



FCC Test Report

ANNEX 4 LTE BAND 5

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.



TABLE OF CONTENTS

Test Report Declaration	Page
1. EMISSION TEST RESULTS.....	3
1.1. -26dB and 99% Occupied Bandwidth.....	3
1.2. Conducted Spurious Emissions	16
1.3. Conducted Out of Band Emissions.....	28

**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 5 1.4MHz	QPSK	824.7	1.084	1.223
		836.5	1.090	1.217
		848.3	1.084	1.233
LTE Band 5 1.4 MHz	16-QAM	824.7	1.087	1.237
		836.5	1.086	1.228
		848.3	1.084	1.215
LTE Band 5 3 MHz	QPSK	825.5	2.688	2.955
		836.5	2.685	2.940
		847.5	2.685	2.931
LTE Band 5 3 MHz	16-QAM	825.5	2.684	2.961
		836.5	2.685	2.969
		847.5	2.684	2.943
LTE Band 5 5 MHz	QPSK	826.5	4.486	4.901
		836.5	4.468	4.891
		846.5	4.485	4.903
LTE Band 5 5 MHz	16-QAM	826.5	4.473	4.835
		836.5	4.475	4.892
		846.5	4.489	4.911
LTE Band 5 10 MHz	QPSK	829	8.953	9.657
		836.5	8.944	9.711
		844	8.945	9.678
LTE Band 5 10 MHz	16-QAM	829	8.963	9.676
		836.5	8.937	9.600
		844	8.950	9.650

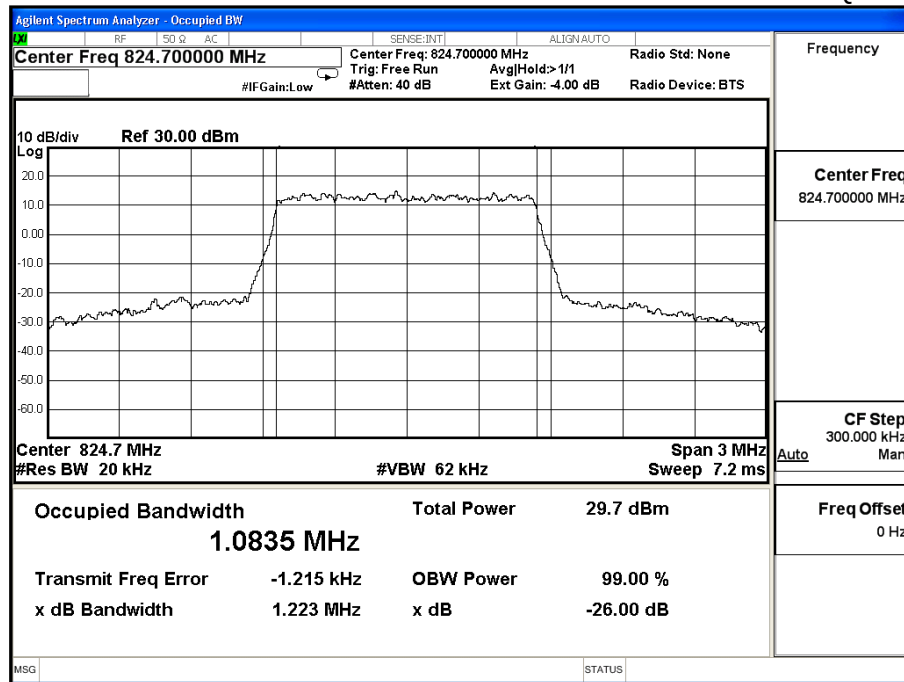
Note: Measurement Uncertainty: $\pm 20\text{Hz}$.

Test plot as follows:



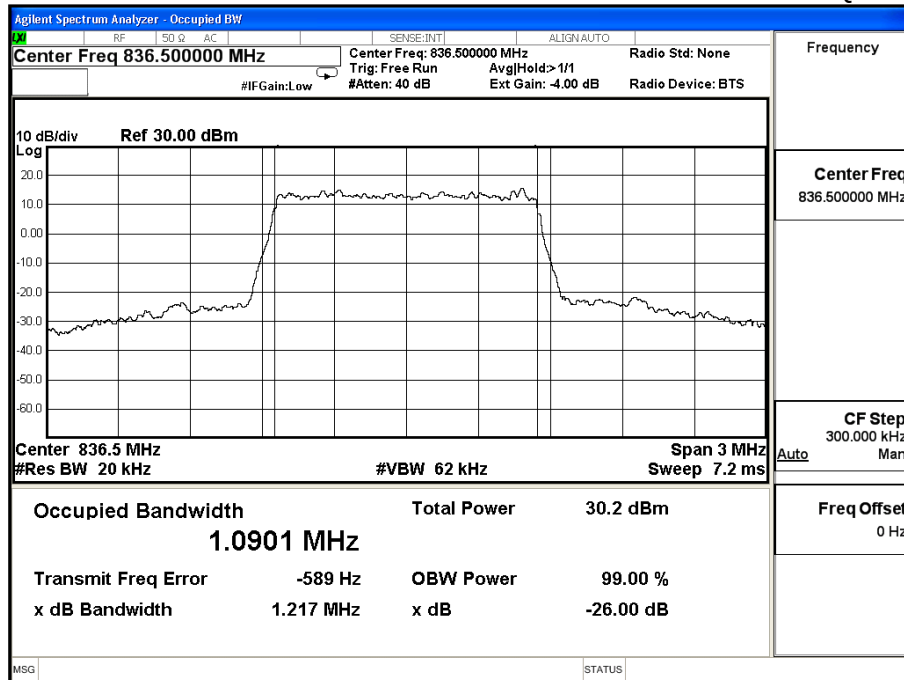
LTE Band 5 Lowest channel

1.4 MHz QPSK



LTE Band 5 Middle channel

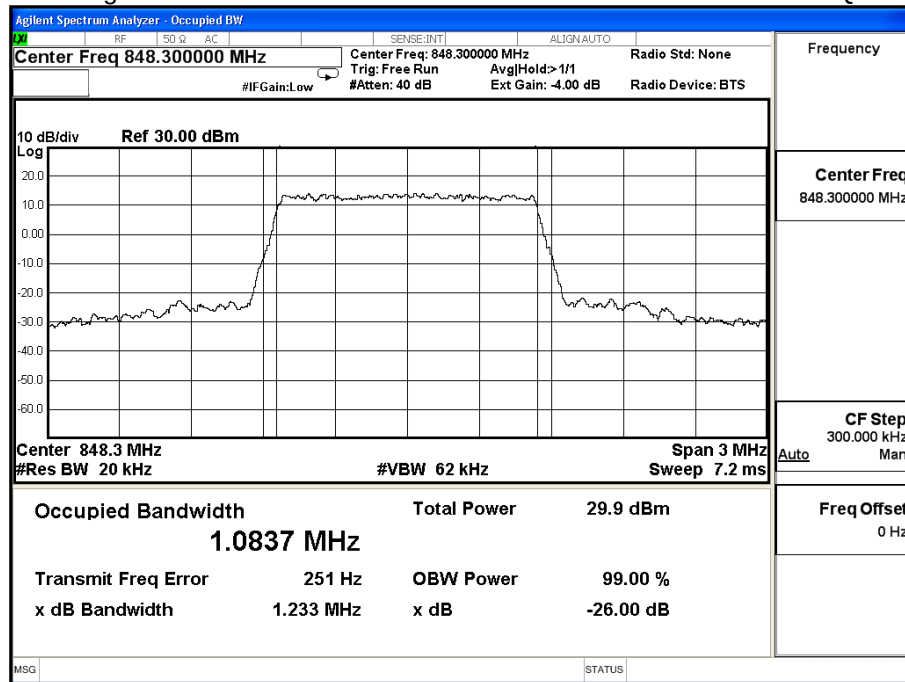
1.4 MHz QPSK





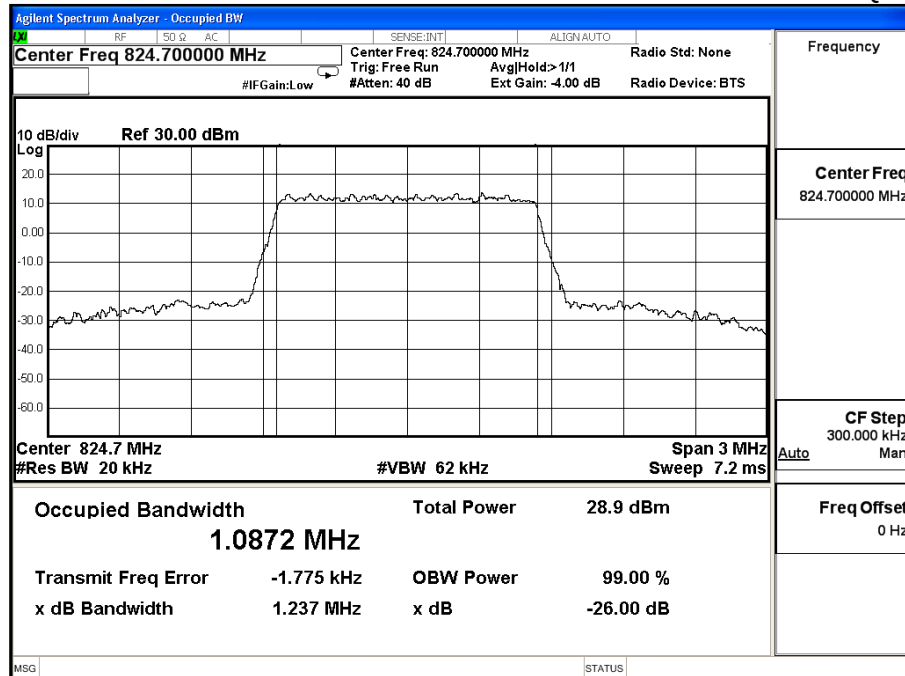
LTE Band 5 Highest channel:

1.4 MHz QPSK



LTE Band 5 Lowest channel

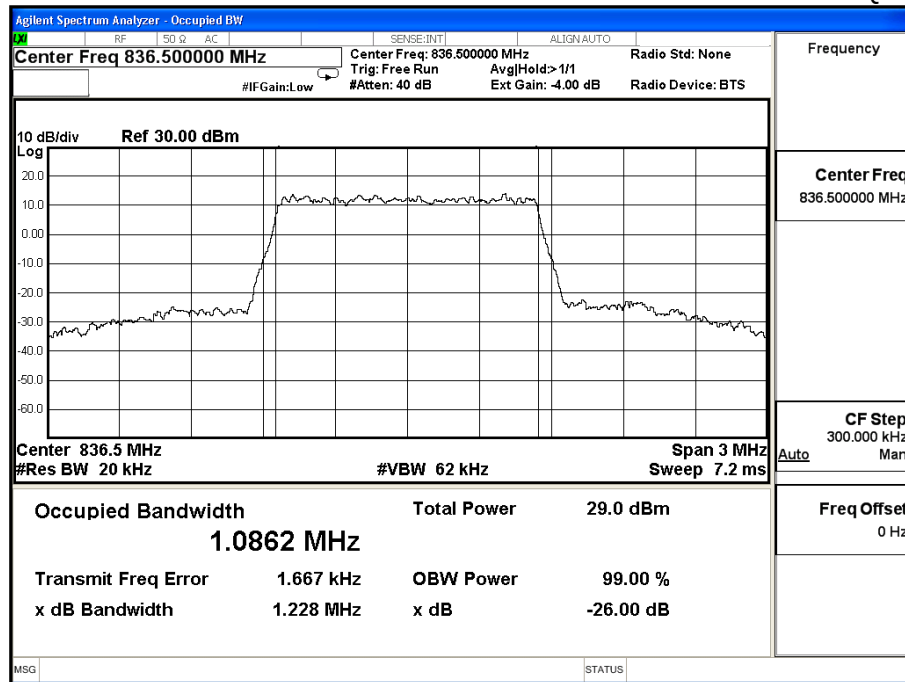
1.4 MHz 16-QAM





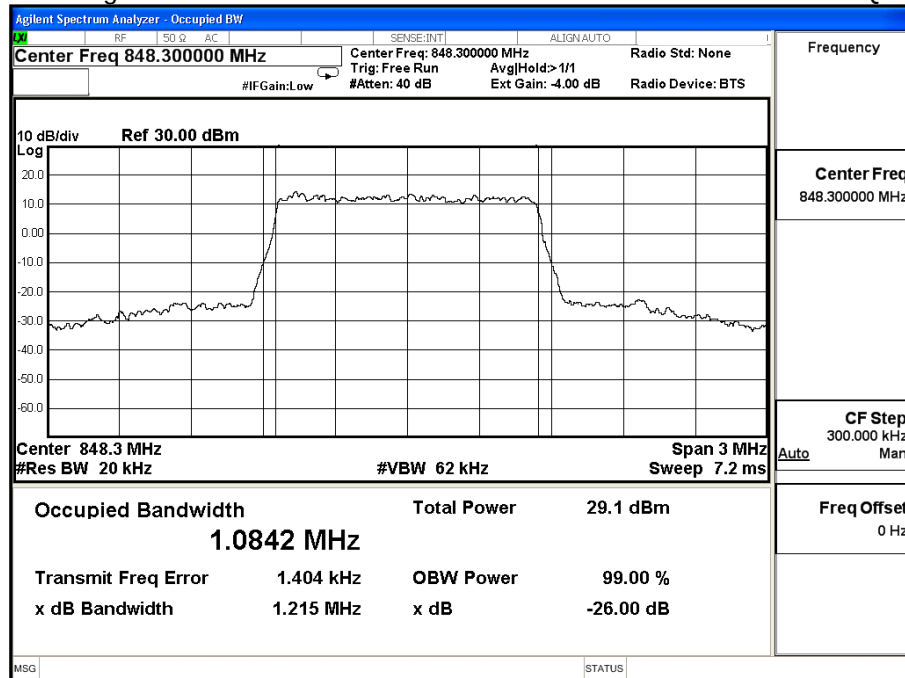
LTE Band 5 Middle channel

1.4 MHz 16-QAM



LTE Band 5 Highest channel:

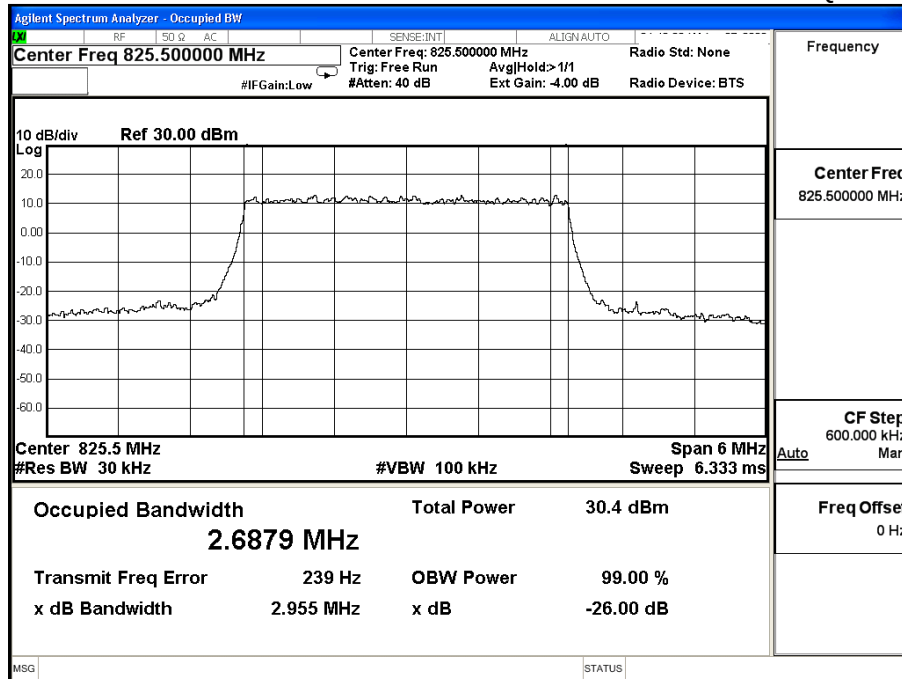
1.4 MHz 16-QAM





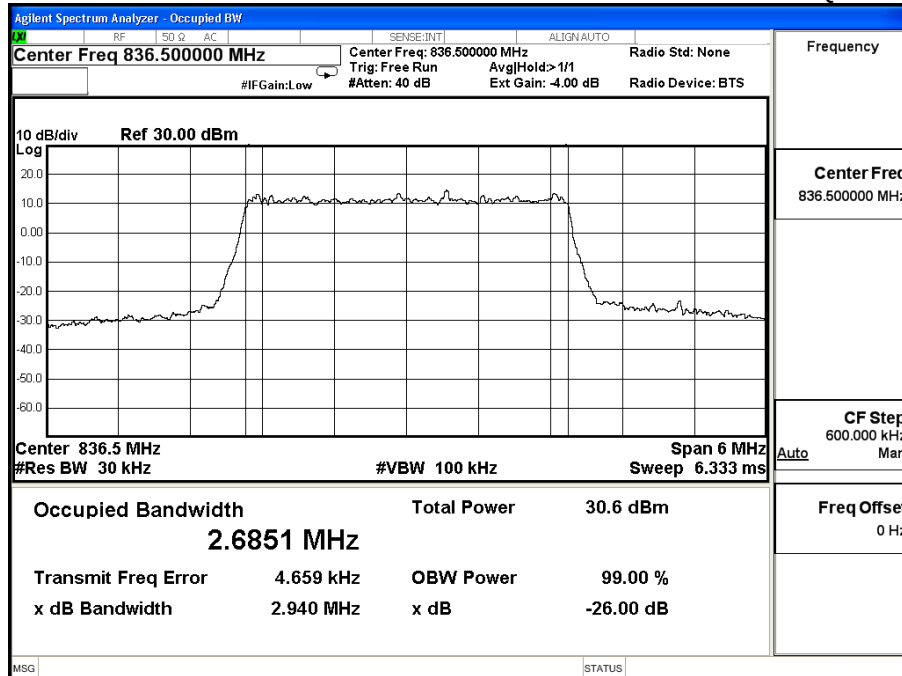
LTE Band 5 Lowest channel

3 MHz QPSK



LTE Band 5 Middle channel

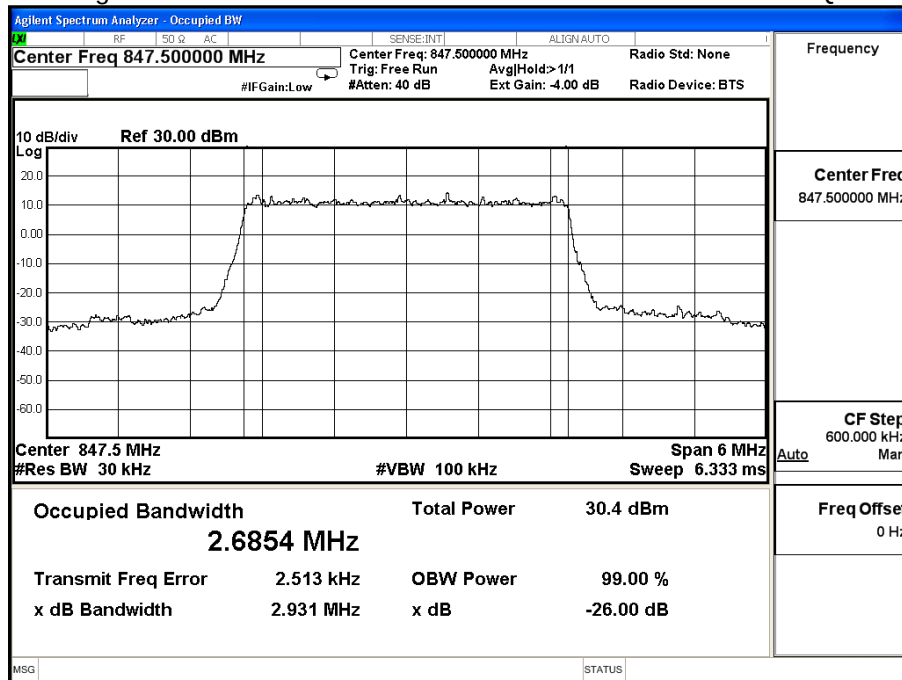
3 MHz QPSK





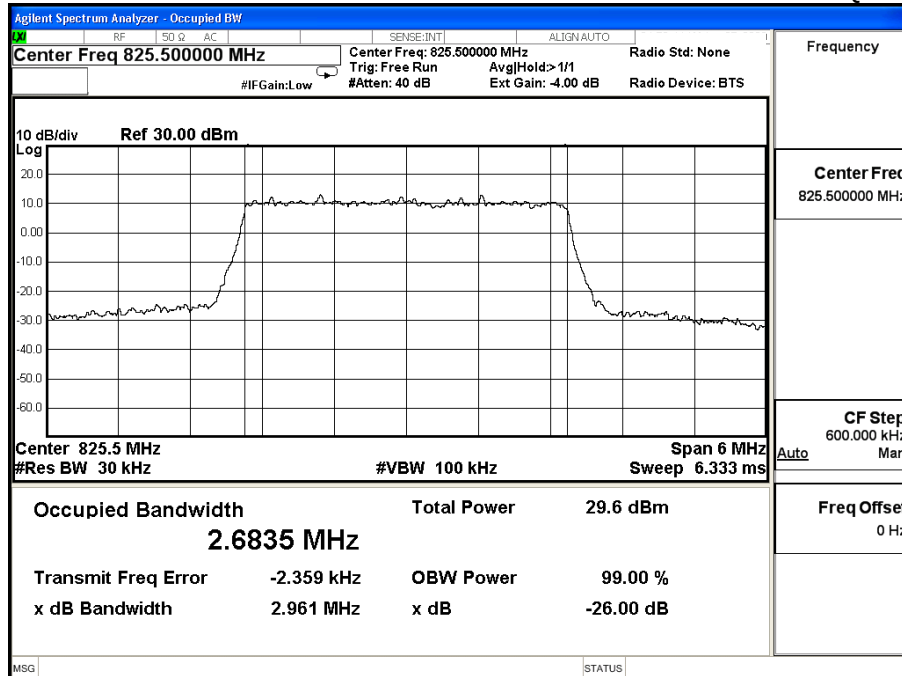
LTE Band 5 Highest channel:

3 MHz QPSK



LTE Band 5 Lowest channel

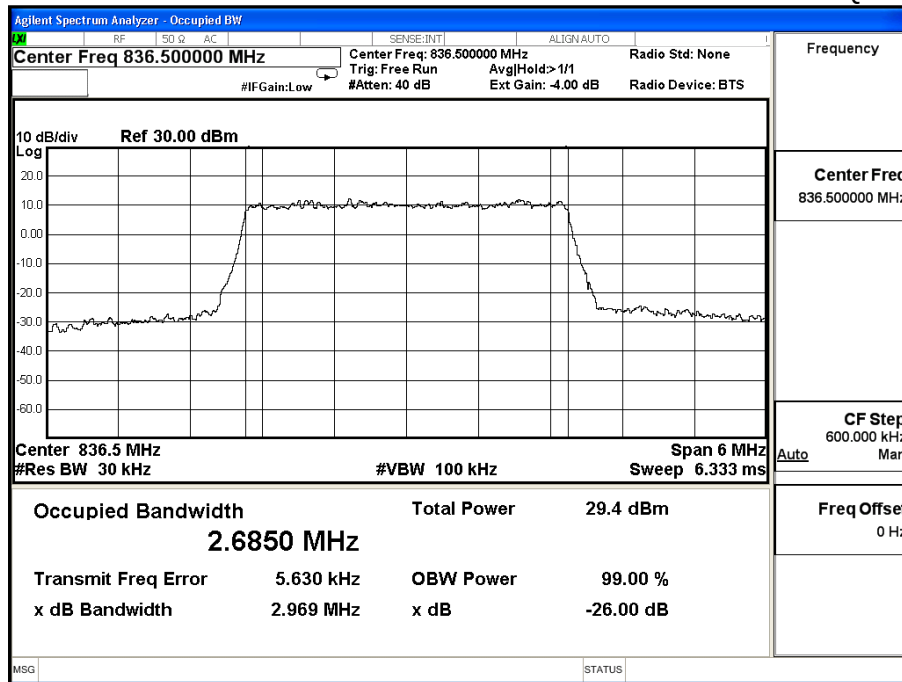
3 MHz 16-QAM





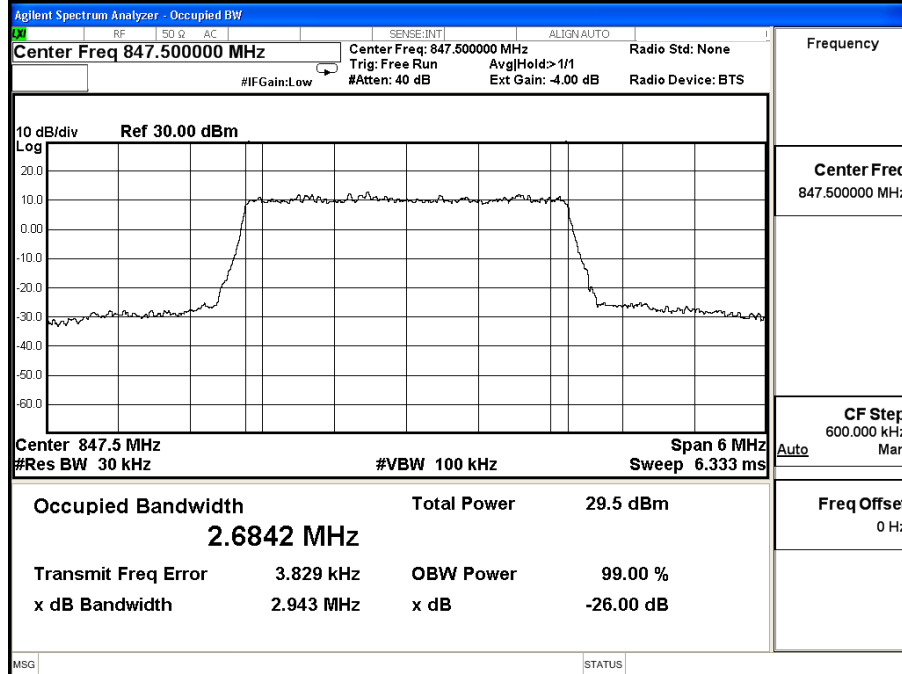
LTE Band 5 Middle channel

3 MHz 16-QAM



LTE Band 5 Highest channel:

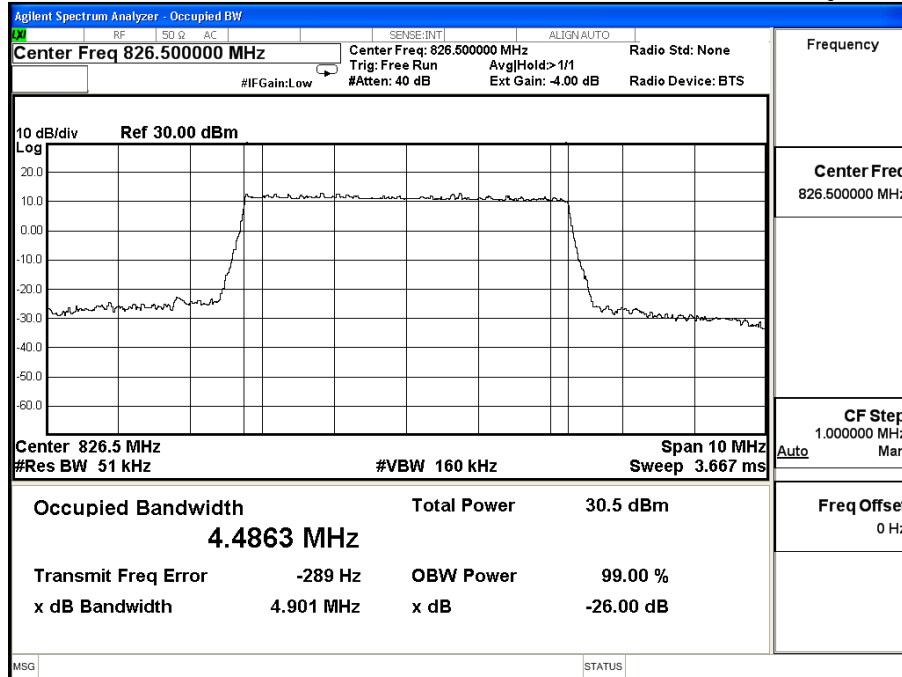
3 MHz 16-QAM





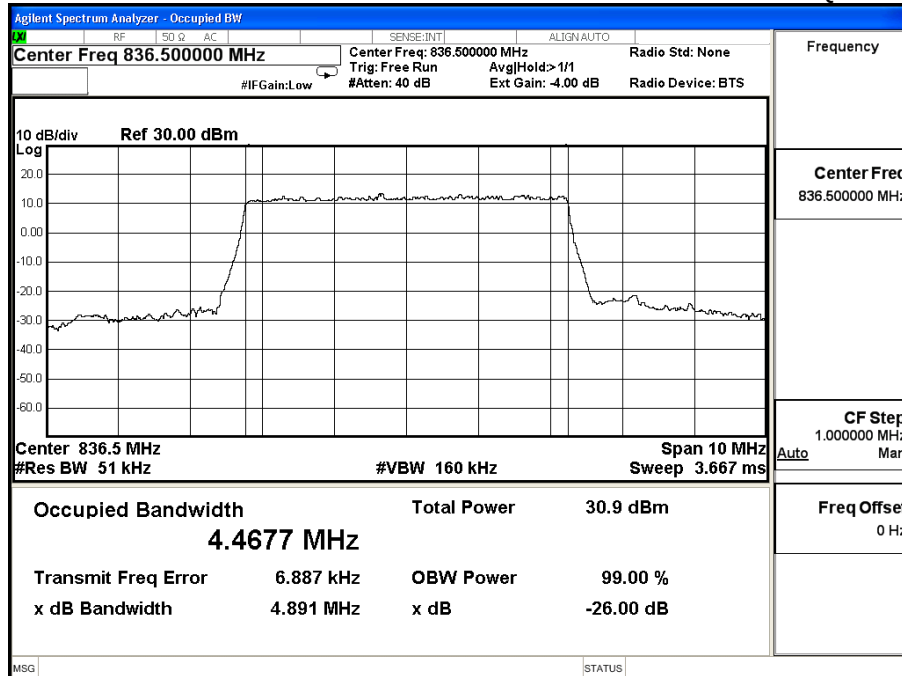
LTE Band 5 Lowest channel

5 MHz QPSK



LTE Band 5 Middle channel

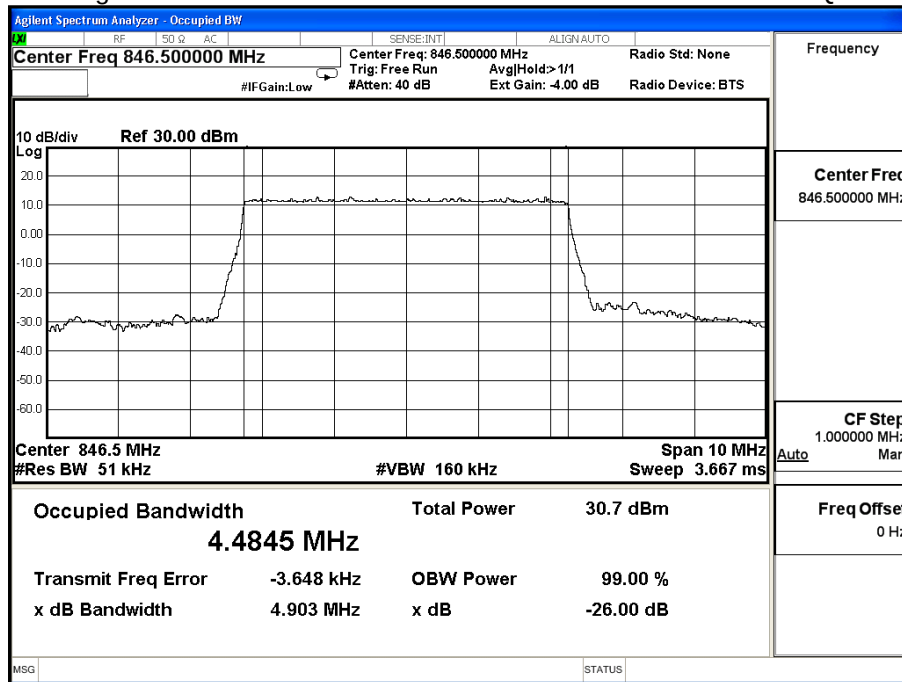
5 MHz QPSK





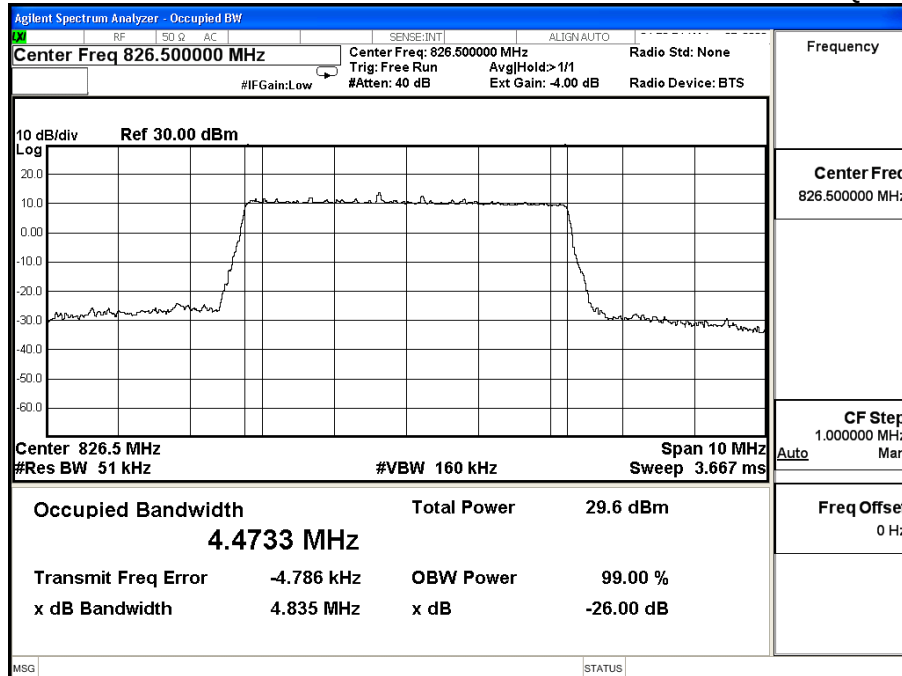
LTE Band 5 Highest channel:

5 MHz QPSK



LTE Band 5 Lowest channel

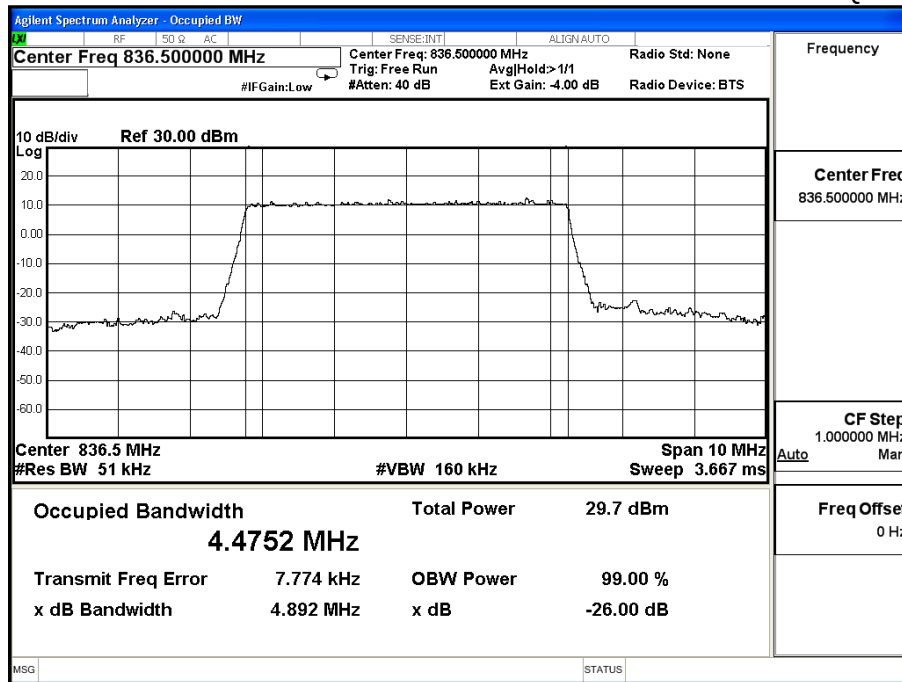
5 MHz 16-QAM





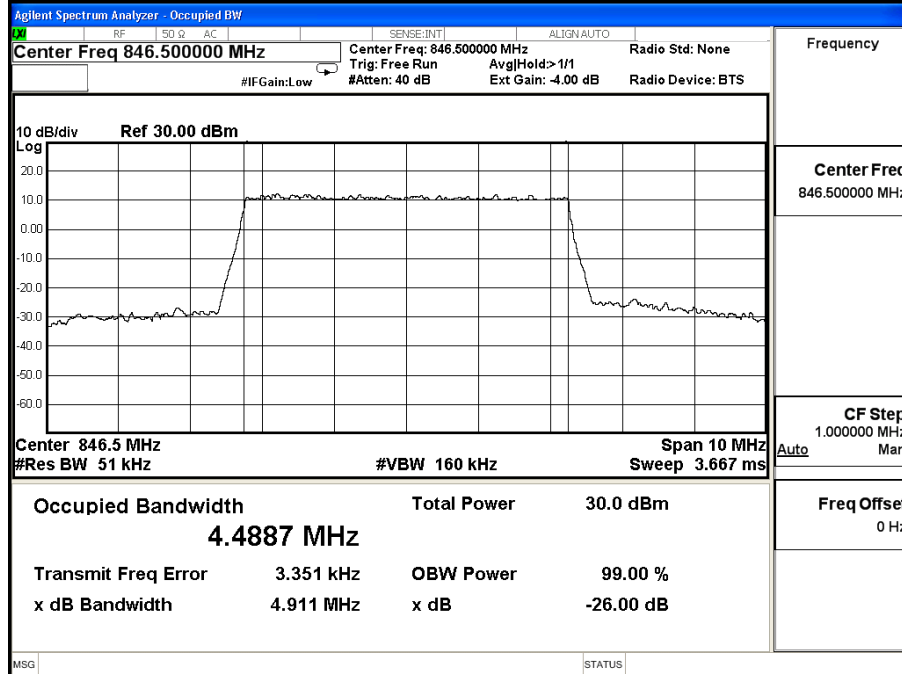
LTE Band 5 Middle channel

5 MHz 16-QAM



LTE Band 5 Highest channel:

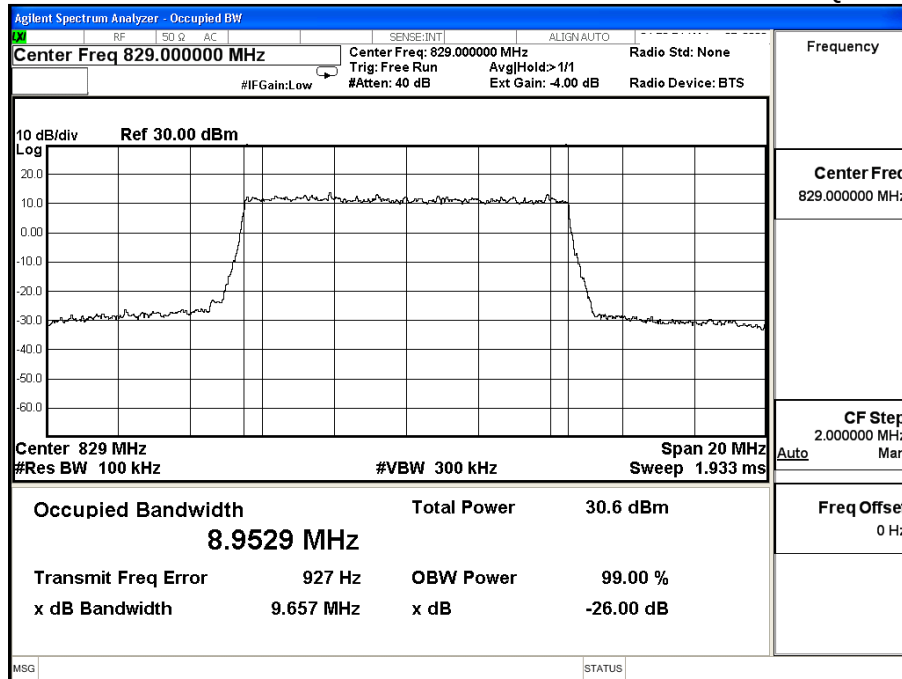
5 MHz 16-QAM





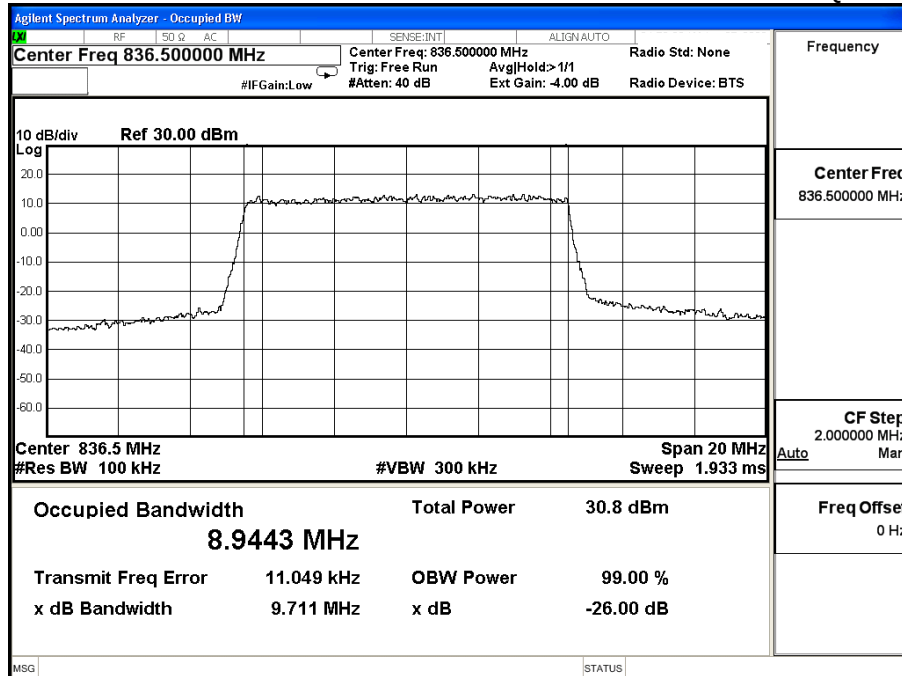
LTE Band 5 Lowest channel

10 MHz QPSK



LTE Band 5 Middle channel

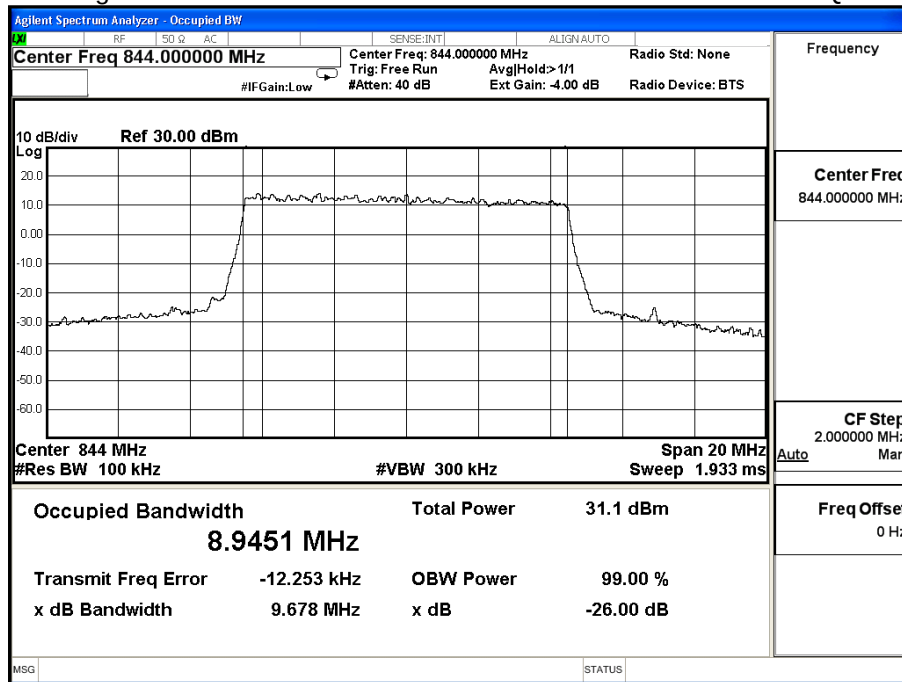
10 MHz QPSK





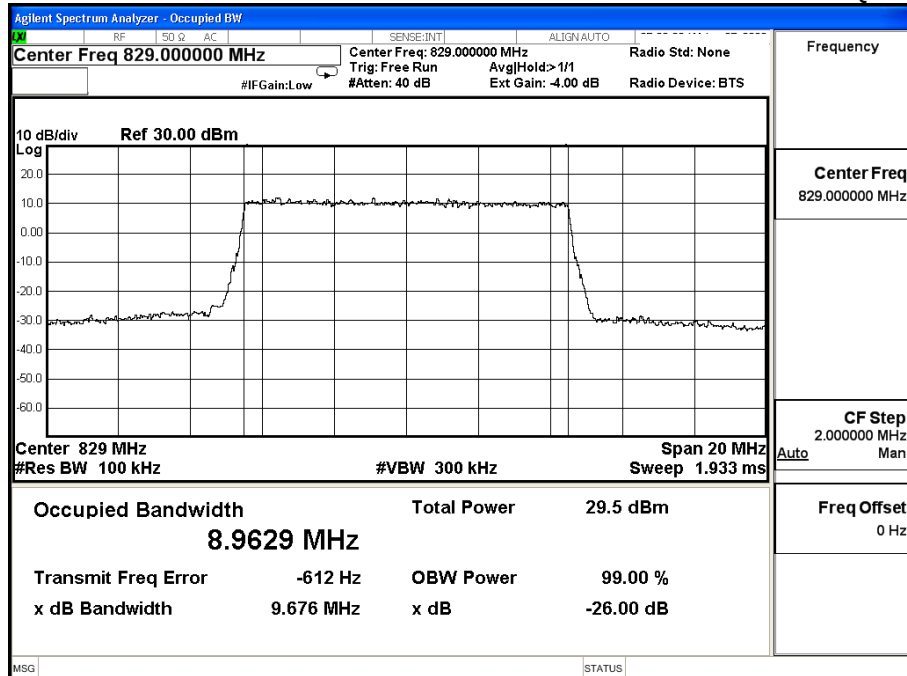
LTE Band 5 Highest channel:

10 MHz QPSK



LTE Band 5 Lowest channel

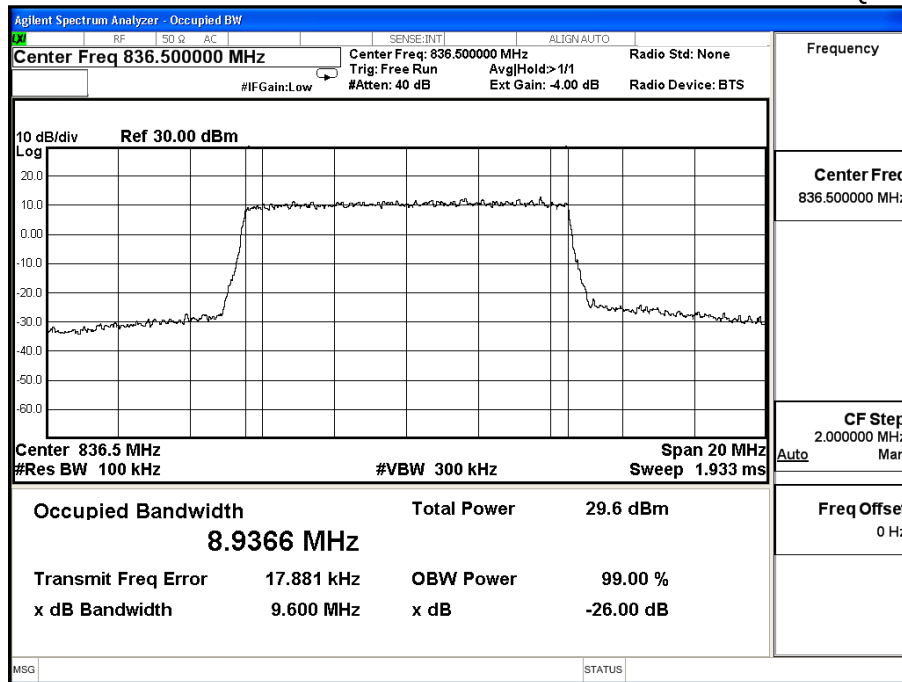
10 MHz 16-QAM





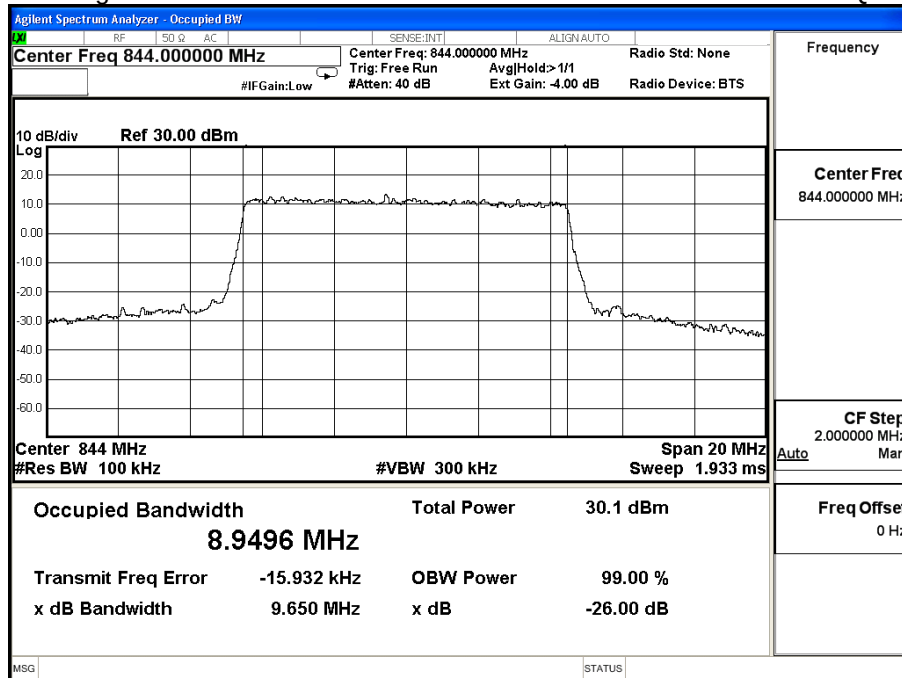
LTE Band 5 Middle channel

10 MHz 16-QAM



LTE Band 5 Highest channel:

10 MHz 16-QAM





1.2. Conducted Spurious Emissions

1.2.1. Test Result

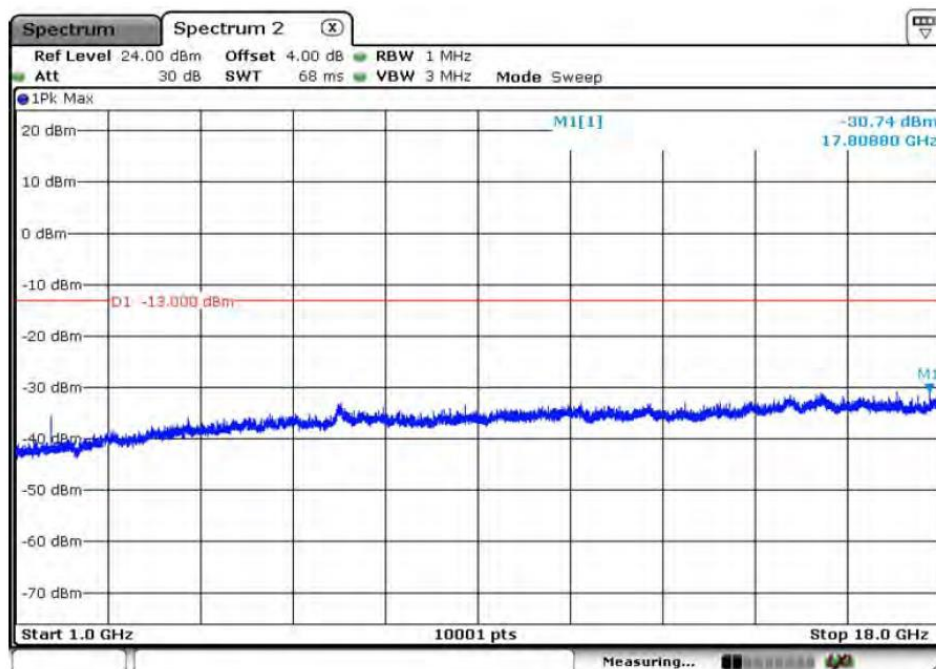
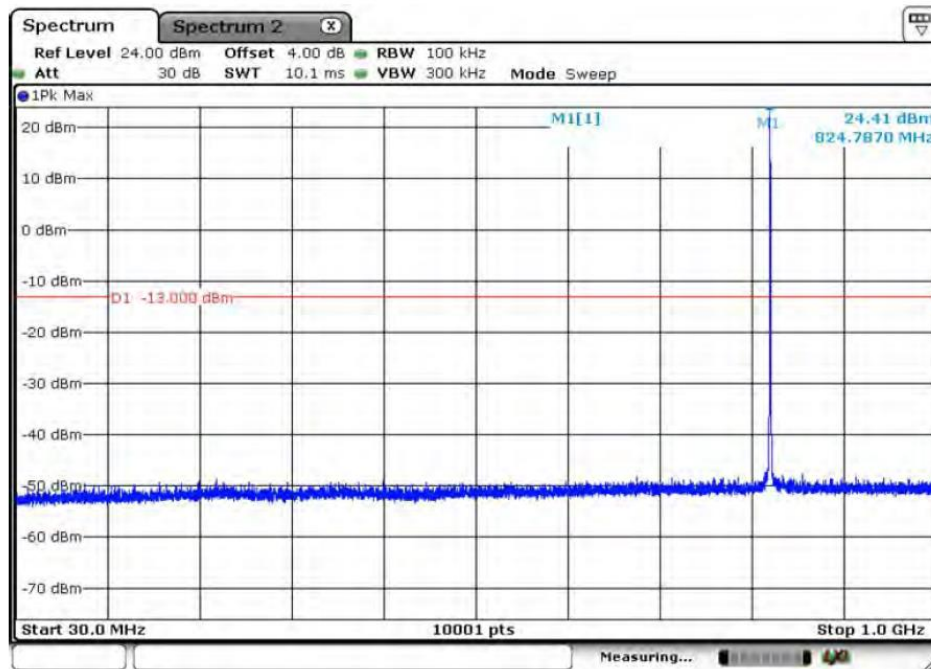
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

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

Pass, the table and plot please see annex.

LTE Band 5 Lowest channel

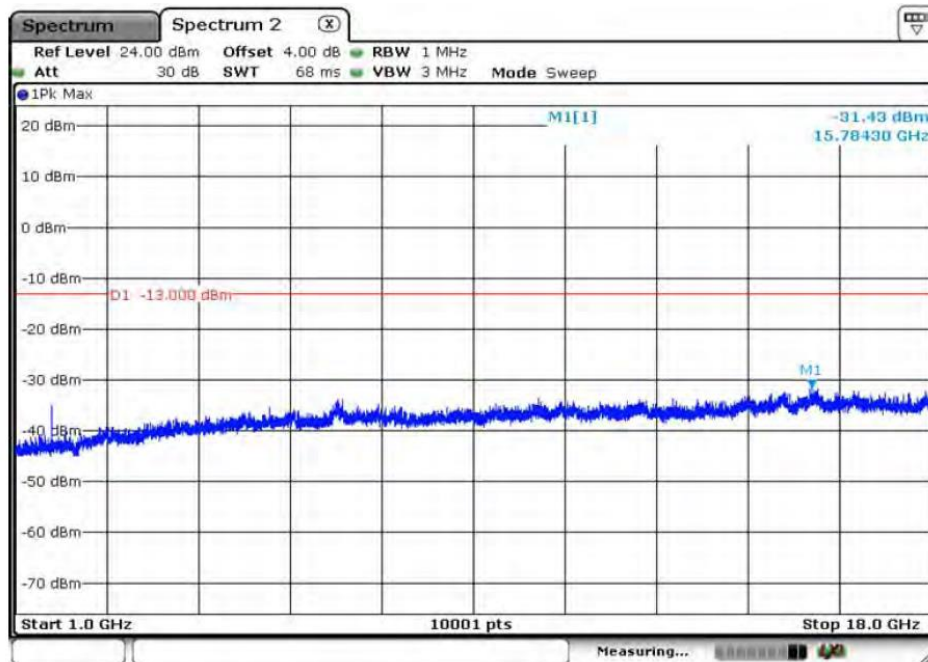
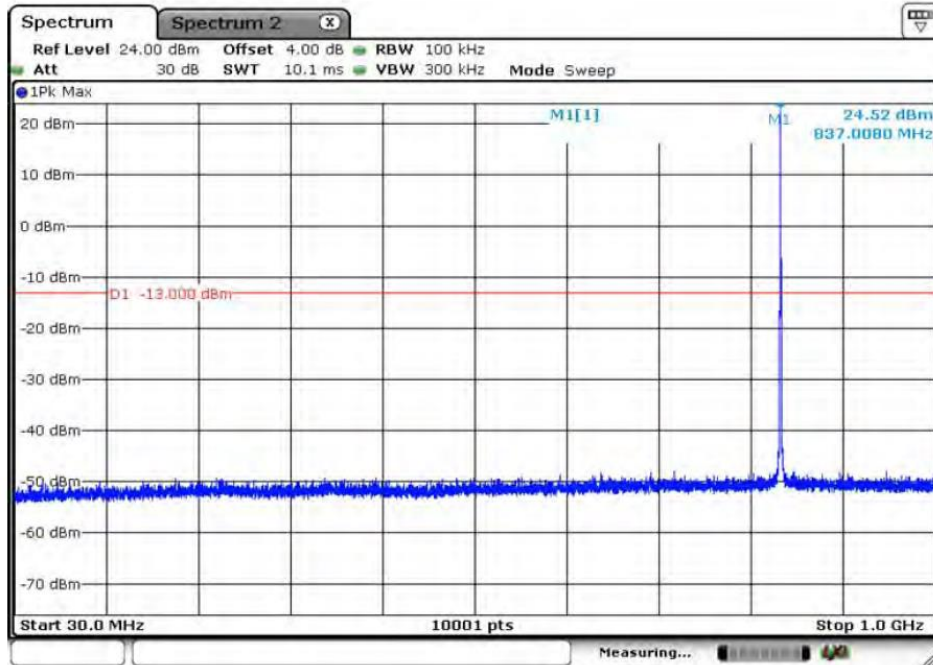
1.4MHz





LTE Band 5 middle channel

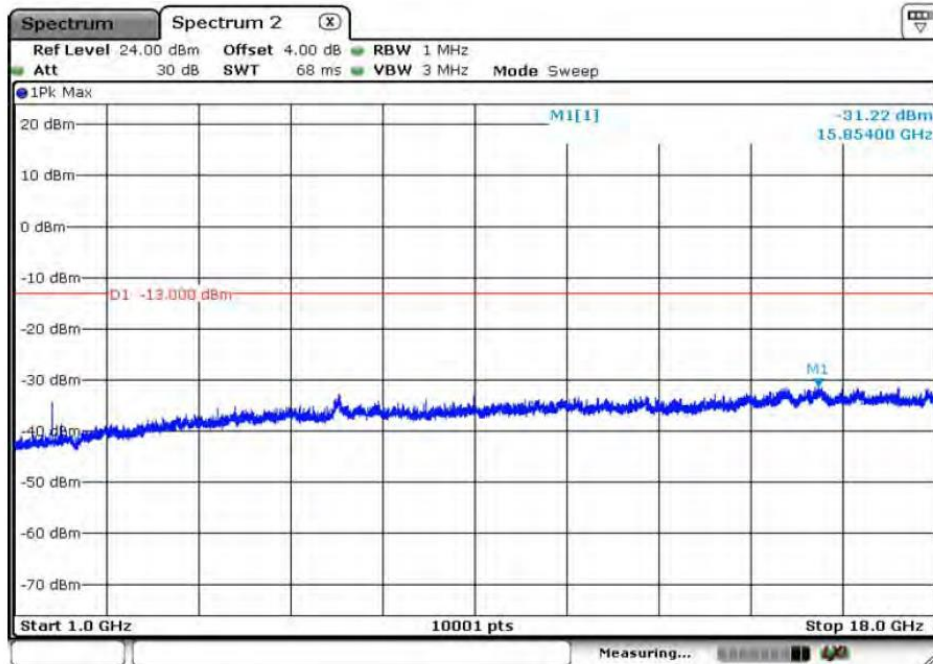
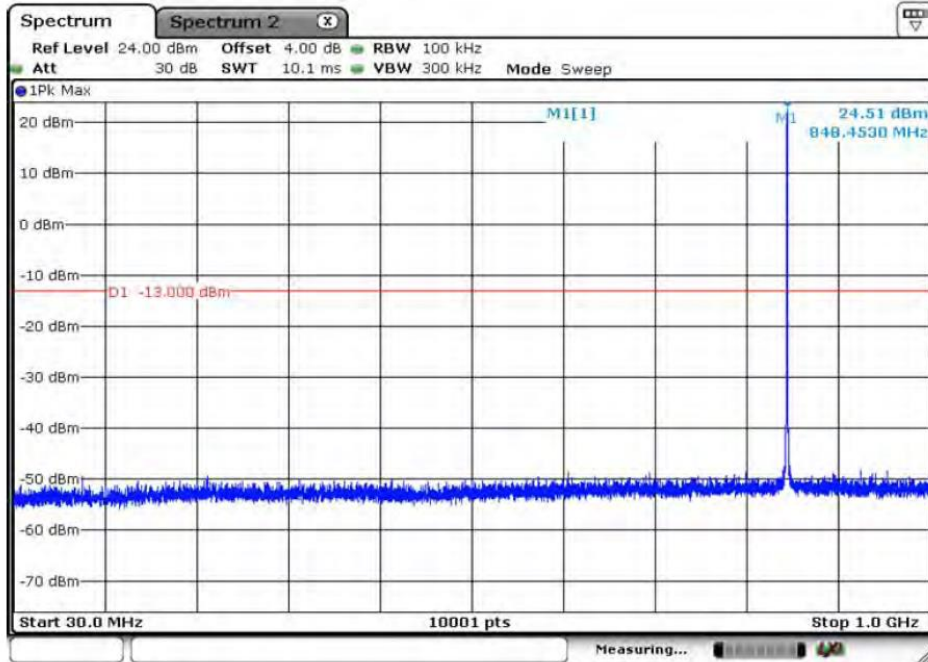
1.4MHz





LTE Band 5 high channel

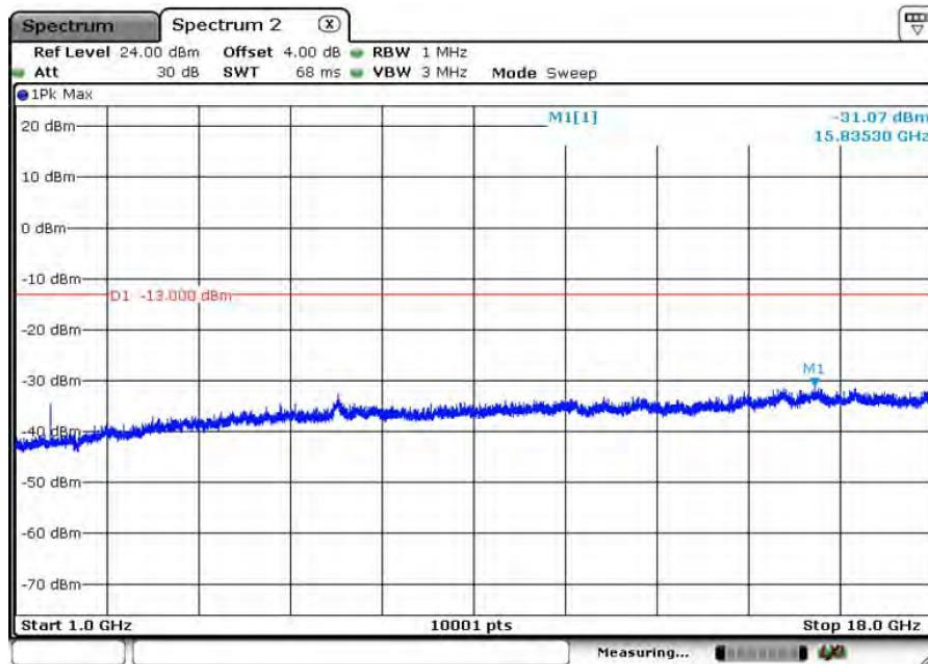
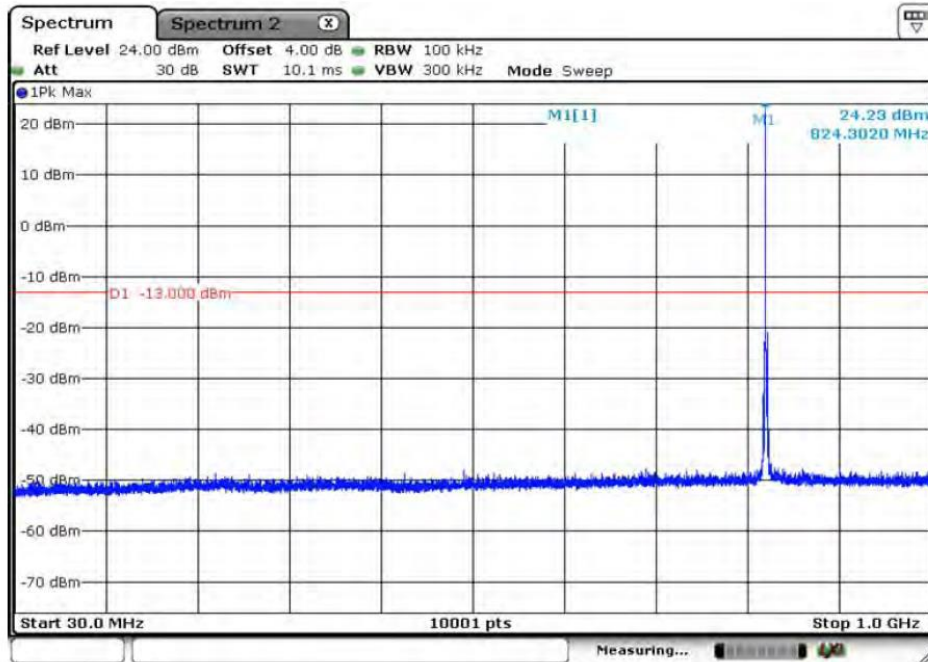
1.4MHz





LTE Band 5 Lowest channel

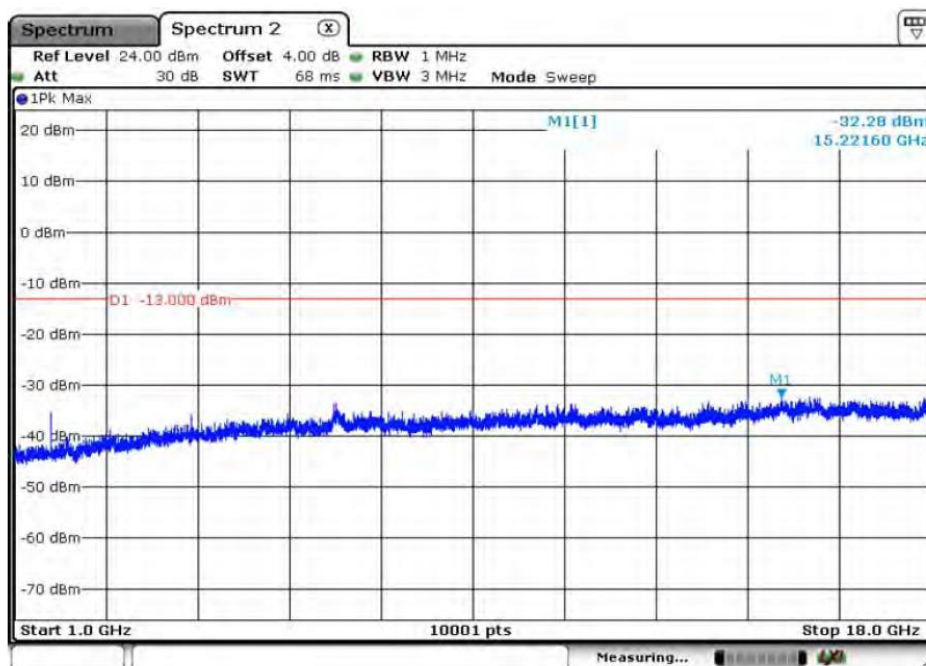
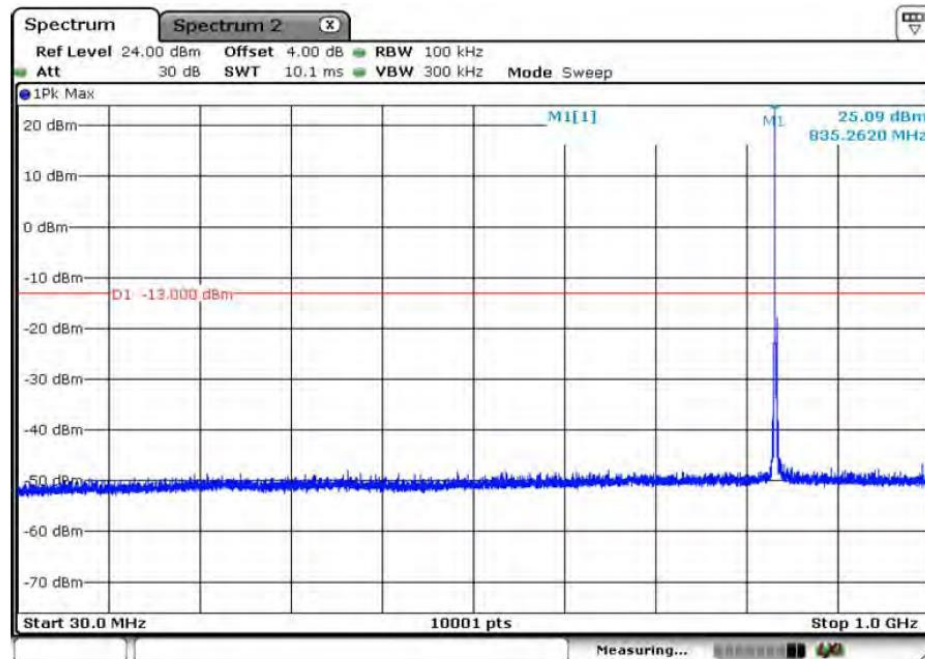
3MHz





LTE Band 5 middle channel

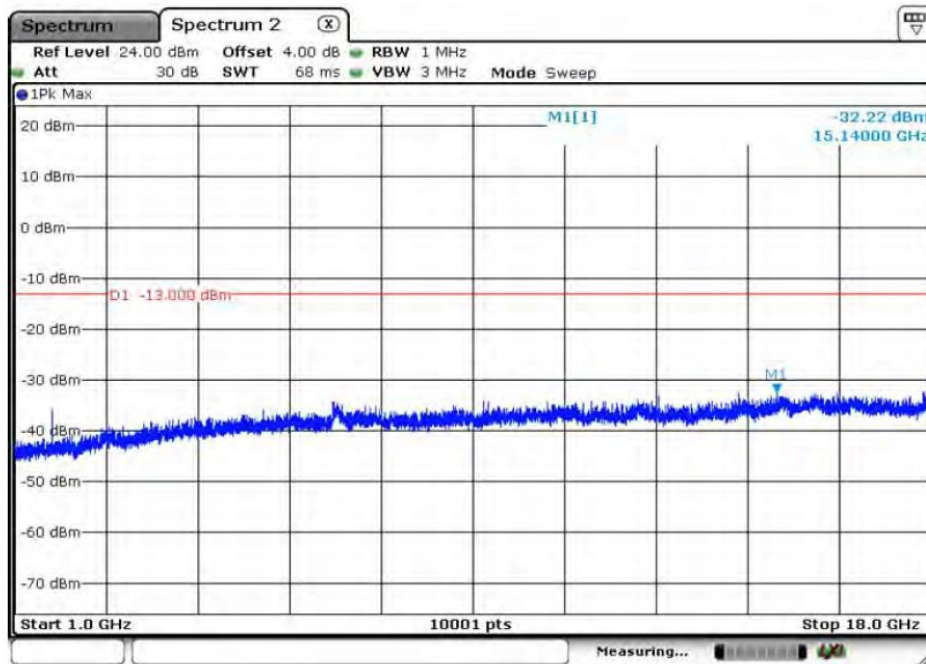
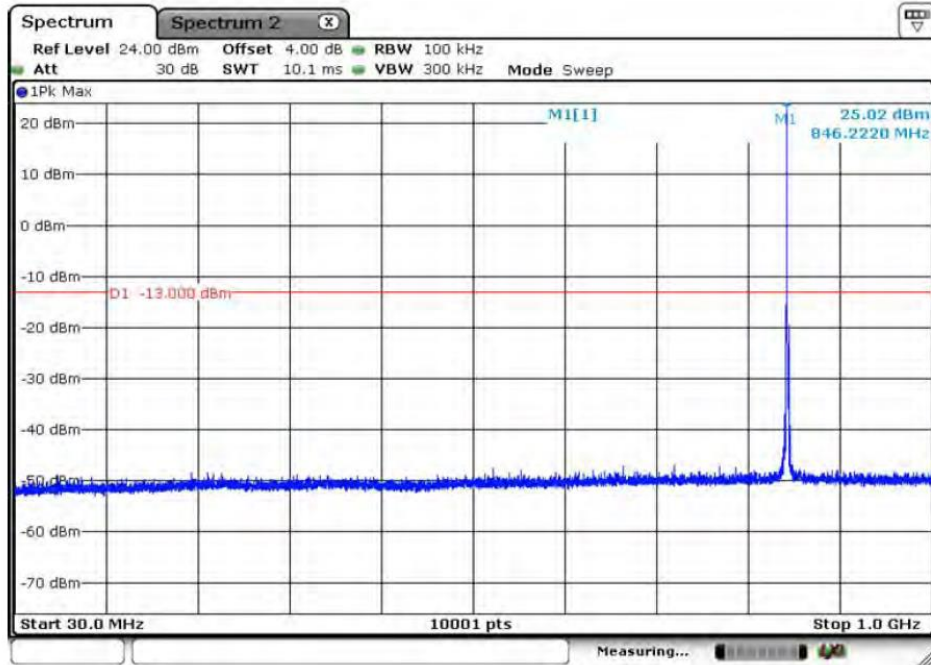
3MHz





LTE Band 5 high channel

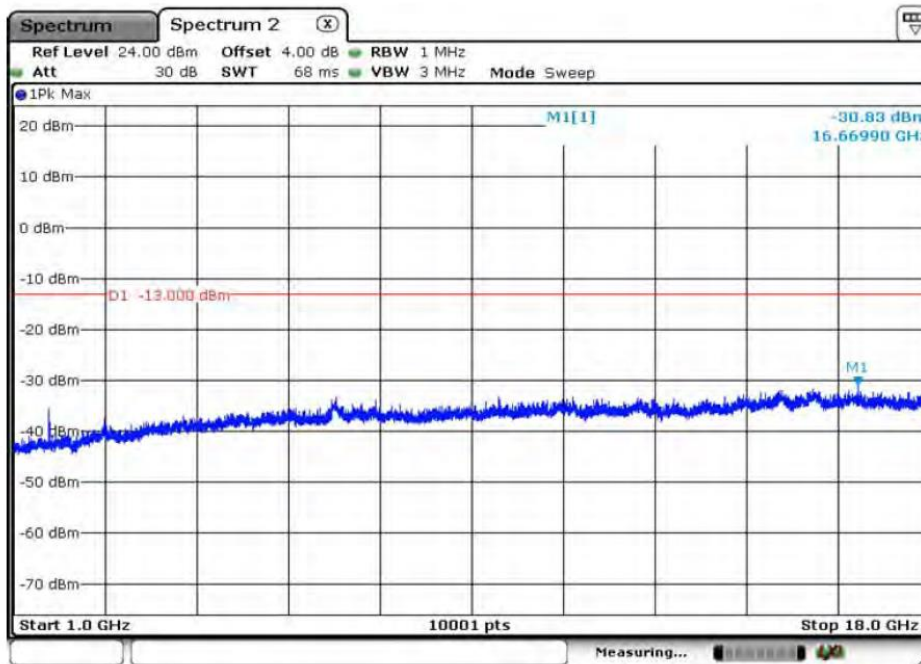
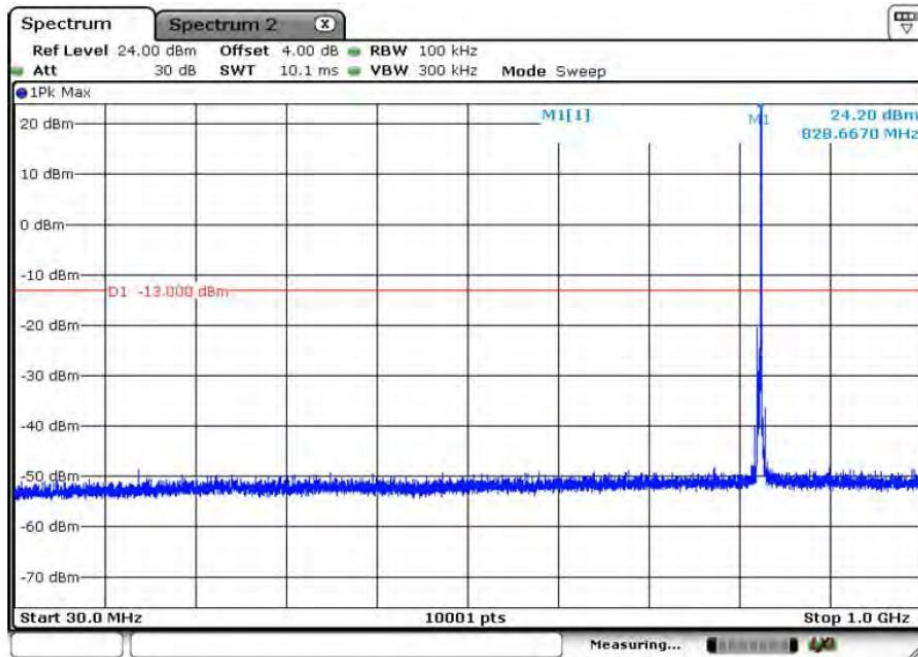
3MHz





LTE Band 5 Lowest channel

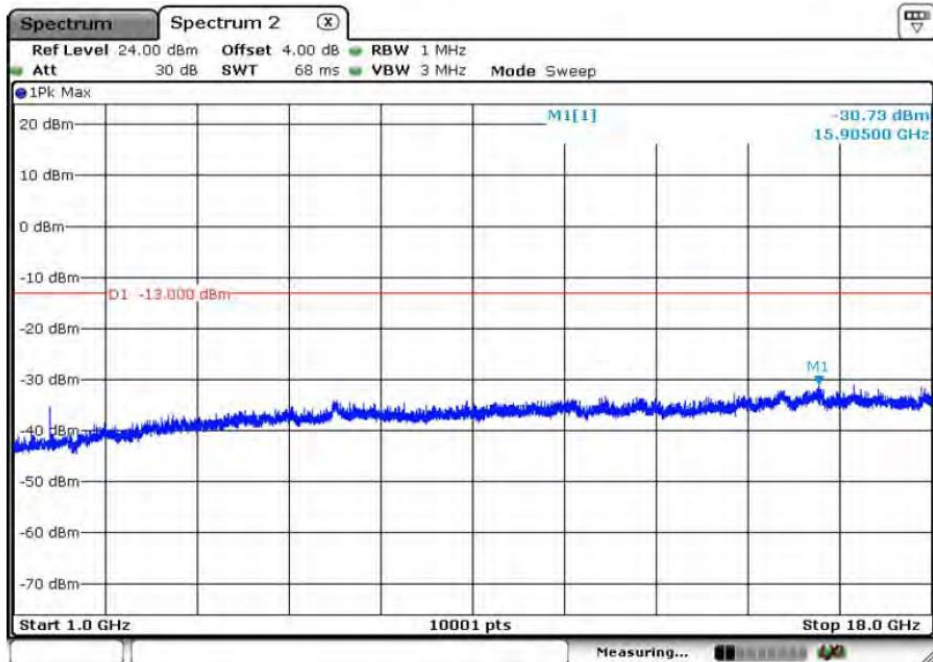
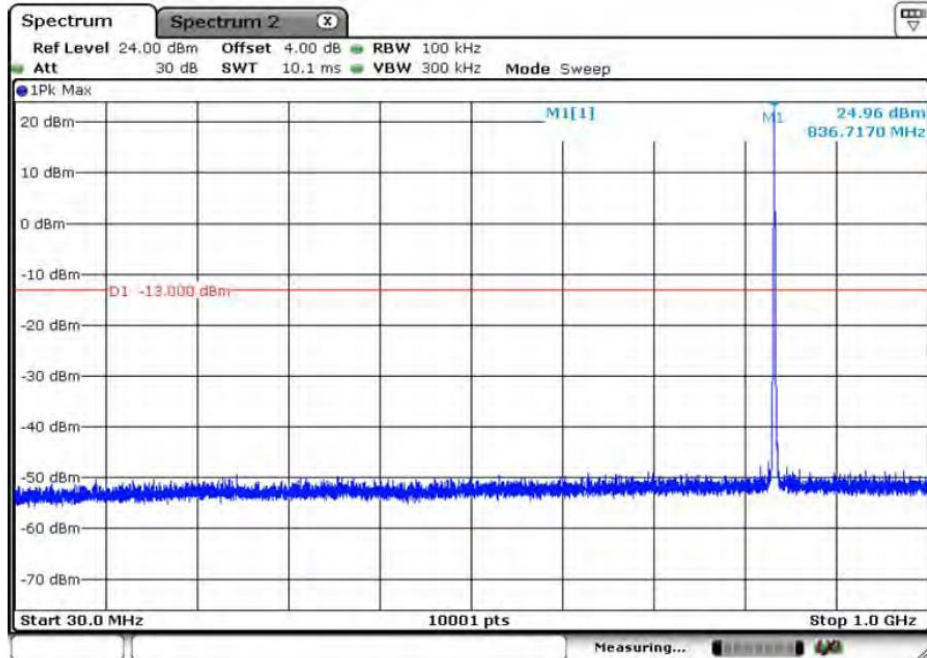
5MHz





LTE Band 5 middle channel

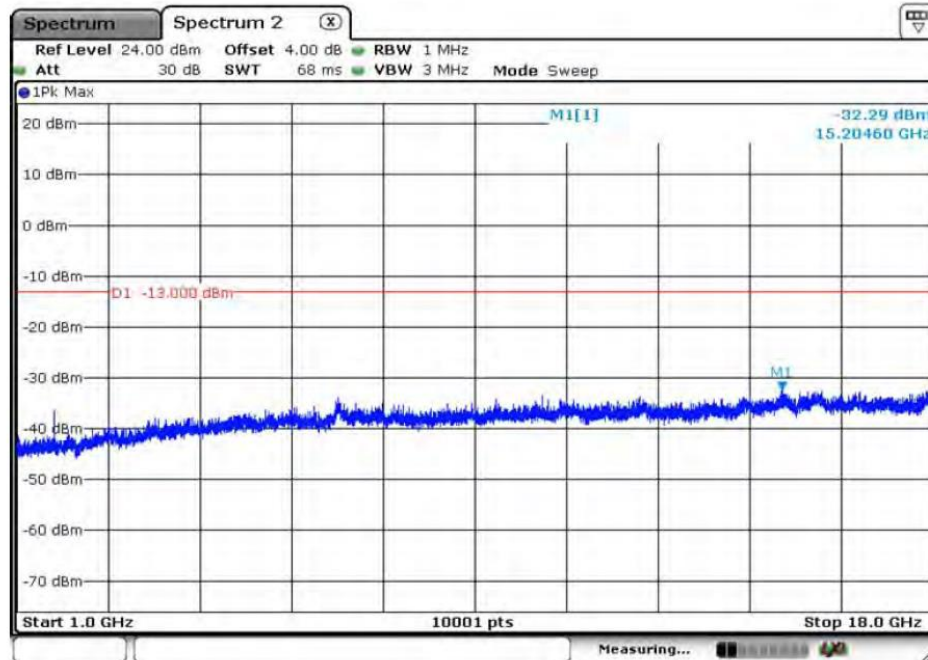
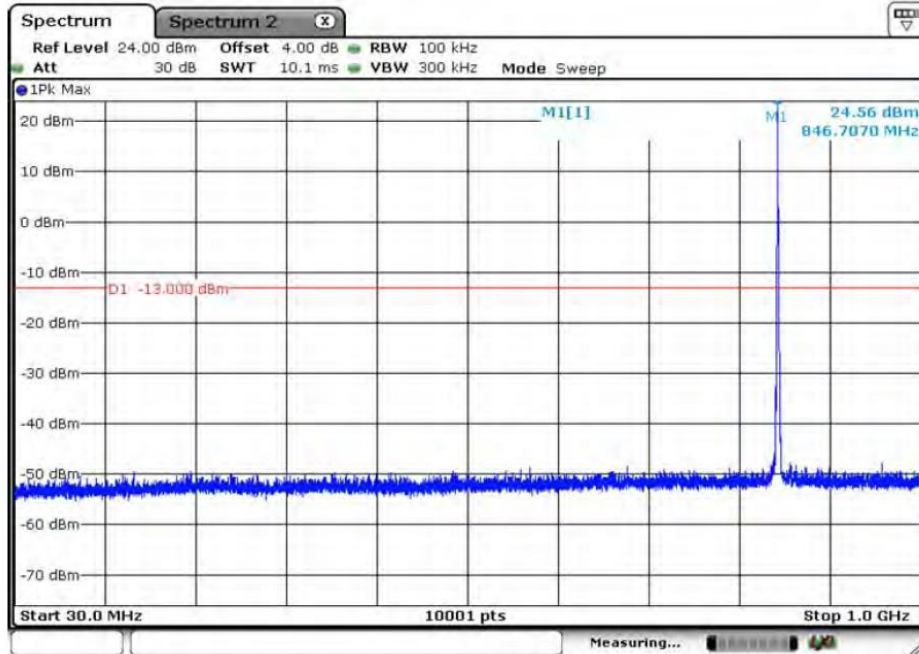
5MHz





LTE Band 5 high channel

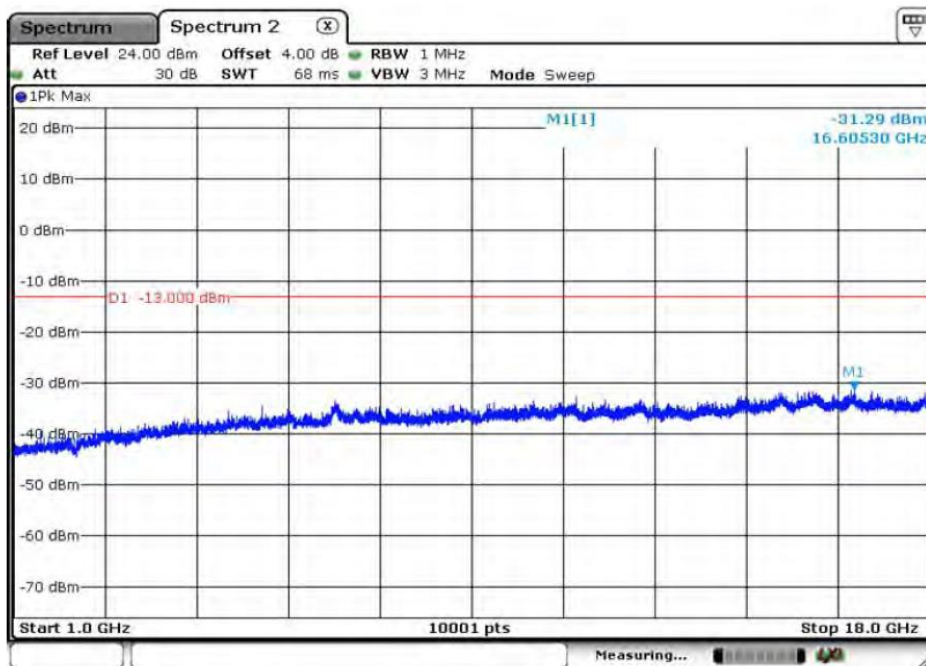
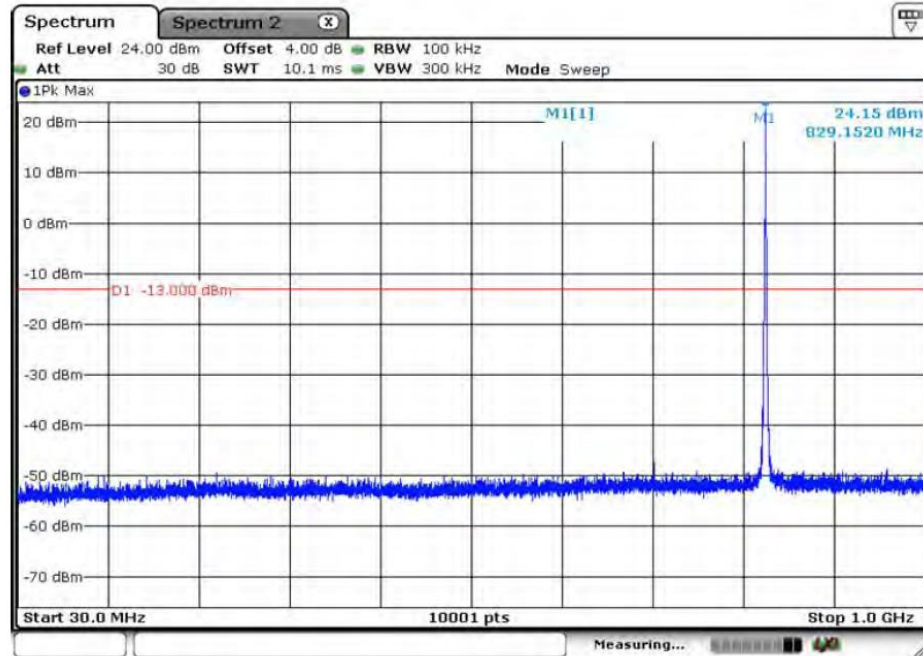
5MHz





LTE Band 5 Lowest channel

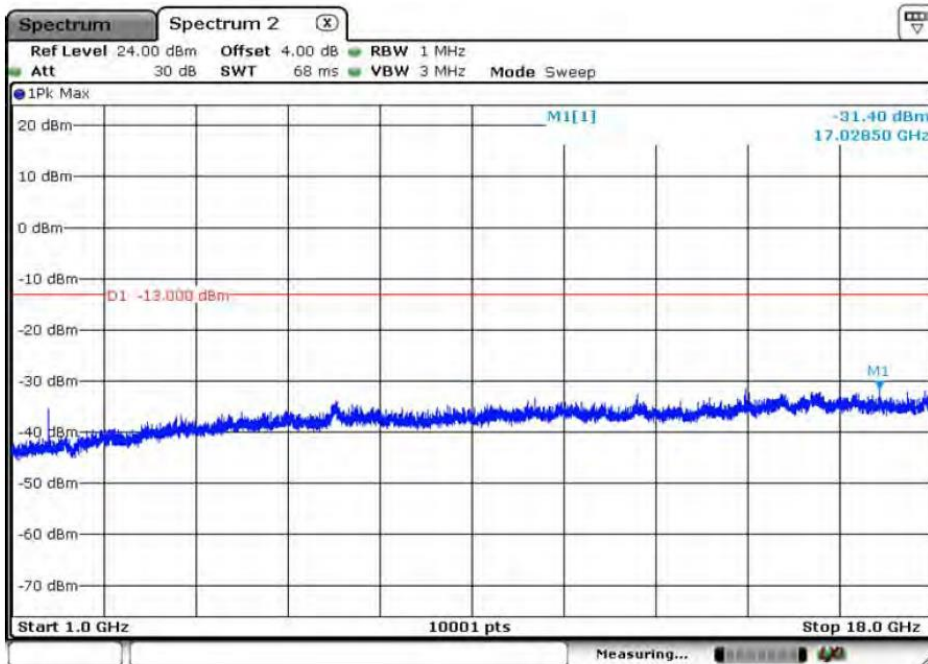
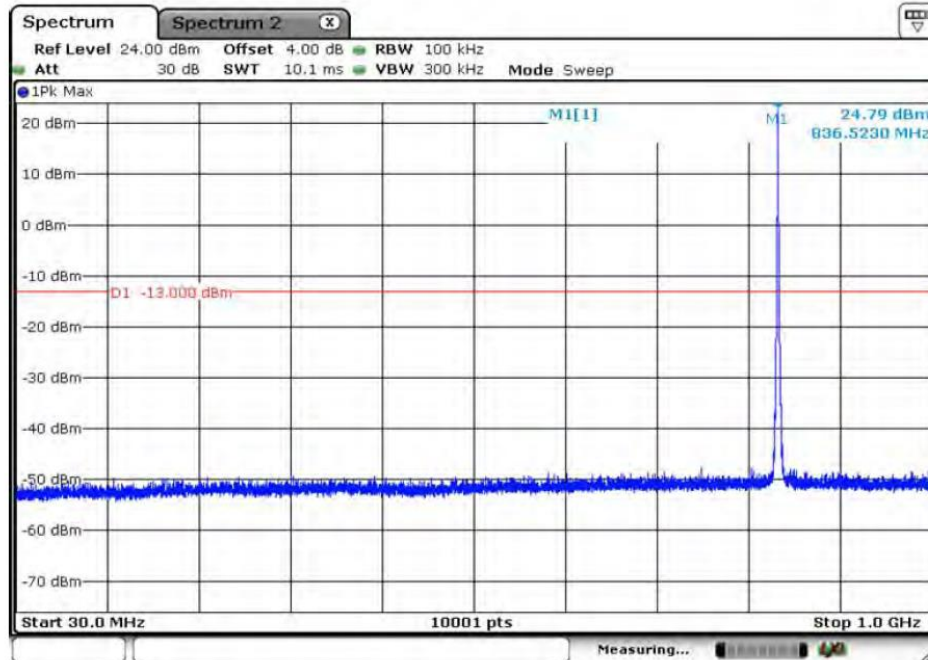
10MHz





LTE Band 5 middle channel

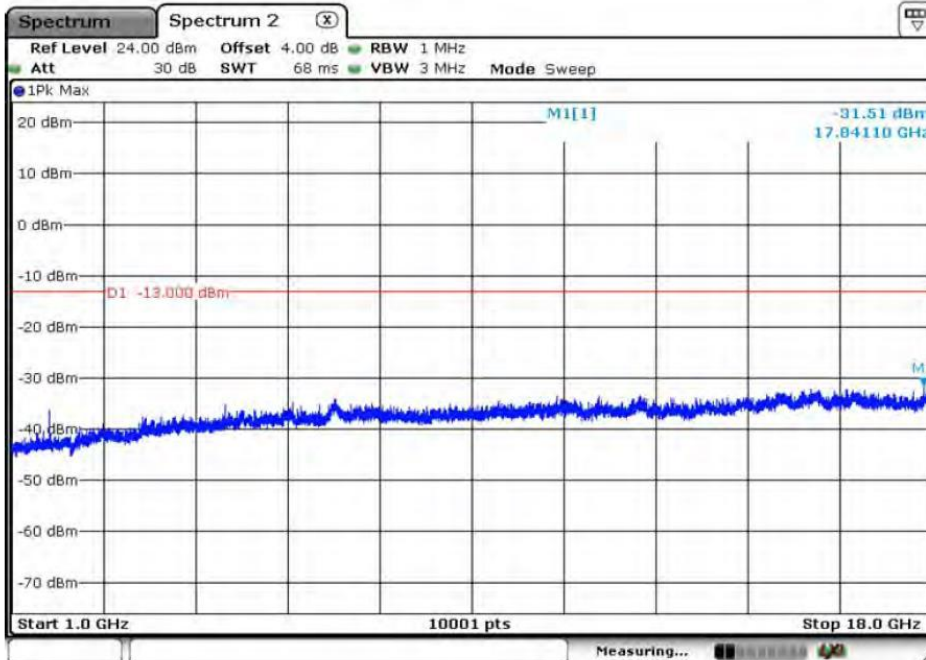
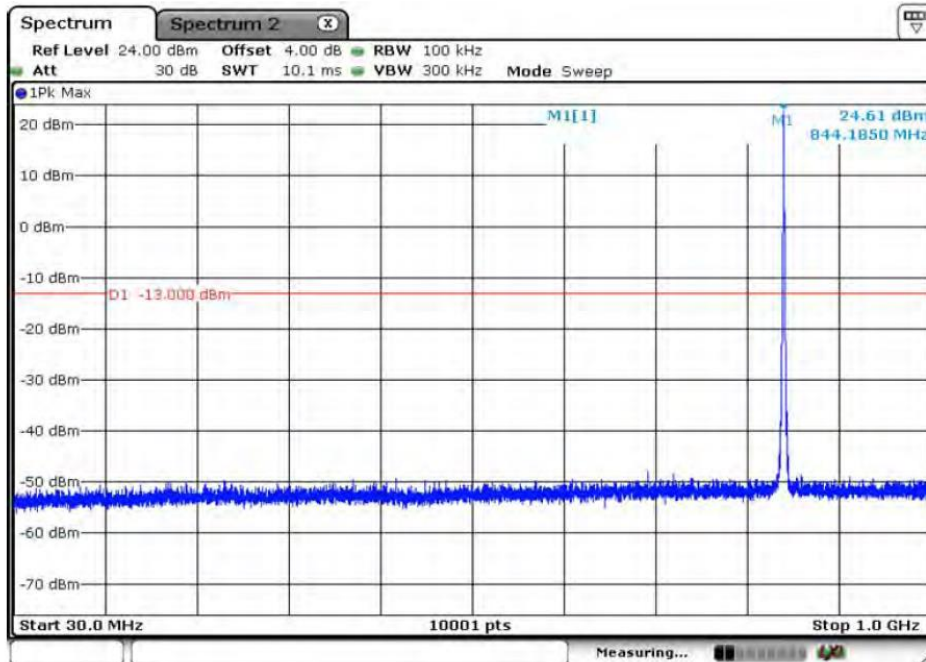
10MHz





LTE Band 5 high channel

10MHz





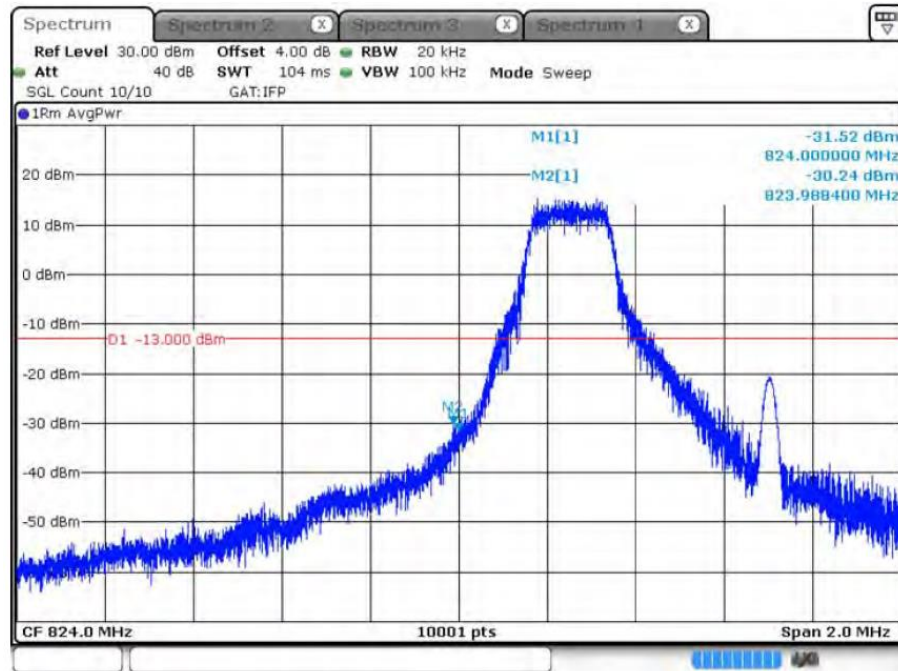
1.3. Conducted Out of Band Emissions

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.

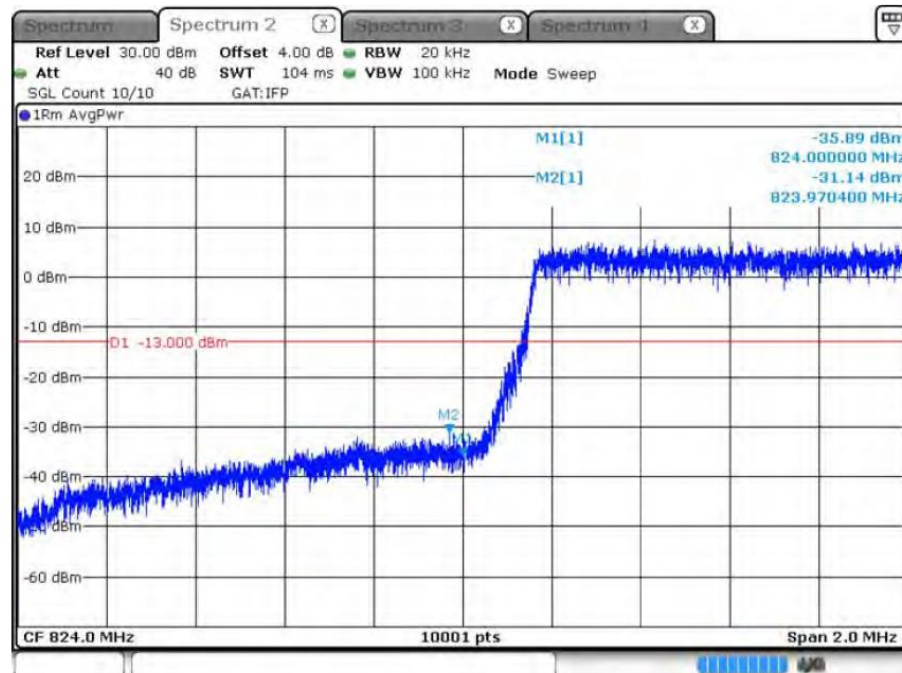
LTE Band 5 Lowest channel

1.4MHz 1RB



LTE Band 5 Lowest channel

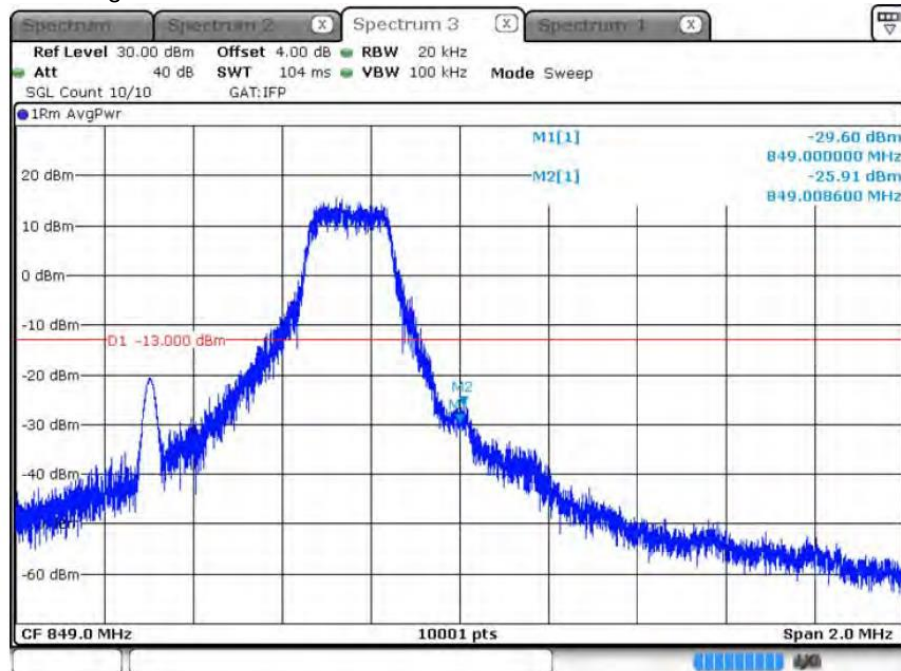
1.4MHz 6RB





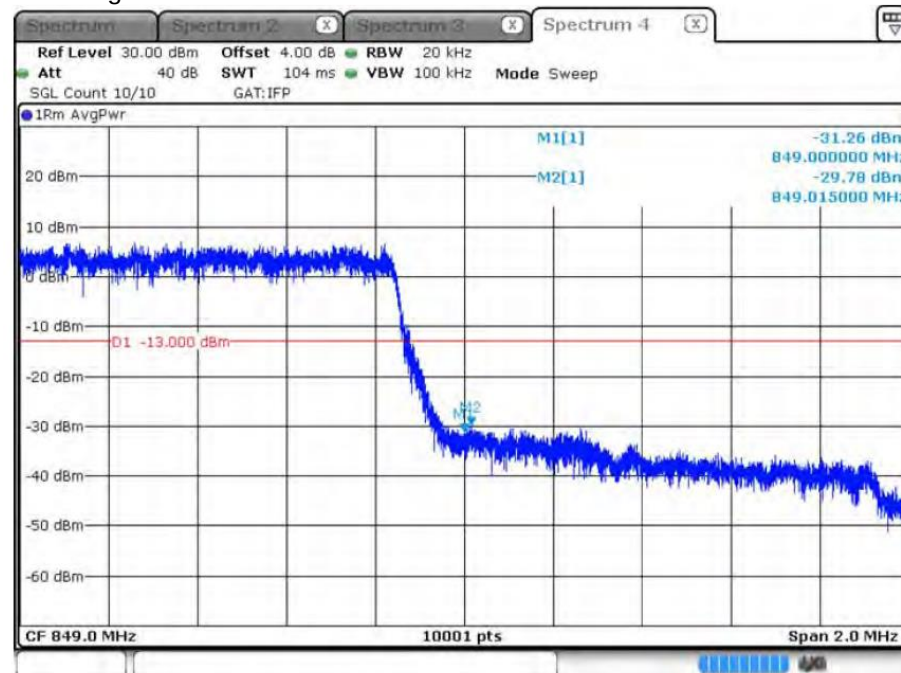
LTE Band 5 Highest channel:

1.4MHz 1RB



LTE Band 5 Highest channel:

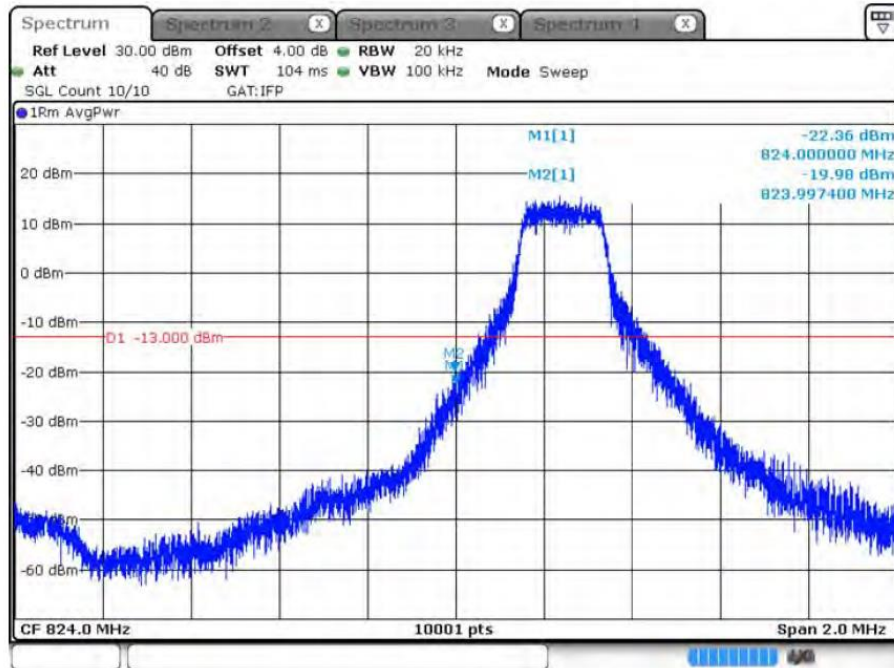
1.4MHz 6RB





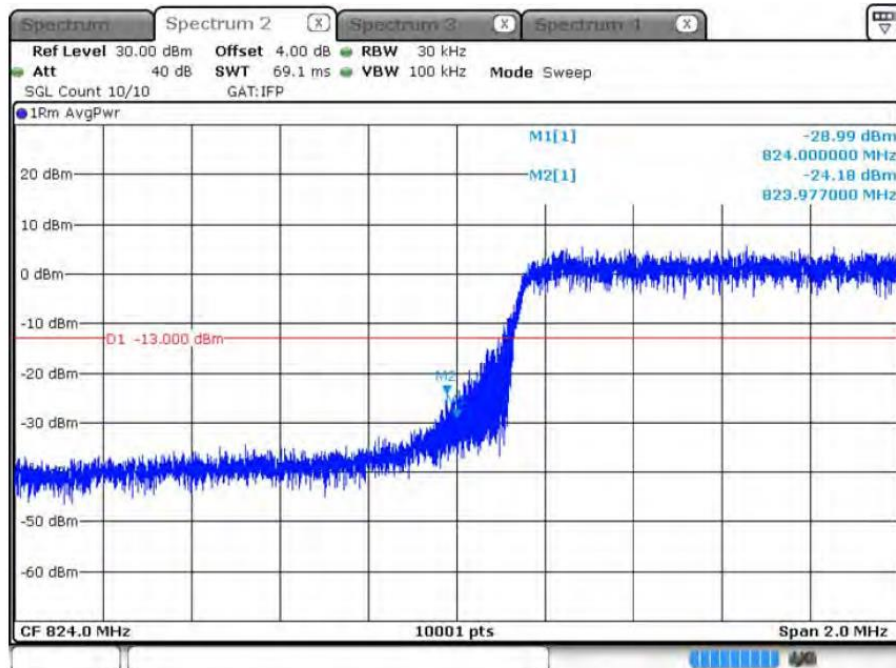
LTE Band 5 Lowest channel

3MHz 1RB



LTE Band 5 Lowest channel

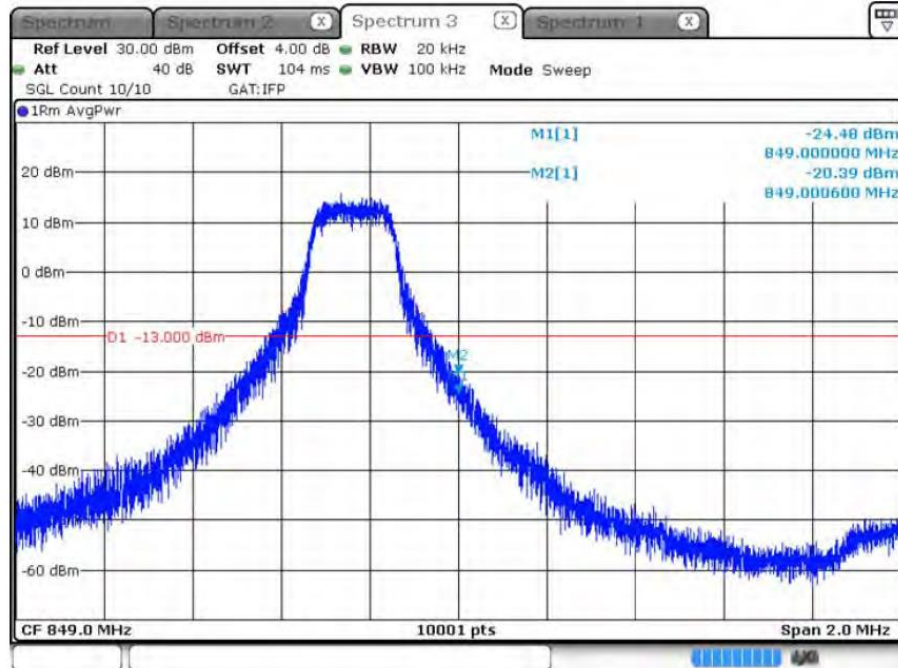
3MHz 15RB





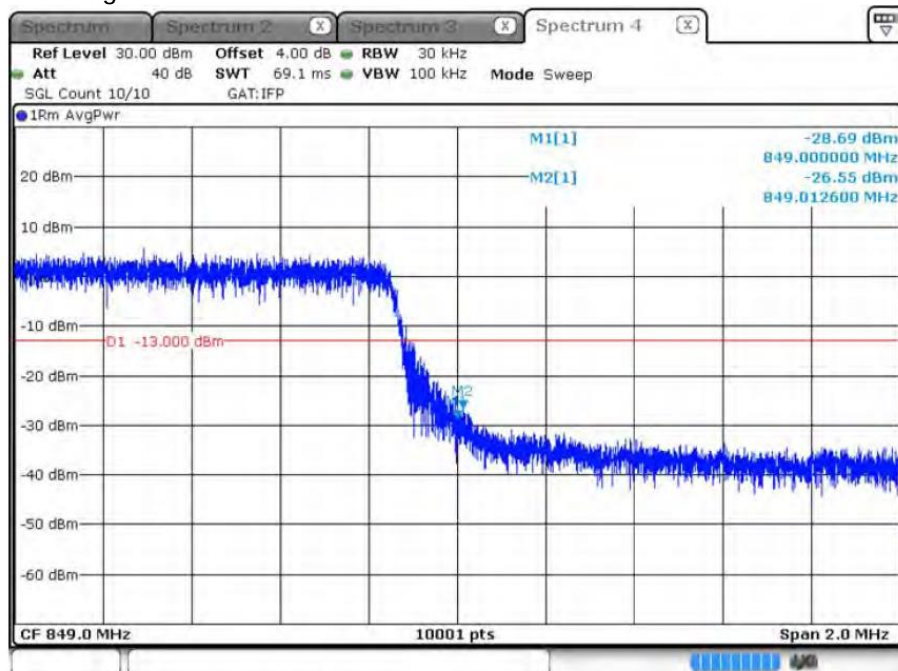
LTE Band 5 Highest channel:

3MHz 1RB



LTE Band 5 Highest channel:

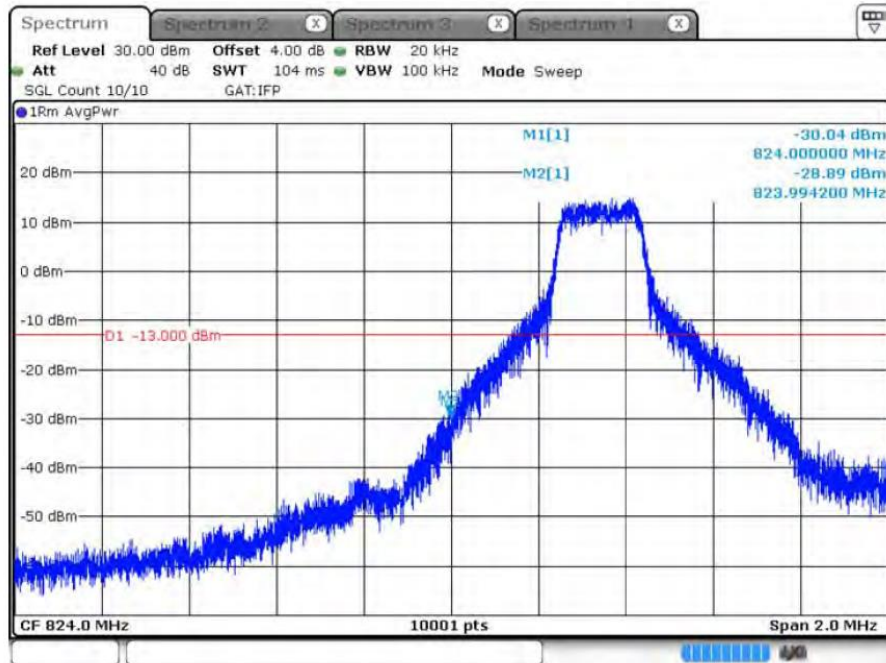
3MHz 15RB





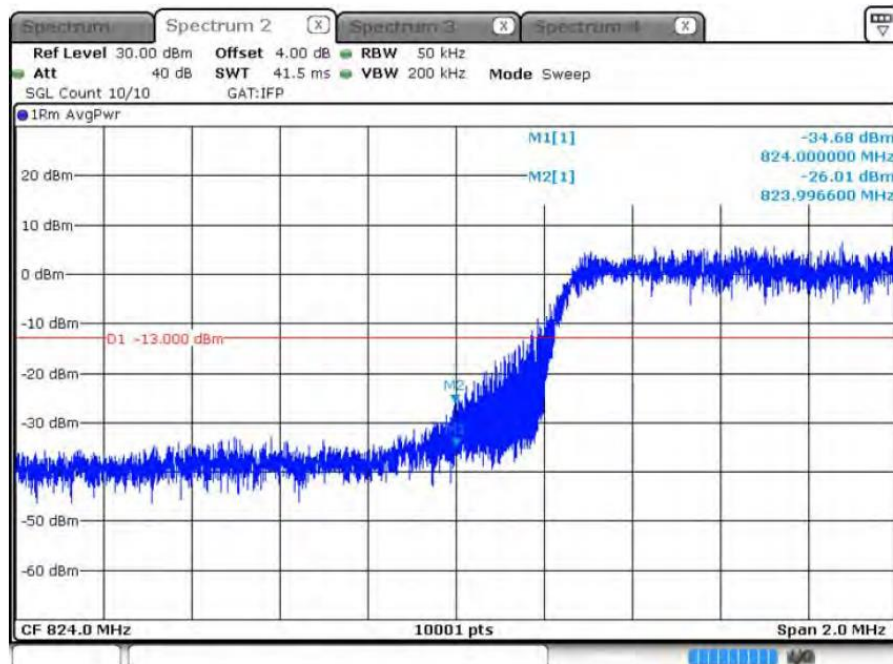
LTE Band 5 Lowest channel

5MHz 1RB



LTE Band 5 Lowest channel

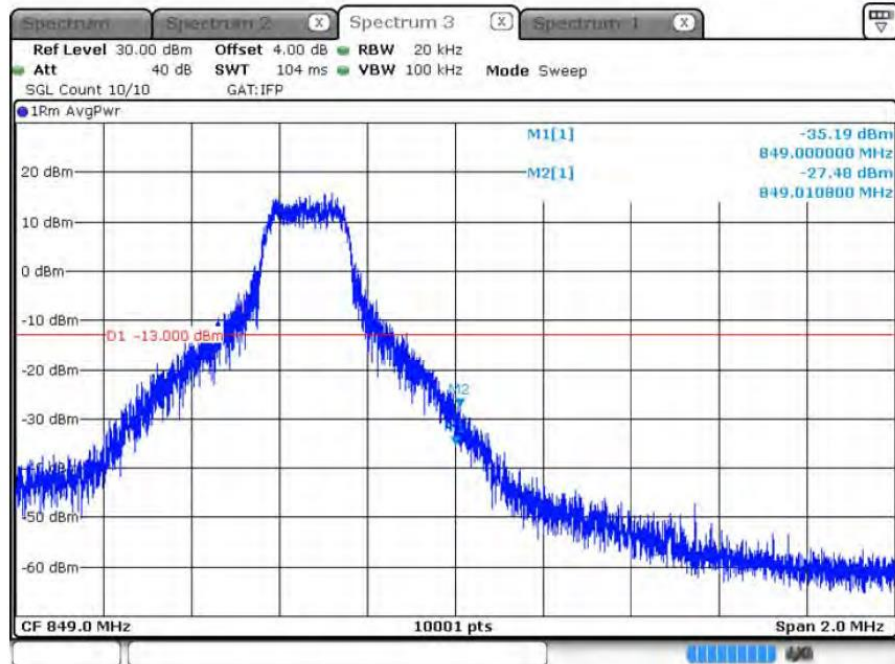
5MHz 25RB





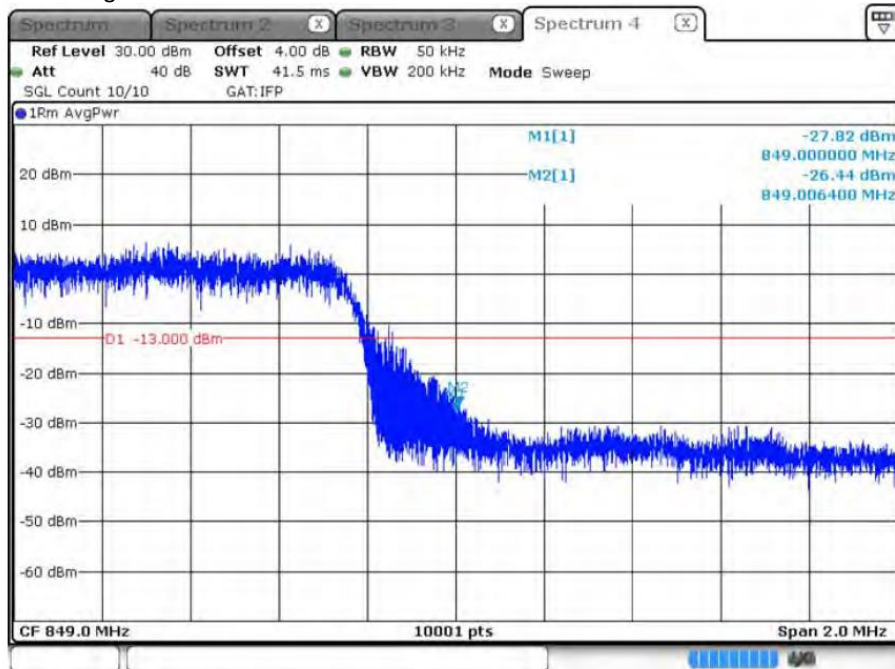
LTE Band 5 Highest channel:

5MHz 1RB



LTE Band 5 Highest channel:

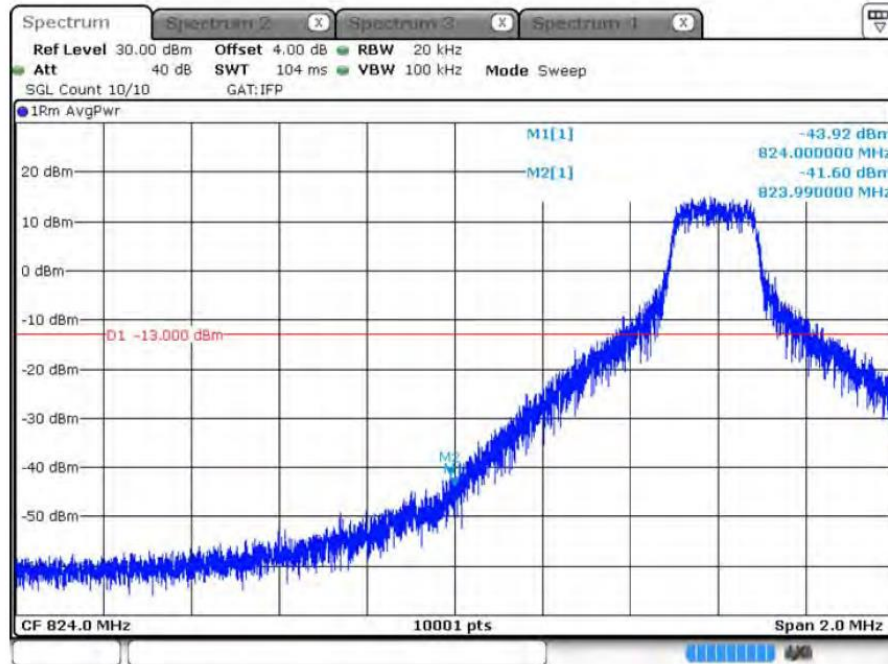
5MHz 25RB





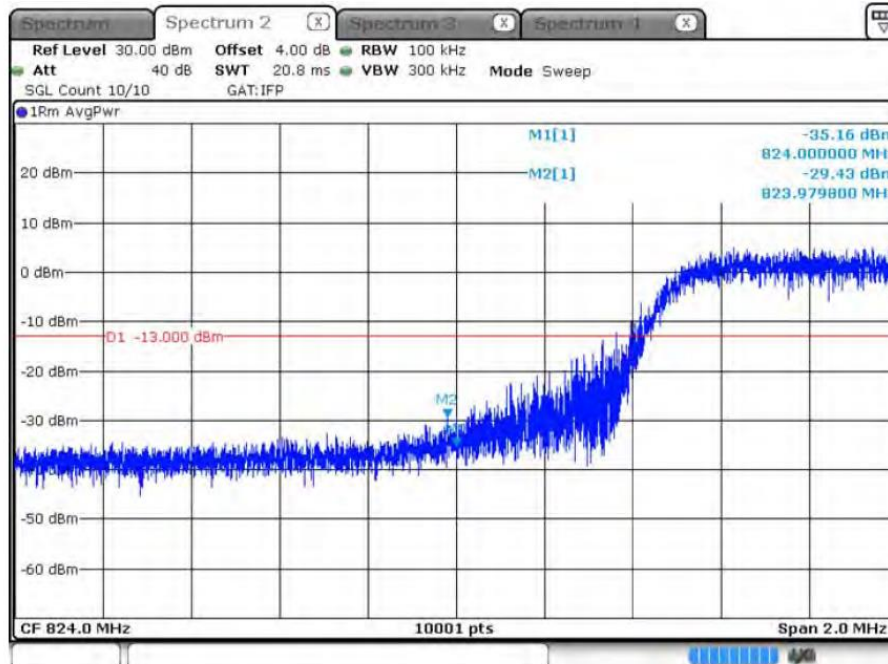
LTE Band 5 Lowest channel

10MHz 1RB



LTE Band 5 Lowest channel

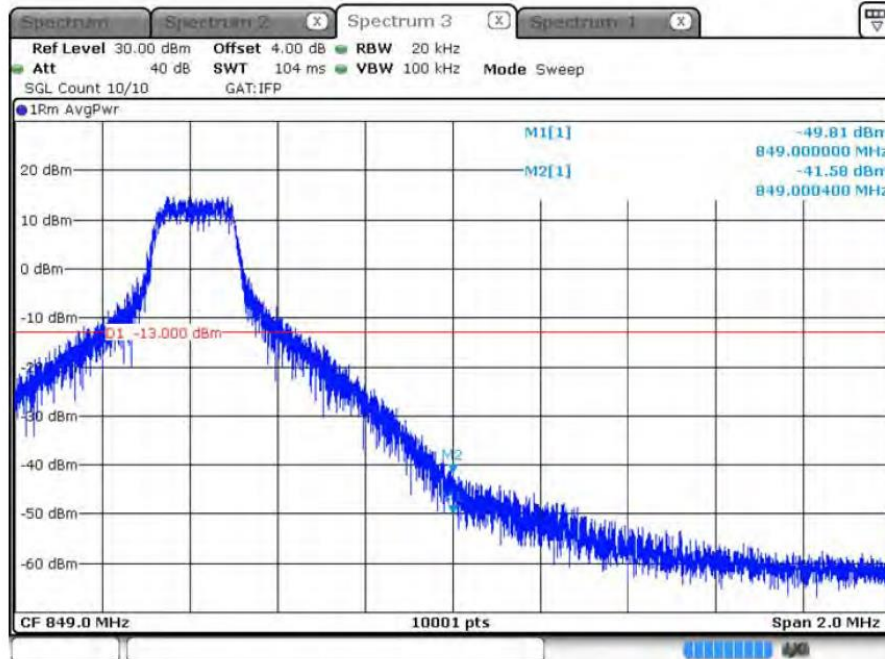
10MHz 50RB





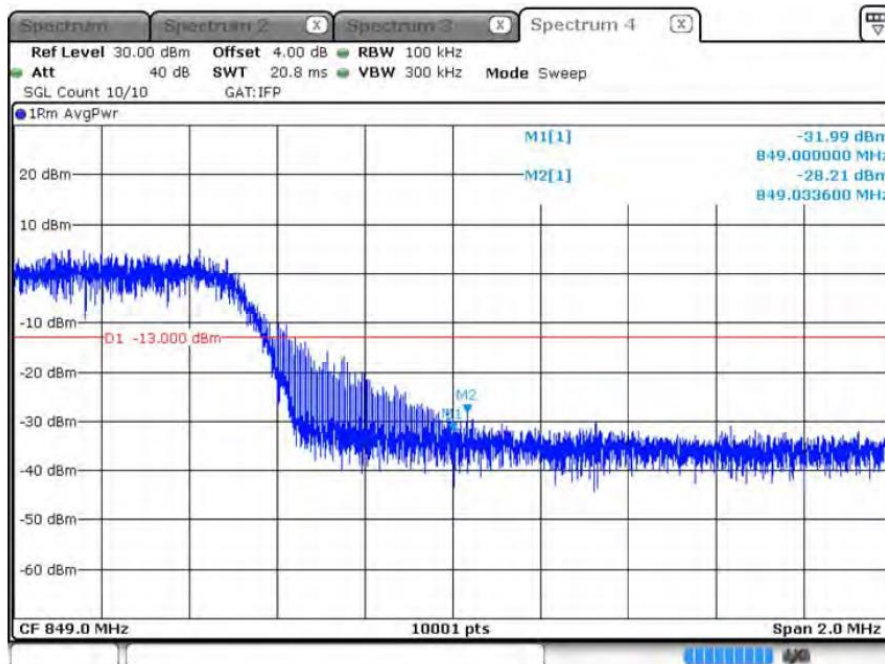
LTE Band 5 Highest channel:

10MHz 1RB



LTE Band 5 Highest channel:

10MHz 50RB



***** END *****