

FCC Test Report

Application Purpose : Original grant

Applicant Name: : INFINIX MOBILITY LIMITED

FCC ID : 2AIZN-X571

Equipment Type : Mobile phone

Model Name : X571

Report Number : FCC17060520A-5

Standard(S) : FCC Part 22H&24E&27 Rules

Date Of Receipt : June 14, 2017

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	June 30, 2017	Valid	Original Report

TABLE OF CONTENTS

1	CERTIFICATION.....	4
2	EUT INFORMATION	5
3	TEST DESCRIPTION	7
3.1	TEST FACILITY	7
3.2	EUT SYSTEM CONFIGURATION	7
3.3	DESCRIPTION OF TEST CHANNELS AND TEST MODES.....	8
3.4	EQUIPMENT MODIFICATIONS.....	11
4	SUMMARY OF TEST REQUIREMENTS AND RESULTS.....	12
5	EFFECTIVE (ISOTROPIC) RADIATED POWER.....	15
6	SPURIOUS EMISSION (CONDUCTED AND RADIATED)	44
6.1	MEASUREMENT RESULT (PRE-MEASUREMENT).....	44
6.1.1	CONDUCTED METHOD	49
6.1.1	RADIATED METHOD.....	114
7	FREQUENCY STABILITY	124
7.1	MEASUREMENT RESULT (WORST)	125
8	OCCUPIED BANDWIDTH& EMISSION BANDWIDTH	150
8.1	MEASUREMENT RESULT	152
8.2	TEST PLOT(S).....	155

1 CERTIFICATION

Applicant	INFINIX MOBILITY LIMITED
Address	RMS 05-15, 13A/F SOUTH TOWER WORLD FINANCE CTR HARBOUR CITY 17 CANTON RD TST KLN HONG KONG
Manufacturer	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address	1-4th Floor,3rd Building,Pacific Industrial Park,No.2088,Shenyan Road,Yantian District,Shenzhen,Guangdong,China
Equipment Type	Mobile phone
Brand Name	Infinix
Test Model	X571
Hardware version:	V1.1
Software version:	X571-H5311B-N-PR2-170511V85
Series Model	N/A
Difference description	N/A
Deviation	None
Condition of Test Sample	Normal

We hereby certify that:

All measurement facilities used to collect the measurement data are located at QTC Certification & Testing Co., Ltd.

Registration Number: 588523

The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C 63.4:2014 and TIA/EIA 603(2010). The sample tested as described in this report is in compliance with the FCC Rules Part 22H and 24E and 27.

The test results of this report relate only to the tested sample identified in this report.

2 EUT INFORMATION

Table 2.1.1 General Information

Equipment Type:	Mobile phone
Hardware version:	V1.1
Software version:	X571-H5311B-N-PR2-170511V85
Frequency Bands:	☒ GSM 850 ☒ PCS 1900 (U.S. Bands) UTRA Bands: ☒ UTRA Band 2 ☒ UTRA Band 4 ☒ UTRA Band 5 E-UTRA Bands: ☒ E-UTRA Band 2 ☒ E-UTRA Band 4 ☐ E-UTRA Band 5 ☒ E-UTRA Band 7
Antenna Type:	Internal Antenna
Antenna gain:	PCS 1900: -0.29dBi GSM850: -3.2 dBi UTRA Band 2: -0.29dBi UTRA Band 4: -2.98 dBi UTRA Band 5: -3.2 dBi E-UTRA Band 2: -0.29dBi E-UTRA Band 4: -2.98dBi E-UTRA Band 7: 0.08dBi
Battery information:	Li-Polymer Battery : BL-44AX Voltage: 3.85V Capacity: 4400mAh/4500mAh(min/typ) Limited Charge Voltage: 4.4V
Adapter Information:	Adapter: CQ-25JX Input: AC 100-240V 50/60Hz 0.8A Output: DC 5V $\overline{=}$ 2A/5V $\overline{=}$ 5A Max
Card(S):	Card 1: E-UTRA Card Slot Card 2: GSM Card Slot
Max power:	See Table 2.1.2
Extreme Vol. Limits:	DC 3.45V to 4.44V (Normal: DC 3.85V)
Extreme Temp. Tolerance	-10°C to +65°C

Note 1: The High Voltage DC 4.44V and Low Voltage DC 3.45V were declared by manufacturer, The EUT couldn't be operating normally with higher or lower voltage.

Table 2.1.2 The Basic Technical Specification for Working BAND(S).

OPERATION BAND(S)	Power Class	Mod.	Max Average (dBm)	Max Peak Power (dBm)
GSM850	Class 4	GMSK	32.95	33.62
DCS1900	Class 1	GMSK	30.23	30.45
UTRA BAND 2	Class 3	QPSK	21.76	22.64
UTRA BAND 4	Class 3	QPSK	22.18	23.48
UTRA BAND 5	Class 3	QPSK	22.49	23.65
E-UTRA Band 2	Class 3	QPSK	21.47	22.60
E-UTRA Band 2	Class 3	16QAM	21.47	22.61
E-UTRA Band 4	Class 3	QPSK	21.42	22.43
E-UTRA Band 4	Class 3	16QAM	21.45	22.43
E-UTRA Band 7	Class 3	QPSK	21.44	22.76
E-UTRA Band 7	Class 3	16QAM	21.44	22.76

3 TEST DESCRIPTION

3.1 Test Facility

The test site used to collect the radiated data is located at:

QTC Certification & Testing Co., Ltd.

Registration Number: 588523

3.2 EUT System Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

Fig. 3.2-1 Configuration of EUT System



Table 3.2-1 Equipment Used in EUT System

Item	Equipment	Model No.	ID or Specification	Note
1	Mobile phone	X571	2AIZN-X571	EUT

***Note: All the accessories have been used during the test. The following “EUT” in setup diagram means EUT system.

3.3 Description Of Test Channels And Test Modes

Test channels:

GSM 850			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	0.2	128	824.2
Mid Range	0.2	190	836.6
High Range	0.2	251	848.8

PCS 1900			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	0.2	512	1850.2
Mid Range	0.2	661	1880
High Range	0.2	810	1909.8

URTA BAND 2			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	9262	1852.4
Mid Range	5	9400	1880
High Range	5	9538	1907.6

URTA BAND 4			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	1312	1712.4
Mid Range	5	1413	1732.6
High Range	5	1513	1752.6

URTA BAND 5			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	4132	826.4
Mid Range	5	4182	836.4
High Range	5	4233	846.6

LTE BAND 2			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	18607	1850.7
	3	18615	1851.5
	5	18625	1852.5
	10	18650	1855
	15	18675	1857.5
	20	18700	1860
Mid Range	1.4/3/5/10 15 /20	18900	1880
High Range	1.4	19193	1909.3
	3	19185	1908.5
	5	19175	1907.5
	10	19150	1905
	15	19125	1902.5
	20	19100	1900

LTE BAND 4			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	1.4	19957	1710.7
	3	19965	1711.5
	5	19975	1712.5
	10	20000	1715
	15	20025	1717.5
	20	20050	1720
Mid Range	1.4/3/5/10/15/20	20175	1732.5
High Range	1.4	20393	1754.3
	3	20385	1753.5
	5	20375	1752.5
	10	20350	1750
	15	20325	1747.5
	20	20300	1745

LTE BAND 7			
Test Channel	BW(MHz)	UL Channel	Frequency(MHz)
Low Range	5	20775	2502.5
	10	20800	2505
	15	20825	2507.5
	20	20850	2510
Mid Range	5/10/15/20	21100	2535
High Range	5	21425	2567.5
	10	21400	2565
	15	21375	2562.5
	20	21350	2560

Note 1: both QPSK&16QAM modulation has been measured;

Note 2: The worst condition was recorded in the test report if no other modes test data.

3.4 Equipment Modifications

Not available for this EUT intended for grant.

4 SUMMARY OF TEST REQUIREMENTS AND RESULTS

BAND 2(PCS 1900/ E-UTRA Band 2/ UTRA Band 2):

Test Item	FCC Rule No.	Requirements	Judgement
Effective (Isotropic) Radiated Power	§2.1046, §24.232(c)	EIRP $\leq$ 2W(33dBm)	Pass
Bandwidth	§2.1049 §24.238(a)	OBW: No limit. EBW: No limit.	Pass
Band Edges	§2.1051, §24.238(a)	-13dBm	Pass
Spurious Emission at Antenna Terminals	§2.1051, §24.238(a)	-13dBm	Pass
Field Strength of Spurious Radiation	§2.1053, §24.238(a)	-13dBm	Pass
Frequency Stability	§2.1055, §24.235	the fundamental emission stays within the authorized frequency block.	Pass
Peak to average ratio	§24.232(d)	<13dB	Pass

BAND 4(UTRA Band 4/E-UTRA Band 4):

Test Item	FCC Rule No.	Requirements	Judgement
Effective (Isotropic) Radiated Power	§2.1046, §27.50(d)	EIRP $\leq$ 1W(30dBm)	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Pass
Band Edges	§2.1051, §27.53(h)	-13dBm	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(h)	-13dBm	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(h)	-13dBm	Pass
Frequency Stability	§2.1055, §27.54	the fundamental emissions stay within the authorized bands of operation. (2.5ppm)	Pass
Peak to average ratio	§27.50(d)	<13dB	Pass

BAND 5(GSM850/ UTRA Band 5):

Test Item	FCC Rule No.	Requirements	Judgement
Effective (Isotropic) Radiated Power	§2.1046, §2.913(a)	EIRP $\leq$ 7W(38.5dBm)	Pass
Occupied Bandwidth	§2.1049	OBW: No limit.	Pass
Emission Bandwidth	22.917(b)	EBW: No limit.	Pass
Band Edges Compliance	§2.1051, §22.917(a)(b)	KDB 971 168 D02 971168 D02 Misc OOB License Digital Systems v01 &27.53(m) for detail the limit is upon different OBW	Pass
Spurious Emission at Antenna Terminals	§2.1051, §22.917	-13dBm	Pass
Field Strength of Spurious Radiation	§2.1053, §22.917	-13dBm	Pass
Frequency Stability	§2.1055, §22.355	the fundamental emissions stay within the authorized bands of operation. (2.5ppm)	Pass

BAND 7(E-UTRA Band 7):

Test Item	FCC Rule No.	Requirements	Judgement
Effective (Isotropic) Radiated Power	§2.1046, §27.50(h)	EIRP $\leq$ 2W(33dBm)	Pass
Bandwidth	§2.1049	OBW: No limit. EBW: No limit.	Pass
Band Edges	§2.1051, §27.53(m)	KDB 971 168 D02 971168 D02 Misc OOB License Digital Systems v01 &27.53(m) for detail the limit is upon different OBW	Pass
Spurious Emission at Antenna Terminals	§2.1051, §27.53(m)	-25dBm	Pass
Field Strength of Spurious Radiation	§2.1053, §27.53(m)	-25dBm	Pass
Frequency Stability	§2.1055, §27.54	the fundamental emissions stay within the authorized bands of operation. (2.5ppm)	Pass

MEASUREMENT INSTRUMENTS

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.
EMI Test Receiver	R&S	ESCI	100005	08/19/2016	08/18/2017
LISN	AFJ	LS16	16010222119	08/19/2016	08/18/2017
LISN(EUT)	Mestec	AN3016	04/10040	08/19/2016	08/18/2017
Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	08/19/2016	08/18/2017
Coaxial cable	Megalon	LMR400	N/A	08/12/2016	08/11/2017
GPIOB cable	Megalon	GPIOB	N/A	08/12/2016	08/11/2017
Spectrum Analyzer	R&S	FSU	100114	08/19/2016	08/18/2017
Pre Amplifier	H.P.	HP8447E	2945A02715	10/13/2016	10/12/2017
Pre-Amplifier	CDSI	PAP-1G18-38	--	10/13/2016	10/12/2017
Loop Antenna	R&S	HFH2-Z2	100296	10/13/2016	10/12/2017
Bi-log Antenna	SUNOL Sciences	JB3	A021907	09/13/2016	09/12/2017
9*6*6 Anechoic	--	--	--	08/21/2016	08/20/2017
Horn Antenna	COMPLIANCE ENGINEERING	CE18000	--	09/13/2016	09/12/2017
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	08/23/2016	08/22/2017
Power meter	Anritsu	ML2487A	6K00003613	08/23/2016	08/22/2017
Power meter	Anritsu	MA2491A	32263	08/23/2016	08/22/2017
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	04/24/2017	04/23/2018
System-Controller	CCS	N/A	N/A	N.C.R	N.C.R
Turn Table	CCS	N/A	N/A	N.C.R	N.C.R
Antenna Tower	CCS	N/A	N/A	N.C.R	N.C.R
RF cable	Murata	MXHQ87WA3000	-	08/21/2016	08/20/2017
Loop Antenna	EMCO	6502	00042960	08/22/2016	08/21/2017
Wideband Radio Communication Tester	R&S	CMW 500	103974	08/19/2016	08/18/2017
Horn Antenna	SCHWARZBECK	BBHA 9170	1123	08/19/2016	08/18/2017
H & T Chamber	Guangzhou gongwen	GDJS-500-40	0329	08/19/2016	08/18/2017

5 EFFECTIVE (ISOTROPIC) RADIATED POWER

Test limit:

According to §22.913, The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

According to §24.232, 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.

According to §27.50 (d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

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

See section 4.

Test procedure:

1. The setup of EUT is according with per TIA/EIA Standard 603 D:2010 or KDB971168 D01 v02r02.
2. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.
3. The frequency range up to tenth harmonic of the fundamental frequency was investigated.
4. Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.
5. $ERP/EIRP = P_{Meas} + GT - LC$

where:

ERP/EIRP = effective or equivalent radiated power

P_{Meas} = measured transmitter output power from SG

GT = gain of the substitution antenna

LC = cable loss between SG and substitution antenna.

GSM850 BAND:							
Mode		Frequency (MHz)	Peak Power	Avg.Burst Power	PAR	Duty cycle Factor(dB)	Frame Power(dBm)
GSM850		824.2	33.38	32.95	0.43	-9	23.95
		836.6	33.42	32.86	0.56	-9	23.86
		848.8	33.62	32.89	0.73	-9	23.89
GPRS850	1 Tx Slots	824.2	33.05	32.26	0.73	-9.03	23.23
		836.6	32.96	32.23	0.79	-9.03	23.20
		848.8	33.10	32.28	0.73	-9.03	23.25
	2 Tx Slots	824.2	32.63	31.58	0.82	-6.02	25.56
		836.6	32.44	31.56	1.05	-6.02	25.54
		848.8	32.68	31.57	0.88	-6.02	25.55
	3 Tx Slots	824.2	31.20	30.26	1.11	-4.26	26.00
		836.6	31.52	30.38	0.94	-4.26	26.12
		848.8	31.09	30.35	1.14	-4.26	26.09
	4 Tx Slots	824.2	30.28	29.88	0.74	-3.01	26.87
		836.6	30.34	29.79	0.40	-3.01	26.78
		848.8	30.19	29.86	0.55	-3.01	26.85
EPRS850	1 Tx Slots	824.2	28.12	27.36	0.76	-9.03	18.33
		836.6	28.05	27.36	0.69	-9.03	18.33
		848.8	28.30	27.45	0.85	-9.03	18.42
	2 Tx Slots	824.2	27.41	26.72	0.69	-6.02	20.70
		836.6	27.32	26.73	0.59	-6.02	20.71
		848.8	27.18	26.82	0.36	-6.02	20.80
	3 Tx Slots	824.2	26.33	25.93	0.40	-4.26	21.67
		836.6	26.42	25.95	0.47	-4.26	21.69
		848.8	26.15	25.91	0.24	-4.26	21.65
	4 Tx Slots	824.2	26.31	25.33	0.98	-3.01	22.32
		836.6	26.26	25.38	0.88	-3.01	22.37
		848.8	26.14	25.35	0.79	-3.01	22.34
Tine average factor = 1 uplink, 10*log(1/8)= -9.03dB, 2 uolink, 10*log(2/8)= -6.02dB, 3 uolink, 10*log(3/8)= -4.26dB, 4 uolink, 10*log(4/8)= -3.01dB							

PCS1900 BAND:

Mode		Frequency (MHz)	Peak Power	Avg.Burst Power	PAR	Duty cycle Factor(dB)	Frame Power(dBm)
GSM1900		1850.2	30.27	30.18	0.09	-9	21.18
		1880	30.45	30.23	0.22	-9	21.23
		1909.8	30.37	30.19	0.18	-9	21.19
GPRS1900	1 Tx Slots	1850.2	30.16	29.68	0.48	-9.03	20.65
		1880	30.20	29.66	0.54	-9.03	20.63
		1909.8	30.08	29.62	0.46	-9.03	20.59
	2 Tx Slots	1850.2	29.15	27.83	1.32	-6.02	21.81
		1880	29.52	28.90	0.62	-6.02	22.88
		1909.8	29.14	28.85	0.29	-6.02	22.83
	3 Tx Slots	1850.2	28.33	27.22	1.11	-4.26	22.96
		1880	28.34	27.31	1.03	-4.26	23.05
		1909.8	28.62	27.33	1.29	-4.26	23.07
	4 Tx Slots	1850.2	27.31	26.83	0.48	-3.01	23.82
		1880	27.29	26.86	0.43	-3.01	23.85
		1909.8	27.17	26.80	0.37	-3.01	23.79
EGPRS1900	1 Tx Slots	1850.2	28.07	27.25	0.82	-9.03	18.22
		1880	28.12	27.28	0.84	-9.03	18.25
		1909.8	28.10	27.26	0.84	-9.03	18.23
	2 Tx Slots	1850.2	27.11	26.55	0.56	-6.02	20.53
		1880	27.13	26.58	0.55	-6.02	20.56
		1909.8	27.23	26.57	0.66	-6.02	20.55
	3 Tx Slots	1850.2	26.20	25.82	0.38	-4.26	21.56
		1880	26.14	25.83	0.31	-4.26	21.57
		1909.8	26.16	25.81	0.35	-4.26	21.55
	4 Tx Slots	1850.2	26.02	25.25	0.77	-3.01	22.24
		1880	26.03	25.29	0.74	-3.01	22.28
		1909.8	26.04	25.26	0.78	-3.01	22.25

Tine average factor = 1 uplink, $10 \cdot \log(1/8) = -9.03\text{dB}$, 2 uolink, $10 \cdot \log(2/8) = -6.02\text{dB}$,
 3 uolink, $10 \cdot \log(3/8) = -4.26\text{dB}$, 4 uolink, $10 \cdot \log(4/8) = -3.01\text{dB}$

UTRA BANDS:
BAND 2:

Mode		Frequency (MHz)	Peak Power	Avg.Burst Power	PAPR (dB)
RMC 12.2K		1852.4	22.43	21.60	0.83
		1880	22.64	21.66	0.98
		1907.6	22.32	21.76	0.56
HSDPA	Sub-test 1	1852.4	22.10	21.20	0.90
		1880	22.31	21.42	0.89
		1907.6	22.20	21.31	0.89
	Sub-test 2	1852.4	22.09	21.15	0.94
		1880	21.20	20.58	0.62
		1907.6	21.31	20.64	0.67
	Sub-test 3	1852.4	21.64	21.10	0.54
		1880	21.38	20.52	0.86
		1907.6	21.64	20.58	1.06
	Sub-test 4	1852.4	21.52	21.02	0.50
		1880	21.63	20.62	1.01
		1907.6	21.58	20.56	1.02
HSUPA	Sub-test 1	1852.4	21.94	21.32	0.62
		1880	21.84	20.75	1.09
		1907.6	21.67	20.82	0.85
	Sub-test 2	1852.4	21.77	21.12	0.65
		1880	21.67	20.55	1.12
		1907.6	21.42	20.70	0.72
	Sub-test 3	1852.4	21.64	21.15	0.49
		1880	21.92	20.73	1.19
		1907.6	21.64	20.80	0.84
	Sub-test 4	1852.4	21.47	20.62	0.85
		1880	21.42	20.65	0.77
		1907.6	21.44	20.71	0.73
	Sub-test 5	1852.4	21.62	20.95	0.67
		1880	21.57	20.85	0.72
		1907.6	21.36	20.81	0.55

BAND 4:

Mode		Frequency (MHz)	Peak Power	Avg.Burst Power	PAPR (dB)
RMC 12.2K		1712.4	23.39	22.06	1.33
		1732.6	23.46	22.18	1.28
		1752.6	23.48	22.12	1.36
HSDPA	Sub-test 1	1712.4	22.18	21.51	0.67
		1732.6	22.34	21.53	0.81
		1752.6	22.52	21.55	0.97
	Sub-test 2	1712.4	22.35	21.82	0.53
		1732.6	22.36	21.74	0.62
		1752.6	22.51	21.42	1.09
	Sub-test 3	1712.4	22.41	21.72	0.69
		1732.6	22.66	21.51	1.15
		1752.6	22.45	21.45	1.00
	Sub-test 4	1712.4	22.34	21.61	0.73
		1732.6	22.43	21.78	0.65
		1752.6	22.25	21.58	0.67
HSUPA	Sub-test 1	1712.4	22.33	21.56	0.77
		1732.6	22.56	21.38	1.18
		1752.6	22.41	21.33	1.08
	Sub-test 2	1712.4	22.85	21.58	1.27
		1732.6	22.34	21.65	0.69
		1752.6	22.66	21.42	1.24
	Sub-test 3	1712.4	22.49	21.42	1.07
		1732.6	22.31	21.45	0.86
		1752.6	22.54	21.33	1.21
	Sub-test 4	1712.4	22.68	21.35	1.33
		1732.6	22.90	21.49	1.41
		1752.6	22.85	22.32	0.53
	Sub-test 5	1712.4	22.31	21.37	0.94
		1732.6	22.42	21.43	0.99
		1752.6	22.63	21.38	1.25

BAND 5:

Mode		Frequency (MHz)	Peak Power	Avg. Burst Power	PAPR (dB)
RMC 12.2K		826.4	23.28	22.49	0.79
		836.4	23.56	22.43	1.13
		846.6	23.65	22.45	1.20
HSDPA	Sub-test 1	826.4	23.08	22.23	0.85
		836.4	23.10	22.25	0.85
		846.6	23.21	22.17	1.04
	Sub-test 2	826.4	22.58	21.72	0.86
		836.4	22.78	21.71	1.07
		846.6	22.72	21.72	1.00
	Sub-test 3	826.4	22.63	21.33	1.30
		836.4	22.14	21.32	0.82
		846.6	22.52	21.43	1.09
	Sub-test 4	826.4	22.64	21.55	1.09
		836.4	22.42	21.55	0.87
		846.6	22.15	21.62	0.53
HSUPA	Sub-test 1	826.4	22.13	21.62	0.51
		836.4	22.66	21.56	1.10
		846.6	22.41	21.66	0.75
	Sub-test 2	826.4	22.63	21.52	1.11
		836.4	22.45	21.82	0.63
		846.6	22.42	21.52	0.90
	Sub-test 3	826.4	22.34	21.33	1.01
		836.4	22.26	21.33	0.93
		846.6	22.57	21.22	1.35
	Sub-test 4	826.4	22.13	21.53	0.60
		836.4	22.34	21.27	1.07
		846.6	22.15	21.33	0.82
	Sub-test 5	826.4	22.62	21.28	1.34
		836.4	22.10	21.26	0.84
		846.6	22.16	21.28	0.88

E-UTRA BANDS:**BAND 2:**

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
1.4	18607	1850.7	QPSK	1	LOW	21.26	22.46	1.2
1.4	18607	1850.7	QPSK	1	MID	21.26	22.2	0.94
1.4	18607	1850.7	QPSK	1	HIGH	21.26	21.59	0.33
1.4	18607	1850.7	QPSK	3	LOW	21.26	22.34	1.08
1.4	18607	1850.7	QPSK	3	MID	21.26	22.04	0.78
1.4	18607	1850.7	QPSK	3	HIGH	21.26	21.88	0.62
1.4	18607	1850.7	QPSK	6	LOW	21.26	22.02	0.76
1.4	18607	1850.7	Q16	1	LOW	21.26	21.86	0.6
1.4	18607	1850.7	Q16	1	MID	21.26	22.13	0.87
1.4	18607	1850.7	Q16	1	HIGH	21.26	22.14	0.88
1.4	18607	1850.7	Q16	3	LOW	21.26	21.56	0.3
1.4	18607	1850.7	Q16	3	MID	21.26	22.22	0.96
1.4	18607	1850.7	Q16	3	HIGH	21.26	22.26	1
1.4	18607	1850.7	Q16	6	LOW	21.26	22.1	0.84
1.4	18900	1880	QPSK	1	LOW	21.47	21.83	0.36
1.4	18900	1880	QPSK	1	MID	20.74	22.39	1.65
1.4	18900	1880	QPSK	1	HIGH	21.03	22.53	1.5
1.4	18900	1880	QPSK	3	LOW	20.77	22.23	1.46
1.4	18900	1880	QPSK	3	MID	21.23	22.49	1.26
1.4	18900	1880	QPSK	3	HIGH	21.25	22.32	1.07
1.4	18900	1880	QPSK	6	LOW	20.65	22.13	1.48
1.4	18900	1880	Q16	1	LOW	21.27	22.04	0.77
1.4	18900	1880	Q16	1	MID	20.79	22.46	1.67
1.4	18900	1880	Q16	1	HIGH	21.47	21.9	0.43
1.4	18900	1880	Q16	3	LOW	20.76	22.18	1.42
1.4	18900	1880	Q16	3	MID	20.66	21.68	1.02
1.4	18900	1880	Q16	3	HIGH	20.75	22.07	1.32
1.4	18900	1880	Q16	6	LOW	20.64	22.17	1.53
1.4	19193	1909.3	QPSK	1	LOW	21.03	21.73	0.7
1.4	19193	1909.3	QPSK	1	MID	21.41	21.82	0.41
1.4	19193	1909.3	QPSK	1	HIGH	20.79	22.08	1.29
1.4	19193	1909.3	QPSK	3	LOW	21.11	22.09	0.98
1.4	19193	1909.3	QPSK	3	MID	21.46	22.39	0.93
1.4	19193	1909.3	QPSK	3	HIGH	21.31	22.27	0.96
1.4	19193	1909.3	QPSK	6	LOW	20.96	22.43	1.47

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
1.4	19193	1909.3	Q16	1	LOW	20.76	21.72	0.96
1.4	19193	1909.3	Q16	1	MID	21.12	21.58	0.46
1.4	19193	1909.3	Q16	1	HIGH	21.08	22.19	1.11
1.4	19193	1909.3	Q16	3	LOW	21.34	21.78	0.44
1.4	19193	1909.3	Q16	3	MID	21.28	22.41	1.13
1.4	19193	1909.3	Q16	3	HIGH	21.12	21.58	0.46
1.4	19193	1909.3	Q16	6	LOW	20.56	22.03	1.47
3	18615	1851.5	QPSK	1	LOW	20.80	21.71	0.91
3	18615	1851.5	QPSK	1	MID	21.20	22.34	1.14
3	18615	1851.5	QPSK	1	HIGH	20.53	21.71	1.18
3	18615	1851.5	QPSK	8	LOW	20.69	22.3	1.61
3	18615	1851.5	QPSK	8	MID	20.53	21.76	1.23
3	18615	1851.5	QPSK	8	HIGH	21.02	21.59	0.57
3	18615	1851.5	QPSK	15	LOW	20.53	22.04	1.51
3	18615	1851.5	Q16	1	LOW	20.64	21.67	1.03
3	18615	1851.5	Q16	1	MID	21.14	21.9	0.76
3	18615	1851.5	Q16	1	HIGH	20.77	22.13	1.36
3	18615	1851.5	Q16	8	LOW	20.73	21.55	0.82
3	18615	1851.5	Q16	8	MID	20.96	21.52	0.56
3	18615	1851.5	Q16	8	HIGH	20.99	22.21	1.22
3	18615	1851.5	Q16	15	LOW	21.21	22.11	0.9
3	18900	1880	QPSK	1	LOW	21.02	22.17	1.15
3	18900	1880	QPSK	1	MID	20.91	22.34	1.43
3	18900	1880	QPSK	1	HIGH	21.12	21.59	0.47
3	18900	1880	QPSK	8	LOW	20.51	22.28	1.77
3	18900	1880	QPSK	8	MID	20.87	22.44	1.57
3	18900	1880	QPSK	8	HIGH	20.96	22.08	1.12
3	18900	1880	QPSK	15	LOW	21.18	22.2	1.02
3	18900	1880	Q16	1	LOW	21.37	22.3	0.93
3	18900	1880	Q16	1	MID	20.64	21.98	1.34
3	18900	1880	Q16	1	HIGH	21.42	21.58	0.16
3	18900	1880	Q16	8	LOW	20.93	22.34	1.41
3	18900	1880	Q16	8	MID	21.32	22.25	0.93
3	18900	1880	Q16	8	HIGH	21.32	21.76	0.44
3	18900	1880	Q16	15	LOW	20.51	21.76	1.25
3	19185	1908.5	QPSK	1	LOW	20.70	22.3	1.6
3	19185	1908.5	QPSK	1	MID	20.87	21.98	1.11

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average	Peak	PAPR (dB)
				Size	Offset	(dBm)	(dBm)	
3	19185	1908.5	QPSK	1	HIGH	21.01	21.67	0.66
3	19185	1908.5	QPSK	8	LOW	21.00	21.68	0.68
3	19185	1908.5	QPSK	8	MID	20.63	22.28	1.65
3	19185	1908.5	QPSK	8	HIGH	21.46	21.95	0.49
3	19185	1908.5	QPSK	15	LOW	21.24	22.02	0.78
3	19185	1908.5	Q16	1	LOW	20.97	21.72	0.75
3	19185	1908.5	Q16	1	MID	20.86	21.86	1
3	19185	1908.5	Q16	1	HIGH	20.56	22.3	1.74
3	19185	1908.5	Q16	8	LOW	21.34	21.87	0.53
3	19185	1908.5	Q16	8	MID	20.82	22.15	1.33
3	19185	1908.5	Q16	8	HIGH	21.30	22.15	0.85
3	19185	1908.5	Q16	15	LOW	21.34	22.55	1.21
5	18625	1852.5	QPSK	1	LOW	21.13	22.2	1.07
5	18625	1852.5	QPSK	1	MID	21.08	22.36	1.28
5	18625	1852.5	QPSK	1	HIGH	20.72	22.49	1.77
5	18625	1852.5	QPSK	12	LOW	21.37	21.73	0.36
5	18625	1852.5	QPSK	12	MID	20.76	21.9	1.14
5	18625	1852.5	QPSK	12	HIGH	20.67	22.07	1.4
5	18625	1852.5	QPSK	25	LOW	21.18	22.59	1.41
5	18625	1852.5	Q16	1	LOW	20.61	21.65	1.04
5	18625	1852.5	Q16	1	MID	21.36	21.72	0.36
5	18625	1852.5	Q16	1	HIGH	21.47	22.61	1.14
5	18625	1852.5	Q16	12	LOW	21.23	21.67	0.44
5	18625	1852.5	Q16	12	MID	20.75	21.77	1.02
5	18625	1852.5	Q16	12	HIGH	21.27	22.58	1.31
5	18625	1852.5	Q16	25	LOW	21.06	22.33	1.27
5	18900	1880	QPSK	1	LOW	21.45	22.23	0.78
5	18900	1880	QPSK	1	MID	20.73	22.07	1.34
5	18900	1880	QPSK	1	HIGH	20.95	21.79	0.84
5	18900	1880	QPSK	12	LOW	20.61	22.4	1.79
5	18900	1880	QPSK	12	MID	20.61	22.45	1.84
5	18900	1880	QPSK	12	HIGH	21.12	21.7	0.58
5	18900	1880	QPSK	25	LOW	20.76	22.53	1.77
5	18900	1880	Q16	1	LOW	21.19	22.08	0.89
5	18900	1880	Q16	1	MID	20.63	22.45	1.82
5	18900	1880	Q16	1	HIGH	20.84	22.29	1.45
5	18900	1880	Q16	12	LOW	21.32	21.91	0.59

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average	Peak	PAPR (dB)
				Size	Offset	(dBm)	(dBm)	
5	18900	1880	Q16	12	MID	21.01	22.5	1.49
5	18900	1880	Q16	12	HIGH	21.27	22.01	0.74
5	18900	1880	Q16	25	LOW	21.33	22.2	0.87
5	19175	1907.5	QPSK	1	LOW	20.51	22.13	1.62
5	19175	1907.5	QPSK	1	MID	20.90	21.69	0.79
5	19175	1907.5	QPSK	1	HIGH	20.57	21.95	1.38
5	19175	1907.5	QPSK	12	LOW	21.30	22.6	1.3
5	19175	1907.5	QPSK	12	MID	20.68	22.56	1.88
5	19175	1907.5	QPSK	12	HIGH	21.44	22.31	0.87
5	19175	1907.5	QPSK	25	LOW	20.80	21.63	0.83
5	19175	1907.5	Q16	1	LOW	20.65	22.09	1.44
5	19175	1907.5	Q16	1	MID	21.01	21.94	0.93
5	19175	1907.5	Q16	1	HIGH	21.36	21.71	0.35
5	19175	1907.5	Q16	12	LOW	20.80	22.33	1.53
5	19175	1907.5	Q16	12	MID	20.49	21.8	1.31
5	19175	1907.5	Q16	12	HIGH	20.80	22.47	1.67
5	19175	1907.5	Q16	25	LOW	20.68	21.92	1.24
10	18650	1855	QPSK	1	LOW	21.14	22.37	1.23
10	18650	1855	QPSK	1	MID	21.13	22.4	1.27
10	18650	1855	QPSK	1	HIGH	21.37	22.17	0.8
10	18650	1855	QPSK	25	LOW	21.16	22.03	0.87
10	18650	1855	QPSK	25	MID	21.21	22.29	1.08
10	18650	1855	QPSK	25	HIGH	21.15	21.89	0.74
10	18650	1855	QPSK	50	LOW	21.33	22.16	0.83
10	18650	1855	Q16	1	LOW	21.26	21.93	0.67
10	18650	1855	Q16	1	MID	21.29	21.8	0.51
10	18650	1855	Q16	1	HIGH	20.59	22.46	1.87
10	18650	1855	Q16	25	LOW	21.23	22.2	0.97
10	18650	1855	Q16	25	MID	20.95	22.51	1.56
10	18650	1855	Q16	25	HIGH	20.86	22.43	1.57
10	18650	1855	Q16	50	LOW	20.61	22.13	1.52
10	18900	1880	QPSK	1	LOW	21.28	21.65	0.37
10	18900	1880	QPSK	1	MID	21.35	22.6	1.25
10	18900	1880	QPSK	1	HIGH	21.05	22.35	1.3
10	18900	1880	QPSK	25	LOW	20.88	22.21	1.33
10	18900	1880	QPSK	25	MID	20.86	22.1	1.24
10	18900	1880	QPSK	25	HIGH	21.39	21.98	0.59

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
10	18900	1880	QPSK	50	LOW	20.68	21.77	1.09
10	18900	1880	Q16	1	LOW	20.84	22.55	1.71
10	18900	1880	Q16	1	MID	20.52	21.76	1.24
10	18900	1880	Q16	1	HIGH	20.74	22.21	1.47
10	18900	1880	Q16	25	LOW	21.33	22.01	0.68
10	18900	1880	Q16	25	MID	20.60	22.11	1.51
10	18900	1880	Q16	25	HIGH	20.94	22.07	1.13
10	18900	1880	Q16	50	LOW	20.52	21.88	1.36
10	19150	1905	QPSK	1	LOW	20.90	21.66	0.76
10	19150	1905	QPSK	1	MID	21.32	22.42	1.1
10	19150	1905	QPSK	1	HIGH	21.35	21.76	0.41
10	19150	1905	QPSK	25	LOW	21.12	22.18	1.06
10	19150	1905	QPSK	25	MID	20.51	22.58	2.07
10	19150	1905	QPSK	25	HIGH	21.19	22.15	0.96
10	19150	1905	QPSK	50	LOW	20.70	22.27	1.57
10	19150	1905	Q16	1	LOW	20.86	22.12	1.26
10	19150	1905	Q16	1	MID	20.77	22.3	1.53
10	19150	1905	Q16	1	HIGH	21.13	21.92	0.79
10	19150	1905	Q16	25	LOW	21.20	21.85	0.65
10	19150	1905	Q16	25	MID	20.84	21.82	0.98
10	19150	1905	Q16	25	HIGH	21.21	21.84	0.63
10	19150	1905	Q16	50	LOW	20.99	22.11	1.12
15	18675	1857.5	QPSK	1	LOW	21.02	21.66	0.64
15	18675	1857.5	QPSK	1	MID	20.71	21.78	1.07
15	18675	1857.5	QPSK	1	HIGH	21.02	22.28	1.26
15	18675	1857.5	QPSK	36	LOW	20.71	22.52	1.81
15	18675	1857.5	QPSK	36	MID	21.42	21.77	0.35
15	18675	1857.5	QPSK	36	HIGH	21.06	21.8	0.74
15	18675	1857.5	QPSK	75	LOW	21.10	22.26	1.16
15	18675	1857.5	Q16	1	LOW	20.69	22.29	1.6
15	18675	1857.5	Q16	1	MID	20.80	21.8	1
15	18675	1857.5	Q16	1	HIGH	20.72	22.31	1.59
15	18675	1857.5	Q16	36	LOW	20.88	22	1.12
15	18675	1857.5	Q16	36	MID	21.03	22.03	1
15	18675	1857.5	Q16	36	HIGH	20.86	22.45	1.59
15	18675	1857.5	Q16	75	LOW	20.65	22.51	1.86
15	18900	1880	QPSK	1	LOW	21.36	22.26	0.9

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average	Peak	PAPR (dB)
				Size	Offset	(dBm)	(dBm)	
15	18900	1880	QPSK	1	MID	20.67	21.82	1.15
15	18900	1880	QPSK	1	HIGH	20.74	22.06	1.32
15	18900	1880	QPSK	36	LOW	20.51	22.48	1.97
15	18900	1880	QPSK	36	MID	20.51	22.15	1.64
15	18900	1880	QPSK	36	HIGH	21.31	22.31	1
15	18900	1880	QPSK	75	LOW	20.86	21.82	0.96
15	18900	1880	Q16	1	LOW	20.79	22.18	1.39
15	18900	1880	Q16	1	MID	21.23	22.41	1.18
15	18900	1880	Q16	1	HIGH	20.99	22.07	1.08
15	18900	1880	Q16	36	LOW	20.51	22.51	2
15	18900	1880	Q16	36	MID	20.69	21.98	1.29
15	18900	1880	Q16	36	HIGH	20.90	22.6	1.7
15	18900	1880	Q16	75	LOW	20.62	21.8	1.18
15	19125	1902.5	QPSK	1	LOW	20.74	22.26	1.52
15	19125	1902.5	QPSK	1	MID	20.83	21.8	0.97
15	19125	1902.5	QPSK	1	HIGH	21.27	21.9	0.63
15	19125	1902.5	QPSK	36	LOW	21.21	22.35	1.14
15	19125	1902.5	QPSK	36	MID	21.12	22.08	0.96
15	19125	1902.5	QPSK	36	HIGH	20.64	22.22	1.58
15	19125	1902.5	QPSK	75	LOW	21.43	21.68	0.25
15	19125	1902.5	Q16	1	LOW	21.26	21.81	0.55
15	19125	1902.5	Q16	1	MID	21.10	21.81	0.71
15	19125	1902.5	Q16	1	HIGH	20.82	22.57	1.75
15	19125	1902.5	Q16	36	LOW	20.49	22.43	1.94
15	19125	1902.5	Q16	36	MID	20.73	22.4	1.67
15	19125	1902.5	Q16	36	HIGH	20.84	22.39	1.55
15	19125	1902.5	Q16	75	LOW	20.98	22.31	1.33
20	18700	1860	QPSK	1	LOW	20.72	22.37	1.65
20	18700	1860	QPSK	1	MID	20.66	22.27	1.61
20	18700	1860	QPSK	1	HIGH	21.29	21.83	0.54
20	18700	1860	QPSK	50	LOW	21.26	21.72	0.46
20	18700	1860	QPSK	50	MID	21.41	22.06	0.65
20	18700	1860	QPSK	50	HIGH	20.73	21.64	0.91
20	18700	1860	QPSK	100	LOW	21.20	21.84	0.64
20	18700	1860	Q16	1	LOW	21.20	22.3	1.1
20	18700	1860	Q16	1	MID	21.02	21.95	0.93
20	18700	1860	Q16	1	HIGH	21.23	22.43	1.2

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average	Peak	PAPR (dB)
				Size	Offset	(dBm)	(dBm)	
20	18700	1860	Q16	50	LOW	21.14	22.5	1.36
20	18700	1860	Q16	50	MID	21.33	22.03	0.7
20	18700	1860	Q16	50	HIGH	20.58	22.15	1.57
20	18700	1860	Q16	100	LOW	21.47	21.82	0.35
20	18900	1880	QPSK	1	LOW	20.55	22.08	1.53
20	18900	1880	QPSK	1	MID	21.43	22.55	1.12
20	18900	1880	QPSK	1	HIGH	21.16	22.36	1.2
20	18900	1880	QPSK	50	LOW	20.52	22.04	1.52
20	18900	1880	QPSK	50	MID	20.73	22.45	1.72
20	18900	1880	QPSK	50	HIGH	20.99	22.43	1.44
20	18900	1880	QPSK	100	LOW	21.06	21.76	0.7
20	18900	1880	Q16	1	LOW	21.39	21.69	0.3
20	18900	1880	Q16	1	MID	21.29	22.16	0.87
20	18900	1880	Q16	1	HIGH	20.86	22.56	1.7
20	18900	1880	Q16	50	LOW	20.57	22.17	1.6
20	18900	1880	Q16	50	MID	21.26	22.01	0.75
20	18900	1880	Q16	50	HIGH	20.52	21.68	1.16
20	18900	1880	Q16	100	LOW	20.66	22.13	1.47
20	19100	1900	QPSK	1	LOW	21.40	21.72	0.32
20	19100	1900	QPSK	1	MID	20.55	21.86	1.31
20	19100	1900	QPSK	1	HIGH	21.45	21.71	0.26
20	19100	1900	QPSK	50	LOW	20.74	22.47	1.73
20	19100	1900	QPSK	50	MID	21.46	21.62	0.16
20	19100	1900	QPSK	50	HIGH	21.44	22.1	0.66
20	19100	1900	QPSK	100	LOW	20.63	22.14	1.51
20	19100	1900	Q16	1	LOW	20.96	21.78	0.82
20	19100	1900	Q16	1	MID	21.17	21.91	0.74
20	19100	1900	Q16	1	HIGH	20.69	22.08	1.39
20	19100	1900	Q16	50	LOW	20.96	21.59	0.63
20	19100	1900	Q16	50	MID	20.59	22.13	1.54
20	19100	1900	Q16	50	HIGH	20.56	22.25	1.69
20	19100	1900	Q16	100	LOW	21.26	21.59	0.33

BAND 4:

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
1.4	19957	1710.7	QPSK	1	LOW	21.33	21.63	0.3
1.4	19957	1710.7	QPSK	1	MID	20.88	21.58	0.7
1.4	19957	1710.7	QPSK	1	HIGH	20.81	21.81	1
1.4	19957	1710.7	QPSK	3	LOW	21.03	22	0.97
1.4	19957	1710.7	QPSK	3	MID	20.50	21.71	1.21
1.4	19957	1710.7	QPSK	3	HIGH	21.14	21.63	0.49
1.4	19957	1710.7	QPSK	6	LOW	20.72	22.22	1.5
1.4	19957	1710.7	Q16	1	LOW	21.36	21.53	0.17
1.4	19957	1710.7	Q16	1	MID	20.96	22.1	1.14
1.4	19957	1710.7	Q16	1	HIGH	21.08	22.25	1.17
1.4	19957	1710.7	Q16	3	LOW	20.58	22.3	1.72
1.4	19957	1710.7	Q16	3	MID	20.74	22.08	1.34
1.4	19957	1710.7	Q16	3	HIGH	21.26	22.43	1.17
1.4	19957	1710.7	Q16	6	LOW	20.46	21.46	1
1.4	20175	1732.5	QPSK	1	LOW	21.15	22.17	1.02
1.4	20175	1732.5	QPSK	1	MID	21.37	21.53	0.16
1.4	20175	1732.5	QPSK	1	HIGH	20.56	22.25	1.69
1.4	20175	1732.5	QPSK	3	LOW	20.52	21.91	1.39
1.4	20175	1732.5	QPSK	3	MID	21.29	22.27	0.98
1.4	20175	1732.5	QPSK	3	HIGH	20.93	21.77	0.84
1.4	20175	1732.5	QPSK	6	LOW	21.06	22.01	0.95
1.4	20175	1732.5	Q16	1	LOW	21.24	21.99	0.75
1.4	20175	1732.5	Q16	1	MID	21.10	21.99	0.89
1.4	20175	1732.5	Q16	1	HIGH	20.96	22.09	1.13
1.4	20175	1732.5	Q16	3	LOW	20.88	22.3	1.42
1.4	20175	1732.5	Q16	3	MID	20.54	21.62	1.08
1.4	20175	1732.5	Q16	3	HIGH	21.39	22.31	0.92
1.4	20175	1732.5	Q16	6	LOW	21.25	21.82	0.57
1.4	20393	1754.3	QPSK	1	LOW	20.76	21.88	1.12
1.4	20393	1754.3	QPSK	1	MID	21.24	22.37	1.13
1.4	20393	1754.3	QPSK	1	HIGH	20.93	21.89	0.96
1.4	20393	1754.3	QPSK	3	LOW	20.56	22.22	1.66
1.4	20393	1754.3	QPSK	3	MID	20.46	22.27	1.81
1.4	20393	1754.3	QPSK	3	HIGH	20.82	22.01	1.19
1.4	20393	1754.3	QPSK	6	LOW	20.93	21.93	1
1.4	20393	1754.3	Q16	1	LOW	20.88	21.77	0.89

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak	PAPR (dB)
				Size	Offset		(dBm)	
1.4	20393	1754.3	Q16	1	MID	20.67	21.69	1.02
1.4	20393	1754.3	Q16	1	HIGH	21.41	21.78	0.37
1.4	20393	1754.3	Q16	3	LOW	21.03	22.14	1.11
1.4	20393	1754.3	Q16	3	MID	20.94	22.02	1.08
1.4	20393	1754.3	Q16	3	HIGH	20.95	22.1	1.15
1.4	20393	1754.3	Q16	6	LOW	21.07	22.38	1.31
3	19965	1711.5	QPSK	1	LOW	20.47	21.72	1.25
3	19965	1711.5	QPSK	1	MID	20.64	21.88	1.24
3	19965	1711.5	QPSK	1	HIGH	21.21	22.03	0.82
3	19965	1711.5	QPSK	8	LOW	20.90	21.54	0.64
3	19965	1711.5	QPSK	8	MID	21.29	21.49	0.2
3	19965	1711.5	QPSK	8	HIGH	20.63	21.63	1
3	19965	1711.5	QPSK	15	LOW	20.75	22.07	1.32
3	19965	1711.5	Q16	1	LOW	20.85	21.8	0.95
3	19965	1711.5	Q16	1	MID	21.18	21.6	0.42
3	19965	1711.5	Q16	1	HIGH	20.54	21.52	0.98
3	19965	1711.5	Q16	8	LOW	20.96	21.58	0.62
3	19965	1711.5	Q16	8	MID	21.15	21.53	0.38
3	19965	1711.5	Q16	8	HIGH	21.43	21.75	0.32
3	19965	1711.5	Q16	15	LOW	20.79	22.43	1.64
3	20175	1732.5	QPSK	1	LOW	21.27	22.07	0.8
3	20175	1732.5	QPSK	1	MID	20.50	22.28	1.78
3	20175	1732.5	QPSK	1	HIGH	20.65	22.41	1.76
3	20175	1732.5	QPSK	8	LOW	21.06	21.59	0.53
3	20175	1732.5	QPSK	8	MID	21.02	21.97	0.95
3	20175	1732.5	QPSK	8	HIGH	21.07	22.02	0.95
3	20175	1732.5	QPSK	15	LOW	20.81	22.22	1.41
3	20175	1732.5	Q16	1	LOW	21.27	22.02	0.75
3	20175	1732.5	Q16	1	MID	20.91	21.92	1.01
3	20175	1732.5	Q16	1	HIGH	20.68	22.24	1.56
3	20175	1732.5	Q16	8	LOW	20.96	21.83	0.87
3	20175	1732.5	Q16	8	MID	21.06	22.09	1.03
3	20175	1732.5	Q16	8	HIGH	21.00	21.96	0.96
3	20175	1732.5	Q16	15	LOW	21.33	21.71	0.38
3	20385	1753.5	QPSK	1	LOW	20.67	21.96	1.29
3	20385	1753.5	QPSK	1	MID	20.73	22.05	1.32
3	20385	1753.5	QPSK	1	HIGH	20.99	21.88	0.89

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak	PAPR (dB)
				Size	Offset		(dBm)	
3	20385	1753.5	QPSK	8	LOW	21.35	21.94	0.59
3	20385	1753.5	QPSK	8	MID	21.28	21.71	0.43
3	20385	1753.5	QPSK	8	HIGH	21.08	21.48	0.4
3	20385	1753.5	QPSK	15	LOW	20.80	22.24	1.44
3	20385	1753.5	Q16	1	LOW	20.54	21.65	1.11
3	20385	1753.5	Q16	1	MID	20.97	22.13	1.16
3	20385	1753.5	Q16	1	HIGH	20.92	21.57	0.65
3	20385	1753.5	Q16	8	LOW	21.23	21.47	0.24
3	20385	1753.5	Q16	8	MID	21.45	21.8	0.35
3	20385	1753.5	Q16	8	HIGH	21.02	21.57	0.55
3	20385	1753.5	Q16	15	LOW	20.63	21.9	1.27
5	19975	1712.5	QPSK	1	LOW	21.18	22.13	0.95
5	19975	1712.5	QPSK	1	MID	21.32	22.31	0.99
5	19975	1712.5	QPSK	1	HIGH	20.82	22.06	1.24
5	19975	1712.5	QPSK	12	LOW	21.00	22.42	1.42
5	19975	1712.5	QPSK	12	MID	21.41	21.76	0.35
5	19975	1712.5	QPSK	12	HIGH	20.69	21.47	0.78
5	19975	1712.5	QPSK	25	LOW	21.24	21.61	0.37
5	19975	1712.5	Q16	1	LOW	20.72	22.19	1.47
5	19975	1712.5	Q16	1	MID	20.67	21.89	1.22
5	19975	1712.5	Q16	1	HIGH	20.53	22.1	1.57
5	19975	1712.5	Q16	12	LOW	20.84	22.05	1.21
5	19975	1712.5	Q16	12	MID	20.97	21.99	1.02
5	19975	1712.5	Q16	12	HIGH	20.97	21.68	0.71
5	19975	1712.5	Q16	25	LOW	21.27	22.41	1.14
5	20175	1732.5	QPSK	1	LOW	20.69	21.87	1.18
5	20175	1732.5	QPSK	1	MID	20.87	21.84	0.97
5	20175	1732.5	QPSK	1	HIGH	20.75	22.31	1.56
5	20175	1732.5	QPSK	12	LOW	20.60	22.25	1.65
5	20175	1732.5	QPSK	12	MID	21.03	22.21	1.18
5	20175	1732.5	QPSK	12	HIGH	20.54	21.68	1.14
5	20175	1732.5	QPSK	25	LOW	20.87	21.93	1.06
5	20175	1732.5	Q16	1	LOW	20.50	22.01	1.51
5	20175	1732.5	Q16	1	MID	21.19	22.31	1.12
5	20175	1732.5	Q16	1	HIGH	20.77	21.59	0.82
5	20175	1732.5	Q16	12	LOW	21.31	21.56	0.25
5	20175	1732.5	Q16	12	MID	20.56	22.09	1.53

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak	PAPR (dB)
				Size	Offset		(dBm)	
5	20175	1732.5	Q16	12	HIGH	21.18	21.71	0.53
5	20175	1732.5	Q16	25	LOW	21.23	22.18	0.95
5	20375	1752.5	QPSK	1	LOW	20.55	21.78	1.23
5	20375	1752.5	QPSK	1	MID	20.51	21.57	1.06
5	20375	1752.5	QPSK	1	HIGH	21.05	22.18	1.13
5	20375	1752.5	QPSK	12	LOW	20.75	22.27	1.52
5	20375	1752.5	QPSK	12	MID	20.66	21.77	1.11
5	20375	1752.5	QPSK	12	HIGH	21.10	22.08	0.98
5	20375	1752.5	QPSK	25	LOW	20.56	21.7	1.14
5	20375	1752.5	Q16	1	LOW	20.59	22.13	1.54
5	20375	1752.5	Q16	1	MID	20.67	21.84	1.17
5	20375	1752.5	Q16	1	HIGH	21.16	21.58	0.42
5	20375	1752.5	Q16	12	LOW	20.57	22.21	1.64
5	20375	1752.5	Q16	12	MID	21.02	21.96	0.94
5	20375	1752.5	Q16	12	HIGH	20.93	22.39	1.46
5	20375	1752.5	Q16	25	LOW	21.16	21.91	0.75
10	20000	1715	QPSK	1	LOW	20.90	21.56	0.66
10	20000	1715	QPSK	1	MID	21.11	22.42	1.31
10	20000	1715	QPSK	1	HIGH	21.23	22.3	1.07
10	20000	1715	QPSK	25	LOW	21.34	22.36	1.02
10	20000	1715	QPSK	25	MID	21.33	22.08	0.75
10	20000	1715	QPSK	25	HIGH	21.09	22.12	1.03
10	20000	1715	QPSK	50	LOW	20.71	21.74	1.03
10	20000	1715	Q16	1	LOW	20.62	22.29	1.67
10	20000	1715	Q16	1	MID	20.76	22.4	1.64
10	20000	1715	Q16	1	HIGH	21.34	22.24	0.9
10	20000	1715	Q16	25	LOW	20.90	21.67	0.77
10	20000	1715	Q16	25	MID	20.79	21.55	0.76
10	20000	1715	Q16	25	HIGH	21.17	22.41	1.24
10	20000	1715	Q16	50	LOW	20.53	22	1.47
10	20175	1732.5	QPSK	1	LOW	21.06	22.22	1.16
10	20175	1732.5	QPSK	1	MID	20.58	21.47	0.89
10	20175	1732.5	QPSK	1	HIGH	20.72	22.27	1.55
10	20175	1732.5	QPSK	25	LOW	21.03	22.29	1.26
10	20175	1732.5	QPSK	25	MID	21.30	21.63	0.33
10	20175	1732.5	QPSK	25	HIGH	20.47	22.43	1.96
10	20175	1732.5	QPSK	50	LOW	20.71	22	1.29

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak	PAPR (dB)
				Size	Offset		(dBm)	
10	20175	1732.5	Q16	1	LOW	20.82	21.93	1.11
10	20175	1732.5	Q16	1	MID	20.97	22.23	1.26
10	20175	1732.5	Q16	1	HIGH	21.42	22.06	0.64
10	20175	1732.5	Q16	25	LOW	20.64	22.42	1.78
10	20175	1732.5	Q16	25	MID	20.72	22.06	1.34
10	20175	1732.5	Q16	25	HIGH	20.72	22.22	1.5
10	20175	1732.5	Q16	50	LOW	21.37	21.97	0.6
10	20350	1750	QPSK	1	LOW	21.34	22.05	0.71
10	20350	1750	QPSK	1	MID	21.29	22.14	0.85
10	20350	1750	QPSK	1	HIGH	20.66	21.58	0.92
10	20350	1750	QPSK	25	LOW	20.80	21.8	1
10	20350	1750	QPSK	25	MID	21.09	21.84	0.75
10	20350	1750	QPSK	25	HIGH	21.42	21.97	0.55
10	20350	1750	QPSK	50	LOW	21.24	22.43	1.19
10	20350	1750	Q16	1	LOW	20.87	21.54	0.67
10	20350	1750	Q16	1	MID	20.88	22.17	1.29
10	20350	1750	Q16	1	HIGH	21.07	22.04	0.97
10	20350	1750	Q16	25	LOW	21.05	21.92	0.87
10	20350	1750	Q16	25	MID	20.66	22.16	1.5
10	20350	1750	Q16	25	HIGH	20.82	22.06	1.24
10	20350	1750	Q16	50	LOW	20.55	21.85	1.3
15	20025	1717.5	QPSK	1	LOW	20.80	22.16	1.36
15	20025	1717.5	QPSK	1	MID	20.68	21.91	1.23
15	20025	1717.5	QPSK	1	HIGH	20.73	22.26	1.53
15	20025	1717.5	QPSK	36	LOW	20.98	22.12	1.14
15	20025	1717.5	QPSK	36	MID	20.86	21.79	0.93
15	20025	1717.5	QPSK	36	HIGH	20.50	22.17	1.67
15	20025	1717.5	QPSK	75	LOW	21.29	22.06	0.77
15	20025	1717.5	Q16	1	LOW	20.71	21.97	1.26
15	20025	1717.5	Q16	1	MID	20.67	21.63	0.96
15	20025	1717.5	Q16	1	HIGH	20.86	21.76	0.9
15	20025	1717.5	Q16	36	LOW	20.95	21.78	0.83
15	20025	1717.5	Q16	36	MID	20.70	22.09	1.39
15	20025	1717.5	Q16	36	HIGH	20.84	22.1	1.26
15	20025	1717.5	Q16	75	LOW	20.86	22.33	1.47
15	20175	1732.5	QPSK	1	LOW	21.06	21.54	0.48
15	20175	1732.5	QPSK	1	MID	20.85	21.79	0.94

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak	PAPR (dB)
				Size	Offset		(dBm)	
15	20175	1732.5	QPSK	1	HIGH	20.48	22.25	1.77
15	20175	1732.5	QPSK	36	LOW	20.85	22.2	1.35
15	20175	1732.5	QPSK	36	MID	21.15	22.22	1.07
15	20175	1732.5	QPSK	36	HIGH	21.40	21.52	0.12
15	20175	1732.5	QPSK	75	LOW	20.76	21.46	0.7
15	20175	1732.5	Q16	1	LOW	20.81	22.15	1.34
15	20175	1732.5	Q16	1	MID	21.04	21.59	0.55
15	20175	1732.5	Q16	1	HIGH	20.86	21.54	0.68
15	20175	1732.5	Q16	36	LOW	21.14	22.09	0.95
15	20175	1732.5	Q16	36	MID	21.11	22.09	0.98
15	20175	1732.5	Q16	36	HIGH	20.83	21.45	0.62
15	20175	1732.5	Q16	75	LOW	21.12	21.74	0.62
15	20325	1747.5	QPSK	1	LOW	20.64	22.28	1.64
15	20325	1747.5	QPSK	1	MID	20.54	22.02	1.48
15	20325	1747.5	QPSK	1	HIGH	20.77	21.86	1.09
15	20325	1747.5	QPSK	36	LOW	21.31	22.04	0.73
15	20325	1747.5	QPSK	36	MID	20.94	22.12	1.18
15	20325	1747.5	QPSK	36	HIGH	20.95	21.46	0.51
15	20325	1747.5	QPSK	75	LOW	20.89	21.94	1.05
15	20325	1747.5	Q16	1	LOW	21.11	22.07	0.96
15	20325	1747.5	Q16	1	MID	20.77	22.27	1.5
15	20325	1747.5	Q16	1	HIGH	21.26	22	0.74
15	20325	1747.5	Q16	36	LOW	20.69	22.05	1.36
15	20325	1747.5	Q16	36	MID	21.28	21.48	0.2
15	20325	1747.5	Q16	36	HIGH	20.53	22.22	1.69
15	20325	1747.5	Q16	75	LOW	20.63	22.16	1.53
20	20050	1720	QPSK	1	LOW	20.79	21.83	1.04
20	20050	1720	QPSK	1	MID	20.53	21.91	1.38
20	20050	1720	QPSK	1	HIGH	20.61	21.51	0.9
20	20050	1720	QPSK	50	LOW	21.31	21.99	0.68
20	20050	1720	QPSK	50	MID	20.89	21.59	0.7
20	20050	1720	QPSK	50	HIGH	21.04	21.79	0.75
20	20050	1720	QPSK	100	LOW	20.63	22.06	1.43
20	20050	1720	Q16	1	LOW	21.23	21.74	0.51
20	20050	1720	Q16	1	MID	20.90	22.11	1.21
20	20050	1720	Q16	1	HIGH	20.53	22.13	1.6
20	20050	1720	Q16	50	LOW	21.22	21.86	0.64

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak	PAPR (dB)
				Size	Offset		(dBm)	
20	20050	1720	Q16	50	MID	21.03	21.52	0.49
20	20050	1720	Q16	50	HIGH	21.35	22.22	0.87
20	20050	1720	Q16	100	LOW	20.63	21.69	1.06
20	20175	1732.5	QPSK	1	LOW	20.82	21.74	0.92
20	20175	1732.5	QPSK	1	MID	20.85	21.7	0.85
20	20175	1732.5	QPSK	1	HIGH	20.95	22.14	1.19
20	20175	1732.5	QPSK	50	LOW	20.63	21.59	0.96
20	20175	1732.5	QPSK	50	MID	21.13	22.27	1.14
20	20175	1732.5	QPSK	50	HIGH	20.77	22.06	1.29
20	20175	1732.5	QPSK	100	LOW	20.63	22.01	1.38
20	20175	1732.5	Q16	1	LOW	21.41	22.41	1
20	20175	1732.5	Q16	1	MID	20.96	22.03	1.07
20	20175	1732.5	Q16	1	HIGH	21.27	21.56	0.29
20	20175	1732.5	Q16	50	LOW	20.67	21.69	1.02
20	20175	1732.5	Q16	50	MID	20.78	22.24	1.46
20	20175	1732.5	Q16	50	HIGH	20.67	22.28	1.61
20	20175	1732.5	Q16	100	LOW	20.81	21.69	0.88
20	20300	1745	QPSK	1	LOW	20.91	22.07	1.16
20	20300	1745	QPSK	1	MID	21.35	22.07	0.72
20	20300	1745	QPSK	1	HIGH	21.42	21.58	0.16
20	20300	1745	QPSK	50	LOW	20.69	22.29	1.6
20	20300	1745	QPSK	50	MID	21.34	22.41	1.07
20	20300	1745	QPSK	50	HIGH	21.31	21.49	0.18
20	20300	1745	QPSK	100	LOW	20.84	21.85	1.01
20	20300	1745	Q16	1	LOW	20.53	22.18	1.65
20	20300	1745	Q16	1	MID	21.39	21.7	0.31
20	20300	1745	Q16	1	HIGH	21.37	21.77	0.4
20	20300	1745	Q16	50	LOW	21.17	21.96	0.79
20	20300	1745	Q16	50	MID	20.70	21.72	1.02
20	20300	1745	Q16	50	HIGH	20.75	21.96	1.21
20	20300	1745	Q16	100	LOW	21.28	21.62	0.34

BAND 7:

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
5	20775	2502.5	QPSK	1	LOW	20.97	22.23	1.26
5	20775	2502.5	QPSK	1	MID	21.28	22.7	1.42
5	20775	2502.5	QPSK	1	HIGH	20.91	22.1	1.19
5	20775	2502.5	QPSK	12	LOW	21.26	22.36	1.1
5	20775	2502.5	QPSK	12	MID	21.11	22.29	1.18
5	20775	2502.5	QPSK	12	HIGH	20.92	22.34	1.42
5	20775	2502.5	QPSK	25	LOW	20.98	21.98	1
5	20775	2502.5	Q16	1	LOW	21.32	22.57	1.25
5	20775	2502.5	Q16	1	MID	20.62	21.82	1.2
5	20775	2502.5	Q16	1	HIGH	20.78	22.65	1.87
5	20775	2502.5	Q16	12	LOW	21.06	22.13	1.07
5	20775	2502.5	Q16	12	MID	20.89	22.28	1.39
5	20775	2502.5	Q16	12	HIGH	20.95	22.17	1.22
5	20775	2502.5	Q16	25	LOW	20.78	22.69	1.91
5	21100	2535	QPSK	1	LOW	21.43	21.98	0.55
5	21100	2535	QPSK	1	MID	20.54	22.75	2.21
5	21100	2535	QPSK	1	HIGH	21.39	21.82	0.43
5	21100	2535	QPSK	12	LOW	20.66	22.3	1.64
5	21100	2535	QPSK	12	MID	21.43	22.69	1.26
5	21100	2535	QPSK	12	HIGH	21.31	22.16	0.85
5	21100	2535	QPSK	25	LOW	21.44	21.92	0.48
5	21100	2535	Q16	1	LOW	20.53	22.43	1.9
5	21100	2535	Q16	1	MID	21.40	22.41	1.01
5	21100	2535	Q16	1	HIGH	20.62	22.32	1.7
5	21100	2535	Q16	12	LOW	21.26	21.96	0.7
5	21100	2535	Q16	12	MID	20.76	22.43	1.67
5	21100	2535	Q16	12	HIGH	21.03	22.02	0.99
5	21100	2535	Q16	25	LOW	21.28	22.43	1.15
5	21425	2567.5	QPSK	1	LOW	20.84	21.8	0.96
5	21425	2567.5	QPSK	1	MID	20.52	22.18	1.66
5	21425	2567.5	QPSK	1	HIGH	20.95	22.45	1.5
5	21425	2567.5	QPSK	12	LOW	21.13	22.16	1.03
5	21425	2567.5	QPSK	12	MID	21.02	21.84	0.82
5	21425	2567.5	QPSK	12	HIGH	21.11	21.98	0.87
5	21425	2567.5	QPSK	25	LOW	20.88	22.57	1.69
5	21425	2567.5	Q16	1	LOW	20.86	22.26	1.4
5	21425	2567.5	Q16	1	MID	21.08	22.27	1.19

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
5	21425	2567.5	Q16	1	HIGH	20.55	22.35	1.8
5	21425	2567.5	Q16	12	LOW	20.87	22.45	1.58
5	21425	2567.5	Q16	12	MID	21.03	22.25	1.22
5	21425	2567.5	Q16	12	HIGH	20.98	21.89	0.91
5	21425	2567.5	Q16	25	LOW	20.48	22	1.52
10	20800	2505	QPSK	1	LOW	20.61	22.65	2.04
10	20800	2505	QPSK	1	MID	21.28	22.39	1.11
10	20800	2505	QPSK	1	HIGH	20.95	21.83	0.88
10	20800	2505	QPSK	25	LOW	21.27	22.45	1.18
10	20800	2505	QPSK	25	MID	20.94	22.41	1.47
10	20800	2505	QPSK	25	HIGH	21.08	21.79	0.71
10	20800	2505	QPSK	50	LOW	21.30	21.98	0.68
10	20800	2505	Q16	1	LOW	21.17	21.99	0.82
10	20800	2505	Q16	1	MID	21.01	22.36	1.35
10	20800	2505	Q16	1	HIGH	20.96	21.83	0.87
10	20800	2505	Q16	25	LOW	20.60	21.82	1.22
10	20800	2505	Q16	25	MID	20.58	22.04	1.46
10	20800	2505	Q16	25	HIGH	21.41	22.25	0.84
10	20800	2505	Q16	50	LOW	20.68	22.71	2.03
10	21100	2535	QPSK	1	LOW	20.90	22.72	1.82
10	21100	2535	QPSK	1	MID	20.74	22.4	1.66
10	21100	2535	QPSK	1	HIGH	21.21	22.43	1.22
10	21100	2535	QPSK	25	LOW	20.87	21.8	0.93
10	21100	2535	QPSK	25	MID	20.52	22.37	1.85
10	21100	2535	QPSK	25	HIGH	21.30	22.12	0.82
10	21100	2535	QPSK	50	LOW	20.59	21.88	1.29
10	21100	2535	Q16	1	LOW	21.14	21.95	0.81
10	21100	2535	Q16	1	MID	21.32	22.57	1.25
10	21100	2535	Q16	1	HIGH	20.67	22.63	1.96
10	21100	2535	Q16	25	LOW	20.51	22.54	2.03
10	21100	2535	Q16	25	MID	21.33	21.82	0.49
10	21100	2535	Q16	25	HIGH	20.54	22.29	1.75
10	21100	2535	Q16	50	LOW	21.29	22.25	0.96
10	21400	2565	QPSK	1	LOW	20.71	21.92	1.21
10	21400	2565	QPSK	1	MID	21.31	22.26	0.95
10	21400	2565	QPSK	1	HIGH	21.00	21.84	0.84
10	21400	2565	QPSK	25	LOW	20.90	22.67	1.77
10	21400	2565	QPSK	25	MID	20.87	22.31	1.44

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
10	21400	2565	QPSK	25	HIGH	20.97	21.9	0.93
10	21400	2565	QPSK	50	LOW	20.69	21.85	1.16
10	21400	2565	Q16	1	LOW	20.79	22.12	1.33
10	21400	2565	Q16	1	MID	20.92	22.63	1.71
10	21400	2565	Q16	1	HIGH	20.74	22.53	1.79
10	21400	2565	Q16	25	LOW	20.53	22.46	1.93
10	21400	2565	Q16	25	MID	20.56	22.48	1.92
10	21400	2565	Q16	25	HIGH	21.33	22.4	1.07
10	21400	2565	Q16	50	LOW	20.90	21.92	1.02
15	20825	2507.5	QPSK	1	LOW	21.31	22.25	0.94
15	20825	2507.5	QPSK	1	MID	21.00	22.44	1.44
15	20825	2507.5	QPSK	1	HIGH	21.07	22.67	1.6
15	20825	2507.5	QPSK	36	LOW	21.27	22.01	0.74
15	20825	2507.5	QPSK	36	MID	20.96	22.23	1.27
15	20825	2507.5	QPSK	36	HIGH	20.88	22.56	1.68
15	20825	2507.5	QPSK	75	LOW	21.32	22.19	0.87
15	20825	2507.5	Q16	1	LOW	20.54	21.87	1.33
15	20825	2507.5	Q16	1	MID	21.03	22.64	1.61
15	20825	2507.5	Q16	1	HIGH	21.37	22.15	0.78
15	20825	2507.5	Q16	36	LOW	21.30	22.24	0.94
15	20825	2507.5	Q16	36	MID	20.59	22.35	1.76
15	20825	2507.5	Q16	36	HIGH	20.93	22.7	1.77
15	20825	2507.5	Q16	75	LOW	21.44	22.5	1.06
15	21100	2535	QPSK	1	LOW	20.87	22.61	1.74
15	21100	2535	QPSK	1	MID	20.93	22.41	1.48
15	21100	2535	QPSK	1	HIGH	20.86	22.12	1.26
15	21100	2535	QPSK	36	LOW	20.75	22.7	1.95
15	21100	2535	QPSK	36	MID	20.83	22.59	1.76
15	21100	2535	QPSK	36	HIGH	21.20	22.08	0.88
15	21100	2535	QPSK	75	LOW	21.43	22.57	1.14
15	21100	2535	Q16	1	LOW	20.79	22.57	1.78
15	21100	2535	Q16	1	MID	21.32	22.76	1.44
15	21100	2535	Q16	1	HIGH	20.66	22	1.34
15	21100	2535	Q16	36	LOW	20.74	22.6	1.86
15	21100	2535	Q16	36	MID	20.79	22.32	1.53
15	21100	2535	Q16	36	HIGH	21.12	22.41	1.29
15	21100	2535	Q16	75	LOW	20.87	22.32	1.45
15	21375	2562.5	QPSK	1	LOW	21.22	22.76	1.54

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
15	21375	2562.5	QPSK	1	MID	20.84	22.41	1.57
15	21375	2562.5	QPSK	1	HIGH	20.55	22.42	1.87
15	21375	2562.5	QPSK	36	LOW	20.53	22.65	2.12
15	21375	2562.5	QPSK	36	MID	21.06	22.52	1.46
15	21375	2562.5	QPSK	36	HIGH	20.85	22.51	1.66
15	21375	2562.5	QPSK	75	LOW	20.93	22.38	1.45
15	21375	2562.5	Q16	1	LOW	20.95	22.4	1.45
15	21375	2562.5	Q16	1	MID	21.23	22.16	0.93
15	21375	2562.5	Q16	1	HIGH	20.90	21.92	1.02
15	21375	2562.5	Q16	36	LOW	21.39	22.23	0.84
15	21375	2562.5	Q16	36	MID	21.19	21.92	0.73
15	21375	2562.5	Q16	36	HIGH	21.35	22.06	0.71
15	21375	2562.5	Q16	75	LOW	21.30	22.7	1.4
20	20850	2510	QPSK	1	LOW	21.26	22.31	1.05
20	20850	2510	QPSK	1	MID	21.03	22.04	1.01
20	20850	2510	QPSK	1	HIGH	21.12	21.93	0.81
20	20850	2510	QPSK	50	LOW	20.48	22.75	2.27
20	20850	2510	QPSK	50	MID	20.59	21.77	1.18
20	20850	2510	QPSK	50	HIGH	20.99	22.6	1.61
20	20850	2510	QPSK	100	LOW	20.94	22.23	1.29
20	20850	2510	Q16	1	LOW	21.34	22.31	0.97
20	20850	2510	Q16	1	MID	20.83	22.52	1.69
20	20850	2510	Q16	1	HIGH	20.88	21.94	1.06
20	20850	2510	Q16	50	LOW	20.79	22.27	1.48
20	20850	2510	Q16	50	MID	20.47	22.68	2.21
20	20850	2510	Q16	50	HIGH	21.22	22.25	1.03
20	20850	2510	Q16	100	LOW	21.06	21.89	0.83
20	21100	2535	QPSK	1	LOW	20.96	21.78	0.82
20	21100	2535	QPSK	1	MID	20.94	22.09	1.15
20	21100	2535	QPSK	1	HIGH	21.28	22.48	1.2
20	21100	2535	QPSK	50	LOW	20.46	21.9	1.44
20	21100	2535	QPSK	50	MID	21.15	21.83	0.68
20	21100	2535	QPSK	50	HIGH	20.70	22.2	1.5
20	21100	2535	QPSK	100	LOW	20.75	22.06	1.31
20	21100	2535	Q16	1	LOW	21.00	22.38	1.38
20	21100	2535	Q16	1	MID	20.45	22.63	2.18
20	21100	2535	Q16	1	HIGH	20.60	22	1.4
20	21100	2535	Q16	50	LOW	21.33	21.97	0.64

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Average (dBm)	Peak (dBm)	PAPR (dB)
				Size	Offset			
20	21100	2535	Q16	50	MID	20.98	21.83	0.85
20	21100	2535	Q16	50	HIGH	20.43	21.95	1.52
20	21100	2535	Q16	100	LOW	21.42	22.74	1.32
20	21350	2560	QPSK	1	LOW	21.26	22.16	0.9
20	21350	2560	QPSK	1	MID	21.22	22.26	1.04
20	21350	2560	QPSK	1	HIGH	20.93	21.94	1.01
20	21350	2560	QPSK	50	LOW	20.81	22.54	1.73
20	21350	2560	QPSK	50	MID	20.86	21.95	1.09
20	21350	2560	QPSK	50	HIGH	21.10	22.6	1.5
20	21350	2560	QPSK	100	LOW	20.92	21.9	0.98
20	21350	2560	Q16	1	LOW	21.40	22.36	0.96
20	21350	2560	Q16	1	MID	20.67	22.3	1.63
20	21350	2560	Q16	1	HIGH	20.44	21.79	1.35
20	21350	2560	Q16	50	LOW	20.52	22.15	1.63
20	21350	2560	Q16	50	MID	20.82	22.14	1.32
20	21350	2560	Q16	50	HIGH	20.94	22.76	1.82
20	21350	2560	Q16	100	LOW	20.80	21.9	1.1

Radiation power test

Note: Record the condition when max power has been detector for radiated method.(X axis)

Radiated Power (ERP) for GSM 850 MHZ				
Mode	Frequency	Result		Conclusion
		Max. Peak ERP (dBm)	Polarization Of Max. ERP	
GSM850	824.2	32.35	Horizontal	Pass
	836.6	32.37	Horizontal	Pass
	848.8	32.29	Horizontal	Pass

Radiated Power (ERP) for GPRS 850 MHZ				
Mode	Frequency	Result		Conclusion
		Max. Peak ERP (dBm)	Polarization Of Max. ERP	
GPRS850	824.2	29.28	Horizontal	Pass
	836.6	29.48	Horizontal	Pass
	848.8	29.62	Horizontal	Pass

Radiated Power (ERP) for EGPRS 850 MHZ				
Mode	Frequency	Result		Conclusion
		Max. Peak ERP (dBm)	Polarization Of Max. ERP	
EGPRS850	824.2	27.43	Horizontal	Pass
	836.6	27.56	Horizontal	Pass
	848.8	27.62	Horizontal	Pass

Radiated Power (E.I.R.P) for PCS 1900 MHZ				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
GSM 1900	1850.2	29.68	Horizontal	Pass
	1880.0	29.49	Horizontal	Pass
	1909.8	29.44	Horizontal	Pass

Radiated Power (E.I.R.P) for PCS 1900 MHZ				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
GPRS 1900	1850.2	27.30	Horizontal	Pass
	1880.0	27.41	Horizontal	Pass
	1909.8	27.28	Horizontal	Pass

Radiated Power (E.I.R.P) for PCS 1900 MHZ				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
EGPRS 1900	1850.2	25.29	Horizontal	Pass
	1880.0	25.38	Horizontal	Pass
	1909.8	25.31	Horizontal	Pass

Radiated Power (E.I.R.P) for UTRA Band 2				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
UTRA Band 2	1852.4	22.64	Horizontal	Pass
	1880	22.58	Horizontal	Pass
	1907.6	22.65	Horizontal	Pass

Radiated Power (E.I.R.P) for UTRA Band 4				
Mode	Frequency	Result		Conclusion
		Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
UTRA Band 4	1712.4	22.38	Horizontal	Pass
	1732.6	22.64	Horizontal	Pass
	1752.6	22.47	Horizontal	Pass

Radiated Power (ERP) for UTRA Band 5				
Mode	Frequency	Result		Conclusion
		Max. Peak ERP (dBm)	Polarization Of Max.ERP	
UTRA Band 5	826.4	22.67	Horizontal	Pass
	836.4	22.55	Horizontal	Pass
	846.6	22.43	Horizontal	Pass

LTE power is filtered as the worst mode data

Radiated Power (E.I.R.P) for E-UTRA Band 2						
Mode	band width	Modulation	Mid Range Frequency(MHz)	Result		Conclusion
				Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
E-UTRA Band 2	1.4	QPSK	1880	21.04	Horizontal	Pass
		Q16	1880	21.61	Horizontal	Pass
	3	QPSK	1880	21.17	Horizontal	Pass
		Q16	1880	21.53	Horizontal	Pass
	5	QPSK	1880	21.34	Horizontal	Pass
		Q16	1880	21.74	Horizontal	Pass
	10	QPSK	1880	21.56	Horizontal	Pass
		Q16	1880	21.21	Horizontal	Pass
	15	QPSK	1880	21.24	Horizontal	Pass
		Q16	1880	21.88	Horizontal	Pass
	20	QPSK	1880	21.75	Horizontal	Pass
		Q16	1880	21.80	Horizontal	Pass

Radiated Power (E.I.R.P) for E-UTRA Band 4						
Mode	band width	Modulation	Mid Range Frequency(MHz)	Result		Conclusion
				Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
E-UTRA Band 4	1.4	QPSK	1732.5	21.20	Horizontal	Pass
		Q16	1732.5	21.60	Horizontal	Pass
	3	QPSK	1732.5	21.87	Horizontal	Pass
		Q16	1732.5	21.53	Horizontal	Pass
	5	QPSK	1732.5	21.51	Horizontal	Pass
		Q16	1732.5	21.73	Horizontal	Pass
	10	QPSK	1732.5	21.65	Horizontal	Pass
		Q16	1732.5	21.57	Horizontal	Pass
	15	QPSK	1732.5	21.30	Horizontal	Pass
		Q16	1732.5	21.37	Horizontal	Pass
	20	QPSK	1732.5	21.32	Horizontal	Pass
		Q16	1732.5	21.22	Horizontal	Pass

Radiated Power (E.I.R.P) for E-UTRA Band 7						
Mode	band width	Modulation	Mid Range Frequency(MHz)	Result		Conclusion
				Max. Peak E.I.R.P.(dBm)	Polarization Of Max. E.I.R.P.	
E-UTRA Band 7	5	QPSK	2535	21.05	Horizontal	Pass
		Q16	2535	21.25	Horizontal	Pass
	10	QPSK	2535	21.72	Horizontal	Pass
		Q16	2535	21.51	Horizontal	Pass
	15	QPSK	2535	21.58	Horizontal	Pass
		Q16	2535	21.24	Horizontal	Pass
	20	QPSK	2535	21.60	Horizontal	Pass
		Q16	2535	21.79	Horizontal	Pass

6 SPURIOUS EMISSION (Conducted and Radiated)

6.1 Measurement Result (Pre-measurement)

GSM850:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	0.2	128	824.2	Pass
Middle Range	0.2	190	836.6	Pass
High Range	0.2	251	848.8	Pass

PCS 1900:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	0.2	512	1850.2	Pass
Middle Range	0.2	661	1880.0	Pass
High Range	0.2	810	1909.8	Pass

UTRA BANDS**BAND 2:**

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	9262	1852.4	Pass
Middle Range	5	9400	1880.0	Pass
High Range	5	9538	1907.6	Pass

BAND 4:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	1312	1712.4	Pass
Middle Range	5	1413	1732.6	Pass
High Range	5	1513	1752.6	Pass

BAND 5:

Test Channel	BW(MHz)	UL Channel	Frequency(MHz)	Judgment
Low Range	5	4132	826.4	Pass
Middle Range	5	4182	836.4	Pass
High Range	5	4233	846.6	Pass

E-UTRA BANDS**BAND 2:**

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
1.4	18607	1850.7	QPSK	6	LOW	Pass
1.4	18607	1850.7	Q16	6	LOW	Pass
1.4	18900	1880	QPSK	6	LOW	Pass
1.4	18900	1880	Q16	6	LOW	Pass
1.4	19193	1909.3	QPSK	6	LOW	Pass
1.4	19193	1909.3	Q16	6	LOW	Pass
3	18615	1851.5	QPSK	15	LOW	Pass
3	18615	1851.5	Q16	15	LOW	Pass
3	18900	1880	QPSK	15	LOW	Pass
3	18900	1880	Q16	15	LOW	Pass
3	19185	1908.5	QPSK	15	LOW	Pass
3	19185	1908.5	Q16	15	LOW	Pass
5	18625	1852.5	QPSK	25	LOW	Pass
5	18625	1852.5	Q16	25	LOW	Pass
5	18900	1880	QPSK	25	LOW	Pass
5	18900	1880	Q16	25	LOW	Pass
5	19175	1907.5	QPSK	25	LOW	Pass
5	19175	1907.5	Q16	25	LOW	Pass
10	18650	1855	QPSK	50	LOW	Pass
10	18650	1855	Q16	50	LOW	Pass
10	18900	1880	QPSK	50	LOW	Pass
10	18900	1880	Q16	50	LOW	Pass
10	19150	1905	QPSK	50	LOW	Pass
10	19150	1905	Q16	50	LOW	Pass
15	18675	1857.5	QPSK	75	LOW	Pass
15	18675	1857.5	Q16	75	LOW	Pass
15	18900	1880	QPSK	75	LOW	Pass
15	18900	1880	Q16	75	LOW	Pass
15	19125	1902.5	QPSK	75	LOW	Pass
15	19125	1902.5	Q16	75	LOW	Pass
20	18700	1860	QPSK	100	LOW	Pass
20	18700	1860	Q16	100	LOW	Pass
20	18900	1880	QPSK	100	LOW	Pass
20	18900	1880	Q16	100	LOW	Pass
20	19100	1900	QPSK	100	LOW	Pass

BAND 4:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
20	19100	1900	Q16	100	LOW	Pass

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
1.4	19957	1710.7	QPSK	6	LOW	Pass
1.4	19957	1710.7	Q16	6	LOW	Pass
1.4	20393	1754.3	QPSK	6	LOW	Pass
1.4	20393	1754.3	Q16	6	LOW	Pass
1.4	20175	1732.5	QPSK	6	LOW	Pass
1.4	20175	1732.5	Q16	6	LOW	Pass
3	19965	1711.5	QPSK	15	LOW	Pass
3	19965	1711.5	Q16	15	LOW	Pass
3	20385	1753.5	QPSK	15	LOW	Pass
3	20385	1753.5	Q16	15	LOW	Pass
3	20175	1732.5	QPSK	15	LOW	Pass
3	20175	1732.5	Q16	15	LOW	Pass
5	19975	1712.5	QPSK	25	LOW	Pass
5	19975	1712.5	Q16	25	LOW	Pass
5	20375	1752.5	QPSK	25	LOW	Pass
5	20375	1752.5	Q16	25	LOW	Pass
5	20175	1732.5	QPSK	25	LOW	Pass
5	20175	1732.5	Q16	25	LOW	Pass
10	20000	1715	QPSK	50	LOW	Pass
10	20000	1715	Q16	50	LOW	Pass
10	20350	1750	QPSK	50	LOW	Pass
10	20350	1750	Q16	50	LOW	Pass
10	20175	1732.5	QPSK	50	LOW	Pass
10	20175	1732.5	Q16	50	LOW	Pass
15	20025	1717.5	QPSK	75	LOW	Pass
15	20025	1717.5	Q16	75	LOW	Pass
15	20325	1747.5	QPSK	75	LOW	Pass
15	20325	1747.5	Q16	75	LOW	Pass
15	20175	1732.5	QPSK	75	LOW	Pass
15	20175	1732.5	Q16	75	LOW	Pass
20	20050	1720	QPSK	100	LOW	Pass
20	20050	1720	Q16	100	LOW	Pass
20	20300	1745	QPSK	100	LOW	Pass

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
20	20300	1745	Q16	100	LOW	Pass
20	20175	1732.5	QPSK	100	LOW	Pass
20	20175	1732.5	Q16	100	LOW	Pass

BAND 7:

Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
5	20775	2502.5	QPSK	25	LOW	Pass
5	20775	2502.5	Q16	25	LOW	Pass
5	21425	2567.5	QPSK	25	LOW	Pass
5	21425	2567.5	Q16	25	LOW	Pass
5	21100	2535	QPSK	25	LOW	Pass
5	21100	2535	QPSK	25	LOW	Pass
10	20800	2505	QPSK	50	LOW	Pass
10	20800	2505	Q16	50	LOW	Pass
10	21400	2565	QPSK	50	LOW	Pass
10	21400	2565	Q16	50	LOW	Pass
10	21100	2535	QPSK	50	LOW	Pass
10	21100	2535	Q16	50	LOW	Pass
15	20825	2507.5	QPSK	75	LOW	Pass
15	20825	2507.5	Q16	75	LOW	Pass
15	21375	2562.5	QPSK	75	LOW	Pass
15	21375	2562.5	Q16	75	LOW	Pass
15	21100	2535	QPSK	75	LOW	Pass
15	21100	2535	Q16	75	LOW	Pass
20	20850	2510	QPSK	100	LOW	Pass
20	20850	2510	Q16	100	LOW	Pass
20	21350	2560	QPSK	100	LOW	Pass
20	21350	2560	Q16	100	LOW	Pass
20	21100	2535	QPSK	100	LOW	Pass
20	21100	2535	Q16	100	LOW	Pass

Test Plot(s)

6.1.1 Conducted method

Test limit:

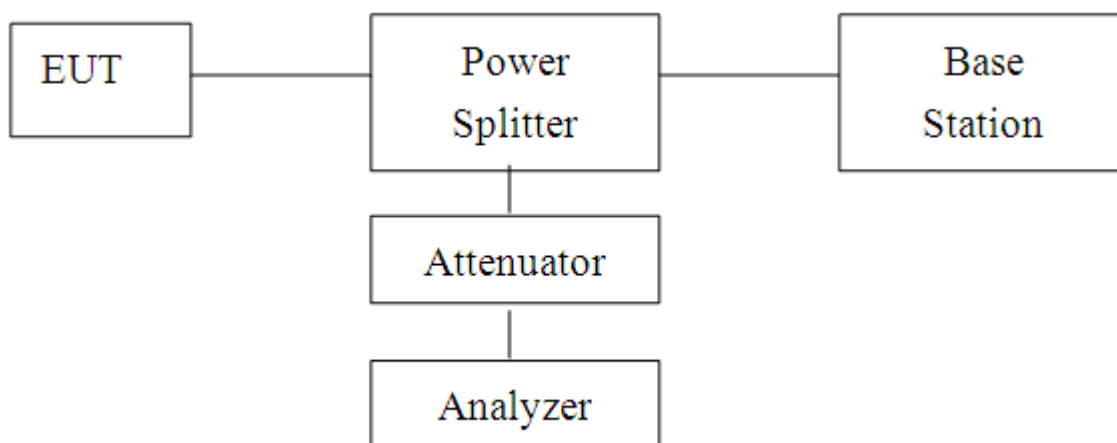
The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. In some rule parts, the unwanted emission limits are specified by an emission mask that defines the applicable limit as a function of the frequency range relative to the authorized frequency block.

Typically, unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $X + 10\log(P)$ dB, where P represents the transmitter power expressed in watts and X is a specified scalar value (e.g., 43). This specification can be interpreted in one of two equivalent ways. First, the required attenuation can be construed to be relative to the mean carrier power, with the resultant of the equation $X + 10\log(P)$ being expressed in dBc (dB relative to the maximum carrier power). Alternatively, the specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e., $10\log(P) - \{X + 10\log(P)\}$], resulting in an absolute level of $-X$ dBW [or $(-X + 30)$ dBm]. See section 4.

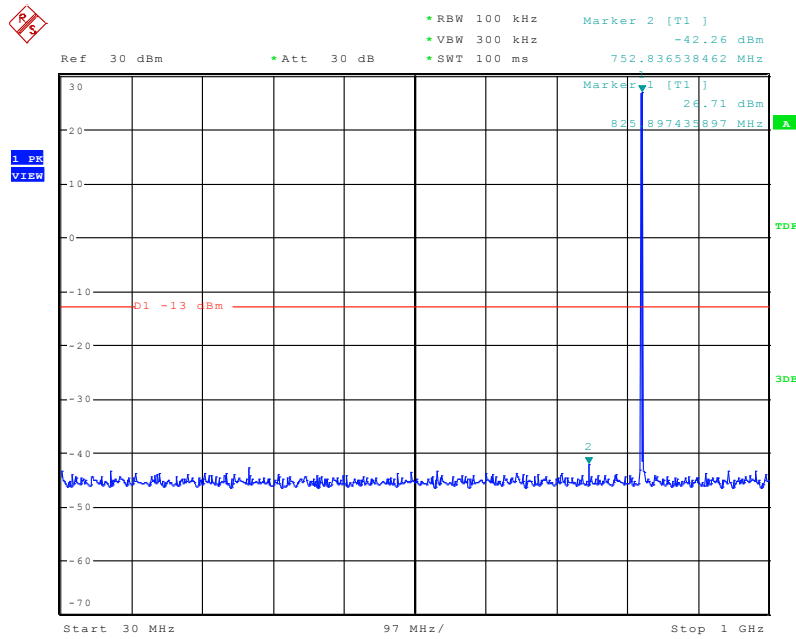
Test procedure:

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

Conducted Emission Test-Up:

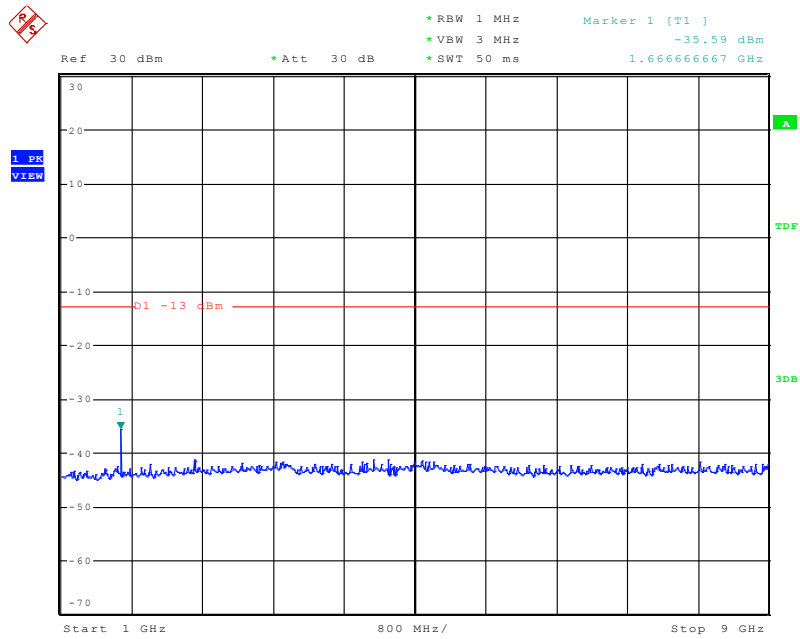


CONDUCTED EMISSION IN GSM850 BAND
Conducted Emission Transmitting Mode CH 128 30MHz – 1GHz



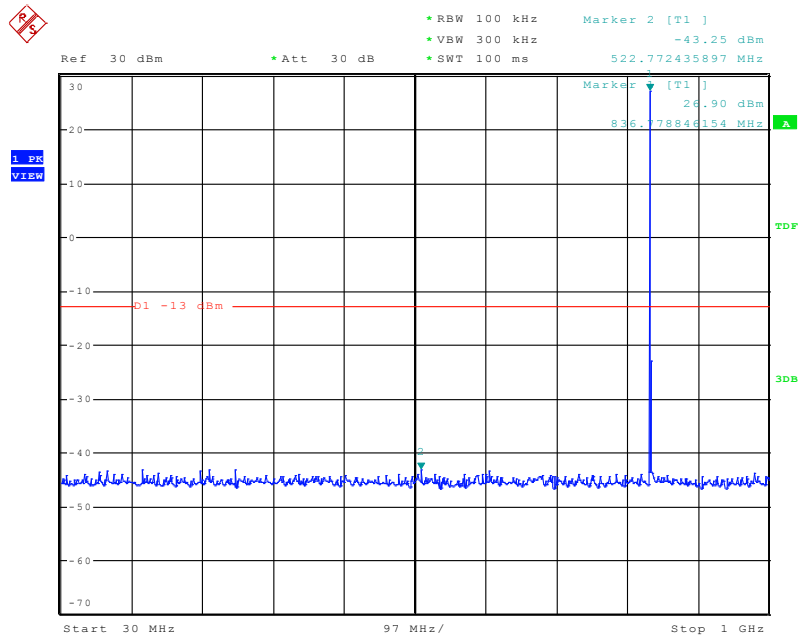
Date: 16.JUN.2017 20:02:20

Conducted Emission Transmitting Mode CH 128 1GHz – 9GHz



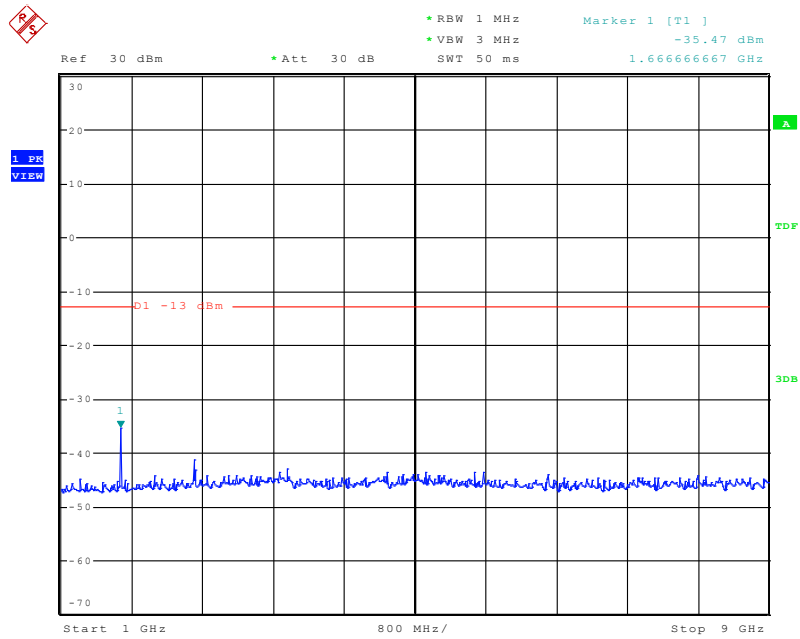
Date: 16.JUN.2017 20:07:16

Conducted Emission Transmitting Mode CH 190 30MHz – 1GHz

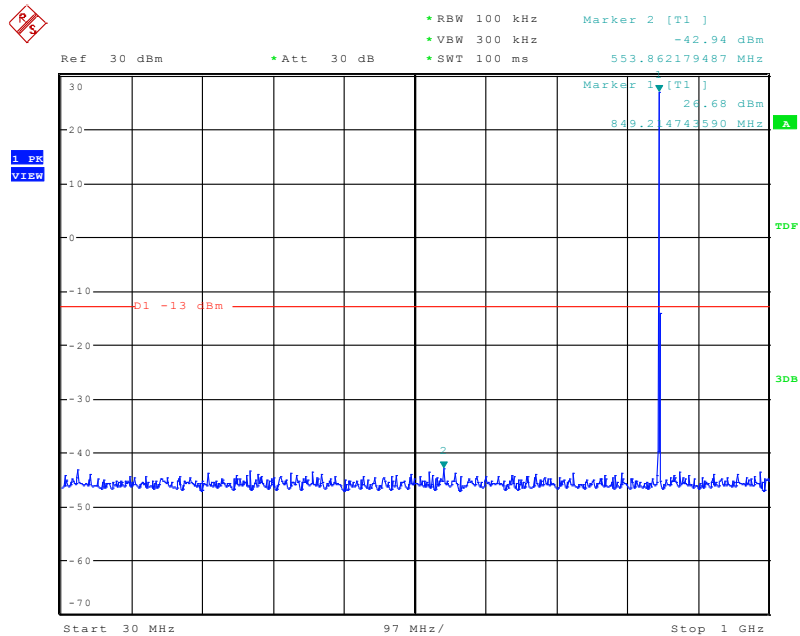


Date: 16.JUN.2017 20:04:41

Conducted Emission Transmitting Mode CH 190 1GHz – 9GHz

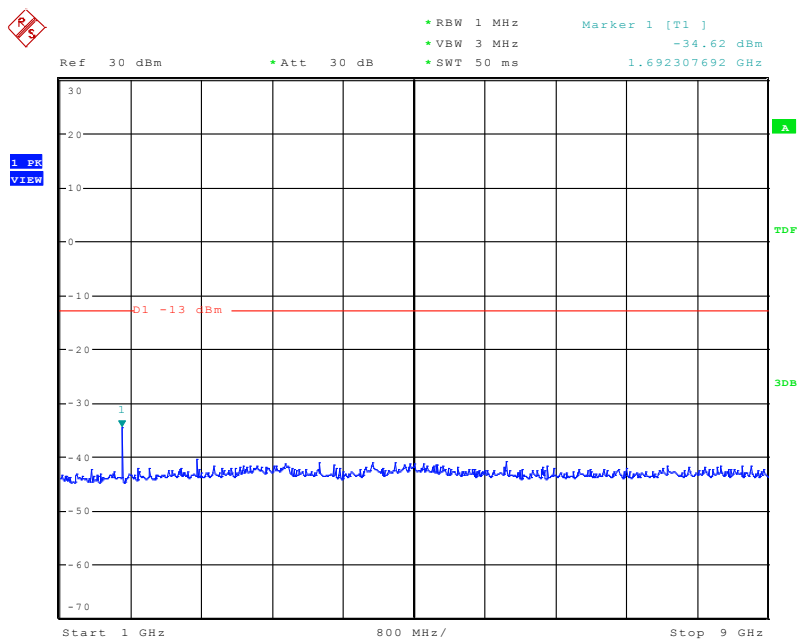


Conducted Emission Transmitting Mode CH 251 30MHz – 1GHz

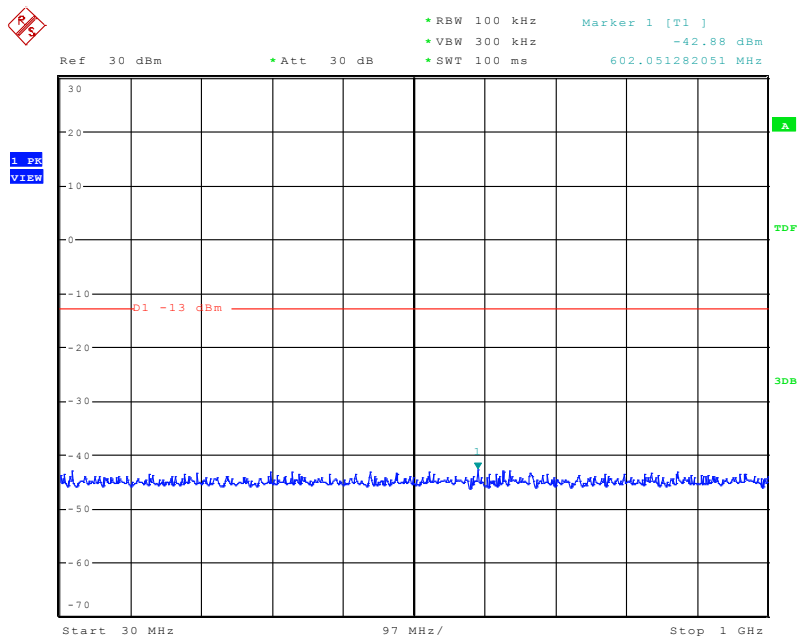


Date: 16.JUN.2017 19:58:53

Conducted Emission Transmitting Mode CH 251 1GHz – 9GHz

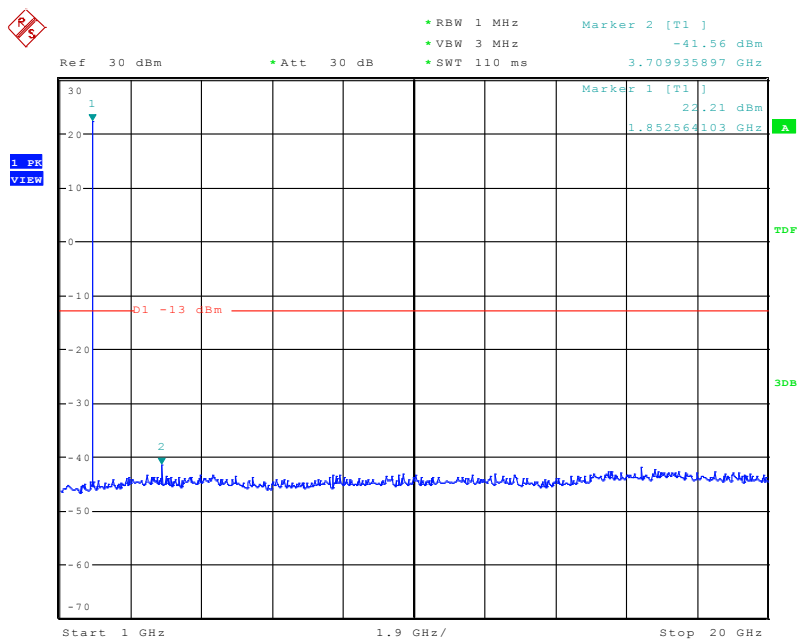


Date: 16.JUN.2017 20:25:07

CONDUCTED EMISSION IN PCS1900 BAND
Conducted Emission Transmitting Mode CH 512 30MHz – 1GHz

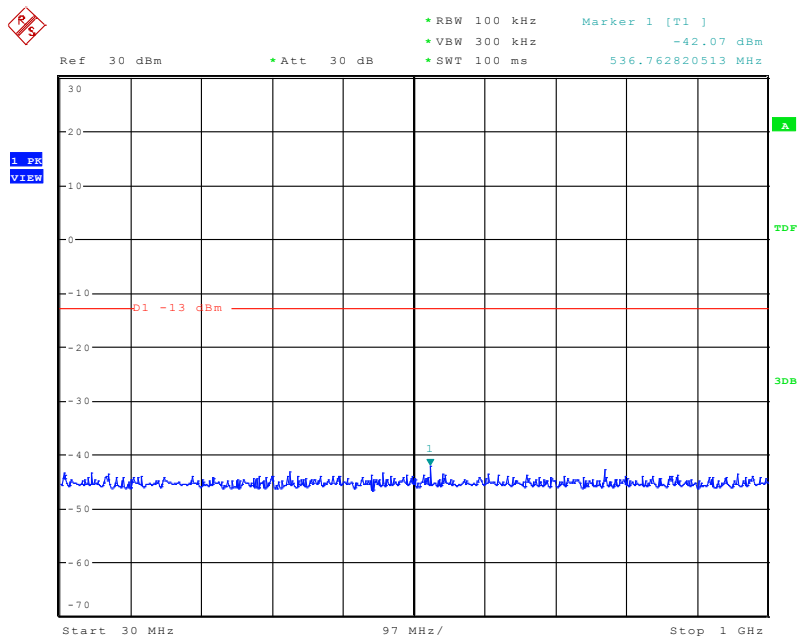
Date: 16.JUN.2017 20:38:05

Conducted Emission Transmitting Mode CH 512 1GHz – 20GHz



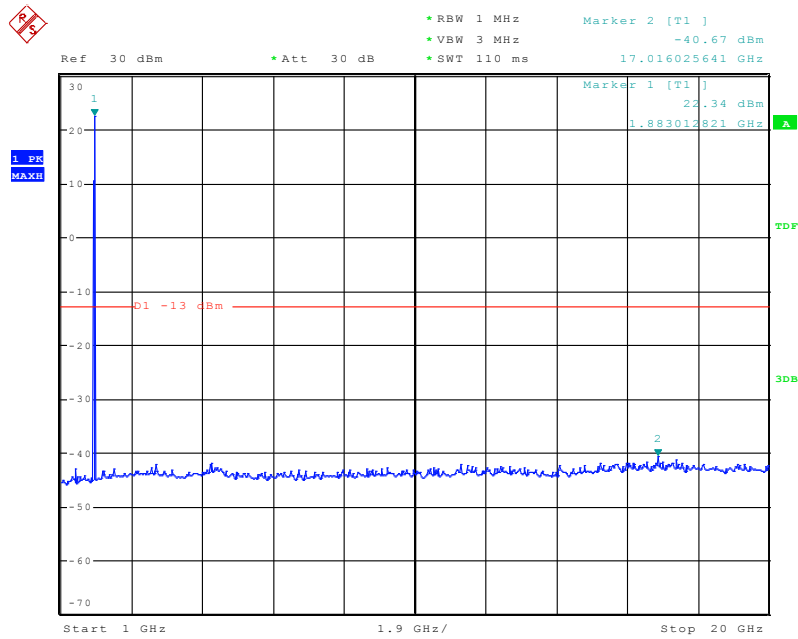
Date: 16.JUN.2017 20:51:28

Conducted Emission Transmitting Mode CH 661 30MHz – 1GHz



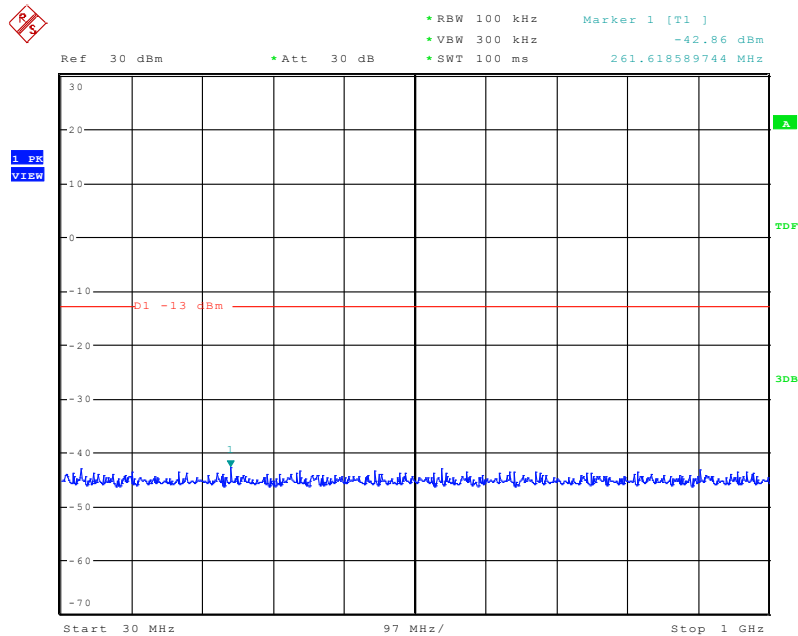
Date: 16.JUN.2017 20:40:29

Conducted Emission Transmitting Mode CH 661 1GHz – 20GHz



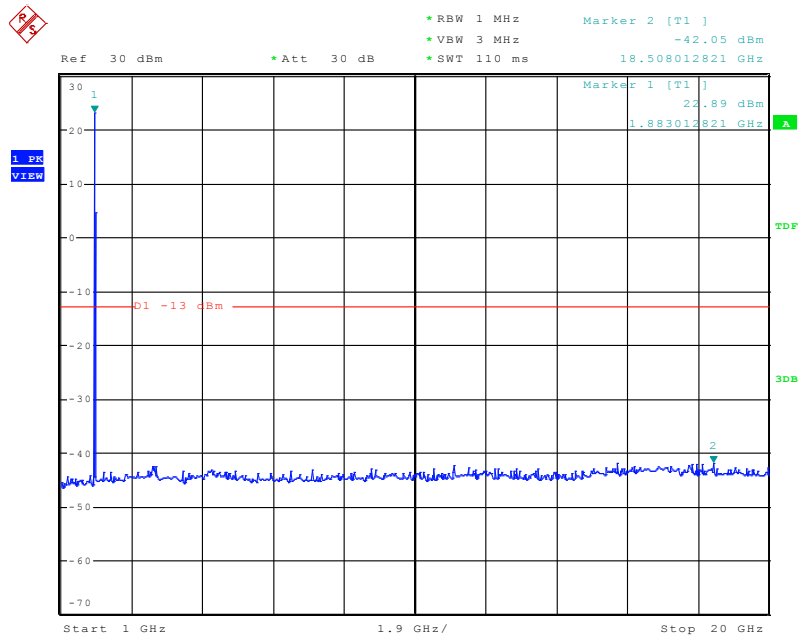
Date: 16.JUN.2017 20:49:26

Conducted Emission Transmitting Mode CH 810 30MHz – 1GHz



Date: 16.JUN.2017 20:42:21

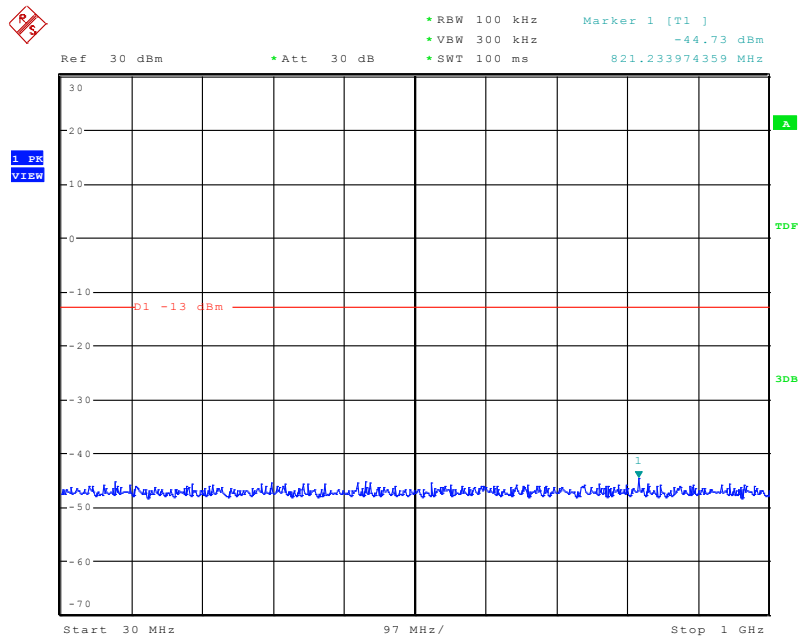
Conducted Emission Transmitting Mode CH 810 1GHz – 20GHz



Date: 16.JUN.2017 20:54:04

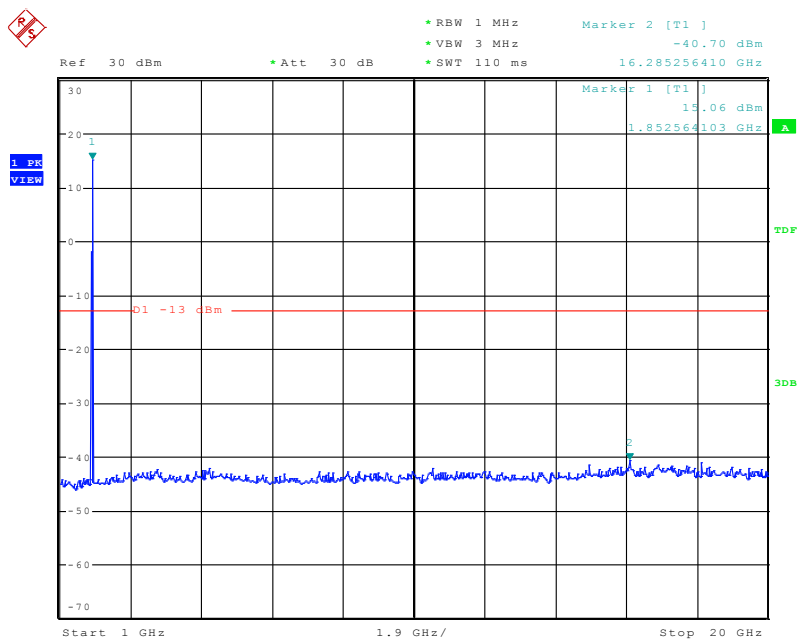
CONDUCTED EMISSION IN WCDMA Band II

Conducted Emission Transmitting Mode CH 9262 30MHz – 1GHz



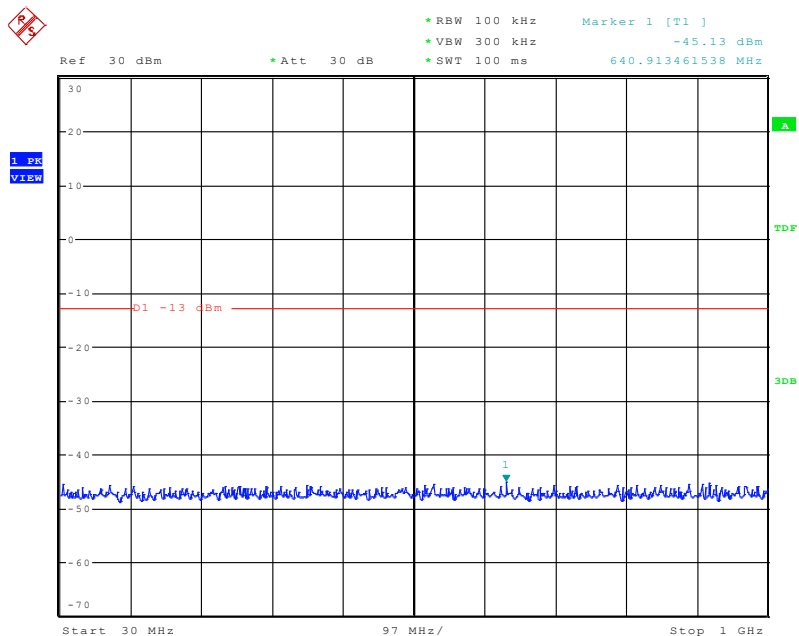
Date: 16.JUN.2017 21:00:24

Conducted Emission Transmitting Mode CH 9262 1GHz – 20GHz



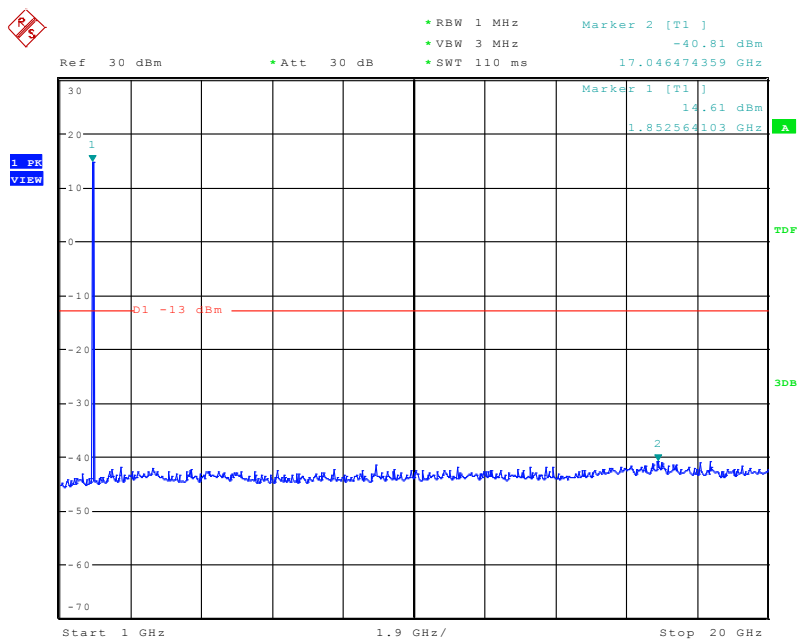
Date: 16.JUN.2017 21:07:57

Conducted Emission Transmitting Mode CH 9400 30MHz – 1GHz



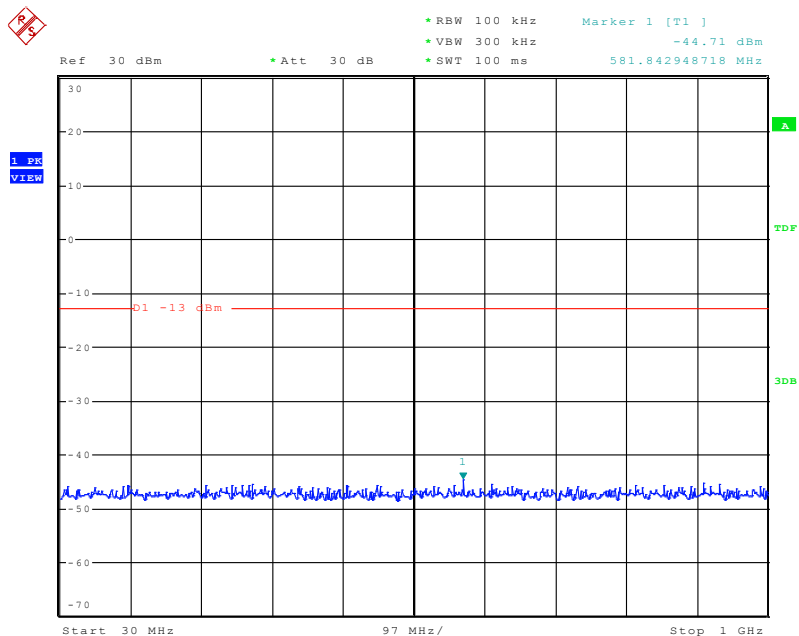
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Conducted Emission Transmitting Mode CH 9400 1GHz – 20GHz



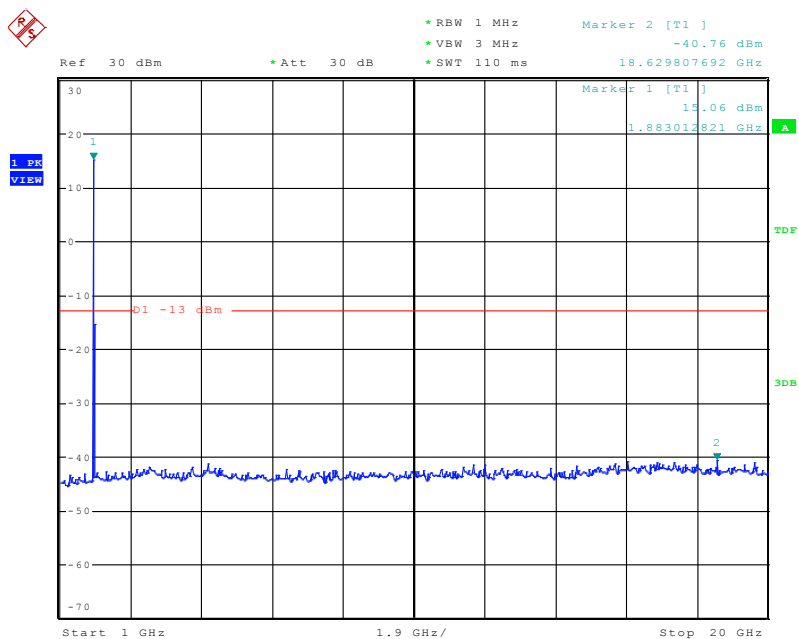
Date: 16.JUN.2017 21:10:07

Conducted Emission Transmitting Mode CH 9538 30MHz – 1GHz



Date: 16.JUN.2017 21:03:05

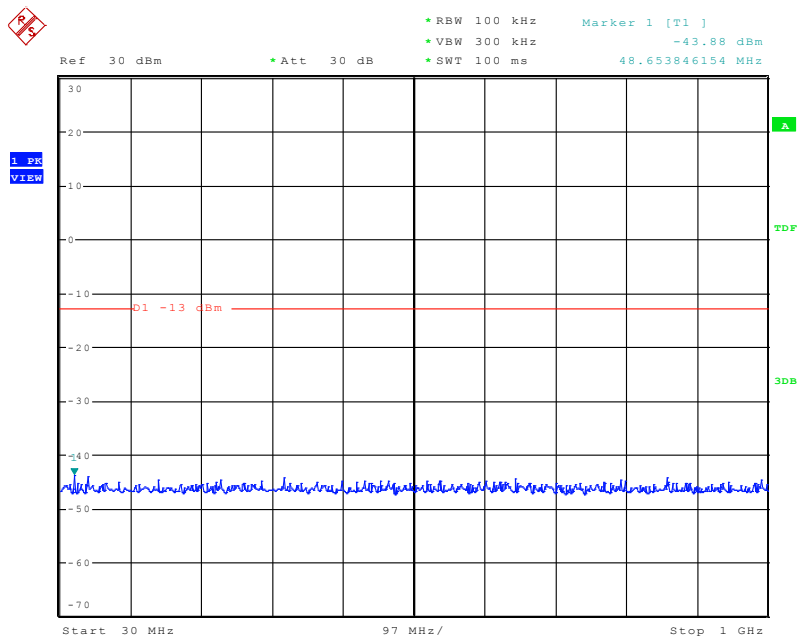
Conducted Emission Transmitting Mode CH 9538 1GHz – 20GHz



Date: 16.JUN.2017 21:11:51

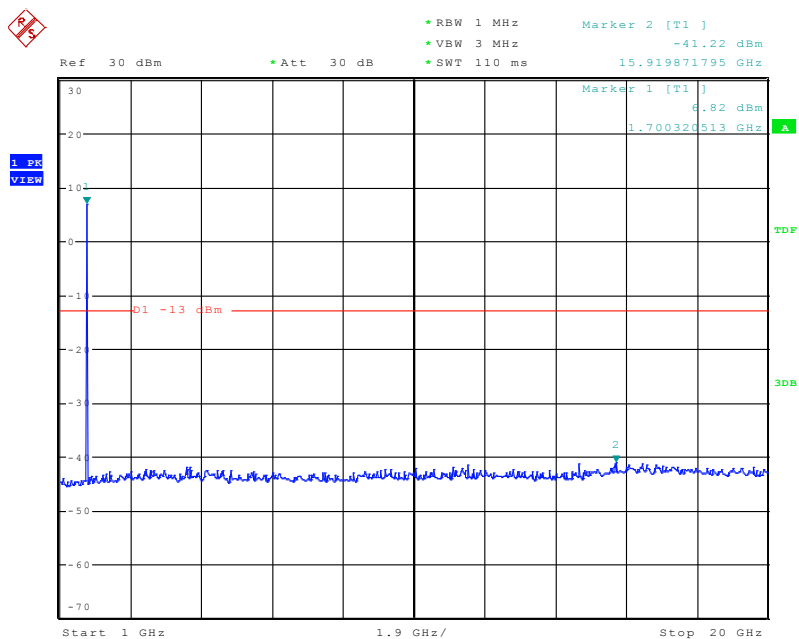
CONDUCTED EMISSION IN WCDMA Band IV

Conducted Emission Transmitting Mode CH 1312 30MHz – 1GHz



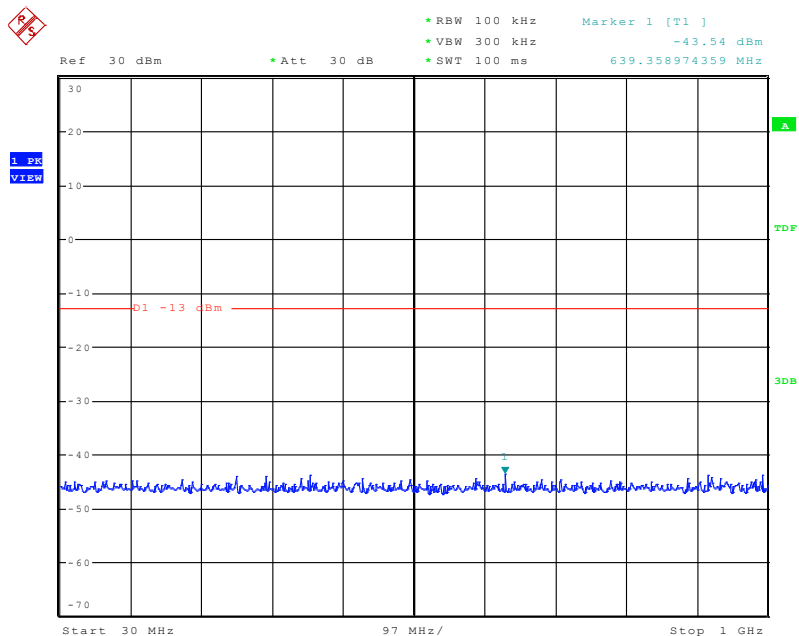
Date: 16.JUN.2017 21:16:00

Conducted Emission Transmitting Mode CH 1312 1GHz – 20GHz



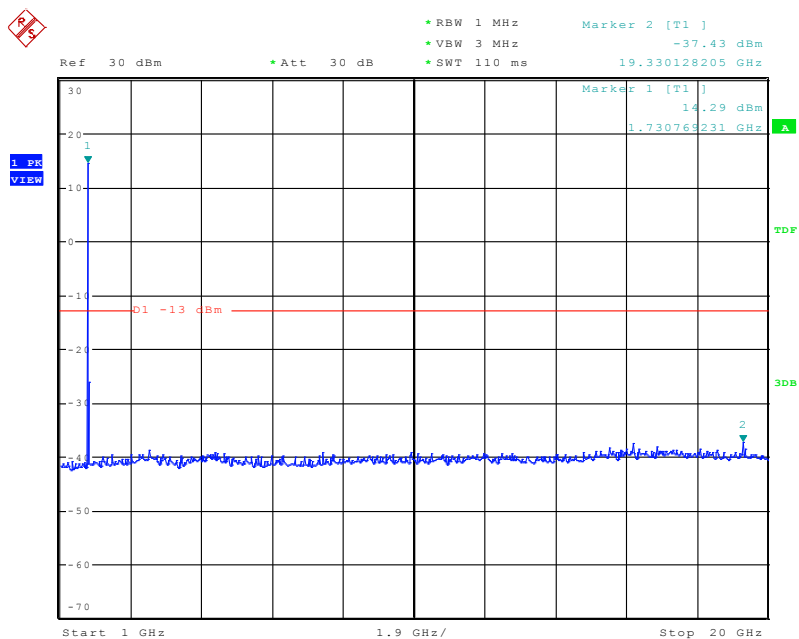
Date: 16.JUN.2017 21:18:07

Conducted Emission Transmitting Mode CH 1413 30MHz – 1GHz



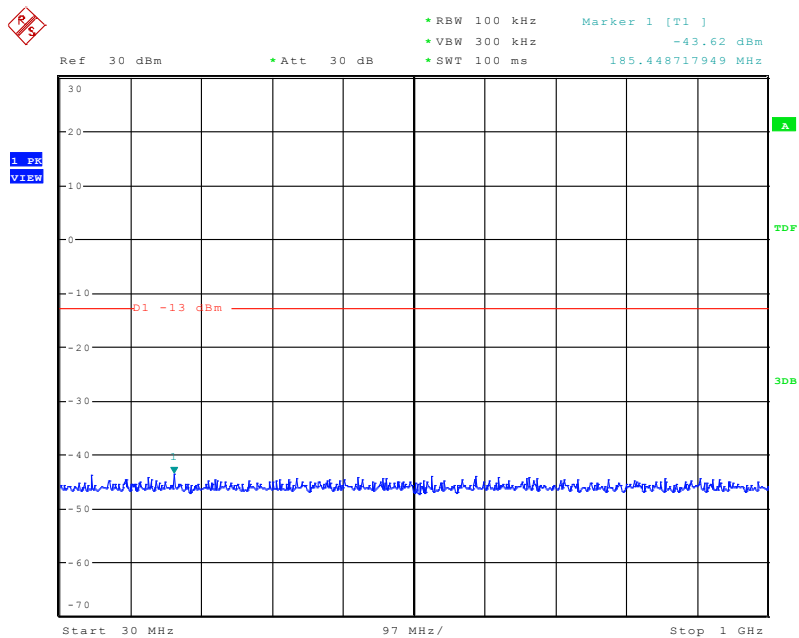
Date: 16.JUN.2017 21:21:32

Conducted Emission Transmitting Mode CH 1413 1GHz – 20GHz



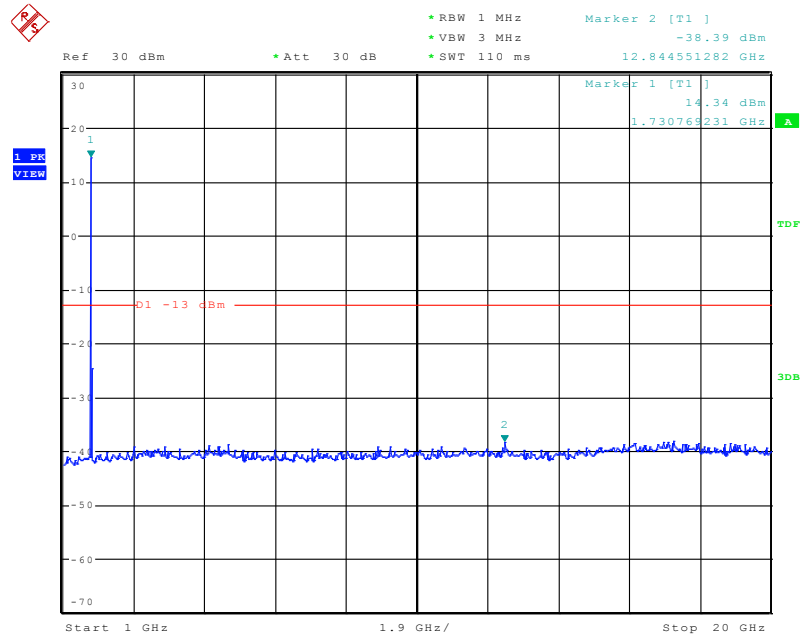
Date: 16.JUN.2017 21:29:19

Conducted Emission Transmitting Mode CH 1513 30MHz – 1GHz



Date: 16.JUN.2017 21:23:18

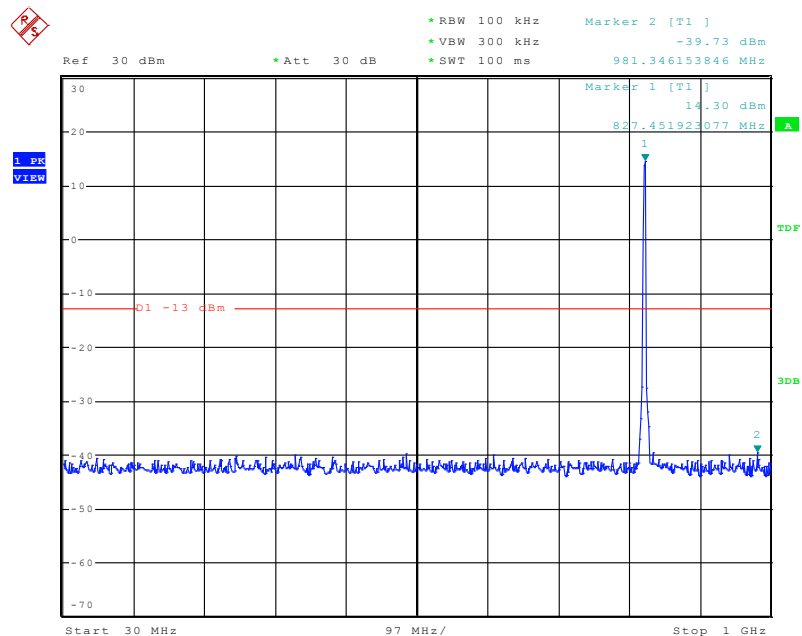
Conducted Emission Transmitting Mode CH 1513 1GHz – 20GHz



Date: 16.JUN.2017 21:30:09

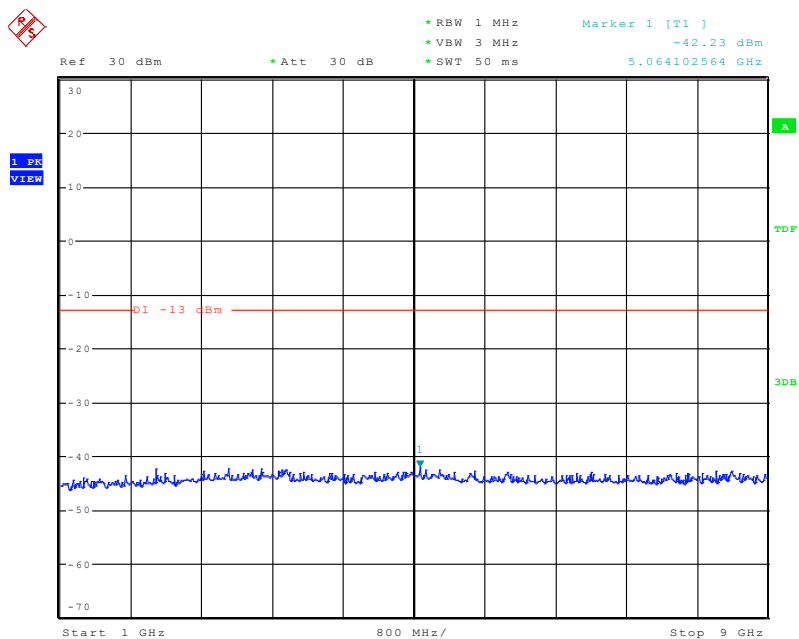
CONDUCTED EMISSION IN WCDMA Band V

Conducted Emission Transmitting Mode CH 4132 30MHz – 1GHz



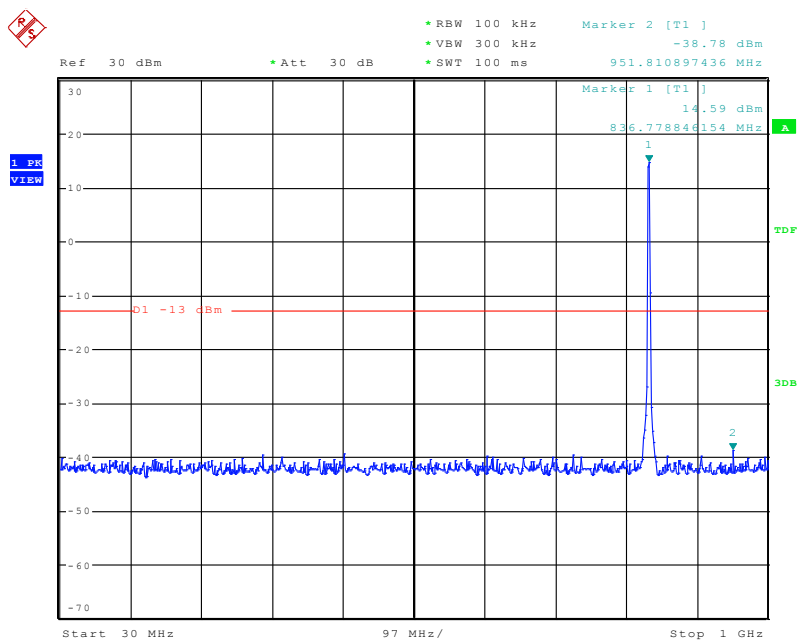
Date: 16.JUN.2017 21:34:24

Conducted Emission Transmitting Mode CH 4132 1GHz – 9GHz



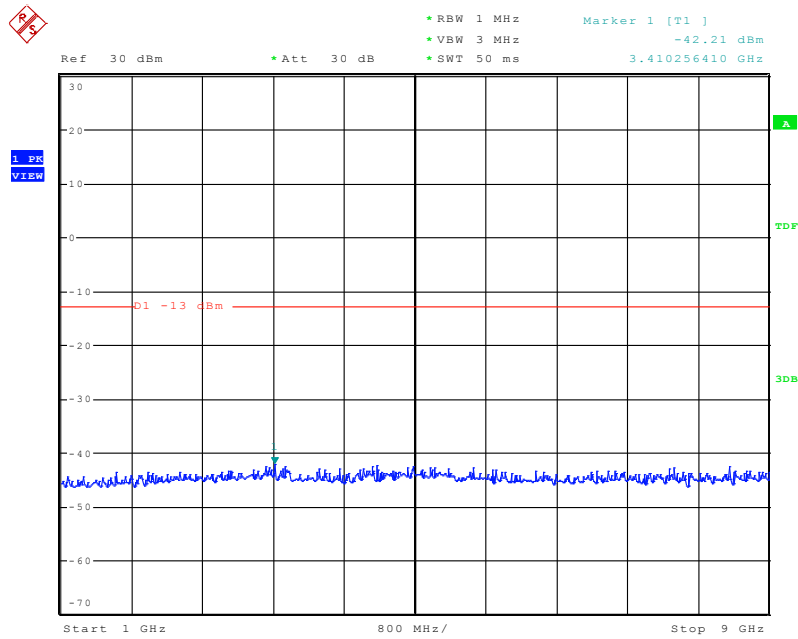
Date: 16.JUN.2017 21:38:00

Conducted Emission Transmitting Mode CH 4182 30MHz – 1GHz



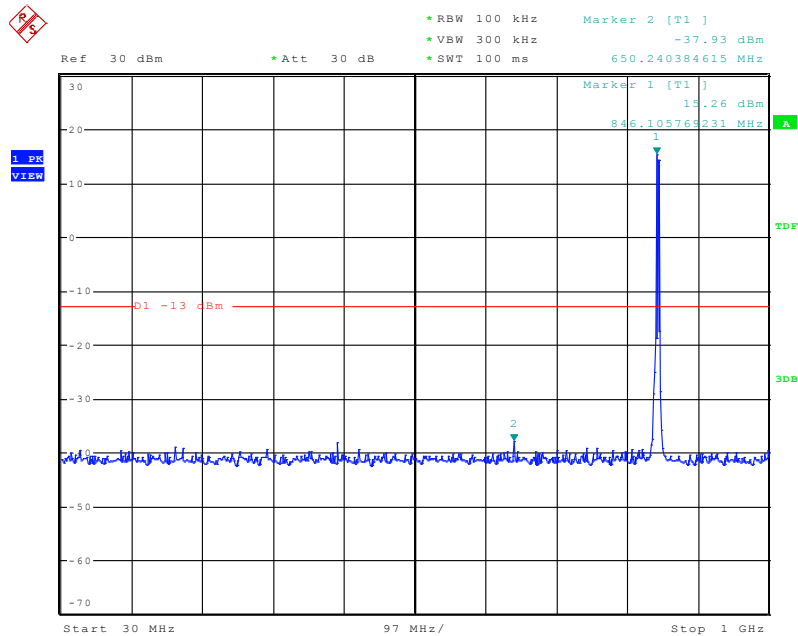
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Conducted Emission Transmitting Mode CH 4182 1GHz – 9GHz



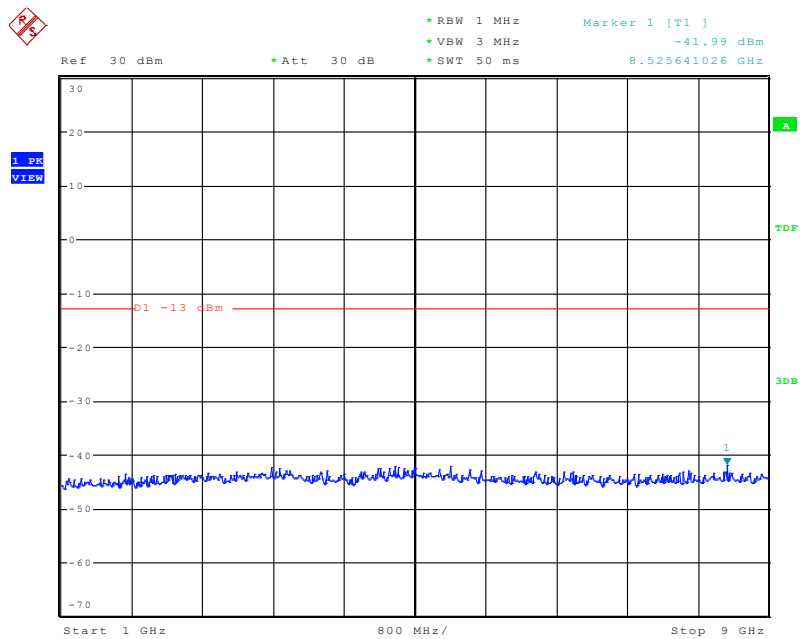
Date: 16.JUN.2017 21:38:42

Conducted Emission Transmitting Mode CH 4233 30MHz – 1GHz



Date: 16.JUN.2017 21:36:27

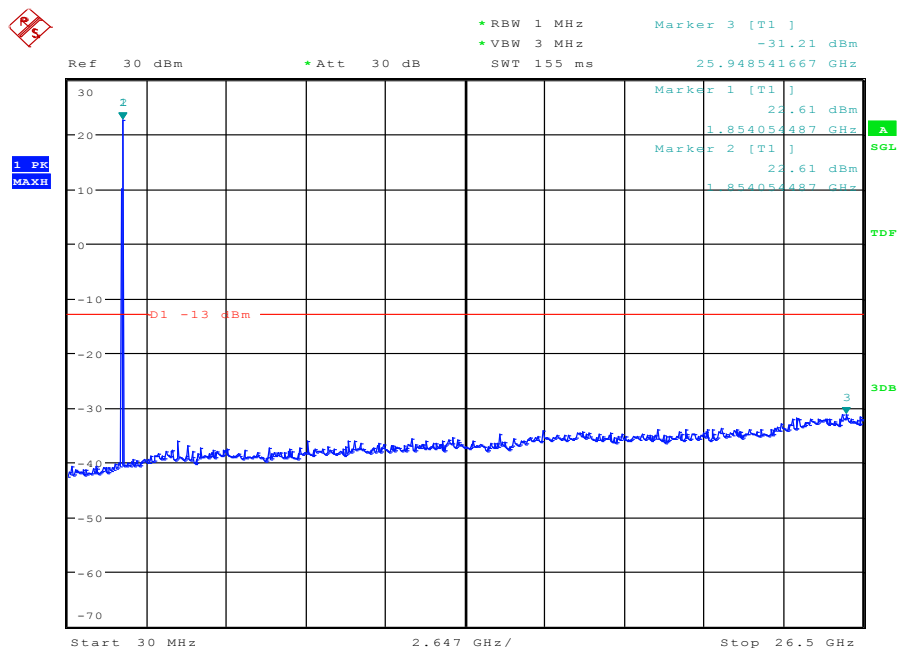
Conducted Emission Transmitting Mode CH 4233 1GHz – 9GHz



Date: 16.JUN.2017 21:39:08

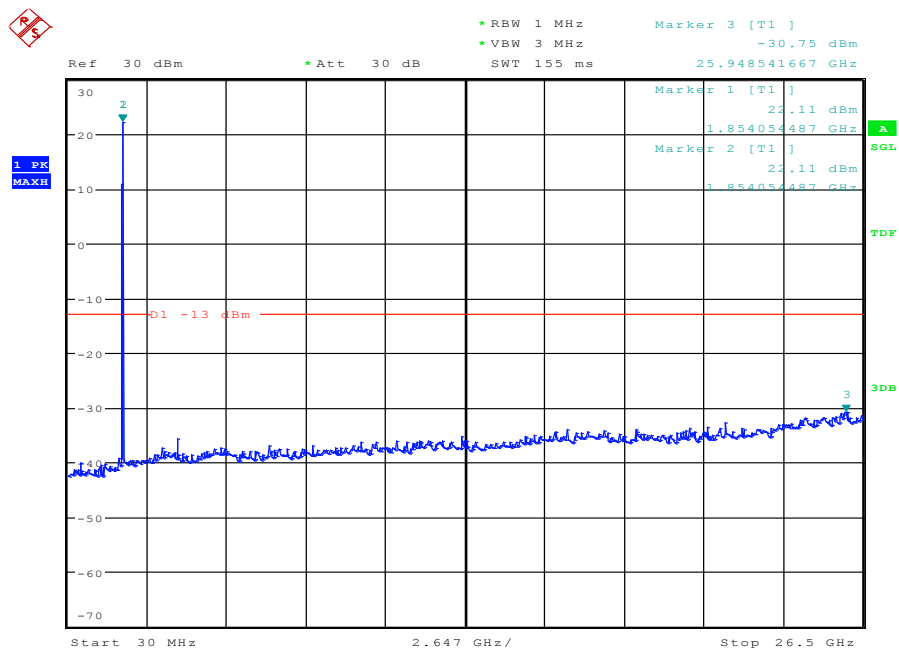
BAND 2@ Conducted Spurious Emission

BW1.4MHz-1850.7MHz,Q16-6RB_LOW@Pass

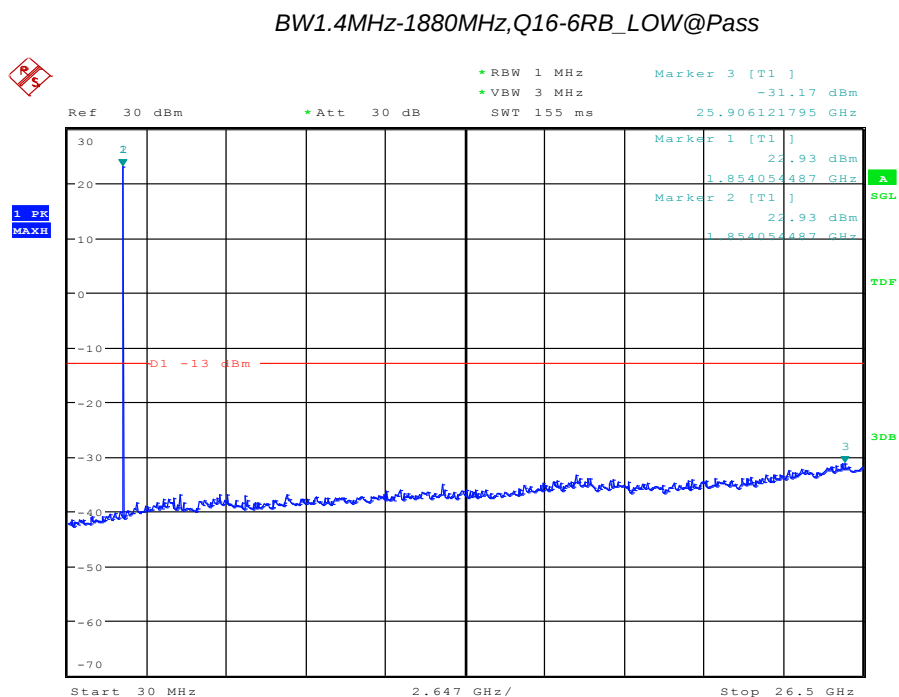


Date: 19.JUN.2017 21:00:59

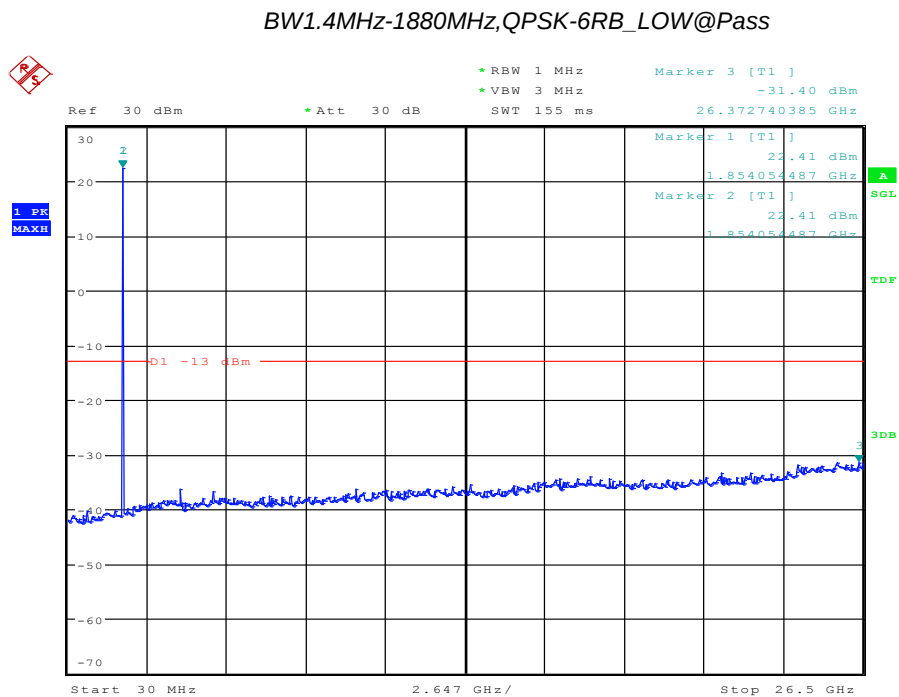
BW1.4MHz-1850.7MHz,QPSK-6RB_LOW@Pass



Date: 19.JUN.2017 21:00:42

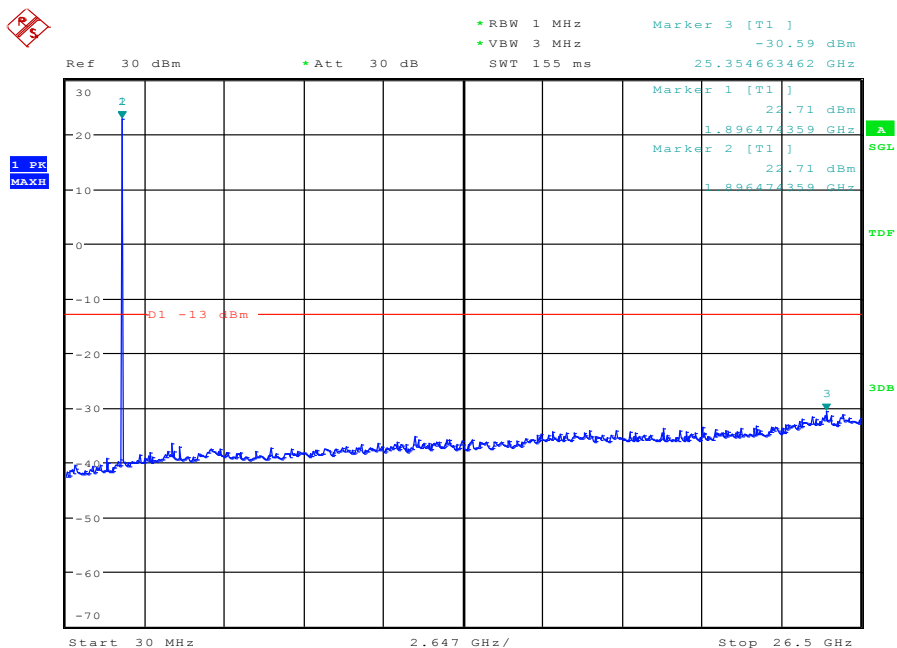


Date: 19.JUN.2017 21:02:04



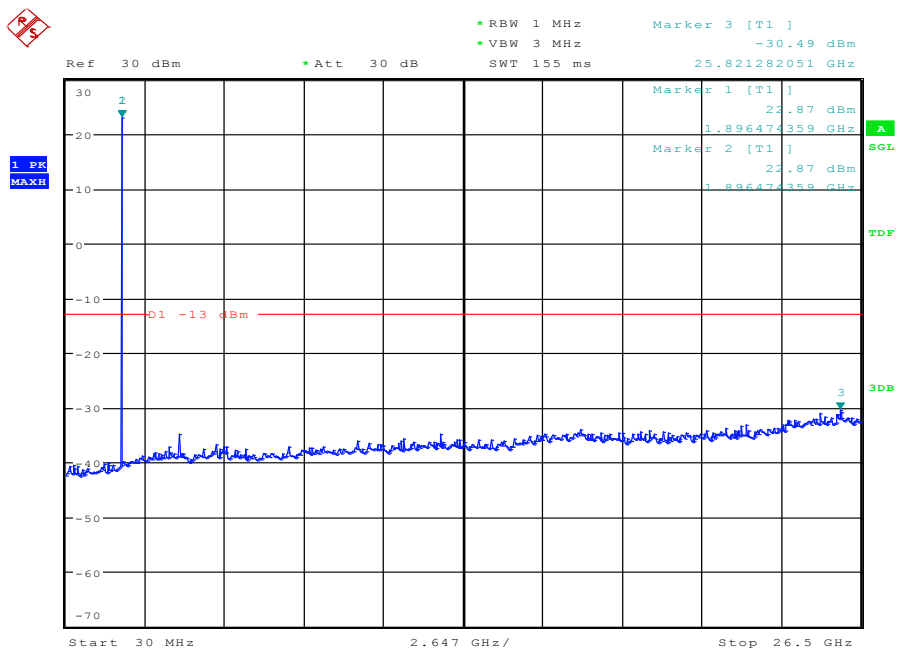
Date: 19.JUN.2017 21:01:48

BW1.4MHz-1909.3MHz,Q16-6RB_LOW@Pass



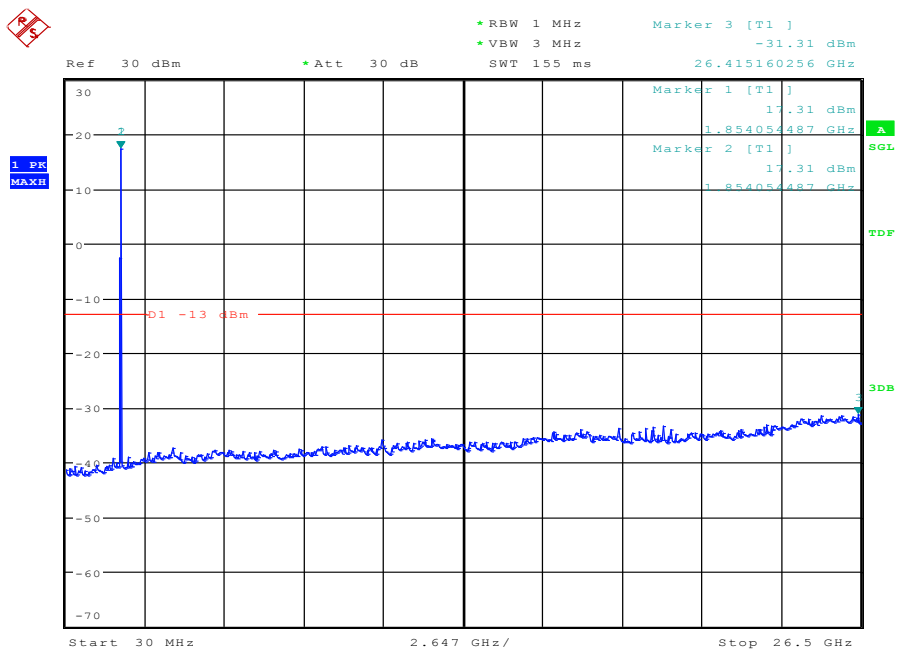
Date: 19.JUN.2017 21:01:31

BW1.4MHz-1909.3MHz,QPSK-6RB_LOW@Pass



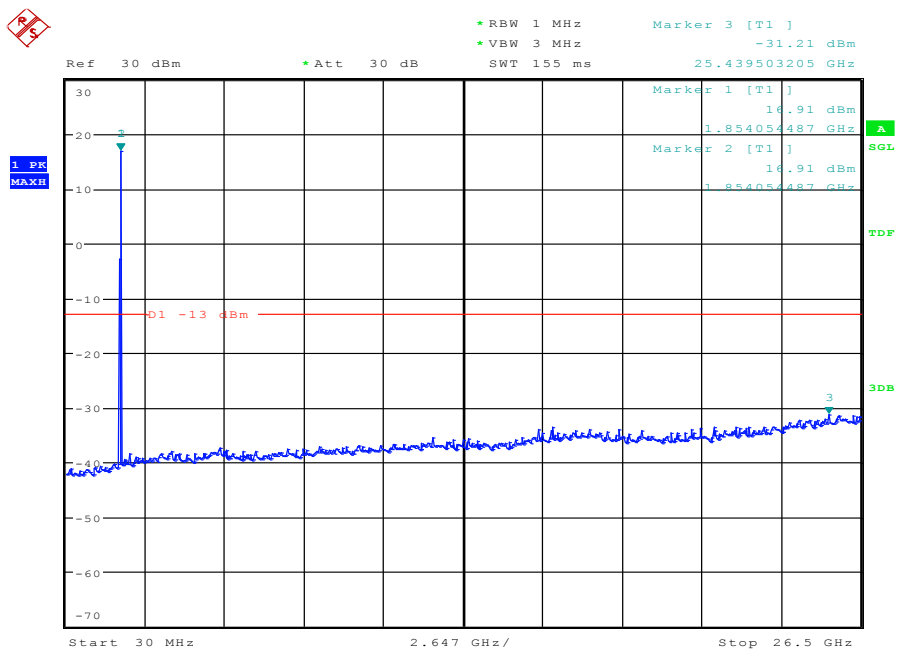
Date: 19.JUN.2017 21:01:15

BW10MHz-1855MHz,Q16-50RB_LOW@Pass



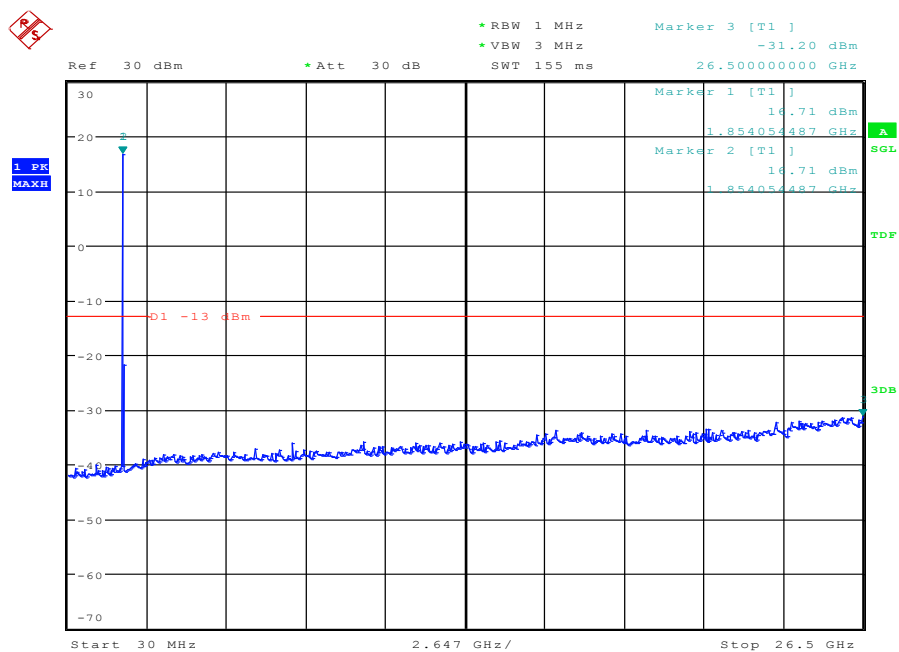
Date: 19.JUN.2017 20:55:21

BW10MHz-1855MHz,QPSK-50RB_LOW@Pass



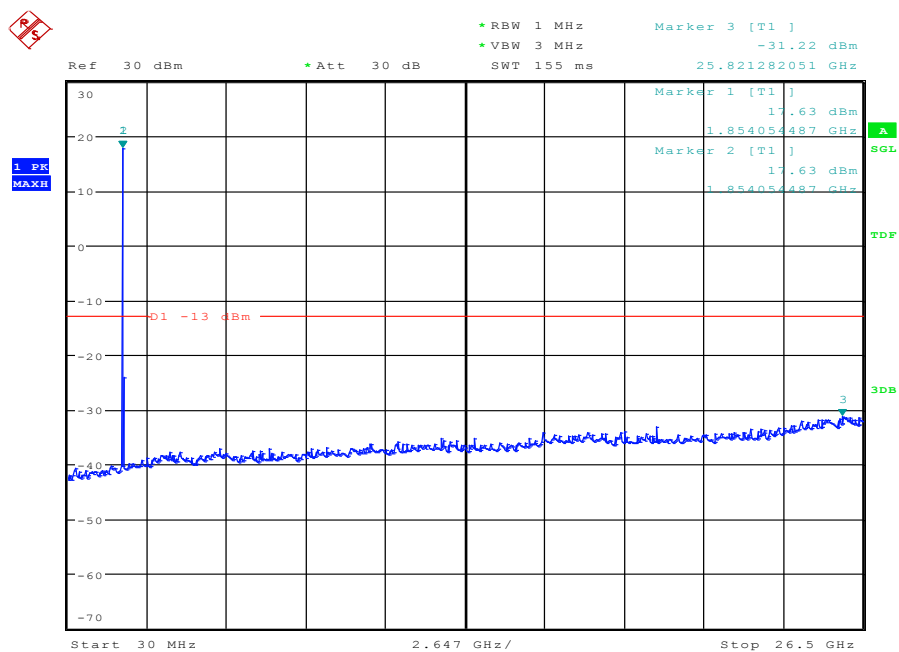
Date: 19.JUN.2017 20:55:05

BW10MHz-1880MHz,Q16-50RB_LOW@Pass



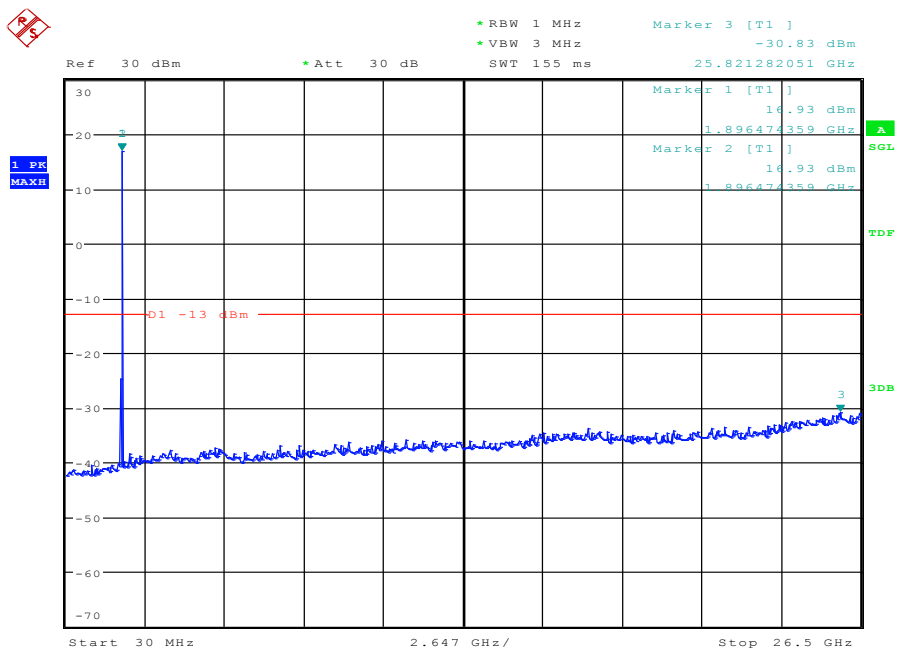
Date: 19.JUN.2017 20:56:29

BW10MHz-1880MHz,QPSK-50RB_LOW@Pass



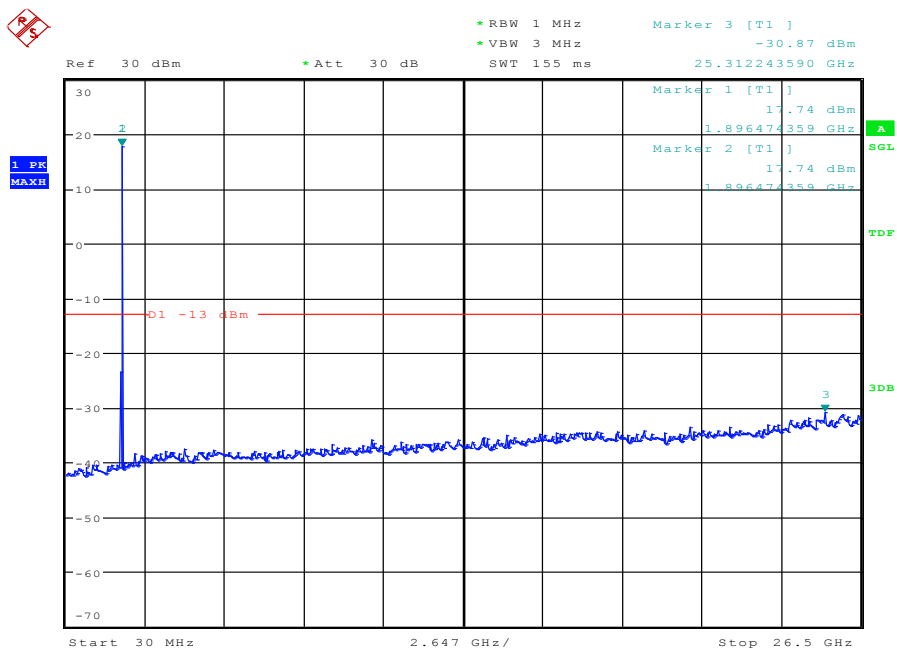
Date: 19.JUN.2017 20:56:12

BW10MHz-1905MHz,Q16-50RB_LOW@Pass



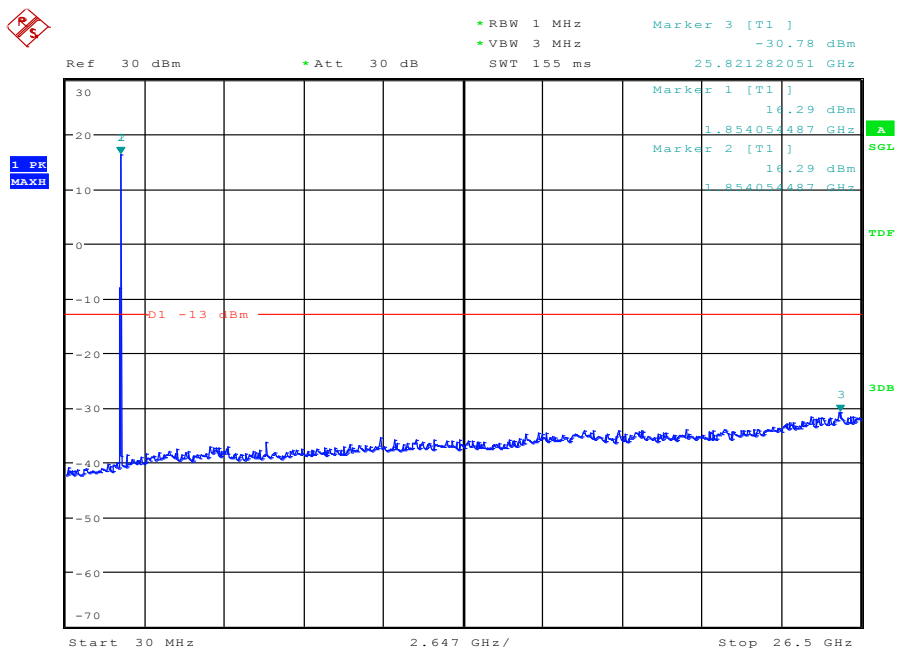
Date: 19.JUN.2017 20:55:55

BW10MHz-1905MHz,QPSK-50RB_LOW@Pass



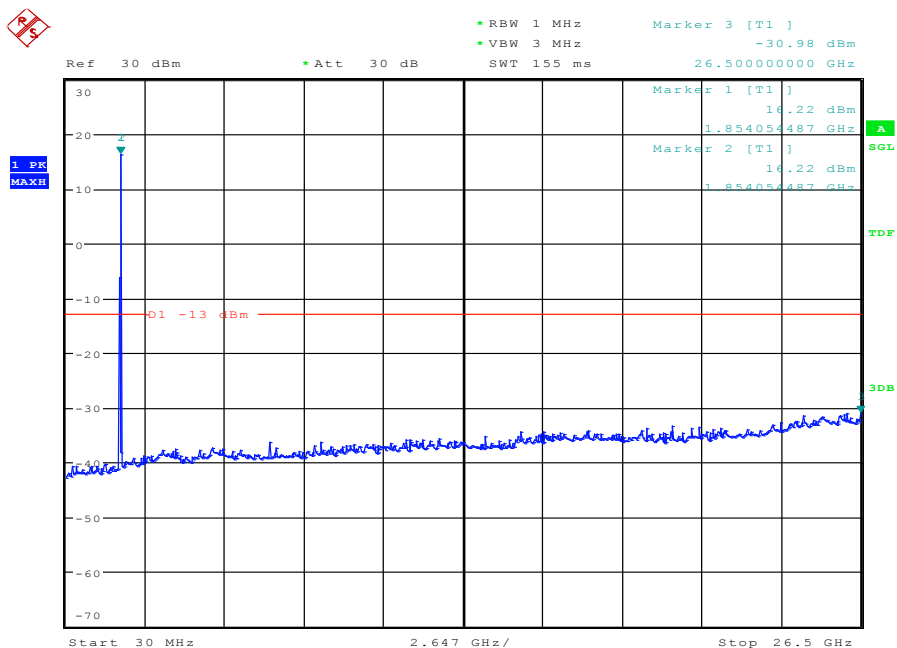
Date: 19.JUN.2017 20:55:39

BW15MHz-1857.5MHz,Q16-75RB_LOW@Pass



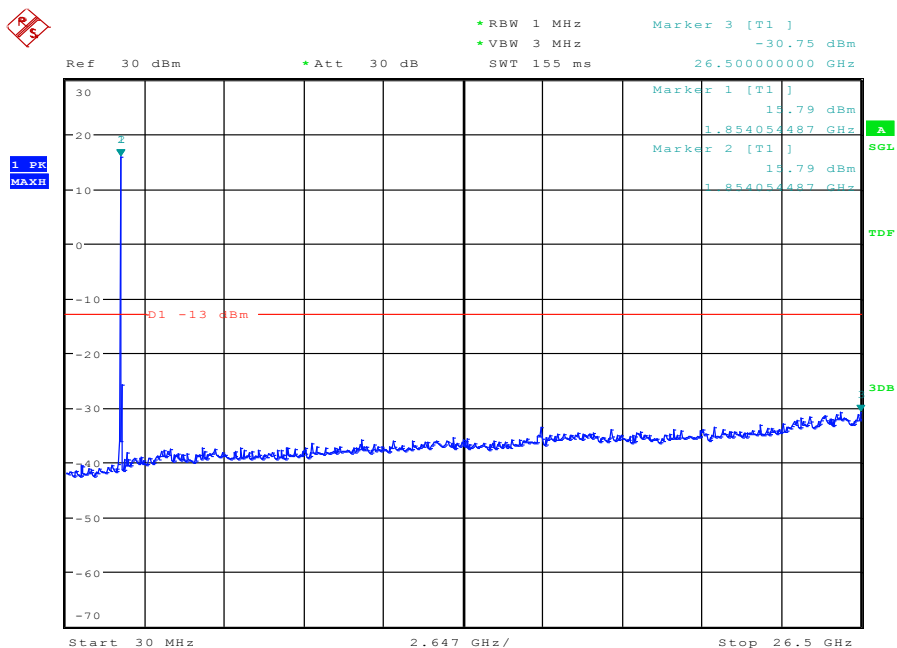
Date: 19.JUN.2017 20:57:09

BW15MHz-1857.5MHz,QPSK-75RB_LOW@Pass



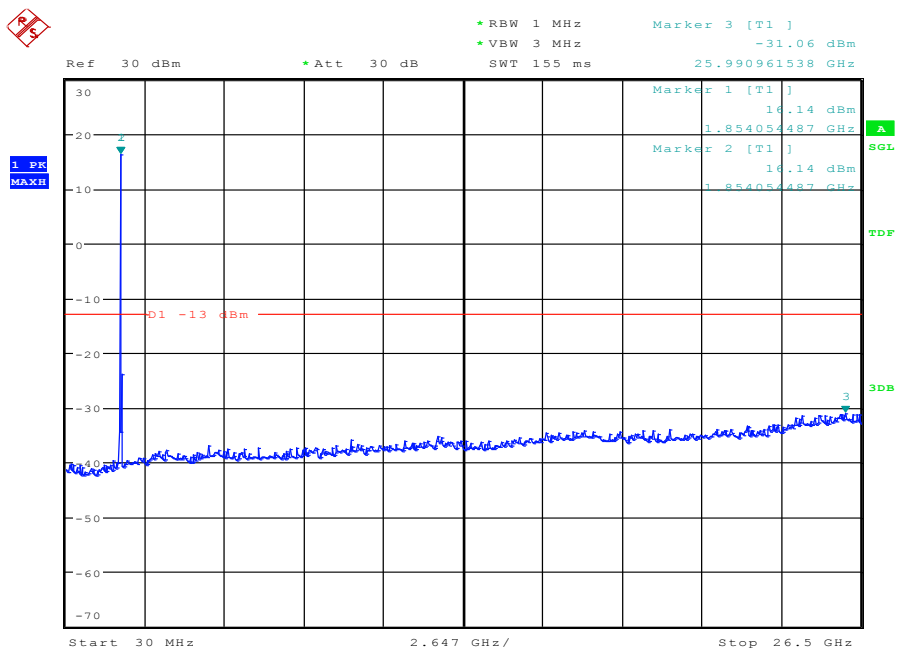
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BW15MHz-1880MHz,Q16-75RB_LOW@Pass



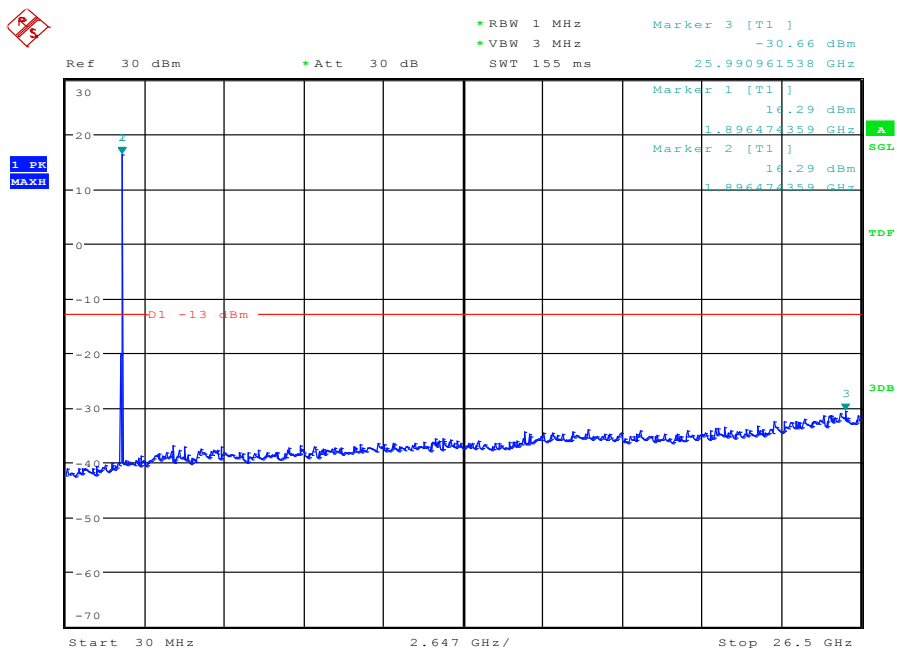
Date: 19.JUN.2017 20:58:25

BW15MHz-1880MHz,QPSK-75RB_LOW@Pass



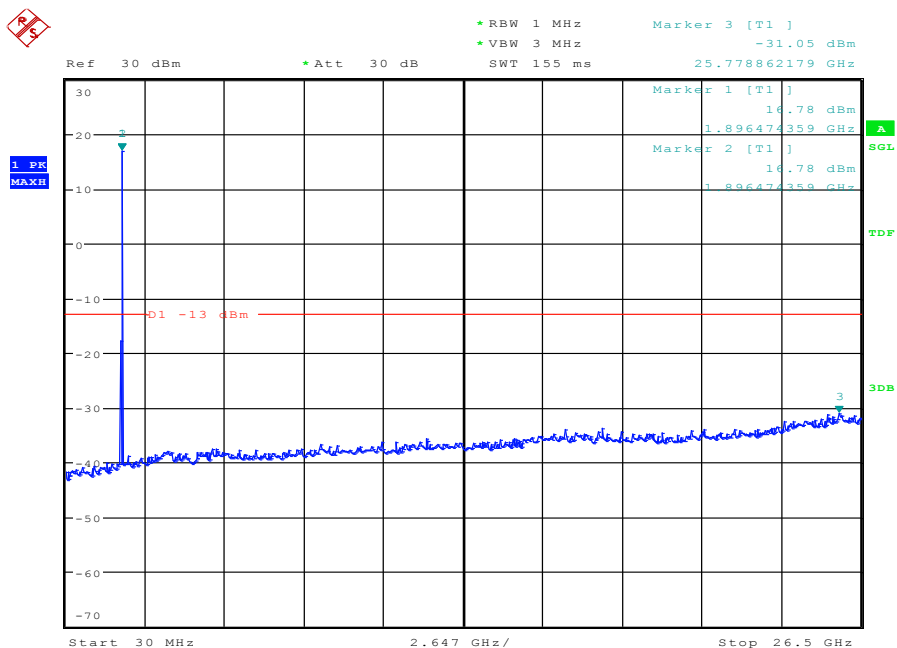
Date: 19.JUN.2017 20:58:06

BW15MHz-1902.5MHz,Q16-75RB_LOW@Pass



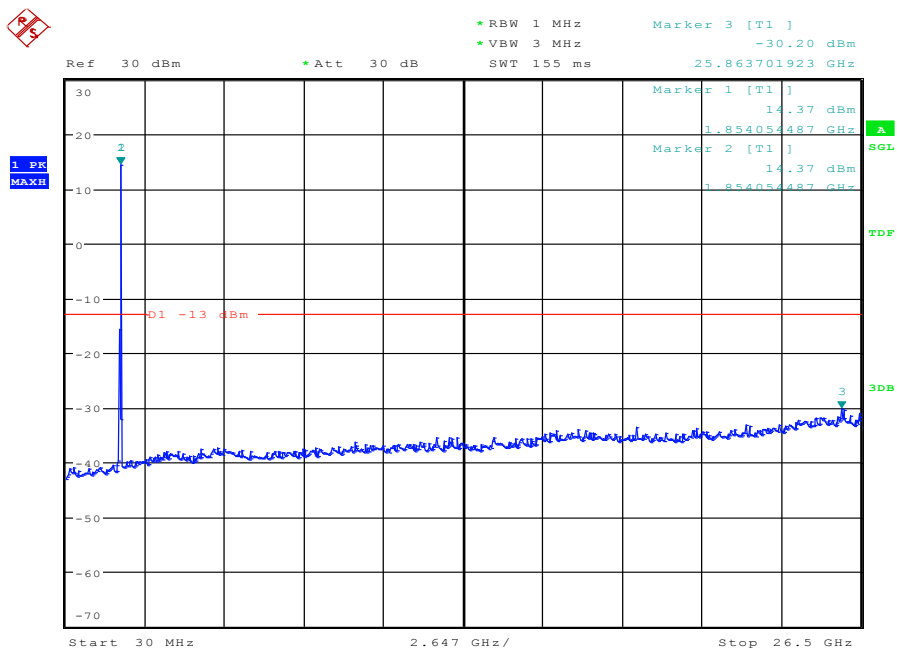
Date: 19.JUN.2017 20:57:47

BW15MHz-1902.5MHz,QPSK-75RB_LOW@Pass



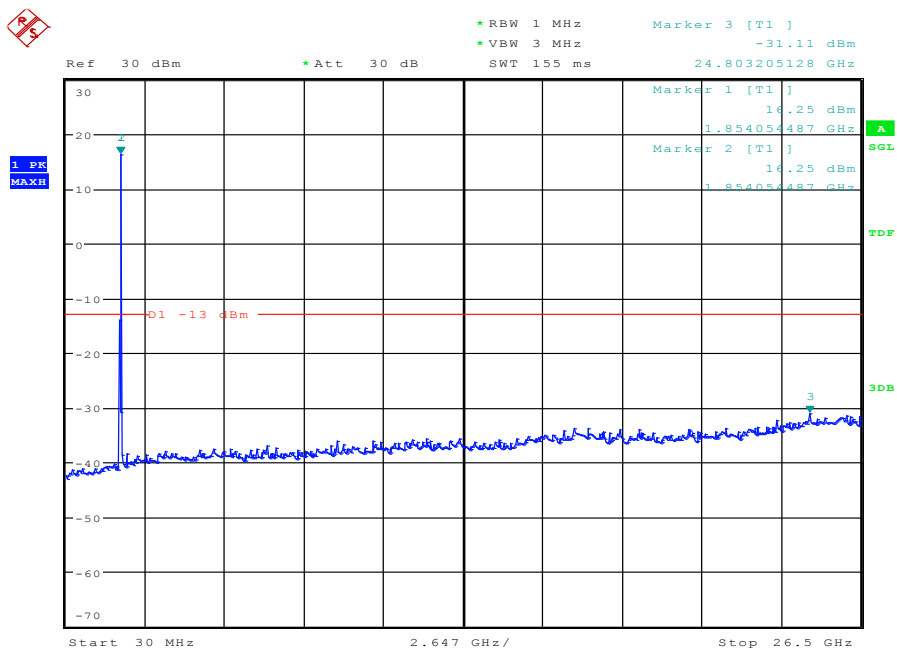
Date: 19.JUN.2017 20:57:28

BW20MHz-1860MHz,Q16-100RB_LOW@Pass



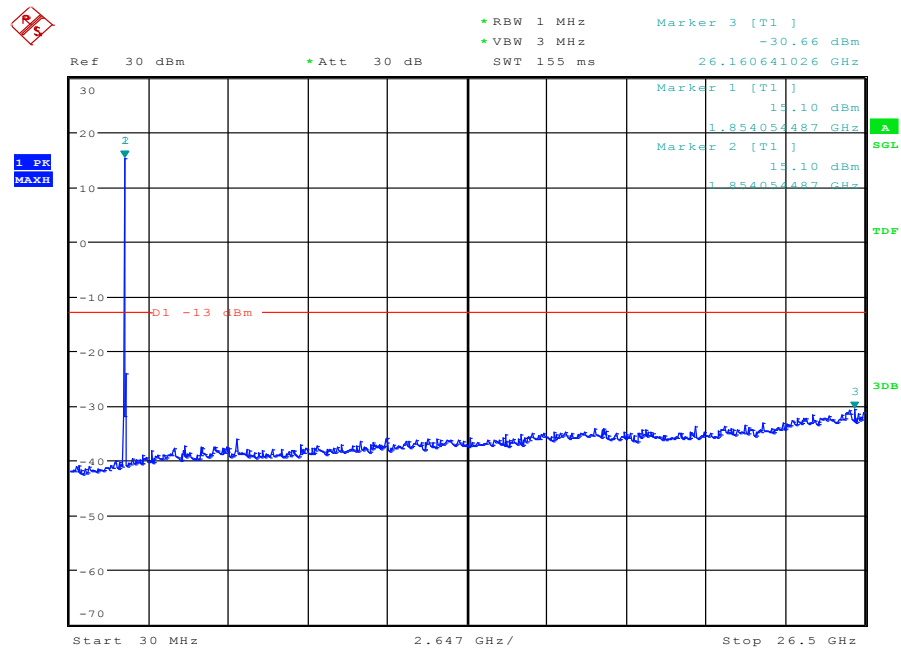
Date: 19.JUN.2017 20:59:05

BW20MHz-1860MHz,QPSK-100RB_LOW@Pass



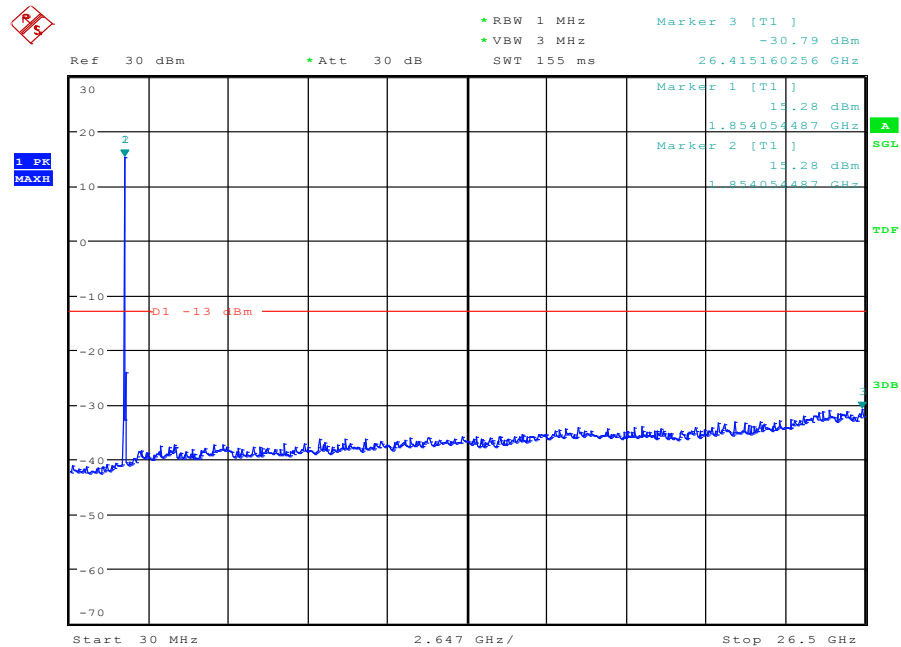
Date: 19.JUN.2017 20:58:47

BW20MHz-1880MHz,Q16-100RB_LOW@Pass



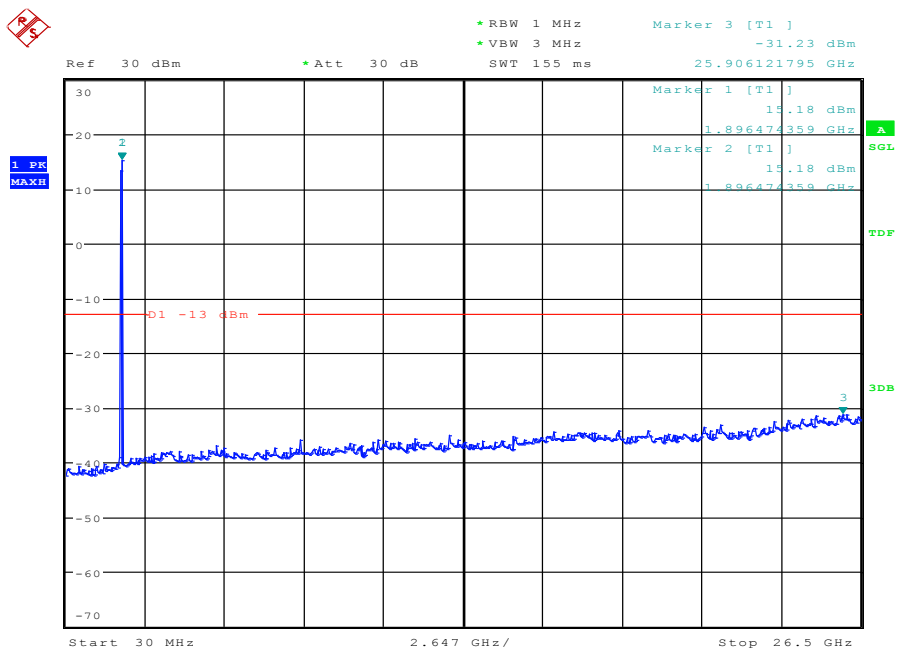
Date: 19.JUN.2017 21:00:22

BW20MHz-1880MHz,QPSK-100RB_LOW@Pass



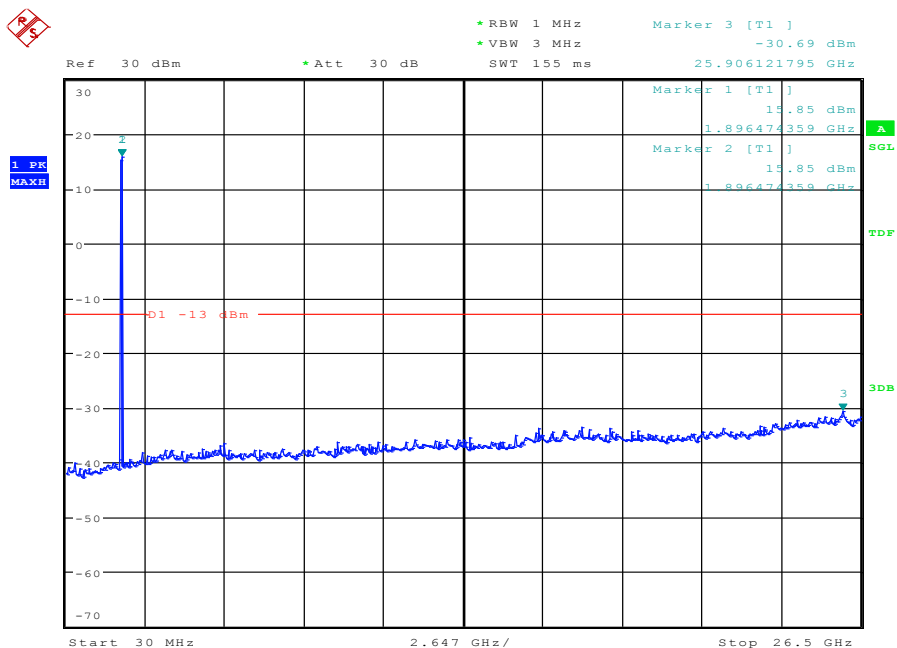
Date: 19.JUN.2017 21:00:03

BW20MHz-1900MHz,Q16-100RB_LOW@Pass

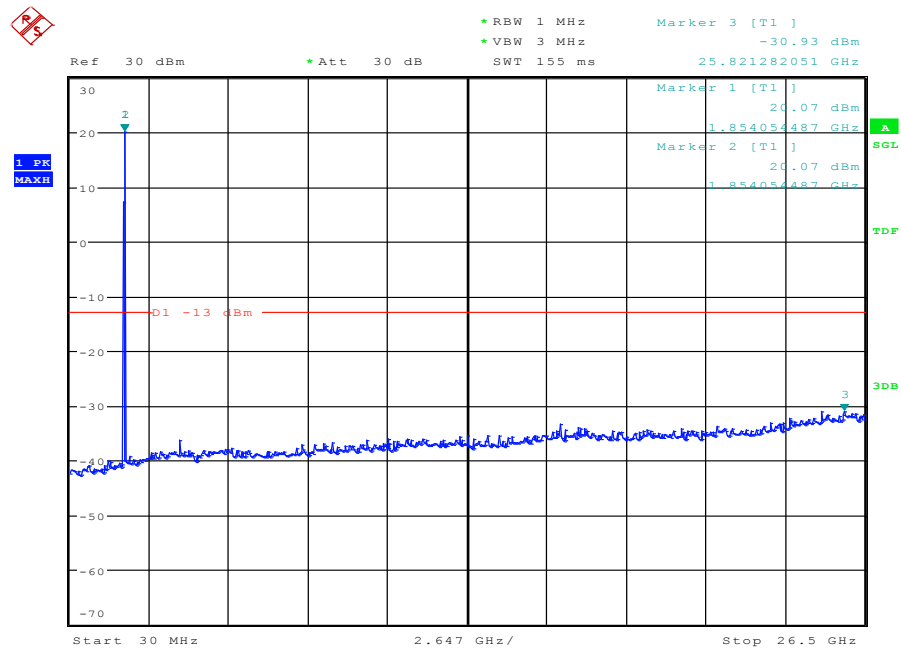


Date: 19.JUN.2017 20:59:44

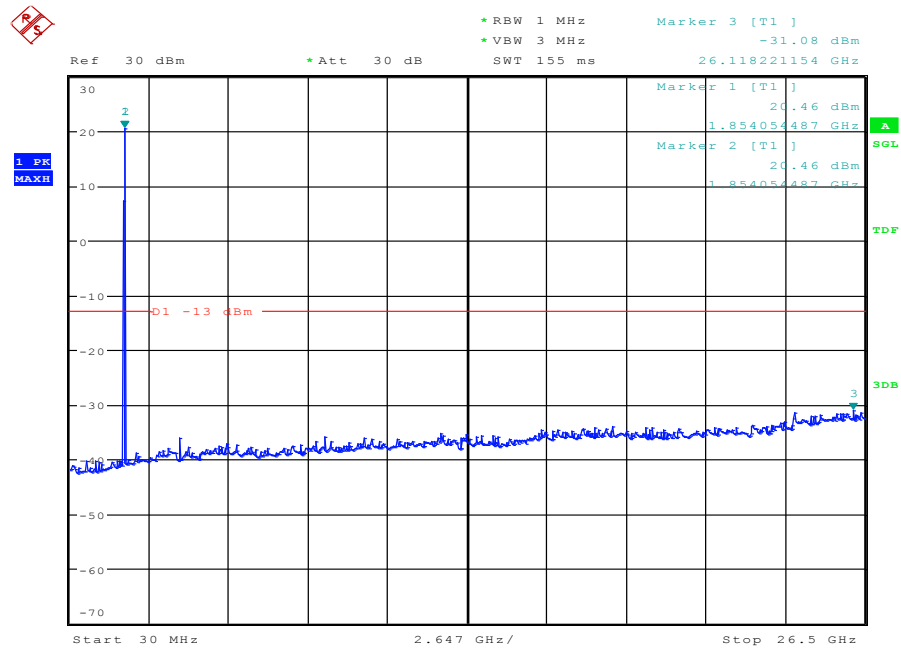
BW20MHz-1900MHz,QPSK-100RB_LOW@Pass



Date: 19.JUN.2017 20:59:25

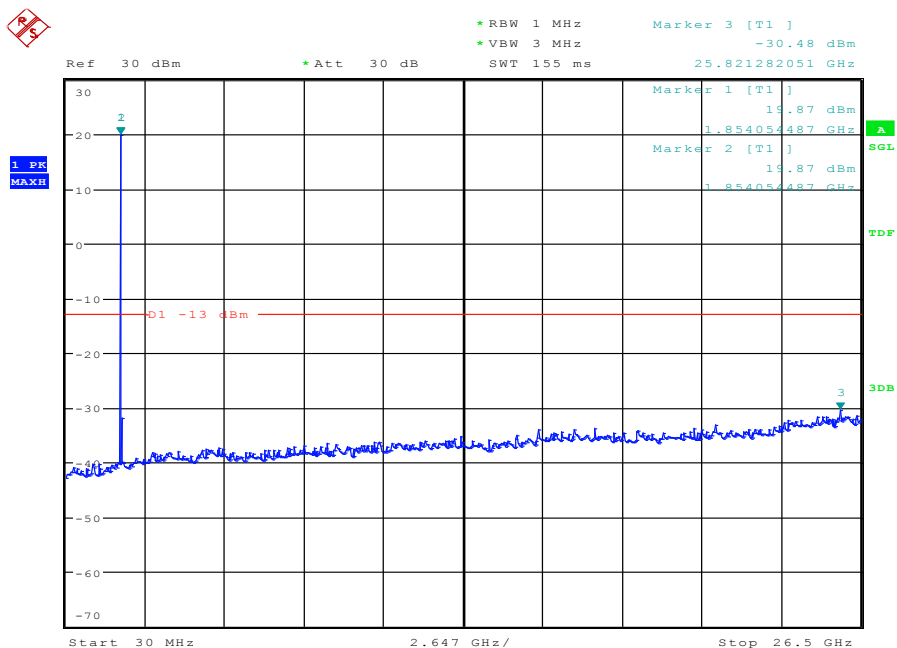
BW3MHz-1851.5MHz,Q16-15RB_LOW@Pass

Date: 19.JUN.2017 21:02:40

BW3MHz-1851.5MHz,QPSK-15RB_LOW@Pass

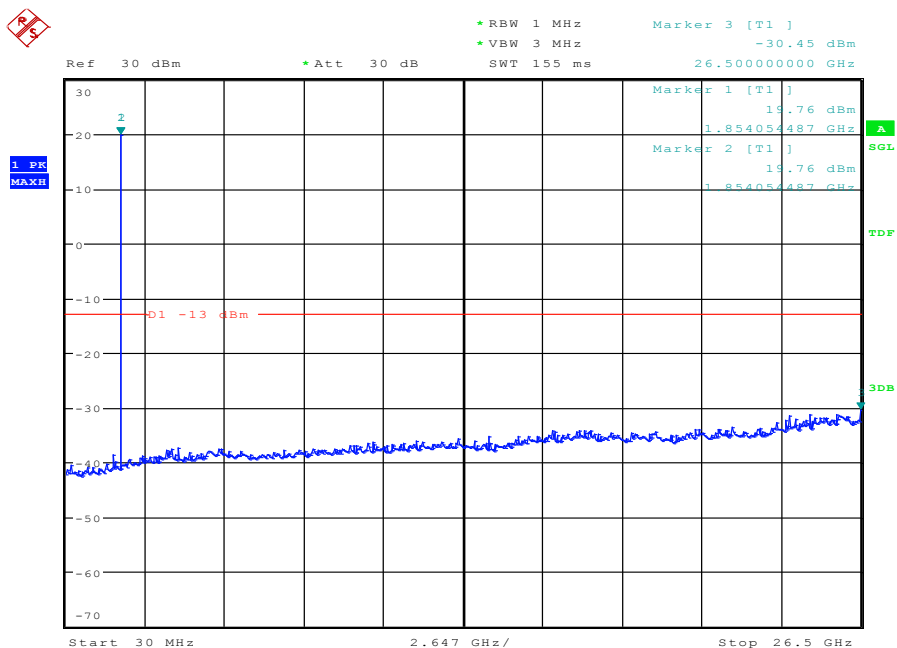
Date: 19.JUN.2017 21:02:23

BW3MHz-1880MHz,Q16-15RB_LOW@Pass



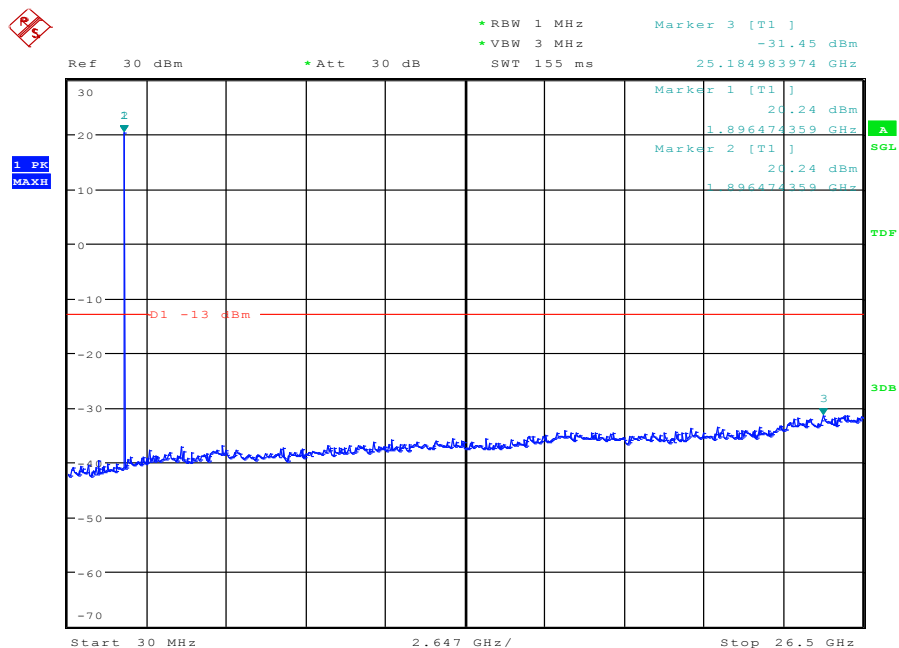
Date: 19.JUN.2017 21:03:46

BW3MHz-1880MHz,QPSK-15RB_LOW@Pass



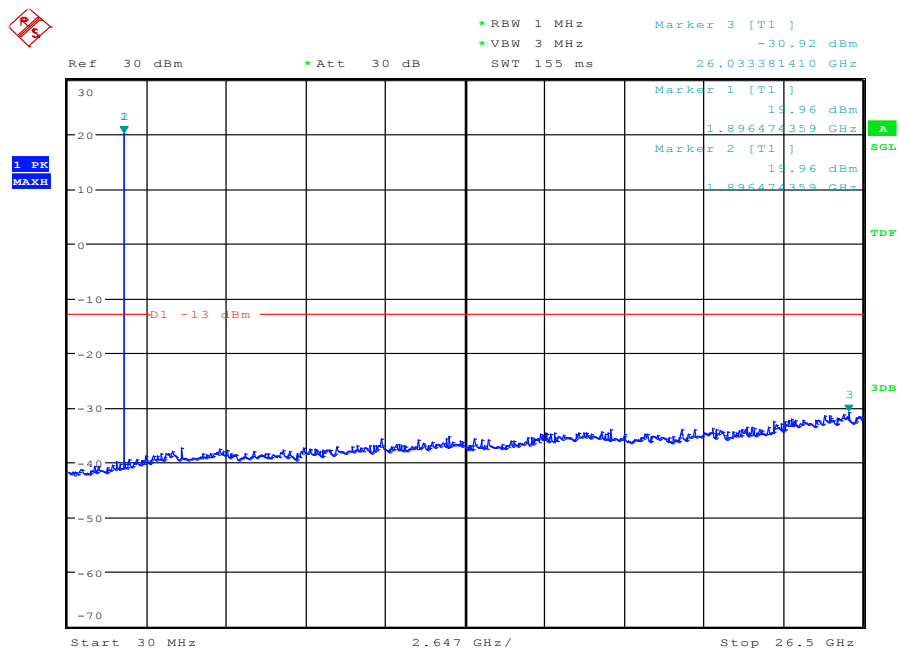
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BW3MHz-1908.5MHz,Q16-15RB_LOW@Pass



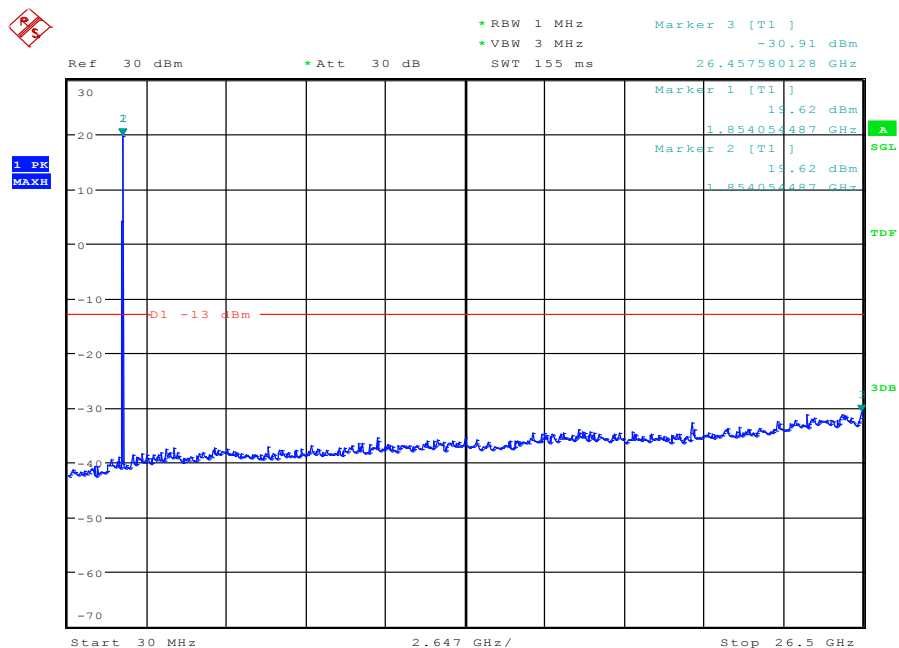
Date: 19.JUN.2017 21:03:13

BW3MHz-1908.5MHz,QPSK-15RB_LOW@Pass



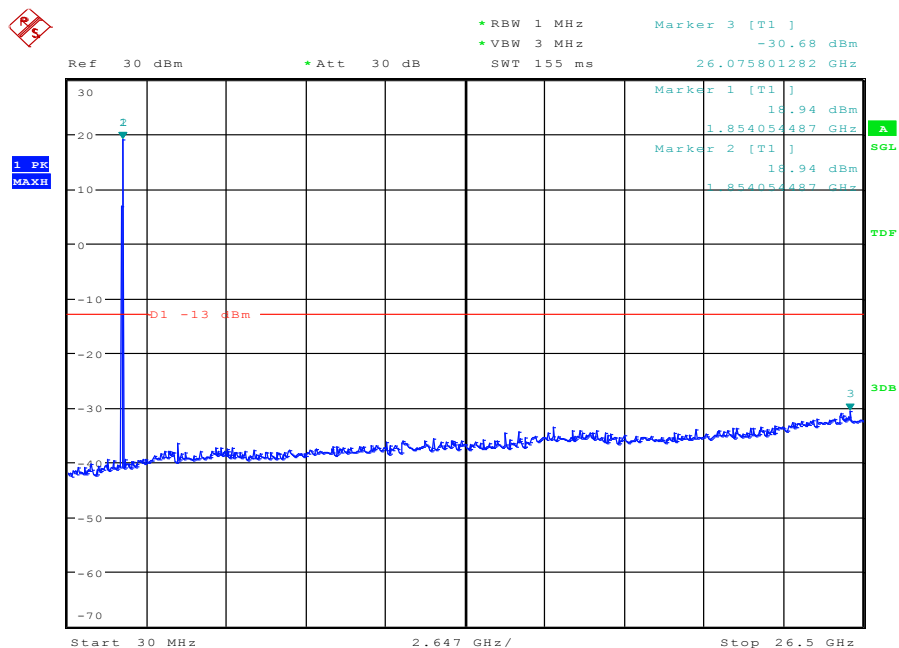
Date: 19.JUN.2017 21:02:56

BW5MHz-1852.5MHz,Q16-25RB_LOW@Pass



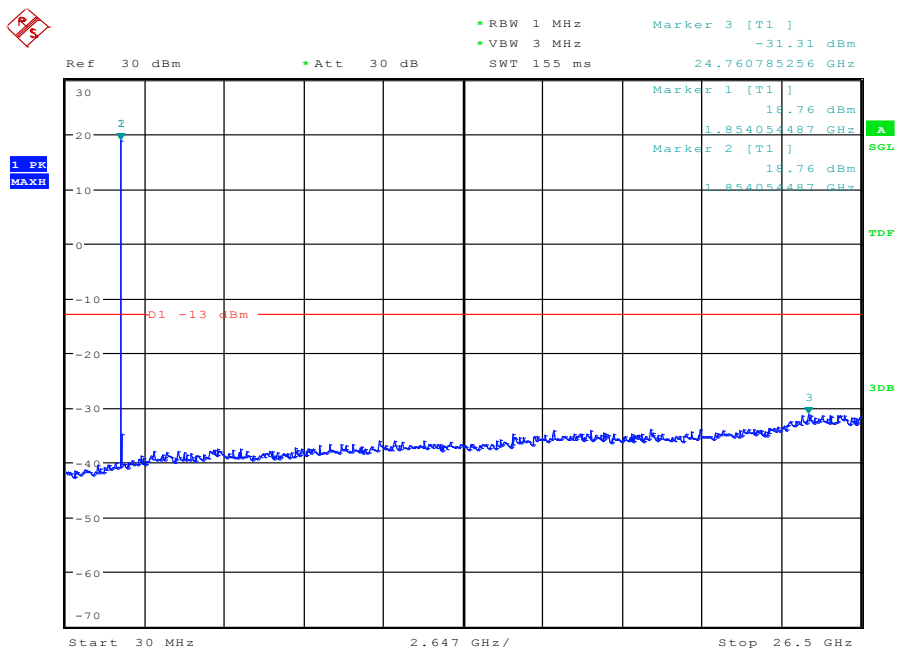
Date: 19.JUN.2017 20:53:39

BW5MHz-1852.5MHz,QPSK-25RB_LOW@Pass



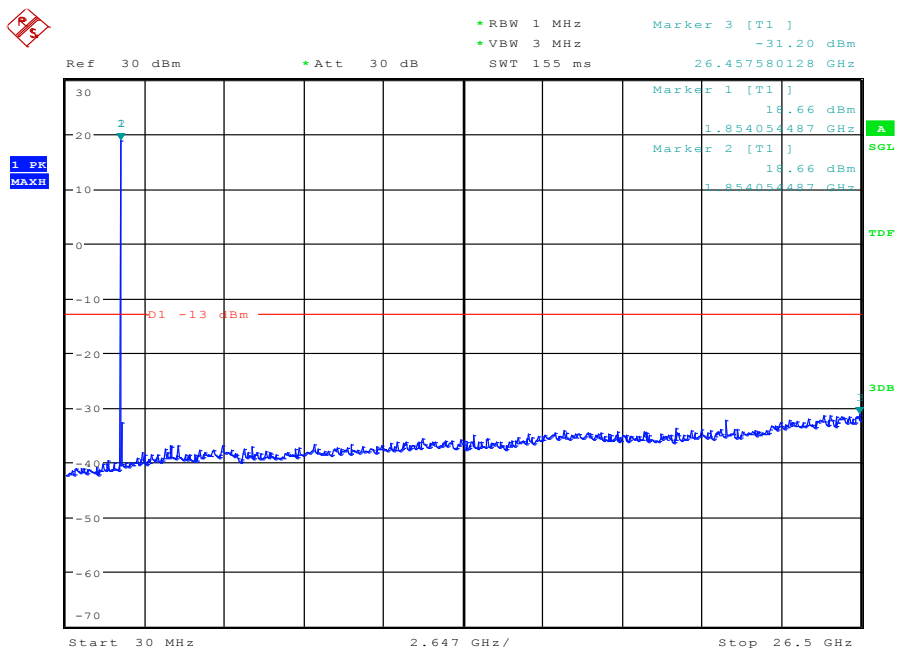
Date: 19.JUN.2017 21:04:05

BW5MHz-1880MHz,Q16-25RB_LOW@Pass



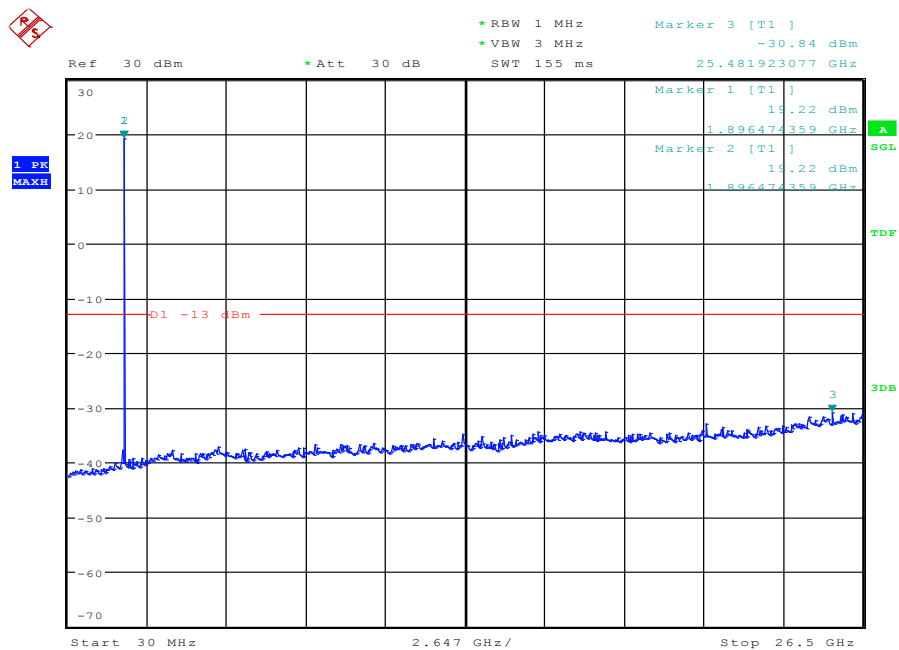
Date: 19.JUN.2017 20:54:45

BW5MHz-1880MHz,QPSK-25RB_LOW@Pass



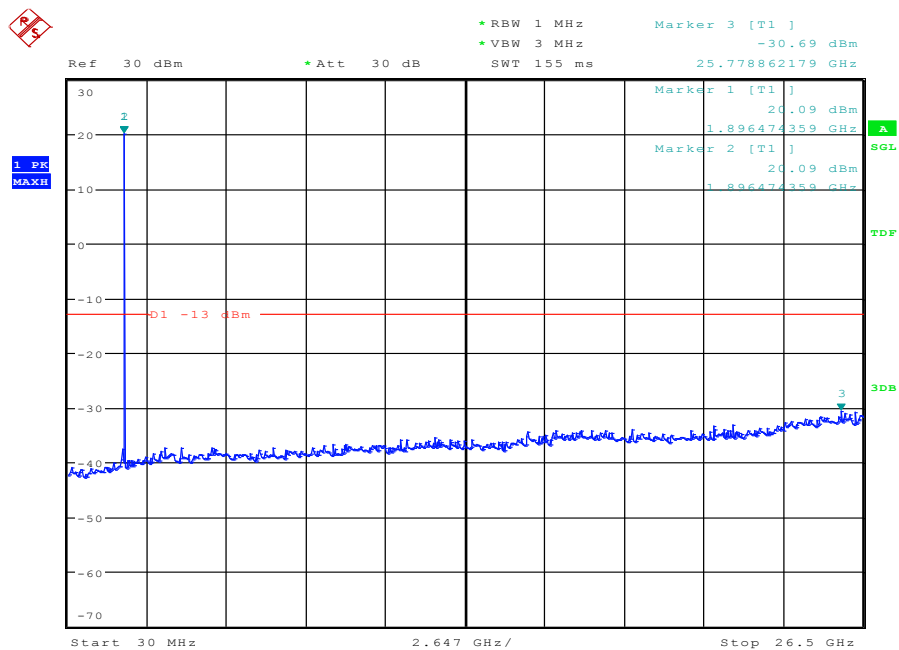
Date: 19.JUN.2017 20:54:29

BW5MHz-1907.5MHz,Q16-25RB_LOW@Pass



Date: 19.JUN.2017 20:54:12

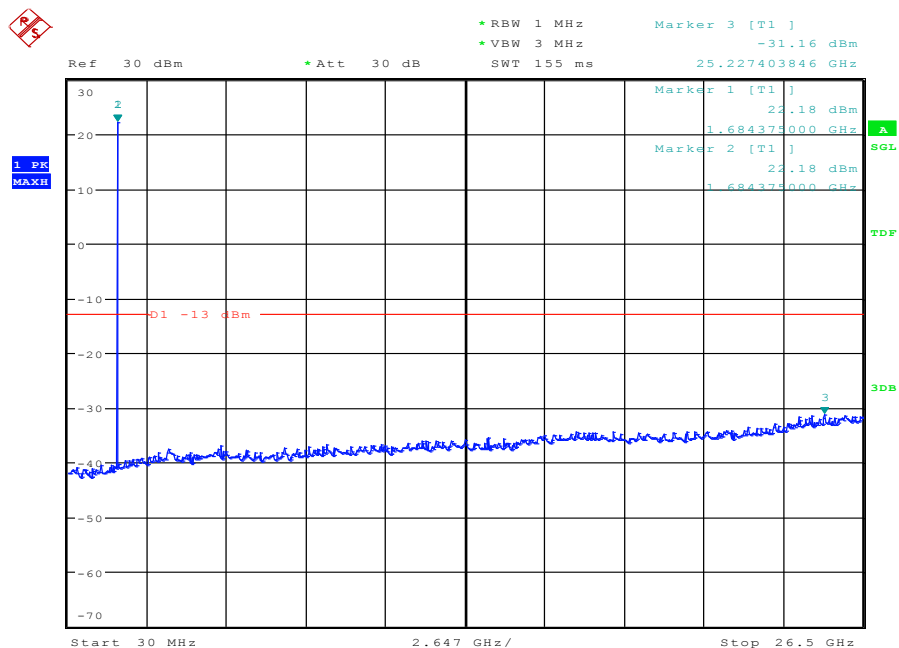
BW5MHz-1907.5MHz,QPSK-25RB_LOW@Pass



Date: 19.JUN.2017 20:53:56

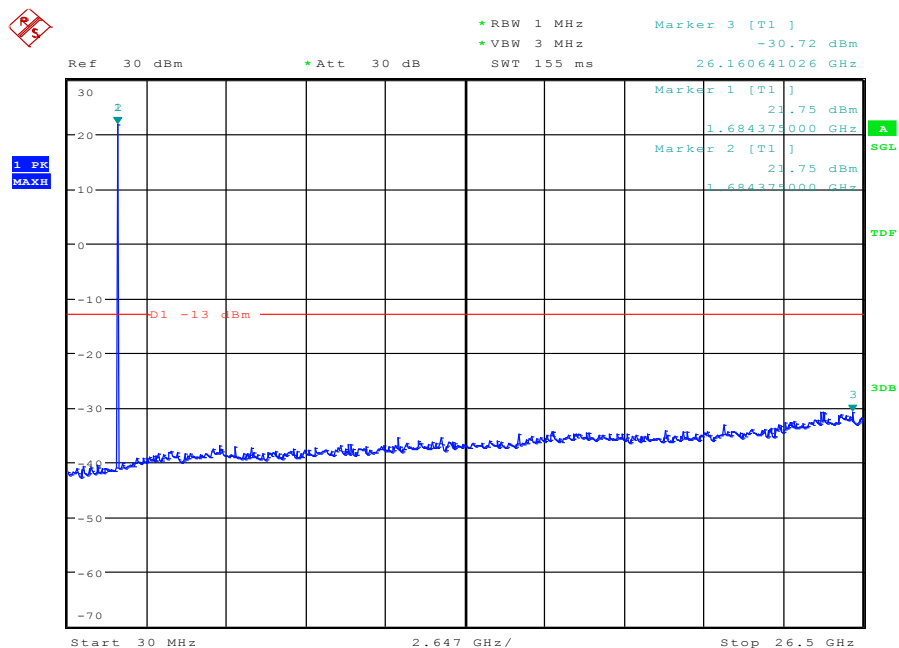
BAND 4@Conducted Spurious Emission

BW1.4MHz-1710.7MHz,Q16-6RB_LOW@Pass



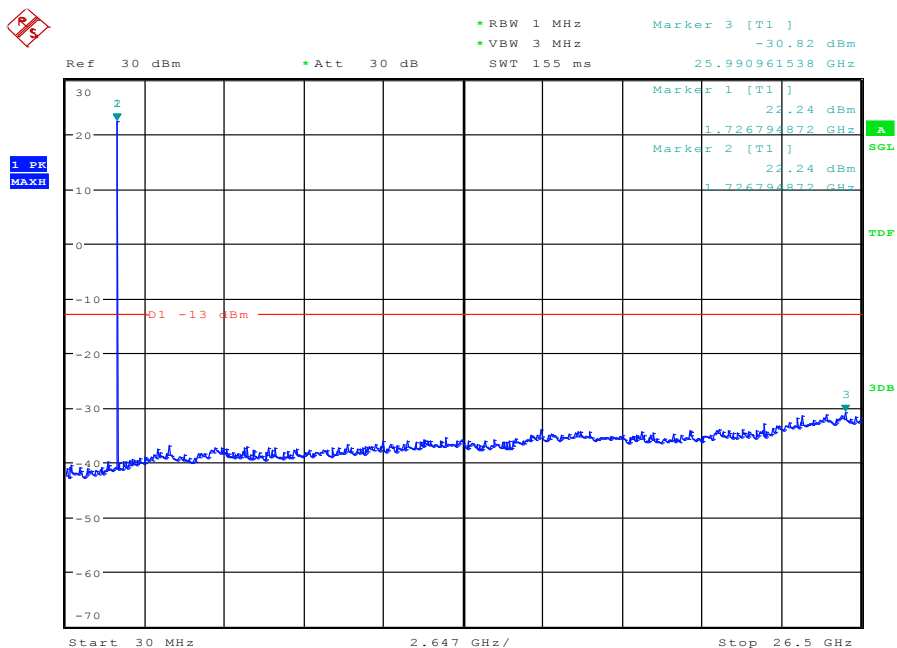
Date: 19.JUN.2017 21:31:50

BW1.4MHz-1710.7MHz,QPSK-6RB_LOW@Pass



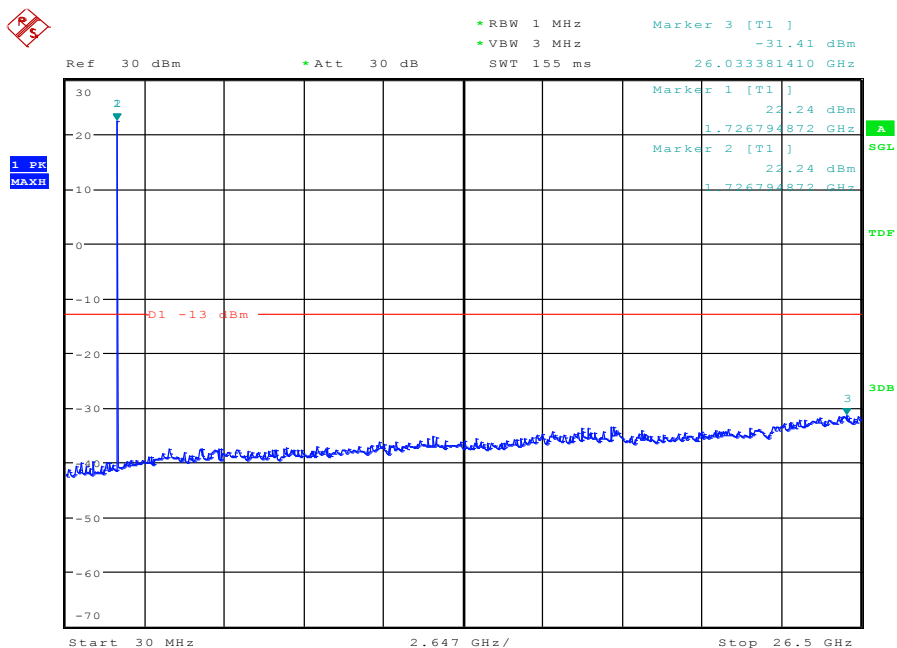
Date: 19.JUN.2017 21:31:35

BW1.4MHz-1732.5MHz,Q16-6RB_LOW@Pass



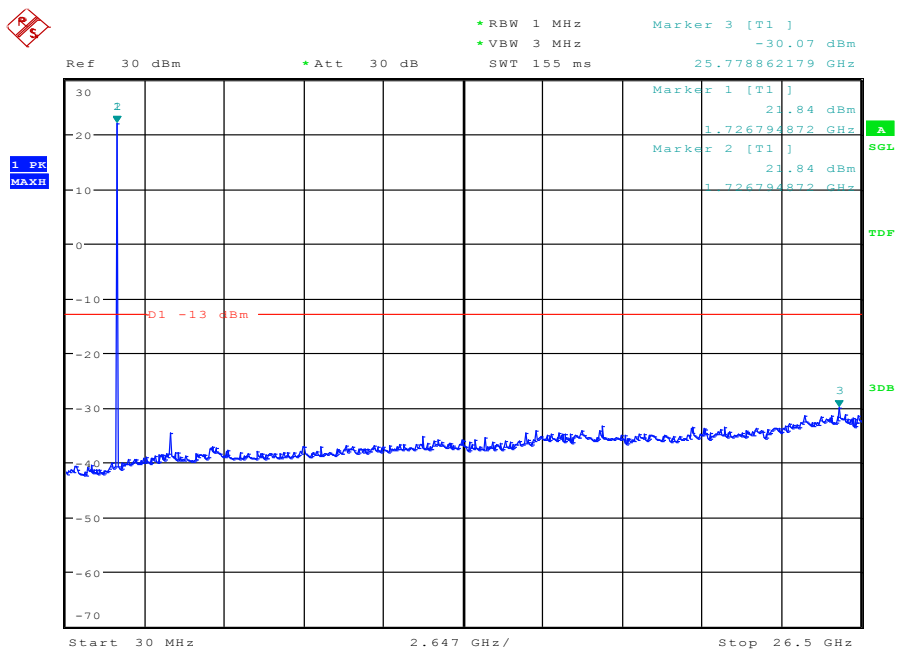
Date: 19.JUN.2017 21:32:54

BW1.4MHz-1732.5MHz,QPSK-6RB_LOW@Pass



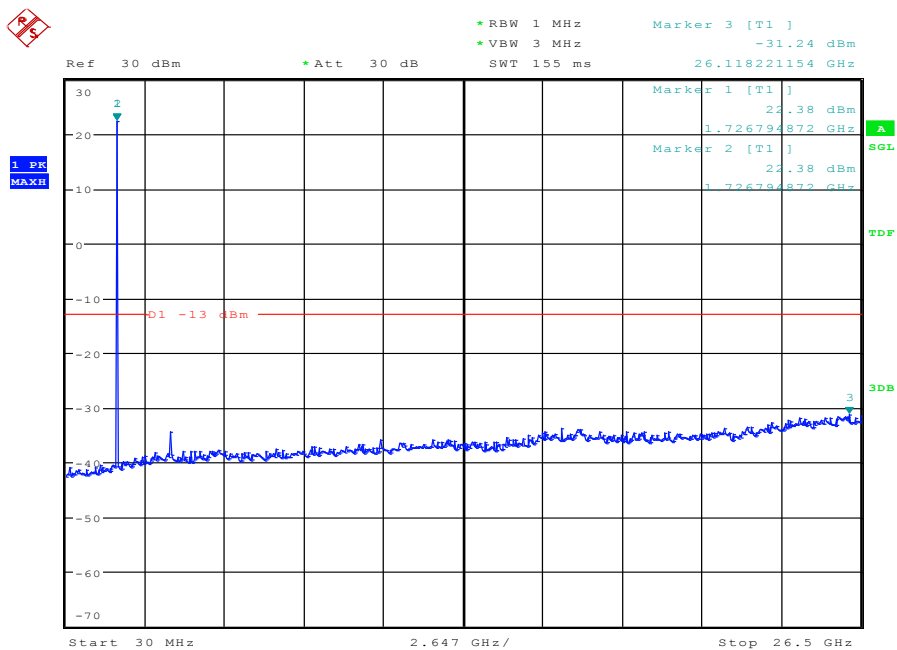
Date: 19.JUN.2017 21:32:38

BW1.4MHz-1754.3MHz,Q16-6RB_LOW@Pass



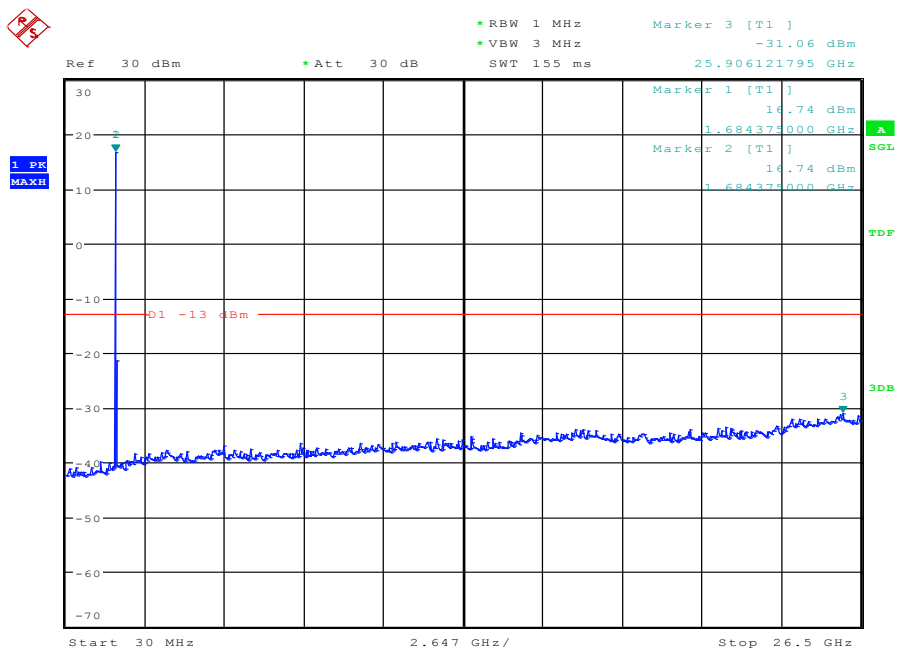
Date: 19.JUN.2017 21:32:22

BW1.4MHz-1754.3MHz,QPSK-6RB_LOW@Pass



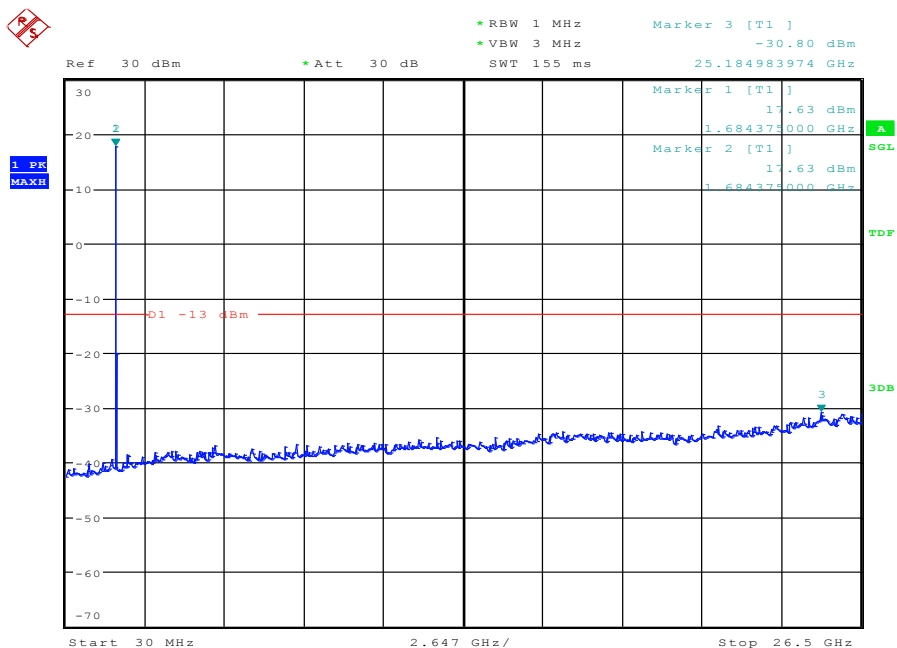
Date: 19.JUN.2017 21:32:06

BW10MHz-1715MHz,Q16-50RB_LOW@Pass



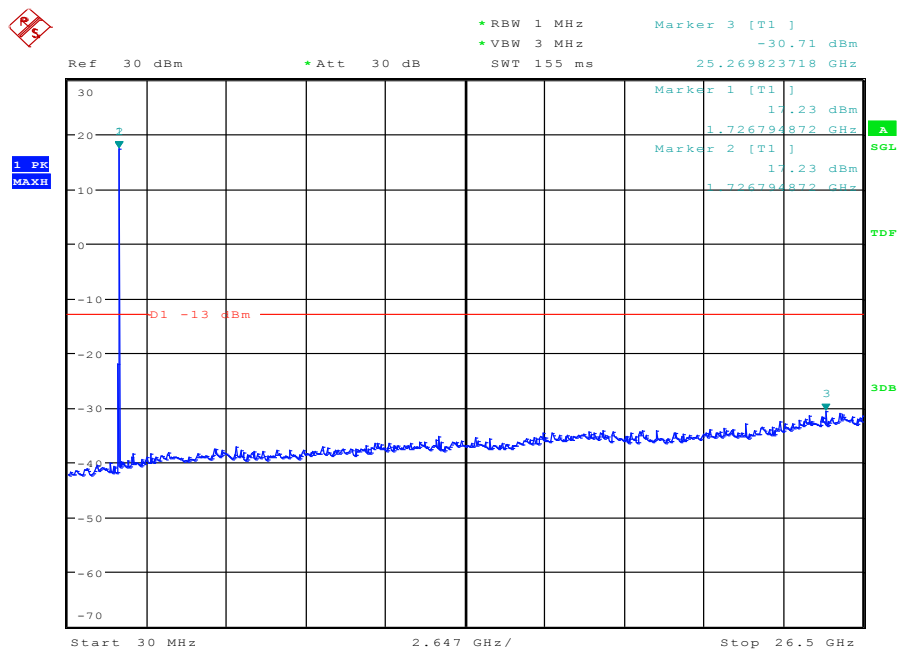
Date: 19.JUN.2017 21:36:50

BW10MHz-1715MHz,QPSK-50RB_LOW@Pass



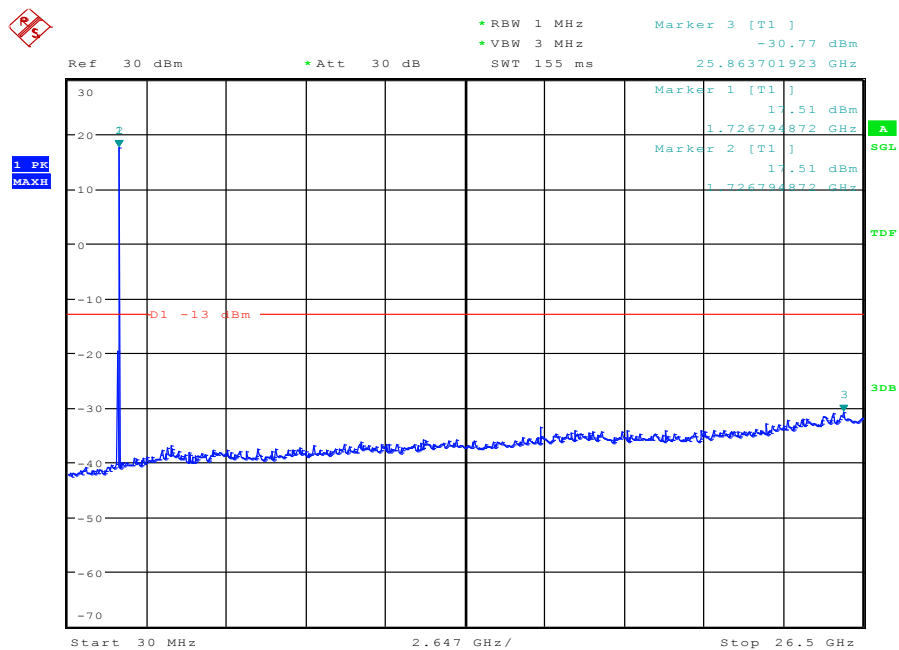
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BW10MHz-1732.5MHz,Q16-50RB_LOW@Pass



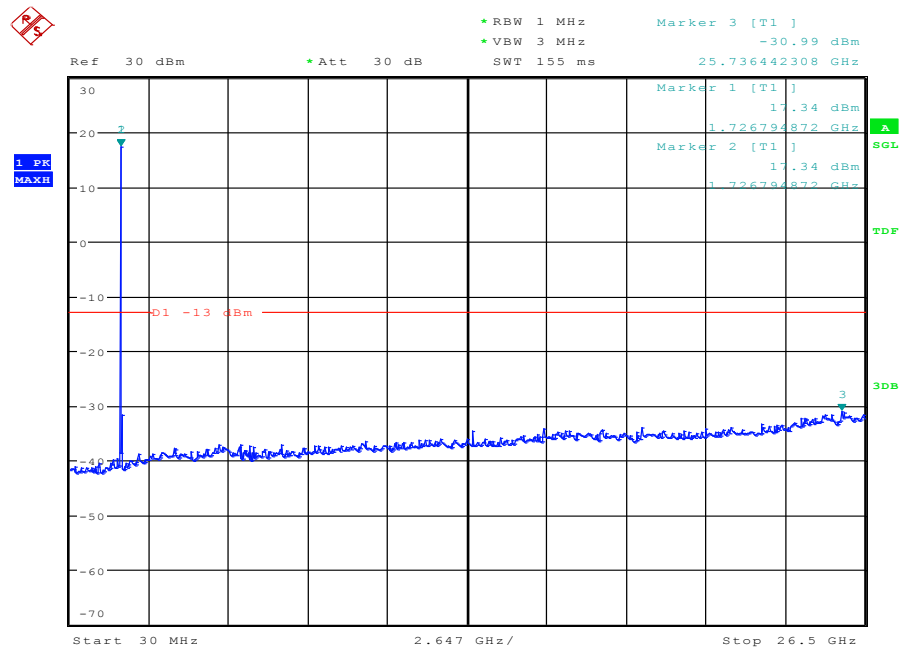
Date: 19.JUN.2017 21:37:57

BW10MHz-1732.5MHz,QPSK-50RB_LOW@Pass



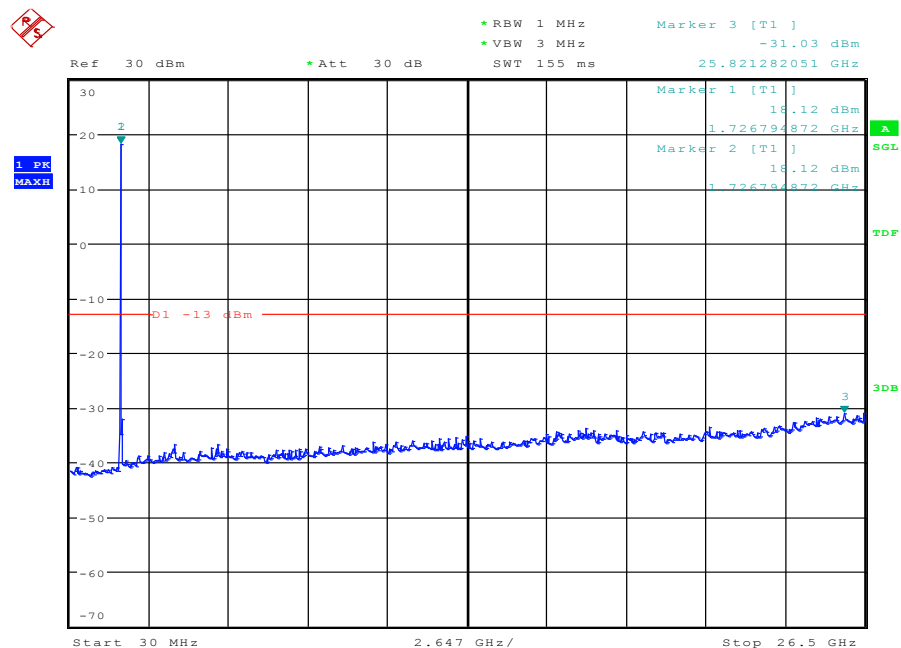
Date: 19.JUN.2017 21:37:41

BW10MHz-1750MHz,Q16-50RB_LOW@Pass

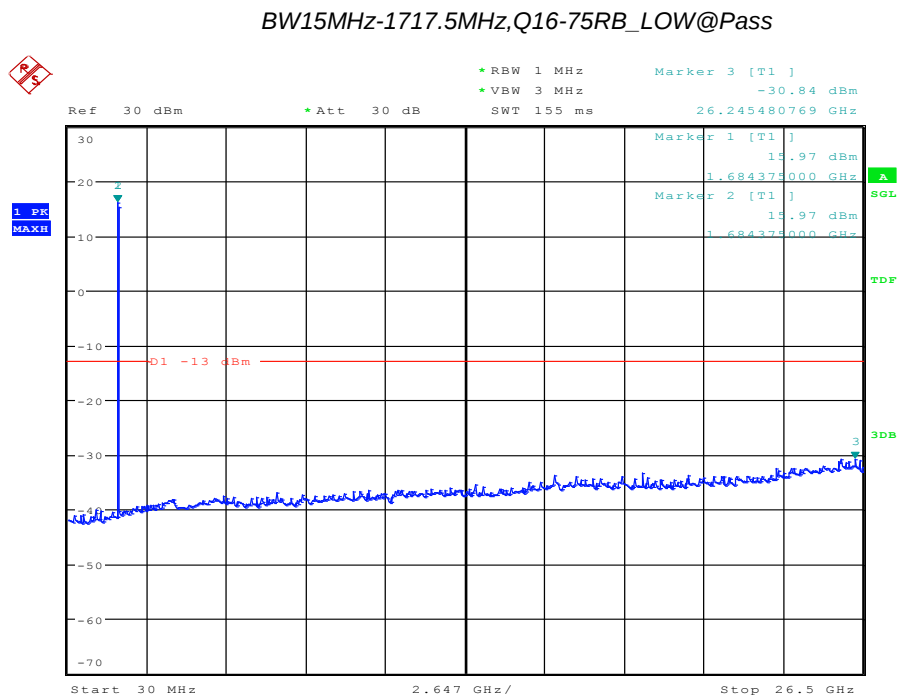


Date: 19.JUN.2017 21:37:24

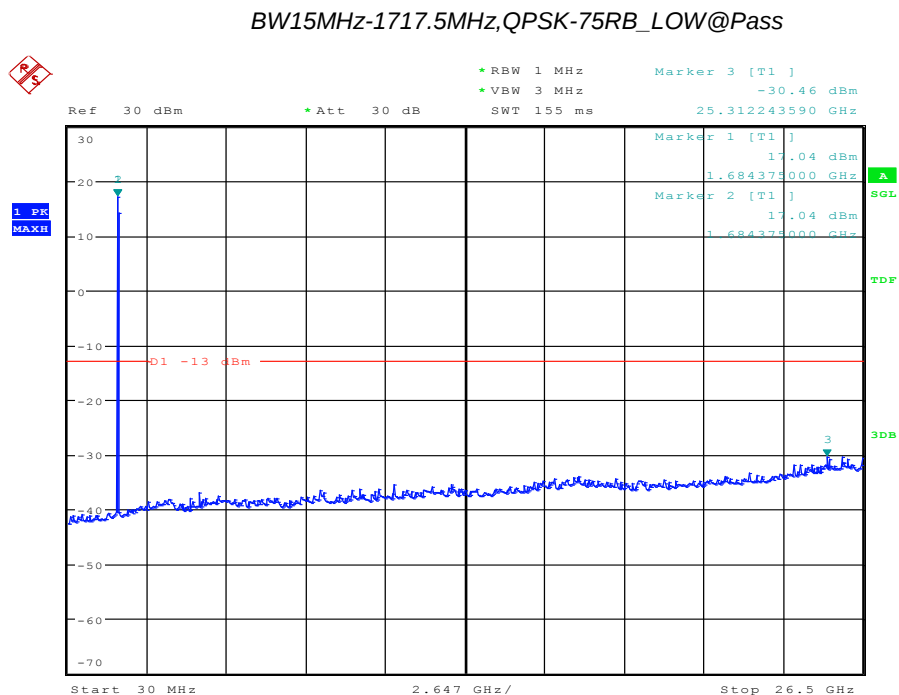
BW10MHz-1750MHz,QPSK-50RB_LOW@Pass



Date: 19.JUN.2017 21:37:07

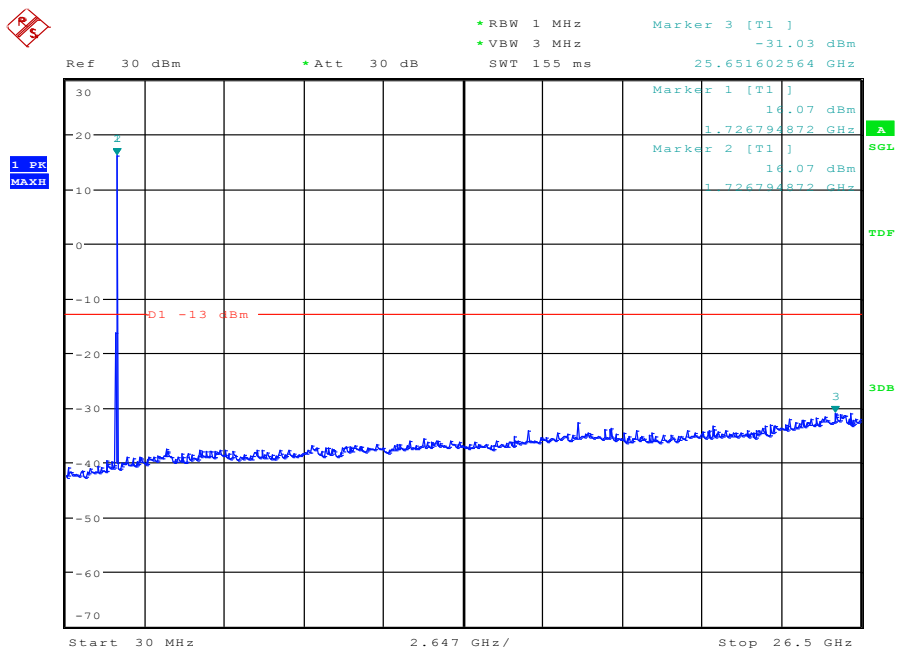


Date: 19.JUN.2017 21:38:38



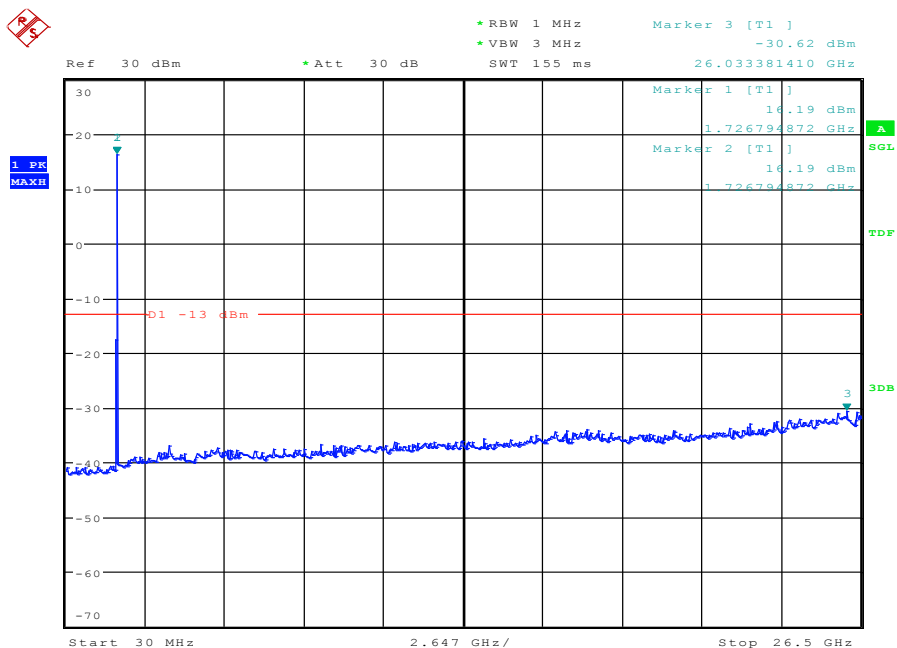
Date: 19.JUN.2017 21:38:19

BW15MHz-1732.5MHz,Q16-75RB_LOW@Pass



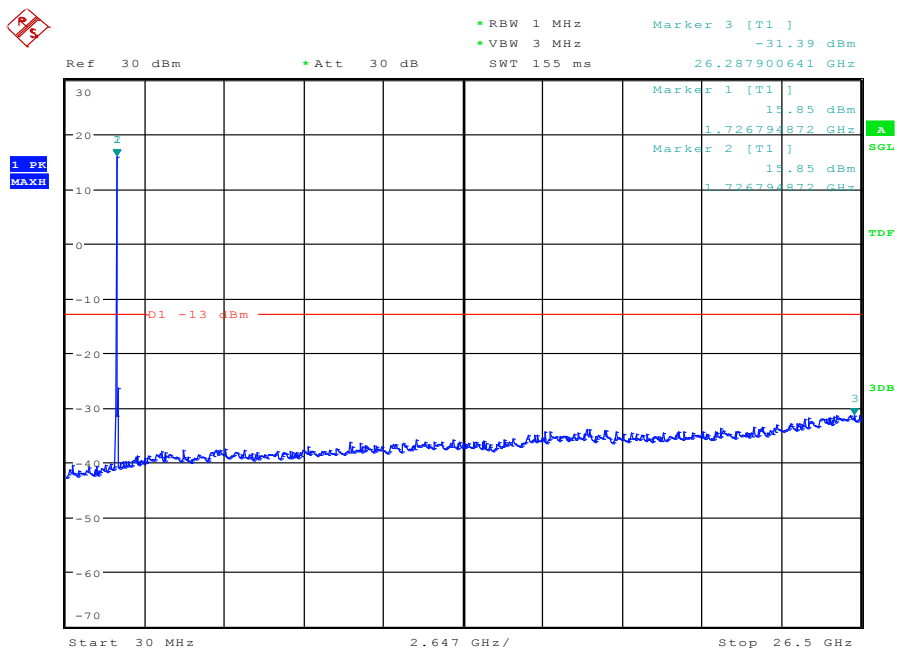
Date: 19.JUN.2017 21:39:54

BW15MHz-1732.5MHz,QPSK-75RB_LOW@Pass



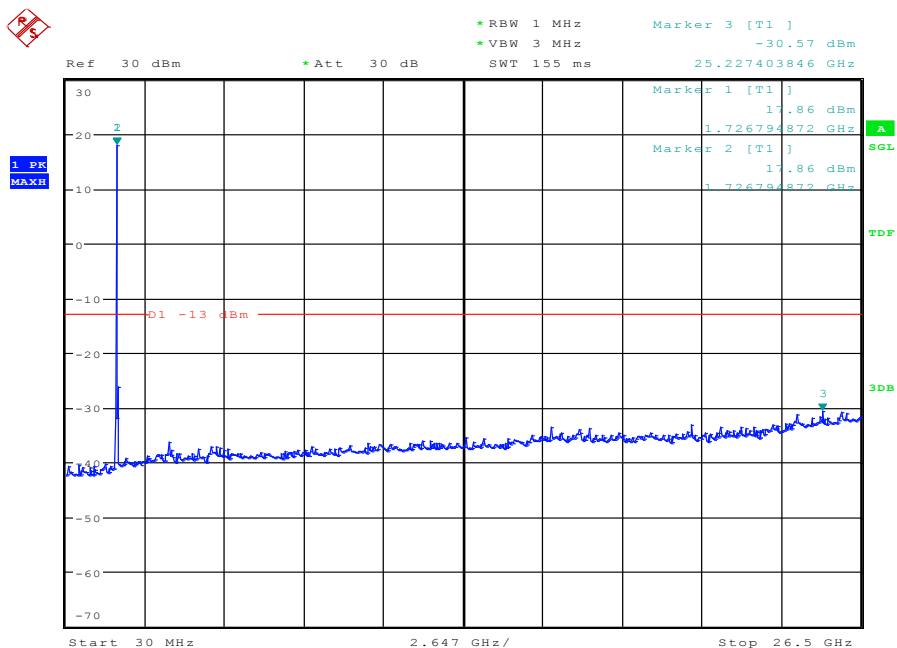
Date: 19.JUN.2017 21:39:35

BW15MHz-1747.5MHz,Q16-75RB_LOW@Pass



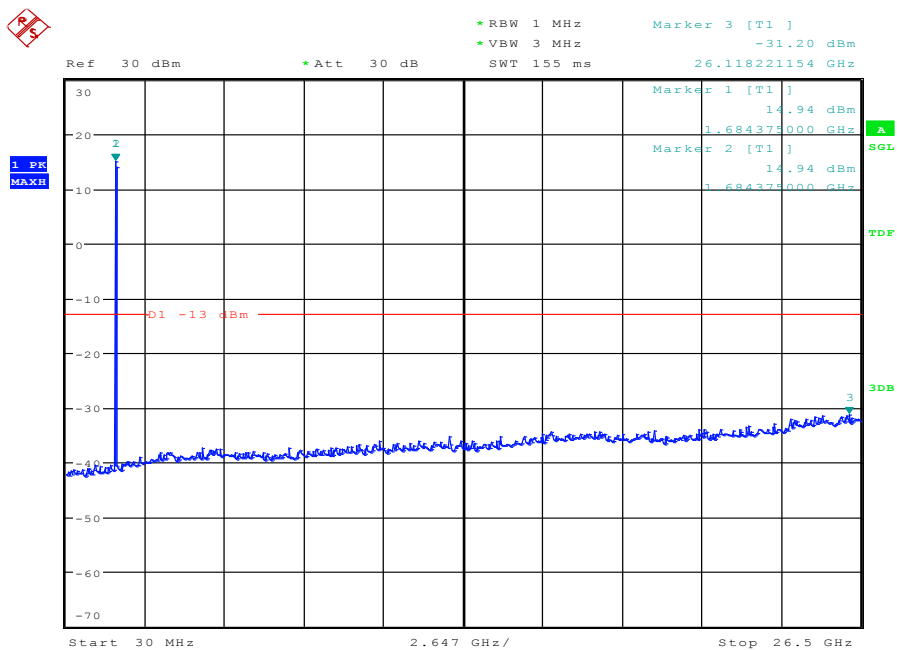
Date: 19.JUN.2017 21:39:16

BW15MHz-1747.5MHz,QPSK-75RB_LOW@Pass



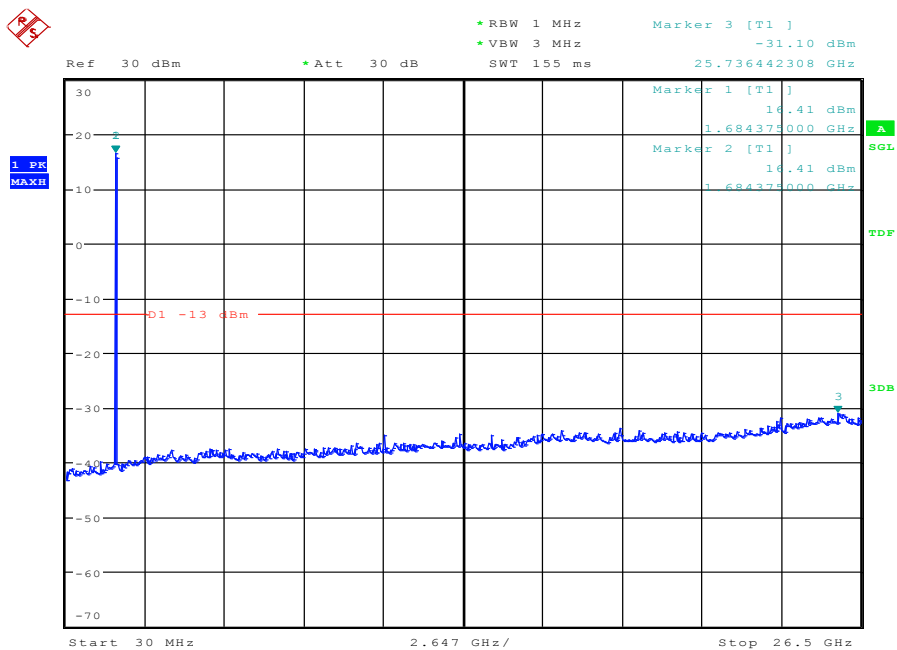
Date: 19.JUN.2017 21:38:57

BW20MHz-1720MHz,Q16-100RB_LOW@Pass



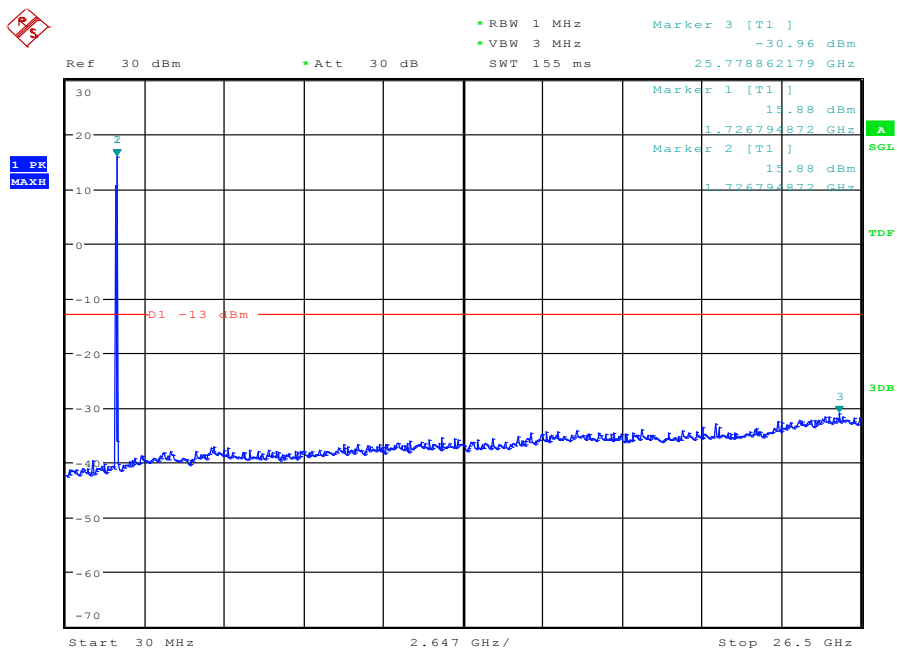
Date: 19.JUN.2017 21:40:35

BW20MHz-1720MHz,QPSK-100RB_LOW@Pass



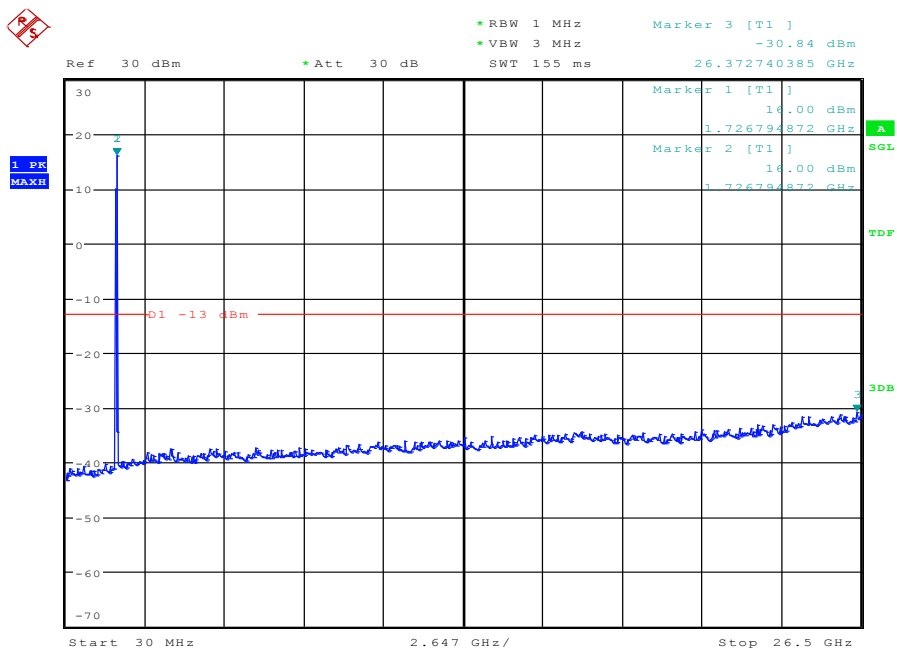
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BW20MHz-1732.5MHz,Q16-100RB_LOW@Pass



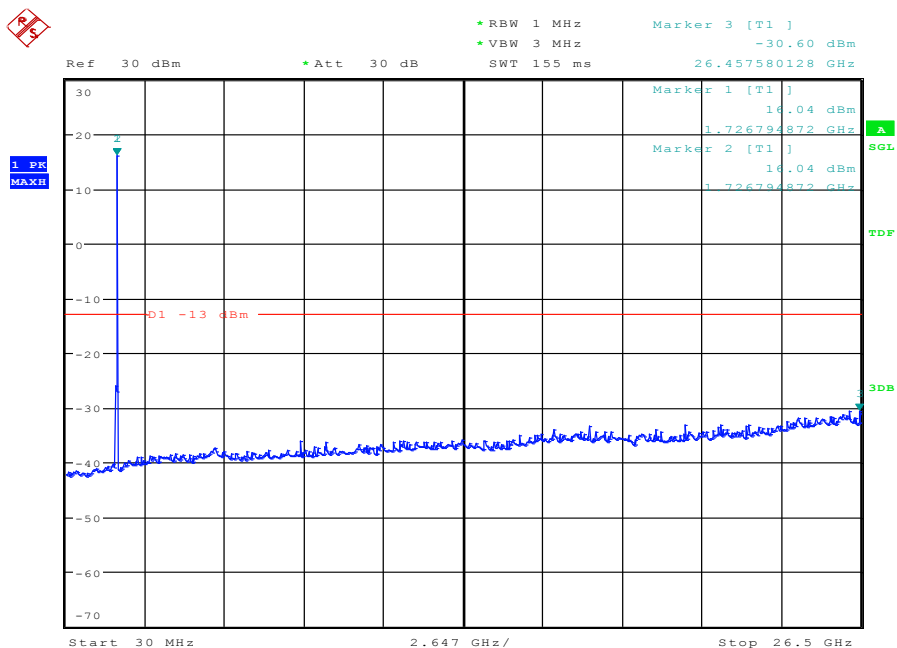
Date: 19.JUN.2017 21:41:52

BW20MHz-1732.5MHz,QPSK-100RB_LOW@Pass



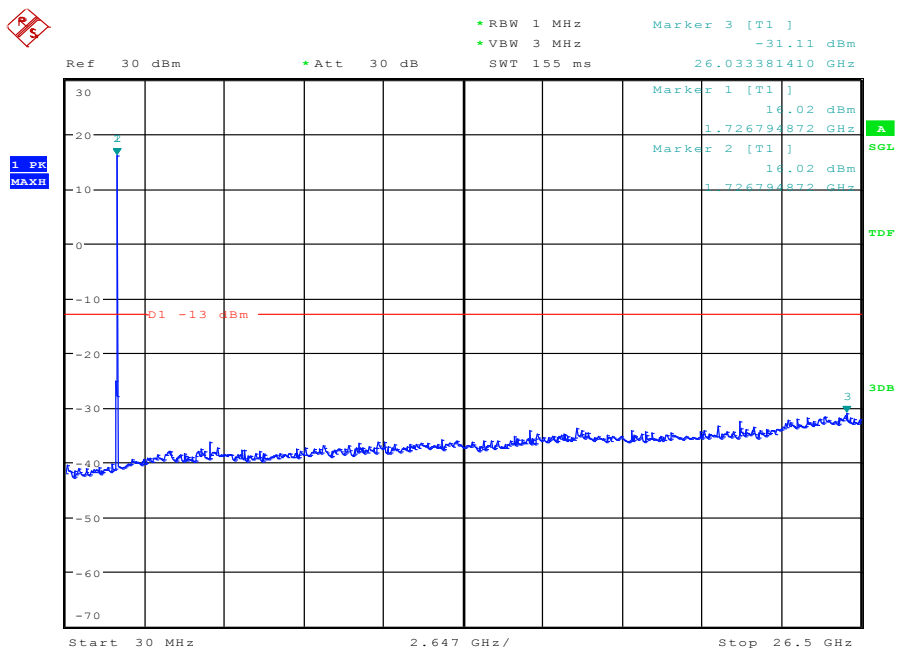
Date: 19.JUN.2017 21:41:33

BW20MHz-1745MHz,Q16-100RB_LOW@Pass



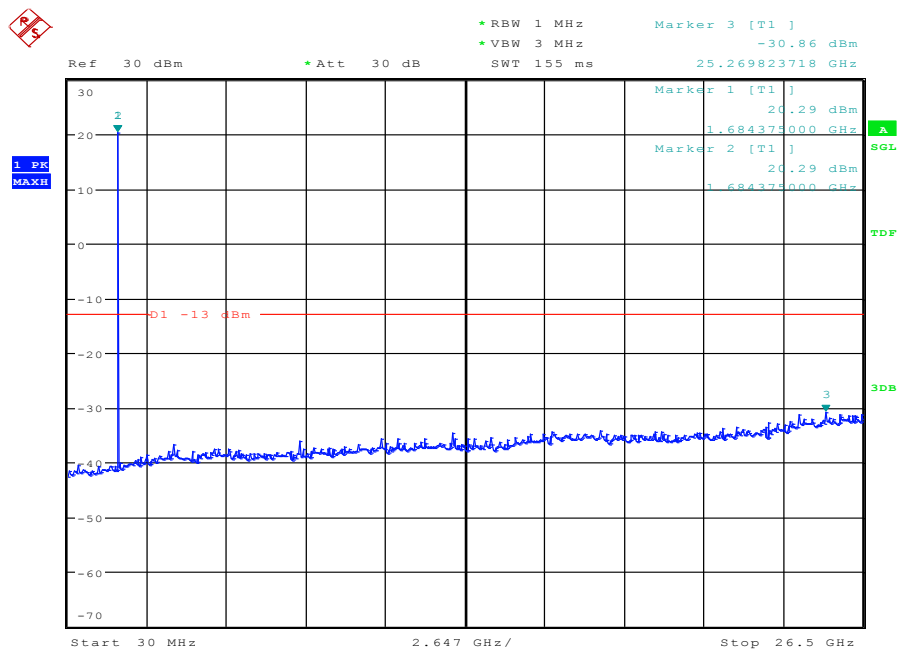
Date: 19.JUN.2017 21:41:13

BW20MHz-1745MHz,QPSK-100RB_LOW@Pass



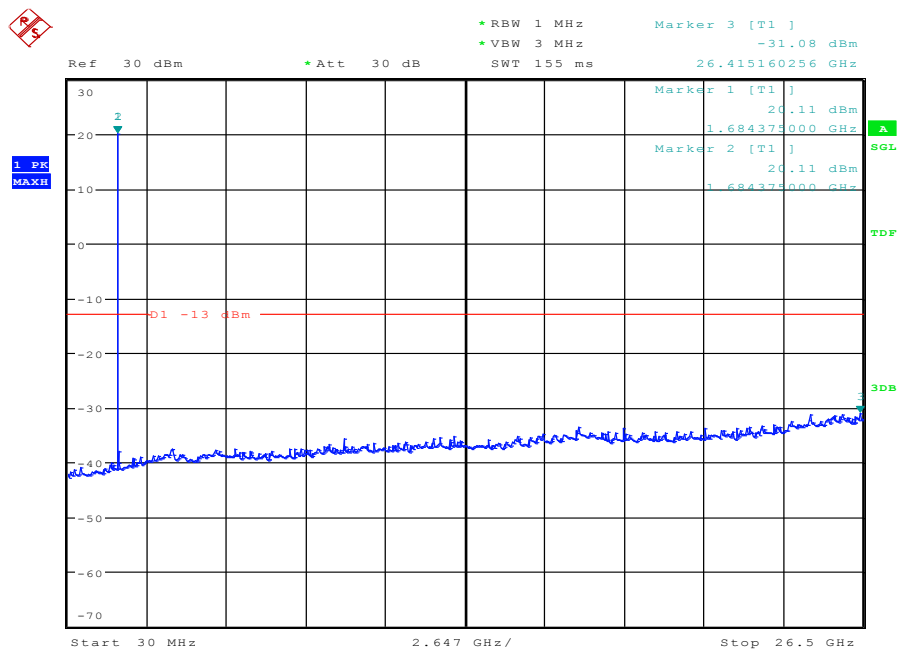
Date: 19.JUN.2017 21:40:54

BW3MHz-1711.5MHz,Q16-15RB_LOW@Pass



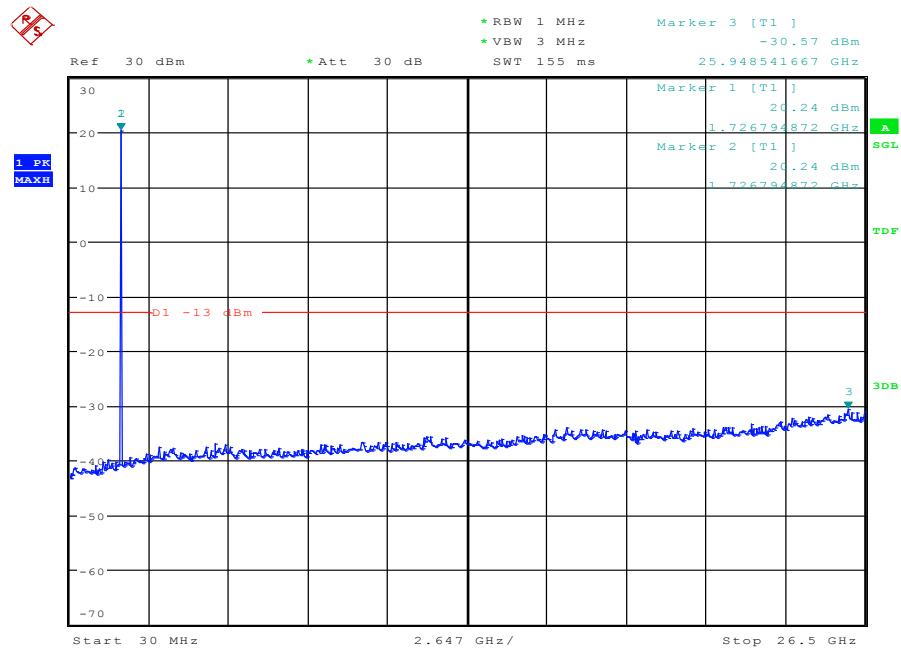
Date: 19.JUN.2017 21:33:29

BW3MHz-1711.5MHz,QPSK-15RB_LOW@Pass



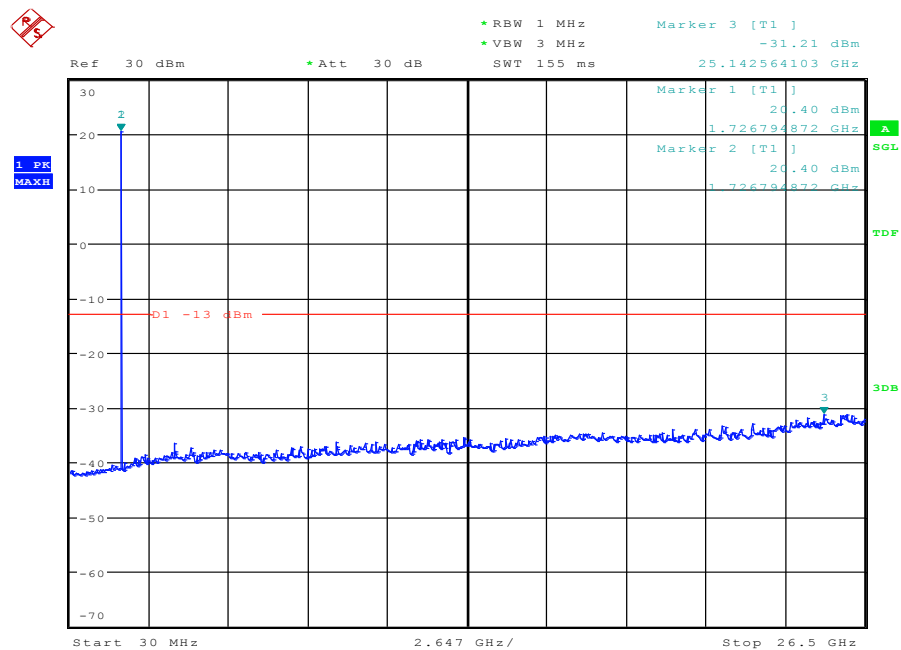
Date: 19.JUN.2017 21:33:13

BW3MHz-1753.5MHz,Q16-15RB_LOW@Pass



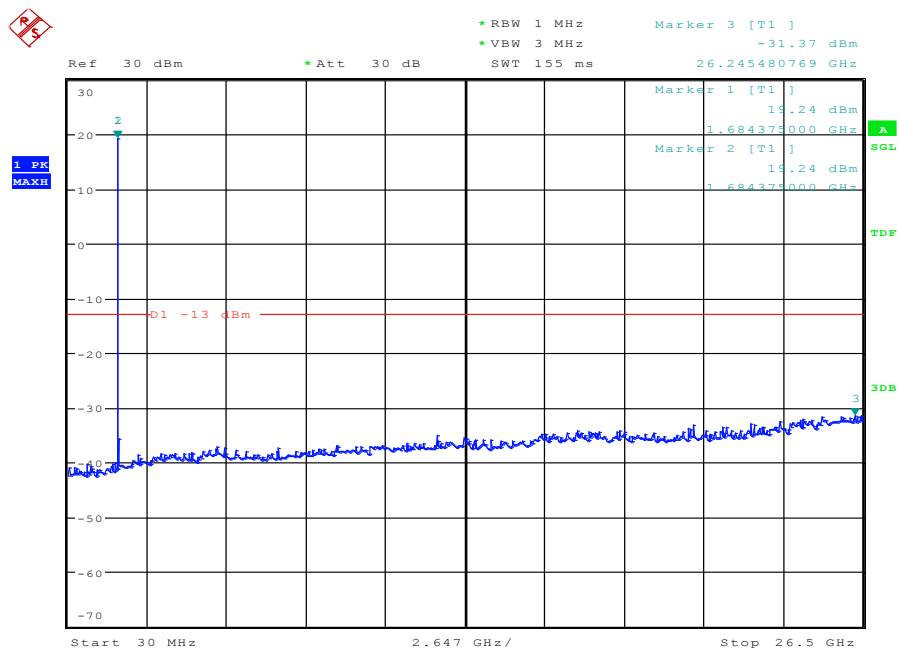
Date: 19.JUN.2017 21:34:01

BW3MHz-1753.5MHz,QPSK-15RB_LOW@Pass



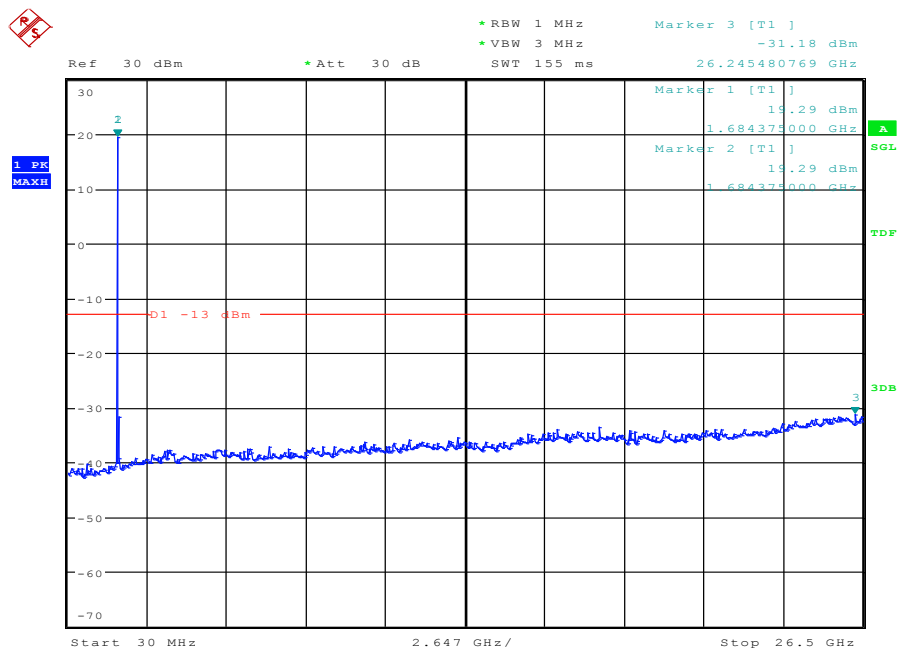
Date: 19.JUN.2017 21:33:45

BW5MHz-1712.5MHz,Q16-25RB_LOW@Pass



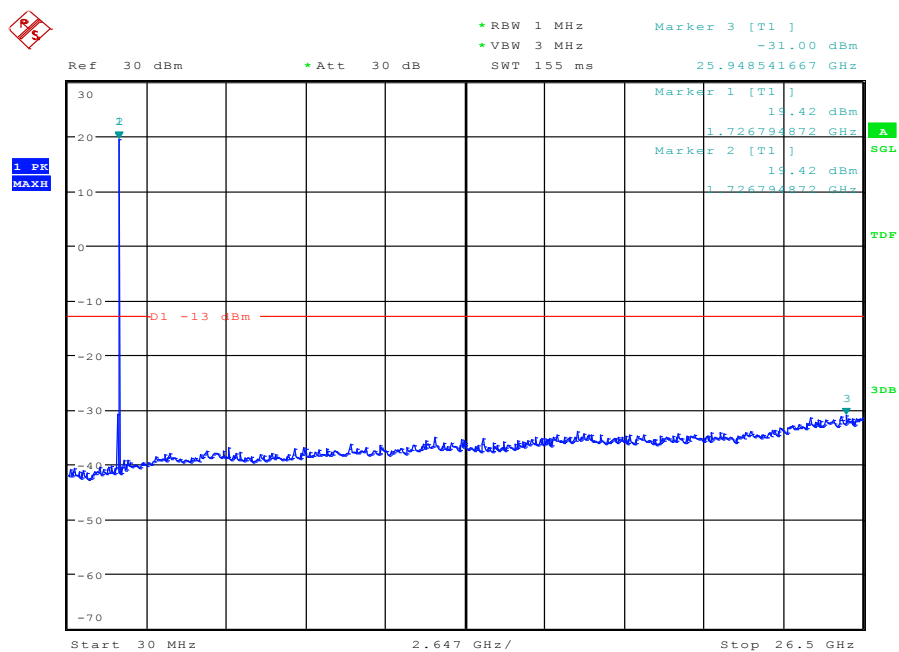
Date: 19.JUN.2017 21:35:08

BW5MHz-1712.5MHz,QPSK-25RB_LOW@Pass



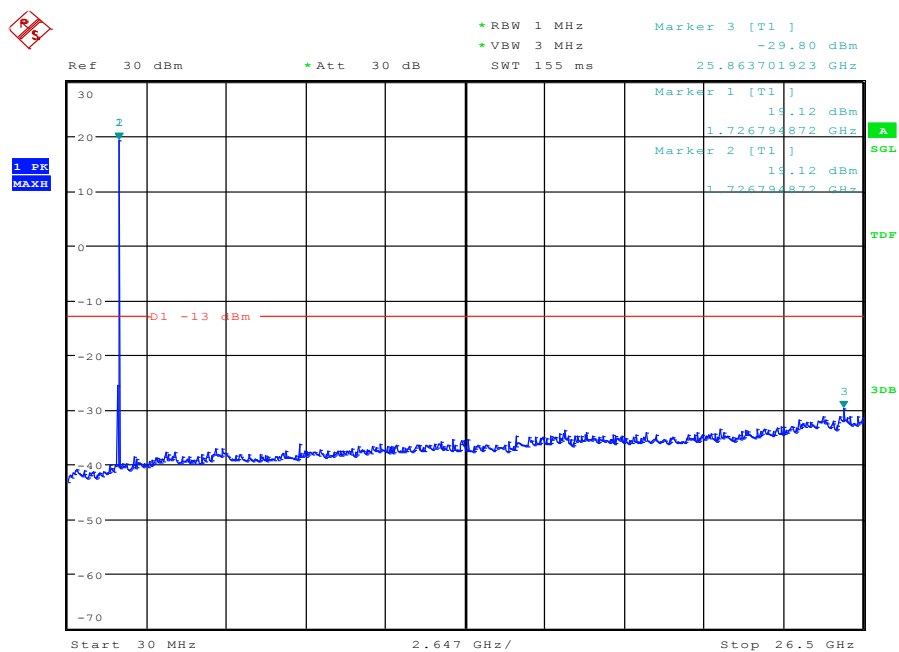
Date: 19.JUN.2017 21:34:52

BW5MHz-1732.5MHz,Q16-25RB_LOW@Pass



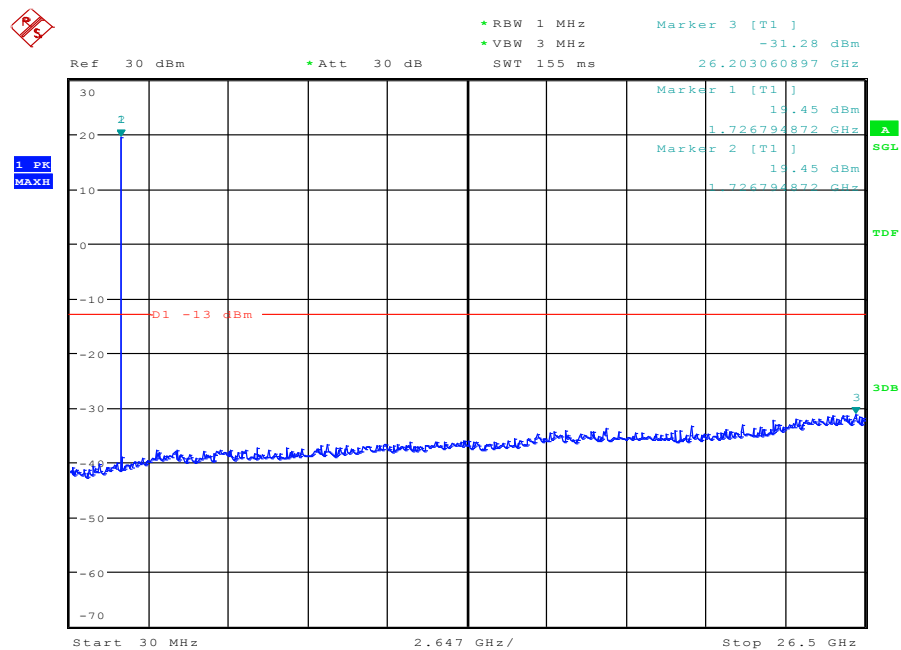
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BW5MHz-1732.5MHz,QPSK-25RB_LOW@Pass



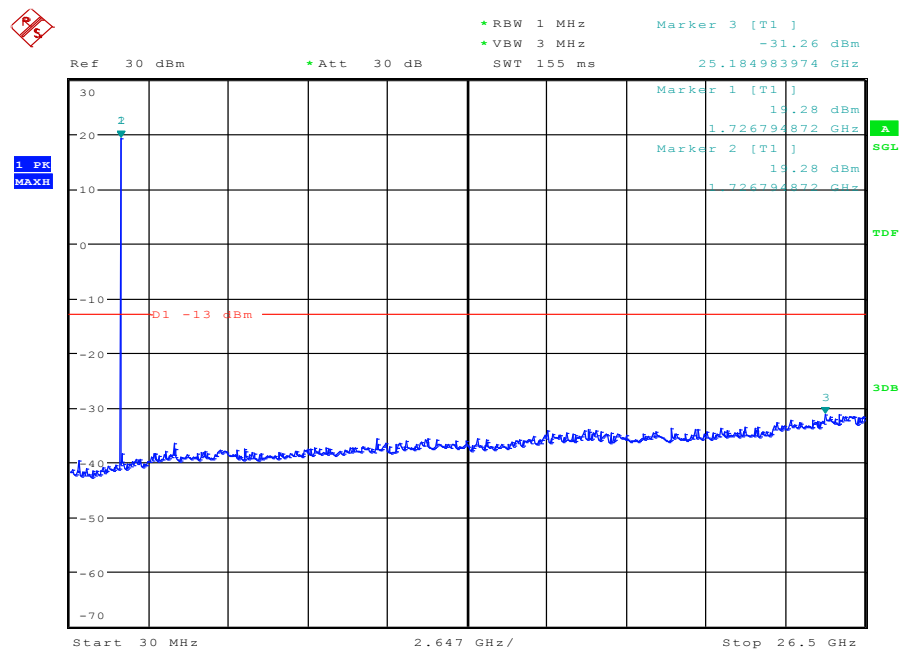
Date: 19.JUN.2017 21:35:58

BW5MHz-1752.5MHz,Q16-25RB_LOW@Pass

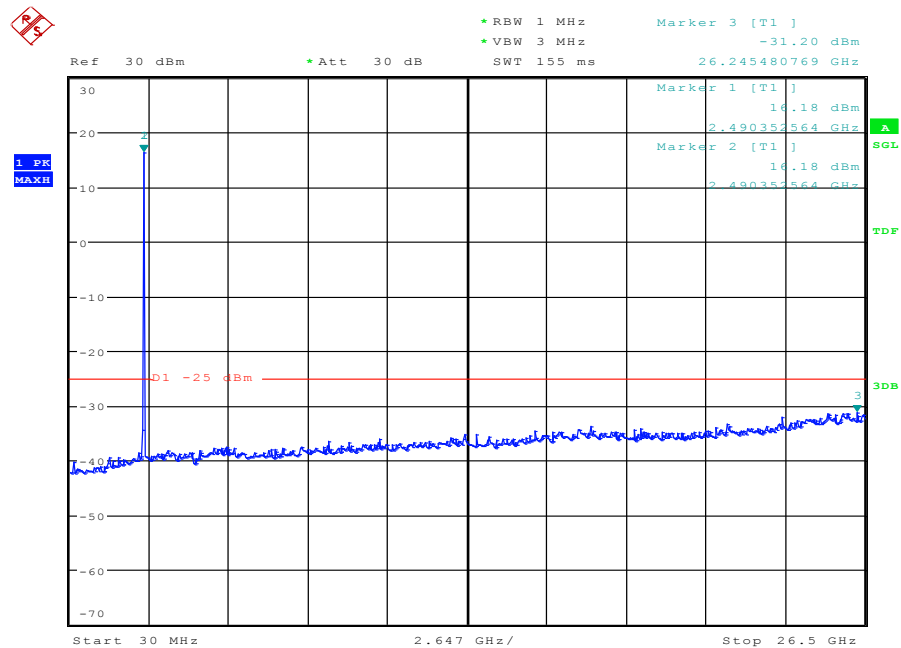


Date: 19.JUN.2017 21:35:41

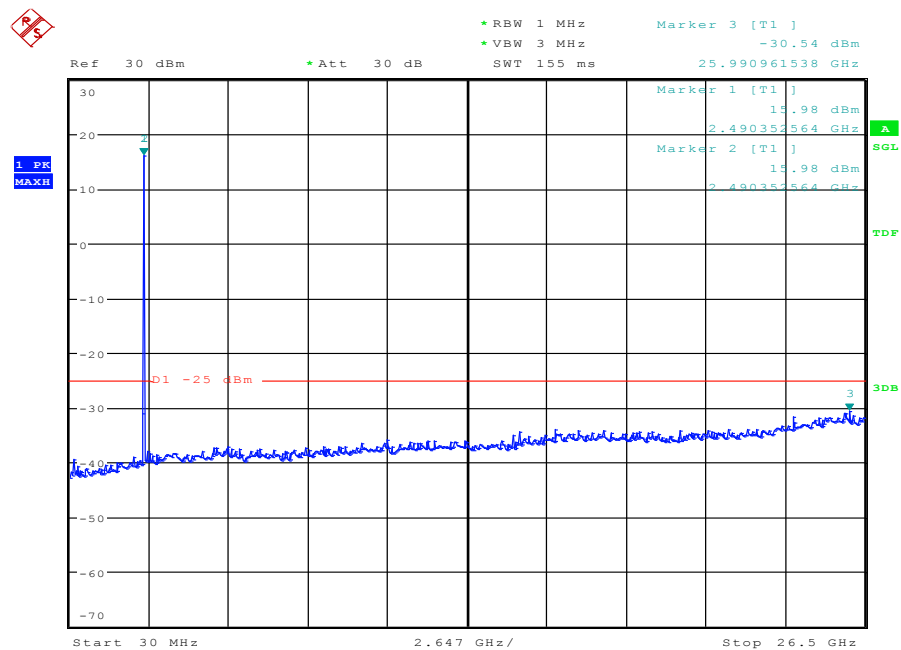
BW5MHz-1752.5MHz,QPSK-25RB_LOW@Pass



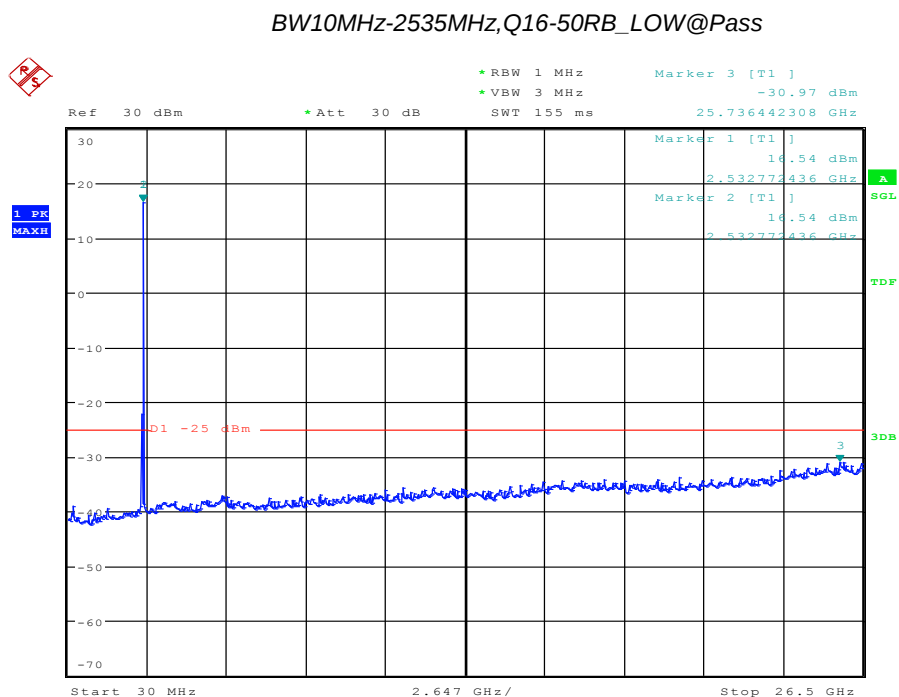
Date: 19.JUN.2017 21:35:25

BAND 7@Conducted Spurious Emission*BW10MHz-2505MHz,Q16-50RB_LOW@Pass*

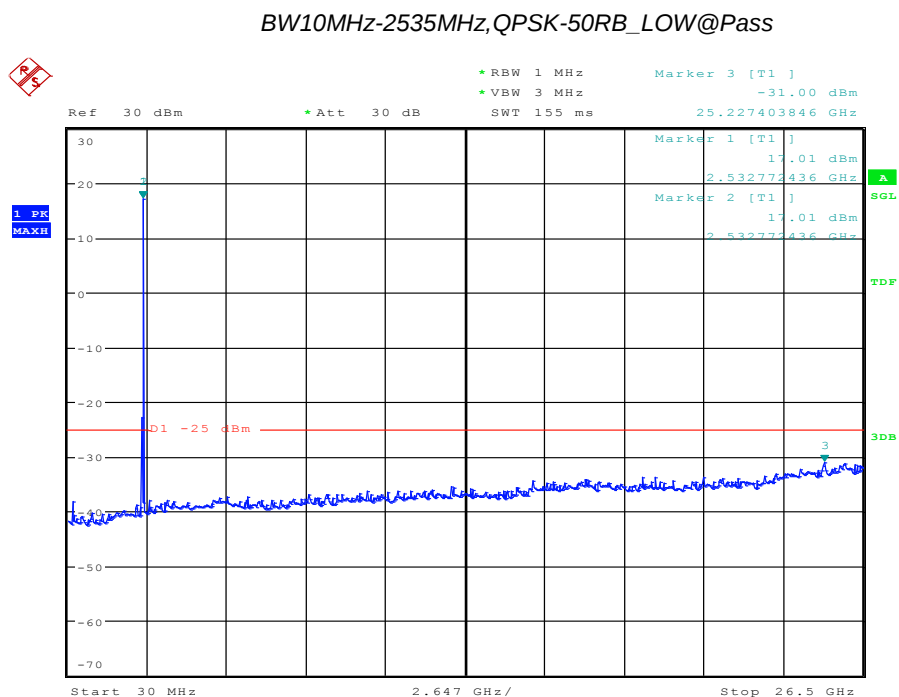
Date: 19.JUN.2017 22:30:00

BW10MHz-2505MHz,QPSK-50RB_LOW@Pass

Date: 19.JUN.2017 22:29:44

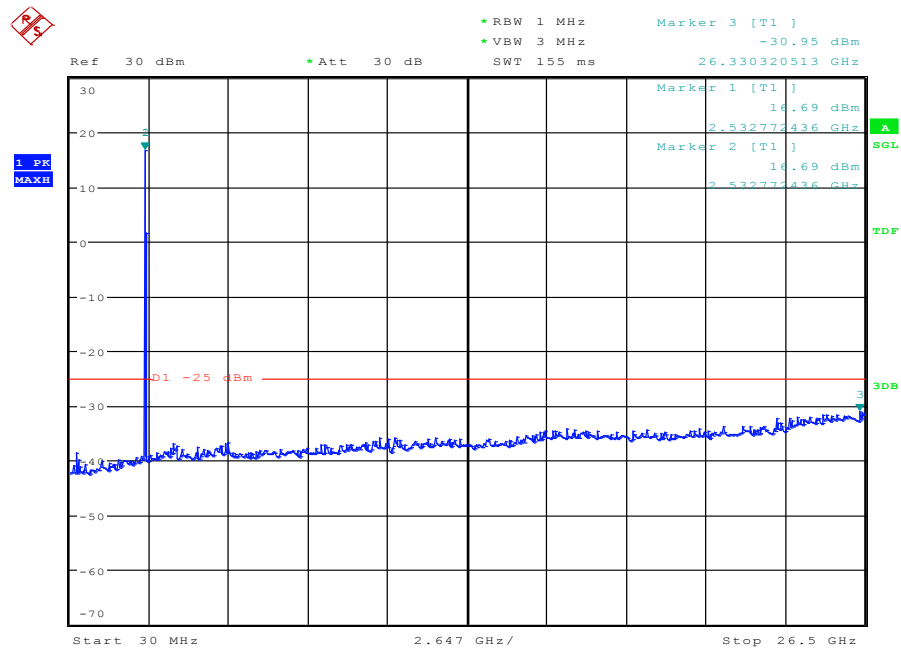


Date: 19.JUN.2017 22:31:08



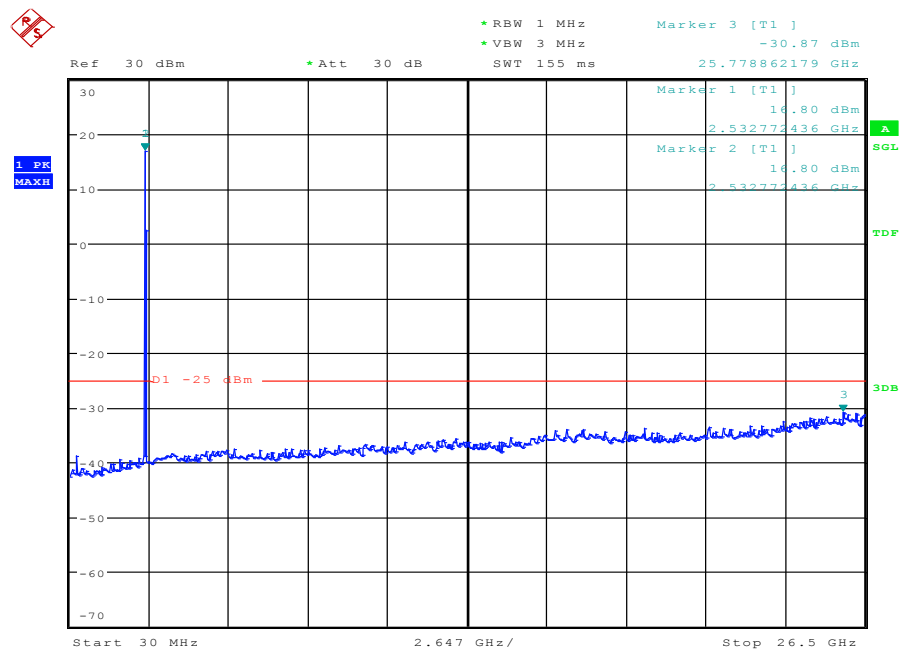
Date: 19.JUN.2017 22:30:51

BW10MHz-2565MHz,Q16-50RB_LOW@Pass

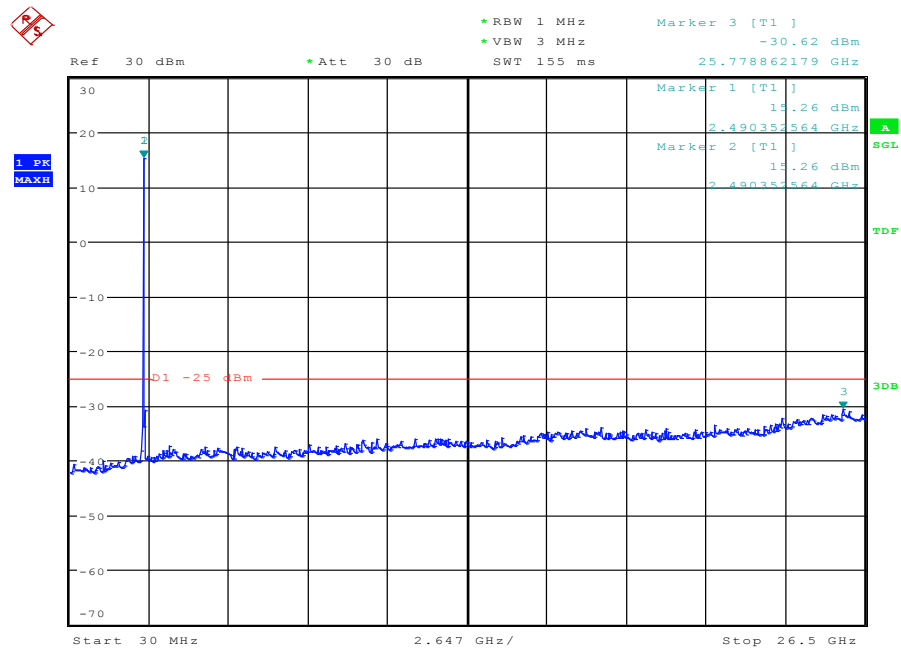


Date: 19.JUN.2017 22:30:34

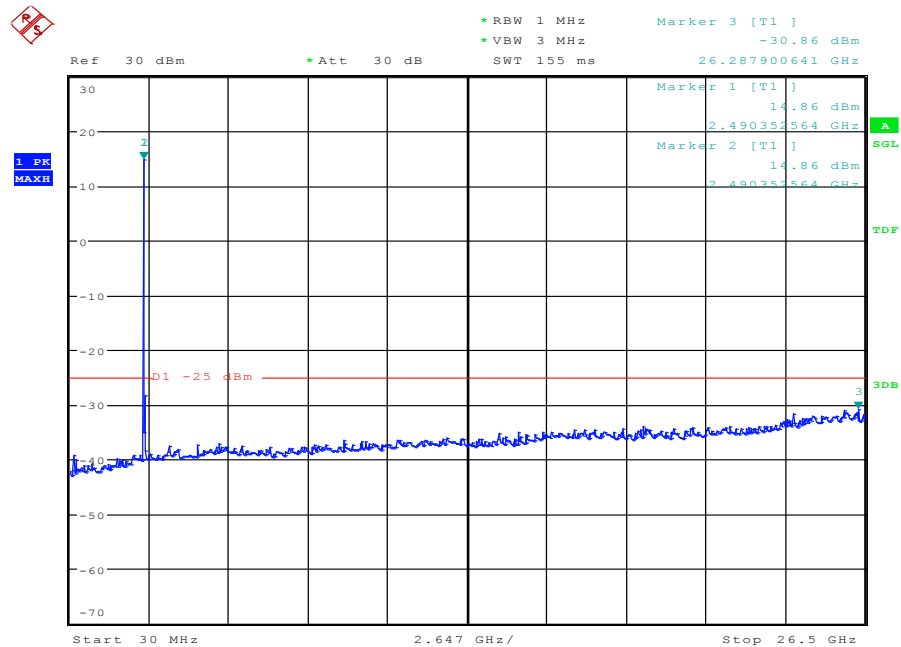
BW10MHz-2565MHz,QPSK-50RB_LOW@Pass



Date: 19.JUN.2017 22:30:18

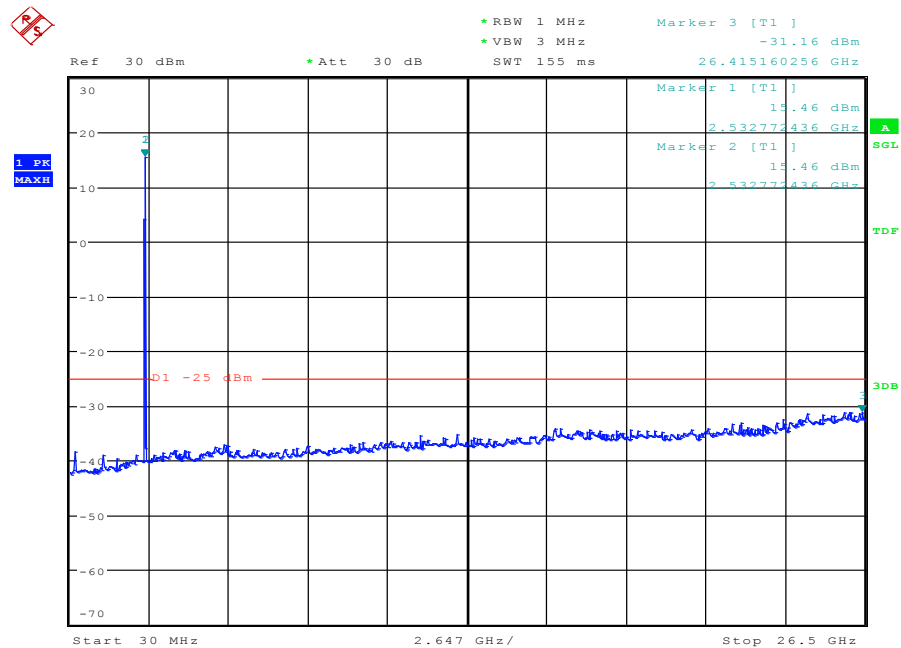
BW15MHz-2507.5MHz,Q16-75RB_LOW@Pass

Date: 19.JUN.2017 22:31:48

BW15MHz-2507.5MHz,QPSK-75RB_LOW@Pass

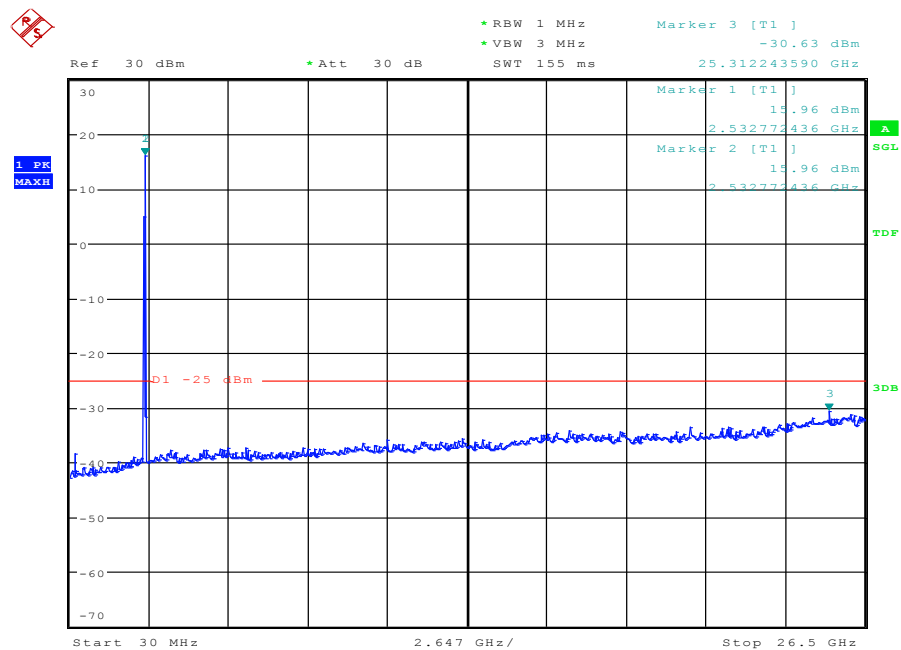
Date: 19.JUN.2017 22:31:29

BW15MHz-2535MHz,Q16-75RB_LOW@Pass



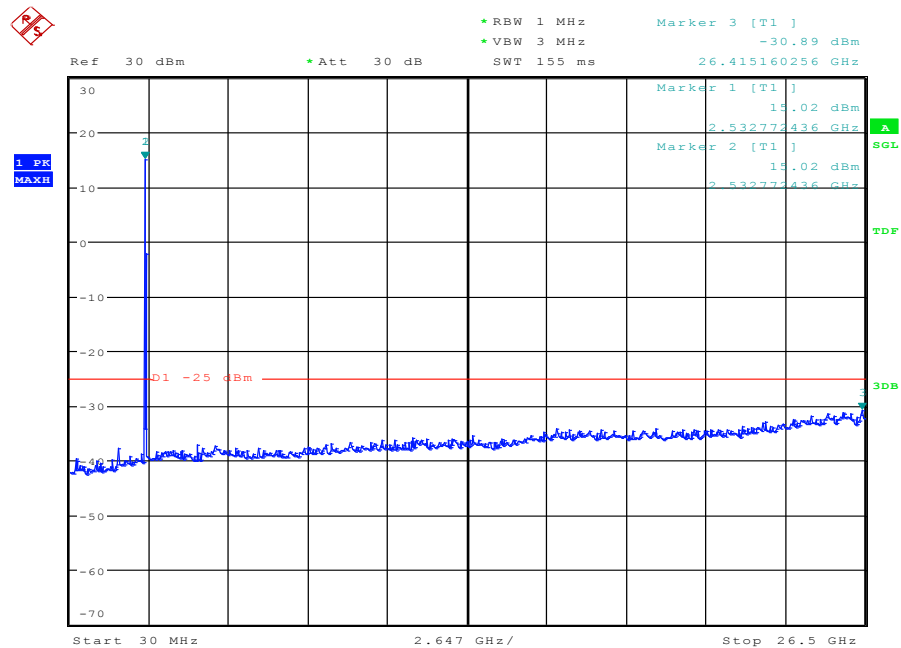
Date: 19.JUN.2017 22:33:04

BW15MHz-2535MHz,QPSK-75RB_LOW@Pass



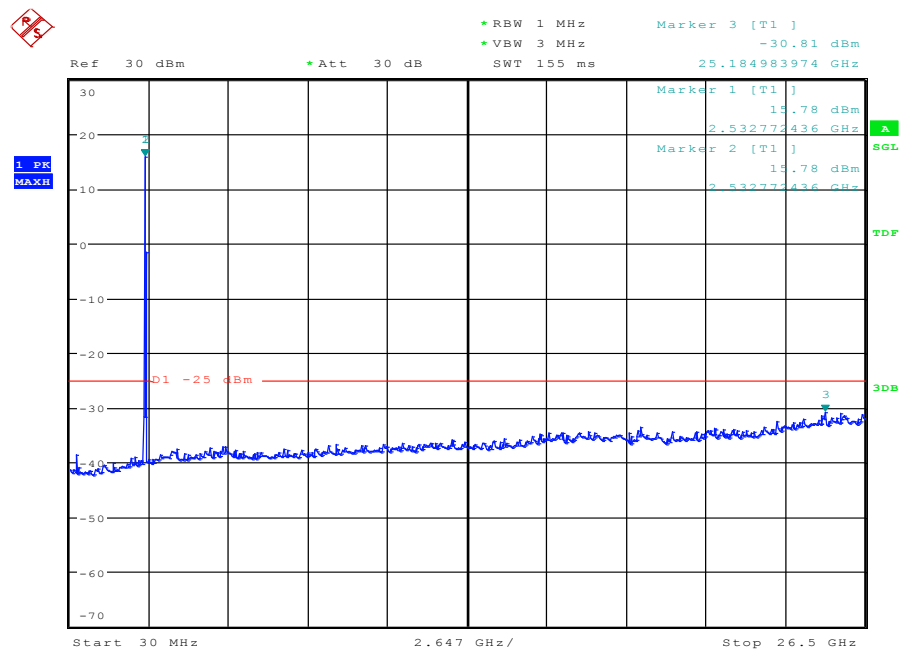
Date: 19.JUN.2017 22:32:46

BW15MHz-2562.5MHz,Q16-75RB_LOW@Pass



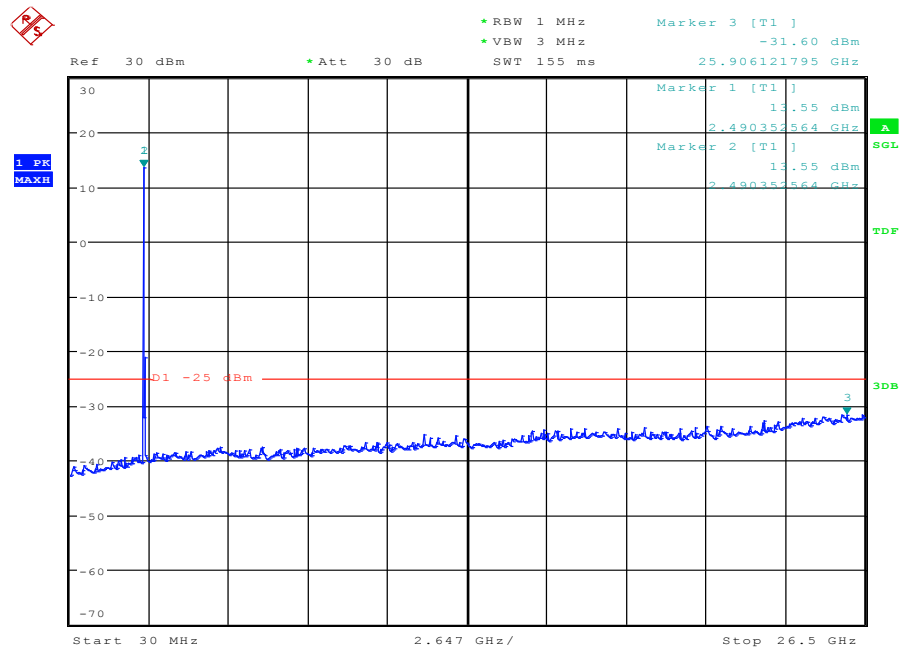
Date: 19.JUN.2017 22:32:26

BW15MHz-2562.5MHz,QPSK-75RB_LOW@Pass



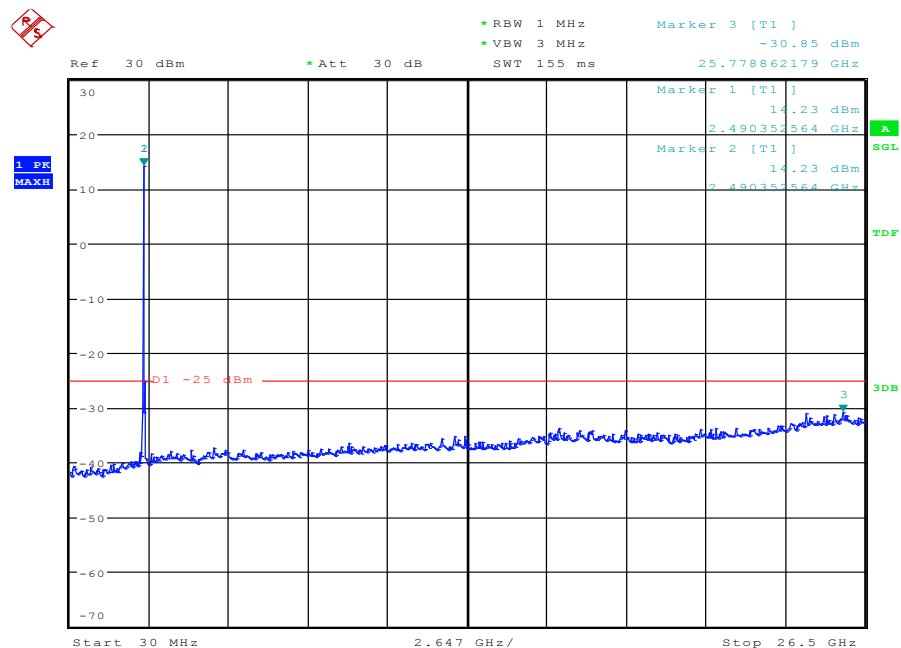
Date: 19.JUN.2017 22:32:08

BW20MHz-2510MHz,Q16-100RB_LOW@Pass



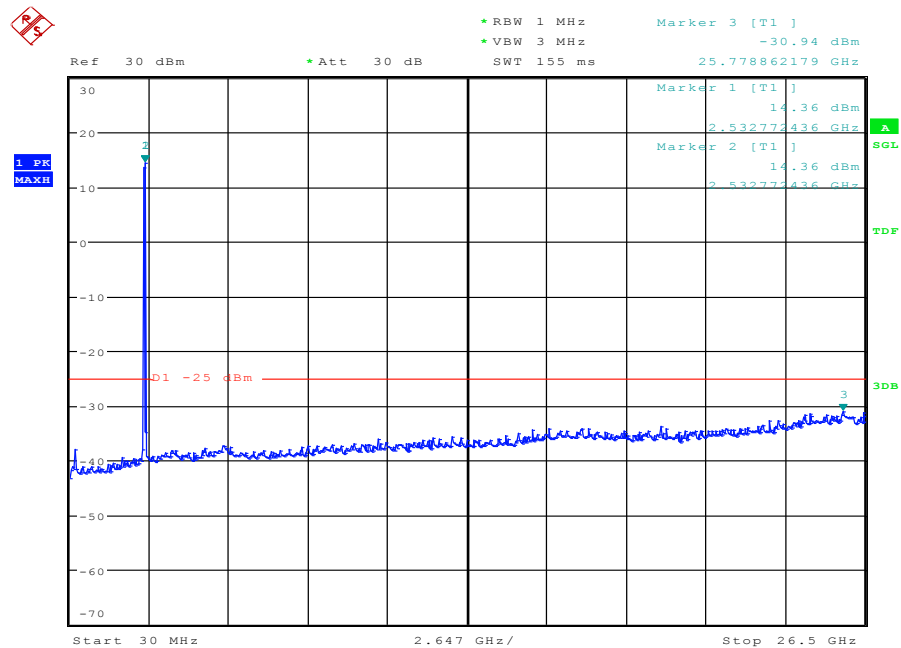
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BW20MHz-2510MHz,QPSK-100RB_LOW@Pass



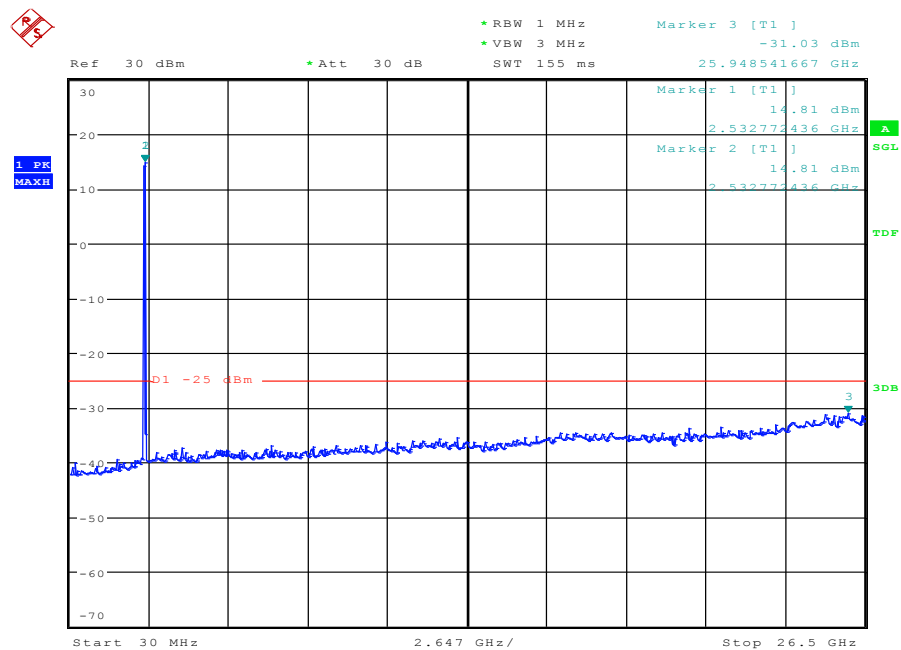
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BW20MHz-2535MHz,Q16-100RB_LOW@Pass



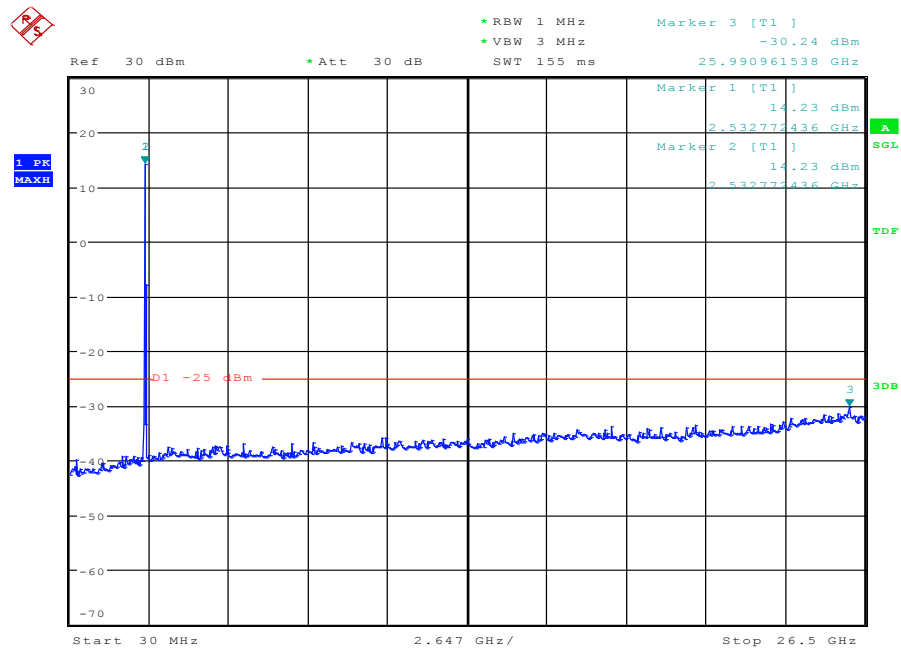
Date: 19.JUN.2017 22:35:02

BW20MHz-2535MHz,QPSK-100RB_LOW@Pass



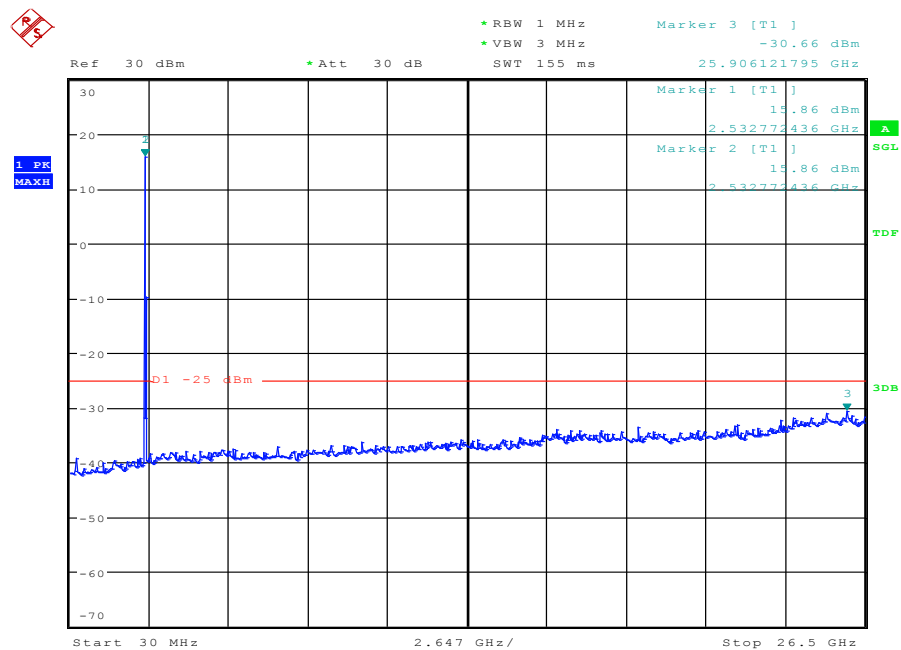
Date: 19.JUN.2017 22:34:43

BW20MHz-2560MHz,Q16-100RB_LOW@Pass



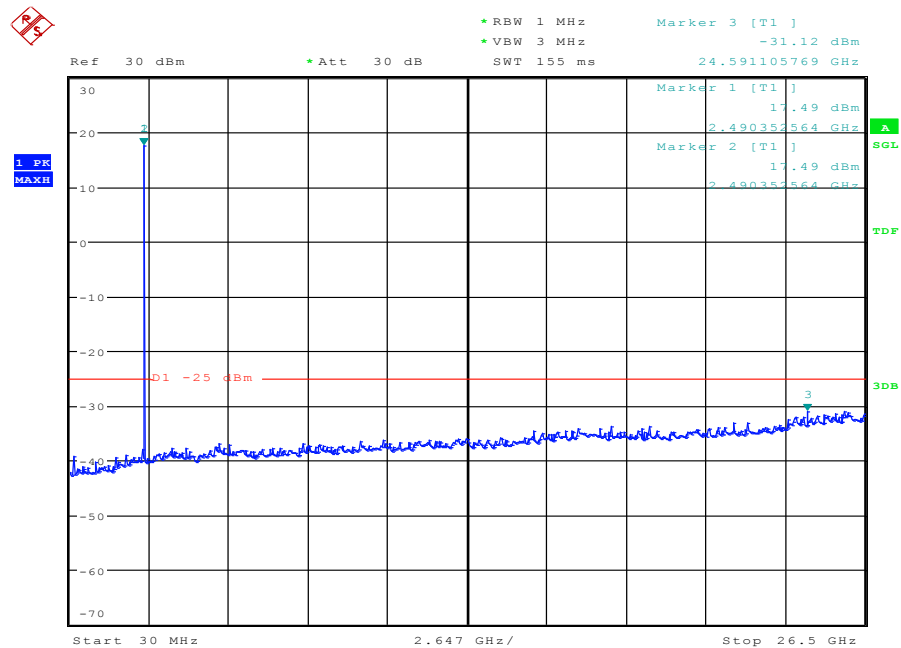
Date: 19.JUN.2017 22:34:23

BW20MHz-2560MHz,QPSK-100RB_LOW@Pass



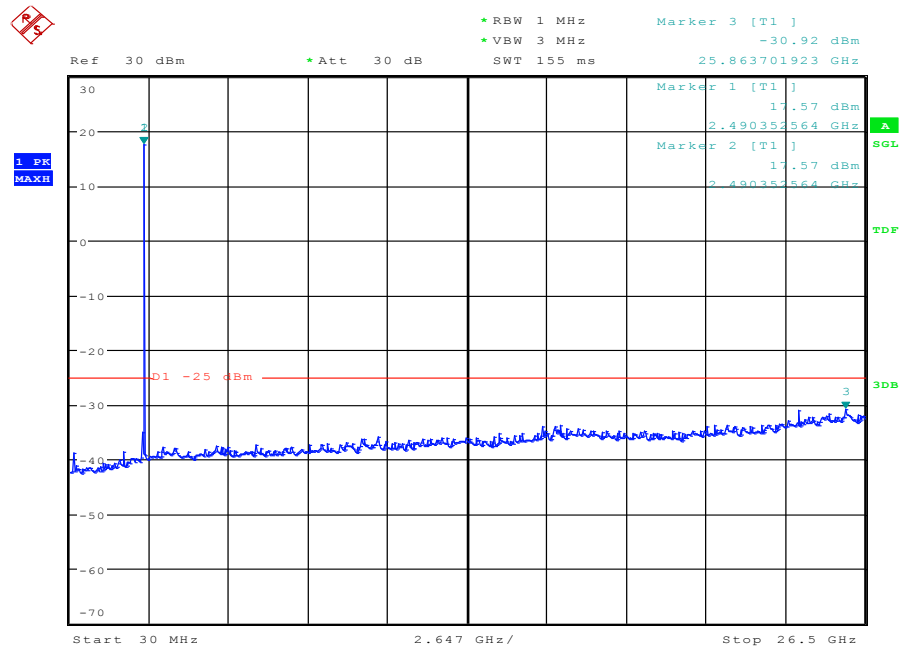
Date: 19.JUN.2017 22:34:05

BW5MHz-2502.5MHz,Q16-25RB_LOW@Pass



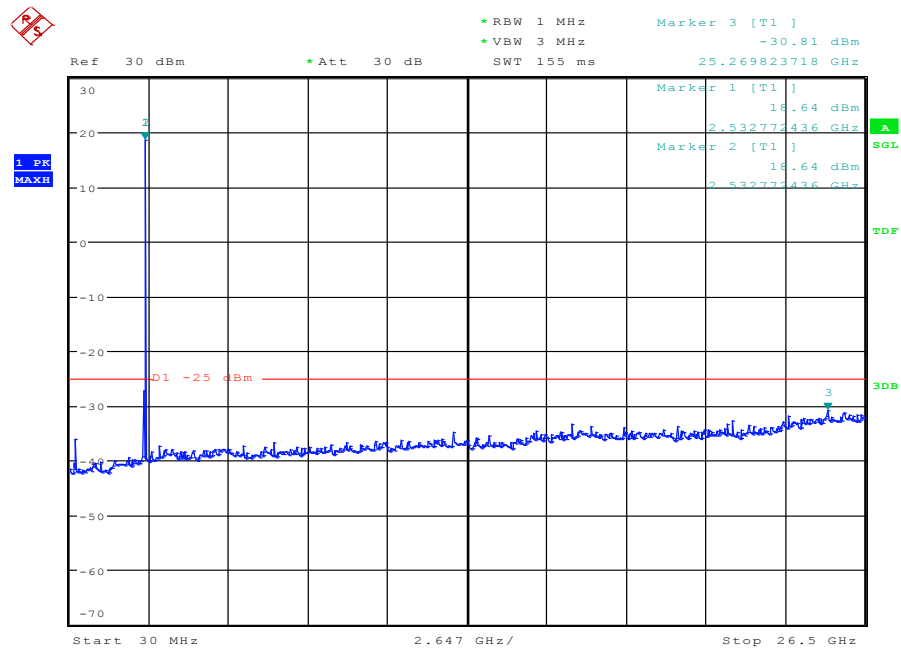
Date: 19.JUN.2017 22:28:18

BW5MHz-2502.5MHz,QPSK-25RB_LOW@Pass



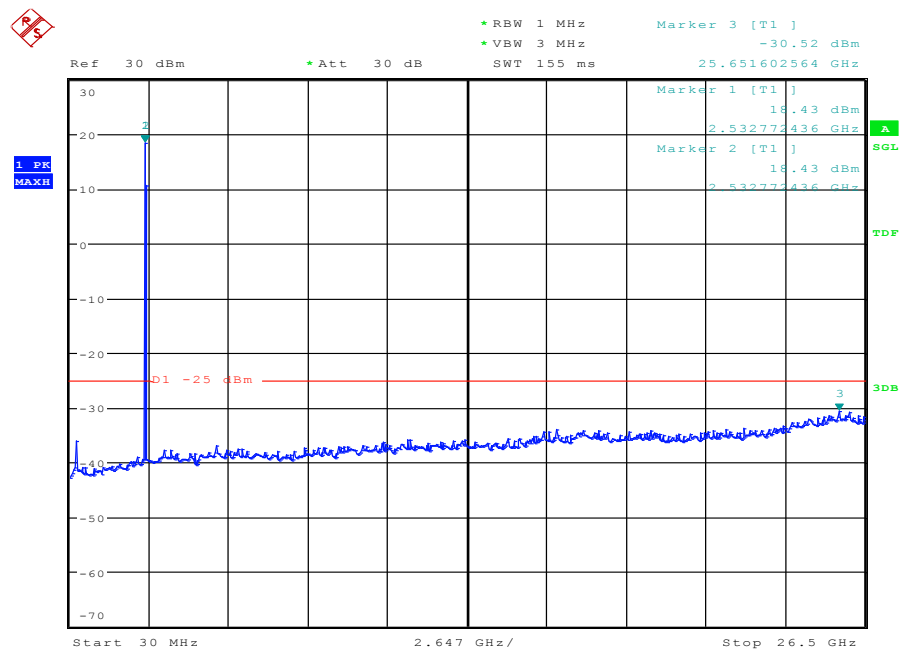
Date: 19.JUN.2017 22:28:02

BW5MHz-2535MHz,QPSK-25RB_LOW@Pass

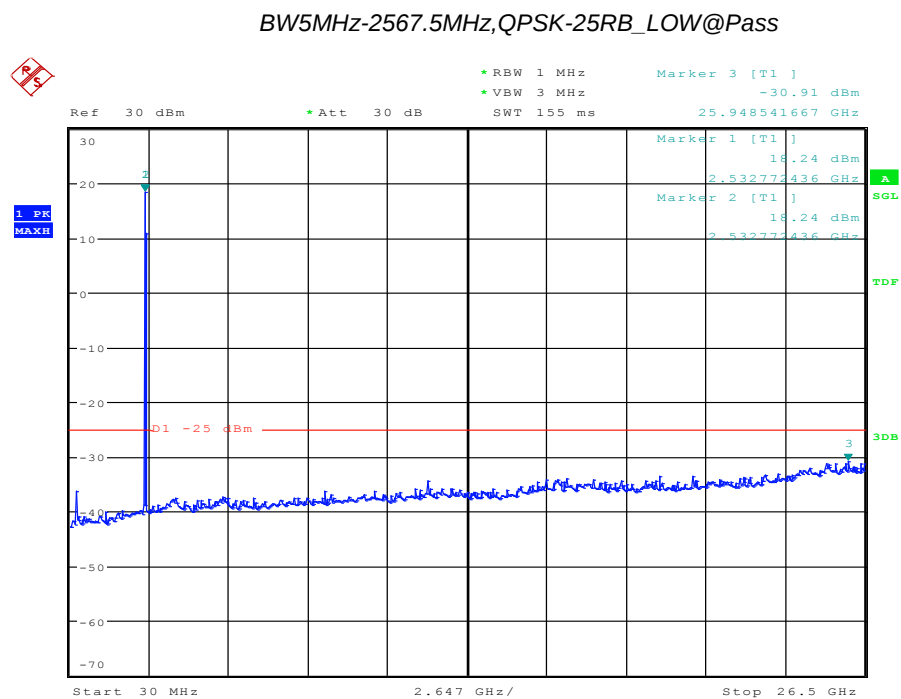


Date: 19.JUN.2017 22:29:24

BW5MHz-2567.5MHz,Q16-25RB_LOW@Pass



Date: 19.JUN.2017 22:28:51



Date: 19.JUN.2017 22:28:35

6.1.1 Radiated method

Test limit:

The spurious (unwanted) emission limits specified in the individual FCC rule parts applicable to licensed digital transmitters (typically referred to under the heading 'emission limits') normally apply to any and all emissions that are present outside of the authorized frequency band/block and apply to emissions in both the out-of-band and spurious domains. In some rule parts, the unwanted emission limits are specified by an emission mask that defines the applicable limit as a function of the frequency range relative to the authorized frequency block.

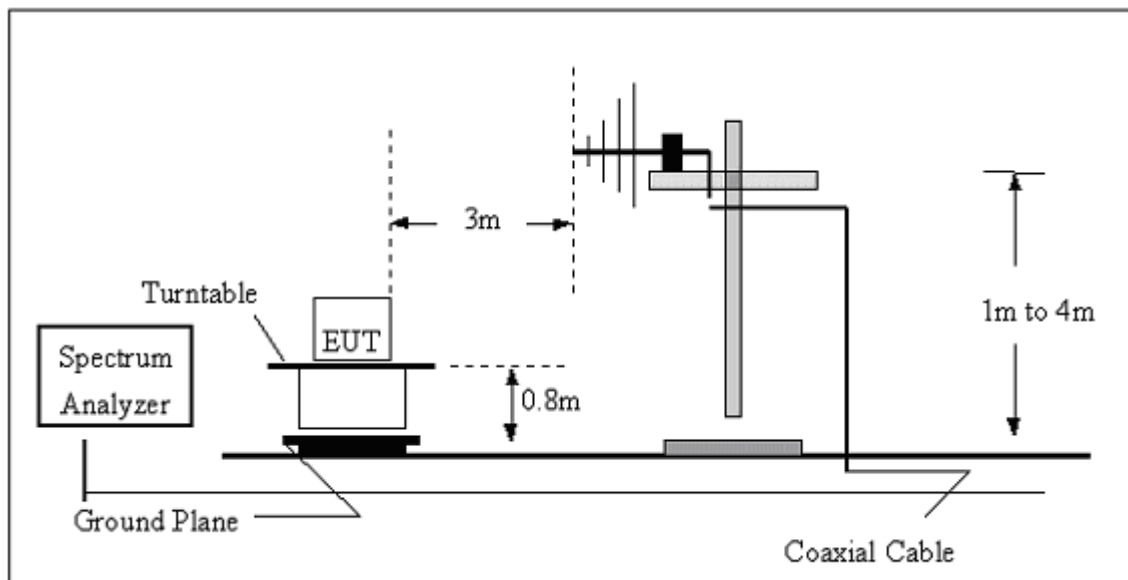
Typically, unwanted emissions are required by the licensed rule parts to be attenuated below the transmitter power by a factor of at least $X + 10\log(P)$ dB, where P represents the transmitter power expressed in watts and X is a specified scalar value (e.g., 43). This specification can be interpreted in one of two equivalent ways. First, the required attenuation can be construed to be relative to the mean carrier power, with the resultant of the equation $X + 10\log(P)$ being expressed in dBc (dB relative to the maximum carrier power). Alternatively, the specification can be interpreted as an absolute limit when the specified attenuation is actually subtracted from the maximum permissible transmitter power [i.e., $10\log(P) - \{X + 10\log(P)\}$], resulting in an absolute level of $-X$ dBW [or $(-X + 30)$ dBm]. See section 4.

Test procedure:

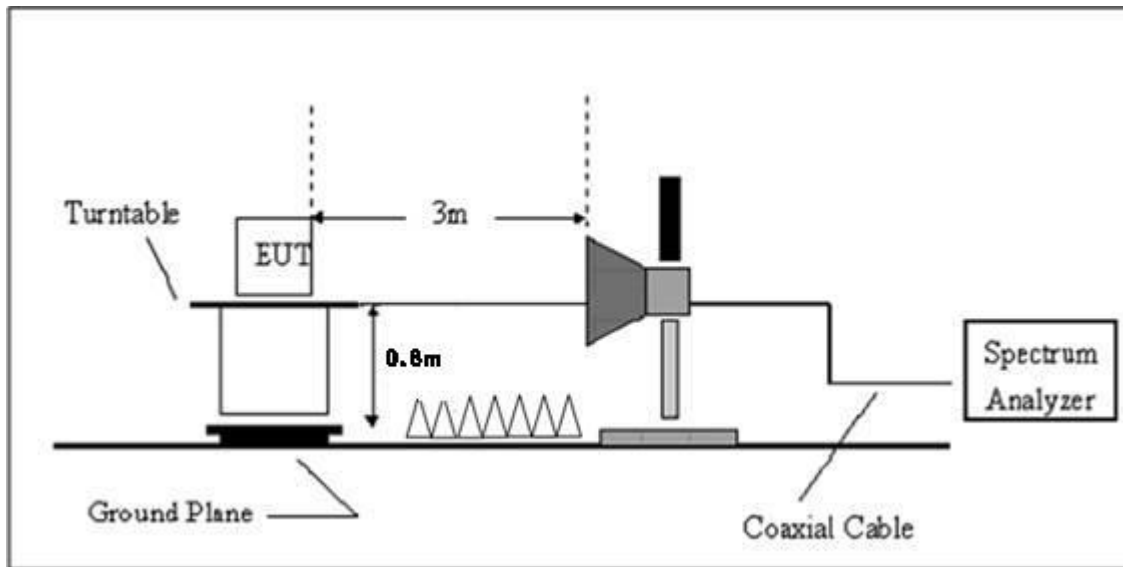
The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site. The resolution bandwidth of the spectrum analyzer was set at 100 kHz below 1 GHz and 1 MHz above 1 GHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonics.

Test setup:

(A) Radiated Emission Test-Up Frequency 30MHz~1GHz



(B) Radiated Emission Test-Up Frequency Above 1GHz

**Note:**

1, Below 30MHz no Spurious found.

2, UE is positioned at 3 axis at the pre-scan stage, and only the measurement of the worst case (bandwidth: 20MHz / Full RB / QPSK) is reported in this part.

List of final test modes:**GSM850:**

Mode	UL Channel	Frequency	Judgement
1	128	824.2	Pass
2	190	836.6	Pass
3	251	848.8	Pass

PCS1900

Mode	UL Channel	Frequency	Judgement
1	512	1850.2	Pass
2	661	1880	Pass
3	810	1909.8	Pass

UTRA BANDS**BAND 2:**

Mode	UL Channel	Frequency	Judgement
1	9262	1852.4	Pass
2	9400	1880	Pass
3	9538	1907.6	Pass

BAND 4:.

Mode	UL Channel	Frequency	Judgement
1	1312	1712.4	Pass
2	1413	1732.6	Pass
3	1513	1752.6	Pass

BAND 5:

Mode	UL Channel	Frequency	Judgement
1	4132	826.4	Pass
2	4182	836.4	Pass
3	4233	846.6	Pass

E-UTRA BANDS**BAND 2:**

Mode	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
1	20	18700	1860	QPSK	100	LOW	Pass
2	20	18900	1880	QPSK	100	LOW	Pass
3	20	19100	1900	QPSK	100	LOW	Pass

BAND 4:

Mode	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
1	20	20050	1720	Q16	100	LOW	Pass
2	20	20300	1745	Q16	100	LOW	Pass
3	20	20175	1732.5	Q16	100	LOW	Pass

BAND 7:

Mode	Bandwidth	UL Channel	Frequency	Modulation	RB Size	RB Offset	Judgement
1	20	20850	2510	QPSK	100	LOW	Pass
2	20	21350	2560	QPSK	100	LOW	Pass
3	20	21100	2535	QPSK	100	LOW	Pass

Test record:

GSM850:

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1697.6	-28.97	-4.99	-23.98	-13	Horizontal
1697.6	-28.79	-2.45	-26.34	-13	Vertical
3395.2	-26.70	3.61	-30.31	-13	Horizontal
3395.2	-26.85	2.82	-29.67	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1707.6	-33.91	-4.99	-28.92	-13	Horizontal
1707.6	-29.59	-2.45	-27.14	-13	Vertical
3405.2	-28.18	3.61	-31.79	-13	Horizontal
3405.2	-26.09	2.82	-28.91	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1717.6	-33.42	-4.99	-28.43	-13	Horizontal
1717.6	-34.71	-2.45	-32.26	-13	Vertical
3415.2	-32.59	3.61	-36.20	-13	Horizontal
3415.2	-31.18	2.82	-34.00	-13	Vertical

PCS1900:

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3819.6	-28.26	-3.21	-25.05	-13	Horizontal
3819.6	-26.30	0.34	-26.64	-13	Vertical
7639.2	-26.12	3.95	-30.07	-13	Horizontal
7639.2	-30.36	-2.26	-28.10	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3829.6	-30.74	-3.21	-27.53	-13	Horizontal
3829.6	-32.51	0.34	-32.85	-13	Vertical
7649.2	-33.09	3.95	-37.04	-13	Horizontal
7649.2	-30.59	-2.26	-28.33	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3839.6	-29.52	-3.21	-26.31	-13	Horizontal
3839.6	-28.89	0.34	-29.23	-13	Vertical
7659.2	-32.47	3.95	-36.42	-13	Horizontal
7659.2	-34.62	-2.26	-32.36	-13	Vertical

UTRA BANDS**BAND 2:**

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3704.8	-62.36	10.76	-51.60	-13	Horizontal
3704.8	-62.74	11.00	-51.74	-13	Vertical
5557.2	-63.83	12.30	-51.53	-13	Horizontal
5557.2	-65.33	11.97	-53.36	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3760	-62.87	10.17	-52.70	-13	Horizontal
3760	-62.61	10.36	-52.24	-13	Vertical
5640	-64.25	11.64	-52.61	-13	Horizontal
5640	-64.64	11.74	-52.89	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3815.2	-63.07	10.79	-52.28	-13	Horizontal
3815.2	-62.55	10.46	-52.09	-13	Vertical
5722.8	-63.51	12.47	-51.04	-13	Horizontal
5722.8	-64.73	11.87	-52.86	-13	Vertical

BAND 4:

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3424.8	-63.21	10.86	-52.35	-13	Horizontal
3424.8	-63.00	10.44	-52.57	-13	Vertical
5137.2	-64.02	12.09	-51.93	-13	Horizontal
5137.2	-64.69	12.43	-52.26	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3465.2	-62.42	10.59	-51.83	-13	Horizontal
3465.2	-62.90	10.43	-52.47	-13	Vertical
5197.8	-63.53	12.29	-51.24	-13	Horizontal
5197.8	-65.42	11.74	-53.68	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3505.2	-62.67	10.88	-51.79	-13	Horizontal
3505.2	-62.95	10.73	-52.22	-13	Vertical
5257.8	-64.13	11.59	-52.54	-13	Horizontal
5257.8	-64.82	11.89	-52.93	-13	Vertical

BAND 5:

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1652.8	-62.50	10.14	-52.35	-13	Horizontal
1652.8	-62.97	10.05	-52.92	-13	Vertical
2479.2	-63.50	12.24	-51.26	-13	Horizontal
2479.2	-65.21	12.46	-52.75	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1673.2	-62.55	10.23	-52.32	-13	Horizontal
1673.2	-63.13	10.34	-52.79	-13	Vertical
2509.8	-63.63	11.62	-52.02	-13	Horizontal
2509.8	-65.06	11.76	-53.30	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1693.2	-63.18	10.54	-52.64	-13	Horizontal
1693.2	-62.85	10.22	-52.63	-13	Vertical
2539.8	-64.12	12.28	-51.84	-13	Horizontal
2539.8	-65.20	12.10	-53.10	-13	Vertical

E-UTRA BANDS**BAND 2:**

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3720	-62.81	10.14	-52.67	-13	Horizontal
3720	-62.74	10.60	-52.13	-13	Vertical
5580	-64.20	11.72	-52.48	-13	Horizontal
5580	-65.06	11.53	-53.52	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3760	-62.78	10.56	-52.22	-13	Horizontal
3760	-62.58	10.72	-51.86	-13	Vertical
5640	-63.73	12.09	-51.64	-13	Horizontal
5640	-65.01	12.29	-52.72	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3800	-62.34	10.11	-52.23	-13	Horizontal
3800	-62.97	10.29	-52.68	-13	Vertical
5700	-63.82	11.58	-52.24	-13	Horizontal
5700	-65.01	12.47	-52.54	-13	Vertical

BAND 4:

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3440	-62.91	10.55	-52.35	-13	Horizontal
3440	-62.74	10.15	-52.59	-13	Vertical
5160	-64.38	11.71	-52.67	-13	Horizontal
5160	-65.41	11.71	-53.70	-13	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3465	-62.63	10.99	-51.64	-13	Horizontal
3465	-63.36	10.90	-52.47	-13	Vertical
5197.5	-63.88	11.57	-52.31	-13	Horizontal
5197.5	-64.83	12.09	-52.74	-13	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
3490	-62.33	10.29	-52.04	-13	Horizontal
3490	-62.75	10.74	-52.01	-13	Vertical
5235	-64.40	12.39	-52.01	-13	Horizontal
5235	-64.53	12.36	-52.18	-13	Vertical

BAND 7:

Mode 1					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
5037	-62.85	10.76	-52.09	-25	Horizontal
5037	-62.70	10.22	-52.48	-25	Vertical
7555.5	-63.86	11.70	-52.16	-25	Horizontal
7555.5	-65.28	11.69	-53.59	-25	Vertical

Mode 2					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
5047.5	-62.57	10.88	-51.69	-25	Horizontal
5047.5	-62.70	10.66	-52.04	-25	Vertical
7566	-64.39	12.45	-51.94	-25	Horizontal
7566	-65.49	11.82	-53.67	-25	Vertical

Mode 3					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
5057.5	-63.04	10.65	-52.39	-25	Horizontal
5057.5	-63.32	10.79	-52.54	-25	Vertical
7575.5	-64.13	12.18	-51.95	-25	Horizontal
7575.5	-65.00	12.13	-52.86	-25	Vertical

7 FREQUENCY STABILITY

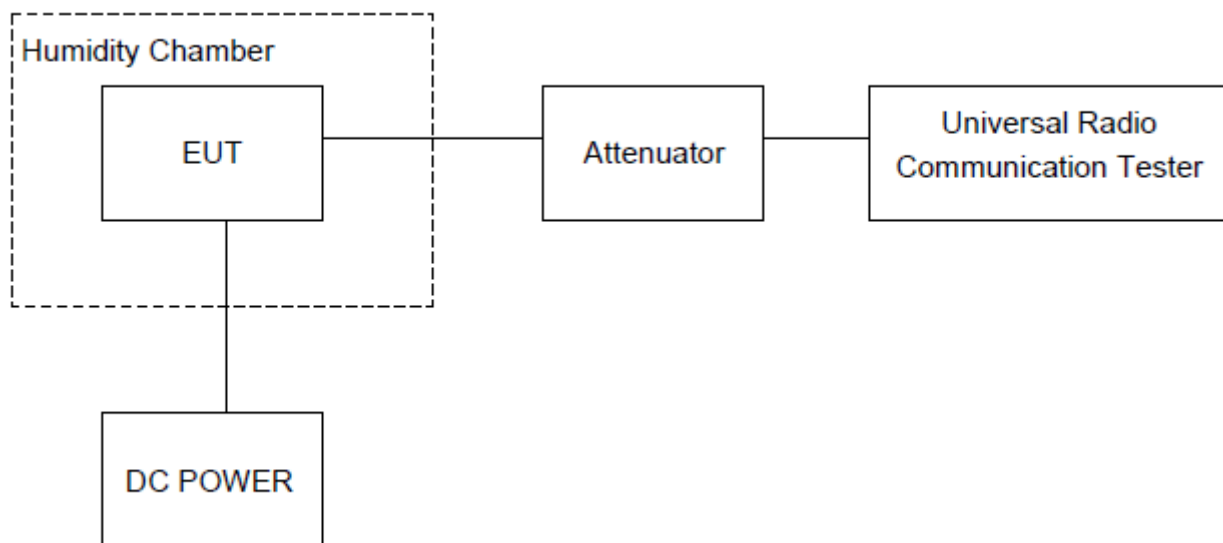
Test limit:

The frequency stability of the transmitter shall be measured while varying the ambient temperatures and supply voltages over the ranges specified in §2.1055. The specific frequency stability limits are provided in the relevant rules section(s). see section 4.

Test procedure:

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

Test setup:



7.1 Measurement Result (Worst)

Frequency Error against Voltage for GSM 850 band (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	32	0.039
3.85	31	0.037
4.4	28	0.034

Frequency Error against Temperature for GSM 850 band (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	36	0.044
0	35	0.042
10	36	0.043
20	40	0.048
30	34	0.041
40	33	0.039
50	39	0.046

Frequency Error against Voltage for PCS 1900 band (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	30	0.016
3.85	32	0.017
4.4	38	0.020

Frequency Error against Temperature for PCS 1900 band (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	39	0.021
0	35	0.018
10	29	0.015
20	40	0.021
30	37	0.020
40	41	0.022
50	32	0.017

Frequency Error against Voltage for GPRS 850 band (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	41	0.048
3.85	36	0.043
4.4	37	0.045

Frequency Error against Temperature for GPRS 850 band (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	41	0.048
0	39	0.046
10	33	0.040
20	40	0.048
30	32	0.038
40	36	0.043
50	40	0.048

Frequency Error against Voltage for GPRS 1900 band (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	30	0.016
3.85	33	0.017
4.4	30	0.016

Frequency Error against Temperature for GPRS 1900 band (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	34	0.018
0	33	0.018
10	32	0.017
20	33	0.018
30	32	0.017
40	41	0.022
50	31	0.016

Frequency Error against Voltage for EGPRS 850 band (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	35	0.042
3.85	30	0.036
4.4	36	0.043

Frequency Error against Temperature for EGPRS 850 band (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	31	0.037
0	39	0.046
10	34	0.041
20	40	0.048
30	29	0.034
40	33	0.039
50	40	0.048

Frequency Error against Voltage for EGPRS 1900 band (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	35	0.019
3.85	37	0.020
4.4	29	0.015

Frequency Error against Temperature for EGPRS 1900 band (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	37	0.020
0	33	0.017
10	36	0.019
20	29	0.015
30	32	0.017
40	32	0.017
50	38	0.020

UTRA BANDS**Frequency Error against Voltage for WCDMA BAND 2 (Mid channel)**

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	35	0.019
3.85	34	0.018
4.4	36	0.019

Frequency Error against Temperature for WCDMA BAND 2 (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	28	0.015
0	30	0.016
10	32	0.017
20	33	0.018
30	40	0.021
40	40	0.021
50	37	0.020

Frequency Error against Voltage for WCDMA BAND 4 (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error (ppm)
3.45	30	0.018
3.85	32	0.018
4.4	36	0.021

Frequency Error against Temperature for WCDMA BAND 4 (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	37	0.021
0	39	0.023
10	35	0.020
20	30	0.017
30	29	0.017
40	33	0.019
50	36	0.021

Frequency Error against Voltage for WCDMA BAND 5 (Mid channel)

Voltage(V)	Frequency error(Hz)	Frequency error(ppm)
3.45	33	0.040
3.85	39	0.046
4.4	37	0.044

Frequency Error against Temperature for WCDMA BAND 5 (Mid channel)

Temperature(°C)	Frequency error(Hz)	Frequency error(ppm)
-10	36	0.043
0	29	0.035
10	32	0.038
20	32	0.038
30	38	0.045
40	35	0.042
50	31	0.037

E-UTRA
BAND 2:

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
1.4	18607	1850.7	QPSK	1	LOW	1.61	0.000856
1.4	18607	1850.7	QPSK	1	MID	-4.85	-0.00258
1.4	18607	1850.7	QPSK	1	HIGH	1.73	0.00092
1.4	18607	1850.7	QPSK	3	LOW	-2.23	-0.00119
1.4	18607	1850.7	QPSK	3	MID	2.93	0.001559
1.4	18607	1850.7	QPSK	3	HIGH	3.04	0.001617
1.4	18607	1850.7	QPSK	6	LOW	2.11	0.001122
1.4	18607	1850.7	Q16	1	LOW	0.41	0.000218
1.4	18607	1850.7	Q16	1	MID	1.45	0.000771
1.4	18607	1850.7	Q16	1	HIGH	-0.95	-0.00051
1.4	18607	1850.7	Q16	3	LOW	2.59	0.001378
1.4	18607	1850.7	Q16	3	MID	-3.24	-0.00172
1.4	18607	1850.7	Q16	3	HIGH	4.54	0.002415
1.4	18607	1850.7	Q16	6	LOW	3.02	0.001606
1.4	18900	1880	QPSK	1	LOW	-1.71	-0.00091
1.4	18900	1880	QPSK	1	MID	0.71	0.000378
1.4	18900	1880	QPSK	1	HIGH	4.1	0.002181
1.4	18900	1880	QPSK	3	LOW	-3.46	-0.00184
1.4	18900	1880	QPSK	3	MID	2.67	0.00142
1.4	18900	1880	QPSK	3	HIGH	0.87	0.000463
1.4	18900	1880	QPSK	6	LOW	3.45	0.001835
1.4	18900	1880	Q16	1	LOW	3.09	0.001644
1.4	18900	1880	Q16	1	MID	-3.1	-0.00165
1.4	18900	1880	Q16	1	HIGH	-1.62	-0.00086
1.4	18900	1880	Q16	3	LOW	4.98	0.002649
1.4	18900	1880	Q16	3	MID	-1.52	-0.00081
1.4	18900	1880	Q16	3	HIGH	-1.27	-0.00068
1.4	18900	1880	Q16	6	LOW	-3.46	-0.00184
1.4	19193	1909.3	QPSK	1	LOW	2.93	0.001559
1.4	19193	1909.3	QPSK	1	MID	4.76	0.002532
1.4	19193	1909.3	QPSK	1	HIGH	-1.94	-0.00103
1.4	19193	1909.3	QPSK	3	LOW	-2.58	-0.00137
1.4	19193	1909.3	QPSK	3	MID	4.48	0.002383
1.4	19193	1909.3	QPSK	3	HIGH	-1.64	-0.00087

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
1.4	19193	1909.3	QPSK	6	LOW	-1.65	-0.00088
1.4	19193	1909.3	Q16	1	LOW	-4.5	-0.00239
1.4	19193	1909.3	Q16	1	MID	4.55	0.00242
1.4	19193	1909.3	Q16	1	HIGH	1.63	0.000867
1.4	19193	1909.3	Q16	3	LOW	-1.88	-0.001
1.4	19193	1909.3	Q16	3	MID	-3.67	-0.00195
1.4	19193	1909.3	Q16	3	HIGH	2.43	0.001293
1.4	19193	1909.3	Q16	6	LOW	2.76	0.001468
3	18615	1851.5	QPSK	1	LOW	1.64	0.000872
3	18615	1851.5	QPSK	1	MID	-3.99	-0.00212
3	18615	1851.5	QPSK	1	HIGH	4.01	0.002133
3	18615	1851.5	QPSK	8	LOW	-4.86	-0.00259
3	18615	1851.5	QPSK	8	MID	3.26	0.001734
3	18615	1851.5	QPSK	8	HIGH	-3.99	-0.00212
3	18615	1851.5	QPSK	15	LOW	-0.68	-0.00036
3	18615	1851.5	Q16	1	LOW	1.5	0.000798
3	18615	1851.5	Q16	1	MID	1.97	0.001048
3	18615	1851.5	Q16	1	HIGH	1.23	0.000654
3	18615	1851.5	Q16	8	LOW	-4.13	-0.0022
3	18615	1851.5	Q16	8	MID	-3.42	-0.00182
3	18615	1851.5	Q16	8	HIGH	-2.53	-0.00135
3	18615	1851.5	Q16	15	LOW	0.84	0.000447
3	18900	1880	QPSK	1	LOW	0.28	0.000149
3	18900	1880	QPSK	1	MID	3.16	0.001681
3	18900	1880	QPSK	1	HIGH	-0.79	-0.00042
3	18900	1880	QPSK	8	LOW	3.37	0.001793
3	18900	1880	QPSK	8	MID	2.74	0.001457
3	18900	1880	QPSK	8	HIGH	4.67	0.002484
3	18900	1880	QPSK	15	LOW	-4.58	-0.00244
3	18900	1880	Q16	1	LOW	-4.65	-0.00247
3	18900	1880	Q16	1	MID	-3.3	-0.00176
3	18900	1880	Q16	1	HIGH	4.99	0.002654
3	18900	1880	Q16	8	LOW	0.89	0.000473
3	18900	1880	Q16	8	MID	-1.22	-0.00065
3	18900	1880	Q16	8	HIGH	2.79	0.001484
3	18900	1880	Q16	15	LOW	-2.35	-0.00125

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
3	19185	1908.5	QPSK	1	LOW	3.2	0.001702
3	19185	1908.5	QPSK	1	MID	-0.76	-0.0004
3	19185	1908.5	QPSK	1	HIGH	-2.37	-0.00126
3	19185	1908.5	QPSK	8	LOW	-0.44	-0.00023
3	19185	1908.5	QPSK	8	MID	2.86	0.001521
3	19185	1908.5	QPSK	8	HIGH	-3.14	-0.00167
3	19185	1908.5	QPSK	15	LOW	0.28	0.000149
3	19185	1908.5	Q16	1	LOW	-4.15	-0.00221
3	19185	1908.5	Q16	1	MID	-1.31	-0.0007
3	19185	1908.5	Q16	1	HIGH	2.97	0.00158
3	19185	1908.5	Q16	8	LOW	-2.91	-0.00155
3	19185	1908.5	Q16	8	MID	-0.31	-0.00016
3	19185	1908.5	Q16	8	HIGH	-3.29	-0.00175
3	19185	1908.5	Q16	15	LOW	0.89	0.000473
5	18625	1852.5	QPSK	1	LOW	-1.02	-0.00054
5	18625	1852.5	QPSK	1	MID	-0.14	-7.4E-05
5	18625	1852.5	QPSK	1	HIGH	-4.81	-0.00256
5	18625	1852.5	QPSK	12	LOW	4.48	0.002383
5	18625	1852.5	QPSK	12	MID	4.38	0.00233
5	18625	1852.5	QPSK	12	HIGH	-0.14	-7.4E-05
5	18625	1852.5	QPSK	25	LOW	-2.01	-0.00107
5	18625	1852.5	Q16	1	LOW	0.47	0.00025
5	18625	1852.5	Q16	1	MID	-1.11	-0.00059
5	18625	1852.5	Q16	1	HIGH	3.39	0.001803
5	18625	1852.5	Q16	12	LOW	-2.4	-0.00128
5	18625	1852.5	Q16	12	MID	3.47	0.001846
5	18625	1852.5	Q16	12	HIGH	1.1	0.000585
5	18625	1852.5	Q16	25	LOW	1.7	0.000904
5	18900	1880	QPSK	1	LOW	-1.35	-0.00072
5	18900	1880	QPSK	1	MID	0.02	1.06E-05
5	18900	1880	QPSK	1	HIGH	4.55	0.00242
5	18900	1880	QPSK	12	LOW	3.66	0.001947
5	18900	1880	QPSK	12	MID	-0.51	-0.00027
5	18900	1880	QPSK	12	HIGH	0.06	3.19E-05
5	18900	1880	QPSK	25	LOW	4.19	0.002229
5	18900	1880	Q16	1	LOW	0.21	0.000112

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
5	18900	1880	Q16	1	MID	-3.69	-0.00196
5	18900	1880	Q16	1	HIGH	-3.1	-0.00165
5	18900	1880	Q16	12	LOW	-0.11	-5.9E-05
5	18900	1880	Q16	12	MID	-0.54	-0.00029
5	18900	1880	Q16	12	HIGH	3.83	0.002037
5	18900	1880	Q16	25	LOW	3.64	0.001936
5	19175	1907.5	QPSK	1	LOW	-1.25	-0.00066
5	19175	1907.5	QPSK	1	MID	-2.56	-0.00136
5	19175	1907.5	QPSK	1	HIGH	4.54	0.002415
5	19175	1907.5	QPSK	12	LOW	3.2	0.001702
5	19175	1907.5	QPSK	12	MID	-1.28	-0.00068
5	19175	1907.5	QPSK	12	HIGH	-2.23	-0.00119
5	19175	1907.5	QPSK	25	LOW	0.41	0.000218
5	19175	1907.5	Q16	1	LOW	0.63	0.000335
5	19175	1907.5	Q16	1	MID	4.32	0.002298
5	19175	1907.5	Q16	1	HIGH	3.06	0.001628
5	19175	1907.5	Q16	12	LOW	-4.1	-0.00218
5	19175	1907.5	Q16	12	MID	3.11	0.001654
5	19175	1907.5	Q16	12	HIGH	-1.94	-0.00103
5	19175	1907.5	Q16	25	LOW	4.93	0.002622
10	18650	1855	QPSK	1	LOW	1.22	0.000649
10	18650	1855	QPSK	1	MID	-2.73	-0.00145
10	18650	1855	QPSK	1	HIGH	-0.94	-0.0005
10	18650	1855	QPSK	25	LOW	4.81	0.002559
10	18650	1855	QPSK	25	MID	-0.19	-0.0001
10	18650	1855	QPSK	25	HIGH	-1.7	-0.0009
10	18650	1855	QPSK	50	LOW	0.26	0.000138
10	18650	1855	Q16	1	LOW	-4.25	-0.00226
10	18650	1855	Q16	1	MID	2.09	0.001112
10	18650	1855	Q16	1	HIGH	-4.42	-0.00235
10	18650	1855	Q16	25	LOW	3.15	0.001676
10	18650	1855	Q16	25	MID	-1.68	-0.00089
10	18650	1855	Q16	25	HIGH	-2.02	-0.00107
10	18650	1855	Q16	50	LOW	4.02	0.002138
10	18900	1880	QPSK	1	LOW	2.78	0.001479
10	18900	1880	QPSK	1	MID	-4.68	-0.00249

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
10	18900	1880	QPSK	1	HIGH	0.51	0.000271
10	18900	1880	QPSK	25	LOW	0.6	0.000319
10	18900	1880	QPSK	25	MID	-4.67	-0.00248
10	18900	1880	QPSK	25	HIGH	1.17	0.000622
10	18900	1880	QPSK	50	LOW	-1.67	-0.00089
10	18900	1880	Q16	1	LOW	-0.1	-5.3E-05
10	18900	1880	Q16	1	MID	-4.18	-0.00222
10	18900	1880	Q16	1	HIGH	2.11	0.001122
10	18900	1880	Q16	25	LOW	3.52	0.001872
10	18900	1880	Q16	25	MID	3.83	0.002037
10	18900	1880	Q16	25	HIGH	0.25	0.000133
10	18900	1880	Q16	50	LOW	-1.97	-0.00105
10	19150	1905	QPSK	1	LOW	-0.43	-0.00023
10	19150	1905	QPSK	1	MID	0.77	0.00041
10	19150	1905	QPSK	1	HIGH	3.09	0.001644
10	19150	1905	QPSK	25	LOW	-4.81	-0.00256
10	19150	1905	QPSK	25	MID	2.89	0.001537
10	19150	1905	QPSK	25	HIGH	-2.13	-0.00113
10	19150	1905	QPSK	50	LOW	2.15	0.001144
10	19150	1905	Q16	1	LOW	2.68	0.001426
10	19150	1905	Q16	1	MID	-1.97	-0.00105
10	19150	1905	Q16	1	HIGH	-2.66	-0.00141
10	19150	1905	Q16	25	LOW	2.52	0.00134
10	19150	1905	Q16	25	MID	-1.48	-0.00079
10	19150	1905	Q16	25	HIGH	1.48	0.000787
10	19150	1905	Q16	50	LOW	-0.9	-0.00048
15	18675	1857.5	QPSK	1	LOW	0.06	3.19E-05
15	18675	1857.5	QPSK	1	MID	3.21	0.001707
15	18675	1857.5	QPSK	1	HIGH	1.11	0.00059
15	18675	1857.5	QPSK	36	LOW	3.76	0.002
15	18675	1857.5	QPSK	36	MID	-3.91	-0.00208
15	18675	1857.5	QPSK	36	HIGH	2.97	0.00158
15	18675	1857.5	QPSK	75	LOW	0.4	0.000213
15	18675	1857.5	Q16	1	LOW	0.85	0.000452
15	18675	1857.5	Q16	1	MID	1.77	0.000941
15	18675	1857.5	Q16	1	HIGH	-1.4	-0.00074

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
15	18675	1857.5	Q16	36	LOW	-3.63	-0.00193
15	18675	1857.5	Q16	36	MID	3.78	0.002011
15	18675	1857.5	Q16	36	HIGH	-2.27	-0.00121
15	18675	1857.5	Q16	75	LOW	4.76	0.002532
15	18900	1880	QPSK	1	LOW	-0.6	-0.00032
15	18900	1880	QPSK	1	MID	-4.51	-0.0024
15	18900	1880	QPSK	1	HIGH	4.87	0.00259
15	18900	1880	QPSK	36	LOW	4.89	0.002601
15	18900	1880	QPSK	36	MID	4.8	0.002553
15	18900	1880	QPSK	36	HIGH	-1.28	-0.00068
15	18900	1880	QPSK	75	LOW	2.26	0.001202
15	18900	1880	Q16	1	LOW	2.57	0.001367
15	18900	1880	Q16	1	MID	4.46	0.002372
15	18900	1880	Q16	1	HIGH	1.53	0.000814
15	18900	1880	Q16	36	LOW	2.42	0.001287
15	18900	1880	Q16	36	MID	-0.69	-0.00037
15	18900	1880	Q16	36	HIGH	3.96	0.002106
15	18900	1880	Q16	75	LOW	0.65	0.000346
15	19125	1902.5	QPSK	1	LOW	-0.37	-0.0002
15	19125	1902.5	QPSK	1	MID	-3.47	-0.00185
15	19125	1902.5	QPSK	1	HIGH	-4.75	-0.00253
15	19125	1902.5	QPSK	36	LOW	-1.15	-0.00061
15	19125	1902.5	QPSK	36	MID	-0.99	-0.00053
15	19125	1902.5	QPSK	36	HIGH	1.69	0.000899
15	19125	1902.5	QPSK	75	LOW	4.79	0.002548
15	19125	1902.5	Q16	1	LOW	4.83	0.002569
15	19125	1902.5	Q16	1	MID	-1.31	-0.0007
15	19125	1902.5	Q16	1	HIGH	-3.44	-0.00183
15	19125	1902.5	Q16	36	LOW	-0.8	-0.00043
15	19125	1902.5	Q16	36	MID	1.08	0.000574
15	19125	1902.5	Q16	36	HIGH	-4.18	-0.00222
15	19125	1902.5	Q16	75	LOW	4.71	0.002505
20	18700	1860	QPSK	1	LOW	-1.49	-0.00079
20	18700	1860	QPSK	1	MID	2.53	0.001346
20	18700	1860	QPSK	1	HIGH	0.97	0.000516
20	18700	1860	QPSK	50	LOW	-0.15	-8E-05

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error (Hz)	Frequency Error (ppm)
				Size	Offset		
20	18700	1860	QPSK	50	MID	-1.16	-0.00062
20	18700	1860	QPSK	50	HIGH	-0.41	-0.00022
20	18700	1860	QPSK	100	LOW	-2.85	-0.00152
20	18700	1860	Q16	1	LOW	1.95	0.001037
20	18700	1860	Q16	1	MID	-3.91	-0.00208
20	18700	1860	Q16	1	HIGH	-1.59	-0.00085
20	18700	1860	Q16	50	LOW	-1.1	-0.00059
20	18700	1860	Q16	50	MID	3.96	0.002106
20	18700	1860	Q16	50	HIGH	-0.78	-0.00041
20	18700	1860	Q16	100	LOW	4.05	0.002154
20	18900	1880	QPSK	1	LOW	3.05	0.001622
20	18900	1880	QPSK	1	MID	1.62	0.000862
20	18900	1880	QPSK	1	HIGH	-0.17	-9E-05
20	18900	1880	QPSK	50	LOW	-1.53	-0.00081
20	18900	1880	QPSK	50	MID	3.07	0.001633
20	18900	1880	QPSK	50	HIGH	-1.21	-0.00064
20	18900	1880	QPSK	100	LOW	0.97	0.000516
20	18900	1880	Q16	1	LOW	1.08	0.000574
20	18900	1880	Q16	1	MID	-3.01	-0.0016
20	18900	1880	Q16	1	HIGH	0.99	0.000527
20	18900	1880	Q16	50	LOW	0.72	0.000383
20	18900	1880	Q16	50	MID	0.25	0.000133
20	18900	1880	Q16	50	HIGH	-0.38	-0.0002
20	18900	1880	Q16	100	LOW	3.48	0.001851
20	19100	1900	QPSK	1	LOW	-3.45	-0.00184
20	19100	1900	QPSK	1	MID	-0.65	-0.00035
20	19100	1900	QPSK	1	HIGH	-4.92	-0.00262
20	19100	1900	QPSK	50	LOW	-1.7	-0.0009
20	19100	1900	QPSK	50	MID	-2.35	-0.00125
20	19100	1900	QPSK	50	HIGH	3.1	0.001649
20	19100	1900	QPSK	100	LOW	-0.39	-0.00021
20	19100	1900	Q16	1	LOW	0.11	5.85E-05
20	19100	1900	Q16	1	MID	-1.68	-0.00089
20	19100	1900	Q16	1	HIGH	2.62	0.001394
20	19100	1900	Q16	50	LOW	2.17	0.001154
20	19100	1900	Q16	50	MID	2.28	0.001213

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
20	19100	1900	Q16	50	HIGH	2.06	0.001096
20	19100	1900	Q16	100	LOW	-2.6	-0.00138

BAND 4:

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
1.4	19957	1710.7	QPSK	1	LOW	-2.04	-0.00119
1.4	19957	1710.7	QPSK	1	MID	-3.39	-0.00197
1.4	19957	1710.7	QPSK	1	HIGH	2.07	0.001203
1.4	19957	1710.7	QPSK	3	LOW	4.29	0.002494
1.4	19957	1710.7	QPSK	3	MID	-4.74	-0.00276
1.4	19957	1710.7	QPSK	3	HIGH	4.31	0.002506
1.4	19957	1710.7	QPSK	6	LOW	4.34	0.002523
1.4	19957	1710.7	Q16	1	LOW	-3.64	-0.00212
1.4	19957	1710.7	Q16	1	MID	-2.72	-0.00158
1.4	19957	1710.7	Q16	1	HIGH	-1.62	-0.00094
1.4	19957	1710.7	Q16	3	LOW	2	0.001163
1.4	19957	1710.7	Q16	3	MID	-4.05	-0.00235
1.4	19957	1710.7	Q16	3	HIGH	-4.95	-0.00288
1.4	19957	1710.7	Q16	6	LOW	4.25	0.002471
1.4	20393	1754.3	QPSK	1	LOW	-4.76	-0.00277
1.4	20393	1754.3	QPSK	1	MID	4.61	0.00268
1.4	20393	1754.3	QPSK	1	HIGH	0.74	0.00043
1.4	20393	1754.3	QPSK	3	LOW	1.05	0.00061
1.4	20393	1754.3	QPSK	3	MID	-1.58	-0.00092
1.4	20393	1754.3	QPSK	3	HIGH	3.21	0.001866
1.4	20393	1754.3	QPSK	6	LOW	2.8	0.001628
1.4	20393	1754.3	Q16	1	LOW	4.38	0.002547
1.4	20393	1754.3	Q16	1	MID	-3.92	-0.00228
1.4	20393	1754.3	Q16	1	HIGH	4.22	0.002453
1.4	20393	1754.3	Q16	3	LOW	-1.55	-0.0009
1.4	20393	1754.3	Q16	3	MID	-3.02	-0.00176
1.4	20393	1754.3	Q16	3	HIGH	2.37	0.001378
1.4	20393	1754.3	Q16	6	LOW	1.51	0.000878
1.4	20175	1732.5	QPSK	1	LOW	4.99	0.002901
1.4	20175	1732.5	QPSK	1	MID	0.73	0.000424
1.4	20175	1732.5	QPSK	1	HIGH	1.03	0.000599
1.4	20175	1732.5	QPSK	3	LOW	2.67	0.001552
1.4	20175	1732.5	QPSK	3	MID	-2	-0.00116
1.4	20175	1732.5	QPSK	3	HIGH	4.5	0.002616

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
1.4	20175	1732.5	QPSK	6	LOW	4.37	0.002541
1.4	20175	1732.5	Q16	1	LOW	1.74	0.001012
1.4	20175	1732.5	Q16	1	MID	1.22	0.000709
1.4	20175	1732.5	Q16	1	HIGH	-2.27	-0.00132
1.4	20175	1732.5	Q16	3	LOW	0.24	0.00014
1.4	20175	1732.5	Q16	3	MID	4.78	0.002779
1.4	20175	1732.5	Q16	3	HIGH	-1.11	-0.00065
1.4	20175	1732.5	Q16	6	LOW	4.76	0.002767
3	19965	1711.5	QPSK	1	LOW	-3.78	-0.0022
3	19965	1711.5	QPSK	1	MID	3.26	0.001895
3	19965	1711.5	QPSK	1	HIGH	-0.79	-0.00046
3	19965	1711.5	QPSK	8	LOW	-2.77	-0.00161
3	19965	1711.5	QPSK	8	MID	2.15	0.00125
3	19965	1711.5	QPSK	8	HIGH	-2.08	-0.00121
3	19965	1711.5	QPSK	15	LOW	-1.97	-0.00115
3	19965	1711.5	Q16	1	LOW	1.89	0.001099
3	19965	1711.5	Q16	1	MID	-4.17	-0.00242
3	19965	1711.5	Q16	1	HIGH	-1.69	-0.00098
3	19965	1711.5	Q16	8	LOW	0.55	0.00032
3	19965	1711.5	Q16	8	MID	2.93	0.001703
3	19965	1711.5	Q16	8	HIGH	-4.7	-0.00273
3	19965	1711.5	Q16	15	LOW	-3.1	-0.0018
3	20385	1753.5	QPSK	1	LOW	-2.36	-0.00137
3	20385	1753.5	QPSK	1	MID	4.07	0.002366
3	20385	1753.5	QPSK	1	HIGH	2.1	0.001221
3	20385	1753.5	QPSK	8	LOW	2.93	0.001703
3	20385	1753.5	QPSK	8	MID	3.2	0.00186
3	20385	1753.5	QPSK	8	HIGH	-4.3	-0.0025
3	20385	1753.5	QPSK	15	LOW	4.54	0.00264
3	20385	1753.5	Q16	1	LOW	-2.66	-0.00155
3	20385	1753.5	Q16	1	MID	-4.12	-0.0024
3	20385	1753.5	Q16	1	HIGH	-2.62	-0.00152
3	20385	1753.5	Q16	8	LOW	2.27	0.00132
3	20385	1753.5	Q16	8	MID	-0.93	-0.00054
3	20385	1753.5	Q16	8	HIGH	2.69	0.001564
3	20385	1753.5	Q16	15	LOW	-4.32	-0.00251

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
3	20175	1732.5	QPSK	1	LOW	4.77	0.002773
3	20175	1732.5	QPSK	1	MID	3.44	0.002
3	20175	1732.5	QPSK	1	HIGH	4.38	0.002547
3	20175	1732.5	QPSK	8	LOW	3.33	0.001936
3	20175	1732.5	QPSK	8	MID	1.68	0.000977
3	20175	1732.5	QPSK	8	HIGH	-4.74	-0.00276
3	20175	1732.5	QPSK	15	LOW	3.72	0.002163
3	20175	1732.5	Q16	1	LOW	2.92	0.001698
3	20175	1732.5	Q16	1	MID	-2.28	-0.00133
3	20175	1732.5	Q16	1	HIGH	1.55	0.000901
3	20175	1732.5	Q16	8	LOW	-2.95	-0.00172
3	20175	1732.5	Q16	8	MID	-1.45	-0.00084
3	20175	1732.5	Q16	8	HIGH	1.5	0.000872
3	20175	1732.5	Q16	15	LOW	0.38	0.000221
5	19975	1712.5	QPSK	1	LOW	-3.14	-0.00183
5	19975	1712.5	QPSK	1	MID	2.18	0.001267
5	19975	1712.5	QPSK	1	HIGH	1.93	0.001122
5	19975	1712.5	QPSK	12	LOW	3.96	0.002302
5	19975	1712.5	QPSK	12	MID	0.74	0.00043
5	19975	1712.5	QPSK	12	HIGH	2.28	0.001326
5	19975	1712.5	QPSK	25	LOW	-2.99	-0.00174
5	19975	1712.5	Q16	1	LOW	-3.91	-0.00227
5	19975	1712.5	Q16	1	MID	2.83	0.001645
5	19975	1712.5	Q16	1	HIGH	4.85	0.00282
5	19975	1712.5	Q16	12	LOW	-2.47	-0.00144
5	19975	1712.5	Q16	12	MID	1.79	0.001041
5	19975	1712.5	Q16	12	HIGH	4.61	0.00268
5	19975	1712.5	Q16	25	LOW	-4.73	-0.00275
5	20375	1752.5	QPSK	1	LOW	0.04	2.33E-05
5	20375	1752.5	QPSK	1	MID	-1.42	-0.00083
5	20375	1752.5	QPSK	1	HIGH	2.74	0.001593
5	20375	1752.5	QPSK	12	LOW	-1.28	-0.00074
5	20375	1752.5	QPSK	12	MID	-3.12	-0.00181
5	20375	1752.5	QPSK	12	HIGH	1.42	0.000826
5	20375	1752.5	QPSK	25	LOW	-0.44	-0.00026
5	20375	1752.5	Q16	1	LOW	5	0.002907

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
5	20375	1752.5	Q16	1	MID	-1.43	-0.00083
5	20375	1752.5	Q16	1	HIGH	-2.15	-0.00125
5	20375	1752.5	Q16	12	LOW	-3.93	-0.00228
5	20375	1752.5	Q16	12	MID	1.19	0.000692
5	20375	1752.5	Q16	12	HIGH	-2.29	-0.00133
5	20375	1752.5	Q16	25	LOW	0.15	8.72E-05
5	20175	1732.5	QPSK	1	LOW	-4.15	-0.00241
5	20175	1732.5	QPSK	1	MID	-0.37	-0.00022
5	20175	1732.5	QPSK	1	HIGH	-1.62	-0.00094
5	20175	1732.5	QPSK	12	LOW	1.89	0.001099
5	20175	1732.5	QPSK	12	MID	-1.65	-0.00096
5	20175	1732.5	QPSK	12	HIGH	-2.36	-0.00137
5	20175	1732.5	QPSK	25	LOW	-3.06	-0.00178
5	20175	1732.5	Q16	1	LOW	-2.96	-0.00172
5	20175	1732.5	Q16	1	MID	3.61	0.002099
5	20175	1732.5	Q16	1	HIGH	3.45	0.002006
5	20175	1732.5	Q16	12	LOW	-3.65	-0.00212
5	20175	1732.5	Q16	12	MID	-4.33	-0.00252
5	20175	1732.5	Q16	12	HIGH	2.65	0.001541
5	20175	1732.5	Q16	25	LOW	2.77	0.00161
10	20000	1715	QPSK	1	LOW	2.52	0.001465
10	20000	1715	QPSK	1	MID	0.43	0.00025
10	20000	1715	QPSK	1	HIGH	-0.78	-0.00045
10	20000	1715	QPSK	25	LOW	-3.92	-0.00228
10	20000	1715	QPSK	25	MID	-4.86	-0.00283
10	20000	1715	QPSK	25	HIGH	1.7	0.000988
10	20000	1715	QPSK	50	LOW	2.13	0.001238
10	20000	1715	Q16	1	LOW	-2.71	-0.00158
10	20000	1715	Q16	1	MID	0.75	0.000436
10	20000	1715	Q16	1	HIGH	-3.08	-0.00179
10	20000	1715	Q16	25	LOW	-1.04	-0.0006
10	20000	1715	Q16	25	MID	2.87	0.001669
10	20000	1715	Q16	25	HIGH	-0.3	-0.00017
10	20000	1715	Q16	50	LOW	-3.58	-0.00208
10	20350	1750	QPSK	1	LOW	-1.99	-0.00116
10	20350	1750	QPSK	1	MID	-2.81	-0.00163

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
10	20350	1750	QPSK	1	HIGH	-4.4	-0.00256
10	20350	1750	QPSK	25	LOW	2.55	0.001483
10	20350	1750	QPSK	25	MID	1.8	0.001047
10	20350	1750	QPSK	25	HIGH	3.95	0.002297
10	20350	1750	QPSK	50	LOW	-4.63	-0.00269
10	20350	1750	Q16	1	LOW	-4.86	-0.00283
10	20350	1750	Q16	1	MID	4.62	0.002686
10	20350	1750	Q16	1	HIGH	3.5	0.002035
10	20350	1750	Q16	25	LOW	3.27	0.001901
10	20350	1750	Q16	25	MID	3.43	0.001994
10	20350	1750	Q16	25	HIGH	4.96	0.002884
10	20350	1750	Q16	50	LOW	-3.57	-0.00208
10	20175	1732.5	QPSK	1	LOW	-1.76	-0.00102
10	20175	1732.5	QPSK	1	MID	4.85	0.00282
10	20175	1732.5	QPSK	1	HIGH	-1.77	-0.00103
10	20175	1732.5	QPSK	25	LOW	2.25	0.001308
10	20175	1732.5	QPSK	25	MID	-0.64	-0.00037
10	20175	1732.5	QPSK	25	HIGH	-1.7	-0.00099
10	20175	1732.5	QPSK	50	LOW	-0.6	-0.00035
10	20175	1732.5	Q16	1	LOW	3.53	0.002052
10	20175	1732.5	Q16	1	MID	-4.01	-0.00233
10	20175	1732.5	Q16	1	HIGH	-4.42	-0.00257
10	20175	1732.5	Q16	25	LOW	-3.33	-0.00194
10	20175	1732.5	Q16	25	MID	-1.16	-0.00067
10	20175	1732.5	Q16	25	HIGH	-1.37	-0.0008
10	20175	1732.5	Q16	50	LOW	-0.38	-0.00022
15	20025	1717.5	QPSK	1	LOW	-1.68	-0.00098
15	20025	1717.5	QPSK	1	MID	-0.94	-0.00055
15	20025	1717.5	QPSK	1	HIGH	1.74	0.001012
15	20025	1717.5	QPSK	36	LOW	-4.02	-0.00234
15	20025	1717.5	QPSK	36	MID	3.61	0.002099
15	20025	1717.5	QPSK	36	HIGH	-3.99	-0.00232
15	20025	1717.5	QPSK	75	LOW	-0.14	-8.1E-05
15	20025	1717.5	Q16	1	LOW	-4.4	-0.00256
15	20025	1717.5	Q16	1	MID	-3.05	-0.00177
15	20025	1717.5	Q16	1	HIGH	4.67	0.002715

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
15	20025	1717.5	Q16	36	LOW	-3.12	-0.00181
15	20025	1717.5	Q16	36	MID	-0.18	-0.0001
15	20025	1717.5	Q16	36	HIGH	-4.67	-0.00272
15	20025	1717.5	Q16	75	LOW	-4.19	-0.00244
15	20325	1747.5	QPSK	1	LOW	2.88	0.001674
15	20325	1747.5	QPSK	1	MID	-4.7	-0.00273
15	20325	1747.5	QPSK	1	HIGH	0.64	0.000372
15	20325	1747.5	QPSK	36	LOW	-1.19	-0.00069
15	20325	1747.5	QPSK	36	MID	0.37	0.000215
15	20325	1747.5	QPSK	36	HIGH	0.9	0.000523
15	20325	1747.5	QPSK	75	LOW	-1.23	-0.00072
15	20325	1747.5	Q16	1	LOW	3.88	0.002256
15	20325	1747.5	Q16	1	MID	4.83	0.002808
15	20325	1747.5	Q16	1	HIGH	-0.37	-0.00022
15	20325	1747.5	Q16	36	LOW	2.54	0.001477
15	20325	1747.5	Q16	36	MID	-4.01	-0.00233
15	20325	1747.5	Q16	36	HIGH	2.91	0.001692
15	20325	1747.5	Q16	75	LOW	-3.03	-0.00176
15	20175	1732.5	QPSK	1	LOW	-1.14	-0.00066
15	20175	1732.5	QPSK	1	MID	3.11	0.001808
15	20175	1732.5	QPSK	1	HIGH	2.73	0.001587
15	20175	1732.5	QPSK	36	LOW	2.45	0.001424
15	20175	1732.5	QPSK	36	MID	-3.73	-0.00217
15	20175	1732.5	QPSK	36	HIGH	0.33	0.000192
15	20175	1732.5	QPSK	75	LOW	3.23	0.001878
15	20175	1732.5	Q16	1	LOW	4.56	0.002651
15	20175	1732.5	Q16	1	MID	0.96	0.000558
15	20175	1732.5	Q16	1	HIGH	3.68	0.00214
15	20175	1732.5	Q16	36	LOW	2.91	0.001692
15	20175	1732.5	Q16	36	MID	-2.48	-0.00144
15	20175	1732.5	Q16	36	HIGH	3.4	0.001977
15	20175	1732.5	Q16	75	LOW	2.35	0.001366
20	20050	1720	QPSK	1	LOW	-4.38	-0.00255
20	20050	1720	QPSK	1	MID	-3.67	-0.00213
20	20050	1720	QPSK	1	HIGH	2.75	0.001599
20	20050	1720	QPSK	50	LOW	-4.72	-0.00274

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
20	20050	1720	QPSK	50	MID	0.65	0.000378
20	20050	1720	QPSK	50	HIGH	2.51	0.001459
20	20050	1720	QPSK	100	LOW	-4.51	-0.00262
20	20050	1720	Q16	1	LOW	-3.02	-0.00176
20	20050	1720	Q16	1	MID	4.55	0.002645
20	20050	1720	Q16	1	HIGH	-2.25	-0.00131
20	20050	1720	Q16	50	LOW	3.4	0.001977
20	20050	1720	Q16	50	MID	-0.27	-0.00016
20	20050	1720	Q16	50	HIGH	2.38	0.001384
20	20050	1720	Q16	100	LOW	-4.68	-0.00272
20	20300	1745	QPSK	1	LOW	-2.37	-0.00138
20	20300	1745	QPSK	1	MID	-2.32	-0.00135
20	20300	1745	QPSK	1	HIGH	-2.79	-0.00162
20	20300	1745	QPSK	50	LOW	4.8	0.002791
20	20300	1745	QPSK	50	MID	1.97	0.001145
20	20300	1745	QPSK	50	HIGH	2.4	0.001395
20	20300	1745	QPSK	100	LOW	1.37	0.000797
20	20300	1745	Q16	1	LOW	4.75	0.002762
20	20300	1745	Q16	1	MID	-3.37	-0.00196
20	20300	1745	Q16	1	HIGH	-1.48	-0.00086
20	20300	1745	Q16	50	LOW	1.09	0.000634
20	20300	1745	Q16	50	MID	-0.08	-4.7E-05
20	20300	1745	Q16	50	HIGH	2.56	0.001488
20	20300	1745	Q16	100	LOW	-0.94	-0.00055
20	20175	1732.5	QPSK	1	LOW	0.02	1.16E-05
20	20175	1732.5	QPSK	1	MID	0.44	0.000256
20	20175	1732.5	QPSK	1	HIGH	0.9	0.000523
20	20175	1732.5	QPSK	50	LOW	-1.81	-0.00105
20	20175	1732.5	QPSK	50	MID	3.42	0.001988
20	20175	1732.5	QPSK	50	HIGH	-0.67	-0.00039
20	20175	1732.5	QPSK	100	LOW	2.18	0.001267
20	20175	1732.5	Q16	1	LOW	-4.48	-0.0026
20	20175	1732.5	Q16	1	MID	-2.71	-0.00158
20	20175	1732.5	Q16	1	HIGH	4.72	0.002744
20	20175	1732.5	Q16	50	LOW	1.33	0.000773
20	20175	1732.5	Q16	50	MID	-0.66	-0.00038

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency Error	Frequency Error
				Size	Offset	(Hz)	(ppm)
20	20175	1732.5	Q16	50	HIGH	2.26	0.001314
20	20175	1732.5	Q16	100	LOW	3.02	0.001756

BAND 7:

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency error	Frequency Error
				Size	Offset	(Hz)	(ppm)
5	20775	2502.5	QPSK	1	LOW	-3.52	-0.00139
5	20775	2502.5	QPSK	1	MID	1.43	0.000564
5	20775	2502.5	QPSK	1	HIGH	4.36	0.00172
5	20775	2502.5	QPSK	12	LOW	4.57	0.001803
5	20775	2502.5	QPSK	12	MID	3.09	0.001219
5	20775	2502.5	QPSK	12	HIGH	-4.34	-0.00171
5	20775	2502.5	QPSK	25	LOW	-1.95	-0.00077
5	20775	2502.5	Q16	1	LOW	-3.65	-0.00144
5	20775	2502.5	Q16	1	MID	3.46	0.001365
5	20775	2502.5	Q16	1	HIGH	1.66	0.000655
5	20775	2502.5	Q16	12	LOW	-2.64	-0.00104
5	20775	2502.5	Q16	12	MID	2.52	0.000994
5	20775	2502.5	Q16	12	HIGH	-4.95	-0.00195
5	20775	2502.5	Q16	25	LOW	1.96	0.000773
5	21425	2567.5	QPSK	1	LOW	2.39	0.000943
5	21425	2567.5	QPSK	1	MID	2.83	0.001116
5	21425	2567.5	QPSK	1	HIGH	-1.39	-0.00055
5	21425	2567.5	QPSK	12	LOW	-4.28	-0.00169
5	21425	2567.5	QPSK	12	MID	-2.62	-0.00103
5	21425	2567.5	QPSK	12	HIGH	-3.78	-0.00149
5	21425	2567.5	QPSK	25	LOW	-1.75	-0.00069
5	21425	2567.5	Q16	1	LOW	-1.02	-0.0004
5	21425	2567.5	Q16	1	MID	-2.51	-0.00099
5	21425	2567.5	Q16	1	HIGH	-4.9	-0.00193
5	21425	2567.5	Q16	12	LOW	4.13	0.001629
5	21425	2567.5	Q16	12	MID	0.93	0.000367
5	21425	2567.5	Q16	12	HIGH	2.49	0.000982
5	21425	2567.5	Q16	25	LOW	-3.32	-0.00131

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency error	Frequency Error
				Size	Offset	(Hz)	(ppm)
5	21100	2535	QPSK	1	LOW	3.43	0.001353
5	21100	2535	QPSK	1	MID	-0.37	-0.00015
5	21100	2535	QPSK	1	HIGH	-1.09	-0.00043
5	21100	2535	QPSK	12	LOW	1.98	0.000781
5	21100	2535	QPSK	12	MID	3.46	0.001365
5	21100	2535	QPSK	12	HIGH	-3.85	-0.00152
5	21100	2535	QPSK	25	LOW	1.85	0.00073
5	21100	2535	QPSK	1	LOW	-3.96	-0.00156
5	21100	2535	QPSK	1	MID	2.5	0.000986
5	21100	2535	QPSK	1	HIGH	-4.24	-0.00167
5	21100	2535	QPSK	12	LOW	-2.1	-0.00083
5	21100	2535	QPSK	12	MID	4.58	0.001807
5	21100	2535	QPSK	12	HIGH	-0.86	-0.00034
5	21100	2535	QPSK	25	LOW	-2.15	-0.00085
10	20800	2505	QPSK	1	LOW	-4.19	-0.00165
10	20800	2505	QPSK	1	MID	-2.07	-0.00082
10	20800	2505	QPSK	1	HIGH	-4.73	-0.00187
10	20800	2505	QPSK	25	LOW	-0.26	-0.0001
10	20800	2505	QPSK	25	MID	-2.14	-0.00084
10	20800	2505	QPSK	25	HIGH	0.38	0.00015
10	20800	2505	QPSK	50	LOW	-4.69	-0.00185
10	20800	2505	Q16	1	LOW	-1.73	-0.00068
10	20800	2505	Q16	1	MID	-2.82	-0.00111
10	20800	2505	Q16	1	HIGH	-1.52	-0.0006
10	20800	2505	Q16	25	LOW	-2.04	-0.0008
10	20800	2505	Q16	25	MID	-0.36	-0.00014
10	20800	2505	Q16	25	HIGH	-1.29	-0.00051
10	20800	2505	Q16	50	LOW	-4.86	-0.00192
10	21400	2565	QPSK	1	LOW	3.92	0.001546
10	21400	2565	QPSK	1	MID	-2.57	-0.00101
10	21400	2565	QPSK	1	HIGH	1.07	0.000422
10	21400	2565	QPSK	25	LOW	4.64	0.00183
10	21400	2565	QPSK	25	MID	-0.86	-0.00034
10	21400	2565	QPSK	25	HIGH	3.32	0.00131
10	21400	2565	QPSK	50	LOW	4.36	0.00172
10	21400	2565	QPSK	1	LOW	-4.66	-0.00184

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency error	Frequency Error
				Size	Offset	(Hz)	(ppm)
10	21400	2565	QPSK	1	MID	-1.34	-0.00053
10	21400	2565	QPSK	1	HIGH	-4	-0.00158
10	21400	2565	Q16	25	LOW	-4.43	-0.00175
10	21400	2565	Q16	25	MID	-4.74	-0.00187
10	21400	2565	Q16	25	HIGH	4.68	0.001846
10	21400	2565	Q16	50	LOW	-2.62	-0.00103
10	21100	2535	QPSK	1	LOW	-1.17	-0.00046
10	21100	2535	QPSK	1	MID	-0.59	-0.00023
10	21100	2535	QPSK	1	HIGH	-4.53	-0.00179
10	21100	2535	QPSK	25	LOW	2.29	0.000903
10	21100	2535	QPSK	25	MID	0.26	0.000103
10	21100	2535	QPSK	25	HIGH	-1.41	-0.00056
10	21100	2535	QPSK	50	LOW	4.02	0.001586
10	21100	2535	QPSK	1	LOW	-0.62	-0.00024
10	21100	2535	QPSK	1	MID	-0.42	-0.00017
10	21100	2535	QPSK	1	HIGH	-2.51	-0.00099
10	21100	2535	Q16	25	LOW	1.6	0.000631
10	21100	2535	Q16	25	MID	3.52	0.001389
10	21100	2535	Q16	25	HIGH	-4.26	-0.00168
10	21100	2535	Q16	50	LOW	-1.76	-0.00069
15	20825	2507.5	QPSK	1	LOW	-1.62	-0.00064
15	20825	2507.5	QPSK	1	MID	-4.72	-0.00186
15	20825	2507.5	QPSK	1	HIGH	-0.16	-6.3E-05
15	20825	2507.5	QPSK	36	LOW	-4.38	-0.00173
15	20825	2507.5	QPSK	36	MID	1.17	0.000462
15	20825	2507.5	QPSK	36	HIGH	2.56	0.00101
15	20825	2507.5	QPSK	75	LOW	2.66	0.001049
15	20825	2507.5	Q16	1	LOW	-3.44	-0.00136
15	20825	2507.5	Q16	1	MID	-2.35	-0.00093
15	20825	2507.5	Q16	1	HIGH	-1.79	-0.00071
15	20825	2507.5	Q16	36	LOW	1.09	0.00043
15	20825	2507.5	Q16	36	MID	-2.27	-0.0009
15	20825	2507.5	Q16	36	HIGH	3.39	0.001337
15	20825	2507.5	Q16	75	LOW	-4.48	-0.00177
15	21375	2562.5	QPSK	1	LOW	-2.73	-0.00108
15	21375	2562.5	QPSK	1	MID	1.65	0.000651

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency error	Frequency Error
				Size	Offset	(Hz)	(ppm)
15	21375	2562.5	QPSK	1	HIGH	-0.18	-7.1E-05
15	21375	2562.5	QPSK	36	LOW	2.74	0.001081
15	21375	2562.5	QPSK	36	MID	-2.61	-0.00103
15	21375	2562.5	QPSK	36	HIGH	-0.69	-0.00027
15	21375	2562.5	QPSK	75	LOW	-2.59	-0.00102
15	21375	2562.5	Q16	1	LOW	-5	-0.00197
15	21375	2562.5	Q16	1	MID	2.36	0.000931
15	21375	2562.5	Q16	1	HIGH	2.36	0.000931
15	21375	2562.5	Q16	36	LOW	-3.45	-0.00136
15	21375	2562.5	Q16	36	MID	-0.23	-9.1E-05
15	21375	2562.5	Q16	36	HIGH	-1.99	-0.00079
15	21375	2562.5	Q16	75	LOW	-0.08	-3.2E-05
15	21100	2535	QPSK	1	LOW	1.95	0.000769
15	21100	2535	QPSK	1	MID	2.36	0.000931
15	21100	2535	QPSK	1	HIGH	-1.03	-0.00041
15	21100	2535	QPSK	36	LOW	-1.92	-0.00076
15	21100	2535	QPSK	36	MID	-4.25	-0.00168
15	21100	2535	QPSK	36	HIGH	-1.27	-0.0005
15	21100	2535	QPSK	75	LOW	-1.7	-0.00067
15	21100	2535	Q16	1	LOW	0.34	0.000134
15	21100	2535	Q16	1	MID	-2.72	-0.00107
15	21100	2535	Q16	1	HIGH	1.25	0.000493
15	21100	2535	Q16	36	LOW	-3.38	-0.00133
15	21100	2535	Q16	36	MID	-4.92	-0.00194
15	21100	2535	Q16	36	HIGH	4.01	0.001582
15	21100	2535	Q16	75	LOW	0.4	0.000158
20	20850	2510	QPSK	1	LOW	2.23	0.00088
20	20850	2510	QPSK	1	MID	-1.87	-0.00074
20	20850	2510	QPSK	1	HIGH	1.78	0.000702
20	20850	2510	QPSK	50	LOW	3.97	0.001566
20	20850	2510	QPSK	50	MID	2.12	0.000836
20	20850	2510	QPSK	50	HIGH	-1.26	-0.0005
20	20850	2510	QPSK	100	LOW	-0.36	-0.00014
20	20850	2510	Q16	1	LOW	2.45	0.000966
20	20850	2510	Q16	1	MID	-4.25	-0.00168
20	20850	2510	Q16	1	HIGH	-4.78	-0.00189

Bandwidth	UL Channel	Frequency	Modulation	RB	RB	Frequency error	Frequency Error
				Size	Offset	(Hz)	(ppm)
20	20850	2510	Q16	50	LOW	-0.49	-0.00019
20	20850	2510	Q16	50	MID	3.56	0.001404
20	20850	2510	Q16	50	HIGH	-4.77	-0.00188
20	20850	2510	Q16	100	LOW	3.49	0.001377
20	21350	2560	QPSK	1	LOW	-3.46	-0.00136
20	21350	2560	QPSK	1	MID	-4.71	-0.00186
20	21350	2560	QPSK	1	HIGH	-4.95	-0.00195
20	21350	2560	QPSK	50	LOW	-1.02	-0.0004
20	21350	2560	QPSK	50	MID	1.26	0.000497
20	21350	2560	QPSK	50	HIGH	-3.51	-0.00138
20	21350	2560	QPSK	100	LOW	-4.48	-0.00177
20	21350	2560	Q16	1	LOW	-2.27	-0.0009
20	21350	2560	Q16	1	MID	0.64	0.000252
20	21350	2560	Q16	1	HIGH	4.36	0.00172
20	21350	2560	Q16	50	LOW	0.5	0.000197
20	21350	2560	Q16	50	MID	-0.74	-0.00029
20	21350	2560	Q16	50	HIGH	-4.43	-0.00175
20	21350	2560	Q16	100	LOW	-2.69	-0.00106
20	21100	2535	QPSK	1	LOW	-2.71	-0.00107
20	21100	2535	QPSK	1	MID	3.99	0.001574
20	21100	2535	QPSK	1	HIGH	-3.91	-0.00154
20	21100	2535	QPSK	50	LOW	-0.17	-6.7E-05
20	21100	2535	QPSK	50	MID	4.66	0.001838
20	21100	2535	QPSK	50	HIGH	-4.99	-0.00197
20	21100	2535	QPSK	100	LOW	-1.48	-0.00058
20	21100	2535	Q16	1	LOW	-3.97	-0.00157
20	21100	2535	Q16	1	MID	3.52	0.001389
20	21100	2535	Q16	1	HIGH	2.29	0.000903
20	21100	2535	Q16	50	LOW	-0.96	-0.00038
20	21100	2535	Q16	50	MID	3.71	0.001464
20	21100	2535	Q16	50	HIGH	-3.91	-0.00154
20	21100	2535	Q16	100	LOW	-4.68	-0.00185

8 OCCUPIED BANDWIDTH& Emission Bandwidth

Test limit:

The occupied bandwidth (OBW), that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission, shall be measured when modulated by an input signal such that its amplitude and symbol rate represent the maximum rated conditions under which the equipment will be operated. The signal shall be applied through any filter networks, pseudo-random generators or other devices required in normal service. Additionally, the occupied bandwidth shall be shown for operation with any devices used for modifying the spectrum when such devices are optional at the discretion of the user. [i]2.1049(h)]

Many of the individual rule parts specify a relative OBW in lieu of the 99% OBW. In such cases, the OBW is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated by at least X dB below the transmitter power, where the value of X is typically specified as 26.

The relative OBW must be measured and reported when it is specified in the applicable rule part; otherwise, the 99% OBW shall be measured and reported. The test report shall specify which OBW is reported.

A spectrum/signal analyzer or other instrument providing a spectral display is recommended for these measurements and the video bandwidth shall be set to a value at least three times greater than the IF/resolution bandwidth to avoid any amplitude smoothing. Video filtering shall not be used during occupied bandwidth tests.

The OBW shall be measured for all operating conditions that will affect the bandwidth results (e.g. variable modulations, coding, or channel bandwidth settings). See section 4.

Test procedure:

Occupied bandwidth – relative measurement procedure

The reference value is the highest level of the spectral envelope of the modulated signal.

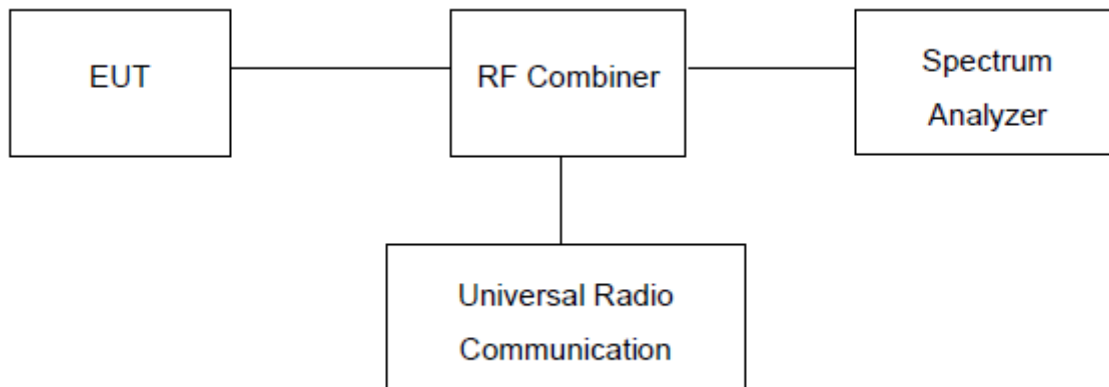
- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
- b) The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to prevent the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) The dynamic range of the spectrum analyzer at the selected RBW shall be at least 10 dB below the target “-X dB down” requirement (i.e., if the requirement calls for measuring the -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be at least 36 dB below the reference value).
- f) Set the detection mode to peak, and the trace mode to max hold.
- g) Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- h) Determine the “-X dB down amplitude” as equal to (Reference Value – X). Alternatively, this calculation can be performed by the analyzer by using the marker-delta function.
- i) Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “-X dB down amplitude” determined in step g). If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- j) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Occupied bandwidth – power bandwidth (99%) measurement procedure

The following procedure shall be used for measuring (99 %) power bandwidth

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) Set the detection mode to peak, and the trace mode to max hold..
- f) Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.
- h) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Test setup:



8.1 Measurement Result

GSM850:

Frequency	OBW(99%)	26dB BW
824.2	248.04KHz	314.10KHz
836.6	243.59KHz	315.71KHz
848.8	246.79KHz	310.89KHz

PCS1900:

Frequency	OBW(99%)	26dB BW
1850.2	246.79KHz	315.71KHz
1880	248.39KHz	318.91KHz
1909.8	245.19KHz	314.10KHz

GPRS850:

Frequency	OBW(99%)	26dB BW
824.2	245.19KHz	322.12KHz
836.6	246.79KHz	318.91KHz
848.8	246.79KHz	310.89KHz

GPRS 1900:

Frequency	OBW(99%)	26dB BW
1850.2	246.79KHz	314.10KHz
1880	246.79KHz	318.91KHz
1909.8	246.79KHz	320.51KHz

EGPRS 850:

Frequency	OBW(99%)	26dB BW
824.2	241.99KHz	310.89KHz
836.6	243.59KHz	330.57KHz
848.8	254.81KHz	298.08KHz

EGPRS 1900:

Frequency	OBW(99%)	26dB BW
1850.2	245.19KHz	304.49KHz
1880	246.79KHz	302.88KHz
1909.8	246.79KHz	307.69KHz

UTRA BANDS**BAND 2:**

Frequency	OBW(99%)	26dB BW
1852.6	4.231MHz	4.888MHz
1880	4.231MHz	4.888MHz
1907.4	4.215MHz	4.888MHz

BAND 4:

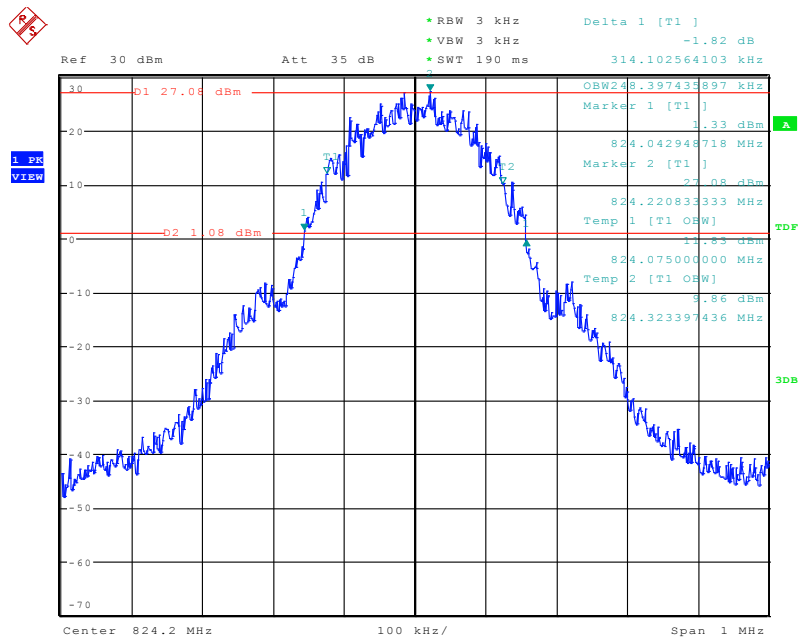
Frequency	OBW(99%)	26dB BW
1712.6	4.231MHz	4.888MHz
17400	4.215MHz	4.872MHz
1752.4	4.231MHz	4.888MHz

BAND 5:

Frequency	OBW(99%)	26dB BW
826.6	4.215MHz	4.872MHz
835	4.231MHz	4.872MHz
846.4	4.215MHz	4.888MHz

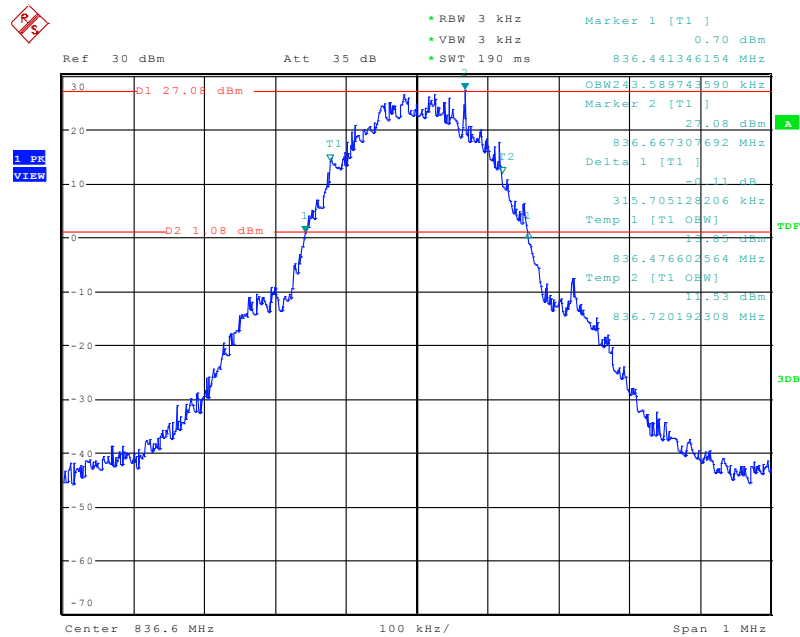
8.2 Test Plot(s)

Occupied Bandwidth (99% and -26dBc) GSM 850 BAND CH 128



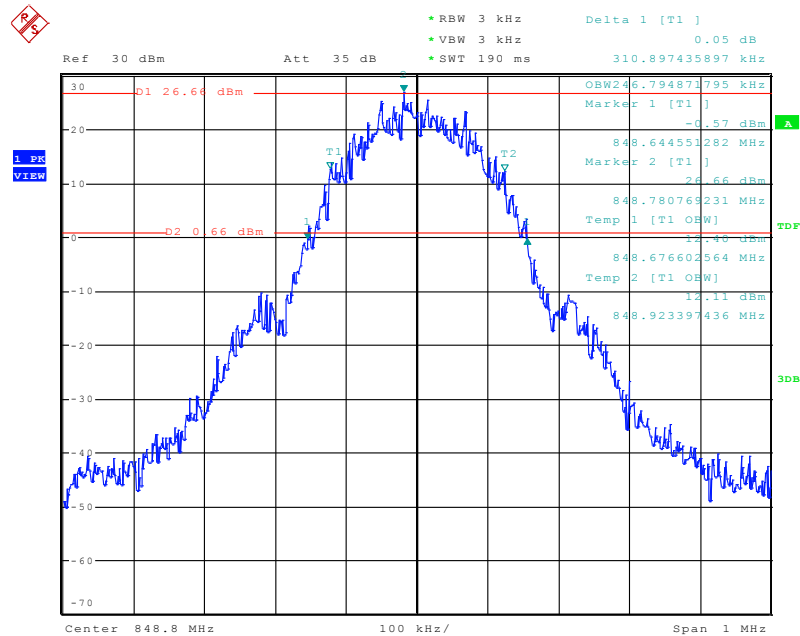
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Occupied Bandwidth (99% and -26dBc) GSM 850 BAND CH 190



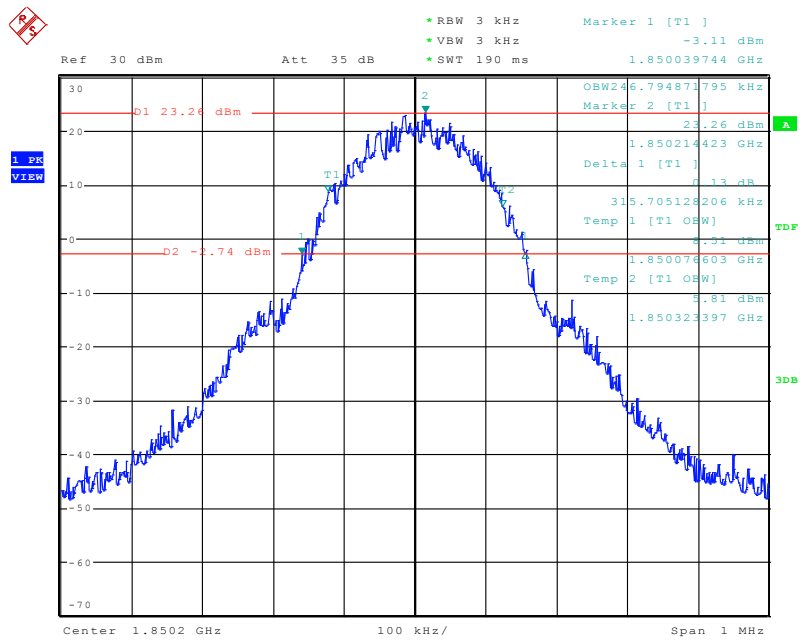
Date: 20.JUN.2017 20:36:56

Occupied Bandwidth (99% and -26dBc) GSM 850 BAND CH 251



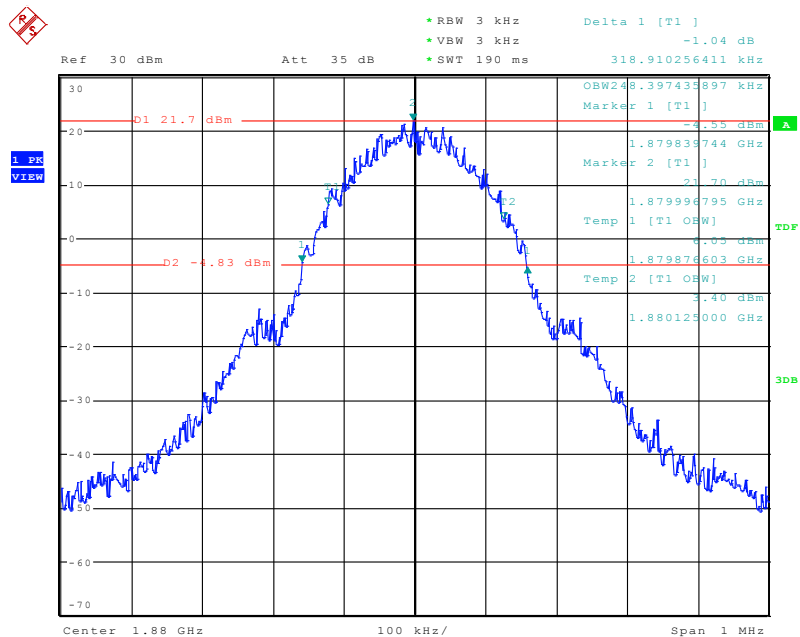
Date: 20.JUN.2017 20:39:47

Occupied Bandwidth (99% and -26dBc) GSM 1900 BAND CH 512



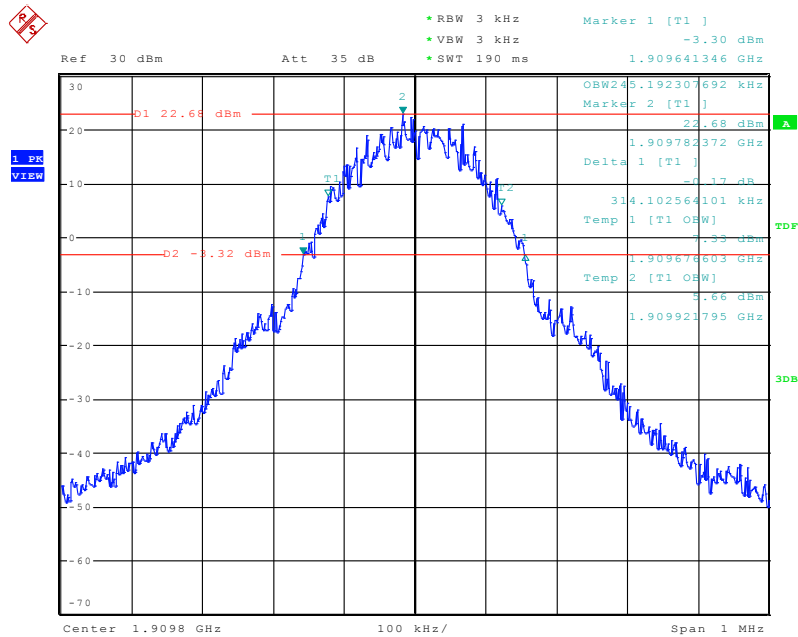
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Occupied Bandwidth (99% and -26dBc) PCS 1900 BAND CH 661



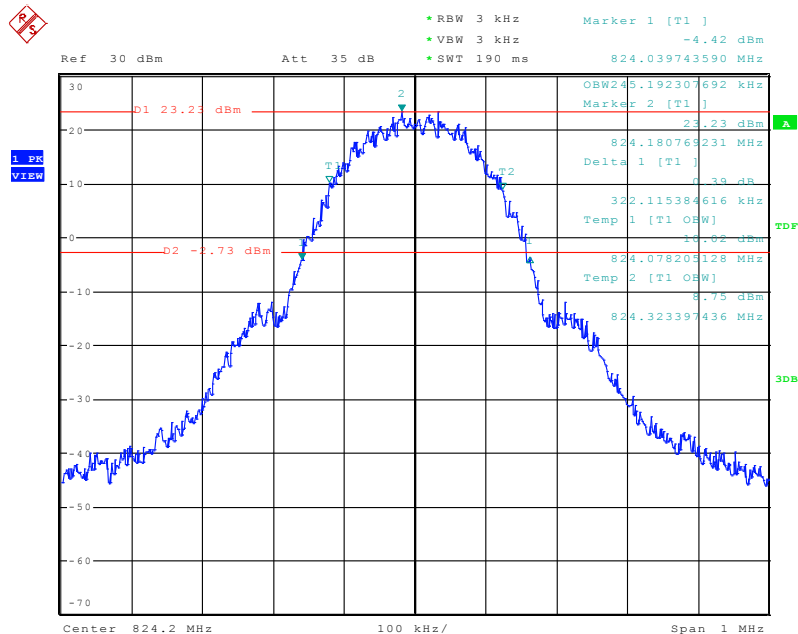
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Occupied Bandwidth (99% and -26dBc) PCS 1900 BAND CH 810



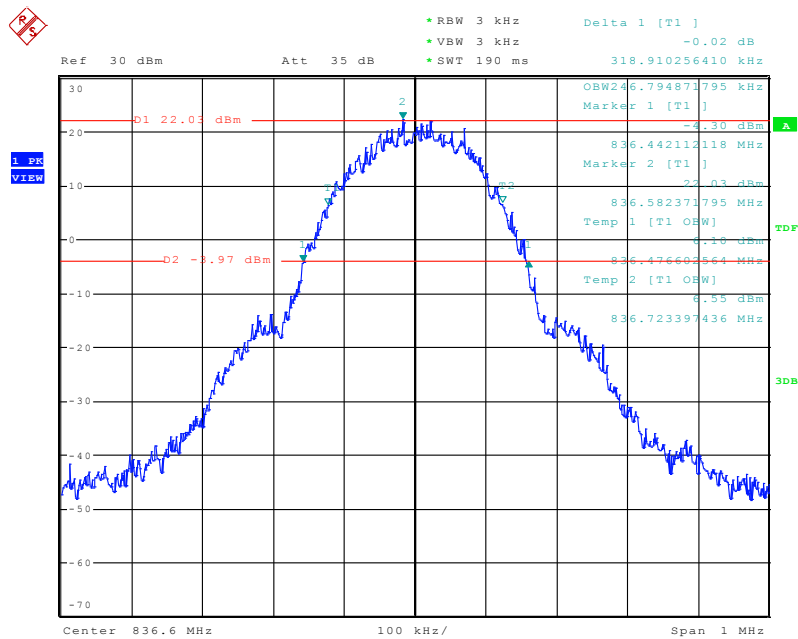
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Occupied Bandwidth (99% and -26dBc) GPRS 850 BAND CH 128



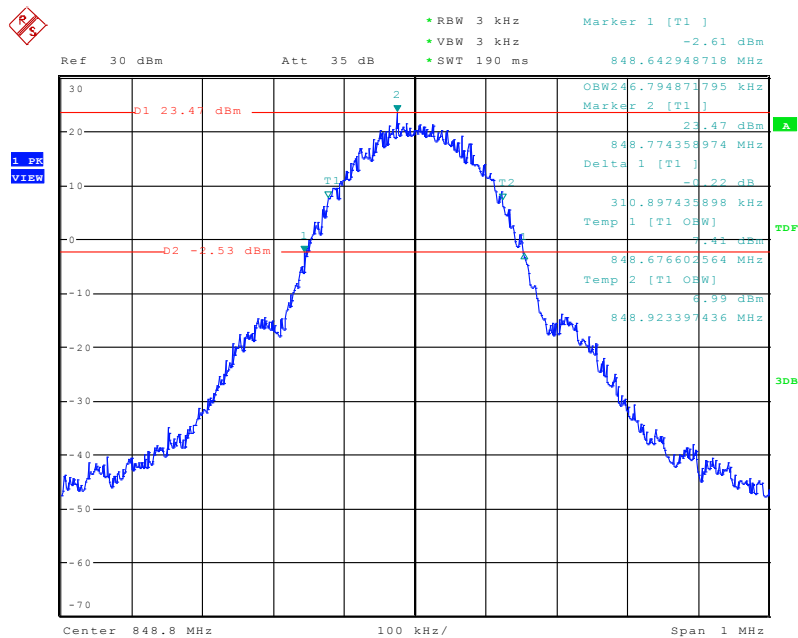
Date: 20.JUN.2017 21:11:00

Occupied Bandwidth (99% and -26dBc) GPRS 850 BAND CH 190



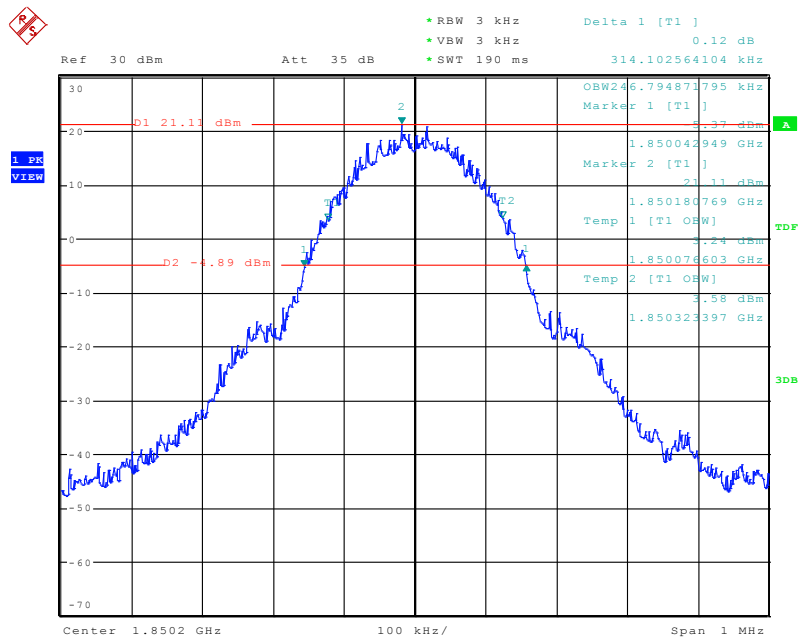
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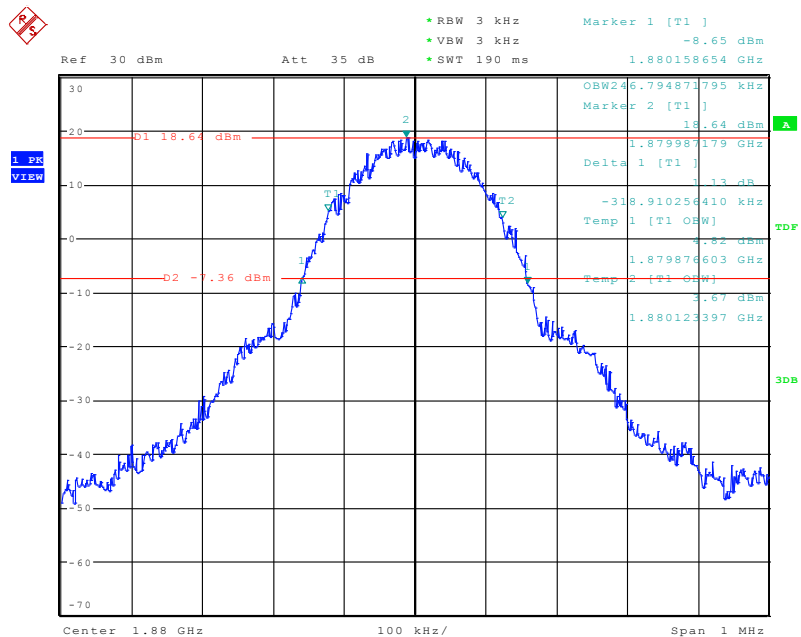
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Occupied Bandwidth (99% and -26dBc) GPRS 1900 BAND CH 512



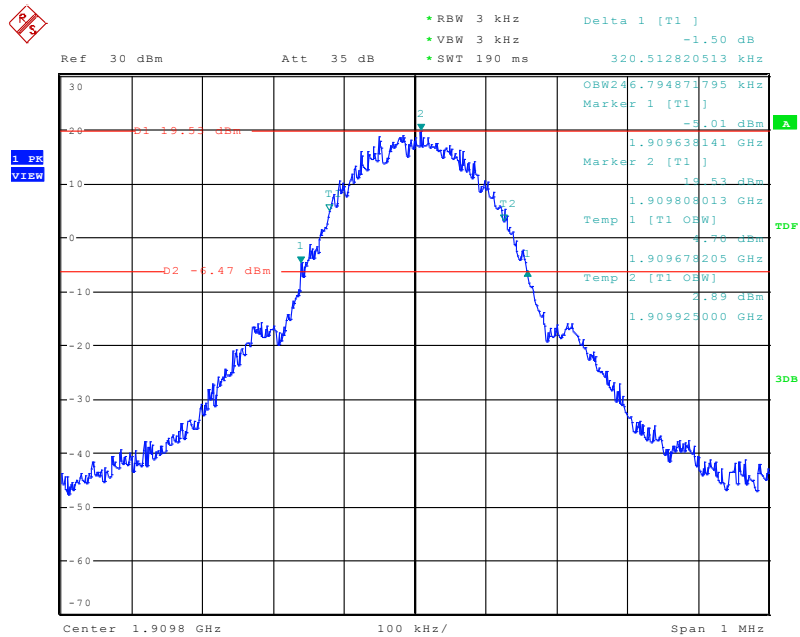
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Occupied Bandwidth (99% and -26dBc) GPRS 1900 BAND CH 661



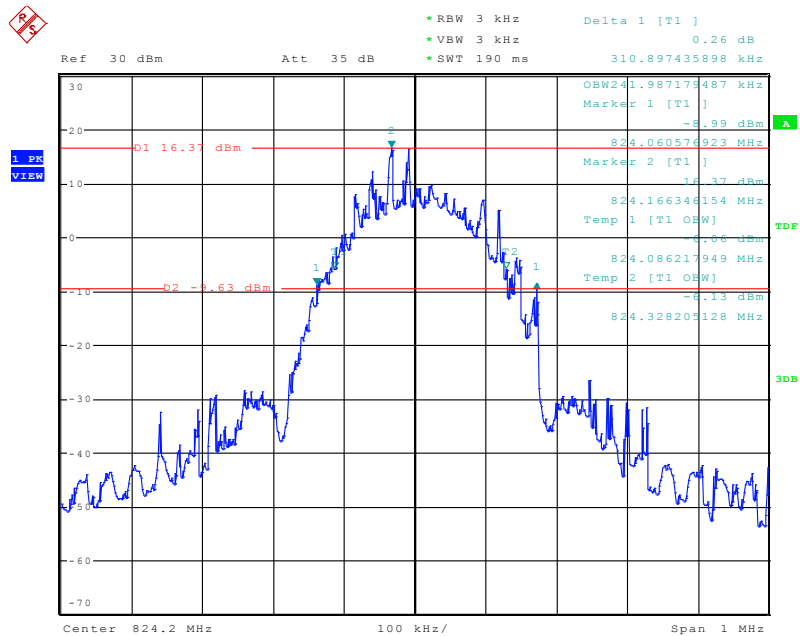
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Occupied Bandwidth (99% and -26dBc) GPRS 1900 BAND CH 810



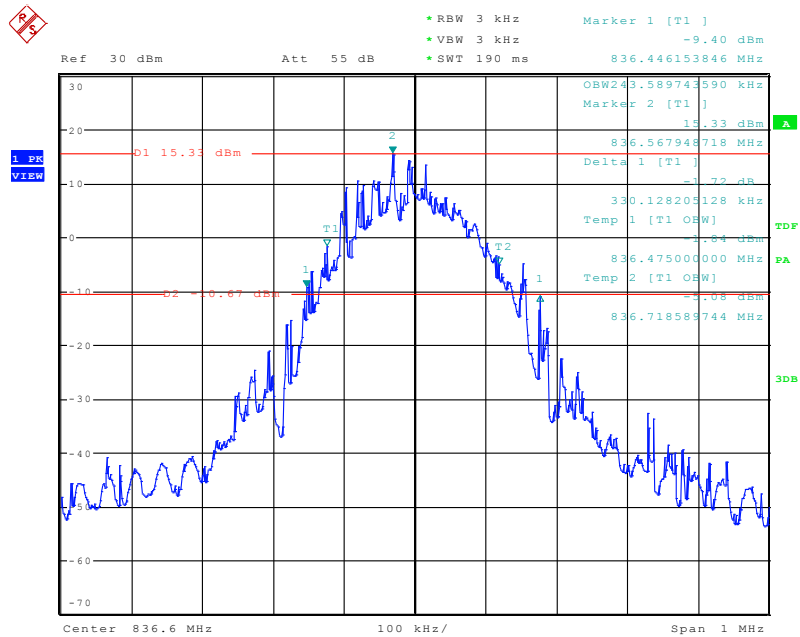
Date: 20.JUN.2017 20:57:36

Occupied Bandwidth (99% and -26dBc) EGPRS 850 BAND CH 128



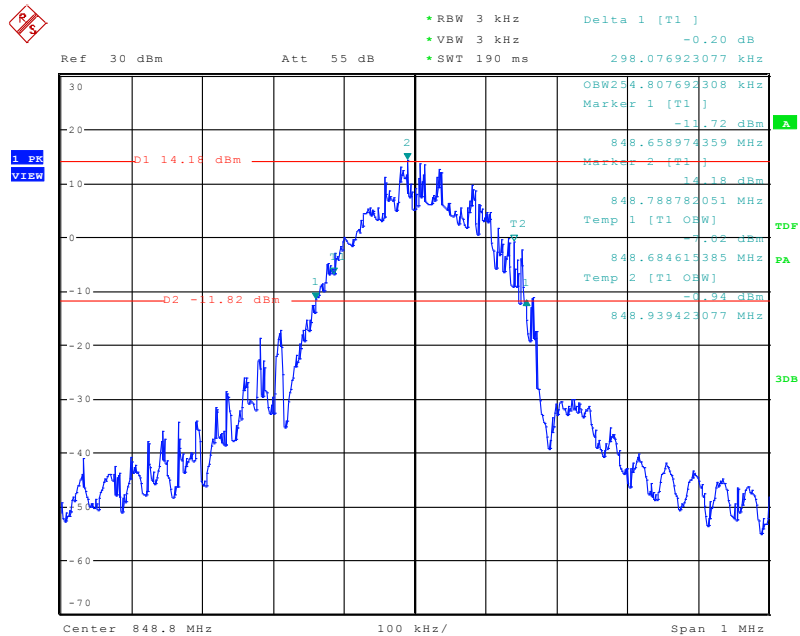
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Occupied Bandwidth (99% and -26dBc) EGPRS 850 BAND CH 190



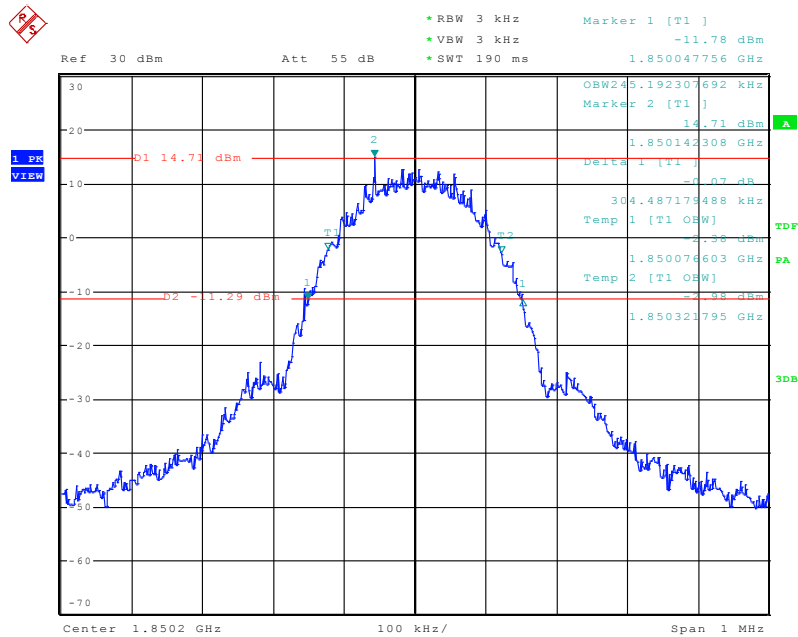
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Occupied Bandwidth (99% and -26dBc) EGPRS 850 BAND CH 251



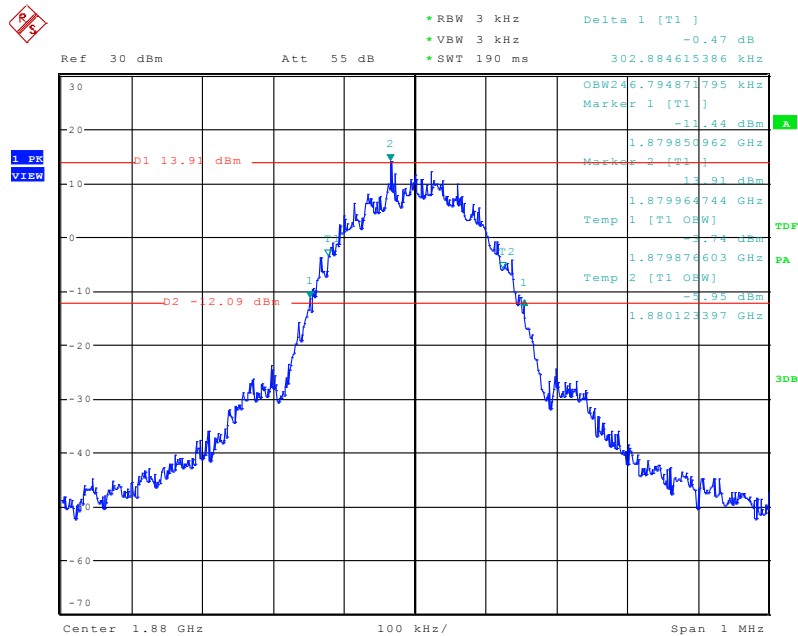
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Occupied Bandwidth (99% and -26dBc) EGPRS 1900 BAND CH 512



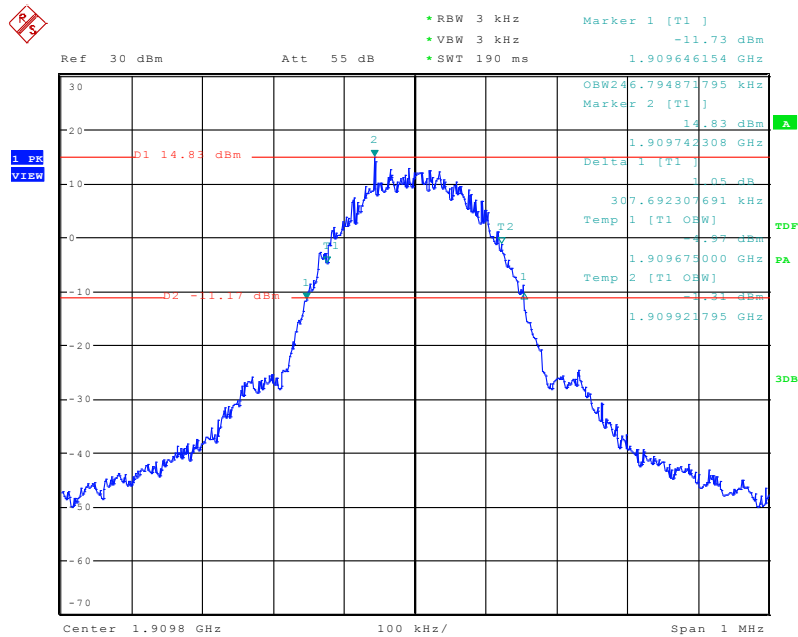
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Occupied Bandwidth (99% and -26dBc) EGPRS 1900 BAND CH 661



Date: 20.JUN.2017 21:58:00

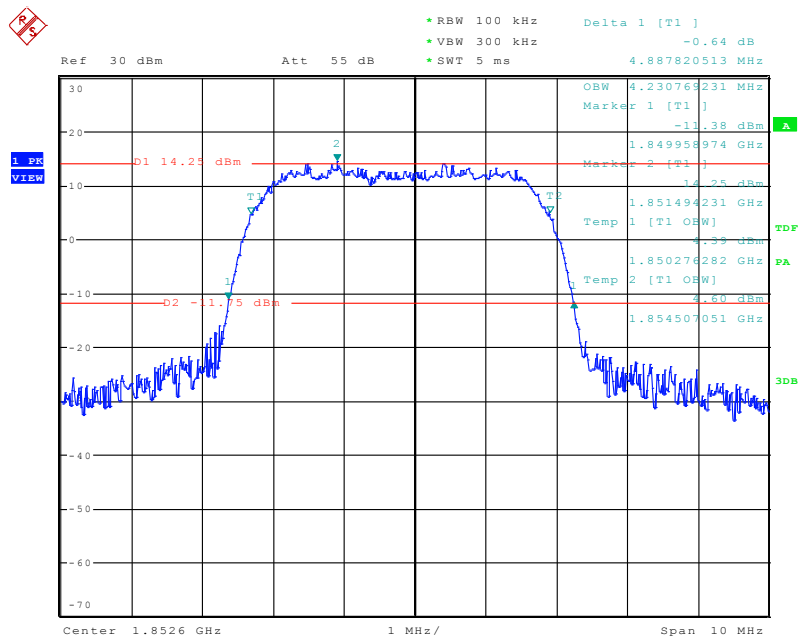
Occupied Bandwidth (99% and -26dBc) EGPRS 1900 BAND CH 810



Date: 20.JUN.2017 22:00:11

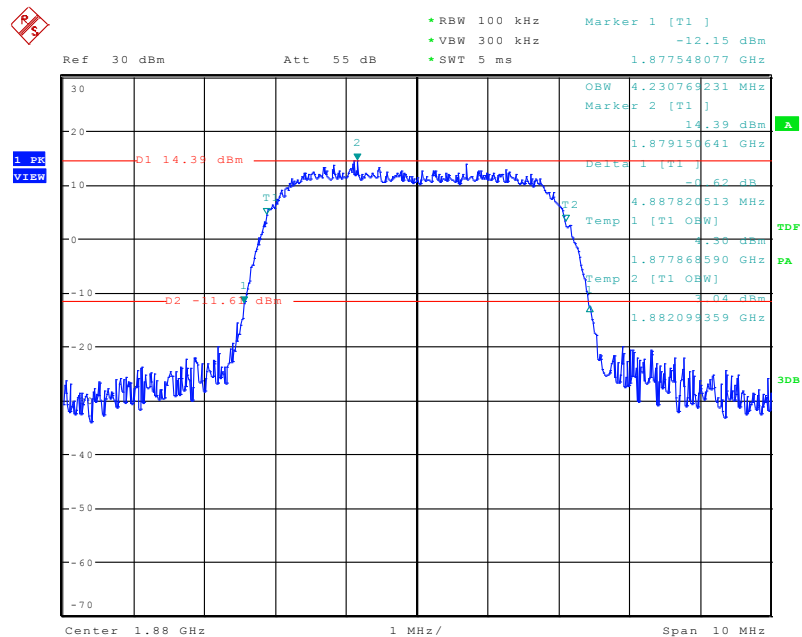
UTRA BANDS

Occupied Bandwidth (99% and -26dBc) WCDMA BAND II CH 9262

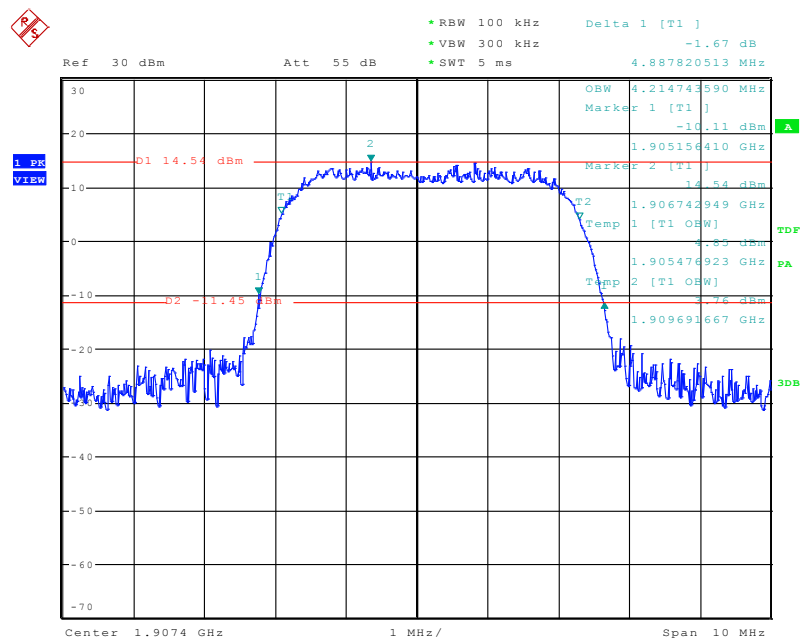


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Occupied Bandwidth (99%and-26dBc) WCDMA BAND II CH 9400

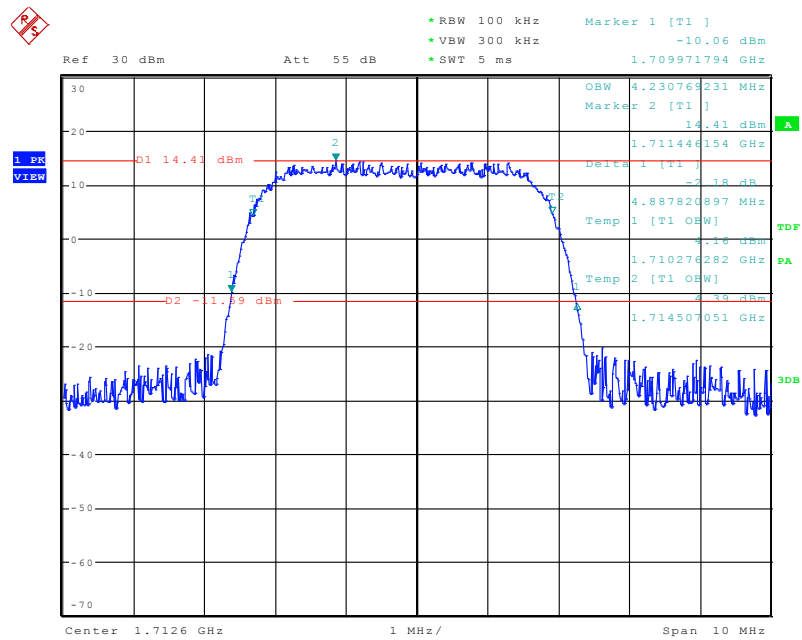


Occupied Bandwidth (99%and-26dBc) WCDMA BAND II CH 9538



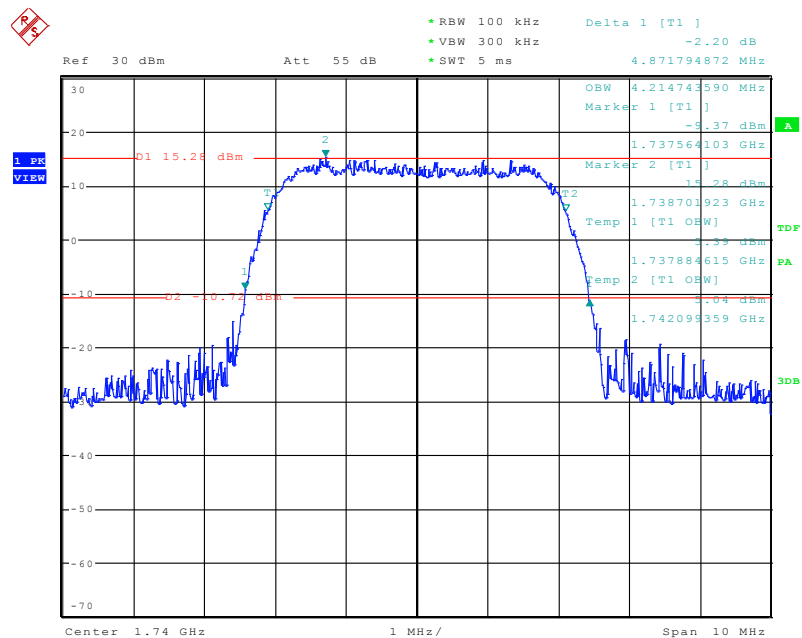
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Occupied Bandwidth (99% and -26dBc) WCDMA BAND IV CH 1312



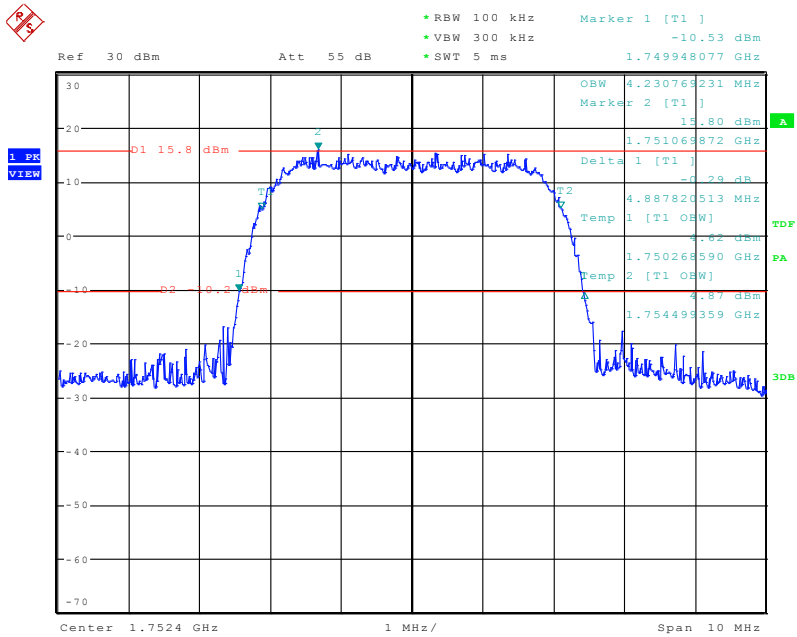
Date: 20.JUN.2017 22:07:11

Occupied Bandwidth (99% and -26dBc) WCDMA BAND IV CH 1413



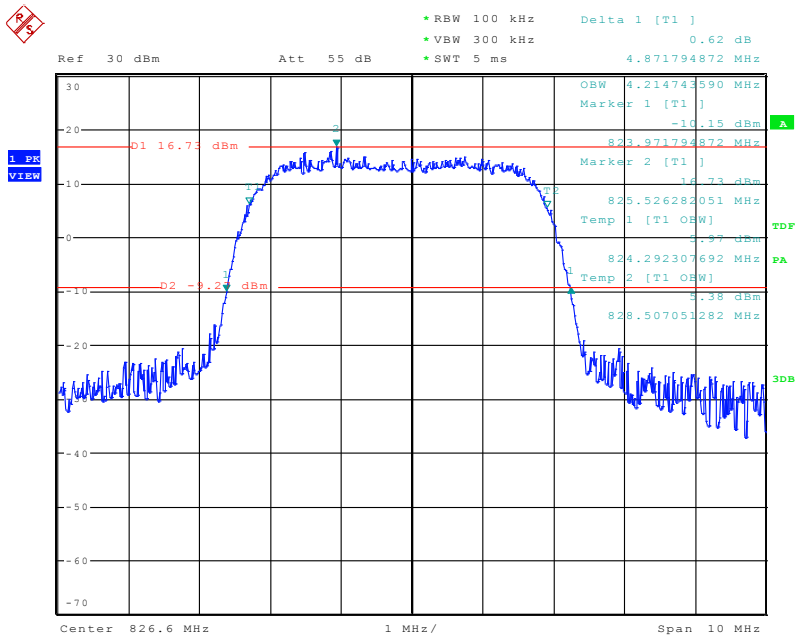
Date: 20.JUN.2017 22:08:26

Occupied Bandwidth (99% and -26dBc) WCDMA BAND IV CH 1513



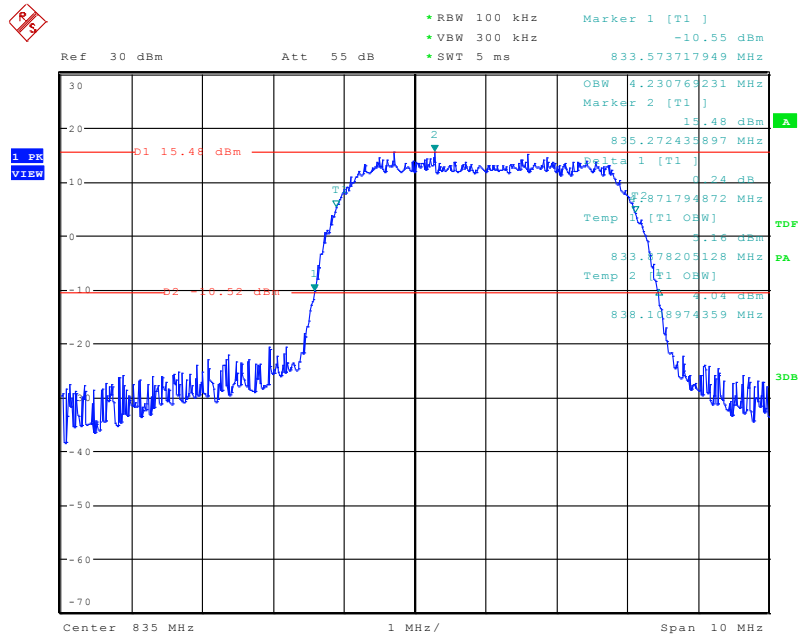
Date: 20.JUN.2017 22:09:25

Occupied Bandwidth (99%and-26dBc) WCDMA BAND V CH 4132



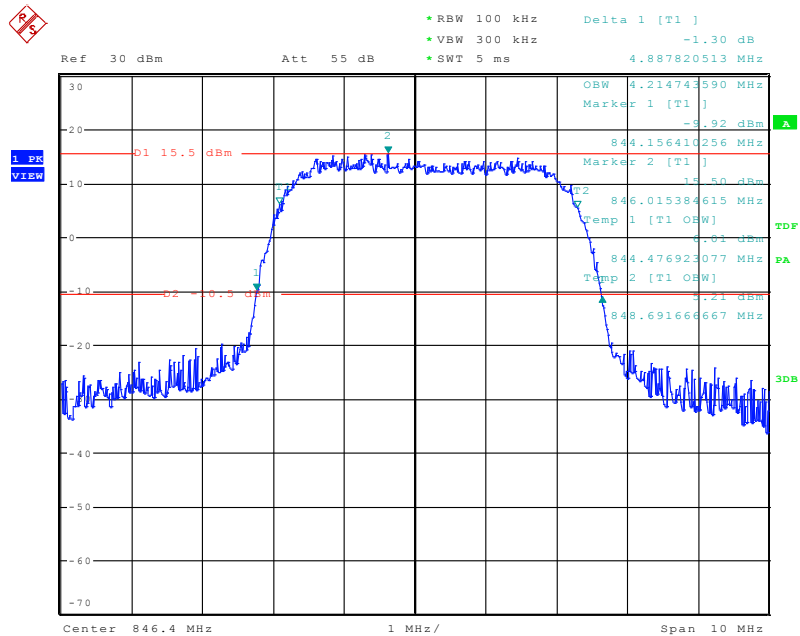
Date: 20.JUN.2017 22:10:51

Occupied Bandwidth (99%and-26dBc) WCDMA BAND V CH 4182



Date: 20.JUN.2017 22:12:17

Occupied Bandwidth (99%and-26dBc) WCDMA BAND V CH 4233



Date: 20.JUN.2017 22:13:17