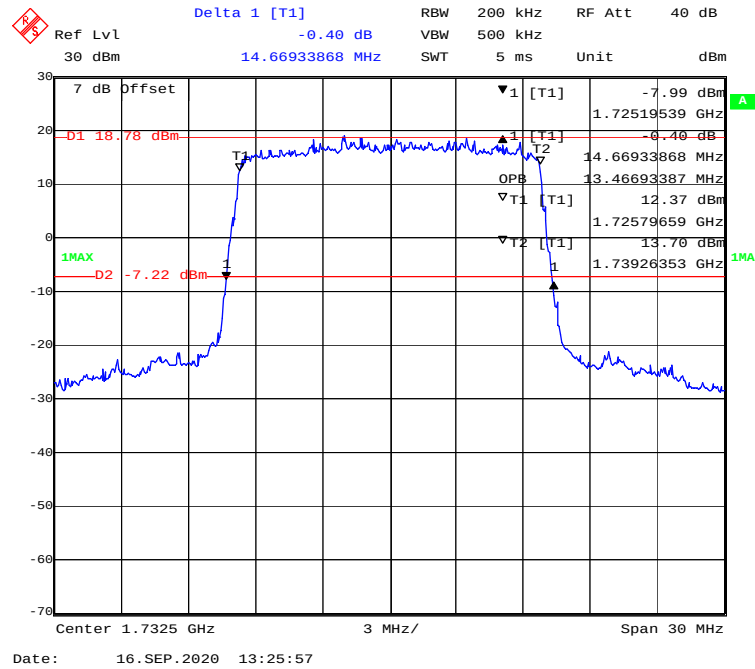
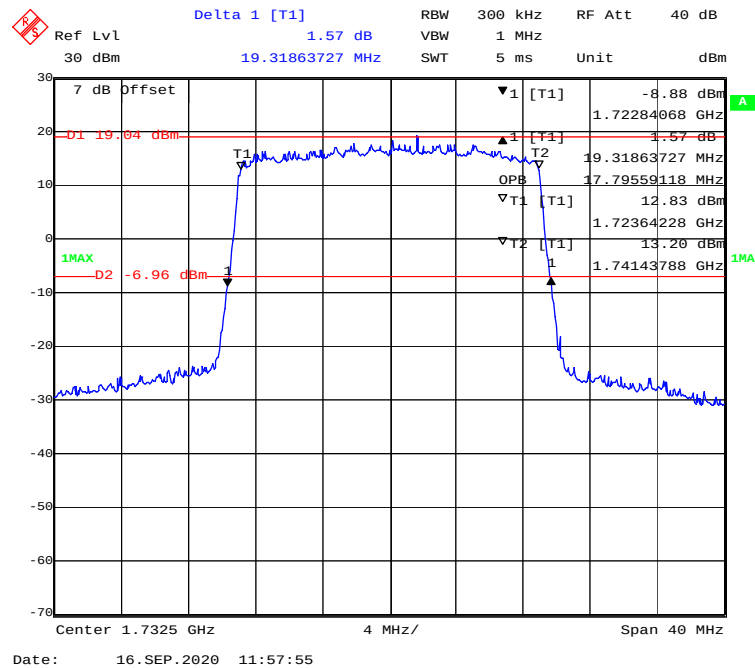


QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

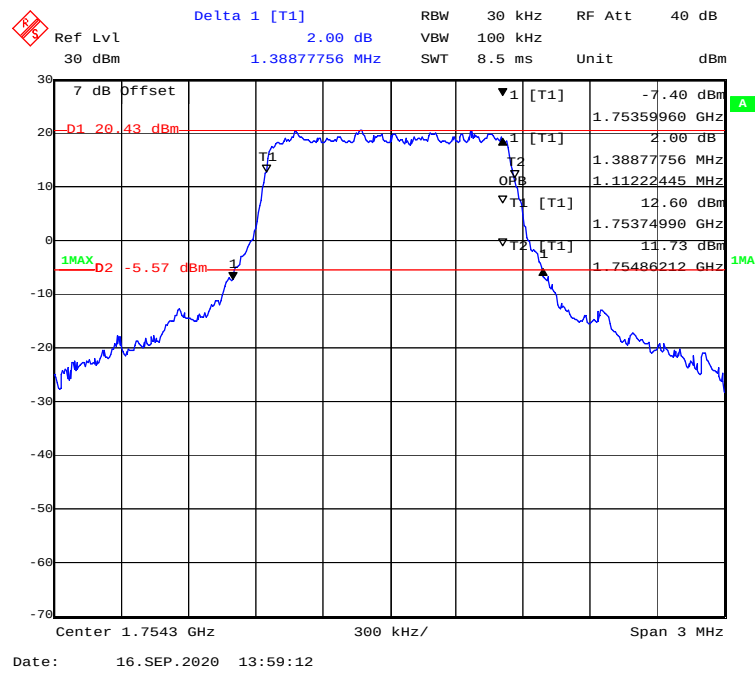


QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

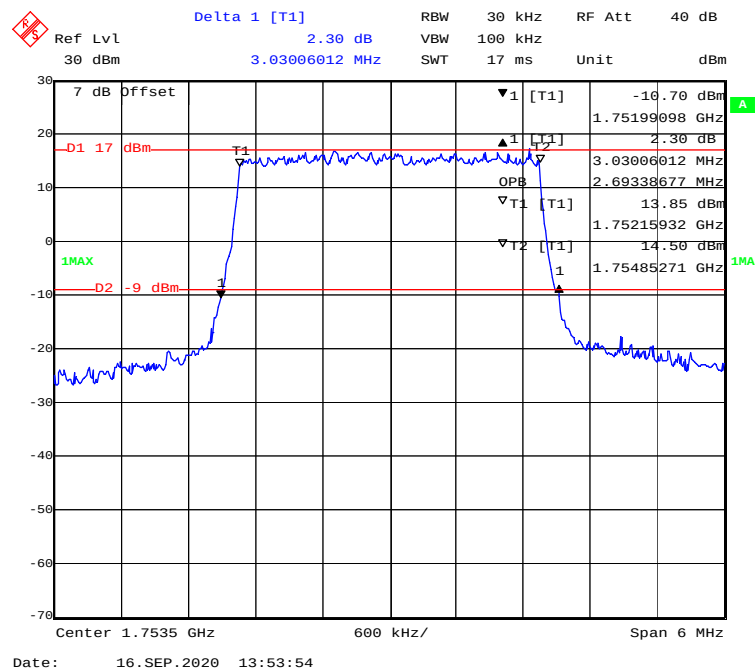


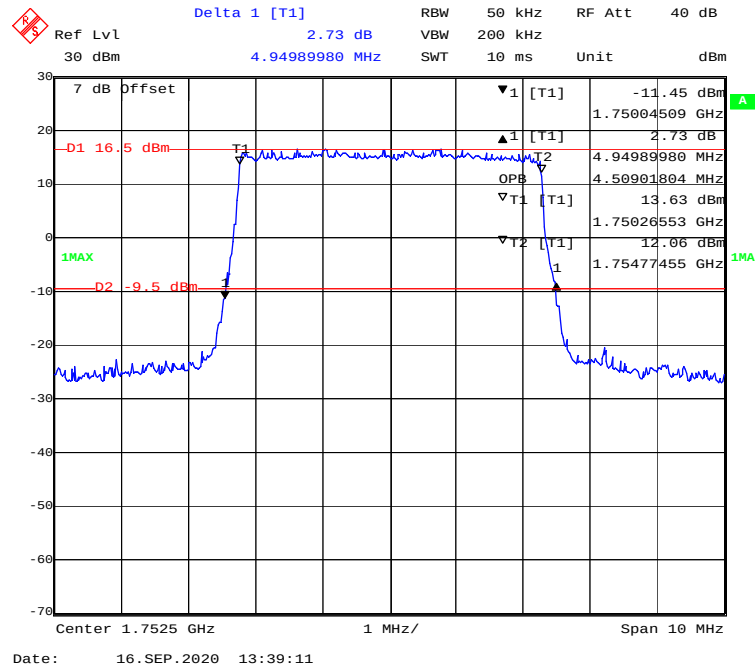
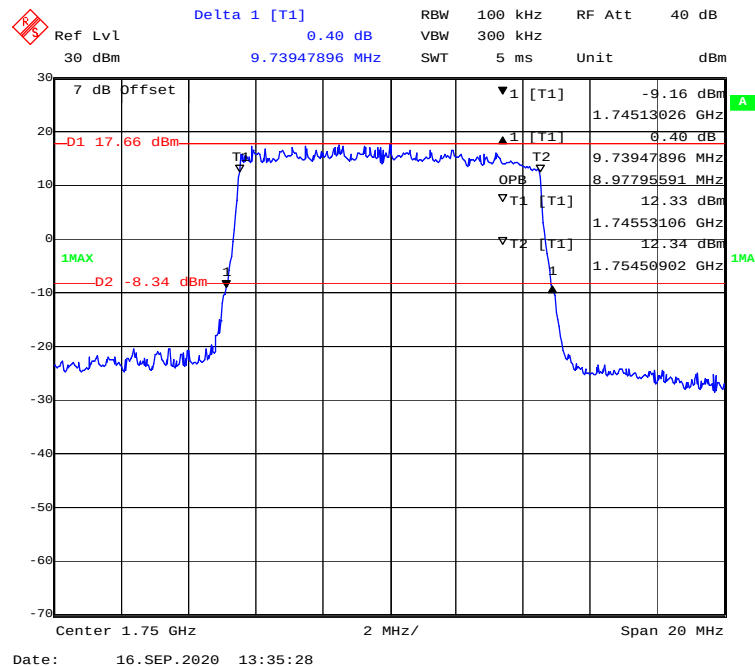
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

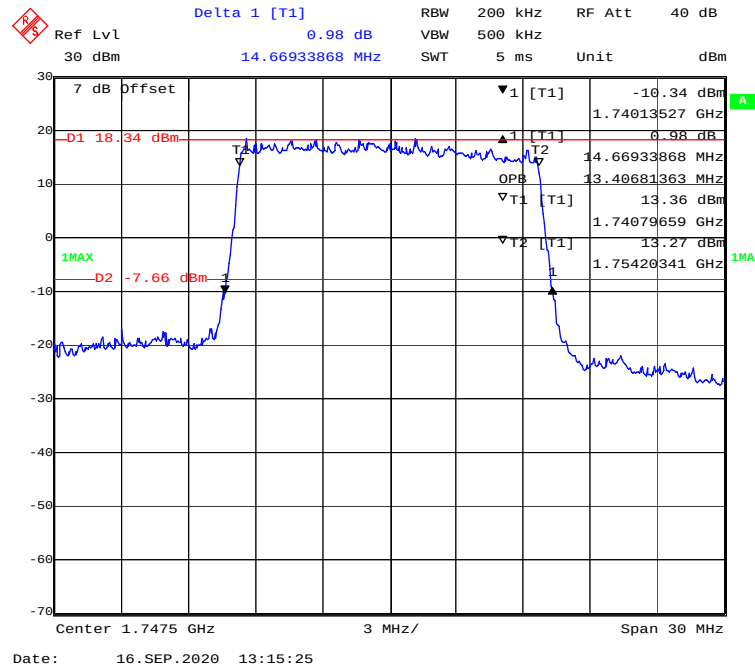
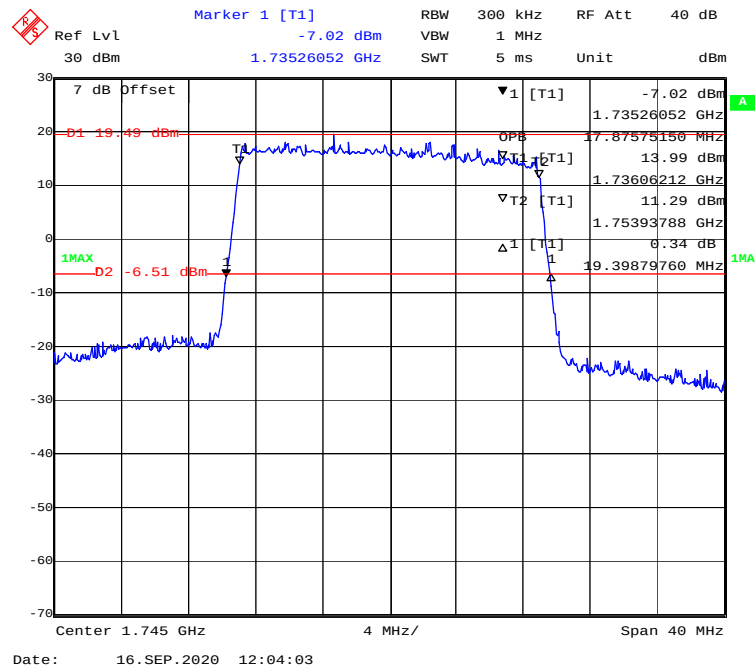
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel

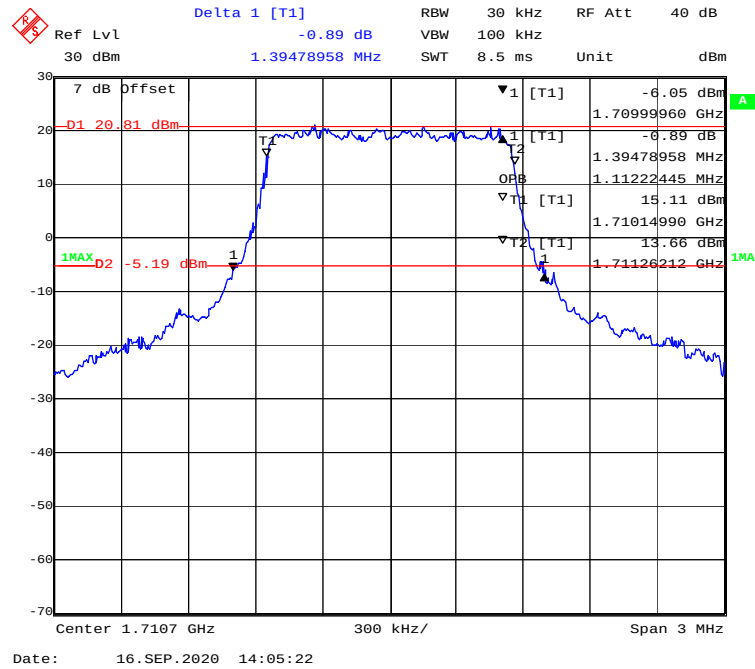
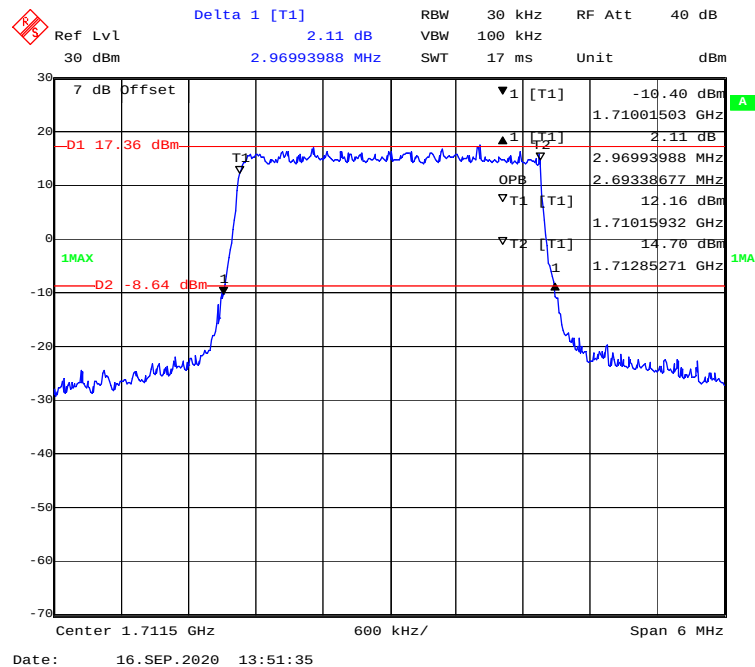


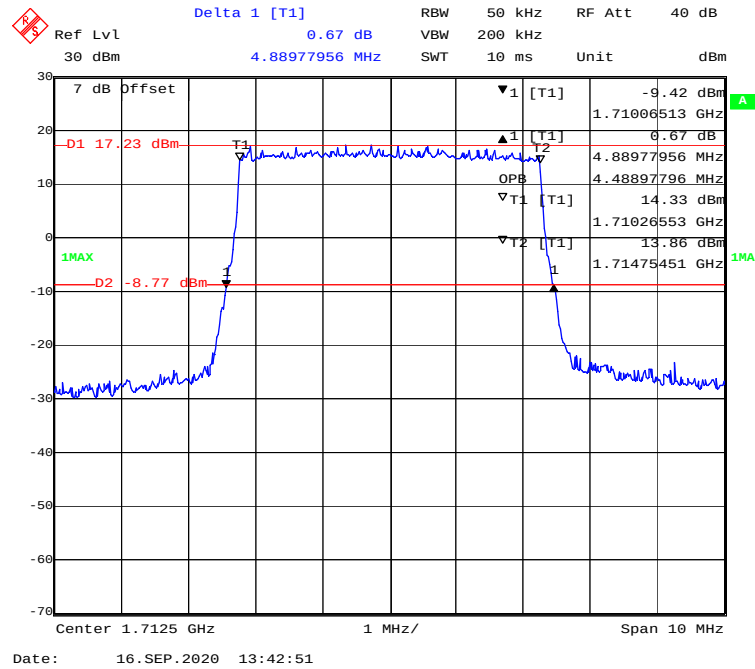
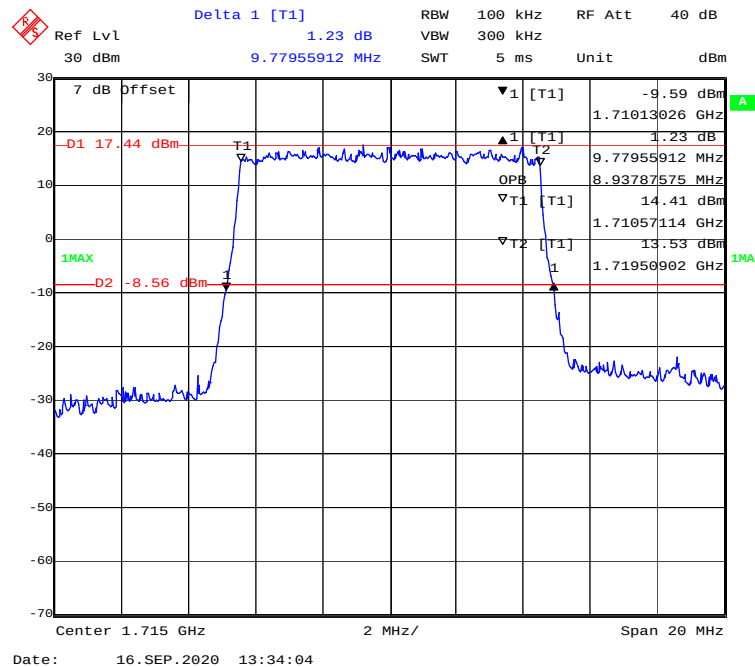
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



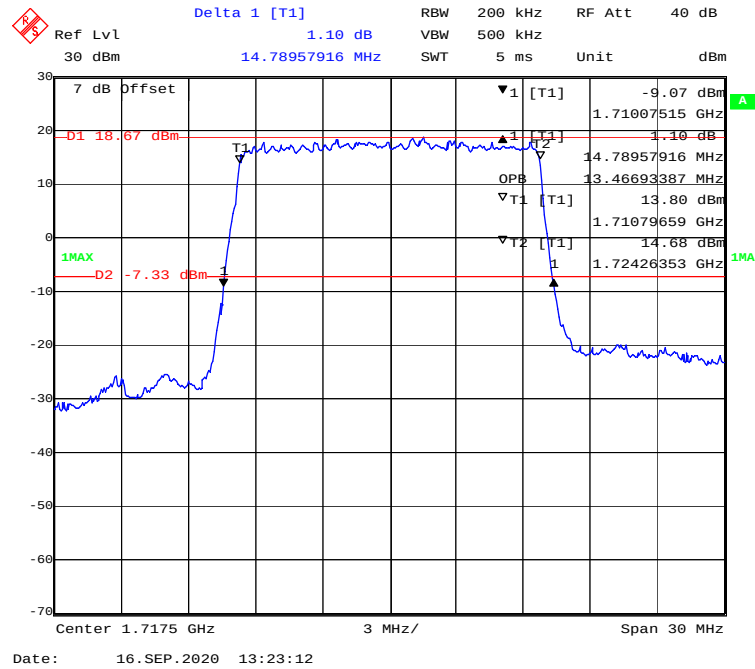
QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

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

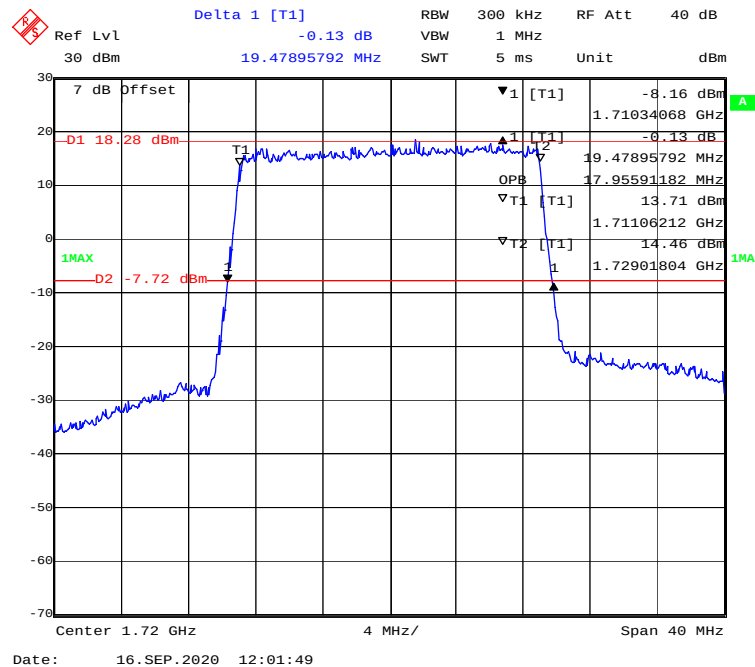
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

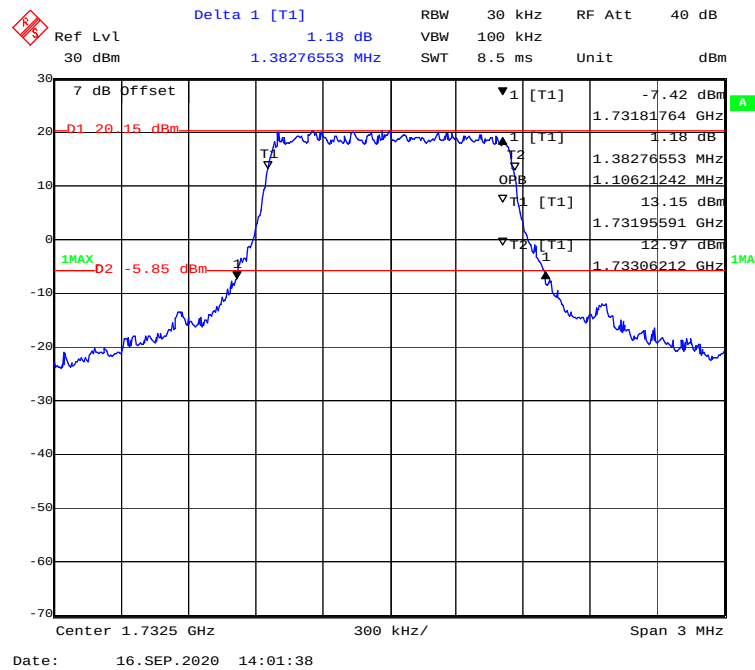
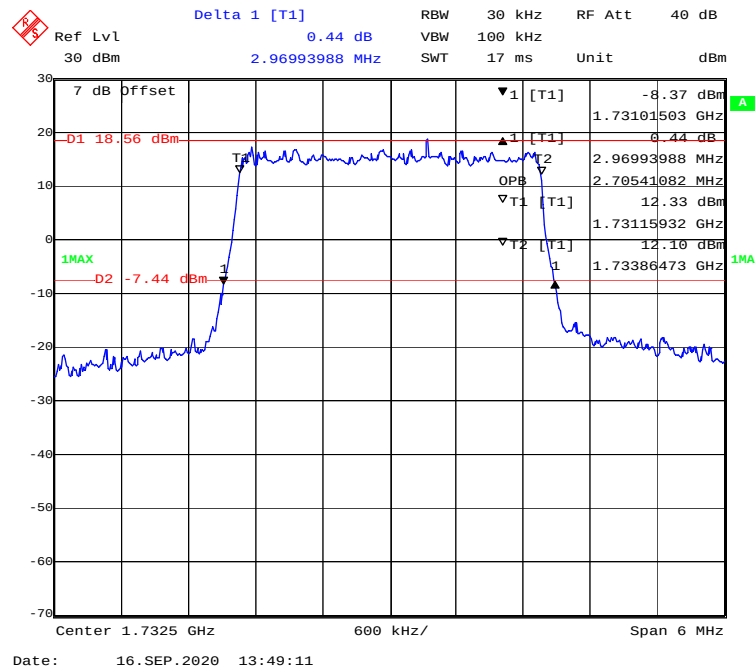
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

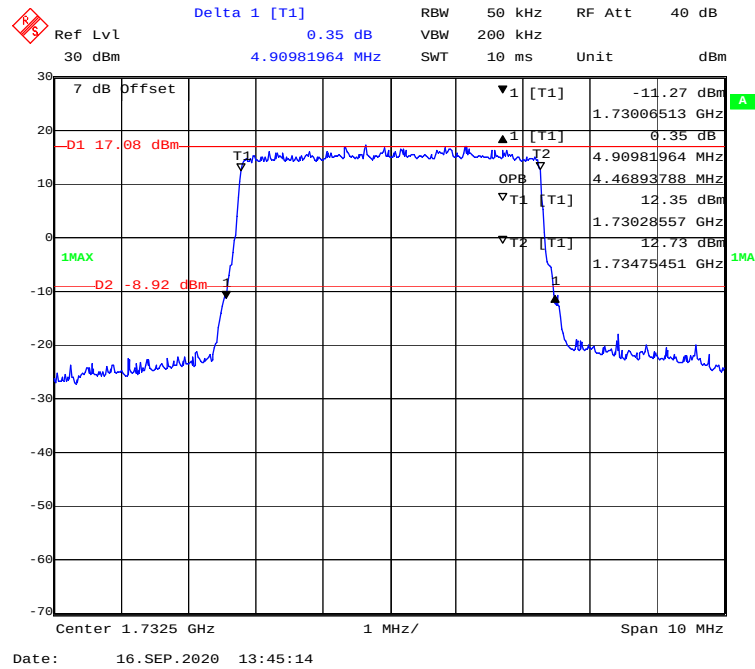
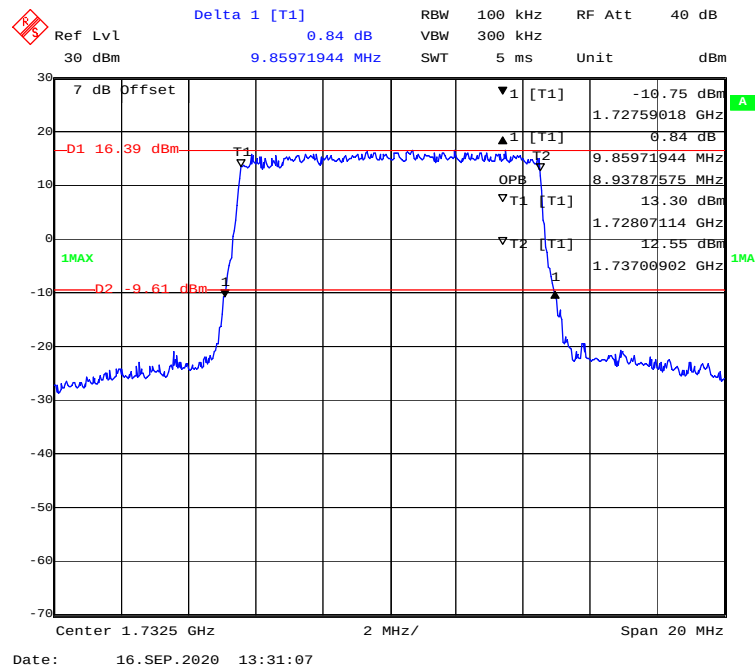
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

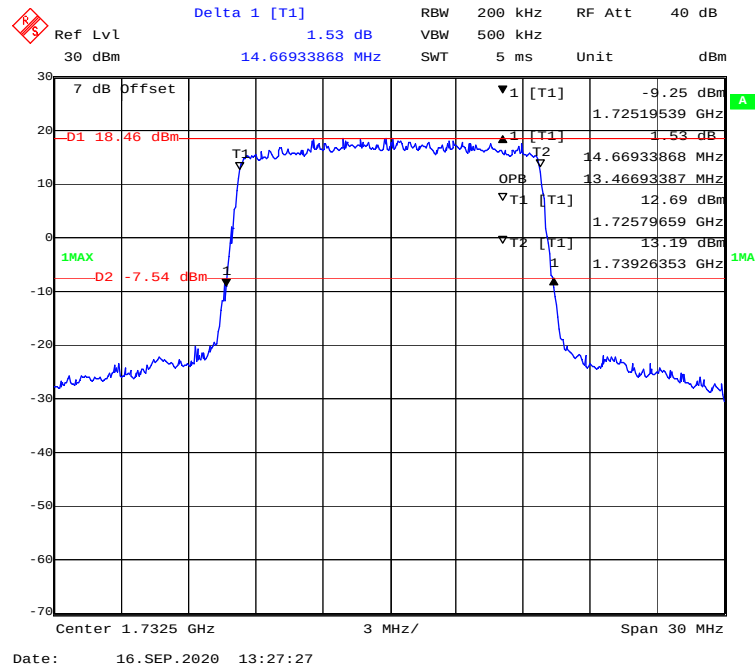
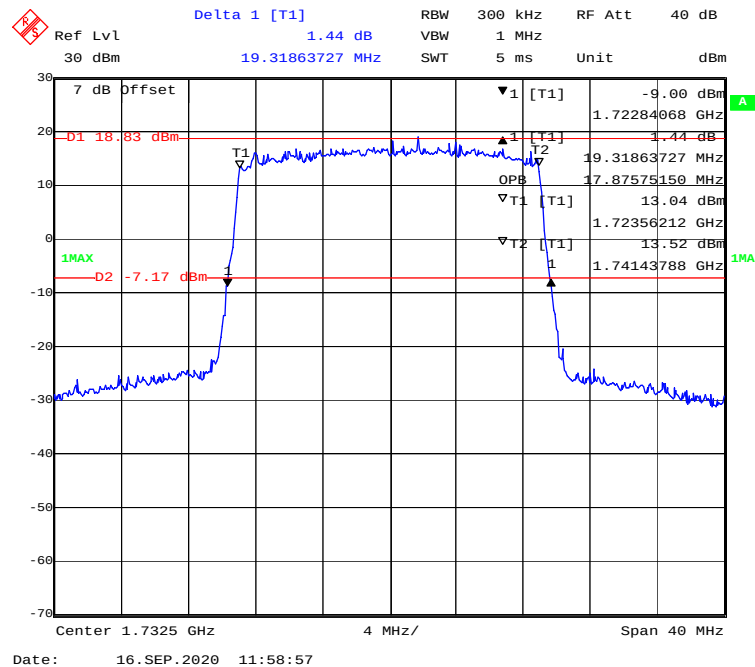


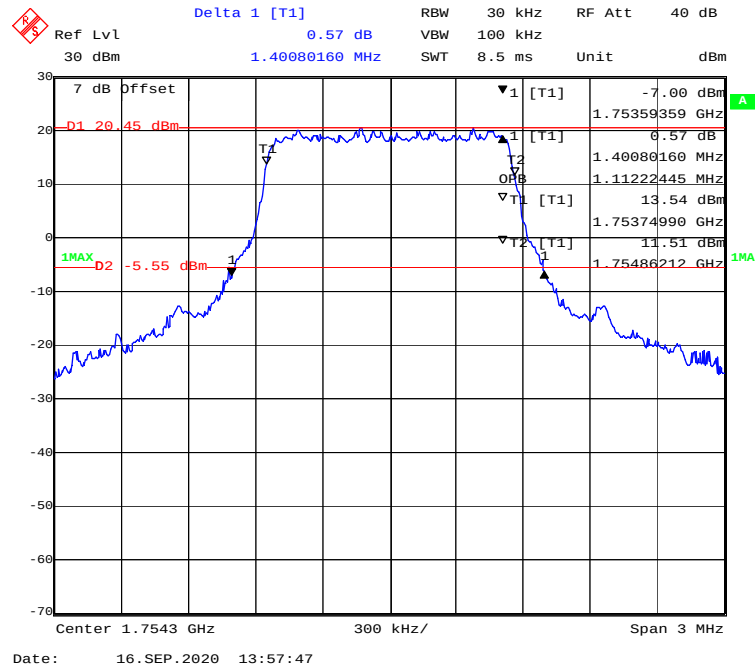
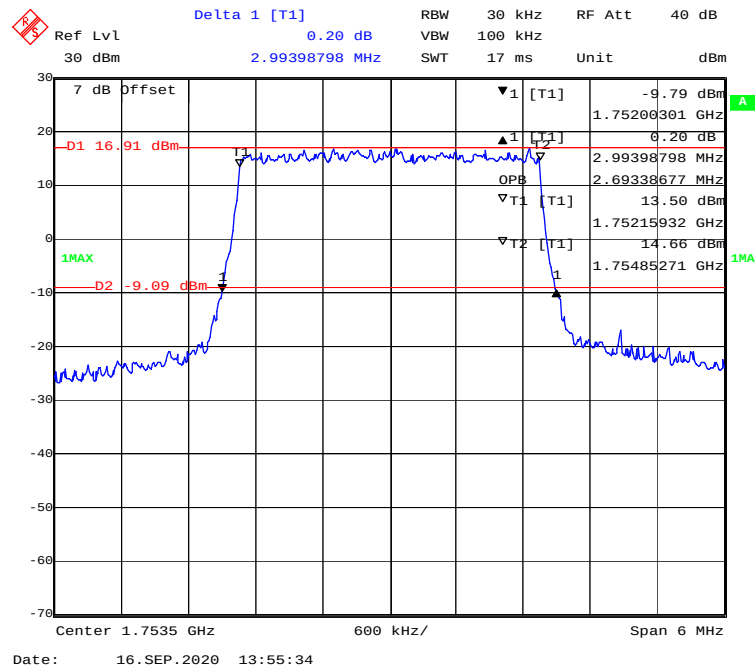
16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

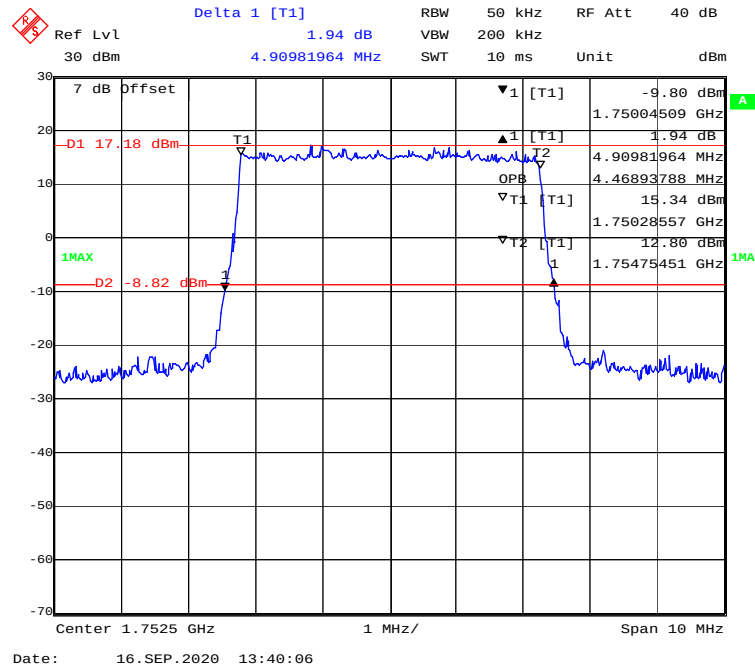
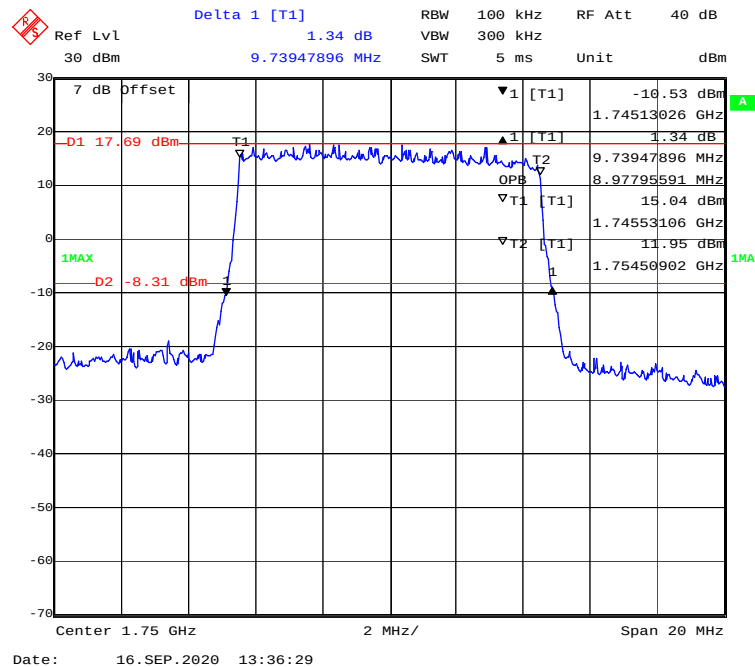


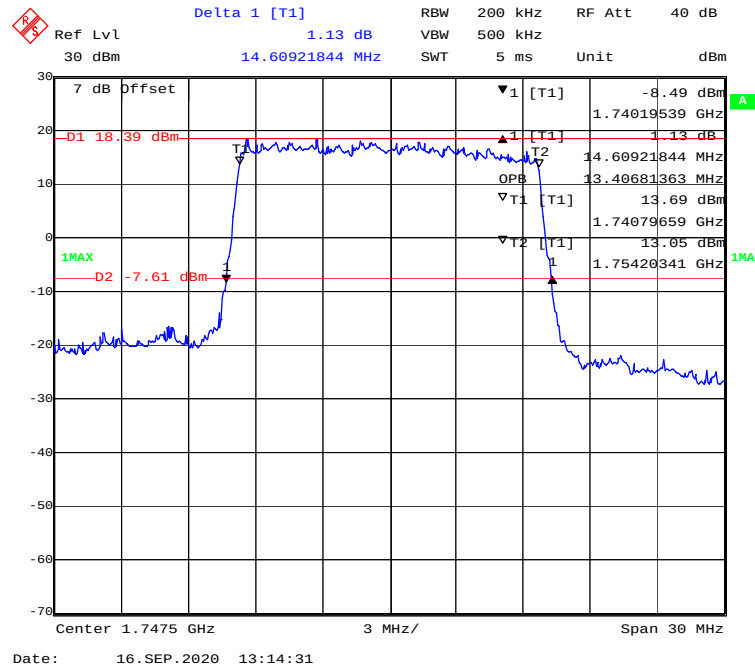
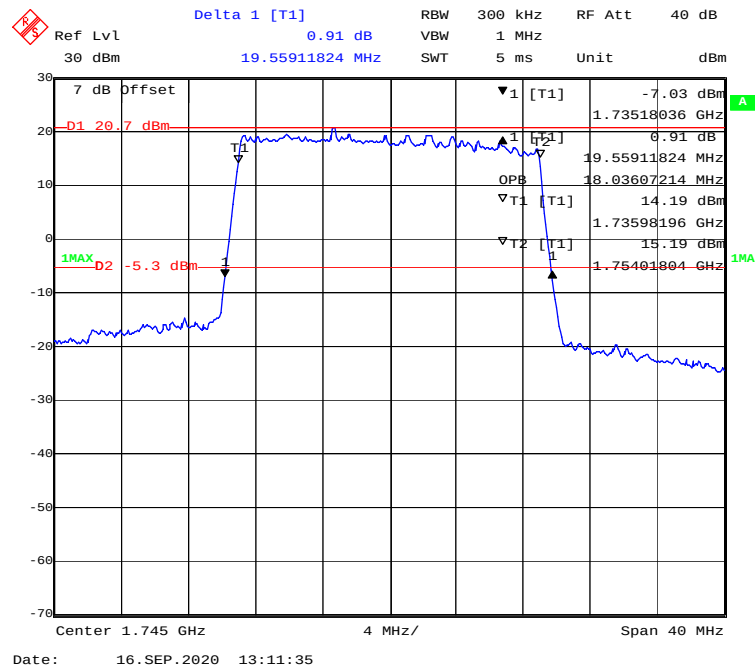
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

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**

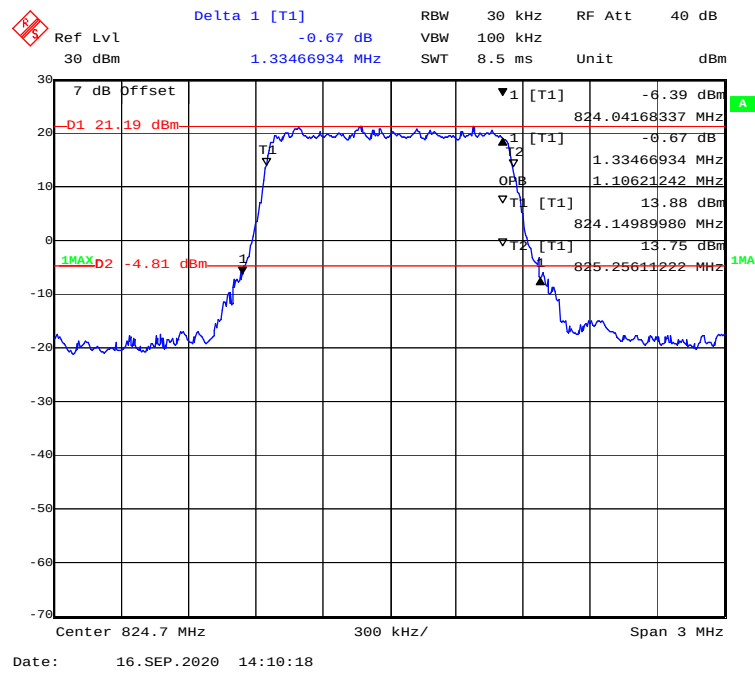
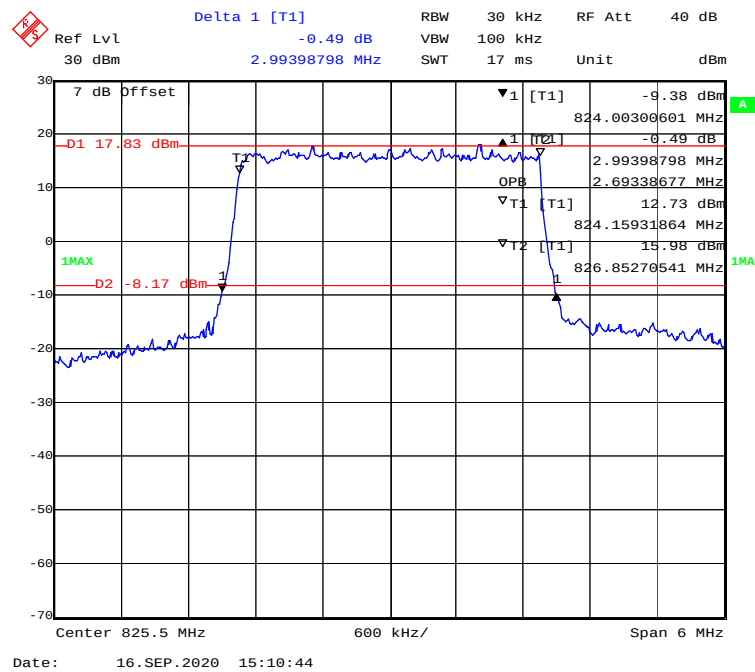
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

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

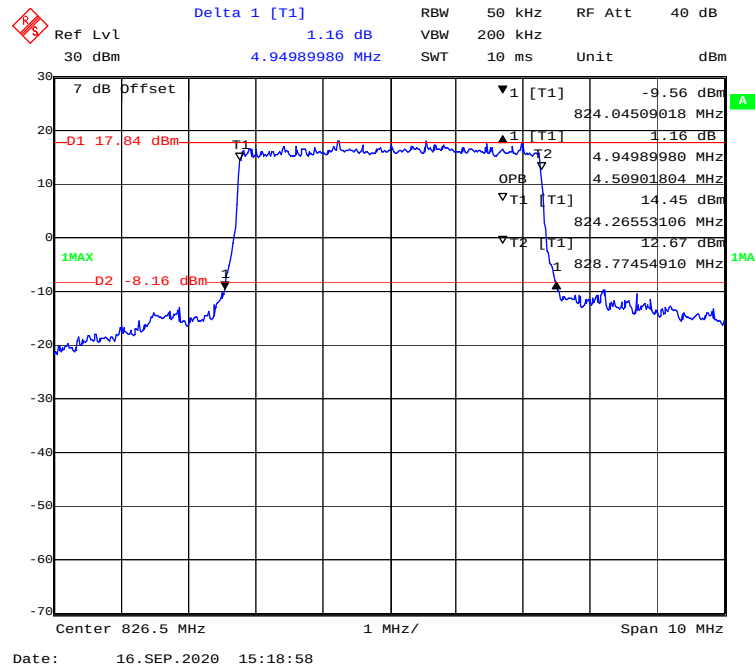
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

LTE Band 5:

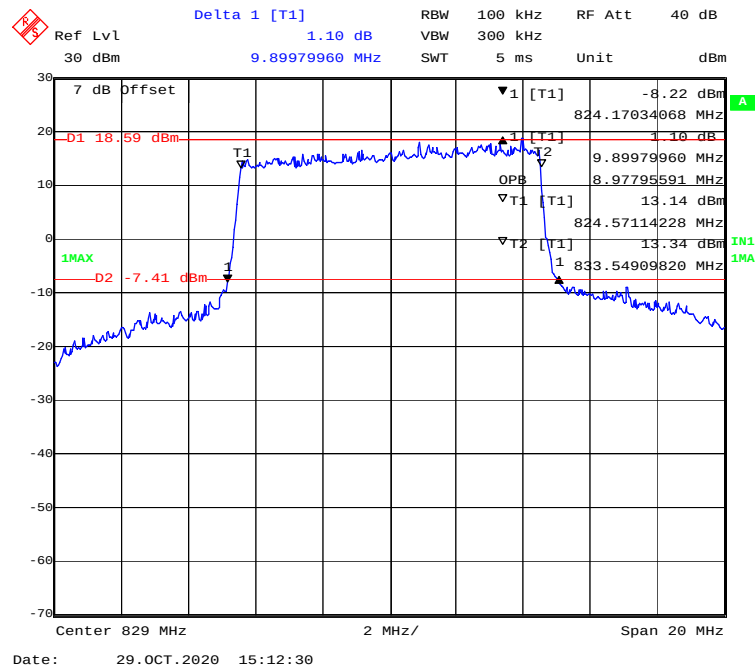
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.335	1.106
	3M		2.994	2.693
	5M		4.950	4.509
	10M		9.900	8.978
	1.4M	Middle	1.299	1.106
	3M		2.958	2.693
	5M		4.910	4.489
	10M		9.820	8.978
	1.4M	High	1.305	1.112
	3M		2.946	2.705
	5M		4.970	4.509
	10M		9.980	8.978
16-QAM	1.4M	Low	1.317	1.106
	3M		2.982	2.693
	5M		4.930	4.489
	10M		9.900	8.978
	1.4M	Middle	1.311	1.112
	3M		2.970	2.693
	5M		4.890	4.469
	10M		9.820	8.978
	1.4M	High	1.323	1.112
	3M		2.934	2.705
	5M		4.970	4.509
	10M		9.820	8.978

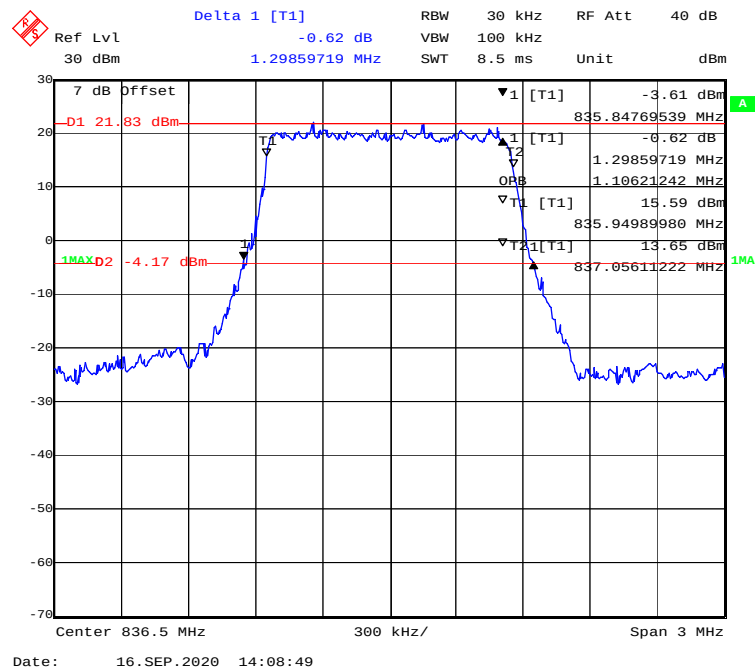
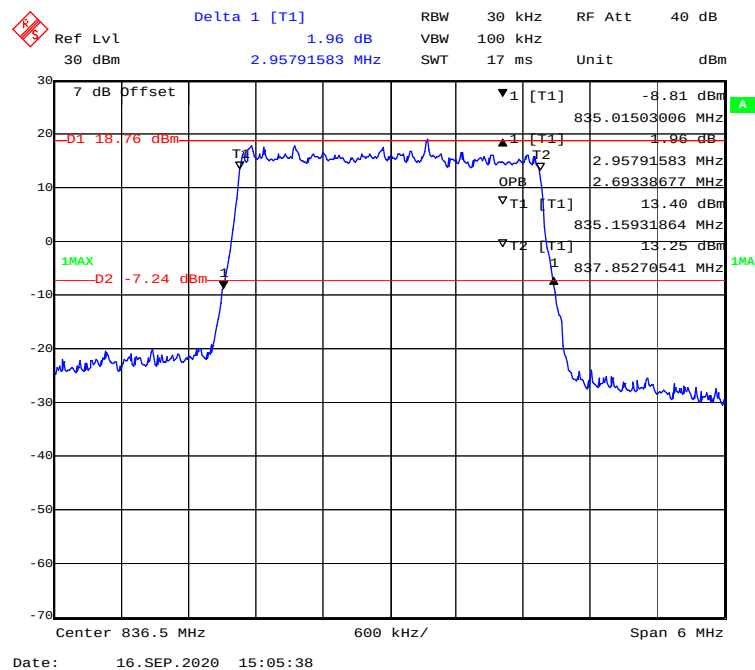
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

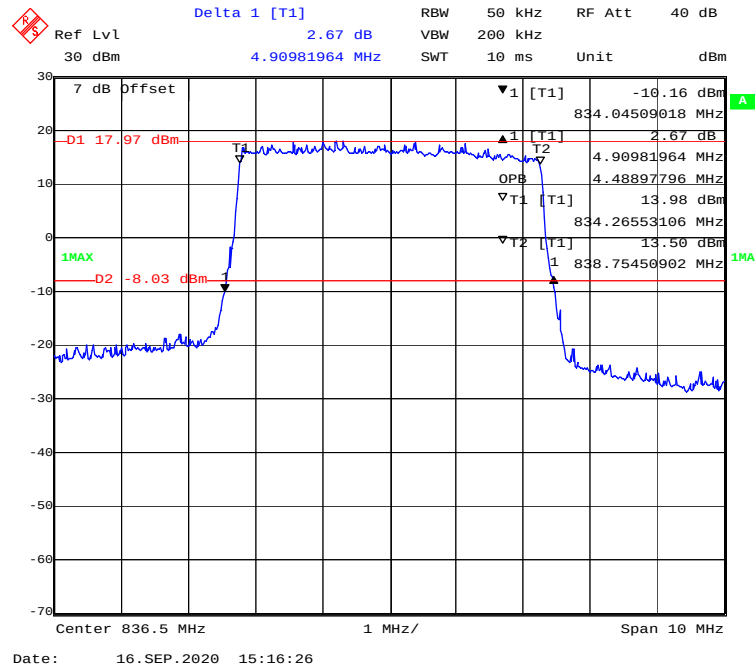
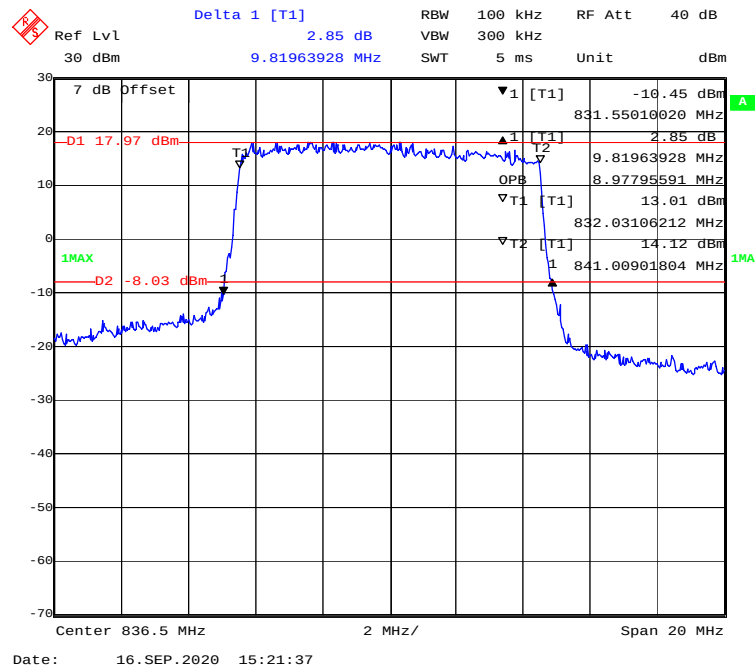
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



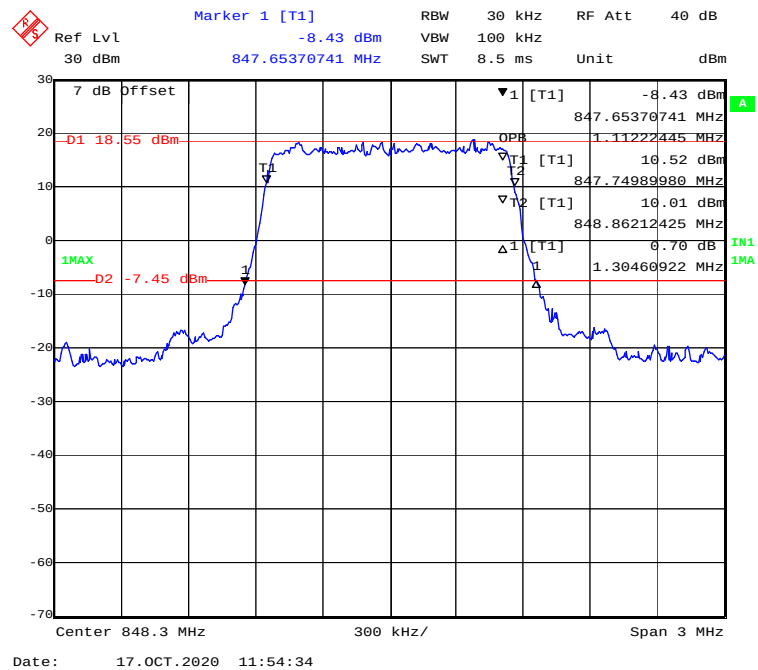
QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



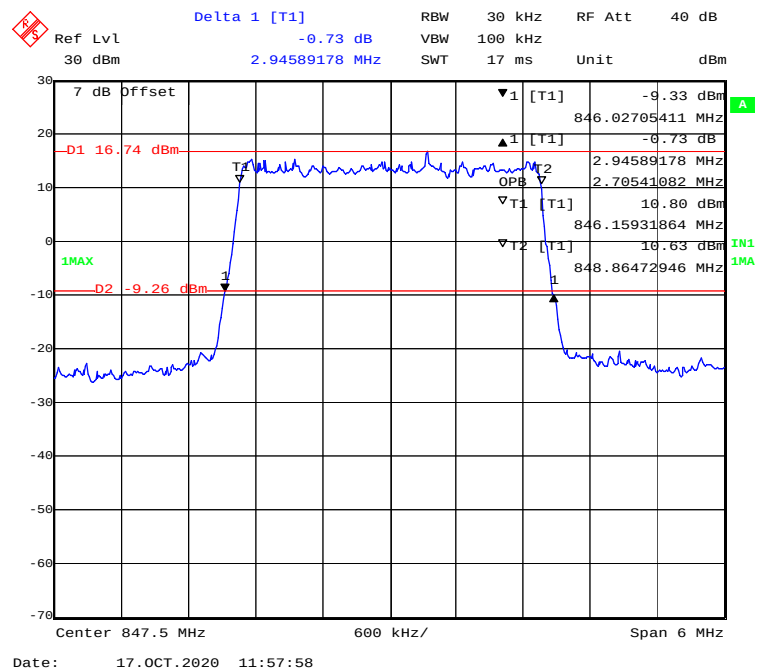
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

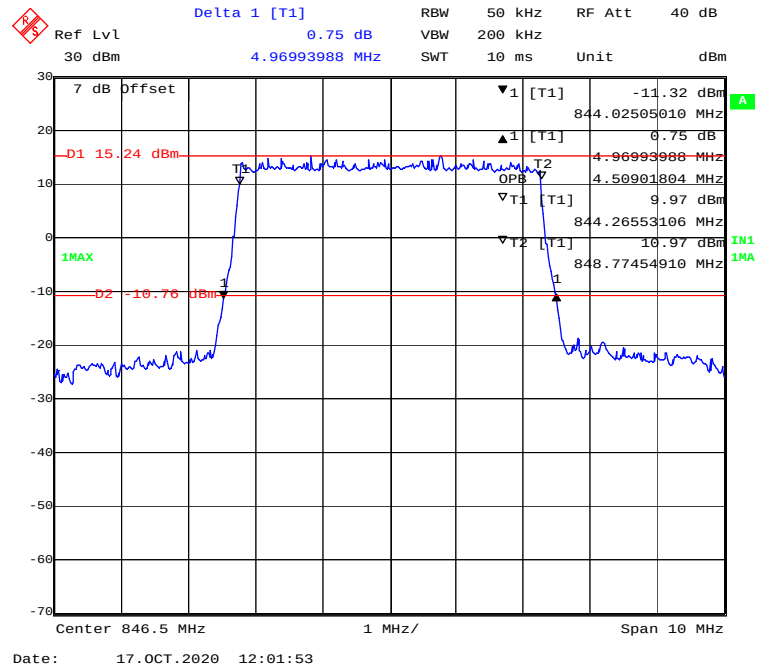
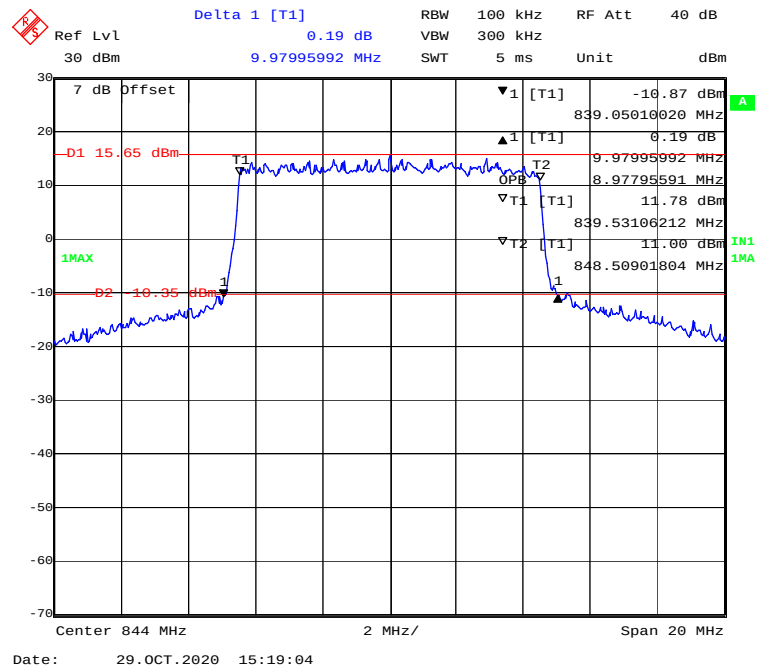
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

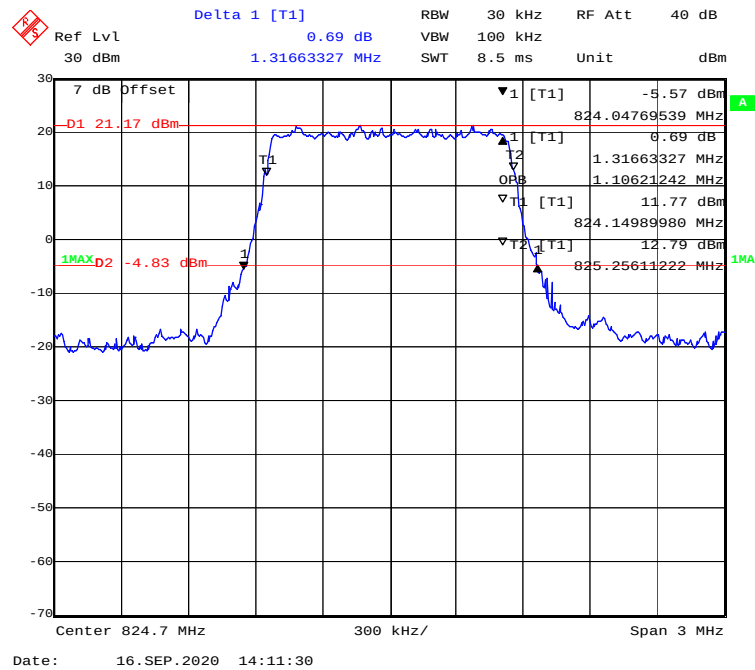
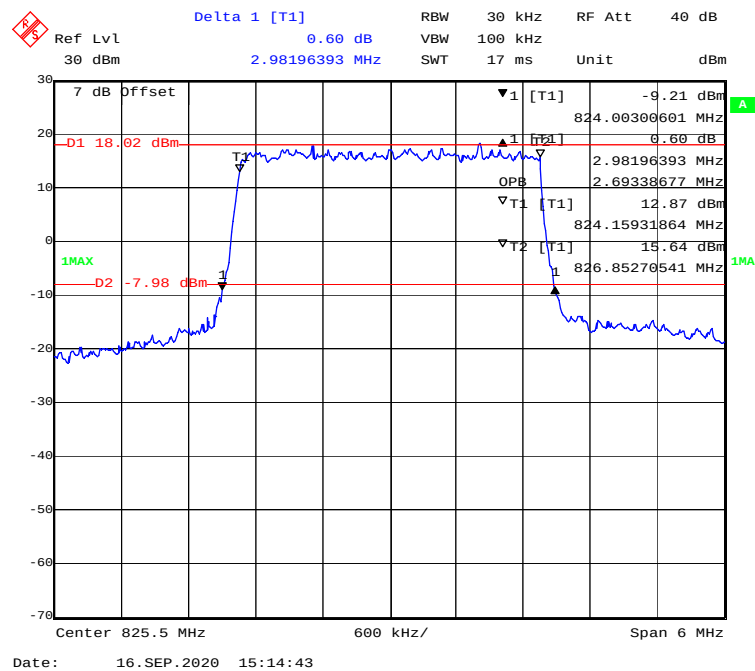
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel

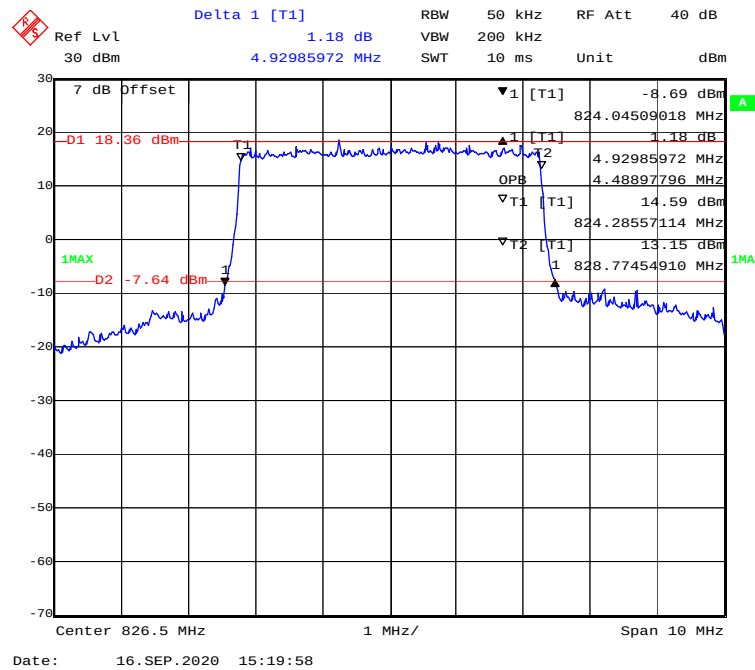
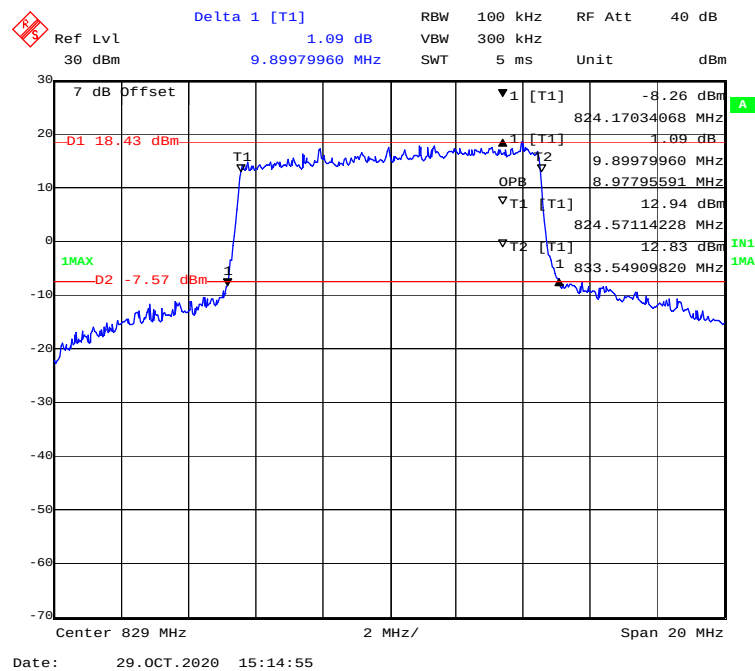


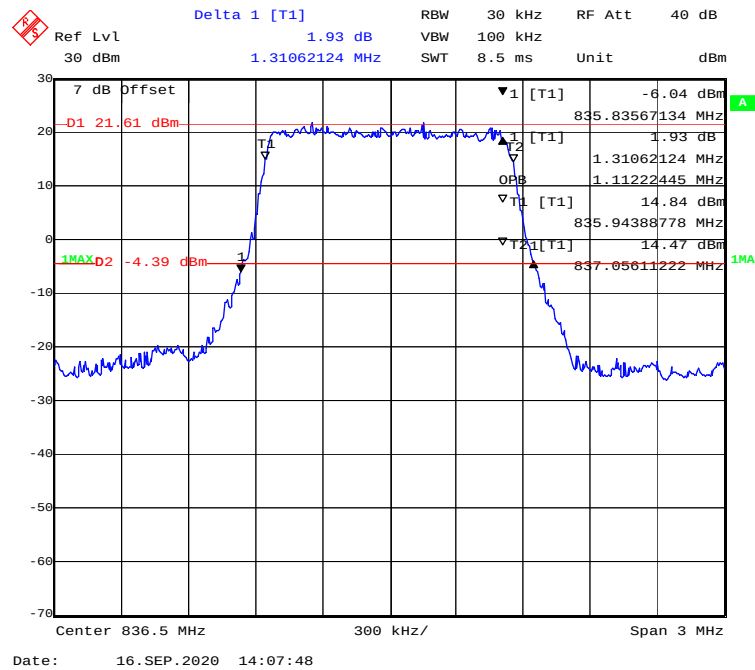
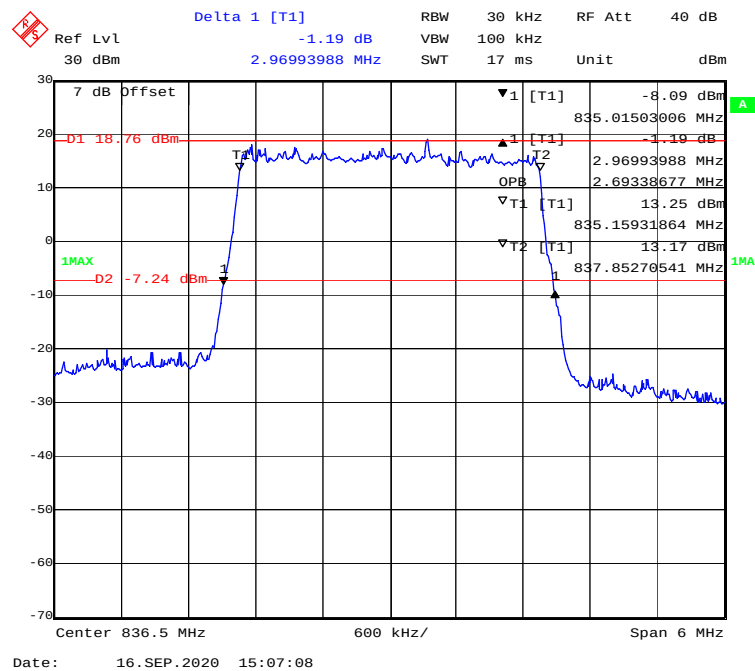
QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



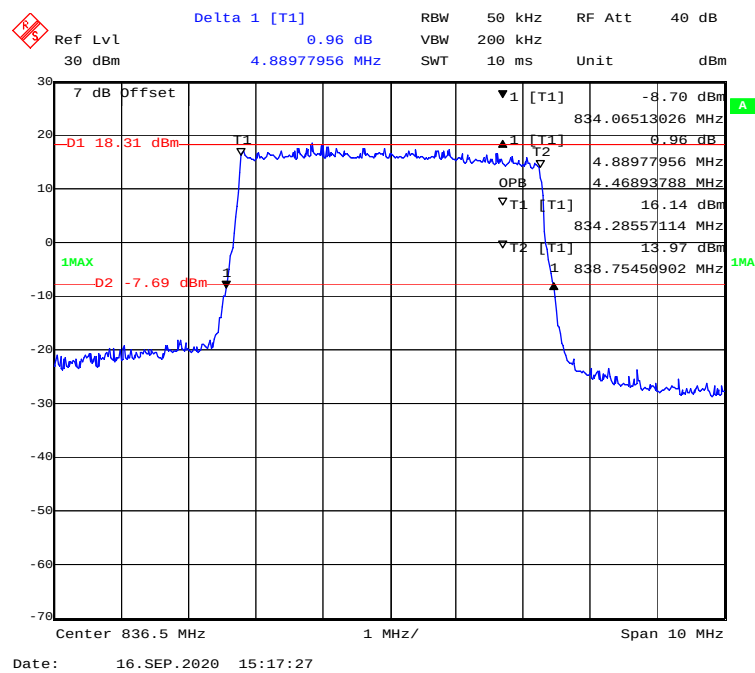
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

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

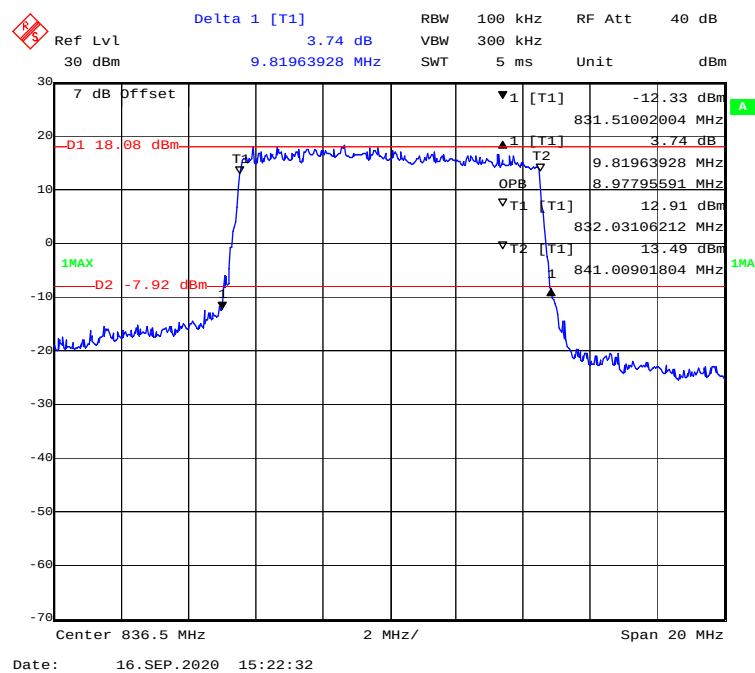
16-QAM (5.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

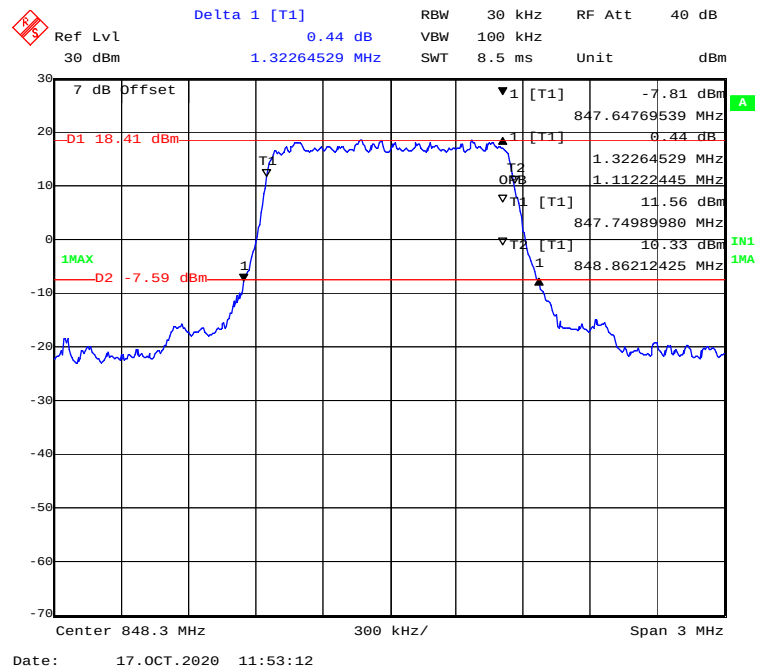
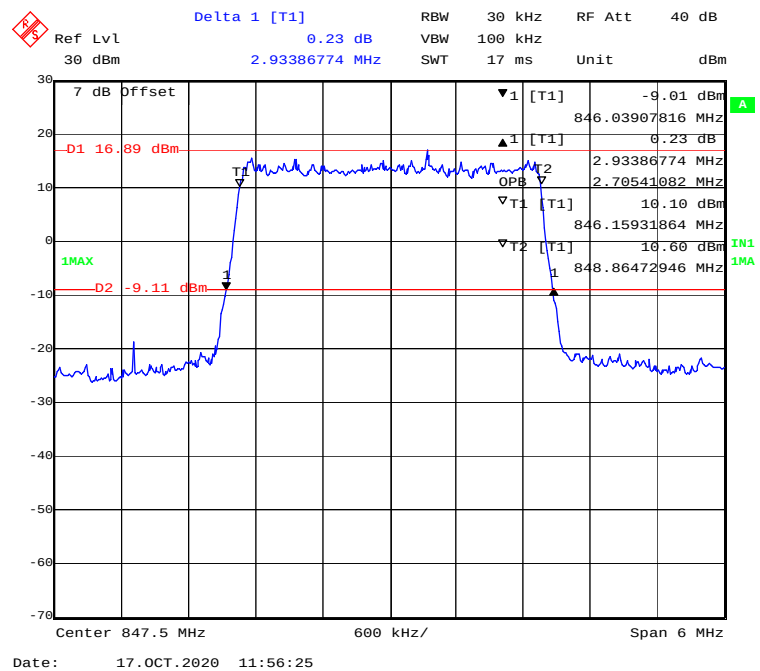
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

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

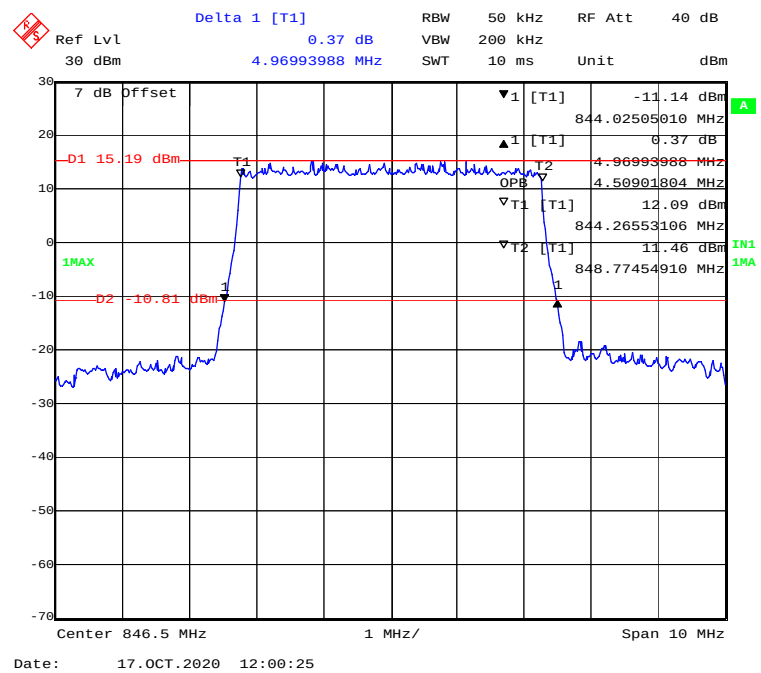


16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

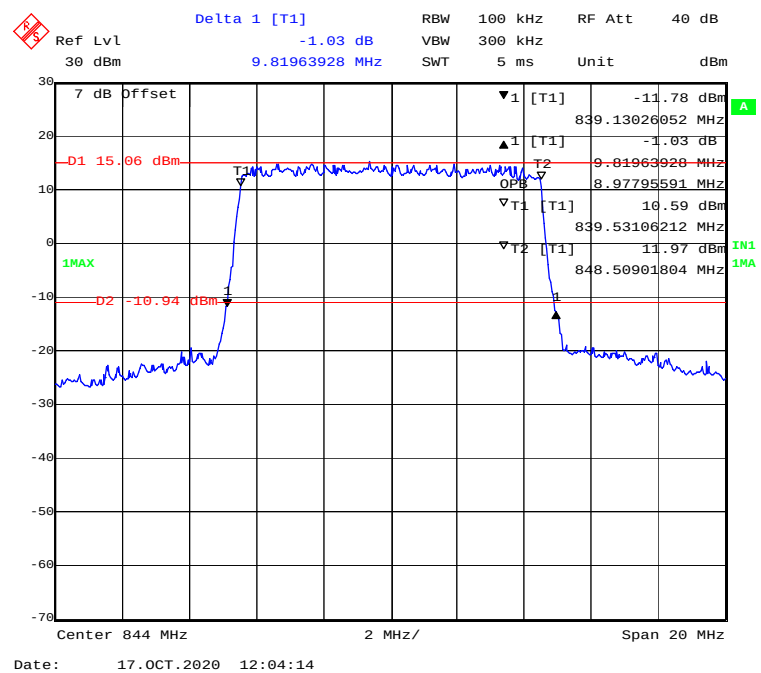


16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

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



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



LTE Band 7:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	5M	Low	4.950	4.489
	10M		9.780	8.978
	15M		14.970	13.587
	20M		19.639	17.956
	5M	Middle	4.950	4.509
	10M		9.820	8.978
	15M		14.850	13.527
	20M		19.399	17.876
	5M	High	4.910	4.489
	10M		9.739	8.978
	15M		14.910	13.467
	20M		19.479	17.956
16-QAM	5M	Low	4.930	4.489
	10M		9.780	8.978
	15M		14.970	13.527
	20M		19.639	17.956
	5M	Middle	4.950	4.509
	10M		9.820	8.978
	15M		14.850	13.527
	20M		19.399	17.876
	5M	High	4.910	4.509
	10M		9.739	8.978
	15M		14.910	13.467
	20M		19.559	17.956

Delta 1 [T1] 1.18 dB

Ref Lvl 27 dBm

RBW 50 kHz

RF Att 30 dB

SWT 10 ms

Unit dBm

7 dB Offset

-D1 12.97 dBm

1MAX

D2 -13.03 dBm

▼1 [T1] -13.31 dBm

▲1 [T1] 1.18 dB

OPB 4.94989980 MHz

▽T1 [T1] 4.48897796 MHz

▽T2 [T1] 2.50028557 GHz

1 2.50477455 GHz

IN1 1MA

Center 2.5025 GHz

1 MHz/

Span 10 MHz

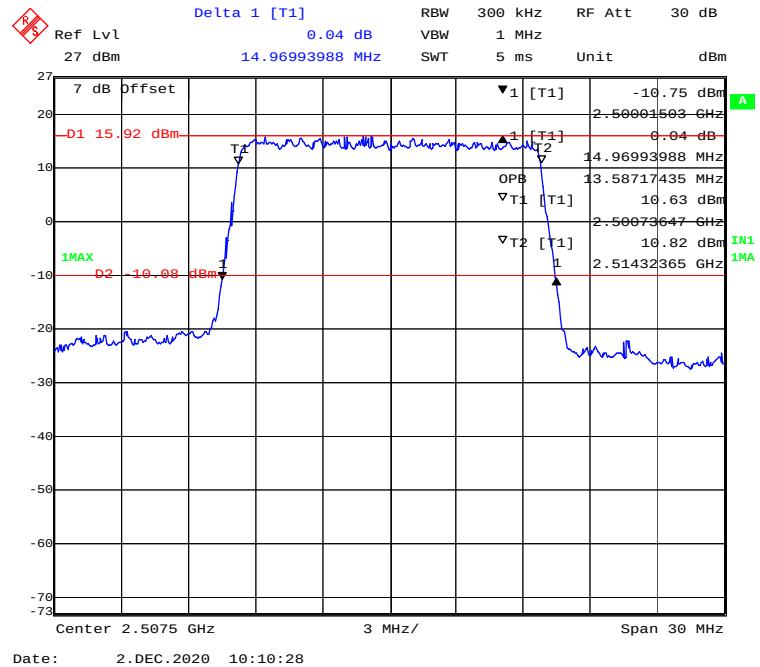
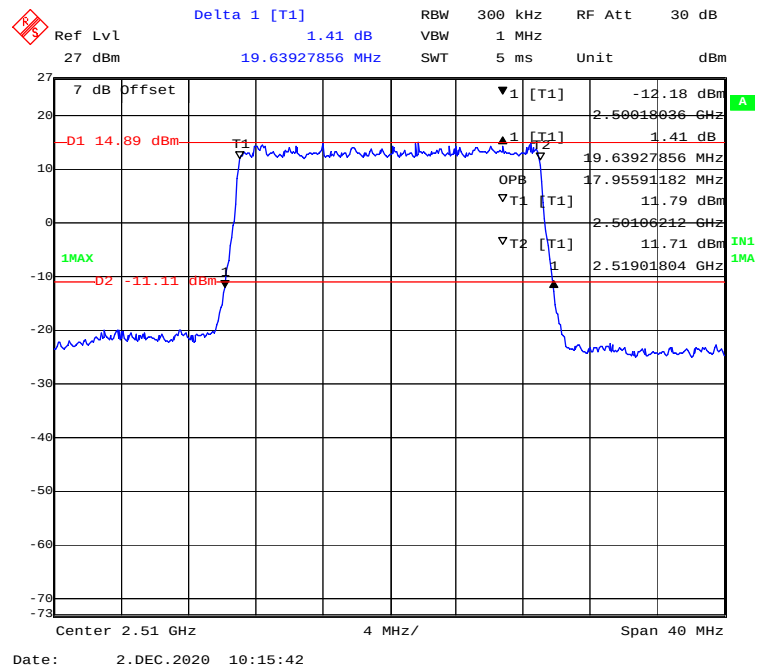
Date: 2.DEC.2020 09:58:17

Delta 1 [T1] -0.02 dB
 Ref Lvl 27 dBm
 RBW 100 kHz
 VBW 300 kHz
 SWT 5 ms
 RF Att 30 dB
 Unit dBm

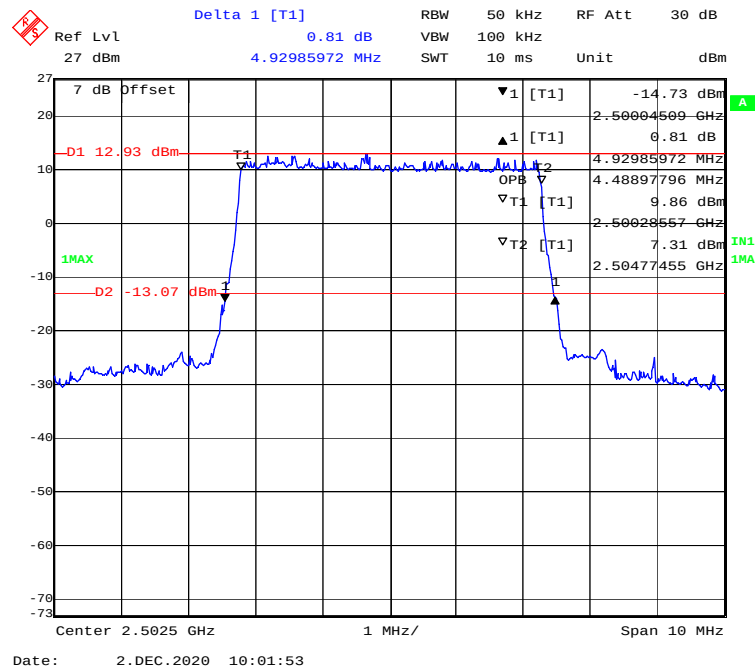
7 dB Offset
 D1 12.16 dBm
 D2 -13.84 dBm
 1MAX
 IN1 1MA
 T1
 T2
 OPB
 T1 [T1]
 T2 [T1]

Center 2.505 GHz
 2 MHz/
 Span 20 MHz

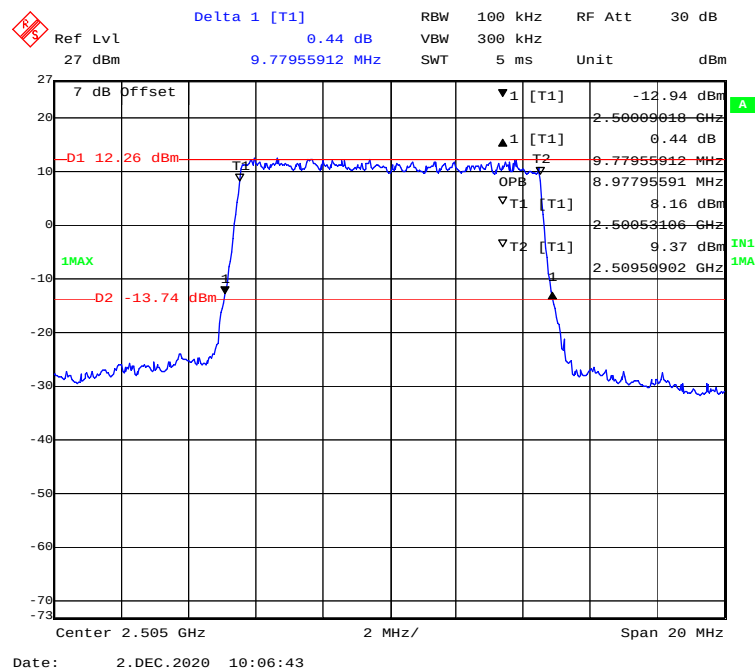
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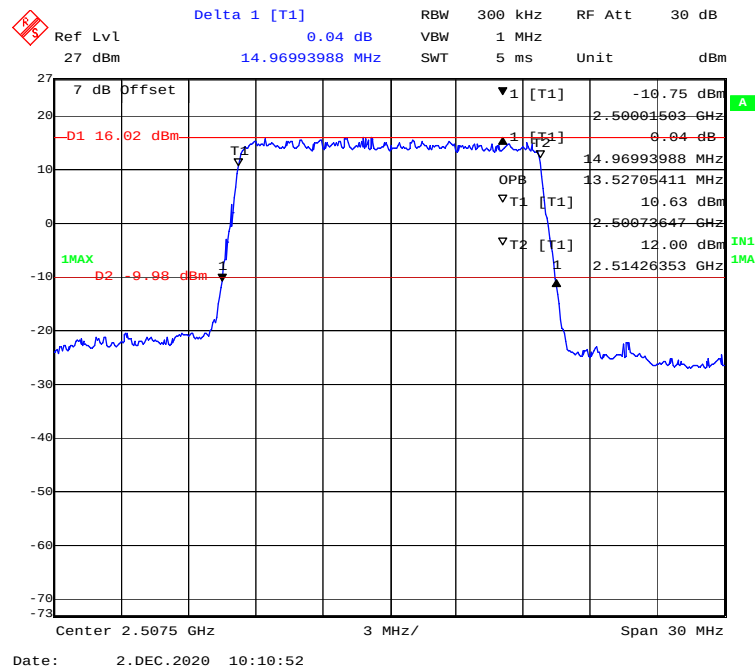
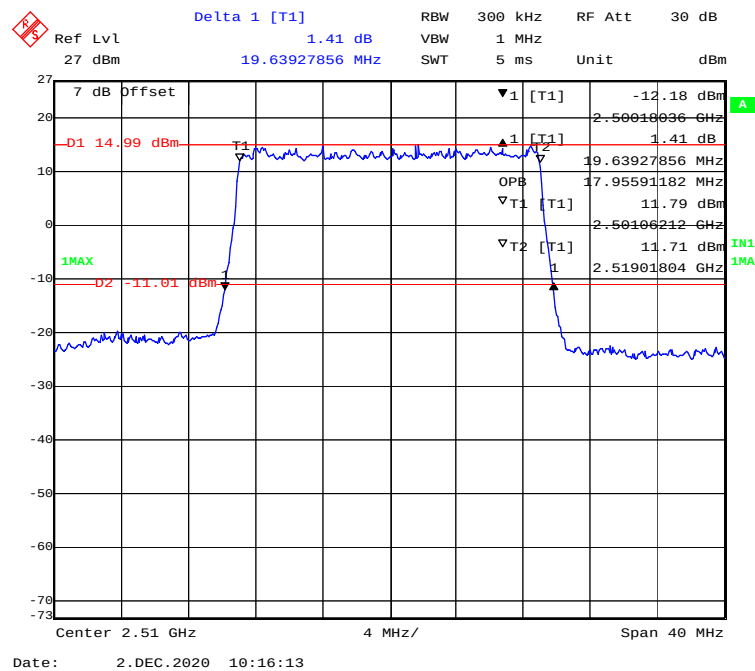
QPSK (15.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (20.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

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

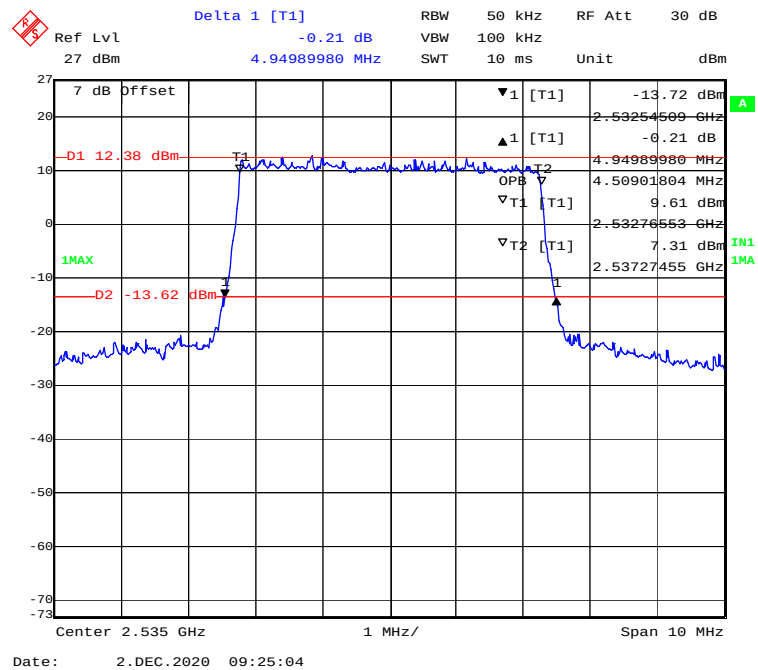


16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel

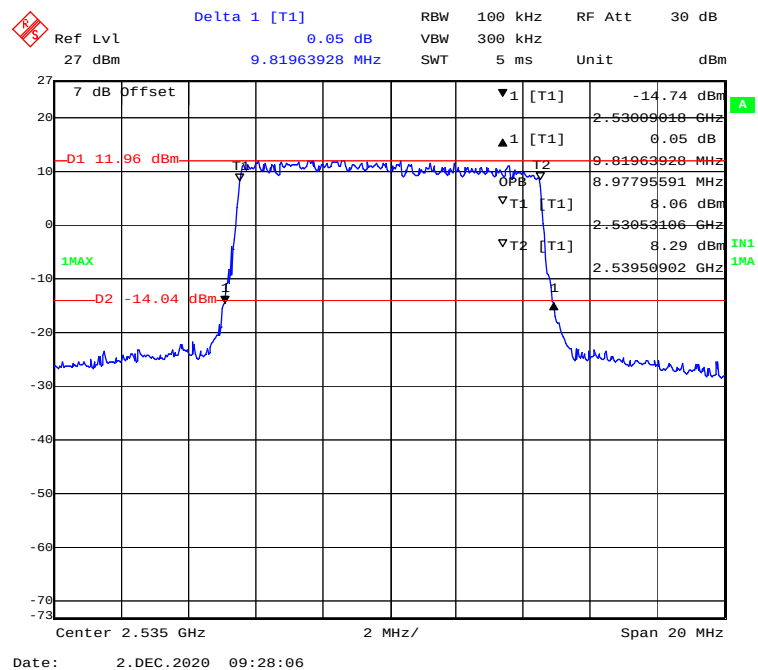


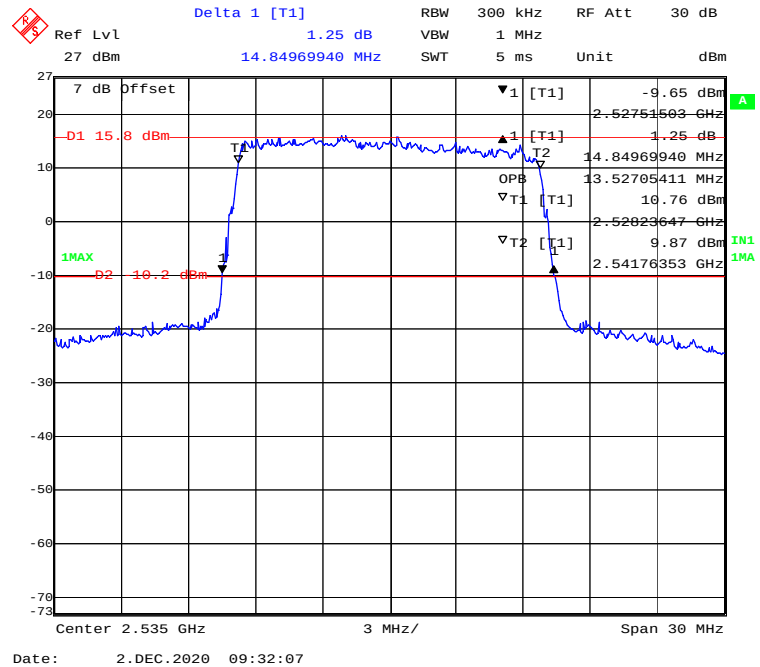
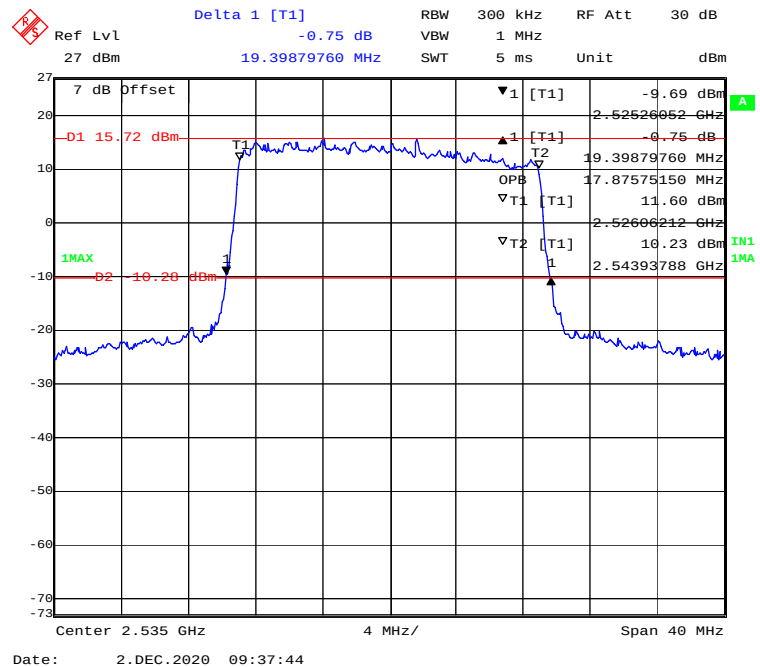
16-QAM (15.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (20.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

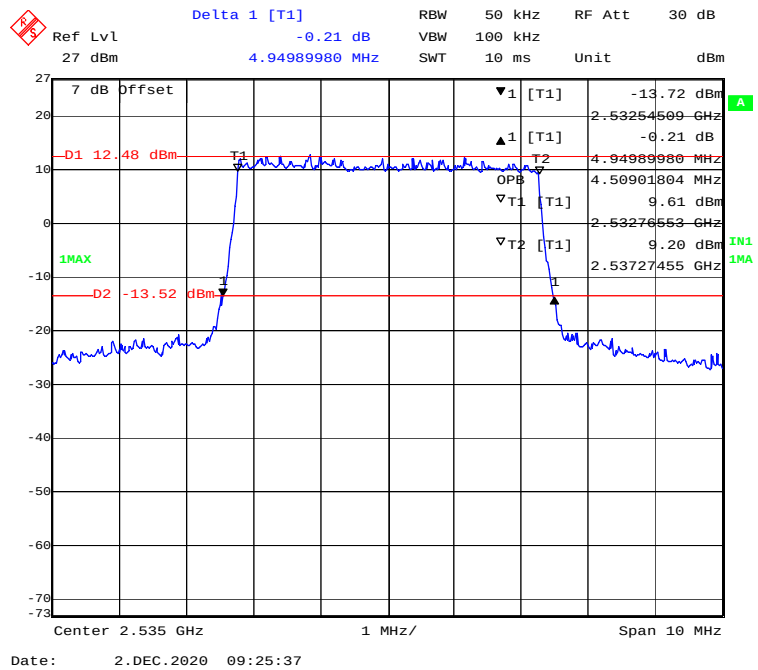
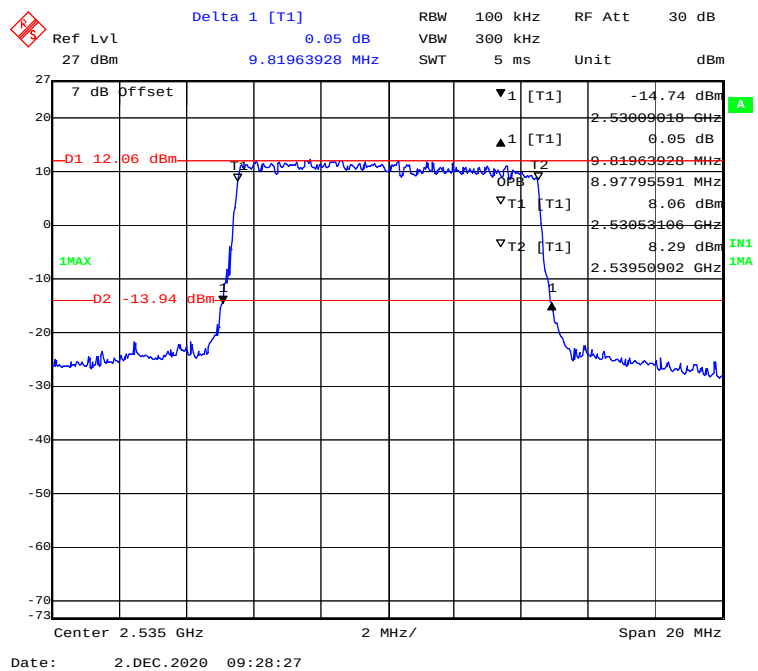
QPSK (5.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

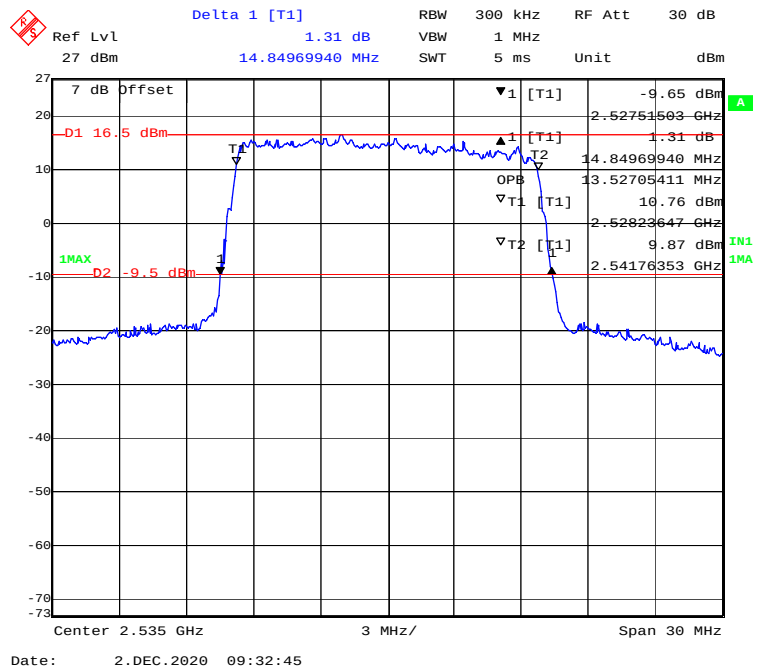
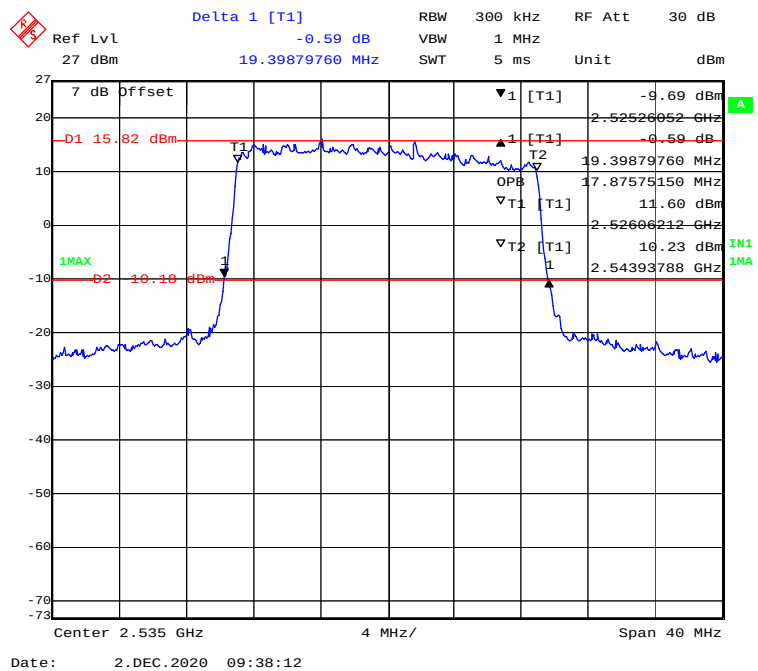


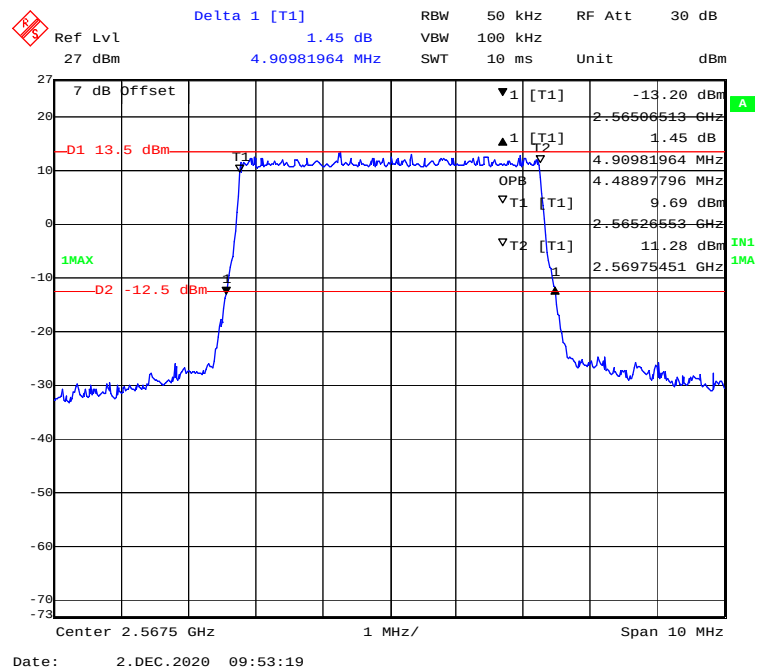
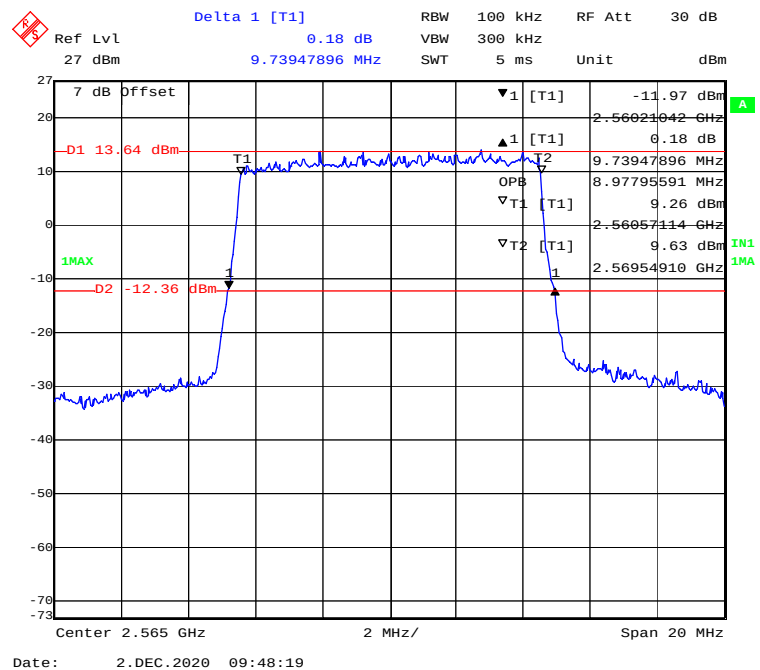
QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

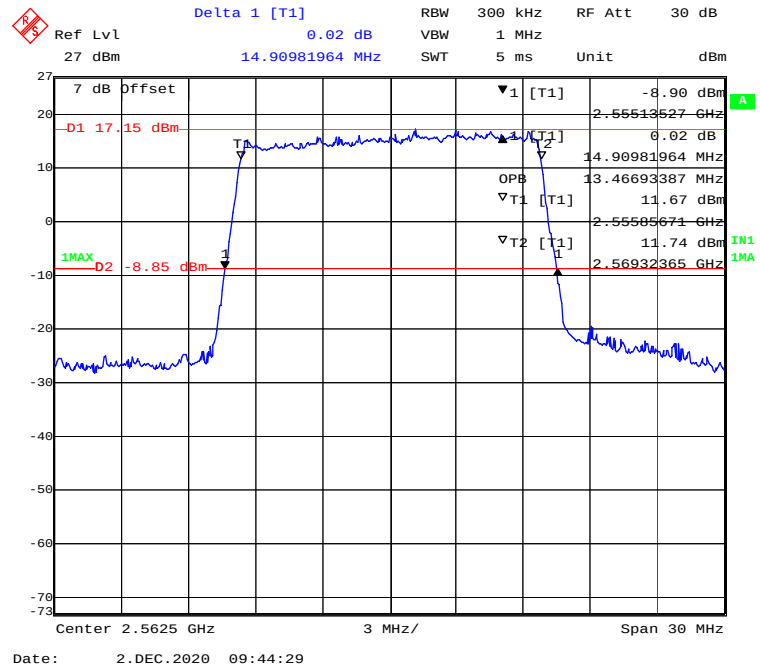
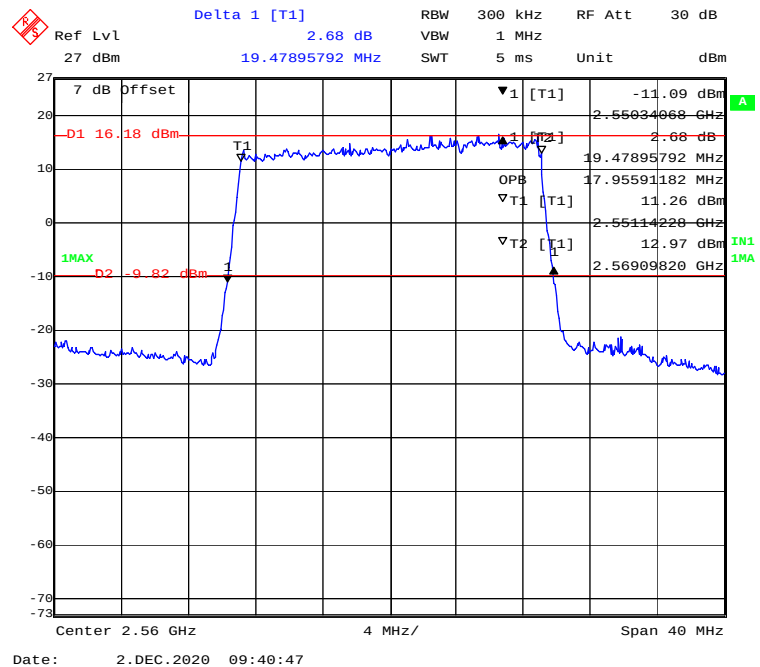


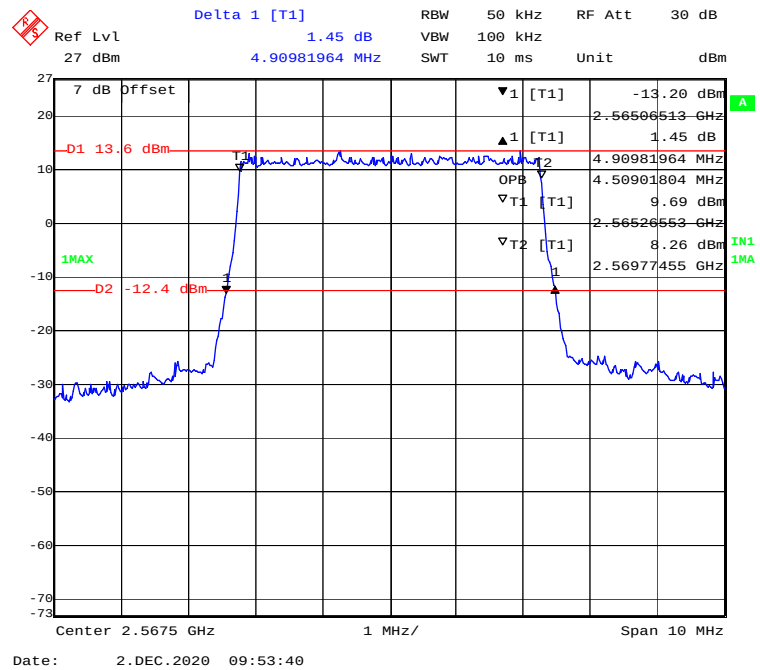
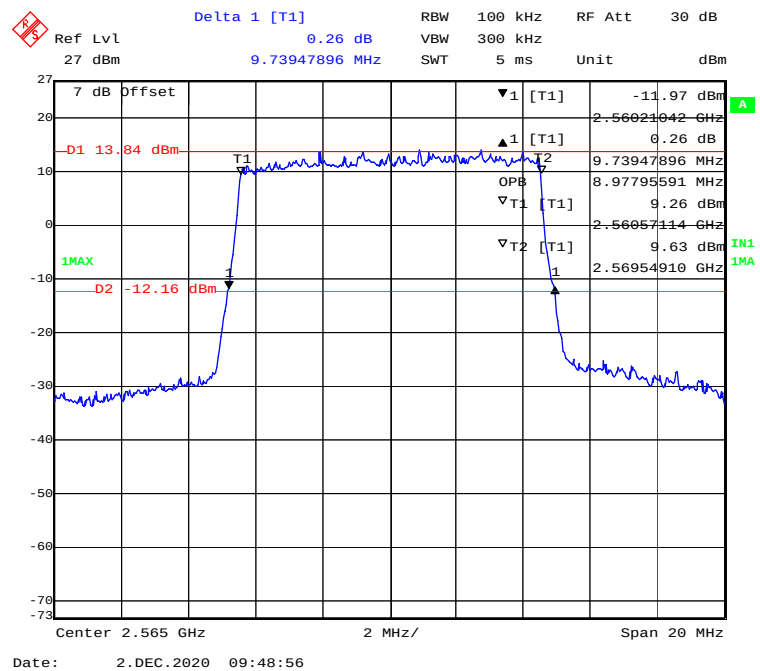
QPSK (15.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (20.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

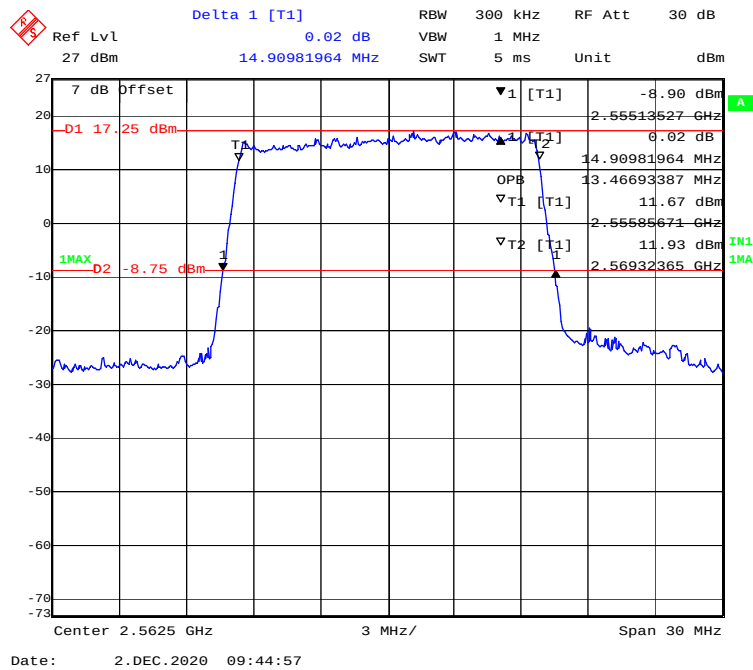
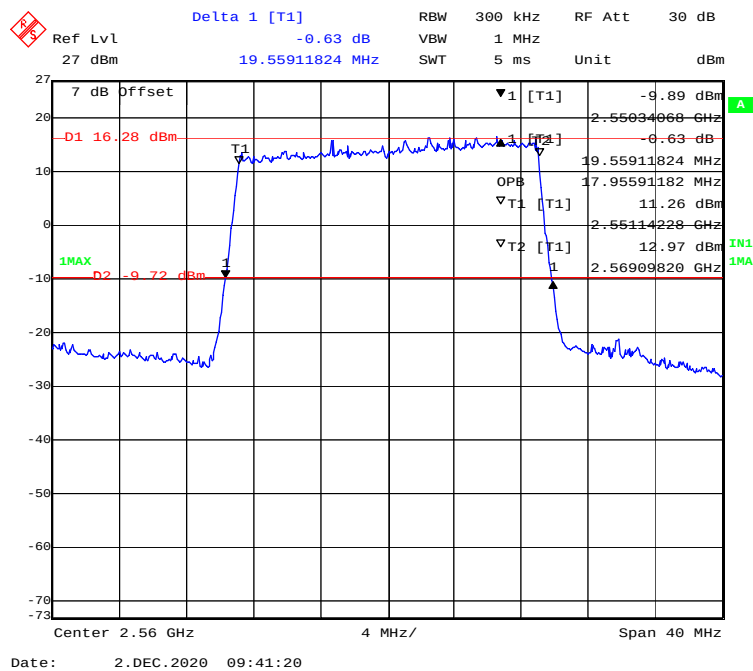
16-QAM (5.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

16-QAM (15.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**16-QAM (20.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

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

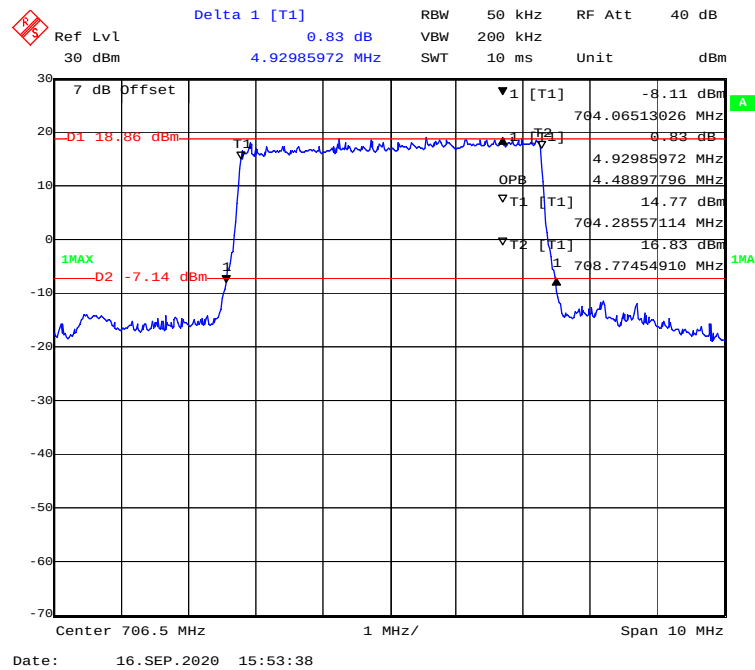
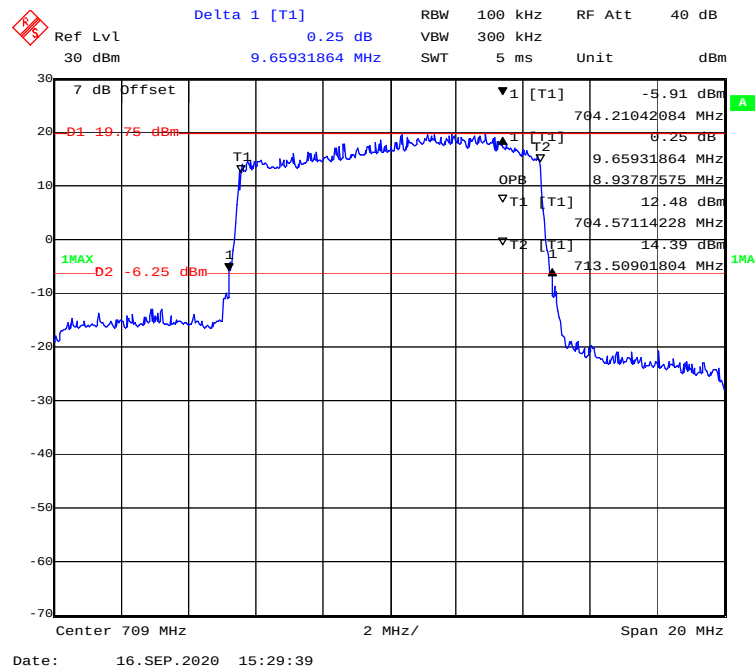
QPSK (15.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (20.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

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

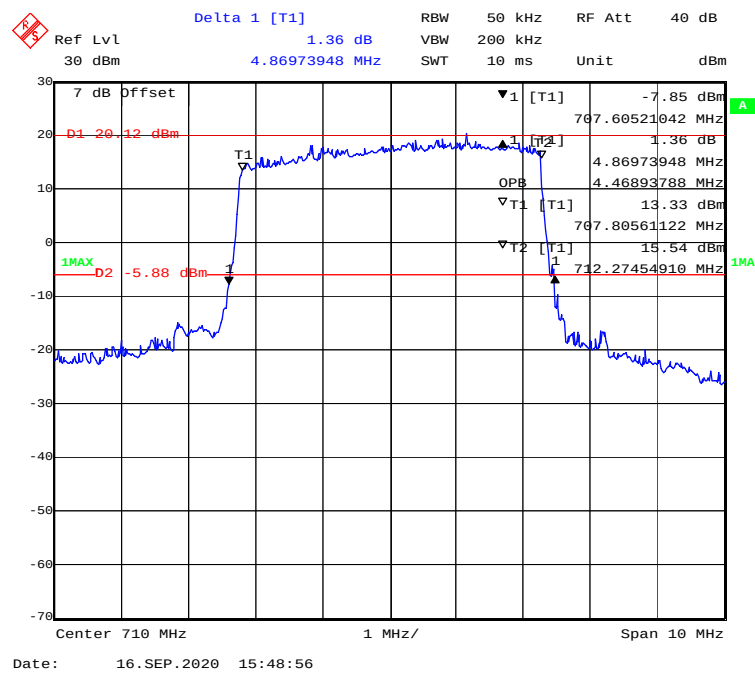
16-QAM (15.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**16-QAM (20.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

LTE Band 17:

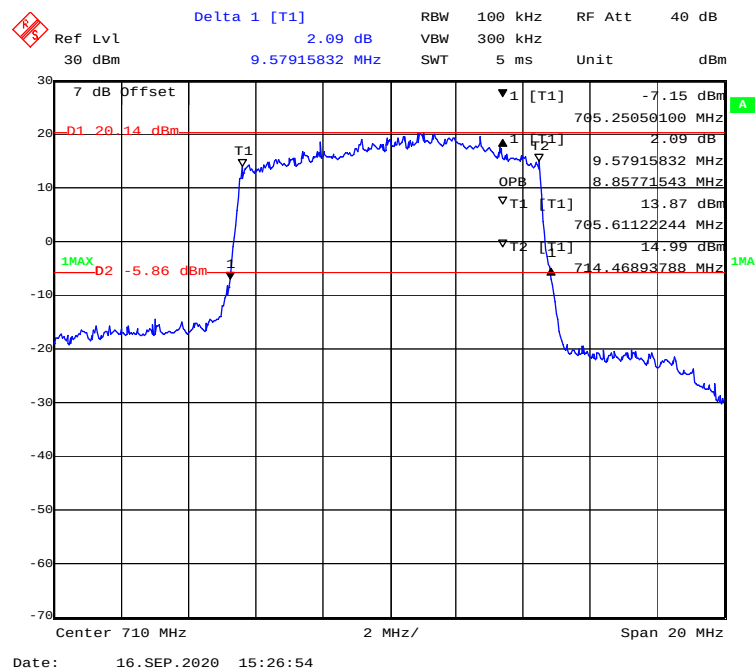
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	5M	Low	4.930	4.489
	10M		9.659	8.938
	5M	Middle	4.870	4.469
	10M		9.579	8.858
	5M	High	4.910	4.489
	10M		9.659	8.898
16-QAM	5M	Low	4.950	4.489
	10M		9.699	8.938
	5M	Middle	4.870	4.469
	10M		9.579	8.858
	5M	High	4.870	4.489
	10M		9.659	8.898

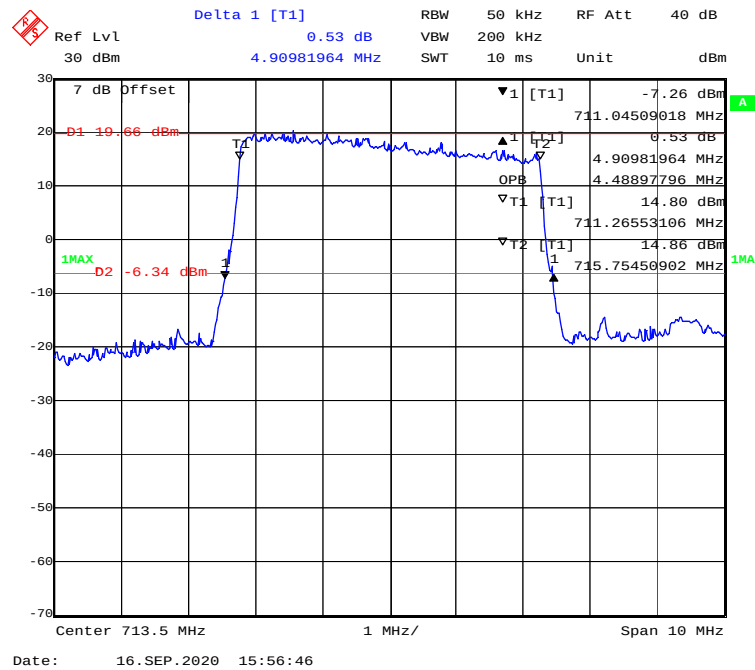
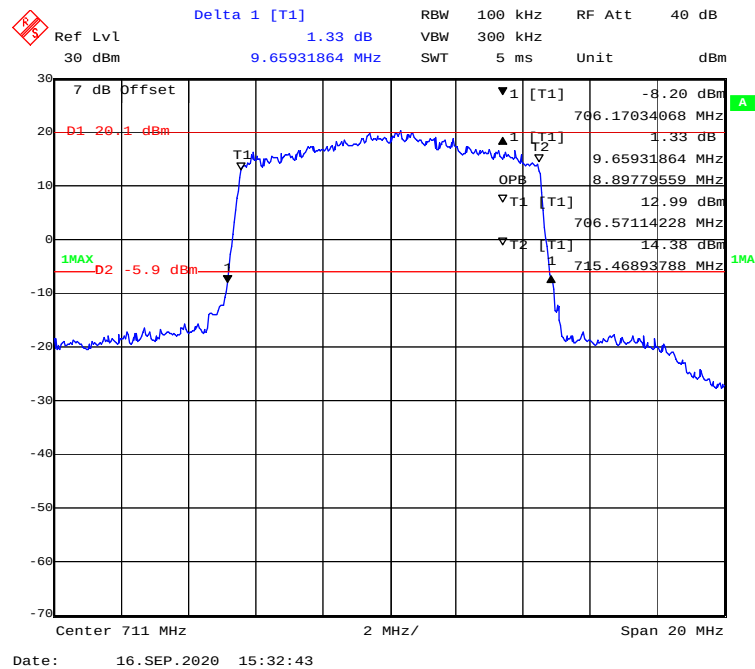
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

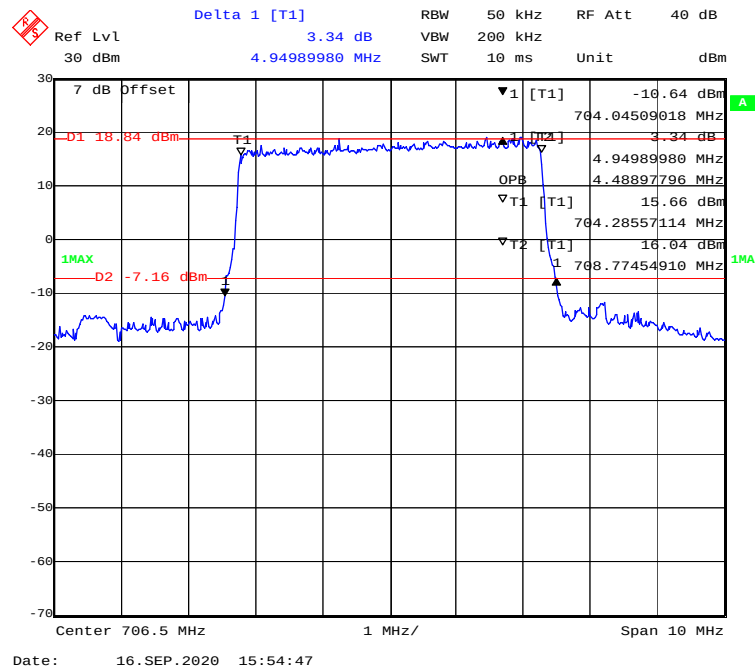
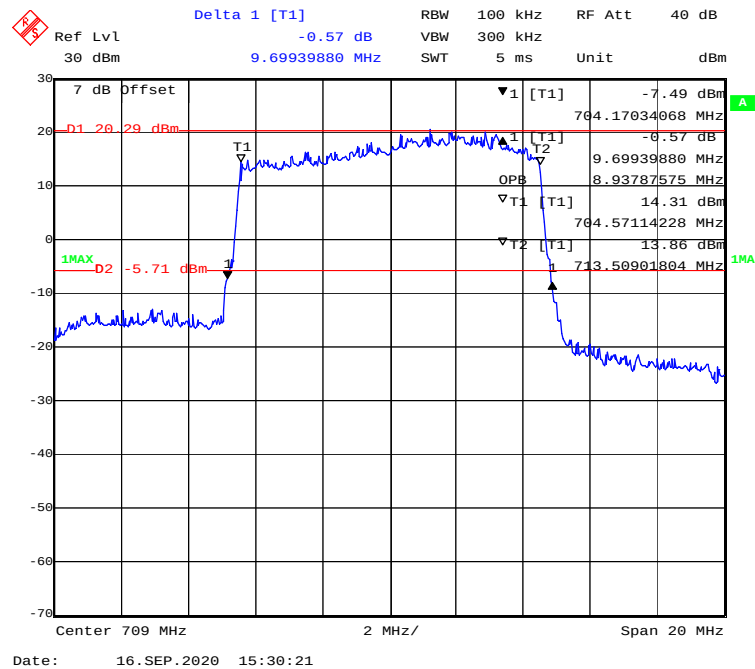
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

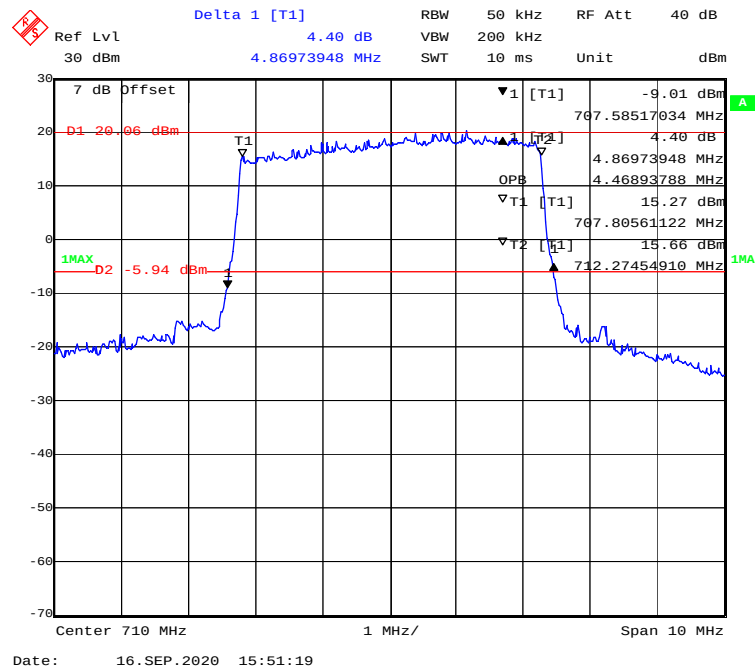
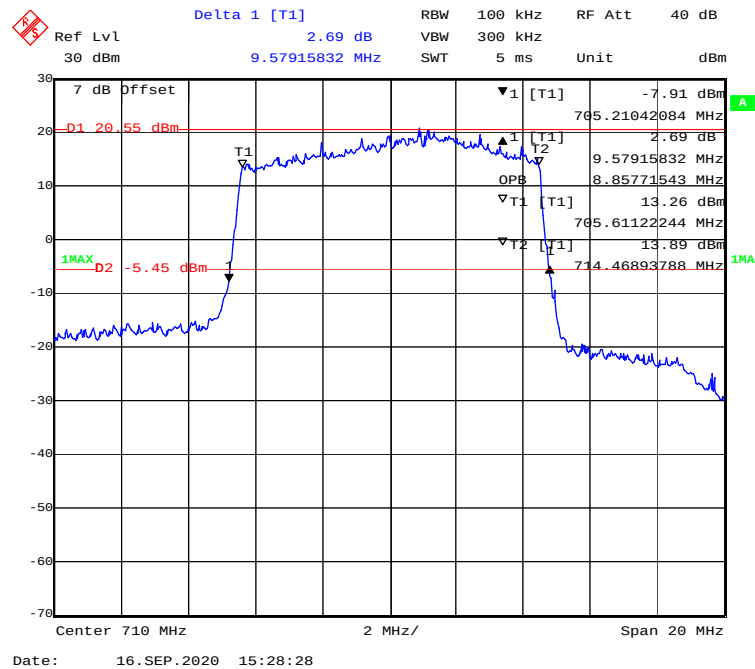


QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

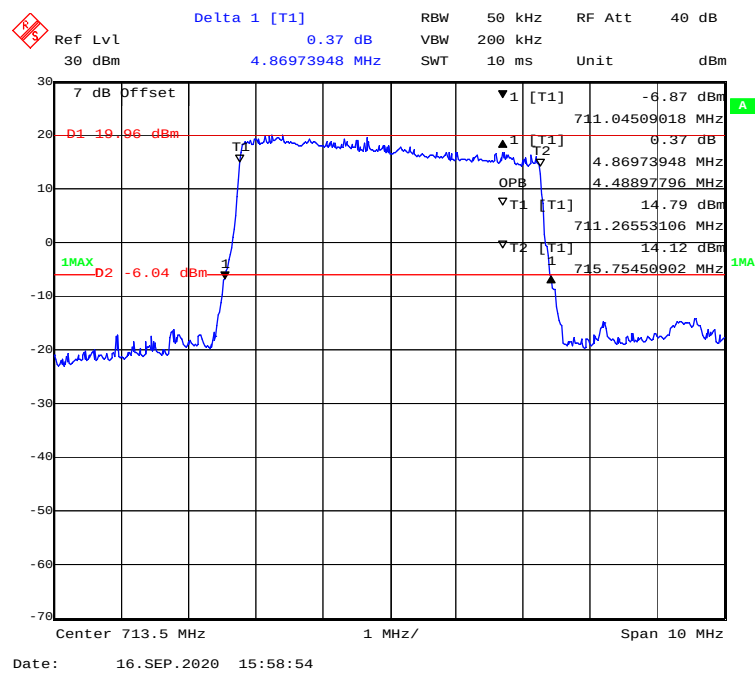


QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel**

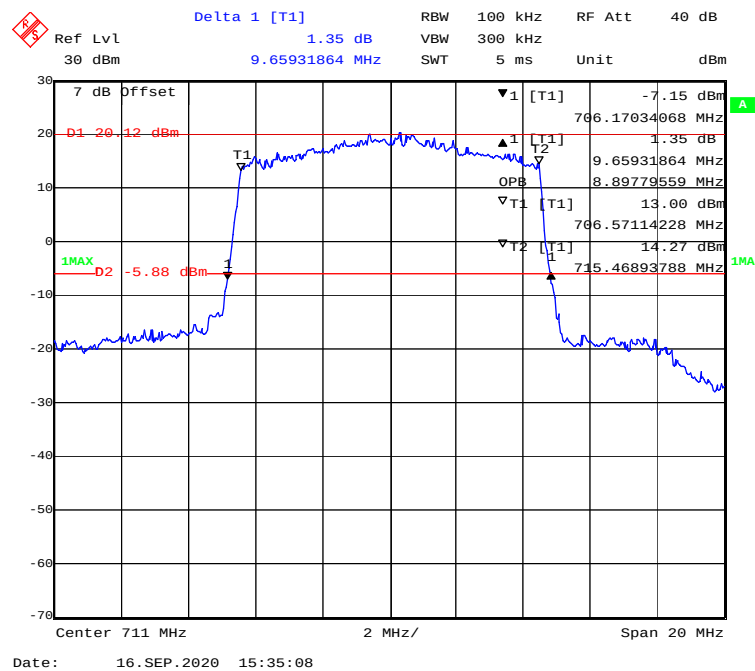
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

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



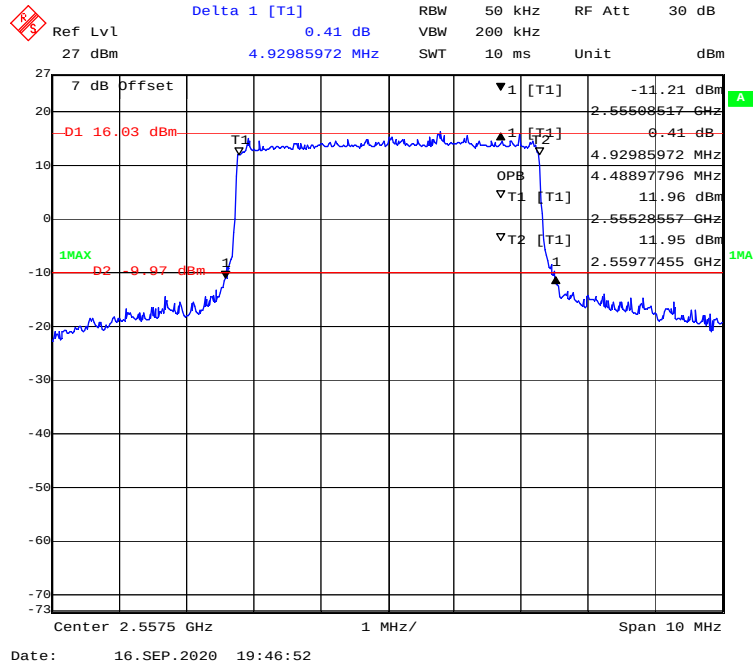
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



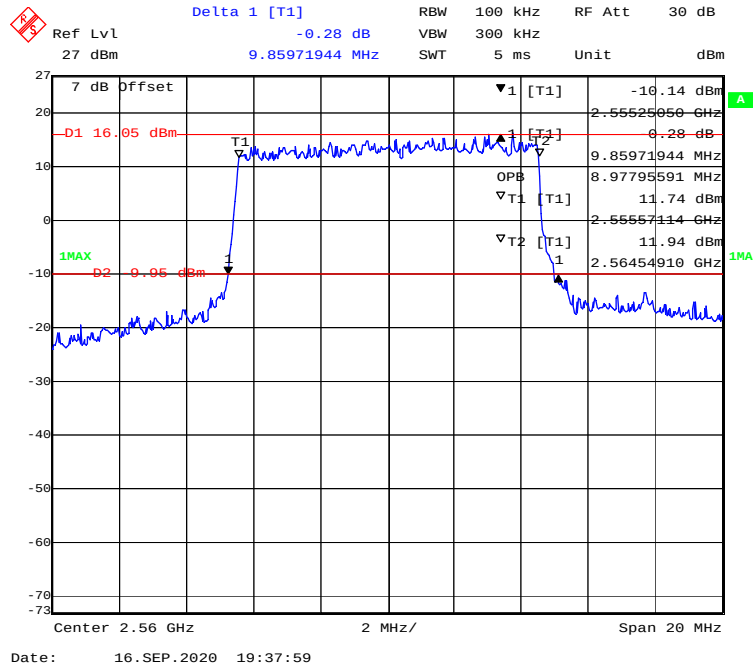
LTE Band 41:

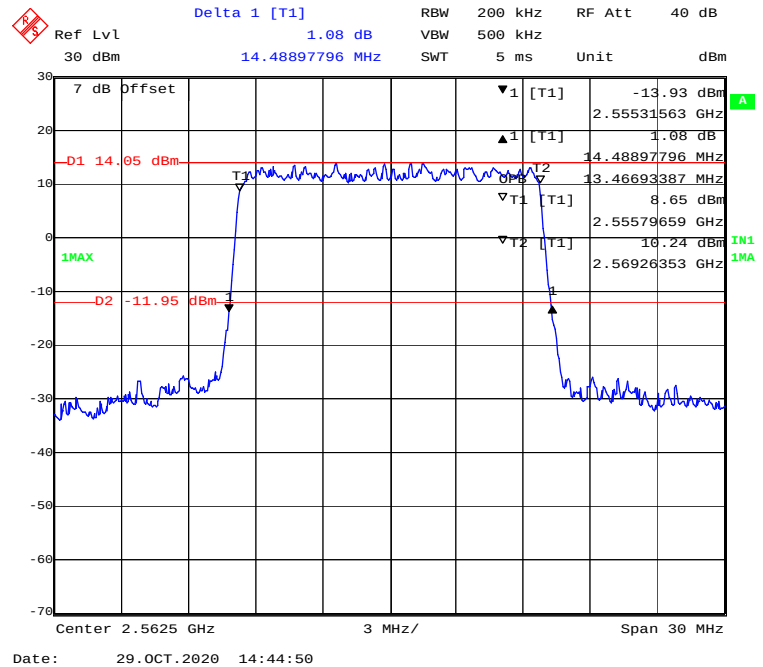
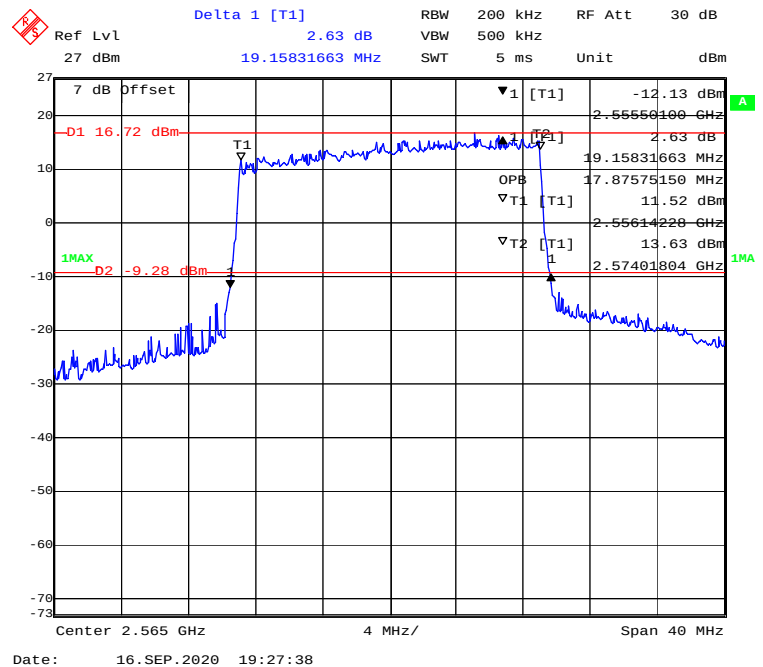
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	5M	Low	4.930	4.489
	10M		9.860	8.978
	15M		14.489	13.467
	20M		19.158	17.876
	5M	Middle	4.930	4.489
	10M		9.820	8.938
	15M		14.489	13.467
	20M		19.078	17.956
	5M	High	4.930	4.469
	10M		9.860	8.978
	15M		14.609	13.407
	20M		19.399	17.796
16-QAM	5M	Low	4.950	4.529
	10M		9.980	8.978
	15M		14.549	13.467
	20M		19.078	17.876
	5M	Middle	4.930	4.489
	10M		9.860	8.978
	15M		14.429	13.407
	20M		19.078	17.876
	5M	High	4.850	4.469
	10M		9.860	8.978
	15M		14.609	13.347
	20M		19.319	17.796

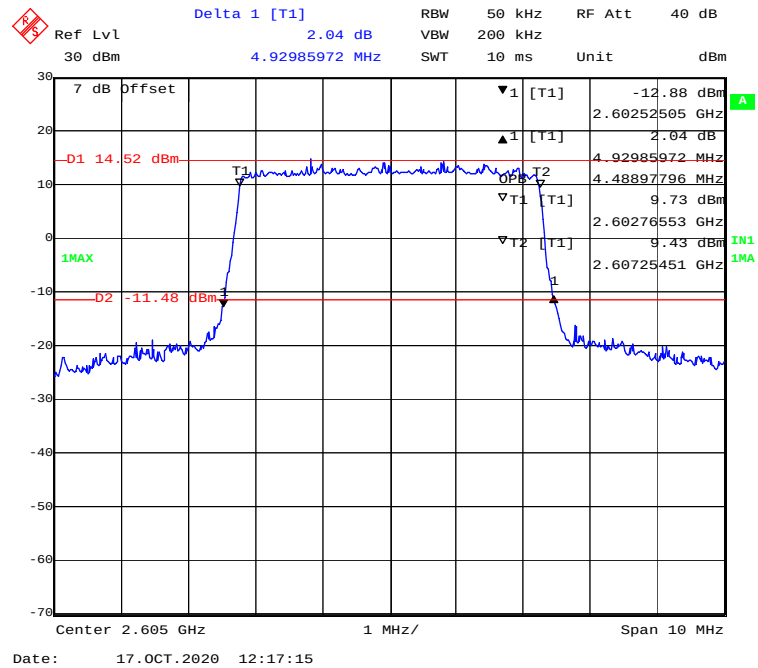
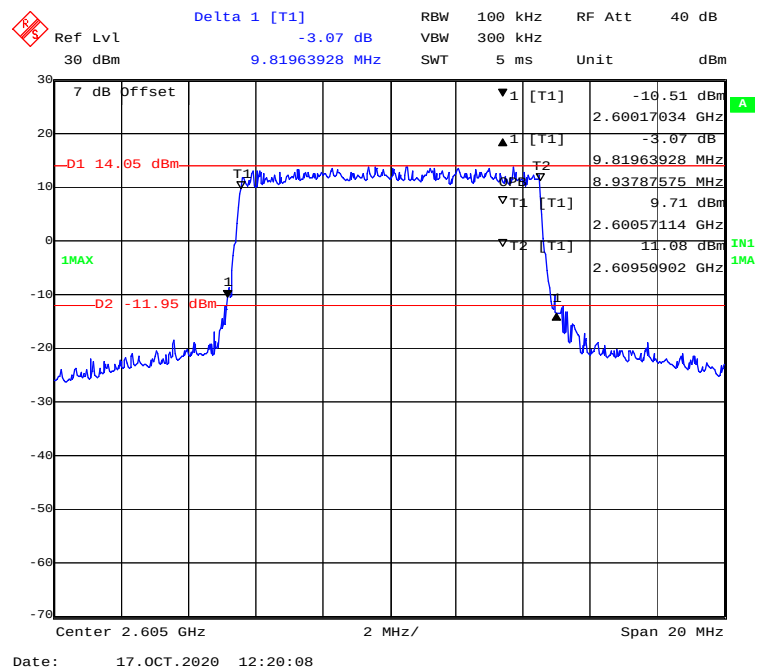
QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



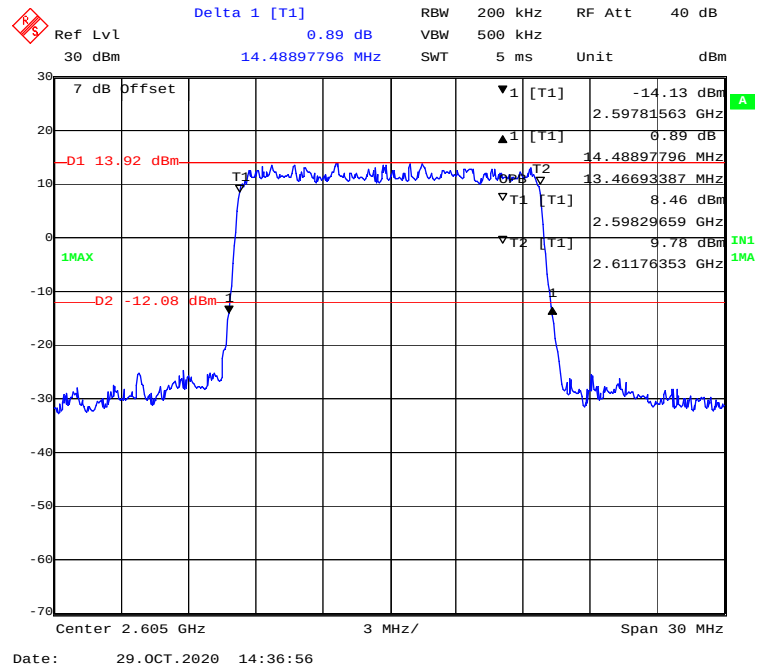
QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



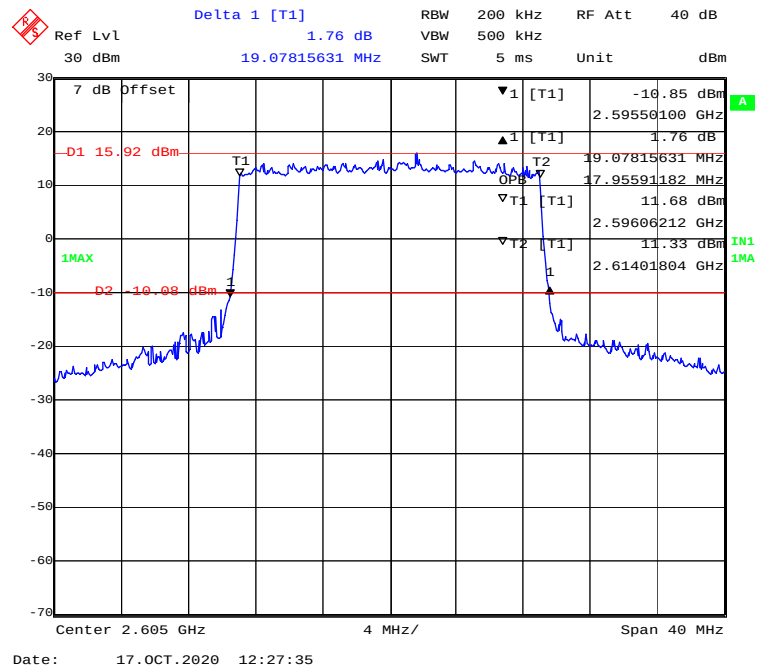
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel**

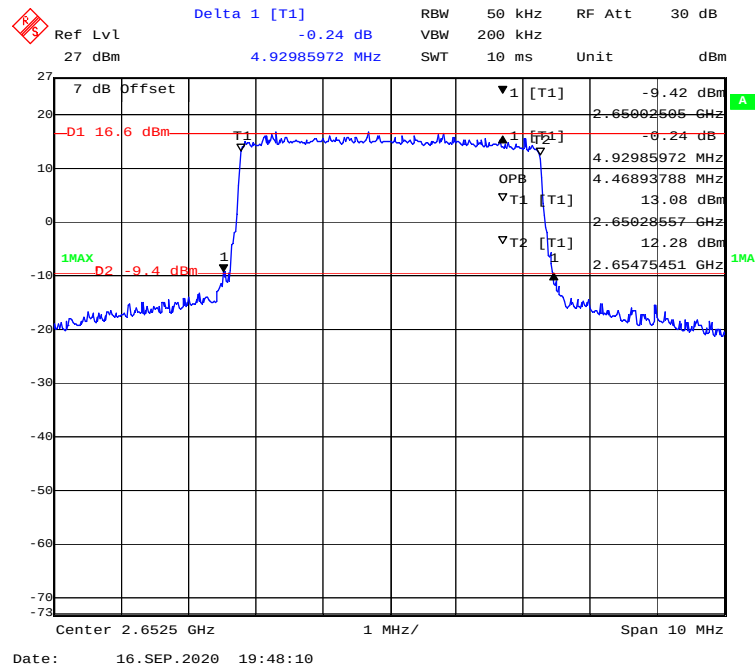
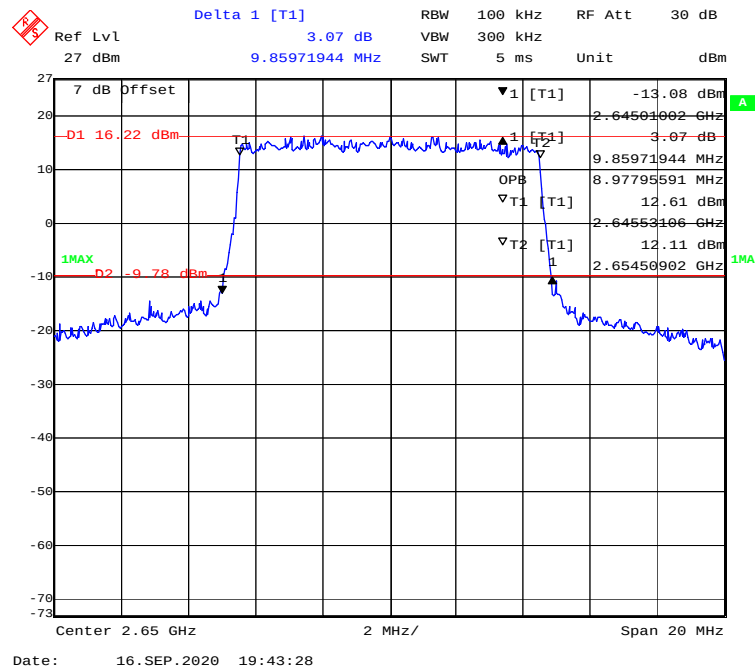
QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel**

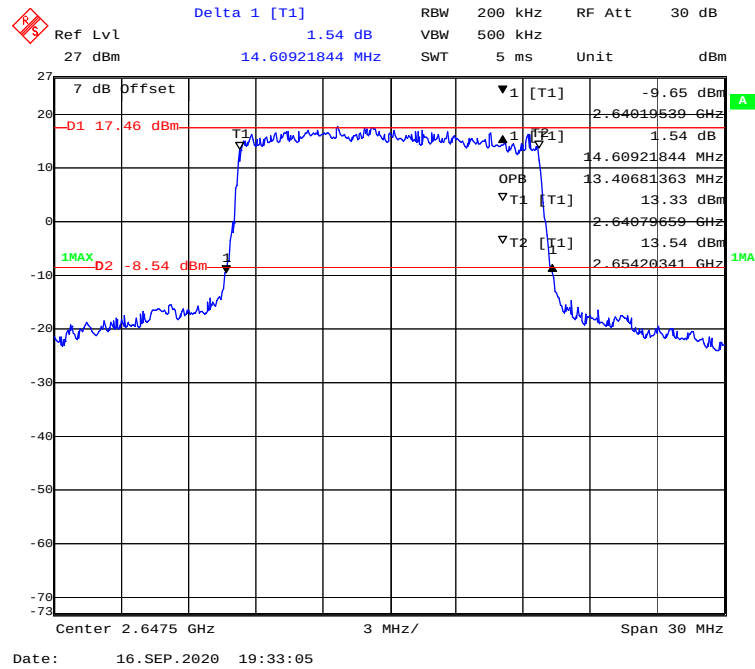
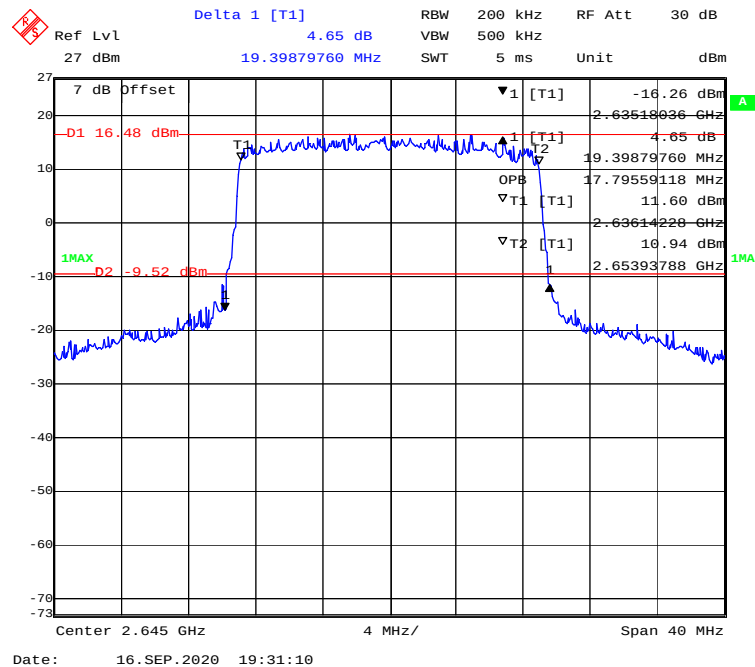
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel

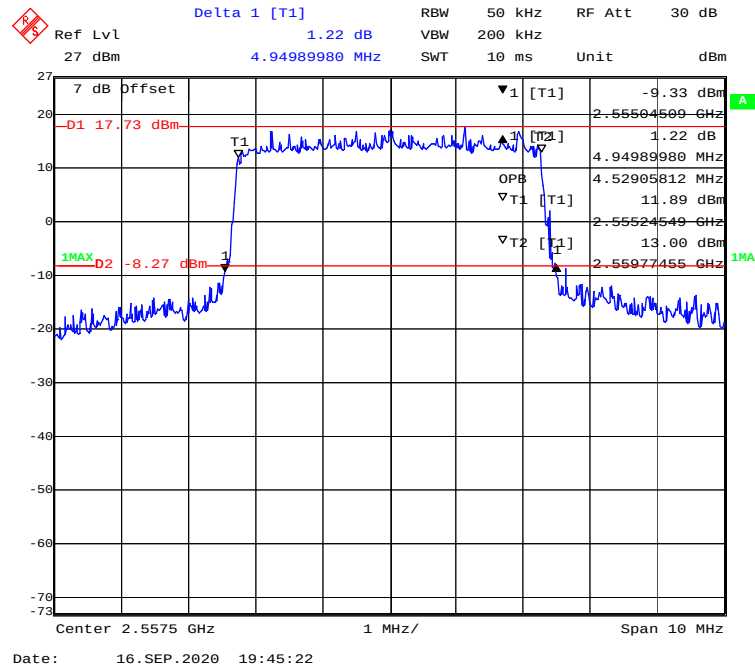
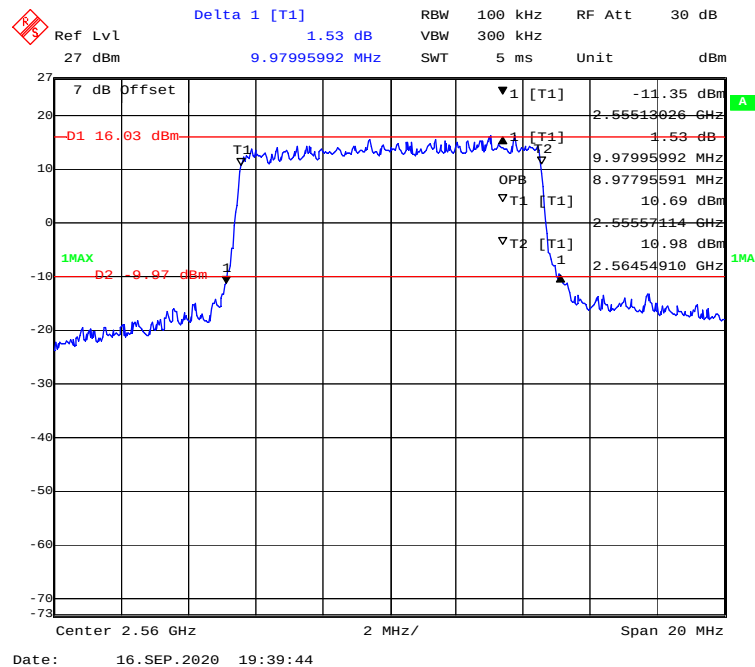


QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



QPSK (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 (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] 1.97 dB

RBW 200 kHz RF Att 40 dB

VBW 500 kHz

SWT 5 ms Unit dBm

Ref Lvl 30 dBm

7 dB Offset

D1 14.41 dBm

IN1 1MA

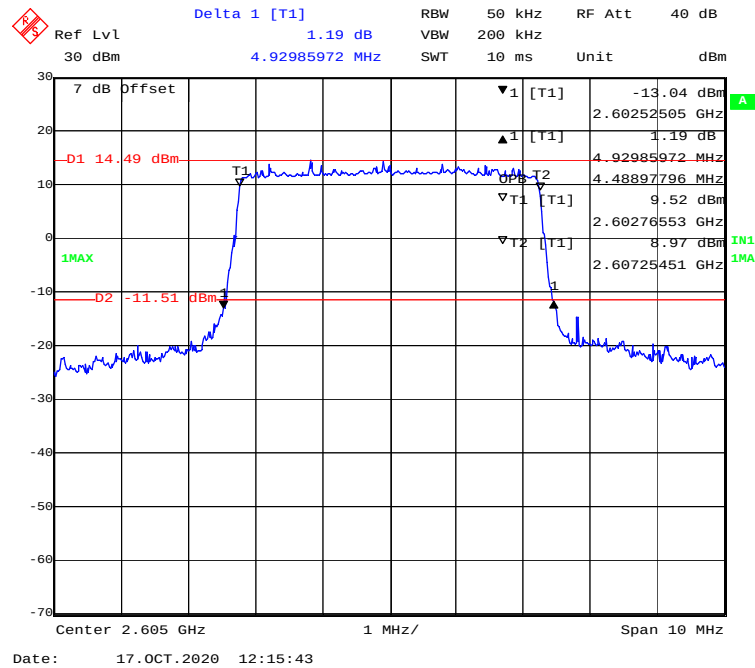
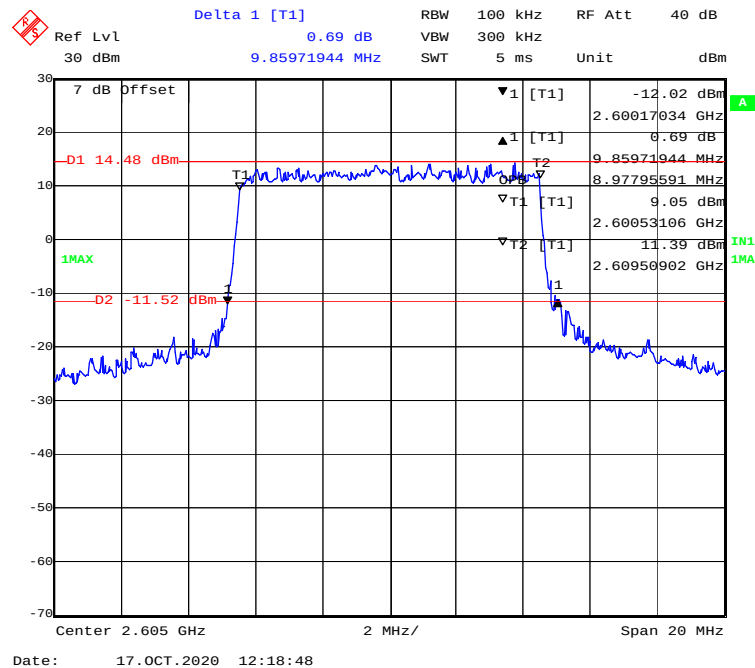
D2 -11.59 dBm

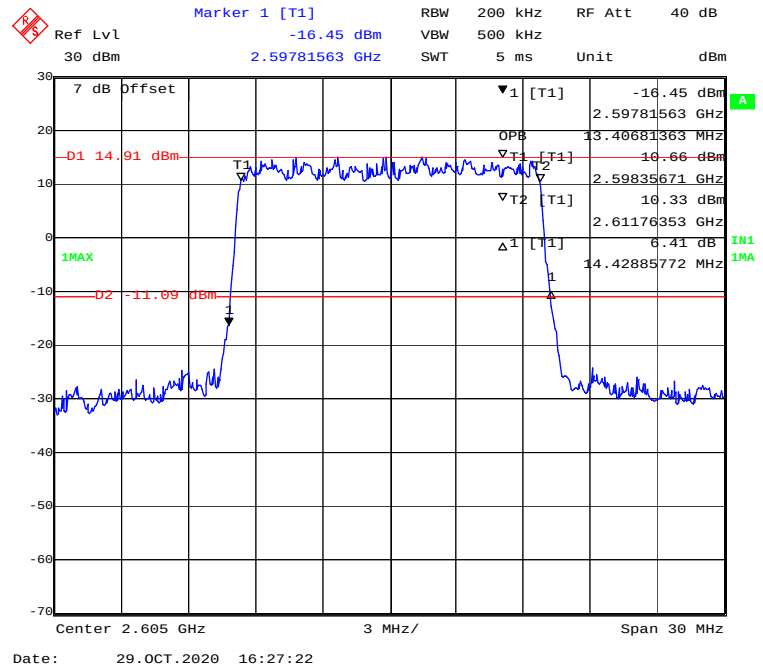
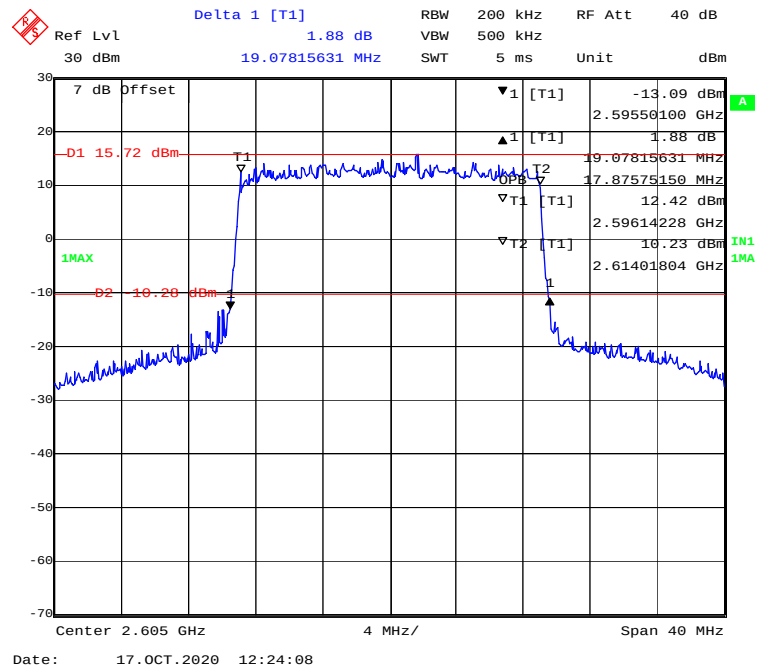
Center 2.5625 GHz 3 MHz/ Span 30 MHz

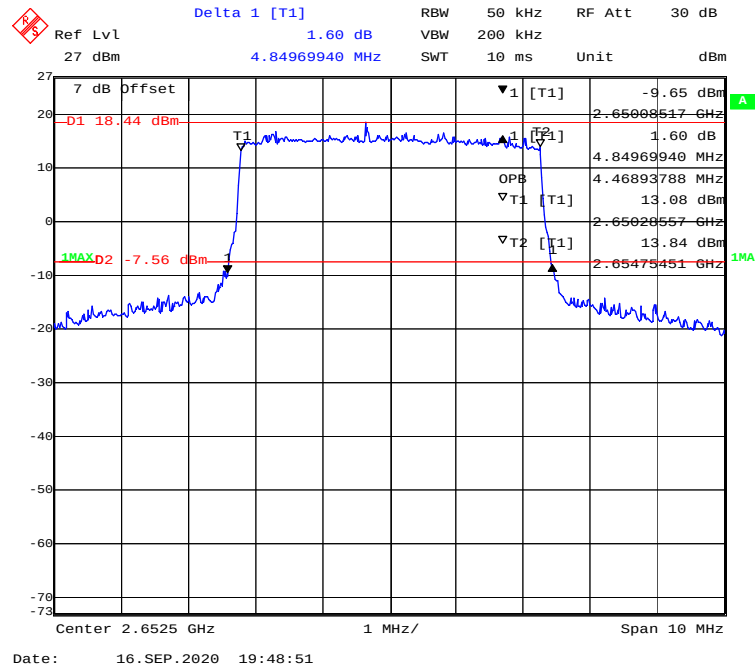
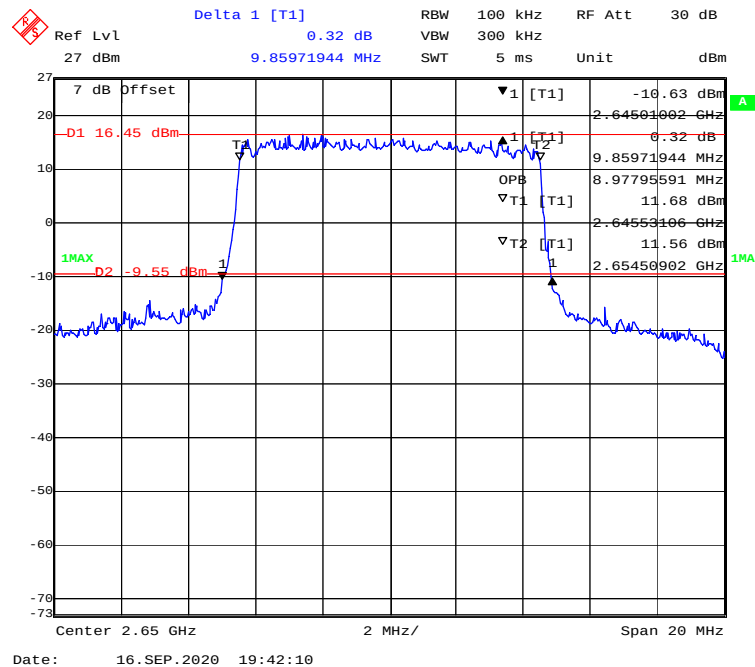
Date: 29.OCT.2020 16:29:23

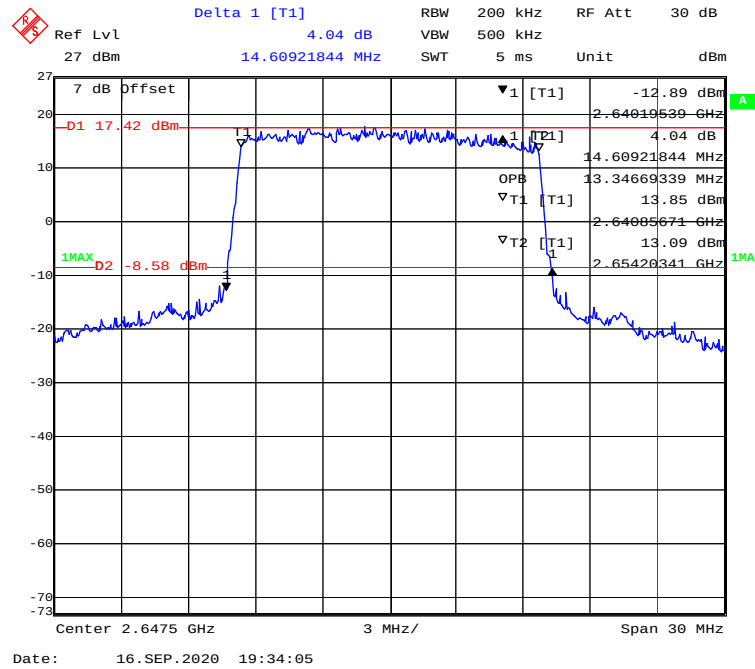
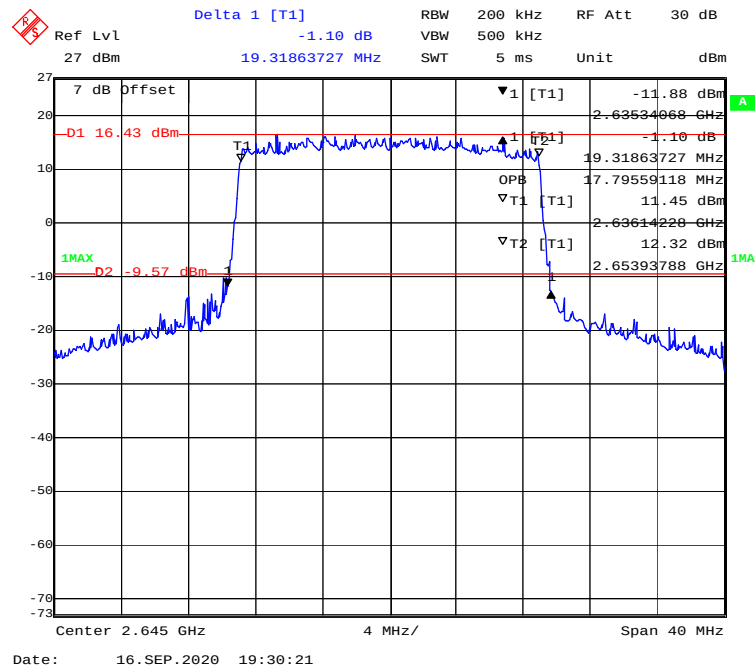
The screenshot displays a spectrum analyzer interface with the following settings and measurements:

- Title:** Delta 1 [T1]
- Parameters:**
 - Ref Lvl: 27 dBm
 - RBW: 200 kHz
 - VBW: 500 kHz
 - RF Att: 30 dB
 - SWT: 5 ms
 - Unit: dBm
- Frequency Range:** Center 2.565 GHz, Span 40 MHz.
- Measurements:**
 - D1:** 16.38 dBm (red line)
 - D2:** -9.62 dBm (green line)
 - T1:** Peak marker at 19.07815631 MHz, 11.55 dBm.
 - T2:** Peak marker at 2.57401804 GHz, 12.97 dBm.
 - Other labels:** 7 dB Offset, 1MAX, 1MAG, A.

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

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

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

Applicable Standards

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

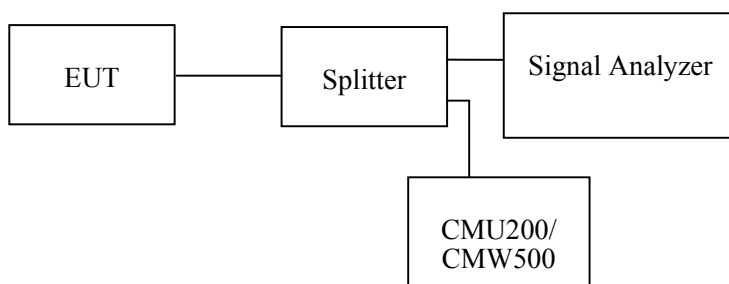
The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

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.

According to §27.53(m),for mobile digital stations, any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $55 + 10 \log(P)$ 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

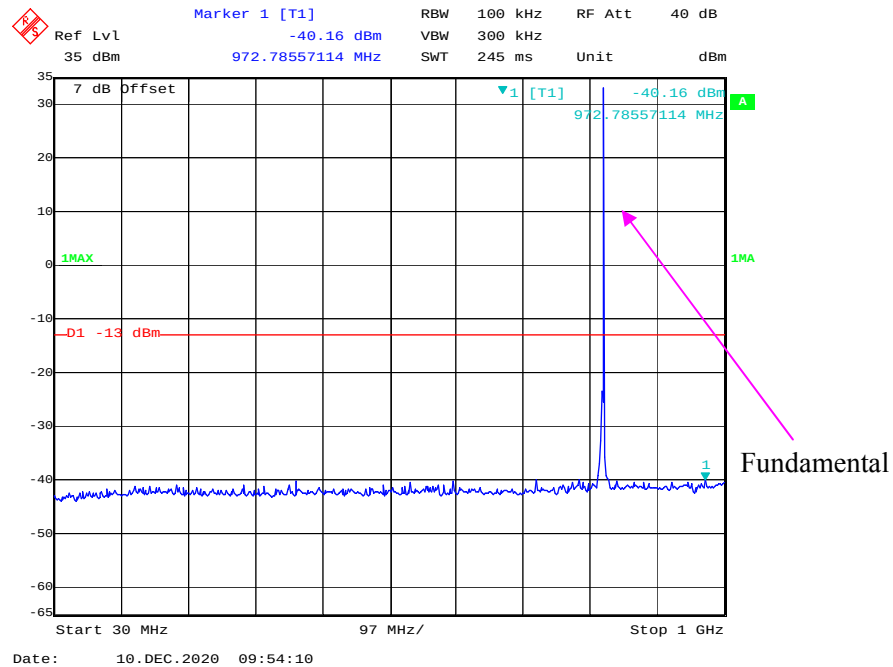
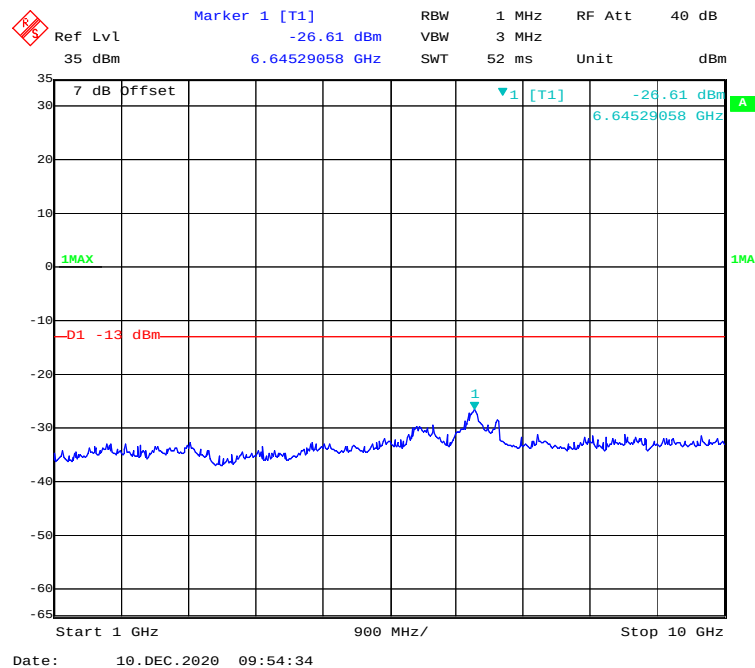
Environmental Conditions

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

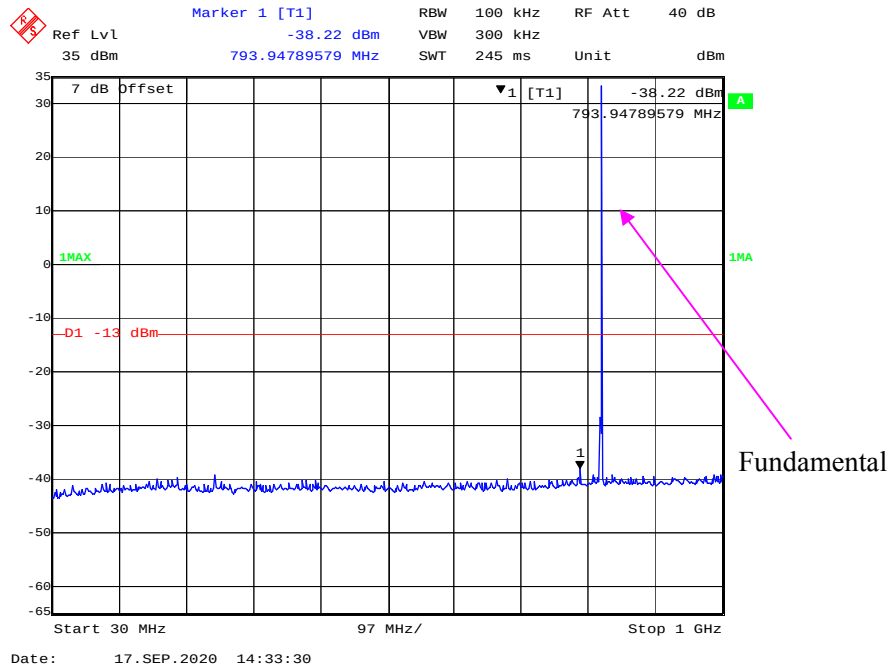
The testing was performed by Jack Jiao from 2020-09-16 to 2020-12-10.

EUT operation mode: Transmitting

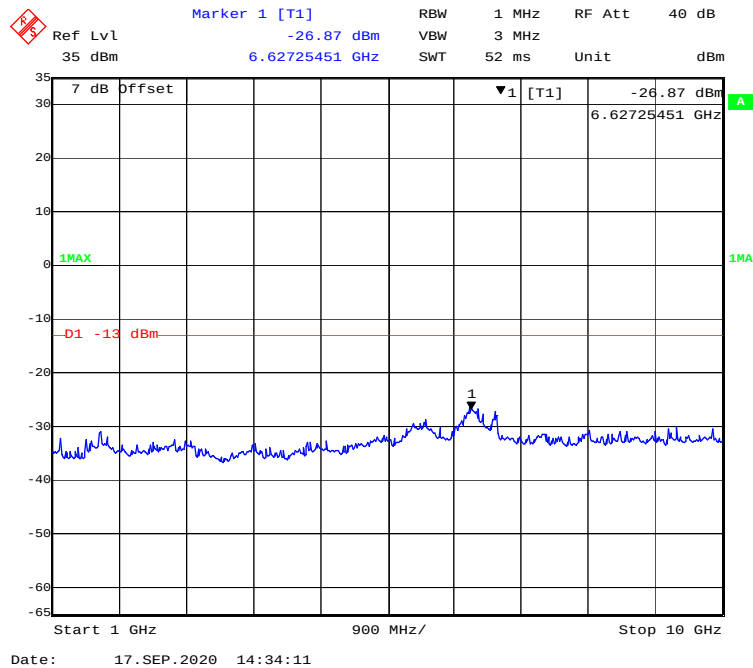
Test Result: Compliance.

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

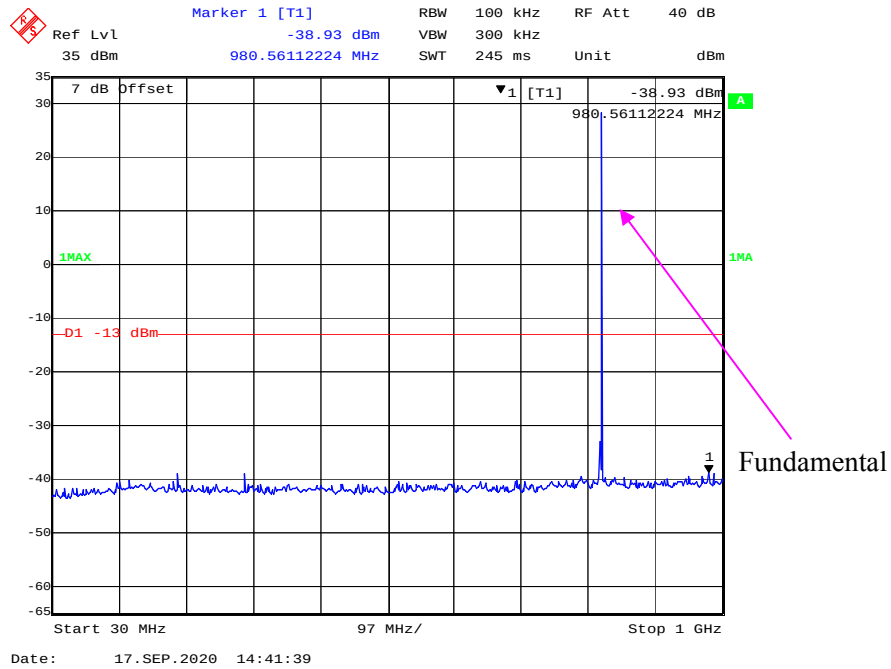
30 MHz – 1GHz(GPRS Mode), Low channel



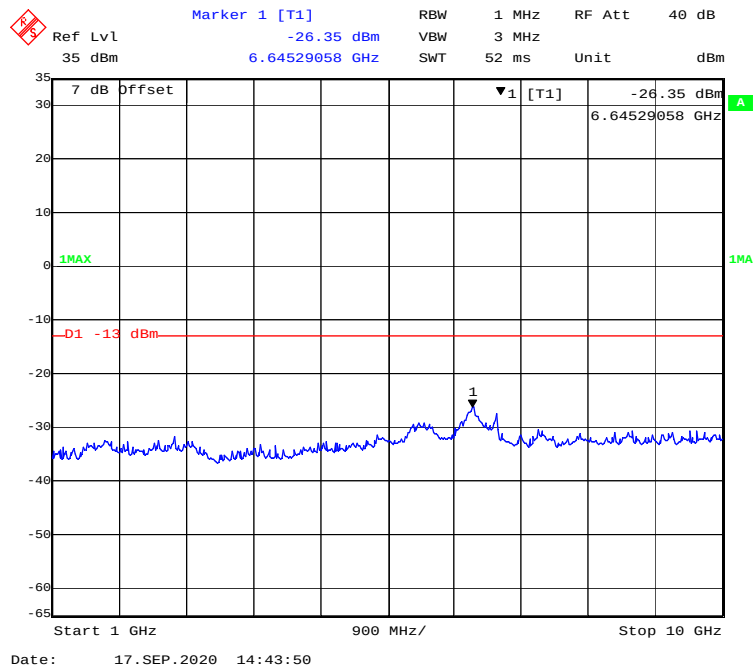
1 GHz – 10 GHz (GPRS Mode), Low channel



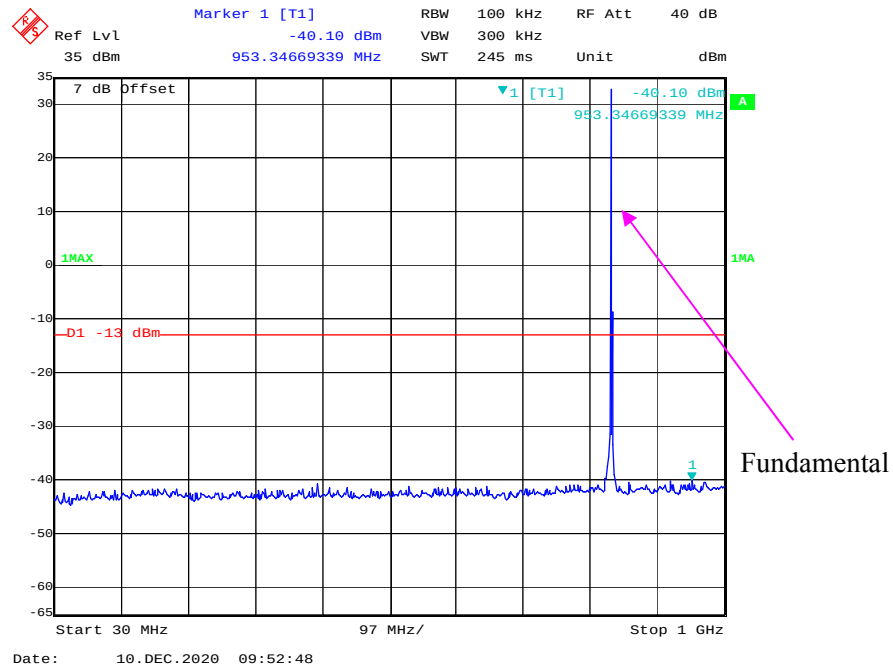
30 MHz – 1GHz(EGPRS Mode), Low channel



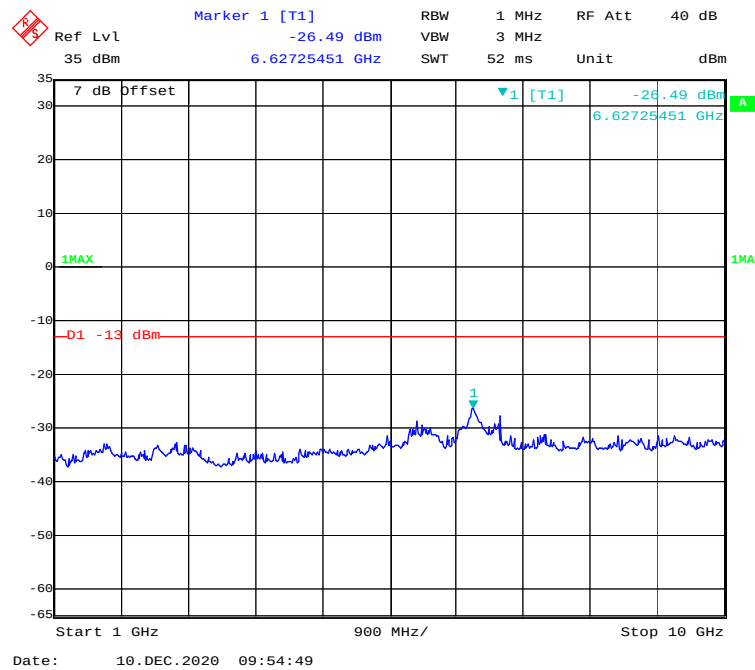
1 GHz – 10 GHz (EGPRS Mode), Low channel



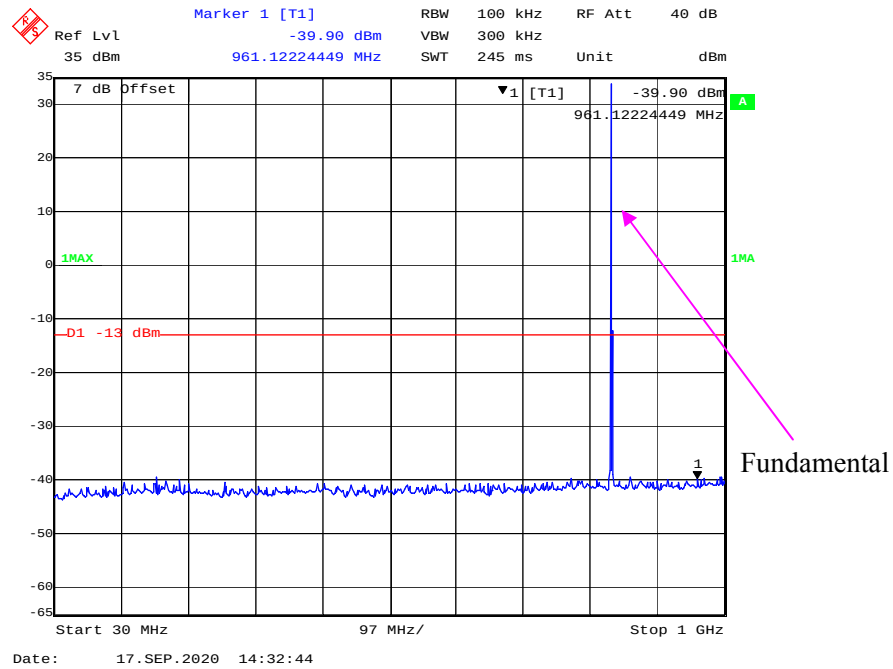
30 MHz – 1GHz(GSM Mode), Middle channel



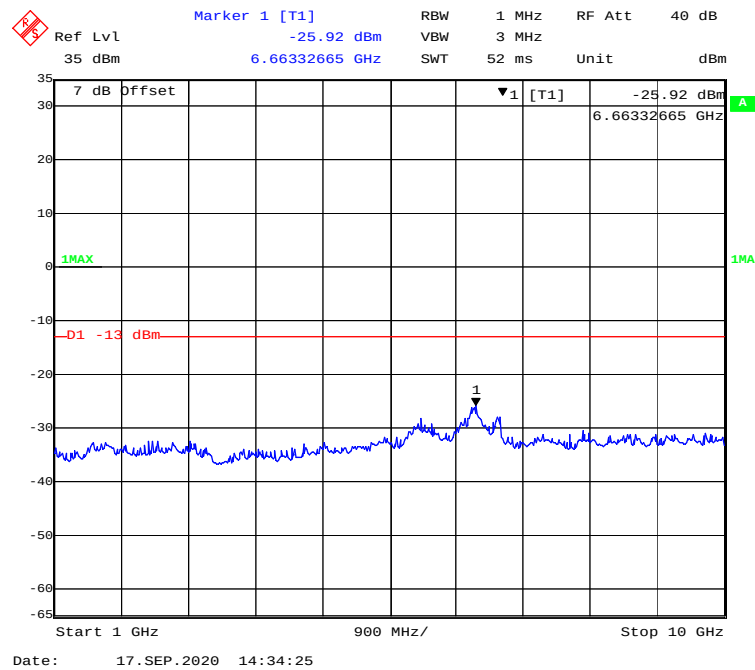
1 GHz – 10 GHz (GSM Mode), Middle channel



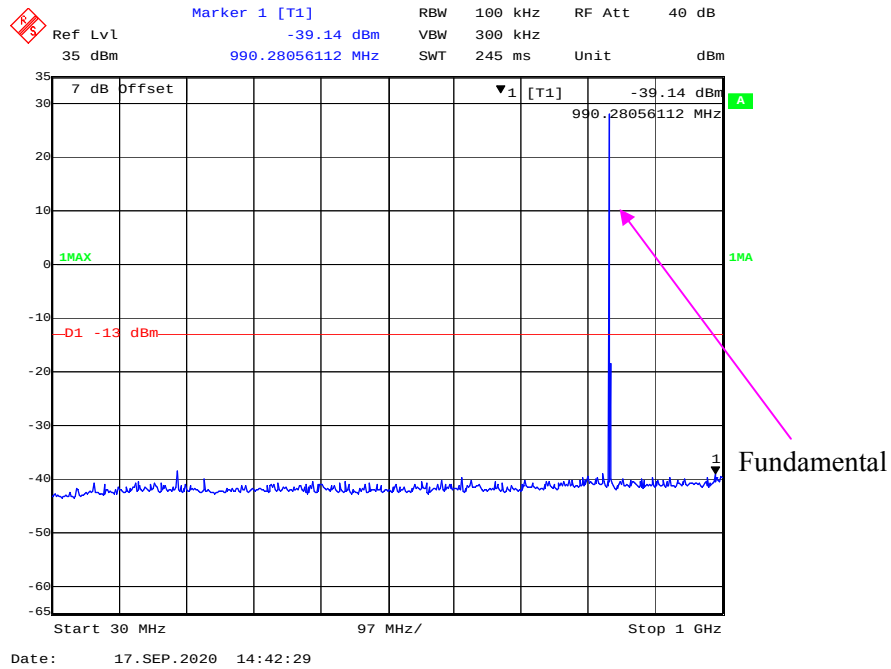
30 MHz – 1GHz(GPRS Mode), Middle channel



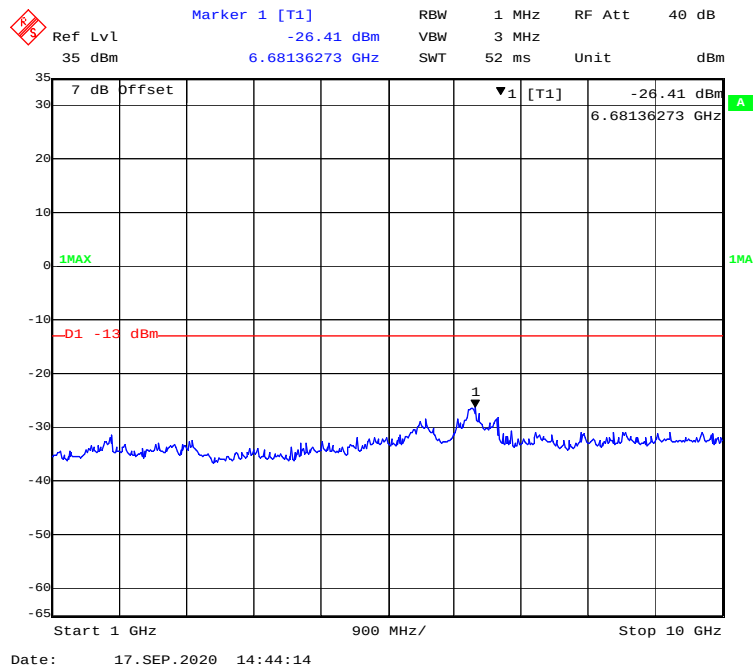
1 GHz – 10 GHz (GPRS Mode), Middle channel



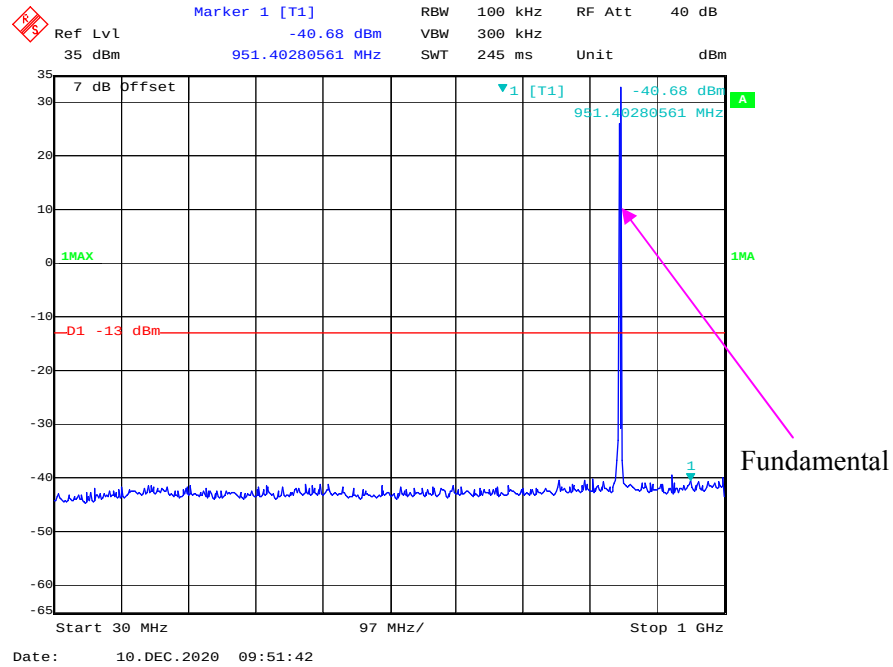
30 MHz – 1GHz(EGPRS Mode), Middle channel



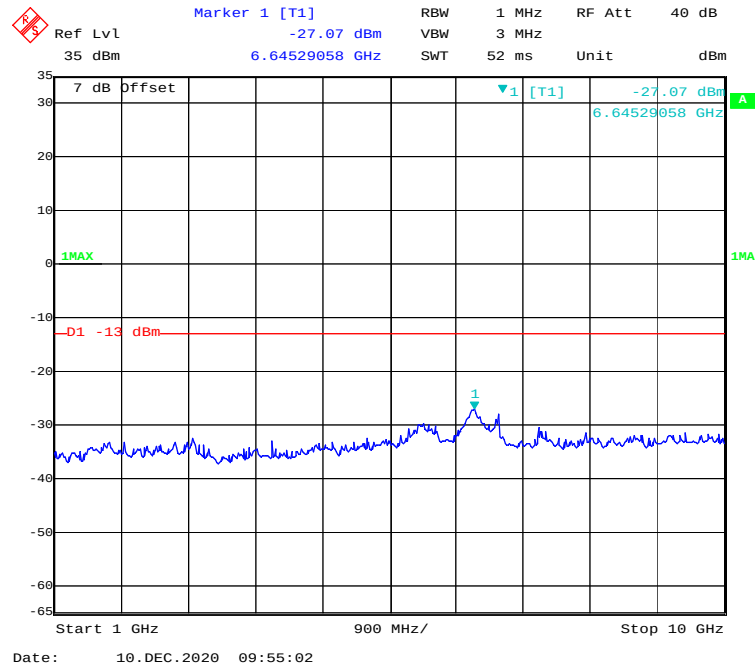
1 GHz – 10 GHz (EGPRS Mode), Middle channel

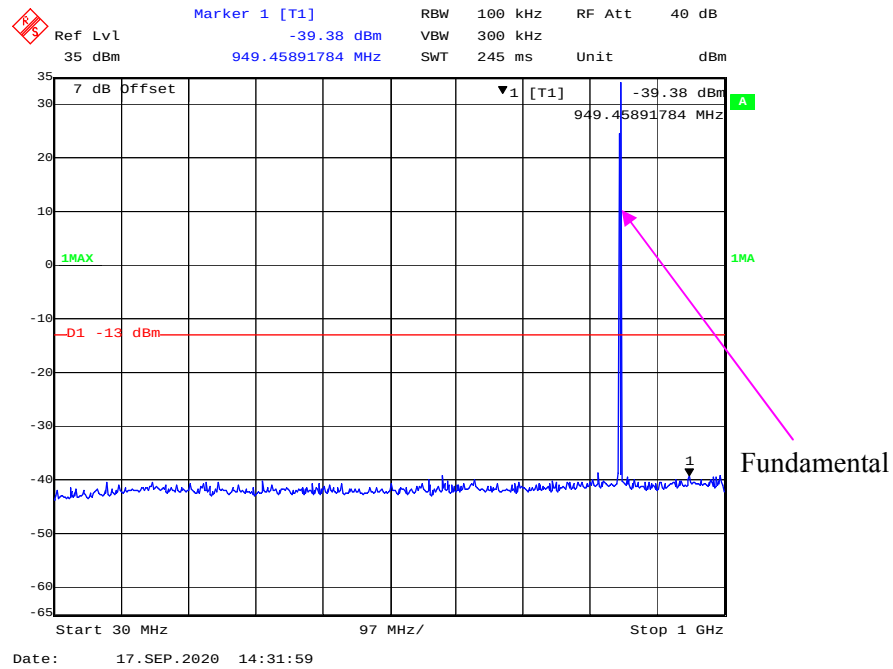
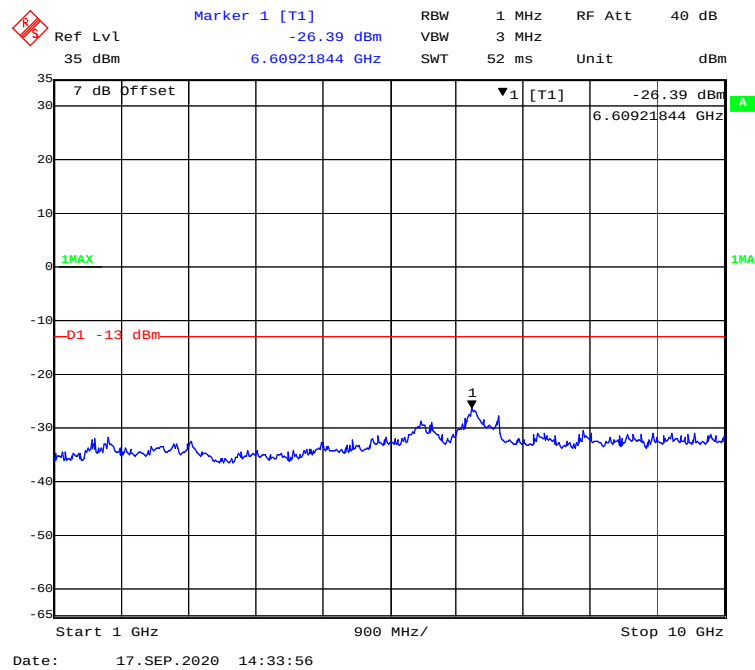


30 MHz – 1GHz(GSM Mode), High channel

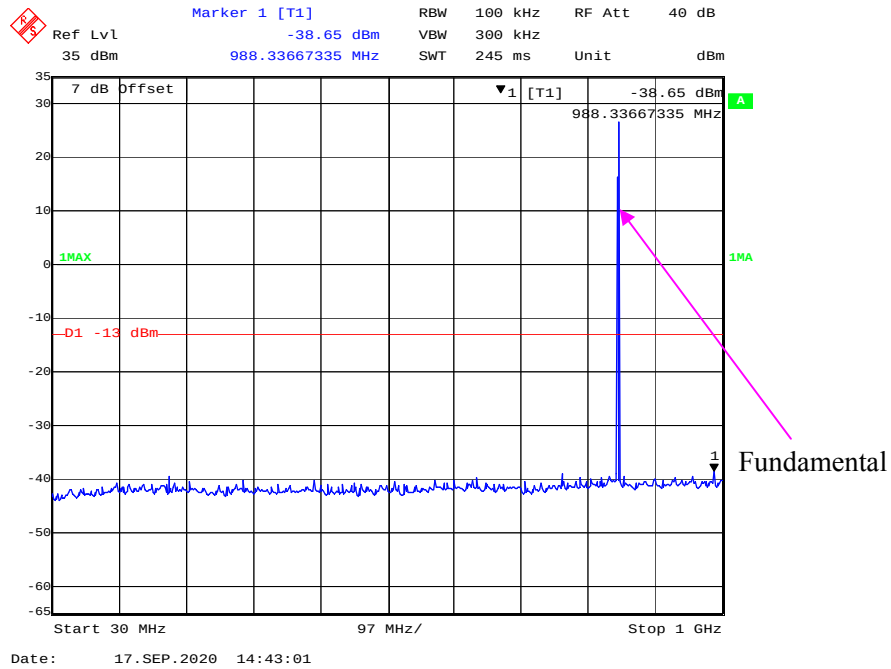


1 GHz – 10 GHz (GSM Mode), High channel

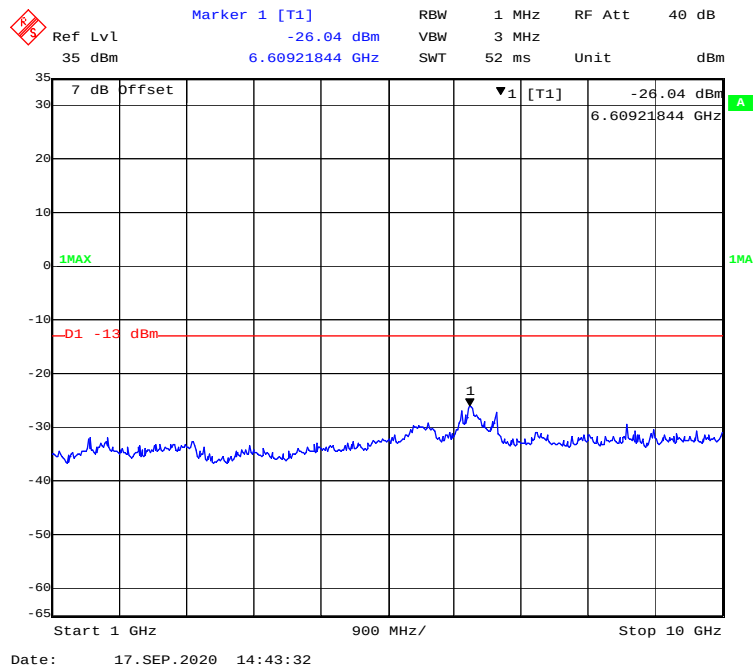


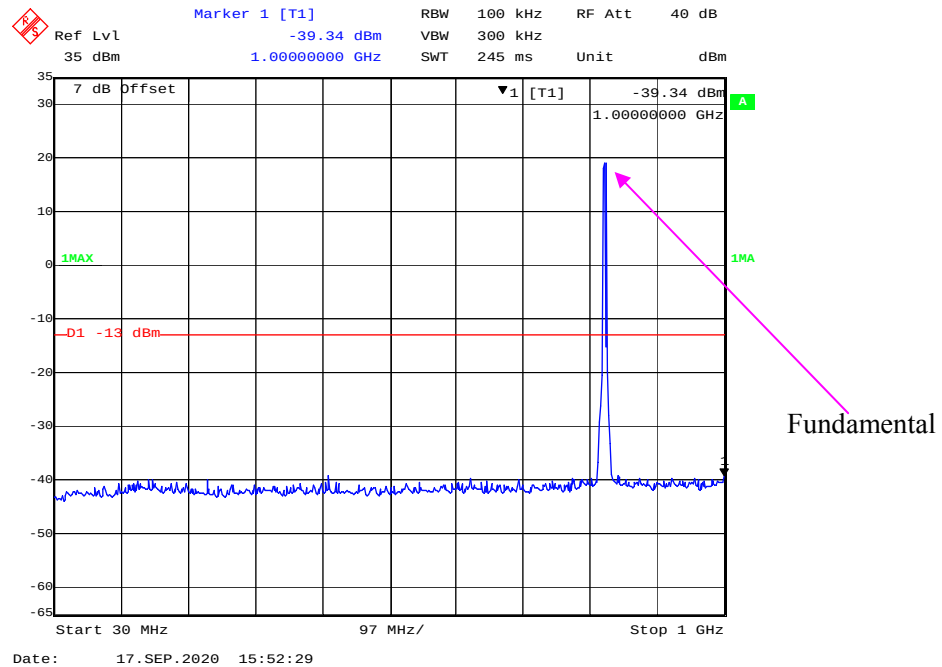
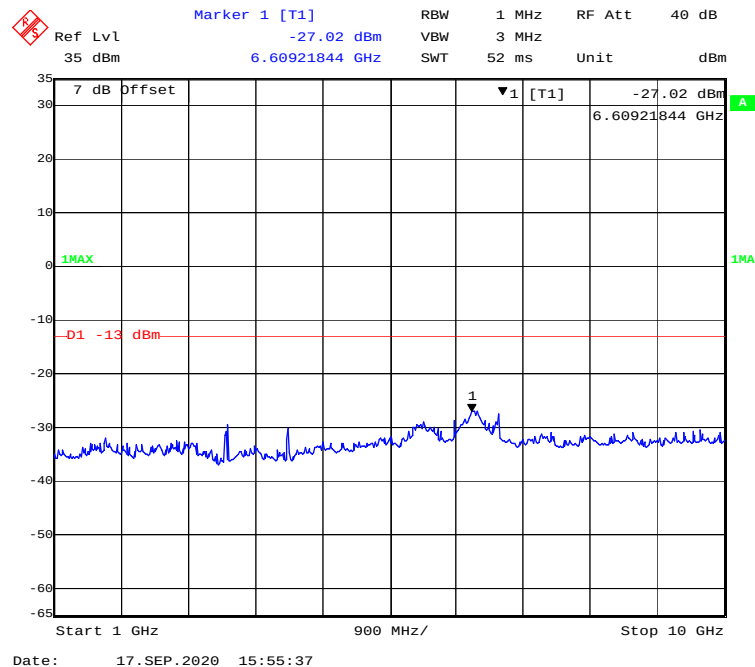
30 MHz – 1GHz(GPRS Mode), High channel**1 GHz – 10 GHz (GPRS Mode), High channel**

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

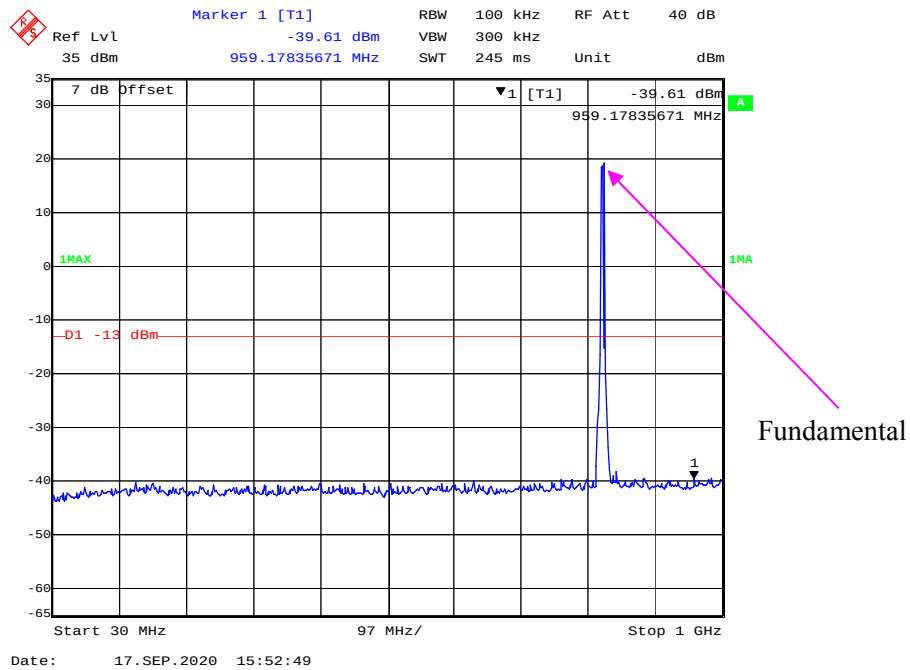


1 GHz – 10 GHz (EGPRS Mode), High channel

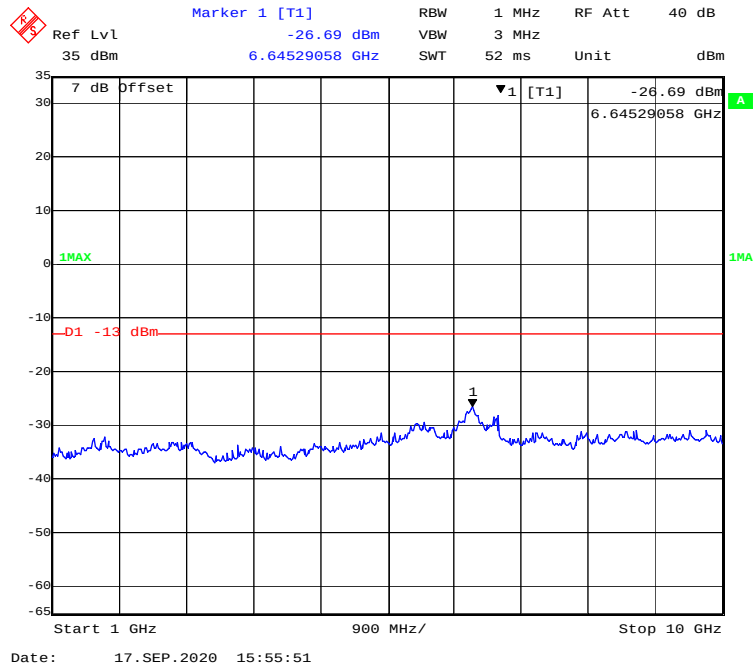


WCDMA Band V:**30 MHz – 1GHz WCDMA (Rel 99) Mode, Low channel****1 GHz – 10 GHz WCDMA (Rel 99) Mode, Low channel**

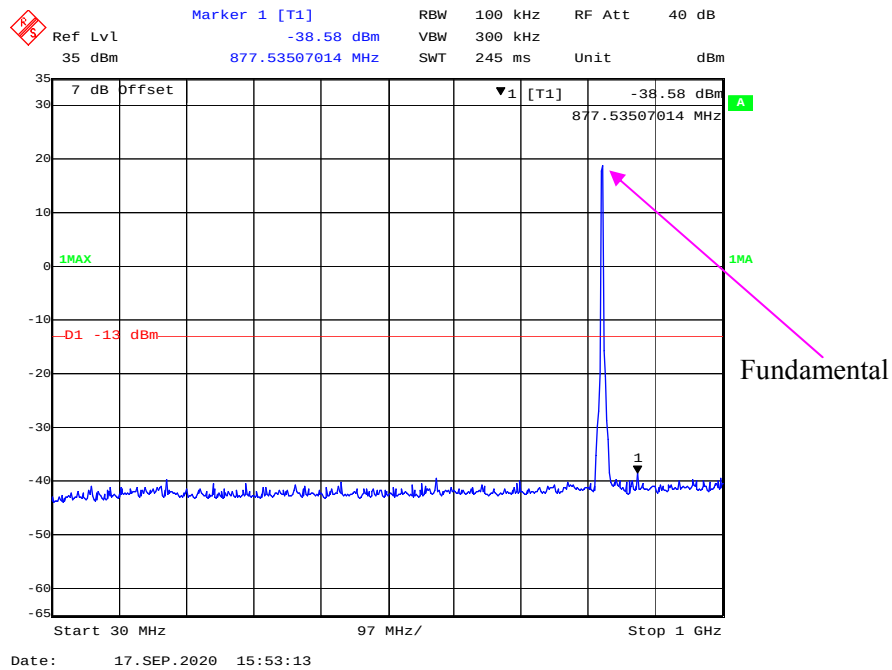
30 MHz – 1GHz WCDMA (HSDPA) Mode, Low channel



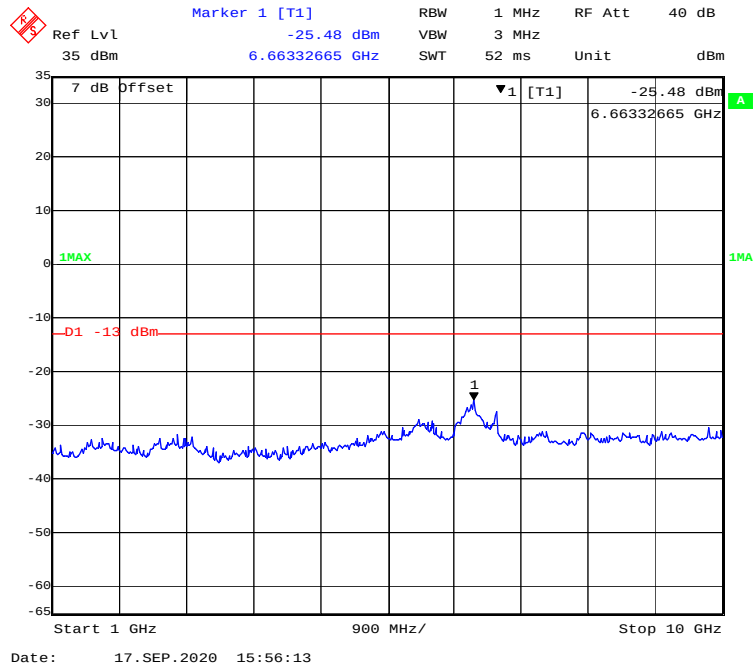
1 GHz – 10 GHz WCDMA (HSDPA) Mode, Low channel



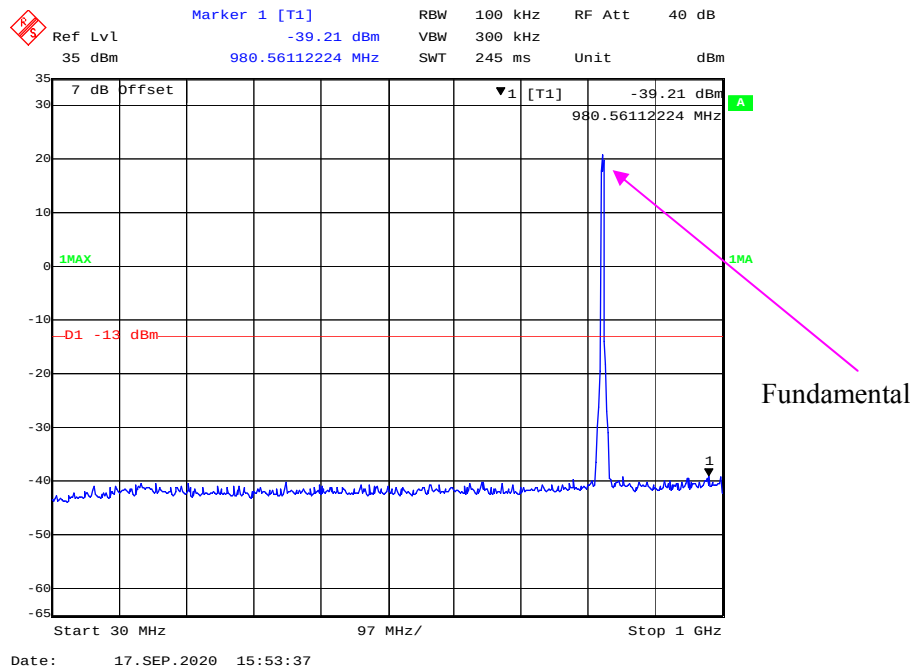
30 MHz – 1GHz WCDMA (HSUPA) Mode, Low channel



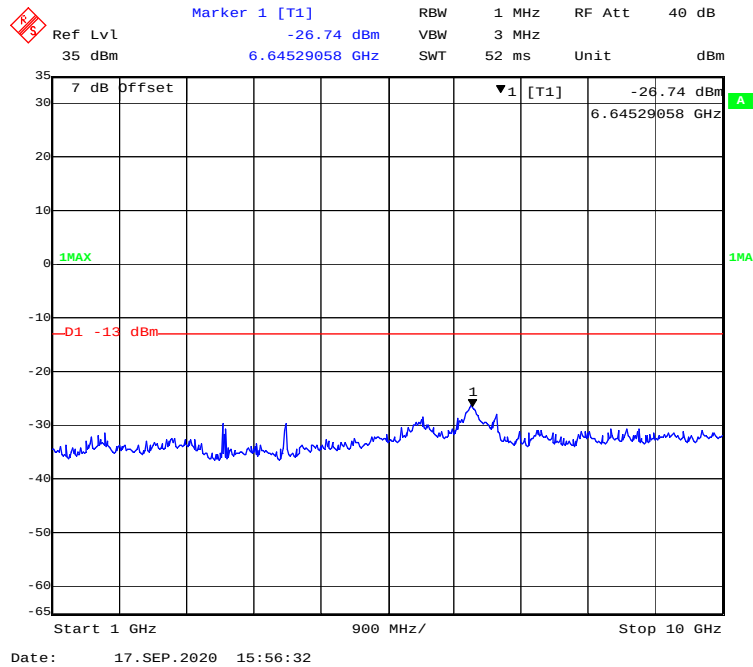
1 GHz – 10 GHz WCDMA (HSUPA) Mode, Low channel

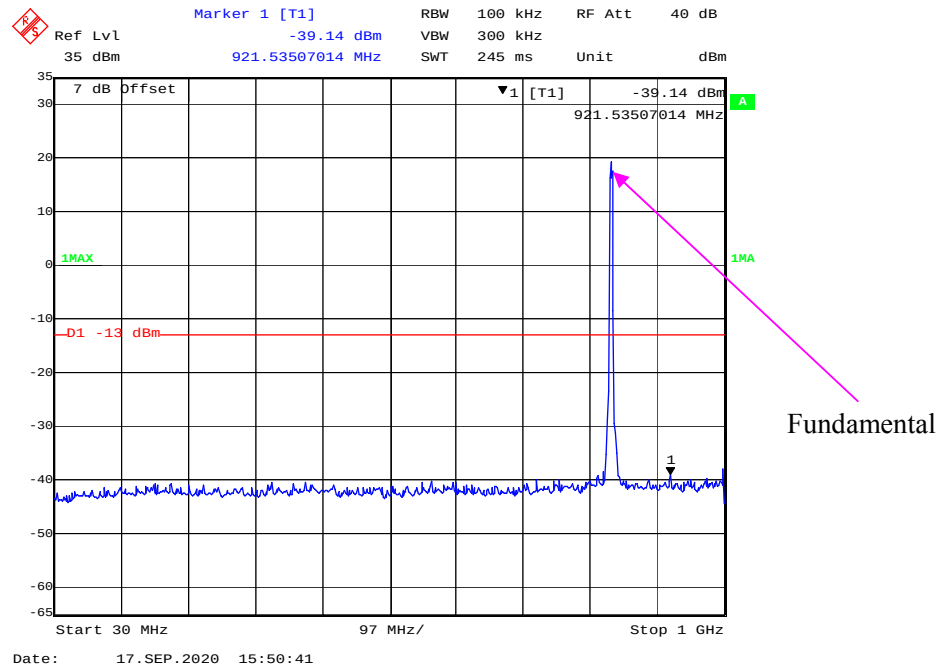
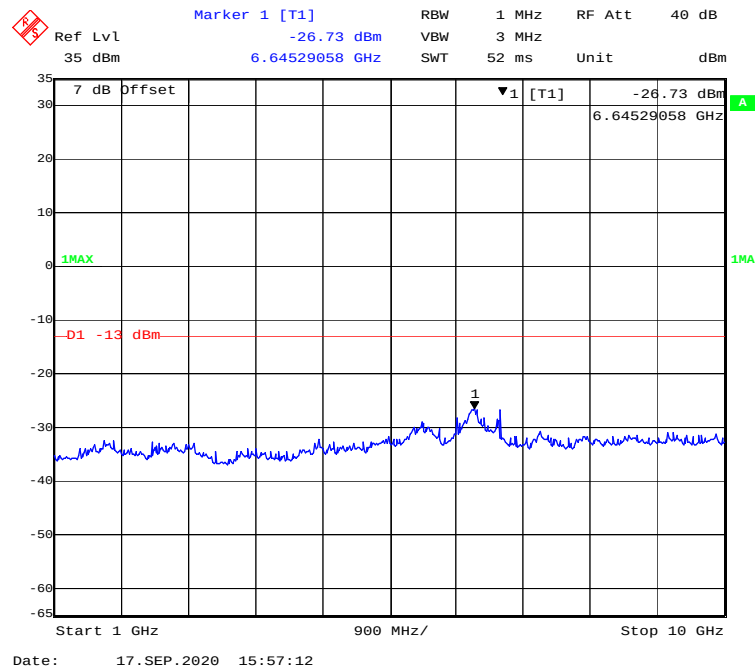


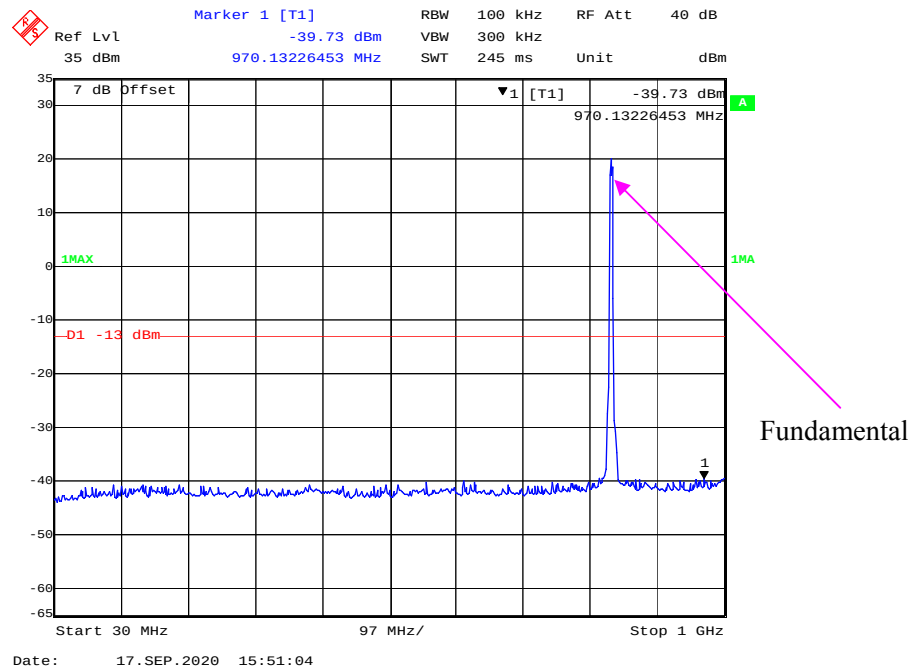
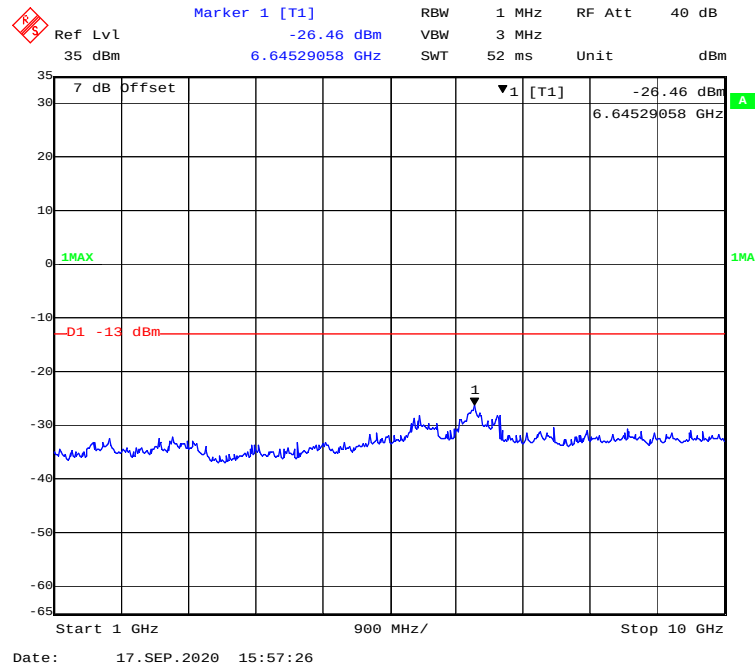
30 MHz – 1GHz WCDMA (HSPA+) Mode, Low channel

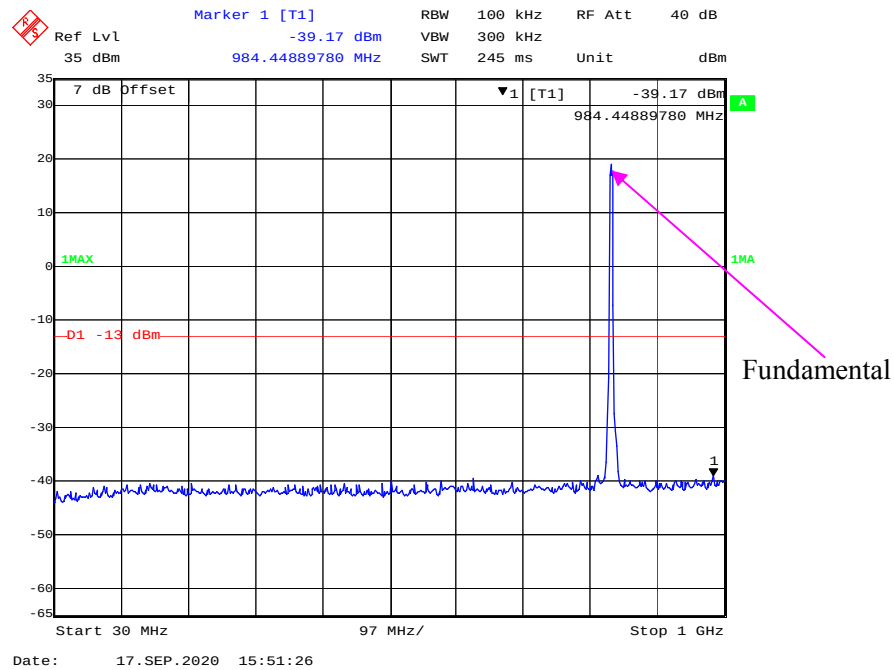
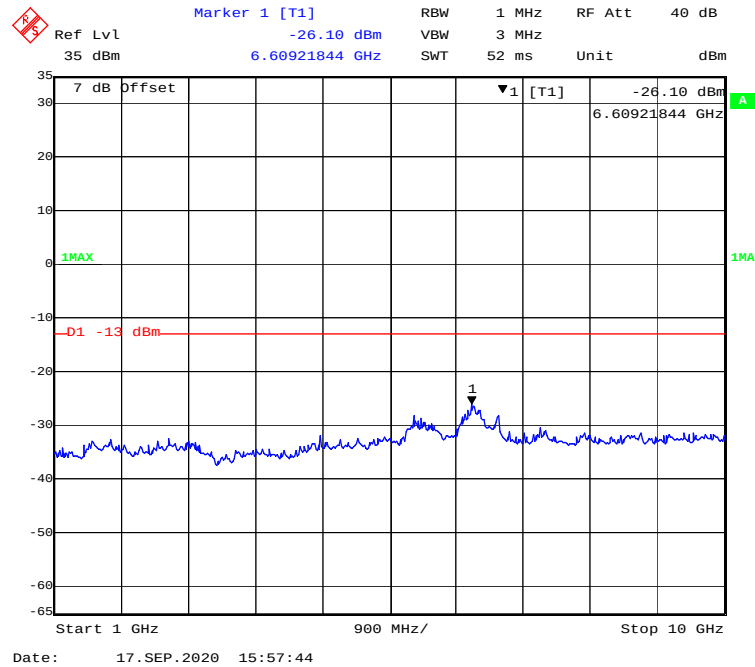


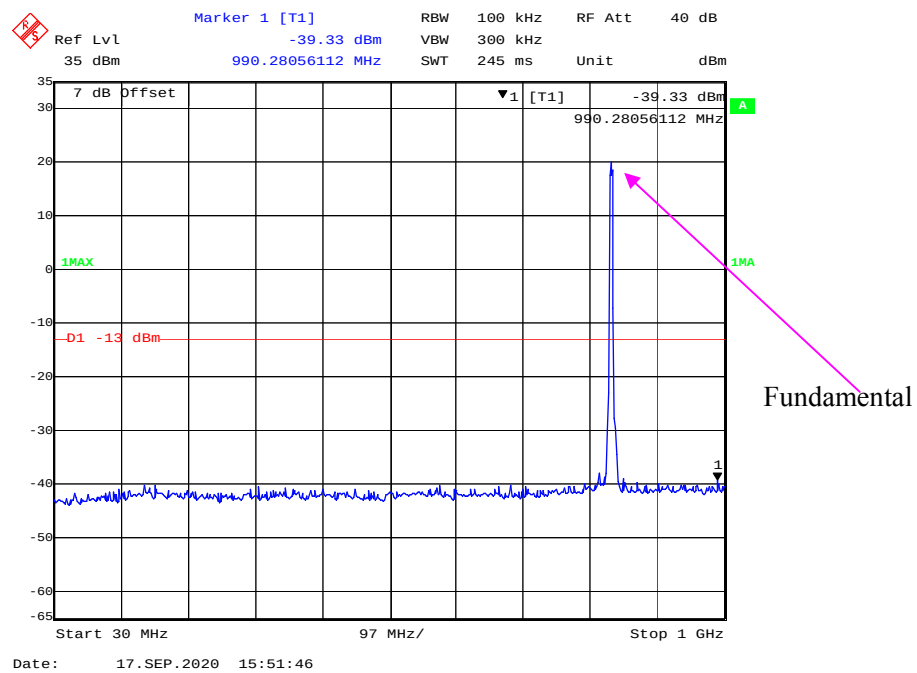
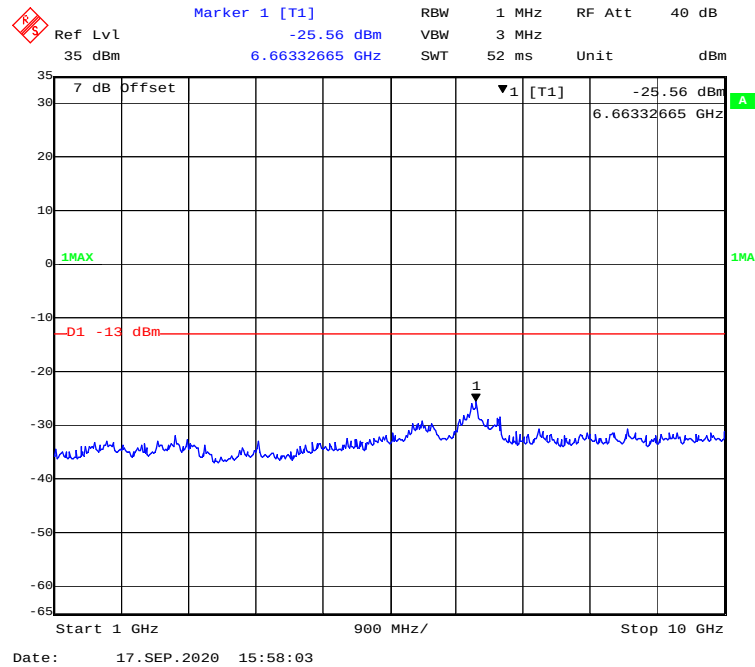
1 GHz – 10 GHz WCDMA (HSPA+) Mode, Low channel

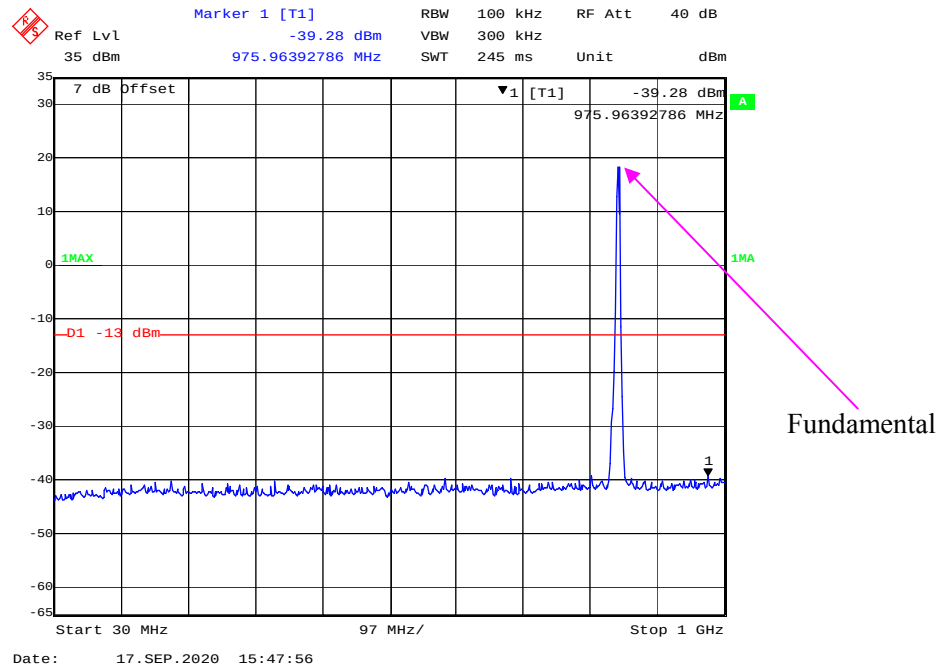
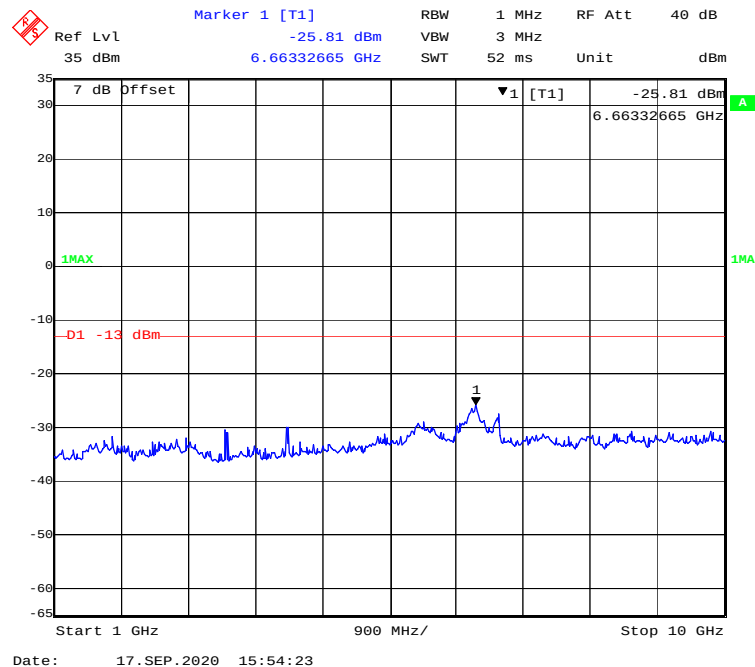


30 MHz – 1GHz WCDMA (Rel 99) Mode, Middle channel**1 GHz – 10 GHz WCDMA (Rel 99) Mode, Middle channel**

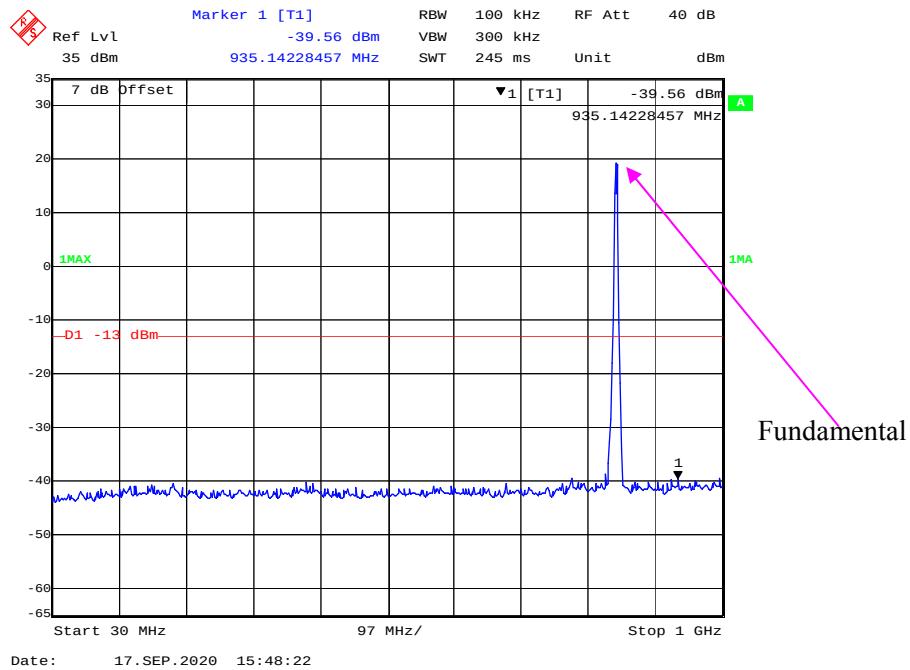
30 MHz – 1GHz WCDMA (HSDPA) Mode, Middle channel**1 GHz – 10 GHz WCDMA (HSDPA) Mode, Middle channel**

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

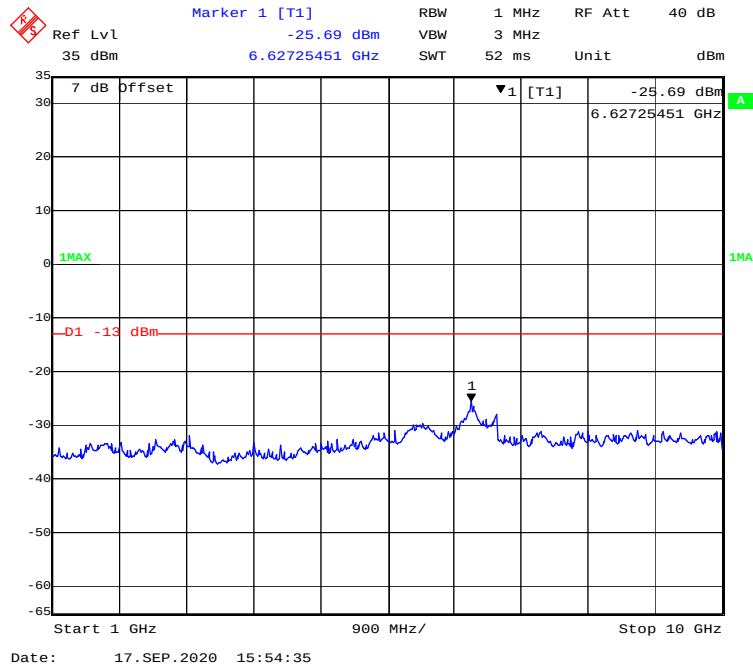
30 MHz – 1GHz WCDMA (HSPA+) Mode, Middle channel**1 GHz – 10 GHz WCDMA (HSPA+) Mode, Middle channel**

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

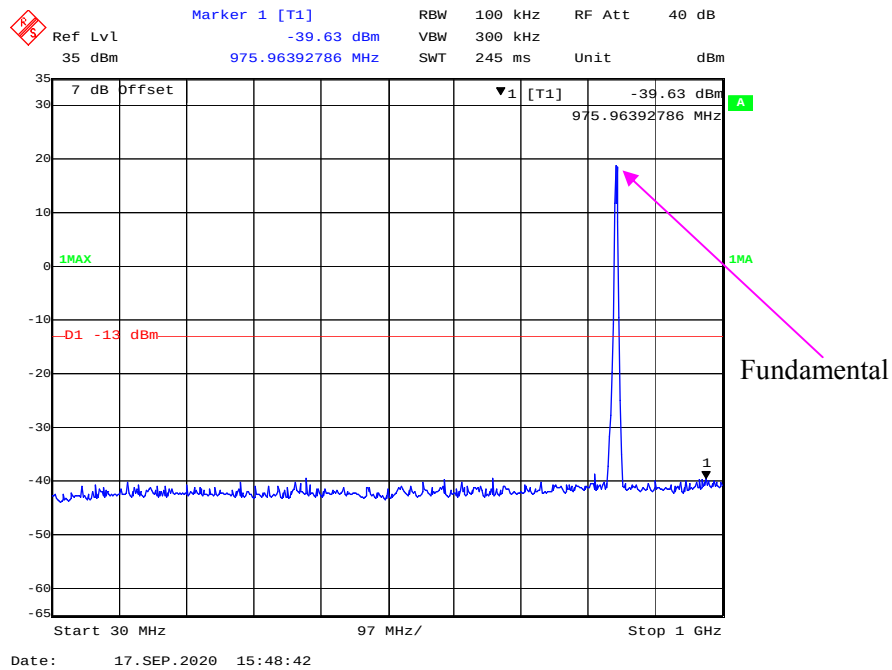
30 MHz – 1GHz WCDMA (HSDPA) Mode, High channel



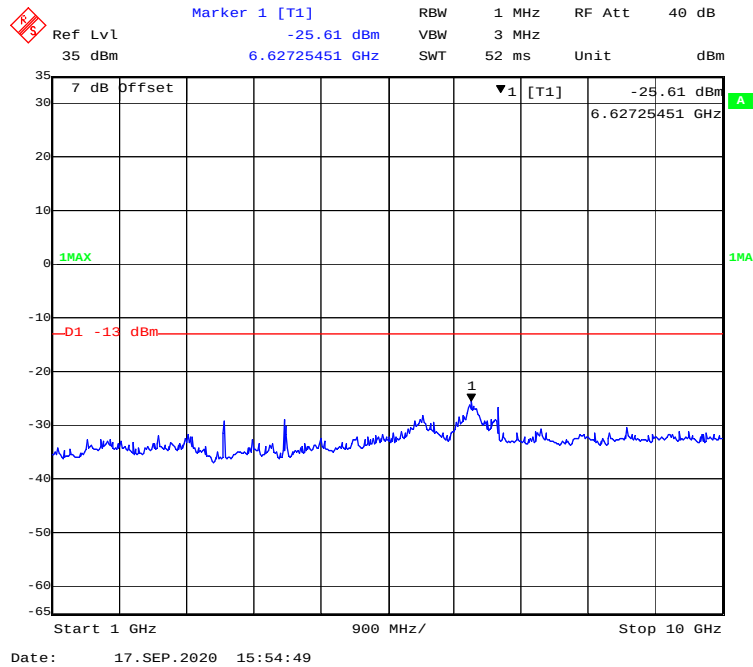
1 GHz – 10 GHz WCDMA (HSDPA) Mode, High channel



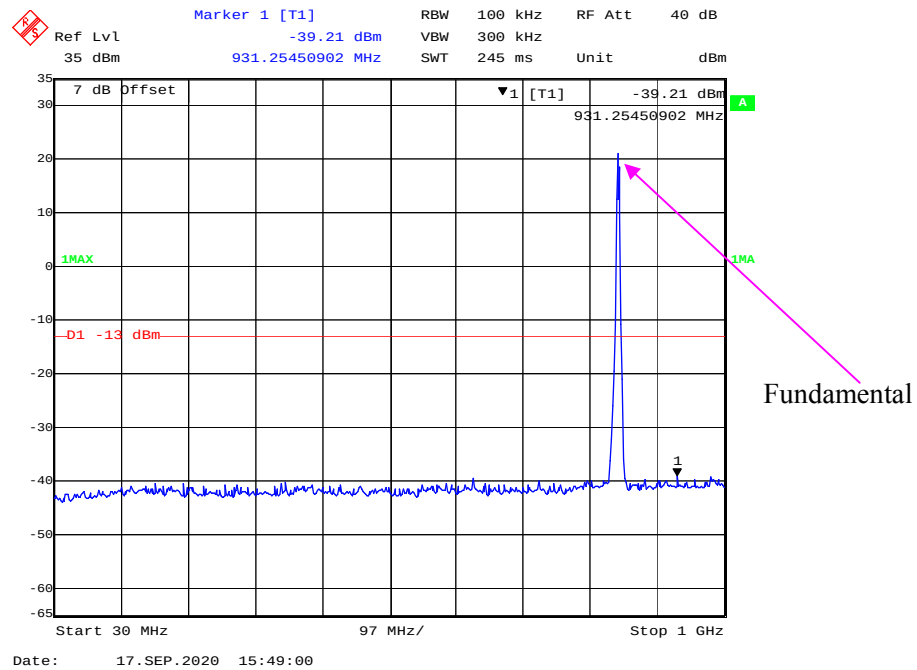
30 MHz – 1GHz WCDMA (HSUPA) Mode, High channel



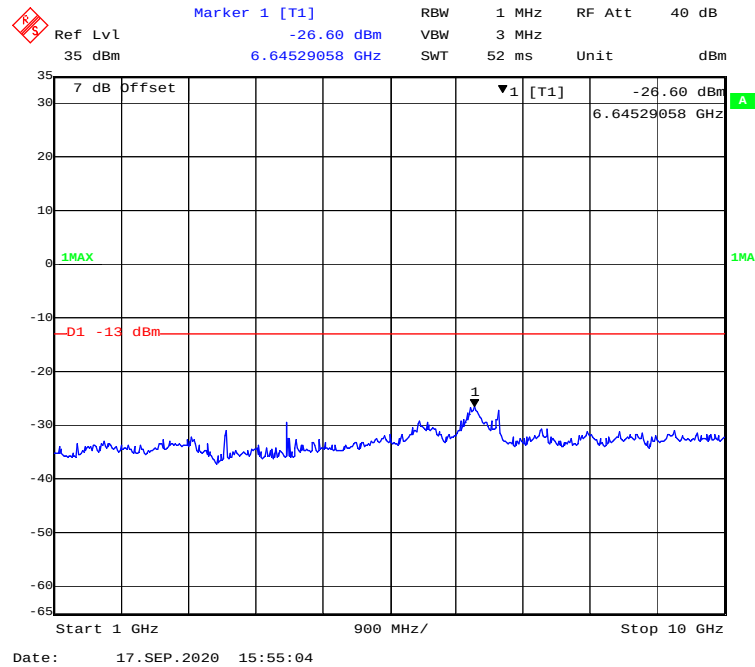
1 GHz – 10 GHz WCDMA (HSUPA) Mode, High channel



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

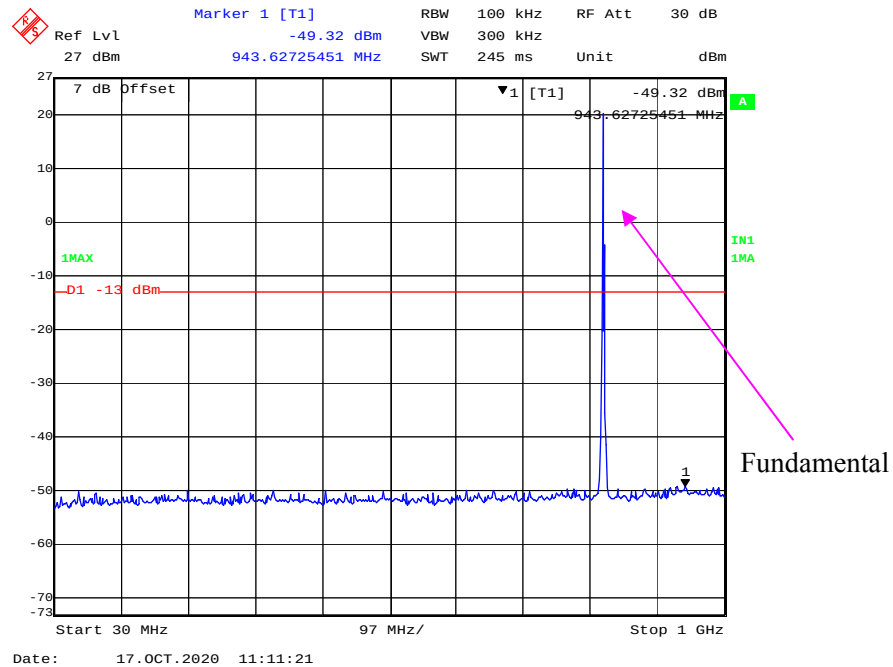
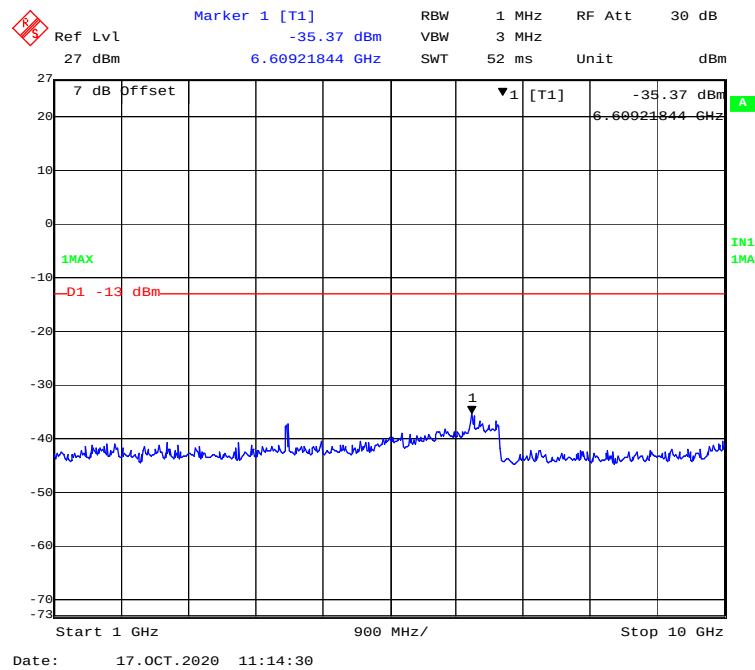


1 GHz – 10 GHz WCDMA (HSPA+) Mode, High channel

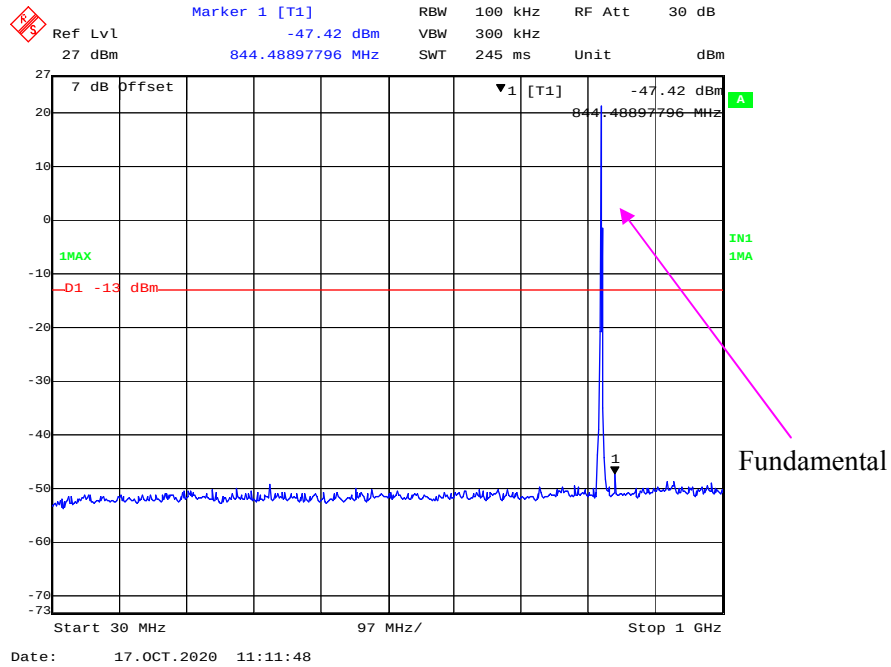


30 MHz – 1GHz, Low channel

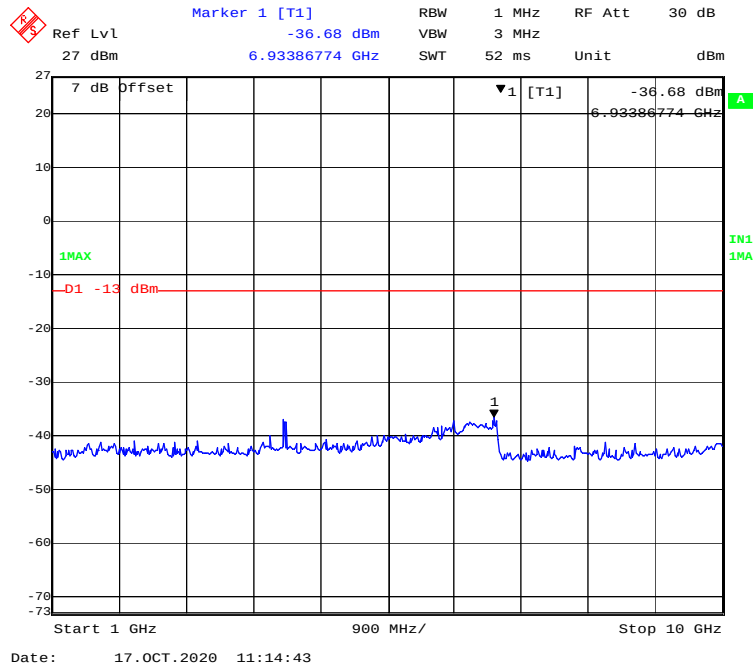


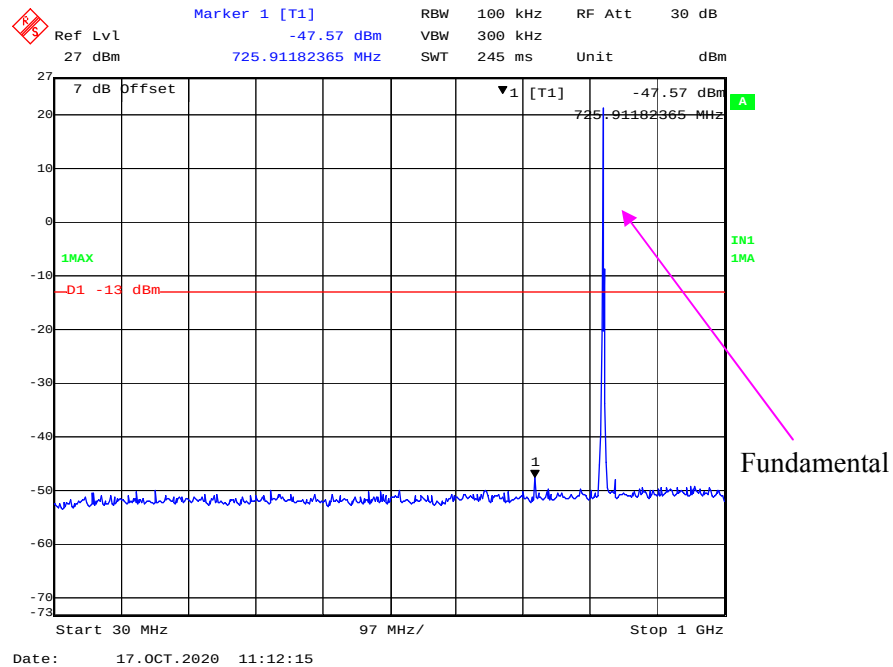
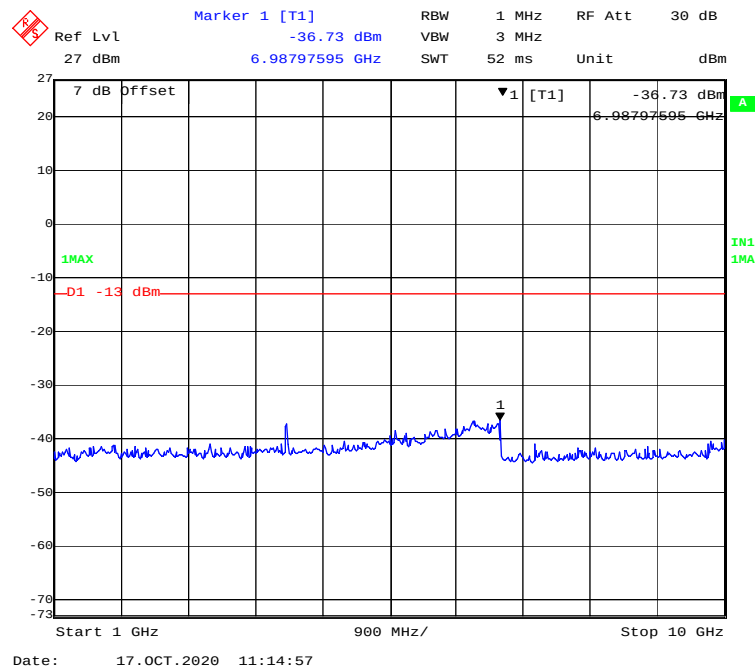
30 MHz – 1GHz, Middle channel**1 GHz – 10 GHz, Middle channel**

30 MHz – 1GHz, High channel

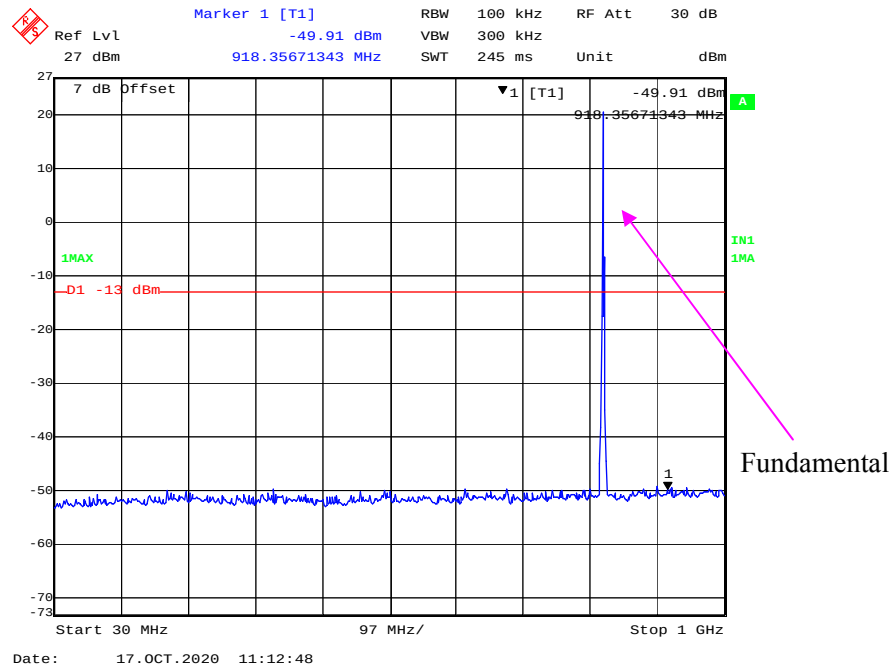


1 GHz – 10 GHz, High channel

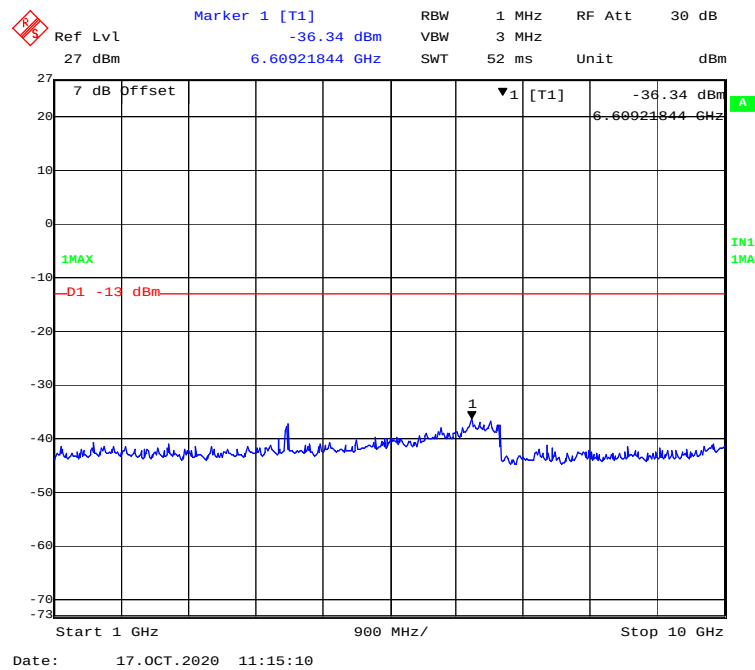


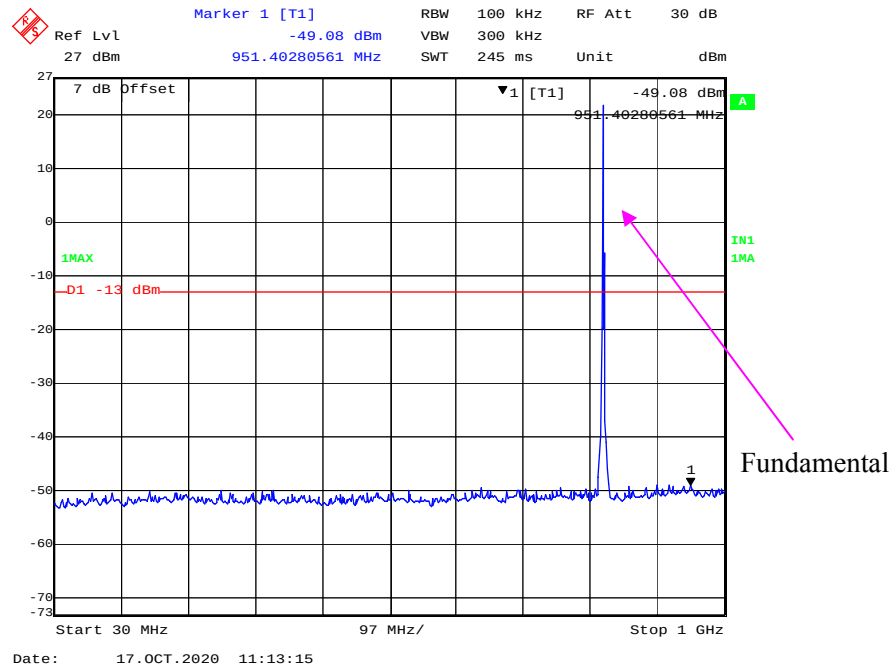
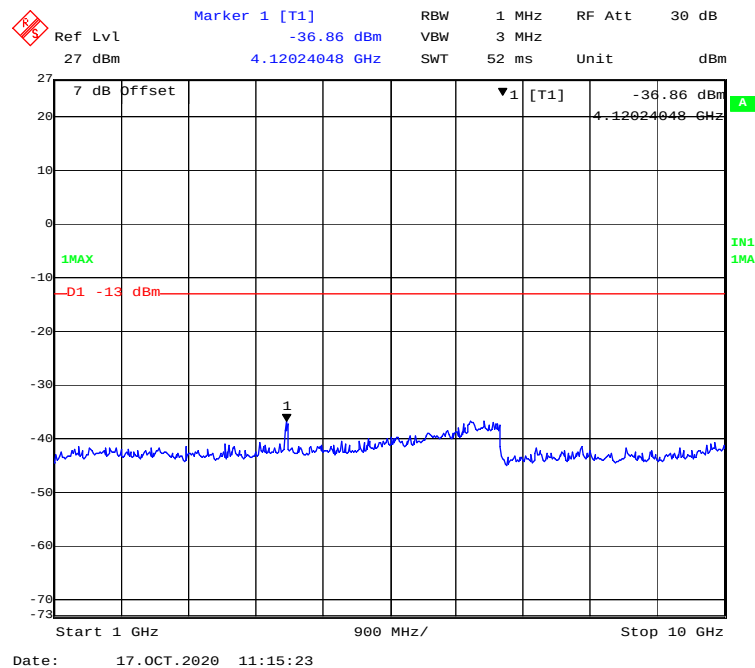
1xRTT mode:**30 MHz – 1GHz, Low channel****1 GHz – 10 GHz, Low channel**

30 MHz – 1GHz, Middle channel



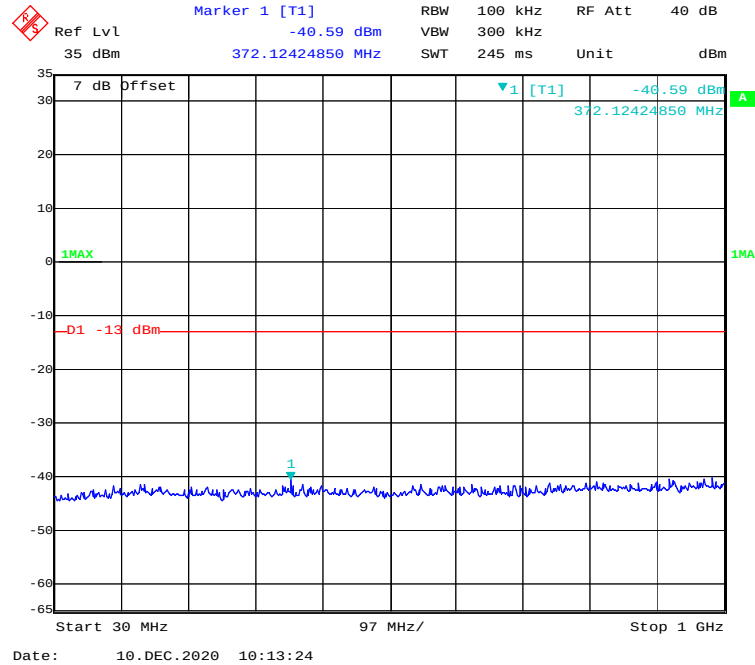
1 GHz – 10 GHz, Middle channel



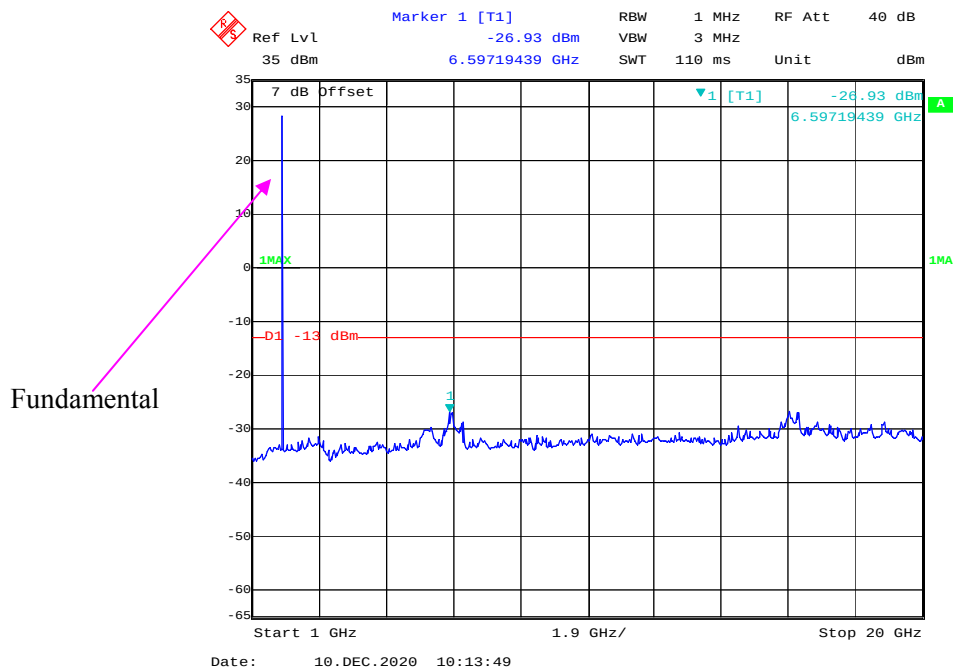
30 MHz – 1GHz, High channel**1 GHz – 10 GHz, High channel**

PCS 1900 Band:

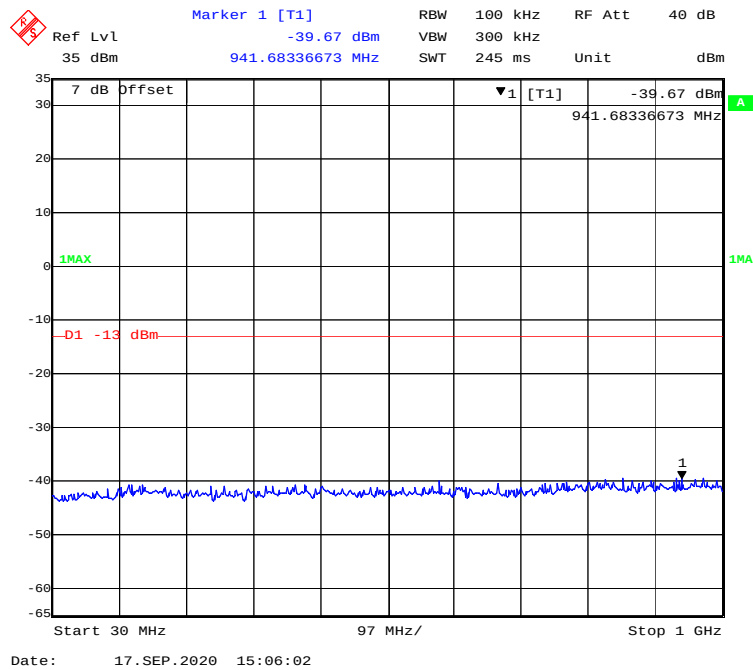
30 MHz – 1GHz(GSM Mode), Low channel



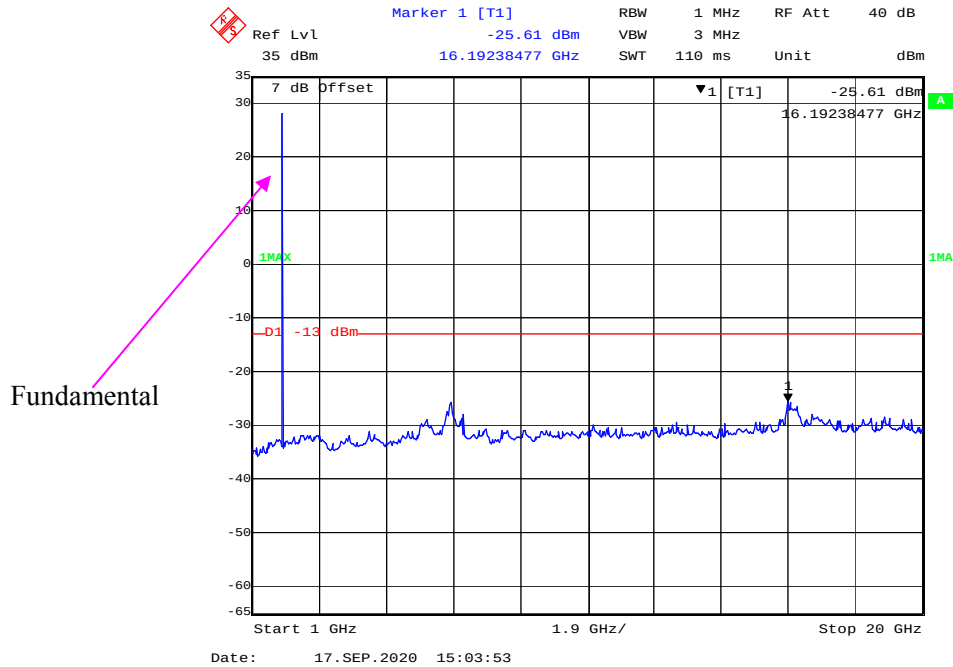
1 GHz – 20 GHz (GSM Mode), Low channel



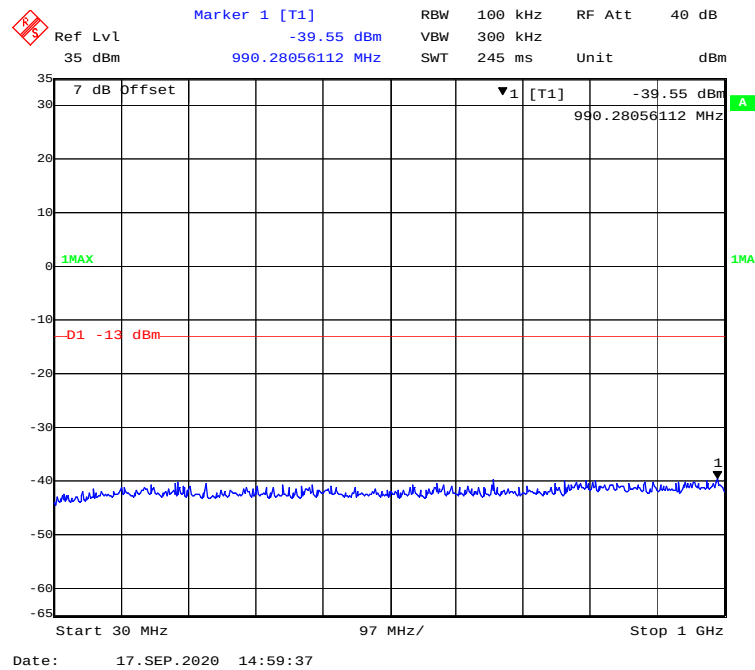
30 MHz – 1GHz(GPRS Mode) , Low channel



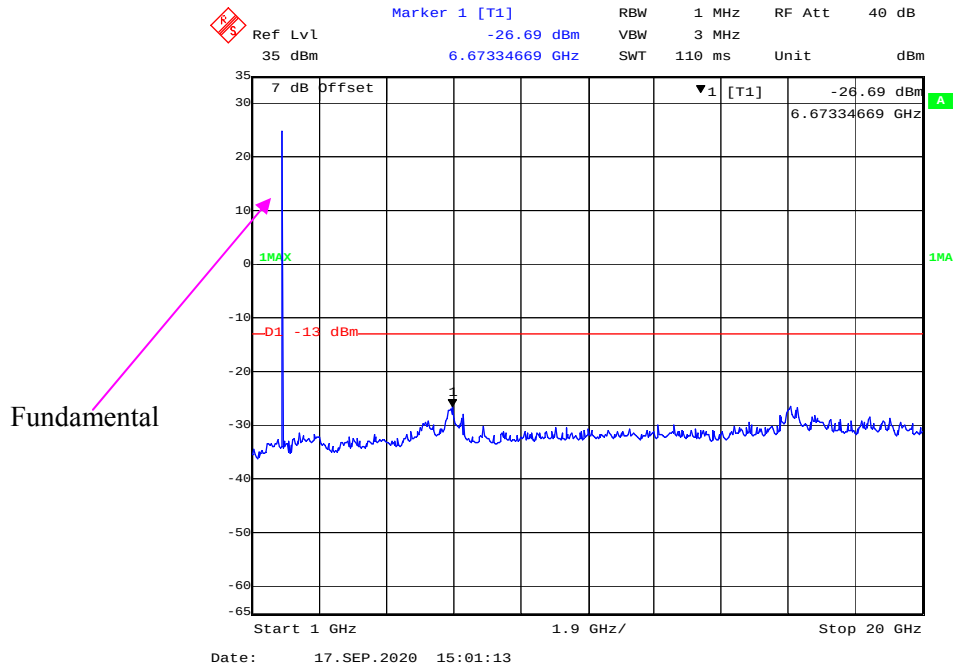
1 GHz – 20 GHz (GPRS Mode) , Low channel



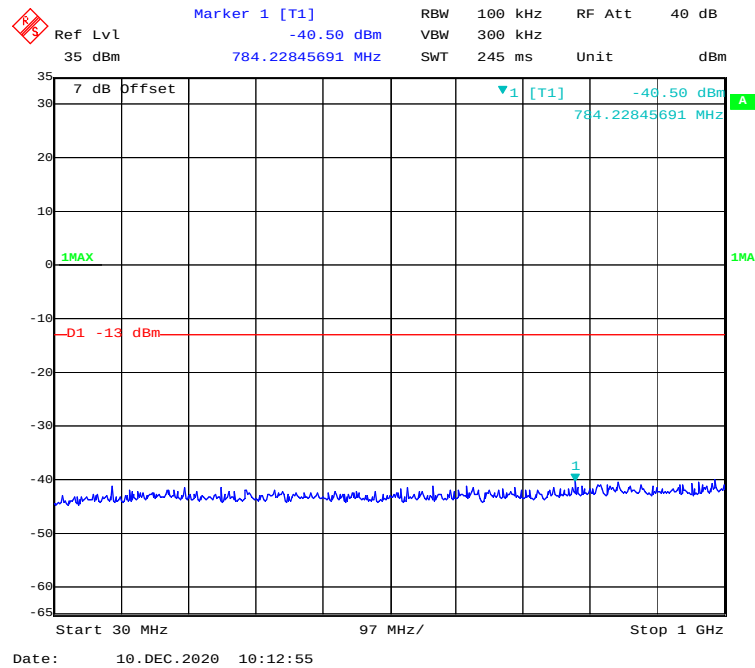
30 MHz – 1GHz(EGPRS Mode) , Low channel



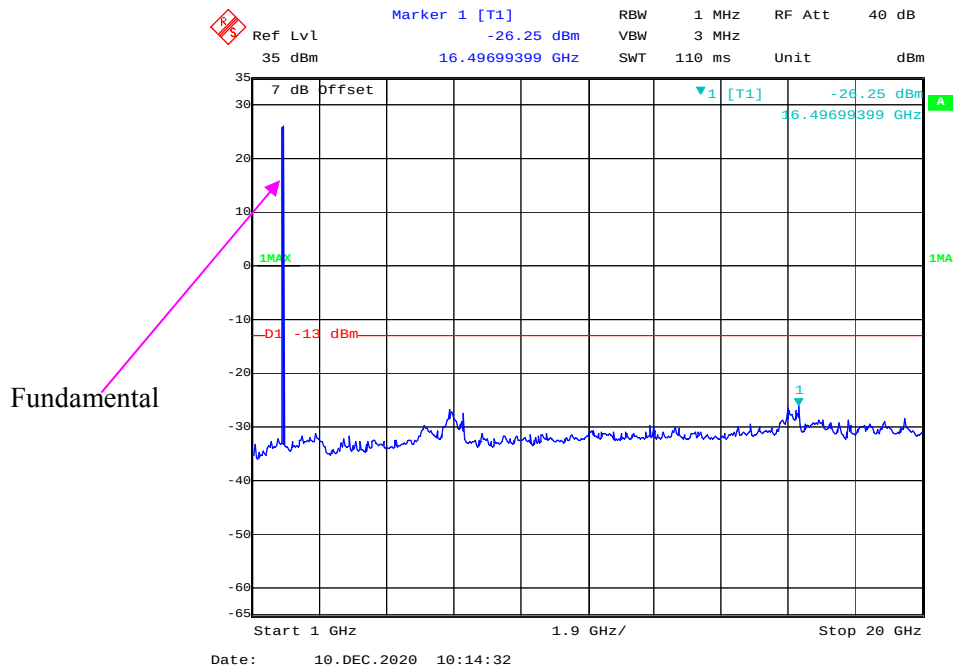
1 GHz – 20 GHz (EGPRS Mode) , Low channel



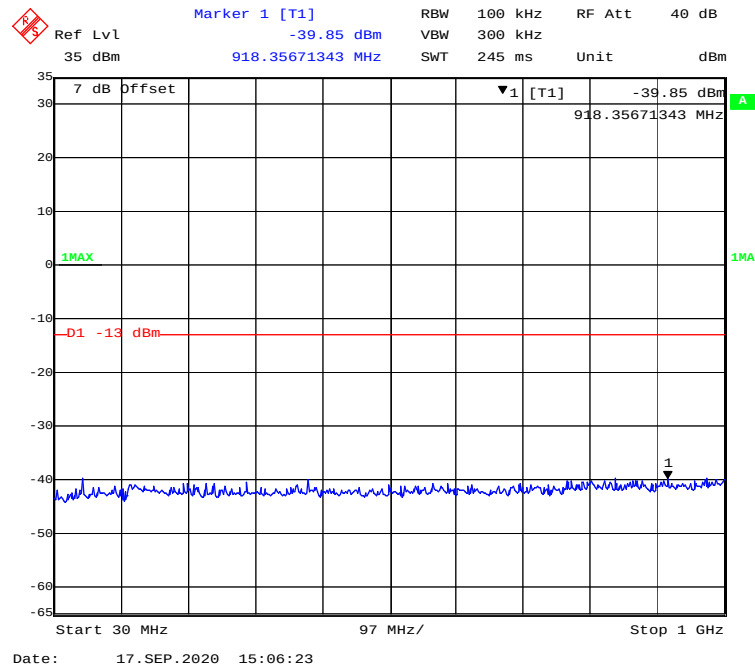
30 MHz – 1GHz(GSM Mode), Middle channel



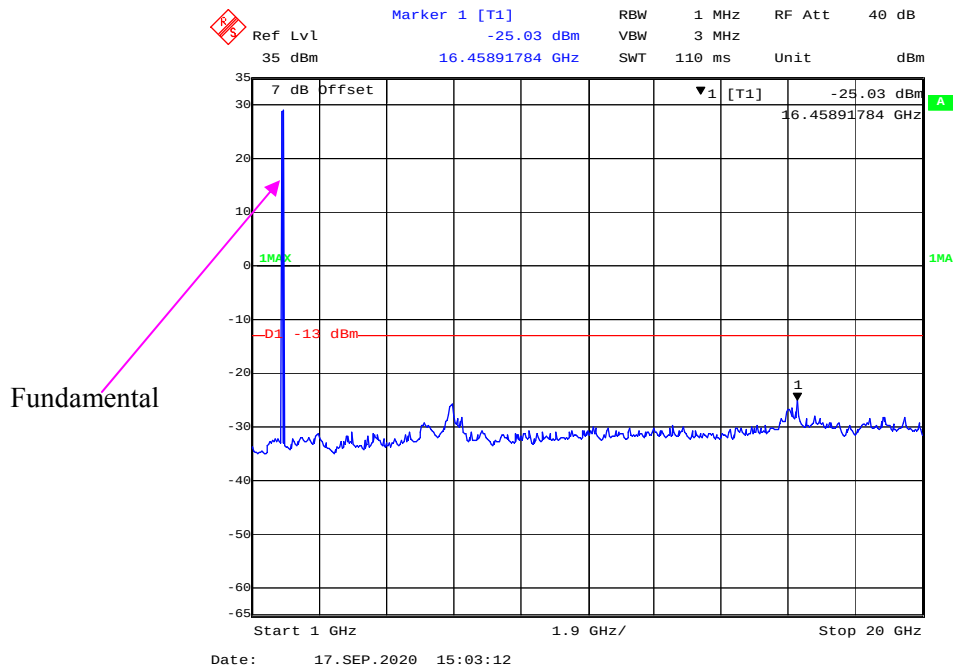
1 GHz – 20 GHz (GSM Mode), Middle channel



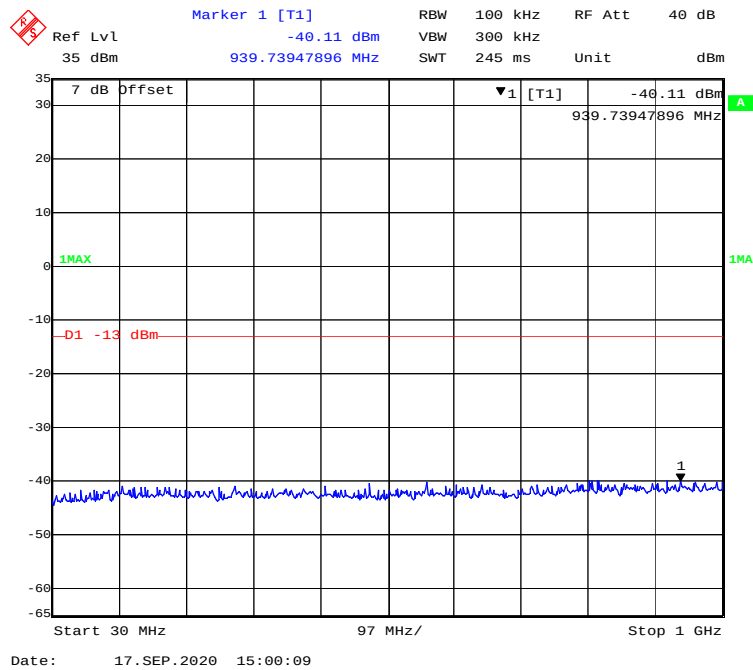
30 MHz – 1GHz(GPRS Mode) , Middle channel



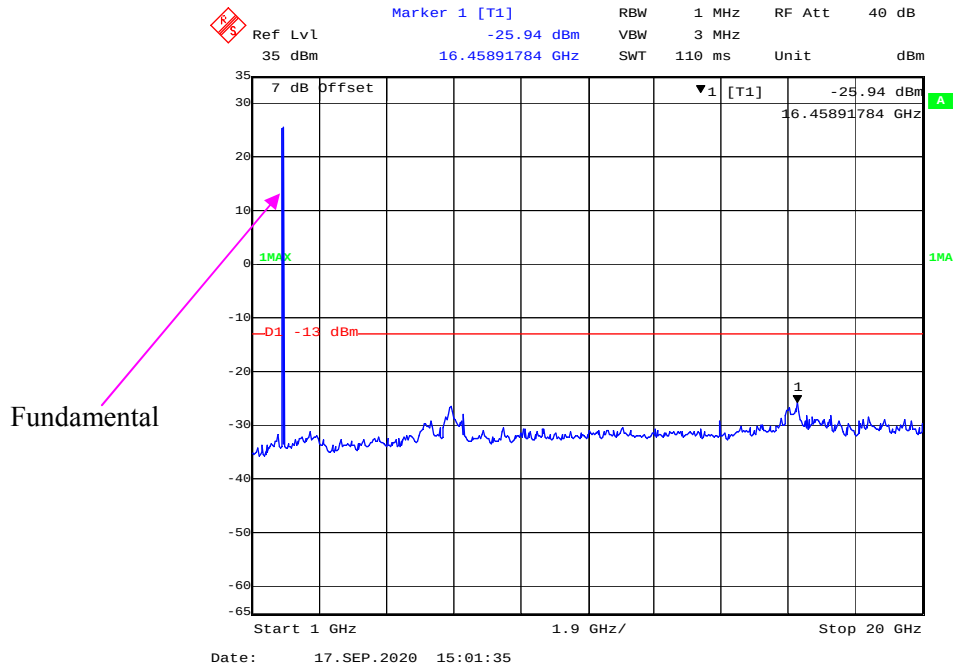
1 GHz – 20 GHz (GPRS Mode) , Middle channel



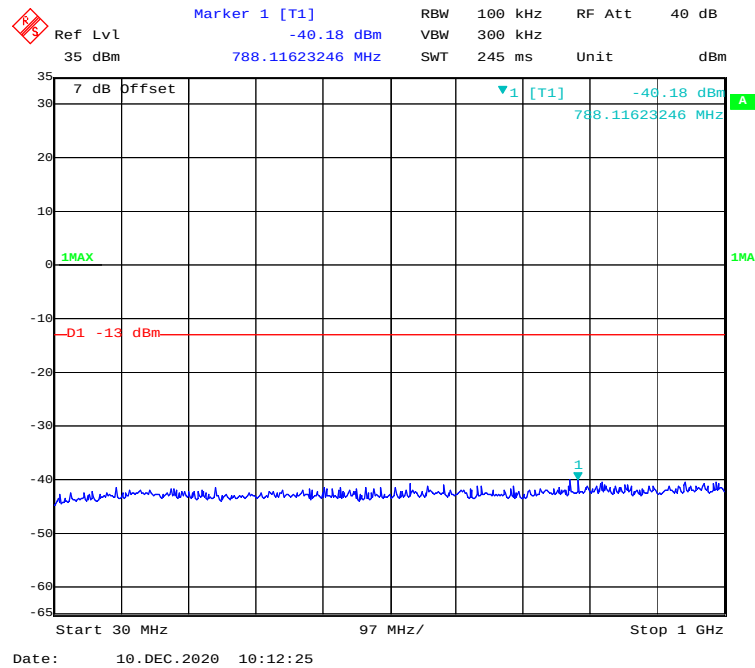
30 MHz – 1GHz(EGPRS Mode) , Middle channel



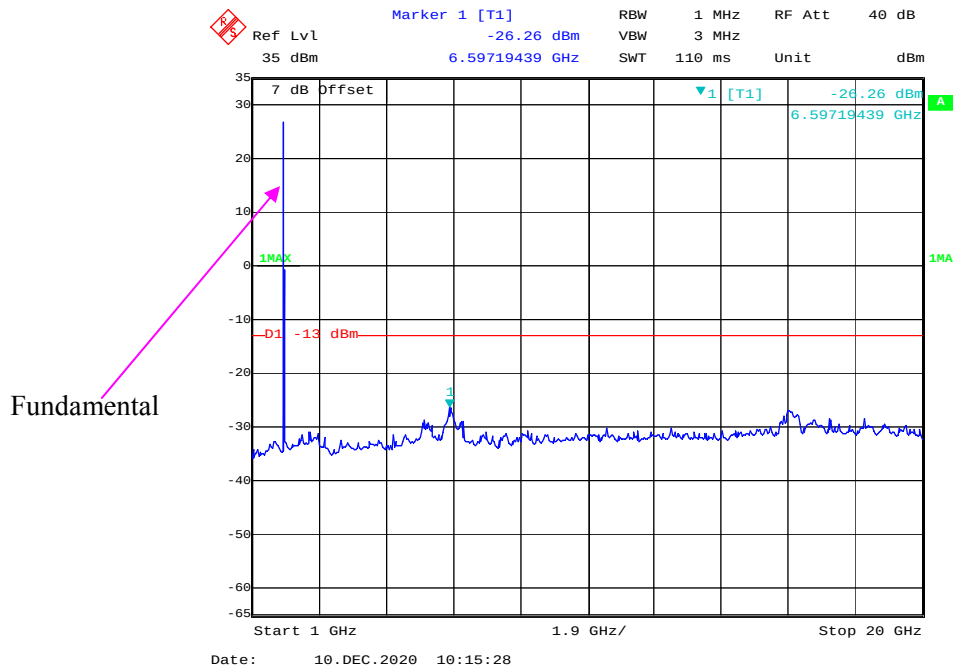
1 GHz – 20 GHz (EGPRS Mode) , Middle channel



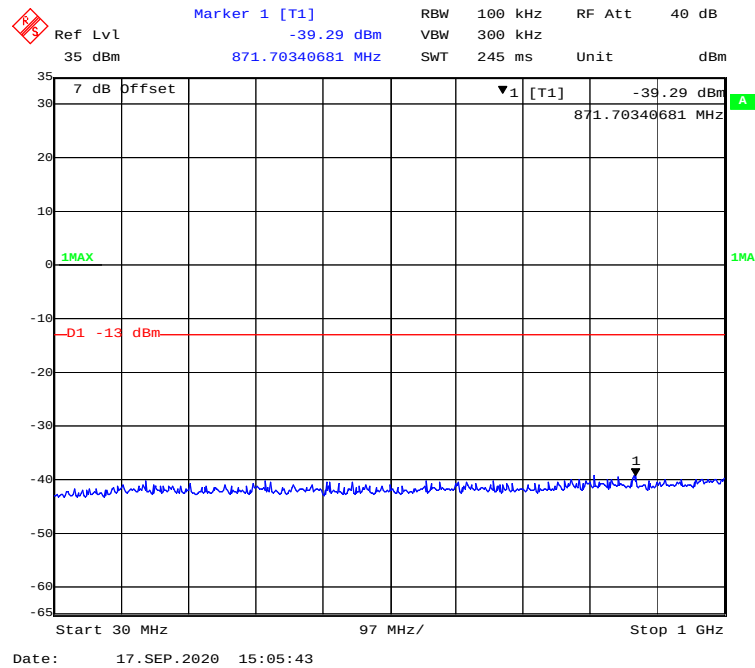
30 MHz – 1GHz(GSM Mode), High channel



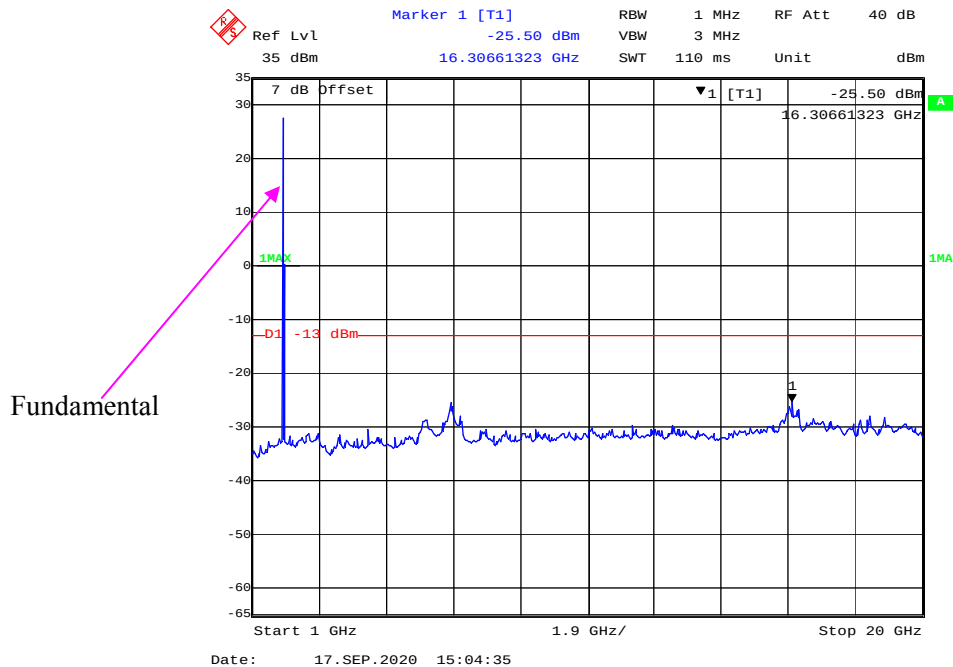
1 GHz – 20 GHz (GSM Mode), High channel



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



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



RBW 100 kHz RF Att 40 dB
 VBW 300 kHz
 SWT 245 ms

Ref Lvl 35 dBm
 Unit dBm

Marker 1 [T1]
 -39.05 dBm
 968.89779559 MHz

7 dB Offset
 1MAX
 -D1 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 17.SEP.2020 15:00:34

Marker 1 [T1]
 -25.37 dBm
 6.63527054 GHz

RBW 1 MHz
 VBW 3 MHz
 SWT 110 ms

Ref Lvl 35 dBm
 RF Att 40 dB
 Unit dBm

7 dB Offset
 ▼1 [T1]
 -25.37 dBm
 6.63527054 GHz

1MAX
 -13 dBm

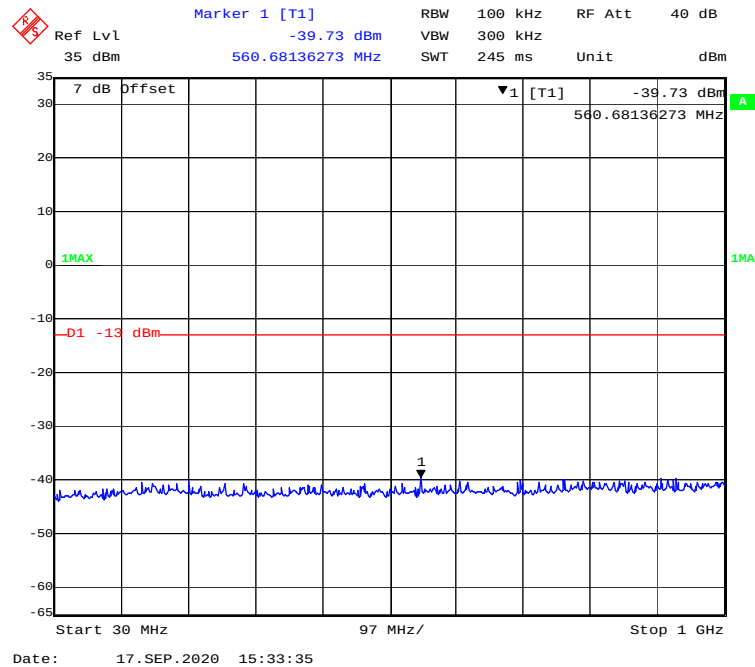
Start 1 GHz
 1.9 GHz/
 Stop 20 GHz

Date: 17.SEP.2020 15:02:02

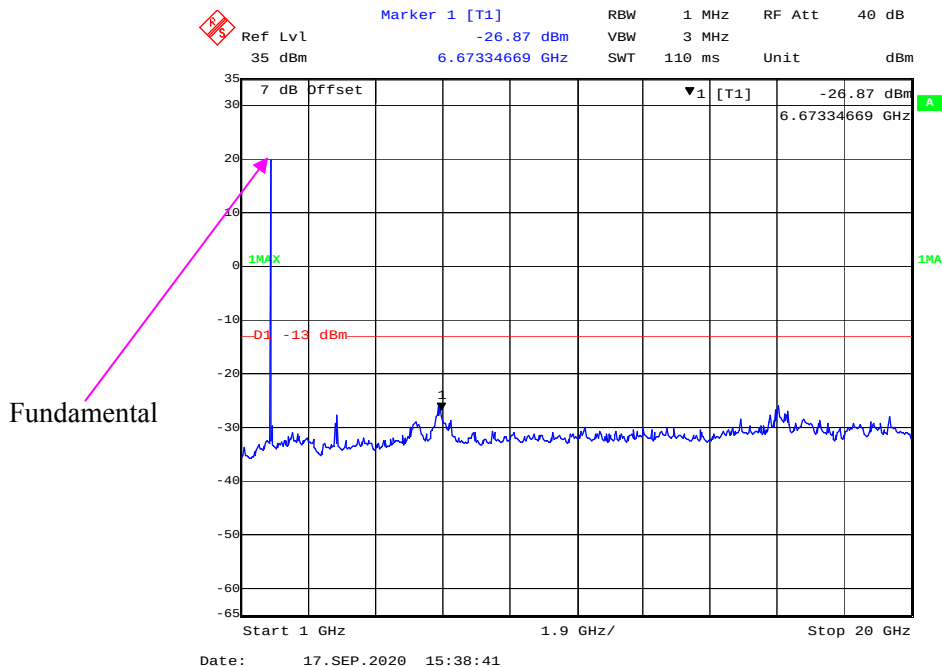
Fundamental

WCDMA Band II:

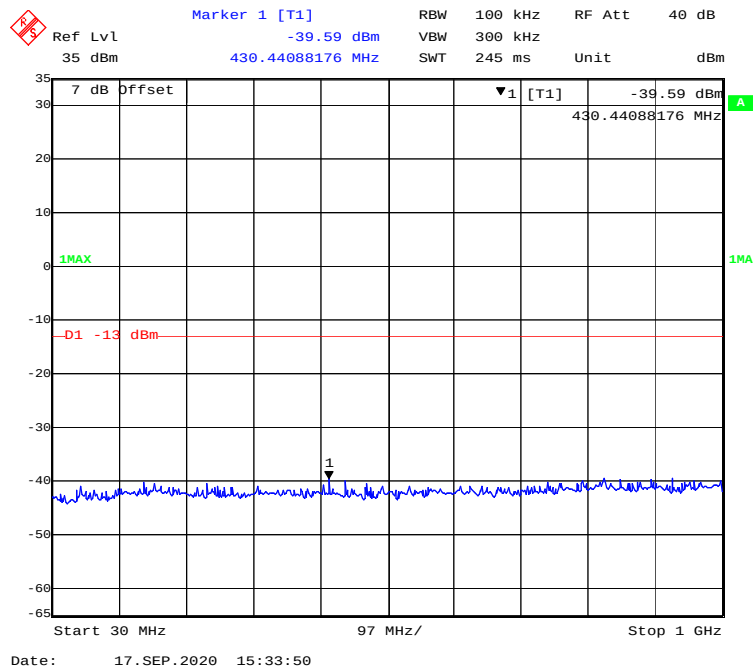
30 MHz – 1GHz WCDMA (Rel 99) Mode , Low channel



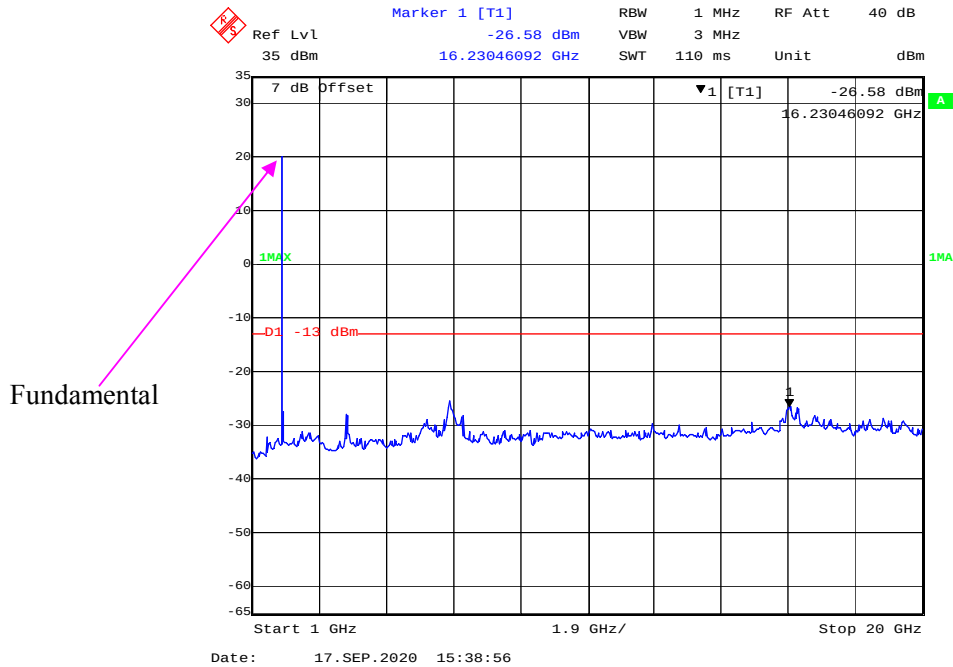
1 GHz – 20 GHz WCDMA (Rel 99) Mode , Low channel



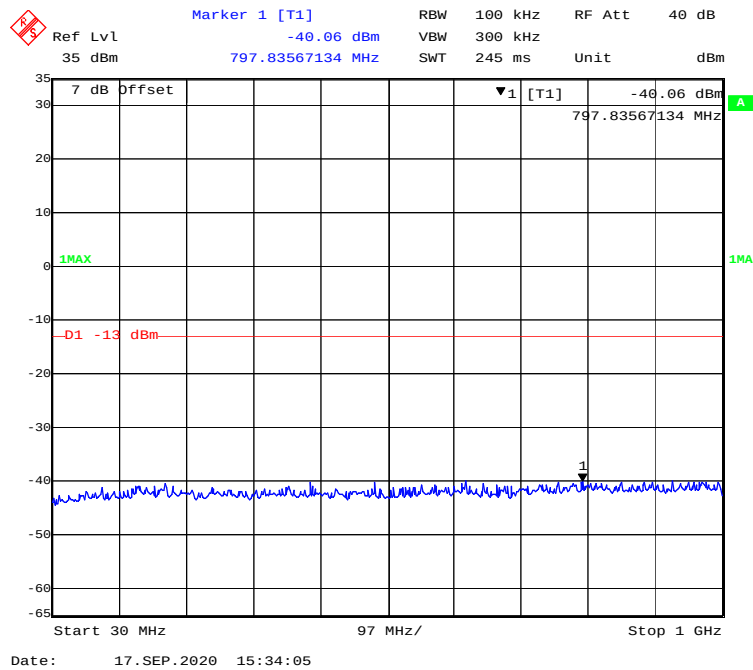
30 MHz – 1GHz WCDMA (HSDPA) Mode , Low channel



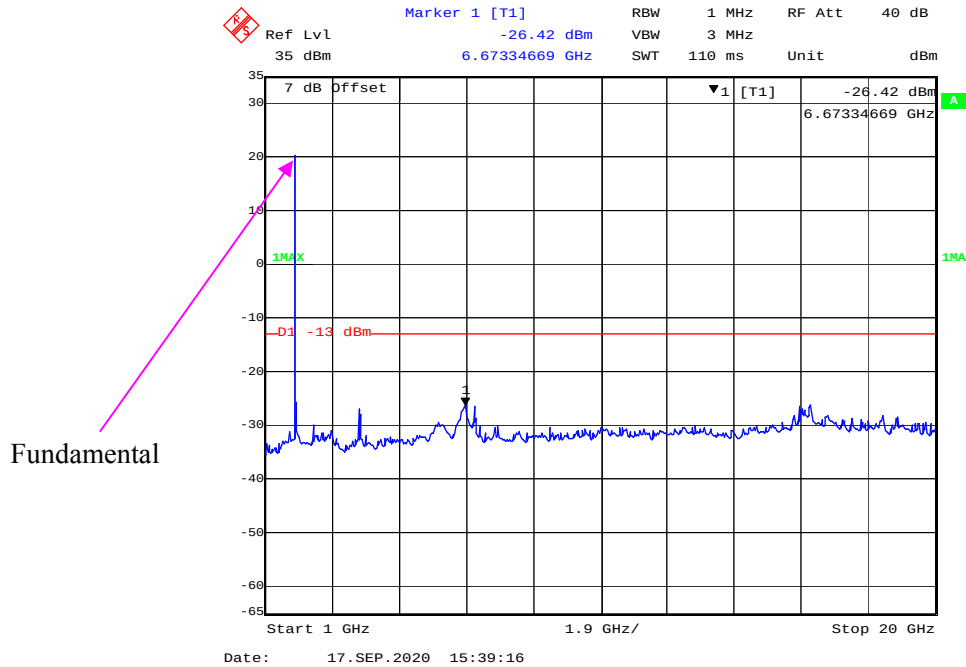
1 GHz – 20 GHz WCDMA (HSDPA) Mode , Low channel



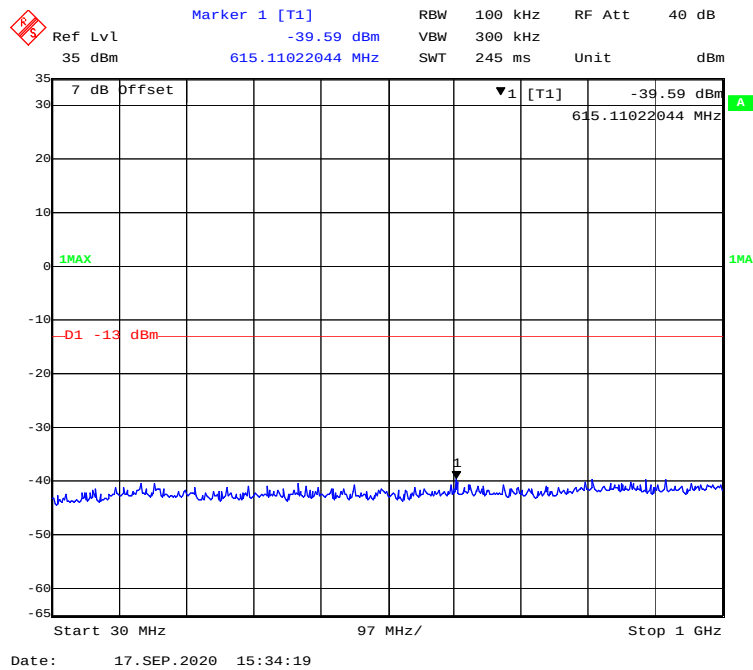
30 MHz – 1GHz WCDMA (HSUPA) Mode , Low channel



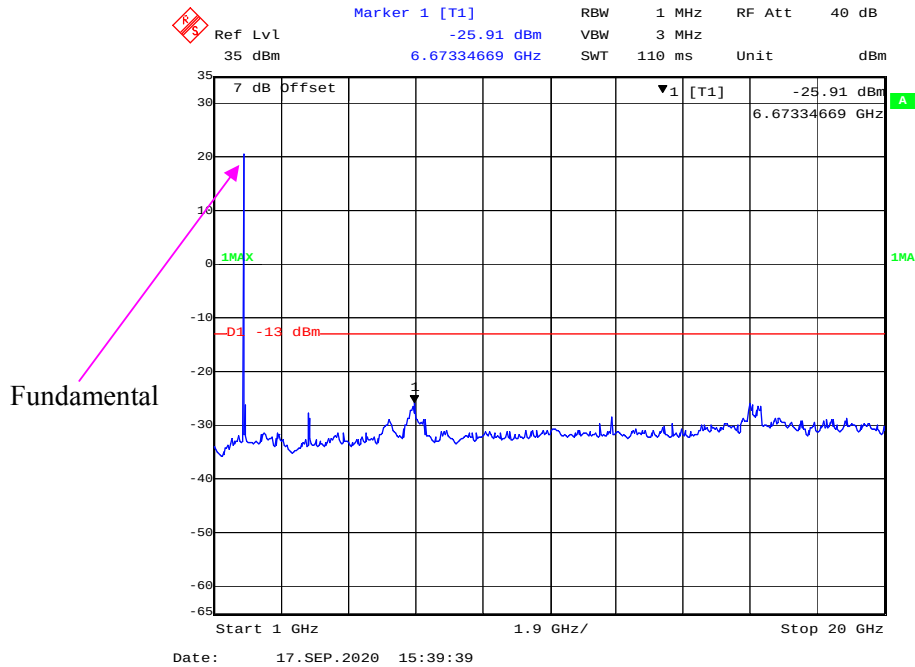
1 GHz – 20 GHz WCDMA (HSUPA) Mode , Low channel



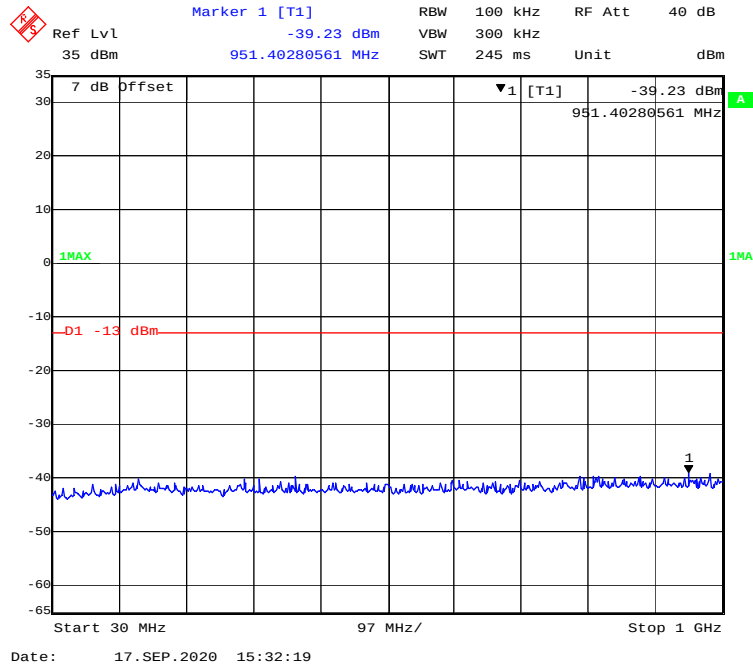
30 MHz – 1GHz WCDMA (HSPA+) Mode , Low channel



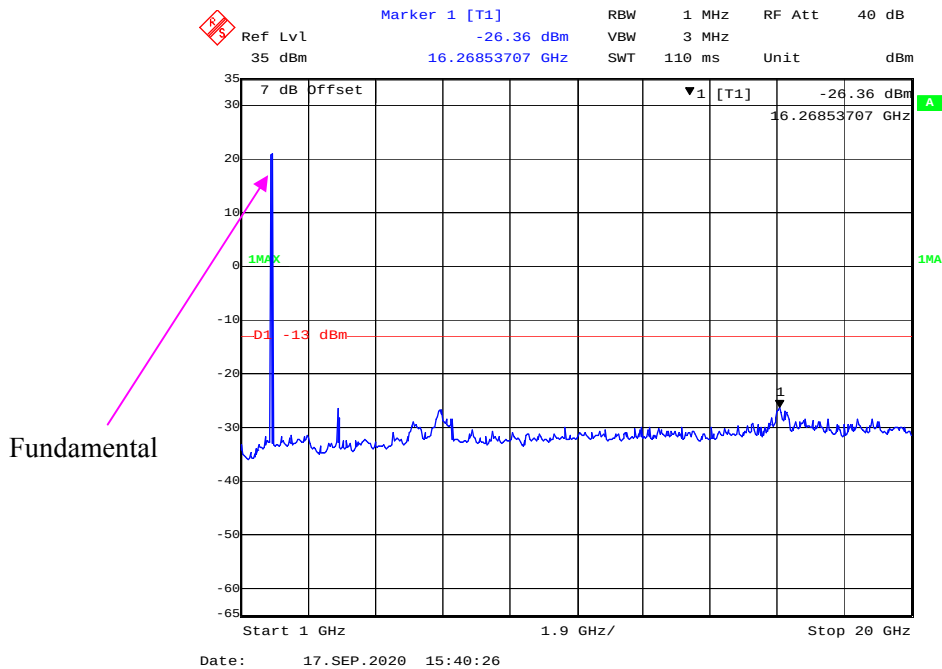
1 GHz – 20 GHz WCDMA (HSPA+) Mode , Low channel



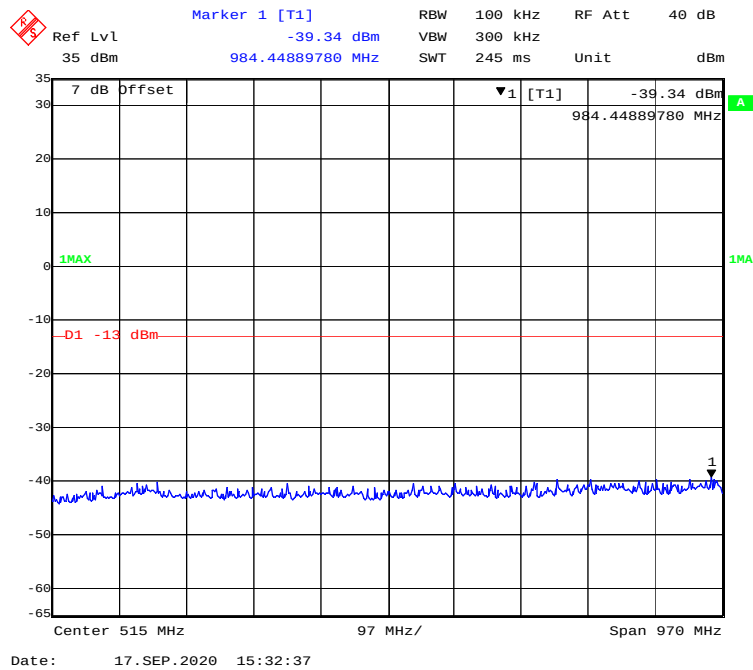
30 MHz – 1GHz WCDMA (Rel 99) Mode , Middle channel



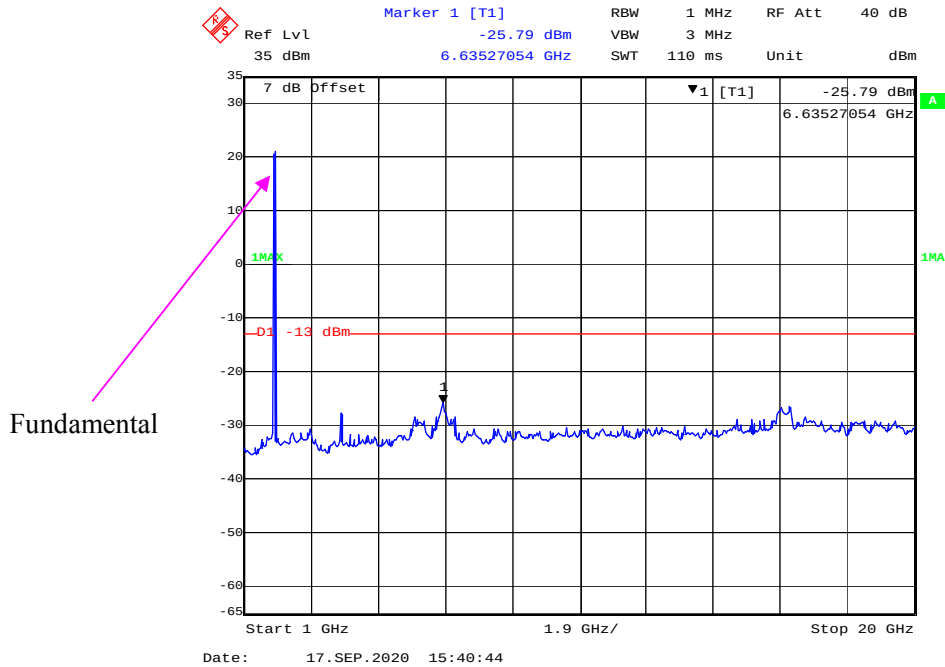
1 GHz – 20 GHz WCDMA (Rel 99) Mode , Middle channel



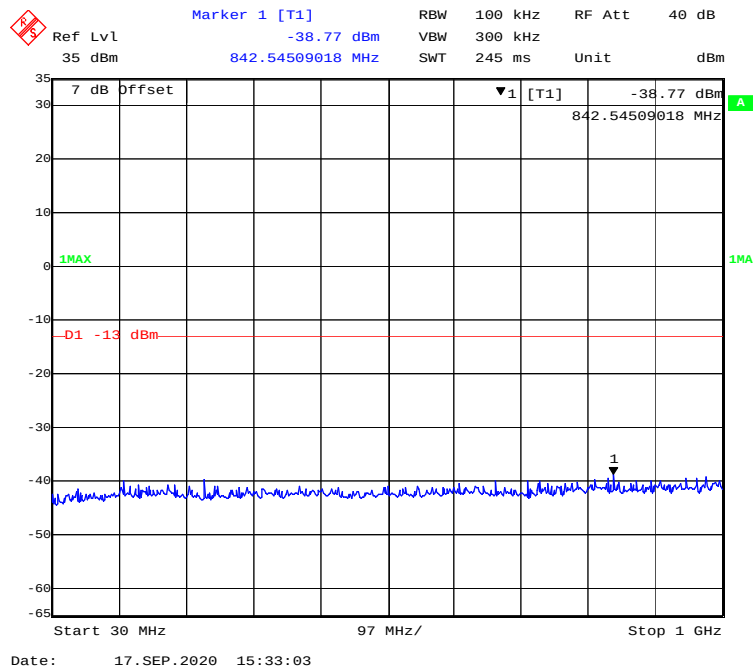
30 MHz – 1GHz WCDMA (HSDPA) Mode , Middle channel



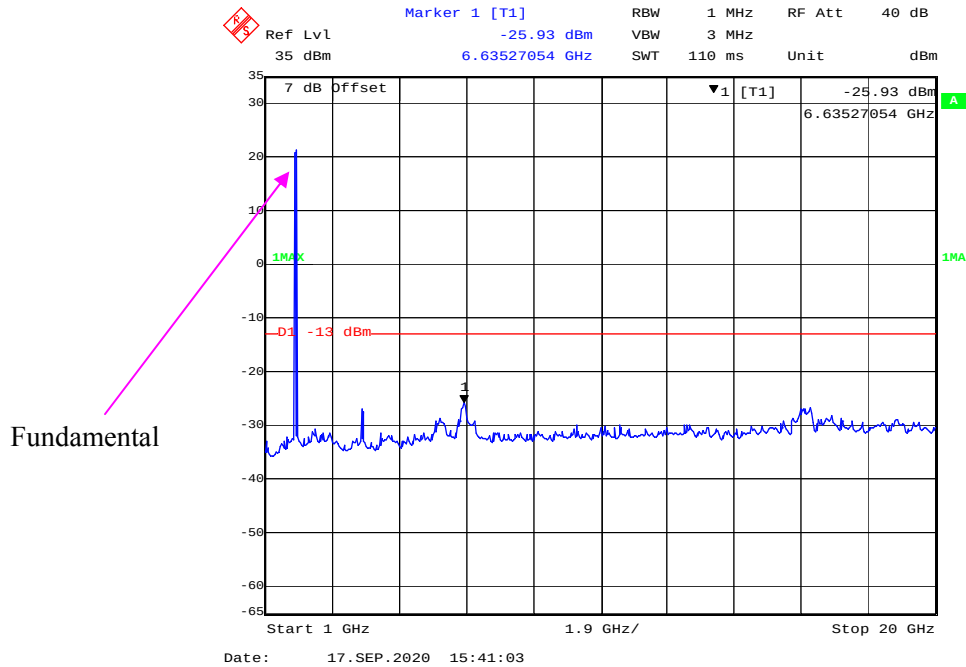
1 GHz – 20 GHz WCDMA (HSDPA) Mode , Middle channel



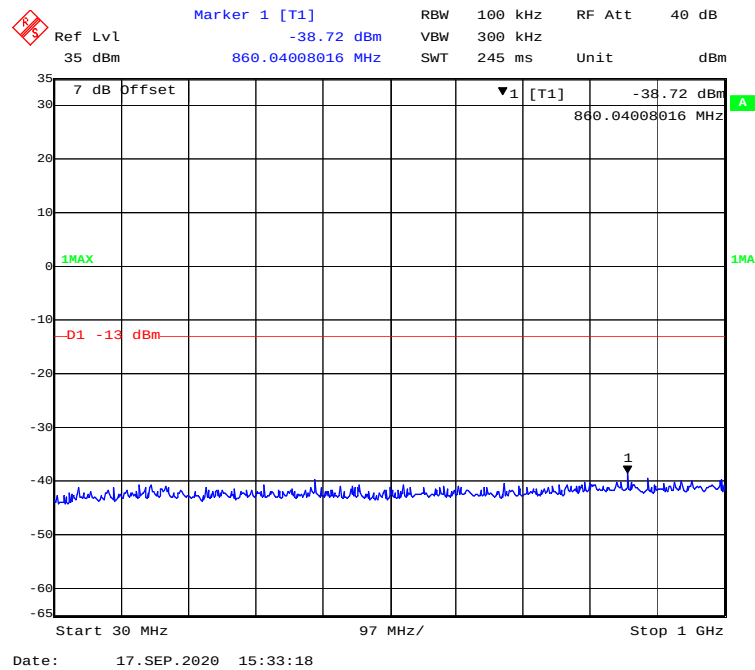
30 MHz – 1GHz WCDMA (HSUPA) Mode , Middle channel



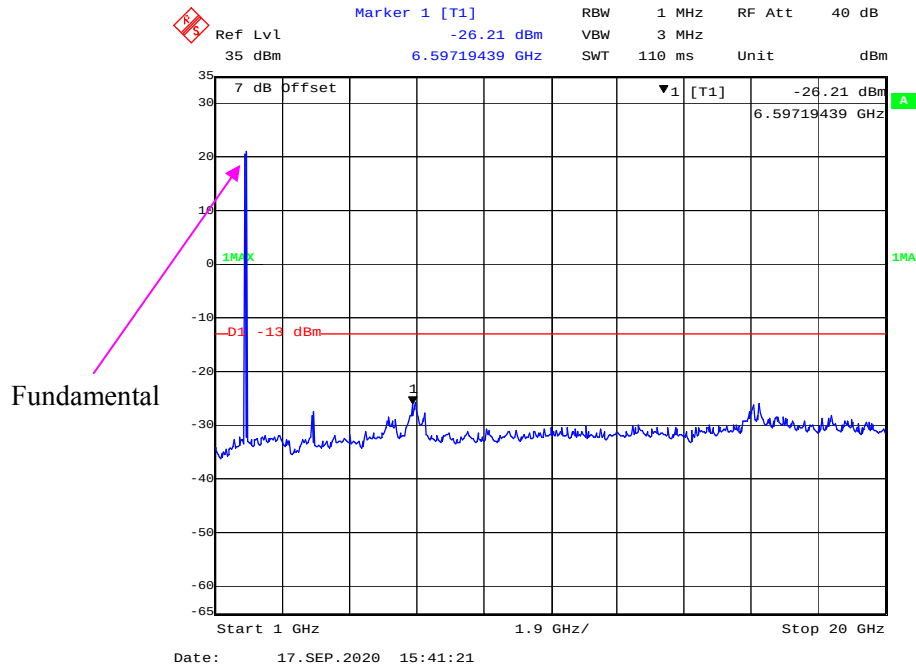
1 GHz – 20 GHz WCDMA (HSUPA) Mode , Middle channel

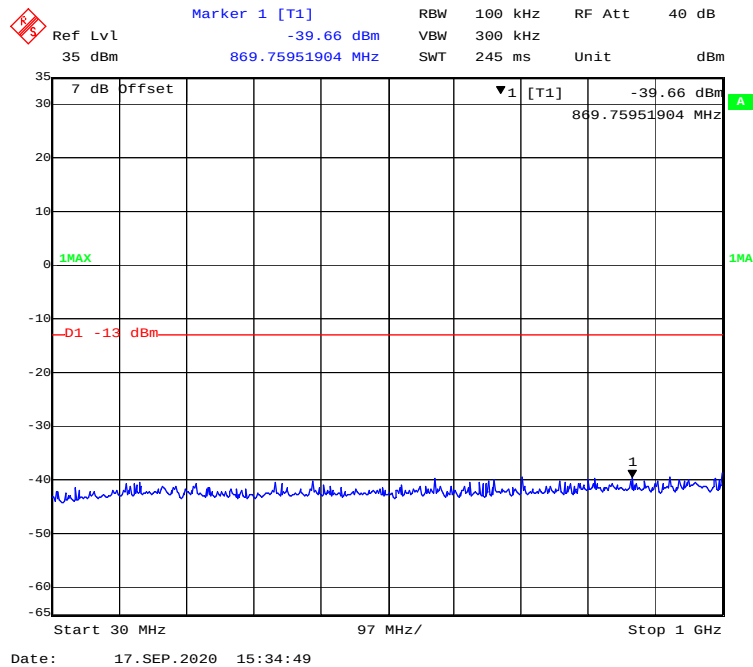
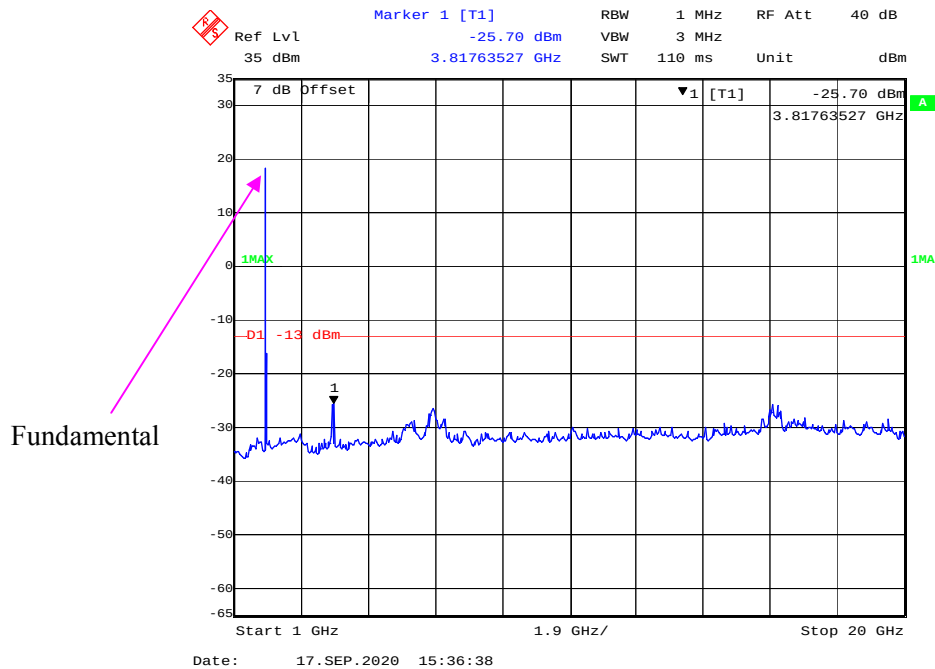


30 MHz – 1GHz WCDMA (HSPA+) Mode , Middle channel

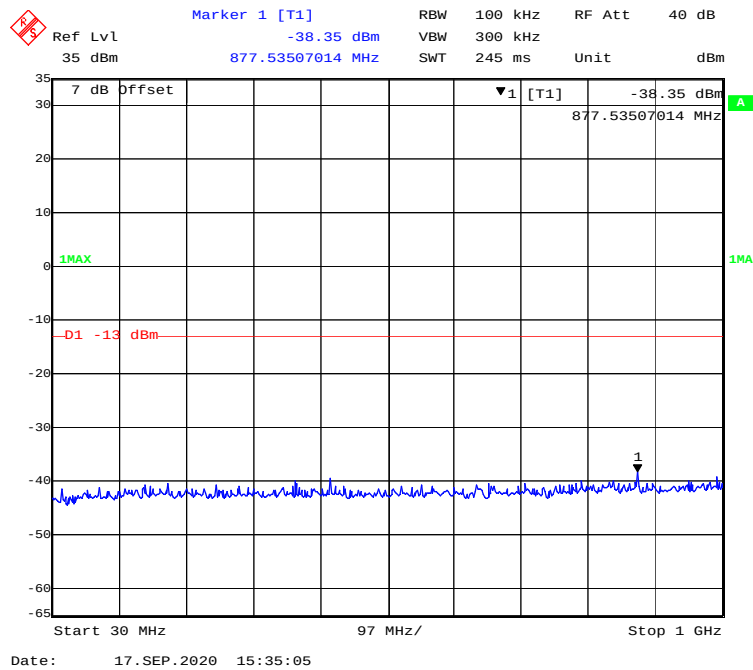


1 GHz – 20 GHz WCDMA (HSPA+) Mode , Middle channel

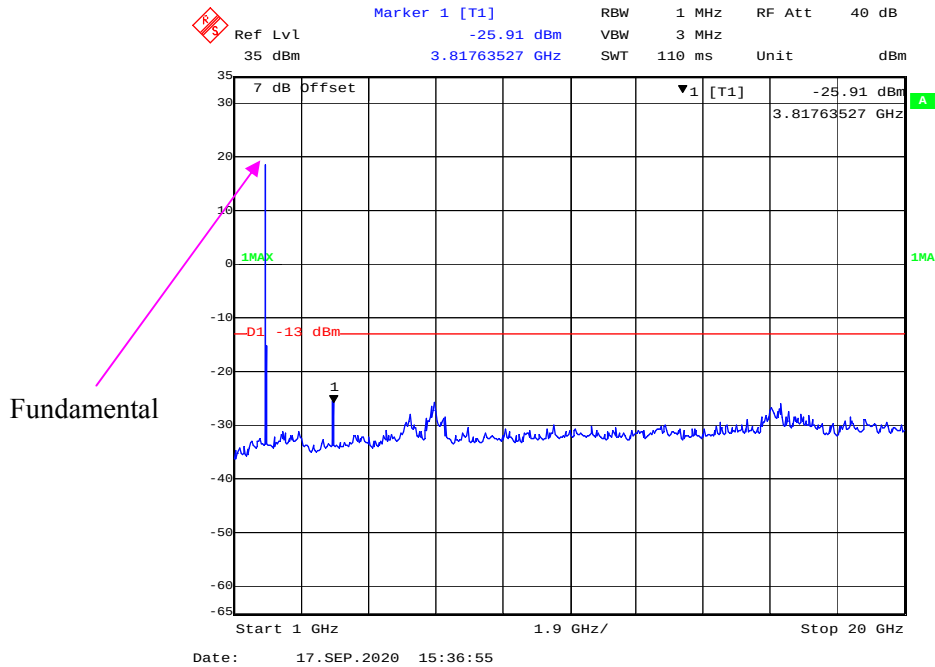


30 MHz – 1GHz WCDMA (Rel 99) Mode , High channel**1 GHz – 20 GHz WCDMA (Rel 99) Mode , High channel**

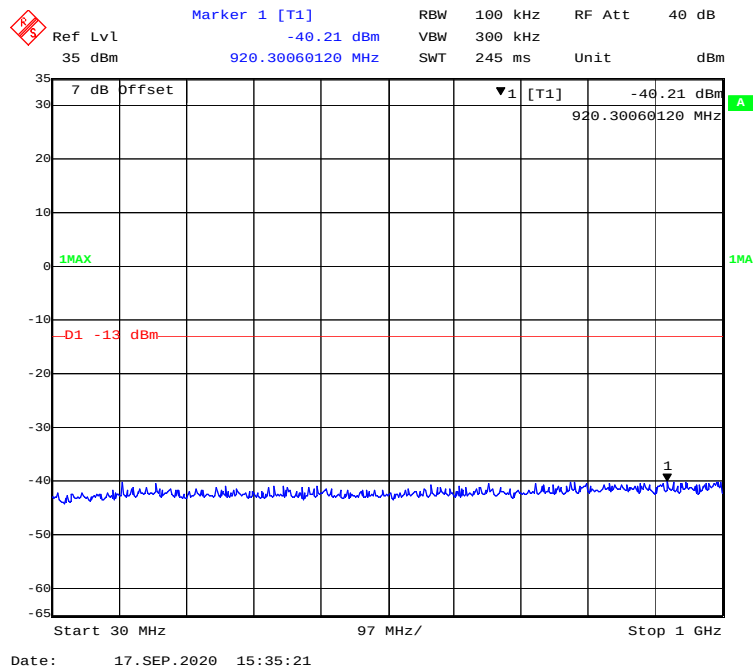
30 MHz – 1GHz WCDMA (HSDPA) Mode , High channel



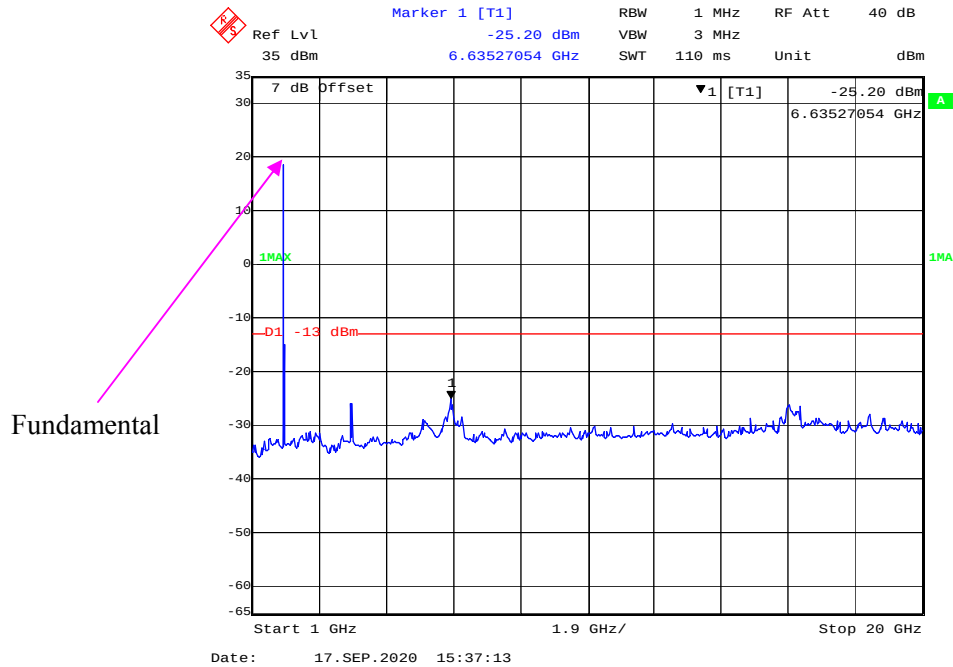
1 GHz – 20 GHz WCDMA (HSDPA) Mode , High channel



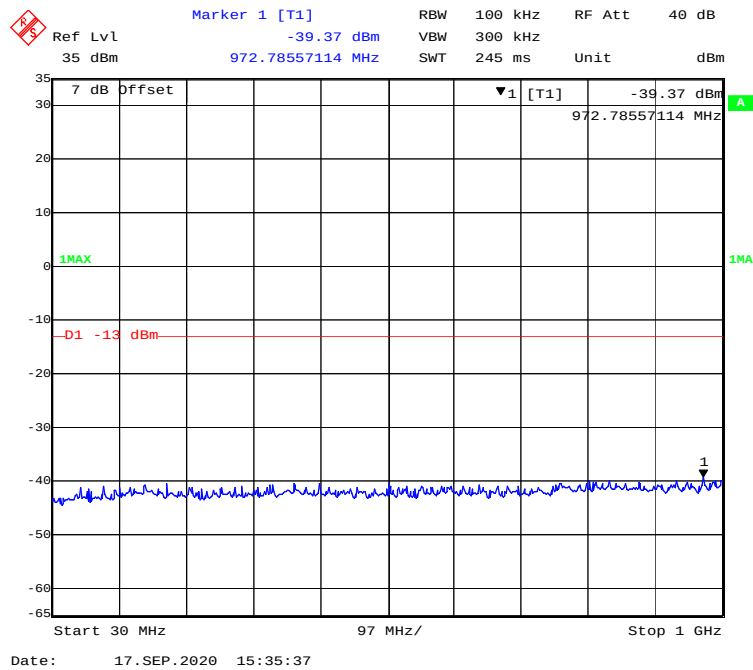
30 MHz – 1GHz WCDMA (HSUPA) Mode , High channel



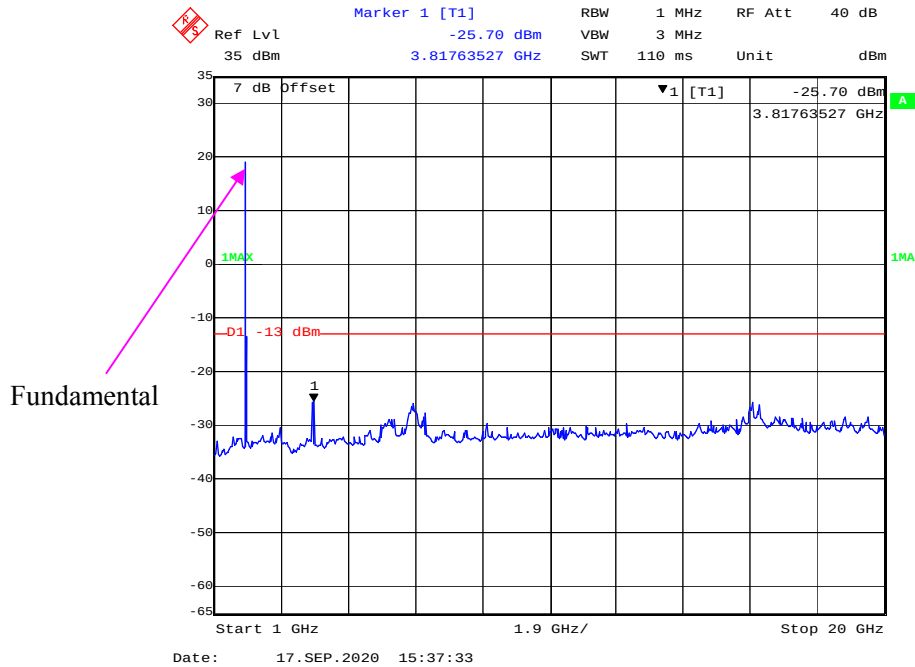
1 GHz – 20 GHz WCDMA (HSUPA) Mode , High channel



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

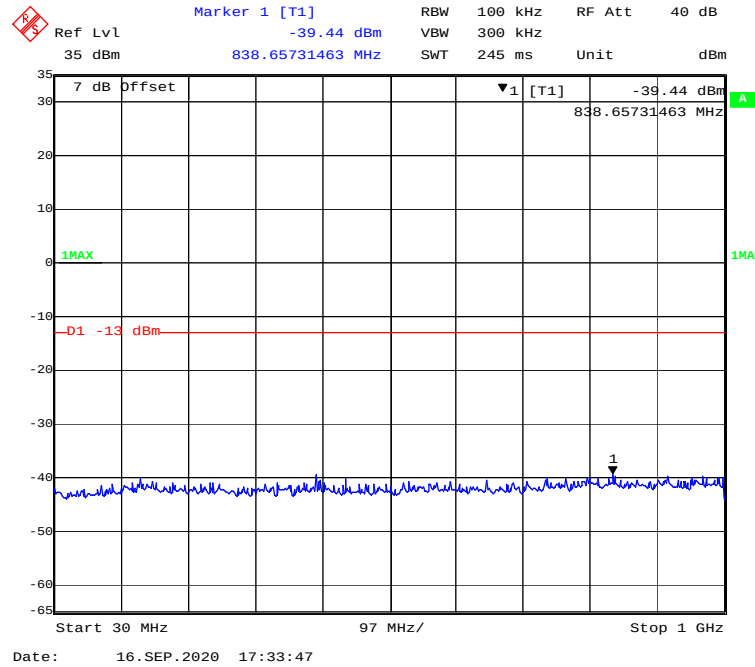


1 GHz – 20 GHz WCDMA (HSPA+) Mode , High channel

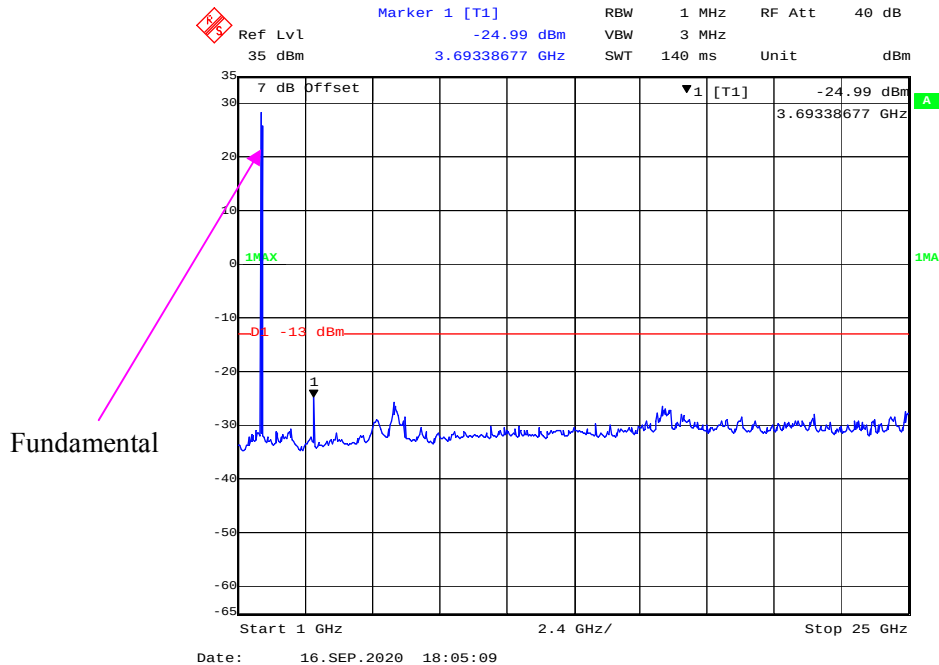


LTE Band 2:

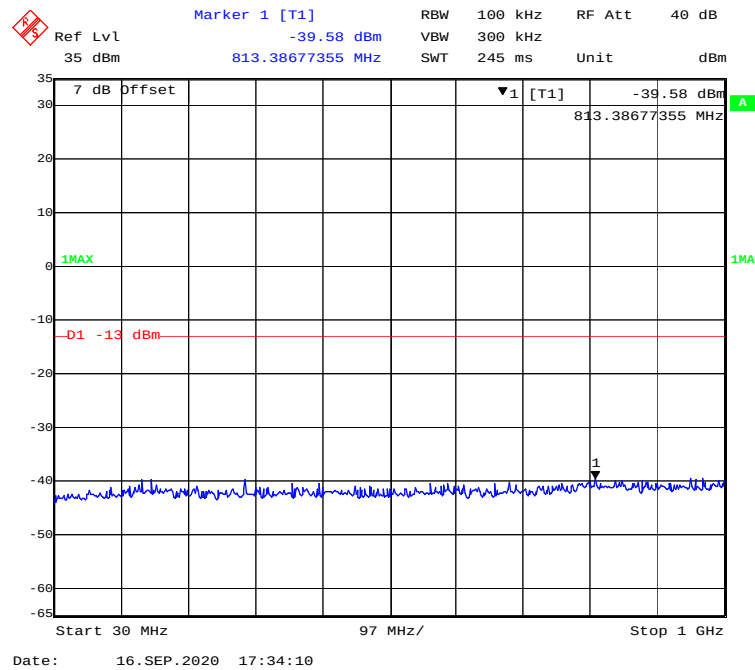
30 MHz - 1 GHz (1.4 MHz, QPSK, Low Channel)



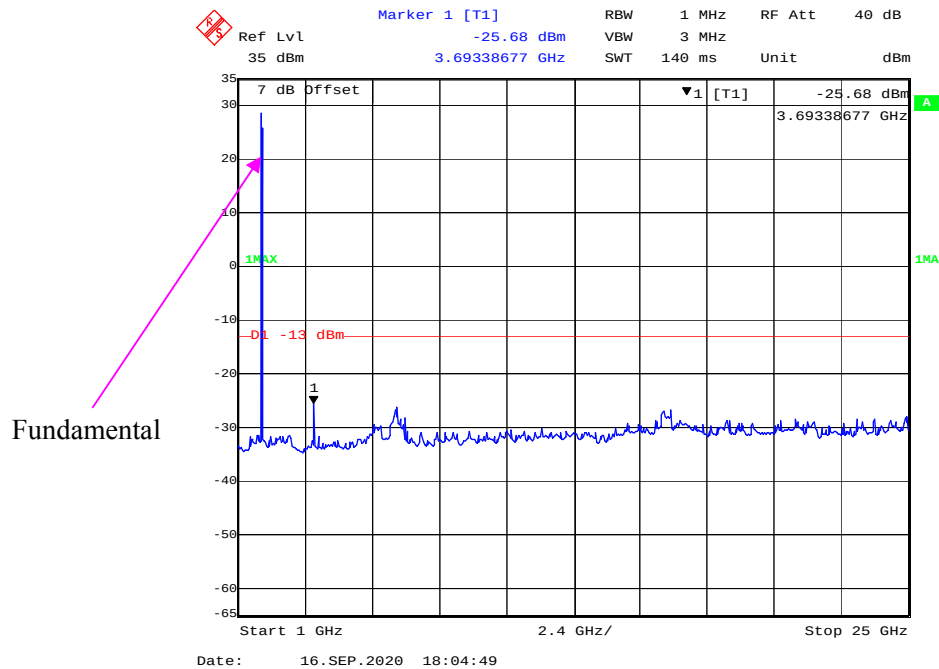
1 GHz – 20 GHz (1.4 MHz, QPSK, Low Channel)



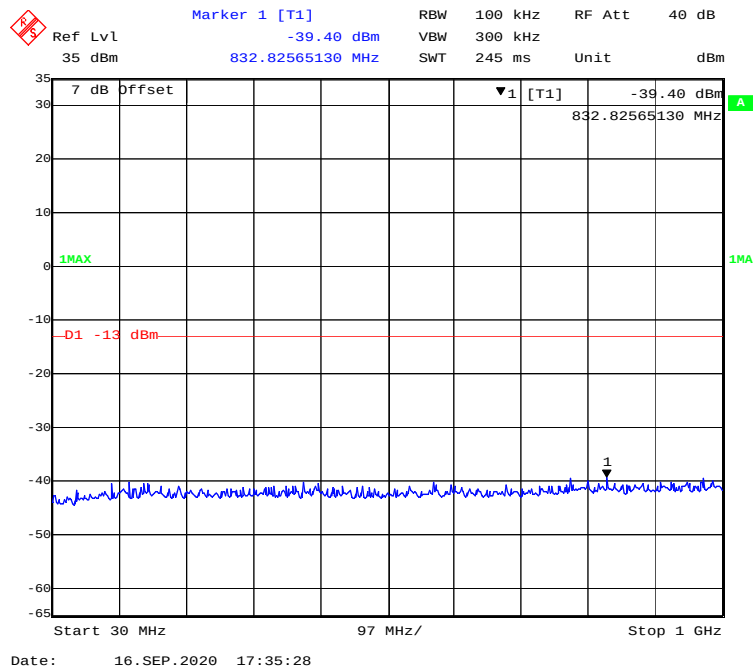
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Low Channel)



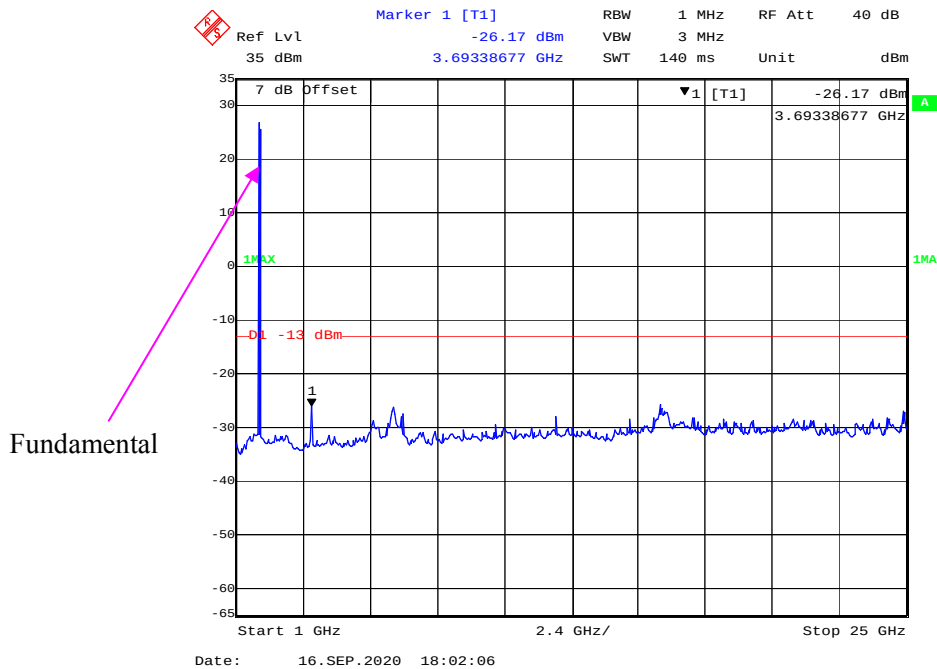
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Low Channel)



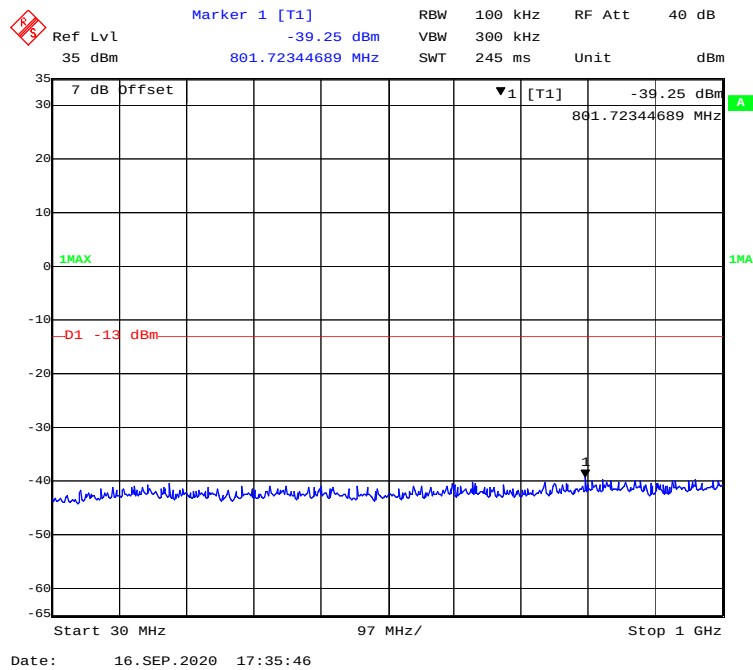
30 MHz - 1 GHz (3 MHz, QPSK, Low Channel)



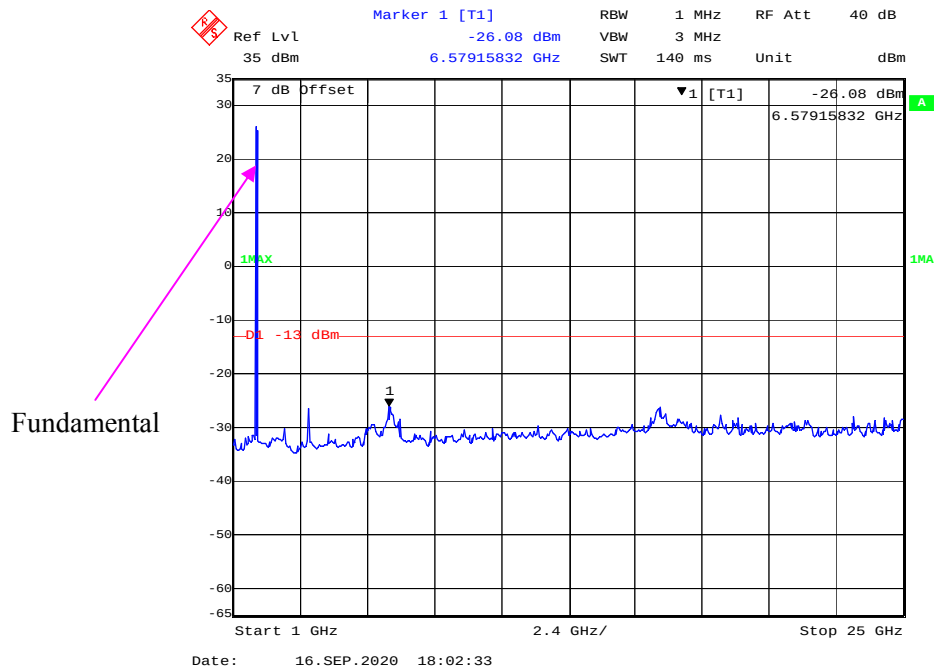
1 GHz – 20 GHz (3 MHz, QPSK, Low Channel)



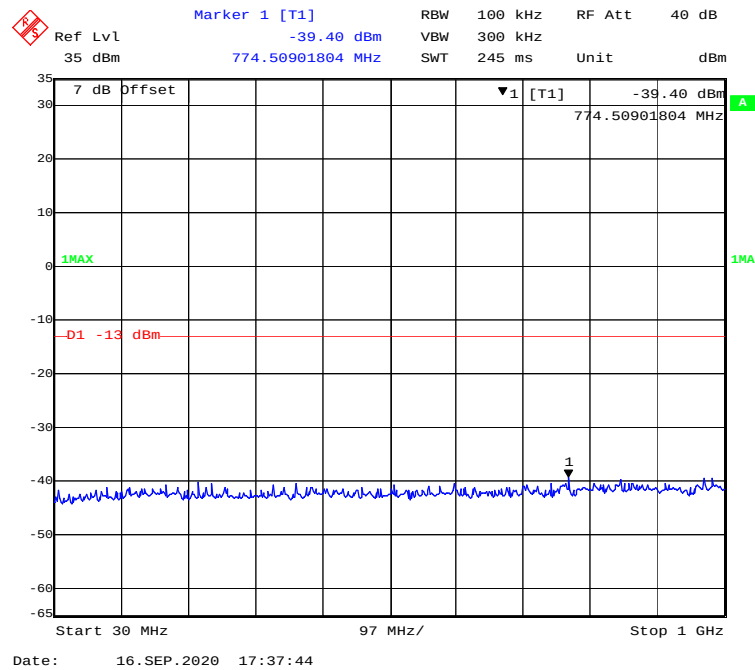
30 MHz - 1 GHz (3 MHz, 16-QAM, Low Channel)



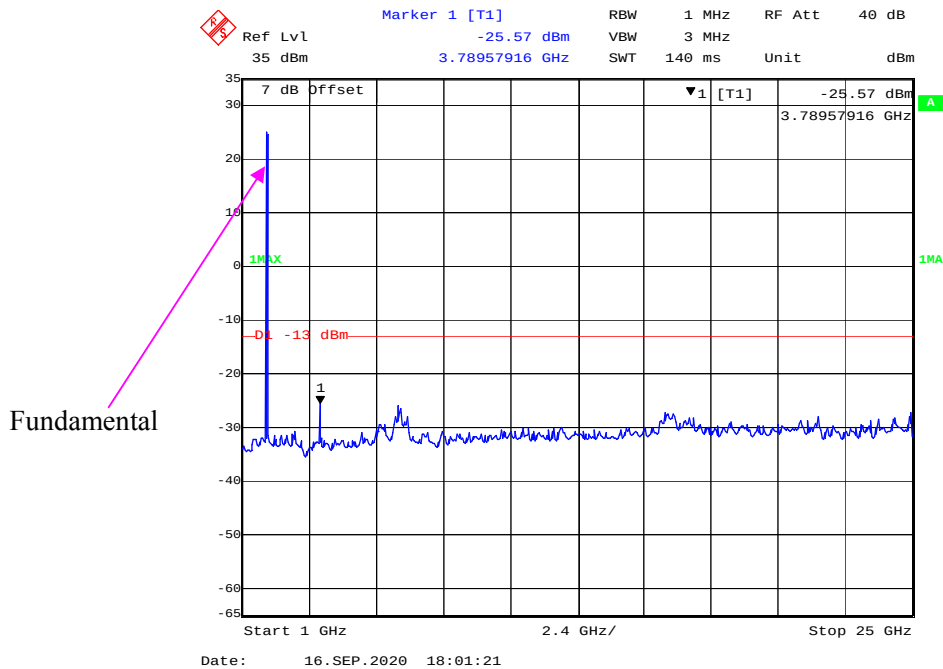
1 GHz – 20 GHz (3 MHz, 16-QAM, Low Channel)



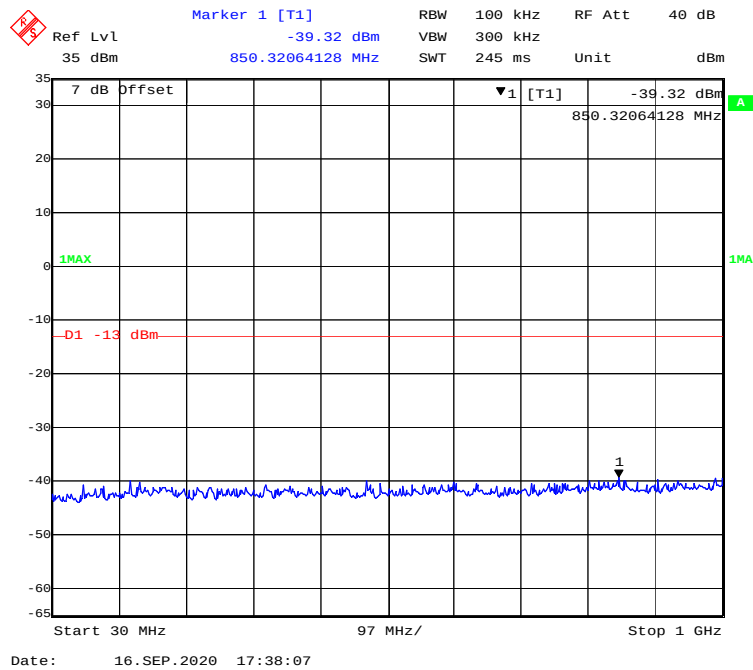
30 MHz - 1 GHz (5 MHz, QPSK, Low Channel)



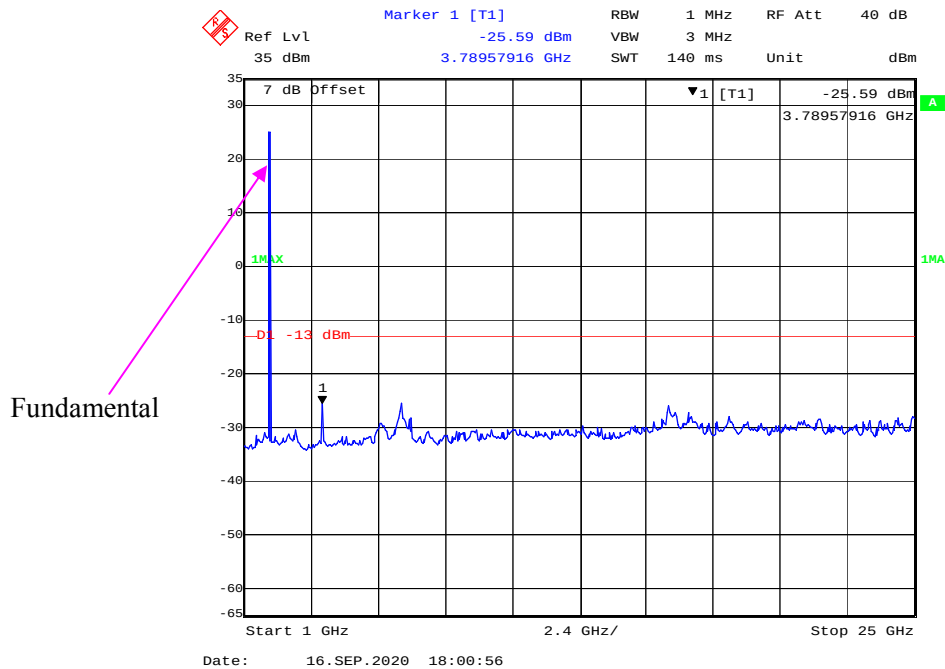
1 GHz – 20 GHz (5 MHz, QPSK, Low Channel)



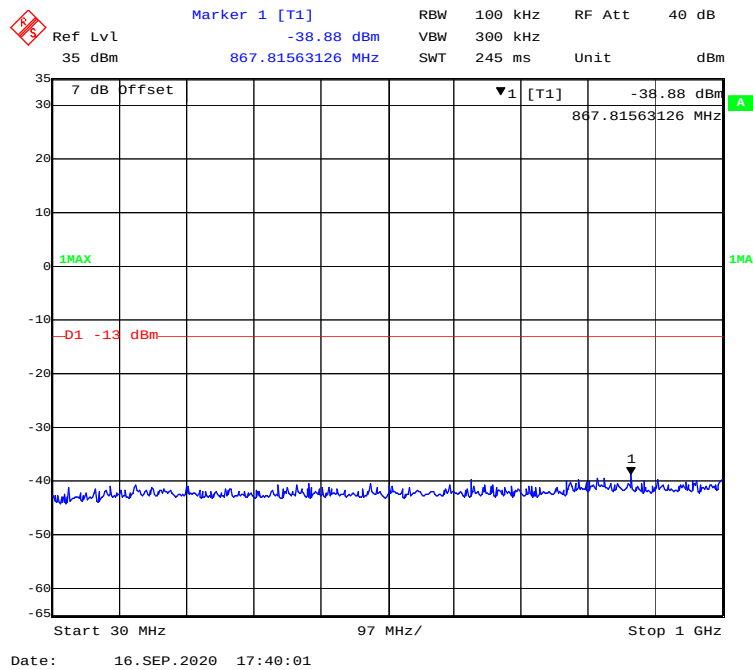
30 MHz - 1 GHz (5 MHz, 16-QAM, Low Channel)



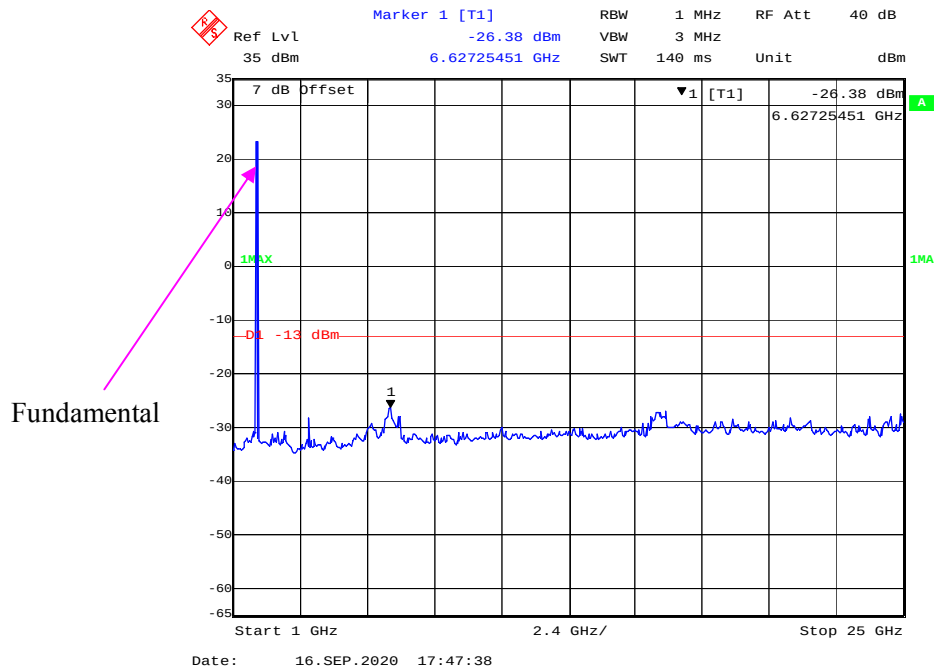
1 GHz - 20 GHz (5 MHz, 16-QAM, Low Channel)



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



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



Ref Lvl 35 dBm
 7 dB Offset
 Marker 1 [T1] -38.55 dBm
 RBW 100 kHz
 VBW 300 kHz
 SWT 245 ms
 RF Att 40 dB
 Unit dBm
 786.17234469 MHz
 -38.55 dBm
 1MAX
 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 16.SEP.2020 17:40:20

Ref Lvl 35 dBm RBW 1 MHz RF Att 40 dB

-26.51 dBm VBW 3 MHz Unit dBm

16.00601202 GHz SWT 140 ms

7 dB Offset

▼1 [T1] -26.51 dBm

16.00601202 GHz

1MAX

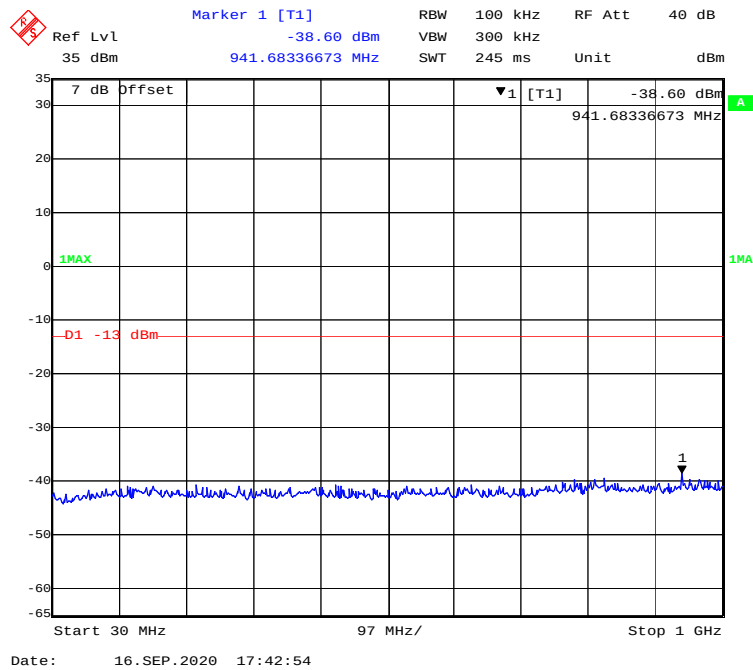
D1 -13 dBm

1

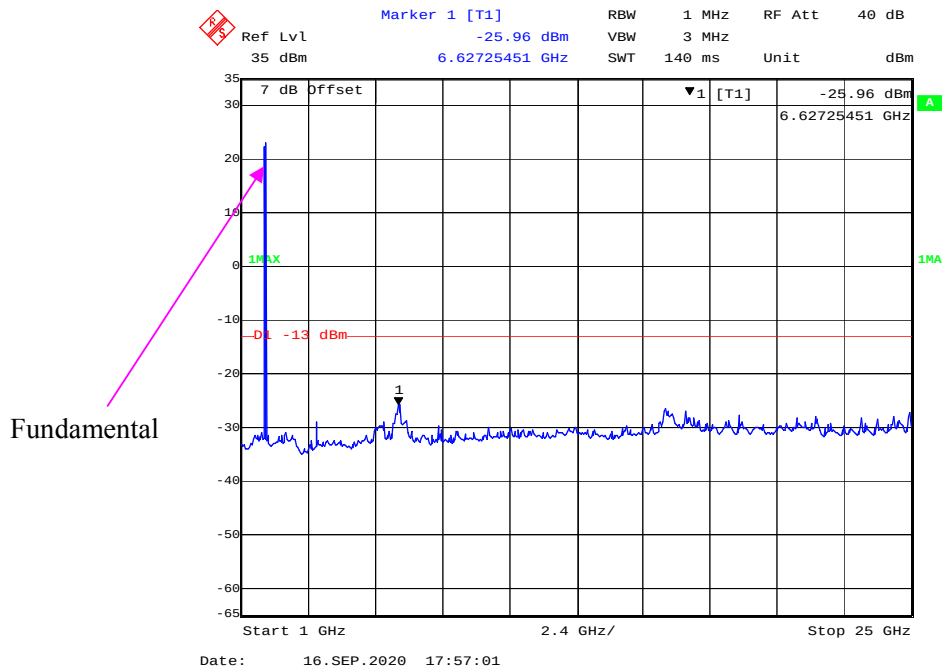
Start 1 GHz 2.4 GHz/ Stop 25 GHz

Date: 16.SEP.2020 17:47:13

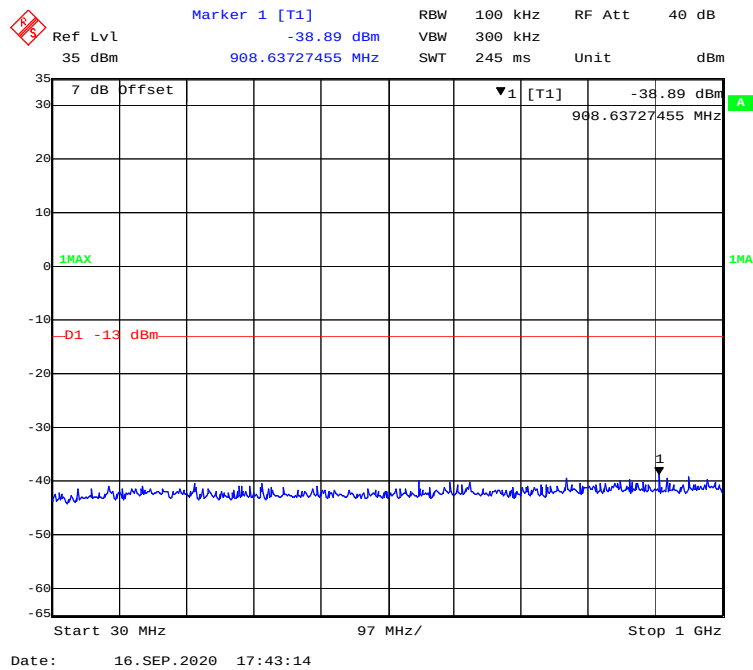
30 MHz - 1 GHz (15 MHz, QPSK, Low Channel)



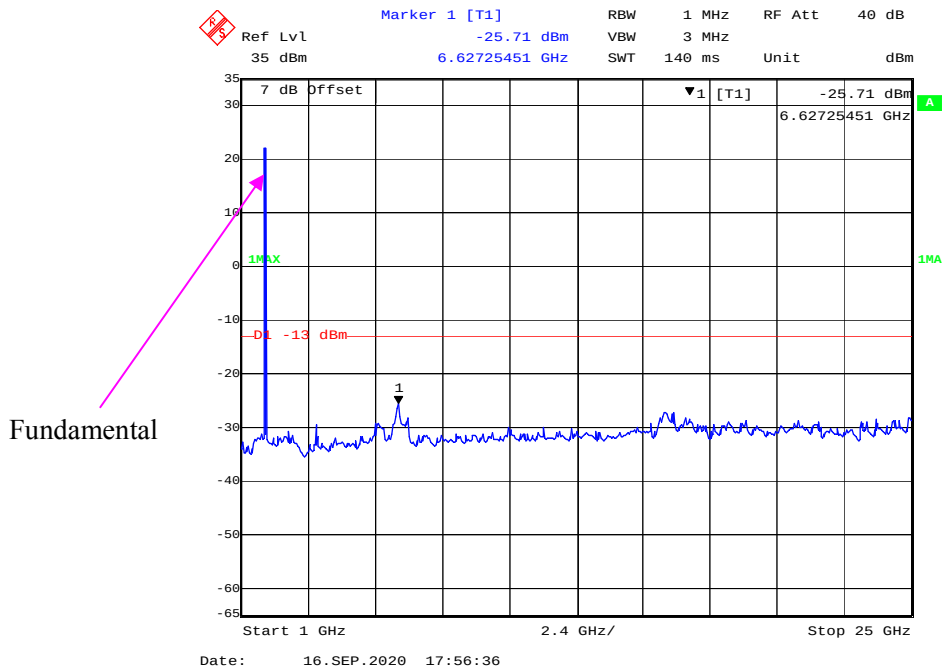
1 GHz – 20 GHz (15 MHz, QPSK, Low Channel)



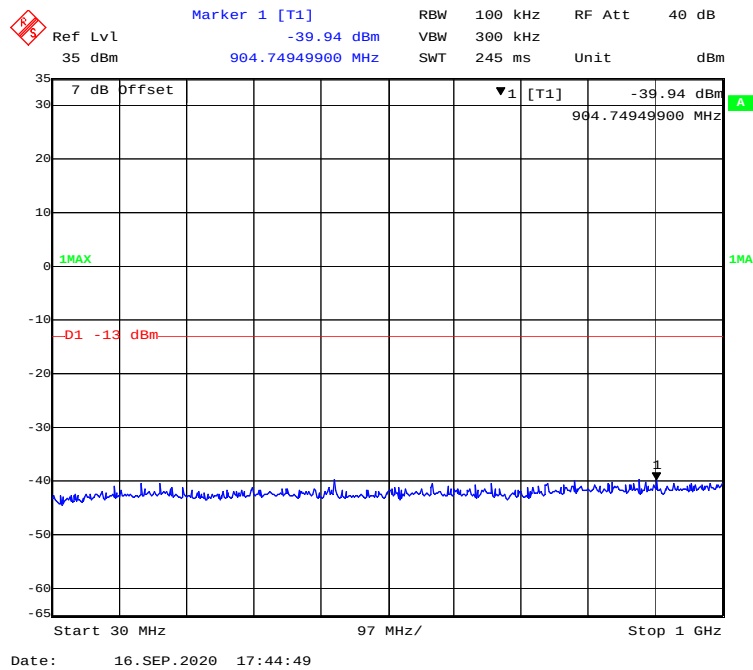
30 MHz - 1 GHz (15 MHz, 16-QAM, Low Channel)



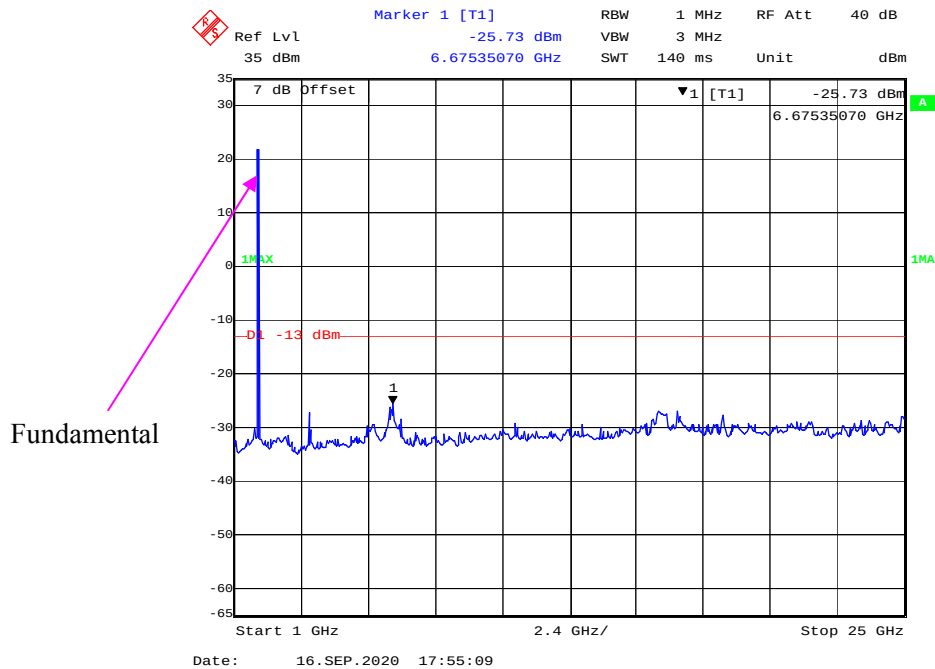
1 GHz – 20 GHz (15 MHz, 16-QAM, Low Channel)



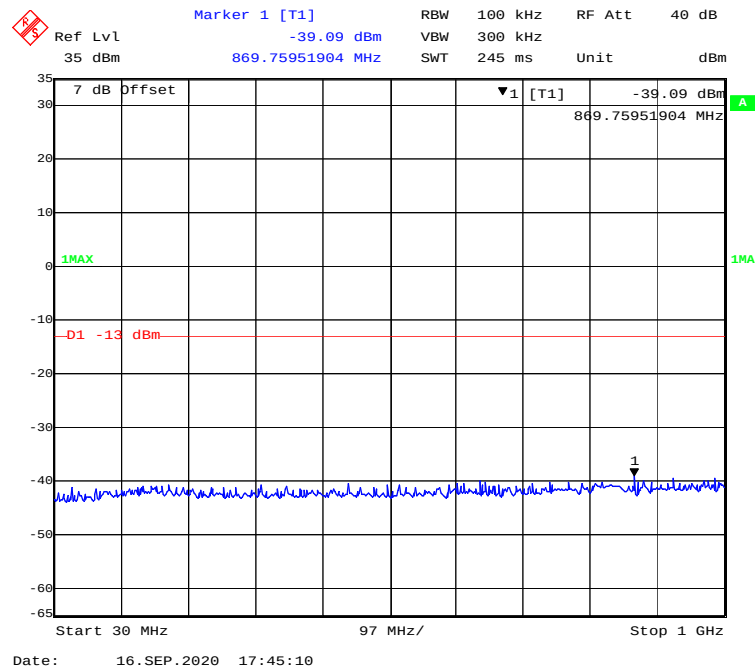
30 MHz - 1 GHz (20 MHz, QPSK, Low Channel)



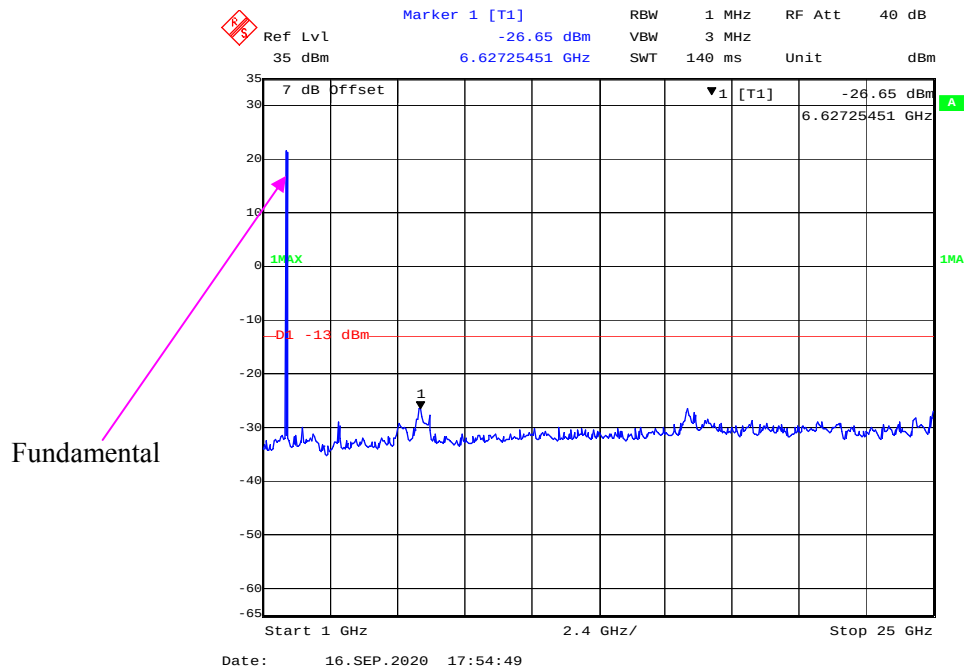
1 GHz – 20 GHz (20 MHz, QPSK, Low Channel)



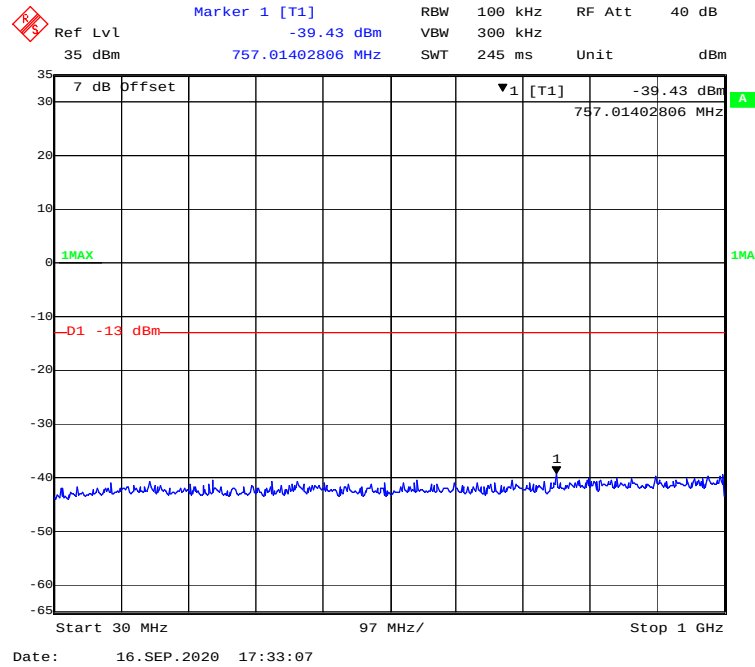
30 MHz - 1 GHz (20 MHz, 16-QAM, Low Channel)



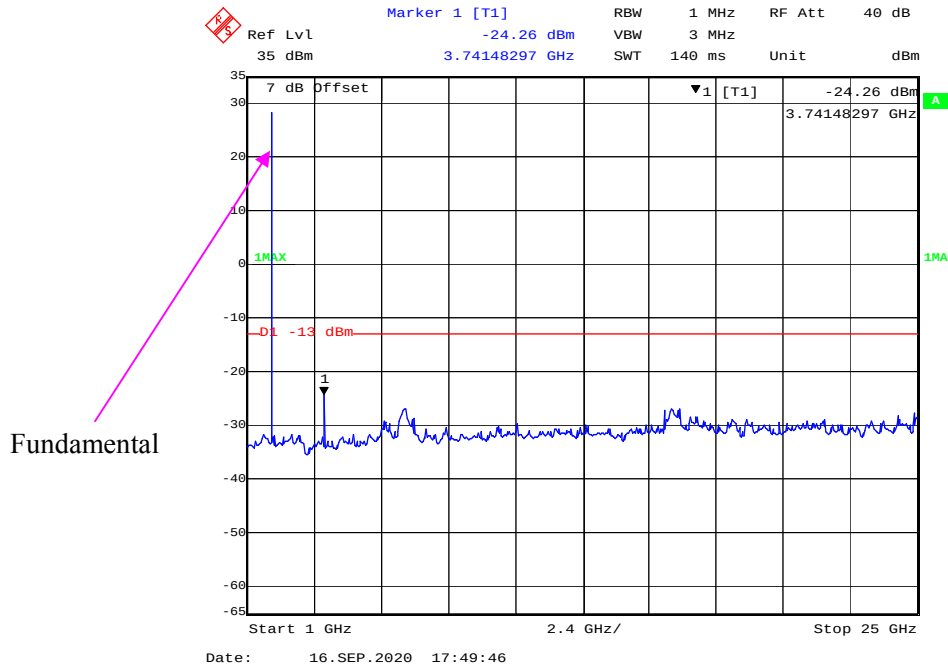
1 GHz – 20 GHz (20 MHz, 16-QAM, Low Channel)



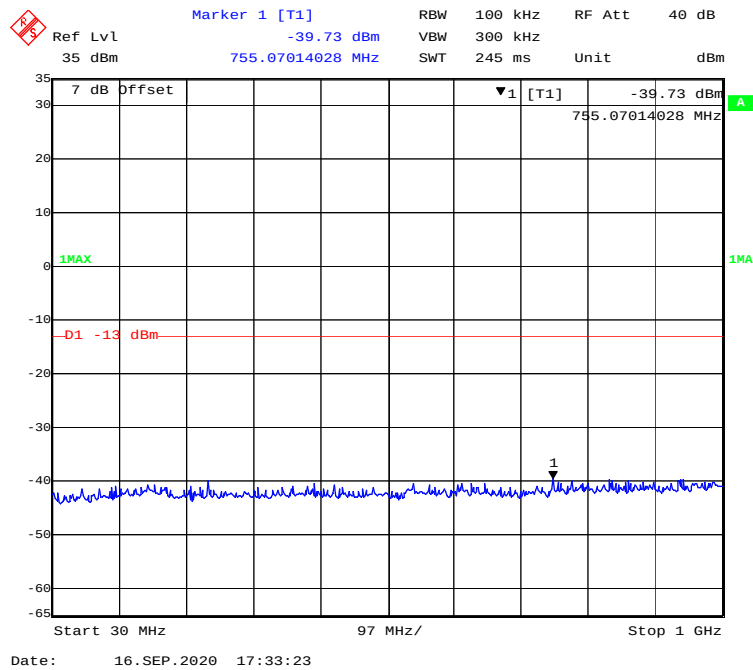
30 MHz - 1 GHz (1.4 MHz, QPSK, Middle Channel)



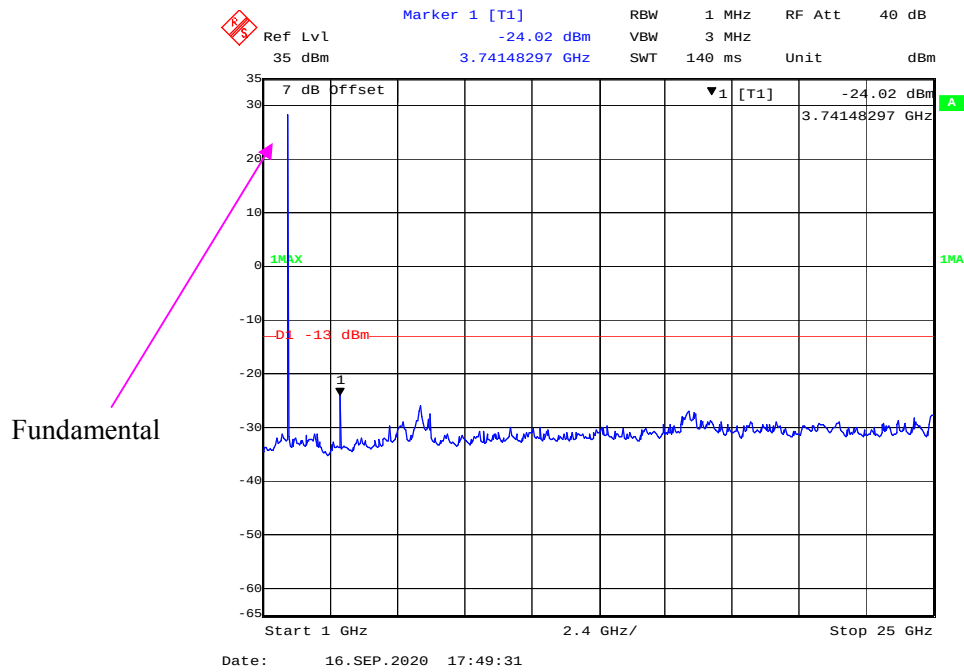
1 GHz – 20 GHz (1.4 MHz, QPSK, Middle Channel)



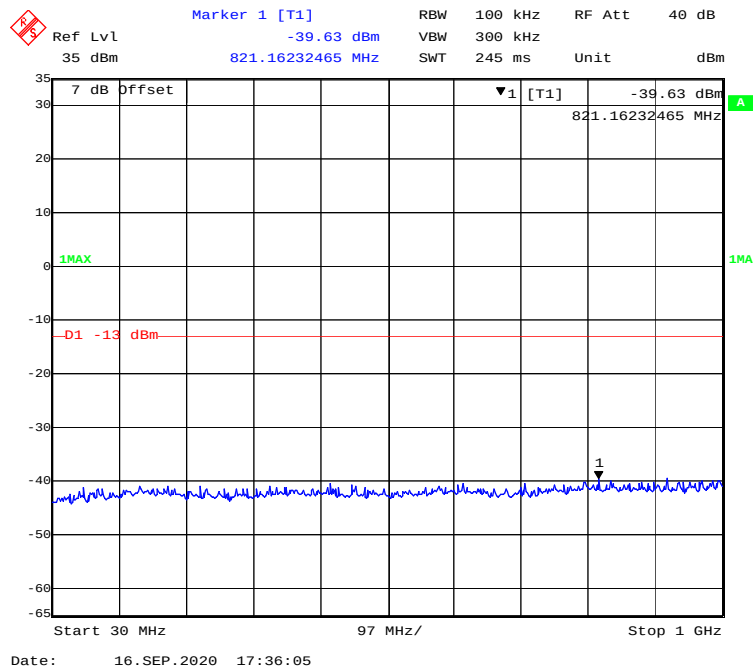
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Middle Channel)



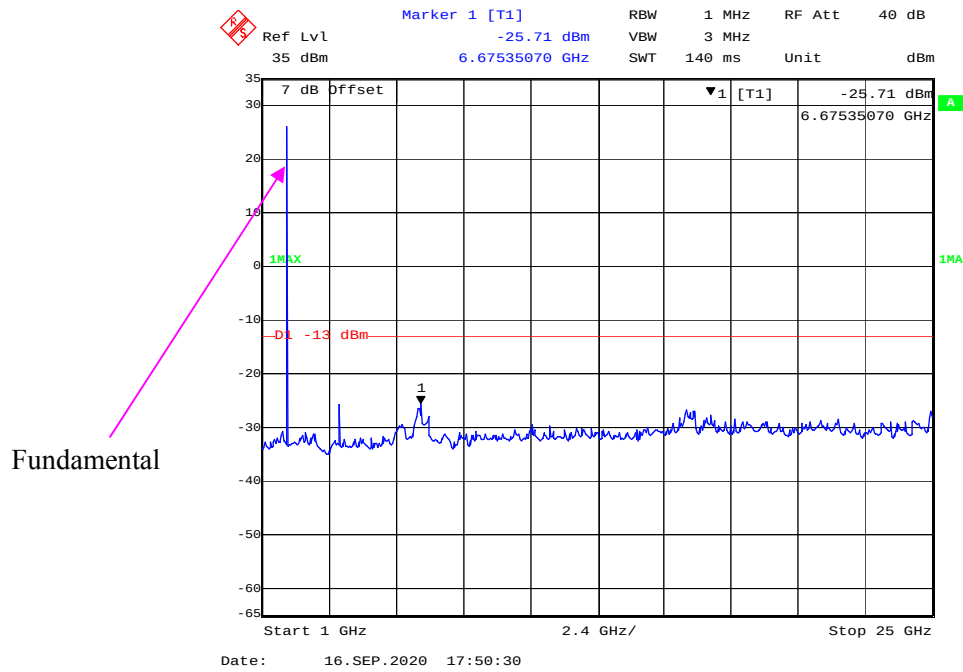
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Middle Channel)



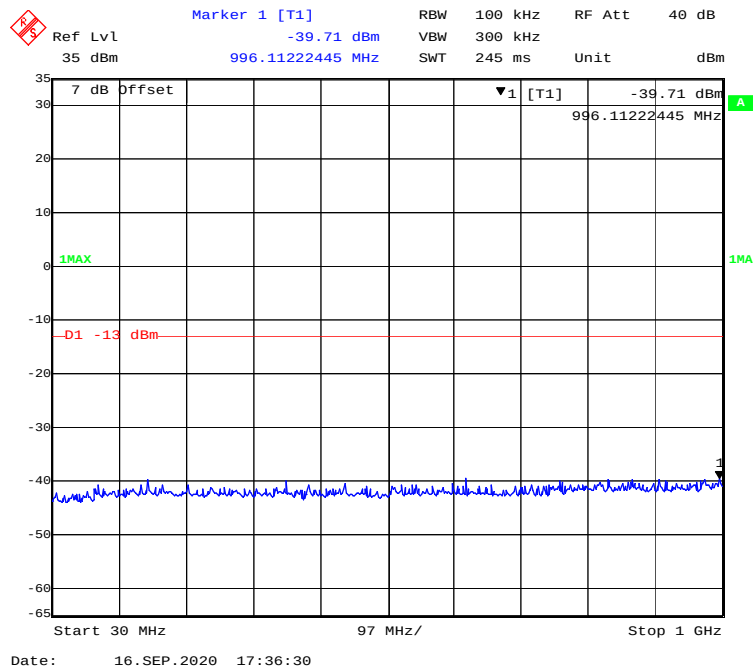
30 MHz - 1 GHz (3 MHz, QPSK, Middle Channel)



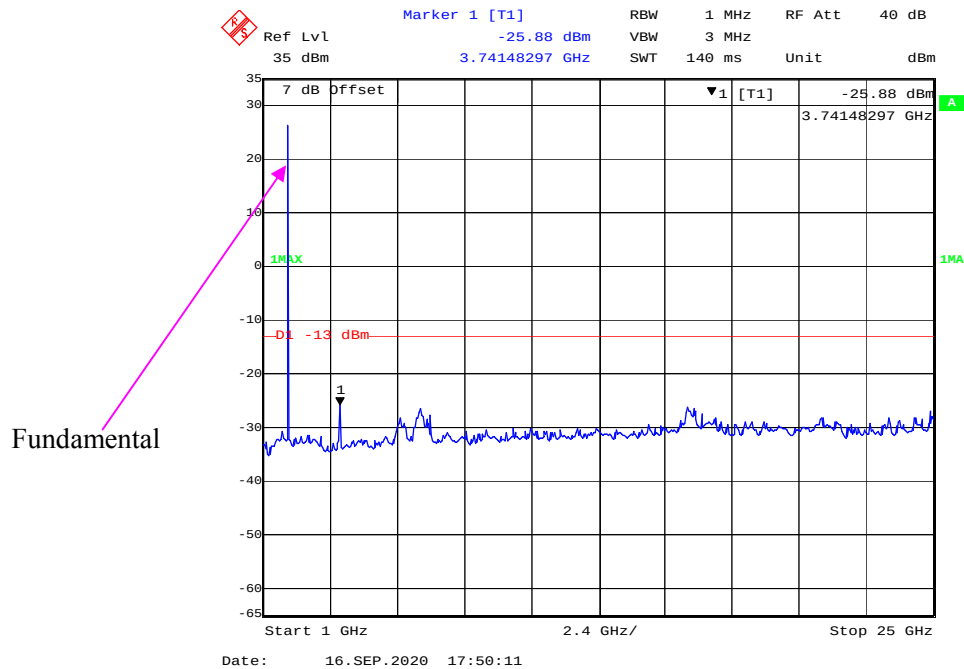
1 GHz – 20 GHz (3 MHz, QPSK, Middle Channel)



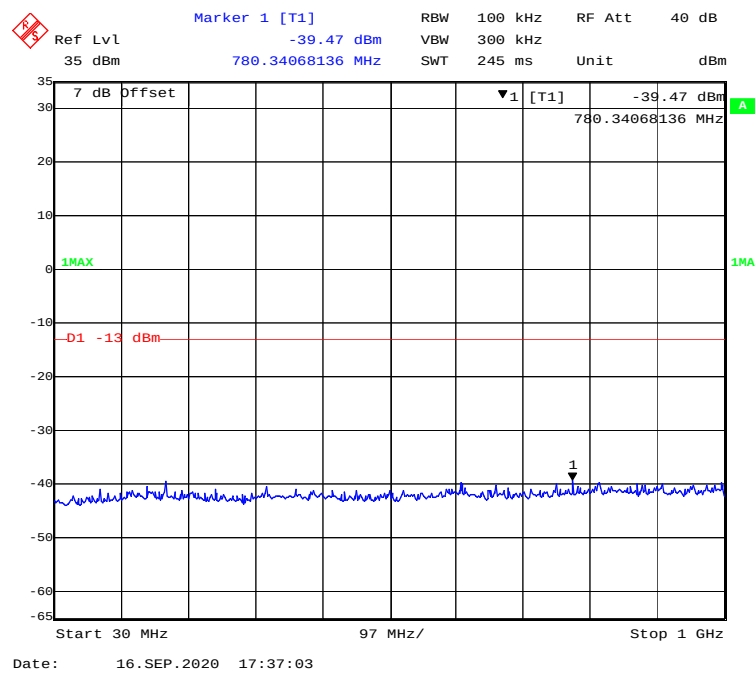
30 MHz - 1 GHz (3 MHz, 16-QAM, Middle Channel)



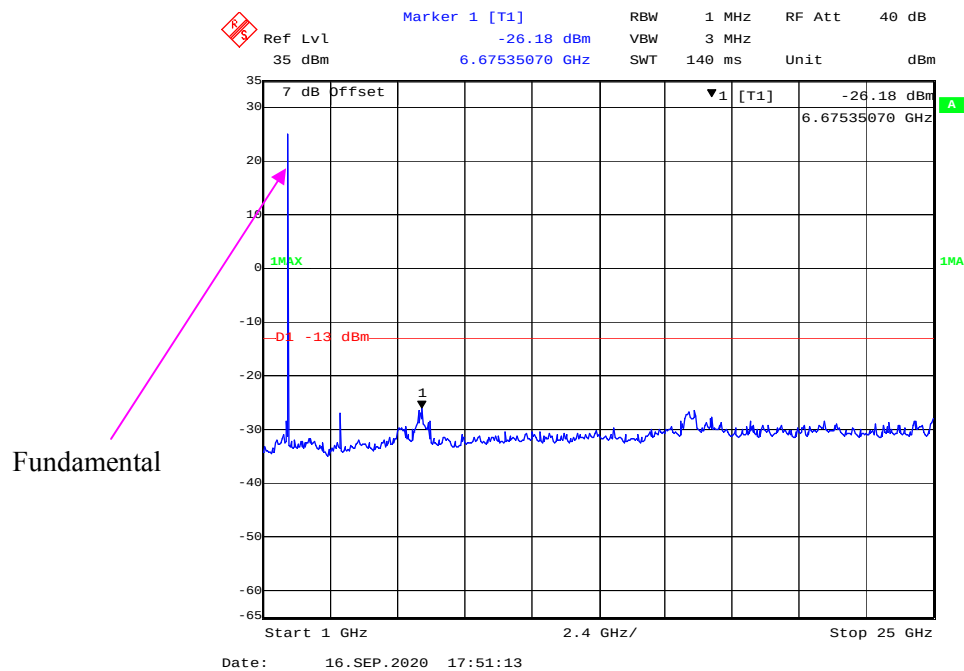
1 GHz – 20 GHz (3 MHz, 16-QAM, Middle Channel)



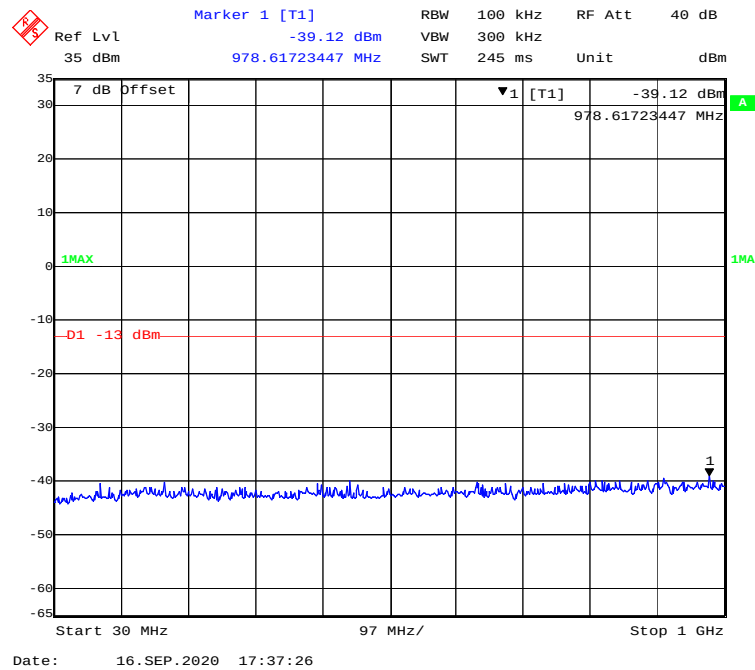
30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)



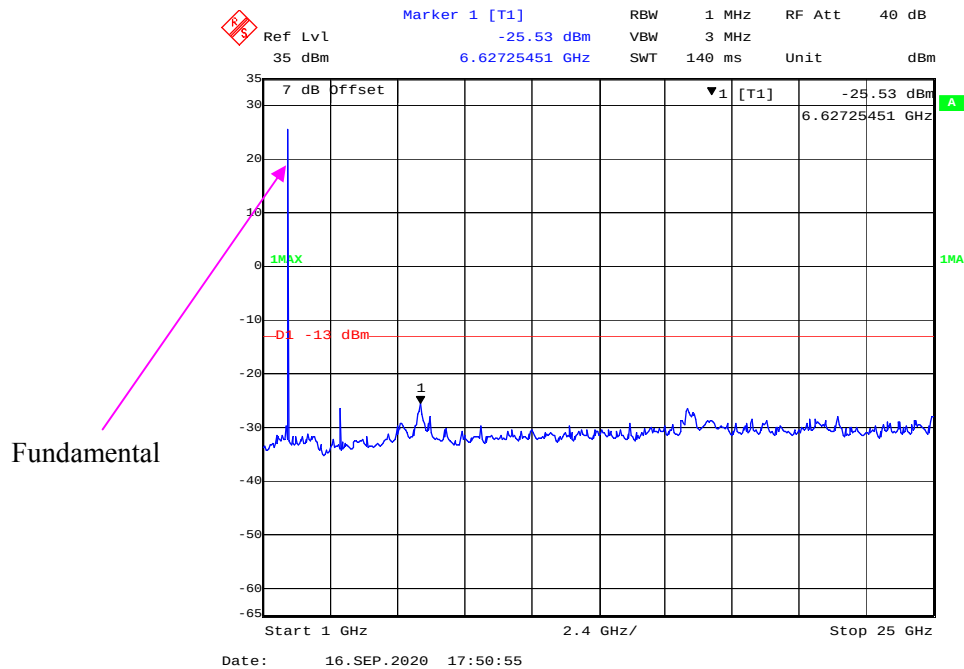
1 GHz – 20 GHz (5 MHz, QPSK, Middle Channel)



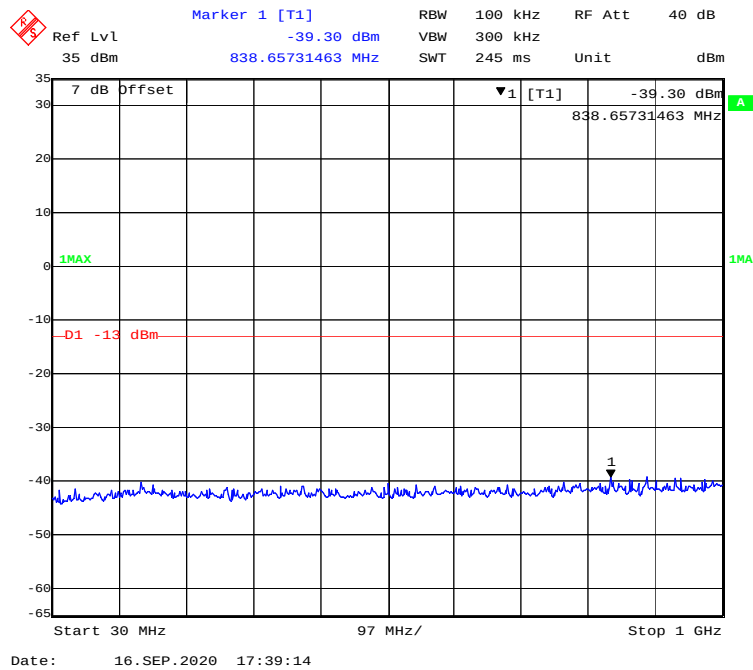
30 MHz - 1 GHz (5 MHz, 16-QAM, Middle Channel)



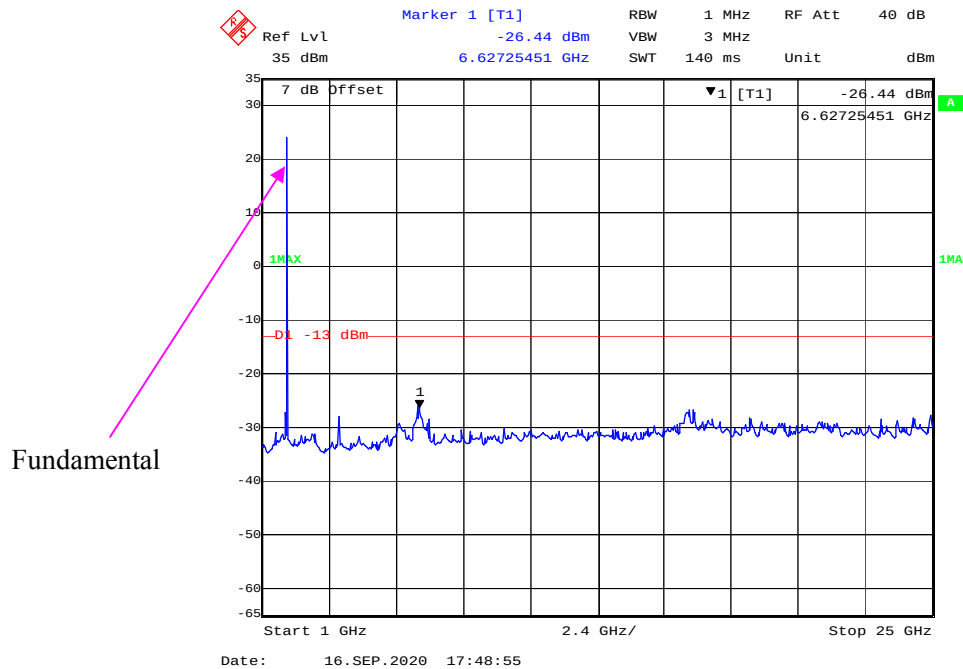
1 GHz – 20 GHz (5 MHz, 16-QAM, Middle Channel)



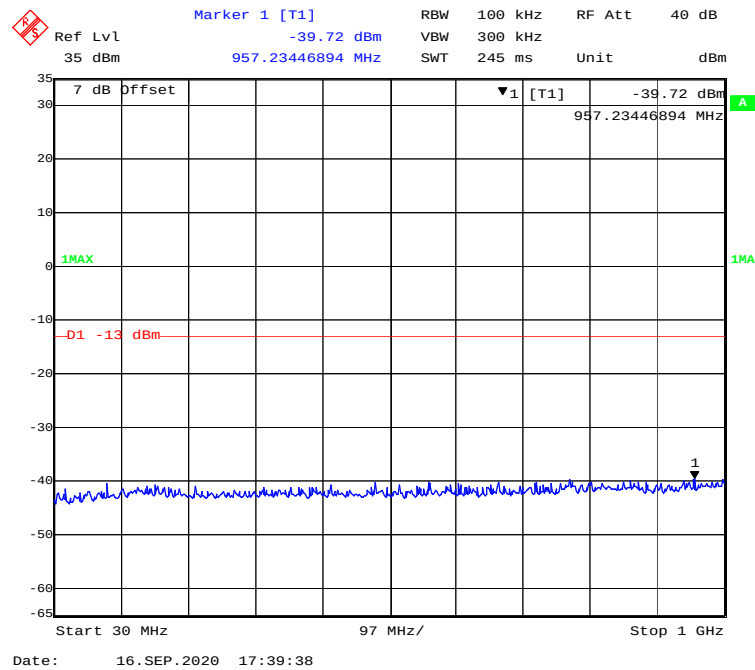
30 MHz - 1 GHz (10 MHz, QPSK, Middle Channel)



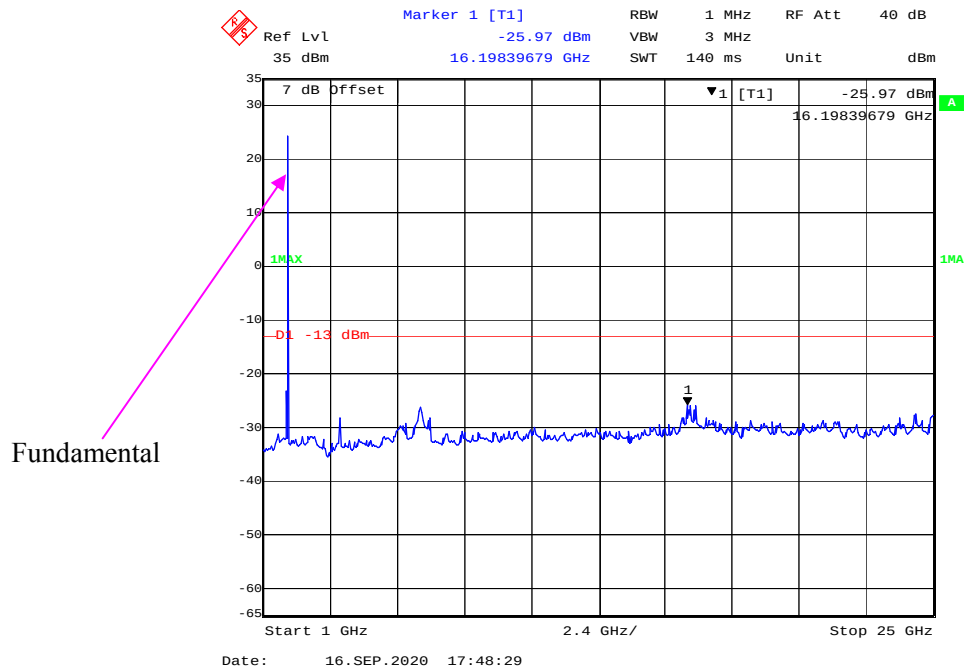
1 GHz – 20 GHz (10 MHz, QPSK, Middle Channel)



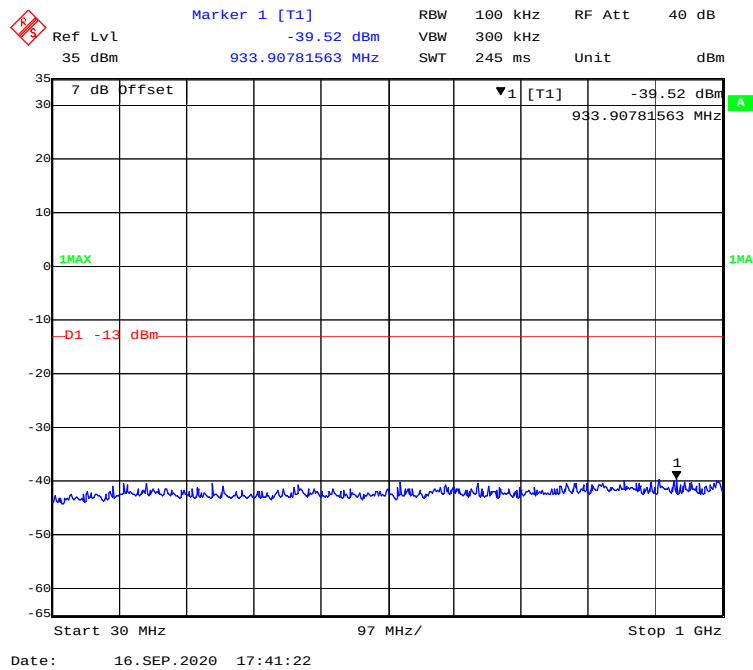
30 MHz - 1 GHz (10 MHz, 16-QAM, Middle Channel)



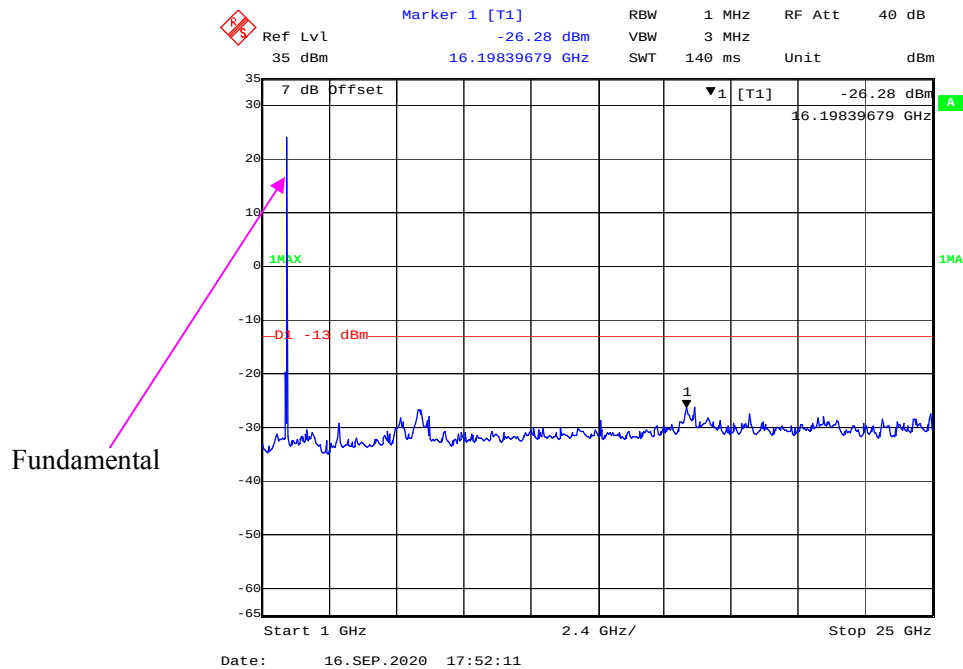
1 GHz – 20 GHz (10 MHz, 16-QAM, Middle Channel)



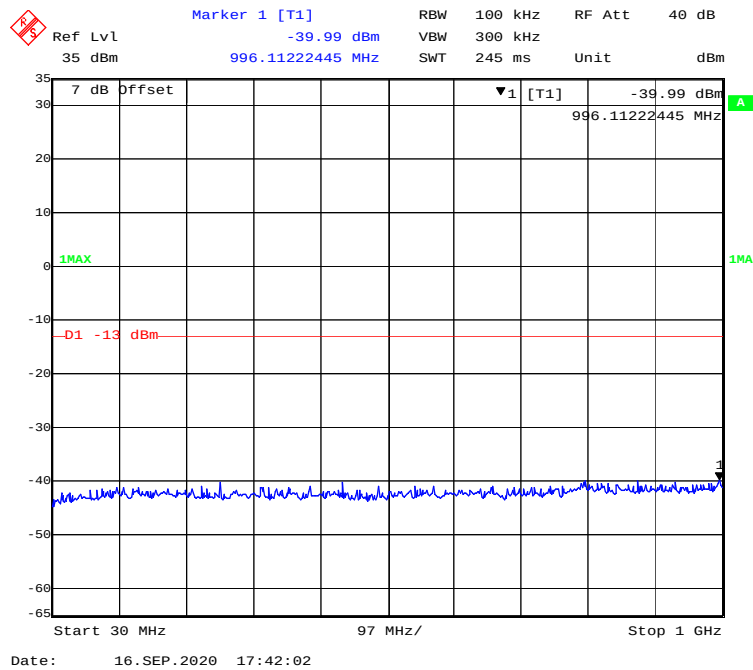
30 MHz - 1 GHz (15 MHz, QPSK, Middle Channel)



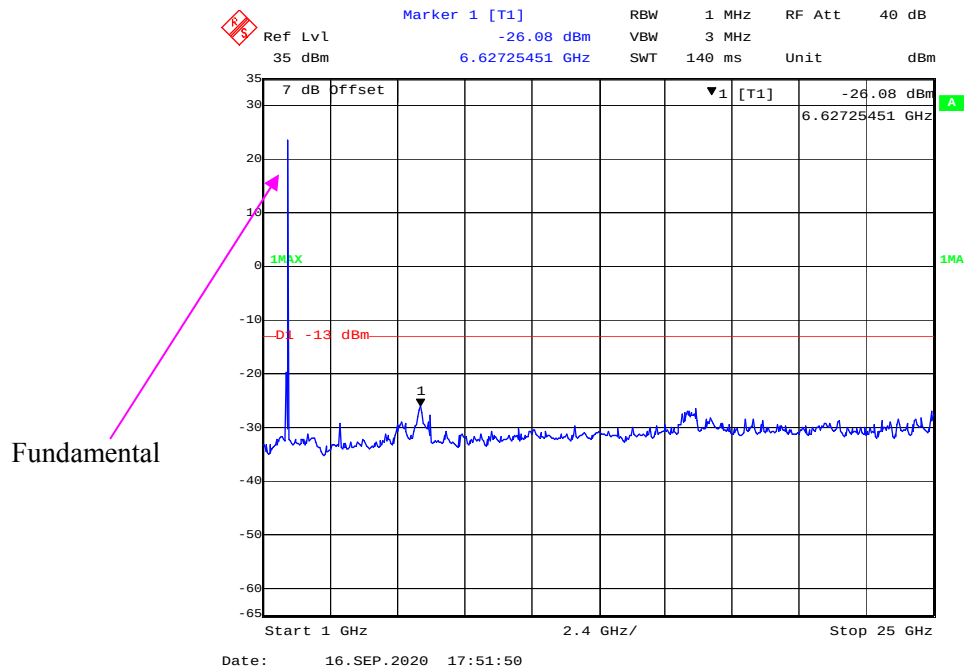
1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



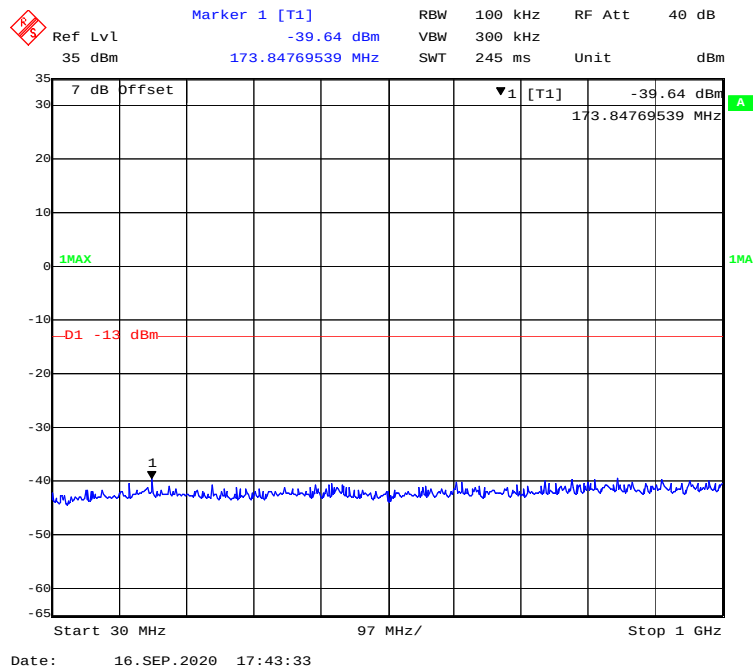
30 MHz - 1 GHz (15 MHz, 16-QAM, Middle Channel)



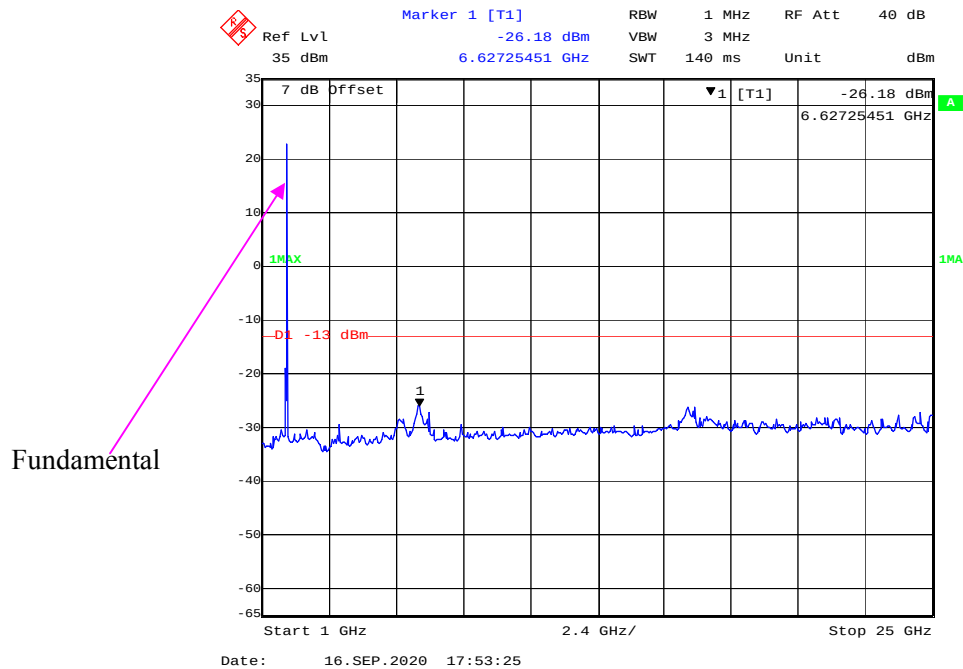
1 GHz – 20 GHz (15 MHz, 16-QAM, Middle Channel)



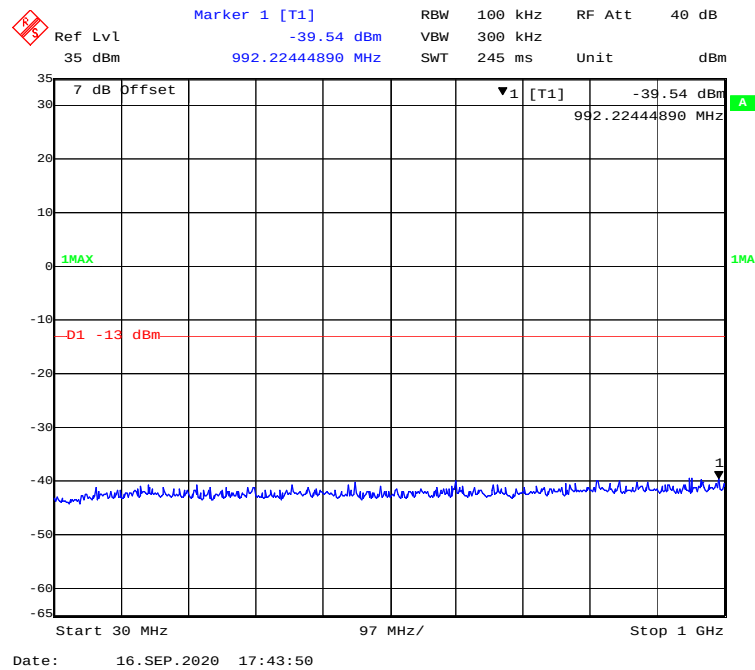
30 MHz - 1 GHz (20 MHz, QPSK, Middle Channel)



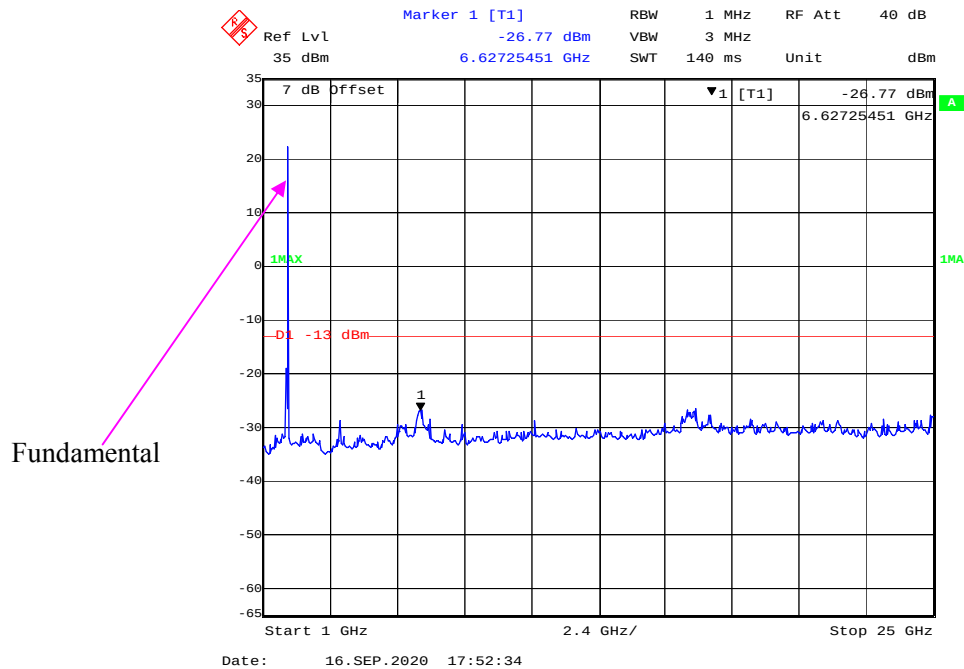
1 GHz – 20 GHz (20 MHz, QPSK, Middle Channel)



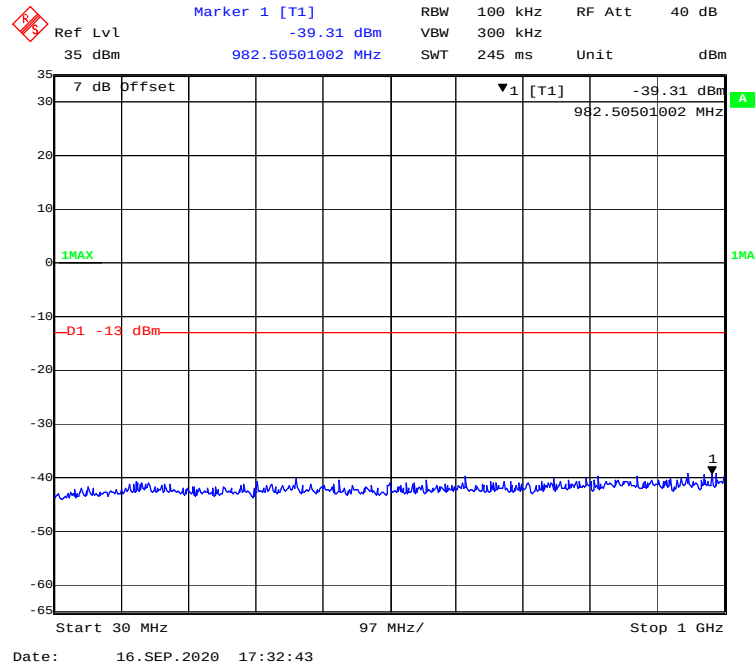
30 MHz - 1 GHz (20 MHz, 16-QAM, Middle Channel)



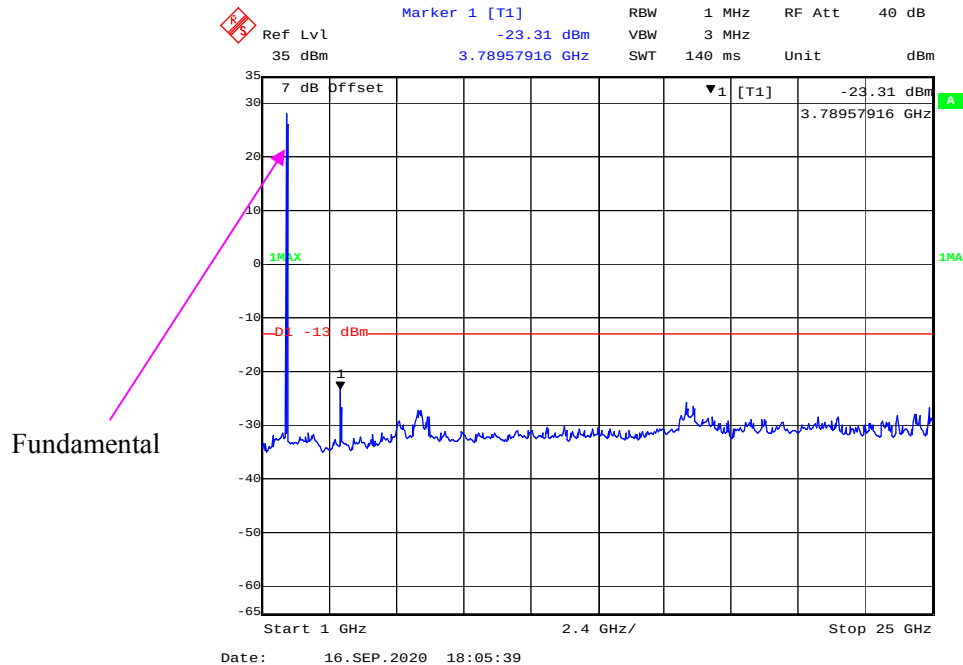
1 GHz – 20 GHz (20 MHz, 16-QAM, Middle Channel)



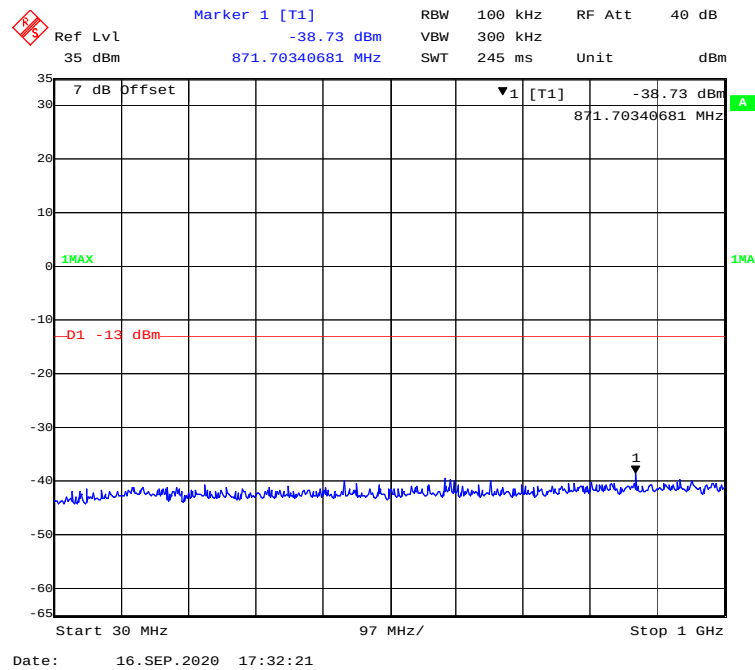
30 MHz - 1 GHz (1.4 MHz, QPSK, High Channel)



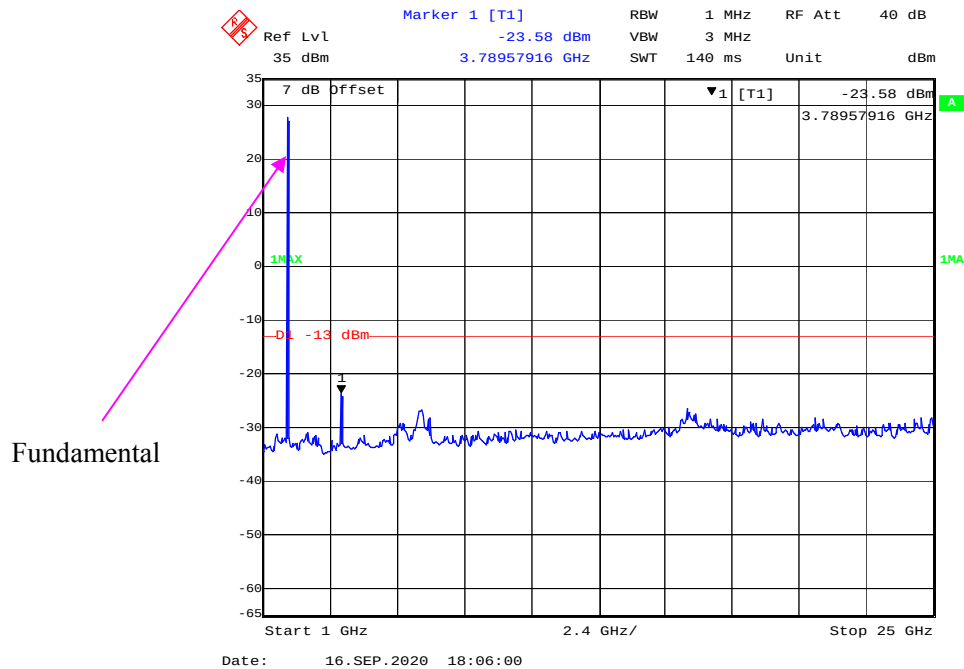
1 GHz – 20 GHz (1.4 MHz, QPSK, High Channel)



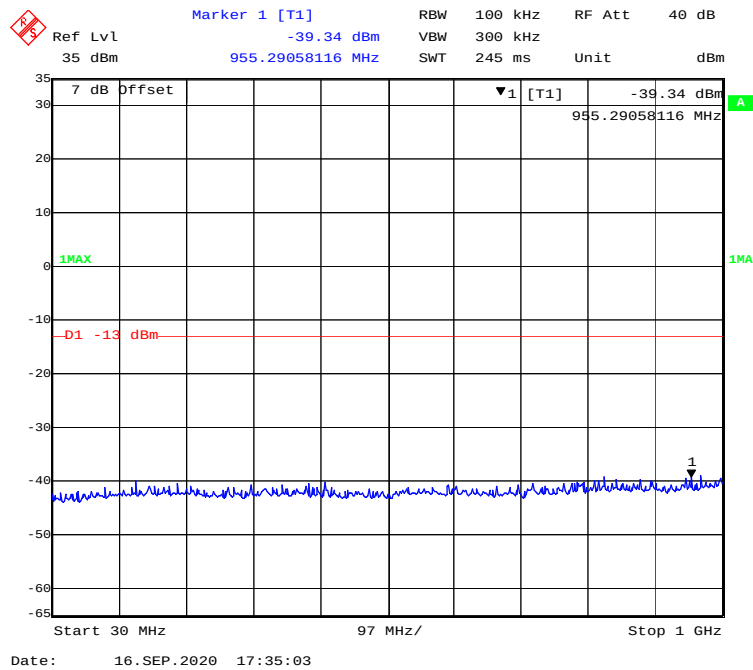
30 MHz - 1 GHz (1.4 MHz, 16-QAM, High Channel)



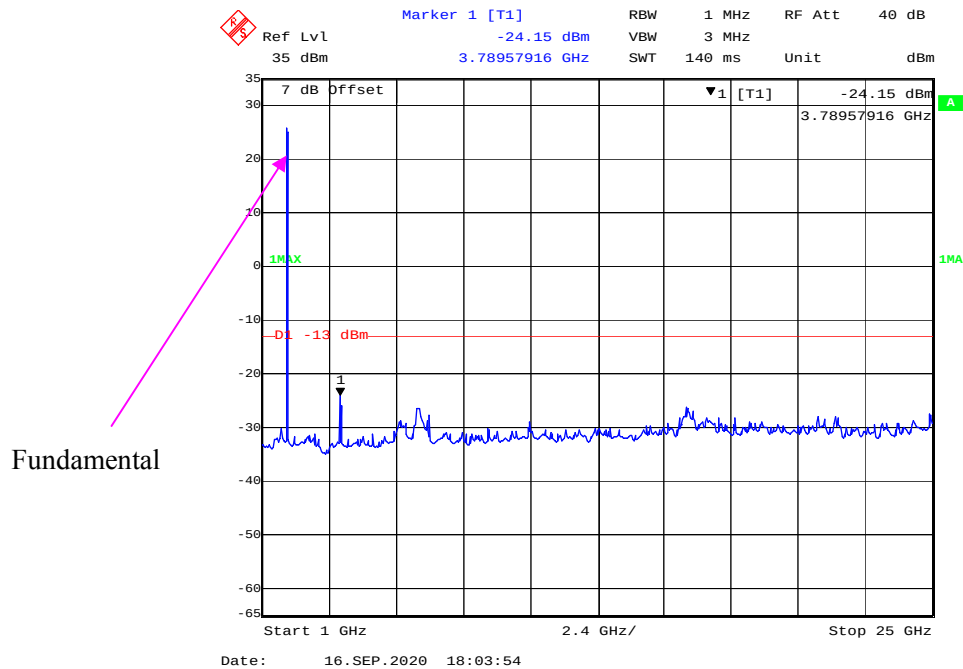
1 GHz – 20 GHz (1.4 MHz, 16-QAM, High Channel)



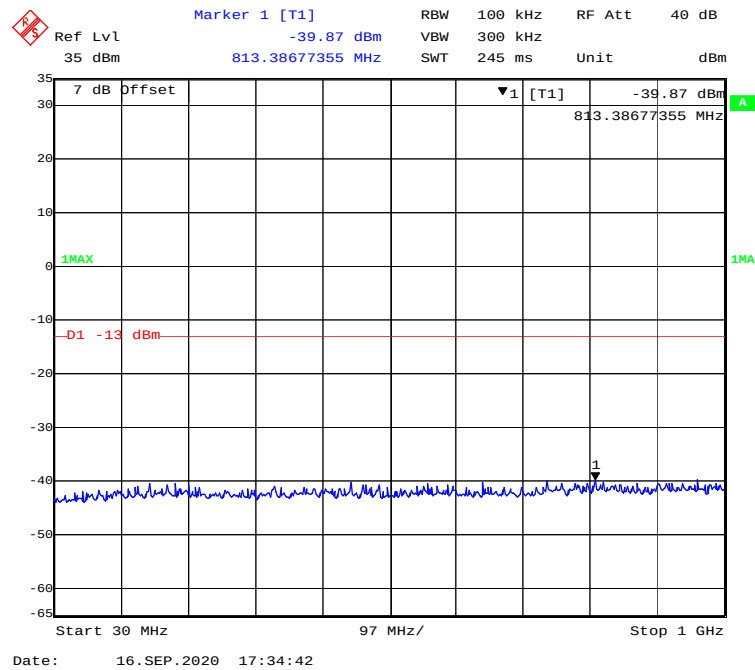
30 MHz - 1 GHz (3 MHz, QPSK, High Channel)



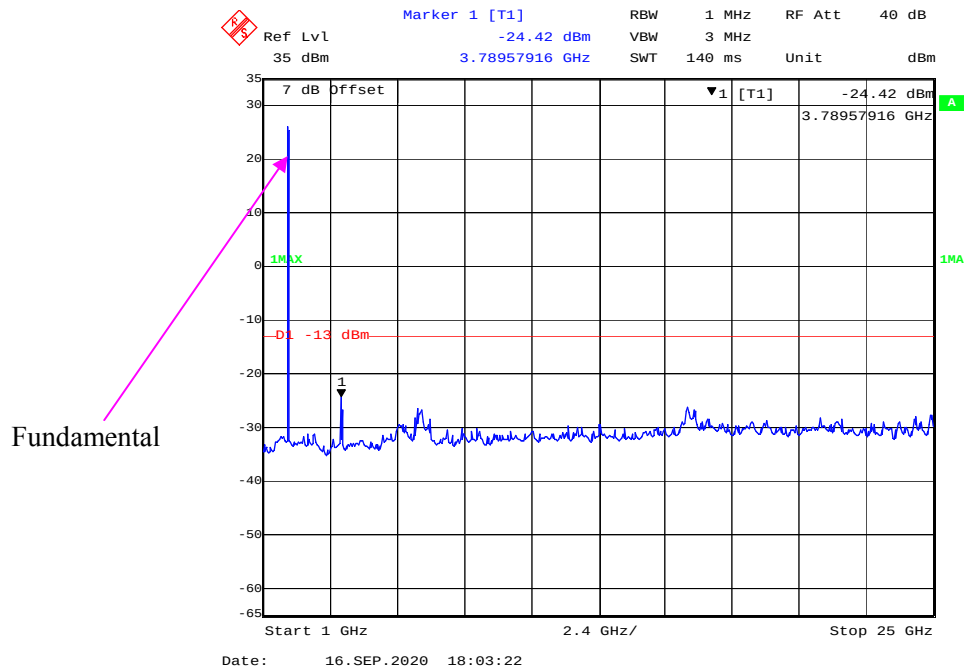
1 GHz – 20 GHz (3 MHz, QPSK, High Channel)



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



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



Ref Lvl 35 dBm
 RBW 100 kHz
 RF Att 40 dB
 VBW 300 kHz
 Unit dBm
 SWT 245 ms

Marker 1 [T1]
 -39.37 dBm
 195.23046092 MHz

7 dB Offset
 1 [T1]
 -39.37 dBm
 195.23046092 MHz

1MAX
 -13 dBm
 1

Start 30 MHz
 97 MHz/
 Stop 1 GHz

Date: 16.SEP.2020 17:38:28

Ref Lvl 35 dBm
 RBW 1 MHz
 RF Att 40 dB
 VBW 3 MHz
 SWT 140 ms
 Unit dBm

Marker 1 [T1]
 -26.70 dBm
 6.67535070 GHz

7 dB Offset
 ▼1 [T1]
 -26.70 dBm
 6.67535070 GHz

1MAX
 -DL -13 dBm

1

Start 1 GHz
 2.4 GHz/
 Stop 25 GHz

Date: 16.SEP.2020 18:00:18

Fundamental

Ref Lvl 35 dBm
 35 dBm
 Marker 1 [T1] -39.02 dBm
 RBW 100 kHz
 VBW 300 kHz
 RF Att 40 dB
 SWT 245 ms
 Unit dBm
 974.72945892 MHz

7 dB Offset
 1MAX
 -D1 -13 dBm
 1

Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 16.SEP.2020 17:38:48

Ref Lvl 35 dBm
 RBW 1 MHz
 VBW 3 MHz
 SWT 140 ms
 RF Att 40 dB
 Unit dBm

Marker 1 [T1]
 -26.37 dBm
 6.62725451 GHz

7 dB Offset
 ▼1 [T1]
 -26.37 dBm
 6.62725451 GHz

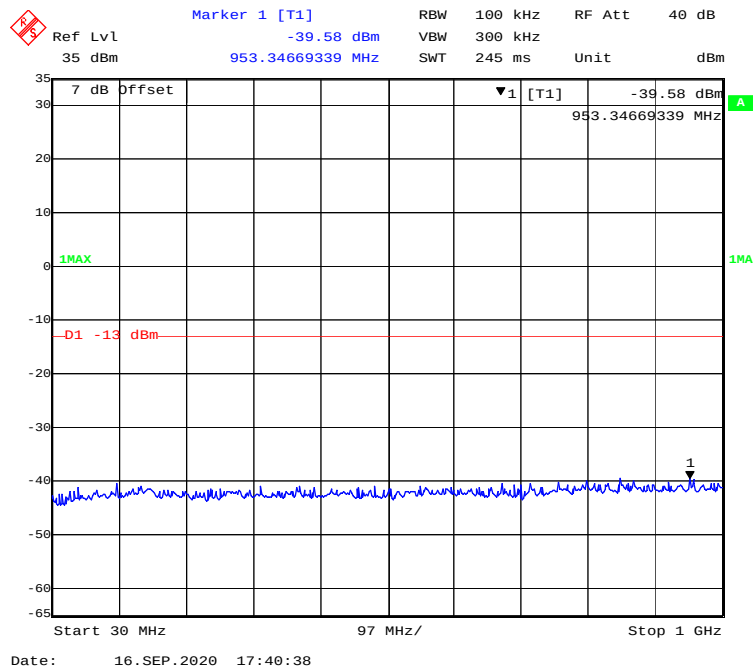
1MAX
 D1 -13 dBm
 1

Start 1 GHz
 2.4 GHz/
 Stop 25 GHz

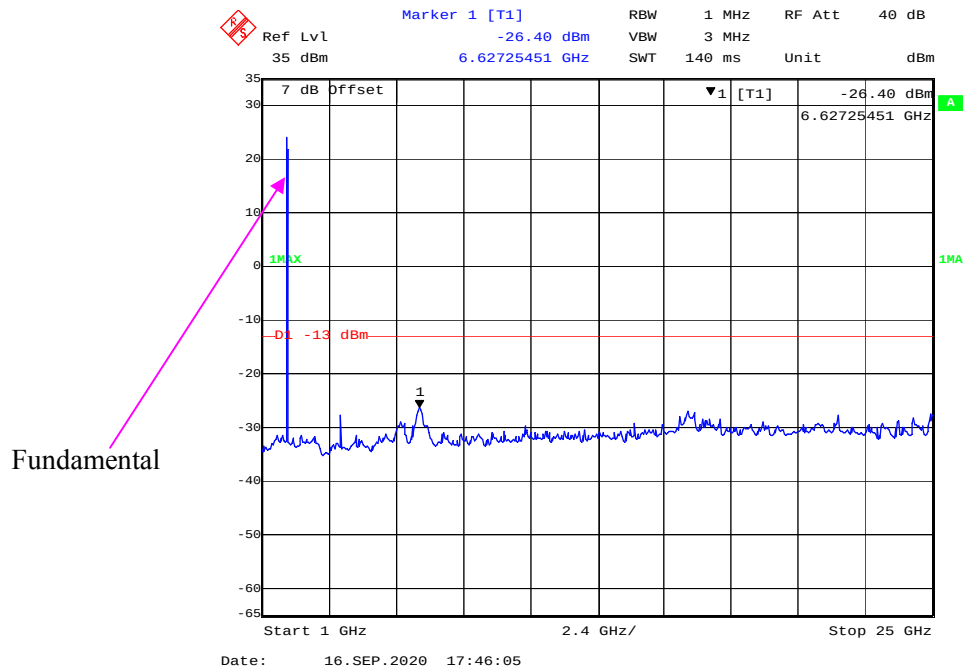
Date: 16.SEP.2020 17:59:55

Fundamental

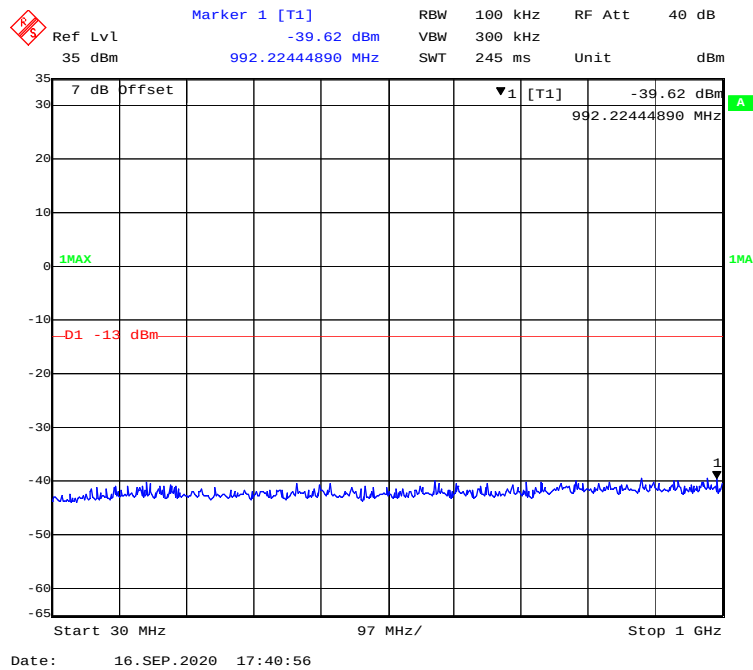
30 MHz - 1 GHz (10 MHz, QPSK, High Channel)



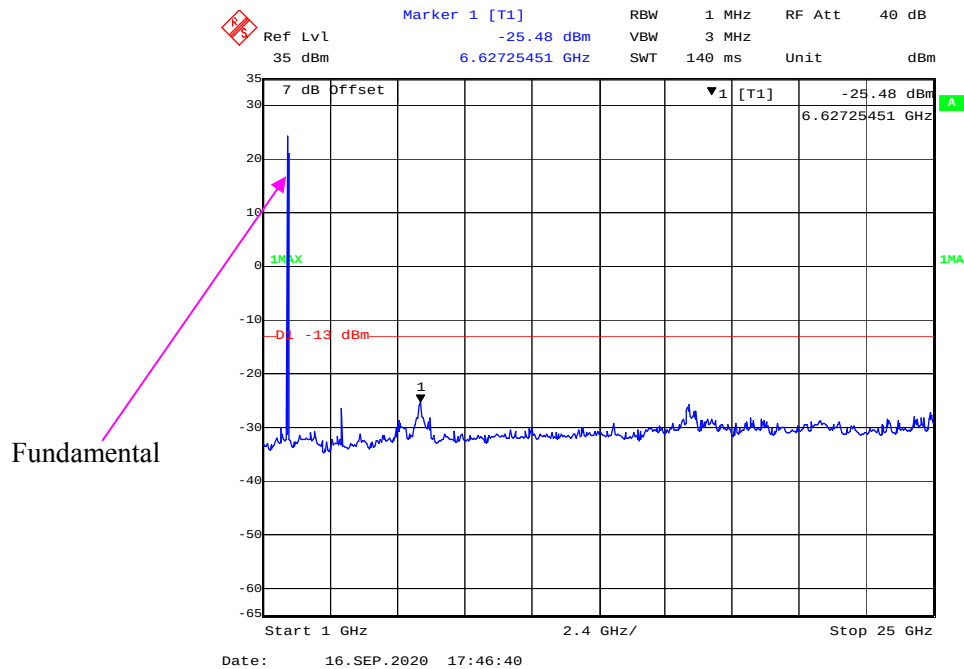
1 GHz – 20 GHz (10 MHz, QPSK, High Channel)



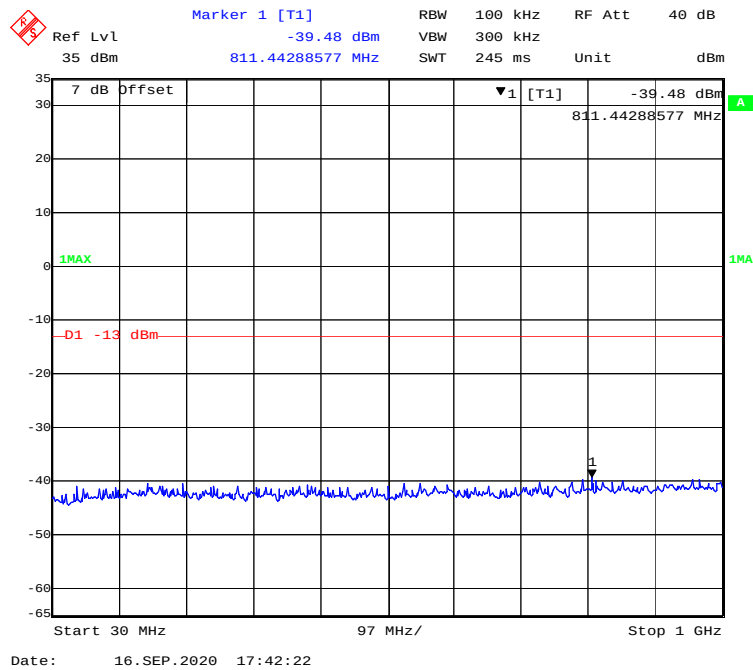
30 MHz - 1 GHz (10 MHz, 16-QAM, High Channel)



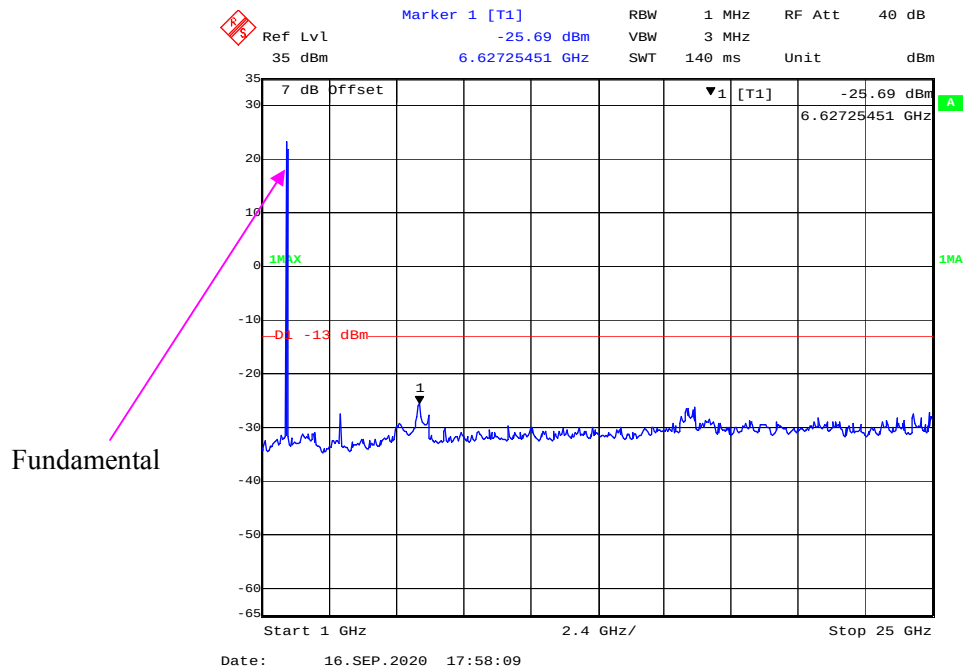
1 GHz – 20 GHz (10 MHz, 16-QAM, High Channel)



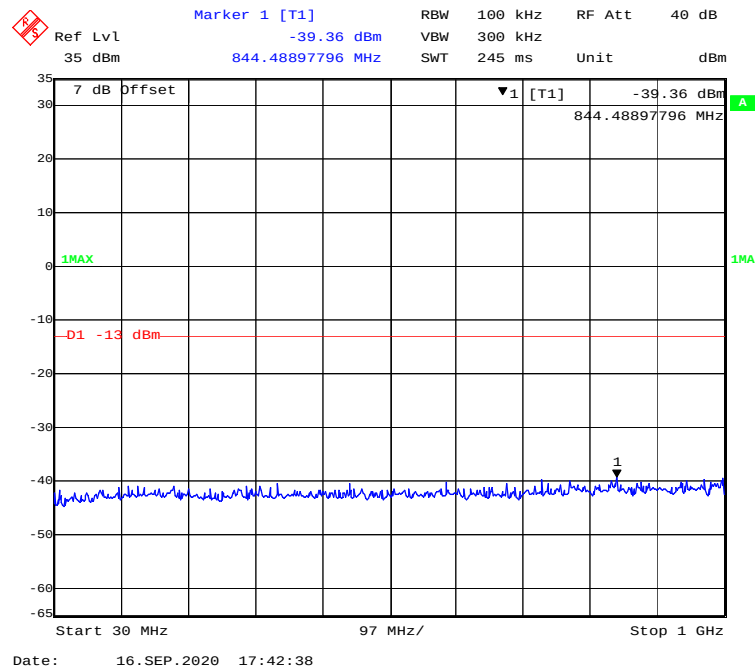
30 MHz - 1 GHz (15 MHz, QPSK, High Channel)



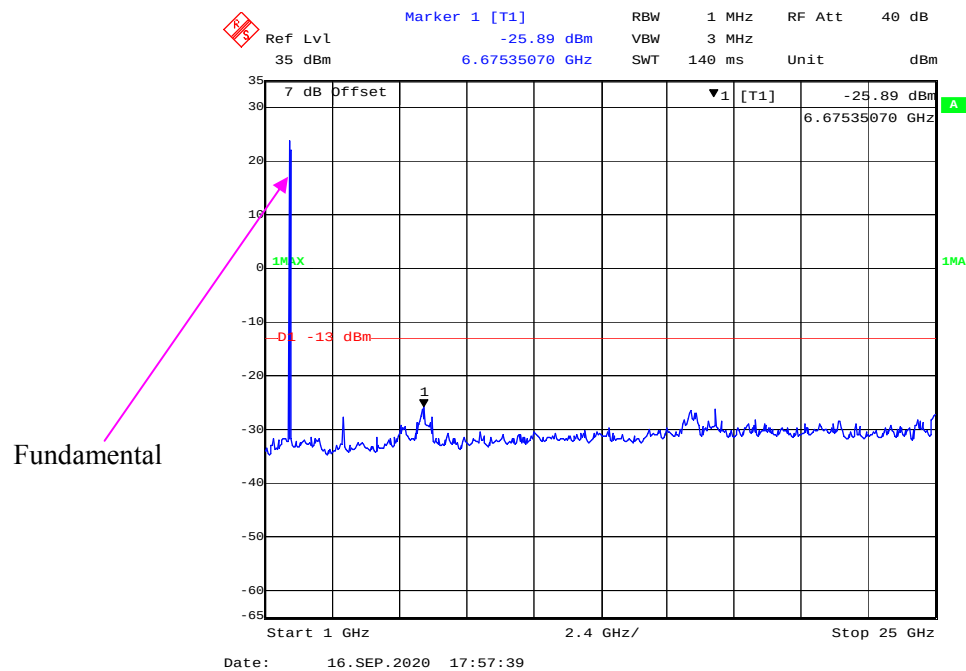
1 GHz – 20 GHz (15 MHz, QPSK, High Channel)



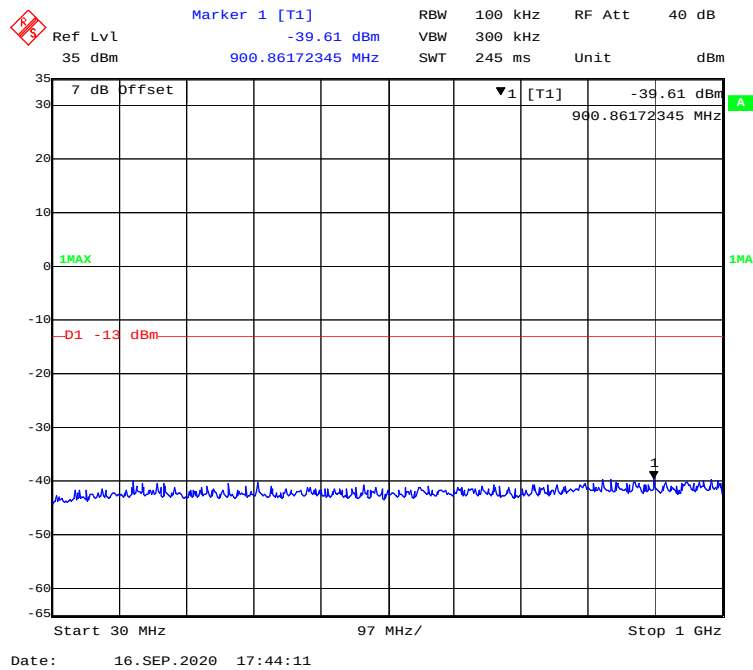
30 MHz - 1 GHz (15 MHz, 16-QAM, High Channel)



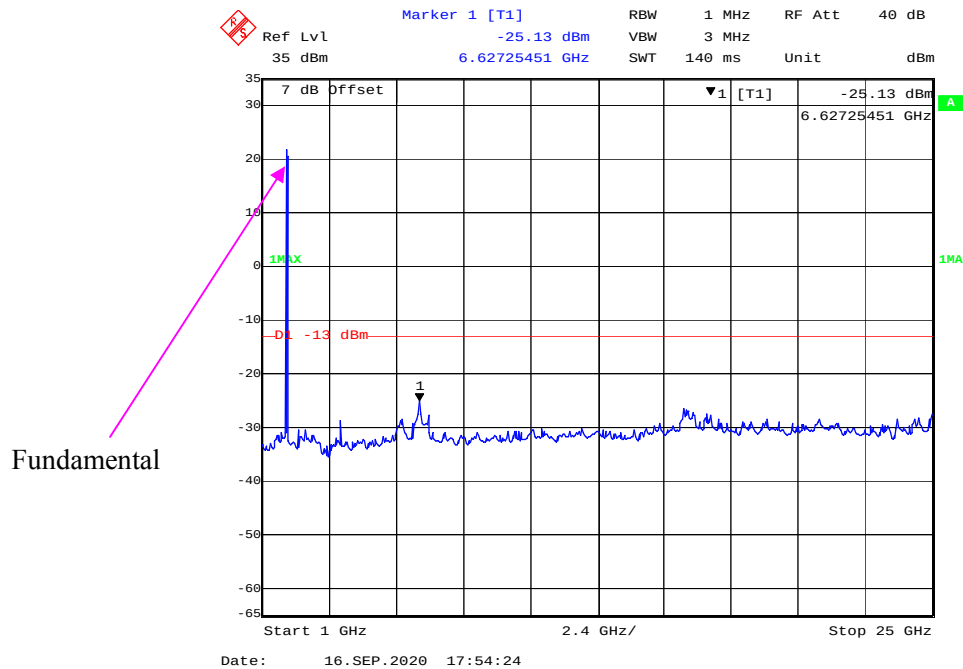
1 GHz – 20 GHz (15 MHz, 16-QAM, High Channel)



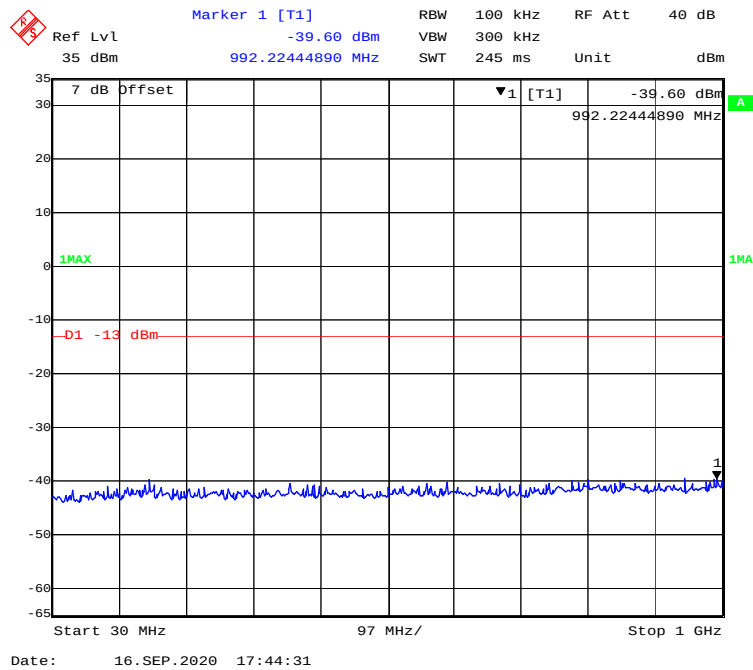
30 MHz - 1 GHz (20 MHz, QPSK, High Channel)



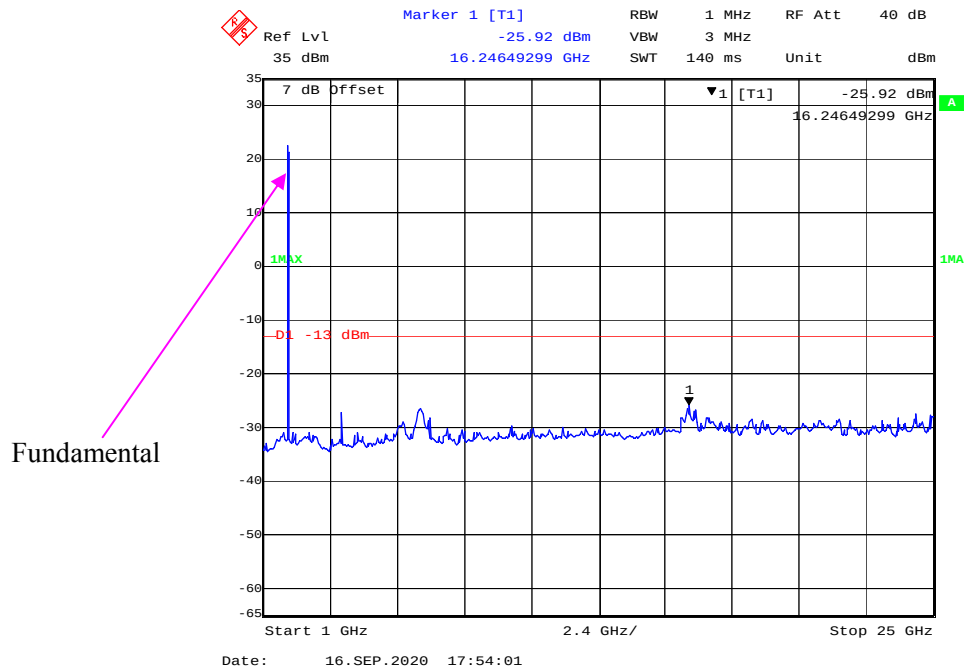
1 GHz – 20 GHz (20 MHz, QPSK, High Channel)

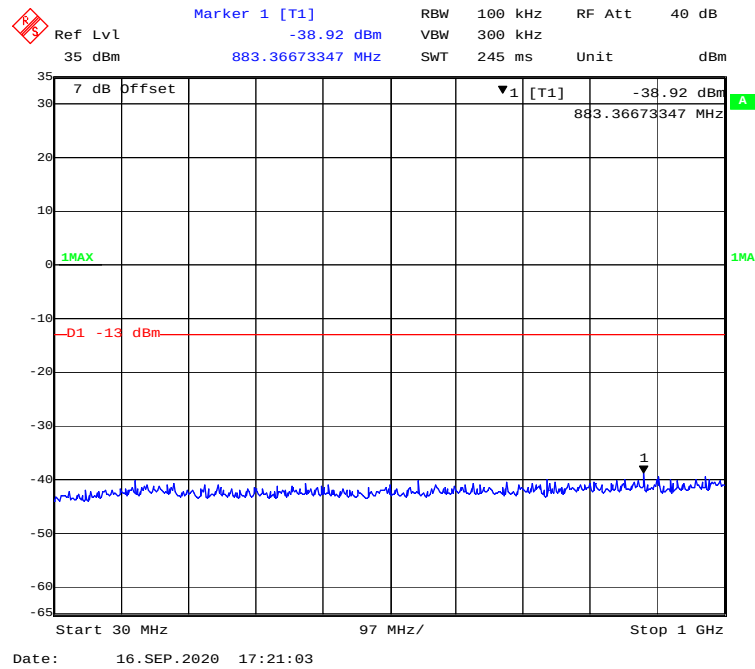
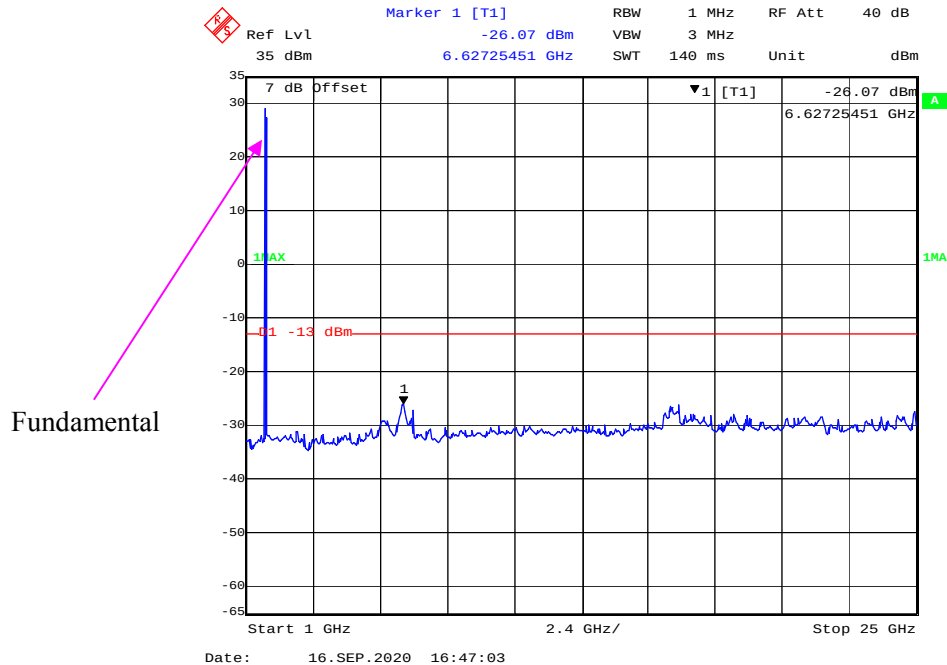


30 MHz - 1 GHz (20 MHz, 16-QAM, High Channel)

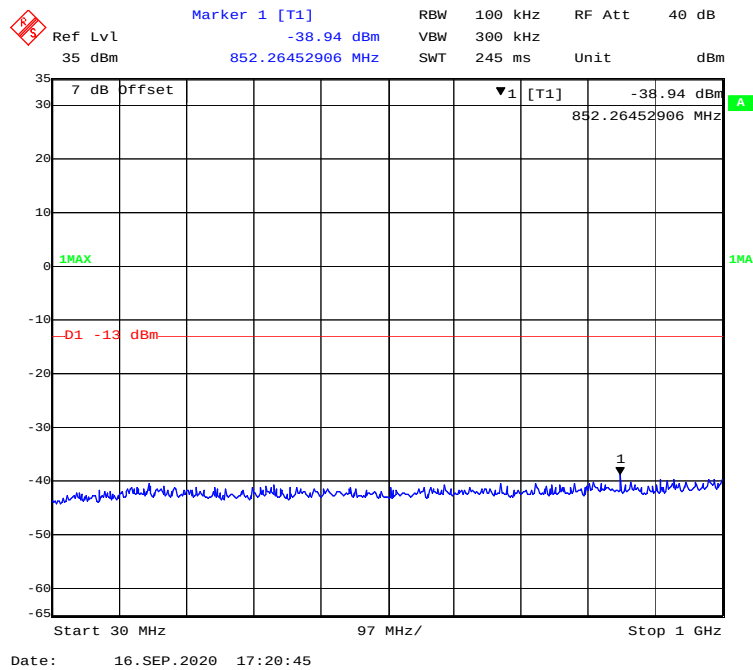


1 GHz – 20 GHz (20 MHz, 16-QAM, High Channel)

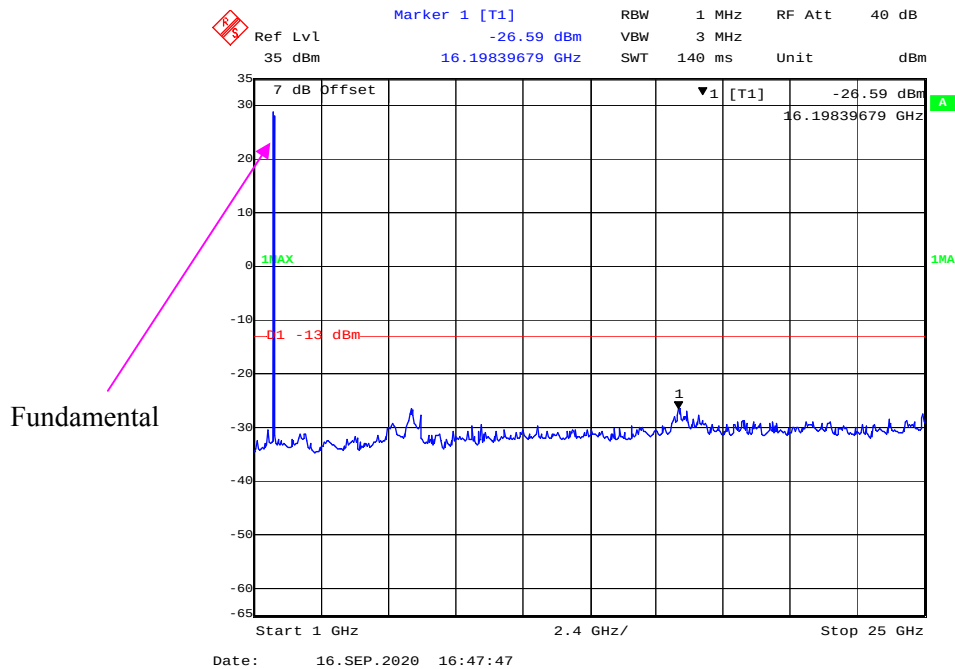


LTE Band 4:**30 MHz - 1 GHz (1.4 MHz, QPSK, Low Channel)****1 GHz – 20 GHz (1.4 MHz, QPSK, Low Channel)**

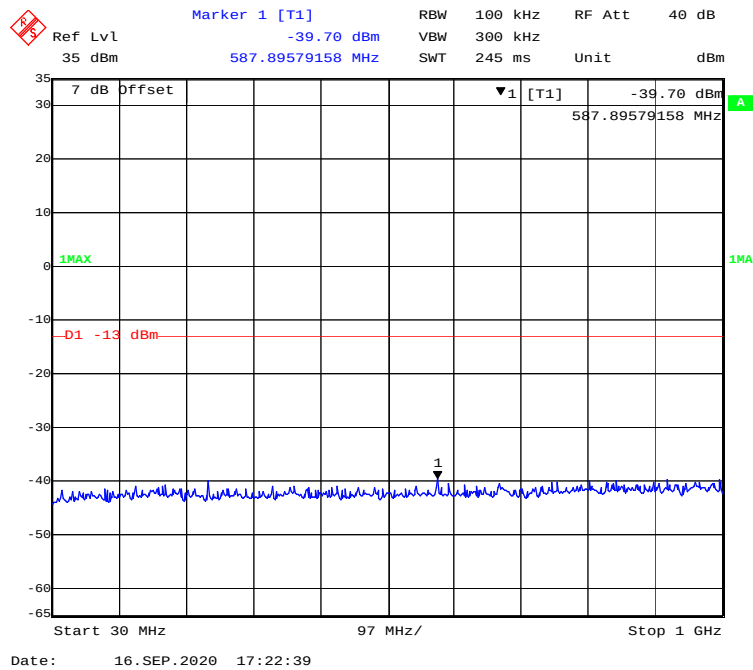
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Low Channel)



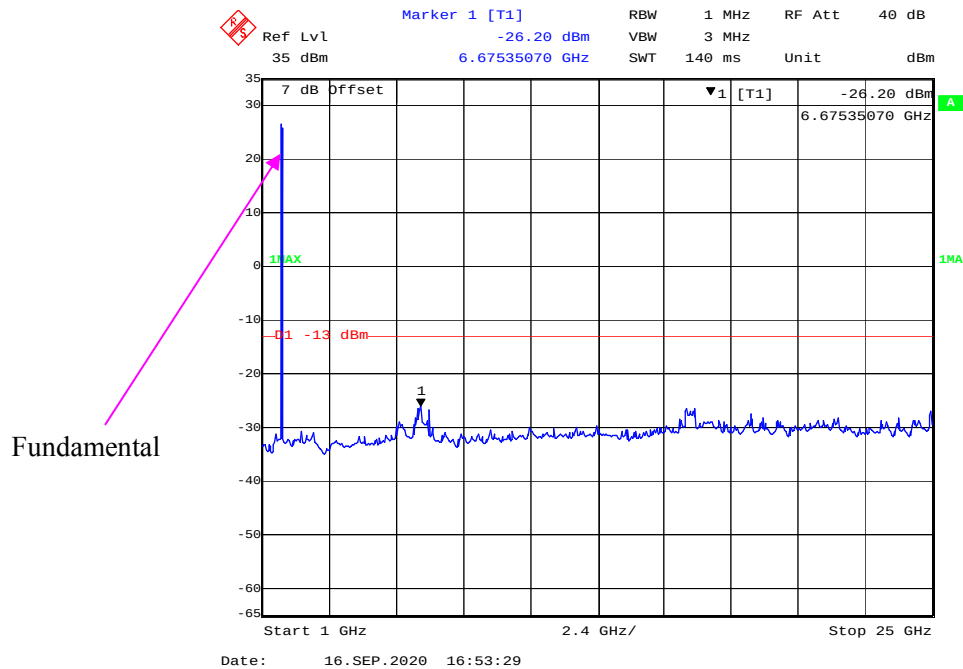
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Low Channel)



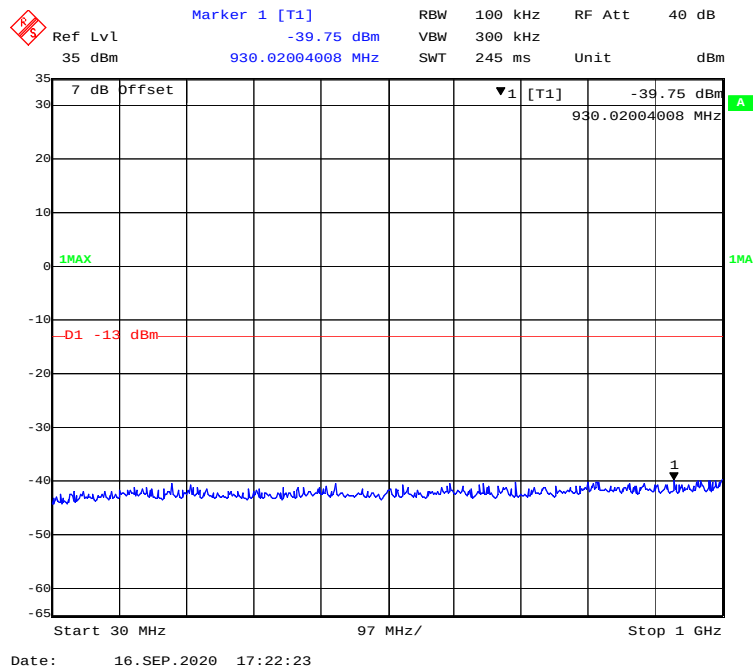
30 MHz - 1 GHz (3 MHz, QPSK, Low Channel)



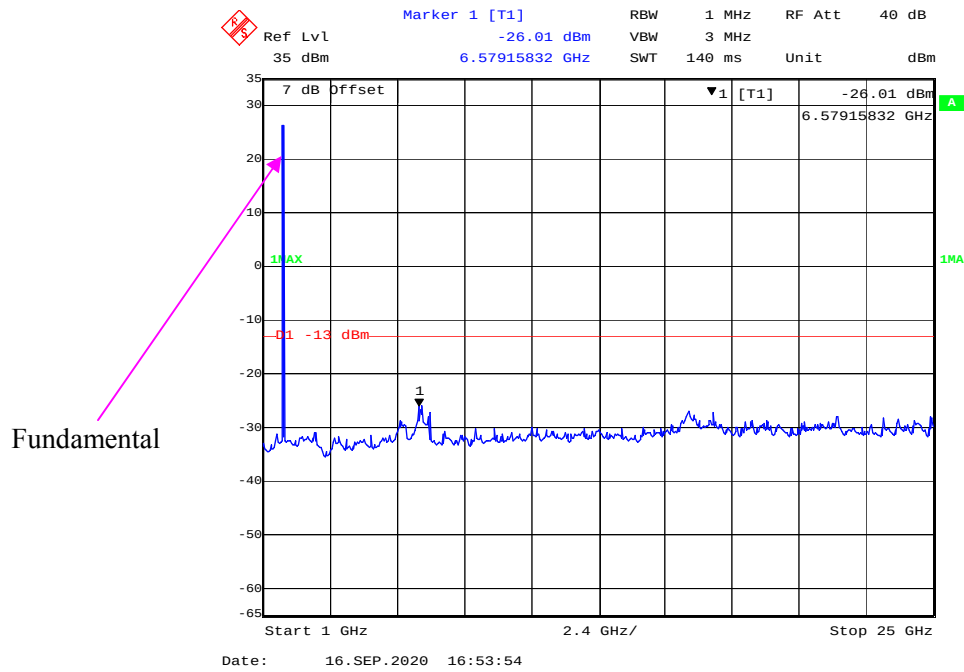
1 GHz – 20 GHz (3 MHz, QPSK, Low Channel)



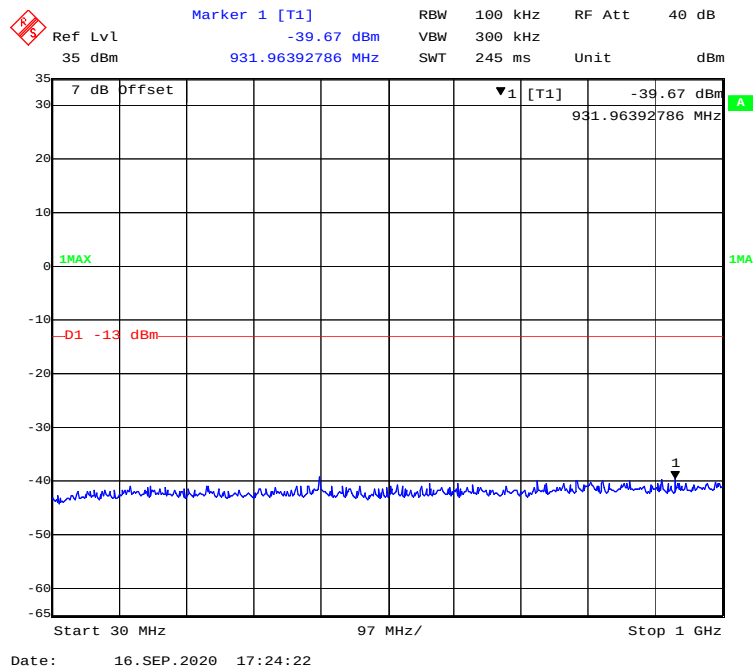
30 MHz - 1 GHz (3 MHz, 16-QAM, Low Channel)



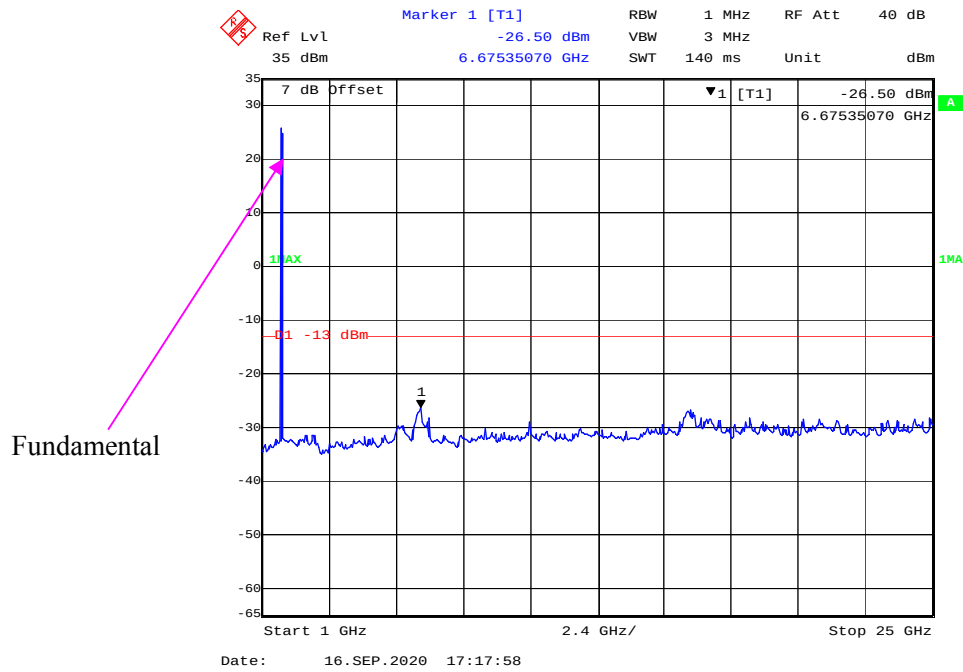
1 GHz – 20 GHz (3 MHz, 16-QAM, Low Channel)



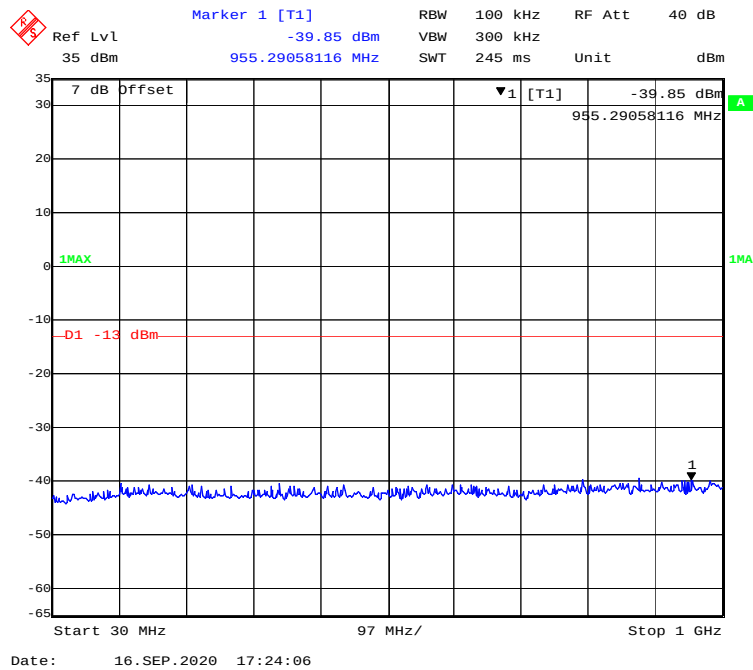
30 MHz - 1 GHz (5 MHz, QPSK, Low Channel)



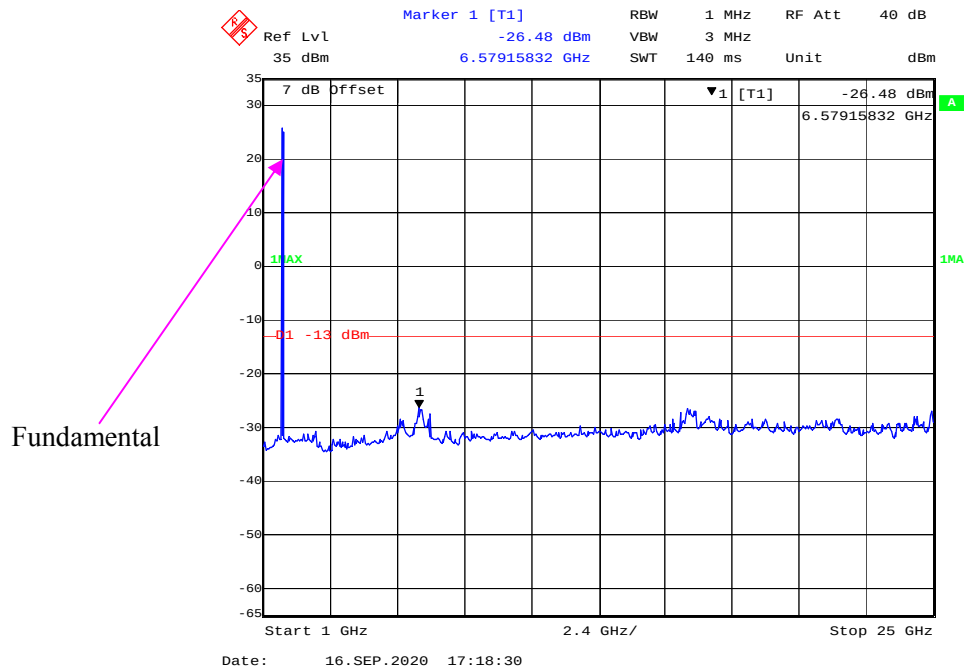
1 GHz – 20 GHz (5 MHz, QPSK, Low Channel)



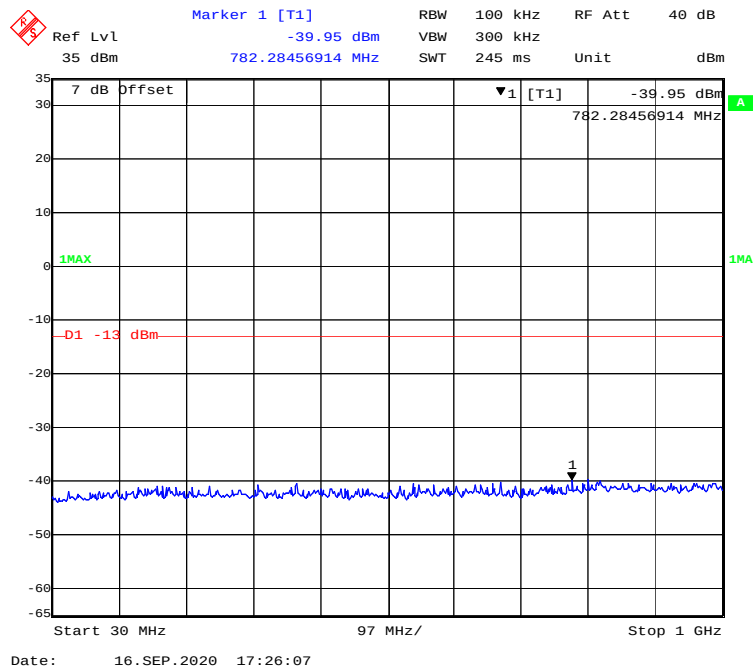
30 MHz - 1 GHz (5 MHz, 16-QAM, Low Channel)



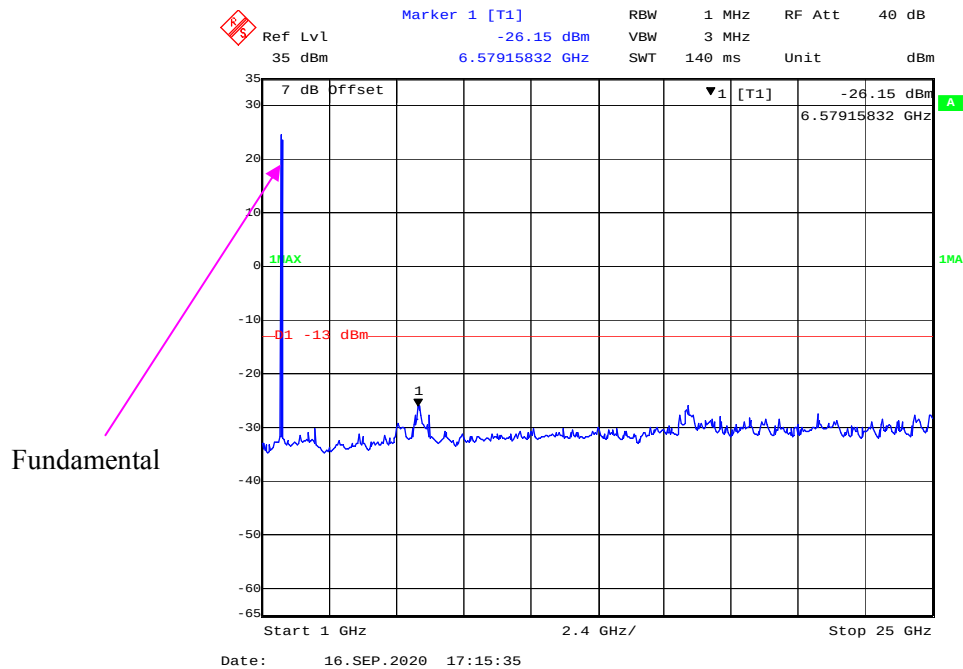
1 GHz – 20 GHz (5 MHz, 16-QAM, Low Channel)



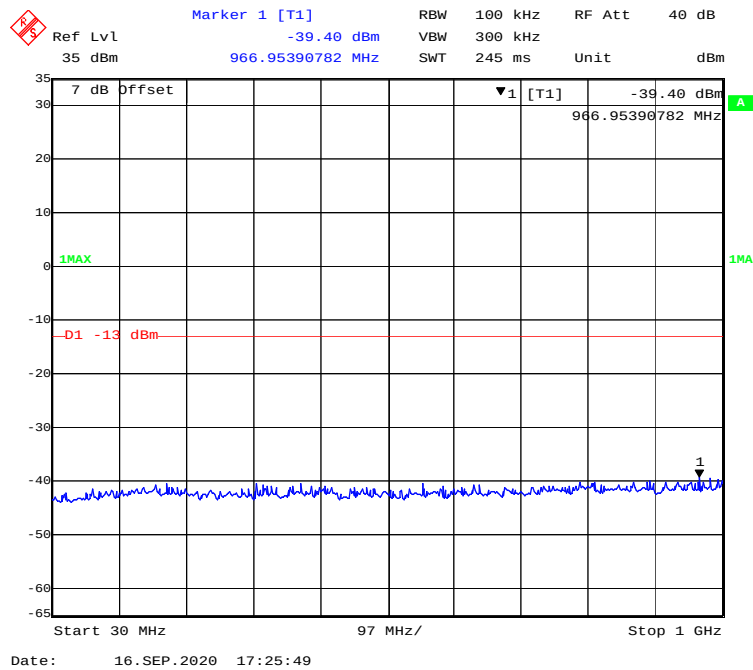
30 MHz - 1 GHz (10 MHz, QPSK, Low Channel)



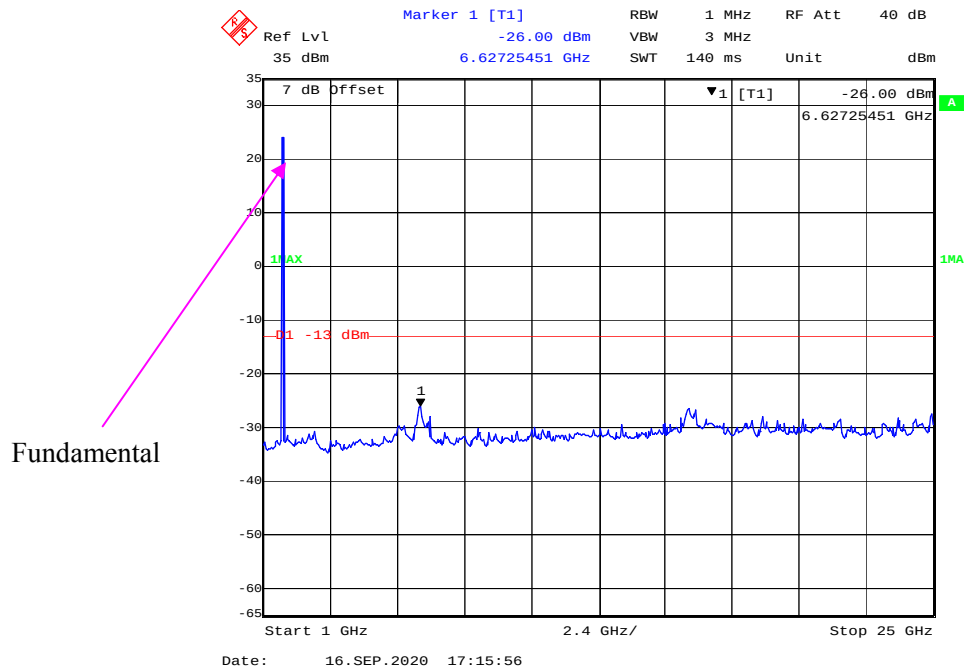
1 GHz – 20 GHz (10 MHz, QPSK, Low Channel)



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



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



Ref Lvl 35 dBm
RBW 100 kHz
VBW 300 kHz
SWT 245 ms
RF Att 40 dB
Unit dBm

Marker 1 [T1]
-39.58 dBm
877.53507014 MHz

7 dB Offset
▼1 [T1]
-39.58 dBm
877.53507014 MHz

1MAX

D1 -13 dBm

1

Start 30 MHz 97 MHz/ Stop 1 GHz

Date: 16.SEP.2020 17:28:17

Ref Lvl 35 dBm
 RBW 1 MHz
 VBW 3 MHz
 SWT 140 ms
 RF Att 40 dB
 Unit dBm

Marker 1 [T1]
 -26.06 dBm
 6.57915832 GHz

7 dB Offset
 ▼1 [T1]
 -26.06 dBm
 6.57915832 GHz

19AX
 -13 dBm

1

Fundamental

Start 1 GHz
 2.4 GHz/
 Stop 25 GHz

Date: 16.SEP.2020 17:14:20

Marker 1 [T1]
 -39.46 dBm
 881.42284569 MHz

RBW 100 kHz
 VBW 300 kHz
 SWT 245 ms

Ref Lvl 35 dBm
 RF Att 40 dB
 Unit dBm

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

Ref Lvl 35 dBm

Marker 1 [T1] -26.81 dBm

RBW 1 MHz RF Att 40 dB

VBW 3 MHz

SWT 140 ms Unit dBm

6.62725451 GHz

7 dB Offset

▼1 [T1] -26.81 dBm

6.62725451 GHz

11 AX

11 -13 dBm

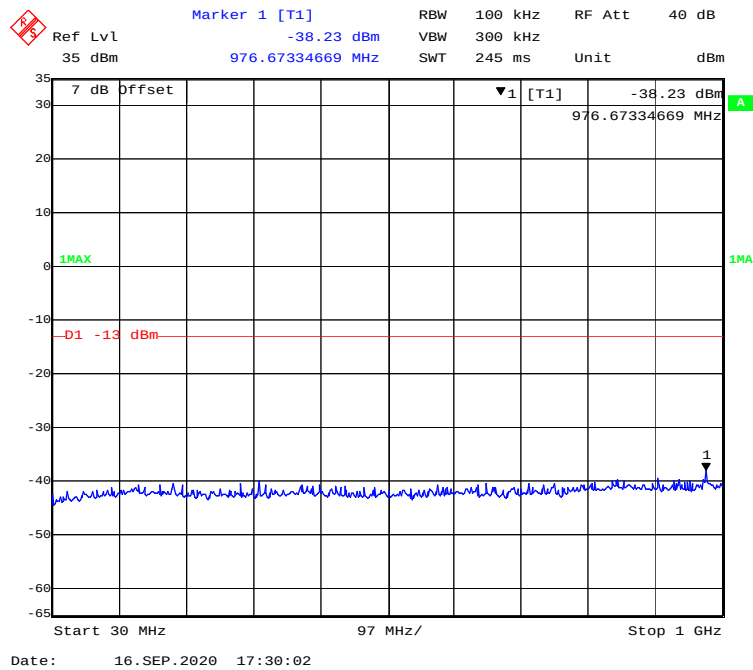
1

Start 1 GHz 2.4 GHz/ Stop 25 GHz

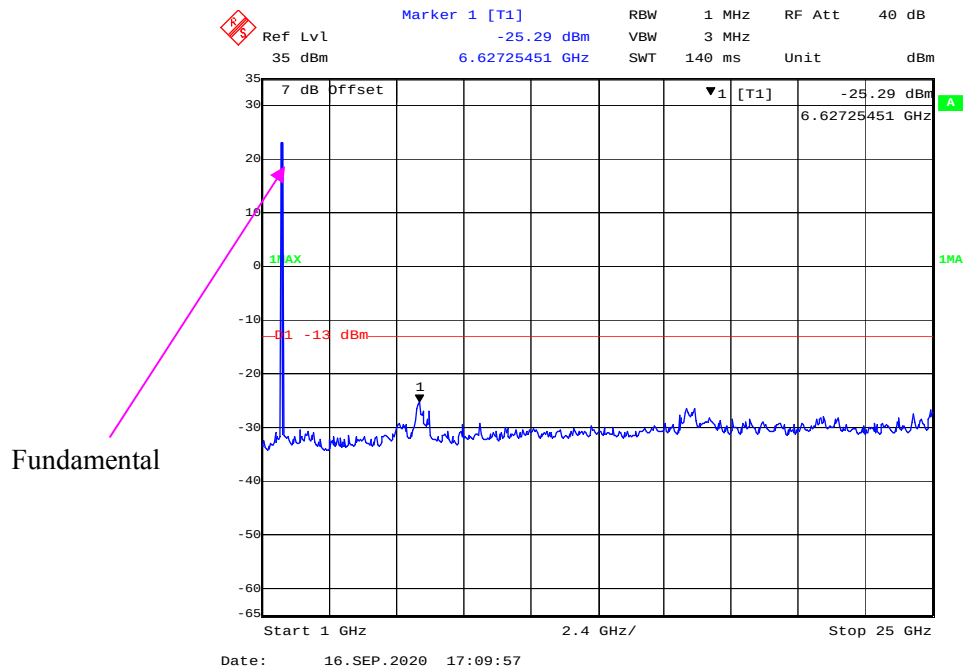
Date: 16.SEP.2020 17:14:53

Fundamental

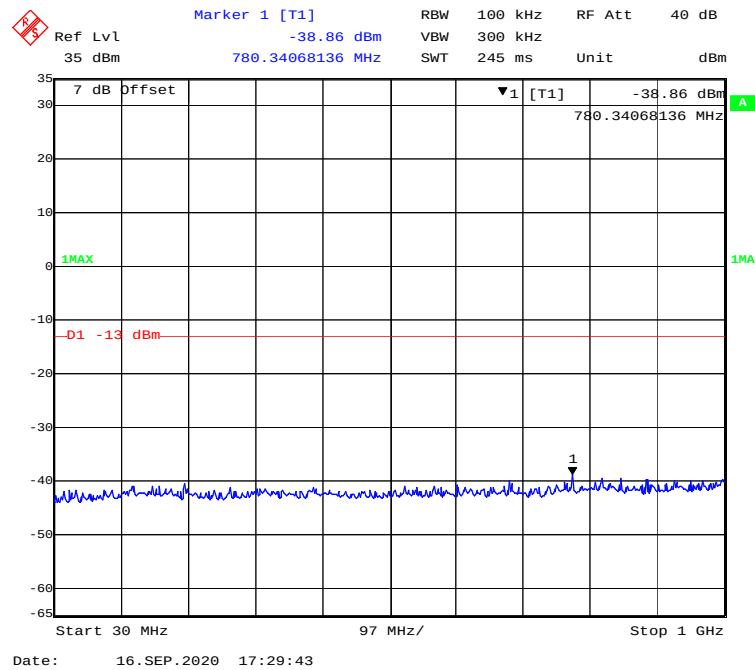
30 MHz - 1 GHz (20 MHz, QPSK, Low Channel)



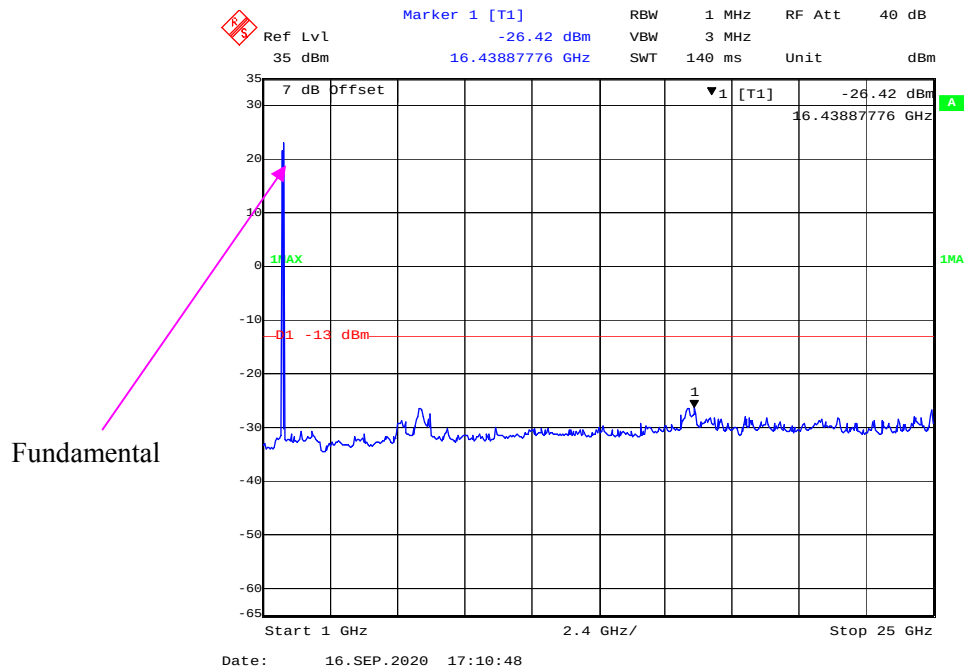
1 GHz – 20 GHz (20 MHz, QPSK, Low Channel)



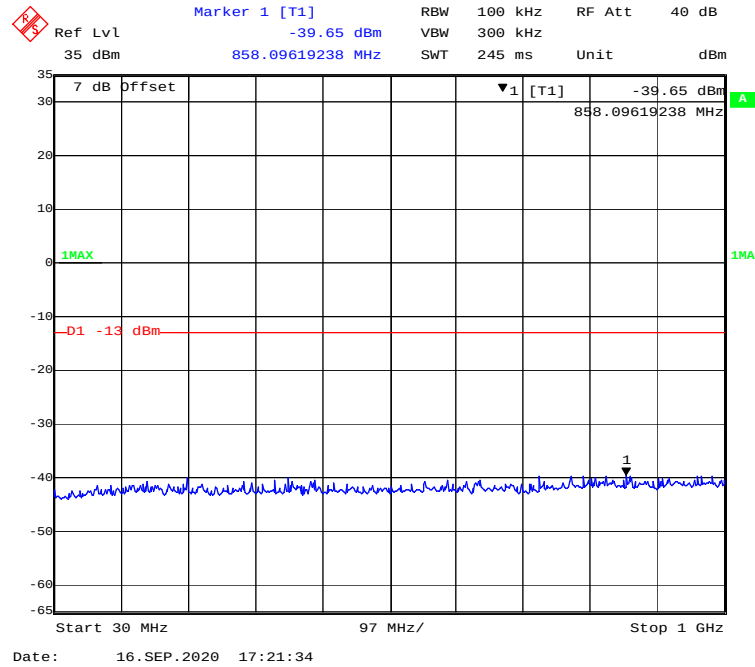
30 MHz - 1 GHz (20 MHz, 16-QAM, Low Channel)



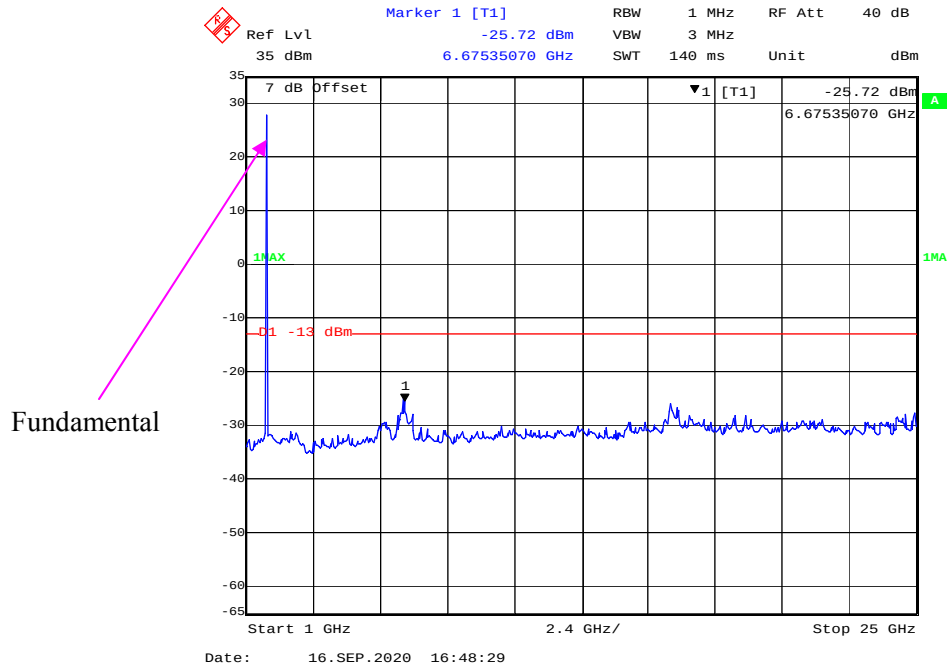
1 GHz – 20 GHz (20 MHz, 16-QAM, Low Channel)



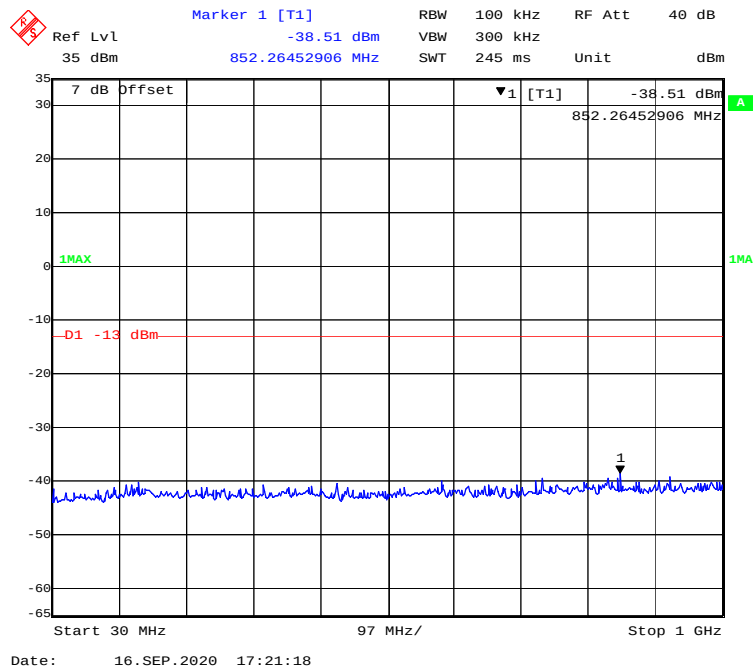
30 MHz - 1 GHz (1.4 MHz, QPSK, Middle Channel)



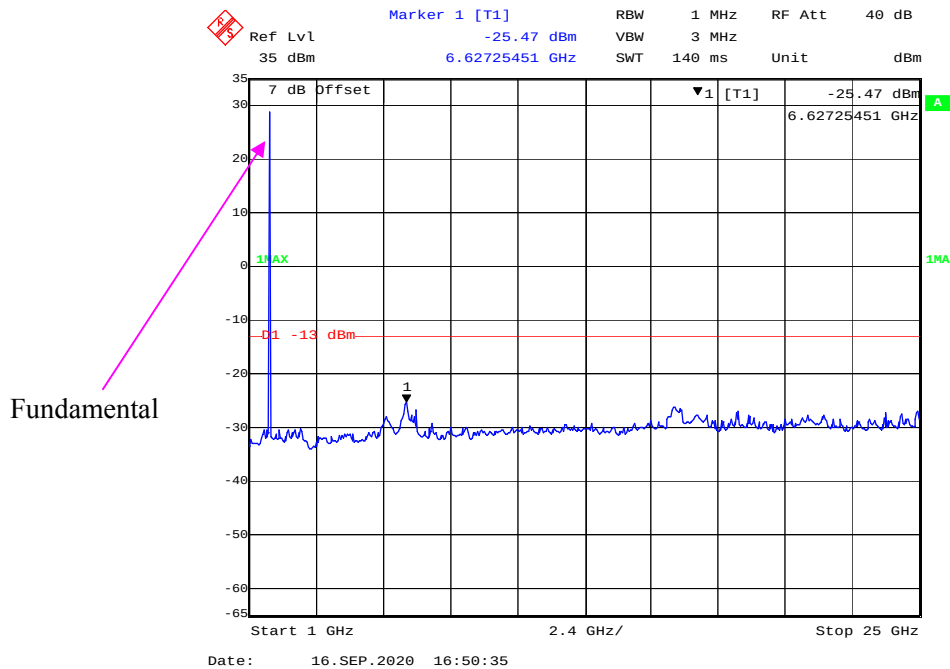
1 GHz – 20 GHz (1.4 MHz, QPSK, Middle Channel)



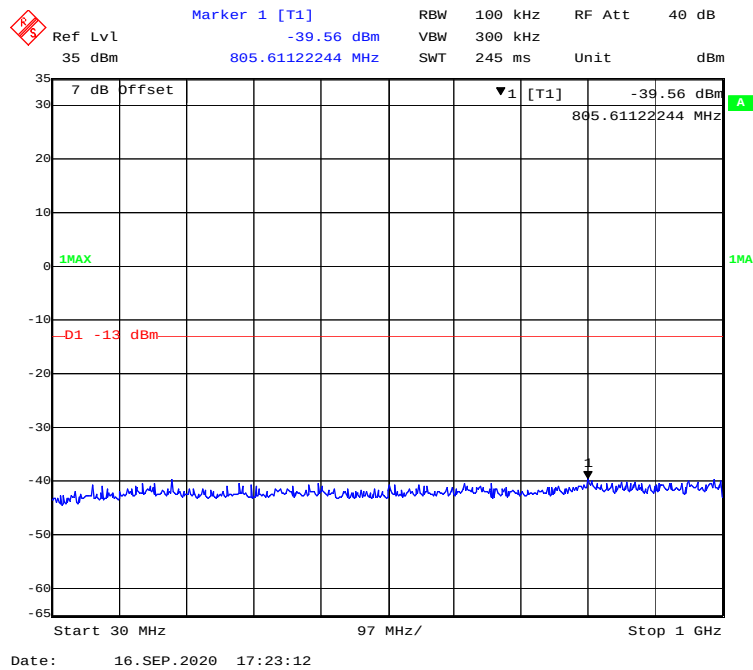
30 MHz - 1 GHz (1.4 MHz, 16-QAM, Middle Channel)



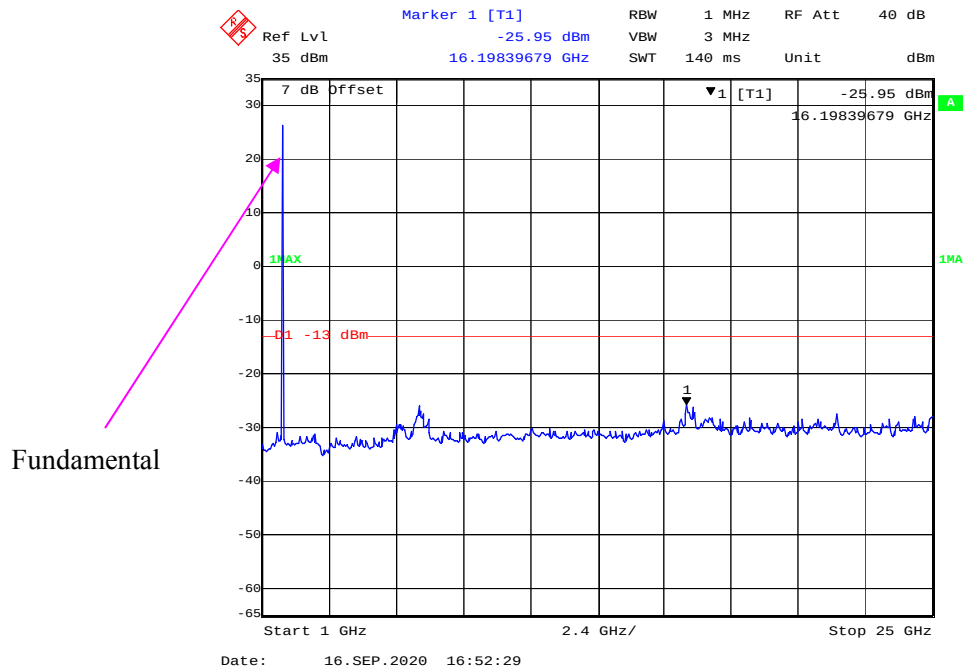
1 GHz – 20 GHz (1.4 MHz, 16-QAM, Middle Channel)



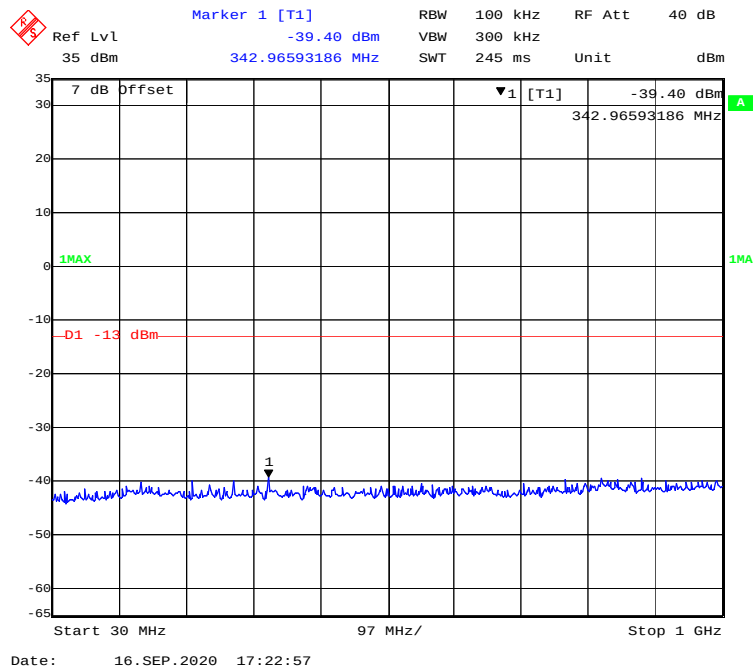
30 MHz - 1 GHz (3 MHz, QPSK, Middle Channel)



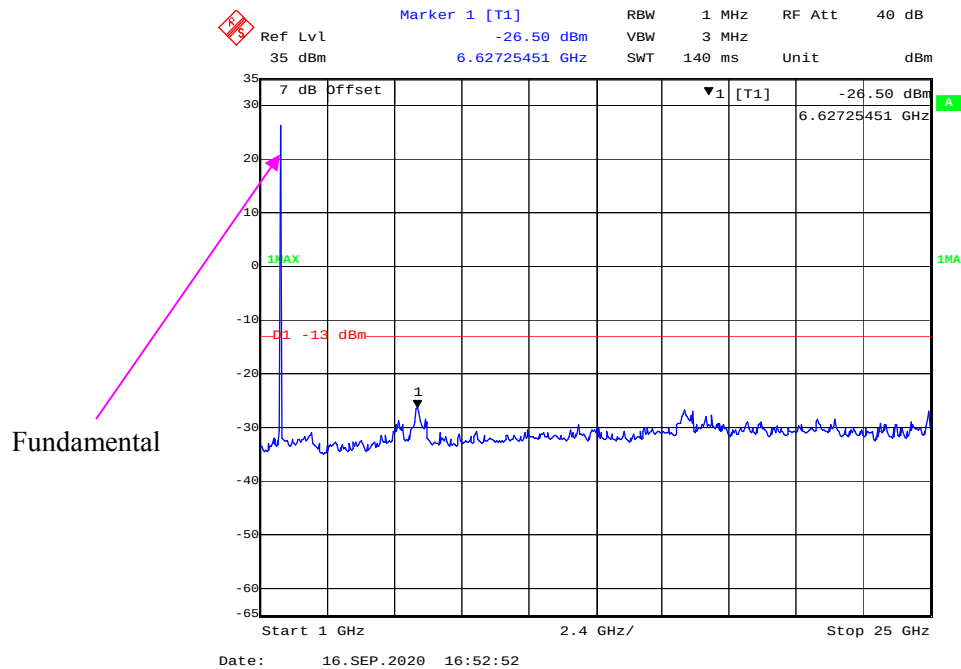
1 GHz – 20 GHz (3 MHz, QPSK, Middle Channel)



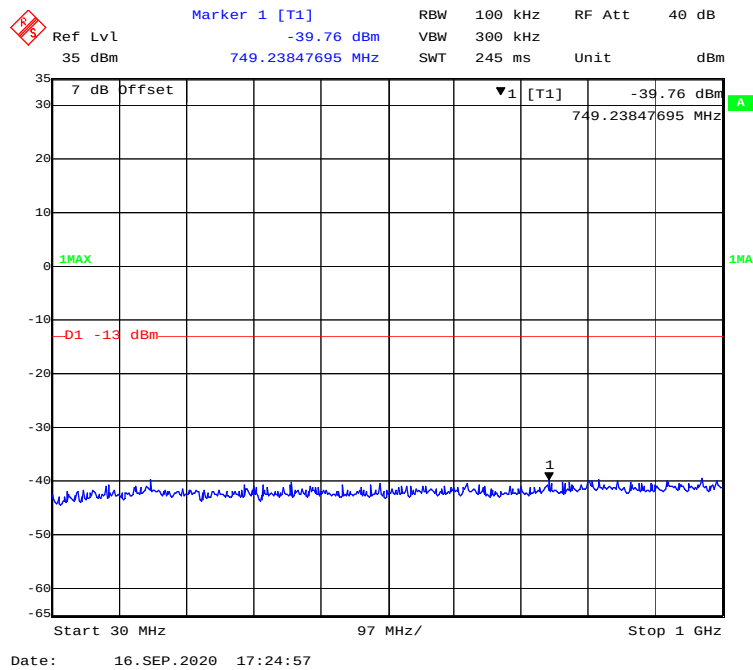
30 MHz - 1 GHz (3 MHz, 16-QAM, Middle Channel)



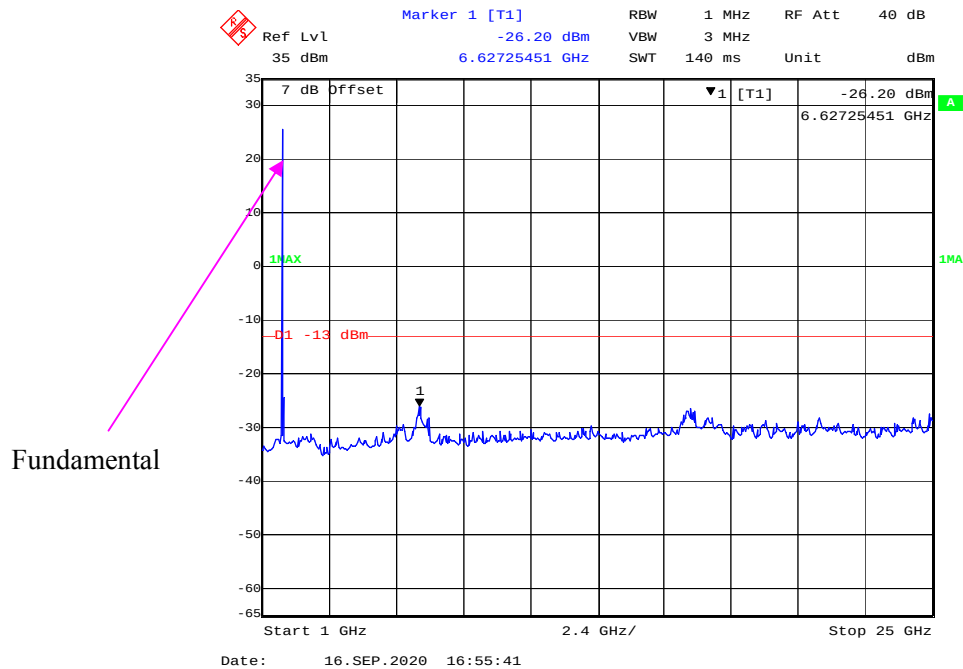
1 GHz – 20 GHz (3 MHz, 16-QAM, Middle Channel)



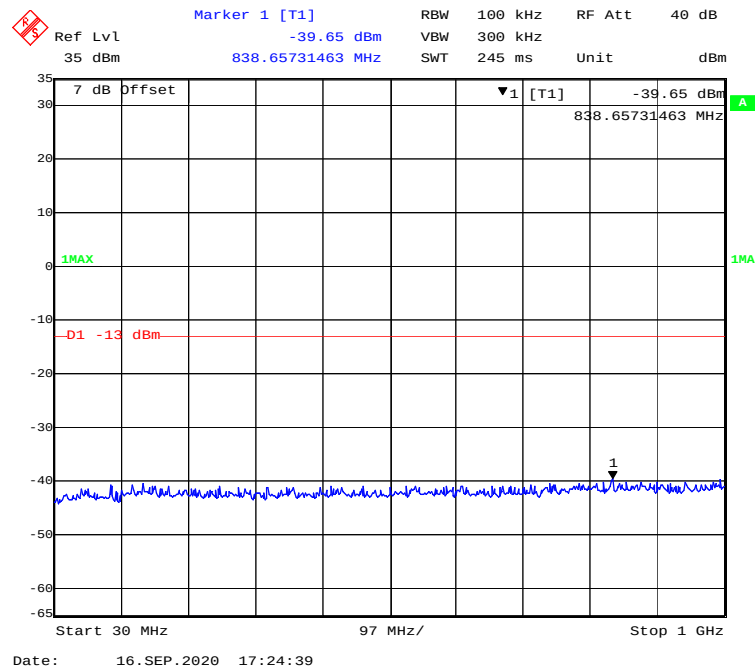
30 MHz - 1 GHz (5 MHz, QPSK, Middle Channel)



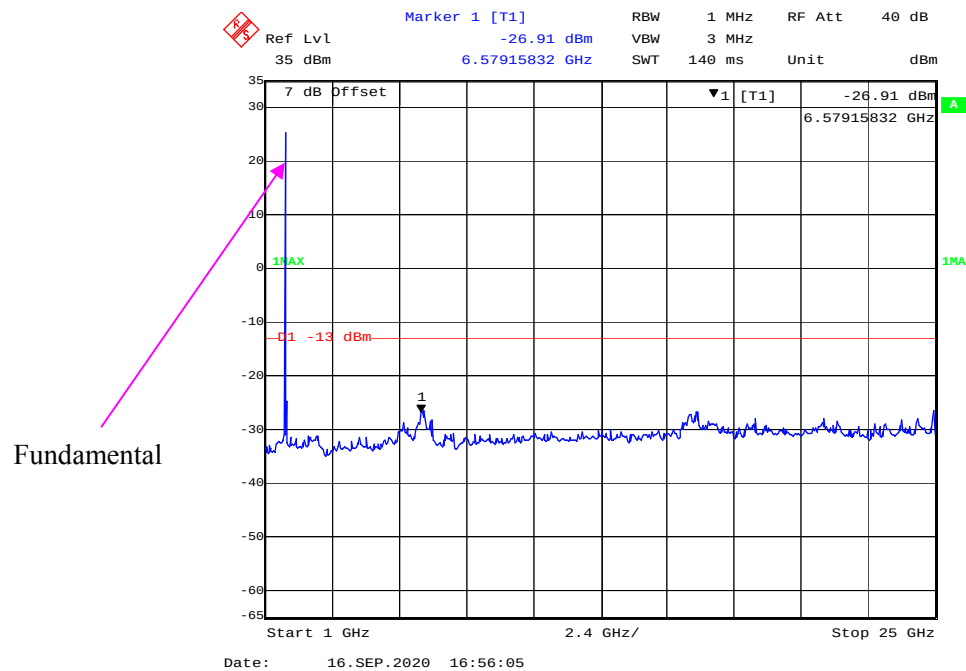
1 GHz – 20 GHz (5 MHz, QPSK, Middle Channel)



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



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



Ref Lvl 35 dBm RBW 100 kHz RF Att 40 dB
 35 dBm 881.42284569 MHz Unit dBm
 Marker 1 [T1] -39.27 dBm
 VBW 300 kHz
 SWT 245 ms
 7 dB Offset
 30 dBm
 1MAX
 D1 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 16.SEP.2020 17:26:39

Ref Lvl 35 dBm
 RBW 1 MHz
 VBW 3 MHz
 SWT 140 ms
 RF Att 40 dB
 Unit dBm

Marker 1 [T1]
 -26.38 dBm
 16.19839679 GHz

7 dB Offset
 ▼1 [T1]
 -26.38 dBm
 16.19839679 GHz

1MAX
 -01 -13 dBm

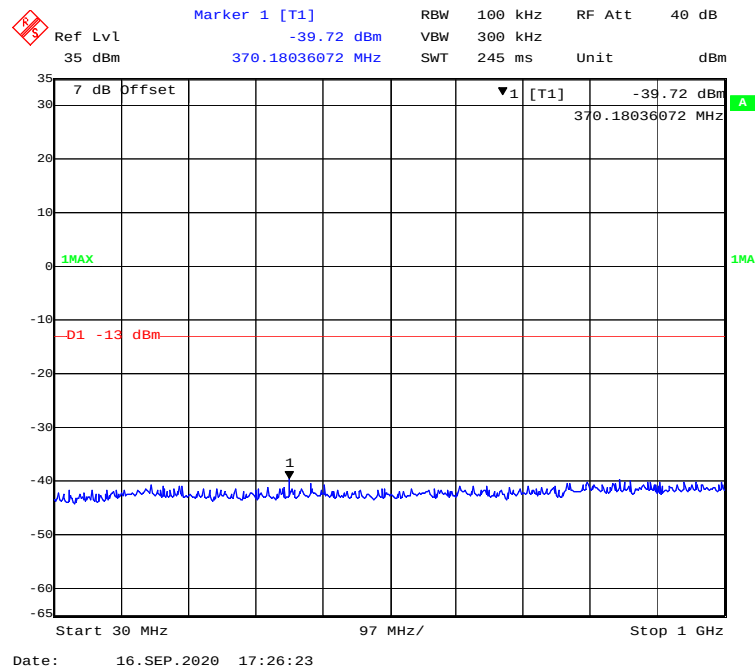
1

Start 1 GHz 2.4 GHz/ Stop 25 GHz

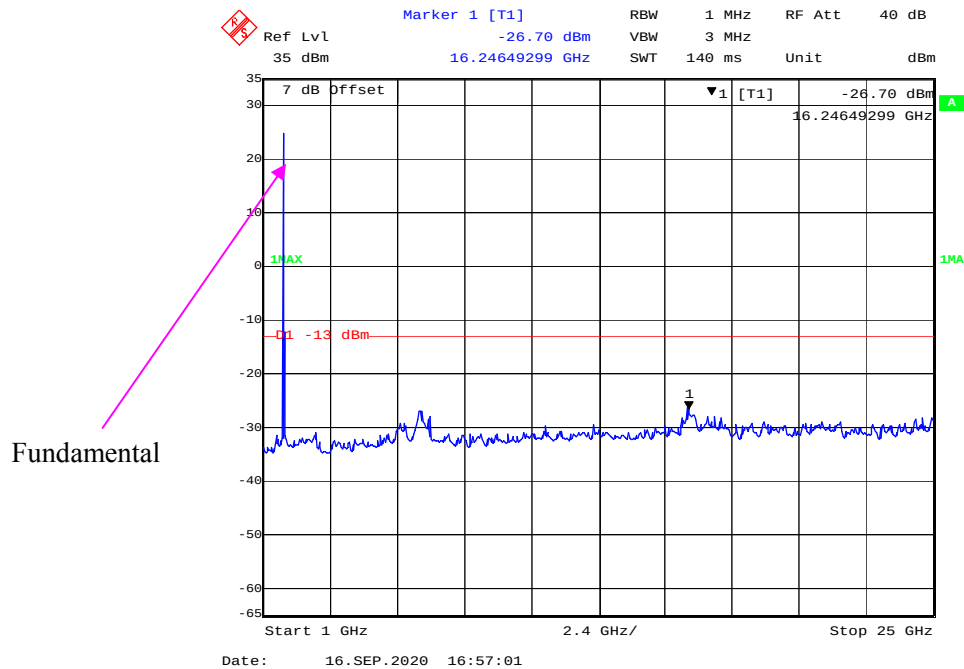
Date: 16.SEP.2020 16:56:43

Fundamental

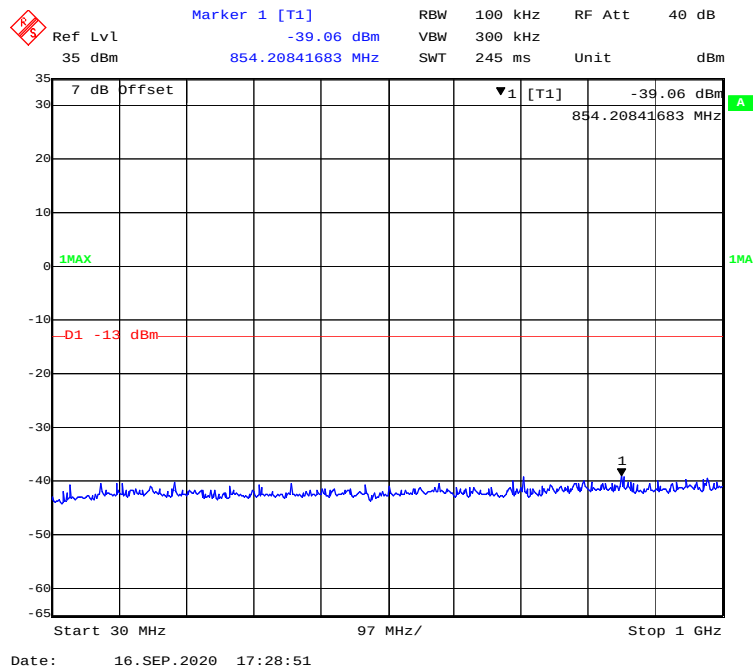
30 MHz - 1 GHz (10 MHz, 16-QAM, Middle Channel)



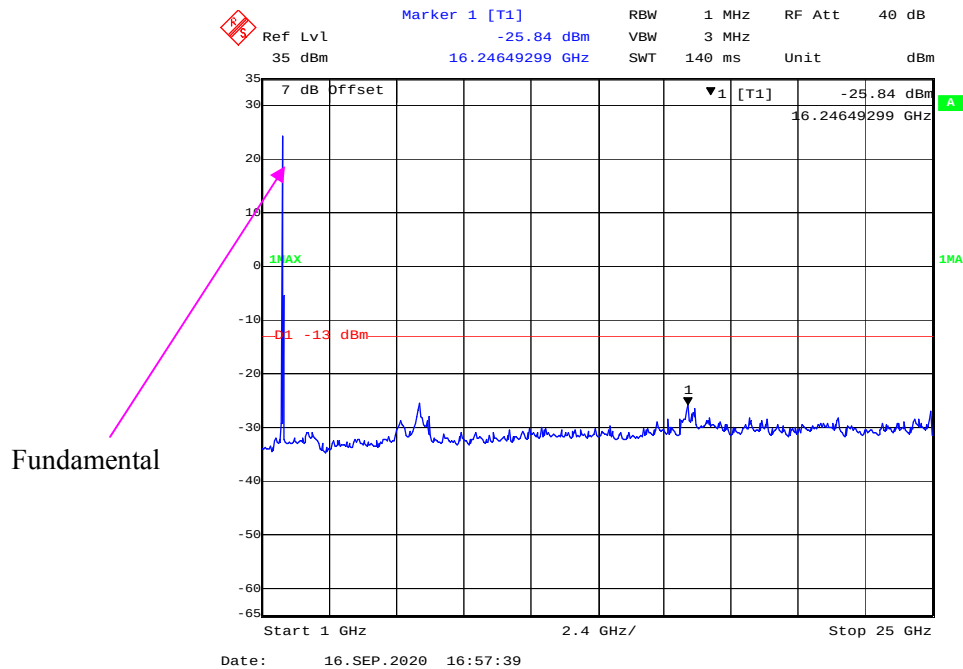
1 GHz – 20 GHz (10 MHz, 16-QAM, Middle Channel)



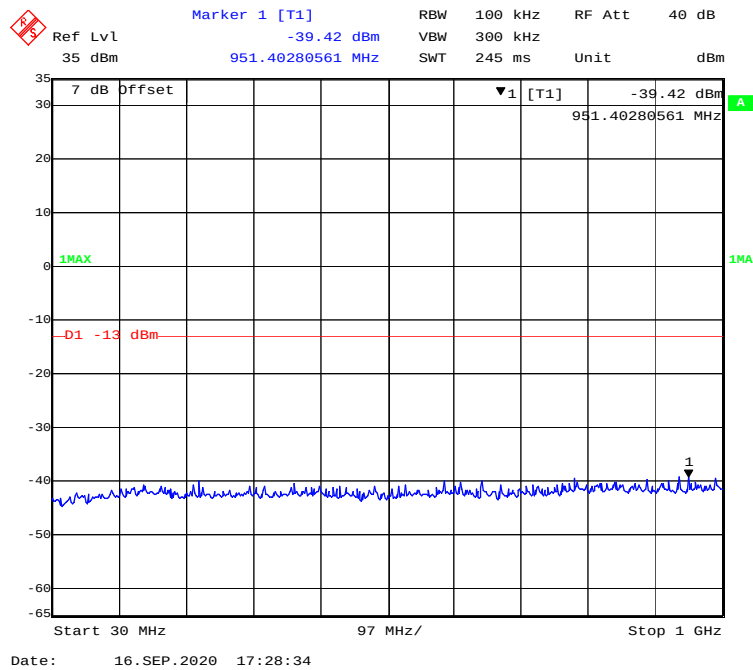
30 MHz - 1 GHz (15 MHz, QPSK, Middle Channel)



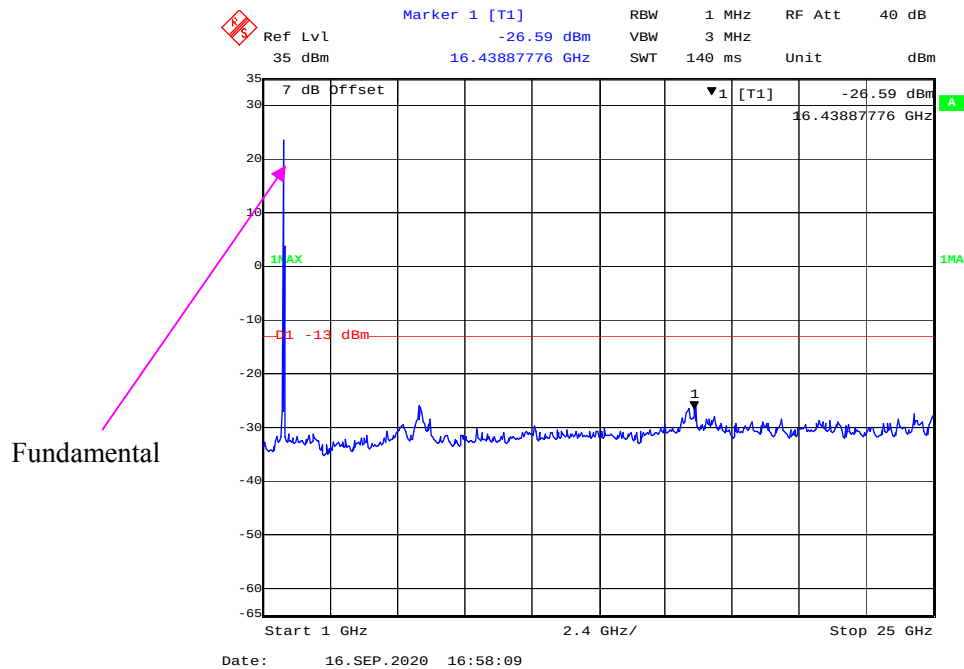
1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



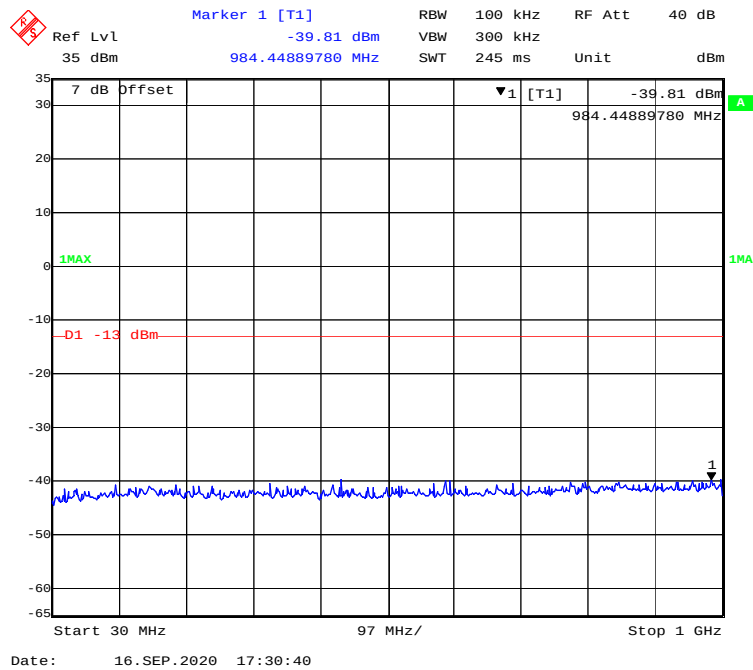
30 MHz - 1 GHz (15 MHz, 16-QAM, Middle Channel)



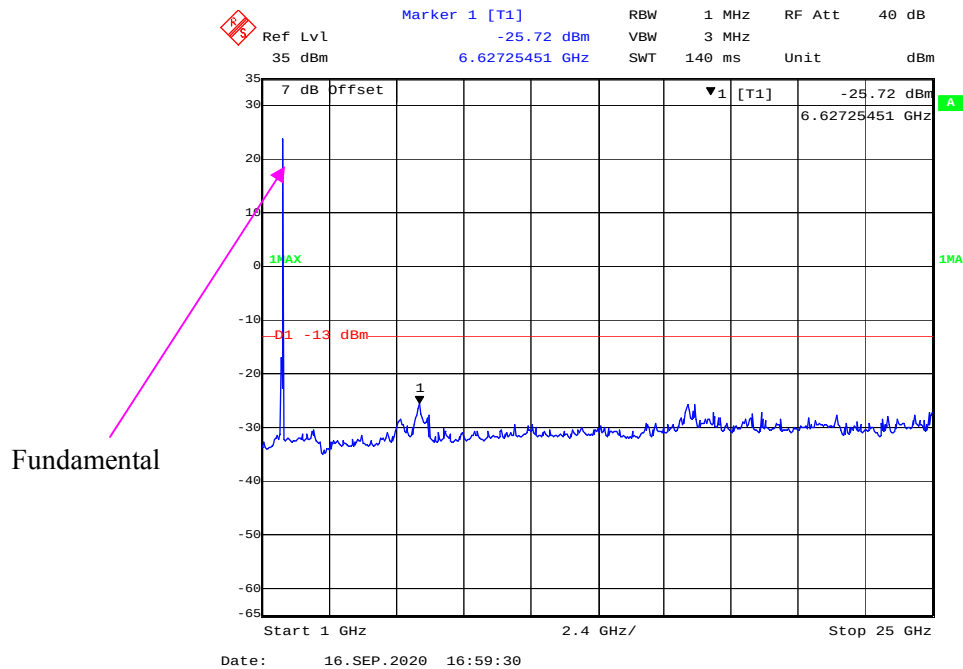
1 GHz – 20 GHz (15 MHz, 16-QAM, Middle Channel)



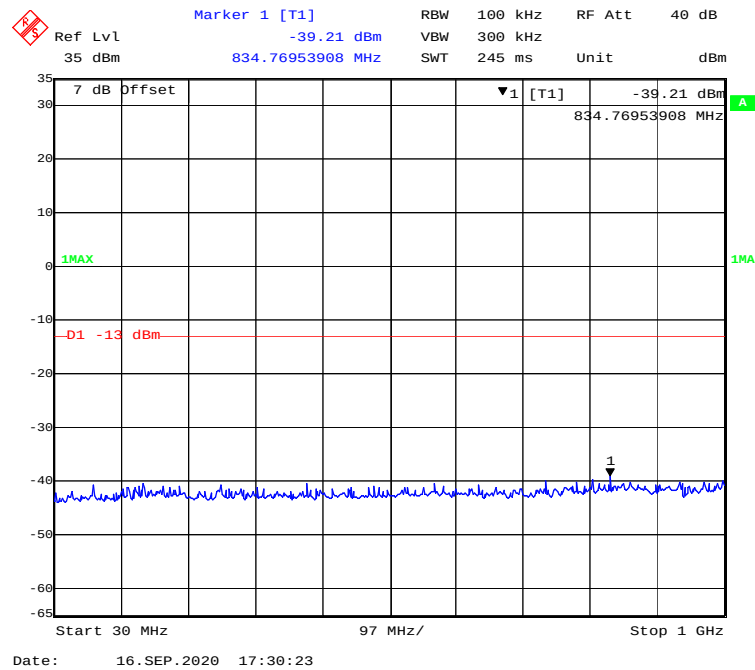
30 MHz - 1 GHz (20 MHz, QPSK, Middle Channel)



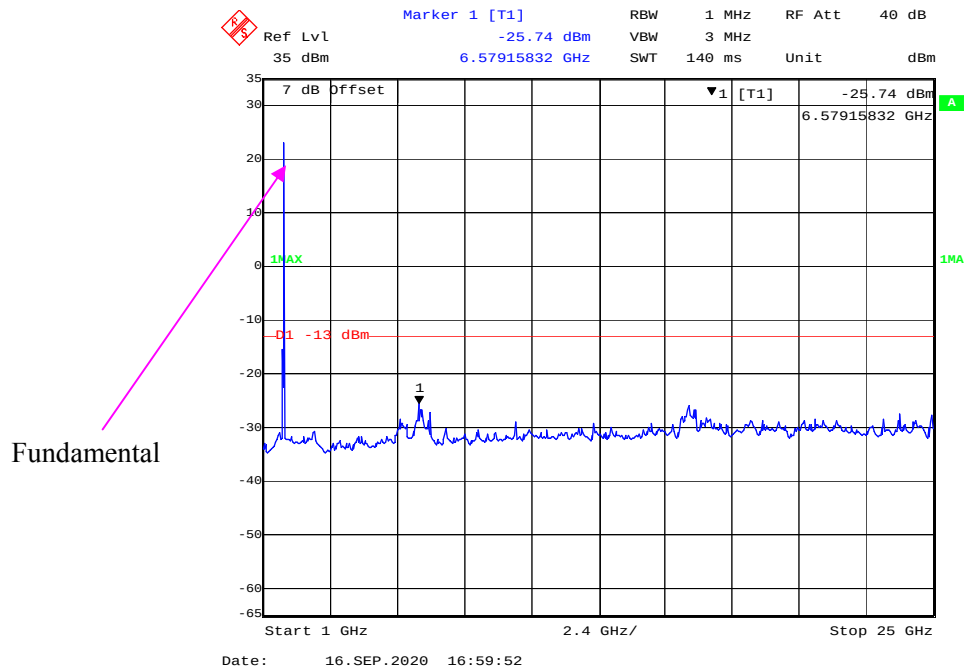
1 GHz – 20 GHz (20 MHz, QPSK, Middle Channel)



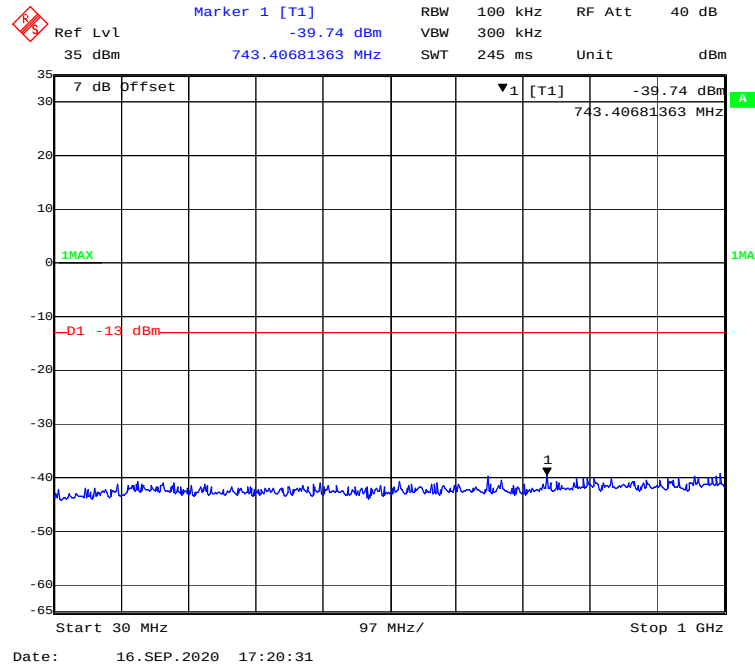
30 MHz - 1 GHz (20 MHz, 16-QAM, Middle Channel)



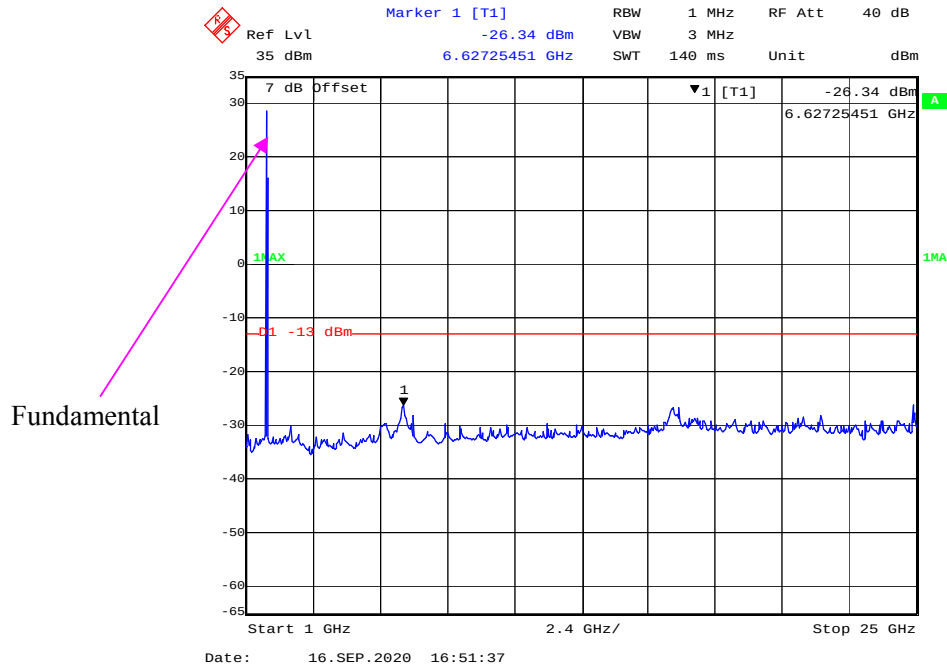
1 GHz – 20 GHz (20 MHz, 16-QAM, Middle Channel)



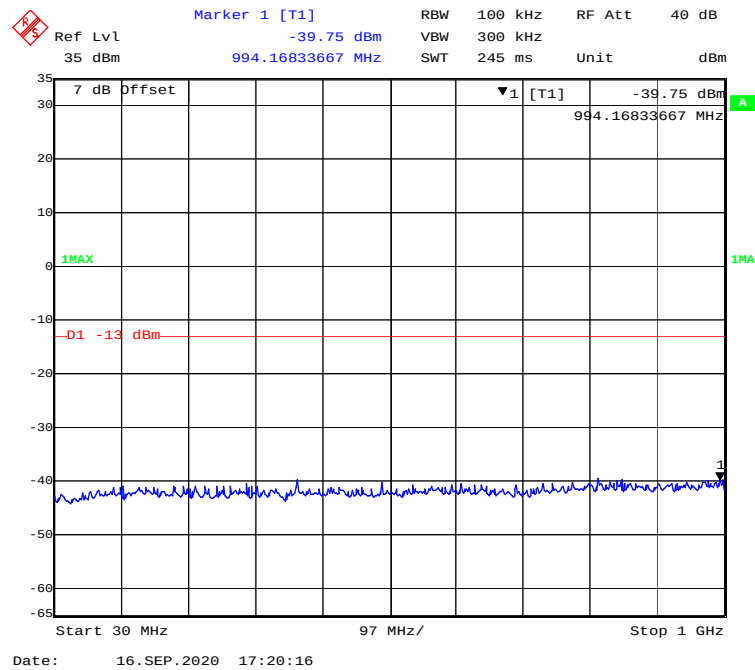
30 MHz - 1 GHz (1.4 MHz, QPSK, High Channel)



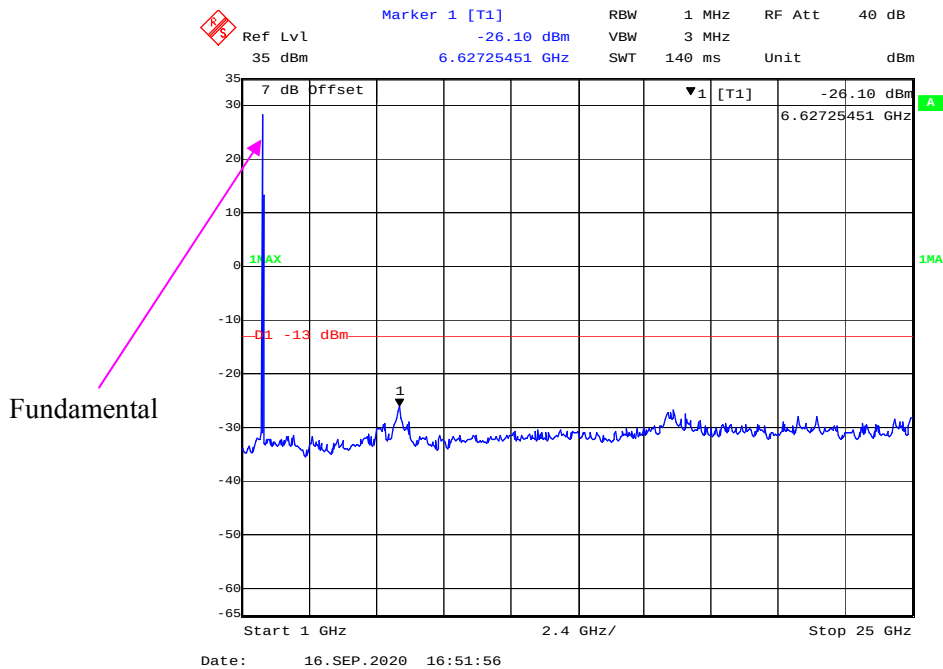
1 GHz – 20 GHz (1.4 MHz, QPSK, High Channel)



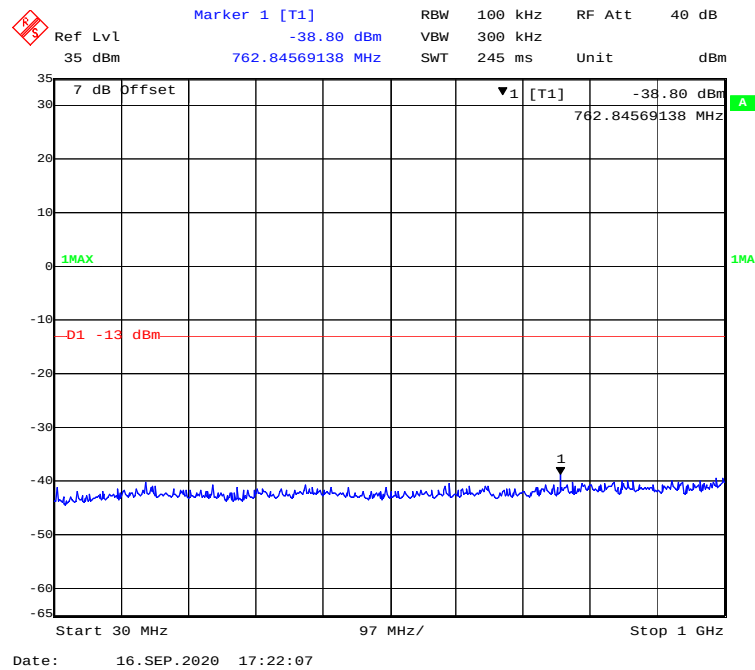
30 MHz - 1 GHz (1.4 MHz, 16-QAM, High Channel)



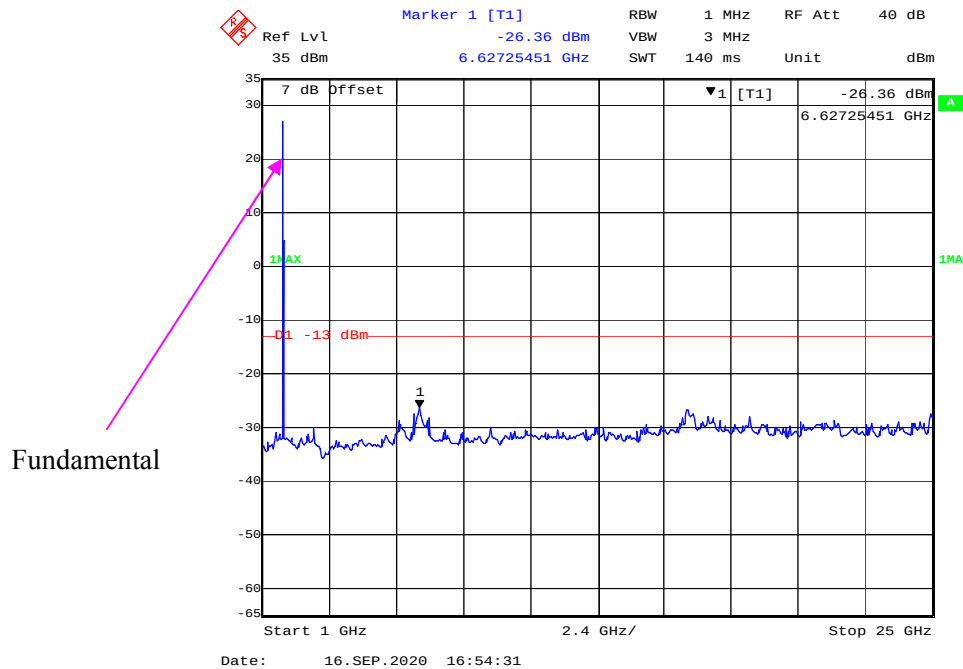
1 GHz – 20 GHz (1.4 MHz, 16-QAM, High Channel)



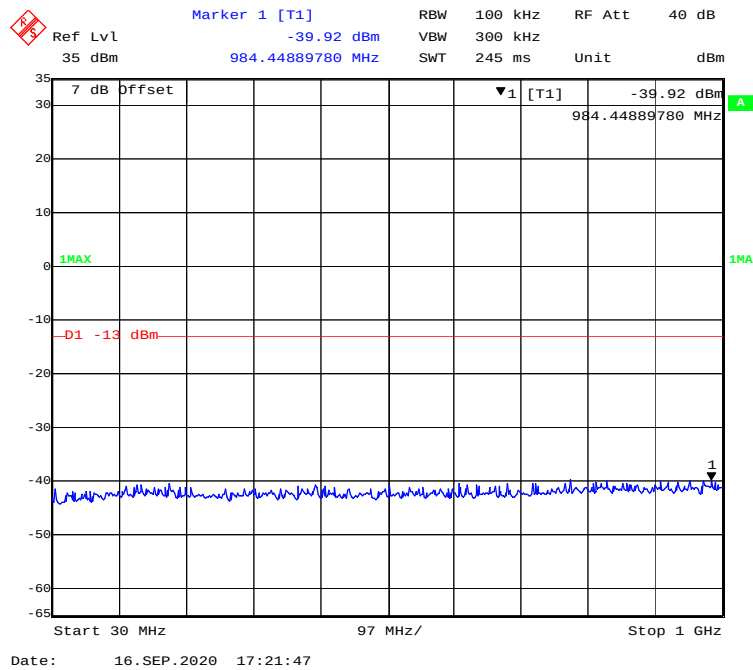
30 MHz - 1 GHz (3 MHz, QPSK, High Channel)



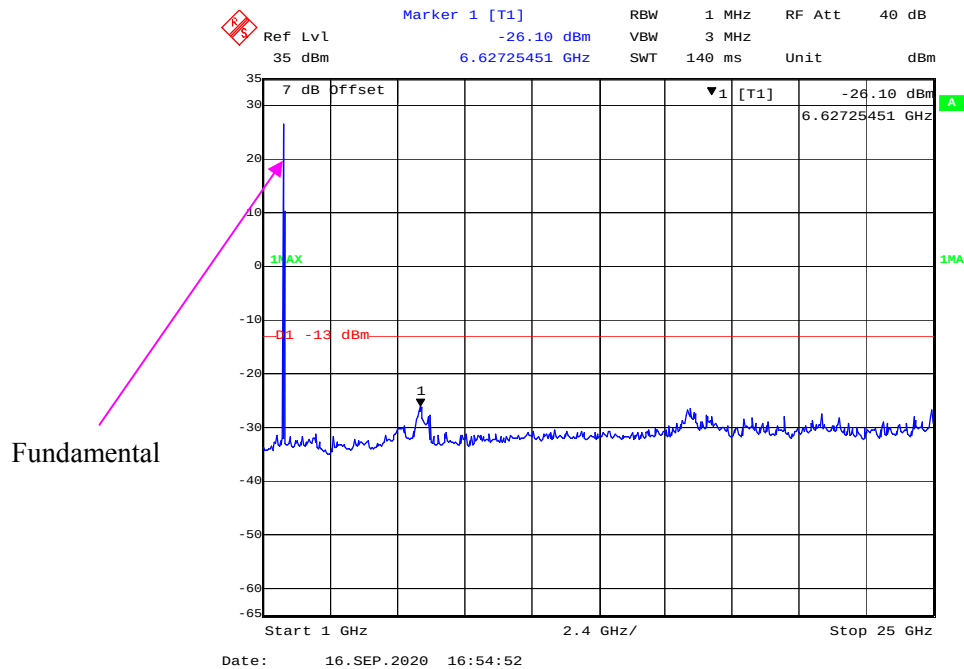
1 GHz – 20 GHz (3 MHz, QPSK, High Channel)



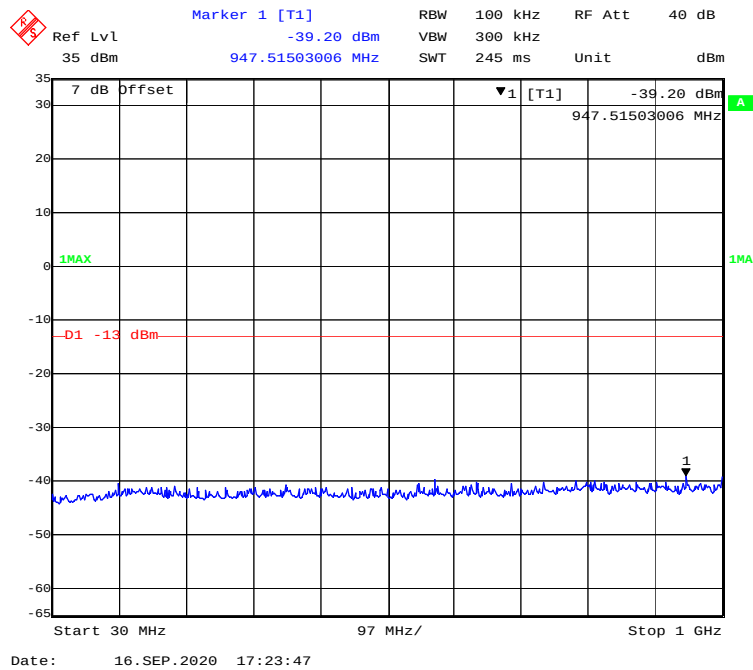
30 MHz - 1 GHz (3 MHz, 16-QAM, High Channel)



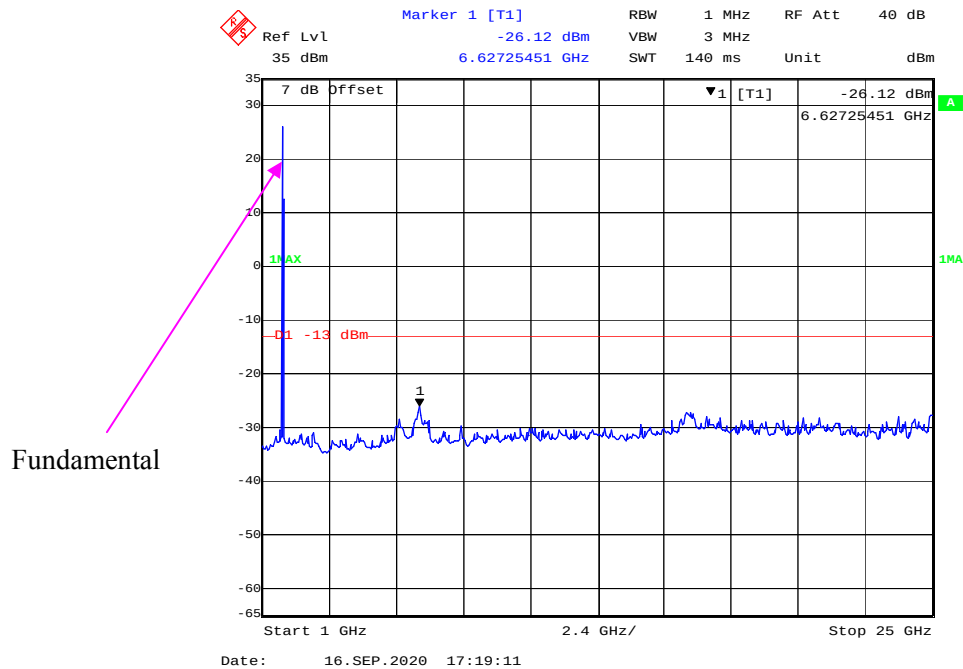
1 GHz – 20 GHz (3 MHz, 16-QAM, High Channel)



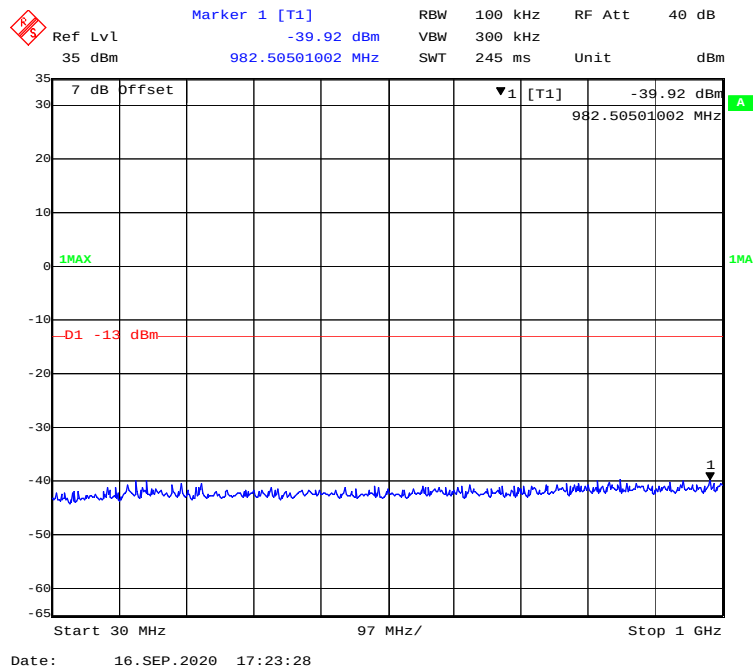
30 MHz - 1 GHz (5 MHz, QPSK, High Channel)



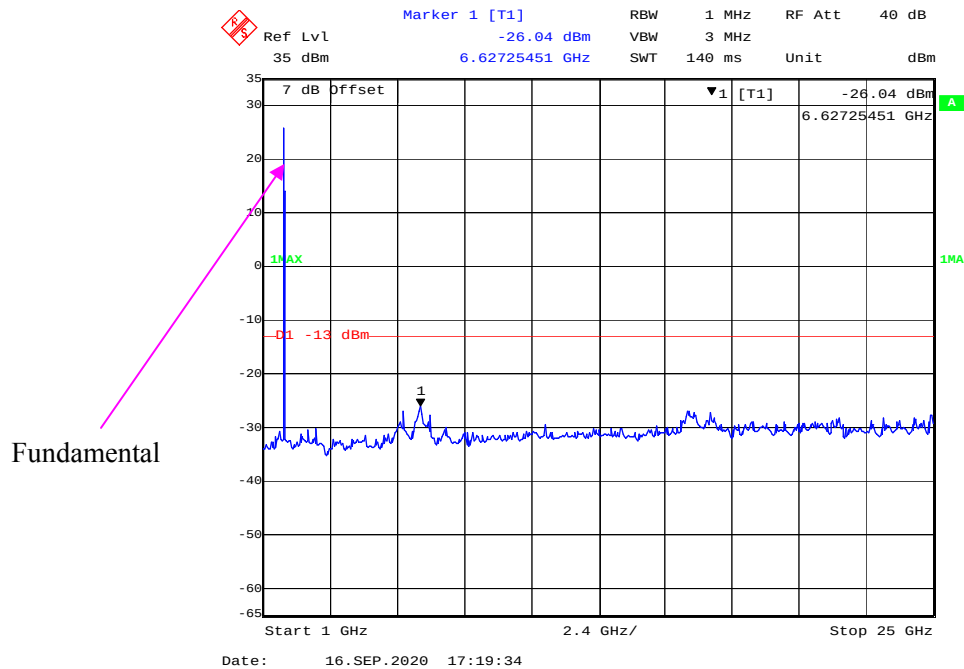
1 GHz – 20 GHz (5 MHz, QPSK, High Channel)



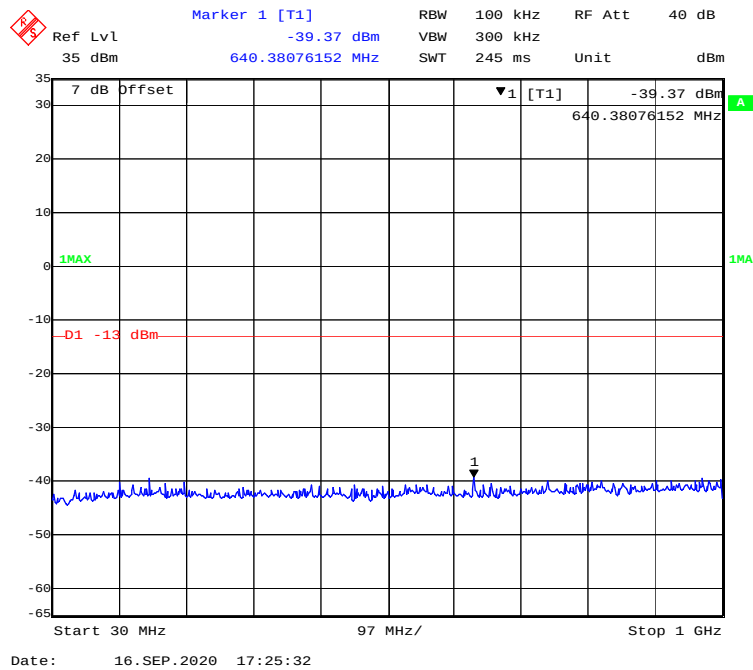
30 MHz - 1 GHz (5 MHz, 16-QAM, High Channel)



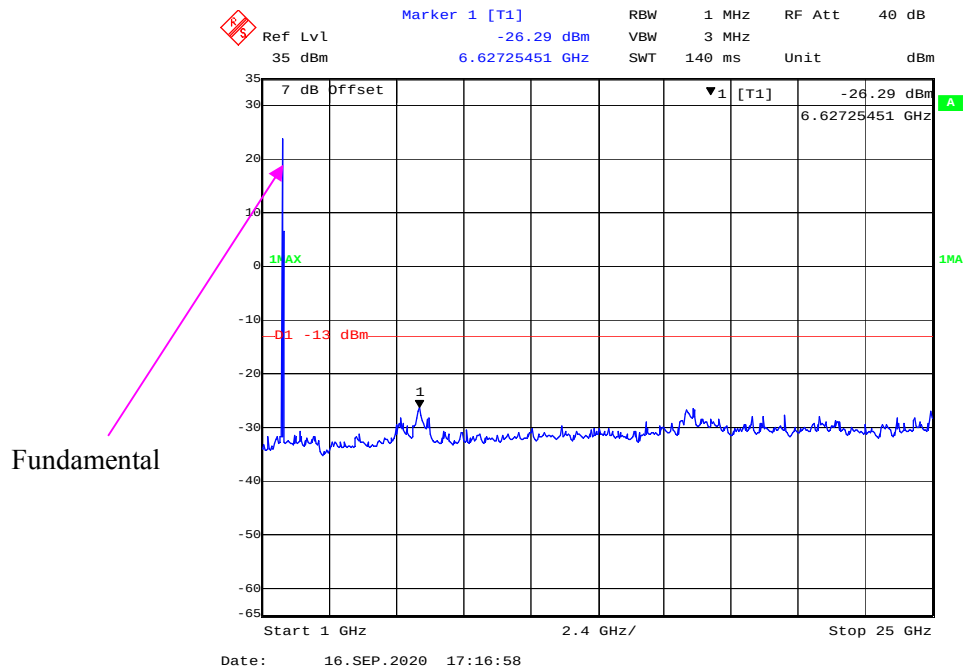
1 GHz – 20 GHz (5 MHz, 16-QAM, High Channel)



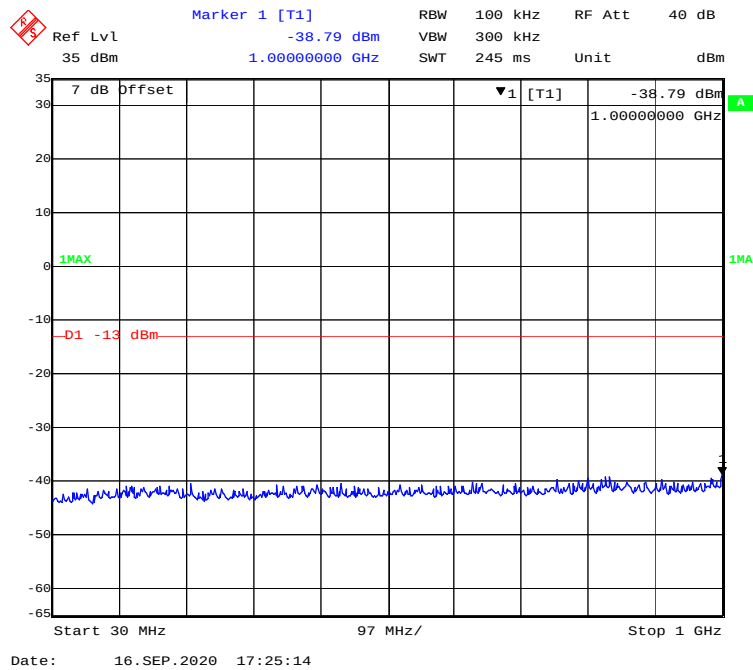
30 MHz - 1 GHz (10 MHz, QPSK, High Channel)



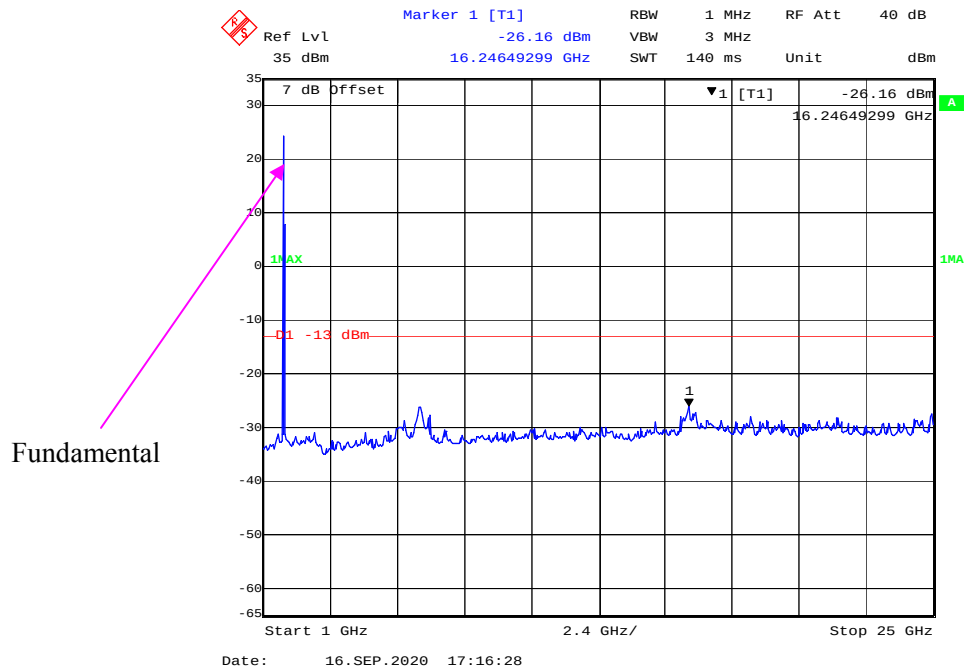
1 GHz – 20 GHz (10 MHz, QPSK, High Channel)



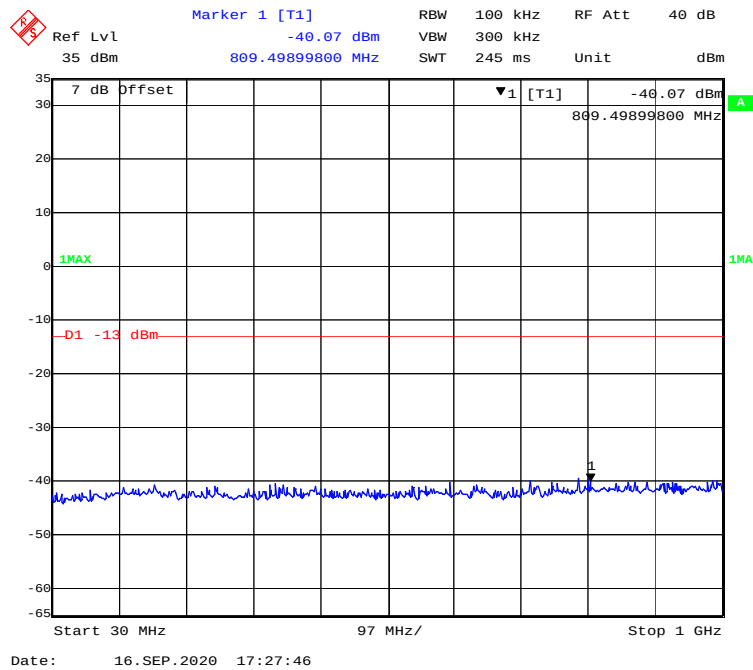
30 MHz - 1 GHz (10 MHz, 16-QAM, High Channel)



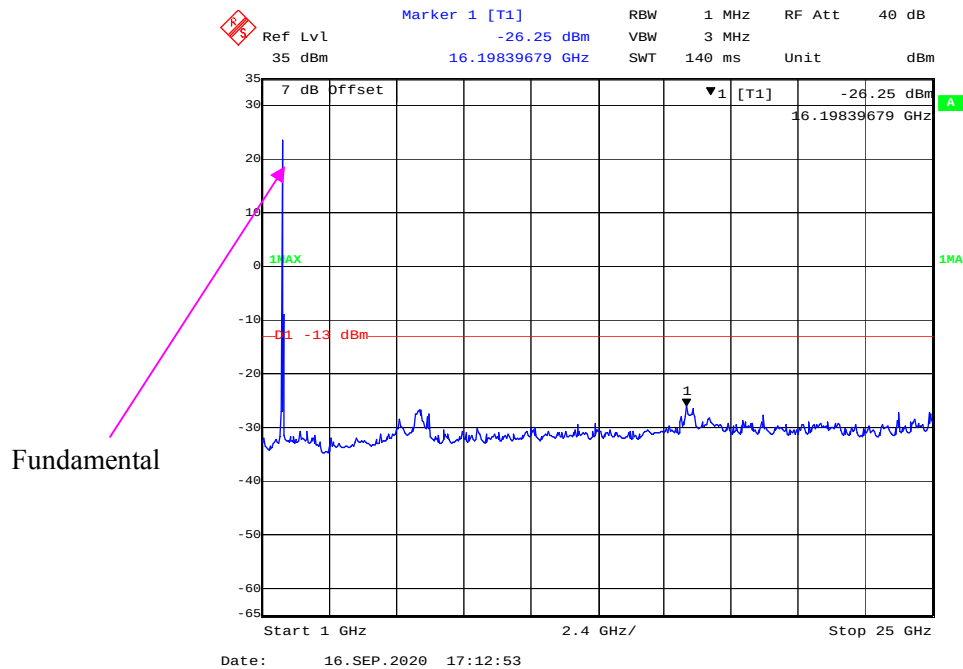
1 GHz – 20 GHz (10 MHz, 16-QAM, High Channel)



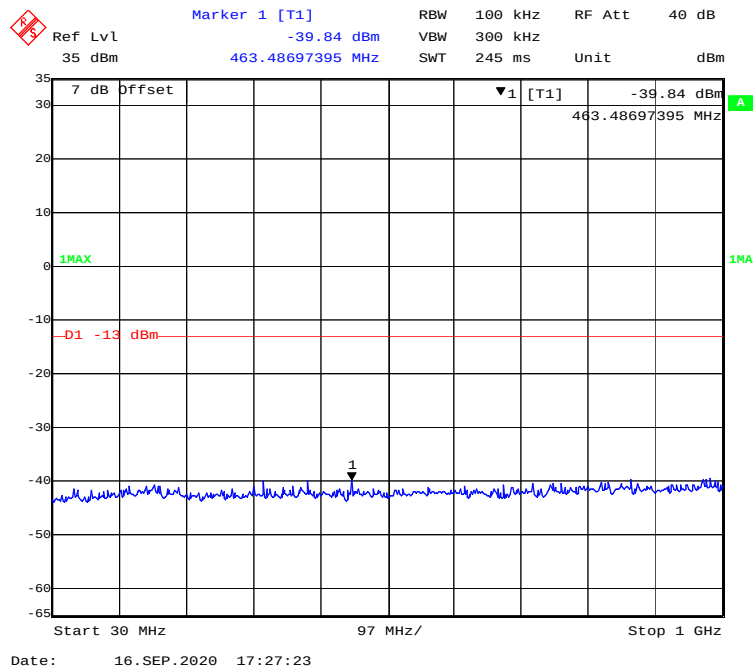
30 MHz - 1 GHz (15 MHz, QPSK, High Channel)



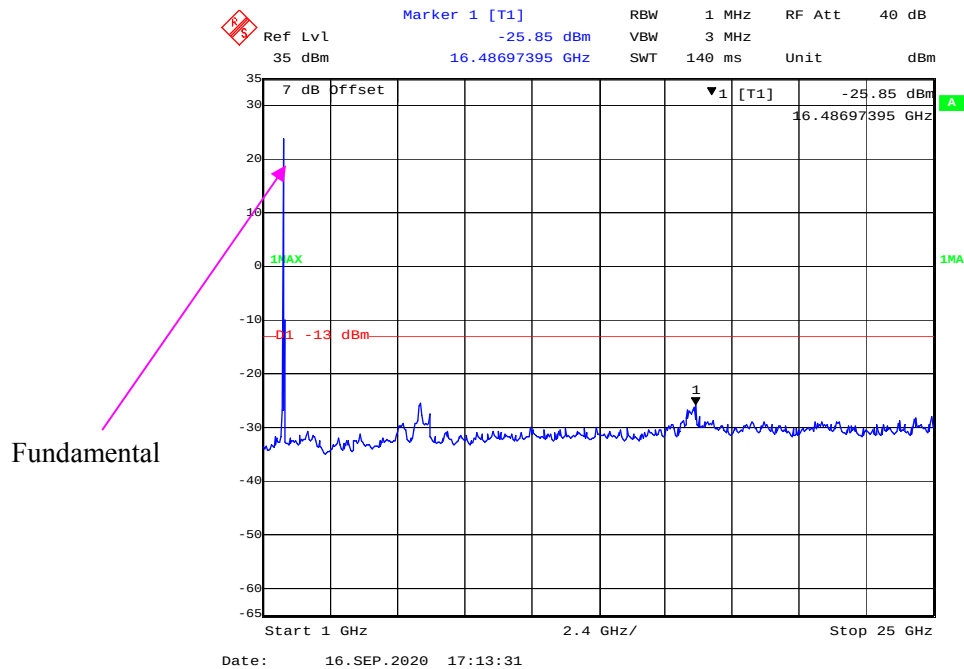
1 GHz – 20 GHz (15 MHz, QPSK, Middle Channel)



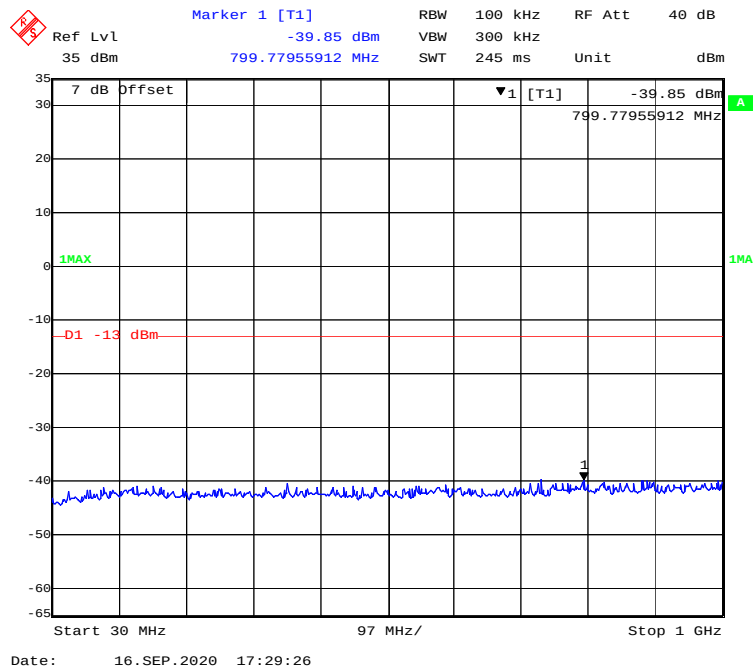
30 MHz - 1 GHz (15 MHz, 16-QAM, High Channel)



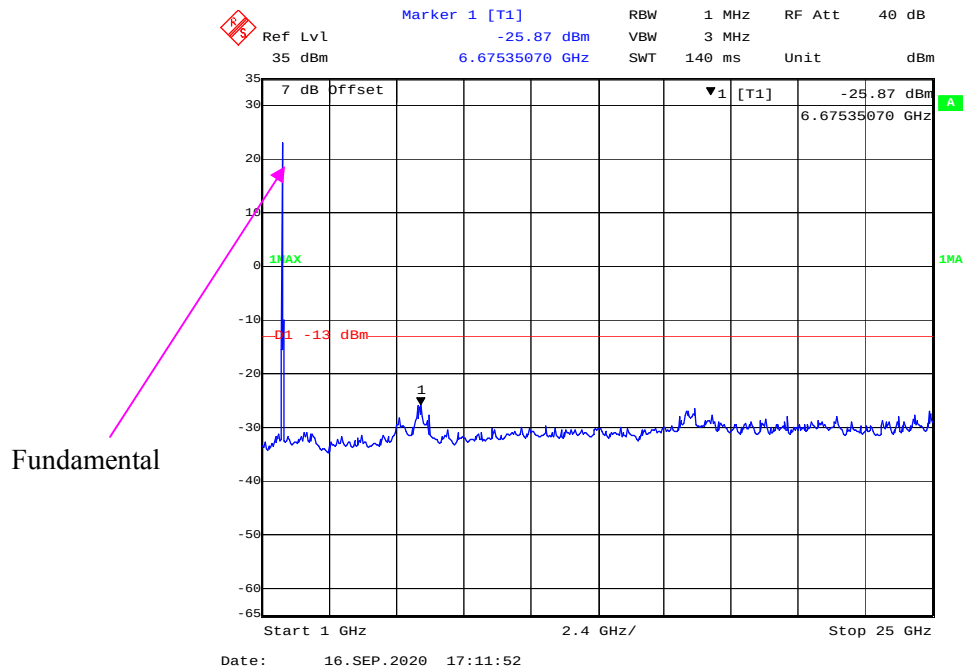
1 GHz – 20 GHz (15 MHz, 16-QAM, High Channel)



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



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



REF Lvl: 35 dBm
 Marker 1 [T1]: -39.99 dBm
 RBW: 100 kHz
 VBW: 300 kHz
 SWT: 245 ms
 RF Att: 40 dB
 Unit: dBm

7 dB Offset
 957.23446894 MHz
 -39.99 dBm
 957.23446894 MHz
 1MAX
 -D1 -13 dBm
 1
 Start 30 MHz 97 MHz/ Stop 1 GHz
 Date: 16.SEP.2020 17:29:09

Ref Lvl 35 dBm RBW 1 MHz RF Att 40 dB
 VBW 3 MHz
 SWT 140 ms Unit dBm

Marker 1 [T1] -26.12 dBm
 6.72344689 GHz

7 dB Offset ▼1 [T1] -26.12 dBm
 6.72344689 GHz

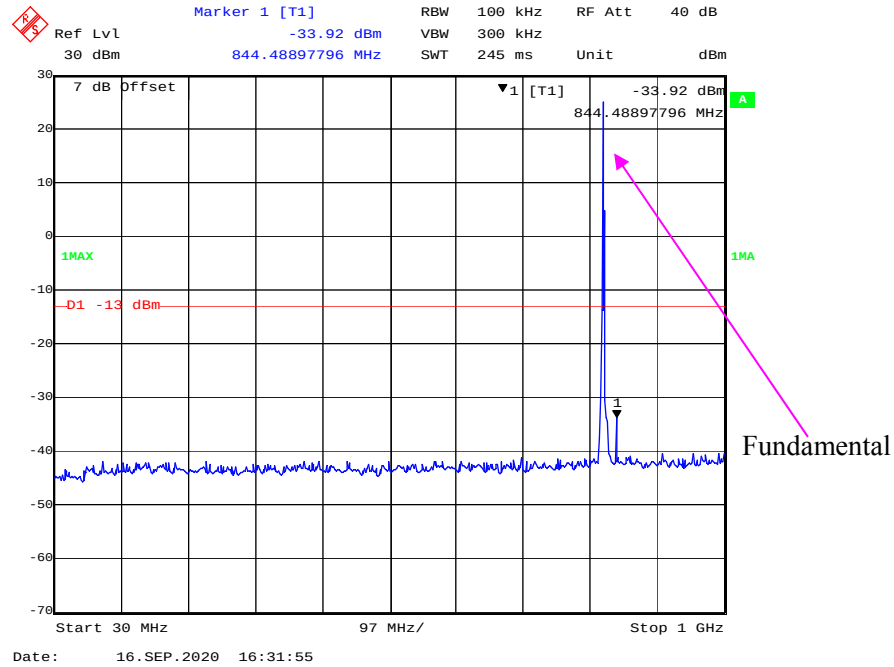
11AX
 -13 dBm
 1

Start 1 GHz 2.4 GHz/ Stop 25 GHz

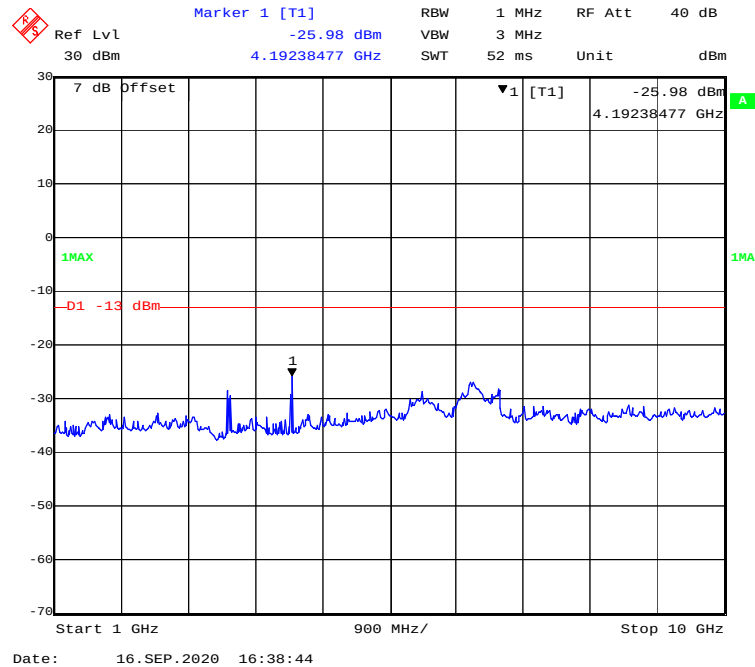
Date: 16.SEP.2020 17:12:14

LTE Band 5:

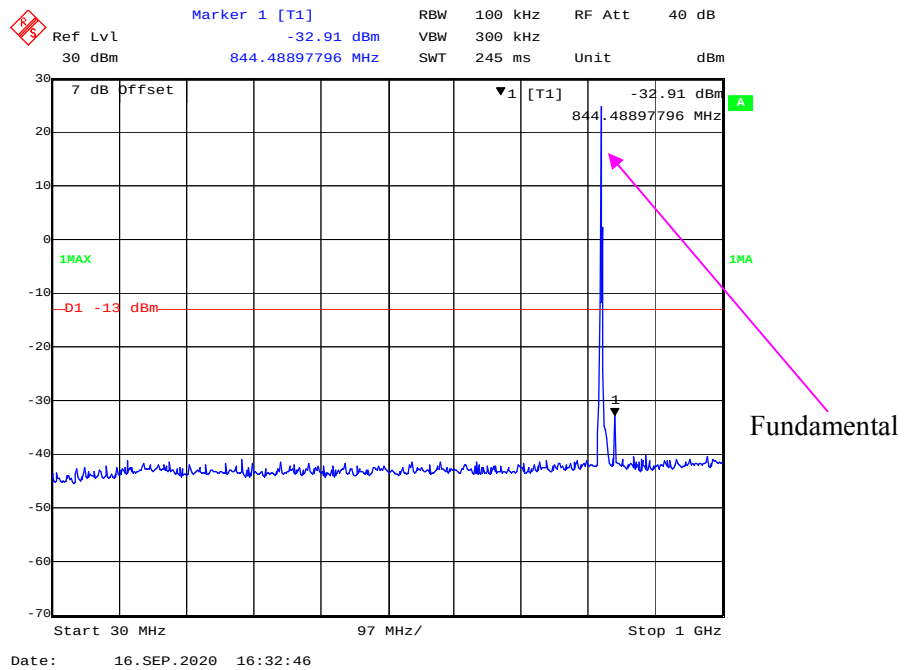
30 MHz - 1 GHz (QPSK, 1.4 MHz, Low Channel)



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



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



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

