

FCC Test Report

ANNEX 7 LTE BAND 7

FCC ID: 2A8NR-Z91

Applicant: ShenZhen ZCS Technology CO.,LTD
Address: 202C, G2 Building, TCL World E City, Zhongshan Yuan Road, Nanshan District, Shenzhen, China.

Manufacturer: ShenZhen ZCS Technology CO.,LTD
Address: 202C, G2 Building, TCL World E City, Zhongshan Yuan Road, Nanshan District, Shenzhen, China.

EUT: Smart Pos

Trade Mark: ZCS

Model Number: Z91
Z90, Z92, Z93, Z100, Z70

Date of Receipt: Apr. 15, 2022

Test Date: Apr. 15, 2022 – May. 05, 2022

Date of Report: Sep. 05, 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

Applicable Standards: FCC CFR Title 47 Part22 Subpart H
FCC CFR Title 47 Part24 Subpart E
FCC CFR Title 47 Part27
ANSI/TIA-603-E-2016
FCC KDB 971168 D01 Power Meas. License Digital Systems v03v01
ANSI C63.26:2015

Test Result: Pass

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	12
1.3. Conducted Out of Band Emissions	24

1. EMISSION TEST RESULTS

1.1. -26dB and 99% Occupied Bandwidth

1.1.1. Test Result

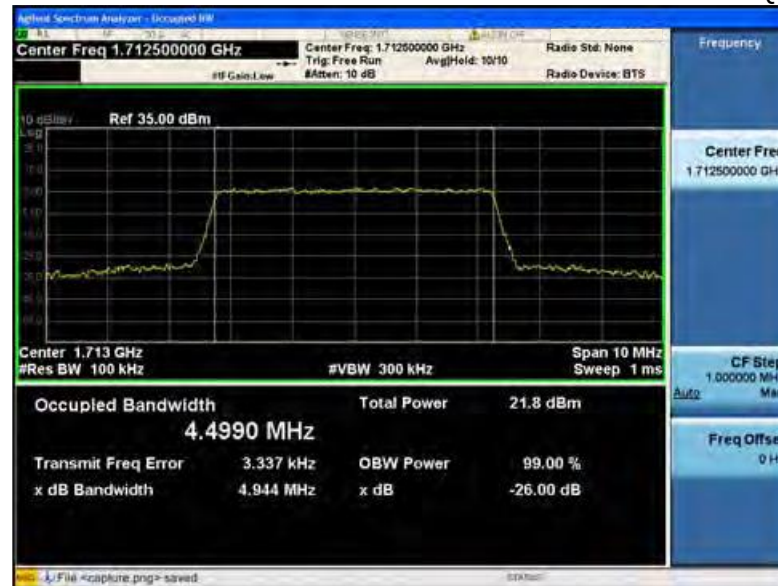
EUT Mode Bandwidth	Modulation	Frequency (MHz)	99% Occupy bandwidth (MHz)	-26dB bandwidth (MHz)
LTE Band 7 5MHz	QPSK	2502.5	4.50	4.91
		2535.0	4.51	4.96
		2567.5	4.50	4.92
LTE Band 7 5MHz	16-QAM	2502.5	4.50	4.89
		2535.0	4.50	4.93
		2567.5	4.51	4.90
LTE Band 7 10 MHz	QPSK	2505.5	9.00	9.75
		2535.0	8.96	9.68
		2565.5	9.00	9.78
LTE Band 7 10 MHz	16-QAM	2505.5	8.97	9.67
		2535.0	8.98	9.70
		2565.5	8.96	9.74
LTE Band 7 15 MHz	QPSK	2507.5	13.44	14.54
		2535.0	13.44	14.49
		2562.5	13.51	14.56
LTE Band 7 15 MHz	16-QAM	2507.5	13.49	14.61
		2535.0	13.50	14.57
		2562.5	13.45	14.49
LTE Band 7 20 MHz	QPSK	2510.0	17.91	19.35
		2535.0	17.90	19.26
		2560.0	17.97	19.32
LTE Band 7 20 MHz	16-QAM	2510.0	17.96	19.40
		2535.0	17.90	19.24
		2560.0	17.95	19.35

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

Test plot as follows:

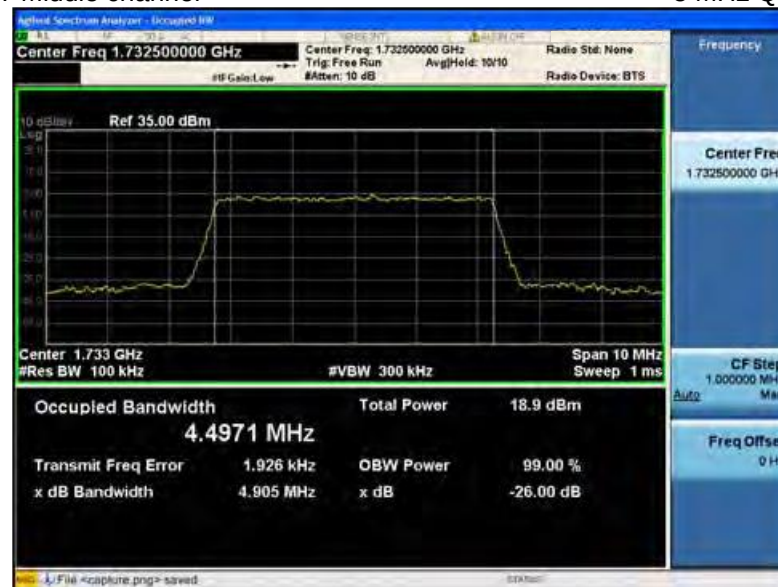
LTE Band 7 Lowest channel

5 MHz QPSK



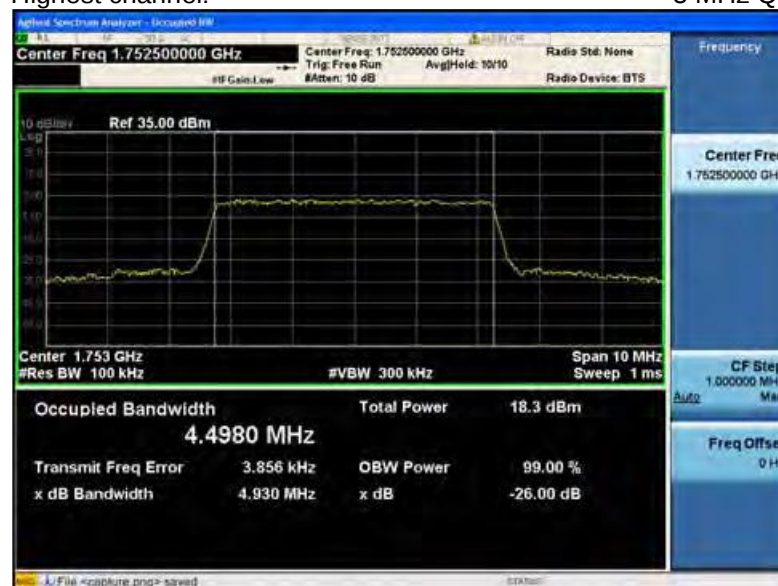
LTE Band 7 Middle channel

5 MHz QPSK



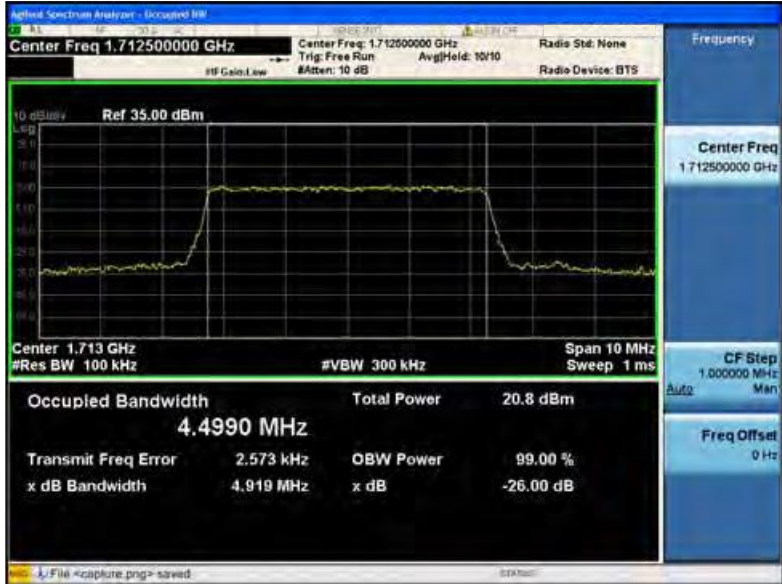
LTE Band 7 Highest channel:

5 MHz QPSK



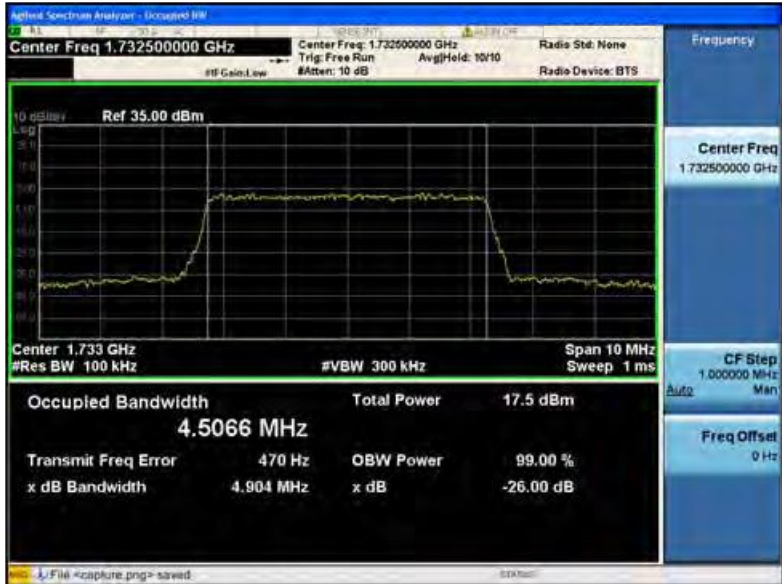
LTE Band 7 Lowest channel

5 MHz 16-QAM



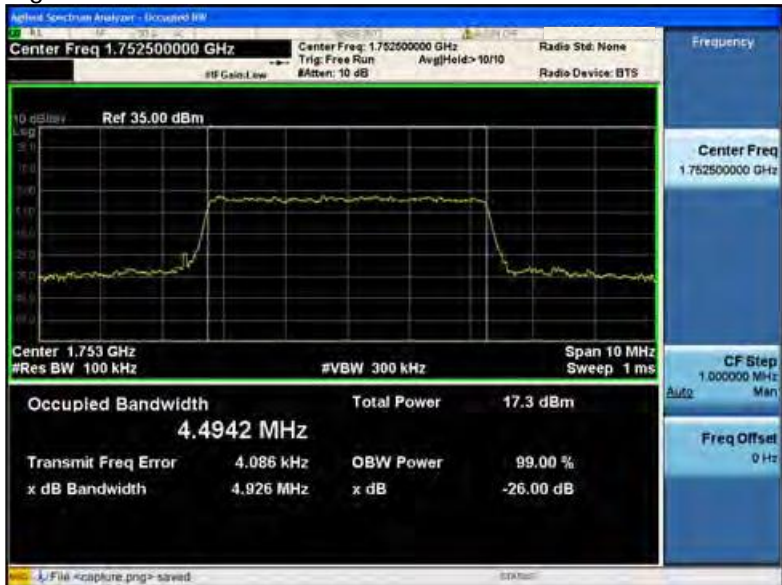
LTE Band 7 Middle channel

5 MHz 16-QAM



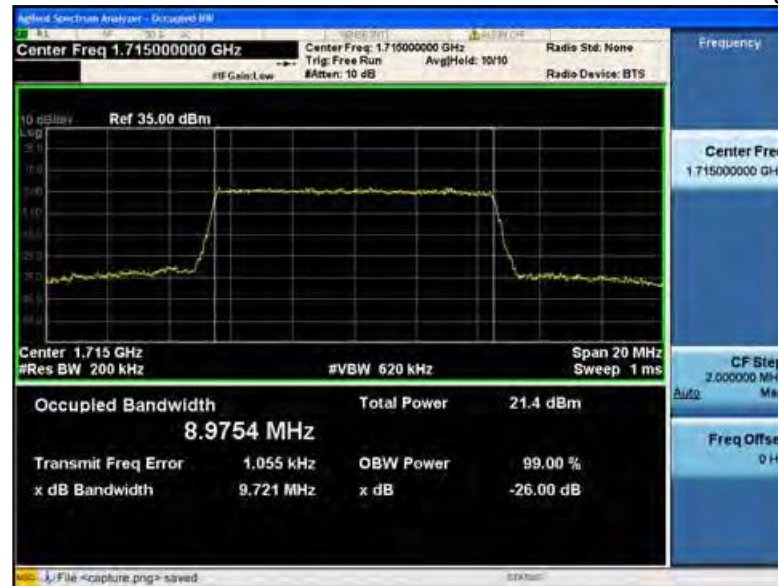
LTE Band 7 Highest channel:

5 MHz 16-QAM



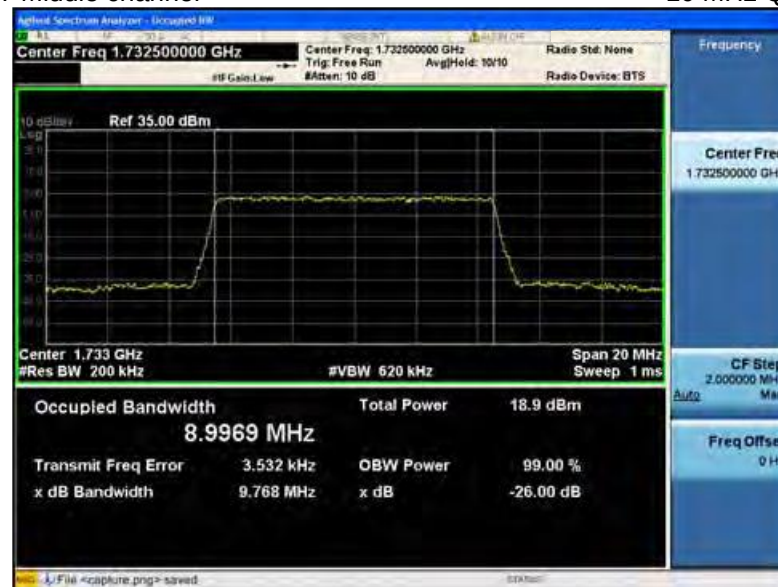
LTE Band 7 Lowest channel

10 MHz QPSK



LTE Band 7 Middle channel

10 MHz QPSK



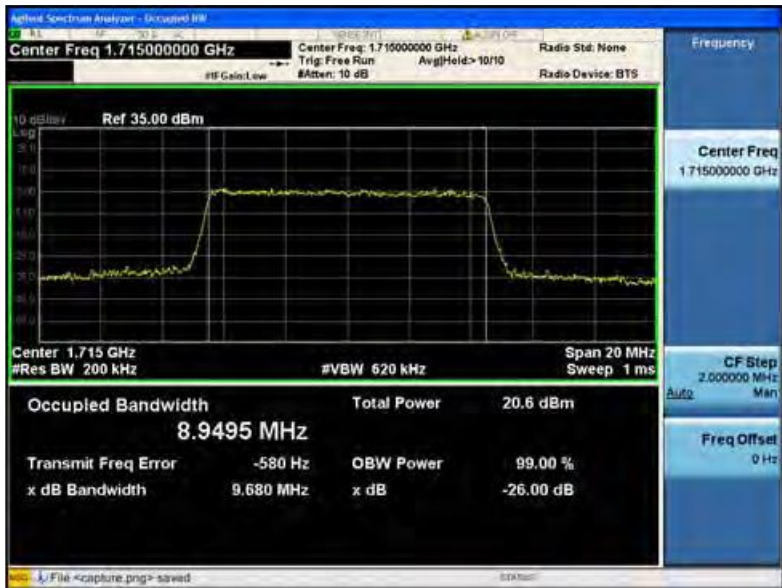
LTE Band 7 Highest channel:

10 MHz QPSK



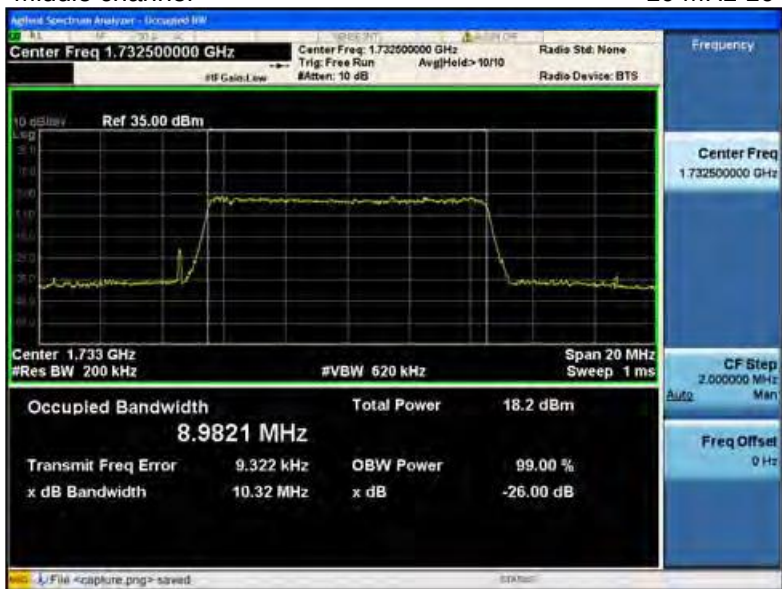
LTE Band 7 Lowest channel

10 MHz 16-QAM



LTE Band 7 Middle channel

10 MHz 16-QAM



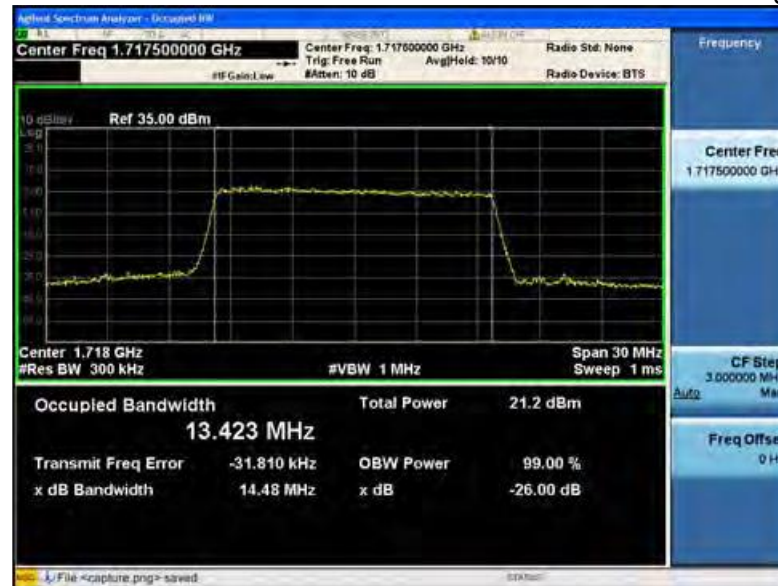
LTE Band 7 Highest channel:

10 MHz 16-QAM



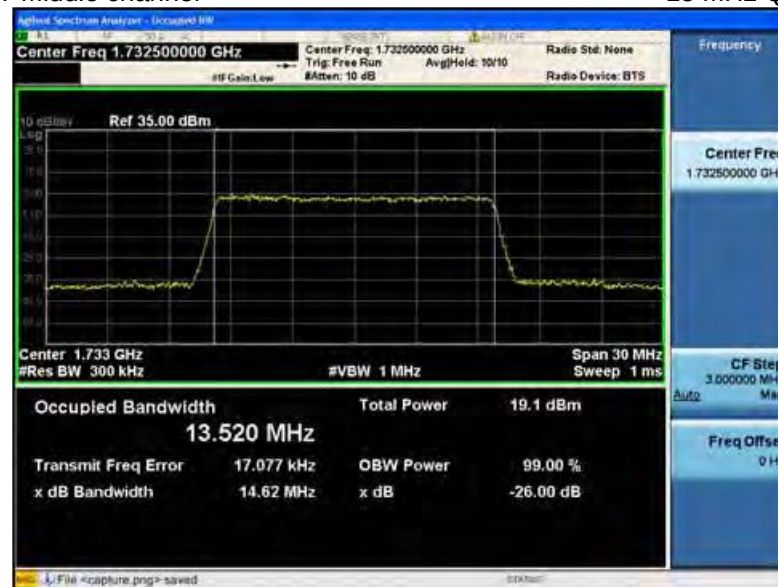
LTE Band 7 Lowest channel

15 MHz QPSK



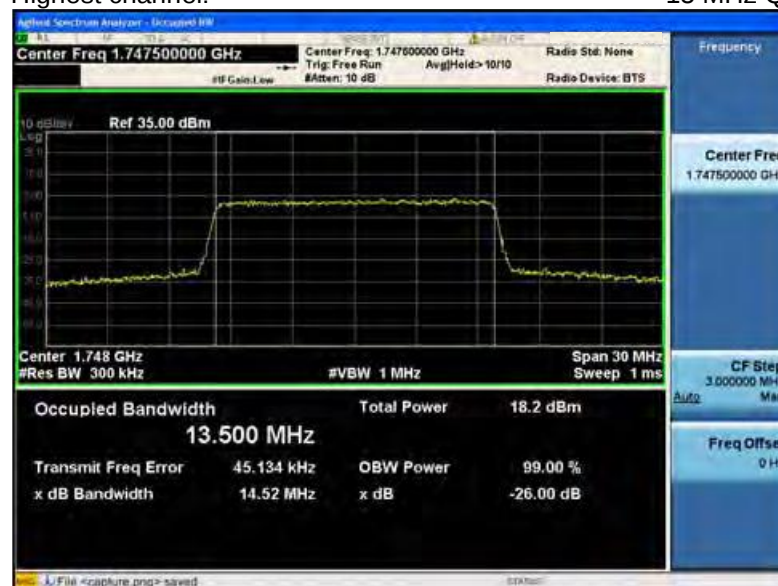
LTE Band 7 Middle channel

15 MHz QPSK



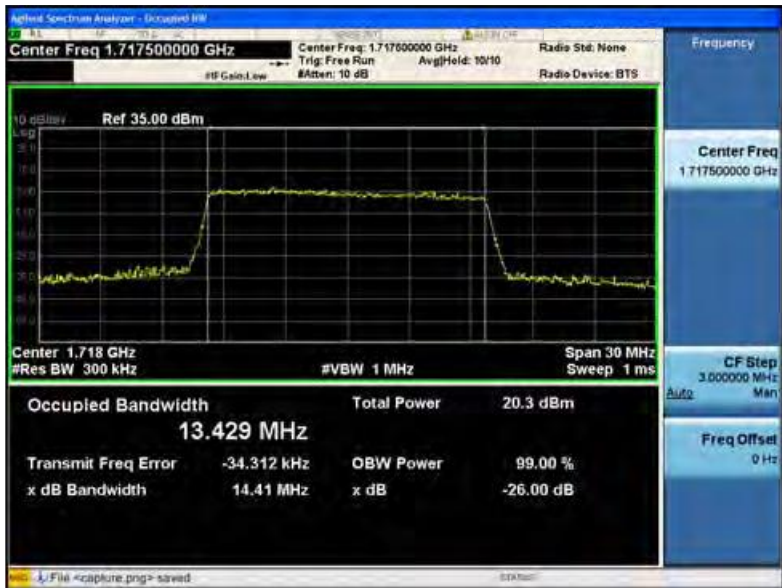
LTE Band 7 Highest channel:

15 MHz QPSK



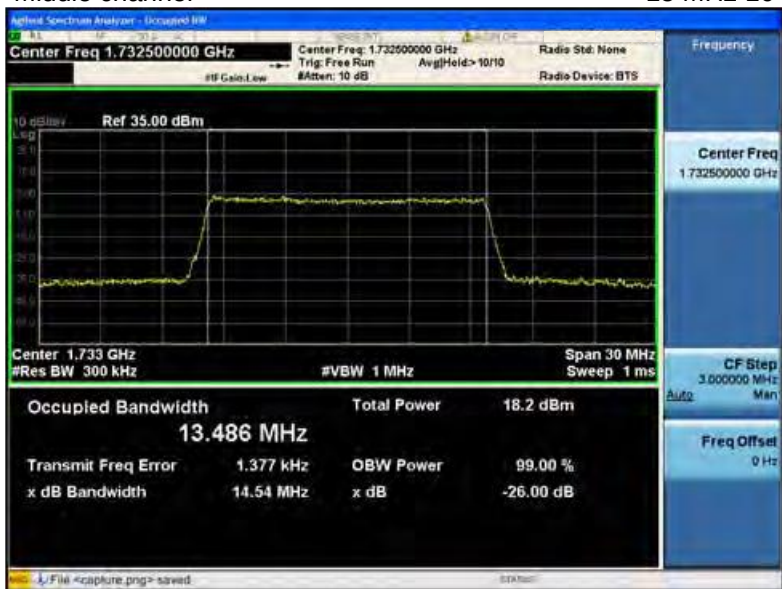
LTE Band 7 Lowest channel

15 MHz 16-QAM



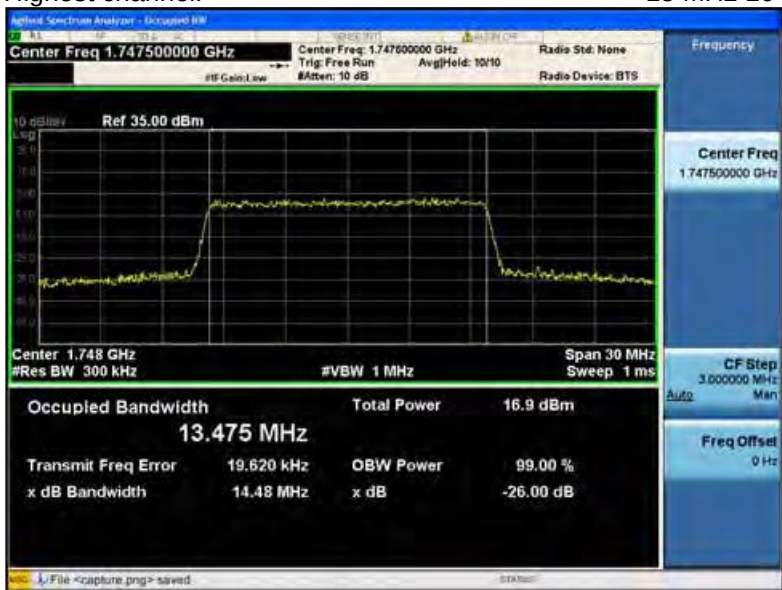
LTE Band 7 Middle channel

15 MHz 16-QAM



LTE Band 7 Highest channel:

15 MHz 16-QAM



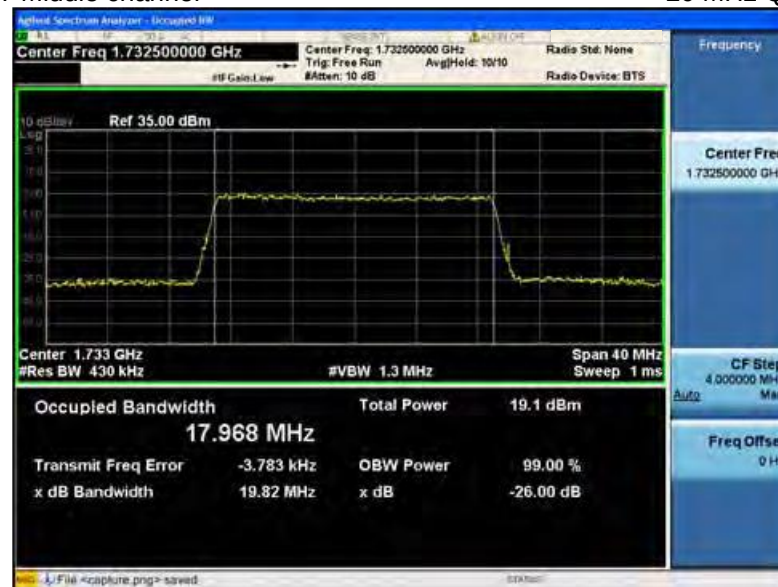
LTE Band 7 Lowest channel

20 MHz QPSK



LTE Band 7 Middle channel

20 MHz QPSK



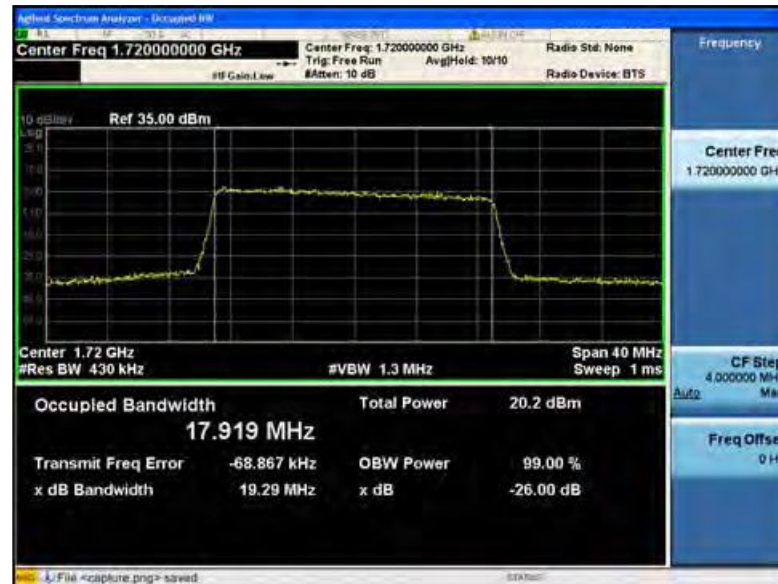
LTE Band 7 Highest channel:

20 MHz QPSK



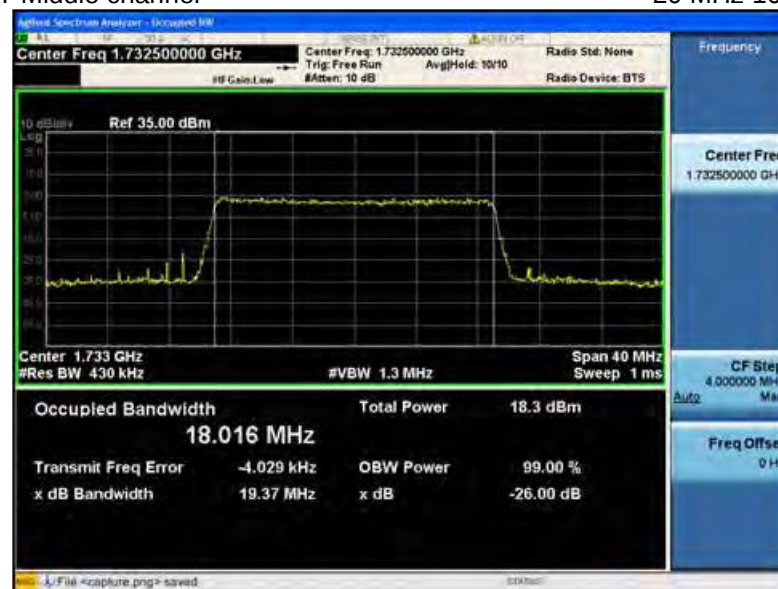
LTE Band 7 Lowest channel

20 MHz 16-QAM



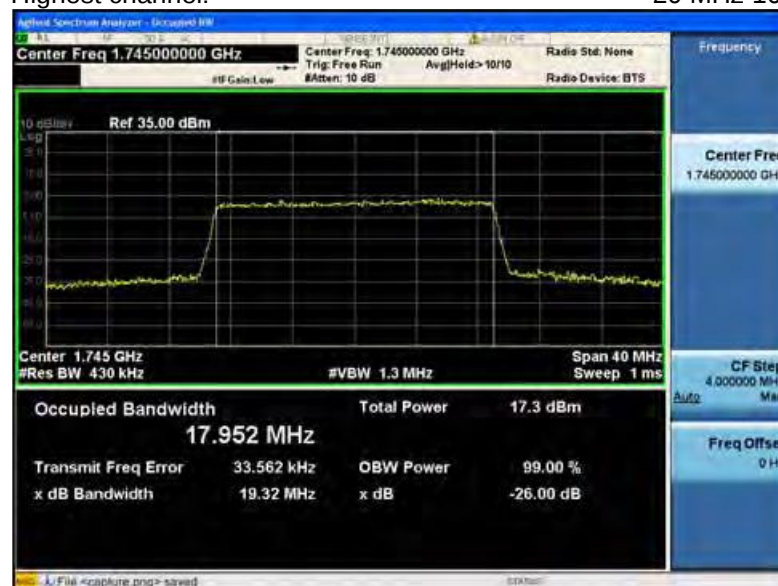
LTE Band 7 Middle channel

20 MHz 16-QAM



LTE Band 7 Highest channel:

20 MHz 16-QAM



1.2. Conducted Spurious Emissions

1.2.1. Test Result

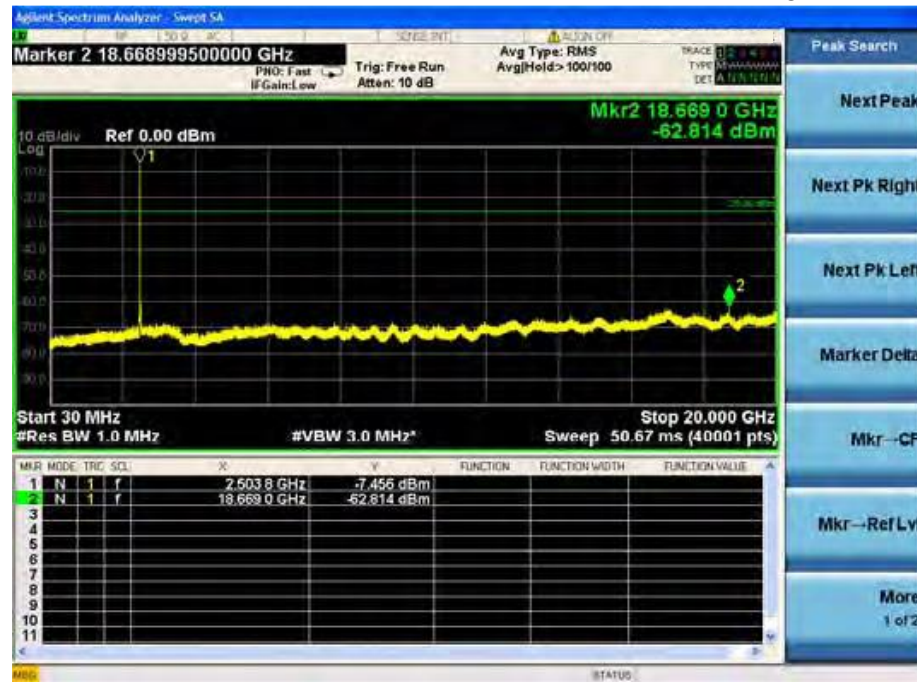
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

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

Pass, the table and plot please see annex.

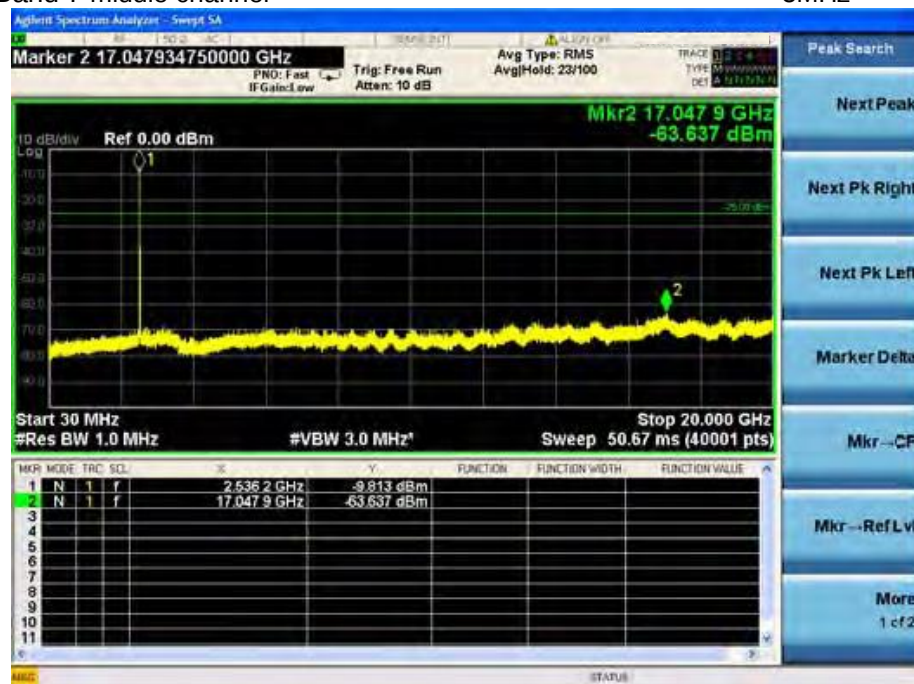
LTE Band 7 Lowest channel

5MHz



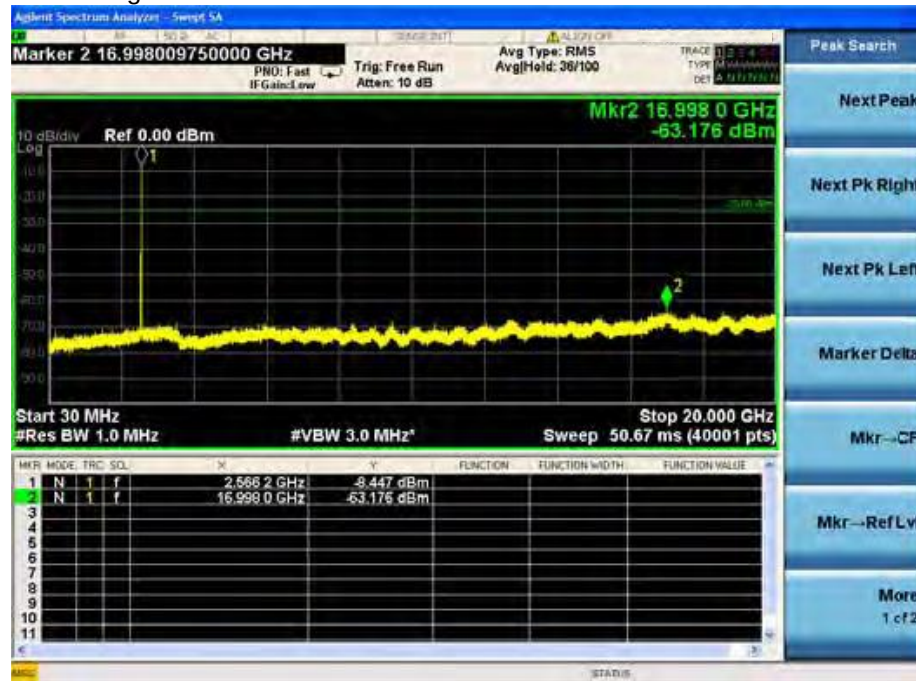
LTE Band 7 middle channel

5MHz



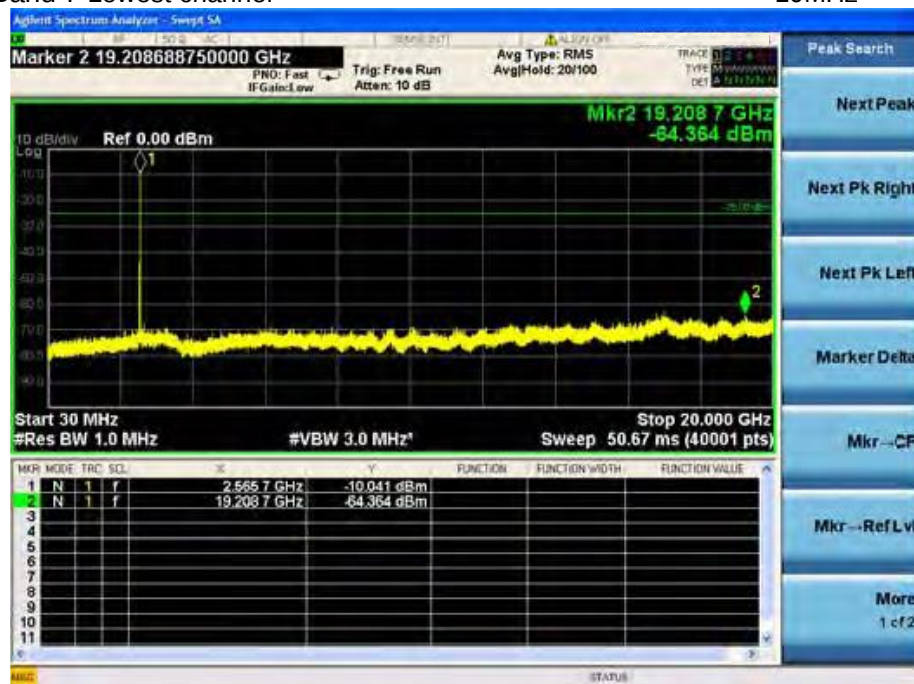
LTE Band 7 high channel

5MHz

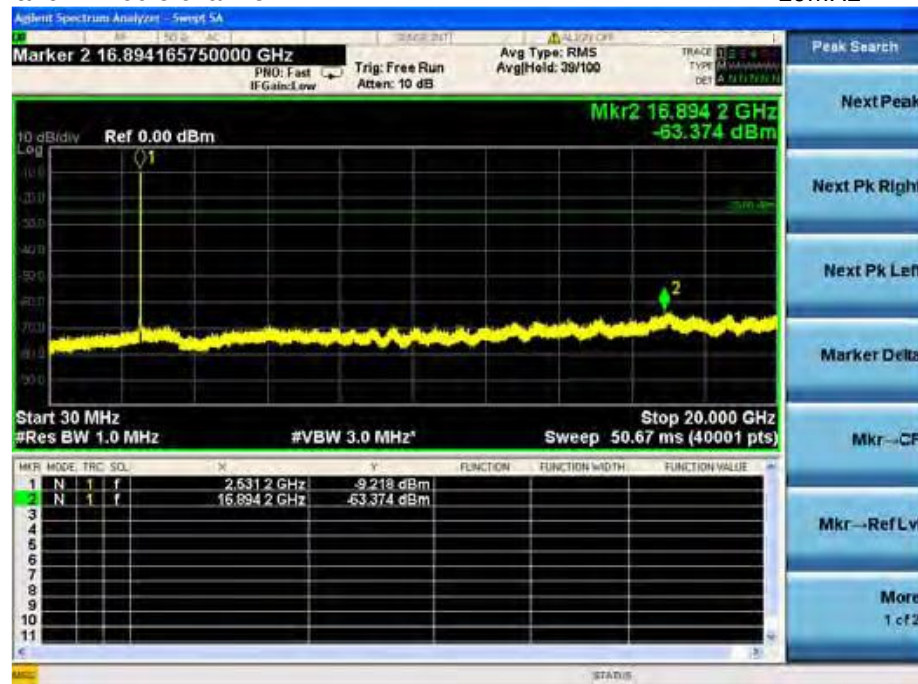


LTE Band 7 Lowest channel

10MHz

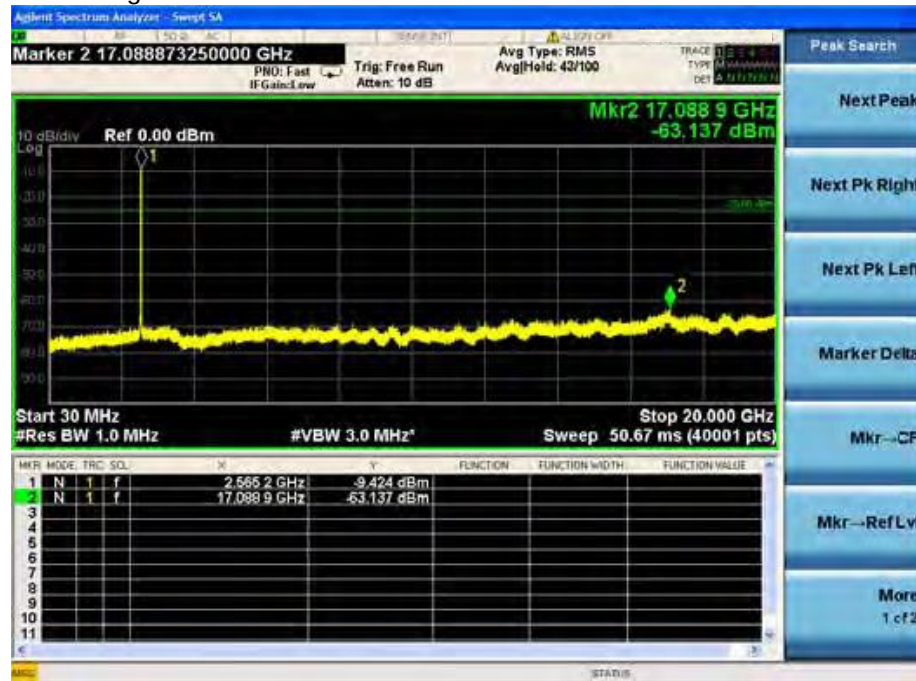


10MHz



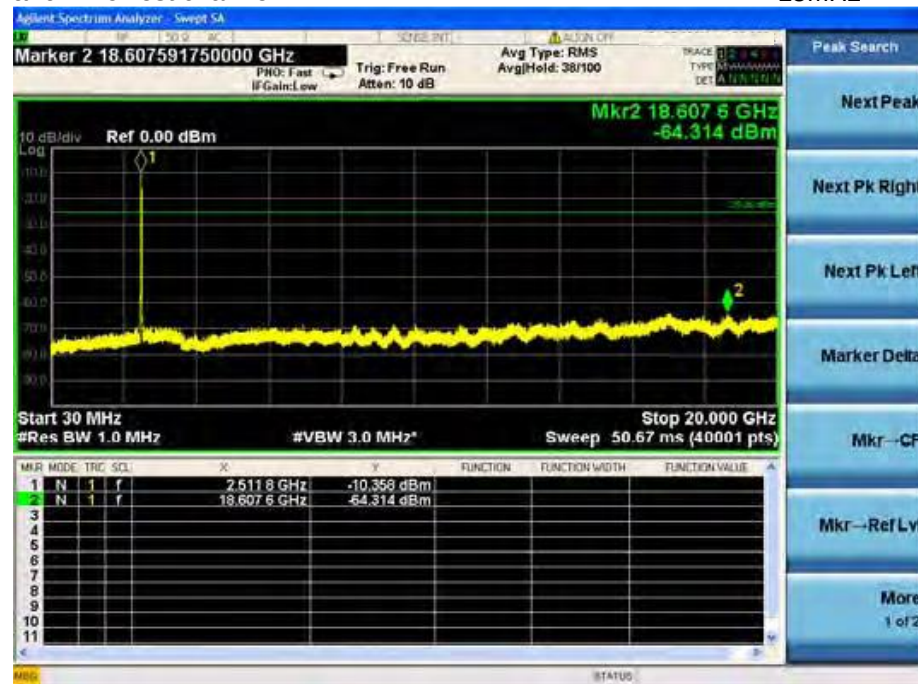
LTE Band 7 high channel

10MHz



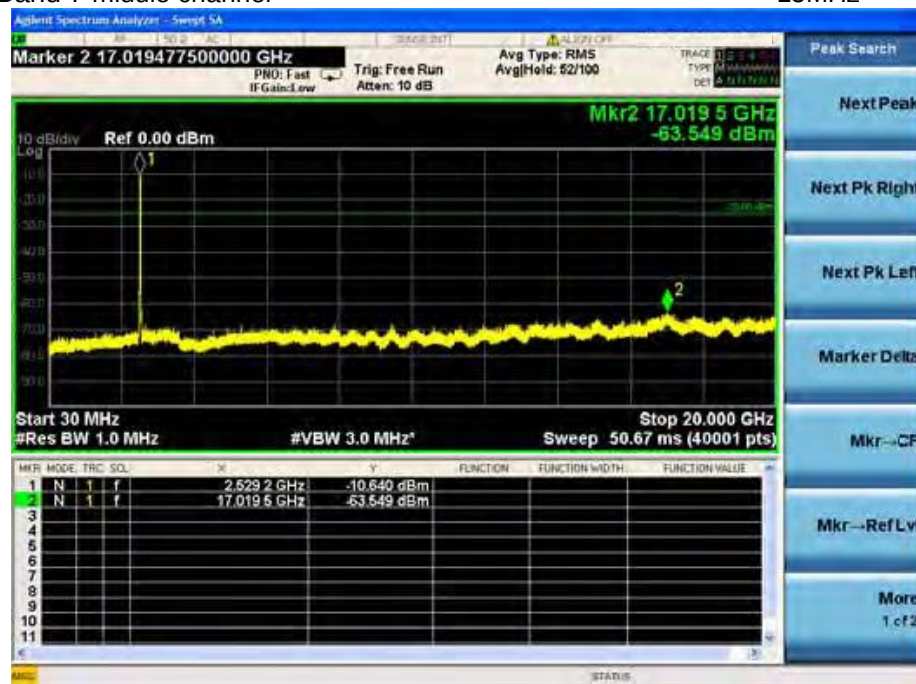
LTE Band 7 Lowest channel

15MHz



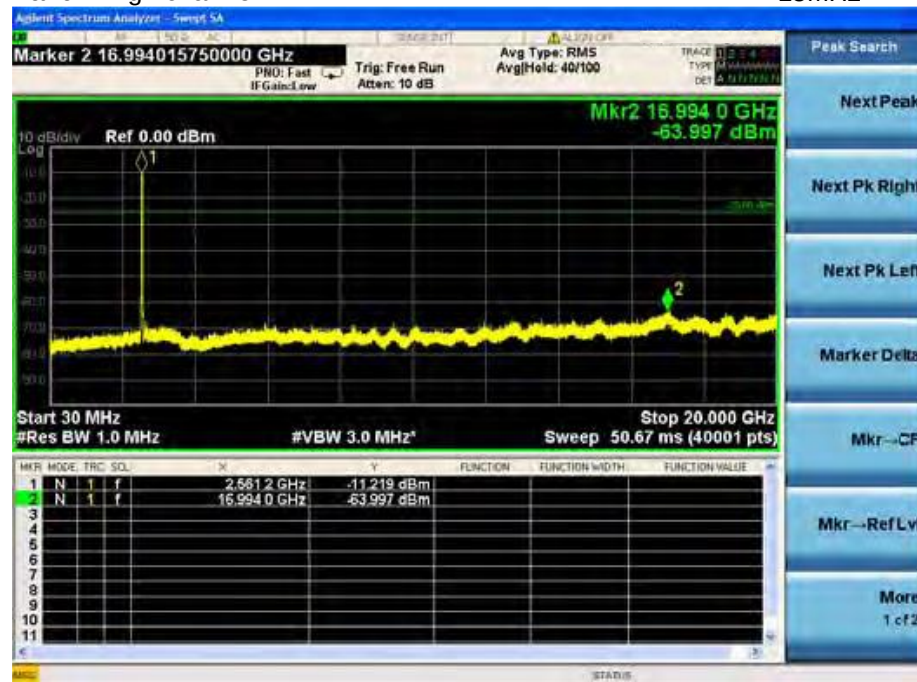
LTE Band 7 middle channel

15MHz

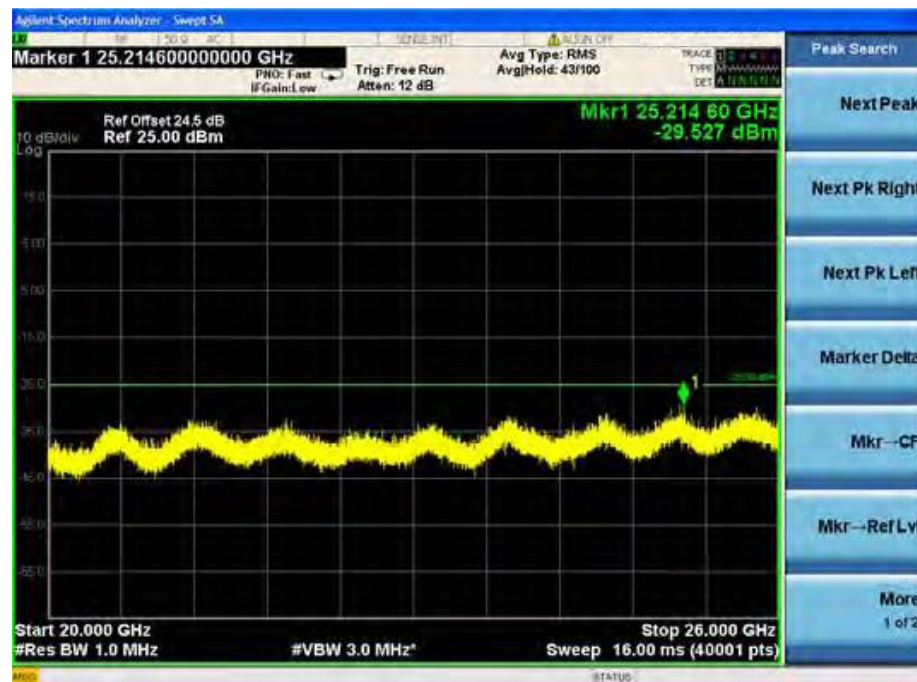
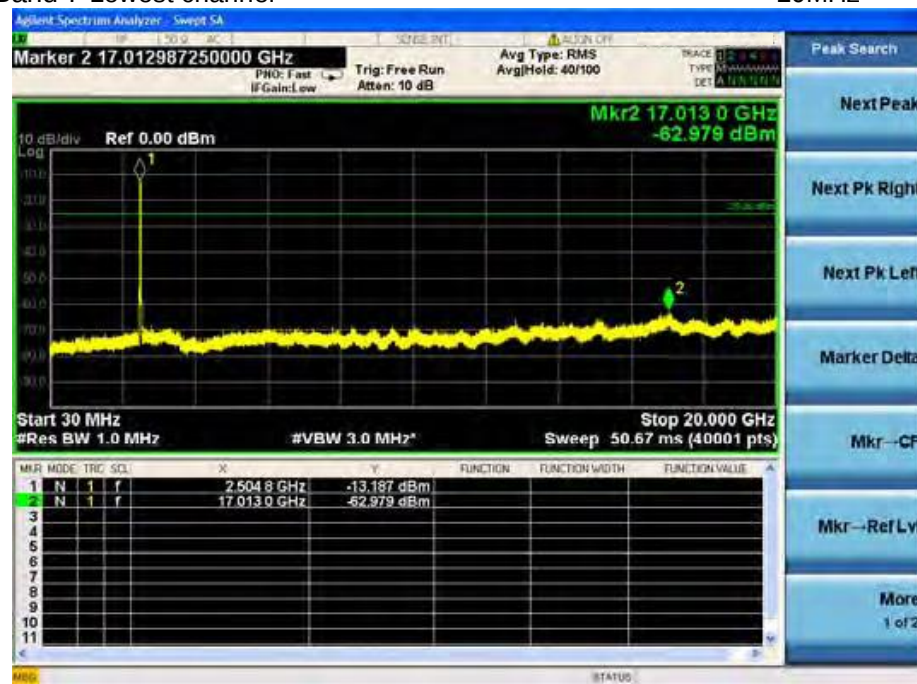


LTE Band 7 high channel

15MHz

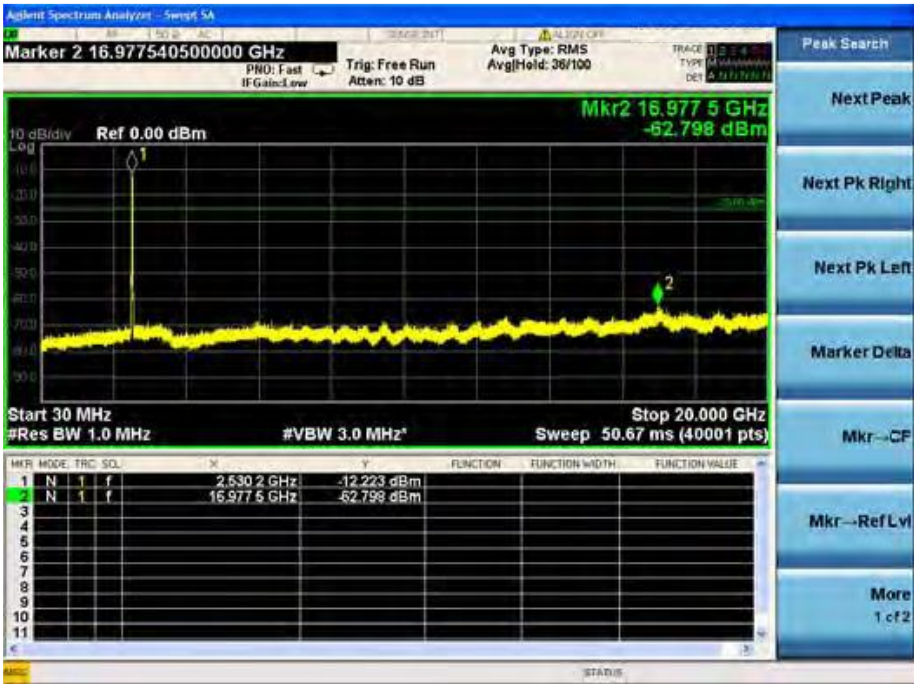


20MHz



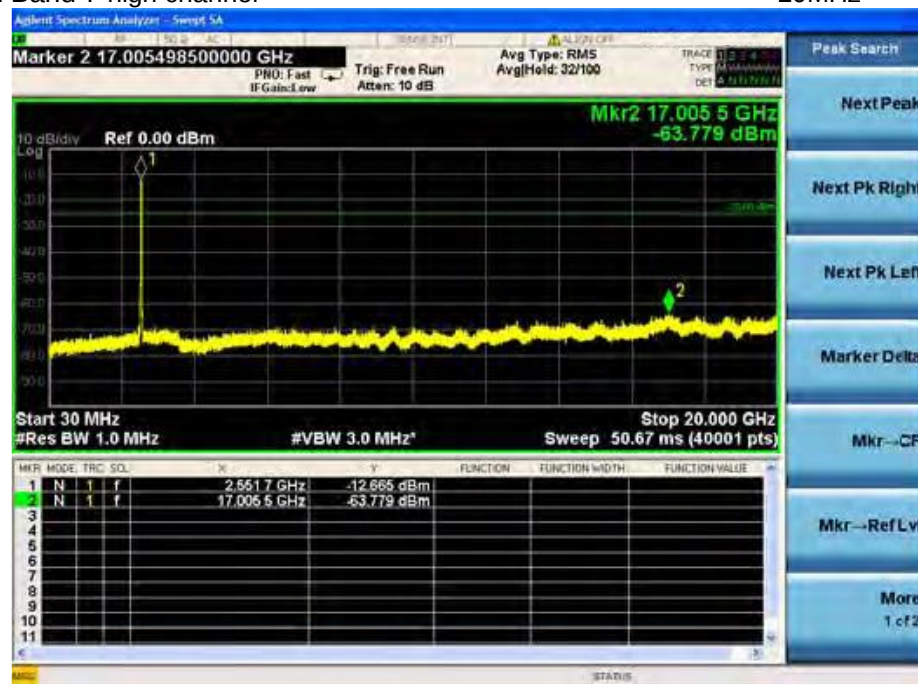
LTE Band 7 middle channel

20MHz



LTE Band 7 high channel

20MHz



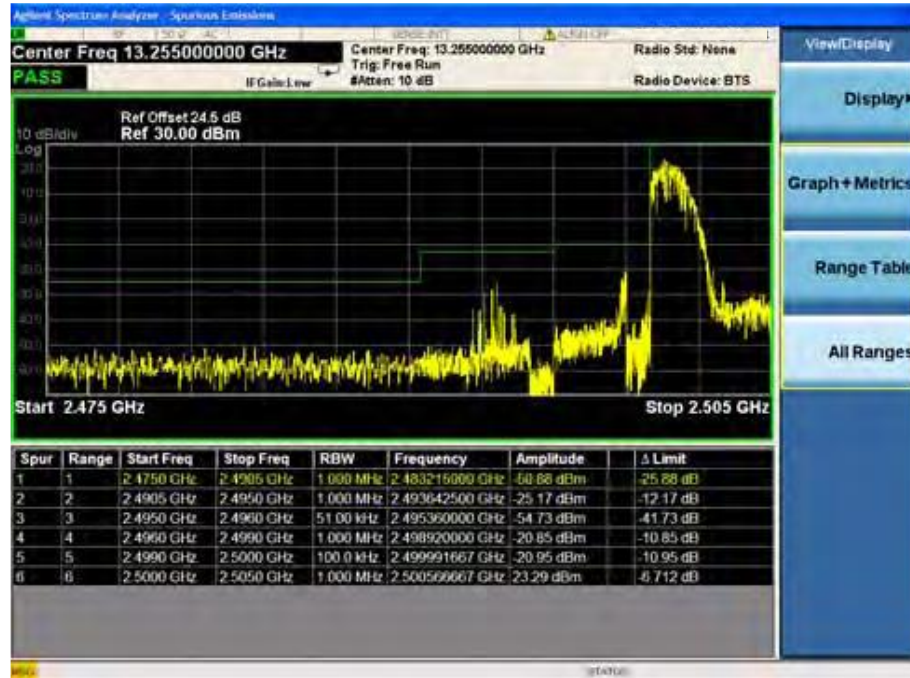
1.3. Conducted Out of Band Emissions

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.

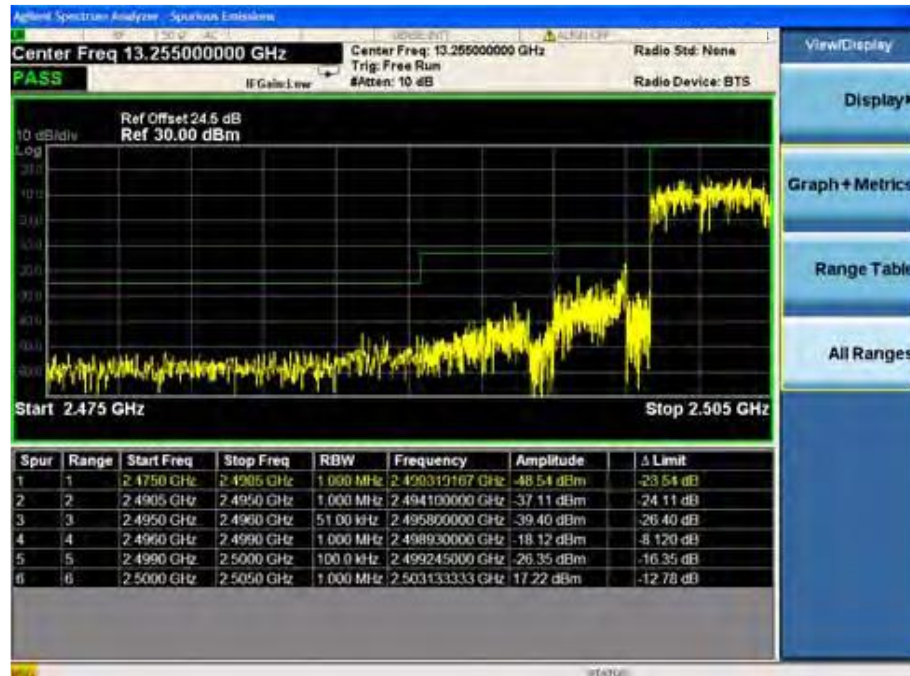
LTE Band 7 Lowest channel

5MHz 1RB



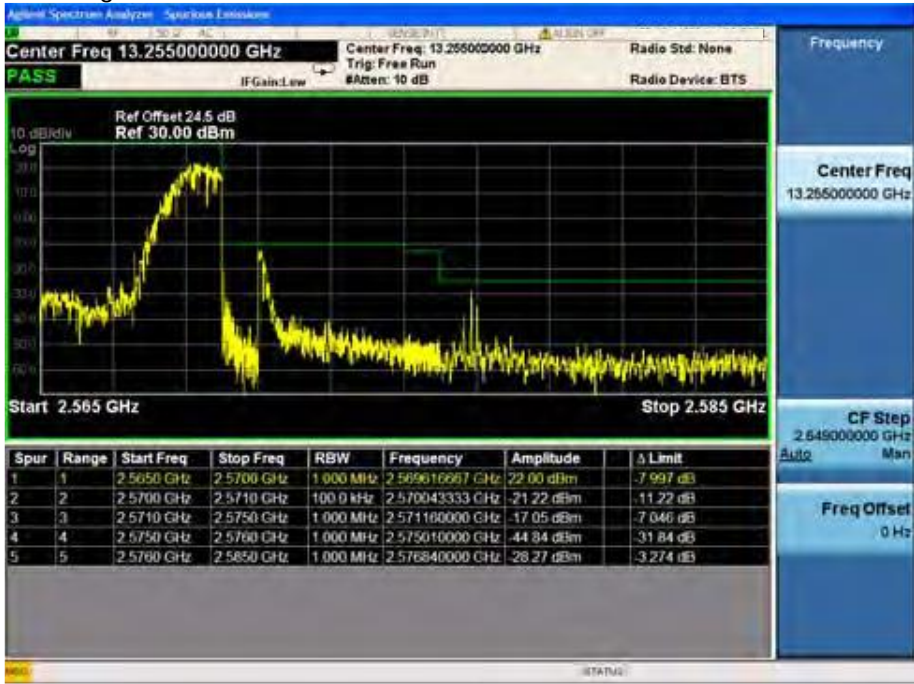
LTE Band 7 Lowest channel

5MHz 25RB



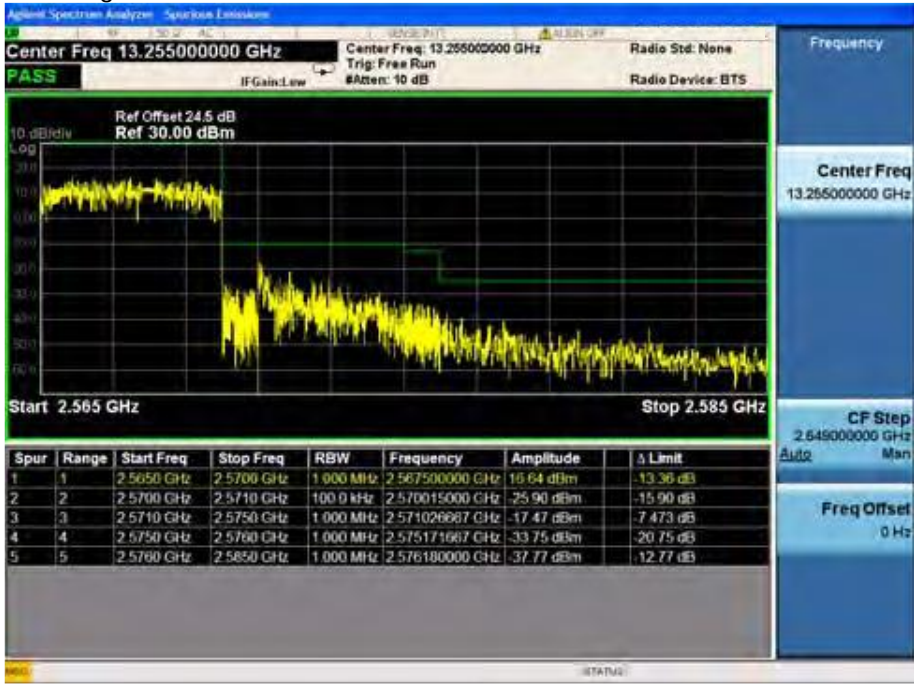
LTE Band 7 Highest channel:

5MHz 1RB



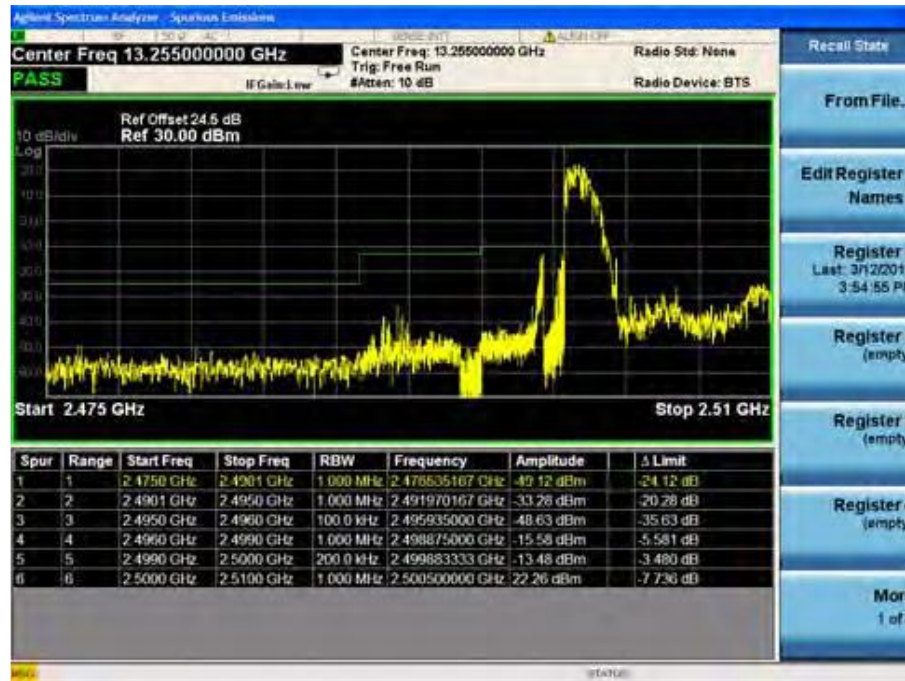
LTE Band 7 Highest channel:

5MHz 25RB



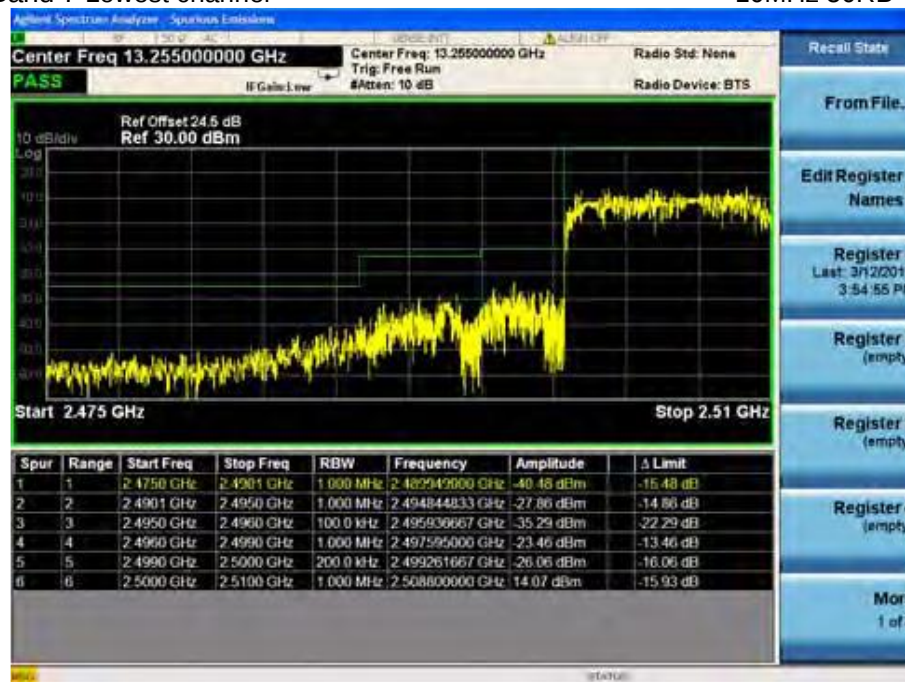
LTE Band 7 Lowest channel

10MHz 1RB



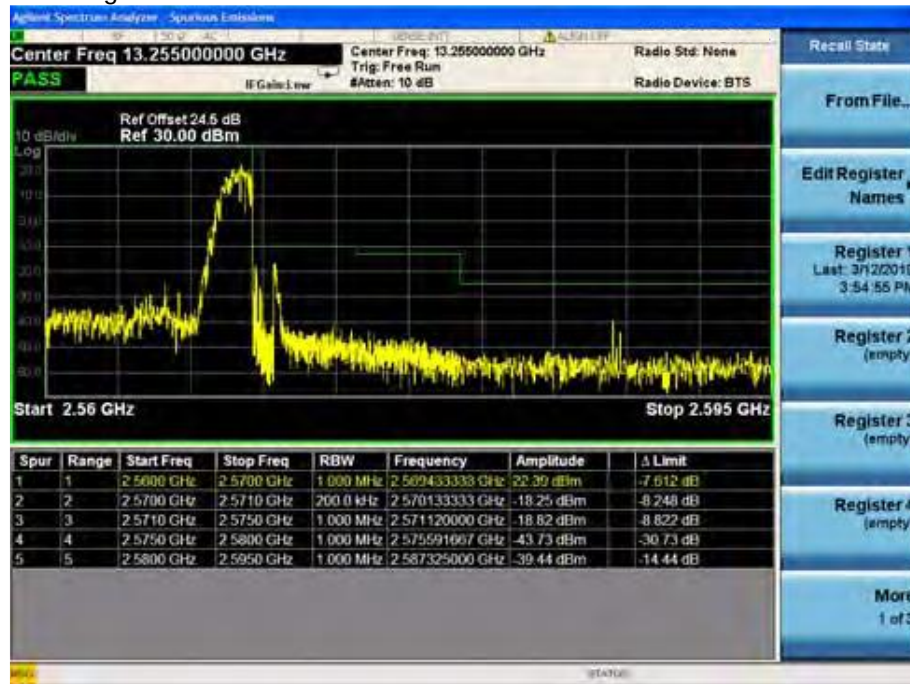
LTE Band 7 Lowest channel

10MHz 50RB



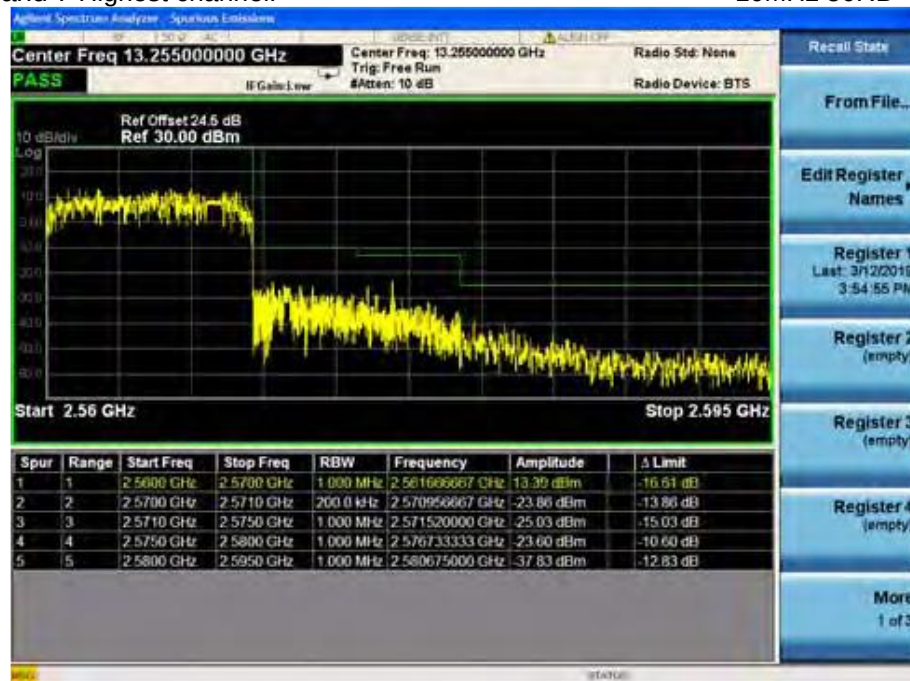
LTE Band 7 Highest channel:

10MHz 1RB



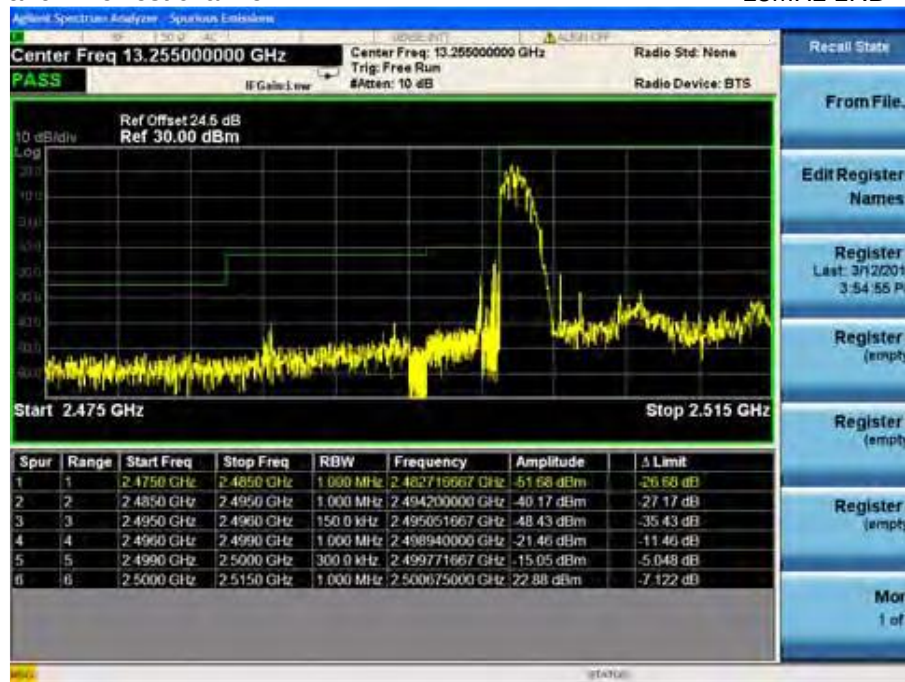
LTE Band 7 Highest channel:

10MHz 50RB



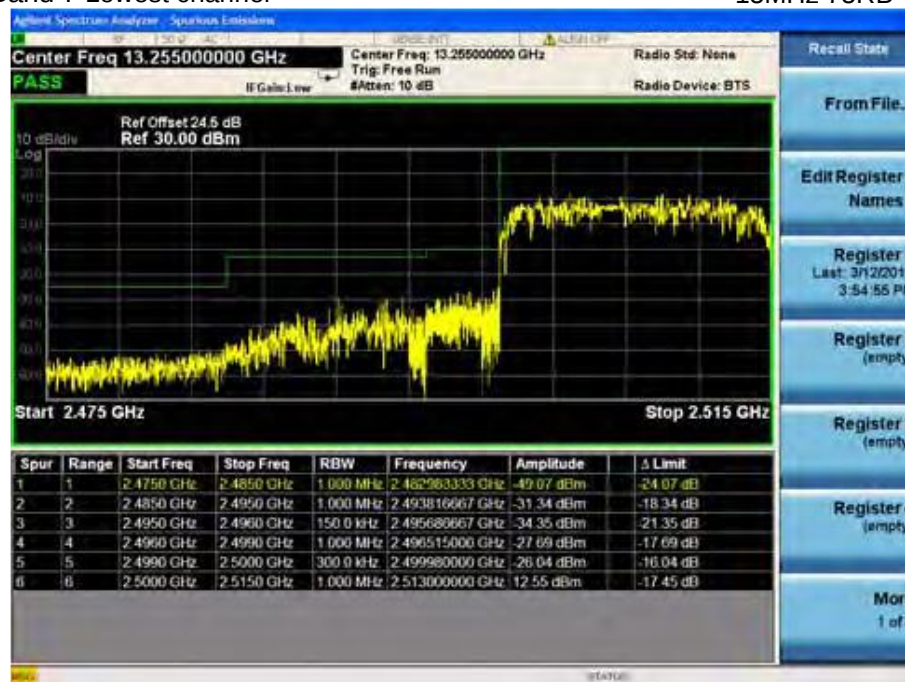
LTE Band 7 Lowest channel

15MHz 1RB



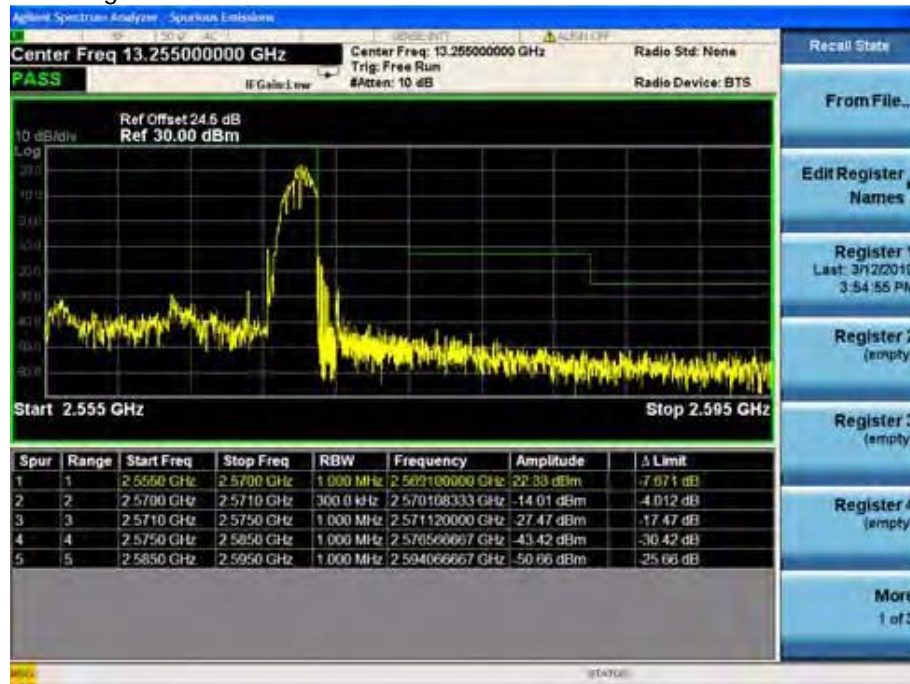
LTE Band 7 Lowest channel

15MHz 75RB



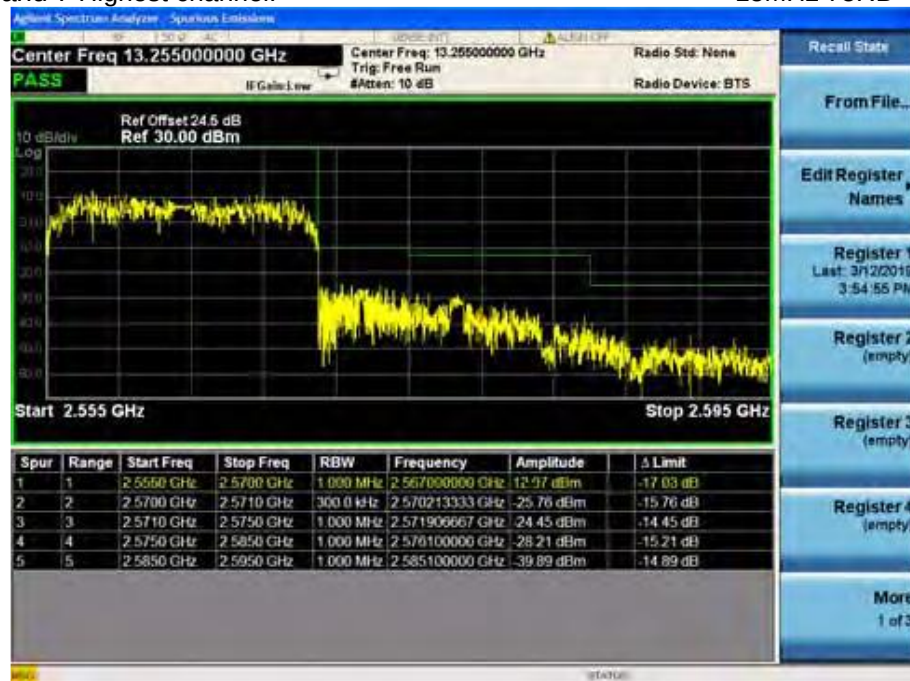
LTE Band 7 Highest channel:

15MHz 1RB



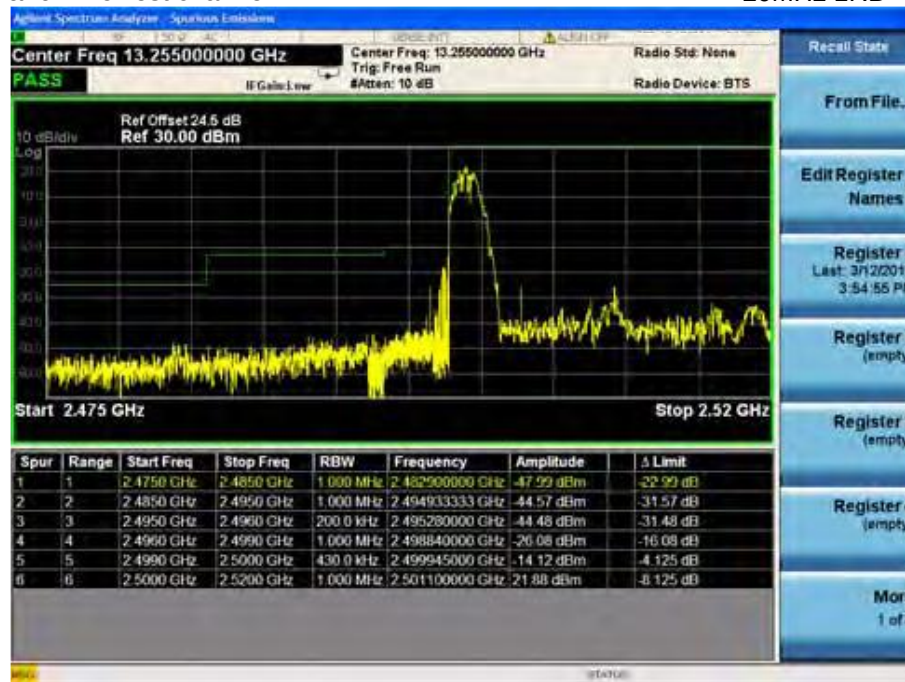
LTE Band 7 Highest channel:

15MHz 75RB



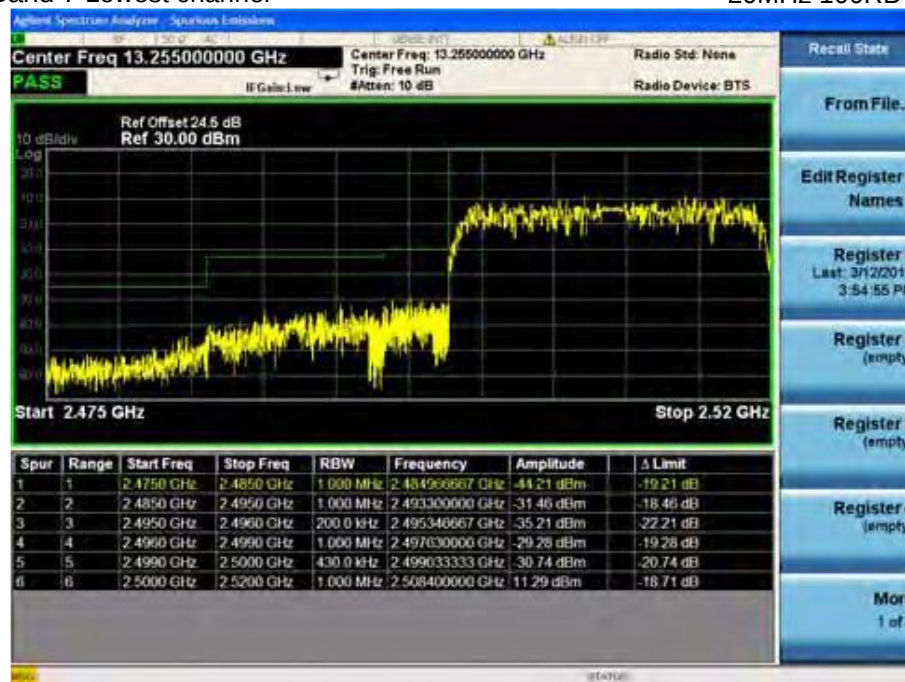
LTE Band 7 Lowest channel

20MHz 1RB



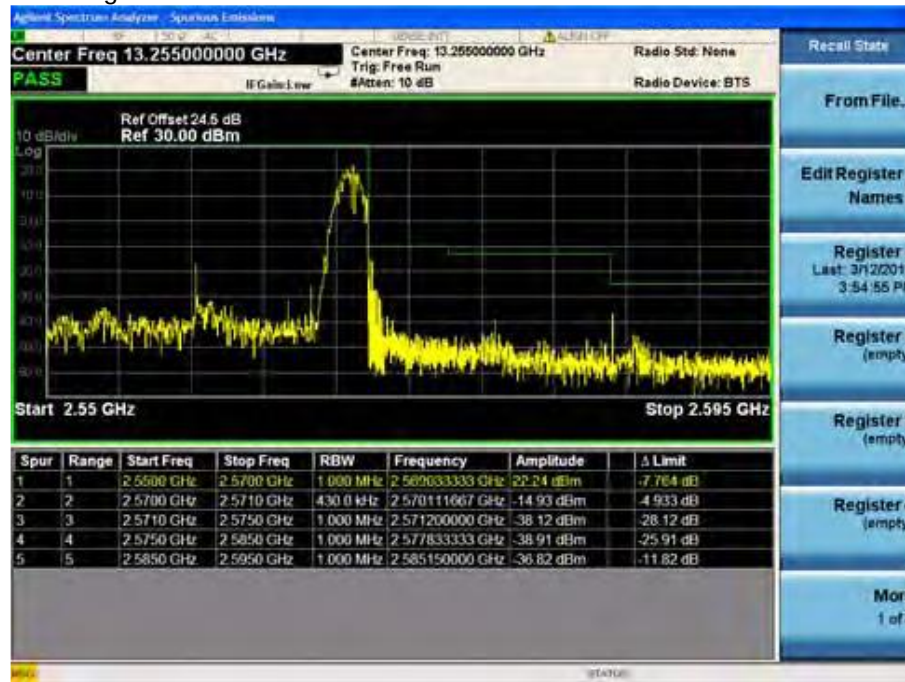
LTE Band 7 Lowest channel

20MHz 100RB



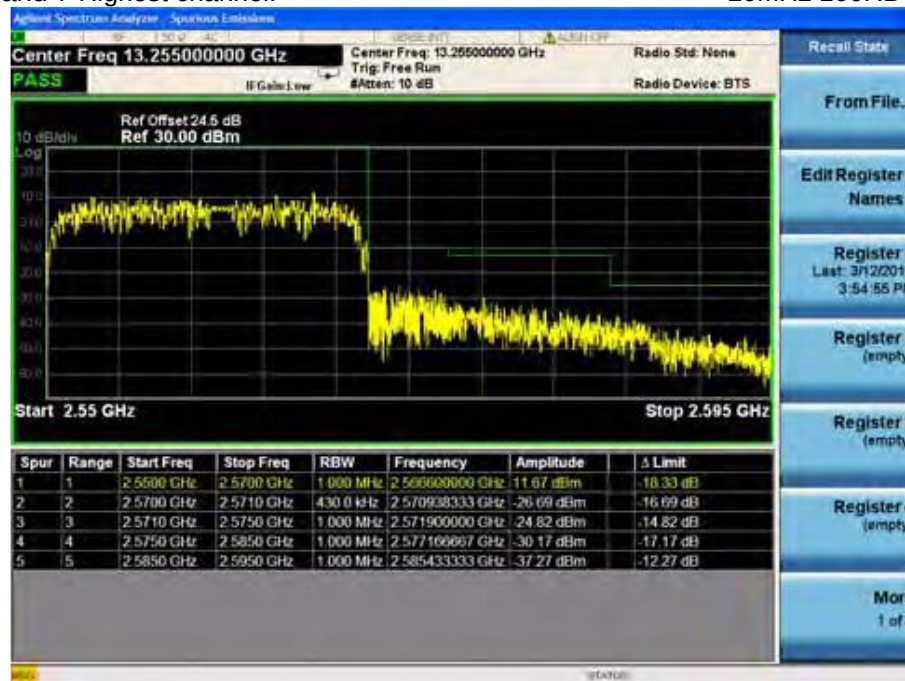
LTE Band 7 Highest channel:

20MHz 1RB



LTE Band 7 Highest channel:

20MHz 100RB



***** END *****