



FCC Test Report

ANNEX 2 LTE BAND 2

FCC ID: 2AYFQ-SEM1000

Applicant: Quanzhou SFE Electronic Technology Co.,Ltd
Address: No.35 Yangming Street, Shuangyang, Luojiang District, Quanzhou City, Fujian Province 362012, China
Manufacturer: Quanzhou SFE Electronic Technology Co.,Ltd
Address: No.35 Yangming Street, Shuangyang, Luojiang District, Quanzhou City, Fujian Province 362012, China
EUT: In-vehicle PoC Network Radio
Trade Mark: SFE
Model Number: SEM1000, SEM2000
Date of Receipt: Dec. 03, 2021
Test Date: Dec. 03, 2021 – Jan. 07, 2022
Date of Report: Jan. 07, 2022
Prepared By: Shenzhen DL Testing Technology Co., Ltd.
Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China
FCC CFR Title 47 Part22 Subpart H
FCC CFR Title 47 Part24 Subpart E
Applicable Standards: FCC CFR Title 47 Part27
ANSI/ TIA/ EIA-603-D-2010
FCC KDB 971168 D01 Power Meas. License Digital Systems v02v02
ANSI C63.26:2015
Test Result: Pass
Report Number: DL-20220108006E

Prepared (Test Engineer): Pxing Huang
Reviewer (Supervisor): Jack Bu
Approved (Manager): Jade Yang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen DL Testing Technology Co., Ltd.



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1. EMISSION TEST RESULTS

1.1. -26dB and 99% Occupied Bandwidth

1.1.1. Test Result

EUT Mode Bandwidth	Modulation	Frequency (MHz)	99% Occupy bandwidth (MHz)	-26dB bandwidth (MHz)
LTE Band 2 1.4MHz	QPSK	1850.7	1.080	1.218
		1882.5	1.079	1.219
		1914.3	1.087	1.205
LTE Band 2 1.4 MHz	16-QAM	1850.7	1.079	1.203
		1882.5	1.081	1.225
		1914.3	1.082	1.221
LTE Band 2 3 MHz	QPSK	1851.5	2.691	2.940
		1882.5	2.693	2.944
		1913.5	2.687	2.951
LTE Band 2 3 MHz	16-QAM	1851.5	2.684	2.937
		1882.5	2.684	2.946
		1913.5	2.685	2.948
LTE Band 2 5 MHz	QPSK	1852.5	4.469	4.869
		1882.5	4.488	4.912
		1912.5	4.476	4.892
LTE Band 2 5 MHz	16-QAM	1852.5	4.473	4.917
		1882.5	4.469	4.824
		1912.5	4.476	4.873
LTE Band 2 10 MHz	QPSK	1855.0	8.955	9.731
		1882.5	8.948	9.688
		1910.0	8.945	9.628
LTE Band 2 10 MHz	16-QAM	1855.0	8.941	9.668
		1882.5	8.943	9.644
		1910.0	8.935	9.608
LTE Band 2 15 MHz	QPSK	1857.5	13.441	14.530
		1882.5	13.403	14.500
		1907.5	13.410	14.450
LTE Band 2 15 MHz	16-QAM	1857.5	13.419	14.470
		1882.5	13.389	14.450
		1907.5	13.416	14.390
LTE Band 2 20 MHz	QPSK	1860.0	17.885	19.150
		1882.5	17.834	19.010
		1905.0	17.867	19.340
LTE Band 2 20 MHz	16-QAM	1860.0	17.867	19.110
		1882.5	17.856	19.200
		1905.0	17.821	19.150

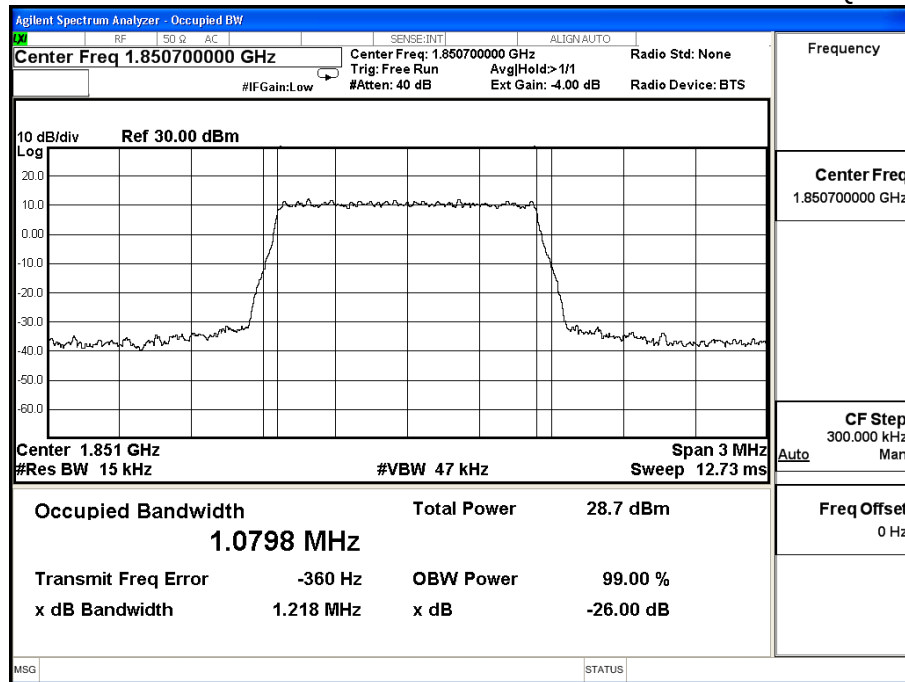
Note: Measurement Uncertainty: $\pm 20\text{Hz}$.

Test plot as follows:



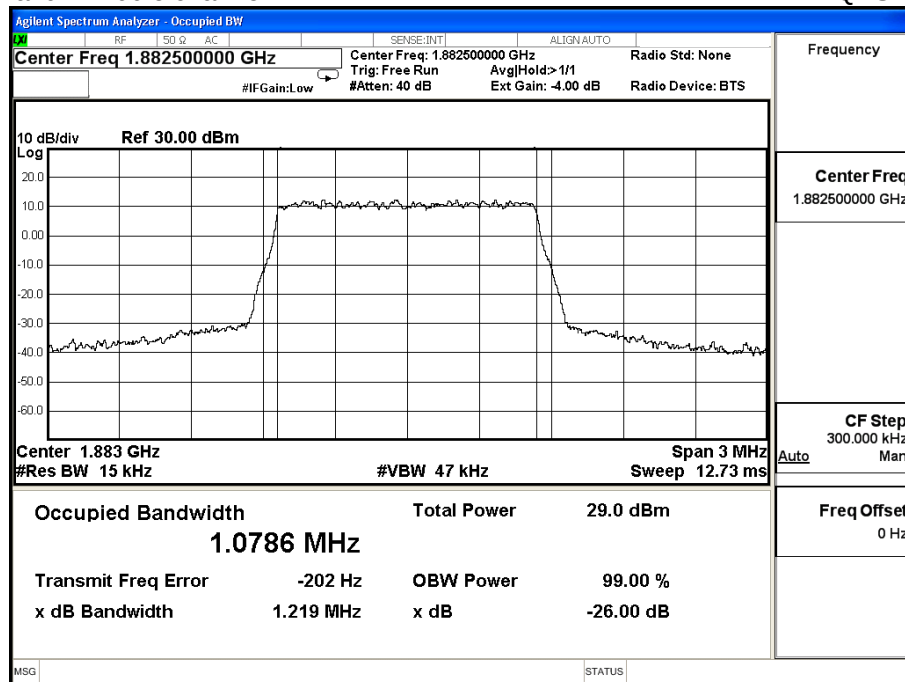
LTE Band 2 Lowest channel

1.4 MHz QPSK



LTE Band 2 Middle channel

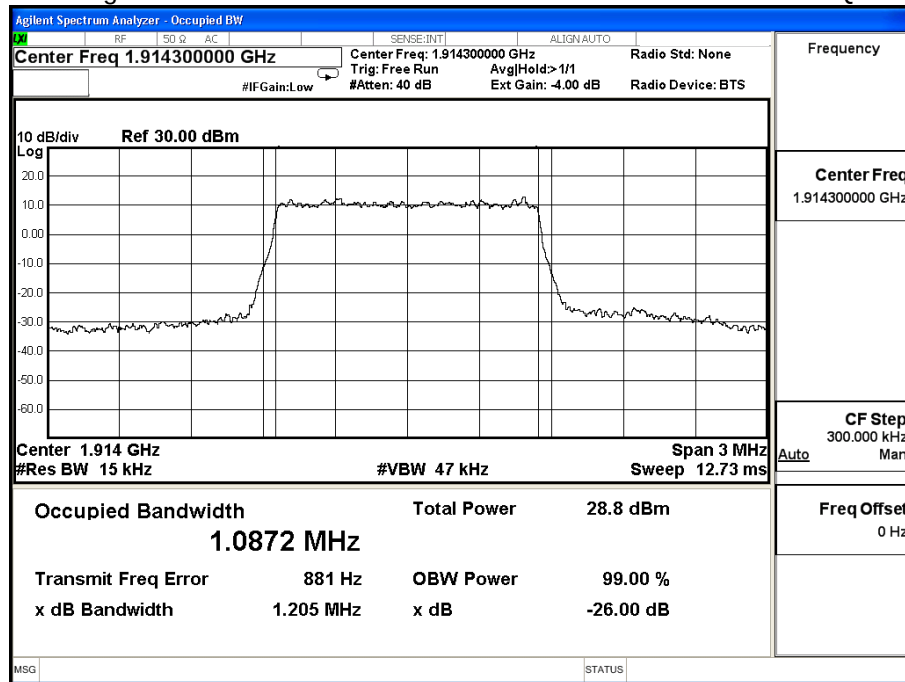
1.4 MHz QPSK





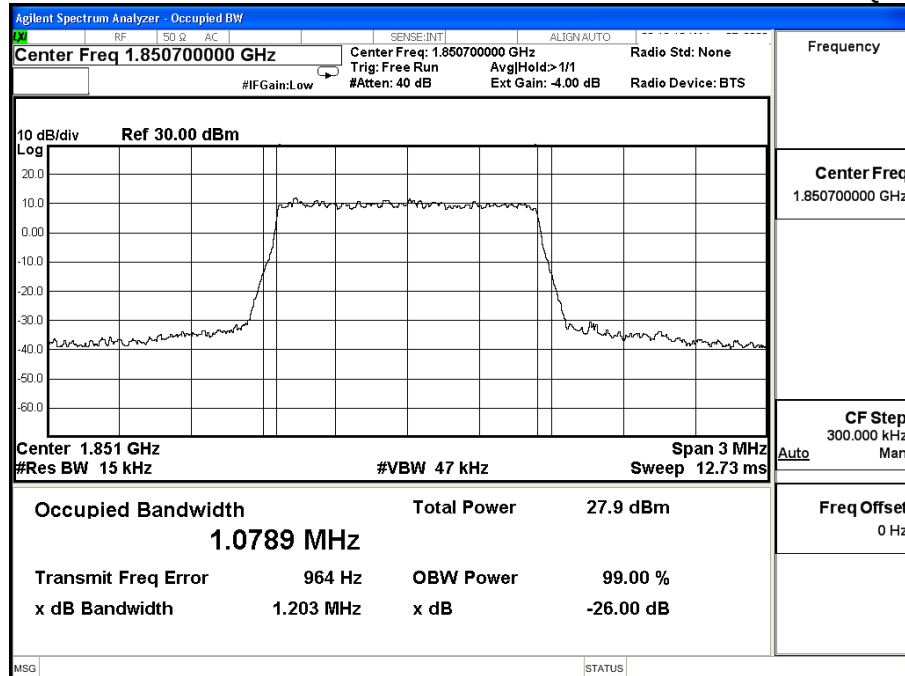
LTE Band 2 Highest channel:

1.4 MHz QPSK



LTE Band 2 Lowest channel

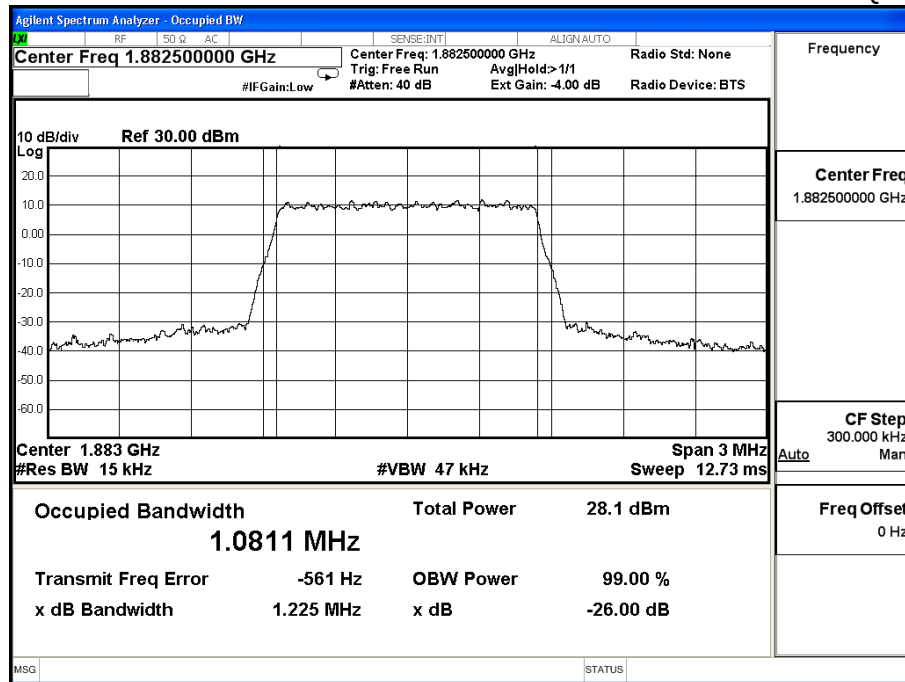
1.4 MHz 16-QAM





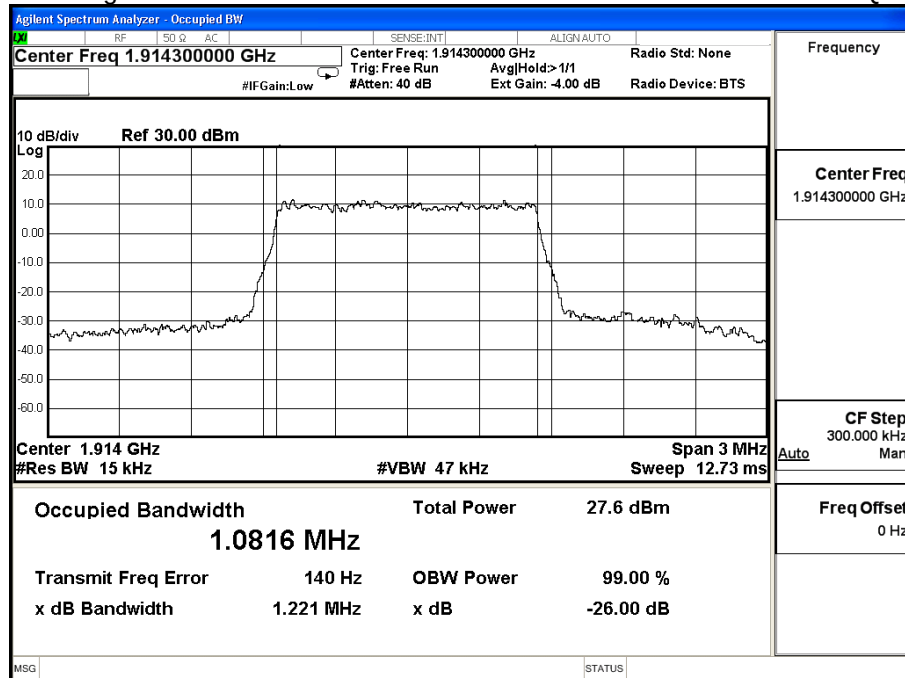
LTE Band 2 Middle channel

1.4 MHz 16-QAM



LTE Band 2 Highest channel:

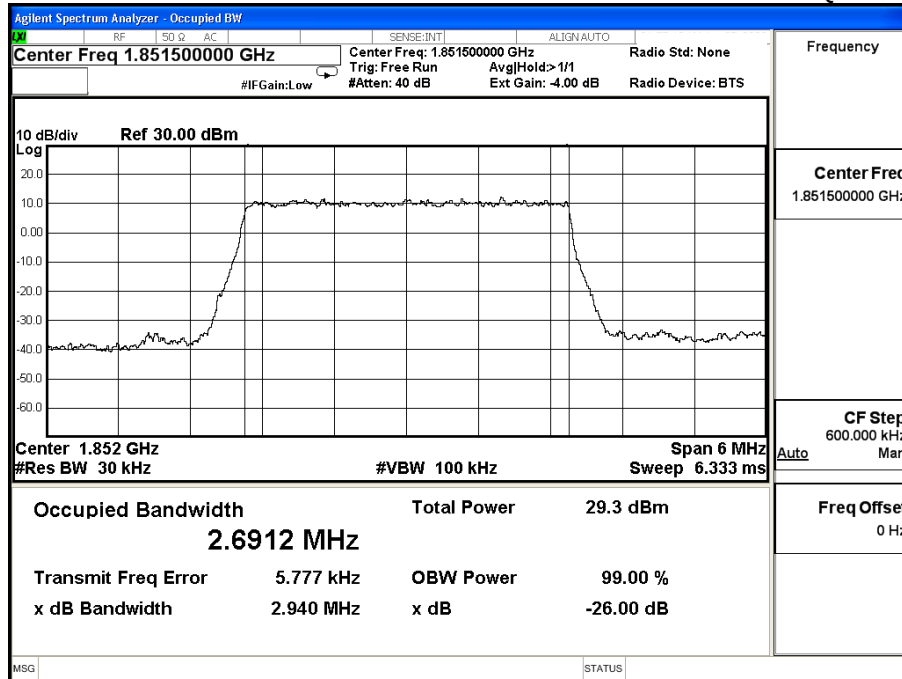
1.4 MHz 16-QAM





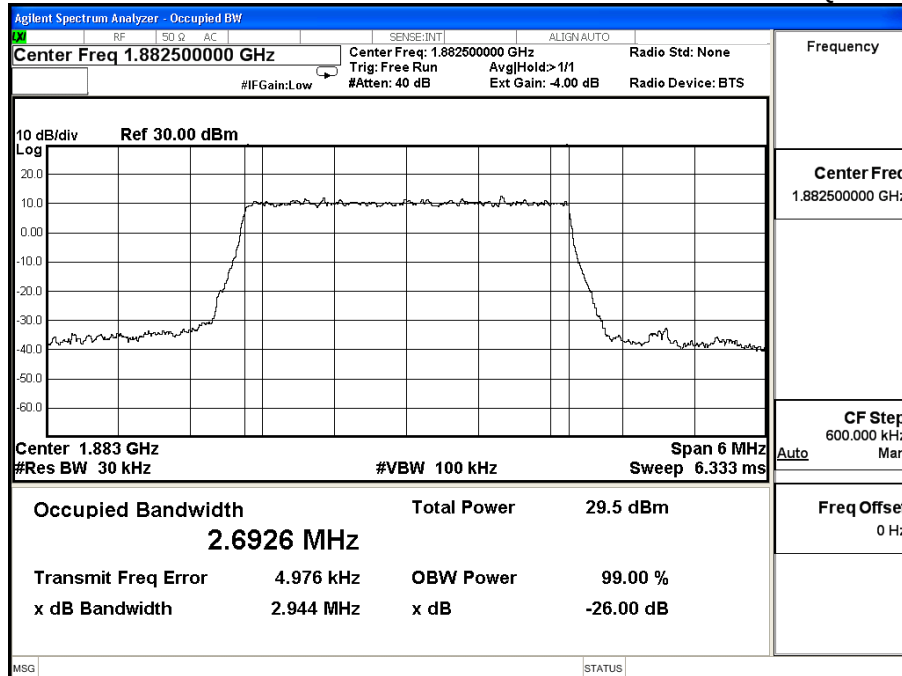
LTE Band 2 Lowest channel

3 MHz QPSK



LTE Band 2 Middle channel

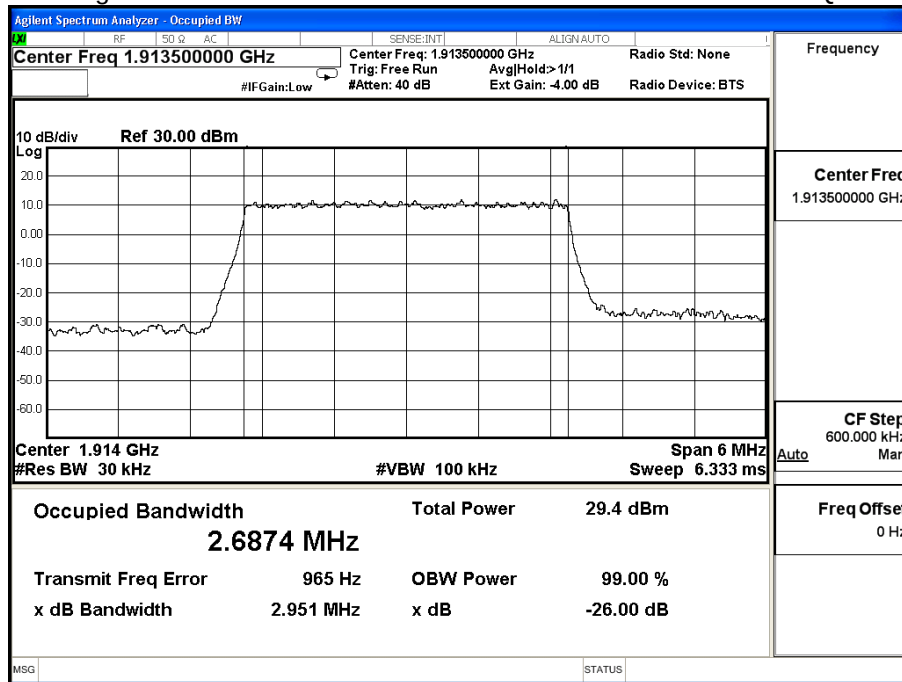
3 MHz QPSK





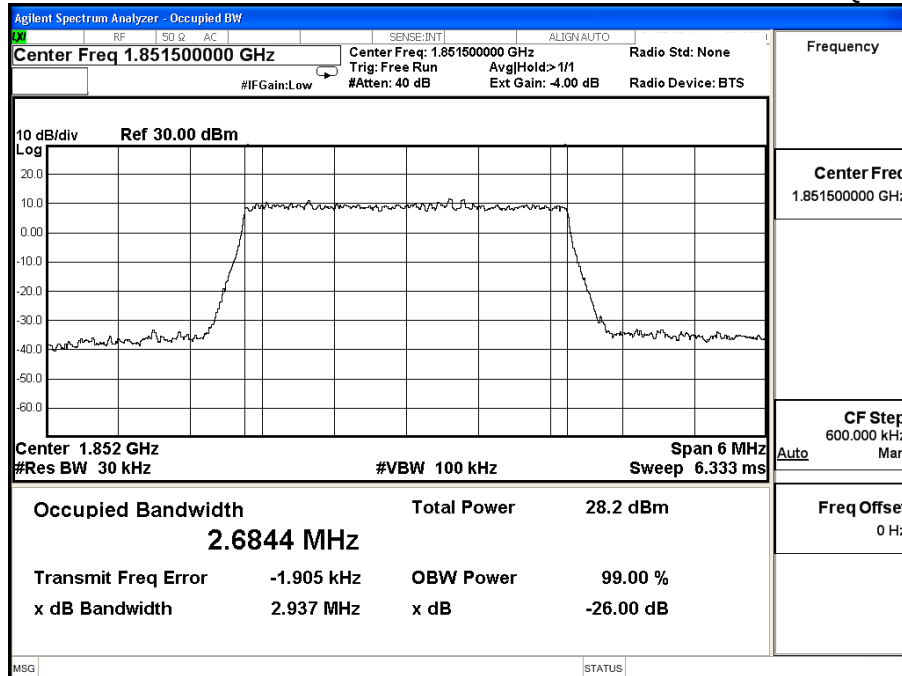
LTE Band 2 Highest channel:

3 MHz QPSK



LTE Band 2 Lowest channel

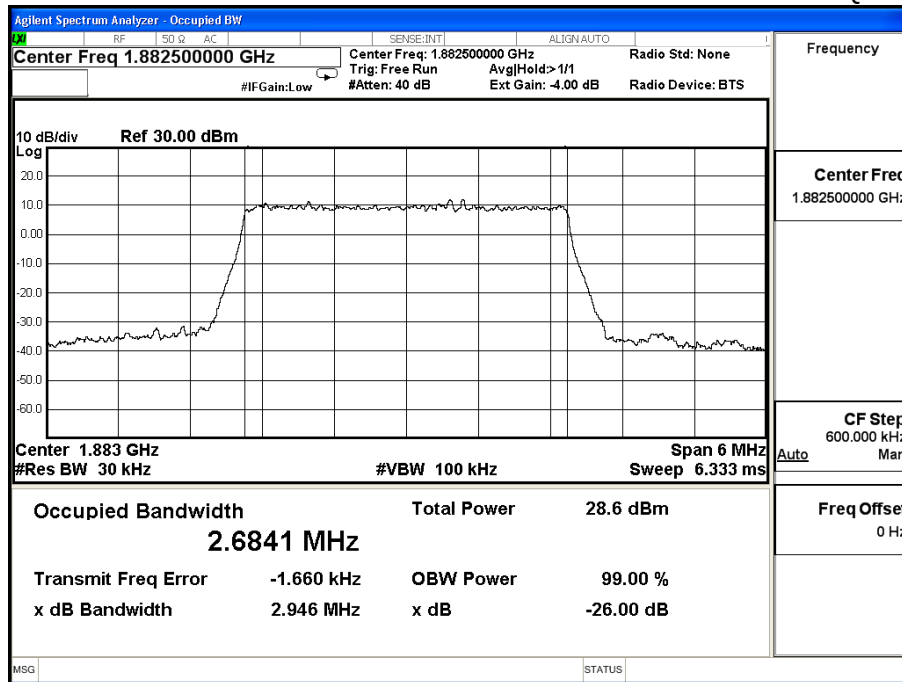
3 MHz 16-QAM





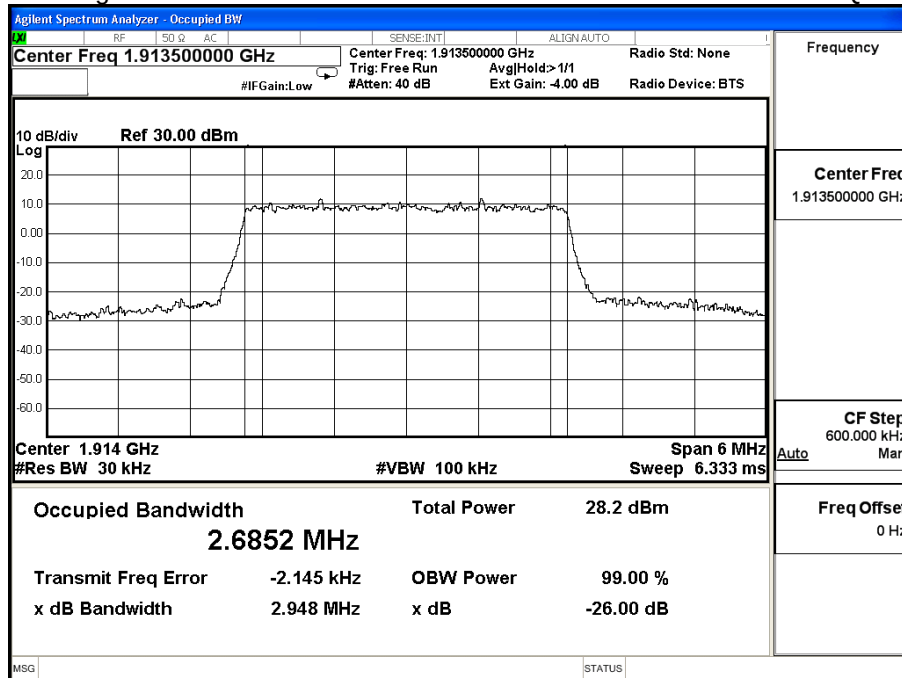
LTE Band 2 Middle channel

3 MHz 16-QAM



LTE Band 2 Highest channel:

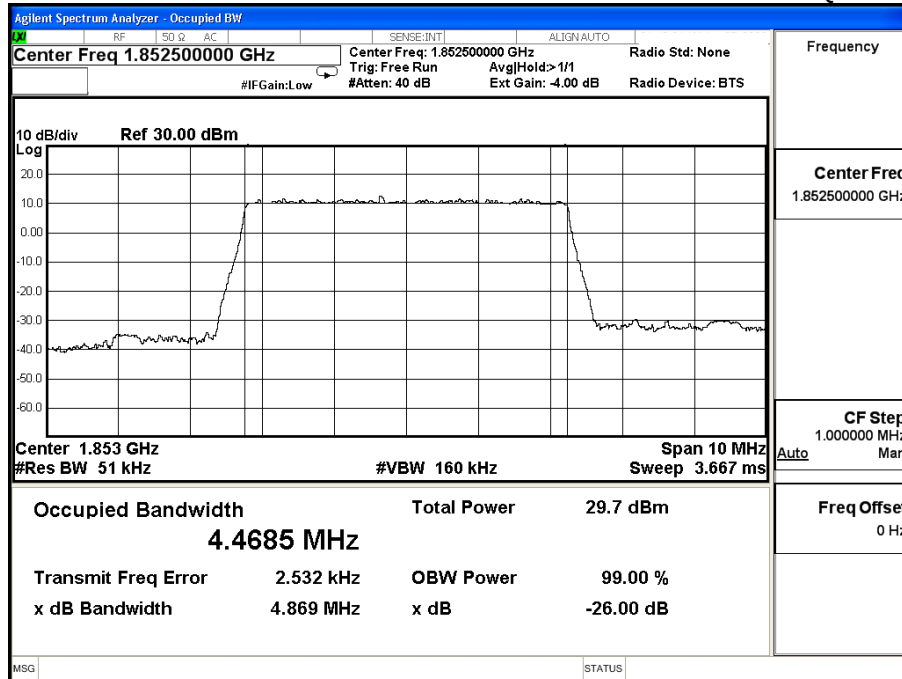
3 MHz 16-QAM





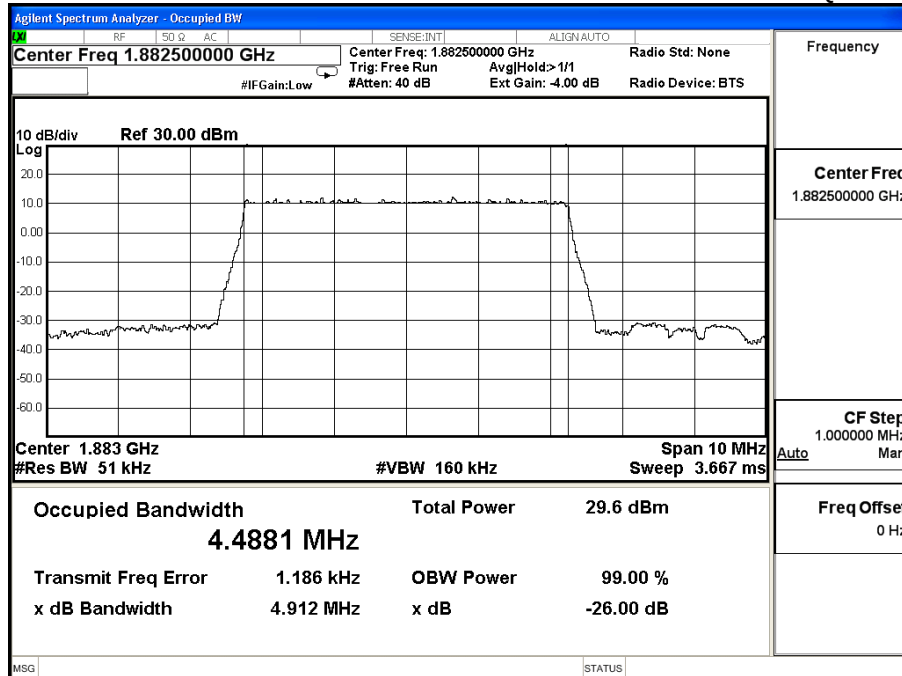
LTE Band 2 Lowest channel

5 MHz QPSK



LTE Band 2 Middle channel

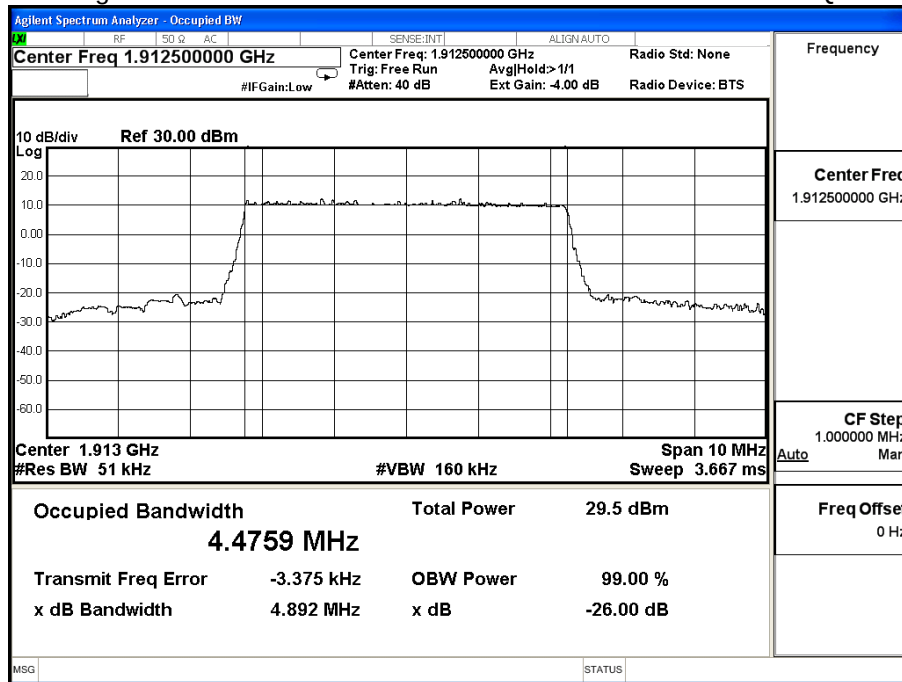
5 MHz QPSK





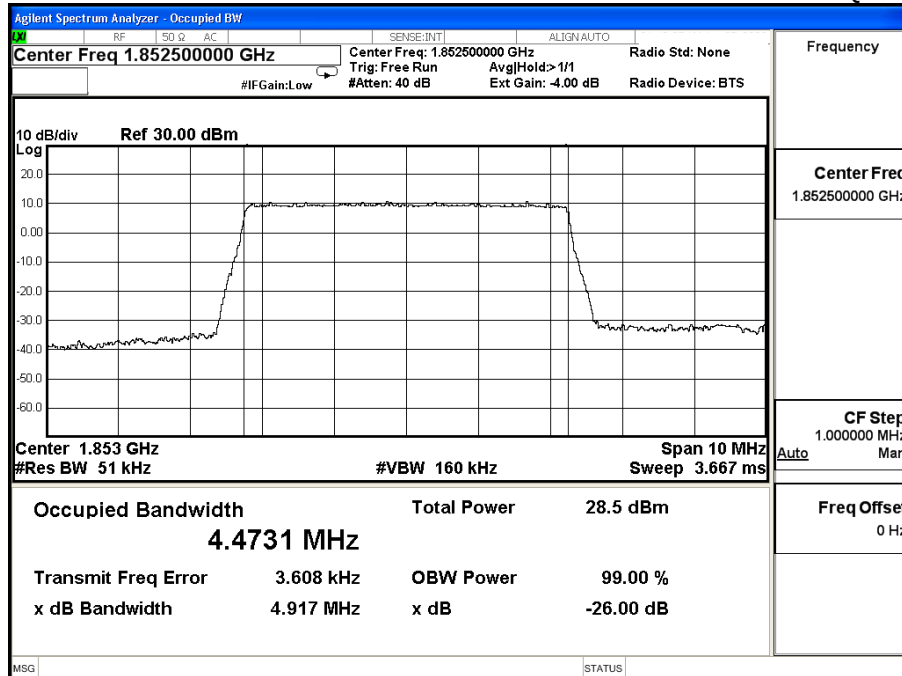
LTE Band 2 Highest channel:

5 MHz QPSK



LTE Band 2 Lowest channel

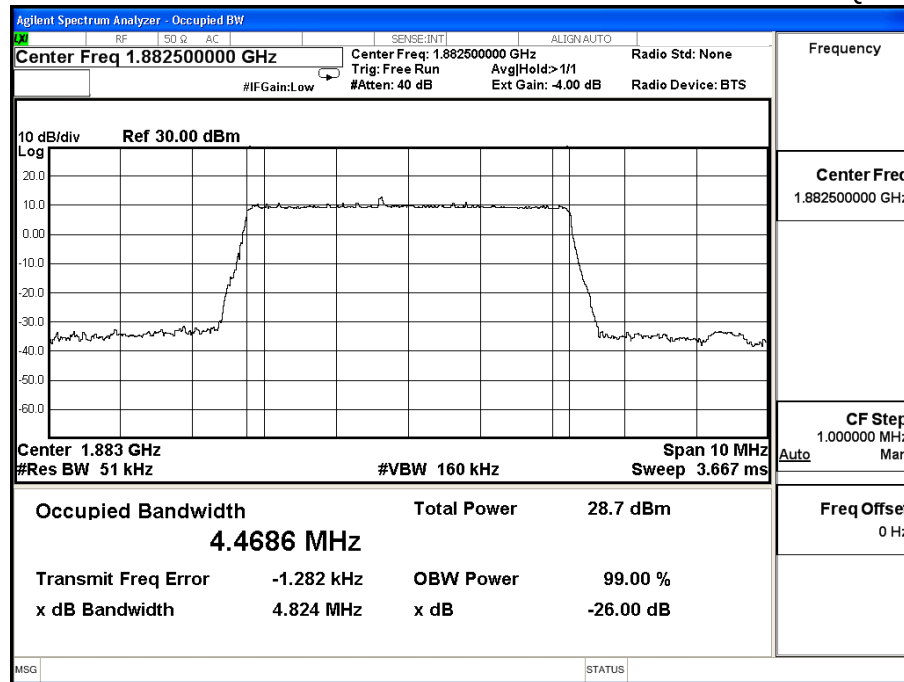
5 MHz 16-QAM





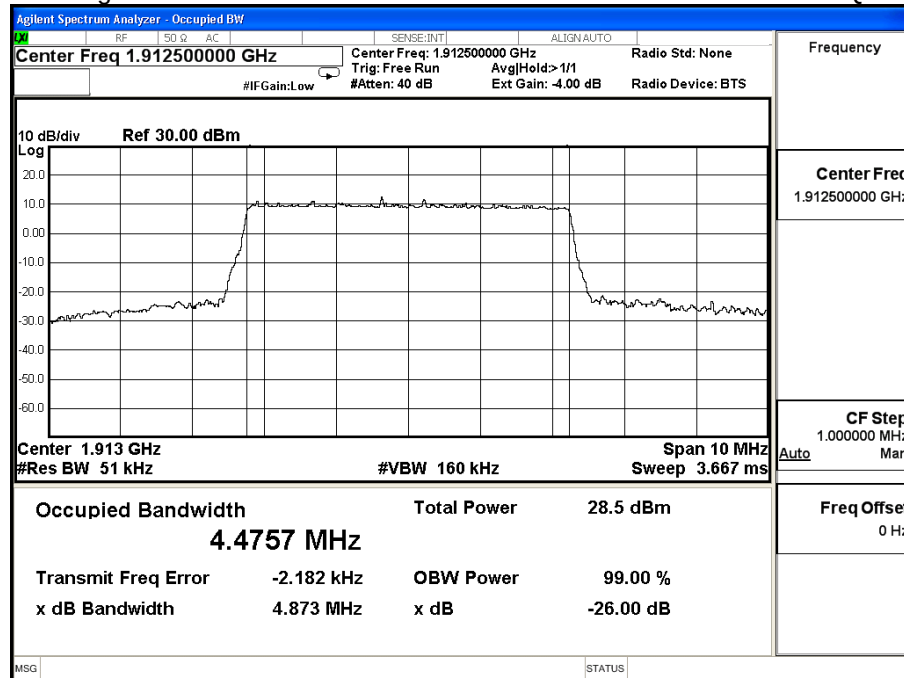
LTE Band 2 Middle channel

5 MHz 16-QAM



LTE Band 2 Highest channel:

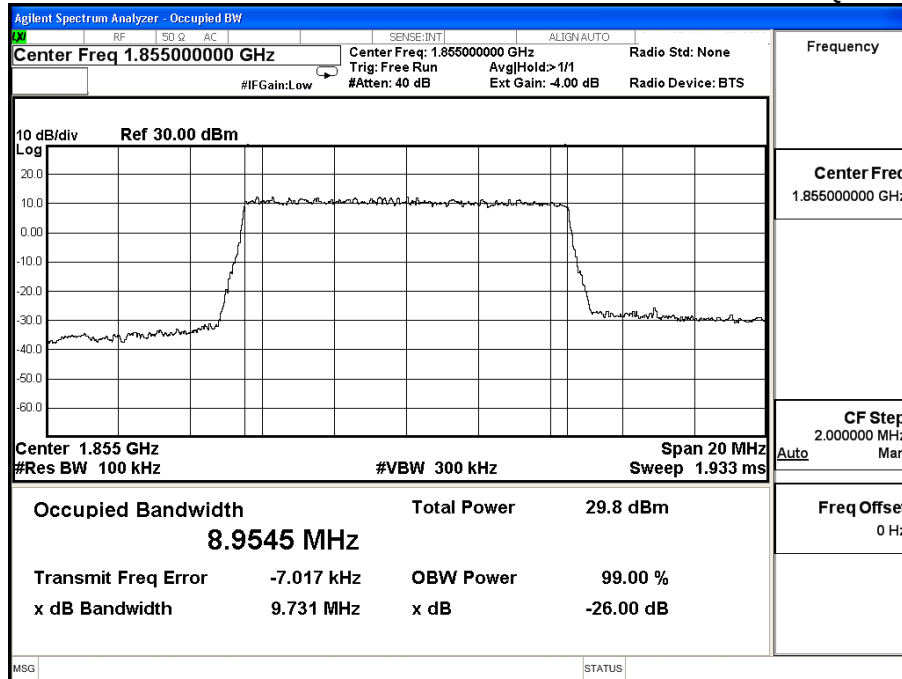
5 MHz 16-QAM





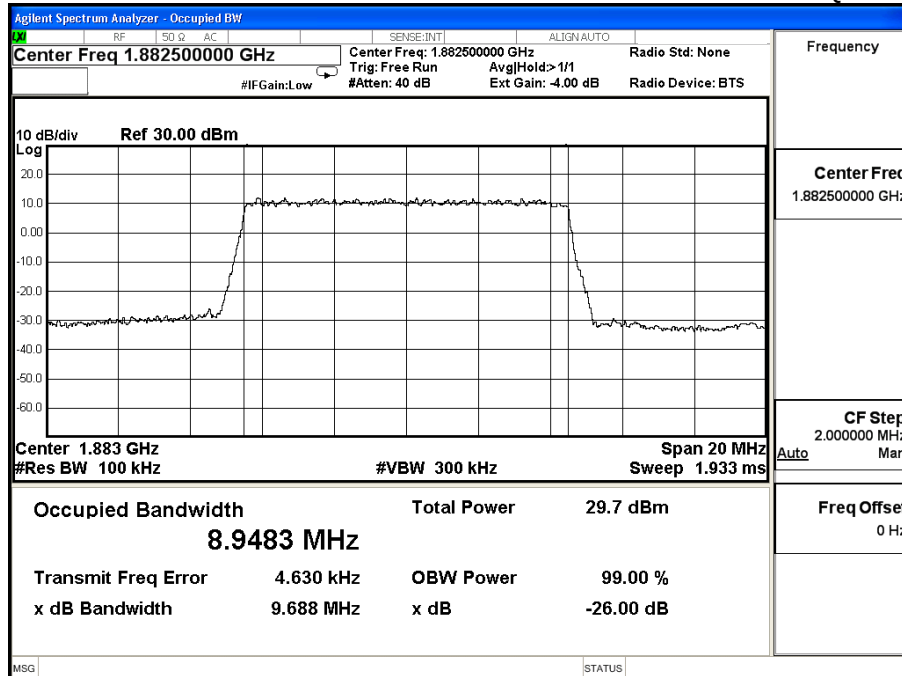
LTE Band 2 Lowest channel

10 MHz QPSK



LTE Band 2 Middle channel

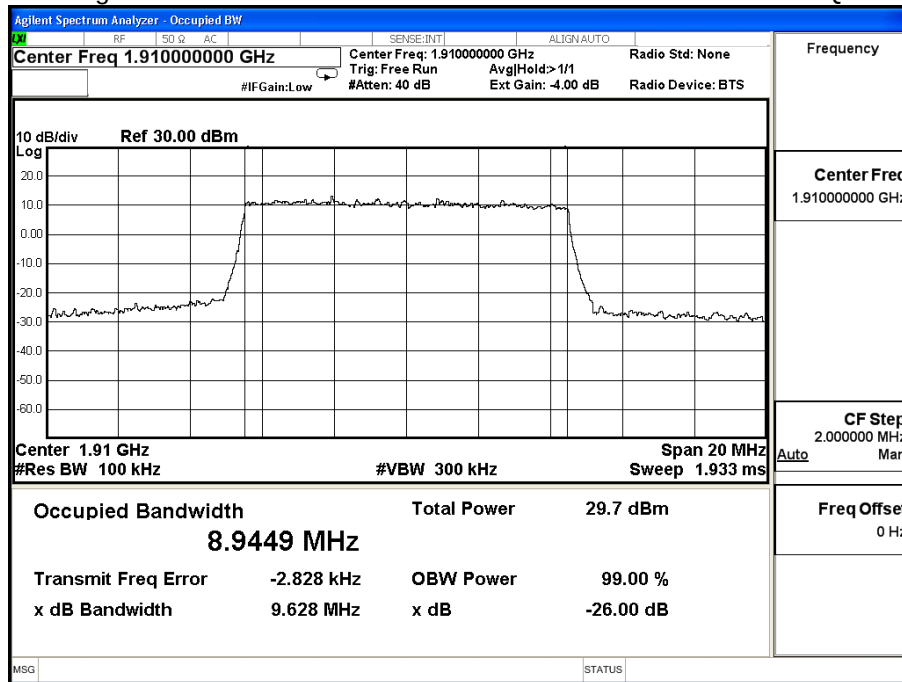
10 MHz QPSK





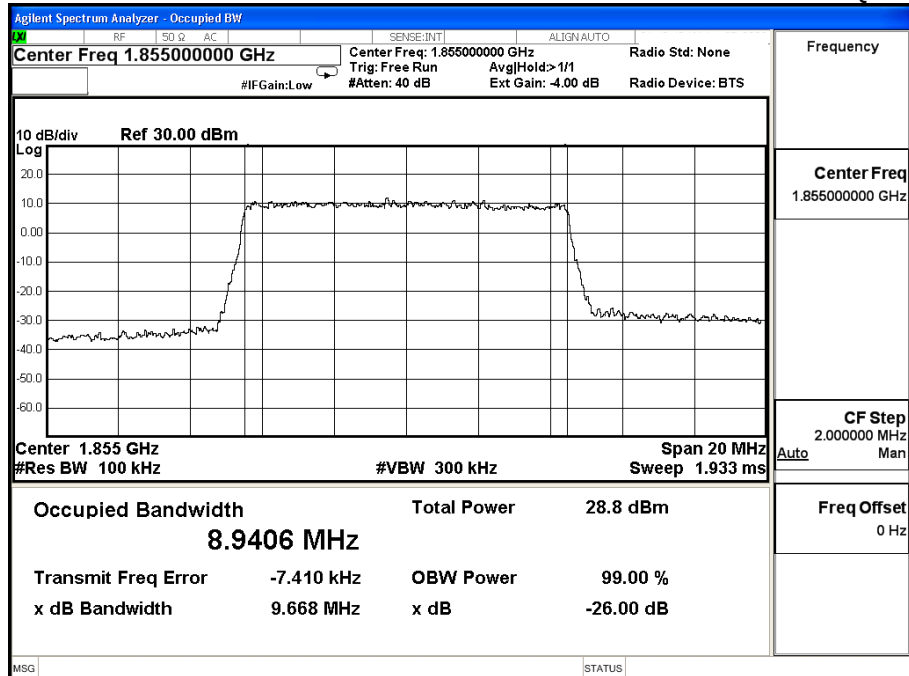
LTE Band 2 Highest channel:

10 MHz QPSK



LTE Band 2 Lowest channel

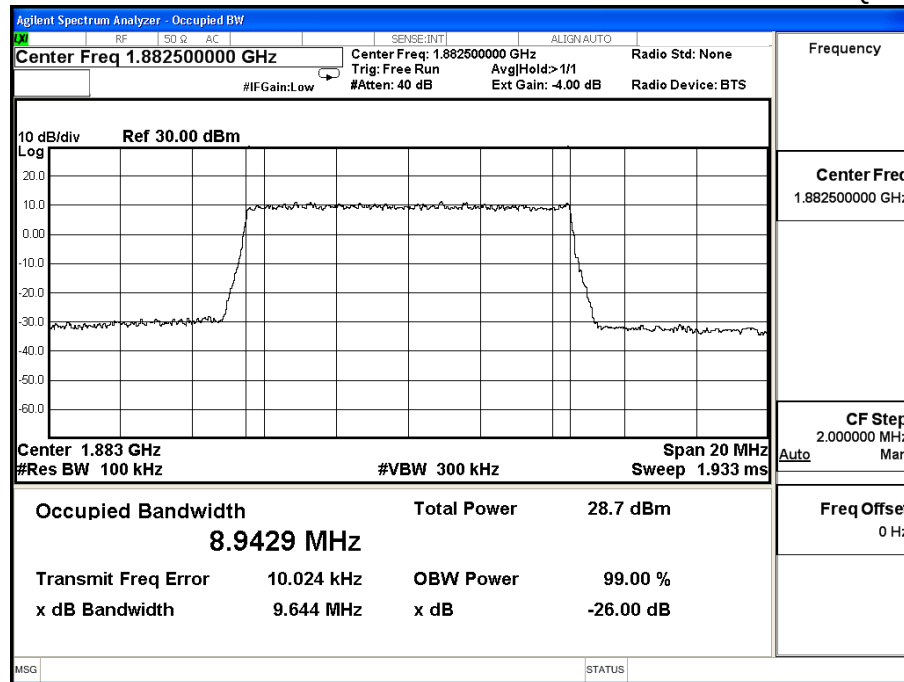
10 MHz 16-QAM





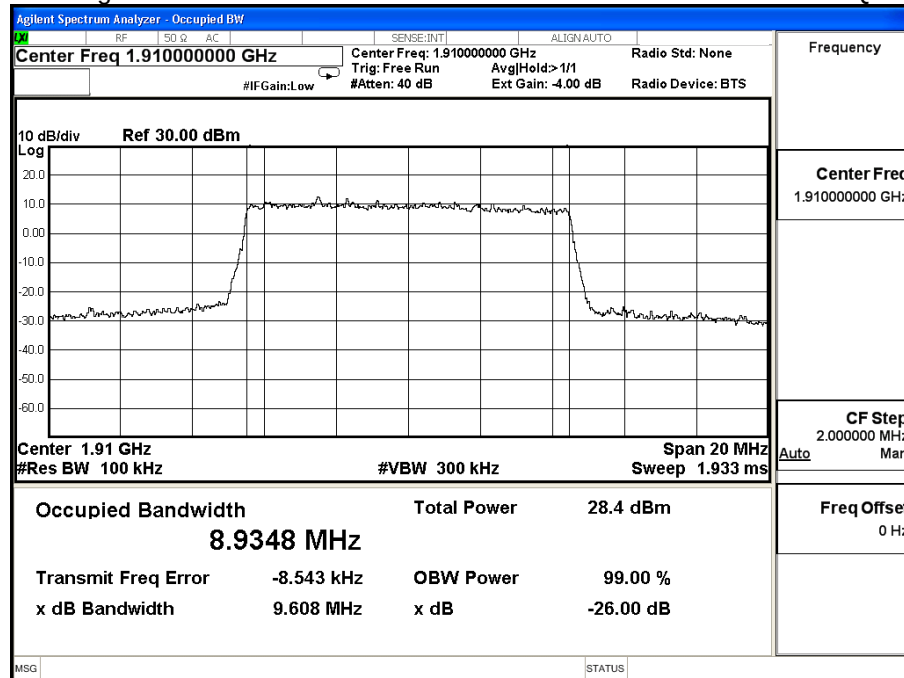
LTE Band 2 Middle channel

10 MHz 16-QAM



LTE Band 2 Highest channel:

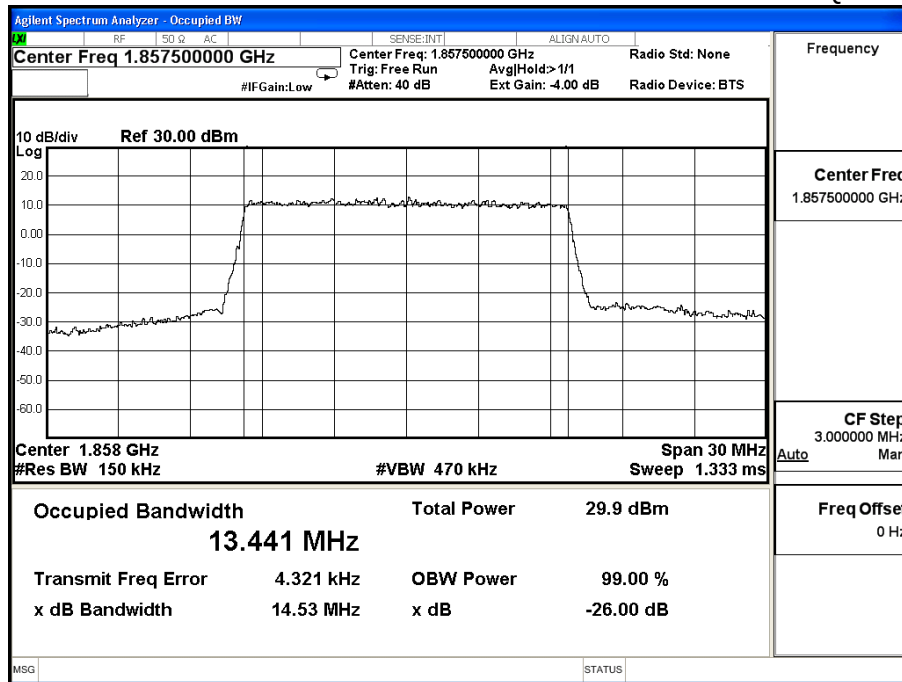
10 MHz 16-QAM





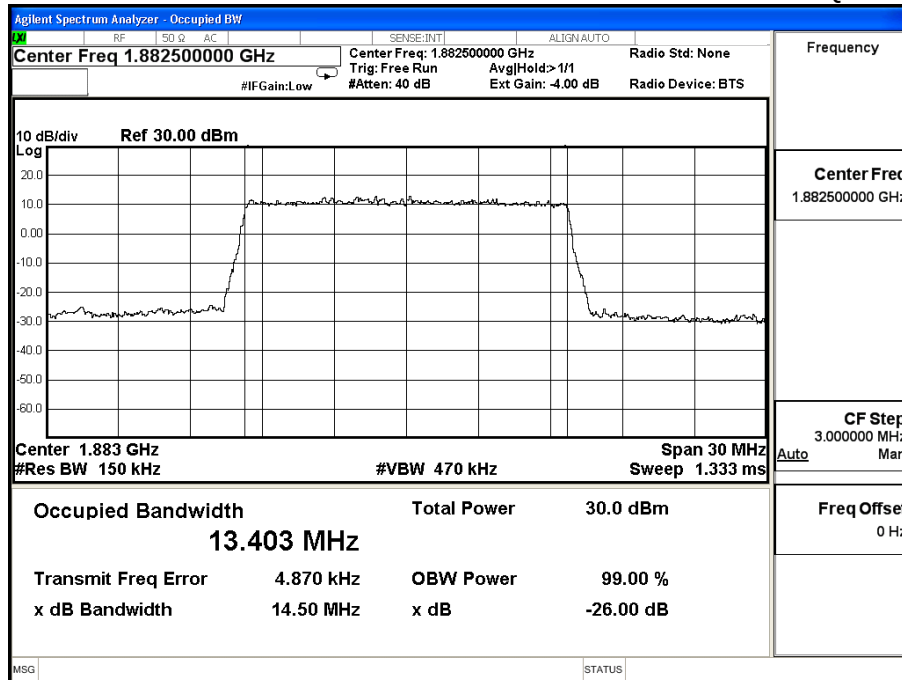
LTE Band 2 Lowest channel

15 MHz QPSK



LTE Band 2 Middle channel

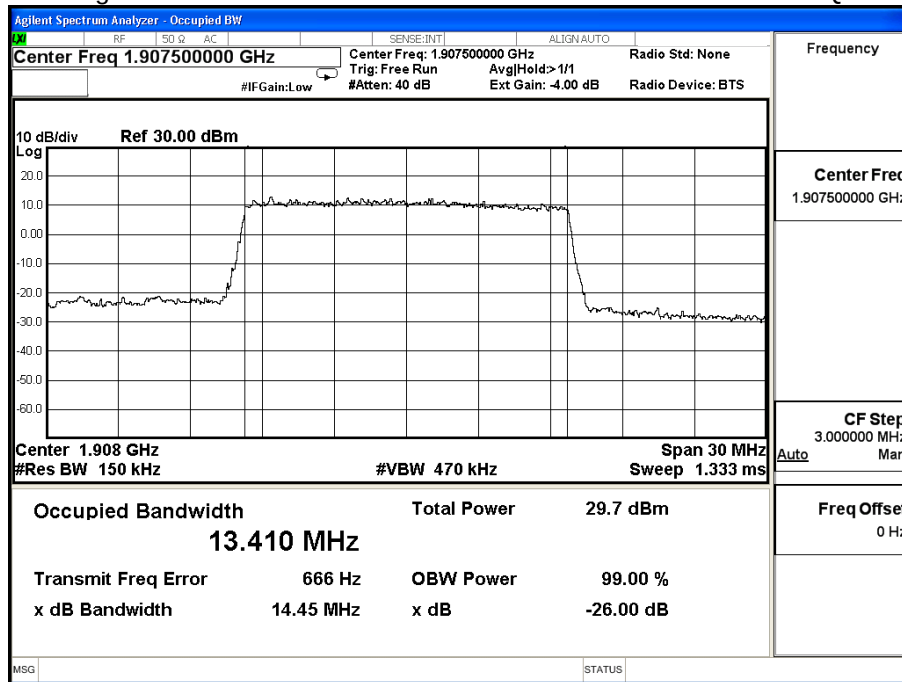
15 MHz QPSK





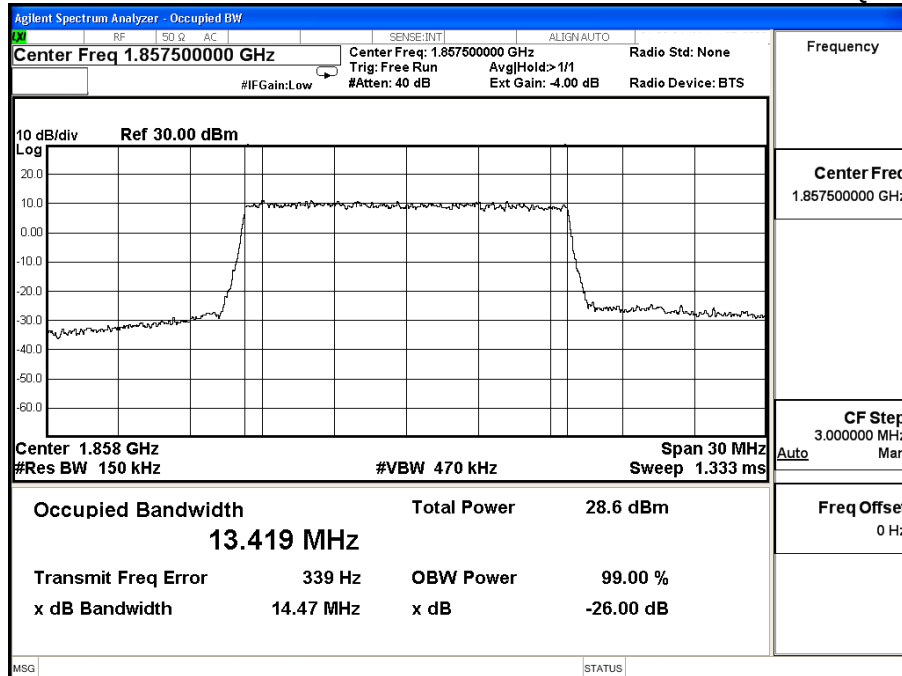
LTE Band 2 Highest channel:

15 MHz QPSK



LTE Band 2 Lowest channel

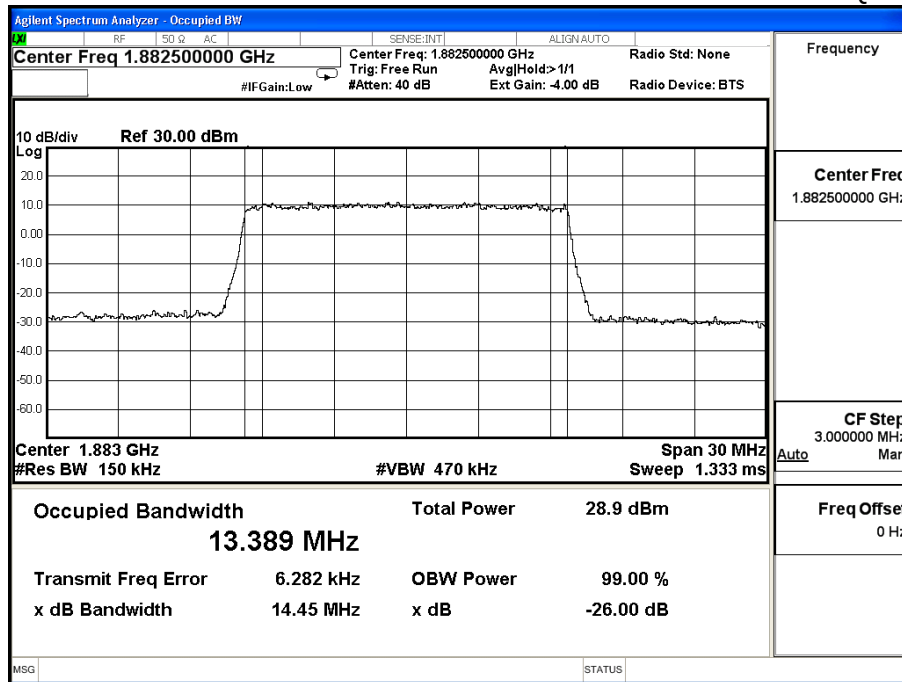
15 MHz 16-QAM





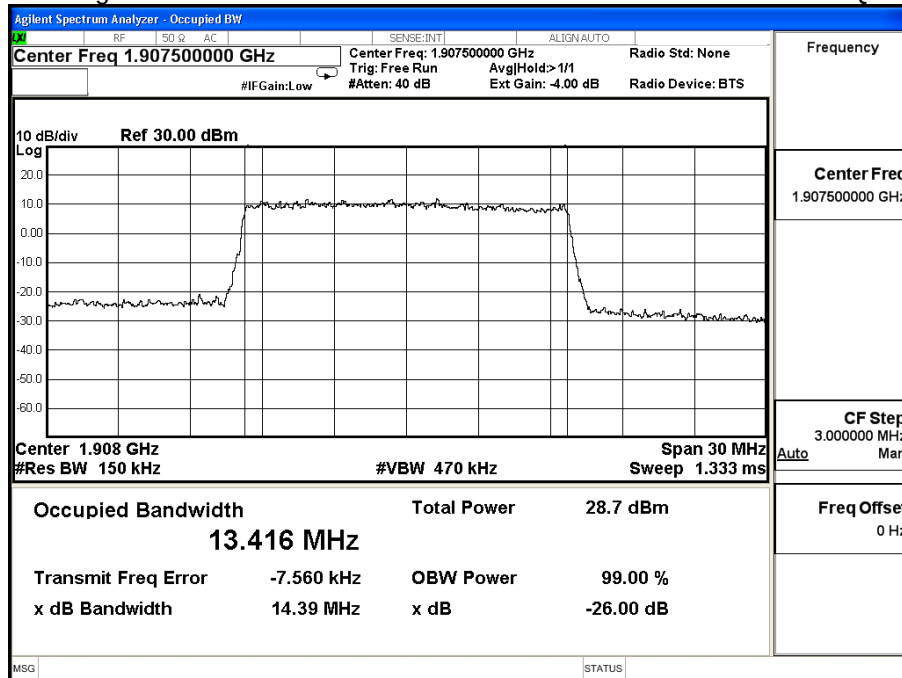
LTE Band 2 Middle channel

15 MHz 16-QAM



LTE Band 2 Highest channel:

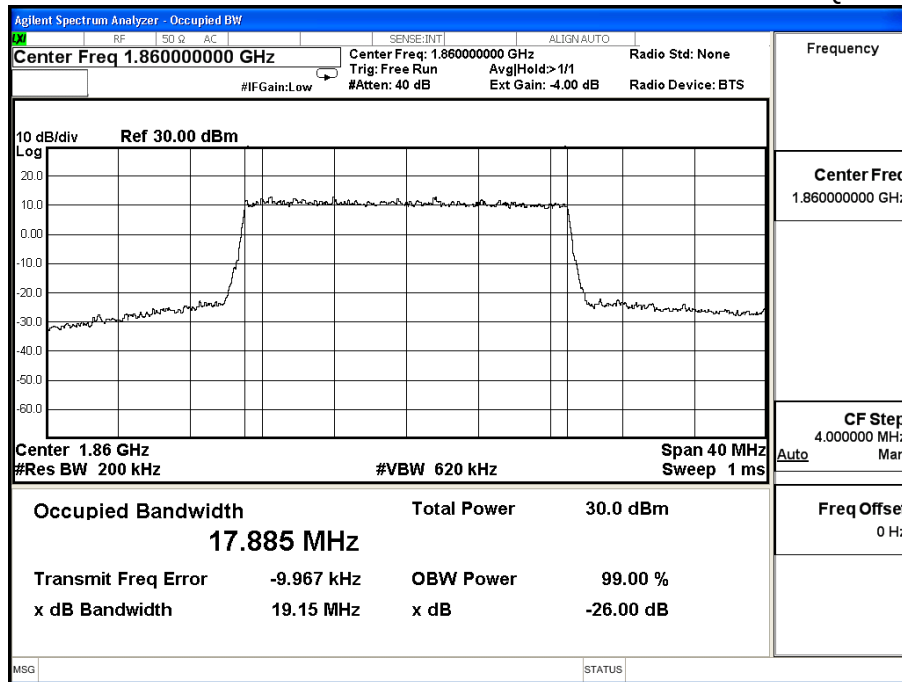
15 MHz 16-QAM





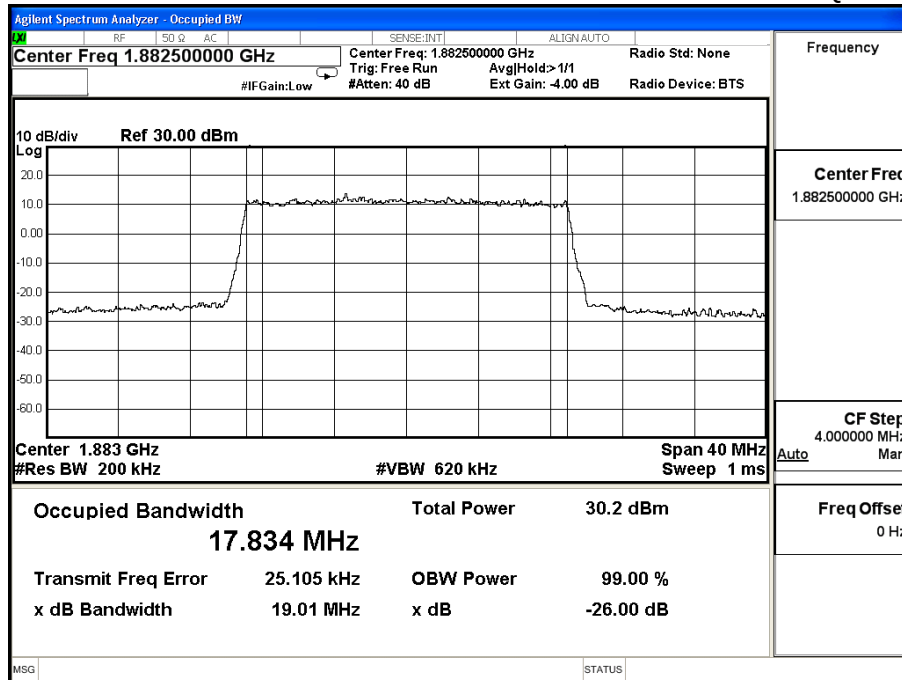
LTE Band 2 Lowest channel

20 MHz QPSK



LTE Band 2 Middle channel

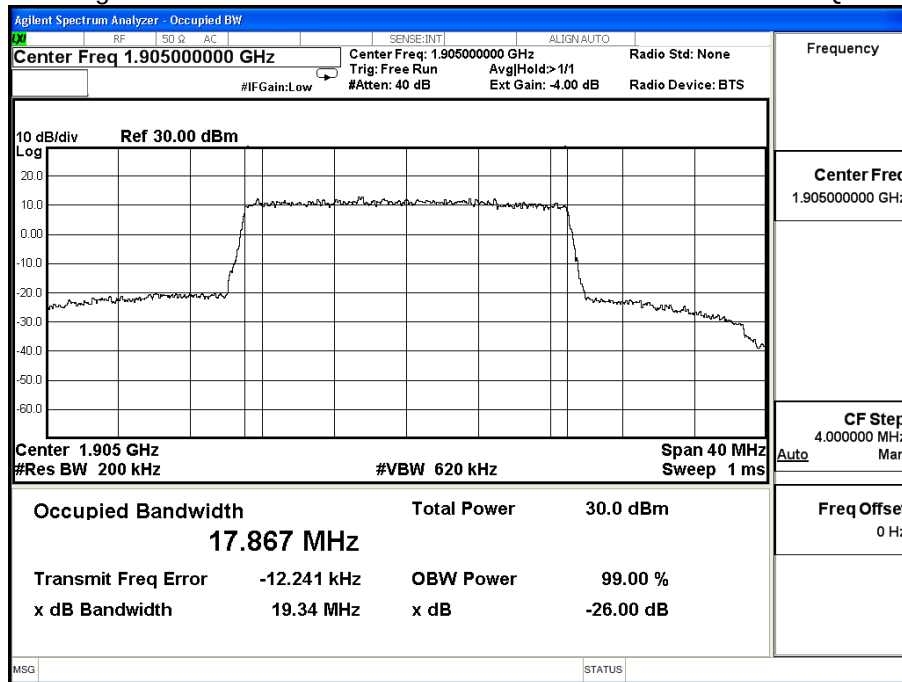
20 MHz QPSK





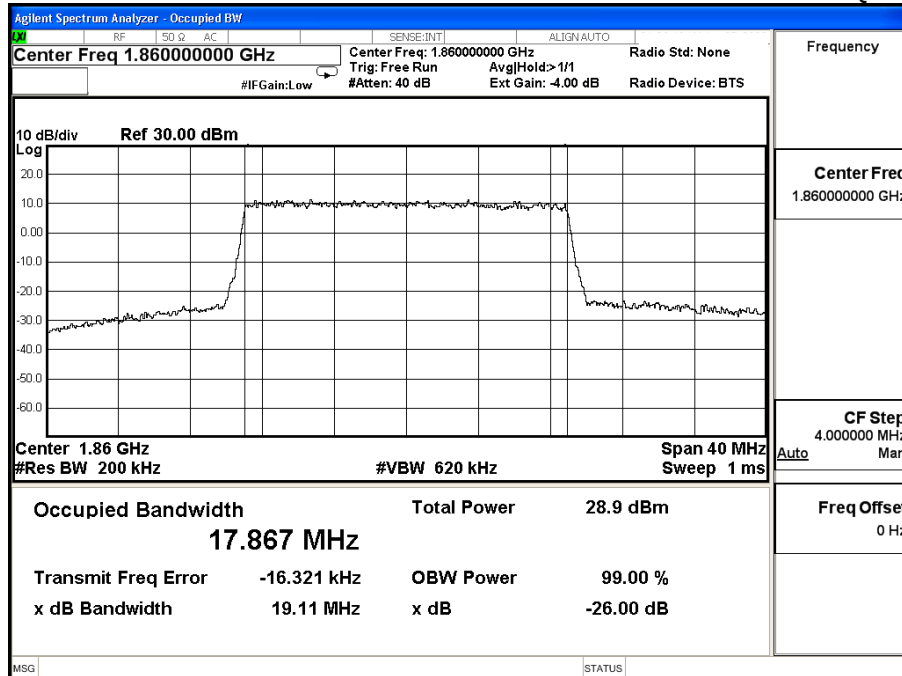
LTE Band 2 Highest channel:

20 MHz QPSK



LTE Band 2 Lowest channel

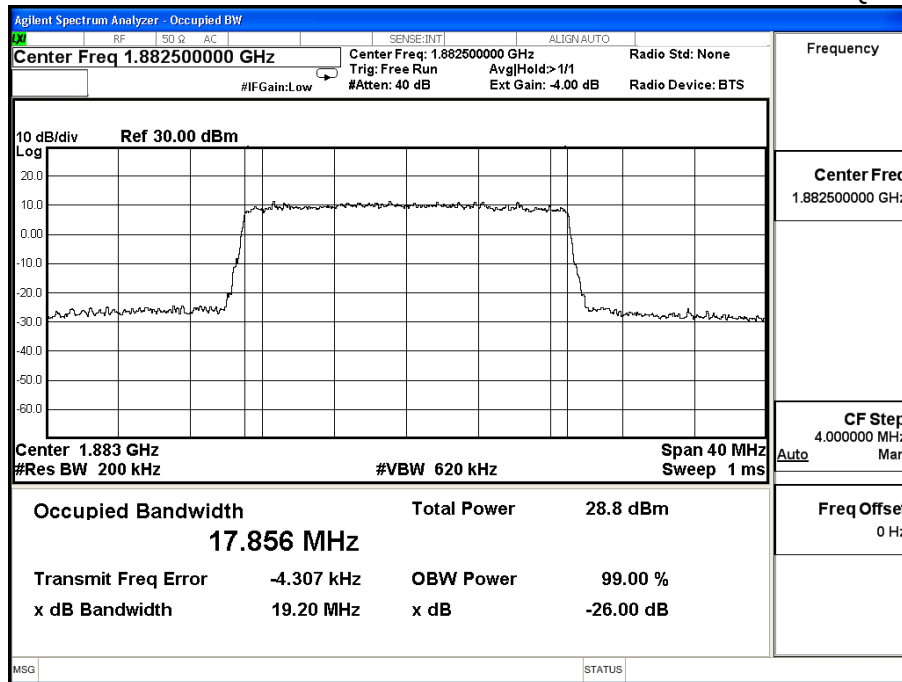
20 MHz 16-QAM





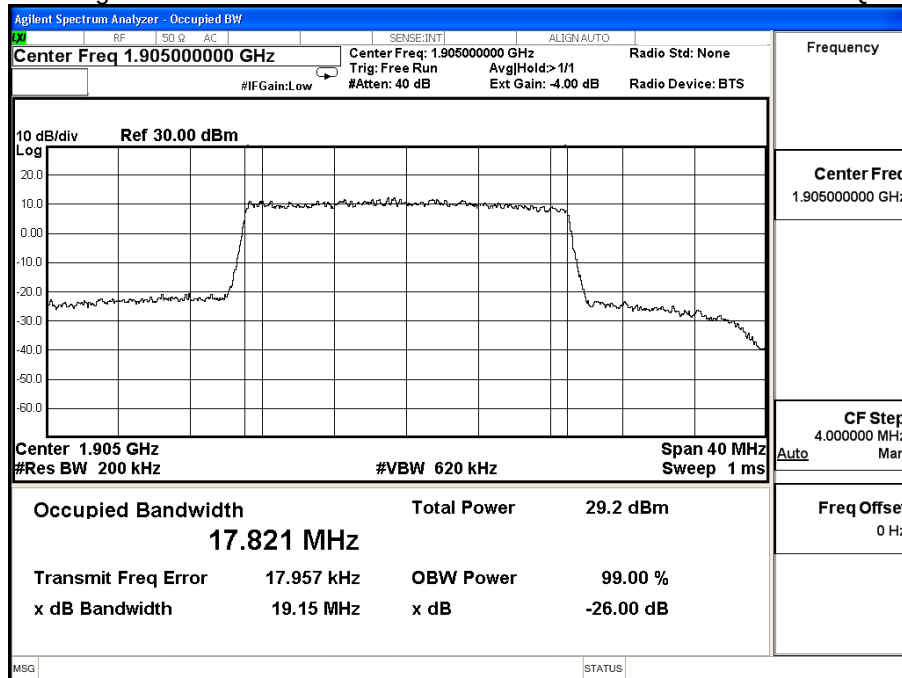
LTE Band 2 Middle channel

20 MHz 16-QAM



LTE Band 2 Highest channel:

20 MHz 16-QAM





1.2. Conducted Spurious Emissions

1.2.1. Test Result

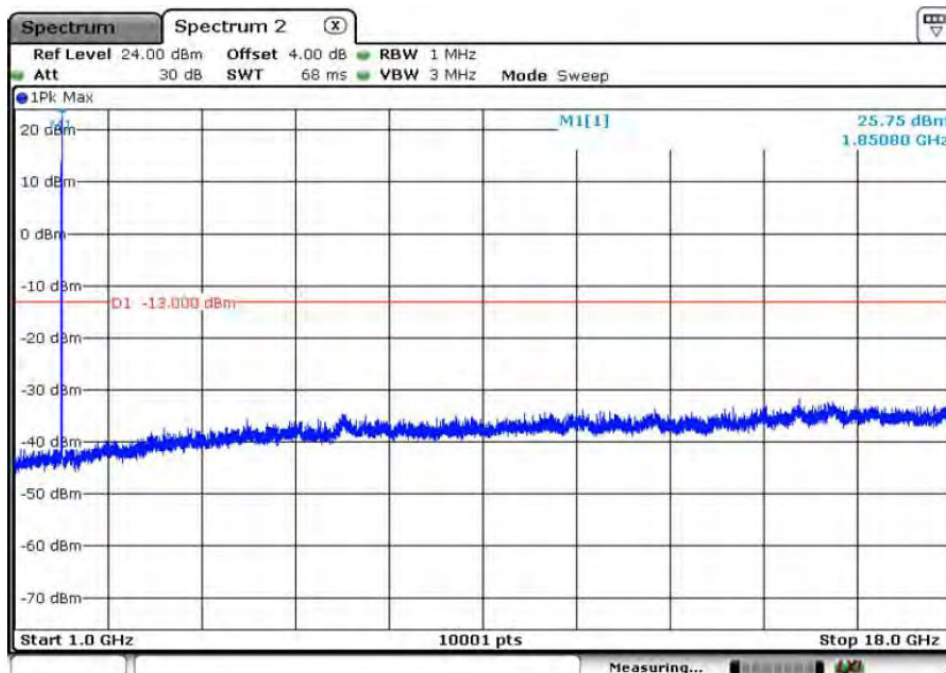
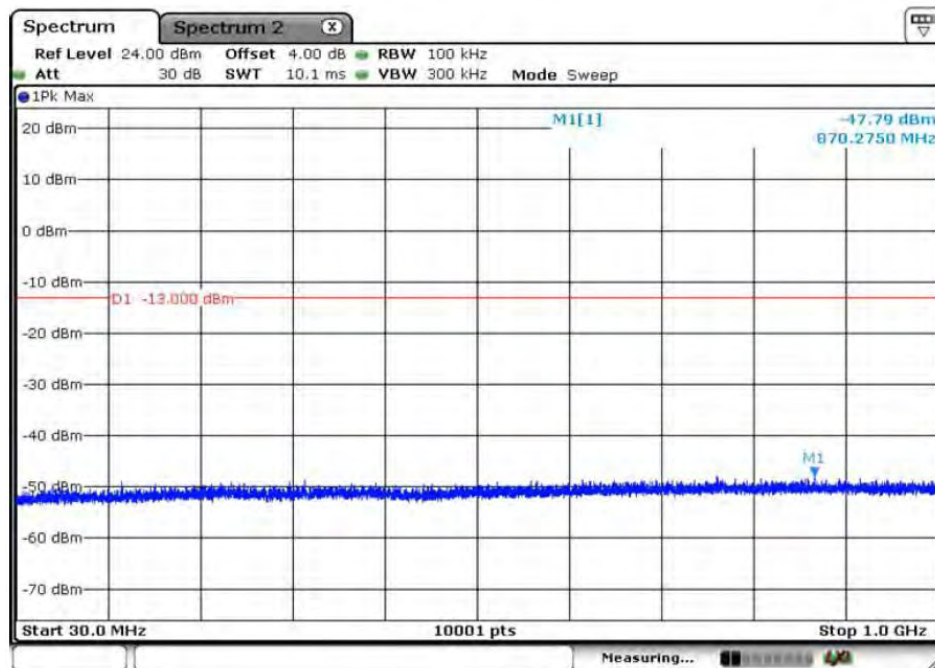
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

For LTE mode, the plot only show the QPSK, RB100's data.

Pass, the table and plot please see annex.

LTE Band 2 Lowest channel

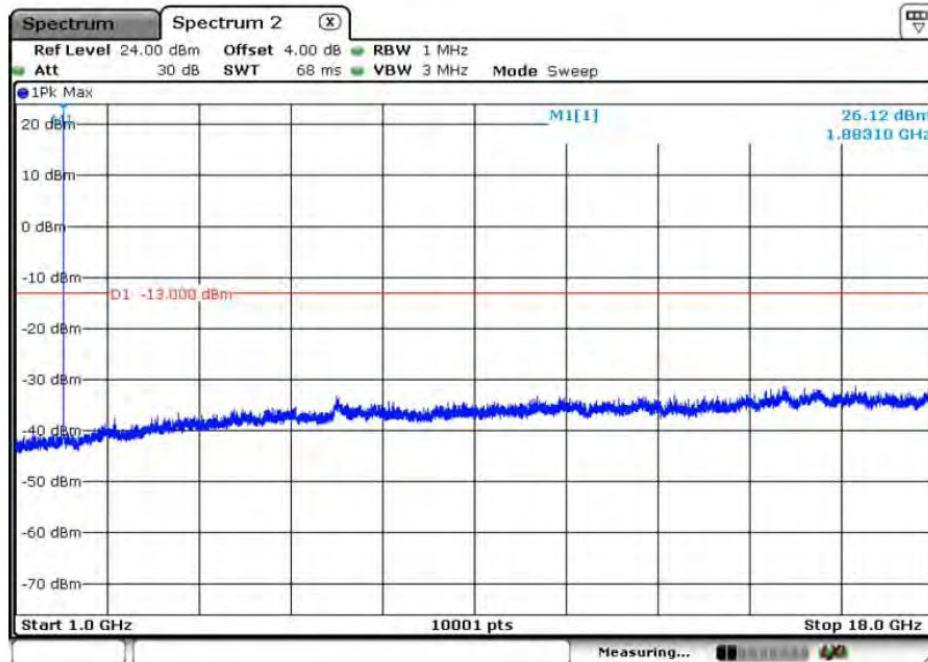
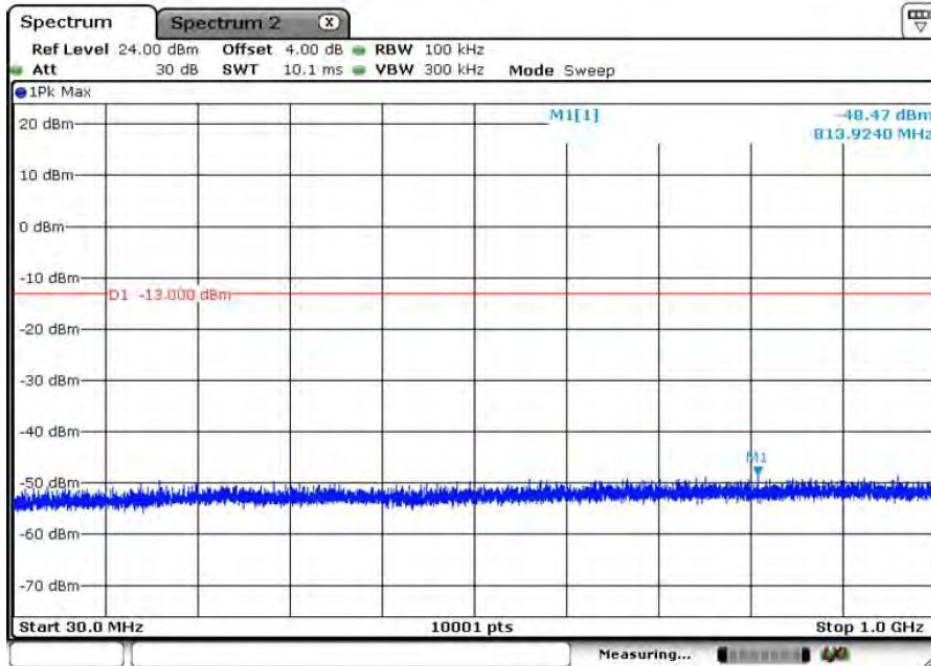
1.4MHz





LTE Band 2 middle channel

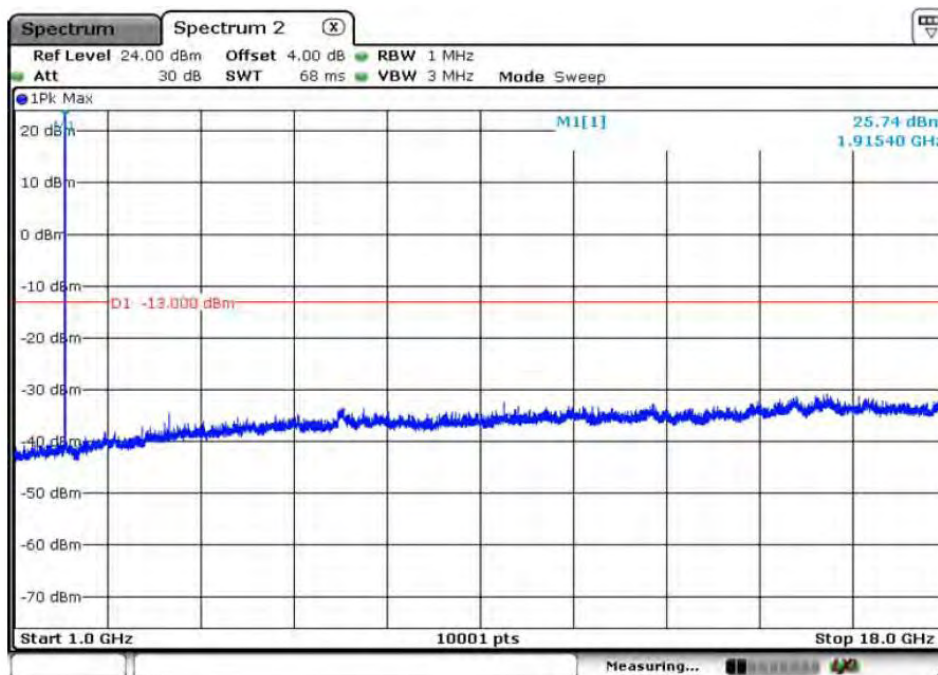
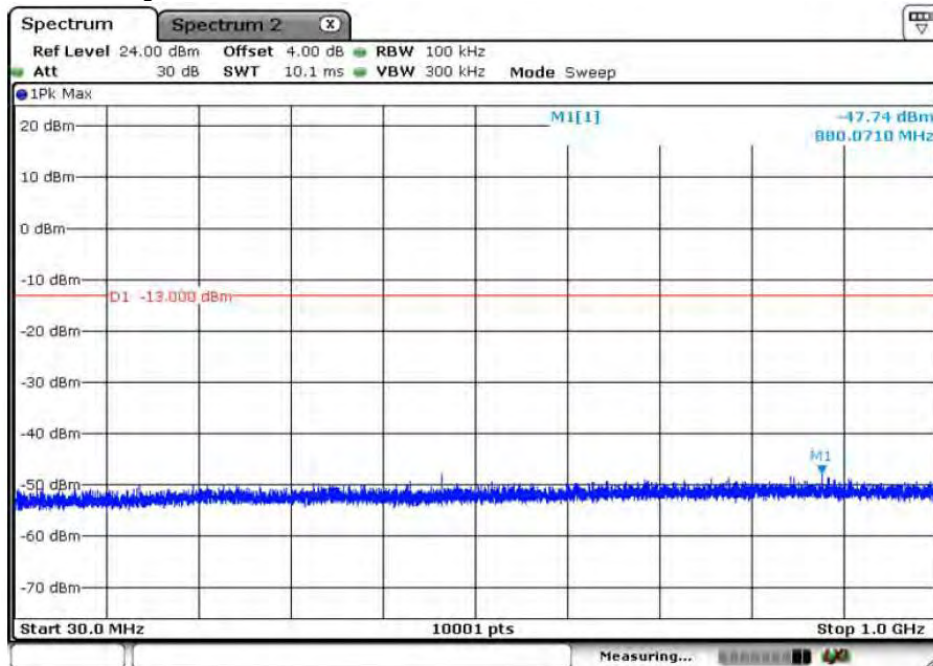
1.4MHz





LTE Band 2 high channel

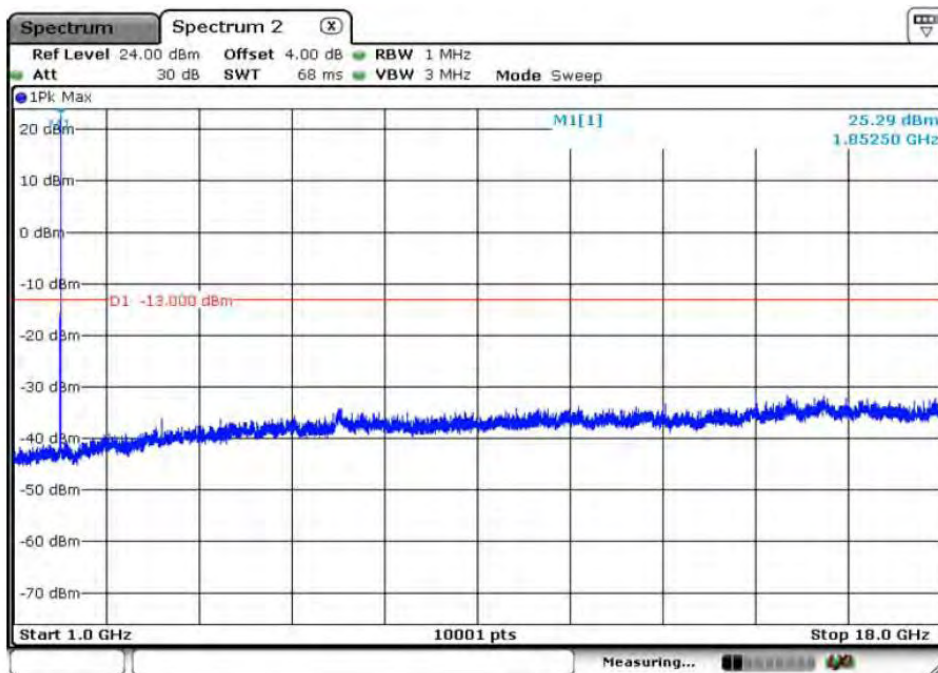
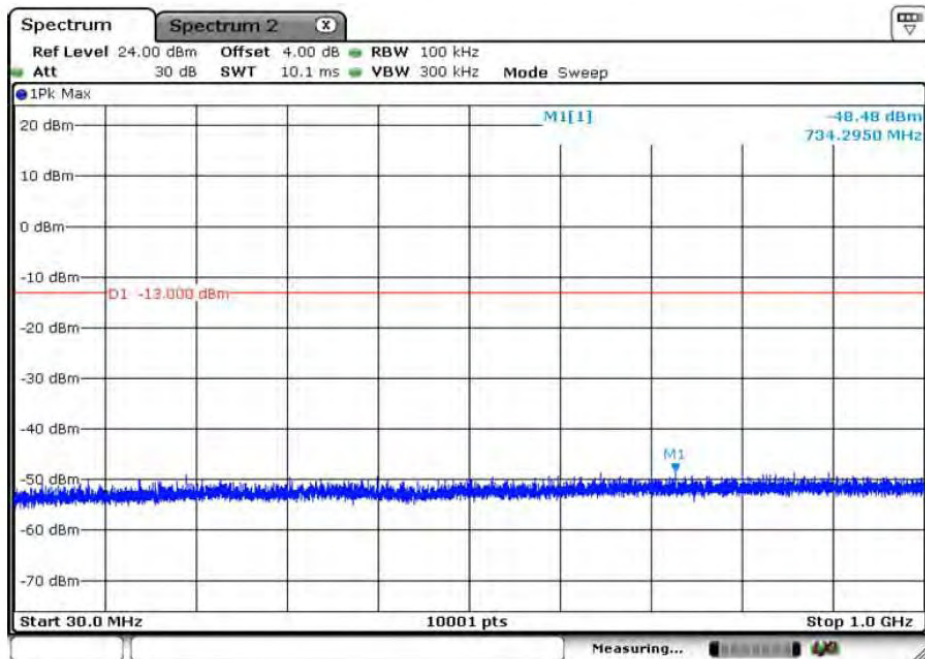
1.4MHz





LTE Band 2 Lowest channel

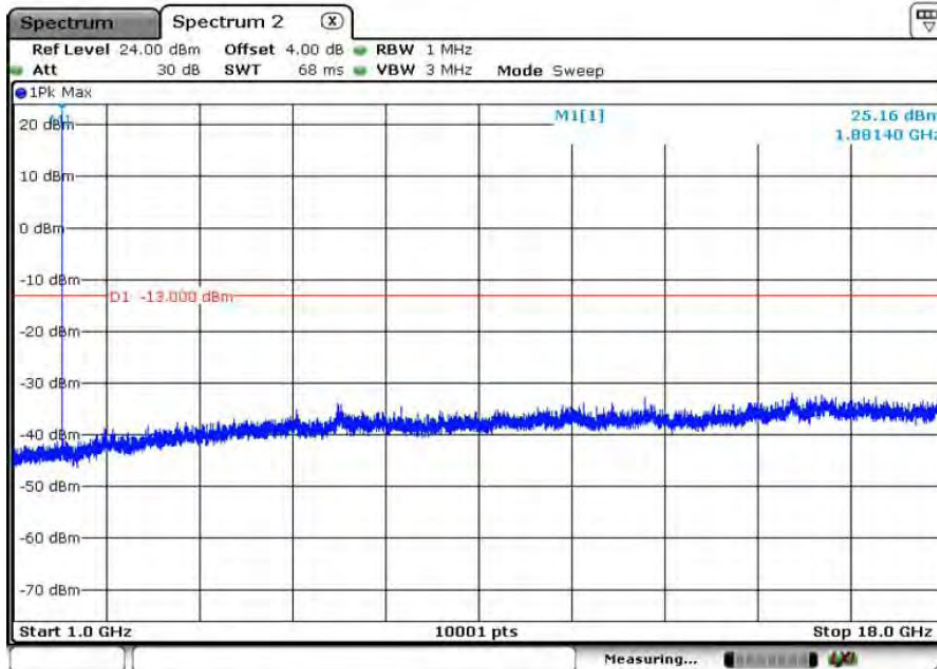
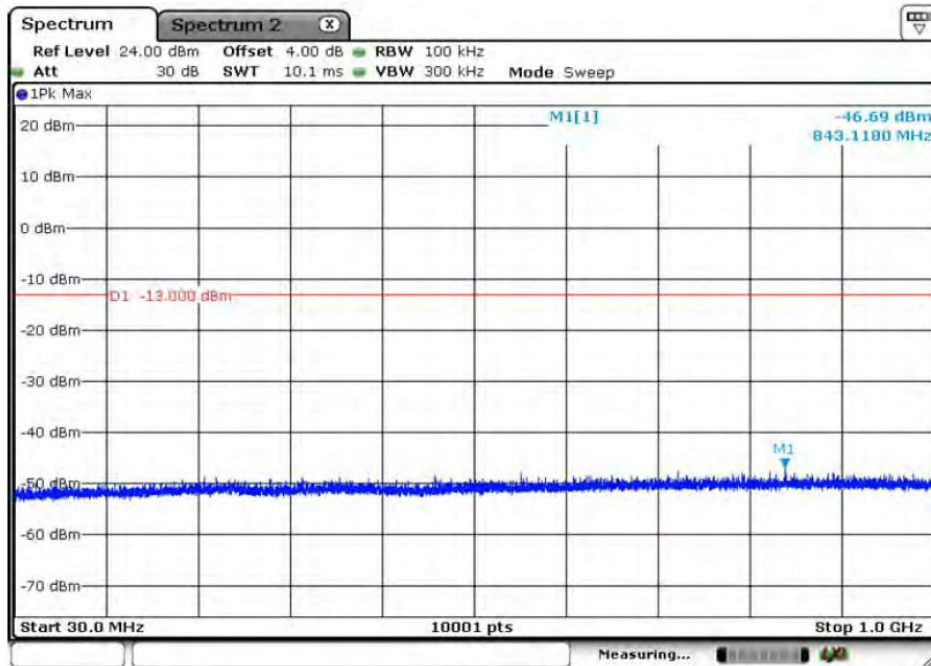
3MHz





LTE Band 2 middle channel

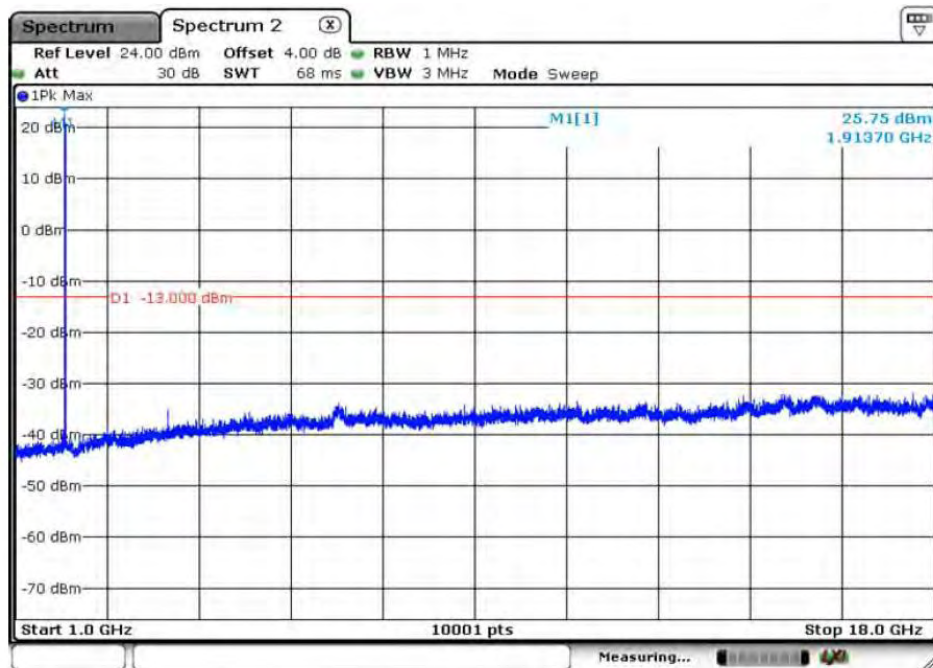
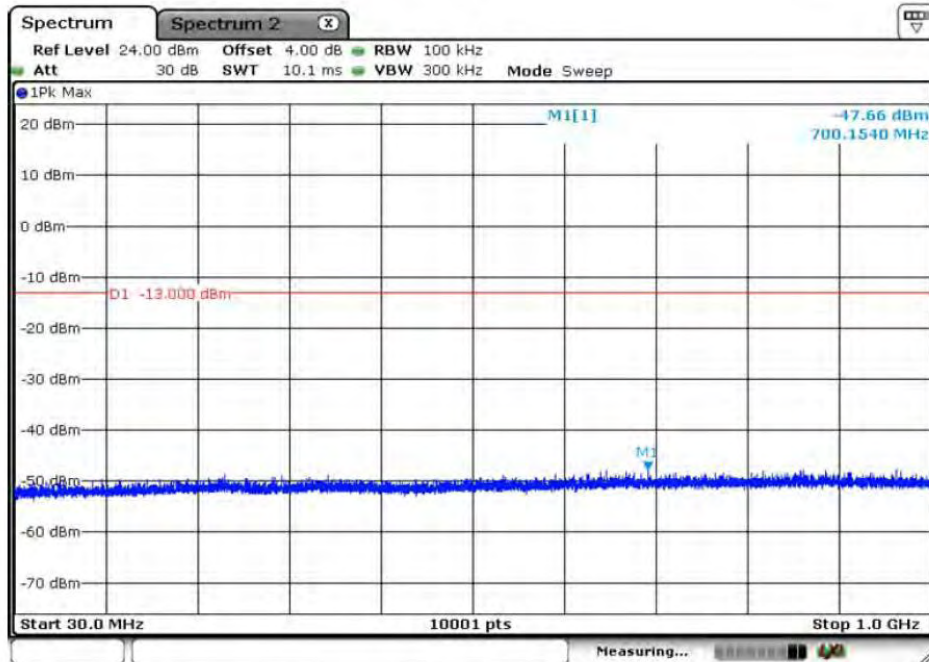
3MHz





LTE Band 2 high channel

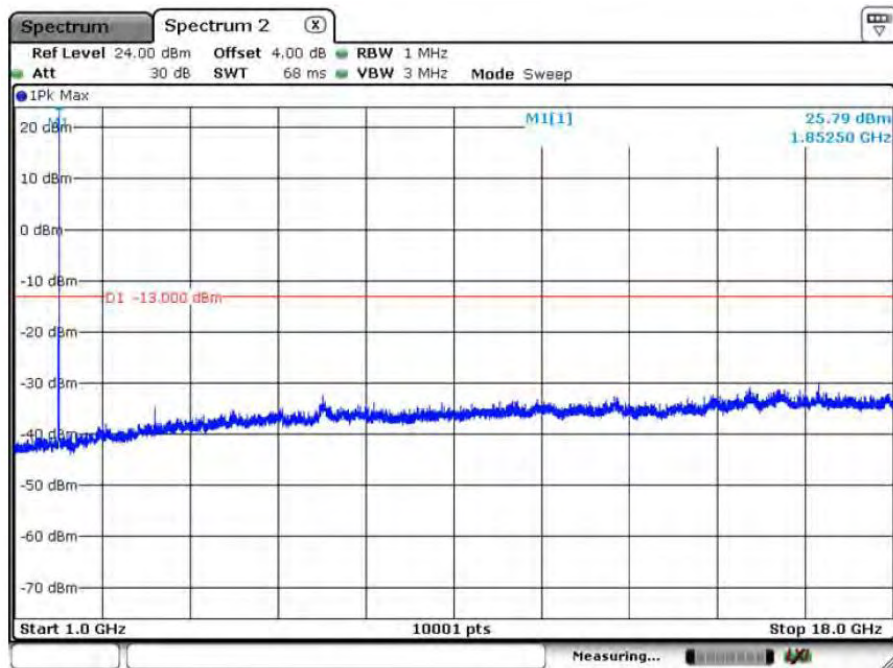
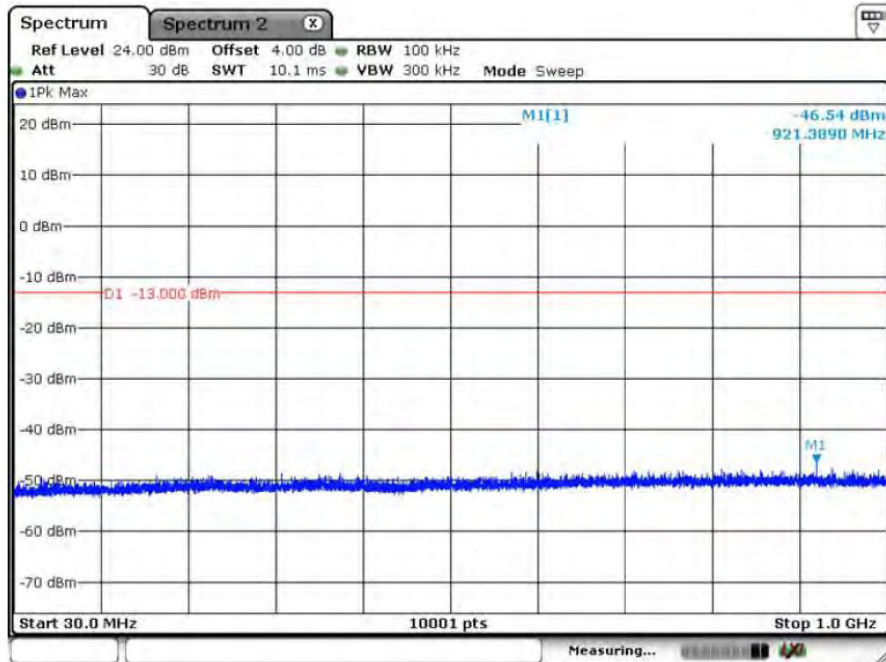
3MHz





LTE Band 2 Lowest channel

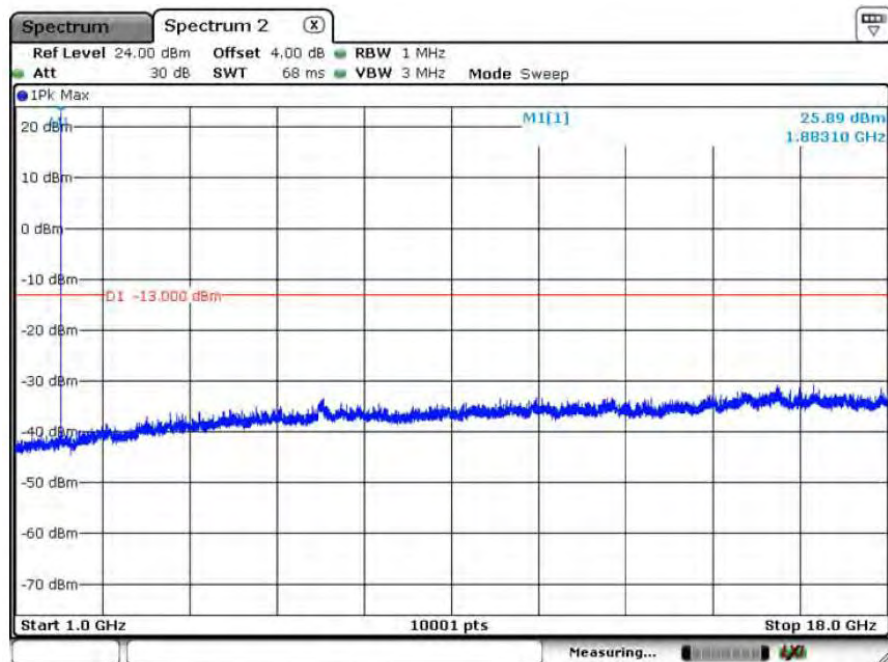
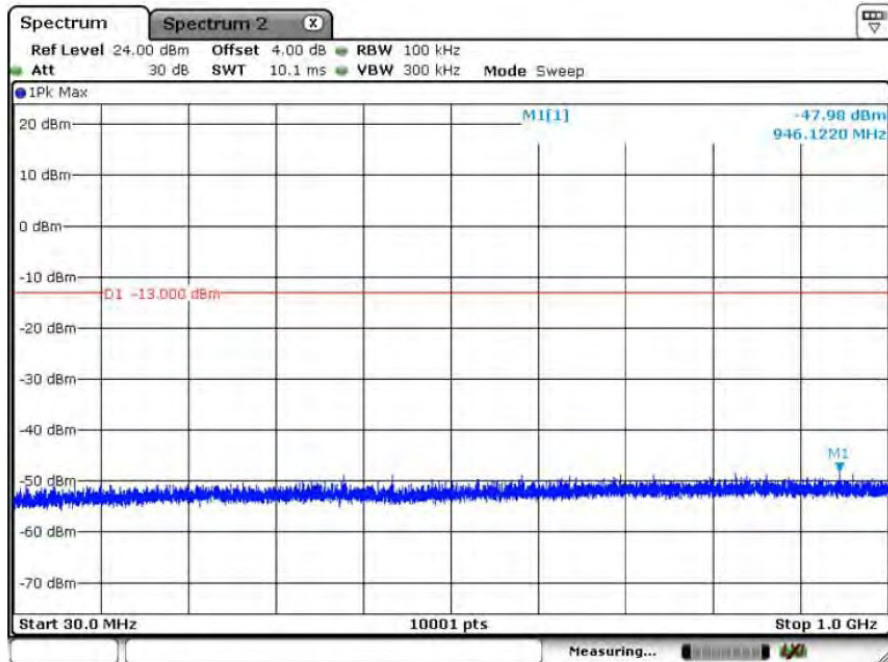
5MHz





LTE Band 2 middle channel

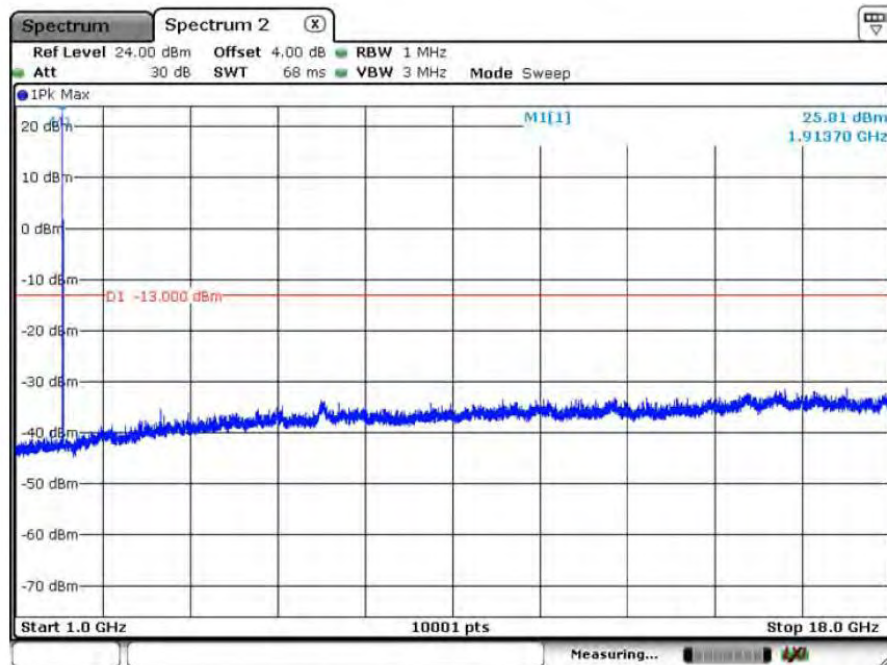
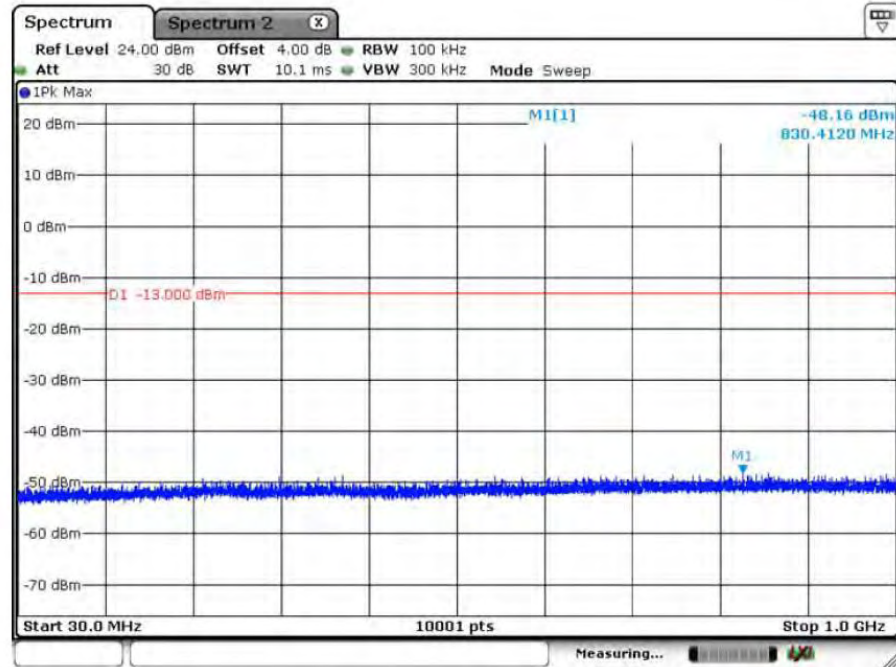
5MHz





LTE Band 2 high channel

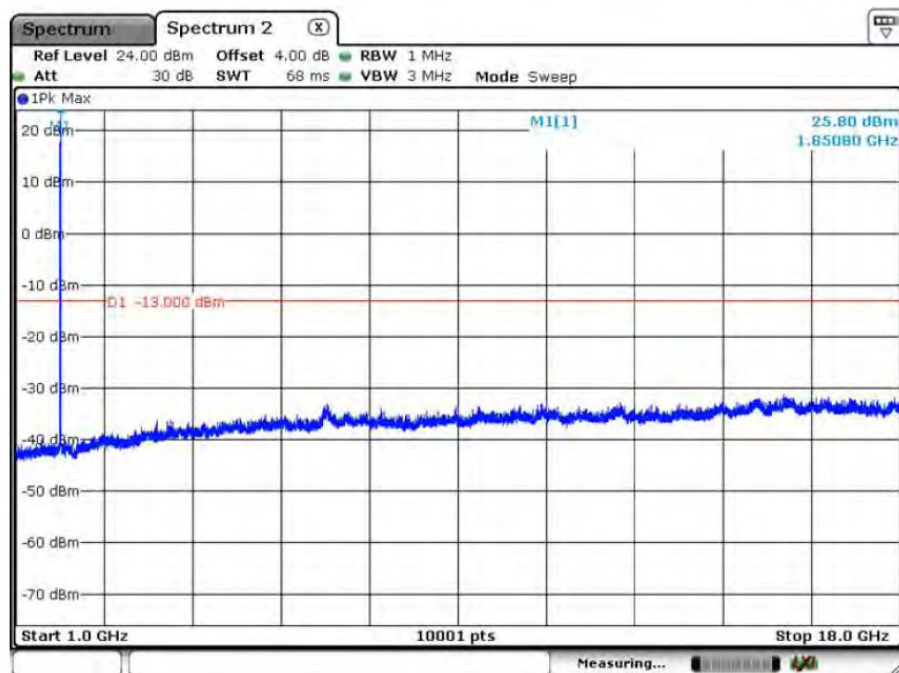
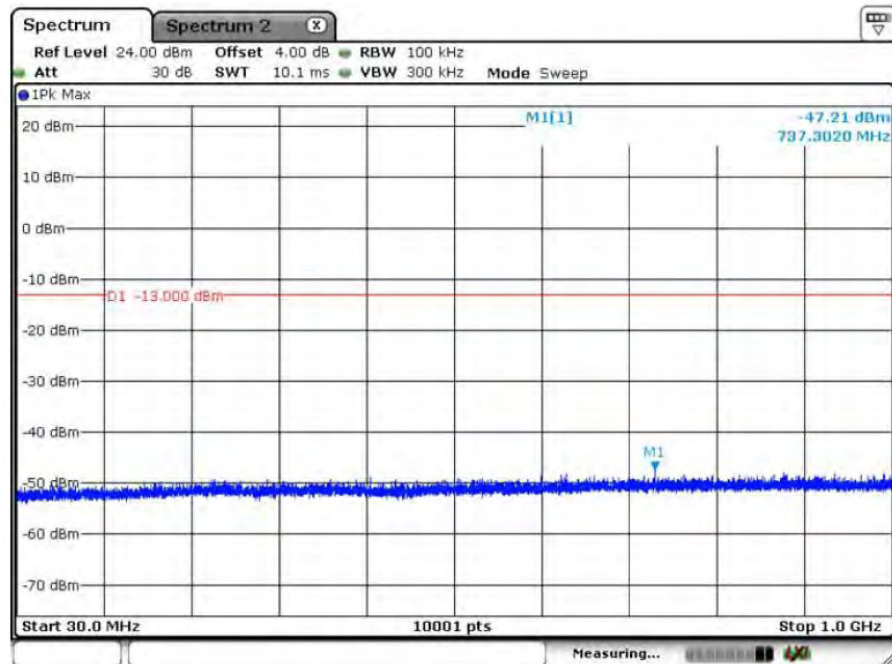
5MHz





LTE Band 2 Lowest channel

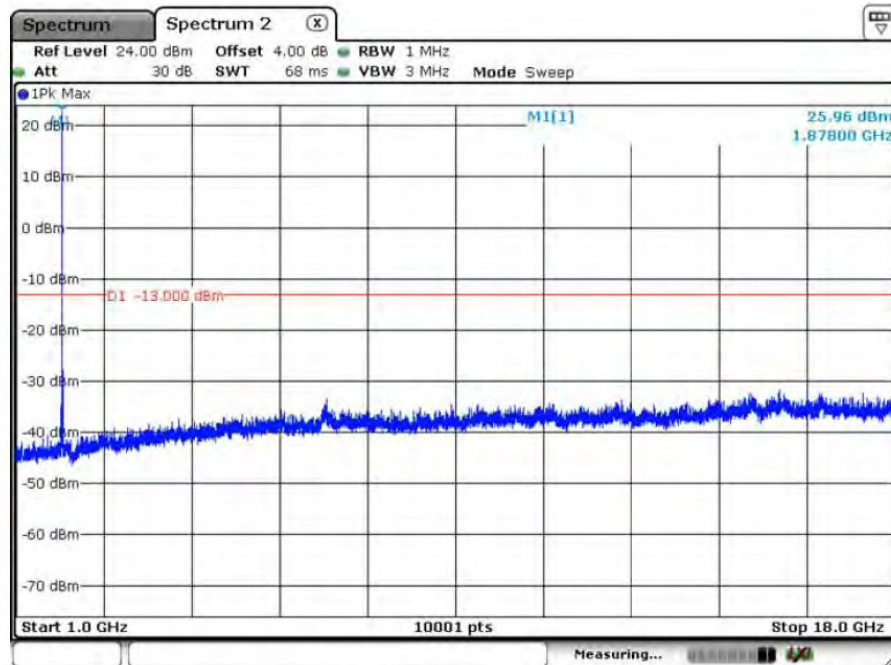
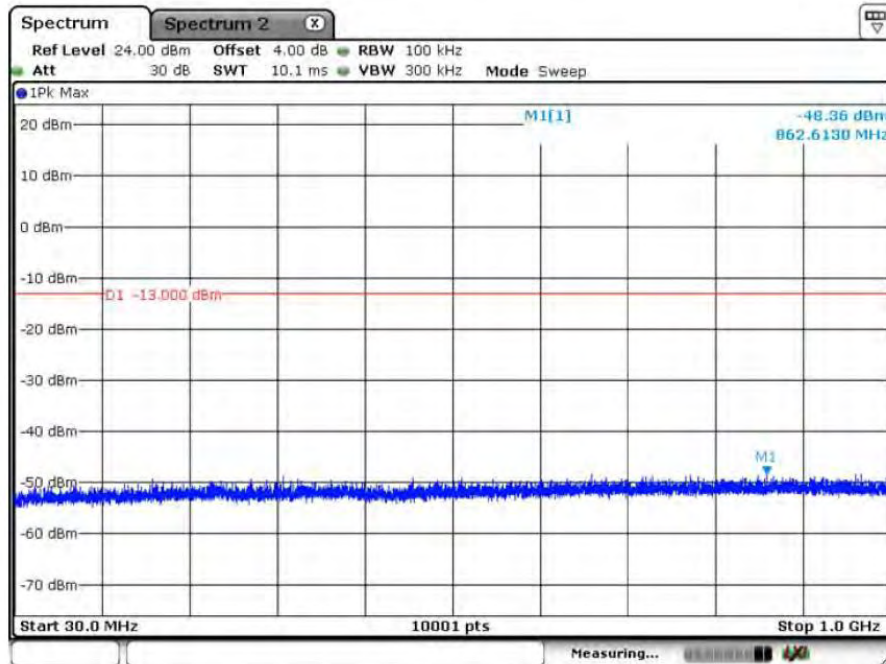
10MHz





LTE Band 2 middle channel

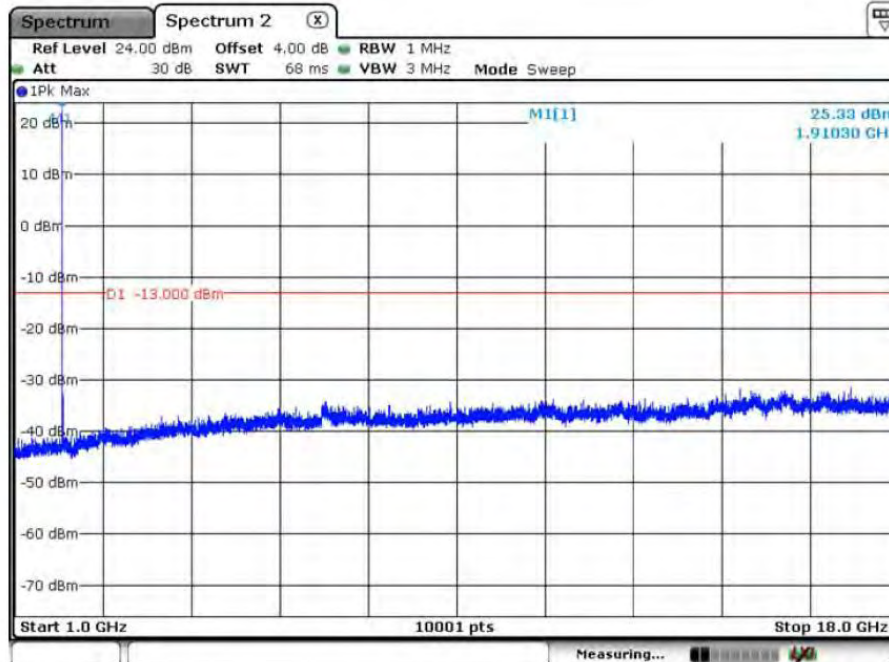
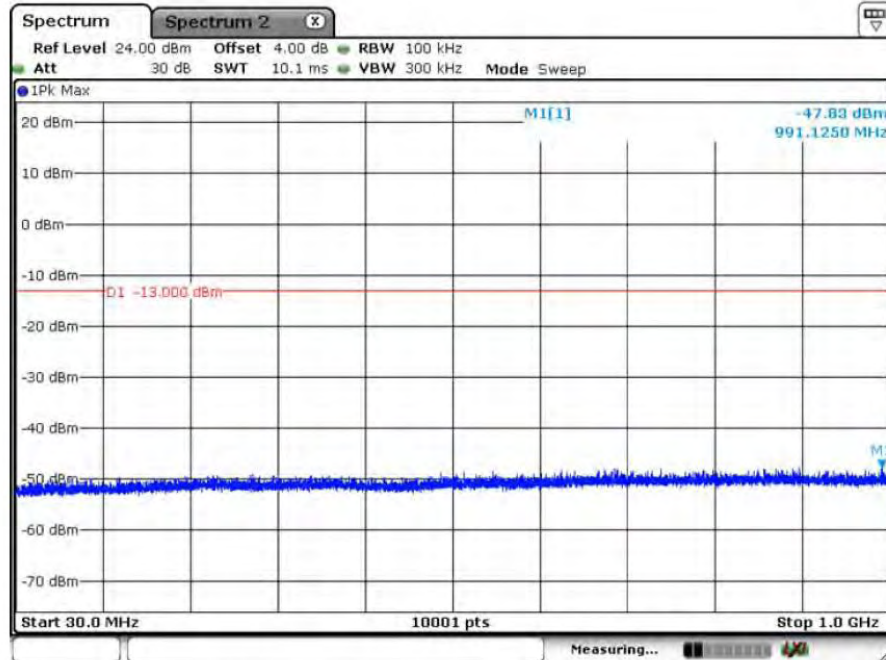
10MHz





LTE Band 2 high channel

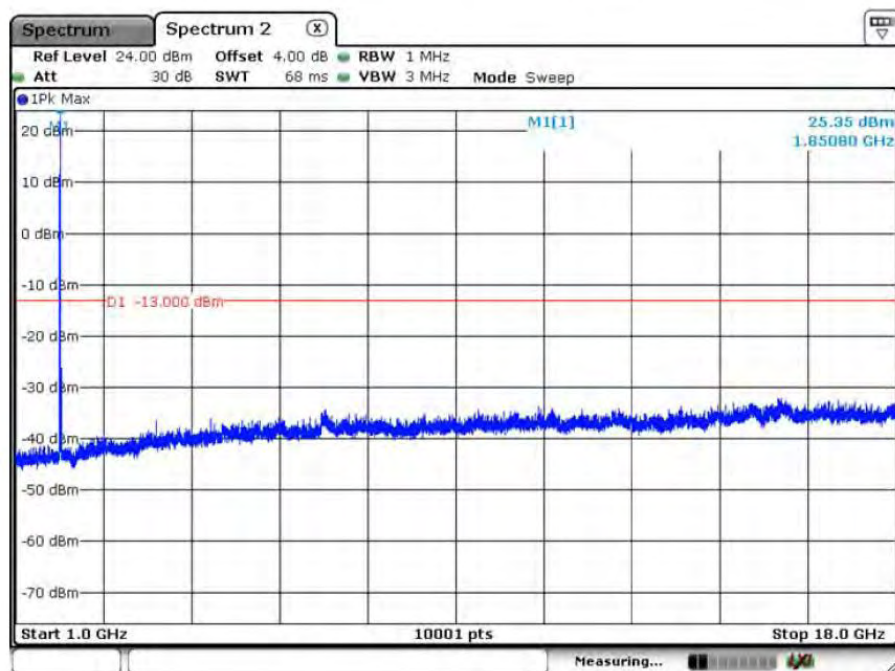
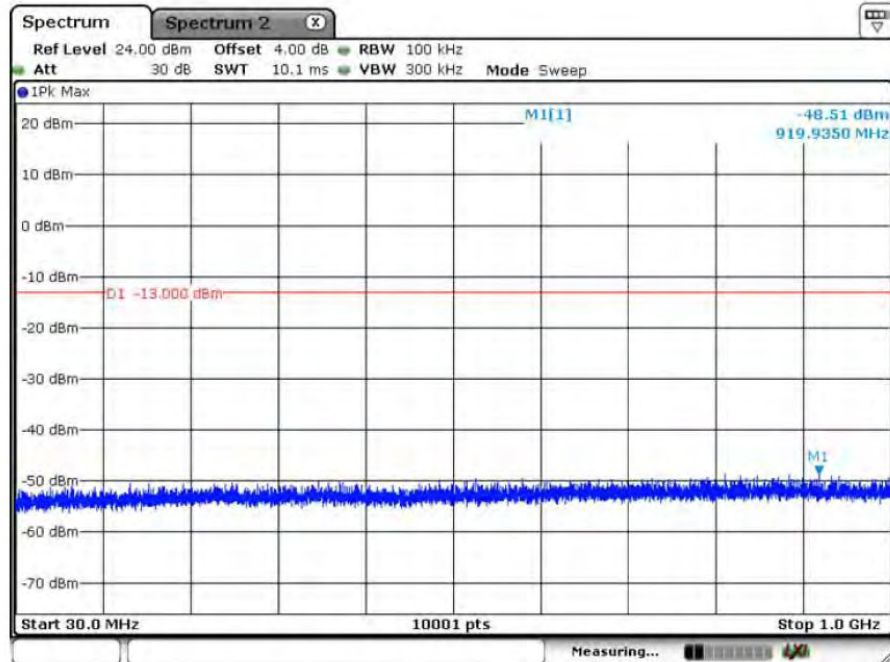
10MHz





LTE Band 2 Lowest channel

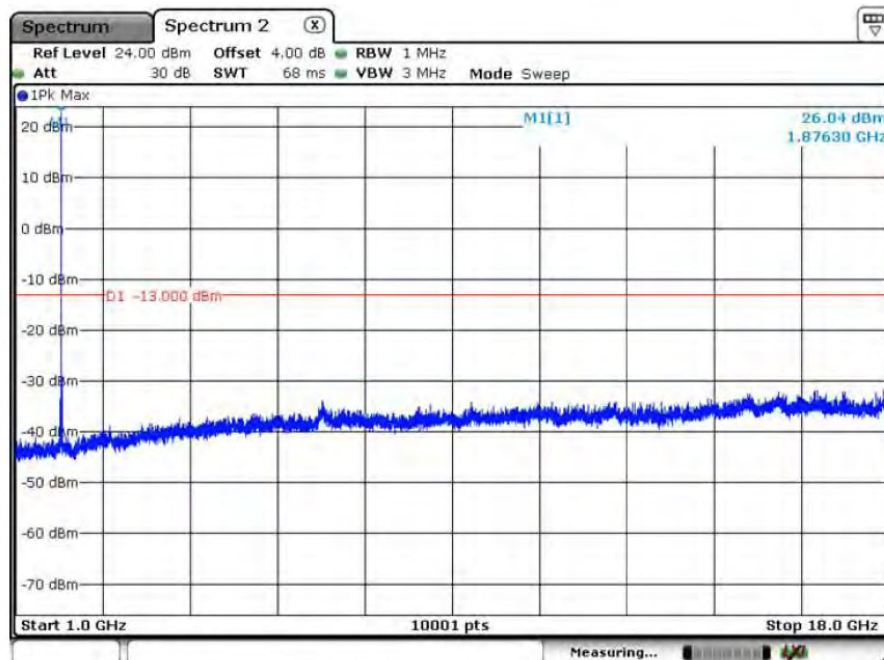
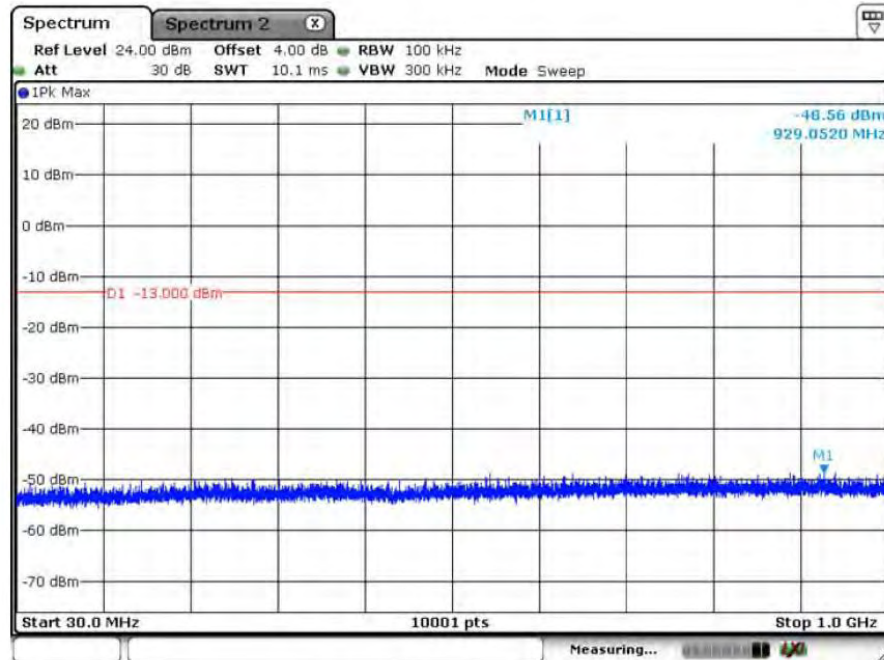
15MHz





LTE Band 2 middle channel

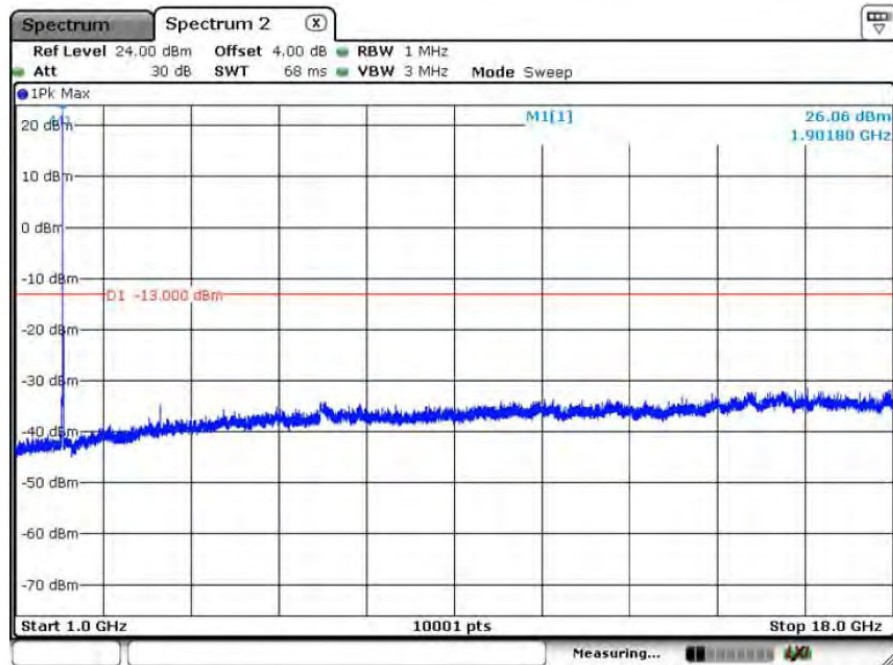
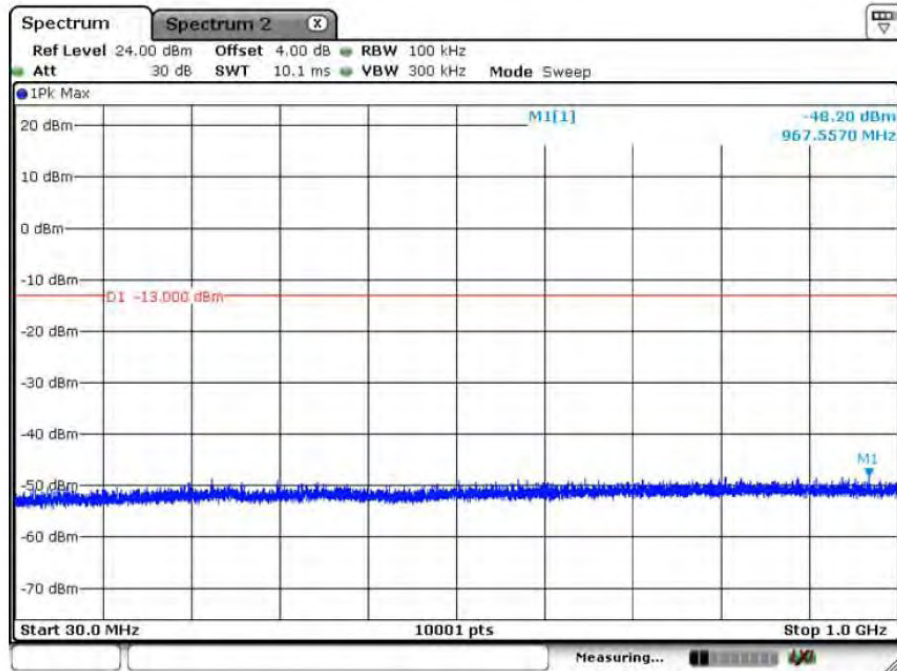
15MHz





LTE Band 2 high channel

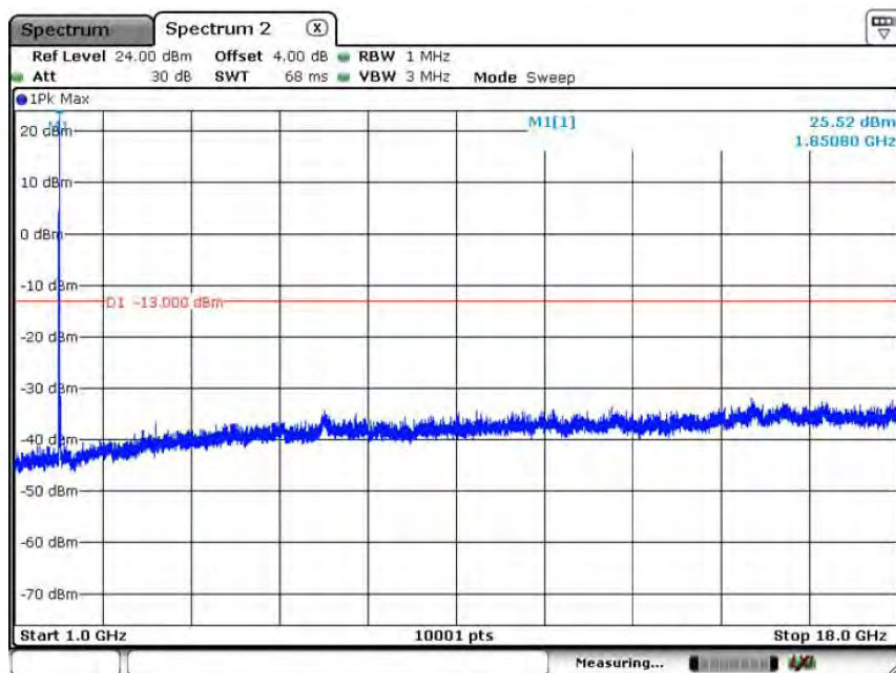
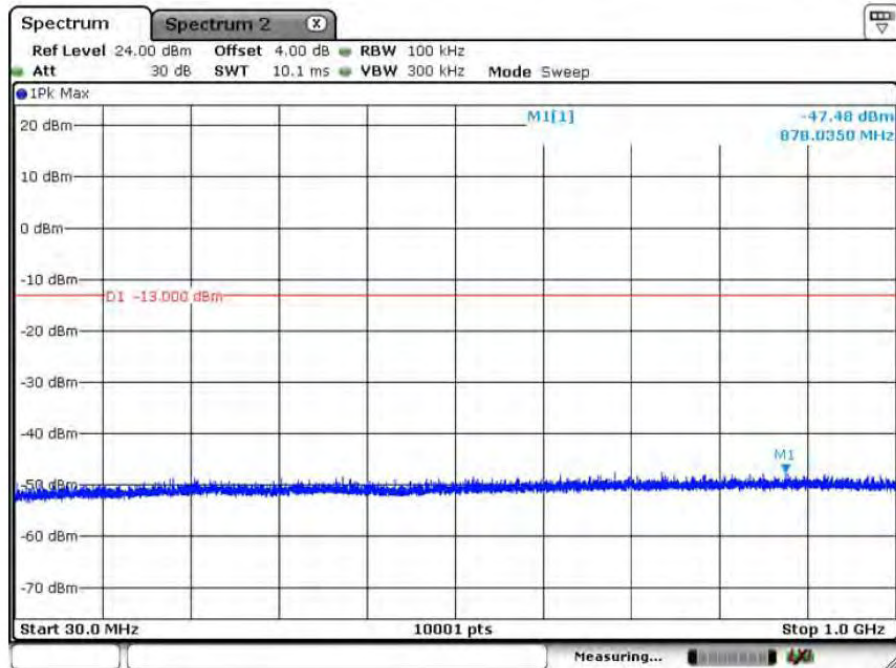
15MHz





LTE Band 2 Lowest channel

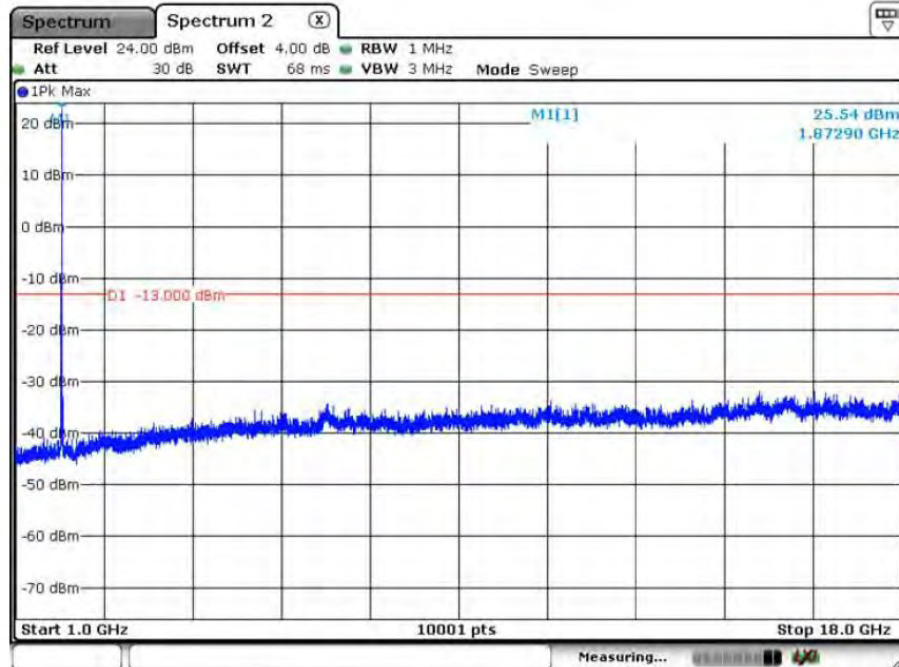
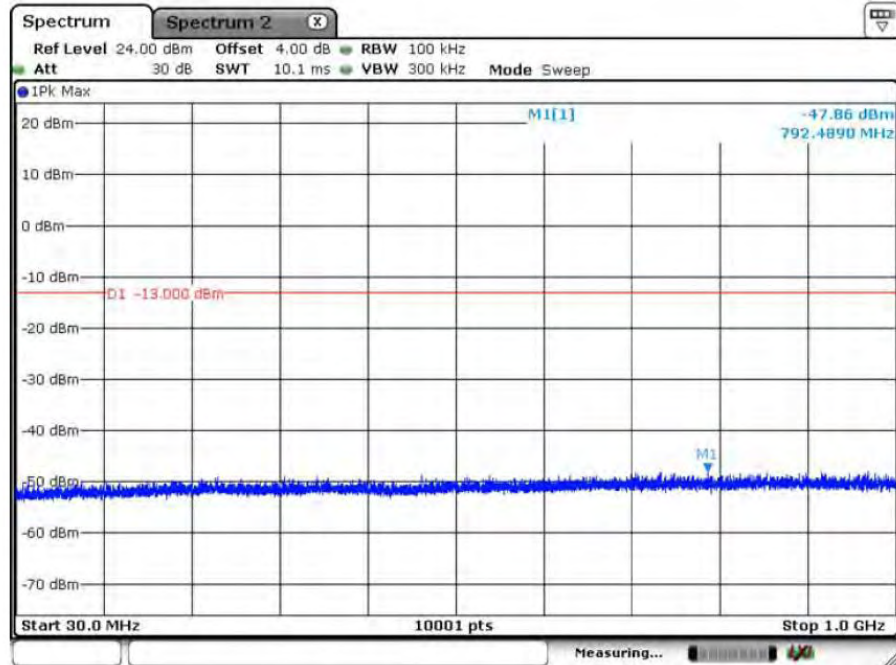
20MHz





LTE Band 2 middle channel

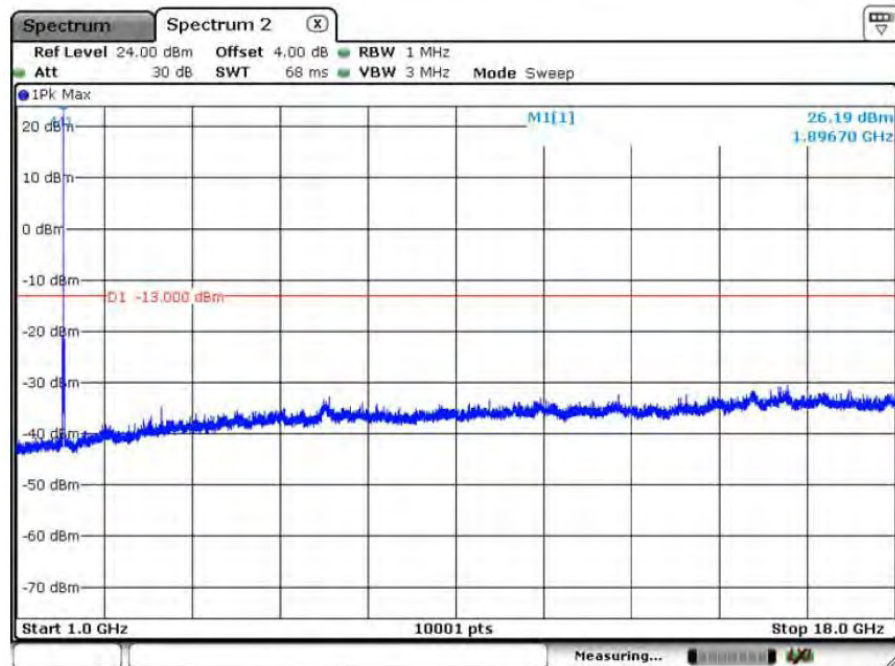
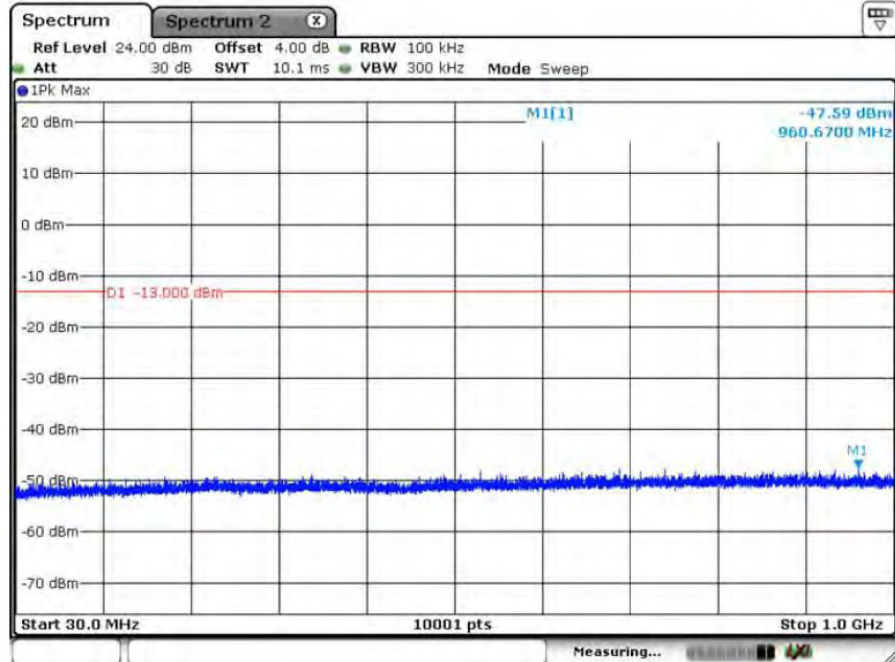
20MHz





LTE Band 2 high channel

20MHz





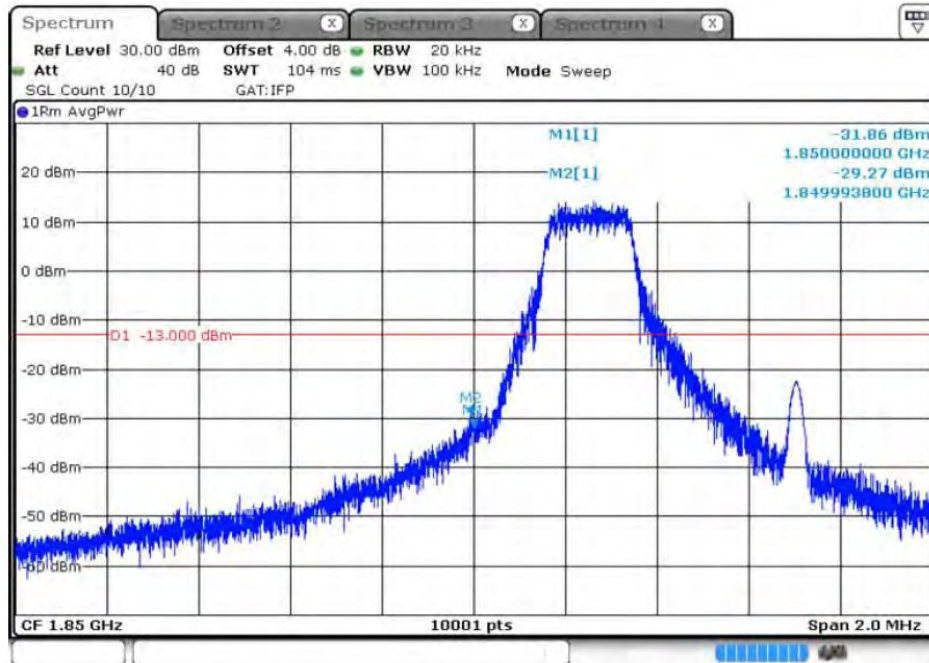
1.3. Conducted Out of Band Emissions

1.3.1. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

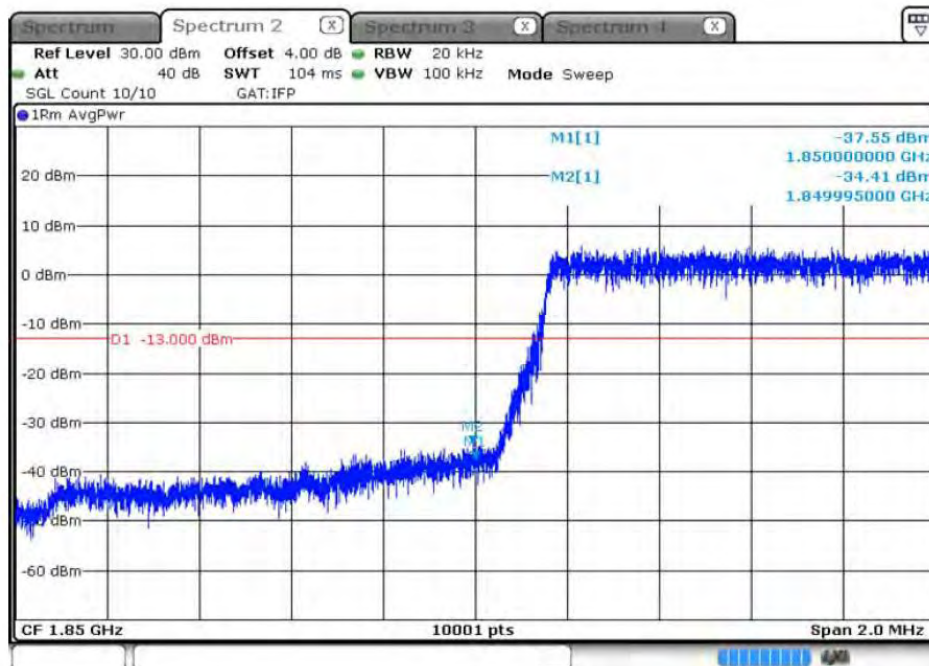
LTE Band 2 Lowest channel

1.4MHz 1RB



LTE Band 2 Lowest channel

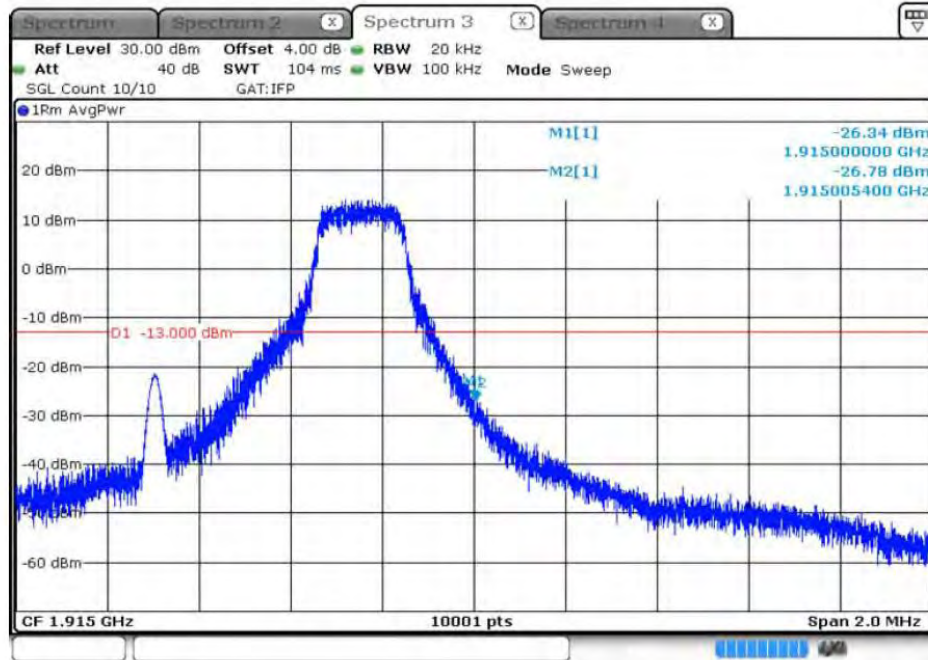
1.4MHz 6RB





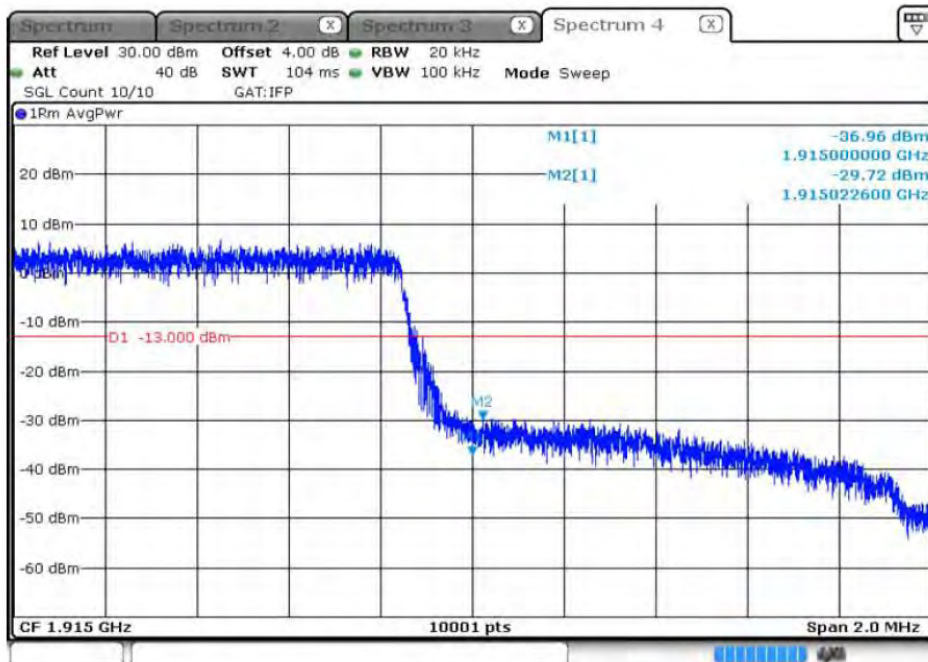
LTE Band 2 Highest channel:

1.4MHz 1RB



LTE Band 2 Highest channel:

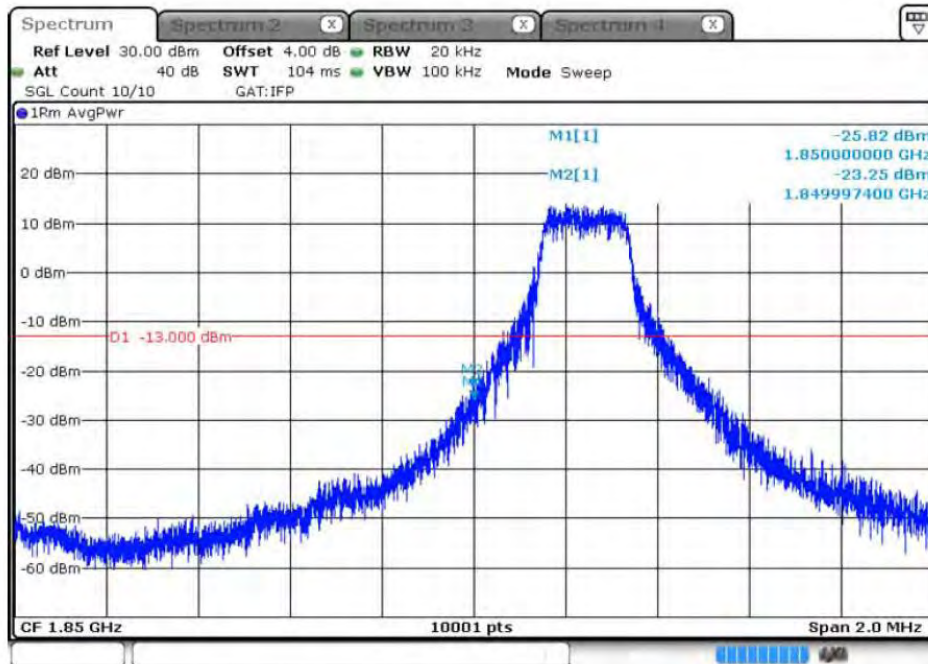
1.4MHz 6RB





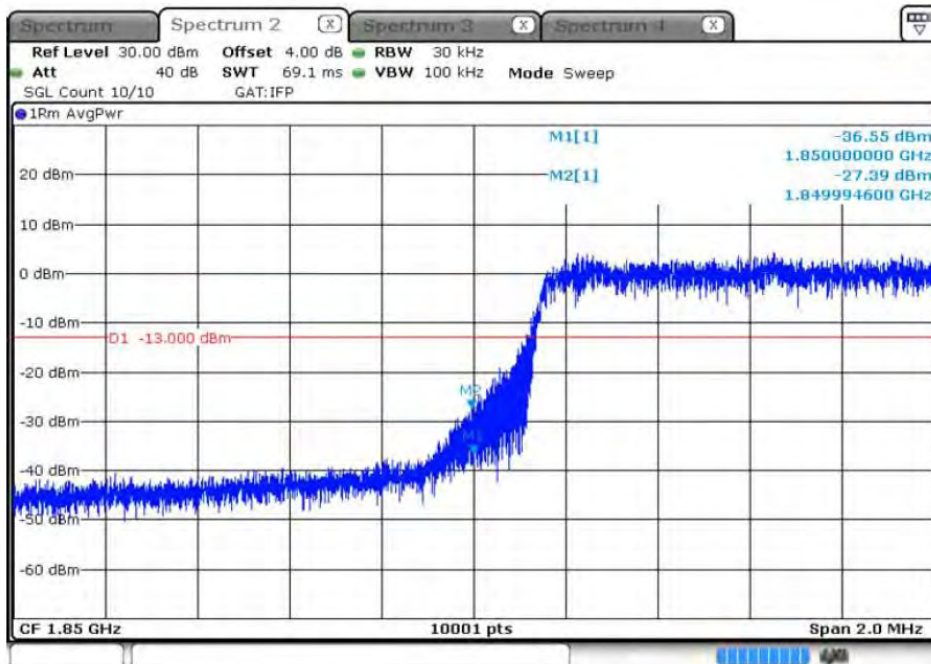
LTE Band 2 Lowest channel

3MHz 1RB



LTE Band 2 Lowest channel

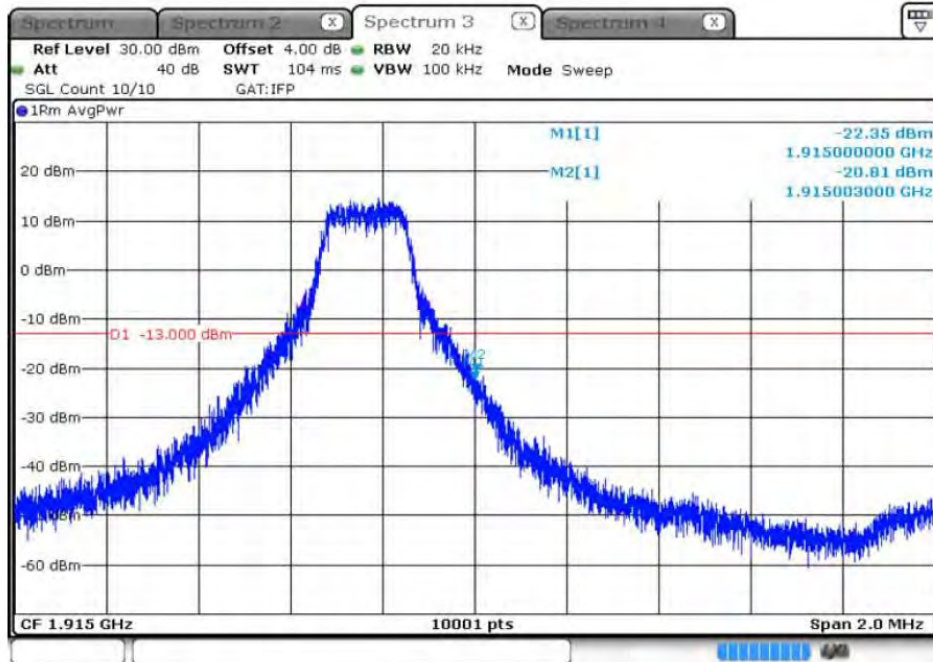
3MHz 15RB





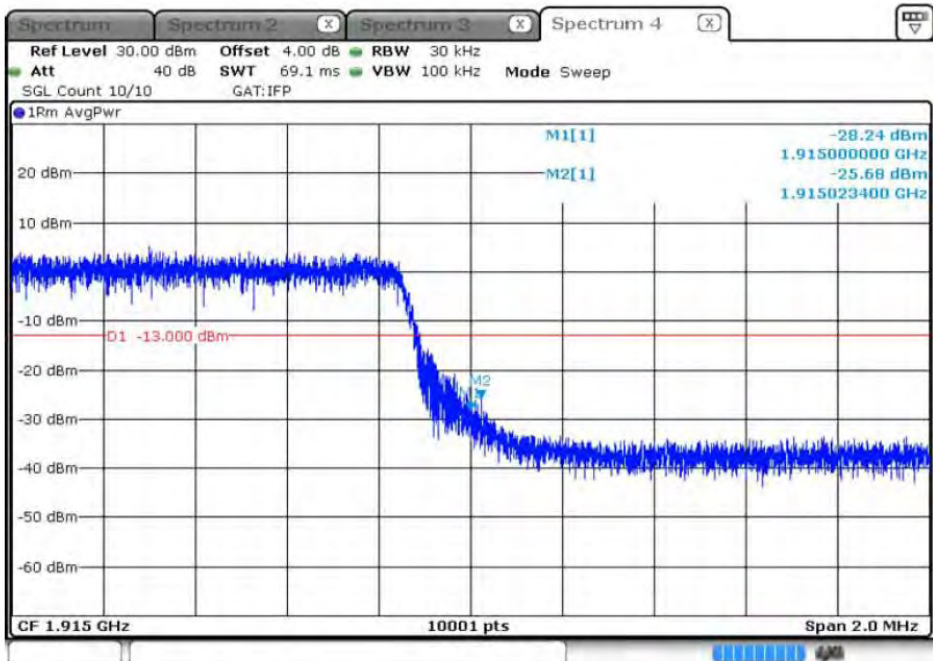
LTE Band 2 Highest channel:

3MHz 1RB



LTE Band 2 Highest channel:

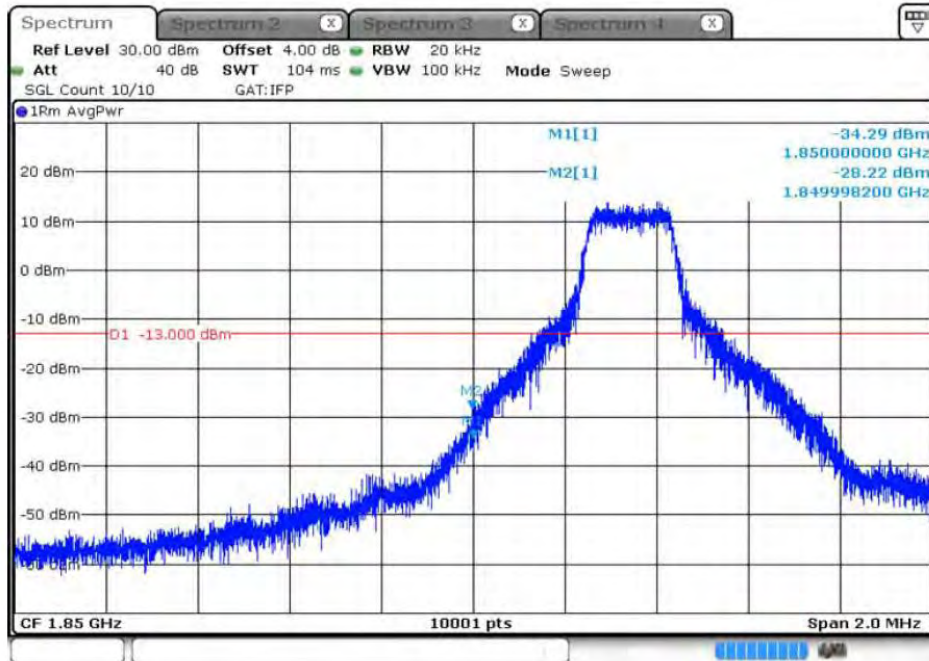
3MHz 15RB





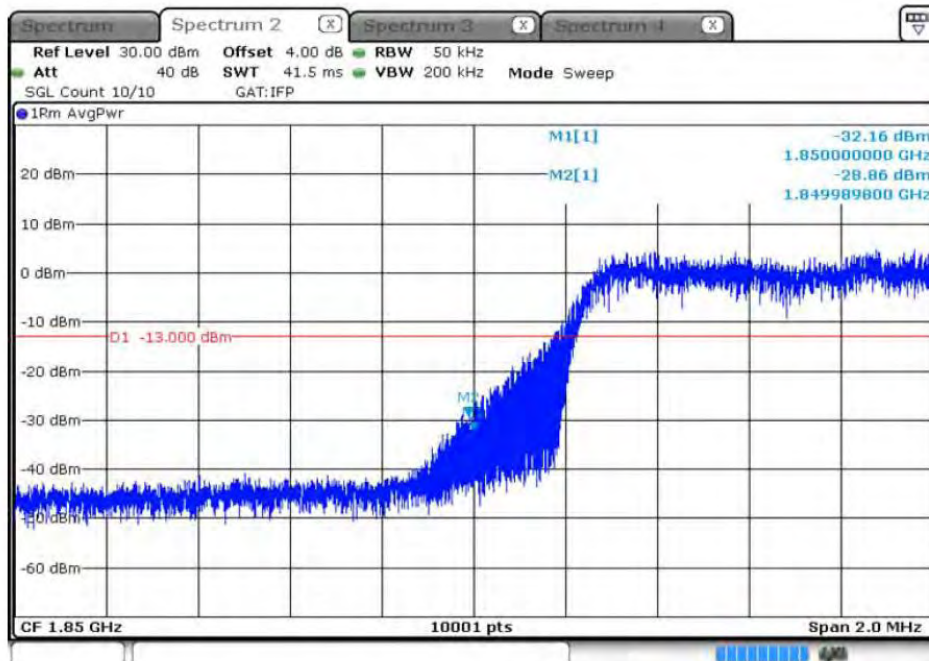
LTE Band 2 Lowest channel

5MHz 1RB



LTE Band 2 Lowest channel

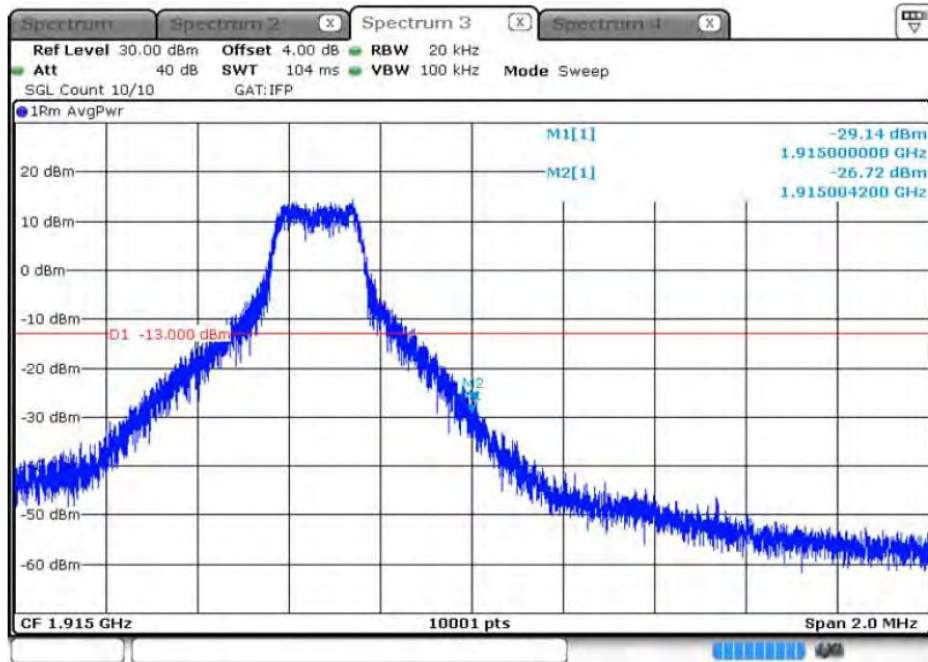
5MHz 25RB





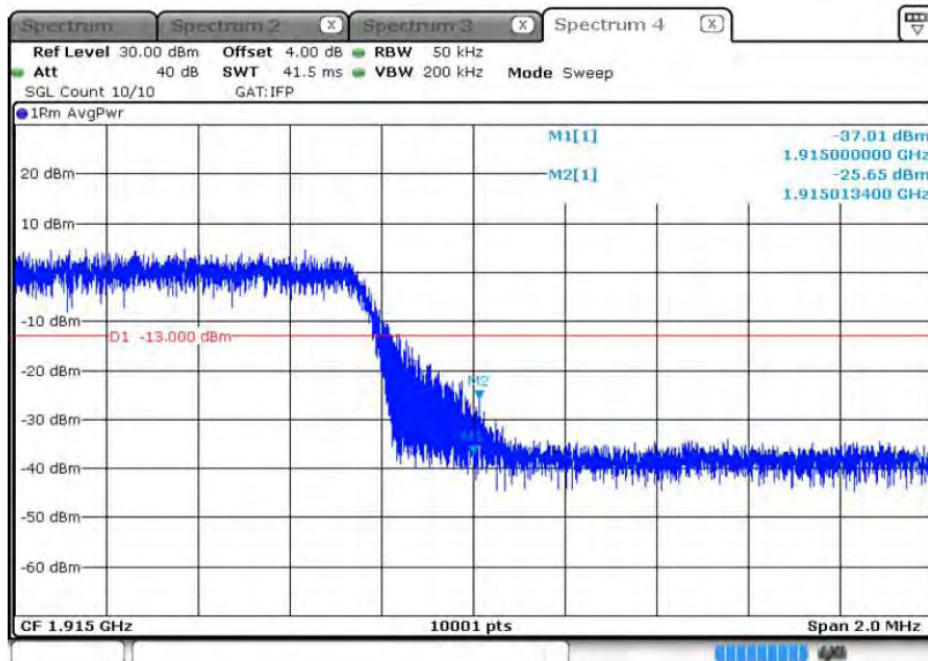
LTE Band 2 Highest channel:

5MHz 1RB



LTE Band 2 Highest channel:

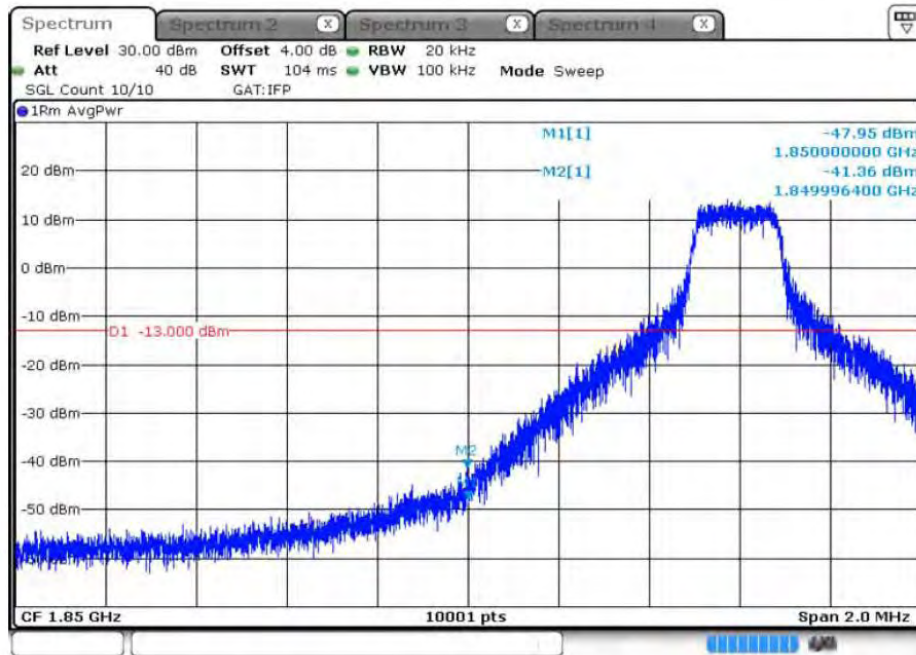
5MHz 25RB





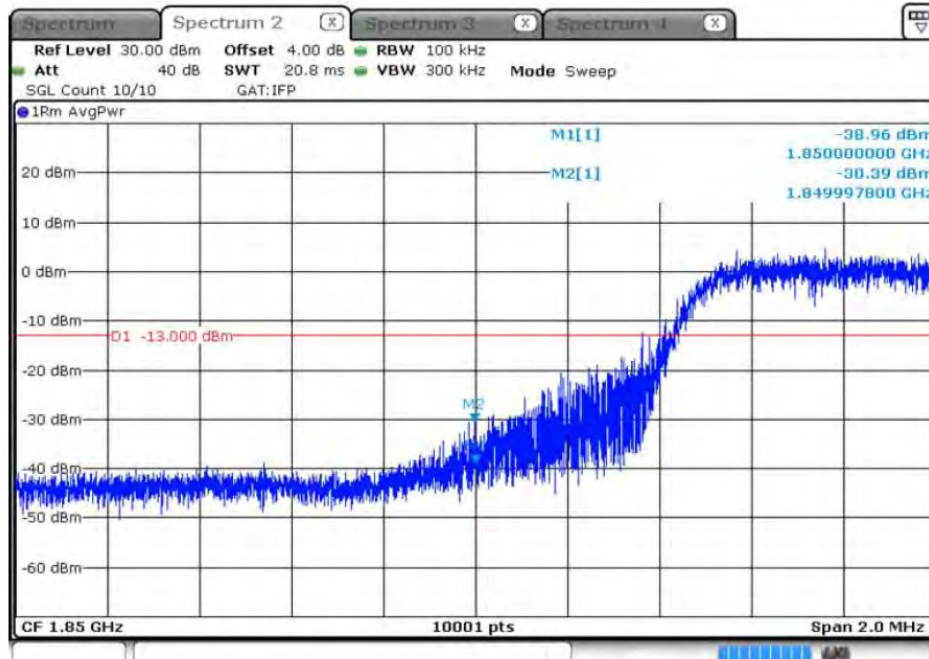
LTE Band 2 Lowest channel

10MHz 1RB



LTE Band 2 Lowest channel

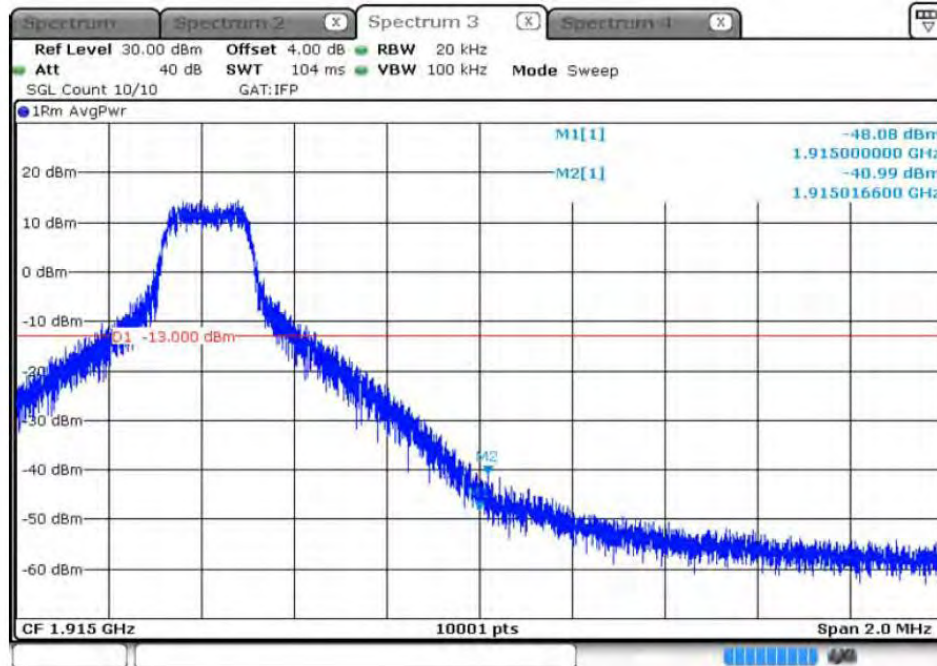
10MHz 50RB





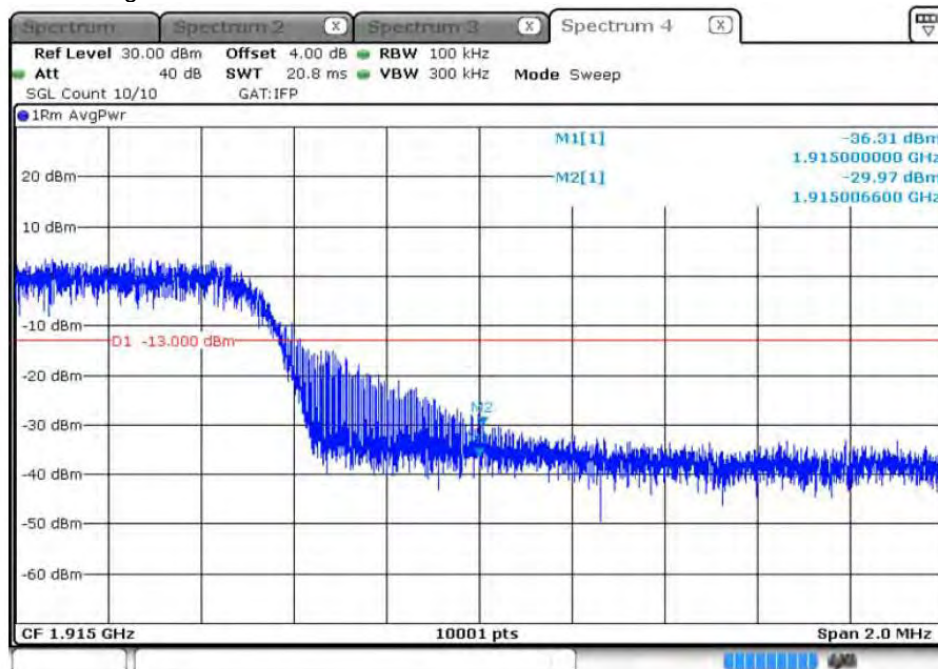
LTE Band 2 Highest channel:

10MHz 1RB



LTE Band 2 Highest channel:

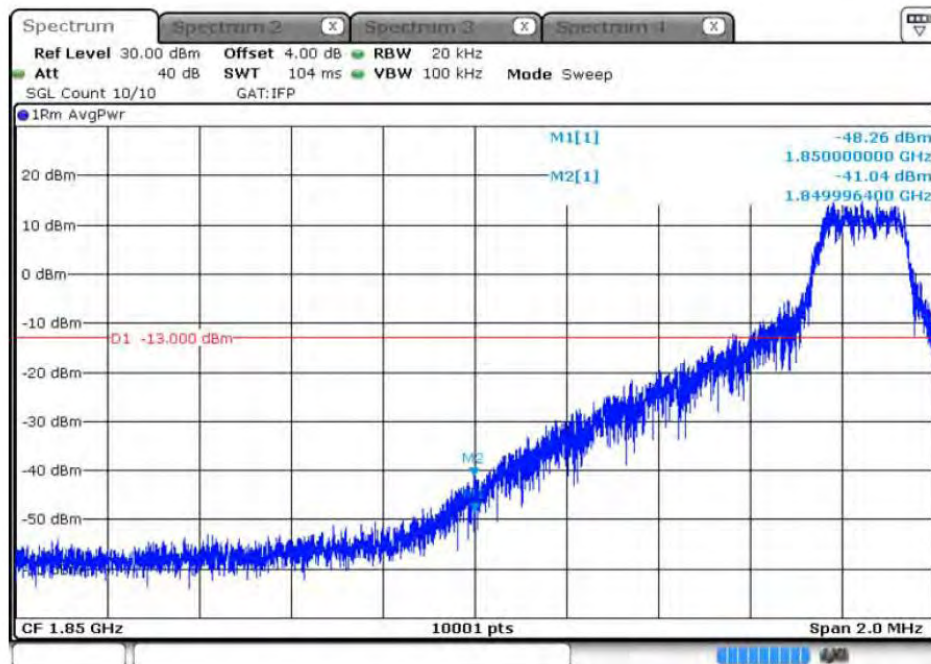
10MHz 50RB





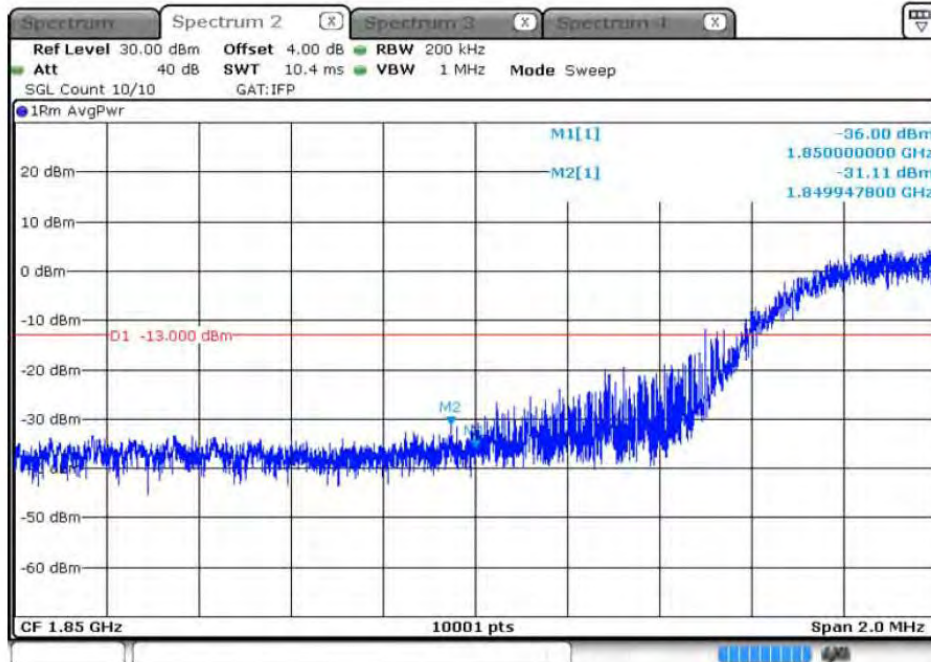
LTE Band 2 Lowest channel

15MHz 1RB



LTE Band 2 Lowest channel

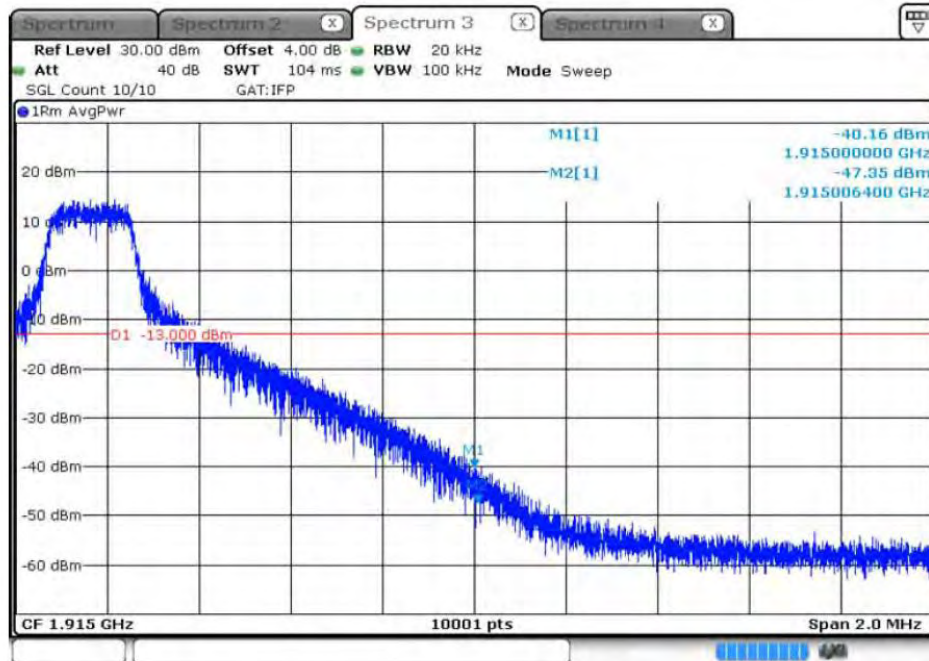
15MHz 75RB





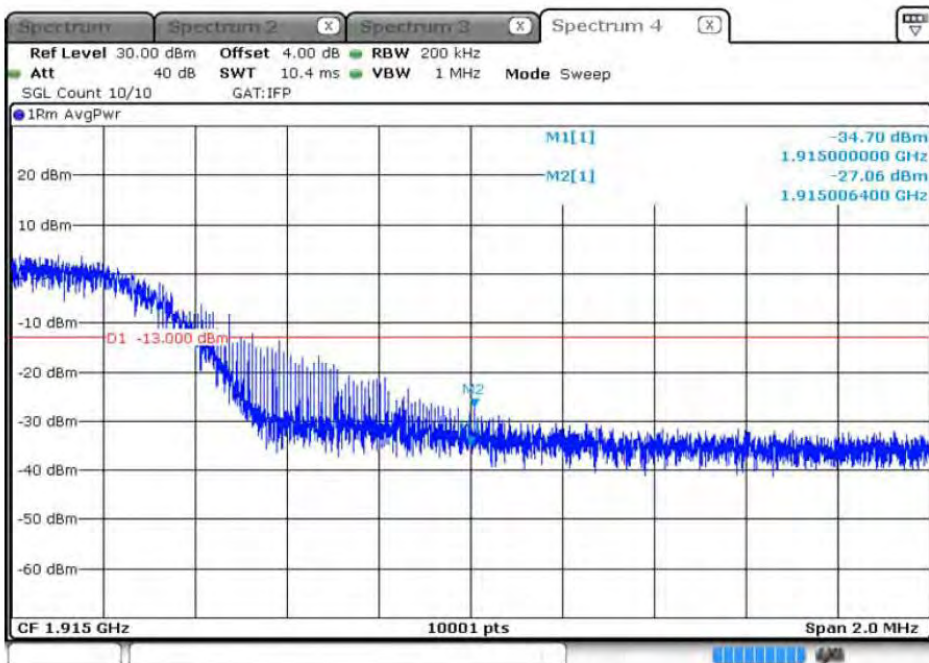
LTE Band 2 Highest channel:

15MHz 1RB



LTE Band 2 Highest channel:

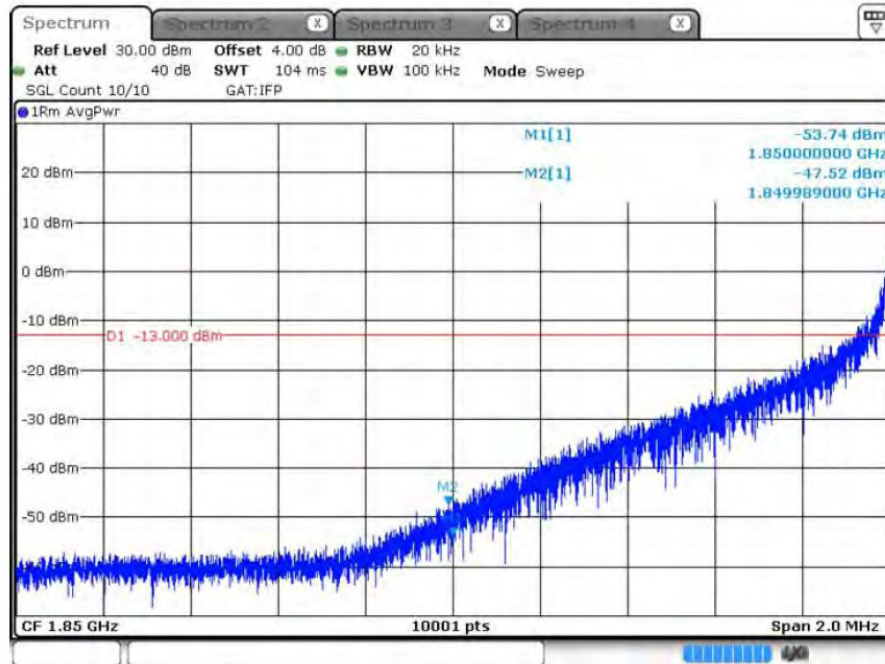
15MHz 75RB





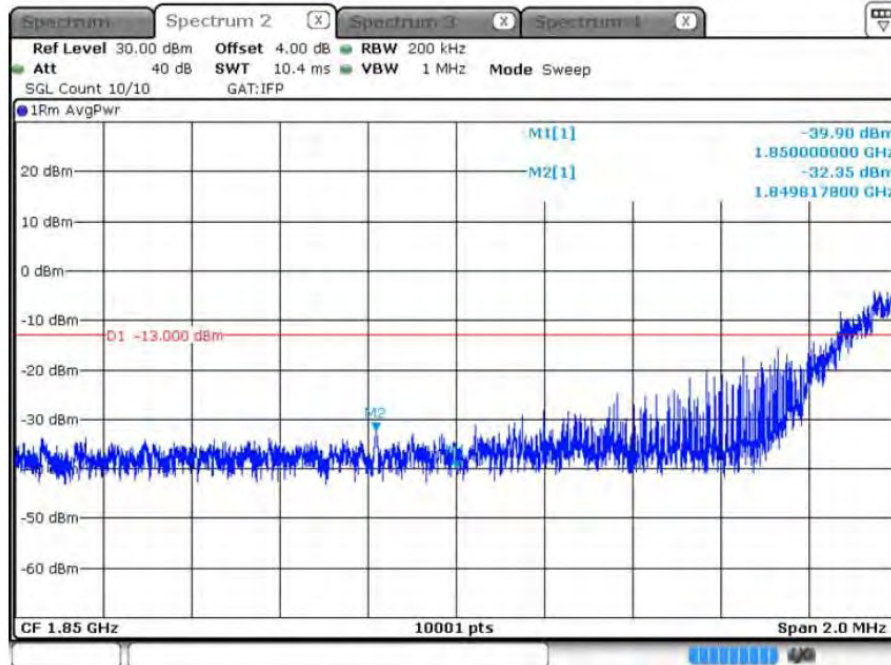
LTE Band 2 Lowest channel

20MHz 1RB



LTE Band 2 Lowest channel

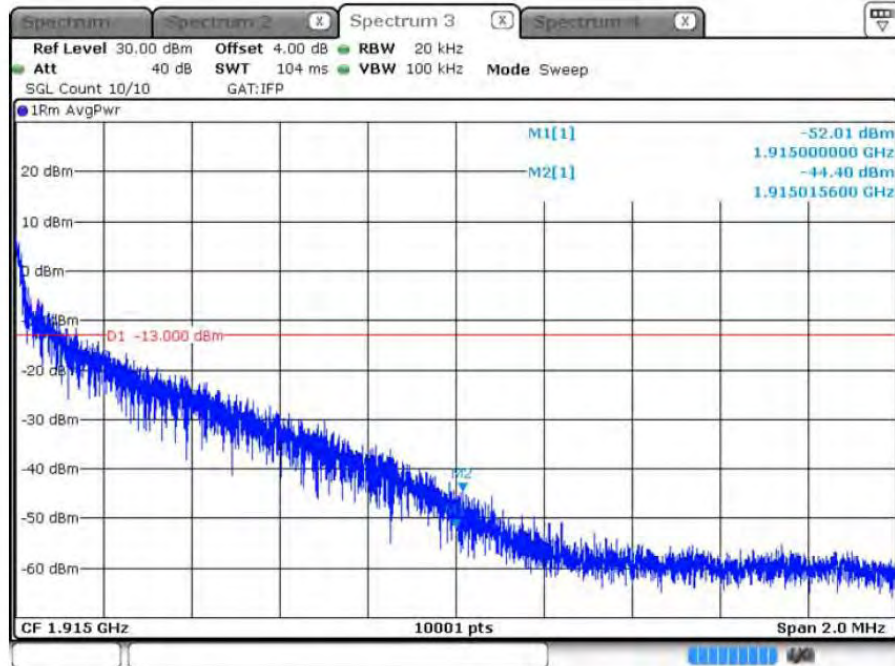
20MHz 75RB





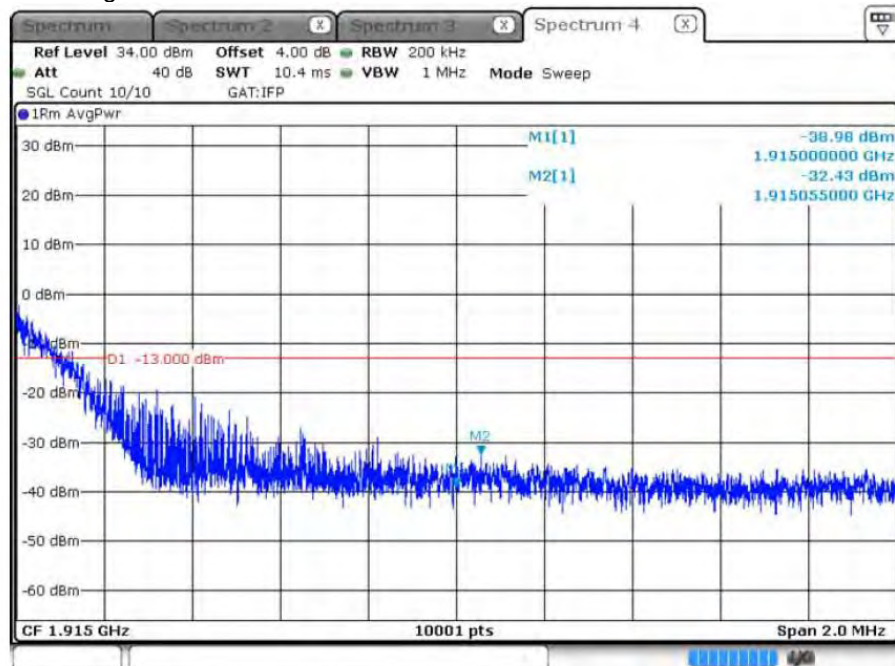
LTE Band 2 Highest channel:

20MHz 1RB



LTE Band 2 Highest channel:

20MHz 75RB



***** END *****