

TEST REPORT

of

FCC Part 22 Subpart H, Part 24 Subpart E, Part 27 Subpart C/ L/ H

FCC ID: BEJTM05GTJN

Equipment Under Test : Car Telematics Device
Model Name : TA4HEB-N
Applicant : LG Electronics USA
Manufacturer : LG Electronics USA
Date of Receipt : 2018.08.01
Date of Test(s) : 2018.08.02 ~ 2019.03.22
Date of Issue : 2019.04.12

In the configuration tested, the EUT complied with the standards specified above.

Tested By:



Nancy Park

Date:

2019.04.12

Technical
Manager:



Hyunchae You

Date:

2019.04.12

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

Phone No. : +82 31 688 0901

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1.2. Details of Applicant

Applicant : LG Electronics USA

Address : 1000 Sylvan Avenue, Englewood Cliffs, New Jersey, United States, 07632

Contact Person : Han, Kyung-su

Phone No. : +2 201 472 2623

1.3. Details of Manufacturer

Company : LG Electronics Inc.

Address : 10, Magokjungang 10-ro, Gangseo-gu, Seoul, Korea, 07796

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SGS Korea Co., Ltd. (Gunpo Laboratory) 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807 <http://www.sgsgroup.kr>

RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

1.4. Description of EUT

Kind of Product	Car Telematics Device
Model Name	TA4HEB-N
Power Supply	DC 12 V
Rated Power	GSM 850: 33 dB m GSM 1 900: 30 dB m WCDMA 2,4,5: 23 dB m LTE Band 2, 4, 5, 7, 12, 26: 23 dB m
Frequency Range	GSM 850: 824 MHz ~ 849 MHz GSM 1 900: 1 850 MHz ~ 1 910 MHz WCDMA 2: 1 850 MHz ~ 1 910 MHz WCDMA 4: 1 710 MHz ~ 1 755 MHz WCDMA 5: 824 MHz ~ 849 MHz LTE Band 2: 1 850 MHz ~ 1 910 MHz LTE Band 4: 1 710 MHz ~ 1 755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2 500 MHz ~ 2 570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 26: 824 MHz ~ 849 MHz
Emission Designator	GSM 850: 243KGXW (Voice) / 245KG7W (EDGE) GSM 1900: 241KGXW (Voice) / 242KG7W (EDGE) WCDMA 2: 4M17F9W WCDMA 4: 4M14F9W WCDMA 5: 4M14F9W LTE Band 2 (1.4 MHz): 1M10G7D (QPSK) / 1M10W7D (16QAM) LTE Band 2 (3 MHz): 2M69G7D (QPSK) / 2M69W7D (16QAM) LTE Band 2 (5 MHz): 4M52G7D (QPSK) / 4M52W7D (16QAM) LTE Band 2 (10 MHz): 8M97G7D (QPSK) / 8M97W7D (16QAM) LTE Band 2 (15 MHz): 13M5G7D (QPSK) / 13M5W7D (16QAM) LTE Band 2 (20 MHz): 18M0G7D (QPSK) / 17M9W7D (16QAM) LTE Band 4 (1.4 MHz): 1M10G7D (QPSK) / 1M10W7D (16QAM) LTE Band 4 (3 MHz): 2M69G7D (QPSK) / 2M69W7D (16QAM) LTE Band 4 (5 MHz): 4M52G7D (QPSK) / 4M52W7D (16QAM) LTE Band 4 (10 MHz): 8M94G7D (QPSK) / 8M97W7D (16QAM) LTE Band 4 (15 MHz): 13M5G7D (QPSK) / 13M5W7D (16QAM) LTE Band 4 (20 MHz): 18M0G7D (QPSK) / 18M0W7D (16QAM) LTE Band 5 (1.4 MHz): 1M10G7D (QPSK) / 1M10W7D (16QAM) LTE Band 5 (3 MHz): 2M69G7D (QPSK) / 2M69W7D (16QAM) LTE Band 5 (5 MHz): 4M52G7D (QPSK) / 4M52W7D (16QAM) LTE Band 5 (10 MHz): 8M97G7D (QPSK) / 8M97W7D (16QAM) LTE Band 7 (5 MHz): 4M52G7D (QPSK) / 4M52W7D (16QAM) LTE Band 7 (10 MHz): 8M94G7D (QPSK) / 8M94W7D (16QAM) LTE Band 7 (15 MHz): 13M5G7D (QPSK) / 13M5W7D (16QAM) LTE Band 7 (20 MHz): 17M9G7D (QPSK) / 18M0W7D (16QAM) LTE Band 12 (1.4 MHz): 1M10G7D (QPSK) / 1M10W7D (16QAM) LTE Band 12 (3 MHz): 2M69G7D (QPSK) / 2M69W7D (16QAM) LTE Band 12 (5 MHz): 4M52G7D (QPSK) / 4M52W7D (16QAM) LTE Band 12 (10 MHz): 8M97G7D (QPSK) / 8M94W7D (16QAM) LTE Band 26 (1.4 MHz): 1M10G7D (QPSK) / 1M10W7D (16QAM) LTE Band 26 (3 MHz): 2M69G7D (QPSK) / 2M69W7D (16QAM) LTE Band 26 (5 MHz): 4M53G7D (QPSK) / 4M52W7D (16QAM) LTE Band 26 (10 MHz): 8M97G7D (QPSK) / 8M97W7D (16QAM) LTE Band 26 (15 MHz): 13M5G7D (QPSK) / 13M5W7D (16QAM)

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1.5. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	Agilent	E8257D	MY51501169	Jul. 03, 2018	Annual	Jul. 03, 2019
Spectrum Analyzer	R&S	FSV30	103102	Jun. 11, 2018	Annual	Jun. 11, 2019
Mobile Test Unit	R&S	CMW500	144035	Feb. 19, 2019	Annual	Feb. 19, 2020
Power Meter	Anritsu	ML2495A	1223004	Jun. 12, 2018	Annual	Jun. 12, 2019
Power Sensor	Anritsu	MA2411B	1207272	Jun. 12, 2018	Annual	Jun. 12, 2019
Directional Coupler	KRYTAR	152613	140972	Jun. 14, 2018	Annual	Jun. 14, 2019
Temperature Chamber	ESPEC CORP.	PL-1J	15000793	Jun. 14, 2018	Annual	Jun. 14, 2019
High Pass Filter	Wainwright Instrument GmbH	WHKX10-900-1000-18000-40SS	7	Mar. 12, 2019	Annual	Mar. 12, 2020
High Pass Filter	Wainwright Instrument GmbH	WHK3.0/18G-10SS	344	May 27, 2018	Annual	May 27, 2019
High Pass Filter	Wainwright Instrument GmbH	WHKX2.2/12.75G-10SS	8	Mar. 12, 2019	Annual	Mar. 12, 2020
High Pass Filter	Wainwright Instrument GmbH	WHKX1.5/15G-6SS	4	Jun. 14, 2018	Annual	Jun. 14, 2019
DC Power Supply	R&S	HMP2020	019258024	Nov. 06, 2018	Annual	Nov. 06, 2019
Preamplifier	H.P.	8447F	2944A03909	Aug. 07, 2018	Annual	Aug. 07, 2019
Preamplifier	Agilent	8449B	3008A01932	Feb. 22, 2019	Annual	Feb. 22, 2020
Preamplifier	MITEQ Inc.	JS44-18004000-35-8P	1546891	May 13, 2018	Annual	May 13, 2019
Test Receiver	R&S	ESU26	100109	Jan. 31, 2019	Annual	Jan. 31, 2020
Loop Antenna	SCHWARZBECK MESSELEKTRONIK	FMZB 1519	1519-039	Aug. 23, 2017	Biennial	Aug. 23, 2019
Bilog Antenna	SCHWARZBECK MESSELEKTRONIK	VULB9163	01126	Mar. 26, 2018	Biennial	Mar. 26, 2020
Horn Antenna	R&S	HF906	100326	Feb. 14, 2018	Biennial	Feb. 14, 2020
Horn Antenna	SCHWARZBECK MESSELEKTRONIK	BBHA9170	BBHA9170223	Sep. 10, 2018	Biennial	Sep. 10, 2020
Antenna Master	Innco systems GmbH	MM4000	N/A	N.C.R.	N/A	N.C.R.
Turn Table	Innco systems GmbH	DS 1200S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/38330516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L x W x H (9.6 m x 6.4 m x 6.4 m)	N/A	N.C.R.	N/A	N.C.R.

► Support Equipment

Description	Manufacturer	Model	Serial Number
N/A	-	-	-

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1.6. Summary of Test Results

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 2, 22, 24 and 27		
Section	Test Item(s)	Result
§2.1046 §22.913(a)(5) §24.232(c) §27.50(c)(10) §27.50(d)(4) §27.50(h)(2)	RF Radiated Output Power	Complied
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1) §27.53(m)(4)	Spurious Radiated Emission	Complied
§2.1046	Conducted Output Power	Complied
§2.1049	Occupied Bandwidth	Complied
§22.913(d) §24.232(d) §27.50(d)(5)	Peak-Average Ratio	Complied
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1) §27.53(m)(4)	Spurious Emission at Antenna Terminal	Complied
§22.917(a) §24.238(a) §27.53(g) §27.53(h)(1) §27.53(m)(4)	Band Edge	Complied
§2.1055 §22.355 §24.235 §27.54	Frequency Stability	Complied

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1.7. Test Report Revision

Revision	Report number	Date of Issue	Description
0	F690501/RF-RTL013639	2019.03.28	Initial
1	F690501/RF-RTL013639-1	2019.04.12	Deleted IC standards

1.8. Sample Calculation for Offset

Where relevant, the following sample calculation is provided:

1.8.1. Conducted Test

Offset value (dB) = Directional Coupler (dB) + Cable loss (dB)

1.8.2. Radiation Test

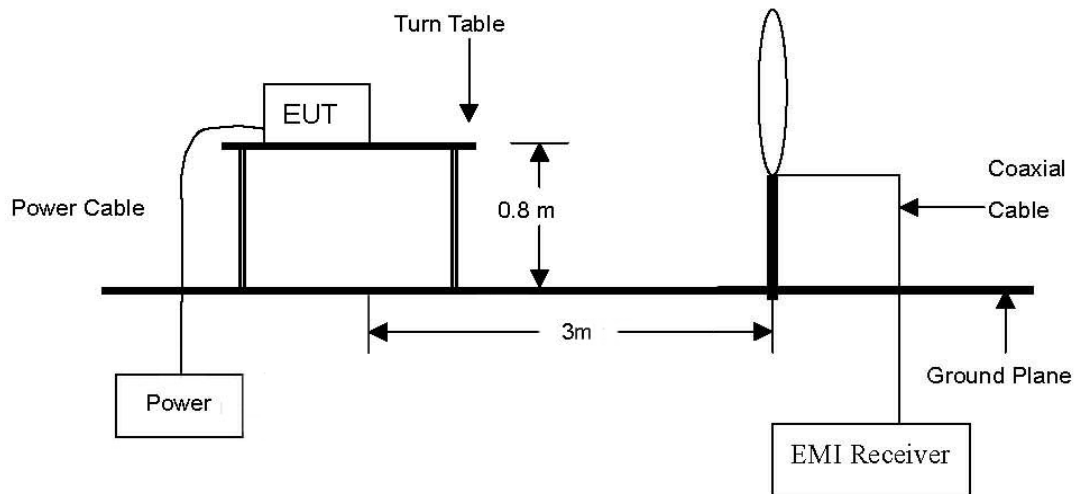
E.R.P. & E.I.R.P. = [S.G level + Amp.] (dB m) - Cable loss (dB) + Ant. gain (dB d/dB i)

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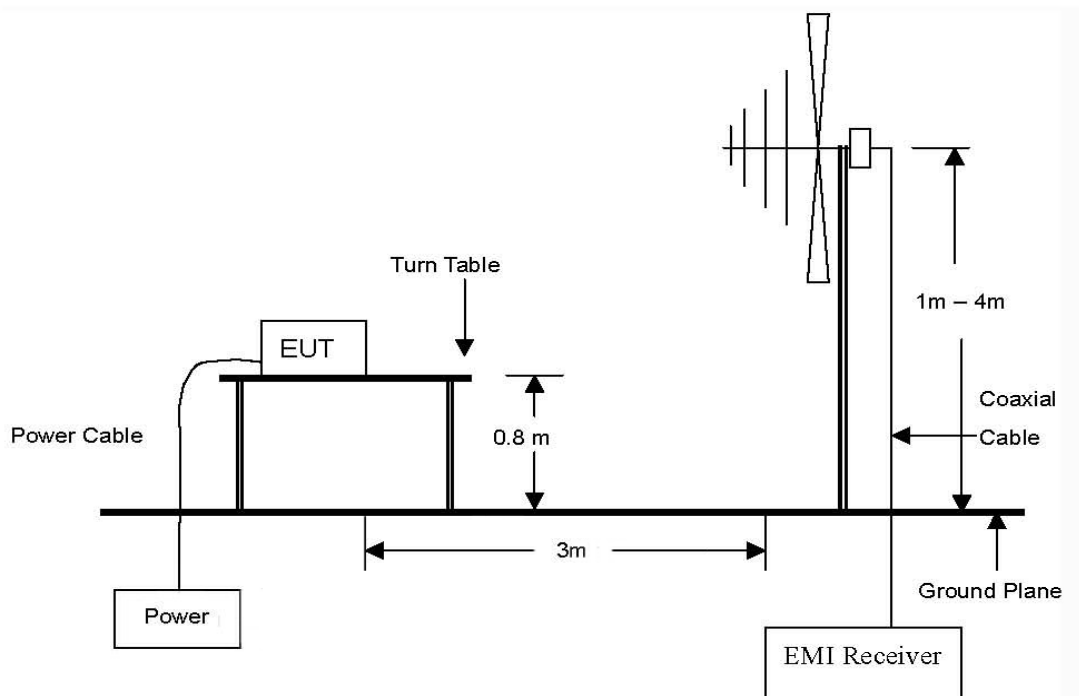
2. RF Radiated Output Power & Spurious Radiated Emission

2.1. Test Setup

The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz emissions.

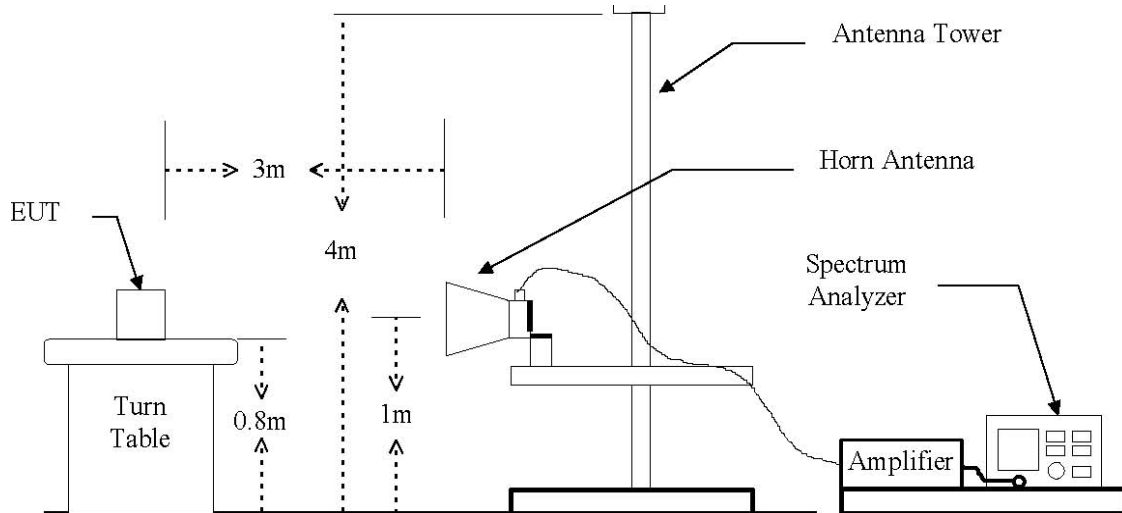


The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz.

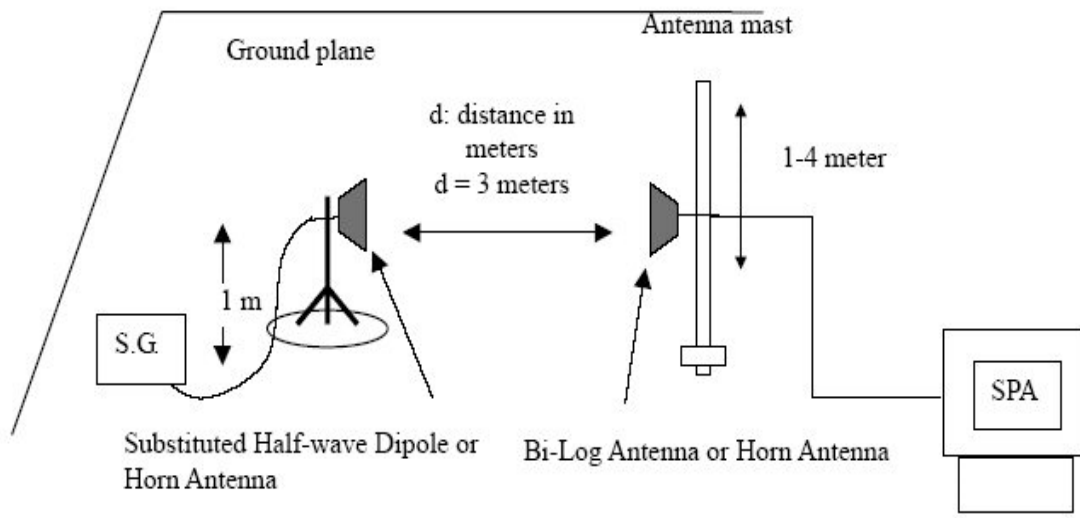


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The diagram below shows the test setup that is utilized to make the measurements for emission from 1 GHz to 26 GHz.



The diagram below shows the test setup for substituted method.



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2.2. Limit

2.2.1. Limit of radiated output power

- §22.913(a)(5), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

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

- §27.50(c)(10), Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

- §27.50(d)(4), fixed, mobile, and portable (hand-held) stations operating in the 1 710-1 755 MHz band and mobile and portable stations operating in the 1 695-1 710 MHz and 1 755-1 780 MHz bands are limited to 1 watt EIRP.

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

2.2.2. Limit of spurious radiated emission

- §22.917(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

- §24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

- §27.53(g), the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB.

- §27.53(h)(1), for operations in the 1 695-1 710 MHz, 1 710-1 755 MHz, 1 755-1 780 MHz, 1 915-1 920 MHz, 1 995-2 000 MHz, 2 000-2 020 MHz, 2 110-2 155 MHz, 2 155-2 180 MHz, and 2 180-2 200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

- §27.53(m)(4), for mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log_{10}(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log_{10}(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log_{10}(P)$ 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. In addition, the attenuation factor shall not be less than $43 + 10 \log_{10}(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log_{10}(P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

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2.3. Test Procedure: Based on ANSI/TIA 603E: 2016

1. On a test site, the EUT shall be placed at 80 cm height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration band set to the emissions occupied bandwidth, RBW = 1-5 % of the OBW (not to exceed 1 MHz), VBW ≥ 3 x RBW, Detector = power averaging (rms), sweep time = auto, trace average at least 100 traces in power averaging (rms) mode, per the guidelines of KDB Publication 971168 D01 v03r01.
5. Radiated spurious emissions measurement method was set as follows:
RBW = 100 kHz for emissions below 1 GHz and 1 MHz for emissions above 1 GHz, VBW ≥ 3 x RBW, Detector = Peak, trace mode = max hold, per the guidelines of KDB Publication 971168 D01 v03r01.
6. The transmitter shall be switched on, the measuring receiver shall be tuned to the frequency of the transmitter under test.
7. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
8. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
9. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
10. The maximum signal level detected by the measuring receiver shall be noted.
11. The EUT was replaced by half-wave dipole (1 GHz below) or horn antenna (1 GHz above) connected to a signal generator.
12. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
13. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
14. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, which is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
15. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
16. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

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2.4. Test result for RF radiated output power

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 % R.H.

LTE band 2 (1.4 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 850.7	H	11.64	4.33	8.53	15.84	38.37
1 850.7	V	15.57	4.33	8.53	19.77	94.84
1 880.0	H	13.57	4.34	8.63	17.86	61.09
1 880.0	V	16.17	4.34	8.63	20.46	111.17
1 909.3	H	13.64	4.36	8.60	17.88	61.38
1 909.3	V	14.12	4.36	8.60	18.36	68.55

* 1.4 BW 1RB size / 0 Offset for B2

LTE band 2 (1.4 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 850.7	H	11.01	4.33	8.53	15.21	33.19
1 850.7	V	14.49	4.33	8.53	18.69	73.96
1 880.0	H	12.76	4.34	8.63	17.05	50.70
1 880.0	V	15.12	4.34	8.63	19.41	87.30
1 909.3	H	12.57	4.36	8.60	16.81	47.97
1 909.3	V	13.03	4.36	8.60	17.27	53.33

* 1.4 BW 1RB size / 0 Offset for B2

LTE band 2 (3 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 851.5	H	11.99	4.33	8.54	16.20	41.69
1 851.5	V	15.48	4.33	8.54	19.69	93.11
1 880.0	H	13.69	4.34	8.63	17.98	62.81
1 880.0	V	16.04	4.34	8.63	20.33	107.89
1 908.5	H	13.51	4.36	8.61	17.76	59.70
1 908.5	V	14.57	4.36	8.61	18.82	76.21

* 3 BW 1RB size / 0 Offset for B2

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LTE band 2 (3 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 851.5	H	11.17	4.33	8.54	15.38	34.51
1 851.5	V	14.71	4.33	8.54	18.92	77.98
1 880.0	H	12.75	4.34	8.63	17.04	50.58
1 880.0	V	14.73	4.34	8.63	19.02	79.80
1 908.5	H	12.67	4.36	8.61	16.92	49.20
1 908.5	V	13.72	4.36	8.61	17.97	62.66

* 3 BW 1RB size / 0 Offset for B2

LTE band 2 (5 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 852.5	H	11.86	4.33	8.54	16.07	40.46
1 852.5	V	15.59	4.33	8.54	19.80	95.50
1 880.0	H	13.96	4.34	8.63	18.25	66.83
1 880.0	V	16.01	4.34	8.63	20.30	107.15
1 907.5	H	13.82	4.36	8.62	18.08	64.27
1 907.5	V	14.98	4.36	8.62	19.24	83.95

* 5 BW 1RB size / 0 Offset for B2

LTE band 2 (5 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 852.5	H	11.12	4.33	8.54	15.33	34.12
1 852.5	V	14.74	4.33	8.54	18.95	78.52
1 880.0	H	13.03	4.34	8.63	17.32	53.95
1 880.0	V	14.31	4.34	8.63	18.60	72.44
1 907.5	H	12.69	4.36	8.62	16.95	49.55
1 907.5	V	14.13	4.36	8.62	18.39	69.02

* 5 BW 1RB size / 0 Offset for B2

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LTE band 2 (10 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 855.0	H	12.63	4.33	8.55	16.85	48.42
1 855.0	V	15.70	4.33	8.55	19.92	98.17
1 880.0	H	14.04	4.34	8.63	18.33	68.08
1 880.0	V	15.59	4.34	8.63	19.88	97.27
1 905.0	H	13.48	4.36	8.64	17.76	59.70
1 905.0	V	15.40	4.36	8.64	19.68	92.90

* 10 BW 1RB size / 0 Offset for B2

LTE band 2 (10 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 855.0	H	11.62	4.33	8.55	15.84	38.37
1 855.0	V	14.59	4.33	8.55	18.81	76.03
1 880.0	H	13.17	4.34	8.63	17.46	55.72
1 880.0	V	14.88	4.34	8.63	19.17	82.60
1 905.0	H	12.48	4.36	8.64	16.76	47.42
1 905.0	V	14.60	4.36	8.64	18.88	77.27

* 10 BW 1RB size / 0 Offset for B2

LTE band 2 (15 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 857.5	H	13.10	4.33	8.55	17.32	53.95
1 857.5	V	16.09	4.33	8.55	20.31	107.40
1 880.0	H	14.85	4.34	8.63	19.14	82.04
1 880.0	V	16.29	4.34	8.63	20.58	114.29
1 902.5	H	14.23	4.35	8.67	18.55	71.61
1 902.5	V	16.48	4.35	8.67	20.80	120.23

* 15 BW 1RB size / 0 Offset for B2

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LTE band 2 (15 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 857.5	H	12.41	4.33	8.55	16.63	46.03
1 857.5	V	15.06	4.33	8.55	19.28	84.72
1 880.0	H	13.65	4.34	8.63	17.94	62.23
1 880.0	V	15.43	4.34	8.63	19.72	93.76
1 902.5	H	13.38	4.35	8.67	17.70	58.88
1 902.5	V	15.64	4.35	8.67	19.96	99.08

* 15 BW 1RB size / 0 Offset for B2

LTE band 2 (20 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 860.0	H	13.66	4.33	8.56	17.89	61.52
1 860.0	V	16.65	4.33	8.56	20.88	122.46
1 880.0	H	14.94	4.34	8.63	19.23	83.75
1 880.0	V	16.62	4.34	8.63	20.91	123.31
1 900.0	H	15.14	4.35	8.70	19.49	88.92
1 900.0	V	17.35	4.35	8.70	21.70	147.91

* 20 BW 1RB size / 0 Offset for B2

LTE band 2 (20 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 860.0	H	12.97	4.33	8.56	17.20	52.48
1 860.0	V	15.89	4.33	8.56	20.12	102.80
1 880.0	H	14.20	4.34	8.63	18.49	70.63
1 880.0	V	15.89	4.34	8.63	20.18	104.23
1 900.0	H	14.11	4.35	8.70	18.46	70.15
1 900.0	V	16.54	4.35	8.70	20.89	122.74

* 20 BW 1RB size / 0 Offset for B2

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LTE band 4 (1.4 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 710.7	H	5.73	4.14	8.51	10.10	10.23
1 710.7	V	16.37	4.14	8.51	20.74	118.58
1 732.5	H	6.56	4.18	8.48	10.86	12.19
1 732.5	V	16.25	4.18	8.48	20.55	113.50
1 754.3	H	5.93	4.22	8.44	10.15	10.35
1 754.3	V	16.71	4.22	8.44	20.93	123.88

* 1.4 BW 1RB size / 0 Offset for B4

LTE band 4 (1.4 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 710.7	H	4.74	4.14	8.51	9.11	8.15
1 710.7	V	15.26	4.14	8.51	19.63	91.83
1 732.5	H	5.39	4.18	8.48	9.69	9.31
1 732.5	V	15.32	4.18	8.48	19.62	91.62
1 754.3	H	5.14	4.22	8.44	9.36	8.63
1 754.3	V	15.57	4.22	8.44	19.79	95.28

* 1.4 BW 1RB size / 0 Offset for B4

LTE band 4 (3 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 711.5	H	5.86	4.14	8.51	10.23	10.54
1 711.5	V	16.56	4.14	8.51	20.93	123.88
1 732.5	H	6.08	4.18	8.48	10.38	10.91
1 732.5	V	16.16	4.18	8.48	20.46	111.17
1 753.5	H	5.77	4.22	8.44	9.99	9.98
1 753.5	V	16.37	4.22	8.44	20.59	114.55

* 3 BW 1RB size / 0 Offset for B4

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LTE band 4 (3 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 711.5	H	4.87	4.14	8.51	9.24	8.39
1 711.5	V	15.58	4.14	8.51	19.95	98.86
1 732.5	H	5.30	4.18	8.48	9.60	9.12
1 732.5	V	15.70	4.18	8.48	20.00	100.00
1 753.5	H	5.04	4.22	8.44	9.26	8.43
1 753.5	V	15.53	4.22	8.44	19.75	94.41

* 3 BW 1RB size / 0 Offset for B4

LTE band 4 (5 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 712.5	H	5.49	4.14	8.51	9.86	9.68
1 712.5	V	16.54	4.14	8.51	20.91	123.31
1 732.5	H	6.35	4.18	8.48	10.65	11.61
1 732.5	V	16.71	4.18	8.48	21.01	126.18
1 752.5	H	5.80	4.21	8.44	10.03	10.07
1 752.5	V	16.19	4.21	8.44	20.42	110.15

* 5 BW 1RB size / 0 Offset for B4

LTE band 4 (5 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 712.5	H	5.17	4.14	8.51	9.54	8.99
1 712.5	V	15.62	4.14	8.51	19.99	99.77
1 732.5	H	5.07	4.18	8.48	9.37	8.65
1 732.5	V	15.30	4.18	8.48	19.60	91.20
1 752.5	H	4.64	4.21	8.44	8.87	7.71
1 752.5	V	15.31	4.21	8.44	19.54	89.95

* 5 BW 1RB size / 0 Offset for B4

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LTE band 4 (10 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 715.0	H	6.11	4.15	8.50	10.46	11.12
1 715.0	V	16.44	4.15	8.50	20.79	119.95
1 732.5	H	5.57	4.18	8.48	9.87	9.71
1 732.5	V	16.54	4.18	8.48	20.84	121.34
1 750.0	H	6.31	4.21	8.45	10.55	11.35
1 750.0	V	17.53	4.21	8.45	21.77	150.31

* 10 BW 1RB size / 0 Offset for B4

LTE band 4 (10 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 715.0	H	5.41	4.15	8.50	9.76	9.46
1 715.0	V	15.77	4.15	8.50	20.12	102.80
1 732.5	H	4.62	4.18	8.48	8.92	7.80
1 732.5	V	16.00	4.18	8.48	20.30	107.15
1 750.0	H	5.71	4.21	8.45	9.95	9.89
1 750.0	V	15.30	4.21	8.45	19.54	89.95

* 10 BW 1RB size / 0 Offset for B4

LTE band 4 (15 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 717.5	H	6.87	4.15	8.50	11.22	13.24
1 717.5	V	17.42	4.15	8.50	21.77	150.31
1 732.5	H	5.64	4.18	8.48	9.94	9.86
1 732.5	V	17.44	4.18	8.48	21.74	149.28
1 747.5	H	7.64	4.21	8.45	11.88	15.42
1 747.5	V	17.15	4.21	8.45	21.39	137.72

* 15 BW 1RB size / 0 Offset for B4

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LTE band 4 (15 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 717.5	H	5.99	4.15	8.50	10.34	10.81
1 717.5	V	16.42	4.15	8.50	20.77	119.40
1 732.5	H	4.82	4.18	8.48	9.12	8.17
1 732.5	V	16.60	4.18	8.48	20.90	123.03
1 747.5	H	6.76	4.21	8.45	11.00	12.59
1 747.5	V	16.34	4.21	8.45	20.58	114.29

* 15 BW 1RB size / 0 Offset for B4

LTE band 4 (20 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 720.0	H	7.22	4.16	8.50	11.56	14.32
1 720.0	V	17.93	4.16	8.50	22.27	168.66
1 732.5	H	5.50	4.18	8.48	9.80	9.55
1 732.5	V	18.00	4.18	8.48	22.30	169.82
1 745.0	H	8.34	4.20	8.46	12.60	18.20
1 745.0	V	18.09	4.20	8.46	22.35	171.79

* 20 BW 1RB size / 0 Offset for B4

LTE band 4 (20 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
1 720.0	H	6.27	4.16	8.50	10.61	11.51
1 720.0	V	17.10	4.16	8.50	21.44	139.32
1 732.5	H	5.00	4.18	8.48	9.30	8.51
1 732.5	V	16.89	4.18	8.48	21.19	131.52
1 745.0	H	7.16	4.20	8.46	11.42	13.87
1 745.0	V	17.34	4.20	8.46	21.60	144.54

* 20 BW 1RB size / 0 Offset for B4

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LTE band 5 (1.4 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
824.7	H	24.11	3.26	-4.93	15.92	39.08
824.7	V	24.09	3.26	-4.93	15.90	38.90
836.5	H	25.32	3.45	-5.15	16.72	46.99
836.5	V	26.93	3.45	-5.15	18.33	68.08
848.3	H	25.16	3.52	-4.09	17.55	56.89
848.3	V	26.05	3.52	-4.09	18.44	69.82

* 1.4 BW 1RB size / 0 Offset for B5

LTE band 5 (1.4 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
824.70	H	23.62	3.26	-4.93	15.43	34.91
824.70	V	23.42	3.26	-4.93	15.23	33.34
836.50	H	24.07	3.45	-5.15	15.47	35.24
836.50	V	25.74	3.45	-5.15	17.14	51.76
848.30	H	24.20	3.52	-4.09	16.59	45.60
848.30	V	25.17	3.52	-4.09	17.56	57.02

* 1.4 BW 1RB size / 0 Offset for B5

LTE band 5 (3 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
825.50	H	24.74	3.28	-5.05	16.41	43.75
825.50	V	24.62	3.28	-5.05	16.29	42.56
836.50	H	25.29	3.45	-5.15	16.69	46.67
836.50	V	26.93	3.45	-5.15	18.33	68.08
847.50	H	25.23	3.52	-4.16	17.55	56.89
847.50	V	26.28	3.52	-4.16	18.60	72.44

* 3 BW 1RB size / 0 Offset for B5

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RTT5041-19(2017.07.10)(0)

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A4(210 mm x 297 mm)

LTE band 5 (3 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
825.50	H	23.60	3.28	-5.05	15.27	33.65
825.50	V	23.64	3.28	-5.05	15.31	33.96
836.50	H	24.15	3.45	-5.15	15.55	35.89
836.50	V	26.12	3.45	-5.15	17.52	56.49
847.50	H	24.35	3.52	-4.16	16.67	46.45
847.50	V	25.45	3.52	-4.16	17.77	59.84

* 3 BW 1RB size / 0 Offset for B5

LTE band 5 (5 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
826.50	H	25.10	3.31	-5.20	16.59	45.60
826.50	V	24.80	3.31	-5.20	16.29	42.56
836.50	H	25.27	3.45	-5.15	16.67	46.45
836.50	V	26.52	3.45	-5.15	17.92	61.94
846.50	H	24.77	3.51	-4.25	17.01	50.23
846.50	V	25.80	3.51	-4.25	18.04	63.68

* 5 BW 1RB size / 0 Offset for B5

LTE band 5 (5 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
826.50	H	24.32	3.31	-5.20	15.81	38.11
826.50	V	23.53	3.31	-5.20	15.02	31.77
836.50	H	24.26	3.45	-5.15	15.66	36.81
836.50	V	25.49	3.45	-5.15	16.89	48.87
846.50	H	24.00	3.51	-4.25	16.24	42.07
846.50	V	24.57	3.51	-4.25	16.81	47.97

* 5 BW 1RB size / 0 Offset for B5

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LTE band 5 (10 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
829.00	H	25.43	3.38	-5.58	16.47	44.36
829.00	V	25.79	3.38	-5.58	16.83	48.19
836.50	H	24.98	3.45	-5.15	16.38	43.45
836.50	V	26.13	3.45	-5.15	17.53	56.62
844.00	H	24.84	3.49	-4.48	16.87	48.64
844.00	V	25.80	3.49	-4.48	17.83	60.67

* 10 BW 1RB size / 0 Offset for B5

LTE band 5 (10 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
829.00	H	24.52	3.38	-5.58	15.56	35.97
829.00	V	24.81	3.38	-5.58	15.85	38.46
836.50	H	24.34	3.45	-5.15	15.74	37.50
836.50	V	25.11	3.45	-5.15	16.51	44.77
844.00	H	23.89	3.49	-4.48	15.92	39.08
844.00	V	24.94	3.49	-4.48	16.97	49.77

* 10 BW 1RB size / 0 Offset for B5

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LTE band 7 (5 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 502.5	H	14.25	4.81	9.13	18.57	71.94
2 502.5	V	8.98	4.81	9.13	13.30	21.38
2 535.0	H	14.79	4.86	9.06	18.99	79.25
2 535.0	V	11.08	4.86	9.06	15.28	33.73
2 567.5	H	12.86	4.90	8.98	16.94	49.43
2 567.5	V	11.05	4.90	8.98	15.13	32.58

* 5 BW 1RB size / 0 Offset

LTE band 7 (5 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 502.5	H	13.48	4.81	9.13	17.80	60.26
2 502.5	V	7.77	4.81	9.13	12.09	16.18
2 535.0	H	13.92	4.86	9.06	18.12	64.86
2 535.0	V	10.56	4.86	9.06	14.76	29.92
2 567.5	H	11.64	4.90	8.98	15.72	37.33
2 567.5	V	10.62	4.90	8.98	14.70	29.51

* 5 BW 1RB size / 0 Offset

LTE band 7 (10 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 505.0	H	14.35	4.82	9.13	18.66	73.45
2 505.0	V	8.86	4.82	9.13	13.17	20.75
2 535.0	H	15.18	4.86	9.06	19.38	86.70
2 535.0	V	11.02	4.86	9.06	15.22	33.27
2 565.0	H	13.12	4.90	8.99	17.21	52.60
2 565.0	V	11.38	4.90	8.99	15.47	35.24

* 10 BW 1RB size / 0 Offset

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LTE band 7 (10 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 505.0	H	13.24	4.82	9.13	17.55	56.89
2 505.0	V	7.93	4.82	9.13	12.24	16.75
2 535.0	H	14.31	4.86	9.06	18.51	70.96
2 535.0	V	10.43	4.86	9.06	14.63	29.04
2 565.0	H	12.06	4.90	8.99	16.15	41.21
2 565.0	V	9.93	4.90	8.99	14.02	25.23

* 10 BW 1RB size / 0 Offset

LTE band 7 (15 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 507.5	H	14.90	4.82	9.12	19.20	83.18
2 507.5	V	9.68	4.82	9.12	13.98	25.00
2 535.0	H	15.66	4.86	9.06	19.86	96.83
2 535.0	V	11.56	4.86	9.06	15.76	37.67
2 562.5	H	13.98	4.90	9.00	18.08	64.27
2 562.5	V	11.74	4.90	9.00	15.84	38.37

* 15 BW 1RB size / 0 Offset

LTE band 7 (15 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 507.5	H	13.96	4.82	9.12	18.26	66.99
2 507.5	V	8.54	4.82	9.12	12.84	19.23
2 535.0	H	14.81	4.86	9.06	19.01	79.62
2 535.0	V	10.70	4.86	9.06	14.90	30.90
2 562.5	H	13.05	4.90	9.00	17.15	51.88
2 562.5	V	10.68	4.90	9.00	14.78	30.06

* 15 BW 1RB size / 0 Offset

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LTE band 7 (20 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 510.0	H	15.03	4.82	9.12	19.33	85.70
2 510.0	V	9.86	4.82	9.12	14.16	26.06
2 535.0	H	15.88	4.86	9.06	20.08	101.86
2 535.0	V	11.98	4.86	9.06	16.18	41.50
2 560.0	H	14.81	4.89	9.00	18.92	77.98
2 560.0	V	11.88	4.89	9.00	15.99	39.72

* 20 BW 1RB size / 0 Offset

LTE band 7 (20 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P.	
					(dB m)	(mW)
2 510.0	H	14.50	4.82	9.12	18.80	75.86
2 510.0	V	9.18	4.82	9.12	13.48	22.28
2 535.0	H	15.03	4.86	9.06	19.23	83.75
2 535.0	V	10.99	4.86	9.06	15.19	33.04
2 560.0	H	14.21	4.89	9.00	18.32	67.92
2 560.0	V	11.15	4.89	9.00	15.26	33.57

* 20 BW 1RB size / 0 Offset

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LTE band 12 (1.4 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
699.7	H	21.34	2.86	-4.00	14.48	28.05
699.7	V	23.85	2.86	-4.00	16.99	50.00
707.5	H	25.33	3.06	-4.53	17.74	59.43
707.5	V	24.82	3.06	-4.53	17.23	52.84
715.3	H	25.05	3.04	-4.31	17.70	58.88
715.3	V	24.28	3.04	-4.31	16.93	49.32

* 1.4 BW 1RB size / 0 Offset for B12

LTE band 12 (1.4 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
699.7	H	20.39	2.86	-4.00	13.53	22.54
699.7	V	22.90	2.86	-4.00	16.04	40.18
707.5	H	24.64	3.06	-4.53	17.05	50.70
707.5	V	23.73	3.06	-4.53	16.14	41.11
715.3	H	24.02	3.04	-4.31	16.67	46.45
715.3	V	23.13	3.04	-4.31	15.78	37.84

* 1.4 BW 1RB size / 0 Offset for B12

LTE band 12 (3 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
700.5	H	21.84	2.87	-4.05	14.92	31.05
700.5	V	24.02	2.87	-4.05	17.10	51.29
707.5	H	25.78	3.06	-4.53	18.19	65.92
707.5	V	24.76	3.06	-4.53	17.17	52.12
714.5	H	25.35	3.05	-4.37	17.93	62.09
714.5	V	24.54	3.05	-4.37	17.12	51.52

* 3 BW 1RB size / 0 Offset for B12

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LTE band 12 (3 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
700.5	H	21.19	2.87	-4.05	14.27	26.73
700.5	V	23.04	2.87	-4.05	16.12	40.93
707.5	H	24.62	3.06	-4.53	17.03	50.47
707.5	V	23.63	3.06	-4.53	16.04	40.18
714.5	H	24.36	3.05	-4.37	16.94	49.43
714.5	V	23.91	3.05	-4.37	16.49	44.57

* 3 BW 1RB size / 0 Offset for B12

LTE band 12 (5 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
701.5	H	22.32	2.90	-4.12	15.30	33.88
701.5	V	24.08	2.90	-4.12	17.06	50.82
707.5	H	25.66	3.06	-4.53	18.07	64.12
707.5	V	24.83	3.06	-4.53	17.24	52.97
713.5	H	25.92	3.06	-4.44	18.42	69.50
713.5	V	24.76	3.06	-4.44	17.26	53.21

* 5 BW 1RB size / 0 Offset for B12

LTE band 12 (5 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
701.5	H	21.24	2.90	-4.12	14.22	26.42
701.5	V	23.00	2.90	-4.12	15.98	39.63
707.5	H	24.88	3.06	-4.53	17.29	53.58
707.5	V	23.95	3.06	-4.53	16.36	43.25
713.5	H	25.21	3.06	-4.44	17.71	59.02
713.5	V	23.75	3.06	-4.44	16.25	42.17

* 5 BW 1RB size / 0 Offset for B12

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LTE band 12 (10 MHz – QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
704.0	H	23.78	2.96	-4.29	16.53	44.98
704.0	V	23.80	2.96	-4.29	16.55	45.19
707.5	H	25.73	3.06	-4.53	18.14	65.16
707.5	V	24.53	3.06	-4.53	16.94	49.43
711.0	H	27.07	3.10	-4.63	19.34	85.90
711.0	V	24.49	3.10	-4.63	16.76	47.42

* 10 BW 1RB size / 0 Offset for B12

LTE band 12 (10 MHz – 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
704.0	H	23.05	2.96	-4.29	15.80	38.02
704.0	V	23.14	2.96	-4.29	15.89	38.82
707.5	H	24.84	3.06	-4.53	17.25	53.09
707.5	V	23.54	3.06	-4.53	15.95	39.36
711.0	H	26.17	3.10	-4.63	18.44	69.82
711.0	V	24.08	3.10	-4.63	16.35	43.15

* 10 BW 1RB size / 0 Offset for B12

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LTE band 26 (1.4 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
824.70	H	24.66	3.26	-4.93	16.47	44.36
824.70	V	26.38	3.26	-4.93	18.19	65.92
836.50	H	25.53	3.45	-5.15	16.93	49.32
836.50	V	25.51	3.45	-5.15	16.91	49.09
848.30	H	24.21	3.52	-4.09	16.60	45.71
848.30	V	24.40	3.52	-4.09	16.79	47.75

* 1.4 BW 1RB size / 0 Offset for B26

LTE band 26 (1.4 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
824.70	H	23.69	3.26	-4.93	15.50	35.48
824.70	V	25.22	3.26	-4.93	17.03	50.47
836.50	H	24.72	3.45	-5.15	16.12	40.93
836.50	V	24.63	3.45	-5.15	16.03	40.09
848.30	H	23.38	3.52	-4.09	15.77	37.76
848.30	V	23.54	3.52	-4.09	15.93	39.17

* 1.4 BW 1RB size / 0 Offset for B26

LTE band 26 (3 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
825.50	H	25.05	3.28	-5.05	16.72	46.99
825.50	V	26.66	3.28	-5.05	18.33	68.08
836.50	H	25.31	3.45	-5.15	16.71	46.88
836.50	V	25.43	3.45	-5.15	16.83	48.19
847.50	H	24.25	3.52	-4.16	16.57	45.39
847.50	V	24.72	3.52	-4.16	17.04	50.58

* 3 BW 1RB size / 0 Offset for B26

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LTE band 26 (3 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
825.50	H	24.05	3.28	-5.05	15.72	37.33
825.50	V	25.83	3.28	-5.05	17.50	56.23
836.50	H	24.62	3.45	-5.15	16.02	39.99
836.50	V	24.66	3.45	-5.15	16.06	40.36
847.50	H	23.17	3.52	-4.16	15.49	35.40
847.50	V	23.96	3.52	-4.16	16.28	42.46

* 3 BW 1RB size / 0 Offset for B26

LTE band 26 (5 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
826.50	H	25.32	3.31	-5.20	16.81	47.97
826.50	V	27.19	3.31	-5.20	18.68	73.79
836.50	H	25.55	3.45	-5.15	16.95	49.55
836.50	V	25.70	3.45	-5.15	17.10	51.29
846.50	H	24.18	3.51	-4.25	16.42	43.85
846.50	V	24.44	3.51	-4.25	16.68	46.56

* 5 BW 1RB size / 0 Offset for B26

LTE band 26 (5 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
826.50	H	24.27	3.31	-5.20	15.76	37.67
826.50	V	26.43	3.31	-5.20	17.92	61.94
836.50	H	24.30	3.45	-5.15	15.70	37.15
836.50	V	24.86	3.45	-5.15	16.26	42.27
846.50	H	22.95	3.51	-4.25	15.19	33.04
846.50	V	23.81	3.51	-4.25	16.05	40.27

* 5 BW 1RB size / 0 Offset for B26

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

LTE band 26 (10 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
829.00	H	25.54	3.38	-5.58	16.58	45.50
829.00	V	28.10	3.38	-5.58	19.14	82.04
836.50	H	25.47	3.45	-5.15	16.87	48.64
836.50	V	25.94	3.45	-5.15	17.34	54.20
844.00	H	23.93	3.49	-4.48	15.96	39.45
844.00	V	24.62	3.49	-4.48	16.65	46.24

* 10 BW 1RB size / 0 Offset for B26

LTE band 26 (10 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
829.00	H	24.98	3.38	-5.58	16.02	39.99
829.00	V	26.77	3.38	-5.58	17.81	60.39
836.50	H	24.43	3.45	-5.15	15.83	38.28
836.50	V	24.87	3.45	-5.15	16.27	42.36
844.00	H	23.02	3.49	-4.48	15.05	31.99
844.00	V	23.75	3.49	-4.48	15.78	37.84

* 10 BW 1RB size / 0 Offset for B26

LTE band 26 (15 MHz - QPSK)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
831.50	H	26.36	3.42	-5.59	17.35	54.33
831.50	V	28.50	3.42	-5.59	19.49	88.92
841.50	H	25.17	3.48	-4.70	16.99	50.00
841.50	V	25.10	3.48	-4.70	16.92	49.20

* 15 BW 1RB size / 0 Offset for B26

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LTE band 26 (15 MHz - 16QAM)

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P.	
					(dB m)	(mW)
831.50	H	25.55	3.42	-5.59	16.54	45.08
831.50	V	27.54	3.42	-5.59	18.53	71.29
841.50	H	24.24	3.48	-4.70	16.06	40.36
841.50	V	24.00	3.48	-4.70	15.82	38.19

* 15 BW 1RB size / 0 Offset for B26

Remark;

1. E.R.P. & E.I.R.P. = [S.G level + Amp.] (dB m) - Cable loss (dB) + Ant. gain (dB d/dB i)
2. This device was tested under all bandwidths, RB configurations and modulations.
3. The data reported in the table above was measured in worst case.

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2.5. Spurious radiated emission

- Measured output Power: 20.46 dB m = 0.111 2 W
- Modulation Signal: LTE band 2 (1.4 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 33.46$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 850.7 MHz)							
3 700.82	V	-59.91	5.96	9.06	-56.81	-13	43.81
Middle Channel (1 880.0 MHz)							
3 759.12	V	-57.22	6.26	9.12	-54.36	-13	41.36
High Channel (1 909.3 MHz)							
3 817.56	V	-57.05	6.51	9.15	-54.41	-13	41.41

* 1.4 BW 1RB size / 0 Offset for B2

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 20.33 dB m = 0.107 9 W
- Modulation Signal: LTE band 2 (3 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 33.33$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 851.5 MHz)							
3 700.64	V	-58.78	5.96	9.06	-55.68	-13	42.68
Middle Channel (1 880.0 MHz)							
3 757.45	V	-57.66	6.25	9.12	-54.79	-13	41.79
High Channel (1 908.5 MHz)							
3 814.78	V	-57.60	6.50	9.15	-54.95	-13	41.95

* 3 BW 1RB size / 0 Offset for B2

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- Measured output Power: 20.30 dB m = 0.107 2 W
- Modulation Signal: LTE band 2 (5 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 33.30$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 852.5 MHz)							
3 700.36	V	-59.36	5.96	9.06	-56.26	-13	43.26
Middle Channel (1 880.0 MHz)							
3 755.79	V	-57.98	6.24	9.12	-55.10	-13	42.10
High Channel (1 907.5 MHz)							
3 810.72	V	-56.77	6.49	9.16	-54.10	-13	41.10

* 5 BW 1RB size / 0 Offset for B2

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- Measured output Power: 19.92 dB m = 0.098 2 W
- Modulation Signal: LTE band 2 (10 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 32.92$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 855.0 MHz)							
3 701.00	V	-58.55	5.97	9.07	-55.45	-13	42.45
Middle Channel (1 880.0 MHz)							
3 751.07	V	-57.92	6.22	9.12	-55.02	-13	42.02
High Channel (1 905.5 MHz)							
3 800.94	V	-56.21	6.46	9.16	-53.51	-13	40.51

* 10 BW 1RB size / 0 Offset for B2

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 20.80 dB m = 0.120 2 W
- Modulation Signal: LTE band 2 (15 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 33.80$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 857.5 MHz)							
3 701.64	V	-58.57	5.97	9.07	-55.47	-13	42.47
Middle Channel (1 880.0 MHz)							
3 746.56	V	-54.83	6.19	9.11	-51.91	-13	38.91
High Channel (1 902.5 MHz)							
3 791.58	V	-56.35	6.42	9.16	-53.61	-13	40.61

* 15 BW 1RB size / 0 Offset for B2

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 21.70 dB m = 0.147 9 W
- Modulation Signal: LTE band 2 (20 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 34.70$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 860.0 MHz)							
3 702.36	V	-58.13	5.97	9.07	-55.03	-13	42.03
Middle Channel (1 880.0 MHz)							
3 742.10	V	-56.14	6.17	9.11	-53.20	-13	40.20
High Channel (1 902.5 MHz)							
3 782.30	V	-56.20	6.37	9.15	-53.42	-13	40.42

* 20 BW 1RB size / 0 Offset for B2

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- Measured output Power: 20.93 dB m = 0.123 9 W
- Modulation Signal: LTE band 4 (1.4 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 33.93$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 710.7 MHz)							
3 420.70	V	-59.67	5.88	9.27	-56.28	-13	43.28
Middle Channel (1 732.5 MHz)							
3 464.30	V	-58.73	5.92	9.24	-55.41	-13	42.41
High Channel (1 754.3 MHz)							
3 507.50	V	-61.80	5.94	9.22	-58.52	-13	45.52

* 1.4 BW 1RB size / 0 Offset for B4

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Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 20.93 dB m = 0.123 9 W
- Modulation Signal: LTE band 4 (3 MHz - QPSK)
- Distance: 3 meters
- Limit: 43 + 10log₁₀ (W) = 33.93 dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 711.5 MHz)							
3 420.78	V	-60.14	5.88	9.27	-56.75	-13	43.75
Middle Channel (1 732.5 MHz)							
3 462.50	V	-59.26	5.92	9.24	-55.94	-13	42.94
High Channel (1 753.5 MHz)							
3 504.84	V	-62.09	5.94	9.22	-58.81	-13	45.81

* 3 BW 1RB size / 0 Offset for B4

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A4(210 mm x 297 mm)

- Measured output Power: 21.01 dB m = 0.126 2 W
- Modulation Signal: LTE band 4 (5 MHz - QPSK)
- Distance: 3 meters
- Limit: 43 + 10log₁₀(W) = 34.01 dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 712.5 MHz)							
3 420.48	V	-60.12	5.88	9.27	-56.73	-13	43.73
Middle Channel (1 732.5 MHz)							
3 460.76	V	-59.12	5.91	9.24	-55.79	-13	42.79
High Channel (1 752.5 MHz)							
3 501.01	V	-62.33	5.95	9.21	-59.07	-13	46.07

* 5 BW 1RB size / 0 Offset for B4

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A4(210 mm x 297 mm)

- Measured output Power: 21.77 dB m = 0.150 3 W
- Modulation Signal: LTE band 4 (10 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 34.77$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 715.0 MHz)							
3 421.36	V	-60.46	5.88	9.27	-57.07	-13	44.07
Middle Channel (1 732.5 MHz)							
3 456.12	V	-58.89	5.91	9.24	-55.56	-13	42.56
High Channel (1 750.0 MHz)							
3 491.36	V	-62.35	5.94	9.22	-59.07	-13	46.07

* 10 BW 1RB size / 0 Offset for B4

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A4(210 mm x 297 mm)

- Measured output Power: 21.77 dB m = 0.150 3 W
- Modulation Signal: LTE band 4 (15 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 34.77$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 717.5 MHz)							
3 421.90	V	-60.01	5.88	9.26	-56.63	-13	43.63
Middle Channel (1 732.5 MHz)							
3 451.48	V	-58.54	5.91	9.24	-55.21	-13	42.21
High Channel (1 747.5 MHz)							
3 481.88	V	-60.86	5.93	9.22	-57.57	-13	44.57

* 15 BW 1RB size / 0 Offset for B4

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A4(210 mm x 297 mm)

- Measured output Power: 22.35 dB m = 0.171 8 W
- Modulation Signal: LTE band 4 (20 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 35.35$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (1 720.0 MHz)							
3 421.86	V	-59.07	5.88	9.26	-55.69	-13	42.69
Middle Channel (1 732.5 MHz)							
3 447.22	V	-58.42	5.90	9.25	-55.07	-13	42.07
High Channel (1 745.0 MHz)							
3 472.40	V	-59.57	5.93	9.23	-56.27	-13	43.27

* 20 BW 1RB size / 0 Offset for B4

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A4(210 mm x 297 mm)

- Measured output Power: 18.44 dB m = 0.069 8 W
- Modulation Signal: LTE band 5 (1.4 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 31.44$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (824.7 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 508.12	H	-41.27	4.82	6.97	-39.12	-13	26.12
2 508.18	V	-45.97	4.82	6.97	-43.82	-13	30.82
High Channel (848.3 MHz)							
2 543.54	H	-38.23	4.87	6.89	-36.21	-13	23.21
2 543.46	V	-43.79	4.87	6.89	-41.77	-13	28.77

* 1.4 BW 1RB size / 0 Offset for B5

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- Measured output Power: 18.60 dB m = 0.072 4 W
- Modulation Signal: LTE band 5 (3 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 31.60$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (825.5 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 505.62	H	-41.52	4.82	6.98	-39.36	-13	26.36
2 505.72	V	-46.37	4.82	6.98	-44.21	-13	31.21
High Channel (847.5 MHz)							
2 538.68	H	-39.33	4.86	6.90	-37.29	-13	24.29
2 538.78	V	-44.30	4.86	6.90	-42.26	-13	29.26

* 3 BW 1RB size / 0 Offset for B5

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- Measured output Power: 18.04 dB m = 0.063 7 W
- Modulation Signal: LTE band 5 (5 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 31.04$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (826.5 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 503.12	H	-41.32	4.81	6.98	-39.15	-13	26.15
2 503.06	V	-46.12	4.81	6.98	-43.95	-13	30.95
High Channel (846.5 MHz)							
2 533.02	H	-40.21	4.86	6.91	-38.16	-13	25.16
2 533.06	V	-45.33	4.86	6.91	-43.28	-13	30.28

* 5 BW 1RB size / 0 Offset for B5

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A4(210 mm x 297 mm)

- Measured output Power: 17.83 dB m = 0.060 7 W
- Modulation Signal: LTE band 5 (10 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 30.83$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (829.0 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 496.32	H	-42.65	4.81	6.99	-40.47	-13	27.47
2 496.44	V	-47.73	4.81	6.99	-45.55	-13	32.55
High Channel (844.0 MHz)							
2 518.80	H	-39.86	4.84	6.95	-37.75	-13	24.75
2 518.68	V	-45.35	4.84	6.95	-43.24	-13	30.24

* 10 BW 1RB size / 0 Offset for B5

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- Measured output Power: 18.99 dB m = 0.079 3 W
- Modulation Signal: LTE band 7 (5 MHz - QPSK)
- Distance: 3 meters
- Limit: $55 + 10 \log_{10}(W) = 43.99$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 502.5 MHz)							
5 000.70	H	-50.90	7.44	9.86	-48.48	-25	23.48
5 000.50	V	-45.20	7.44	9.86	-42.78	-25	17.78
7 501.00	V	-52.05	9.04	11.84	-49.25	-25	24.25
Middle Channel (2 535.0 MHz)							
5 065.60	H	-48.87	7.51	10.20	-46.18	-25	21.18
5 065.74	V	-46.89	7.51	10.20	-44.20	-25	19.20
7 598.54	V	-55.05	9.12	11.80	-52.37	-25	27.37
High Channel (2 567.5 MHz)							
5 130.62	H	-51.87	7.61	10.44	-49.04	-25	24.04
5 130.76	V	-50.16	7.61	10.44	-47.33	-25	22.33
7 695.97	V	-54.22	8.85	11.64	-51.43	-25	26.43

* 5 BW 1RB size / 0 Offset

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A4(210 mm x 297 mm)

- Measured output Power: 19.38 dBm = 0.0867 W
- Modulation Signal: LTE band 7 (10 MHz - QPSK)
- Distance: 3 meters
- Limit: $55 + 10 \log_{10}(W) = 44.38$ dBc

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dBm)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dBm)	Limit (dBm)	Margin (dB)
Low Channel (2 505.0 MHz)							
5 001.38	H	-51.10	7.44	9.87	-48.67	-25	23.67
5 001.22	V	-46.80	7.44	9.87	-44.37	-25	19.37
7 501.68	V	-52.18	9.04	11.84	-49.38	-25	24.38
Middle Channel (2 535.0 MHz)							
5 061.36	H	-49.73	7.50	10.17	-47.06	-25	22.06
5 061.30	V	-46.84	7.50	10.17	-44.17	-25	19.17
7 591.74	V	-53.49	9.11	11.80	-50.80	-25	25.80
High Channel (2 565.0 MHz)							
5 121.30	H	-50.61	7.59	10.42	-47.78	-25	22.78
5 121.18	V	-50.79	7.59	10.42	-47.96	-25	22.96
7 681.98	V	-54.20	8.89	11.66	-51.43	-25	26.43

* 10 BW 1RB size / 0 Offset

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A4(210 mm x 297 mm)

- Measured output Power: 19.86 dB m = 0.096 8 W
- Modulation Signal: LTE band 7 (15 MHz - QPSK)
- Distance: 3 meters
- Limit: $55 + 10 \log_{10}(W) = 44.86$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 507.5 MHz)							
5 001.66	H	-48.82	7.44	9.87	-46.39	-25	21.39
5 001.78	V	-44.19	7.44	9.87	-41.76	-25	16.76
7 502.70	V	-51.03	9.04	11.84	-48.23	-25	23.23
Middle Channel (2 535.0 MHz)							
5 056.70	H	-50.86	7.50	10.15	-48.21	-25	23.21
5 056.62	V	-47.60	7.50	10.15	-44.95	-25	19.95
5 785.08	V	-53.66	7.92	11.29	-50.29	-25	25.29
High Channel (2 562.5 MHz)							
5 111.68	H	-50.93	7.57	10.40	-48.10	-25	23.10
5 111.86	V	-50.52	7.57	10.40	-47.69	-25	22.69
7 667.36	V	-53.24	8.93	11.68	-50.49	-25	25.49

* 15 BW 1RB size / 0 Offset

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- Measured output Power: 20.08 dB m = 0.101 9 W
- Modulation Signal: LTE band 7 (20 MHz - QPSK)
- Distance: 3 meters
- Limit: $55 + 10 \log_{10}(W) = 45.08$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB i)	E.I.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (2 510.0 MHz)							
5 002.18	H	-47.27	7.44	9.87	-44.84	-25	19.84
5 002.22	V	-43.16	7.44	9.87	-40.73	-25	15.73
7 503.36	V	-50.71	9.04	11.84	-47.91	-25	22.91
Middle Channel (2 535.0 MHz)							
5 052.14	H	-51.36	7.49	10.13	-48.72	-25	23.72
5 052.26	V	-48.33	7.49	10.13	-45.69	-25	20.69
7 578.22	V	-52.17	9.10	11.81	-49.46	-25	24.46
High Channel (2 560.0 MHz)							
5 102.20	H	-50.36	7.54	10.38	-47.52	-25	22.52
5 102.14	V	-50.21	7.54	10.38	-47.37	-25	22.37
7 653.16	V	-53.43	8.97	11.71	-50.69	-25	25.69

* 20 BW 1RB size / 0 Offset

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- Measured output Power: 17.74 dB m = 0.059 4 W
- Modulation Signal: LTE band 12 (1.4 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 30.74$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (699.7 MHz)							
1 398.50	H	-55.79	3.57	6.13	-53.23	-13	40.23
1 398.46	V	-61.61	3.57	6.13	-59.05	-13	46.05
Middle Channel (707.5 MHz)							
1 414.07	H	-55.04	3.58	6.08	-52.54	-13	39.54
1 413.98	V	-59.86	3.58	6.08	-57.36	-13	44.36
High Channel (715.3 MHz)							
1 429.64	H	-60.65	3.60	6.02	-58.23	-13	45.23
1 429.80	V	-64.07	3.60	6.02	-61.65	-13	48.65

* 1.4 BW 1RB size / 0 Offset for B12

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RTT5041-19(2017.07.10)(0)

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A4(210 mm x 297 mm)

- Measured output Power: 18.19 dB m = 0.065 9 W
- Modulation Signal: LTE band 12 (3 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 31.19$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (700.5 MHz)							
1 398.38	H	-53.44	3.57	6.13	-50.88	-13	37.88
1 398.63	V	-58.84	3.57	6.13	-56.28	-13	43.28
Middle Channel (707.5 MHz)							
1 412.43	H	-54.75	3.58	6.09	-52.24	-13	39.24
1 412.44	V	-59.45	3.58	6.09	-56.94	-13	43.94
High Channel (714.5 MHz)							
1 426.57	H	-60.30	3.60	6.03	-57.87	-13	44.87
1 426.48	V	-64.67	3.60	6.03	-62.24	-13	49.24

* 3 BW 1RB size / 0 Offset for B12

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 18.42 dB m = 0.069 5 W
- Modulation Signal: LTE band 12 (5 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 31.42$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (701.5 MHz)							
1 398.50	H	-53.90	3.57	6.13	-51.34	-13	38.34
1 398.54	V	-59.30	3.57	6.13	-56.74	-13	43.74
Middle Channel (707.5 MHz)							
1 410.72	H	-53.82	3.58	6.09	-51.31	-13	38.31
1 410.68	V	-58.39	3.58	6.09	-55.88	-13	42.88
High Channel (713.5 MHz)							
1 422.82	H	-63.34	3.59	6.05	-60.88	-13	47.88
1 422.49	V	-65.61	3.59	6.05	-63.15	-13	50.15

* 5 BW 1RB size / 0 Offset for B12

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 19.34 dB m = 0.085 9 W
- Modulation Signal: LTE band 12 (10 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10\log_{10}(W) = 32.34$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (704.0 MHz)							
1 399.08	H	-53.59	3.57	6.13	-51.03	-13	38.03
1 398.83	V	-60.27	3.57	6.13	-57.71	-13	44.71
Middle Channel (707.5 MHz)							
1 406.10	H	-55.22	3.58	6.11	-52.69	-13	39.69
1 406.38	V	-57.00	3.58	6.11	-54.47	-13	41.47
High Channel (711.0 MHz)							
1 413.14	H	-54.99	3.58	6.08	-52.49	-13	39.49
1 413.12	V	-59.81	3.58	6.08	-57.31	-13	44.31

* 10 BW 1RB size / 0 Offset for B12

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 18.19 dB m = 0.065 9 W
- Modulation Signal: LTE band 26 (1.4 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 31.19$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (824.7 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 493.08	H	-41.38	4.81	7.00	-39.19	-13	26.19
2 508.18	V	-44.01	4.82	6.97	-41.86	-13	28.86
High Channel (848.3 MHz)							
2 543.56	H	-36.37	4.87	6.89	-34.35	-13	21.35
2 543.52	V	-41.81	4.87	6.89	-39.79	-13	26.79

* 1.4 BW 1RB size / 0 Offset for B26

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 18.33 dB m = 0.068 1 W
- Modulation Signal: LTE band 26 (3 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 31.33$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (825.5 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 505.66	H	-39.77	4.82	6.98	-37.61	-13	24.61
2 505.58	V	-44.33	4.82	6.98	-42.17	-13	29.17
High Channel (847.5 MHz)							
2 538.70	H	-37.36	4.86	6.90	-35.32	-13	22.32
2 538.76	V	-42.49	4.86	6.90	-40.45	-13	27.45

* 3 BW 1RB size / 0 Offset for B26

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- Measured output Power: 18.68 dB m = 0.073 8 W
- Modulation Signal: LTE band 26 (5 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 31.68$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (826.5 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 502.94	H	-39.54	4.81	6.98	-37.37	-13	24.37
2 503.20	V	-44.16	4.81	6.98	-41.99	-13	28.99
High Channel (846.5 MHz)							
2 533.15	H	-38.47	4.86	6.91	-36.42	-13	23.42
2 532.92	V	-43.44	4.86	6.91	-41.39	-13	28.39

* 5 BW 1RB size / 0 Offset for B26

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 19.14 dB m = 0.082 0 W
- Modulation Signal: LTE band 26 (10 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 32.14$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (829.0 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
Middle Channel (836.5 MHz)							
2 496.29	H	-40.57	4.81	6.99	-38.39	-13	25.39
2 496.20	V	-45.33	4.81	6.99	-43.15	-13	30.15
High Channel (844.0 MHz)							
2 518.93	H	-37.90	4.84	6.95	-35.79	-13	22.79
2 518.78	V	-43.50	4.84	6.95	-41.39	-13	28.39

* 10 BW 1RB size / 0 Offset for B26

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RTT5041-19(2017.07.10)(0)

Tel. +82 31 428 5700 / Fax. +82 31 427 2370

A4(210 mm x 297 mm)

- Measured output Power: 19.49 dB m = 0.088 9 W
- Modulation Signal: LTE band 26 (15 MHz - QPSK)
- Distance: 3 meters
- Limit: $43 + 10 \log_{10}(W) = 32.49$ dB c

Frequency (MHz)	Ant. Pol. (H/V)	S.G level + Amp. (dB m)	Cable loss (dB)	Ant. gain (dB d)	E.R.P. (dB m)	Limit (dB m)	Margin (dB)
Low Channel (831.5 MHz)							
Below 1 000.00	-	-	-	-	Not detected	-	-
Above 1 000.00	-	-	-	-	Not detected	-	-
High Channel (841.5 MHz)							
2 505.01	H	-37.85	4.82	6.98	-35.69	-13	22.69
2 505.46	V	-43.97	4.82	6.98	-41.81	-13	28.81

* 15 BW 1RB size / 0 Offset for B26

Remark;

1. E.R.P. & E.I.R.P. = S.G level (dB m) - Cable loss (dB) + Ant. gain (dB d/dB i)
2. This device was tested under all bandwidths, RB configurations, and modulations.
3. The data reported in the table above was measured in worst case.

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3. Conducted Output Power

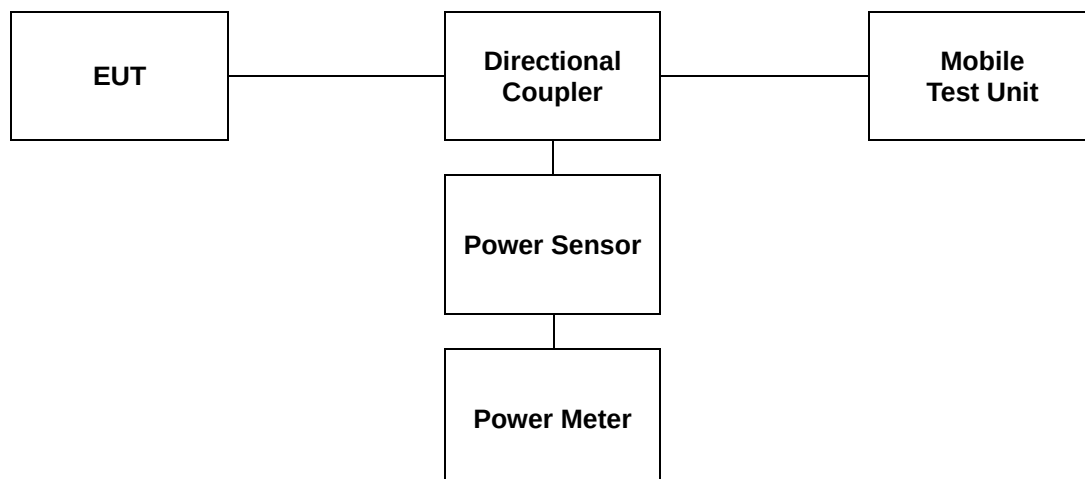
3.1. Limit

CFR 47, Section FCC §2.1046

3.2. Test Procedure

Output power shall be measured at the RF output terminals for all configurations.

1. The RF output of the transmitter was connected to the input of the mobile test unit in order to establish communication with the EUT.
2. The EUT was set up for the max. output power with pseudo random data modulation by using mobile test unit parameters.
3. The measurement performed using a wideband RF power meter.
4. This EUT was tested under all configurations and the highest power was investigated and reported.



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3.3. Test Result

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 % R.H.

Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK			16QAM		
				18607	18900	19193	18607	18900	19193
				1 850.7	1 880.0	1 909.3	1 850.7	1 880.0	1 909.3
2	1.4	1	0	22.54	22.54	22.44	21.70	21.60	21.55
		1	3	22.59	22.61	22.52	21.75	21.68	21.61
		1	5	22.53	22.54	22.44	21.70	21.60	21.54
		3	0	22.57	22.56	22.49	21.72	21.62	21.59
		3	2	22.58	22.57	22.48	21.70	21.62	21.59
		3	3	22.59	22.58	22.47	21.68	21.62	21.58
		6	0	21.60	21.59	21.50	20.60	20.58	20.52
	Bandwidth (MHz)	RB Size	RB Offset	18615	18900	19185	18615	18900	19185
				1 851.5	1 880.0	1 908.5	1 851.5	1 880.0	1 908.5
	3	1	0	22.56	22.48	22.52	21.73	21.60	21.66
		1	8	22.55	22.56	22.50	21.73	21.65	21.65
		1	14	22.55	22.36	22.44	21.67	21.47	21.59
		8	0	21.64	21.58	21.54	20.65	20.61	20.55
		8	4	21.64	21.57	21.54	20.64	20.62	20.54
		8	7	21.64	21.56	21.54	20.63	20.63	20.52
		15	0	21.63	21.57	21.52	20.64	20.59	20.52
	Bandwidth (MHz)	RB Size	RB Offset	18625	18900	19175	18625	18900	19175
				1 852.5	1 880.0	1 907.5	1 852.5	1 880.0	1 907.5
	5	1	0	22.63	22.66	22.57	21.75	21.73	21.74
		1	12	22.65	22.59	22.55	21.87	21.70	21.70
		1	24	22.47	22.43	22.46	21.63	21.53	21.65
		12	0	21.68	21.56	21.55	20.65	20.56	20.52
		12	7	21.67	21.52	21.54	20.65	20.50	20.51
		12	13	21.66	21.48	21.52	20.64	20.43	20.50
		25	0	21.63	21.56	21.55	20.63	20.61	20.54
	Bandwidth (MHz)	RB Size	RB Offset	18650	18900	19150	18650	18900	19150
				1 855.0	1 880.0	1 905.0	1 855.0	1 880.0	1 905.0
	10	1	0	22.74	22.72	22.72	21.94	21.86	21.86
		1	25	22.52	22.51	22.53	21.70	21.64	21.65
		1	49	22.54	22.43	22.46	21.69	21.55	21.59
		25	0	21.78	21.74	21.72	20.74	20.72	20.66
		25	12	21.70	21.63	21.64	20.65	20.60	20.59
		25	25	21.61	21.52	21.56	20.57	20.49	20.52
		50	0	21.65	21.62	21.64	20.59	20.61	20.60
	Bandwidth (MHz)	RB Size	RB Offset	18675	18900	19125	18675	18900	19125
				1 857.5	1 880.0	1 902.5	1 857.5	1 880.0	1 902.5
	15	1	0	23.38	23.42	23.36	22.52	22.65	22.44
		1	37	22.58	22.52	22.47	21.63	21.71	21.57
		1	74	23.03	22.90	22.95	22.04	22.01	22.00
		36	0	21.88	21.94	21.93	20.84	20.91	20.89
		36	20	21.79	21.80	21.81	20.76	20.78	20.76
		36	39	21.71	21.66	21.69	20.68	20.65	20.63
		75	0	21.76	21.77	21.80	20.75	20.76	20.78
	Bandwidth (MHz)	RB Size	RB Offset	18700	18900	19100	18700	18900	19100
				1 860.0	1 880.0	1 900.0	1 860.0	1 880.0	1 900.0
	20	1	0	23.84	23.94	23.95	22.96	23.11	23.15
		1	50	22.50	22.46	22.51	21.60	21.56	21.72
		1	99	23.44	23.35	23.32	22.55	22.44	22.54
		50	0	22.10	22.12	22.22	21.06	21.07	21.14
		50	25	21.99	21.96	22.06	20.94	20.91	20.97
		50	50	21.87	21.80	21.89	20.83	20.75	20.77
		100	0	22.04	21.95	21.98	21.01	20.92	20.97

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Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK			16QAM		
				19957	20175	20393	19957	20175	20393
				1 710.7	1 732.5	1 754.3	1 710.7	1 732.5	1 754.3
4	1.4	1	0	22.51	22.30	22.32	21.67	21.43	21.43
		1	3	22.57	22.40	22.45	21.73	21.53	21.56
		1	5	22.51	22.28	22.38	21.66	21.40	21.45
		3	0	22.57	22.35	22.30	21.65	21.44	21.41
		3	2	22.57	22.38	22.34	21.64	21.47	21.43
		3	3	22.56	22.41	22.37	21.62	21.49	21.46
		6	0	21.59	21.41	21.43	20.63	20.44	20.44
	Bandwidth (MHz)	RB Size	RB Offset	19965	20175	20385	19965	20175	20385
				1 711.5	1 732.5	1 753.5	1 711.5	1 732.5	1 753.5
	3	1	0	22.63	22.35	22.38	21.76	21.53	21.43
		1	8	22.71	22.39	22.40	21.87	21.58	21.54
		1	14	22.63	22.20	22.38	21.75	21.35	21.46
		8	0	21.69	21.53	21.47	20.66	20.53	20.47
		8	4	21.72	21.52	21.43	20.69	20.53	20.42
		8	7	21.75	21.50	21.39	20.71	20.53	20.37
		15	0	21.77	21.46	21.49	20.75	20.49	20.41
	Bandwidth (MHz)	RB Size	RB Offset	19975	20175	20375	19975	20175	20375
				1 712.5	1 732.5	1 752.5	1 712.5	1 732.5	1 752.5
	5	1	0	22.66	22.42	22.38	21.82	21.55	21.52
		1	12	22.72	22.49	22.37	21.92	21.67	21.58
		1	24	22.63	22.27	22.34	21.81	21.40	21.55
		12	0	21.68	21.45	21.36	20.68	20.51	20.40
		12	7	21.70	21.40	21.38	20.70	20.41	20.39
		12	13	21.72	21.35	21.40	20.72	20.32	20.37
		25	0	21.70	21.45	21.35	20.65	20.46	20.34
	Bandwidth (MHz)	RB Size	RB Offset	20000	20175	20350	20000	20175	20350
				1 715.0	1 732.5	1 750.0	1 715.0	1 732.5	1 750.0
	10	1	0	22.83	22.64	22.60	21.98	21.80	21.68
		1	25	22.64	22.44	22.37	21.81	21.61	21.45
		1	49	22.51	22.33	22.44	21.70	21.47	21.55
		25	0	21.87	21.59	21.49	20.81	20.58	20.47
		25	12	21.76	21.49	21.45	20.71	20.50	20.42
		25	25	21.64	21.39	21.40	20.61	20.42	20.37
		50	0	21.77	21.60	21.46	20.70	20.58	20.42
	Bandwidth (MHz)	RB Size	RB Offset	20025	20175	20325	20025	20175	20325
				1 717.5	1 732.5	1 747.5	1 717.5	1 732.5	1 747.5
	15	1	0	23.39	23.26	23.25	22.26	22.24	22.13
		1	37	23.21	23.17	23.14	22.17	22.15	22.13
		1	74	22.98	22.94	22.84	22.06	22.07	21.86
		36	0	22.03	21.85	21.80	20.97	20.80	20.78
		36	20	21.92	21.75	21.67	20.88	20.72	20.64
		36	39	21.81	21.65	21.54	20.78	20.64	20.51
		75	0	21.85	21.67	21.66	20.82	20.64	20.64
	Bandwidth (MHz)	RB Size	RB Offset	20050	20175	20300	20050	20175	20300
				1 720.0	1 732.5	1 745.0	1 720.0	1 732.5	1 745.0
	20	1	0	23.63	23.57	23.51	22.64	22.60	22.57
		1	50	23.50	23.31	23.35	22.59	22.45	22.56
		1	99	23.34	23.20	23.21	22.39	22.29	22.44
		50	0	22.24	22.04	22.01	21.18	20.92	20.98
		50	25	22.06	21.97	21.96	21.03	20.84	20.83
		50	50	22.08	21.90	21.90	20.85	20.76	20.67
		100	0	22.02	21.95	21.95	20.95	20.82	20.84

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Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK			16QAM		
				20407	20525	20643	20407	20525	20643
5	1.4	1	0	22.25	22.17	22.36	21.42	21.33	21.50
		1	3	22.32	22.20	22.46	21.47	21.34	21.54
		1	5	22.27	22.12	22.39	21.42	21.29	21.49
		3	0	22.29	22.20	22.41	21.35	21.36	21.46
		3	2	22.29	22.19	22.42	21.35	21.33	21.50
		3	3	22.29	22.18	22.42	21.36	21.30	21.53
		6	0	21.32	21.26	21.38	20.39	20.31	20.49
	Bandwidth (MHz)	RB Size	RB Offset	20415	20525	20635	20415	20525	20635
	3	1	0	22.67	22.48	22.64	21.85	21.65	21.75
		1	8	22.61	22.53	22.64	21.90	21.69	21.77
		1	14	22.73	22.57	22.66	21.85	21.70	21.75
		8	0	21.75	21.67	21.75	20.85	20.59	20.73
		8	4	21.77	21.67	21.76	20.87	20.60	20.74
		8	7	21.79	21.66	21.76	20.88	20.61	20.75
		15	0	21.77	21.73	21.75	20.87	20.62	20.72
	Bandwidth (MHz)	RB Size	RB Offset	20425	20525	20625	20425	20525	20625
	5	1	0	22.56	22.48	22.54	21.68	21.65	21.92
		1	12	22.57	22.53	22.65	21.78	21.63	22.05
		1	24	22.42	22.40	22.77	21.60	21.50	21.96
		12	0	21.65	21.54	21.65	20.69	20.50	20.90
		12	7	21.60	21.52	21.63	20.63	20.48	20.86
		12	13	21.55	21.50	21.61	20.57	20.45	20.82
		25	0	21.58	21.57	21.68	20.61	20.52	20.87
	Bandwidth (MHz)	RB Size	RB Offset	20450	20525	20600	20450	20525	20600
	10	1	0	22.48	22.33	22.38	21.66	21.57	21.52
		1	25	22.46	22.38	22.59	21.68	21.65	21.71
		1	49	22.32	22.29	22.44	21.47	21.46	21.62
		25	0	21.64	21.58	21.56	20.60	20.59	20.60
		25	12	21.62	21.57	21.61	20.58	20.57	20.64
		25	25	21.60	21.55	21.66	20.55	20.55	20.67
		50	0	21.63	21.55	21.65	20.60	20.56	20.62

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LTE Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK			16QAM		
				20775	21100	21425	20775	21100	21425
				2 502.5	2 535.0	2 567.5	2 502.5	2 535.0	2 567.5
7	5	1	0	22.75	22.74	21.61	21.93	21.83	20.98
		1	12	22.76	22.87	21.23	21.95	21.98	20.57
		1	24	22.67	22.74	20.56	21.84	21.88	19.98
		12	0	21.82	21.84	21.50	20.80	20.82	20.71
		12	7	21.78	21.81	21.23	20.77	20.81	20.49
		12	13	21.73	21.78	20.92	20.74	20.79	20.17
		25	0	21.69	21.81	21.22	20.74	20.81	20.40
	Bandwidth (MHz)	RB Size	RB Offset	20800	21100	21400	20800	21100	21400
				2 505.0	2 535.0	2 565.0	2 505.0	2 535.0	2 565.0
	10	1	0	23.27	23.24	22.39	22.47	22.40	21.65
		1	25	23.15	23.19	22.50	22.33	22.36	21.80
		1	49	23.28	23.01	21.50	22.25	22.19	20.84
		25	0	22.23	22.23	22.25	21.27	21.21	21.24
		25	12	22.21	22.21	22.19	21.24	21.20	21.24
		25	25	22.18	22.18	22.13	21.20	21.20	21.23
		50	0	22.22	22.16	22.57	21.23	21.12	21.29
	Bandwidth (MHz)	RB Size	RB Offset	20825	21100	21375	20825	21100	21375
				2 507.5	2 535.0	2 562.0	2 507.5	2 535.0	2 562.0
	15	1	0	23.83	23.59	22.61	23.01	22.89	21.86
		1	37	23.11	23.17	22.44	22.26	22.41	21.65
		1	74	23.33	23.24	21.76	22.68	22.48	20.98
		36	0	22.46	22.49	22.46	21.41	21.48	21.50
		36	20	22.34	22.41	22.37	21.32	21.40	21.43
		36	39	22.22	22.33	22.28	21.22	21.31	21.36
		75	0	22.35	22.44	22.37	21.35	21.44	21.39
	Bandwidth (MHz)	RB Size	RB Offset	20850	21100	21350	20850	21100	21350
				2 510.0	2 535.0	2 560.0	2 510.0	2 535.0	2 560.0
	20	1	0	23.82	23.57	22.85	22.98	22.82	22.11
		1	50	23.12	23.18	22.30	22.29	22.44	21.58
		1	99	23.29	23.07	21.94	22.44	22.29	20.92
		50	0	22.54	22.70	22.47	21.53	21.66	21.58
		50	25	22.49	22.57	22.37	21.47	21.53	21.47
		50	50	22.44	22.44	22.27	21.40	21.40	21.37
		100	0	22.47	22.52	22.43	21.42	21.57	21.50

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Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK			16QAM		
				23017	23095	23173	23017	23095	23173
				699.7	707.5	715.3	699.7	707.5	715.3
12	1.4	1	0	22.52	22.65	22.53	21.66	21.56	21.65
		1	3	22.50	22.68	22.67	21.65	21.62	21.77
		1	5	22.47	22.68	22.55	21.59	21.60	21.66
		3	0	22.53	22.67	22.56	21.55	21.62	21.64
		3	2	22.49	22.67	22.55	21.52	21.60	21.64
		3	3	22.45	22.66	22.54	21.49	21.58	21.64
		6	0	21.52	21.67	21.58	20.52	20.57	20.63
	Bandwidth (MHz)	RB Size	RB Offset	23025	23095	23165	23025	23095	23165
	3	1	0	22.54	22.36	22.58	21.67	21.53	21.75
		1	8	22.53	22.49	22.68	21.64	21.68	21.77
		1	14	22.44	22.50	22.60	21.61	21.66	21.69
		8	0	21.56	21.58	21.59	20.59	20.65	20.62
		8	4	21.53	21.62	21.63	20.56	20.68	20.65
		8	7	21.49	21.65	21.66	20.53	20.70	20.68
		15	0	21.58	21.56	21.70	20.59	20.61	20.75
	Bandwidth (MHz)	RB Size	RB Offset	23035	23095	23155	23035	23095	23155
	5	1	0	22.55	22.47	22.58	21.71	21.55	21.82
		1	12	22.57	22.61	22.61	21.67	21.68	21.82
		1	24	22.52	22.59	22.62	21.63	21.70	21.82
		12	0	21.58	21.49	21.74	20.57	20.53	20.77
		12	7	21.56	21.57	21.71	20.55	20.60	20.75
		12	13	21.54	21.65	21.68	20.52	20.67	20.72
		25	0	21.55	21.57	21.70	20.60	20.64	20.76
	Bandwidth (MHz)	RB Size	RB Offset	23060	23095	23130	23060	23095	23130
	10	1	0	22.38	22.36	22.46	21.55	21.50	21.60
		1	25	22.48	22.49	22.58	21.62	21.66	21.72
		1	49	22.42	22.38	22.52	21.53	21.58	21.67
		25	0	21.59	21.50	21.67	20.60	20.48	20.66
		25	12	21.57	21.58	21.66	20.58	20.58	20.65
		25	25	21.55	21.65	21.64	20.56	20.67	20.63
		50	0	21.57	21.58	21.67	20.54	20.55	20.65

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Band	Bandwidth (MHz)	RB Size	RB Offset	QPSK			16QAM		
				26797	26915	27033	26797	26915	27033
				824.7	836.5	848.3	824.7	836.5	848.3
26	1.4	1	0	22.08	22.00	22.04	21.26	21.17	21.16
		1	3	22.17	22.02	22.13	21.28	21.20	21.29
		1	5	22.03	21.95	22.10	21.18	21.13	21.22
		3	0	22.11	22.02	22.08	21.23	21.06	21.24
		3	2	22.16	22.03	22.10	21.24	21.08	21.25
		3	3	22.15	21.98	22.13	21.22	21.04	21.20
		6	0	21.18	21.08	21.11	20.23	20.02	20.16
	Bandwidth (MHz)	RB Size	RB Offset	26805	26915	27025	26805	26915	27025
				825.5	836.5	847.5	825.5	836.5	847.5
	3	1	0	22.09	22.00	22.10	21.27	21.21	21.18
		1	8	22.08	22.03	22.14	21.26	21.20	21.30
		1	14	21.99	22.00	22.12	21.17	21.15	21.25
		8	0	21.22	21.06	21.17	20.26	20.08	20.19
		8	4	21.20	21.10	21.23	20.14	20.09	20.23
		8	7	21.12	21.07	21.22	20.12	20.07	20.22
		15	0	21.19	21.11	21.18	20.18	20.12	20.23
	Bandwidth (MHz)	RB Size	RB Offset	26815	26915	27015	26815	26915	27015
				826.5	836.5	846.5	826.5	836.5	846.5
	5	1	0	22.15	22.04	22.01	21.29	21.12	21.23
		1	12	22.17	22.11	22.15	21.28	21.25	21.38
		1	24	22.03	21.98	22.11	21.19	21.07	21.33
		12	0	21.28	21.10	21.16	20.29	20.09	20.17
		12	7	21.30	21.15	21.22	20.24	20.10	20.23
		12	13	21.15	21.03	21.19	20.13	19.96	20.20
		25	0	21.22	21.11	21.17	20.22	20.12	20.16
	Bandwidth (MHz)	RB Size	RB Offset	26840	26915	26990	26840	26915	26990
				829.0	836.5	844.0	829.0	836.5	844.0
	10	1	0	22.04	21.99	21.86	21.20	21.15	21.02
		1	25	22.10	22.06	21.99	21.30	21.19	21.18
		1	49	21.89	21.89	21.93	21.03	21.08	21.09
		25	0	21.15	21.12	21.08	20.08	20.06	20.09
		25	12	21.20	21.14	21.18	20.11	20.12	20.15
		25	25	21.07	21.01	21.16	20.03	19.98	20.13
		50	0	21.13	21.03	21.20	20.04	20.01	20.16
	Bandwidth (MHz)	RB Size	RB Offset	26865	-	26965	26865	-	26965
				831.5	-	841.5	831.5	-	841.5
	15	1	0	22.34	-	22.31	21.40	-	21.65
		1	37	22.09	-	21.96	21.14	-	21.34
		1	74	22.16	-	22.55	21.29	-	21.68
		36	0	21.27	-	21.40	20.24	-	20.38
		36	20	21.05	-	21.30	20.01	-	20.29
		36	39	21.12	-	21.44	20.06	-	20.42
		75	0	21.17	-	21.44	20.15	-	20.42

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4. Occupied Bandwidth 99 %

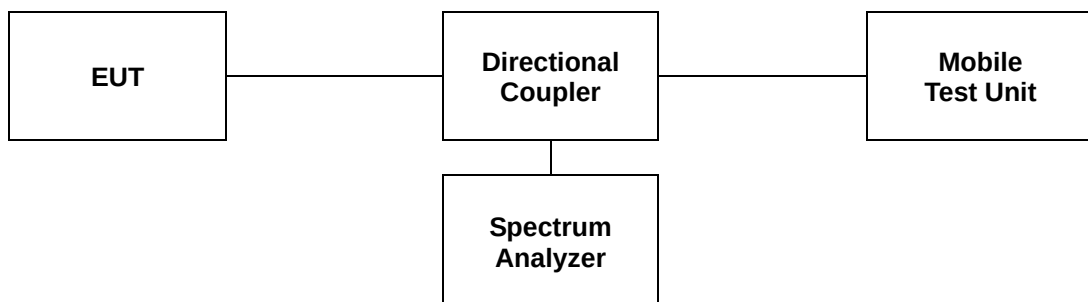
4.1. Limit

CFR 47, Section FCC §2.1049

4.2. Test Procedure

The test follows section 4.2 of FCC KDB Publication 971168 D01 v03r01.

- 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 (typically a span of $1.5 \times \text{OBW}$ is sufficient).
- The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1 % to 5 % of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- Set the detection mode to peak, and the trace mode to max-hold.
- If the instrument does not have a 99 % OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5 % of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5 % of the total is reached and record that frequency as the upper OBW frequency. The 99 % power OBW can be determined by computing the difference these two frequencies.
- The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).



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4.3 Test Results

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 % R.H.

Band	Frequency (MHz)	Occupied Bandwidth (MHz)	
		QPSK	16QAM
2 (1.4 MHz)	1 850.7	1.098	1.098
	1 880.0	1.098	1.098
	1 909.3	1.094	1.090
2 (3 MHz)	1 851.5	2.683	2.692
	1 880.0	2.692	2.692
	1 908.5	2.692	2.692
2 (5 MHz)	1 852.5	4.501	4.515
	1 880.0	4.515	4.515
	1 907.5	4.515	4.515
2 (10 MHz)	1 855.0	8.973	8.944
	1 880.0	8.973	8.973
	1 905.0	8.973	8.973
2 (15 MHz)	1 857.5	13.502	13.546
	1 880.0	13.546	13.502
	1 902.5	13.502	13.502
2 (20 MHz)	1 860.0	18.003	17.945
	1 880.0	17.887	17.945
	1 900.0	17.945	17.945

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Band	Frequency (MHz)	Occupied Bandwidth (MHz)	
		QPSK	16QAM
4 (1.4 MHz)	1 710.7	1.098	1.094
	1 732.5	1.090	1.094
	1 754.3	1.094	1.098
4 (3 MHz)	1 711.5	2.692	2.692
	1 732.5	2.692	2.683
	1 753.5	2.692	2.692
4 (5 MHz)	1 712.5	4.515	4.515
	1 732.5	4.501	4.515
	1 752.5	4.501	4.515
4 (10 MHz)	1 715.0	8.915	8.915
	1 732.5	8.944	8.973
	1 750.0	8.944	8.973
4 (15 MHz)	1 717.5	13.502	13.546
	1 732.5	13.546	13.502
	1 747.5	13.502	13.546
4 (20 MHz)	1 720.0	18.003	18.003
	1 732.5	17.945	17.945
	1 745.0	17.945	17.945

Band	Frequency (MHz)	Occupied Bandwidth (MHz)	
		QPSK	16QAM
5 (1.4 MHz)	824.7	1.098	1.098
	836.5	1.098	1.098
	848.3	1.094	1.098
5 (3 MHz)	825.5	2.692	2.692
	836.5	2.692	2.692
	847.5	2.692	2.692
5 (5 MHz)	826.5	4.501	4.515
	836.5	4.515	4.515
	846.5	4.501	4.515
5 (10 MHz)	829.0	8.944	8.944
	836.5	8.973	8.973
	844.0	8.944	8.944

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Band	Frequency (MHz)	Occupied Bandwidth (MHz)	
		QPSK	16QAM
7 (5 MHz)	2 502.5	4.515	4.515
	2 535.0	4.515	4.515
	2 567.5	4.515	4.515
7 (10 MHz)	2 505.0	8.944	8.944
	2 535.0	8.944	8.944
	2 565.0	8.944	8.944
7 (15 MHz)	2 507.5	13.546	13.546
	2 535.0	13.546	13.502
	2 562.5	13.502	13.502
7 (20 MHz)	2 510.0	17.945	18.003
	2 535.0	17.945	17.945
	2 560.0	17.945	17.945

Band	Frequency (MHz)	Occupied Bandwidth (MHz)	
		QPSK	16QAM
12 (1.4 MHz)	699.7	1.094	1.098
	707.5	1.094	1.098
	715.3	1.098	1.094
12 (3 MHz)	700.5	2.692	2.692
	707.5	2.692	2.692
	714.5	2.692	2.692
12 (5 MHz)	701.5	4.515	4.515
	707.5	4.515	4.515
	713.5	4.515	4.515
12 (10 MHz)	704.0	8.944	8.944
	707.5	8.944	8.944
	711.0	8.973	8.944

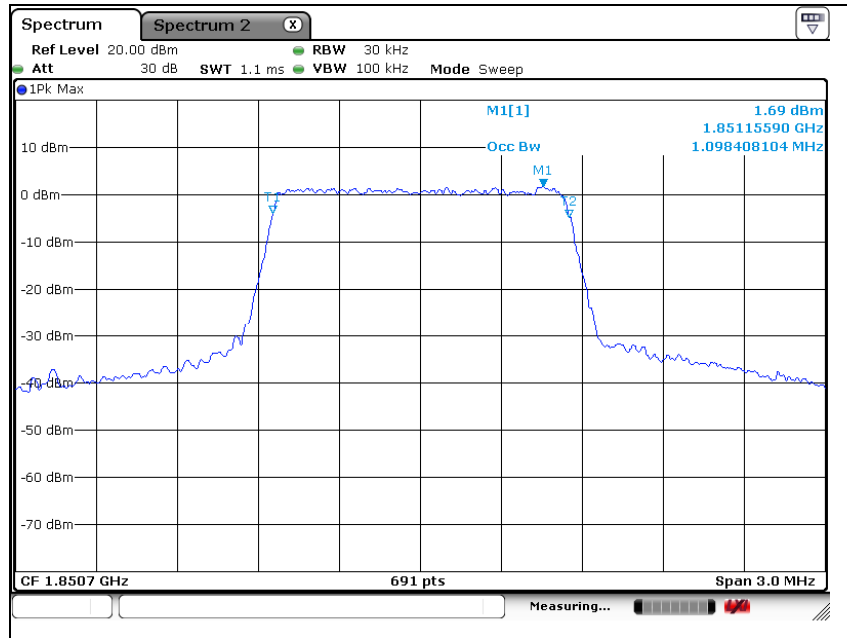
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Band	Frequency (MHz)	Occupied Bandwidth (MHz)	
		QPSK	16QAM
26 (1.4 MHz)	824.7	1.094	1.098
	836.5	1.098	1.094
	848.3	1.098	1.103
26 (3 MHz)	825.5	2.692	2.683
	836.5	2.692	2.692
	847.5	2.683	2.683
26 (5 MHz)	826.5	4.501	4.501
	836.5	4.530	4.515
	846.5	4.515	4.501
26 (10 MHz)	829.0	8.973	8.973
	836.5	8.973	8.973
	844.0	8.944	8.944
26 (15 MHz)	831.5	13.502	13.502
	841.5	13.502	13.502

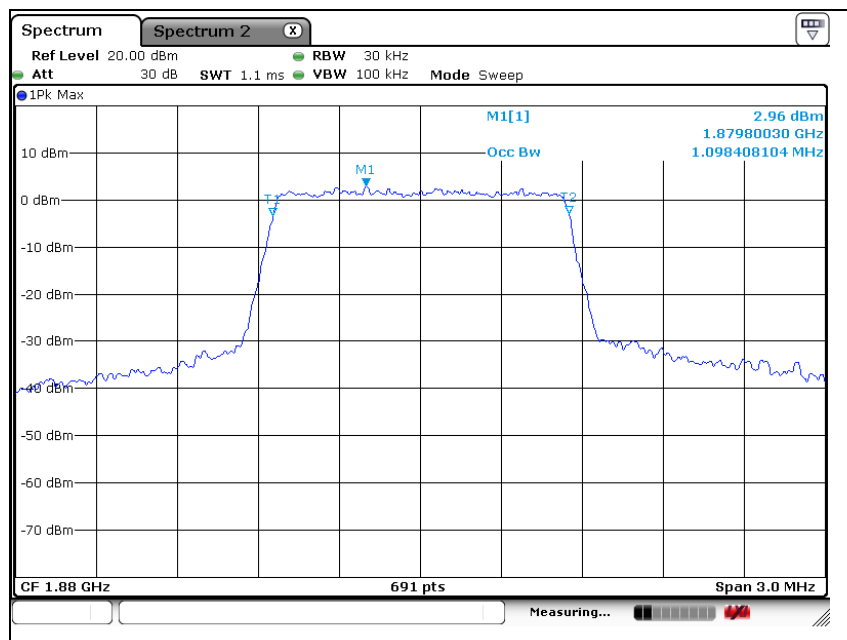
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LTE band 2 (1.4 MHz - QPSK)

Low Channel

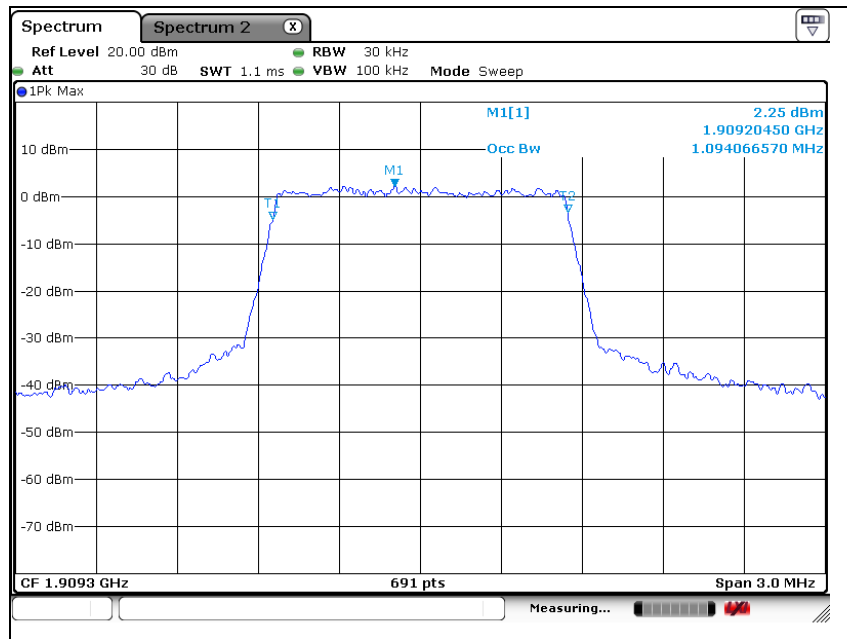


Middle Channel



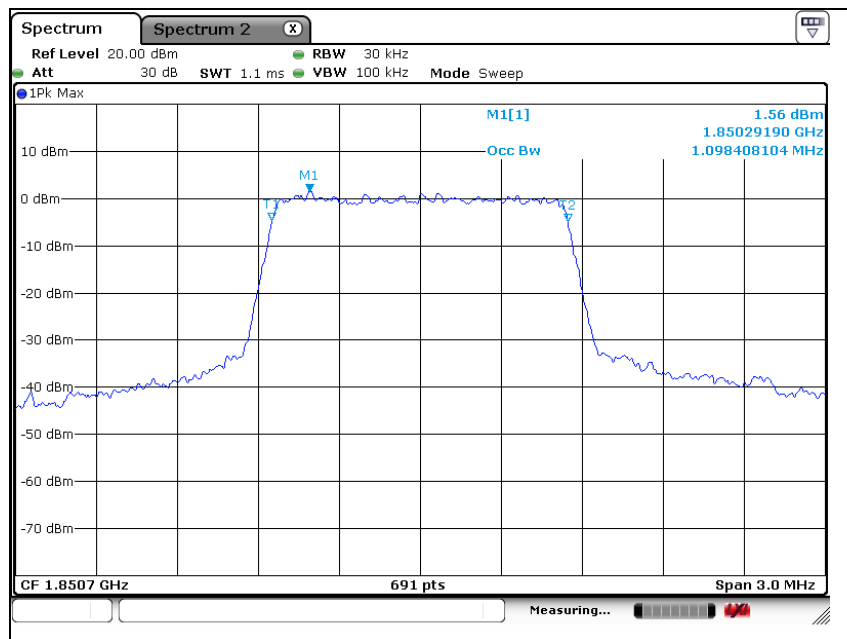
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High Channel



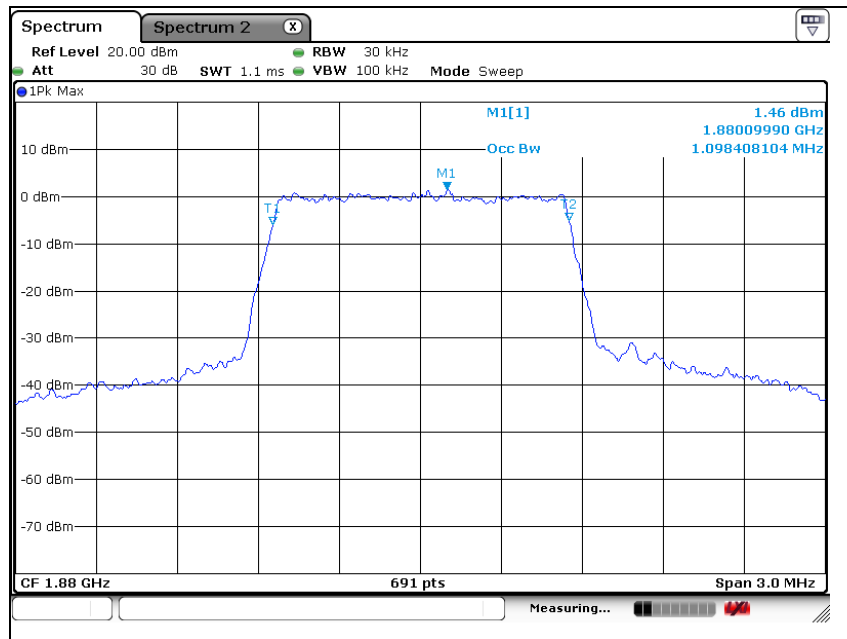
LTE band 2 (1.4 MHz - 16QAM)

Low Channel

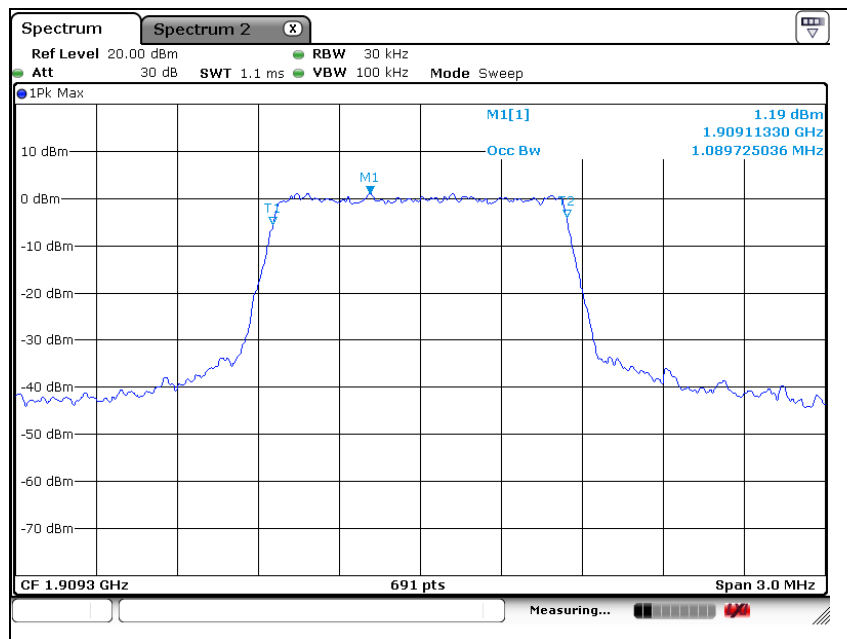


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Middle Channel



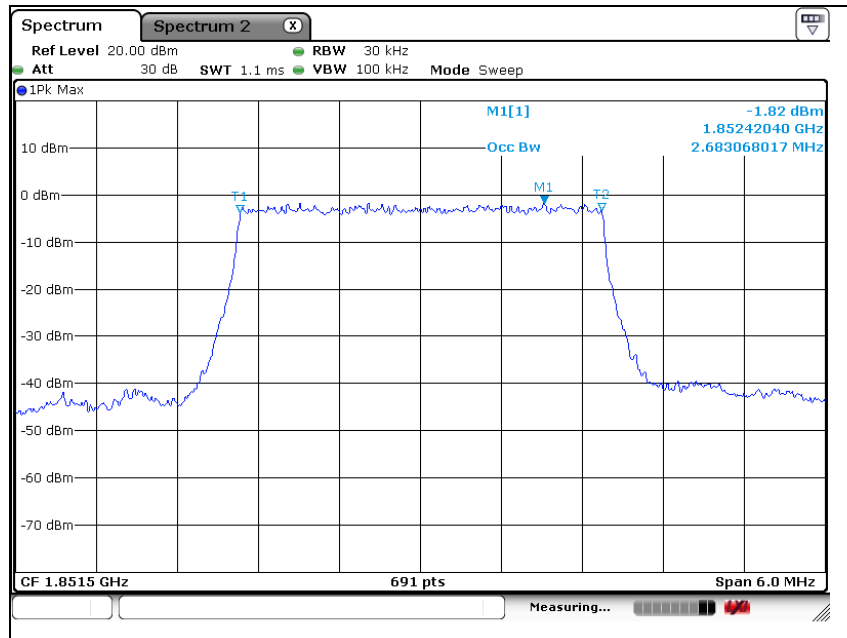
High Channel



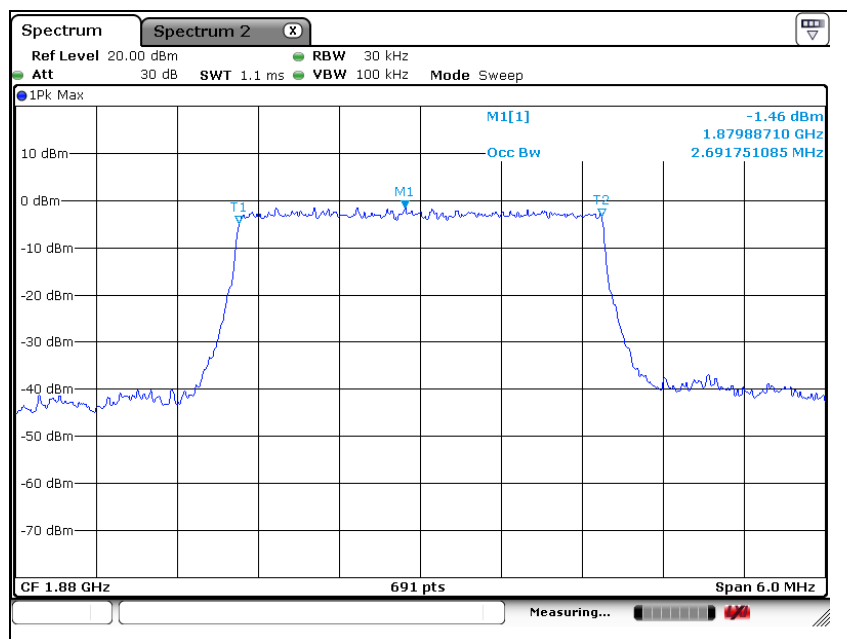
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LTE band 2 (3 MHz - QPSK)

Low Channel

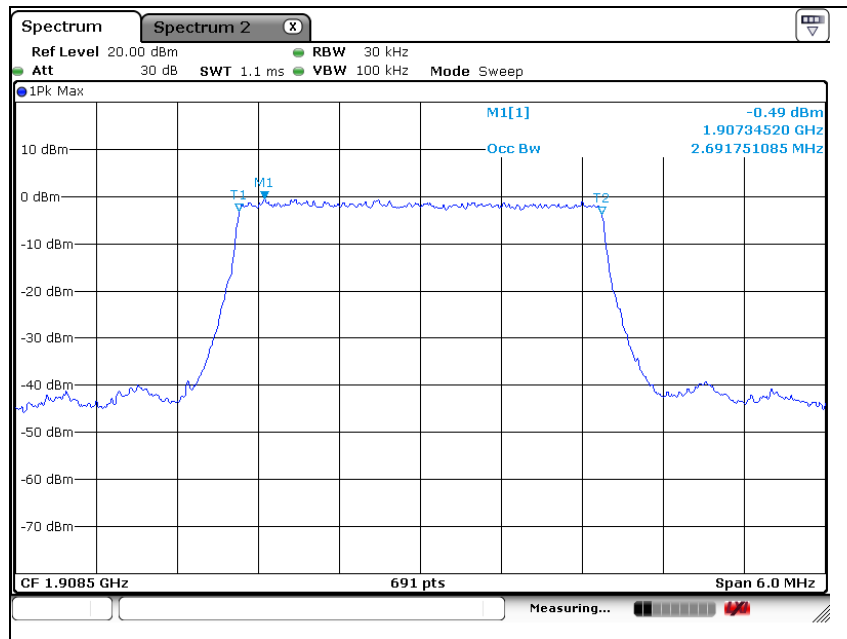


Middle Channel



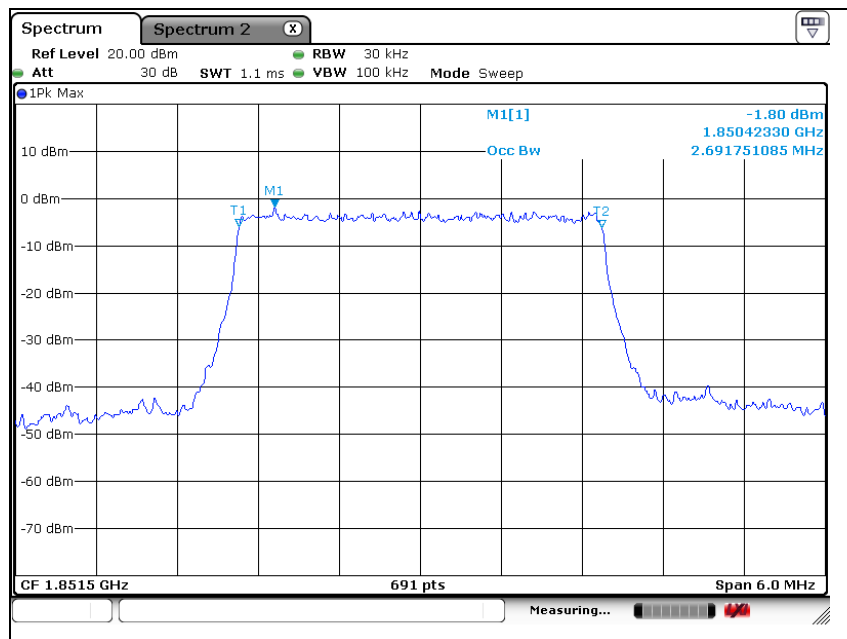
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High Channel



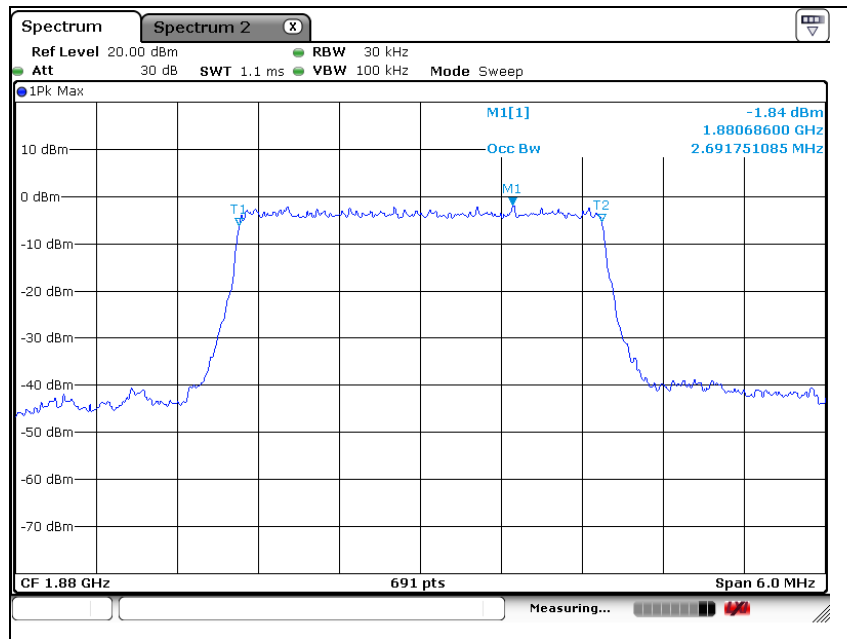
LTE band 2 (3 MHz - 16QAM)

Low Channel

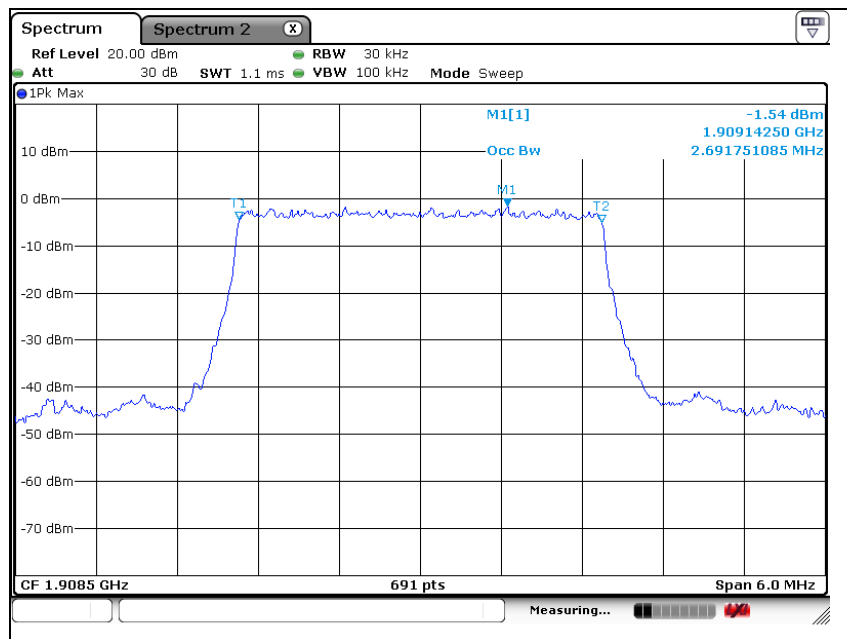


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Middle Channel



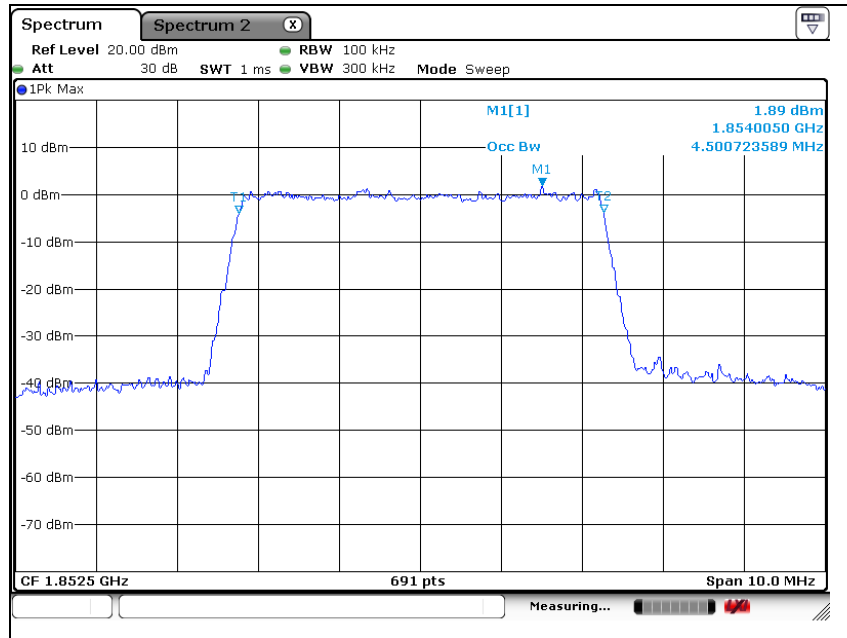
High Channel



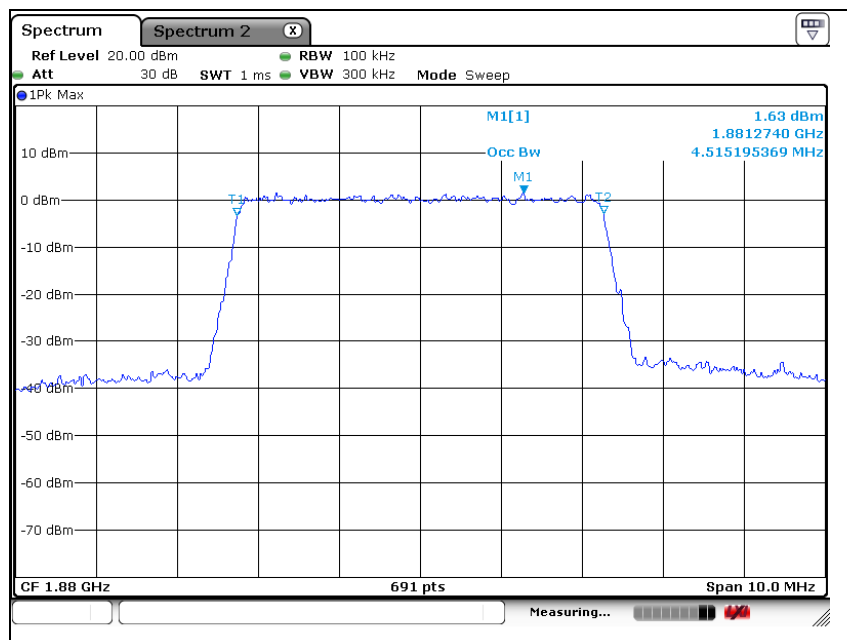
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LTE band 2 (5 MHz - QPSK)

Low Channel

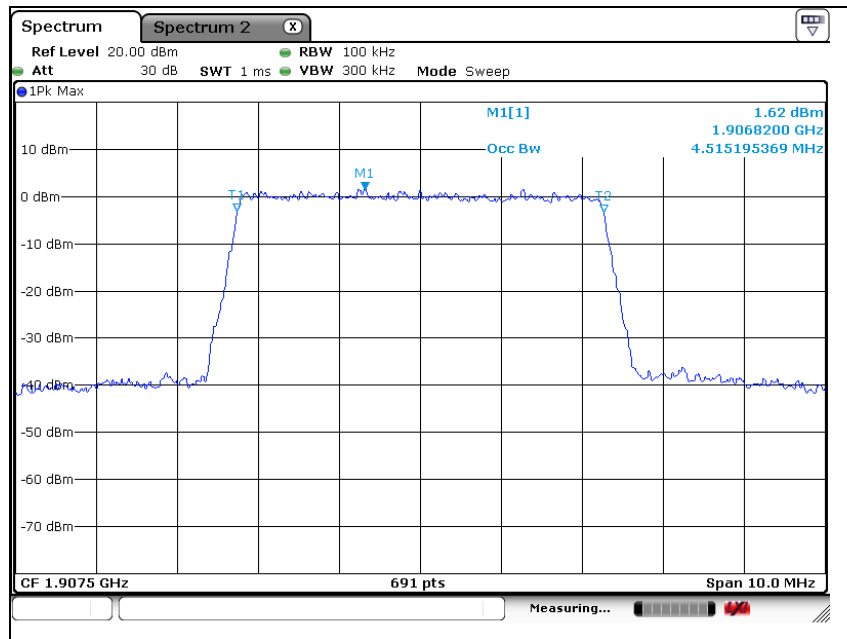


Middle Channel



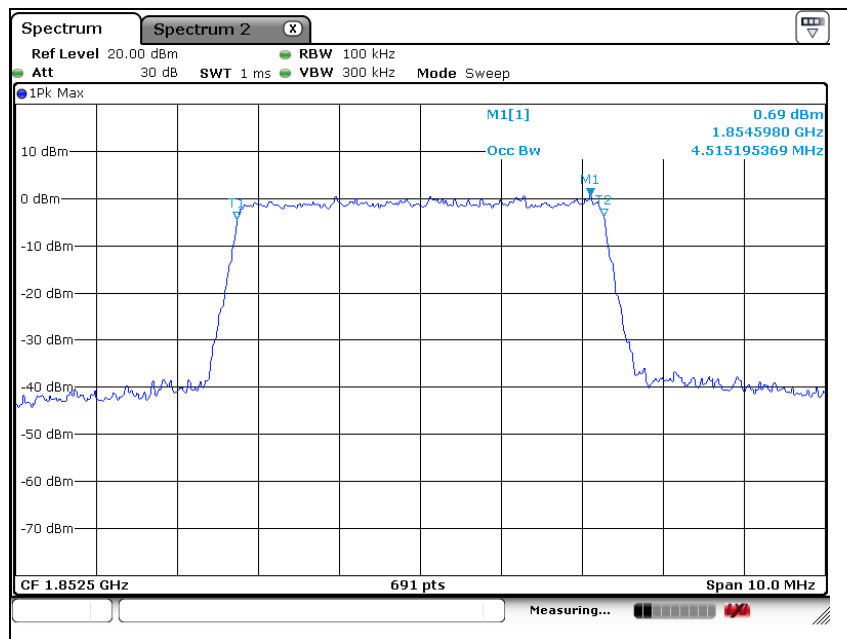
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High Channel



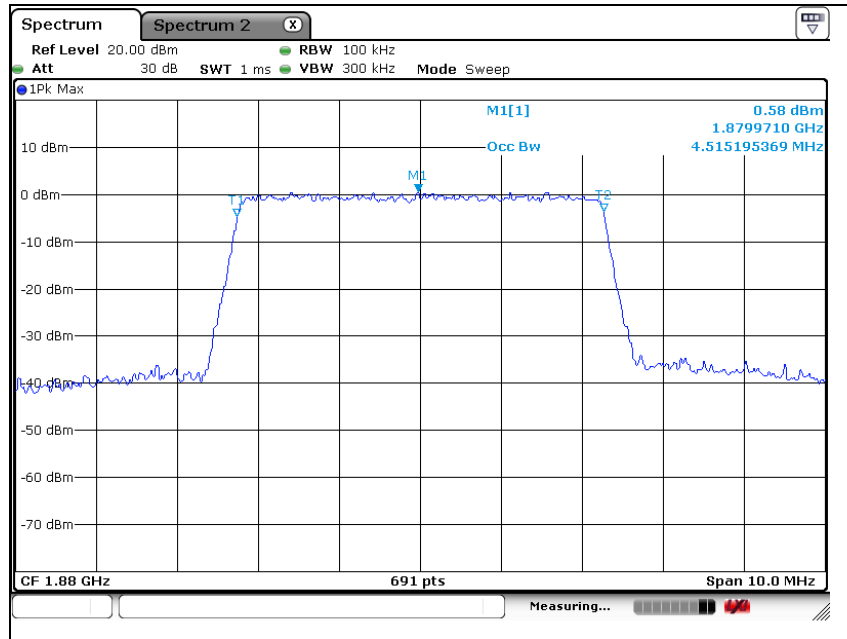
LTE band 2 (5 MHz - 16QAM)

Low Channel

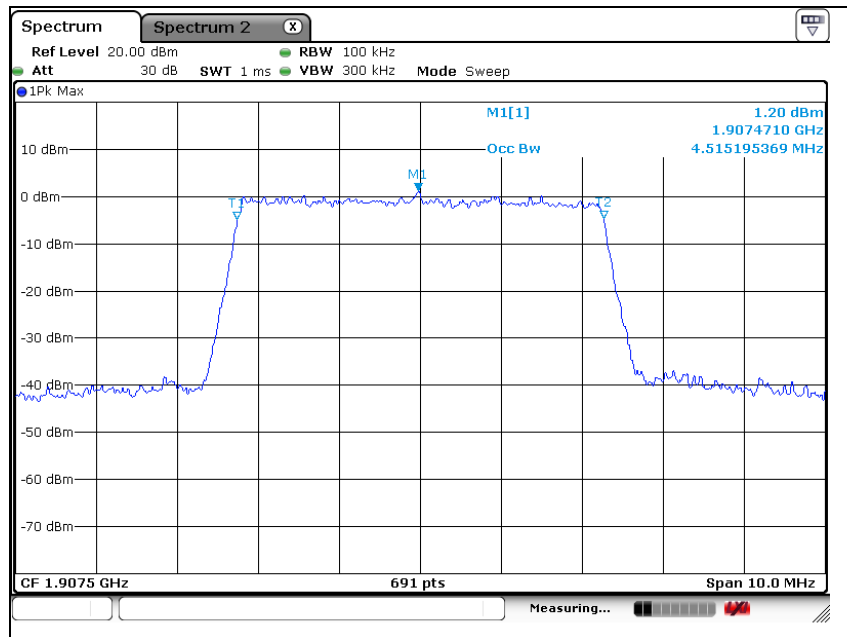


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Middle Channel



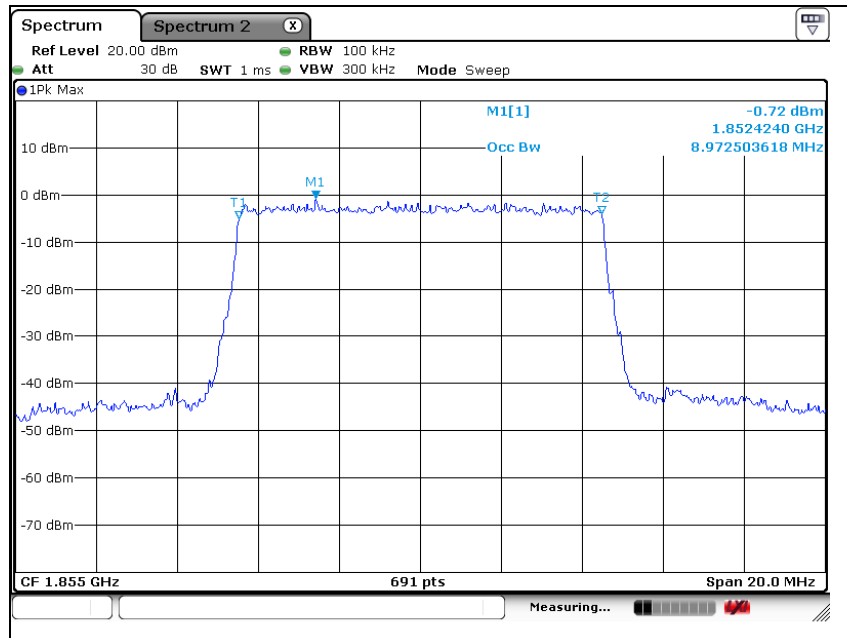
High Channel



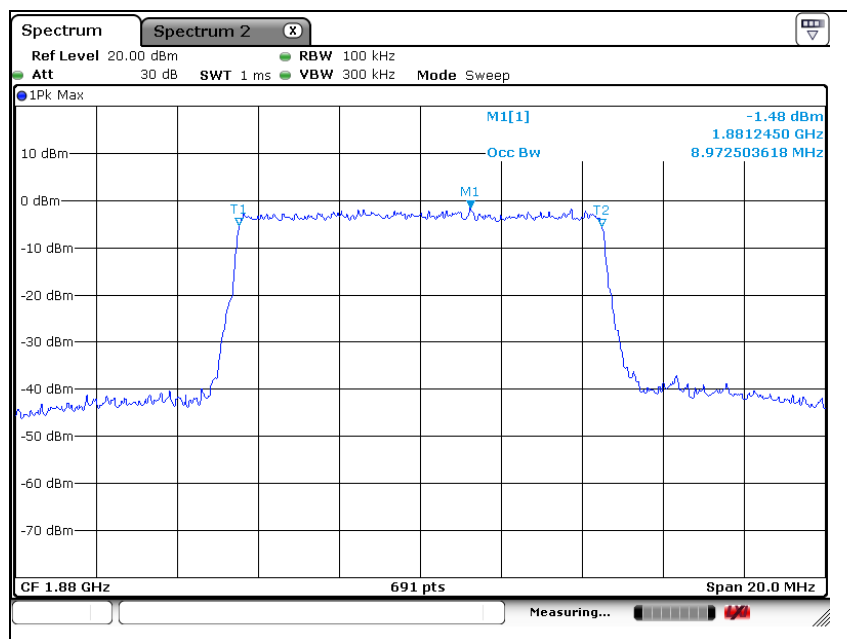
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LTE band 2 (10 MHz - QPSK)

Low Channel

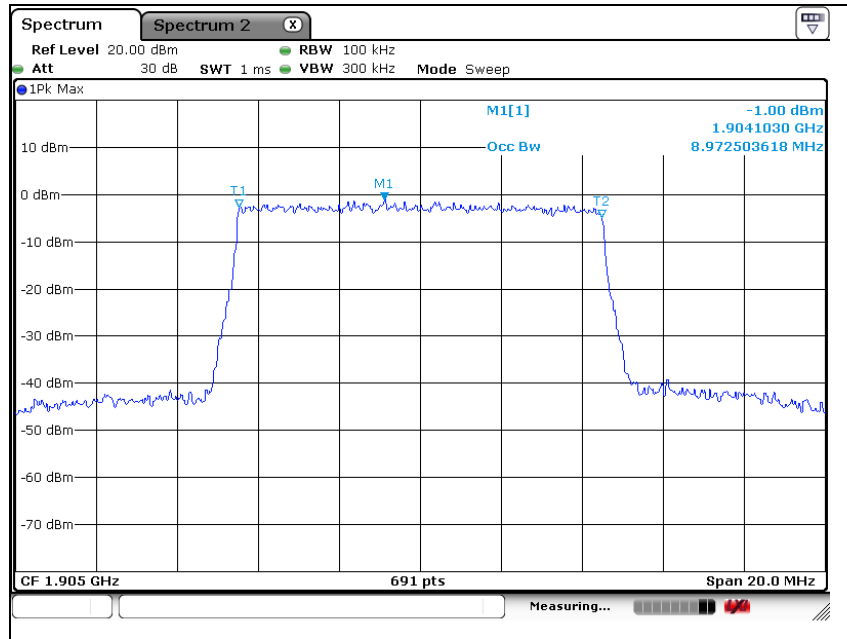


Middle Channel



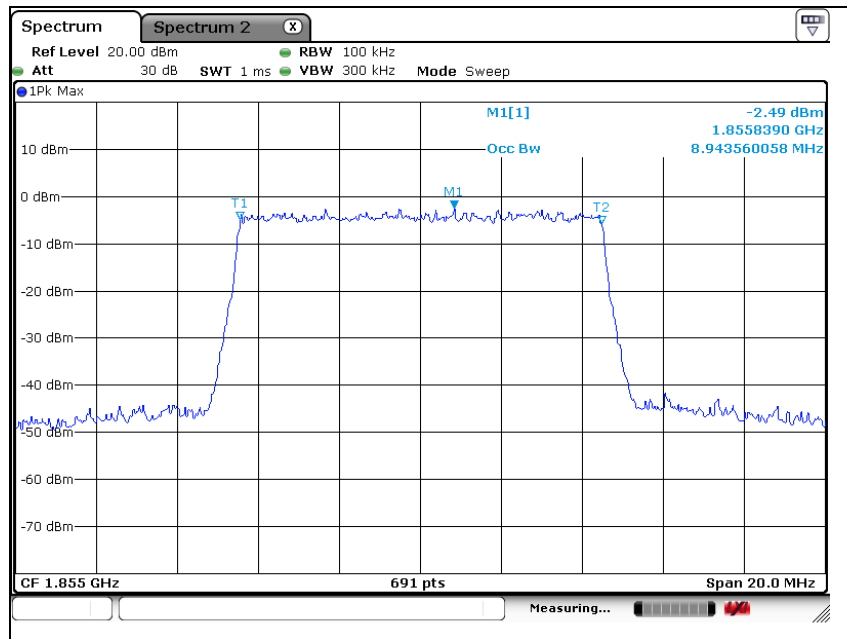
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High Channel



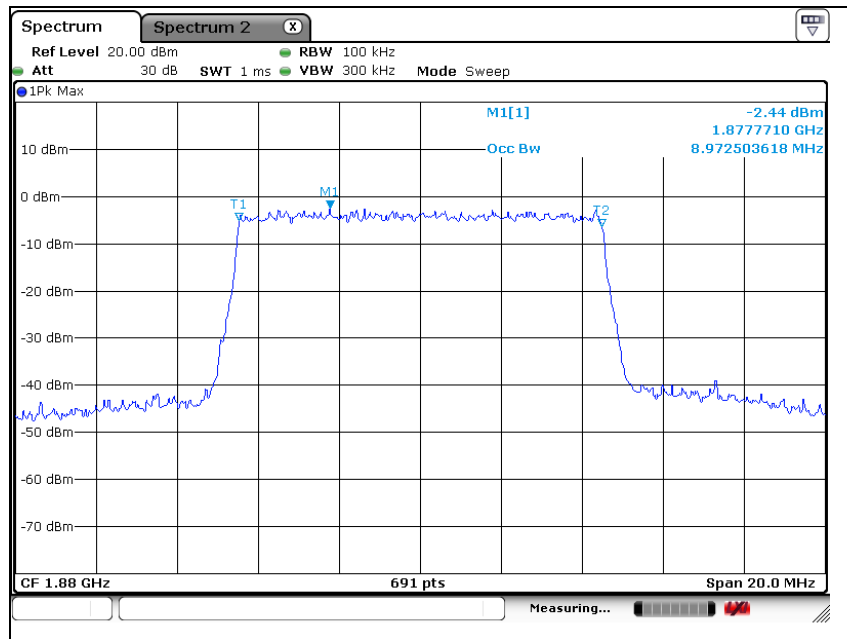
LTE band 2 (10 MHz - 16QAM)

Low Channel

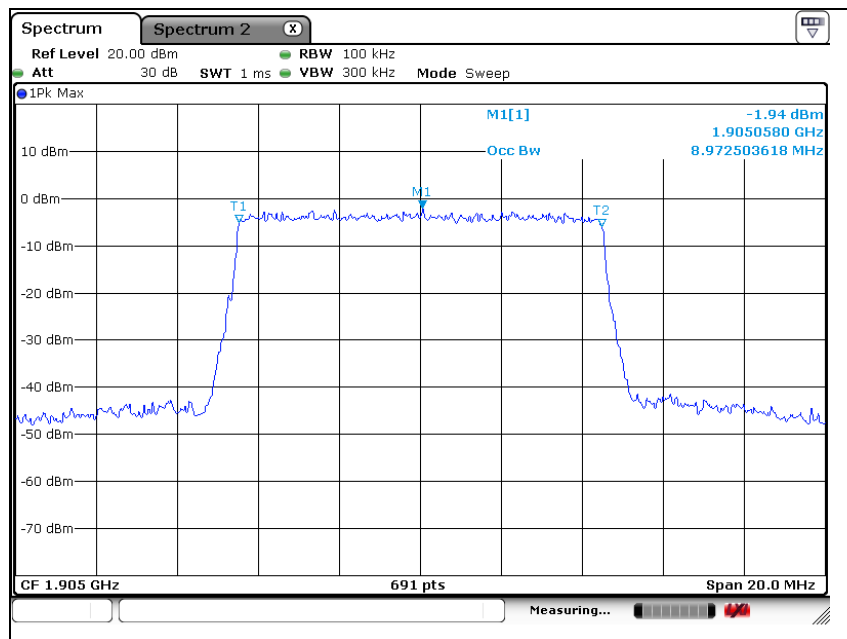


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Middle Channel



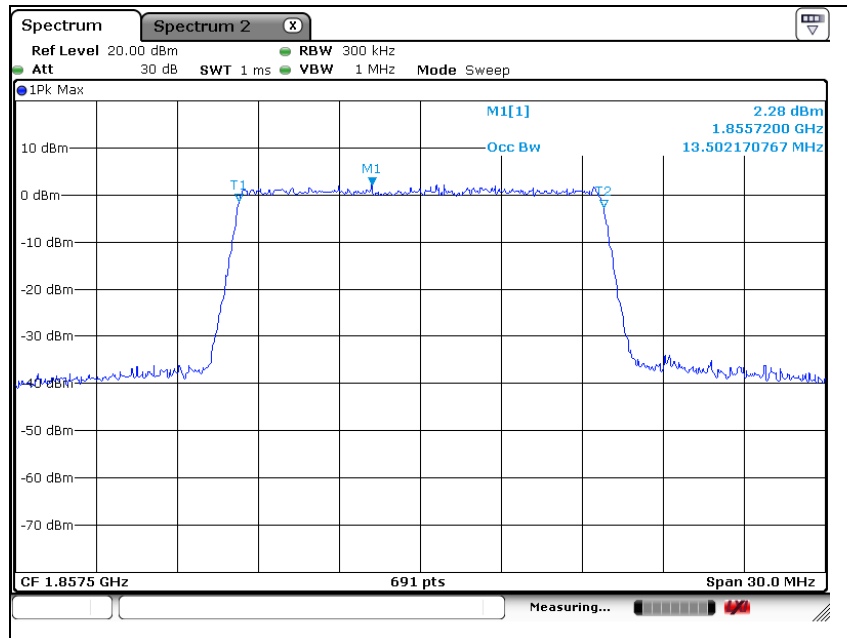
High Channel



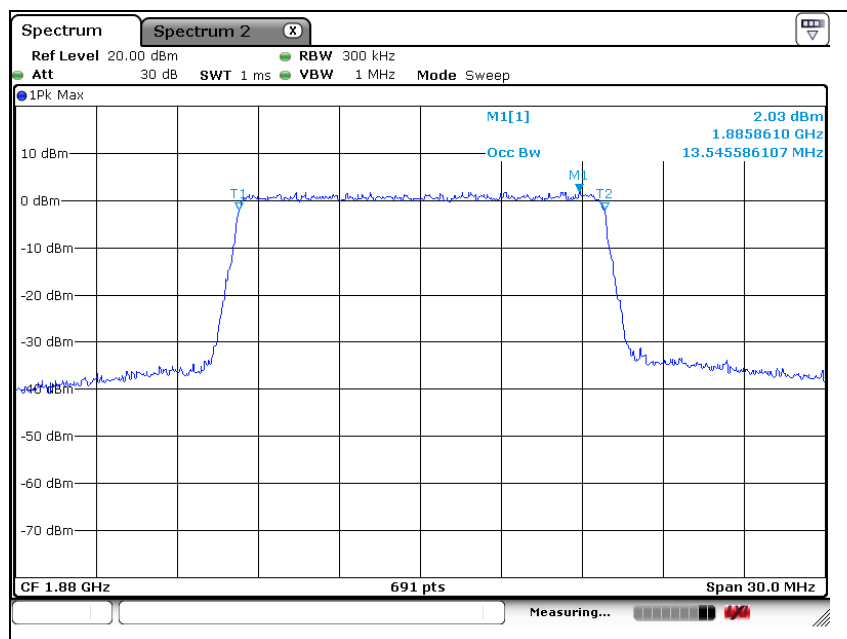
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LTE band 2 (15 MHz - QPSK)

Low Channel

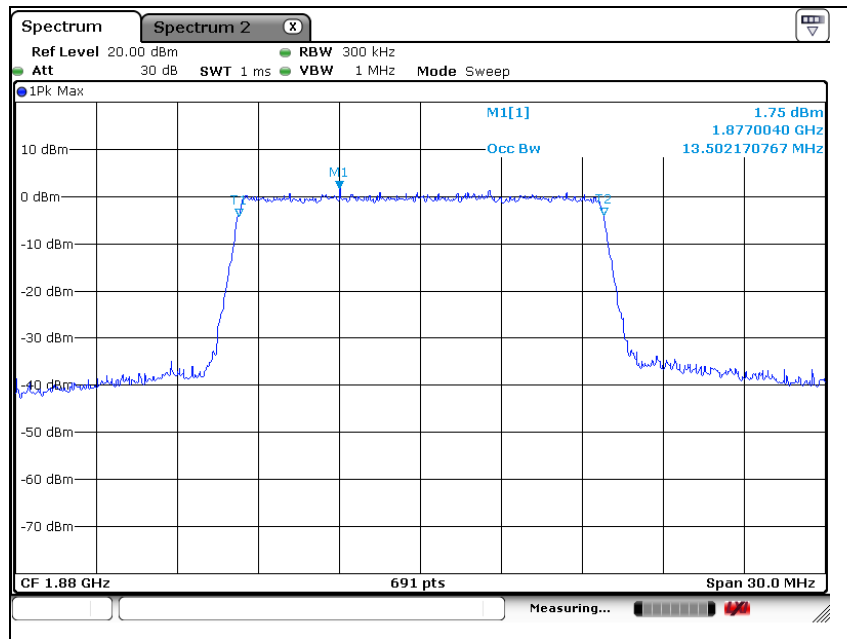


Middle Channel

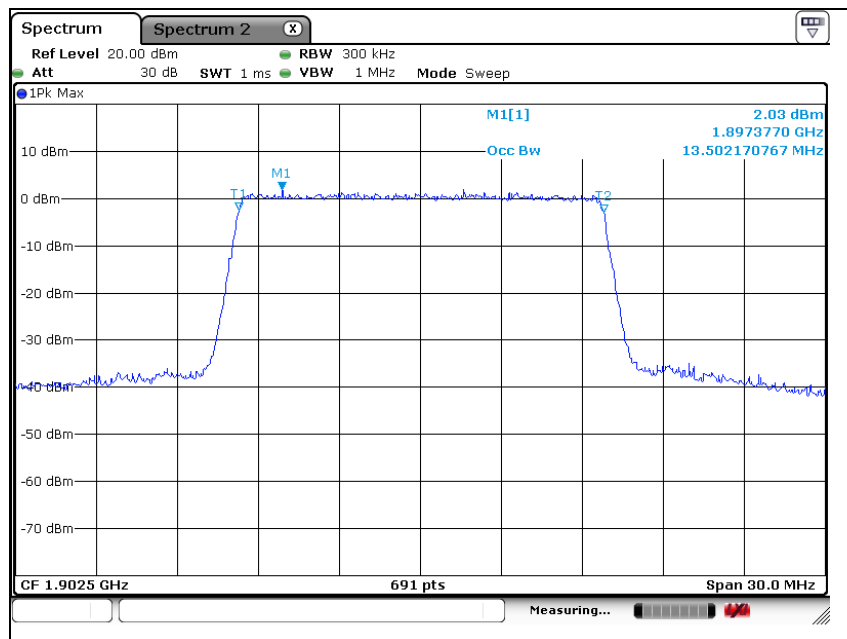


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Middle Channel



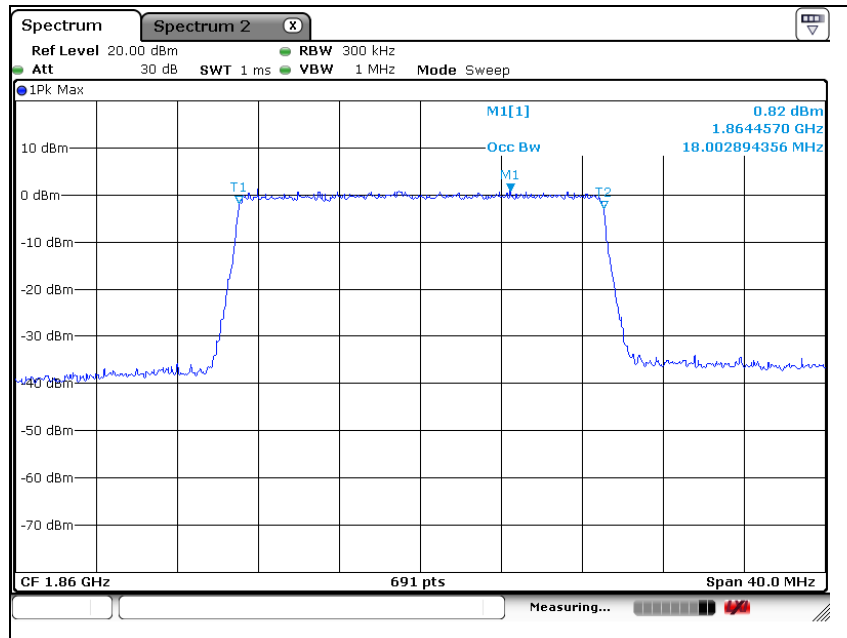
High Channel



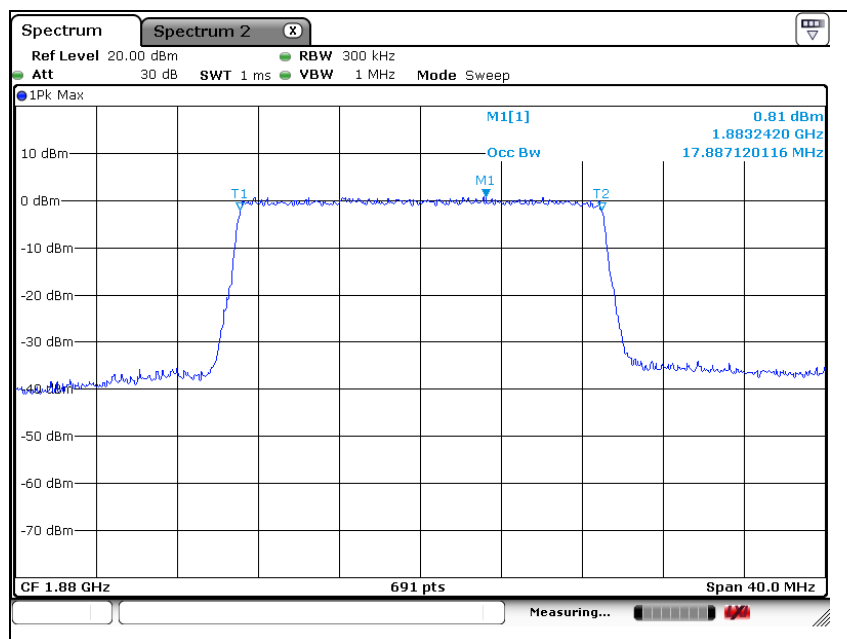
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LTE band 2 (20 MHz - QPSK)

Low Channel

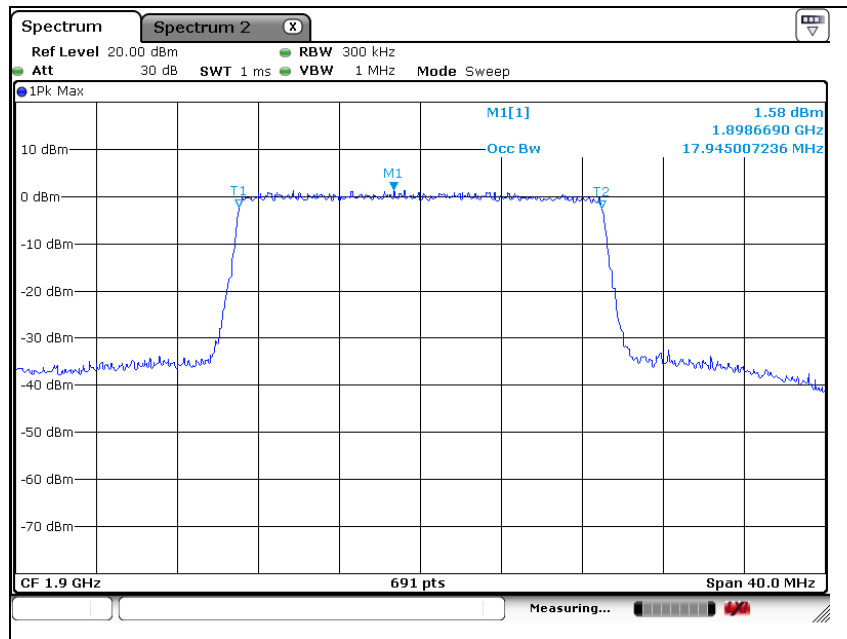


Middle Channel



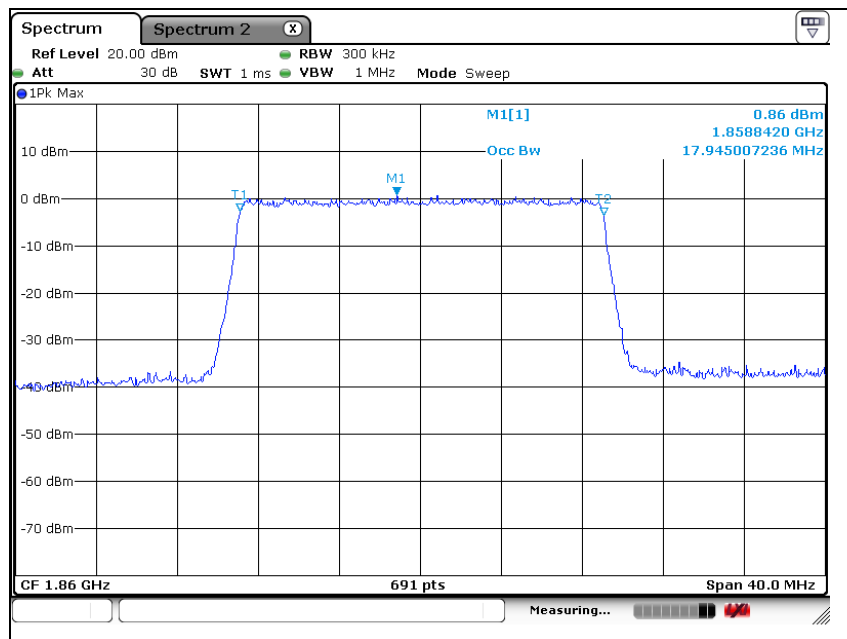
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High Channel



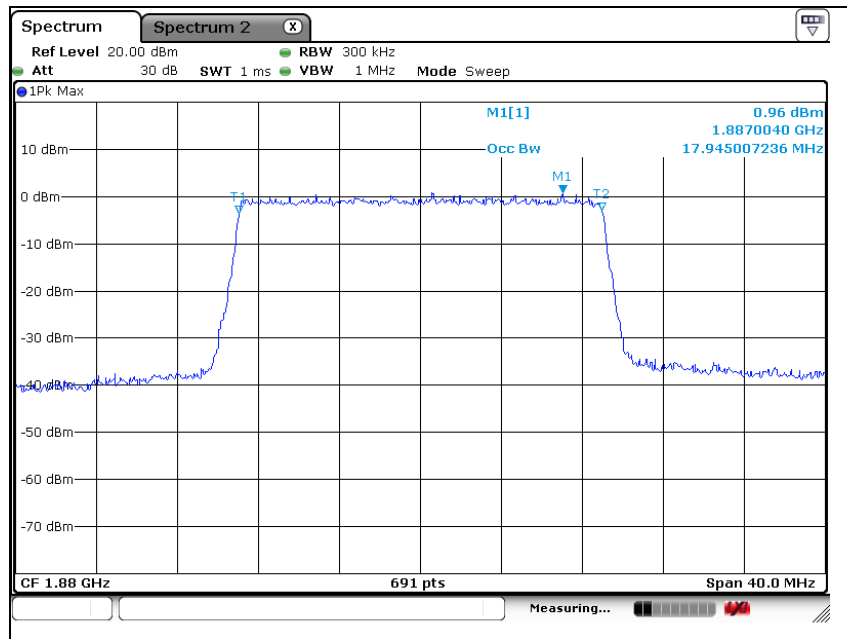
LTE band 2 (20 MHz - 16QAM)

Low Channel

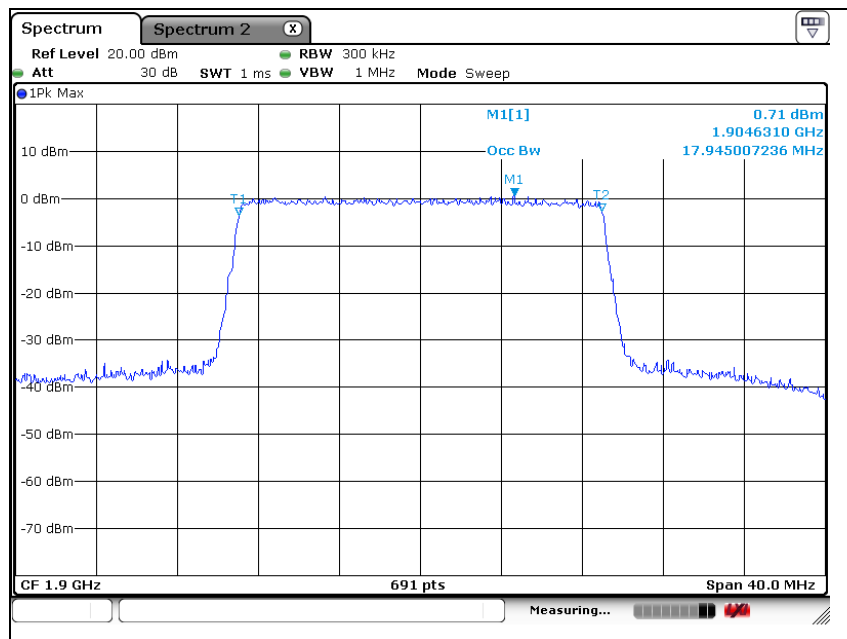


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Middle Channel



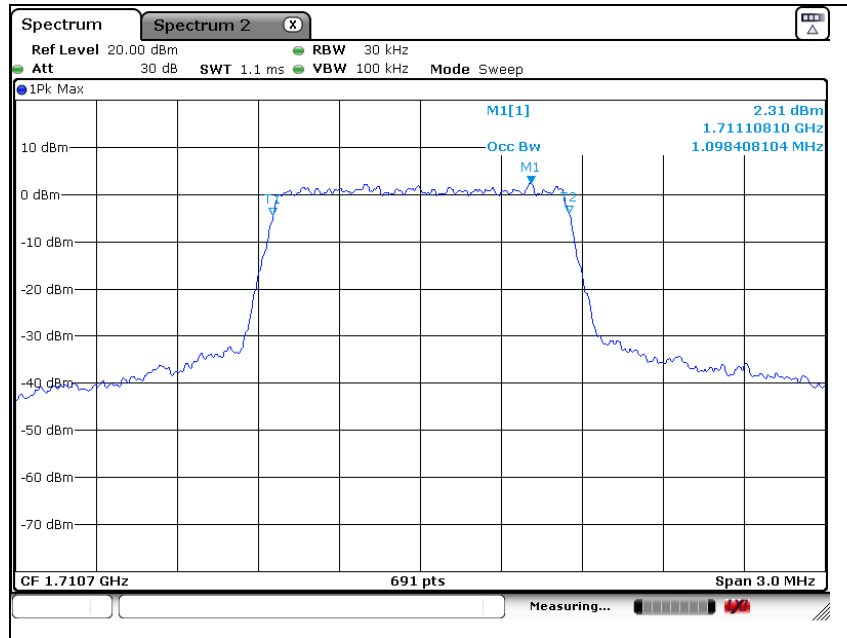
High Channel



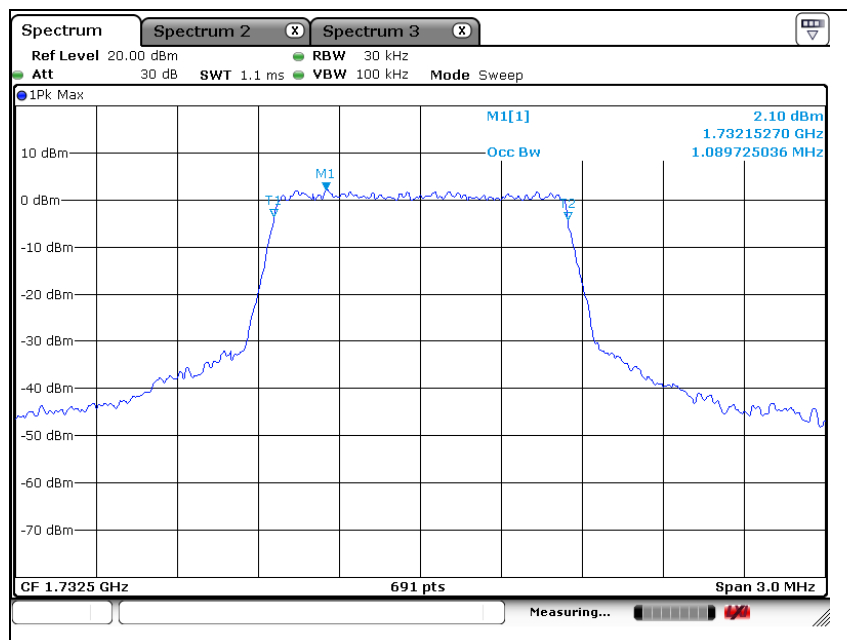
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LTE band 4 (1.4 MHz - QPSK)

Low Channel

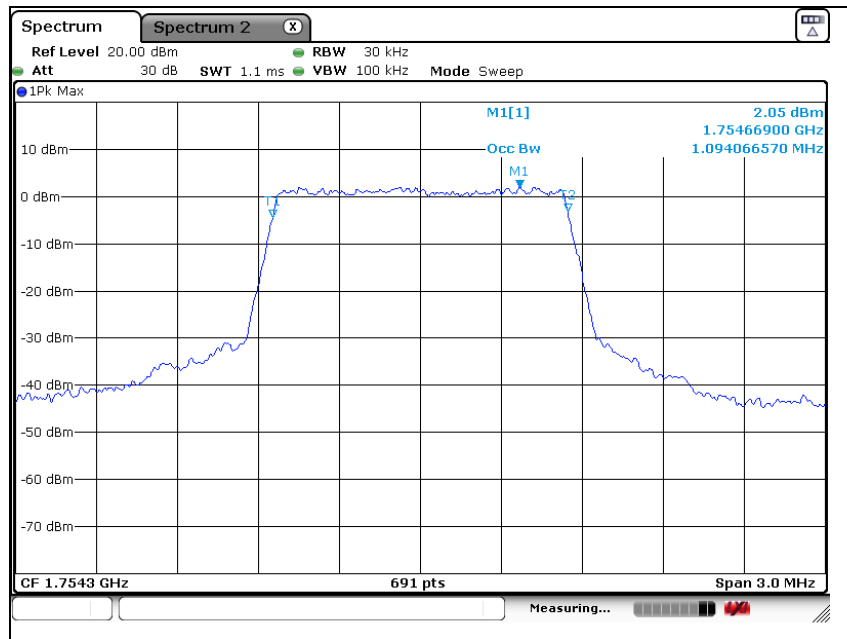


Middle Channel



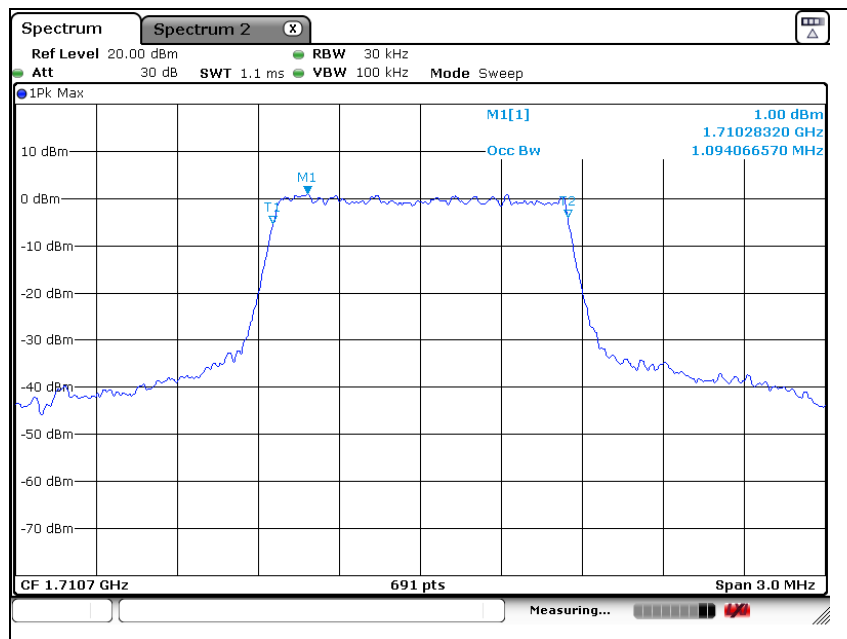
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High Channel



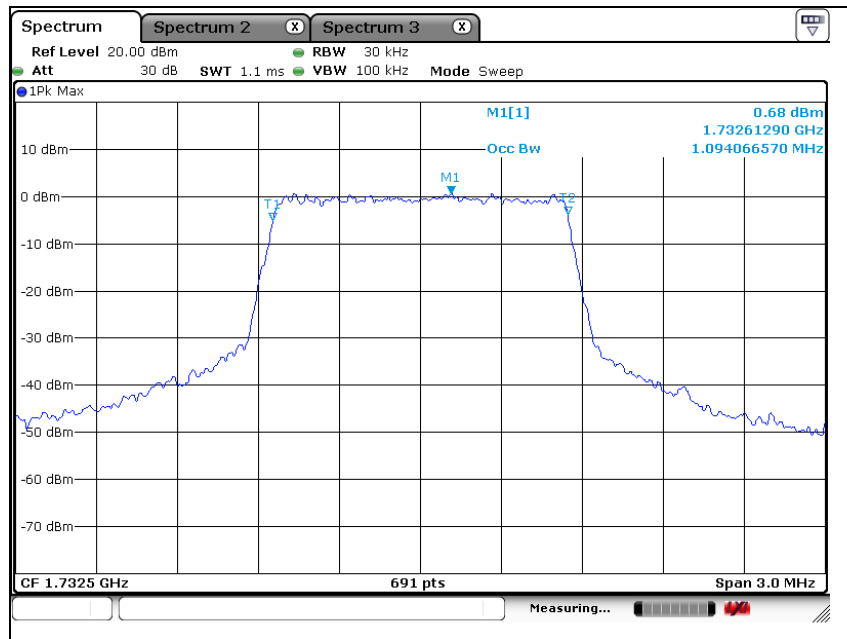
LTE band 4 (1.4 MHz - 16QAM)

Low Channel

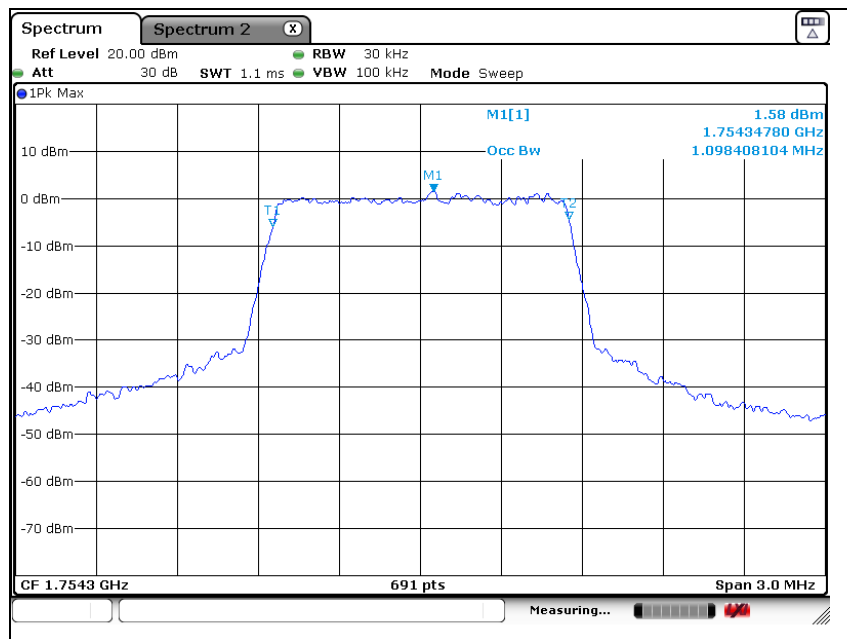


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Middle Channel



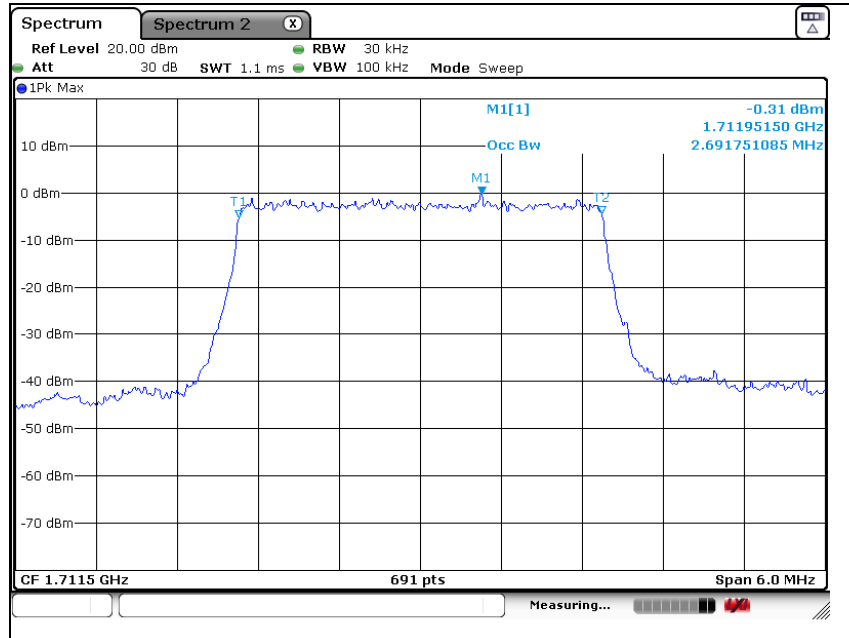
High Channel



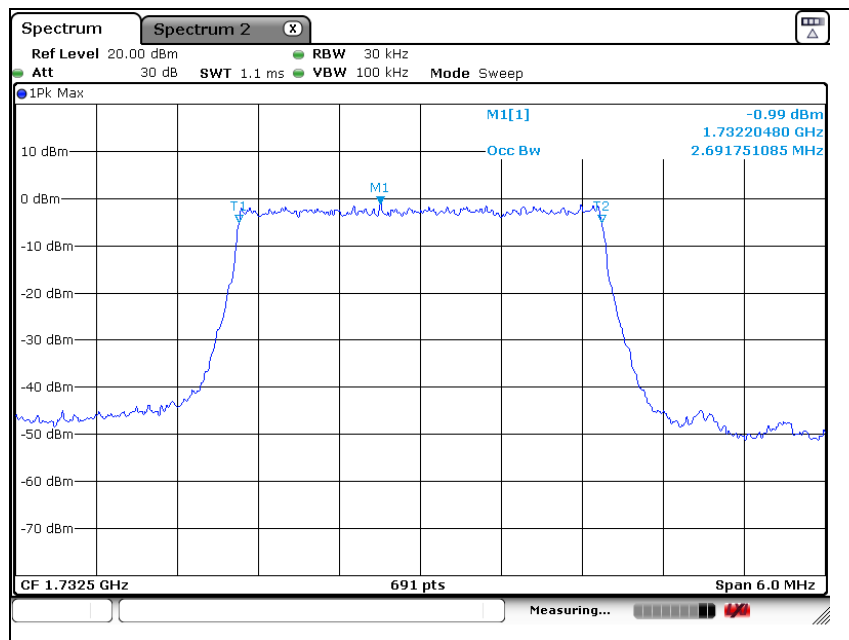
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LTE band 4 (3 MHz - QPSK)

Low Channel

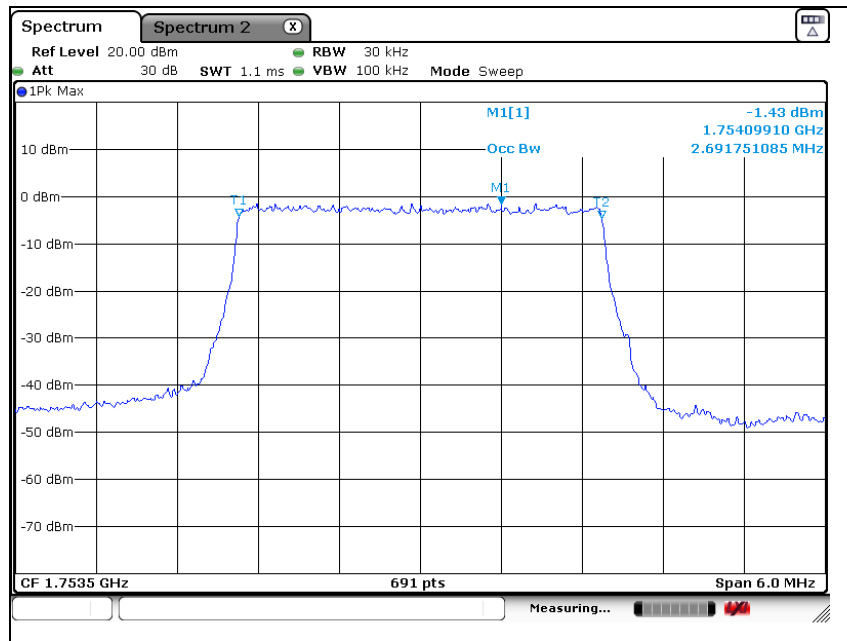


Middle Channel



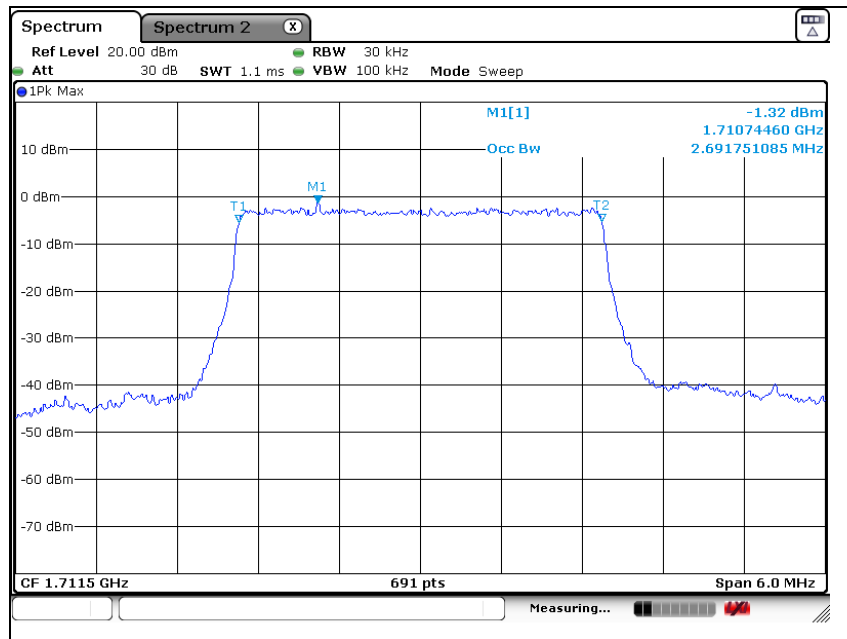
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High Channel



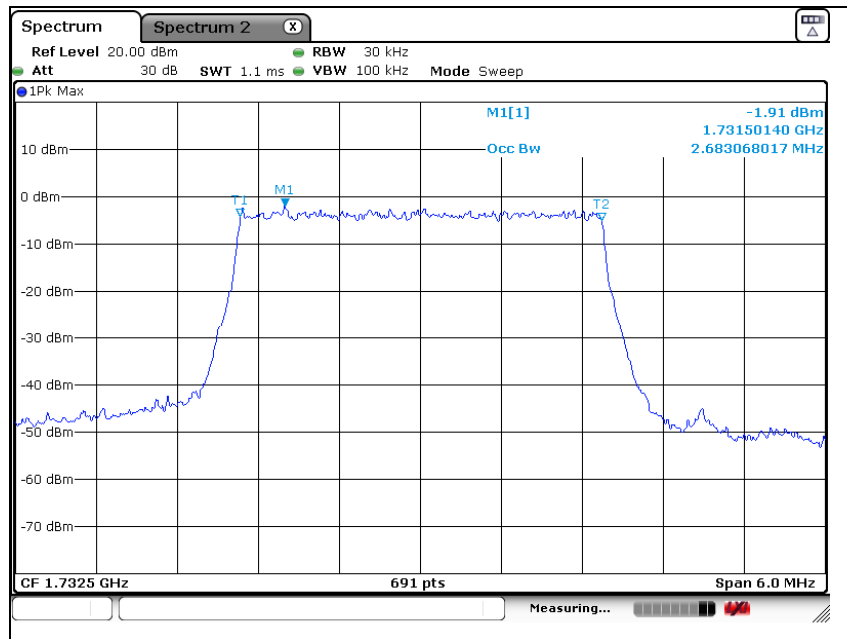
LTE band 4 (3 MHz - 16QAM)

Low Channel

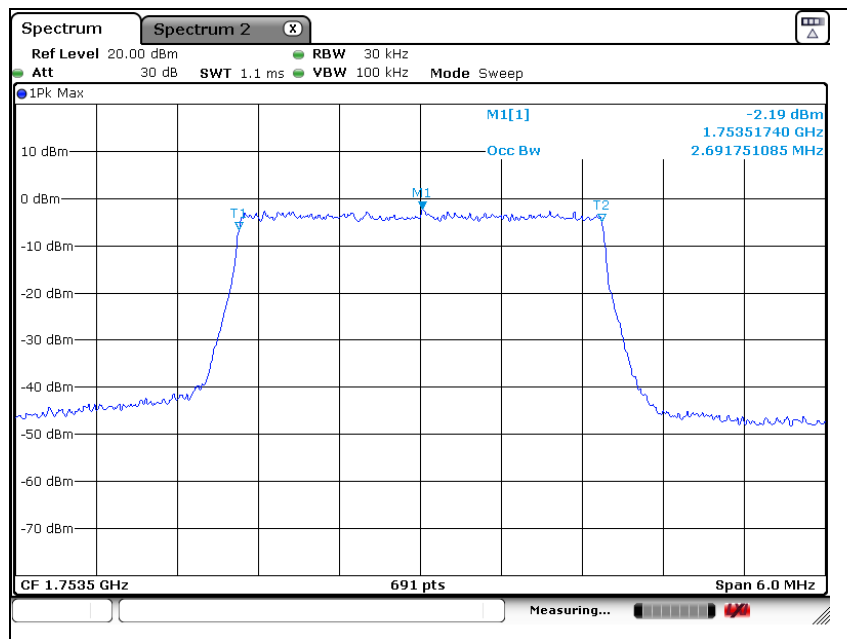


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Middle Channel



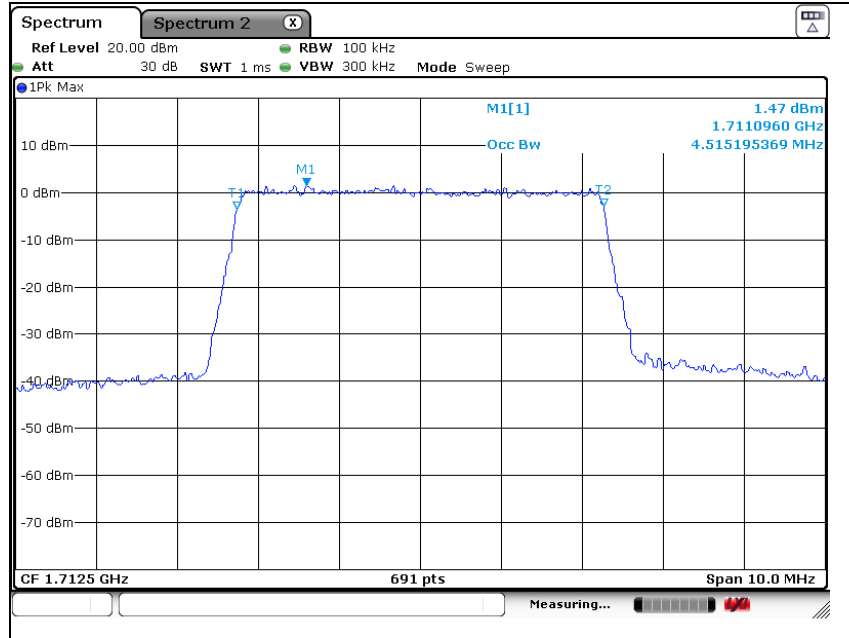
High Channel



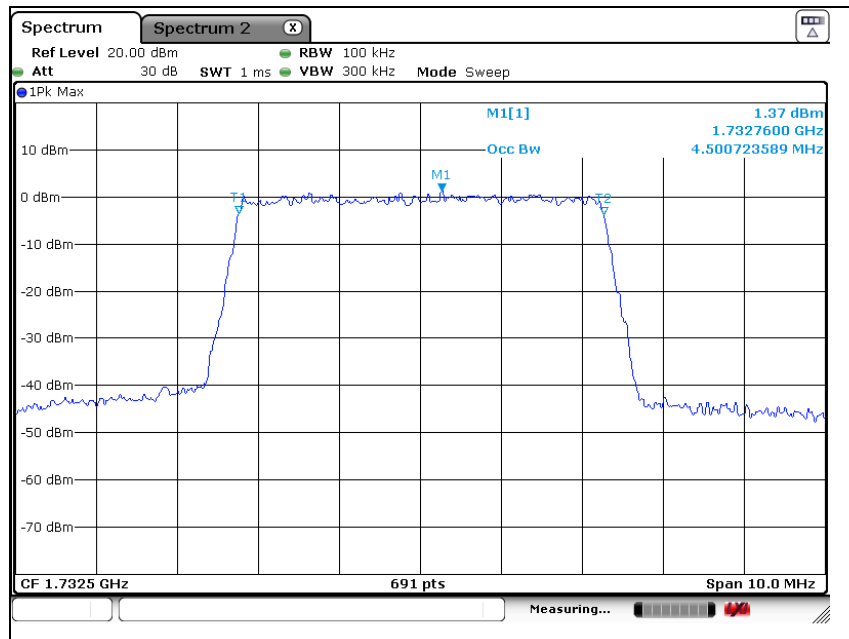
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LTE band 4 (5 MHz - QPSK)

Low Channel

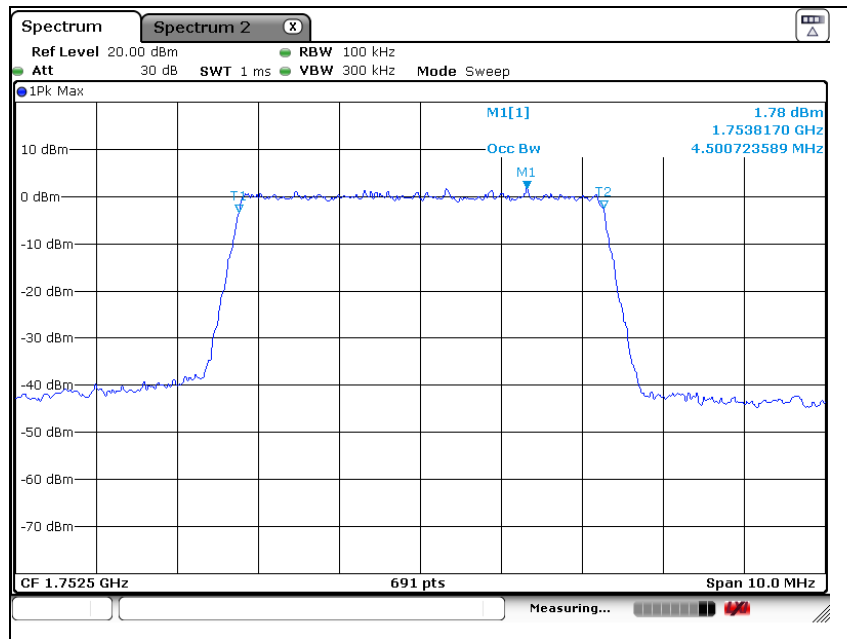


Middle Channel



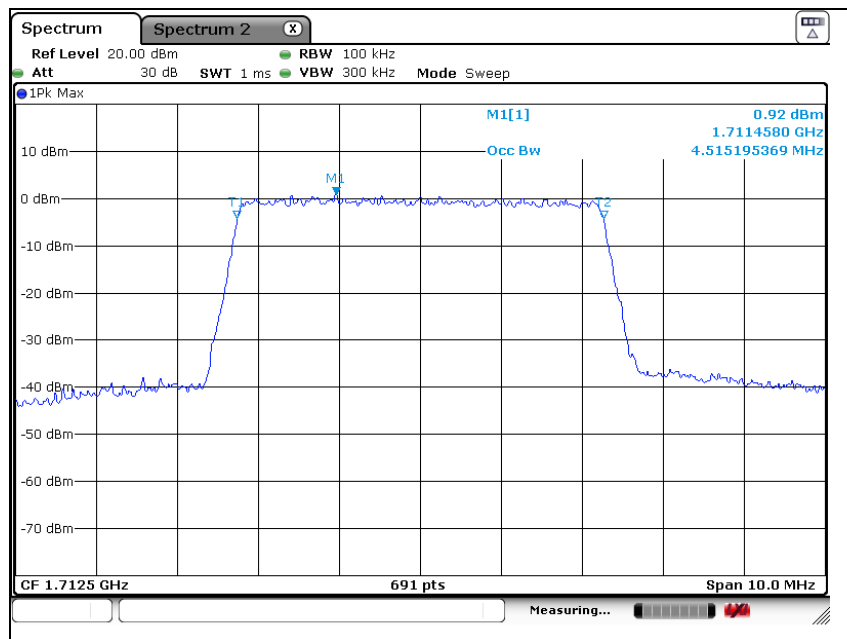
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High Channel



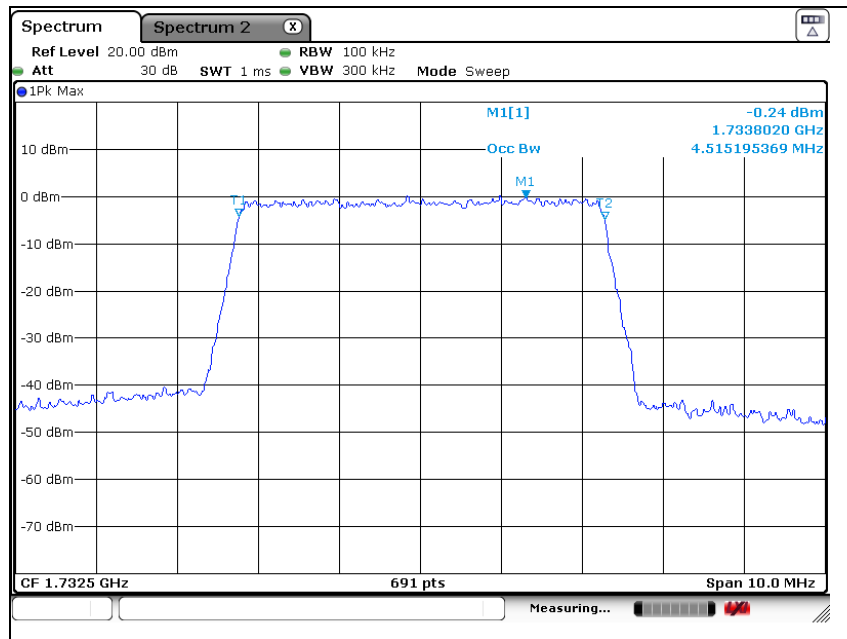
LTE band 4 (5 MHz - 16QAM)

Low Channel

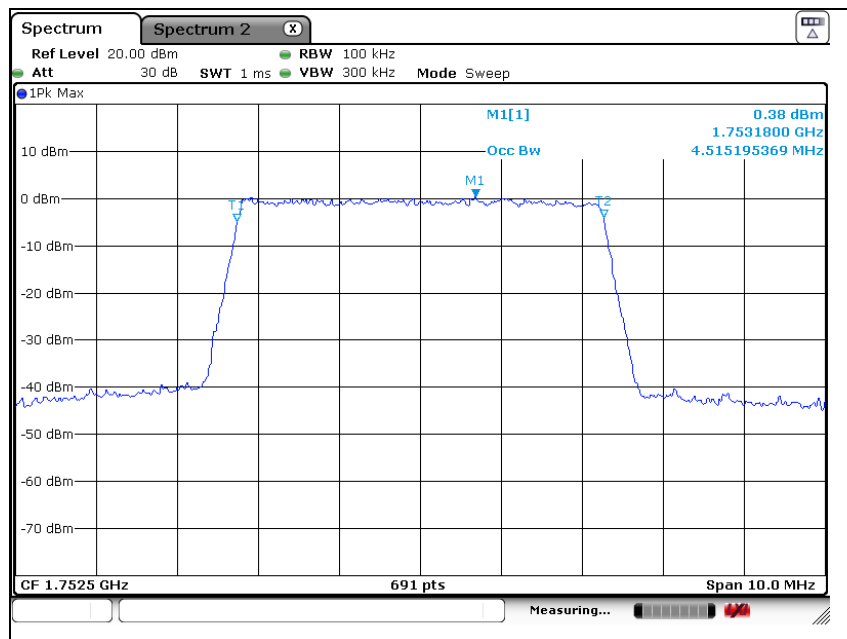


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Middle Channel



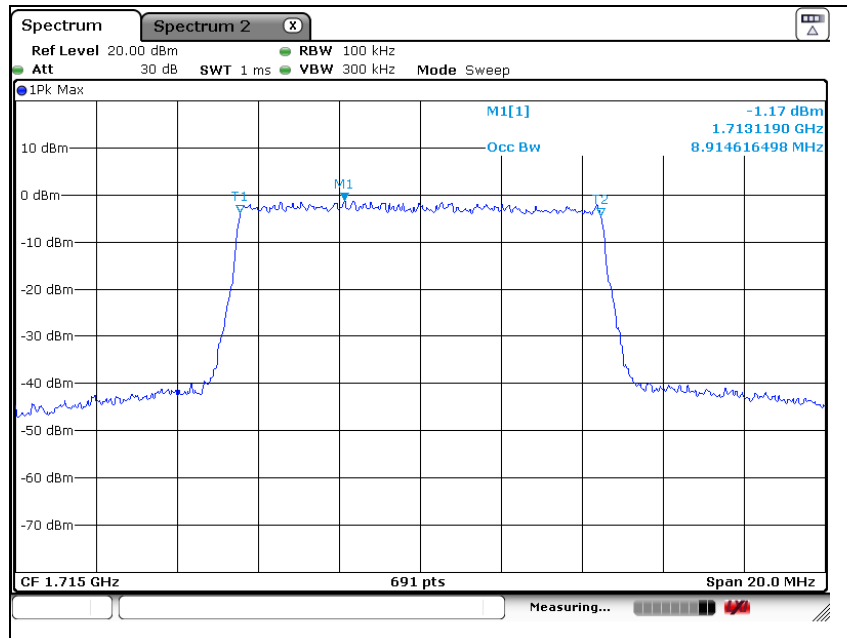
High Channel



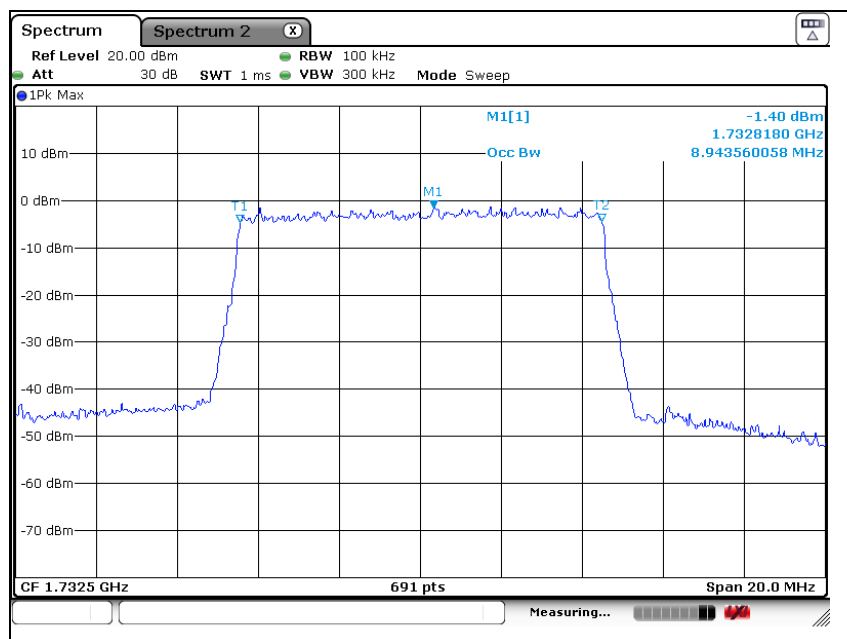
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LTE band 4 (10 MHz - QPSK)

Low Channel

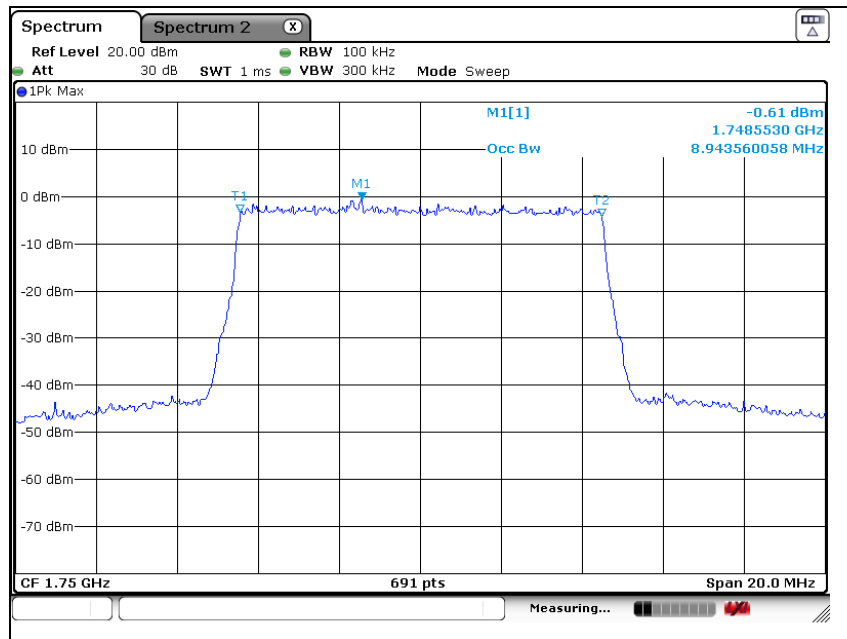


Middle Channel



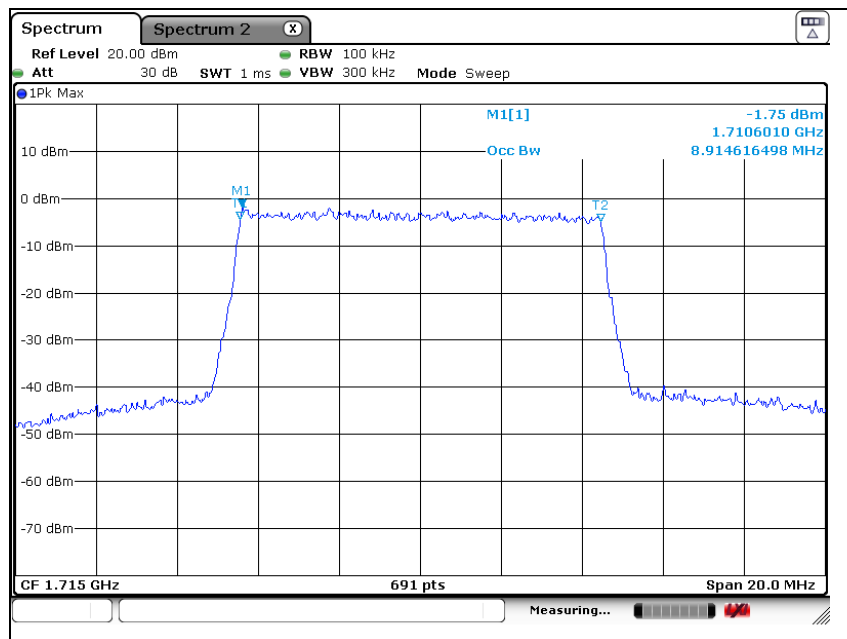
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High Channel



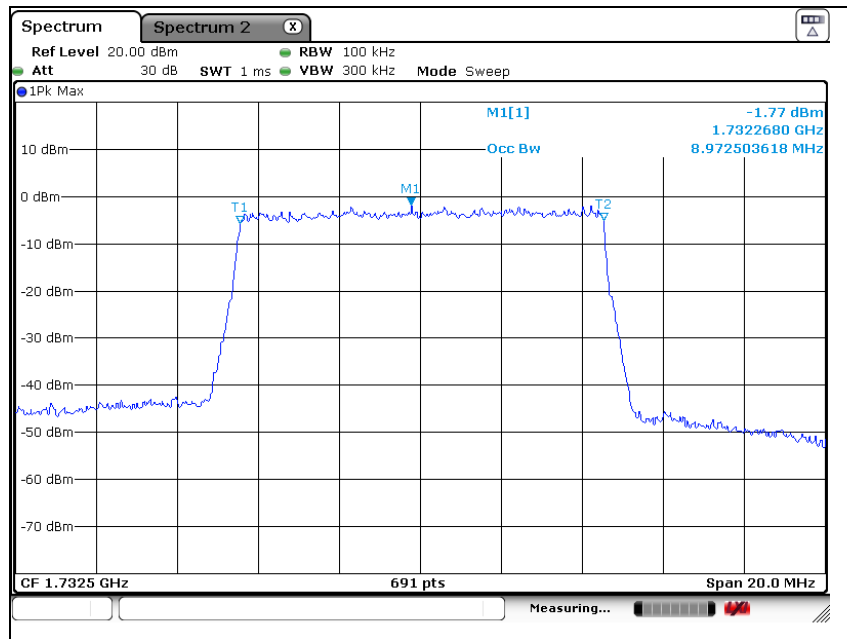
LTE band 4 (10 MHz - 16QAM)

Low Channel

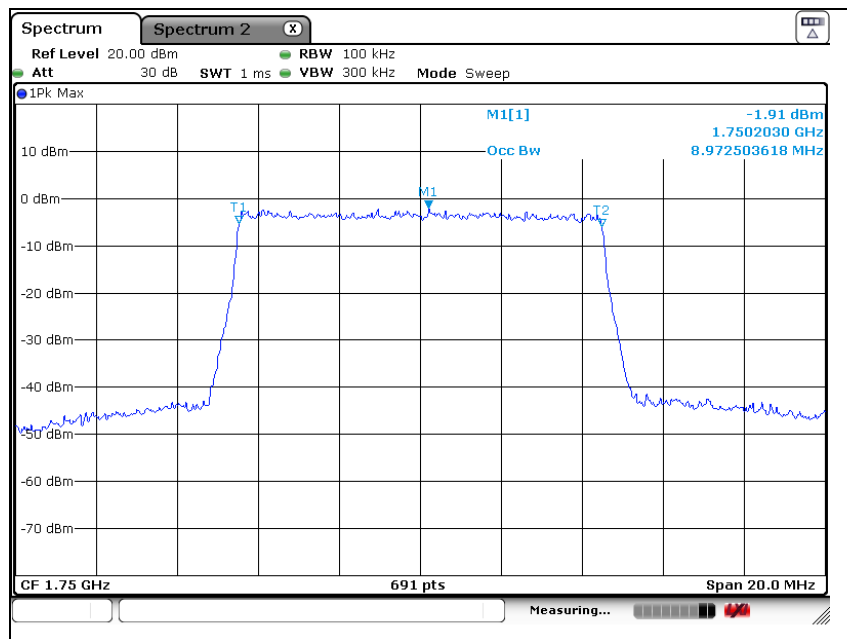


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Middle Channel



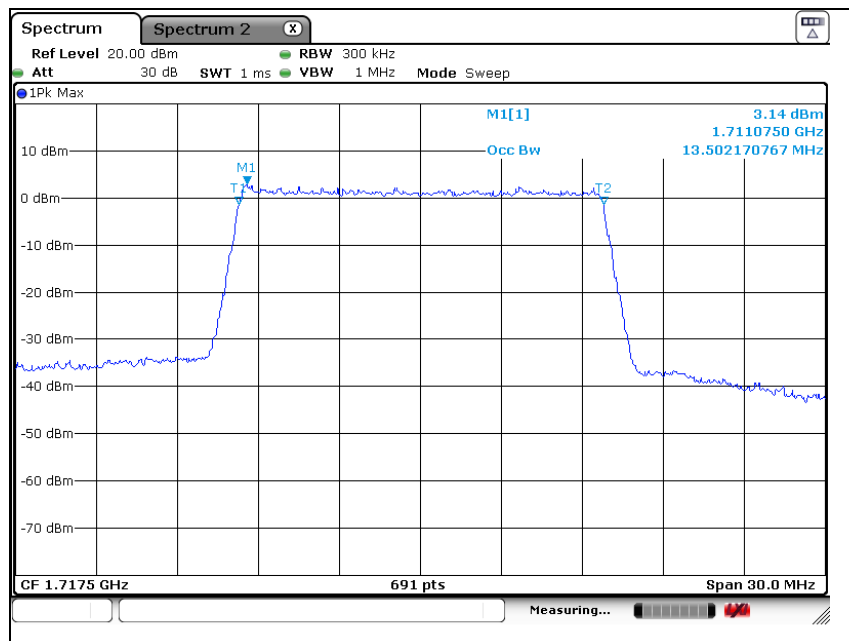
High Channel



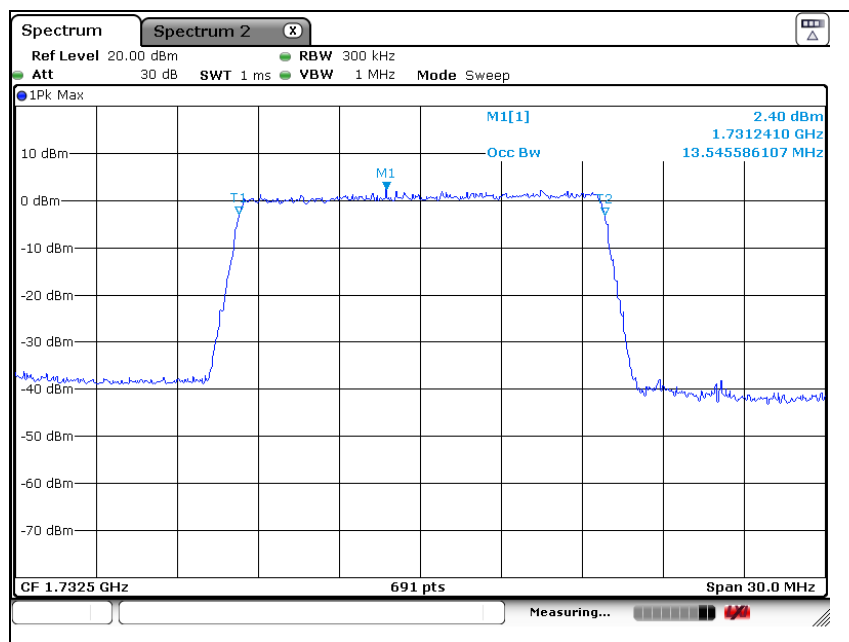
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LTE band 4 (15 MHz - QPSK)

Low Channel

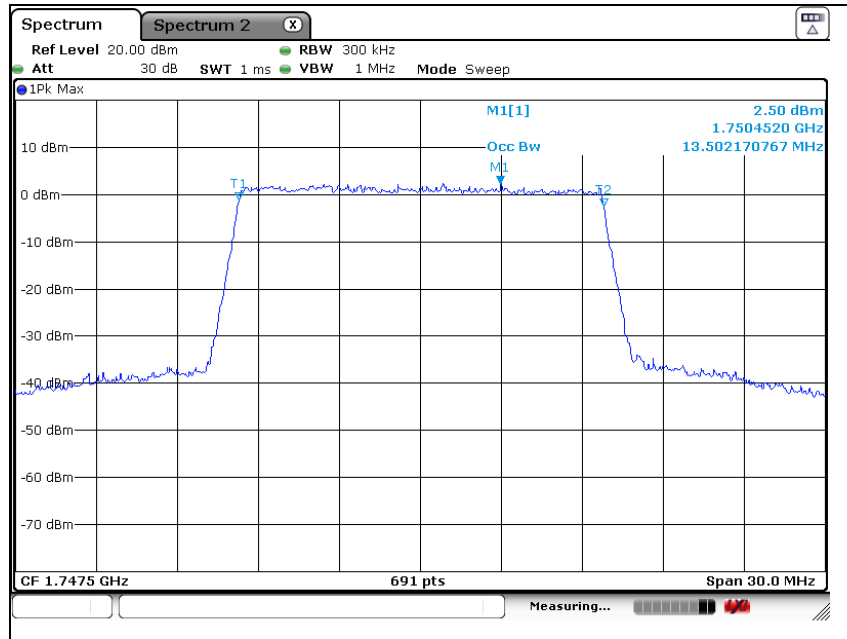


Middle Channel



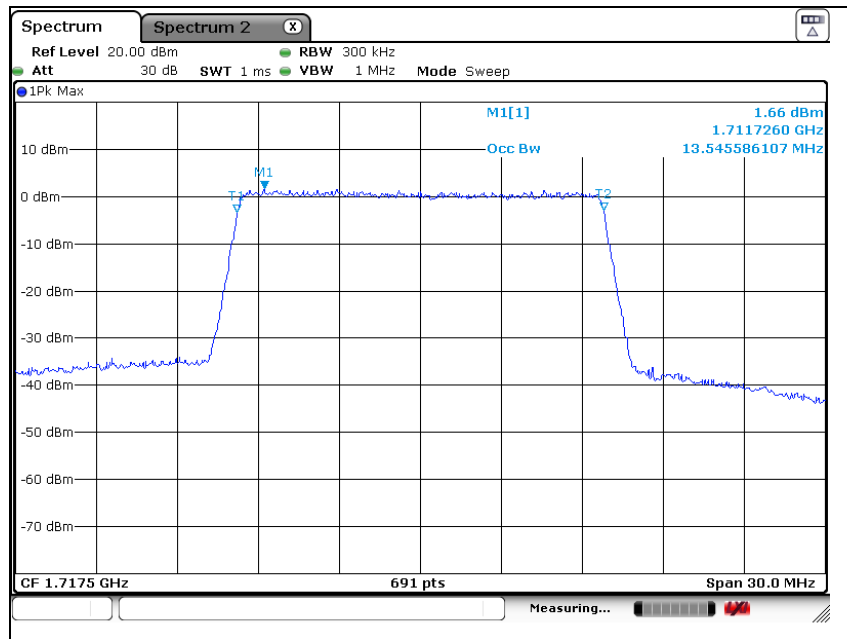
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High Channel



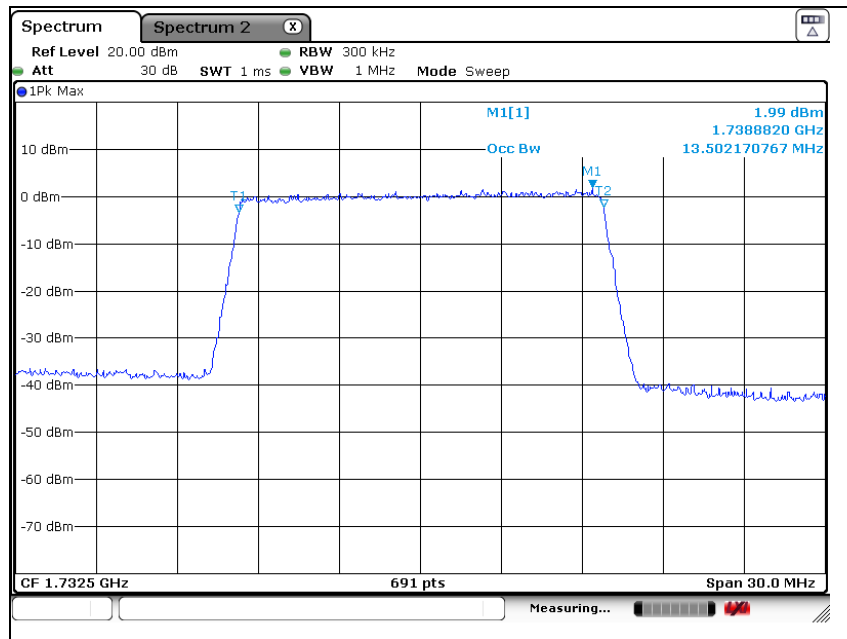
LTE band 4 (15 MHz - 16QAM)

Low Channel

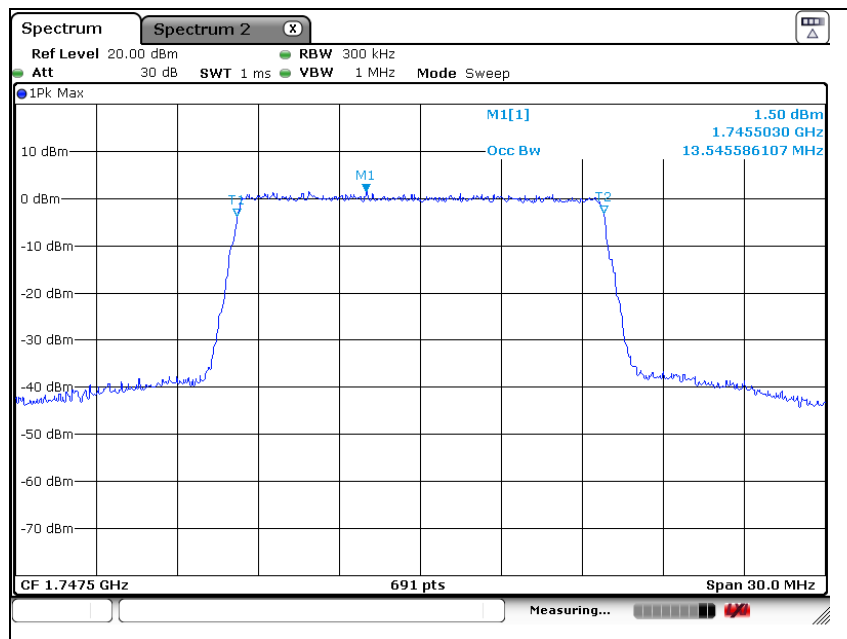


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Middle Channel



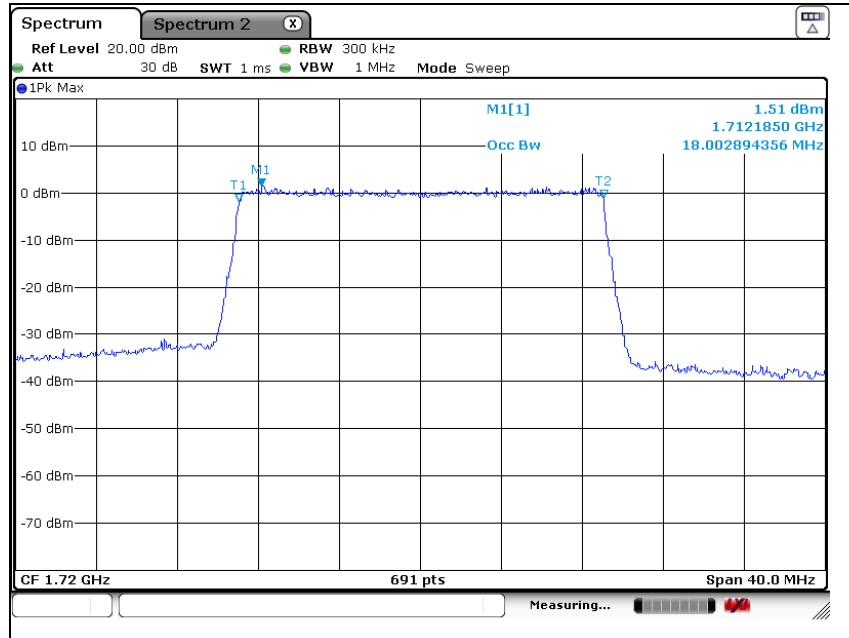
High Channel



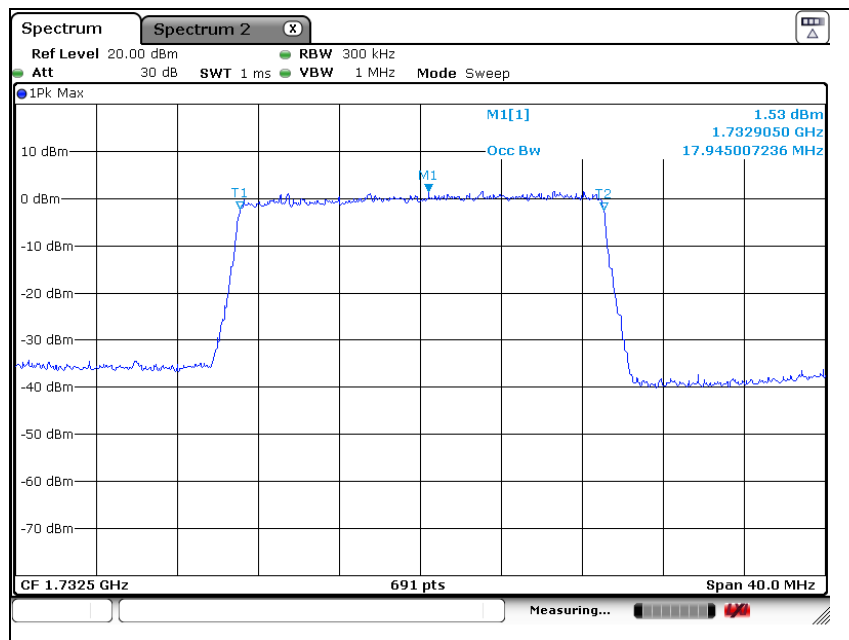
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LTE band 4 (20 MHz - QPSK)

Low Channel

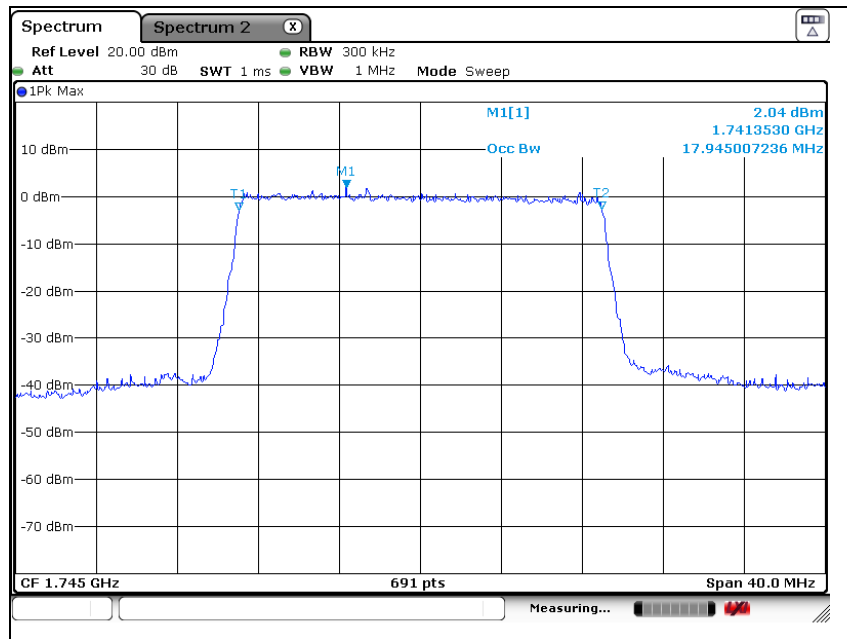


Middle Channel



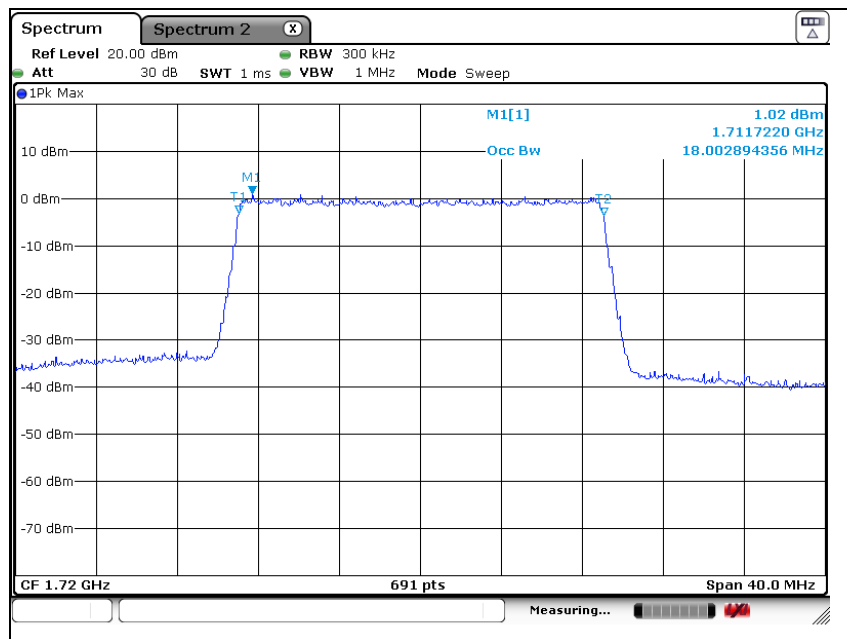
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High Channel



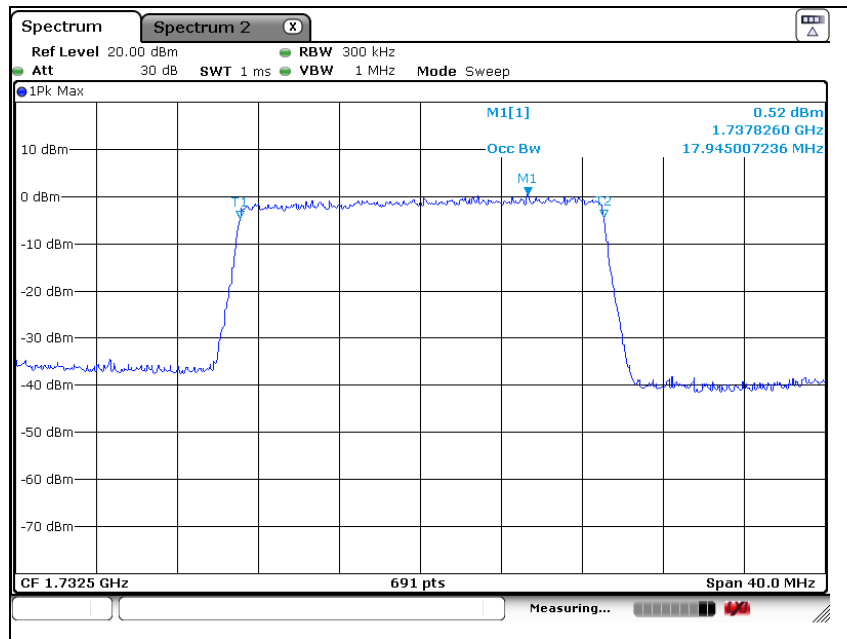
LTE band 4 (20 MHz - 16QAM)

Low Channel

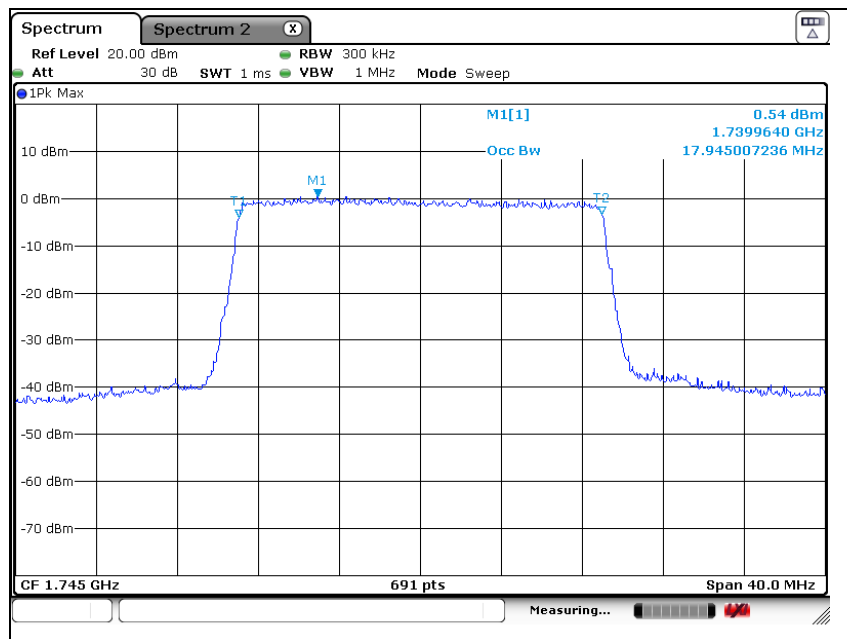


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Middle Channel



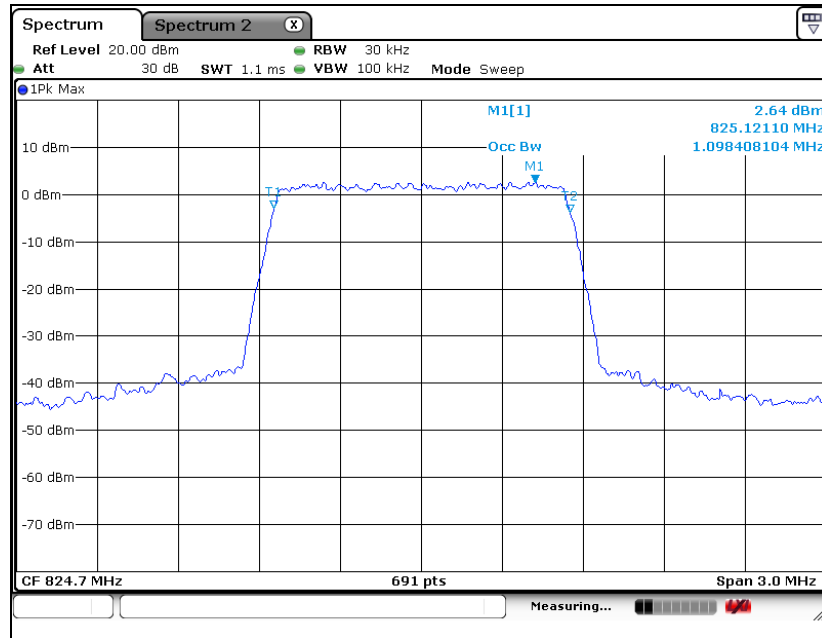
High Channel



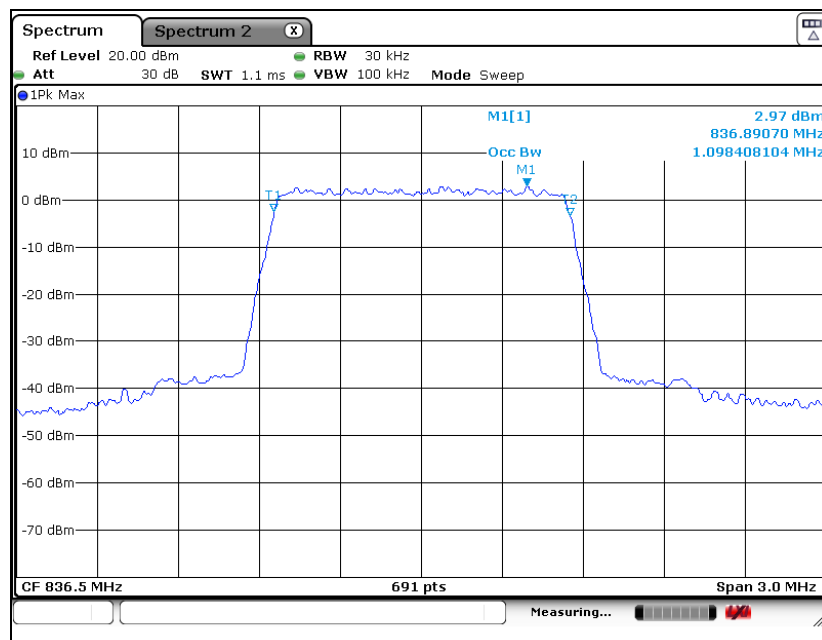
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LTE band 5 (1.4 MHz - QPSK)

Low Channel

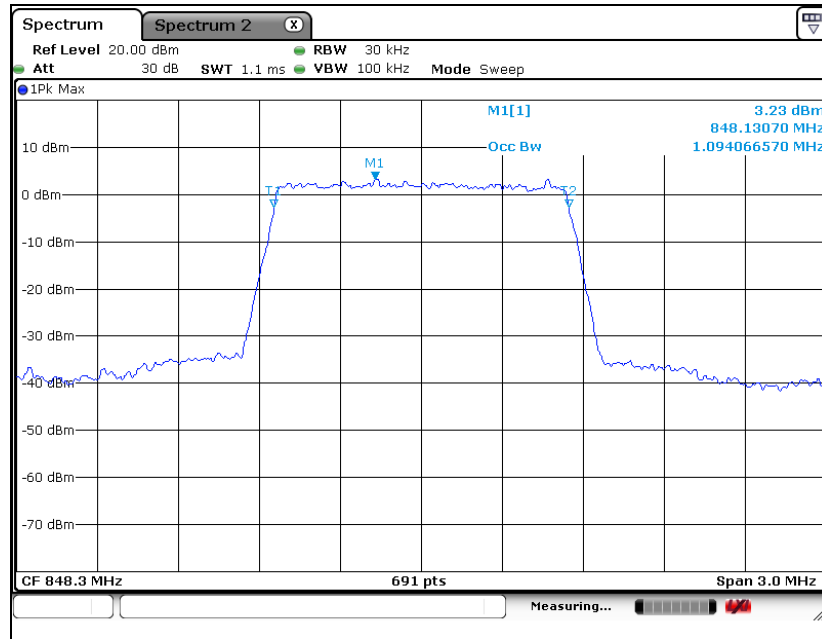


Middle Channel



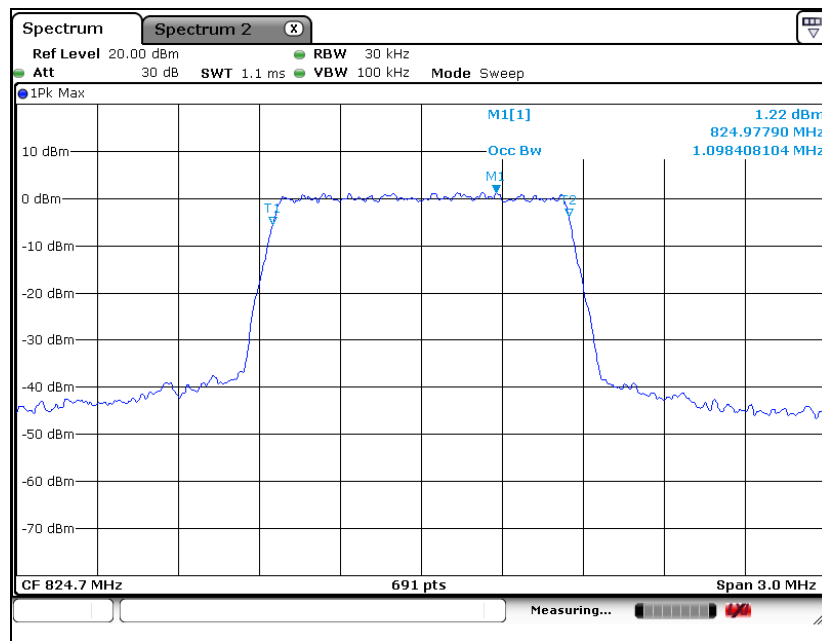
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High Channel



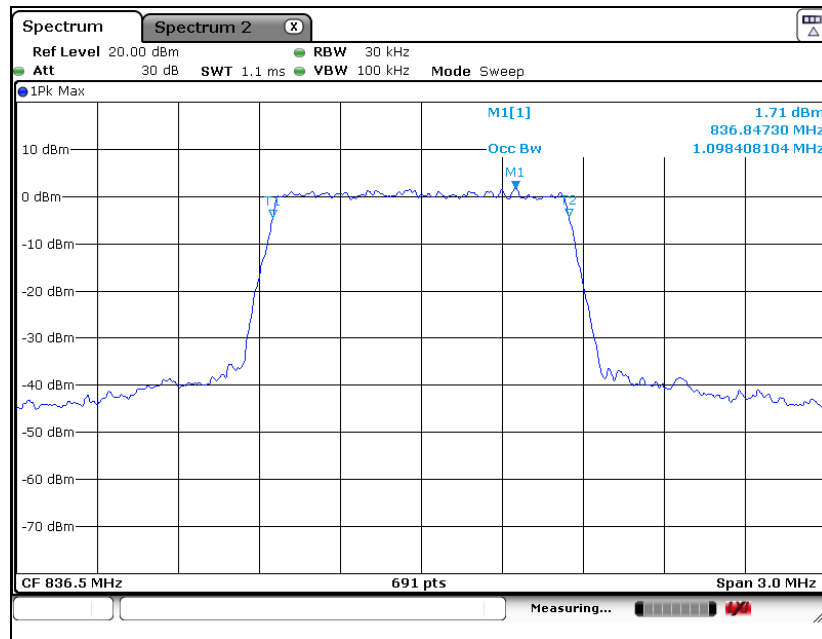
LTE band 5 (1.4 MHz - 16QAM)

Low Channel

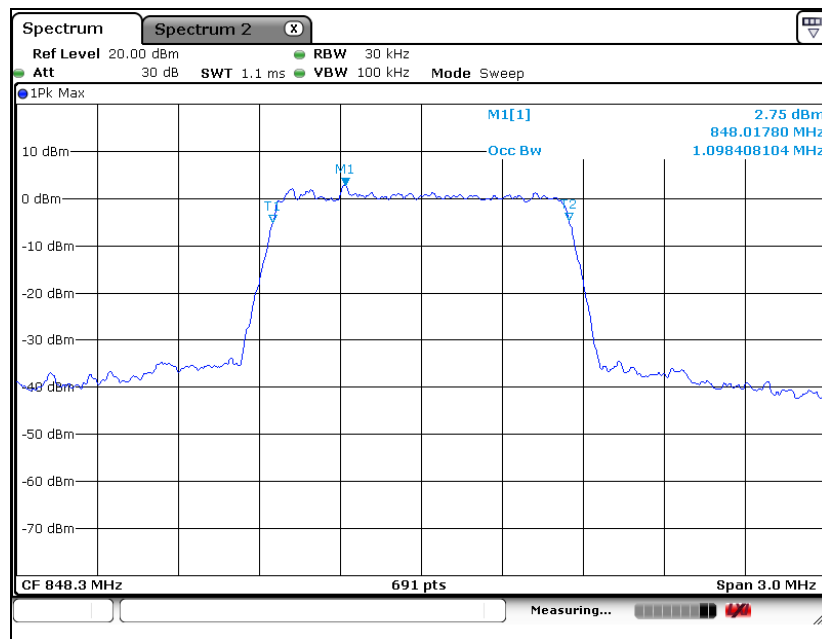


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Middle Channel



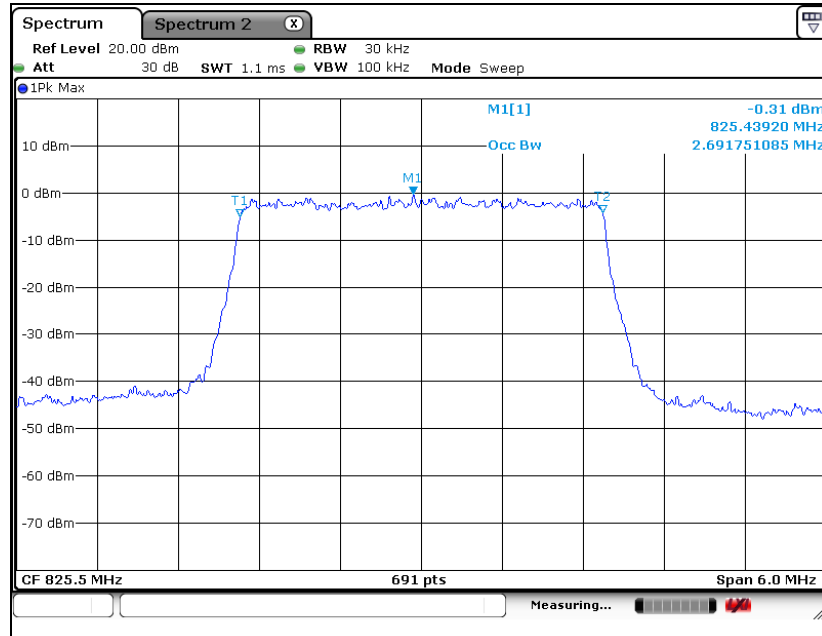
High Channel



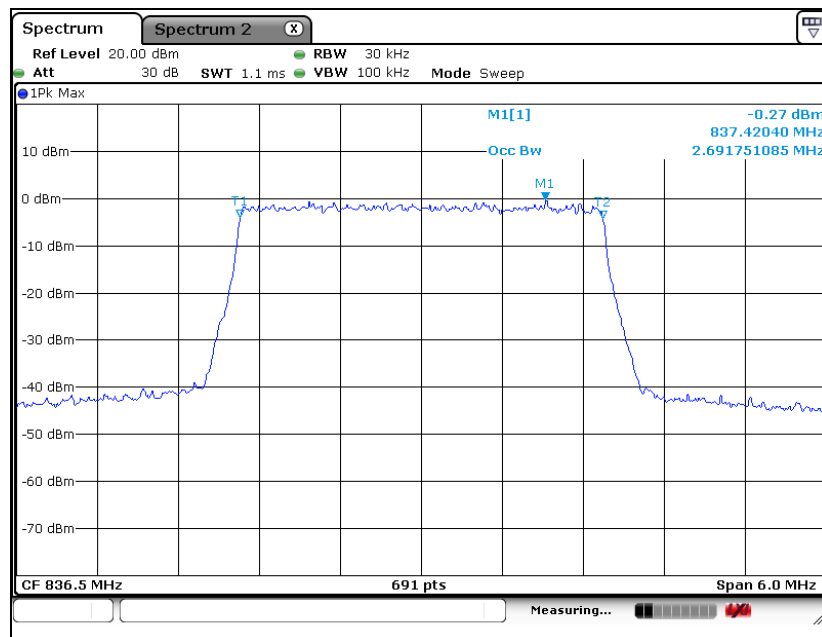
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LTE band 5 (3 MHz - QPSK)

Low Channel

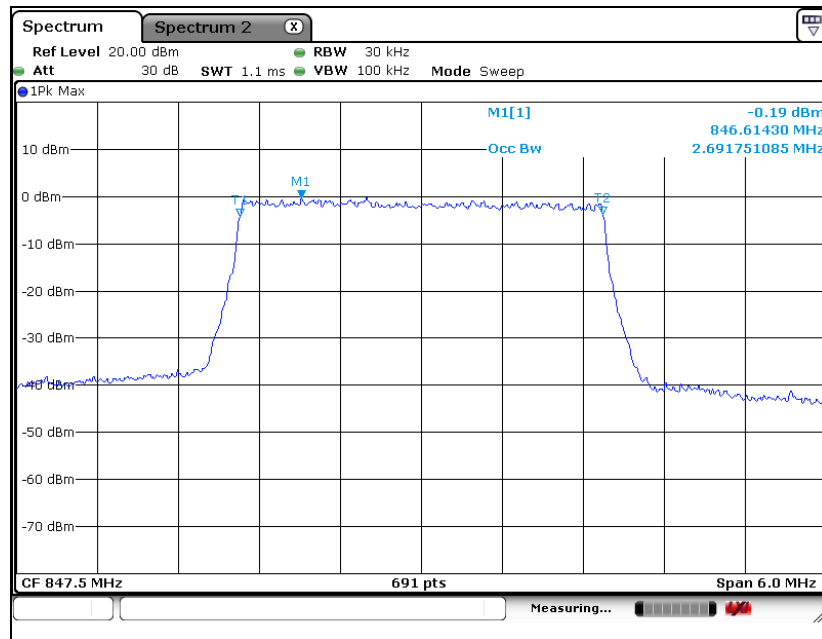


Middle Channel



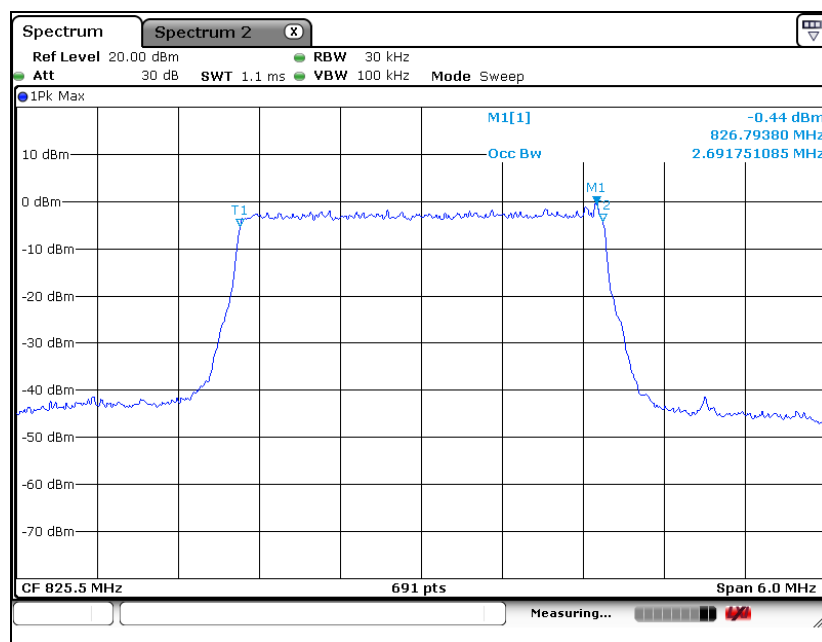
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High Channel



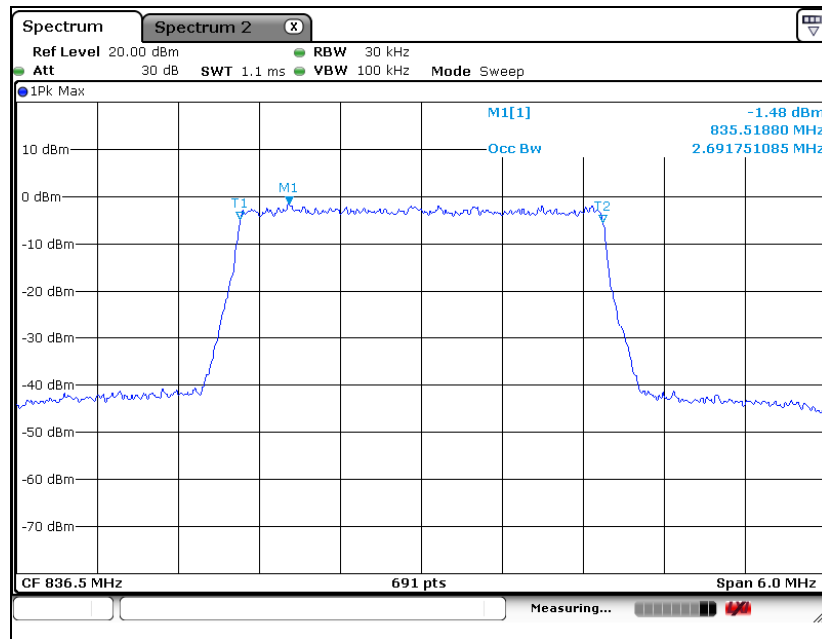
LTE band 5 (3 MHz - 16QAM)

Low Channel

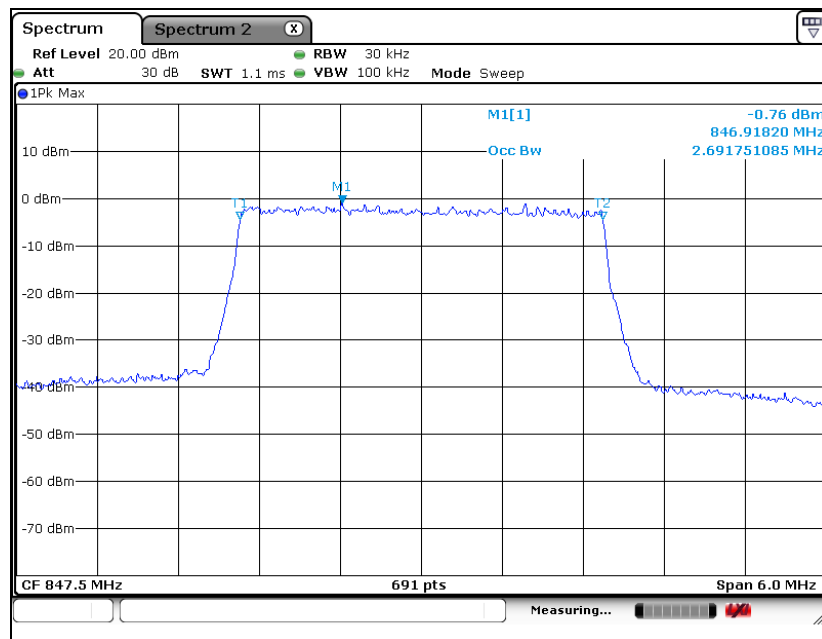


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Middle Channel



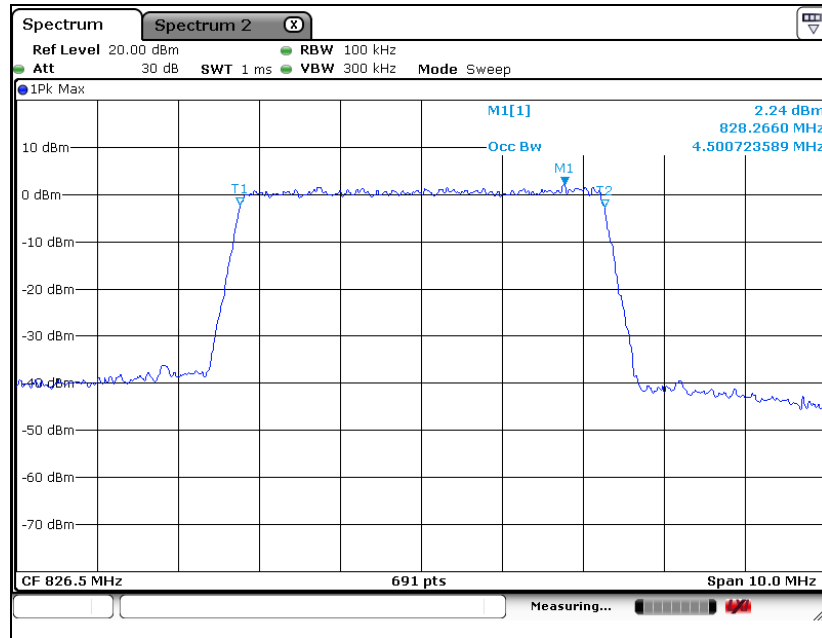
High Channel



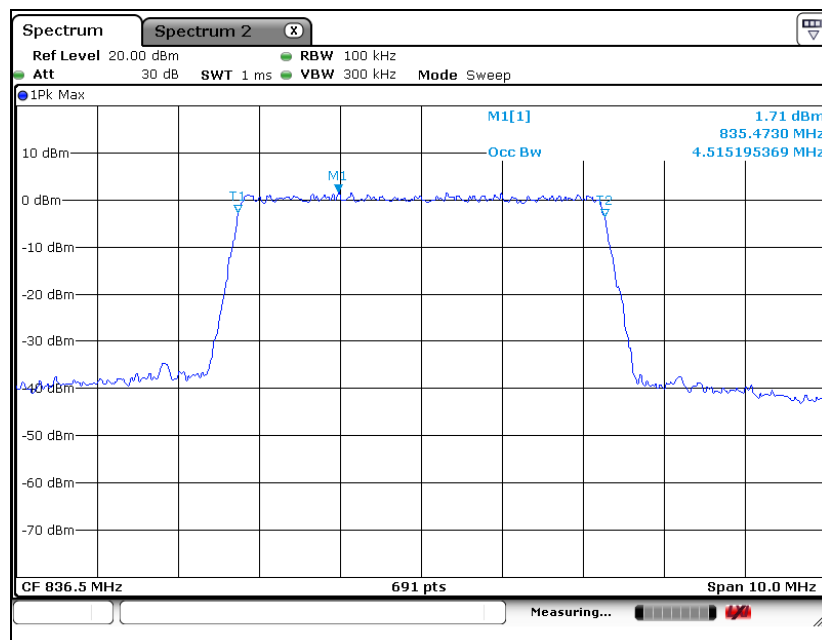
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LTE band 5 (5 MHz - QPSK)

Low Channel

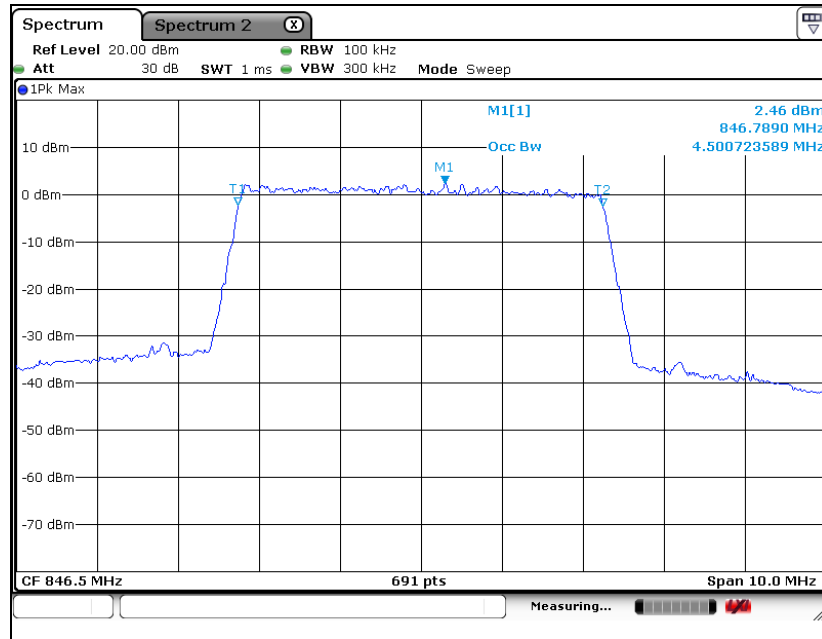


Middle Channel



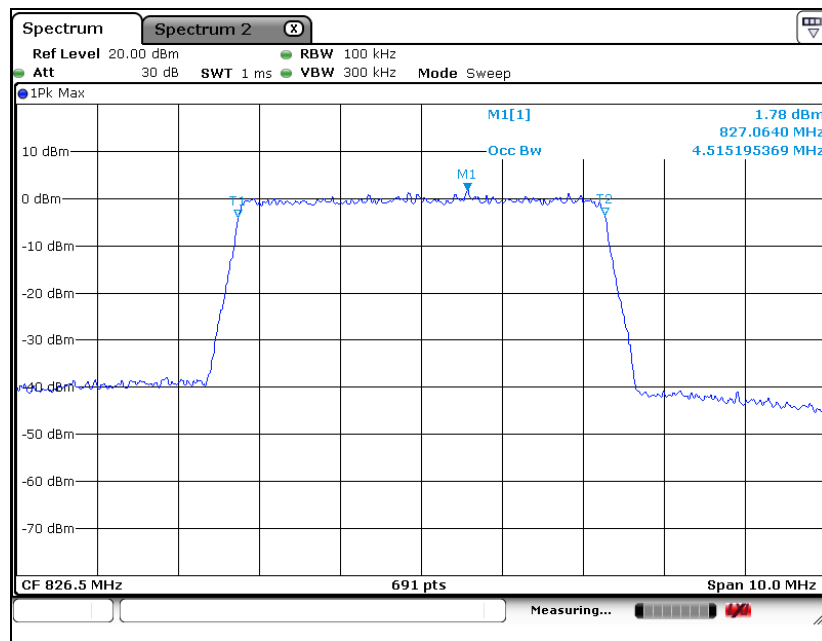
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High Channel



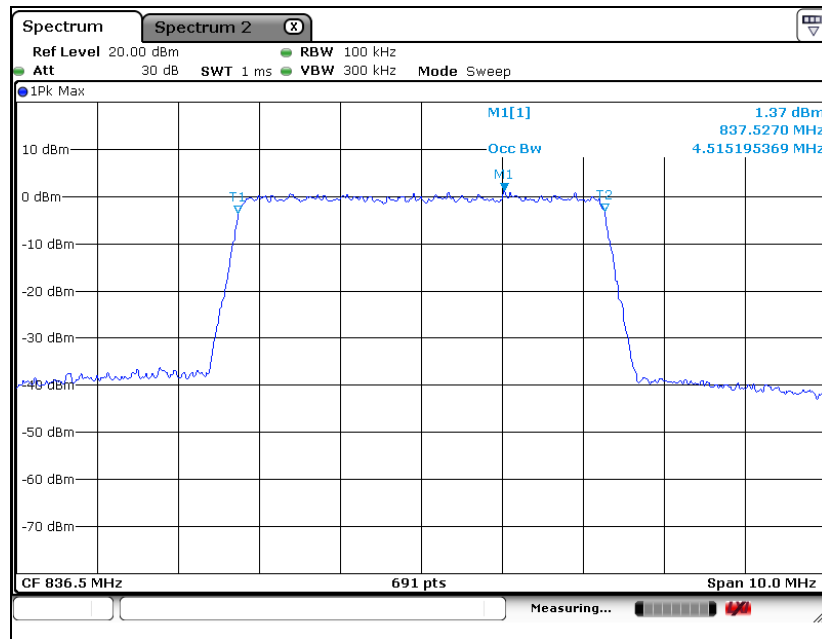
LTE band 5 (5 MHz - 16QAM)

Low Channel

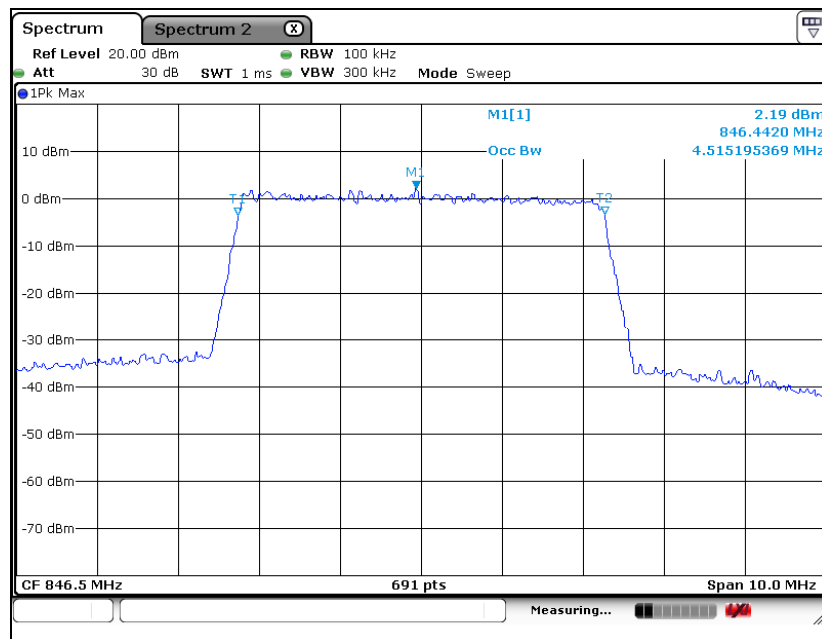


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Middle Channel



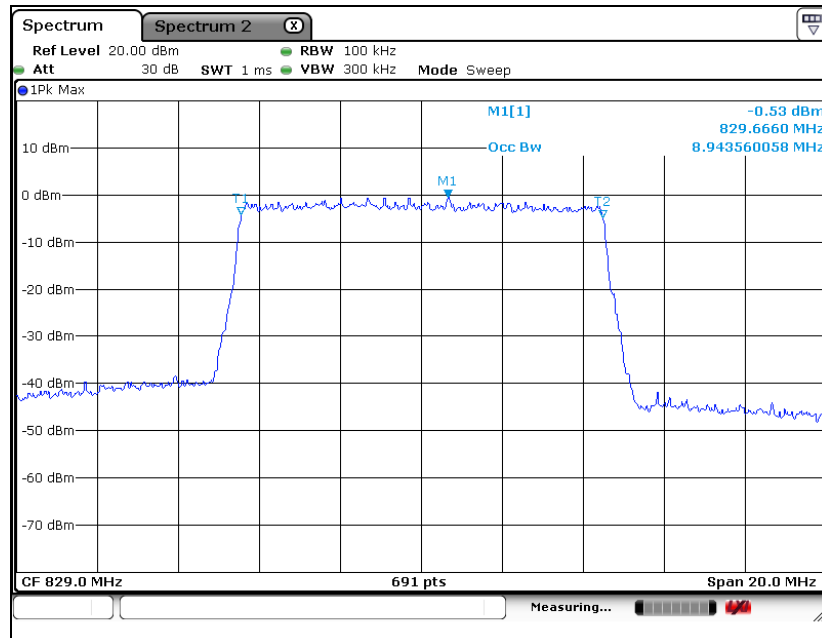
High Channel



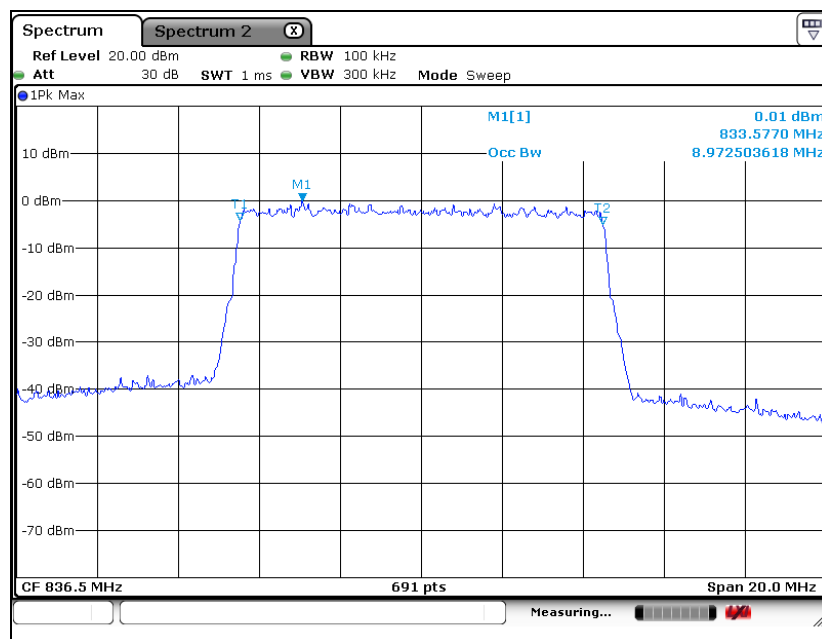
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LTE band 5 (10 MHz - QPSK)

Low Channel

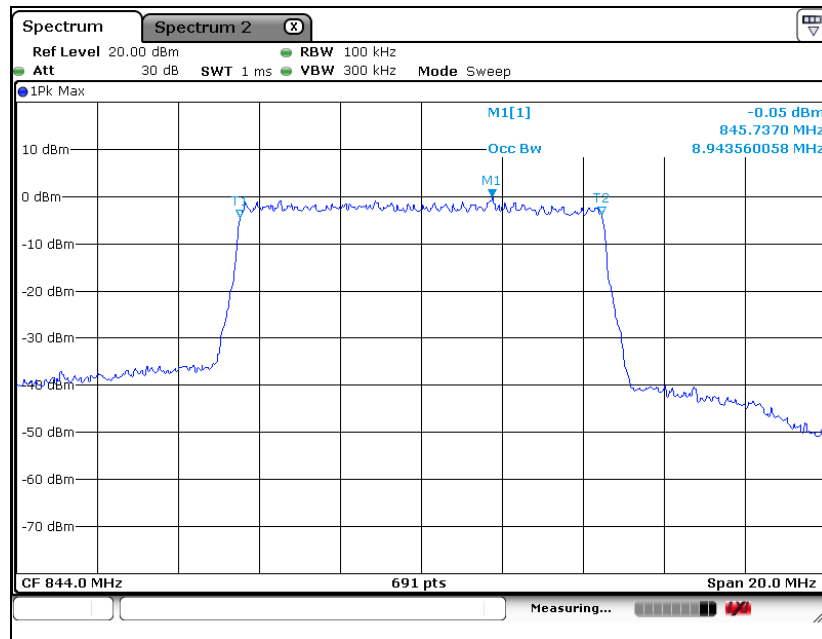


Middle Channel



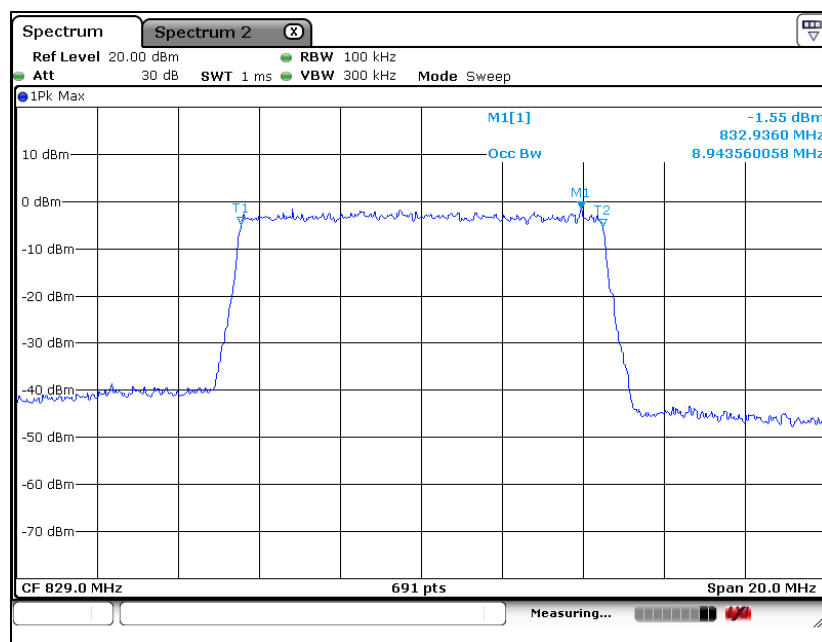
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High Channel



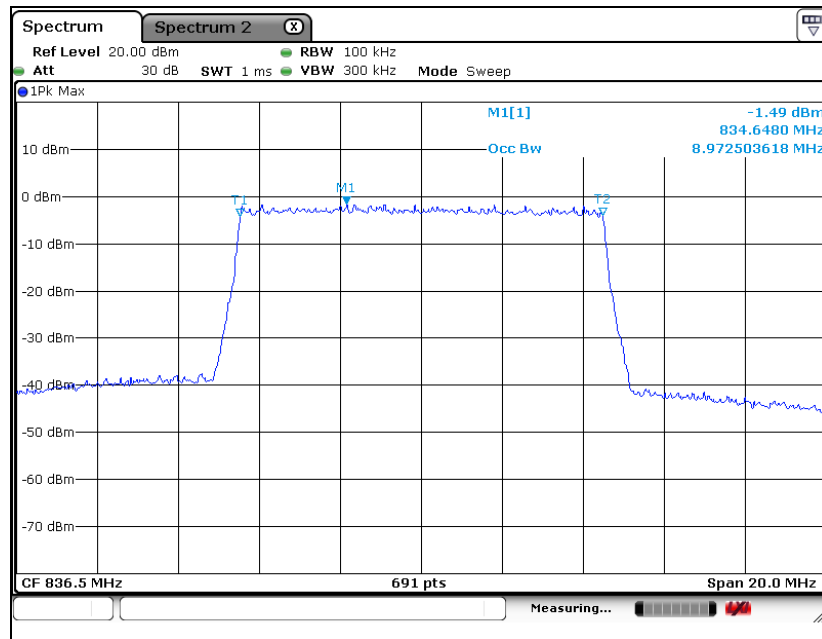
LTE band 5 (10 MHz - 16QAM)

Low Channel

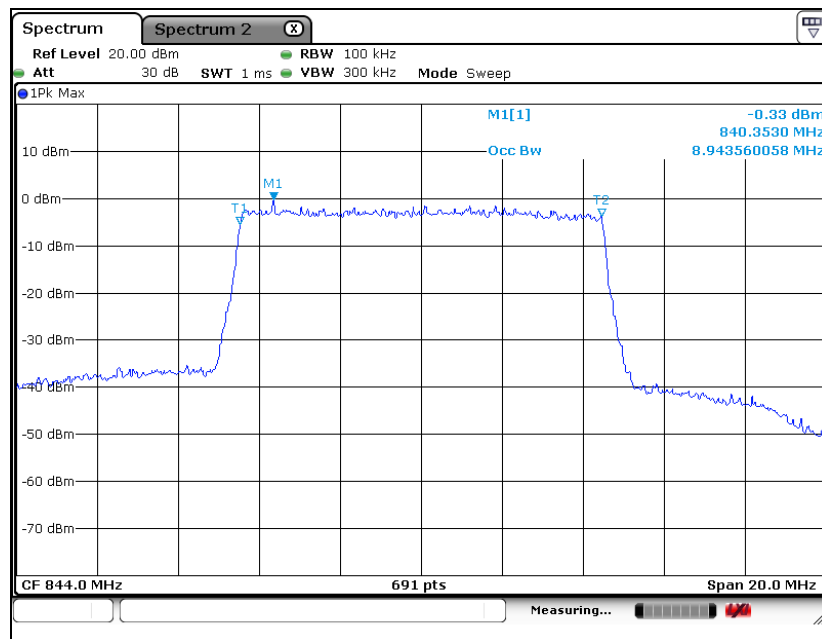


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Middle Channel



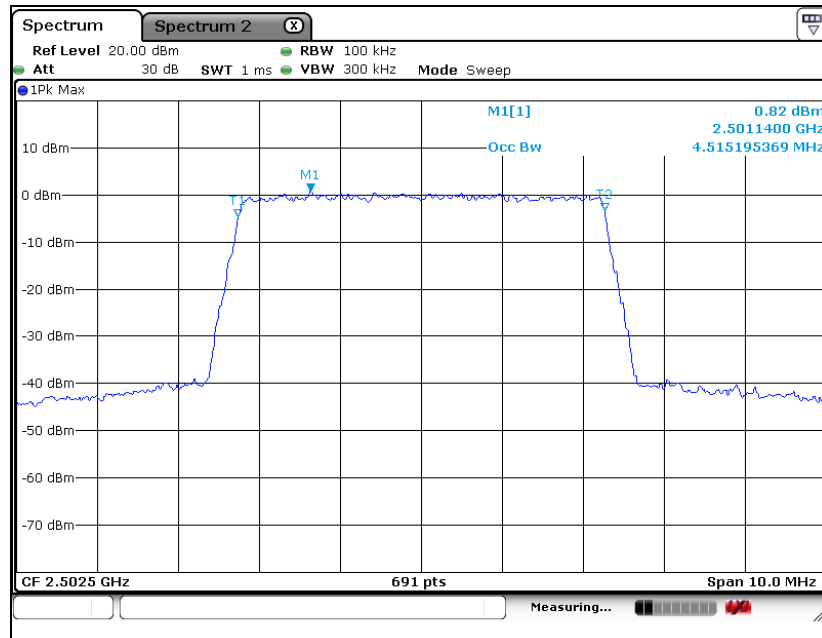
High Channel



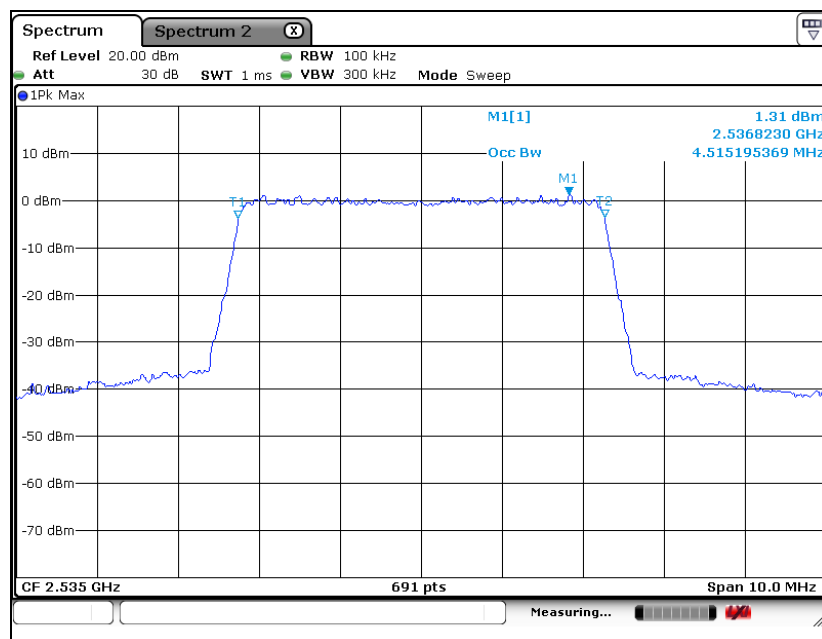
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LTE band 7 (5 MHz - QPSK)

Low Channel

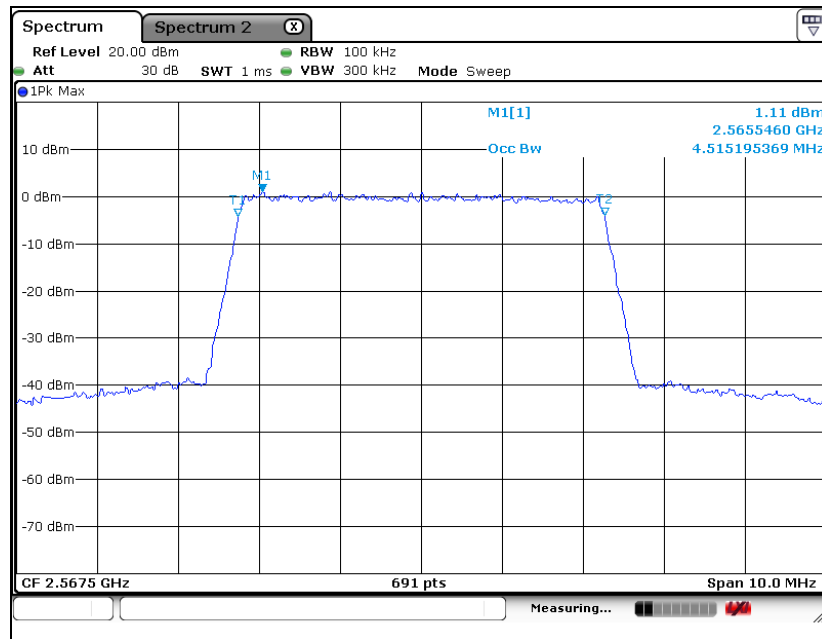


Middle Channel



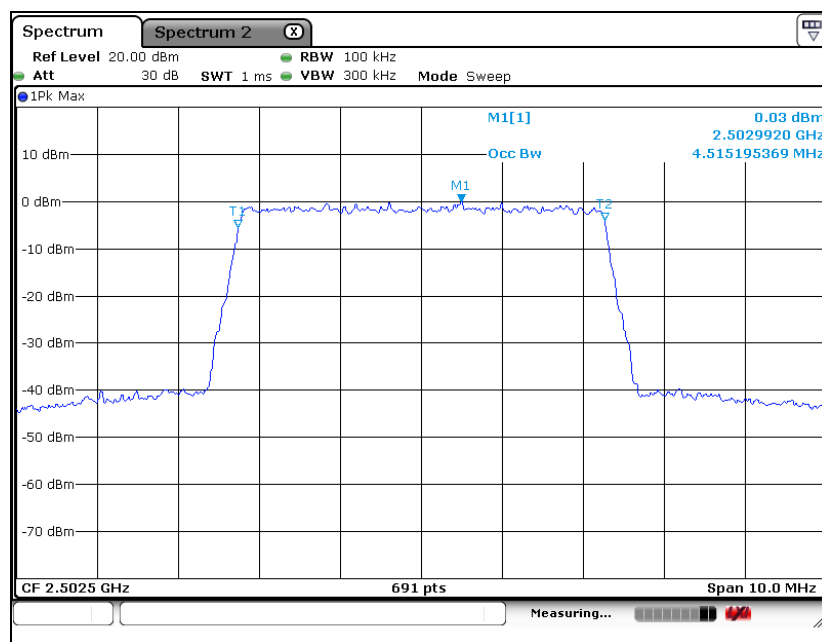
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High Channel



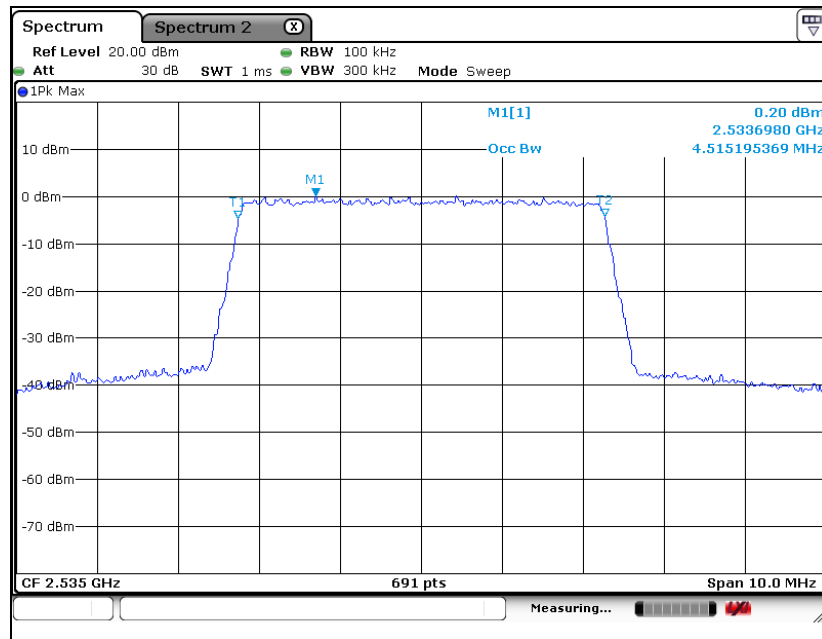
LTE band 7 (5 MHz - 16QAM)

Low Channel

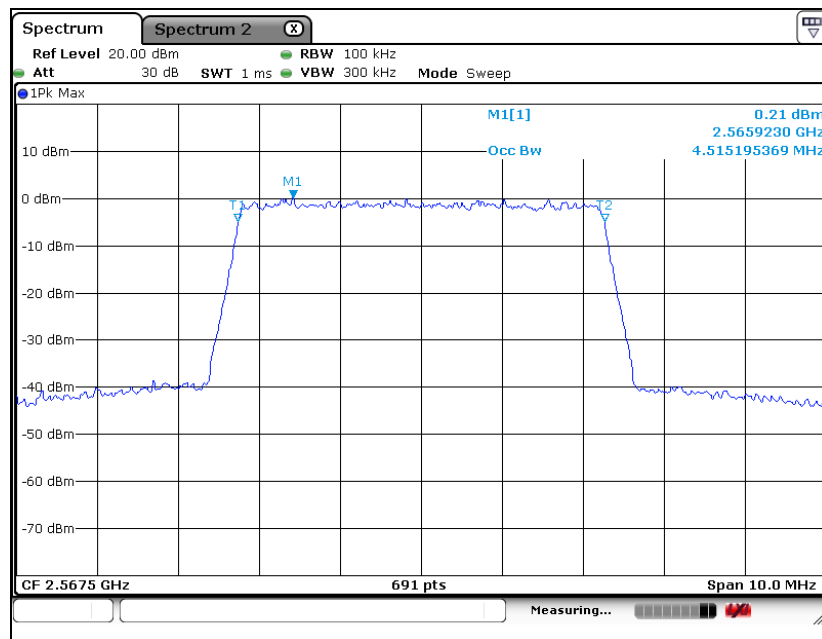


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Middle Channel



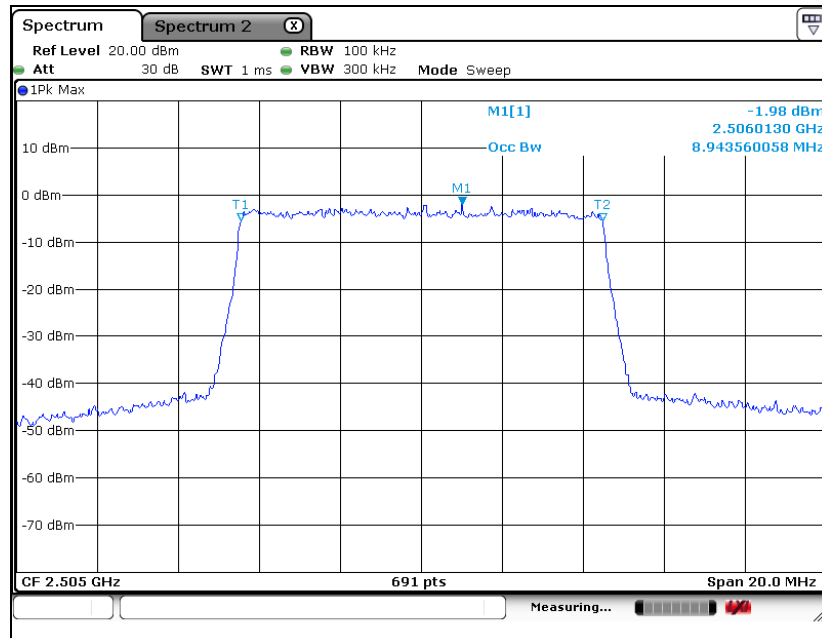
High Channel



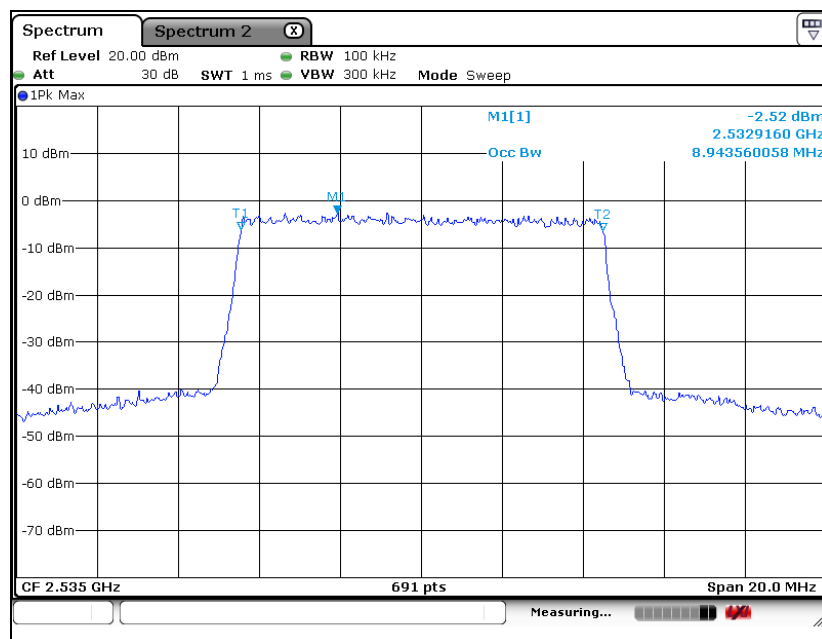
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LTE band 7 (10 MHz - QPSK)

Low Channel

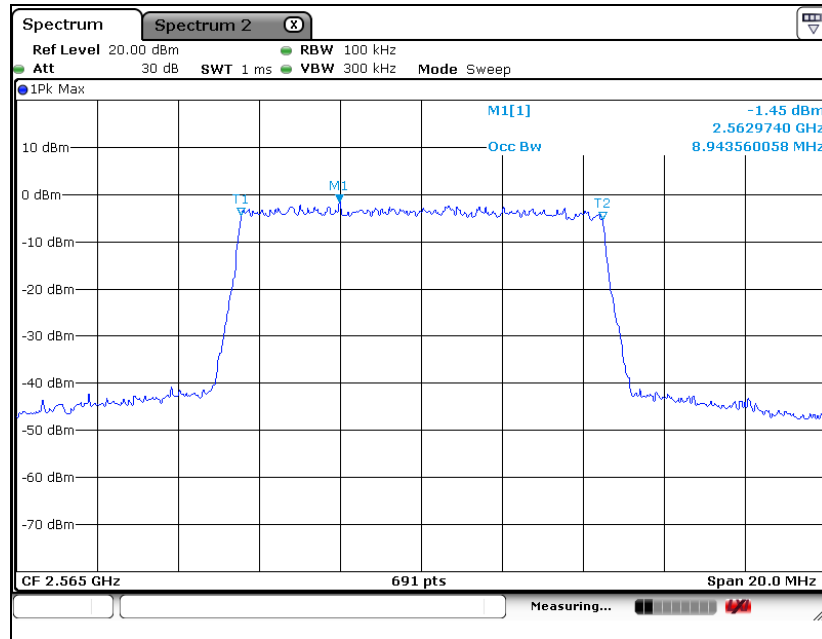


Middle Channel



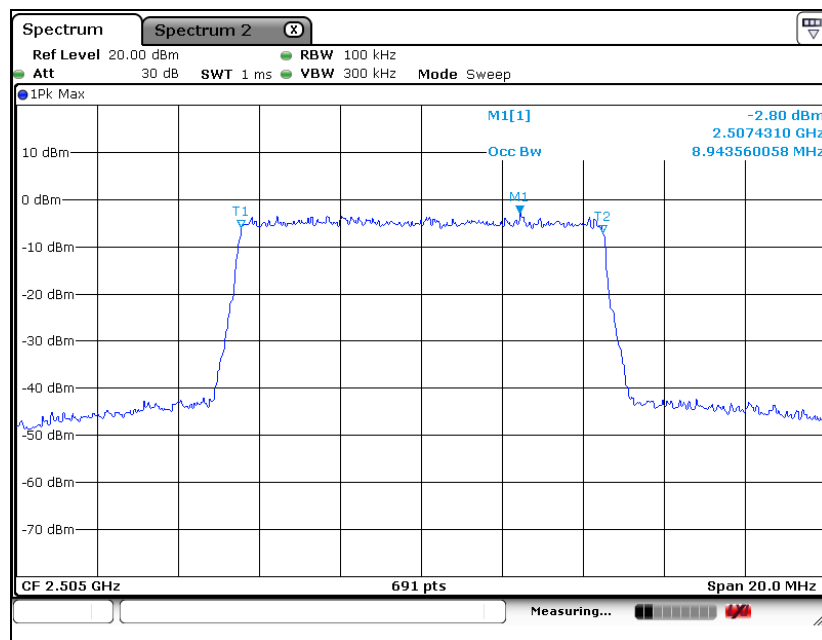
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High Channel



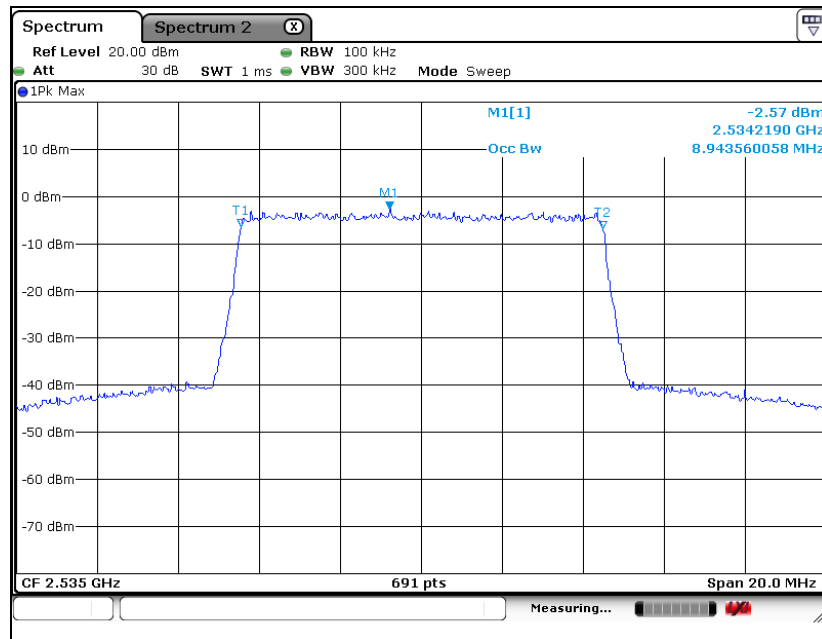
LTE band 7 (10 MHz - 16QAM)

Low Channel

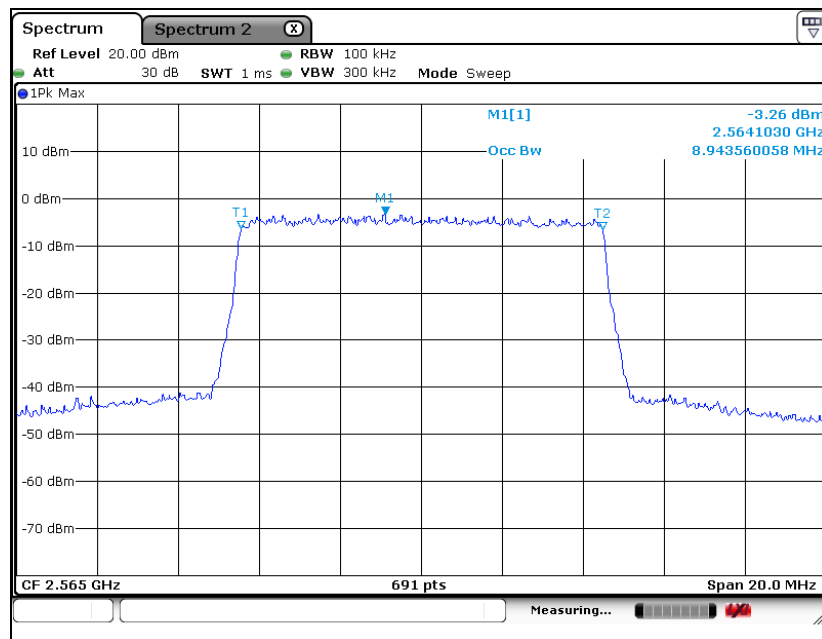


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Middle Channel



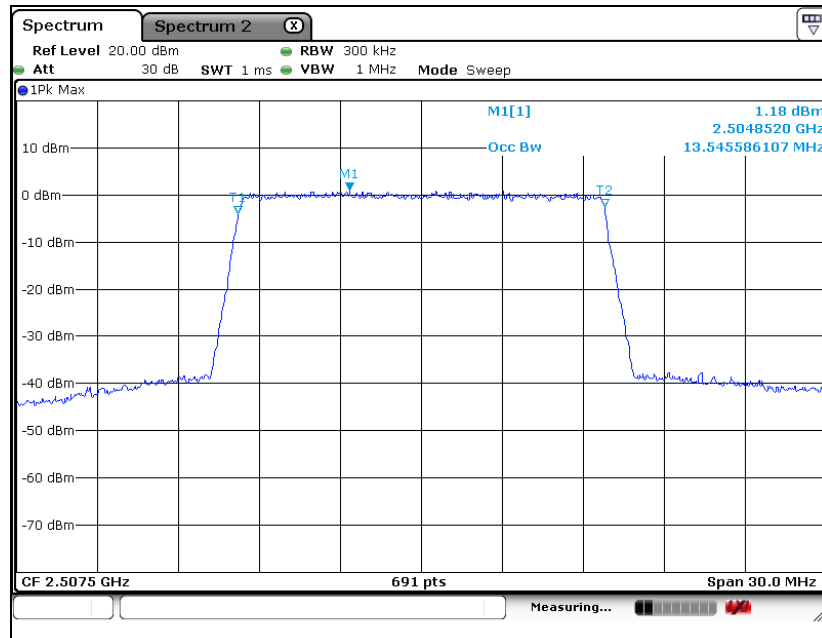
High Channel



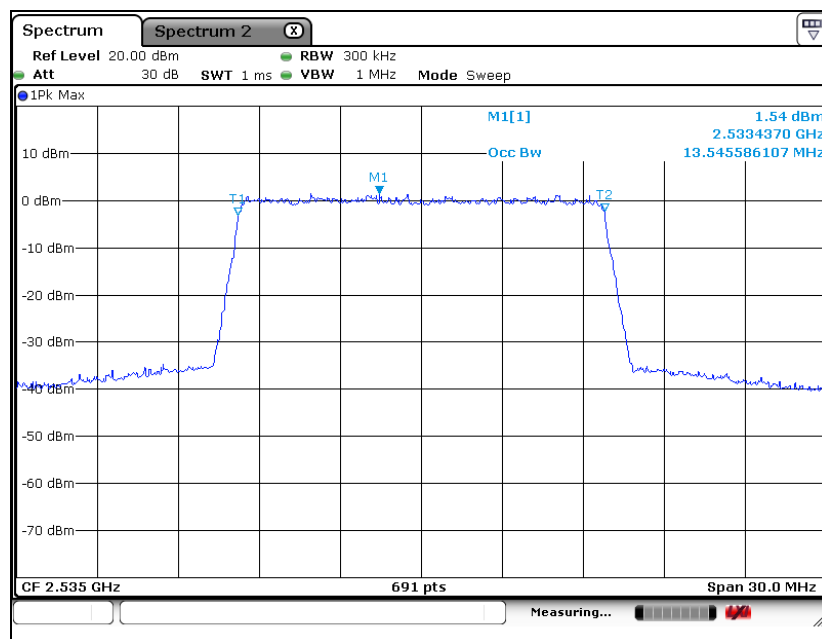
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LTE band 7 (15 MHz - QPSK)

Low Channel

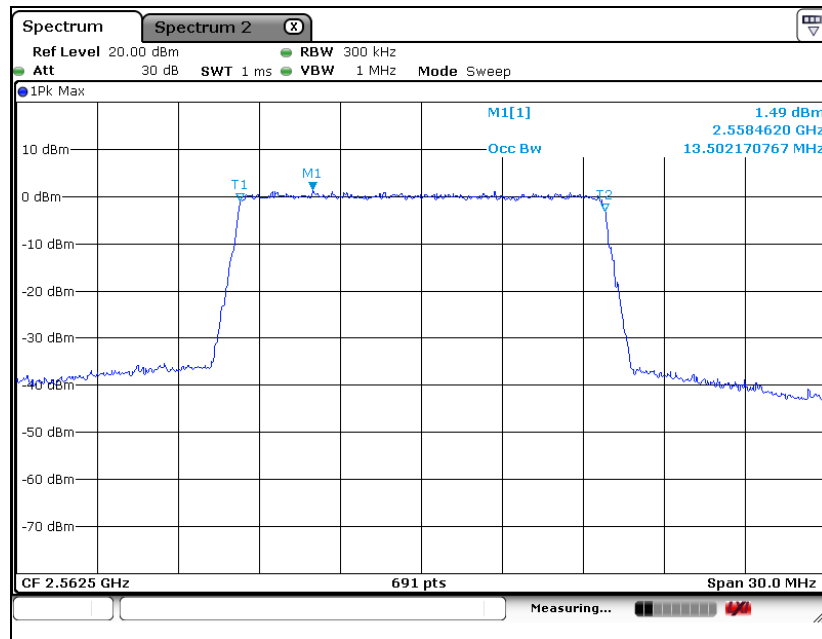


Middle Channel



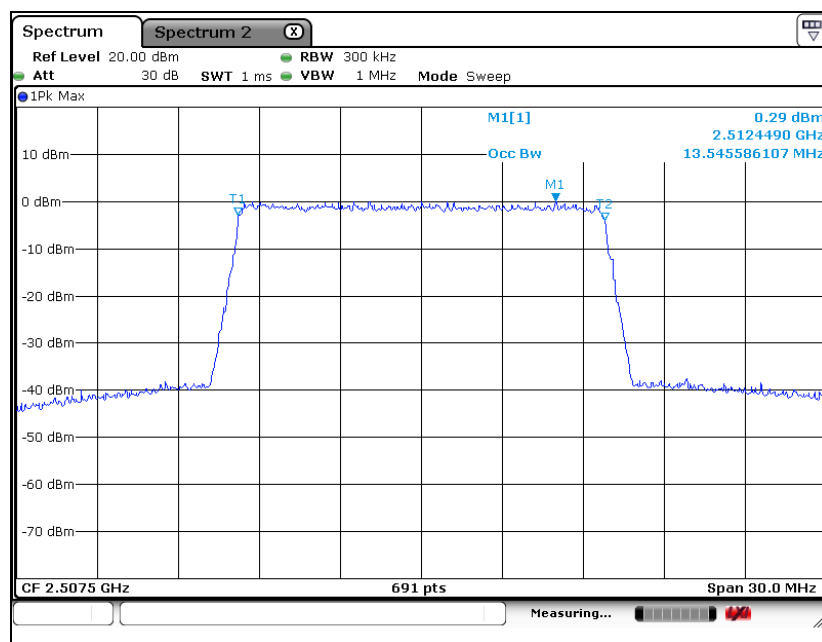
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High Channel



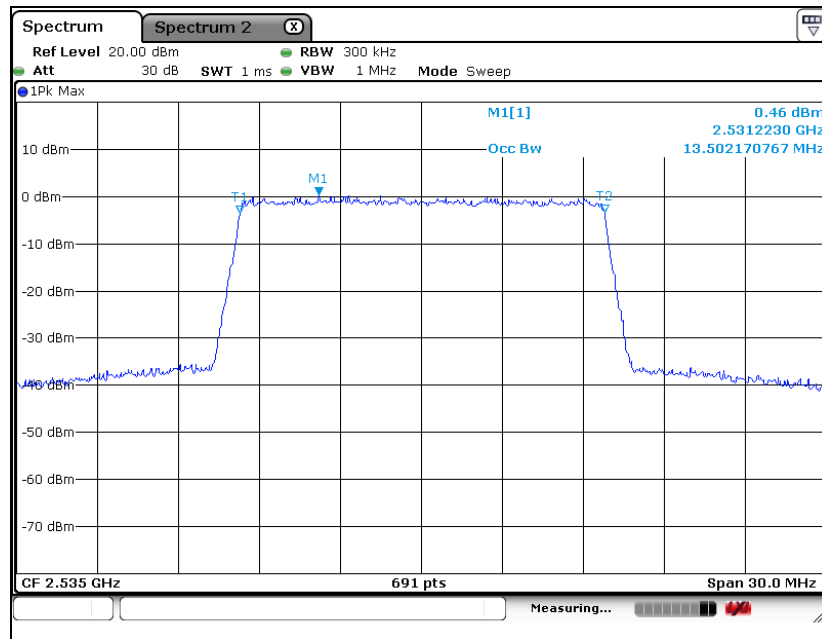
LTE band 7 (15 MHz - 16QAM)

Low Channel

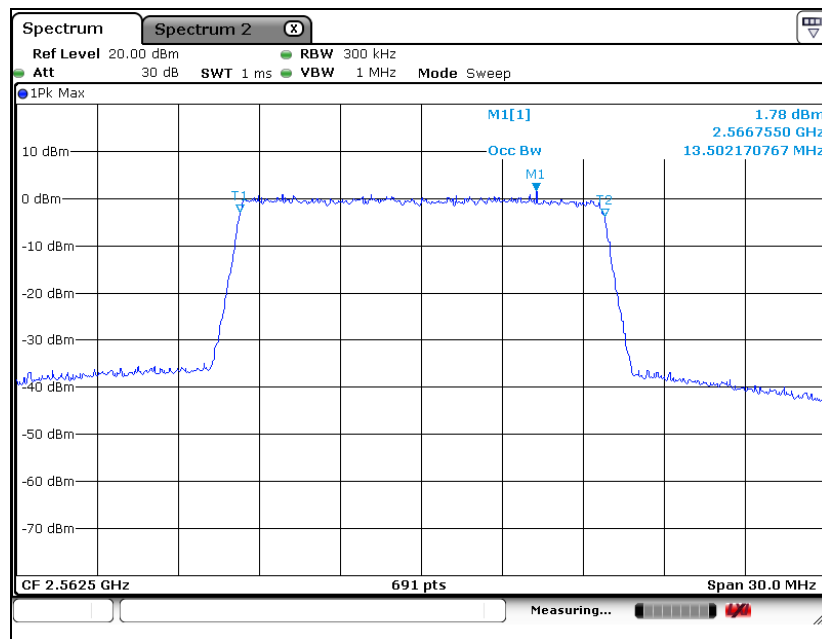


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Middle Channel



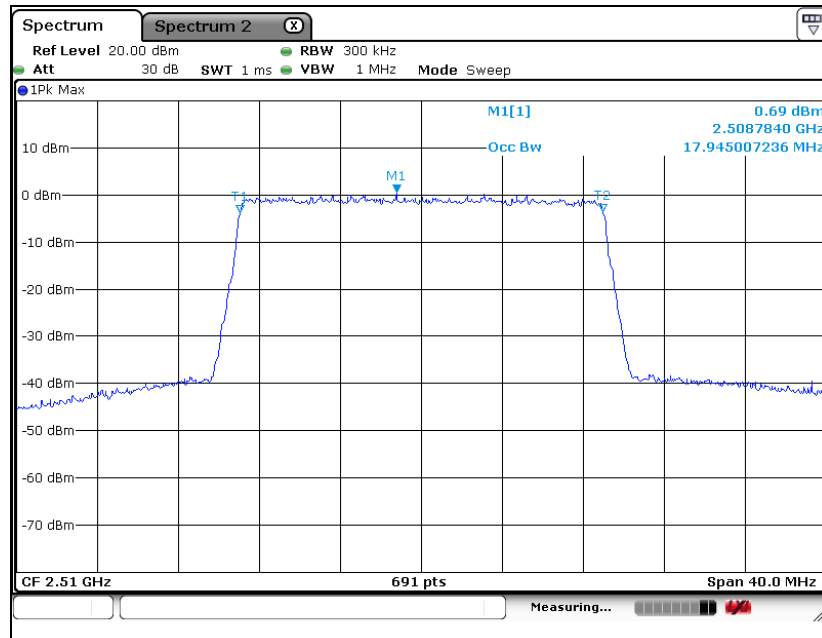
High Channel



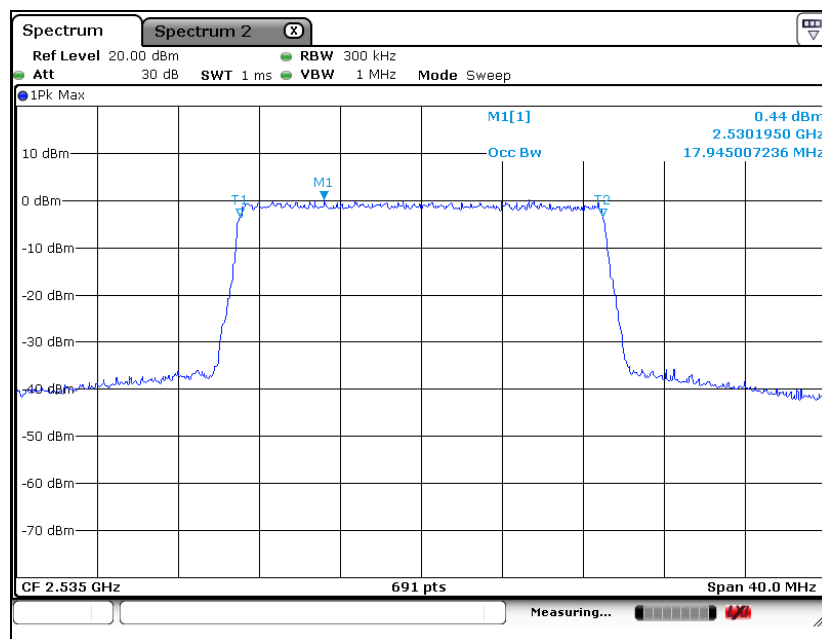
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LTE band 7 (20 MHz - QPSK)

Low Channel

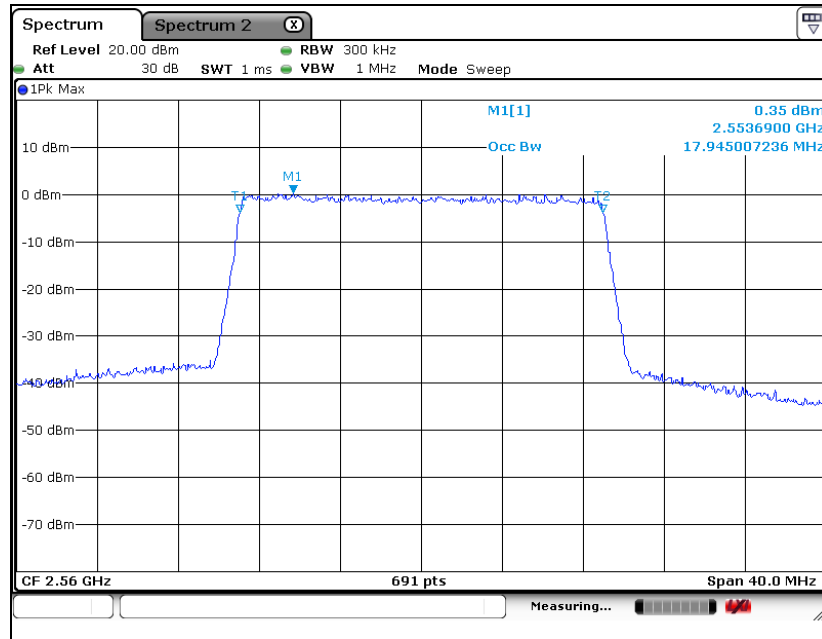


Middle Channel



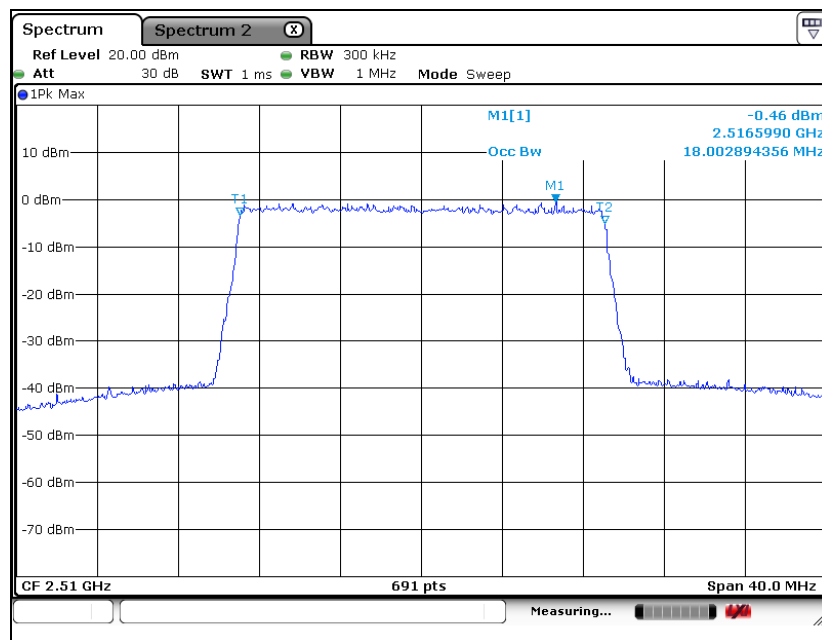
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High Channel



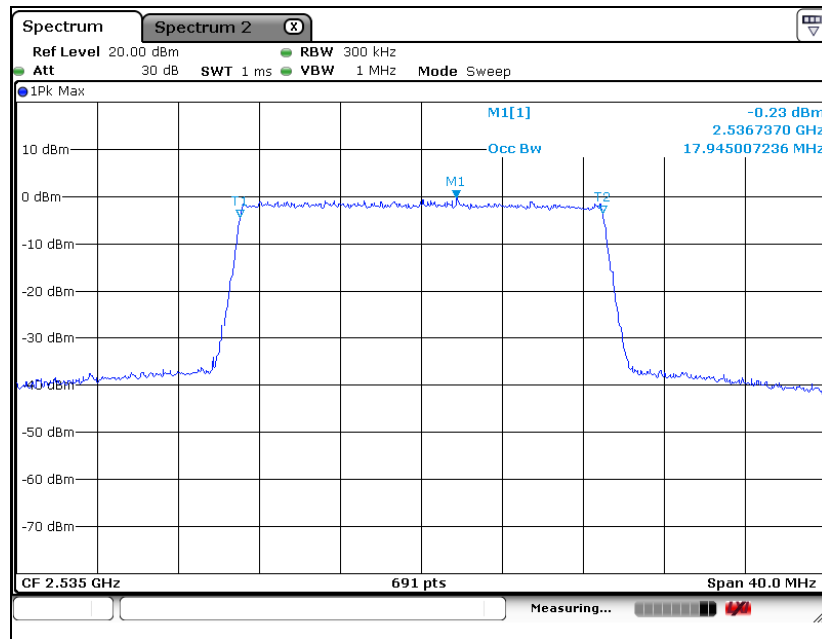
LTE band 7 (20 MHz - 16QAM)

Low Channel

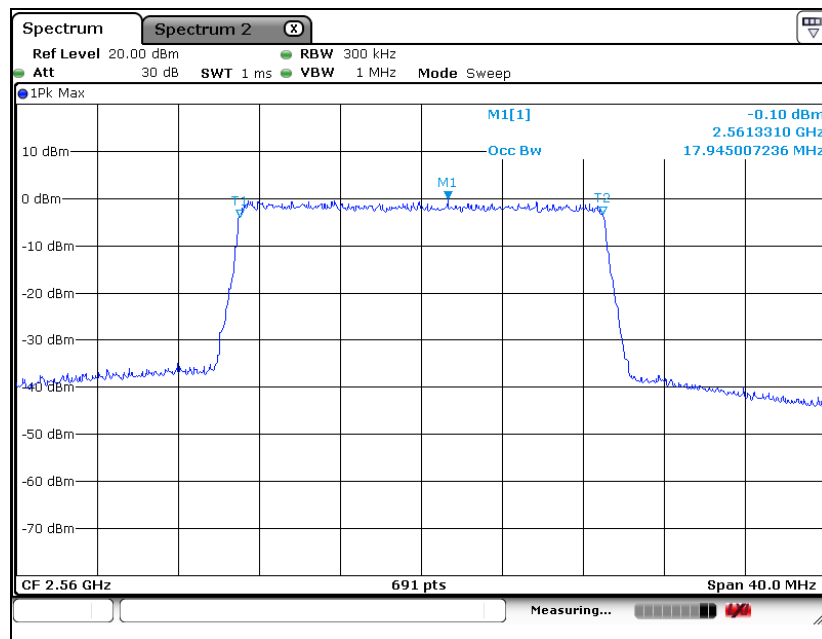


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Middle Channel



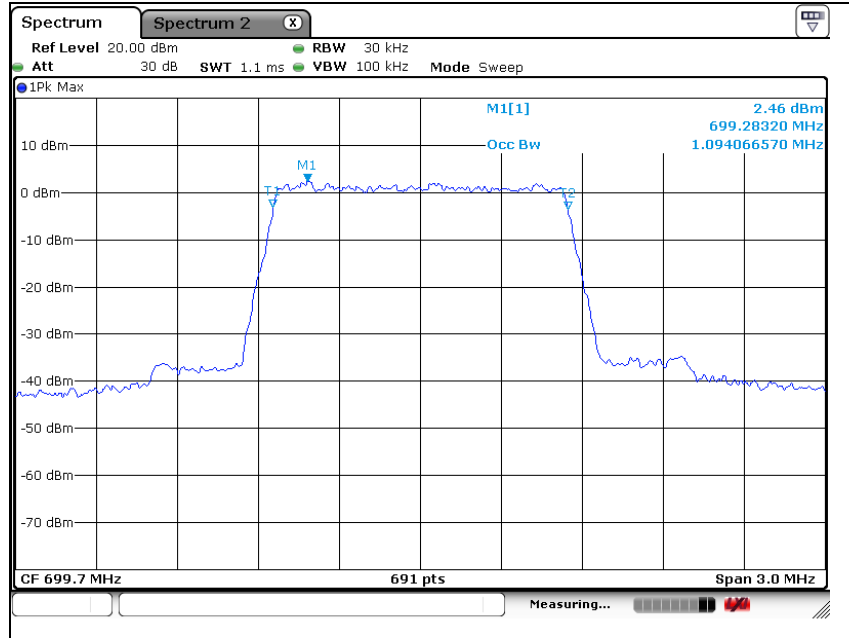
High Channel



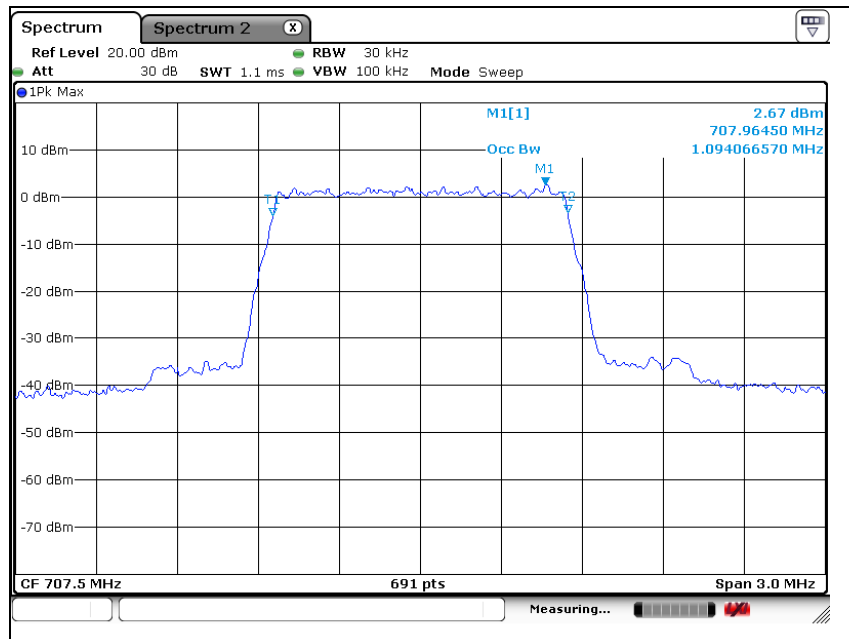
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LTE band 12 (1.4 MHz - QPSK)

Low Channel

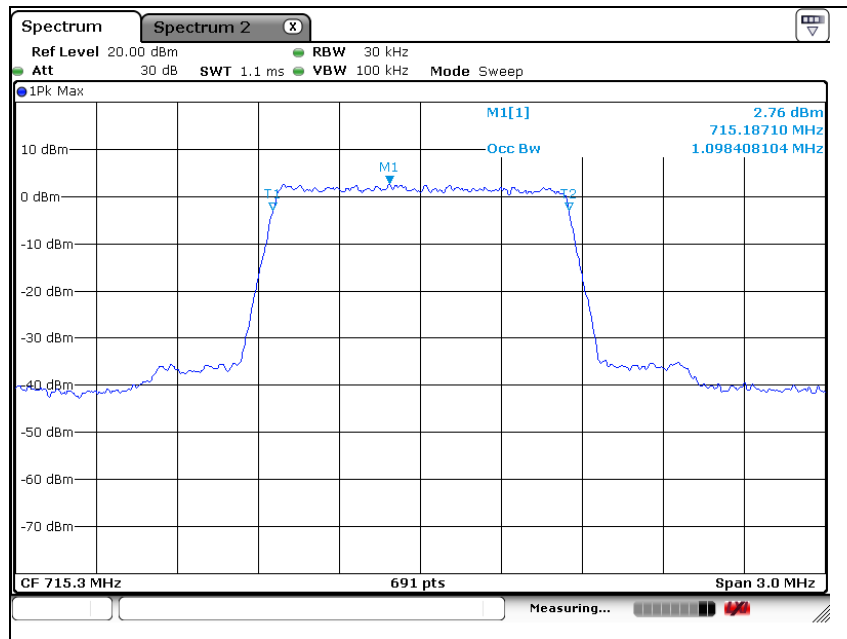


Middle Channel



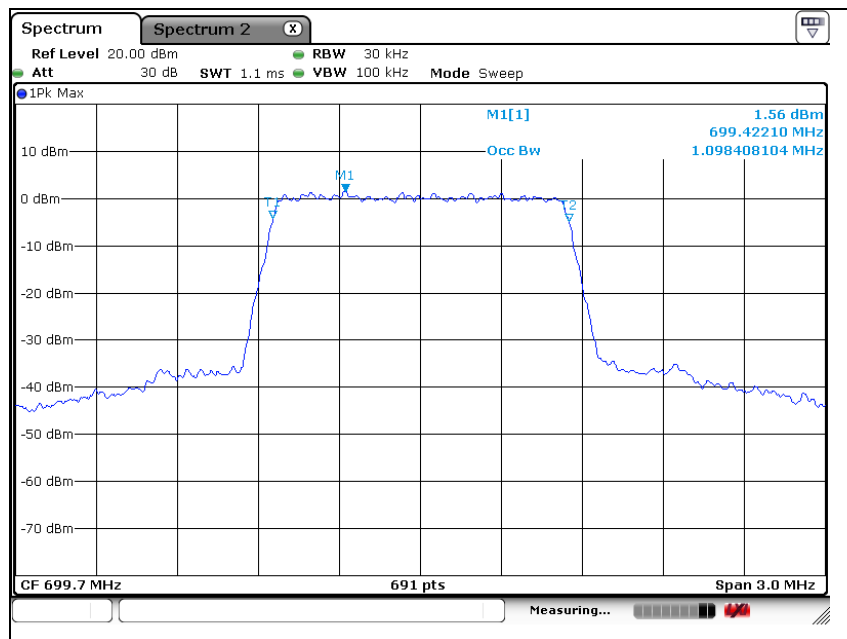
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High Channel



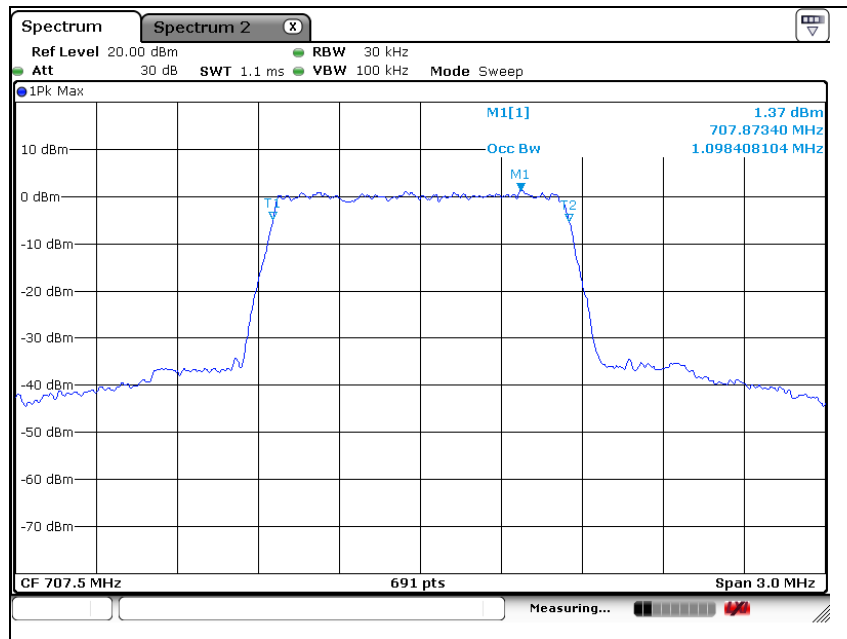
LTE band 12 (1.4 MHz - 16QAM)

Low Channel

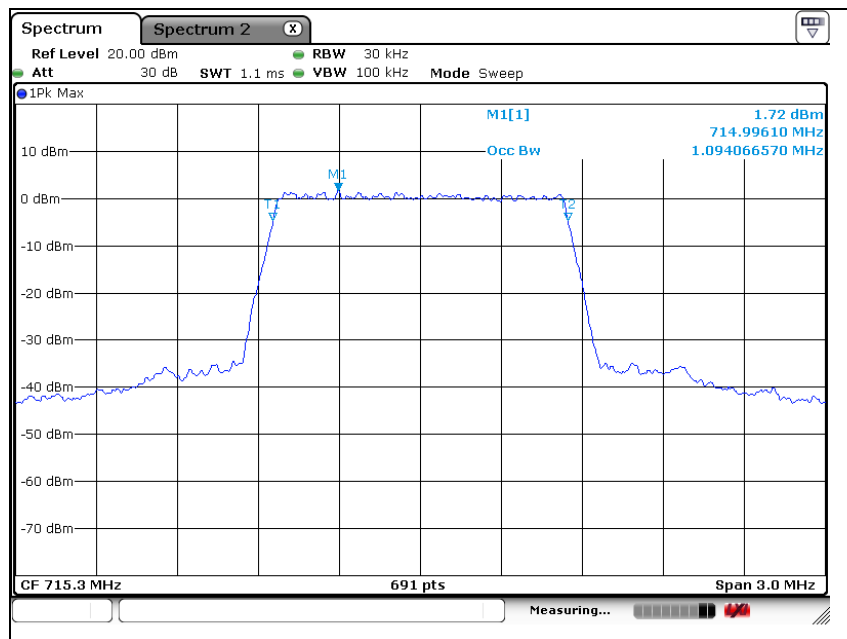


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Middle Channel



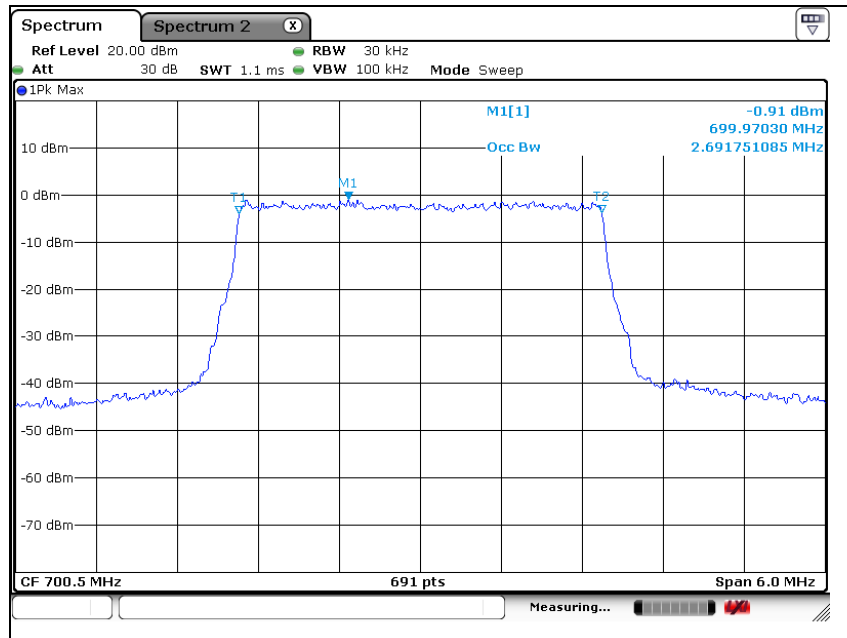
High Channel



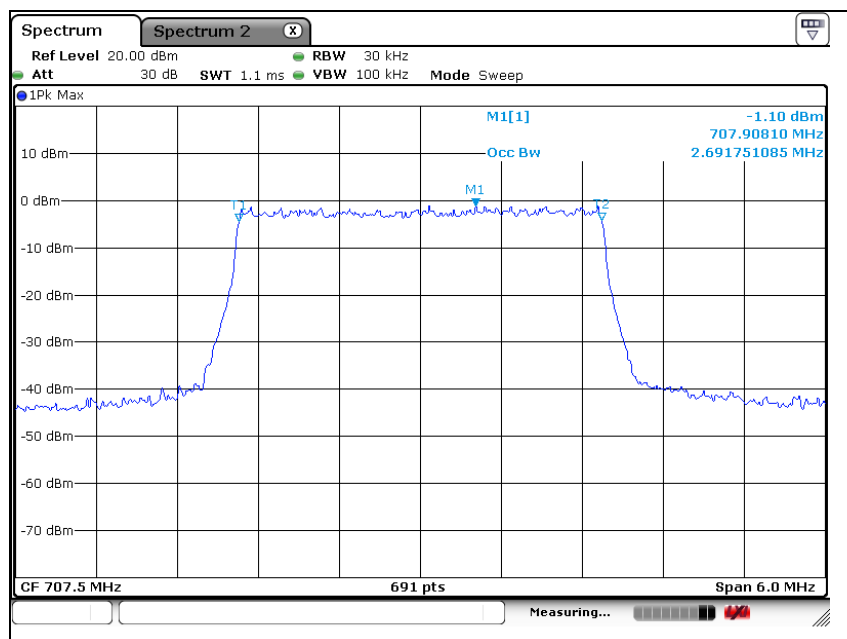
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LTE band 12 (3 MHz - QPSK)

Low Channel

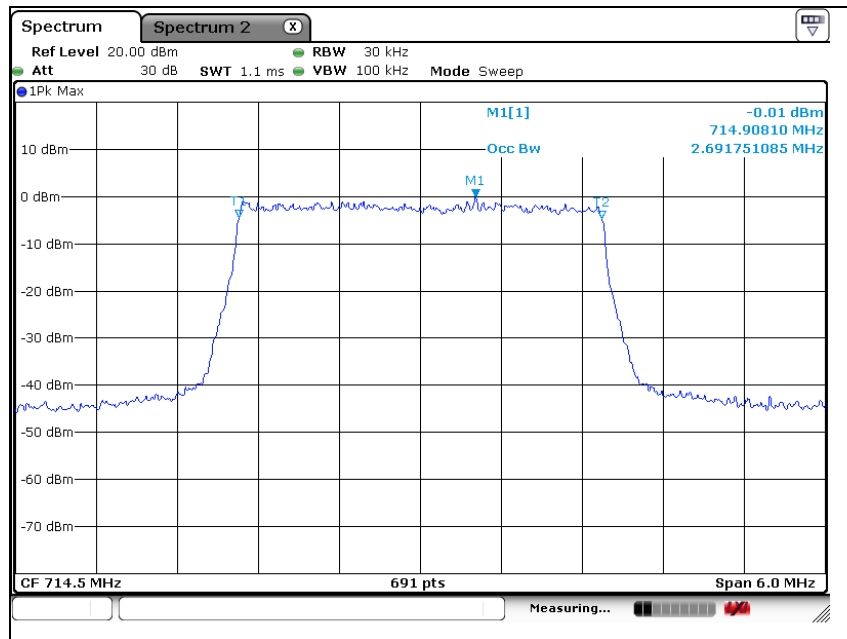


Middle Channel



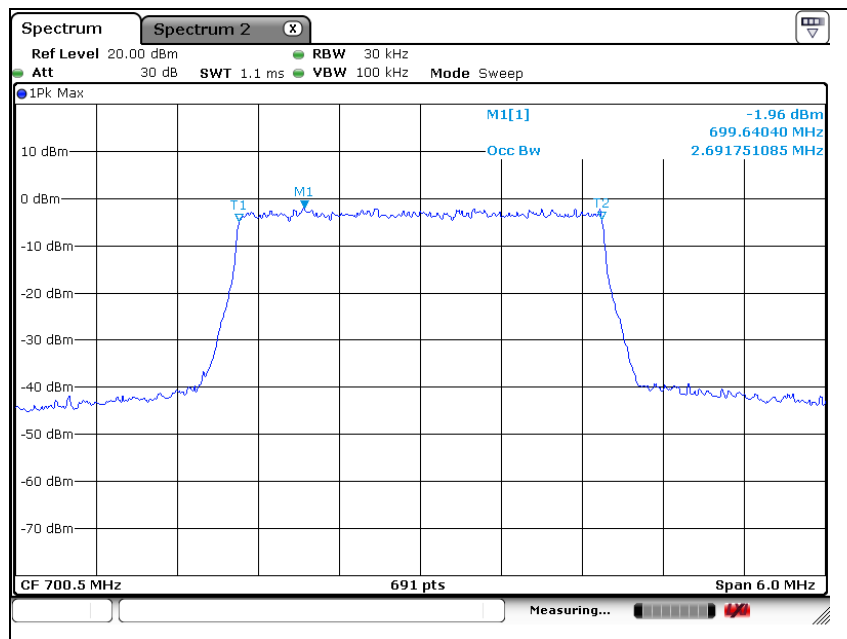
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High Channel



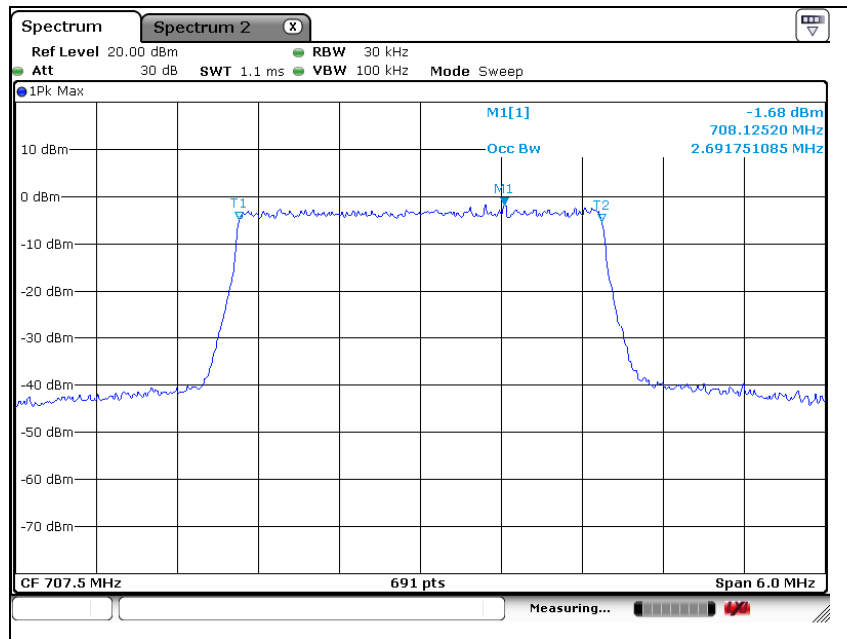
LTE band 12 (3 MHz - 16QAM)

Low Channel

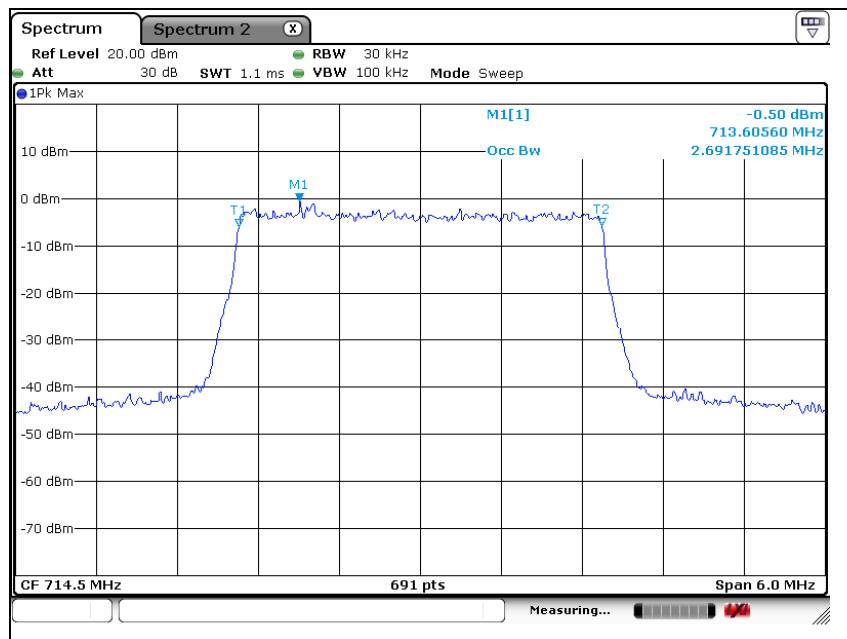


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Middle Channel



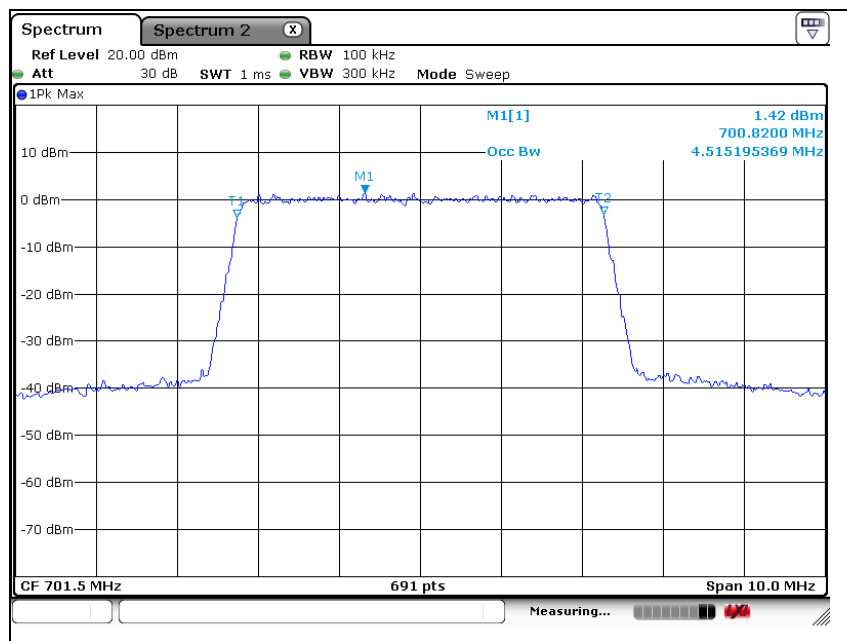
High Channel



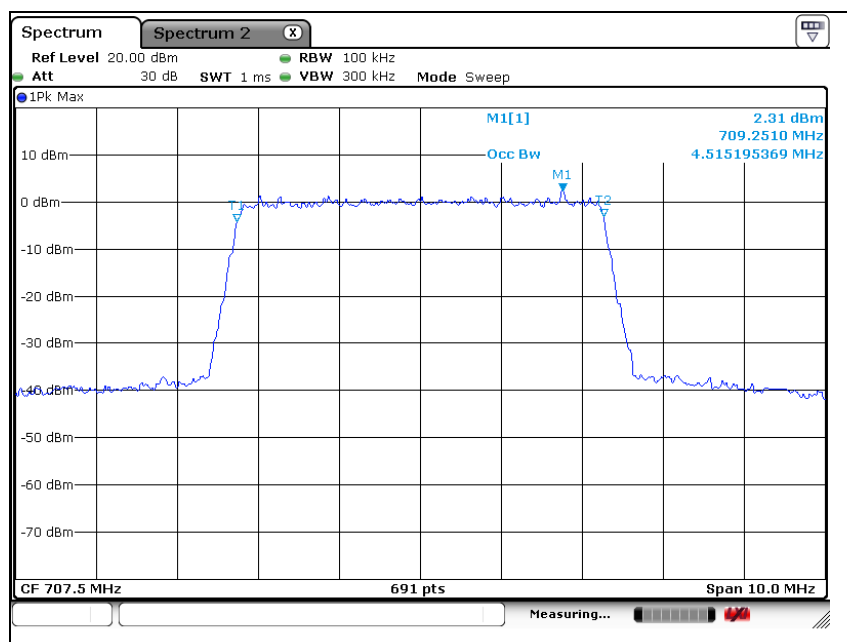
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LTE band 12 (5 MHz - QPSK)

Low Channel

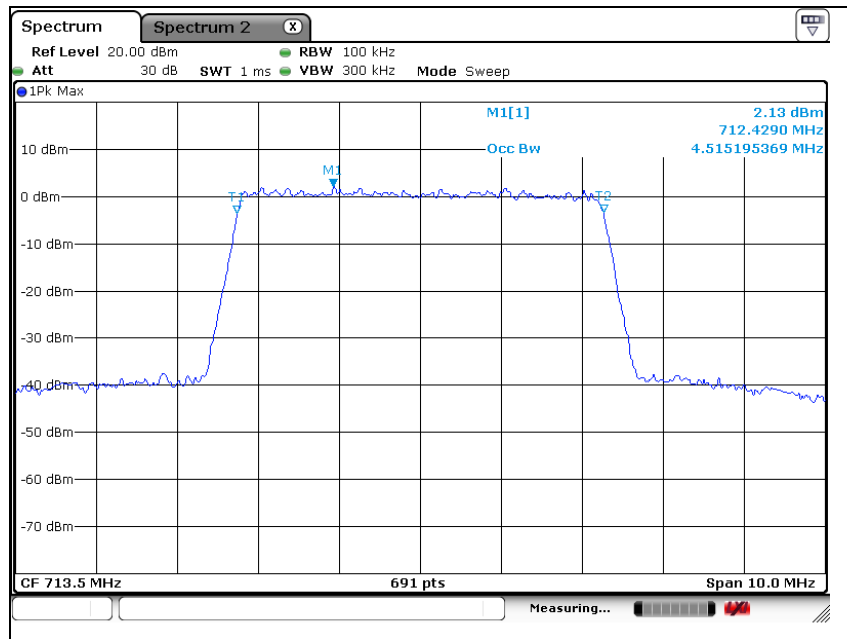


Middle Channel



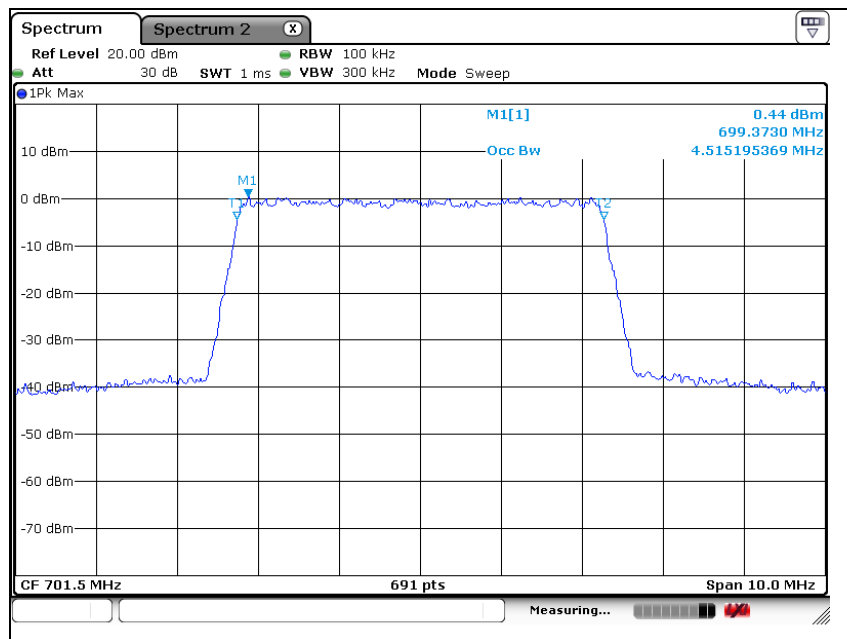
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High Channel



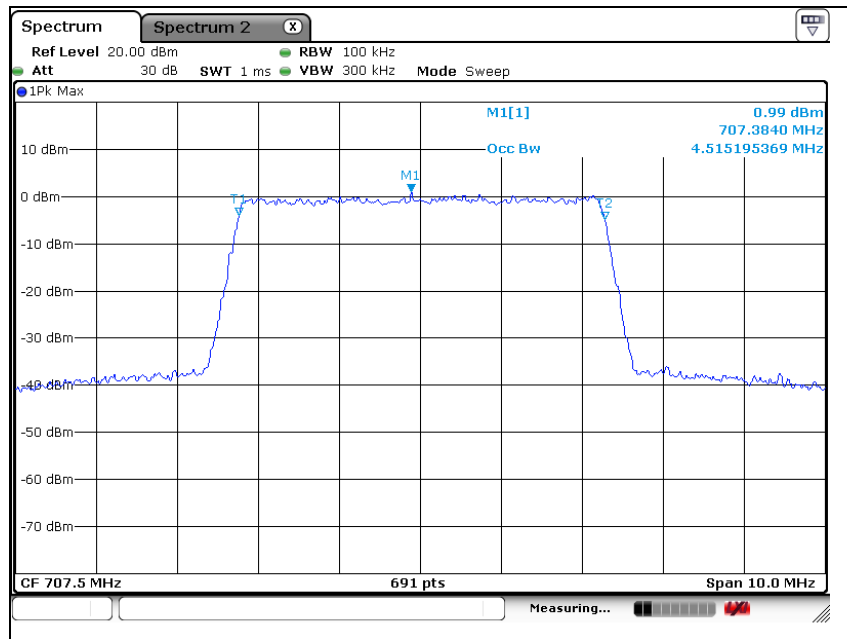
LTE band 12 (5 MHz - 16QAM)

Low Channel

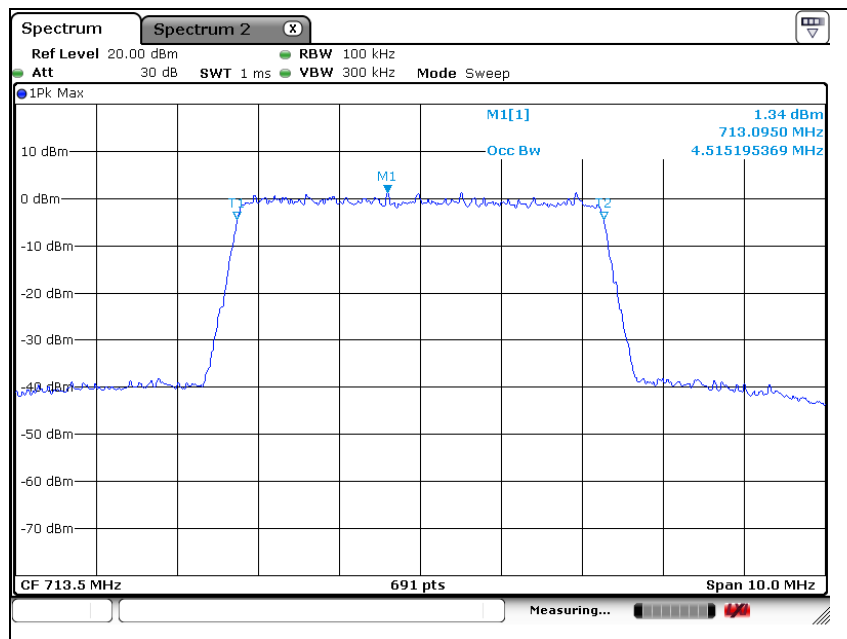


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Middle Channel



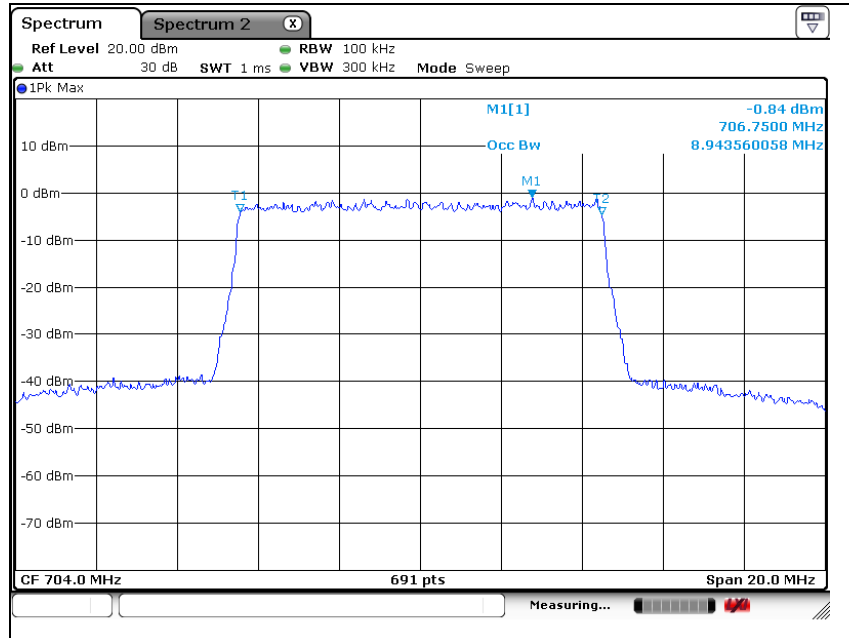
High Channel



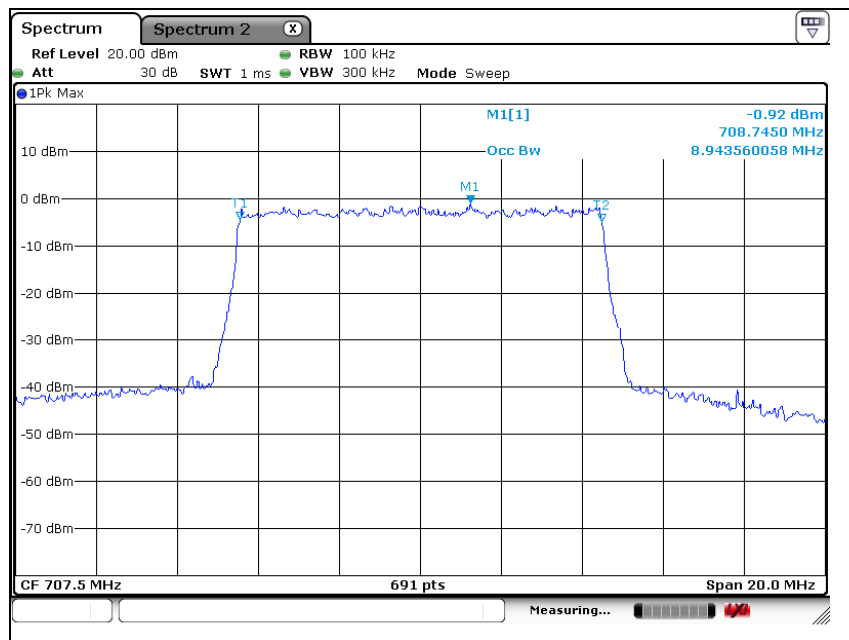
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LTE band 12 (10 MHz - QPSK)

Low Channel

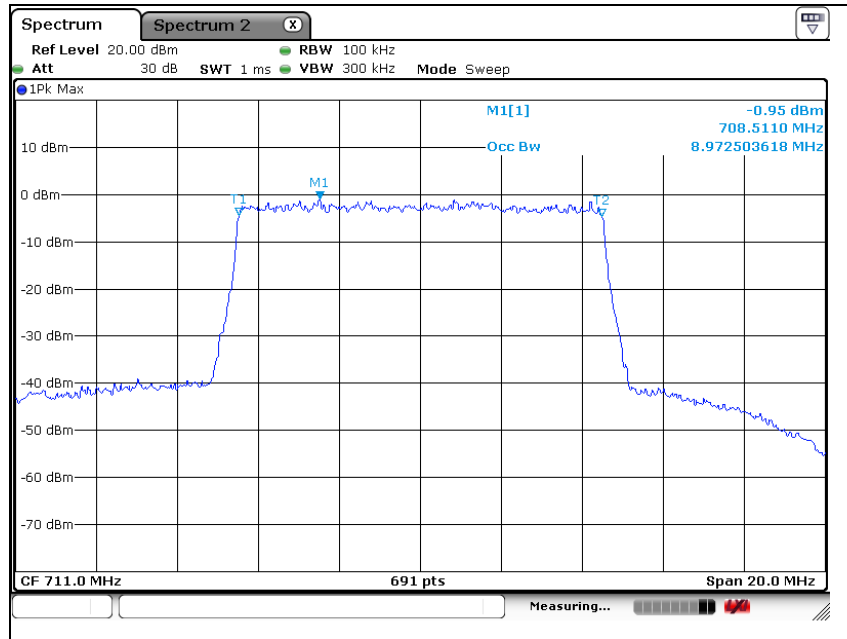


Middle Channel



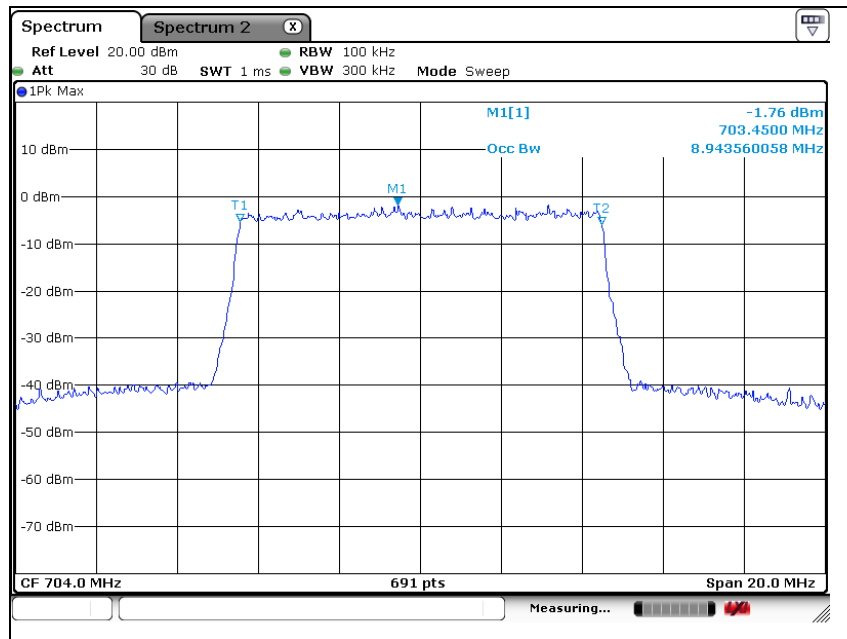
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High Channel



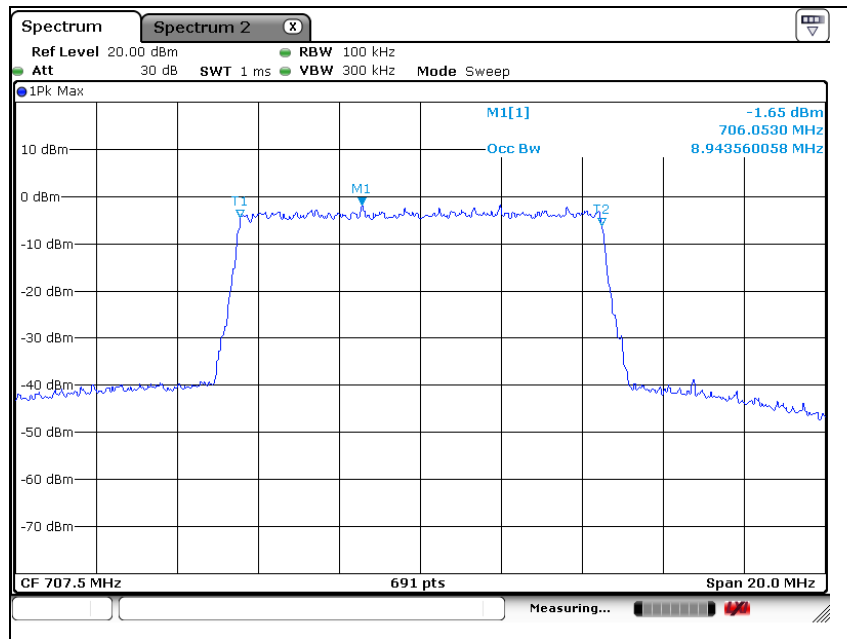
LTE band 12 (10 MHz - 16QAM)

Low Channel

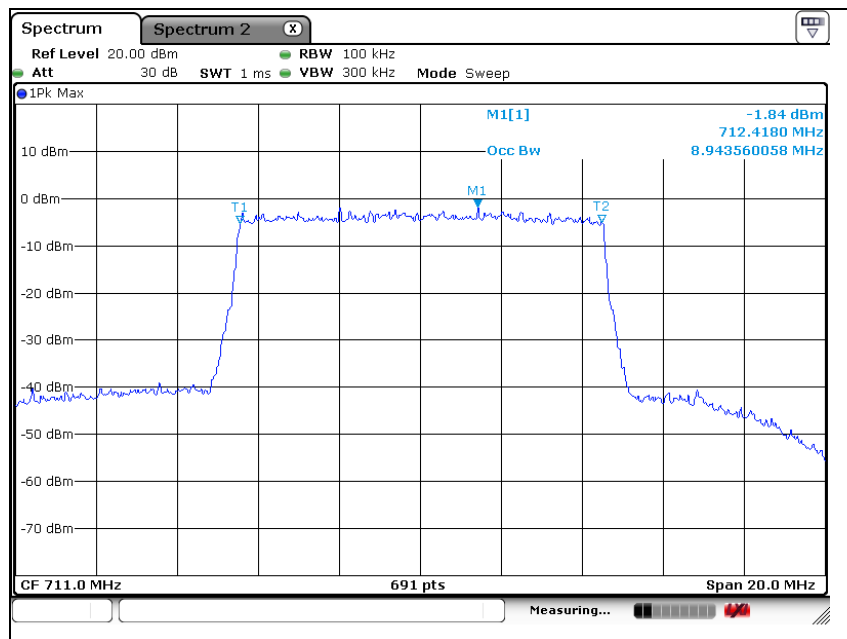


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Middle Channel



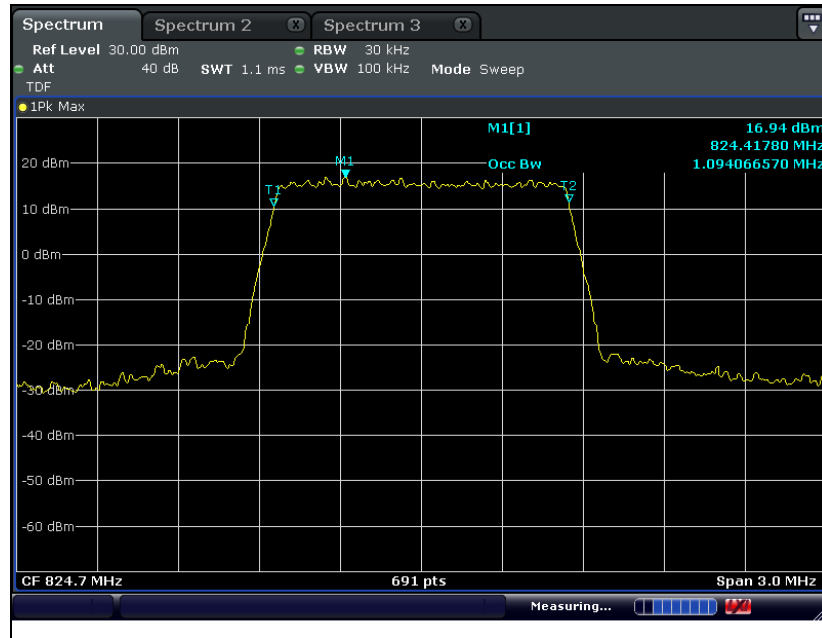
High Channel



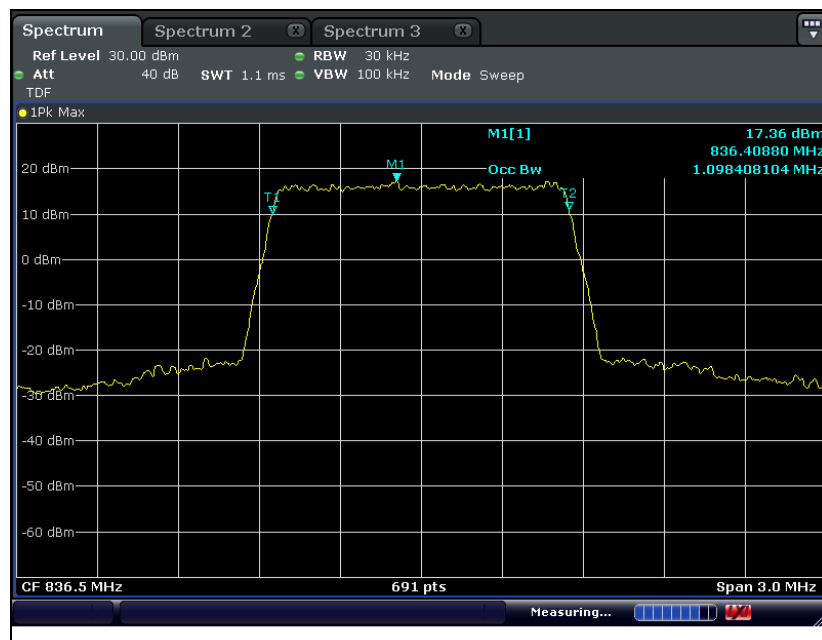
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LTE band 26 (1.4 MHz - QPSK)

Low Channel

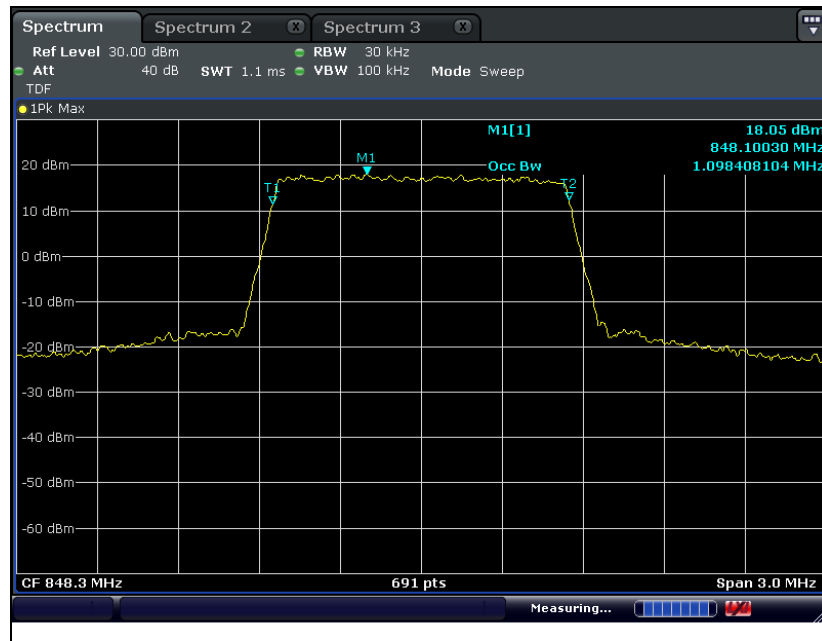


Middle Channel



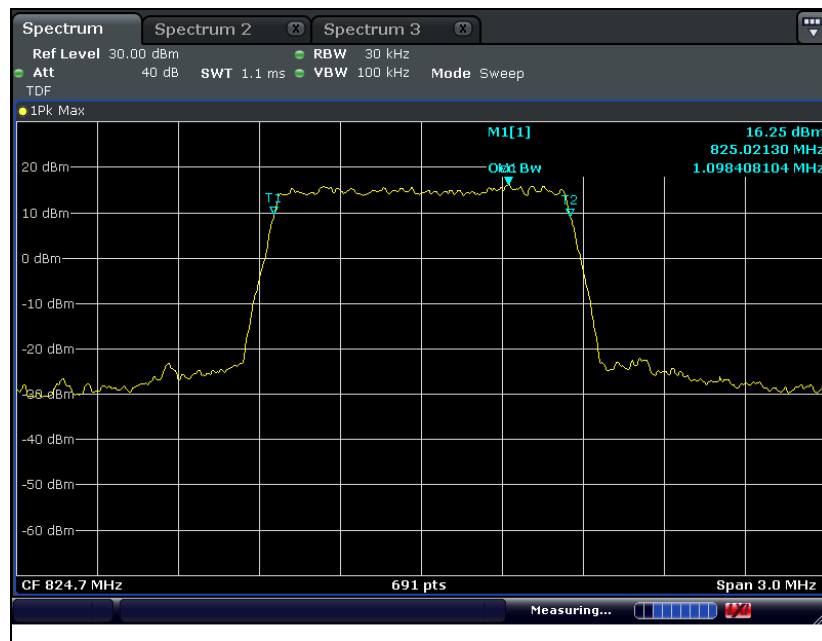
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High Channel



LTE band 26 (1.4 MHz - 16QAM)

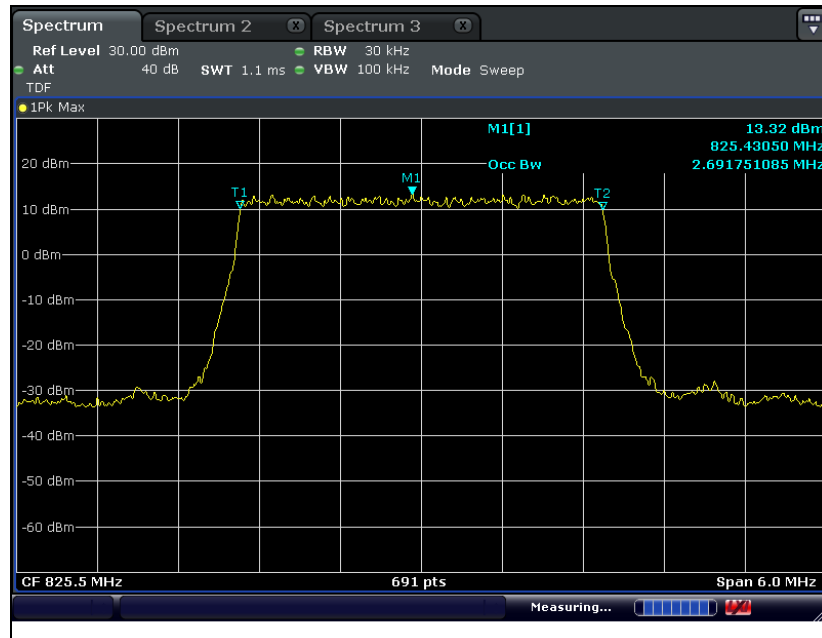
Low Channel



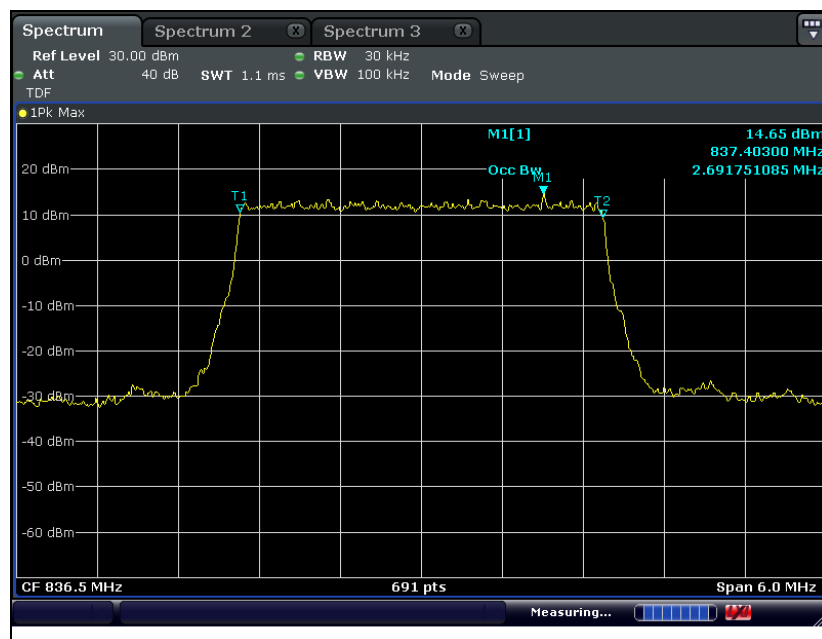
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LTE band 26 (3 MHz - QPSK)

Low Channel

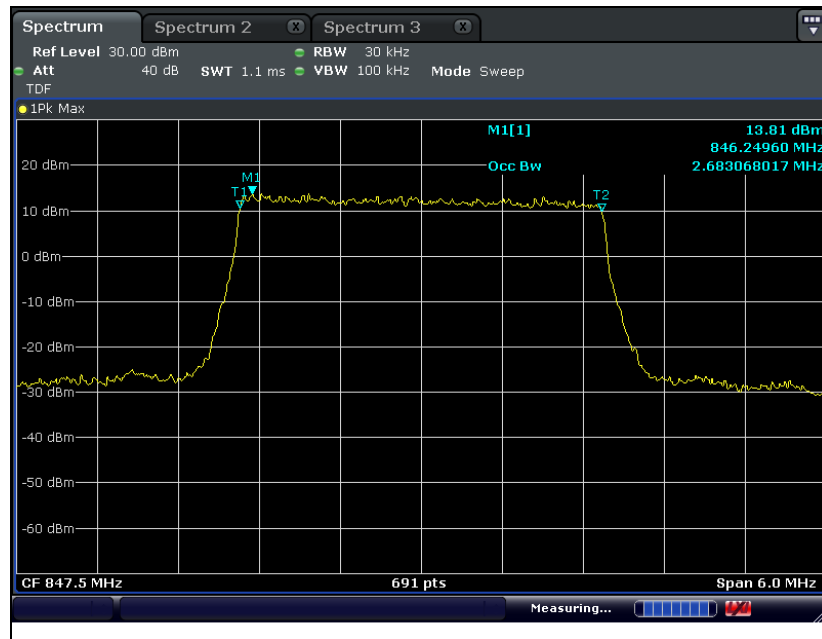


Middle Channel



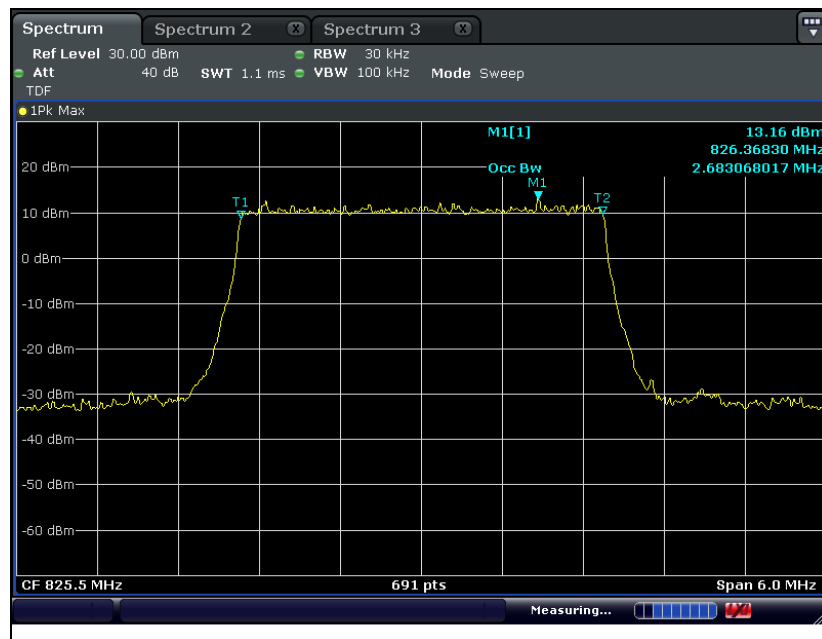
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High Channel



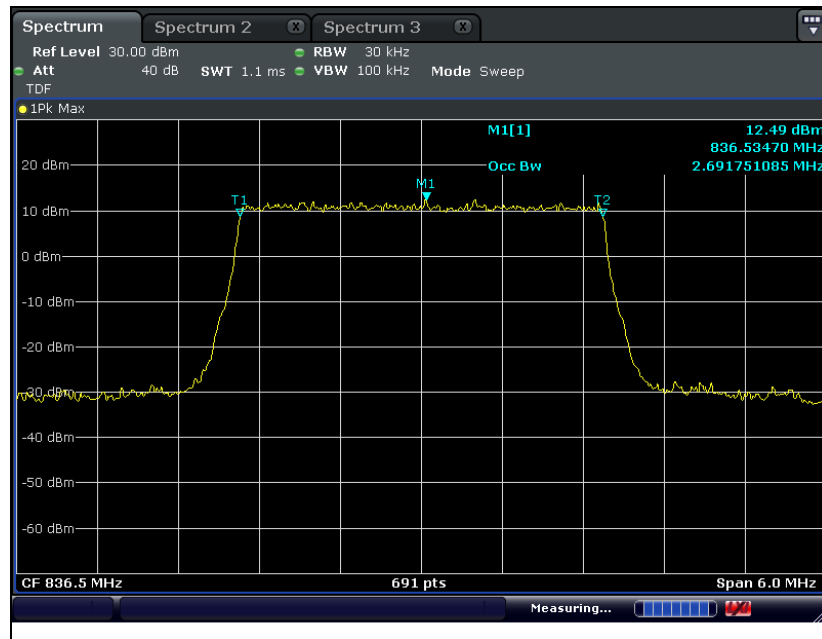
LTE band 26 (3 MHz - 16QAM)

Low Channel

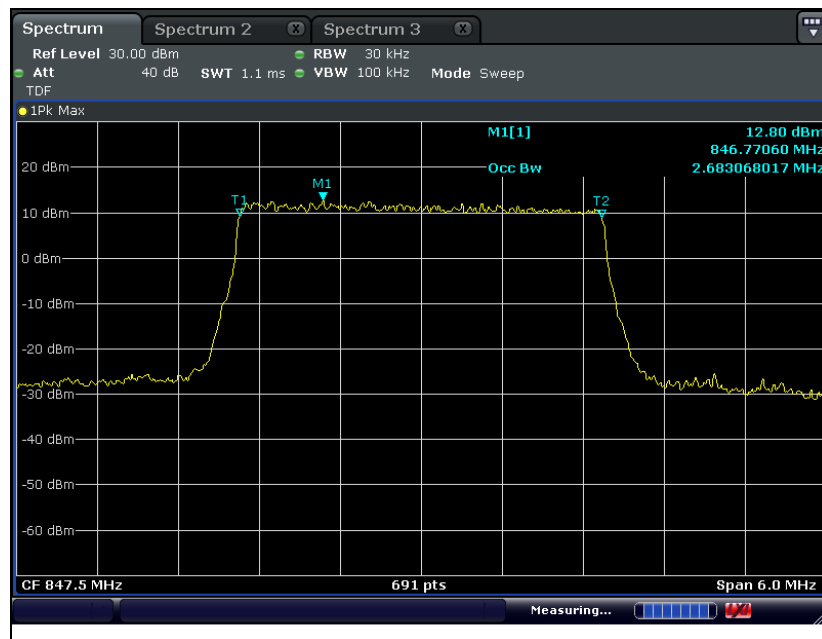


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Middle Channel



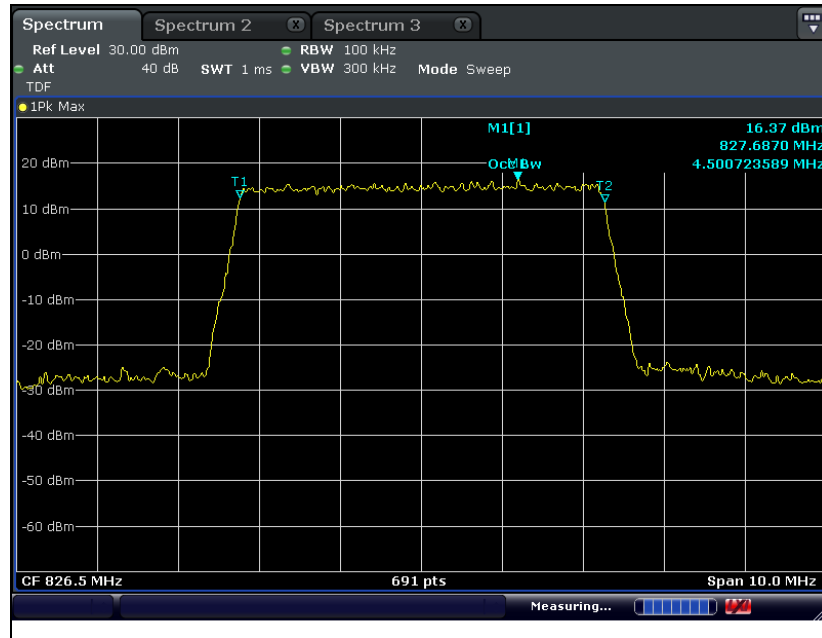
High Channel



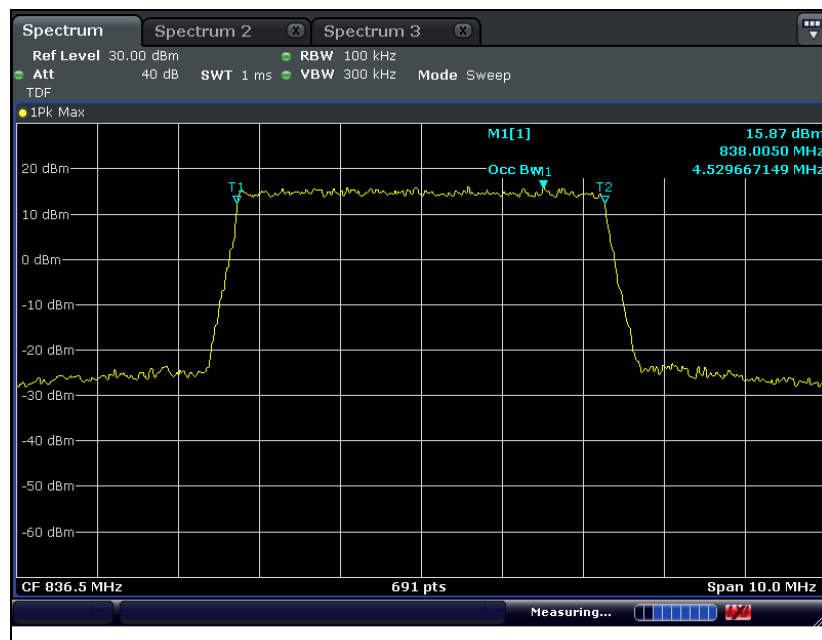
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LTE band 26 (5 MHz - QPSK)

Low Channel

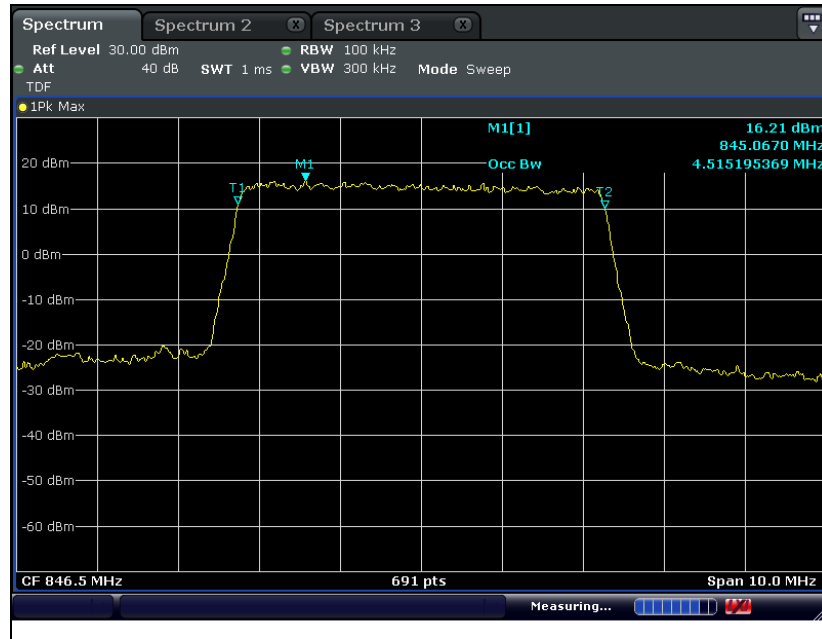


Middle Channel



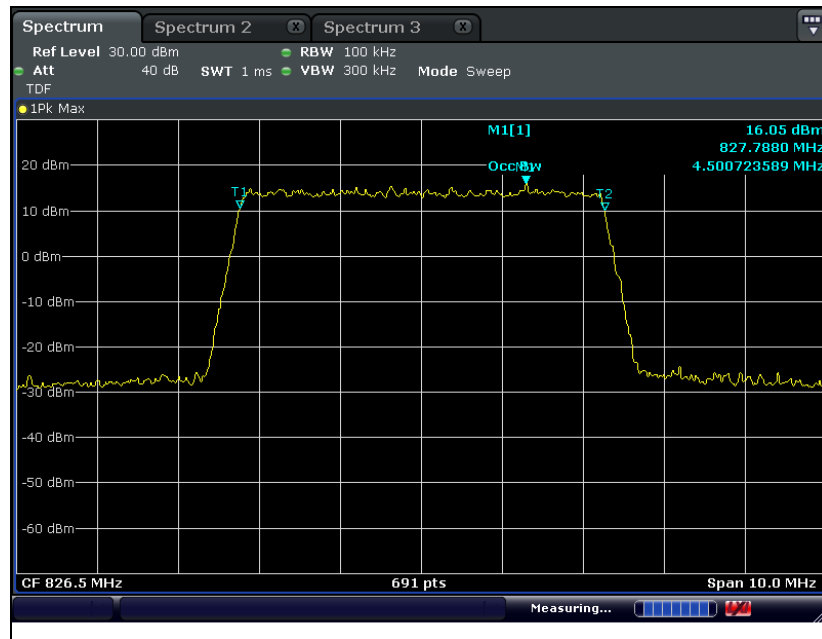
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High Channel



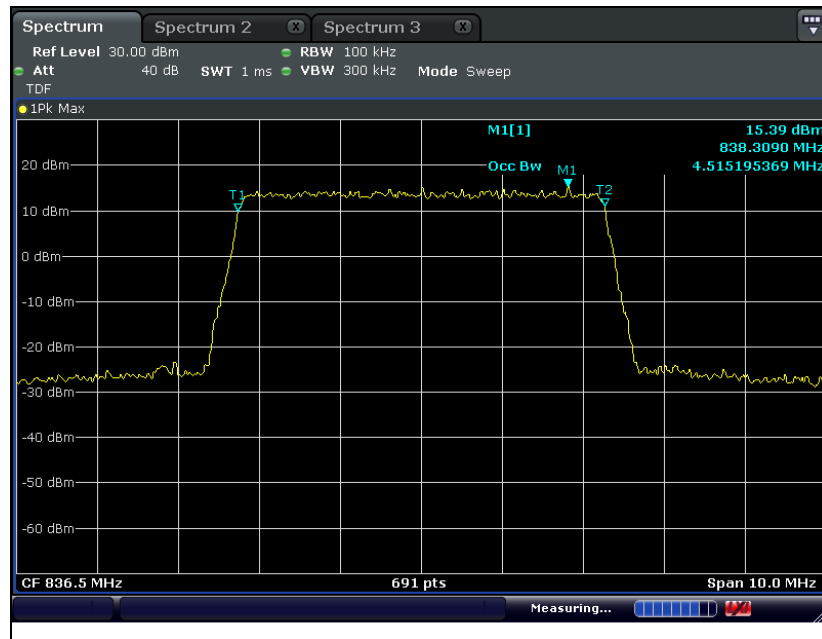
LTE band 26 (5 MHz - 16QAM)

Low Channel

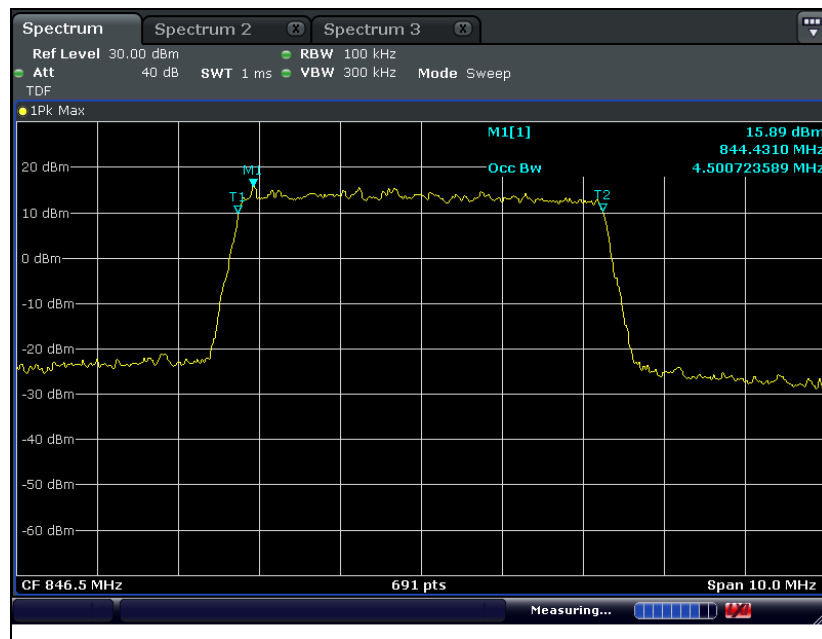


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Middle Channel



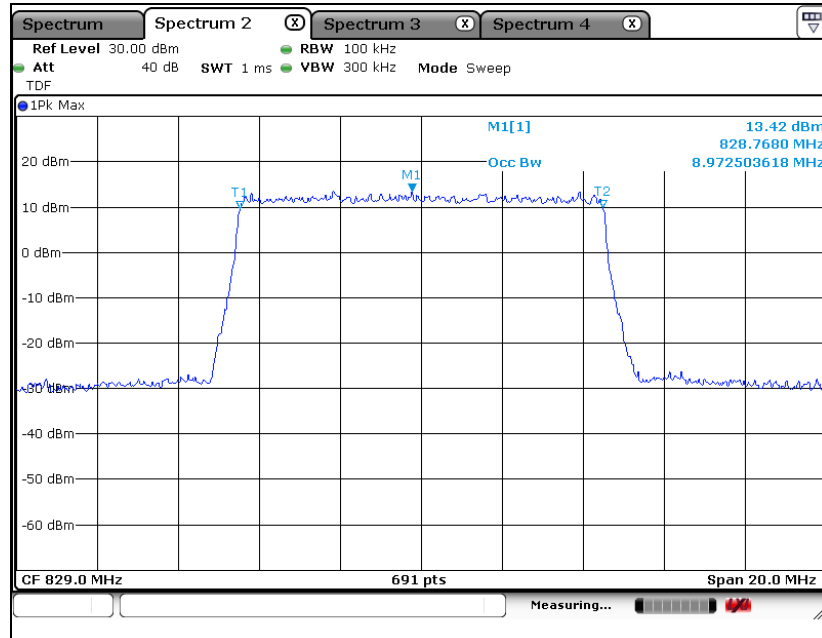
High Channel



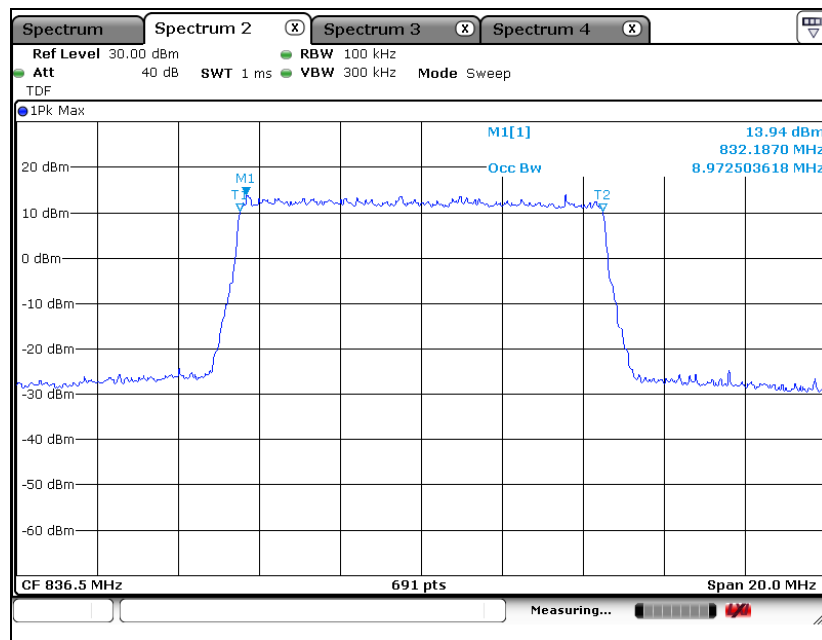
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LTE band 26 (10 MHz - QPSK)

Low Channel

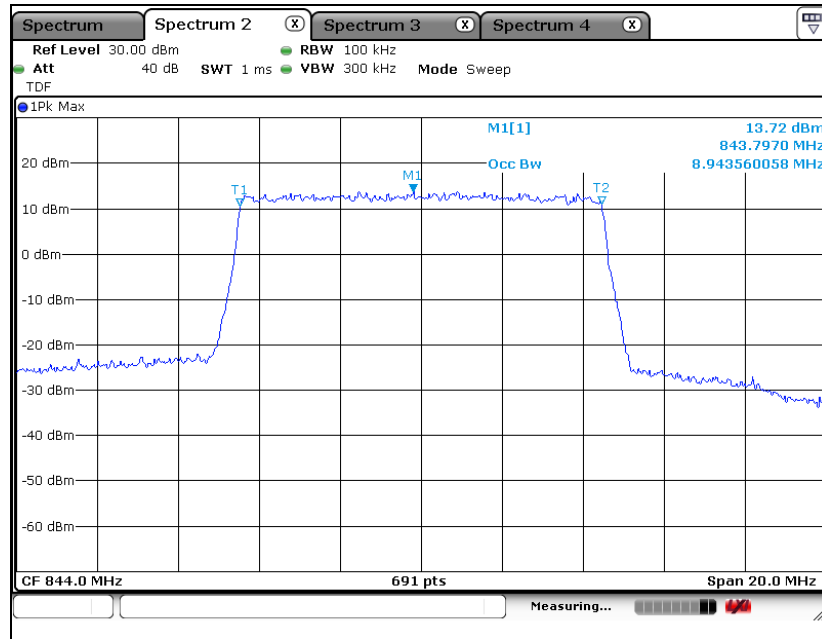


Middle Channel



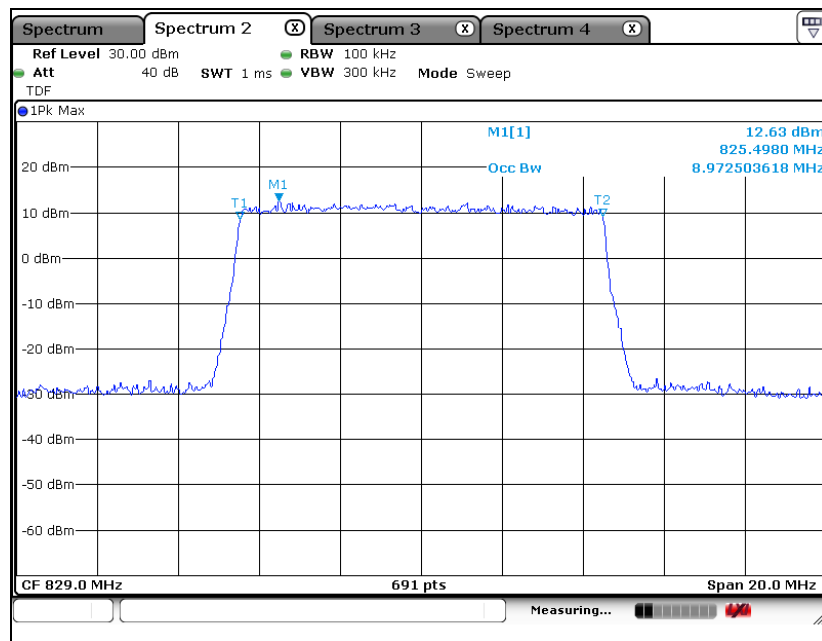
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High Channel



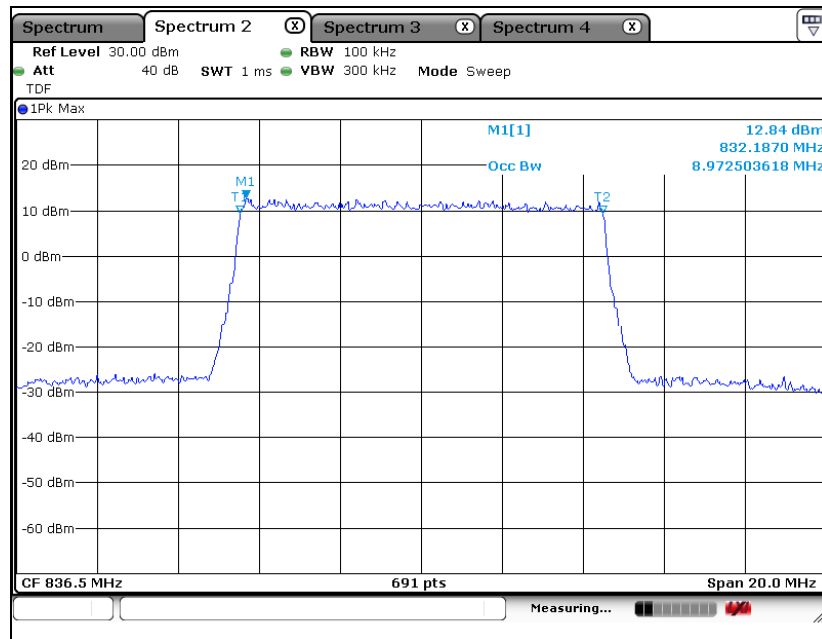
LTE band 26 (10 MHz - 16QAM)

Low Channel

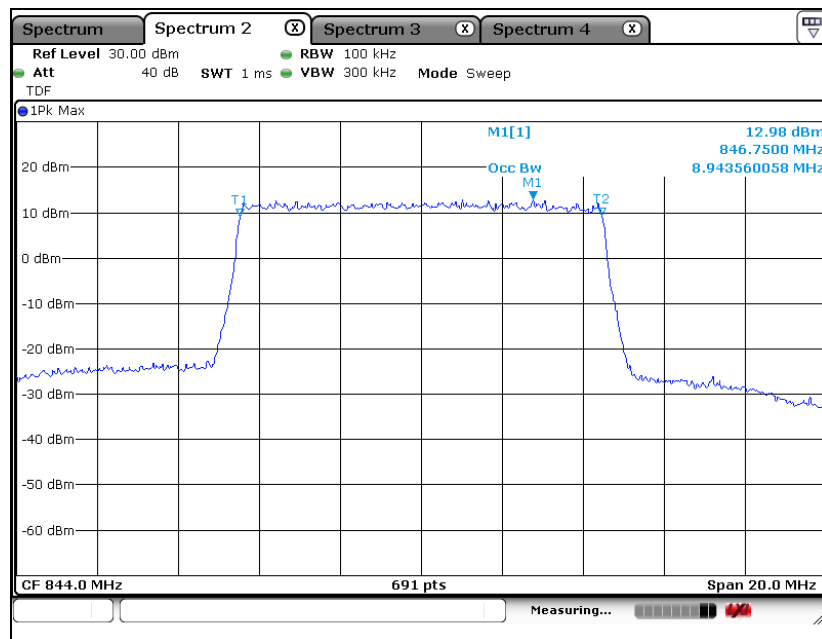


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Middle Channel



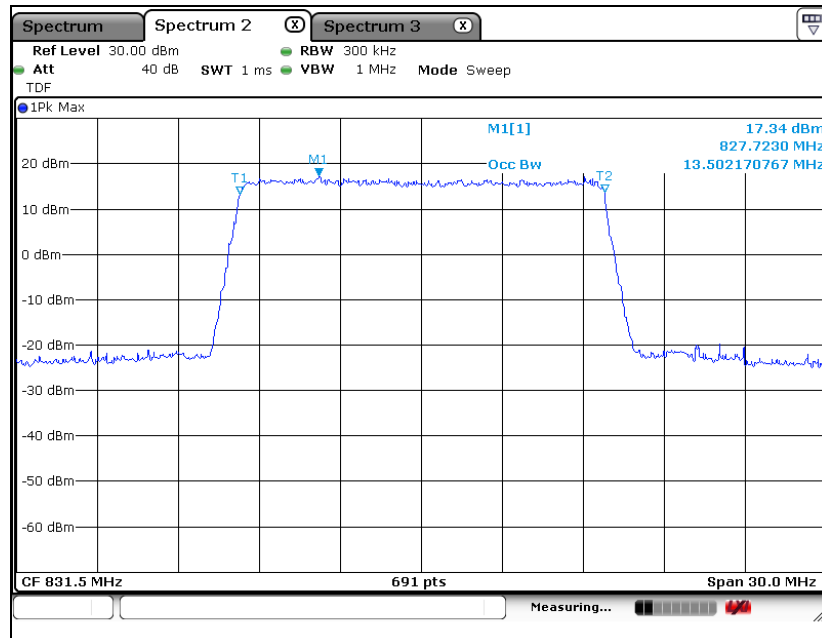
High Channel



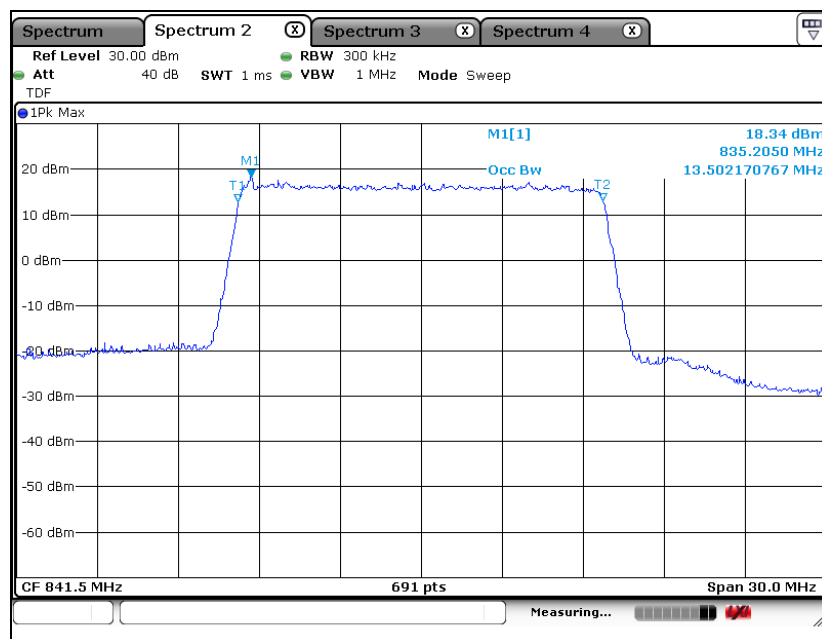
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LTE band 26 (15 MHz - QPSK)

Low Channel



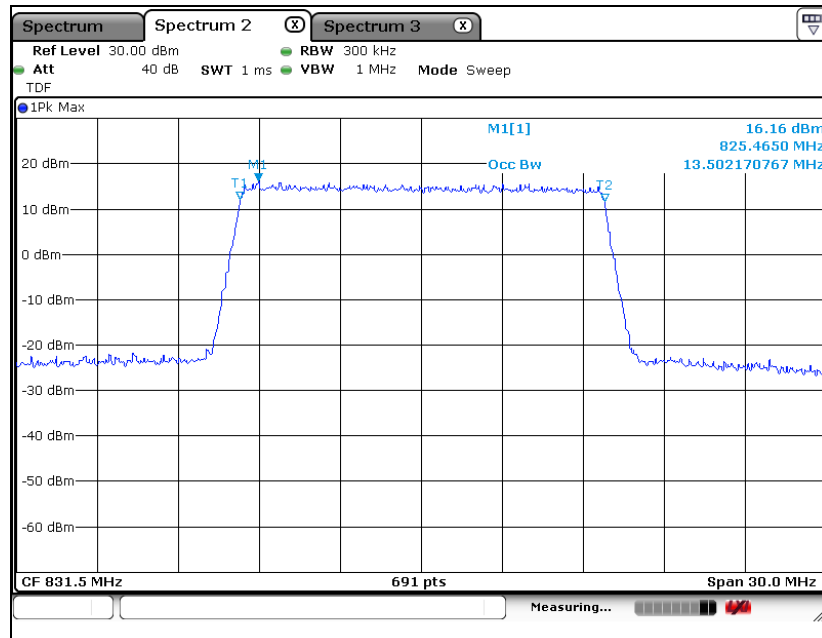
High Channel



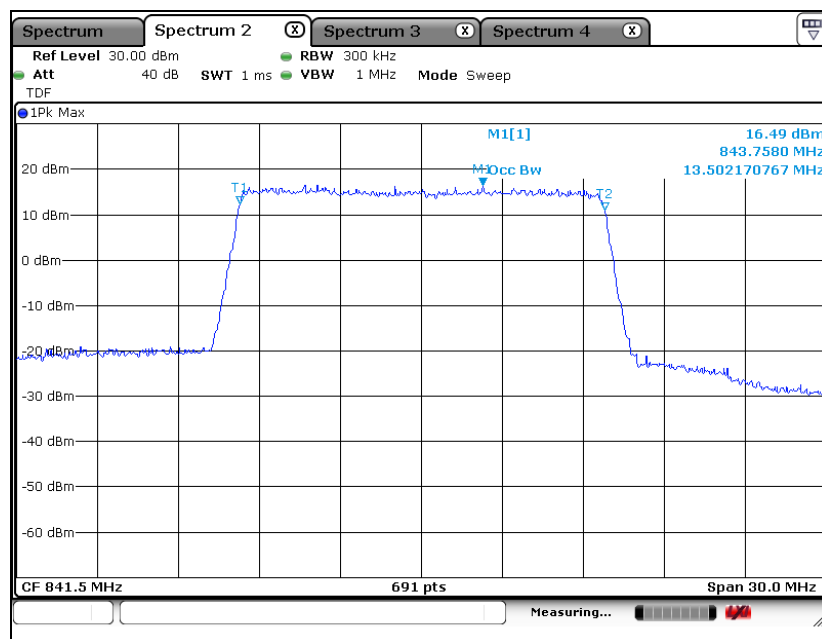
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LTE band 26 (15 MHz - 16QAM)

Low Channel



High Channel



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