



FCC Test Report

ANNEX 3 LTE BAND 4&66

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 4&66 1.4MHz	QPSK	1710.7	1.087	1.207
		1745	1.080	1.218
		1779.3	1.080	1.216
LTE Band 4&66 1.4 MHz	16-QAM	1710.7	1.082	1.226
		1745	1.082	1.223
		1779.3	1.079	1.203
LTE Band 4&66 3 MHz	QPSK	1711.5	2.694	2.926
		1745	2.685	2.916
		1778.5	2.688	2.950
LTE Band 4&66 3 MHz	16-QAM	1711.5	2.685	2.934
		1745	2.684	2.955
		1778.5	2.682	2.946
LTE Band 4&66 5 MHz	QPSK	1712.5	4.490	4.908
		1745	4.481	4.876
		1777.5	4.469	4.893
LTE Band 4&66 5 MHz	16-QAM	1712.5	4.473	4.880
		1745	4.481	4.894
		1777.5	4.475	4.904
LTE Band 4&66 10 MHz	QPSK	1715	8.950	9.642
		1745	8.960	9.701
		1775	8.950	9.600
LTE Band 4&66 10 MHz	16-QAM	1715	8.949	9.655
		1745	8.952	9.610
		1775	8.945	9.639
LTE Band 4&66 15 MHz	QPSK	1717.5	13.437	14.550
		1745	13.418	14.510
		1772.5	13.399	14.400
LTE Band 4&66 15 MHz	16-QAM	1717.5	13.424	14.510
		1745	13.415	14.340
		1772.5	13.412	14.400
LTE Band 4&66 20 MHz	QPSK	1720	17.850	19.080
		1745	17.911	19.400
		1770	17.853	19.060
LTE Band 4&66 20 MHz	16-QAM	1720	17.903	19.150
		1745	17.879	19.220
		1770	17.877	19.170

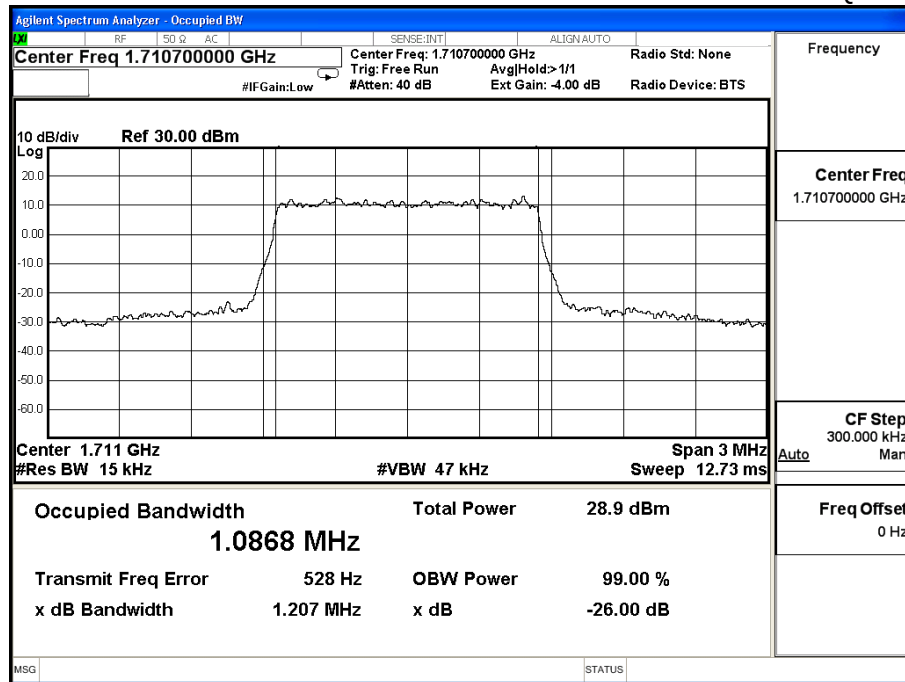
Note: Measurement Uncertainty: $\pm 20\text{Hz}$.

Test plot as follows:



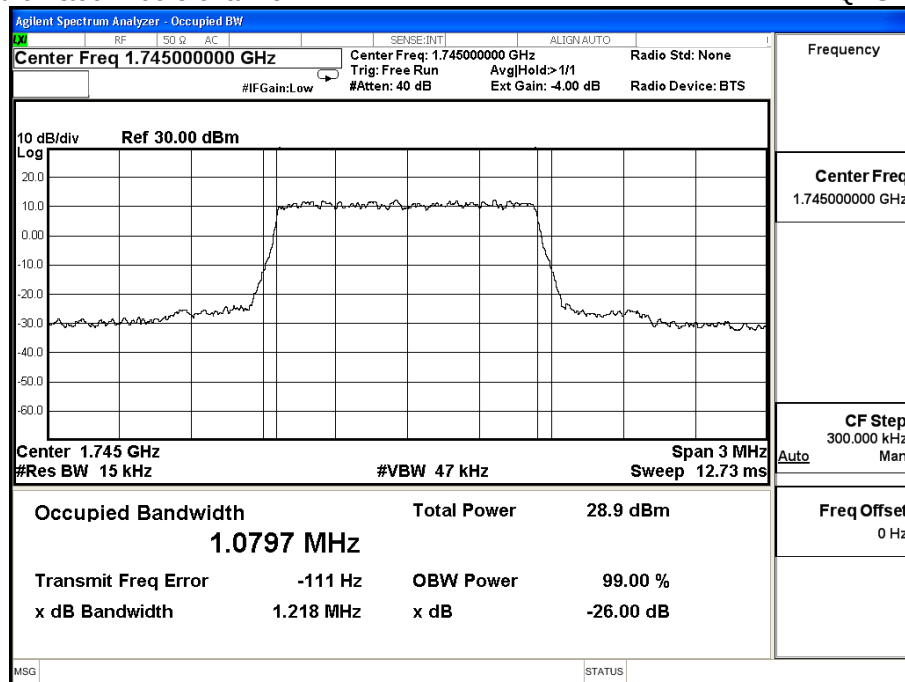
LTE Band 4&66 Lowest channel

1.4 MHz QPSK



LTE Band 4&66 Middle channel

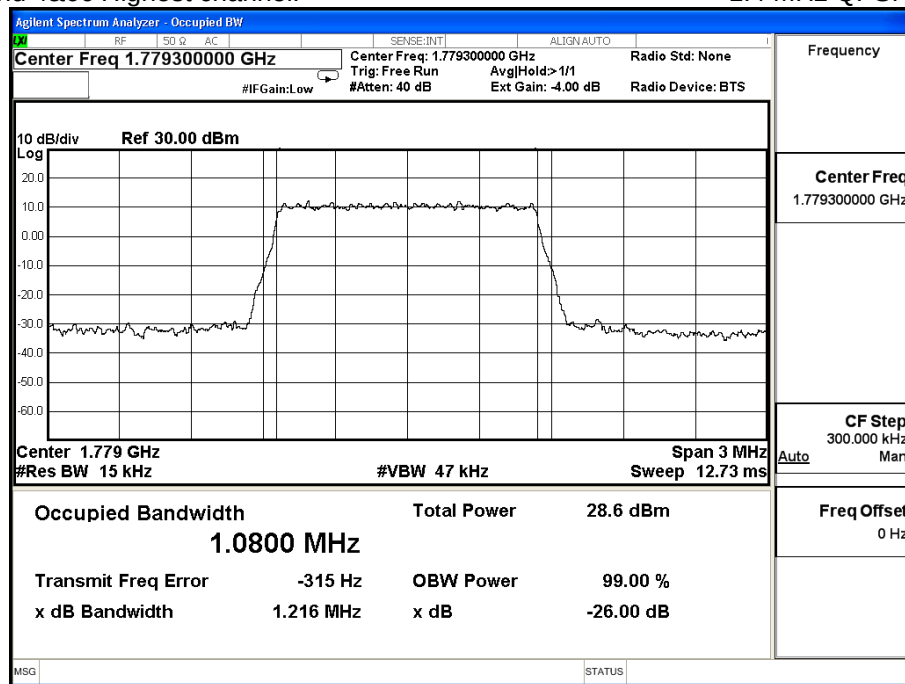
1.4 MHz QPSK





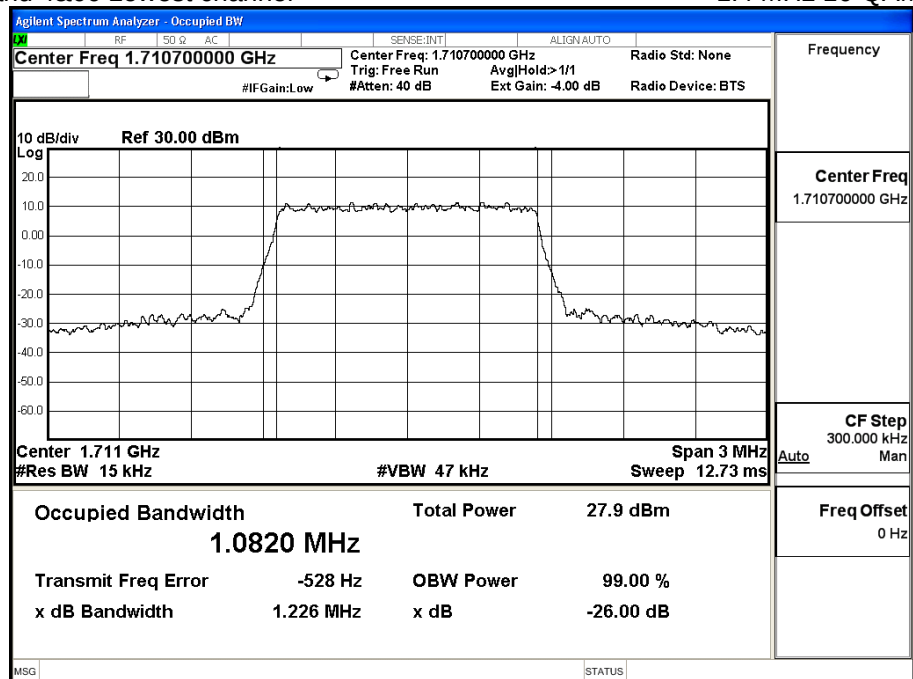
LTE Band 4&66 Highest channel:

1.4 MHz QPSK



LTE Band 4&66 Lowest channel

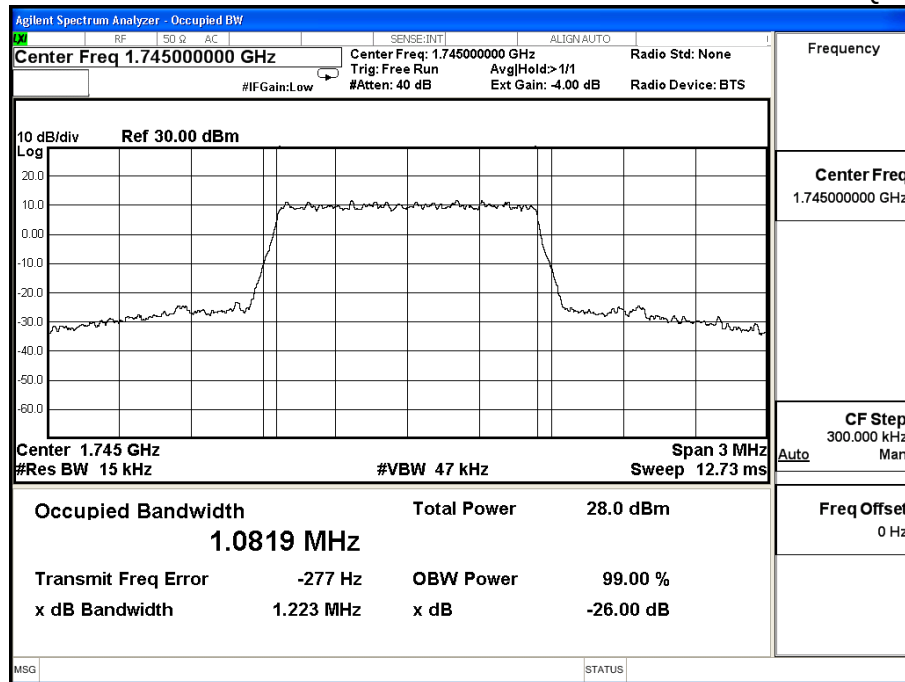
1.4 MHz 16-QAM





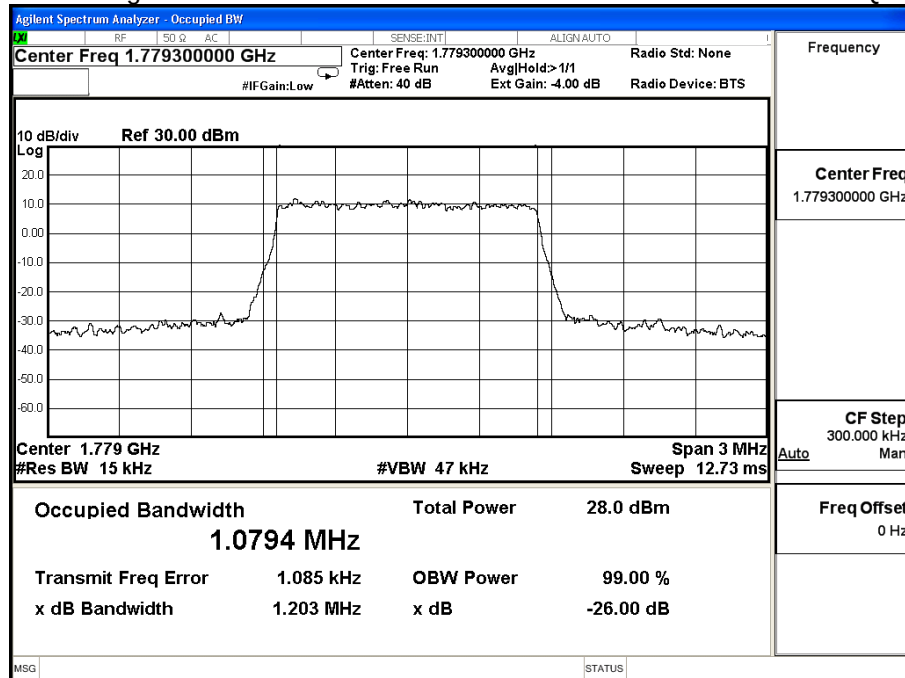
LTE Band 4&66 Middle channel

1.4 MHz 16-QAM



LTE Band 4&66 Highest channel:

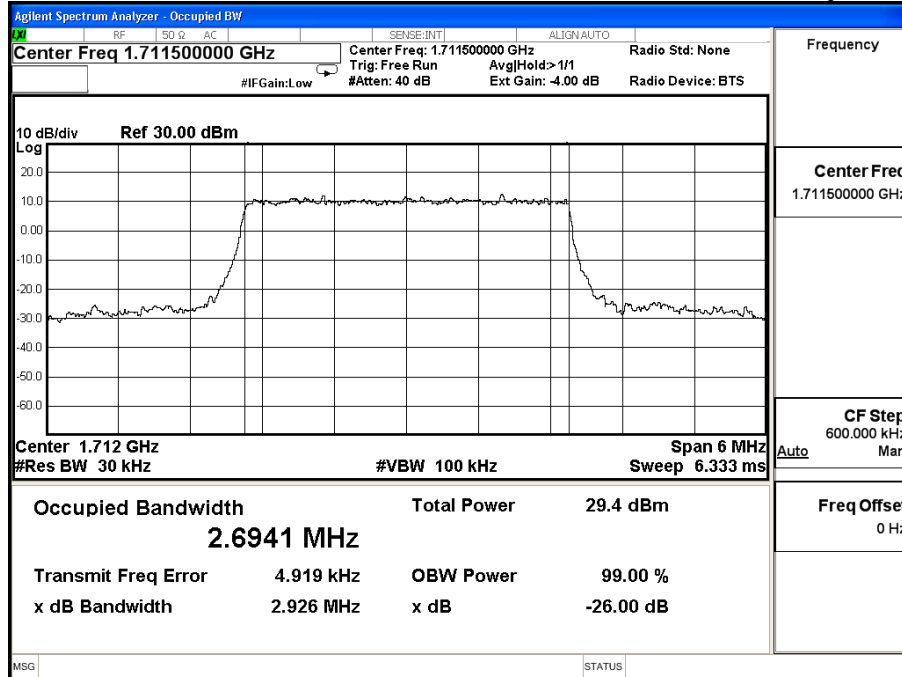
1.4 MHz 16-QAM





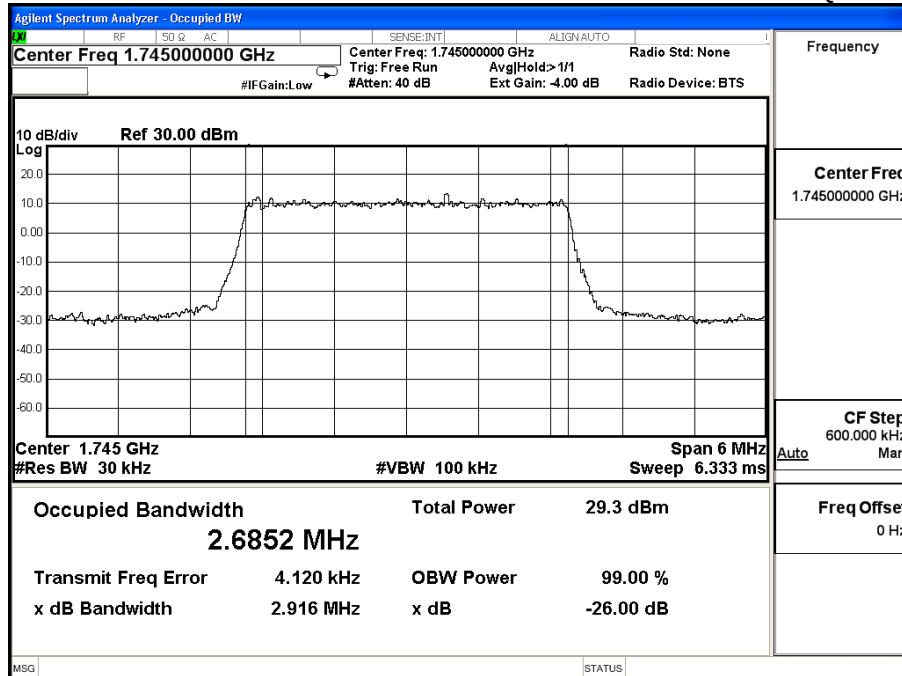
LTE Band 4&66 Lowest channel

3 MHz QPSK



LTE Band 4&66 Middle channel

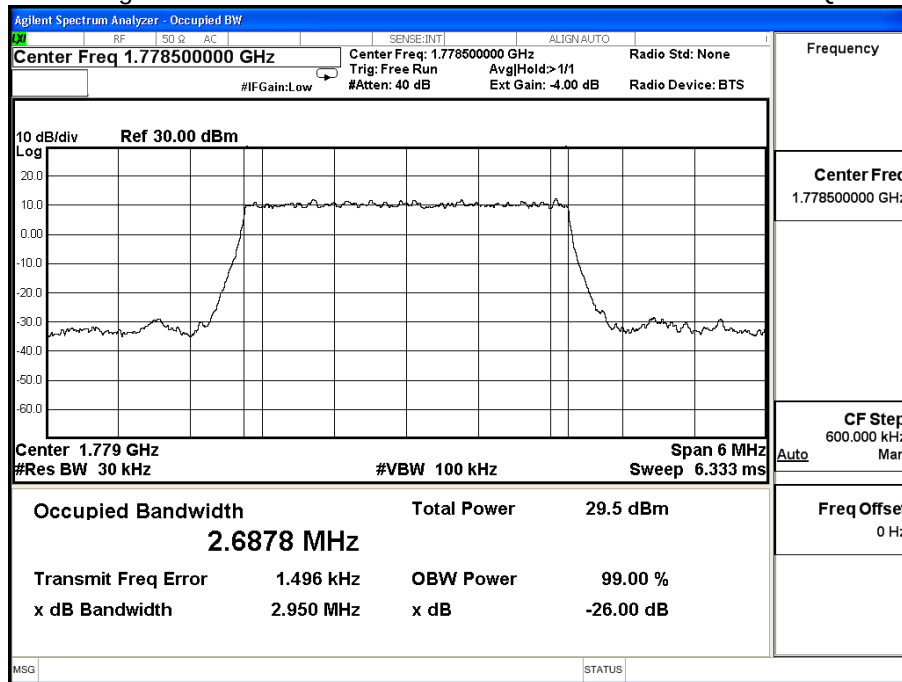
3 MHz QPSK





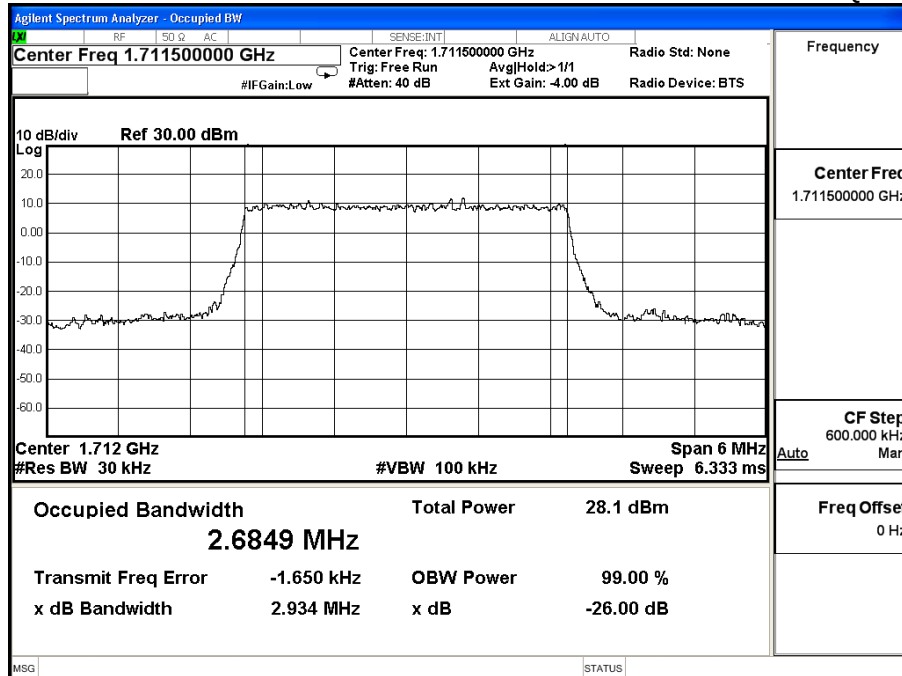
LTE Band 4&66 Highest channel:

3 MHz QPSK



LTE Band 4&66 Lowest channel

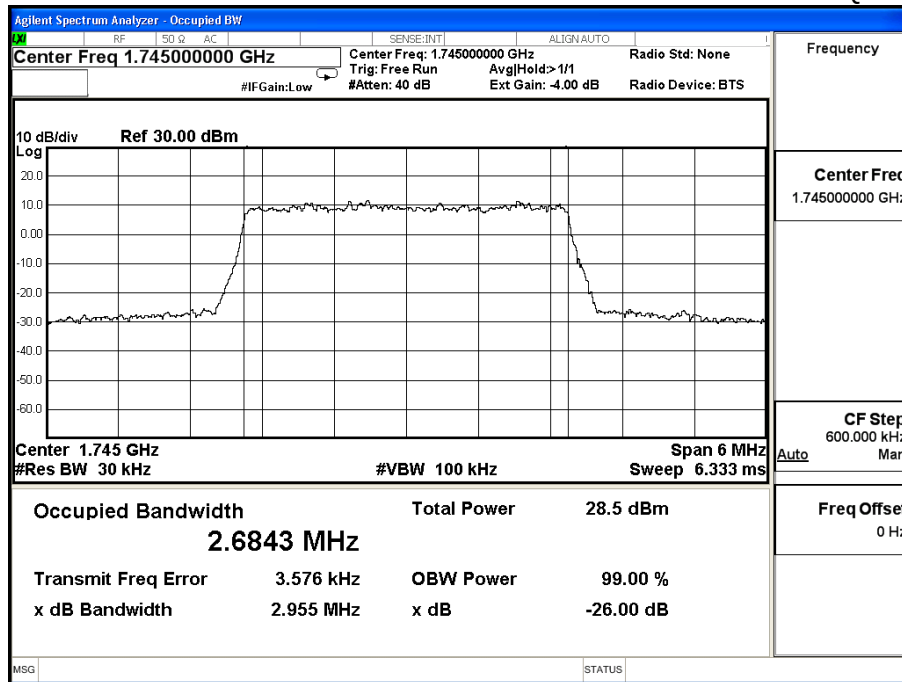
3 MHz 16-QAM





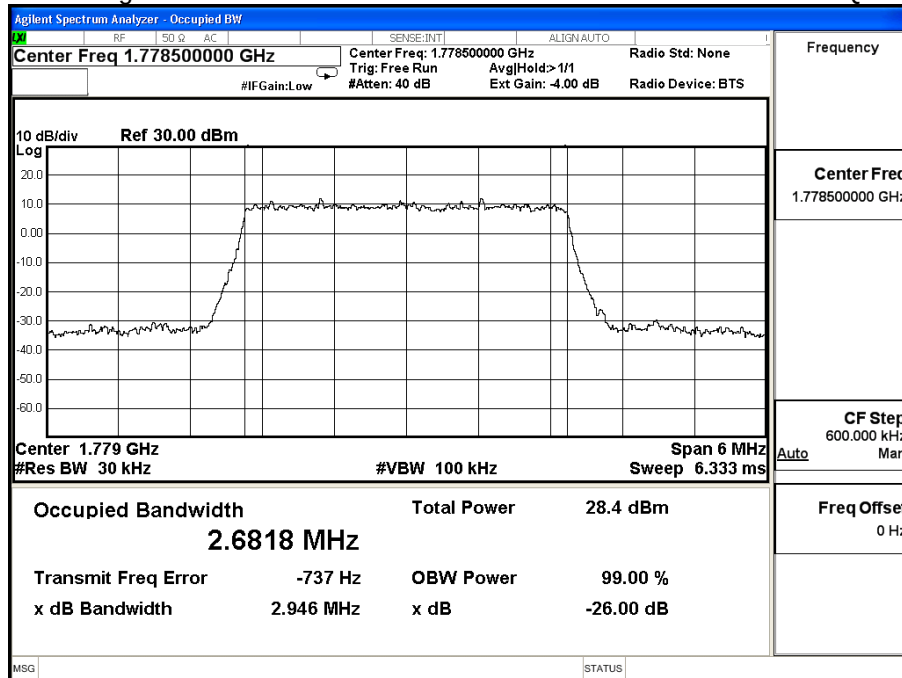
LTE Band 4&66 Middle channel

3 MHz 16-QAM



LTE Band 4&66 Highest channel:

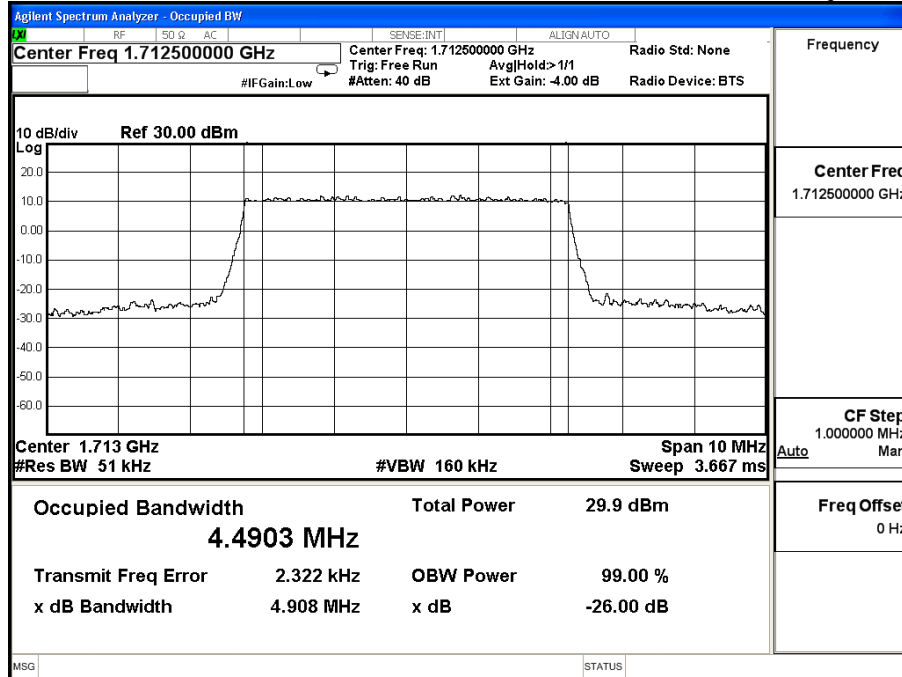
3 MHz 16-QAM





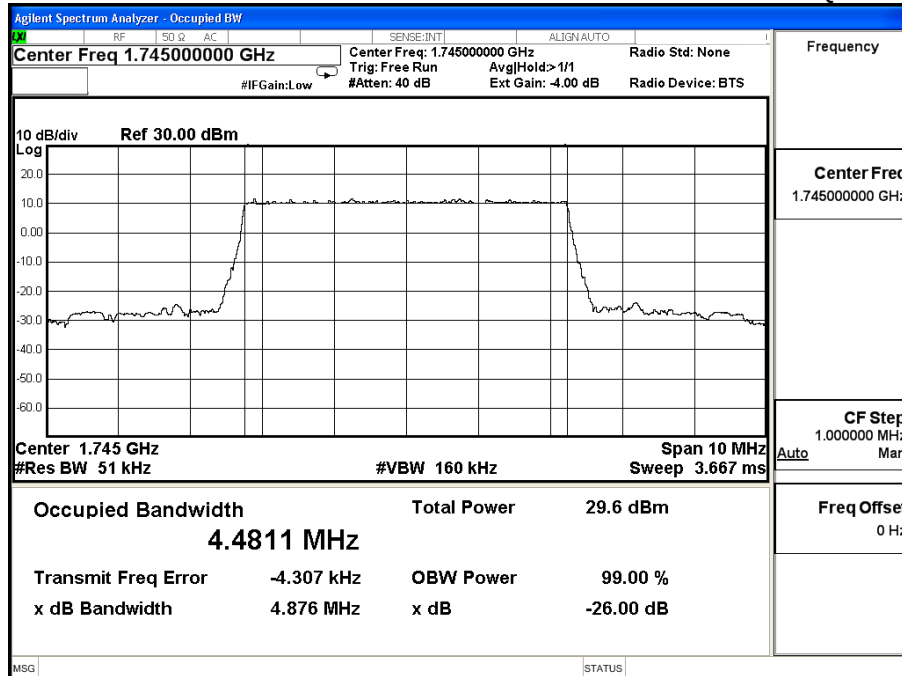
LTE Band 4&66 Lowest channel

5 MHz QPSK



LTE Band 4&66 Middle channel

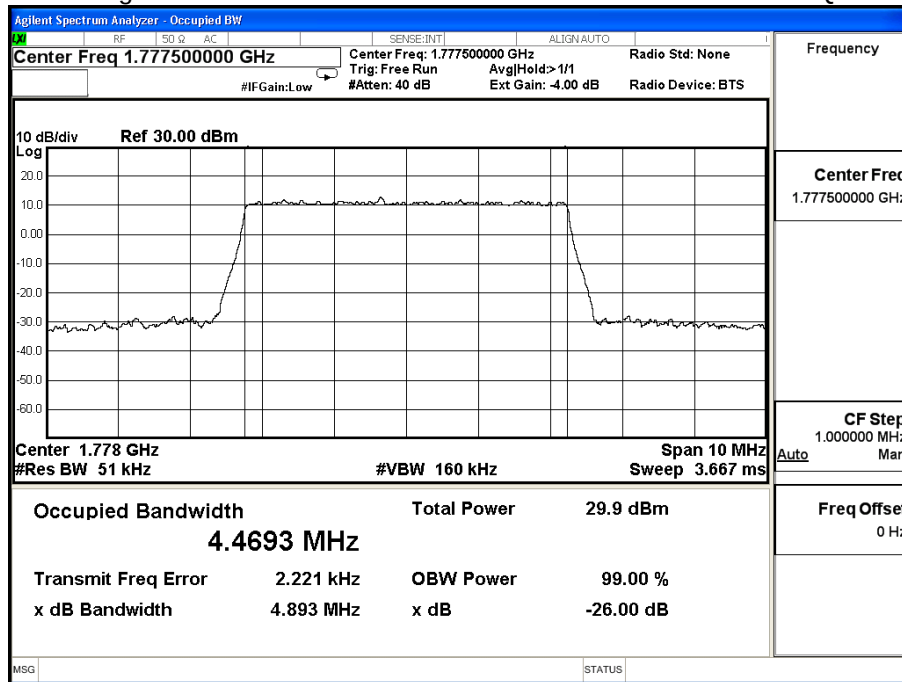
5 MHz QPSK





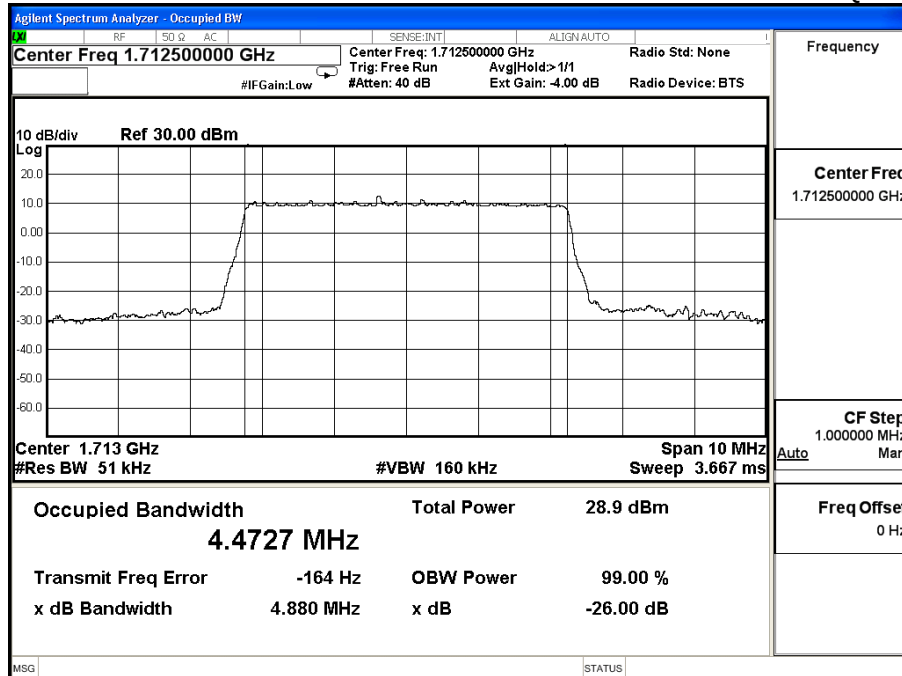
LTE Band 4&66 Highest channel:

5 MHz QPSK



LTE Band 4&66 Lowest channel

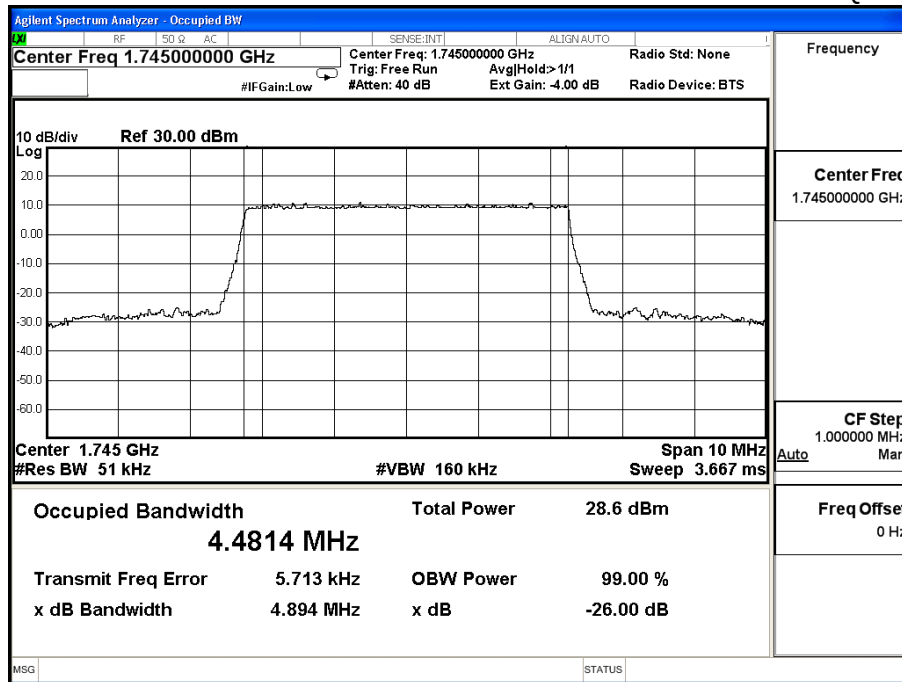
5 MHz 16-QAM





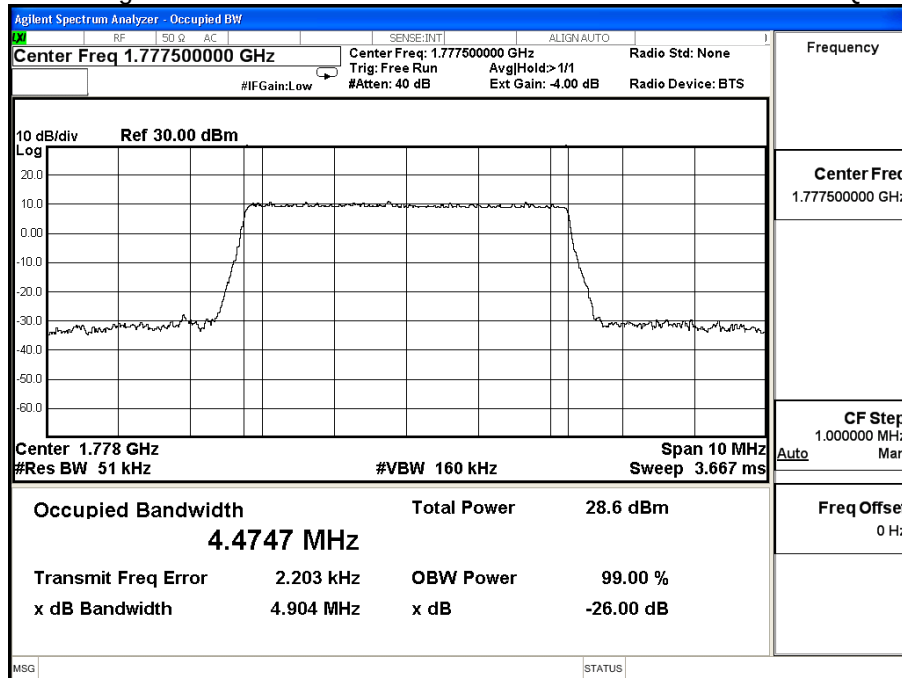
LTE Band 4&66 Middle channel

5 MHz 16-QAM



LTE Band 4&66 Highest channel:

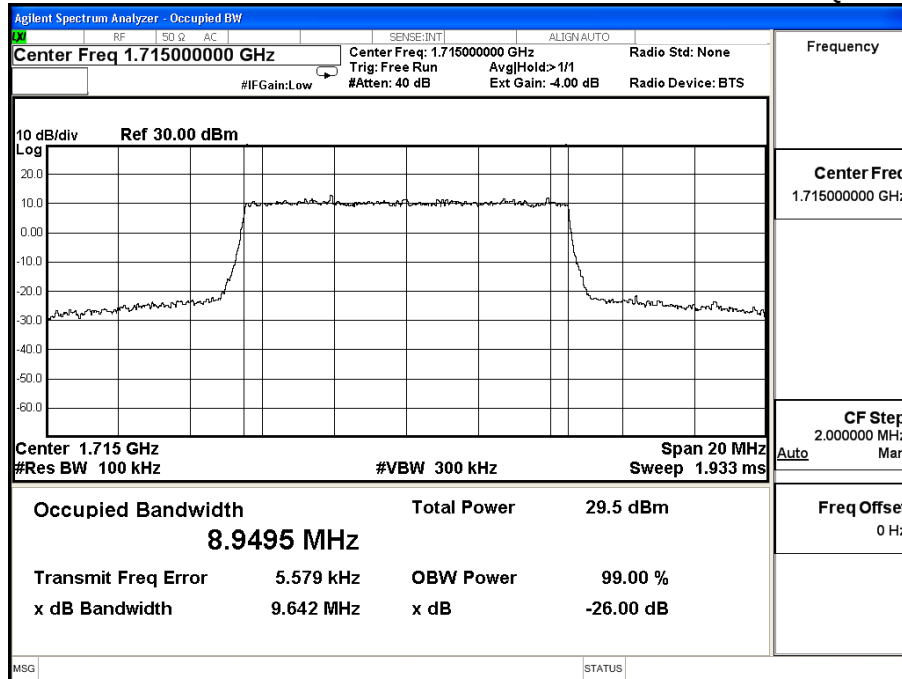
5 MHz 16-QAM





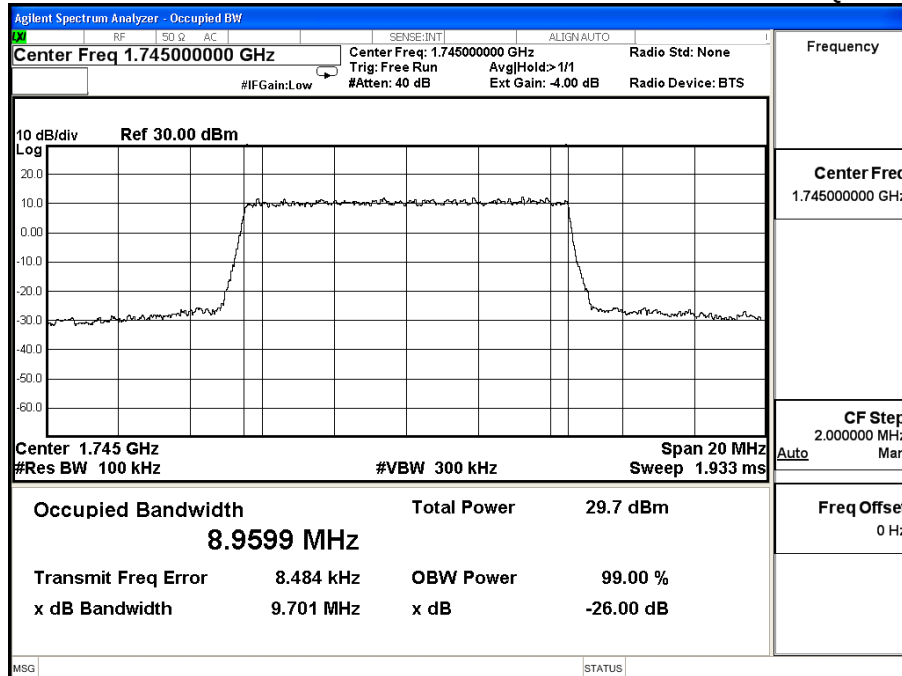
LTE Band 4&66 Lowest channel

10 MHz QPSK



LTE Band 4&66 Middle channel

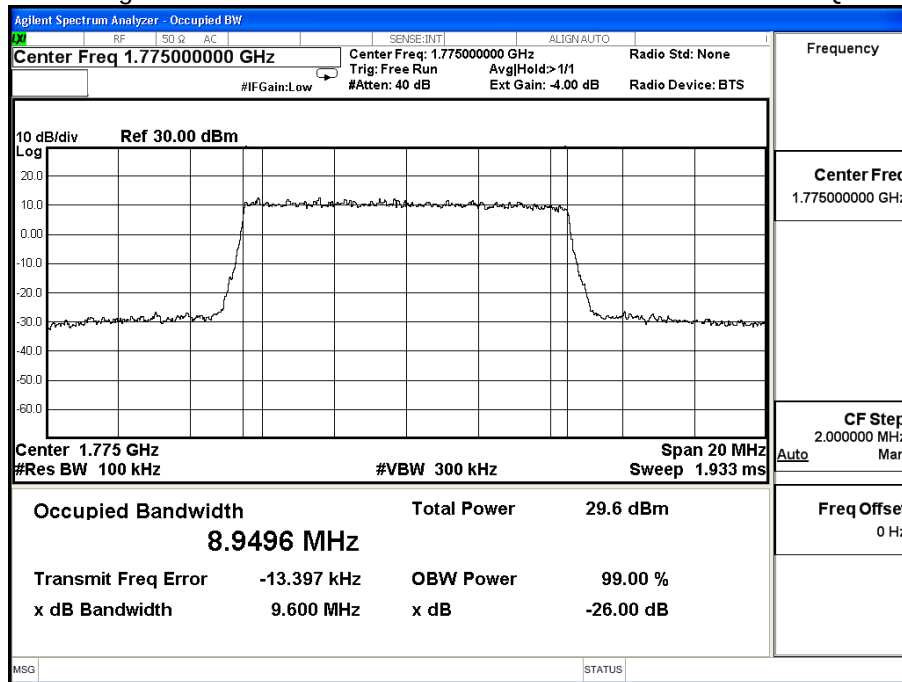
10 MHz QPSK





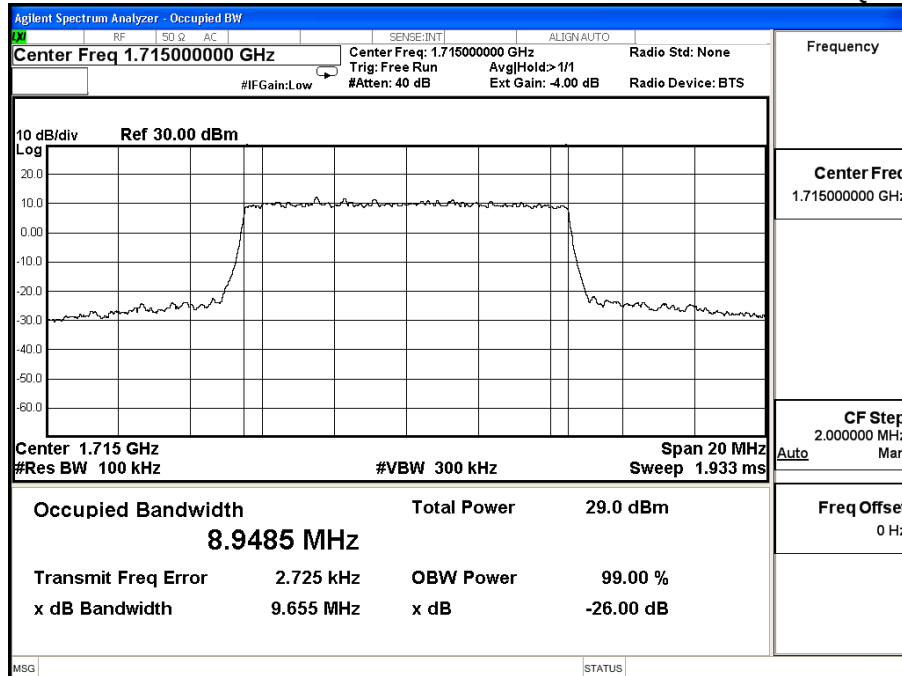
LTE Band 4&66 Highest channel:

10 MHz QPSK



LTE Band 4&66 Lowest channel

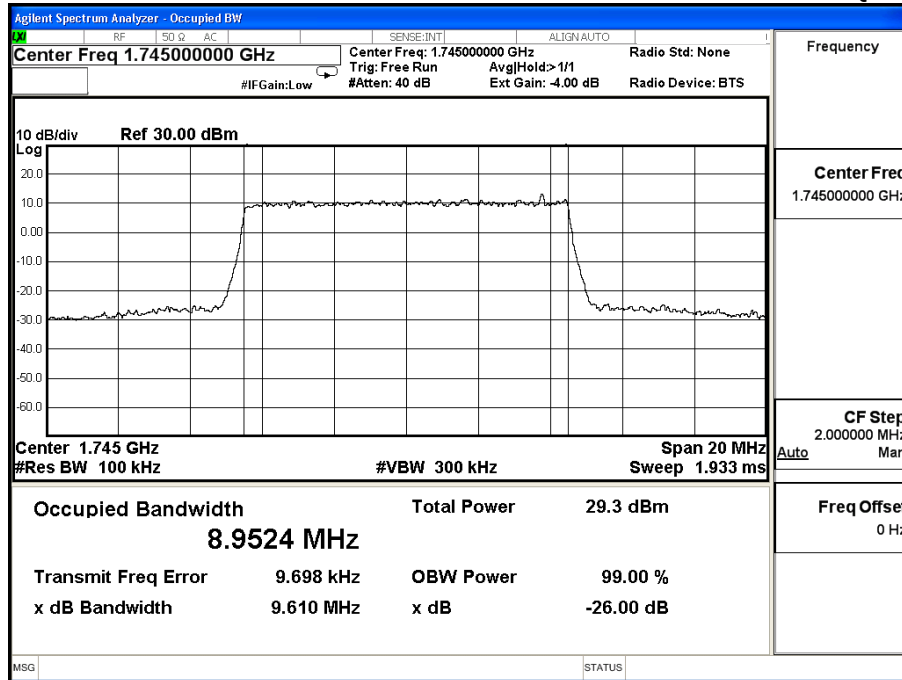
10 MHz 16-QAM





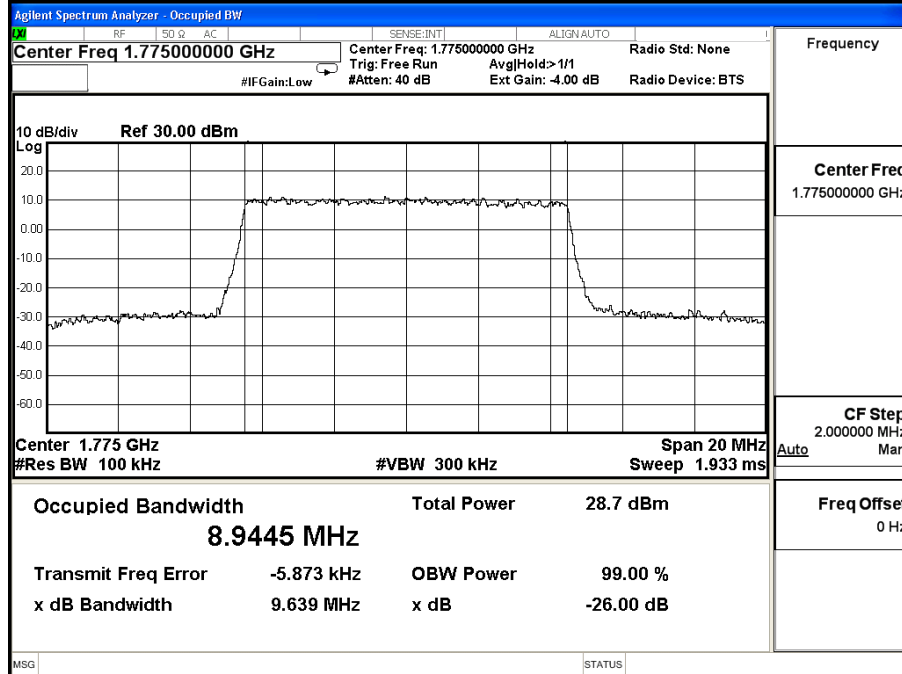
LTE Band 4&66 Middle channel

10 MHz 16-QAM



LTE Band 4&66 Highest channel:

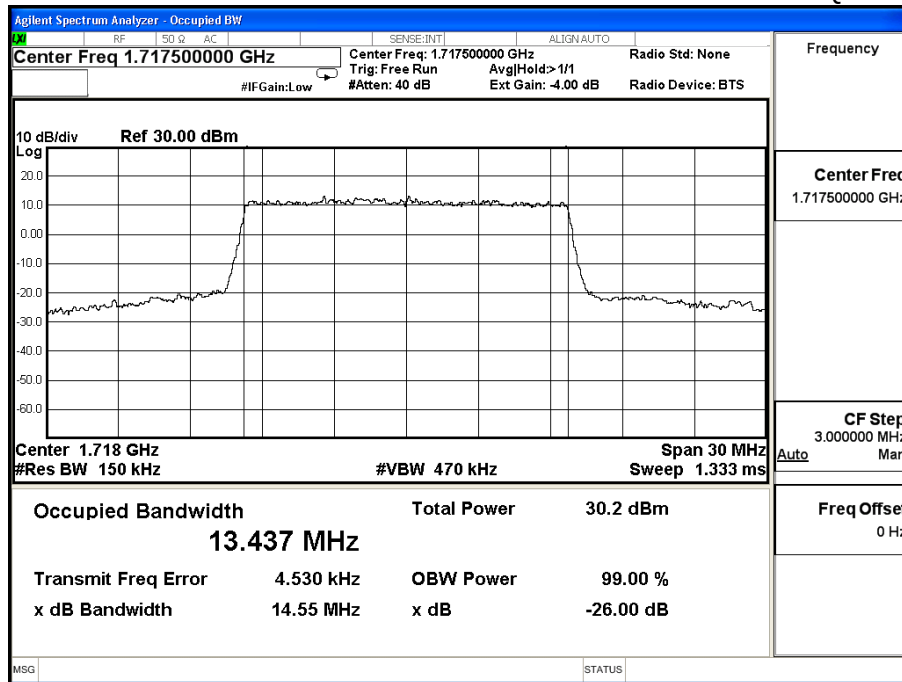
10 MHz 16-QAM





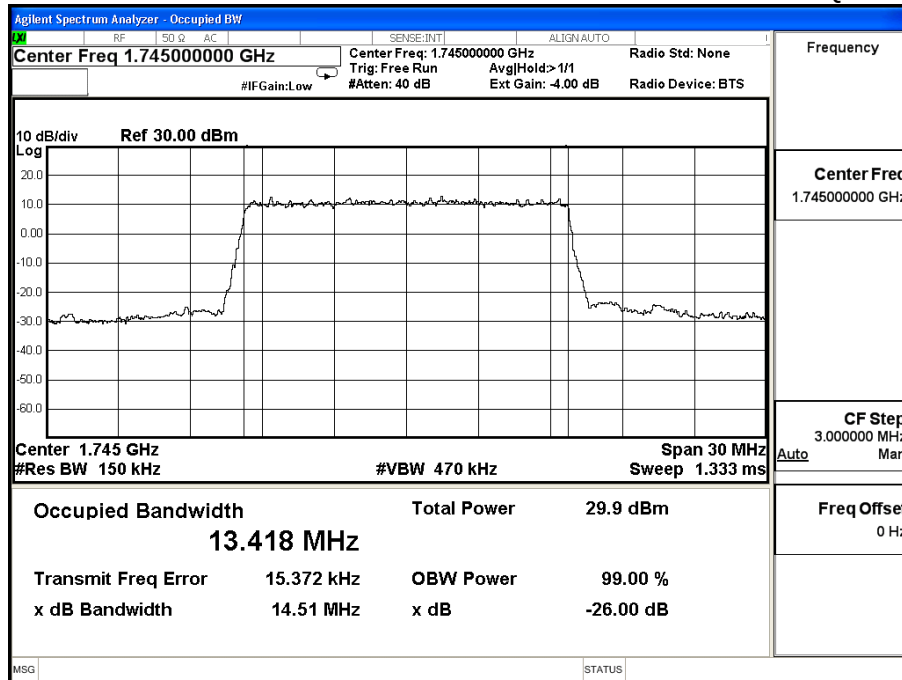
LTE Band 4&66 Lowest channel

15 MHz QPSK



LTE Band 4&66 Middle channel

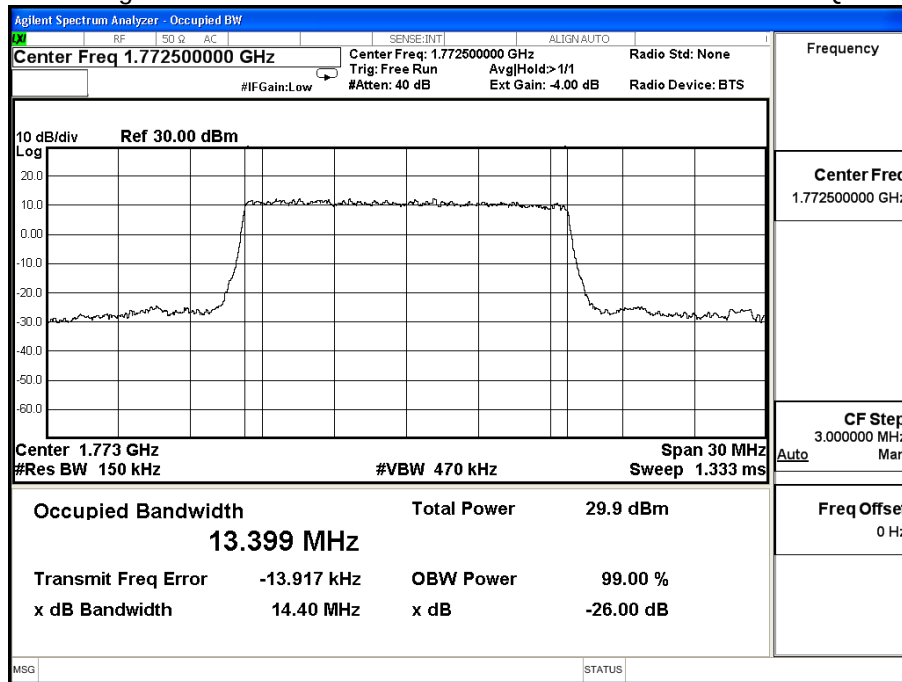
15 MHz QPSK





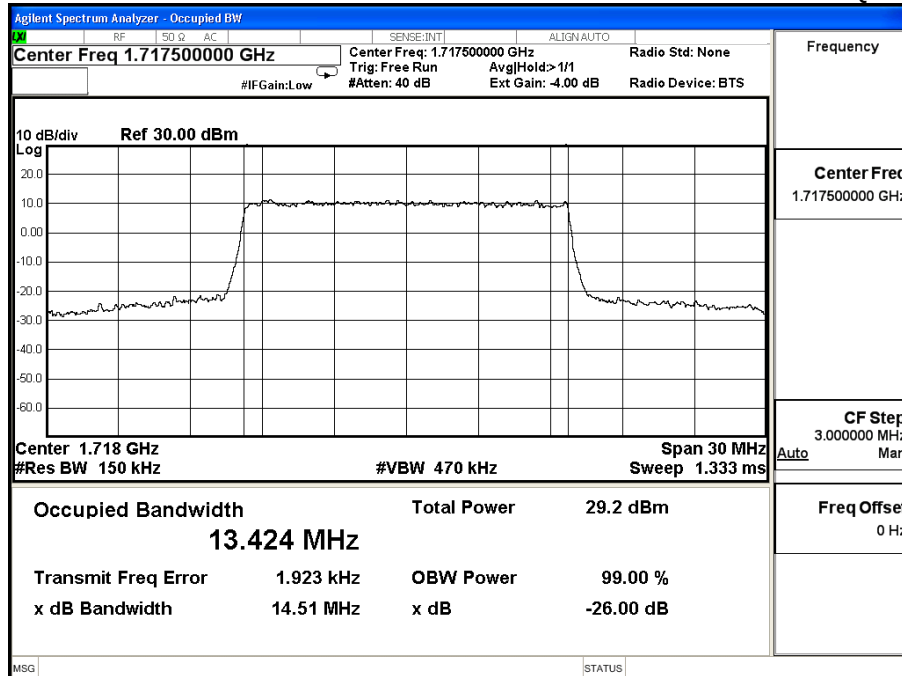
LTE Band 4&66 Highest channel:

15 MHz QPSK



LTE Band 4&66 Lowest channel

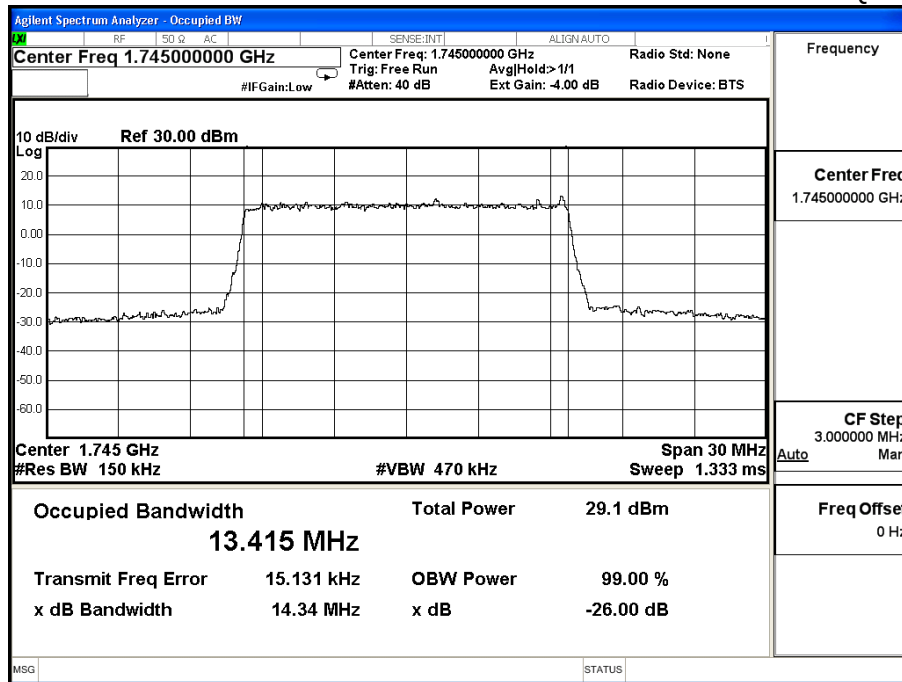
15 MHz 16-QAM





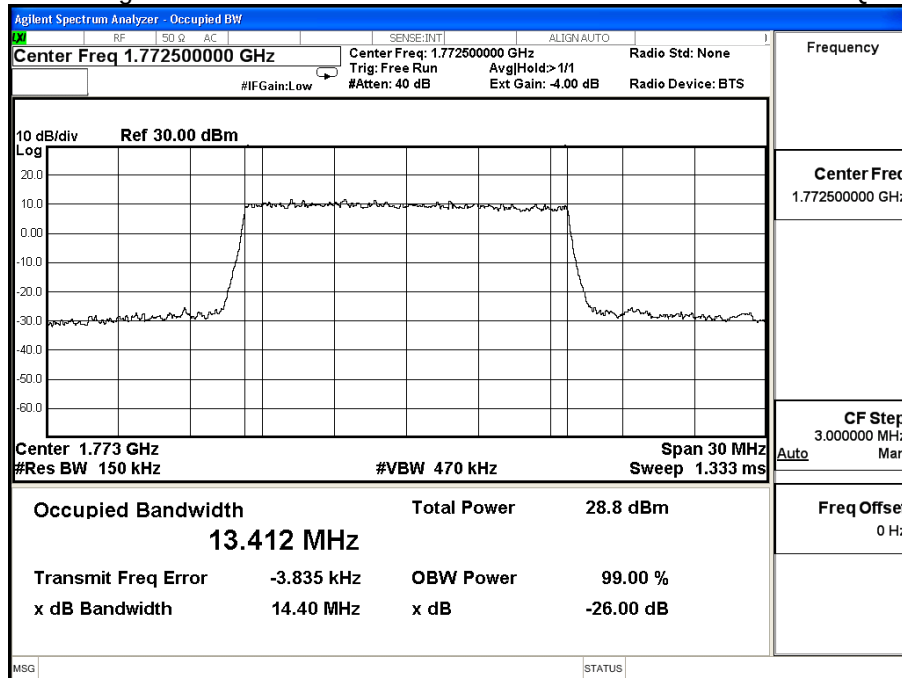
LTE Band 4&66 Middle channel

15 MHz 16-QAM



LTE Band 4&66 Highest channel:

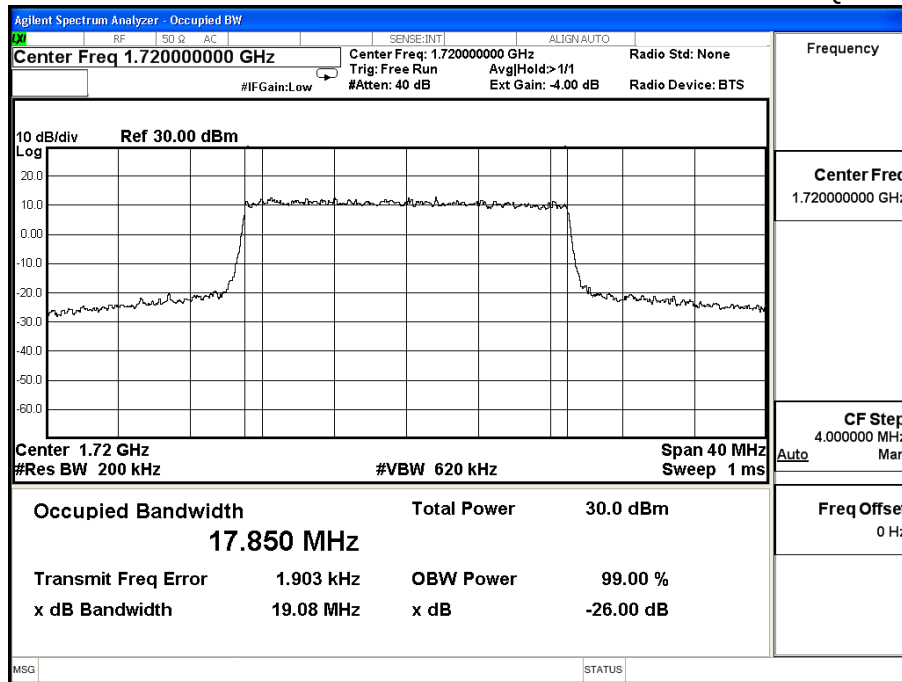
15 MHz 16-QAM





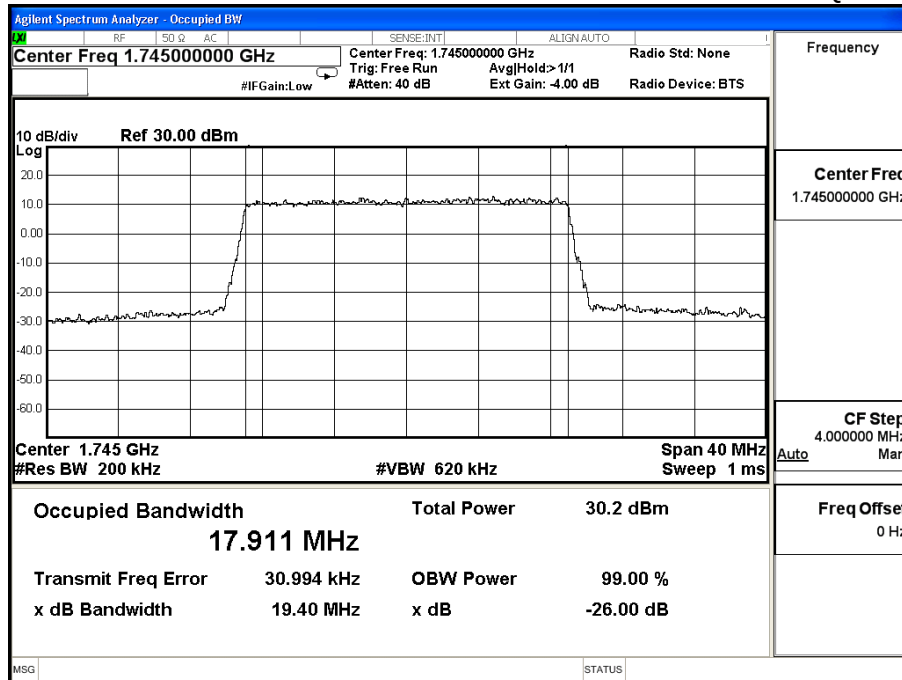
LTE Band 4&66 Lowest channel

20 MHz QPSK



LTE Band 4&66 Middle channel

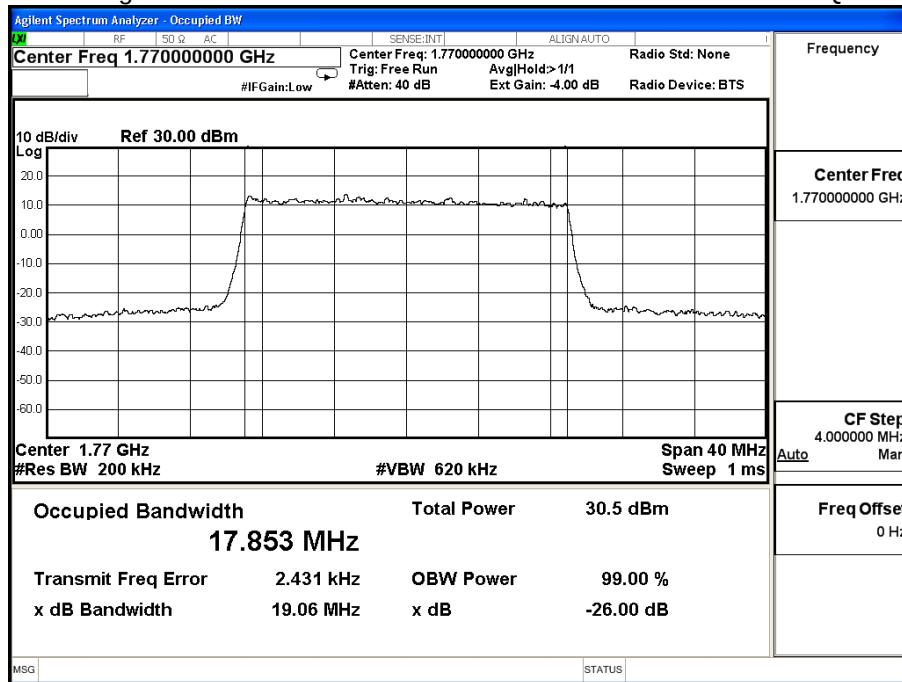
20 MHz QPSK





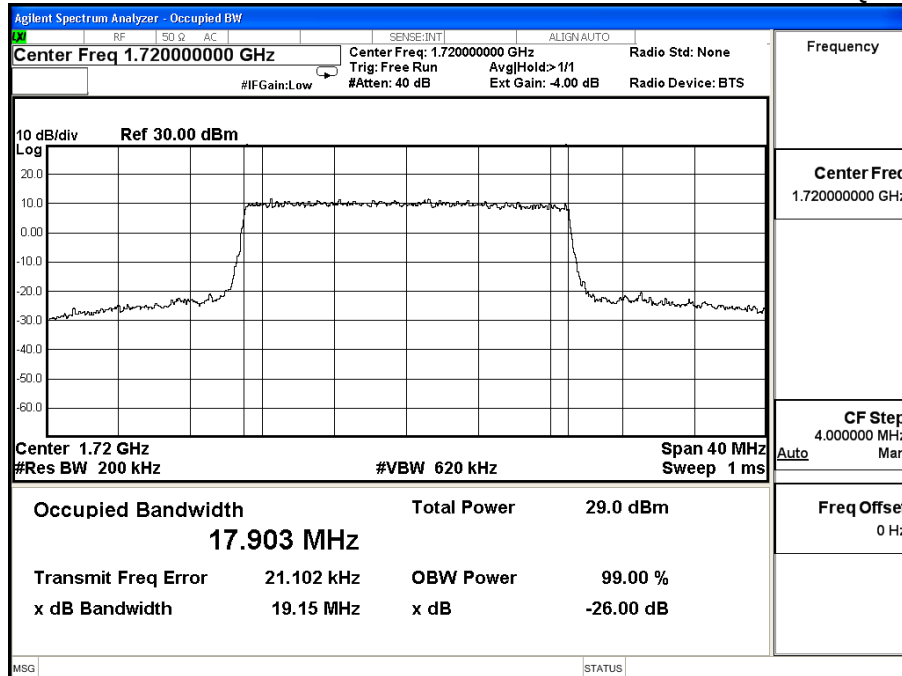
LTE Band 4&66 Highest channel:

20 MHz QPSK



LTE Band 4&66 Lowest channel

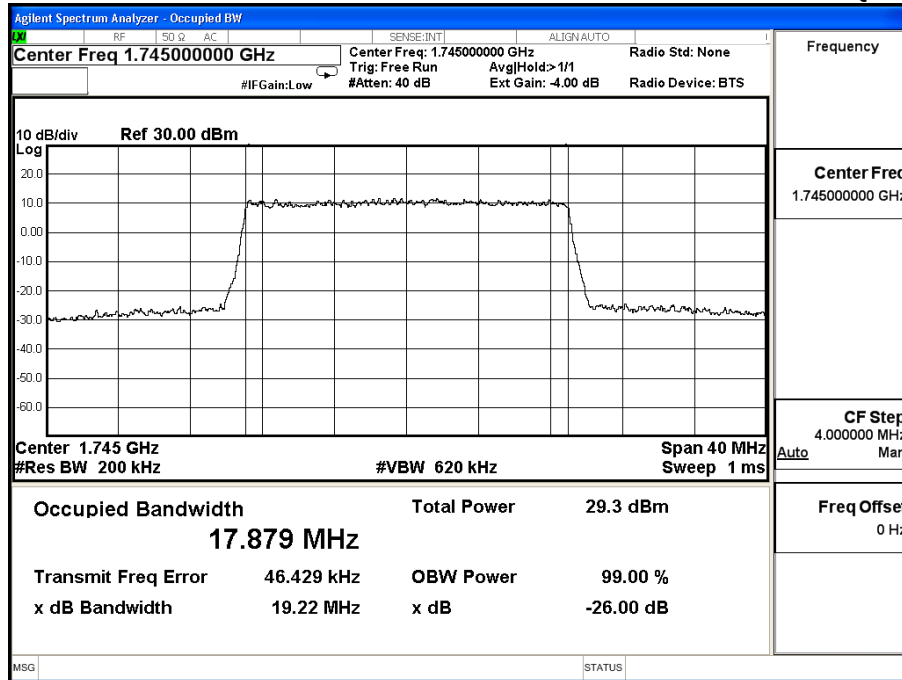
20 MHz 16-QAM





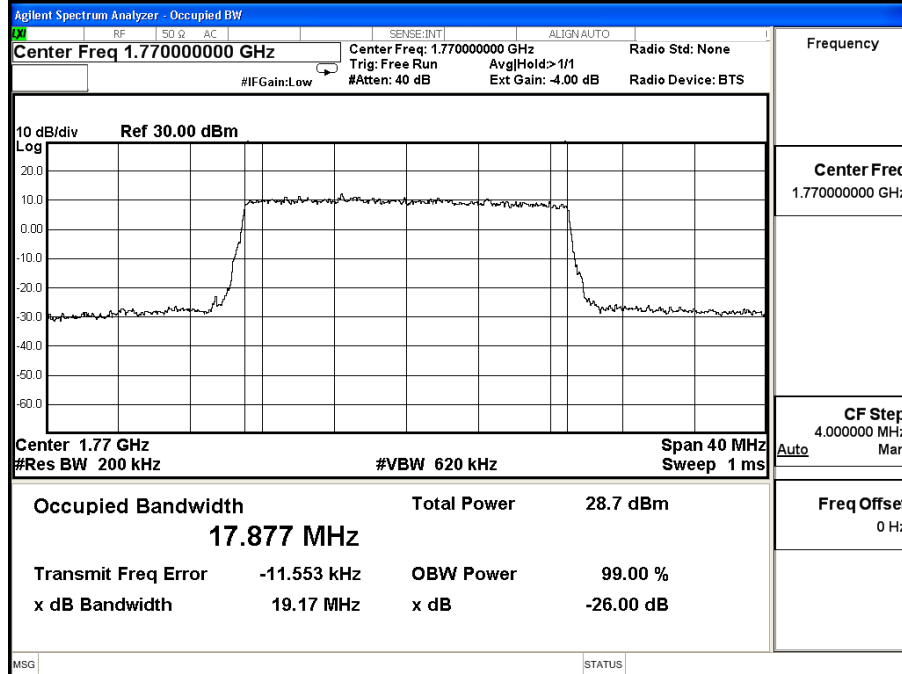
LTE Band 4&66 Middle channel

20 MHz 16-QAM



LTE Band 4&66 Highest channel:

20 MHz 16-QAM





1.2. Conducted Spurious Emissions

1.2.1. Test Result

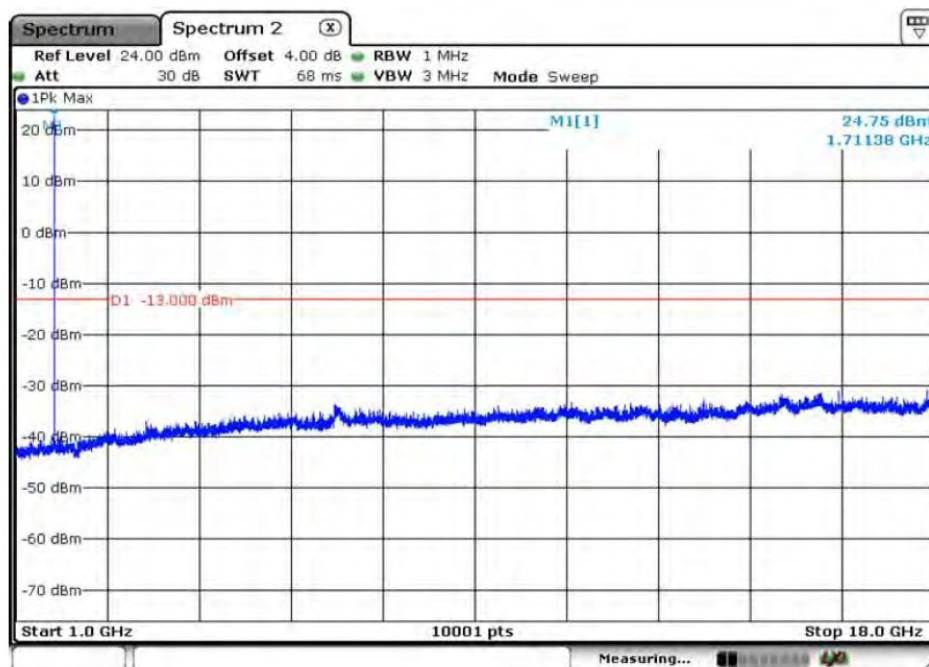
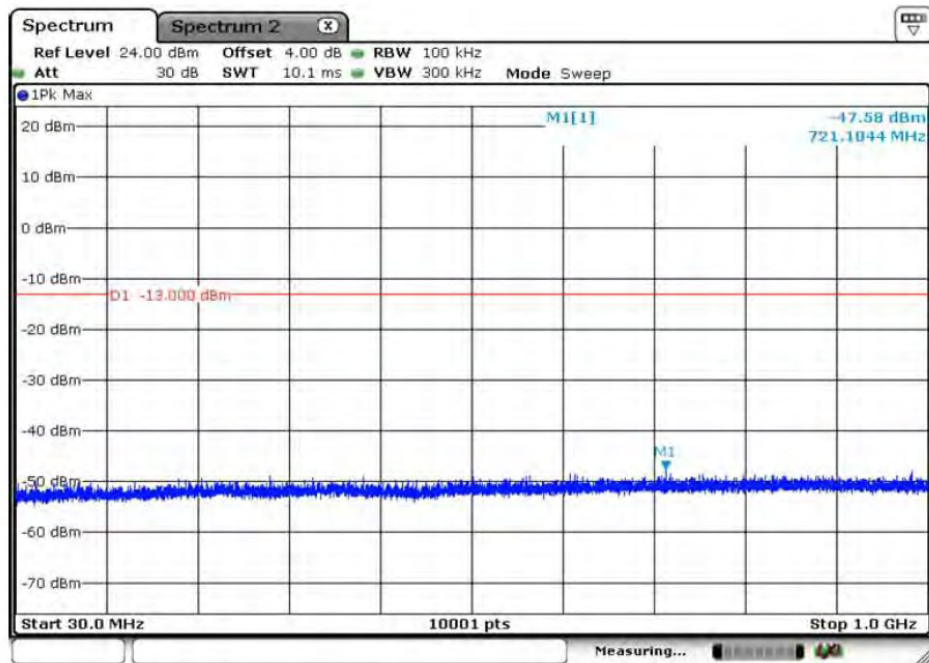
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

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

Pass, the table and plot please see annex.

LTE Band 4&66 Lowest channel

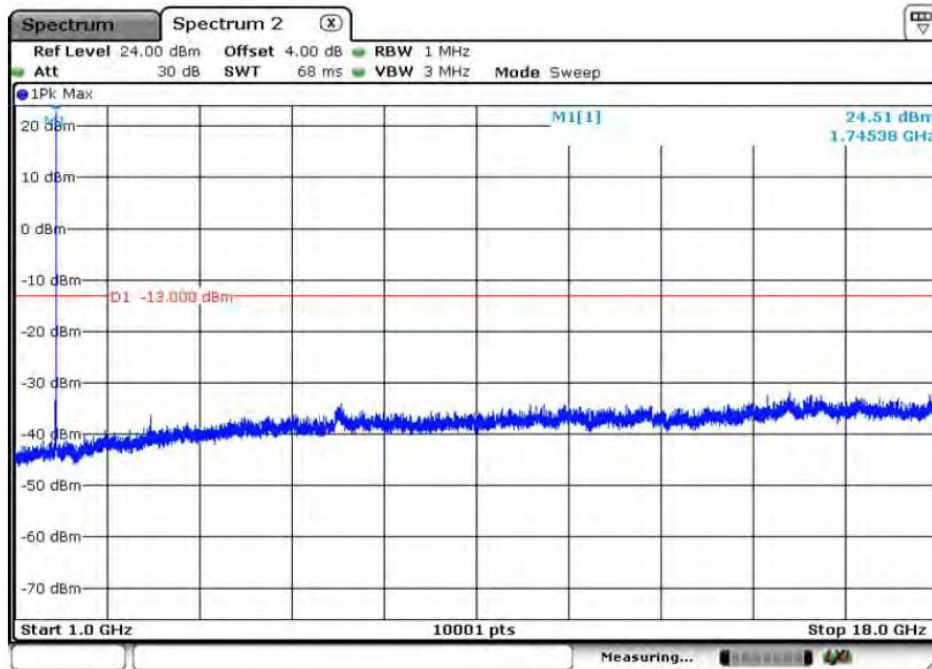
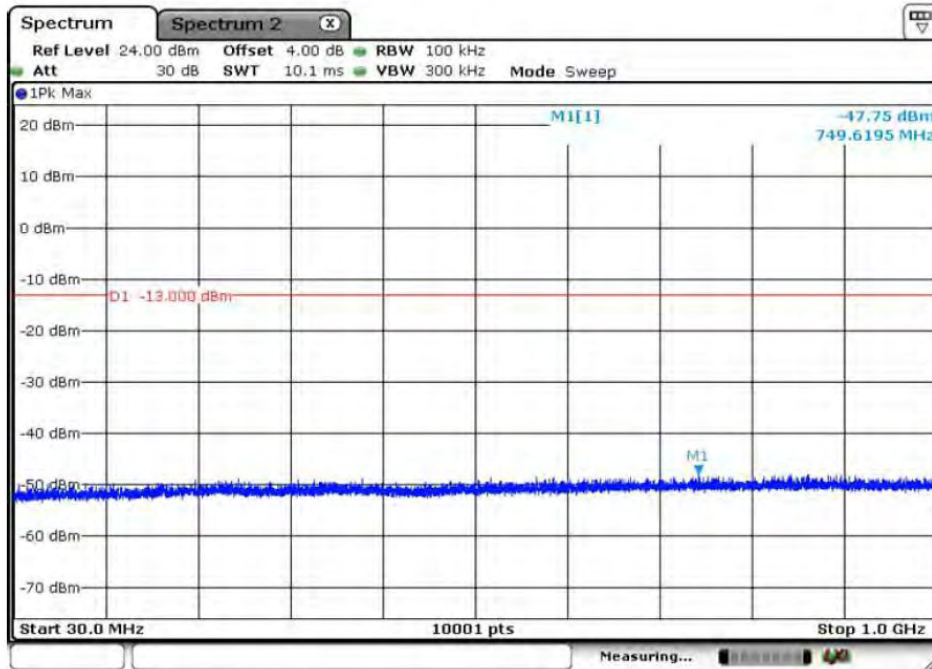
1.4MHz





LTE Band 4&66 middle channel

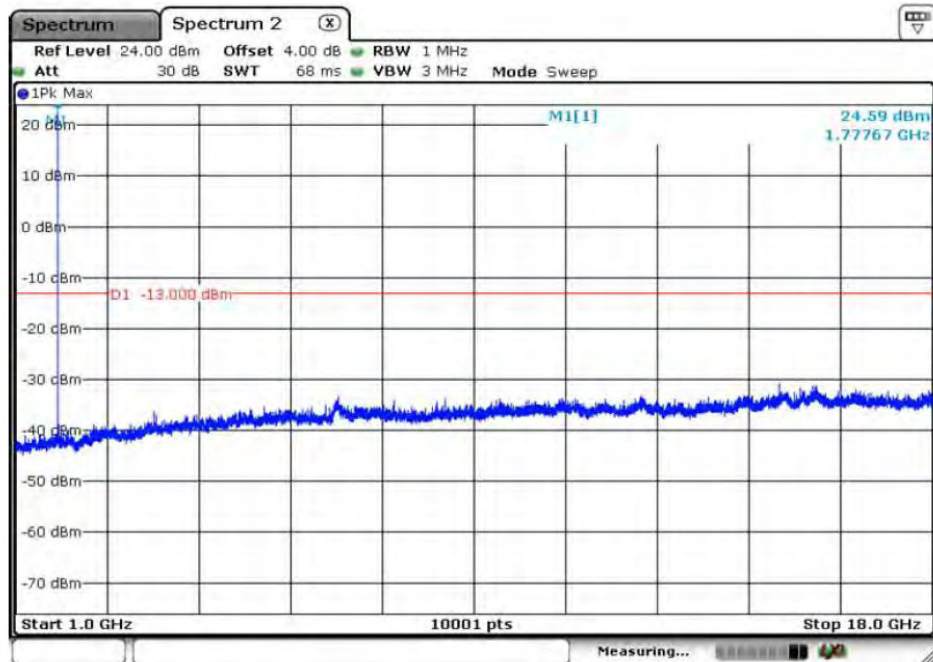
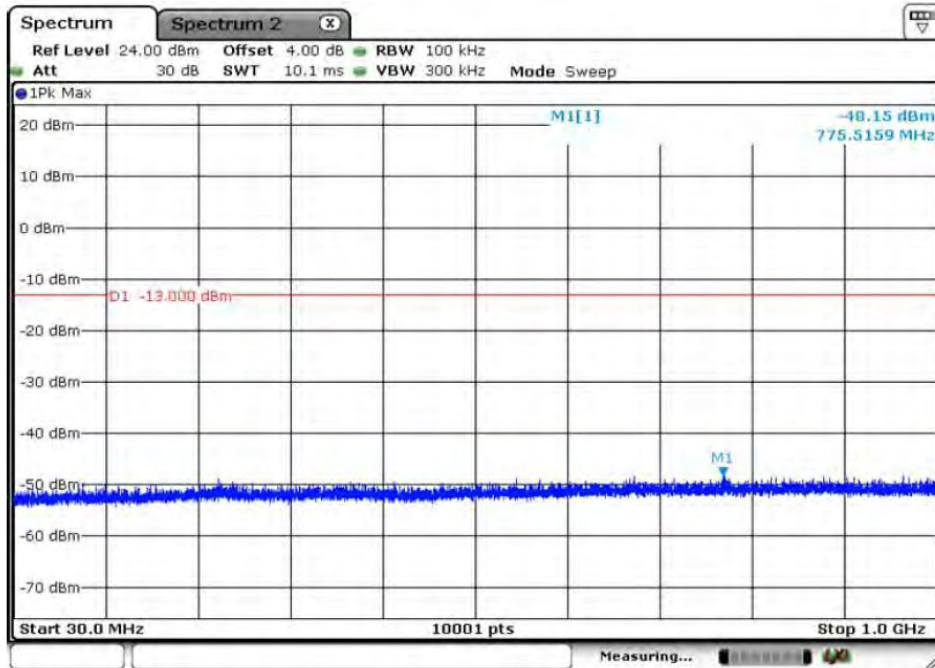
1.4MHz





LTE Band 4&66 high channel

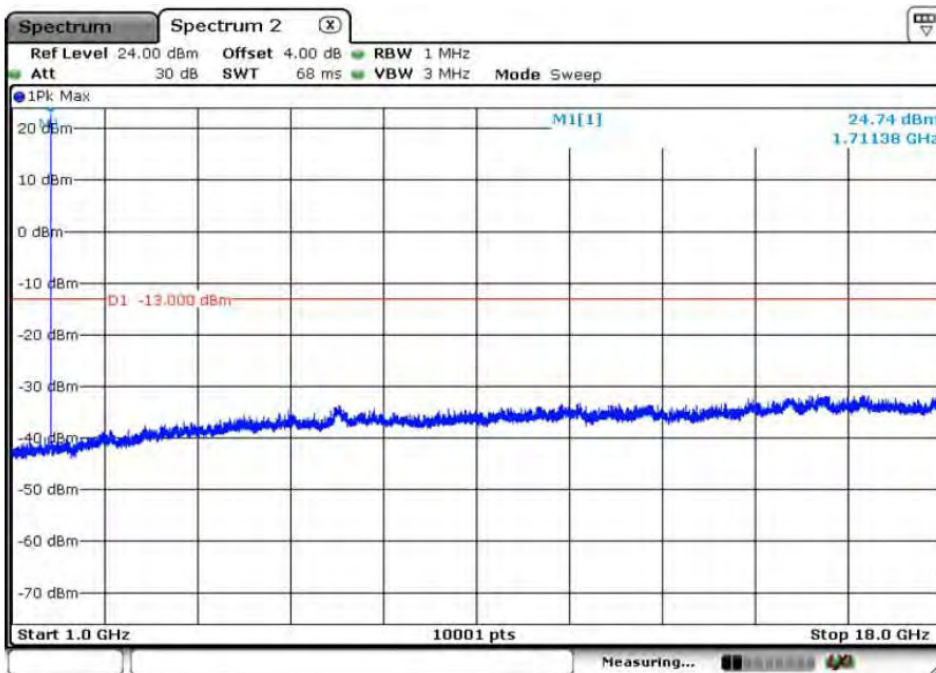
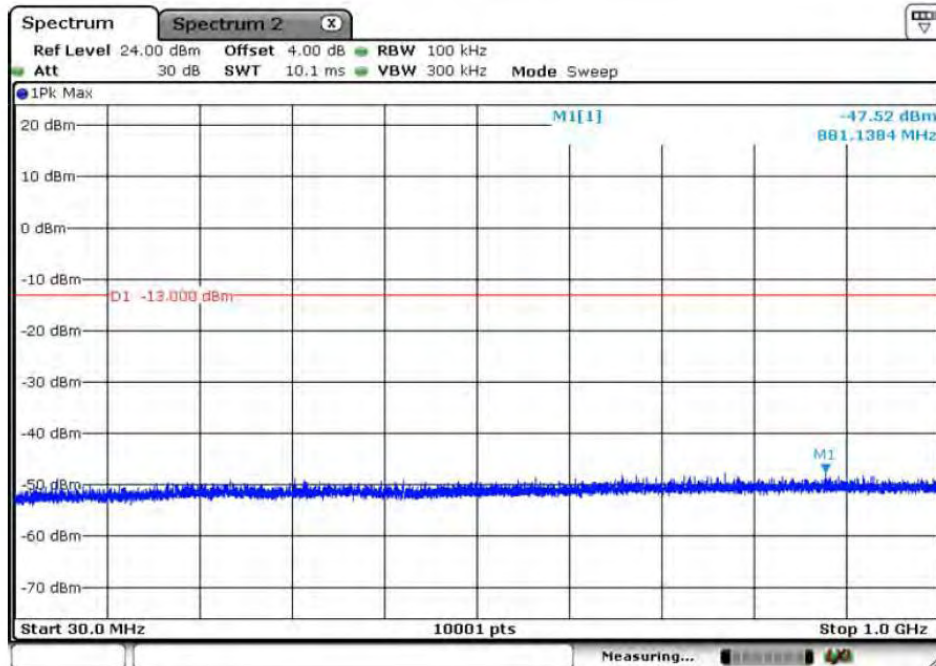
1.4MHz





LTE Band 4&66 Lowest channel

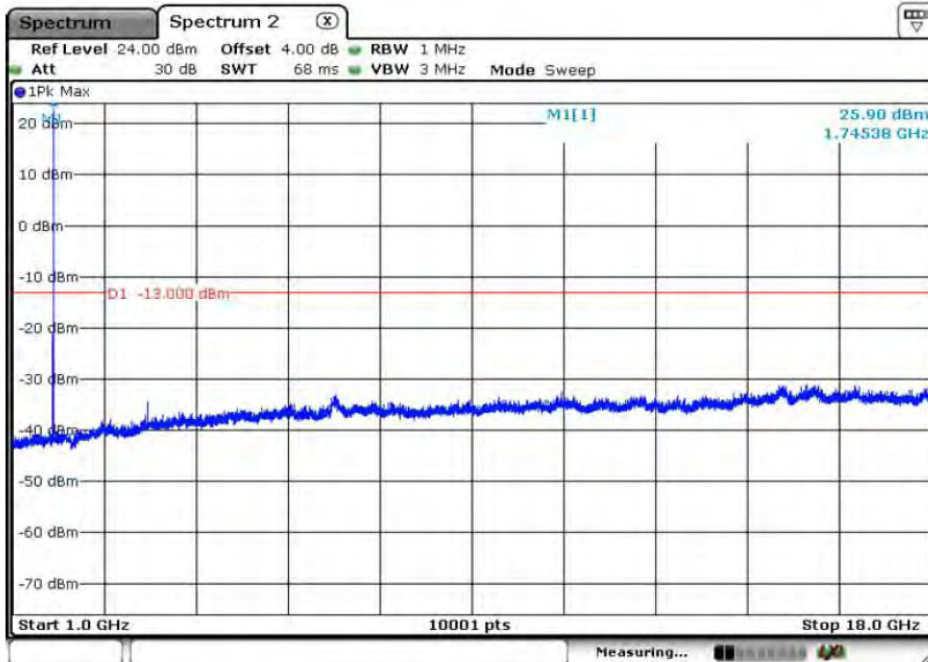
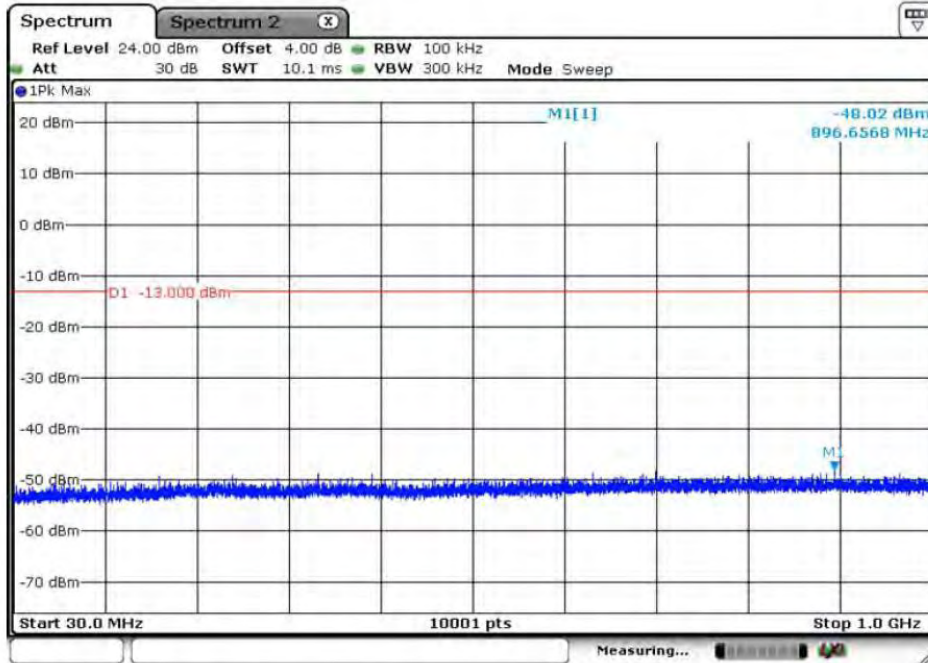
3MHz





LTE Band 4&66 middle channel

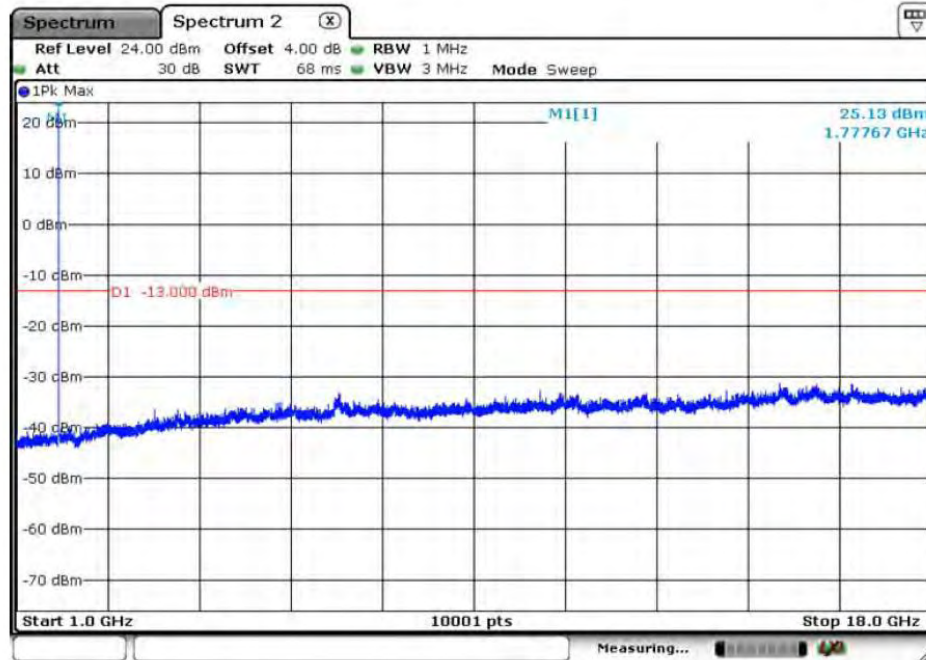
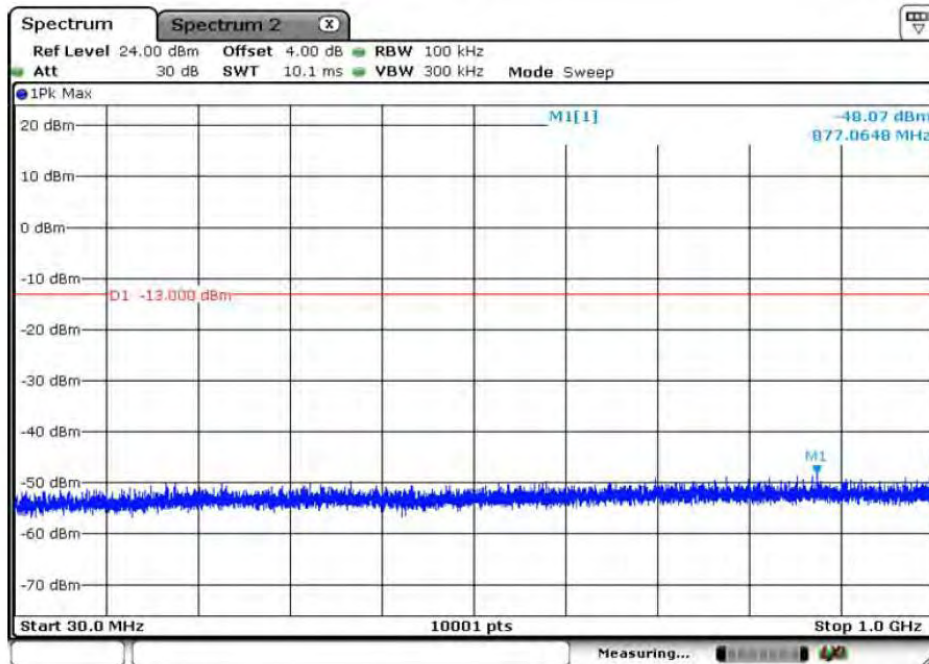
3MHz





LTE Band 4&66 high channel

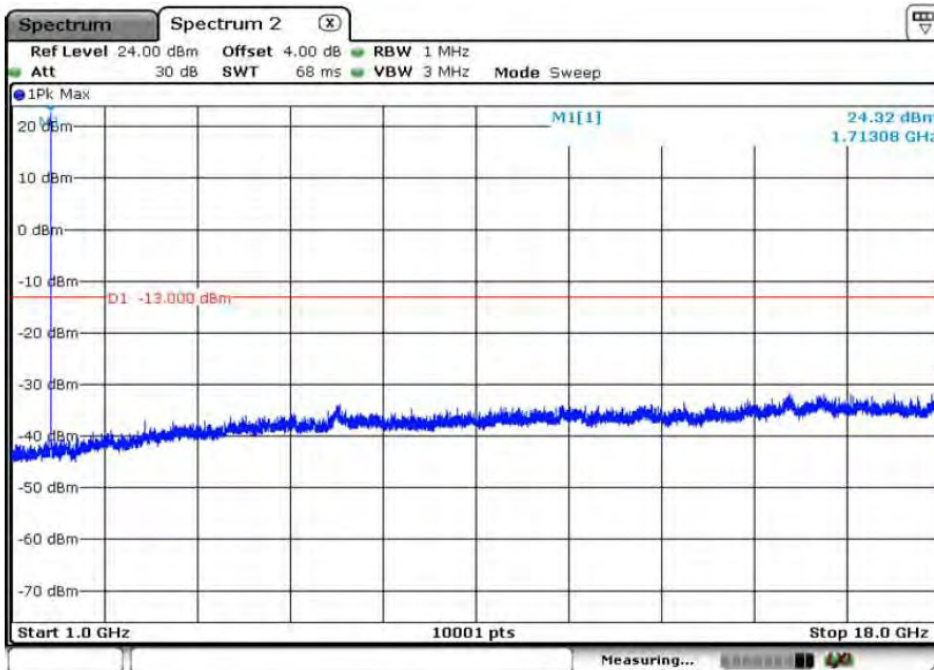
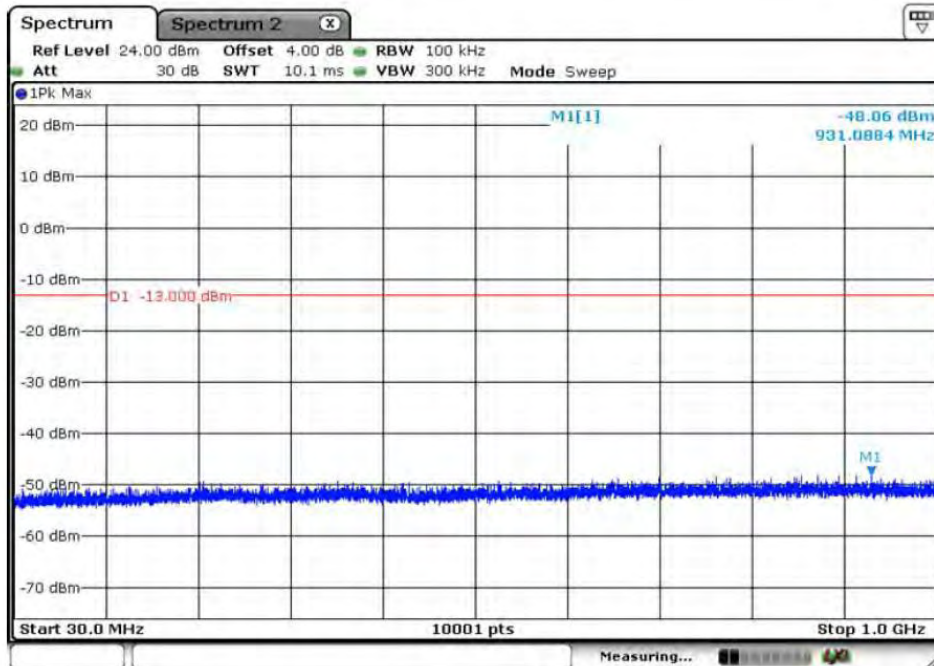
3MHz





LTE Band 4&66 Lowest channel

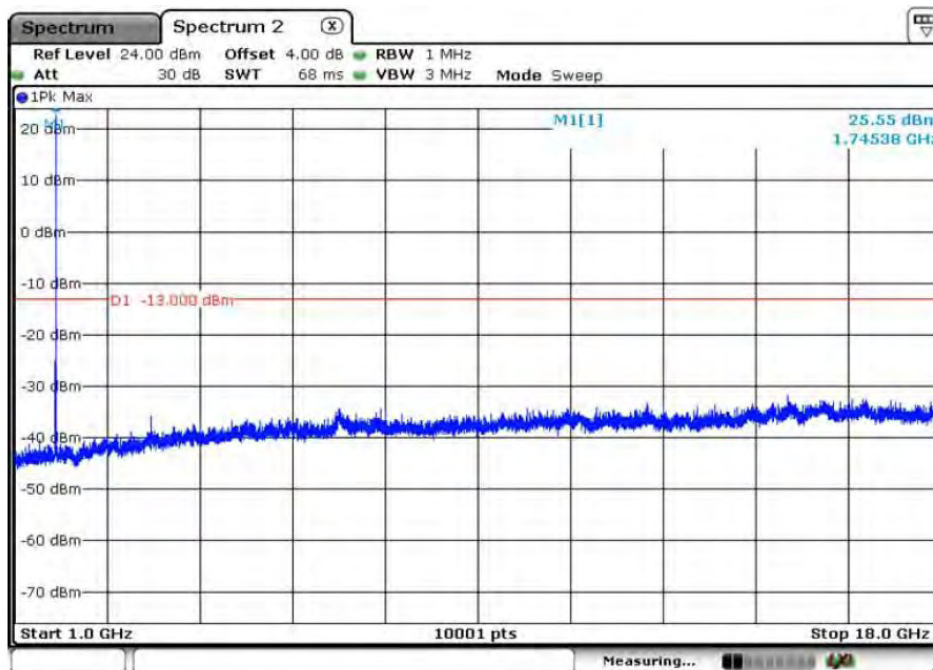
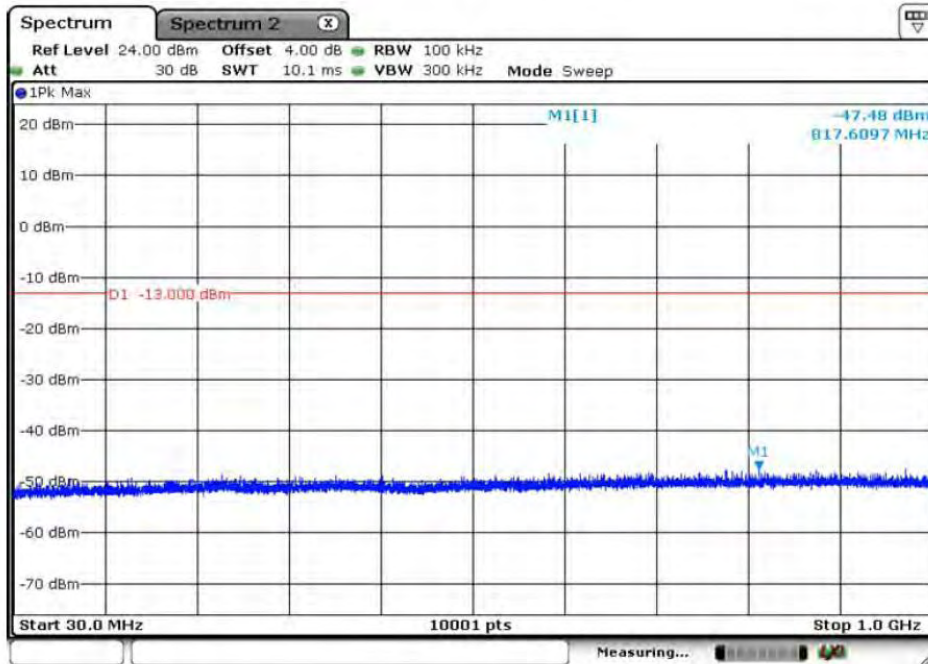
5MHz





LTE Band 4&66 middle channel

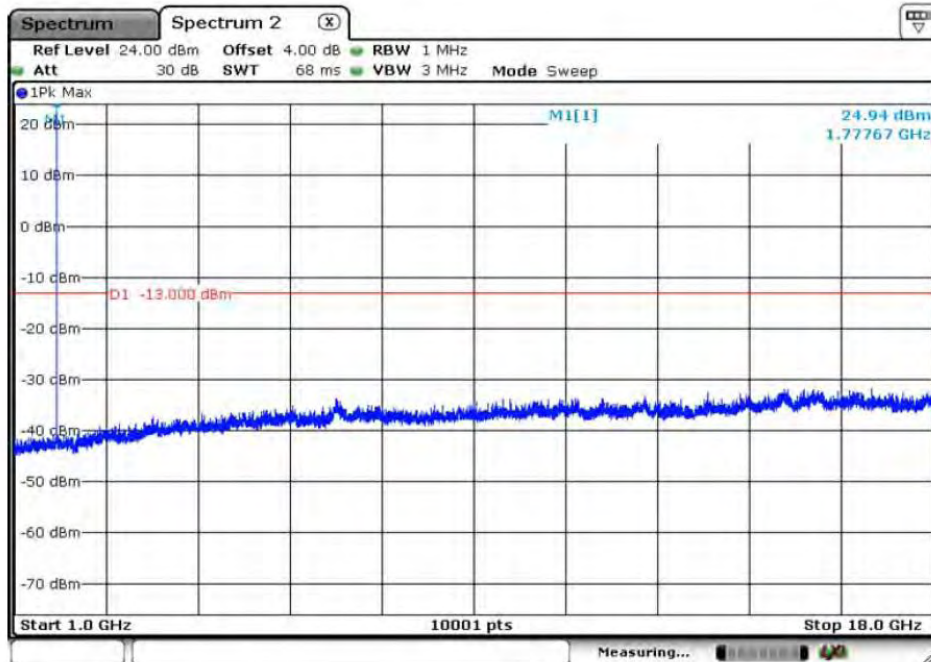
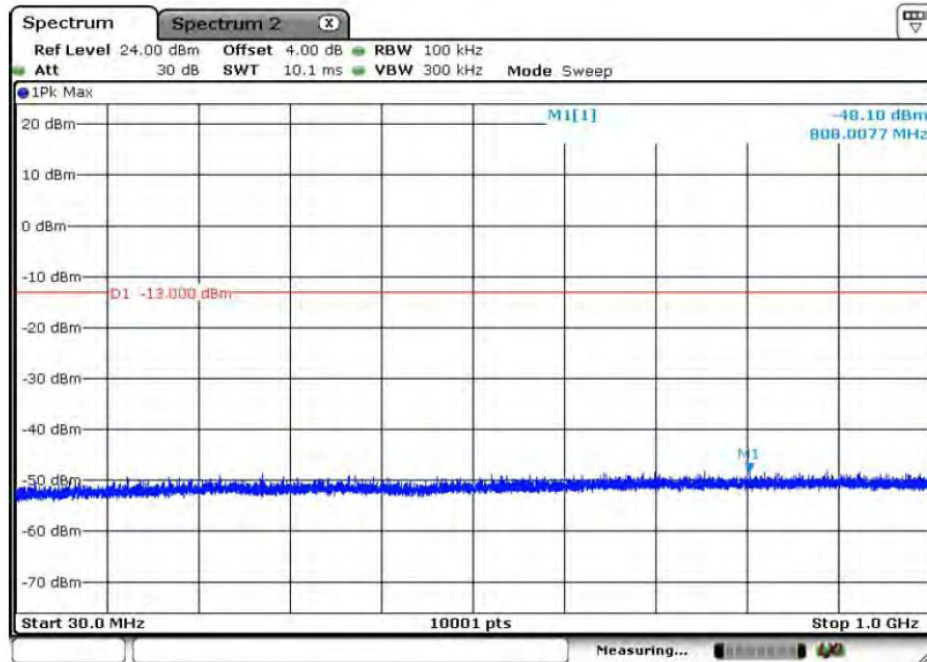
5MHz





LTE Band 4&66 high channel

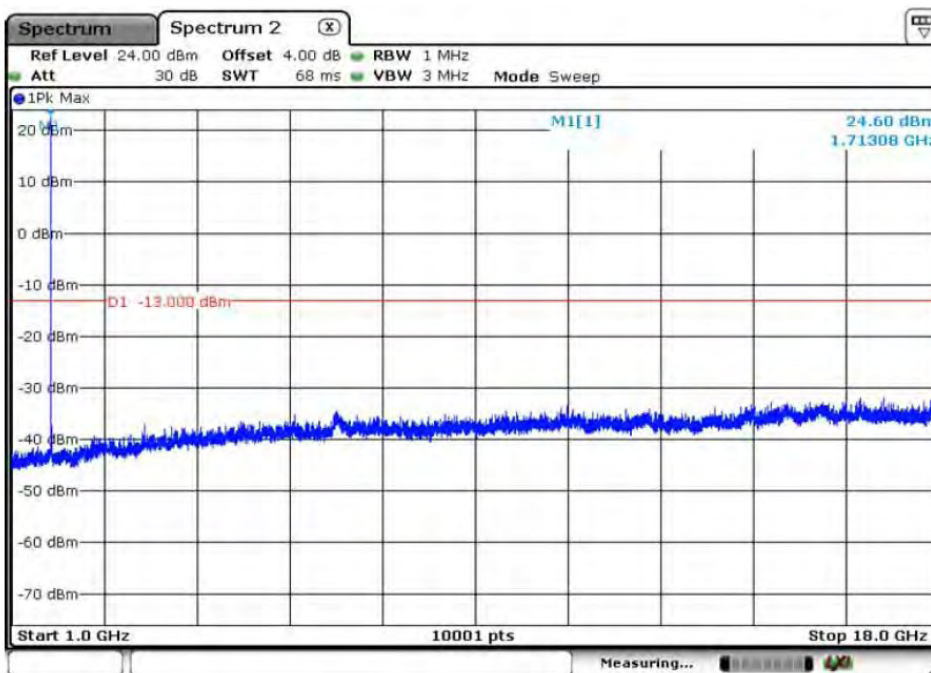
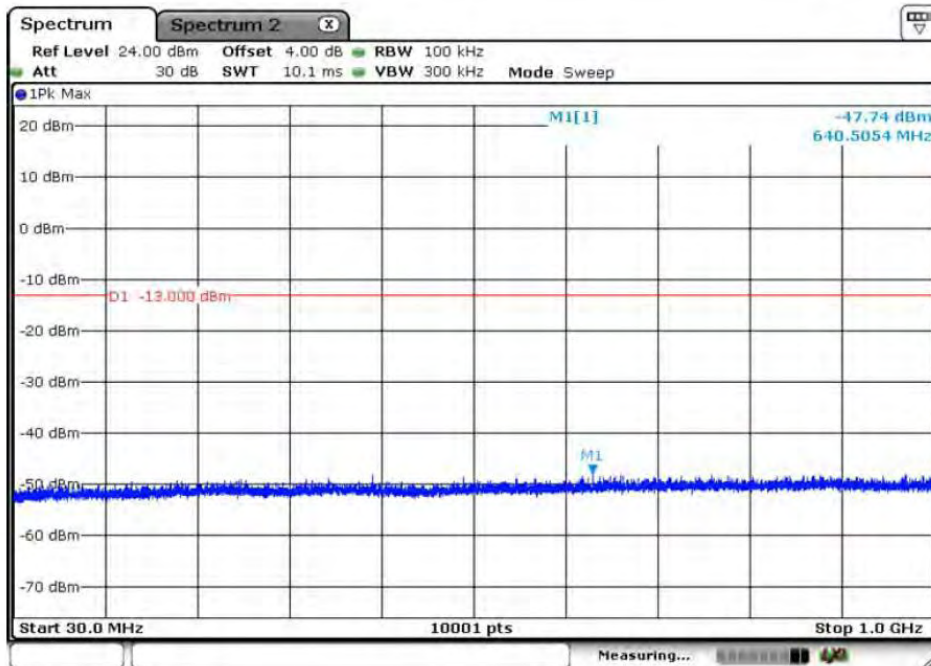
5MHz





LTE Band 4&66 Lowest channel

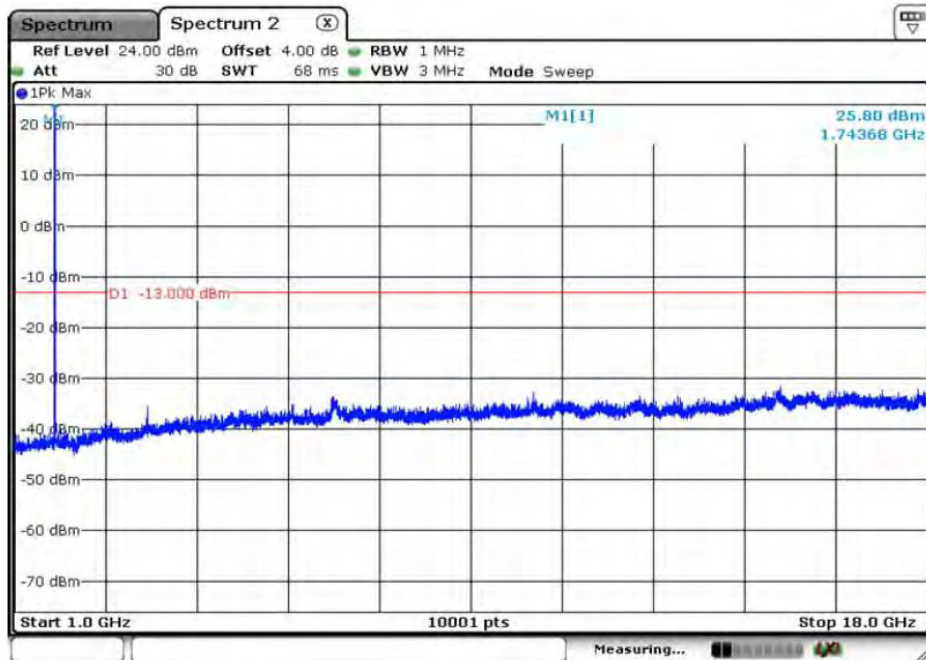
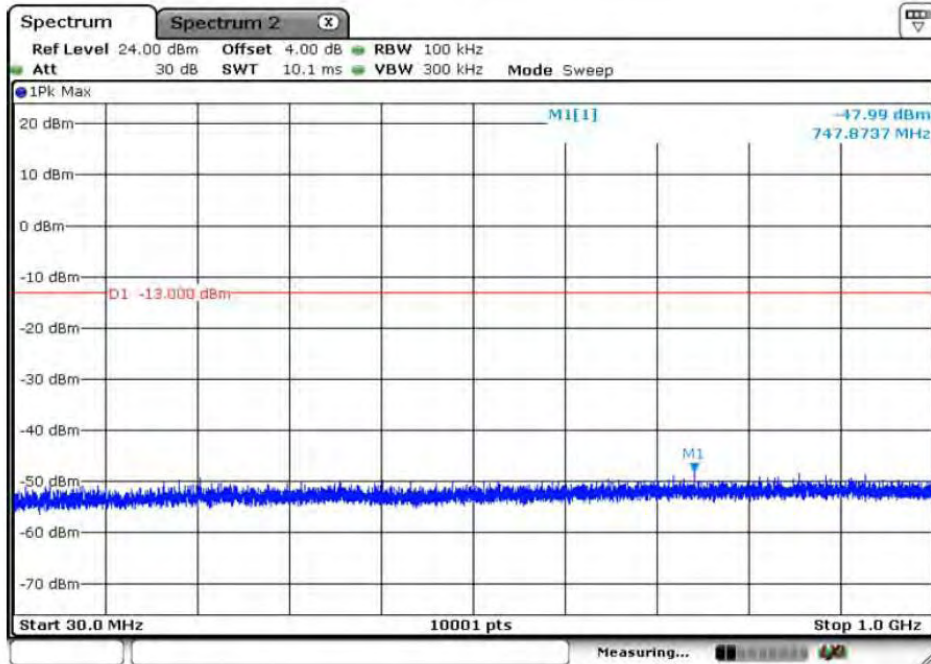
10MHz





LTE Band 4&66 middle channel

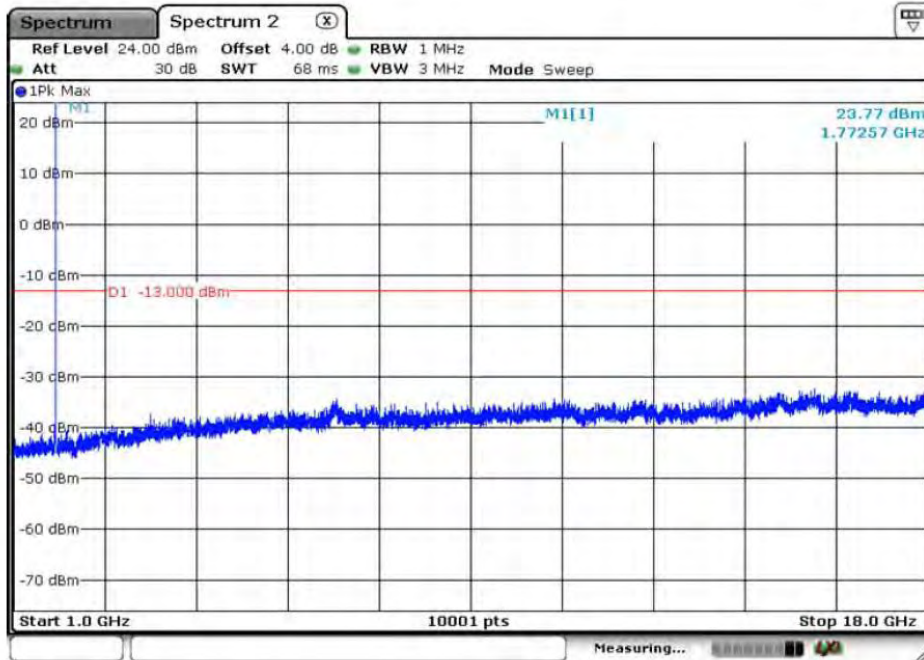
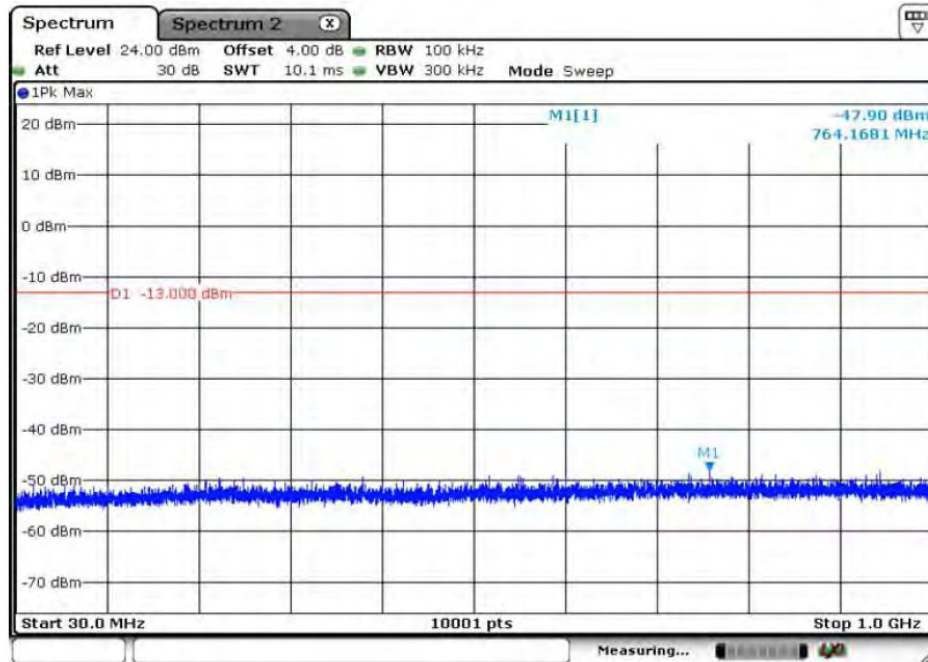
10MHz





LTE Band 4&66 high channel

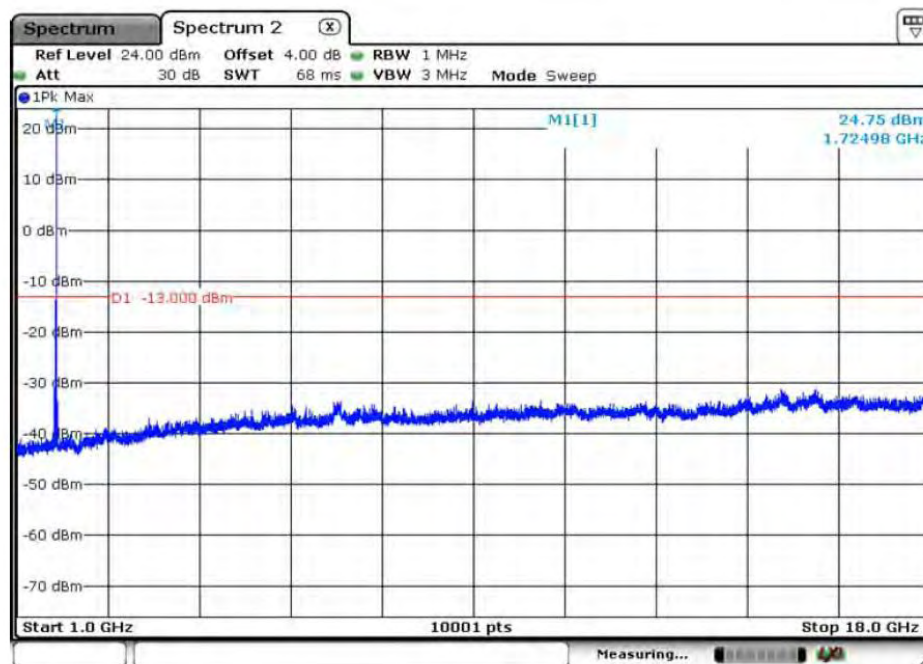
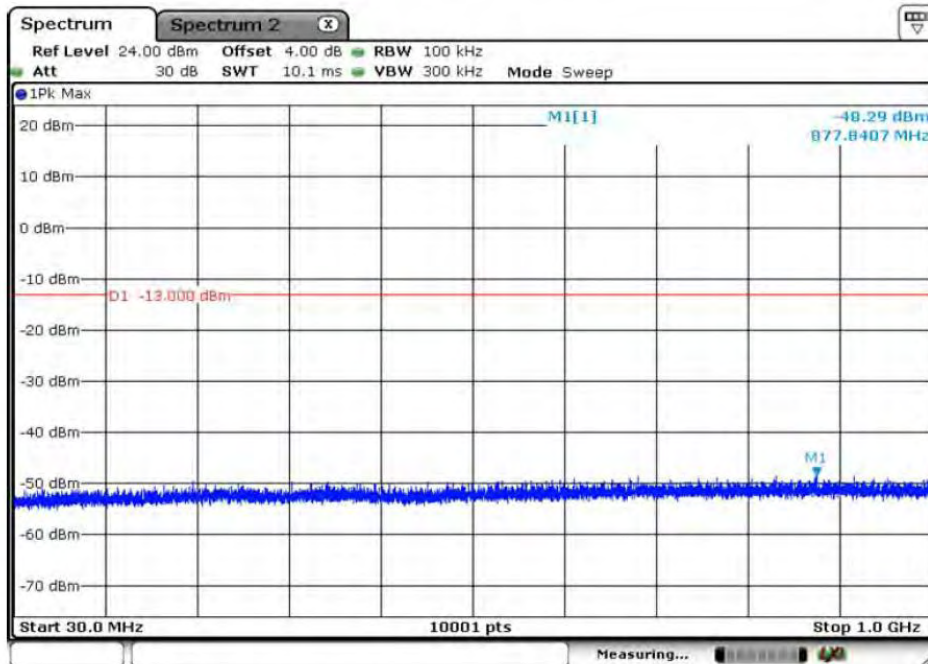
10MHz





LTE Band 4&66 Lowest channel

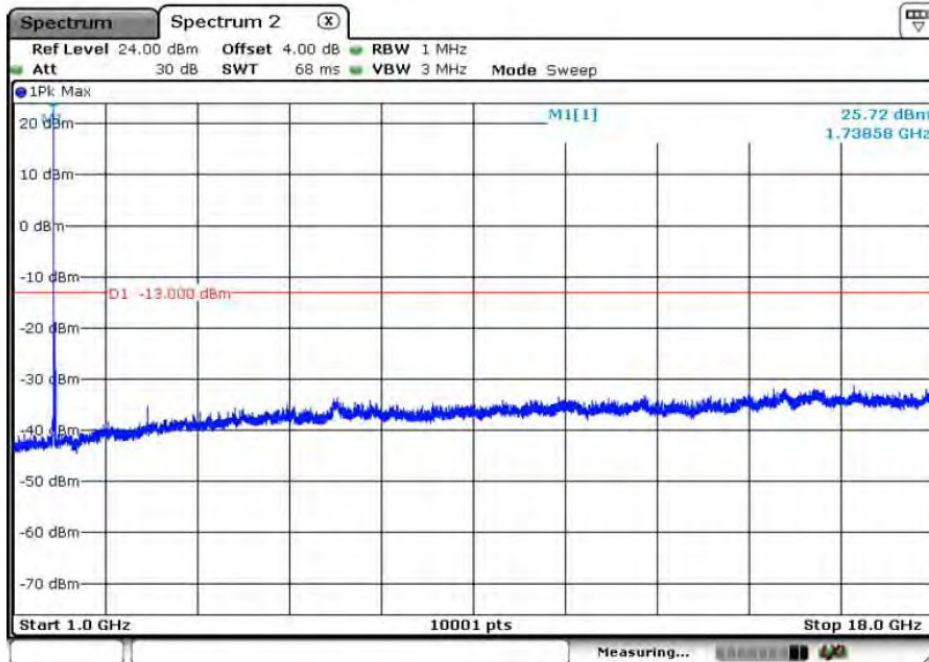
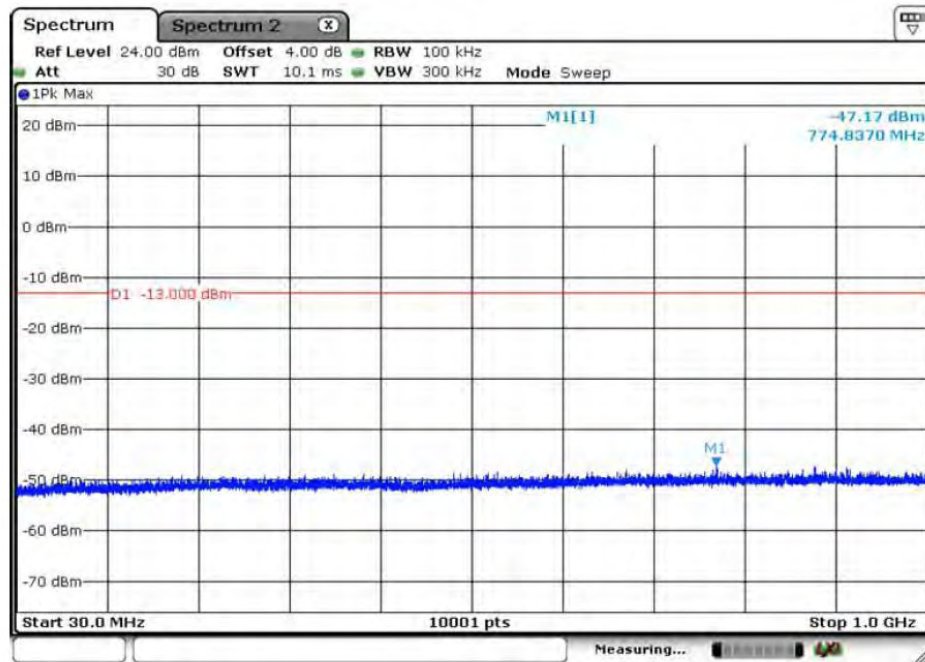
15MHz





LTE Band 4&66 middle channel

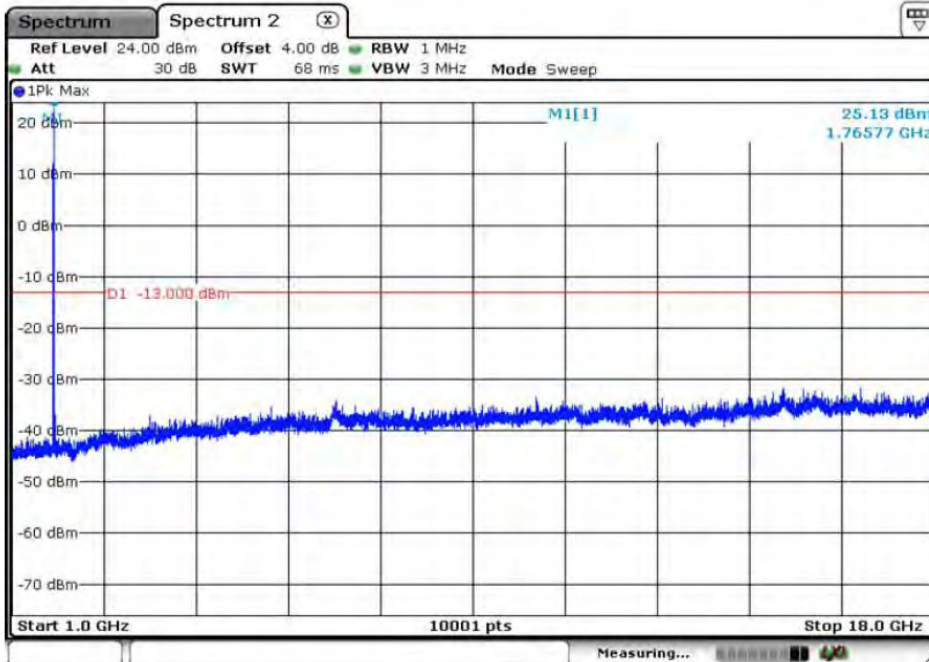
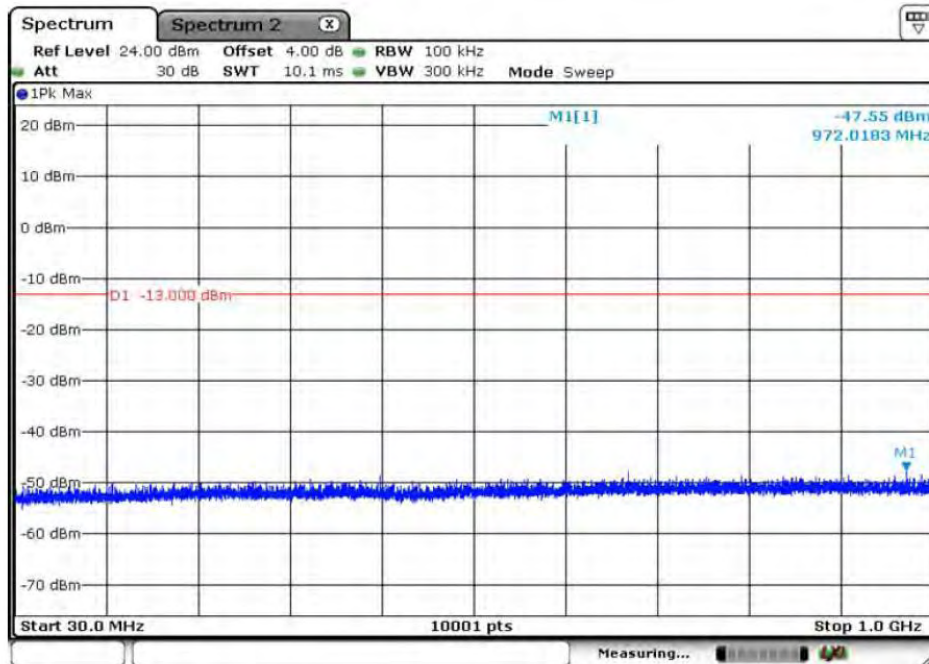
15MHz





LTE Band 4&66 high channel

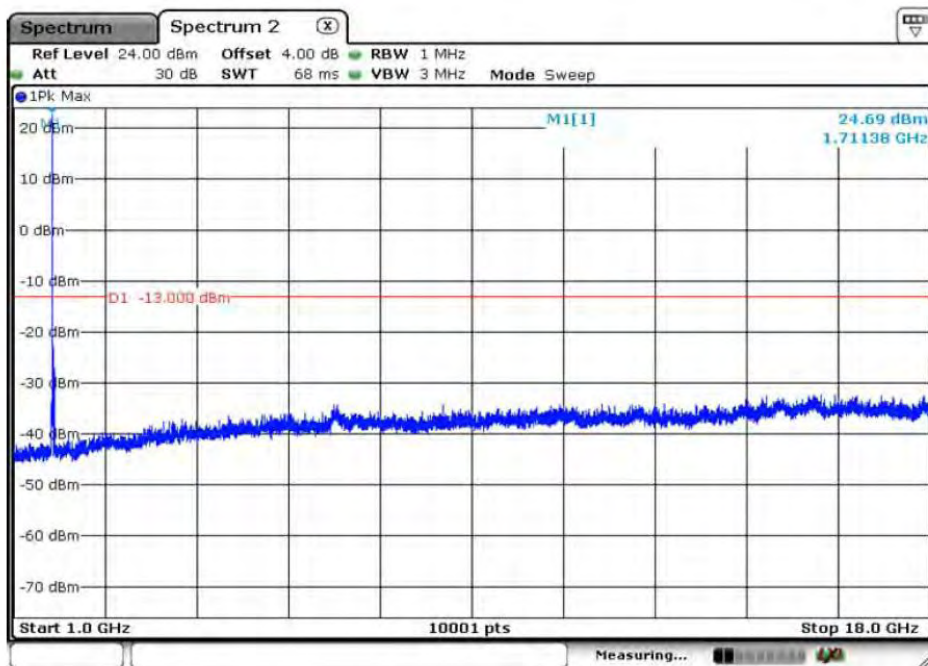
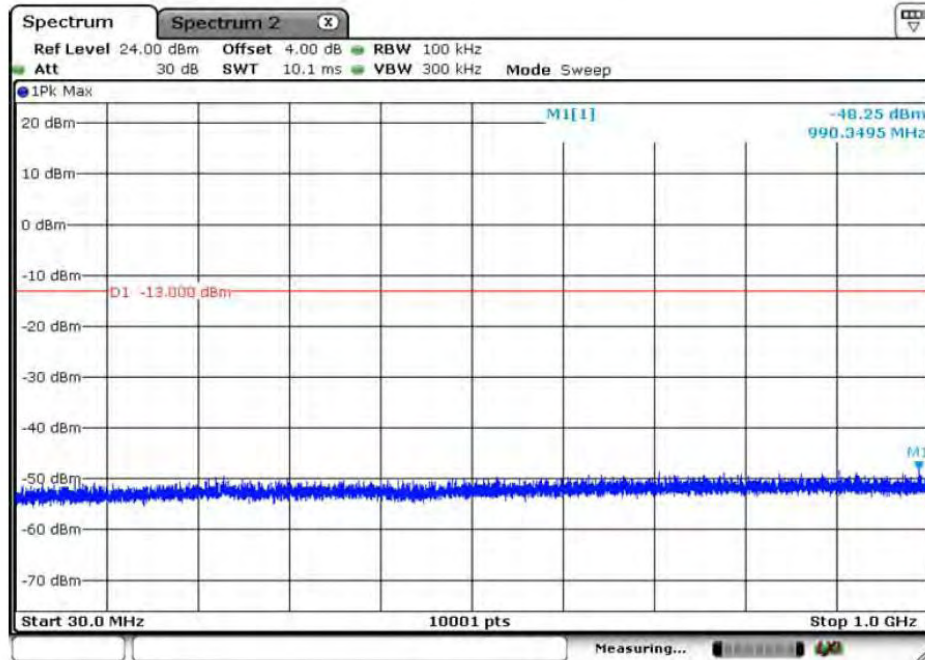
15MHz





LTE Band 4&66 Lowest channel

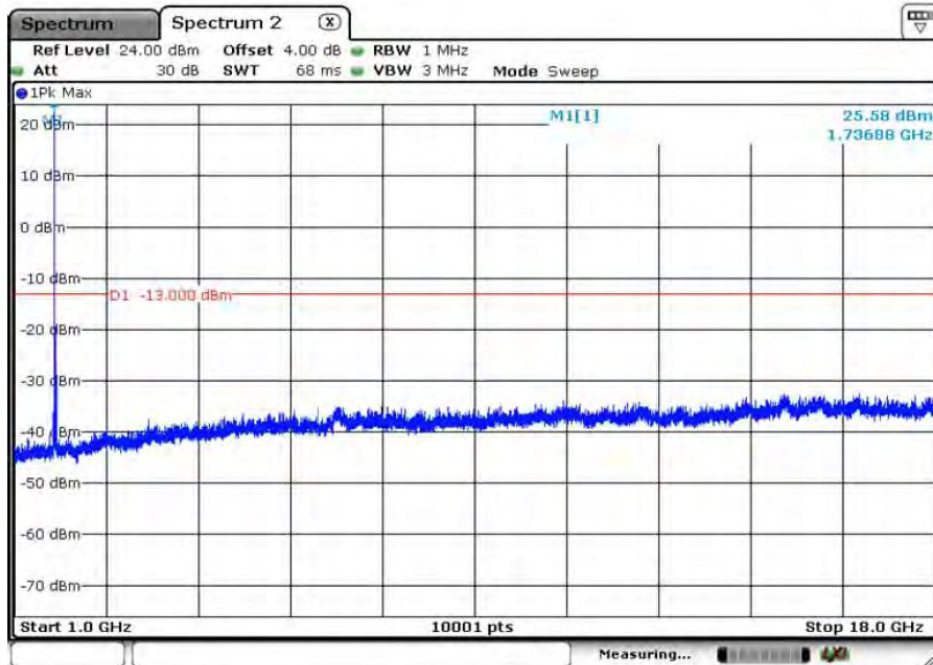
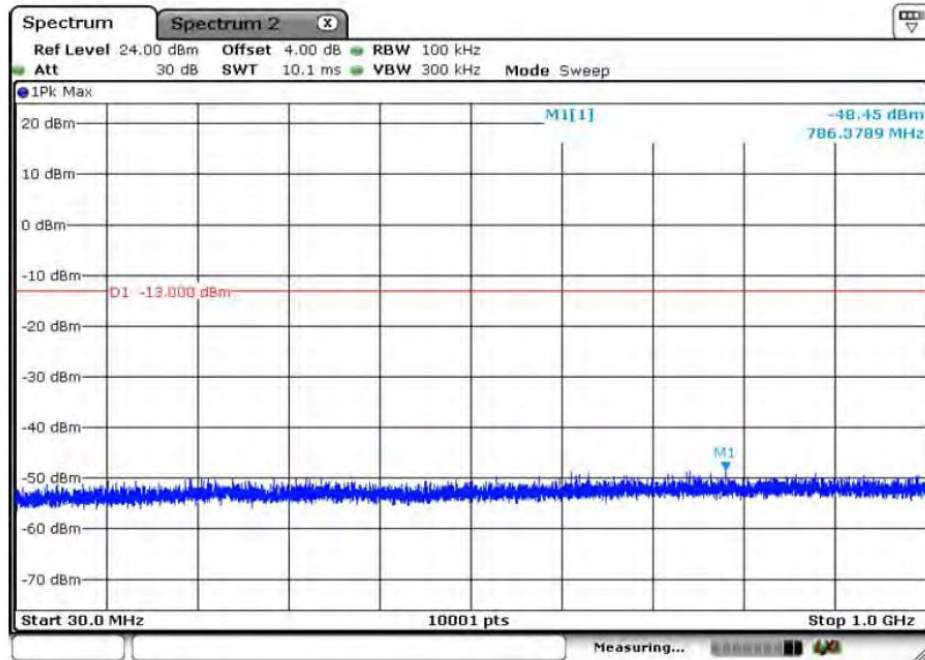
20MHz





LTE Band 4&66 middle channel

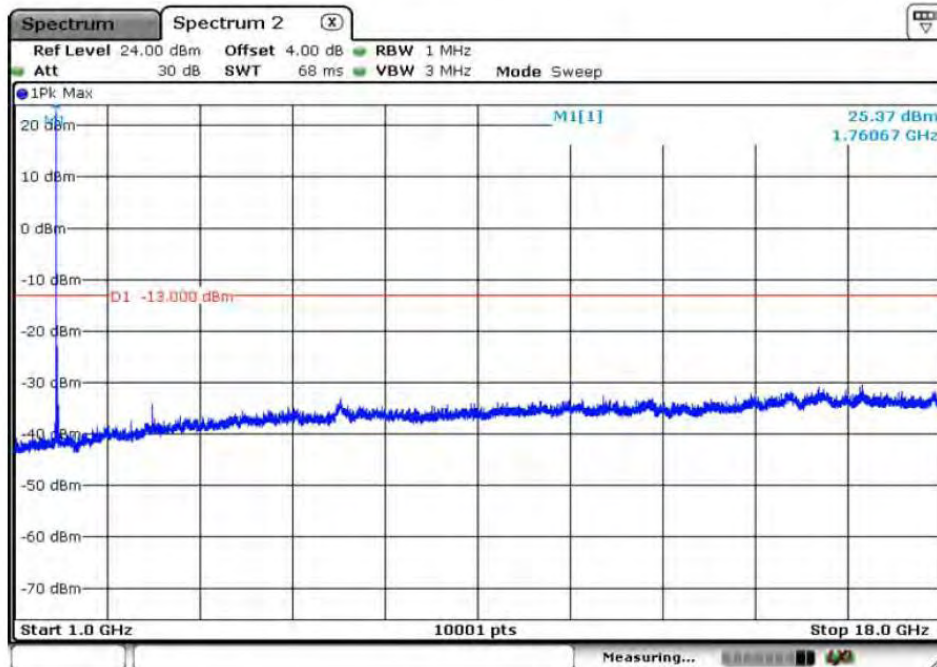
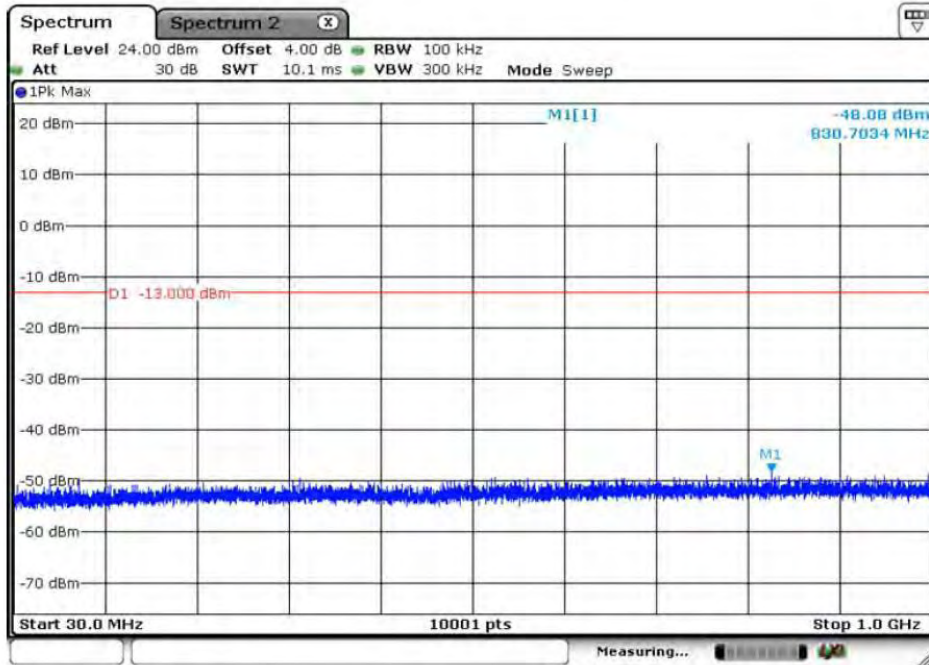
20MHz





LTE Band 4&66 high channel

20MHz





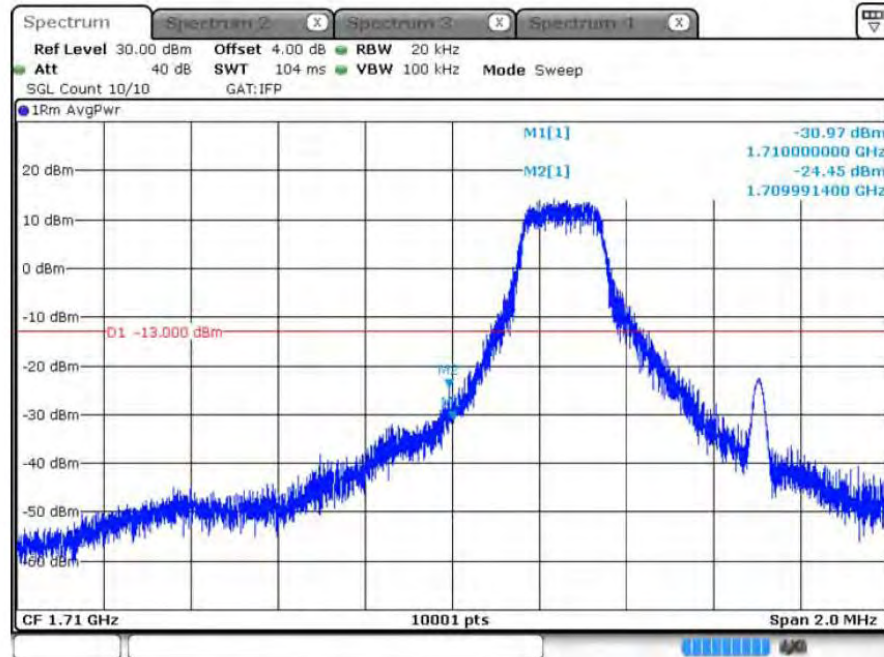
1.3. Conducted Out of Band Emissions

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.

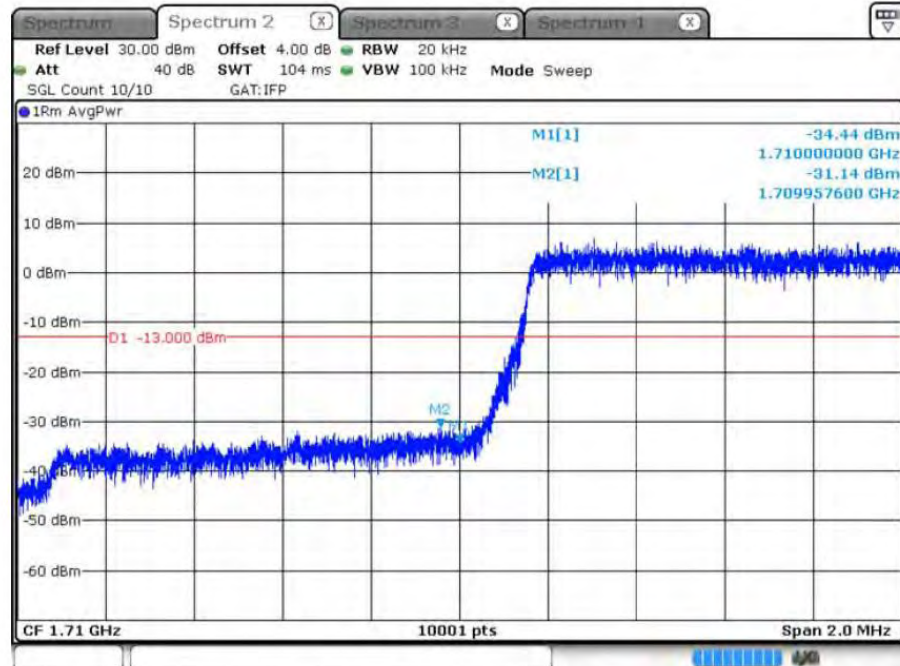
LTE Band 4&66 Lowest channel

1.4MHz 1RB



LTE Band 4&66 Lowest channel

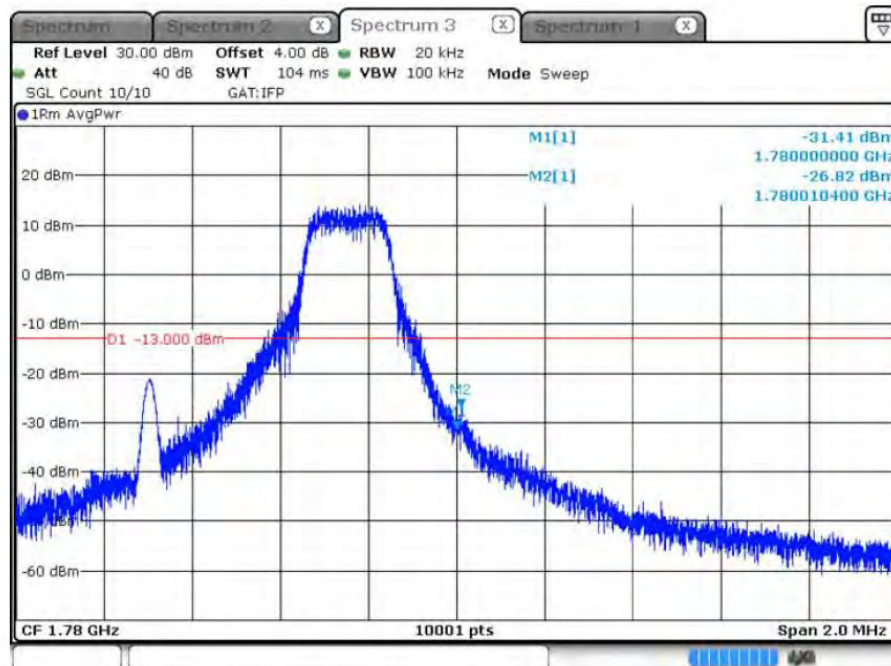
1.4MHz 6RB





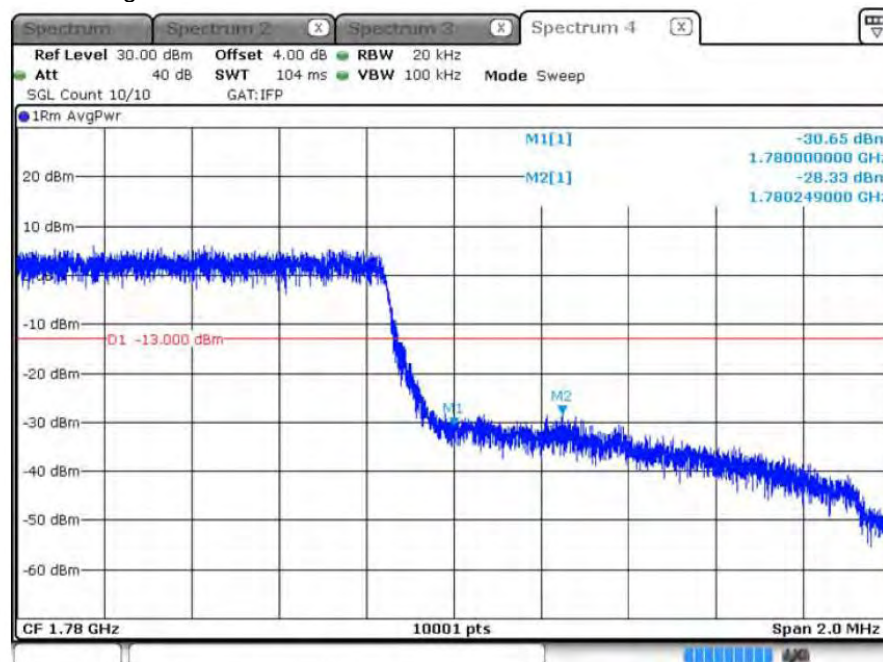
LTE Band 4&66 Highest channel:

1.4MHz 1RB



LTE Band 4&66 Highest channel:

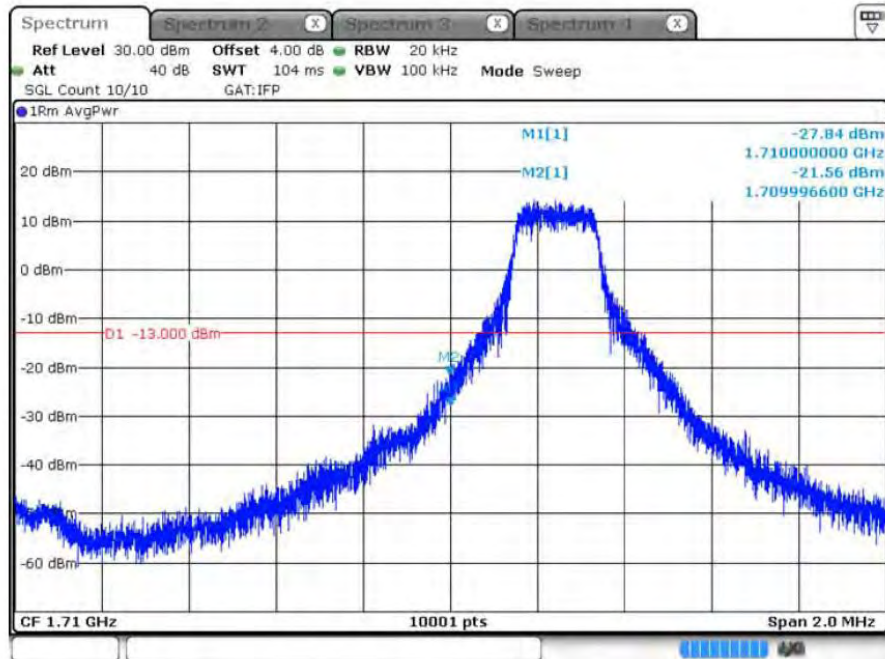
1.4MHz 6RB





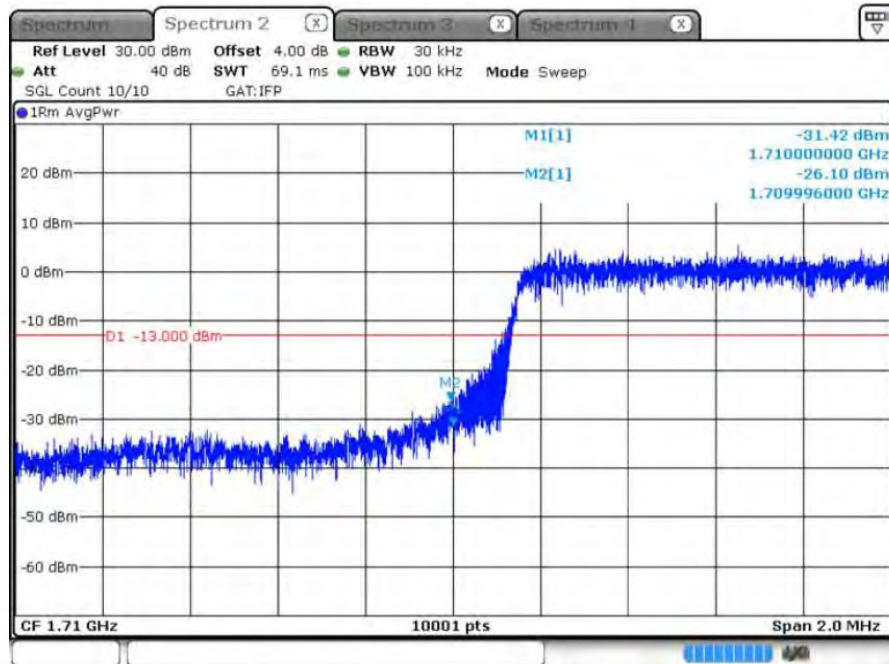
LTE Band 4&66 Lowest channel

3MHz 1RB



LTE Band 4&66 Lowest channel

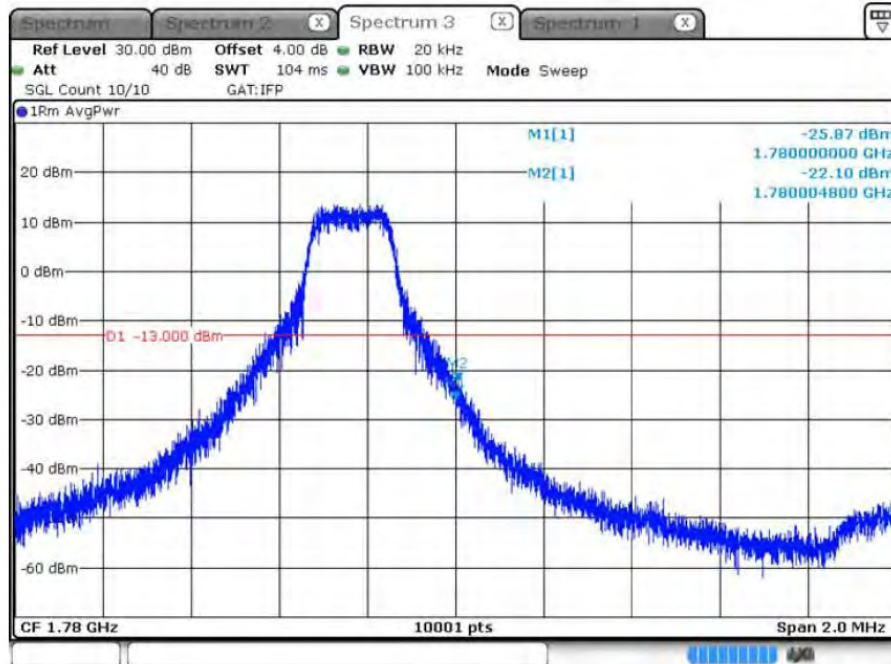
3MHz 15RB





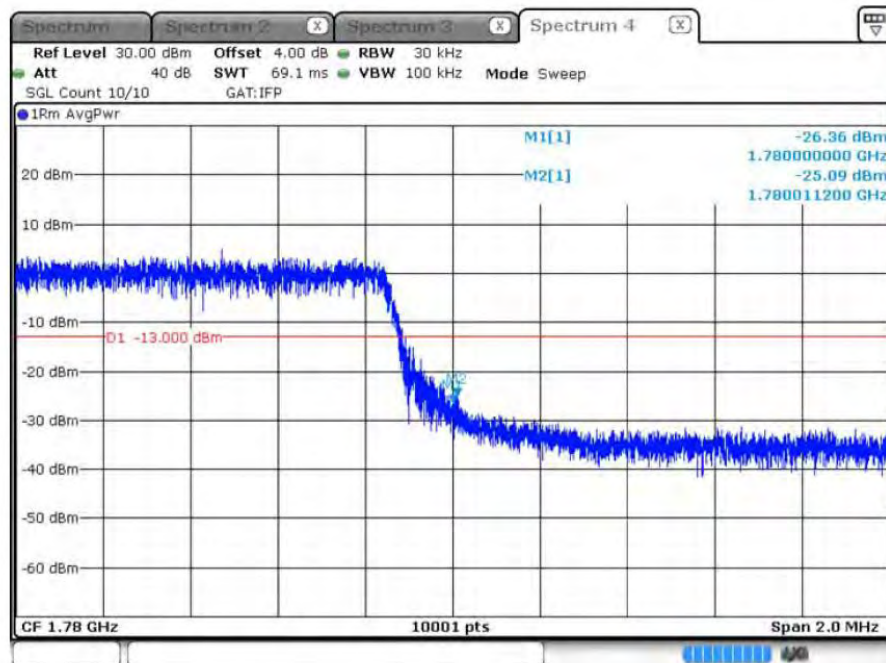
LTE Band 4&66 Highest channel:

3MHz 1RB



LTE Band 4&66 Highest channel:

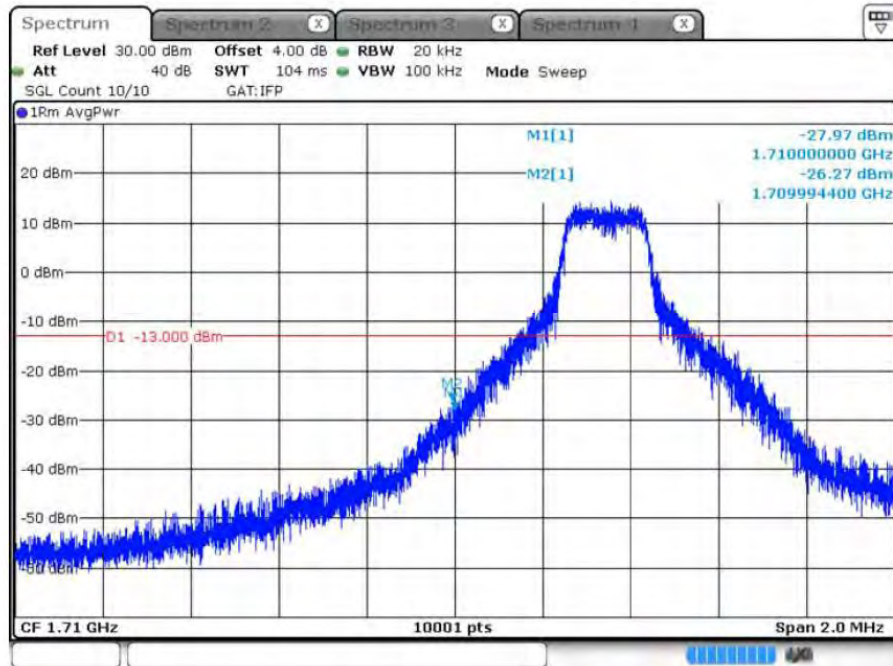
3MHz 15RB





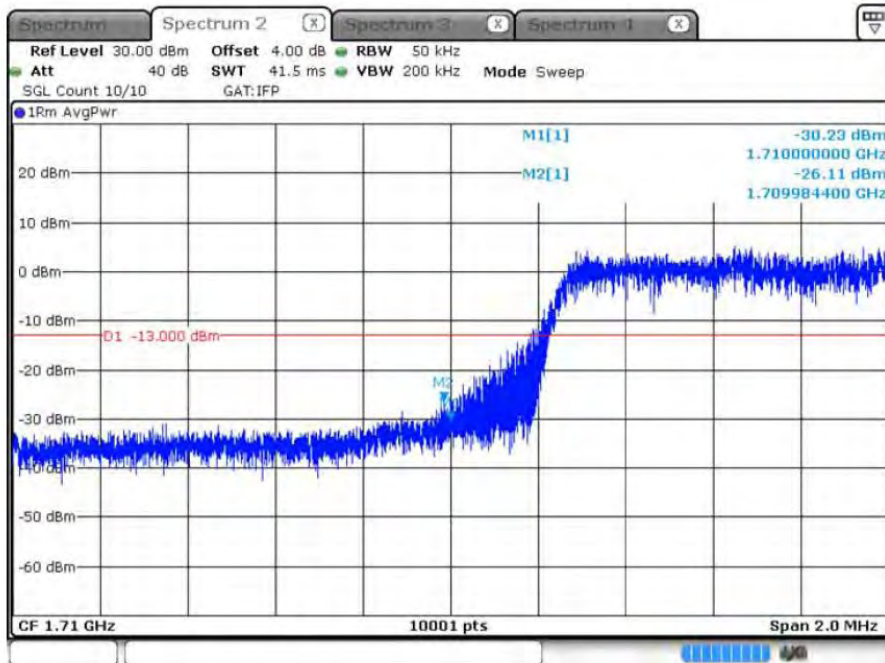
LTE Band 4&66 Lowest channel

5MHz 1RB



LTE Band 4&66 Lowest channel

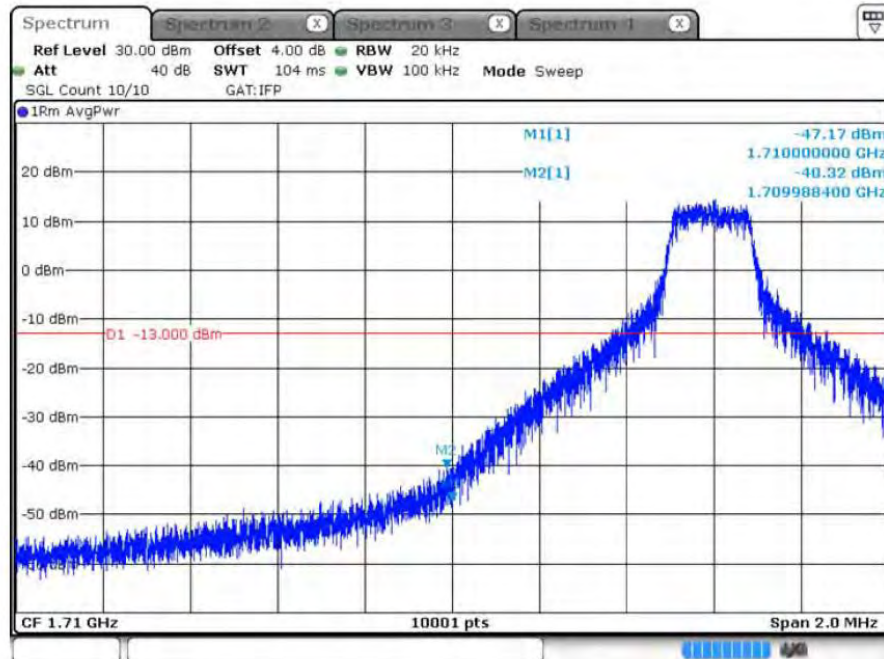
5MHz 25RB





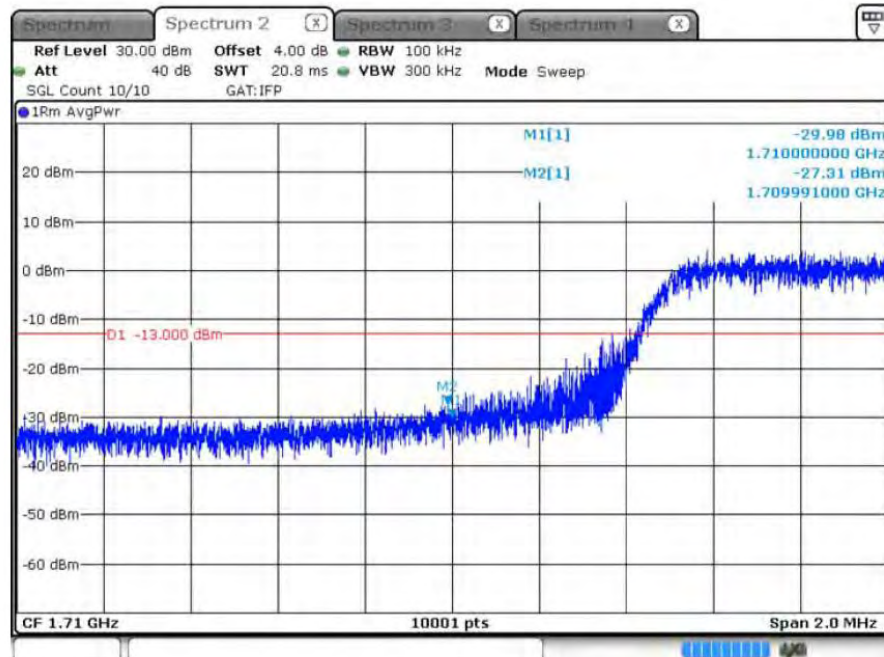
LTE Band 4&66 Lowest channel

10MHz 1RB



LTE Band 4&66 Lowest channel

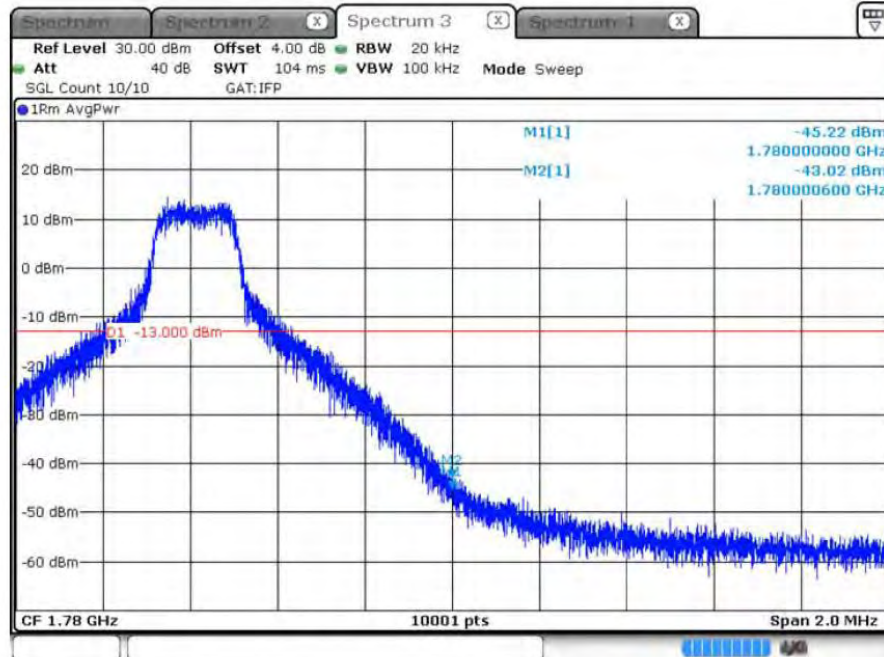
10MHz 50RB





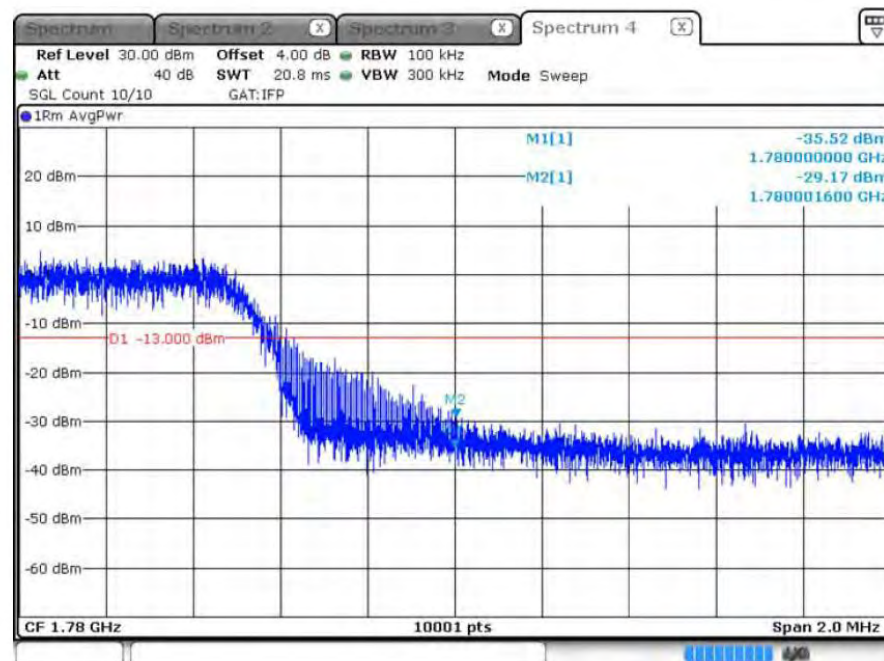
LTE Band 4&66 Highest channel:

10MHz 1RB



LTE Band 4&66 Highest channel:

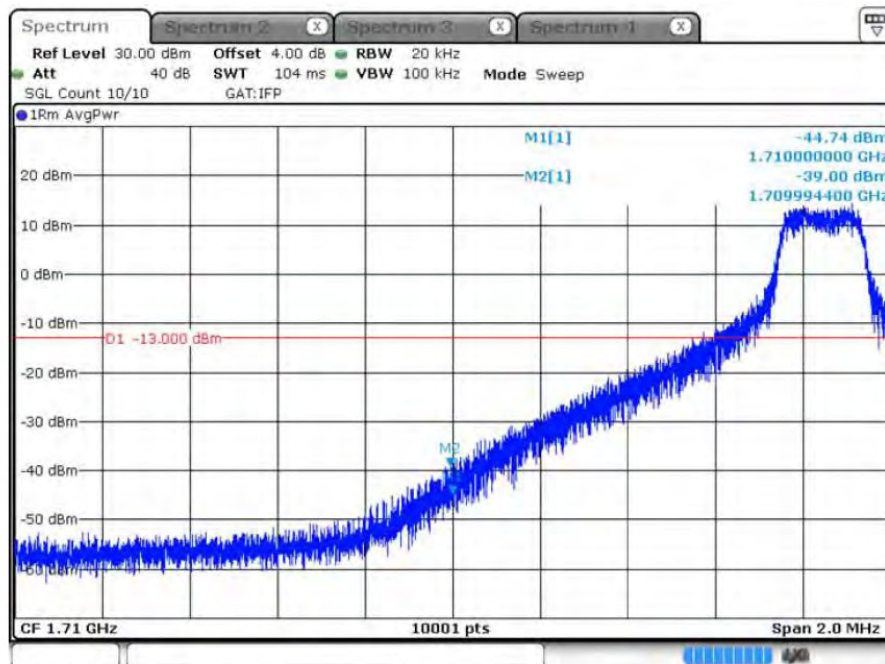
10MHz 50RB





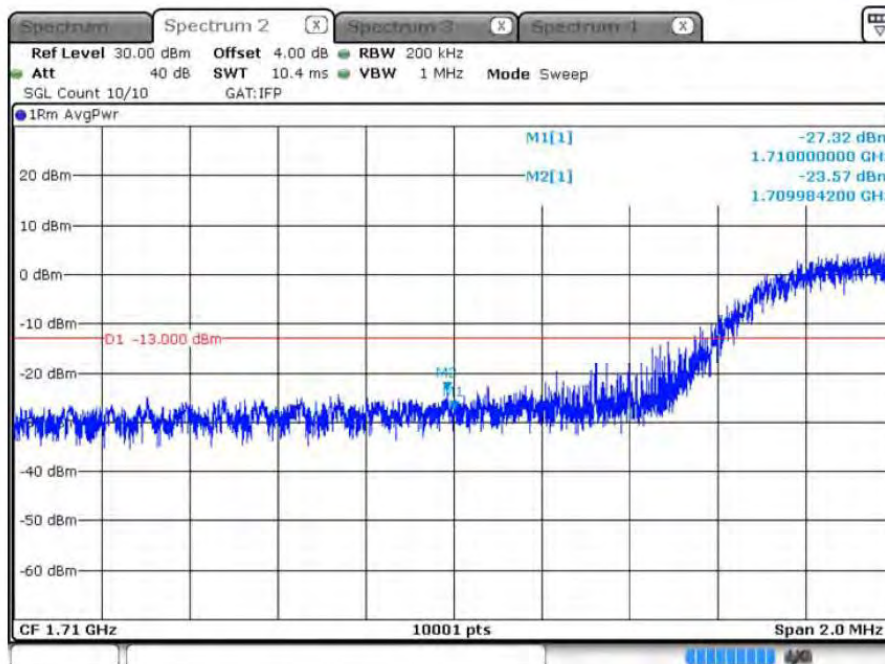
LTE Band 4&66 Lowest channel

15MHz 1RB



LTE Band 4&66 Lowest channel

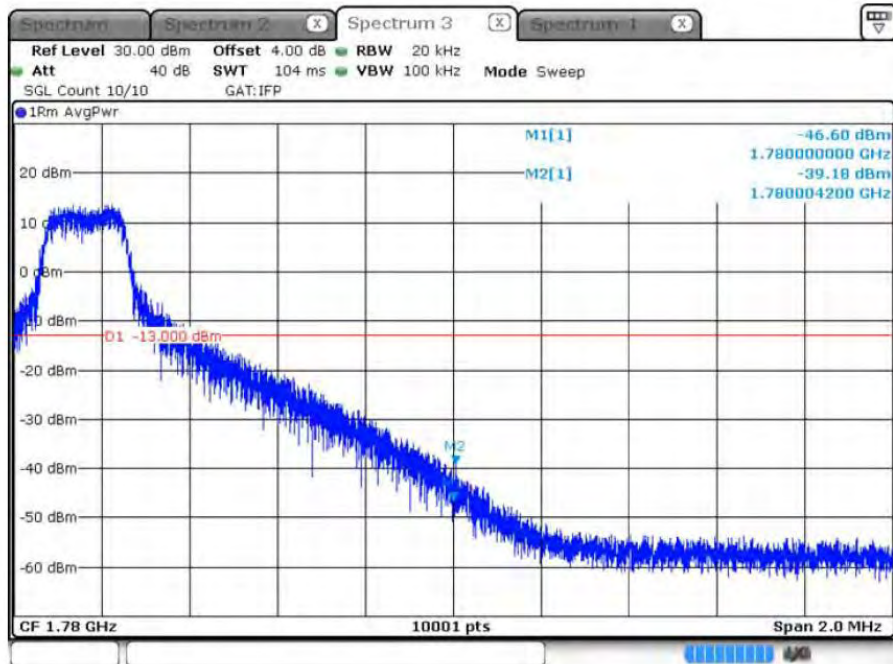
15MHz 75RB





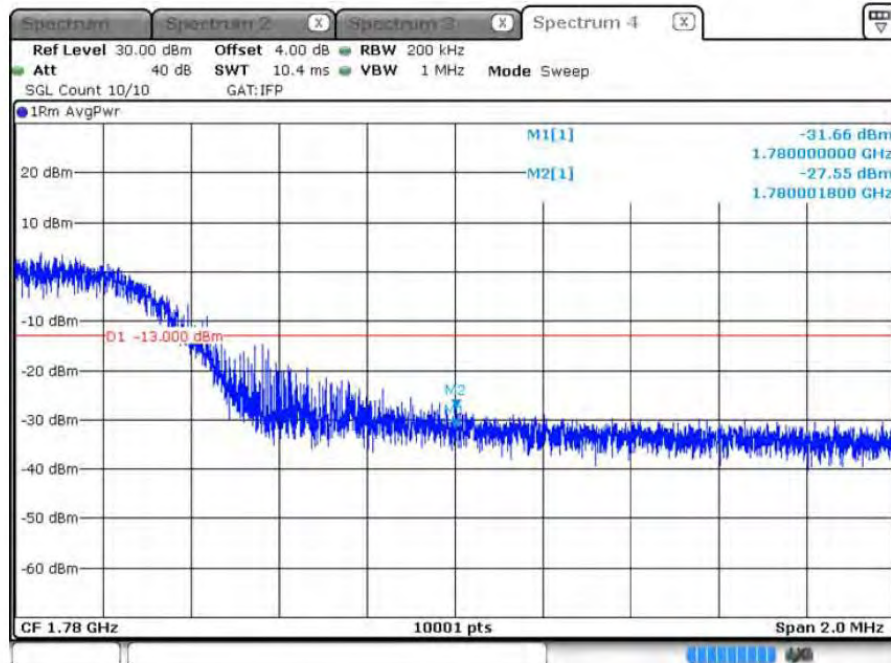
LTE Band 4&66 Highest channel:

15MHz 1RB



LTE Band 4&66 Highest channel:

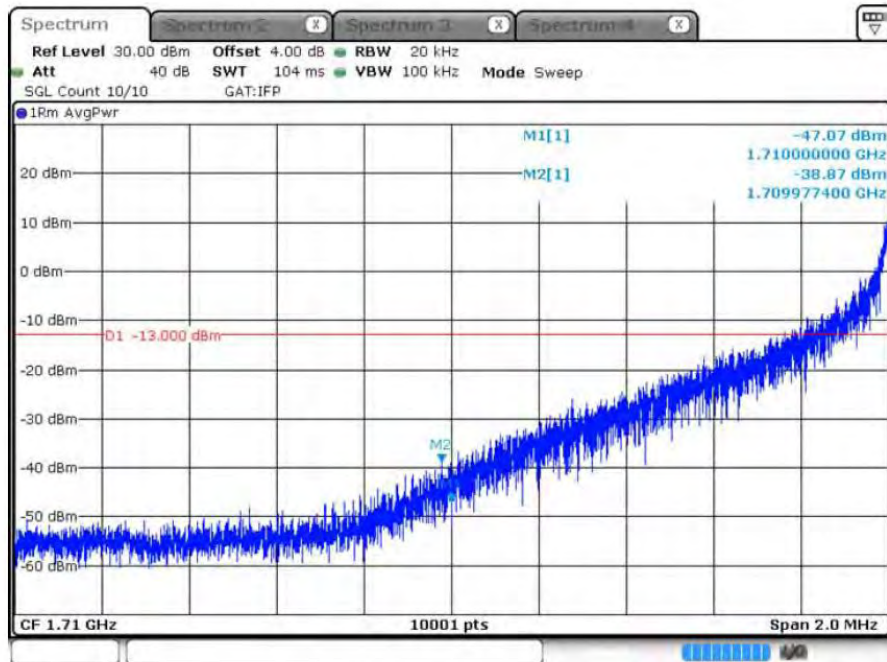
15MHz 75RB





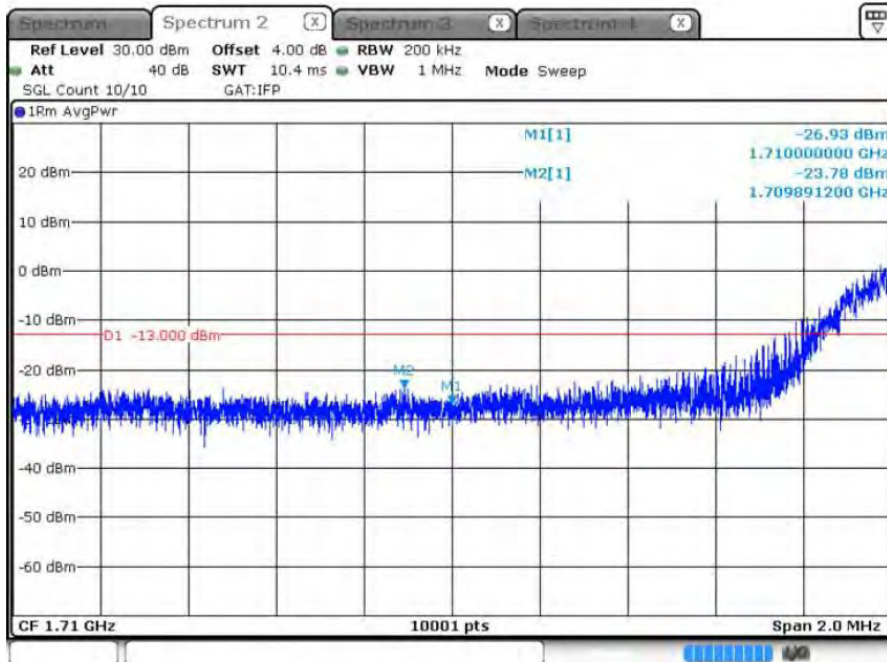
LTE Band 4&66 Lowest channel

20MHz 1RB



LTE Band 4&66 Lowest channel

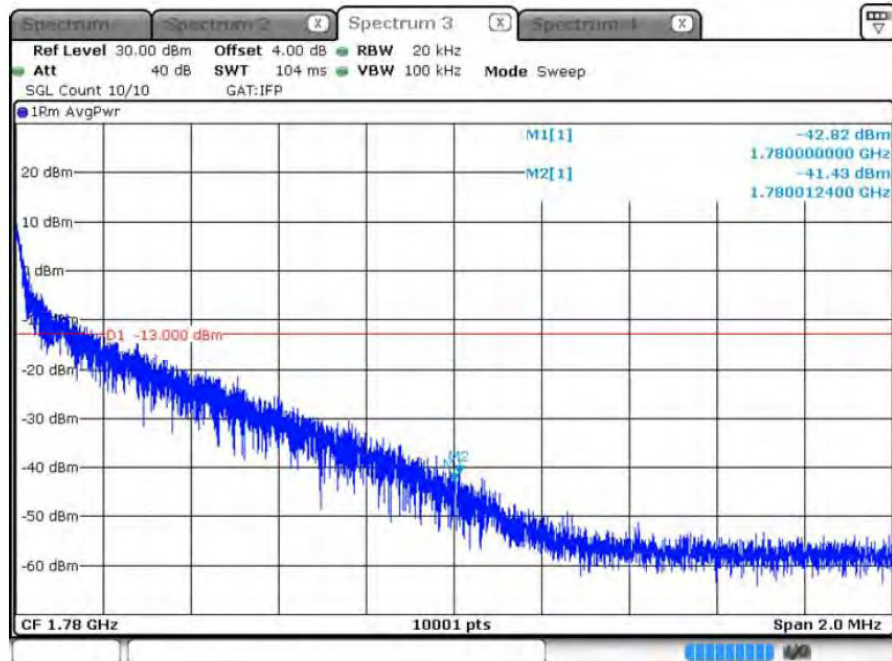
20MHz 75RB





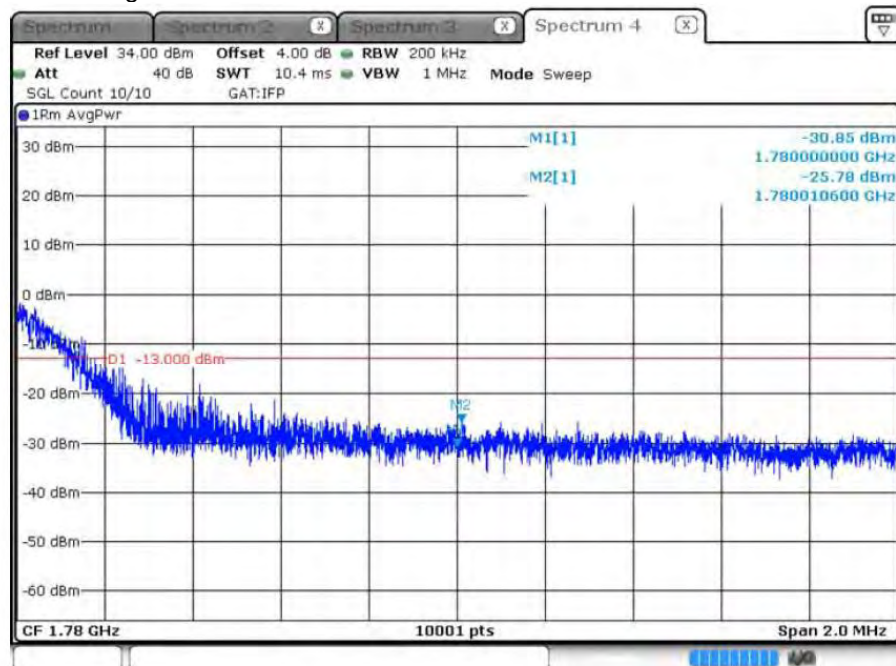
LTE Band 4&66 Highest channel:

20MHz 1RB



LTE Band 4&66 Highest channel:

20MHz 75RB



***** END *****