TESTING LABORATORY
CERTIFICATE#4323.01

FCC PART 27

FCC PART 22H, PART 24E

TEST REPORT

For

Roadefend Intelligence Technology (Shanghai) Co.,Ltd.

Room 01, level3, block B3, lane221, Huangxing Road Yangpu District, Shanghai, China

FCC ID: 2AXWG-AI-5-E

Report Type:	**Product Type:**
Original Report	Intelligent Driving Assist System

Test Engineer:	CK Huang
Report Number:	RSHD200915002-00B
Report Date:	2020-10-15
Reviewed By:	Oscar Ye EMC Manager
Prepared By:	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Roadefend Intelligence Technology (Shanghai) Co.,Ltd.
Tested Model:	AI-5-E
Product Type:	Intelligent Driving Assist System
Power Supply:	DC 6.4Vfrom battery, DC 8-32V from external power supply(typical DC 24V)
RF Function:	GPRS/EGPRS, WCDMA, LTE
Operating Band/Frequency:	GPRS/EGPRS 850: 824-849 MHz(TX), 869-894 MHz(RX) GPRS/EGPRS 1900: 1850-1910 MHz(TX), 1930-1990 MHz(RX) WCDMA Band II: 1850-1910 MHz(TX), 1930-1990 MHz(RX) WCDMA Band IV: 1710-1755 MHz(TX), 2110-2155MHz(RX) WCDMA Band V: 824-849 MHz(TX), 869-894 MHz(RX) LTE Band 2: 1850-1910 MHz(TX), 1930MHz-1990 MHz(RX) LTE Band 4: 1710-1755 MHz(TX), 2110-2155 MHz(RX) LTE Band 5: 824-849 MHz(TX), 869-894 MHz(RX) LTE Band 12: 699-716 MHz(TX), 729-746 MHz(RX) LTE Band 13: 777-787 MHz(TX), 746-756 MHz(RX)
Modulation Type:	GPRS/EGPRS: GMSK/8PSK WCDMA: BPSK,QPSK,16QAM LTE: QPSK,16QAM
Antenna Type:	Monopole antenna
*Maximum Antenna Gain:	2.0 dBi

Note: The antenna gain was provided by the applicant.

**All measurement and test data in this report was gathered from production sample serial number: 20200915002. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-09-15)*

Objective

This type approval report is prepared on behalf of *Roadefend Intelligence Technology (Shanghai) 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)

No related submittal(s)/grant(s).

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 D01and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

SYSTEM TEST CONFIGURATION

Justification

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

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

Channel List

Mode		Channel		Frequency (MHz)
GPRS/EGPRS 850		Low	128	824.2
		Middle	190	836.6
		High	251	848.8
GPRS/EGPRS 1900		Low	512	1850.2
		Middle	661	1880.0
		High	810	1909.8
WCDMA Band II		Low	9262	1852.4
		Middle	9400	1880.0
		High	9538	1907.6
WCDMA Band IV		Low	1312	1712.4
		Middle	1413	1732.6
		High	1513	1752.6
WCDMA Band V		Low	4132	826.4
		Middle	4183	836.6
		High	4233	846.6
LTE Band 2	1.4M	Low	18607	1850.7
		Middle	18900	1880.0
		High	19193	1909.3
	3M	Low	18615	1851.5
		Middle	18900	1880.0
		High	19185	1908.5
	5M	Low	18625	1852.5
		Middle	18900	1880.0
		High	19175	1907.5
	10M	Low	18650	1855.0
		Middle	18900	1880.0
		High	19150	1905.0
	15M	Low	18675	1857.5
		Middle	18900	1880.0
		High	19125	1902.5
	20M	Low	18700	1860.0
		Middle	18900	1880.0
		High	19100	1900.0

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

Mode		Channel		Frequency (MHz)
LTE Band 13	5M	Low	23205	779.5
		Middle	23230	782.0
		High	23255	784.5
	10M	Low	/	/
		Middle	23230	782.0
		High	/	/

Equipment Modifications

No modifications were made to the EUT.

Support Equipment List and Details

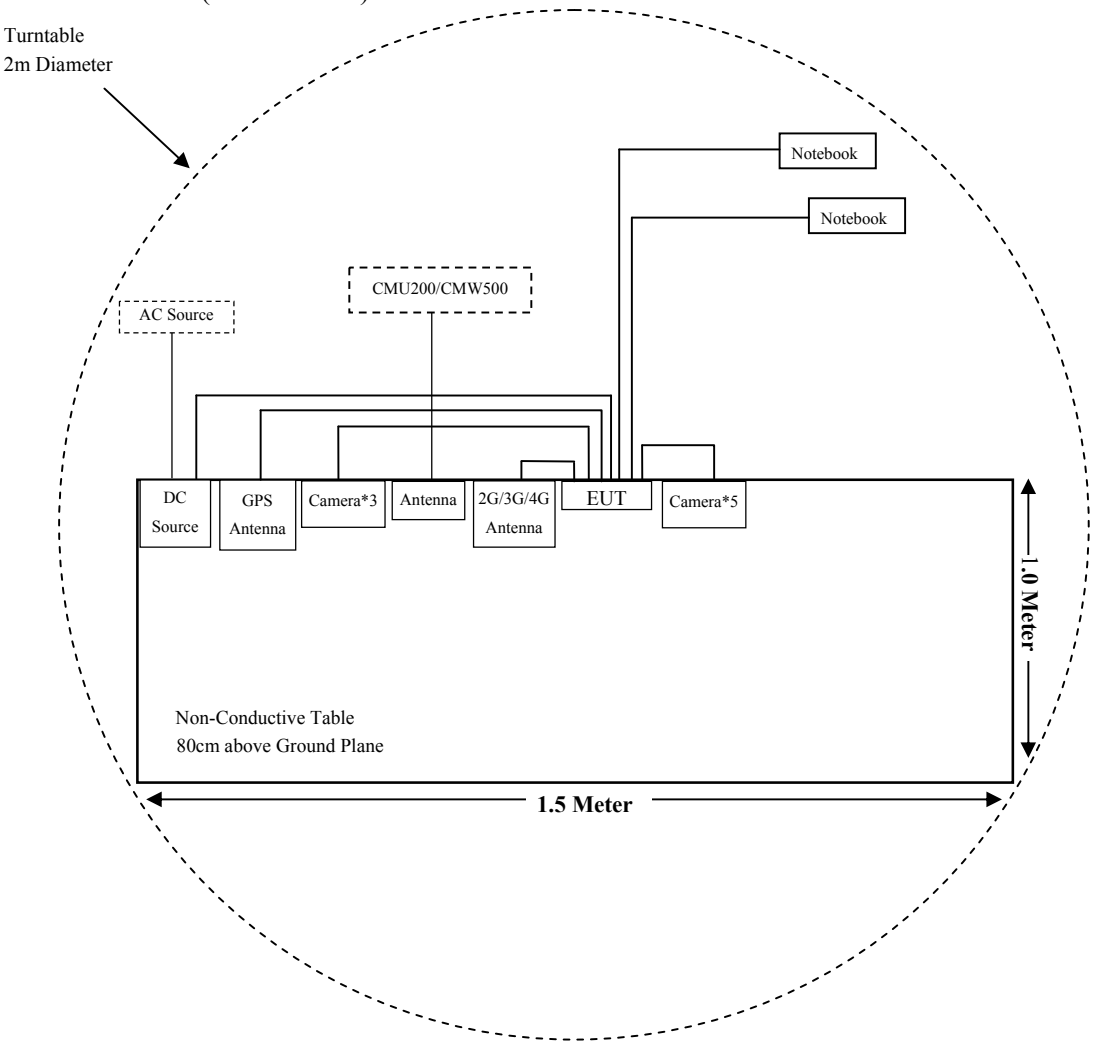
Manufacturer	Description	Model	Serial Number
Aihuaxin technology	Antenna	Unknown	Unknown
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478
Unknown	Camera*3	Unknown	Unknown
Unknown	Camera*5	Unknown	Unknown
Unknown	GPS Antenna	Unknown	Unknown
Unknown	2G/3G/4G Antenna	Unknown	Unknown
MCH	DC Source	MCH-303D-II	14070562
HP	Notebook1	4441s	2CE3130VWY
Dell	Notebook2	E6410	3094742521

External I/O Cable

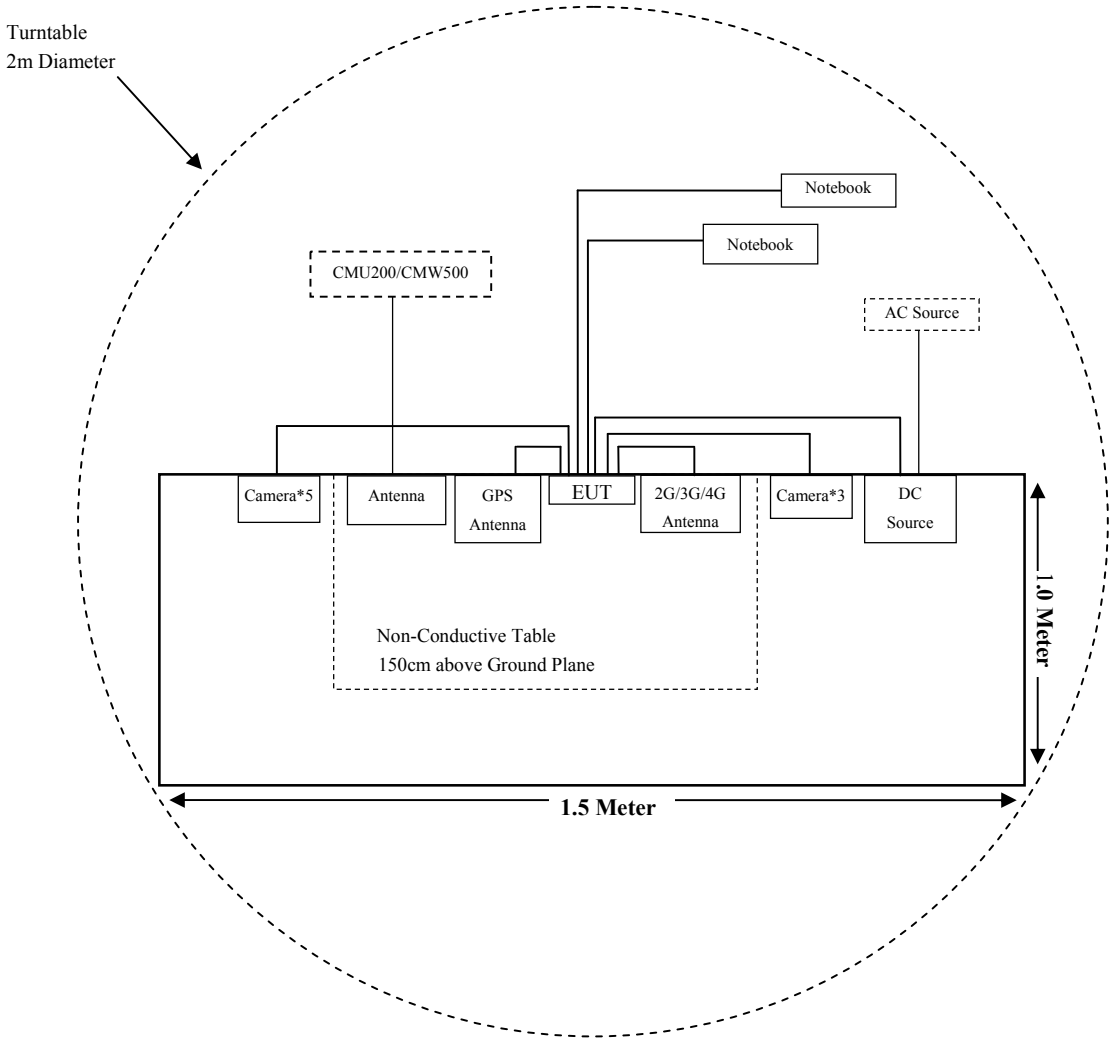
Cable Description	Length (m)	From Port	To
Video Cable	1.3	EUT	Camera*3
Power Cable	1.5	EUT	DC Source
Power Cable	1.0	DC Source	AC Source
Video Cable	1.3	EUT	Camera*5
signal Cable	5	EUT	Notebook1
signal Cable	5	EUT	Notebook2

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
§1.1310 & §2.1091	Maximum Permissible Exposure(MPE)	Compliant
§2.1046; § 22.913 (a);§ 24.232 (c); § 27.50 (b)(c)(d);§27.50(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
HP	Signal Generator	N5183A	MY51040755	2019-12-14	2020-12-13
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2017-12-26	2020-12-25
Sunol Sciences	Broadband Antenna	JB3	A090314-2	2019-01-09	2022-01-08
Sonoma Instrunent	Pre-amplifier	310N	171205	2020-08-14	2021-08-13
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-8	008	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2020-08-15	2021-08-14
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605	2020-04-01	2021-03-31
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2020-08-05	2021-08-04
Radiated Emission Test（Chamber 2#）					
HP	Signal Generator	N5183A	MY51040755	2019-12-14	2020-12-13
Rohde & Schwarz	EMI Test Receiver	ESU40	100207	2020-04-01	2021-03-31
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2020-07-15	2023-07-14
ETS-LINDGREN	Horn Antenna	3115	6229	2020-01-10	2023-01-09
ETS-LINDGREN	Horn Antenna	3116	00084159	2019-10-18	2022-10-17
ETS-LINDGREN	Horn Antenna	3116	2516	2020-01-17	2023-01-16
A.H.Systems,inc	Amplifier	PAM-0118P	512	2020-02-20	2021-02-19
EM Electronics Corporation	Amplifier	EM18G40G	060726	2020-03-22	2021-03-21
Rohde & Schwarz	Auto test Software	EMC32	100361	/	/
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-11	011	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-12	012	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-13	013	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-16	016	2020-08-15	2021-08-14
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605	2020-04-01	2021-03-31
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2020-08-05	2021-08-04

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSIQ26	836131/009	2019-12-14	2020-12-13
Rohde & Schwarz	EMI Test Receiver	ESIB26	100146	2019-12-14	2020-12-13
Narda	Attenuator	10dB	010	2020-08-15	2021-08-14
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	110605	2020-04-01	2021-03-31
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	104478	2020-08-05	2021-08-04
Mini-Ciruits	Power splitter	ZFRSC-14-S+	SF019411452	2019-11-10	2020-11-09
BACL	Temperature & Humidity Chamber	BTH-150	30023	2019-12-20	2020-12-19
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2019-10-10	2020-10-09
EAST	Regulated DC Power Supply	MCH-303D-II	14070562	2020-10-10	2021-10-09
Roadefend Intelligence	RF Cable	Roadefend Intelligence 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 §1.1310 & §2.1091 –MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §2.1091 and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (minutes)**
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

Calculated Formulary:

Predication of MPE limit at a given distance
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Calculated Data (worst case):

Mode	Frequency Range (MHz)	Antenna Gain		Tune-up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
GSM850 (GPRS/EGPRS)	824-849	2.00	1.58	27.50	562.34	20	0.1767	0.55
PCS1900 (GPRS/EGPRS)	1850-1910	2.00	1.58	24.00	251.19	20	0.0789	1.00
WCDMA Band II	1850-1910	2.00	1.58	23.00	199.53	20	0.0627	1.00
WCDMA Band IV	1710-1755	2.00	1.58	23.00	199.53	20	0.0627	1.00
WCDMA Band V	824-849	2.00	1.58	23.00	199.53	20	0.0627	0.55
LTE Band 2	1850-1910	2.00	1.58	23.50	223.87	20	0.0704	1.00
LTE Band 4	1710-1755	2.00	1.58	23.00	199.53	20	0.0627	1.00
LTE Band 5	824-849	2.00	1.58	25.00	316.23	20	0.0994	0.55
LTE Band 12	699-716	2.00	1.58	22.50	177.83	20	0.0559	0.47
LTE Band 13	777-787	2.00	1.58	22.50	177.83	20	0.0559	0.52

Note 1:
GSM850: Tune-up maximum output power with 4 slots is 30.50 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 27.50 dBm.
PCS1900: Tune-up maximum output power with 4 slots is 27.00 dBm, so the tune-up time based Ave. power compared to sloted Ave. power is 24.00 dBm.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.26 dB	-3 dB

Result: The device meet FCC MPE at 20 cm distance.

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 (b) (c) (d) - RF OUTPUT POWER

Applicable Standards

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

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

According to §27.50(b), mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands is limited to 30 watts ERP.

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

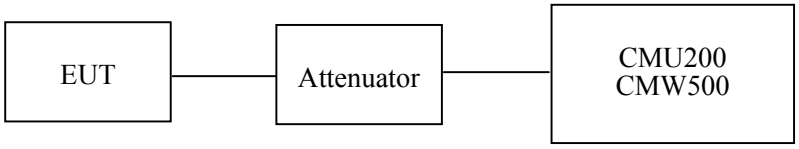
According to §27.50(c), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

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

Test Procedure

Conducted method:

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



Radiated Output Power:

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

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

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

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

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

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

Test Data

Environmental Conditions

Temperature:	24.9 ℃
Relative Humidity:	53 %
ATM Pressure:	101.9 kPa

The testing was performed by CK Huang on 2020-10-12.

Conducted Power:

GPRS/EGPRS 850 Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
GPRS	128	824.20	33.26	32.43	31.29	29.97	38.45
	190	836.60	33.28	32.92	31.12	30.34	38.45
	251	848.80	33.19	32.37	31.09	30.19	38.45

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
EGPRS	128	824.20	26.82	25.42	23.68	22.16	38.45
	190	836.60	26.74	25.39	23.59	22.36	38.45
	251	848.80	26.39	25.49	23.66	22.46	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	22.46	22.35	22.16
		HSDPA	1	22.01	22.17	22.29
			2	21.97	22.09	22.10
			3	22.08	22.13	22.22
			4	22.02	22.01	22.27
		HSUPA	1	21.94	22.06	22.20
			2	22.09	22.05	22.21
			3	22.06	21.91	22.13
			4	22.18	22.16	22.10
			5	21.99	22.08	22.09
		HSPA+	1	22.06	22.05	22.20

PCS 1900 Band

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
GPRS	512	1850.2	29.39	28.49	27.39	26.46	33
	661	1880.0	29.41	28.39	27.41	26.39	33
	810	1909.8	29.33	28.45	27.37	26.41	33

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)				Limit (dBm)
			1 slot	2 slots	3 slots	4 slots	
EGPRS	512	1850.2	26.49	25.21	24.08	22.24	33
	661	1880.0	26.41	25.19	24.11	22.16	33
	810	1909.8	26.09	24.93	23.49	22.09	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	22.46	22.15	22.32
		HSDPA	1	22.17	21.91	22.17
			2	22.32	22.02	22.18
			3	22.30	21.94	22.18
			4	22.27	21.96	22.10
		HSUPA	1	22.23	22.01	22.20
			2	22.26	21.99	22.04
			3	22.30	22.16	22.02
			4	22.17	22.05	22.10
			5	22.28	22.09	22.16
		HSPA+	1	22.17	22.03	22.09

WCDMA Band IV

Mode	Test Condition	Test Mode	3GPP Sub Test	Average Output Power (dBm)		
				Low Frequency	Middle Frequency	High Frequency
WCDMA (Band IV)	Normal	Rel 99	1	22.26	22.16	22.41
		HSDPA	1	22.27	22.07	22.16
			2	22.31	22.10	22.17
			3	22.13	22.01	22.19
			4	22.26	21.96	22.05
		HSUPA	1	22.24	21.98	22.21
			2	22.37	22.04	22.06
			3	22.19	22.01	22.18
			4	22.26	22.01	22.22
			5	22.16	22.10	22.16
		HSPA+	1	22.24	22.11	22.21

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	21.75	22.13	21.92
		1#3	22.53	21.80	21.57
		1#5	22.61	22.31	21.77
		3#0	22.50	21.80	22.11
		3#1	22.01	21.63	22.24
		3#3	22.06	21.74	21.92
		6#0	22.01	21.42	22.36
	16-QAM	1#0	22.47	21.96	21.85
		1#3	22.62	22.00	22.48
		1#5	22.38	21.73	22.39
		3#0	22.40	22.34	22.04
		3#1	22.69	22.32	21.95
		3#3	21.95	22.27	22.28
		6#0	22.70	21.73	21.53
3M	QPSK	1#0	22.32	21.46	22.60
		1#7	22.70	21.55	21.68
		1#14	22.15	22.22	22.24
		8#0	21.98	22.42	21.72
		8#4	21.84	21.79	21.48
		8#7	22.64	21.79	21.63
		15#0	21.79	22.35	21.42
	16-QAM	1#0	22.46	22.21	22.16
		1#7	22.00	21.87	21.43
		1#14	22.24	21.75	22.37
		8#0	22.52	21.63	21.61
		8#4	22.34	21.74	22.39
		8#7	22.28	21.86	22.21
		15#0	22.61	22.46	22.05

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	22.59	21.96	22.20
		1#12	22.23	21.82	21.80
		1#24	22.36	22.23	21.50
		12#0	22.26	22.27	21.53
		12#6	22.81	22.26	21.92
		12#11	22.68	21.43	21.53
		25#0	22.06	21.67	21.66
	16-QAM	1#0	21.83	21.60	21.63
		1#12	22.71	22.03	21.99
		1#24	22.73	21.87	22.04
		12#0	22.55	22.38	21.67
		12#6	22.31	22.08	21.61
		12#11	22.15	21.67	22.16
		25#0	22.31	21.99	22.13
10M	QPSK	1#0	22.54	21.73	22.11
		1#24	22.63	21.88	22.59
		1#49	22.10	22.06	22.16
		25#0	22.75	21.61	22.22
		25#12	21.96	22.22	22.30
		25#24	22.51	21.55	22.51
		50#0	22.39	21.72	21.84
	16-QAM	1#0	22.35	22.02	21.77
		1#24	22.00	22.14	21.96
		1#49	22.62	21.49	22.57
		25#0	22.60	22.15	21.66
		25#12	22.56	21.30	22.43
		25#24	22.11	21.70	22.17
		50#0	22.43	21.63	22.11

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	22.24	22.52	22.00
		1#37	22.22	22.74	21.78
		1#74	23.04	23.01	21.91
		36#0	22.60	22.23	22.41
		36#17	22.61	23.08	22.71
		36#35	22.94	22.50	22.25
		75#0	22.94	22.28	22.34
	16-QAM	1#0	22.60	22.27	22.59
		1#37	23.06	22.68	21.83
		1#74	22.45	22.31	21.84
		36#0	22.27	22.37	22.32
		36#17	22.29	22.34	22.18
		36#35	23.06	22.55	22.47
		75#0	22.98	22.38	22.13
20M	QPSK	1#0	22.84	22.72	21.99
		1#49	22.65	23.02	22.56
		1#99	22.17	22.59	22.60
		50#0	22.40	22.28	22.13
		50#24	22.27	22.95	22.03
		50#49	22.46	22.77	21.92
		100#0	22.15	22.55	22.40
	16-QAM	1#0	22.72	22.63	22.60
		1#49	22.19	22.32	22.10
		1#99	22.69	22.24	21.96
		50#0	22.23	22.92	22.44
		50#24	22.49	22.78	21.93
		50#49	22.96	22.95	22.57
		100#0	22.71	22.80	22.34

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	21.82	21.69	22.05
		1#3	22.07	22.12	22.12
		1#5	22.03	21.99	22.71
		3#0	22.33	22.33	22.97
		3#1	22.13	22.60	22.40
		3#3	22.14	22.10	22.71
		6#0	21.99	22.42	22.99
	16-QAM	1#0	21.87	22.58	22.89
		1#3	21.95	21.94	22.69
		1#5	22.38	22.09	22.55
		3#0	21.84	21.96	22.17
		3#1	22.02	21.72	22.10
		3#3	22.74	22.51	22.42
		6#0	22.40	22.63	22.34
3M	QPSK	1#0	22.26	21.95	22.93
		1#7	22.62	22.10	22.93
		1#14	22.76	22.40	22.48
		8#0	22.72	22.53	22.31
		8#4	22.34	22.26	22.80
		8#7	22.31	22.47	22.90
		15#0	22.34	22.00	22.17
	16-QAM	1#0	21.87	21.86	22.62
		1#7	22.73	22.26	22.79
		1#14	22.66	22.34	22.98
		8#0	22.30	22.60	22.56
		8#4	22.56	22.04	22.32
		8#7	21.92	22.02	22.31
		15#0	22.72	22.05	22.22

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.68	21.79	21.79
		1#12	22.04	22.41	22.25
		1#24	22.25	22.02	22.75
		12#0	21.77	21.91	22.21
		12#6	21.95	22.65	22.45
		12#11	22.27	22.29	22.38
		25#0	22.12	21.88	22.75
	16-QAM	1#0	22.12	22.15	22.83
		1#12	22.08	22.02	22.87
		1#24	22.69	22.48	22.30
		12#0	22.52	21.88	22.85
		12#6	22.32	21.81	22.96
		12#11	22.53	22.68	22.05
		25#0	22.69	22.23	22.37
10M	QPSK	1#0	22.13	22.50	22.05
		1#24	22.63	22.76	22.25
		1#49	21.84	22.19	22.40
		25#0	22.64	22.19	22.29
		25#12	22.31	22.14	22.58
		25#24	22.64	22.28	22.21
		50#0	22.58	22.37	22.18
	16-QAM	1#0	22.06	21.84	22.23
		1#24	22.69	22.05	22.25
		1#49	21.95	22.05	22.20
		25#0	22.49	22.00	22.40
		25#12	22.71	22.53	22.45
		25#24	22.07	21.80	22.53
		50#0	22.34	22.15	21.97

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	1#0	22.16	21.79	21.69
		1#37	22.36	22.27	22.87
		1#74	22.72	21.96	22.57
		36#0	22.13	22.01	22.10
		36#17	22.62	22.22	22.13
		36#35	22.05	21.97	22.14
		75#0	21.92	22.31	22.25
	16-QAM	1#0	22.29	21.68	22.52
		1#37	22.33	22.11	22.15
		1#74	22.76	21.98	21.96
		36#0	21.83	22.36	22.36
		36#17	22.31	22.60	22.28
		36#35	22.37	22.16	22.01
		75#0	22.51	22.54	22.30
20M	QPSK	1#0	22.50	21.85	22.32
		1#49	22.52	22.59	22.14
		1#99	21.98	21.68	22.72
		50#0	22.30	22.08	22.51
		50#24	22.67	21.68	22.75
		50#49	22.63	22.21	22.61
		100#0	22.49	22.60	22.27
	16-QAM	1#0	22.28	21.81	22.25
		1#49	22.64	21.90	22.19
		1#99	22.32	22.03	22.30
		50#0	22.21	22.10	22.80
		50#24	22.20	22.21	21.89
		50#49	22.19	22.46	22.78
		100#0	22.20	22.00	22.42

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	23.78	23.36	24.04
		1#5	23.78	23.93	24.03
		3#0	23.93	23.39	23.95
		3#1	23.93	23.44	23.76
		3#3	23.37	23.27	24.11
		6#0	23.49	23.61	23.88
	16-QAM	1#0	24.28	23.60	23.82
		1#3	23.83	23.65	23.72
		1#5	24.28	23.82	24.09
		3#0	24.31	23.48	23.44
		3#1	23.58	23.97	23.24
		3#3	23.59	23.58	23.23
		6#0	24.14	23.66	23.38
3M	QPSK	1#0	23.58	23.85	23.80
		1#7	23.34	23.26	23.83
		1#14	24.13	23.52	23.63
		8#0	23.79	23.52	23.92
		8#4	24.12	23.82	23.36
		8#7	23.68	24.14	24.12
		15#0	24.19	23.68	23.19
	16-QAM	1#0	23.65	23.38	23.35
		1#7	23.95	23.93	23.46
		1#14	23.55	24.18	23.96
		8#0	23.70	23.47	23.67
		8#4	23.71	23.36	23.55
		8#7	23.88	23.66	23.71
		15#0	23.99	24.18	24.03

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	23.97	23.98	23.74
		1#24	24.47	23.65	24.21
		12#0	23.55	23.70	23.48
		12#6	23.80	23.60	24.19
		12#11	24.20	23.52	24.01
		25#0	23.85	24.05	23.66
	16-QAM	1#0	24.12	23.54	24.11
		1#12	23.57	24.25	23.92
		1#24	23.93	23.64	23.67
		12#0	23.65	23.80	24.30
		12#6	23.66	24.22	24.21
		12#11	23.98	24.23	24.29
		25#0	24.34	23.65	24.06
10M	QPSK	1#0	24.23	24.20	24.01
		1#24	23.68	23.62	24.02
		1#49	23.66	24.12	23.91
		25#0	24.50	23.50	23.54
		25#12	24.16	23.52	24.21
		25#24	23.88	23.72	24.16
		50#0	23.96	23.92	23.52
	16-QAM	1#0	24.29	23.59	23.89
		1#24	24.47	23.31	23.57
		1#49	23.73	23.82	23.48
		25#0	23.66	24.23	23.49
		25#12	24.02	23.98	23.75
		25#24	24.43	23.92	23.37
		50#0	23.73	23.63	23.96

LTE Band 12

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	1#0	21.68	21.98	21.85
		1#3	21.61	21.97	21.93
		1#5	21.60	22.00	21.99
		3#0	21.62	22.04	22.03
		3#1	21.57	22.01	21.95
		3#3	21.63	21.92	21.93
		6#0	21.61	21.81	21.93
	16-QAM	1#0	21.68	21.90	21.93
		1#3	21.62	21.82	21.92
		1#5	21.71	21.83	21.92
		3#0	21.79	21.74	21.89
		3#1	21.83	21.67	21.85
		3#3	21.81	21.74	21.93
		6#0	21.90	21.69	21.82
3M	QPSK	1#0	21.82	21.70	21.78
		1#7	21.85	21.74	21.74
		1#14	21.83	21.68	21.79
		8#0	21.79	21.61	21.73
		8#4	21.82	21.72	21.70
		8#7	21.81	21.74	21.67
		15#0	21.80	21.64	21.66
	16-QAM	1#0	21.84	21.67	21.65
		1#7	21.86	21.68	21.59
		1#14	21.88	21.56	21.69
		8#0	21.90	21.52	21.75
		8#4	21.97	21.48	21.83
		8#7	21.99	21.53	21.94
		15#0	21.97	21.55	21.94

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.95	21.50	21.94
		1#12	21.96	21.62	21.89
		1#24	21.99	21.64	21.82
		12#0	21.91	21.70	21.93
		12#6	21.93	21.73	21.95
		12#11	22.06	21.77	21.91
		25#0	22.03	21.83	22.05
	16-QAM	1#0	22.00	21.80	22.08
		1#12	22.13	21.89	22.00
		1#24	22.14	21.91	22.02
		12#0	22.17	21.93	22.03
		12#6	22.16	21.99	21.90
		12#11	22.20	22.06	21.90
		25#0	22.18	22.17	21.90
10M	QPSK	1#0	22.28	22.09	21.94
		1#24	22.19	22.03	21.89
		1#49	22.21	22.02	21.94
		25#0	22.17	22.07	22.05
		25#12	22.19	22.15	22.07
		25#24	22.28	22.11	22.12
		50#0	22.28	22.14	22.16
	16-QAM	1#0	22.36	22.17	22.06
		1#24	22.30	22.10	22.13
		1#49	22.28	22.17	22.12
		25#0	22.26	22.16	22.08
		25#12	22.28	22.07	22.08
		25#24	22.33	22.07	22.09
		50#0	22.34	22.05	22.08

LTE Band 13

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	1#0	21.28	21.61	22.00
		1#12	21.73	21.71	21.22
		1#24	21.66	21.82	21.36
		12#0	21.90	21.47	21.06
		12#6	21.71	21.76	21.37
		12#11	21.50	21.33	21.54
		25#0	21.28	21.51	21.80
	16-QAM	1#0	22.12	21.94	21.98
		1#12	22.08	22.03	21.34
		1#24	21.37	21.98	21.92
		12#0	21.80	21.89	21.40
		12#6	21.80	21.69	21.65
		12#11	21.80	21.74	21.67
		25#0	21.64	22.02	21.63
10M	QPSK	1#0	/	21.53	/
		1#24	/	21.32	/
		1#49	/	21.48	/
		25#0	/	21.54	/
		25#12	/	21.95	/
		25#24	/	21.33	/
		50#0	/	21.44	/
	16-QAM	1#0	/	21.94	/
		1#24	/	21.29	/
		1#49	/	21.18	/
		25#0	/	21.15	/
		25#12	/	21.45	/
		25#24	/	21.65	/
		50#0	/	21.75	/

Peak-to-average ratio (PAR):

GPRS/ EGPRS 850 Band

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	2.15	≤ 13
	Middle	2.17	≤ 13
	High	2.14	≤ 13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	2.16	≤ 13
	Middle	2.05	≤ 13
	High	2.09	≤ 13

WCDMA Band V

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	3.31	≤ 13
	Middle	3.22	≤ 13
	High	3.30	≤ 13
WCDMA (HSDPA)	Low	2.73	≤ 13
	Middle	2.75	≤ 13
	High	2.72	≤ 13
WCDMA (HSUPA)	Low	2.83	≤ 13
	Middle	2.90	≤ 13
	High	2.80	≤ 13
WCDMA (HSPA+)	Low	2.59	≤ 13
	Middle	2.49	≤ 13
	High	2.41	≤ 13

PCS 1900

Mode	Channel	PAR (dB)	Limit (dB)
GPRS	Low	2.09	13
	Middle	2.06	13
	High	2.15	13

Mode	Channel	PAR (dB)	Limit (dB)
EGPRS	Low	2.01	13
	Middle	2.24	13
	High	2.11	13

WCDMA Band II

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	2.72	≤ 13
	Middle	2.68	≤ 13
	High	2.69	≤ 13
WCDMA (HSDPA)	Low	2.57	≤ 13
	Middle	2.47	≤ 13
	High	2.41	≤ 13
WCDMA (HSUPA)	Low	2.61	≤ 13
	Middle	2.55	≤ 13
	High	2.55	≤ 13
WCDMA (HSPA+)	Low	2.52	≤ 13
	Middle	2.51	≤ 13
	High	2.41	≤ 13

WCDMA Band IV

Mode	Channel	PAR (dB)	Limit (dB)
WCDMA (Rel99)	Low	2.72	≤ 13
	Middle	2.66	≤ 13
	High	2.74	≤ 13
WCDMA (HSDPA)	Low	2.57	≤ 13
	Middle	2.53	≤ 13
	High	2.46	≤ 13
WCDMA (HSUPA)	Low	2.61	≤ 13
	Middle	2.67	≤ 13
	High	2.70	≤ 13
WCDMA (HSPA+)	Low	2.52	≤ 13
	Middle	2.44	≤ 13
	High	2.48	≤ 13

LTE Band 2

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit (dB)
QPSK	1 RB	20M	3.57	3.73	3.62	13
	100 RB		5.51	5.68	5.55	13
16-QAM	1 RB	20M	4.43	4.61	4.53	13
	100 RB		6.33	6.6	6.59	13

LTE Band 4

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	20M	3.52	3.63	3.41	13
	100 RB		5.51	5.56	5.37	13
16-QAM	1 RB	20M	4.27	4.51	4.37	13
	100 RB		6.24	6.47	6.28	13

LTE Band 5

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.37	3.64	3.62	13
	50 RB		5.43	5.73	5.62	13
16-QAM	1 RB	10M	4.61	4.73	4.66	13
	50 RB		6.62	6.77	6.57	13

LTE Band 12

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	3.13	3.13	3.17	13
	50 RB		5.10	5.03	5.15	13
16-QAM	1 RB	10M	4.07	4.14	4.07	13
	50 RB		6.13	6.00	6.02	13

LTE Band 13

Test Modulation		Test Bandwidth	Low Channel (dB)	Middle Channel (dB)	High Channel (dB)	Limit(dB)
QPSK	1 RB	10M	/	3.18	/	13
	50 RB		/	5.09	/	13
16-QAM	1 RB	10M	/	4.05	/	13
	50 RB		/	6.16	/	13

Radiated Power:

GPRS/EGPRS Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
GPRS 850, Low Channel (ERP)										
824.20	98.49	77	200	H	33.69	0.62	-1.18	31.89	38.45	6.56
824.20	97.69	310	157	V	32.89	0.62	-1.18	31.09	38.45	7.36
EGPRS 850, Low Channel (ERP)										
824.20	93.61	56	152	H	29.95	0.62	-1.18	28.15	38.45	10.30
824.20	94.13	254	175	V	30.47	0.62	-1.18	28.67	38.45	9.78
GPRS 1900, Low Channel (EIRP)										
1850.2	93.49	225	198	H	20.36	0.84	8.76	28.28	33.00	4.72
1850.2	94.82	350	174	V	21.69	0.84	8.76	29.61	33.00	3.39
EGPRS 1900, Low Channel (EIRP)										
1850.2	89.46	275	163	H	16.33	0.84	8.76	24.25	33.00	8.75
1850.2	90.12	300	112	V	16.99	0.84	8.76	24.91	33.00	8.09

GPRS/EGPRS Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
GPRS 850, Middle Channel (ERP)										
836.60	99.16	77	200	H	35.5	0.63	-1.10	33.77	38.45	4.68
836.60	98.23	310	157	V	34.57	0.63	-1.10	32.84	38.45	5.61
EGPRS 850, Middle Channel (ERP)										
836.60	94.12	56	152	H	30.46	0.63	-1.10	28.73	38.45	9.72
836.60	92.89	254	175	V	29.23	0.63	-1.10	27.50	38.45	10.95
GPRS 1900, Middle Channel (EIRP)										
1880.00	93.49	225	198	H	20.36	0.85	8.81	28.32	33.00	4.68
1880.00	94.22	350	174	V	21.09	0.85	8.81	29.05	33.00	3.95
EGPRS 1900, Middle Channel (EIRP)										
1880.00	90.39	275	163	H	17.26	0.85	8.81	25.22	33.00	7.78
1880.00	89.46	300	112	V	16.33	0.85	8.81	24.29	33.00	8.71

GPRS/EGPRS Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
GPRS 850, High Channel (ERP)										
848.80	98.16	77	200	H	35.62	0.63	-1.10	33.89	38.45	4.56
848.80	97.68	310	157	V	35.14	0.63	-1.10	33.41	38.45	5.04
EGPRS 850, High Channel (ERP)										
848.80	93.44	56	152	H	30.90	0.63	-1.10	29.17	38.45	9.28
848.80	93.52	254	175	V	30.98	0.63	-1.10	29.25	38.45	9.20
GPRS 1900, High Channel (EIRP)										
1909.80	94.13	225	198	H	21.00	0.85	8.85	29.00	33.00	4.00
1909.80	94.23	350	174	V	21.10	0.85	8.85	29.10	33.00	3.90
EGPRS 1900, High Channel (EIRP)										
1909.80	89.76	275	163	H	16.63	0.85	8.85	24.63	33.00	8.37
1909.80	90.01	300	112	V	16.88	0.85	8.85	24.88	33.00	8.12

WCDMA Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
WCDMA Band V, Low Channel(ERP)										
826.40	87.06	297	187	H	23.55	0.63	-1.17	21.75	38.45	16.70
826.40	86.49	311	130	V	22.98	0.63	-1.17	21.18	38.45	17.27
WCDMA Band II, Low Channel(EIRP)										
1852.40	86.49	168	214	H	14.20	0.84	8.76	22.12	33.00	10.88
1852.40	87.19	246	206	V	14.90	0.84	8.76	22.82	33.00	10.18
WCDMA Band IV, Low Channel(EIRP)										
1715.00	87.49	49	214	H	14.25	0.84	8.57	21.98	30	8.02
1715.00	86.49	176	206	V	13.25	0.84	8.57	20.98	30	9.02

WCDMA Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
WCDMA Band V, Middle Channel(ERP)										
836.60	87.46	40	187	H	23.95	0.63	-1.14	22.18	38.45	16.27
836.60	86.96	201	130	V	23.45	0.63	-1.14	21.68	38.45	16.77
WCDMA Band II, Middle Channel(EIRP)										
1880.00	86.49	211	214	H	14.20	0.85	9.00	22.35	33.00	10.65
1880.00	87.09	210	206	V	14.80	0.85	9.00	22.95	33.00	10.05
WCDMA Band IV, Middle Channel(EIRP)										
1732.60	88.69	124	214	H	15.45	0.84	8.37	22.98	30.00	7.02
1732.60	87.09	315	206	V	13.85	0.84	8.37	21.38	30.00	8.62

WCDMA Mode

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (cm)	Polar (H/V)	Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
WCDMA Band V, High Channel(ERP)										
846.60	86.78	156	187	H	23.27	0.63	-1.11	21.53	38.45	16.92
846.60	87.09	216	130	V	23.58	0.63	-1.11	21.84	38.45	16.61
WCDMA Band II, High Channel(EIRP)										
1907.60	86.96	168	214	H	14.67	0.85	8.85	22.67	33.00	10.33
1907.60	87.19	176	206	V	14.90	0.85	8.85	22.90	33.00	10.10
WCDMA Band IV, High Channel(EIRP)										
1750.00	85.69	236	214	H	12.45	0.84	8.57	20.18	30.00	9.82
1750.00	87.15	307	206	V	13.91	0.84	8.57	21.64	30.00	8.36

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	88.31	15.06	0.84	8.76	22.98	33	10.02
1850.7	V	87.46	14.21	0.84	8.76	22.13	33	10.87
16-QAM 1.4M BW Low Channel								
1850.7	H	88.85	15.60	0.84	8.76	23.52	33	9.48
1850.7	V	87.26	14.01	0.84	8.76	21.93	33	11.07
QPSK 3M BW Low Channel								
1851.5	H	88.16	14.92	0.84	8.76	22.84	33	10.16
1851.5	V	87.82	14.58	0.84	8.76	22.50	33	10.50
16-QAM 3M BW Low Channel								
1851.5	H	88.81	15.57	0.84	8.76	23.49	33	9.51
1851.5	V	87.75	14.51	0.84	8.76	22.43	33	10.57
QPSK 5M BW Low Channel								
1852.5	H	88.3	15.07	0.84	8.76	22.99	33	10.01
1852.5	V	87.36	14.13	0.84	8.76	22.05	33	10.95
16-QAM 5M BW Low Channel								
1852.5	H	88.4	15.17	0.84	8.76	23.09	33	9.91
1852.5	V	87.65	14.42	0.84	8.76	22.34	33	10.66
QPSK 10M BW Low Channel								
1855	H	88.07	14.86	0.84	8.77	22.79	33	10.21
1855	V	87.99	14.78	0.84	8.77	22.71	33	10.29
16-QAM 10M BW Low Channel								
1855	H	88.07	14.86	0.84	8.77	22.79	33	10.21
1855	V	87.1	13.89	0.84	8.77	21.82	33	11.18
QPSK 15M BW Low Channel								
1857.5	H	88.19	14.99	0.84	8.77	22.92	33	10.08
1857.5	V	87.12	13.92	0.84	8.77	21.85	33	11.15
16-QAM 15M BW Low Channel								
1857.5	H	88.97	15.77	0.84	8.77	23.70	33	9.30
1857.5	V	87.85	14.65	0.84	8.77	22.58	33	10.42

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	H	88.26	15.08	0.84	8.78	23.02	33	9.98
1860	V	87.23	14.05	0.84	8.78	21.99	33	11.01
16-QAM 20M BW Low Channel								
1860	H	88.16	14.98	0.84	8.78	22.92	33	10.08
1860	V	87.82	14.64	0.84	8.78	22.58	33	10.42

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Middle Channel								
1880	H	88.65	15.61	0.85	8.81	23.57	33	9.43
1880	V	87.15	14.11	0.85	8.81	22.07	33	10.93
16-QAM 1.4M BW Middle Channel								
1880	H	88.95	15.91	0.85	8.81	23.87	33	9.13
1880	V	87.18	14.14	0.85	8.81	22.10	33	10.90
QPSK 3M BW Middle Channel								
1880	H	88.29	15.25	0.85	8.81	23.21	33	9.79
1880	V	87.79	14.75	0.85	8.81	22.71	33	10.29
16-QAM 3M BW Middle Channel								
1880	H	88.59	15.55	0.85	8.81	23.51	33	9.49
1880	V	87.89	15.07	0.85	8.81	23.03	33	9.97
QPSK 5M BW Middle Channel								
1880	H	88.31	15.27	0.85	8.81	23.23	33	9.77
1880	V	87.87	15.05	0.85	8.81	23.01	33	9.99
16-QAM 5M BW Middle Channel								
1880	H	88.05	15.01	0.85	8.81	22.97	33	10.03
1880	V	87.78	14.96	0.85	8.81	22.92	33	10.08
QPSK 10M BW Middle Channel								
1880	H	88.61	15.57	0.85	8.81	23.53	33	9.47
1880	V	87.16	14.34	0.85	8.81	22.30	33	10.70
16-QAM 10M BW Middle Channel								
1880	H	88.57	15.53	0.85	8.81	23.49	33	9.51
1880	V	87.39	14.57	0.85	8.81	22.53	33	10.47
QPSK 15M BW Middle Channel								
1880	H	88.36	15.32	0.85	8.81	23.28	33	9.72
1880	V	87.33	14.51	0.85	8.81	22.47	33	10.53
16-QAM 15M BW Middle Channel								
1880	H	88.86	15.82	0.85	8.81	23.78	33	9.22
1880	V	87.65	14.83	0.85	8.81	22.79	33	10.21

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 20M BW Middle Channel								
1880	H	88.02	14.98	0.85	8.81	22.94	33	10.06
1880	V	87.66	14.84	0.85	8.81	22.80	33	10.20
16-QAM 20M BW Middle Channel								
1880	H	88.43	15.39	0.85	8.81	23.35	33	9.65
1880	V	87.08	14.26	0.85	8.81	22.22	33	10.78

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								
1909.30	H	88.37	15.53	0.85	8.85	23.53	33	9.47
1909.30	V	87.87	15.03	0.85	8.85	23.03	33	9.97
16-QAM 1.4M BW High Channel								
1909.30	H	88.99	16.15	0.85	8.85	24.15	33	8.85
1909.30	V	87.17	14.33	0.85	8.85	22.33	33	10.67
QPSK 3M BW High Channel								
1908.50	H	88.19	15.34	0.85	8.85	23.34	33	9.66
1908.50	V	87	14.15	0.85	8.85	22.15	33	10.85
16-QAM 3M BW Low Channel								
1908.50	H	88.62	15.77	0.85	8.85	23.77	33	9.23
1908.50	V	87.13	14.28	0.85	8.85	22.28	33	10.72
QPSK 5M BW High Channel								
1907.50	H	88.76	15.91	0.85	8.85	23.91	33	9.09
1907.50	V	87.86	15.01	0.85	8.85	23.01	33	9.99
16-QAM 5M BW High Channel								
1907.50	H	88.22	15.37	0.85	8.85	23.37	33	9.63
1907.50	V	87.07	14.22	0.85	8.85	22.22	33	10.78
QPSK 10M BW High Channel								
1905.00	H	88.56	15.69	0.85	8.85	23.69	33	9.31
1905.00	V	87.23	14.36	0.85	8.85	22.36	33	10.64
16-QAM 10M BW High Channel								
1905.00	H	88.73	15.86	0.85	8.85	23.86	33	9.14
1905.00	V	87.3	14.43	0.85	8.85	22.43	33	10.57
QPSK 15M BW High Channel								
1902.50	H	88.62	15.73	0.85	8.84	23.72	33	9.28
1902.50	V	87.04	14.15	0.85	8.84	22.14	33	10.86
16-QAM 15M BW High Channel								
1902.50	H	88.08	15.19	0.85	8.84	23.18	33	9.82
1902.50	V	87.07	14.18	0.85	8.84	22.17	33	10.83

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								
1900.00	H	88.26	15.36	0.85	8.84	23.35	33	9.65
1900.00	V	87.16	14.26	0.85	8.84	22.25	33	10.75
16-QAM 20M BW High Channel								
1900.00	H	88.53	15.63	0.85	8.84	23.62	33	9.38
1900.00	V	87.38	14.48	0.85	8.84	22.47	33	10.53

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	88.25	14.03	0.84	8.54	21.73	30	8.27
1710.7	V	87.77	13.55	0.84	8.54	21.25	30	8.75
16-QAM 1.4M BW Low Channel								
1710.7	H	88.09	13.87	0.84	8.54	21.57	30	8.43
1710.7	V	87.62	13.40	0.84	8.54	21.10	30	8.90
QPSK 3M BW Low Channel								
1711.5	H	88.13	13.92	0.84	8.54	21.62	30	8.38
1711.5	V	87.02	12.81	0.84	8.54	20.51	30	9.49
16-QAM 3M BW Low Channel								
1711.5	H	88.82	14.61	0.84	8.54	22.31	30	7.69
1711.5	V	87.11	12.90	0.84	8.54	20.60	30	9.40
QPSK 5M BW Low Channel								
1712.5	H	88.76	14.56	0.84	8.54	22.26	30	7.74
1712.5	V	87.81	13.61	0.84	8.54	21.31	30	8.69
16-QAM 5M BW Low Channel								
1712.5	H	88.7	14.50	0.84	8.54	22.20	30	7.80
1712.5	V	87.38	13.18	0.84	8.54	20.88	30	9.12
QPSK 10M BW Low Channel								
1715	H	88.54	14.36	0.84	8.54	22.06	30	7.94
1715	V	87.32	13.14	0.84	8.54	20.84	30	9.16
16-QAM 10M BW Low Channel								
1715	H	88.45	14.27	0.84	8.54	21.97	30	8.03
1715	V	87.8	13.62	0.84	8.54	21.32	30	8.68
QPSK 15M BW Low Channel								
1717.5	H	88.52	14.35	0.84	8.55	22.06	30	7.94
1717.5	V	87.06	12.89	0.84	8.55	20.60	30	9.40
16-QAM 15M BW Low Channel								
1717.5	H	88.33	14.16	0.84	8.55	21.87	30	8.13
1717.5	V	87.66	13.49	0.84	8.55	21.20	30	8.80

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW Low Channel								
1720	H	88.96	14.81	0.84	8.55	22.52	30	7.48
1720	V	87.94	13.79	0.84	8.55	21.50	30	8.50
16-QAM 20M BW Low Channel								
1720	H	88.87	14.72	0.84	8.55	22.43	30	7.57
1720	V	87.4	13.25	0.84	8.55	20.96	30	9.04

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	88.12	14.06	0.84	8.57	21.79	30	8.21
1732.5	V	87.59	13.53	0.84	8.57	21.26	30	8.74
16-QAM 1.4M BW Middle Channel								
1732.5	H	88.51	14.45	0.84	8.57	22.18	30	7.82
1732.5	V	87.43	13.37	0.84	8.57	21.10	30	8.90
QPSK 3M BW Middle Channel								
1732.5	H	88.91	14.85	0.84	8.57	22.58	30	7.42
1732.5	V	87.46	13.40	0.84	8.57	21.13	30	8.87
16-QAM 3M BW Middle Channel								
1732.5	H	88.77	14.71	0.84	8.57	22.44	30	7.56
1732.5	V	87.42	13.36	0.84	8.57	21.09	30	8.91
QPSK 5M BW Middle Channel								
1732.5	H	88.21	14.15	0.84	8.57	21.88	30	8.12
1732.5	V	87.02	12.96	0.84	8.57	20.69	30	9.31
16-QAM 5M BW Middle Channel								
1732.5	H	88.65	14.59	0.84	8.57	22.32	30	7.68
1732.5	V	87.41	13.35	0.84	8.57	21.08	30	8.92
QPSK 10M BW Middle Channel								
1732.5	H	88.15	14.09	0.84	8.57	21.82	30	8.18
1732.5	V	87.55	13.49	0.84	8.57	21.22	30	8.78
16-QAM 10M BW Middle Channel								
1732.5	H	88.17	14.11	0.84	8.57	21.84	30	8.16
1732.5	V	87.69	13.63	0.84	8.57	21.36	30	8.64
QPSK 15M BW Middle Channel								
1732.5	H	88.04	13.98	0.84	8.57	21.71	30	8.29
1732.5	V	87.3	13.24	0.84	8.57	20.97	30	9.03
16-QAM 15M BW Middle Channel								
1732.5	H	88.16	14.10	0.84	8.57	21.83	30	8.17
1732.5	V	87.1	13.04	0.84	8.57	20.77	30	9.23

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	88.65	14.59	0.84	8.57	22.32	30	7.68
1732.5	V	87.86	13.80	0.84	8.57	21.53	30	8.47
16-QAM 20M BW Middle Channel								
1732.5	H	88.39	14.33	0.84	8.57	22.06	30	7.94
1732.5	V	87.88	13.82	0.84	8.57	21.55	30	8.45

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 1.4M BW High Channel								
1754.30	H	88.84	14.93	0.84	8.61	22.70	30.00	7.30
1754.30	V	87.59	13.68	0.84	8.61	21.45	30.00	8.55
16-QAM 1.4M BW High Channel								
1754.30	H	88.43	14.52	0.84	8.61	22.29	30.00	7.71
1754.30	V	87.52	13.61	0.84	8.61	21.38	30.00	8.62
QPSK 3M BW High Channel								
1753.50	H	88.58	14.66	0.84	8.60	22.42	30.00	7.58
1753.50	V	87.85	13.93	0.84	8.60	21.69	30.00	8.31
16-QAM 3M BW High Channel								
1753.50	H	88.23	14.31	0.84	8.60	22.07	30.00	7.93
1753.50	V	87.82	13.90	0.84	8.60	21.66	30.00	8.34
QPSK 5M BW High Channel								
1752.50	H	88.02	14.09	0.84	8.60	21.85	30.00	8.15
1752.50	V	87.71	13.78	0.84	8.60	21.54	30.00	8.46
16-QAM 5M BW High Channel								
1752.50	H	88.26	14.33	0.84	8.60	22.09	30.00	7.91
1752.50	V	87.96	14.03	0.84	8.60	21.79	30.00	8.21
QPSK 10M BW High Channel								
1750.00	H	88.19	14.25	0.84	8.60	22.01	30.00	7.99
1750.00	V	87.08	13.14	0.84	8.60	20.90	30.00	9.10
16-QAM 10M BW High Channel								
1750.00	H	88.63	14.69	0.84	8.60	22.45	30.00	7.55
1750.00	V	87.22	13.28	0.84	8.60	21.04	30.00	8.96
QPSK 15M BW High Channel								
1747.50	H	88.03	14.07	0.84	8.60	21.83	30.00	8.17
1747.50	V	87.01	13.05	0.84	8.60	20.81	30.00	9.19
16-QAM 15M BW High Channel								
1747.50	H	88.23	14.27	0.84	8.60	22.03	30.00	7.97
1747.50	V	87.56	13.60	0.84	8.60	21.36	30.00	8.64

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 20M BW High Channel								
1745.00	H	88.77	14.80	0.84	8.59	22.55	30	7.45
1745.00	V	87.8	13.83	0.84	8.59	21.58	30	8.42
16-QAM 20M High Channel								
1745.00	H	88.10	14.13	0.84	8.59	21.88	30	8.12
1745.00	V	87.38	13.41	0.84	8.59	21.16	30	8.84

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	88.16	23.38	0.62	-1.18	21.58	38.45	16.87
824.7	V	87.69	22.91	0.62	-1.18	21.11	38.45	17.34
16-QAM 1.4M BW Low Channel								
824.7	H	88.3	23.52	0.62	-1.18	21.72	38.45	16.73
824.7	V	87.27	22.49	0.62	-1.18	20.69	38.45	17.76
QPSK 3M BW Low Channel								
825.5	H	88.57	23.86	0.63	-1.17	22.06	38.45	16.39
825.5	V	87.74	23.03	0.63	-1.17	21.23	38.45	17.22
16-QAM 3M BW Low Channel								
825.5	H	88.94	24.23	0.63	-1.17	22.43	38.45	16.02
825.5	V	87.4	22.69	0.63	-1.17	20.89	38.45	17.56
QPSK 5M BW Low Channel								
826.5	H	88.68	24.06	0.63	-1.17	22.26	38.45	16.19
826.5	V	87.18	22.56	0.63	-1.17	20.76	38.45	17.69
16-QAM 5M BW Low Channel								
826.5	H	88.4	23.78	0.63	-1.17	21.98	38.45	16.47
826.5	V	87.5	22.88	0.63	-1.17	21.08	38.45	17.37
QPSK 10M BW Low Channel								
829.0	H	88.55	24.16	0.63	-1.16	22.37	38.45	16.08
829.0	V	87.01	22.62	0.63	-1.16	20.83	38.45	17.62
16-QAM 10M BW Low Channel								
829.0	H	88.89	24.50	0.63	-1.16	22.71	38.45	15.74
829.0	V	87.72	23.33	0.63	-1.16	21.54	38.45	16.91

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	88.22	22.75	0.63	-1.14	20.98	38.45	17.47
836.5	V	87.3	21.83	0.63	-1.14	20.06	38.45	18.39
16-QAM 1.4M BW Middle Channel								
836.5	H	88.85	23.38	0.63	-1.14	21.61	38.45	16.84
836.5	V	87.62	22.15	0.63	-1.14	20.38	38.45	18.07
QPSK 3M BW Middle Channel								
836.5	H	88.42	22.95	0.63	-1.14	21.18	38.45	17.27
836.5	V	87.43	21.96	0.63	-1.14	20.19	38.45	18.26
16-QAM 3M BW Middle Channel								
836.5	H	88.31	22.84	0.63	-1.14	21.07	38.45	17.38
836.5	V	87.53	22.06	0.63	-1.14	20.29	38.45	18.16
QPSK 5M BW Middle Channel								
836.5	H	88.19	22.72	0.63	-1.14	20.95	38.45	17.50
836.5	V	87.8	22.33	0.63	-1.14	20.56	38.45	17.89
16-QAM 5M BW Middle Channel								
836.5	H	88.98	23.51	0.63	-1.14	21.74	38.45	16.71
836.5	V	87.64	22.17	0.63	-1.14	20.40	38.45	18.05
QPSK 10M BW Middle Channel								
836.5	H	88.04	22.57	0.63	-1.14	20.80	38.45	17.65
836.5	V	87.53	22.06	0.63	-1.14	20.29	38.45	18.16
16-QAM 10M BW Middle Channel								
836.5	H	88.19	22.72	0.63	-1.14	20.95	38.45	17.50
836.5	V	87.64	22.17	0.63	-1.14	20.40	38.45	18.05

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW High Channel								
848.30	H	88.99	26.37	0.62	-1.11	24.64	38.45	13.81
848.30	V	87.55	24.93	0.62	-1.11	23.20	38.45	15.25
16-QAM 1.4M BW High Channel								
848.30	H	88.39	25.77	0.62	-1.11	24.04	38.45	14.41
848.30	V	87.42	24.80	0.62	-1.11	23.07	38.45	15.38
QPSK 3M BW High Channel								
847.50	H	88.67	25.98	0.63	-1.11	24.24	38.45	14.21
847.50	V	87.01	24.32	0.63	-1.11	22.58	38.45	15.87
16-QAM 3M BW High Channel								
847.50	H	88.22	25.53	0.63	-1.11	23.79	38.45	14.66
847.50	V	87.17	24.48	0.63	-1.11	22.74	38.45	15.71
QPSK 5M BW High Channel								
846.50	H	88.35	25.57	0.63	-1.11	23.83	38.45	14.62
846.50	V	87.3	24.52	0.63	-1.11	22.78	38.45	15.67
16-QAM 5M BW High Channel								
846.50	H	88.09	25.31	0.63	-1.11	23.57	38.45	14.88
846.50	V	87.7	24.92	0.63	-1.11	23.18	38.45	15.27
QPSK 10M BW High Channel								
844.00	H	88.51	25.50	0.63	-1.12	23.75	38.45	14.70
844.00	V	87.28	24.27	0.63	-1.12	22.52	38.45	15.93
16-QAM 10M BW High Channel								
844.00	H	88.68	25.67	0.63	-1.12	23.92	38.45	14.53
844.00	V	87.76	24.75	0.63	-1.12	23.00	38.45	15.45

ERP:

LTE Band 12

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW Low Channel								
699.7	H	88.53	18.89	0.62	-1.75	16.52	34.77	18.25
699.7	V	87.41	17.77	0.62	-1.75	15.4	34.77	19.37
16-QAM 1.4M BW Low Channel								
699.7	H	88.42	18.78	0.62	-1.75	16.41	34.77	18.36
699.7	V	87.26	17.62	0.62	-1.75	15.25	34.77	19.52
QPSK 3M BW Low Channel								
700.5	H	88.58	18.90	0.62	-1.75	16.53	34.77	18.24
700.5	V	87.46	17.78	0.62	-1.75	15.41	34.77	19.36
16-QAM 3M BW Low Channel								
700.5	H	88.83	19.15	0.62	-1.75	16.78	34.77	17.99
700.5	V	87.23	17.55	0.62	-1.75	15.18	34.77	19.59
QPSK 5M BW Low Channel								
701.5	H	88.42	18.73	0.62	-1.74	16.37	34.77	18.4
701.5	V	87.69	18.00	0.62	-1.74	15.64	34.77	19.13
16-QAM 5M BW Low Channel								
701.5	H	88.47	18.78	0.62	-1.74	16.42	34.77	18.35
701.5	V	87.54	17.85	0.62	-1.74	15.49	34.77	19.28
QPSK 10M BW Low Channel								
704.0	H	88.85	19.11	0.62	-1.73	16.76	34.77	18.01
704.0	V	87.5	17.76	0.62	-1.73	15.41	34.77	19.36
16-QAM 10M BW Low Channel								
704.0	H	88.39	18.65	0.62	-1.73	16.3	34.77	18.47
704.0	V	87.37	17.63	0.62	-1.73	15.28	34.77	19.49

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 1.4M BW Middle Channel								
707.5	H	88.39	24.90	0.62	-1.71	22.57	34.77	12.20
707.5	V	87.64	24.15	0.62	-1.71	21.82	34.77	12.95
16-QAM 1.4M BW Middle Channel								
707.5	H	88.10	24.61	0.62	-1.71	22.28	34.77	12.49
707.5	V	87.75	24.26	0.62	-1.71	21.93	34.77	12.84
QPSK 3M BW Middle Channel								
707.5	H	88.50	25.01	0.62	-1.71	22.68	34.77	12.09
707.5	V	87.00	23.51	0.62	-1.71	21.18	34.77	13.59
16-QAM 3M BW Middle Channel								
707.5	H	88.43	24.94	0.62	-1.71	22.61	34.77	12.16
707.5	V	87.69	24.20	0.62	-1.71	21.87	34.77	12.90
QPSK 5M BW Middle Channel								
707.5	H	88.75	25.26	0.62	-1.71	22.93	34.77	11.84
707.5	V	87.39	23.90	0.62	-1.71	21.57	34.77	13.20
16-QAM 5M BW Middle Channel								
707.5	H	88.21	24.72	0.62	-1.71	22.39	34.77	12.38
707.5	V	87.22	23.73	0.62	-1.71	21.4	34.77	13.37
QPSK 10M BW Middle Channel								
707.5	H	88.37	24.88	0.62	-1.71	22.55	34.77	12.22
707.5	V	87.80	24.31	0.62	-1.71	21.98	34.77	12.79
16-QAM 10M BW Middle Channel								
707.5	H	88.67	25.18	0.62	-1.71	22.85	34.77	11.92
707.5	V	87.51	24.02	0.62	-1.71	21.69	34.77	13.08

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 1.4M BW High Channel								
715.30	H	88.75	18.83	0.62	-1.67	16.54	34.77	18.23
715.30	V	87.38	17.46	0.62	-1.67	15.17	34.77	19.60
16-QAM 1.4M BW High Channel								
715.30	H	88.36	18.44	0.62	-1.67	16.15	34.77	18.62
715.30	V	87.22	17.30	0.62	-1.67	15.01	34.77	19.76
QPSK 3M BW High Channel								
714.50	H	88.65	18.74	0.62	-1.68	16.44	34.77	18.33
714.50	V	87.26	17.35	0.62	-1.68	15.05	34.77	19.72
16-QAM 3M BW High Channel								
714.50	H	88.68	18.77	0.62	-1.68	16.47	34.77	18.30
714.50	V	87.58	17.67	0.62	-1.68	15.37	34.77	19.40
QPSK 5M BW High Channel								
713.50	H	88.31	18.42	0.62	-1.68	16.12	34.77	18.65
713.50	V	87.02	17.13	0.62	-1.68	14.83	34.77	19.94
16-QAM 5M BW High Channel								
713.50	H	88.61	18.72	0.62	-1.68	16.42	34.77	18.35
713.50	V	87.73	17.84	0.62	-1.68	15.54	34.77	19.23
QPSK 10M BW High Channel								
711.00	H	88.24	18.39	0.62	-1.70	16.07	34.77	18.70
711.00	V	87.64	17.79	0.62	-1.70	15.47	34.77	19.30
16-QAM 10M BW High Channel								
711.00	H	88.71	18.86	0.62	-1.70	16.54	34.77	18.23
711.00	V	87.50	17.65	0.62	-1.70	15.33	34.77	19.44

ERP:

LTE Band 13

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Submitted Level (dBm)	Cable loss (dB)	Antenna Gain (dBd/dBi)			
QPSK 5M BW Low Channel								
779.5	H	88.45	26.36	0.65	-1.35	24.36	44.77	20.41
779.5	V	87.94	25.85	0.65	-1.35	23.85	44.77	20.92
16-QAM 5M BW Low Channel								
779.5	H	88.79	26.70	0.65	-1.35	24.70	44.77	20.07
779.5	V	87.63	25.54	0.65	-1.35	23.54	44.77	21.23

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								
782	H	88.43	26.14	0.65	-1.34	24.15	44.77	20.62
782	V	87.32	25.03	0.65	-1.34	23.04	44.77	21.73
16-QAM 5M BW Middle Channel								
782	H	88.86	26.57	0.65	-1.34	24.58	44.77	20.19
782	V	87.88	25.59	0.65	-1.34	23.60	44.77	21.17
QPSK 10M BW Middle Channel								
782	H	88.30	26.01	0.65	-1.34	24.02	44.77	20.75
782	V	87.57	25.28	0.65	-1.34	23.29	44.77	21.48
16-QAM 10M BW Middle Channel								
782	H	88.12	25.83	0.65	-1.34	23.84	44.77	20.93
782	V	87.60	25.31	0.65	-1.34	23.32	44.77	21.45

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 High Channel								
784.5	H	88.78	26.43	0.62	-1.63	24.18	44.77	20.59
784.5	V	87.04	24.69	0.62	-1.63	22.44	44.77	22.33
16-QAM 5M BW High Channel								
784.5	H	88.30	25.95	0.62	-1.63	23.70	44.77	21.07
784.5	V	87.81	25.46	0.62	-1.63	23.21	44.77	21.56

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

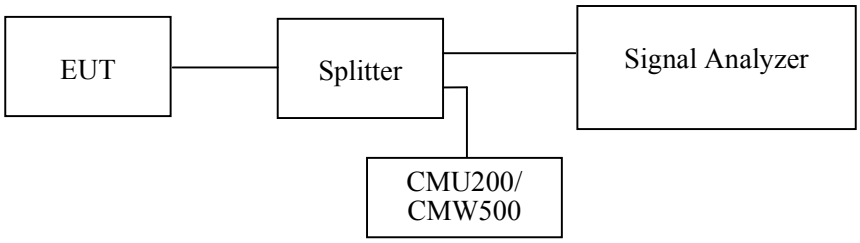
Applicable Standards

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 3 kHz (Cellular /PCS) & 50 kHz (WCDMA) & 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 ℃
Relative Humidity:	50~52 %
ATM Pressure:	100.7~102.9 kPa

The testing was performed by CK Huang from 2020-09-22 to 2020-09-29.

EUT operation mode: Transmitting

Test Result: Compliance.

GSM 850 Band

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
GPRS (GMSK)	824.2	0.319	0.244
	836.6	0.315	0.244
	848.8	0.321	0.244
EGPRS (8PSK)	824.2	0.311	0.246
	836.6	0.305	0.244
	848.8	0.311	0.244

WCDMA Band V

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	826.4	4.669	4.128
	836.6	4.649	4.128
	846.6	4.669	4.128
WCDMA (HSDPA)	826.4	4.649	4.128
	836.6	4.629	4.128
	846.6	4.649	4.128
WCDMA (HSUPA)	826.4	4.649	4.128
	836.6	4.649	4.108
	846.6	4.669	4.128
WCDMA (HSPA+)	826.4	4.649	4.128
	836.6	4.649	4.128
	846.6	4.629	4.128

PCS 1900

Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
GPRS (GMSK)	1850.2	0.318	0.246
	1880.0	0.318	0.244
	1909.8	0.321	0.251
EGPRS (8PSK)	1850.2	0.305	0.240
	1880.0	0.311	0.244
	1909.8	0.311	0.246

WCDMA Band II

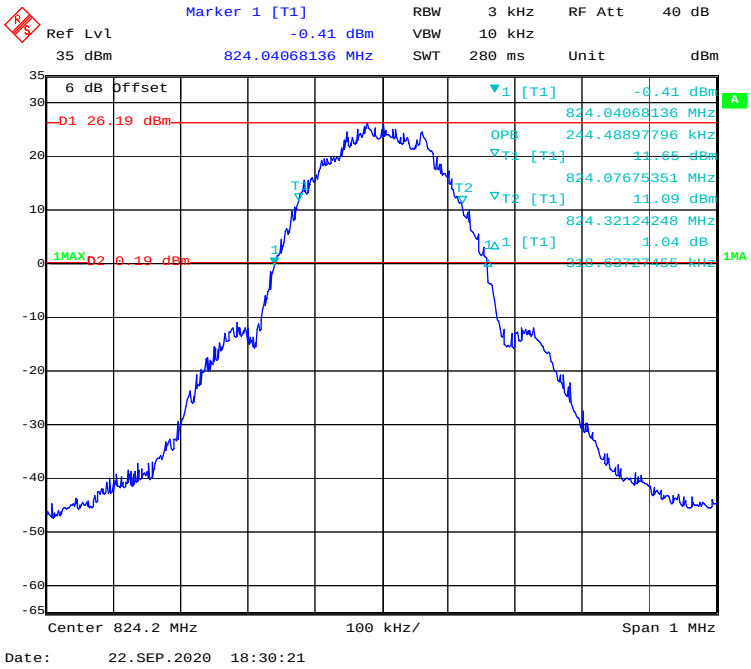
Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	1852.4	4.629	4.128
	1880.0	4.649	4.148
	1907.6	4.689	4.128
WCDMA (HSDPA)	1852.4	4.669	4.128
	1880.0	4.669	4.128
	1907.6	4.689	4.128
WCDMA (HSUPA)	1852.4	4.669	4.128
	1880.0	4.669	4.128
	1907.6	4.689	4.148
WCDMA (HSPA+)	1852.4	4.669	4.128
	1880.0	4.669	4.148
	1907.6	4.669	4.128

WCDMA Band IV

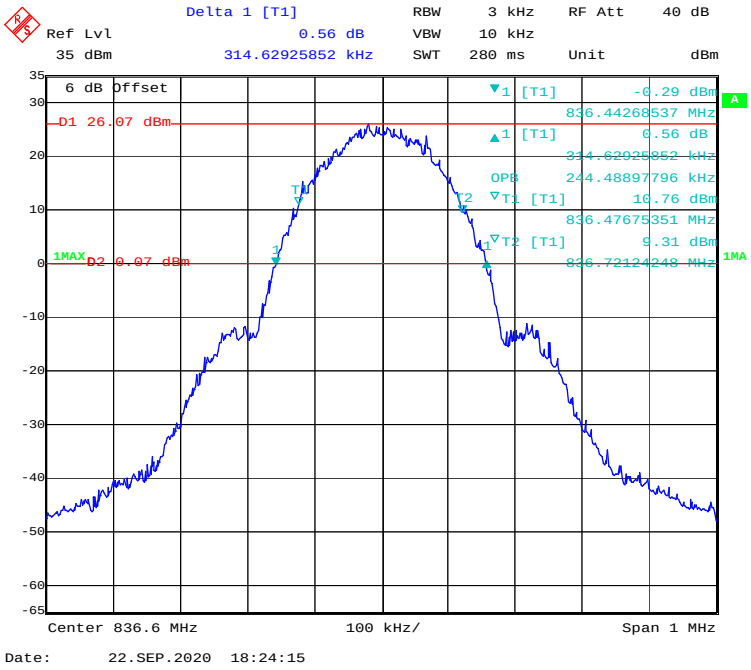
Mode	Frequency (MHz)	26 dB Emission Bandwidth (MHz)	99% Occupied Bandwidth (MHz)
WCDMA (Rel 99)	1712.4	4.669	4.128
	1732.6	4.669	4.128
	1752.6	4.669	4.128
WCDMA (HSDPA)	1712.4	4.689	4.148
	1732.6	4.629	4.148
	1752.6	4.649	4.128
WCDMA (HSUPA)	1712.4	4.649	4.128
	1732.6	4.669	4.148
	1752.6	4.689	4.168
WCDMA (HSPA+)	1712.4	4.669	4.128
	1732.6	4.649	4.148
	1752.6	4.669	4.148

GSM 850 Band

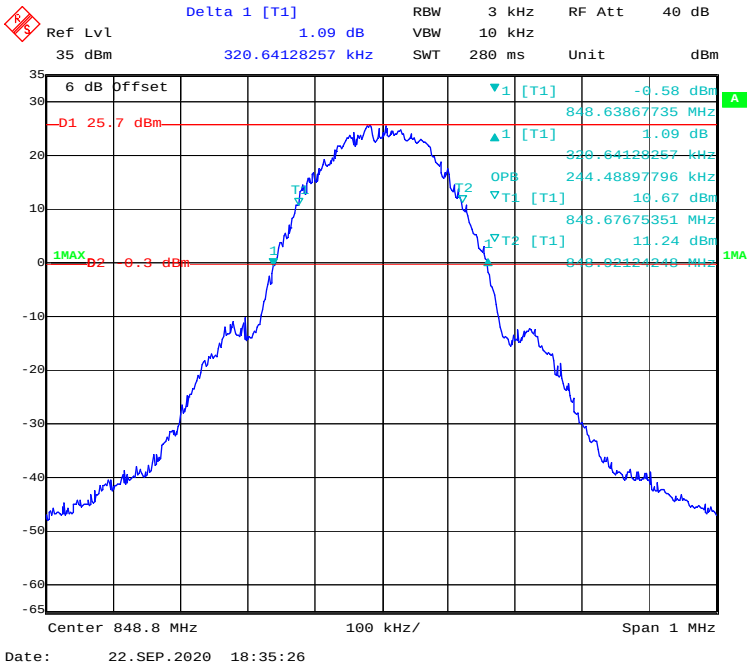
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Low channel



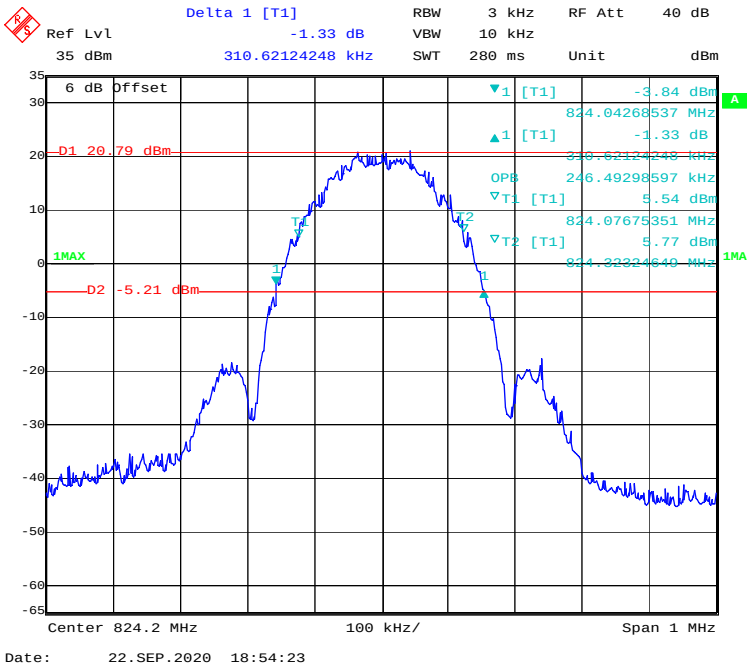
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Middle channel



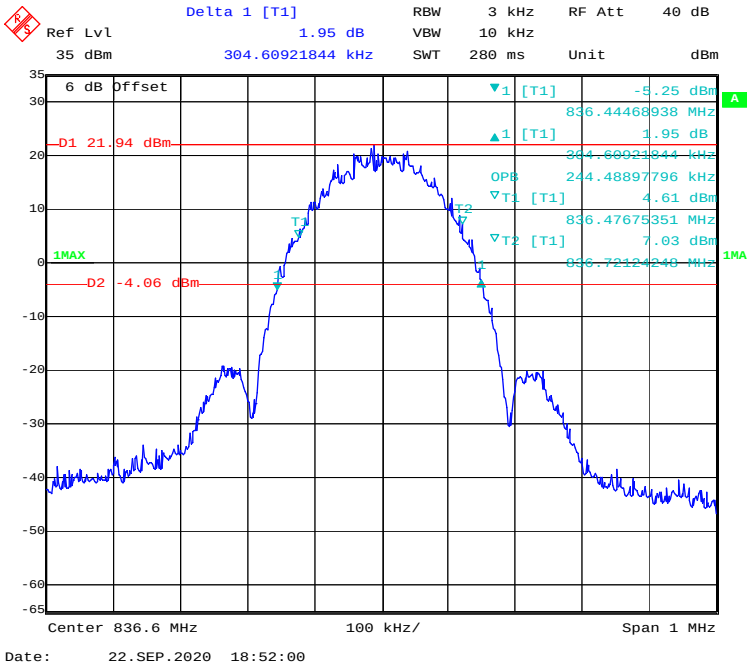
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) High channel



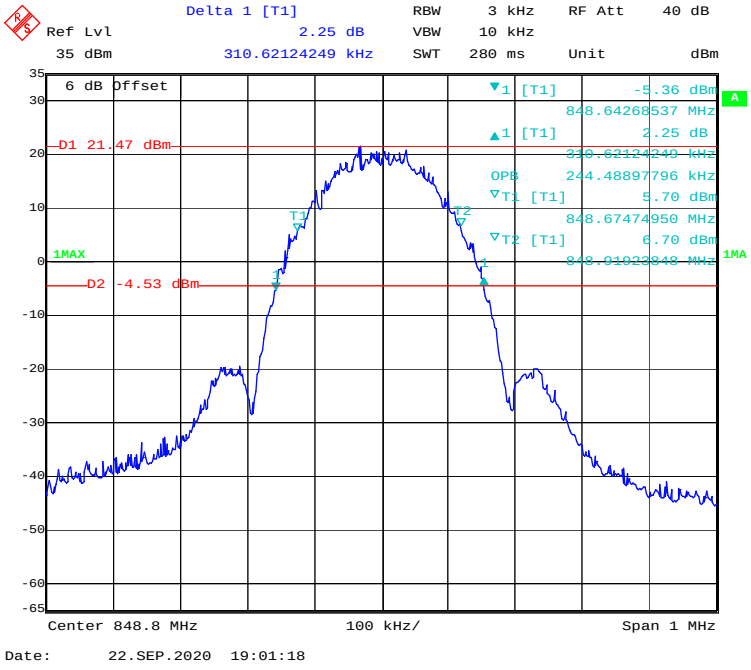
99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) Low channel



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

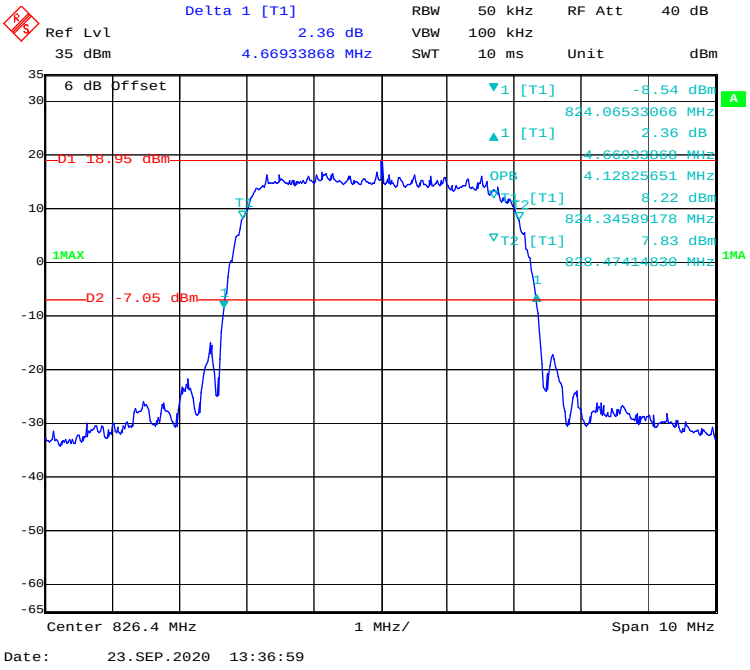


99% Occupied & 26 dB Emissions Bandwidth for EGPRS (GMSK) High channel

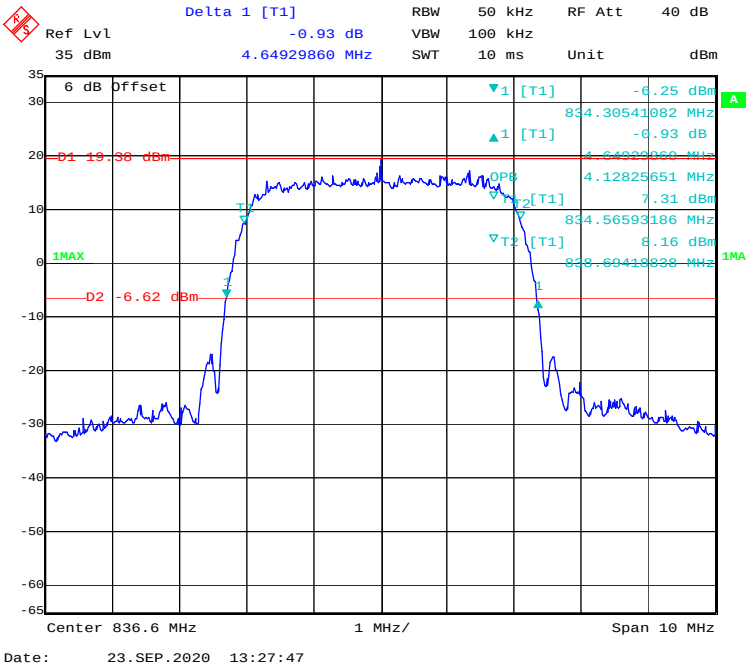


WCDMA Band V

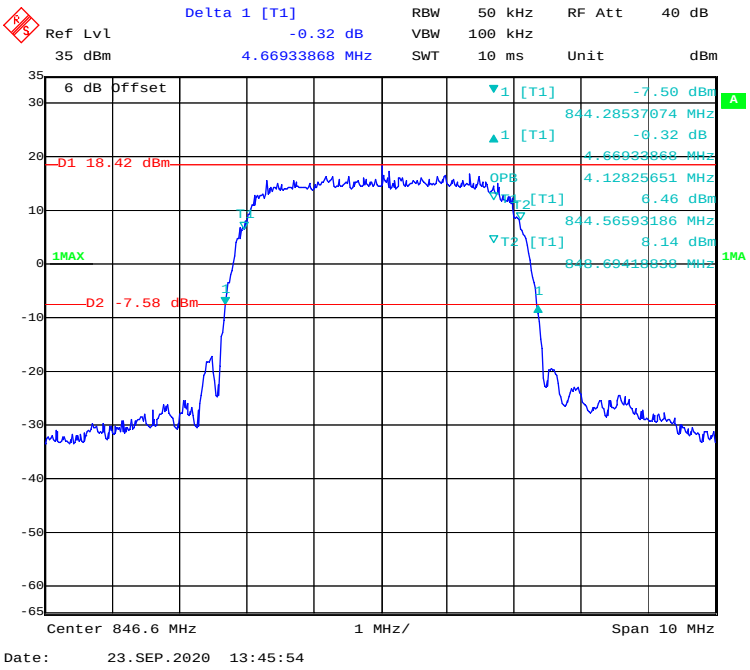
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Low channel



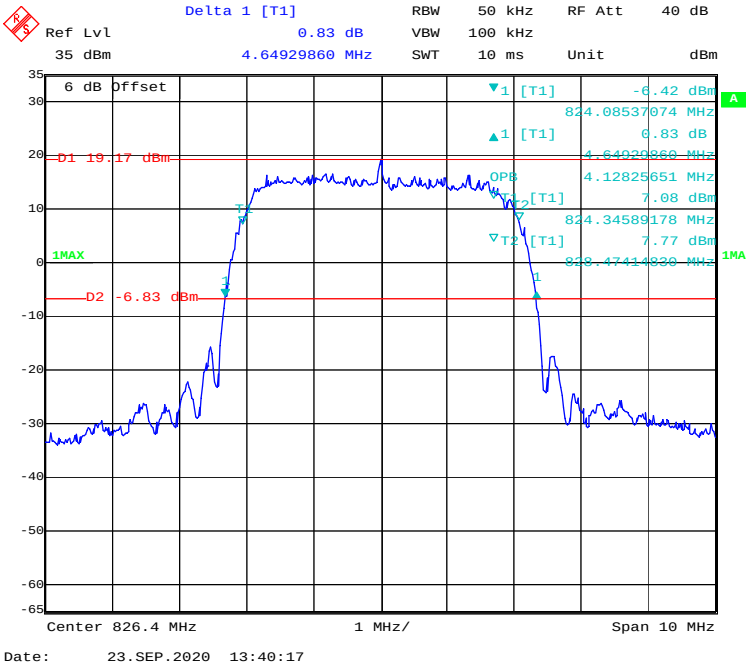
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Middle channel



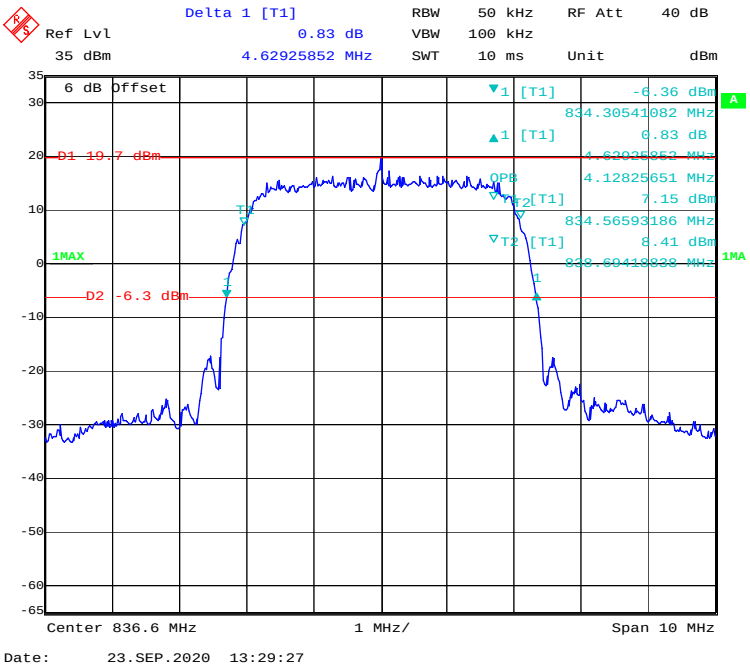
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel



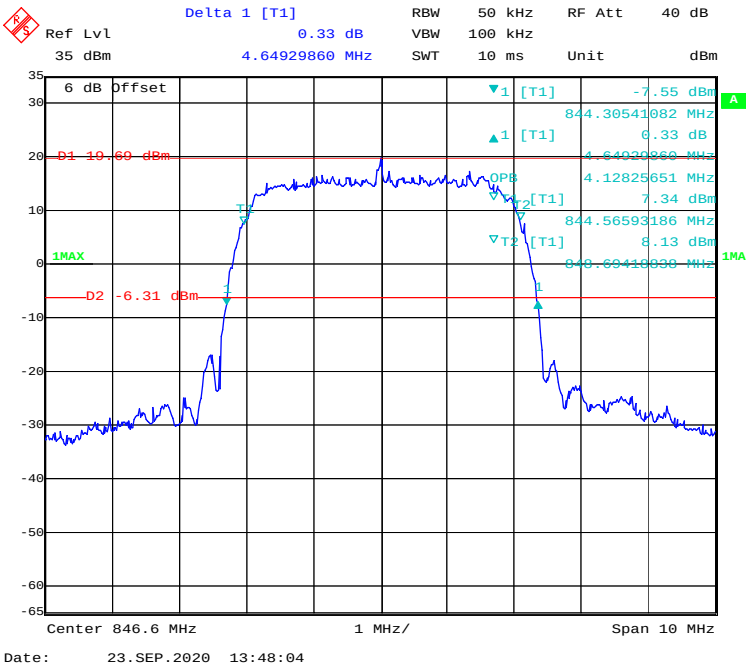
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Low channel



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

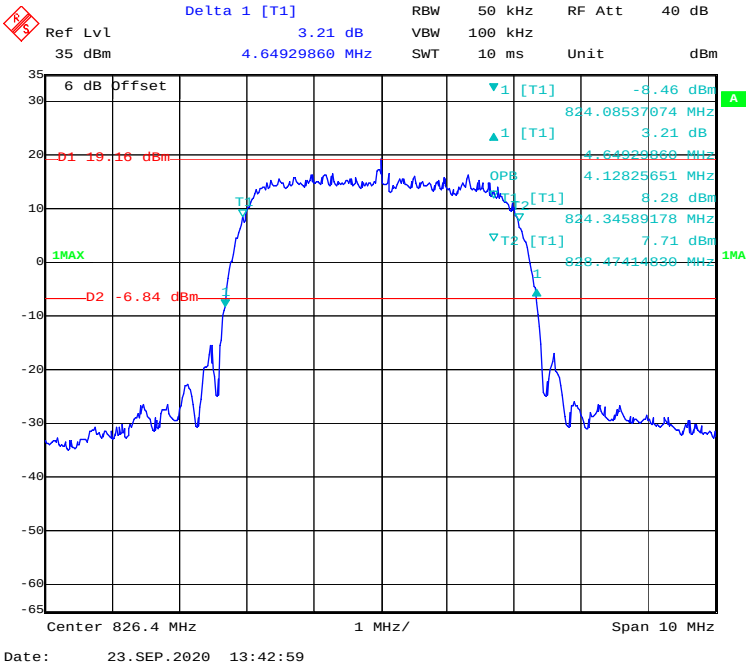


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) High channel

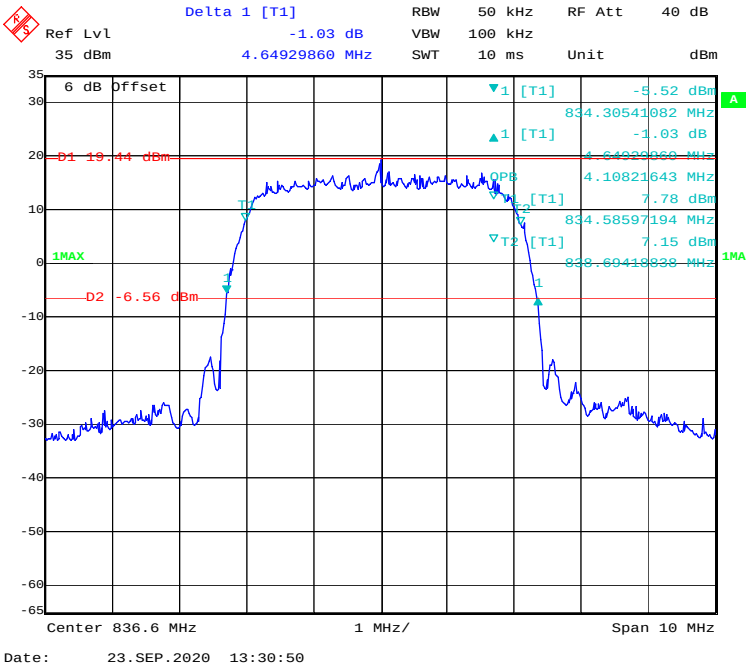


WCDMA Band V

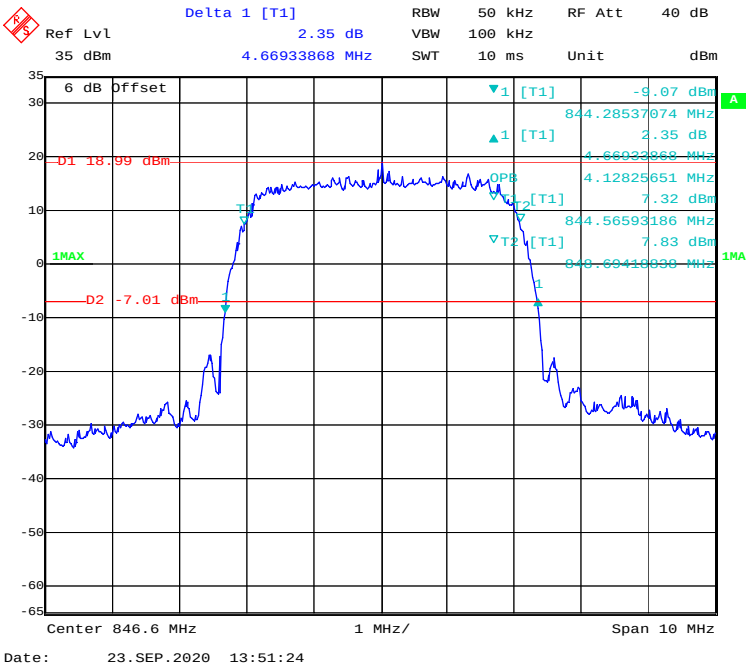
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Low channel



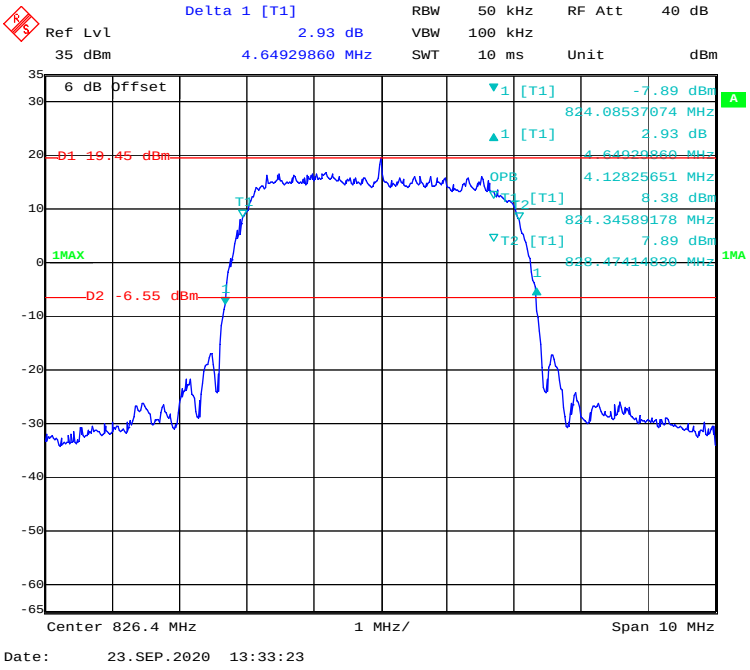
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Middle channel



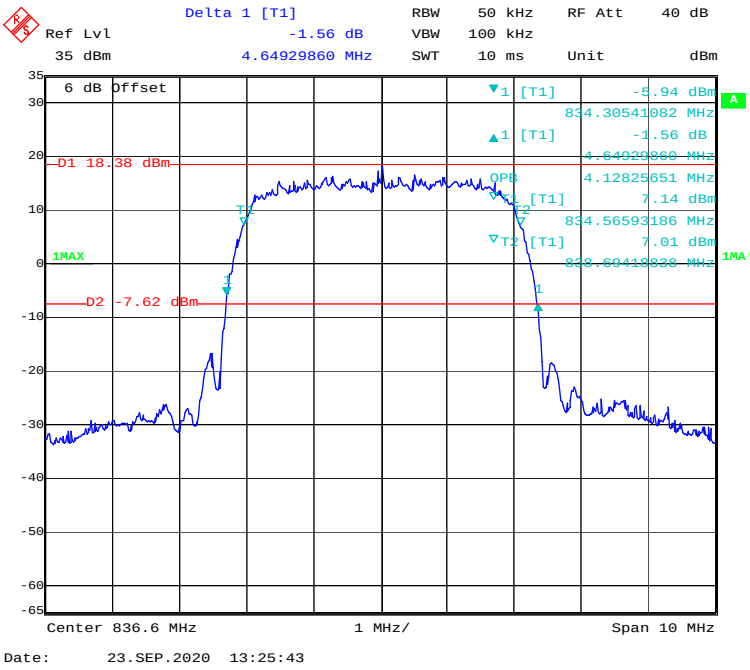
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) High channel



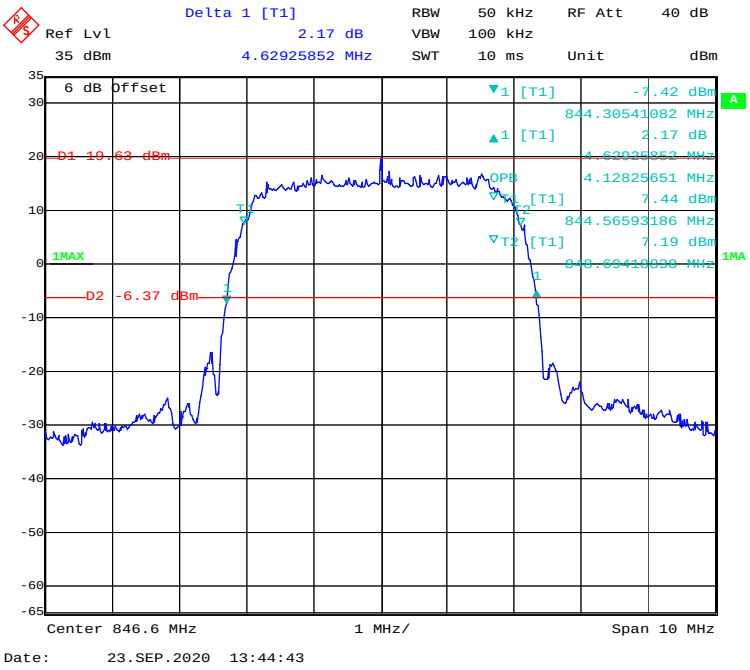
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Low channel



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

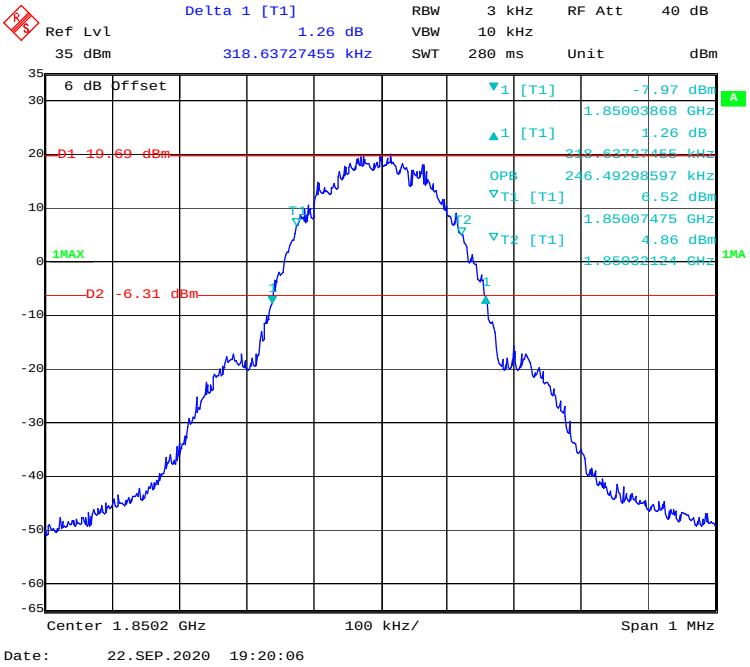


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) High channel

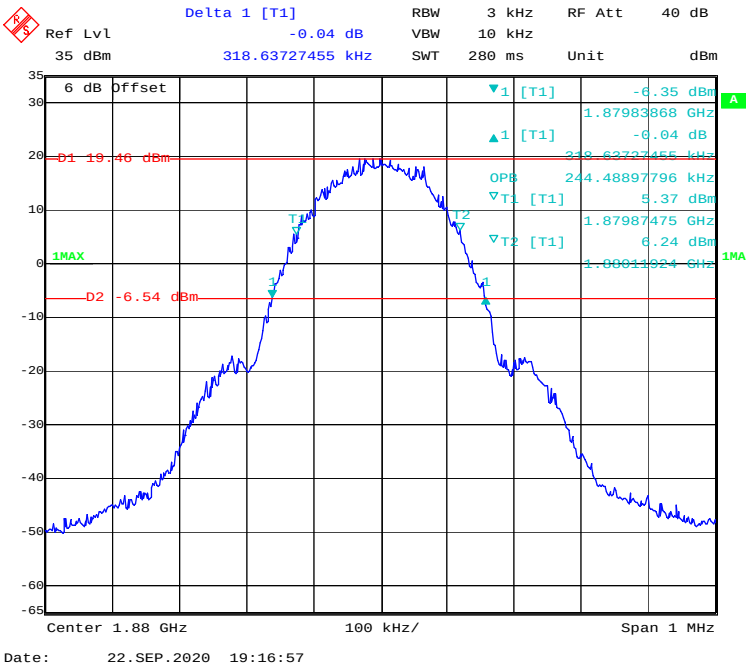


PCS 1900 Band

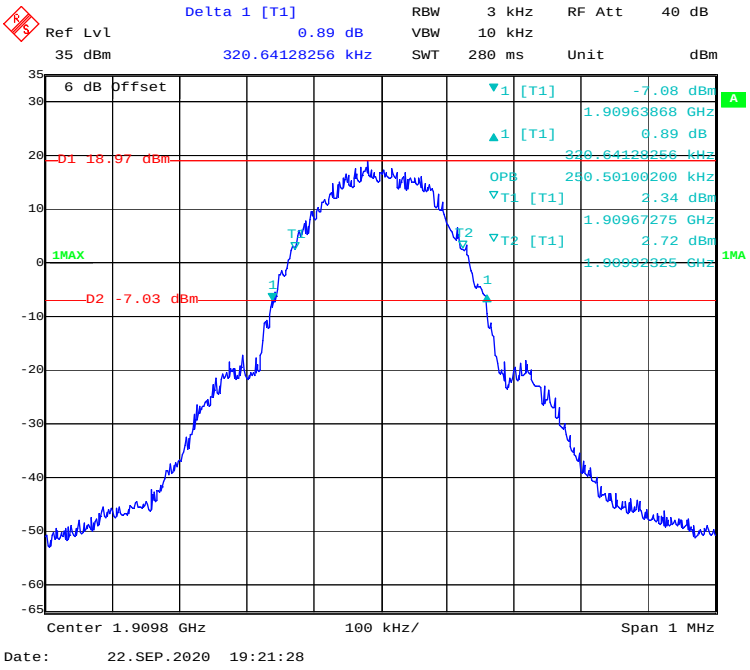
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Low channel



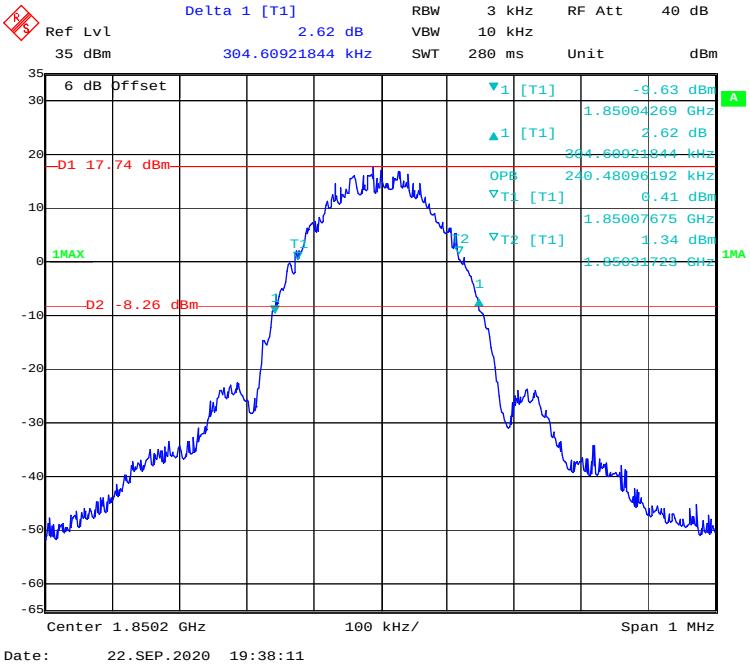
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) Middle channel



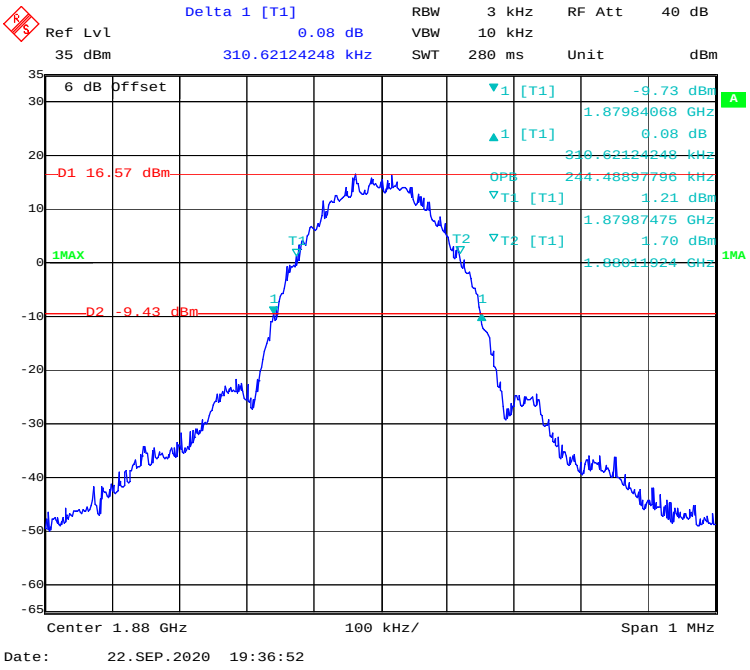
99% Occupied & 26 dB Emissions Bandwidth for GPRS (GMSK) High channel



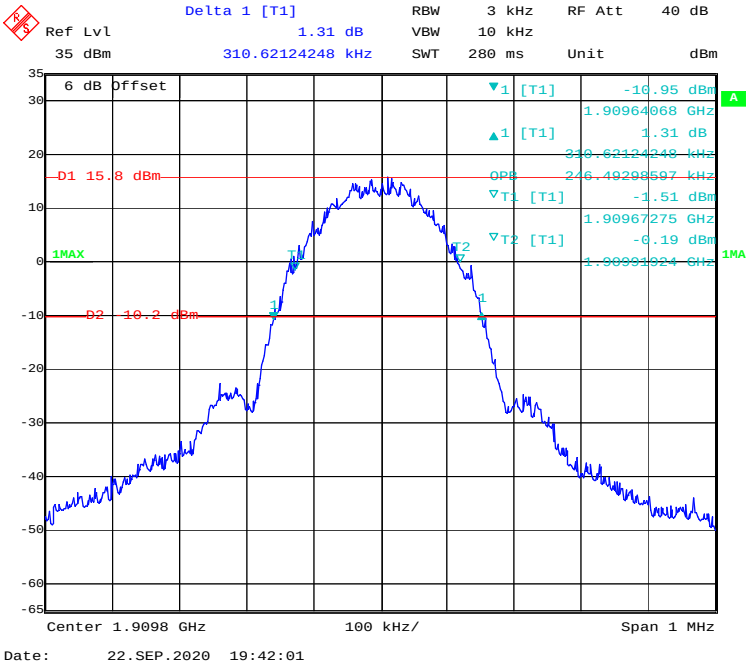
99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) Low channel



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

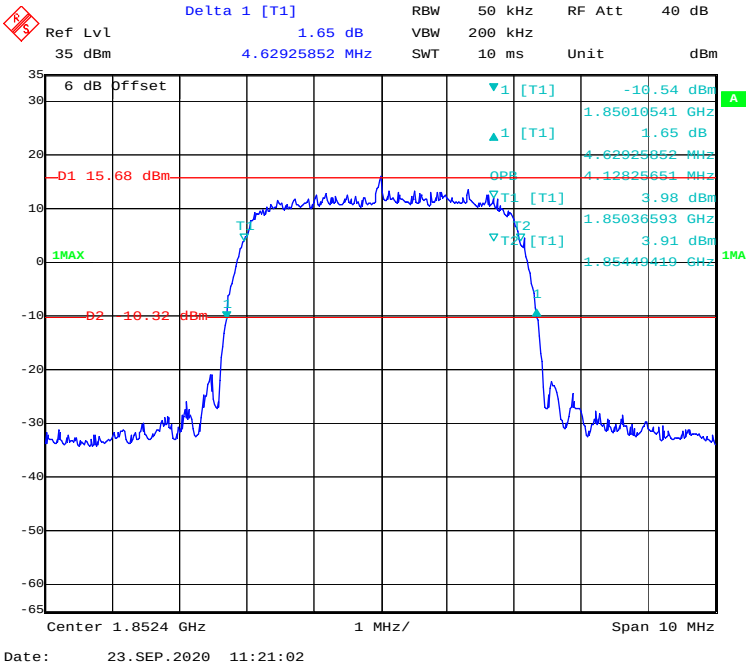


99% Occupied & 26 dB Emissions Bandwidth for EGPRS (8PSK) High channel

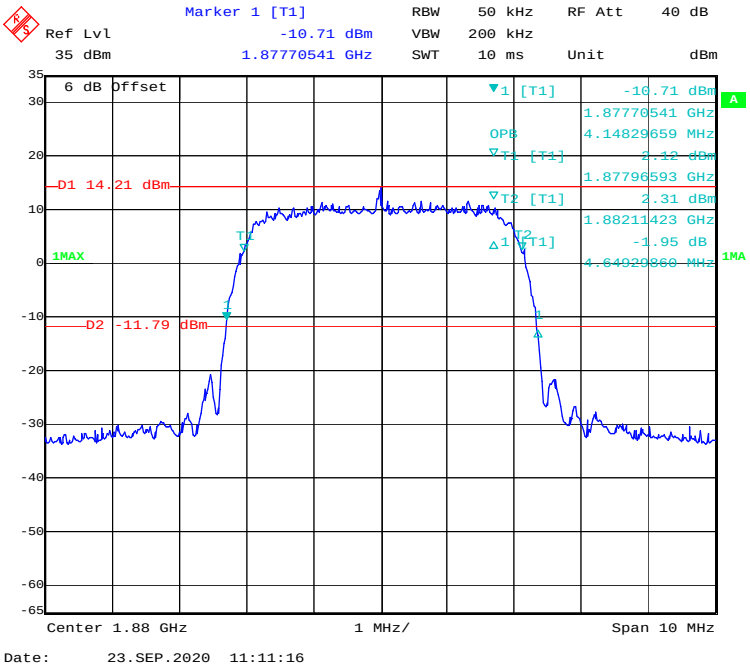


WCDMA Band II

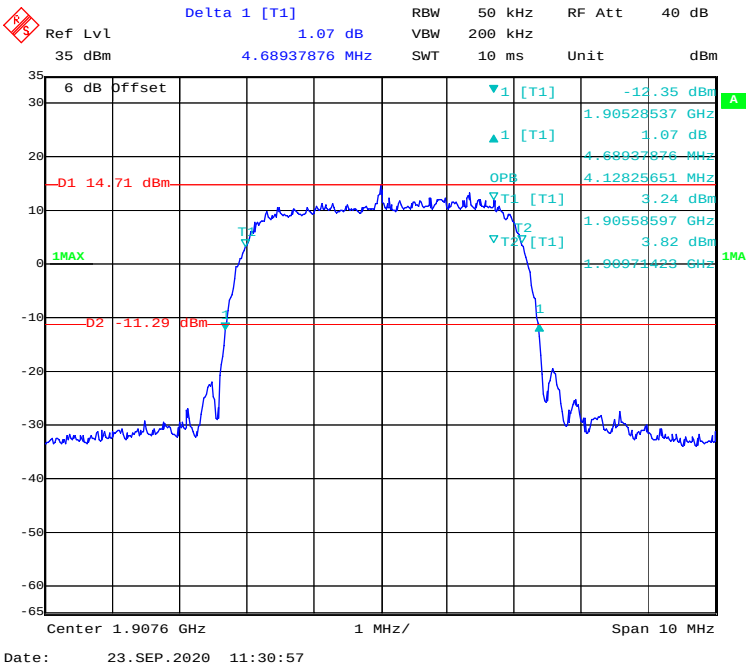
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Low channel



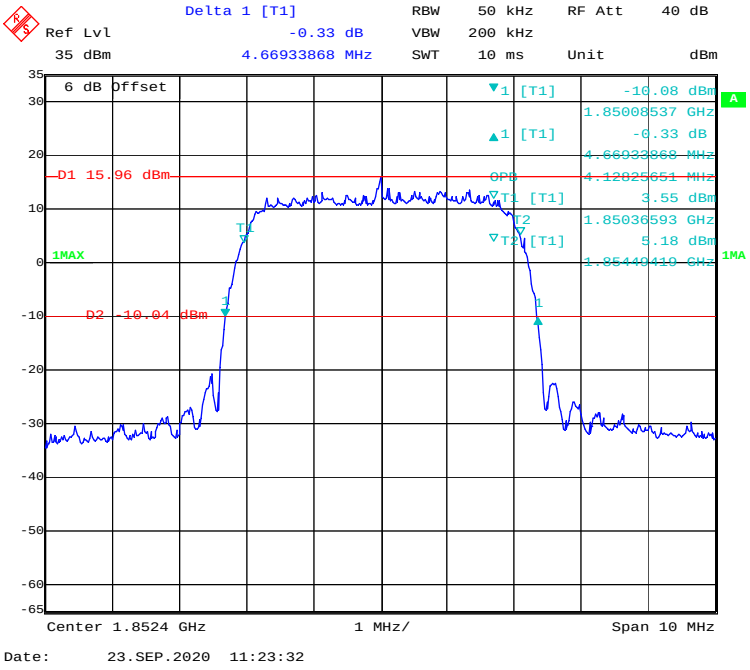
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Middle channel



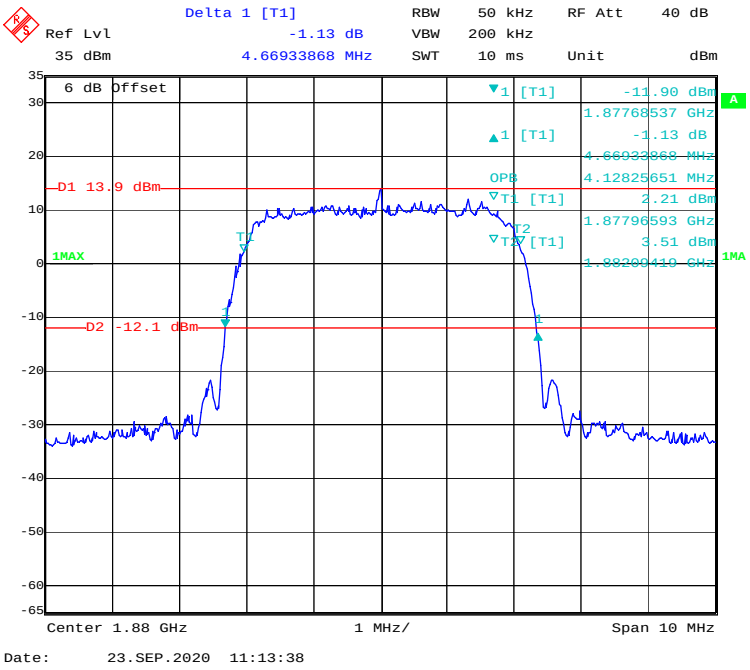
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel



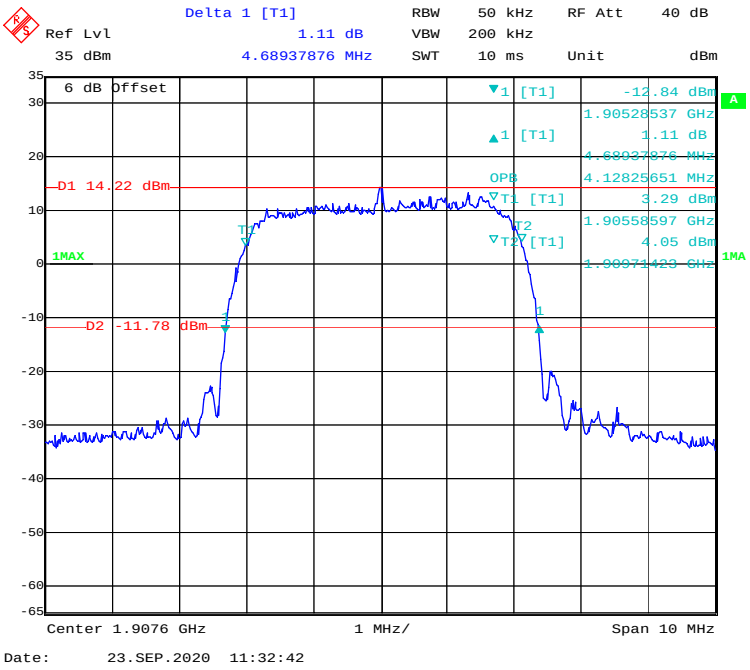
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Low channel



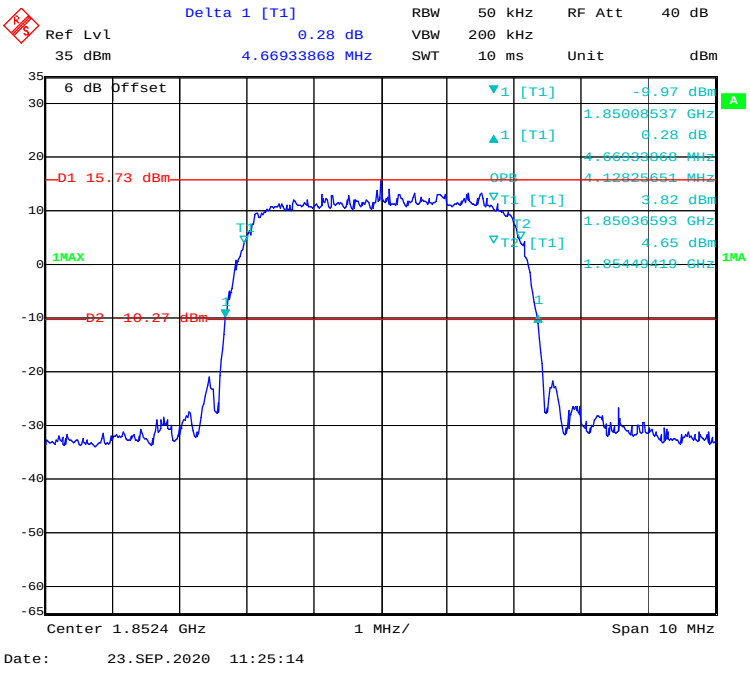
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Middle channel



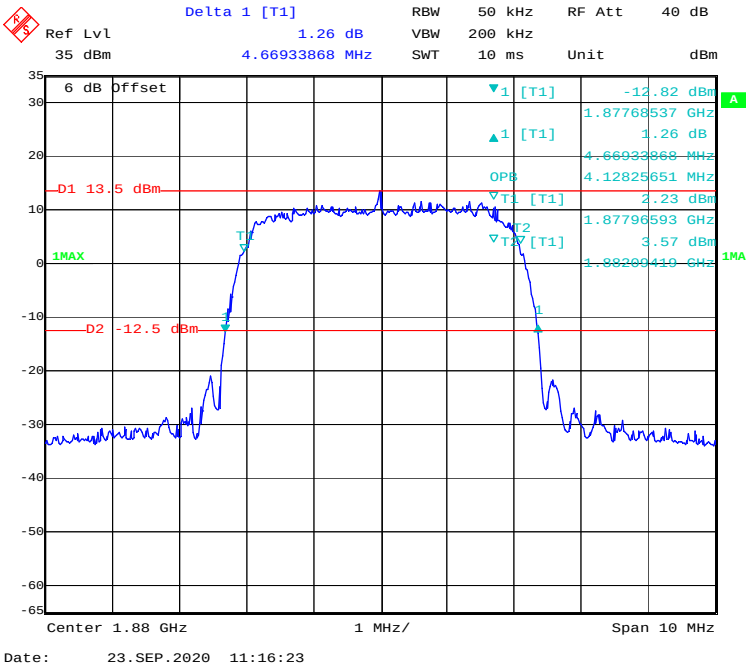
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) High channel



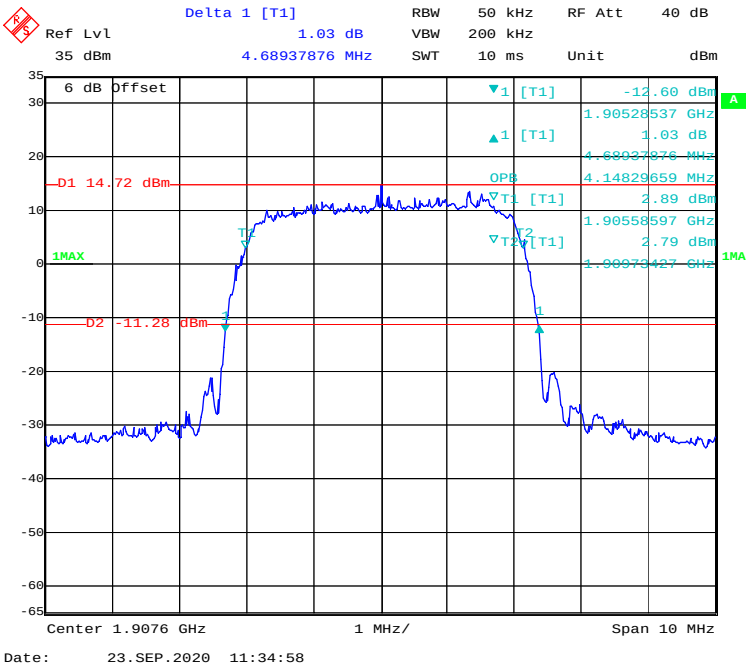
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Low channel



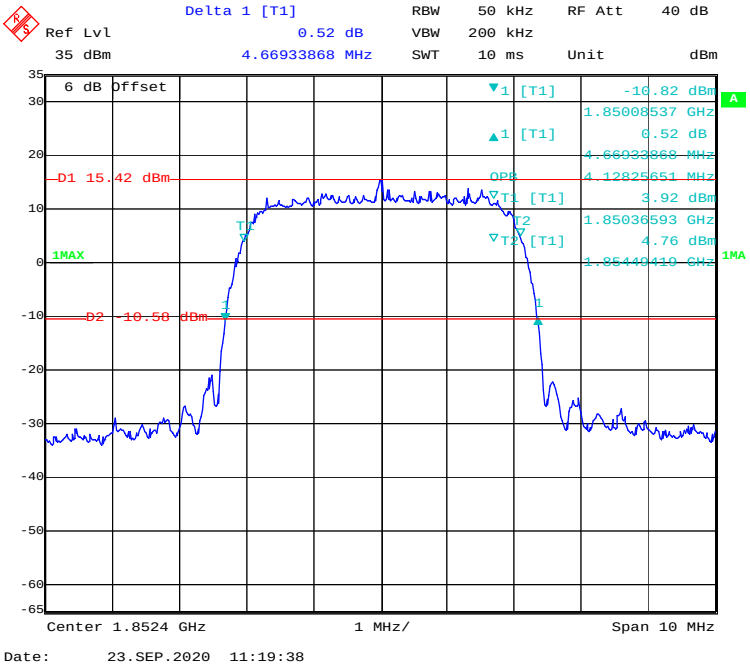
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Middle channel



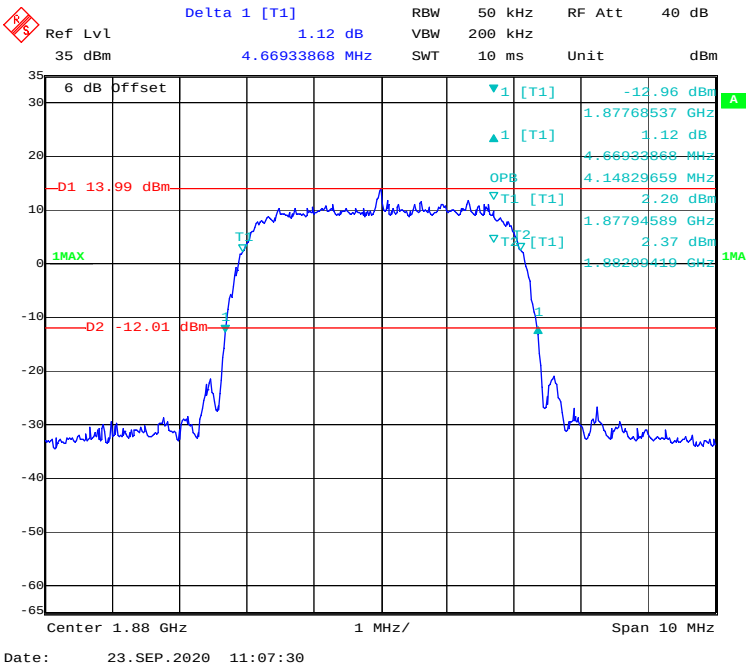
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) High channel



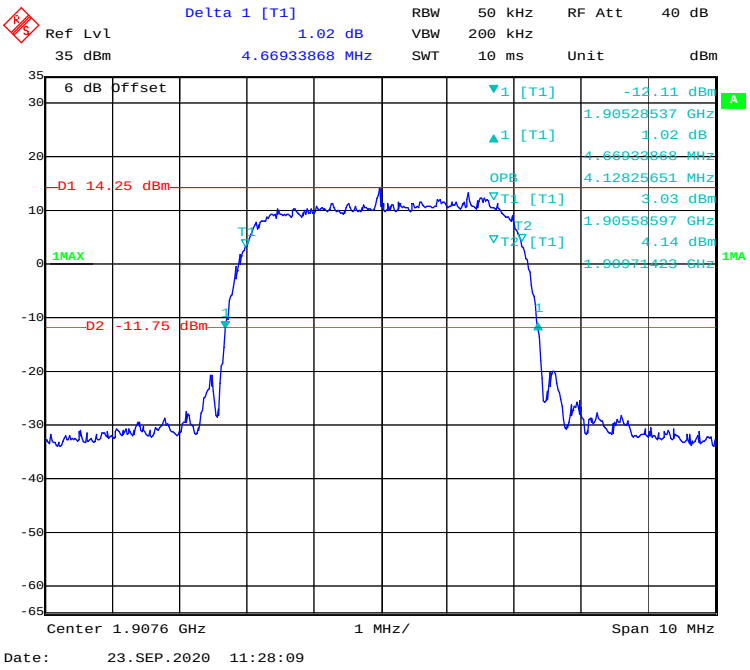
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Low channel



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

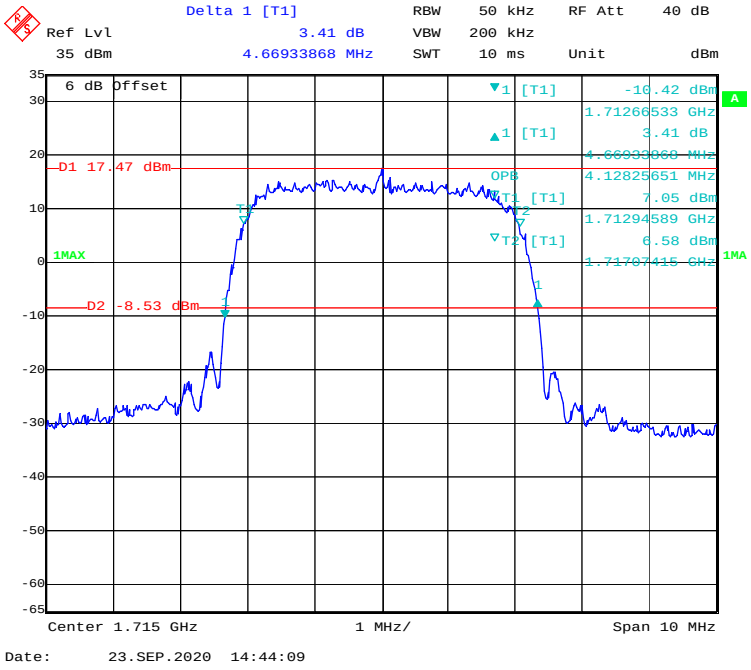


99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) High channel

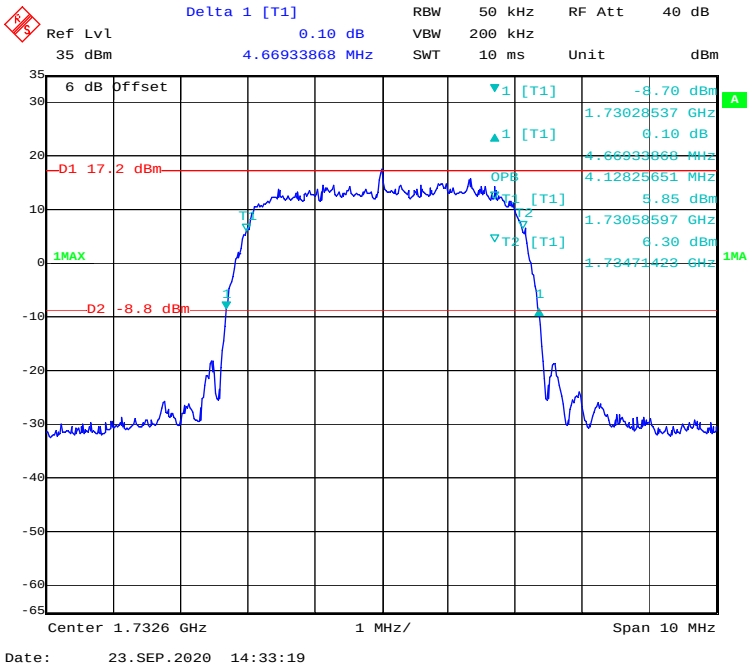


WCDMA Band IV

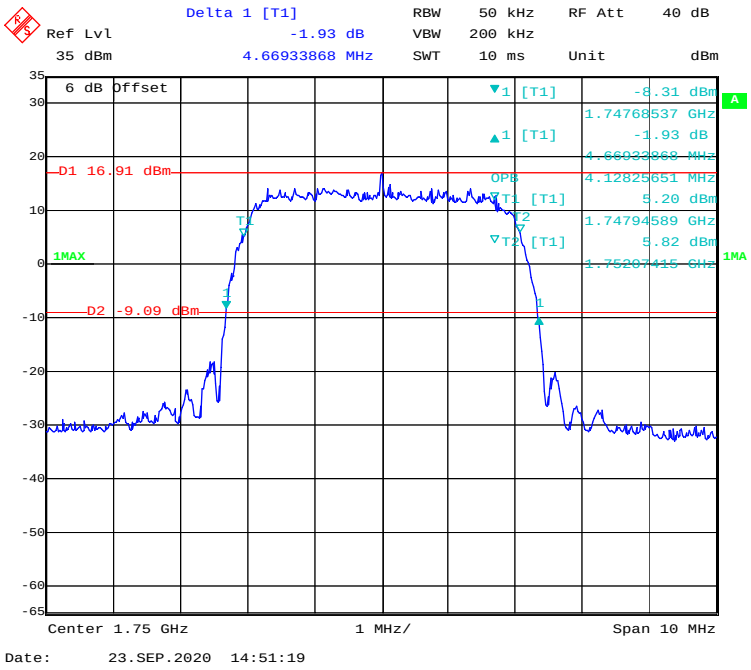
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Low channel



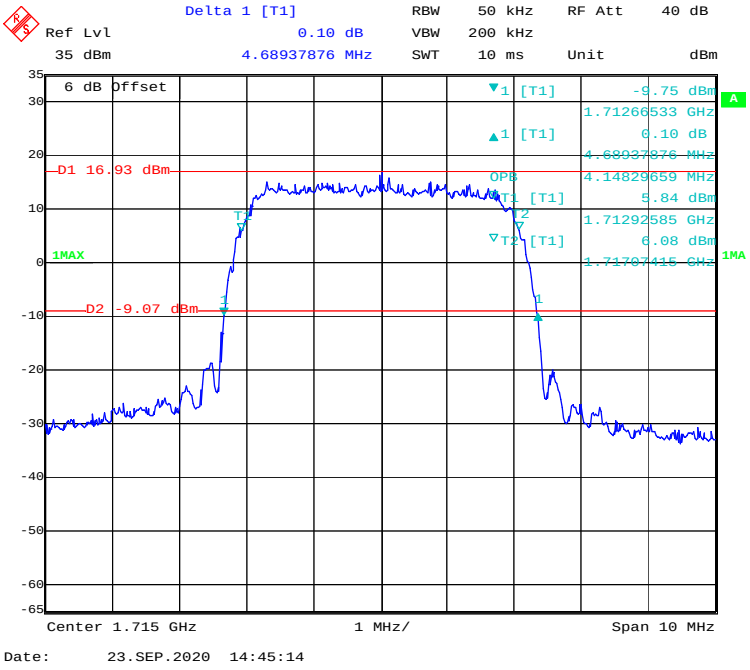
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) Middle channel



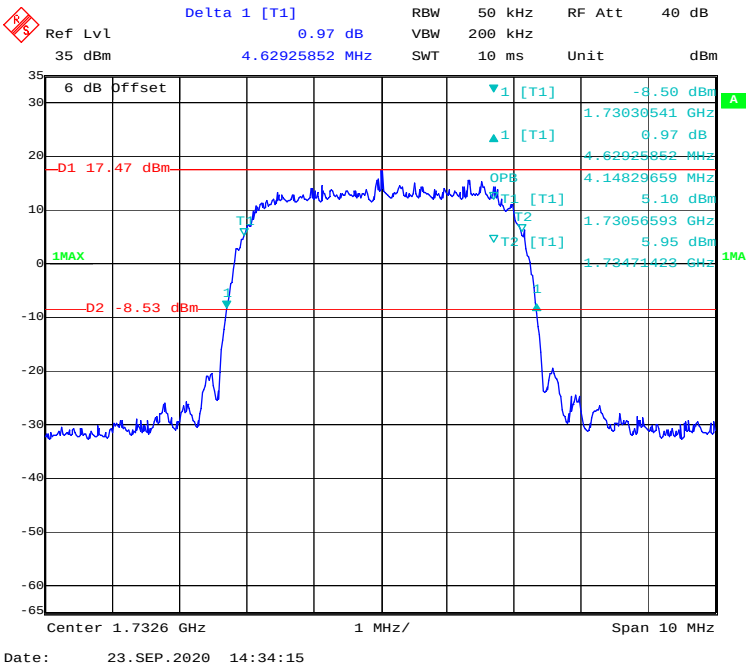
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (Rel 99) High channel



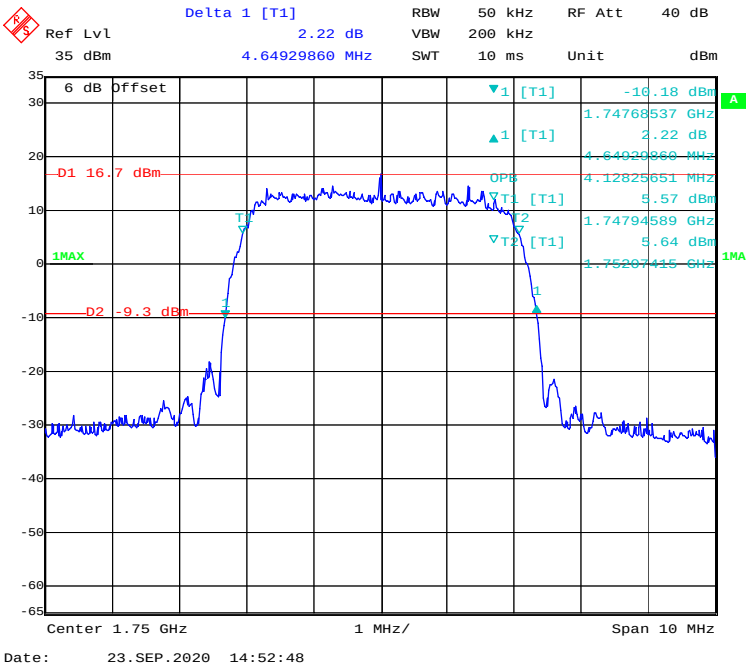
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Low channel



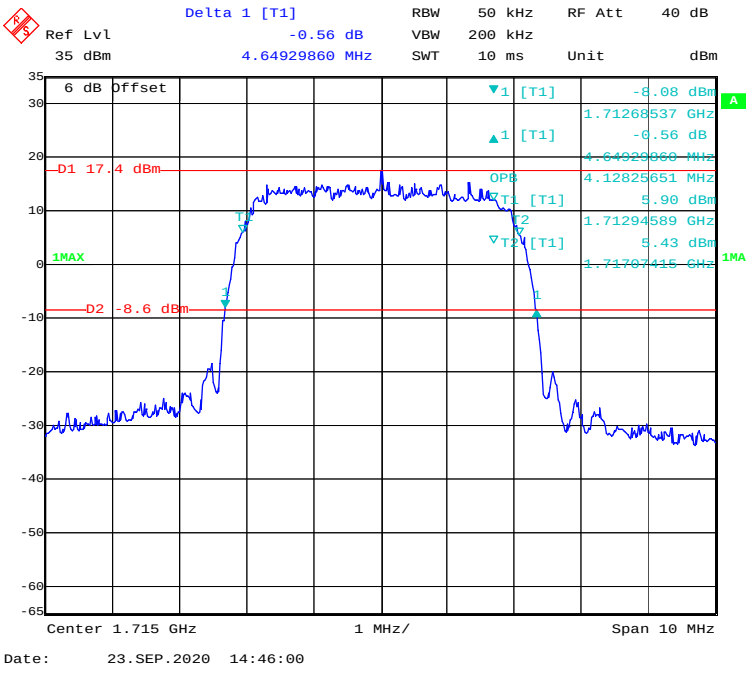
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) Middle channel



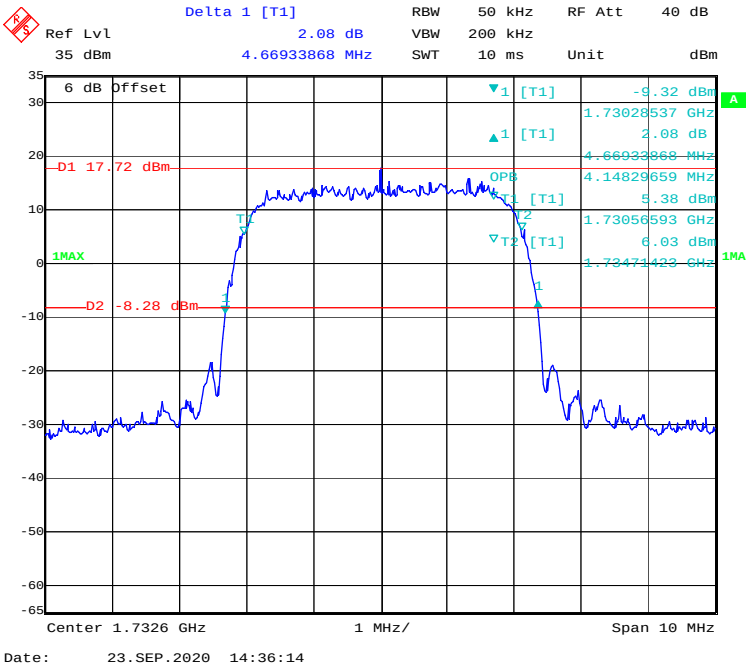
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSDPA) High channel



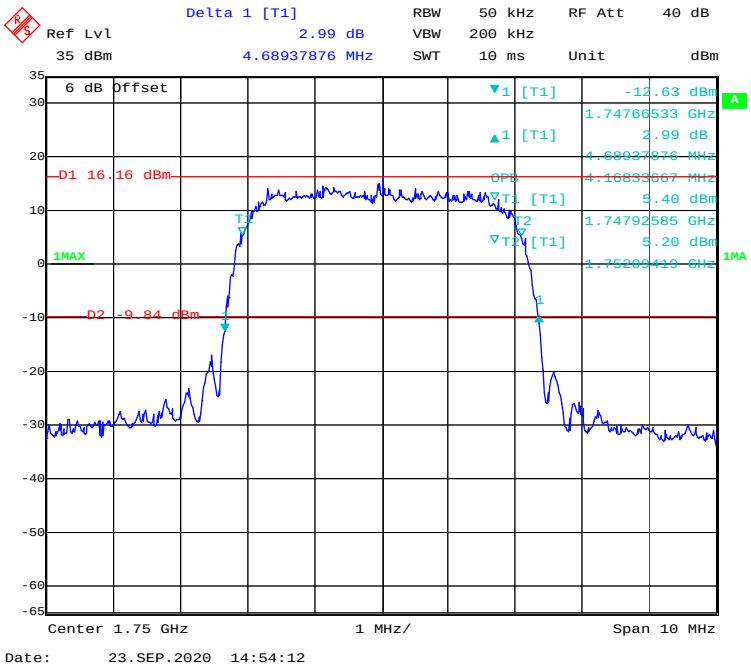
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Low channel



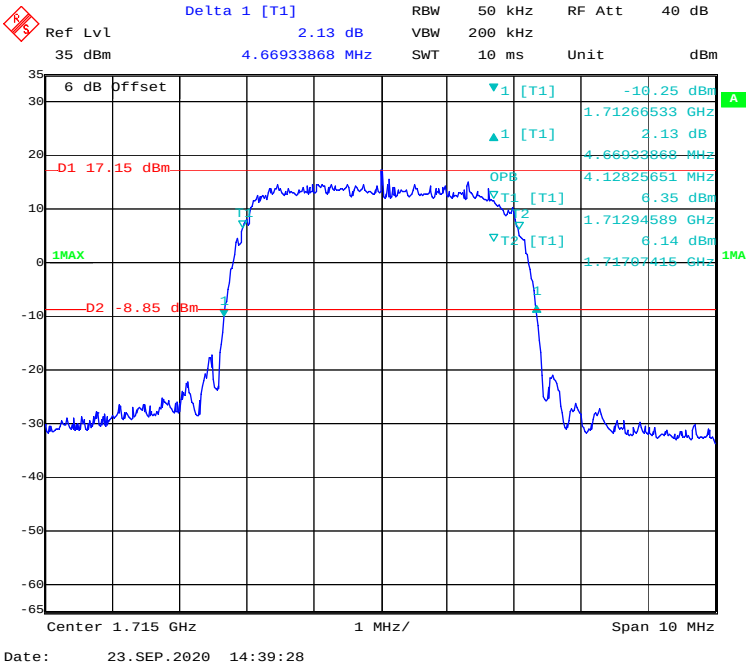
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) Middle channel



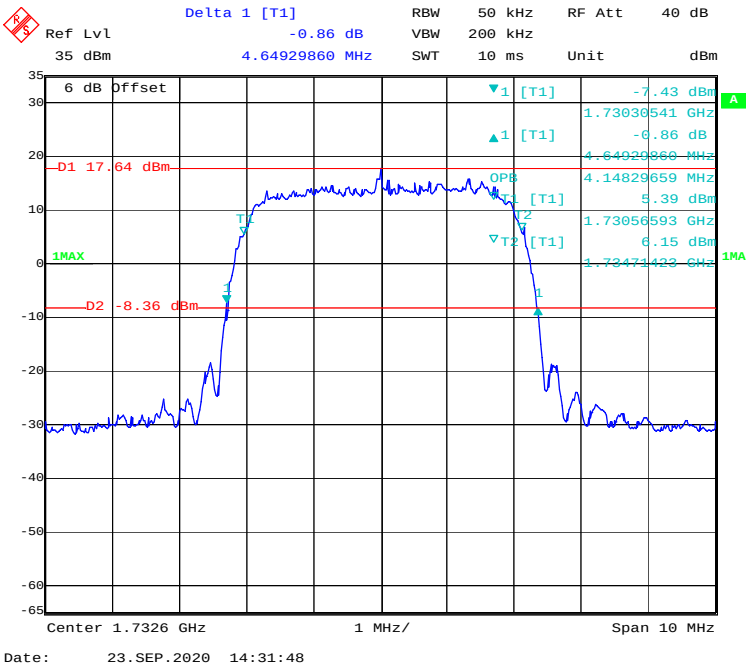
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSUPA) High channel



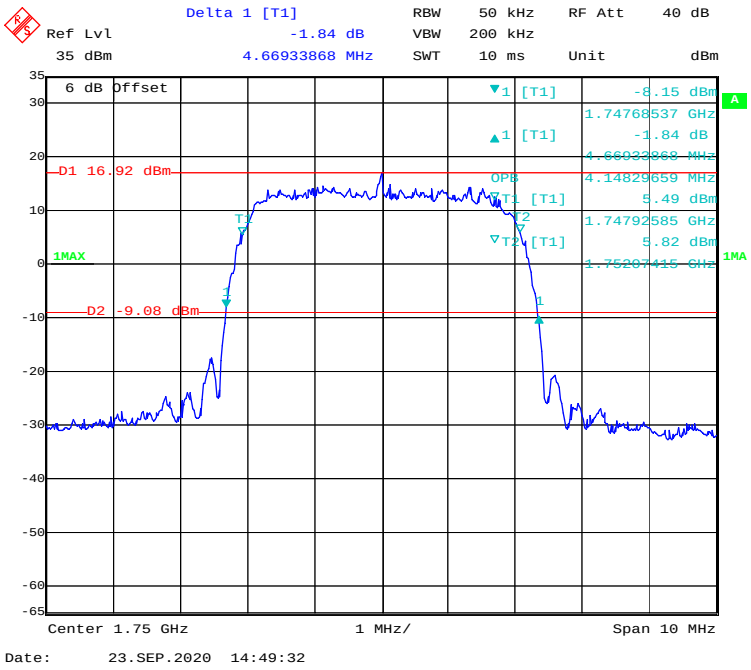
99% Occupied & 26 dB Emissions Bandwidth for WCDMA (HSPA+) Low channel



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



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

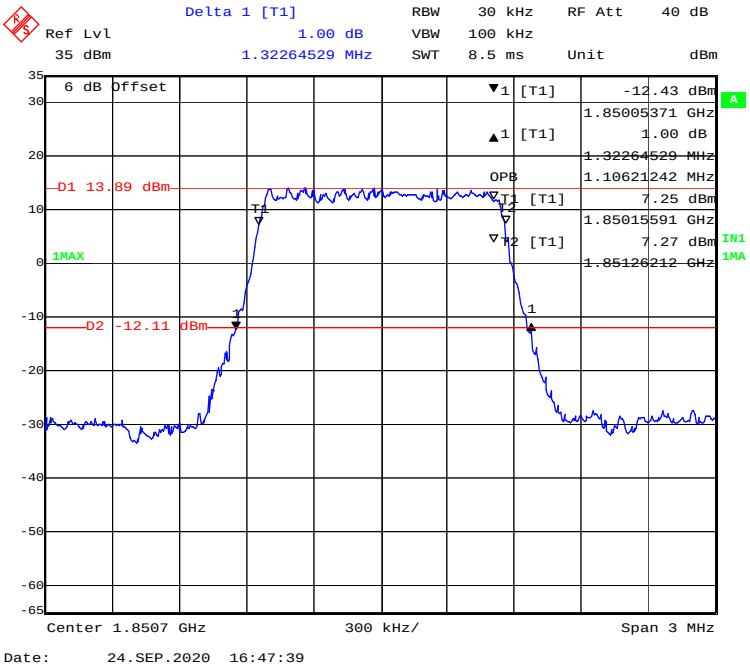


LTE Band 2:

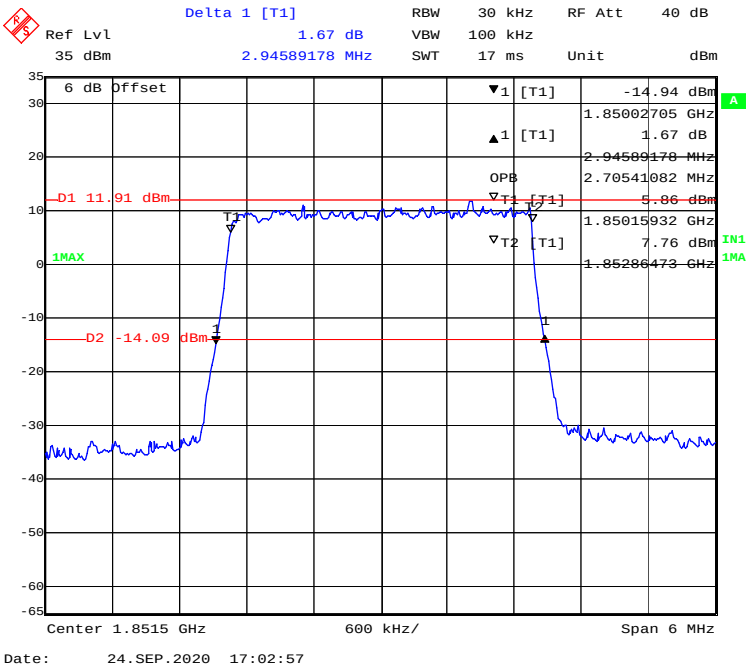
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.323	1.106
	3M		2.946	2.705
	5M		4.950	4.509
	10M		9.619	8.938
	15M		14.549	13.347
	20M		18.998	17.876
	1.4M	Middle	1.311	1.112
	3M		2.946	2.705
	5M		4.950	4.509
	10M		9.780	8.938
	15M		14.729	13.466
	20M		19.238	17.956
	1.4M	High	1.335	1.106
	3M		2.958	2.705
	5M		4.930	4.489
	10M		9.780	9.018
	15M		14.669	13.527
	20M		19.158	17.956

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
16-QAM	1.4M	Low	1.317	1.106
	3M		2.958	2.705
	5M		4.950	4.489
	10M		9.699	8.938
	15M		14.489	13.407
	20M		18.998	17.796
	1.4M	Middle	1.305	1.112
	3M		2.934	2.705
	5M		4.990	4.509
	10M		9.739	8.978
	15M		14.729	13.467
	20M		19.158	17.956
	1.4M	High	1.323	1.112
	3M		2.946	2.705
	5M		4.930	4.489
	10M		9.900	8.978
	15M		14.790	13.527
	20M		19.158	17.956

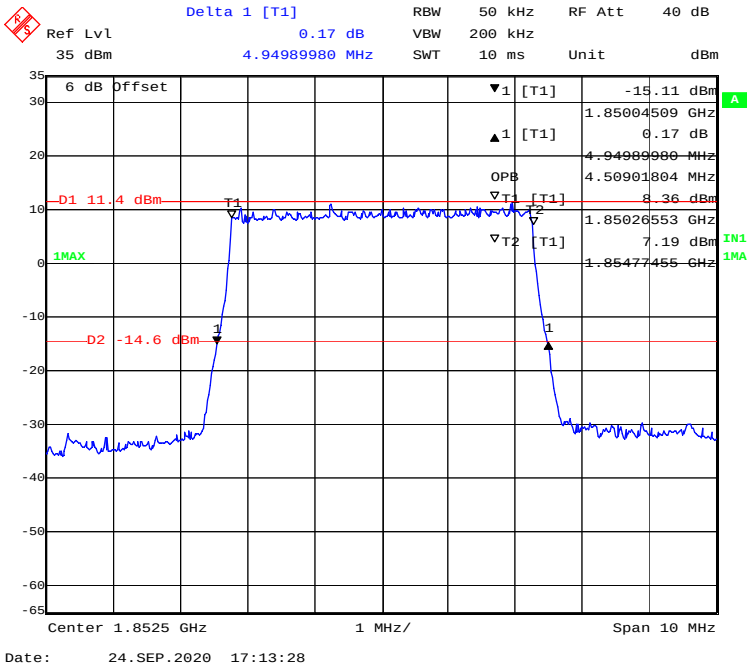
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



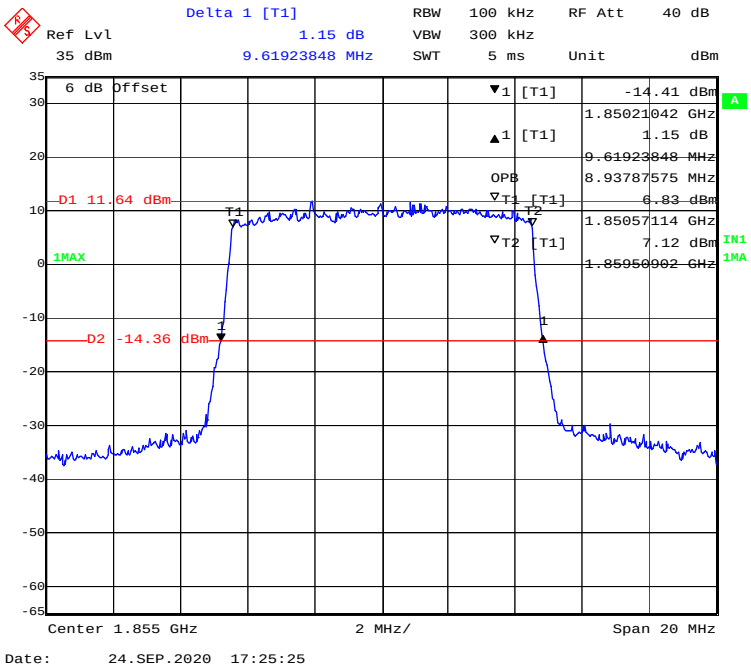
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



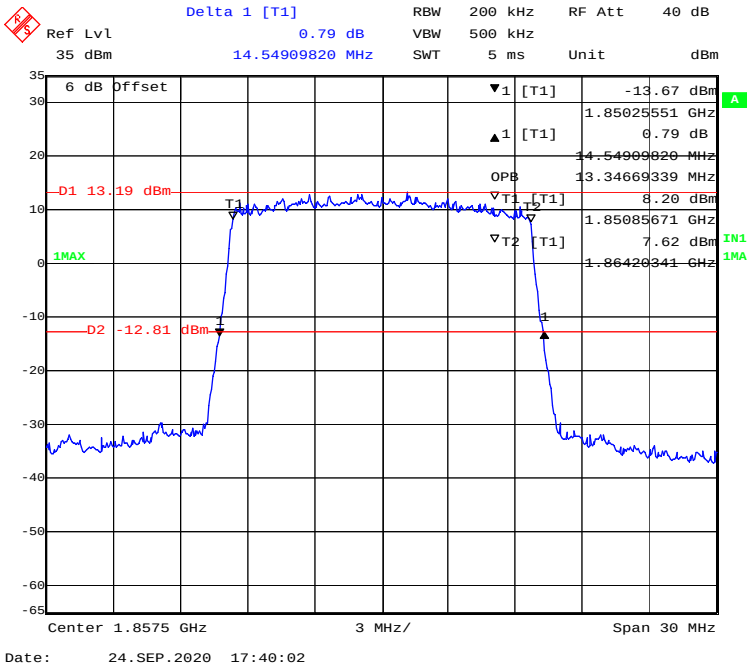
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



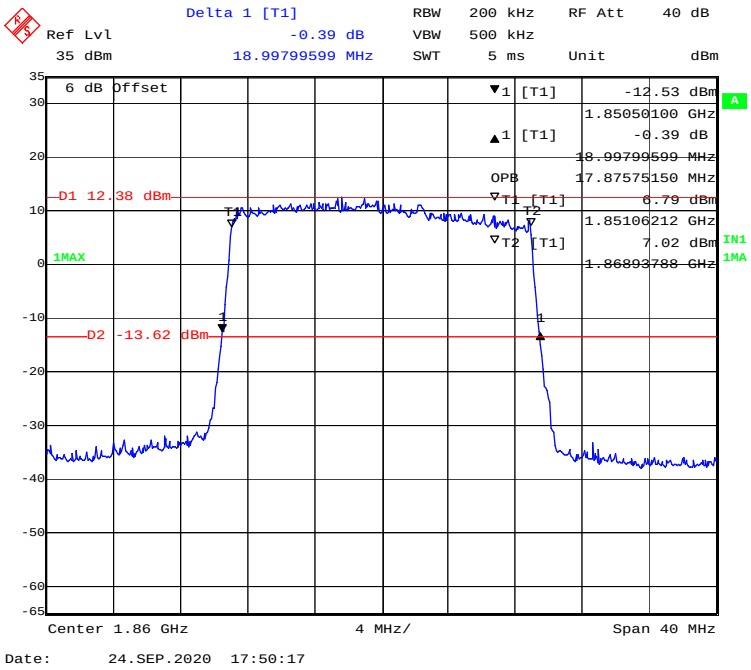
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



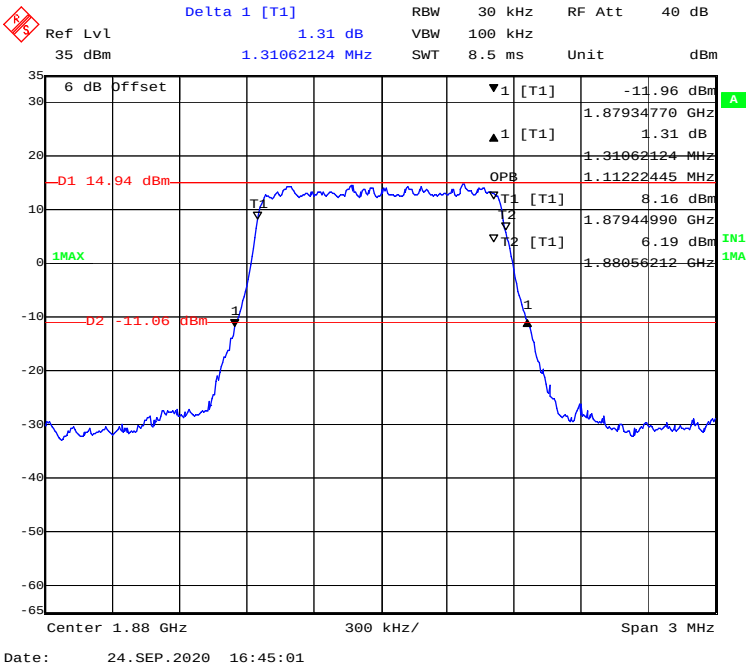
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



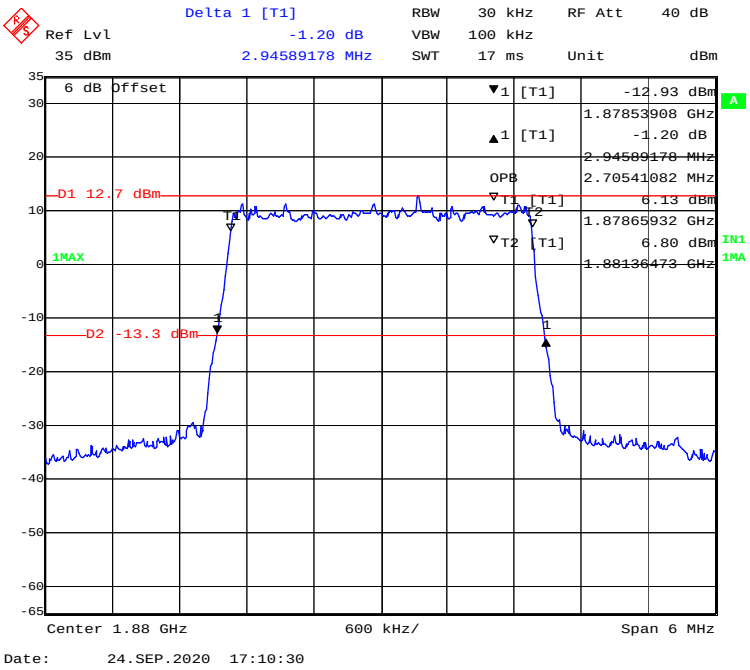
QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



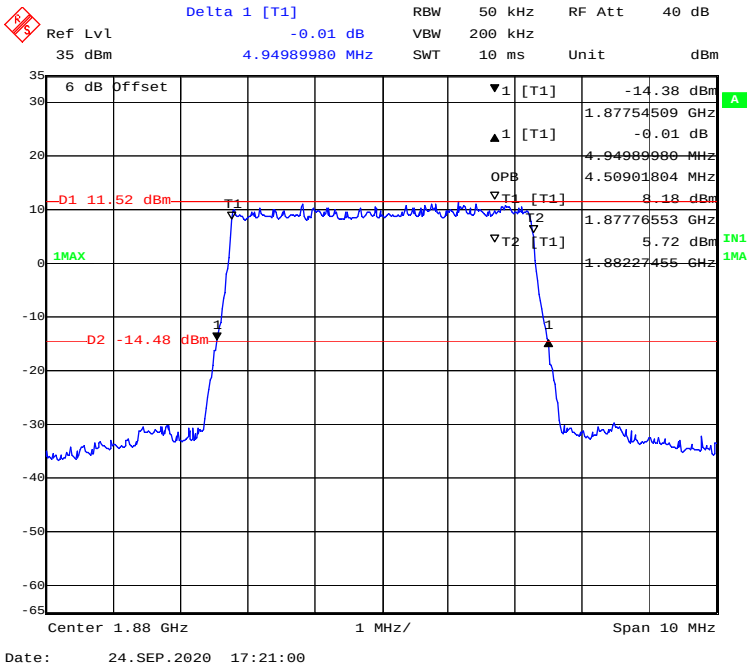
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



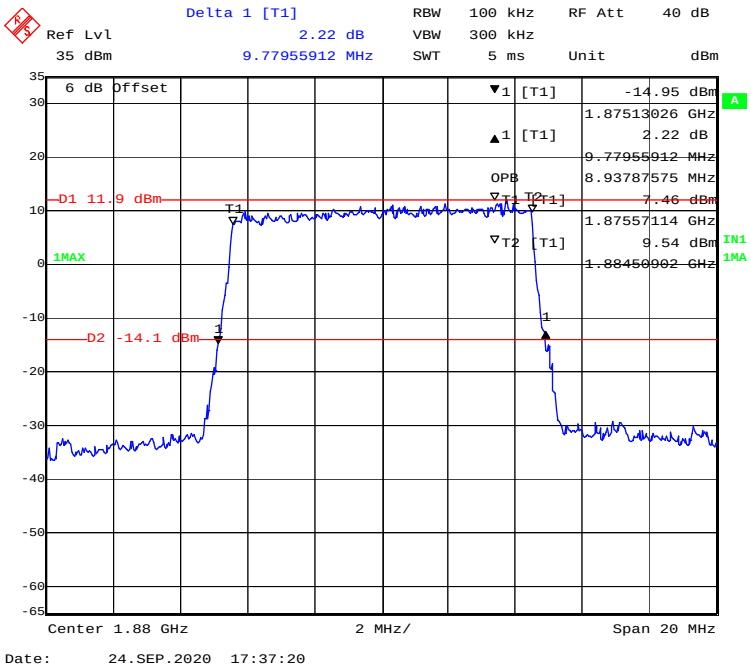
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



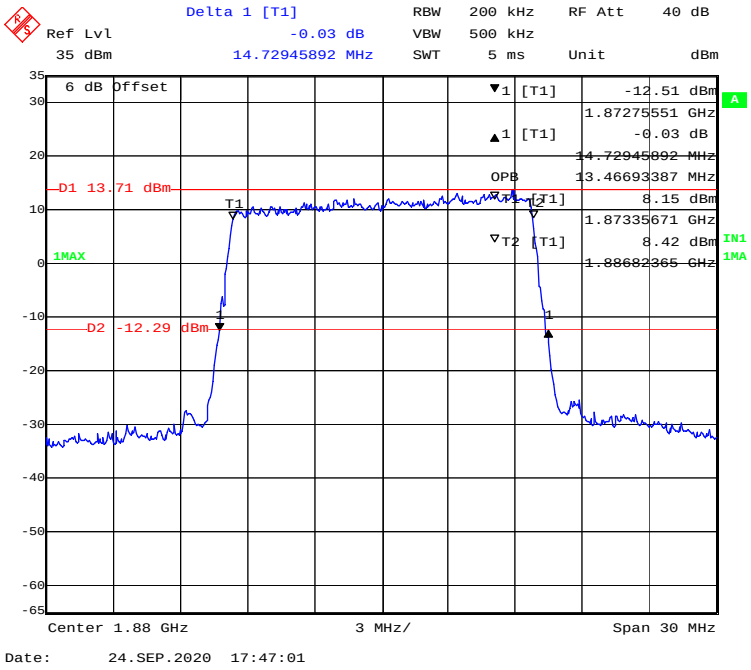
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



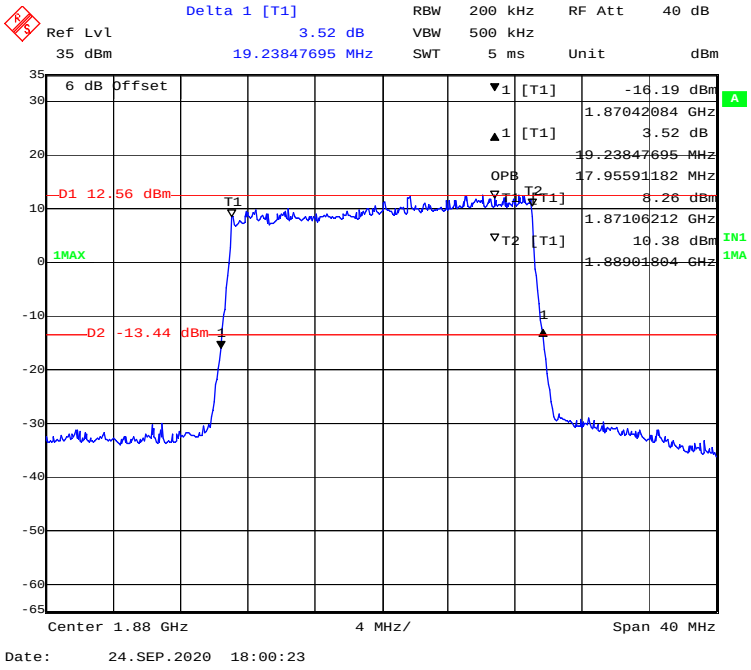
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



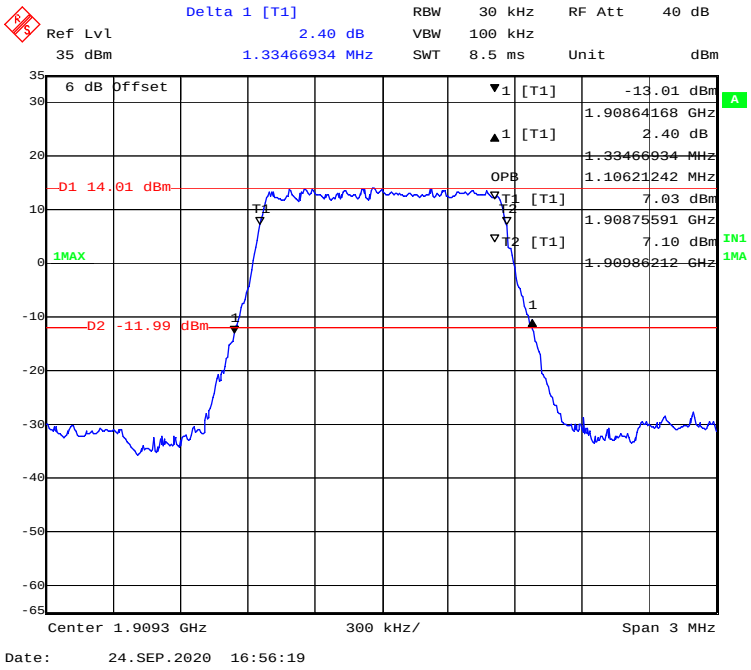
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



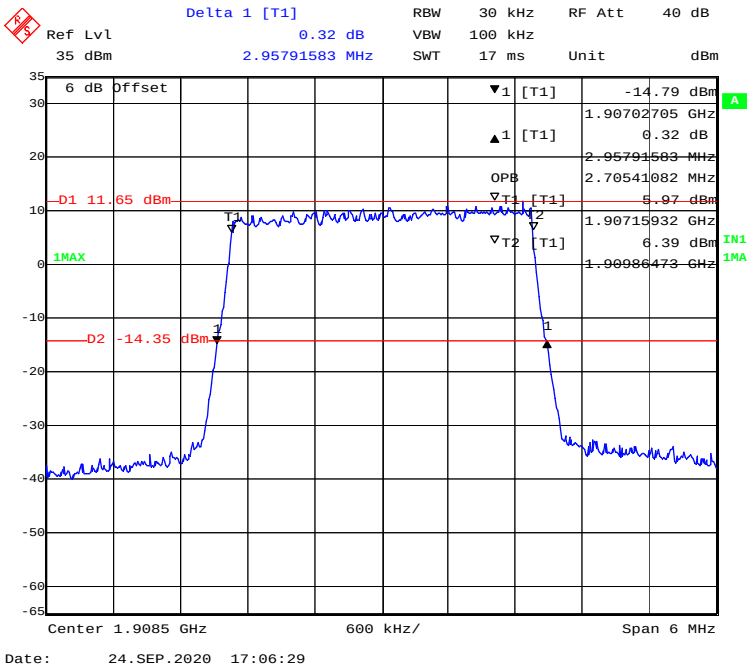
QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



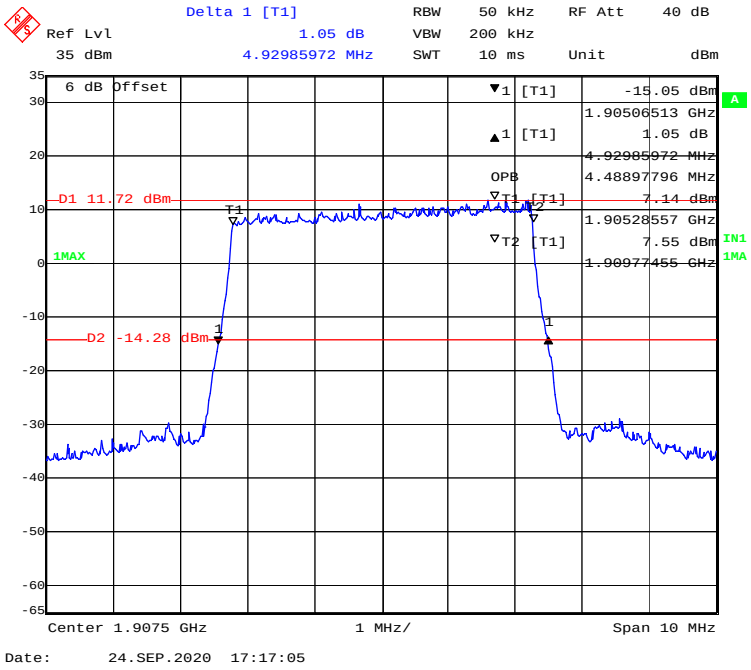
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



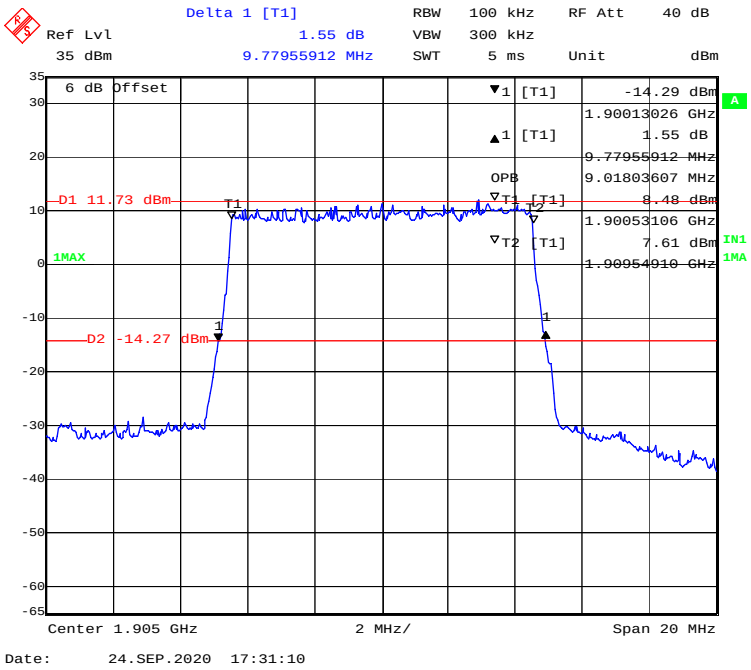
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



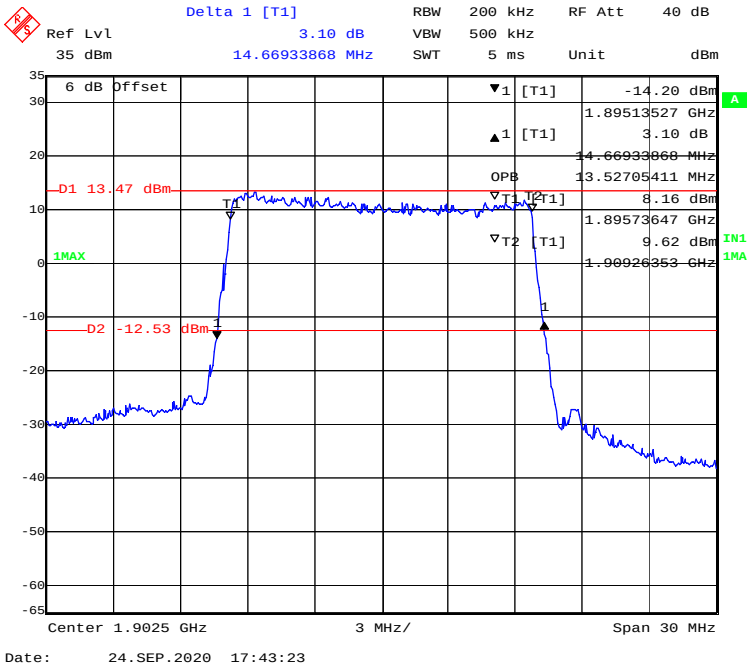
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



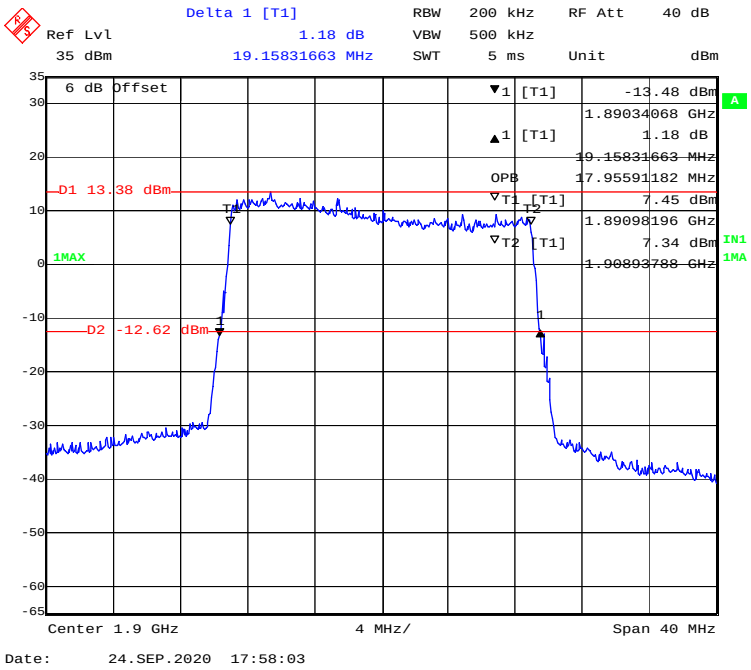
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



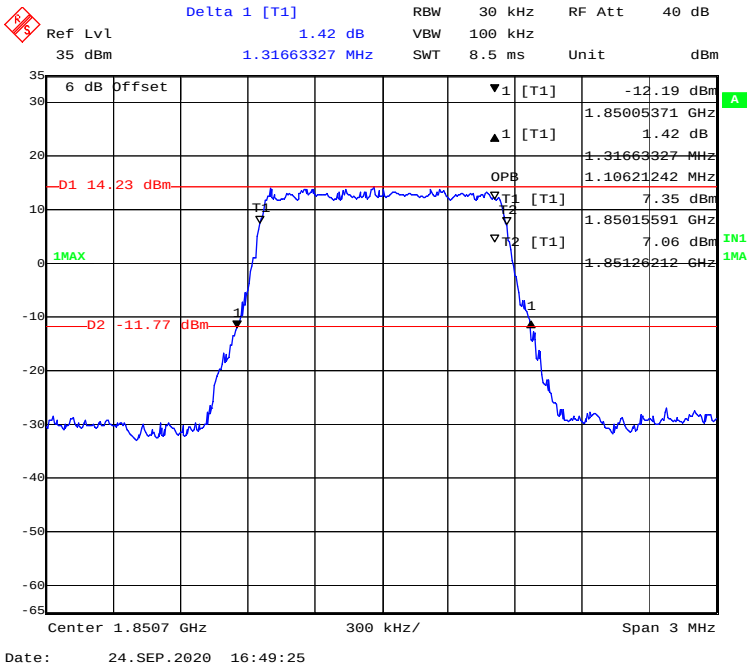
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



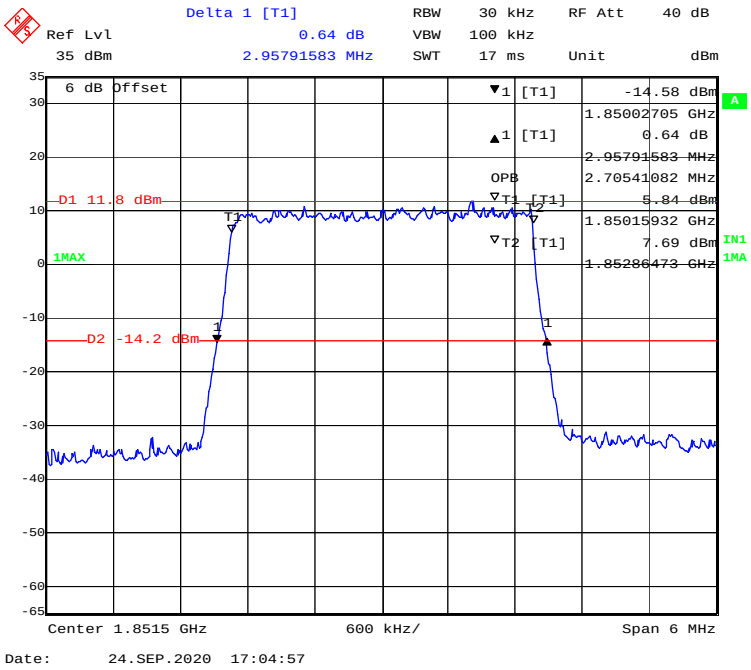
QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



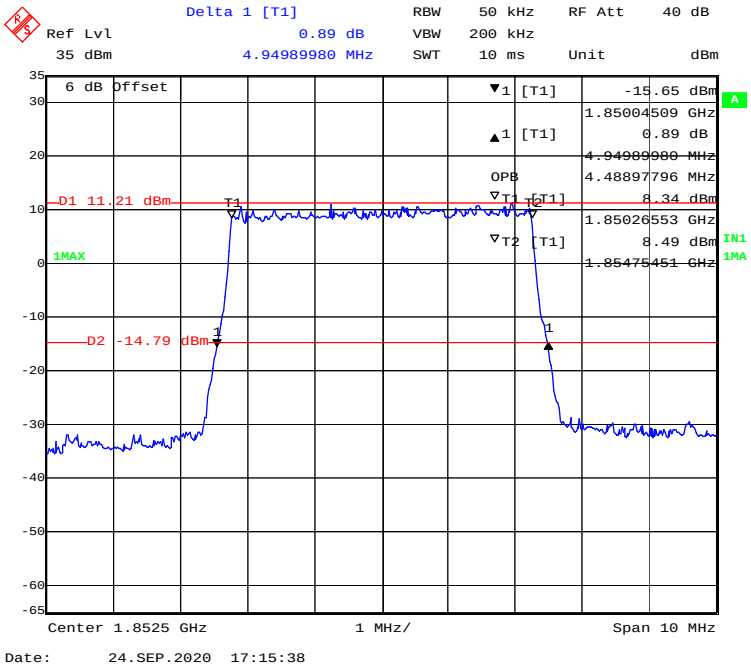
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



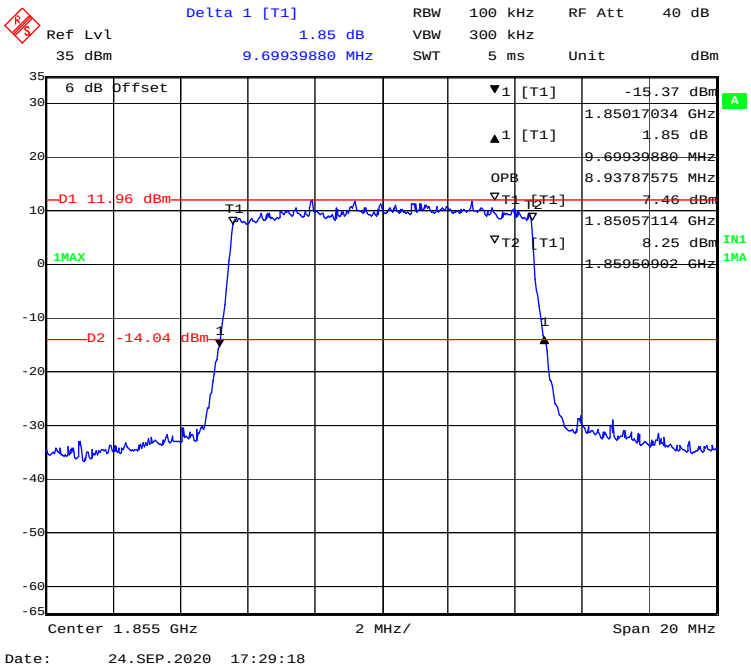
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



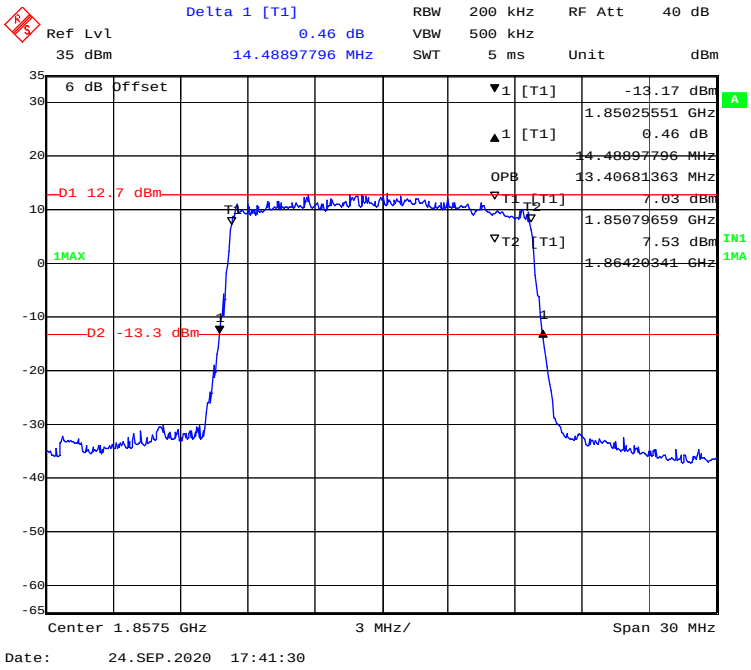
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



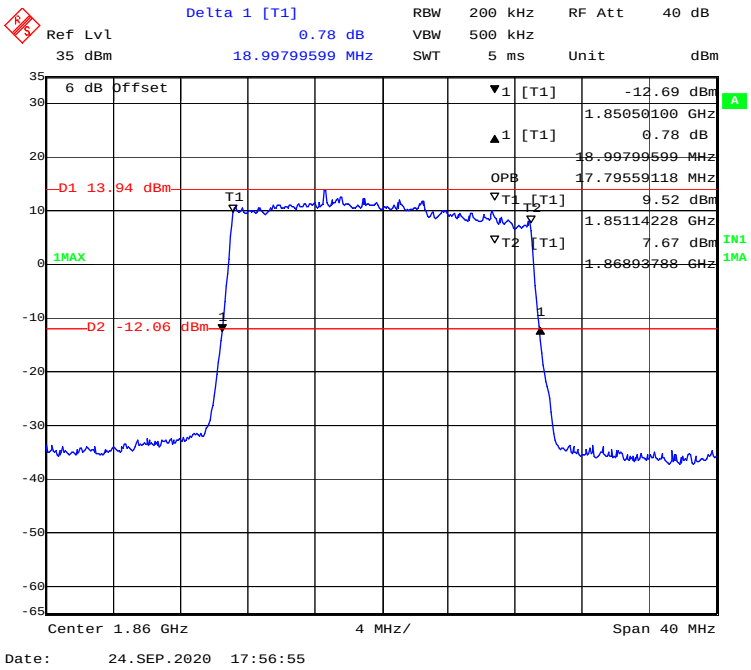
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



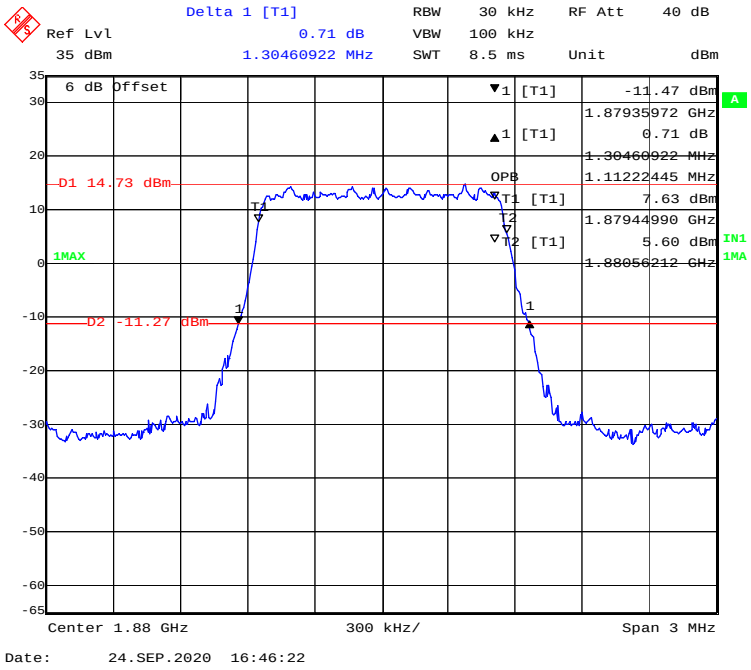
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



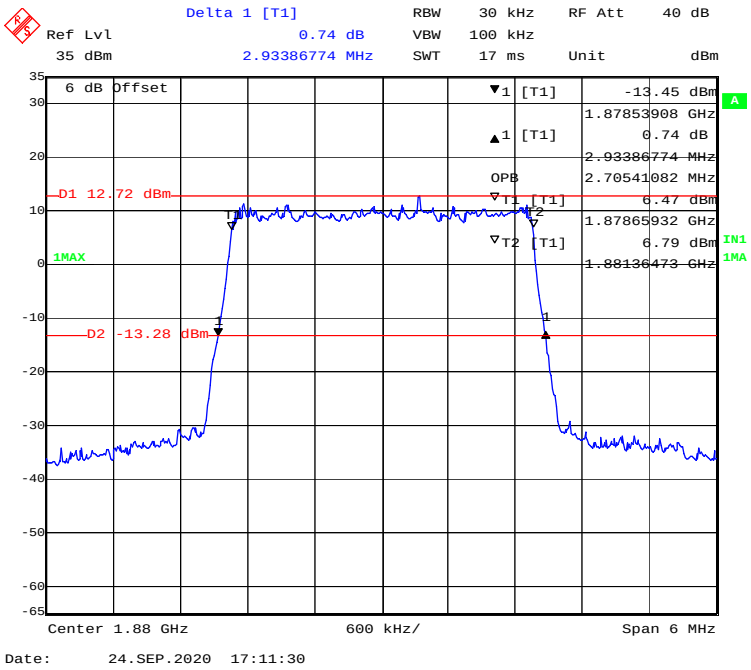
16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



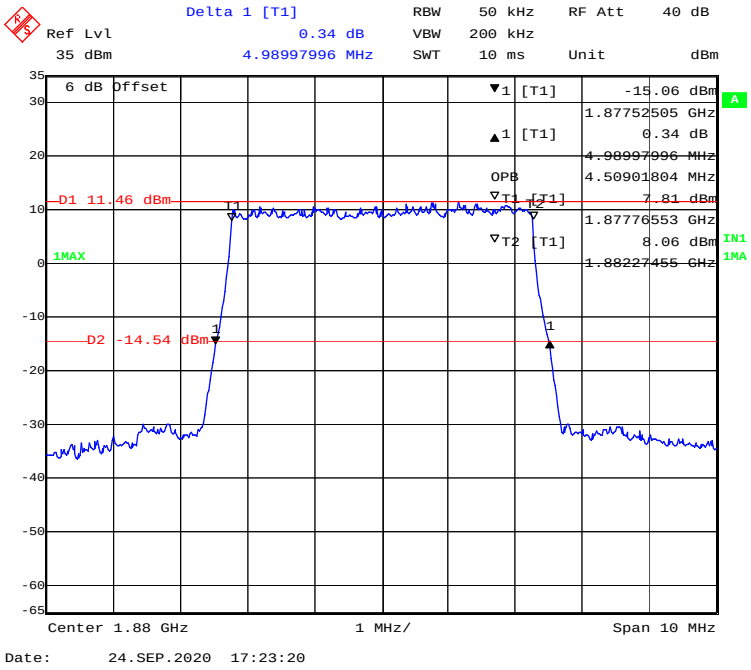
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



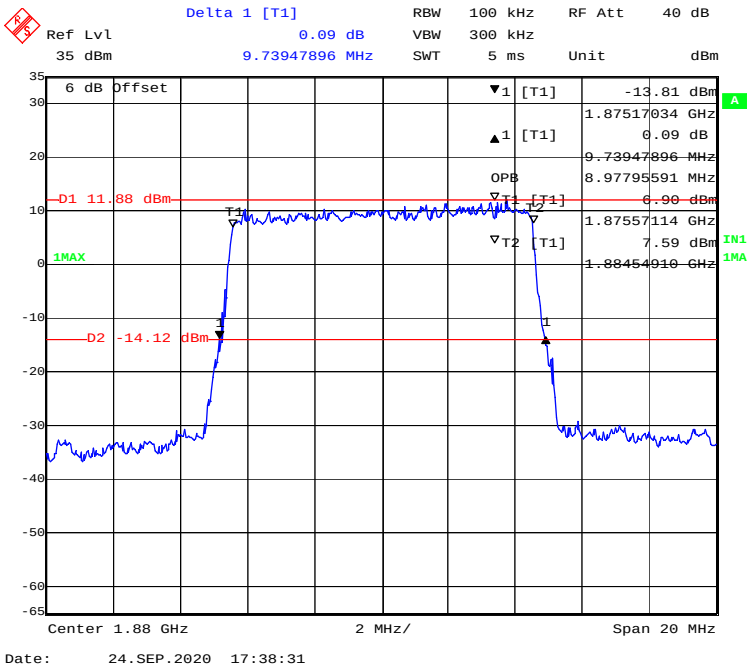
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



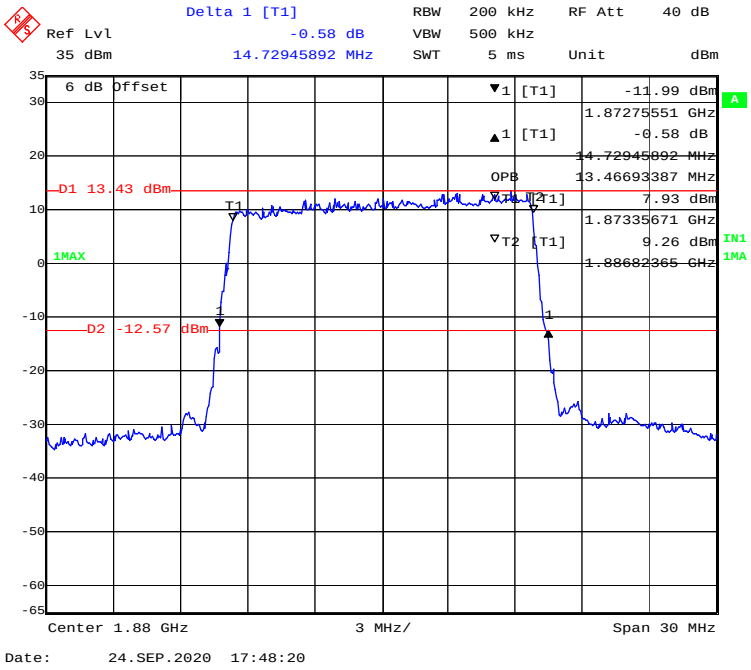
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



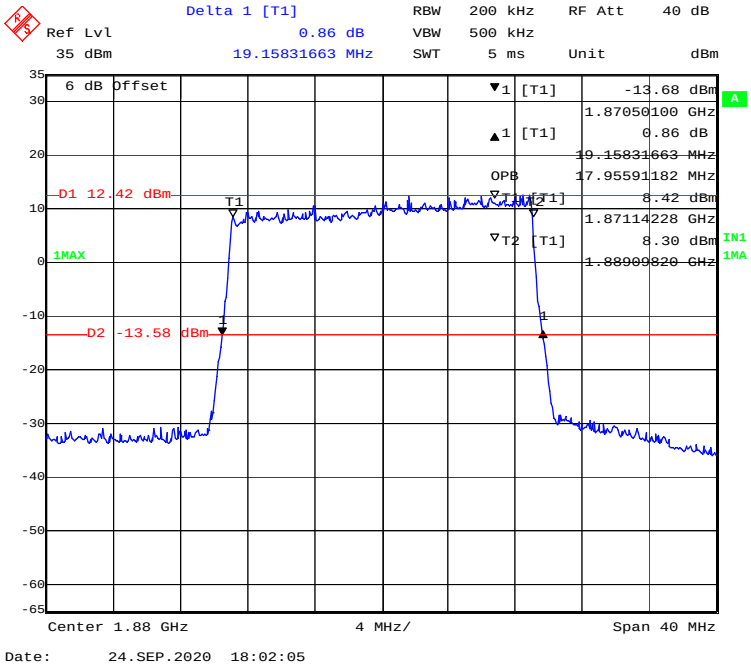
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



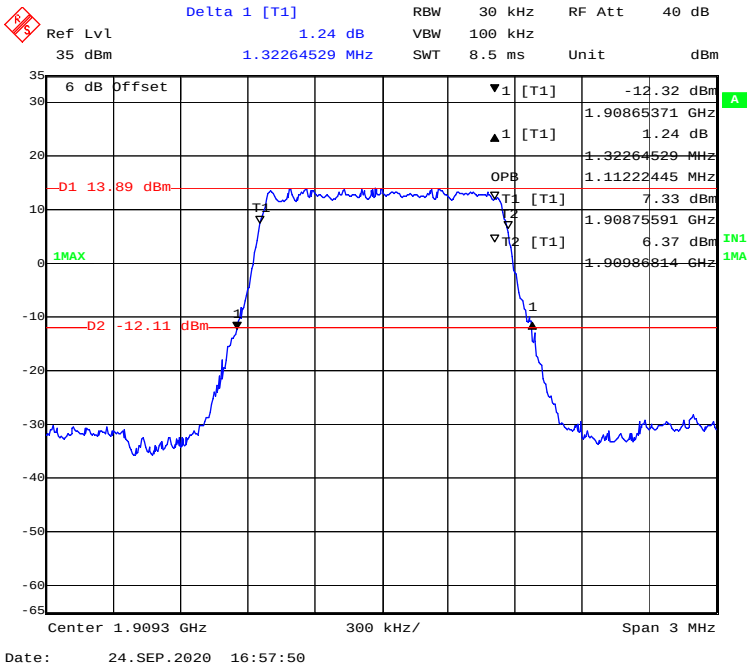
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



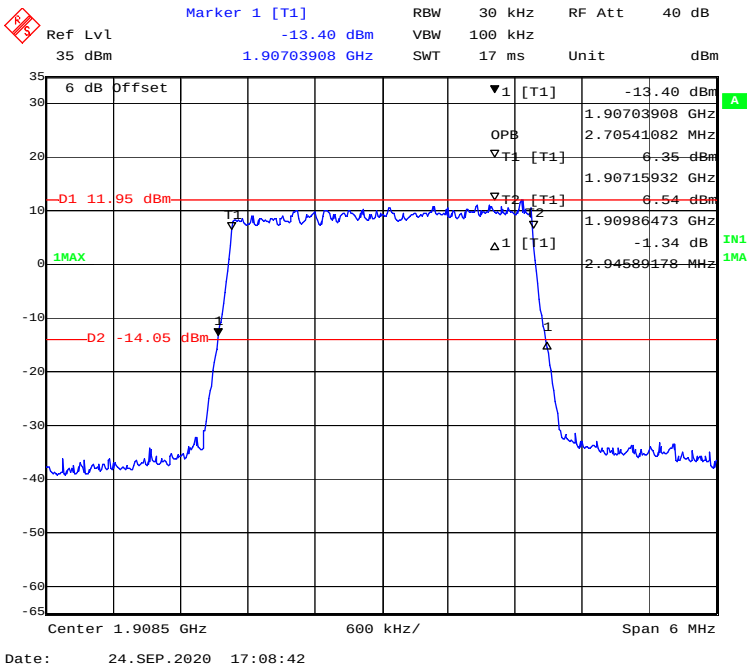
16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



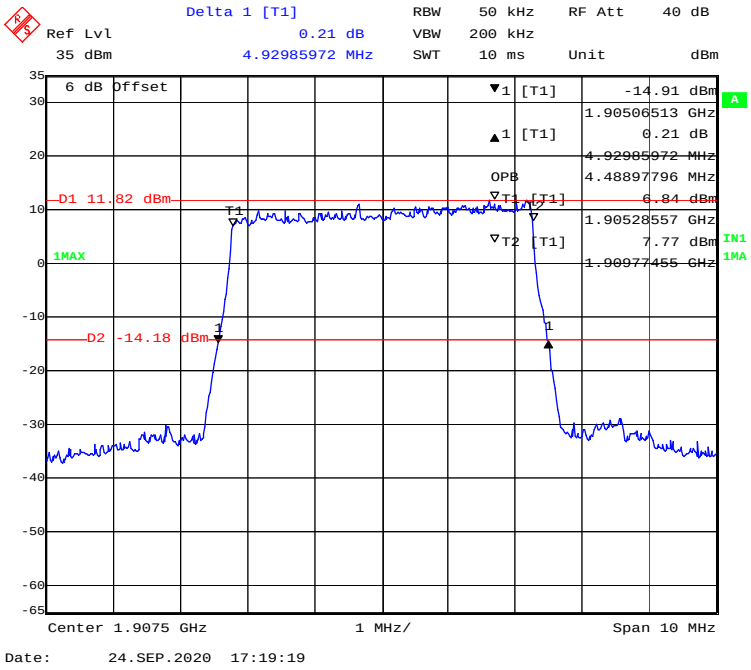
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



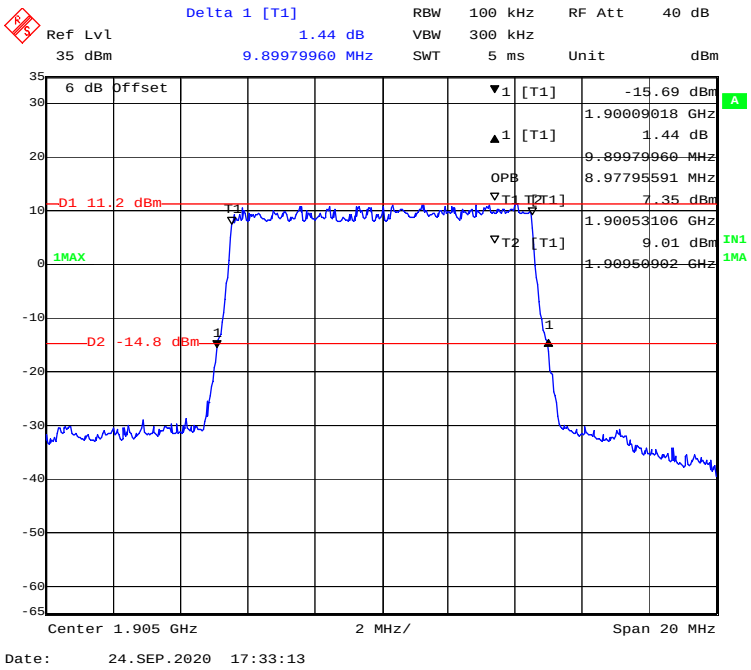
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



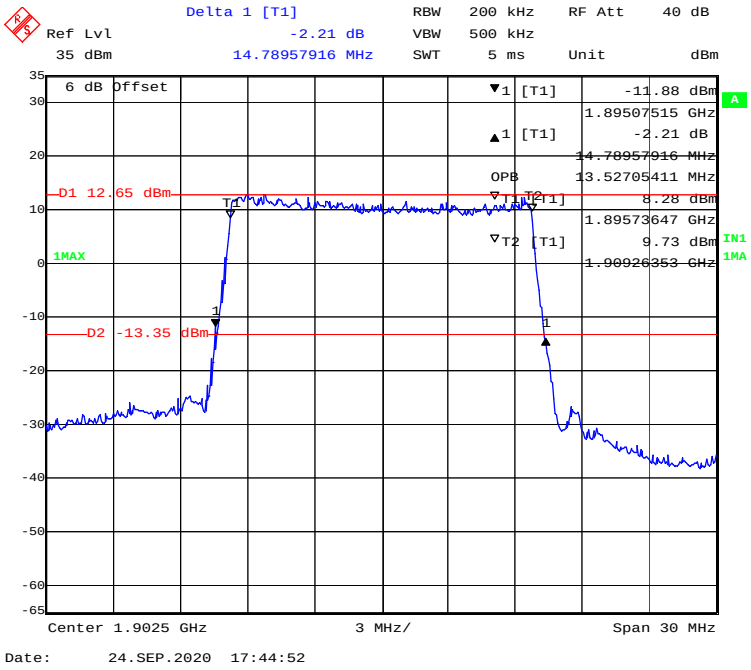
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



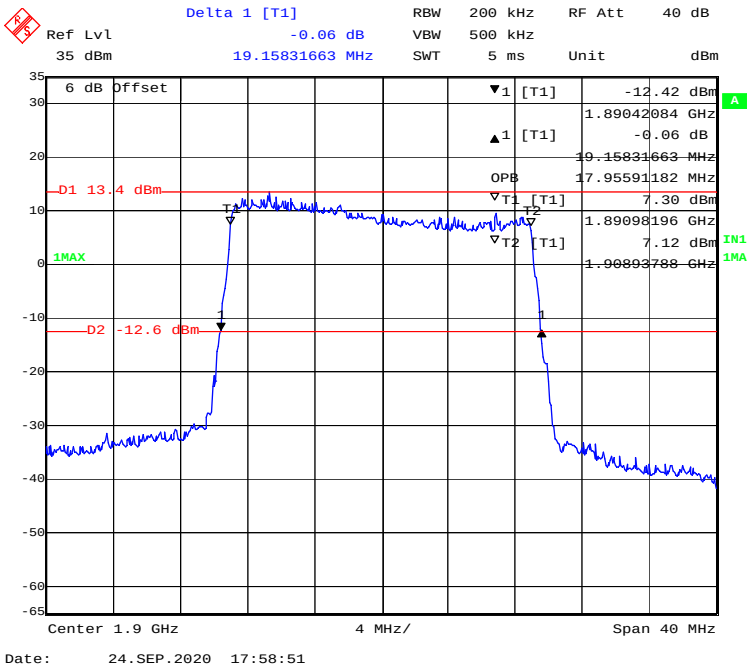
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



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



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

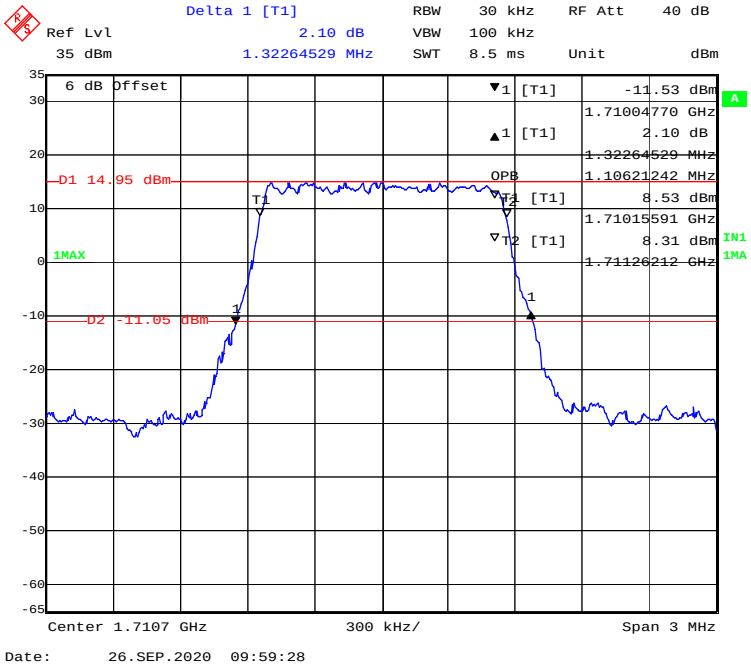


LTE Band 4:

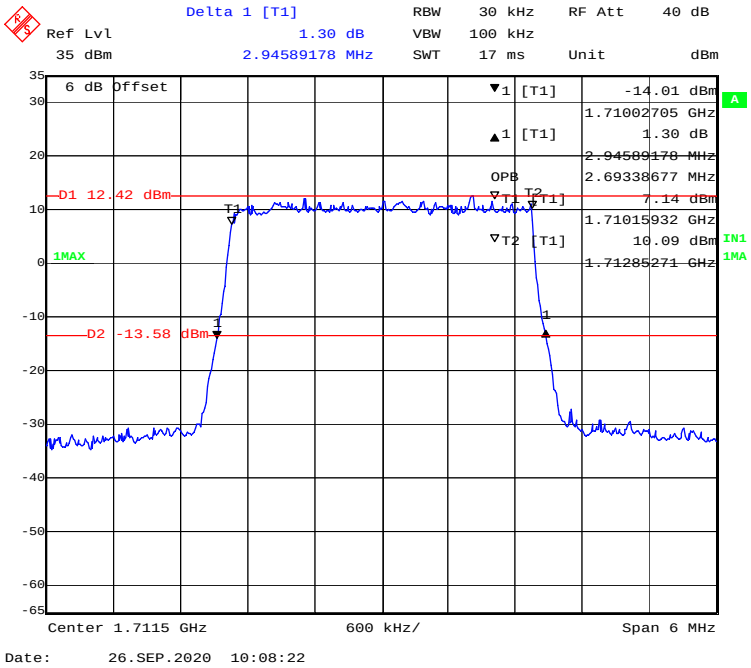
Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.323	1.106
	3M		2.946	2.693
	5M		4.930	4.489
	10M		9.659	8.978
	15M		14.549	13.407
	20M		19.319	17.956
	1.4M	Middle	1.311	1.106
	3M		2.946	2.705
	5M		4.970	4.509
	10M		9.739	8.978
	15M		14.669	13.467
	20M		19.078	17.876
	1.4M	High	1.287	1.118
	3M		2.970	2.693
	5M		4.930	4.489
	10M		9.780	8.978
	15M		14.609	13.467
	20M		19.158	17.796

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
16-QAM	1.4M	Low	1.335	1.106
	3M		2.946	2.705
	5M		4.930	4.509
	10M		9.659	8.938
	15M		14.609	13.407
	20M		19.158	17.956
	1.4M	Middle	1.317	1.112
	3M		2.958	2.705
	5M		4.950	4.509
	10M		9.739	8.978
	15M		14.609	13.467
	20M		18.998	17.876
	1.4M	High	1.293	1.106
	3M		2.970	2.693
	5M		4.950	4.489
	10M		9.739	8.978
	15M		14.729	13.467
	20M		19.238	17.876

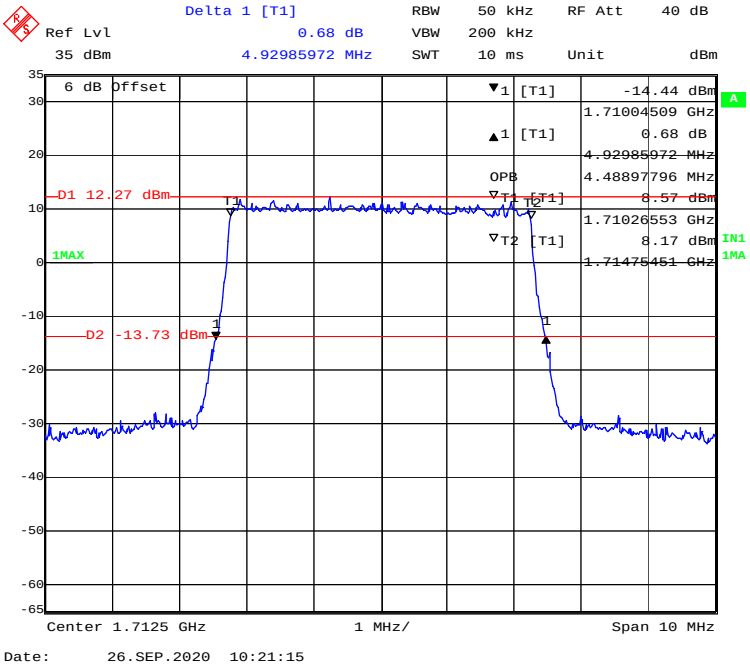
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



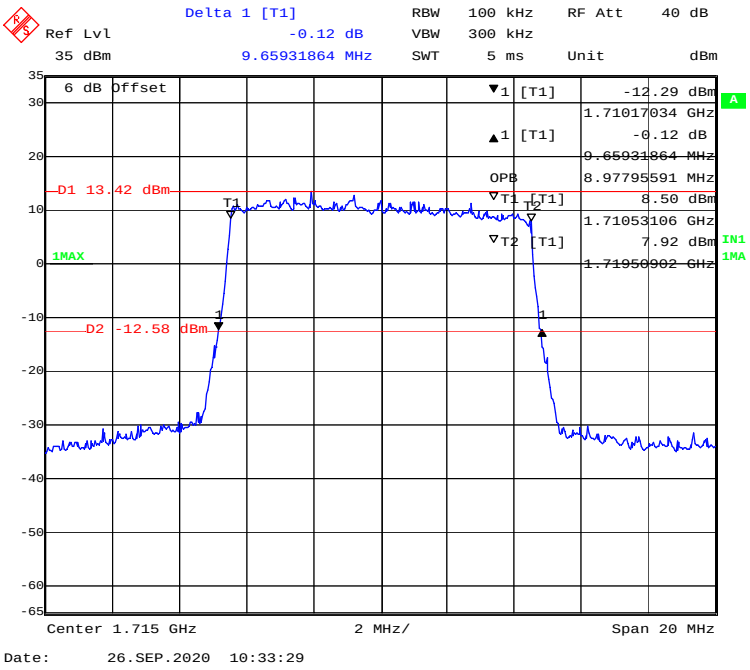
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



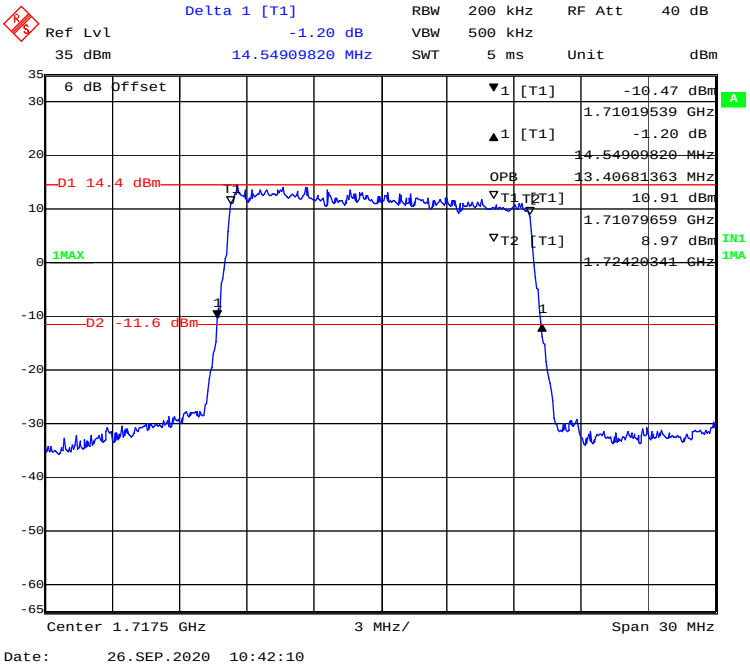
QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



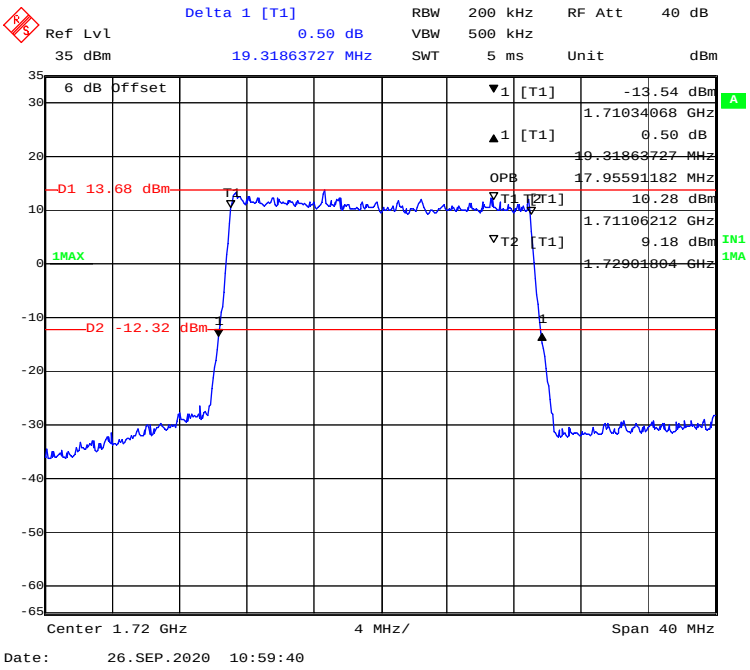
QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



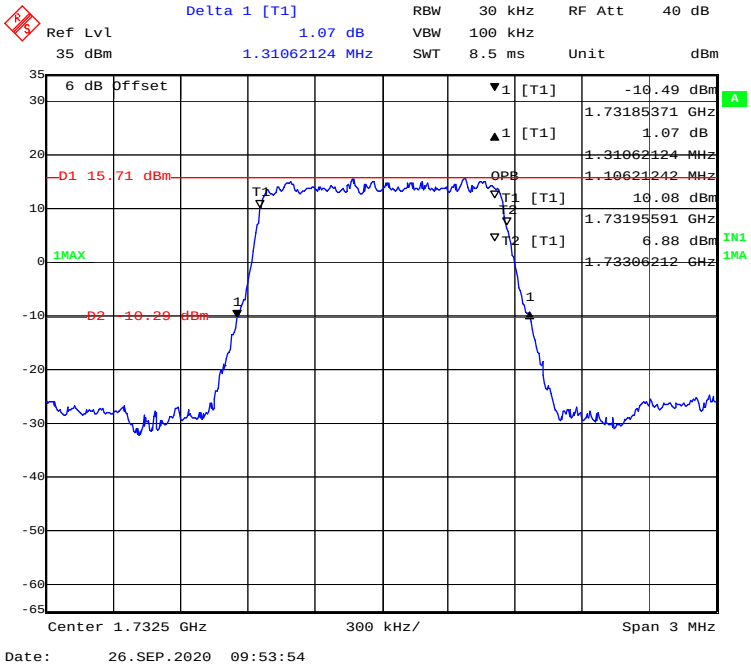
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



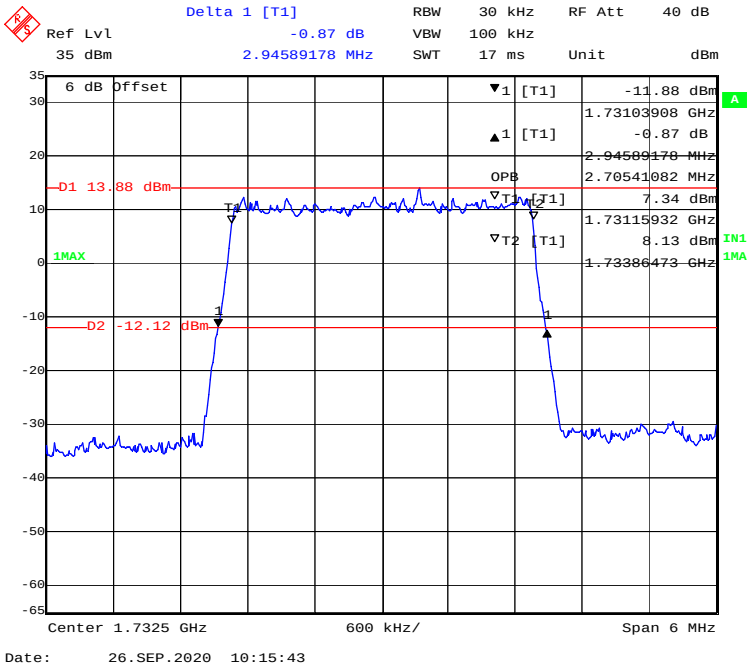
QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



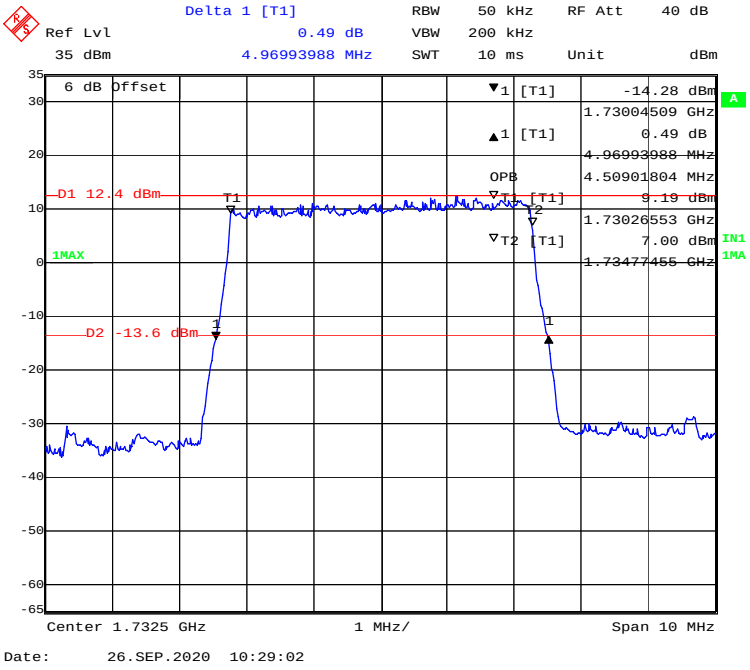
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



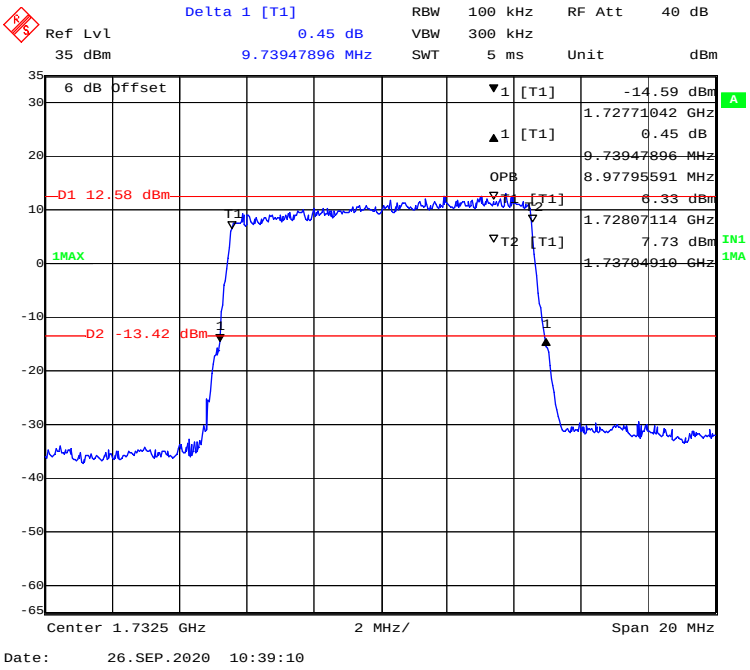
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



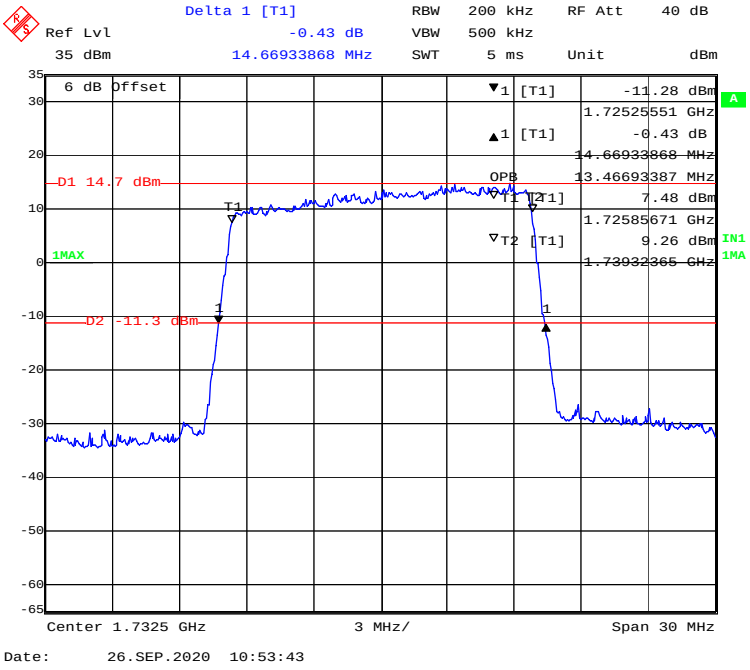
QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



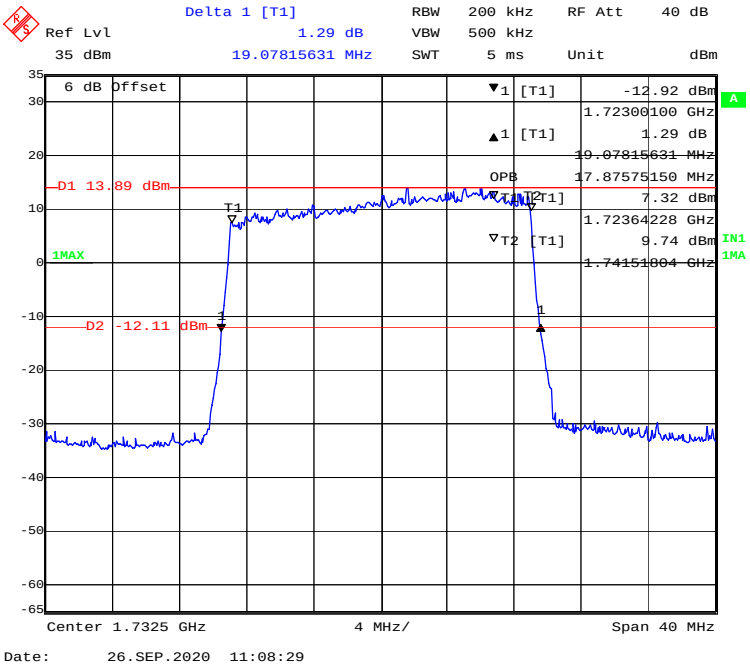
QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



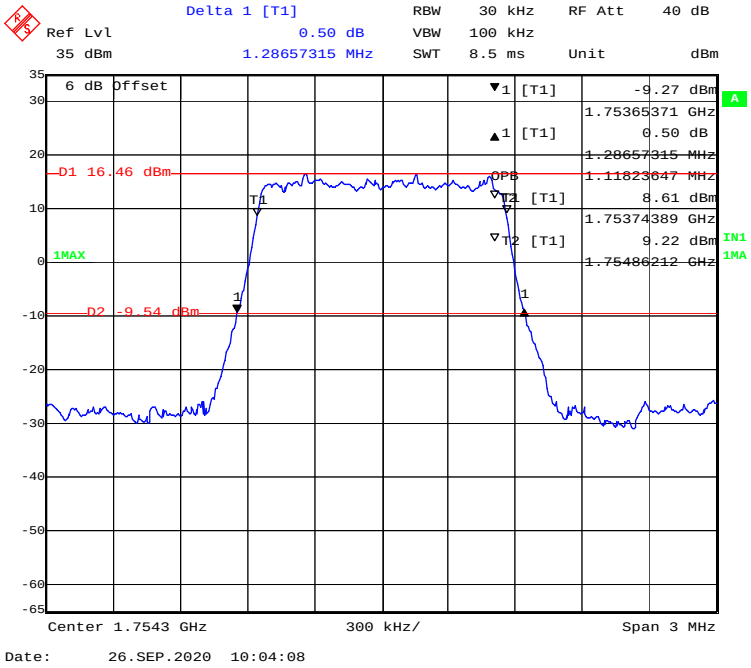
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



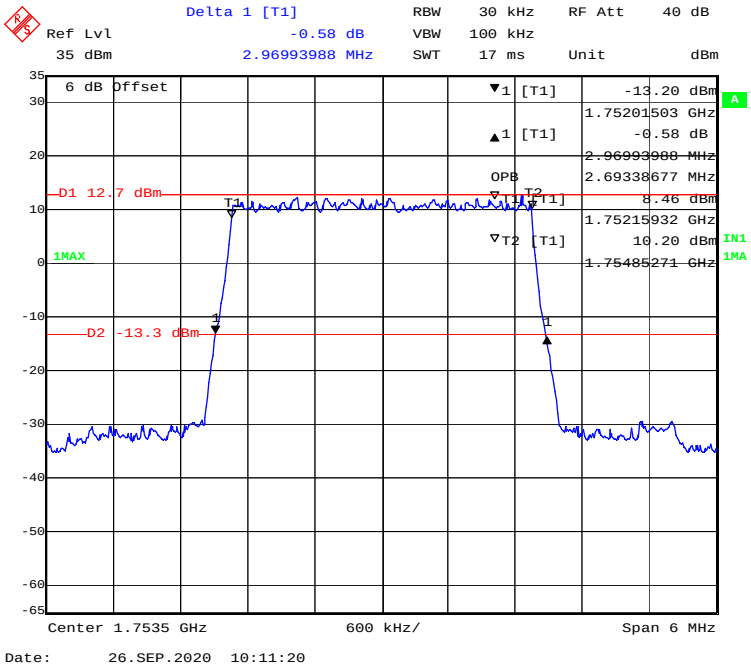
QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



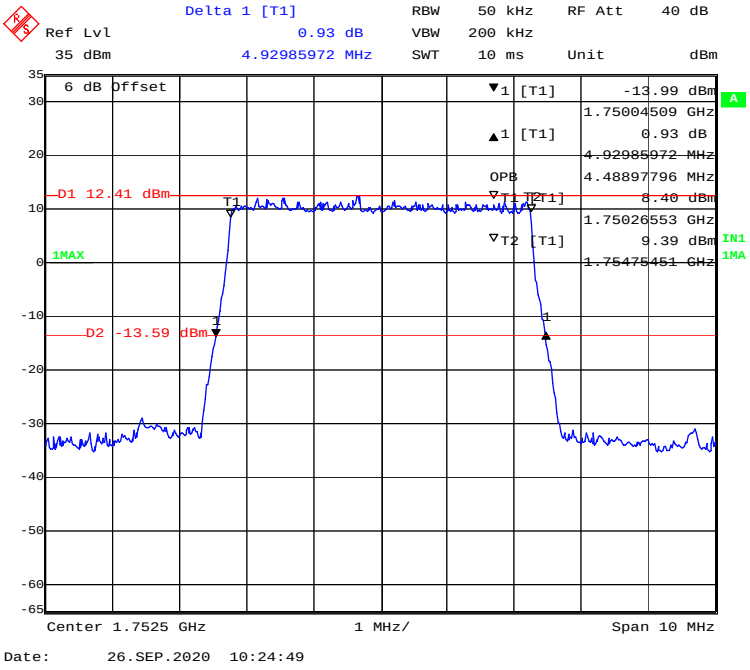
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



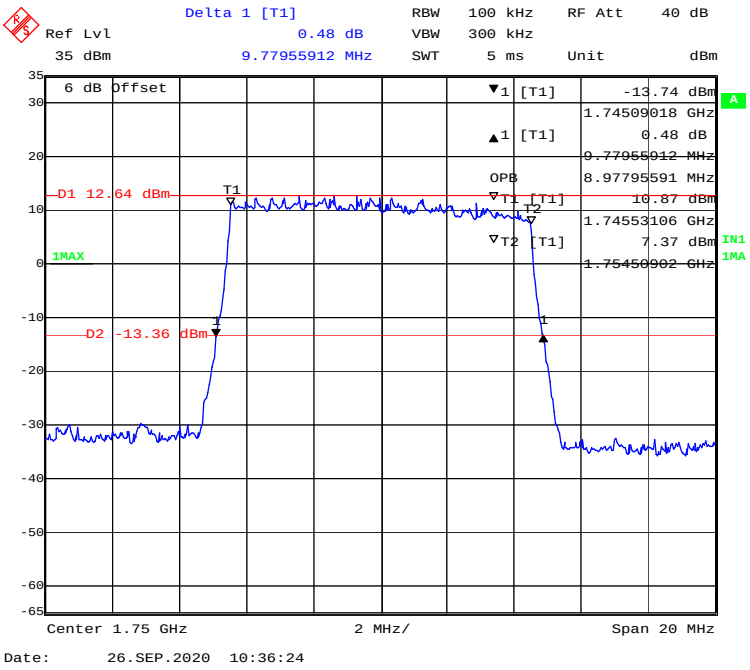
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



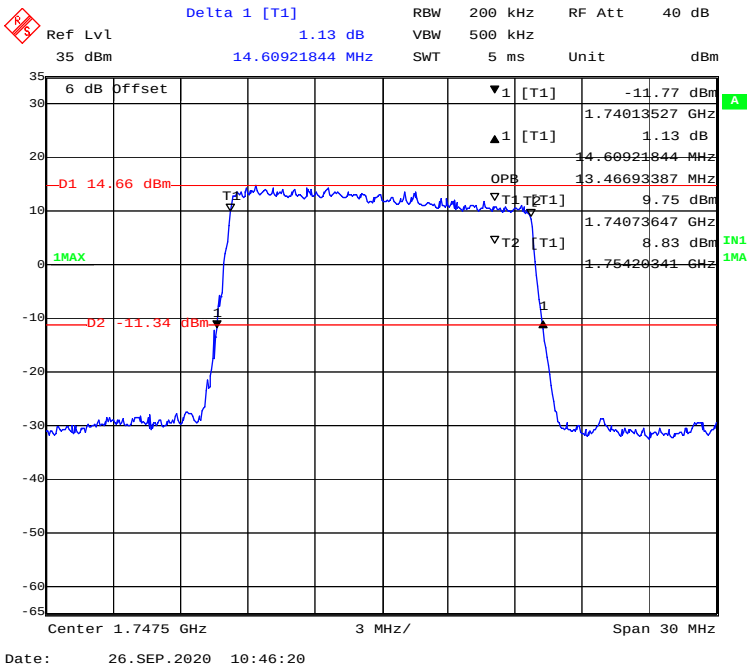
QPSK (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



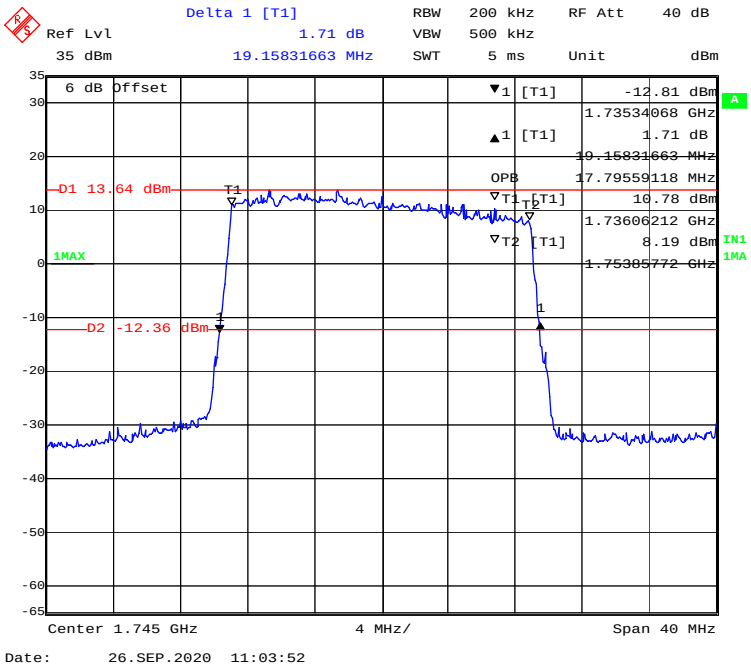
QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



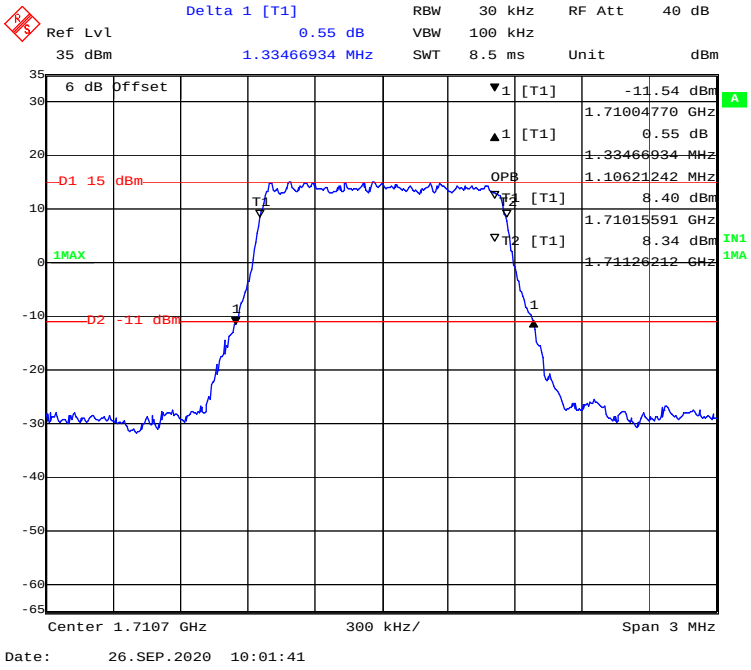
QPSK (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



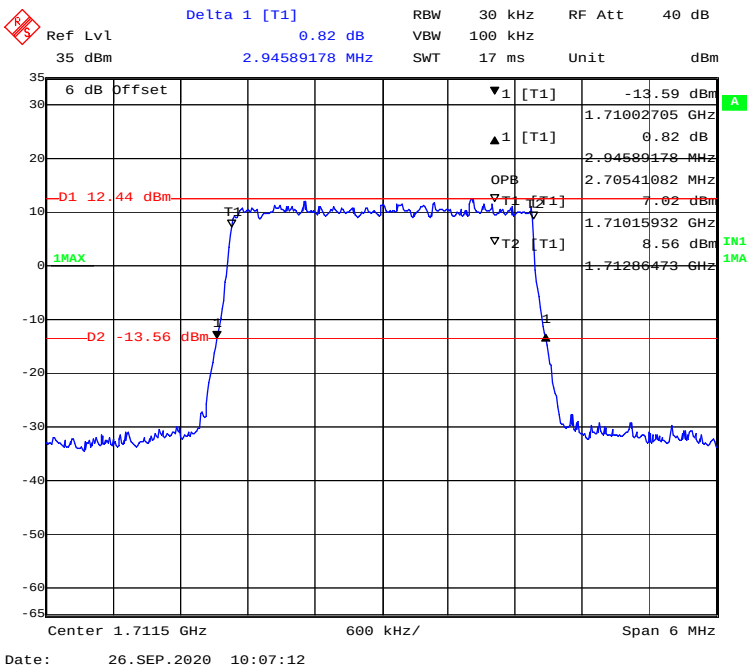
QPSK (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



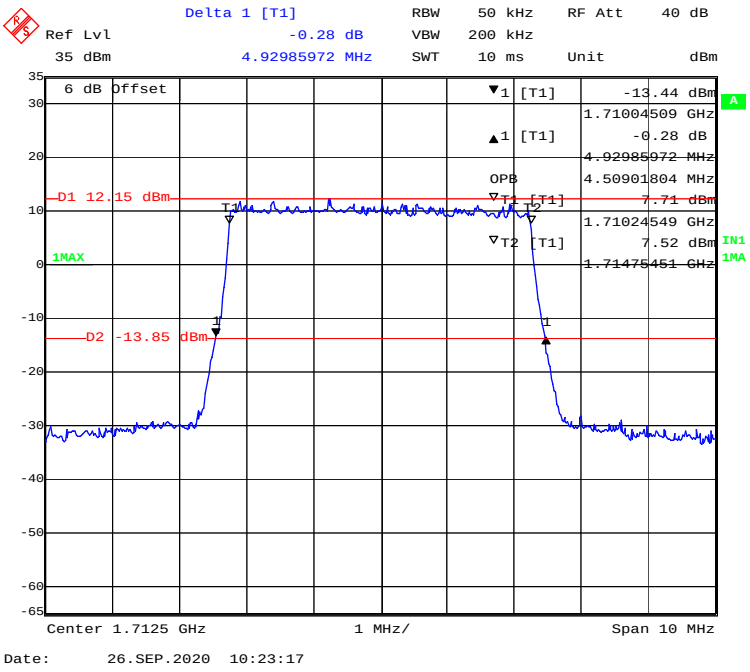
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



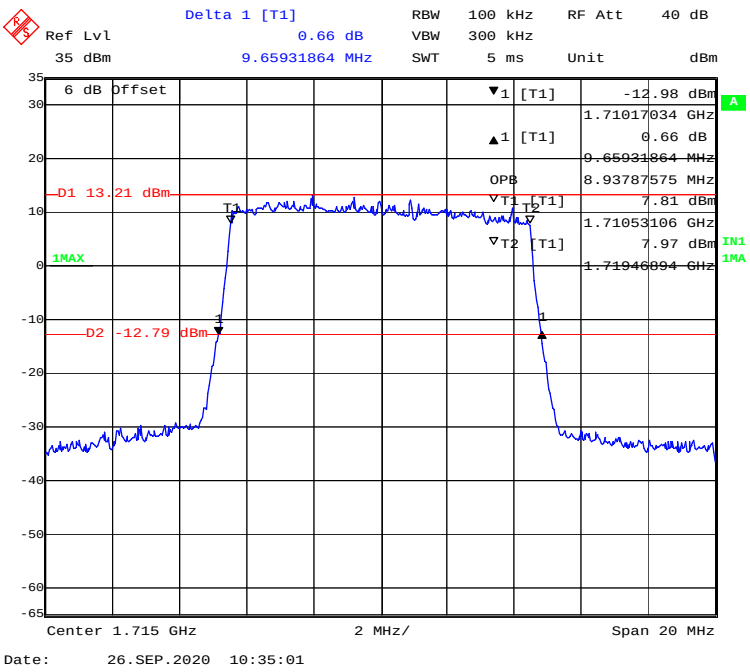
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



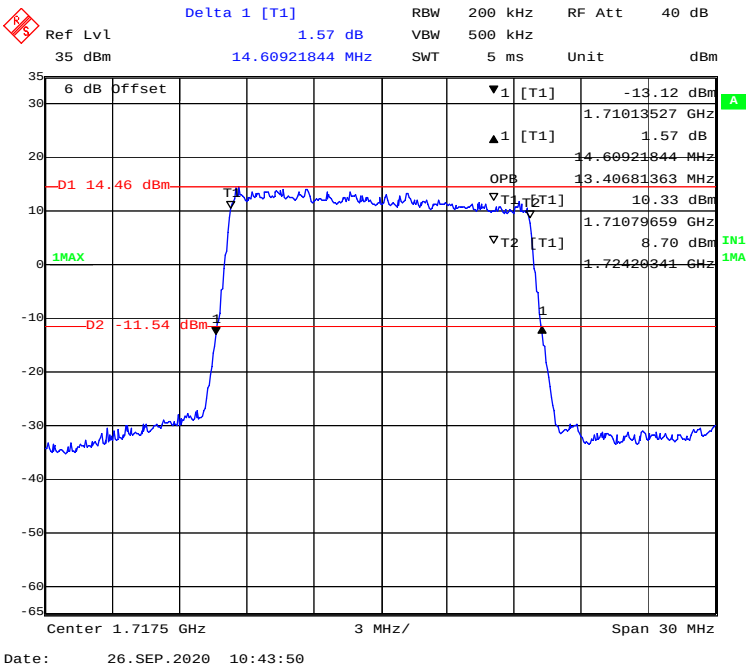
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



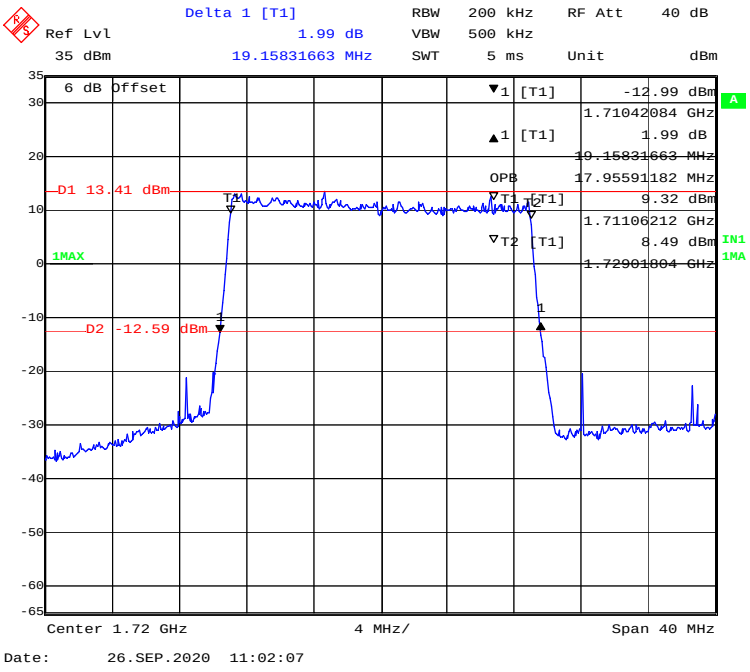
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



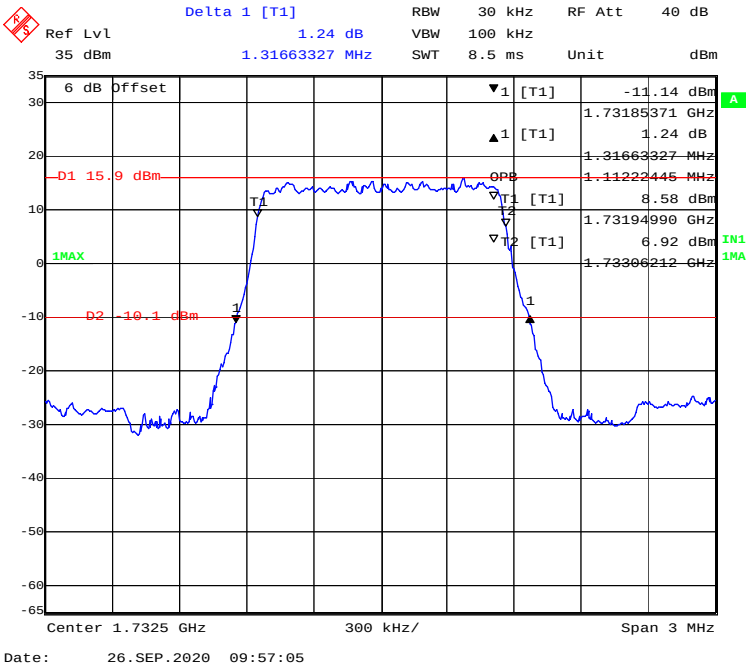
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



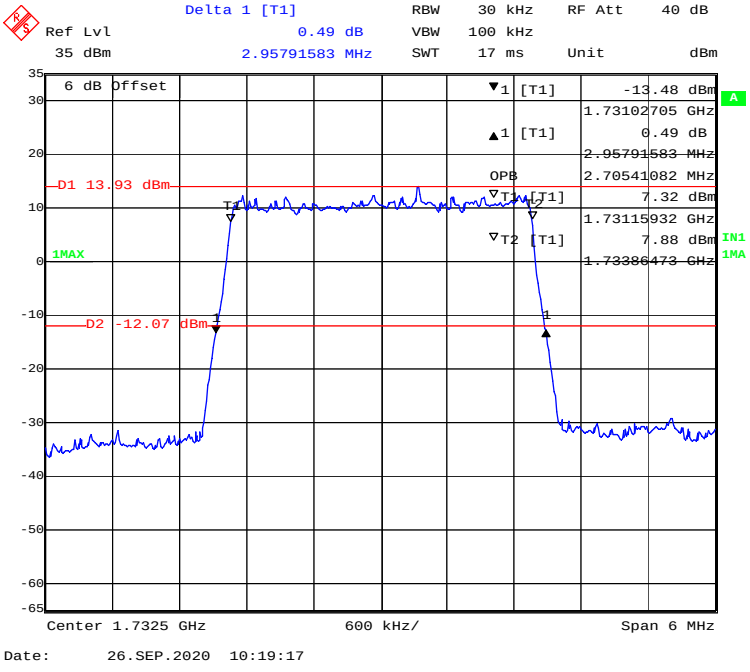
16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



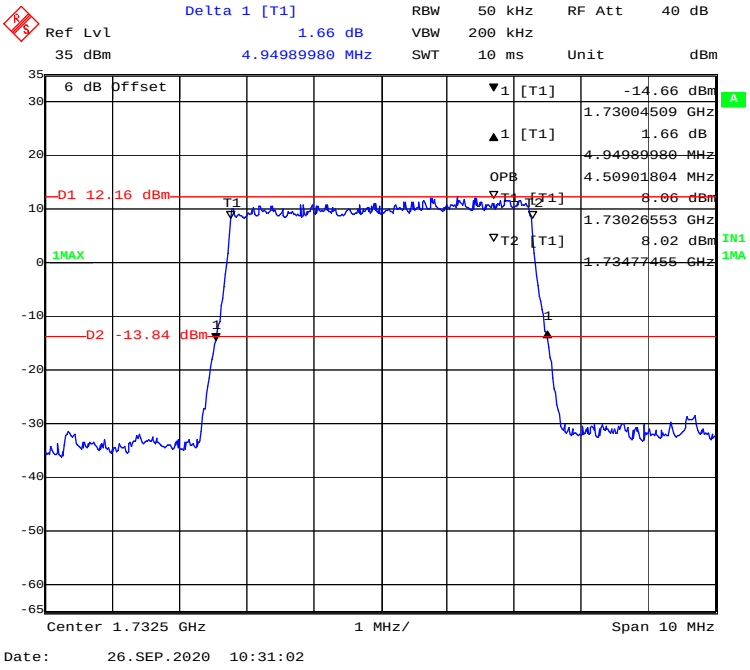
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



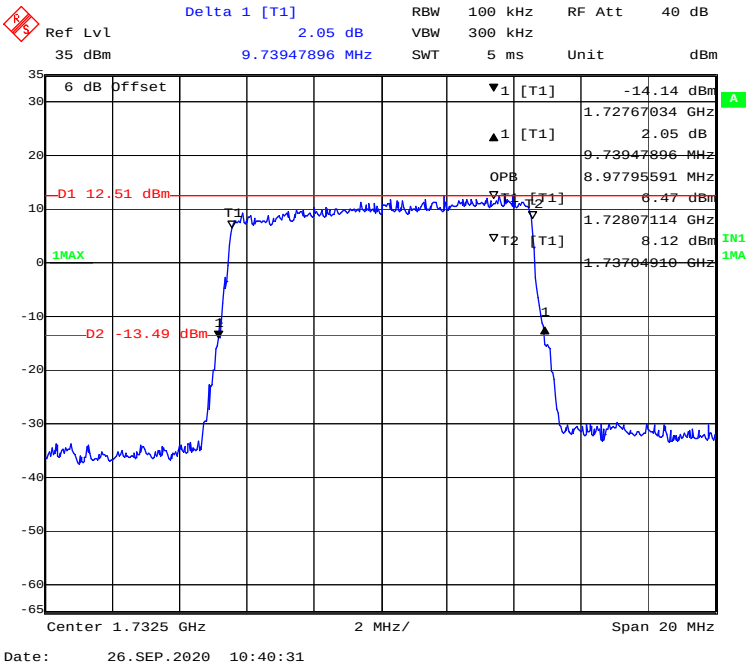
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



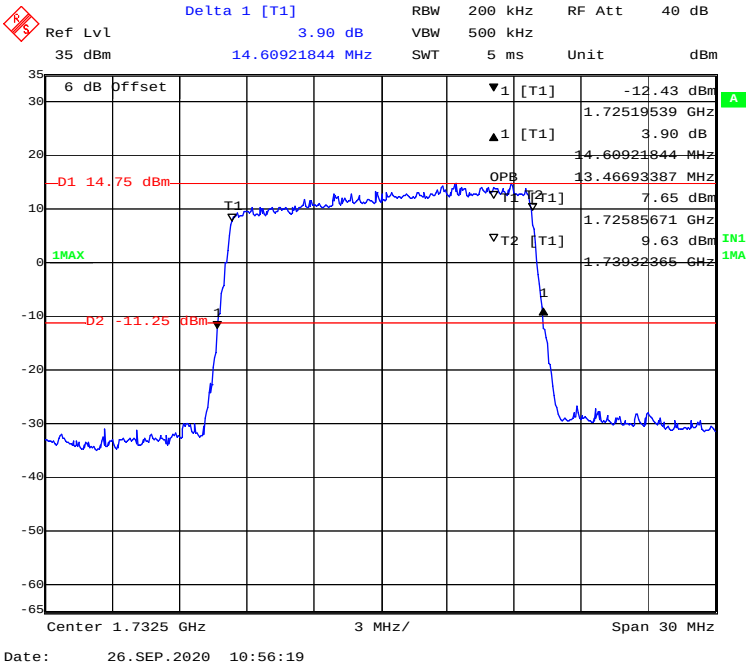
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



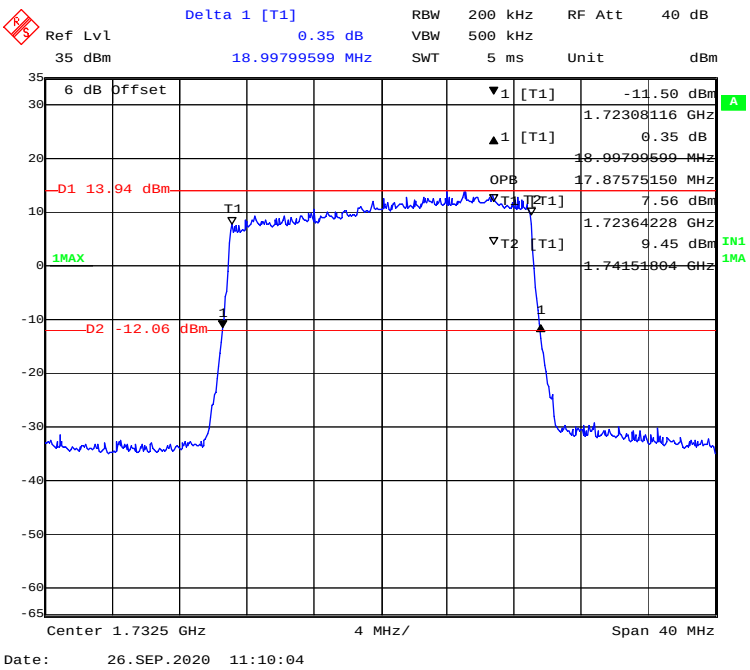
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



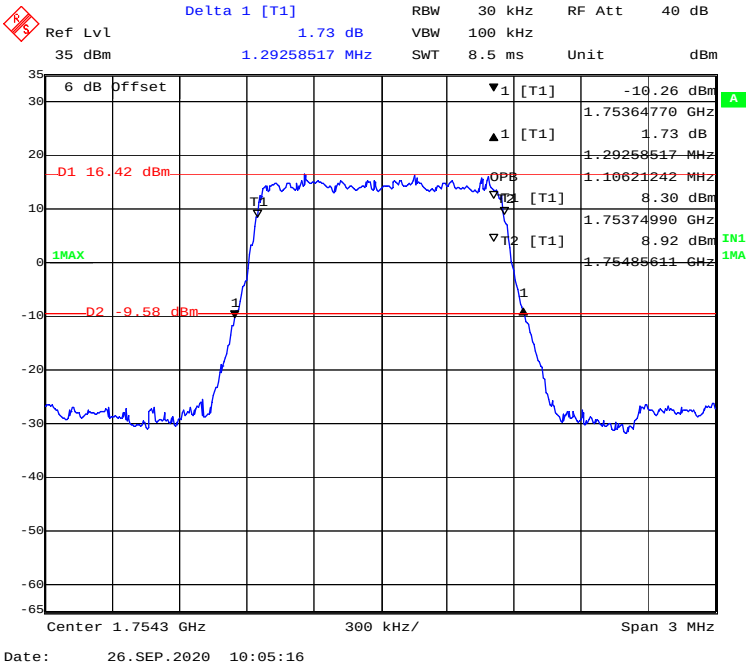
16-QAM (15 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



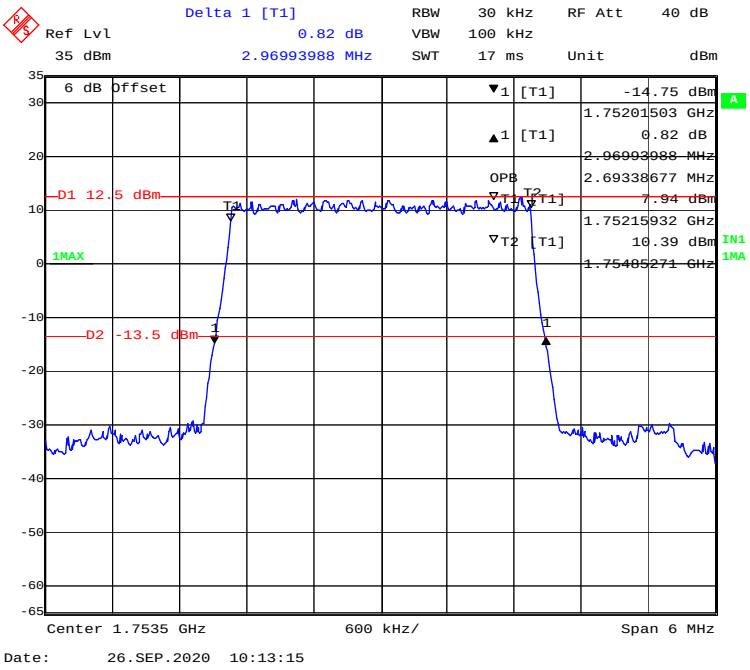
16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



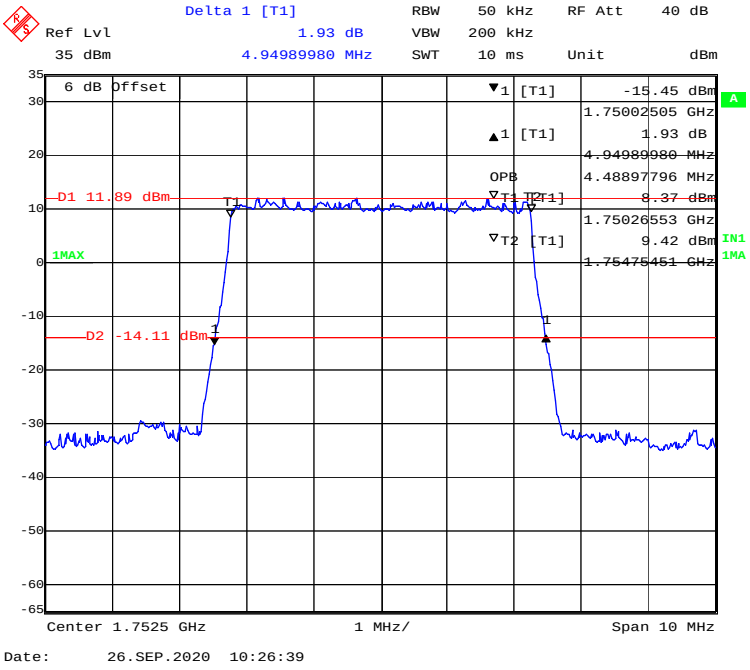
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



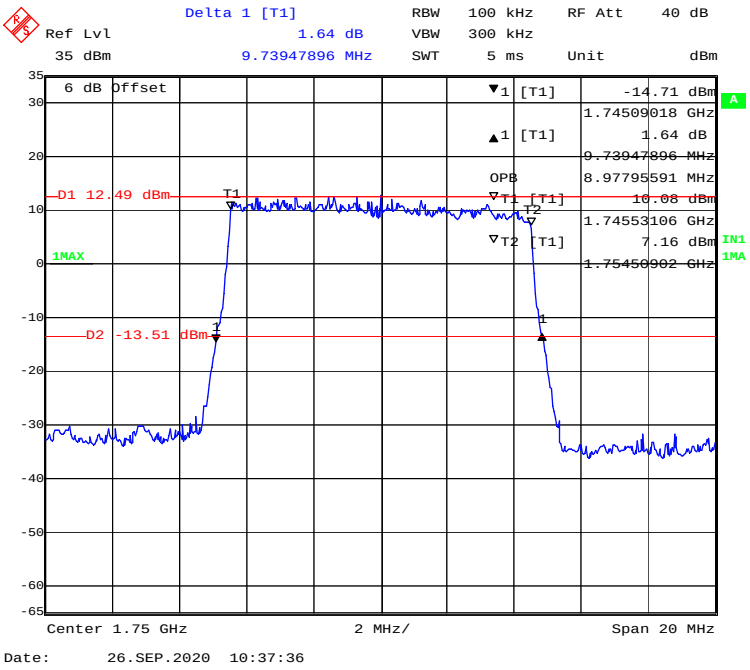
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



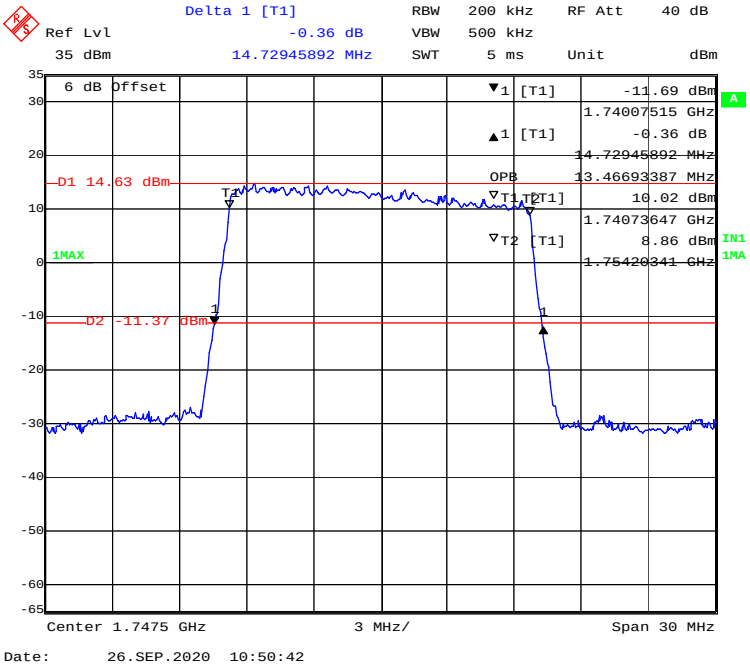
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



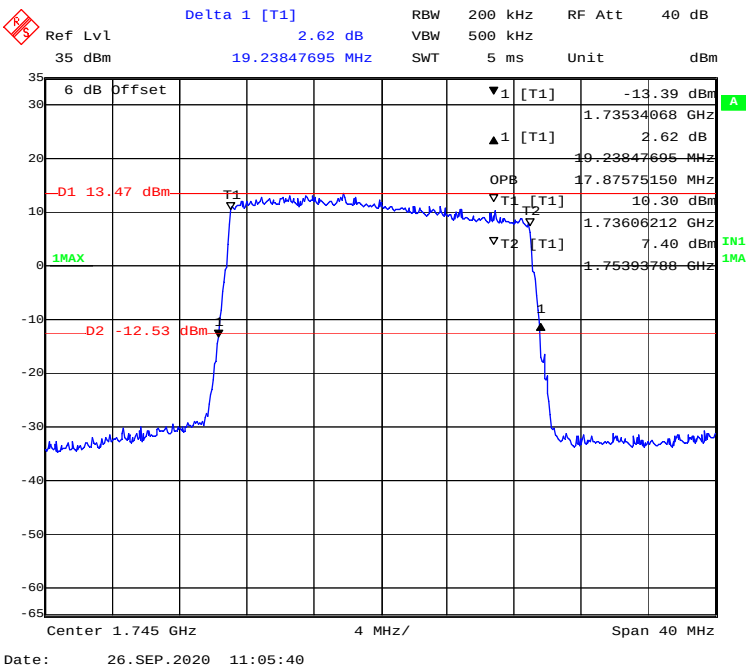
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



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



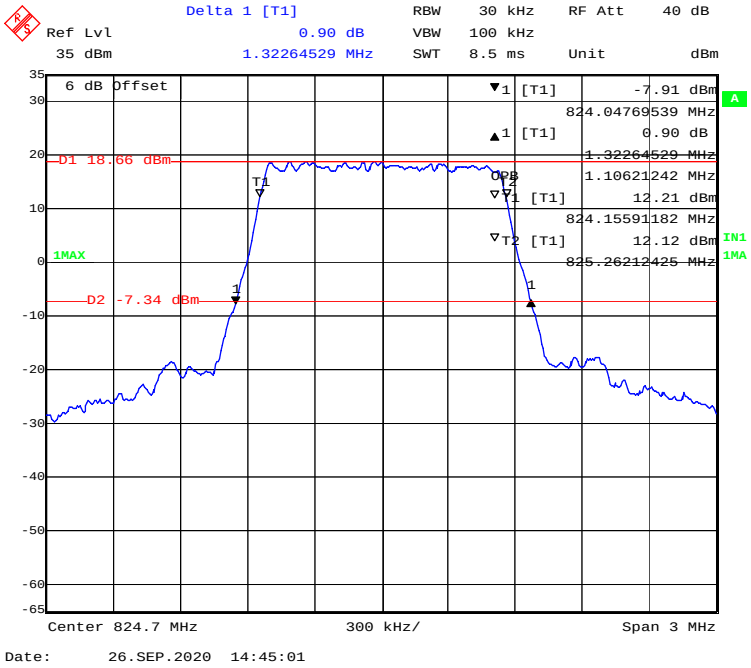
16-QAM (20 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



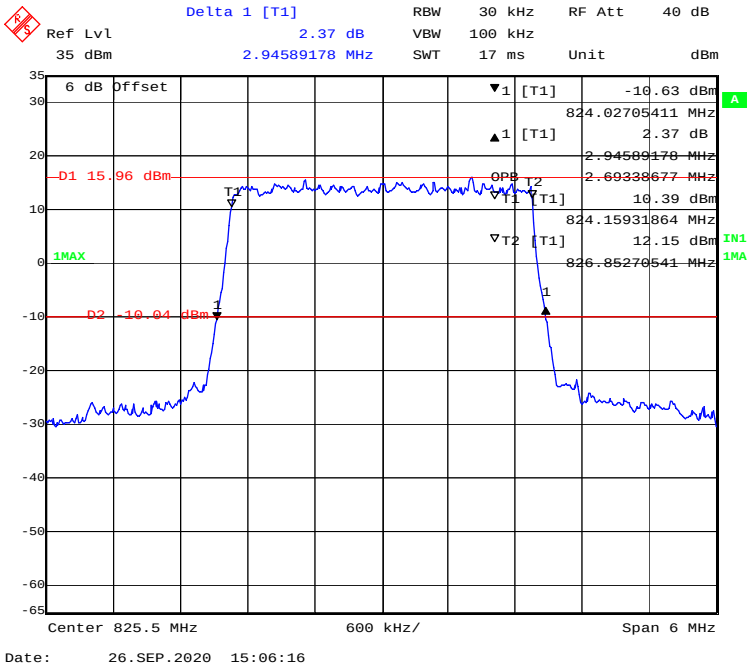
LTE Band 5:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.323	1.106
	3M		2.946	2.693
	5M		4.930	4.489
	10M		9.780	8.978
	1.4M	Middle	1.299	1.112
	3M		2.934	2.705
	5M		4.970	4.489
	10M		9.820	8.978
	1.4M	High	1.293	1.119
	3M		2.958	2.693
	5M		4.910	4.489
	10M		9.739	8.978
16-QAM	1.4M	Low	1.317	1.106
	3M		2.958	2.693
	5M		4.930	4.489
	10M		9.780	8.978
	1.4M	Middle	1.299	1.112
	3M		2.934	2.705
	5M		4.970	4.509
	10M		9.780	8.978
	1.4M	High	1.293	1.118
	3M		2.958	2.693
	5M		4.930	4.489
	10M		9.739	8.978

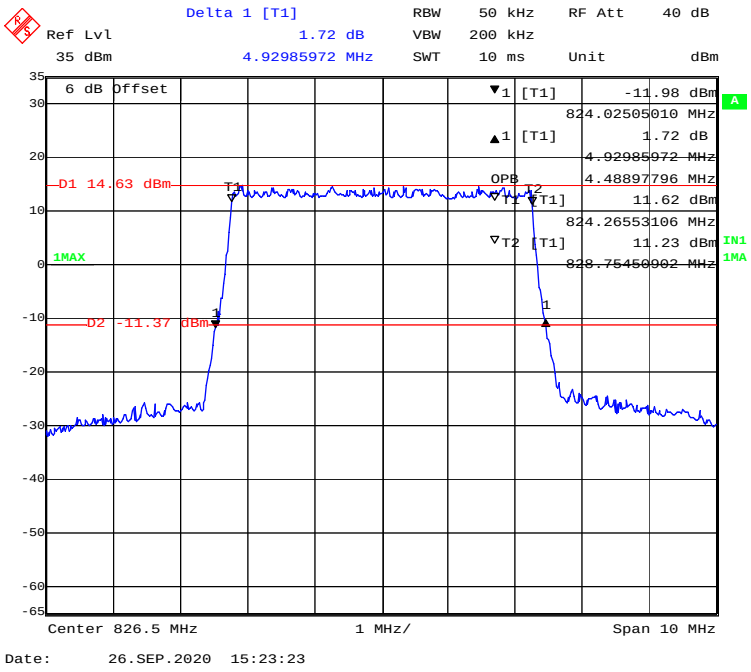
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



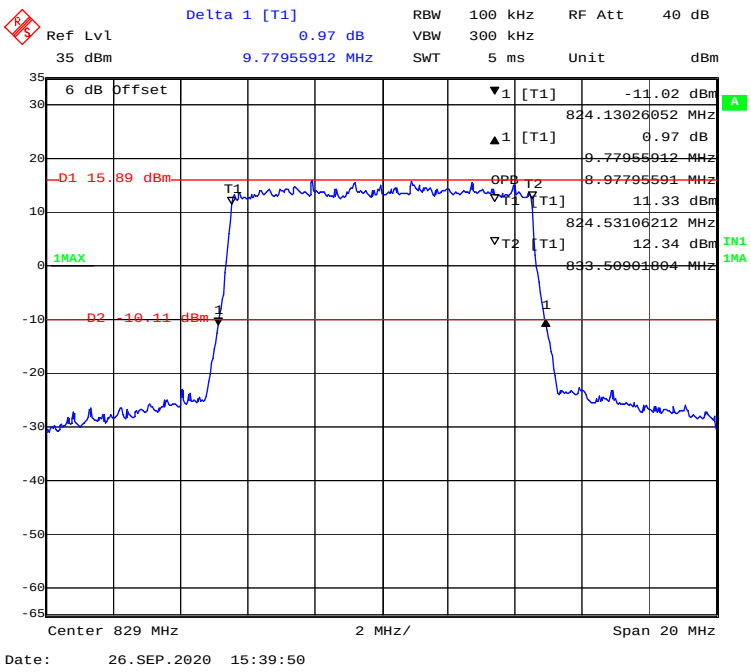
QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



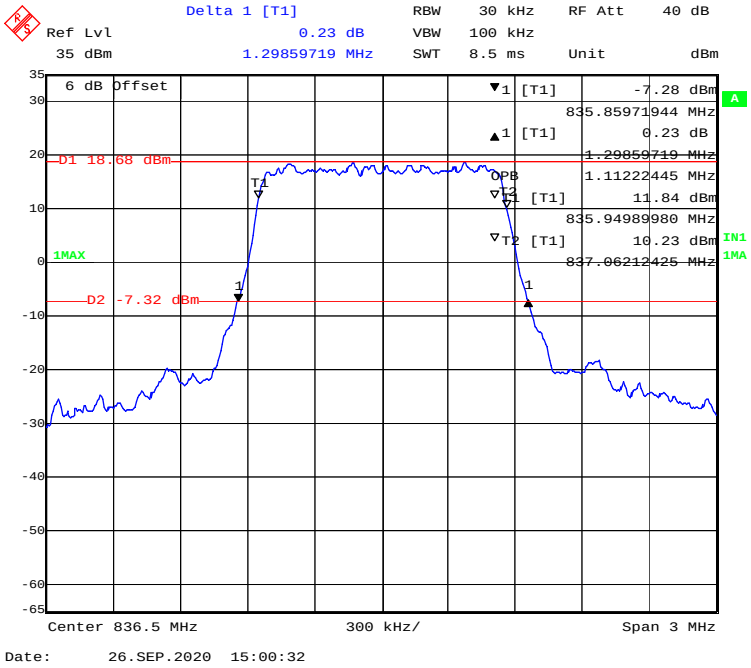
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



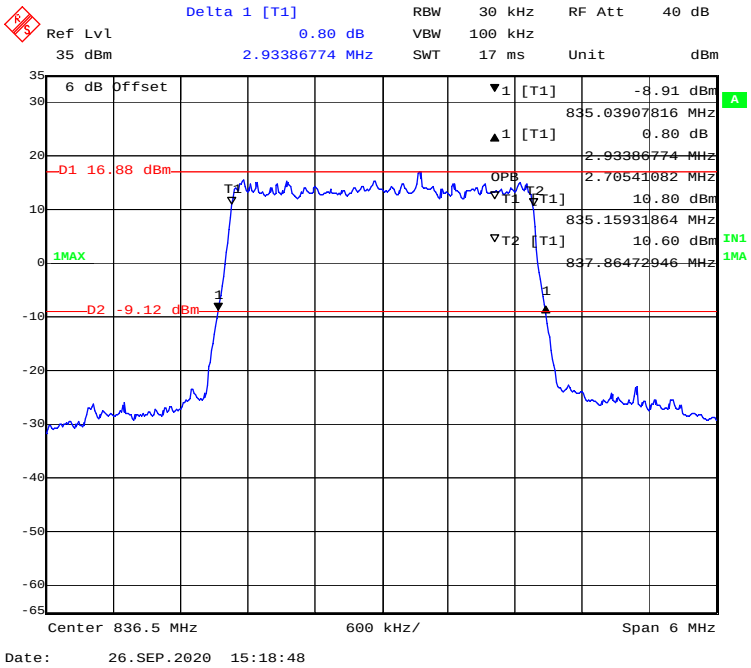
QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



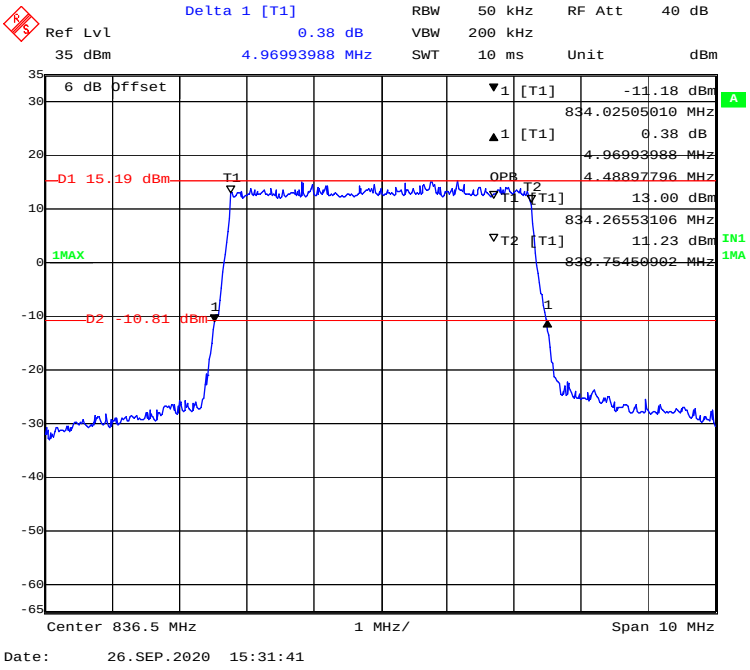
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



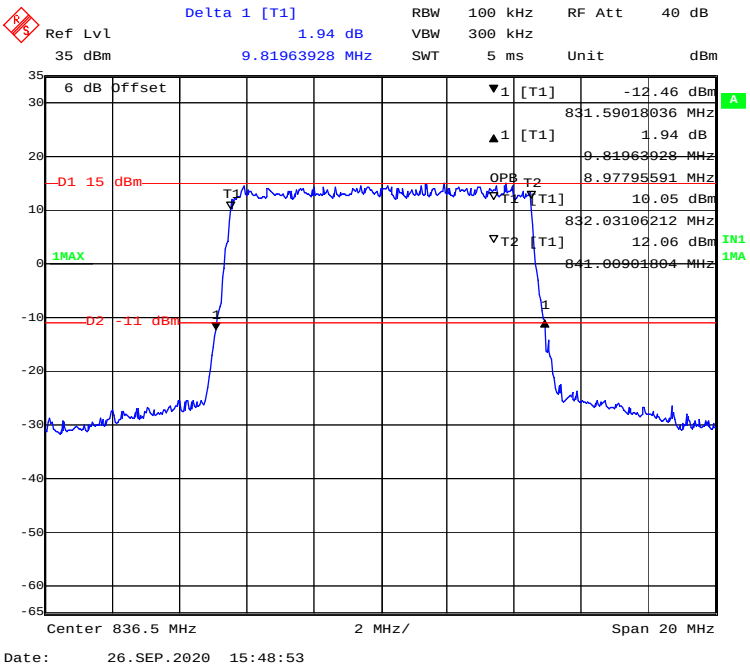
QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



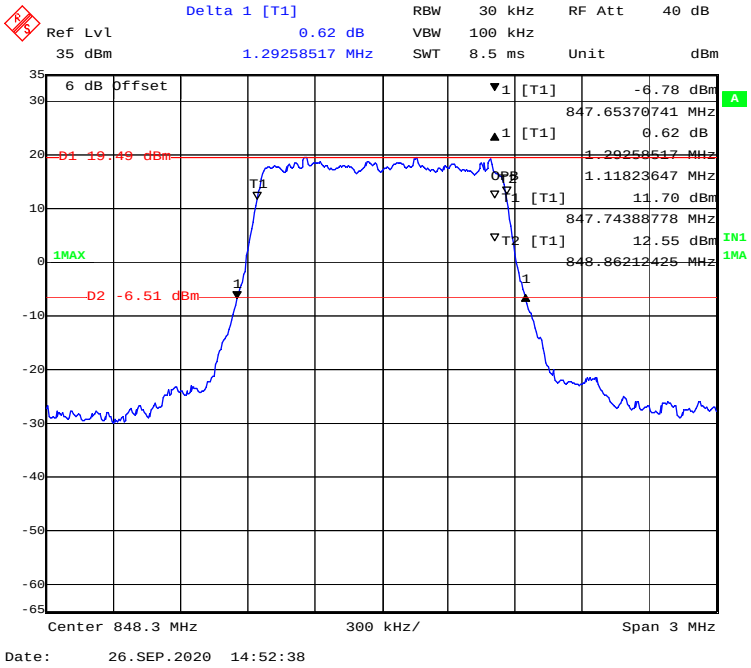
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



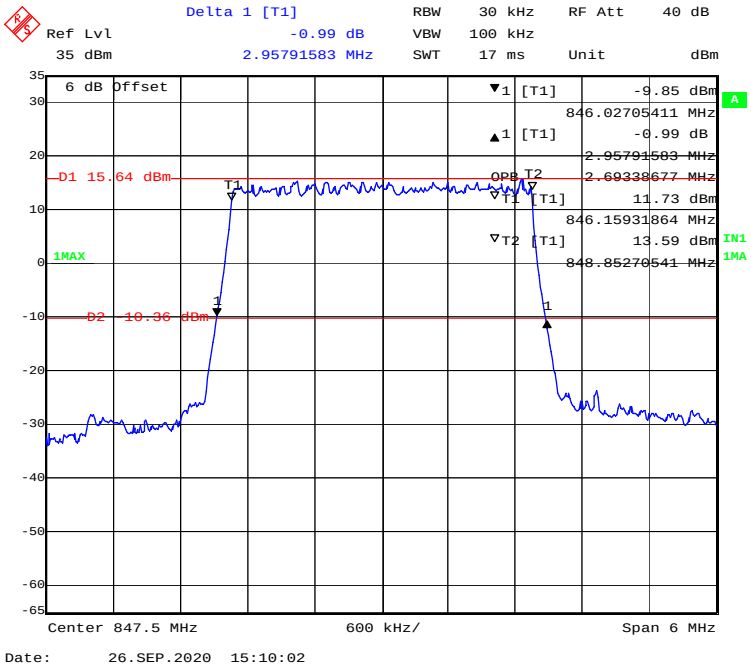
QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



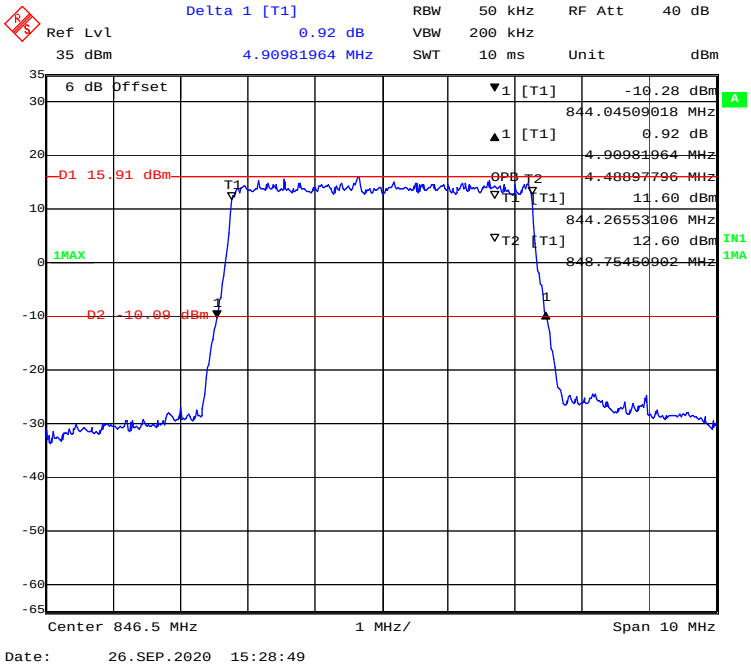
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



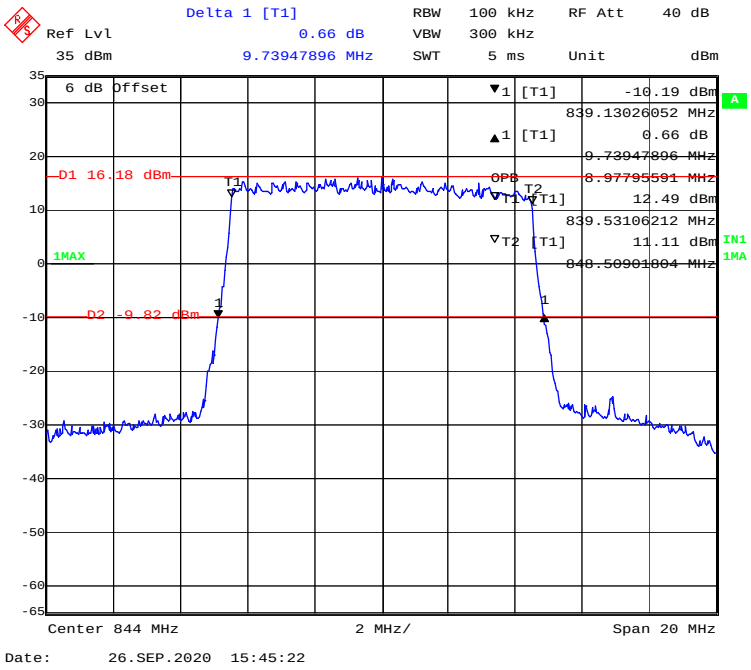
QPSK (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



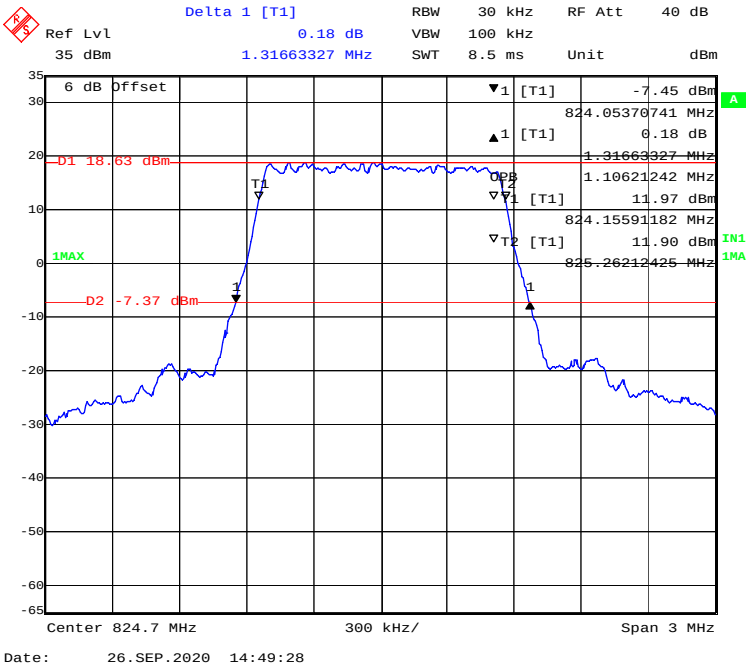
QPSK (5.0MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



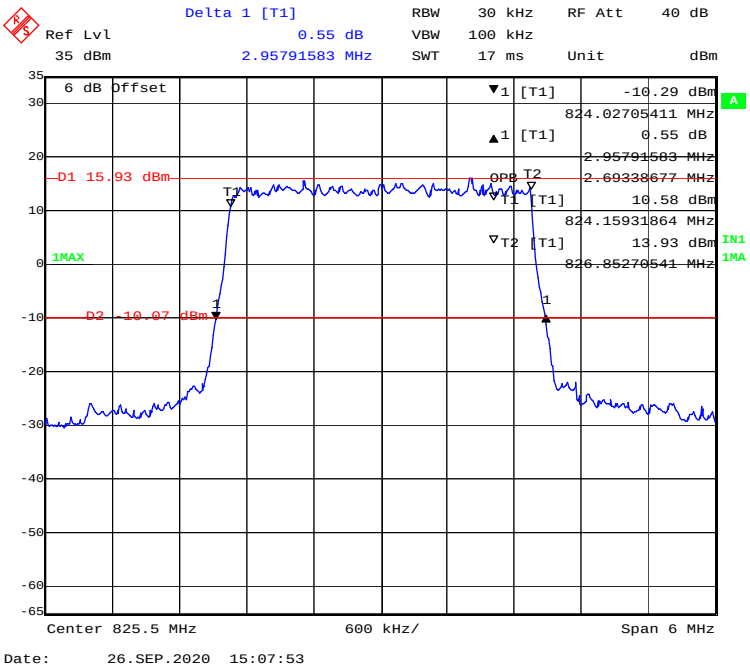
QPSK (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



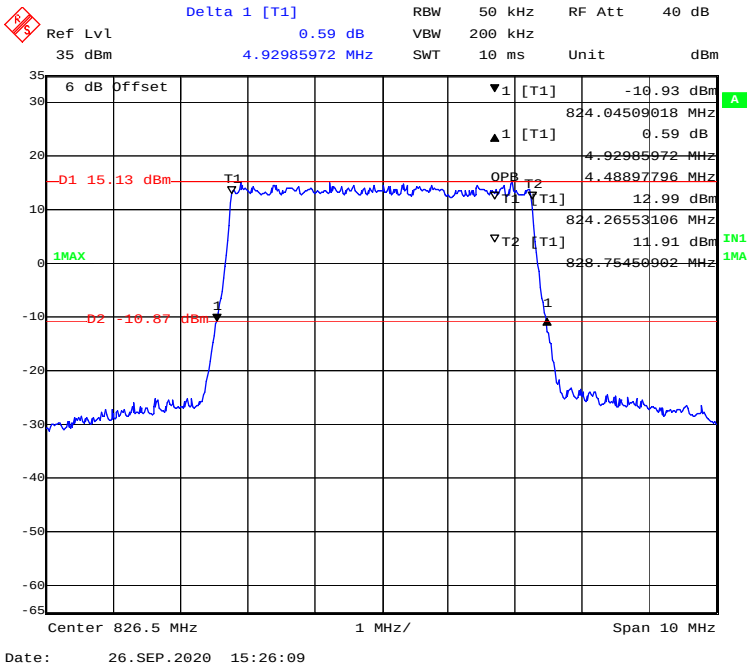
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



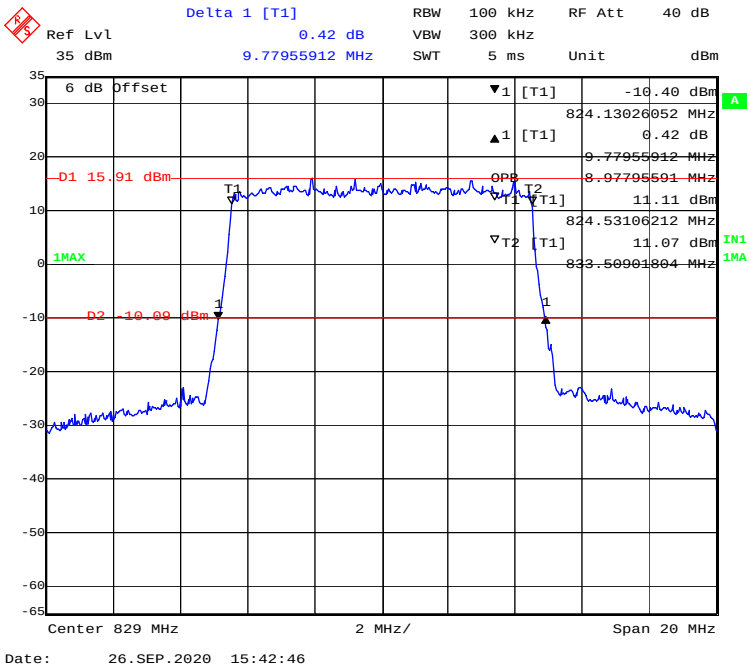
16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



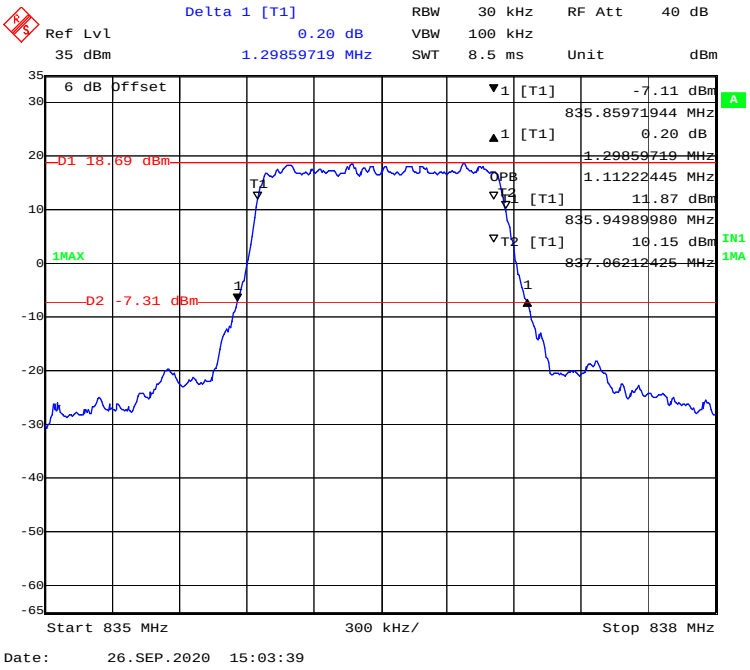
16-QAM (5.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



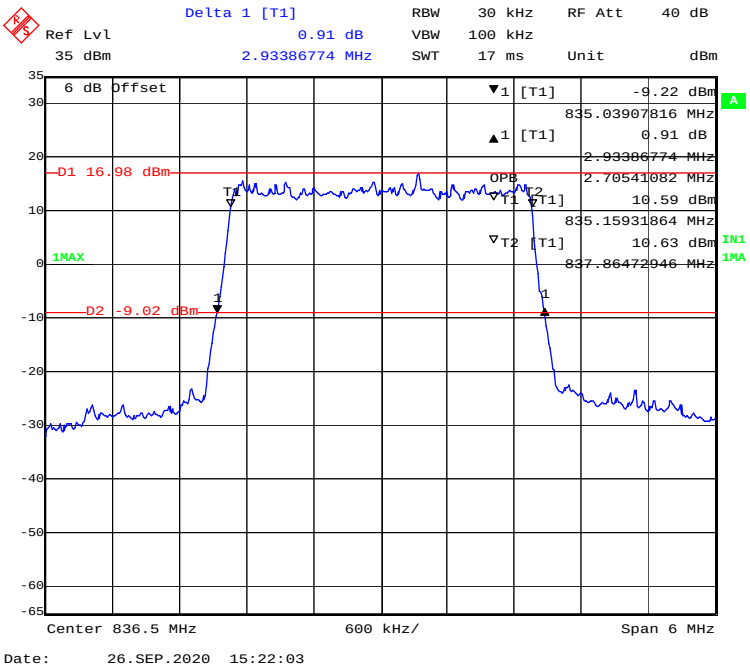
16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



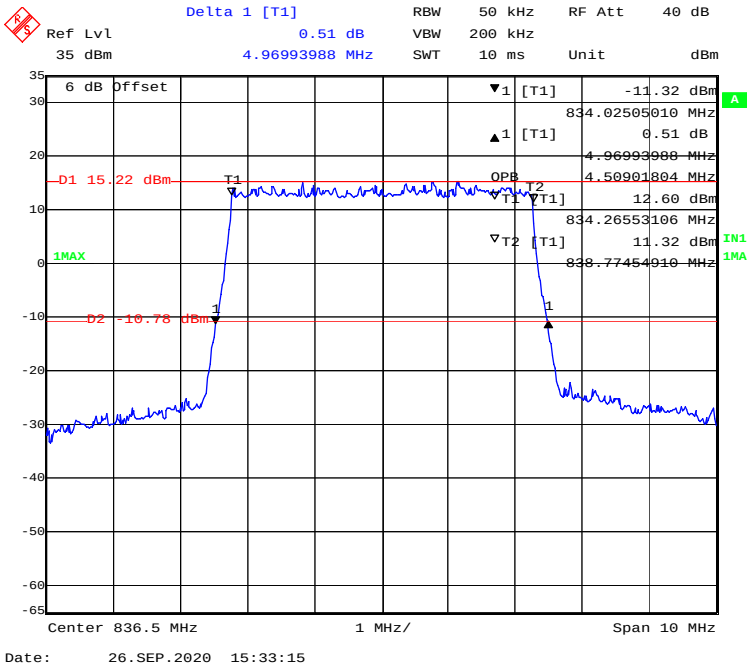
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



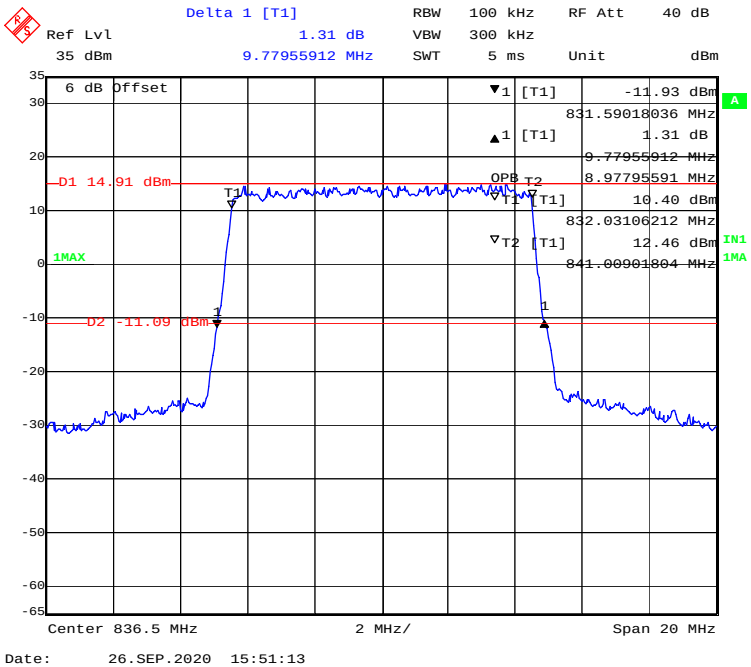
16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



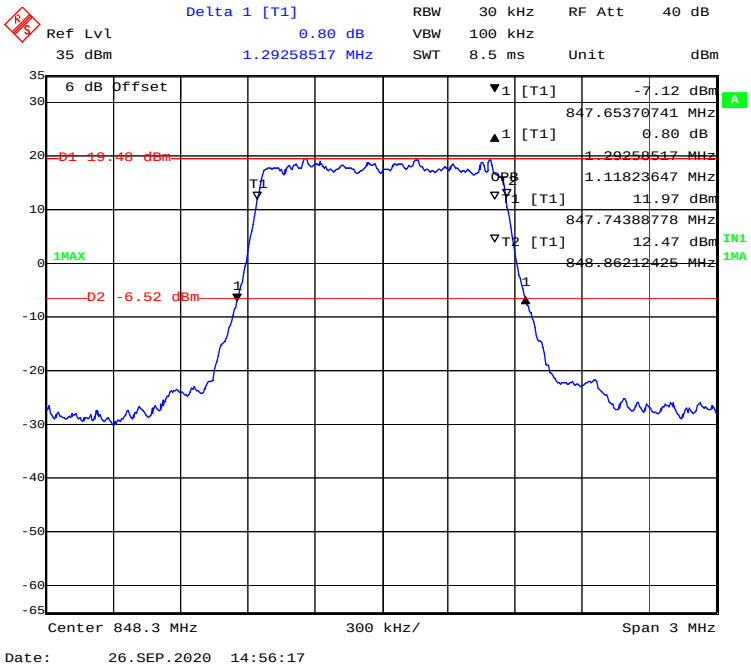
16-QAM (5.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



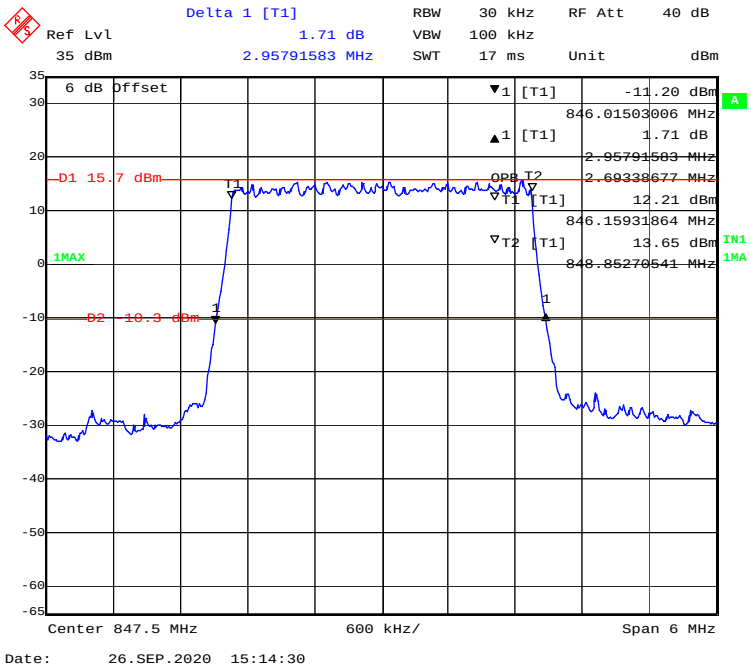
16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



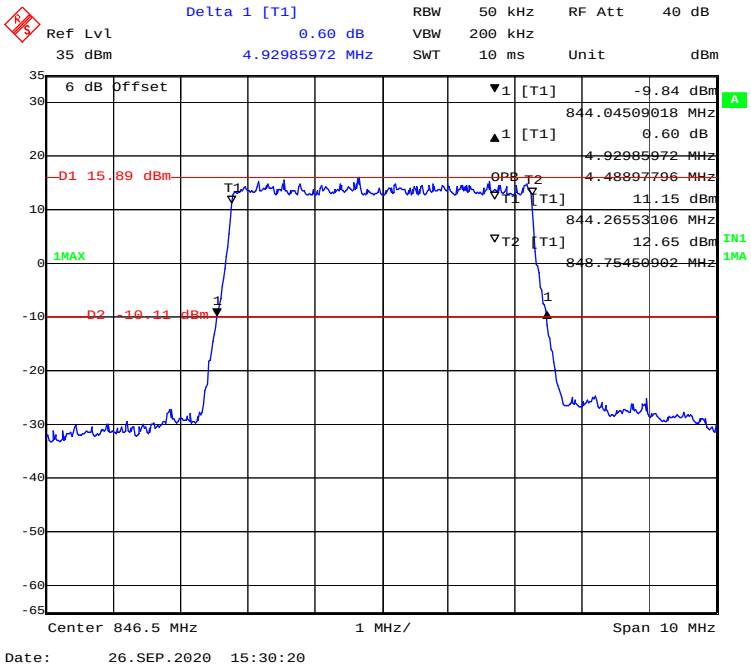
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



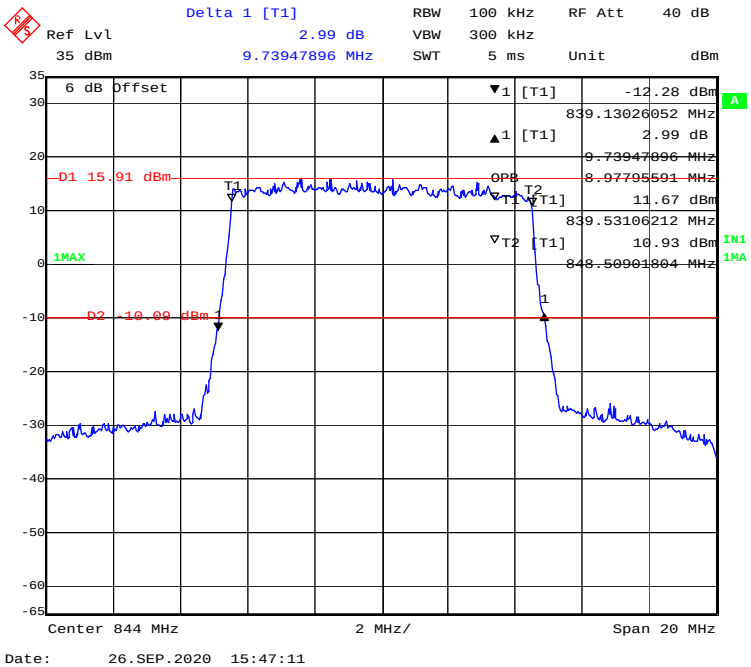
16-QAM (3.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



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



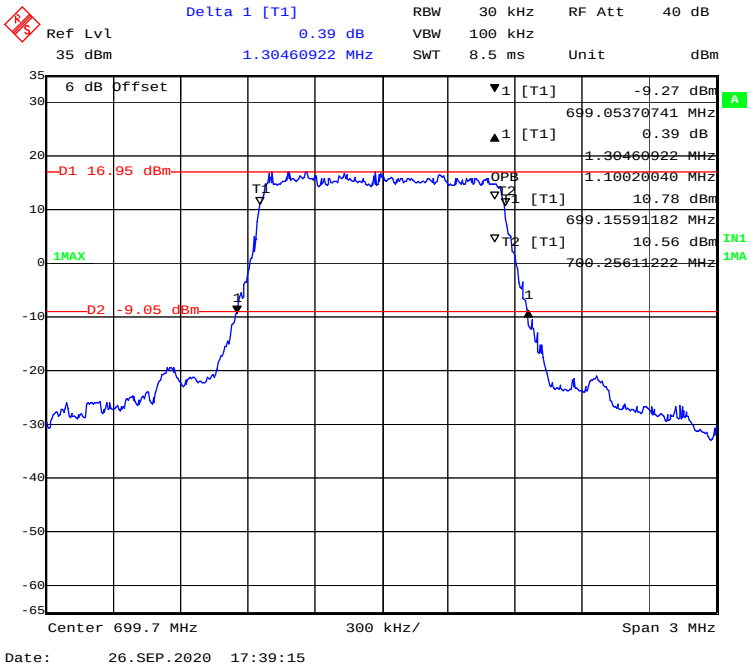
16-QAM (10.0 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



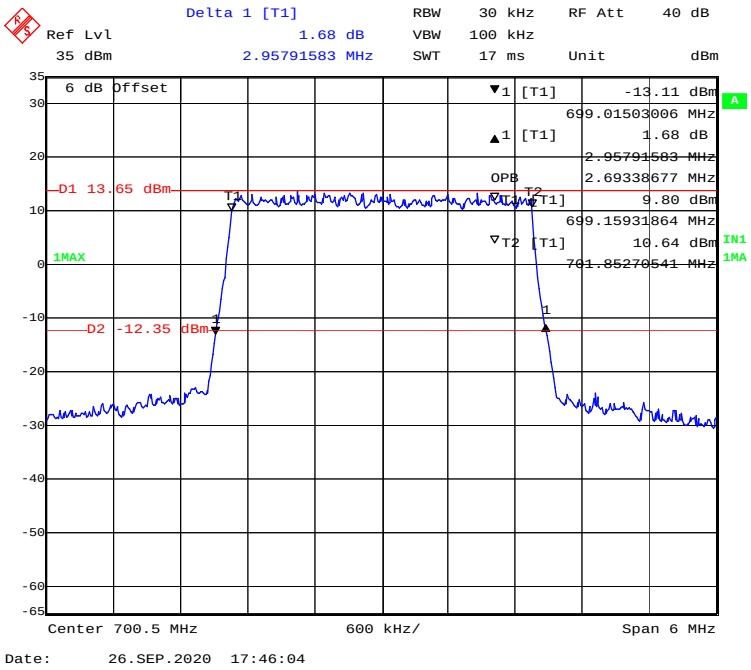
LTE Band 12:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	1.4M	Low	1.305	1.100
	3M		2.958	2.693
	5M		4.970	4.509
	10M		9.820	8.978
	1.4M	Middle	1.305	1.100
	3M		2.934	2.705
	5M		4.910	4.469
	10M		9.739	8.938
	1.4M	High	1.287	1.112
	3M		2.934	2.705
	5M		4.930	4.509
	10M		9.619	8.978
16-QAM	1.4M	Low	1.317	1.106
	3M		2.958	2.693
	5M		4.970	4.489
	10M		9.739	8.978
	1.4M	Middle	1.305	1.106
	3M		2.934	2.705
	5M		4.910	4.489
	10M		9.619	8.938
	1.4M	High	1.293	1.106
	3M		2.946	2.705
	5M		4.930	4.489
	10M		9.619	8.978

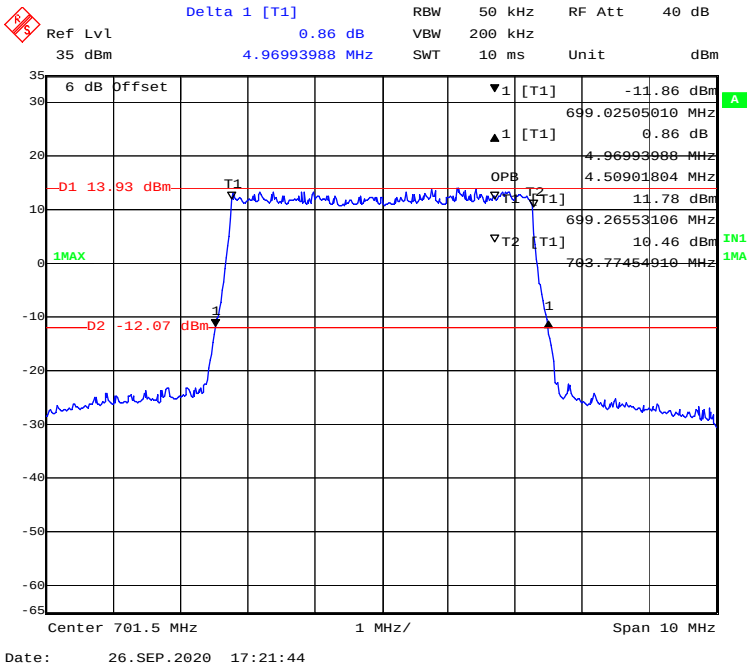
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



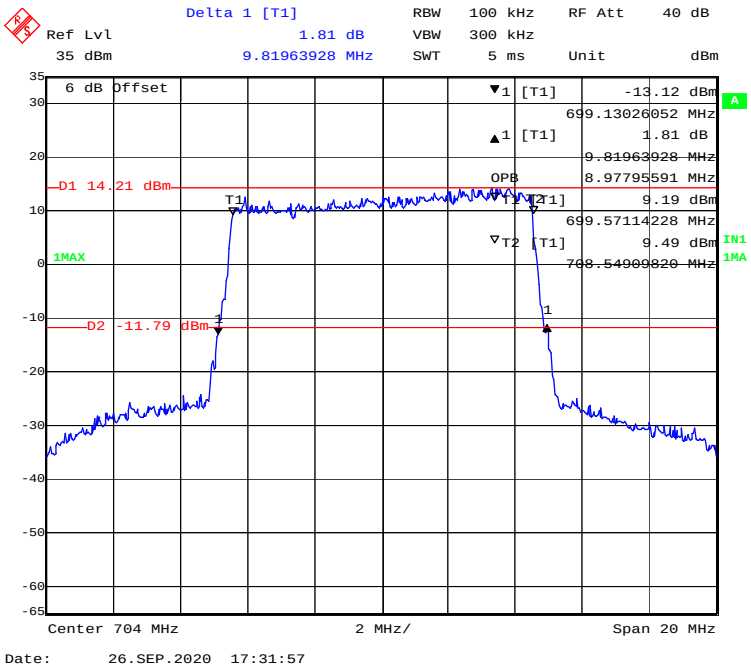
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



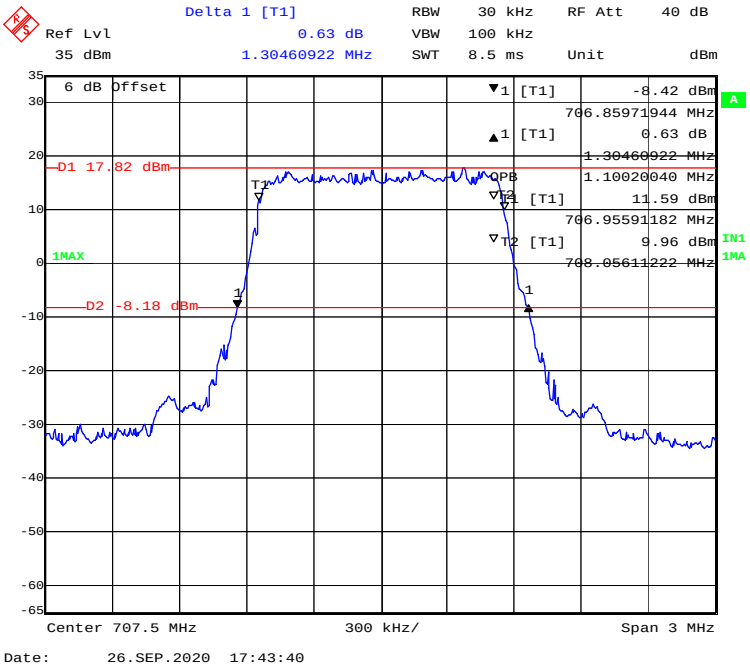
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



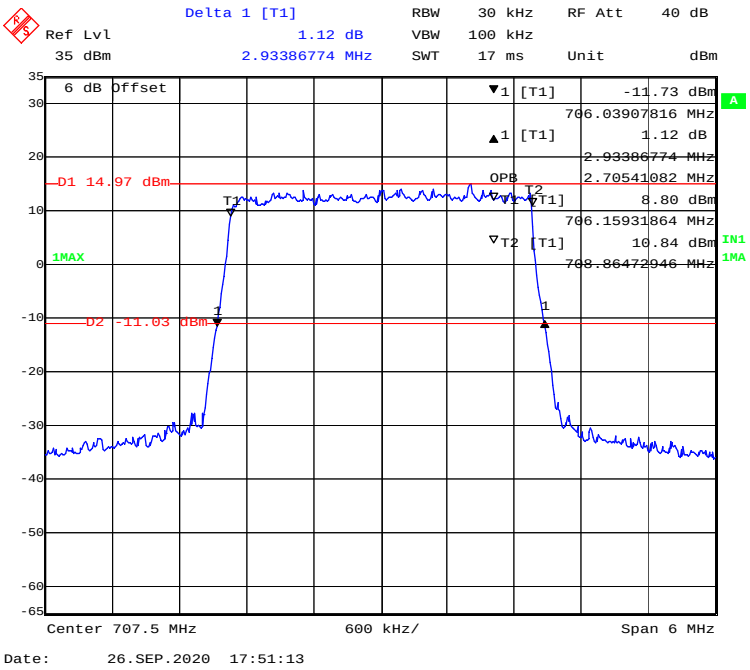
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



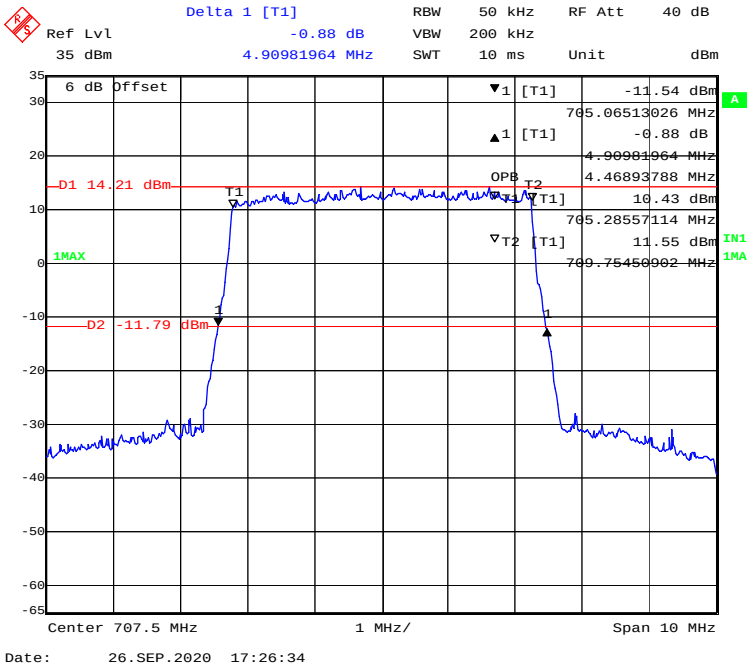
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



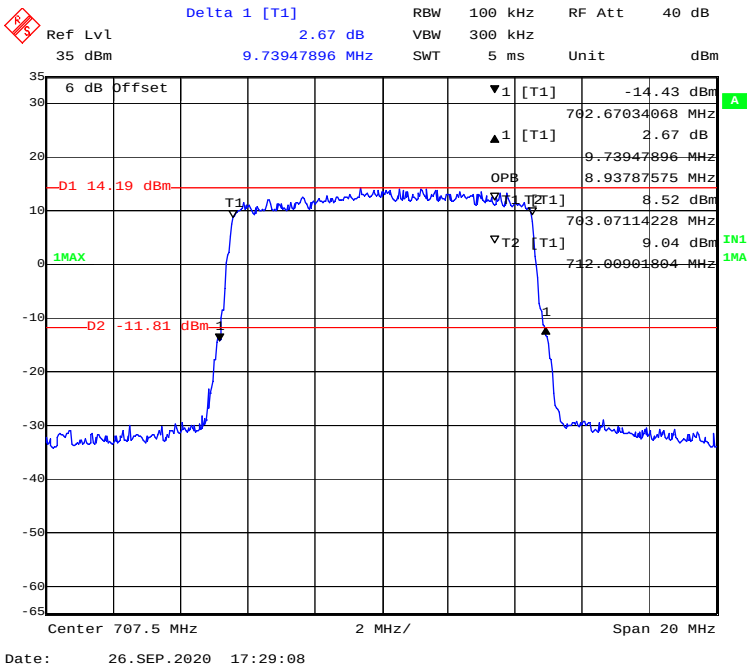
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



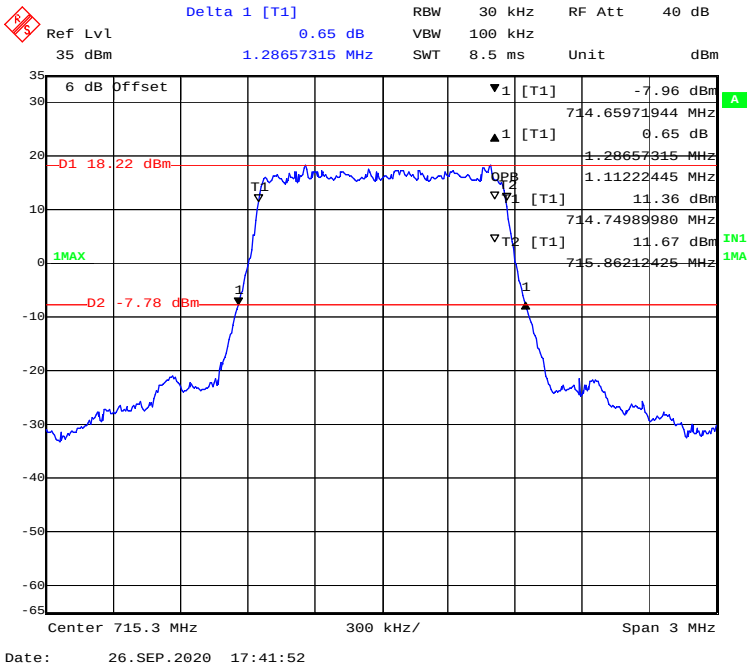
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



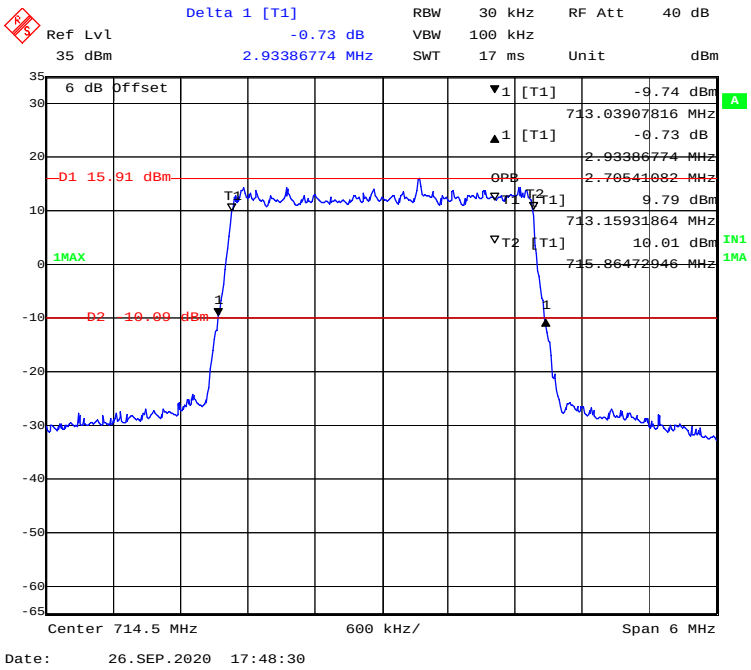
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



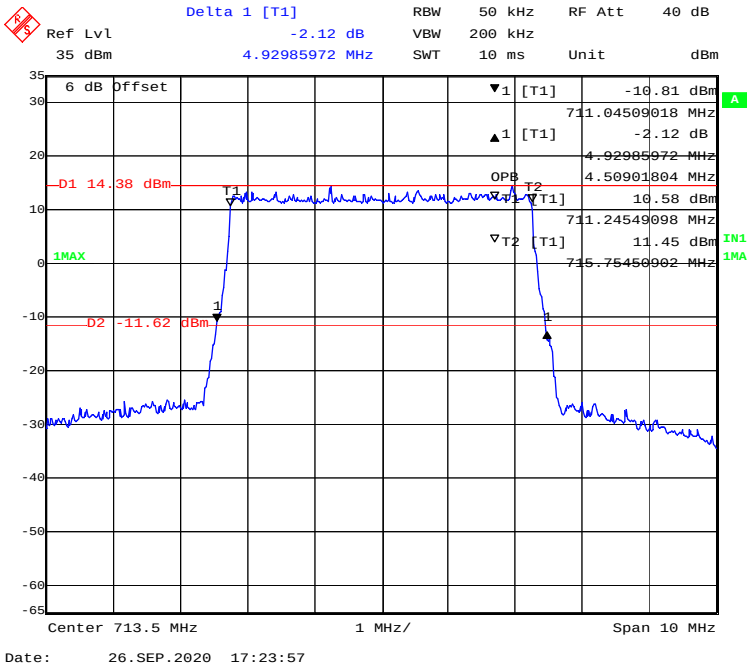
QPSK (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



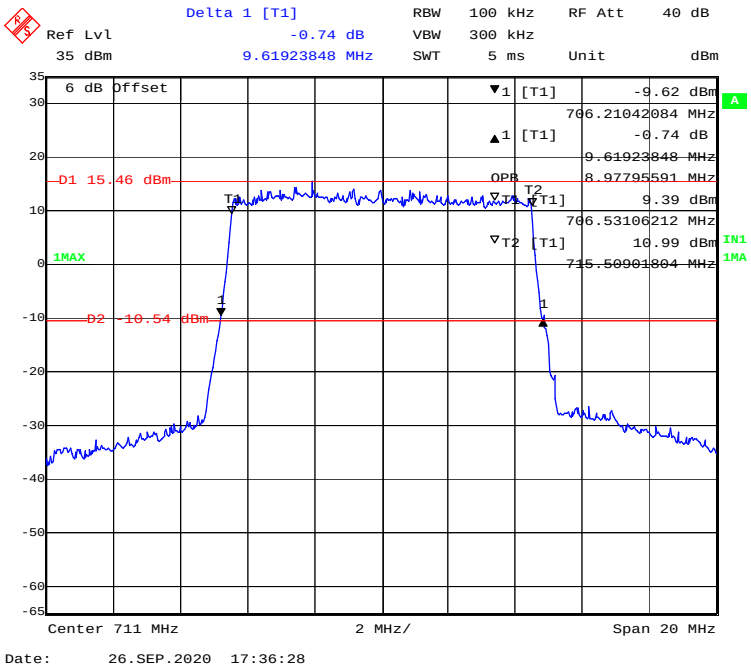
QPSK (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



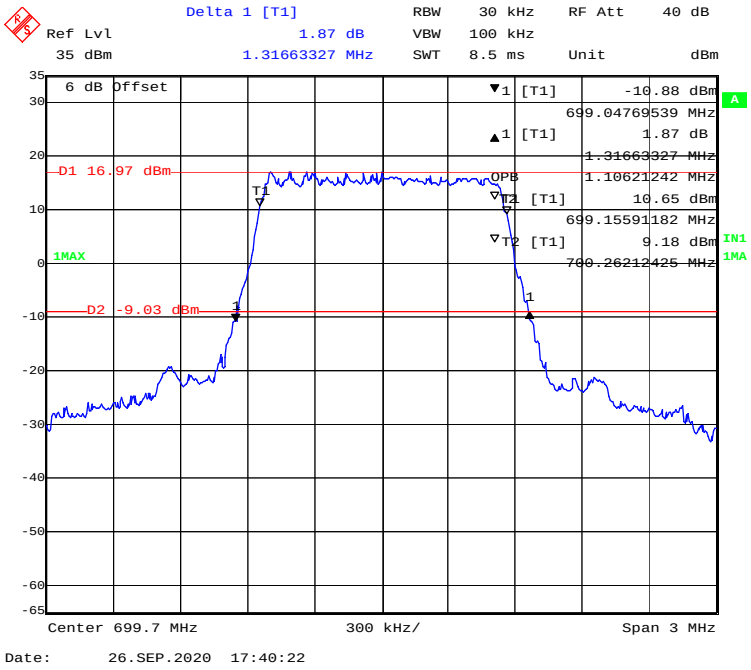
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



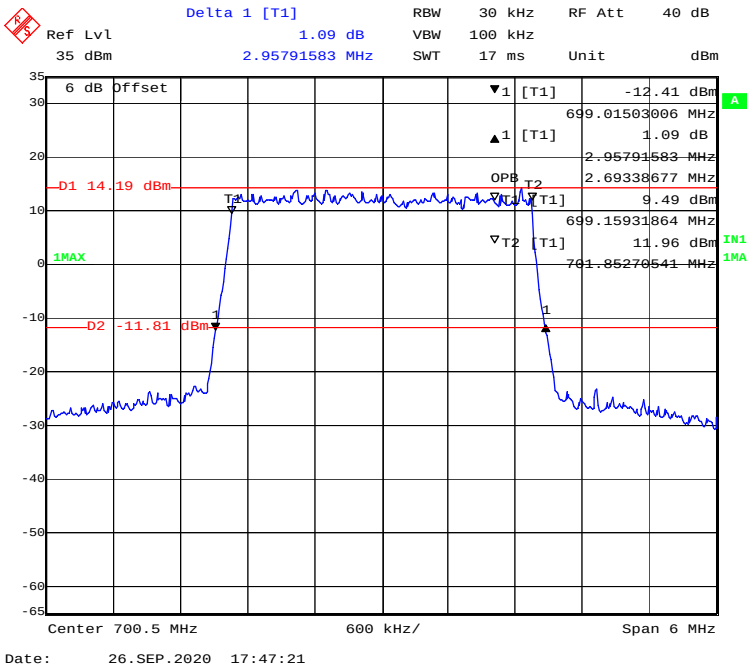
QPSK (10MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



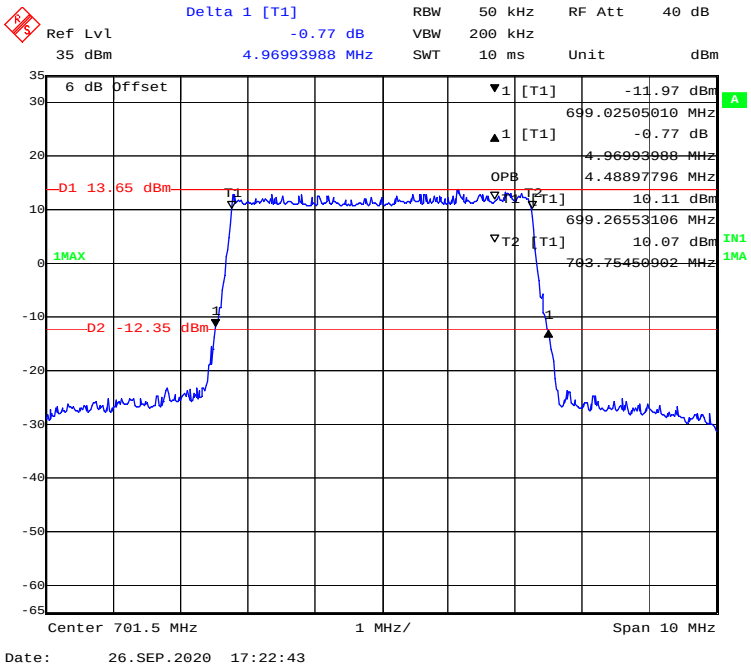
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



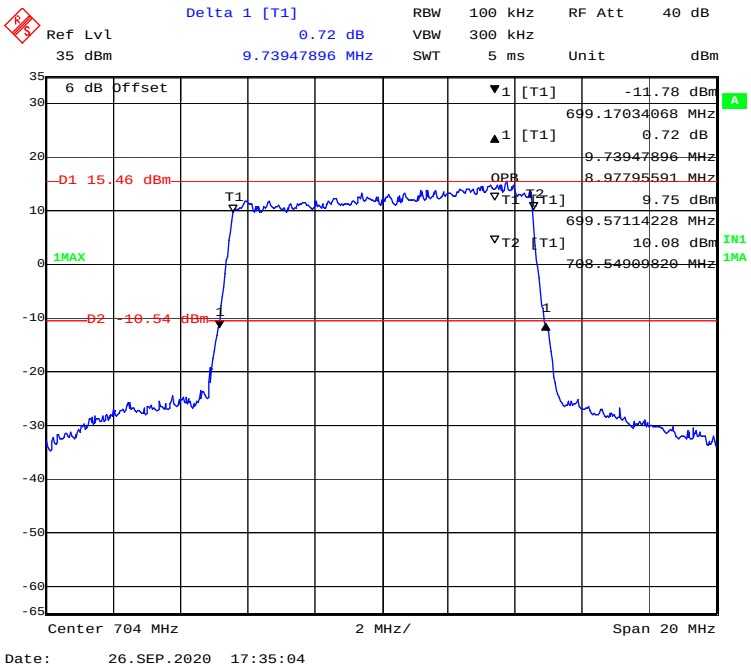
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



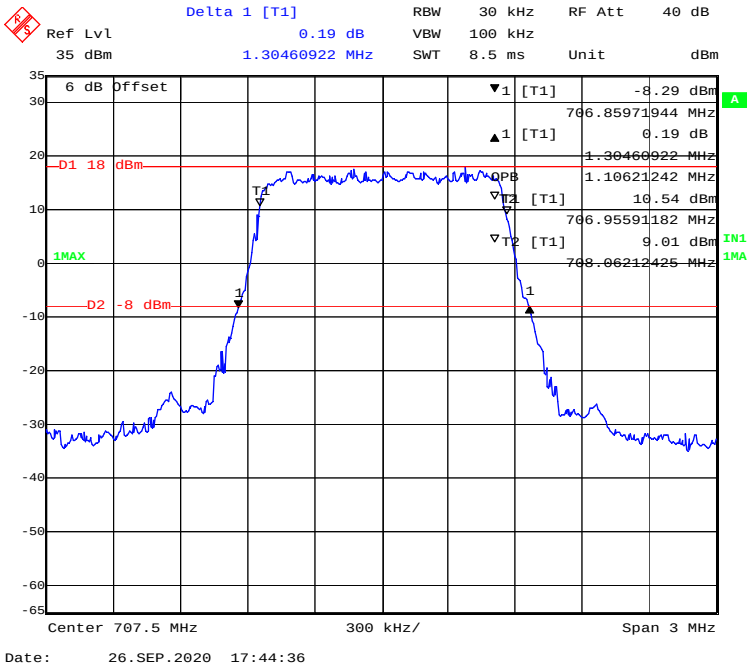
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



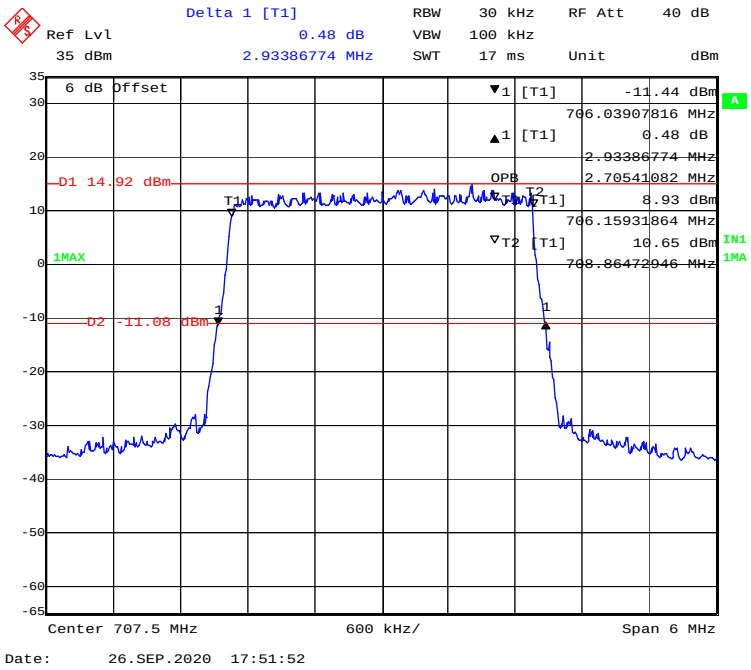
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



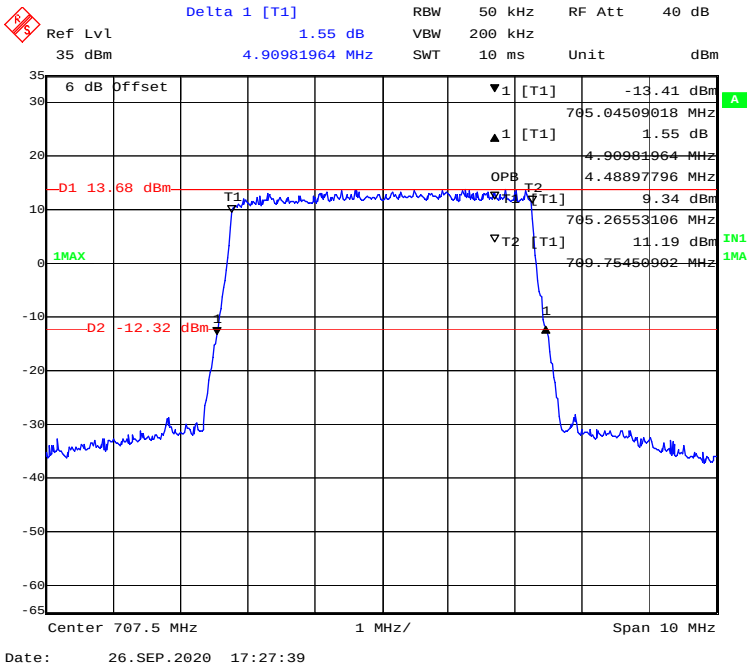
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



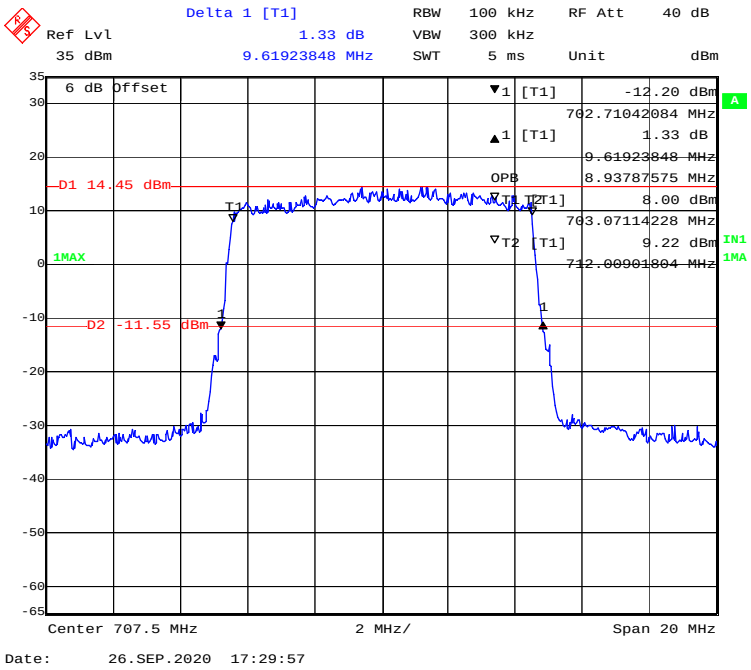
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



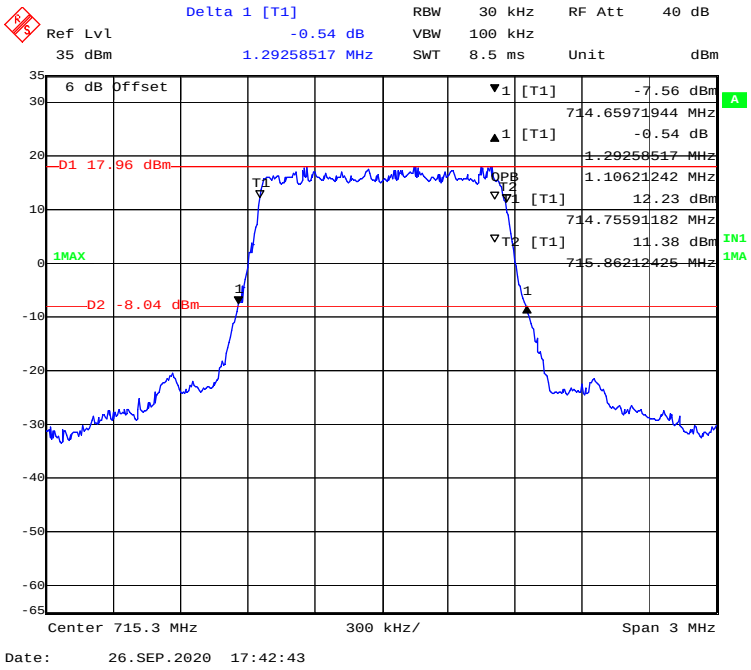
16-QAM (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



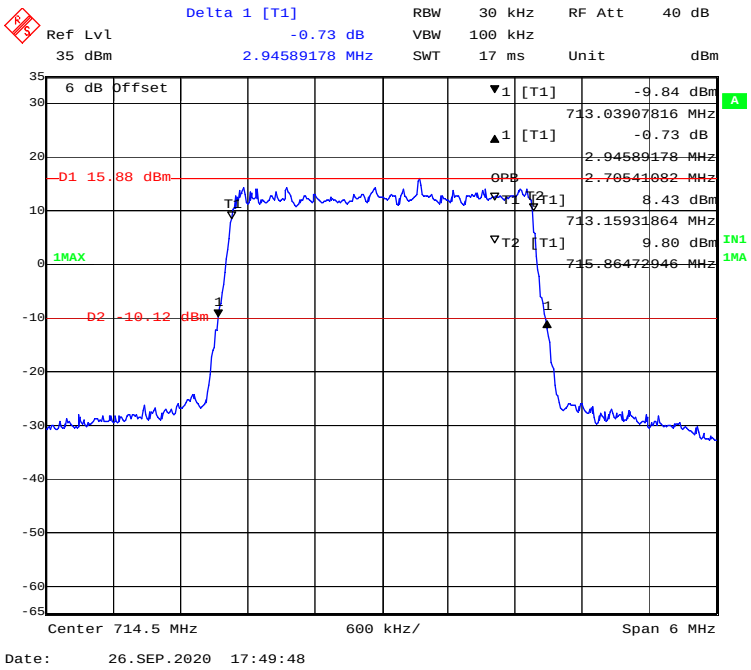
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



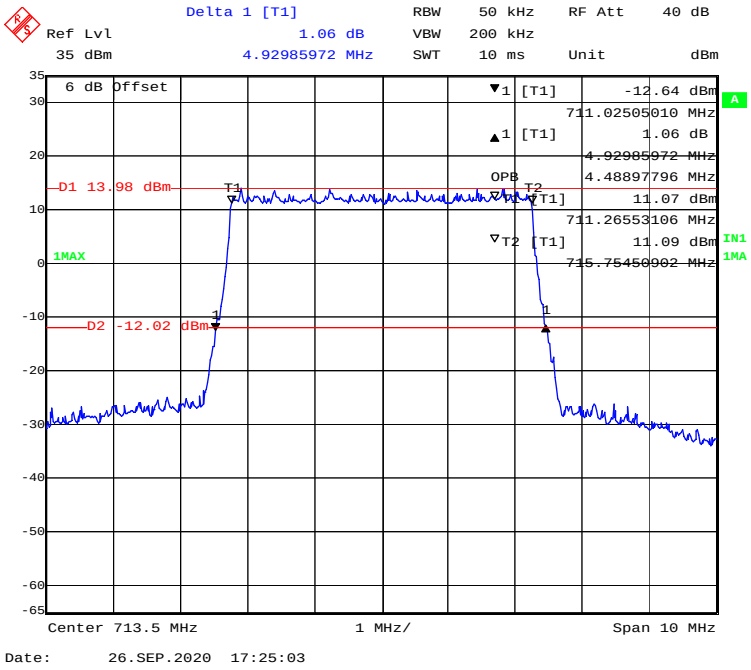
16-QAM (1.4 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



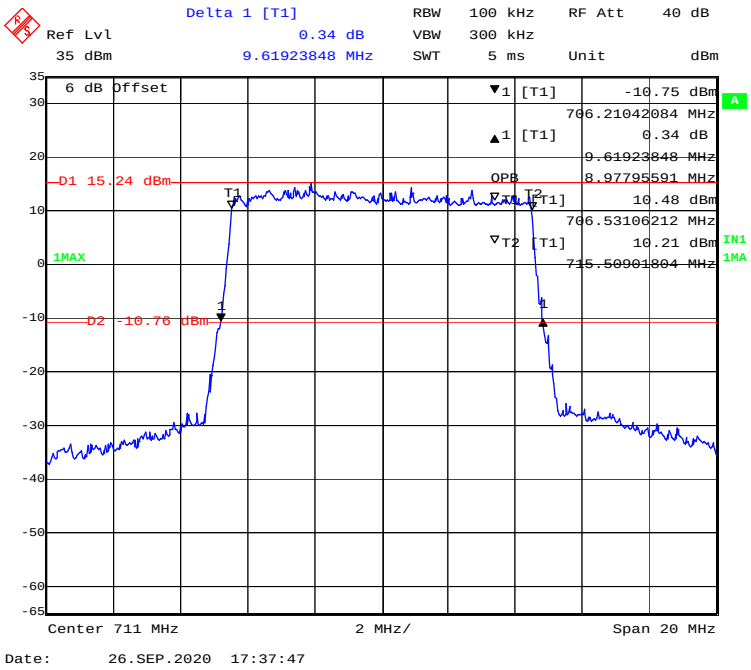
16-QAM (3 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



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



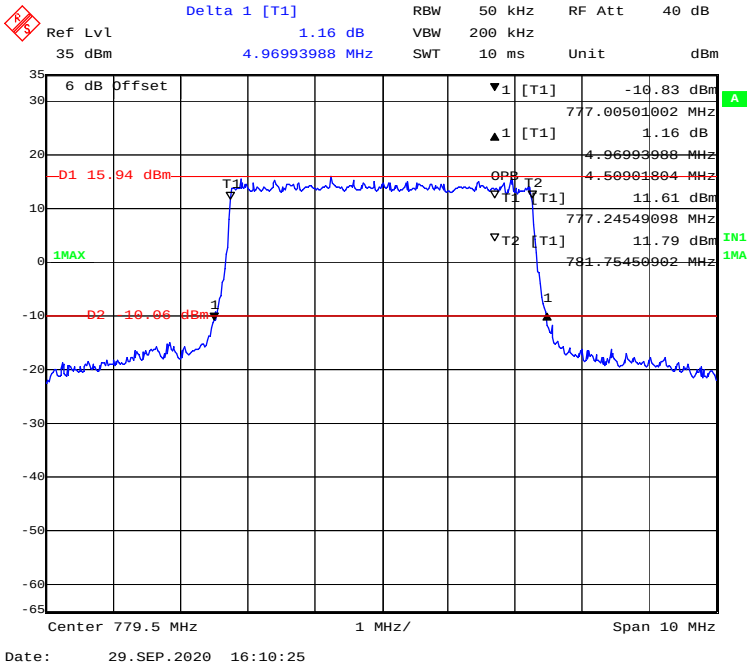
16-QAM (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



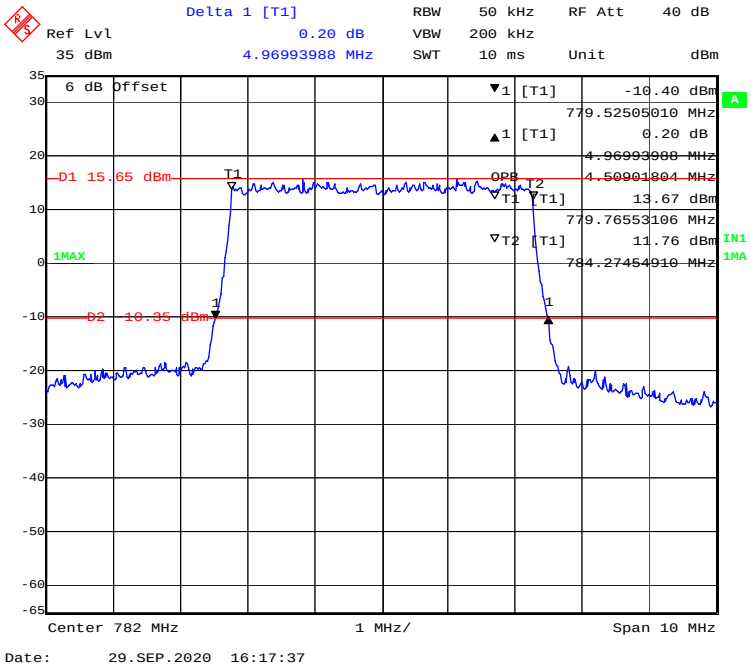
LTE Band 13:

Test Modulation	Test Bandwidth	Test Channel	26 dB Bandwidth	99% Occupied Bandwidth
			MHz	MHz
QPSK	5M	Low	4.970	4.509
	5M	Middle	4.970	4.509
	5M	High	4.930	4.489
	10M	/	9.860	8.978
16-QAM	5M	Low	4.970	4.489
	5M	Middle	4.970	4.509
	5M	High	4.930	4.489
	10M	/	9.820	8.978

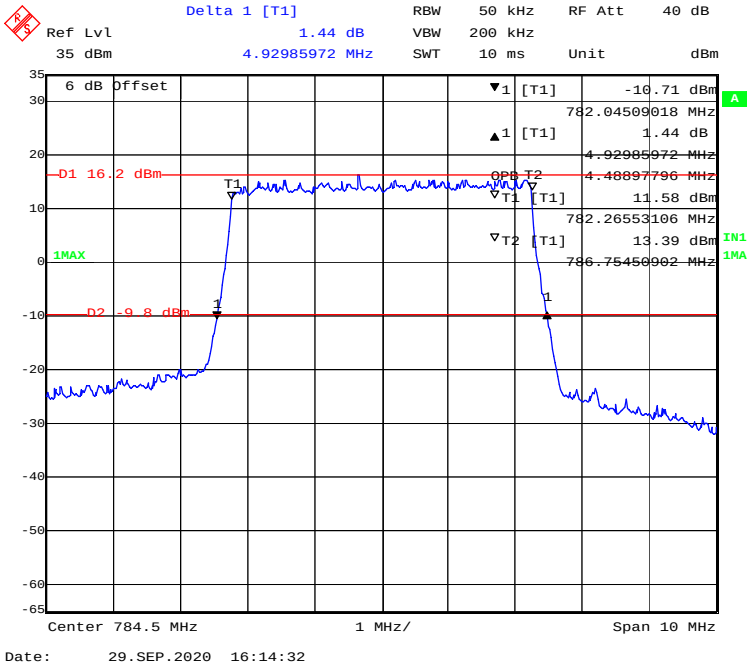
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



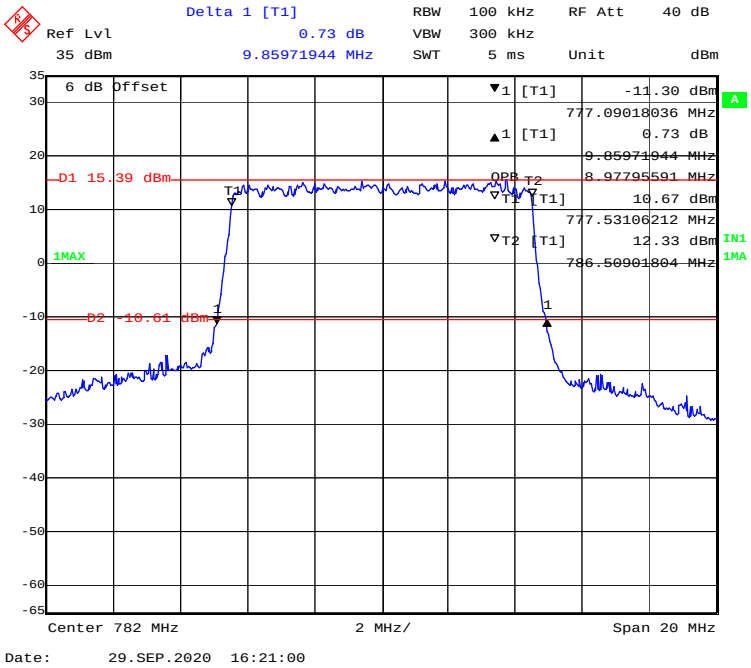
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



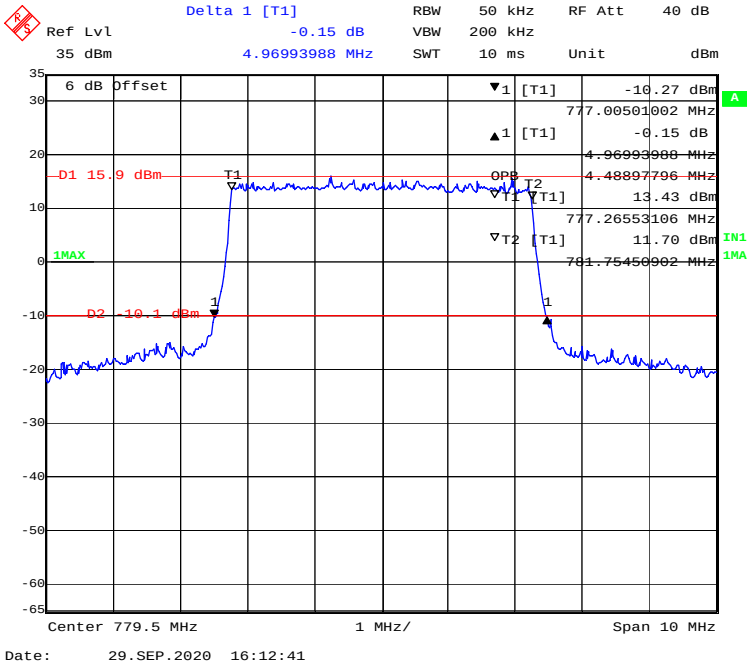
QPSK (5 MHz) - 99% Occupied & 26 dB Emissions Bandwidth, High channel



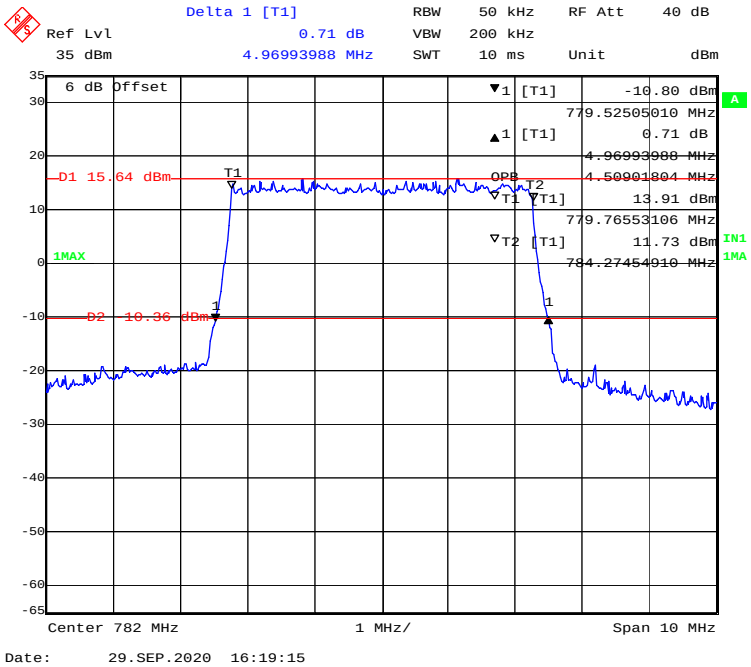
QPSK (10 MHz) - 99% Occupied & 26 dB Emissions Bandwidth



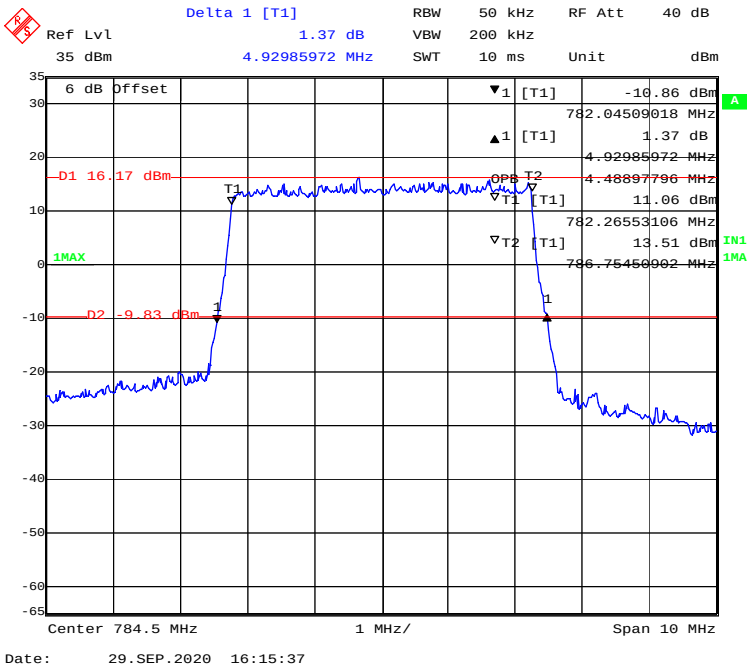
16-QAM (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Low channel



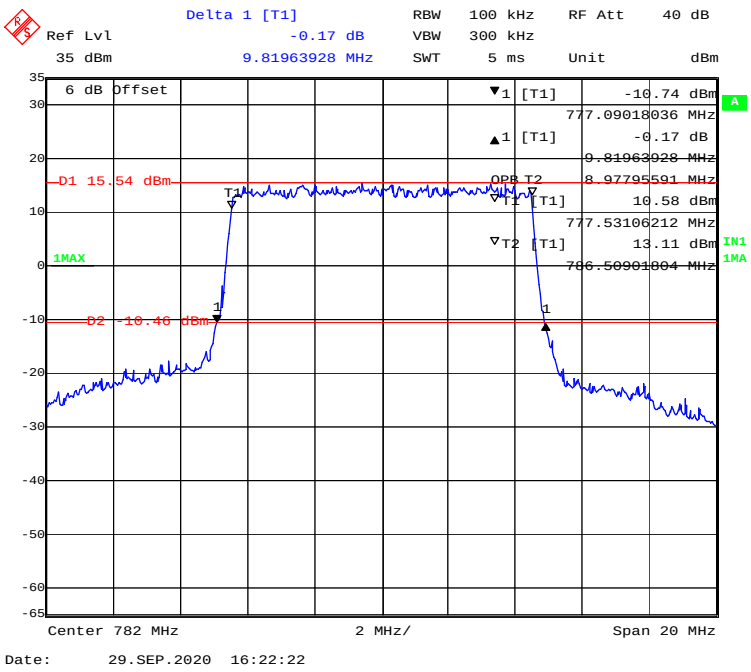
16-QAM (5MHz) - 99% Occupied & 26 dB Emissions Bandwidth, Middle channel



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



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



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)..

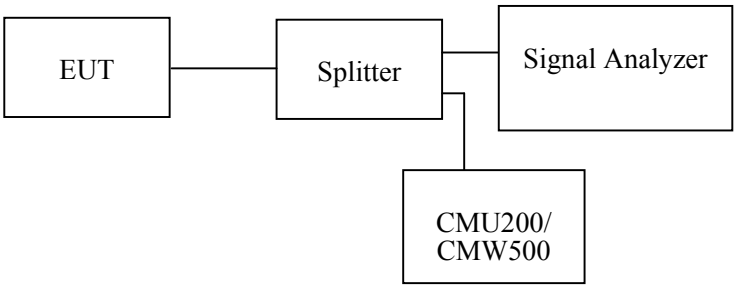
The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

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 ℃
Relative Humidity:	50~52 %
ATM Pressure:	100.7~101.9 kPa

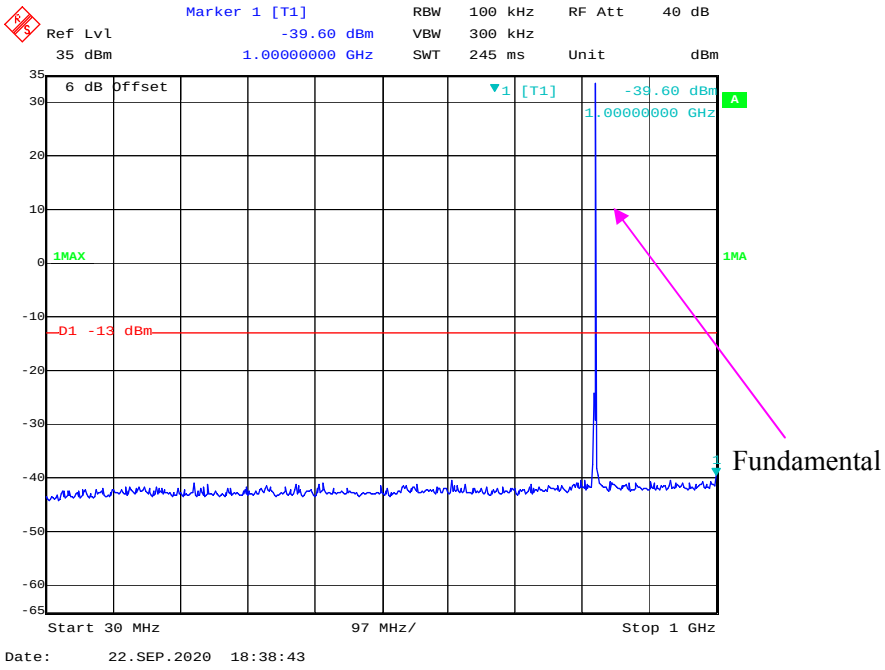
The testing was performed by CK Huang from 2020-09-22 to 2020-09-29.

EUT operation mode: Transmitting

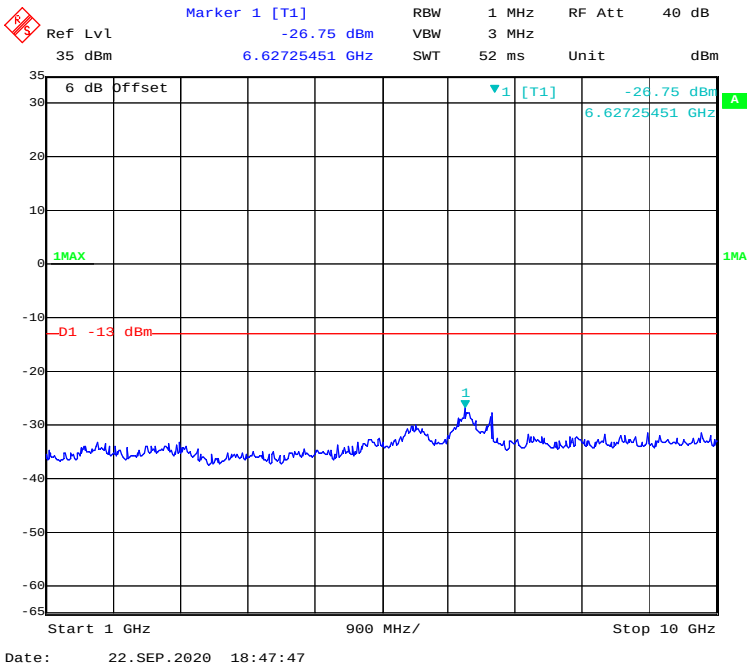
Test Result: Compliance.

GSM 850 Band:

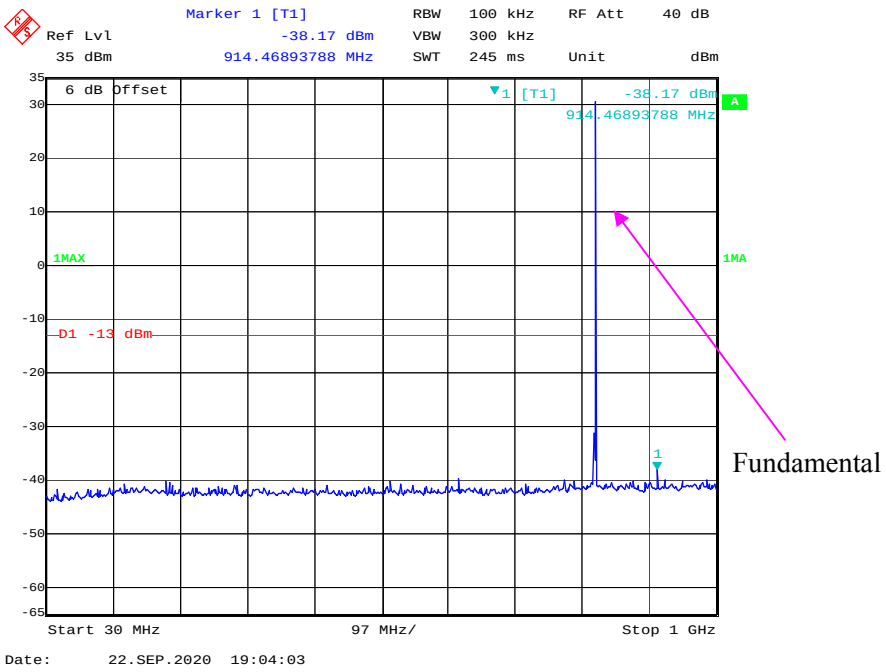
30 MHz – 1GHz(GPRS Mode), Low channel



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

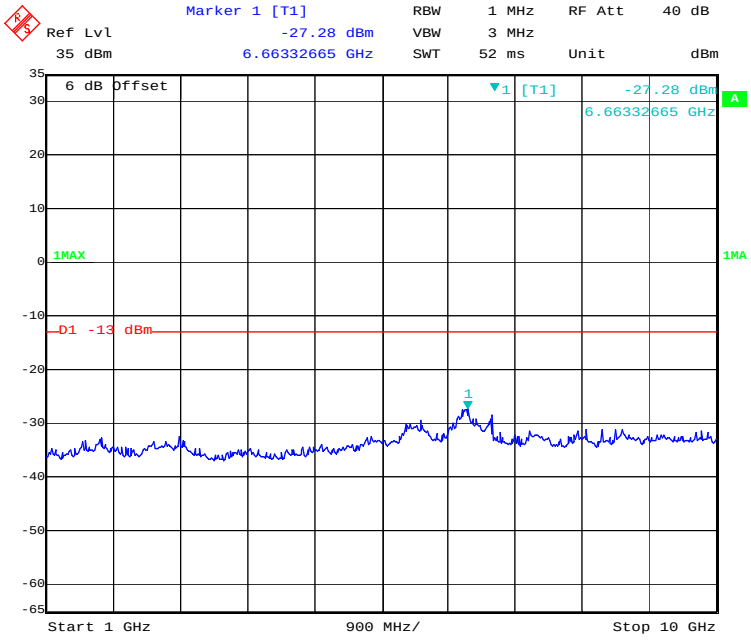


30 MHz – 1GHz(EGPRS Mode)), Low channel



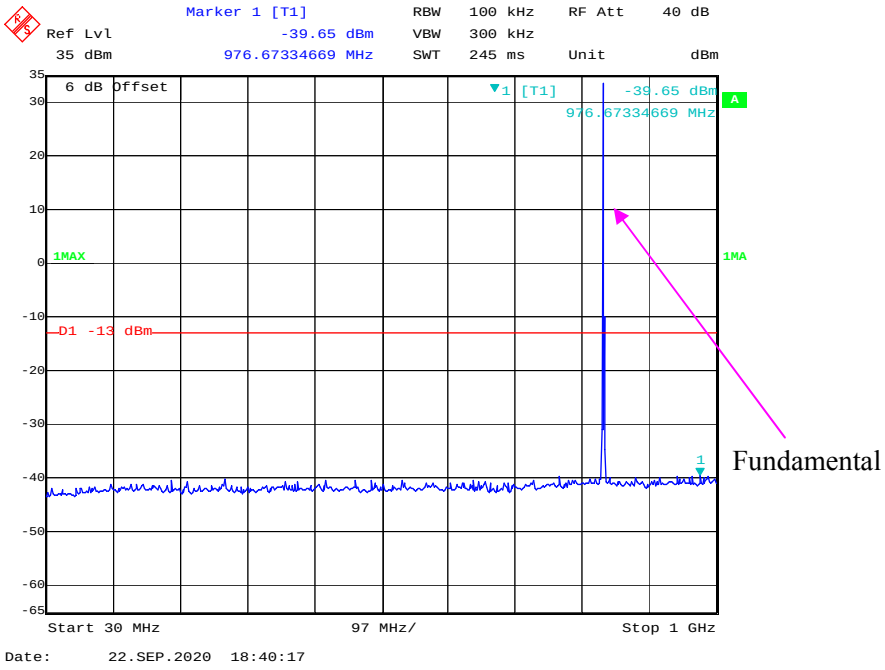
Date: 22.SEP.2020 19:04:03

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

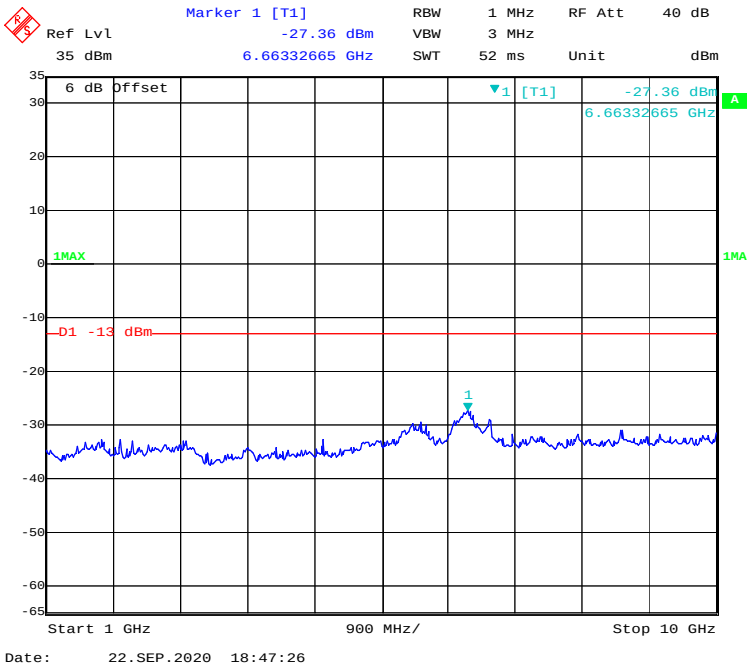


Date: 22.SEP.2020 19:07:49

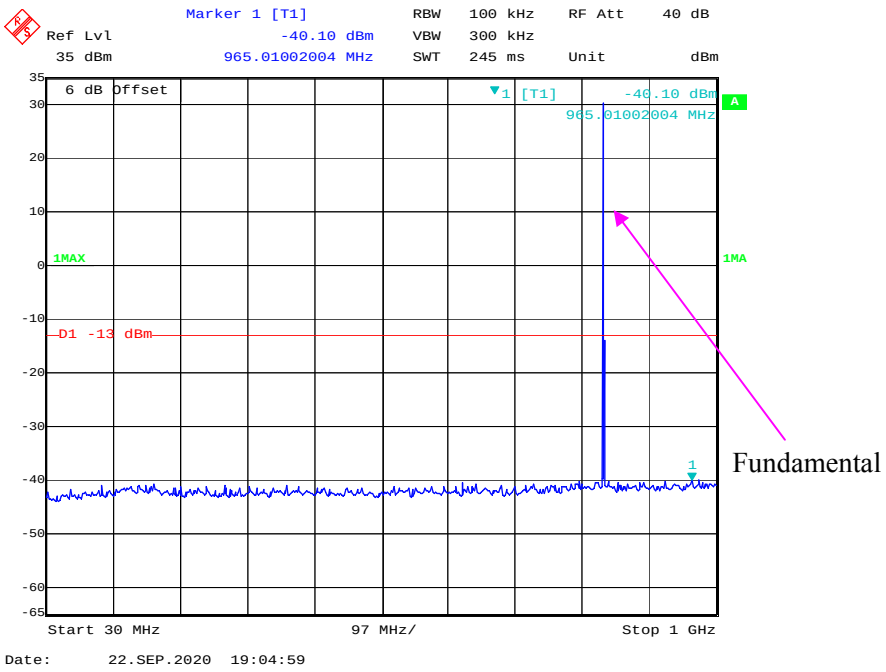
30 MHz – 1GHz(GPRS Mode)), Middle channel



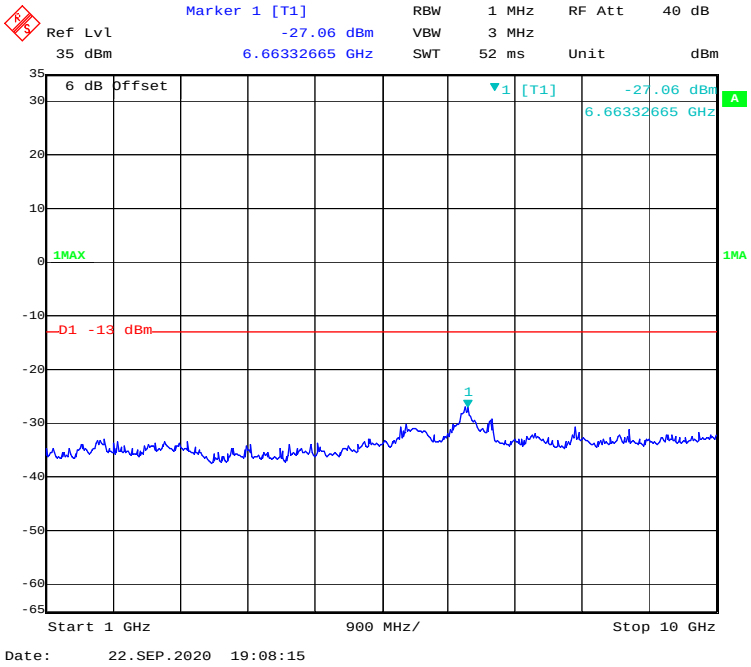
1 GHz – 10 GHz (GPRS Mode)), Middle channel



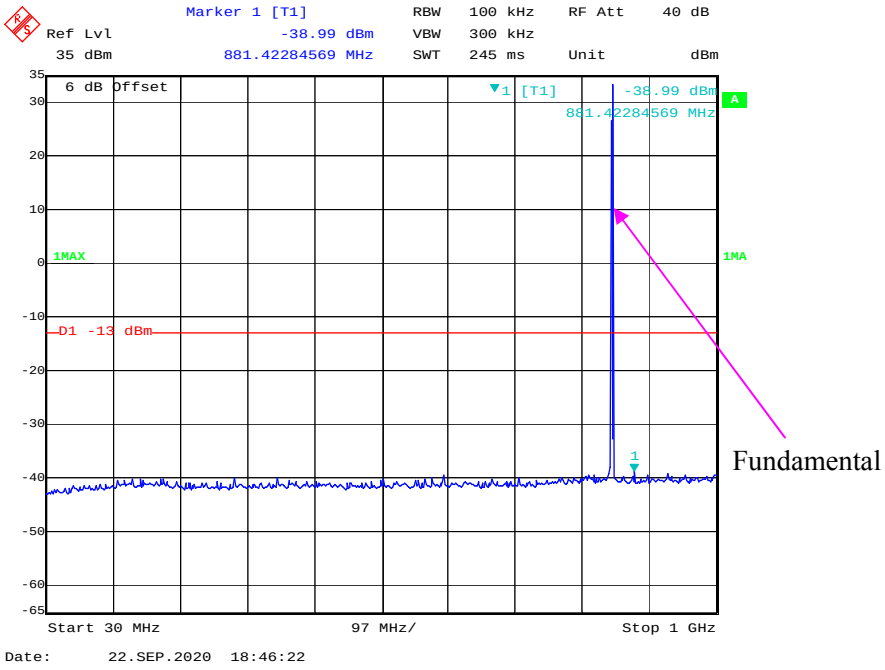
30 MHz – 1GHz(EGPRS Mode) , Middle channel



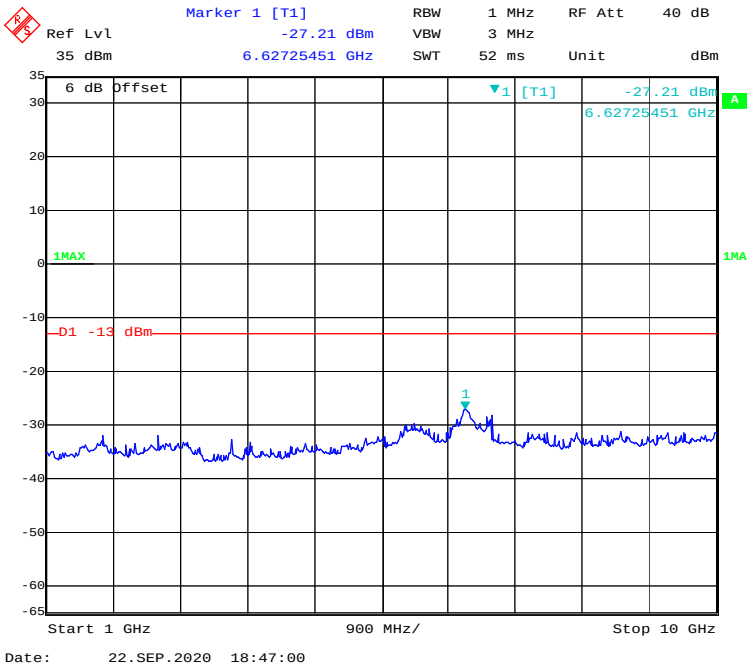
1 GHz – 10 GHz (EGPRS Mode), Middle channel



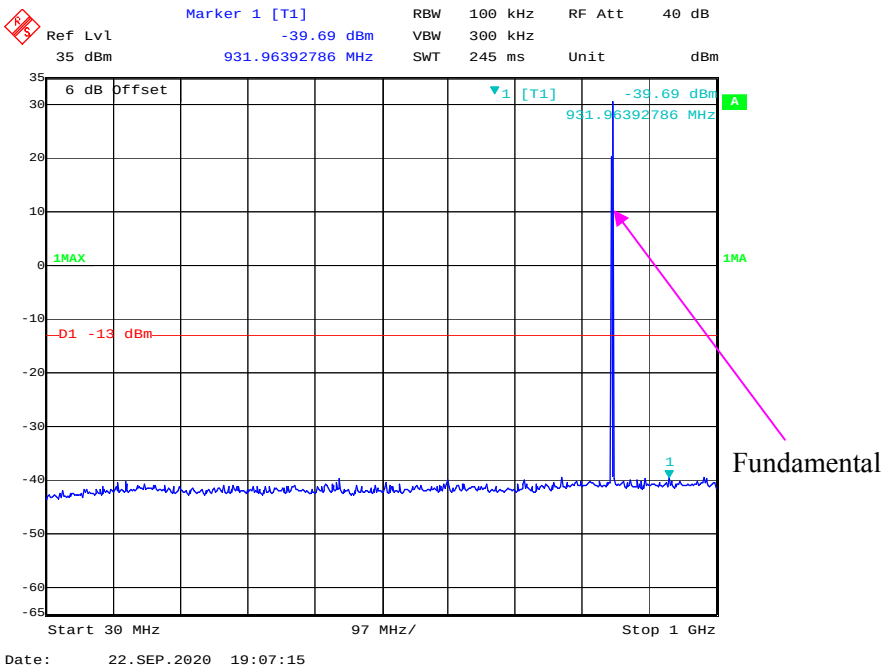
30 MHz – 1GHz(GPRS Mode), High channel



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



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



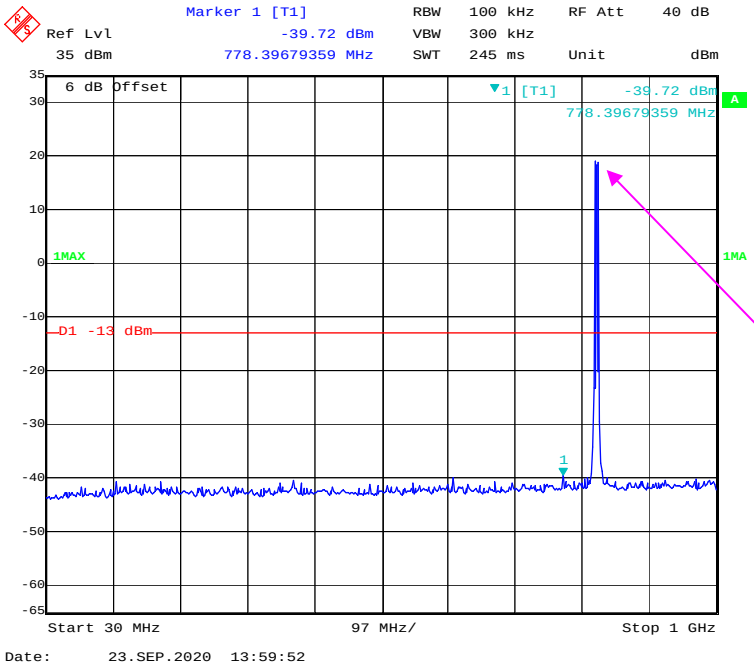
Date: 22.SEP.2020 19:07:15

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

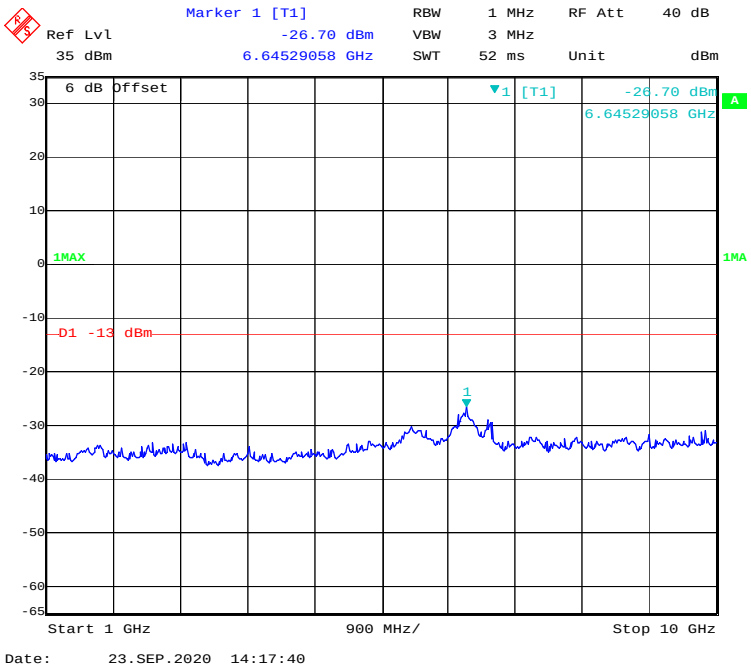
Date: 22.SEP.2020 19:08:41

WCDMA Band V:

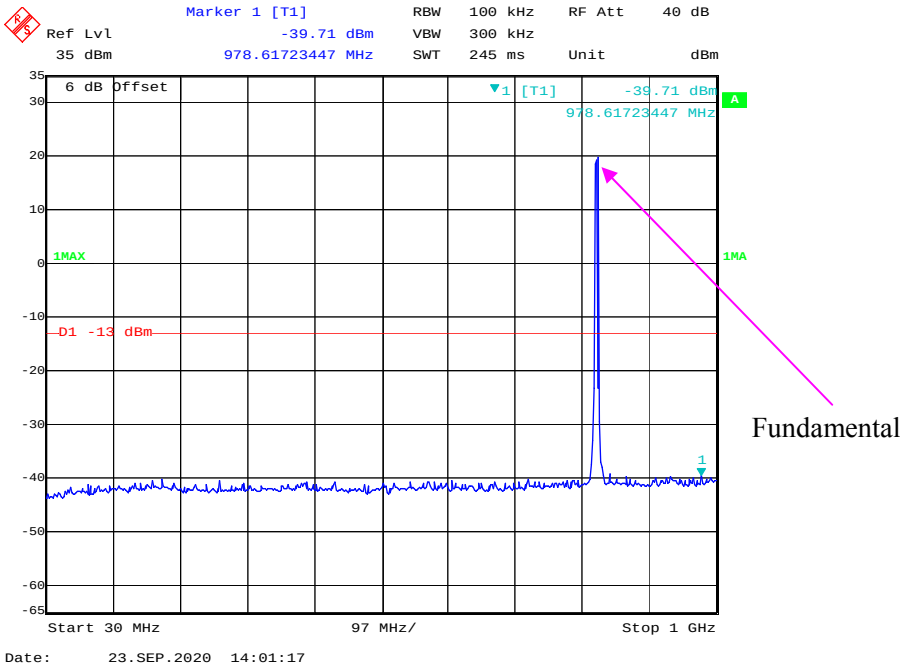
30 MHz – 1GHz WCDMA (Rel 99) Mode, Low channel



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

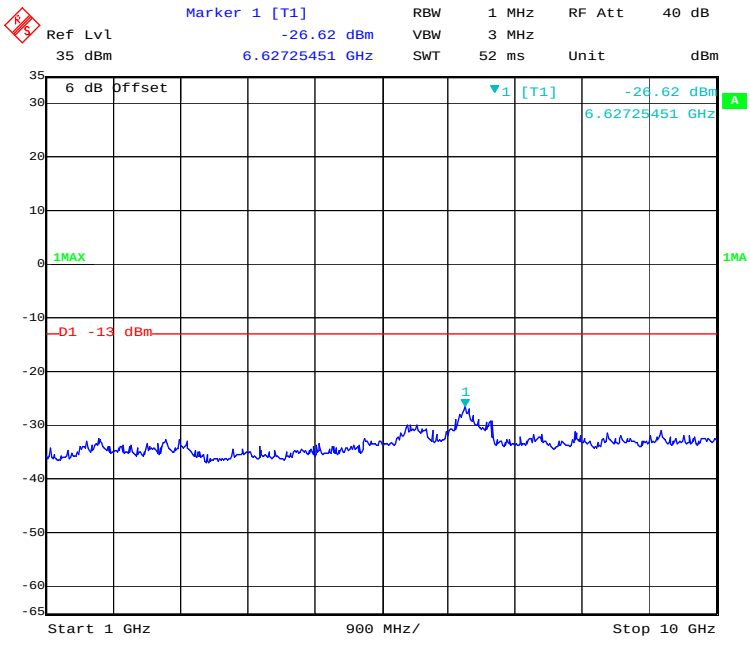


30 MHz – 1GHz WCDMA (HSDPA) Mode, Low channel



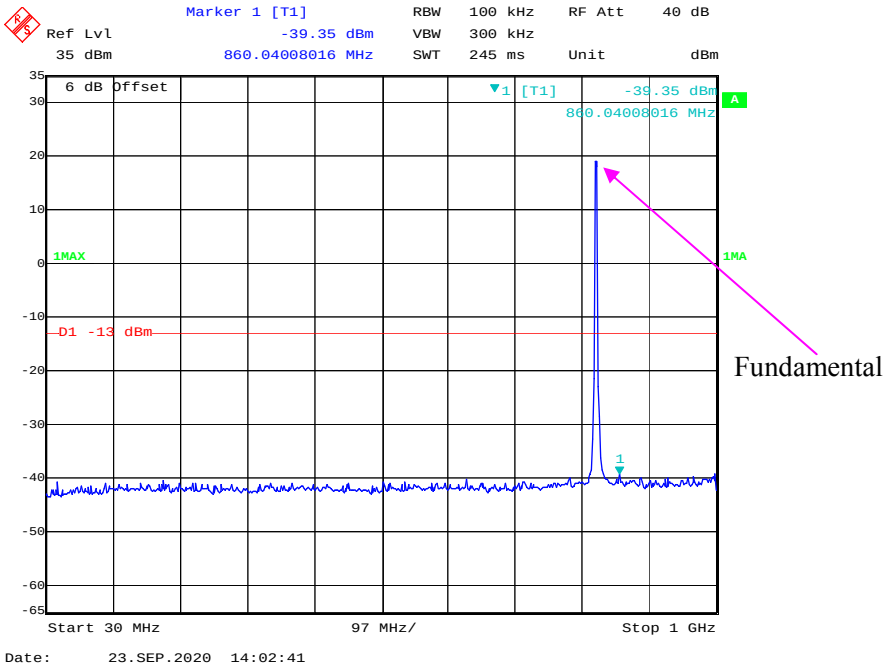
Date: 23.SEP.2020 14:01:17

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

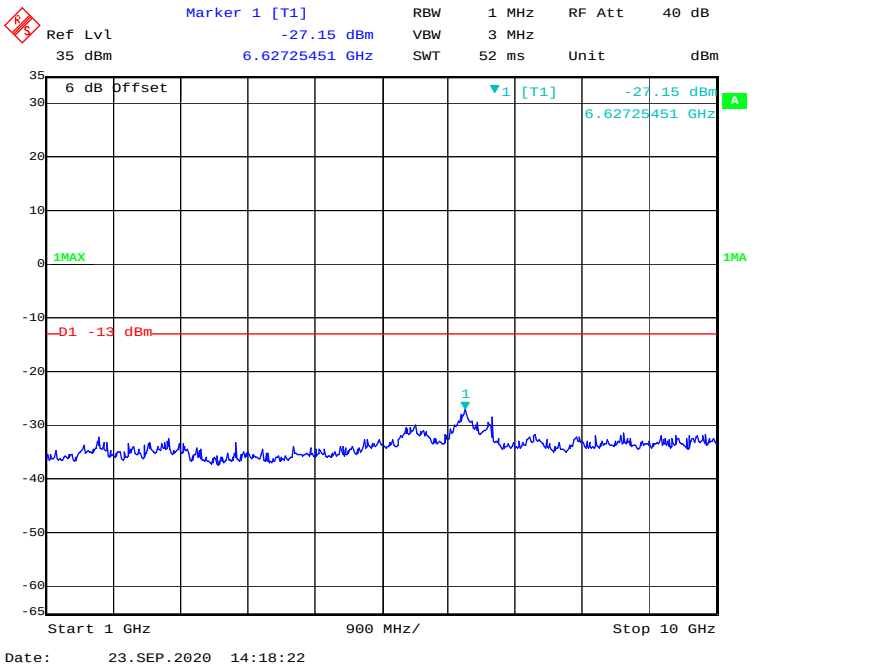


Date: 23.SEP.2020 14:18:05

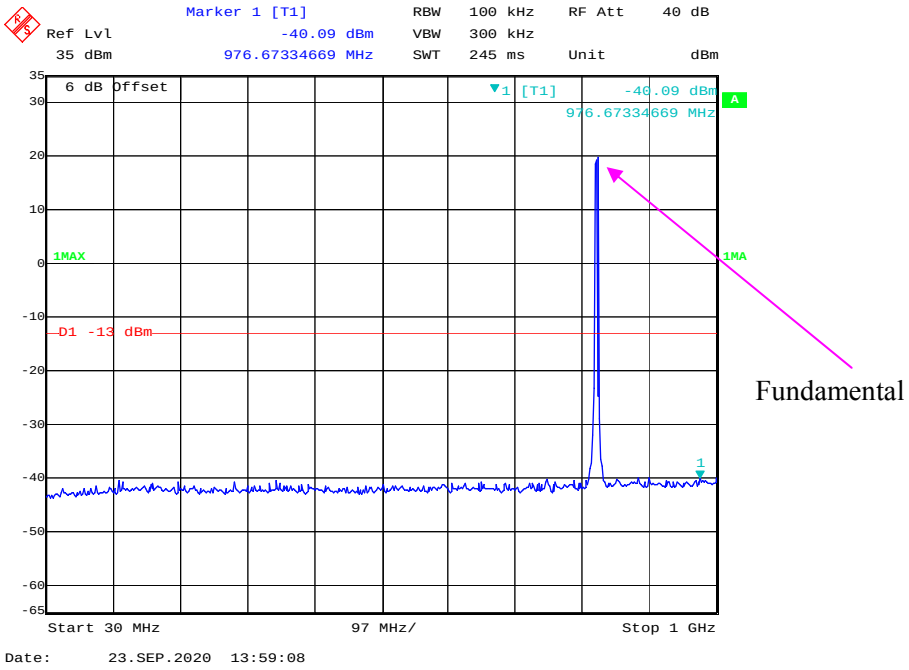
30 MHz – 1GHz WCDMA (HSUPA) Mode, Low channel



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

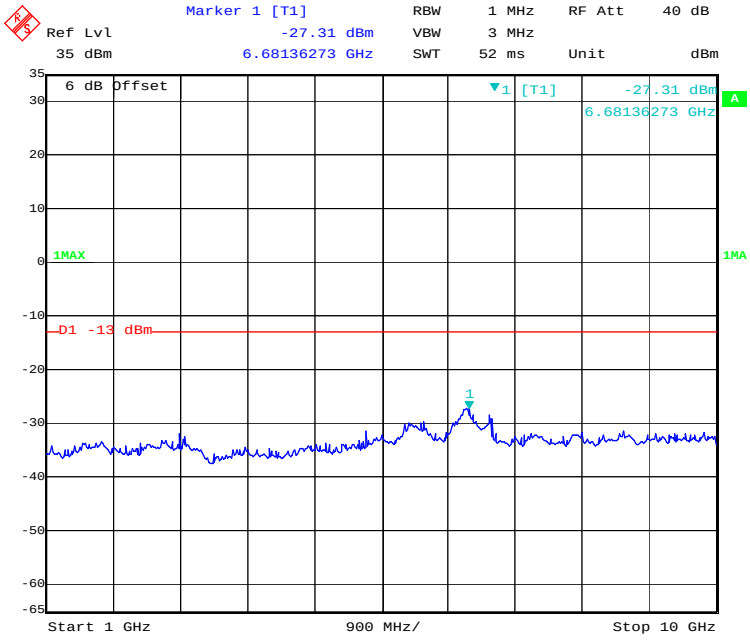


30 MHz – 1GHz WCDMA (HSPA+) Mode, Low channel



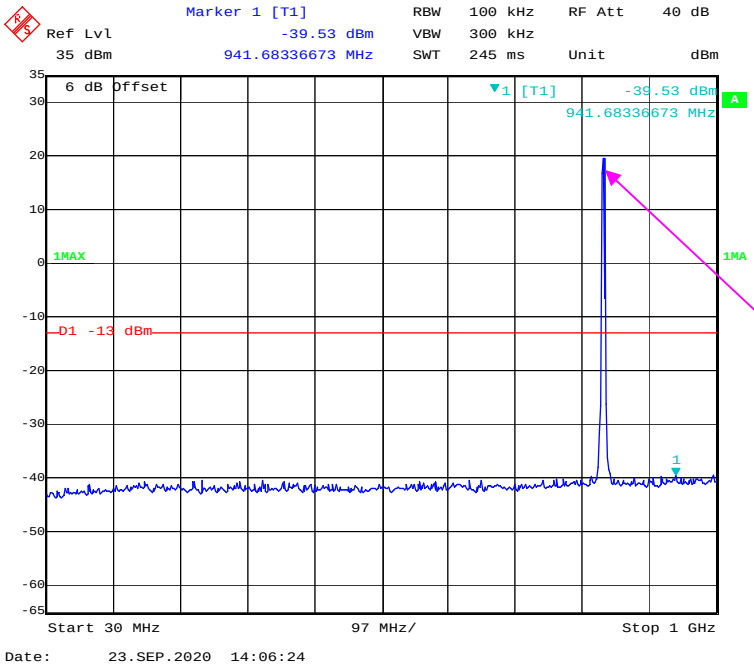
Date: 23.SEP.2020 13:59:08

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

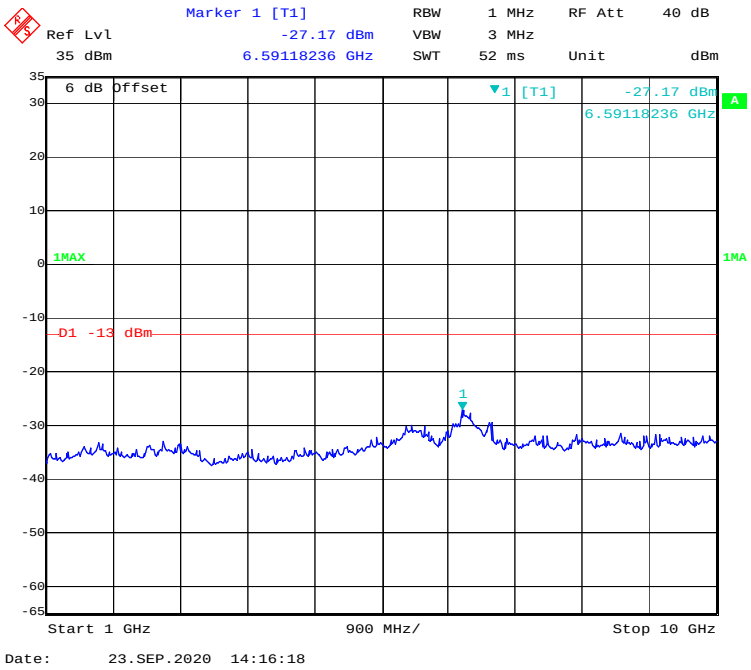


Date: 23.SEP.2020 14:17:19

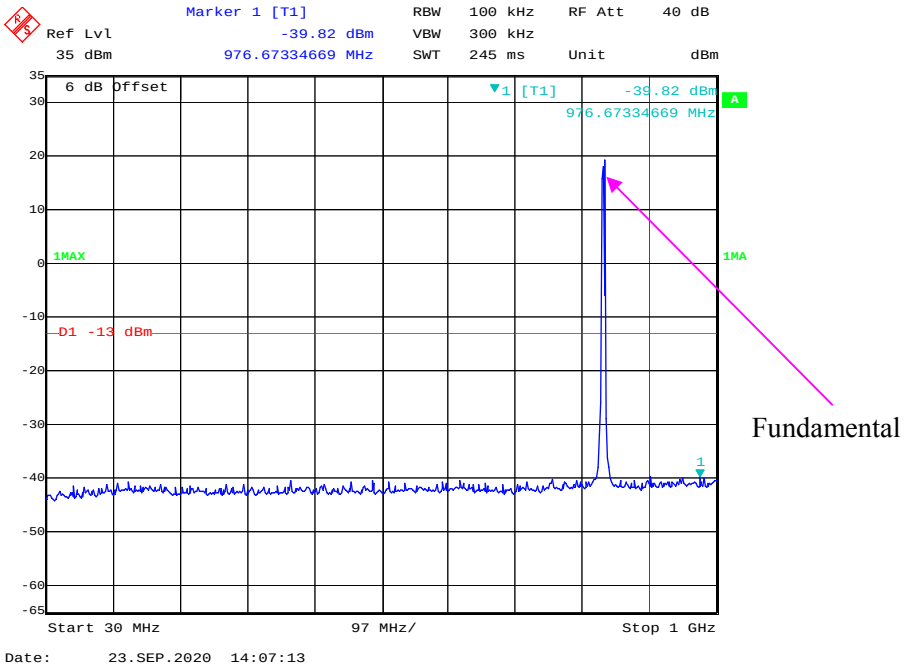
30 MHz – 1GHz WCDMA (Rel 99) Mode, Middle channel



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



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



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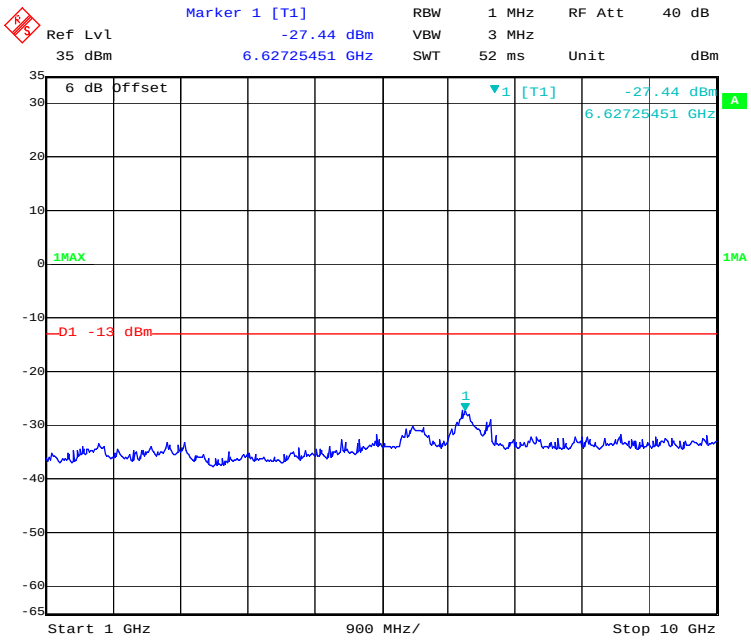
1 GHz – 10 GHz WCDMA (HSDPA) Mode, Middle channel



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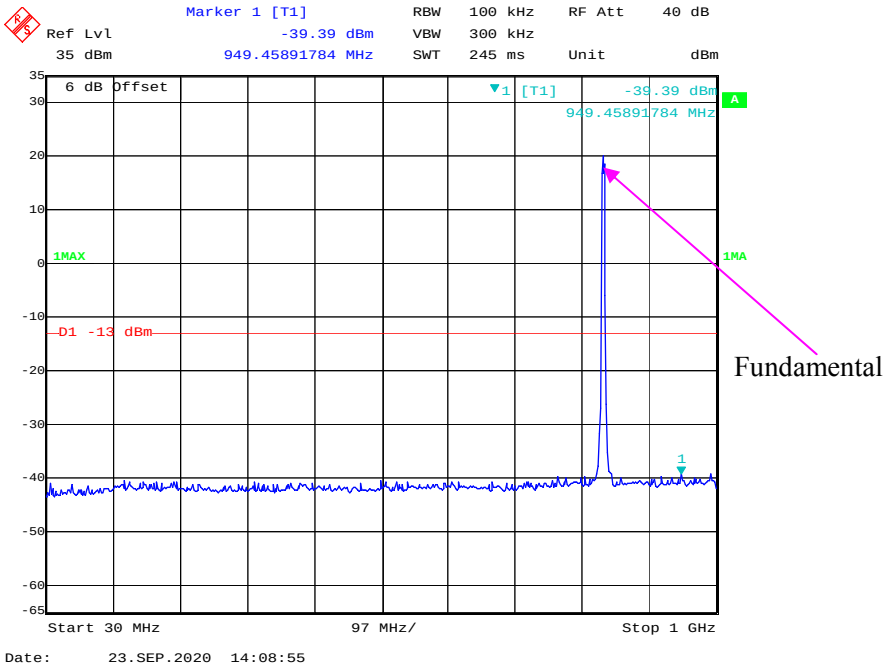
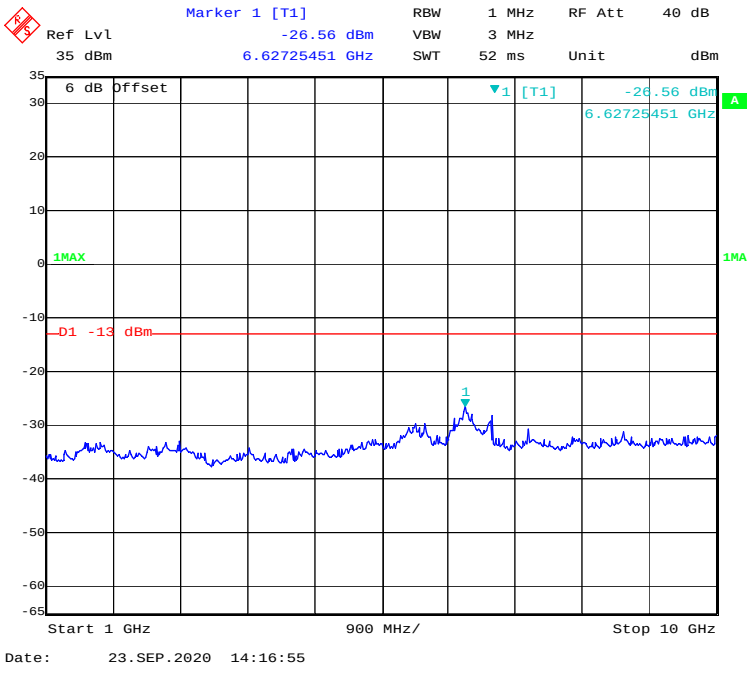
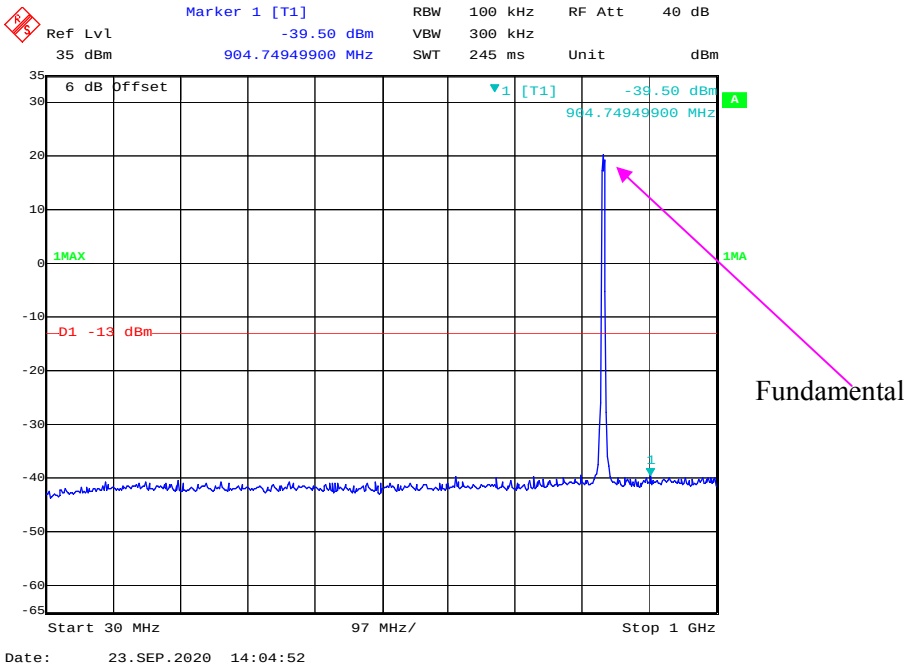
30 MHz – 1GHz WCDMA (HSUPA) Mode, Middle channel



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



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

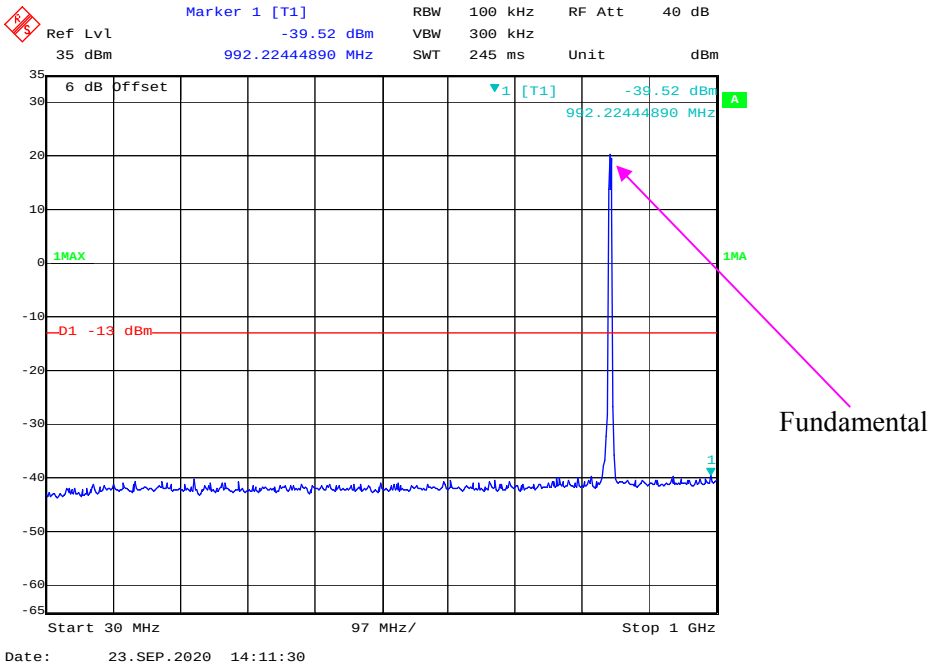


Date: 23.SEP.2020 14:04:52

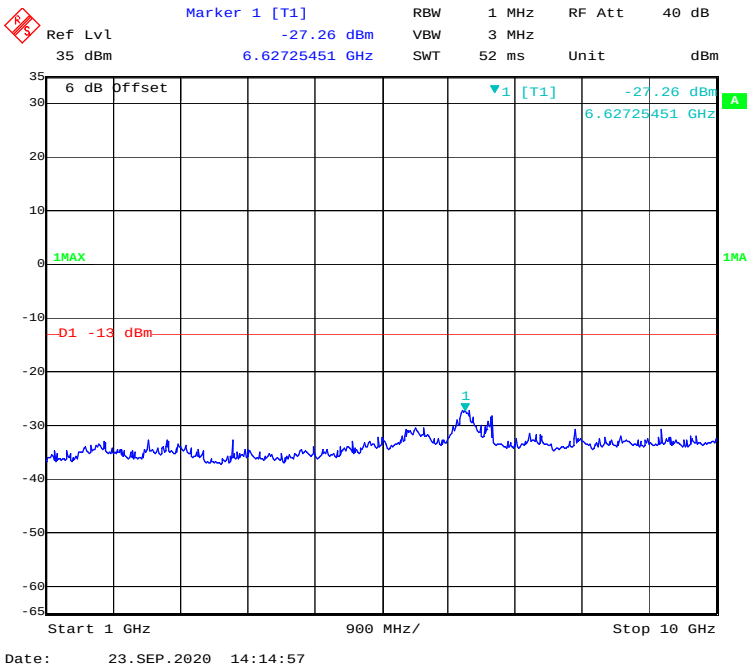
1 GHz – 10 GHz WCDMA (HSPA+) Mode, Middle channel

Date: 23.SEP.2020 14:15:54

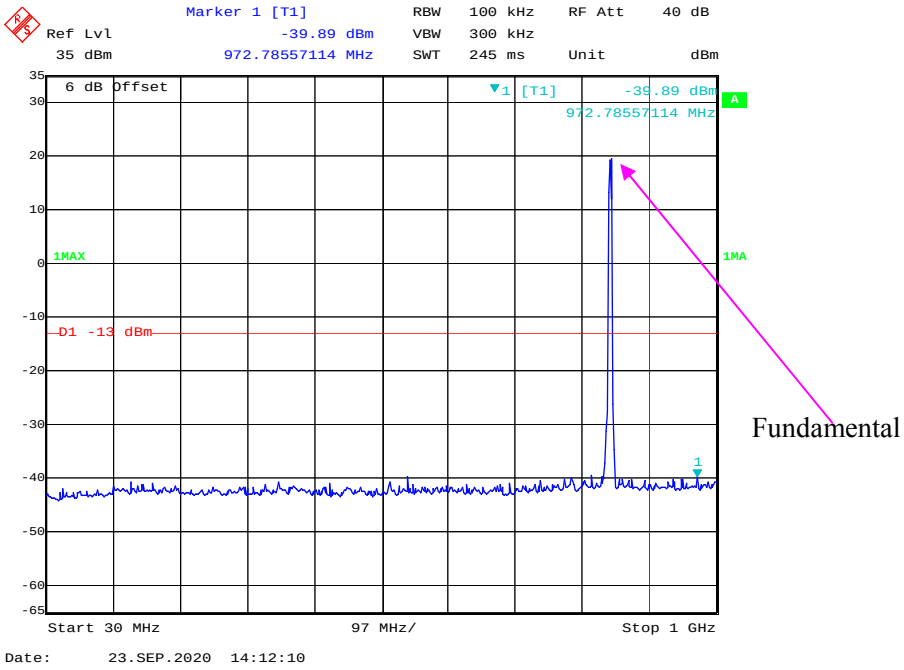
30 MHz – 1GHz WCDMA (Rel 99) Mode, High channel



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



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



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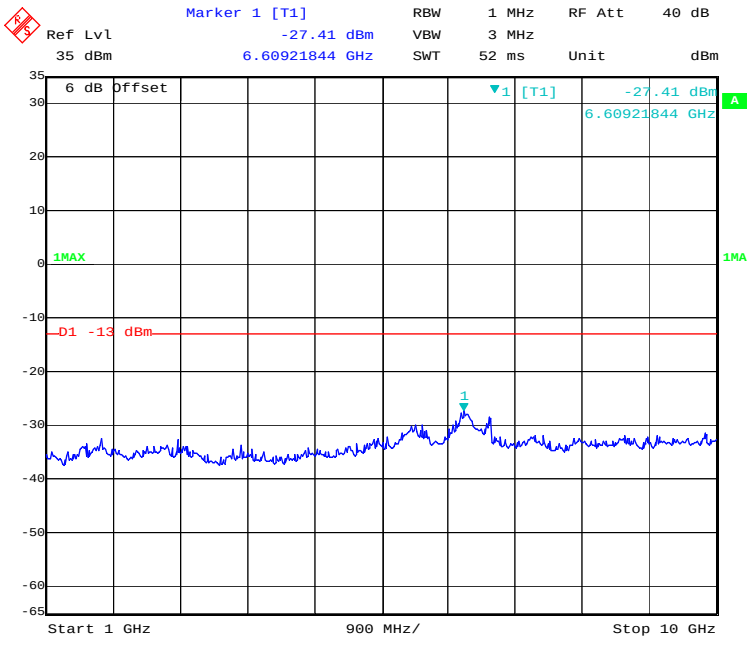
1 GHz – 10 GHz WCDMA (HSDPA) Mode, High channel



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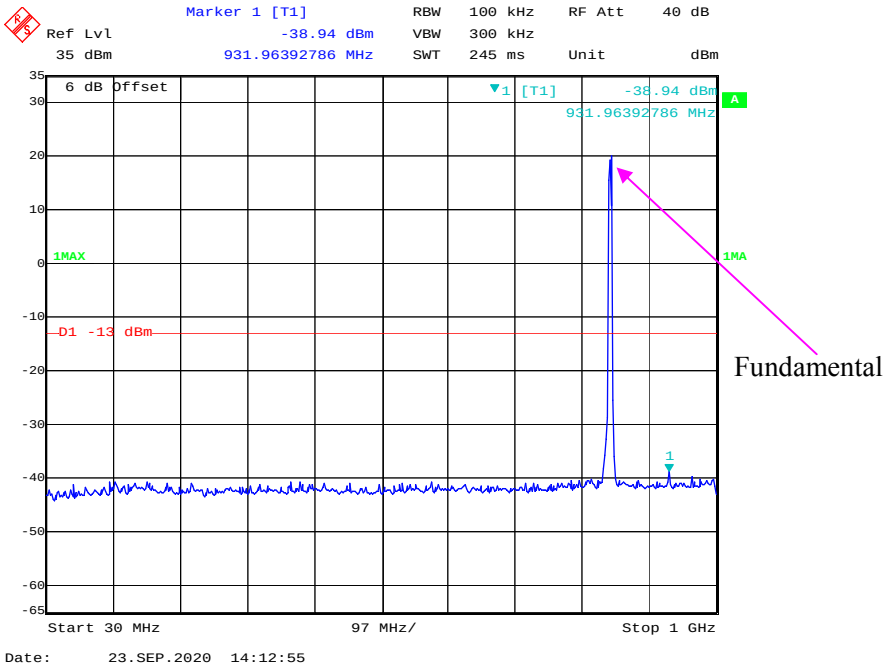
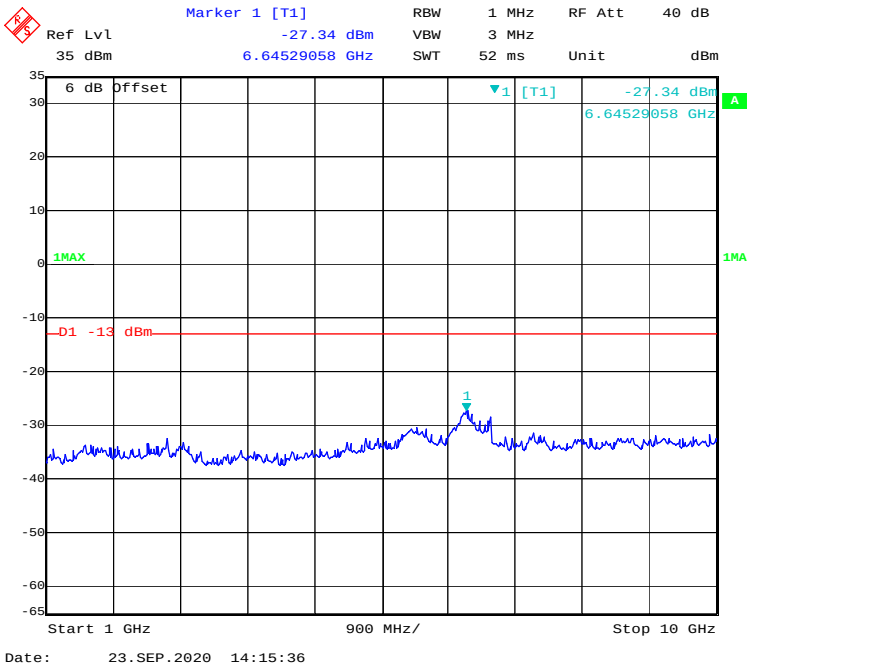
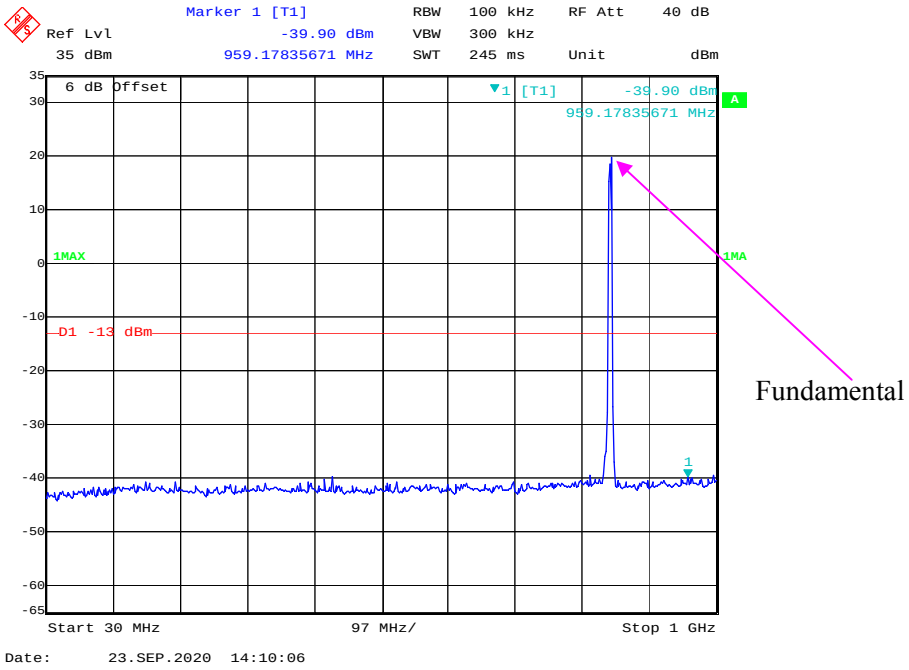
30 MHz – 1GHz WCDMA (HSUPA) Mode, High channel



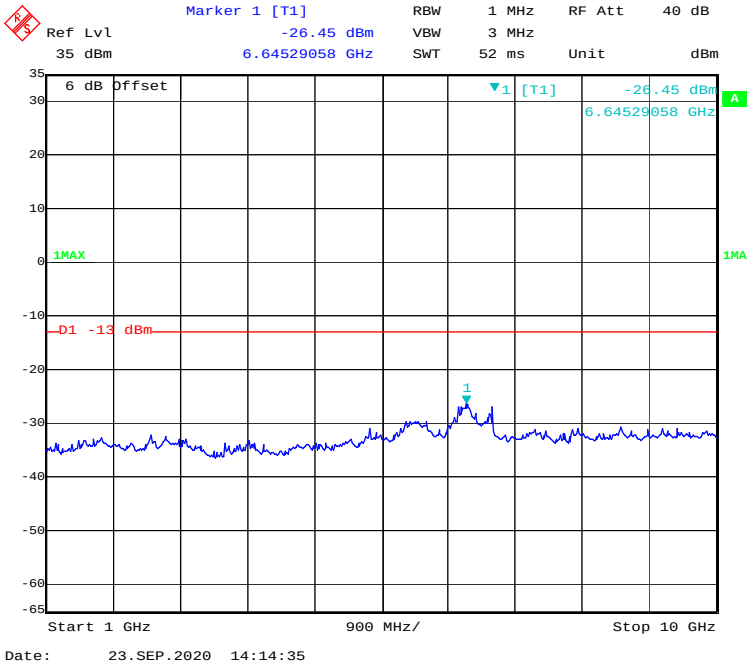
1 GHz – 10 GHz WCDMA (HSUPA) Mode, High channel



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

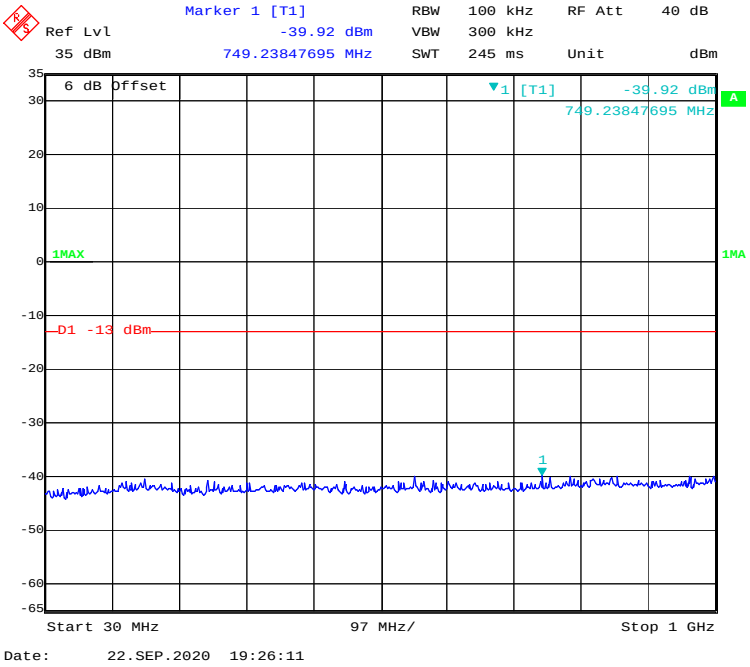


1 GHz – 10 GHz WCDMA (HSPA+) Mode, High channel

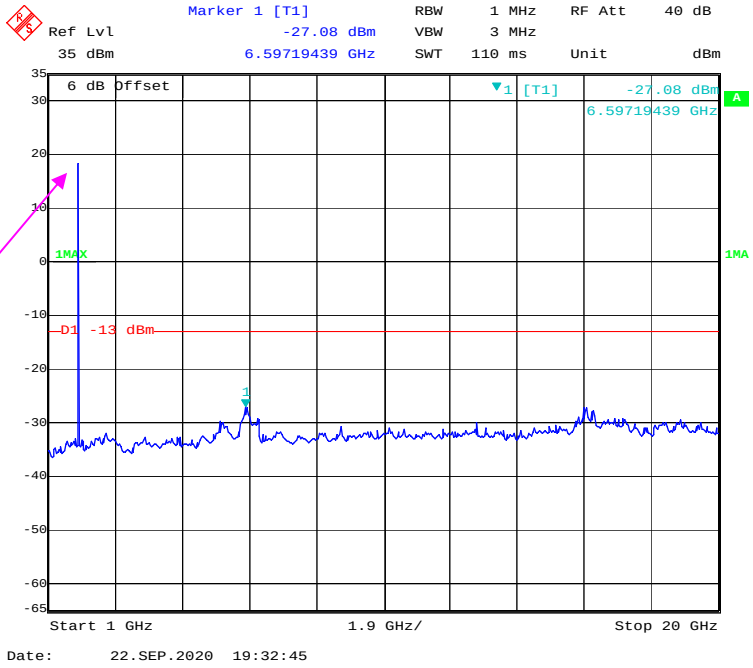


PCS 1900 Band:

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

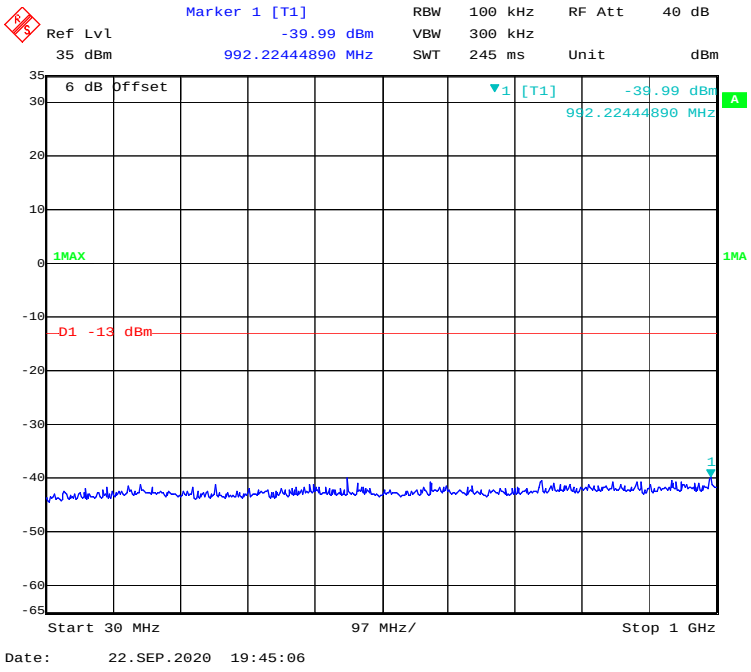


1 GHz – 20 GHz (GPRS Mode) , Low channel

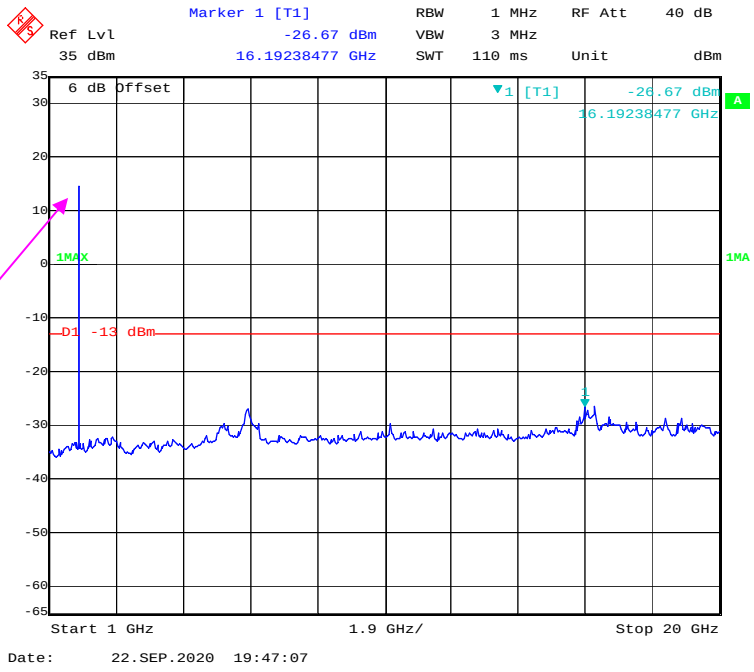


Fundamental

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

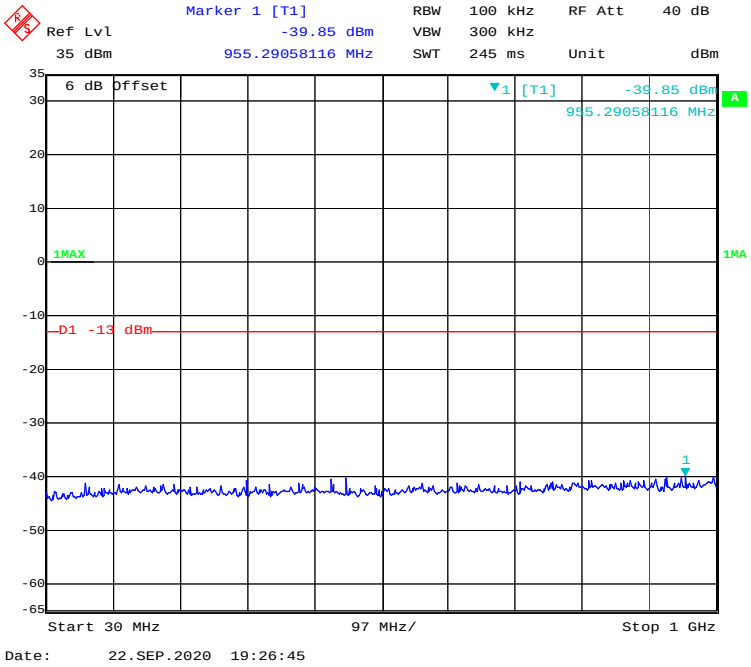


1 GHz – 20 GHz (EGPRS Mode) , Low channel

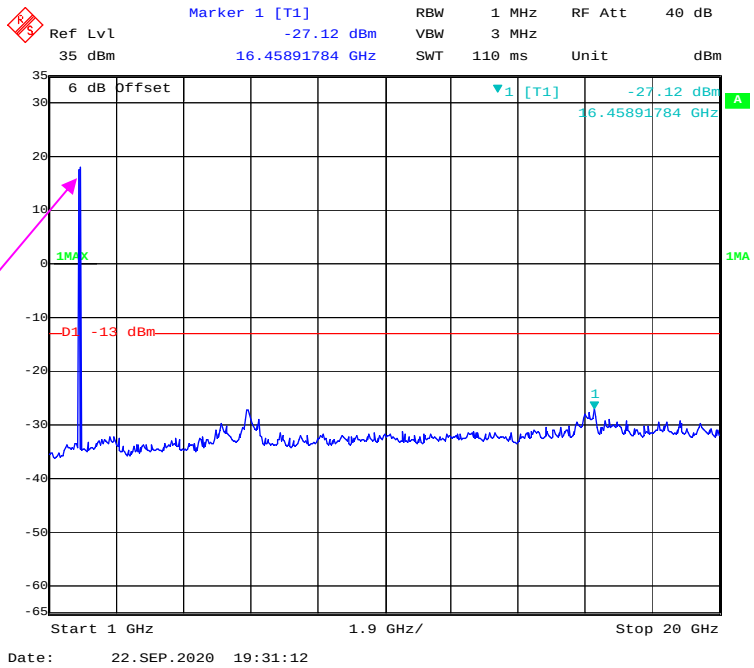


Fundamental

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

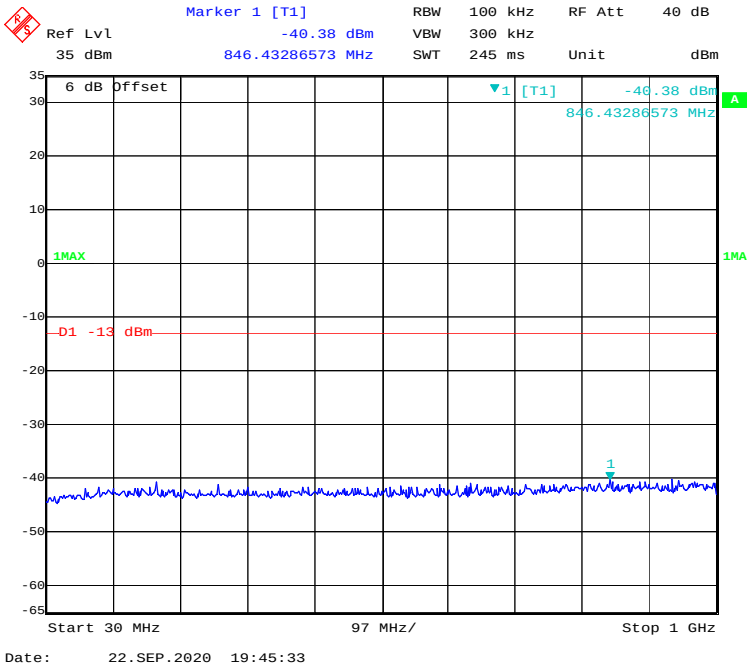


1 GHz – 20 GHz (GPRS Mode) , Middle channel

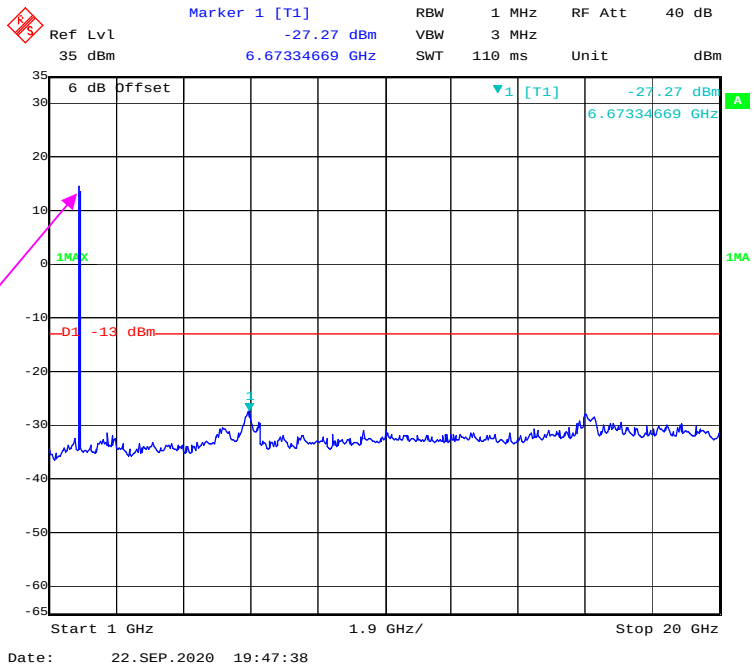


Fundamental

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

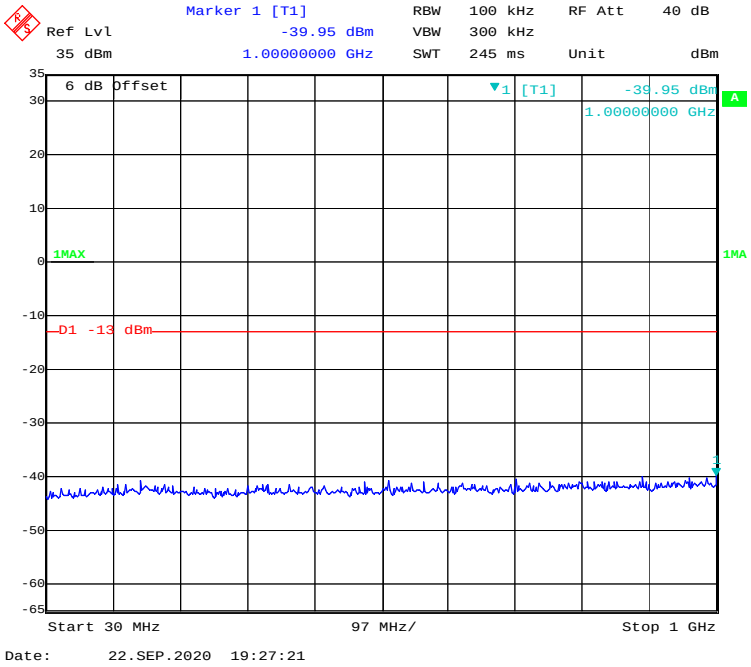


1 GHz – 20 GHz (EGPRS Mode) , Middle channel

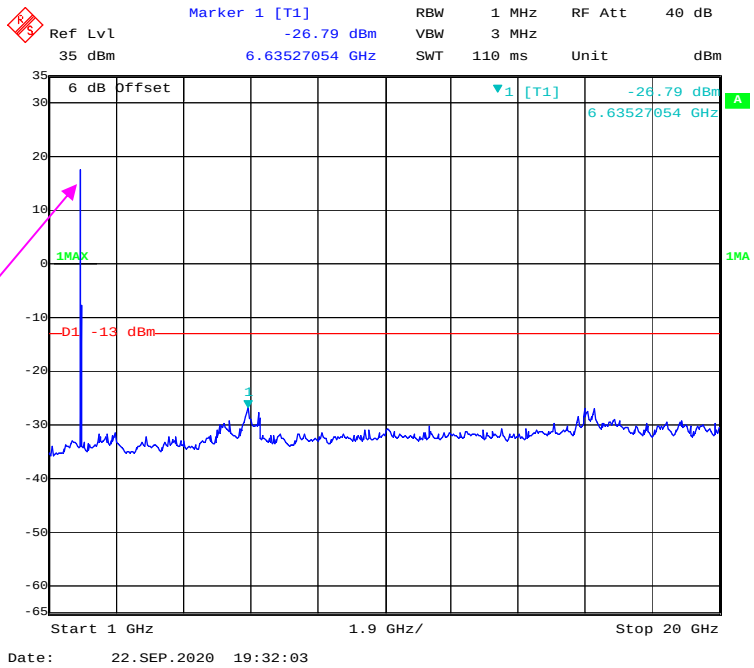


Fundamental

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

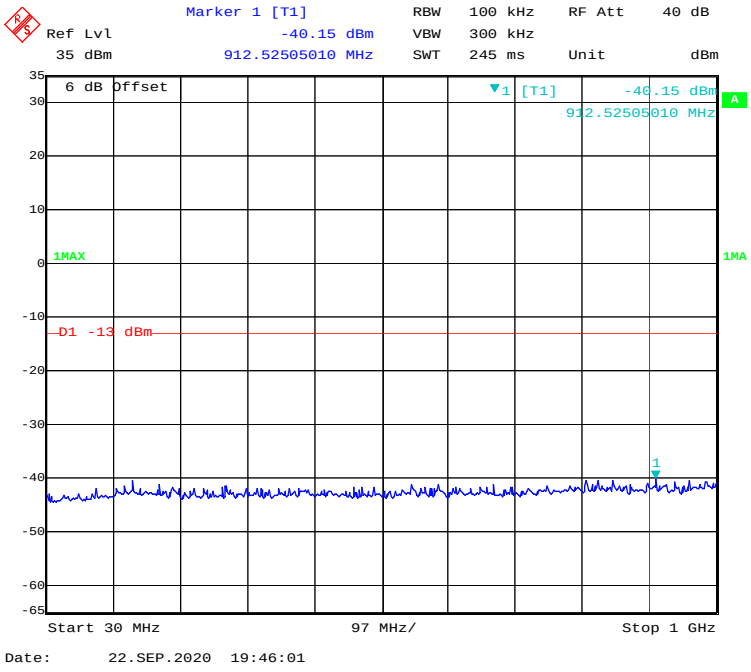


1 GHz – 20 GHz (GPRS Mode) , High channel

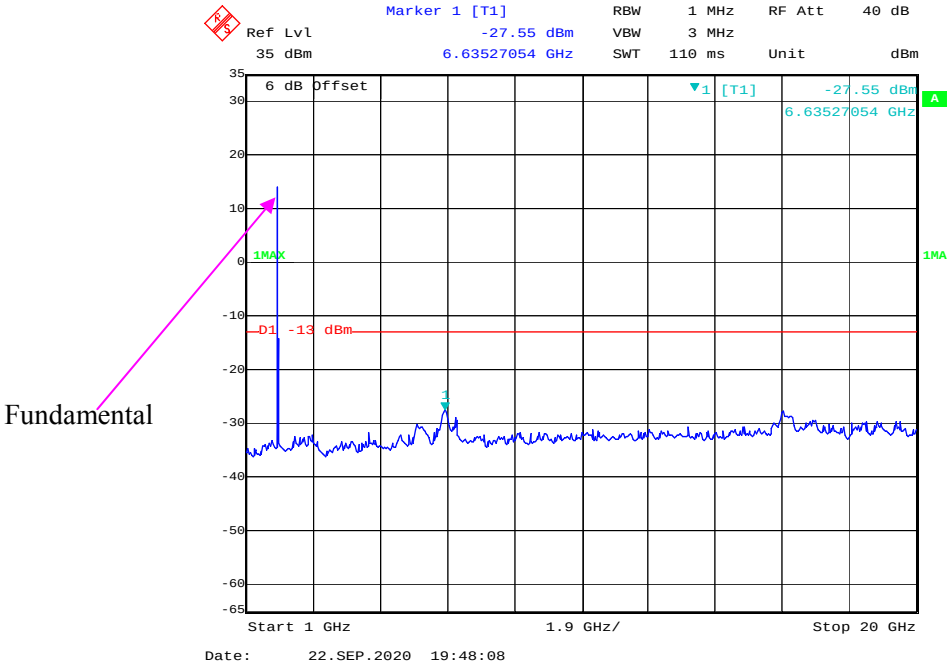


Fundamental

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

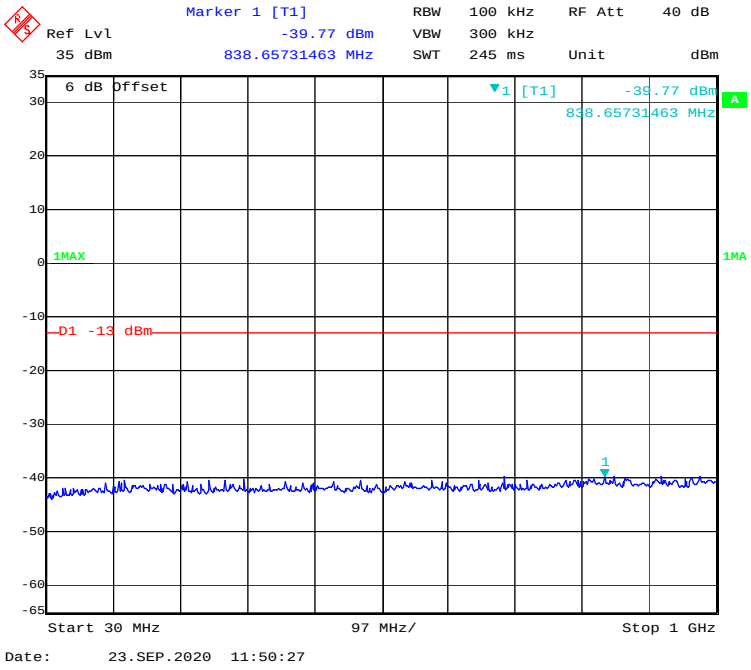


1 GHz – 20 GHz (EGPRS Mode) , High channel

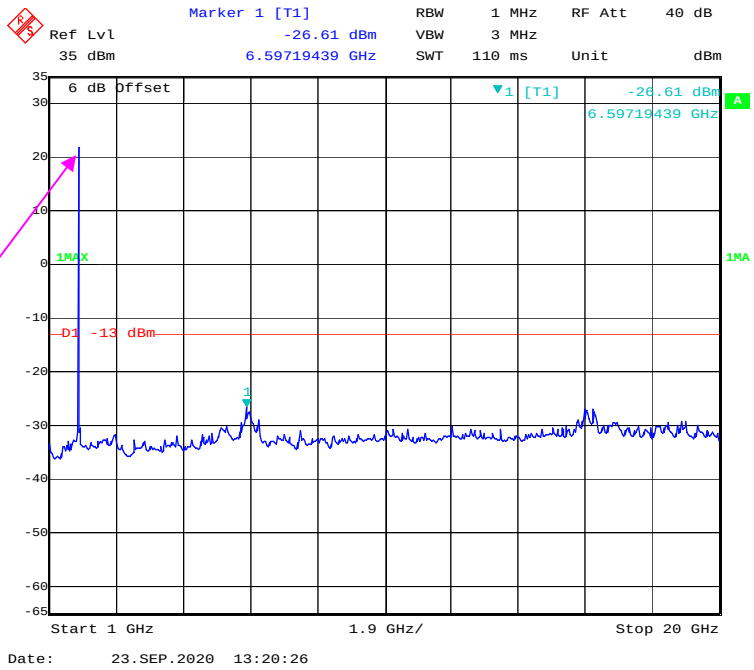


WCDMA Band II:

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

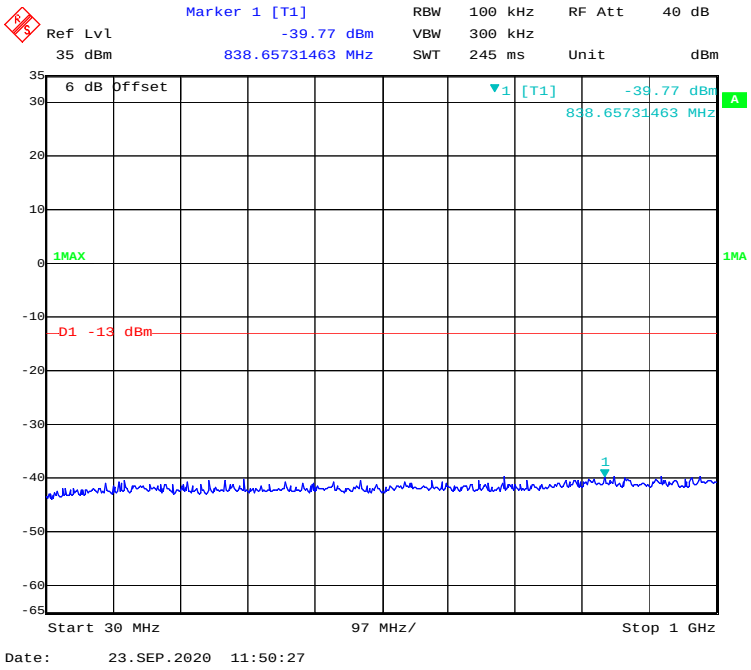


1 GHz – 20 GHz WCDMA (Rel 99) Mode , Low channel

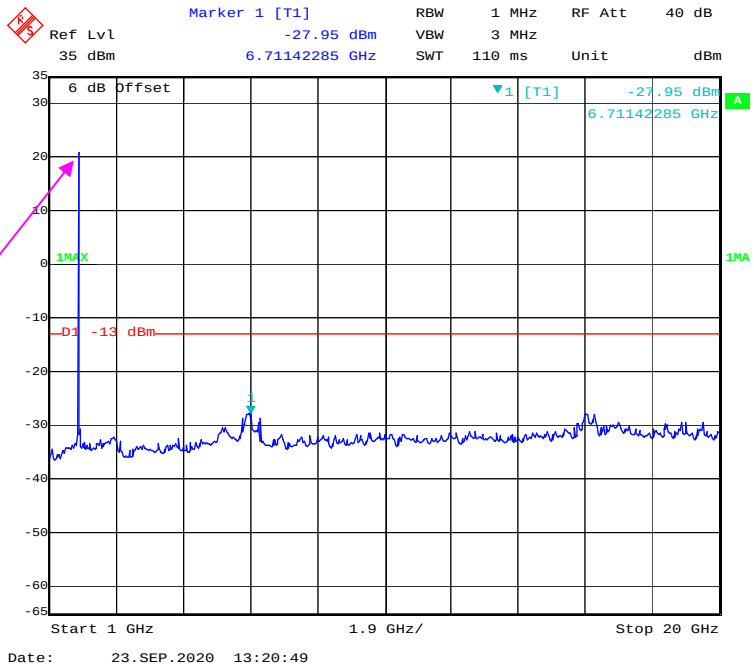


Fundamental

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

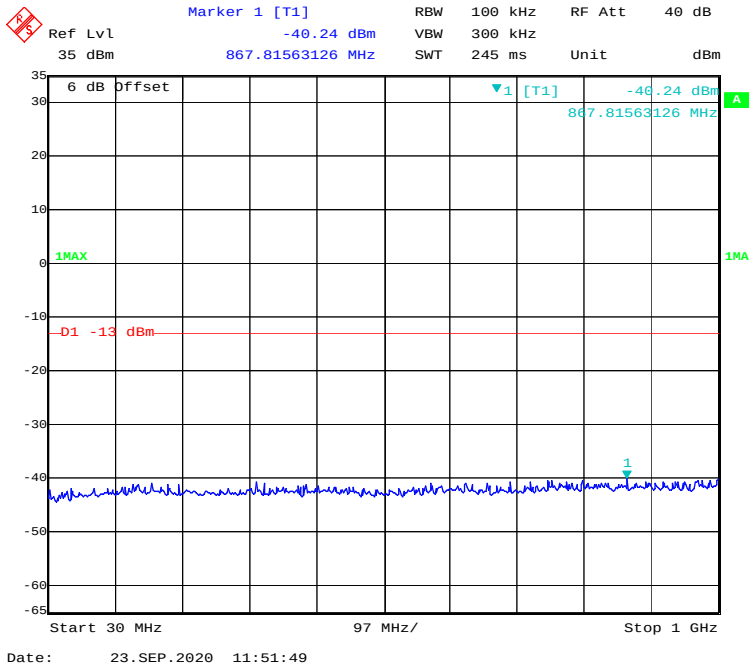


1 GHz – 20 GHz WCDMA (HSDPA) Mode , Low channel

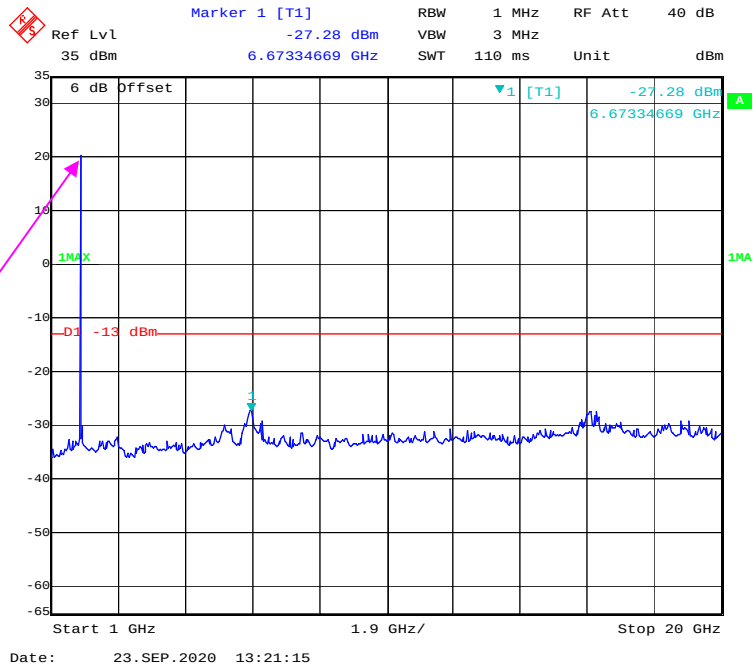


Fundamental

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

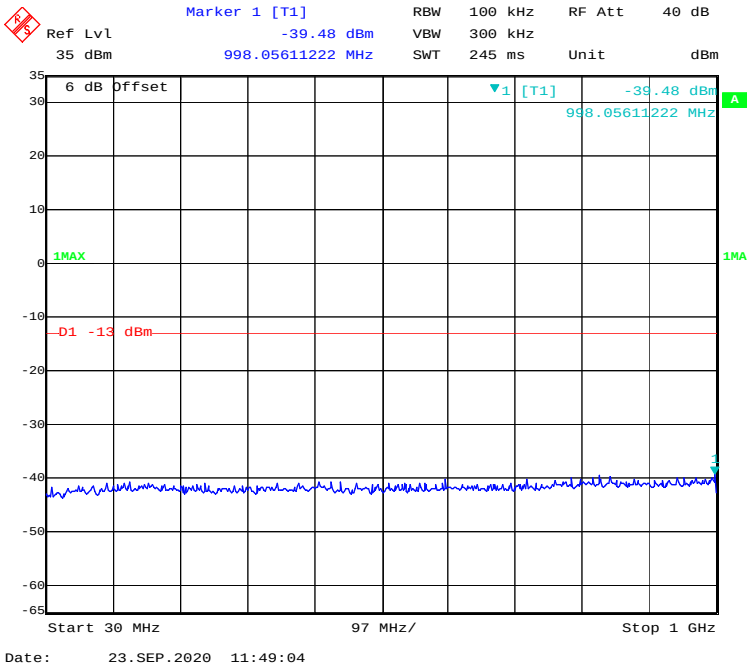


1 GHz – 20 GHz WCDMA (HSUPA) Mode , Low channel

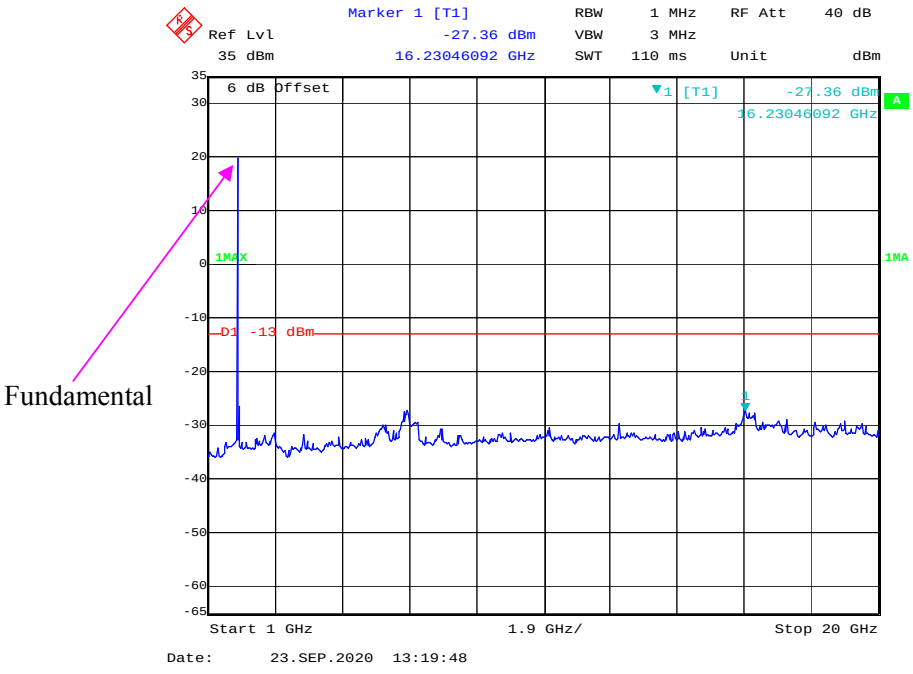


Fundamental

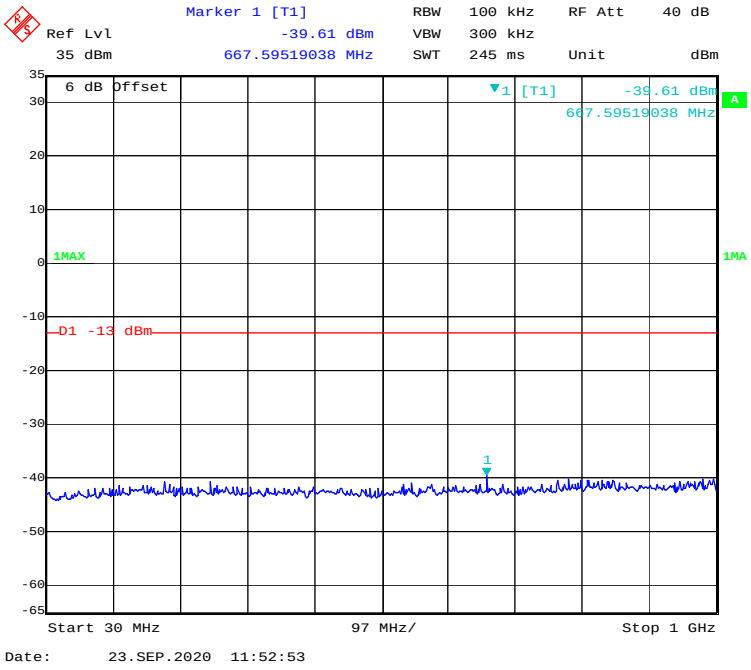
30 MHz – 1GHz WCDMA (HSPA+) Mode , Low channel



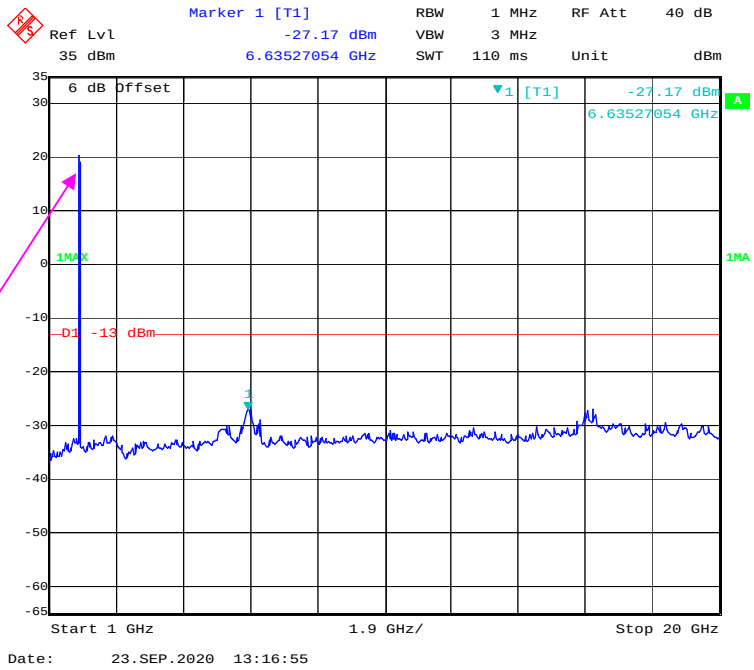
1 GHz – 20 GHz WCDMA (HSPA+) Mode , Low channel



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

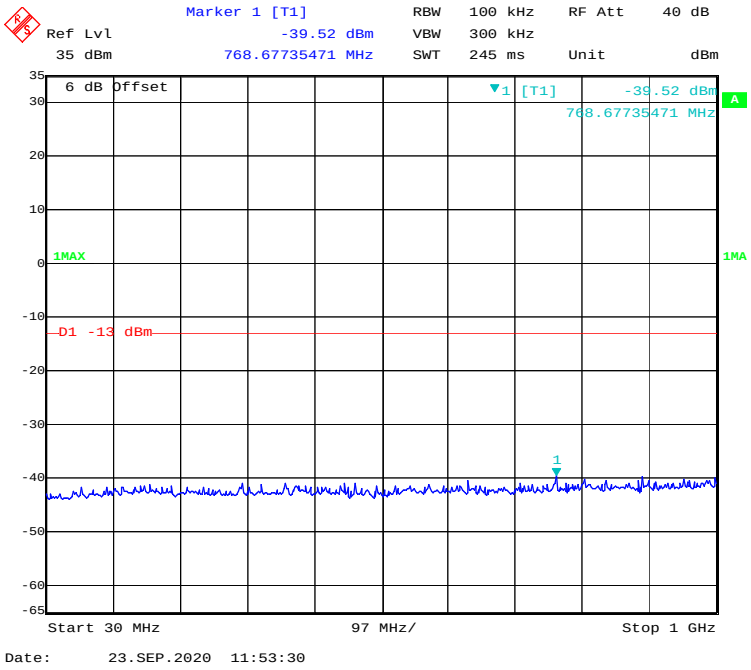


1 GHz – 20 GHz WCDMA (Rel 99) Mode , Middle channel

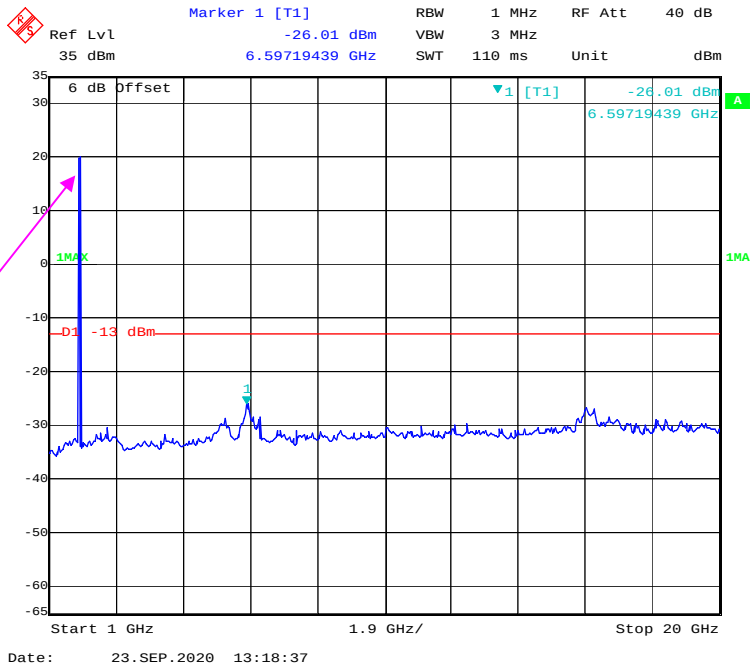


Fundamental

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

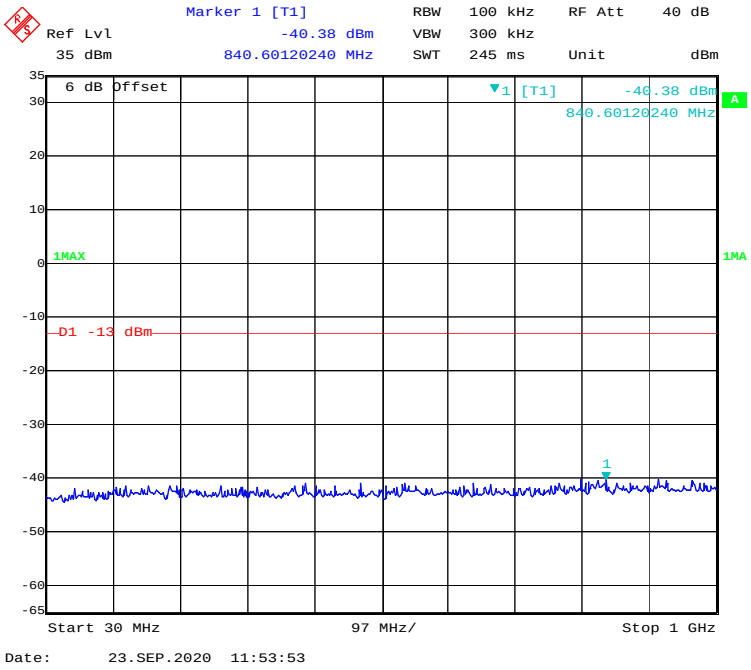


1 GHz – 20 GHz WCDMA (HSDPA) Mode , Middle channel

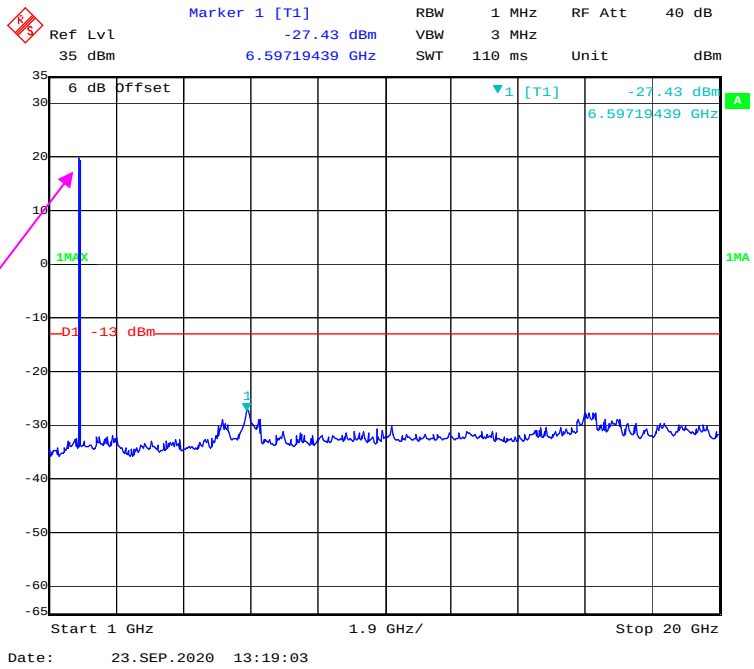


Fundamental

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

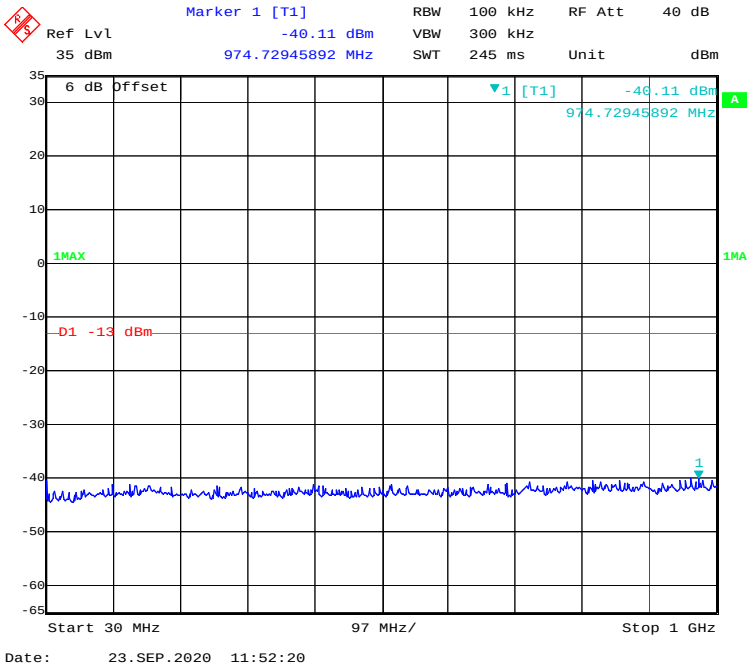


1 GHz – 20 GHz WCDMA (HSUPA) Mode , Middle channel

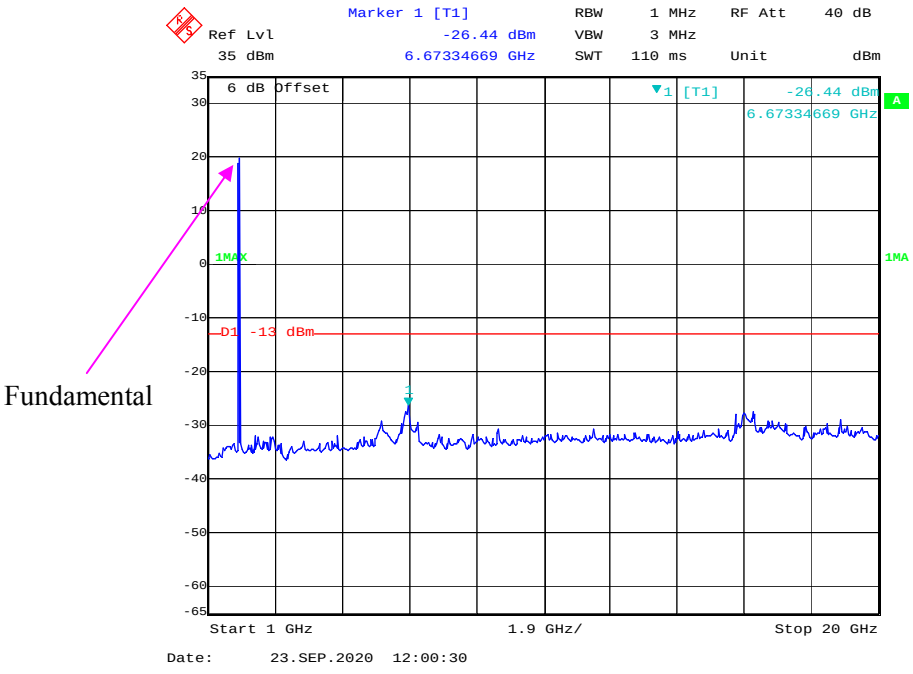


Fundamental

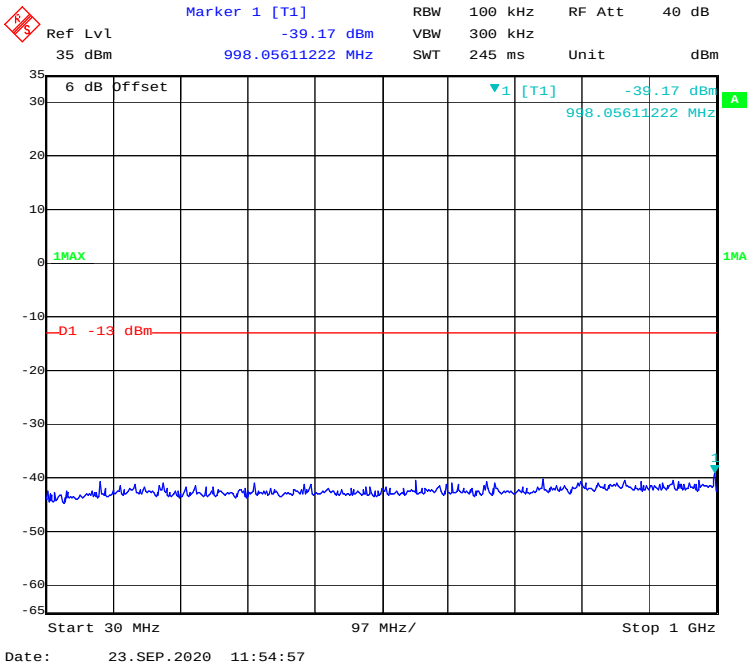
30 MHz – 1GHz WCDMA (HSPA+) Mode , Middle channel



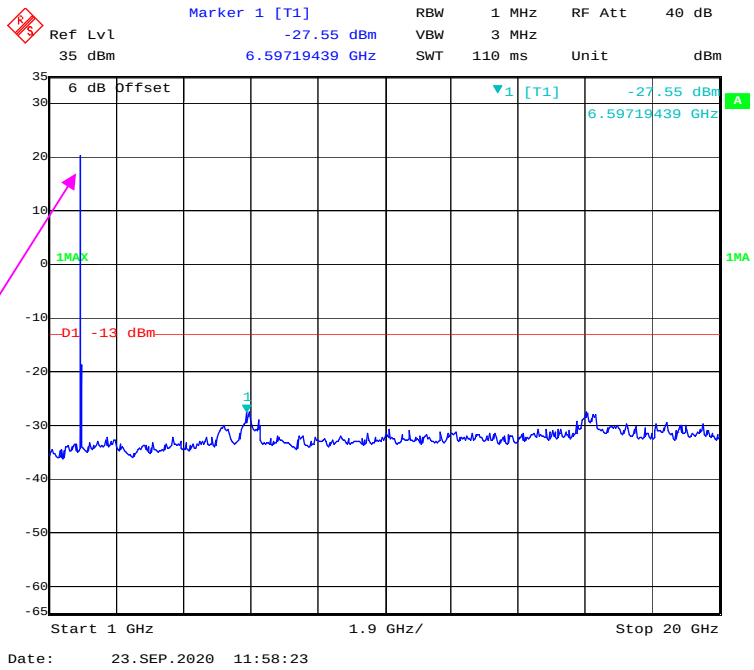
1 GHz – 20 GHz WCDMA (HSPA+) Mode , Middle channel



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

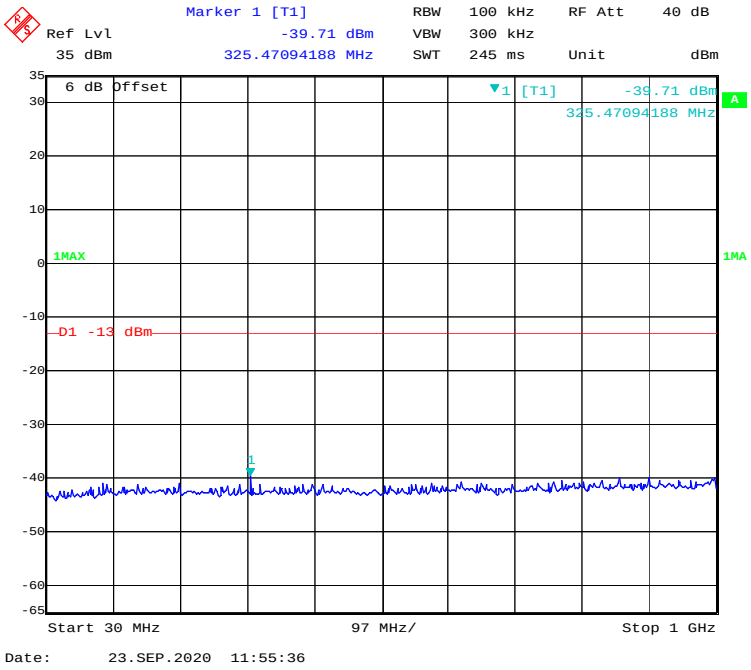


1 GHz – 20 GHz WCDMA (Rel 99) Mode , High channel

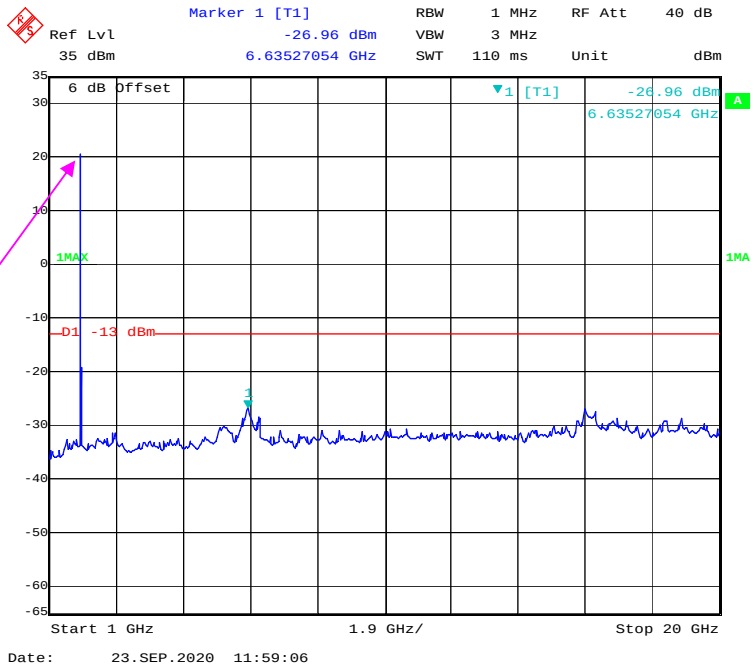


Fundamental

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

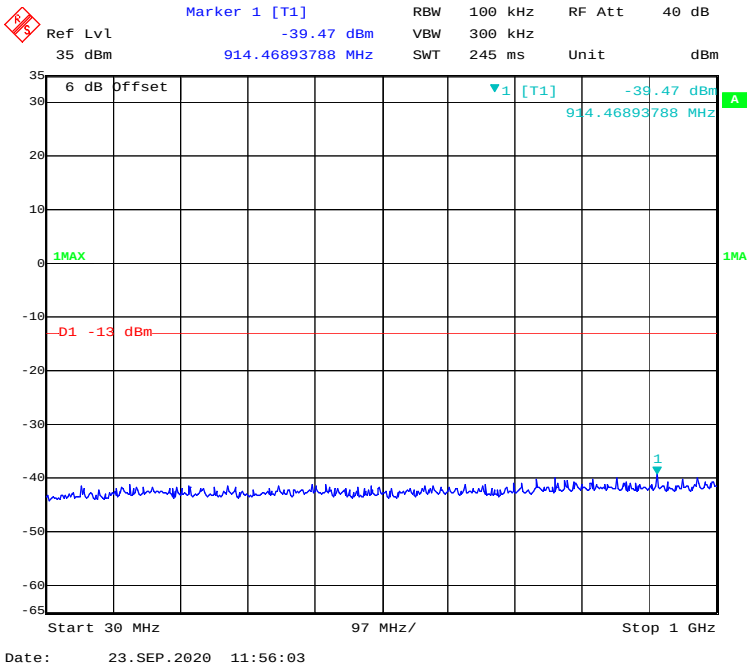


1 GHz – 20 GHz WCDMA (HSDPA) Mode , High channel

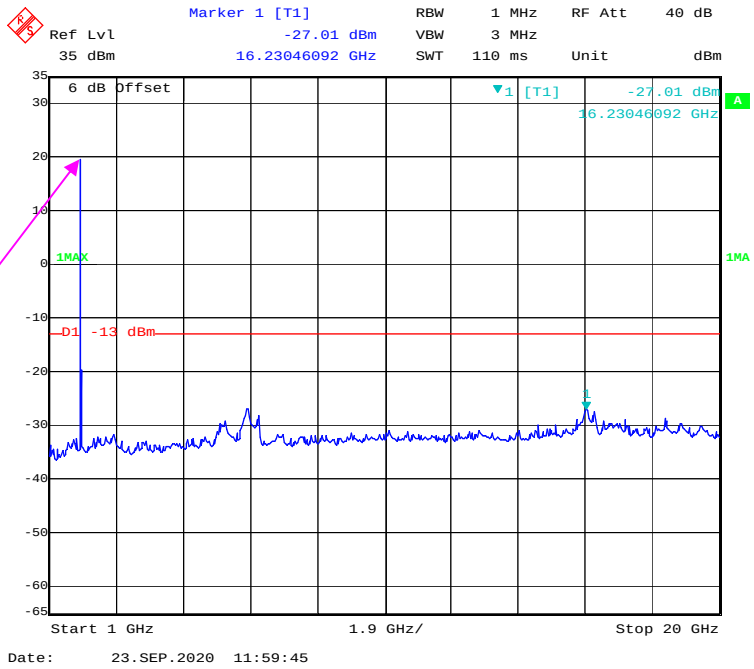


Fundamental

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

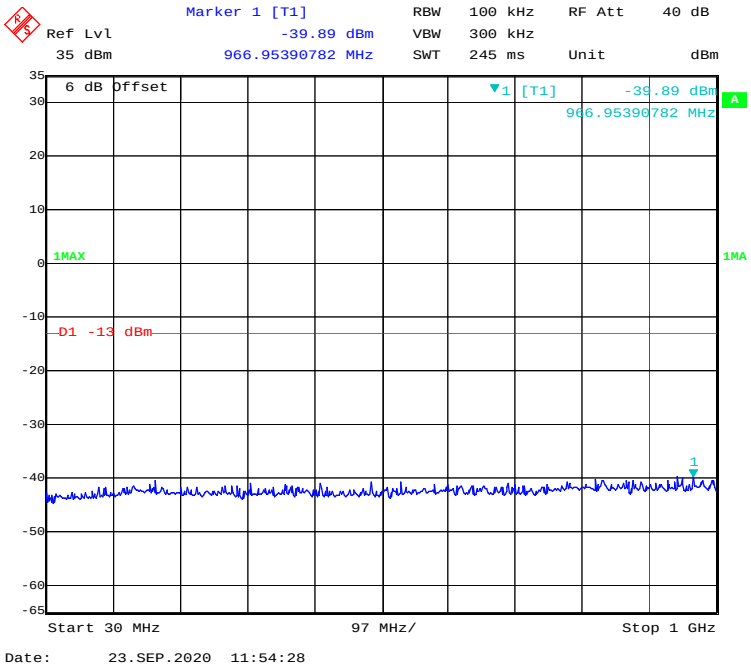


1 GHz – 20 GHz WCDMA (HSUPA) Mode , High channel

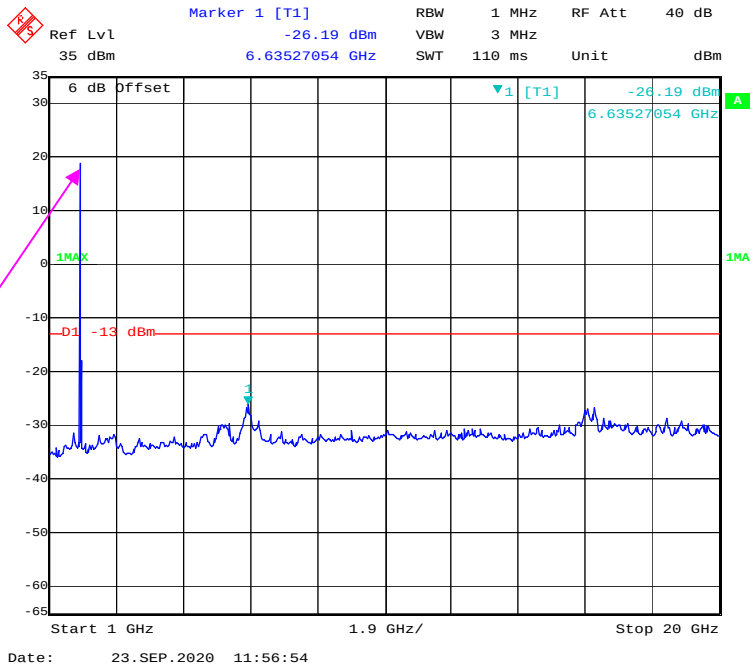


Fundamental

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



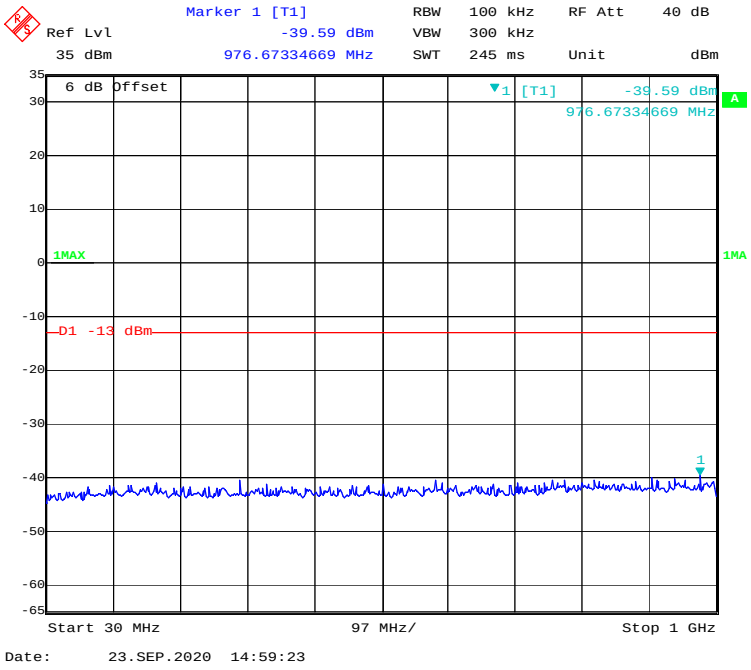
1 GHz – 20 GHz WCDMA (HSPA+) Mode , High channel



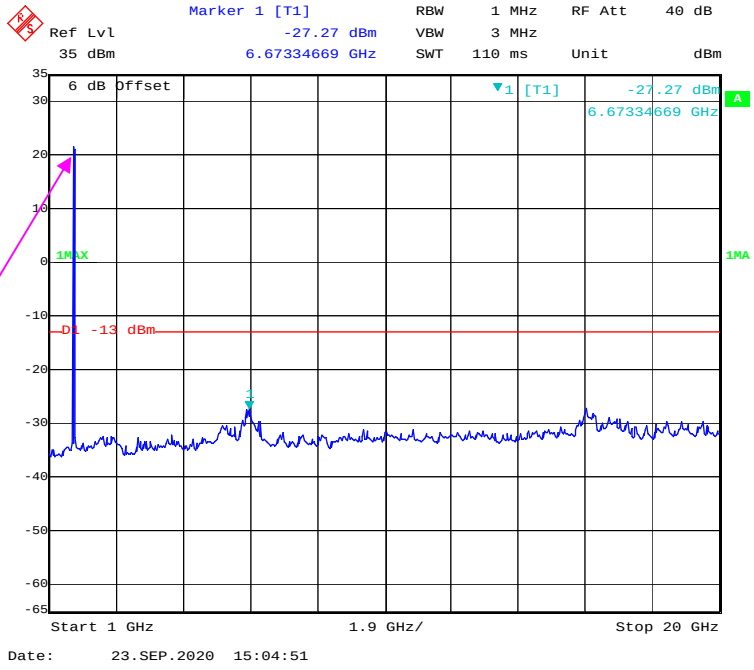
Fundamental

WCDMA Band IV:

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

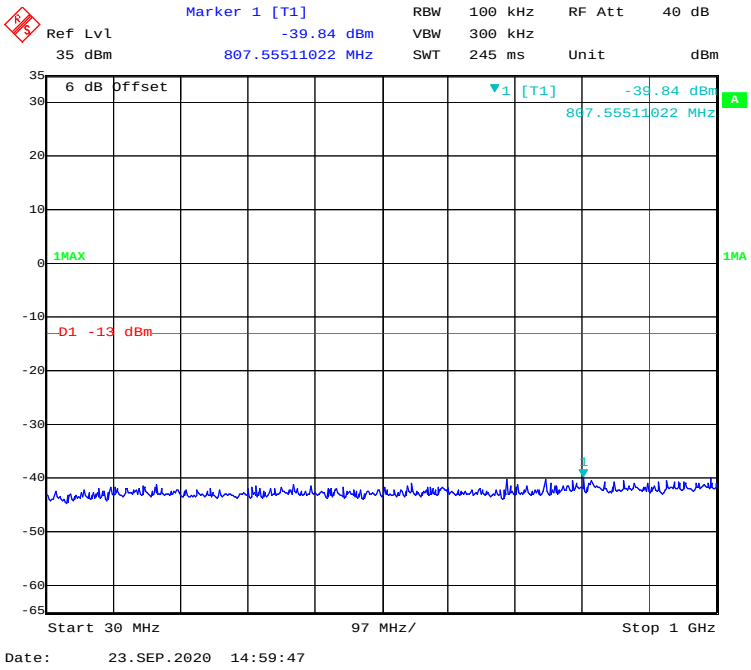


1 GHz – 20 GHz WCDMA (Rel 99) Mode, Low channel

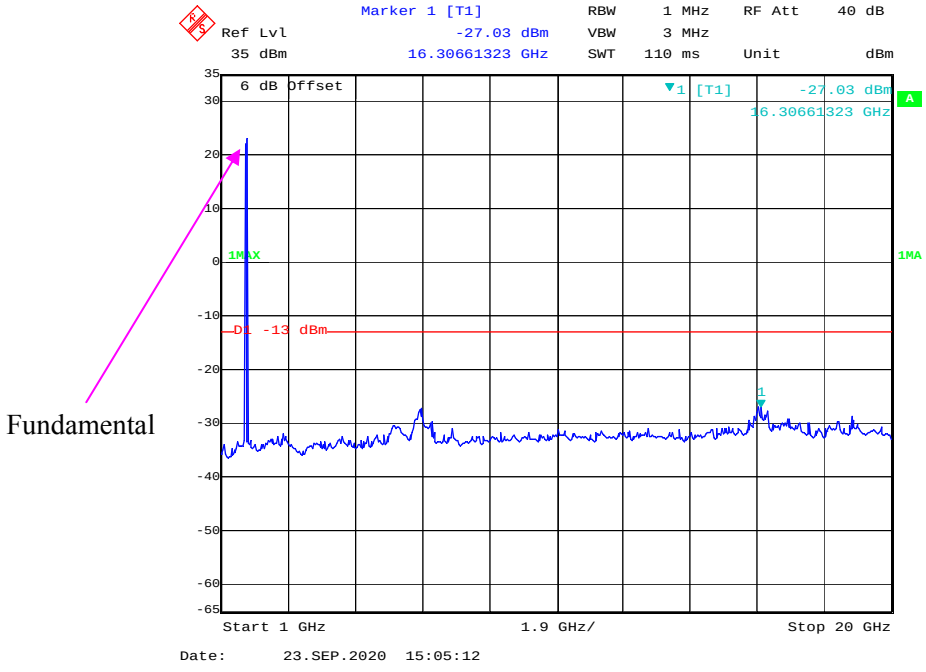


Fundamental

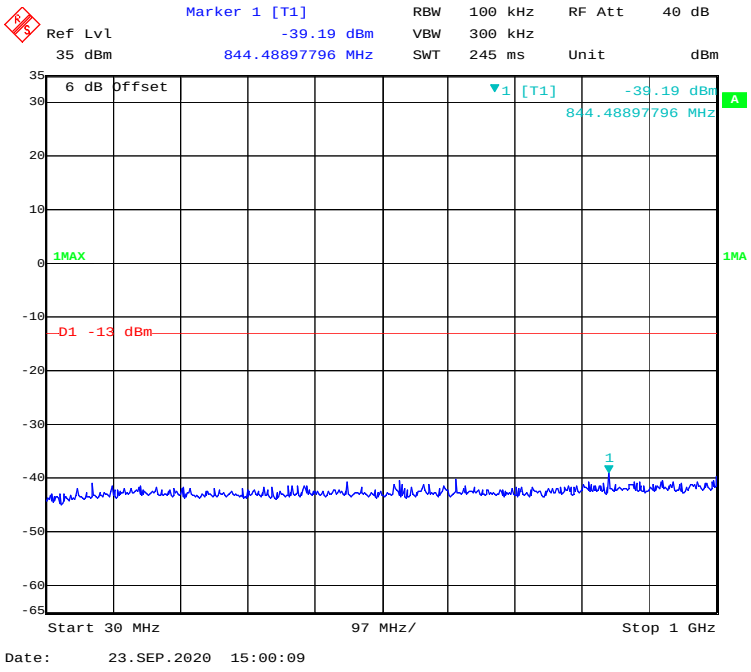
30 MHz – 1GHz WCDMA (HSDPA) Mode, Low channel



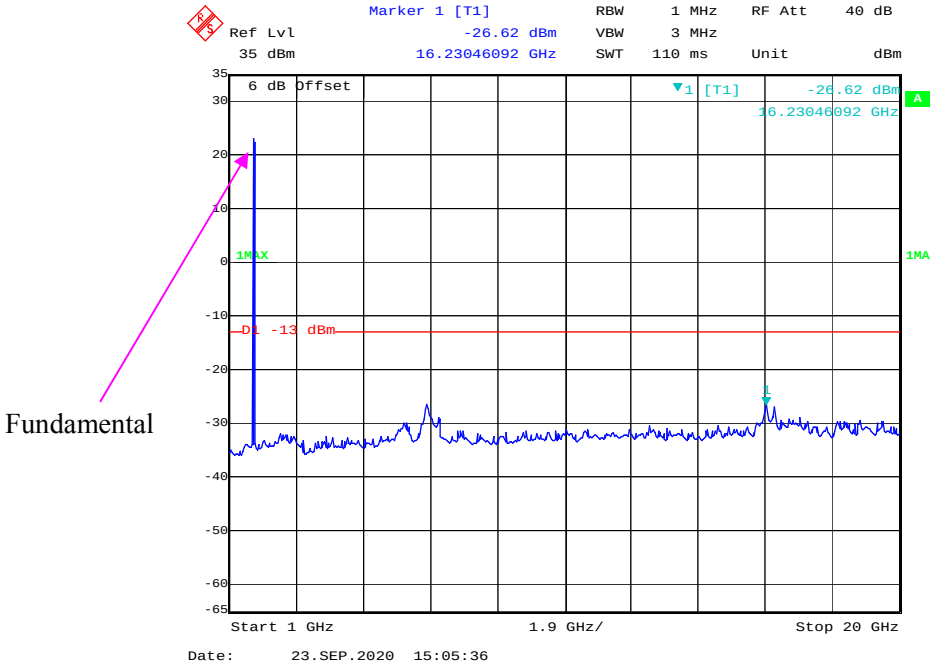
1 GHz – 20 GHz WCDMA (HSDPA) Mode, Low channel



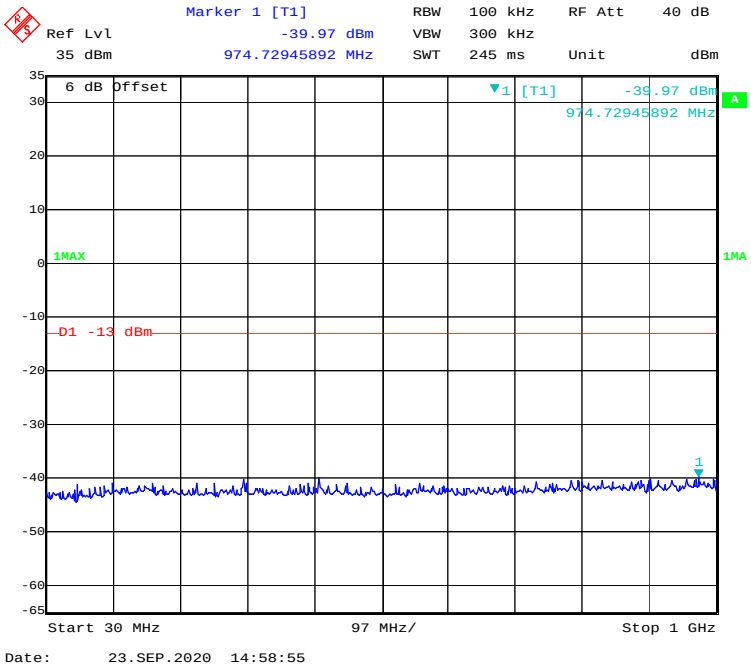
30 MHz – 1GHz WCDMA (HSUPA) Mode, Low channel



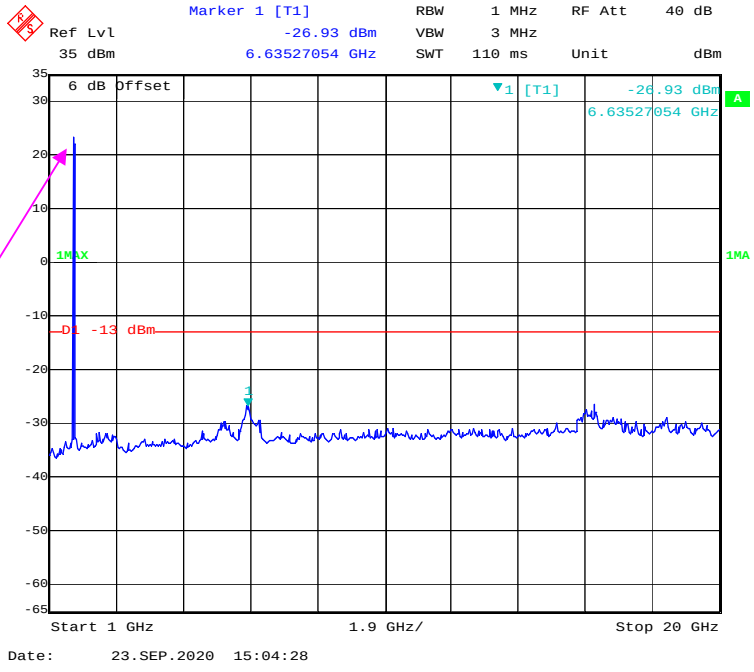
1 GHz – 20 GHz WCDMA (HSUPA) Mode, Low channel



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

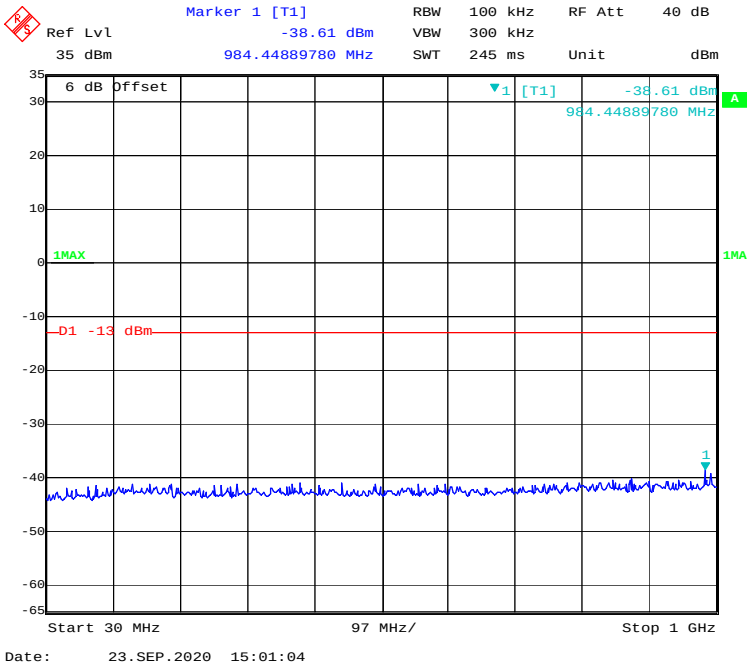


1 GHz – 20 GHz WCDMA (HSPA+) Mode, Low channel

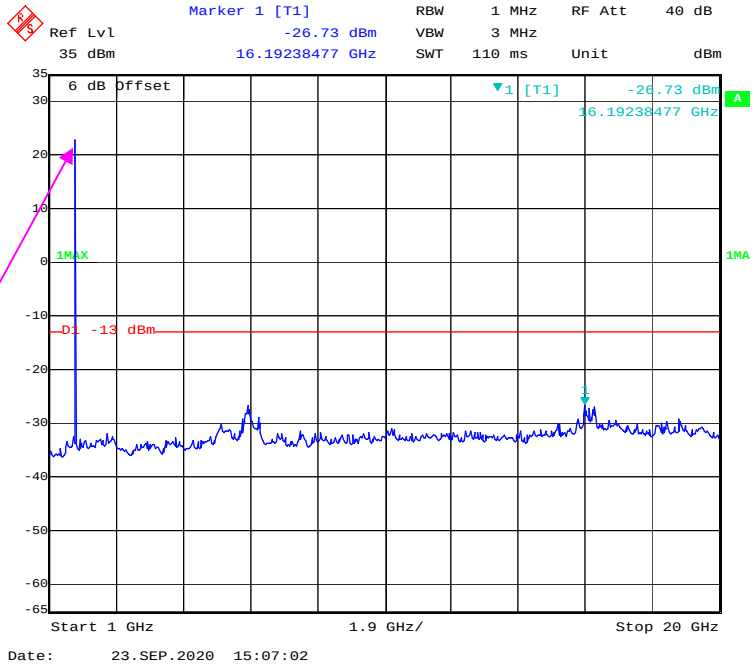


Fundamental

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

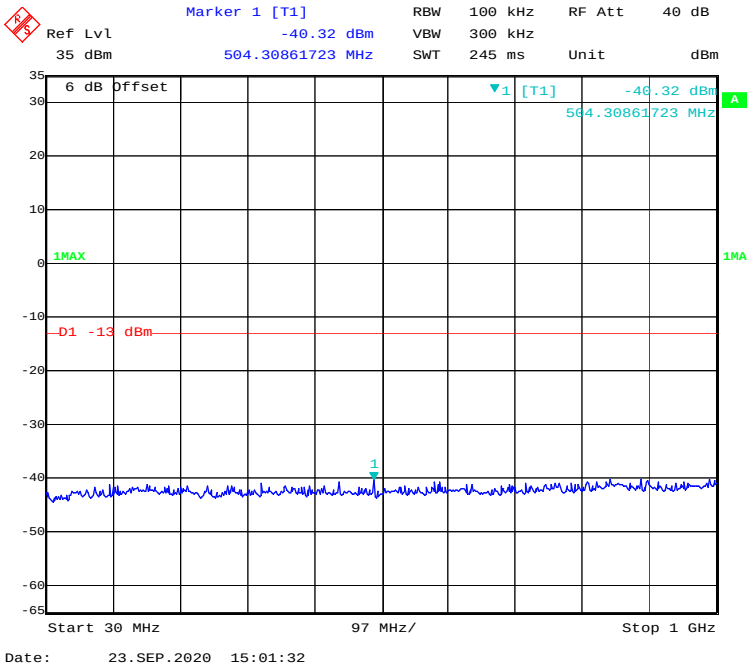


1 GHz – 20 GHz WCDMA (Rel 99) Mode, Middle channel

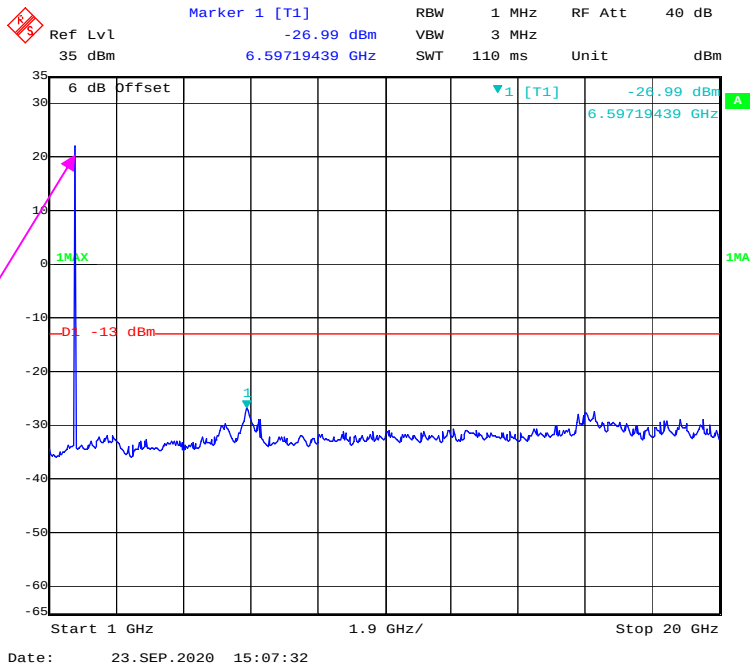


Fundamental

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

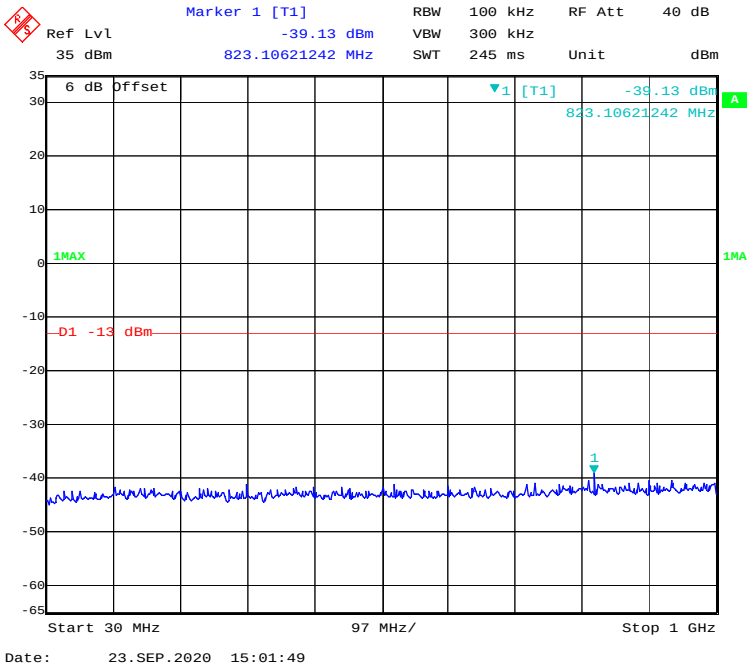


1 GHz – 20 GHz WCDMA (HSDPA) Mode, Middle channel

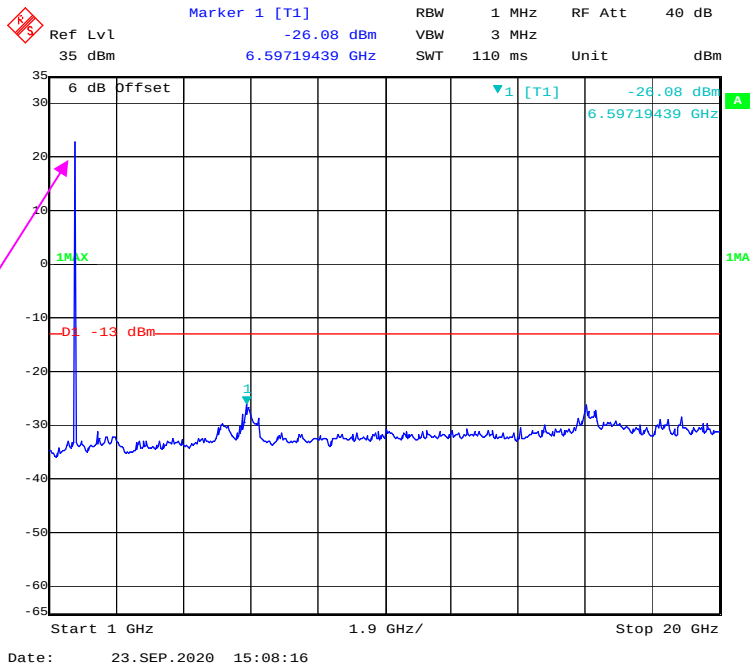


Fundamental

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

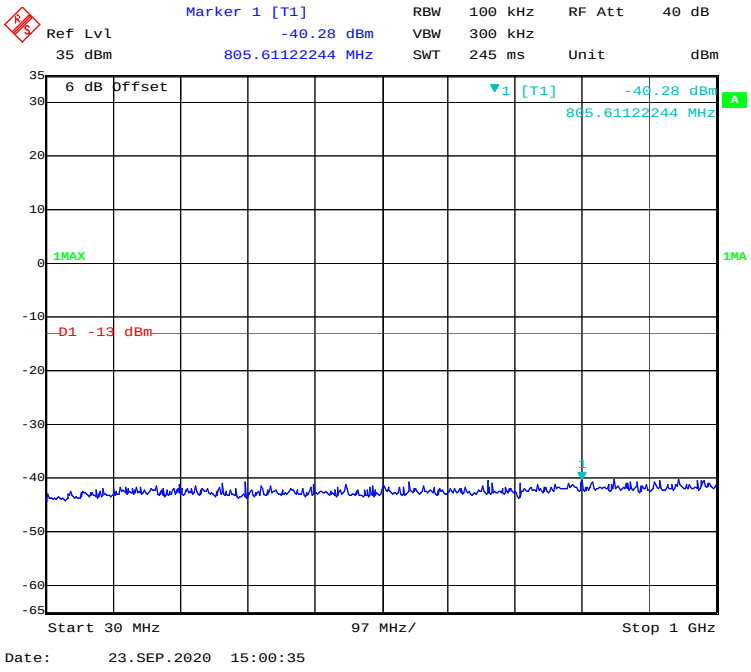


1 GHz – 20 GHz WCDMA (HSUPA) Mode, Middle channel

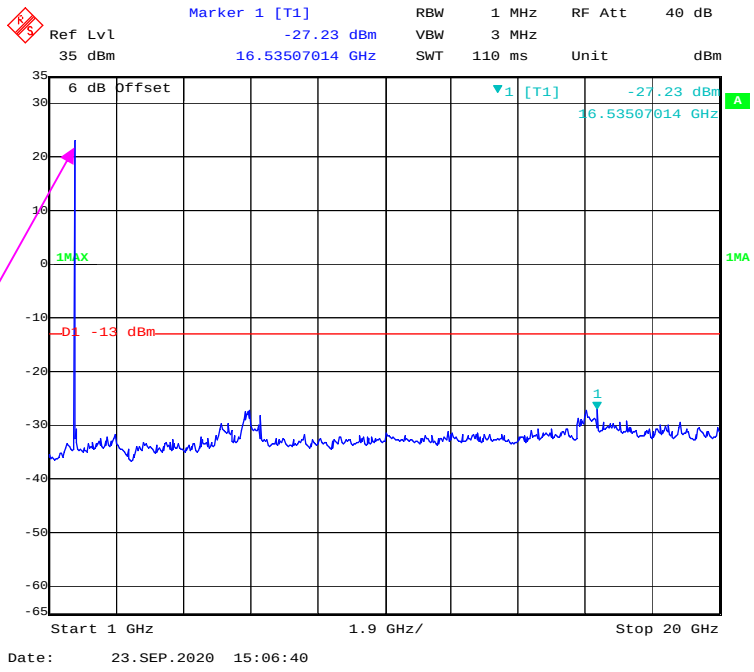


Fundamental

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

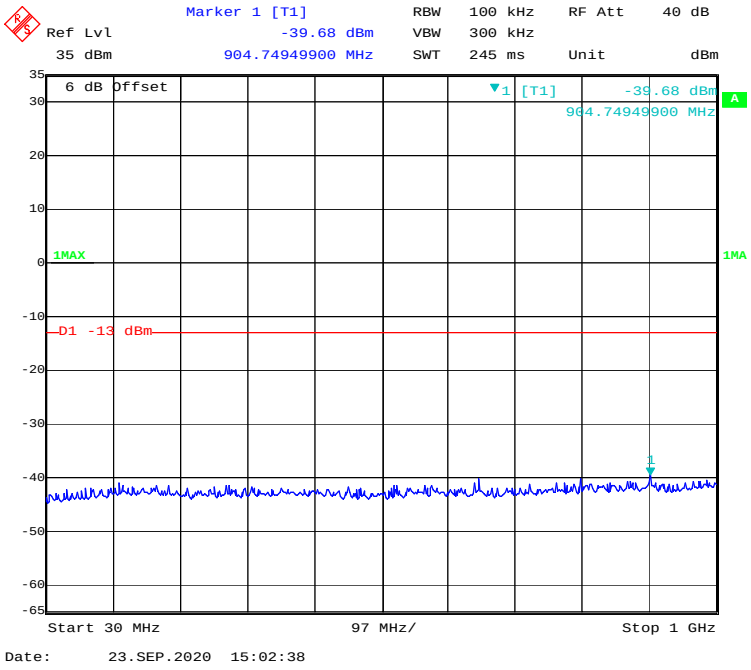


1 GHz – 20 GHz WCDMA (HSPA+) Mode, Middle channel

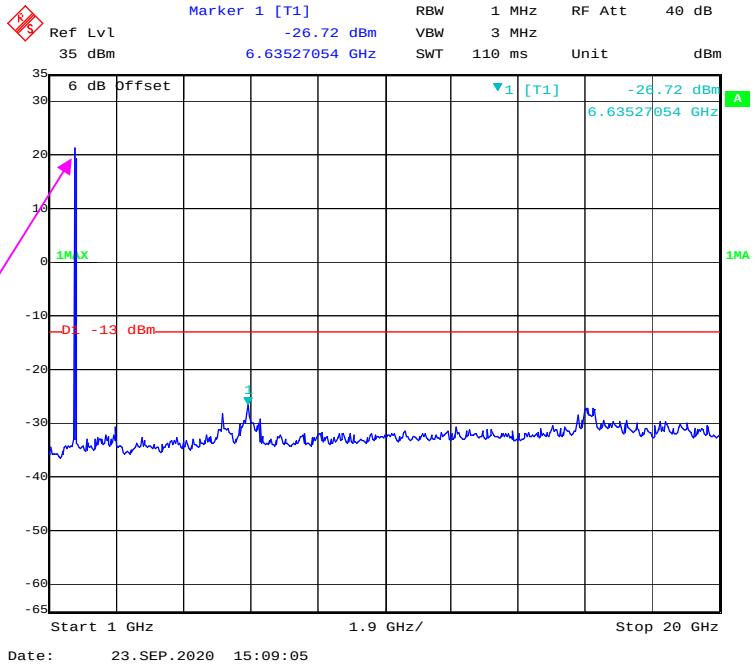


Fundamental

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

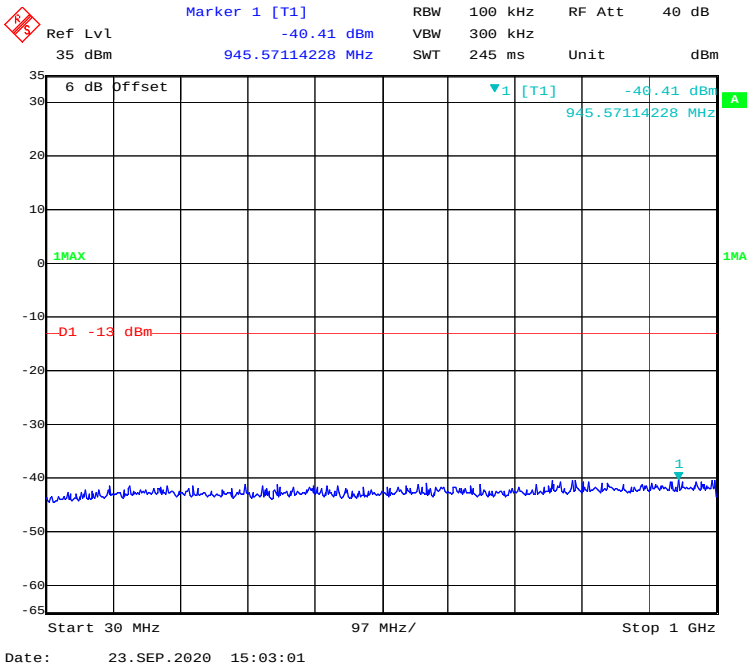


1 GHz – 20 GHz WCDMA (Rel 99) Mode, High channel

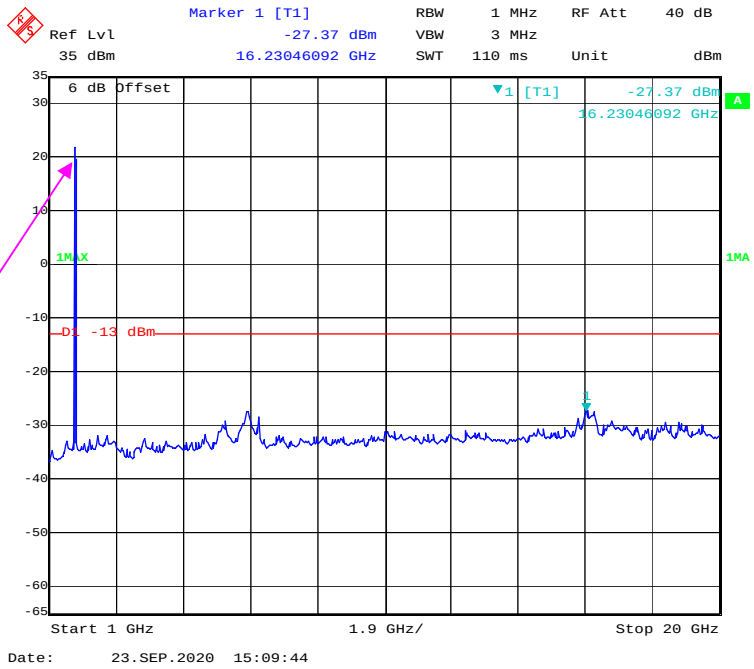


Fundamental

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

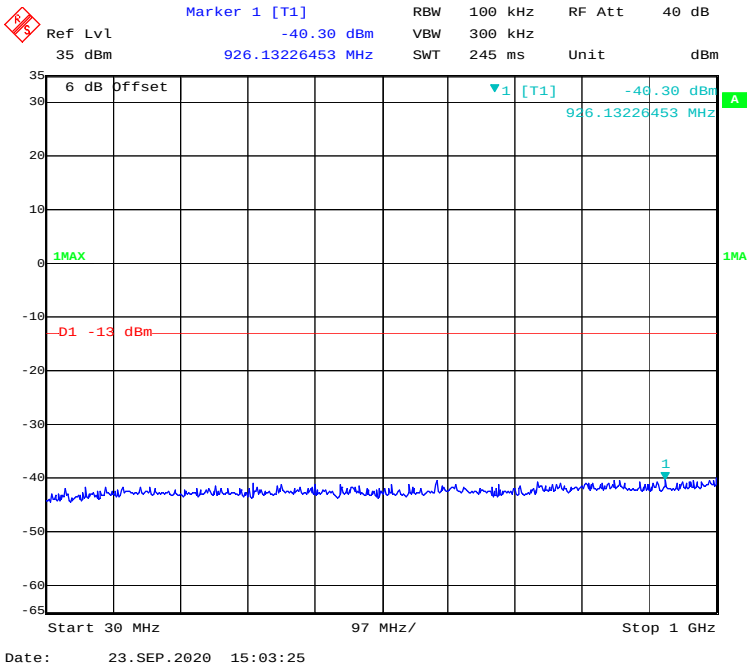


1 GHz – 20 GHz WCDMA (HSDPA) Mode, High channel

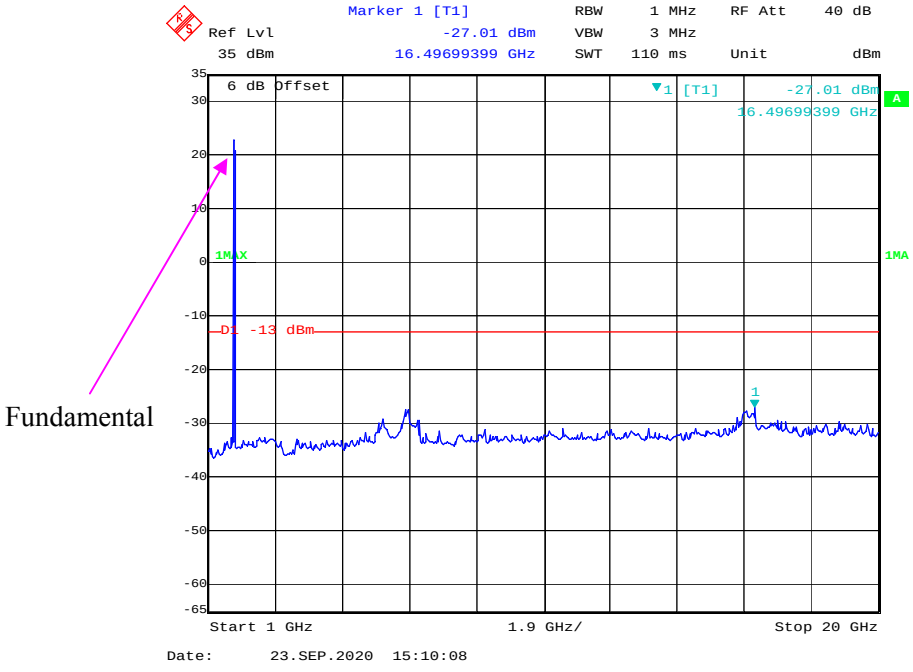


Fundamental

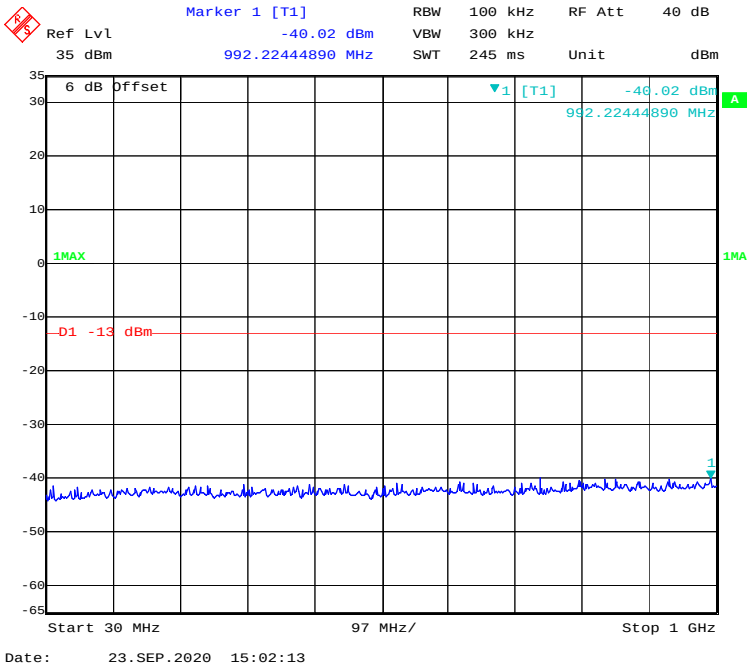
30 MHz – 1GHz WCDMA (HSUPA) Mode, High channel



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