

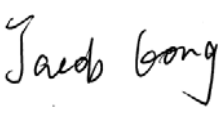
FCC PART 27
FCC PART 22H, PART 24E
TEST REPORT

For

Guangdong BYD Energy-saving Technology Co., Ltd.

BYD Industrial Park, Xiangshui River, Daya Bay, Huizhou City, Guangdong Province, China

FCC ID: 2AX63FF-CDP001-P2

Report Type: Original Report	Product Type: Led roof display
Report Number: RSH201124050-00B	
Report Date: 2021-02-22	
Reviewed By: RF Engineer	Jacob Kong 
Prepared By: Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn	

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk “★”.

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

This report cannot be reproduced except in full, without prior written approval of the Company. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

TABLE OF CONTENTS

GENERAL INFORMATION.....	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
TEST METHODOLOGY	4
MEASUREMENT UNCERTAINTY	4
TEST FACILITY	4
SYSTEM TEST CONFIGURATION	5
DESCRIPTION OF TEST CONFIGURATION	5
EQUIPMENT MODIFICATIONS	5
SUPPORT EQUIPMENT LIST AND DETAILS	5
SUPPORT CABLE DESCRIPTION	5
BLOCK DIAGRAM OF TEST SETUP	5
SUMMARY OF TEST RESULTS	6
TEST EQUIPMENT LIST	7
FCC §15.247 (I) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE).....	9
APPLICABLE STANDARD	9
RESULT	9
FCC §2.1047 - MODULATION CHARACTERISTIC	11
FCC § 2.1046, § 22.913 (A) & § 24.232 (C); §27.50(B) (C) (D) (H) - RF OUTPUT POWER.....	12
APPLICABLE STANDARD	12
TEST PROCEDURE	12
TEST DATA	12
FCC §2.1049, §22.917, §22.905 & §24.238 & §27.53 - OCCUPIED BANDWIDTH	37
APPLICABLE STANDARD	37
TEST PROCEDURE	37
TEST DATA	37
FCC §2.1051, §22.917(A) & §24.238(A); §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS ...	155
APPLICABLE STANDARD	155
TEST PROCEDURE	155
TEST DATA	155
FCC § 2.1053; § 22.917 (A);§ 24.238 (A); §27.53 SPURIOUS RADIATED EMISSIONS	256
APPLICABLE STANDARD	256
TEST PROCEDURE	256
TEST DATA	256
FCC § 22.917 (A);§ 24.238 (A); §27.53 (H)(M) - BAND EDGES	265
APPLICABLE STANDARD	265
TEST PROCEDURE	265
TEST DATA	265
FCC § 2.1055; § 22.355; § 24.235; §27.54 - FREQUENCY STABILITY	331
APPLICABLE STANDARD	331
TEST PROCEDURE	331
TEST DATA	332

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Led roof display
Tested Model	FF-CDP001-P2
Frequency Range	WCDMA Band 2/LTE Band 2: 1850-1910MHz(TX); 1930-1990MHz(RX) WCDMA Band 4/LTE Band 4: 1710-1755MHz(TX); 2110-2155MHz(RX) WCDMA Band 5/LTE Band 5: 824-849MHz(TX); 869-894MHz(RX) LTE Band 7: 2500-2570MHz(TX); 2620-2690MHz(RX) LTE Band 12: 699-716MHz(TX); 729-746MHz(RX) LTE Band 13: 777-787MHz(TX); 746-756MHz(RX) LTE Band 17: 704-716MHz(TX); 734-746MHz(RX)
Maximum Target Output Power	WCDMA Band 4: 23.0dBm, LTE Band 2/4/5/7/12/13/17: 23.0dBm
Modulation Technique	3G: BPSK, QPSK, 16QAM 4G: QPSK, 16QAM
Antenna Specification*	0dBi (provided by the applicant)
Voltage Range	DC 12.0 from Battery
Date of Test	2020-12-14 to 2021-02-22
Sample serial number	RSH201124050-RF-S1(Assigned by BACL, Shenzhen)
Received date	2020-11-24
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Part 22-Subpart H and Part 24-Subpart E and Subpart 27 of the Federal Communication Commissions rules.

The objective is to determine the compliance of the 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.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart 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

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±0.73dB
Unwanted Emission, conducted		±1.6dB
Emissions, Radiated	Below 1GHz	±4.75dB
	Above 1GHz	±4.88dB
Temperature		±1°C
Humidity		±6%
Supply voltages		±0.4%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

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

Equipment Modifications

No modification was made to the EUT.

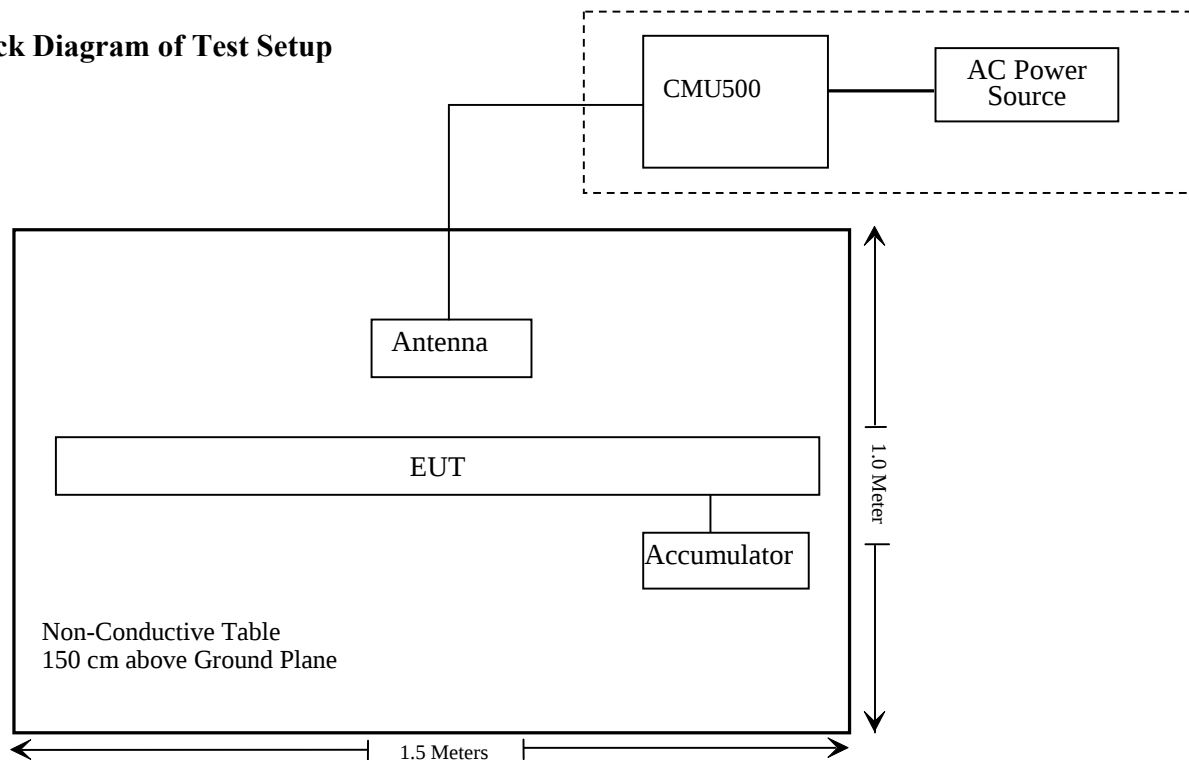
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-116218-UY
VARTA	Accumulator	6-QW-70(600)	T134646

Support Cable Description

Cable Description	Length (m)	From / Port	To
Un-shielding Un-Detachable DC Cable	0.3	EUT	Accumulator

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1310, §2.1091	Maximum Permissible Exposure(MPE)	Compliance
§2.1046; § 22.913 (a); § 24.232 (c); §27.50 (b)(c) (d) (h)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238; §27.53	Occupied Bandwidth	Compliance
§ 2.1051; § 22.917 (a); § 24.238 (a); §27.53	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 22.917 (a); § 24.238 (a); §27.53	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a); §27.53(h) (m)	Band Edge	Compliance
§ 2.1055; § 22.355; § 24.235; §27.54;	Frequency stability	Compliance

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
R&S	EMI Test Receiver	ESR3	102455	2020/08/04	2021/08/03
Sonoma instrument	Pre-amplifier	310 N	186238	2020/08/04	2021/08/03
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2017/12/22	2020/12/21
COM-POWER	Dipole Antenna	AD-100	721027	NCR	NCR
Unknown	Cable 2	RF Cable 2	F-03-EM197	2020/11/29	2021/11/28
Unknown	Cable	Chamber Cable 1	F-03-EM236	2020/11/29	2021/11/28
Rohde & Schwarz	Spectrum Analyzer	FSV40-N	102259	2020/08/04	2021/08/03
COM-POWER	Pre-amplifier	PA-122	181919	2020/11/29	2021/11/28
Quinstar	Amplifier	QLW-18405536-J0	15964001002	2020/11/29	2021/11/28
Sunol Sciences	Horn Antenna	DRH-118	A052604	2017/12/22	2020/12/21
A.H.System	Horn Antenna	SAS-200/571	135	2018/09/01	2021/08/31
Insulted Wire Inc.	RF Cable	SPS-2503-3150	02222010	2020/11/29	2021/11/28
Unknown	RF Cable	W1101-EQ1 OUT	F-19-EM005	2020/11/29	2021/11/28
MICRO-TRONICS	Passband filter	HPM50111	F-19-EM006	2020/04/20	2021/04/20
Unknown	High Pass filter	1.3GHz	101120	2020/04/20	2021/04/20
Ducommun Technologies	Horn antenna	ARH-4223-02	1007726-02 1304	2018/12/06	2021/12/05
Ducommun Technologies	Horn antenna	ARH-4223-02	1007726-01 1304	2018/12/06	2021/12/05
Agilent	Signal Generator	N5183A	MY51040755	2020/12/04	2021/12/04

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200120	2020/04/03	2021/04/02
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	1201.002K50-146520-wh	2020/08/04	2021/08/03
Unknown	RF Cable	Unknown	2301 276	2020/11/29	2021/11/28
Unknown	RF Cable	Unknown	2301 276	2020/11/29	2021/11/28
Unknown	RF Cable	Unknown	DLO J5/W6102	2020/11/29	2021/11/28
Unknown	RF Cable	Unknown	DLO J5/W6102	2020/11/29	2021/11/28
Weinschel	Power divider	1515	MY628	2020/11/29	2021/11/28
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	115500	2020/07/31	2021/07/30
instek	DC Power Supply	GPS-3030DD	EM832096	NCR	NCR
Fluke	Digital Multimeter	287	19000011	2020/07/23	2021/07/22

* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) 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 1.1310 and subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for General Population/Uncontrolled Exposure

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/f ²)	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

Result

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm²)

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)

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Mode	Frequency (MHz)	Antenna Gain		Max Tune Up Conducted Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
Wi-Fi	2412-2462	5.0	3.16	16.5	44.67	20	0.028	1.0
WCDMA Band 2	1850-1910	0	1.0	23.0	200	20	0.040	1.0
WCDMA Band 4	1710-1755	0	1.0	23.0	200	20	0.040	1.0
WCDMA Band 5	824-849	0	1.0	23.0	200	20	0.040	0.549
LTE Band 2	1850-1910	0	1.0	23.0	200	20	0.040	1.0
LTE Band 4	1710-1755	0	1.0	23.0	200	20	0.040	1.0
LTE Band 5	824-849	0	1.0	23.0	200	20	0.040	0.549
LTE Band 7	2500-2570	0	1.0	23.0	200	20	0.040	1.0
LTE Band 12	699-716	0	1.0	23.0	200	20	0.040	0.466
LTE Band 13	777-787	0	1.0	23.0	200	20	0.040	0.518
LTE Band 17	704-716	0	1.0	23.0	200	20	0.040	0.469

Note: 1. the tune up conducted power was declared by the applicant
 2. the Wi-Fi, WCDMA/LTE can transmit at the same time.

So the worst simultaneous transmitting consideration:

The ratio= $MPE_{Wi-Fi}/limit + MPE_{LTE}/limit = 0.028/1.0 + 0.040/0.466 = 0.114 < 1.0$

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliance

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H & 24E & 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) (h) - RF OUTPUT POWER

Applicable Standard

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

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

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

According to §27.50(b), the maximum EIRP must not exceed 3Watts (34.77dBm) for 746-757MHz.

According to §27.50(c), the maximum EIRP must not exceed 3Watts (34.77dBm) for 698-746MHz.

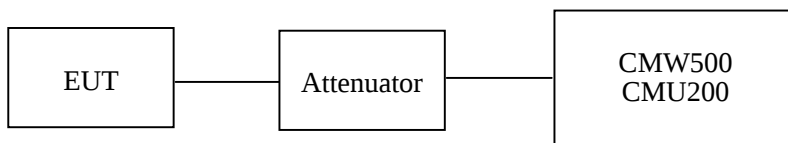
According to §27.50(d), the maximum EIRP must not exceed 1Watts (30dBm) for 1710-1755MHz.

According to §27.50(h), the maximum EIRP must not exceed 2Watts (33dBm) for 2500-2570MHz.

Test Procedure

Conducted method:

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



Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alan He on 2020-12-22 to 2021-01-08.

Conducted Power**Cellular Band (Part 22H)**

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 5)	RMC12.2k		22.64	21.42	20.9	20.19	18.97	18.45
	HSDPA	1	22.60	21.50	20.94	20.15	19.05	18.49
		2	21.56	21.55	21.95	19.11	19.10	19.50
		3	21.59	21.6	21.94	19.14	19.15	19.49
		4	21.66	21.52	21.88	19.21	19.07	19.43
	HSUPA	1	21.62	21.51	21.90	19.17	19.06	19.45
		2	22.63	21.32	20.85	20.18	18.87	18.40
		3	21.62	21.24	21.84	19.17	18.79	19.39
		4	21.66	21.25	21.88	19.21	18.80	19.43
		5	21.65	21.36	21.81	19.20	18.91	19.36

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)
 For WCDMA Band5: Antenna Gain = 0dBi = -2.15dBd (0dBd=2.15dBi)
 Cable Loss=0.3dB* (provided by the applicant)
 Limit: ERP≤38.45dBm

PCS Band (Part 24E)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 2)	RMC12.2k		22.30	22.42	22.4	22.00	22.12	22.1
	HSDPA	1	21.10	21.10	21.26	20.8	20.80	20.96
		2	21.08	21.08	21.26	20.78	20.78	20.96
		3	21.02	21.15	21.22	20.72	20.85	20.92
		4	21.12	21.11	21.28	20.82	20.81	20.98
		5	21.11	21.13	21.24	20.81	20.83	20.94
	HSUPA	1	20.61	20.62	20.78	20.31	20.32	20.48
		2	20.66	20.58	20.8	20.36	20.28	20.5
		3	20.61	20.58	20.86	20.31	20.28	20.56
		4	20.56	20.6	20.77	20.26	20.3	20.47
		5	20.58	20.61	20.79	20.28	20.31	20.49

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
 For WCDMA Band2: Antenna Gain = 0dBi, Cable Loss=0.3dB*(provided by the applicant)
 Limit: EIRP≤33dBm

AWS Band (Part 27)

Mode	Test Mode	3GPP Sub Test	Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
WCDMA (Band 4)	RMC12.2k		21.98	20.78	20.13	21.68	20.48	19.83
	HSDPA	1	21.97	20.60	20.04	21.67	20.30	19.74
		2	21.94	20.68	20.00	21.64	20.38	19.70
		3	21.98	20.61	20.08	21.68	20.31	19.78
		4	21.91	20.62	20.02	21.61	20.32	19.72
		5	21.92	20.55	20.06	21.62	20.25	19.76
	HSUPA	1	21.78	20.38	20.03	21.48	20.08	19.73
		2	21.77	20.33	20.00	21.47	20.03	19.70
		3	21.69	20.42	20.00	21.39	20.12	19.70
		4	21.70	20.34	20.01	21.4	20.04	19.71
		5	21.76	20.40	20.08	21.46	20.10	19.78

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
 For Band4: Antenna Gain = 0dBi, Cable Loss=0.3dB*(provided by the applicant)
 Limit: EIRP ≤ 30dBm

Peak-to-average ratio (PAR)**Cellular Band**

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.65	13
	Middle	3.25	13
	High	3.21	13
HSDPA (16QAM)	Low	3.76	13
	Middle	3.37	13
	High	3.23	13
HSUPA (BPSK)	Low	3.71	13
	Middle	3.44	13
	High	3.31	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.36	13
	Middle	3.25	13
	High	3.59	13
HSDPA (16QAM)	Low	3.65	13
	Middle	3.34	13
	High	3.24	13
HSUPA (BPSK)	Low	3.26	13
	Middle	3.18	13
	High	3.27	13

AWS Band

Mode	Channel	PAR (dB)	Limit (dB)
RMC (BPSK)	Low	3.34	13
	Middle	3.26	13
	High	3.37	13
HSDPA (16QAM)	Low	3.52	13
	Middle	3.19	13
	High	3.65	13
HSUPA (BPSK)	Low	3.48	13
	Middle	3.38	13
	High	3.59	13

LTE Band 2:**Maximum Output Power**

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.83	22.38	22.46	21.53	22.08	22.16
		RB1#2	22.58	22.30	22.38	22.28	22.00	22.08
		RB1#5	22.39	22.12	22.17	22.09	21.82	21.87
		RB3#0	21.84	21.92	21.95	21.54	21.62	21.65
		RB3#1	21.82	21.86	21.92	21.52	21.56	21.62
		RB3#2	21.75	21.78	21.76	21.45	21.48	21.46
		RB6#0	21.78	21.50	22.31	21.48	21.20	22.01
	16QAM	RB1#0	22.34	22.20	22.26	22.04	21.90	21.96
		RB1#2	22.23	22.24	22.11	21.93	21.94	21.81
		RB1#5	22.03	22.24	21.88	21.73	21.94	21.58
		RB3#0	21.09	21.01	21.05	20.79	20.71	20.75
		RB3#1	20.99	20.94	20.95	20.69	20.64	20.65
		RB3#2	20.86	20.37	20.43	20.56	20.07	20.13
		RB6#0	20.52	20.34	20.33	20.22	20.04	20.03
3.0	QPSK	RB1#0	21.57	22.44	22.41	21.27	22.14	22.11
		RB1#7	22.62	22.32	22.36	22.32	22.02	22.06
		RB1#14	22.39	22.14	22.16	22.09	21.84	21.86
		RB8#0	21.83	21.89	21.91	21.53	21.59	21.61
		RB8#4	21.81	21.86	21.91	21.51	21.56	21.61
		RB8#7	21.82	21.78	21.74	21.52	21.48	21.44
		RB15#0	21.78	21.51	22.33	21.48	21.21	22.03
	16QAM	RB1#0	22.31	22.22	22.28	22.01	21.92	21.98
		RB1#7	22.24	22.24	22.12	21.94	21.94	21.82
		RB1#14	22.04	22.23	21.87	21.74	21.93	21.57
		RB8#0	21.04	21.16	21.06	20.74	20.86	20.76
		RB8#4	20.99	20.98	20.98	20.69	20.68	20.68
		RB8#7	20.54	20.43	20.45	20.24	20.13	20.15
		RB15#0	20.56	20.30	20.31	20.26	20.00	20.01

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.68	22.41	22.44	21.38	22.11	22.14
		RB1#12	22.61	22.30	22.37	22.31	22.00	22.07
		RB1#24	22.42	22.11	22.15	22.12	21.81	21.85
		RB12#0	21.84	21.92	21.91	21.54	21.62	21.61
		RB12#6	21.83	21.84	21.88	21.53	21.54	21.58
		RB12#11	21.80	21.85	21.93	21.50	21.55	21.63
		RB25#0	21.76	21.79	21.72	21.46	21.49	21.42
	16QAM	RB1#0	21.77	21.48	22.29	21.47	21.18	21.99
		RB1#12	22.33	22.23	22.29	22.03	21.93	21.99
		RB1#24	22.21	22.22	22.09	21.91	21.92	21.79
		RB12#0	22.03	22.26	21.86	21.73	21.96	21.56
		RB12#6	21.86	21.89	21.94	21.56	21.59	21.64
		RB12#11	21.04	21.03	21.06	20.74	20.73	20.76
		RB25#0	20.95	20.97	21.05	20.65	20.67	20.75
10.0	QPSK	RB1#0	22.06	22.43	22.42	21.76	22.13	22.12
		RB1#24	22.58	22.29	22.35	22.28	21.99	22.05
		RB1#49	22.40	22.11	22.14	22.1	21.81	21.84
		RB25#0	21.86	21.89	21.94	21.56	21.59	21.64
		RB25#12	21.84	21.88	21.87	21.54	21.58	21.57
		RB25#24	21.80	21.86	21.88	21.50	21.56	21.58
		RB50#0	21.77	21.78	21.72	21.47	21.48	21.42
	16QAM	RB1#0	21.78	21.51	22.28	21.48	21.21	21.98
		RB1#24	22.31	22.24	22.29	22.01	21.94	21.99
		RB1#49	22.22	22.26	22.11	21.92	21.96	21.81
		RB25#0	22.04	22.24	21.89	21.74	21.94	21.59
		RB25#12	21.97	21.98	21.67	21.67	21.68	21.37
		RB25#24	21.05	21.04	21.06	20.75	20.74	20.76
		RB50#0	20.97	20.94	20.99	20.67	20.64	20.69

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	22.13	22.41	22.46	21.83	22.11	22.16
		RB1#37	22.61	22.26	22.34	22.31	21.96	22.04
		RB1#74	22.41	22.12	22.17	22.11	21.82	21.87
		RB36#0	21.85	21.90	21.89	21.55	21.60	21.59
		RB36#18	21.84	21.86	21.85	21.54	21.56	21.55
		RB36#37	21.82	21.82	21.92	21.52	21.52	21.62
		RB75#0	21.79	21.77	21.71	21.49	21.47	21.41
	16QAM	RB1#0	21.8	21.52	22.29	21.50	21.22	21.99
		RB1#37	22.35	22.22	22.30	22.05	21.92	22.00
		RB1#74	22.21	22.26	22.11	21.91	21.96	21.81
		RB36#0	22.06	22.23	21.89	21.76	21.93	21.59
		RB36#18	21.86	21.92	21.48	21.56	21.62	21.18
		RB36#37	21.09	21.03	21.01	20.79	20.73	20.71
		RB75#0	20.97	20.98	20.99	20.67	20.68	20.69
20.0	QPSK	RB1#0	21.71	22.42	22.45	21.41	22.12	22.15
		RB1#49	22.63	22.29	22.37	22.33	21.99	22.07
		RB1#99	22.42	22.16	22.17	22.12	21.86	21.87
		RB50#0	21.86	21.91	21.95	21.56	21.61	21.65
		RB50#24	21.85	21.87	21.89	21.55	21.57	21.59
		RB50#49	21.82	21.81	21.88	21.52	21.51	21.58
		RB100#0	21.85	21.76	21.72	21.55	21.46	21.42
	16QAM	RB1#0	21.81	21.47	22.27	21.51	21.17	21.97
		RB1#49	22.35	22.24	22.29	22.05	21.94	21.99
		RB1#99	22.19	22.23	22.14	21.89	21.93	21.84
		RB50#0	22.07	22.25	21.86	21.77	21.95	21.56
		RB50#24	21.89	21.75	21.64	21.59	21.45	21.34
		RB50#49	21.09	21.03	21.04	20.79	20.73	20.74
		RB100#0	20.97	20.99	20.94	20.67	20.69	20.64

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)

For Band2: Antenna Gain = 0dBi, Cable Loss=0.3dB*(provided by the applicant)

Limit: EIRP ≤ 33dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	8.13	8.38	8.63	13	Pass
QPSK (100RB Size)	8.22	8.85	8.36	13	Pass
16QAM (1RB Size)	9.46	9.13	8.93	13	Pass
16QAM (100RB Size)	9.11	8.89	9.41	13	Pass

LTE Band 4

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	22.68	22.86	22.87	22.38	22.56	22.57
		RB1#2	22.88	22.88	22.95	22.58	22.58	22.65
		RB1#5	22.74	22.83	22.79	22.44	22.53	22.49
		RB3#0	22.71	22.73	22.82	22.41	22.43	22.52
		RB3#1	22.68	22.74	22.80	22.38	22.44	22.50
		RB3#2	22.77	22.75	22.79	22.47	22.45	22.49
		RB6#0	21.86	21.76	21.84	21.56	21.46	21.54
	16QAM	RB1#0	22.01	21.80	21.89	21.71	21.50	21.59
		RB1#2	22.13	22.06	21.88	21.83	21.76	21.58
		RB1#5	21.99	21.93	22.02	21.69	21.63	21.72
		RB3#0	21.88	21.74	21.75	21.58	21.44	21.45
		RB3#1	21.89	21.77	21.76	21.59	21.47	21.46
		RB3#2	21.91	21.77	21.79	21.61	21.47	21.49
		RB6#0	20.81	20.80	20.74	20.51	20.50	20.44
3.0	QPSK	RB1#0	21.69	21.52	21.50	21.39	21.22	21.20
		RB1#7	21.54	21.30	21.52	21.24	21.00	21.22
		RB1#14	21.67	21.51	21.50	21.37	21.21	21.20
		RB8#0	20.56	20.26	20.34	20.26	19.96	20.04
		RB8#4	20.50	20.27	20.31	20.20	19.97	20.01
		RB8#7	20.45	20.28	20.29	20.15	19.98	19.99
		RB15#0	20.43	20.29	20.30	20.13	19.99	20.00
	16QAM	RB1#0	20.79	20.60	20.38	20.49	20.30	20.08
		RB1#7	20.48	20.41	20.50	20.18	20.11	20.20
		RB1#14	20.65	20.64	20.42	20.35	20.34	20.12
		RB8#0	19.47	19.23	19.33	19.17	18.93	19.03
		RB8#4	19.43	19.20	19.28	19.13	18.90	18.98
		RB8#7	19.33	19.15	19.22	19.03	18.85	18.92
		RB15#0	19.53	19.27	19.33	19.23	18.97	19.03

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.52	21.45	21.22	21.22	21.15	20.92
		RB1#12	21.46	21.31	21.32	21.16	21.01	21.02
		RB1#24	21.52	21.48	21.28	21.22	21.18	20.98
		RB12#0	20.43	20.27	20.36	20.13	19.97	20.06
		RB12#6	20.40	20.23	20.31	20.10	19.93	20.01
		RB12#11	20.42	20.24	20.35	20.12	19.94	20.05
		RB25#0	20.49	20.32	20.35	20.19	20.02	20.05
	16QAM	RB1#0	20.70	20.47	20.28	20.40	20.17	19.98
		RB1#12	20.51	20.46	20.43	20.21	20.16	20.13
		RB1#24	20.74	20.38	20.46	20.44	20.08	20.16
		RB12#0	19.51	19.38	19.33	19.21	19.08	19.03
		RB12#6	19.46	19.35	19.36	19.16	19.05	19.06
		RB12#11	19.49	19.34	19.34	19.19	19.04	19.04
		RB25#0	19.46	19.37	19.29	19.16	19.07	18.99
10.0	QPSK	RB1#0	21.77	21.73	21.60	21.47	21.43	21.30
		RB1#24	21.79	21.44	21.50	21.49	21.14	21.20
		RB1#49	21.63	21.39	21.54	21.33	21.09	21.24
		RB25#0	20.42	20.40	20.25	20.12	20.10	19.95
		RB25#12	20.46	20.34	20.27	20.16	20.04	19.97
		RB25#24	20.57	20.29	20.31	20.27	19.99	20.01
		RB50#0	20.44	20.35	20.30	20.14	20.05	20.00
	16QAM	RB1#0	20.74	20.77	20.54	20.44	20.47	20.24
		RB1#24	20.88	20.52	20.48	20.58	20.22	20.18
		RB1#49	20.56	20.61	20.53	20.26	20.31	20.23
		RB25#0	19.51	19.44	19.24	19.21	19.14	18.94
		RB25#12	19.48	19.41	19.28	19.18	19.11	18.98
		RB25#24	19.59	19.38	19.33	19.29	19.08	19.03
		RB50#0	19.52	19.43	19.37	19.22	19.13	19.07

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.76	21.69	21.42	21.46	21.39	21.12
		RB1#37	21.51	21.23	21.21	21.21	20.93	20.91
		RB1#74	21.57	21.47	21.37	21.27	21.17	21.07
		RB36#0	20.59	20.43	20.41	20.29	20.13	20.11
		RB36#18	20.45	20.42	20.45	20.15	20.12	20.15
		RB36#37	20.38	20.41	20.37	20.08	20.11	20.07
		RB75#0	20.43	20.39	20.27	20.13	20.09	19.97
	16QAM	RB1#0	20.78	20.83	20.57	20.48	20.53	20.27
		RB1#37	20.46	20.50	20.37	20.16	20.20	20.07
		RB1#74	20.64	20.59	20.58	20.34	20.29	20.28
		RB36#0	19.66	19.45	19.47	19.36	19.15	19.17
		RB36#18	19.54	19.42	19.37	19.24	19.12	19.07
		RB36#37	19.36	19.41	19.33	19.06	19.11	19.03
		RB75#0	19.51	19.46	19.36	19.21	19.16	19.06
20.0	QPSK	RB1#0	22.31	22.42	22.44	22.01	22.12	22.14
		RB1#49	22.59	22.26	22.35	22.29	21.96	22.05
		RB1#99	22.41	22.12	22.18	22.11	21.82	21.88
		RB50#0	21.84	21.90	21.93	21.54	21.60	21.63
		RB50#24	21.80	21.87	21.86	21.50	21.57	21.56
		RB50#49	21.82	21.82	21.93	21.52	21.52	21.63
		RB100#0	21.85	21.79	21.75	21.55	21.49	21.45
	16QAM	RB1#0	21.77	21.52	22.31	21.47	21.22	22.01
		RB1#49	22.29	22.21	22.28	21.99	21.91	21.98
		RB1#99	22.23	22.28	22.11	21.93	21.98	21.81
		RB50#0	22.01	22.26	21.86	21.71	21.96	21.56
		RB50#24	21.87	21.68	21.48	21.57	21.38	21.18
		RB50#49	21.04	21.02	21.03	20.74	20.72	20.73
		RB100#0	21.01	20.95	20.99	20.71	20.65	20.69

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
 For Band4: Antenna Gain = 0dBi, Cable Loss=0.3dB*(provided by the applicant)
 Limit: EIRP ≤ 30dBm

Peak-to-average ratio (PAR)**20MHz Bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	8.87	8.36	8.77	13	Pass
QPSK (100RB Size)	8.41	8.37	8.36	13	Pass
16QAM (1RB Size)	9.10	9.36	9.82	13	Pass
16QAM (100RB Size)	9.47	8.8	9.13	13	Pass

LTE Band5

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB1#0	21.67	21.70	21.77	19.22	19.25	19.32
		RB1#2	21.61	21.82	21.85	19.16	19.37	19.40
		RB1#5	21.63	21.77	21.75	19.18	19.32	19.30
		RB3#0	21.62	21.66	21.72	19.17	19.21	19.27
		RB3#1	21.65	21.58	21.68	19.2	19.13	19.23
		RB3#2	21.69	21.66	21.66	19.24	19.21	19.21
		RB6#0	20.70	20.71	20.74	18.25	18.26	18.29
	16QAM	RB1#0	20.81	20.77	20.82	18.36	18.32	18.37
		RB1#2	20.92	20.86	20.92	18.47	18.41	18.47
		RB1#5	21.04	21.00	20.93	18.59	18.55	18.48
		RB3#0	20.62	20.70	20.74	18.17	18.25	18.29
		RB3#1	20.64	20.68	20.78	18.19	18.23	18.33
		RB3#2	20.60	20.71	20.85	18.15	18.26	18.40
		RB6#0	19.76	19.67	19.75	17.31	17.22	17.30
3.0	QPSK	RB1#0	21.78	21.69	21.76	19.33	19.24	19.31
		RB1#7	21.53	21.68	21.72	19.08	19.23	19.27
		RB1#14	21.70	21.71	21.74	19.25	19.26	19.29
		RB8#0	20.74	20.77	20.76	18.29	18.32	18.31
		RB8#4	20.72	20.76	20.75	18.27	18.31	18.3
		RB8#7	20.73	20.72	20.73	18.28	18.27	18.28
		RB15#0	20.74	20.78	20.77	18.29	18.33	18.32
	16QAM	RB1#0	20.89	21.05	20.98	18.44	18.60	18.53
		RB1#7	20.73	20.88	20.94	18.28	18.43	18.49
		RB1#14	20.78	20.66	20.86	18.33	18.21	18.41
		RB8#0	19.87	19.69	19.67	17.42	17.24	17.22
		RB8#4	19.78	19.65	19.74	17.33	17.2	17.29
		RB8#7	19.68	19.67	19.62	17.23	17.22	17.17
		RB15#0	19.73	19.71	19.77	17.28	17.26	17.32

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.53	21.64	21.59	19.08	19.19	19.14
		RB1#12	21.41	21.63	21.72	18.96	19.18	19.27
		RB1#24	21.49	21.58	21.55	19.04	19.13	19.10
		RB12#0	20.78	20.78	20.79	18.33	18.33	18.34
		RB12#6	20.69	20.74	20.76	18.24	18.29	18.31
		RB12#11	20.71	20.75	20.72	18.26	18.30	18.27
		RB25#0	20.82	20.73	20.75	18.37	18.28	18.30
	16QAM	RB1#0	20.89	20.84	20.78	18.44	18.39	18.33
		RB1#12	20.80	20.91	20.87	18.35	18.46	18.42
		RB1#24	20.74	20.88	20.76	18.29	18.43	18.31
		RB12#0	19.81	19.74	19.75	17.36	17.29	17.30
		RB12#6	19.78	19.75	19.70	17.33	17.30	17.25
		RB12#11	19.75	19.73	19.72	17.30	17.28	17.27
		RB25#0	19.83	19.74	19.77	17.38	17.29	17.32
10.0	QPSK	RB1#0	21.86	21.66	21.90	19.41	19.21	19.45
		RB1#24	21.59	21.76	21.78	19.14	19.31	19.33
		RB1#49	21.81	21.74	21.87	19.36	19.29	19.42
		RB25#0	20.86	20.83	20.75	18.41	18.38	18.30
		RB25#12	20.81	20.79	20.72	18.36	18.34	18.27
		RB25#24	20.77	20.75	20.76	18.32	18.30	18.31
		RB50#0	20.85	20.82	20.82	18.40	18.37	18.37
	16QAM	RB1#0	20.82	20.92	20.97	18.37	18.47	18.52
		RB1#24	20.75	20.99	20.95	18.30	18.54	18.50
		RB1#49	20.87	21.00	20.89	18.42	18.55	18.44
		RB25#0	19.87	19.77	19.77	17.42	17.32	17.32
		RB25#12	19.75	19.78	19.73	17.3	17.33	17.28
		RB25#24	19.69	19.78	19.83	17.24	17.33	17.38
		RB50#0	19.83	19.78	19.85	17.38	17.33	17.40

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For Band5: Antenna Gain = 0dBi = -2.15dBd (0dBd=2.15dBi)

Cable Loss= 0.3dB*(provided by the applicant)

Limit: ERP ≤ 38.45dBm

Peak-to-average ratio (PAR)**10MHz bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.17	9.68	9.47	13	Pass
QPSK (50RB Size)	9.57	9.42	9.29	13	Pass
16QAM (1RB Size)	10.08	10.3	10.07	13	Pass
16QAM (50RB Size)	9.87	9.8	9.95	13	Pass

LTE Band 7

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
5.0	QPSK	RB1#0	21.44	21.32	21.28	21.14	21.02	20.98
		RB1#12	21.48	21.44	21.34	21.18	21.14	21.04
		RB1#24	21.42	21.40	21.17	21.12	21.10	20.87
		RB12#0	21.46	21.28	21.29	21.16	20.98	20.99
		RB12#6	20.42	21.30	21.28	20.12	21.00	20.98
		RB12#11	21.40	21.31	21.28	21.10	21.01	20.98
		RB25#0	20.54	20.38	20.36	20.24	20.08	20.06
	16QAM	RB1#0	20.90	20.56	20.47	20.60	20.26	20.17
		RB1#12	20.80	20.67	20.56	20.50	20.37	20.26
		RB1#24	20.75	20.51	20.70	20.45	20.21	20.40
		RB12#0	20.54	20.26	20.24	20.24	19.96	19.94
		RB12#6	20.48	20.26	20.20	20.18	19.96	19.90
		RB12#11	20.51	20.33	20.21	20.21	20.03	19.91
		RB25#0	19.54	19.33	19.27	19.24	19.03	18.97
10.0	QPSK	RB1#0	21.60	21.44	21.60	21.30	21.14	21.30
		RB1#24	21.57	21.41	21.44	21.27	21.11	21.14
		RB1#49	21.48	21.51	21.40	21.18	21.21	21.10
		RB25#0	20.54	20.45	20.53	20.24	20.15	20.23
		RB25#12	20.55	20.52	20.51	20.25	20.22	20.21
		RB25#24	20.50	20.59	20.40	20.20	20.29	20.10
		RB50#0	20.59	20.45	20.42	20.29	20.15	20.12
	16QAM	RB1#0	20.72	20.72	20.72	20.42	20.42	20.42
		RB1#24	20.65	20.58	20.64	20.35	20.28	20.34
		RB1#49	20.51	20.59	20.69	20.21	20.29	20.39
		RB25#0	19.46	19.40	19.49	19.16	19.10	19.19
		RB25#12	19.42	19.46	19.47	19.12	19.16	19.17
		RB25#24	19.34	19.51	19.27	19.04	19.21	18.97
		RB50#0	19.58	19.48	19.39	19.28	19.18	19.09

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			EIRP(dBm)		
			Low	Mid	High	Low	Mid	High
15.0	QPSK	RB1#0	21.34	21.30	21.33	21.04	21.00	21.03
		RB1#37	21.33	21.33	21.30	21.03	21.03	21.00
		RB1#74	21.32	21.25	21.21	21.02	20.95	20.91
		RB36#0	20.55	20.55	20.52	20.25	20.25	20.22
		RB36#18	20.50	20.51	20.49	20.20	20.21	20.19
		RB36#37	20.45	20.48	20.42	20.15	20.18	20.12
		RB75#0	20.55	20.50	20.52	20.25	20.20	20.22
	16QAM	RB1#0	20.68	20.58	20.51	20.38	20.28	20.21
		RB1#37	20.48	20.61	20.53	20.18	20.31	20.23
		RB1#74	20.56	20.52	20.58	20.26	20.22	20.28
		RB36#0	19.55	19.48	19.55	19.25	19.18	19.25
		RB36#18	19.52	19.43	19.50	19.22	19.13	19.20
		RB36#37	19.51	19.45	19.39	19.21	19.15	19.09
		RB75#0	19.57	19.50	19.46	19.27	19.20	19.16
20.0	QPSK	RB1#0	21.46	21.39	21.65	21.16	21.09	21.35
		RB1#49	21.44	21.47	21.70	21.14	21.17	21.40
		RB1#99	21.34	21.45	21.51	21.04	21.15	21.21
		RB50#0	20.43	20.46	20.51	20.13	20.16	20.21
		RB50#24	20.45	20.42	20.47	20.15	20.12	20.17
		RB50#49	20.52	20.47	20.49	20.22	20.17	20.19
		RB100#0	20.40	20.34	20.45	20.10	20.04	20.15
	16QAM	RB1#0	20.60	20.61	20.85	20.30	20.31	20.55
		RB1#49	20.71	20.79	20.83	20.41	20.49	20.53
		RB1#99	20.53	20.67	20.74	20.23	20.37	20.44
		RB50#0	19.40	19.44	19.53	19.10	19.14	19.23
		RB50#24	19.42	19.45	19.47	19.12	19.15	19.17
		RB50#49	19.47	19.43	19.40	19.17	19.13	19.10
		RB100#0	19.38	19.36	19.47	19.08	19.06	19.17

Note: EIRP(dBm) = Conducted Power(dBm) + Antenna Gain(dBi) - Cable loss(dB)
 For Band 7: Antenna Gain = 0dBi, Cable Loss=0.3dB*(provided by the applicant)
 Limit: EIRP ≤ 33dBm

Peak-to-average ratio (PAR)**20MHz bandwidth**

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	6.8	6.9	7.18	13	Pass
QPSK (100RB Size)	7.75	7	7.22	13	Pass
16QAM (1RB Size)	7.86	7.81	7.8	13	Pass
16QAM (100RB Size)	8.49	8.06	8.23	13	Pass

LTE Band 12

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
1.4	QPSK	RB 1#0	22.52	22.50	22.46	20.07	20.05	20.01
		RB 1#2	22.43	22.43	22.28	19.98	19.98	19.83
		RB 1#5	22.47	22.35	22.32	20.02	19.9	19.87
		RB 3#0	21.68	21.73	21.65	19.23	19.28	19.20
		RB 3#1	21.45	21.68	21.72	19.00	19.23	19.27
		RB 3#2	21.26	21.71	21.50	18.81	19.26	19.05
		RB 6#0	21.06	21.42	21.31	18.61	18.97	18.86
	16QAM	RB 1#0	22.56	22.40	22.59	20.11	19.95	20.14
		RB 1#2	22.41	22.22	22.51	19.96	19.77	20.06
		RB 1#5	22.55	22.20	22.58	20.10	19.75	20.13
		RB 3#0	21.75	21.62	21.85	19.30	19.17	19.40
		RB 3#1	21.53	21.56	21.74	19.08	19.11	19.29
		RB 3#2	21.54	21.52	21.43	19.09	19.07	18.98
		RB 6#0	21.55	21.55	21.50	19.10	19.10	19.05
3	QPSK	RB 1#0	22.78	22.65	22.85	20.33	20.20	20.40
		RB 1#7	22.56	22.59	22.70	20.11	20.14	20.25
		RB 1#14	22.53	22.48	22.73	20.08	20.03	20.28
		RB 8#0	21.89	21.72	21.76	19.44	19.27	19.31
		RB 8#4	21.69	21.66	21.72	19.24	19.21	19.27
		RB 8#7	21.41	21.78	21.6	18.96	19.33	19.15
		RB 15#0	21.88	21.64	21.84	19.43	19.19	19.39
	16QAM	RB 1#0	22.65	22.27	22.37	20.20	19.82	19.92
		RB 1#7	22.35	22.04	22.36	19.90	19.59	19.91
		RB 1#14	21.72	21.87	21.68	19.27	19.42	19.23
		RB 8#0	21.67	21.68	21.37	19.22	19.23	18.92
		RB 8#4	21.54	21.45	21.26	19.09	19.00	18.81
		RB 8#7	21.32	21.14	21.16	18.87	18.69	18.71
		RB 15#0	20.89	20.94	20.71	18.44	18.49	18.26

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	22.14	22.42	22.45	19.69	19.97	20.00
		RB1#12	22.63	22.29	22.35	20.18	19.84	19.90
		RB1#24	22.39	22.11	22.15	19.94	19.66	19.70
		RB12#0	21.83	21.90	21.92	19.38	19.45	19.47
		RB12#6	21.79	21.88	21.87	19.34	19.43	19.42
		RB12#11	21.81	21.86	21.91	19.36	19.41	19.46
		RB25#0	21.74	21.80	21.74	19.29	19.35	19.29
	16QAM	RB1#0	21.79	21.51	22.28	19.34	19.06	19.83
		RB1#12	22.34	22.20	22.26	19.89	19.75	19.81
		RB1#24	22.23	22.24	22.11	19.78	19.79	19.66
		RB12#0	22.07	22.21	21.89	19.62	19.76	19.44
		RB12#6	21.95	21.63	21.77	19.5	19.18	19.32
		RB12#11	21.07	21.05	21.06	18.62	18.60	18.61
		RB25#0	20.96	20.98	20.95	18.51	18.53	18.50
10	QPSK	RB1#0	21.86	22.39	22.40	19.41	19.94	19.95
		RB1#24	22.60	22.26	22.39	20.15	19.81	19.94
		RB1#49	22.41	22.14	22.16	19.96	19.69	19.71
		RB25#0	21.84	21.90	21.89	19.39	19.45	19.44
		RB25#12	21.84	21.83	21.87	19.39	19.38	19.42
		RB25#24	21.81	21.85	21.88	19.36	19.40	19.43
		RB50#0	21.78	21.74	21.71	19.33	19.29	19.26
	16QAM	RB1#0	21.79	21.50	22.27	19.34	19.05	19.82
		RB1#24	22.35	22.20	22.30	19.90	19.75	19.85
		RB1#49	22.23	22.26	22.13	19.78	19.81	19.68
		RB25#0	22.04	22.22	21.85	19.59	19.77	19.40
		RB25#12	21.95	21.68	21.78	19.5	19.23	19.33
		RB25#24	21.08	21.02	21.05	18.63	18.57	18.60
		RB50#0	20.97	20.94	20.96	18.52	18.49	18.51

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For Band12: Antenna Gain = 0dBi = -2.15dBd (0dBd=2.15dBi)

Cable Loss= 0.3dB*(provided by the applicant)

Limit: ERP≤34.77dBm

10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	10.45	9.84	9.93	13	Pass
QPSK (50RB Size)	10.97	10.25	10.23	13	Pass
16QAM (1RB Size)	10.34	10.6	10.28	13	Pass
16QAM (50RB Size)	10.71	10.61	10.38	13	Pass

LTE Band 13

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	22.15	22.42	22.43	19.70	19.97	19.98
		RB1#12	22.59	22.27	22.39	20.14	19.82	19.94
		RB1#24	22.44	22.14	22.18	19.99	19.69	19.73
		RB12#0	21.85	21.87	21.91	19.40	19.42	19.46
		RB12#6	21.88	21.73	21.86	19.43	19.28	19.41
		RB12#11	21.83	21.87	21.92	19.38	19.42	19.47
		RB25#0	21.74	21.76	21.74	19.29	19.31	19.29
	16QAM	RB1#0	21.80	21.47	22.27	19.35	19.02	19.82
		RB1#12	22.32	22.20	22.31	19.87	19.75	19.86
		RB1#24	22.22	22.23	22.13	19.77	19.78	19.68
		RB12#0	22.03	22.24	21.88	19.58	19.79	19.43
		RB12#6	21.78	21.86	21.85	19.33	19.41	19.40
		RB12#11	21.07	21.01	21.04	18.62	18.56	18.59
		RB25#0	20.95	20.95	20.98	18.50	18.50	18.53
10	QPSK	RB1#0	/	22.40	/	/	19.95	/
		RB1#24	/	22.26	/	/	19.81	/
		RB1#49	/	22.15	/	/	19.70	/
		RB25#0	/	21.88	/	/	19.43	/
		RB25#12	/	21.86	/	/	19.41	/
		RB25#24	/	21.83	/	/	19.38	/
		RB50#0	/	21.79	/	/	19.34	/
	16QAM	RB1#0	/	21.49	/	/	19.04	/
		RB1#24	/	22.21	/	/	19.76	/
		RB1#49	/	22.25	/	/	19.80	/
		RB25#0	/	22.24	/	/	19.79	/
		RB25#12	/	21.64	/	/	19.19	/
		RB25#24	/	21.01	/	/	18.56	/
		RB50#0	/	20.95	/	/	18.50	/

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For Band13: Antenna Gain = 0dBi = -2.15dBd (0dBd=2.15dBi)

For 700-960MHz, Cable Loss= 0.3dB*(provided by the applicant)

10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	/	9.27	/	13	Pass
QPSK (50RB Size)	/	10.04	/	13	Pass
16QAM (1RB Size)	/	9.80	/	13	Pass
16QAM (50RB Size)	/	10.05	/	13	Pass

LTE Band 17

Bandwidth (MHz)	Modulation	RB size/ RB Offset	Conducted Average Output Power (dBm)			ERP(dBm)		
			Low	Mid	High	Low	Mid	High
5	QPSK	RB1#0	22.24	22.42	22.45	19.79	19.97	20.00
		RB1#12	22.62	22.26	22.39	20.17	19.81	19.94
		RB1#24	22.40	22.12	22.14	19.95	19.67	19.69
		RB12#0	21.86	21.92	21.89	19.41	19.47	19.44
		RB12#6	21.79	21.77	21.86	19.34	19.32	19.41
		RB12#11	21.80	21.83	21.91	19.35	19.38	19.46
		RB25#0	21.80	21.80	21.73	19.35	19.35	19.28
	16QAM	RB1#0	21.79	21.47	22.25	19.34	19.02	19.80
		RB1#12	22.33	22.24	22.28	19.88	19.79	19.83
		RB1#24	22.23	22.24	22.14	19.78	19.79	19.69
		RB12#0	22.05	22.23	21.86	19.60	19.78	19.41
		RB12#6	21.75	21.63	21.48	19.3	19.18	19.03
		RB12#11	21.04	21.02	21.05	18.59	18.57	18.60
		RB25#0	20.99	20.95	20.96	18.54	18.50	18.51
10	QPSK	RB1#0	22.19	22.43	22.41	19.74	19.98	19.96
		RB1#24	22.61	22.25	22.33	20.16	19.80	19.88
		RB1#49	22.42	22.12	22.17	19.97	19.67	19.72
		RB25#0	21.85	21.90	21.91	19.40	19.45	19.46
		RB25#12	21.73	21.87	21.89	19.28	19.42	19.44
		RB25#24	21.78	21.86	21.91	19.33	19.41	19.46
		RB50#0	21.78	21.76	21.76	19.33	19.31	19.31
	16QAM	RB1#0	21.80	21.50	22.26	19.35	19.05	19.81
		RB1#24	22.32	22.20	22.30	19.87	19.75	19.85
		RB1#49	22.19	22.25	22.10	19.74	19.80	19.65
		RB25#0	22.05	22.22	21.86	19.60	19.77	19.41
		RB25#12	21.58	21.76	21.37	19.13	19.31	18.92
		RB25#24	21.04	21.02	21.05	18.59	18.57	18.60
		RB50#0	20.99	20.94	20.94	18.54	18.49	18.49

Note: ERP(dBm) = Conducted Power(dBm) + Antenna Gain(dBd) - Cable loss(dB)

For Band17: Antenna Gain = 0dBi = -2.15dBd (0dBd=2.15dBi)

For 700-960MHz, Cable Loss= 0.3dB*(provided by the applicant)

10MHz Bandwidth

Modulation	Low channel (dB)	Middle channel (dB)	High channel (dB)	PAR Limit (dB)	Result
QPSK (1RB Size)	9.88	10.55	9.84	13	Pass
QPSK (50RB Size)	10.17	9.29	10.23	13	Pass
16QAM (1RB Size)	9.81	10.77	11.03	13	Pass
16QAM (50RB Size)	10.29	10.12	10.26	13	Pass

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

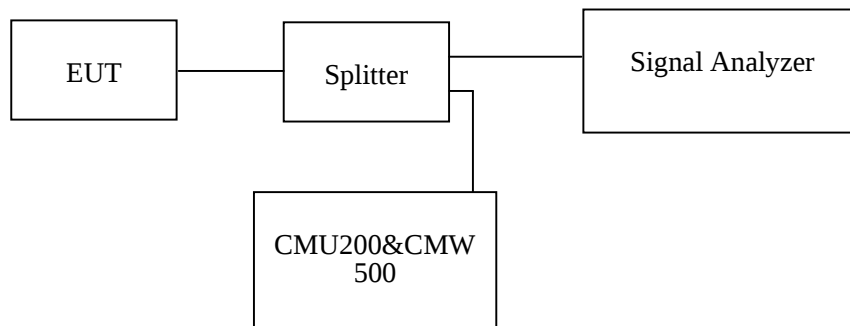
Applicable Standard

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 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.



Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alan He from 2020-12-22 to 2021-01-19.

EUT operation mode: Transmitting

Test Result: Pass

Please refer to the following tables and plots.

Cellular Band (Part 22H)

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	826.4	4.151	4.728
	836.6	4.151	4.705
	846.6	4.151	4.728
HSDPA	826.4	4.167	4.888
	836.6	4.183	4.869
	846.6	4.167	4.728
HSUPA	826.4	4.151	4.705
	836.6	4.167	5.006
	846.6	4.151	4.718

PCS Band (Part 24E)

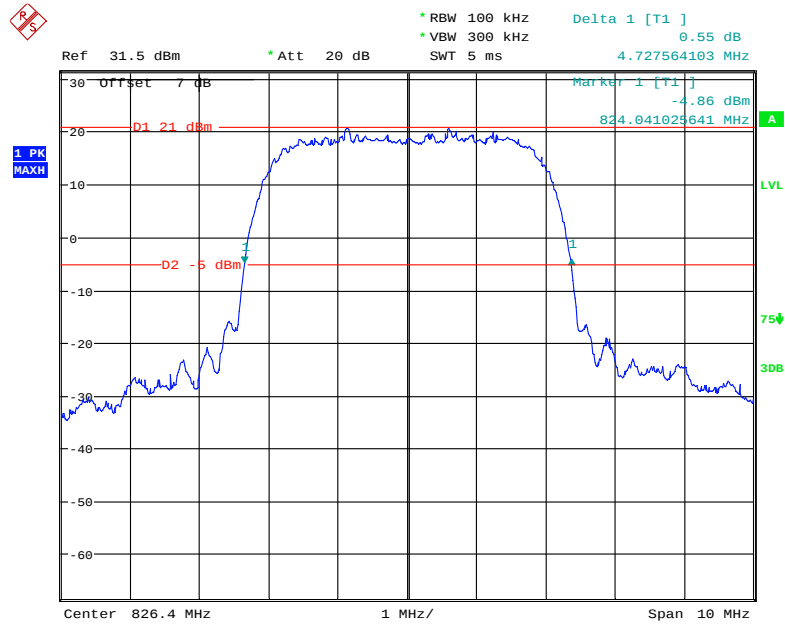
	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1852.4	4.151	4.743
	1880.0	4.167	4.744
	1907.6	4.183	4.760
HSDPA	1852.4	4.167	4.753
	1880.0	4.183	4.737
	1907.6	4.167	4.737
HSUPA	1852.4	4.167	4.744
	1880.0	4.151	4.744
	1907.6	4.151	4.760

AWS Band (Part 27)

	Frequency (MHz)	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)
RMC	1712.4	4.167	4.721
	1732.6	4.167	4.705
	1752.6	4.167	4.744
HSDPA	1712.4	4.151	4.747
	1732.6	4.183	4.753
	1752.6	4.183	4.721
HSUPA	1712.4	4.183	4.737
	1732.6	4.167	7.753
	1752.6	4.167	4.737

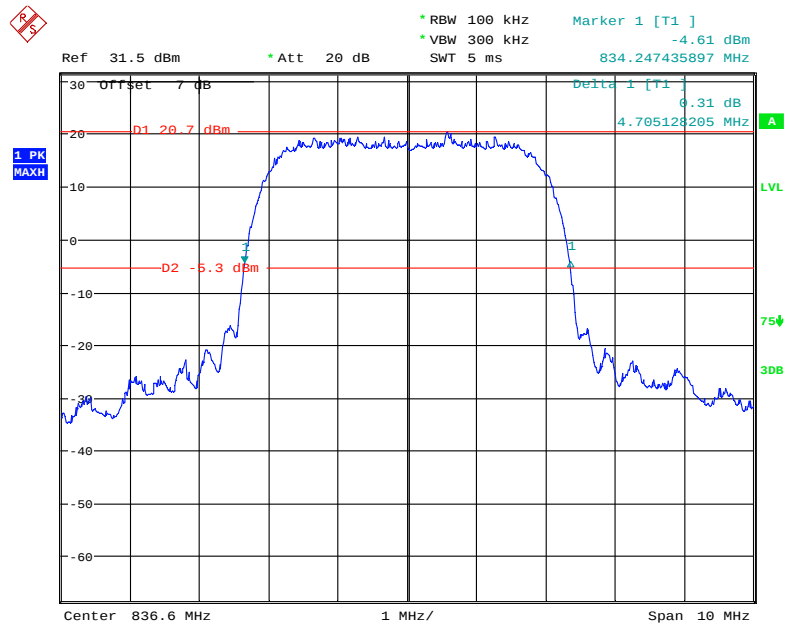
Cellular Band (Part 22H)

26 dB Emissions Bandwidth for RMC (BPSK) Mode, Low channel



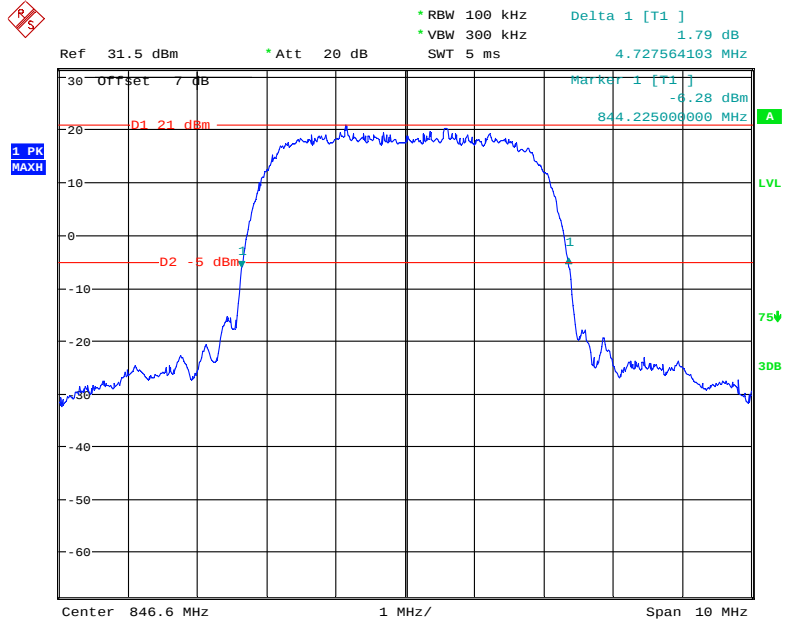
Date: 22.DEC.2020 00:38:02

26 dB Emissions Bandwidth for RMC (BPSK) Mode, Middle channel



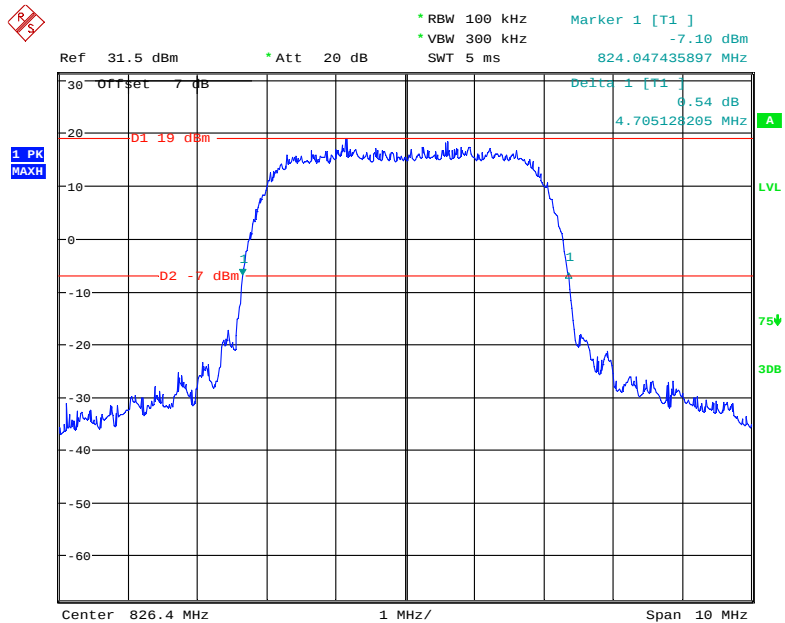
Date: 22.DEC.2020 00:40:27

26 dB Emissions Bandwidth for RMC (BPSK) Mode, High channel



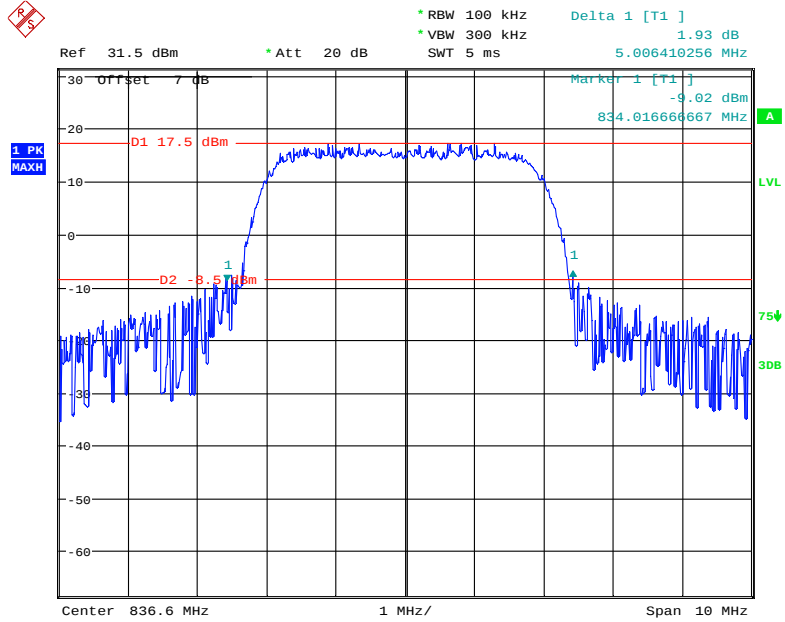
Date: 22.DEC.2020 00:41:32

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, Low channel



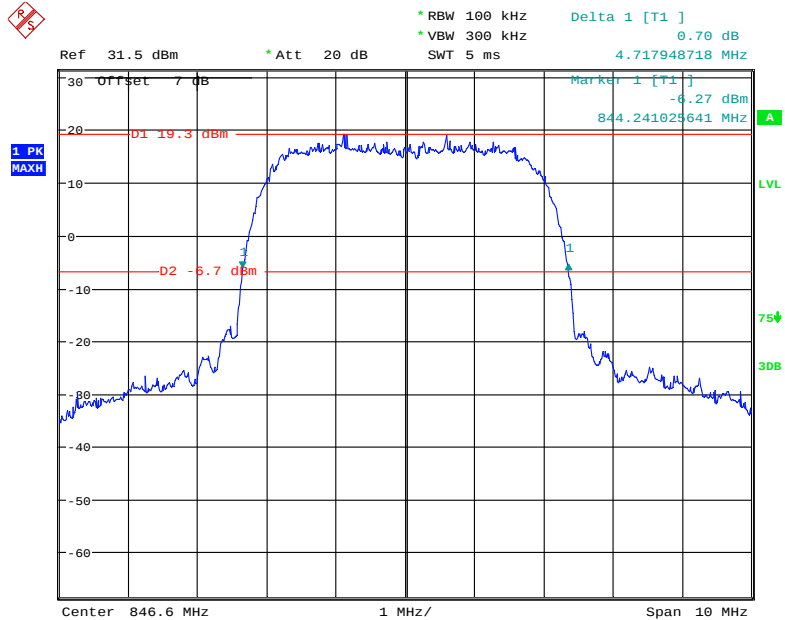
Date: 22.DEC.2020 01:20:52

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, Middle channel



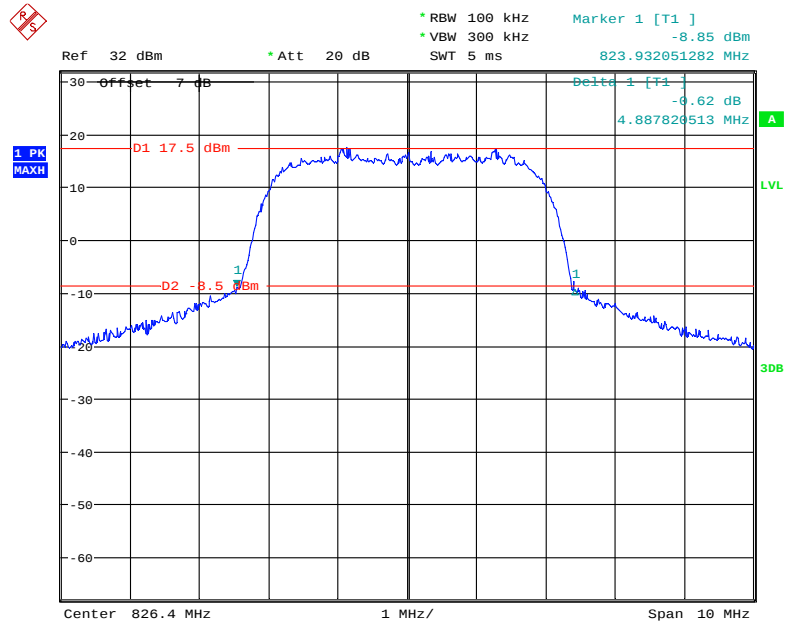
Date: 22.DEC.2020 01:19:37

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, High channel



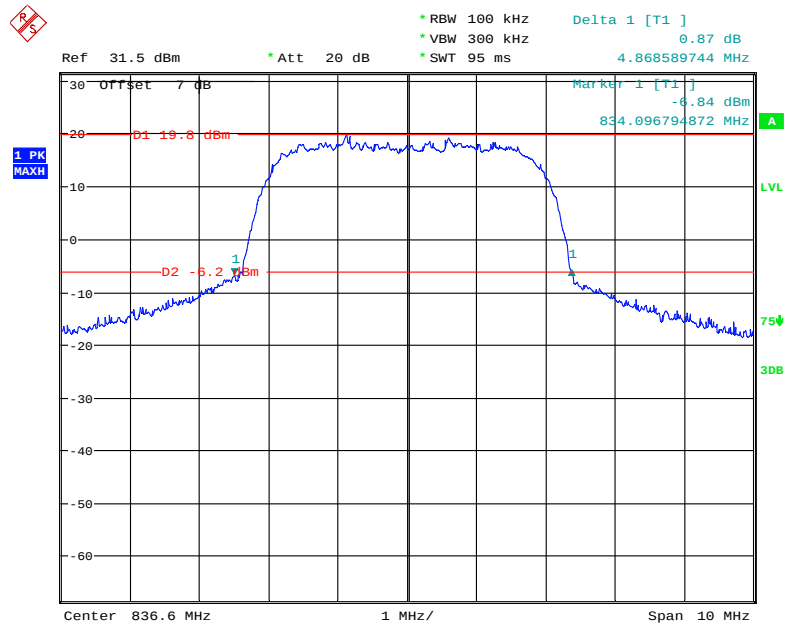
Date: 22.DEC.2020 01:17:43

26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, Low channel



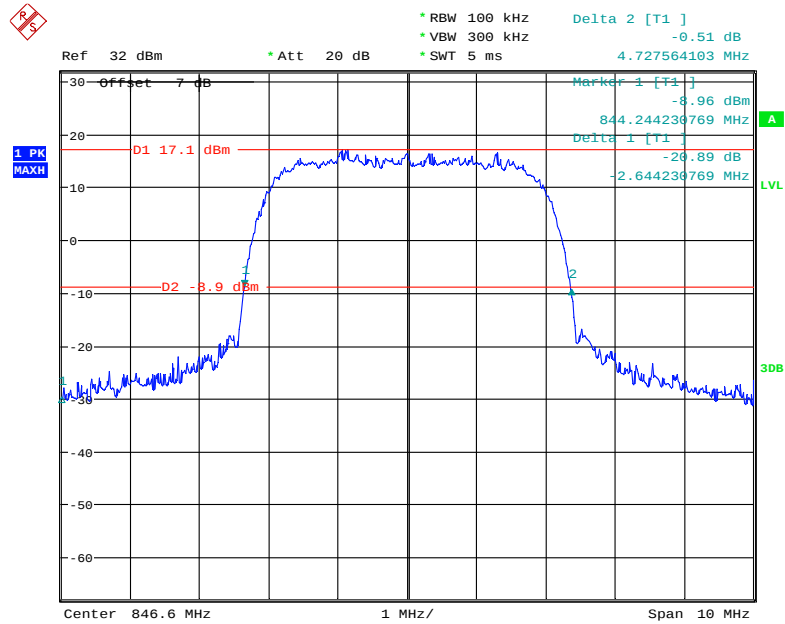
Date: 18.JAN.2021 11:51:31

26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, Middle channel



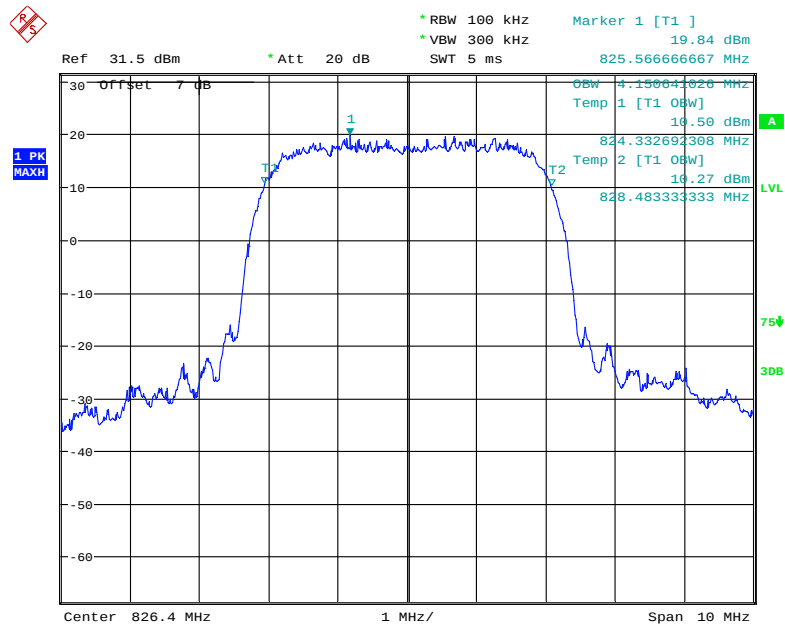
Date: 22.DEC.2020 01:58:38

26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, High channel



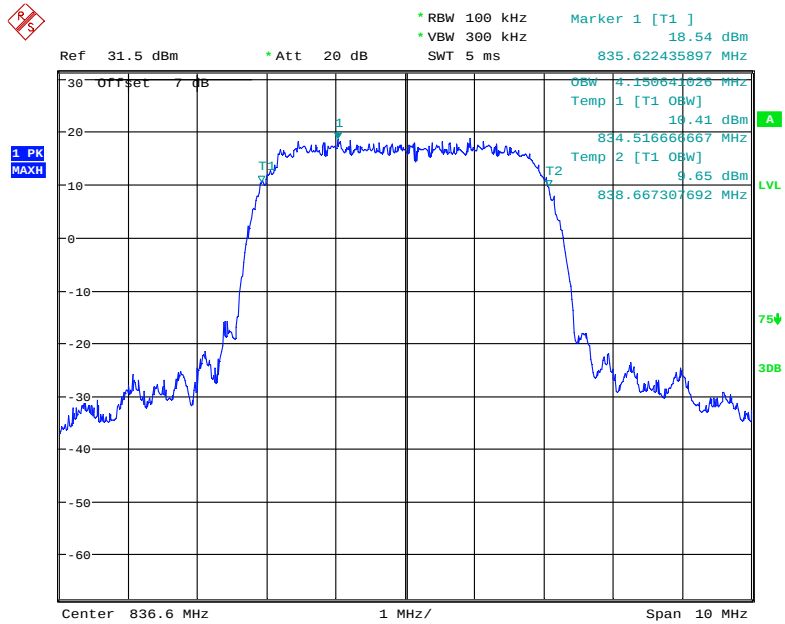
Date: 18.JAN.2021 11:59:48

99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



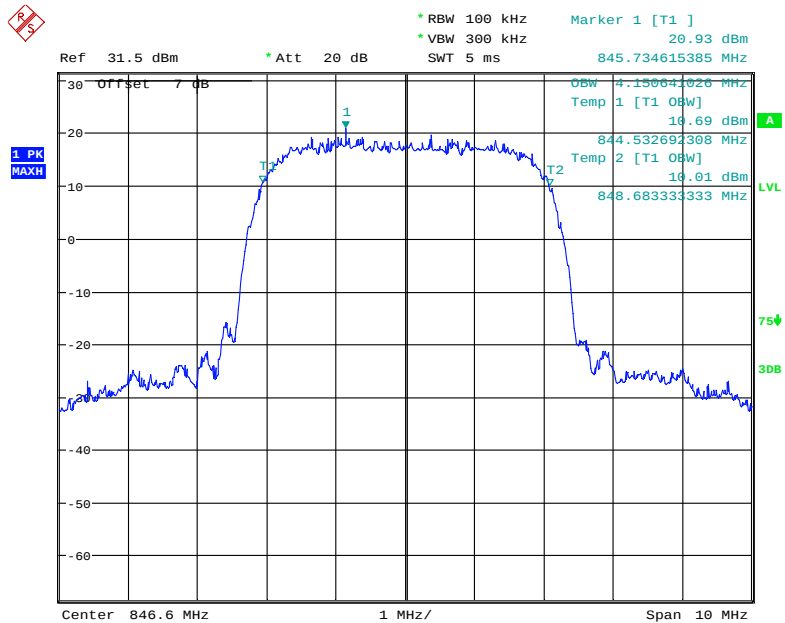
Date: 22.DEC.2020 00:44:40

99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel



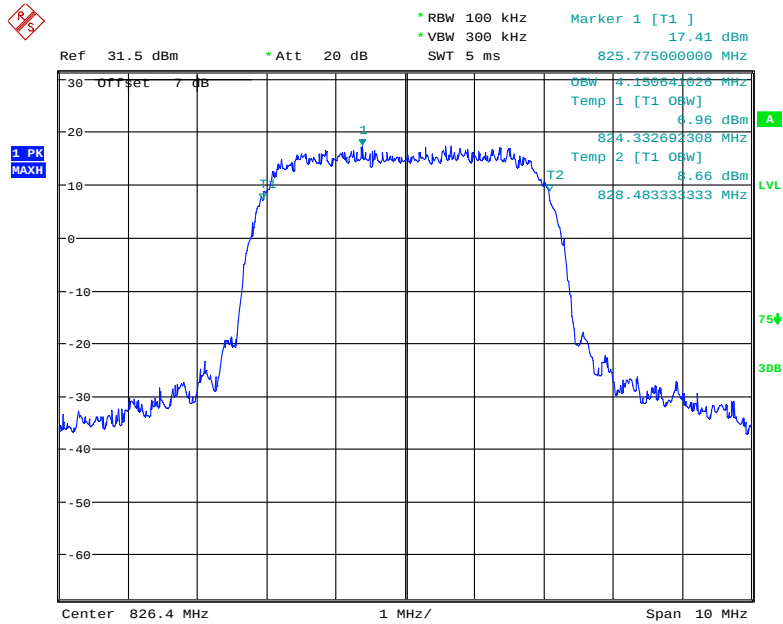
Date: 22.DEC.2020 00:45:12

99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



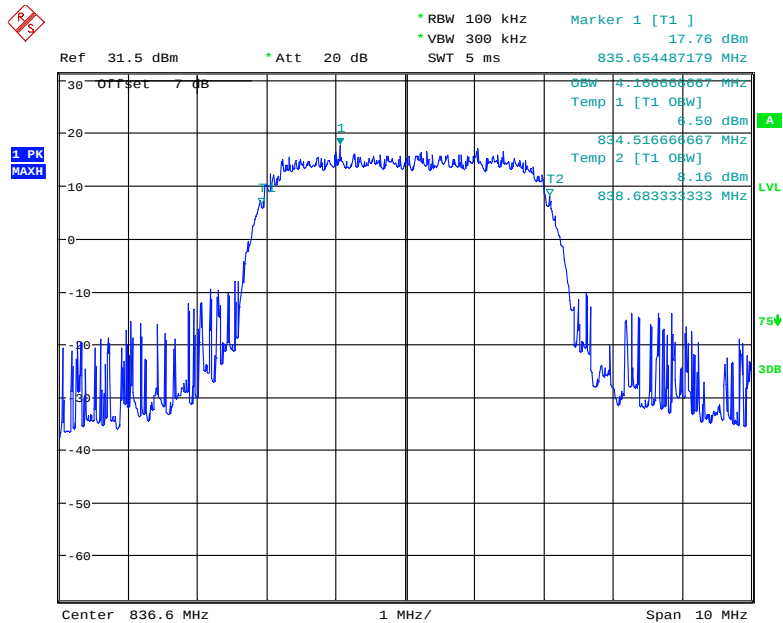
Date: 22.DEC.2020 00:45:39

99% Occupied Bandwidth for HSUPA (BPSK) Mode, Low channel



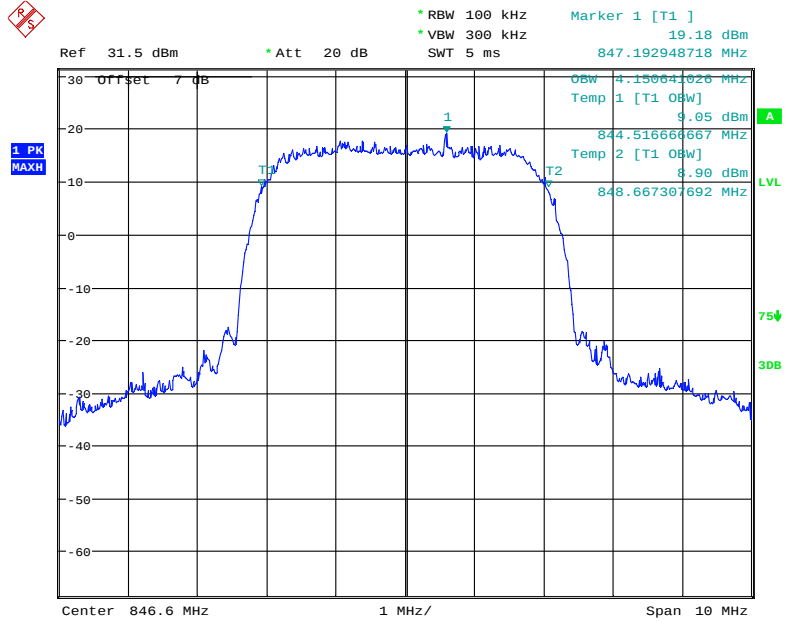
Date: 22.DEC.2020 01:14:37

99% Occupied Bandwidth for HSUPA (BPSK) Mode, Middle channel



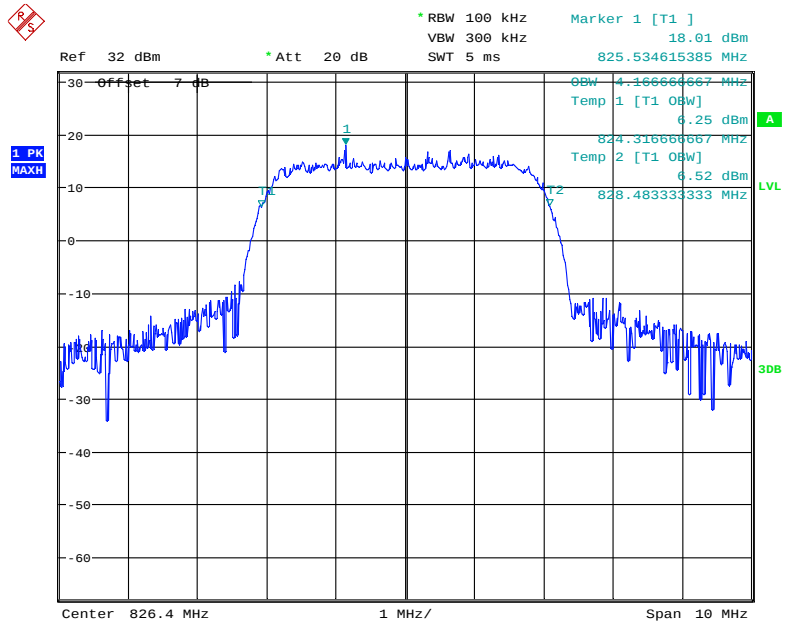
Date: 22.DEC.2020 01:15:06

99% Occupied Bandwidth for HSUPA (BPSK) Mode, High channel



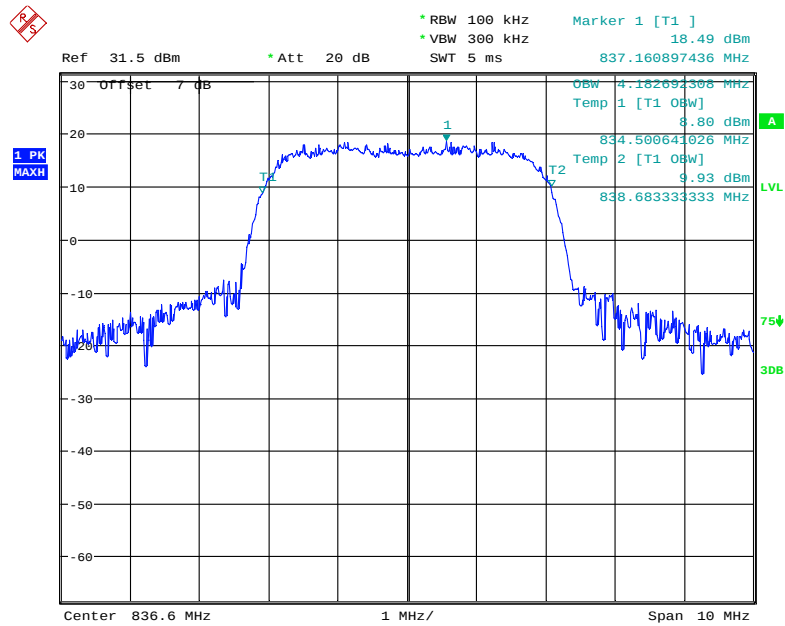
Date: 22.DEC.2020 01:15:47

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



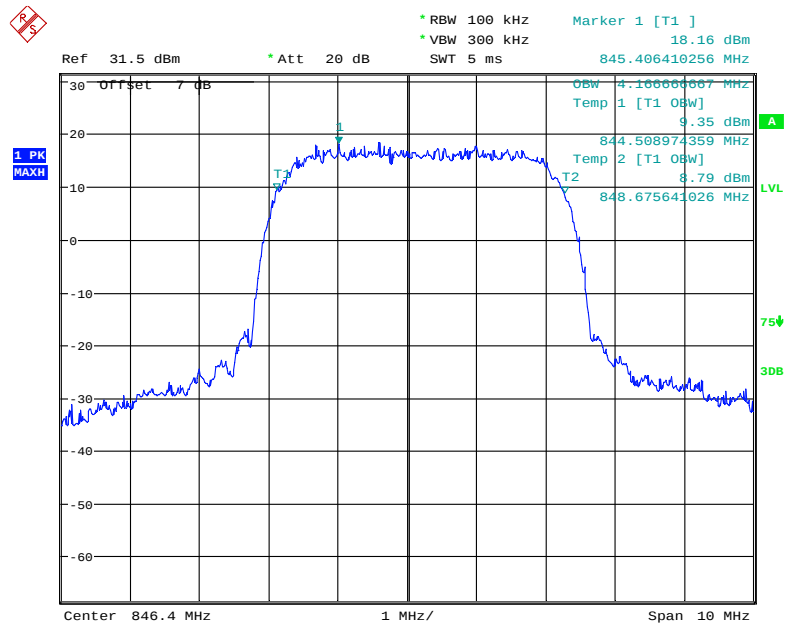
Date: 22.DEC.2020 18:44:38

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



Date: 22.DEC.2020 01:13:14

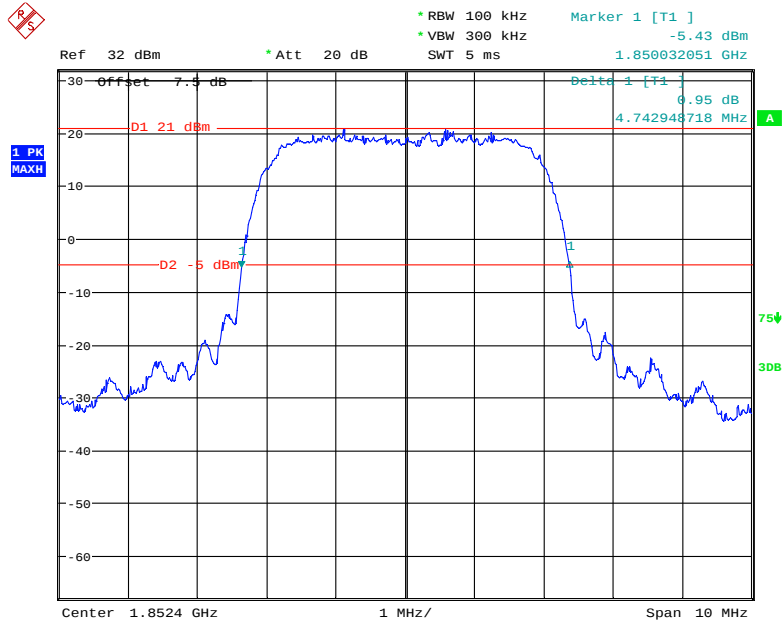
99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 22.DEC.2020 01:10:35

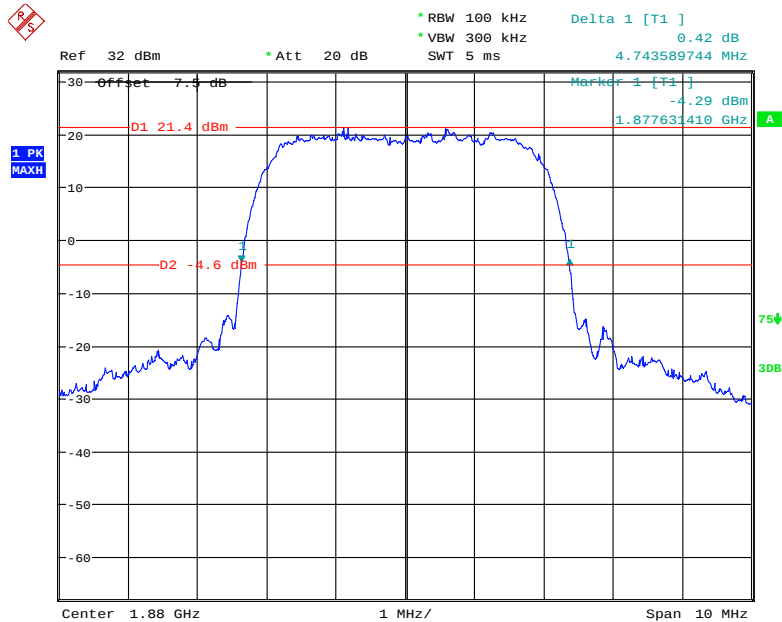
PCS Band (Part 24E)

26 dB Emissions Bandwidth for RMC (BPSK) Mode, Low channel



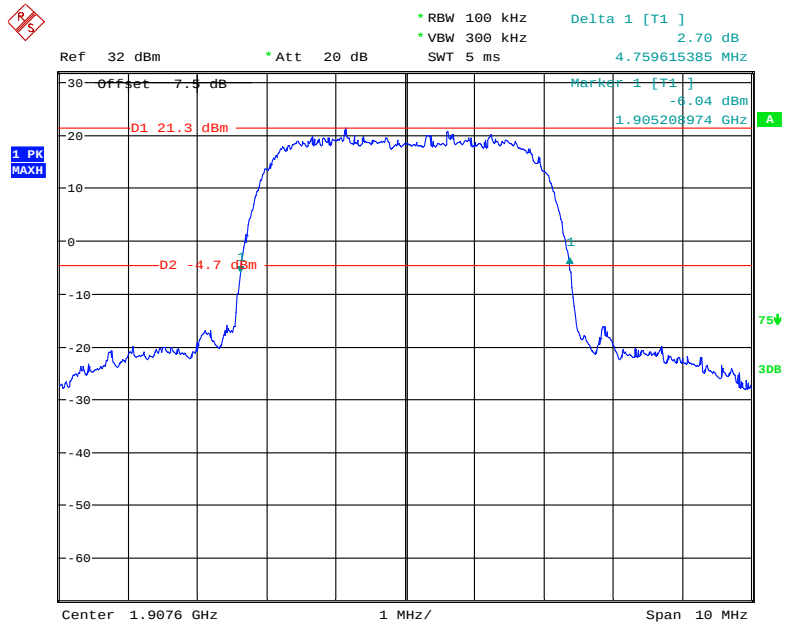
Date: 22.DEC.2020 00:31:50

26 dB Emissions Bandwidth for RMC (BPSK) Mode, Middle channel



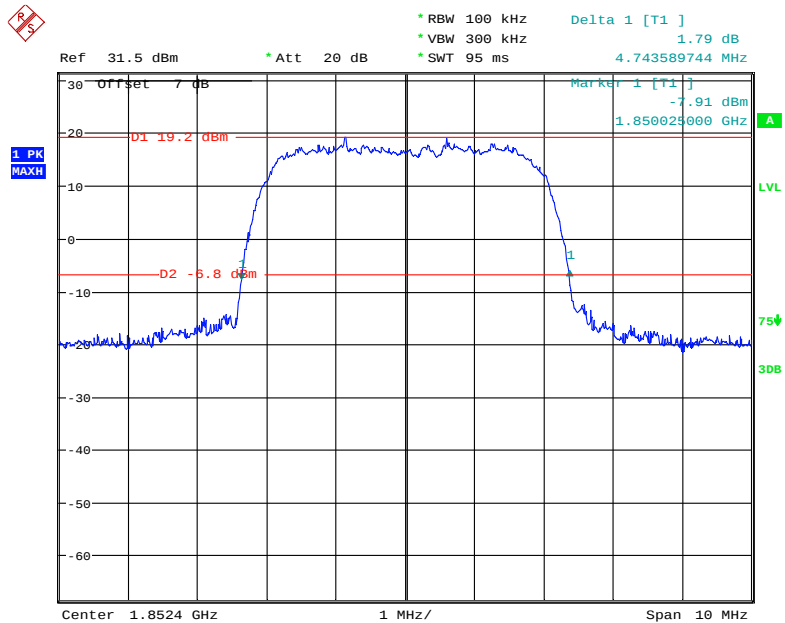
Date: 22.DEC.2020 00:33:17

26 dB Emissions Bandwidth for RMC (BPSK) Mode, High channel



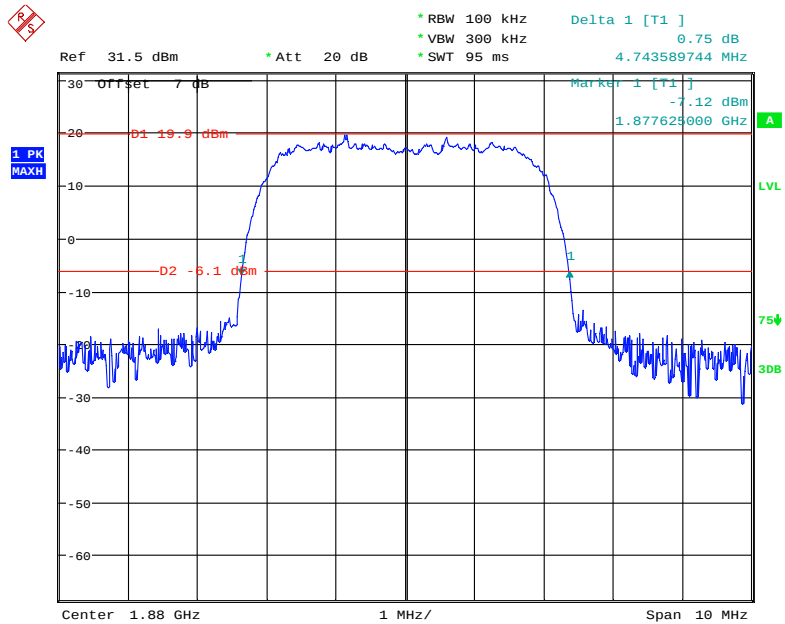
Date: 22.DEC.2020 00:34:47

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, Low channel



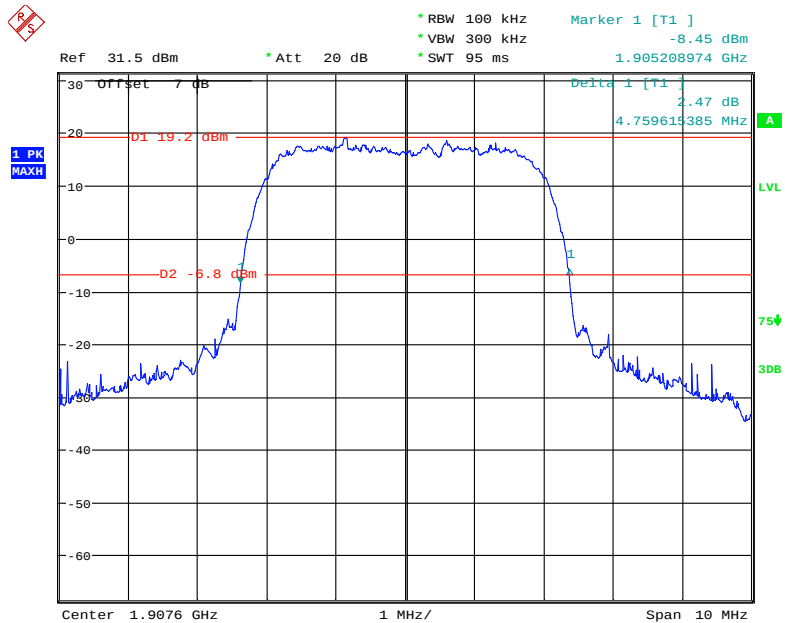
Date: 22.DEC.2020 01:52:21

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, Middle channel



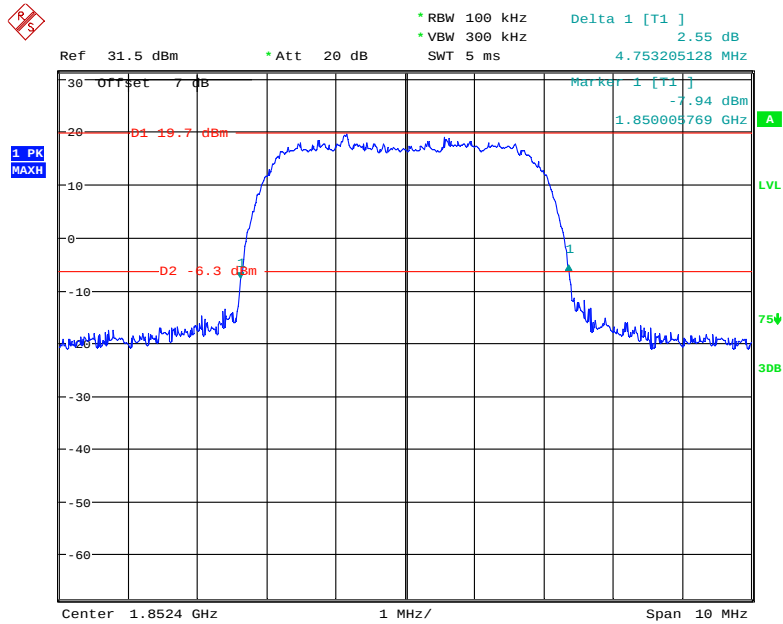
Date: 22.DEC.2020 01:48:56

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, High channel



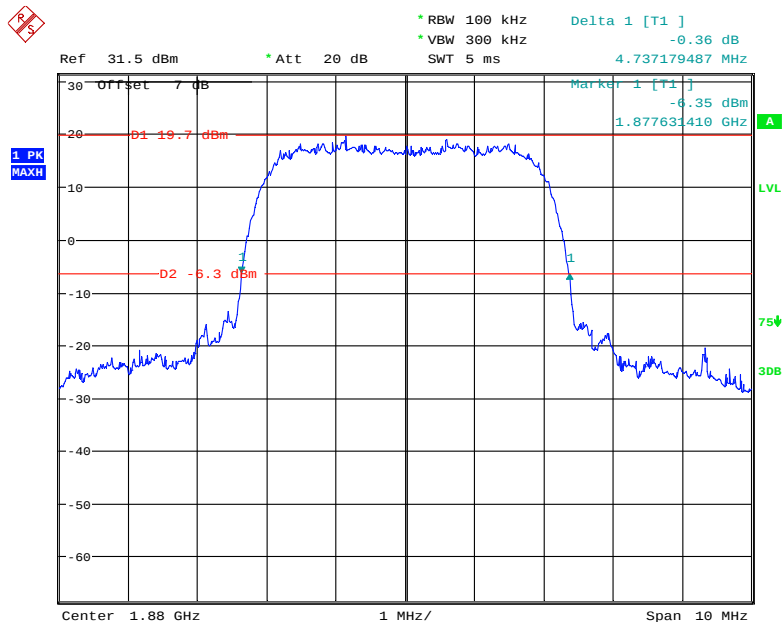
Date: 22.DEC.2020 01:50:54

26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, Low channel

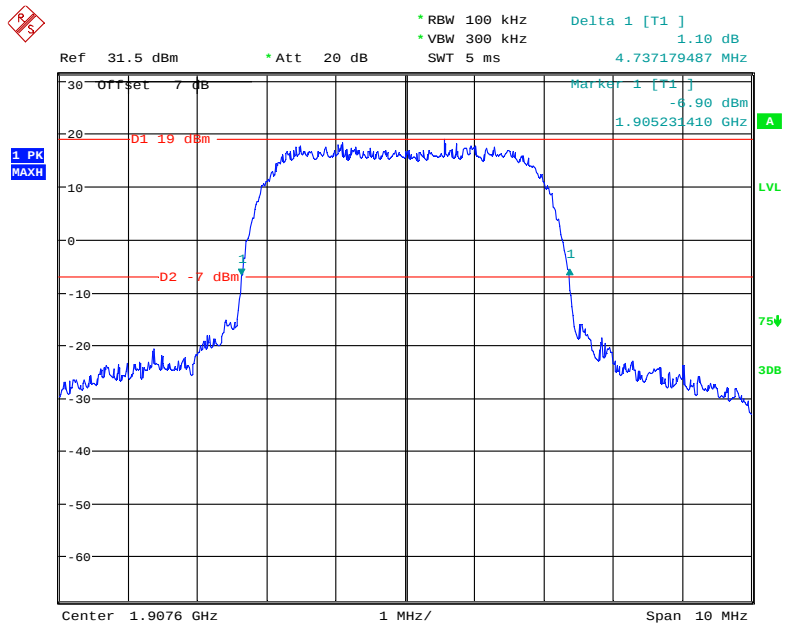


Date: 22.DEC.2020 00:55:14

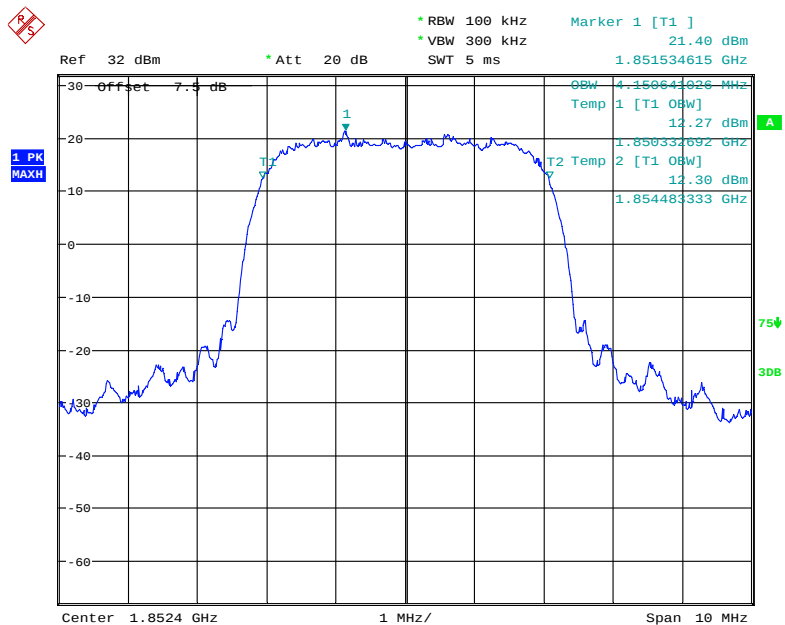
26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, Middle channel



Date: 22.DEC.2020 00:57:32

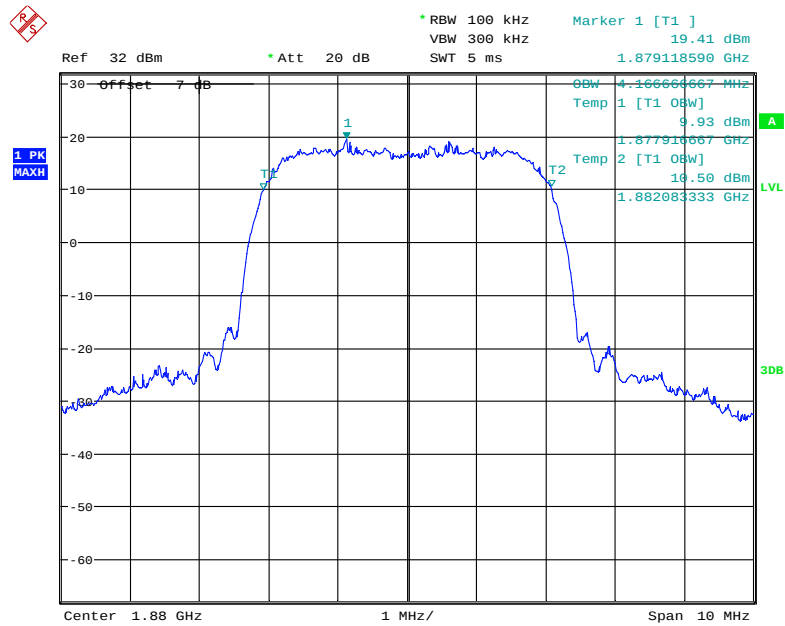
26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, High channel

Date: 22.DEC.2020 01:01:58

99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel

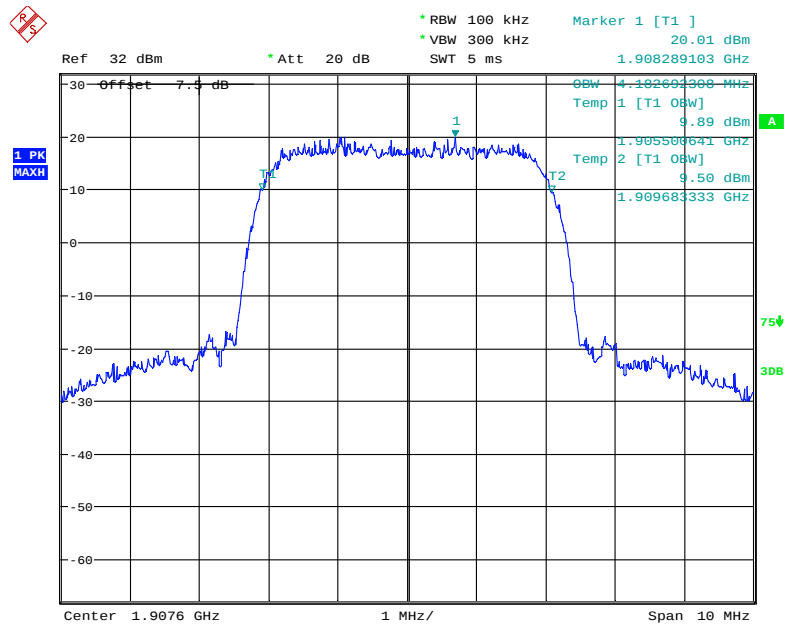
Date: 22.DEC.2020 00:23:03

99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel



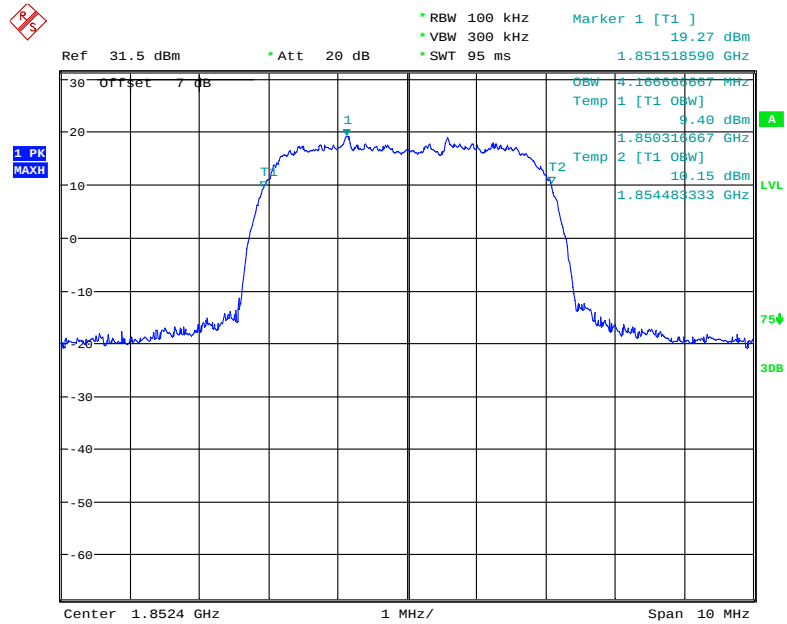
Date: 22.DEC.2020 18:38:55

99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



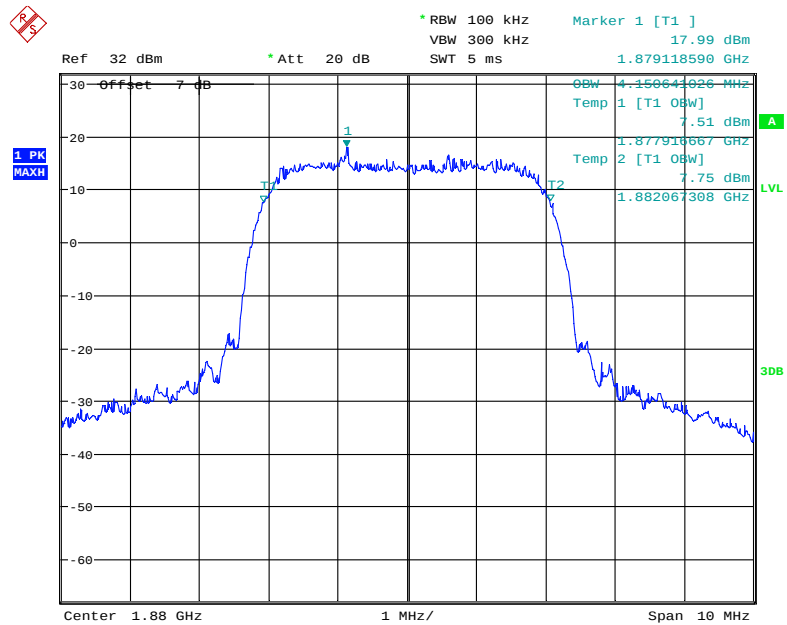
Date: 22.DEC.2020 00:25:48

99% Occupied Bandwidth for HSUPA (BPSK) Mode, Low channel



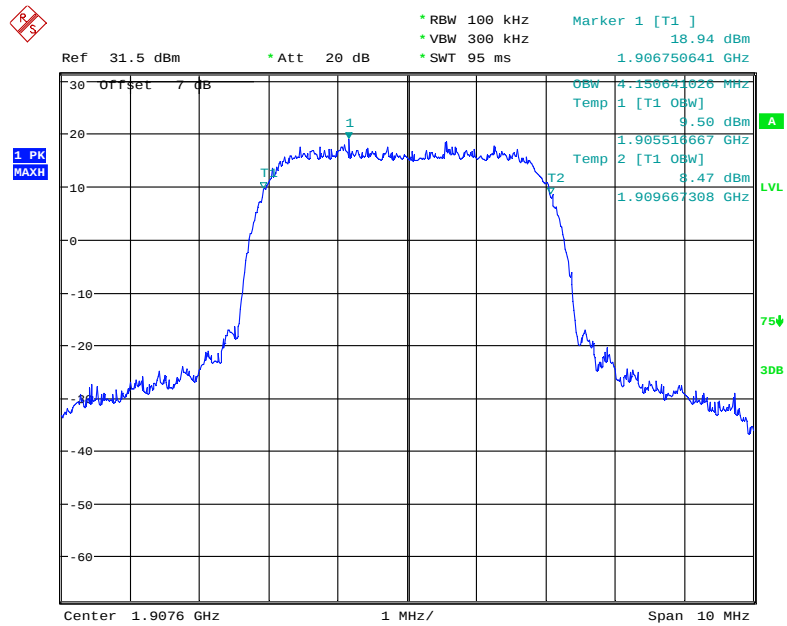
Date: 22.DEC.2020 01:40:22

99% Occupied Bandwidth for HSUPA (BPSK) Mode, Middle channel



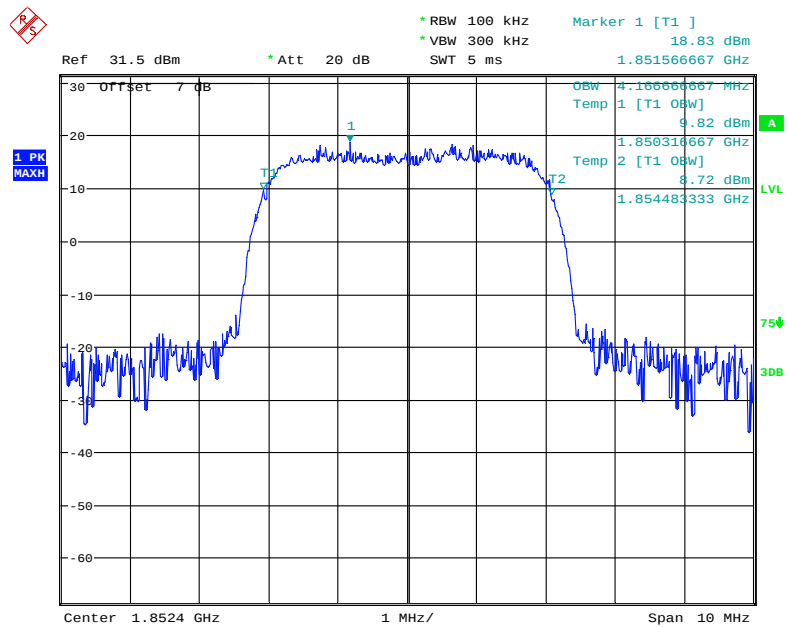
Date: 22.DEC.2020 18:42:11

99% Occupied Bandwidth for HSUPA(BPSK) Mode, High channel



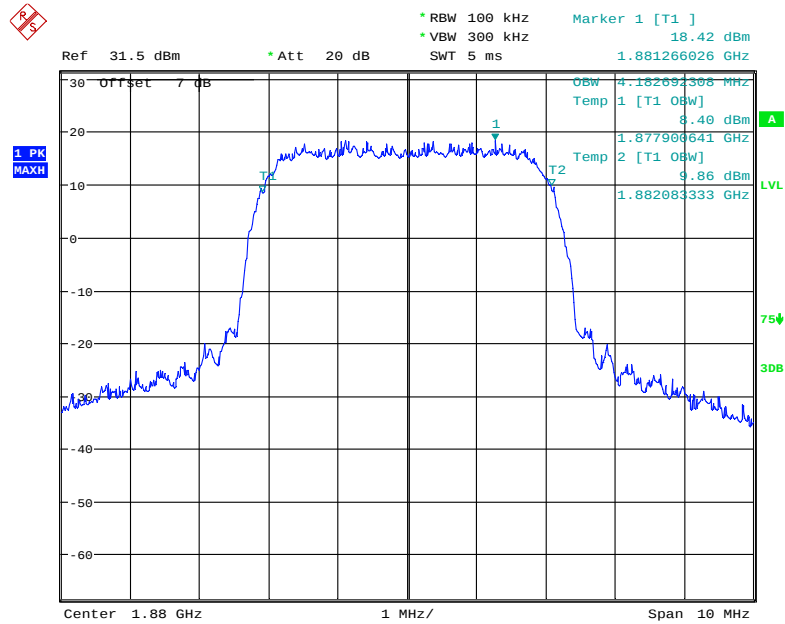
Date: 22.DEC.2020 01:38:17

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



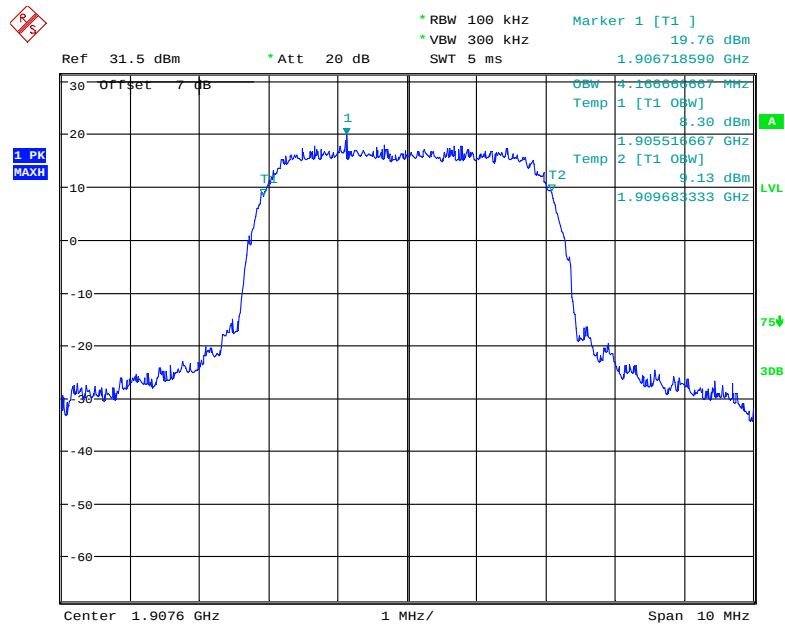
Date: 22.DEC.2020 00:52:54

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



Date: 22.DEC.2020 00:52:13

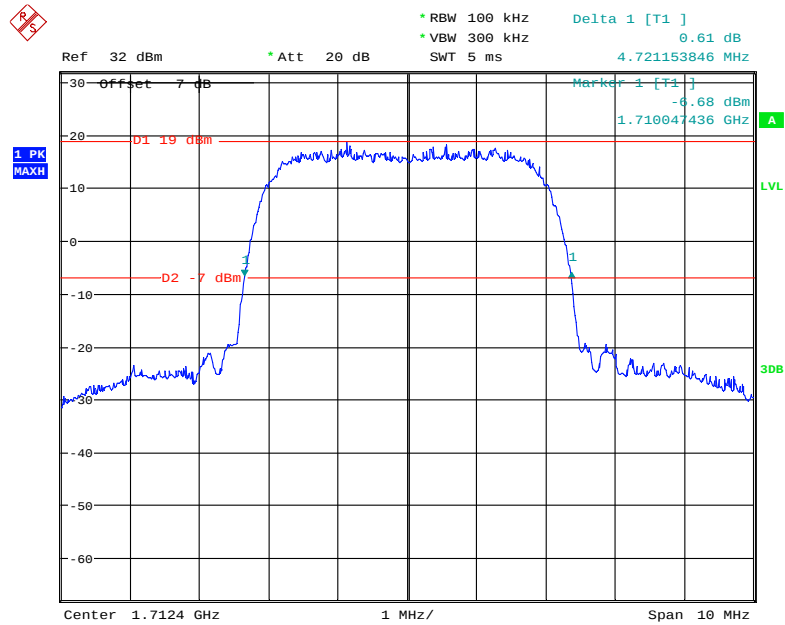
99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



Date: 22.DEC.2020 00:51:21

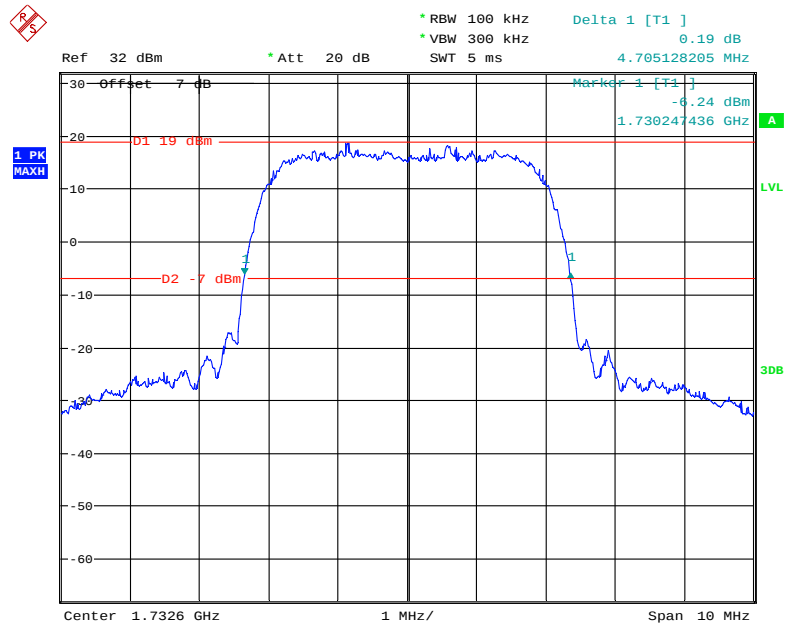
AWS Band (Part 27)

26 dB Emissions Bandwidth for RMC (BPSK) Mode, Low channel



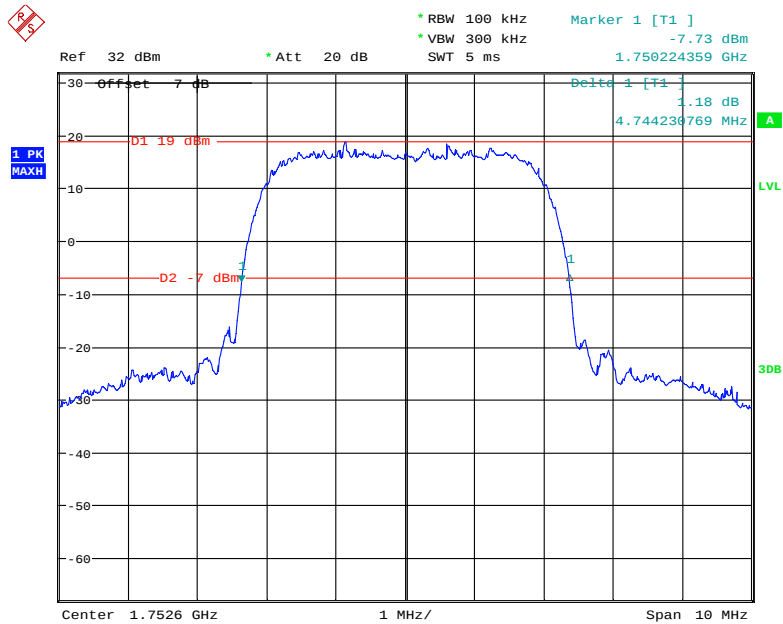
Date: 22.DEC.2020 22:27:58

26 dB Emissions for RMC (BPSK) Mode, Middle channel



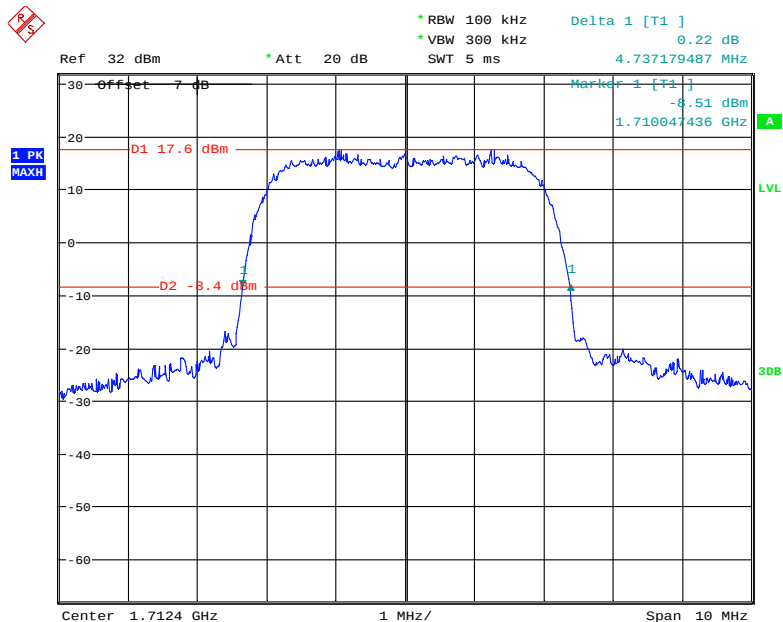
Date: 22.DEC.2020 22:27:20

26 dB Emissions Bandwidth for RMC (BPSK) Mode, High channel



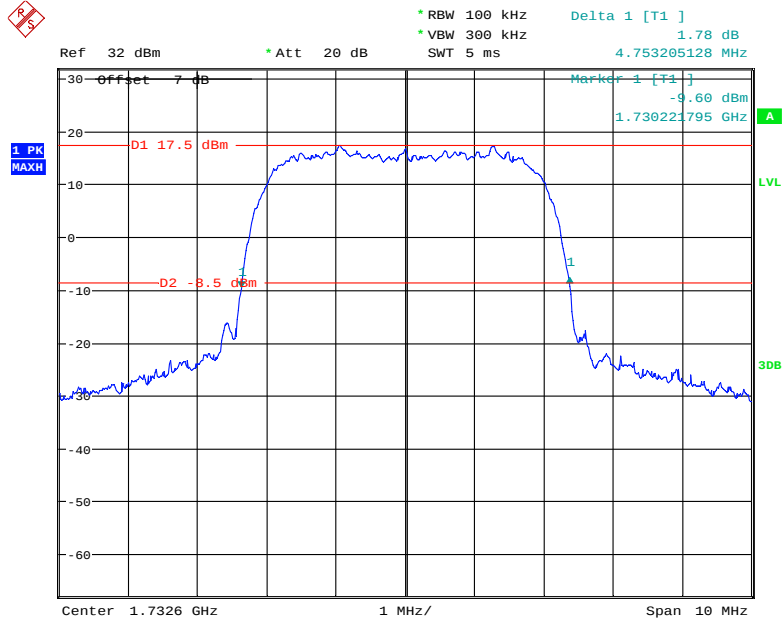
Date: 22.DEC.2020 22:26:14

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, Low channel



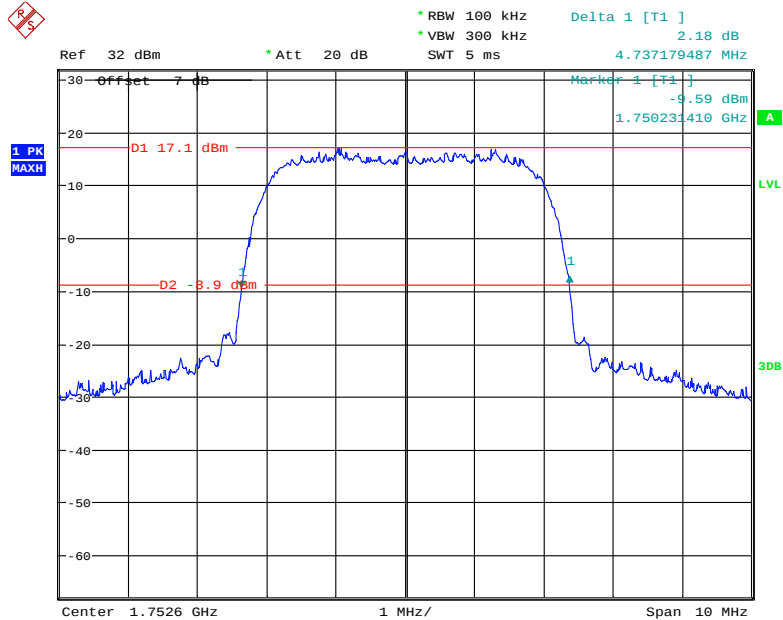
Date: 22.DEC.2020 22:38:45

26 dB Emissions Bandwidth for HSUPA (BPSK) Mode, Middle channel

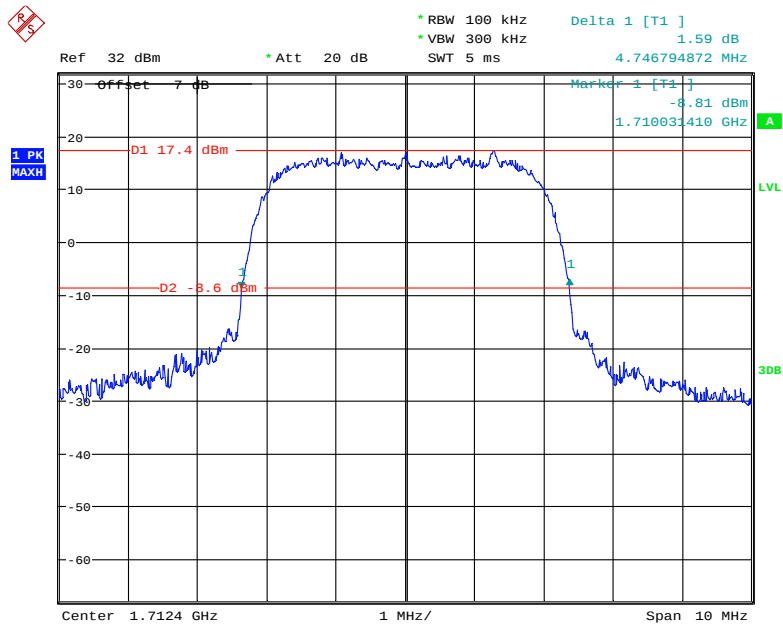


Date: 22.DEC.2020 22:37:32

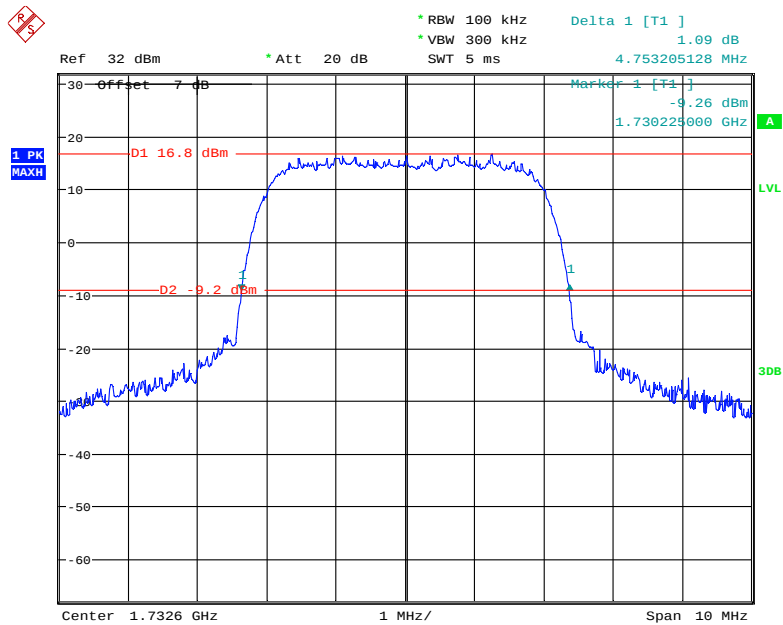
26 dB Emissions for HSUPA (BPSK) Mode, High channel



Date: 22.DEC.2020 22:39:57

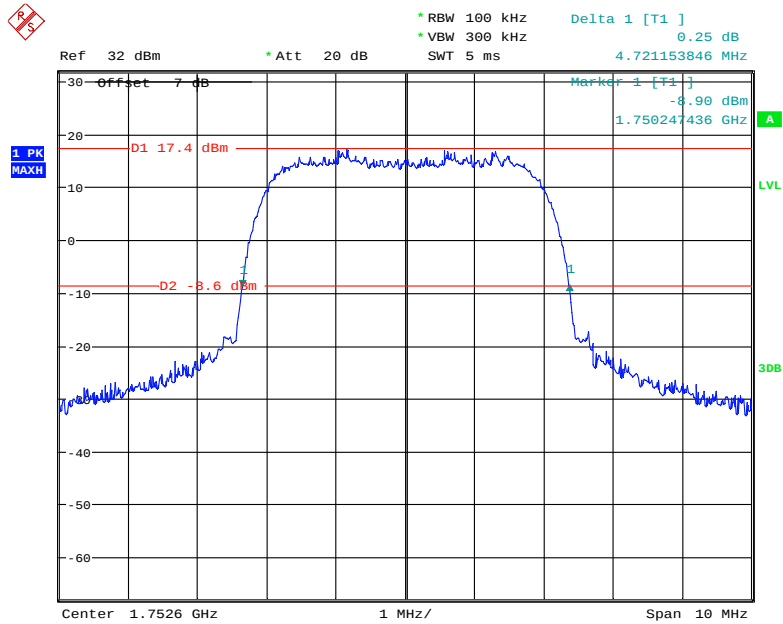
26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, Low channel

Date: 22.DEC.2020 22:13:31

26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, Middle channel

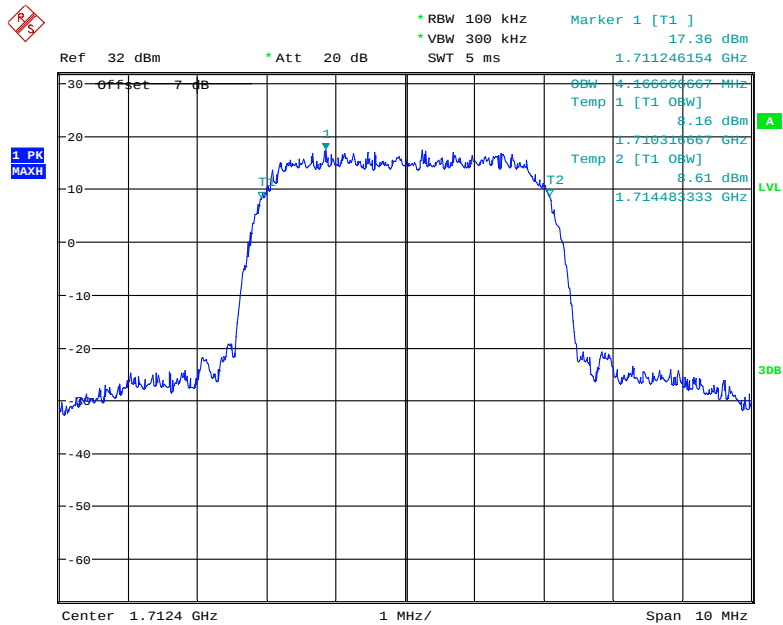
Date: 22.DEC.2020 22:45:41

26 dB Emissions Bandwidth for HSDPA (16QAM) Mode, High channel



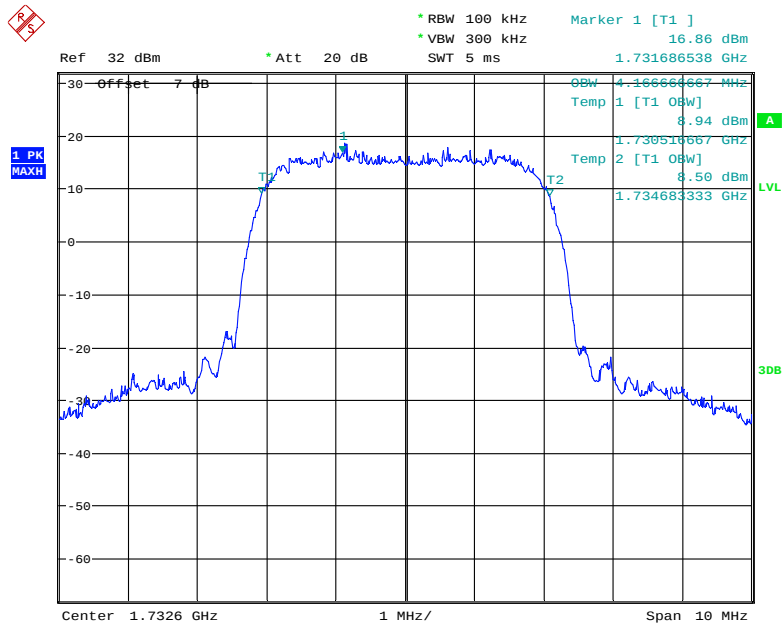
Date: 22.DEC.2020 22:16:30

99% Occupied Bandwidth for RMC (BPSK) Mode, Low channel



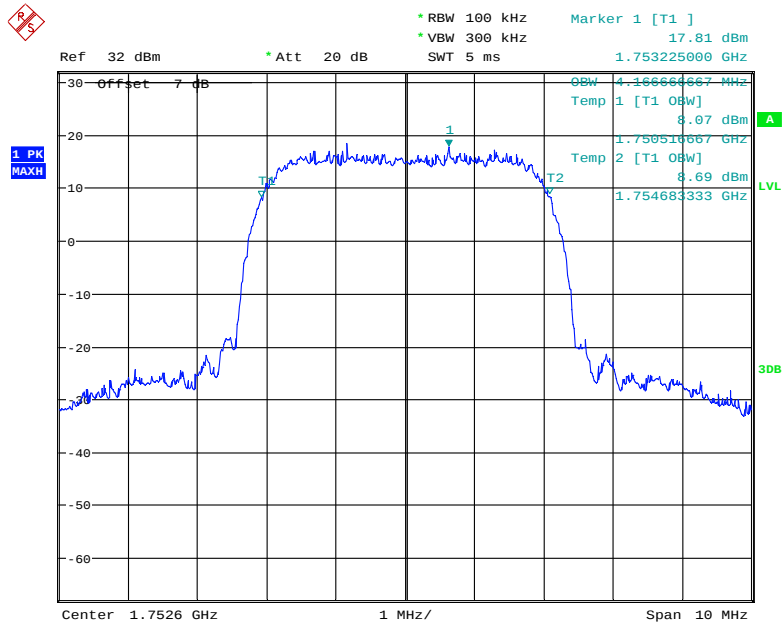
Date: 22.DEC.2020 20:55:59

99% Occupied Bandwidth for RMC (BPSK) Mode, Middle channel



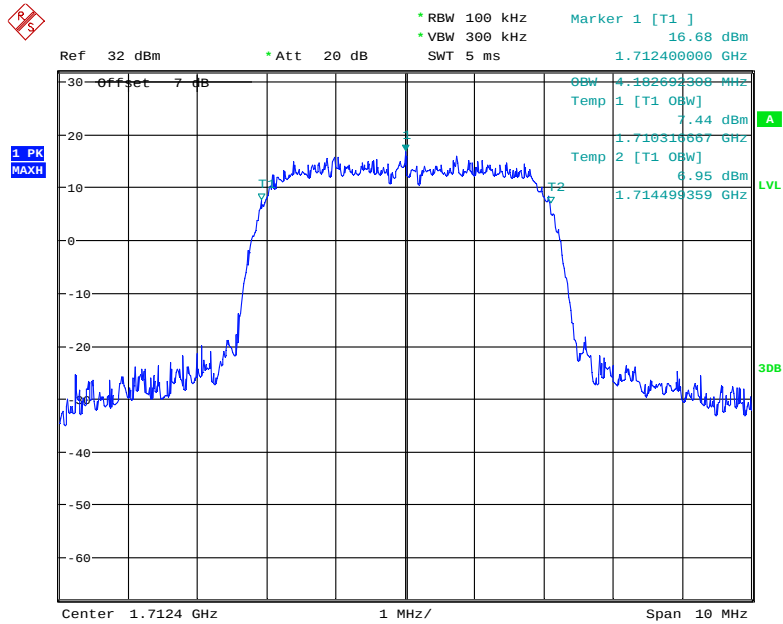
Date: 22.DEC.2020 20:55:27

99% Occupied Bandwidth for RMC (BPSK) Mode, High channel



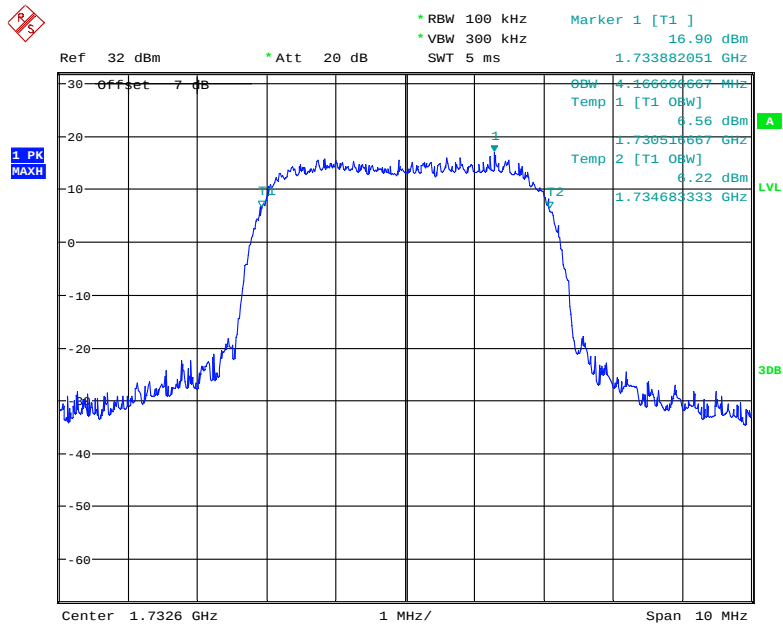
Date: 22.DEC.2020 20:56:30

99% Occupied Bandwidth for HSUPA (BPSK) Mode, Low channel



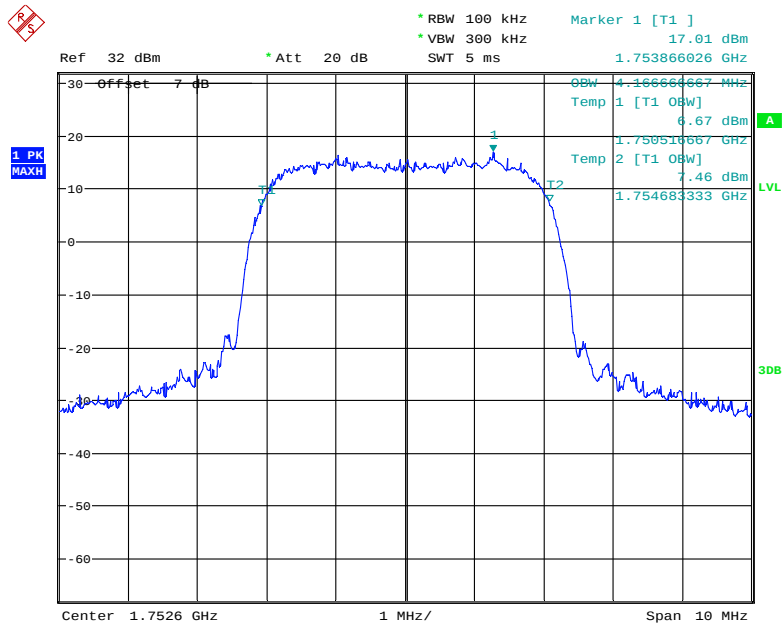
Date: 22.DEC.2020 20:50:57

99% Occupied Bandwidth for HSUPA (BPSK) Mode, Middle channel



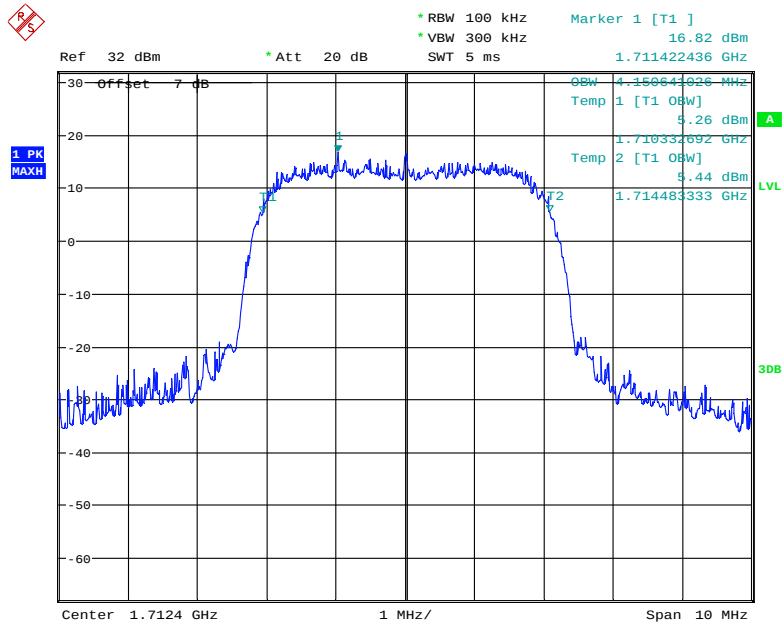
Date: 22.DEC.2020 20:50:24

99% Occupied Bandwidth for HSUPA(BPSK) Mode, High channel



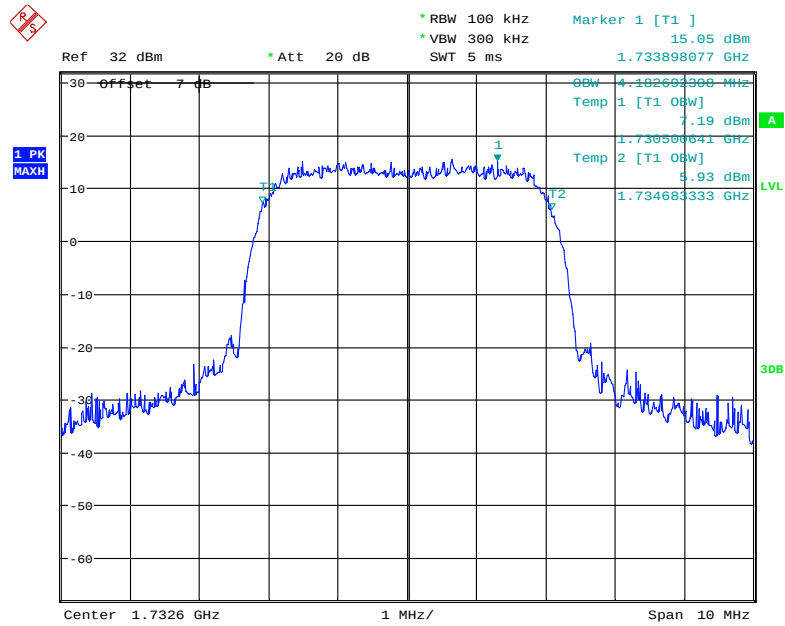
Date: 22.DEC.2020 20:48:35

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Low channel



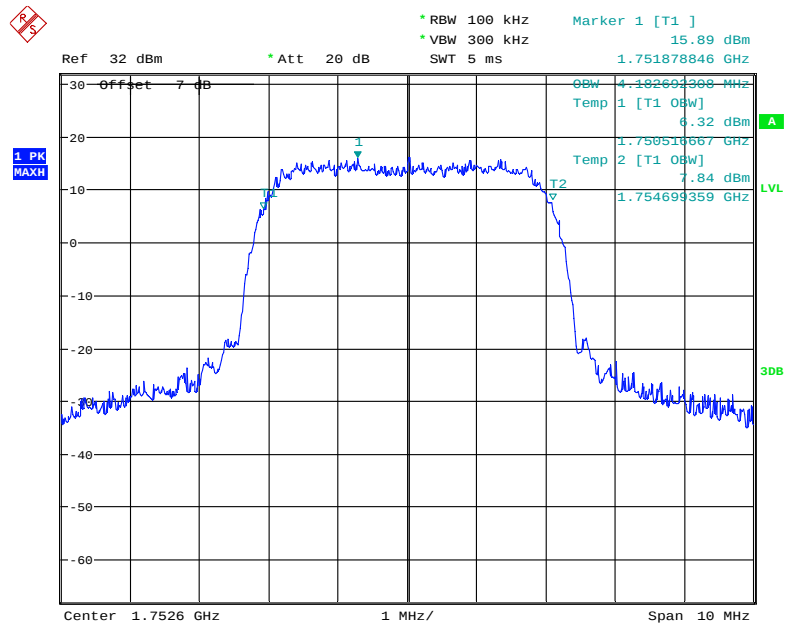
Date: 22.DEC.2020 22:11:37

99% Occupied Bandwidth for HSDPA (16QAM) Mode, Middle channel



Date: 22.DEC.2020 22:11:10

99% Occupied Bandwidth for HSDPA (16QAM) Mode, High channel



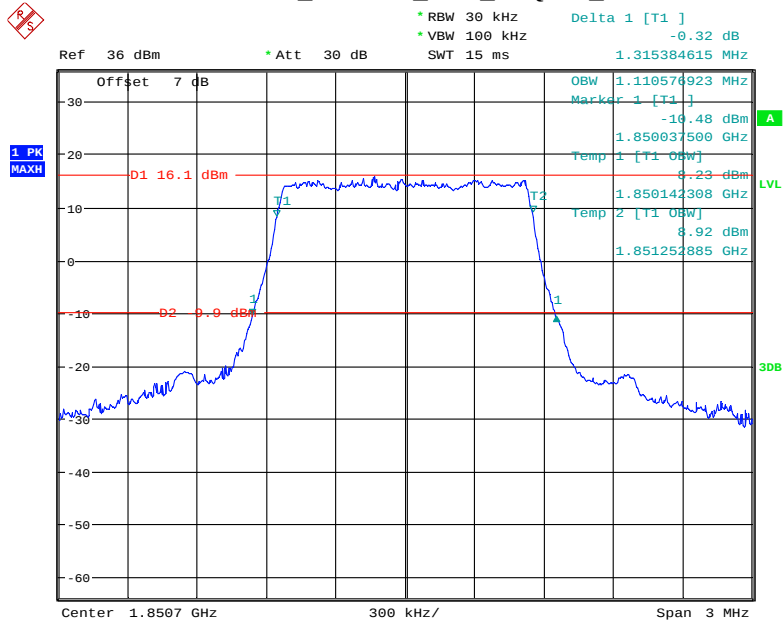
Date: 22.DEC.2020 22:07:00

LTE Band 2:

Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.111	1.315
		Middle	1.110	1.308
		High	1.106	1.332
	16QAM	Low	1.111	1.315
		Middle	1.098	1.320
		High	1.106	1.311
3	QPSK	Low	2.692	2.958
		Middle	2.688	2.952
		High	2.692	2.969
	16QAM	Low	2.692	2.971
		Middle	2.688	2.952
		High	2.692	2.971
5	QPSK	Low	4.535	5.033
		Middle	4.520	5.080
		High	4.535	5.035
	16QAM	Low	4.519	5.024
		Middle	4.520	5.060
		High	4.535	5.074
10	QPSK	Low	8.974	9.692
		Middle	8.960	9.760
		High	8.974	9.769
	16QAM	Low	8.974	9.737
		Middle	8.960	9.680
		High	8.974	9.840
15	QPSK	Low	13.510	14.817
		Middle	13.500	14.880
		High	13.606	14.962
	16QAM	Low	13.510	14.856
		Middle	13.560	14.820
		High	13.558	14.942
20	QPSK	Low	17.949	19.487
		Middle	18.000	19.520
		High	17.949	19.551
	16QAM	Low	17.949	19.526
		Middle	18.000	19.600
		High	18.013	19.615

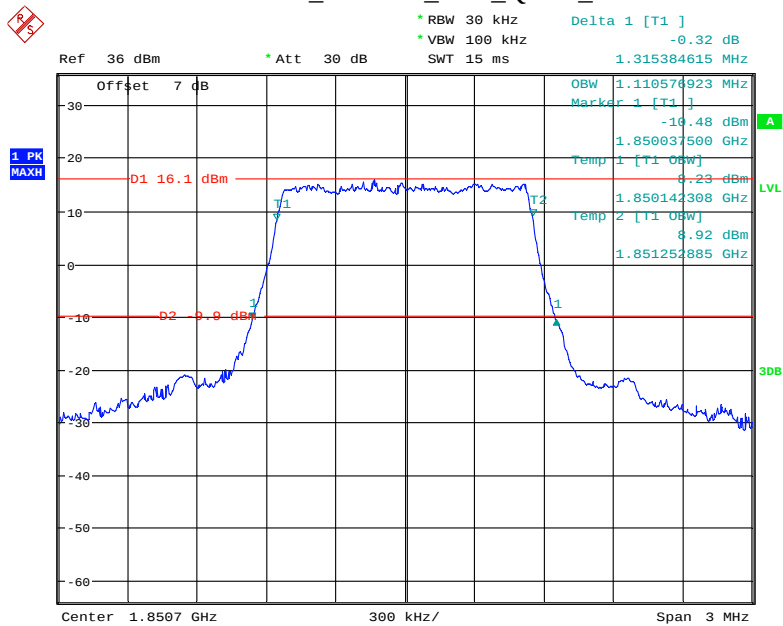
Please refer to following plots:

Band 2_1.4 MHz_Low_16QAM_RB6#0



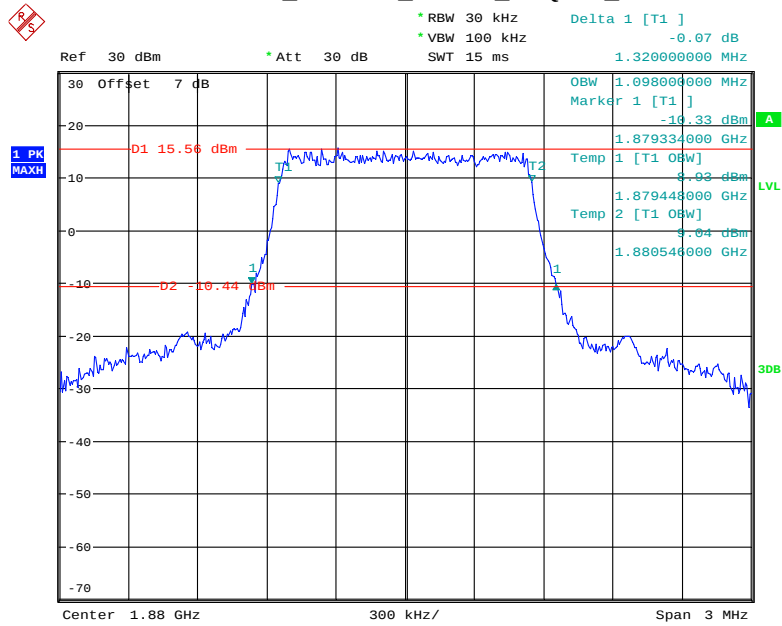
Date: 5.JAN.2021 17:54:57

Band 2_1.4 MHz_Low_QPSK_RB6#0



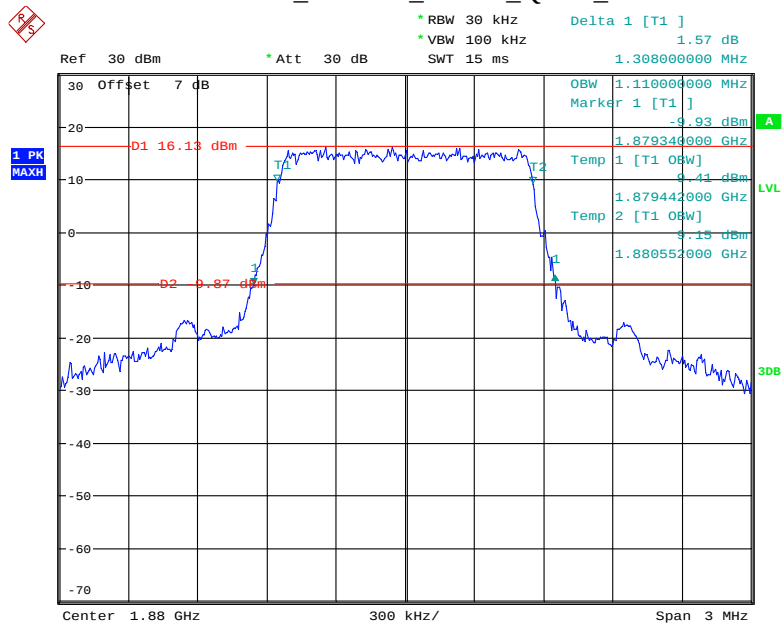
Date: 5.JAN.2021 17:54:57

Band 2_1.4 MHz_Middle_16QAM_RB6#0



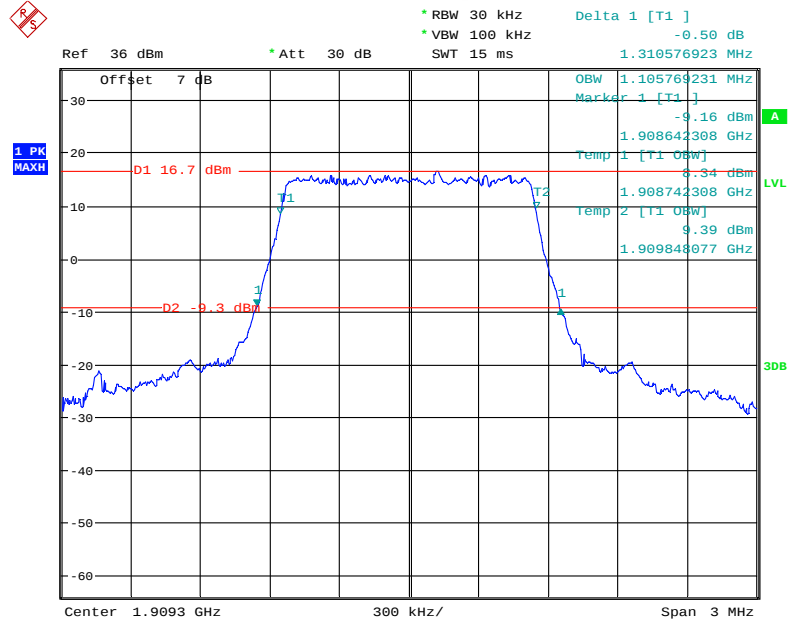
Date: 30.DEC.2020 14:06:28

Band 2_1.4 MHz_Middle_QPSK_RB6#0



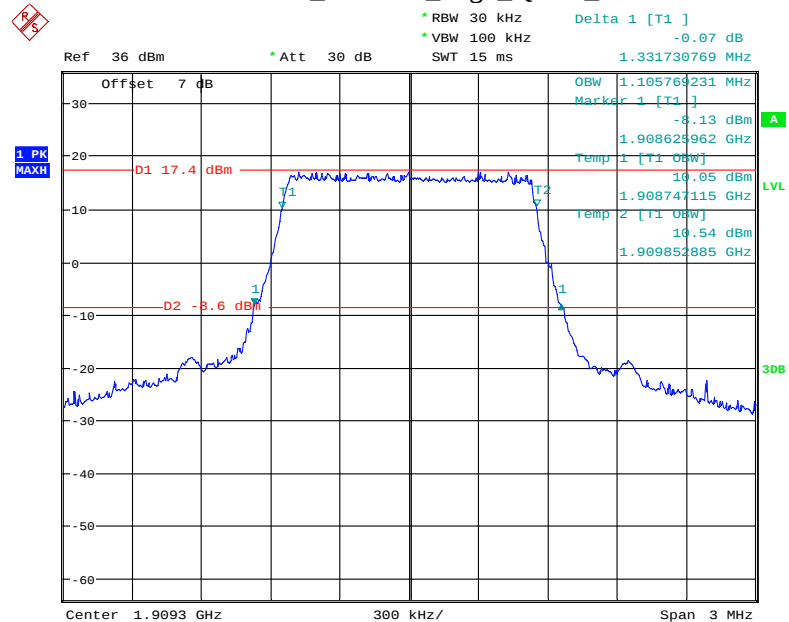
Date: 30.DEC.2020 14:06:07

Band 2_1.4 MHz_High_16QAM_RB6#0

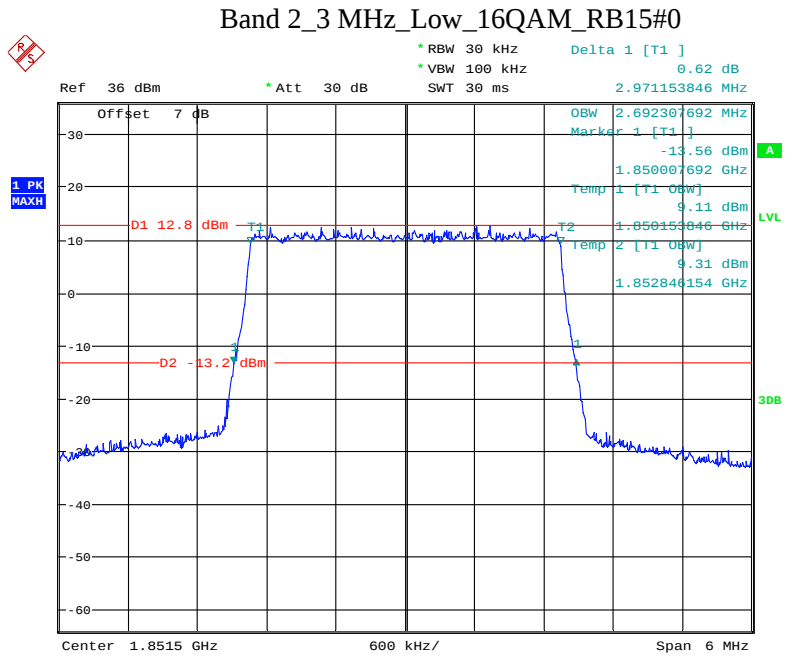


Date: 5.JAN.2021 18:00:24

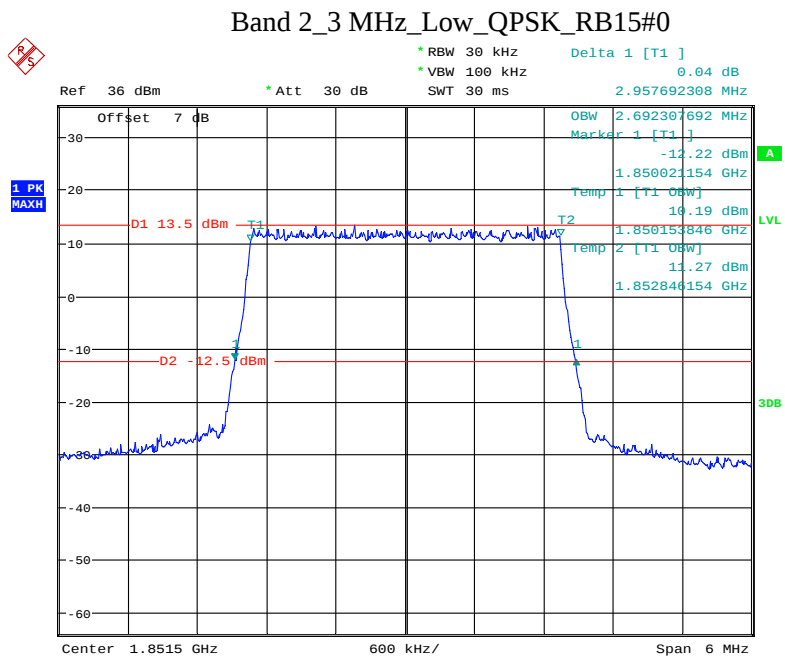
Band 2_1.4 MHz_High_QPSK_RB6#0



Date: 5.JAN.2021 18:09:27

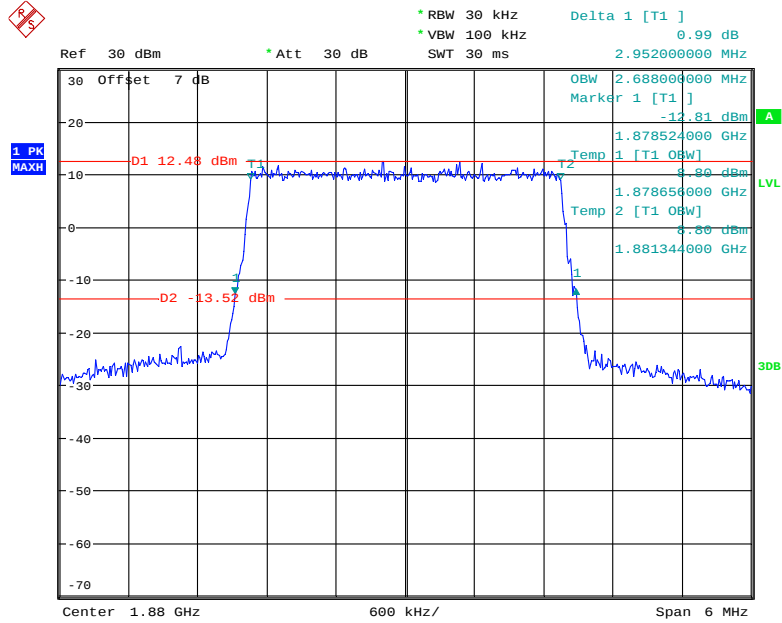


Date: 5.JAN.2021 18:18:30



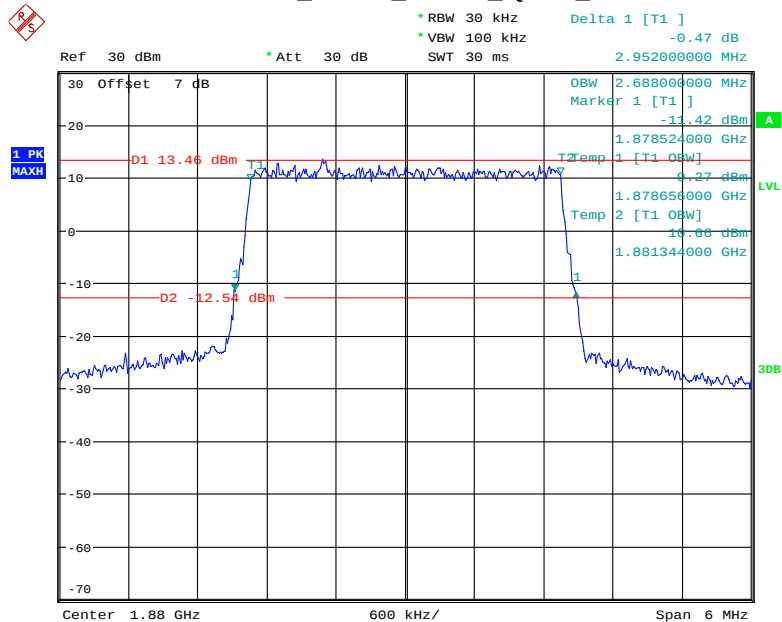
Date: 5.JAN.2021 18:20:10

Band 2_3 MHz_Middle_16QAM_RB15#0

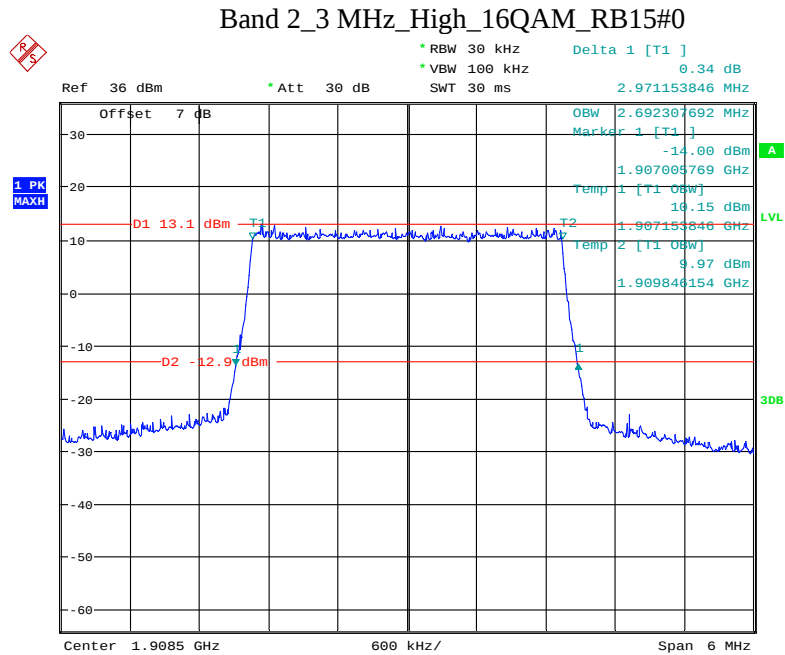


Date: 30.DEC.2020 14:07:05

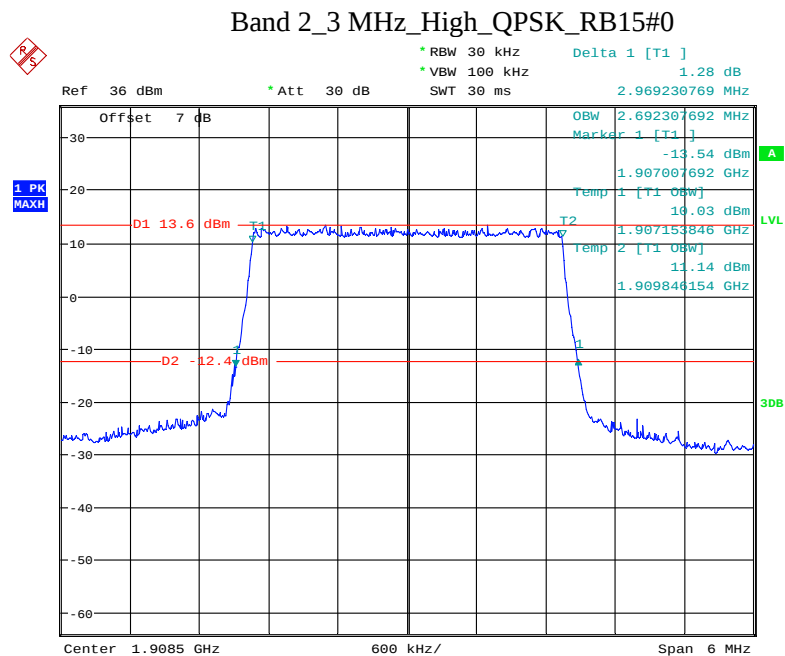
Band 2_3 MHz_Middle_QPSK_RB15#0



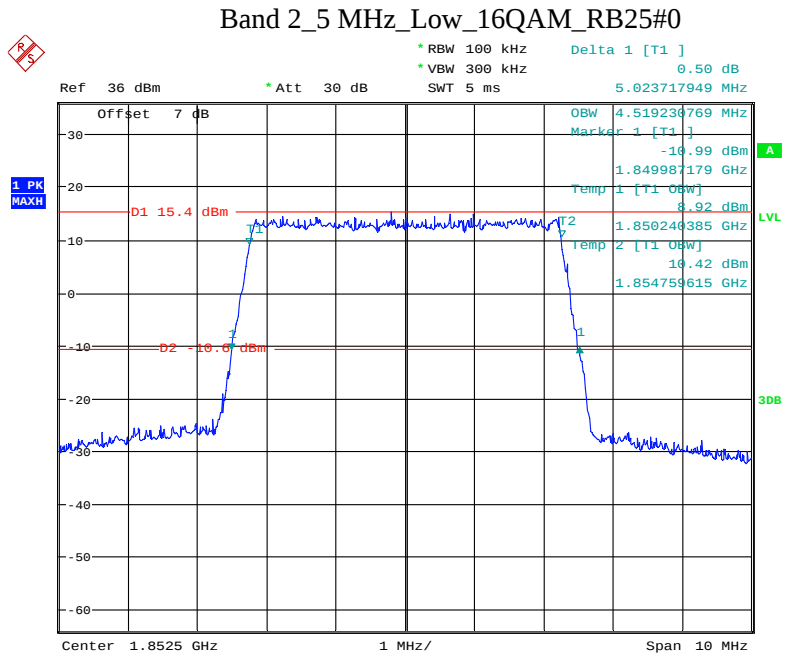
Date: 30.DEC.2020 14:06:47



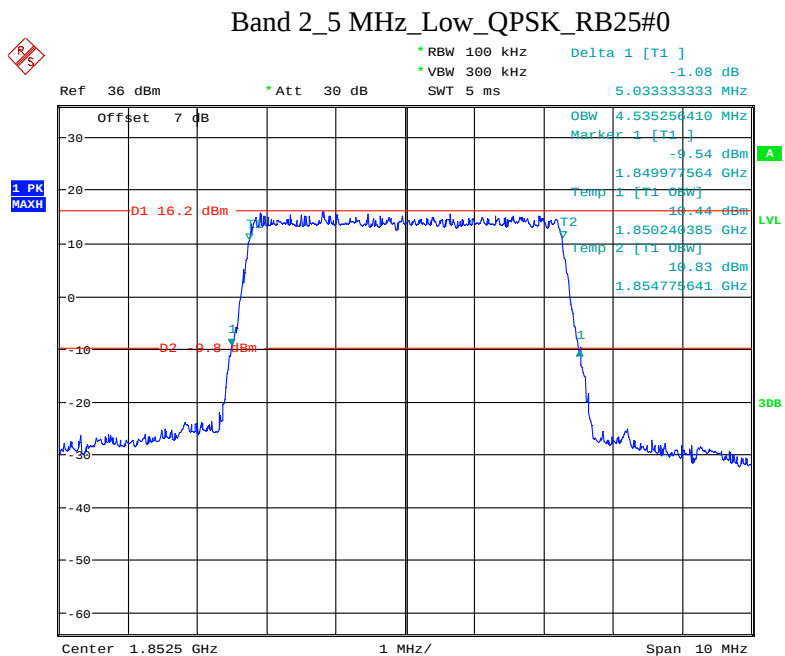
Date: 5.JAN.2021 18:15:11



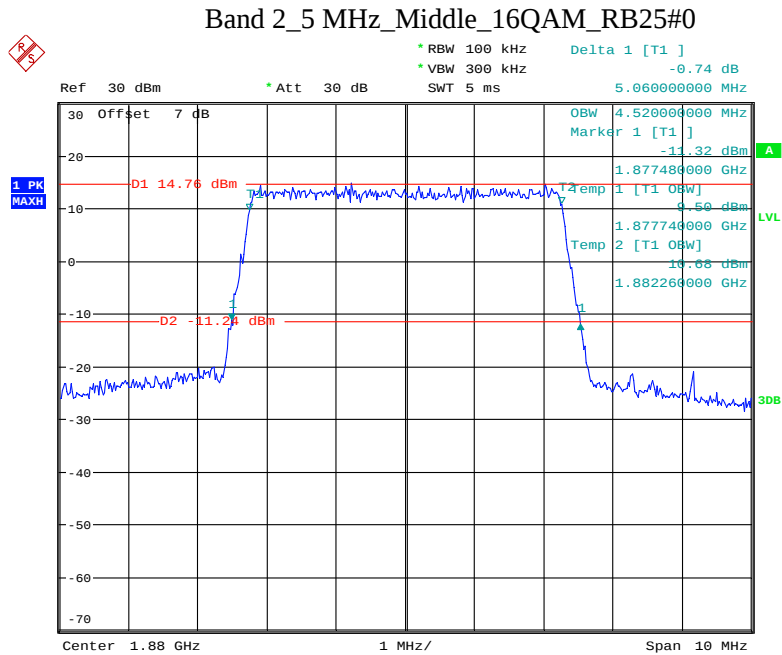
Date: 5.JAN.2021 18:12:59



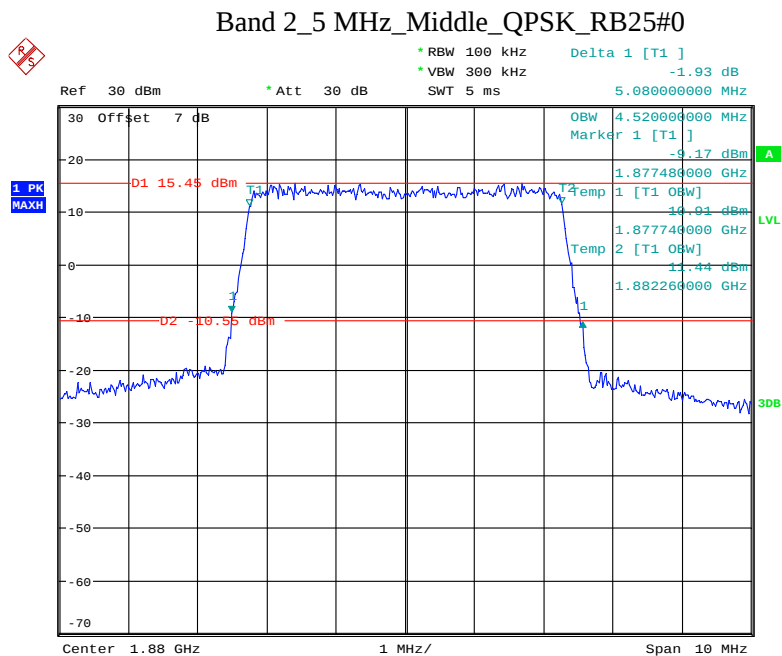
Date: 5.JAN.2021 18:30:45



Date: 5.JAN.2021 18:29:42

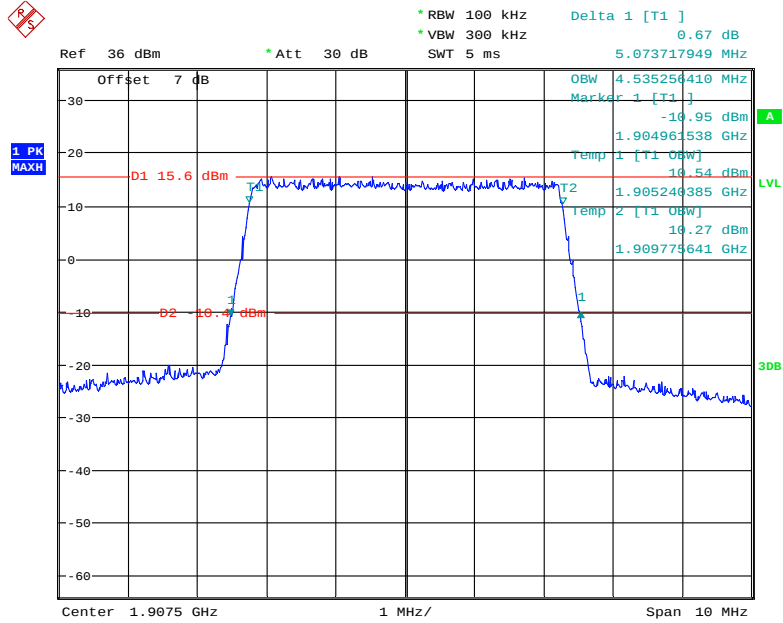


Date: 30.DEC.2020 14:07:48



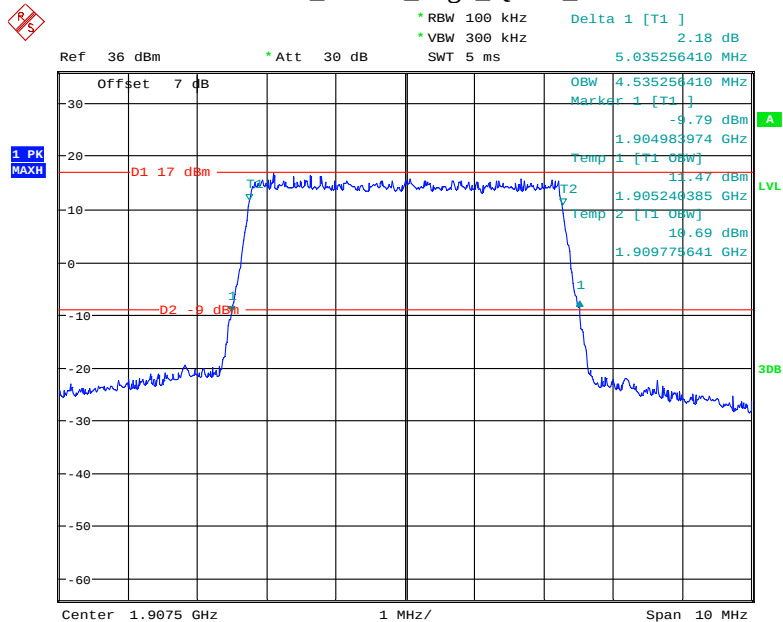
Date: 30.DEC.2020 14:07:28

Band 2_5 MHz_High_16QAM_RB25#0



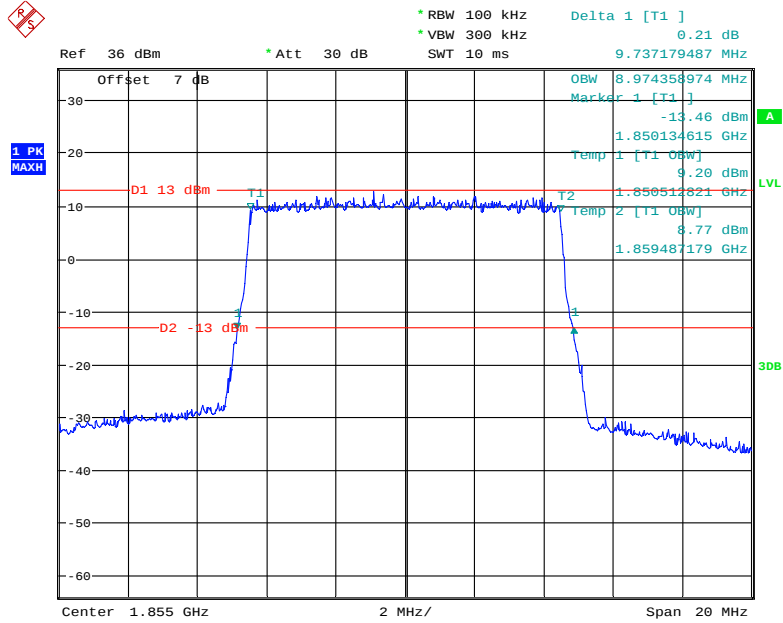
Date: 5.JAN.2021 18:34:20

Band 2_5 MHz_High_QPSK_RB25#0



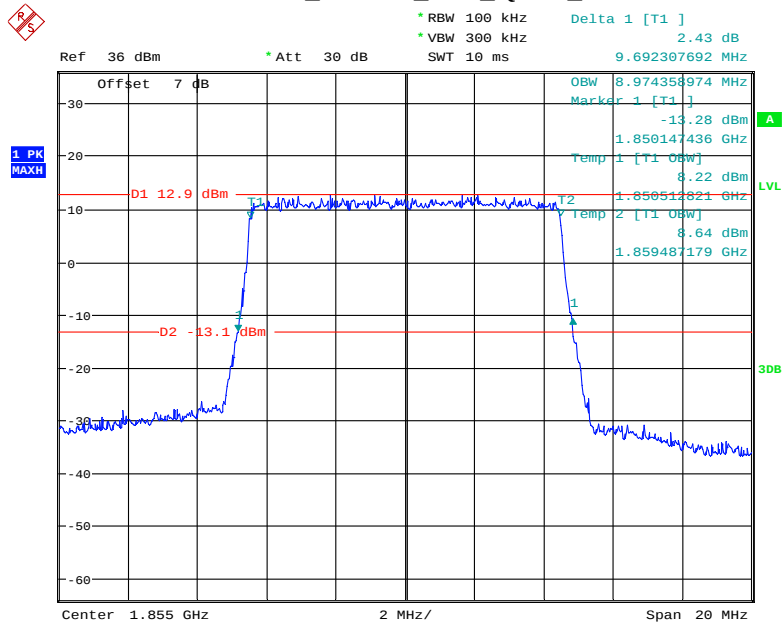
Date: 5.JAN.2021 18:36:09

Band 2_10 MHz_Low_16QAM_RB50#0



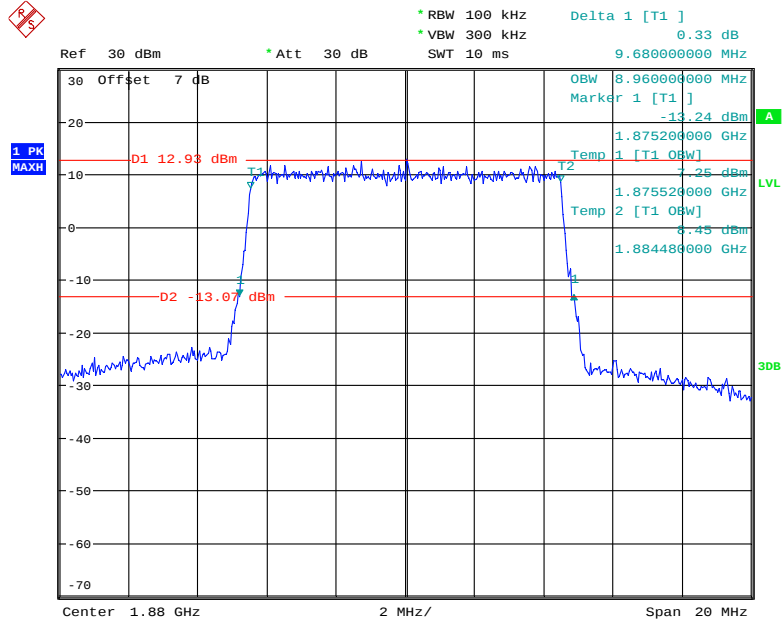
Date: 5.JAN.2021 18:38:51

Band 2_10 MHz_Low_QPSK_RB50#0



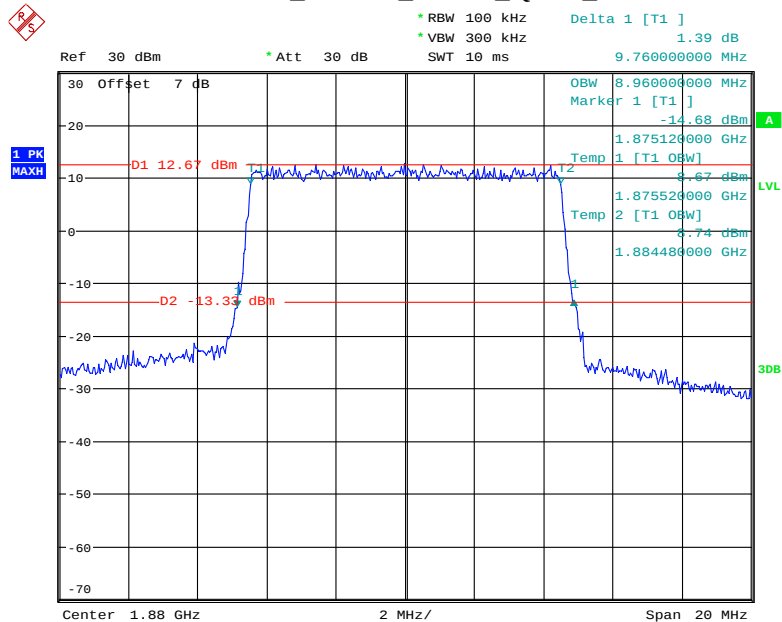
Date: 5.JAN.2021 18:37:44

Band 2_10 MHz_Middle_16QAM_RB50#0

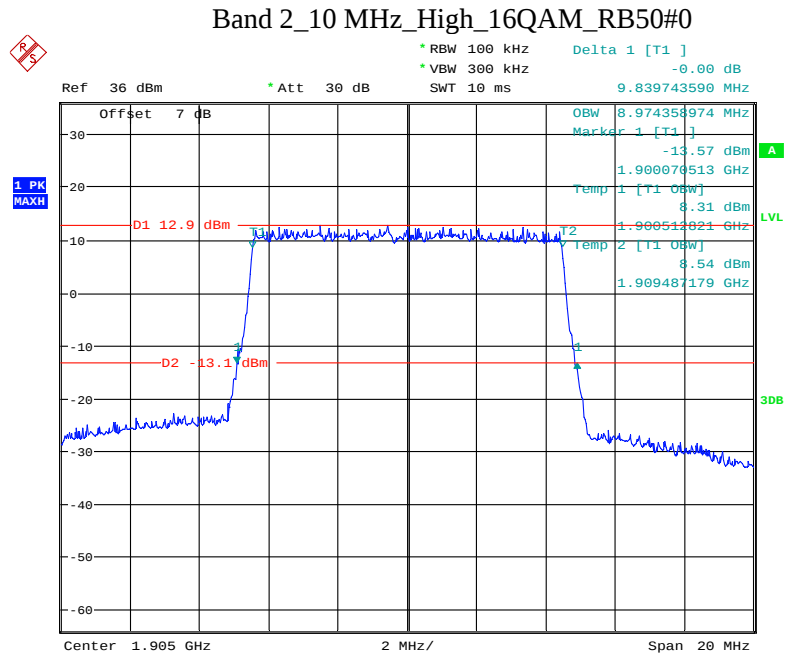


Date: 30.DEC.2020 14:08:28

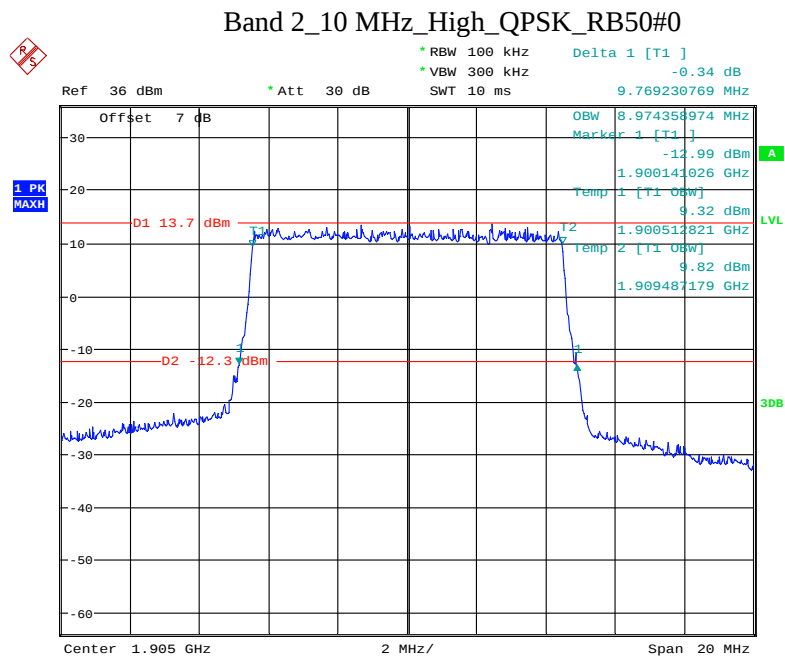
Band 2_10 MHz_Middle_QPSK_RB50#0



Date: 30.DEC.2020 14:08:09

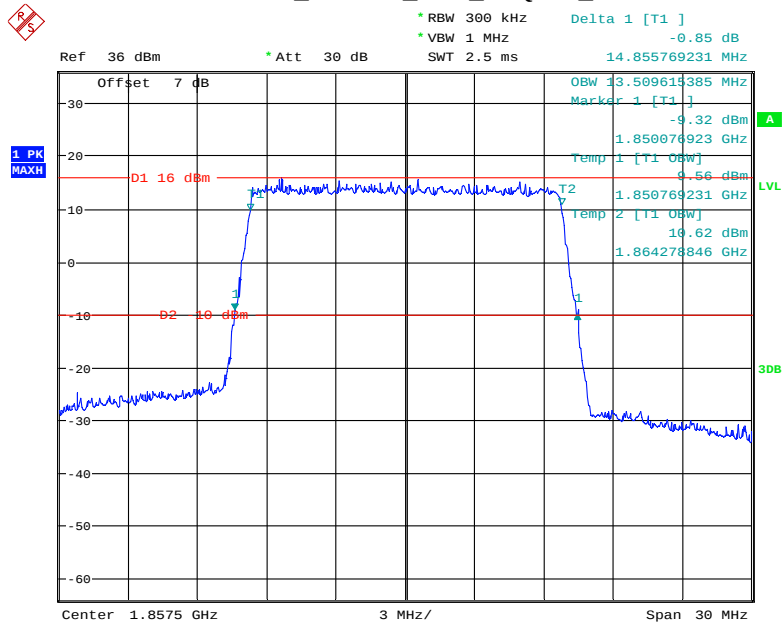


Date: 5.JAN.2021 18:40:38



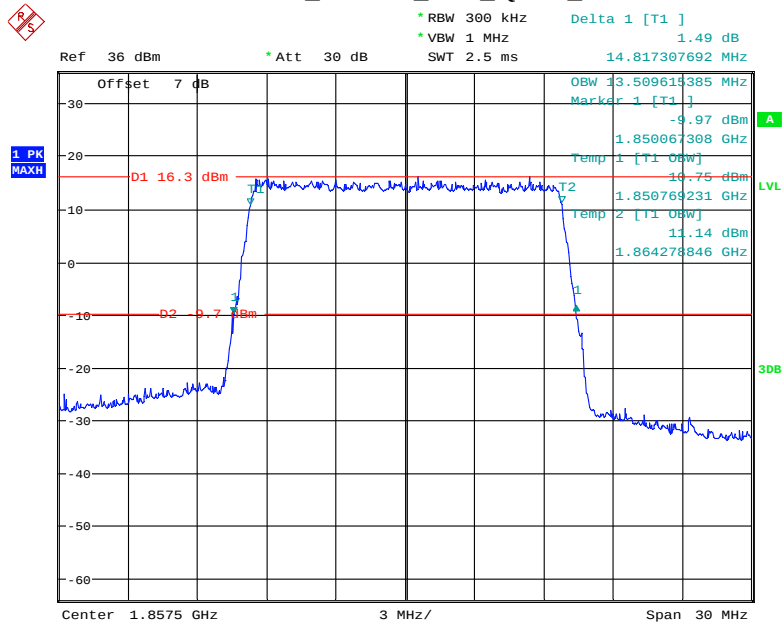
Date: 5.JAN.2021 18:41:56

Band 2_15 MHz_Low_16QAM_RB75#0



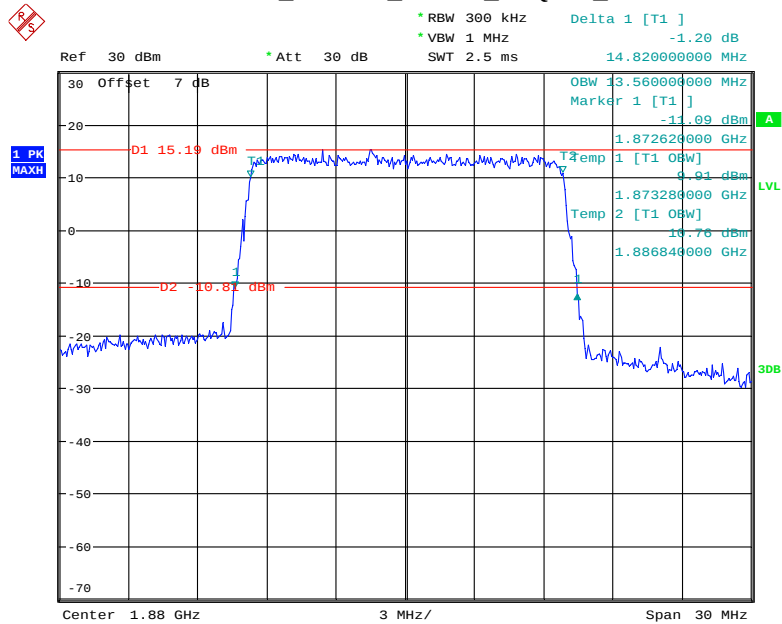
Date: 5.JAN.2021 18:45:07

Band 2_15 MHz_Low_QPSK_RB75#0



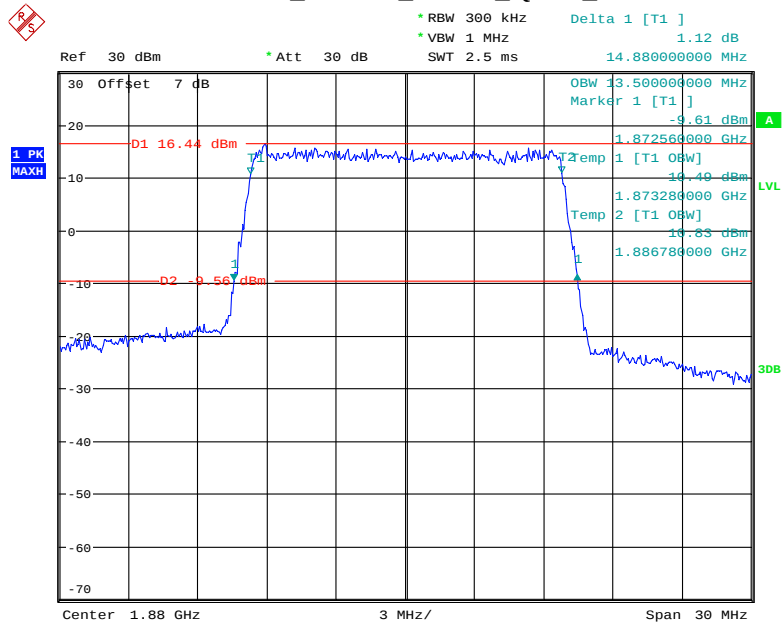
Date: 5.JAN.2021 18:43:46

Band 2_15 MHz_Middle_16QAM_RB75#0



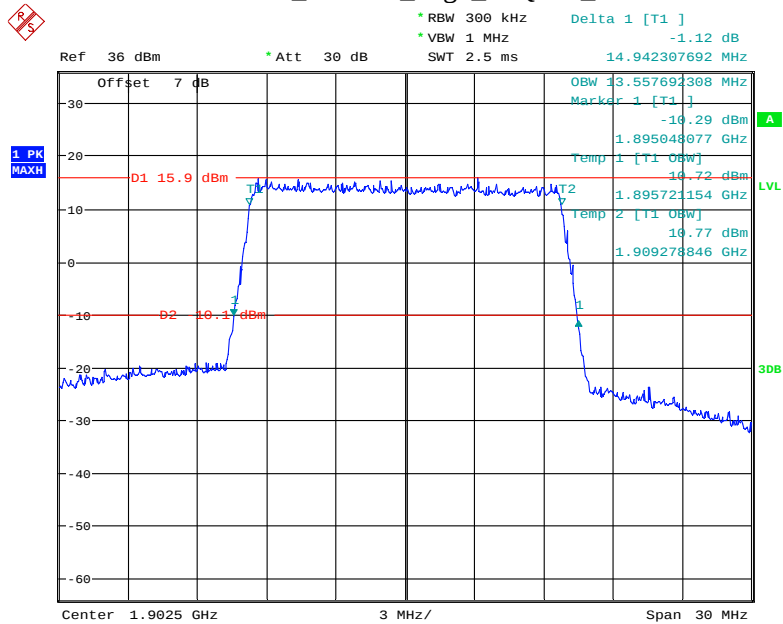
Date: 30.DEC.2020 14:09:15

Band 2_15 MHz_Middle_QPSK_RB75#0



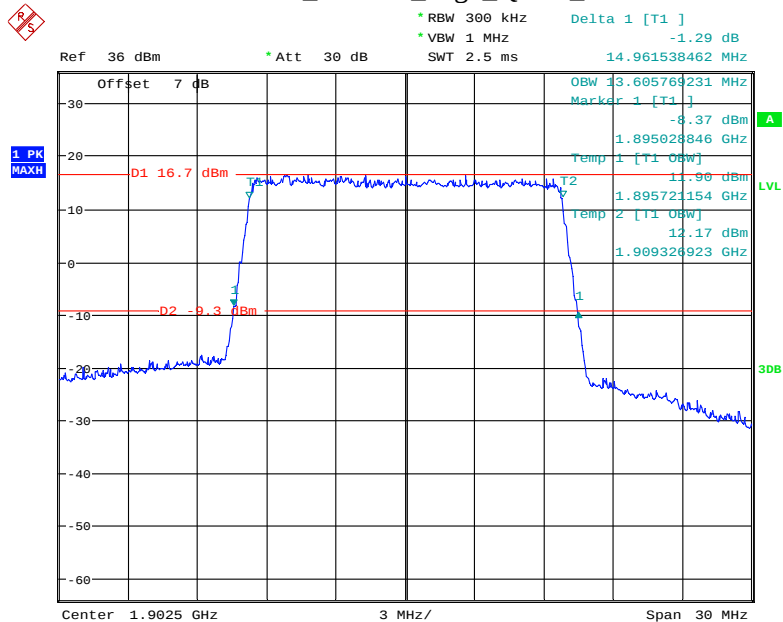
Date: 30.DEC.2020 14:08:54

Band 2_15 MHz_High_16QAM_RB75#0



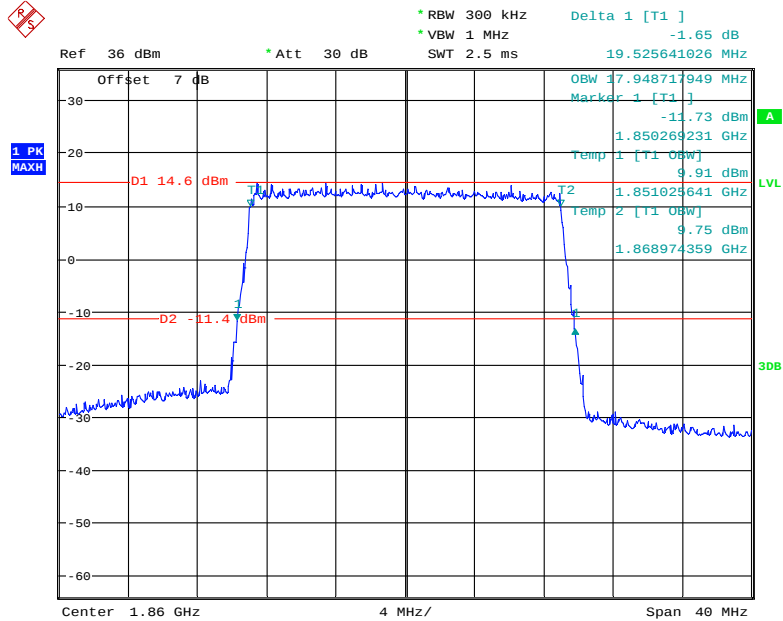
Date: 5.JAN.2021 18:46:15

Band 2_15 MHz_High_QPSK_RB75#0



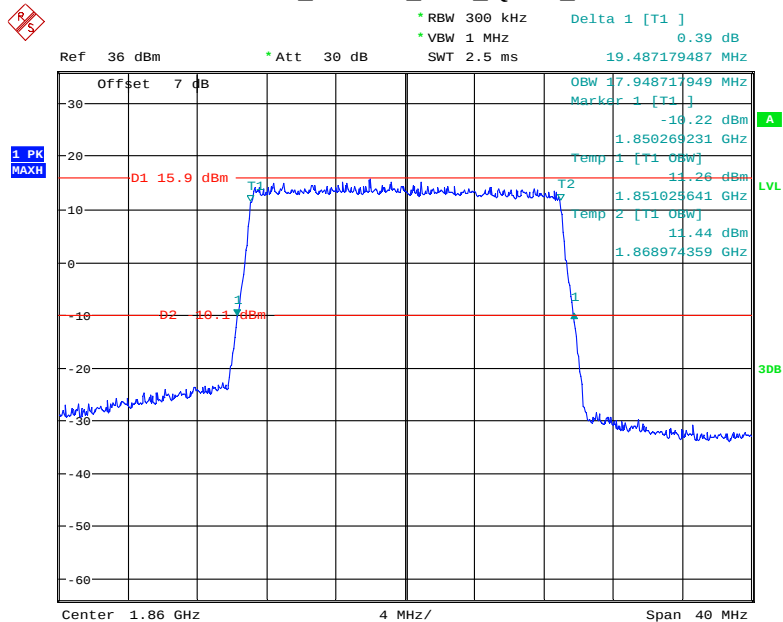
Date: 5.JAN.2021 18:48:45

Band 2_20 MHz_Low_16QAM_RB100#0



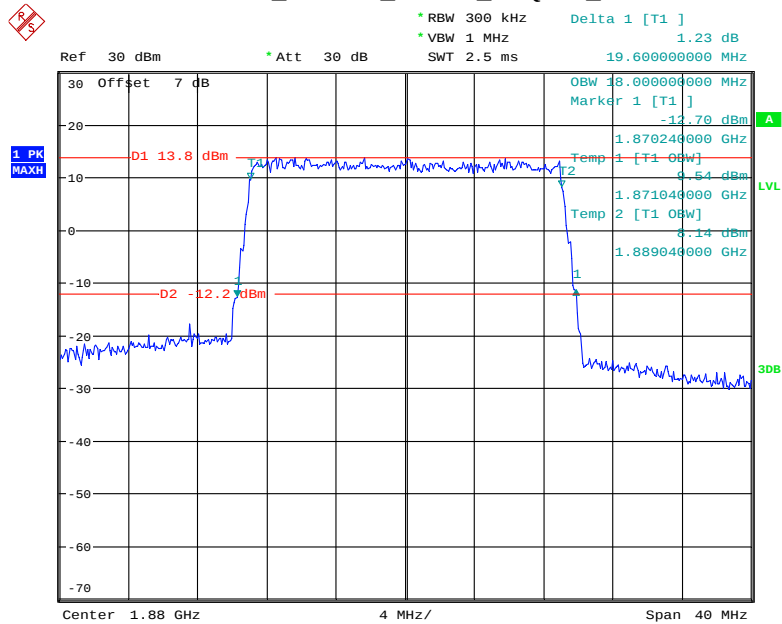
Date: 5.JAN.2021 18:55:11

Band 2_20 MHz_Low_QPSK_RB100#0



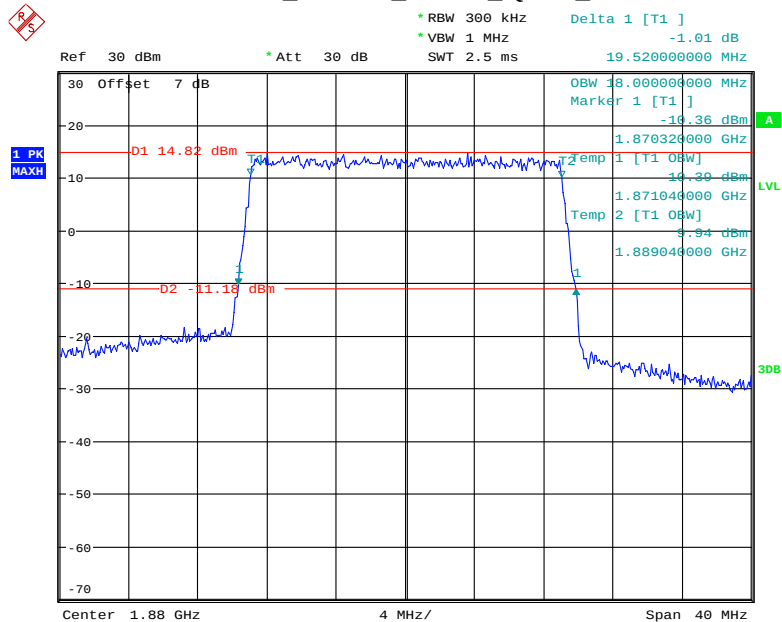
Date: 5.JAN.2021 18:54:14

Band 2_20 MHz_Middle_16QAM_RB100#0

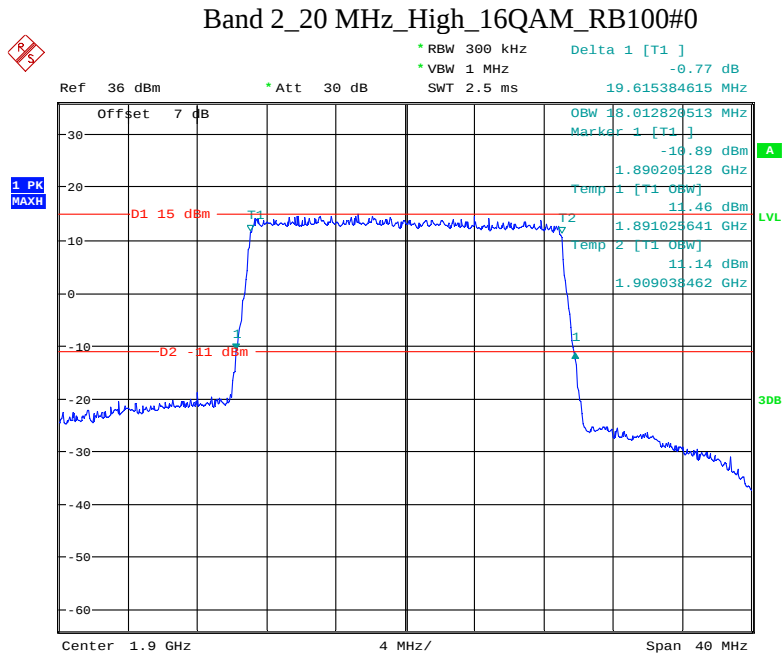


Date: 30.DEC.2020 14:10:02

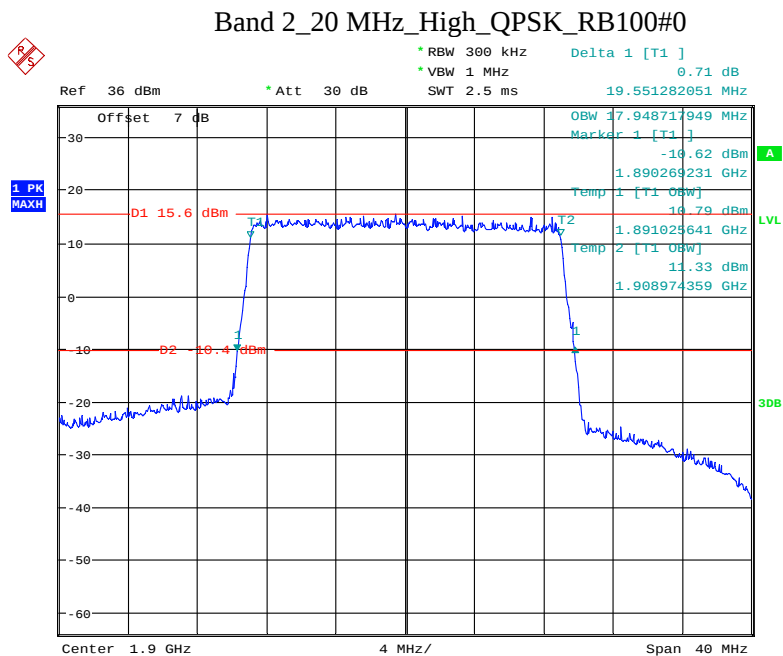
Band 2_20 MHz_Middle_QPSK_RB100#0



Date: 30.DEC.2020 14:09:38



Date: 5.JAN.2021 18:57:26

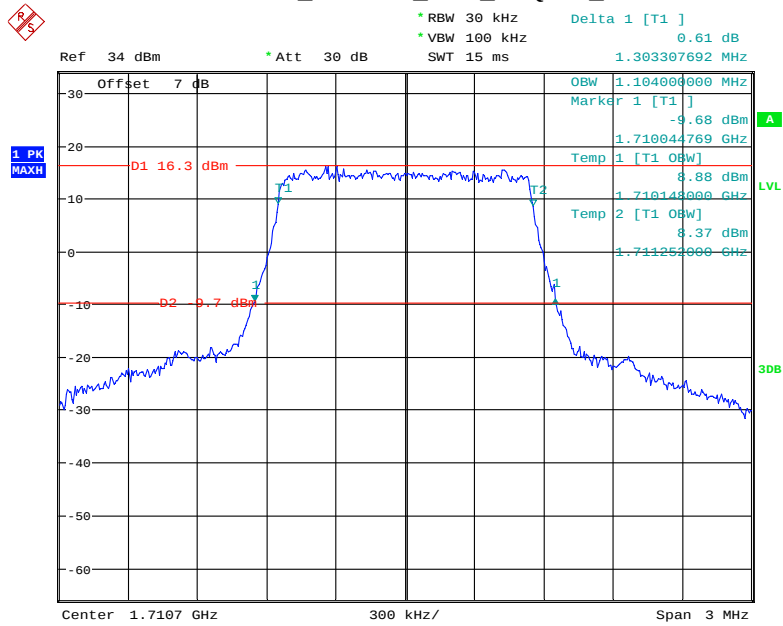


Date: 5.JAN.2021 18:58:26

LTE Band 4:

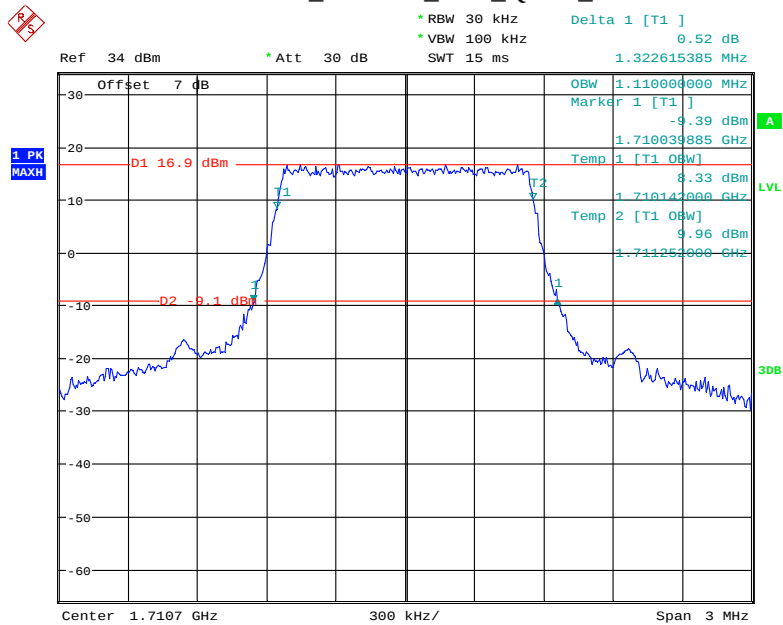
Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.323
		Middle	1.098	1.314
		High	1.110	1.330
	16QAM	Low	1.104	1.303
		Middle	1.104	1.302
		High	1.110	1.332
3	QPSK	Low	2.702	2.971
		Middle	2.700	2.964
		High	2.700	2.982
	16QAM	Low	2.700	2.964
		Middle	2.700	2.952
		High	2.700	2.987
5	QPSK	Low	4.540	5.049
		Middle	4.520	4.980
		High	4.520	5.026
	16QAM	Low	4.540	5.038
		Middle	4.560	5.040
		High	4.540	5.054
10	QPSK	Low	9.000	9.818
		Middle	8.960	9.720
		High	8.960	9.850
	16QAM	Low	9.006	9.808
		Middle	8.960	9.760
		High	8.960	9.826
15	QPSK	Low	13.560	14.987
		Middle	13.560	14.820
		High	13.560	14.939
	16QAM	Low	13.560	14.986
		Middle	13.500	14.880
		High	13.620	15.009
20	QPSK	Low	17.920	19.615
		Middle	17.920	19.600
		High	18.000	19.693
	16QAM	Low	17.920	19.615
		Middle	18.000	19.520
		High	18.000	19.598

Band 4_1.4 MHz_Low_16QAM_RB6#0

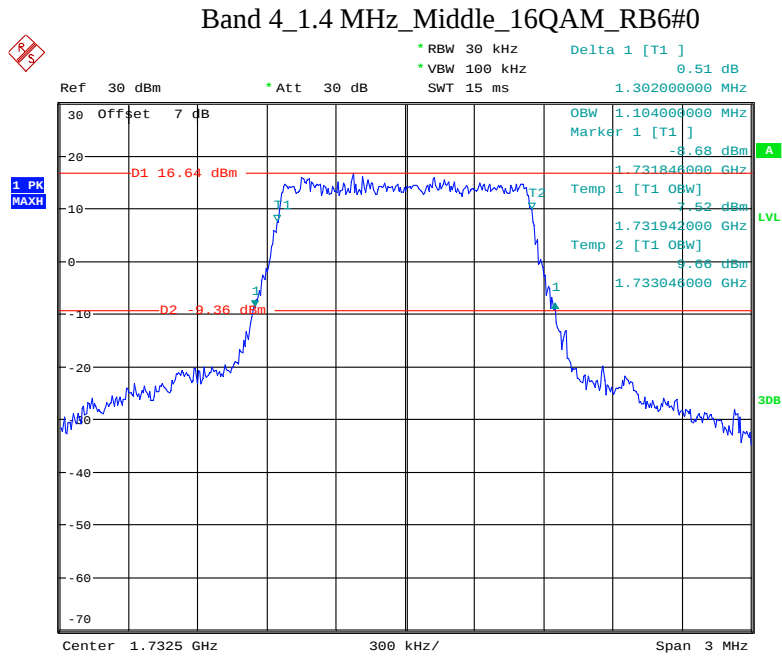


Date: 4.JAN.2021 10:04:10

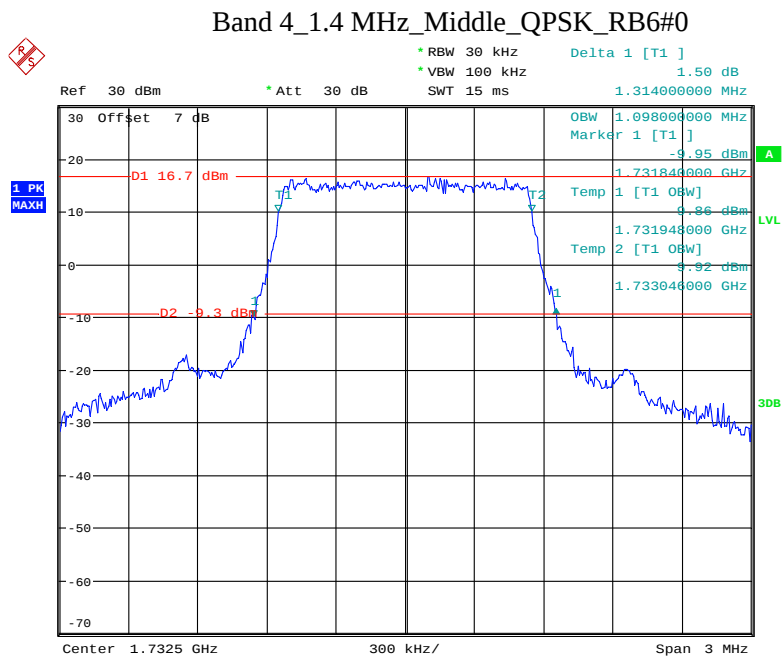
Band 4_1.4 MHz_Low_QPSK_RB6#0



Date: 4.JAN.2021 10:02:38

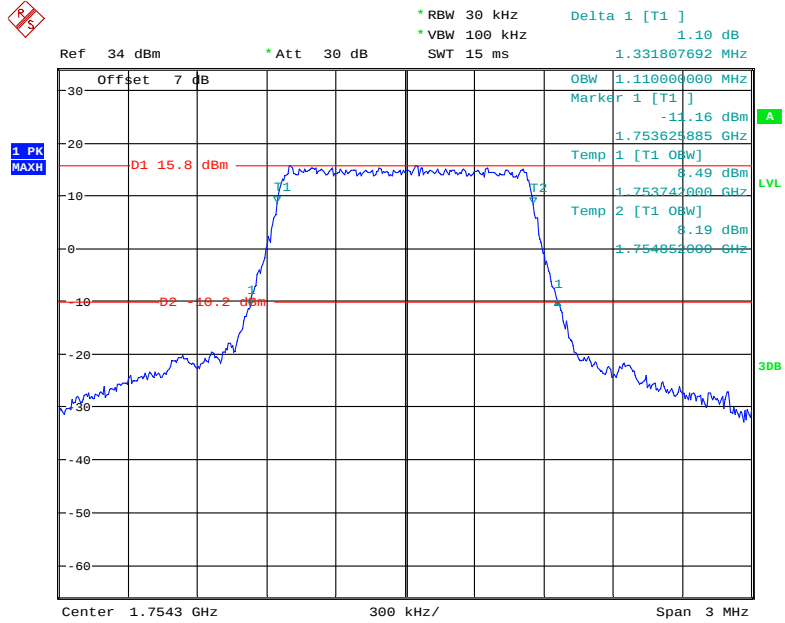


Date: 30.DEC.2020 14:10:49



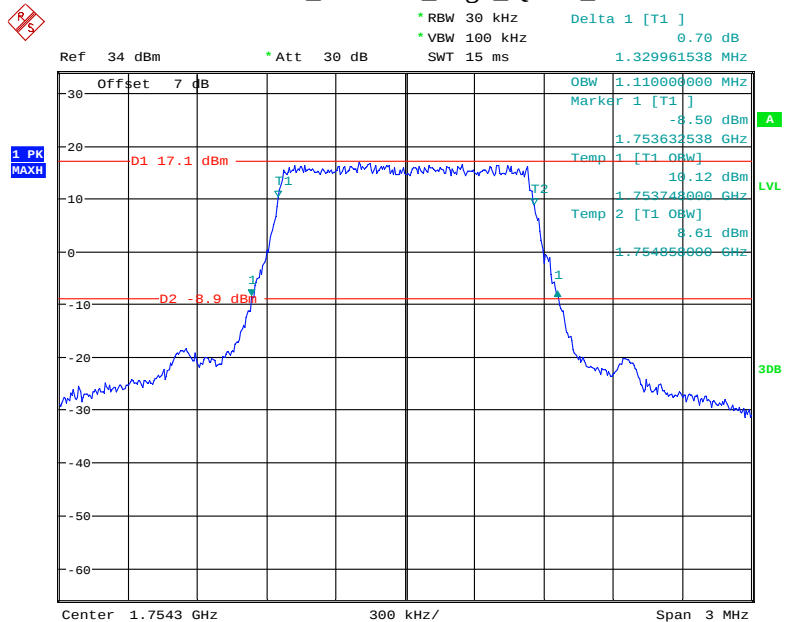
Date: 30.DEC.2020 14:10:29

Band 4_1.4 MHz_High_16QAM_RB6#0

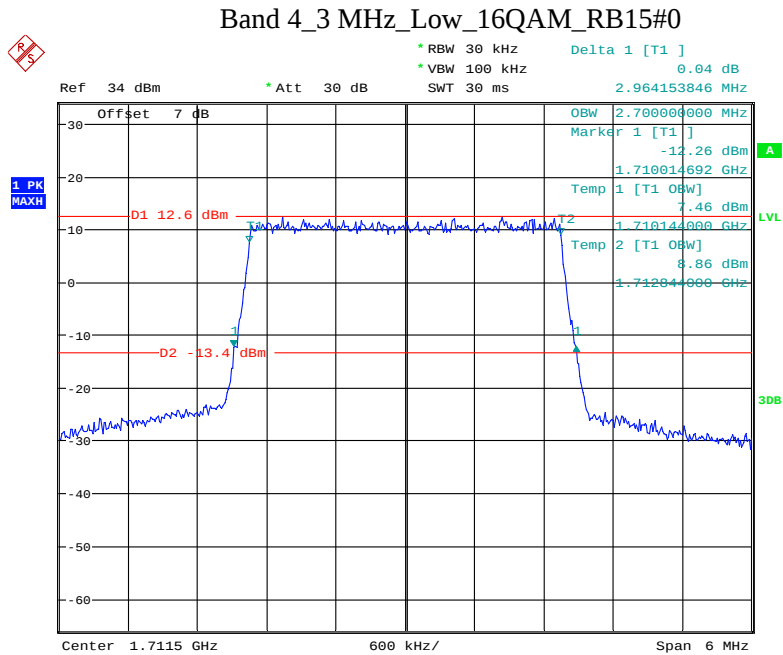


Date: 4.JAN.2021 10:06:18

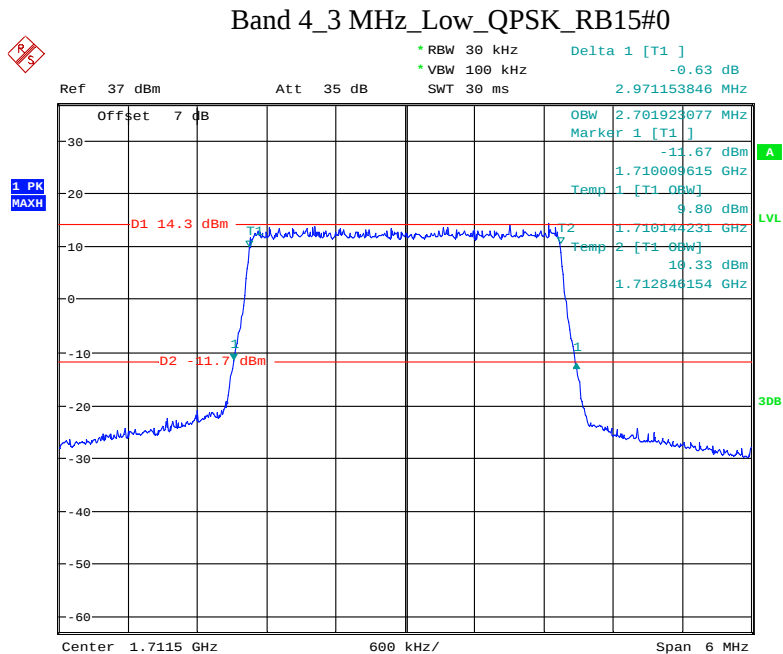
Band 4_1.4 MHz_High_QPSK_RB6#0



Date: 4.JAN.2021 10:07:42

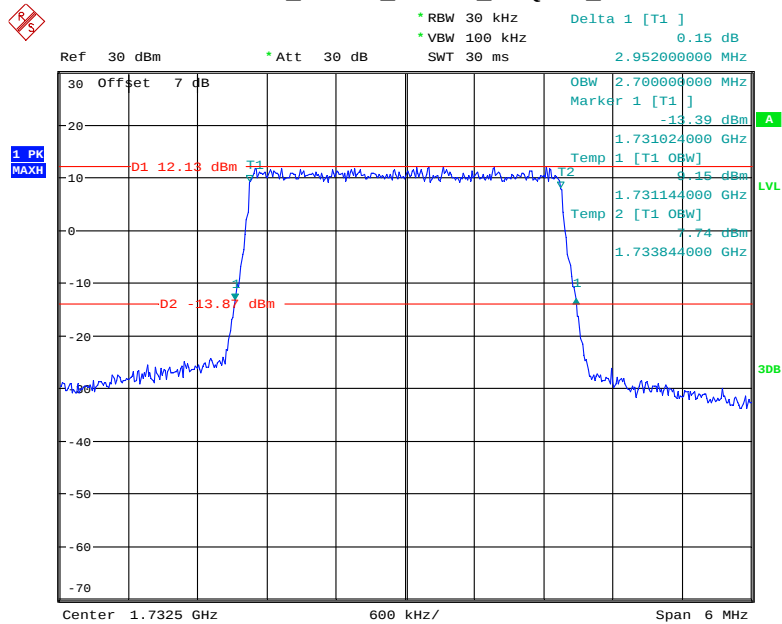


Date: 4.JAN.2021 10:14:45



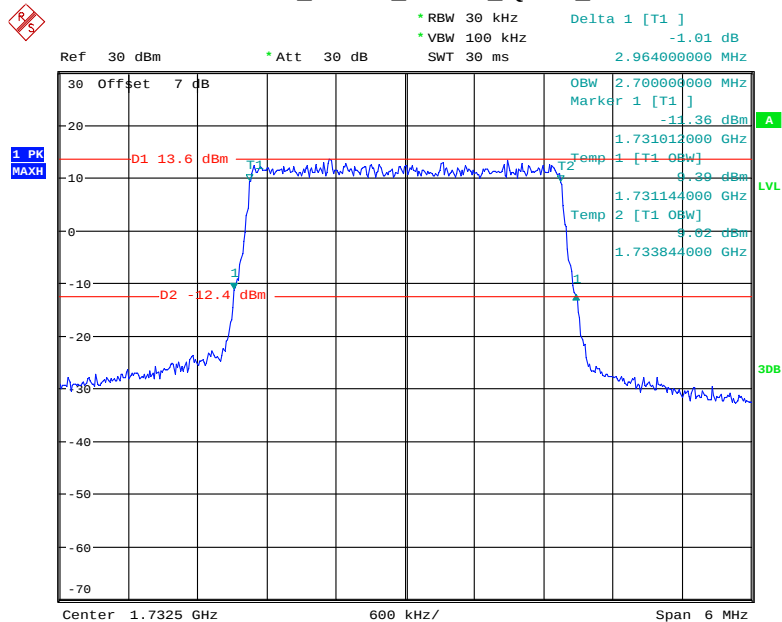
Date: 18.JAN.2021 14:34:51

Band 4_3 MHz_Middle_16QAM_RB15#0



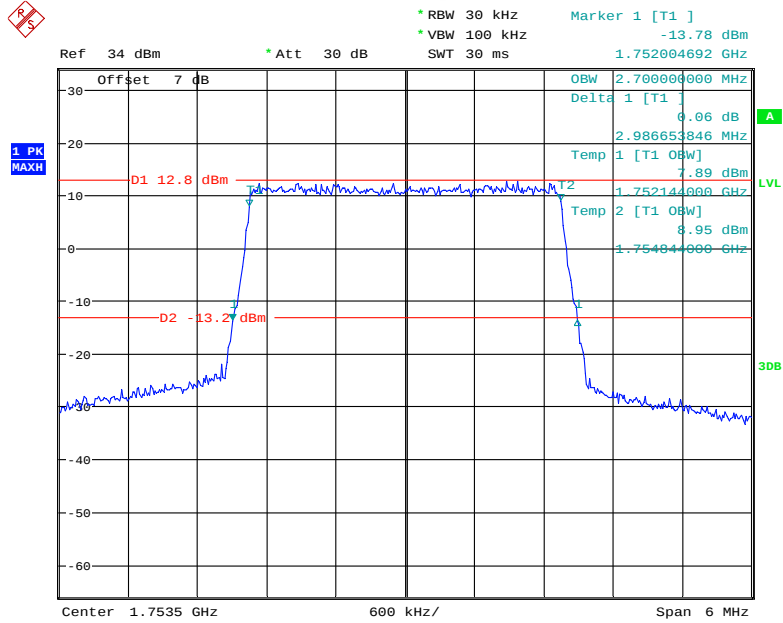
Date: 30.DEC.2020 14:11:33

Band 4_3 MHz_Middle_QPSK_RB15#0



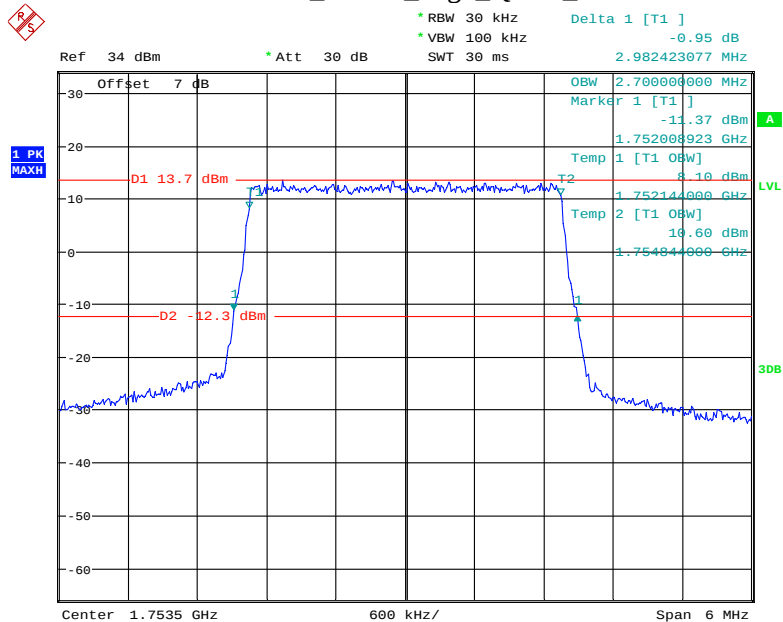
Date: 30.DEC.2020 14:11:12

Band 4_3 MHz_High_16QAM_RB15#0

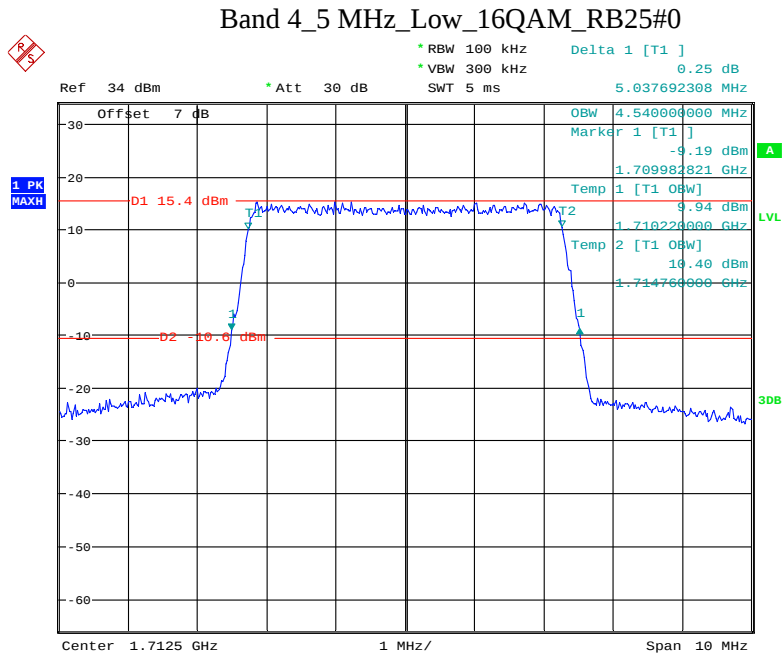


Date: 4.JAN.2021 10:13:21

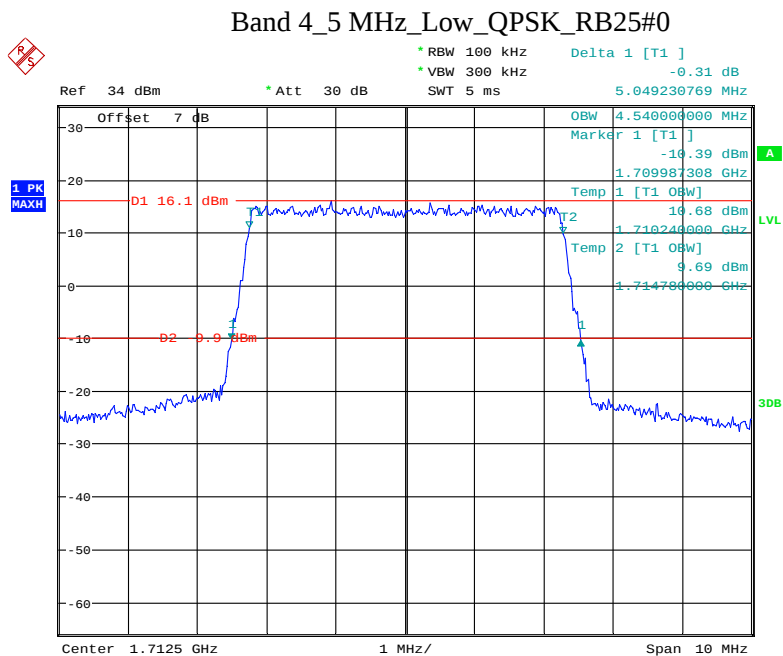
Band 4_3 MHz_High_QPSK_RB15#0



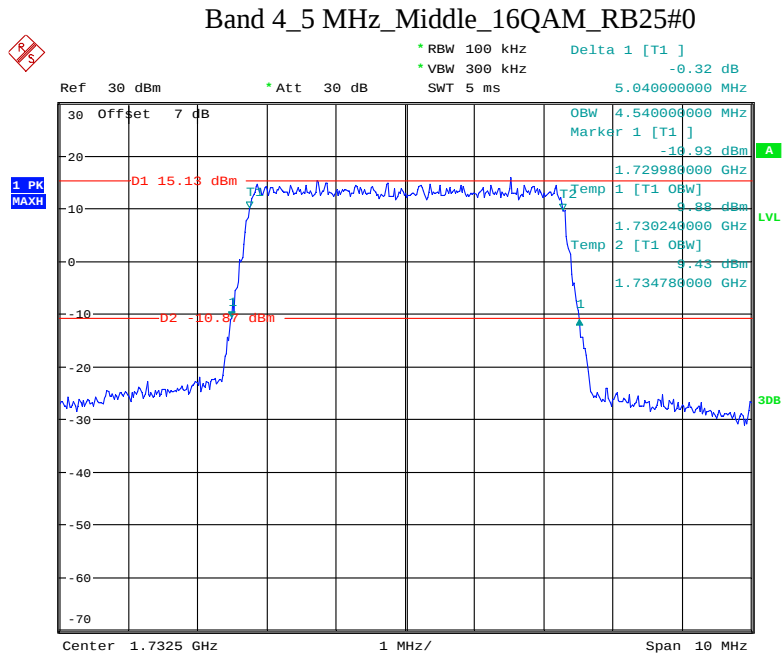
Date: 4.JAN.2021 10:11:10



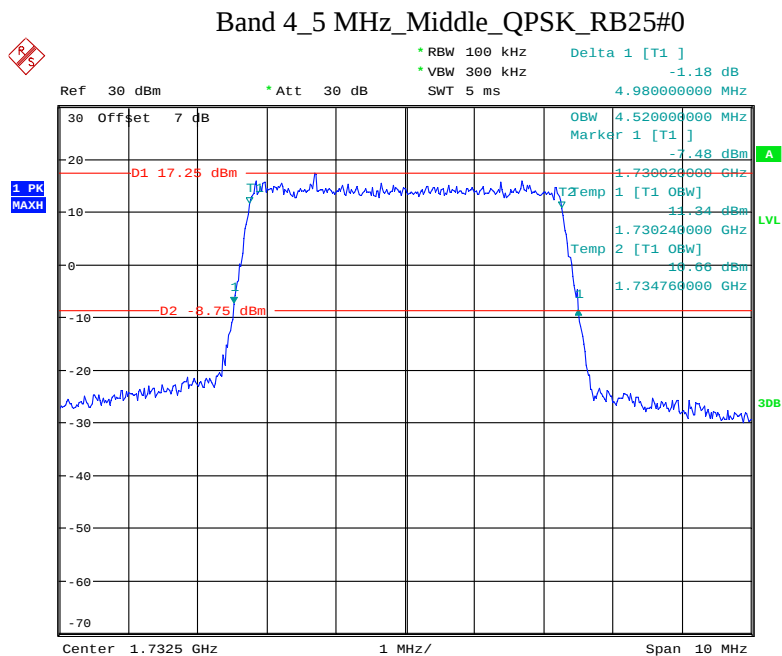
Date: 4.JAN.2021 10:21:53



Date: 4.JAN.2021 10:18:49

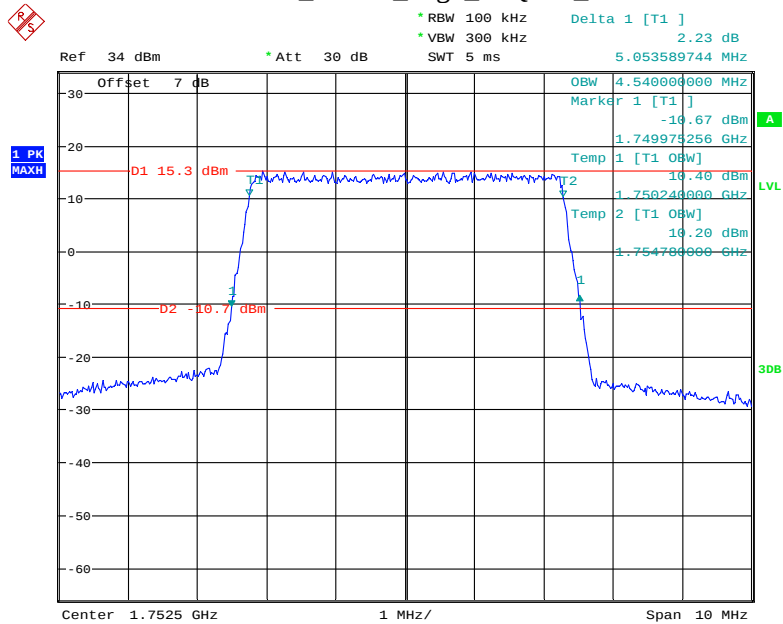


Date: 30.DEC.2020 14:12:16



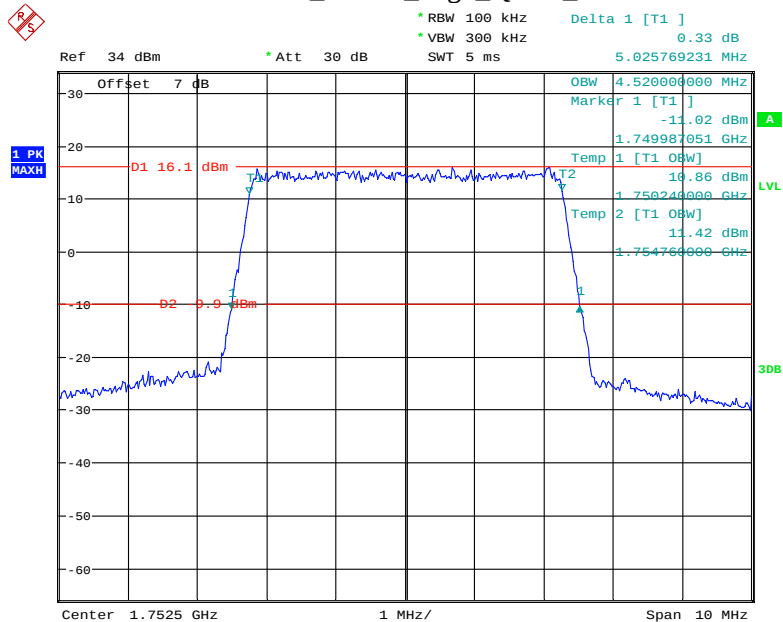
Date: 30.DEC.2020 14:11:55

Band 4_5 MHz_High_16QAM_RB25#0

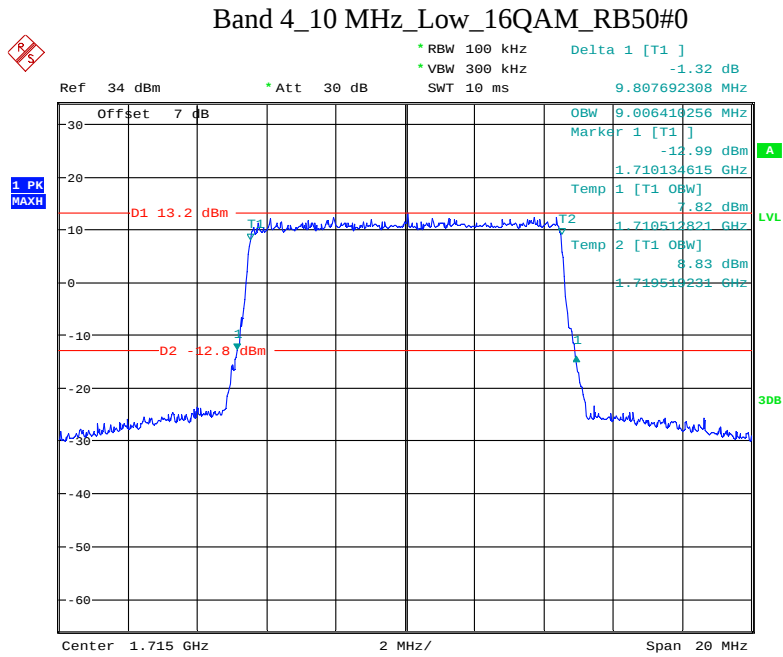


Date: 4.JAN.2021 10:25:06

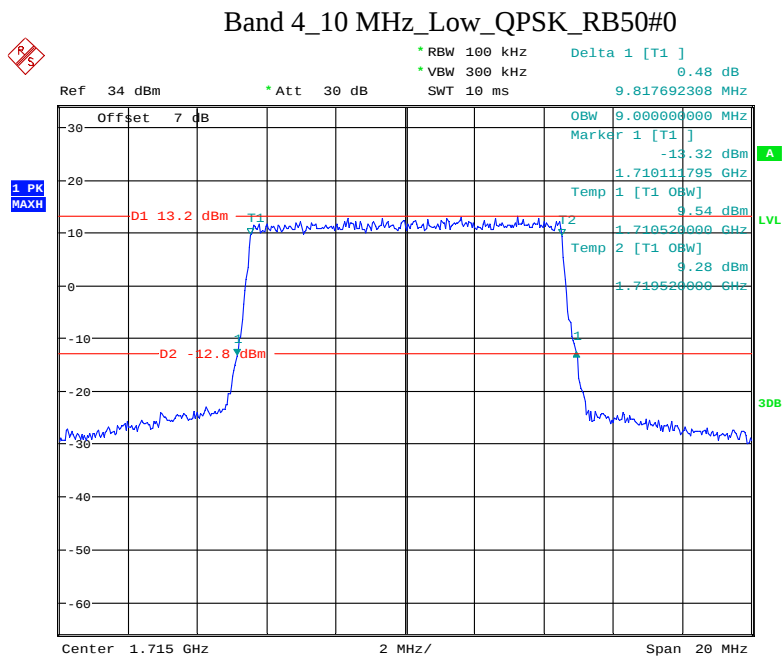
Band 4_5 MHz_High_QPSK_RB25#0



Date: 4.JAN.2021 10:26:50

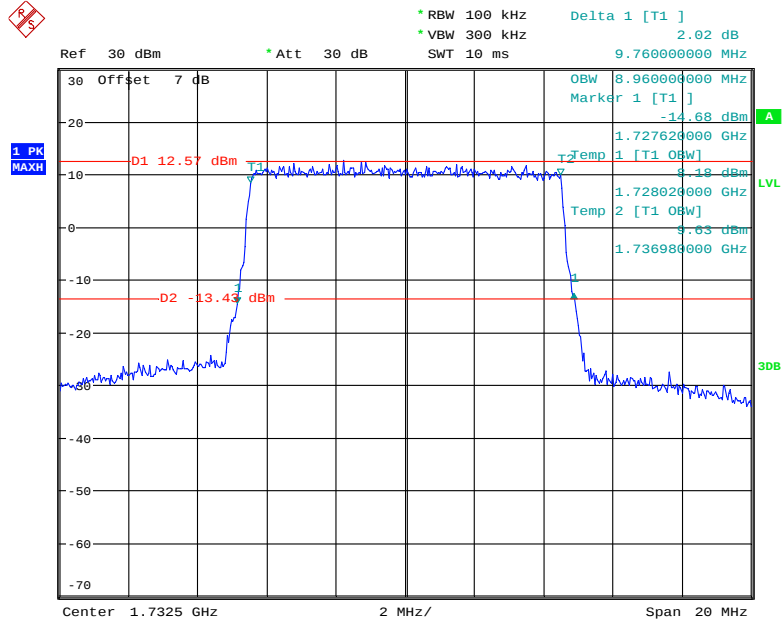


Date: 6.JAN.2021 20:22:46



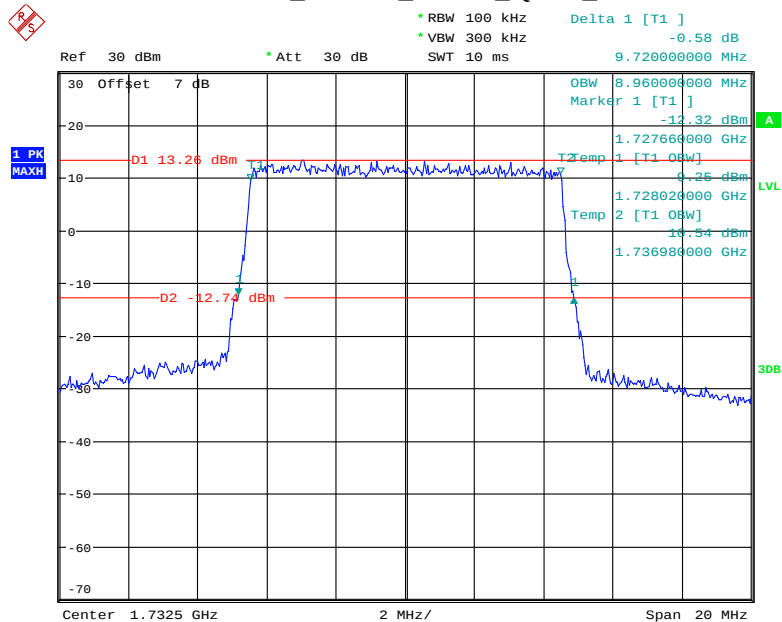
Date: 4.JAN.2021 10:53:38

Band 4_10 MHz_Middle_16QAM_RB50#0

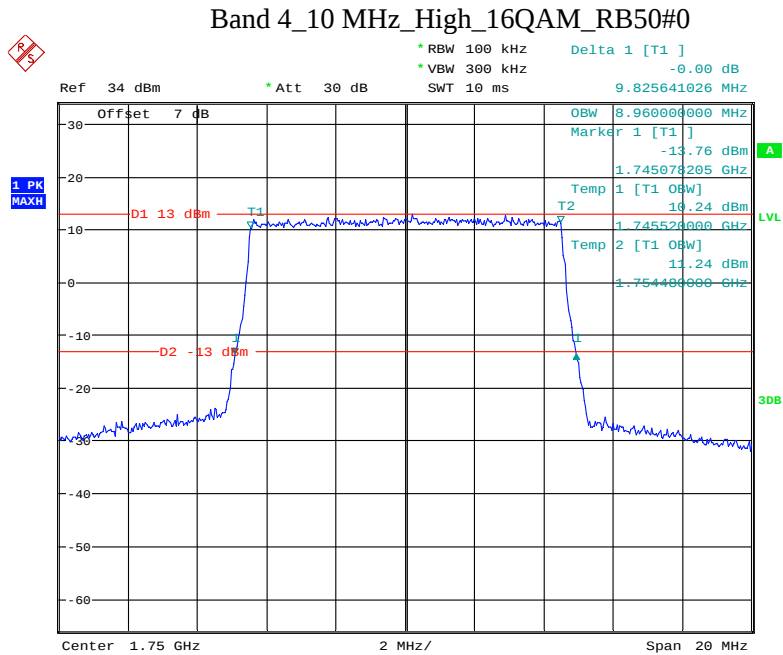


Date: 30.DEC.2020 14:13:02

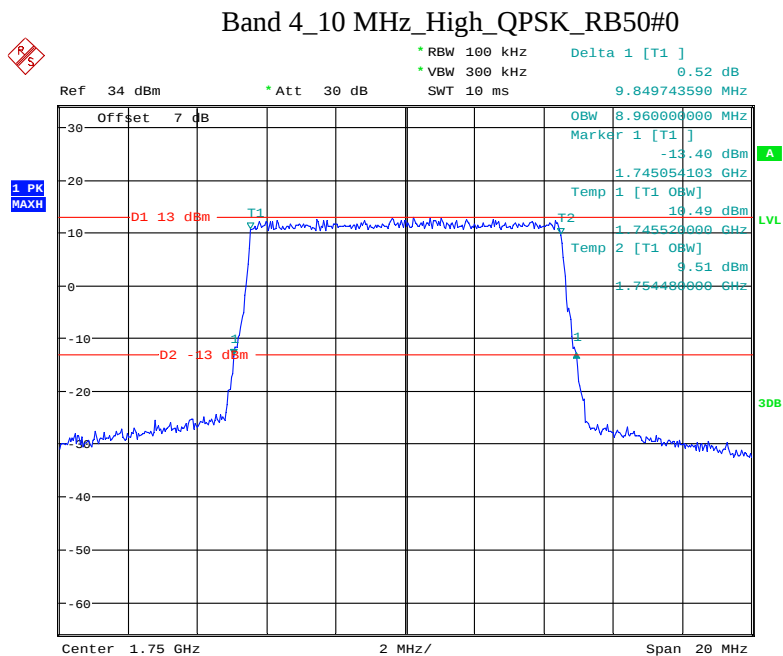
Band 4_10 MHz_Middle_QPSK_RB50#0



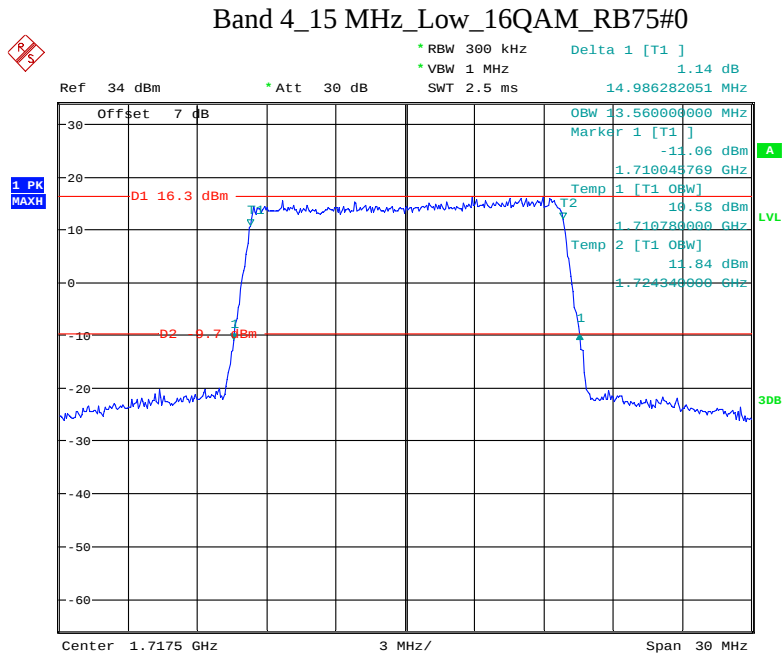
Date: 30.DEC.2020 14:12:40



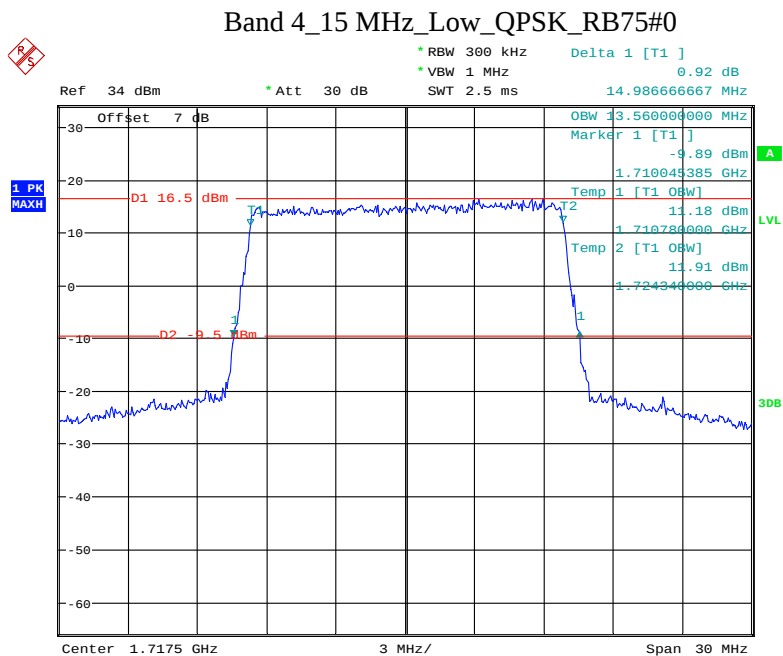
Date: 4.JAN.2021 10:50:45



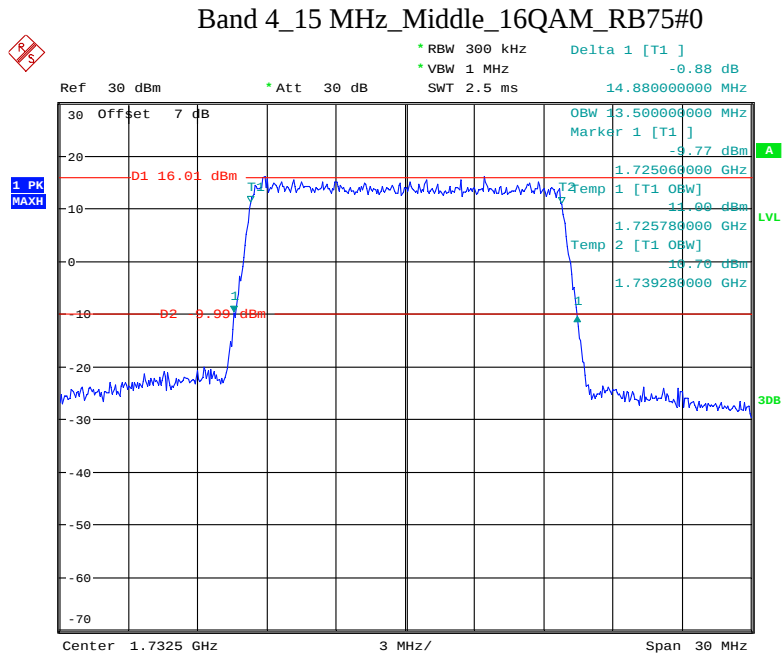
Date: 4.JAN.2021 10:52:32



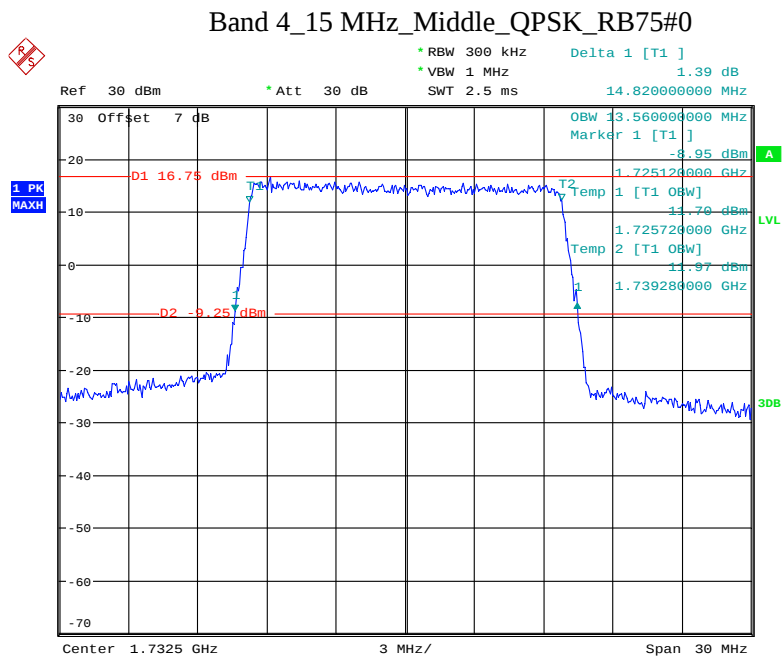
Date: 4.JAN.2021 11:00:33



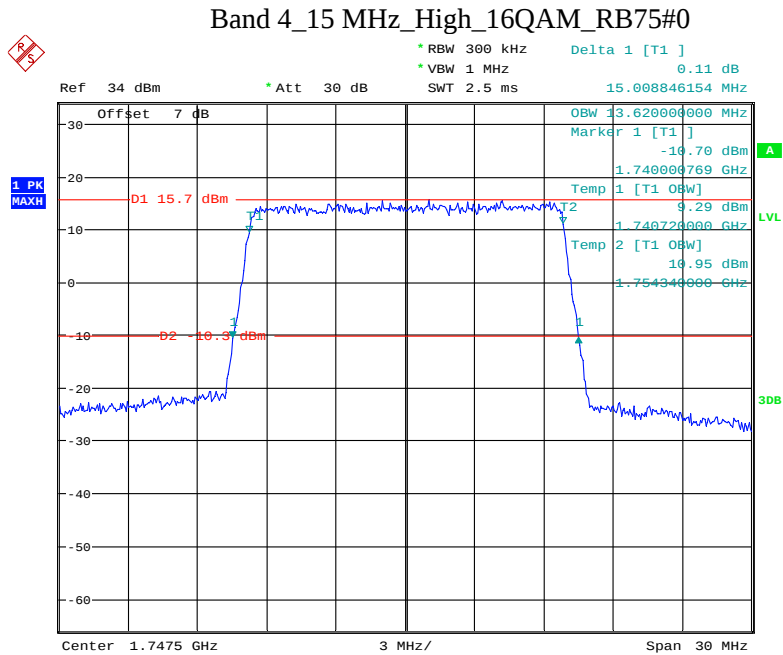
Date: 4.JAN.2021 10:56:48



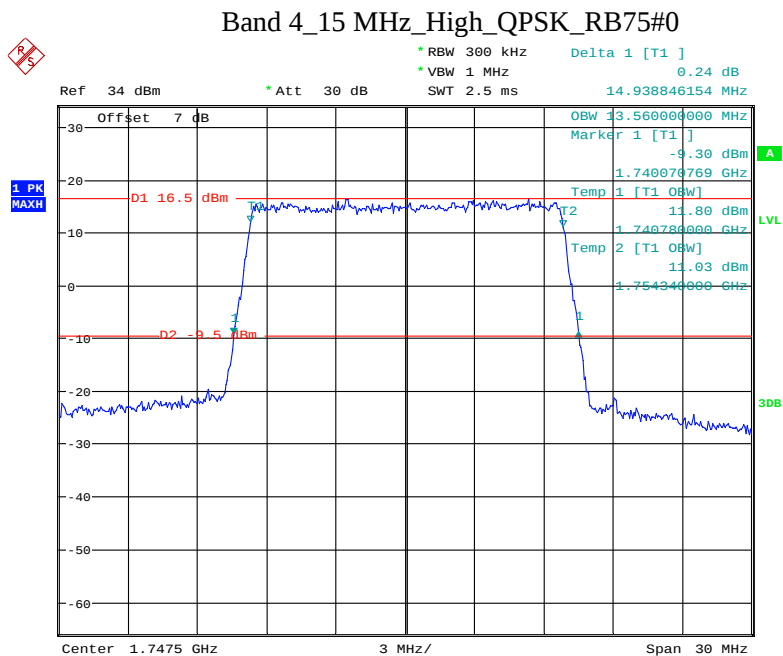
Date: 30.DEC.2020 14:13:52



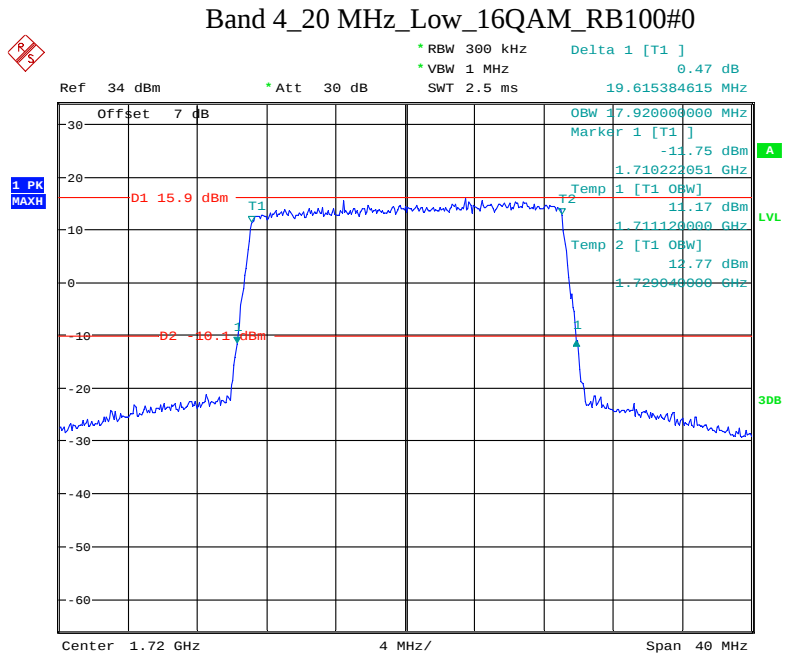
Date: 30.DEC.2020 14:13:28



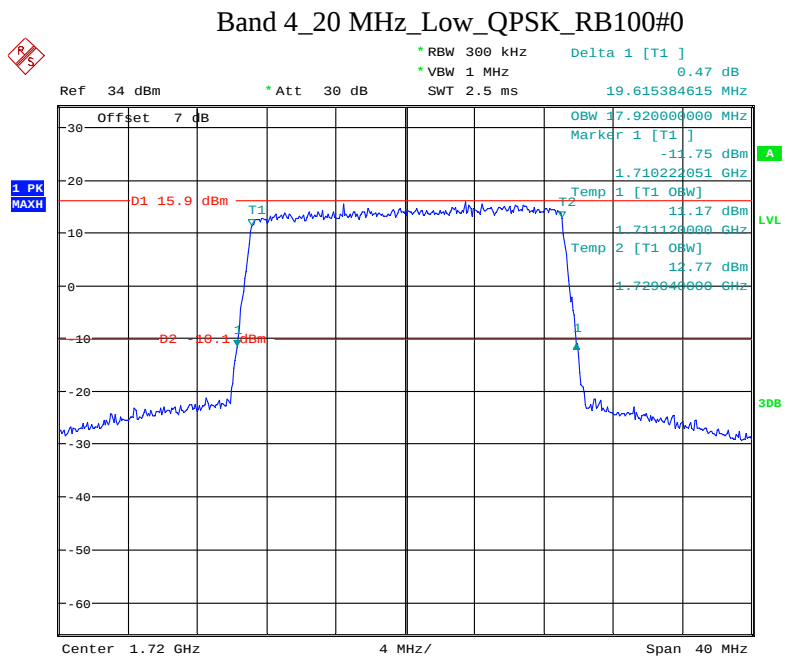
Date: 4.JAN.2021 11:02:45



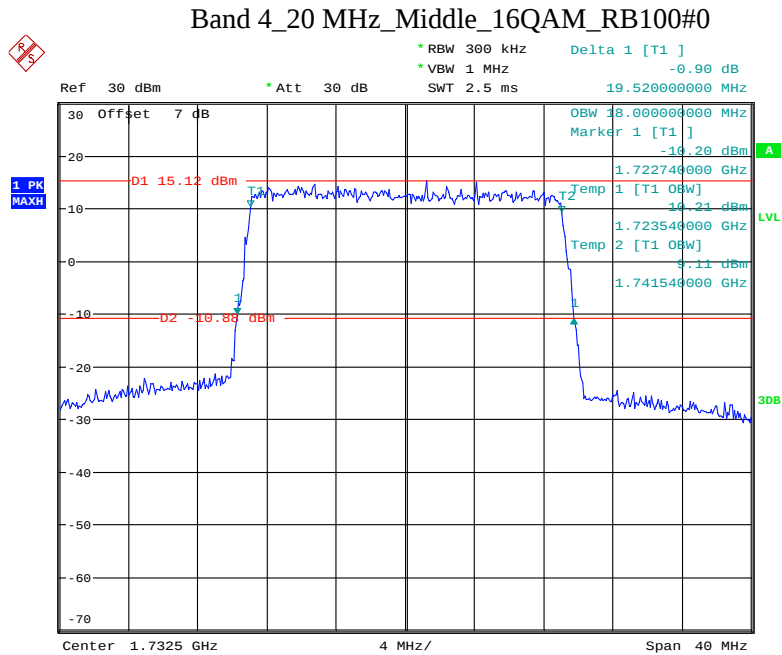
Date: 4.JAN.2021 11:15:02



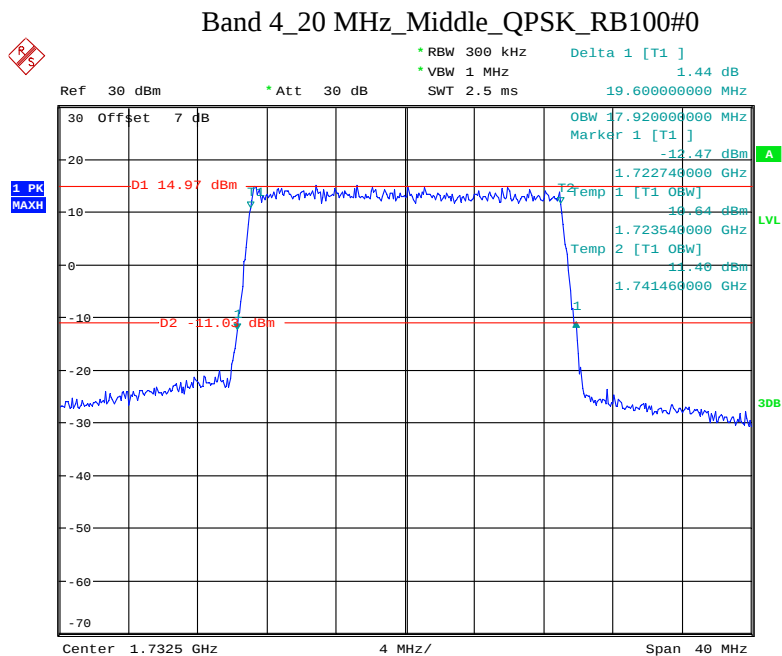
Date: 4.JAN.2021 11:13:11



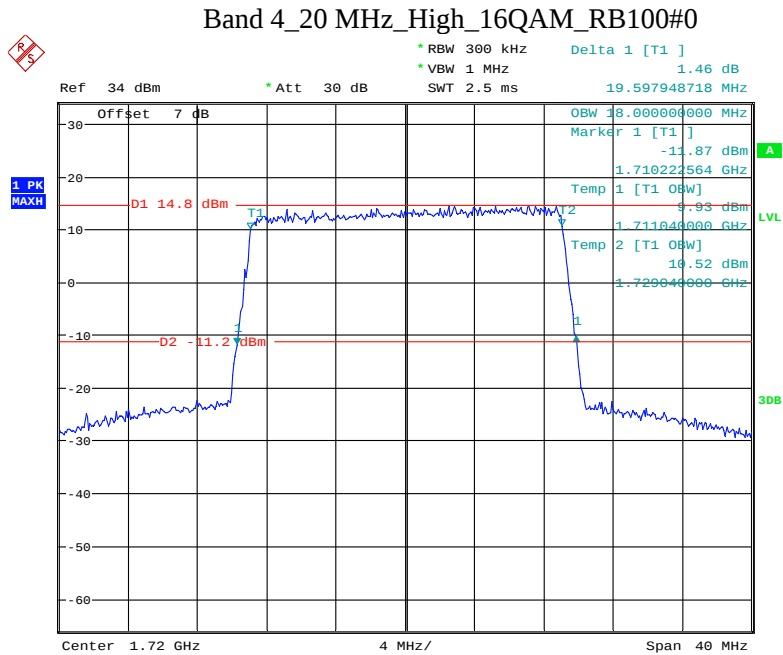
Date: 4.JAN.2021 11:13:11



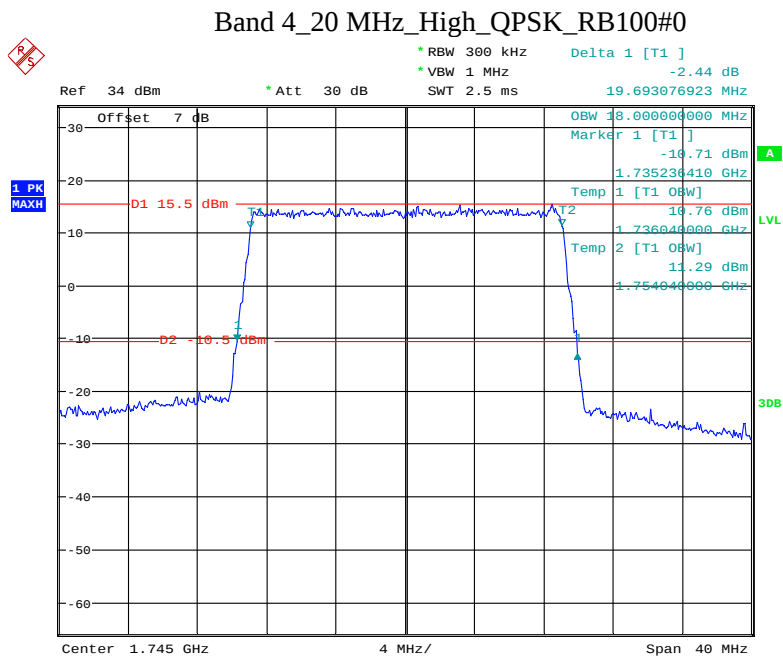
Date: 30.DEC.2020 14:14:39



Date: 30.DEC.2020 14:14:16



Date: 4.JAN.2021 11:11:35

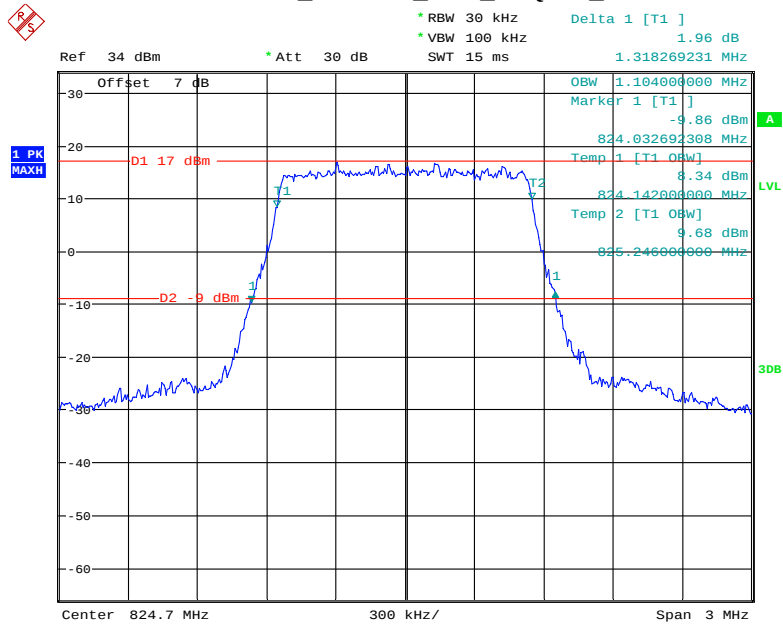


Date: 4.JAN.2021 11:07:26

LTE Band 5:

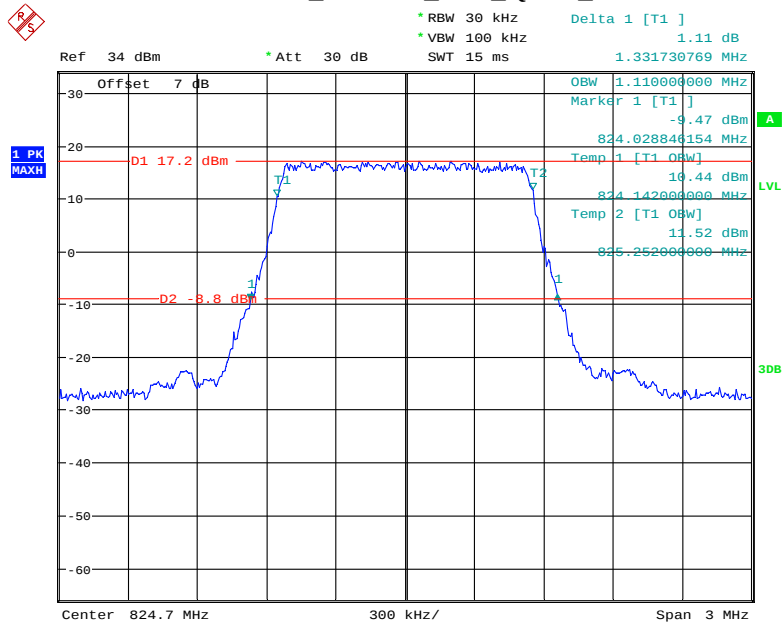
Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.110	1.332
		Middle	1.104	1.308
		High	1.110	1.325
	16QAM	Low	1.104	1.318
		Middle	1.098	1.296
		High	1.104	1.314
3	QPSK	Low	2.700	2.973
		Middle	2.700	2.964
		High	2.700	2.975
	16QAM	Low	2.700	2.985
		Middle	2.700	2.964
		High	2.700	2.966
5	QPSK	Low	4.520	5.048
		Middle	4.540	4.980
		High	4.540	5.039
	16QAM	Low	4.540	5.080
		Middle	4.520	4.960
		High	4.520	5.076
10	QPSK	Low	8.960	9.788
		Middle	8.960	9.720
		High	8.960	9.715
	16QAM	Low	8.960	9.694
		Middle	8.960	9.760
		High	8.960	9.785

Band 5_1.4 MHz_Low_16QAM_RB6#0

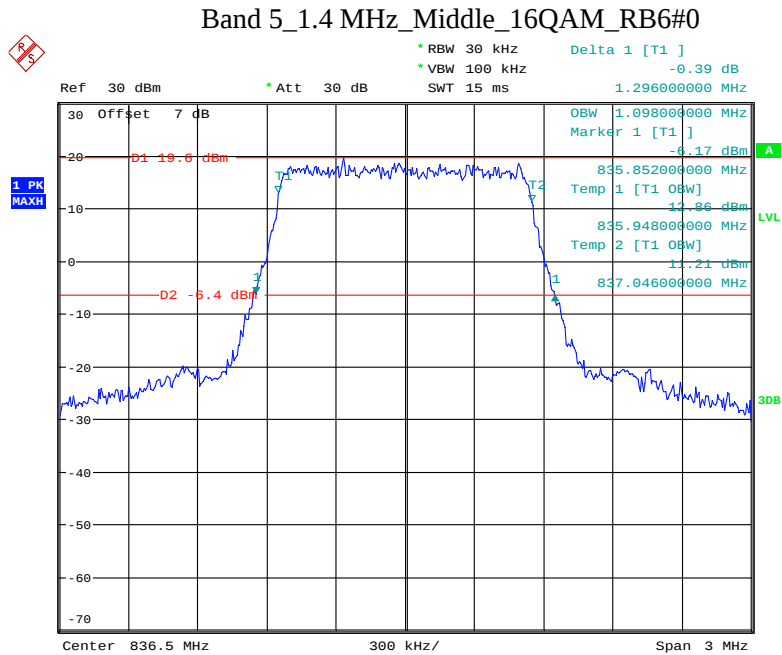


Date: 4.JAN.2021 09:55:49

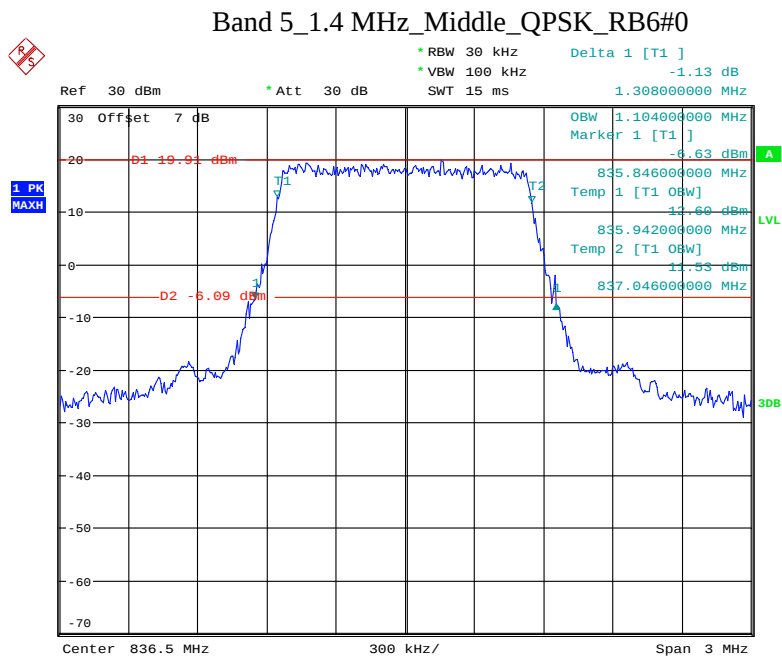
Band 5_1.4 MHz_Low_QPSK_RB6#0



Date: 4.JAN.2021 09:53:48

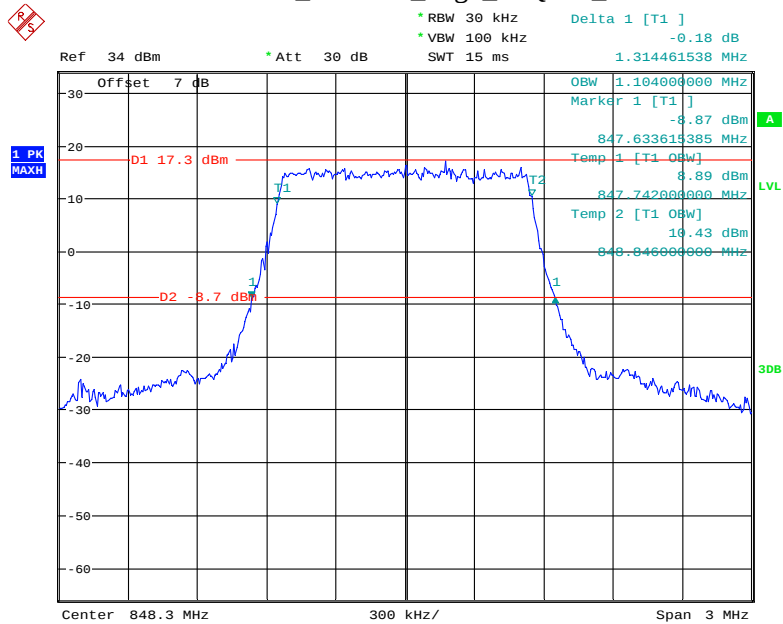


Date: 30.DEC.2020 13:53:27



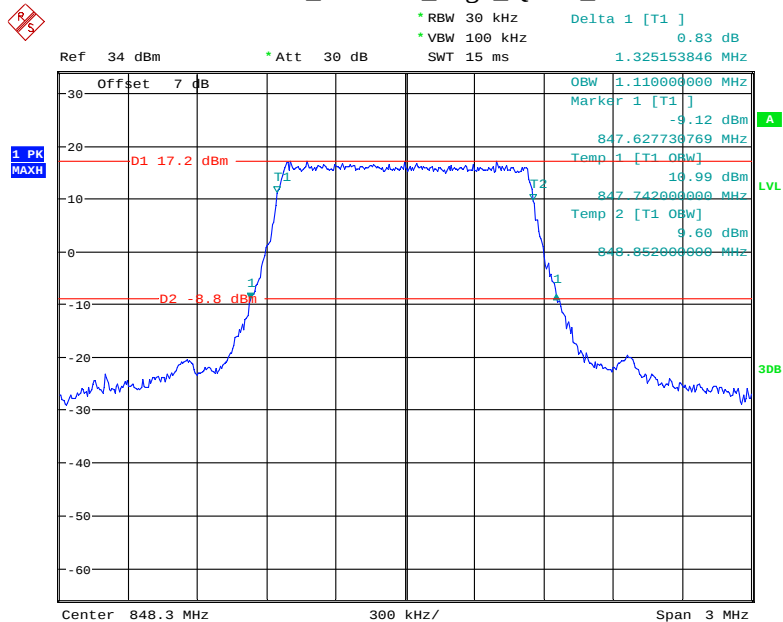
Date: 30.DEC.2020 13:53:04

Band 5_1.4 MHz_High_16QAM_RB6#0

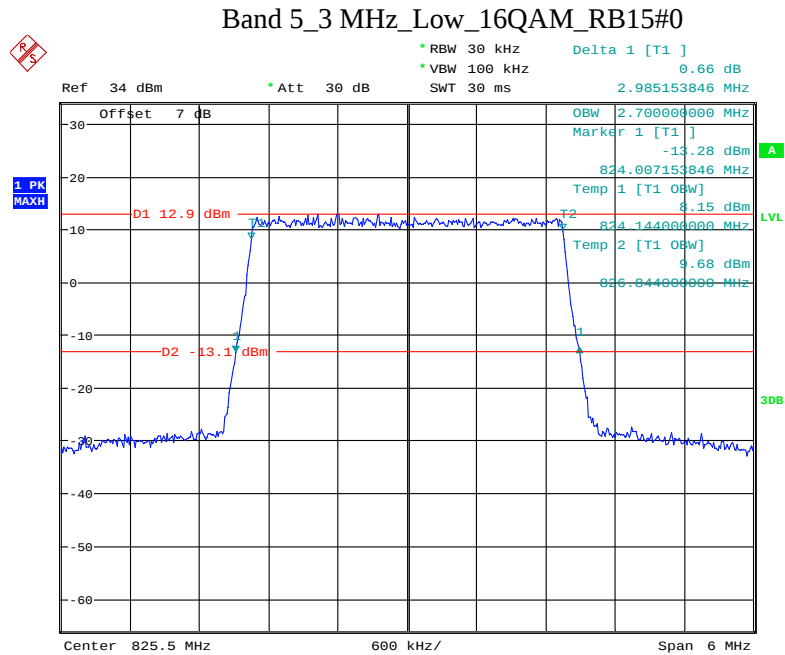


Date: 4.JAN.2021 09:57:14

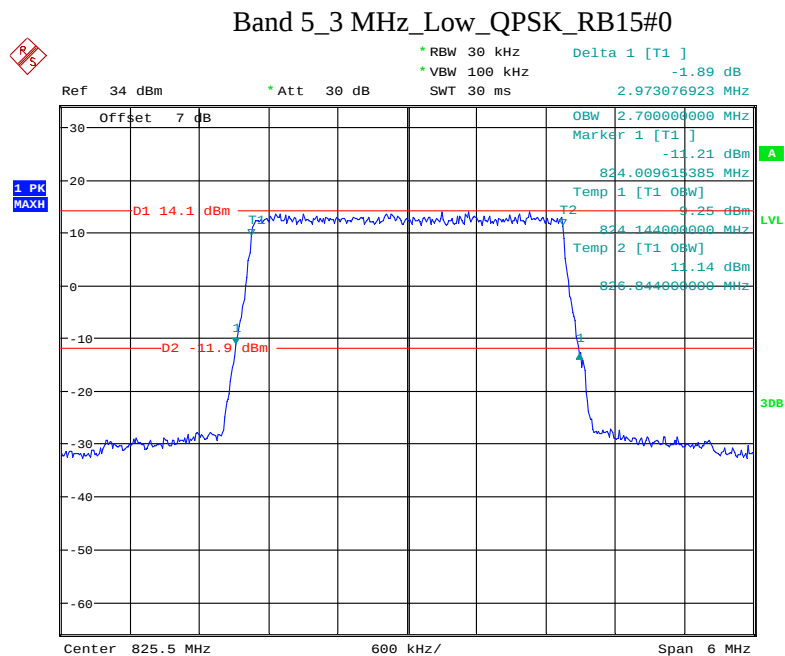
Band 5_1.4 MHz_High_QPSK_RB6#0



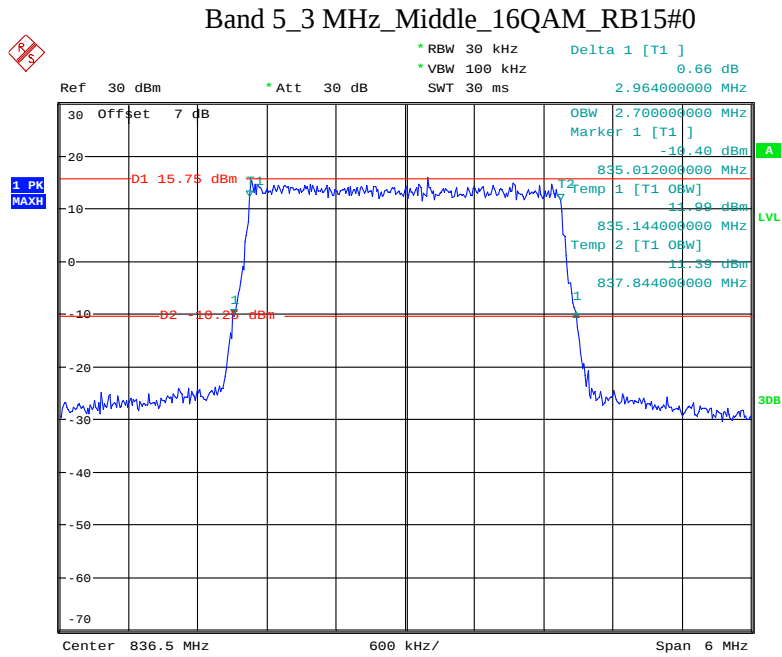
Date: 4.JAN.2021 09:58:56



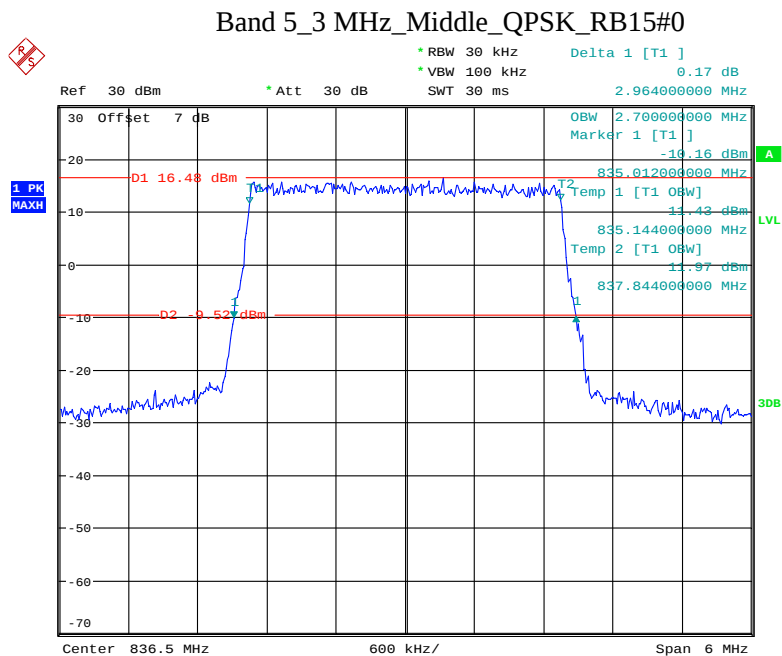
Date: 4.JAN.2021 09:42:30



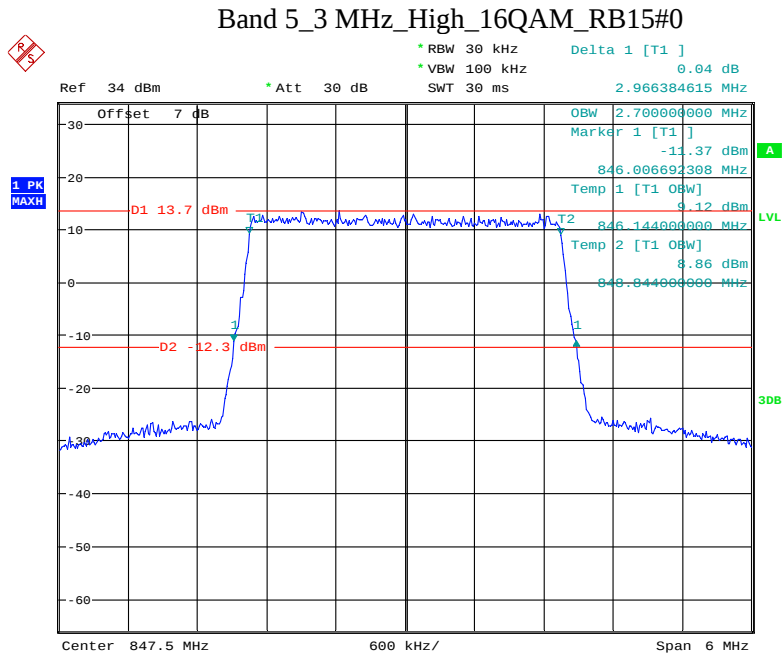
Date: 4.JAN.2021 09:38:49



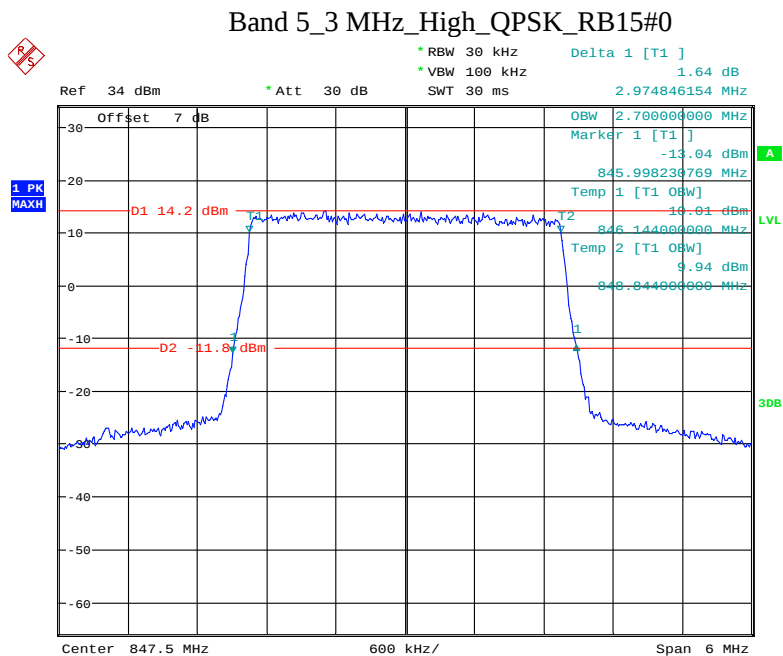
Date: 30.DEC.2020 13:54:10



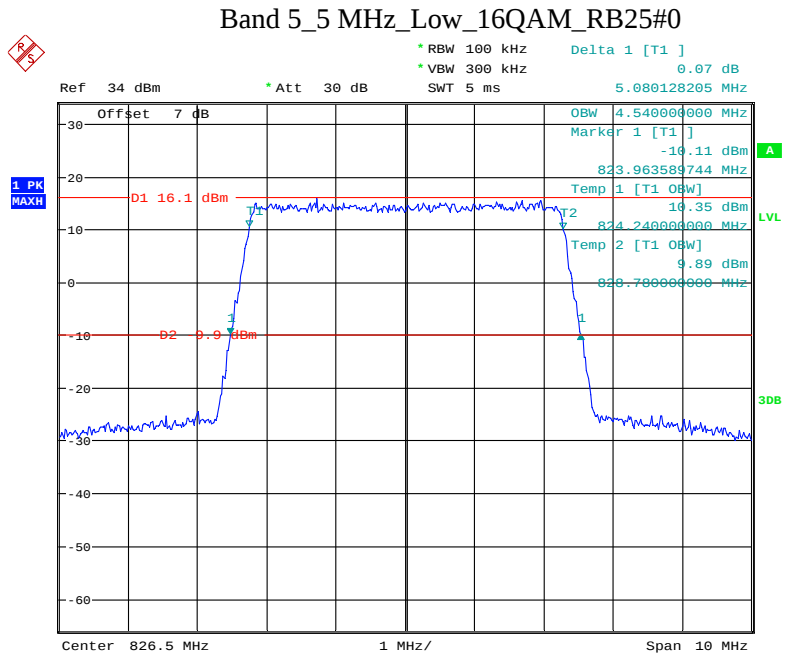
Date: 30.DEC.2020 13:53:50



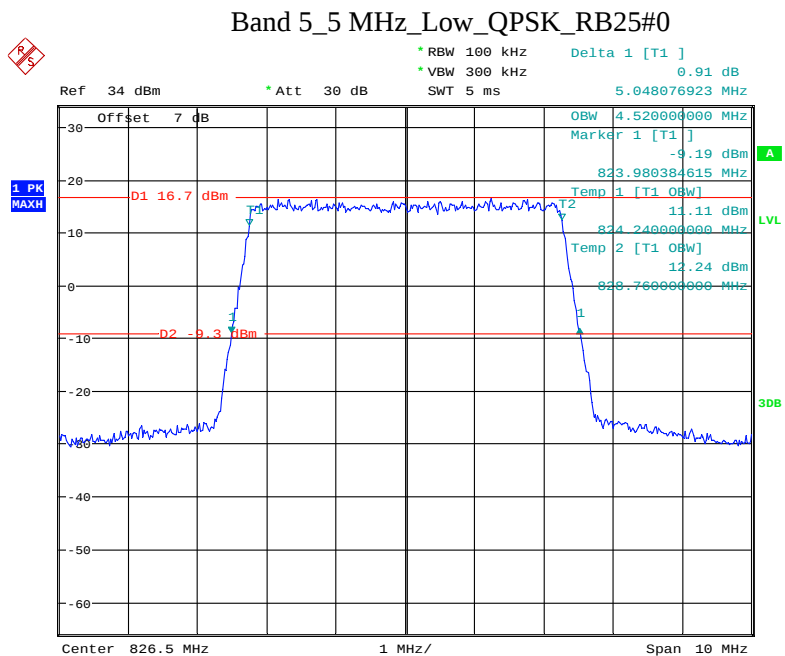
Date: 4.JAN.2021 09:45:46



Date: 4.JAN.2021 09:49:43

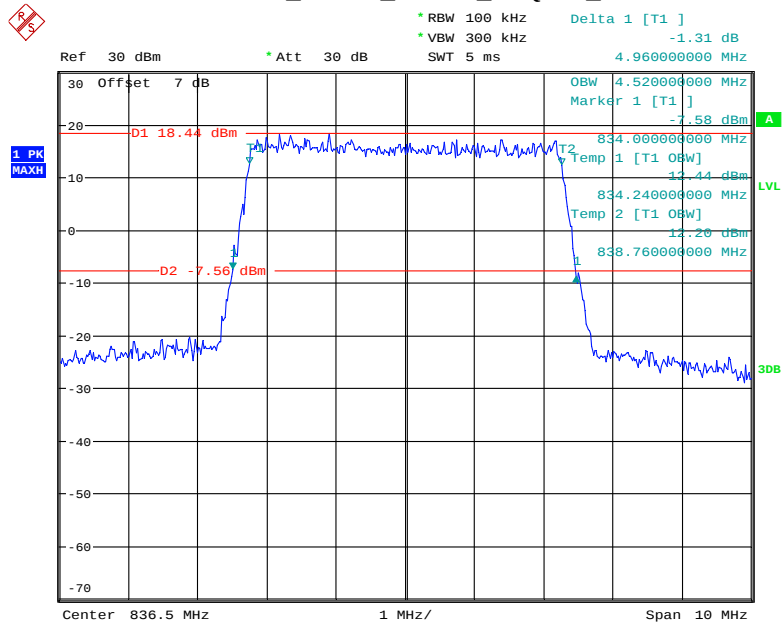


Date: 4.JAN.2021 09:19:27



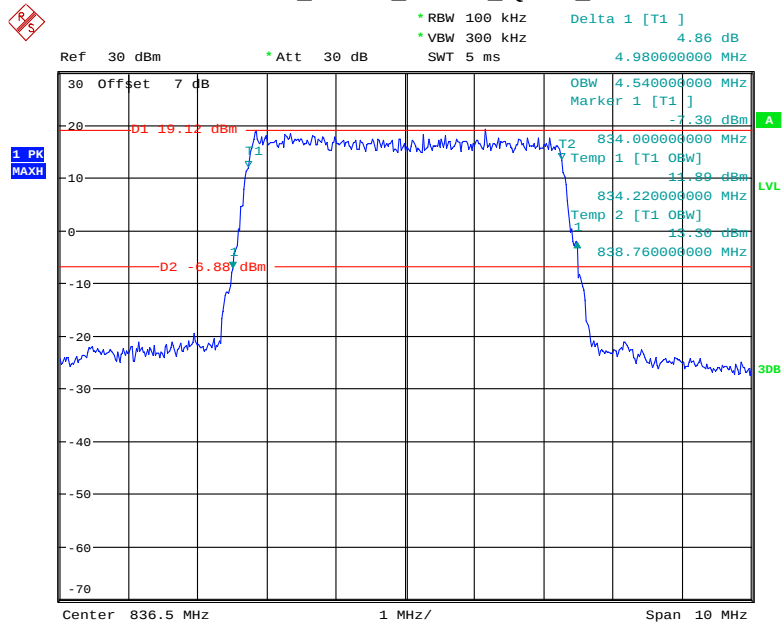
Date: 4.JAN.2021 09:26:09

Band 5_5 MHz_Middle_16QAM_RB25#0

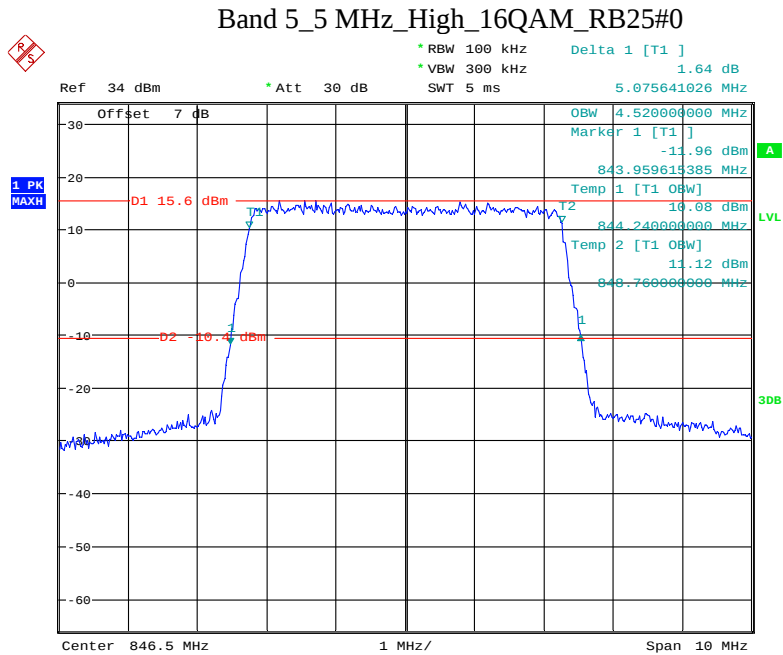


Date: 30.DEC.2020 13:54:54

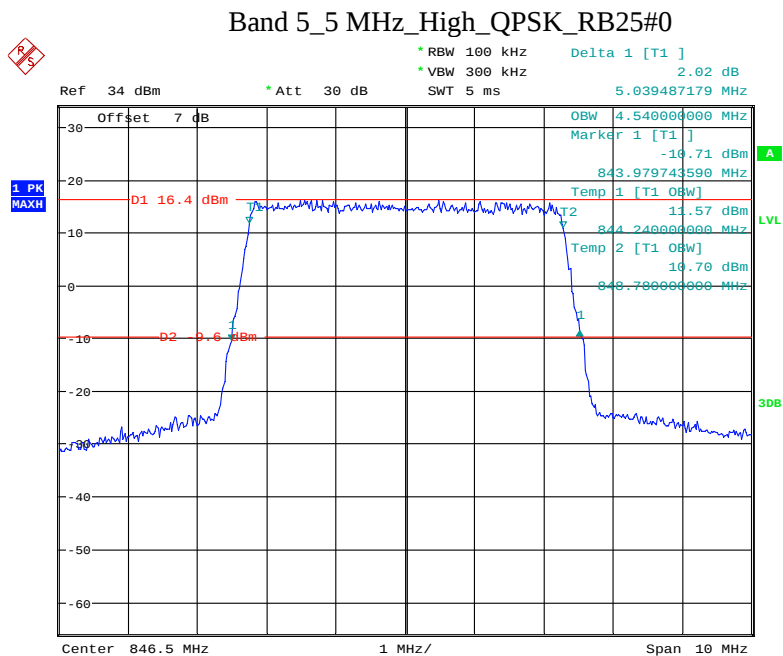
Band 5_5 MHz_Middle_QPSK_RB25#0



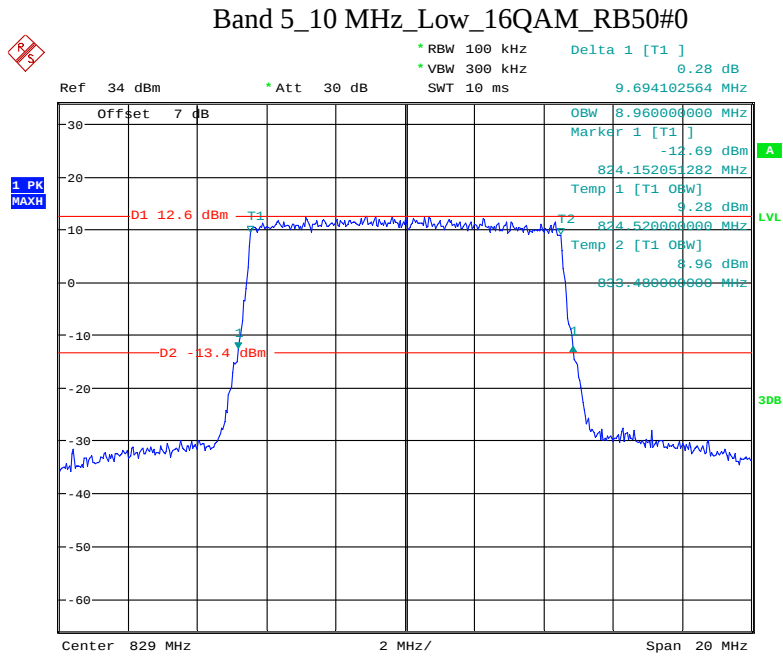
Date: 30.DEC.2020 13:54:33



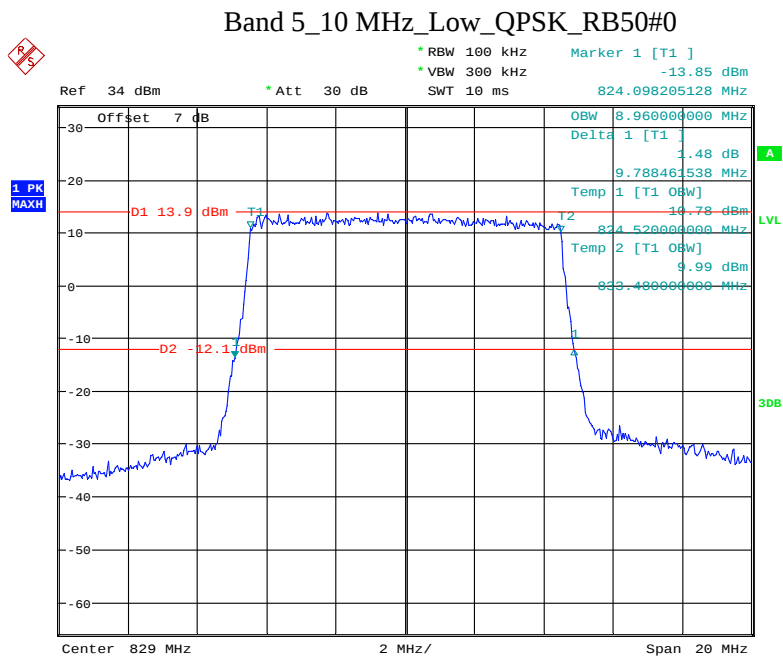
Date: 4.JAN.2021 09:22:03



Date: 4.JAN.2021 09:24:14

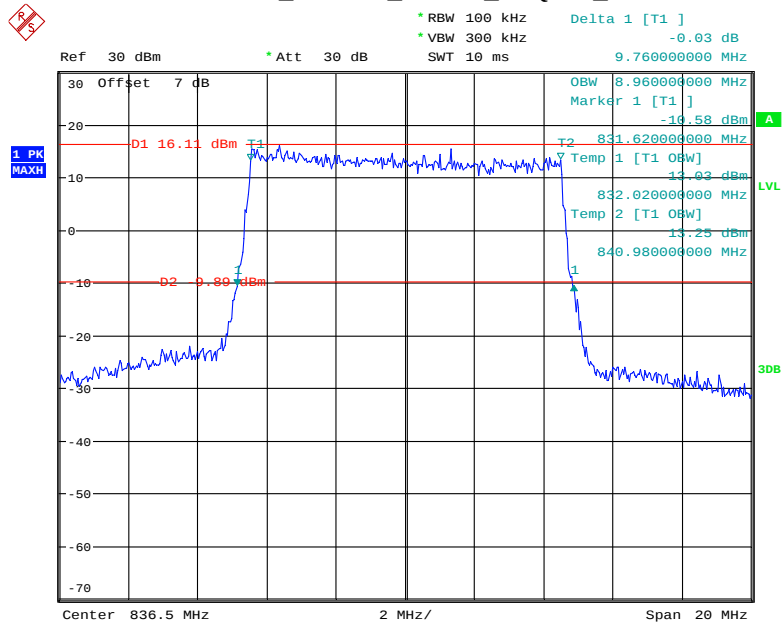


Date: 4.JAN.2021 09:35:41



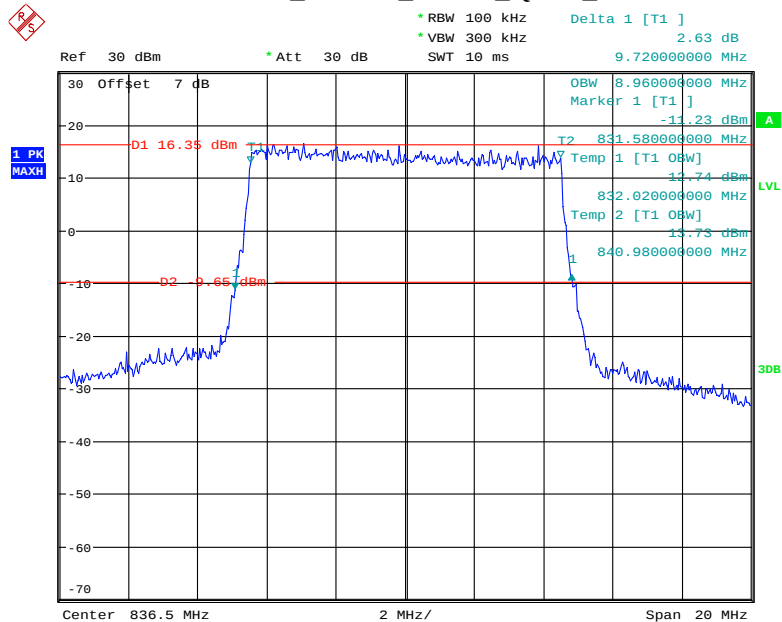
Date: 4.JAN.2021 09:29:18

Band 5_10 MHz_Middle_16QAM_RB50#0

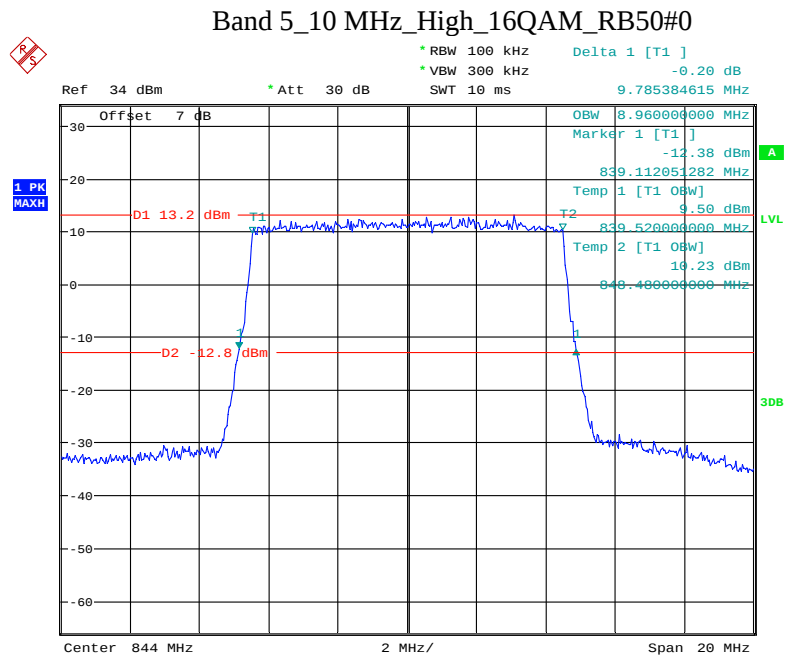


Date: 30.DEC.2020 13:55:40

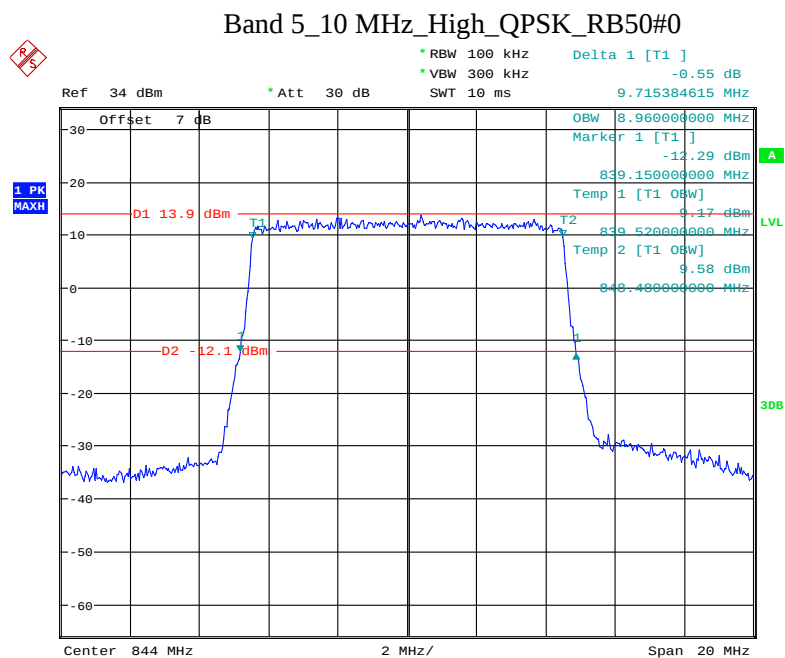
Band 5_10 MHz_Middle_QPSK_RB50#0



Date: 30.DEC.2020 13:55:18



Date: 4.JAN.2021 09:34:14

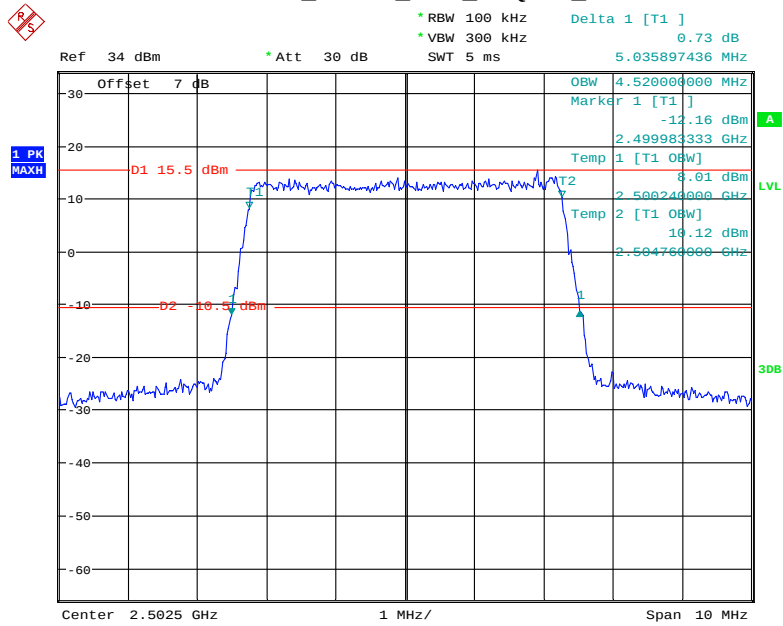


Date: 4.JAN.2021 09:31:55

LTE Band 7:

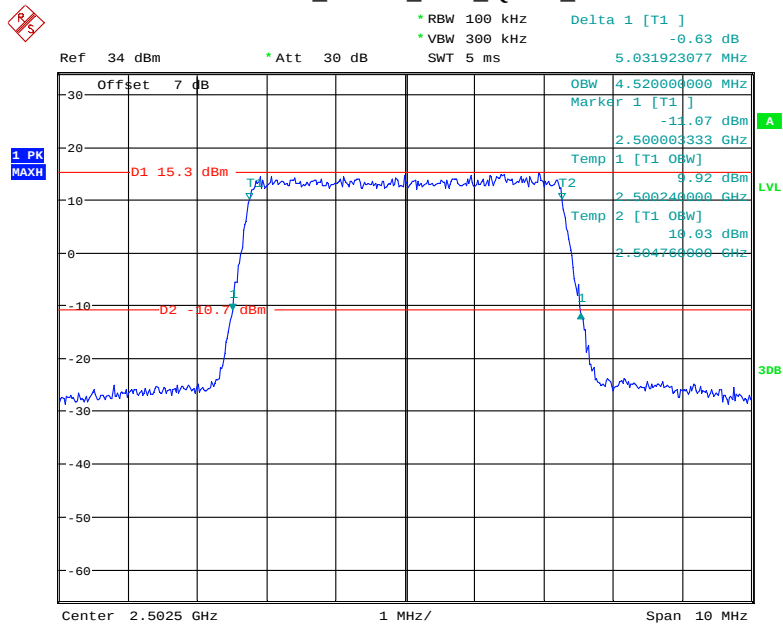
Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.520	5.032
		Middle	4.520	5.060
		High	4.520	5.036
	16QAM	Low	4.520	5.036
		Middle	4.520	4.980
		High	4.520	5.056
10	QPSK	Low	8.960	9.766
		Middle	8.960	9.760
		High	8.960	9.832
	16QAM	Low	8.974	9.776
		Middle	8.960	9.800
		High	8.960	9.831
15	QPSK	Low	13.560	15.023
		Middle	13.560	14.880
		High	13.560	15.039
	16QAM	Low	13.560	14.905
		Middle	13.560	14.940
		High	13.560	14.869
20	QPSK	Low	18.000	19.579
		Middle	18.000	19.520
		High	18.000	19.524
	16QAM	Low	18.000	19.564
		Middle	18.000	19.680
		High	18.000	19.607

Band 7_5 MHz_Low_16QAM_RB25#0



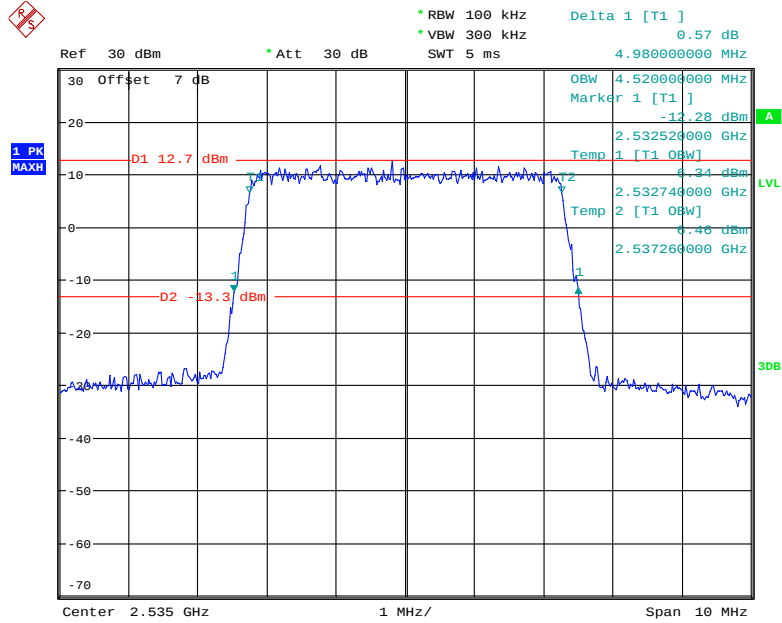
Date: 4.JAN.2021 11:25:43

Band 7_5 MHz_Low_QPSK_RB25#0



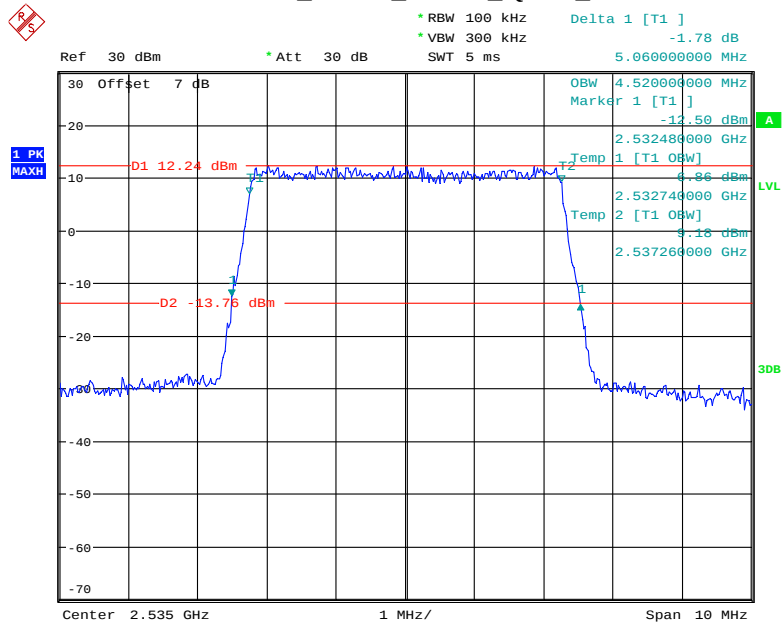
Date: 4.JAN.2021 11:23:55

Band 7_5 MHz_Middle_16QAM_RB25#0

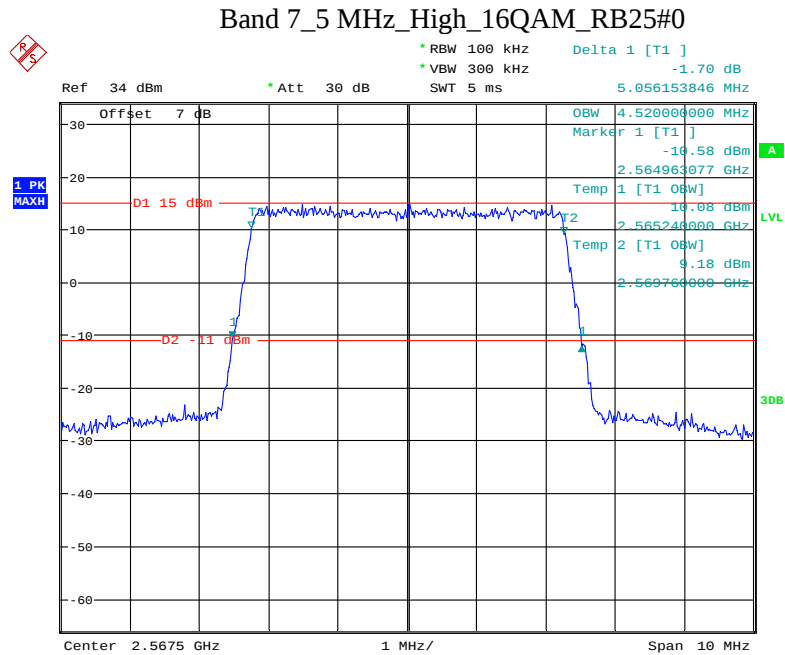


Date: 30.DEC.2020 14:15:34

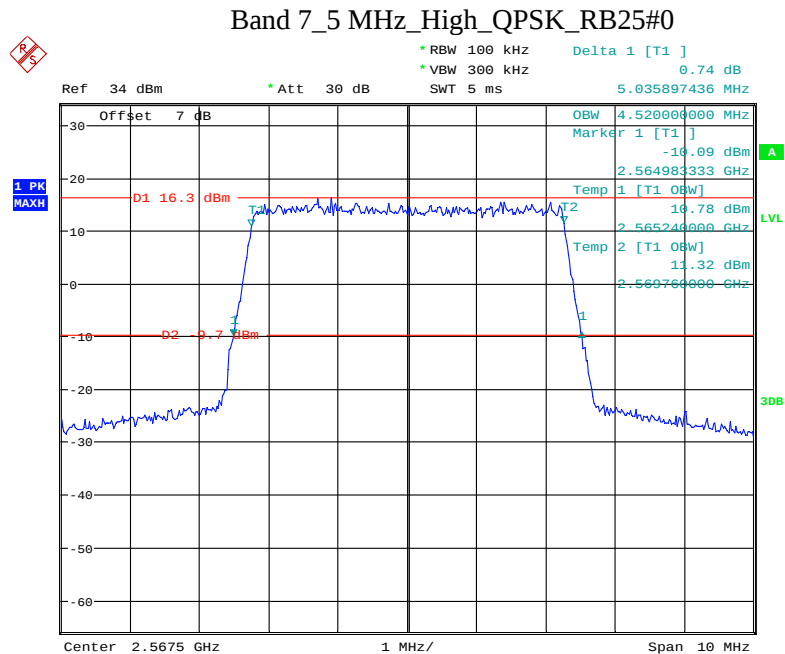
Band 7_5 MHz_Middle_QPSK_RB25#0



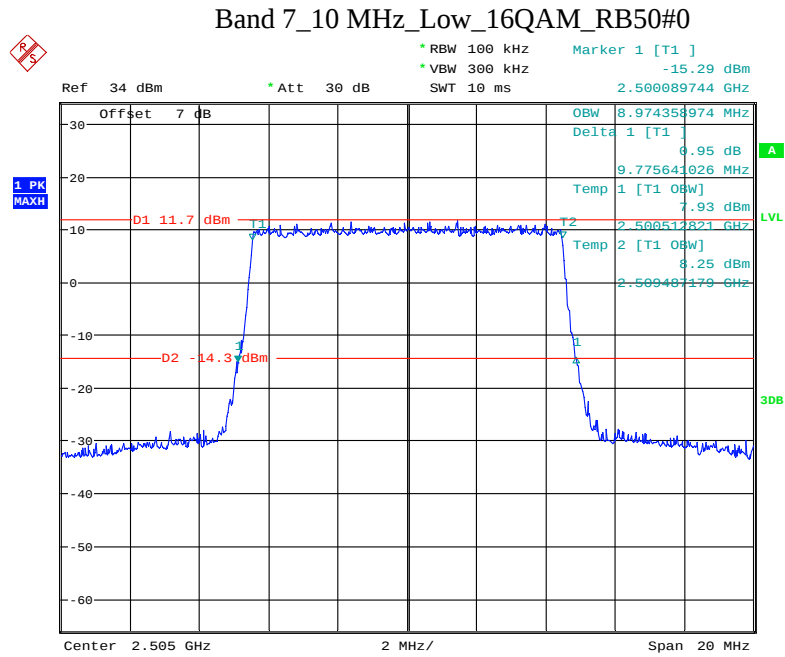
Date: 30.DEC.2020 14:15:13



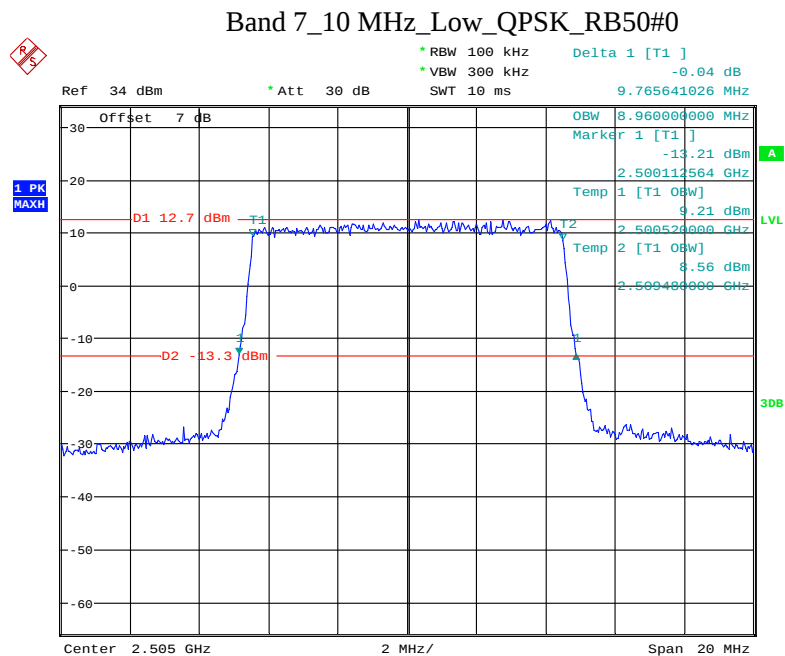
Date: 4.JAN.2021 11:27:52



Date: 4.JAN.2021 11:29:23

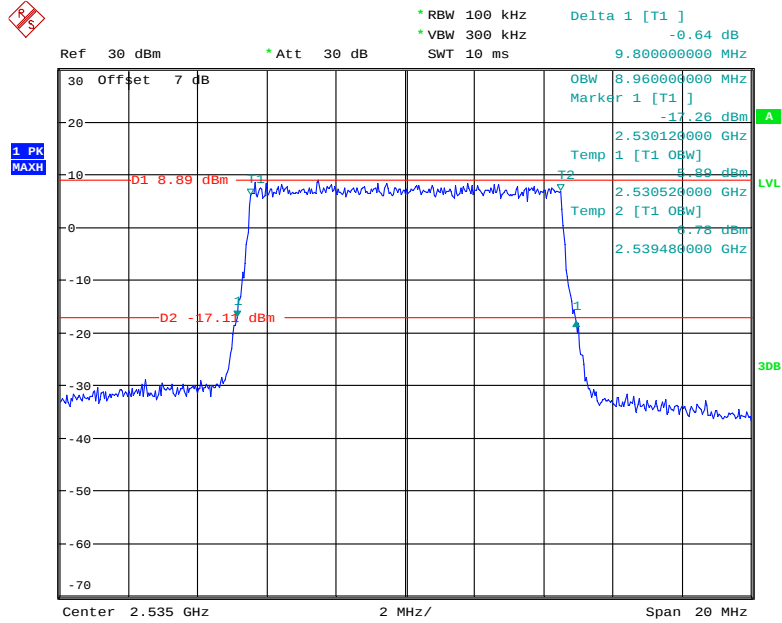


Date: 6.JAN.2021 20:39:21



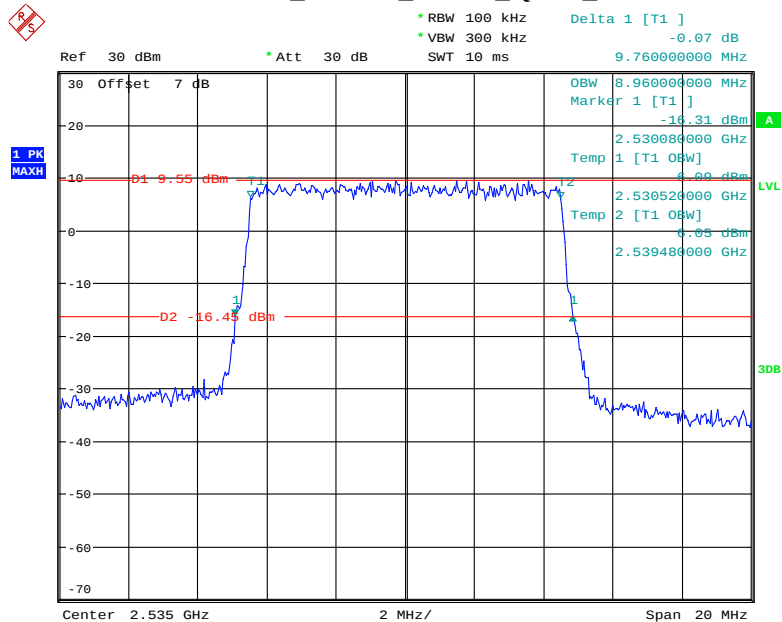
Date: 4.JAN.2021 11:36:13

Band 7_10 MHz_Middle_16QAM_RB50#0

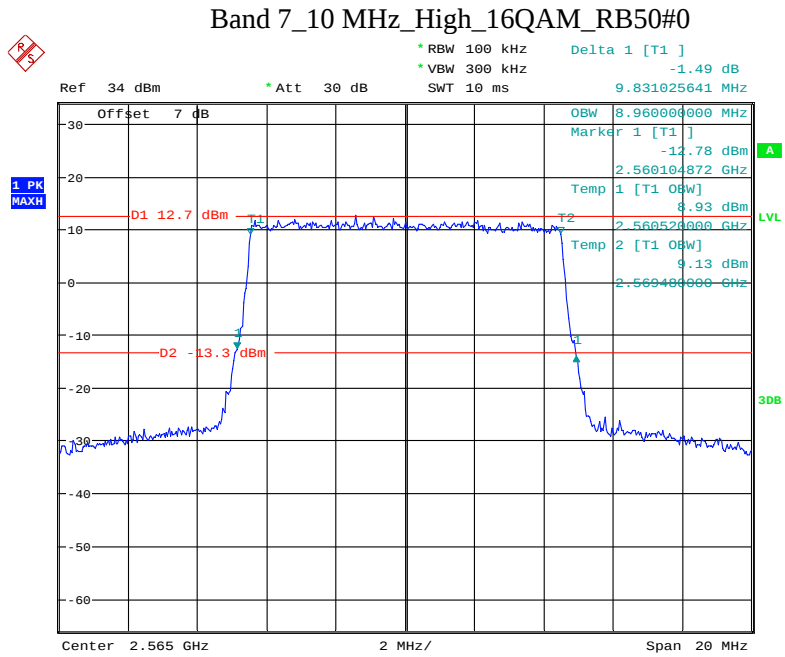


Date: 30.DEC.2020 14:16:16

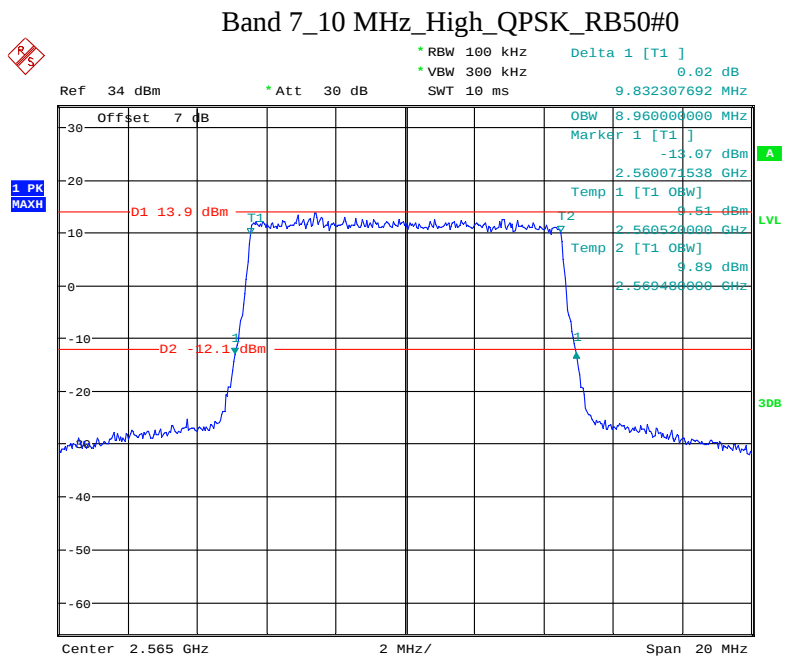
Band 7_10 MHz_Middle_QPSK_RB50#0



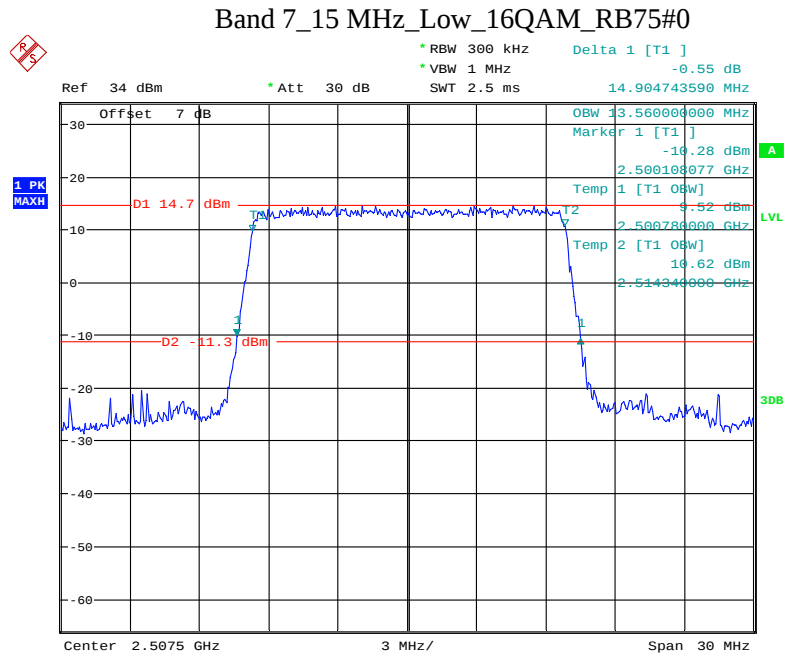
Date: 30.DEC.2020 14:15:55



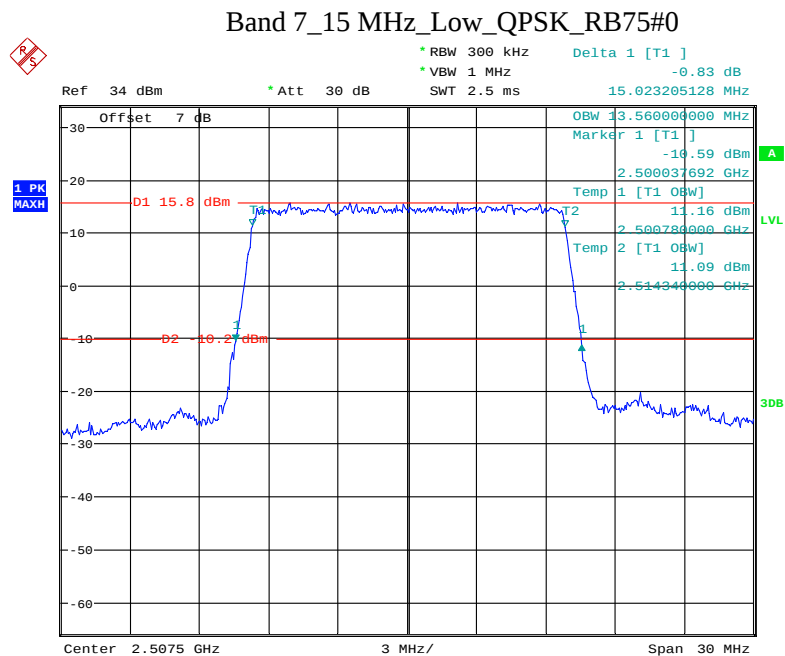
Date: 4.JAN.2021 11:32:36



Date: 4.JAN.2021 11:34:39

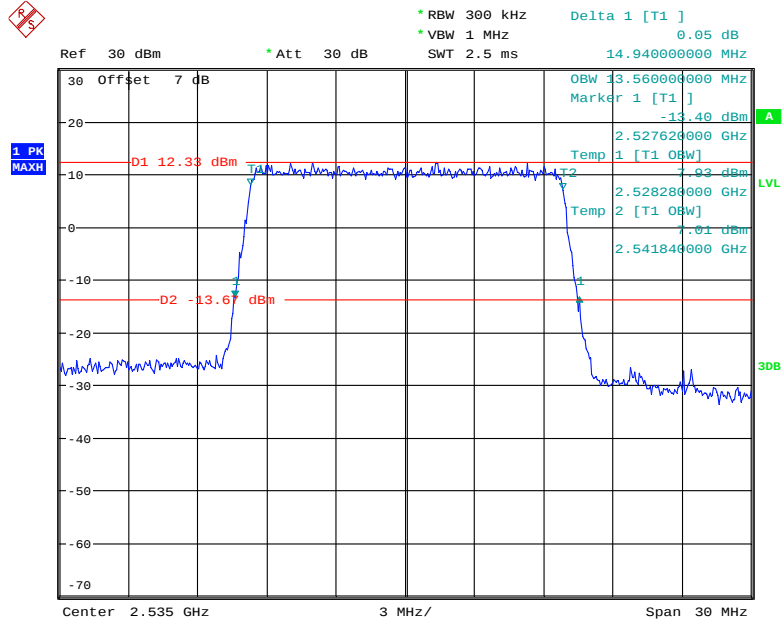


Date: 4.JAN.2021 11:43:39



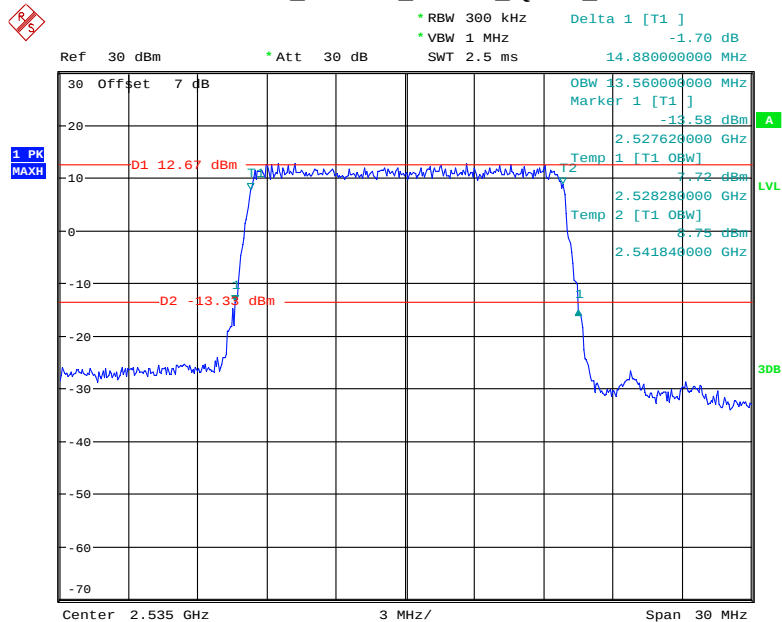
Date: 4.JAN.2021 11:41:43

Band 7_15 MHz_Middle_16QAM_RB75#0

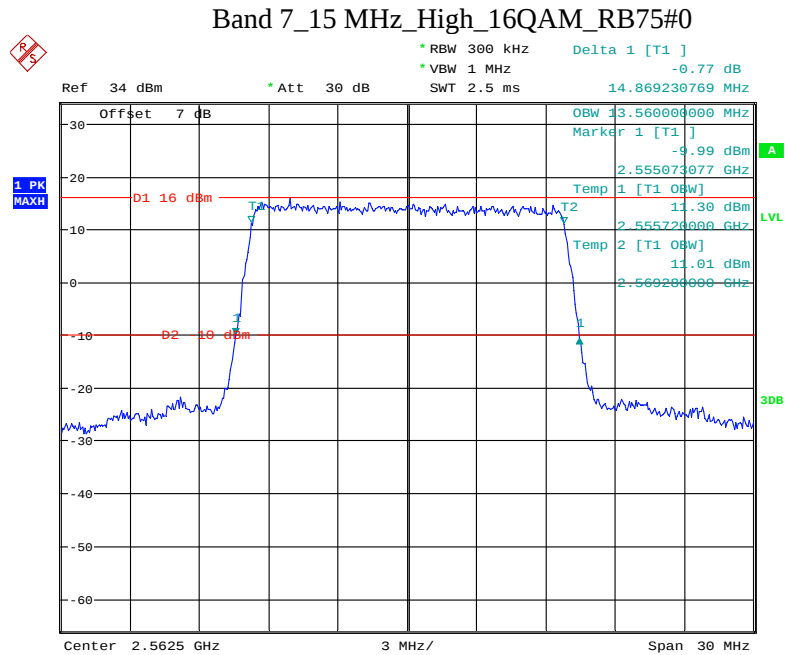


Date: 30.DEC.2020 14:17:03

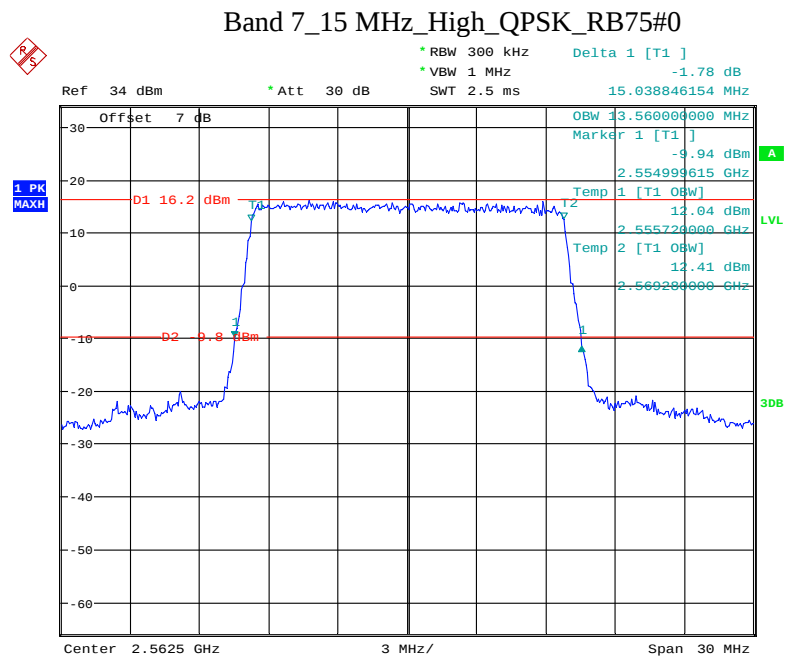
Band 7_15 MHz_Middle_QPSK_RB75#0



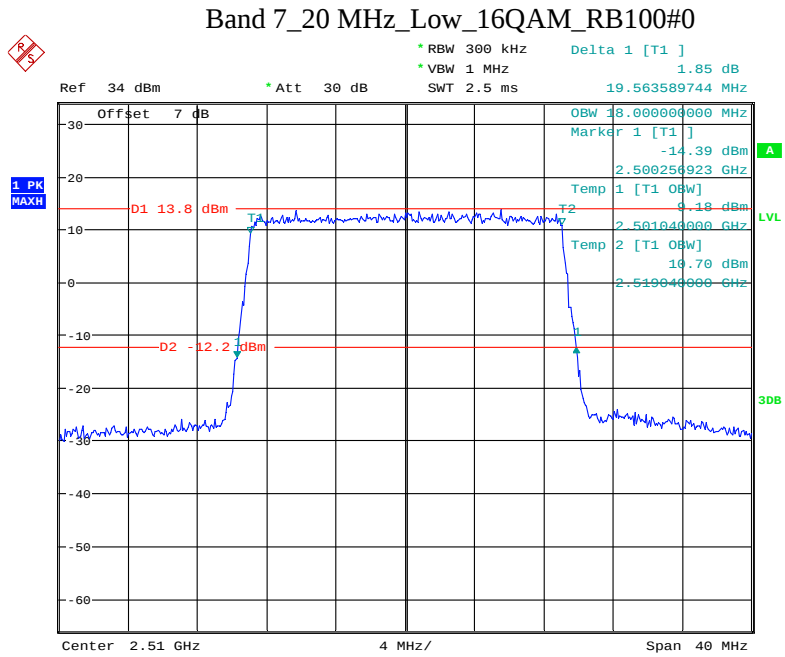
Date: 30.DEC.2020 14:16:39



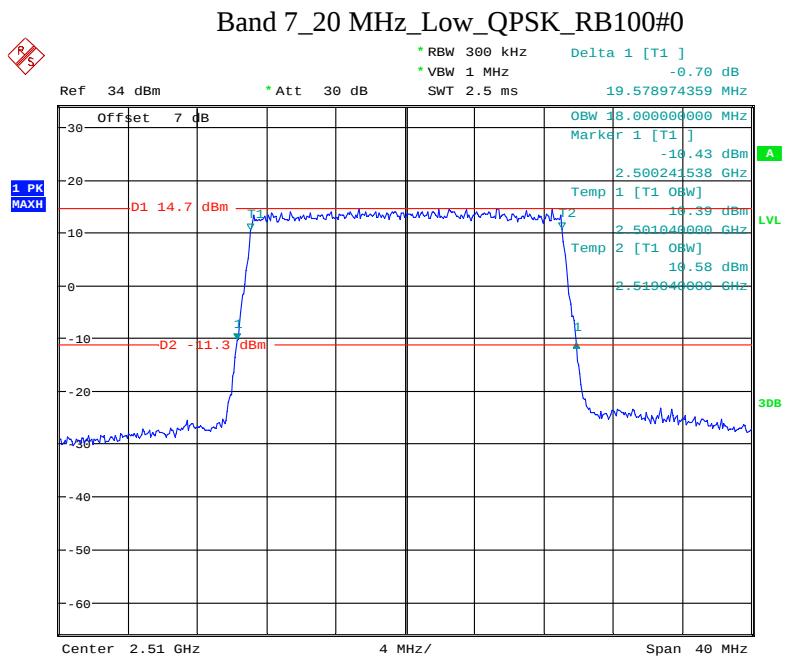
Date: 4.JAN.2021 11:45:35



Date: 4.JAN.2021 11:47:18

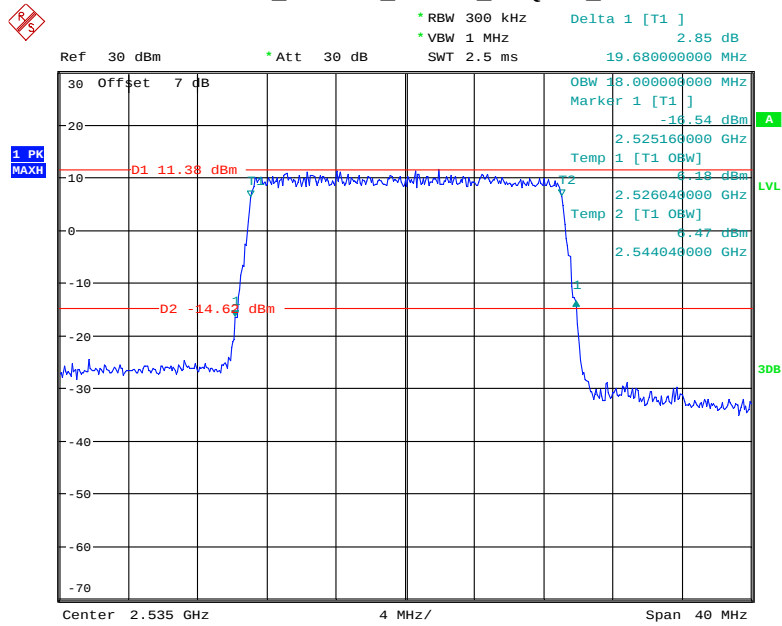


Date: 4.JAN.2021 11:51:57



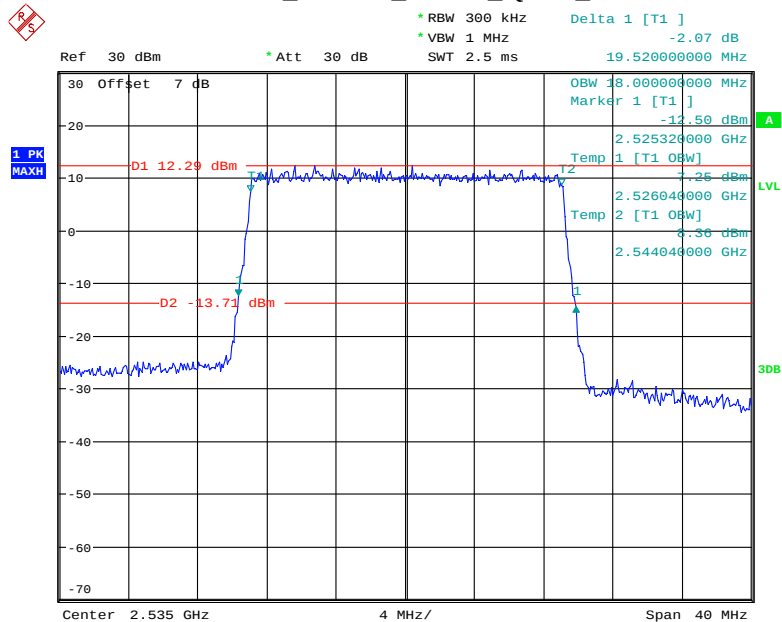
Date: 4.JAN.2021 11:53:57

Band 7_20 MHz_Middle_16QAM_RB100#0

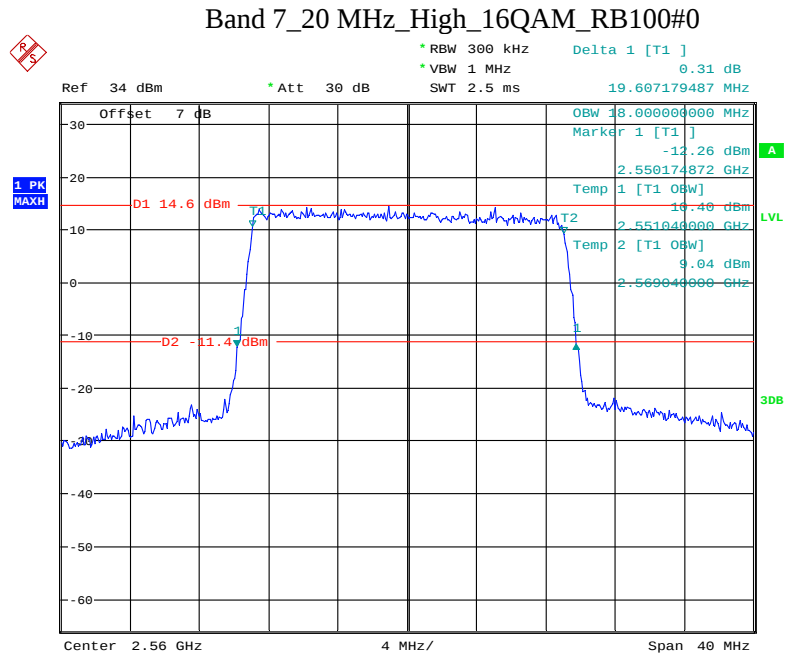


Date: 30.DEC.2020 14:17:54

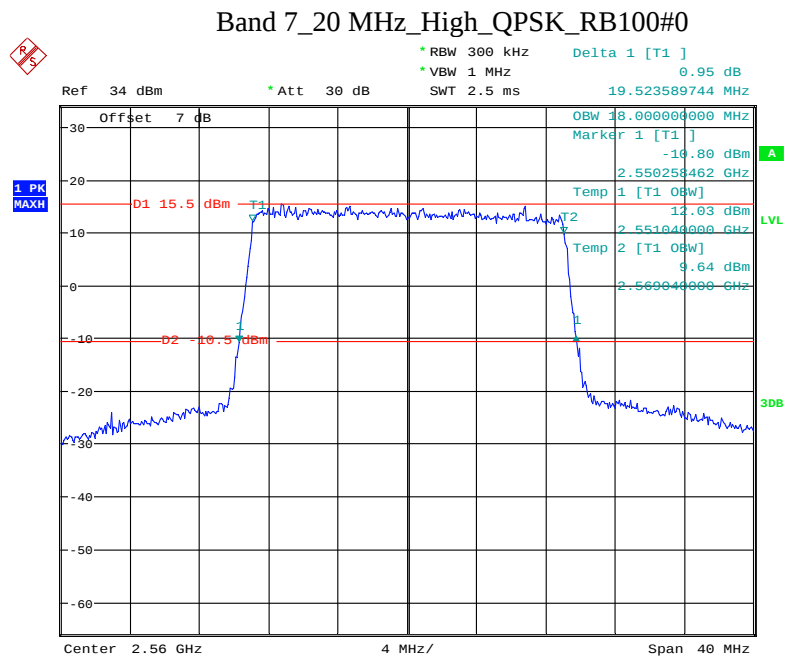
Band 7_20 MHz_Middle_QPSK_RB100#0



Date: 30.DEC.2020 14:17:30



Date: 4.JAN.2021 11:50:30

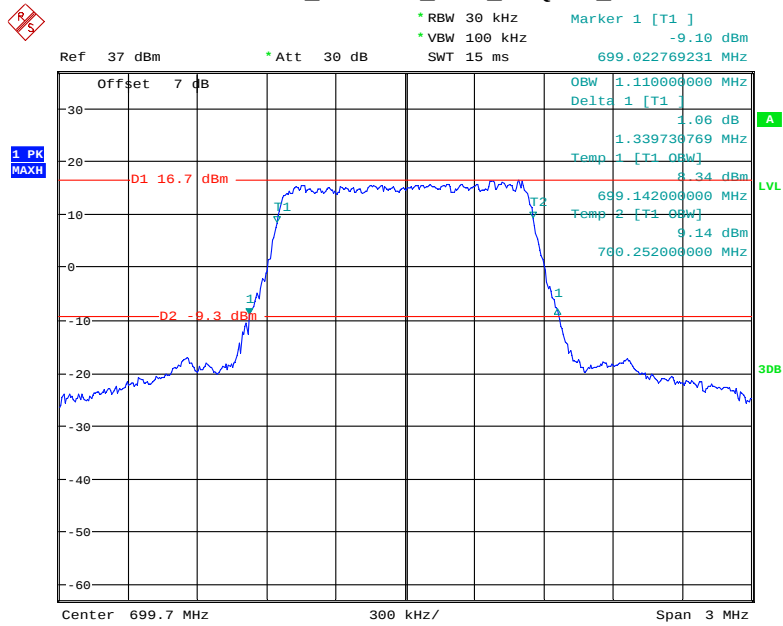


Date: 4.JAN.2021 11:49:09

LTE Band 12

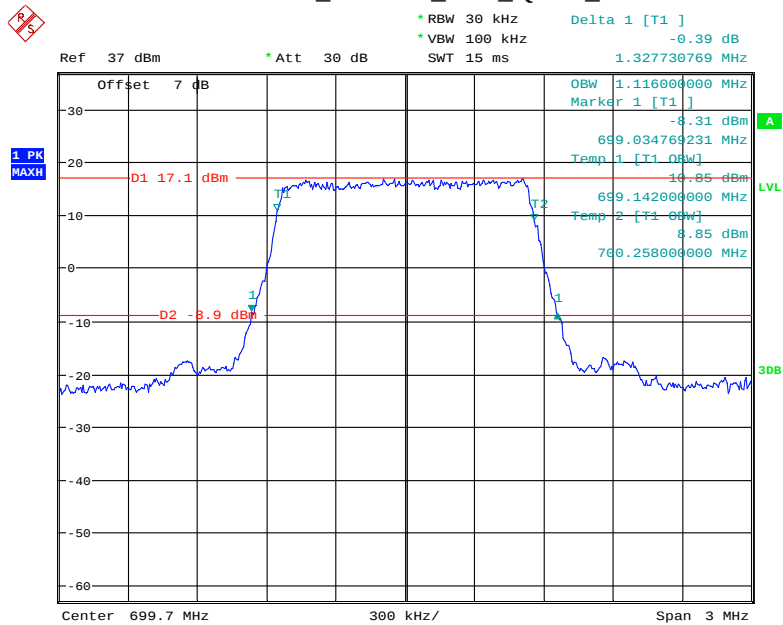
Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
1.4	QPSK	Low	1.116	1.328
		Middle	1.098	1.302
		High	1.104	1.318
	16QAM	Low	1.110	1.340
		Middle	1.104	1.314
		High	1.111	1.327
3	QPSK	Low	2.692	2.967
		Middle	2.700	2.964
		High	2.702	2.960
	16QAM	Low	2.692	2.942
		Middle	2.700	2.952
		High	2.702	2.971
5	QPSK	Low	4.519	5.006
		Middle	4.520	5.020
		High	4.519	5.032
	16QAM	Low	4.535	5.006
		Middle	4.520	5.020
		High	4.535	5.048
10	QPSK	Low	8.942	9.776
		Middle	8.960	9.680
		High	8.974	9.756
	16QAM	Low	8.942	9.788
		Middle	8.920	9.720
		High	8.974	9.827

Band 12_1.4 MHz_Low_16QAM_RB6#0

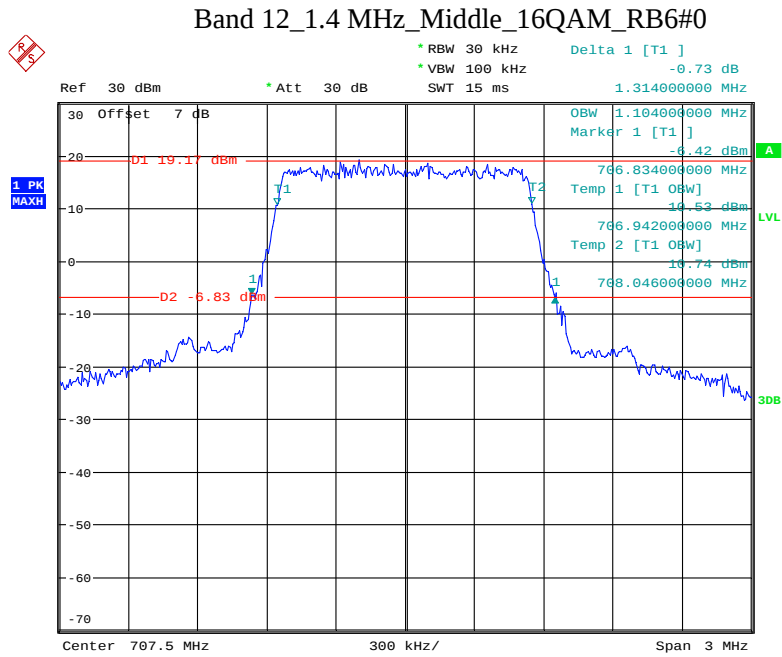


Date: 4.JAN.2021 14:52:06

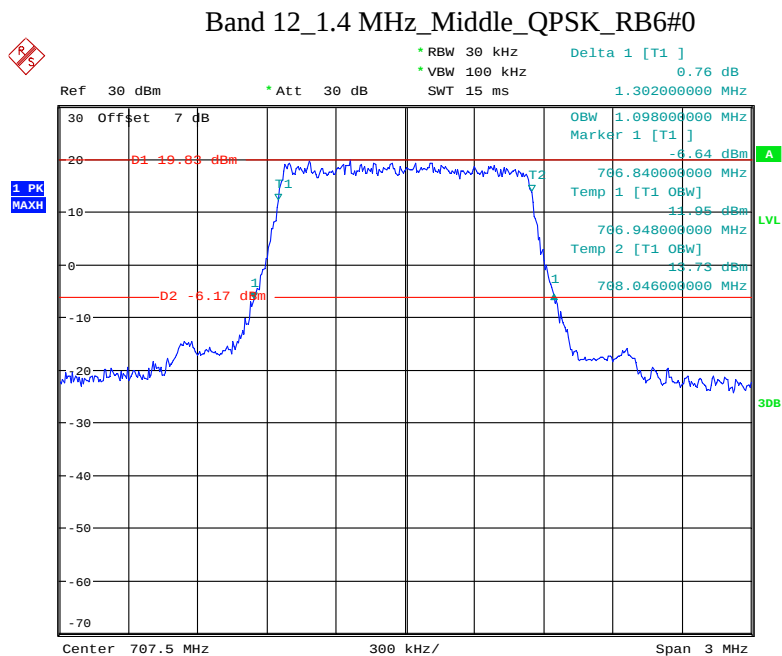
Band 12_1.4 MHz_Low_QPSK_RB6#0



Date: 4.JAN.2021 14:48:39

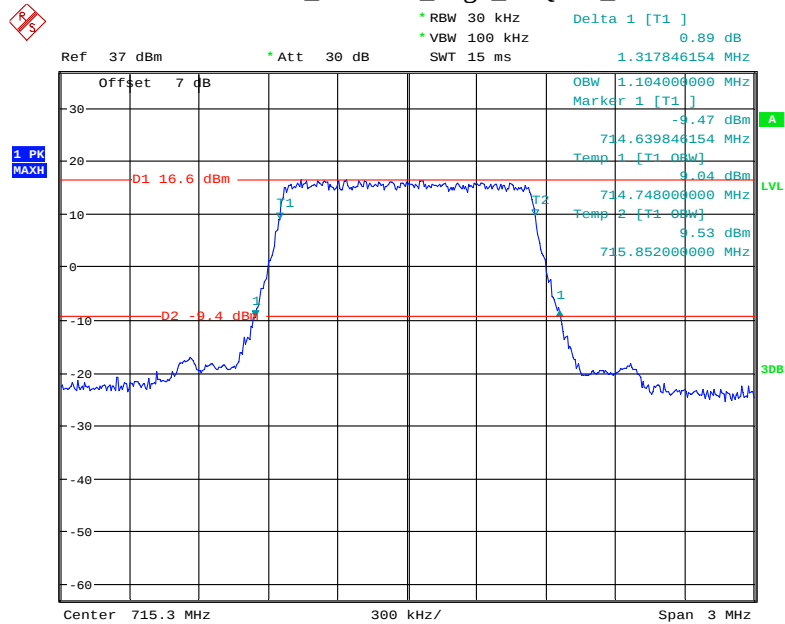


Date: 30.DEC.2020 14:18:46



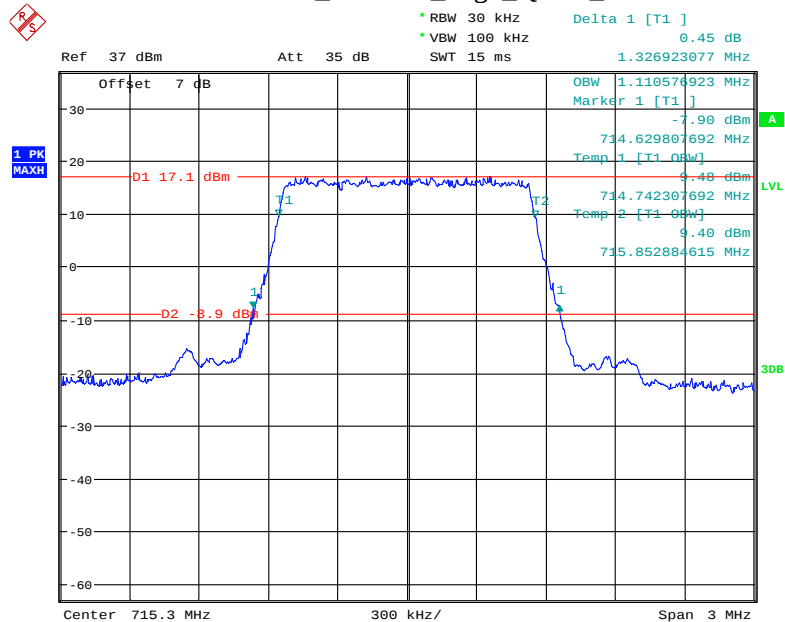
Date: 30.DEC.2020 14:18:26

Band 12_1.4 MHz_High_16QAM_RB6#0

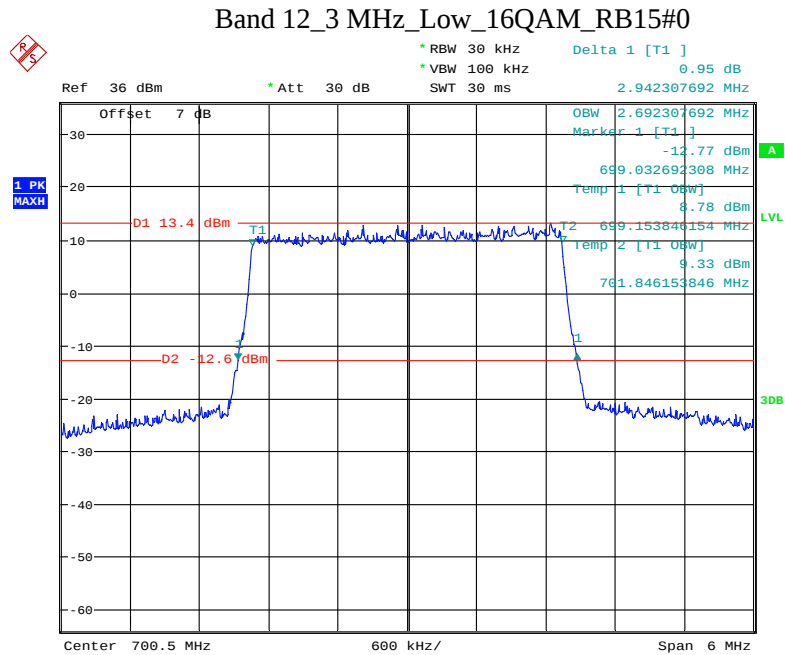


Date: 4.JAN.2021 15:20:50

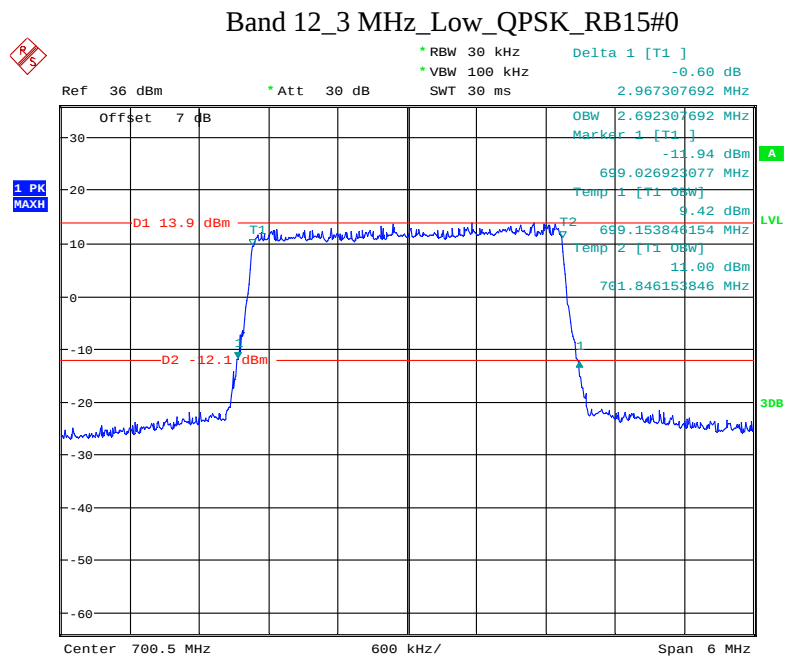
Band 12_1.4 MHz_High_QPSK_RB6#0



Date: 19.JAN.2021 17:05:20

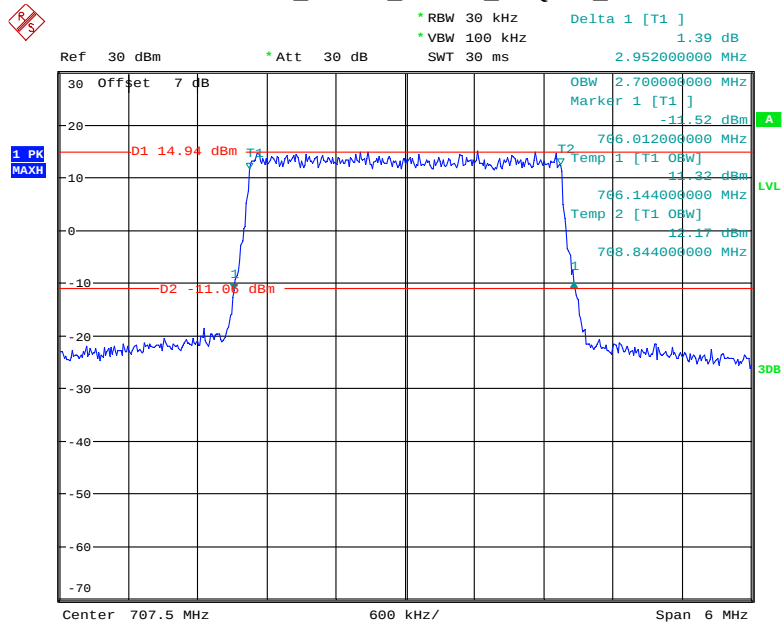


Date: 5.JAN.2021 15:39:49



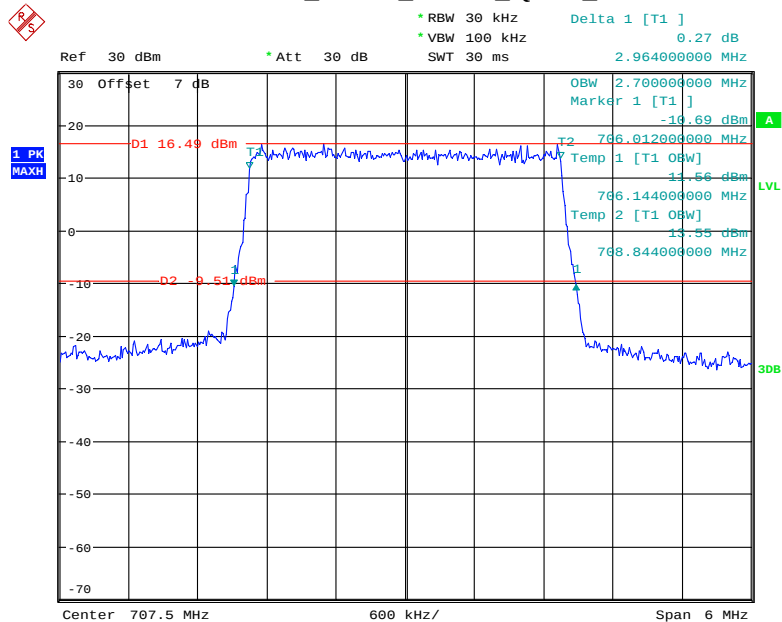
Date: 5.JAN.2021 15:37:47

Band 12_3 MHz_Middle_16QAM_RB15#0

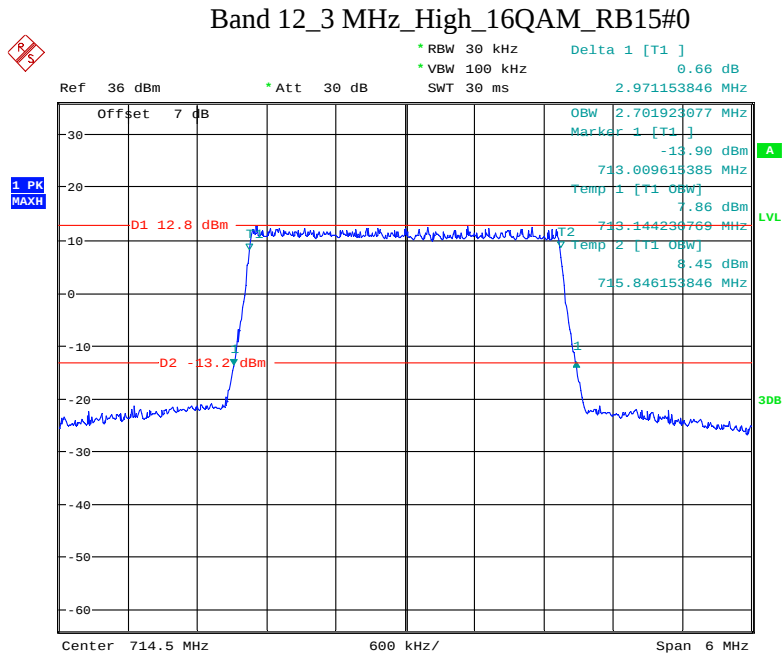


Date: 30.DEC.2020 14:19:26

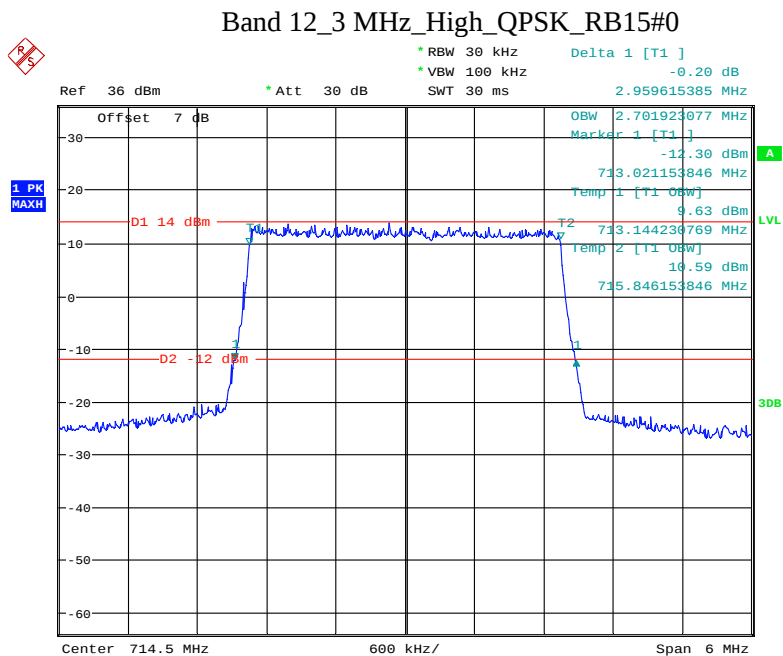
Band 12_3 MHz_Middle_QPSK_RB15#0



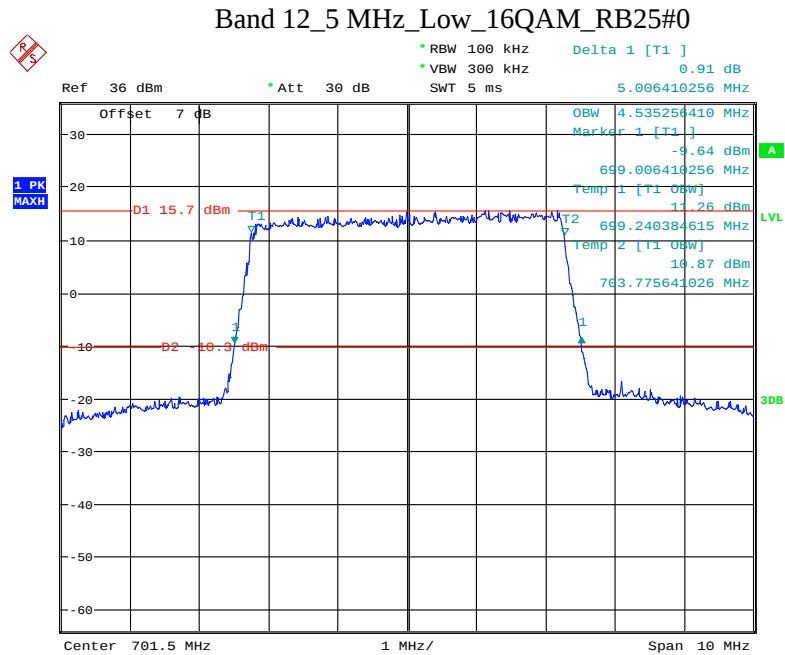
Date: 30.DEC.2020 14:19:09



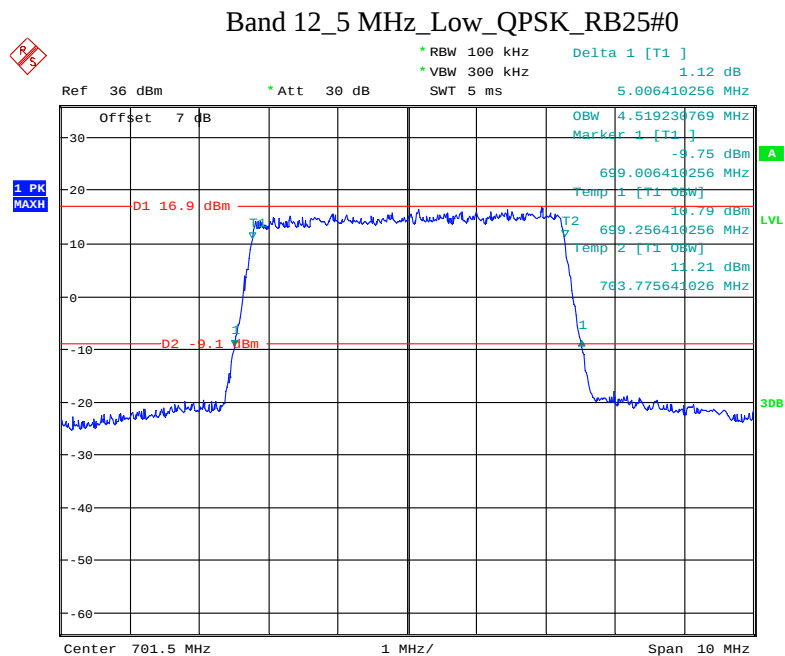
Date: 5.JAN.2021 15:42:08



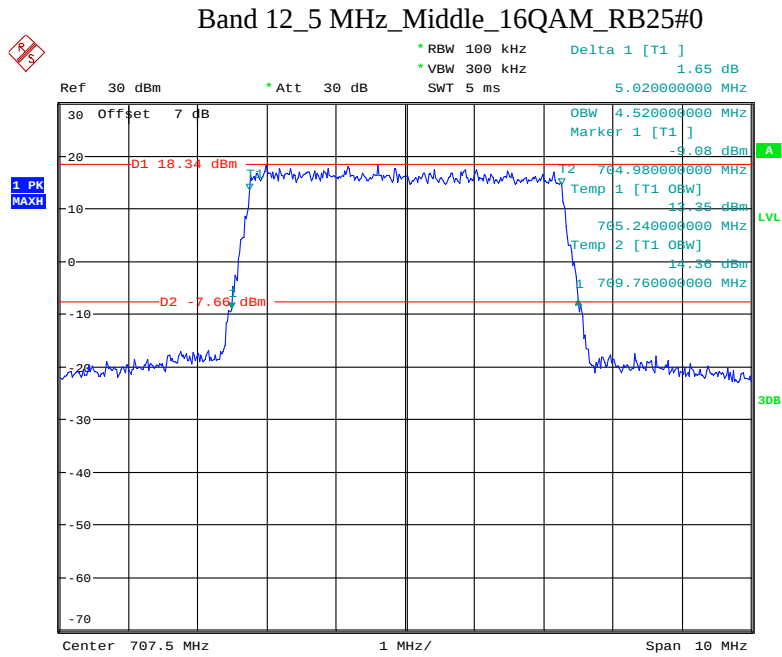
Date: 5.JAN.2021 15:43:51



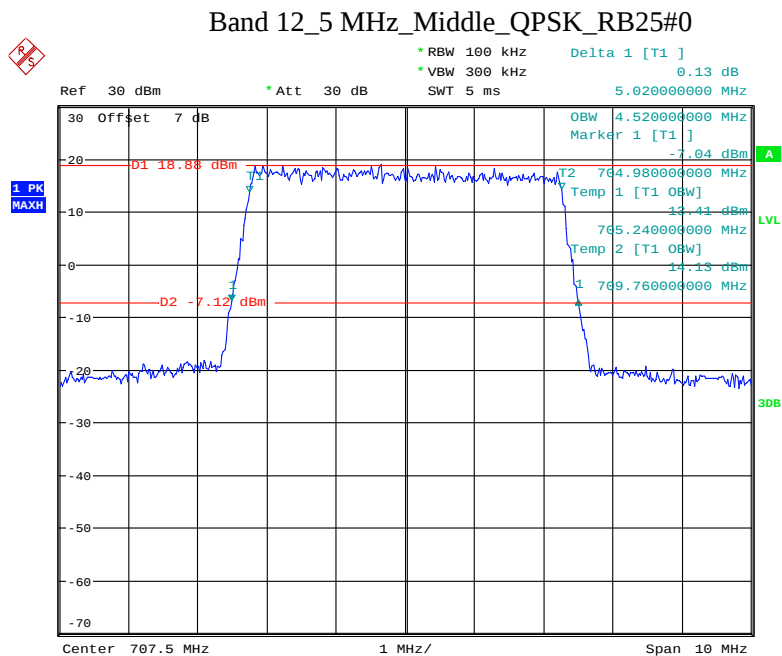
Date: 5.JAN.2021 15:53:37



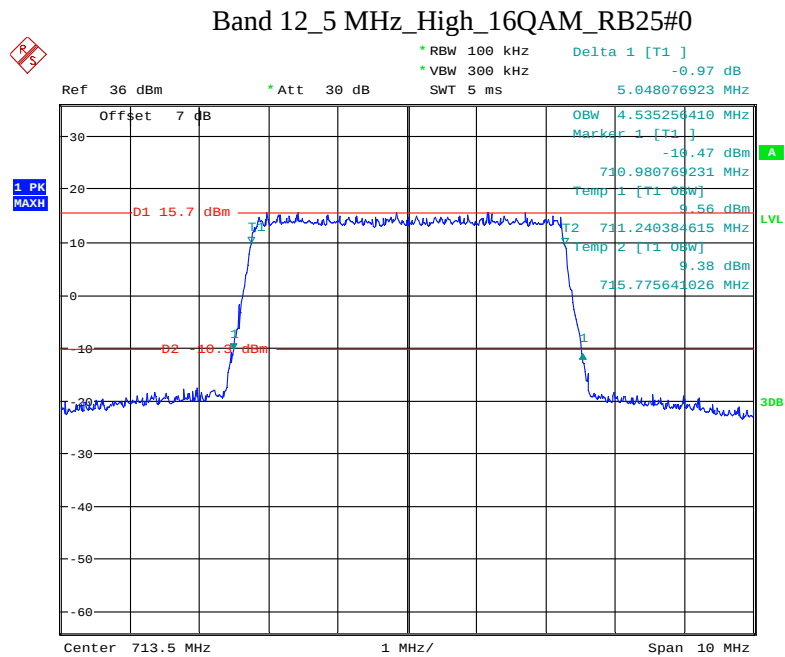
Date: 5.JAN.2021 15:55:40



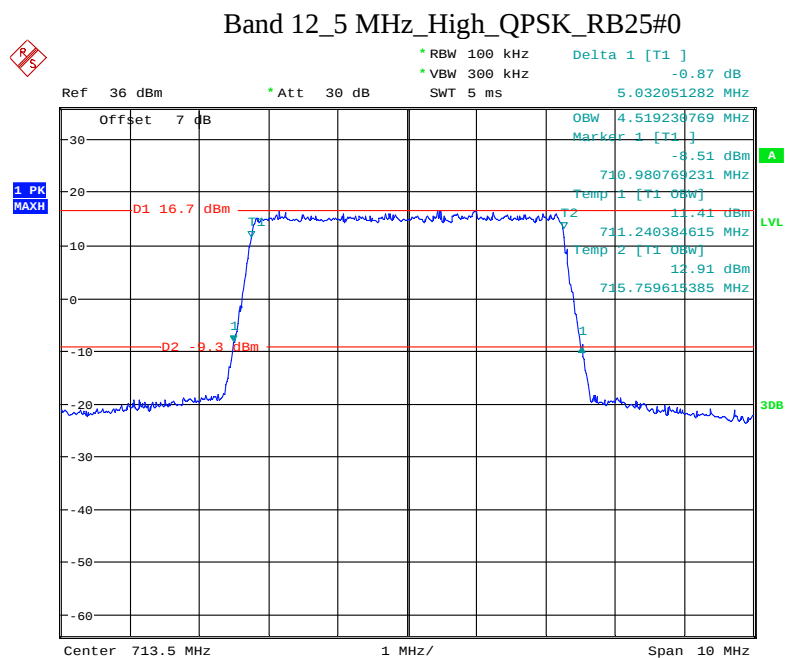
Date: 30.DEC.2020 14:20:19



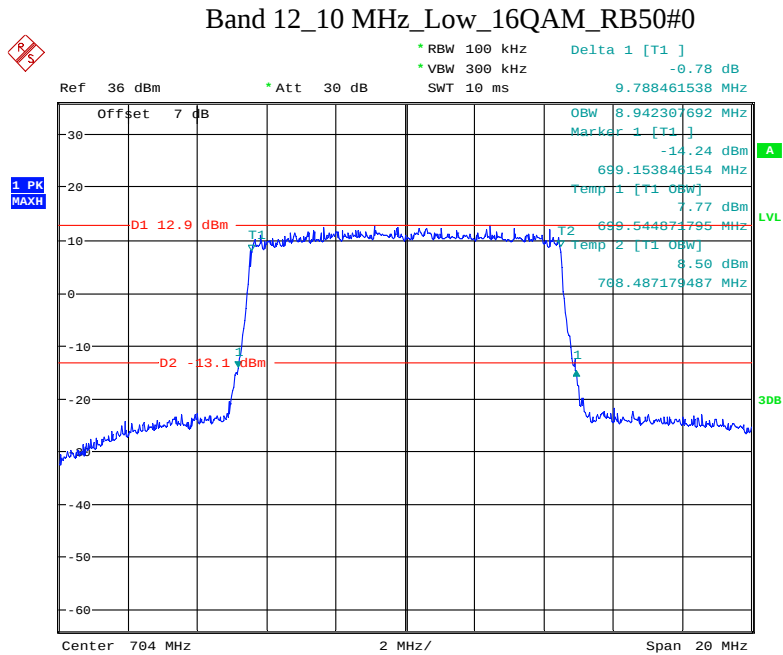
Date: 30.DEC.2020 14:19:52



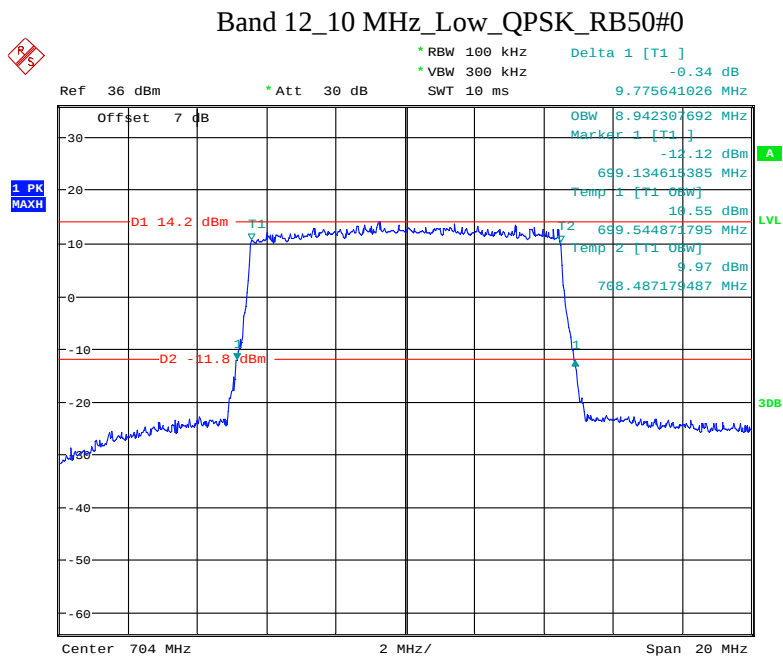
Date: 5.JAN.2021 15:50:51



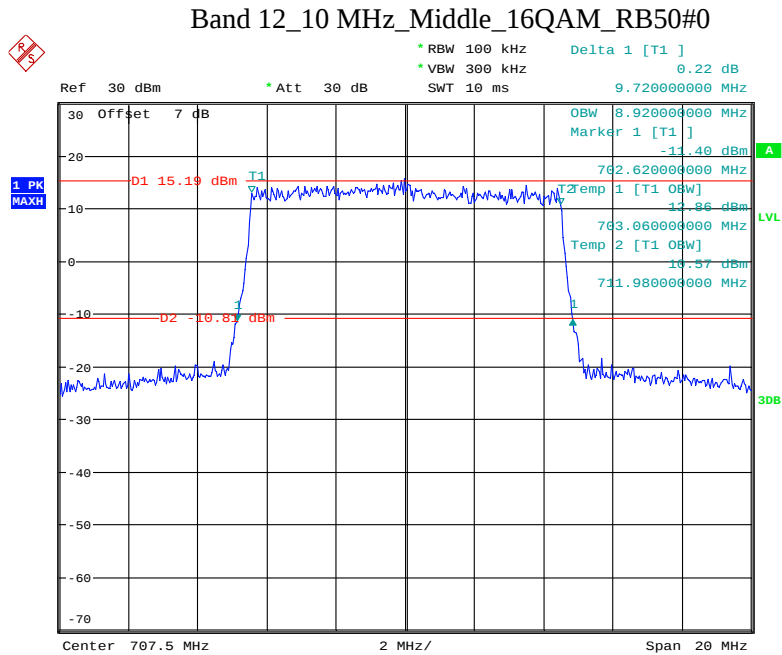
Date: 5.JAN.2021 15:48:26



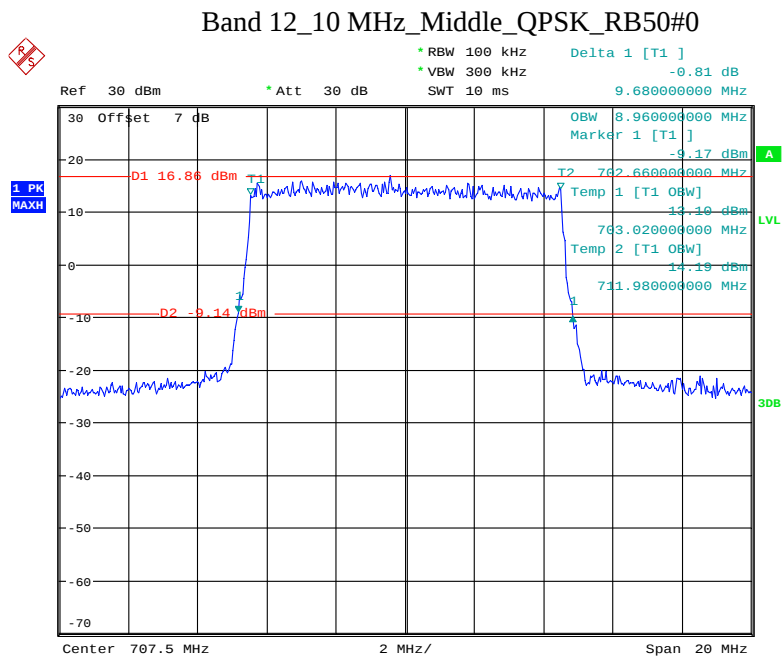
Date: 5.JAN.2021 16:02:37



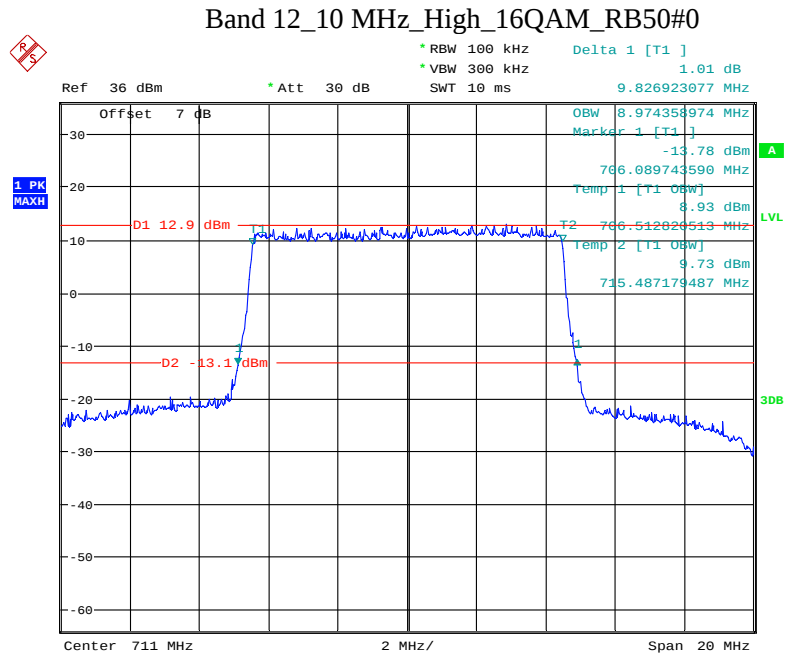
Date: 5.JAN.2021 16:00:04



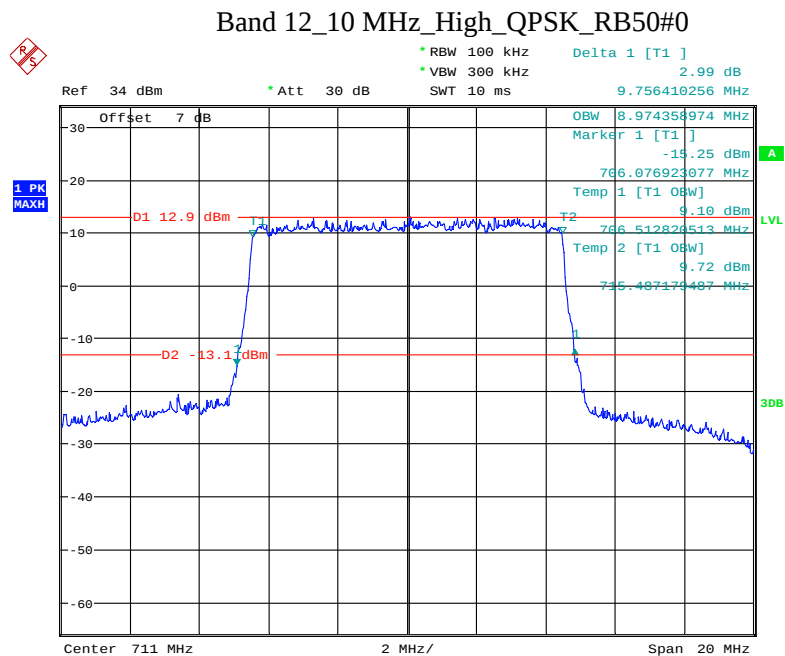
Date: 30.DEC.2020 14:21:05



Date: 30.DEC.2020 14:20:43



Date: 5.JAN.2021 16:06:24

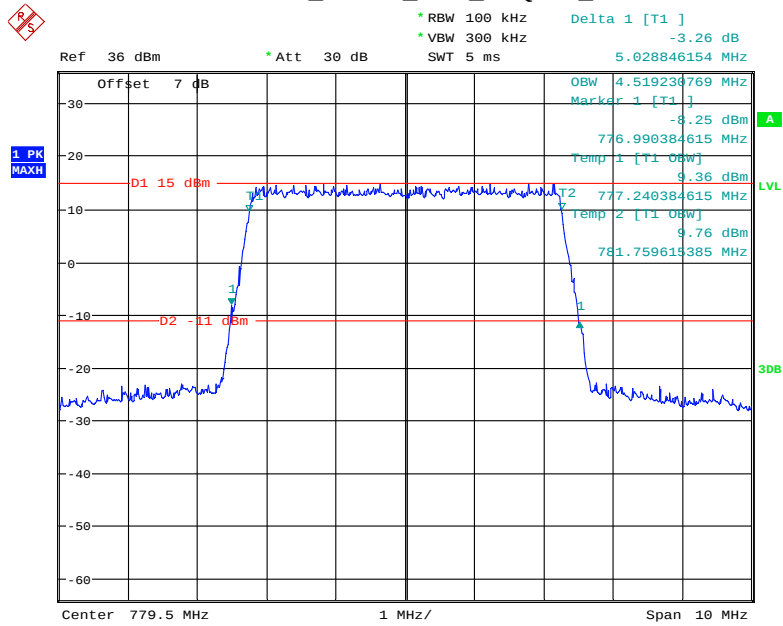


Date: 6.JAN.2021 20:34:07

LTE Band 13

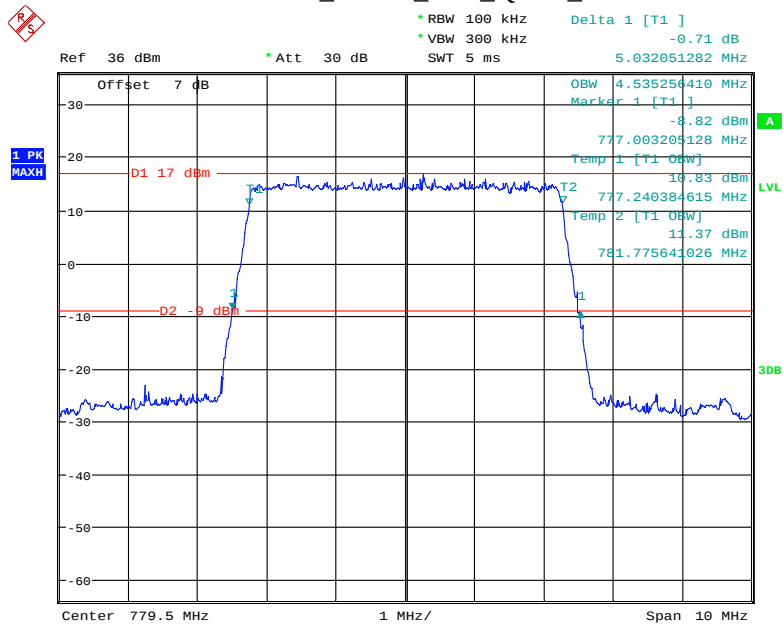
Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.535	5.032
		Middle	4.520	5.000
		High	4.535	5.064
	16QAM	Low	4.519	5.029
		Middle	4.520	5.040
		High	4.535	5.074
10	QPSK	Low	/	/
		Middle	8.960	9.720
		High	/	/
	16QAM	Low	/	/
		Middle	8.960	9.640
		High	/	/

Band 13_5 MHz_Low_16QAM_RB25#0



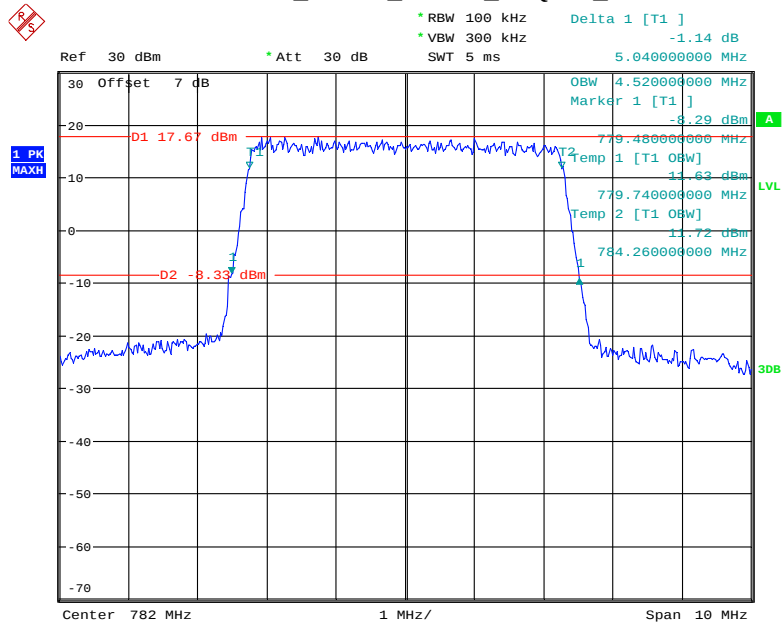
Date: 5.JAN.2021 16:45:11

Band 13_5 MHz_Low_QPSK_RB25#0



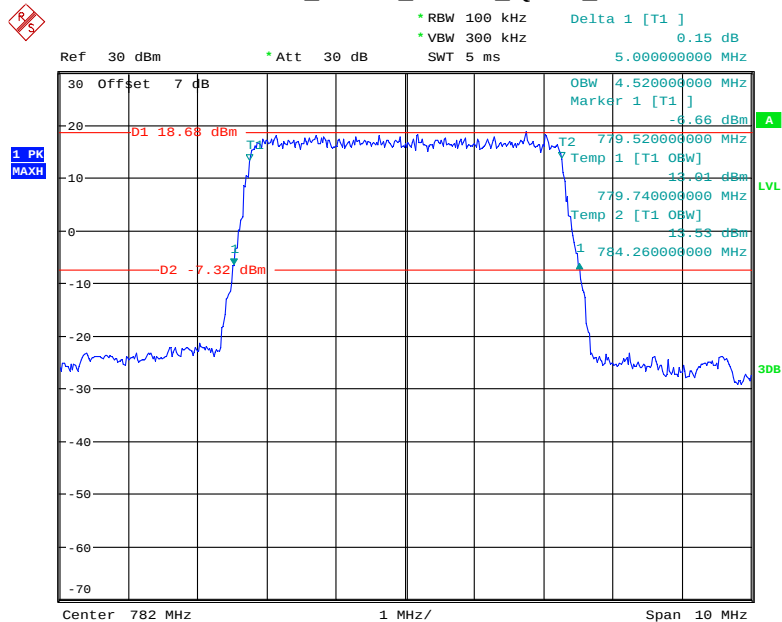
Date: 5.JAN.2021 16:14:56

Band 13_5 MHz_Middle_16QAM_RB25#0

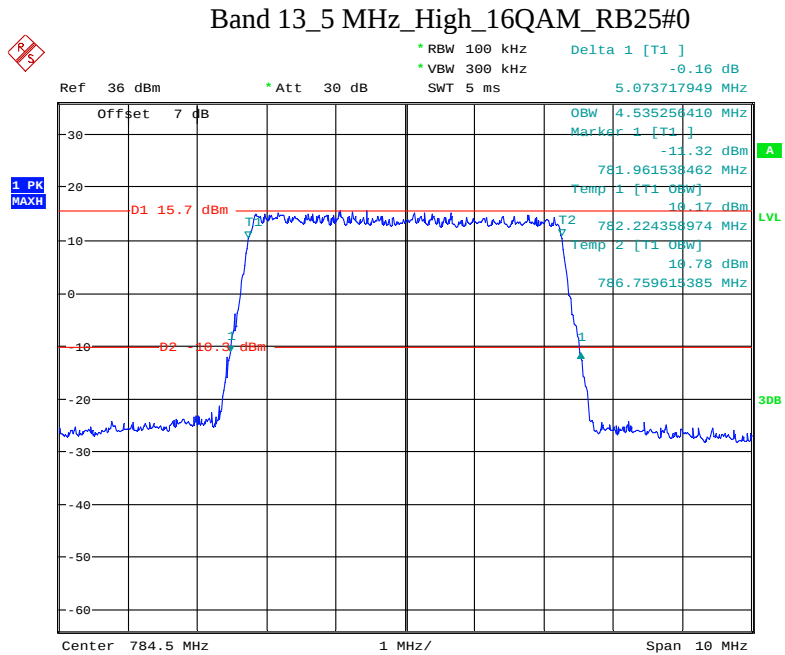


Date: 30.DEC.2020 14:21:59

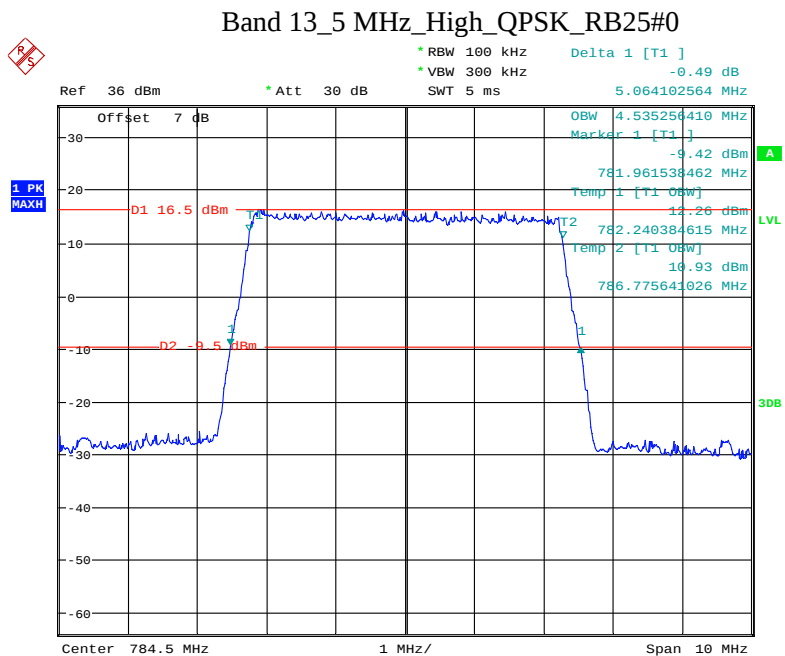
Band 13_5 MHz_Middle_QPSK_RB25#0



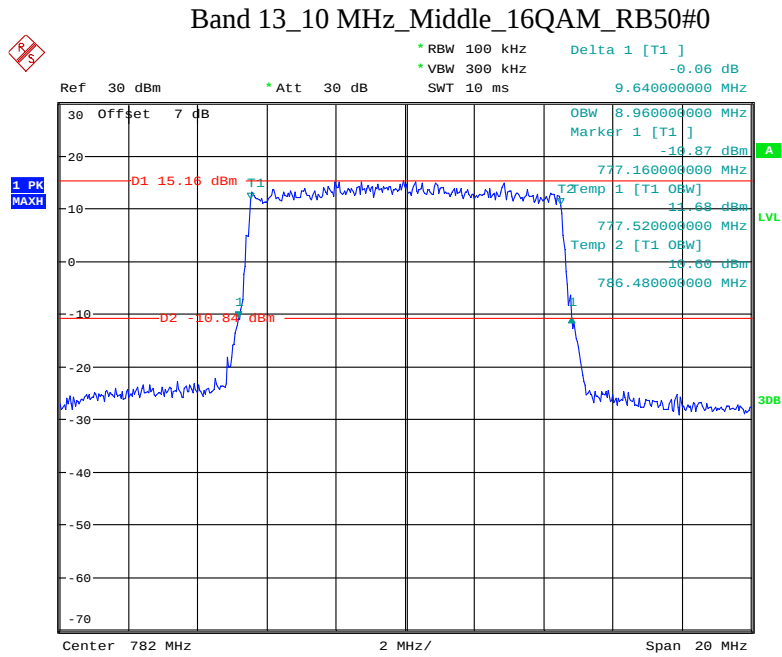
Date: 30.DEC.2020 14:21:38



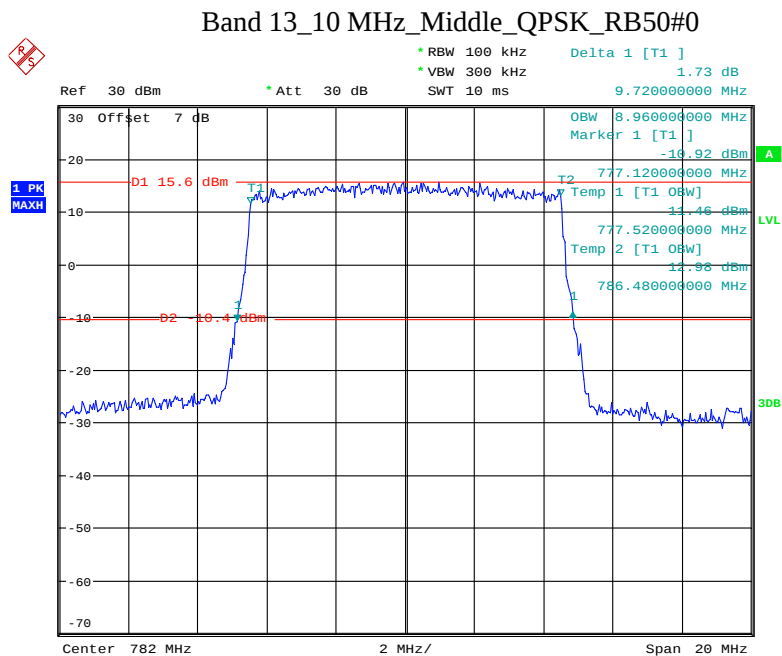
Date: 5.JAN.2021 16:49:29



Date: 5.JAN.2021 16:52:51



Date: 30.DEC.2020 14:22:45

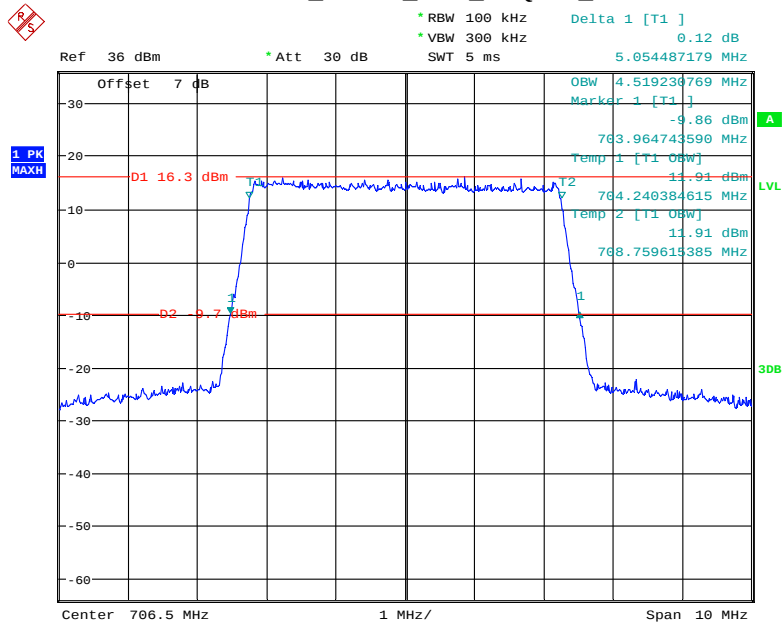


Date: 30.DEC.2020 14:22:23

LTE Band 17

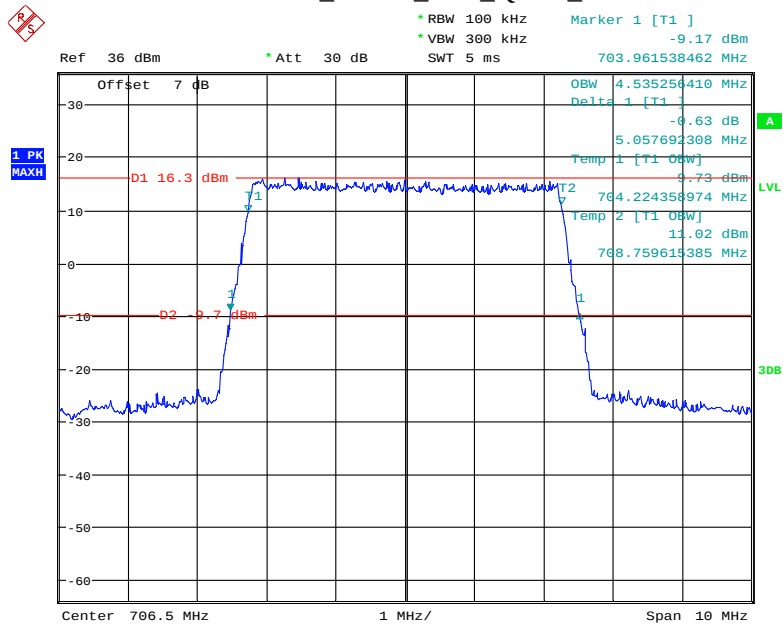
Bandwidth (MHz)	Modulation	Channel	99% Occupied Bandwidth (MHz)	26 dB Emission Bandwidth (MHz)
5	QPSK	Low	4.535	5.058
		Middle	4.560	5.020
		High	4.519	5.038
	16QAM	Low	4.519	5.054
		Middle	4.560	5.060
		High	4.519	4.994
10	QPSK	Low	8.974	9.846
		Middle	8.960	9.840
		High	8.974	9.737
	16QAM	Low	8.974	9.821
		Middle	8.960	9.800
		High	8.974	9.737

Band 17_5 MHz_Low_16QAM_RB25#0



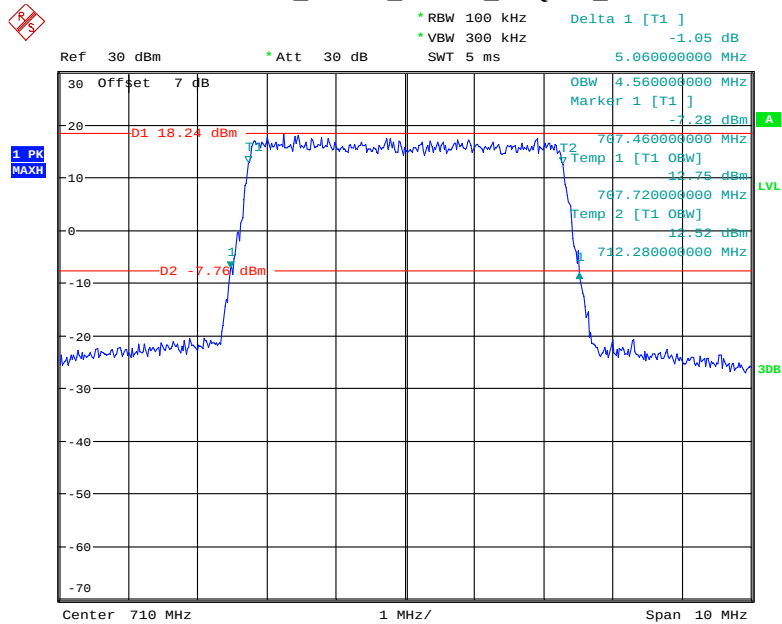
Date: 5.JAN.2021 17:23:18

Band 17_5 MHz_Low_QPSK_RB25#0



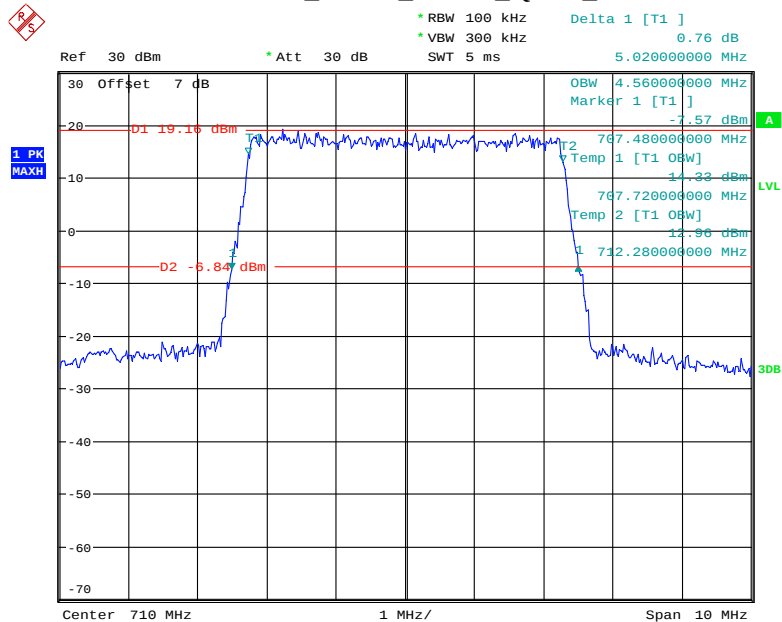
Date: 5.JAN.2021 17:15:02

Band 17_5 MHz_Middle_16QAM_RB25#0

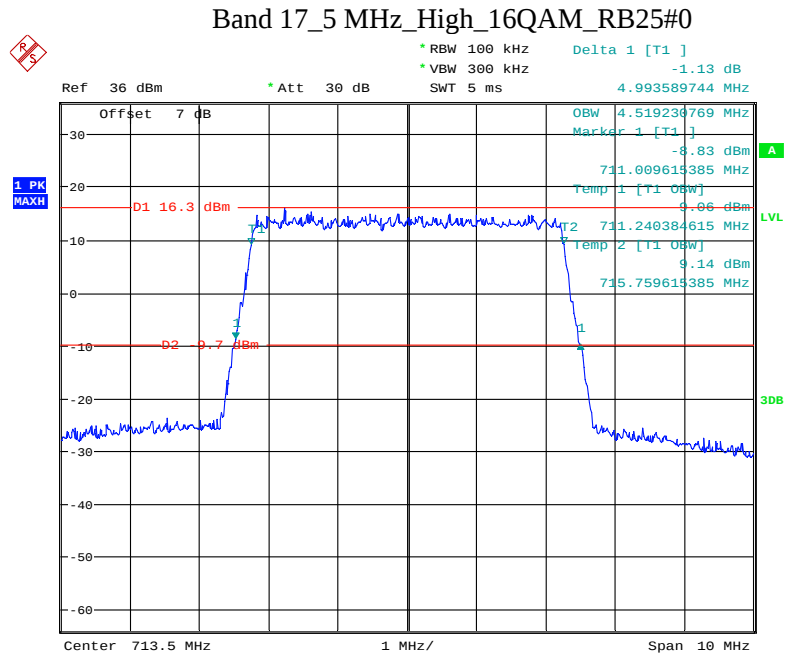


Date: 30.DEC.2020 14:23:38

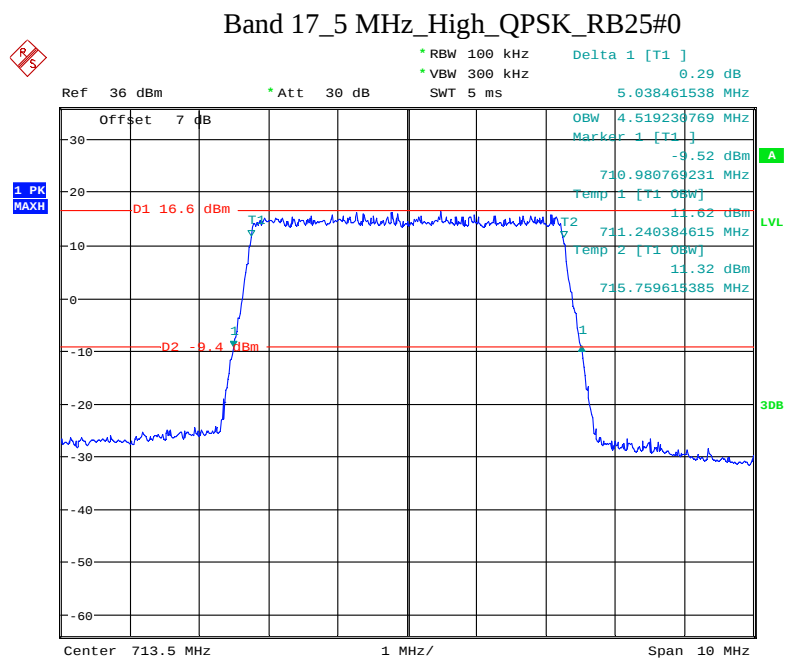
Band 17_5 MHz_Middle_QPSK_RB25#0



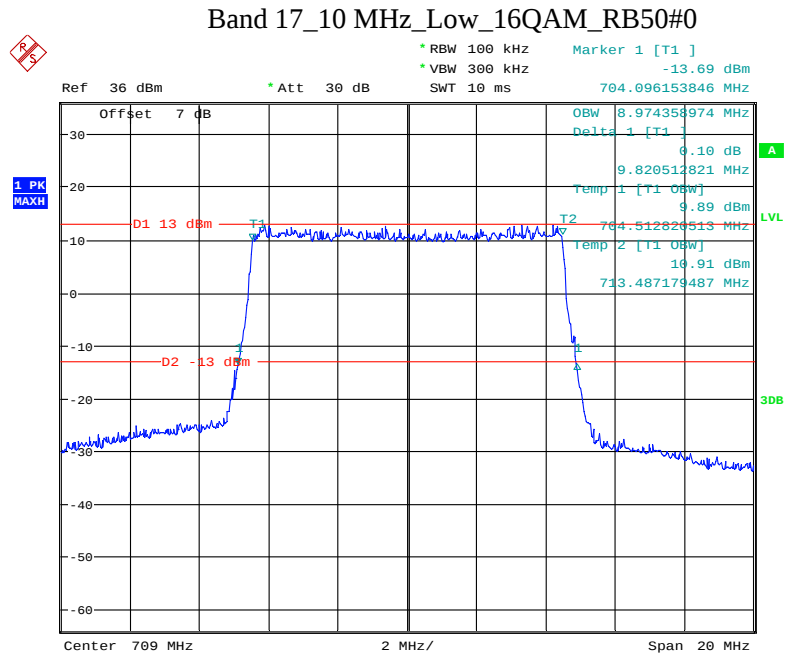
Date: 30.DEC.2020 14:23:17



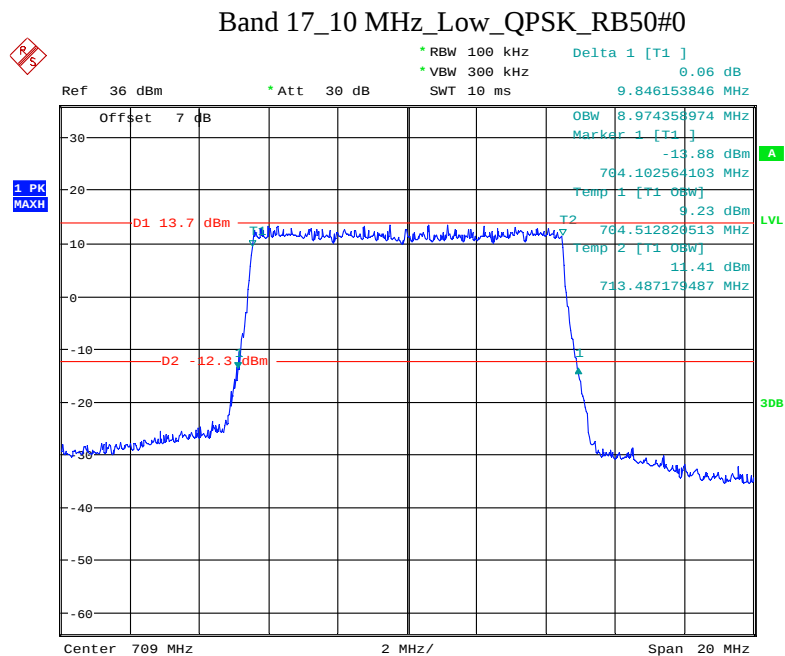
Date: 5.JAN.2021 17:24:29



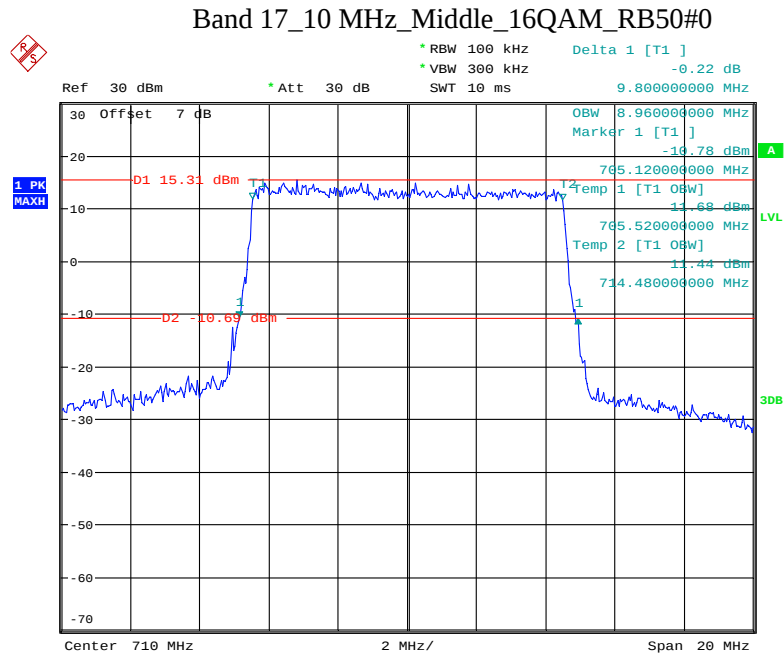
Date: 5.JAN.2021 17:25:50



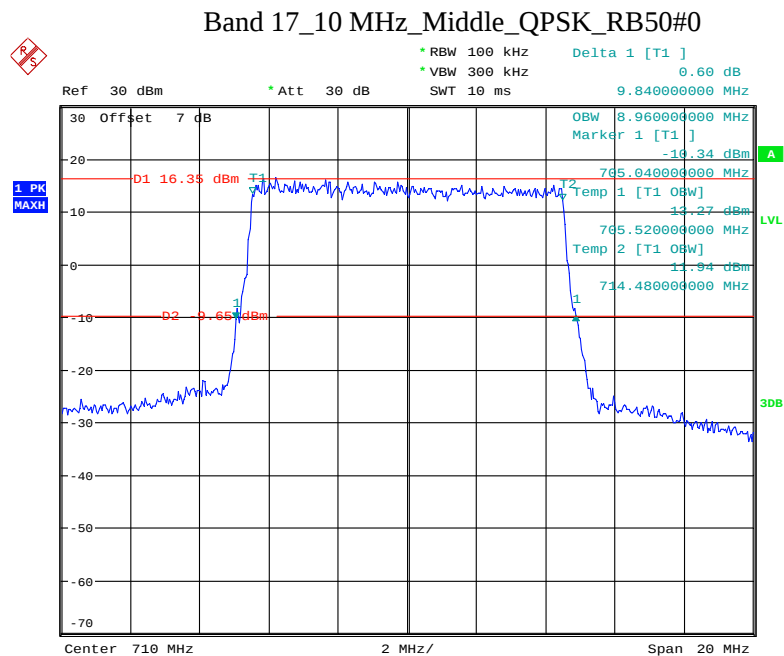
Date: 5.JAN.2021 17:34:06



Date: 5.JAN.2021 17:35:10

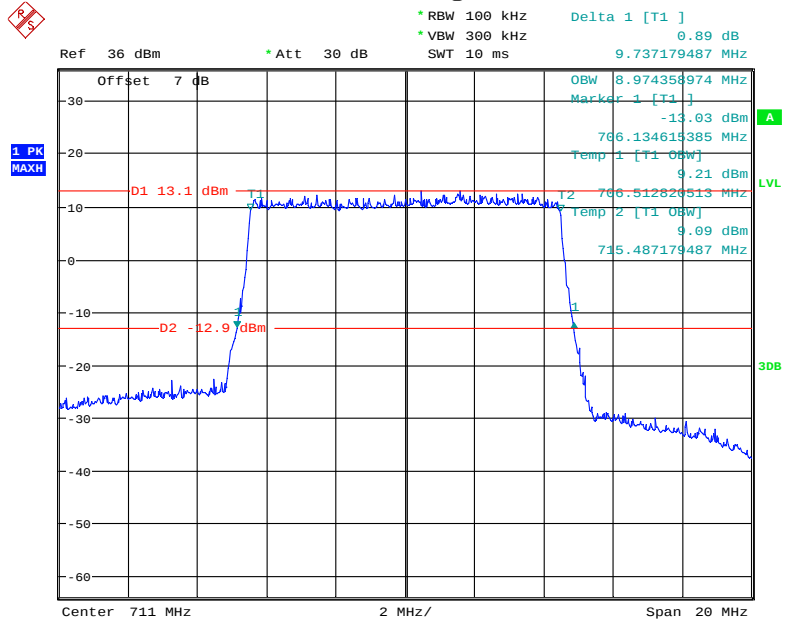


Date: 30.DEC.2020 14:24:23



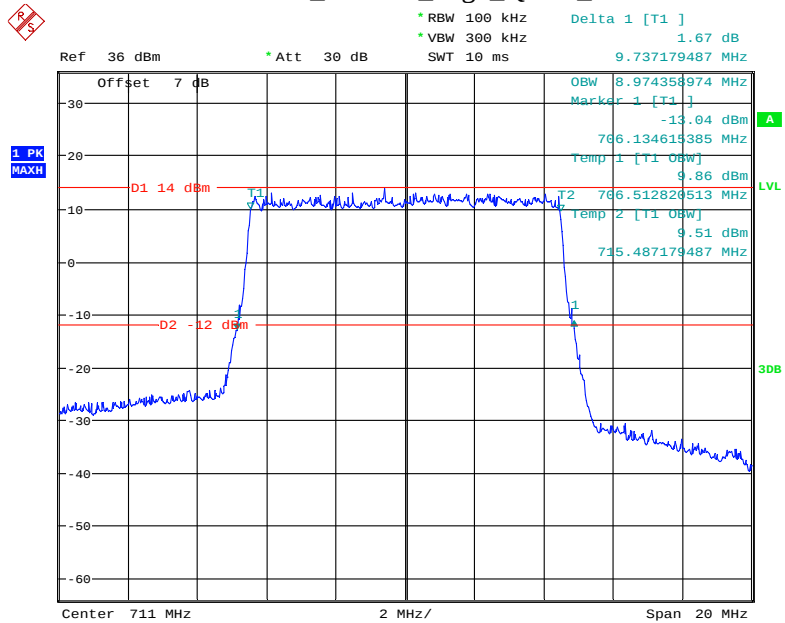
Date: 30.DEC.2020 14:24:02

Band 17_10 MHz_High_16QAM_RB50#0



Date: 5.JAN.2021 17:31:13

Band 17_10 MHz_High_QPSK_RB50#0



Date: 5.JAN.2021 17:28:31

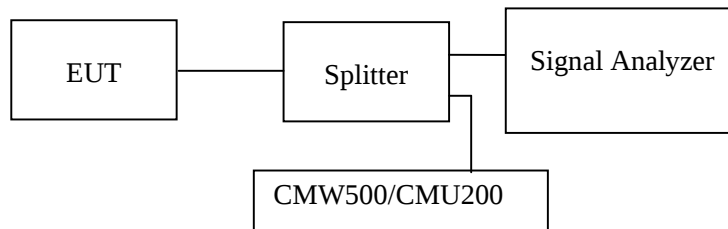
FCC §2.1051, §22.917(a) & §24.238(a); §27.53 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS**Applicable Standard**

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

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

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 1MHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

**Test Data****Environmental Conditions**

Temperature:	25 °C
Relative Humidity:	55 %
ATM Pressure:	101.0 kPa

The testing was performed by Alan He on 2021-01-18.

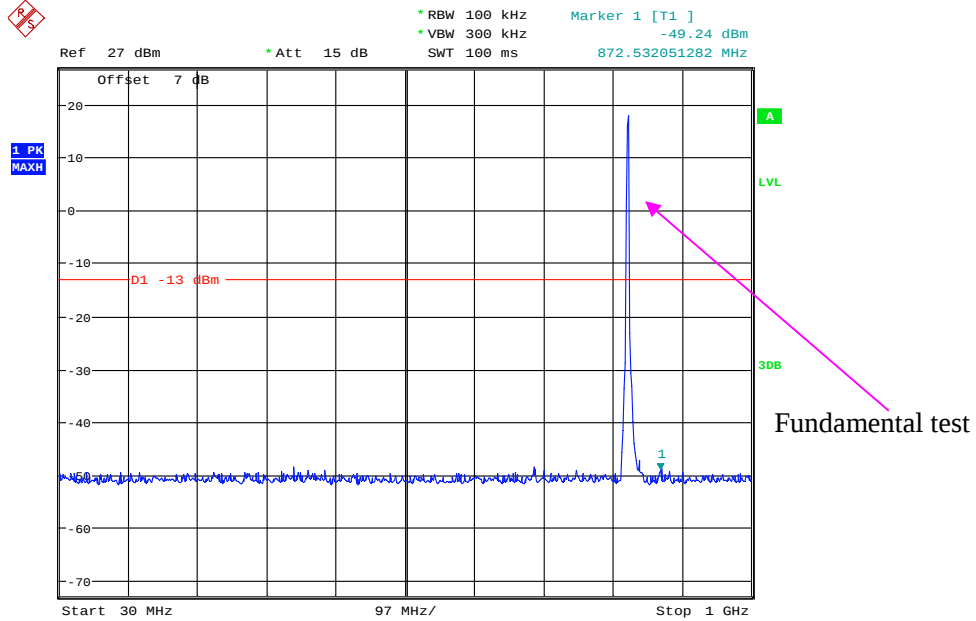
EUT operation mode: Transmitting

Test result: Pass

Please refer to the following plots.

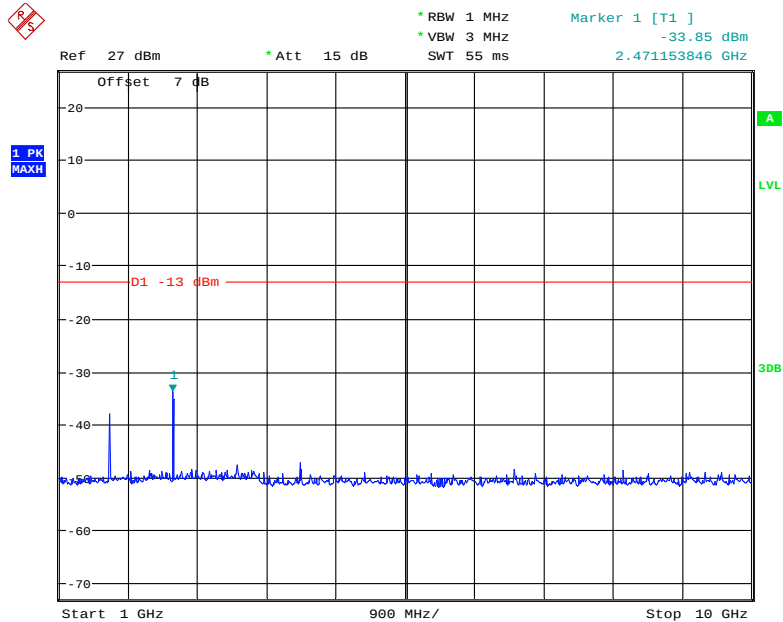
Cellular Band (Part 22H)

30 MHz – 1 GHz (WCDMA Mode) Low channel



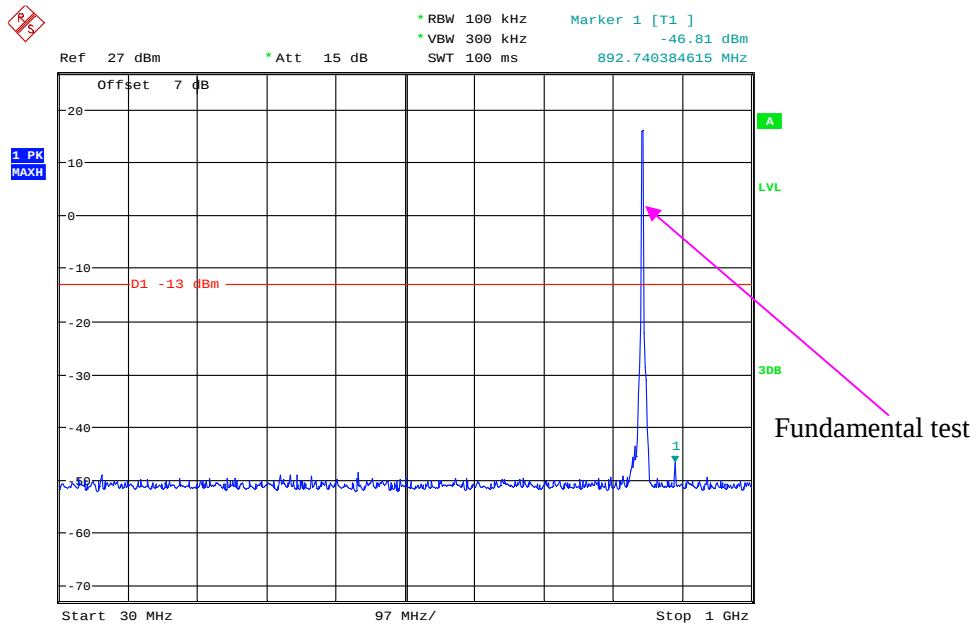
Date: 18.JAN.2021 11:41:12

1 GHz – 10 GHz (WCDMA Mode) Low channel



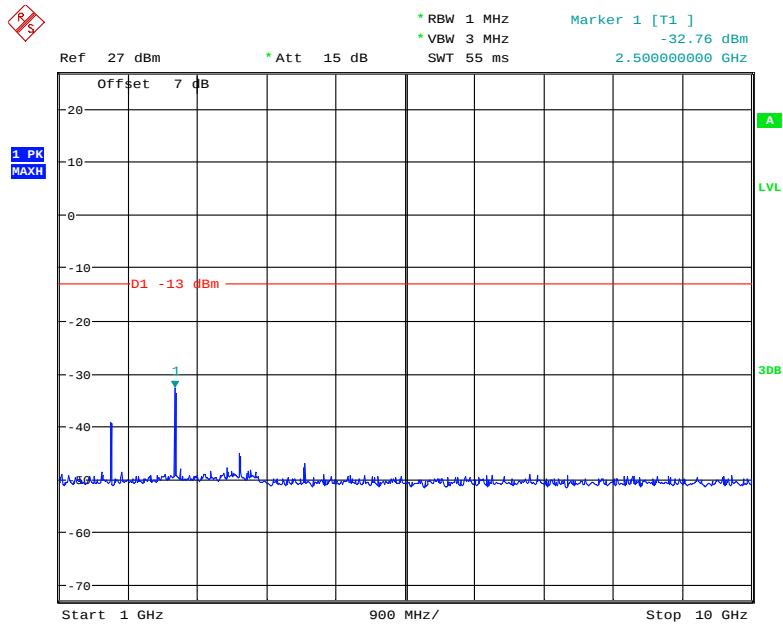
Date: 18.JAN.2021 11:35:00

30 MHz – 1 GHz (WCDMA Mode) Middle channel



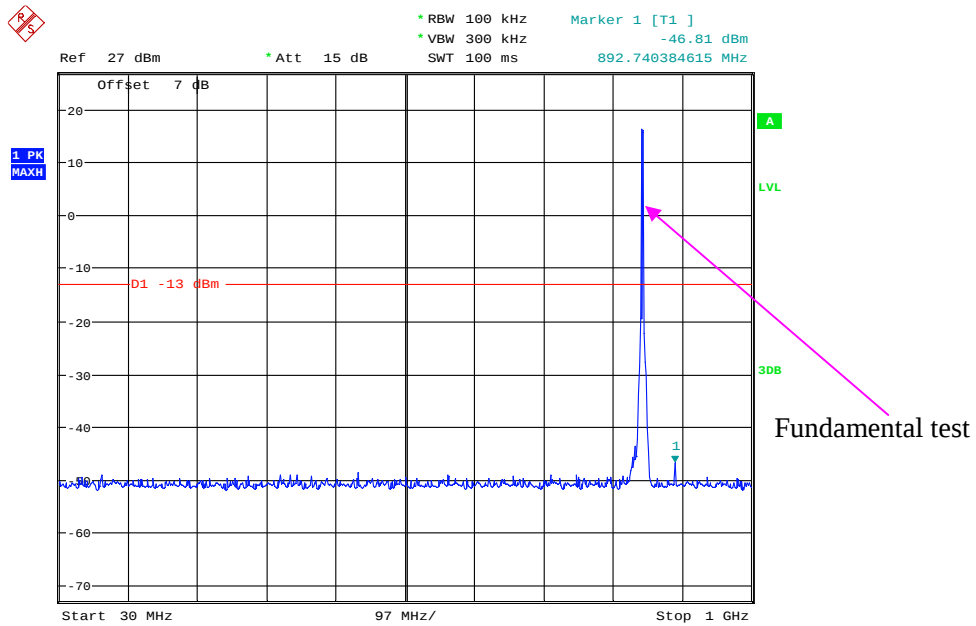
Date: 18.JAN.2021 11:37:45

1 GHz – 10 GHz (WCDMA Mode) Middle channel



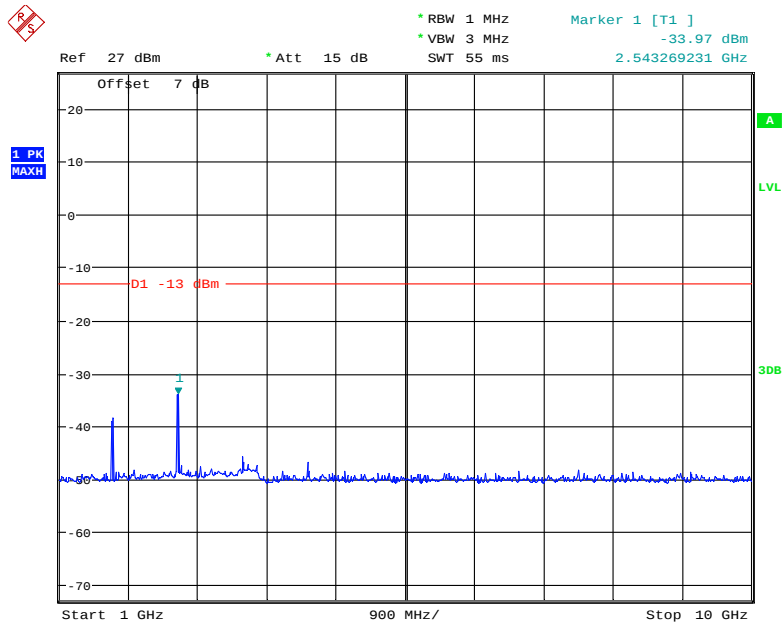
Date: 18.JAN.2021 11:35:41

30 MHz – 1 GHz (WCDMA Mode) High channel



Date: 18.JAN.2021 11:37:53

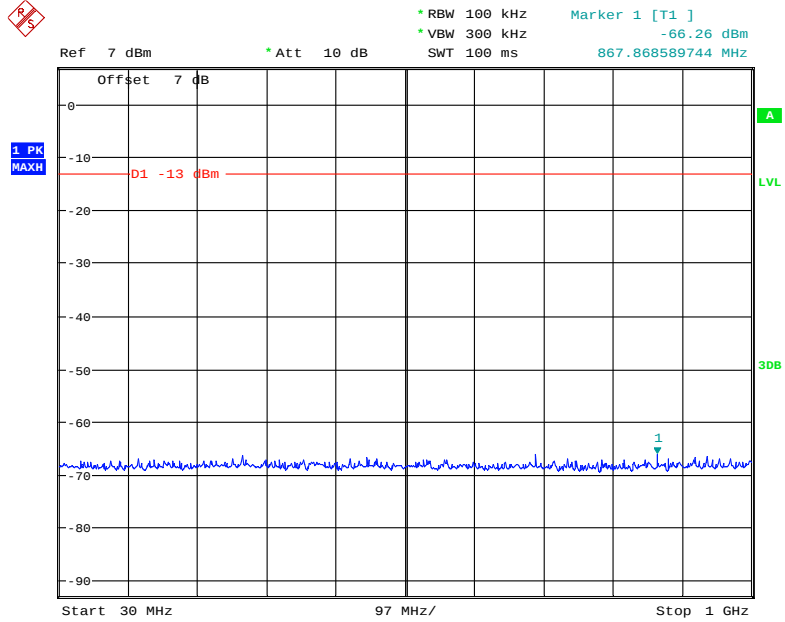
1 GHz – 10 GHz (WCDMA Mode) High channel



Date: 18.JAN.2021 11:39:14

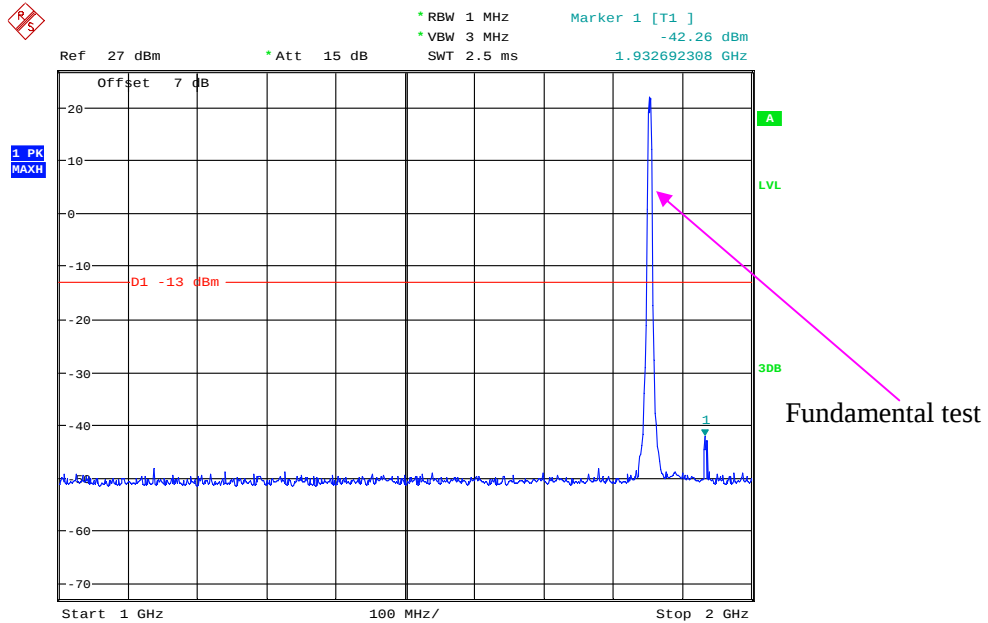
PCS Band (Part 24E)

30 MHz – 1 GHz (WCDMA Mode) Low channel



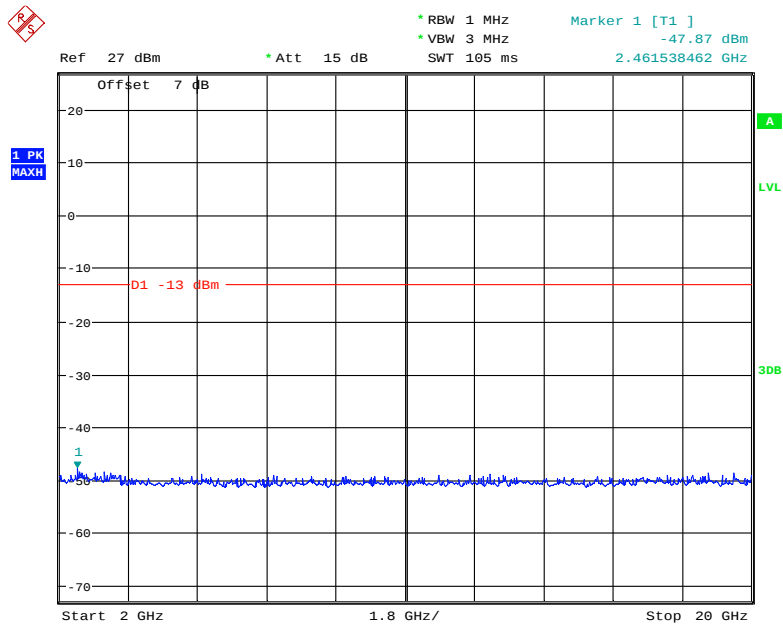
Date: 18.JAN.2021 11:13:56

1 GHz – 2 GHz (WCDMA Mode) Low channel



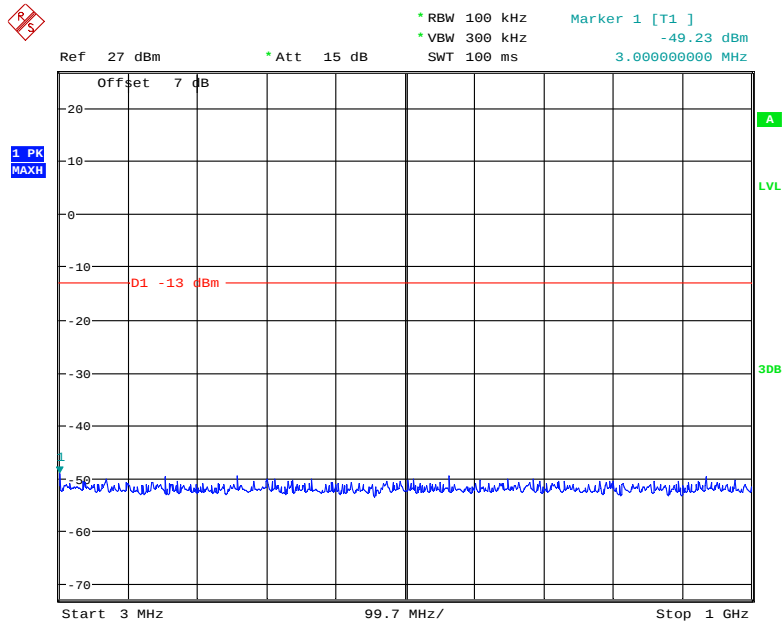
Date: 18.JAN.2021 11:15:46

2 GHz – 20 GHz (WCDMA Mode) Low channel



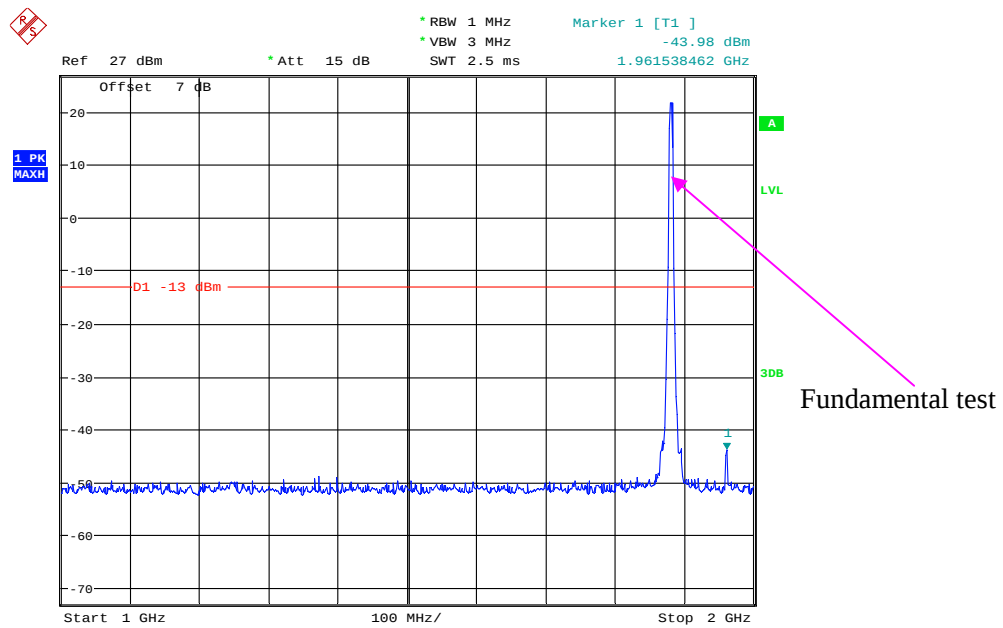
Date: 18.JAN.2021 11:16:13

30 MHz – 1 GHz (WCDMA Mode) Middle channel



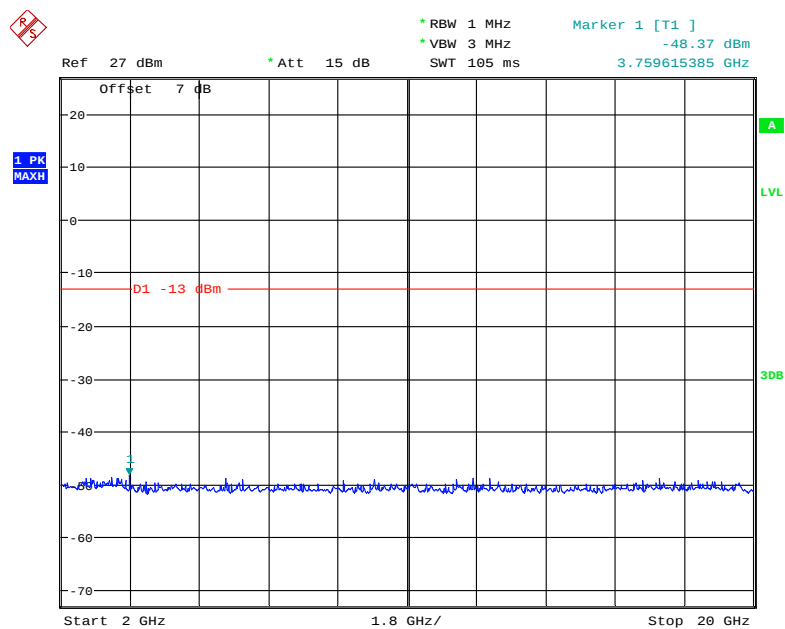
Date: 18.JAN.2021 11:18:06

1 GHz – 2 GHz (WCDMA Mode) Middle channel



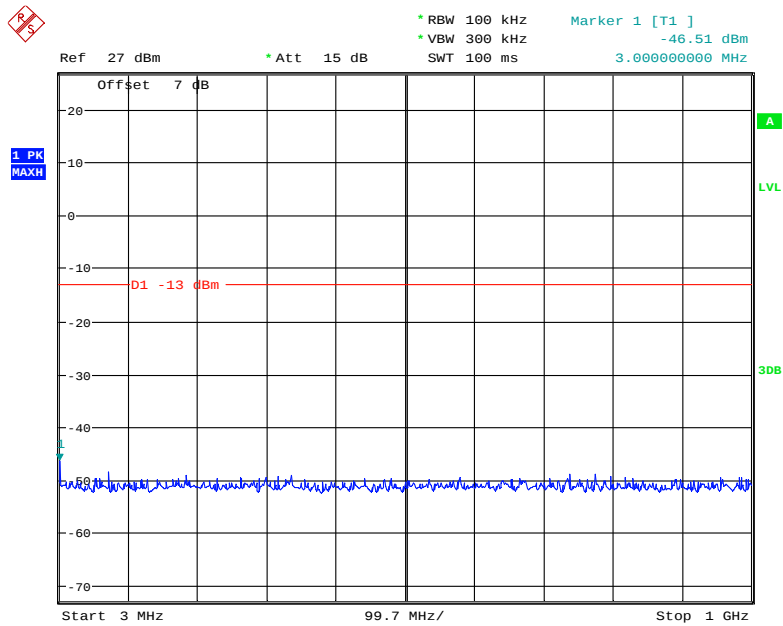
Date: 18.JAN.2021 11:17:38

2 GHz – 20 GHz (WCDMA Mode) Middle channel



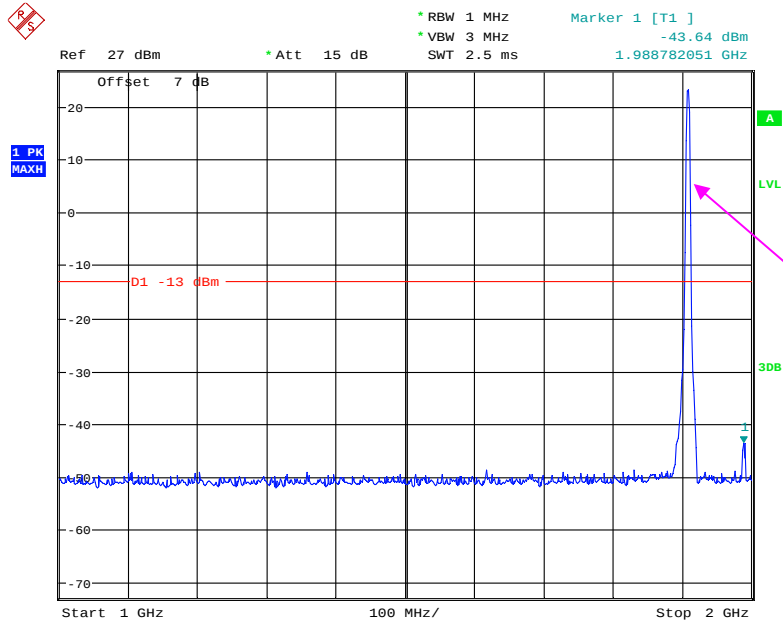
Date: 18.JAN.2021 11:17:02

30 MHz – 1 GHz (WCDMA Mode) High channel



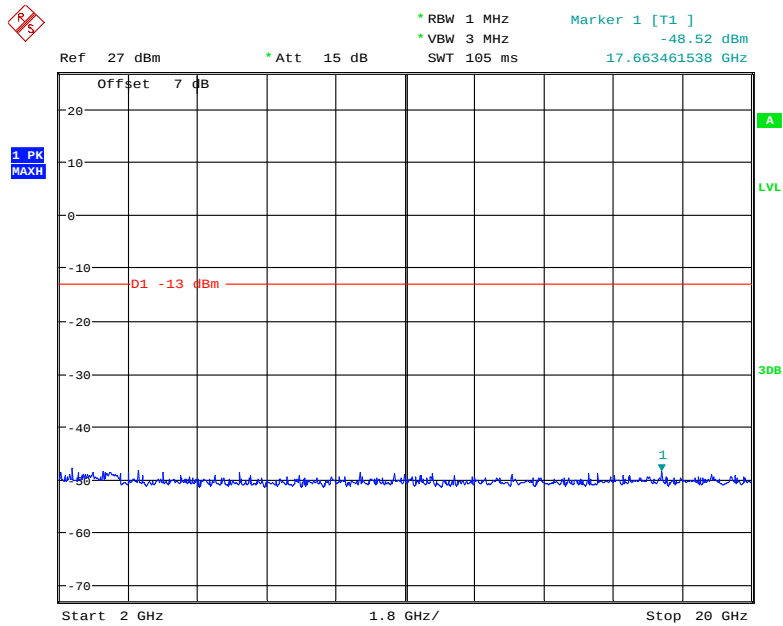
Date: 18.JAN.2021 11:19:35

1 GHz – 2 GHz (WCDMA Mode) High channel

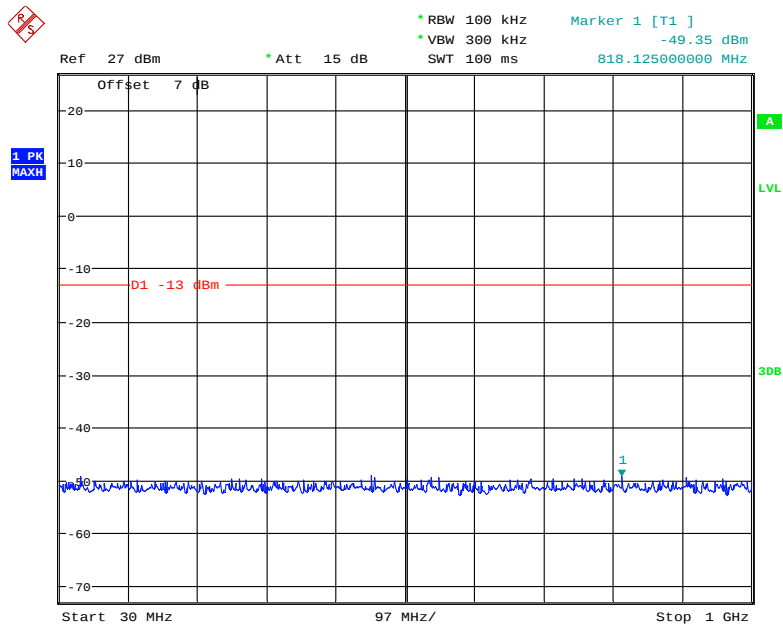


Fundamental test

Date: 18.JAN.2021 11:22:33

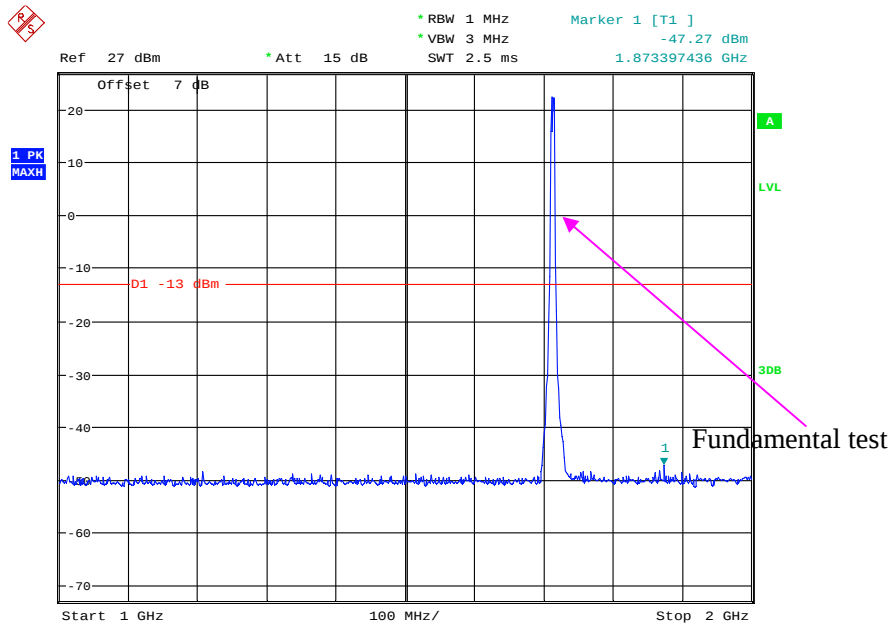
2 GHz – 20 GHz (WCDMA Mode) High channel

Date: 18.JAN.2021 11:23:16

AWS Band (Part 27)**30 MHz – 1 GHz (WCDMA Mode) Low channel**

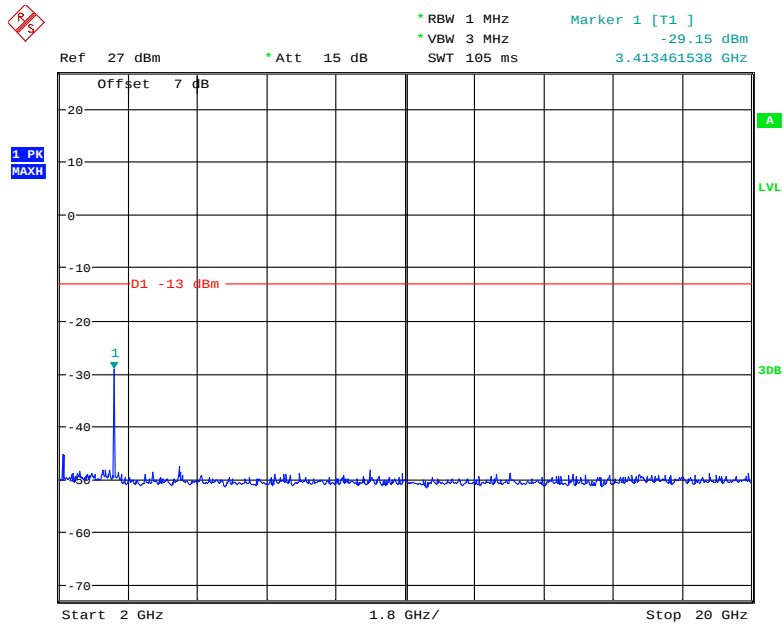
Date: 18.JAN.2021 11:26:29

1 GHz – 2 GHz (WCDMA Mode) Low channel

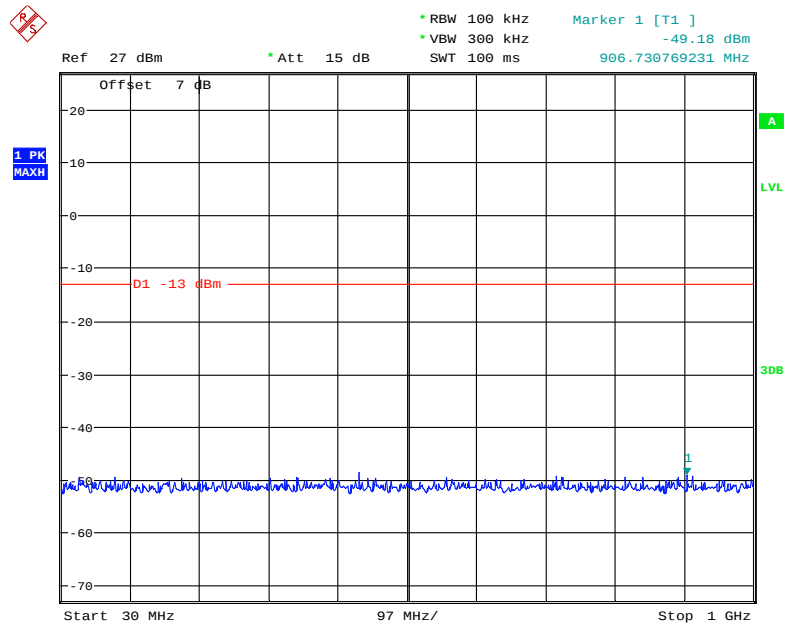


Date: 18.JAN.2021 11:25:38

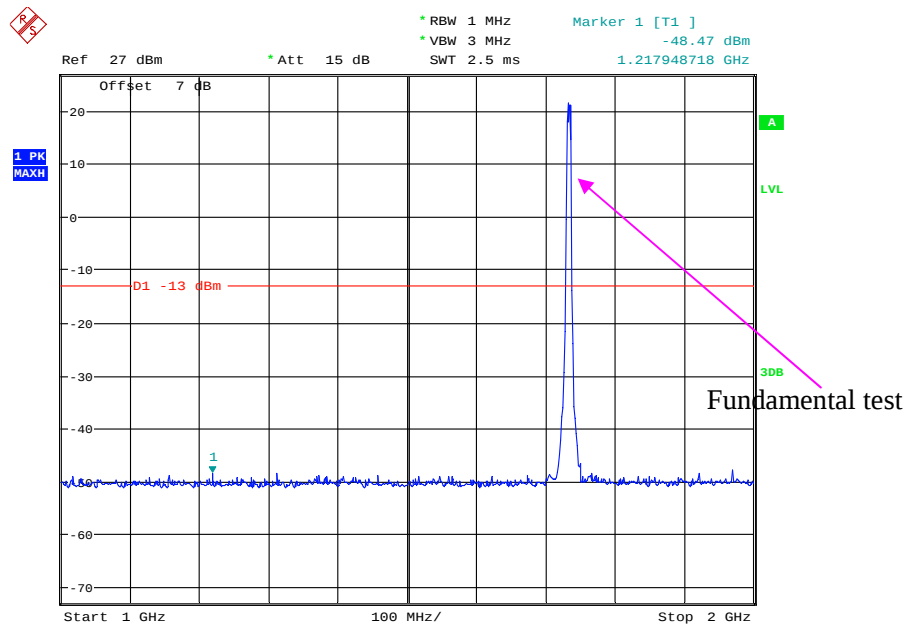
2 GHz – 20 GHz (WCDMA Mode) Low channel



Date: 18.JAN.2021 11:24:29

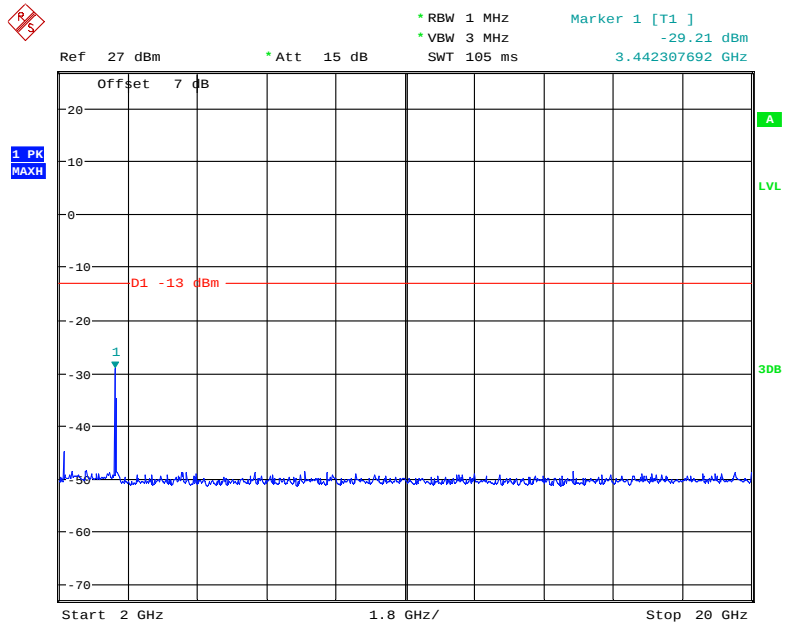
30 MHz – 1 GHz (WCDMA Mode) Middle channel

Date: 18.JAN.2021 11:28:06

1 GHz – 2 GHz (WCDMA Mode) Middle channel

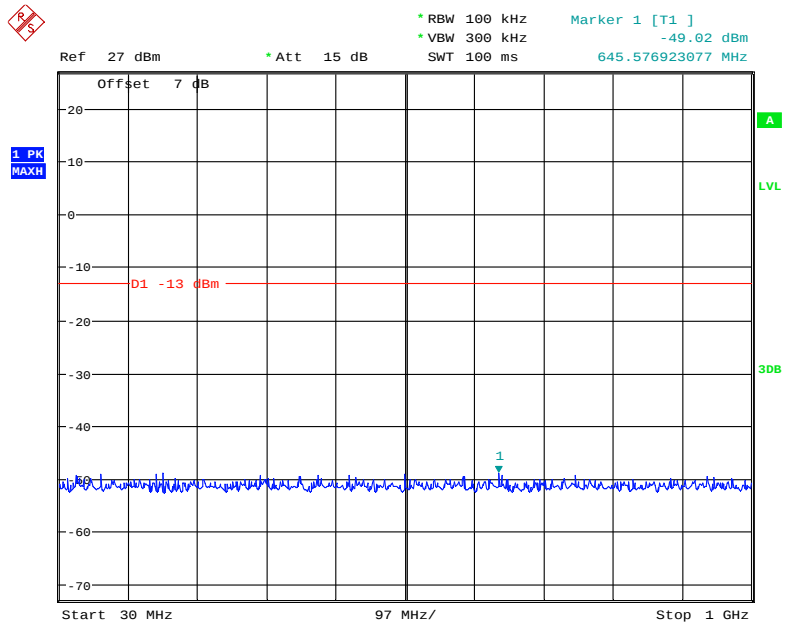
Date: 18.JAN.2021 11:29:23

2 GHz – 20 GHz (WCDMA Mode) Middle channel



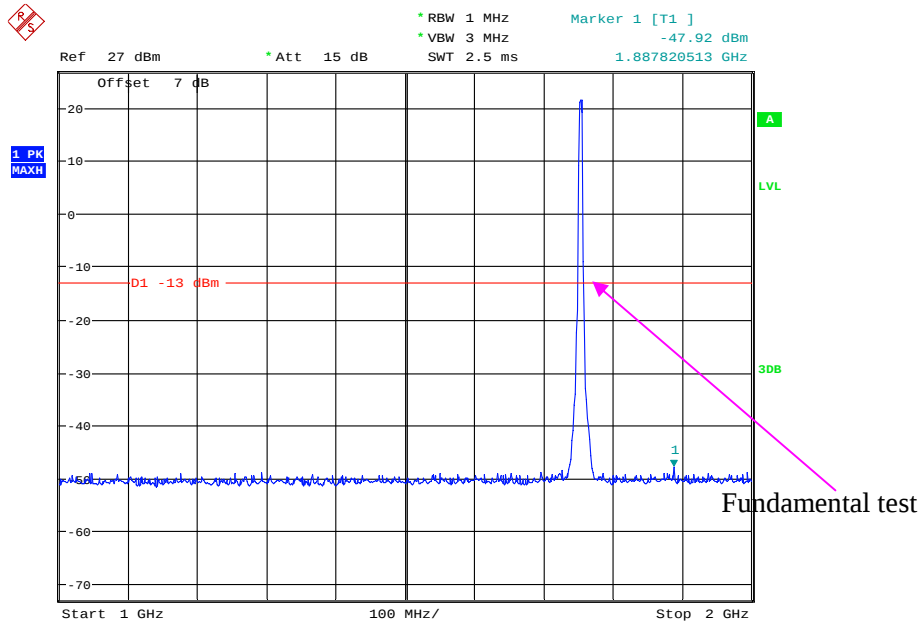
Date: 18.JAN.2021 11:29:51

30 MHz – 1 GHz (WCDMA Mode) High channel



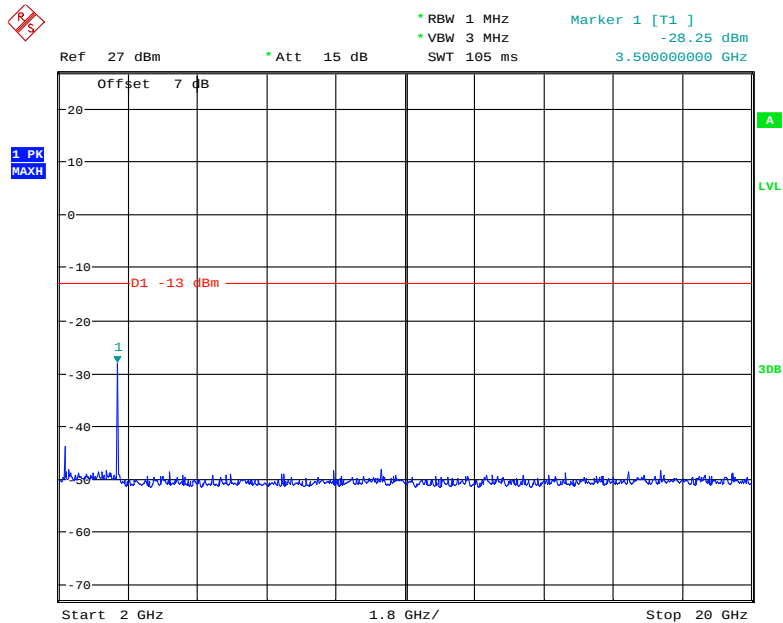
Date: 18.JAN.2021 11:32:17

1 GHz – 2 GHz (WCDMA Mode) High channel



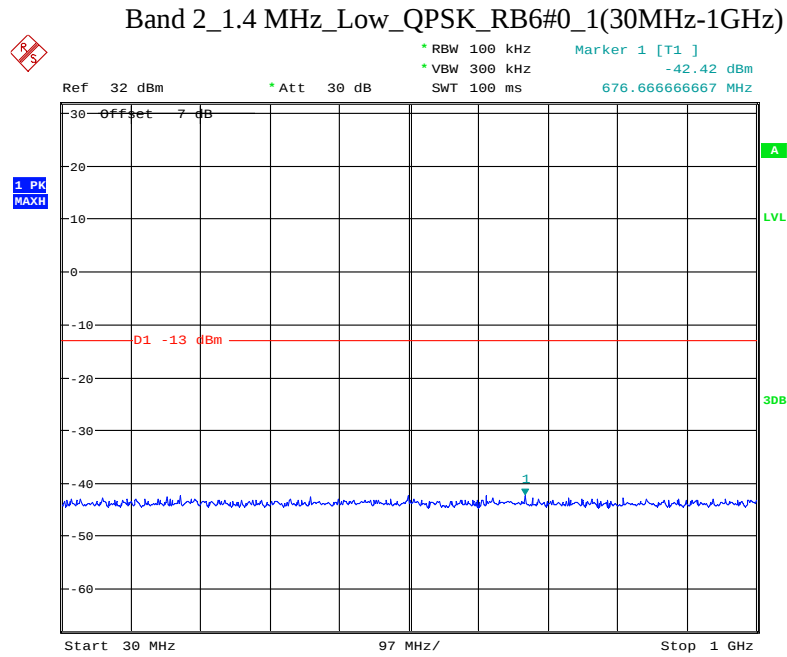
Date: 18.JAN.2021 11:31:11

2 GHz – 20 GHz (WCDMA Mode) High channel

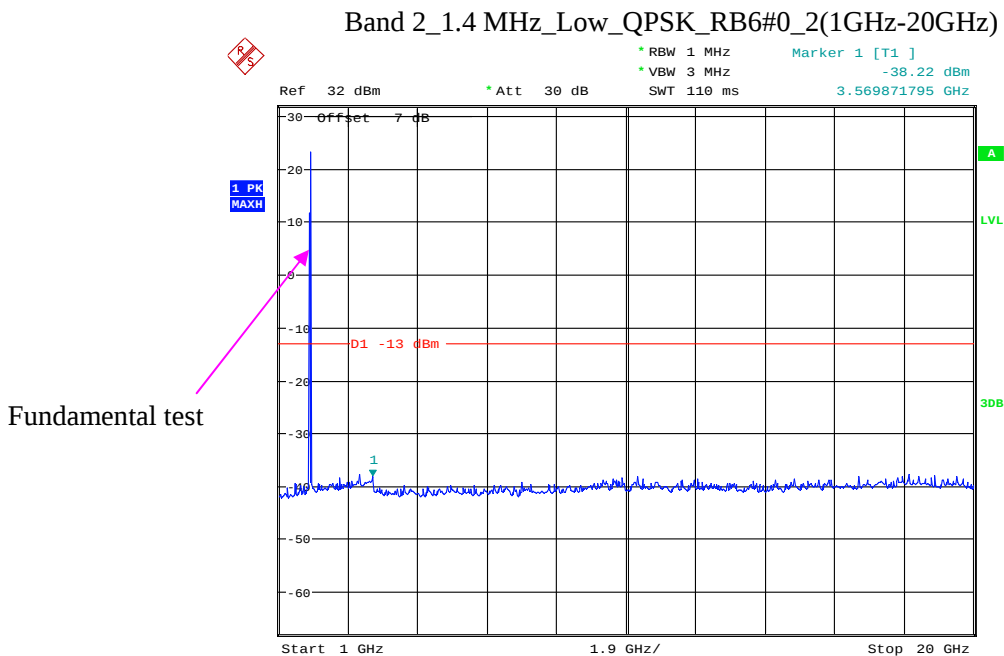


Date: 18.JAN.2021 11:30:21

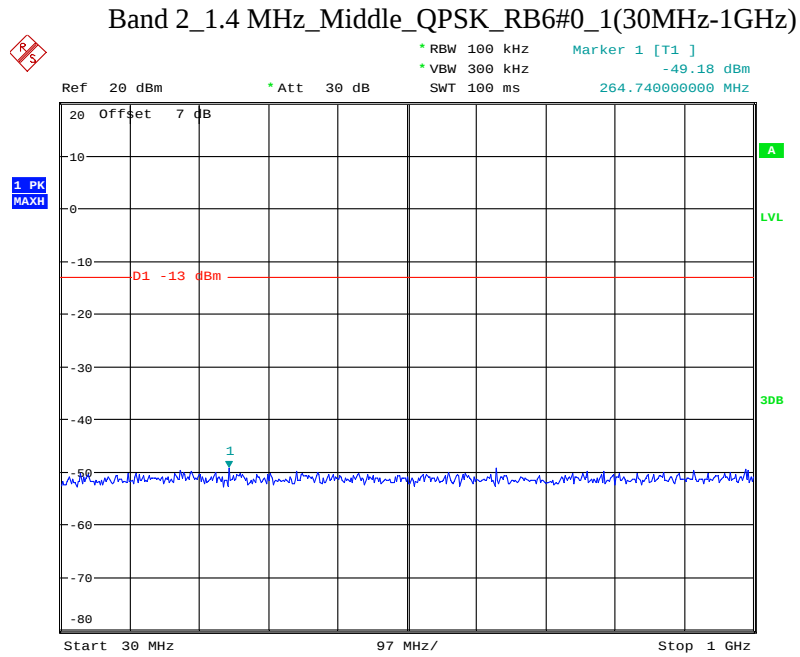
LTE Band 2:



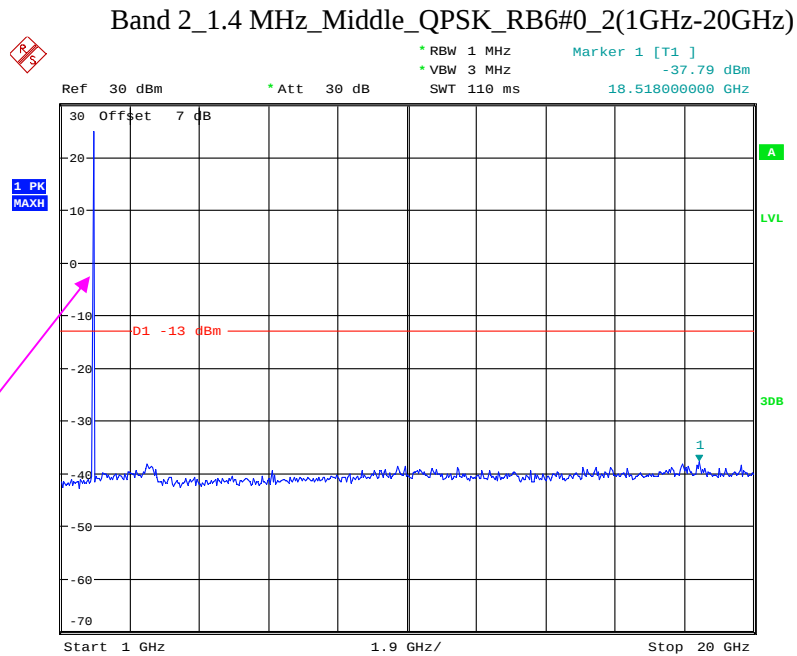
Date: 6.JAN.2021 09:05:15



Date: 6.JAN.2021 09:07:42

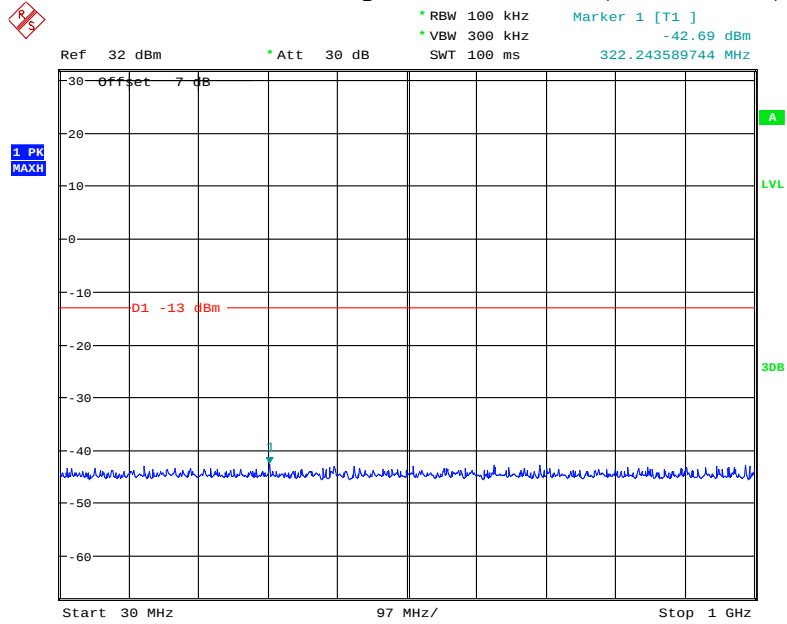


Date: 30.DEC.2020 15:02:02



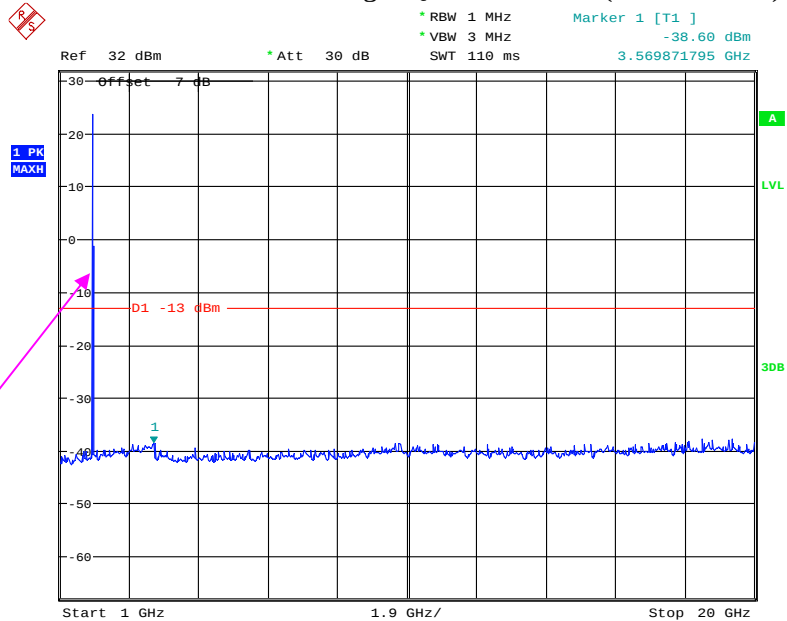
Date: 30.DEC.2020 15:02:13

Band 2_1.4 MHz_High_QPSK_RB6#0_1(30MHz-1GHz)



Date: 6.JAN.2021 09:10:01

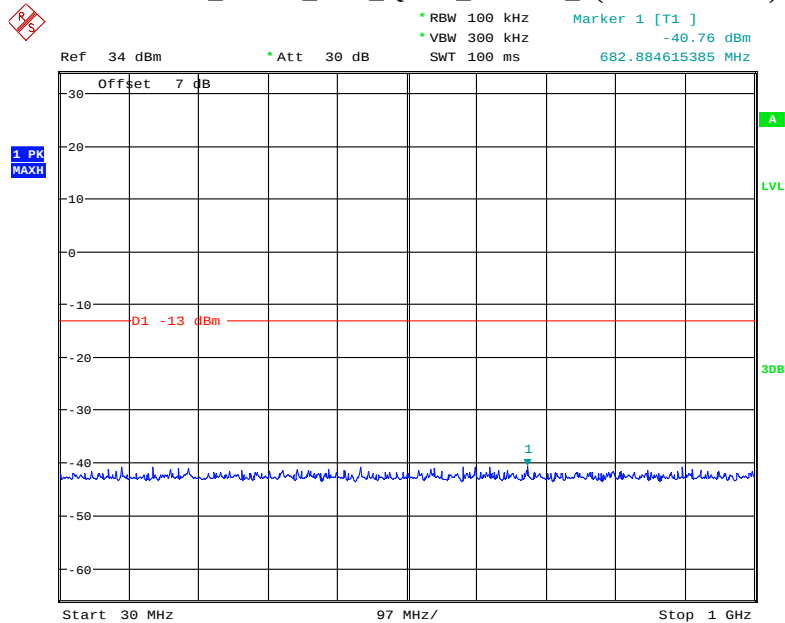
Band 2_1.4 MHz_High_QPSK_RB6#0_2(1GHz-20GHz)



Fundamental test

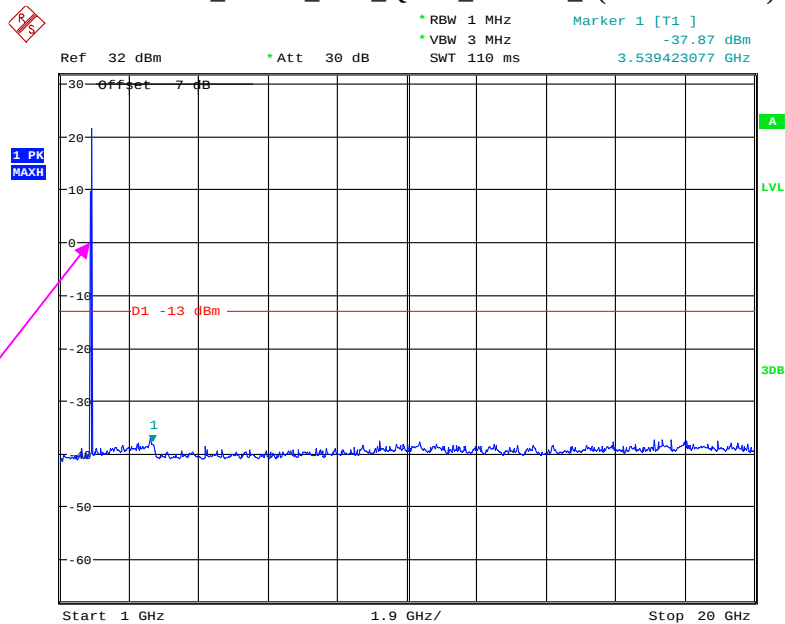
Date: 6.JAN.2021 09:11:10

Band 2_3 MHz_Low_QPSK_RB15#0_1(30MHz-1GHz)



Date: 6.JAN.2021 20:43:11

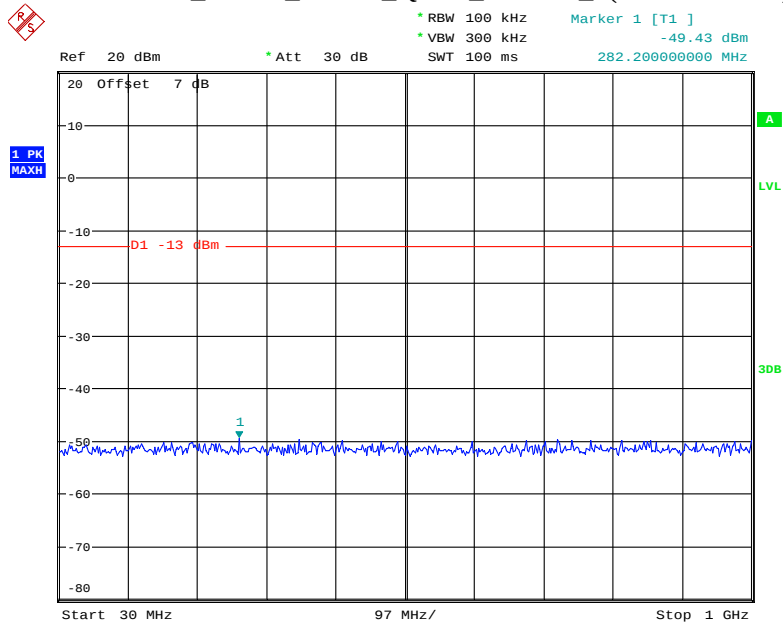
Band 2_3 MHz_Low_QPSK_RB15#0_2(1GHz-20GHz)



Fundamental test

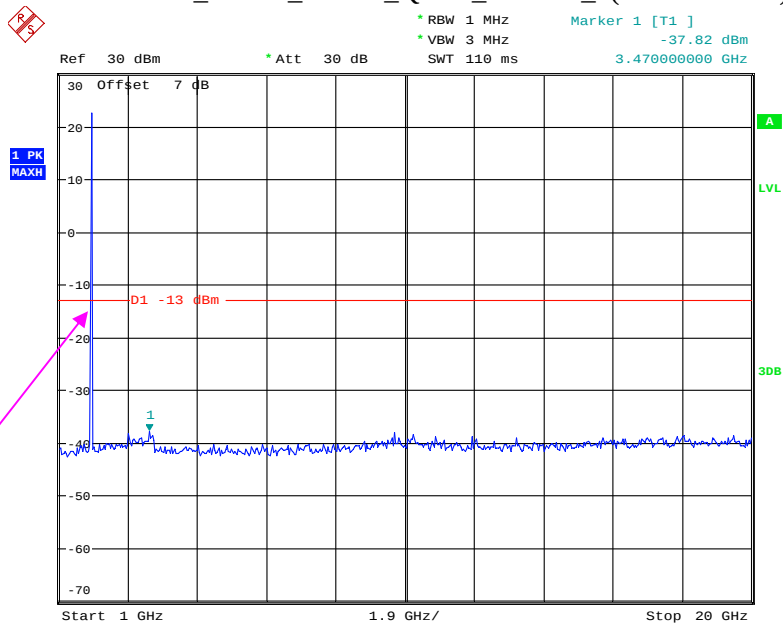
Date: 6.JAN.2021 09:14:54

Band 2_3 MHz_Middle_QPSK_RB15#0_1(30MHz-1GHz)



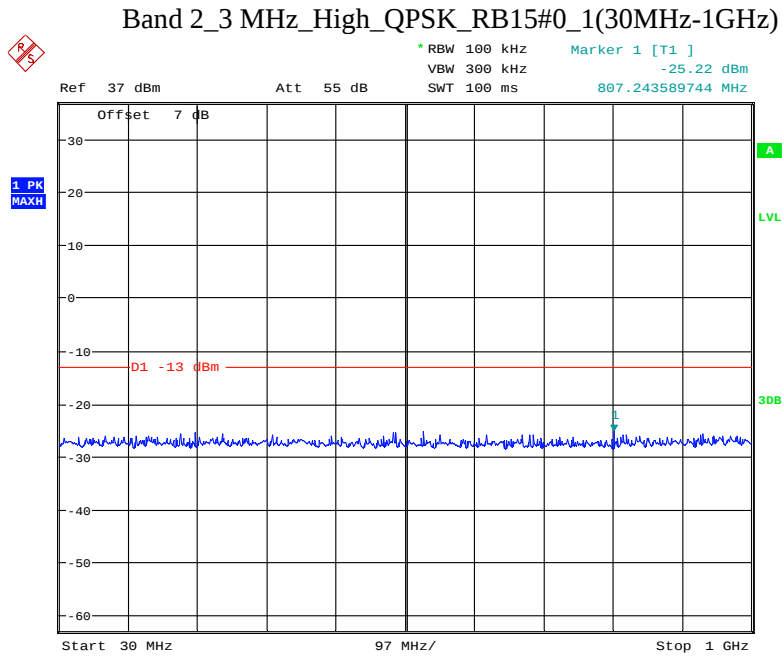
Date: 30.DEC.2020 15:02:31

Band 2_3 MHz_Middle_QPSK_RB15#0_2(1GHz-20GHz)

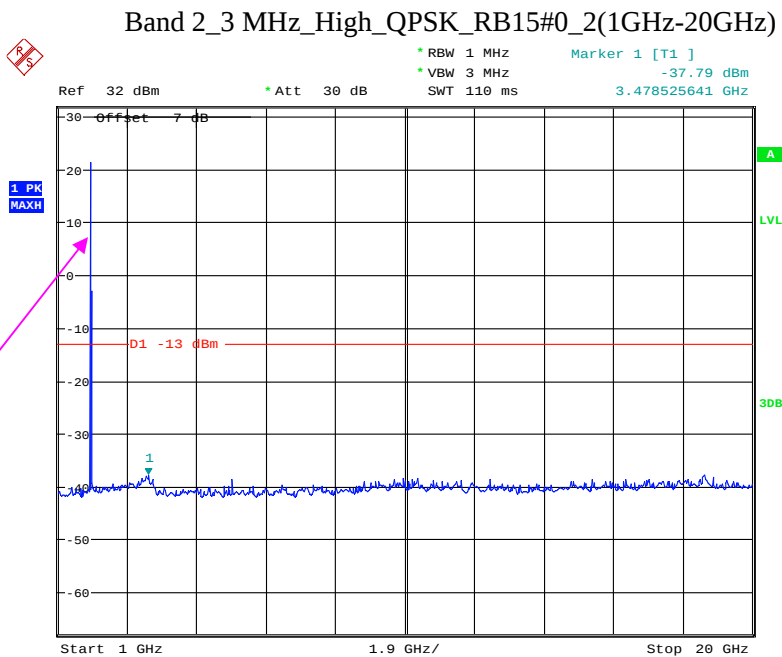


Fundamental test

Date: 30.DEC.2020 15:02:43

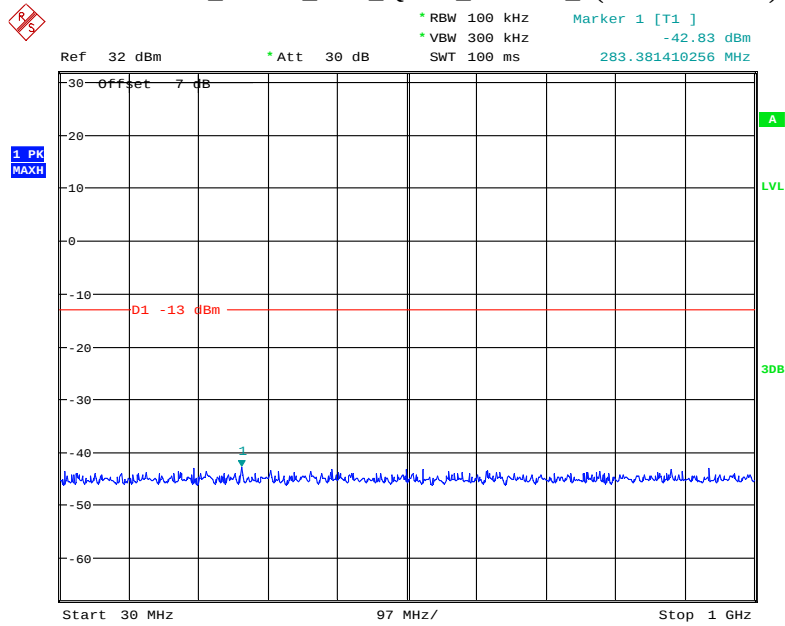


Date: 18.JAN.2021 13:49:37



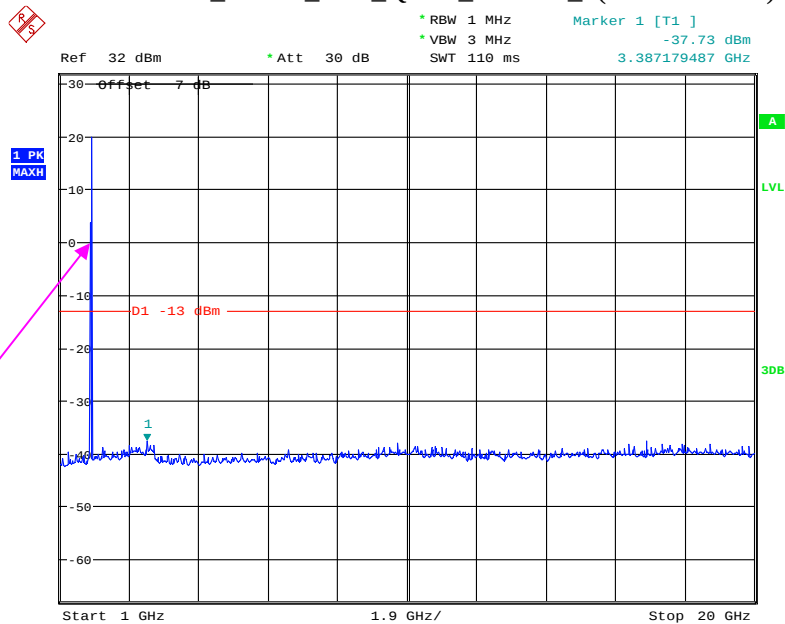
Date: 6.JAN.2021 09:16:33

Band 2_5 MHz_Low_QPSK_RB25#0_1(30MHz-1GHz)



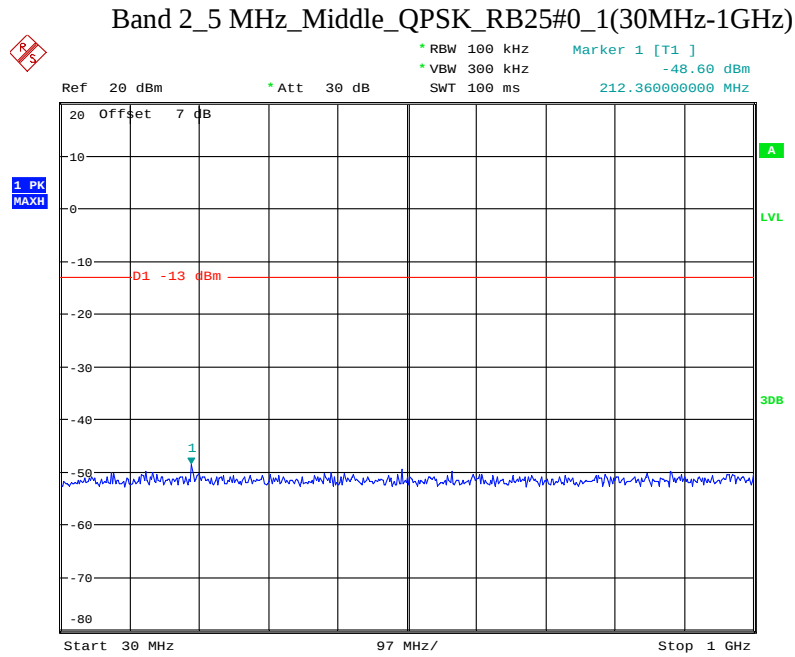
Date: 6.JAN.2021 09:17:52

Band 2_5 MHz_Low_QPSK_RB25#0_2(1GHz-20GHz)

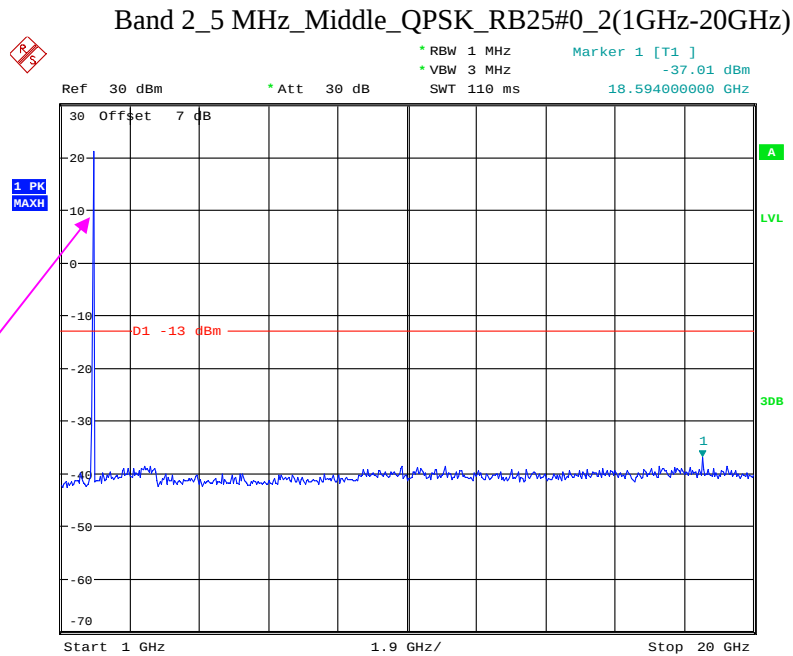


Fundamental test

Date: 6.JAN.2021 09:18:25



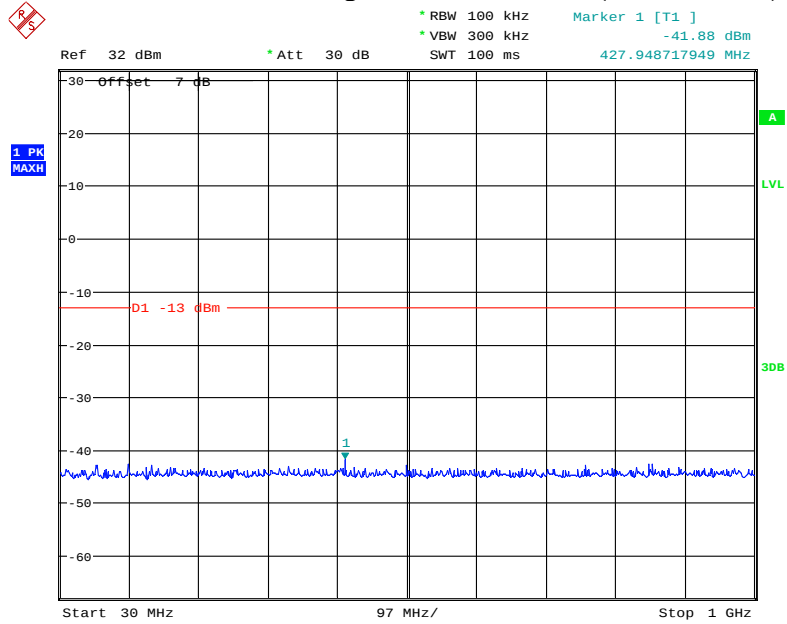
Date: 30.DEC.2020 15:03:01



Fundamental test

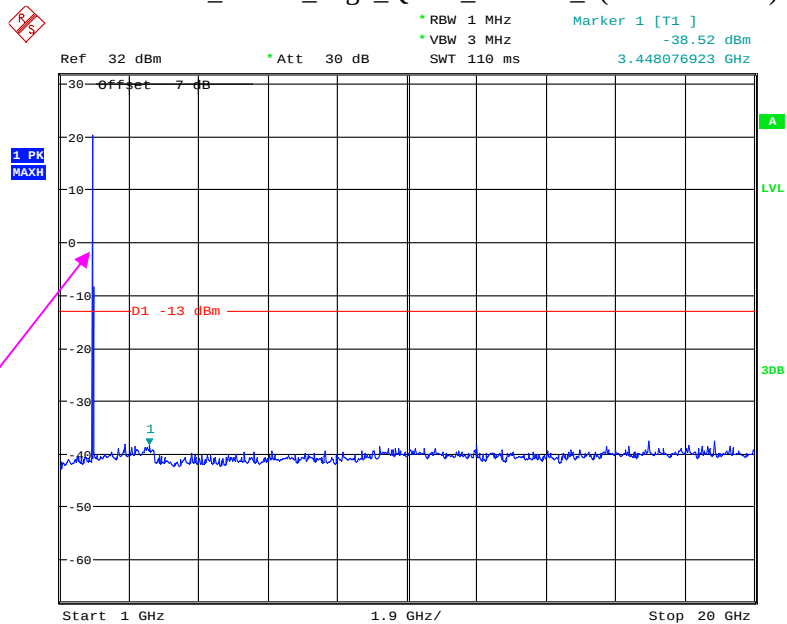
Date: 30.DEC.2020 15:03:12

Band 2_5 MHz_High_QPSK_RB25#0_1(30MHz-1GHz)

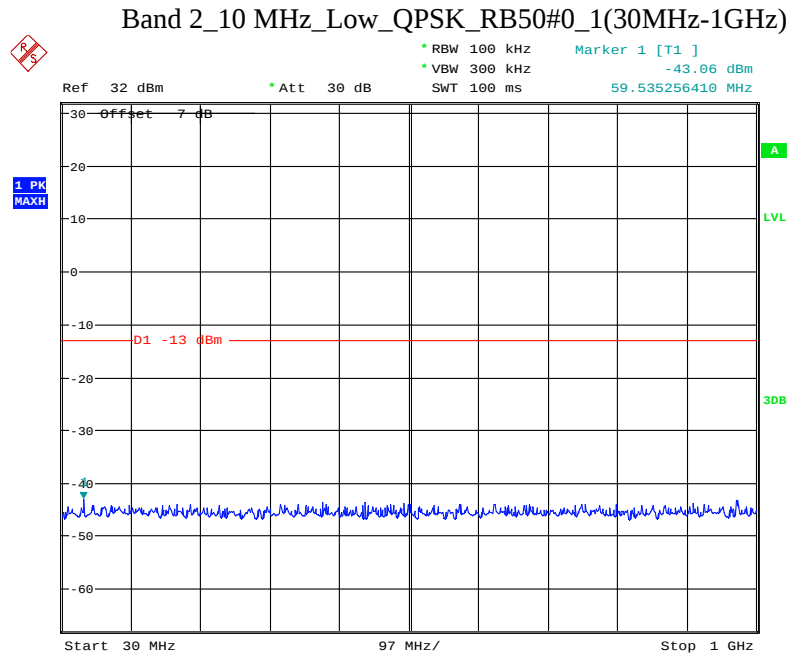


Date: 6.JAN.2021 09:20:17

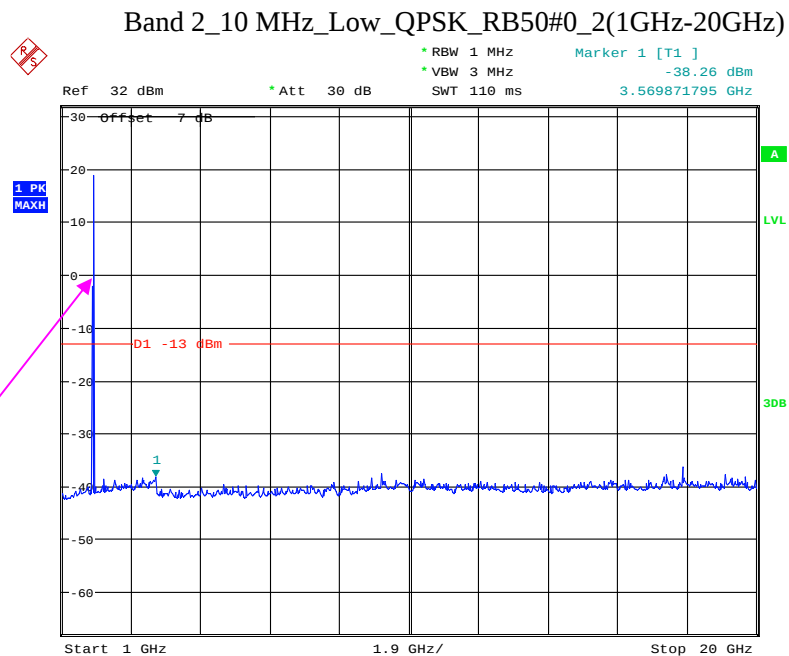
Band 2_5 MHz_High_QPSK_RB25#0_2(1GHz-20GHz)



Date: 6.JAN.2021 09:20:43

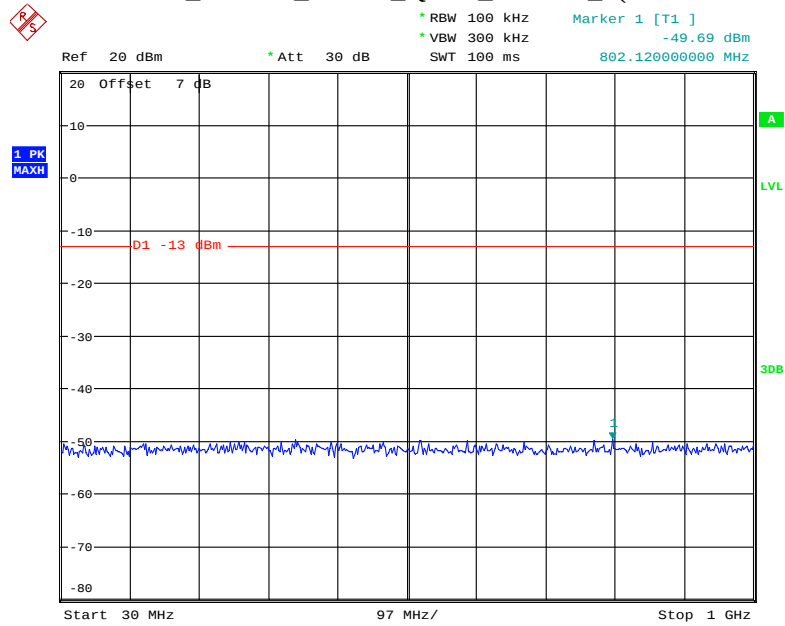


Date: 6.JAN.2021 09:21:33



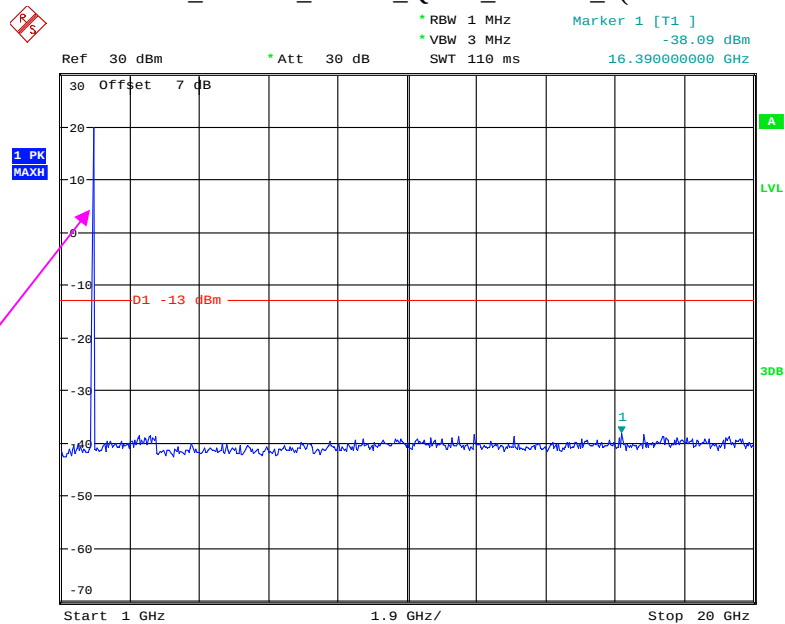
Date: 6.JAN.2021 09:22:02

Band 2_10 MHz_Middle_QPSK_RB50#0_1(30MHz-1GHz)



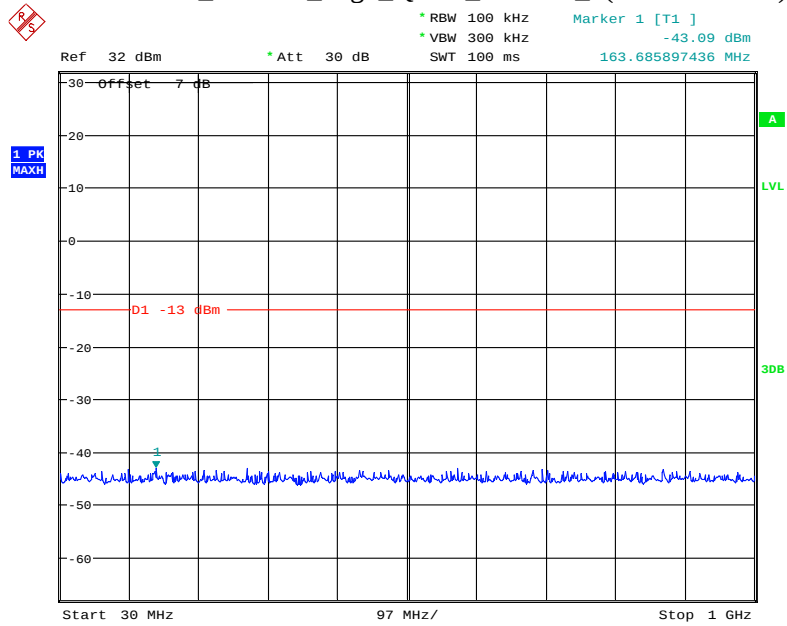
Date: 30.DEC.2020 15:03:32

Band 2_10 MHz_Middle_QPSK_RB50#0_2(1GHz-20GHz)



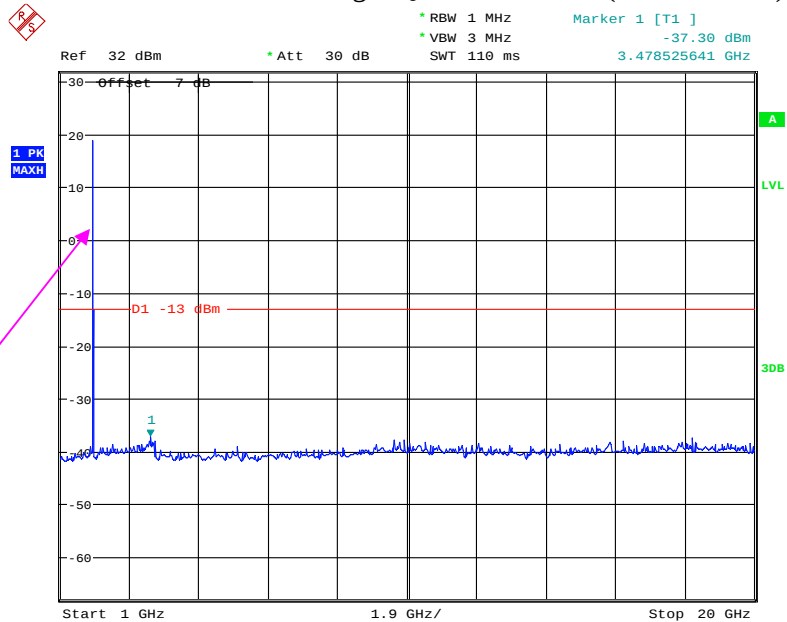
Date: 30.DEC.2020 15:03:43

Band 2_10 MHz_High_QPSK_RB50#0_1(30MHz-1GHz)



Date: 6.JAN.2021 09:22:58

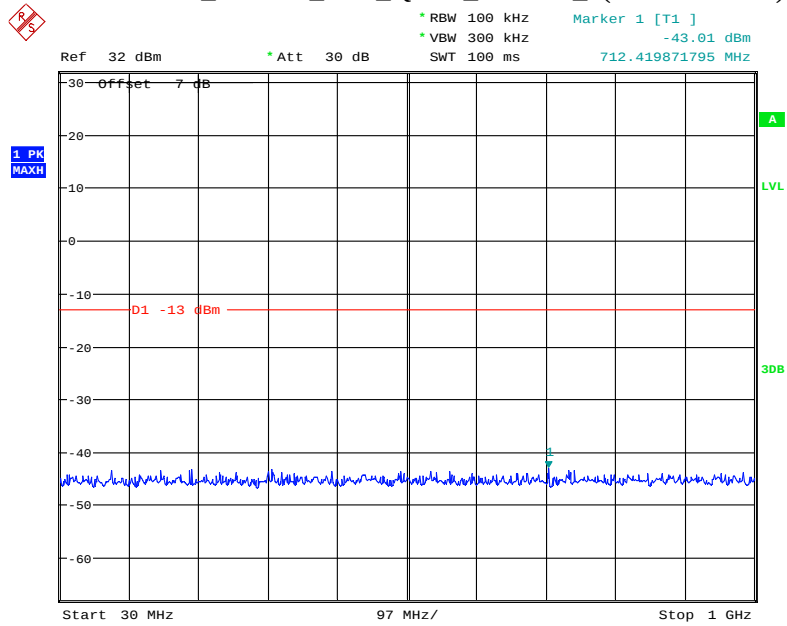
Band 2_10 MHz_High_QPSK_RB50#0_2(1GHz-20GHz)



Fundamental test

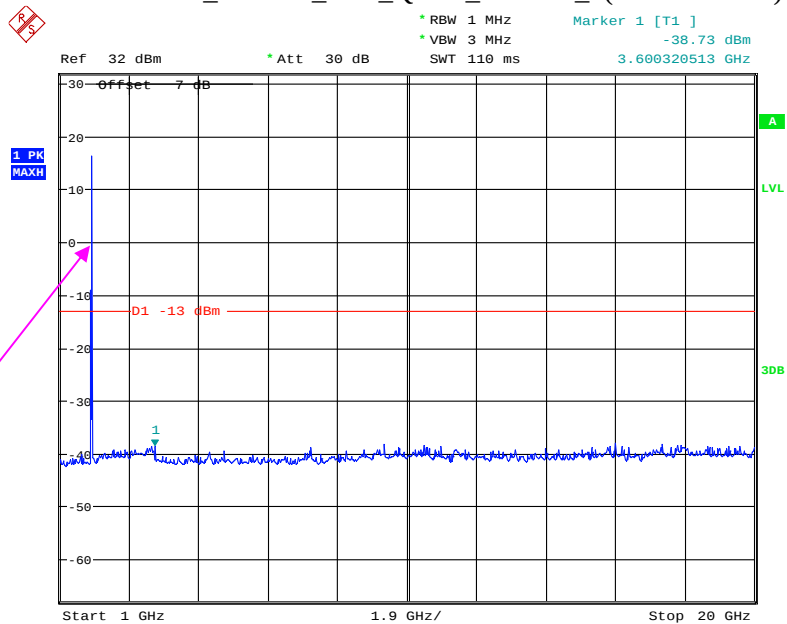
Date: 6.JAN.2021 09:23:37

Band 2_15 MHz_Low_QPSK_RB75#0_1(30MHz-1GHz)



Date: 6.JAN.2021 09:24:33

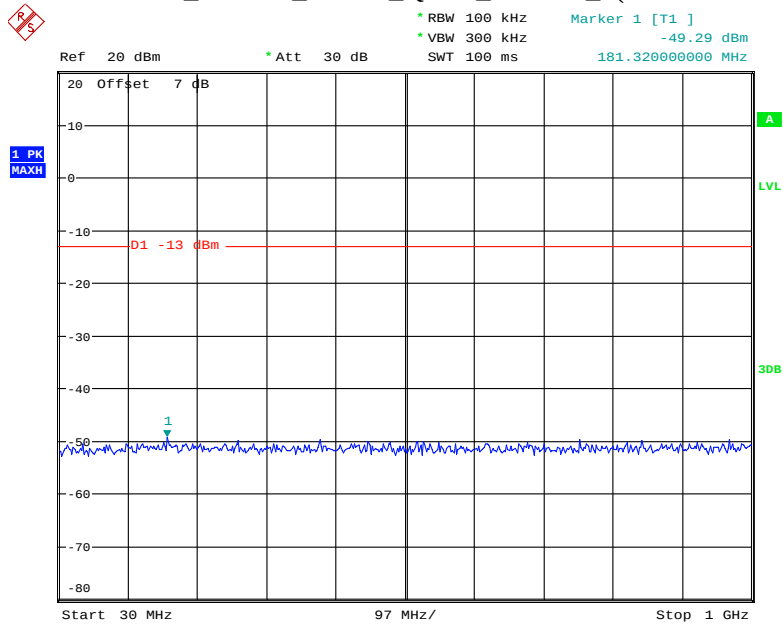
Band 2_15 MHz_Low_QPSK_RB75#0_2(1GHz-20GHz)



Fundamental test

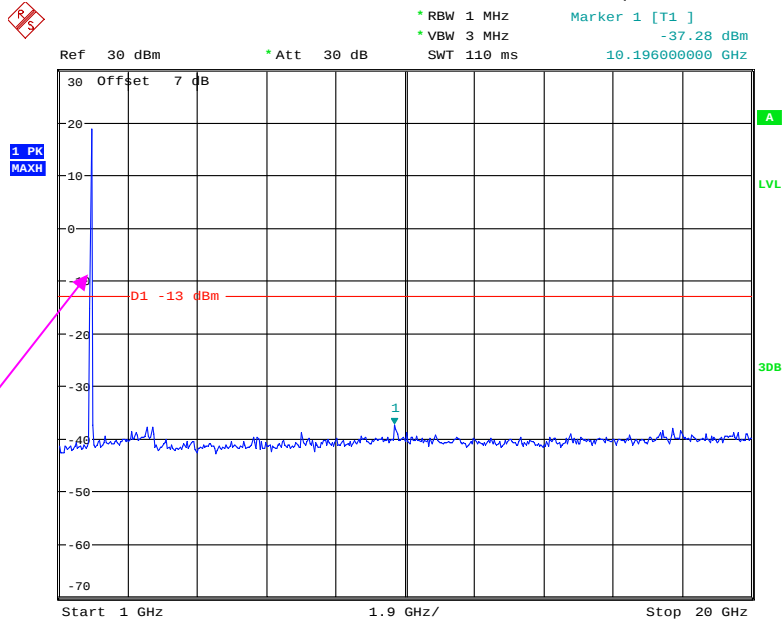
Date: 6.JAN.2021 09:25:05

Band 2_15 MHz_Middle_QPSK_RB75#0_1(30MHz-1GHz)



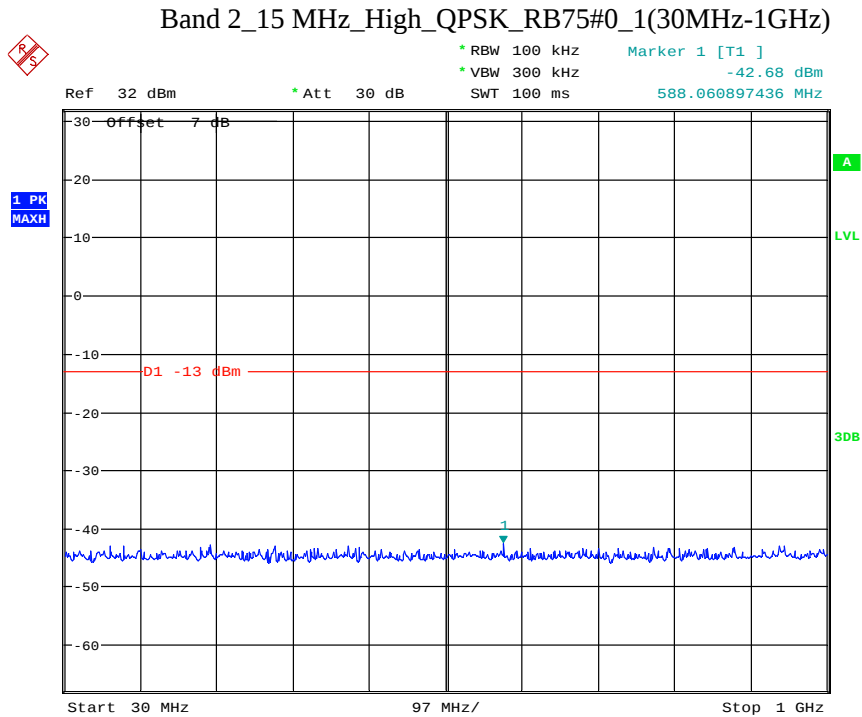
Date: 30.DEC.2020 15:04:08

Band 2_15 MHz_Middle_QPSK_RB75#0_2(1GHz-20GHz)

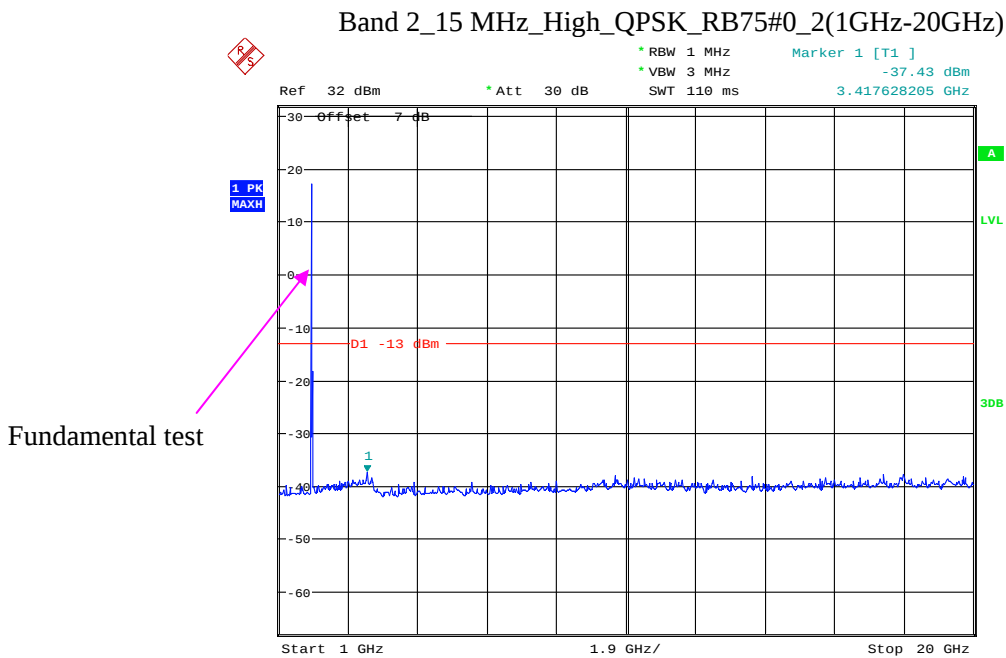


Fundamental test

Date: 30.DEC.2020 15:04:20

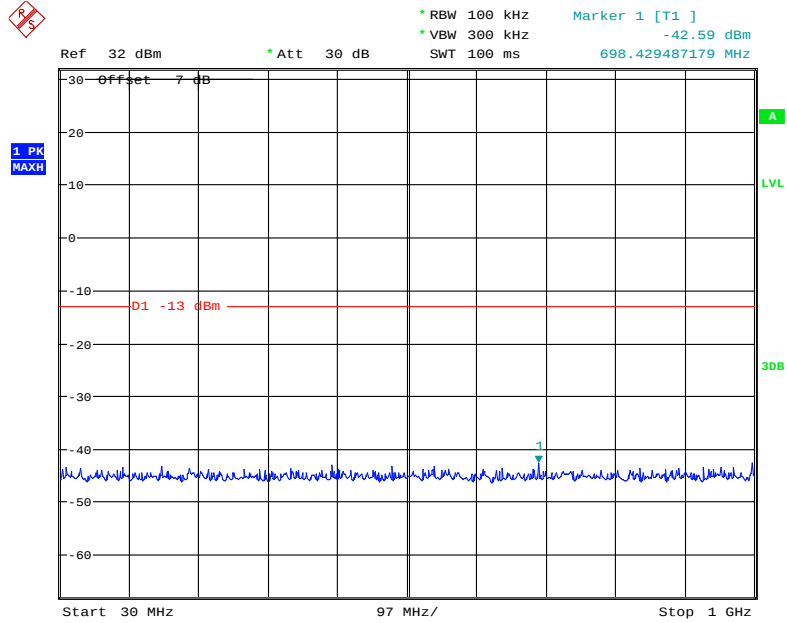


Date: 6.JAN.2021 09:26:28



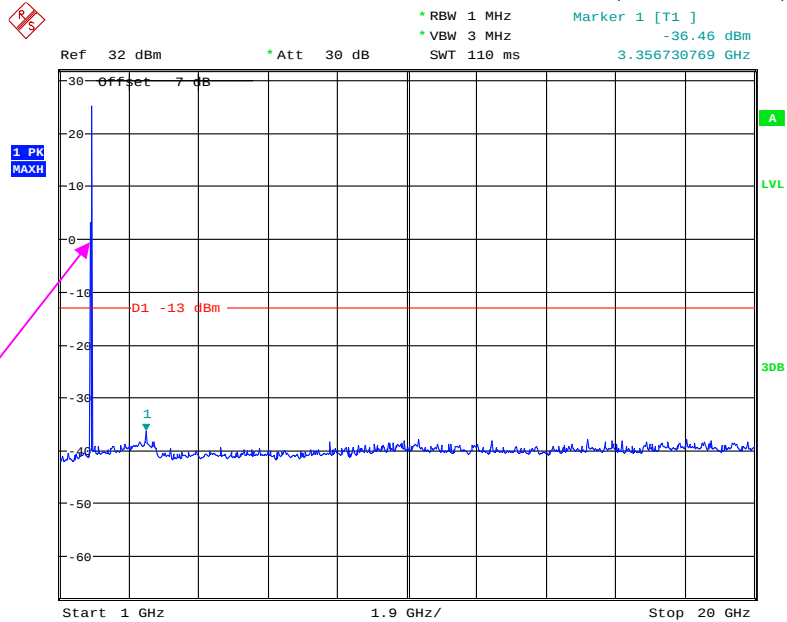
Date: 6.JAN.2021 09:27:00

Band 2_20 MHz_Low_QPSK_RB100#0_1(30MHz-1GHz)



Date: 6.JAN.2021 09:27:59

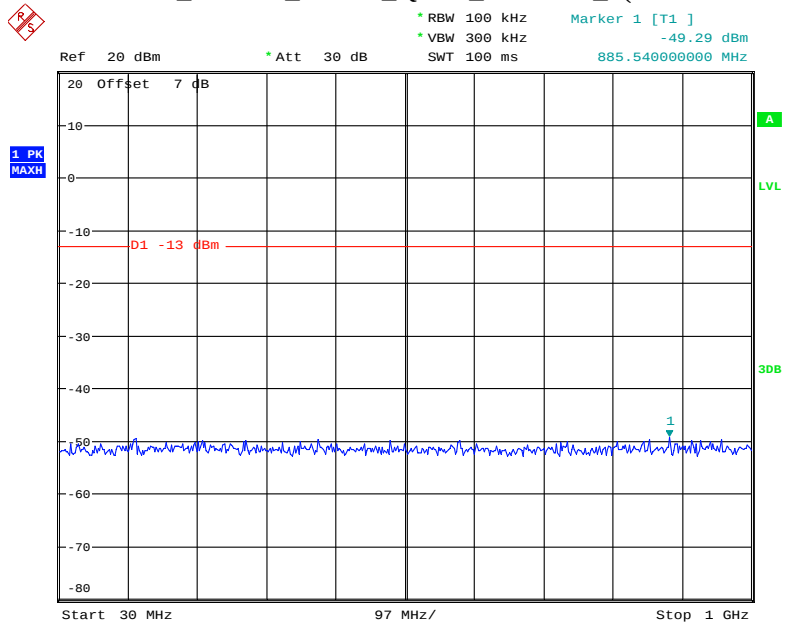
Band 2_20 MHz_Low_QPSK_RB100#0_2(1GHz-20GHz)



Fundamental test

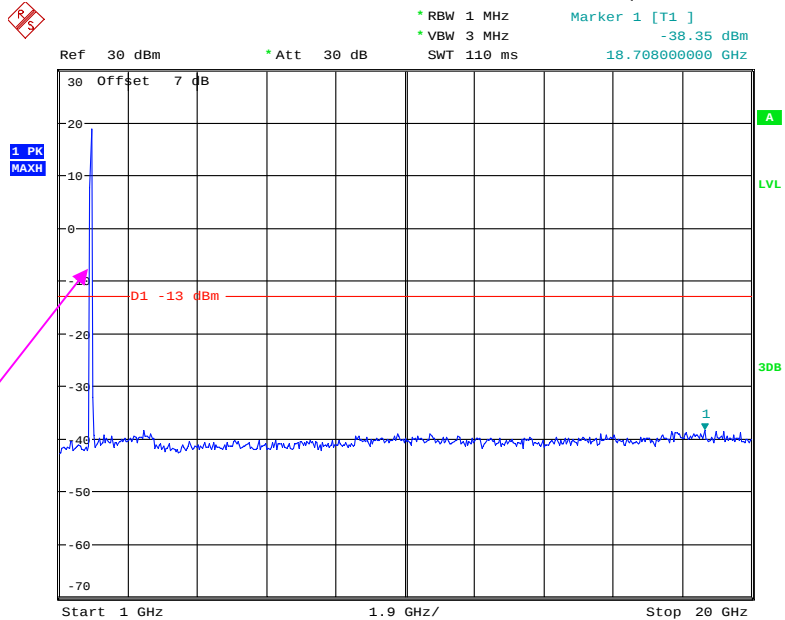
Date: 6.JAN.2021 09:28:53

Band 2_20 MHz_Middle_QPSK_RB100#0_1(30MHz-1GHz)



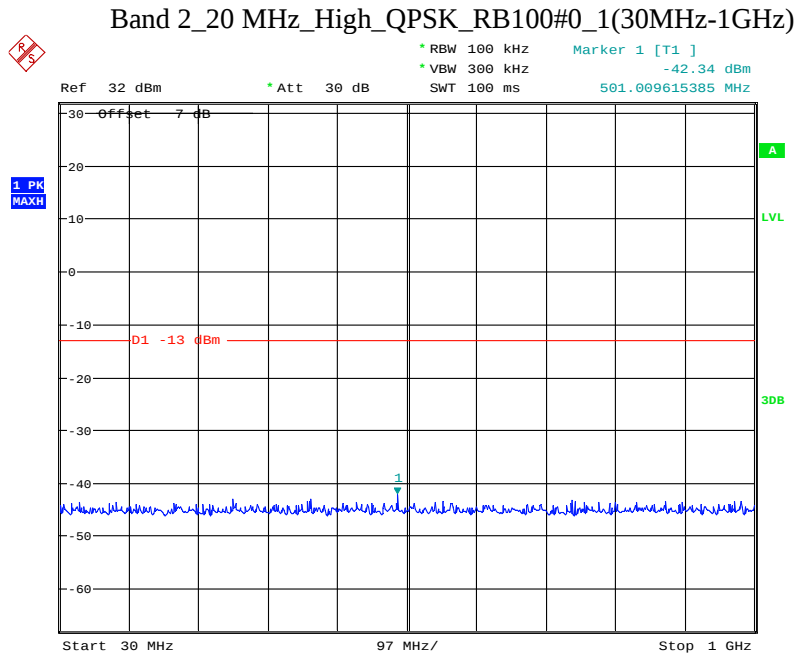
Date: 30.DEC.2020 15:04:42

Band 2_20 MHz_Middle_QPSK_RB100#0_2(1GHz-20GHz)

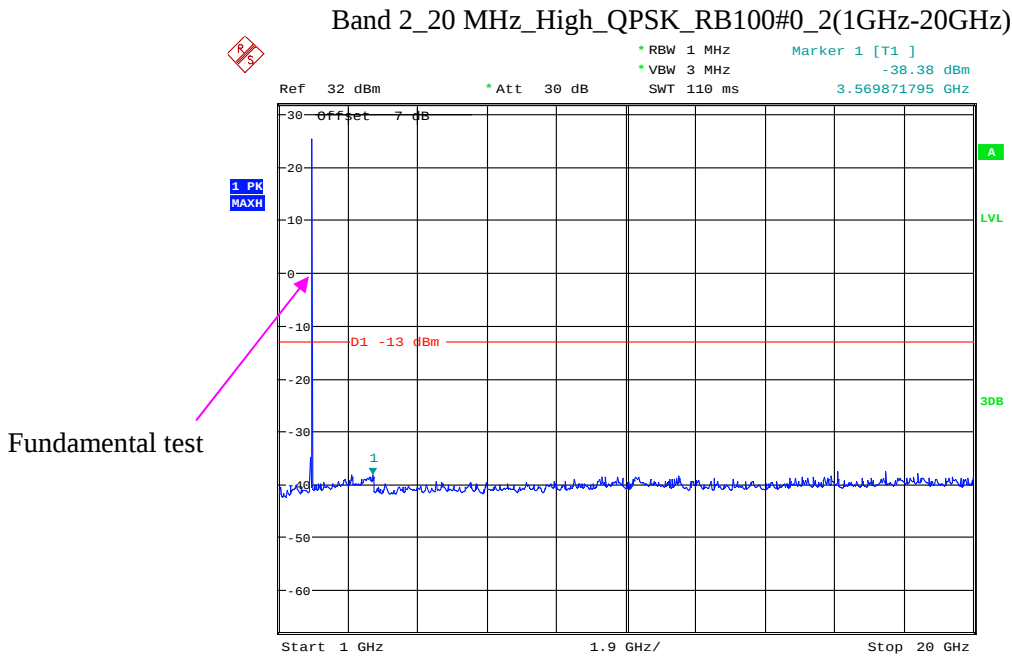


Fundamental test

Date: 30.DEC.2020 15:04:53

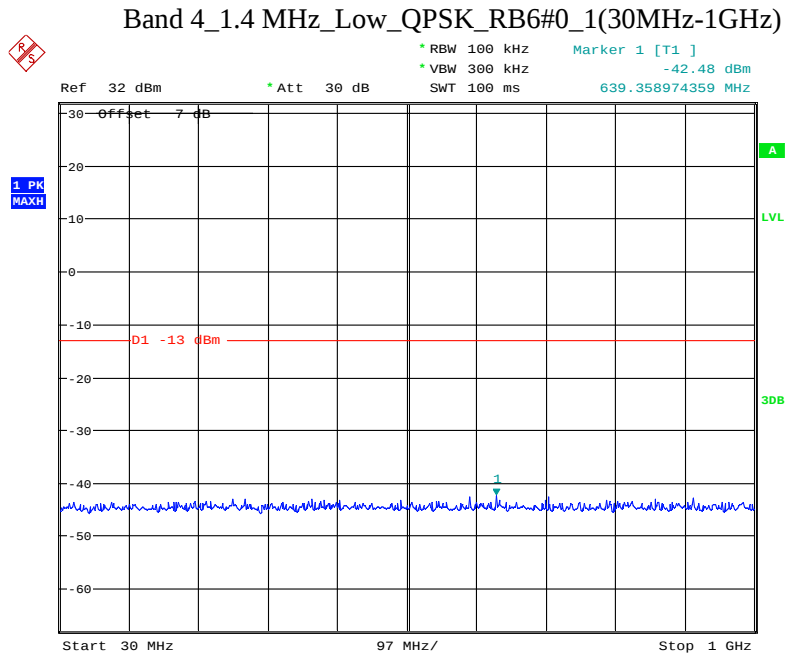


Date: 6.JAN.2021 09:29:50

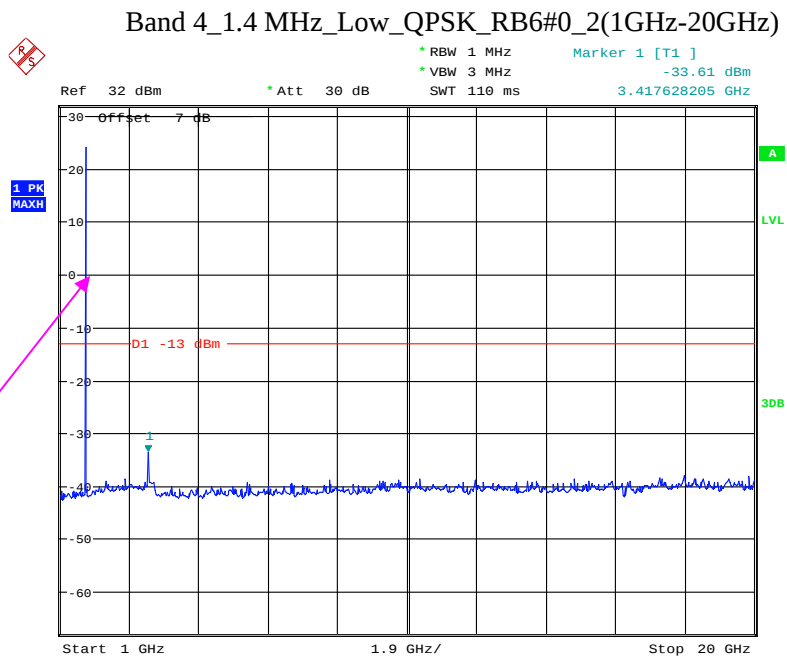


Date: 6.JAN.2021 09:30:21

LTE Band 4:

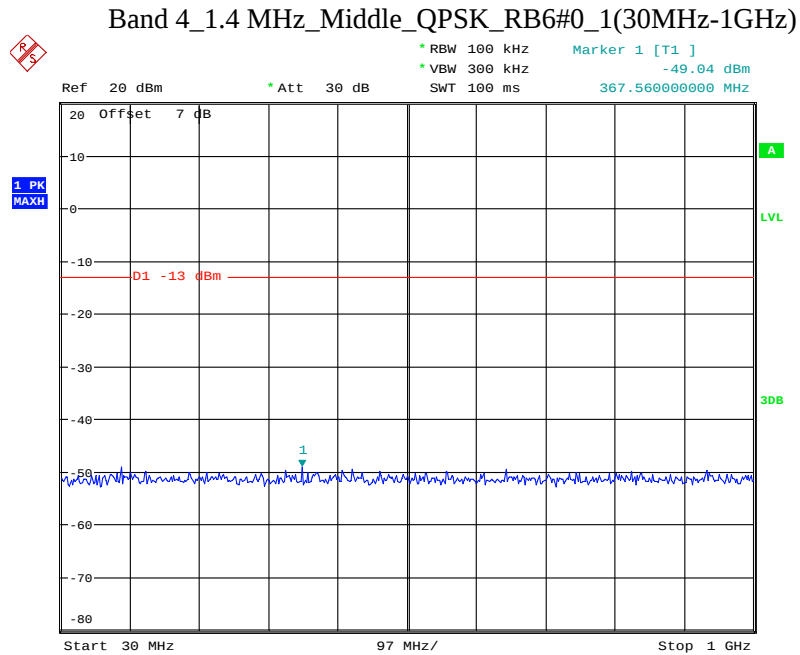


Date: 6.JAN.2021 09:33:10

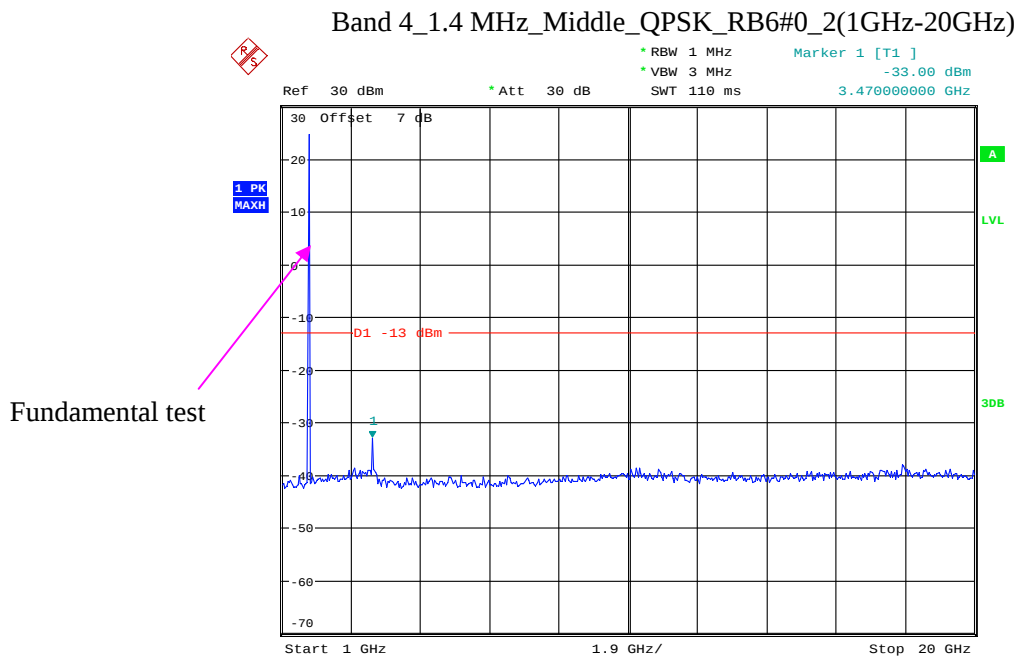


Fundamental test

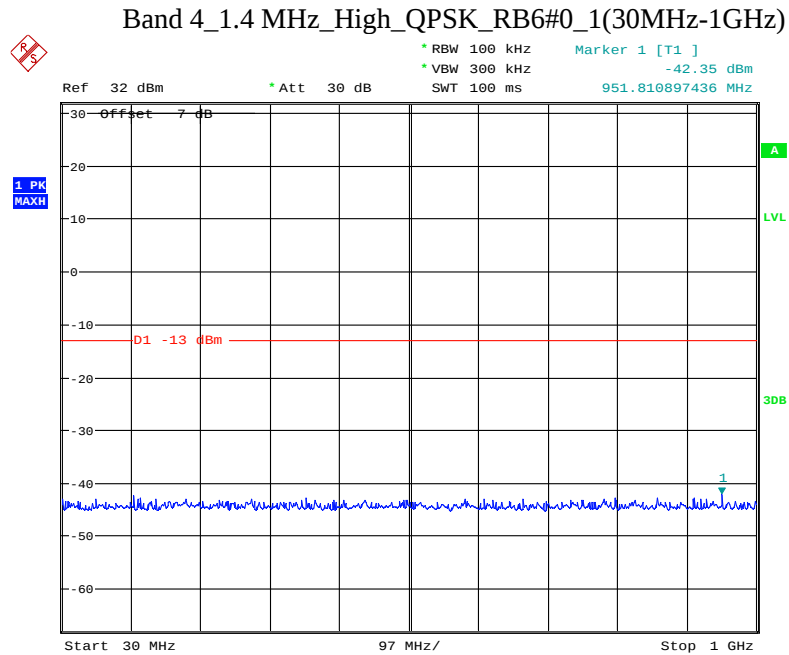
Date: 6.JAN.2021 09:33:51



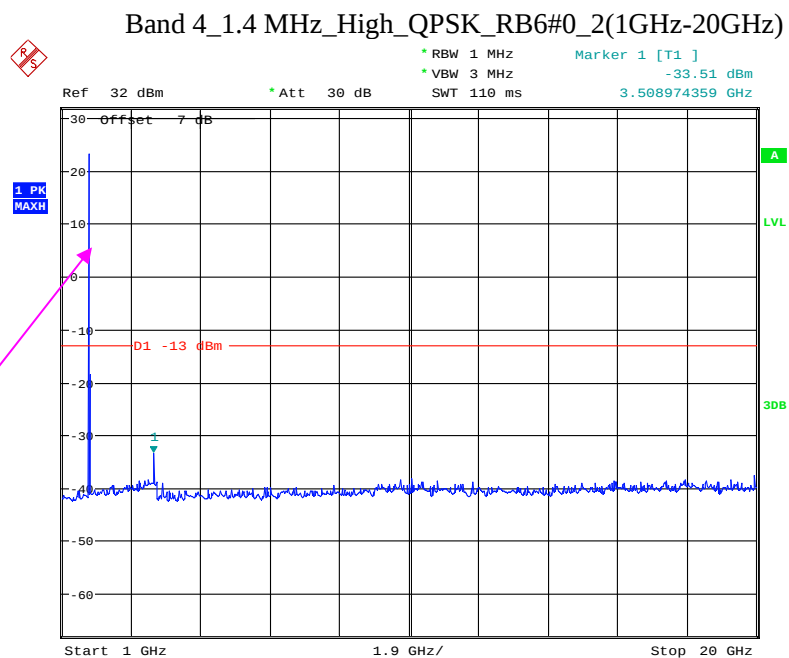
Date: 30.DEC.2020 15:05:18



Date: 30.DEC.2020 15:05:30



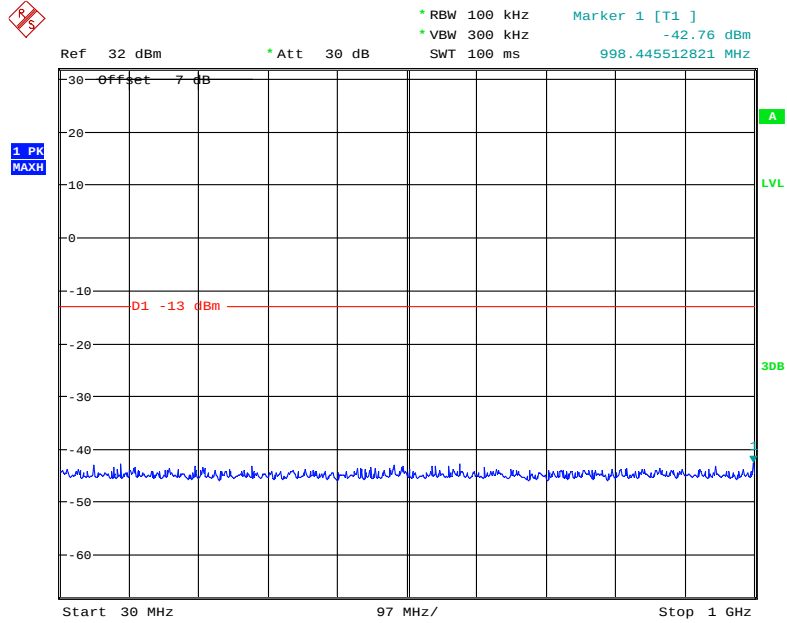
Date: 6.JAN.2021 09:35:55



Fundamental test

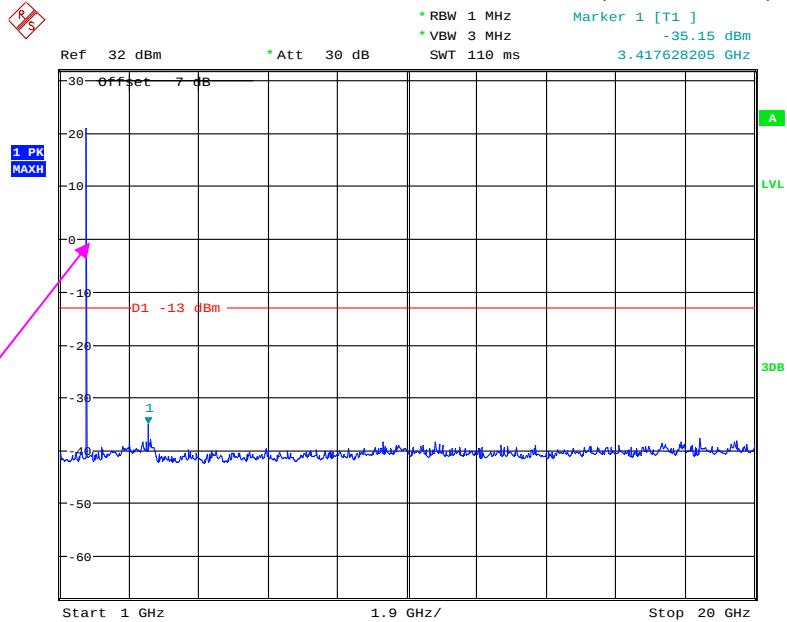
Date: 6.JAN.2021 09:36:21

Band 4_3 MHz_Low_QPSK_RB15#0_1(30MHz-1GHz)



Date: 6.JAN.2021 09:37:20

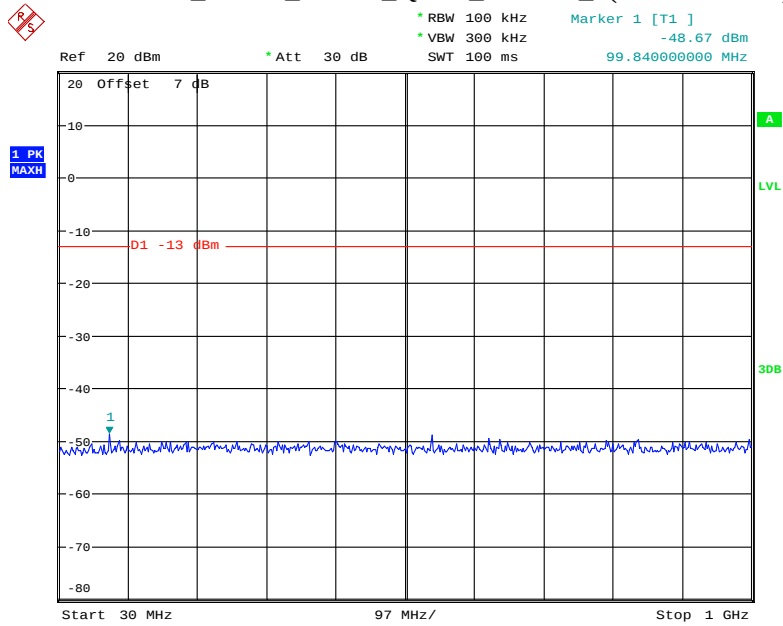
Band 4_3 MHz_Low_QPSK_RB15#0_2(1GHz-20GHz)



Fundamental test

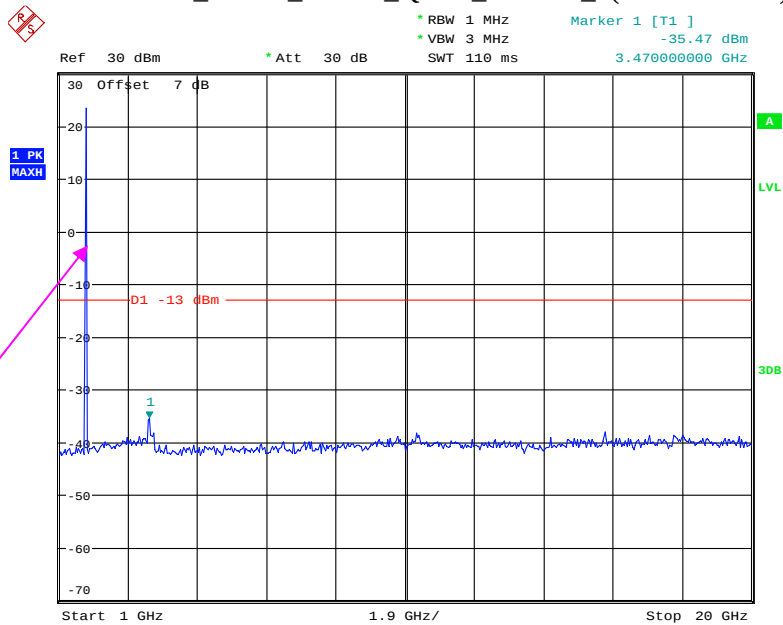
Date: 6.JAN.2021 09:37:47

Band 4_3 MHz_Middle_QPSK_RB15#0_1(30MHz-1GHz)



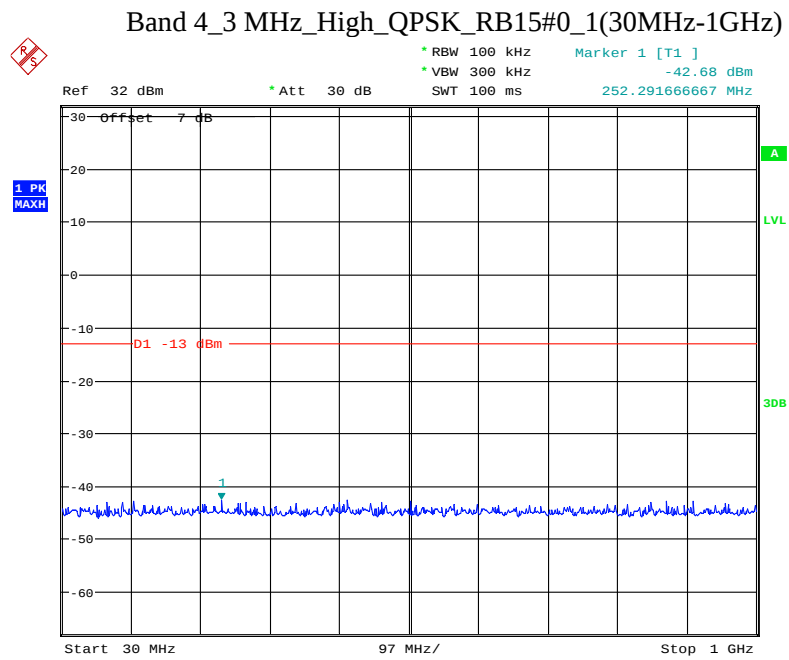
Date: 30.DEC.2020 15:05:51

Band 4_3 MHz_Middle_QPSK_RB15#0_2(1GHz-20GHz)

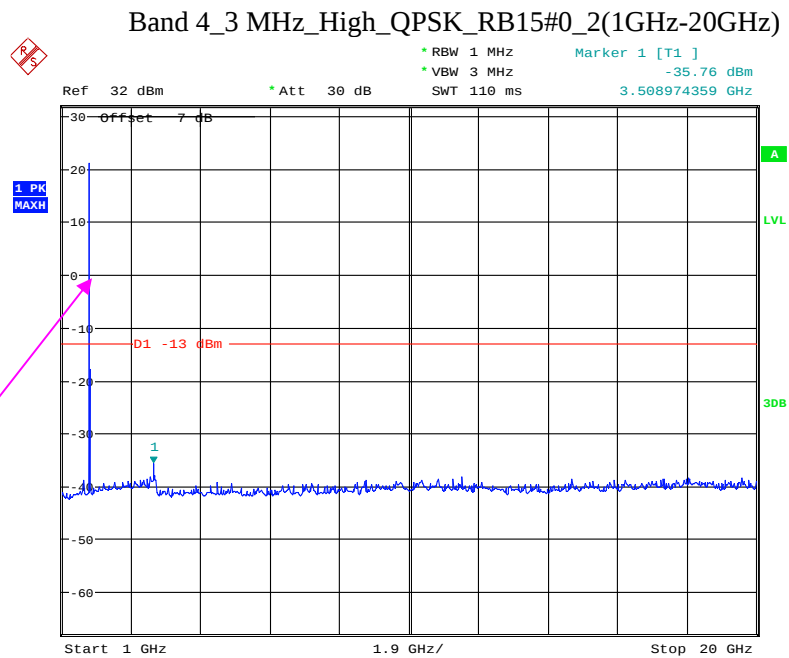


Fundamental test

Date: 30.DEC.2020 15:06:03



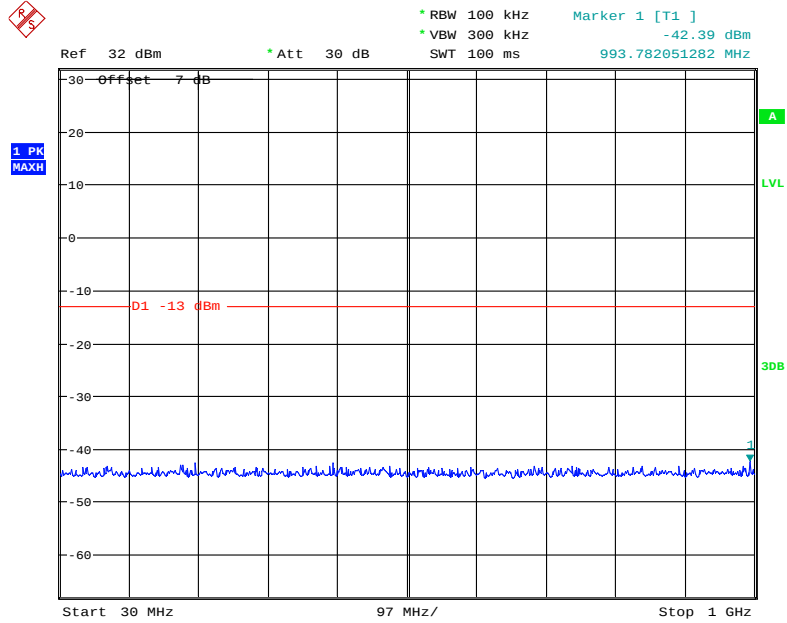
Date: 6.JAN.2021 09:39:03



Fundamental test

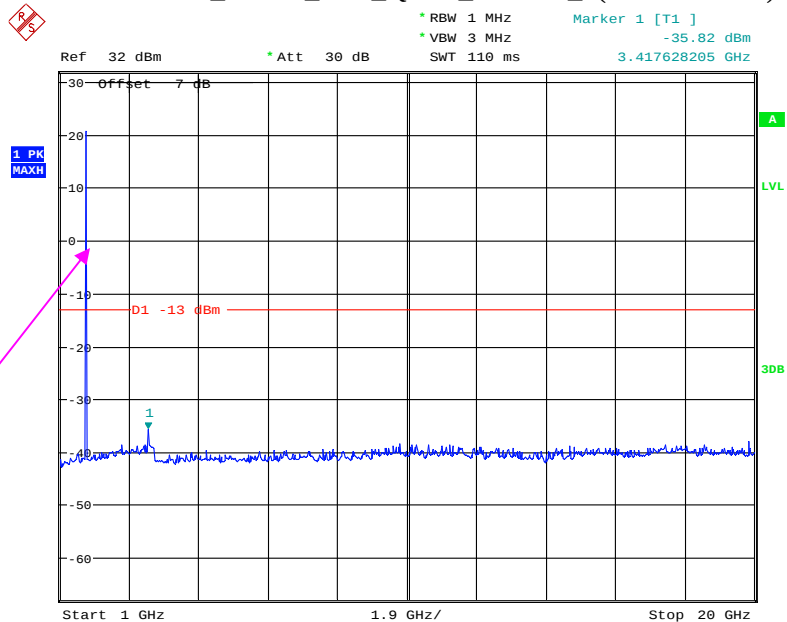
Date: 6.JAN.2021 09:39:50

Band 4_5 MHz_Low_QPSK_RB25#0_1(30MHz-1GHz)

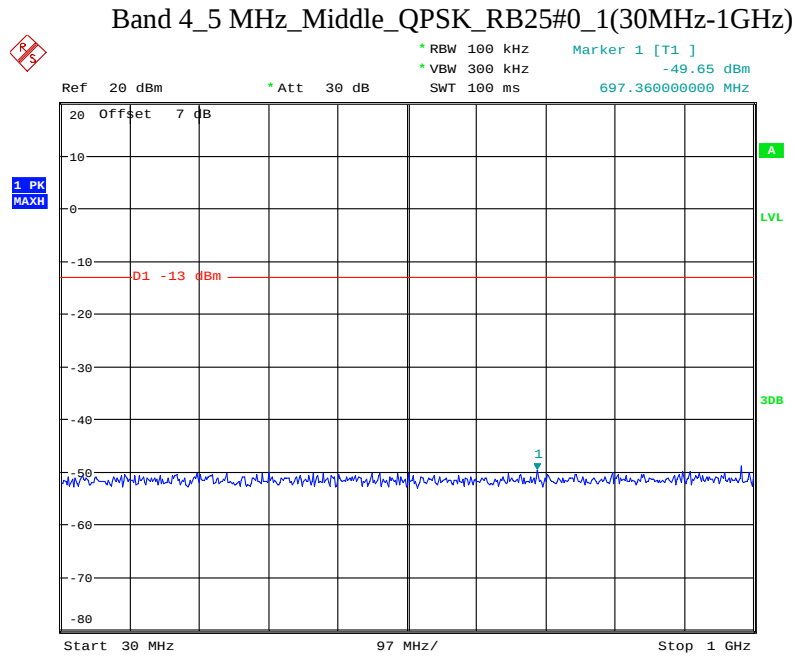


Date: 6.JAN.2021 09:41:50

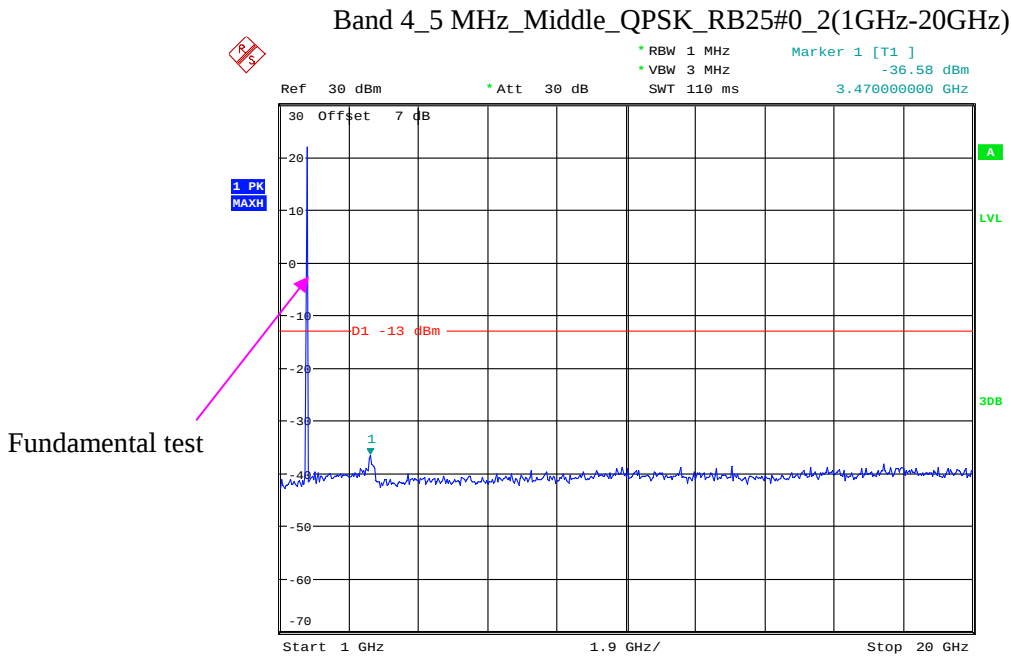
Band 4_5 MHz_Low_QPSK_RB25#0_2(1GHz-20GHz)



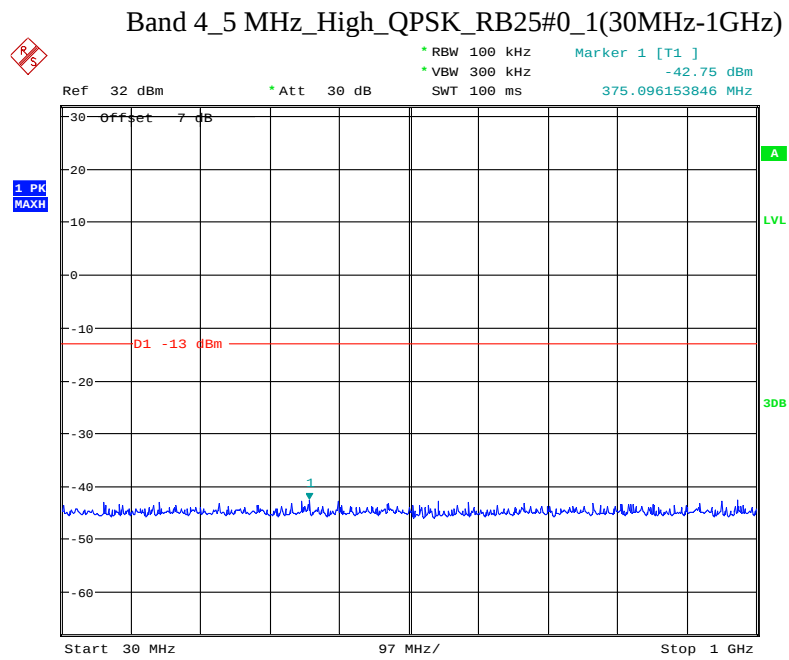
Date: 6.JAN.2021 09:42:28



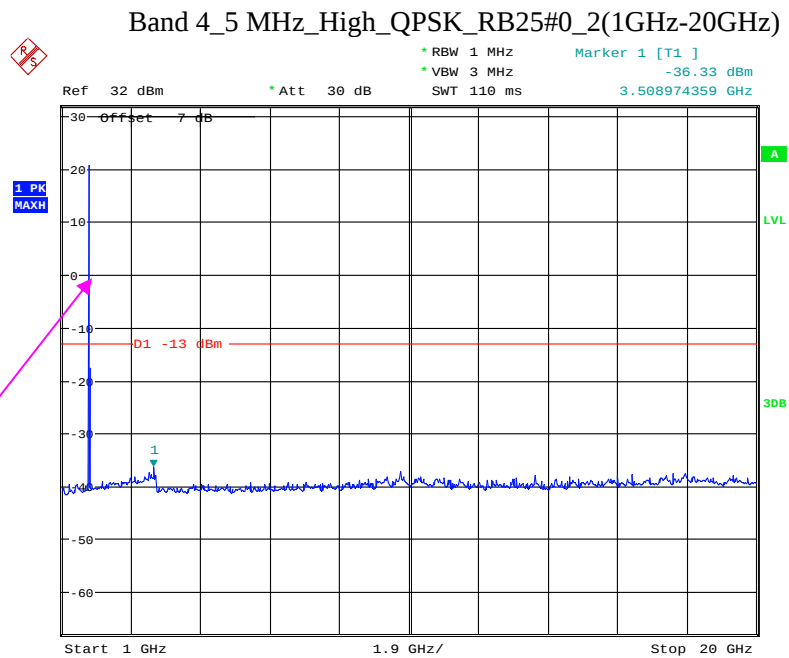
Date: 30.DEC.2020 15:06:21



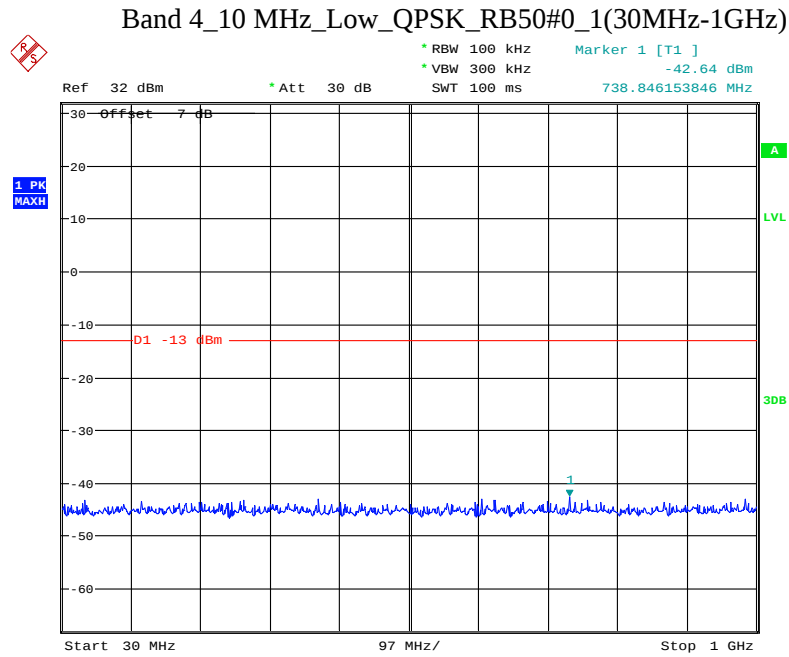
Date: 30.DEC.2020 15:06:32



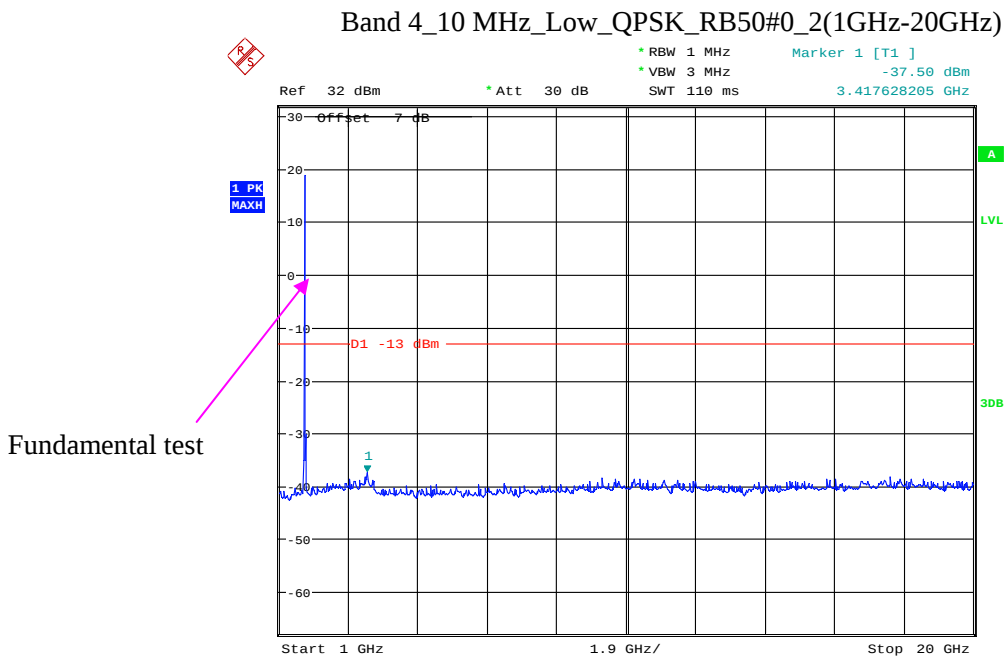
Date: 6.JAN.2021 09:43:38



Date: 6.JAN.2021 09:44:43

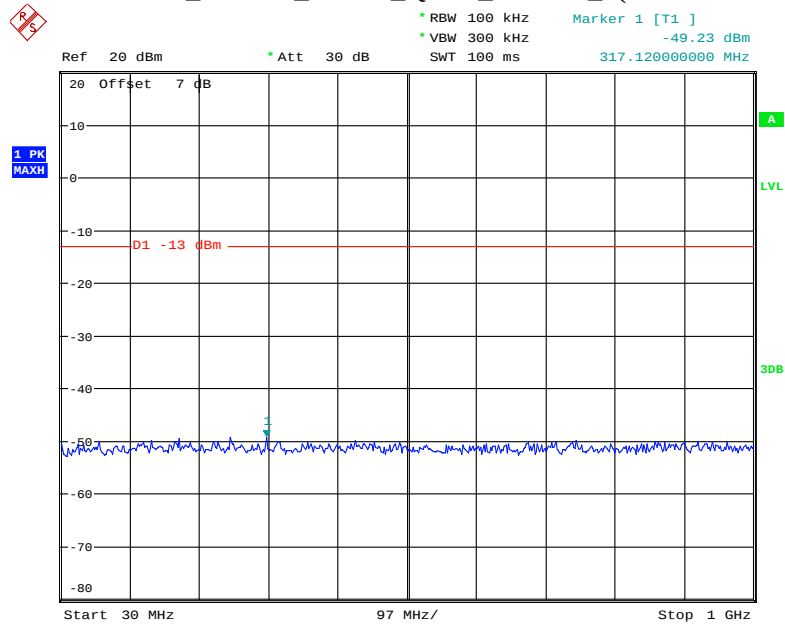


Date: 6.JAN.2021 09:45:38



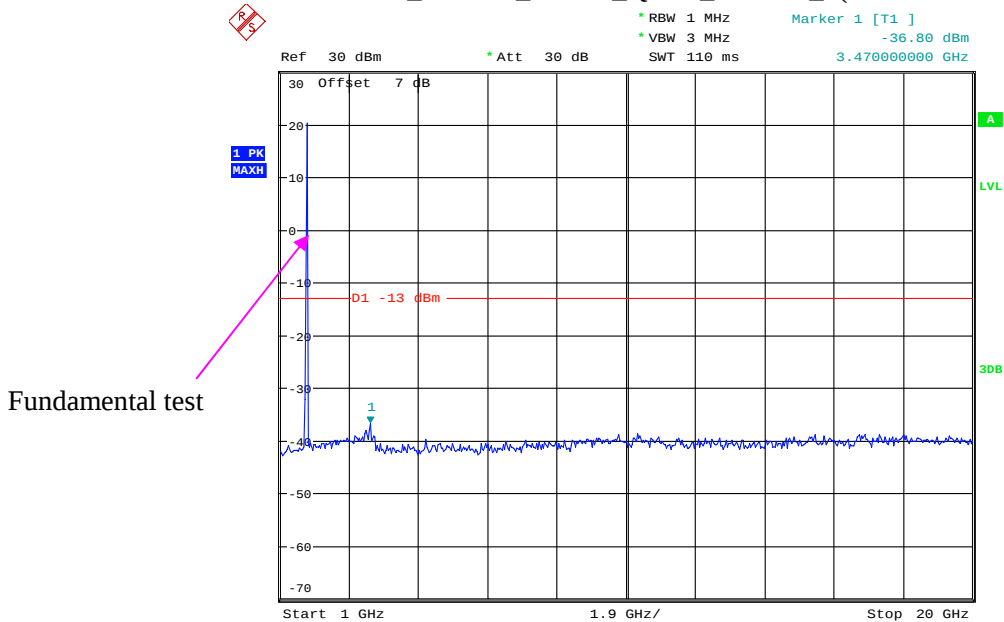
Date: 6.JAN.2021 09:46:11

Band 4_10 MHz_Middle_QPSK_RB50#0_1(30MHz-1GHz)



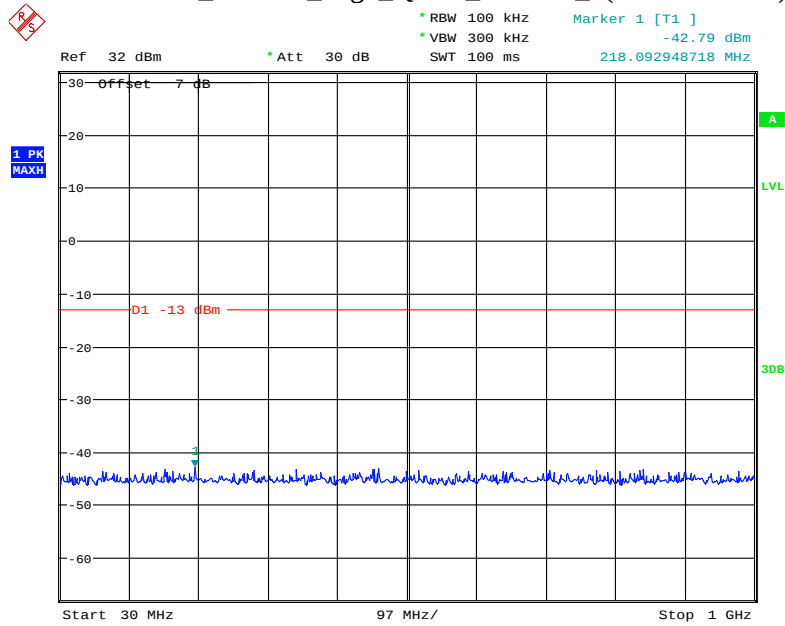
Date: 30.DEC.2020 15:06:55

Band 4_10 MHz_Middle_QPSK_RB50#0_2(1GHz-20GHz)



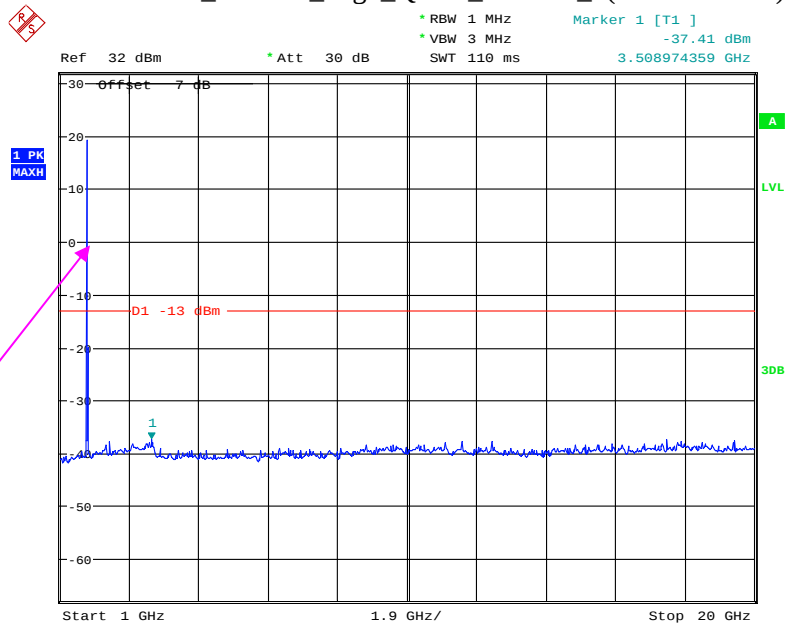
Date: 30.DEC.2020 15:07:06

Band 4_10 MHz_High_QPSK_RB50#0_1(30MHz-1GHz)



Date: 6.JAN.2021 09:47:05

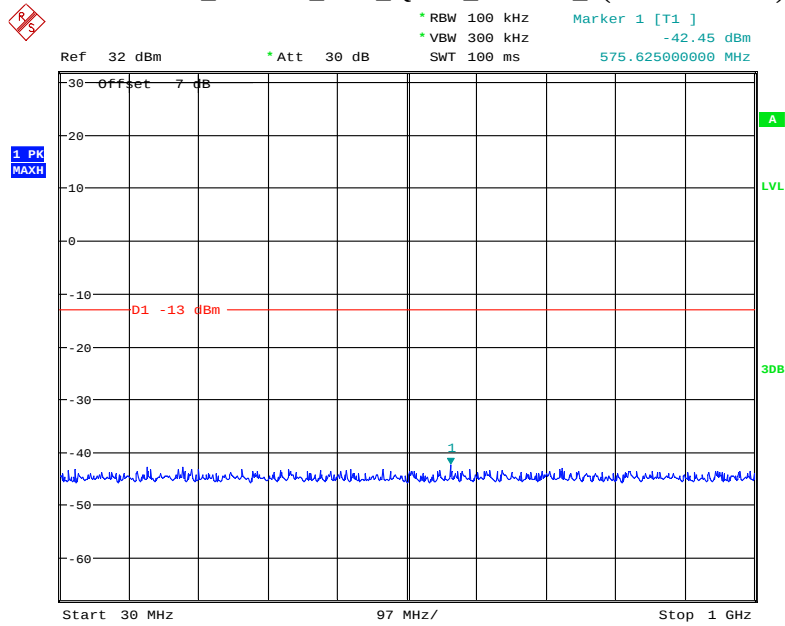
Band 4_10 MHz_High_QPSK_RB50#0_2(1GHz-20GHz)



Fundamental test

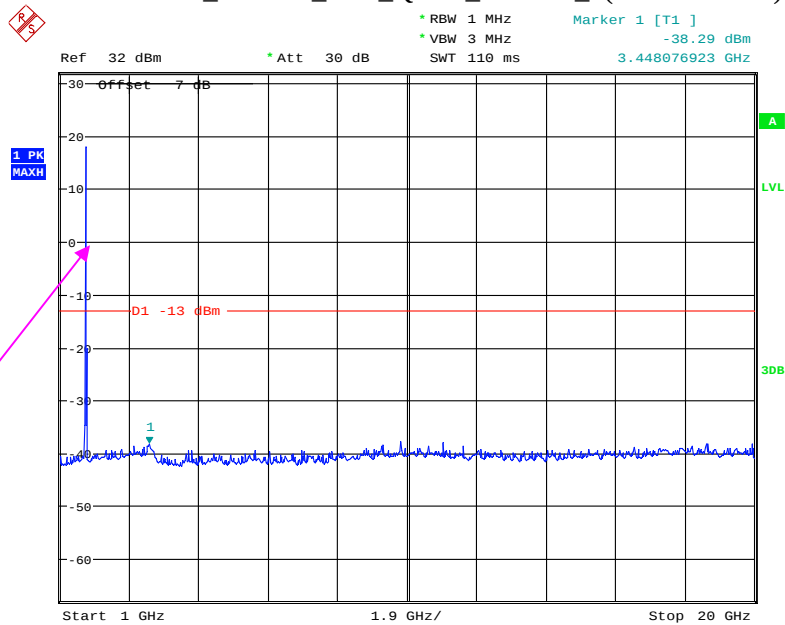
Date: 6.JAN.2021 09:48:14

Band 4_15 MHz_Low_QPSK_RB75#0_1(30MHz-1GHz)



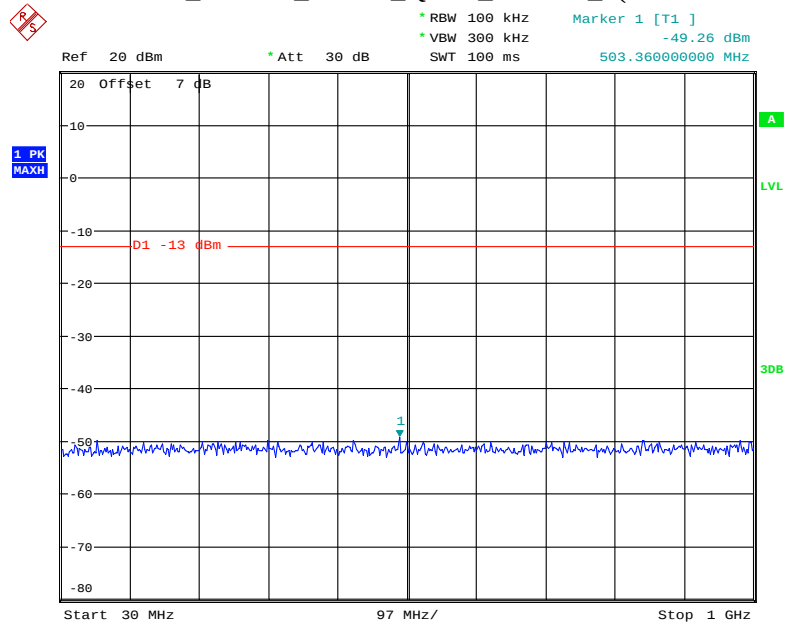
Date: 6.JAN.2021 09:50:09

Band 4_15 MHz_Low_QPSK_RB75#0_2(1GHz-20GHz)



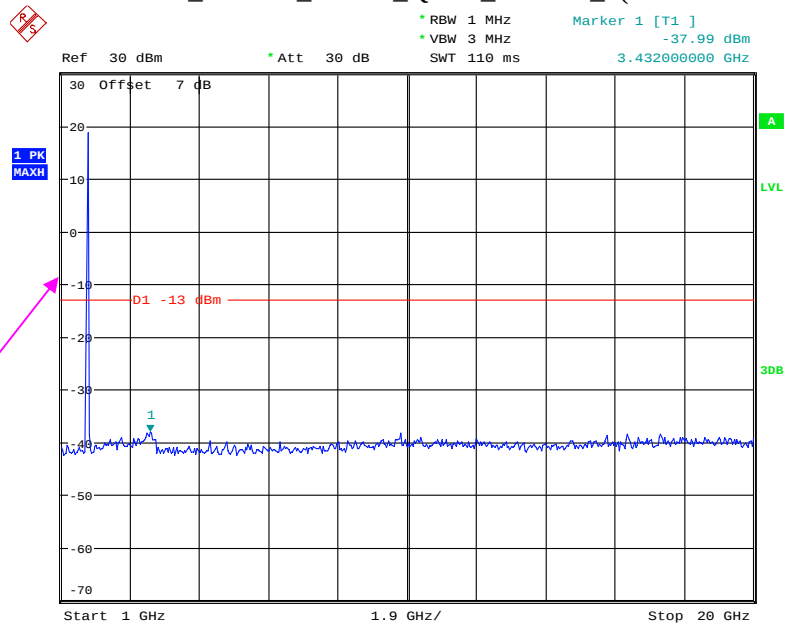
Date: 6.JAN.2021 09:50:59

Band 4_15 MHz_Middle_QPSK_RB75#0_1(30MHz-1GHz)



Date: 30.DEC.2020 15:07:28

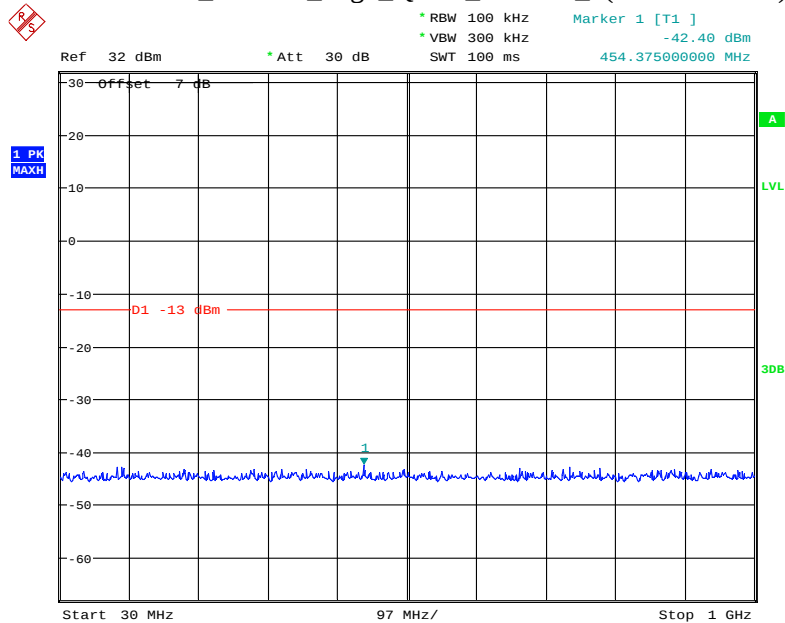
Band 4_15 MHz_Middle_QPSK_RB75#0_2(1GHz-20GHz)



Fundamental test

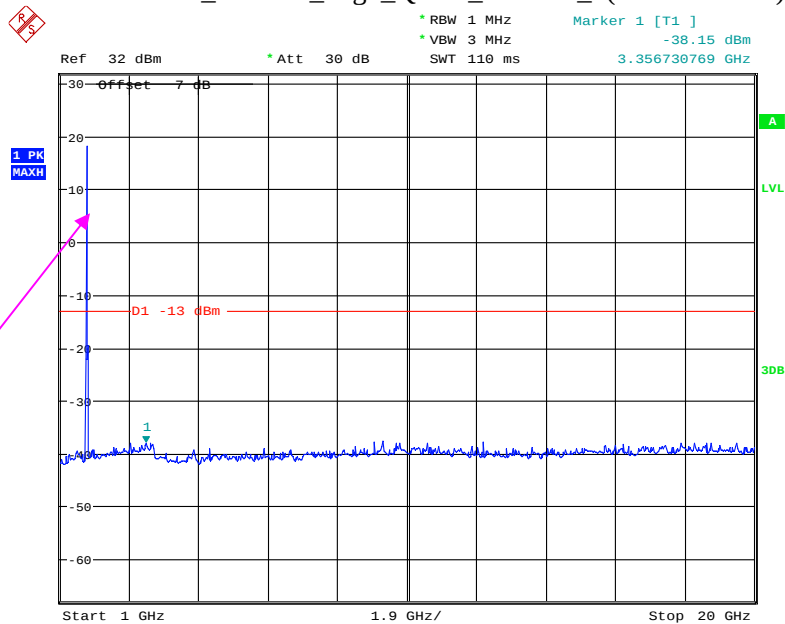
Date: 30.DEC.2020 15:07:39

Band 4_15 MHz_High_QPSK_RB75#0_1(30MHz-1GHz)

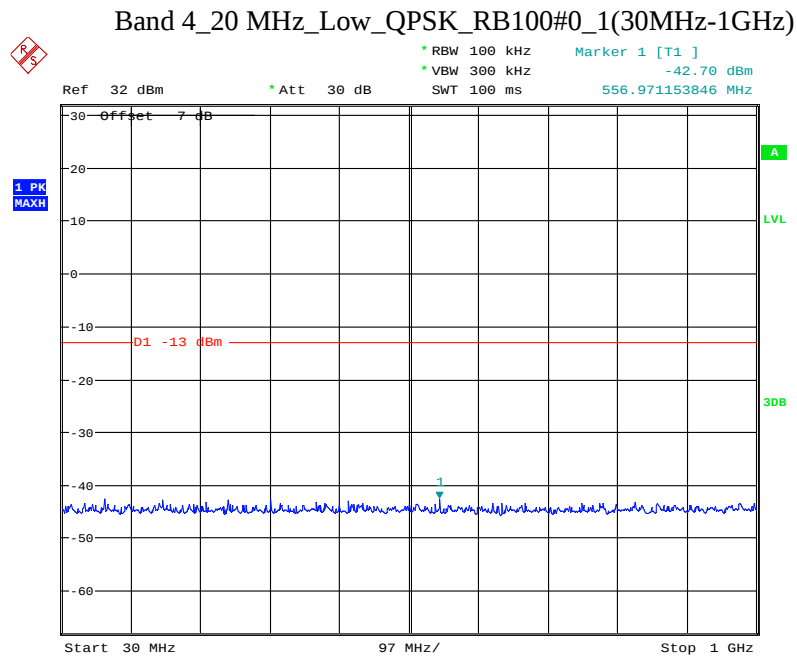


Date: 6.JAN.2021 09:53:41

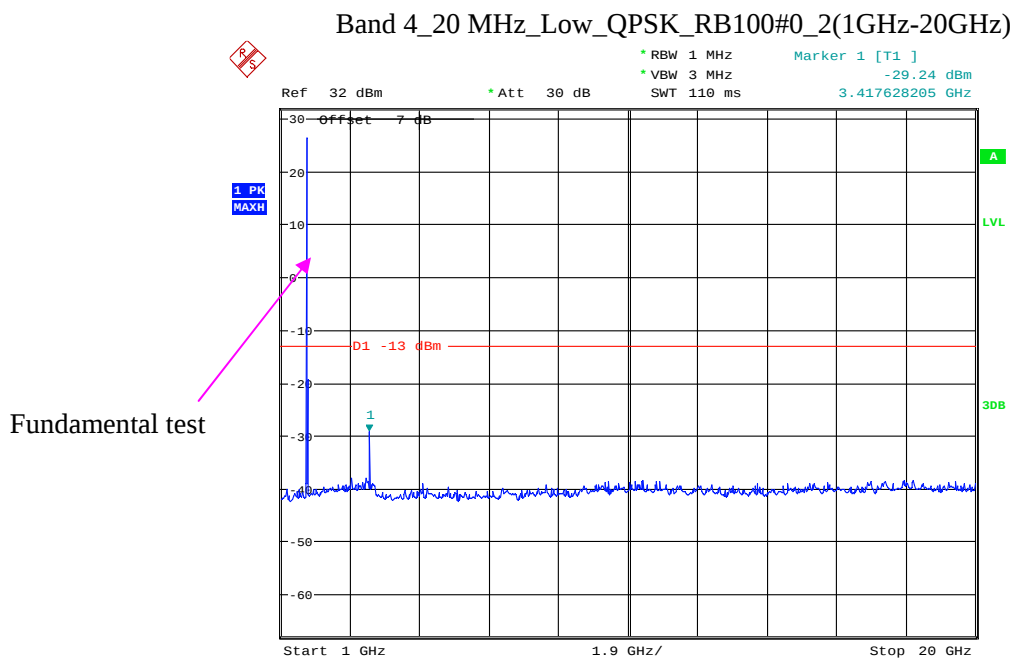
Band 4_15 MHz_High_QPSK_RB75#0_2(1GHz-20GHz)



Date: 6.JAN.2021 09:54:32

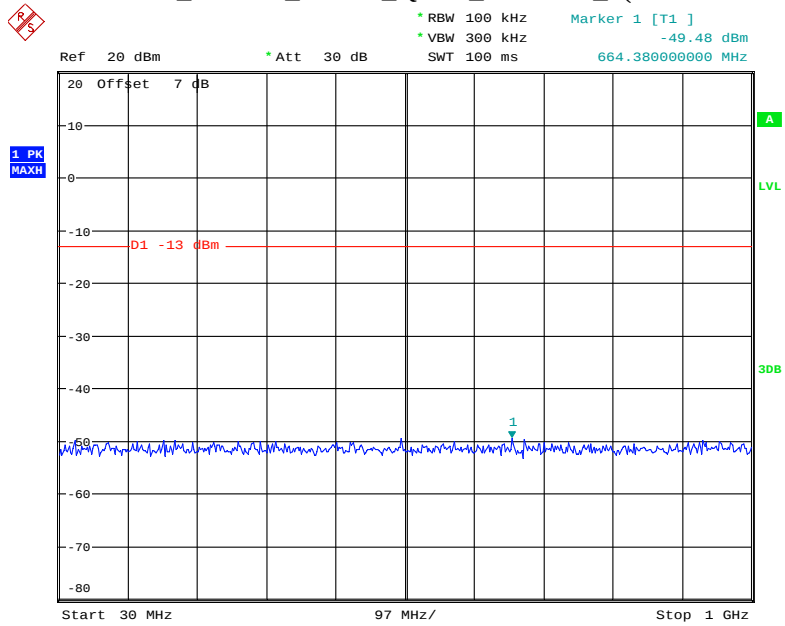


Date: 6.JAN.2021 09:55:59



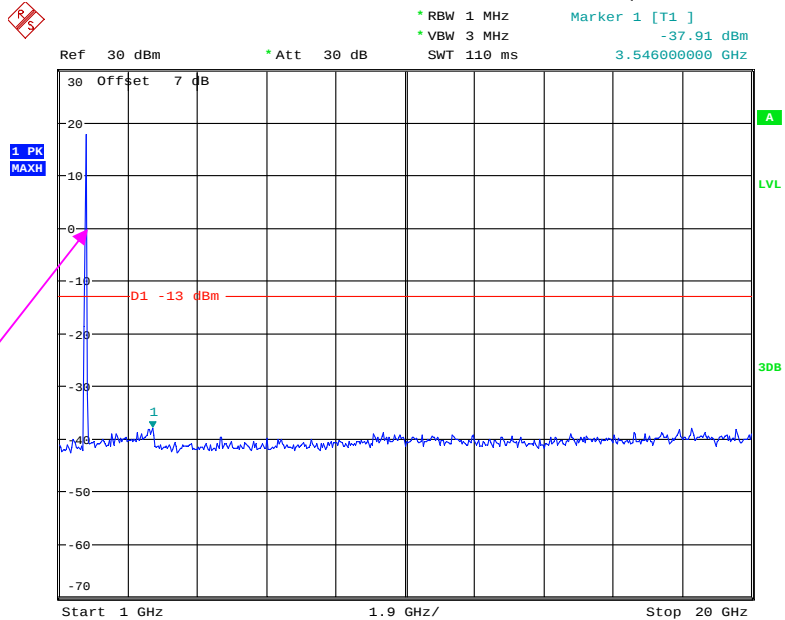
Date: 6.JAN.2021 09:56:28

Band 4_20 MHz_Middle_QPSK_RB100#0_1(30MHz-1GHz)

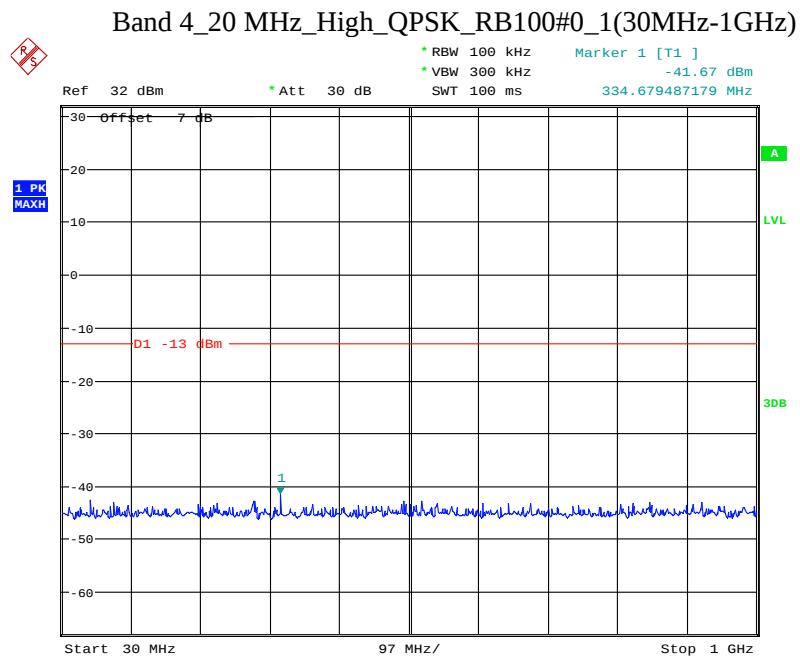


Date: 30.DEC.2020 15:08:01

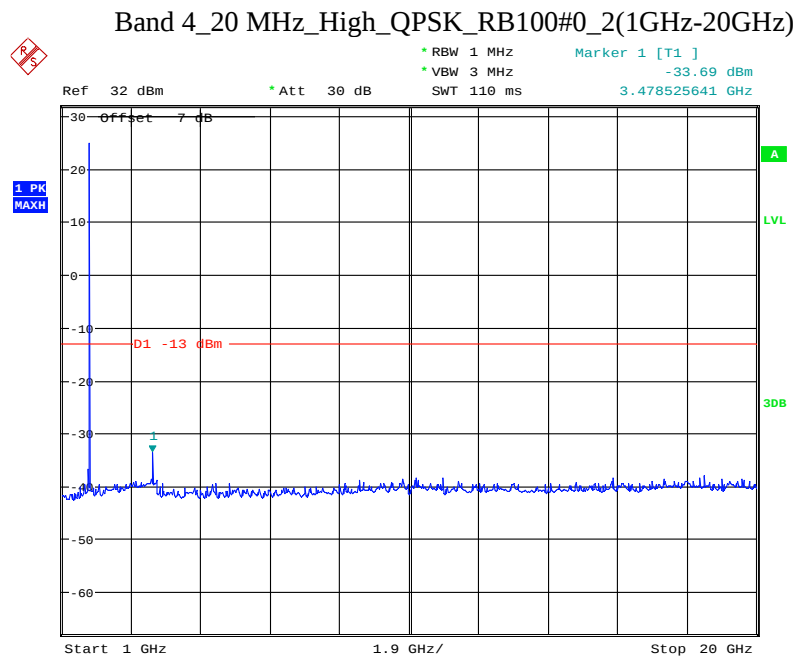
Band 4_20 MHz_Middle_QPSK_RB100#0_2(1GHz-20GHz)



Date: 30.DEC.2020 15:08:12

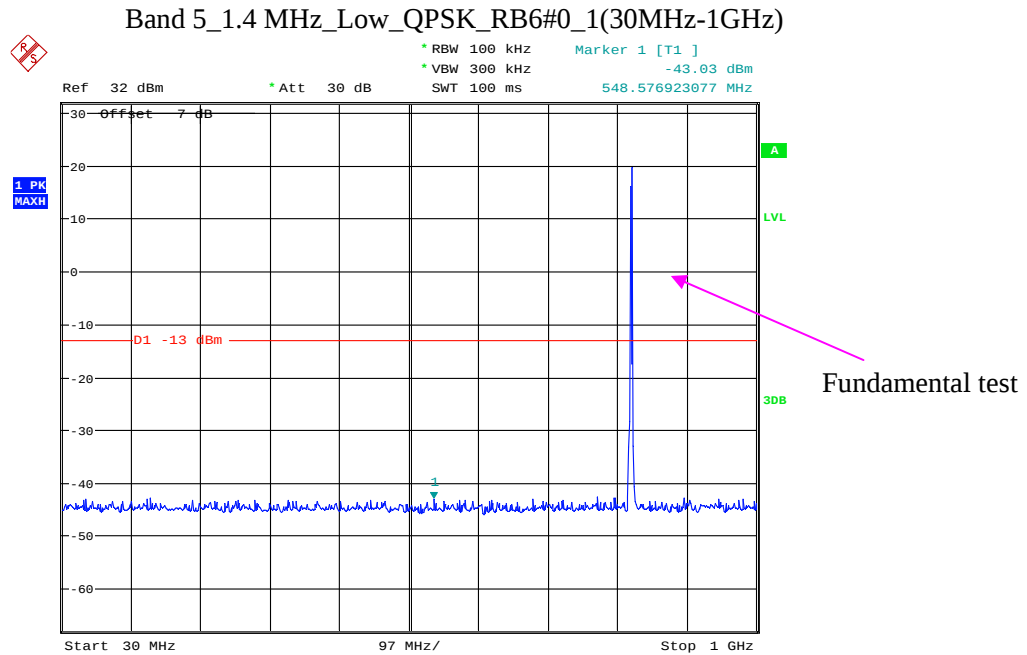


Date: 6.JAN.2021 09:57:28

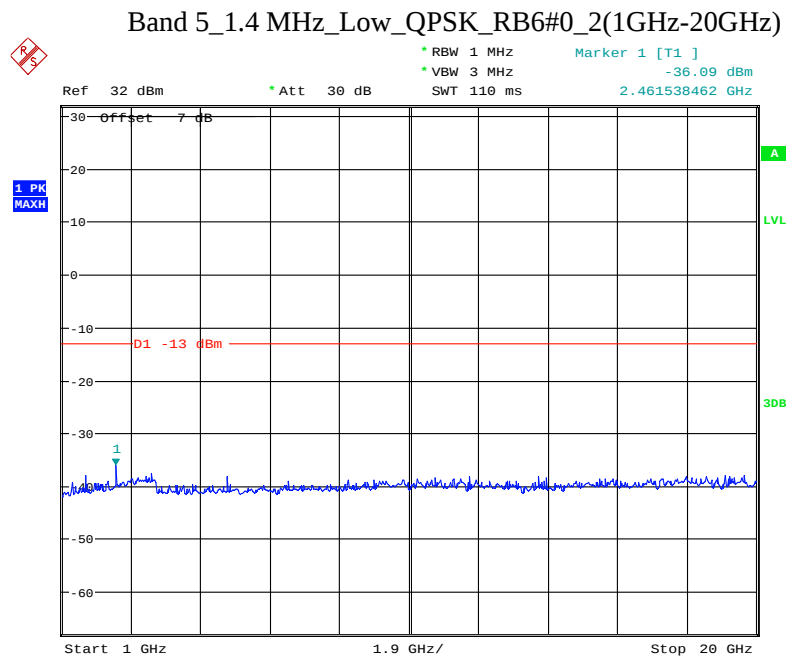


Date: 6.JAN.2021 09:57:49

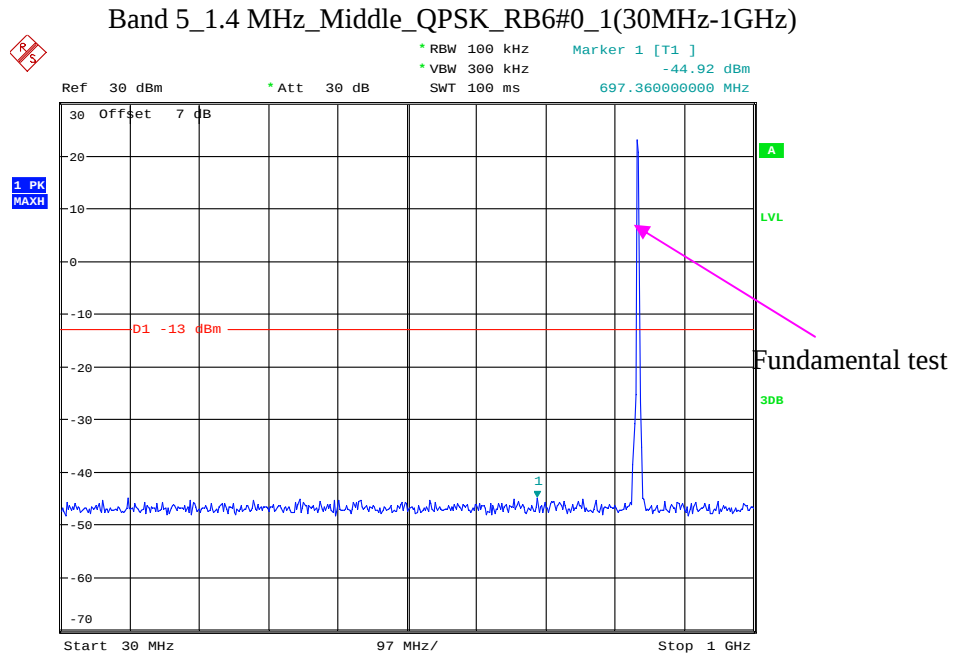
LTE Band 5:



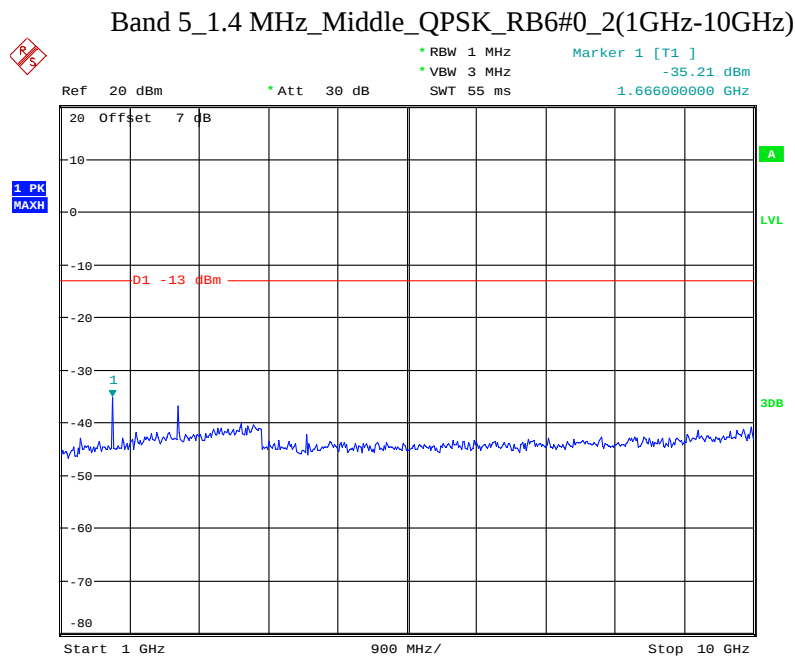
Date: 6.JAN.2021 10:20:07



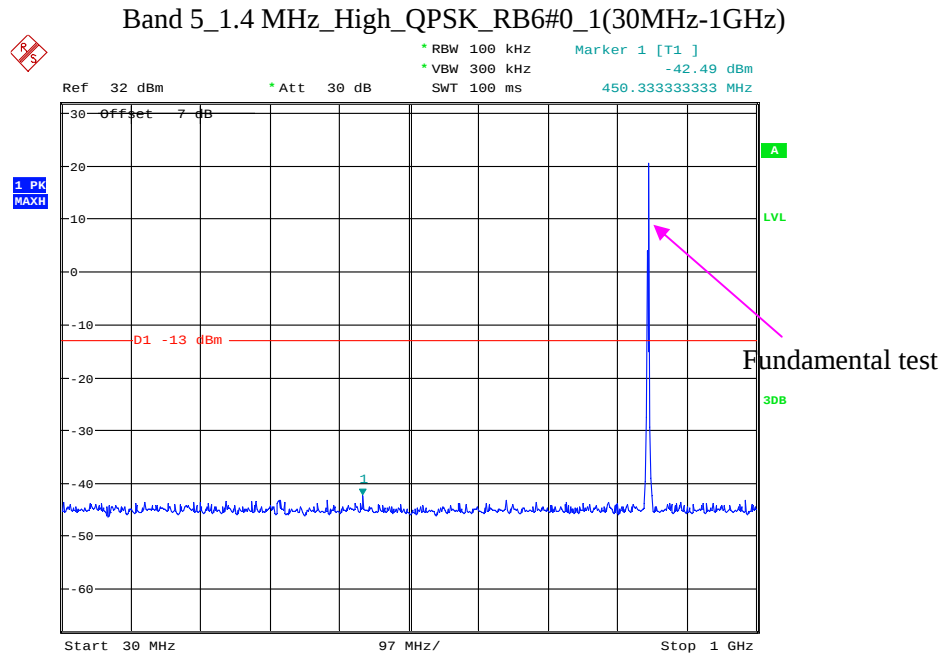
Date: 6.JAN.2021 10:20:57



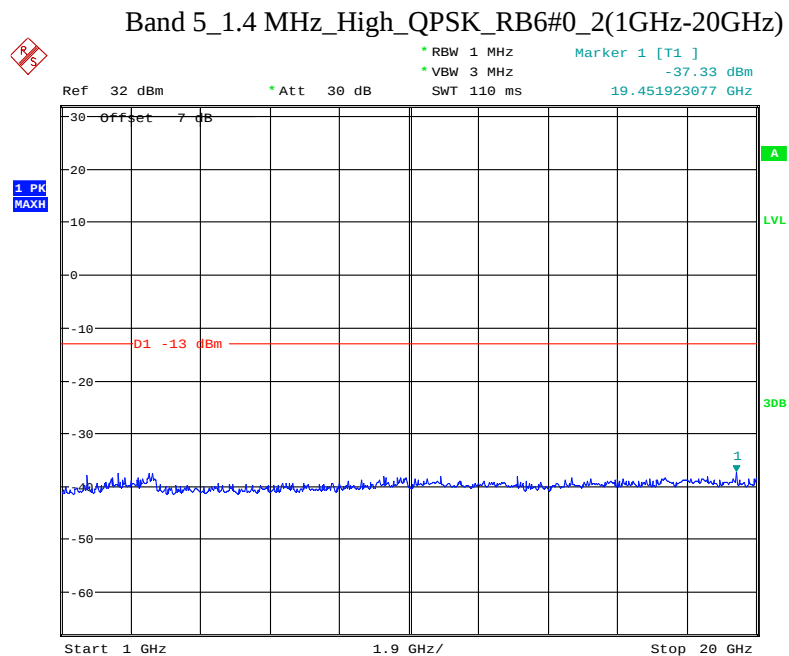
Date: 30.DEC.2020 13:57:15



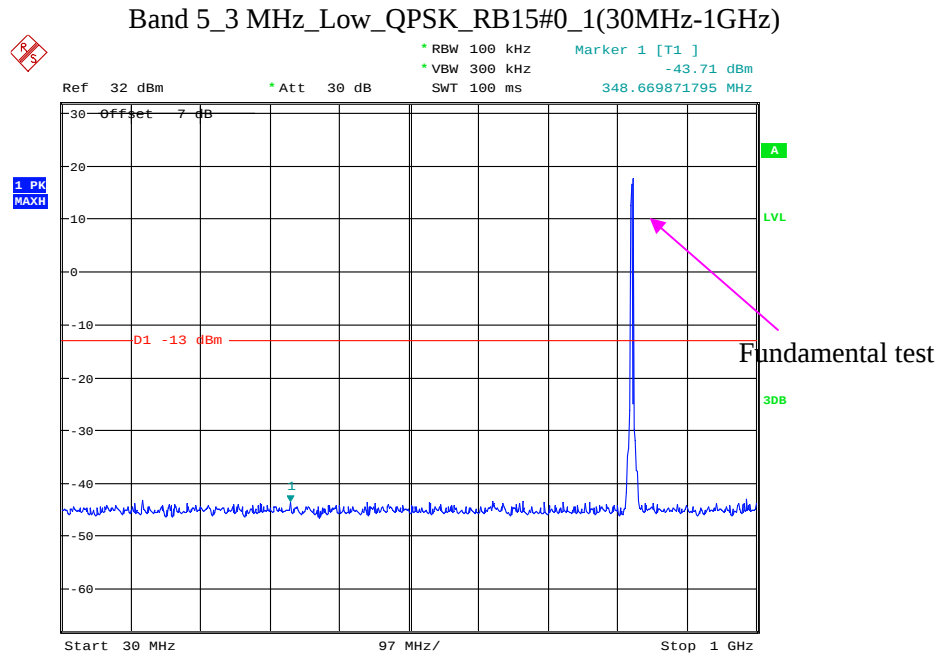
Date: 30.DEC.2020 13:57:26



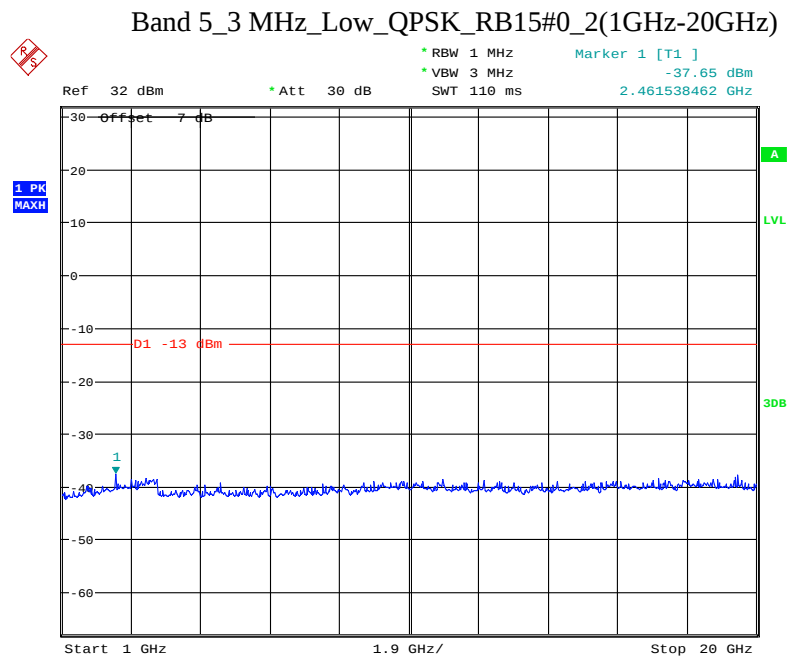
Date: 6.JAN.2021 10:22:02



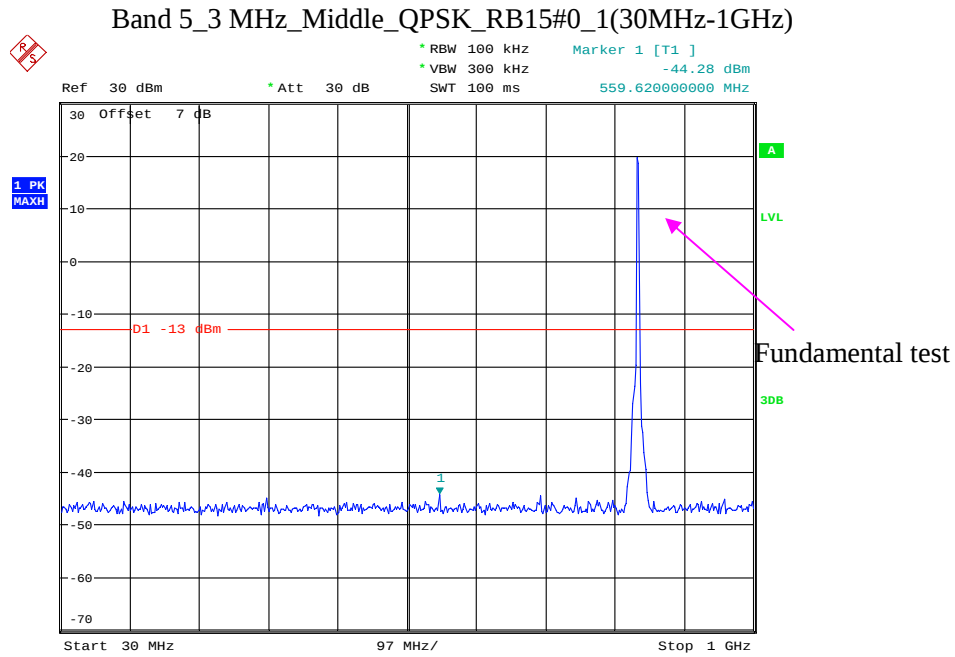
Date: 6.JAN.2021 10:22:58



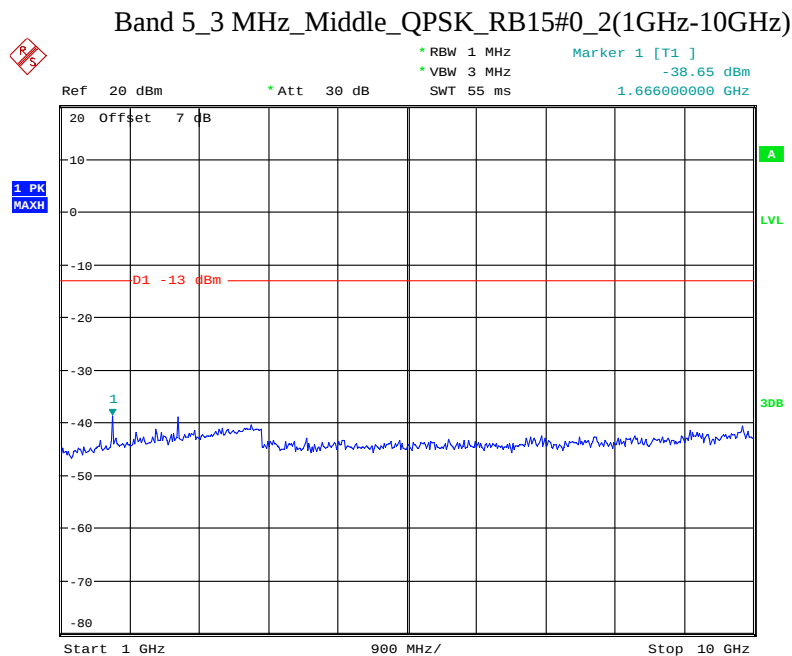
Date: 6.JAN.2021 10:23:45



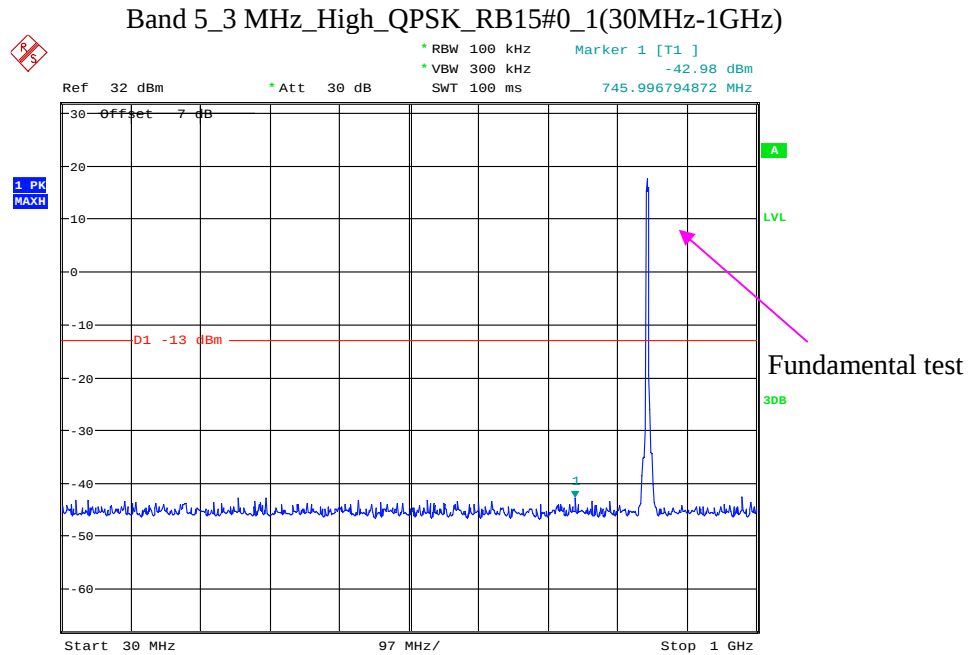
Date: 6.JAN.2021 10:24:16



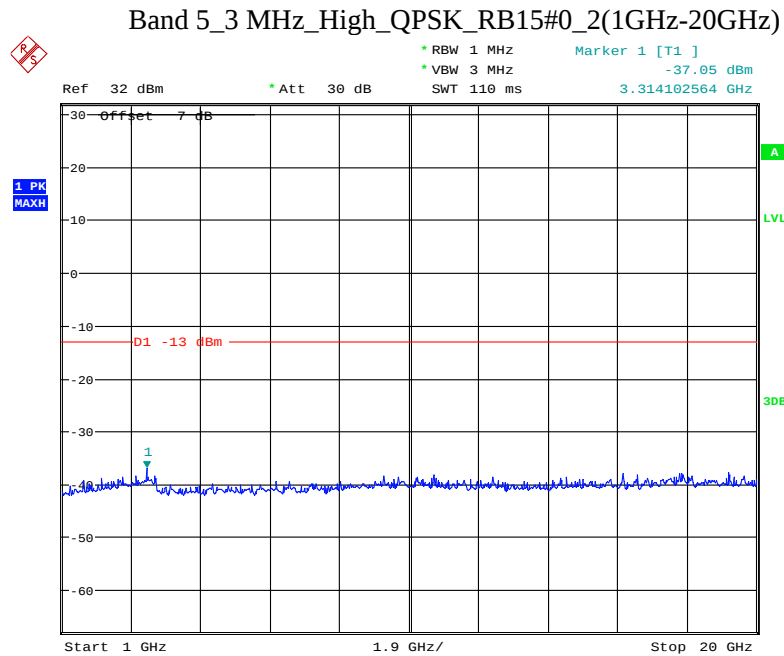
Date: 30.DEC.2020 13:57:45



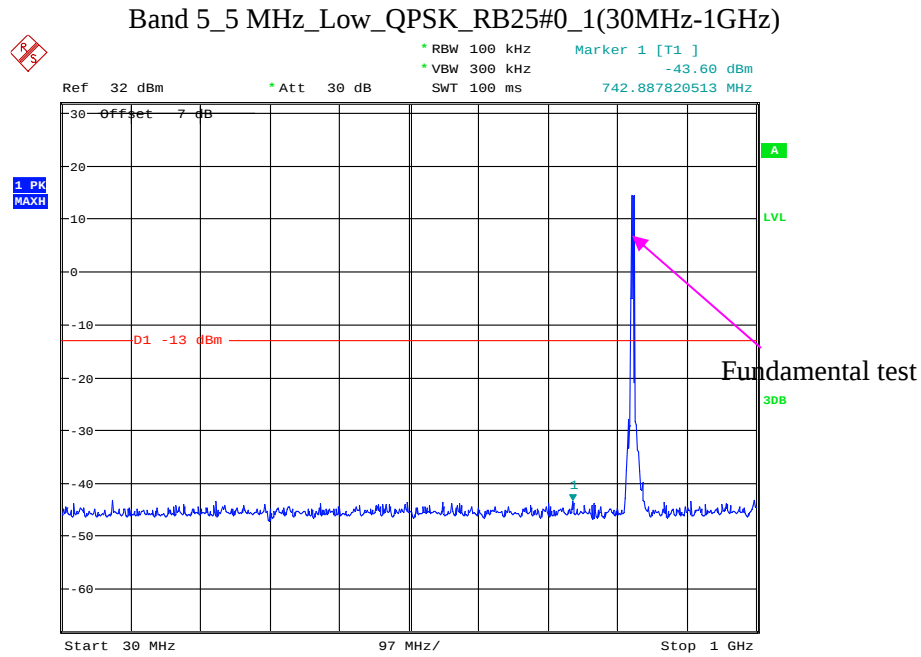
Date: 30.DEC.2020 13:57:59



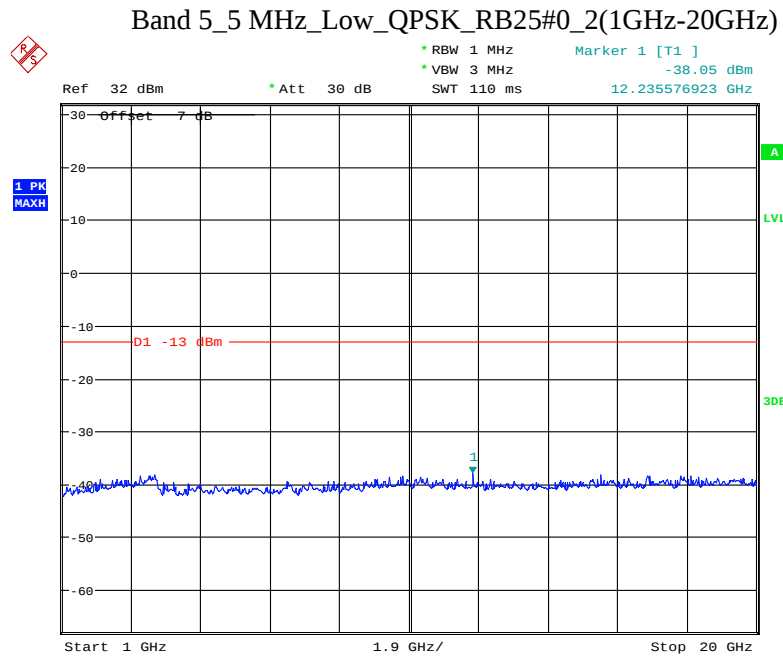
Date: 6.JAN.2021 10:25:10



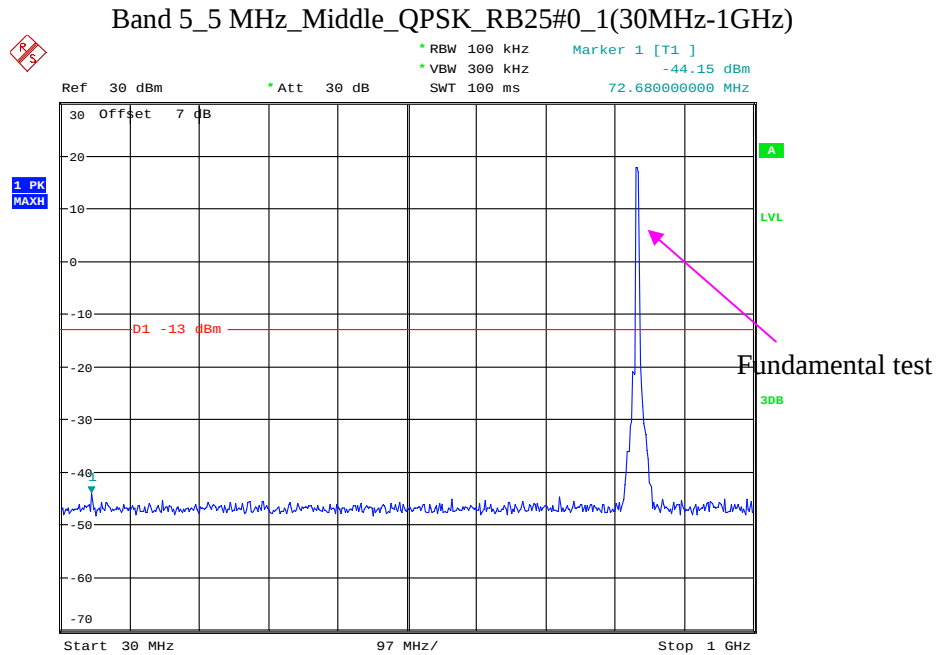
Date: 6.JAN.2021 10:25:39



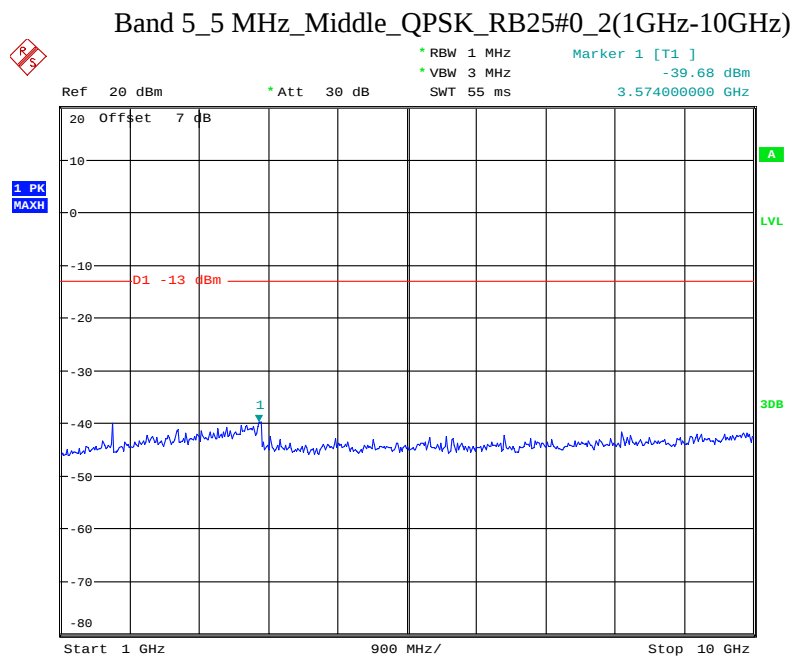
Date: 6.JAN.2021 10:27:16



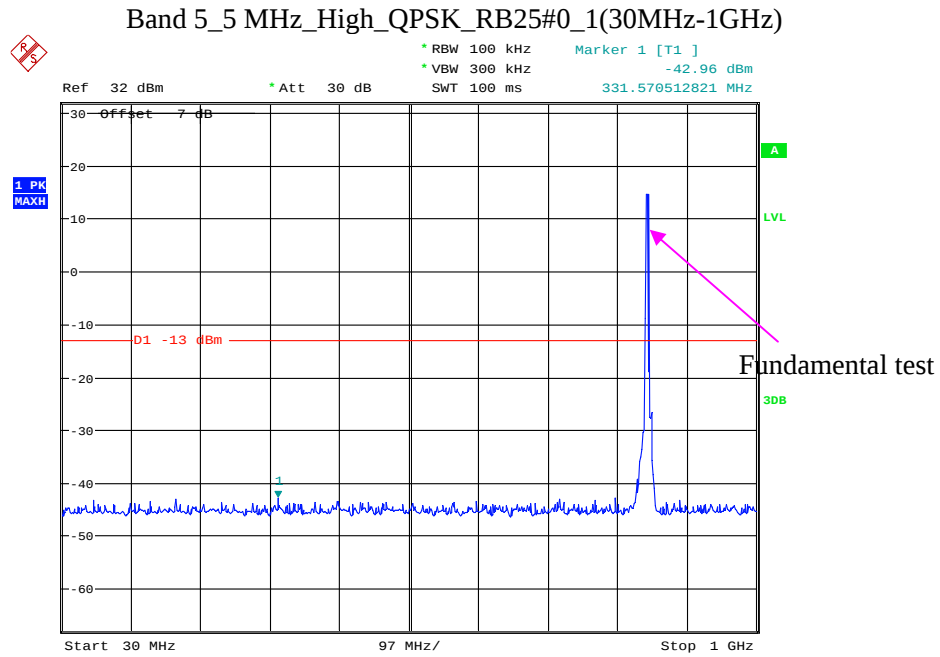
Date: 6.JAN.2021 10:27:49



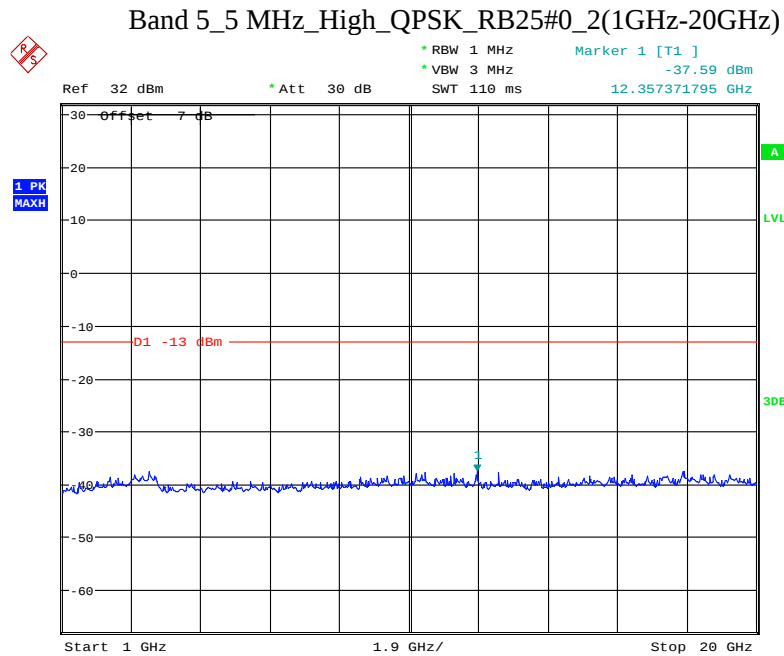
Date: 30.DEC.2020 13:58:18



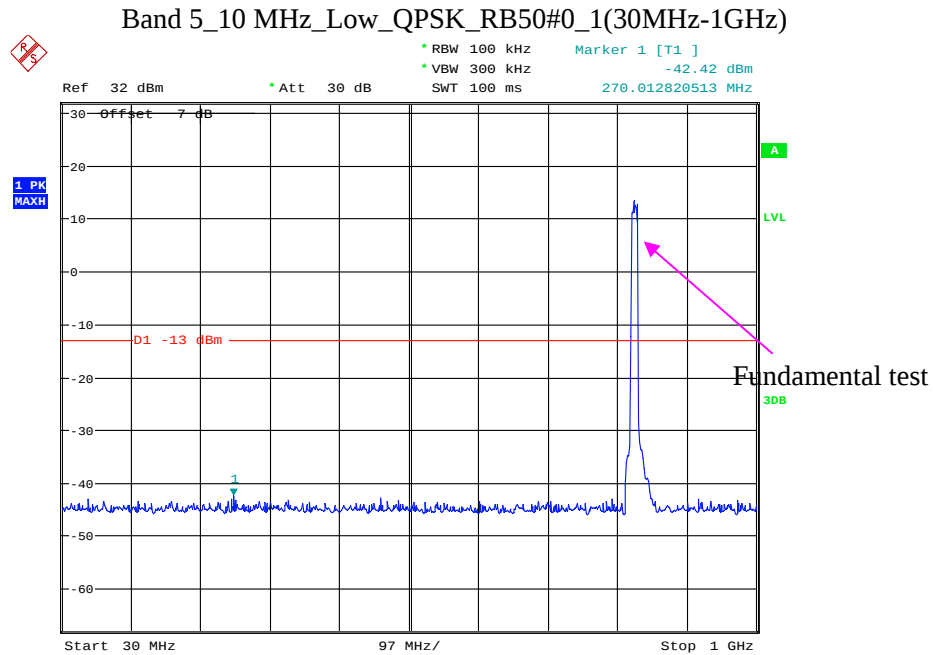
Date: 30.DEC.2020 13:58:29



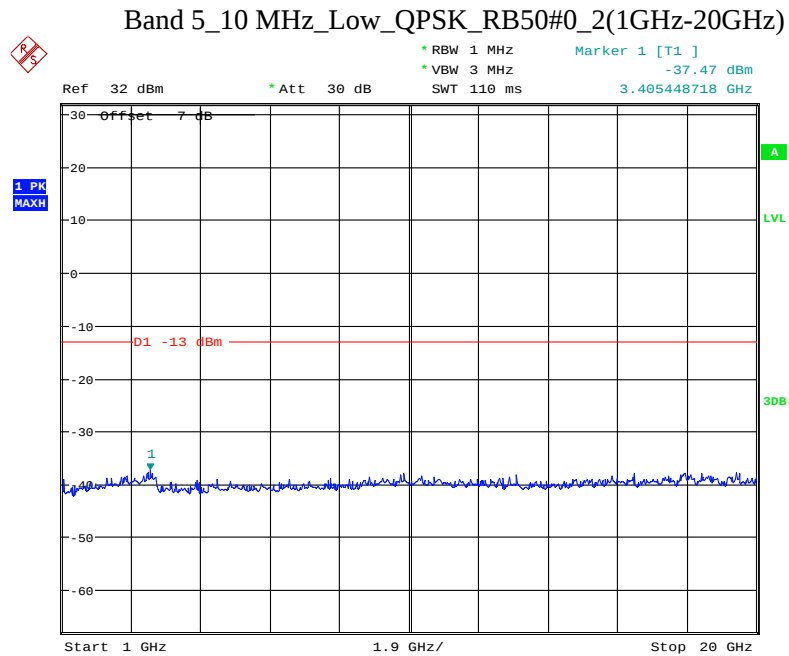
Date: 6.JAN.2021 10:29:00



Date: 6.JAN.2021 10:29:43

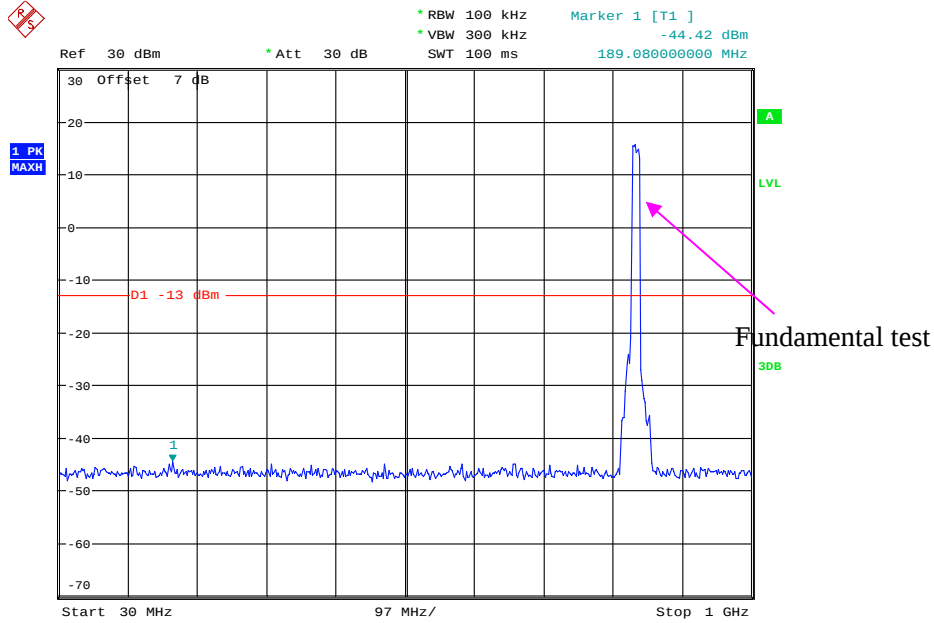


Date: 6.JAN.2021 10:30:37



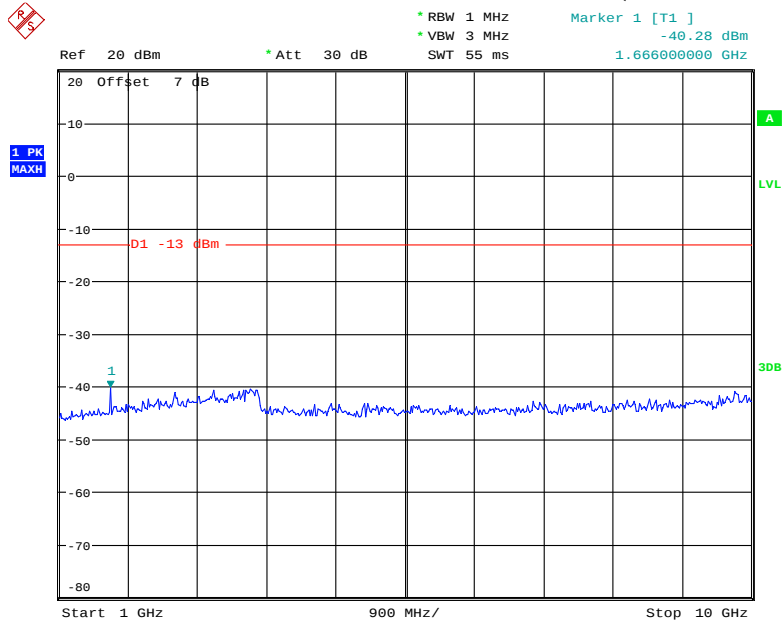
Date: 6.JAN.2021 10:31:22

Band 5_10 MHz_Middle_QPSK_RB50#0_1(30MHz-1GHz)

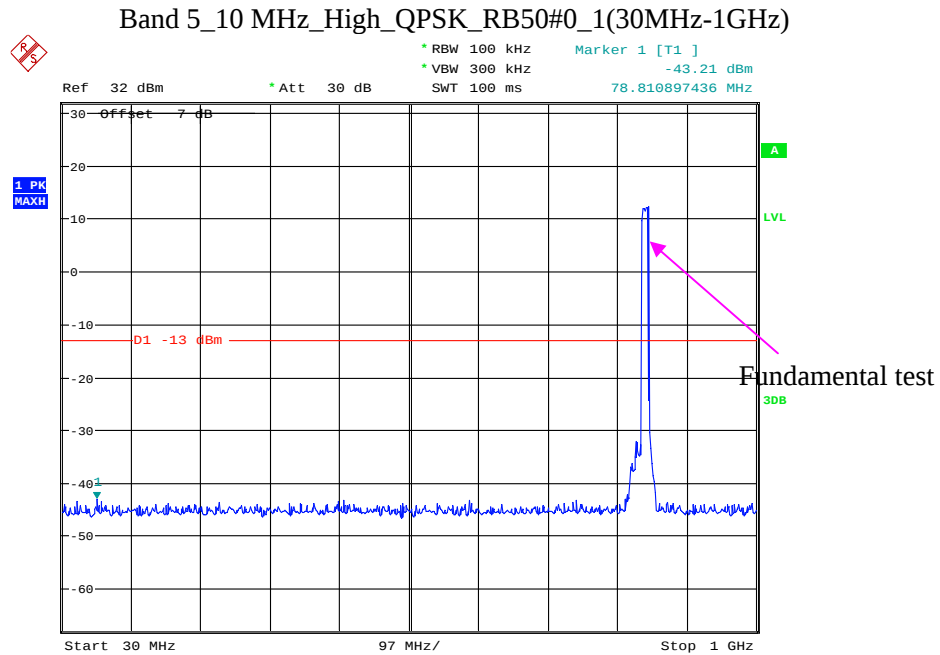


Date: 30.DEC.2020 13:58:52

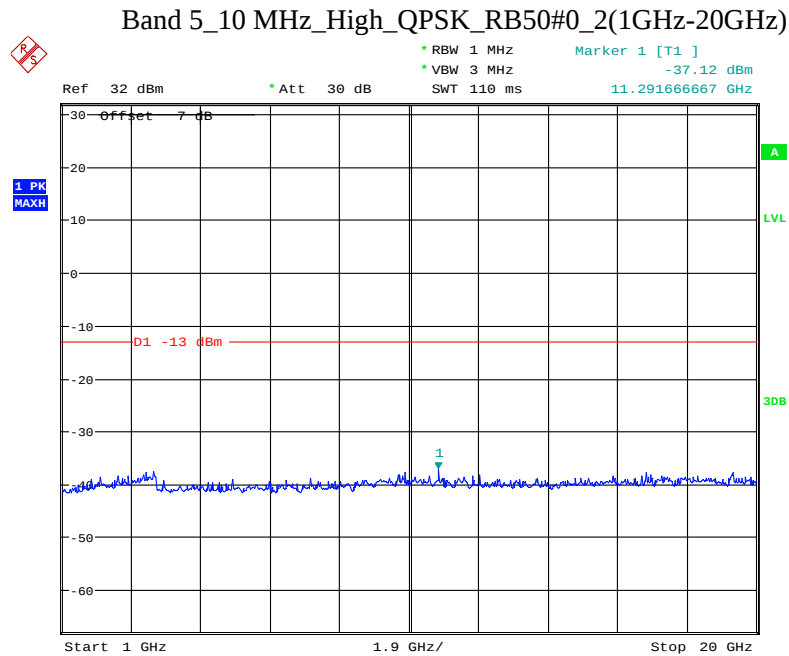
Band 5_10 MHz_Middle_QPSK_RB50#0_2(1GHz-10GHz)



Date: 30.DEC.2020 13:59:03



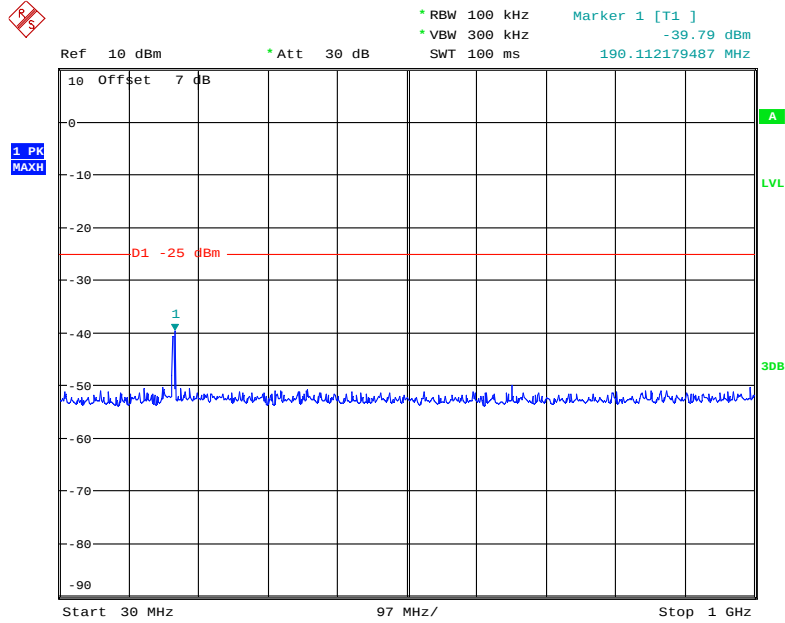
Date: 6.JAN.2021 10:32:08



Date: 6.JAN.2021 10:32:48

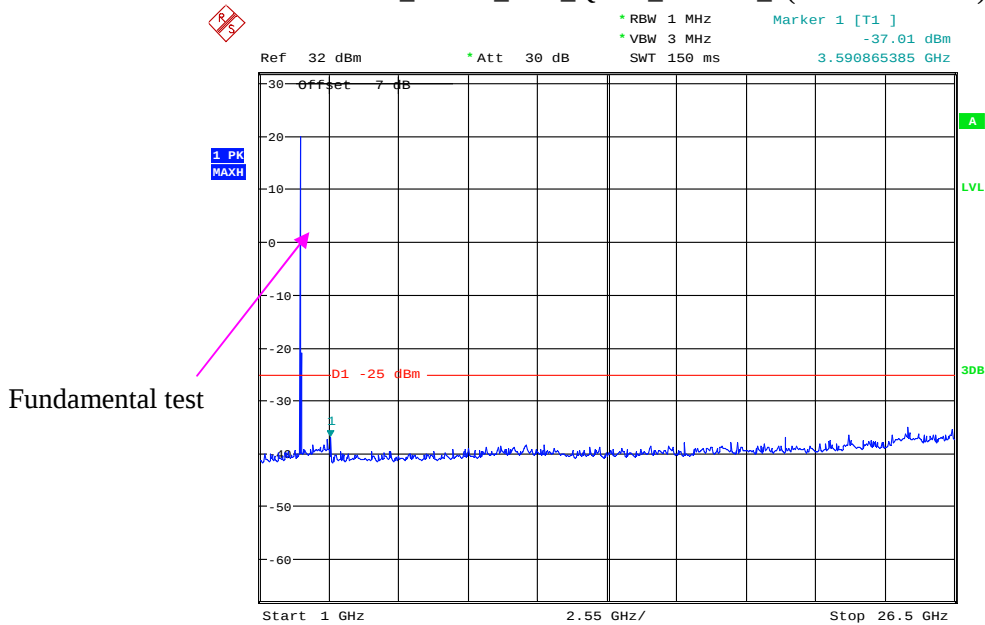
LTE Band 7:

Band 7_5 MHz_Low_QPSK_RB25#0_1(30MHz-1GHz)

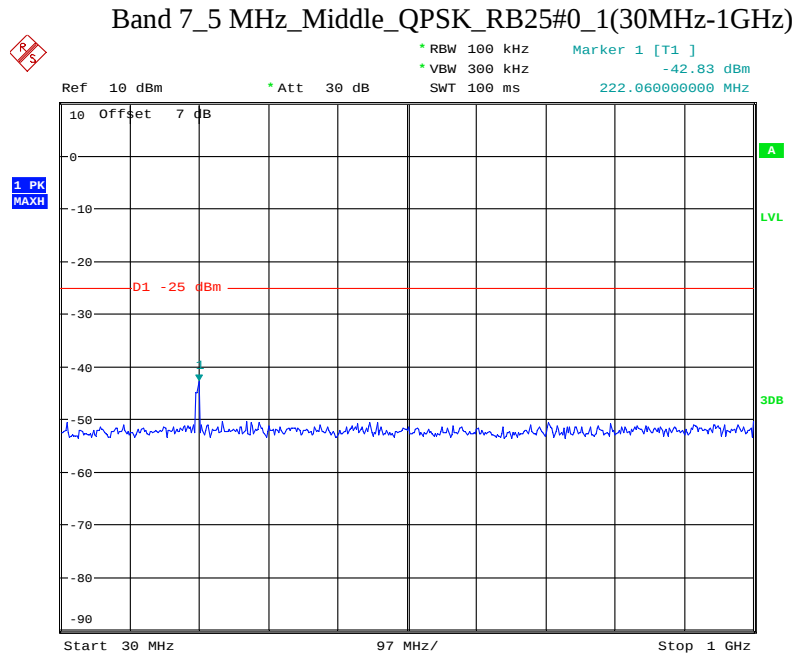


Date: 6.JAN.2021 10:35:21

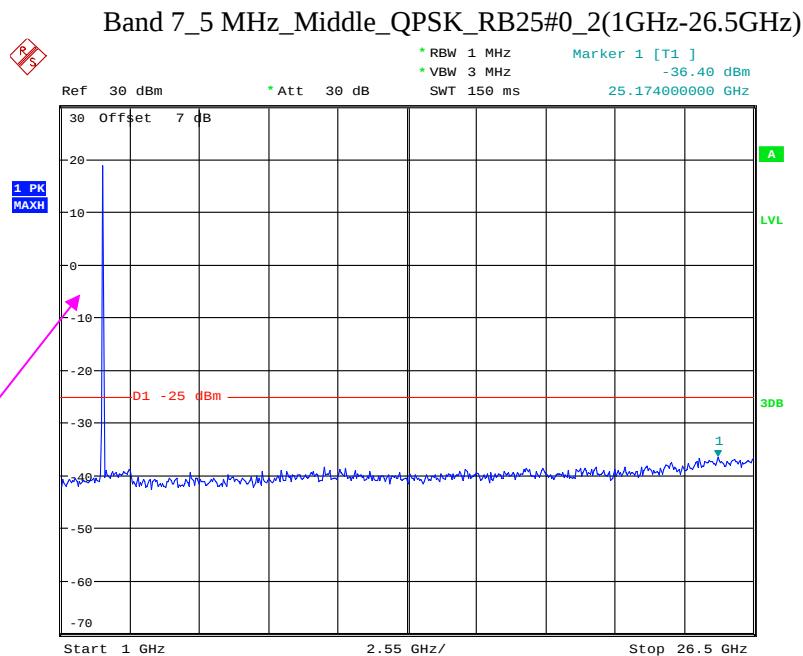
Band 7_5 MHz_Low_QPSK_RB25#0_2(1GHz-26.5GHz)



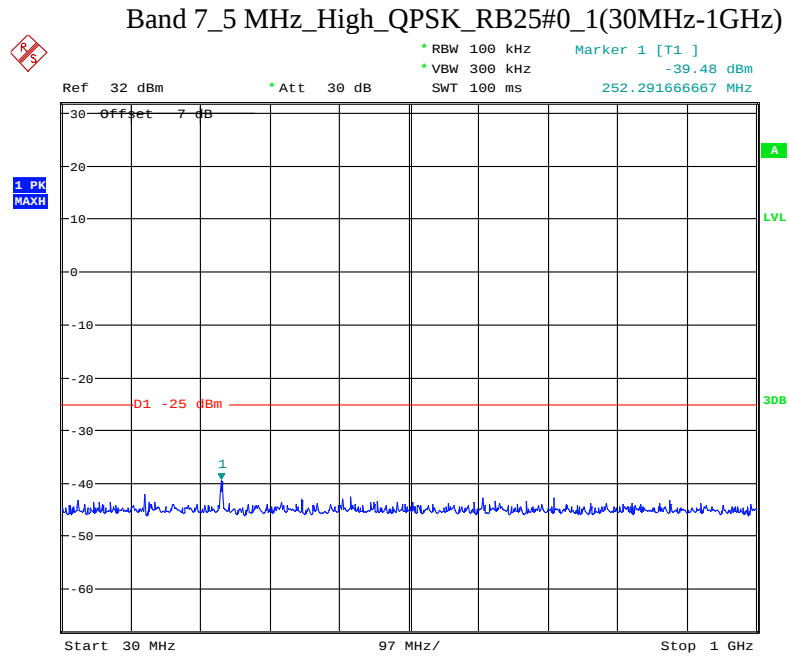
Date: 6.JAN.2021 10:36:30



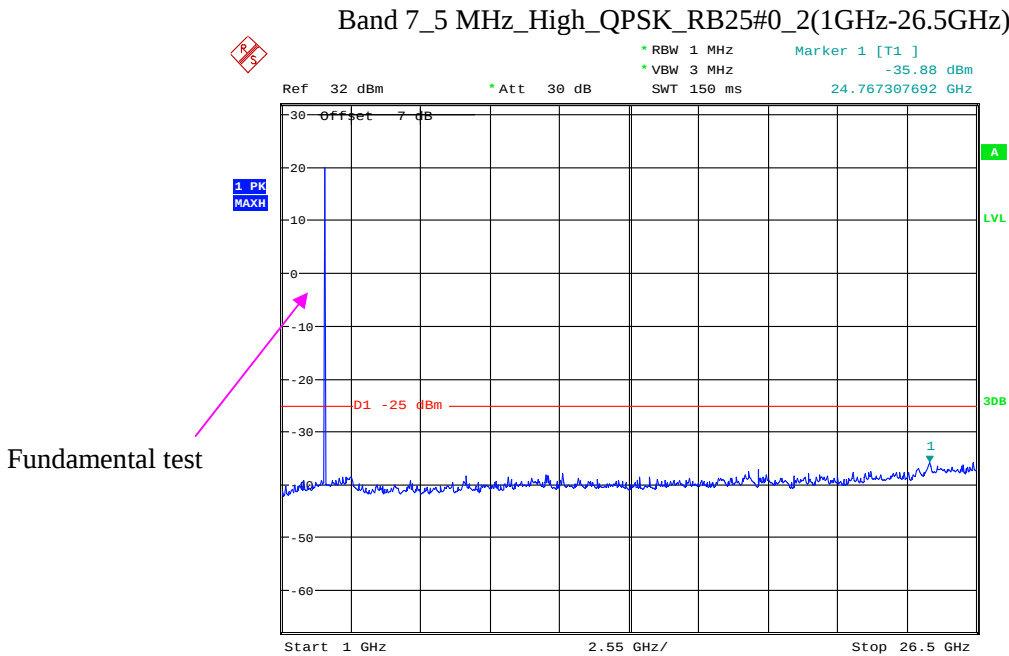
Date: 30.DEC.2020 15:08:41



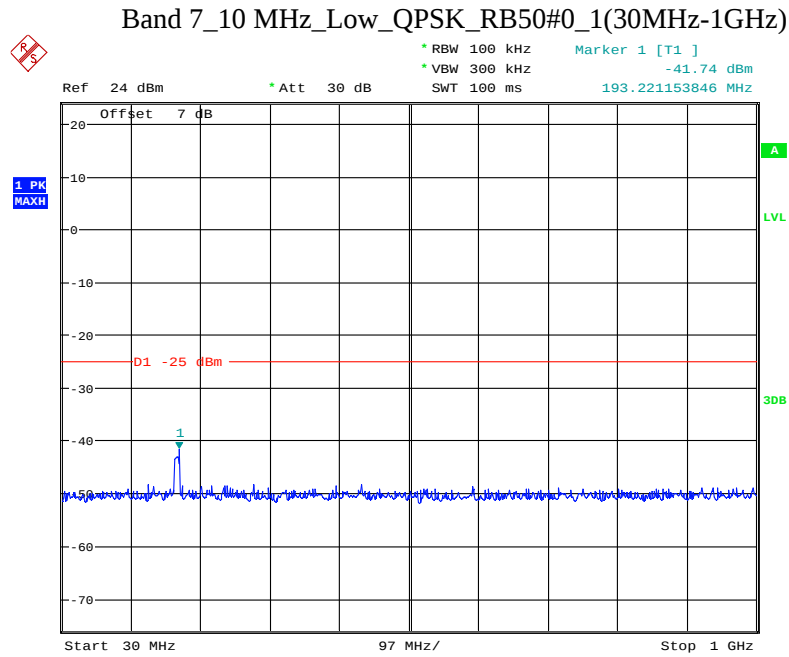
Date: 30.DEC.2020 15:08:52



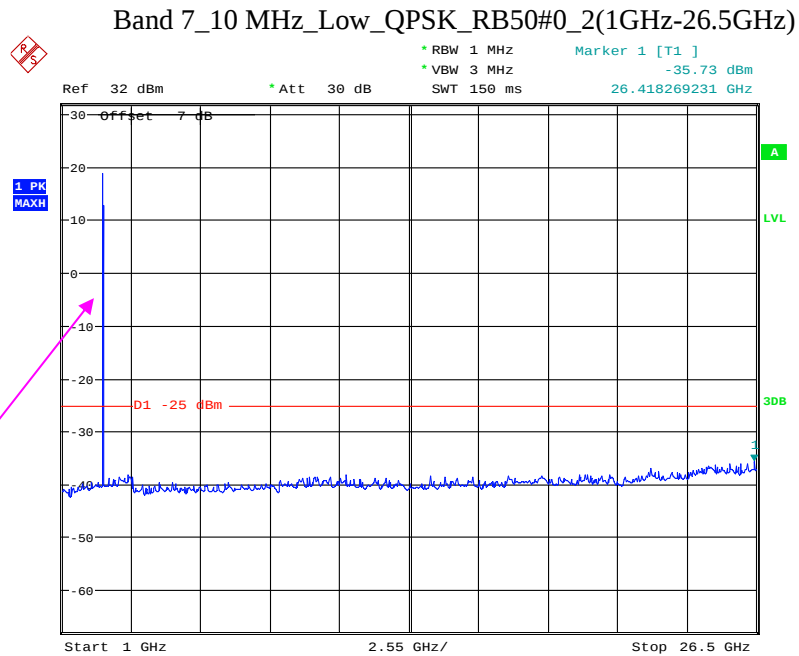
Date: 6.JAN.2021 10:37:50



Date: 6.JAN.2021 10:38:20



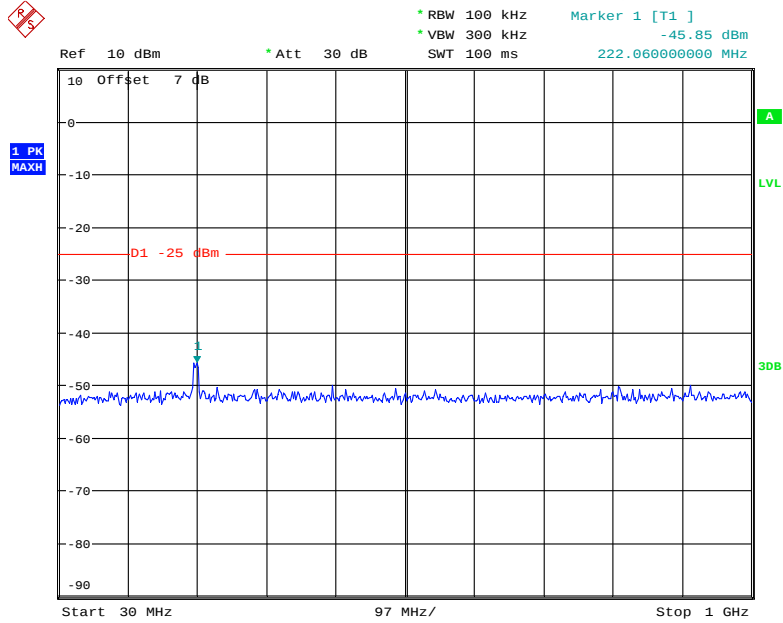
Date: 6.JAN.2021 20:46:44



Fundamental test

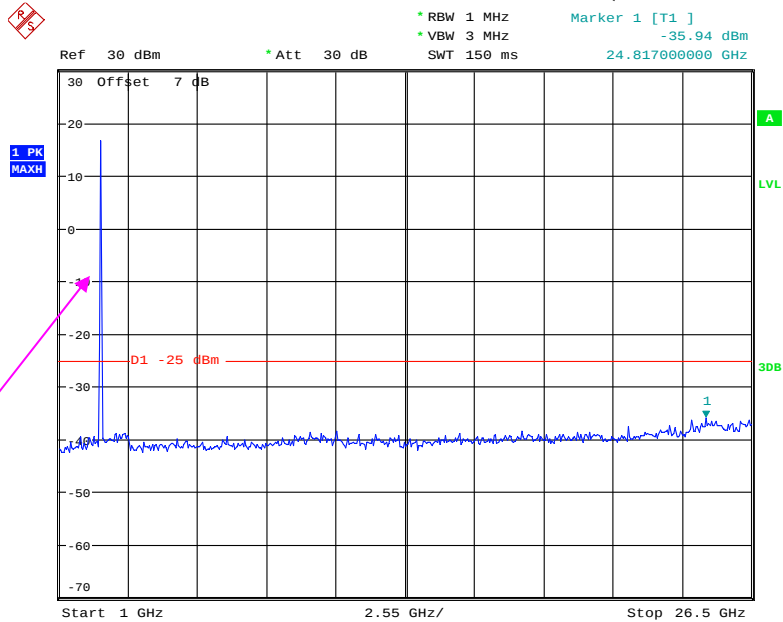
Date: 6.JAN.2021 10:41:08

Band 7_10 MHz_Middle_QPSK_RB50#0_1(30MHz-1GHz)



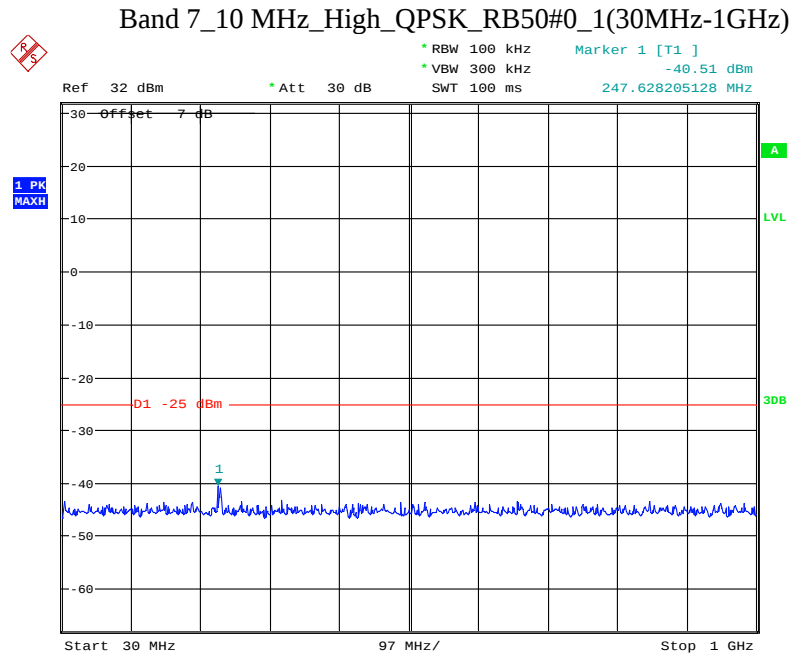
Date: 30.DEC.2020 15:09:14

Band 7_10 MHz_Middle_QPSK_RB50#0_2(1GHz-26.5GHz)

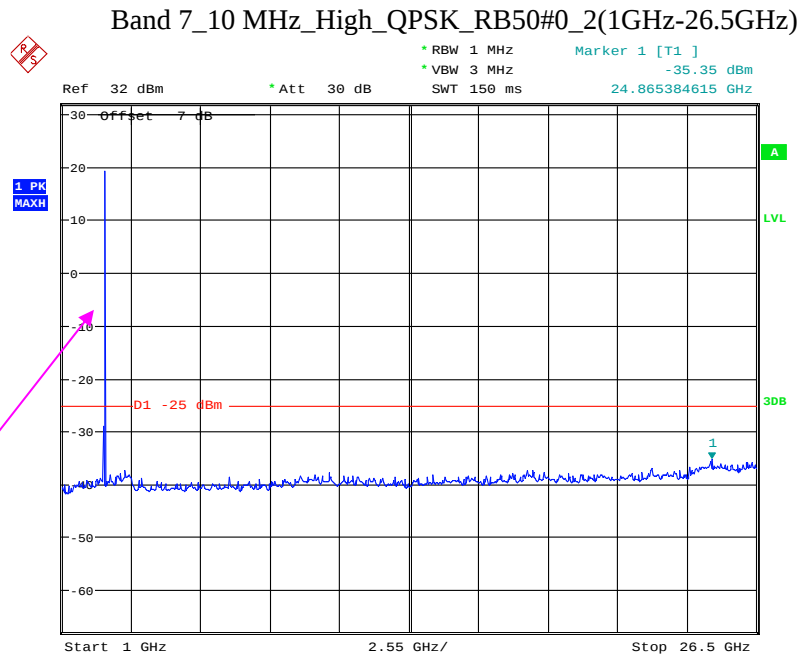


Fundamental test

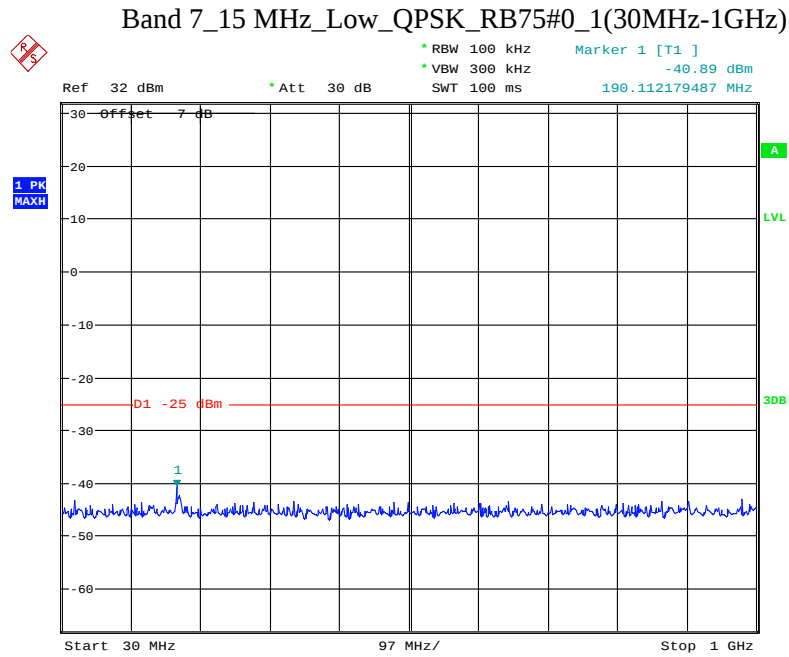
Date: 30.DEC.2020 15:09:26



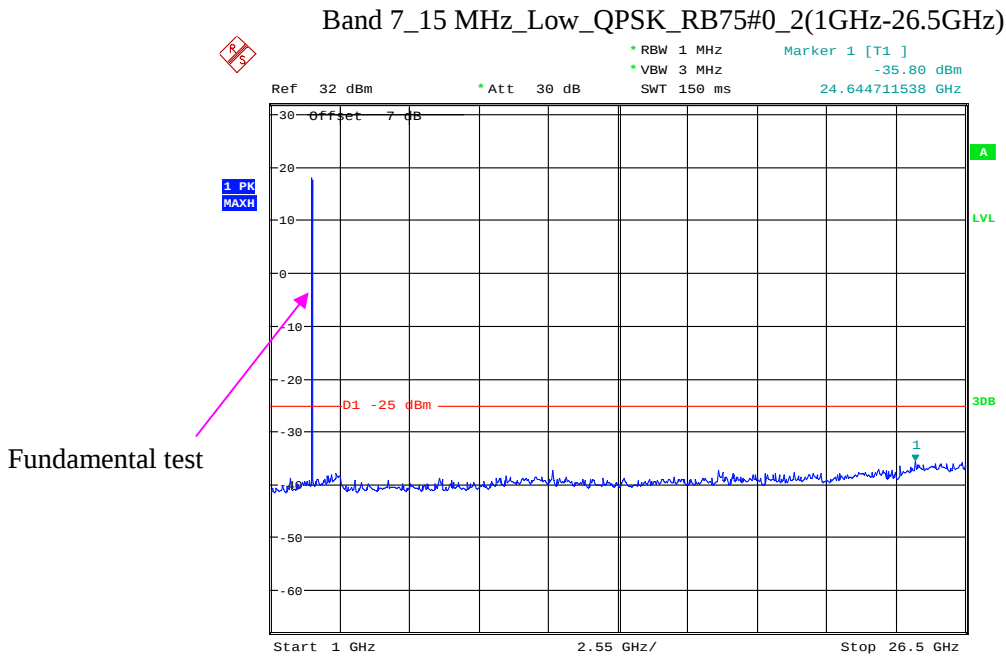
Date: 6.JAN.2021 10:42:36



Date: 6.JAN.2021 10:43:40

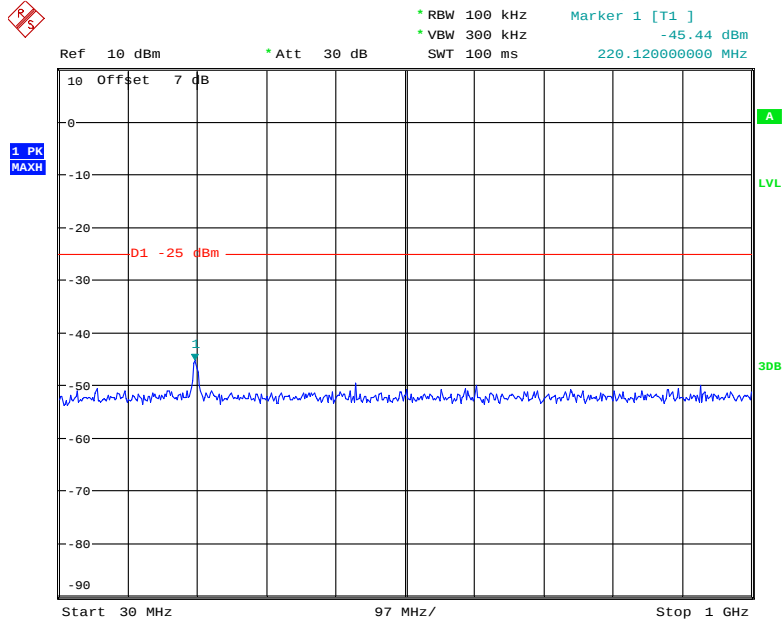


Date: 6.JAN.2021 10:46:55



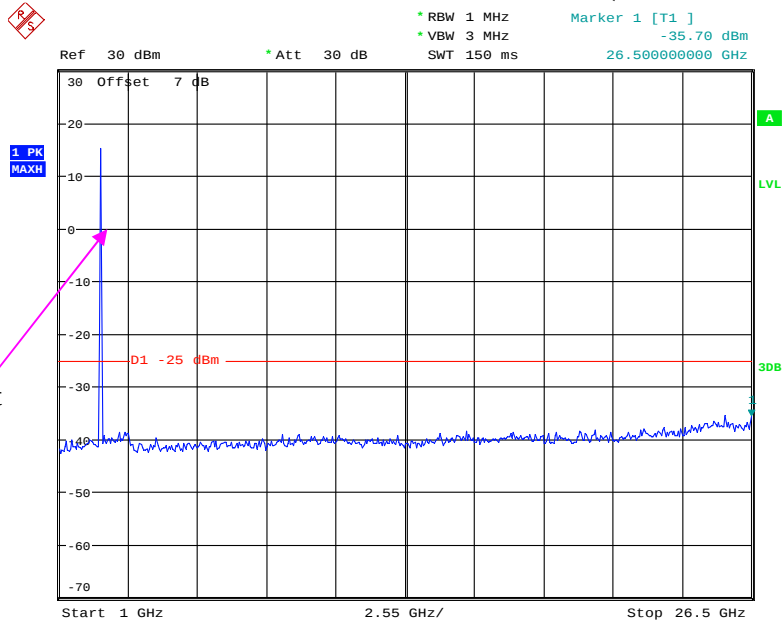
Date: 6.JAN.2021 10:47:56

Band 7_15 MHz_Middle_QPSK_RB75#0_1(30MHz-1GHz)



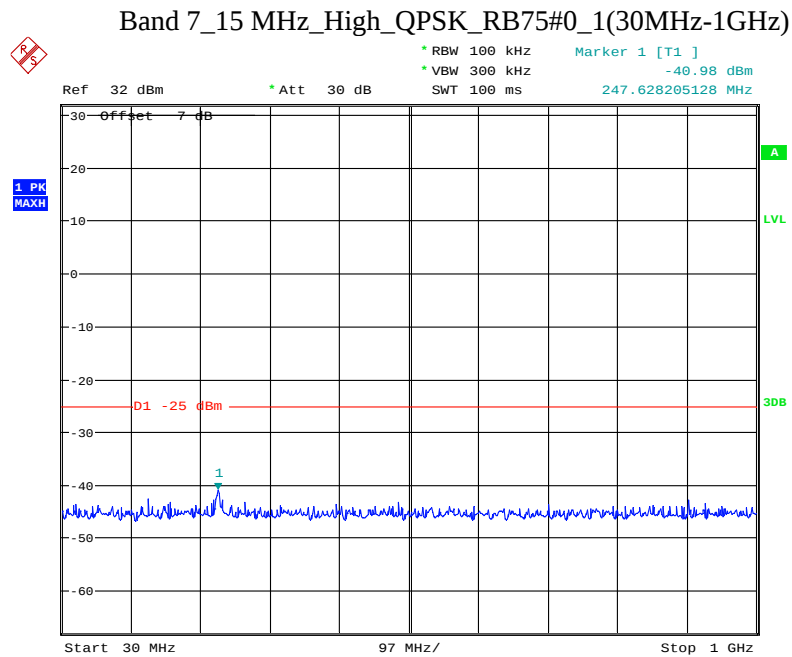
Date: 30.DEC.2020 15:09:51

Band 7_15 MHz_Middle_QPSK_RB75#0_2(1GHz-26.5GHz)

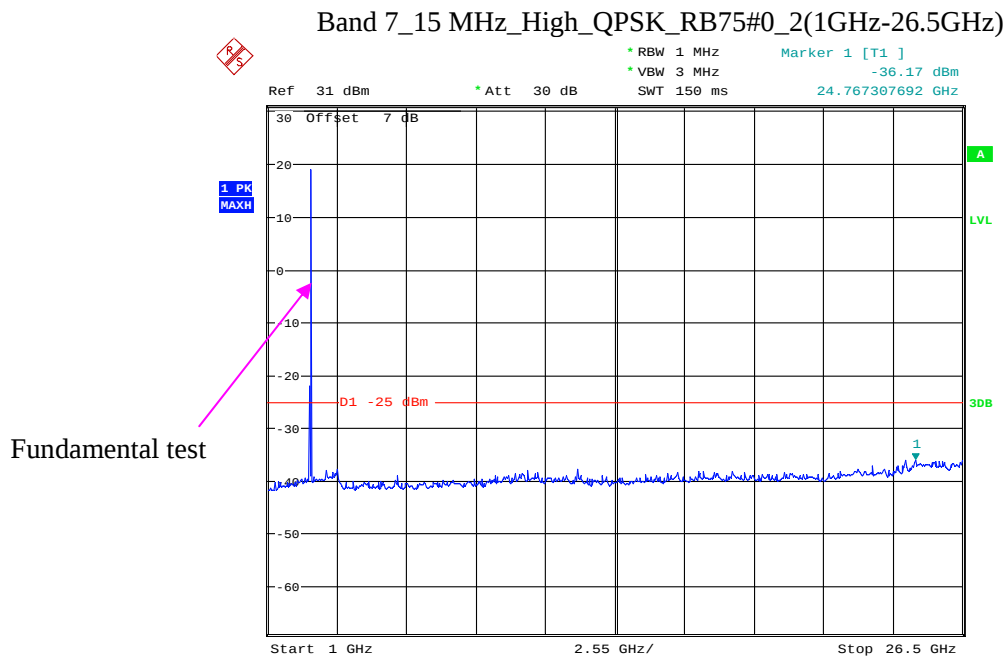


Fundamental test

Date: 30.DEC.2020 15:10:02

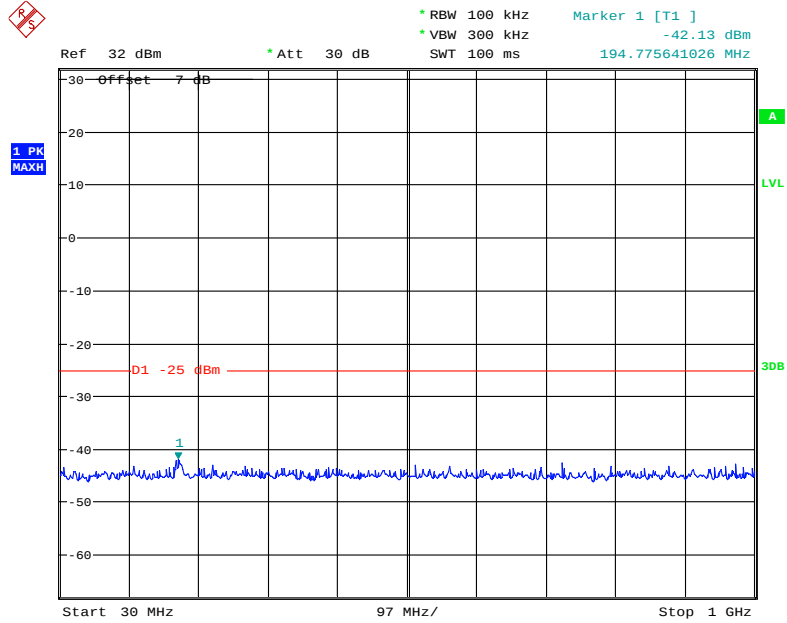


Date: 6.JAN.2021 11:02:05



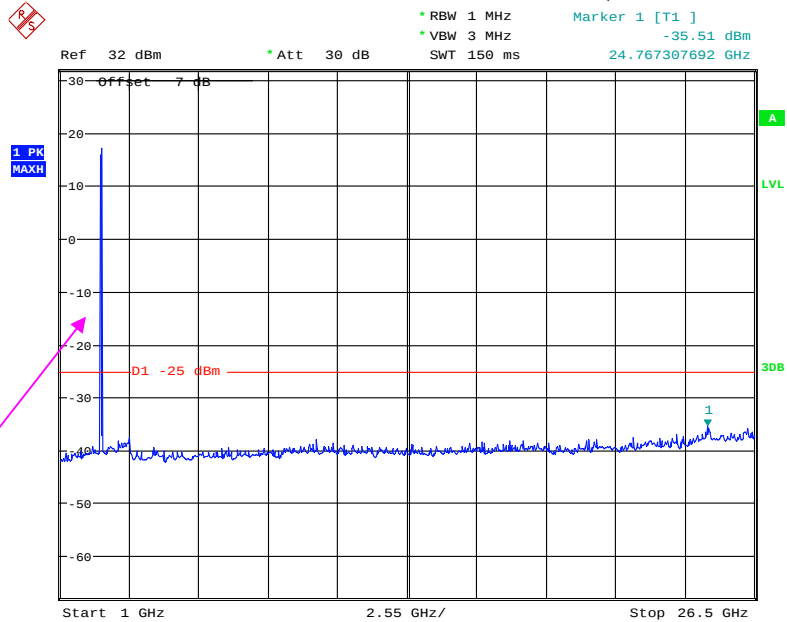
Date: 6.JAN.2021 20:48:47

Band 7_20 MHz_Low_QPSK_RB100#0_1(30MHz-1GHz)



Date: 6.JAN.2021 11:04:38

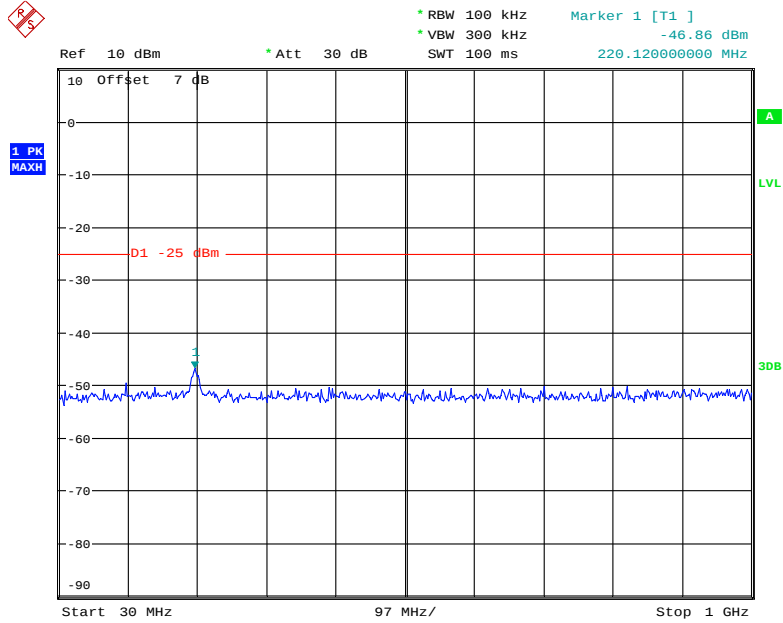
Band 7_20 MHz_Low_QPSK_RB100#0_2(1GHz-26.5GHz)



Fundamental test

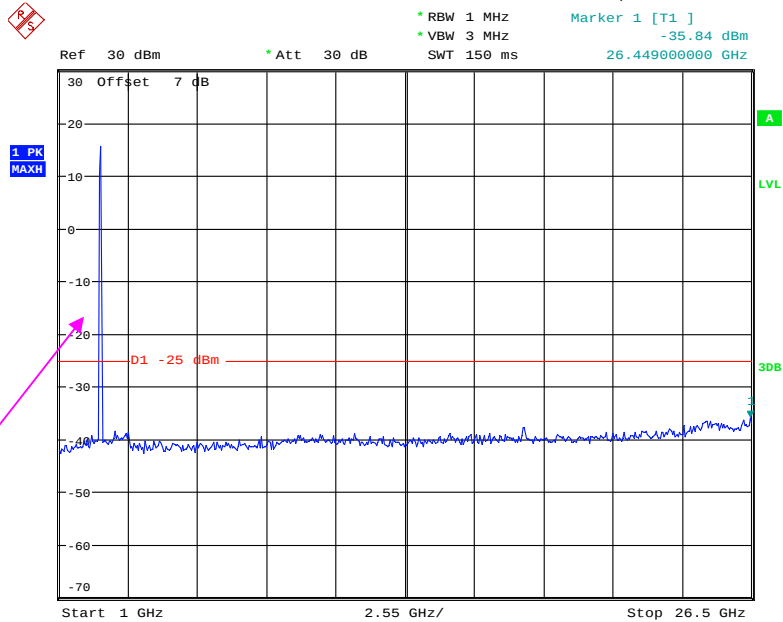
Date: 6.JAN.2021 11:05:25

Band 7_20 MHz_Middle_QPSK_RB100#0_1(30MHz-1GHz)



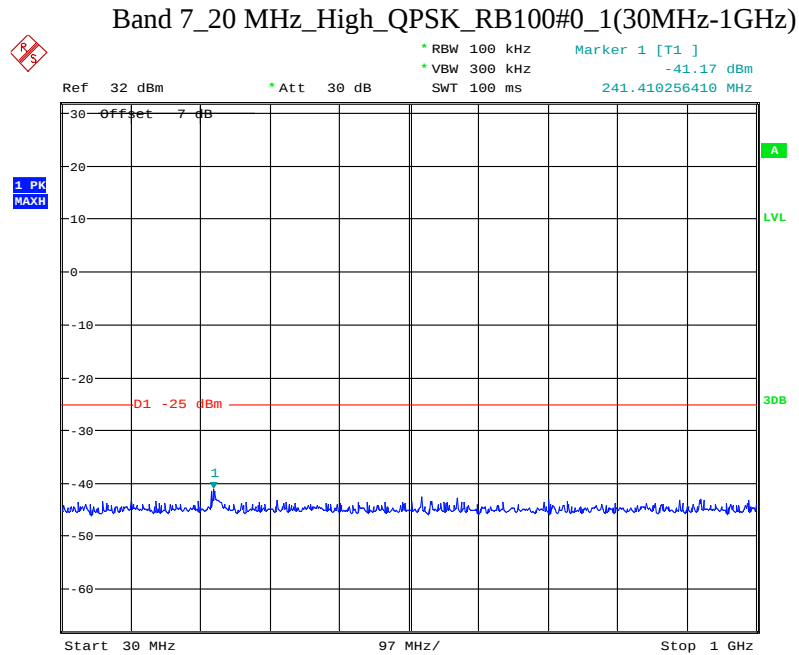
Date: 30.DEC.2020 15:10:33

Band 7_20 MHz_Middle_QPSK_RB100#0_2(1GHz-26.5GHz)

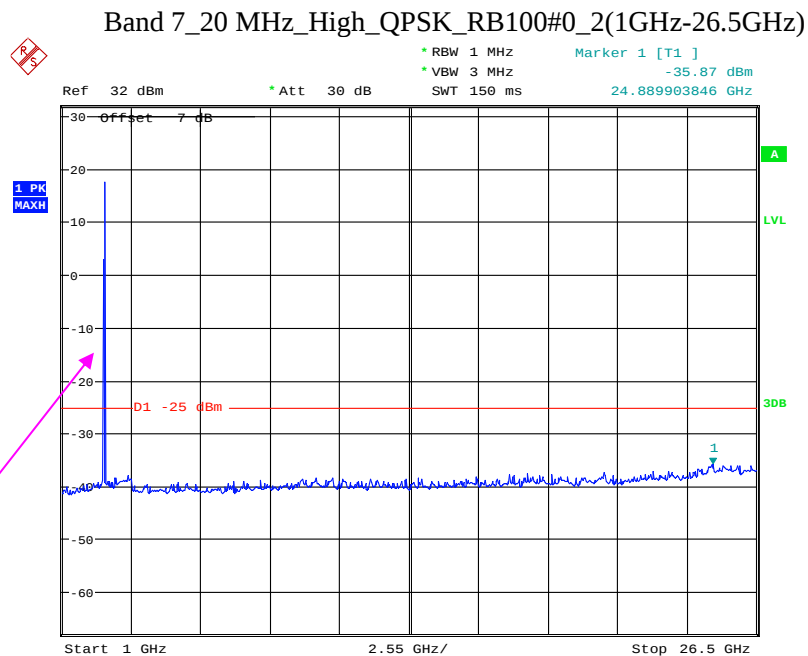


Fundamental test

Date: 30.DEC.2020 15:10:44



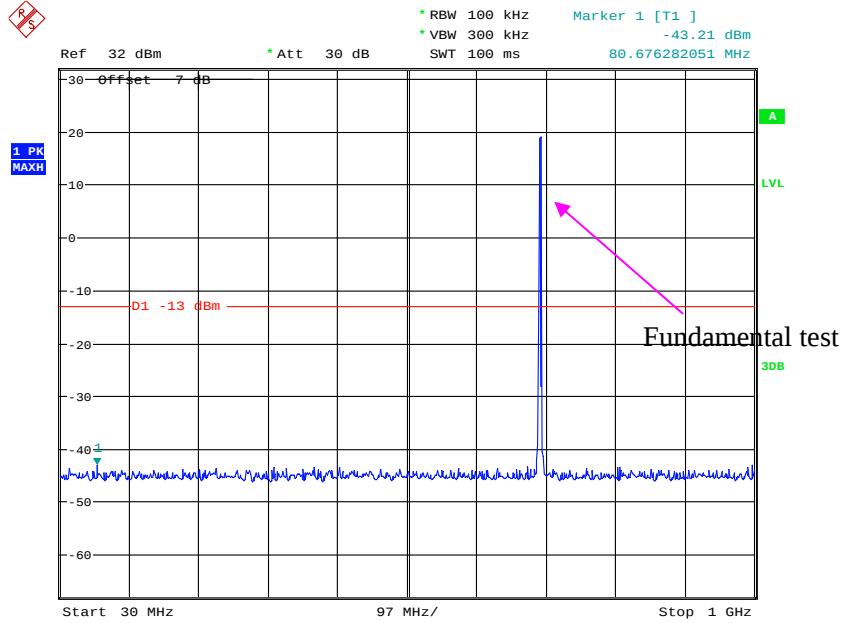
Date: 6.JAN.2021 11:07:14



Date: 6.JAN.2021 11:08:03

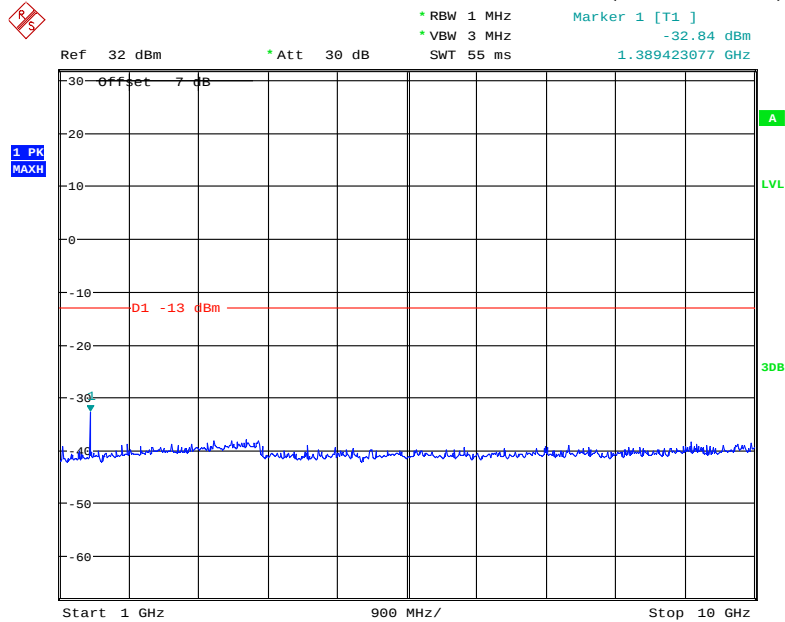
LTE Band 12:

Band 12_1.4 MHz_Low_QPSK_RB6#0_1(30MHz-1GHz)

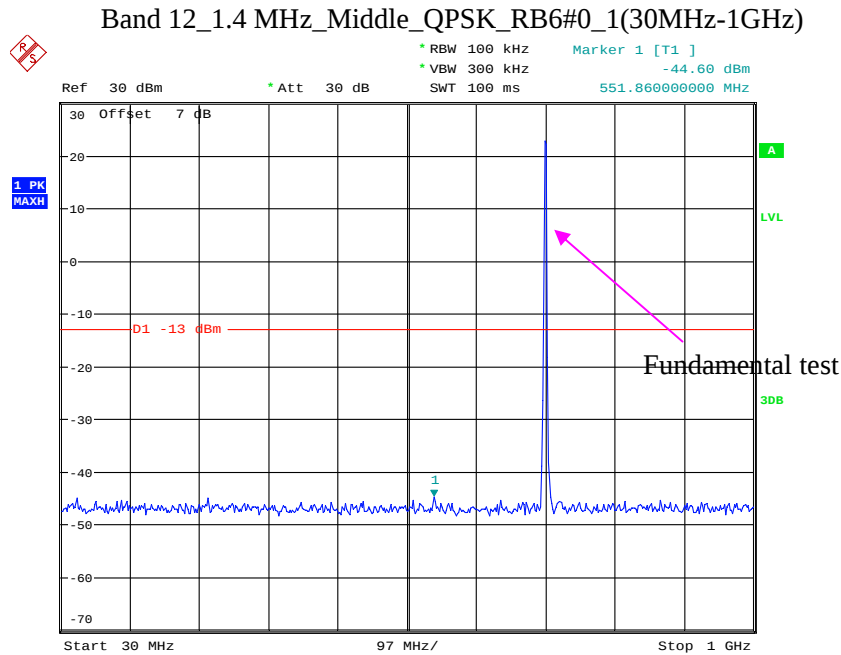


Date: 6.JAN.2021 11:18:28

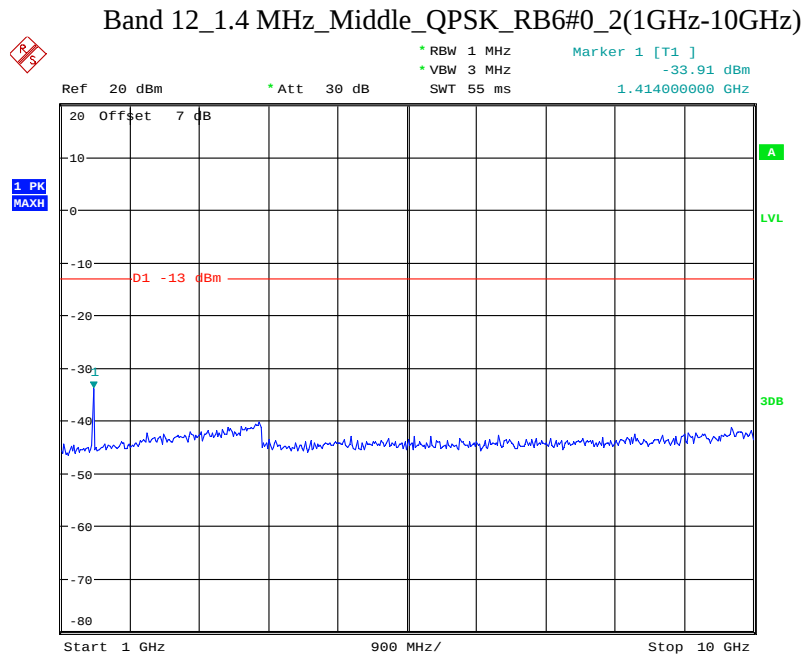
Band 12_1.4 MHz_Low_QPSK_RB6#0_2(1GHz-10GHz)



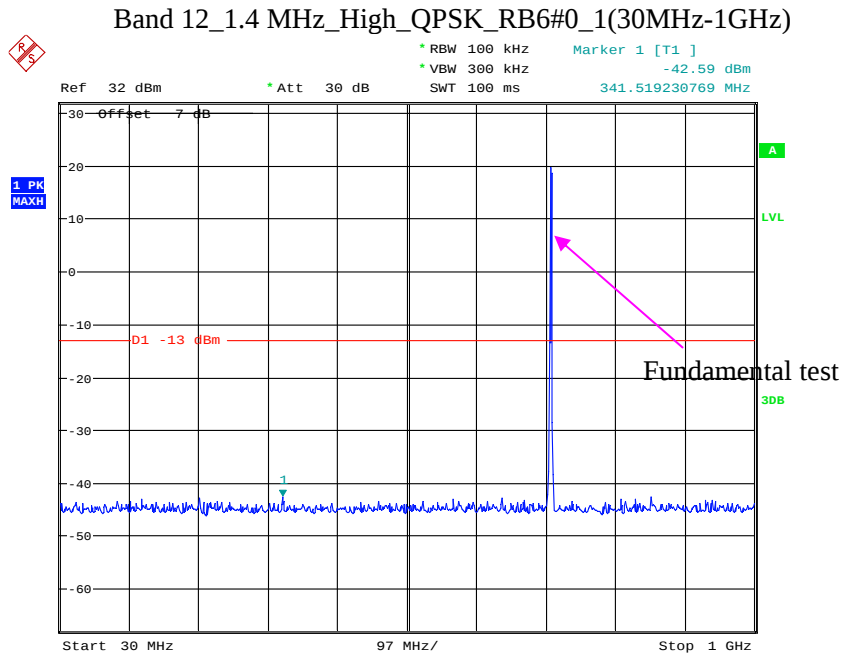
Date: 6.JAN.2021 13:20:50



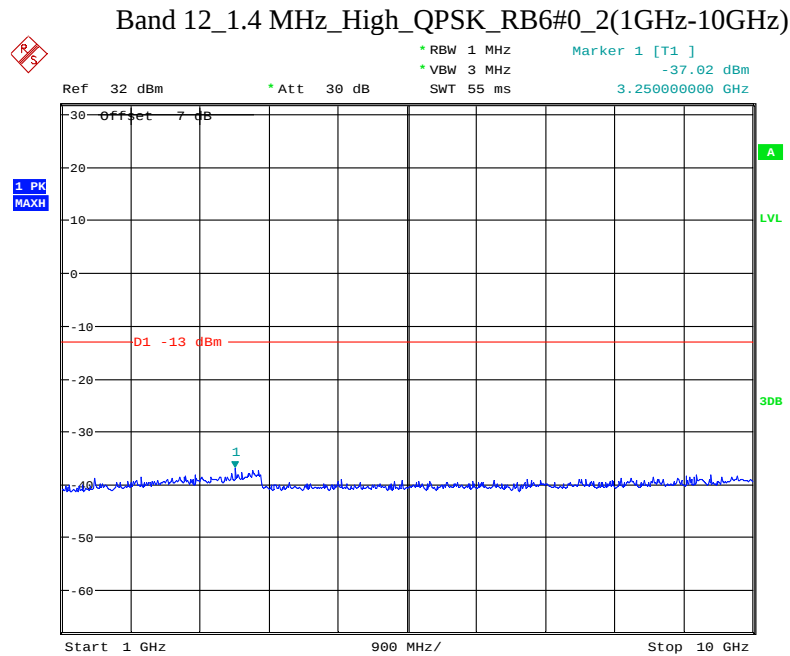
Date: 30.DEC.2020 15:11:12



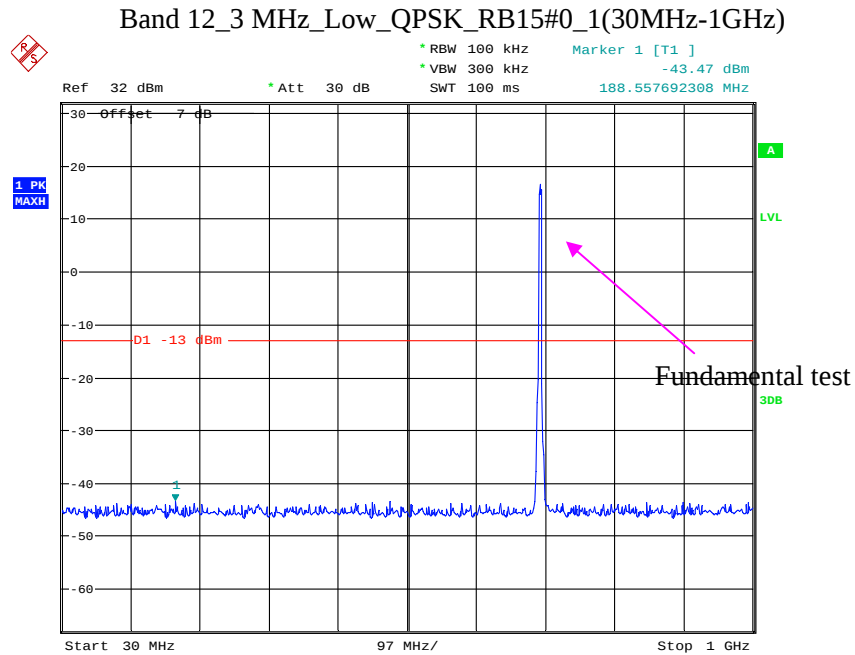
Date: 30.DEC.2020 15:11:23



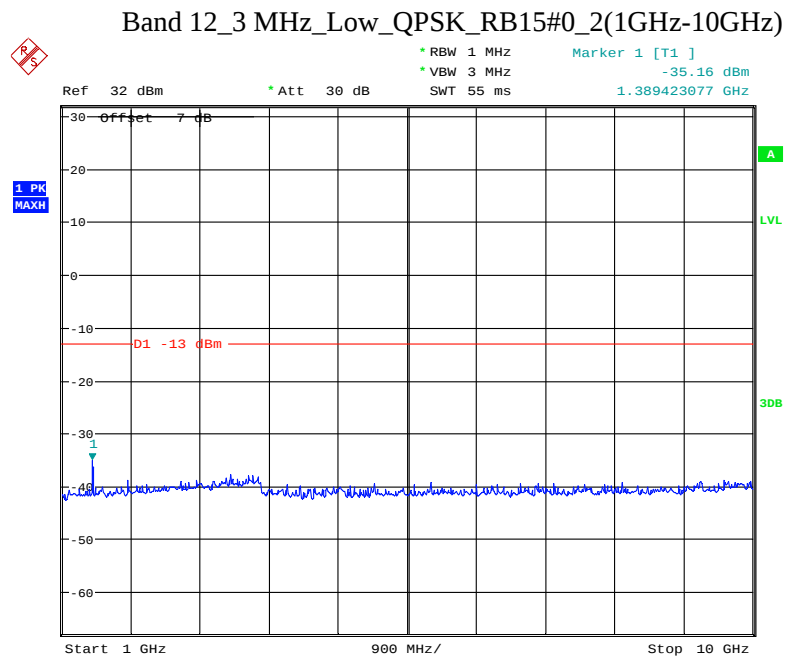
Date: 6.JAN.2021 11:21:22



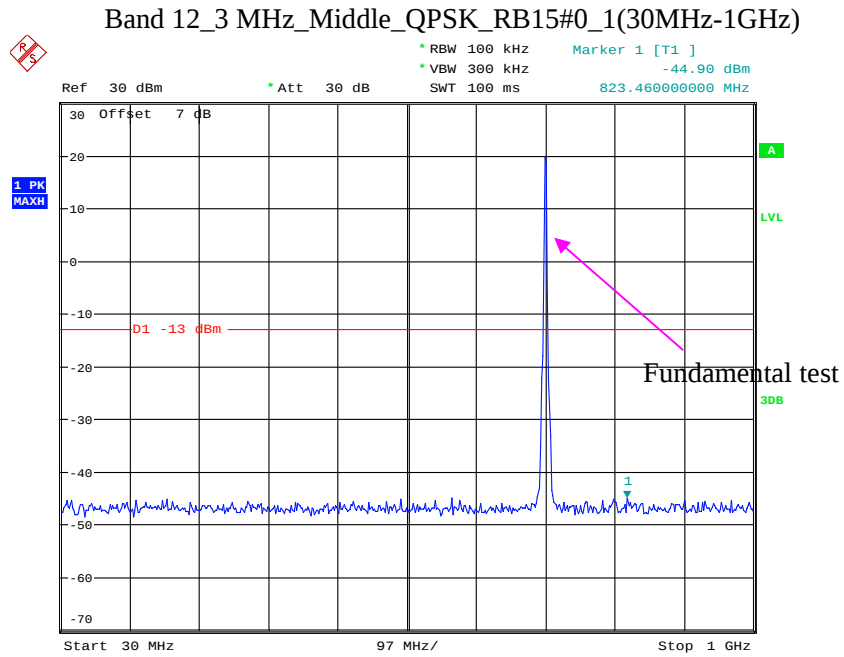
Date: 6.JAN.2021 13:23:04



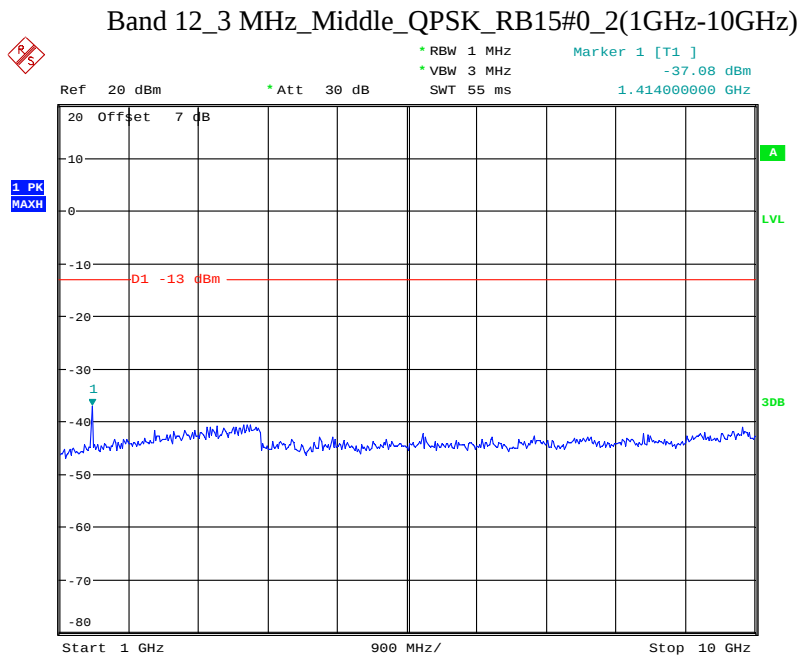
Date: 6.JAN.2021 11:23:16



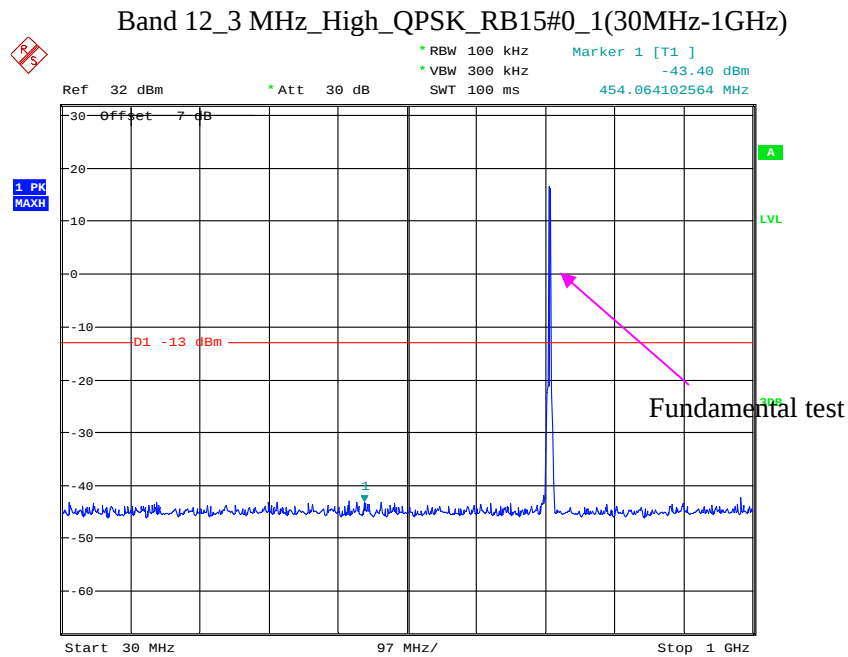
Date: 6.JAN.2021 13:24:16



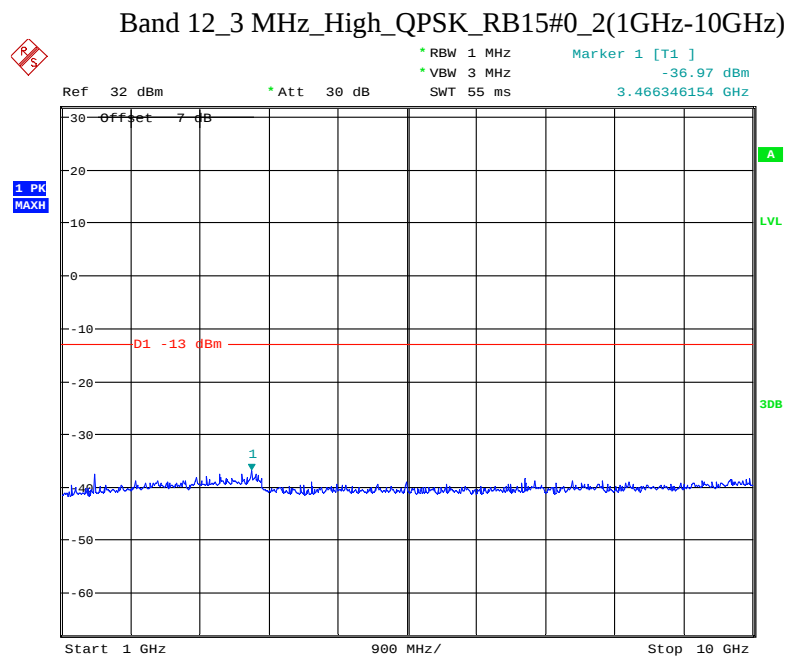
Date: 30.DEC.2020 15:11:42



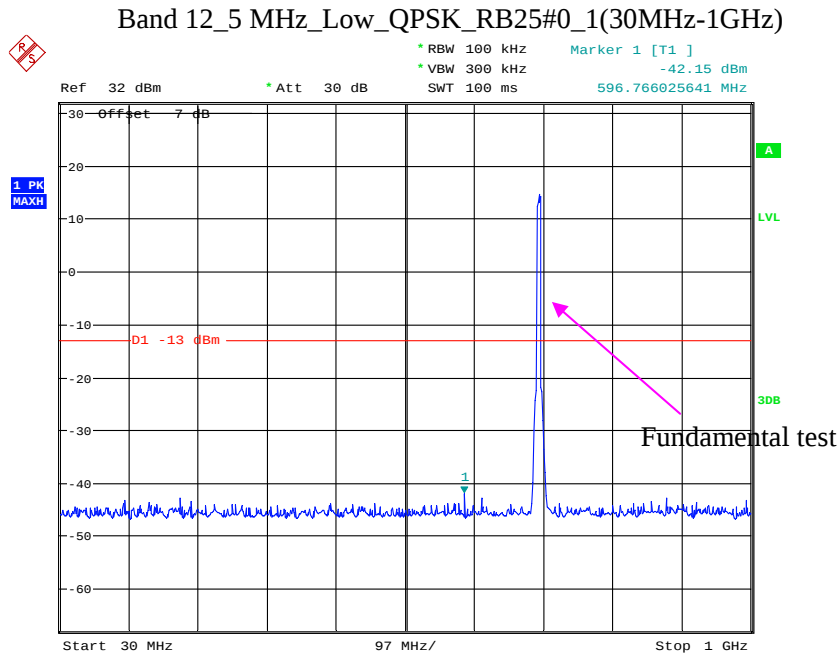
Date: 30.DEC.2020 15:11:53



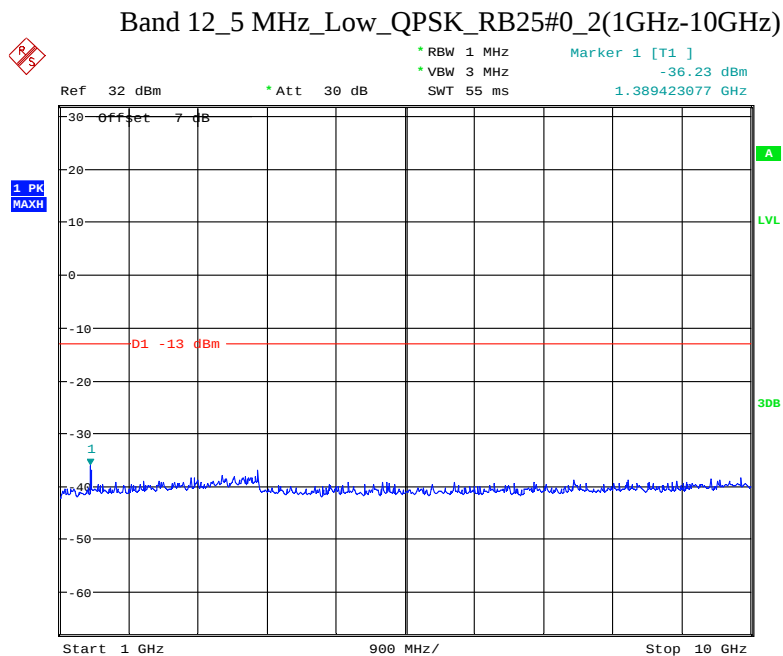
Date: 6.JAN.2021 11:24:57



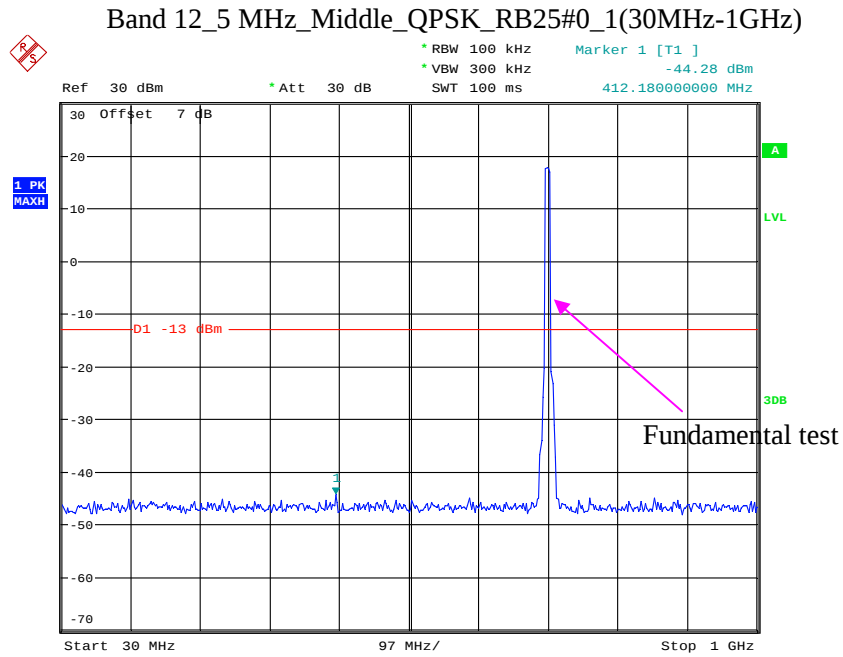
Date: 6.JAN.2021 13:27:00



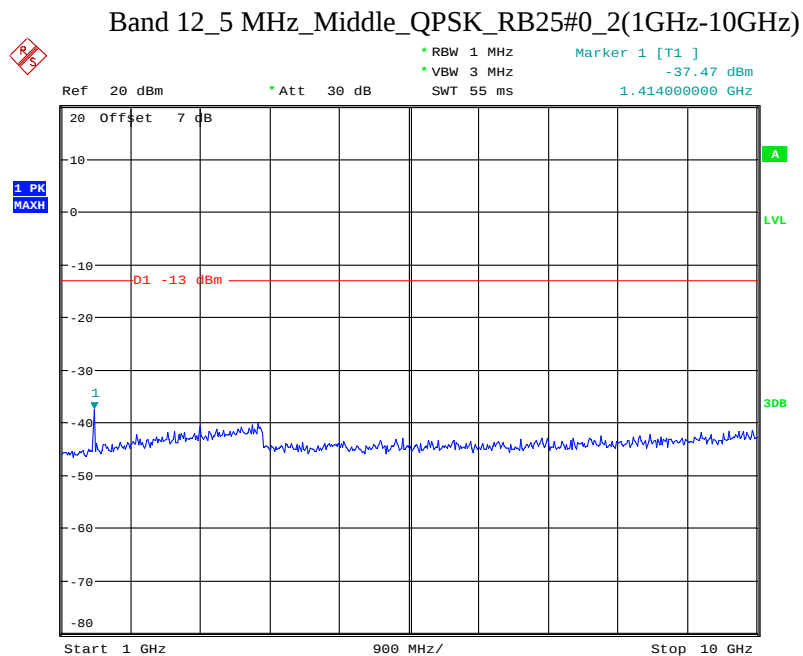
Date: 6.JAN.2021 11:26:45



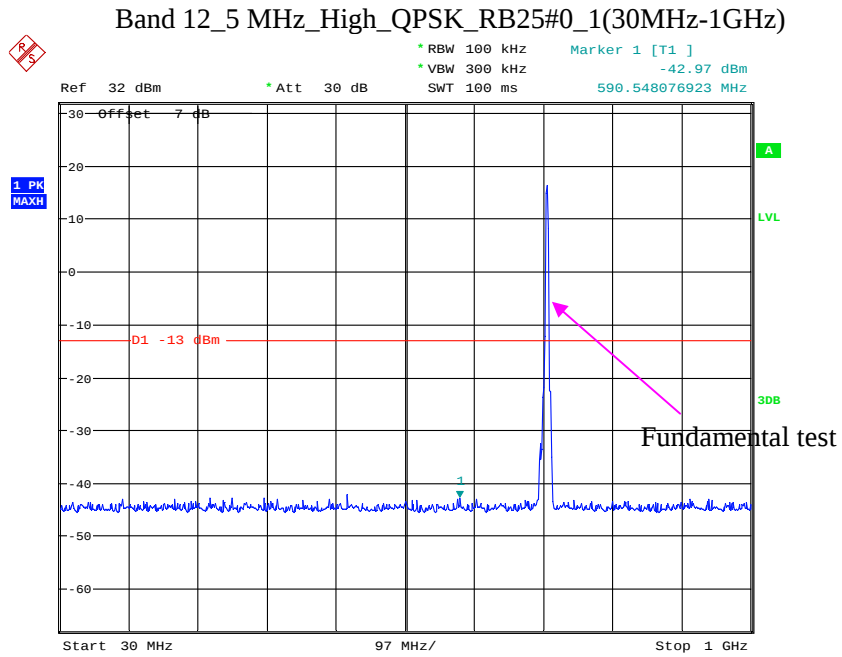
Date: 6.JAN.2021 13:27:55



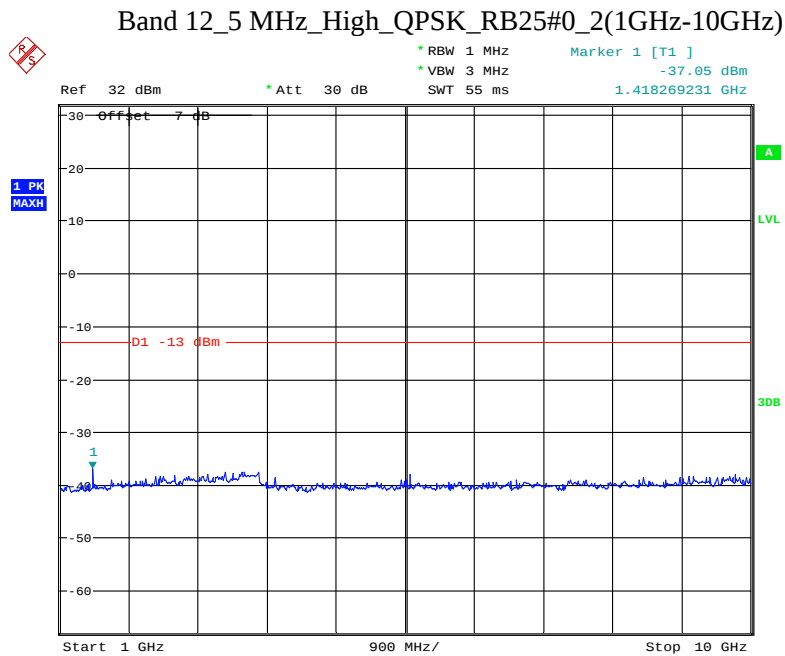
Date: 30.DEC.2020 15:12:15



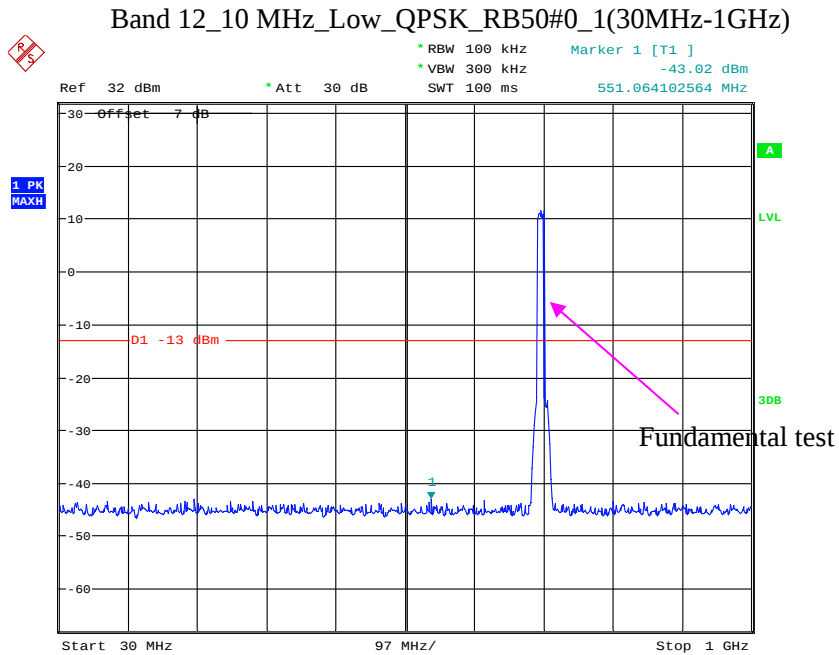
Date: 30.DEC.2020 15:12:26



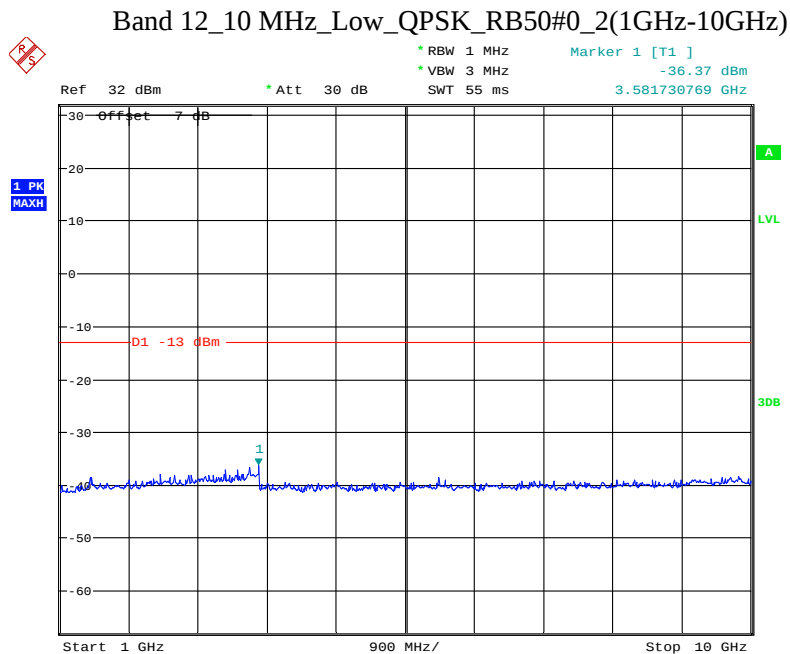
Date: 6.JAN.2021 11:29:11



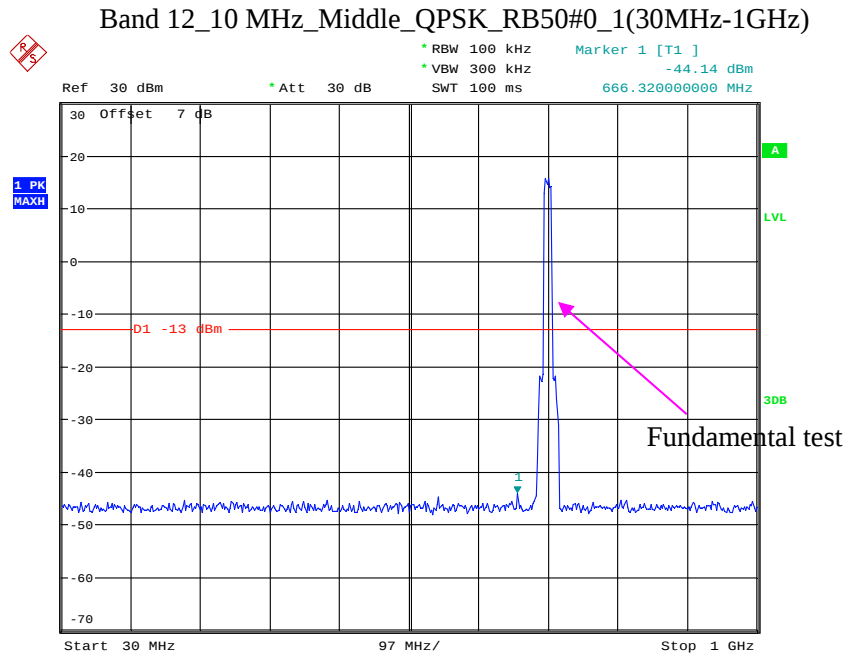
Date: 6.JAN.2021 13:30:03



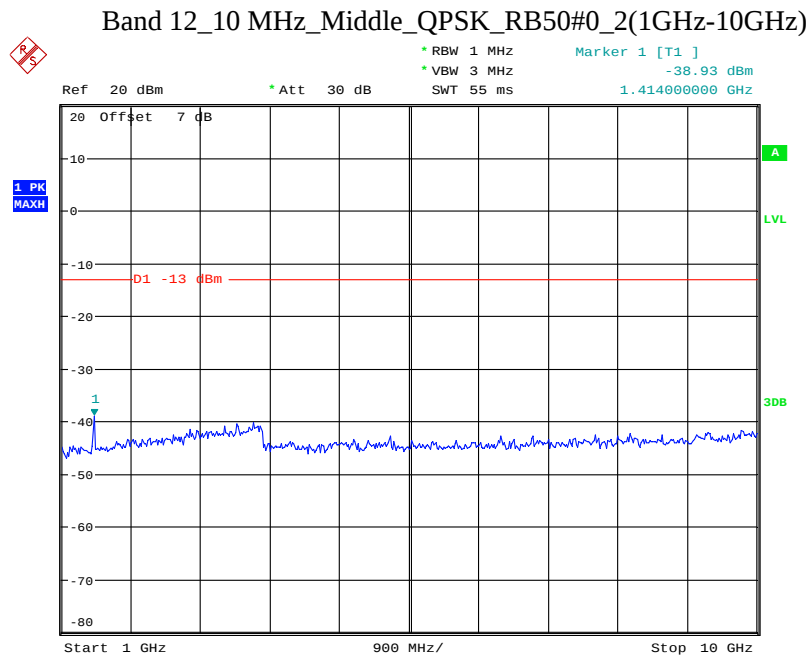
Date: 6.JAN.2021 11:30:35



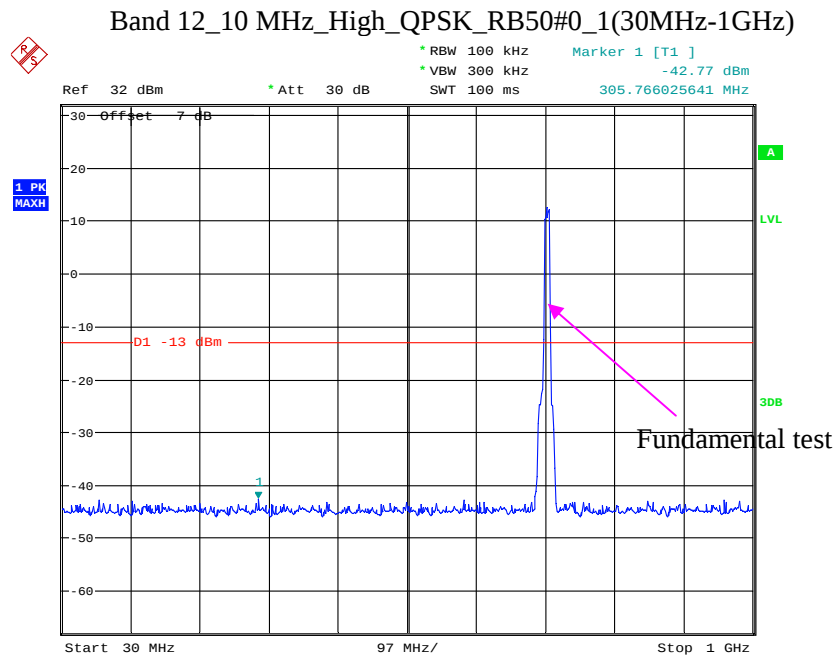
Date: 6.JAN.2021 13:34:11



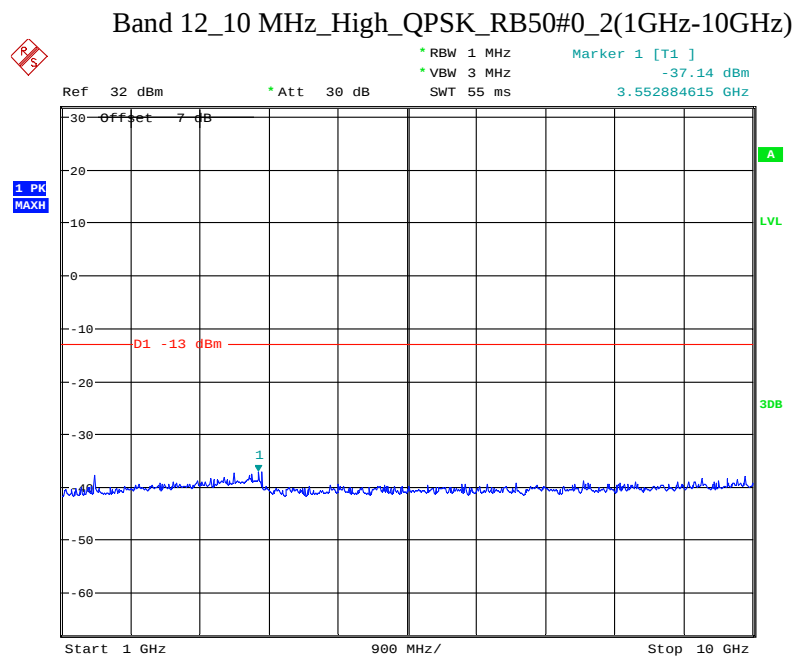
Date: 30.DEC.2020 15:12:49



Date: 30.DEC.2020 15:13:00

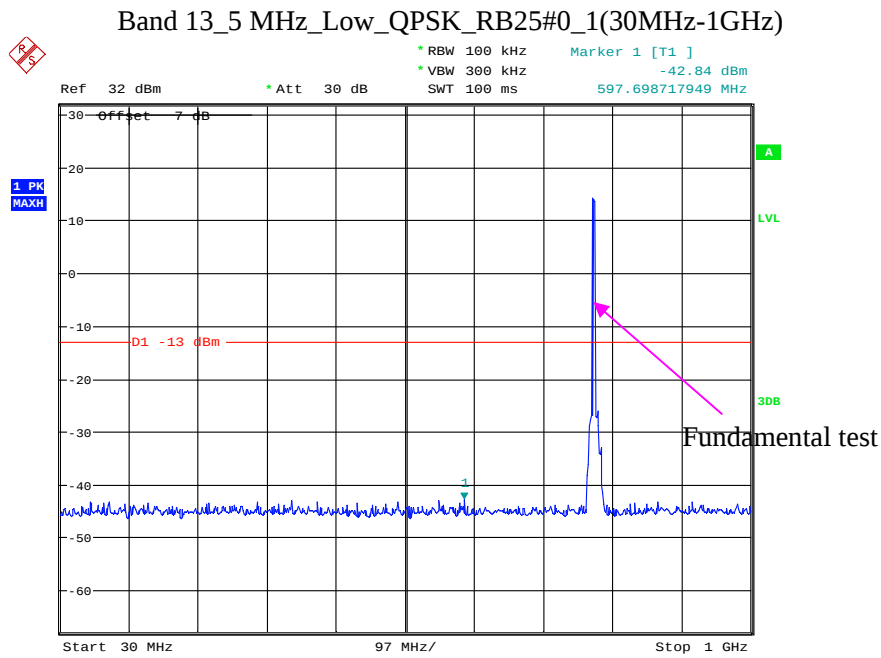


Date: 6.JAN.2021 11:32:30

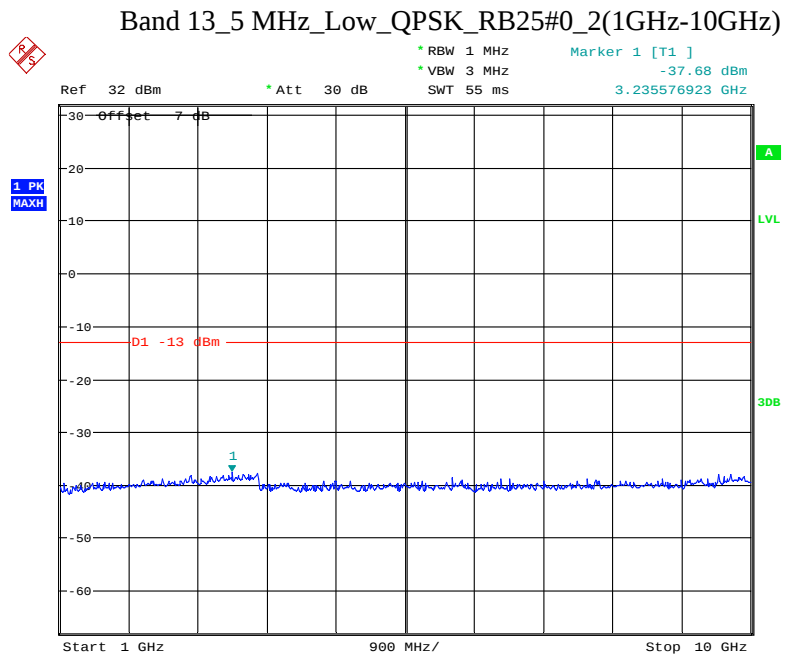


Date: 6.JAN.2021 13:38:04

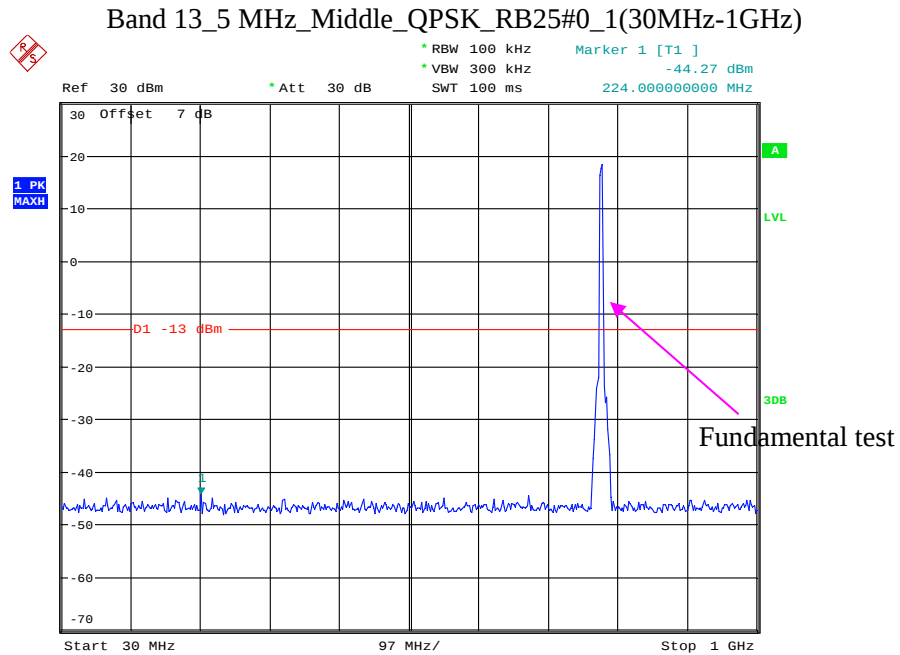
LTE Band 13:



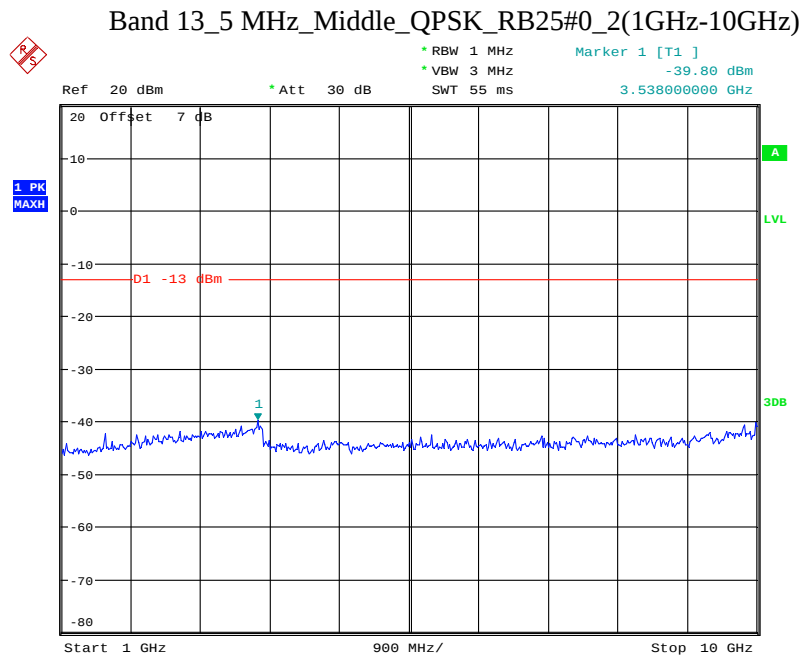
Date: 6.JAN.2021 11:56:06



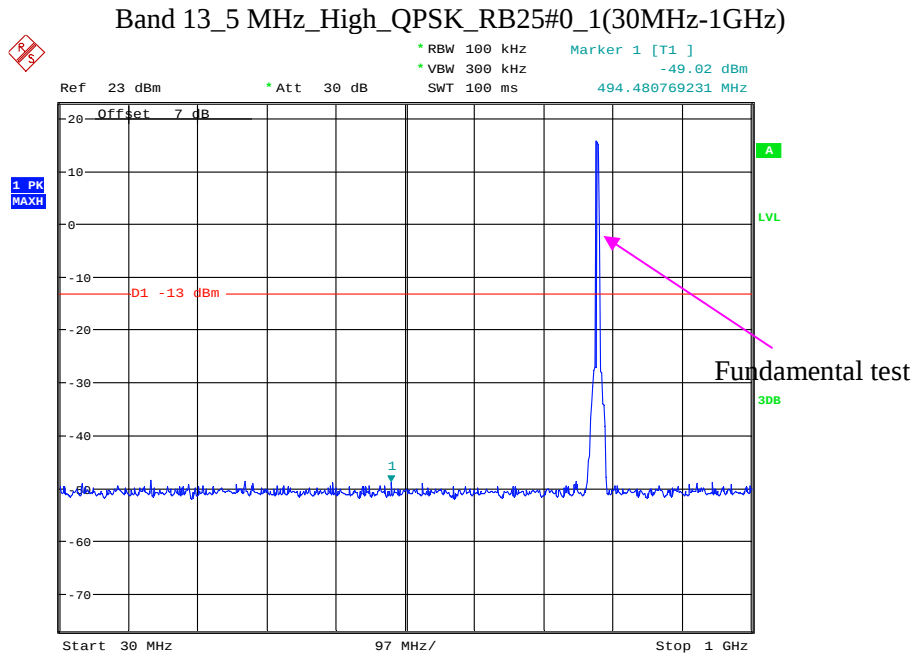
Date: 6.JAN.2021 11:57:31



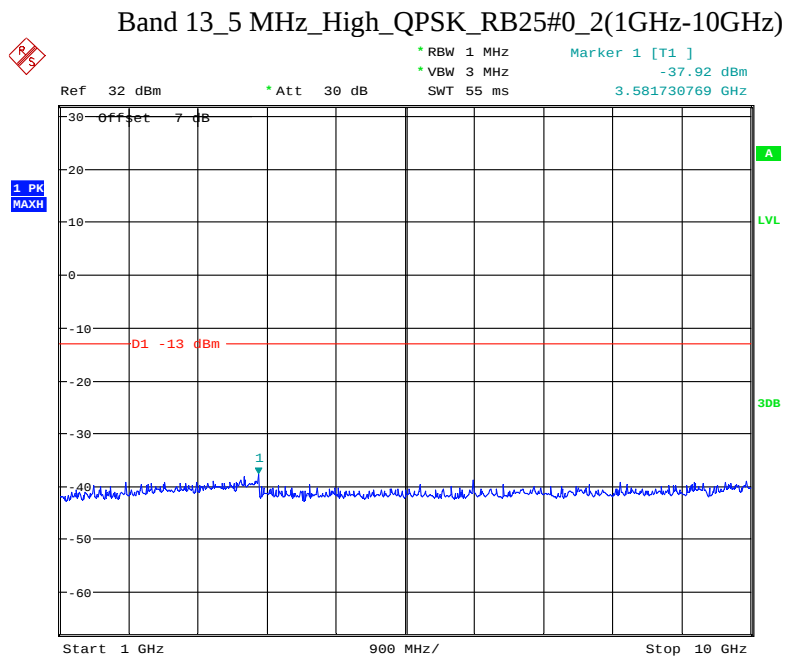
Date: 30.DEC.2020 15:13:22



Date: 30.DEC.2020 15:13:34

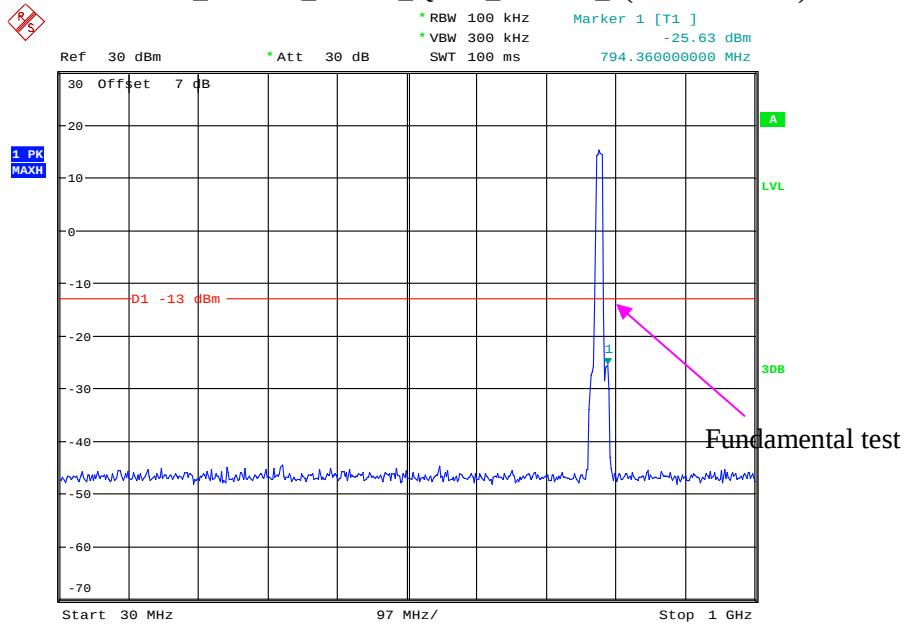


Date: 18.JAN.2021 15:24:39



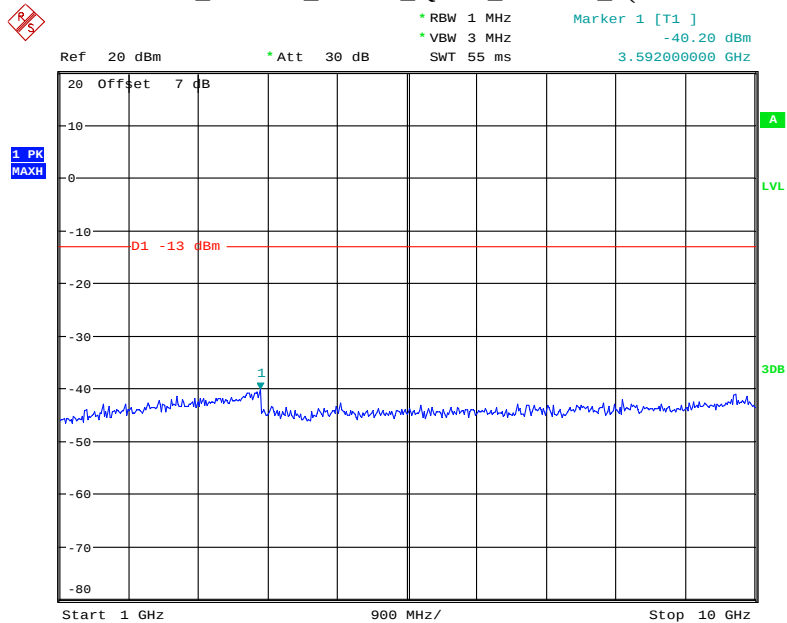
Date: 6.JAN.2021 11:58:53

Band 13_10 MHz_Middle_QPSK_RB50#0_1(30MHz-1GHz)



Date: 30.DEC.2020 15:13:57

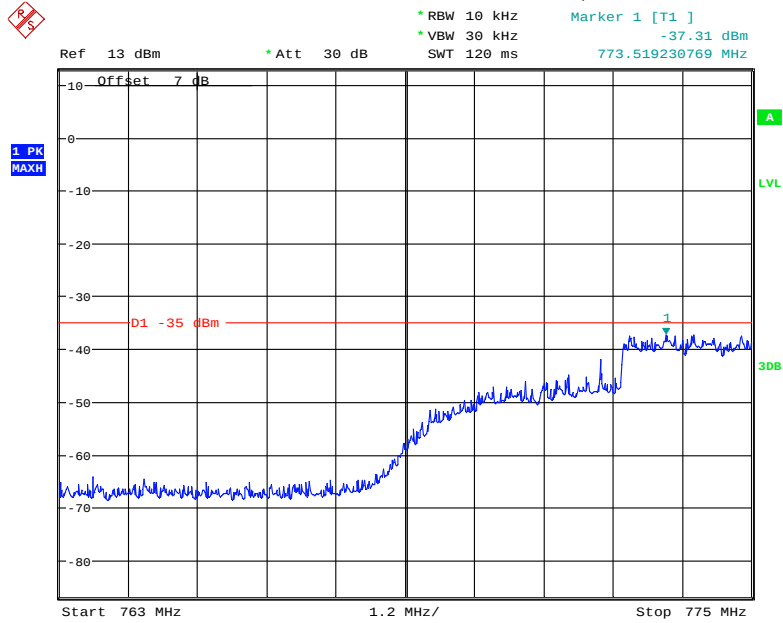
Band 13_10 MHz_Middle_QPSK_RB50#0_2(1GHz-10GHz)



Date: 30.DEC.2020 15:14:08

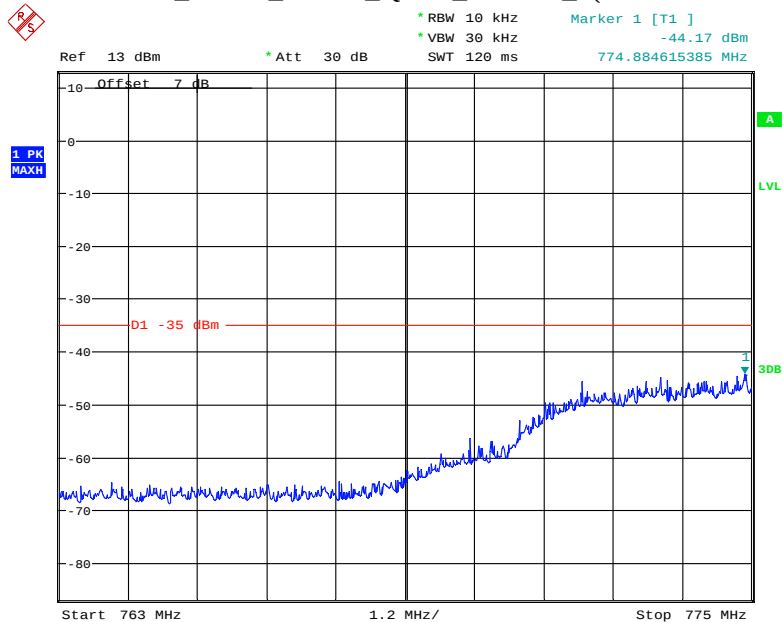
LTE band 13 additional:

Band 13_5 MHz_Low_QPSK_RB25#0_1(763MHz-775MHz)



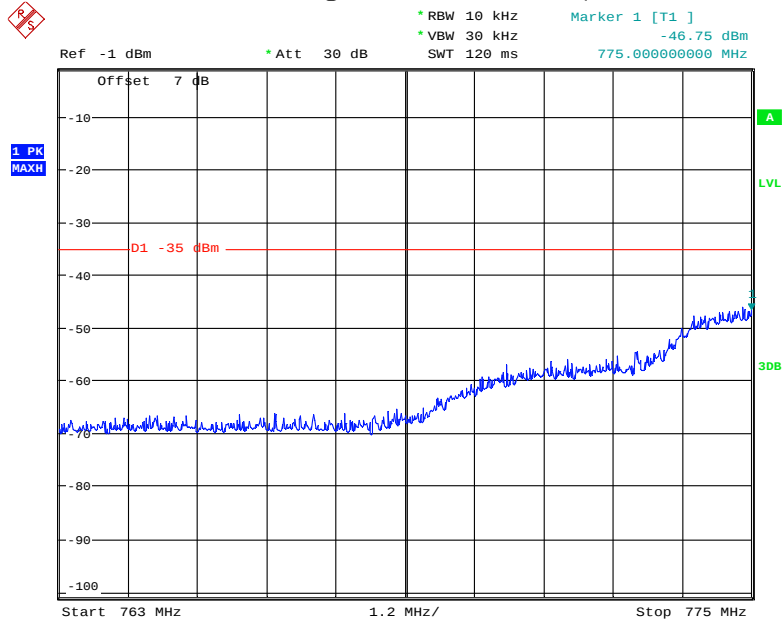
Date: 18.JAN.2021 15:46:37

Band 13_5 MHz_Middle_QPSK_RB25#0_1(763MHz-775MHz)



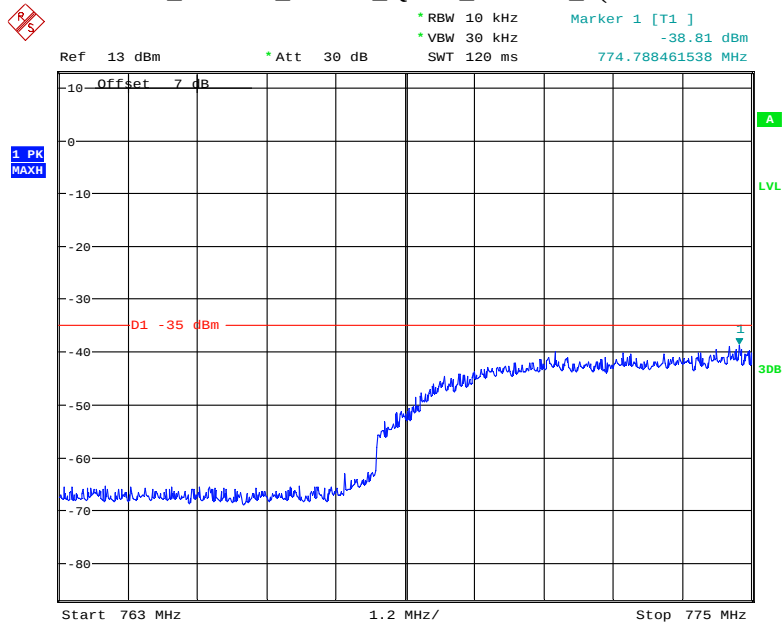
Date: 18.JAN.2021 15:47:48

Band 13_5 MHz_High_QPSK_RB25#0_1(763MHz-775MHz)



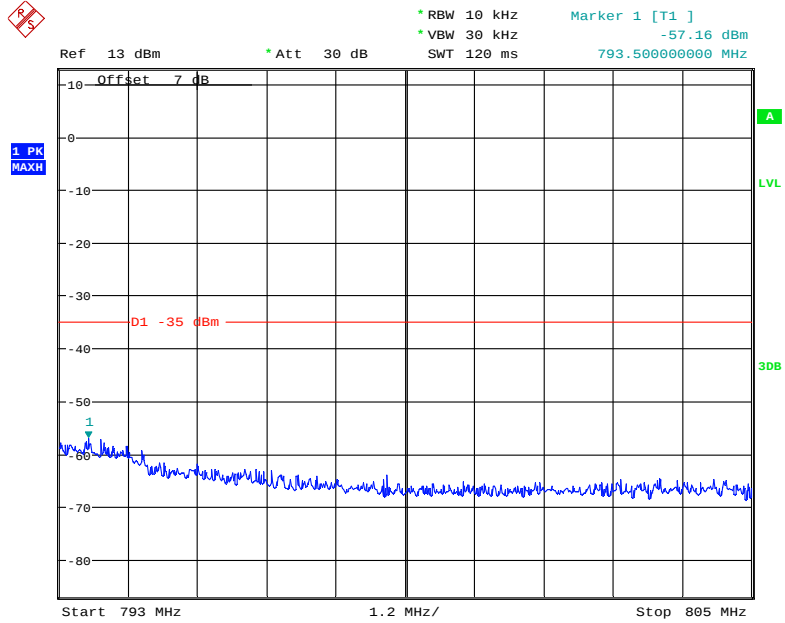
Date: 18.JAN.2021 15:33:57

Band 13_10 MHz_Middle_QPSK_RB50#0_1(763MHz-775MHz)



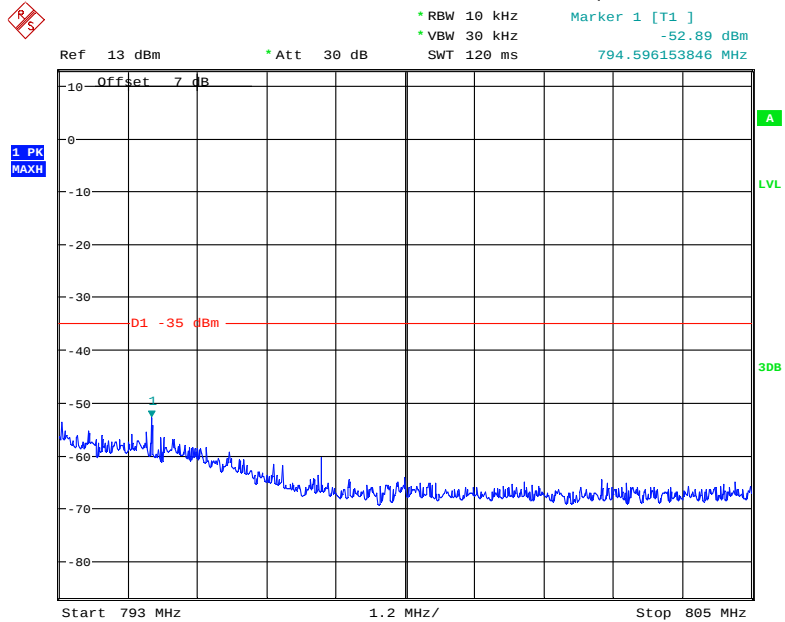
Date: 18.JAN.2021 15:57:50

Band 13_5 MHz_Low_QPSK_RB25#0_1(793MHz-805MHz)



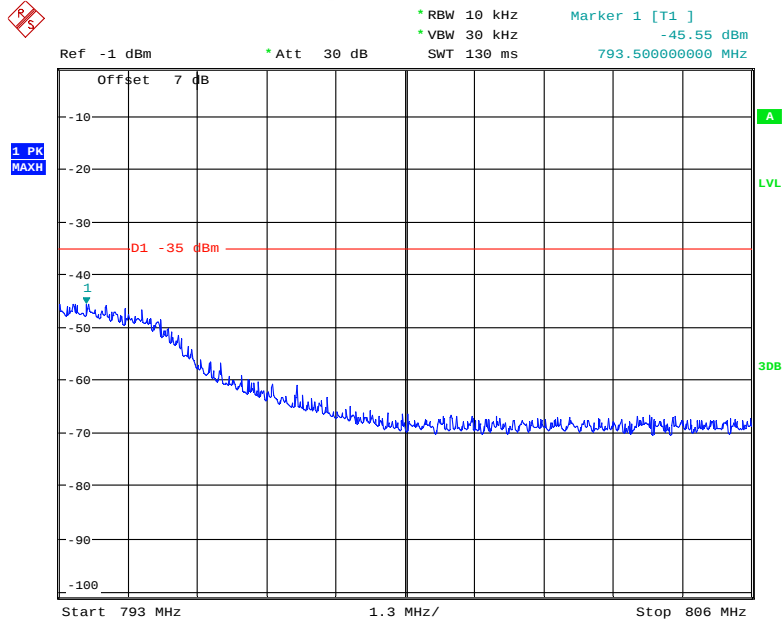
Date: 18.JAN.2021 15:44:51

Band 13_5 MHz_Middle_QPSK_RB25#0_1(793MHz-805MHz)



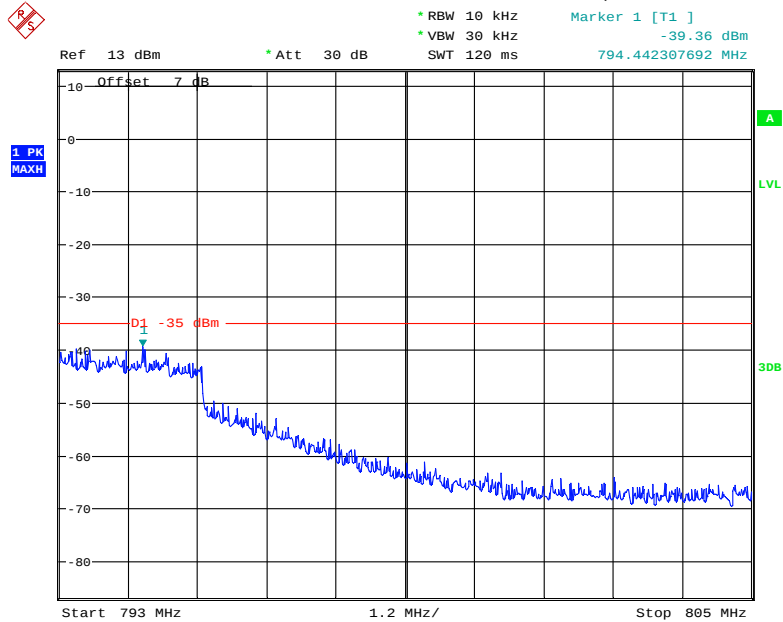
Date: 18.JAN.2021 15:49:12

Band 13_5 MHz_High_QPSK_RB25#0_1(793MHz-805MHz)



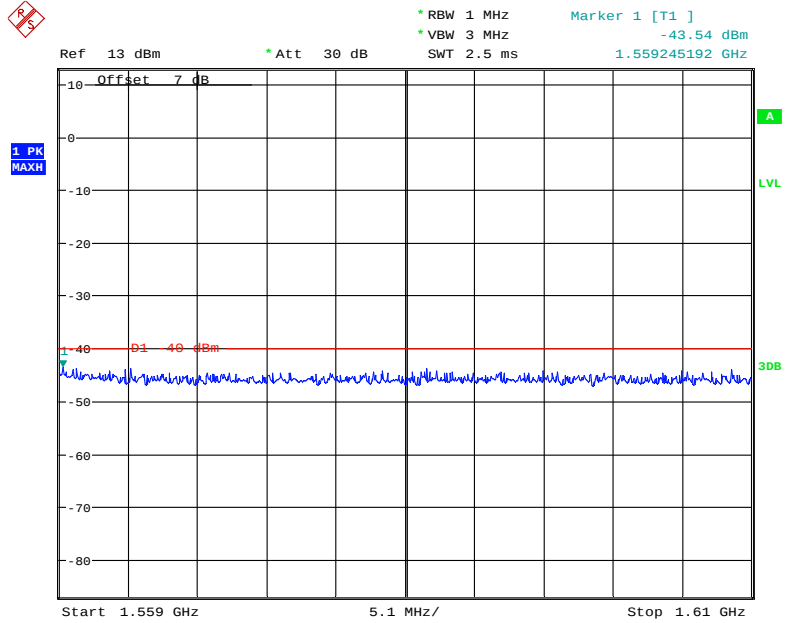
Date: 18.JAN.2021 15:37:25

Band 13_10 MHz_Middle_QPSK_RB50#0_1(793MHz-805MHz)



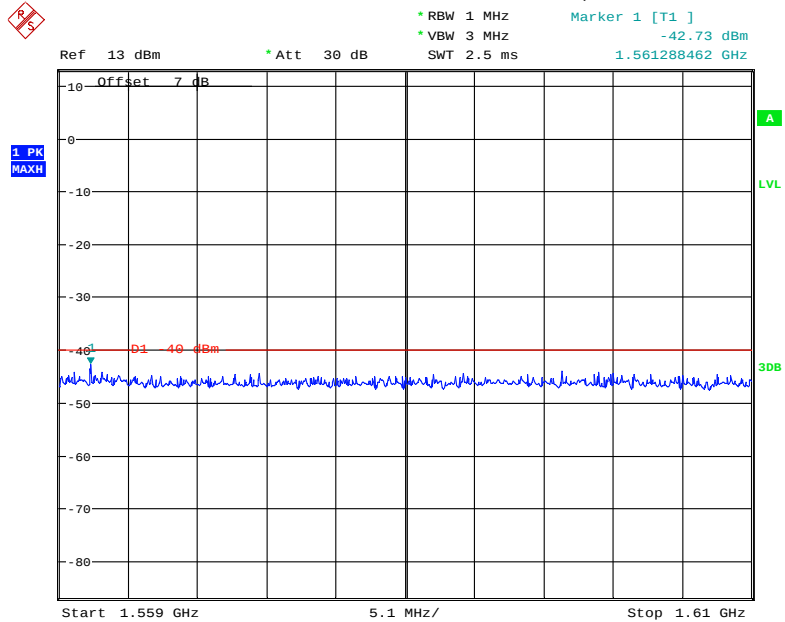
Date: 18.JAN.2021 15:58:32

Band 13_5 MHz_Low_QPSK_RB25#0_1(1559MHz-1610MHz)



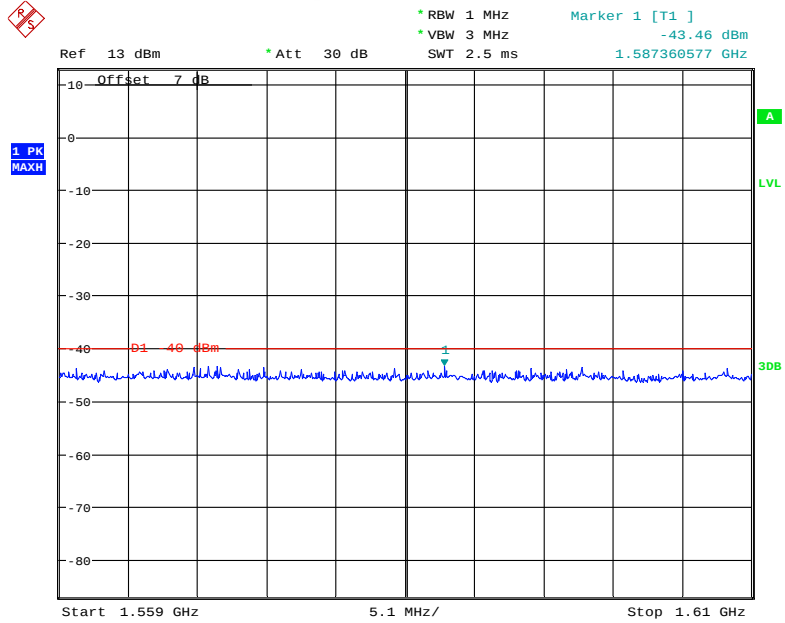
Date: 18.JAN.2021 15:43:32

Band 13_5 MHz_Middle_QPSK_RB25#0_1(1559MHz-1610MHz)



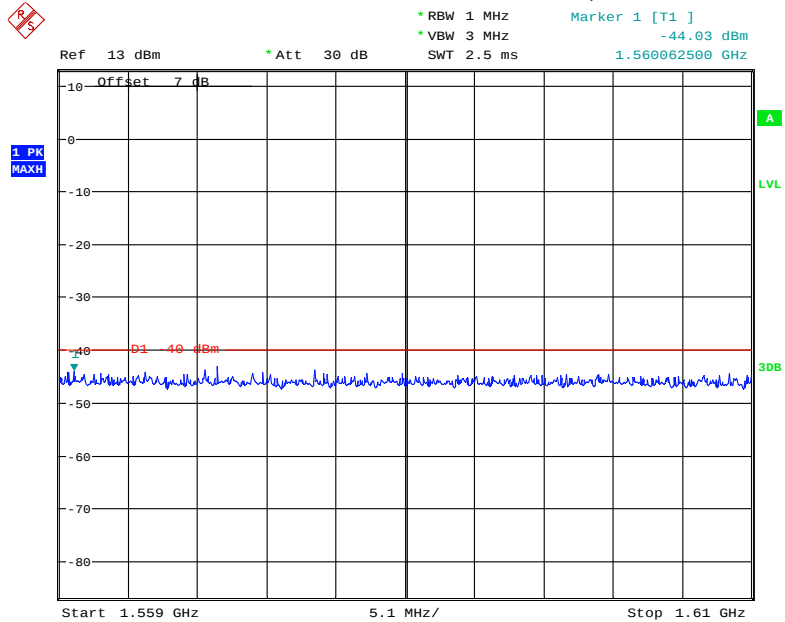
Date: 18.JAN.2021 15:50:46

Band 13_5 MHz_High_QPSK_RB25#0_1(1559MHz-1610MHz)

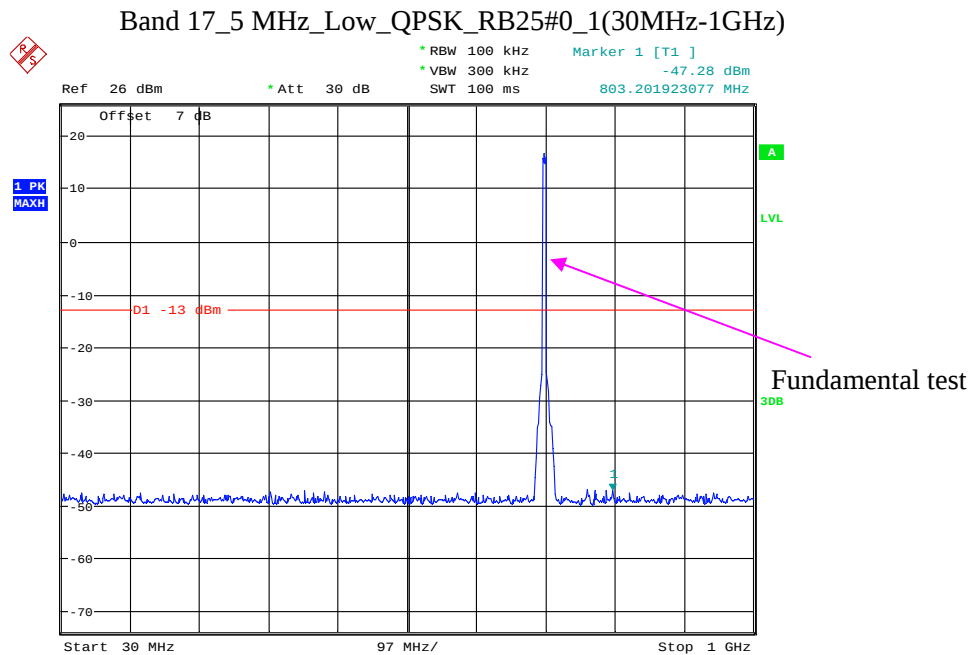


Date: 18.JAN.2021 15:39:30

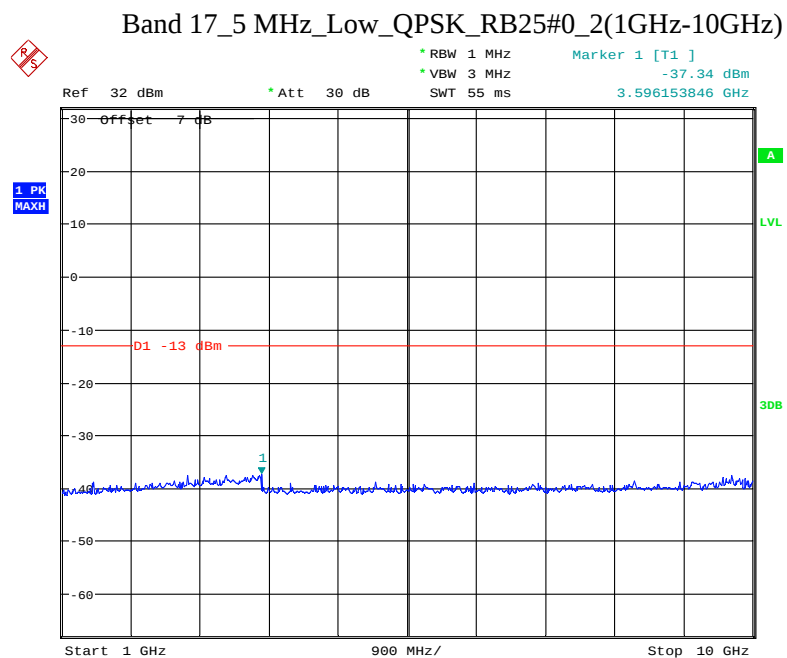
Band 13_10 MHz_Middle_QPSK_RB50#0_1(1559MHz-1610MHz)



Date: 18.JAN.2021 15:51:46

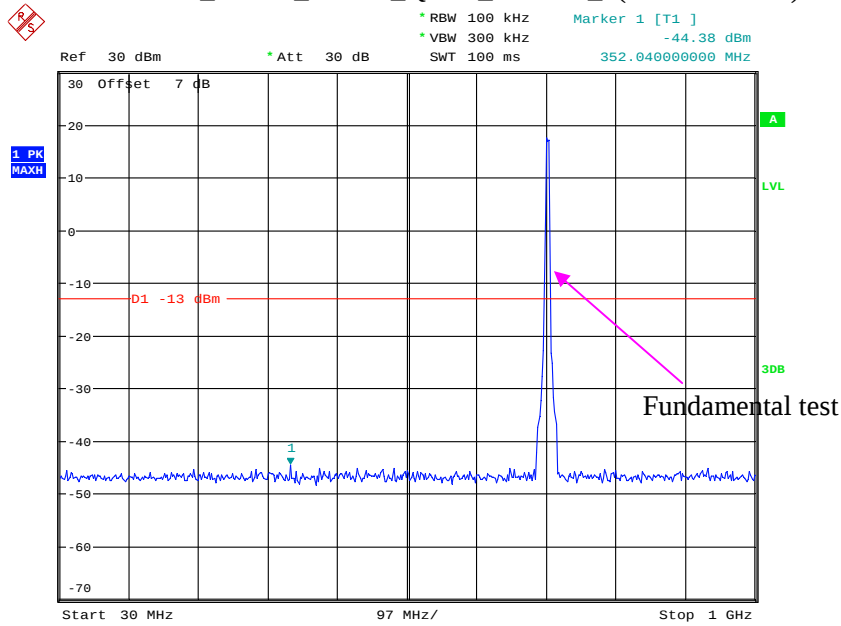
LTE Band 17:

Date: 18.JAN.2021 16:04:16



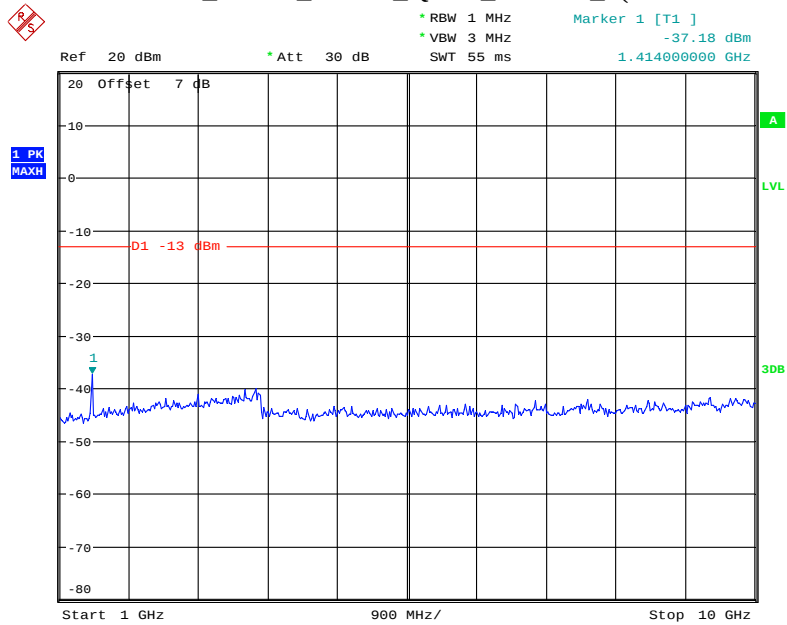
Date: 6.JAN.2021 13:42:42

Band 17_5 MHz_Middle_QPSK_RB25#0_1(30MHz-1GHz)

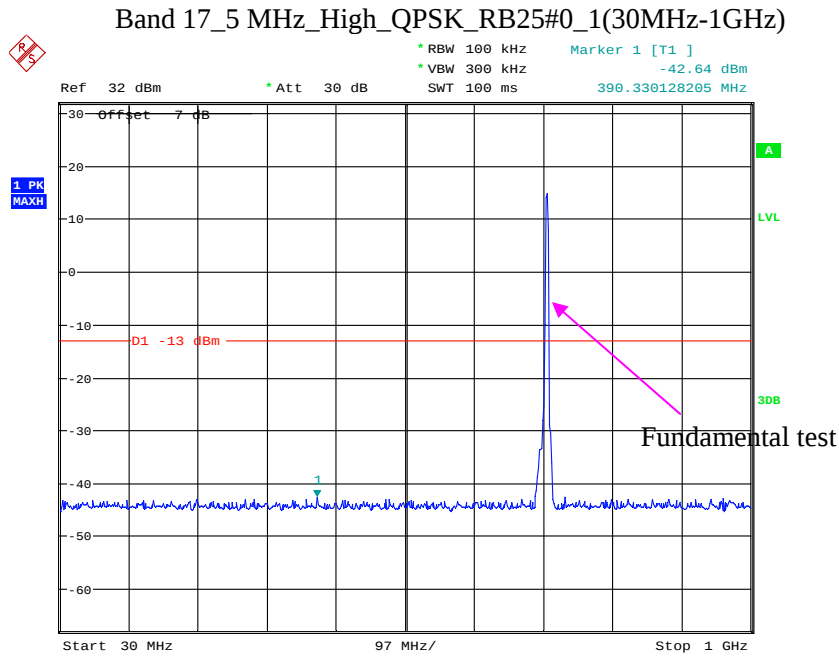


Date: 30.DEC.2020 15:14:39

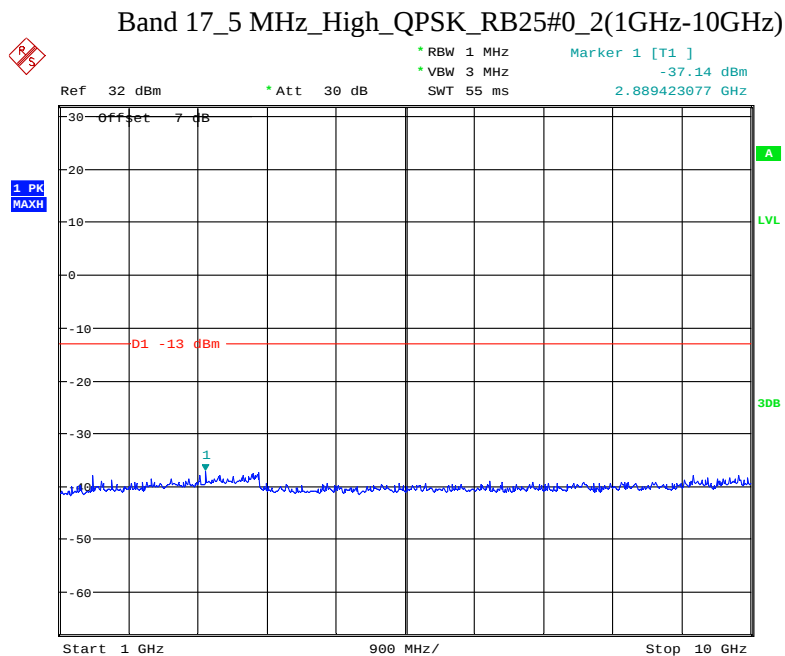
Band 17_5 MHz_Middle_QPSK_RB25#0_2(1GHz-10GHz)



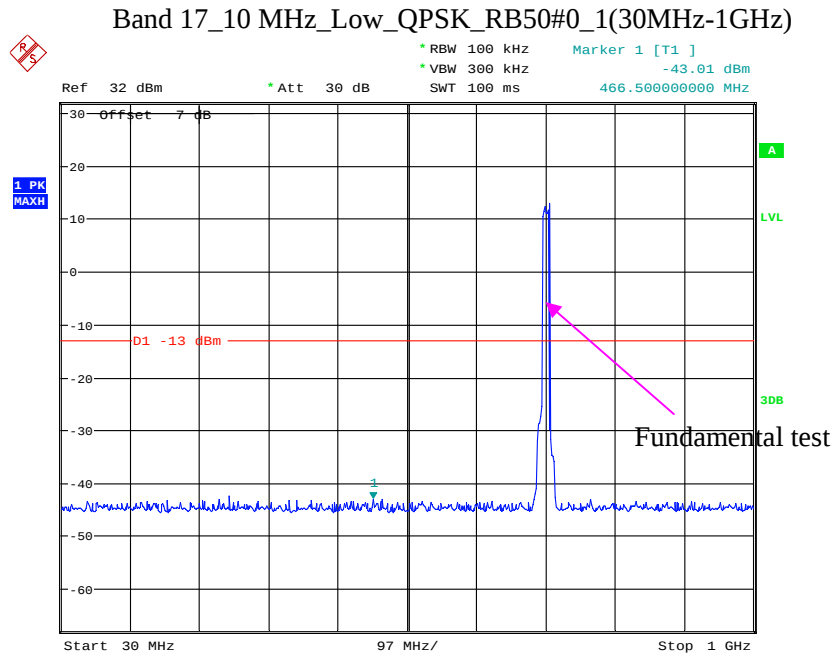
Date: 30.DEC.2020 15:14:50



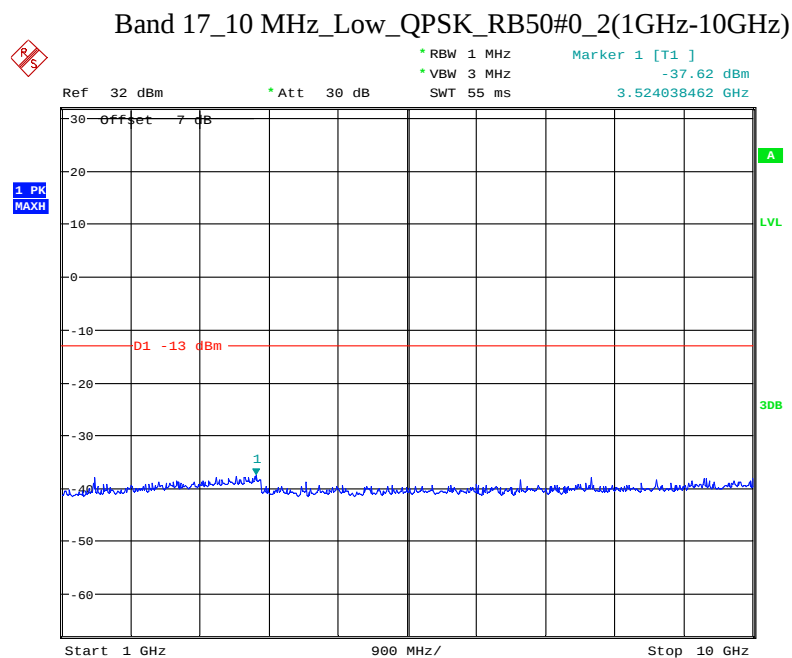
Date: 6.JAN.2021 13:44:59



Date: 6.JAN.2021 13:46:44

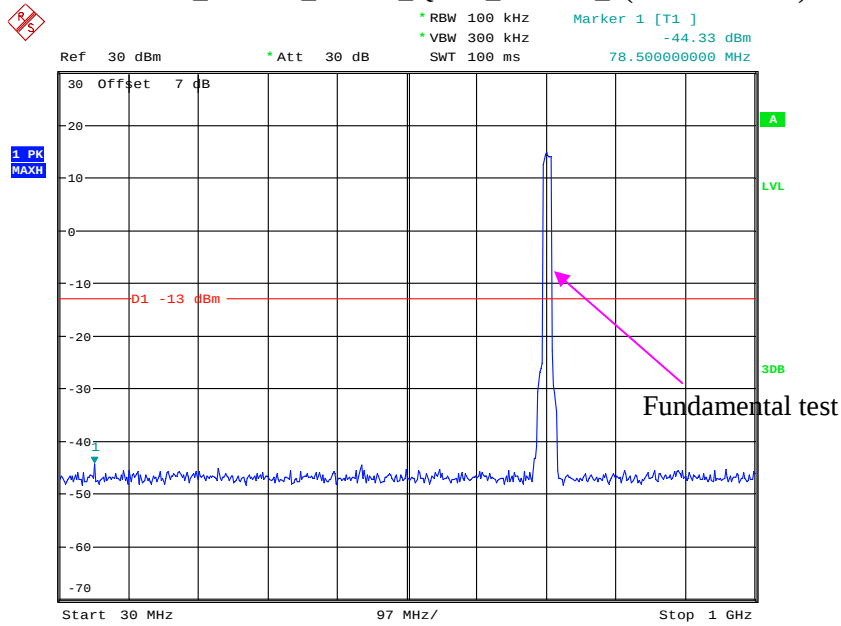


Date: 6.JAN.2021 13:49:17



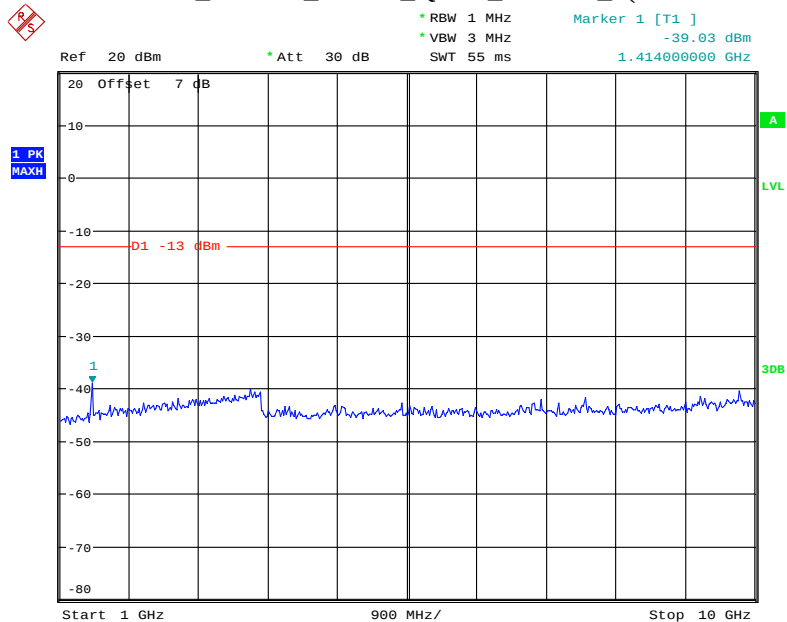
Date: 6.JAN.2021 13:50:34

Band 17_10 MHz_Middle_QPSK_RB50#0_1(30MHz-1GHz)

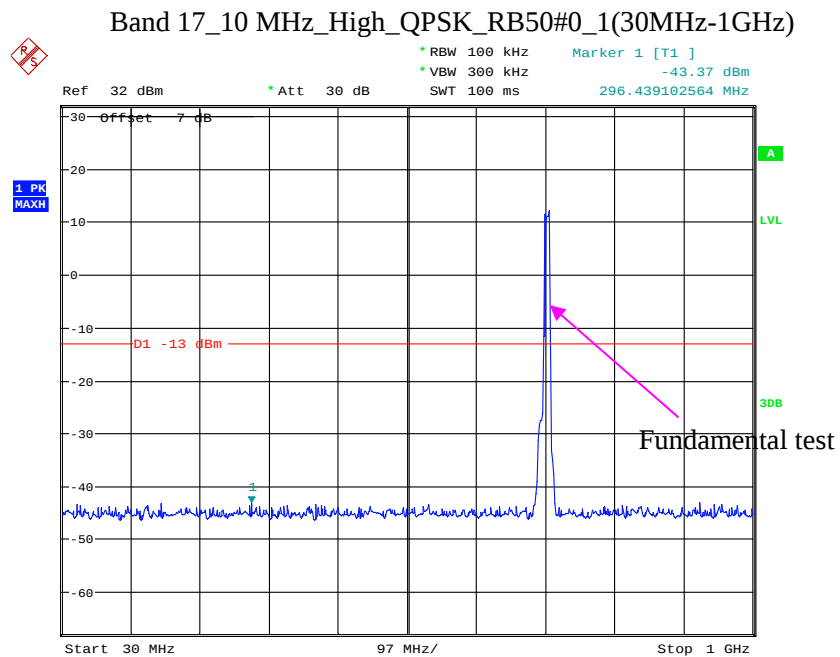


Date: 30.DEC.2020 15:15:10

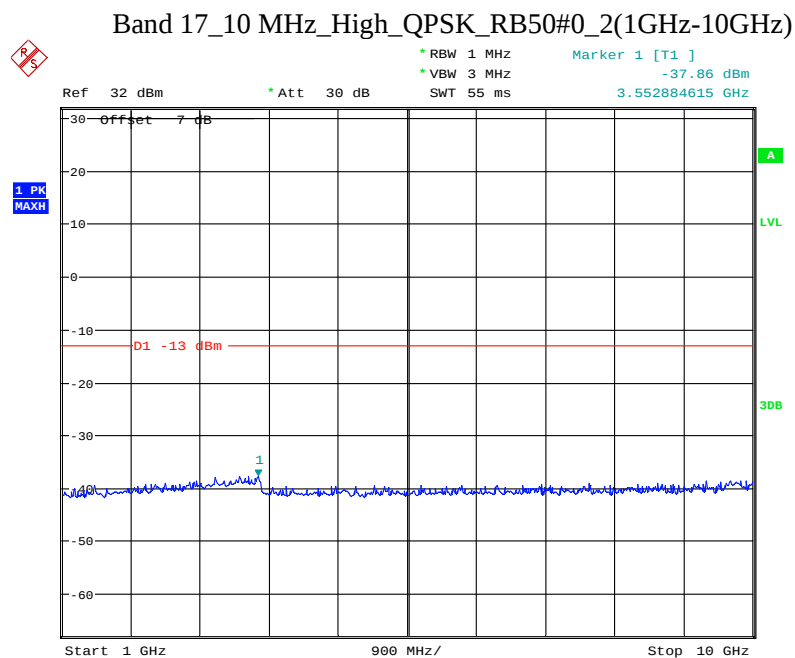
Band 17_10 MHz_Middle_QPSK_RB50#0_2(1GHz-10GHz)



Date: 30.DEC.2020 15:15:21



Date: 6.JAN.2021 13:51:23



Date: 6.JAN.2021 13:52:07