FCC REPORT

Report Reference No. ..... :	**TRE1706030102**	R/C…….: 44745
FCC ID ..... :	**QRP-AZUMIIROA5QL2**	
Applicant's name ..... :	**Azumi S.A**	
Address.....:	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama	
Manufacturer.....:	AZUMI HK LTD	
Address.....:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG,HK	
Test item description ..... :	**4G Mobile Phone**	
Trade Mark .....:	-	
Model/Type reference.....:	IRO A5QL V2	
Listed Model(s) .....:	-	
Standard ..... :	**FCC Part 22: PUBLIC MOBILE SERVICES** **FCC Part 24:PERSONAL COMMUNICATIONS SERVICES** **FCC Part 27: MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES**	
Date of receipt of test sample……..:	Jun.29, 2017	
Date of testing……:	Jun.30, 2017 - Jul.18, 2017	
Date of issue……...:	Jul.19, 2017	
Result..... ……...:	**Pass**	
Compiled by (position+printedname+signature)...:	File administrators Candy Liu	Candy Liu
Supervised by (position+printedname+signature)....:	Project Engineer Lion Cai	Lion Cai
Approved by (position+printedname+signature)....:	Manager Hans Hu	Hans Hu
Testing Laboratory Name ..... :	**Shenzhen Huatongwei International Inspection Co., Ltd.**	
Address.....:	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China	

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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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1. Test standards and Report version

1.1. Applicable Standards

The tests were performed according to following standards:

FCC Part 22:PRIVATE LAND MOBILE RADIO SERVICES.
FCC Part 24:PUBLIC MOBILE SERVICES
FCC Part 27:MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES
TIA/EIA 603 D June 2010:Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.
FCC Part 2:FREQUENCY ALLOCA-TIONS AND RADIO TREATY MAT-TERS; GENERAL RULES AND REG-ULATIONS
971168 D01 Power Meas License Digital Systems v02r02:provides a methodology for fully characterizing the fundamental power of wideband (> 1 MHz) digitally modulated RF signals acceptable to the FCC for demonstrating compliance for licensed transmitters.

1.2. Report version

Version No.	Date of issue	Description
00	Jul.19, 2017	Original

2. Test Description

Test Item	Section in CFR 47	Result
RF Output Power	Part 2.1046 Part 22.913(a) Part 24.232(c) Part 27.50	Pass
99% & -26 dB Occupied Bandwidth	Part 2.1049 Part 22.917(b) Part 24.238(b)	Pass
Conducted Spurious Emissions	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	Pass
Band Edge	Part 2.1051 Part 22.917 Part 24.238 Part 27.53	Pass
ERP and EIRP	Part 22.913(a) Part 24.232(b)	Pass
Radiated Spurious Emissions	Part 2.1053 Part 22.917 Part 24.238 Part 27.53	Pass
Frequency stability vs. temperature	Part 2.1055(a)(1)(b) Part 22.255 Part 24.235 Part 27.54	Pass
Frequency stability vs. voltage	Part 2.1055(d)(1)(2) Part 22.255 Part 24.235 Part 27.54	Pass
Peak-Average Ratio	Part 24.232 Part 27.50	Pass

Note: The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Client Information

Applicant:	Azumi S.A
Address:	Avenida Aquilino de la Guardia con Calle 47, PH Ocean Plaza, Piso 16 of. 16-01, Marbella, Ciudad de Panama, Panama
Manufacturer:	AZUMI HK LTD
Address:	FLAT/RM 18 BLK 1 14/F GOLDEN INDUSTRIAL BUILDING 16-26 KWAI TAK STREET KWAI CHUNG,HK

3.2. Product Description

Name of EUT:	4G Mobile Phone
Trade Mark:	-
Model No.:	IRO A5QL V2
Listed Model(s):	-
IMEI:	353859070006947
Power supply:	DC 3.8V From internal battery
Adapter information:	Input: 100-240Va.c., 50/60Hz, 0.15A Output: 5Vd.c., 600mA
Hardware version:	Azumi_IRO_A5QL_V2_Hardware_V1.0
Software version:	Azumi_IRO_A5QL_V2_PE_V01_20170621
RF Technical Description	
☒FDD Band 2	
Operation Frequency:	Uplink:1850.7 MHz – 1909.3 MHz Downlink: 1930.7 MHz – 1989.3 MHz
Channel bandwidth:	☒1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☒15MHz ☒20MHz
☒FDD Band 4	
Operation Frequency:	Uplink:1710.7 MHz – 1754.3 MHz Downlink: 2110.7 MHz – 2154.3 MHz
Channel bandwidth:	☒1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☒15MHz ☒20MHz
☒FDD Band 5	
Operation Frequency:	Uplink:824.7 MHz – 848.3 MHz Downlink: 869.7 MHz – 893.3 MHz
Channel bandwidth:	☒1.4MHz ☒ 3MHz ☒ 5MHz ☒ 10MHz ☐15MHz ☐20MHz
☒FDD Band 7	
Operation Frequency:	Uplink:2502.5 MHz – 2567.5 MHz Downlink: 2622.5 MHz – 2687.5 MHz
Channel bandwidth:	☐1.4MHz ☐ 3MHz ☒ 5MHz ☒ 10MHz ☐15MHz ☐20MHz
Power Class:	☐ Class 1 ☐ Class 2 ☒ Class 3 ☐ Class 4
Modulation type:	☒QPSK ☒16QAM ☐64QAM
Antennna type:	IntegralAntennna
Antenna gain:	Band 2: 1.8dBi, Band 4: 1.8dBi, Band 5: 1.8dBi, Band 7: 1.8dBi

3.3. Operation state

➢ **Test frequency list**

FDD Band 2

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	18607	1850.7	607	1930.7
	3	18615	1851.5	615	1931.5
	5	18625	1852.5	625	1932.5
	10	18650	1855	650	1935
	15 [1]	18675	1857.5	675	1937.5
	20 [1]	18700	1860	700	1940
Mid Range	1.4/3/5/10 15 [1]/20 [1]	18900	1880	900	1960
High Range	1.4	19193	1909.3	1193	1989.3
	3	19185	1908.5	1185	1988.5
	5	19175	1907.5	1175	1987.5
	10	19150	1905	1150	1985
	15 [1]	19125	1902.5	1125	1982.5
	20 [1]	19100	1900	1100	1980
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.					

FDD Band 4

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	19957	1710.7	1957	2110.7
	3	19965	1711.5	1965	2111.5
	5	19975	1712.5	1975	2112.5
	10	20000	1715	2000	2115
	15	20025	1717.5	2025	2117.5
	20	20050	1720	2050	2120
Mid Range	1.4/3/5/10/15/20	20175	1732.5	2175	2132.5
High Range	1.4	20393	1754.3	2393	2154.3
	3	20385	1753.5	2385	2153.5
	5	20375	1752.5	2375	2152.5
	10	20350	1750	2350	2150
	15	20325	1747.5	2325	2147.5
	20	20300	1745	2300	2145

FDD Band 5

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10 [1]	20450	829	2450	874
Mid Range	1.4/3/5 10 [1]	20525	836.5	2525	881.5
High Range	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10 [1]	20600	844	2600	889
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.					

FDD Band 7

Test Frequency ID	Bandwidth [MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	5	20775	2502.5	2775	2622.5
	10	20800	2505	2800	2625
	15	20825	2507.5	2825	2627.5
	20 [1]	20850	2510	2850	2630
Mid Range	5/10/15 20 [1]	21100	2535	3100	2655
High Range	5	21425	2567.5	3425	2687.5
	10	21400	2565	3400	2685
	15	21375	2562.5	3375	2682.5
	20 [1]	21350	2560	3350	2680
NOTE 1: Bandwidth for which a relaxation of the specified UE receiver sensitivity requirement (TS 36.101 [27] Clause 7.3) is allowed.					

3.4. EUT operation mode

For RF test items
The EUT has been tested under typical operating condition. The Applicant providessoftware to control the EUT for staying in continoustransmitting and receiving mode for testing.

Test Items	Band	Bandwidth (MHz)						Modulation		RB #			Test Channel		
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	M	H
Max OutputPower	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	5	v	v	v	v	-	-	v	v	v	v	v	v	v	v
	7	-	-	v	v	v	v	v	v	v	v	v	v	v	v
26dB and 99% Bandwidth	2	v	v	v	v	v	v	v	v			v	v	v	v
	4	v	v	v	v	v	v	v	v			v	v	v	v
	5	v	v	v	v	-	-	v	v			v	v	v	v
	7	-	-	v	v	v	v	v	v			v	v	v	v
Conducted Band Edge	2	v	v	v	v	v	v	v	v	v		v	v		v
	4	v	v	v	v	v	v	v	v	v		v	v		v
	5	v	v	v	v	-	-	v	v	v		v	v		v
	7	-	-	v	v	v	v	v	v	v		v	v		v
Conducted Spurious Emission	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
E.R.P./ E.I.R.P.	2	v	v	v	v	v	v	v	v	v			v	v	v
	4	v	v	v	v	v	v	v	v	v			v	v	v
	5	v	v	v	v	-	-	v	v	v			v	v	v
	7	-	-	v	v	v	v	v	v	v			v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v		v			v	v	v
	4	v	v	v	v	v	v	v		v			v	v	v
	5	v	v	v	v	-	-	v		v			v	v	v
	7	-	-	v	v	v	v	v		v			v	v	v
Frequency Stability	2						v	v	v			v		v	
	4						v	v	v			v		v	
	5				v			v	v			v		v	
	7						v	v	v			v		v	
Peak-to-AverageRatio	2						v	v	v	v		v	v	v	v
	4						v	v	v	v		v	v	v	v
	5				v			v	v	v		v	v	v	v
	7						v	v	v	v		v	v	v	v
Remark	1. The mark "v"means that this configuration is chosenfor testing 2. The mark "-"means that this bandwidth is not supported. 3. The device is investigatedfrom 30MHz to10 times offundamental signal for radiated spurious emission test under different RB size/offset and modulations in exploratory test. Subsequently, only the worst case emissions are reported.														

3.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

		Length (m) :	/
		Shield :	/
		Detachable :	/
		Manufacturer :	/
		Model No. :	/

3.6. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Laboratory:Shenzhen Huatongwei International Inspection Co., Ltd.
Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China
Phone: 86-755-26748019 Fax: 86-755-26748089

4.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No. 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 317478

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 317478.

IC-Registration No.: 5377B

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3. Equipments Used during the Test

Output Power(Conducted) &Occupied Bandwidth&EmissionBandwidth&Band Edge Compliance&Conducted Spurious Emission					
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13
2	WIDEB.RADIO COMM.TESRER	Rohde&Schwarz	CMW500	1201.0002K50	2016/11/13
3	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13
4	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13

Frequency Stability					
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13
2	WIDEB.RADIO COMM.TESRER	Rohde&Schwarz	CMW500	1201.0002K50	2016/11/13
3	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13
4	Climate Chamber	ESPEC	EL-10KA	05107008	2016/11/13
5	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13

Output Power (Radiated) &Radiated Spurious Emission					
No.	Equipment	Manufacturer	Model No.	SerialNo.	Last Cal.
1	UNIVERSAL RADIO COMMUNICATION	Rohde&Schwarz	CMU200	112012	2016/11/13
2	Spectrum Analyzer	Rohde&Schwarz	FSU26	201141	2016/11/13
3	HORNANTENNA	ShwarzBeck	9120D	1012	2016/11/13
4	HORNANTENNA	ShwarzBeck	9120D	1011	2016/11/13
5	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2016/11/13
6	Ultra-Broadband Antenna	ShwarzBeck	VULB9163	539	2016/11/13
7	TURNTABLE	MATURO	TT2.0	----	2016/11/13
8	ANTENNA MAST	MATURO	TAM-4.0-P	----	N/A
9	EMI Test Software	Audix	E3	N/A	N/A
10	EMI Test Receiver	Rohde&Schwarz	ESIB 26	100009	2016/11/13
11	RF Test Panel	Rohde&Schwarz	TS / RSP	335015/ 0017	2016/11/13
12	High pass filter	Compliance Direction systems	BSU-6	34202	2016/11/13
13	Splitter	Mini-Circuit	ZAPD-4	400059	2016/11/13
14	Horn Antenna	SCHWARZBECK	BBHA9170	25841	2016/11/13
15	Horn Antenna	SCHWARZBECK	BBHA9170	25842	2016/11/13
16	Preamplifier	ShwarzBeck	BBV 9718	BBV 9718	2016/11/13
17	Broadband Preamplifier	ShwarzBeck	BBV743	9743-0079	2016/11/13
18	Signal Generator	Rohde&Schwarz	SMF100A	101932	2016/11/13
19	Amplifer	Compliance Direction systems	PAP1-4060	120	2016/11/13
20	TURNTABLE	ETS	2088	2149	2016/11/13
21	ANTENNA MAST	ETS	2075	2346	2016/11/13
22	HORNANTENNA	Rohde&Schwarz	HF906	100068	2016/11/13
23	HORNANTENNA	Rohde&Schwarz	HF906	100039	2016/11/13
24	WIDEB.RADIO COMM.TESRER	R&S	CMW500	1201.0002K50	2016/11/13

The calibration interval was one year.

4.4. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature/Tnor:	15~35°C
lative Humidity	30~60 %
Air Pressure	950-1050 hPa

4.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01"Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 1"and TR-100028-02 "Electromagnetic compatibilityand Radio spectrum Matters (ERM);Uncertainties in the measurementof mobile radio equipment characteristics;Part 2 " and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongweilaboratory is reported:

Test Items	MeasurementUncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-12.75 GHz	1.60 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emissio 1~18GHz	5.16 dB	(1)
Radiated Emissio 18-40GHz	5.54 dB	(1)
Occupied Bandwidth	---------	(1)
Emission Mask	---------	(1)
Modulation Characteristic	---------	(1)
Transmitter Frequency Behavior	---------	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

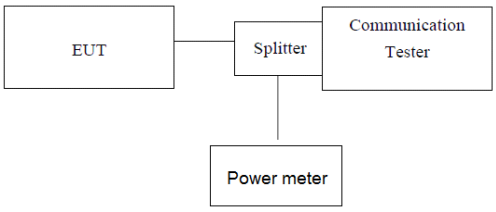
5. TEST CONDITIONS AND RESULTS

5.1. Conducted Output Power

LIMIT

N/A

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

1. The transmitter output port was connected to base station.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator, the path loss was compensated to the results for each measurement.
3. Set EUT at maximum power through base station.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure the maximum burst average power.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

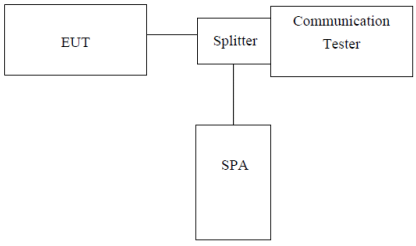
EUT Mode	Frequency (MHz)	Max Avg.Power QPSK (dBm)	Max Avg.Power 16QAM (dBm)
LTE Band 2	1850.7-1909.3	21.78	21.54
LTE Band 4	1710.7 – 1754.3	21.69	21.37
LTE Band 5	824.7 – 848.3	21.94	21.77
LTE Band 7	2502.5 – 2567.5	21.88	21.10

5.2. 99% & -26 dB Occupied Bandwidth

LIMIT

N/A

TEST CONFIGURATION



Note: Measurement setup for testing on Antenna connector

TEST PROCEDURE

1. The EUT's output RF connector was connected with a short cable to the spectrum analyzer
2. RBWwas set to about 1% of emission BW, VBW= 3 times RBW.
3. -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth isthe delta frequency between the two points where the display line intersects the signal trace.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

LTE Band 2					
Bandwidth	Channel	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
1.4MHz	Low	1.0989	1.0939	1.2854	1.2592
	Mid	1.1038	1.0964	1.2714	1.2782
	High	1.0939	1.0989	1.2674	1.2882
3MHz	Low	2.6823	2.6823	2.9084	2.9250
	Mid	2.6873	2.6823	2.9261	2.9425
	High	2.6823	2.6773	2.9211	2.9125
5MHz	Low	4.5154	4.5254	5.104	5.0770
	Mid	4.5254	4.5054	5.115	5.0730
	High	4.5054	4.5354	5.047	5.1200
10MHz	Low	8.9310	8.9510	9.691	9.7430
	Mid	8.9510	8.9510	9.77	9.6490
	High	8.9710	8.9810	9.883	9.8290
15MHz	Low	13.4265	13.4825	14.818	14.8300
	Mid	13.5384	13.5384	14.999	14.8830
	High	13.5384	13.5664	15.019	14.9560
20MHz	Low	17.9100	17.9820	19.44	19.4450
	Mid	17.9460	17.9820	19.441	19.5420
	High	17.9460	17.9820	19.461	19.6520

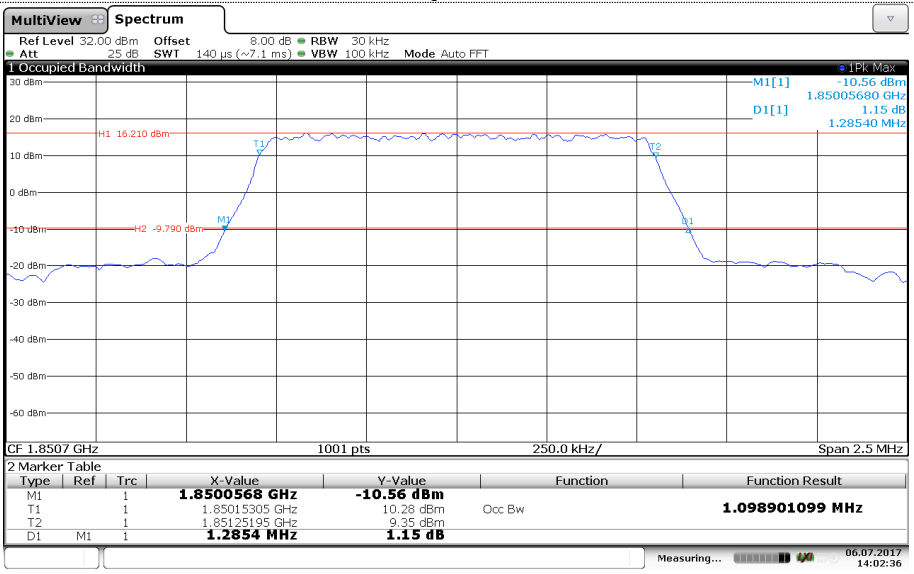
LTE Band 4					
Bandwidth	Channel	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
1.4MHz	Low	1.1013	1.0939	1.2880	1.2674
	Mid	1.0914	1.0989	1.2707	1.2825
	High	1.1038	1.0964	1.2717	1.2746
3MHz	Low	2.6823	2.6823	2.9105	2.9313
	Mid	2.6823	2.6823	2.9154	2.9368
	High	2.6823	2.6773	2.9161	2.9154
5MHz	Low	4.5254	4.5354	5.0780	5.0780
	Mid	4.5254	4.5154	5.0680	5.0680
	High	4.5054	4.5254	5.0450	5.1210
10MHz	Low	8.9310	8.9510	9.7190	9.7850
	Mid	8.9510	8.9510	9.8120	9.6480
	High	8.9510	8.9510	9.8260	9.7750
15MHz	Low	13.4545	13.5104	14.9080	14.9320
	Mid	13.4825	13.5104	14.9520	14.8350
	High	13.5104	13.5384	14.9780	14.9030
20MHz	Low	17.9100	17.9460	19.4380	19.5900
	Mid	17.9100	17.9100	19.2960	19.4710
	High	17.9820	17.9100	19.7030	19.4810

LTE Band 5					
Bandwidth	Channel	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
1.4MHz	Low	1.0964	1.0939	1.2767	1.2571
	Mid	1.0939	1.0964	1.2731	1.2810
	High	1.1013	1.0964	1.2703	1.2663
3MHz	Low	2.6823	2.6823	2.8948	2.9293
	Mid	2.6873	2.6823	2.9154	2.9397
	High	2.6823	2.6773	2.9229	2.9113
5MHz	Low	4.5154	4.5254	5.1010	5.0860
	Mid	4.5254	4.5154	5.0740	5.0560
	High	4.4955	4.5254	5.0600	5.0860
10MHz	Low	8.9310	8.9310	9.6610	9.7100
	Mid	8.9710	8.9510	9.8020	9.7670
	High	8.9510	8.9510	9.8490	9.8110

LTE Band 7					
Bandwidth	Channel	99% Occupy bandwidth (MHz)		-26dB bandwidth (MHz)	
		QPSK	16QAM	QPSK	16QAM
5MHz	Low	4.5154	4.5254	5.0910	5.0560
	Mid	4.5254	4.5054	5.0840	5.0750
	High	4.5054	4.5254	5.0550	5.0940
10MHz	Low	8.9310	8.9510	9.6840	9.7400
	Mid	8.9710	8.9310	9.8590	9.6530
	High	8.9510	8.9510	9.7460	9.6940
15MHz	Low	13.4825	13.5104	14.9010	14.9150
	Mid	13.5104	13.4825	15.0120	14.8830
	High	13.4545	13.4825	14.9390	14.9110
20MHz	Low	17.9100	17.9460	19.4510	19.6110
	Mid	17.9460	17.9460	19.4590	19.4500
	High	17.9460	17.8741	19.5490	19.4050

LTE Band 2-1.4MHz

QPSK



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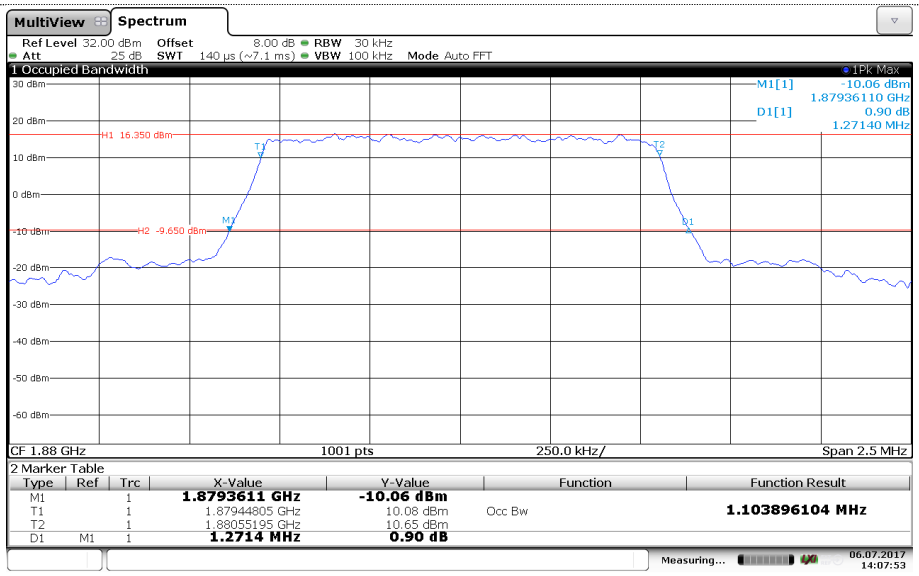

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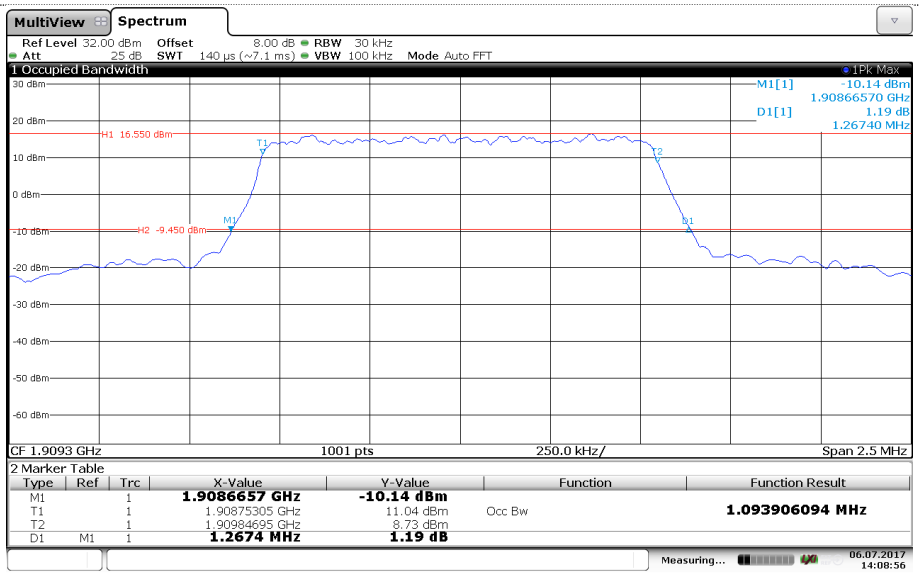

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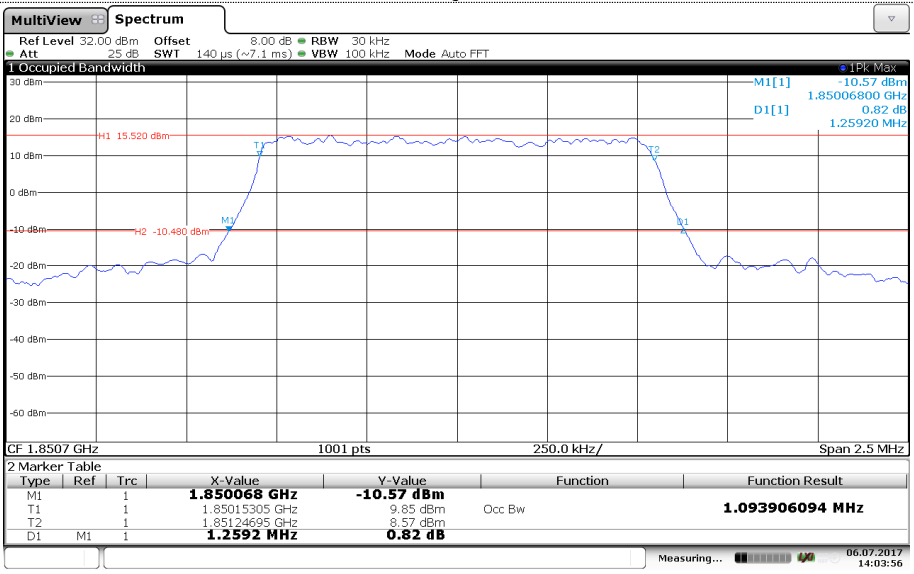
Channel High

LTE Band 2-1.4MHz

16QAM



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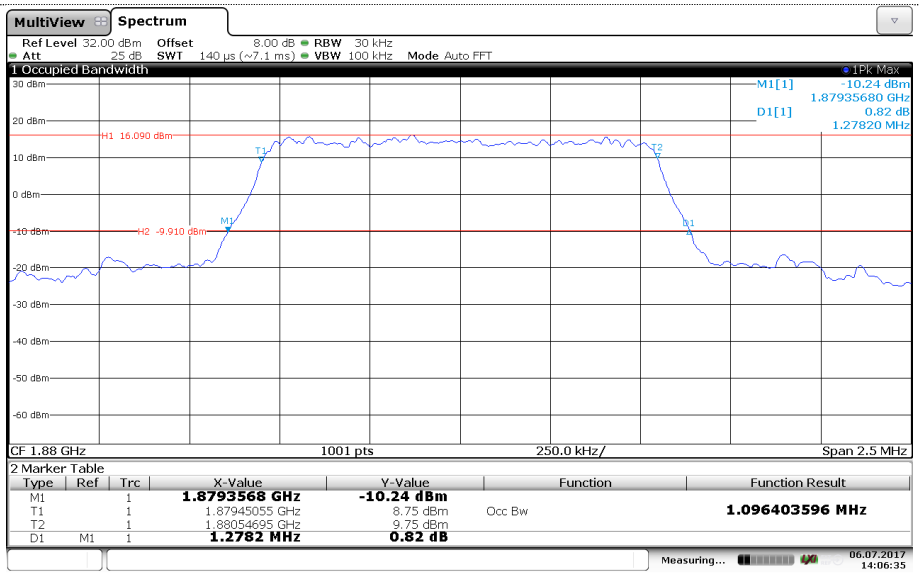
Channel Low



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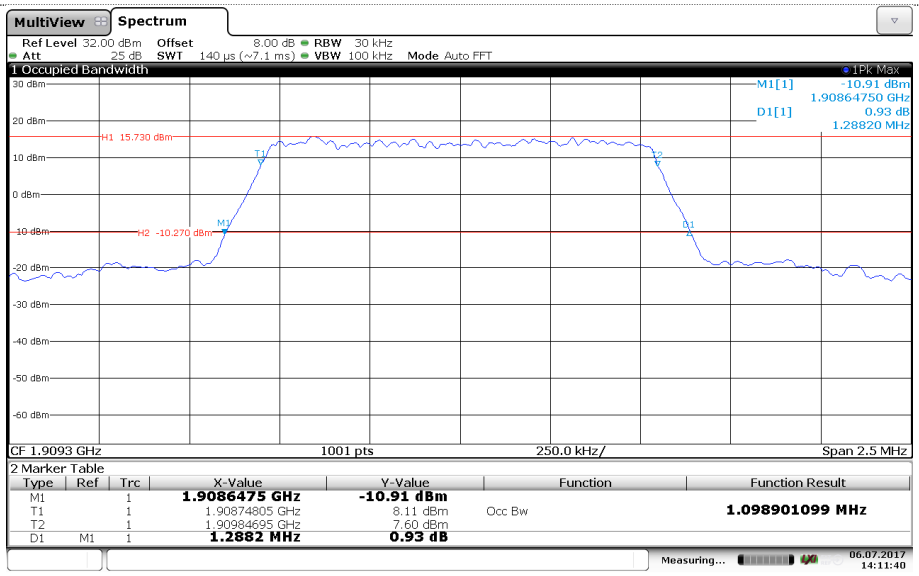
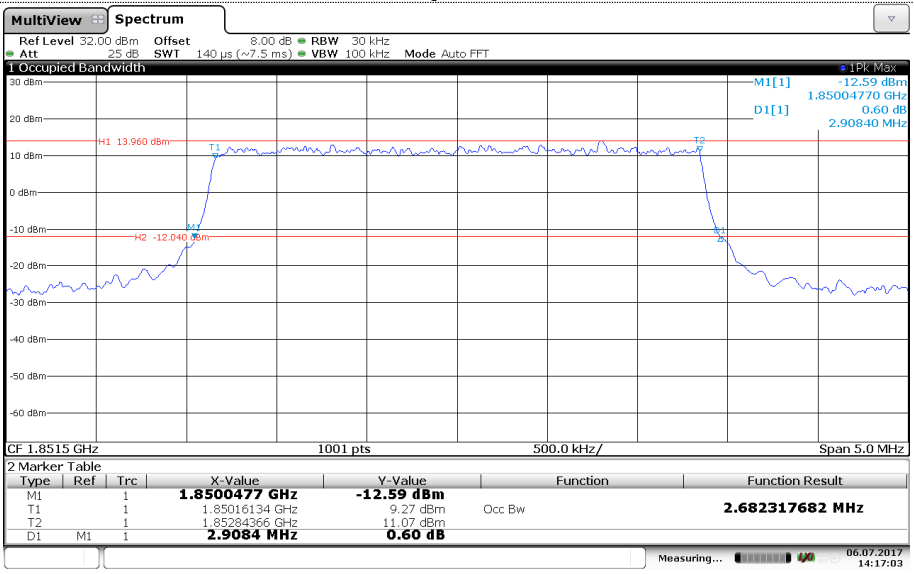


Date: 6.JUL.2017 14:11:40

Channel High

LTE Band 2-3MHz

QPSK



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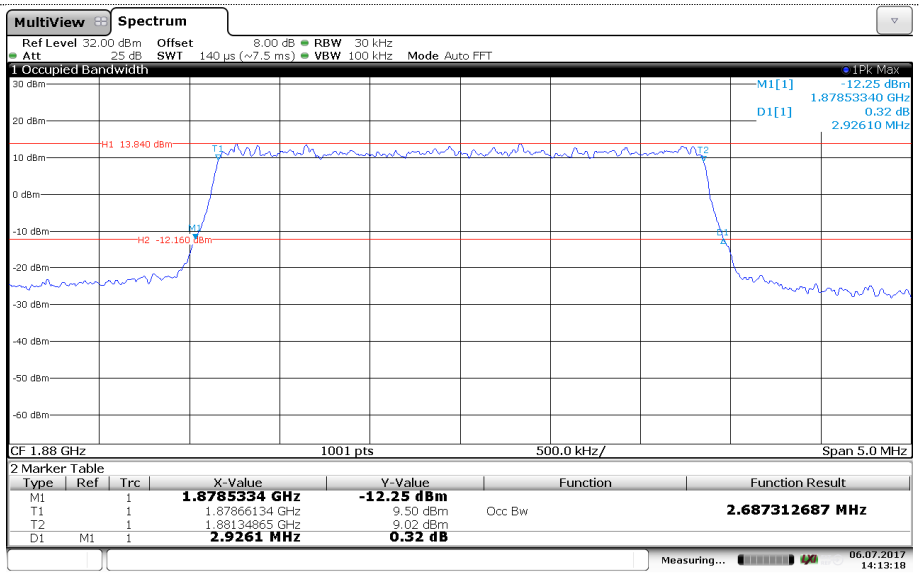
Channel Low



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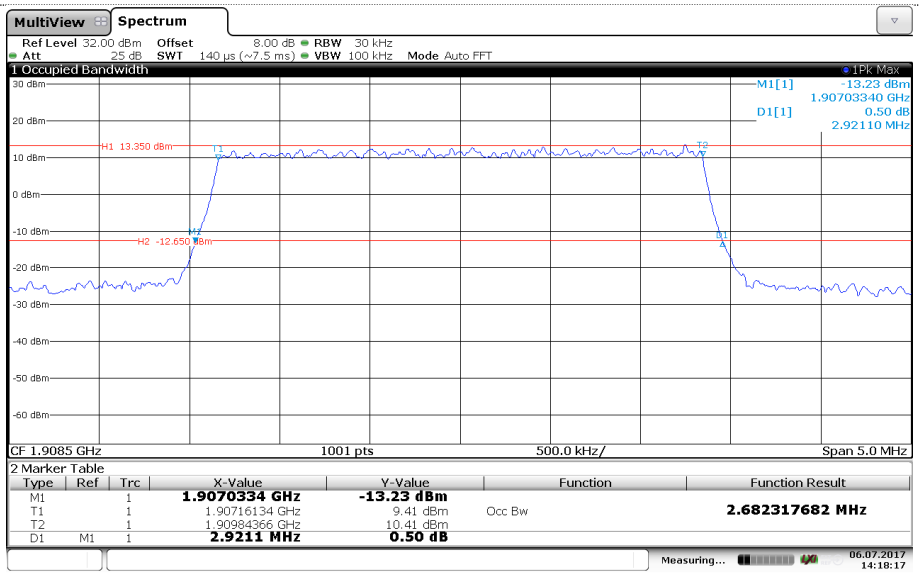
Channel Mid



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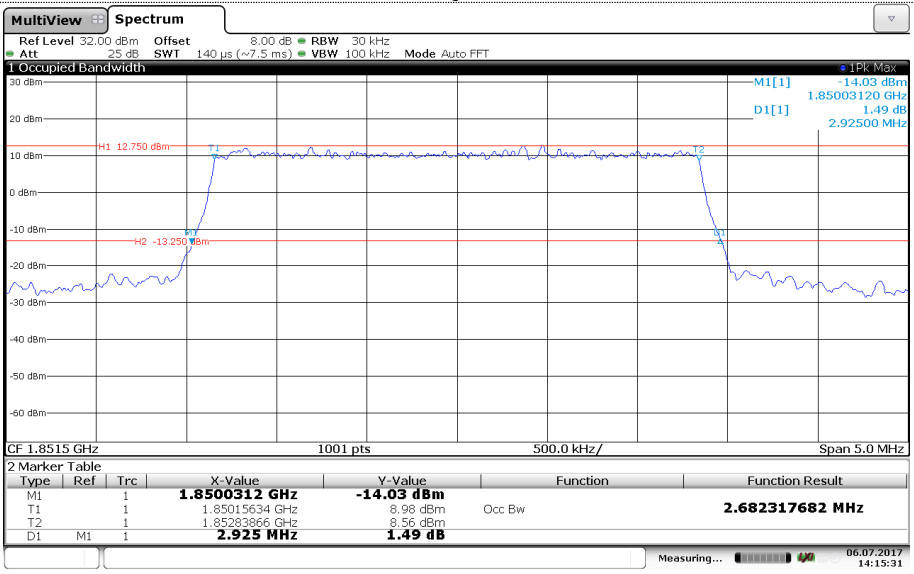
Channel High

LTE Band 2-3MHz

16QAM



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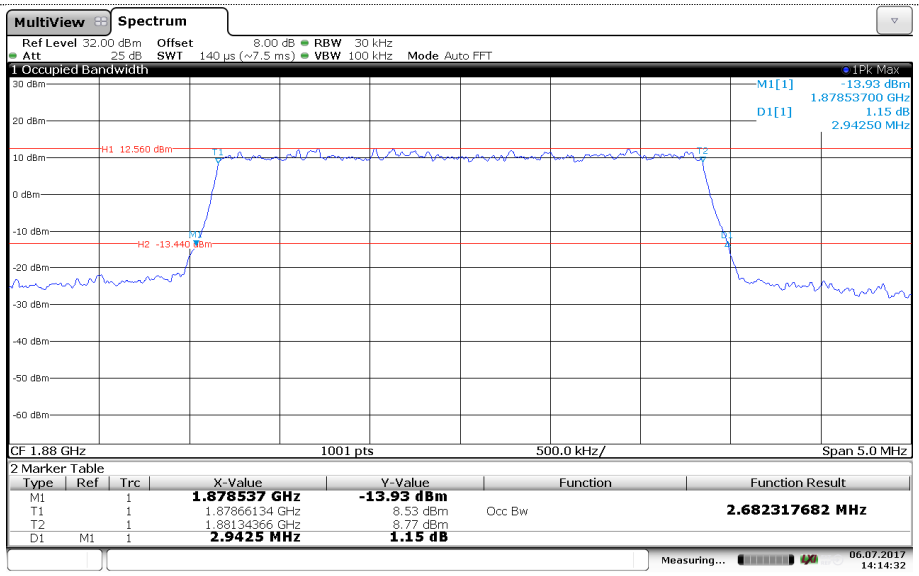
Channel Low



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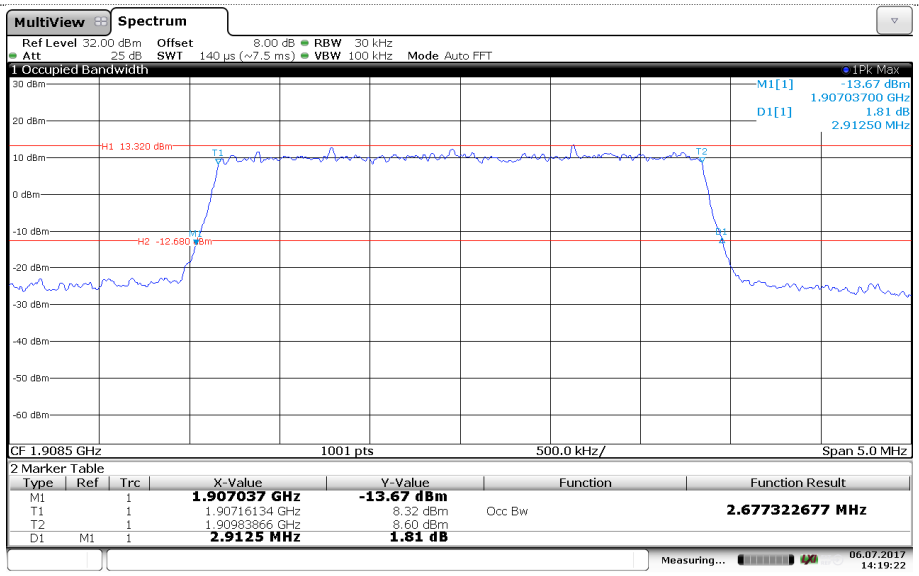
Channel Mid



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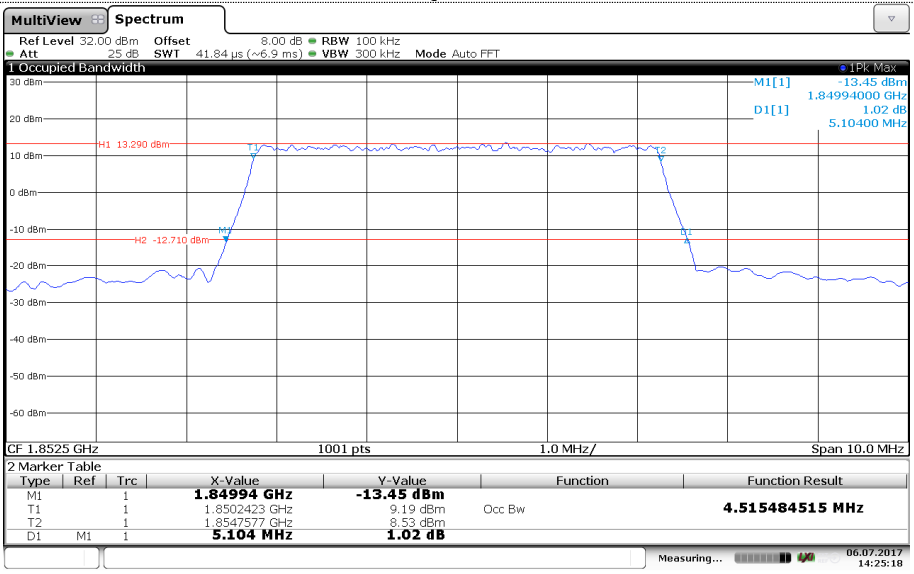
Channel High

LTE Band 2-5MHz

QPSK



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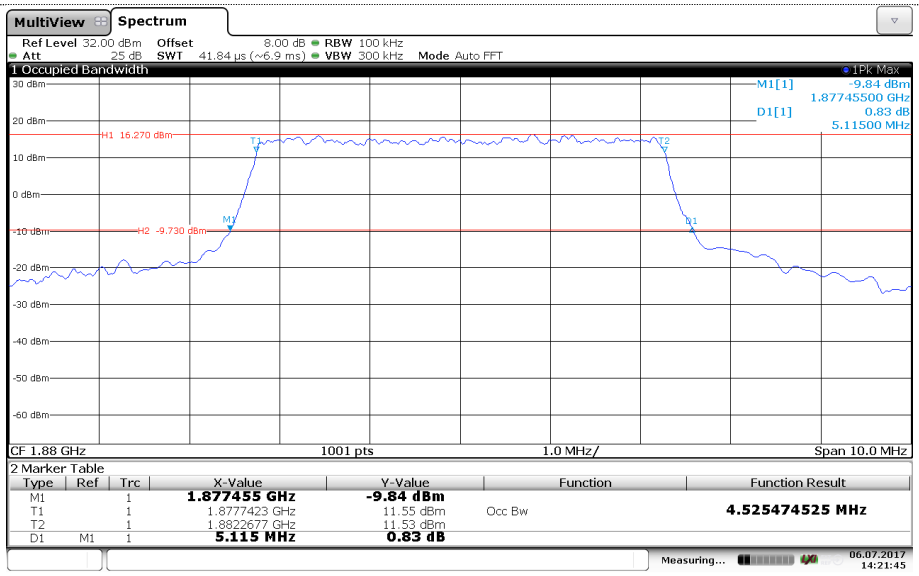

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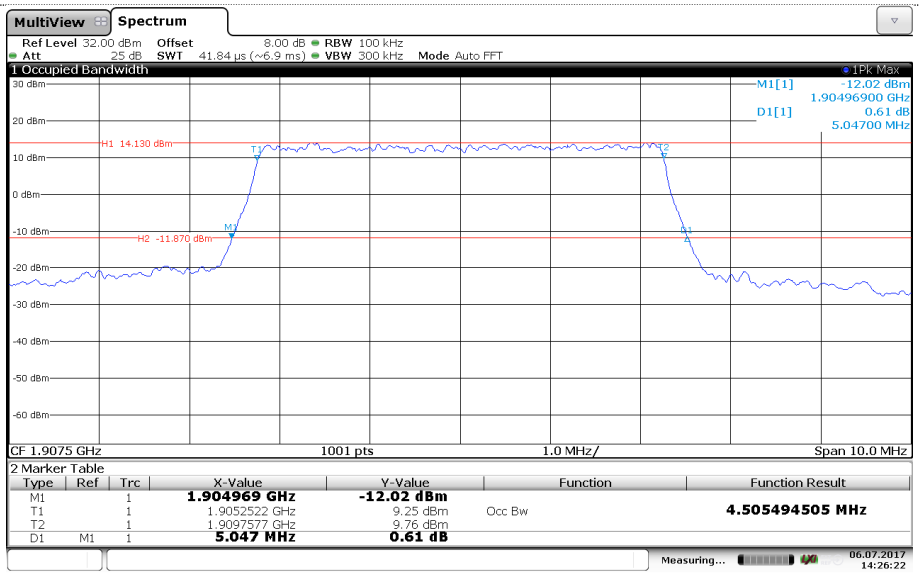
Channel Mid



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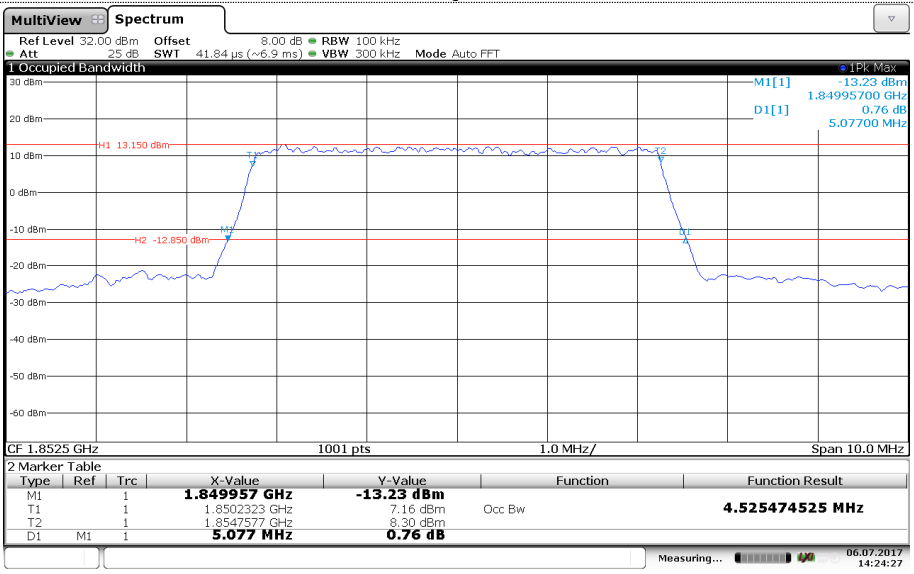
Channel High

LTE Band 2-5MHz

16QAM



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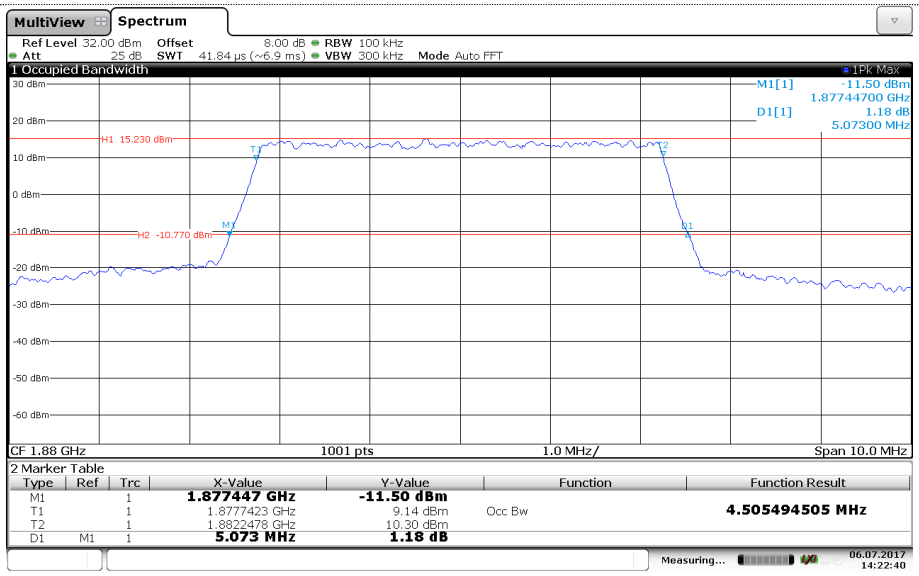

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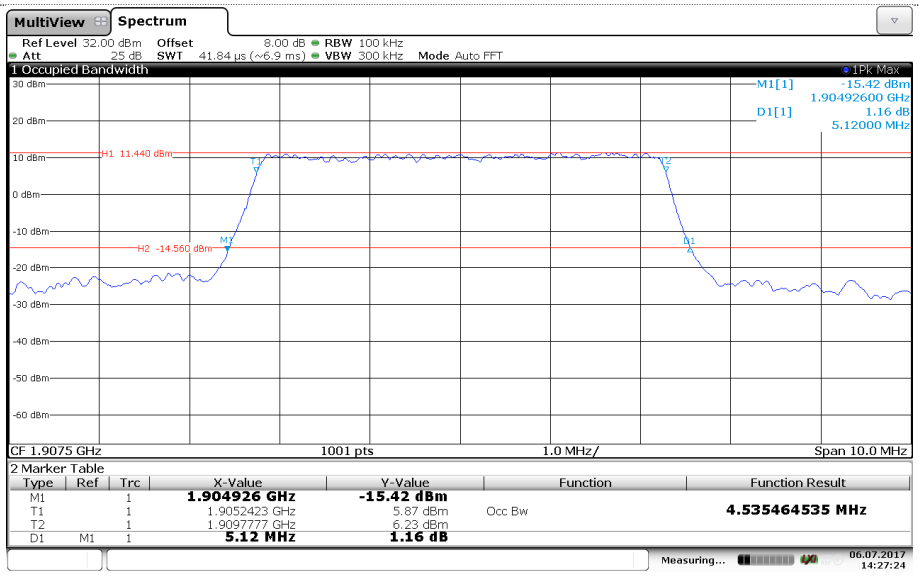
Channel Mid



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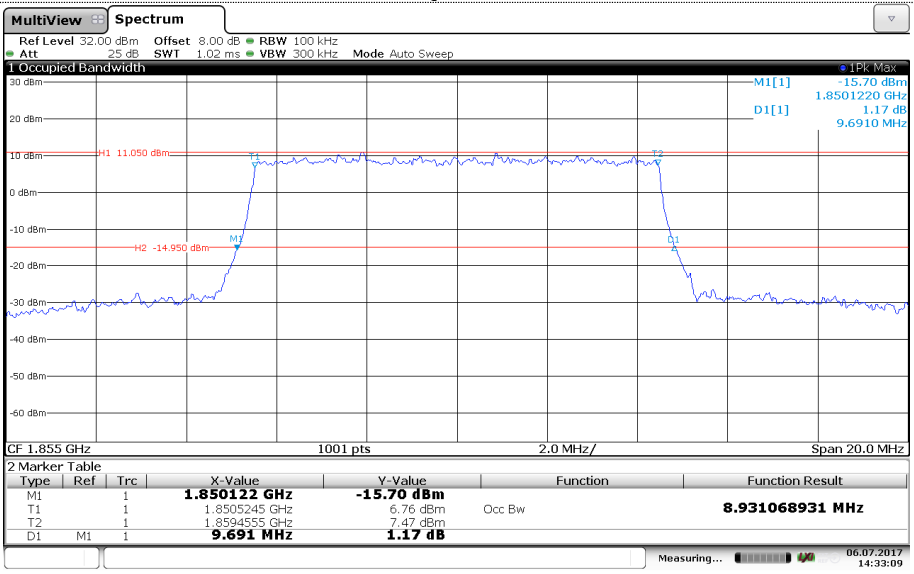
Channel High

LTE Band 2-10MHz

QPSK



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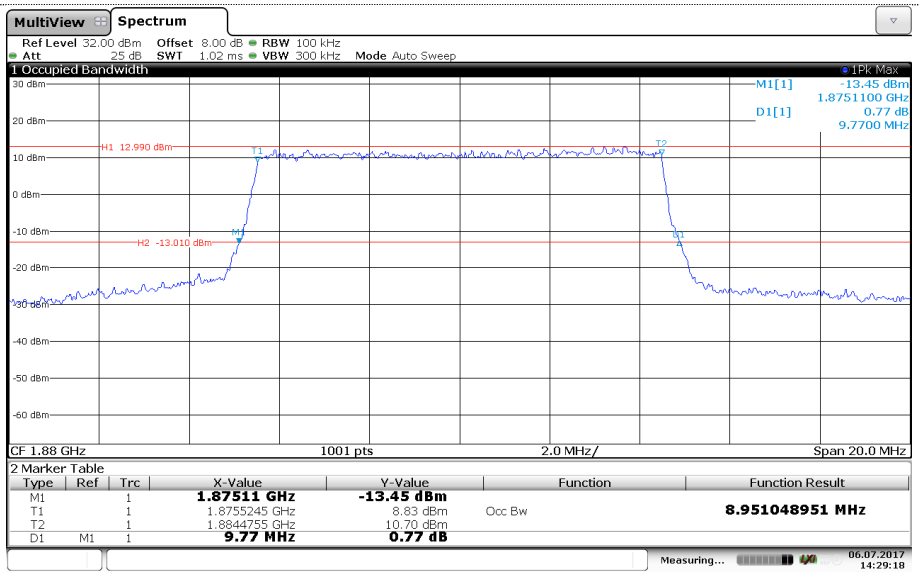

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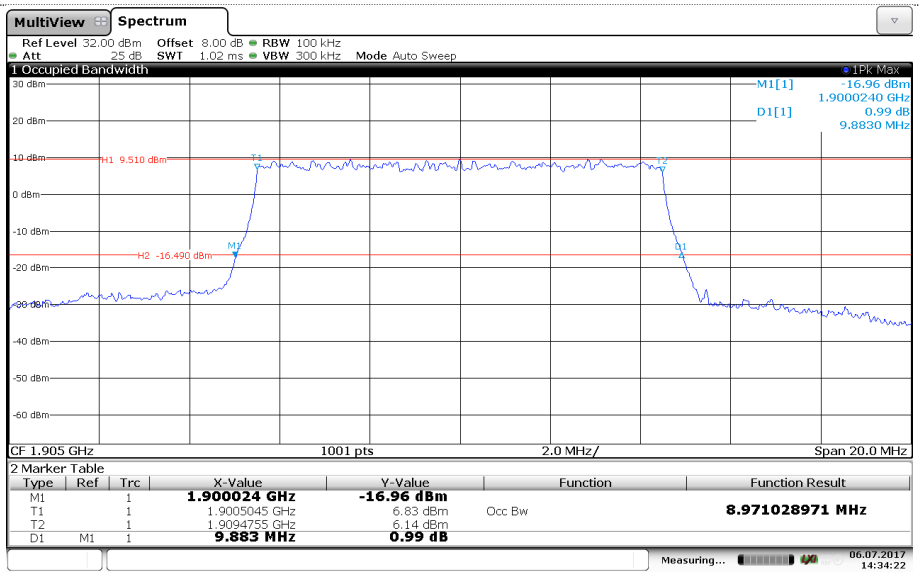
Channel Mid

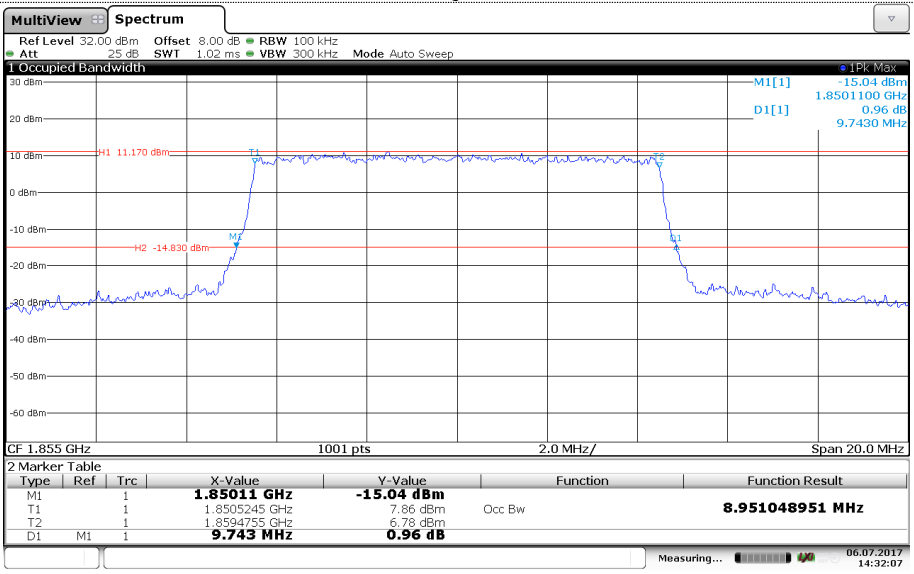


Date: 6.JUL.2017 14:34:22

Channel High

LTE Band 2-10MHz

16QAM



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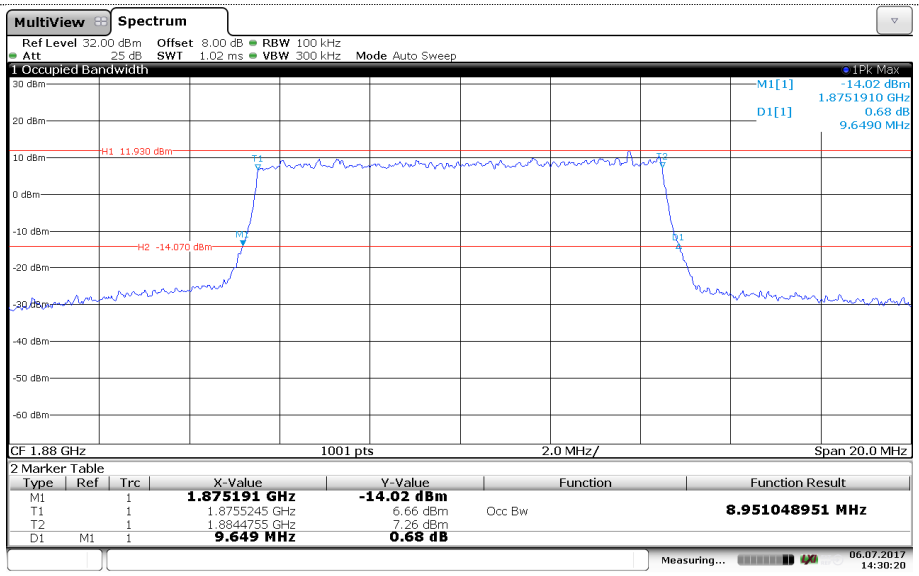

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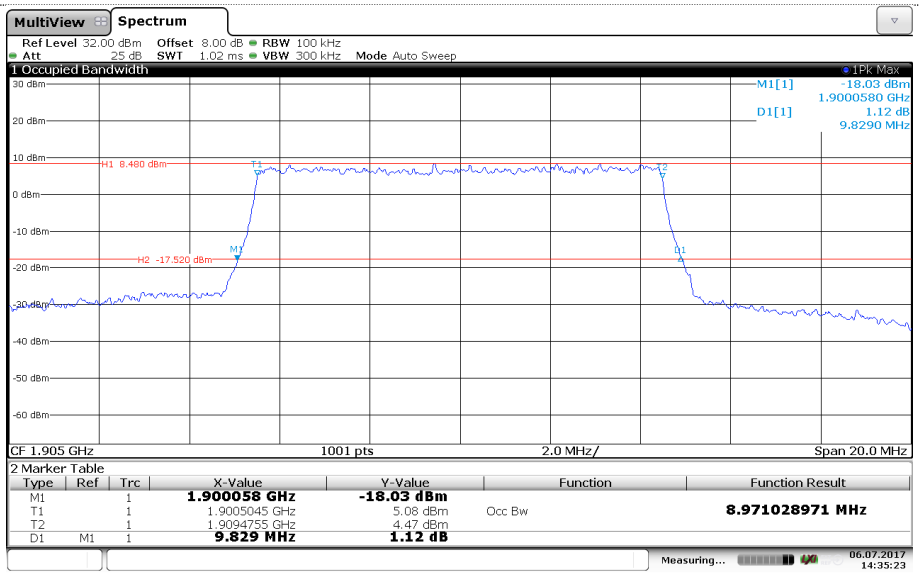
Channel Mid

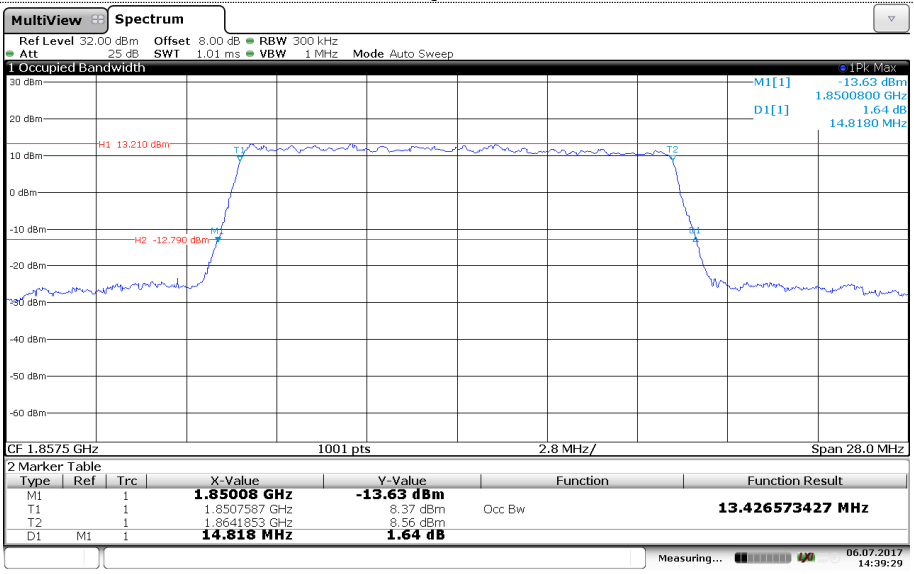


Date: 6.JUL.2017 14:35:22

Channel High

LTE Band 2-15MHz

QPSK



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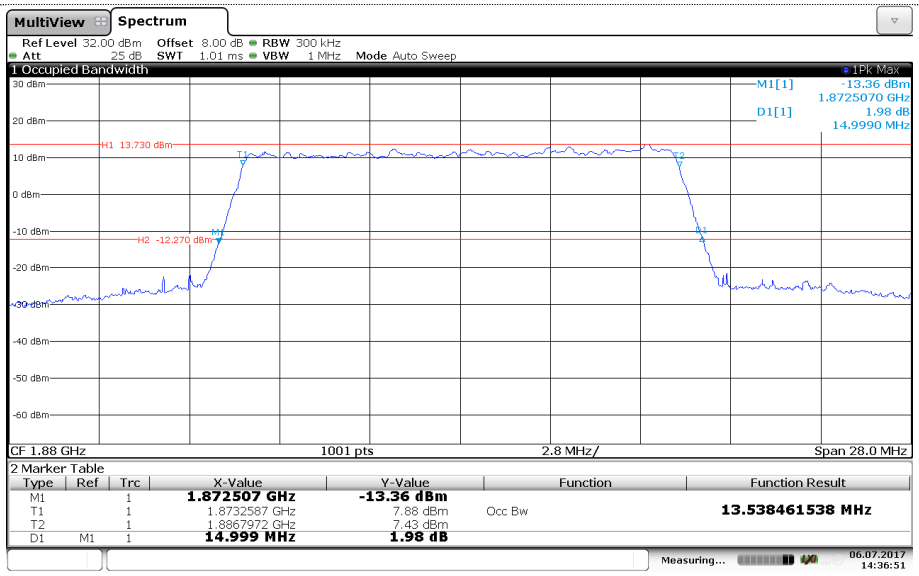
Channel Low



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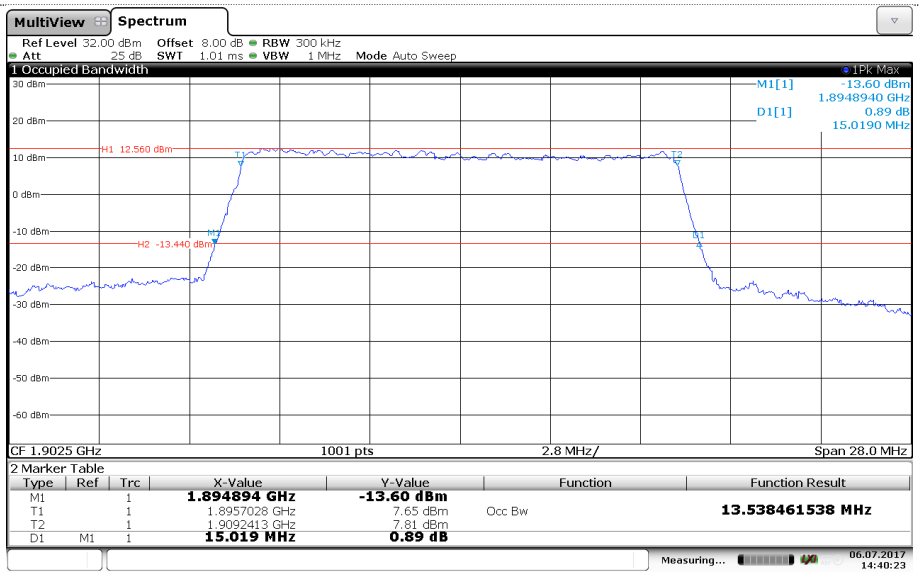
Channel Mid



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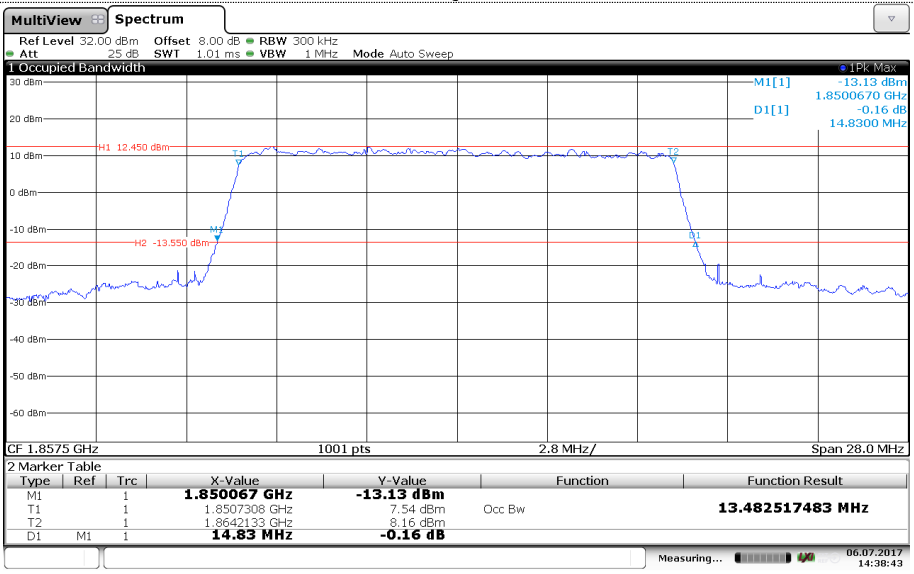
Channel High

LTE Band 2-15MHz

16QAM



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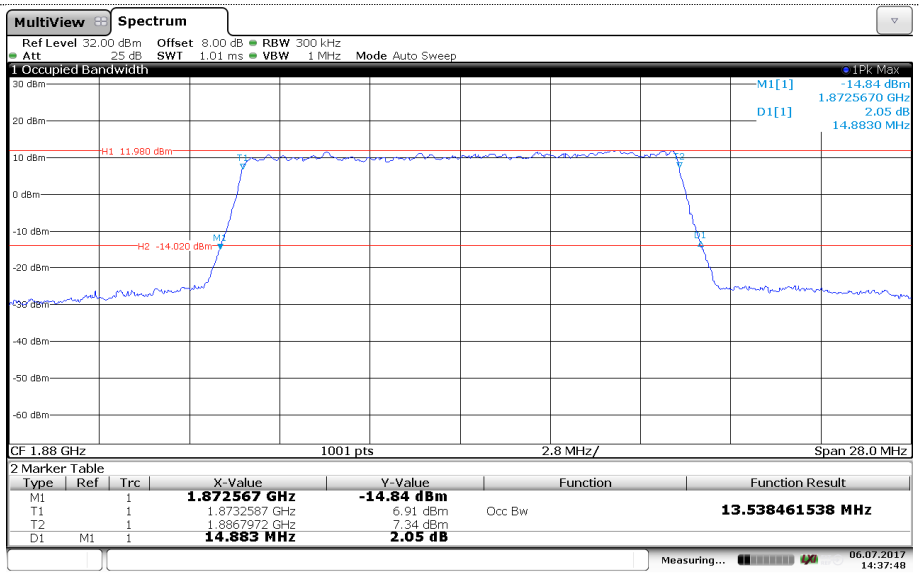
Channel Low



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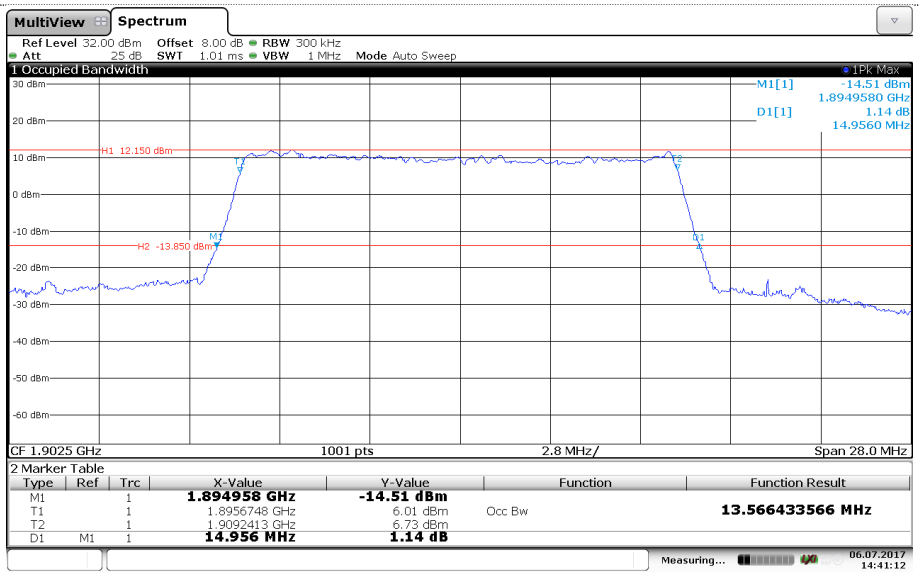
Channel Mid

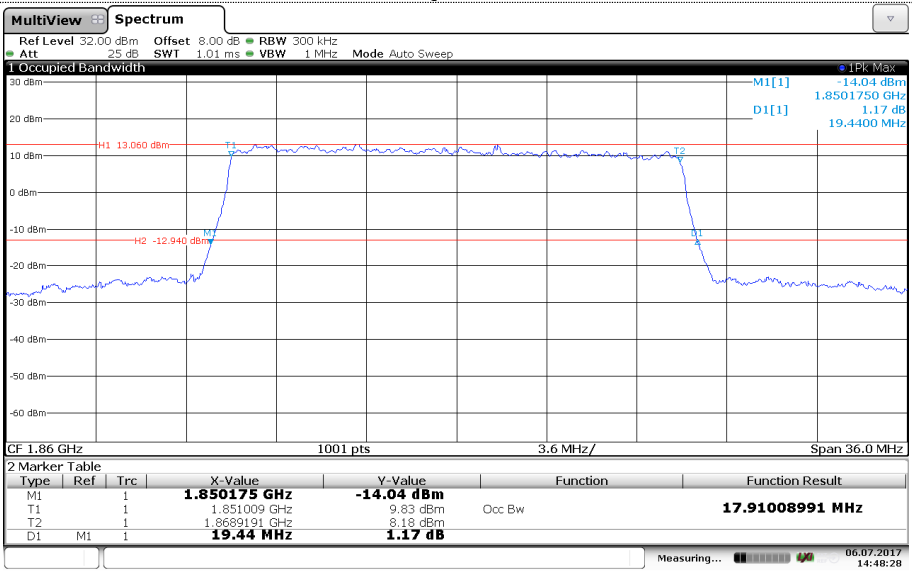


Date: 6.JUL.2017 14:41:13

Channel High

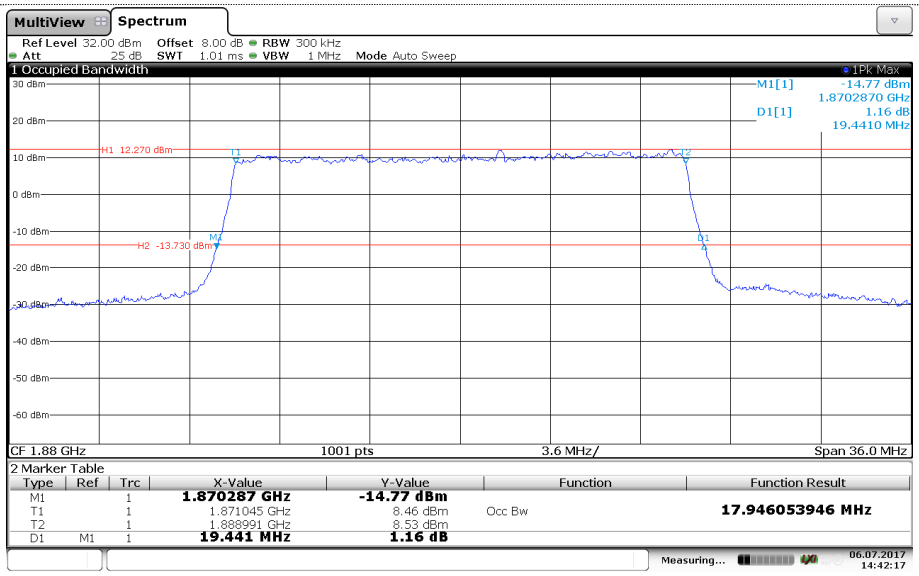
LTE Band 2-20MHz

QPSK



Date: 6.JUL.2017 14:48:29

Channel Low



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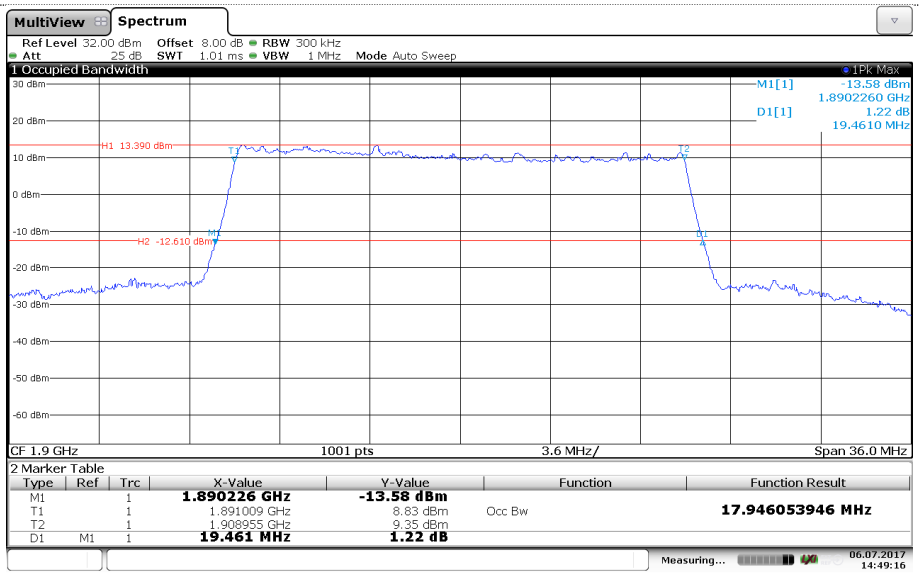
Channel Mid



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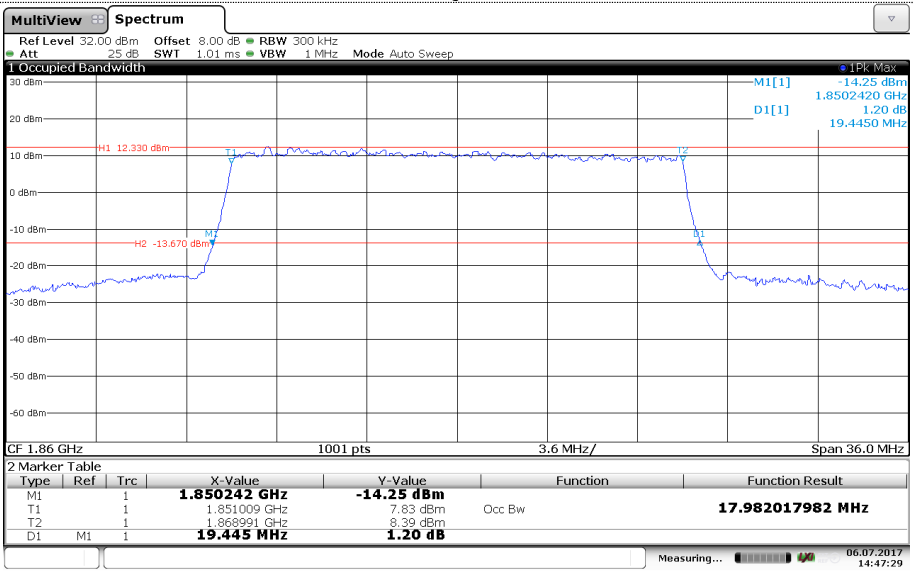
Channel High

LTE Band 2-20MHz

16QAM



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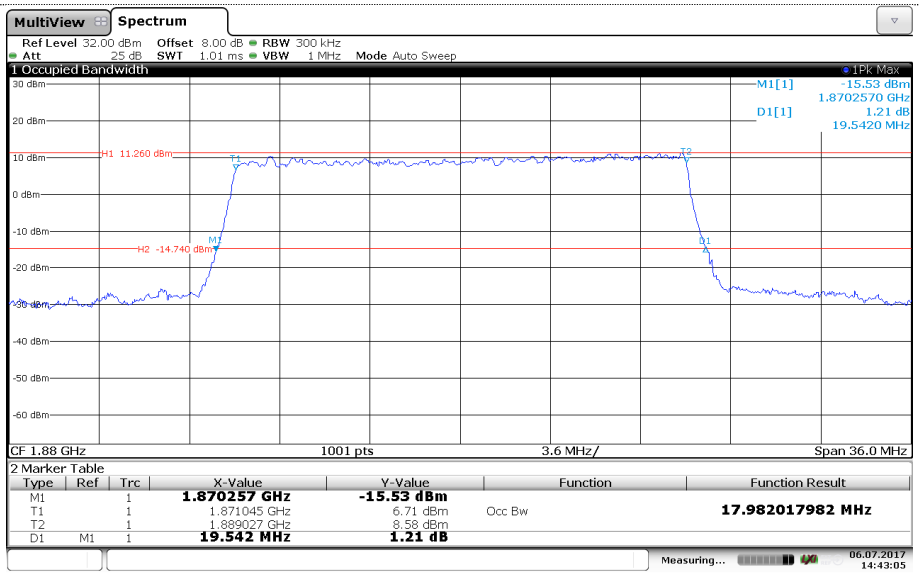
Channel Low



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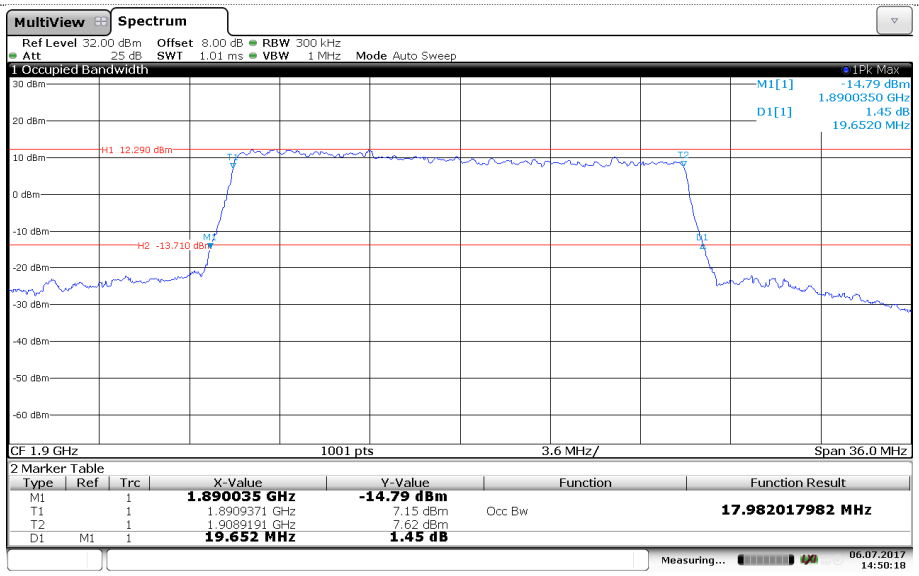
Channel Mid

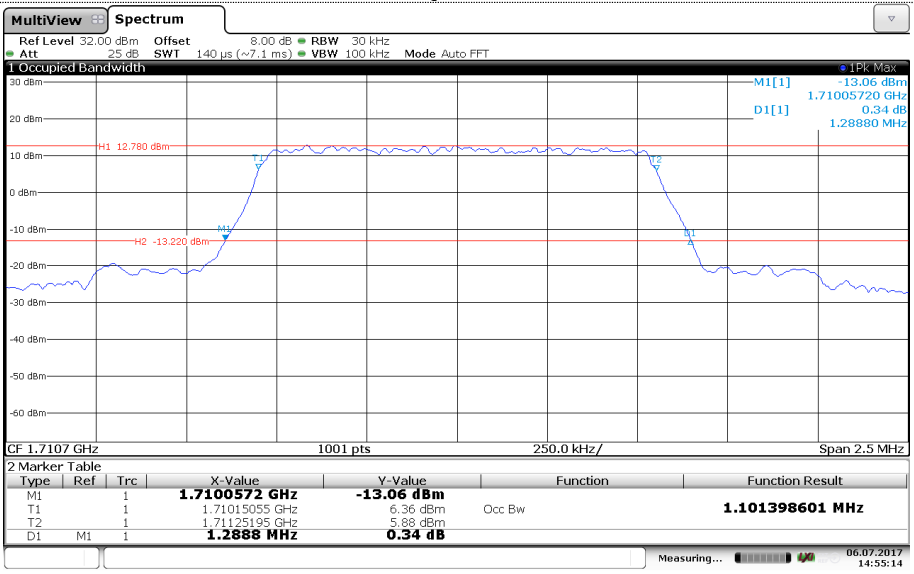


Date: 6.JUL.2017 14:50:17

Channel High

LTE Band 4-1.4MHz

QPSK



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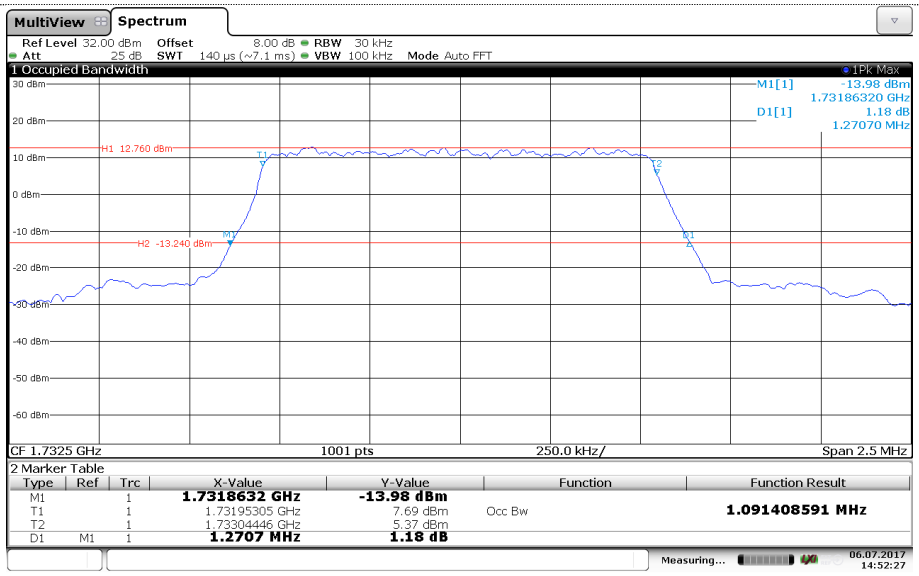
Channel Low



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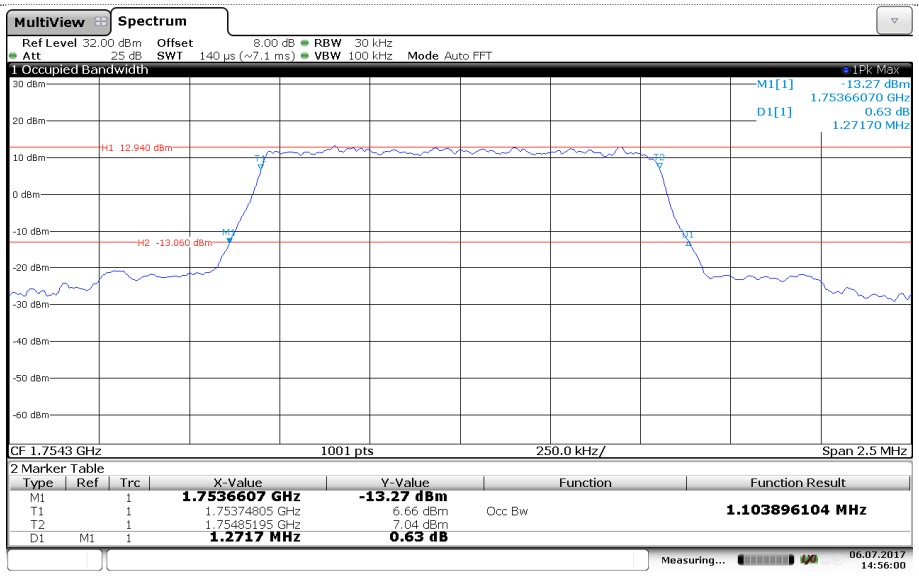
Channel Mid

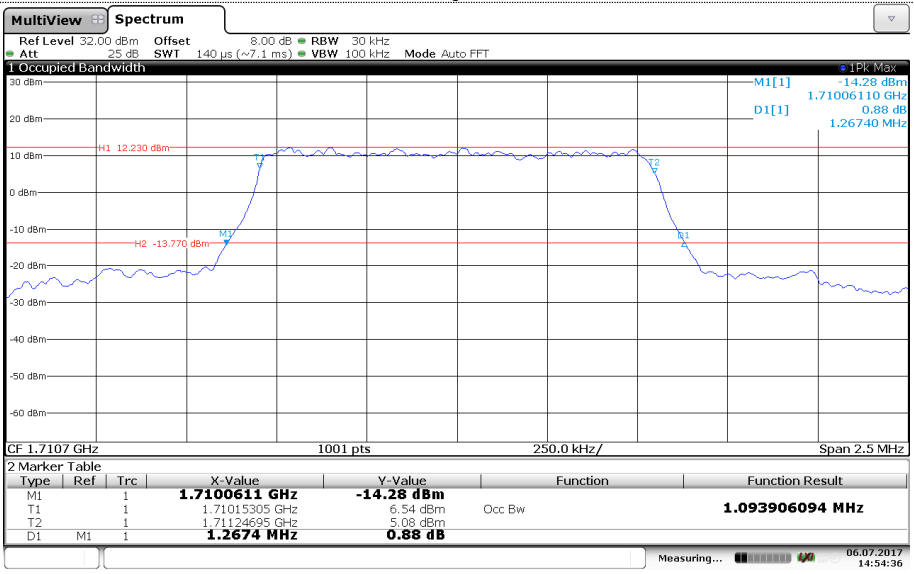


Date: 6.JUL.2017 14:55:59

Channel High

LTE Band 4-1.4MHz

16QAM



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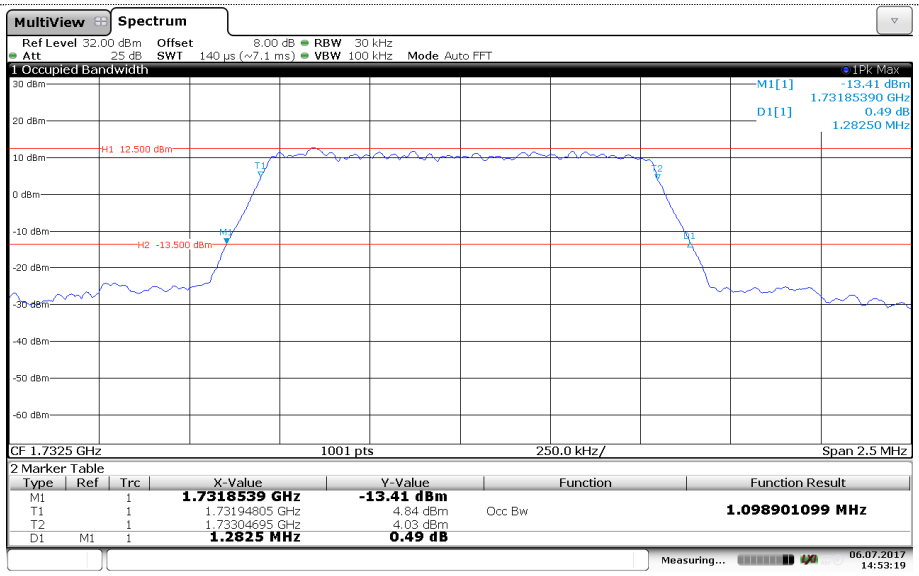
Channel Low



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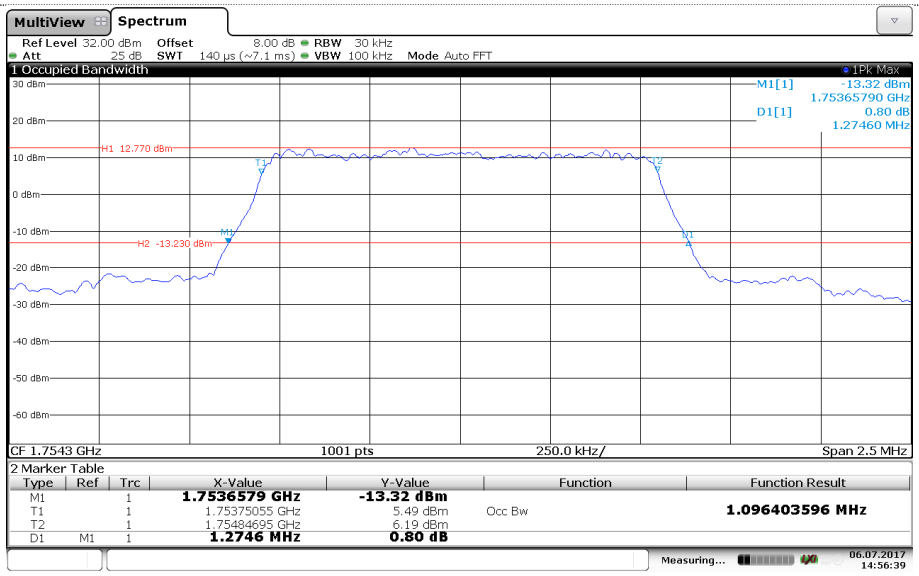
Channel Mid

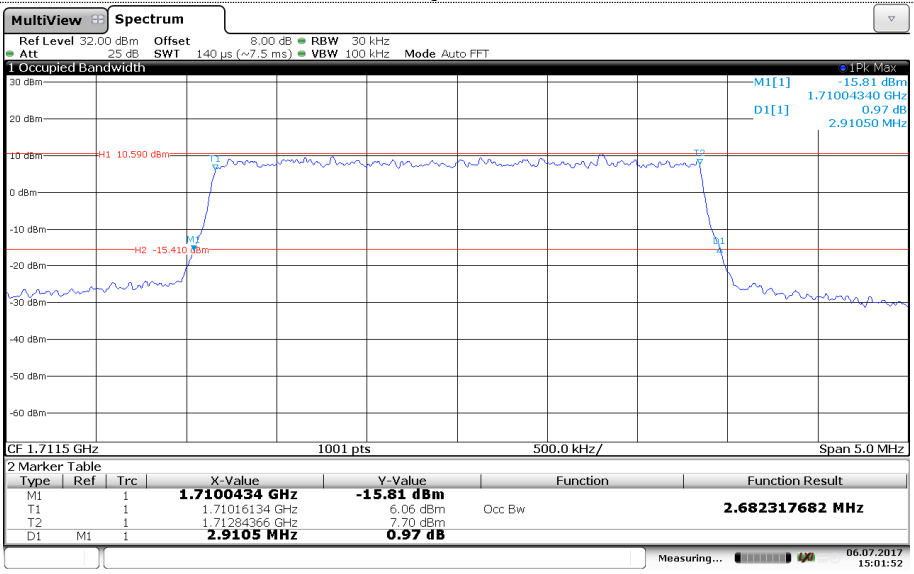


Date: 6.JUL.2017 14:56:39

Channel High

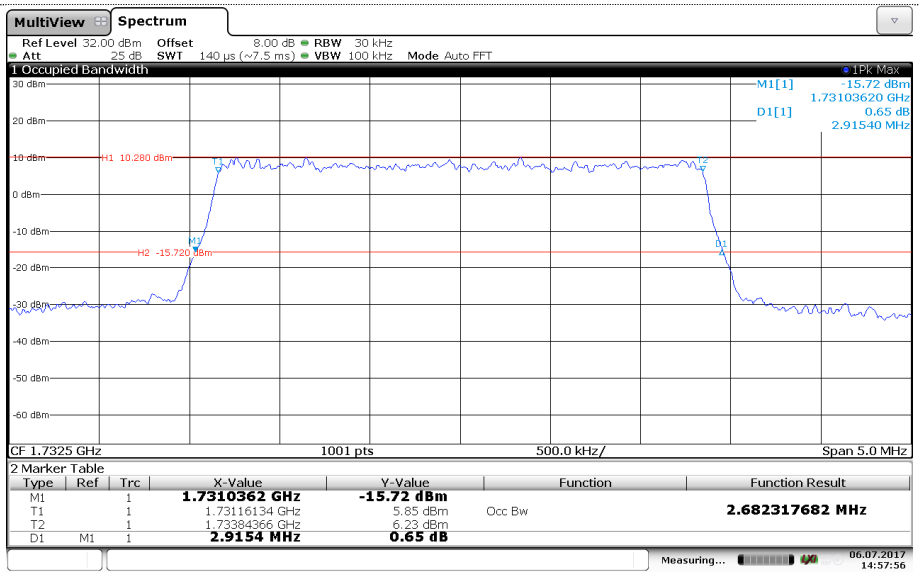
LTE Band 4-3MHz

QPSK



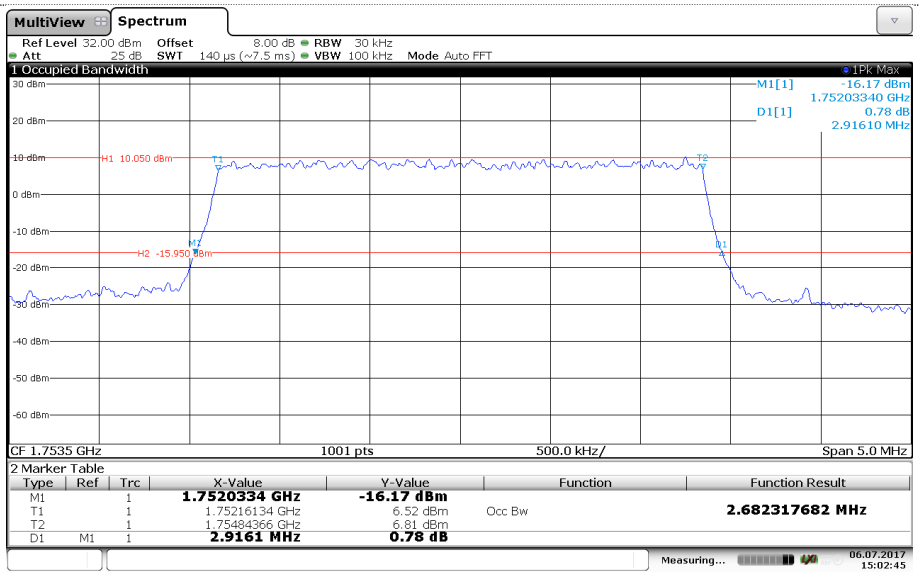
Date: 6.JUL.2017 15:01:52

Channel Low



Date: 6.JUL.2017 14:57:56

Channel Mid

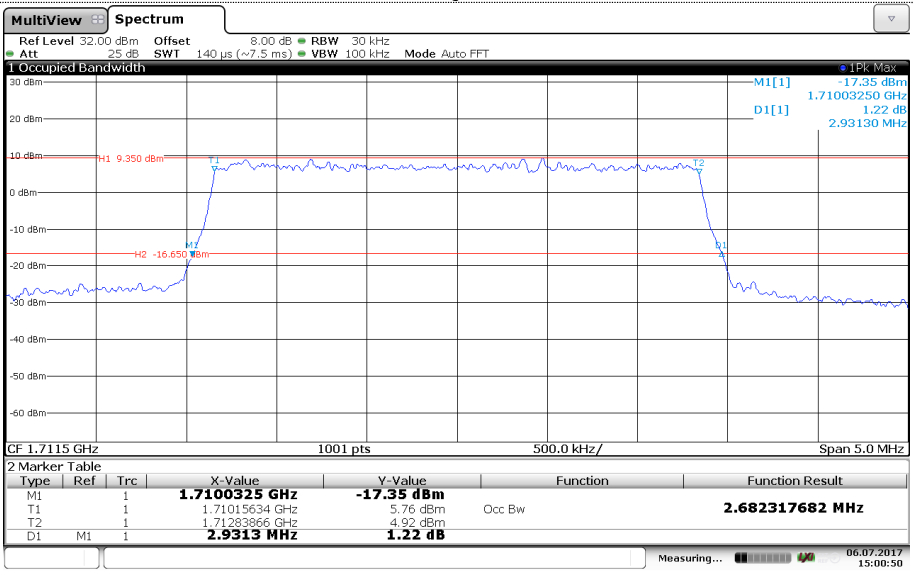


Date: 6.JUL.2017 15:02:45

Channel High

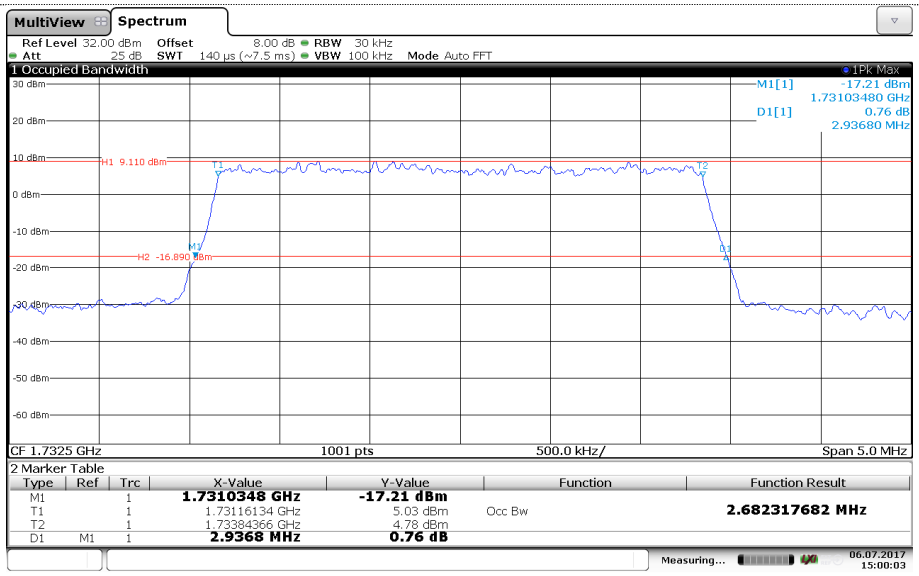
LTE Band 4-3MHz

16QAM



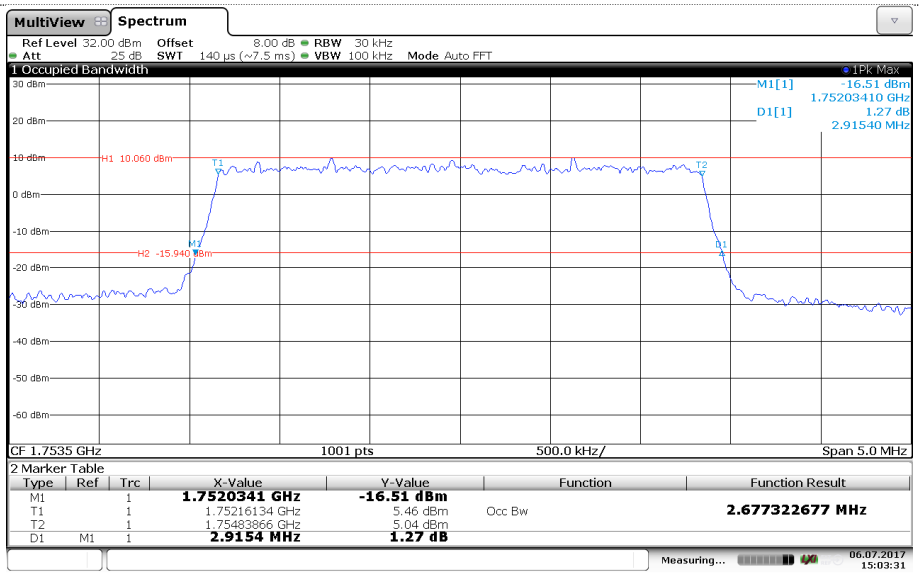
Date: 6.JUL.2017 15:00:50

Channel Low



Date: 6.JUL.2017 15:00:03

Channel Mid

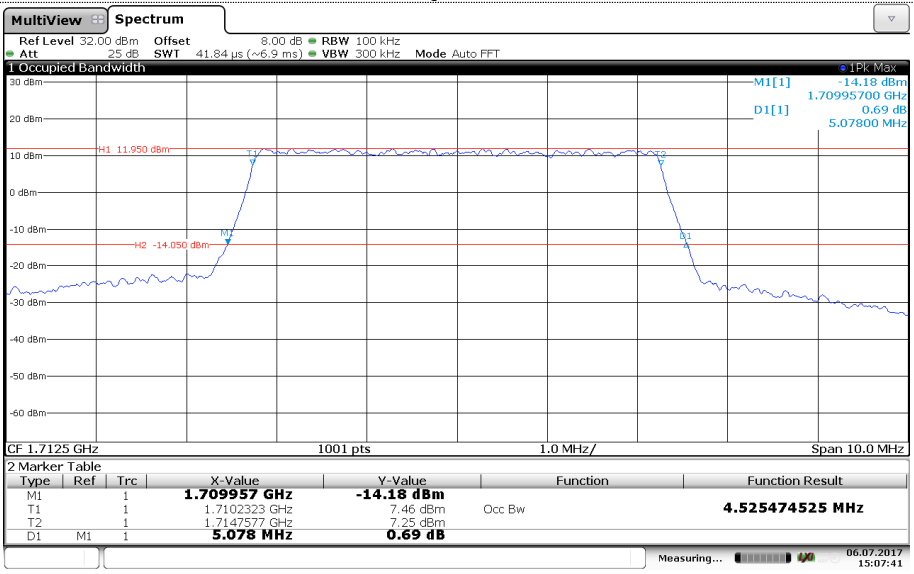


Date: 6.JUL.2017 15:03:31

Channel High

LTE Band 4-5MHz

QPSK



Date: 6.JUL.2017 15:07:42

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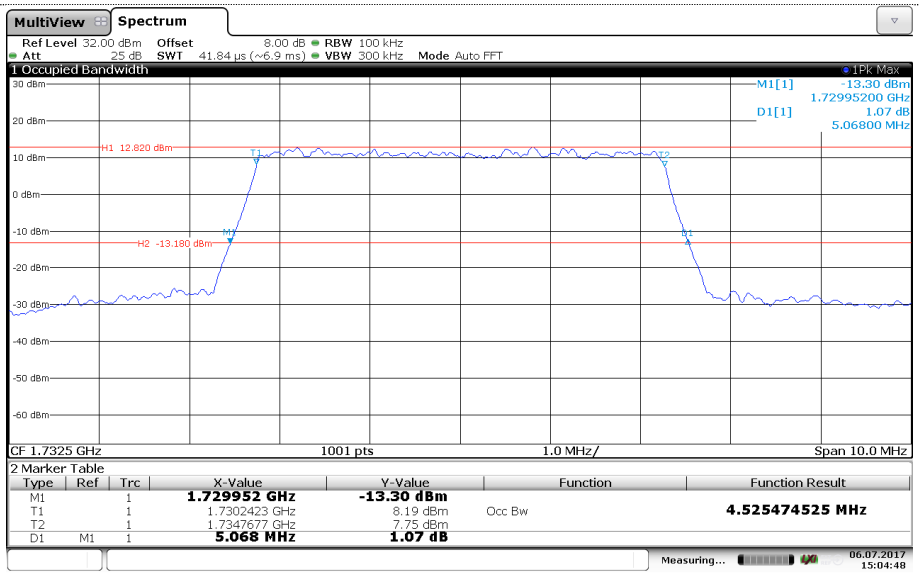
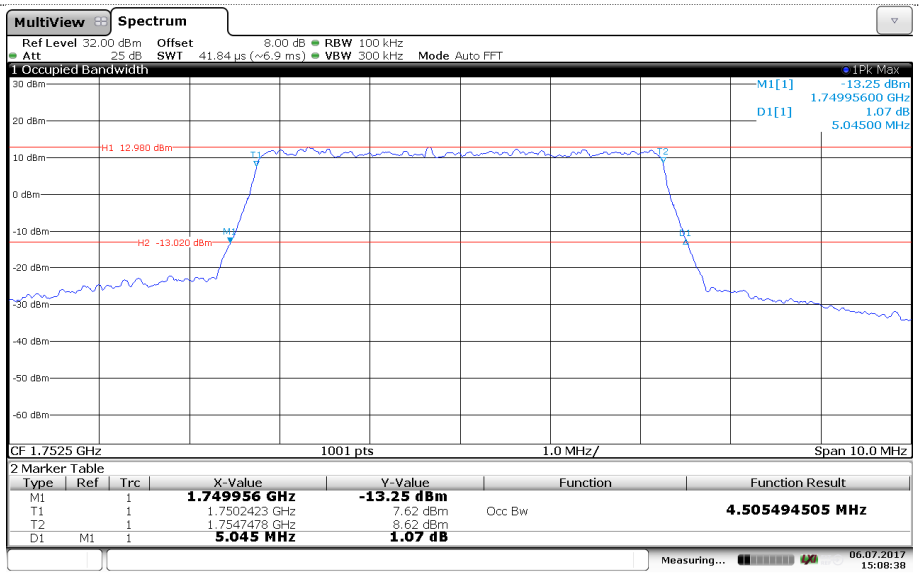


Date: 6.JUL.2017 15:04:48

Channel Mid

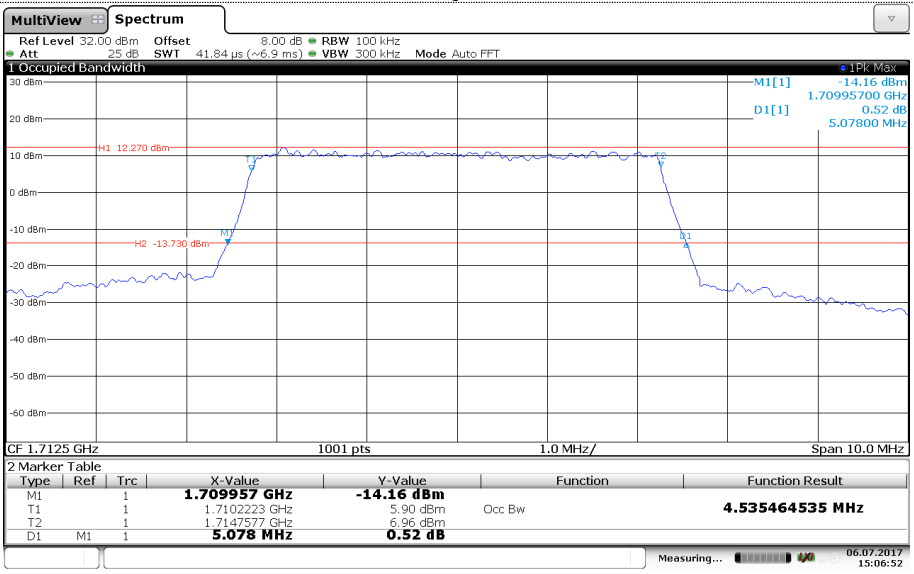


Date: 6.JUL.2017 15:08:38

Channel High

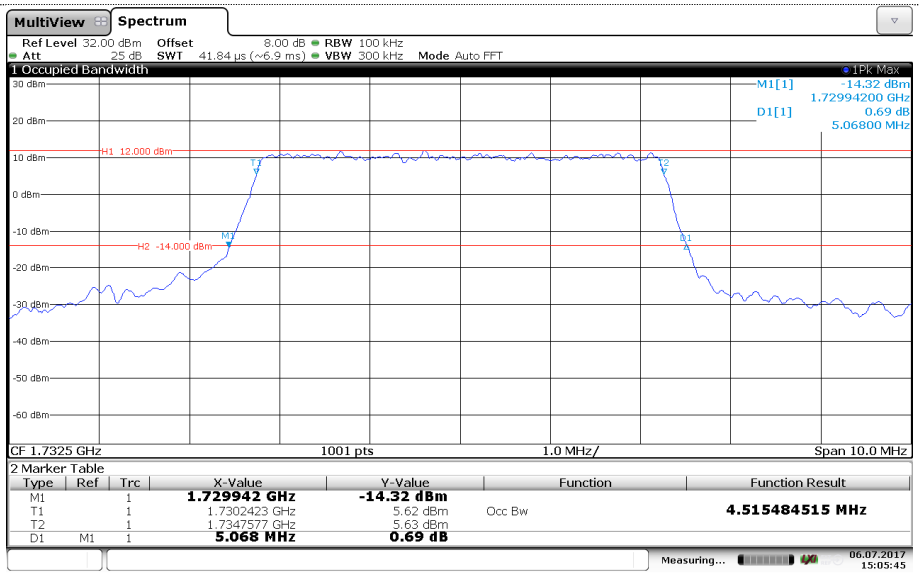
LTE Band 4-5MHz

16QAM



Date: 6.JUL.2017 15:06:51

Channel Low



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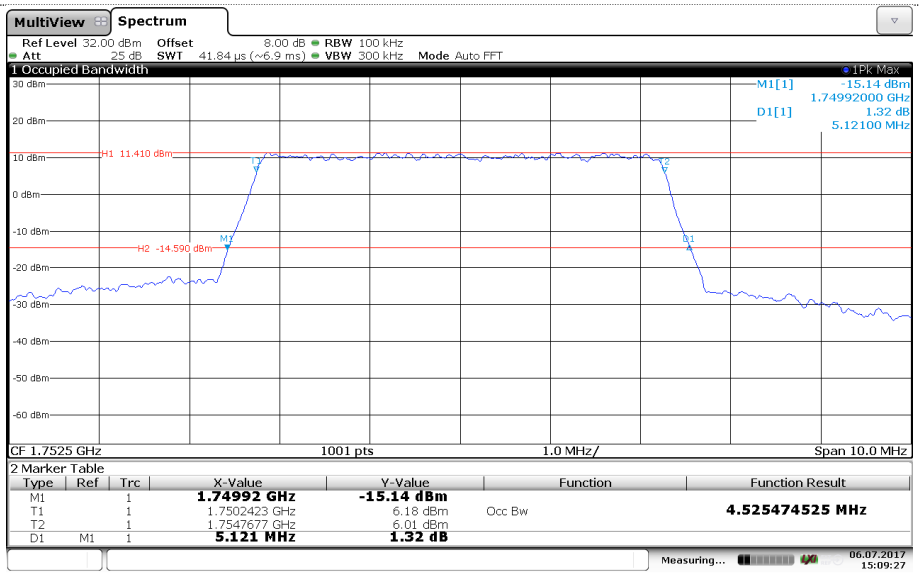
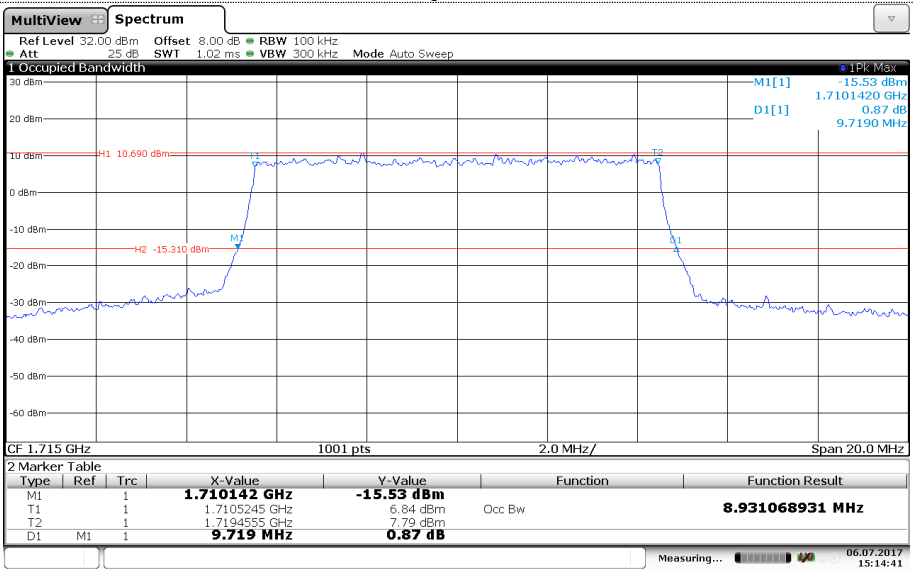


Date: 6.JUL.2017 15:09:27

Channel High

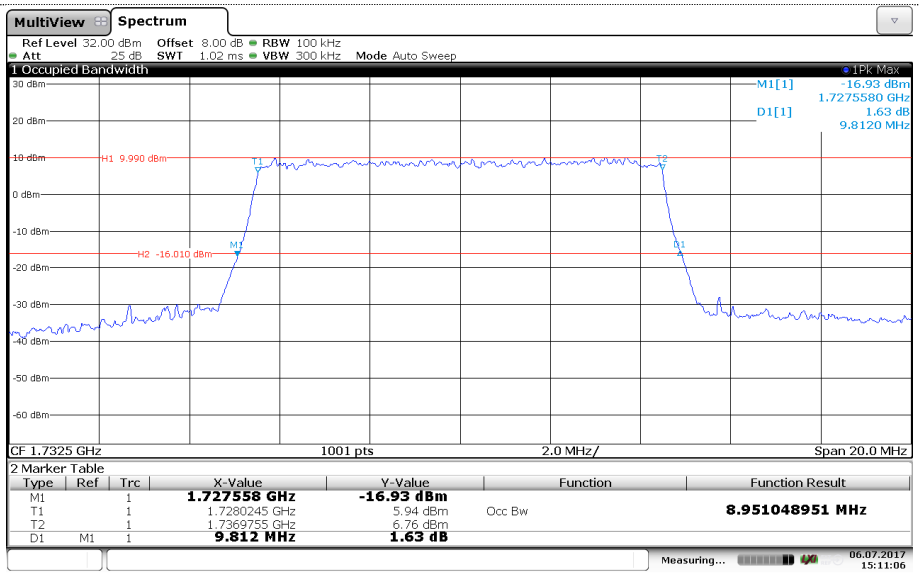
LTE Band 4-10MHz

QPSK



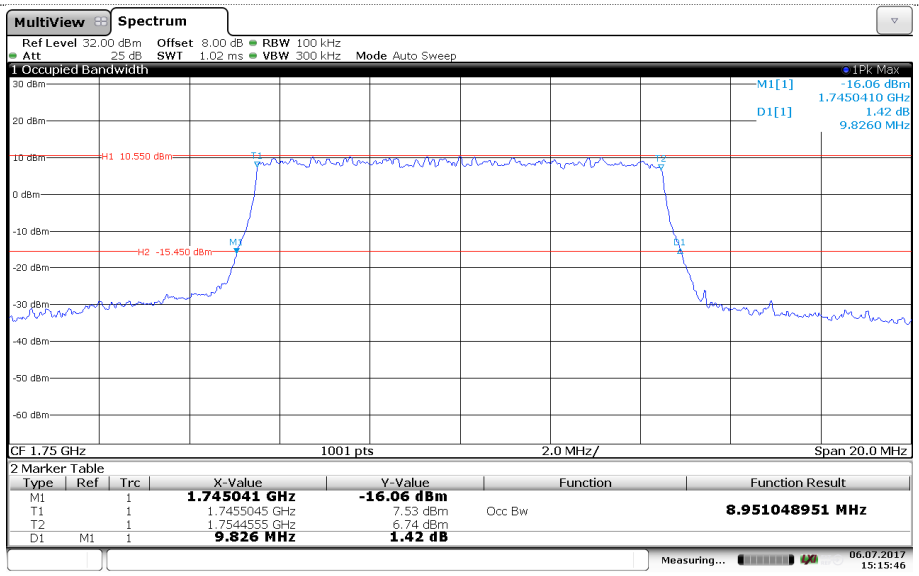
Date: 6.JUL.2017 15:14:41

Channel Low



Date: 6.JUL.2017 15:11:06

Channel Mid

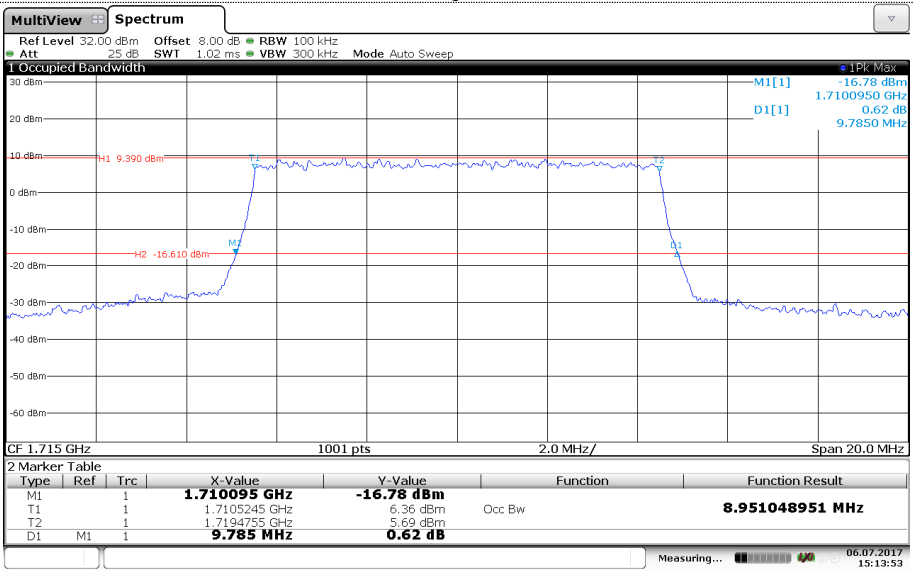


Date: 6.JUL.2017 15:15:46

Channel High

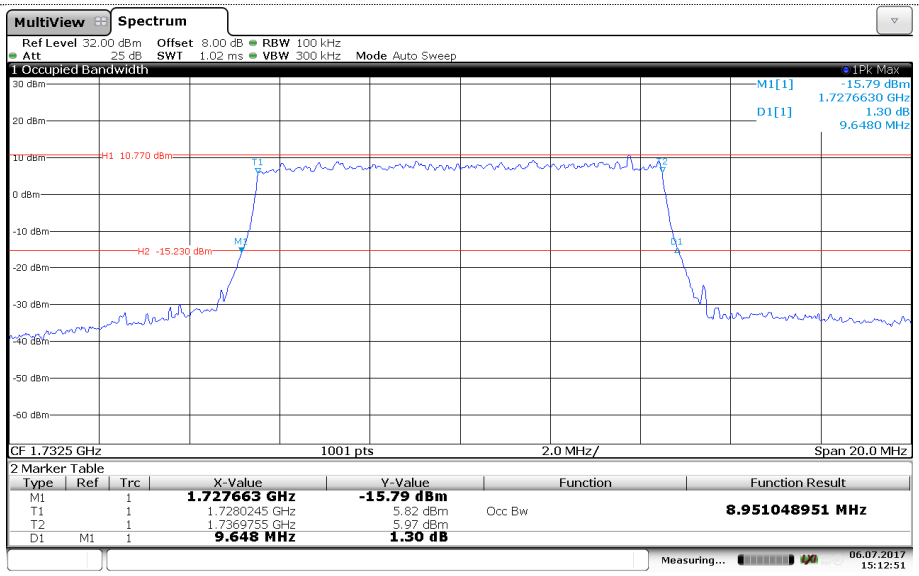
LTE Band 4-10MHz

16QAM



Date: 6.JUL.2017 15:13:53

Channel Low



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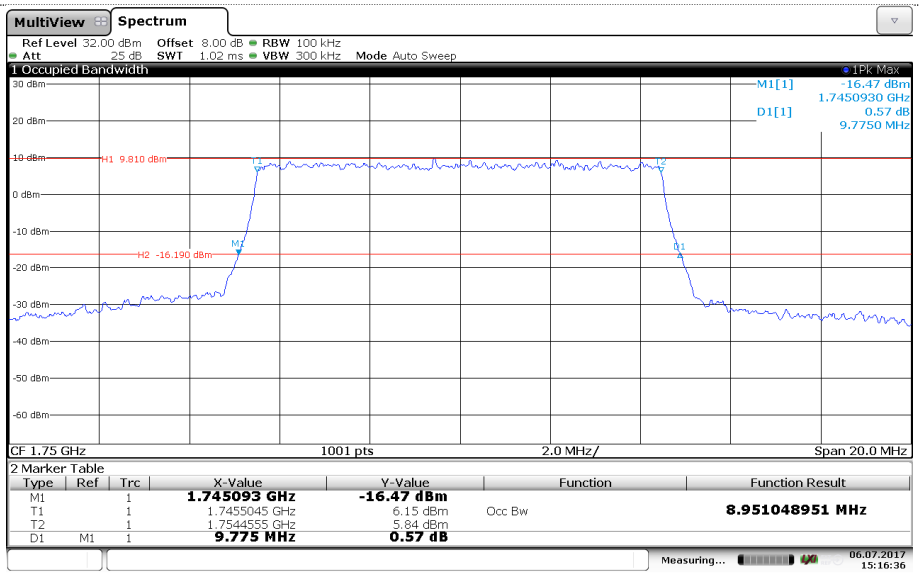
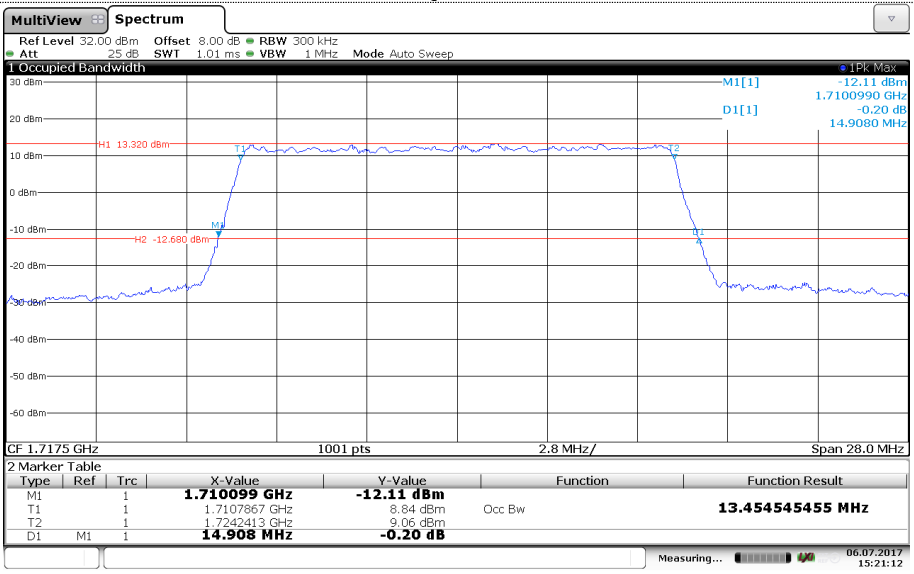


Date: 6.JUL.2017 15:16:35

Channel High

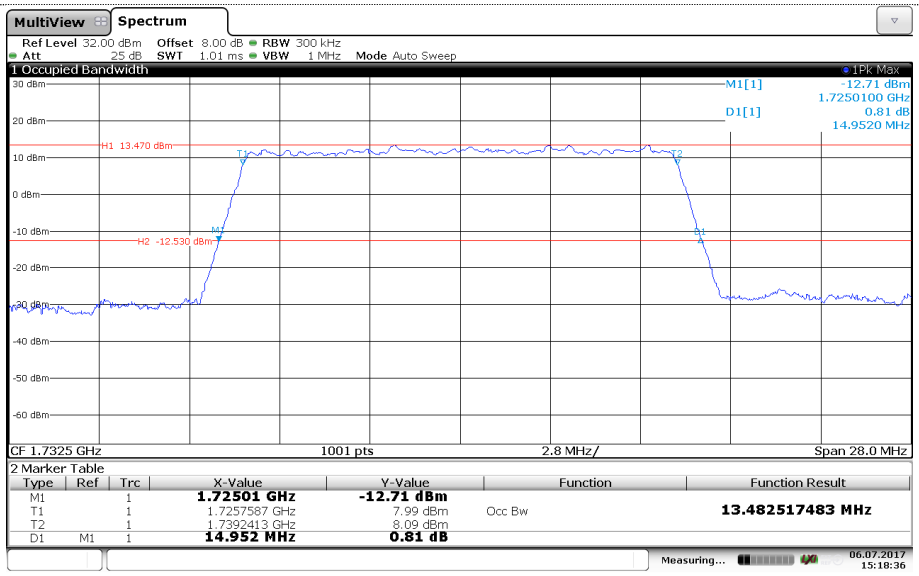
LTE Band 4-15MHz

QPSK



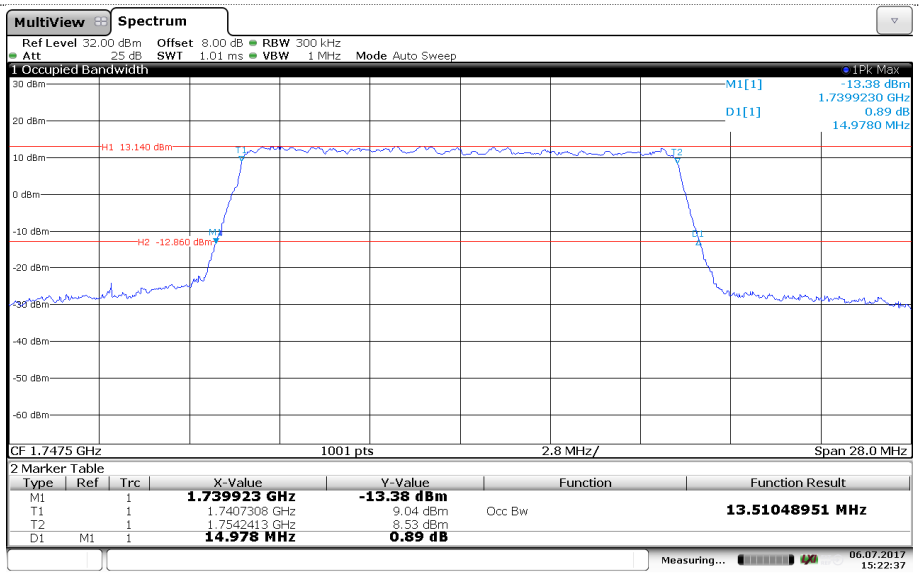
Date: 6.JUL.2017 15:21:12

Channel Low



Date: 6.JUL.2017 15:18:36

Channel Mid

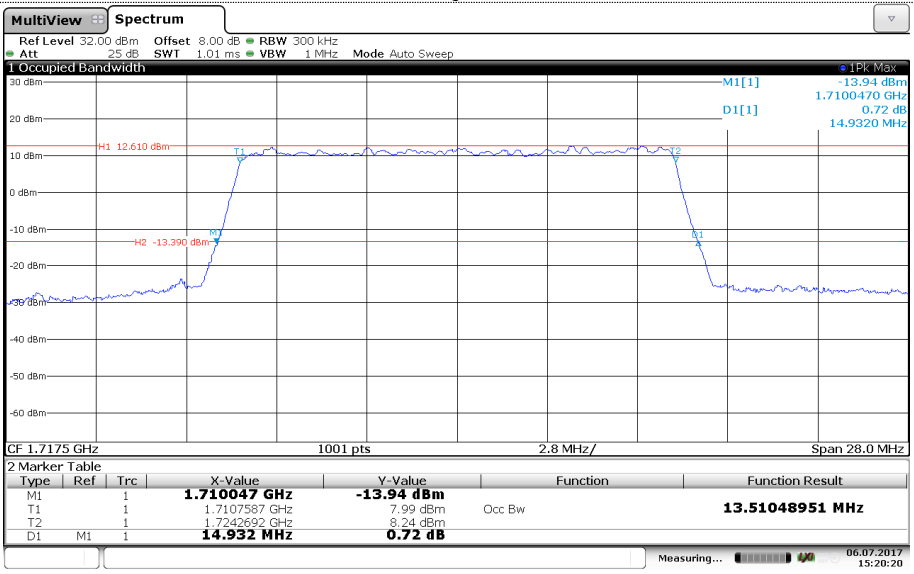


Date: 6.JUL.2017 15:22:36

Channel High

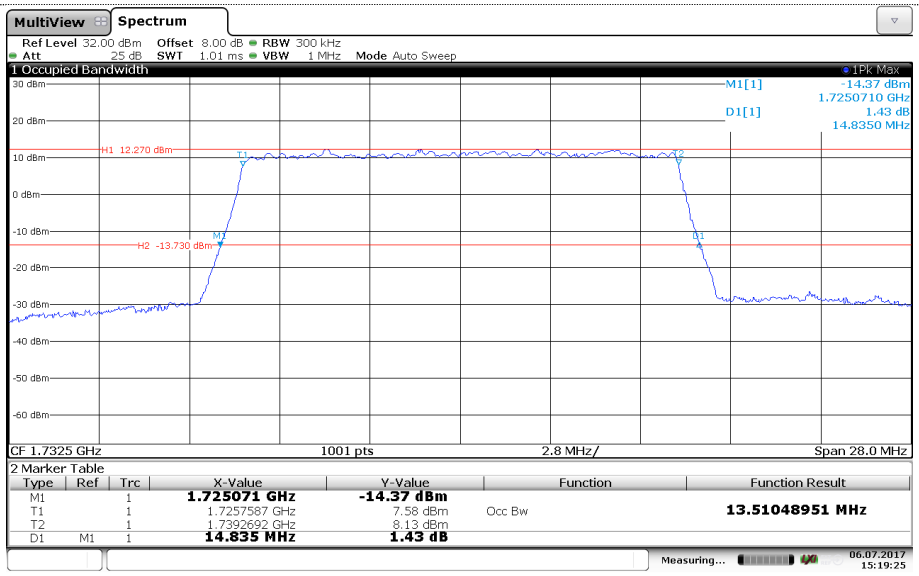
LTE Band 4-15MHz

16QAM



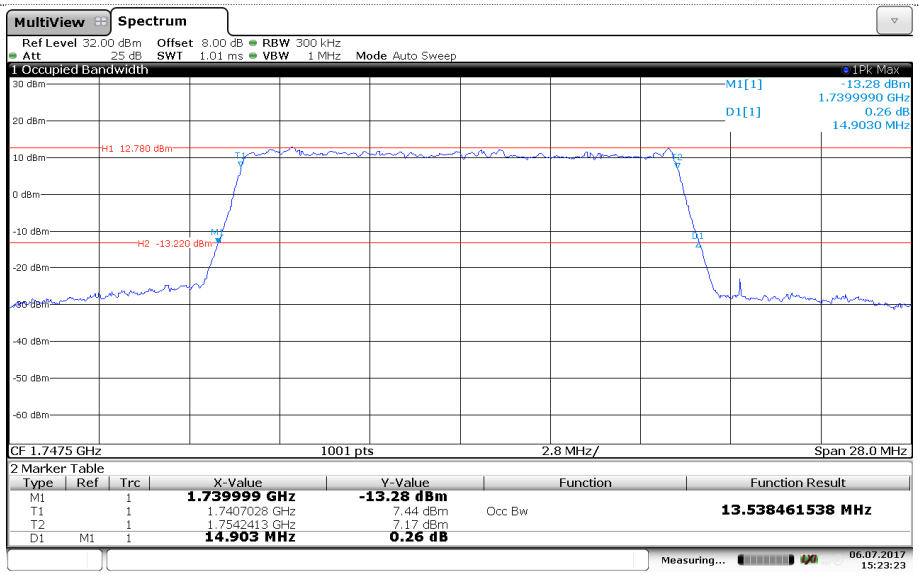
Date: 6.JUL.2017 15:20:19

Channel Low



Date: 6.JUL.2017 15:19:26

Channel Mid

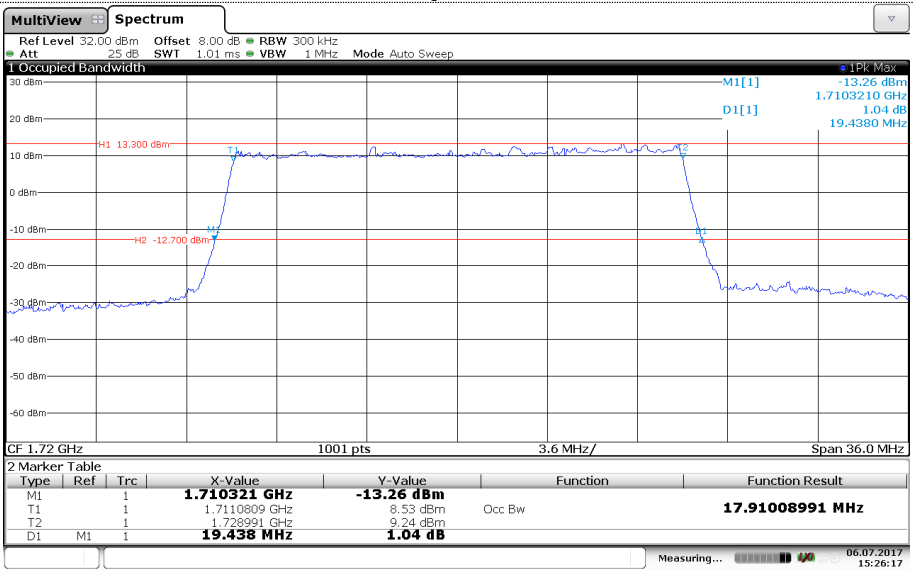


Date: 6.JUL.2017 15:23:23

Channel High

LTE Band 4-20MHz

QPSK



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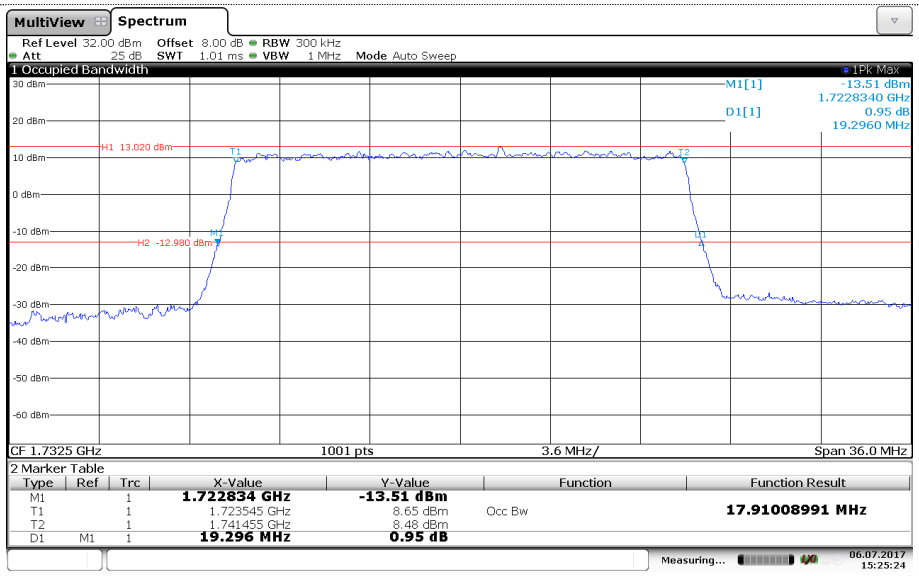
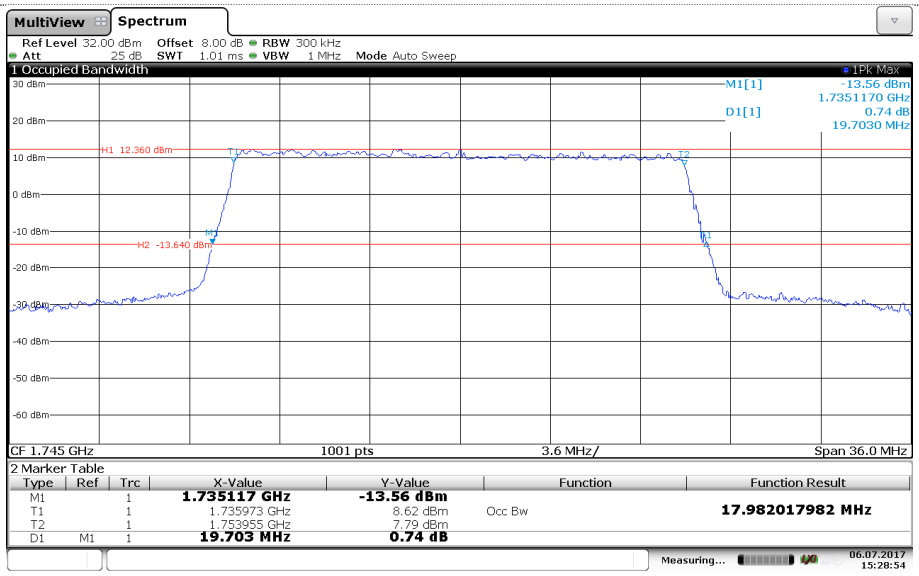
Channel Low



Date: 6.JUL.2017 15:25:24

Channel Mid

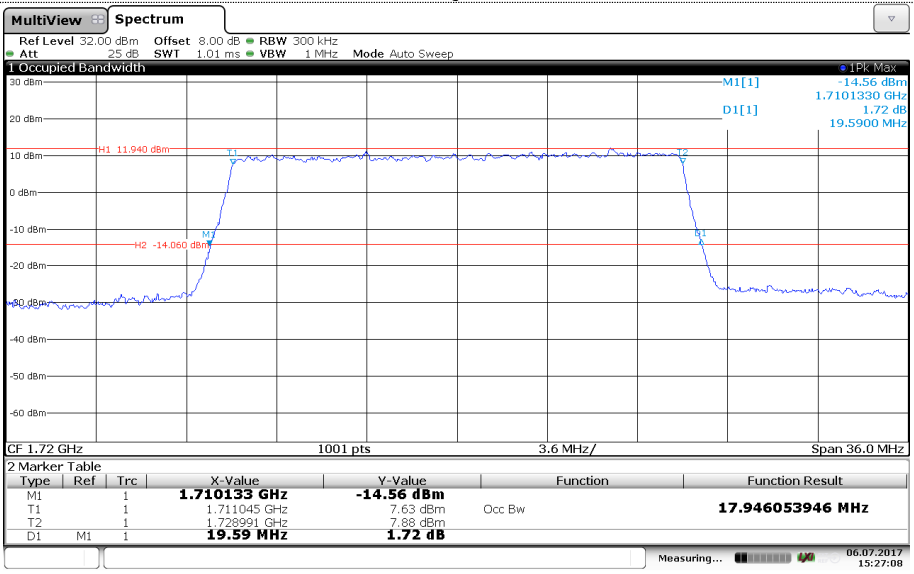


Date: 6.JUL.2017 15:28:54

Channel High

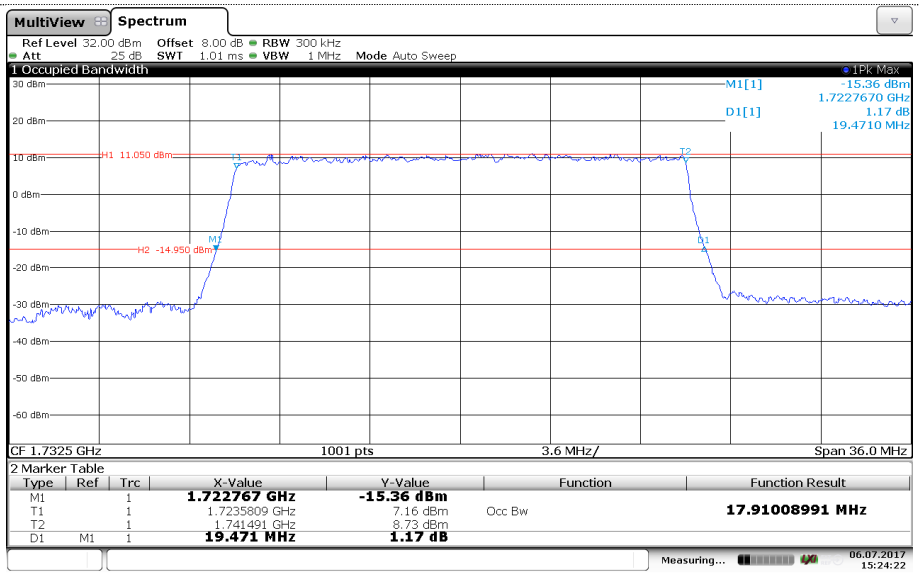
LTE Band 4-20MHz

16QAM



Date: 6.JUL.2017 15:27:08

Channel Low



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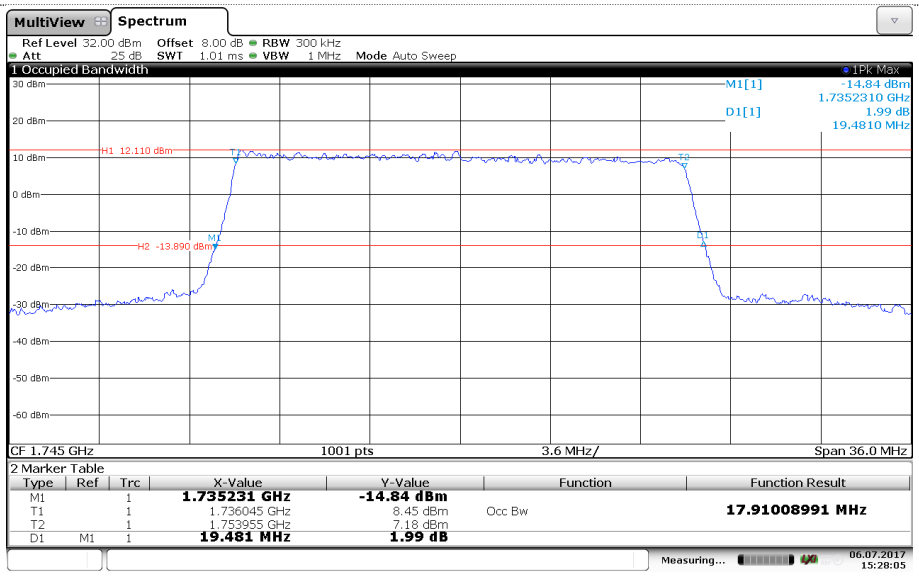
Channel Mid

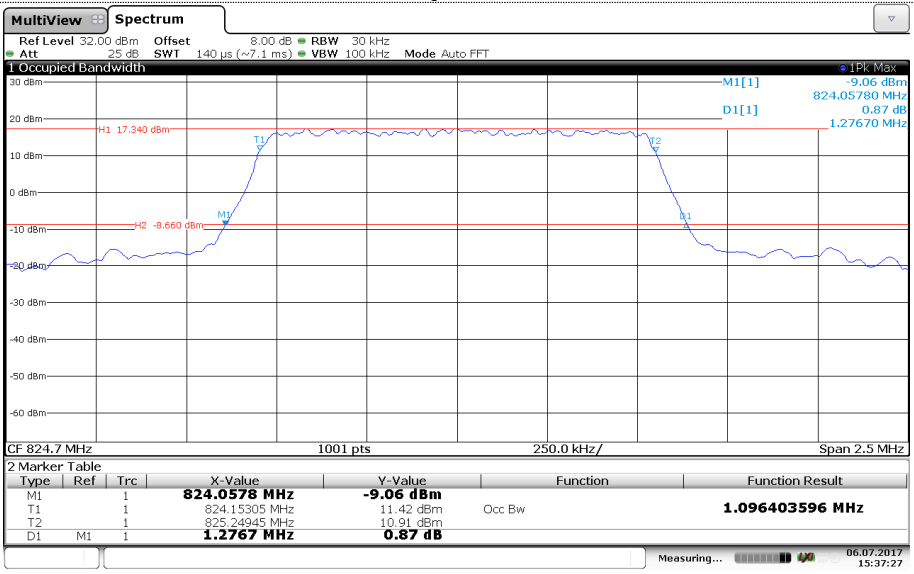


Date: 6.JUL.2017 15:28:06

Channel High

LTE Band 5-1.4MHz

QPSK



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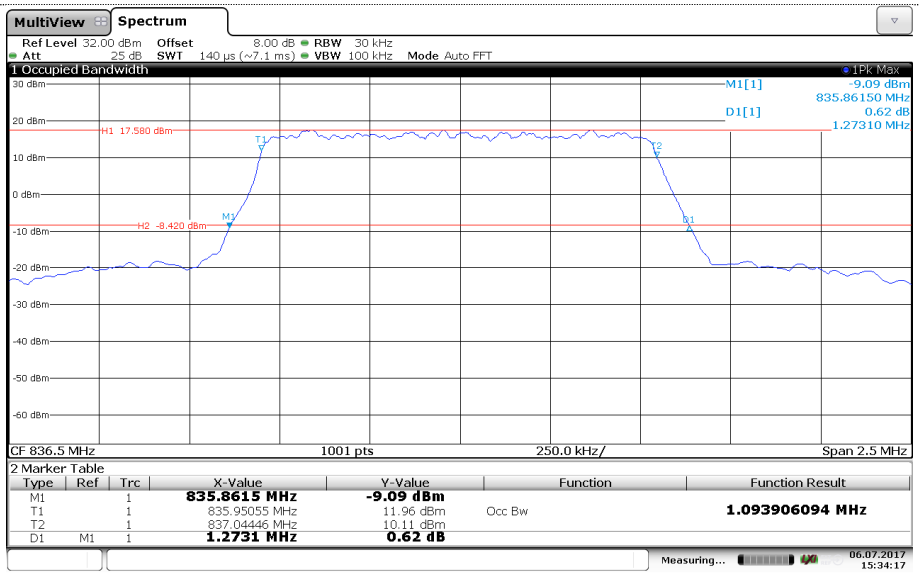
Channel Low



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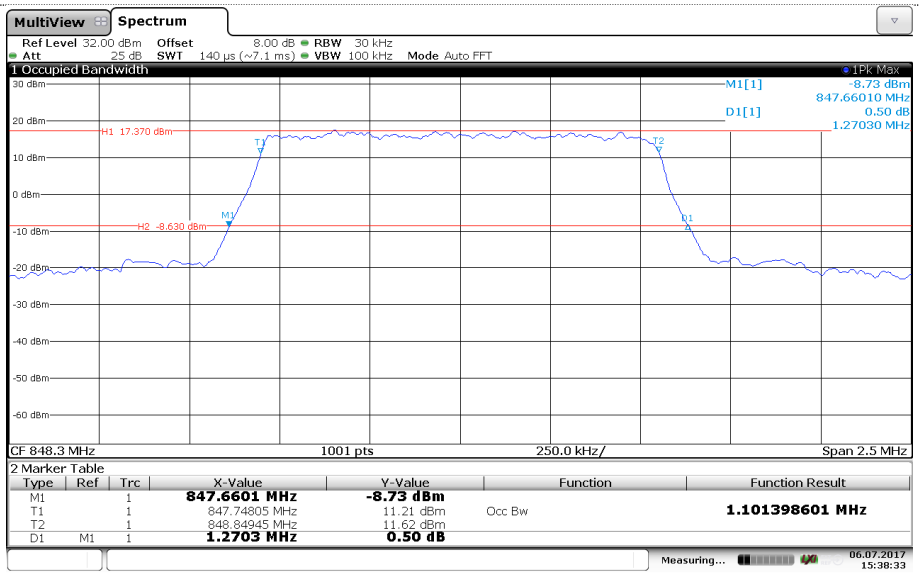
Channel Mid

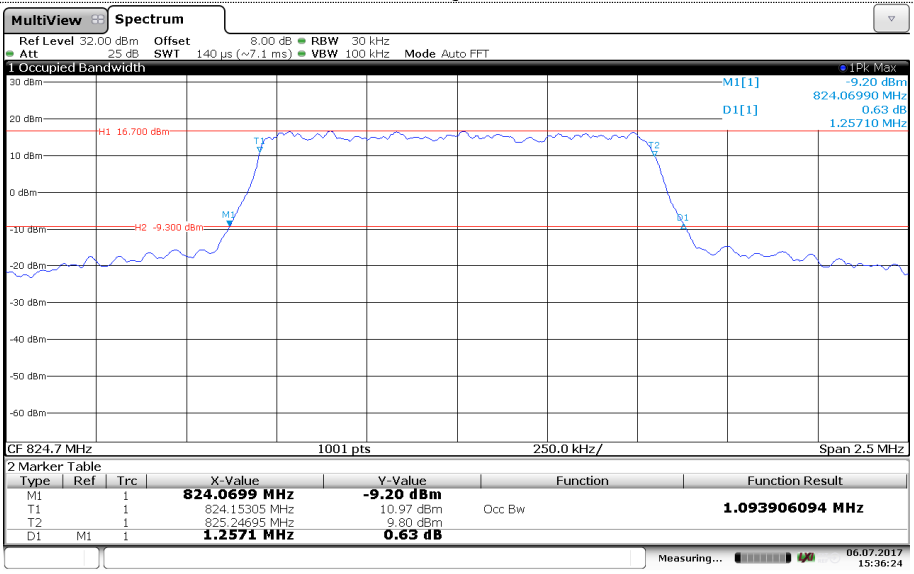


Date: 6.JUL.2017 15:38:33

Channel High

LTE Band 5-1.4MHz

16QAM



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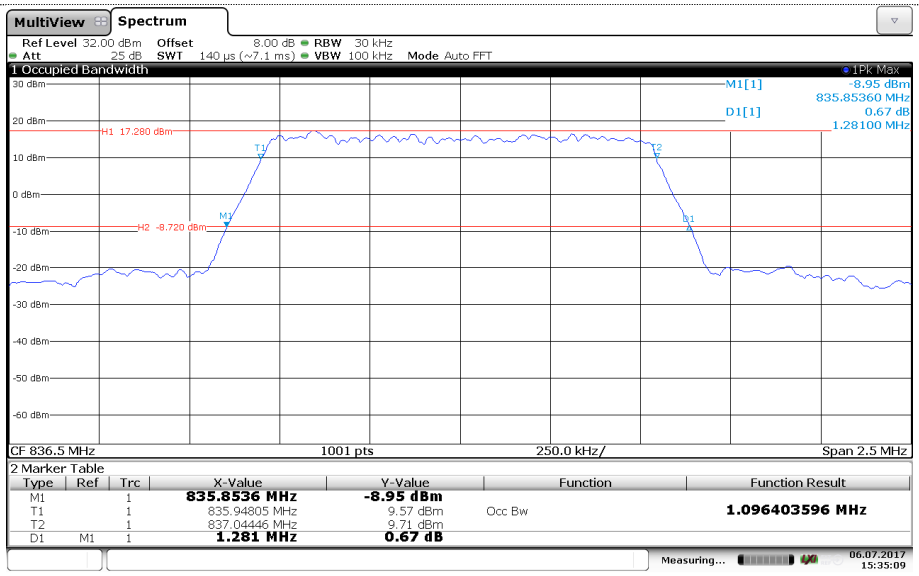
Channel Low



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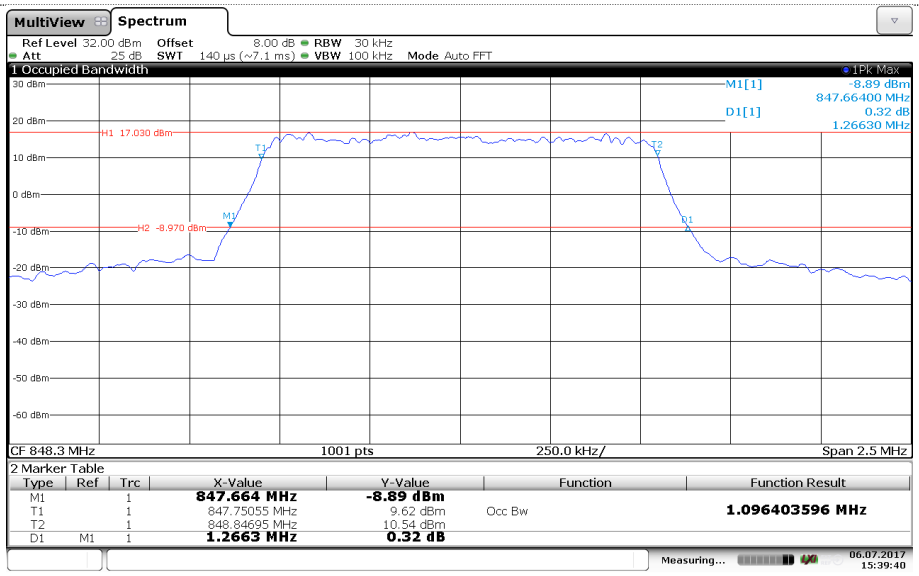
Channel Mid

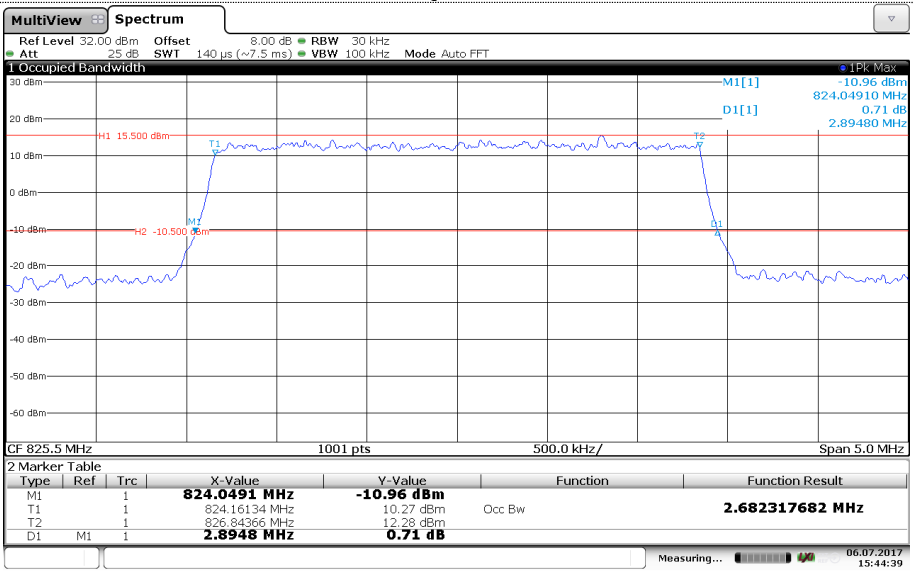


Date: 6.JUL.2017 15:39:40

Channel High

LTE Band 5-3MHz

QPSK



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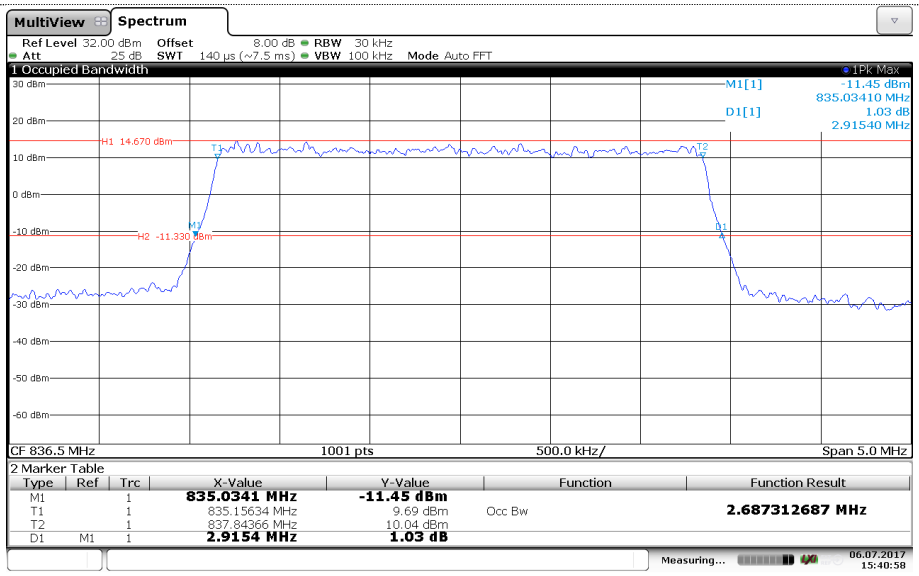
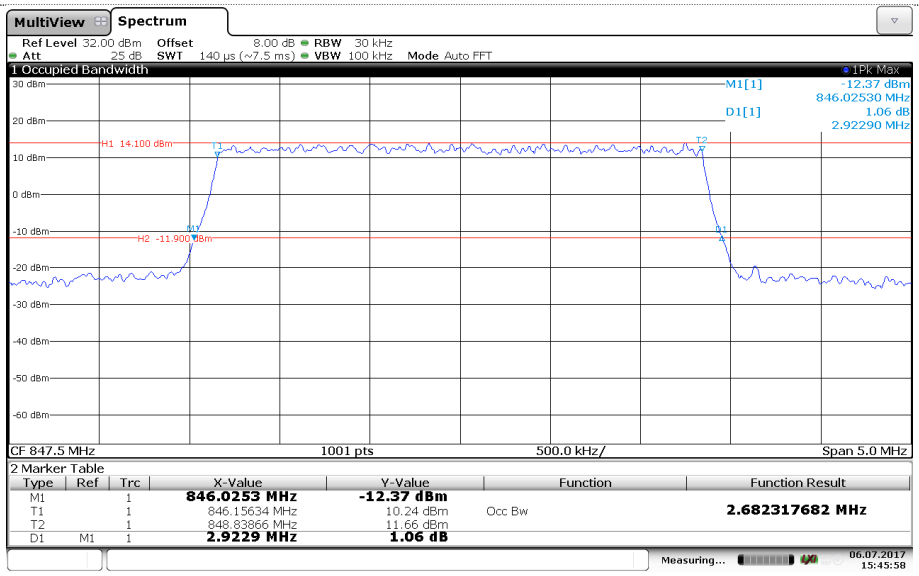
Channel Low



Date: 6.JUL.2017 15:40:58

Channel Mid

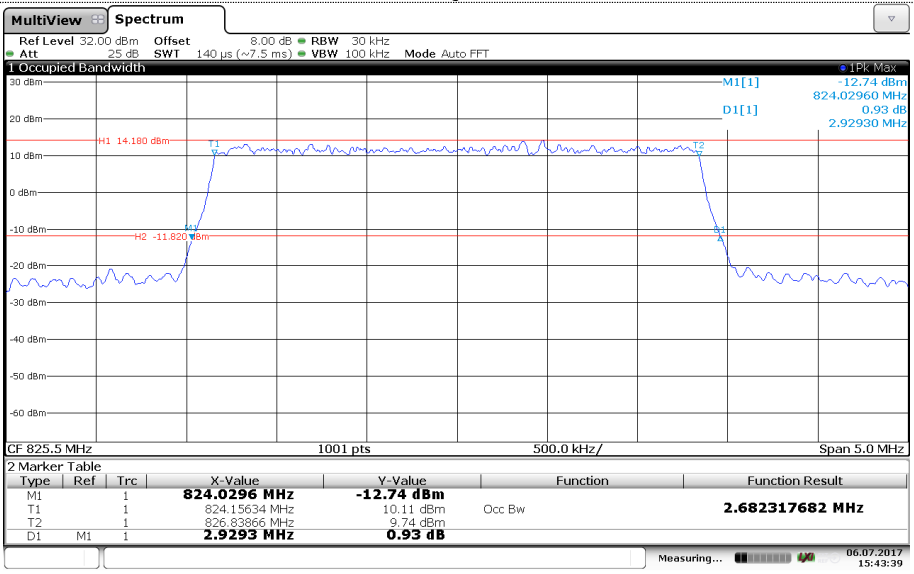


Date: 6.JUL.2017 15:45:58

Channel High

LTE Band 5-3MHz

16QAM



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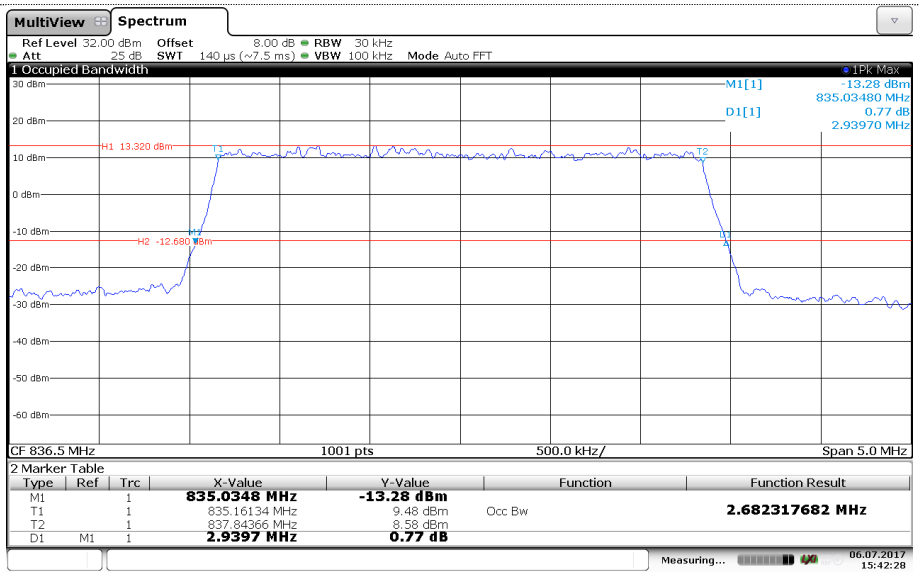
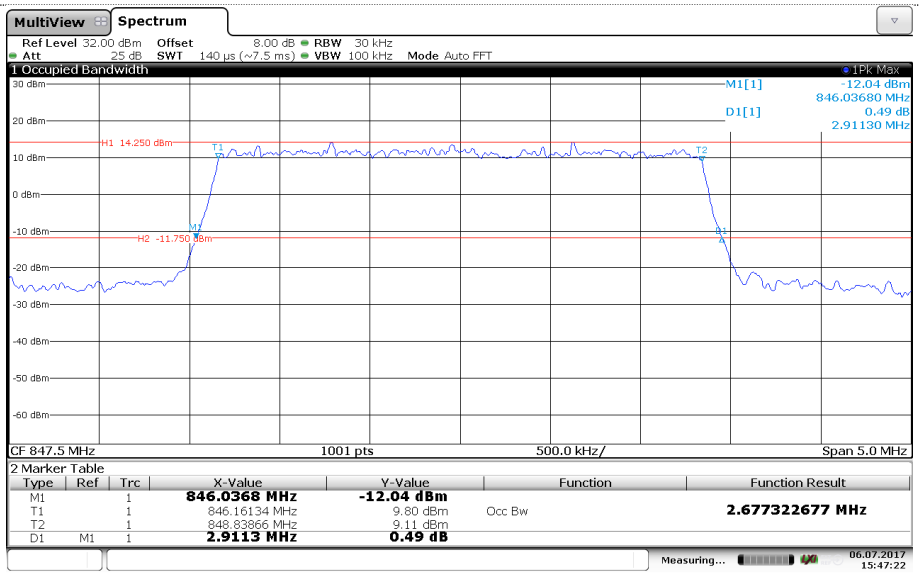
Channel Low



Date: 6.JUL.2017 15:42:29

Channel Mid

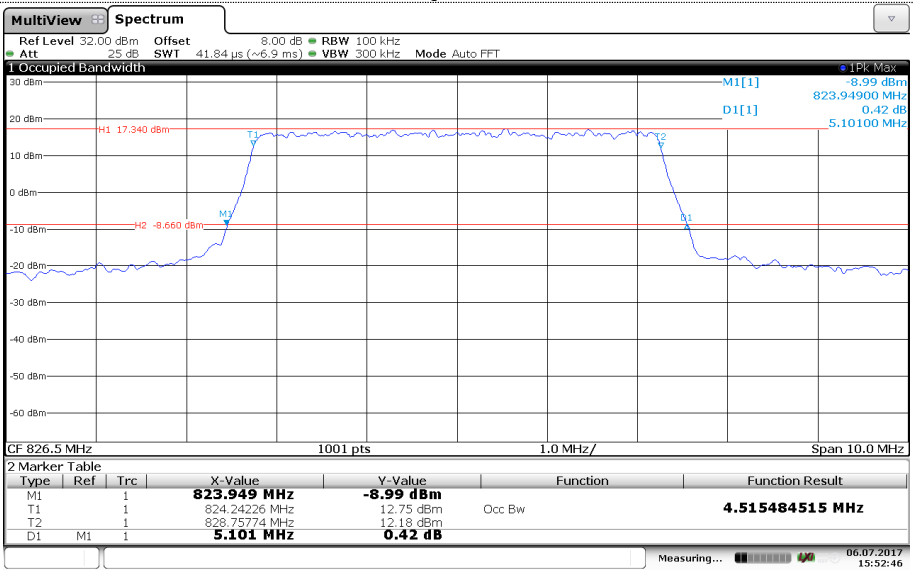


Date: 6.JUL.2017 15:47:22

Channel High

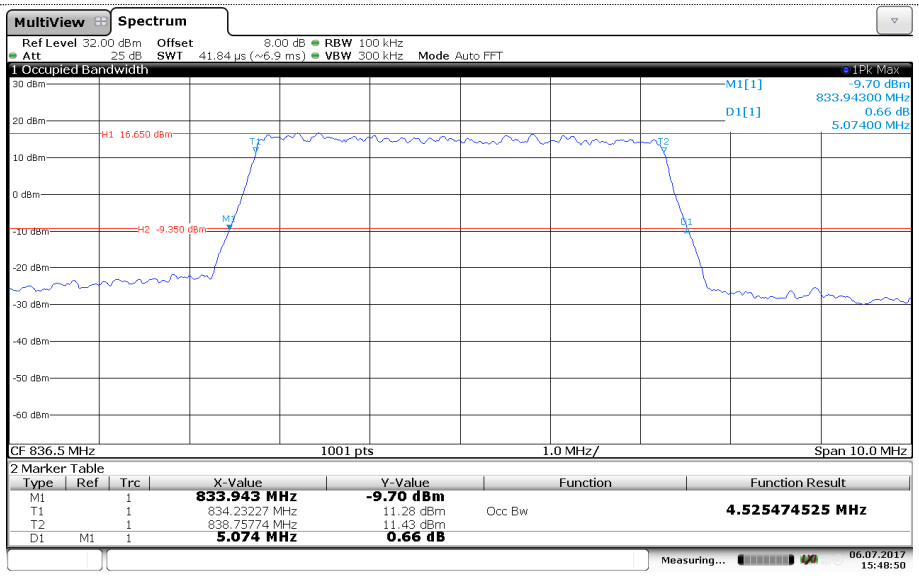
LTE Band 5-5MHz

QPSK



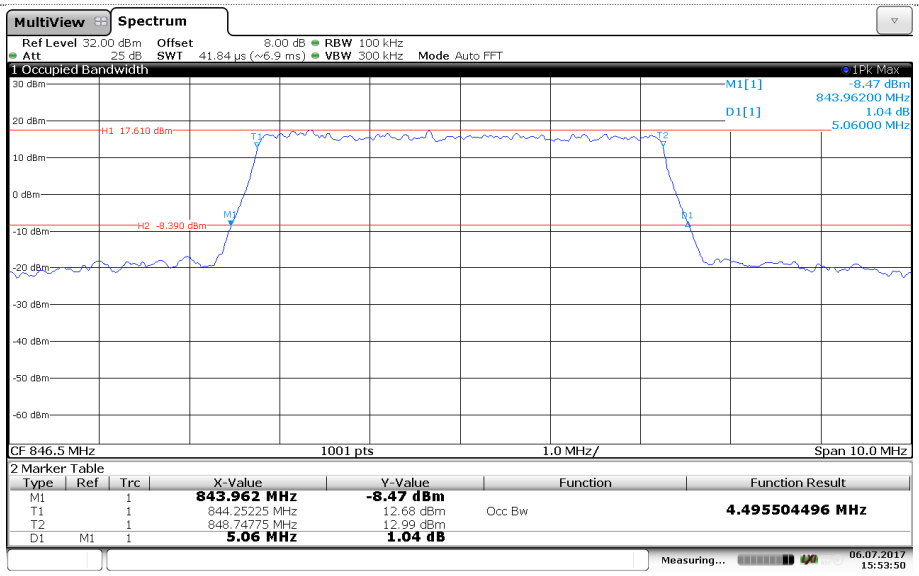
Date: 6.JUL.2017 15:52:46

Channel Low



Date: 6.JUL.2017 15:48:50

Channel Mid

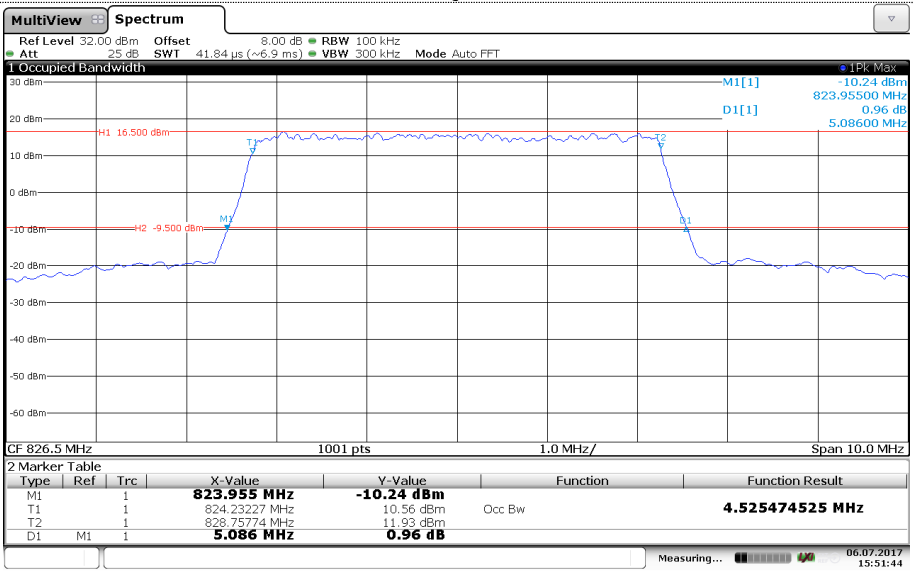


Date: 6.JUL.2017 15:53:49

Channel High

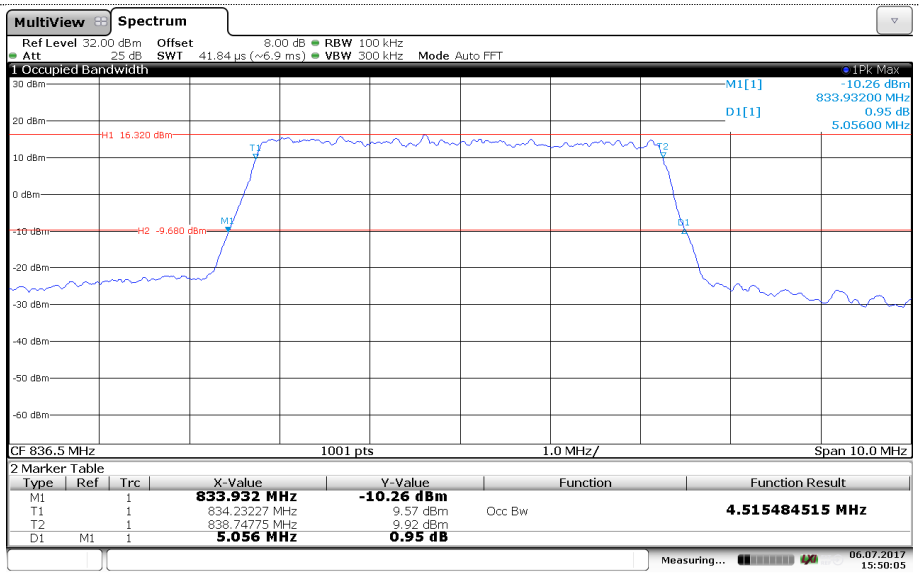
LTE Band 5-5MHz

16QAM



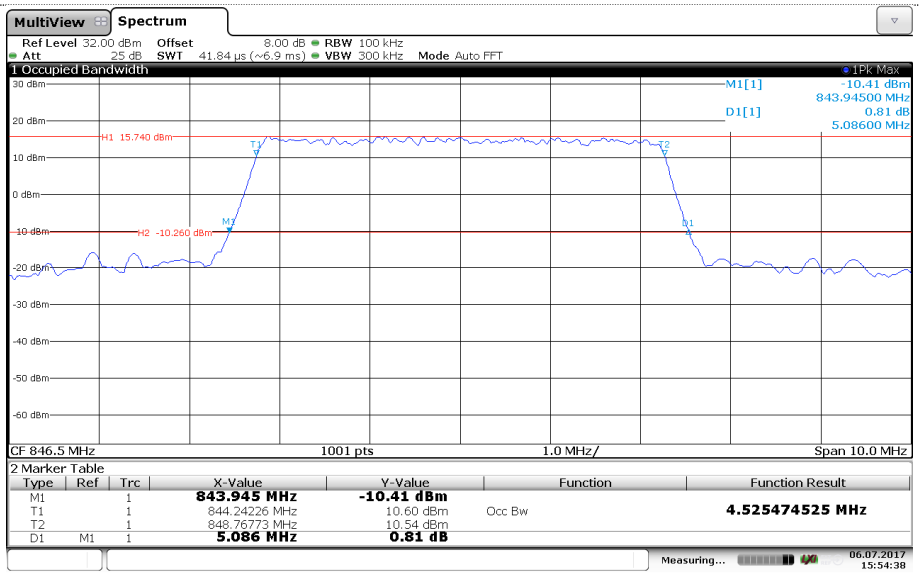
Date: 6.JUL.2017 15:51:44

Channel Low



Date: 6.JUL.2017 15:50:06

Channel Mid

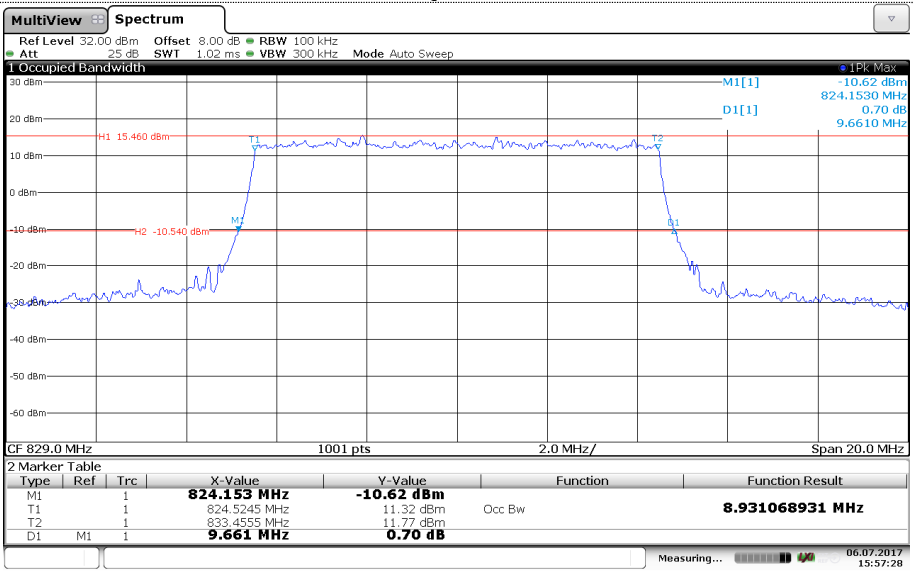


Date: 6.JUL.2017 15:54:38

Channel High

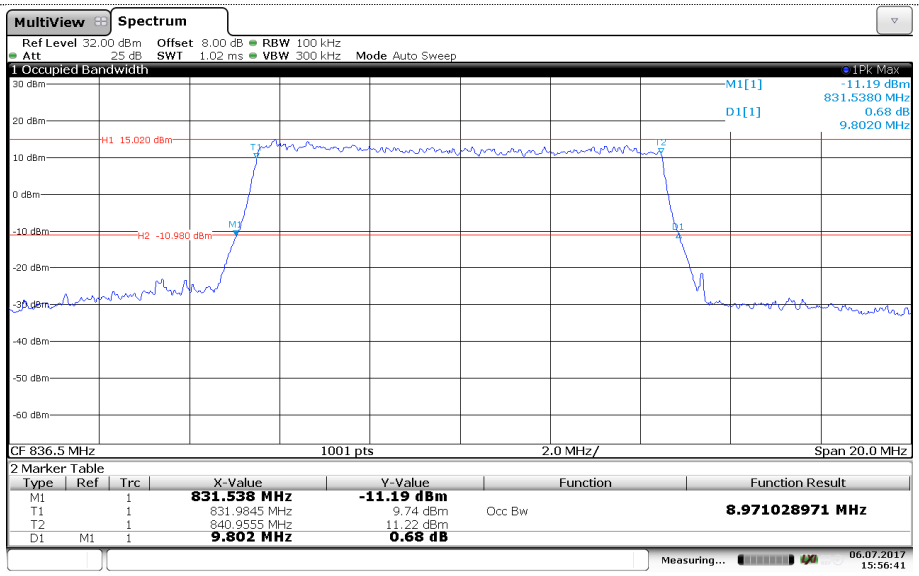
LTE Band 5-10MHz

QPSK



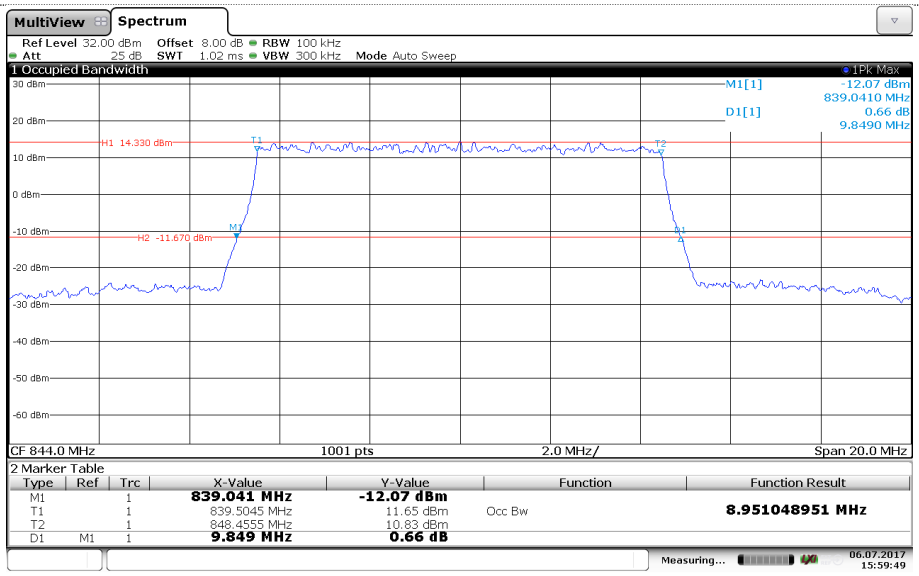
Date: 6.JUL.2017 15:57:27

Channel Low



Date: 6.JUL.2017 15:56:41

Channel Mid

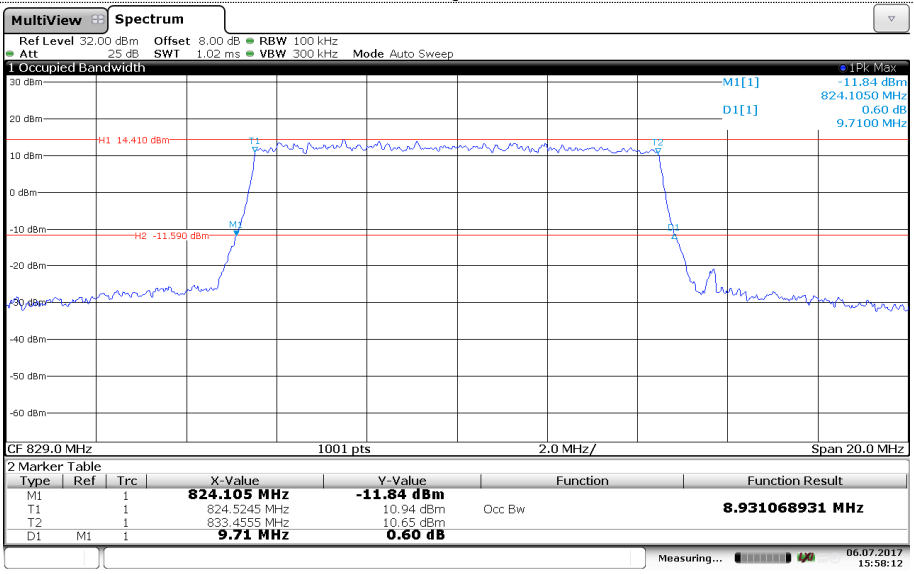


Date: 6.JUL.2017 15:59:49

Channel High

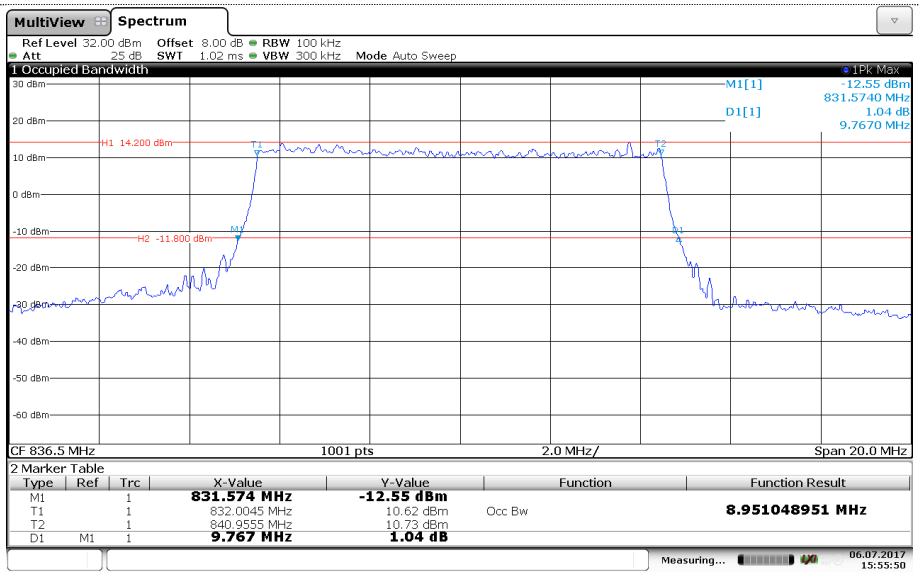
LTE Band 5-10MHz

16QAM



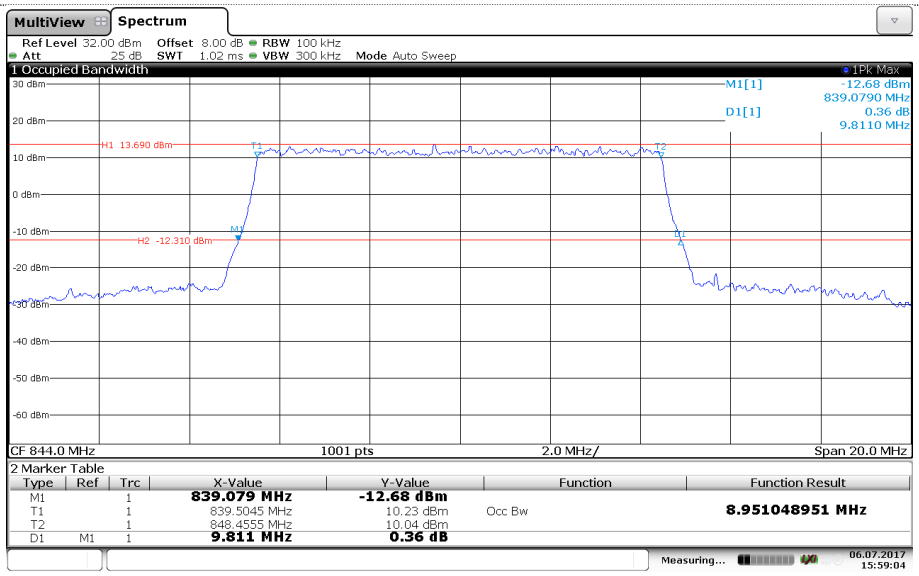
Date: 6.JUL.2017 15:58:12

Channel Low



Date: 6.JUL.2017 15:55:50

Channel Mid

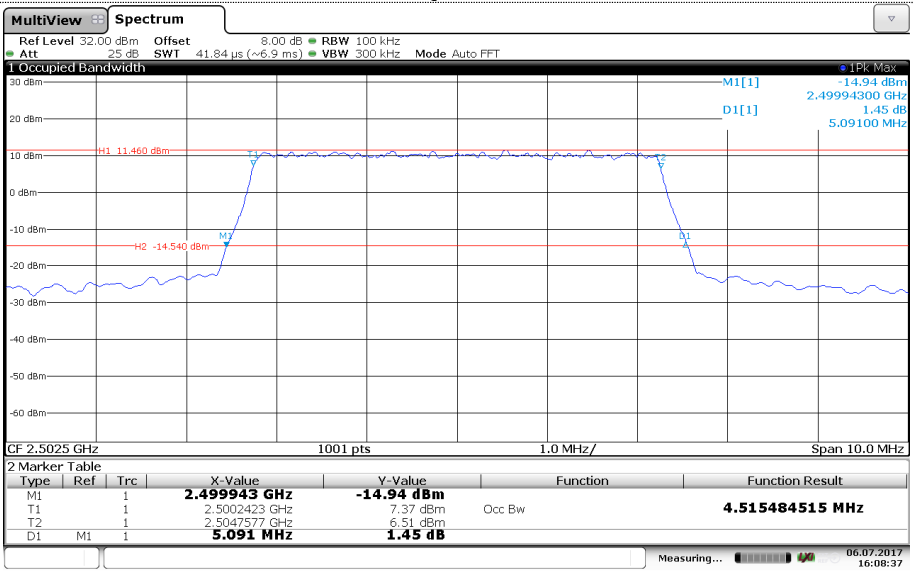


Date: 6.JUL.2017 15:59:04

Channel High

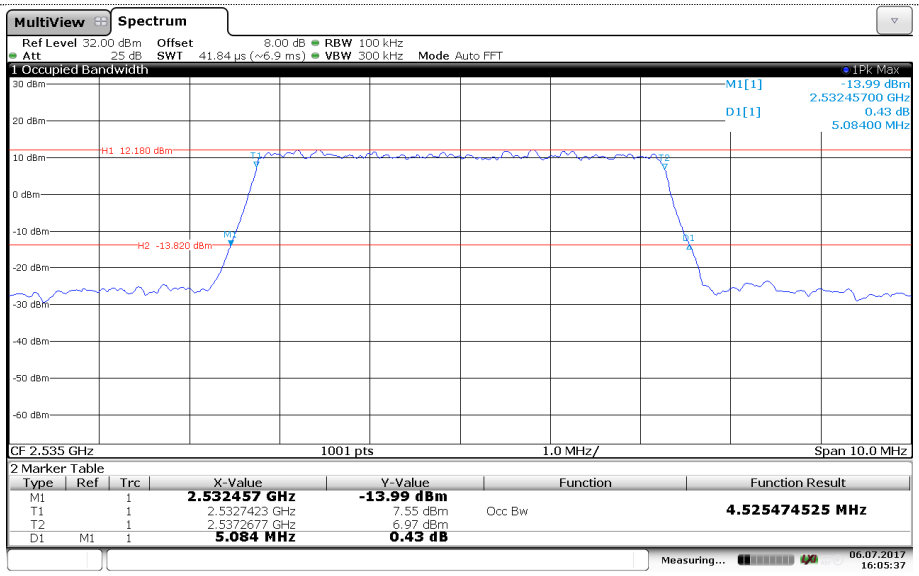
LTE Band 7-5MHz

QPSK



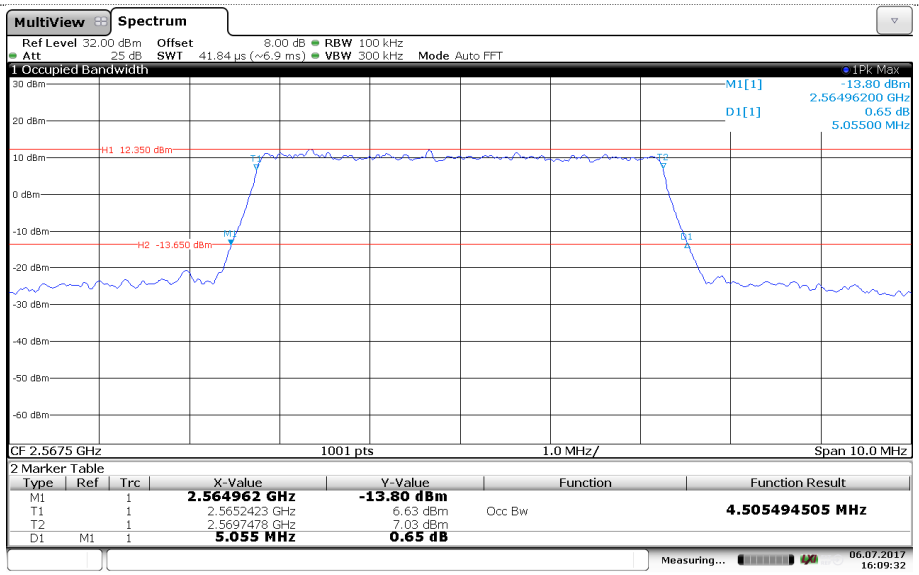
Date: 6.JUL.2017 16:08:37

Channel Low



Date: 6.JUL.2017 16:05:37

Channel Mid

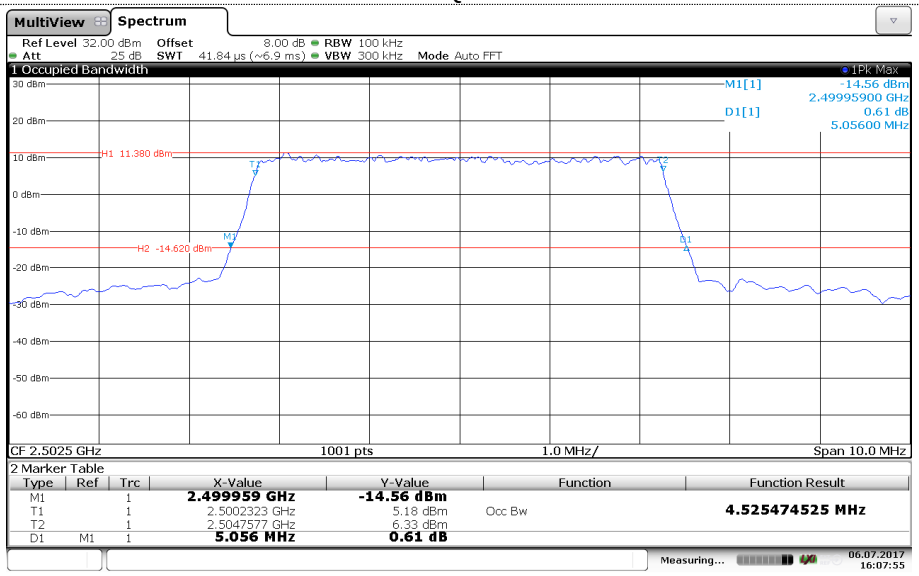


Date: 6.JUL.2017 16:09:32

Channel High

LTE Band 7-5MHz

16QAM



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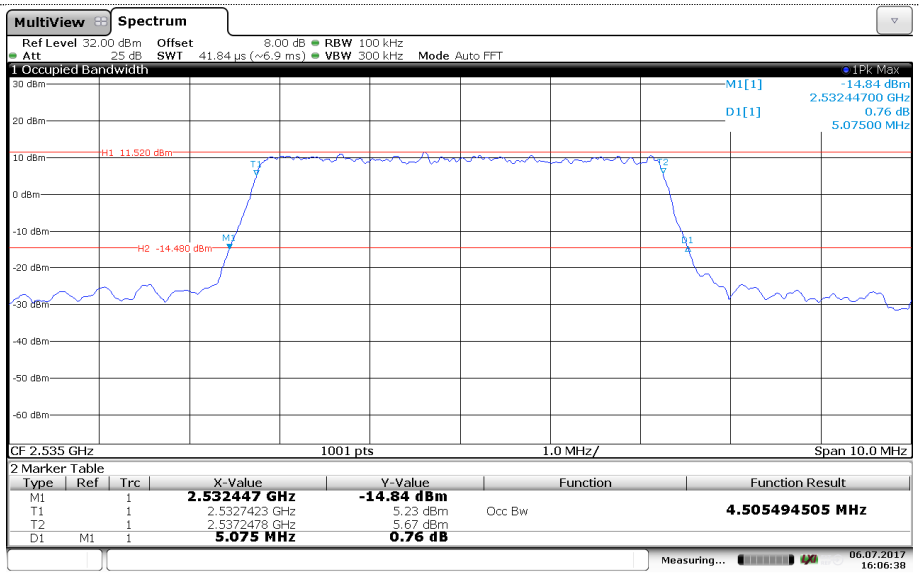
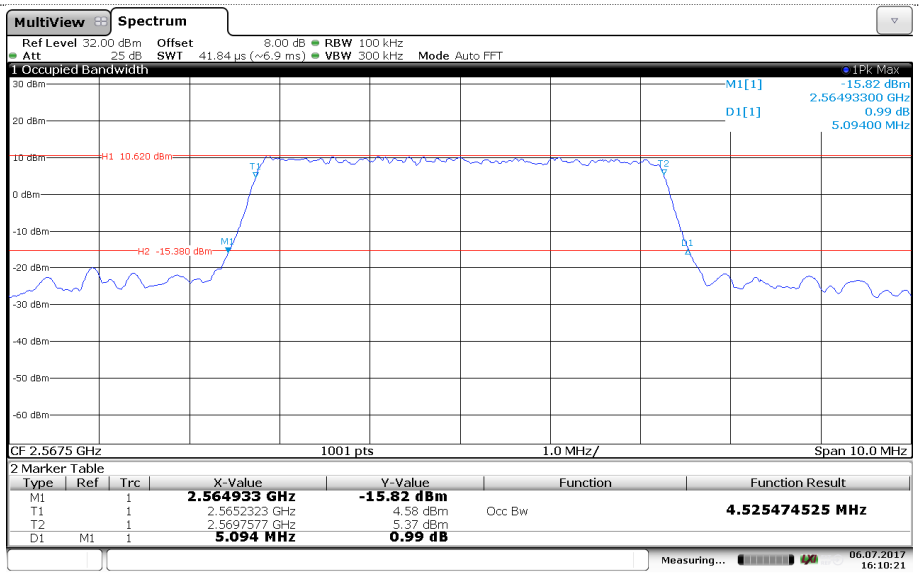
Channel Low



Date: 6.JUL.2017 16:06:38

Channel Mid



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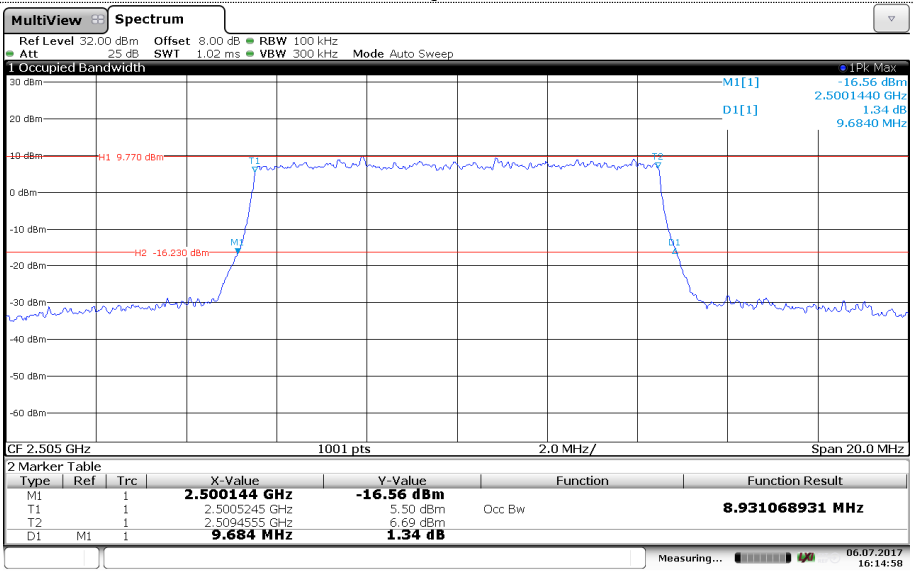
Channel High

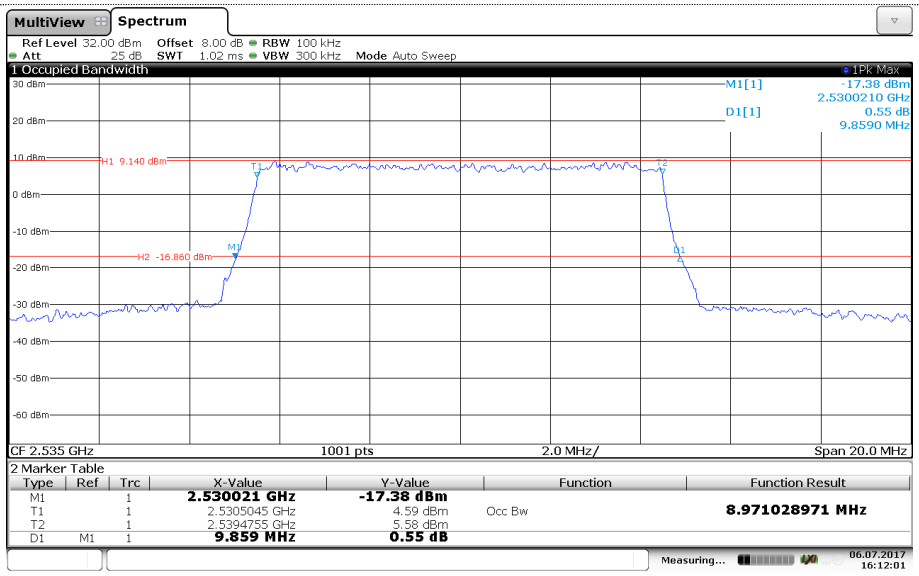
LTE Band 7-10MHz

QPSK



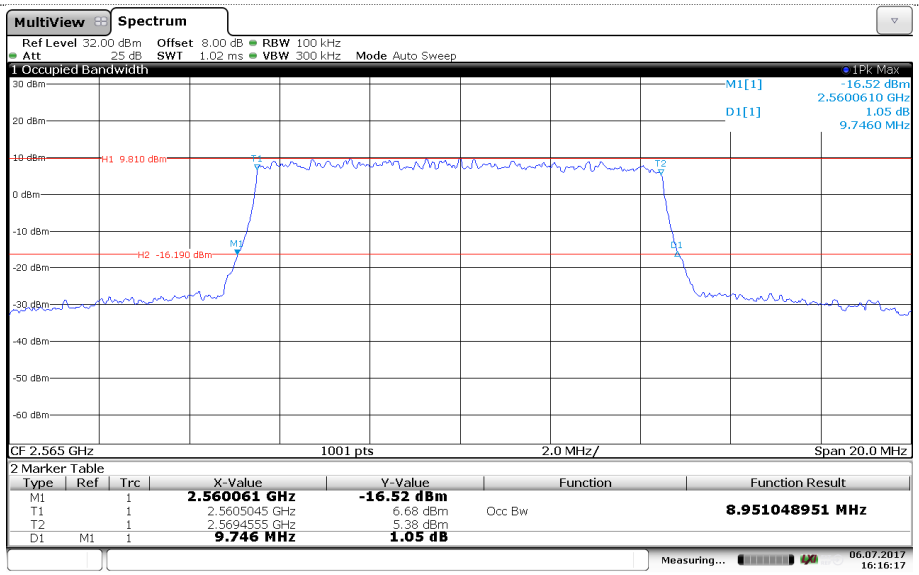
Date: 6.JUL.2017 16:14:58

Channel Low



Date: 6.JUL.2017 16:12:01

Channel Mid



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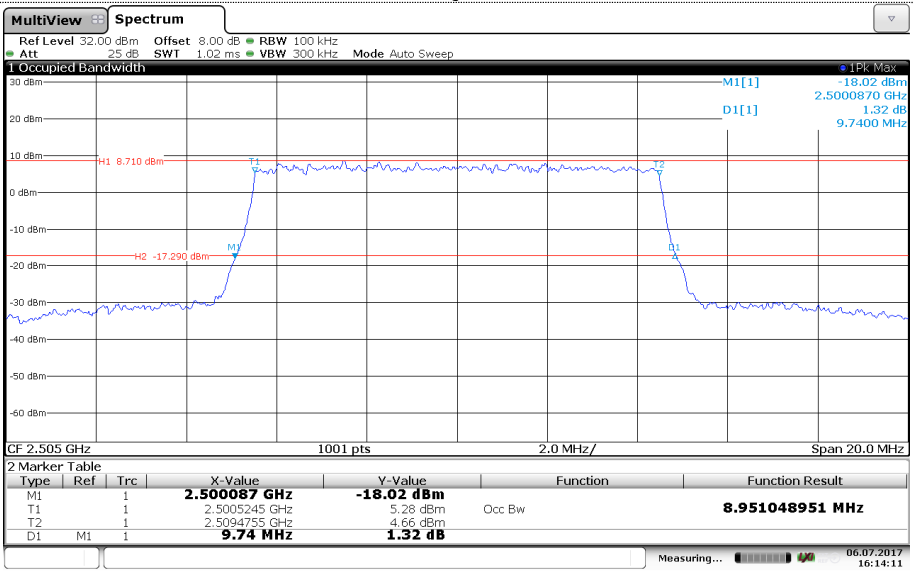
Channel High

LTE Band 7-10MHz

16QAM



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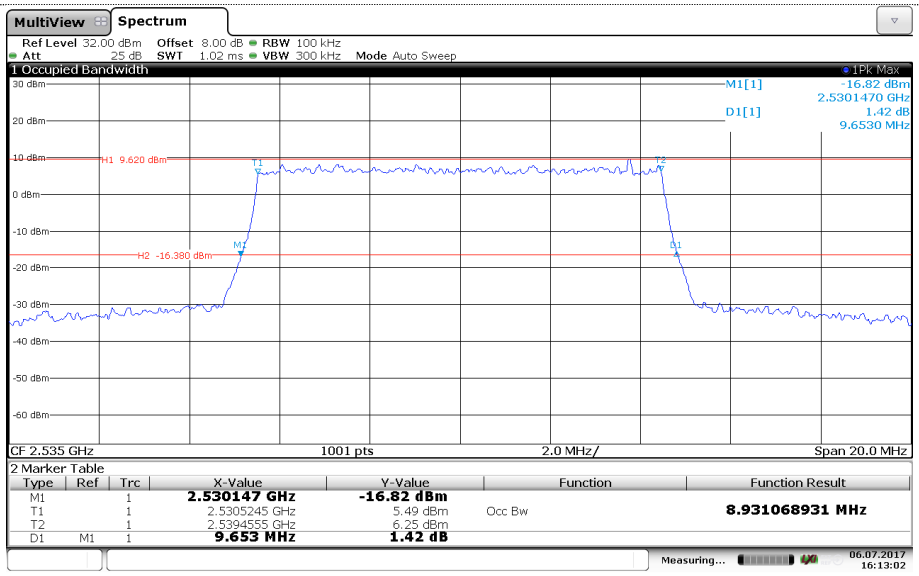
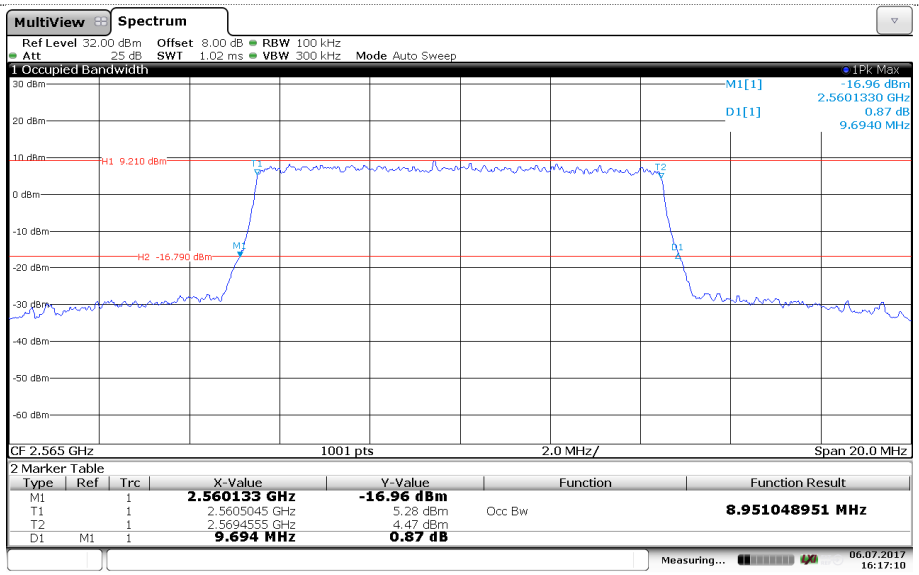
Channel Low



Date: 6.JUL.2017 16:13:02

Channel Mid

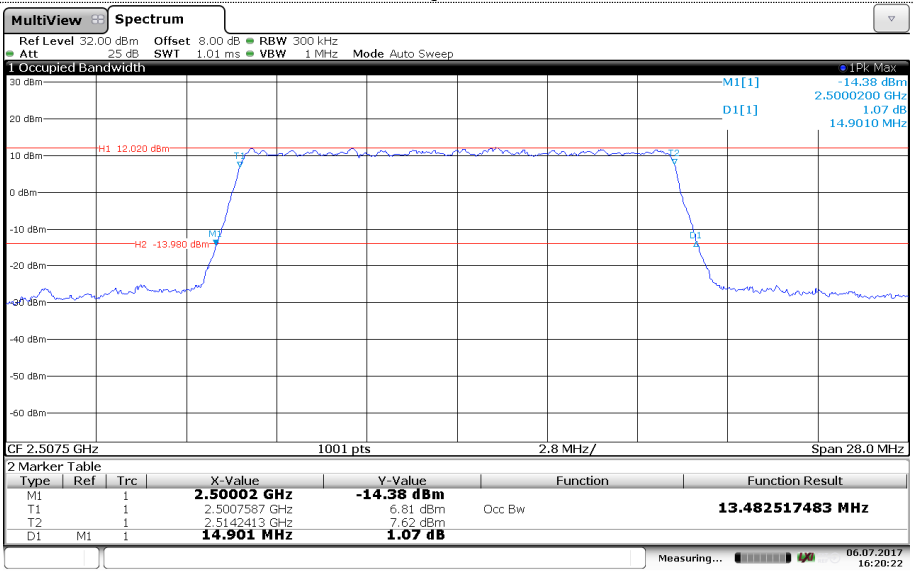


Date: 6.JUL.2017 16:17:10

Channel High

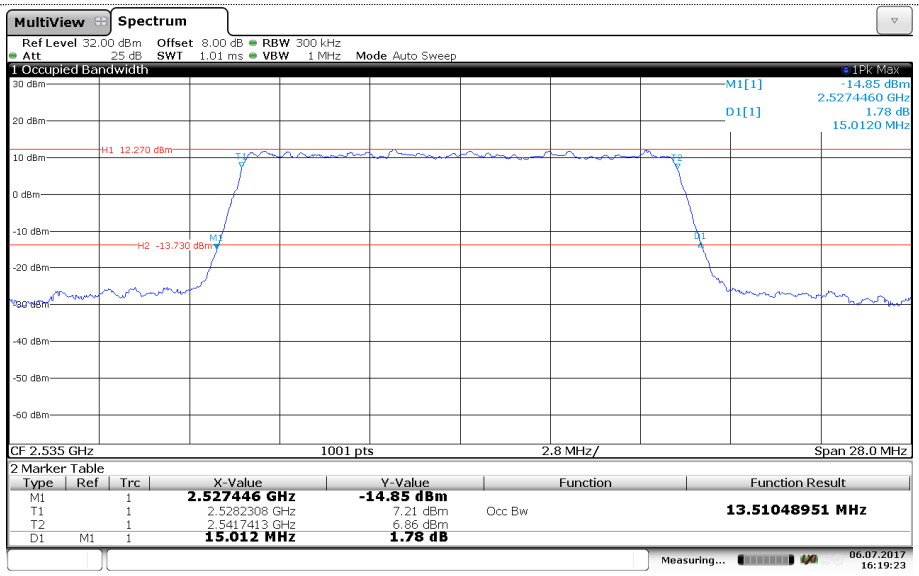
LTE Band 7-15MHz

QPSK



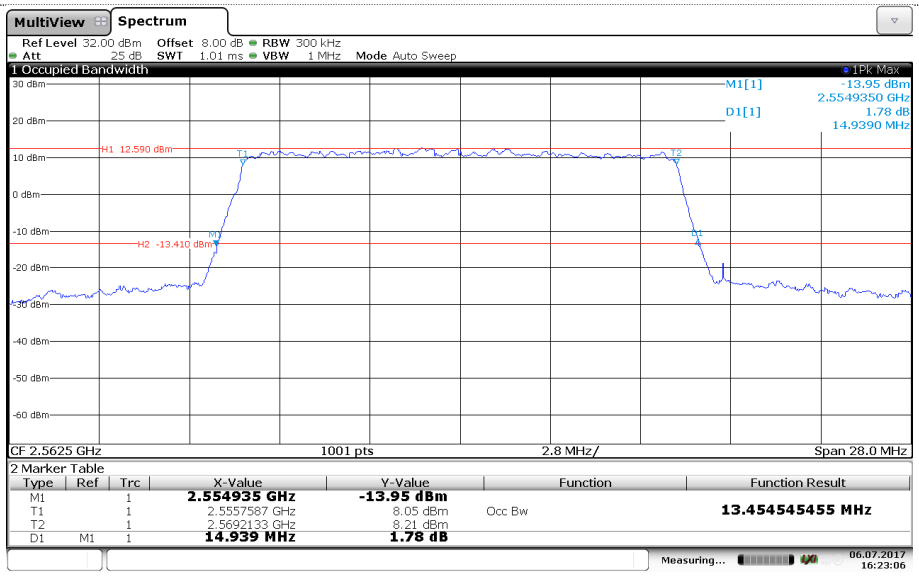
Date: 6.JUL.2017 16:20:21

Channel Low



Date: 6.JUL.2017 16:19:23

Channel Mid

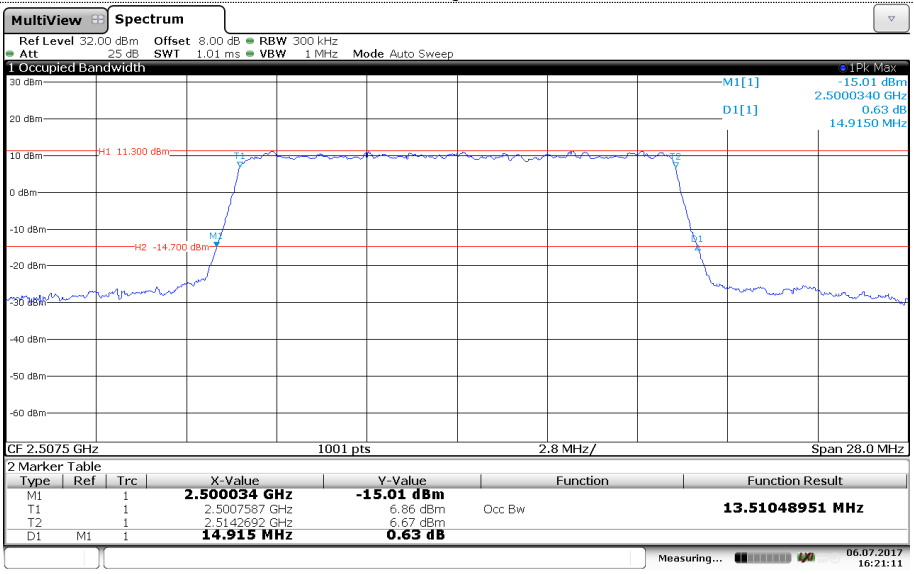


Date: 6.JUL.2017 16:23:06

Channel High

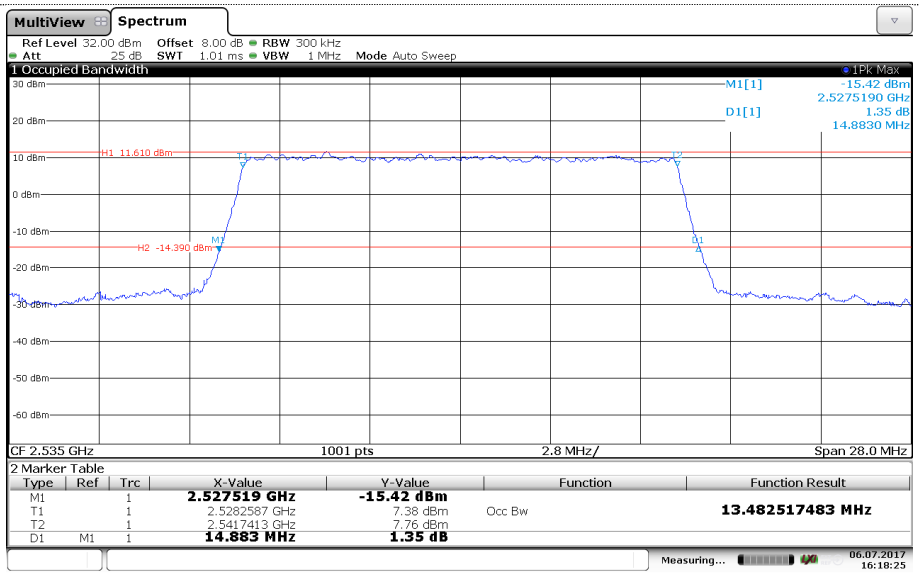
LTE Band 7-15MHz

16QAM



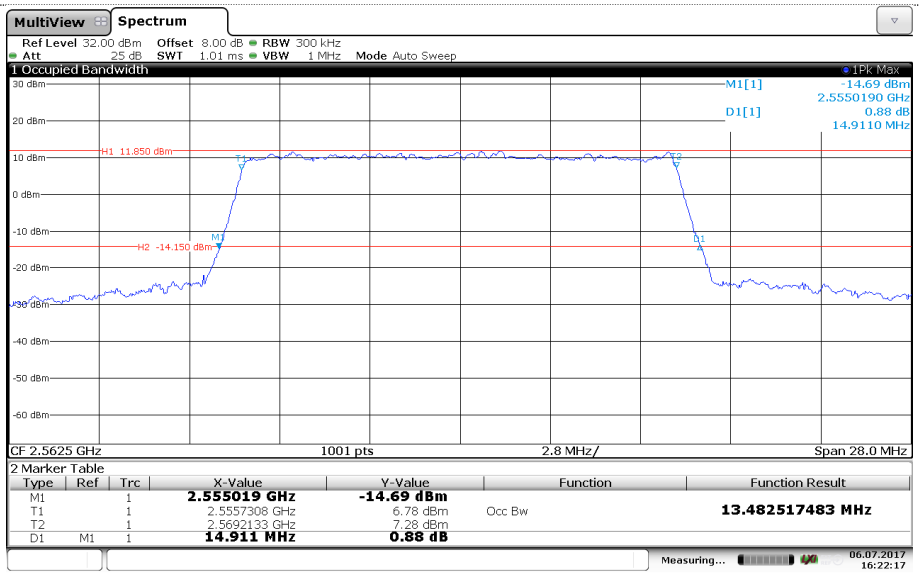
Date: 6.JUL.2017 16:21:11

Channel Low



Date: 6.JUL.2017 16:18:25

Channel Mid

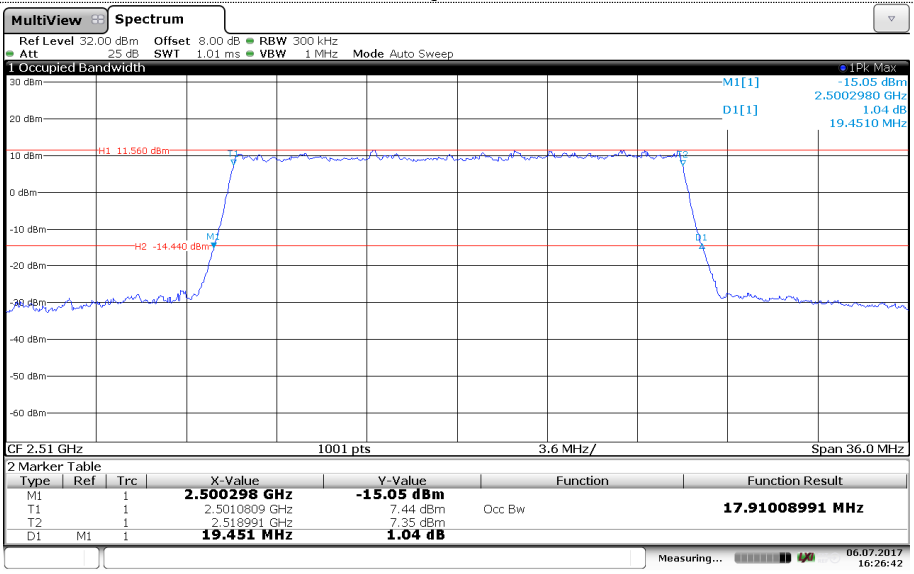


Date: 6.JUL.2017 16:22:17

Channel High

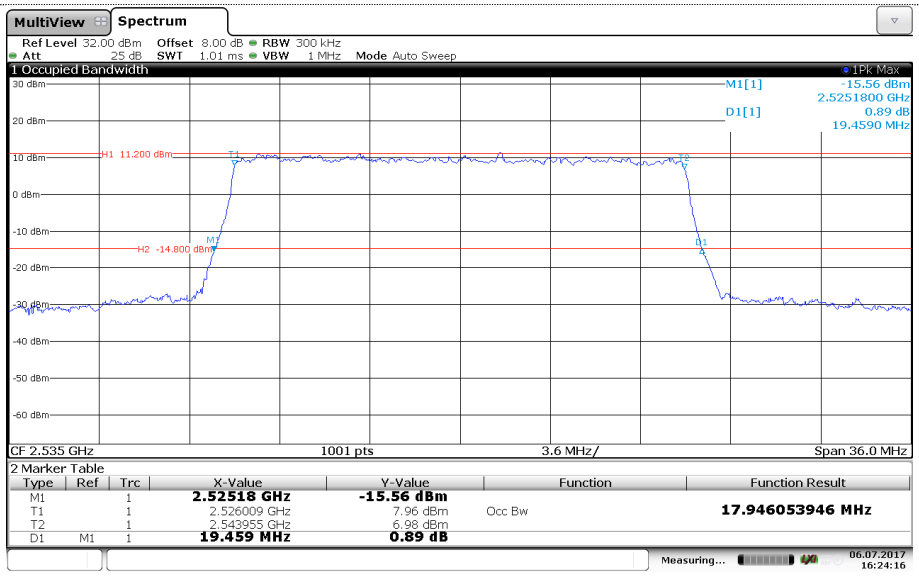
LTE Band 7-20MHz

QPSK



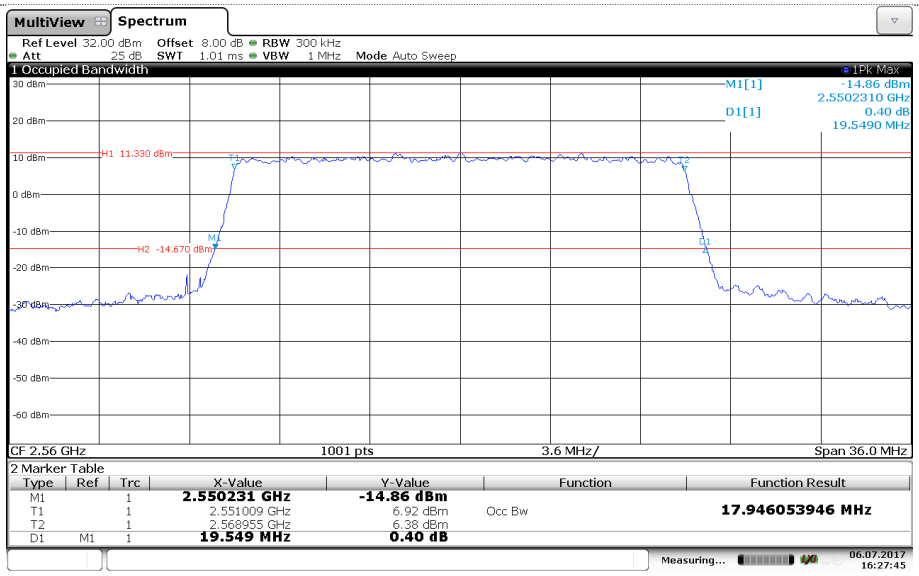
Date: 6.JUL.2017 16:26:42

Channel Low



Date: 6.JUL.2017 16:24:16

Channel Mid

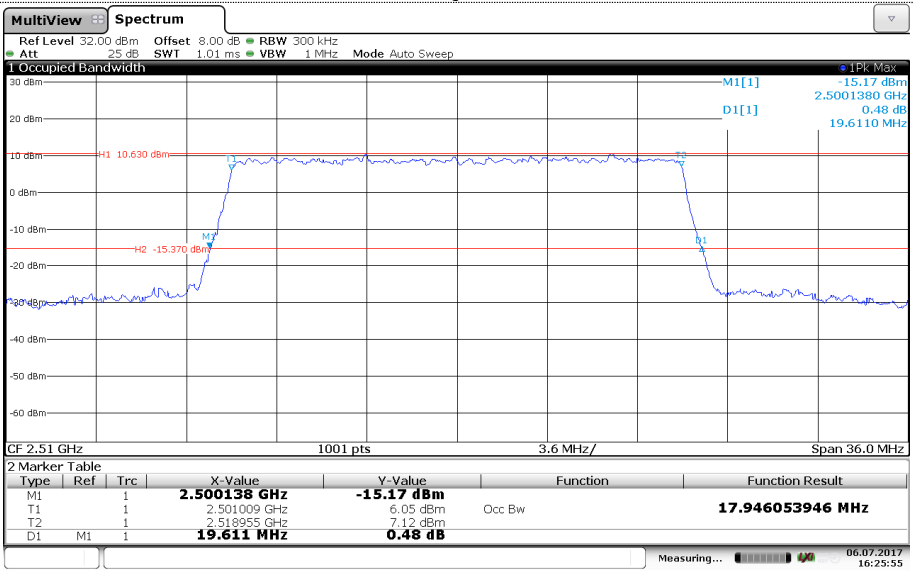


Date: 6.JUL.2017 16:27:44

Channel High

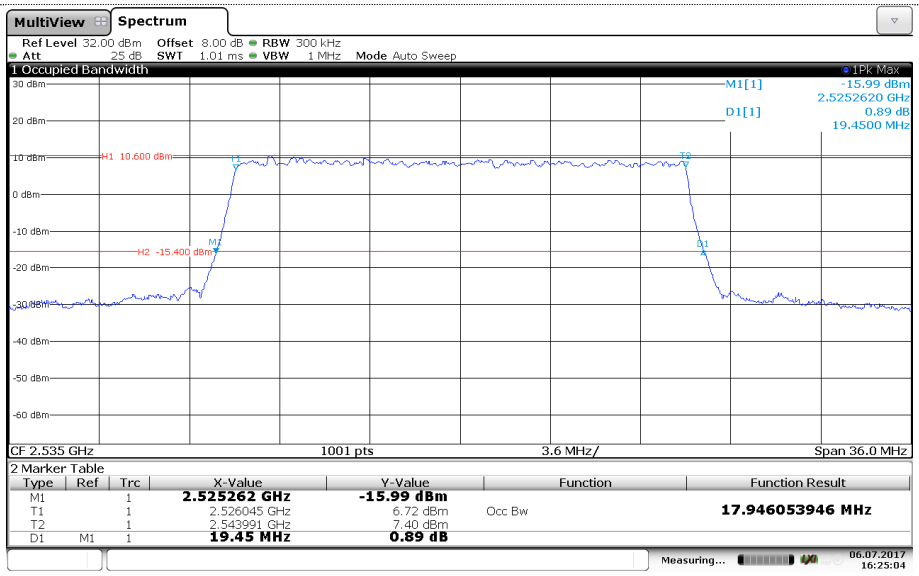
LTE Band 7-20MHz

16QAM



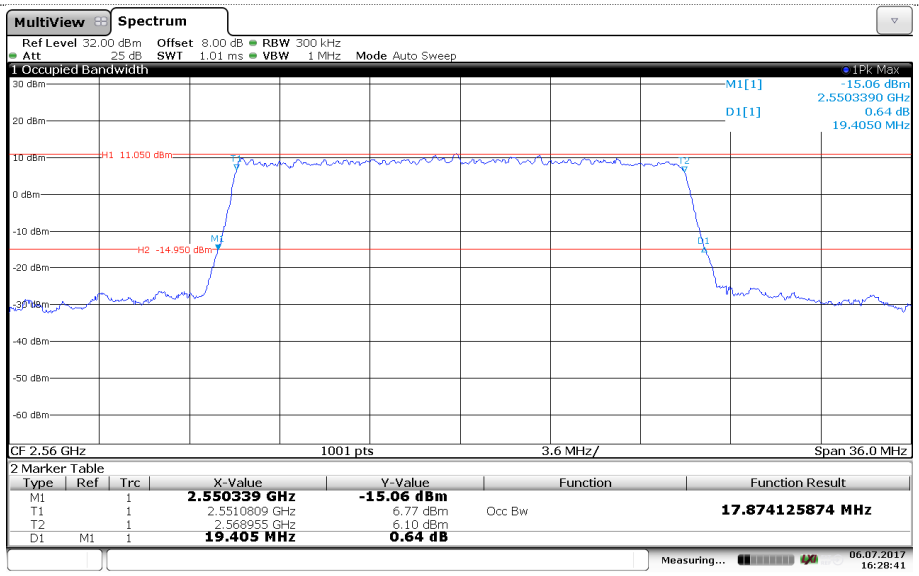
Date: 6.JUL.2017 16:25:55

Channel Low



Date: 6.JUL.2017 16:25:04

Channel Mid



Date: 6.JUL.2017 16:28:40

Channel High

5.3. Conducted Spurious Emissions

LIMIT

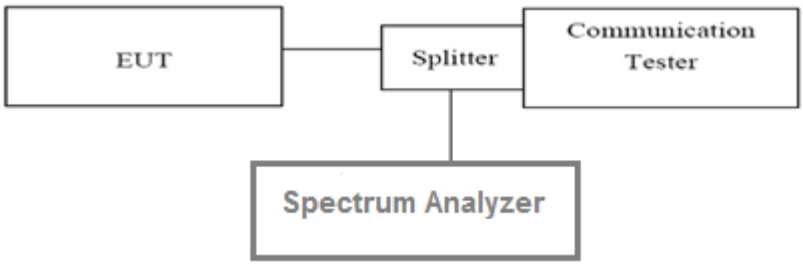
Part 24.238 and Part 22.917 and Part 27.53 h(1) specify that the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

LTE Band 7

Part 27.53 m(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. Limit <-25 dBm

TEST CONFIGURATION



TEST PROCEDURE

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriateattenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficientscans were taken to show the out of band Emissions if any up to 10th harmonic.
3. For the out of band: Set the RBW= 1MHz, VBW = 3MHz, Start=30MHz, Stop= 10th harmonic.

TEST MODE:

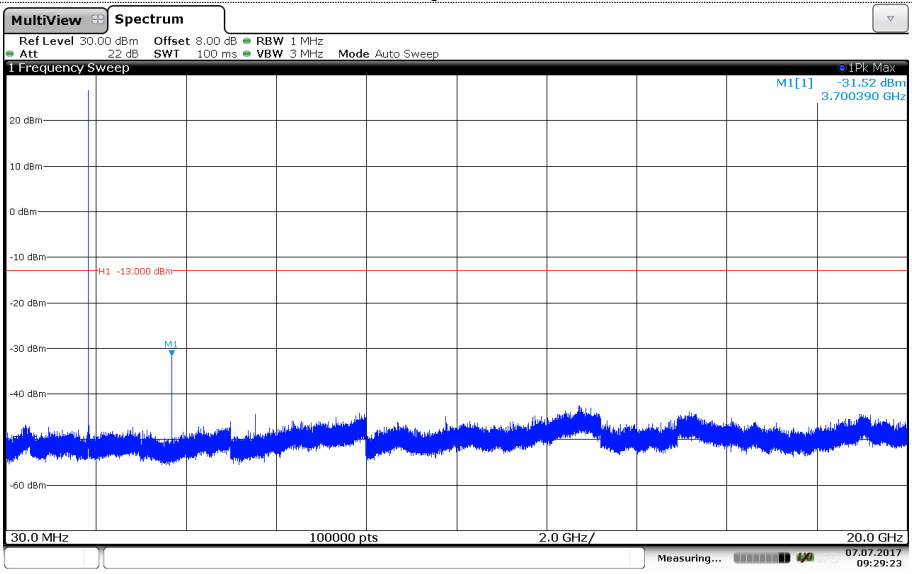
Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

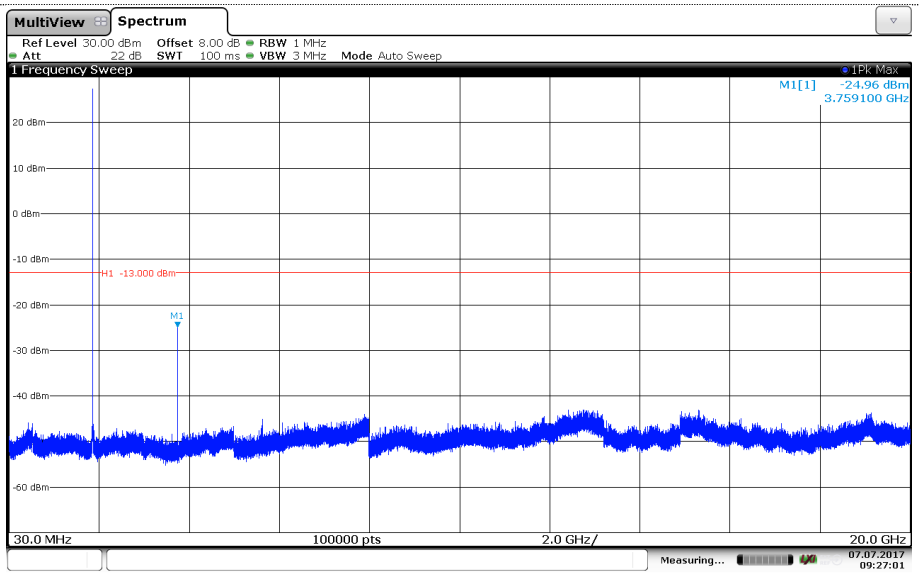
LTE Band 2-1.4MHz

QPSK



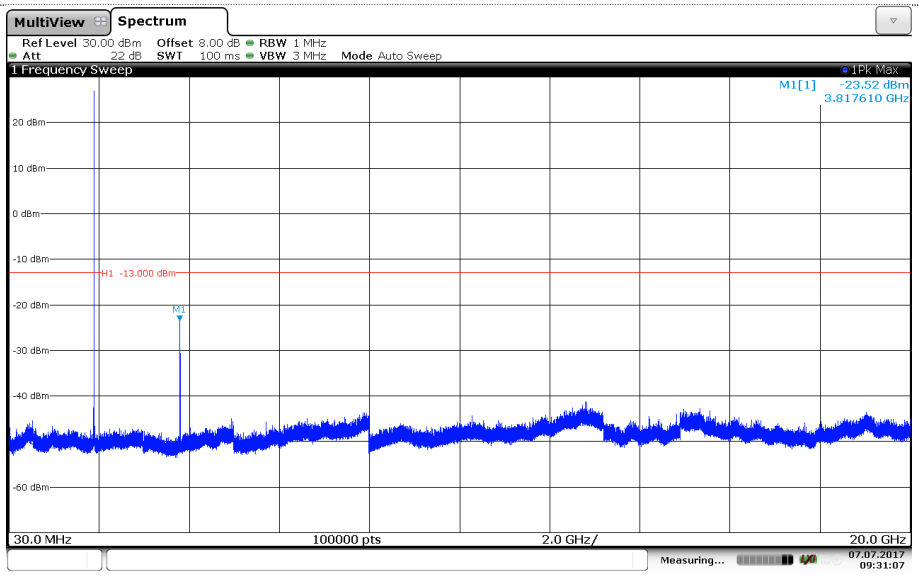
Date: 7.JUL.2017 09:29:23

Channel Low



Date: 7.JUL.2017 09:27:01

Channel Mid

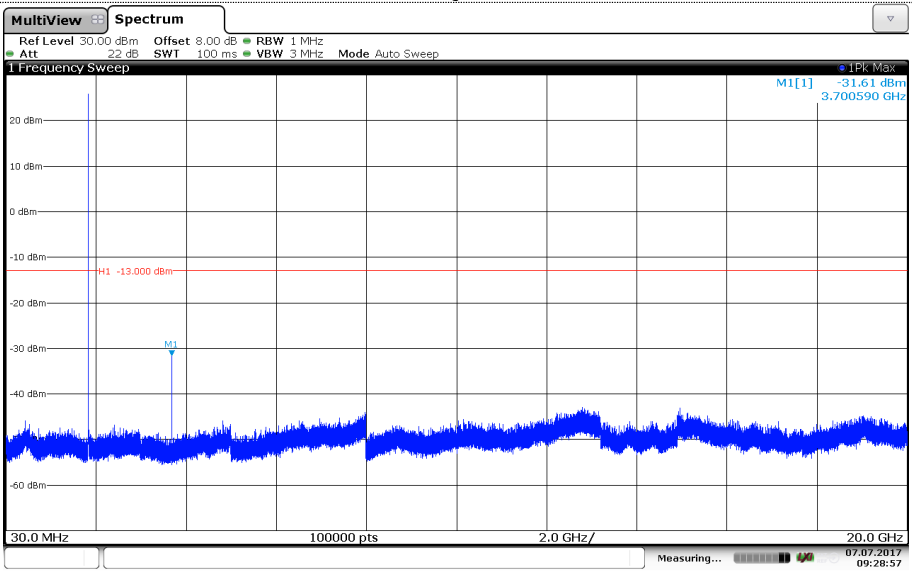


Date: 7.JUL.2017 09:31:07

Channel High

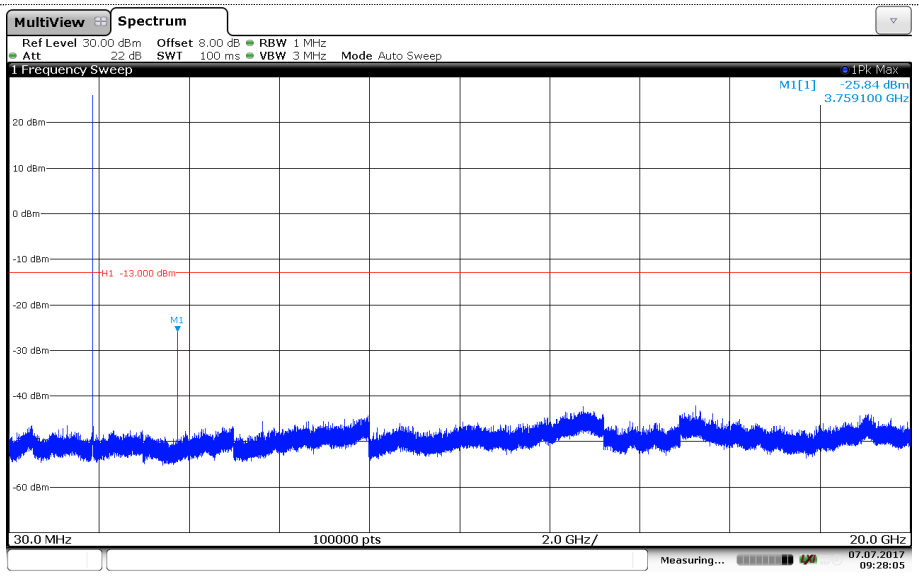
LTE Band 2-1.4MHz

16QAM



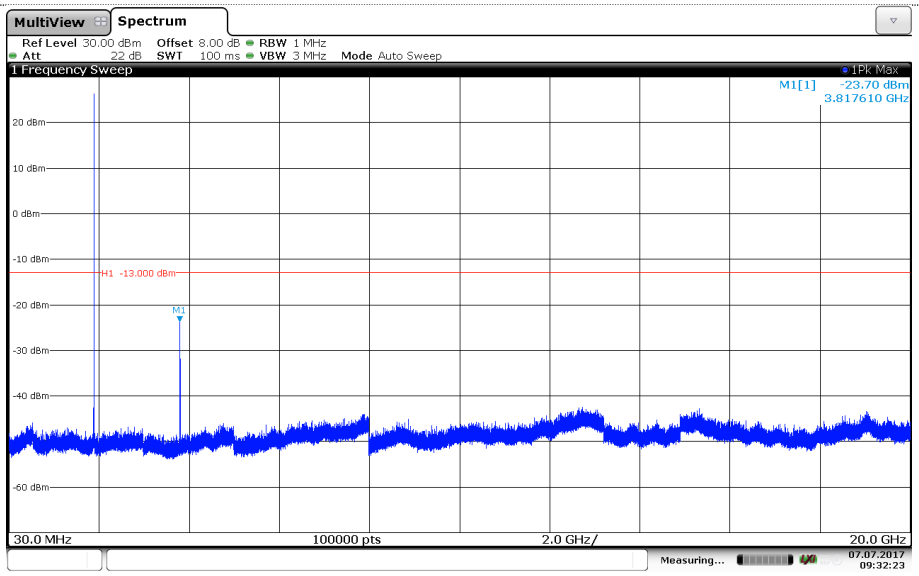
Date: 7.JUL.2017 09:28:58

Channel Low



Date: 7.JUL.2017 09:28:06

Channel Mid

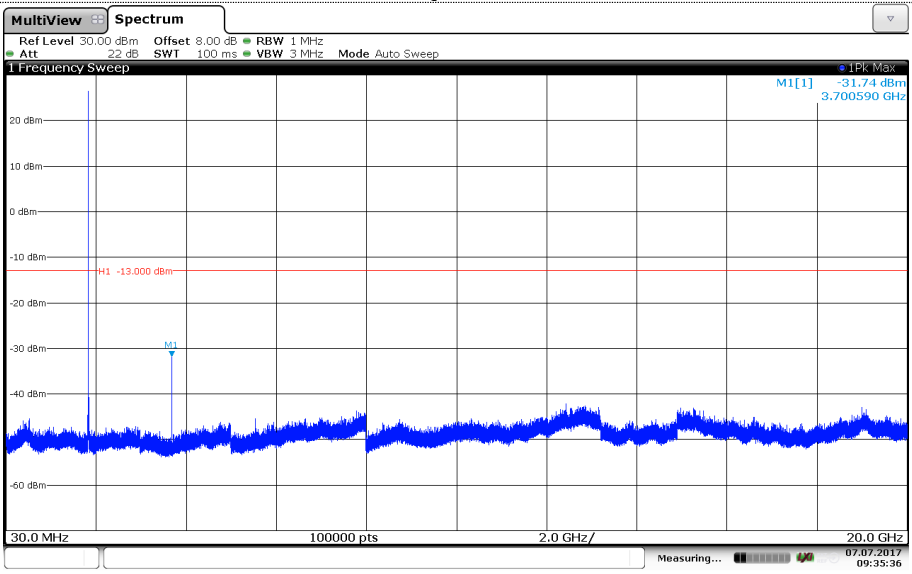


Date: 7.JUL.2017 09:32:23

Channel High

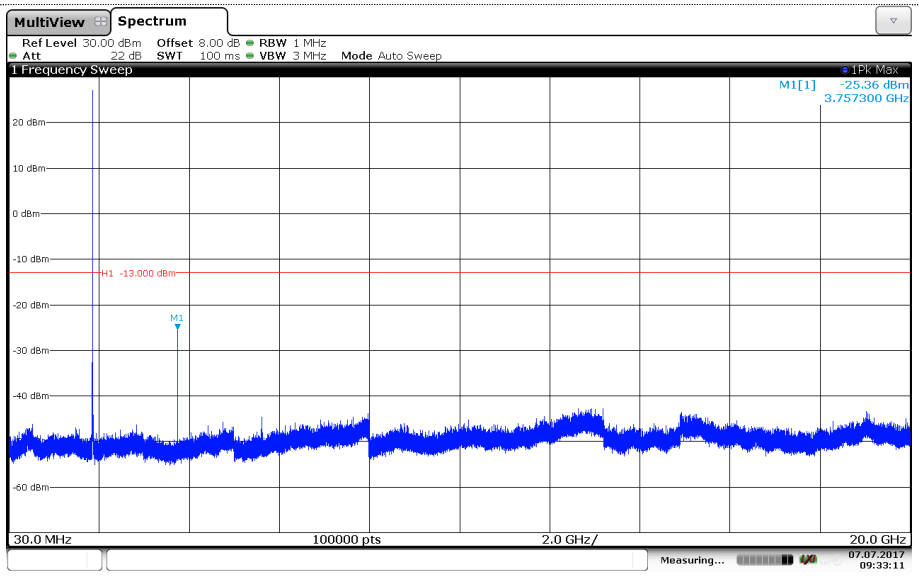
LTE Band 2-3MHz

QPSK



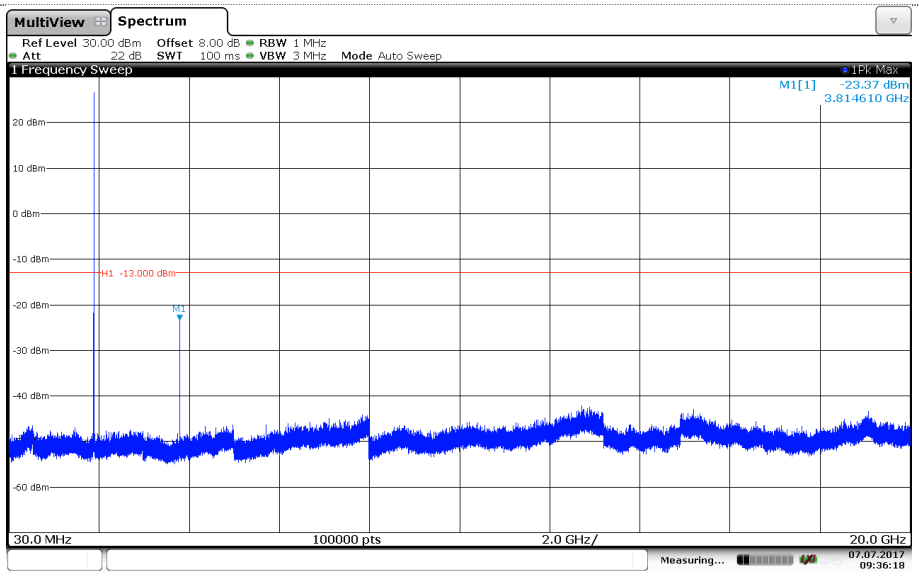
Date: 7.JUL.2017 09:35:36

Channel Low



Date: 7.JUL.2017 09:33:11

Channel Mid

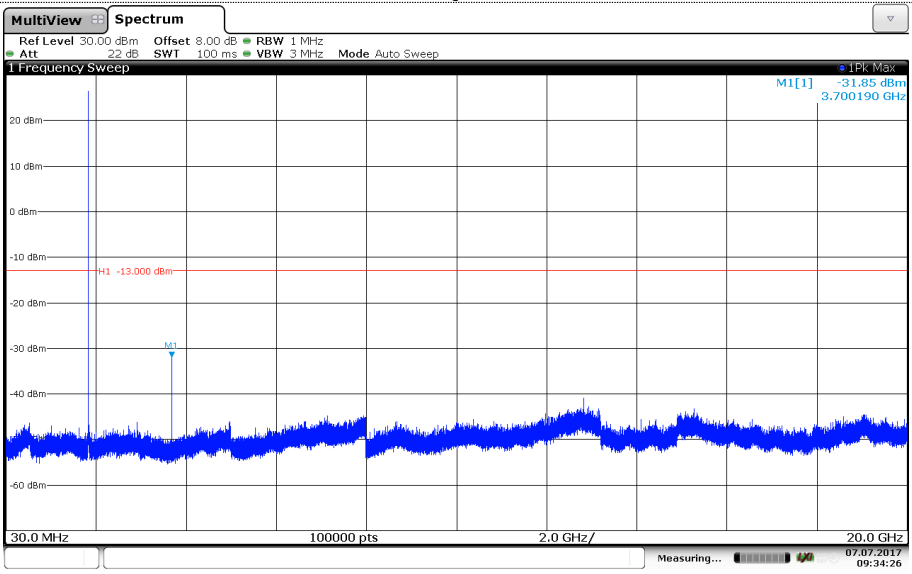


Date: 7.JUL.2017 09:36:18

Channel High

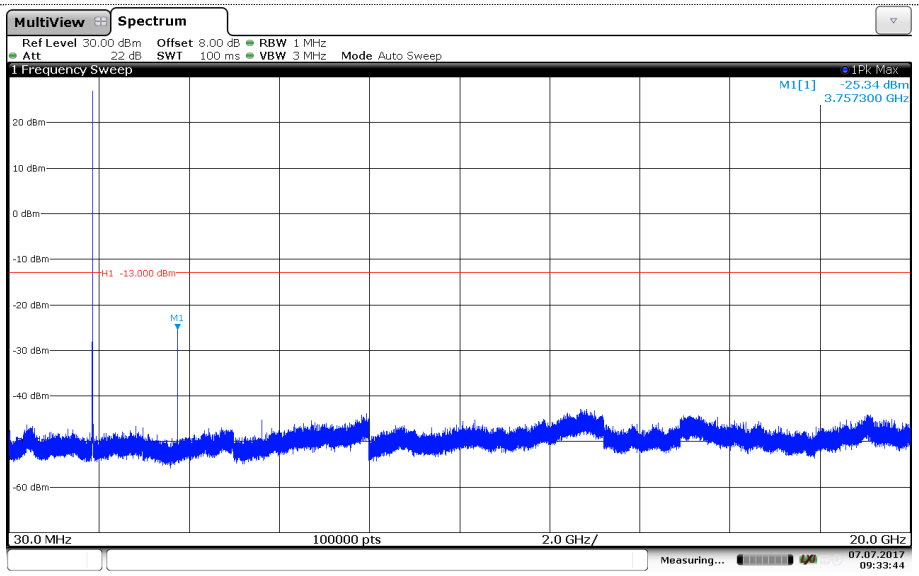
LTE Band 2-3MHz

16QAM



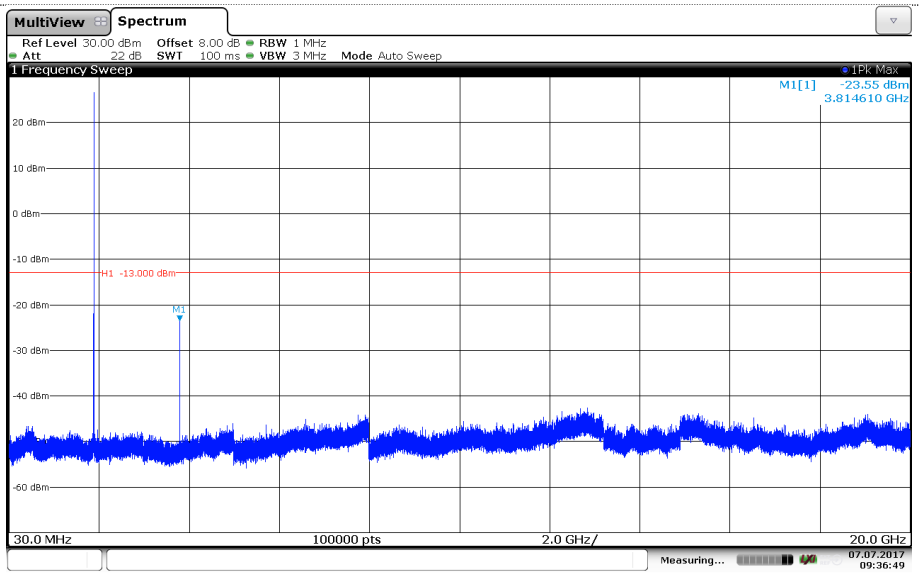
Date: 7.JUL.2017 09:34:26

Channel Low



Date: 7.JUL.2017 09:33:44

Channel Mid

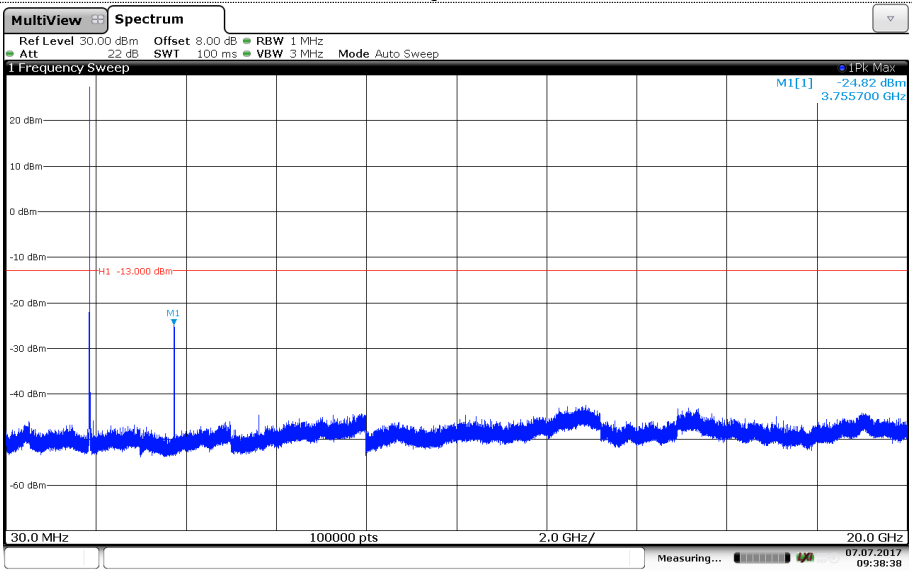


Date: 7.JUL.2017 09:36:49

Channel High

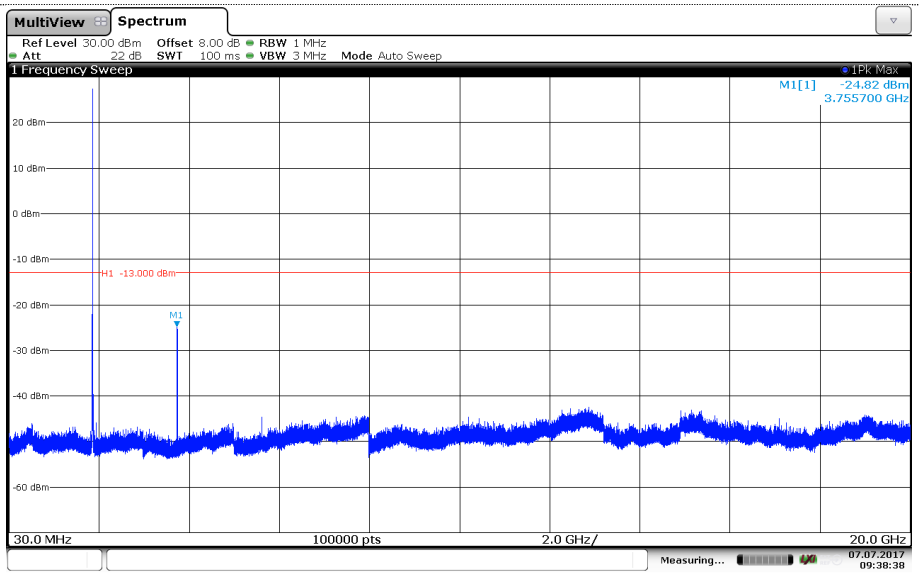
LTE Band 2-5MHz

QPSK



Date: 7.JUL.2017 09:38:38

Channel Low



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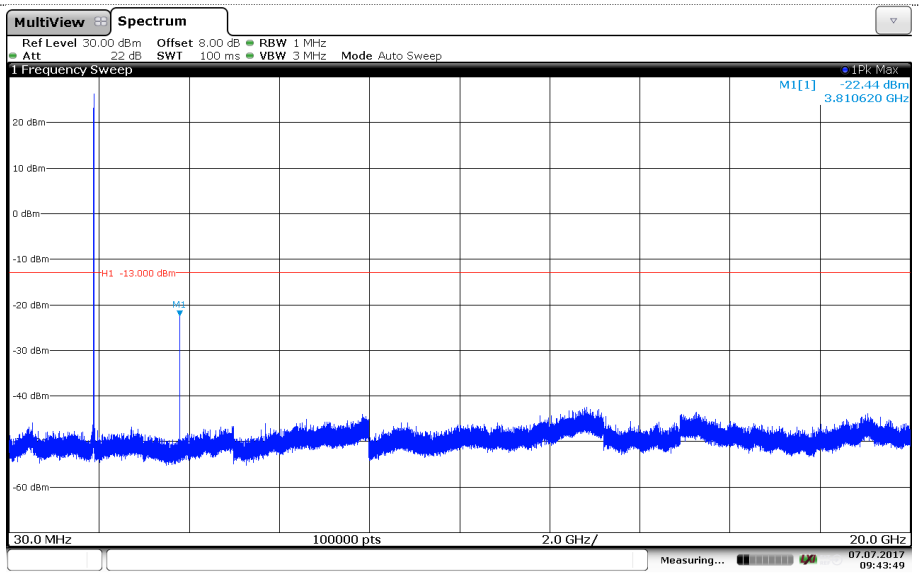
Channel Mid

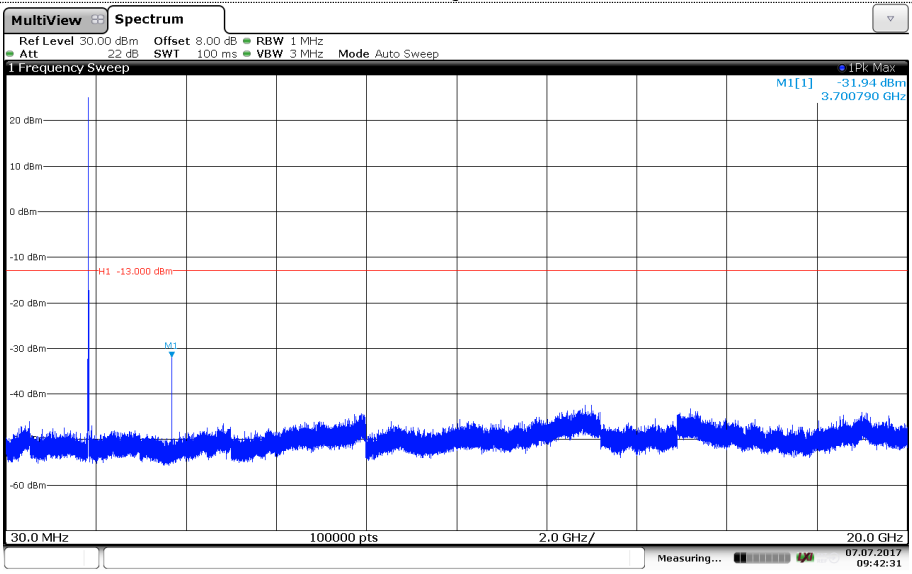


Date: 7.JUL.2017 09:43:50

Channel High

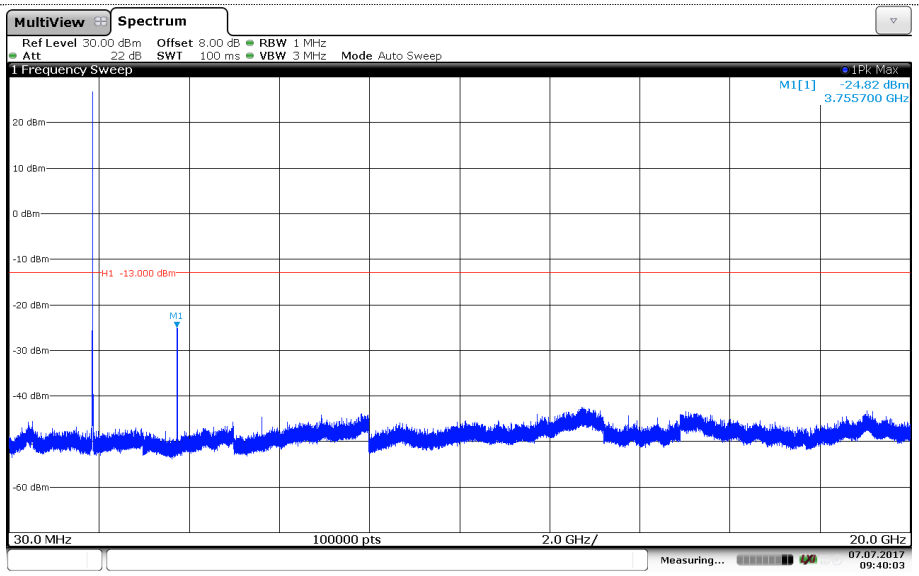
LTE Band 2-5MHz

16QAM



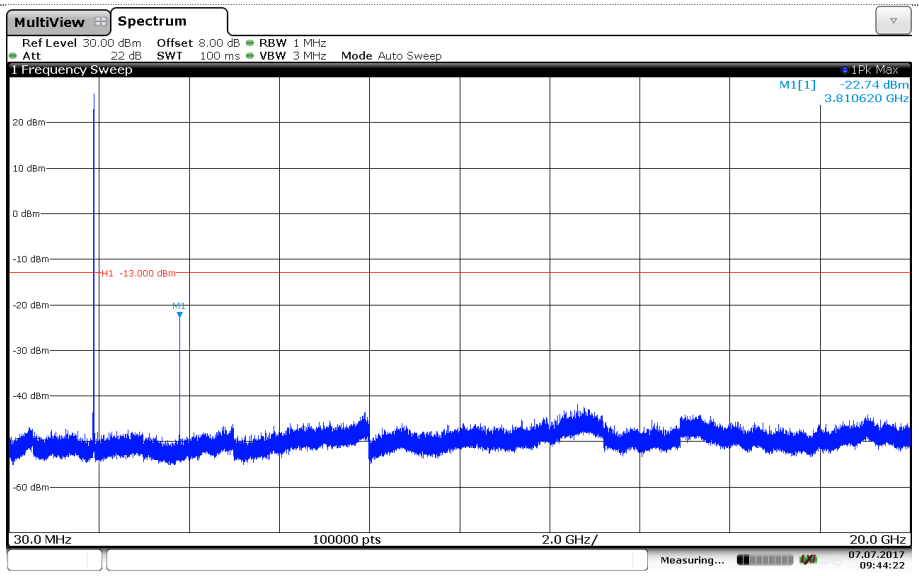
Date: 7.JUL.2017 09:42:32

Channel Low



Date: 7.JUL.2017 09:40:04

Channel Mid

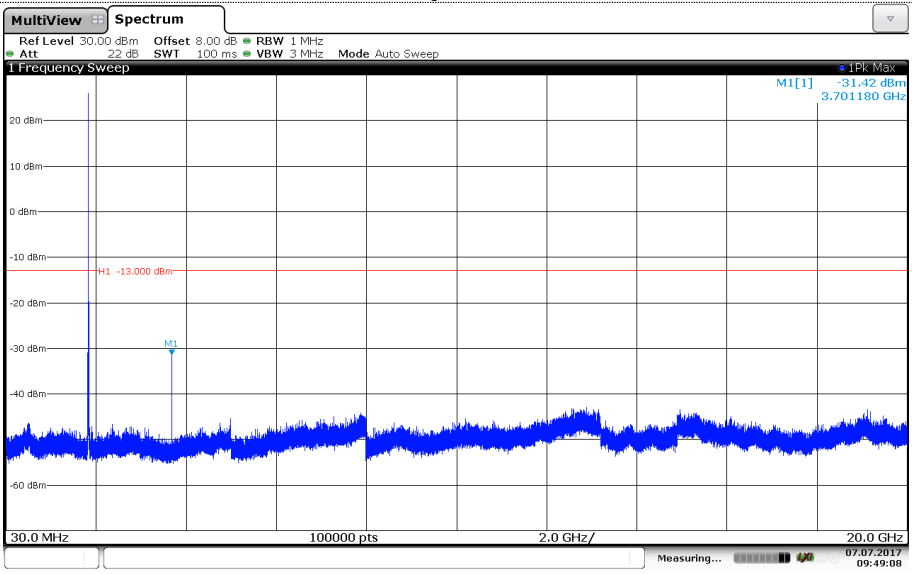


Date: 7.JUL.2017 09:44:22

Channel High

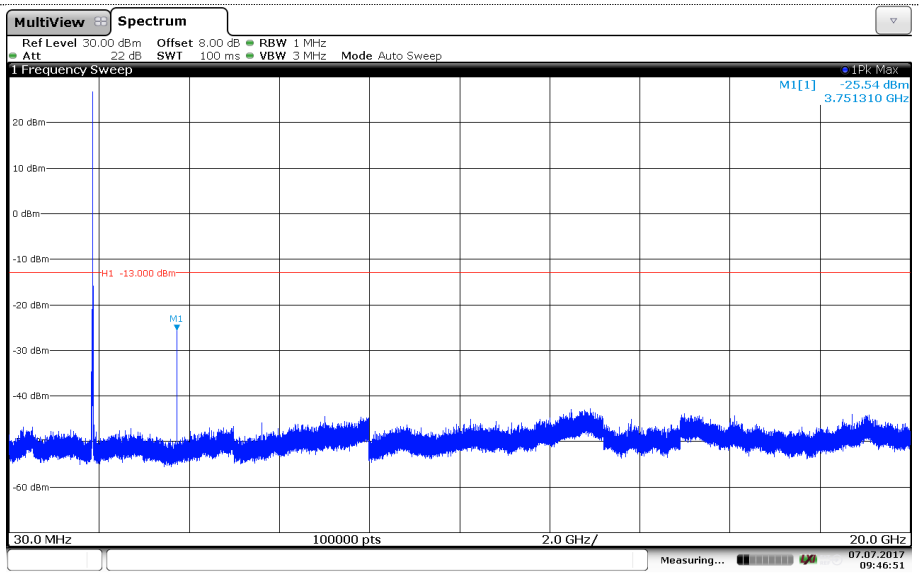
LTE Band 2-10MHz

QPSK



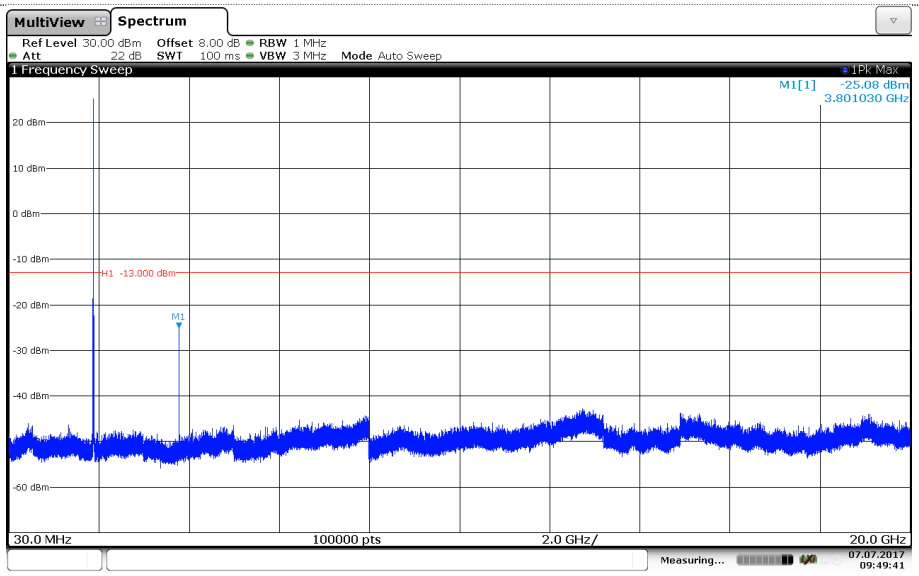
Date: 7.JUL.2017 09:49:08

Channel Low



Date: 7.JUL.2017 09:46:51

Channel Mid

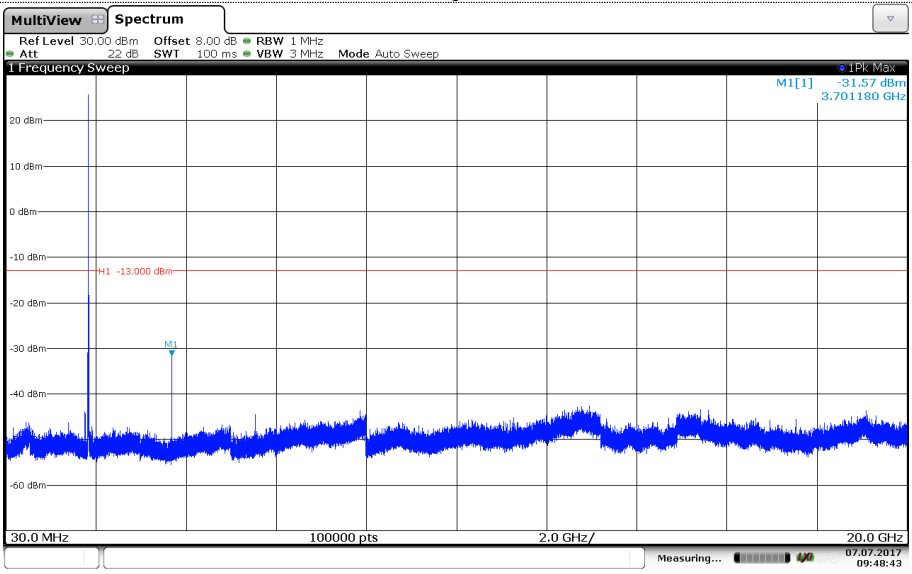


Date: 7.JUL.2017 09:49:41

Channel High

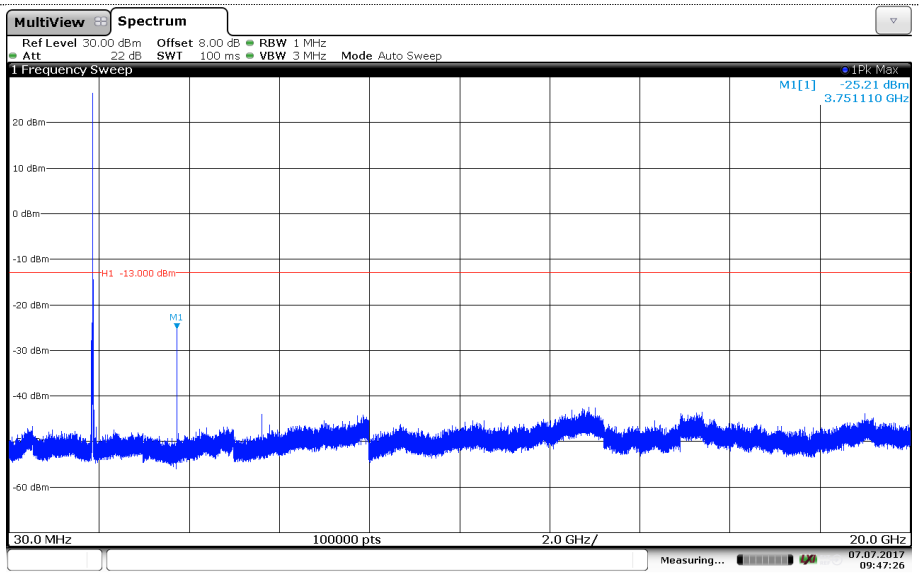
LTE Band 2-10MHz

16QAM



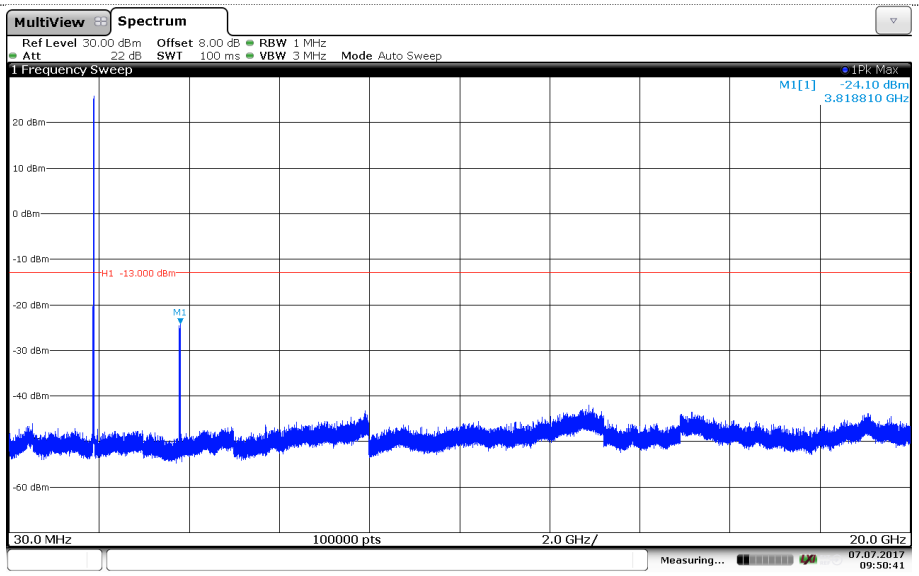
Date: 7.JUL.2017 09:48:43

Channel Low



Date: 7.JUL.2017 09:47:26

Channel Mid

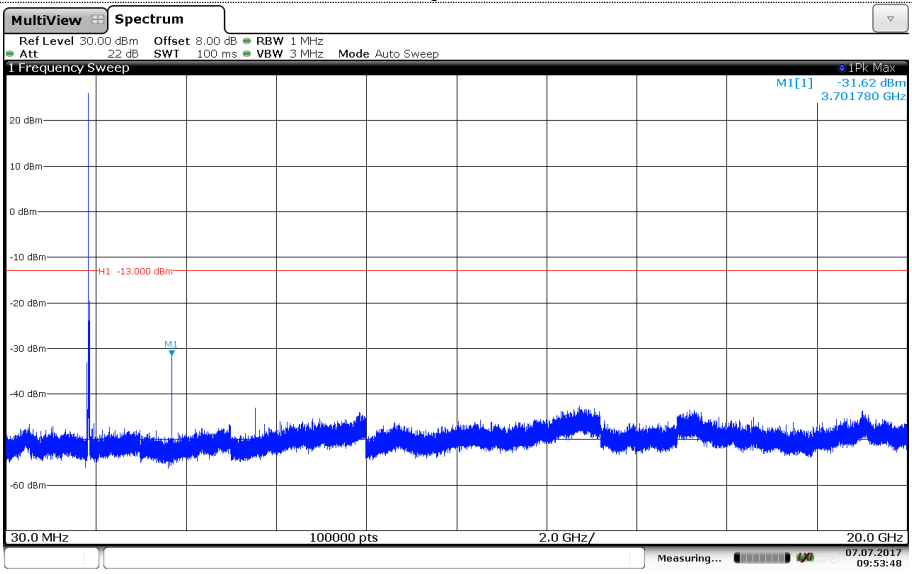


Date: 7.JUL.2017 09:50:41

Channel High

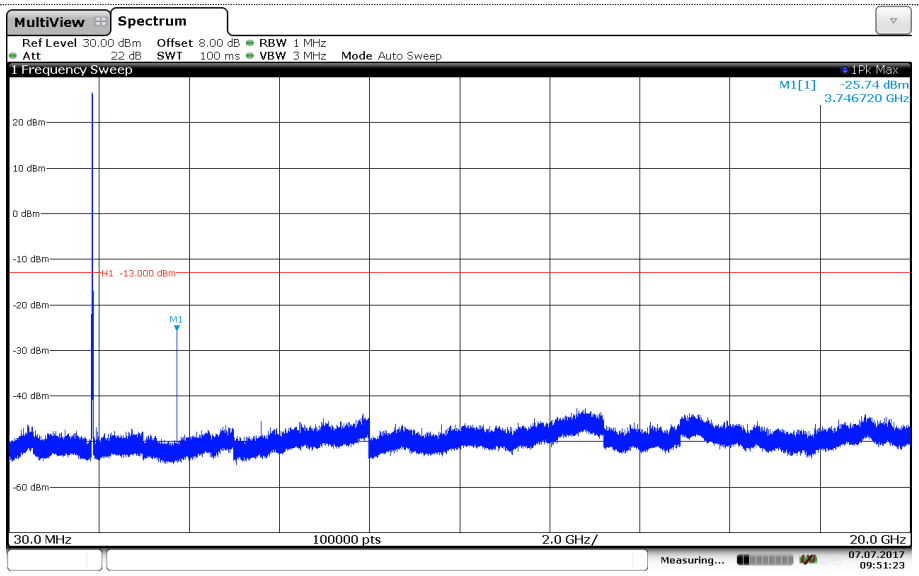
LTE Band 2-15MHz

QPSK



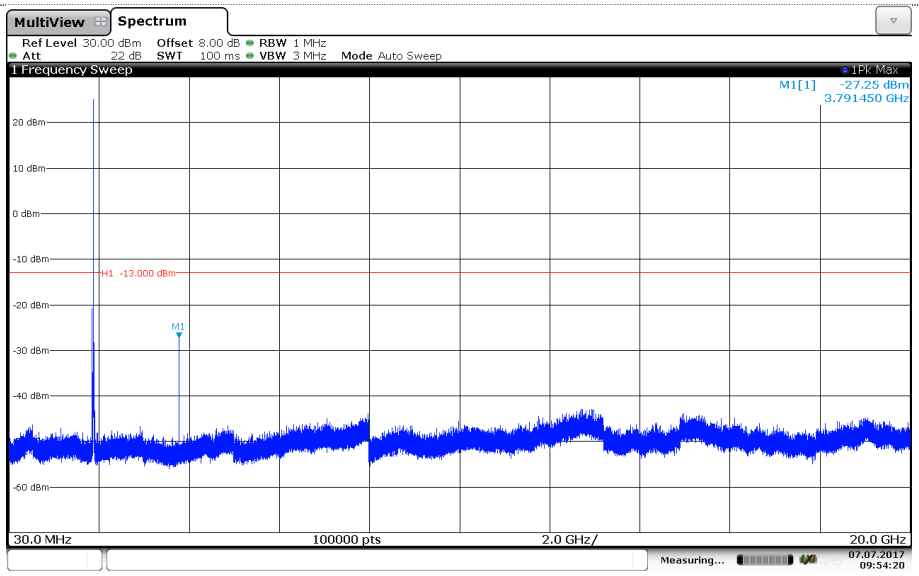
Date: 7.JUL.2017 09:53:48

Channel Low



Date: 7.JUL.2017 09:51:23

Channel Mid



Date: 7.JUL.2017 09:54:20

Channel High