

FCC Test Report

ANNEX 5 LTE BAND 4

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.
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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

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1. EMISSION TEST RESULTS

1.1. -26dB and 99% Occupied Bandwidth

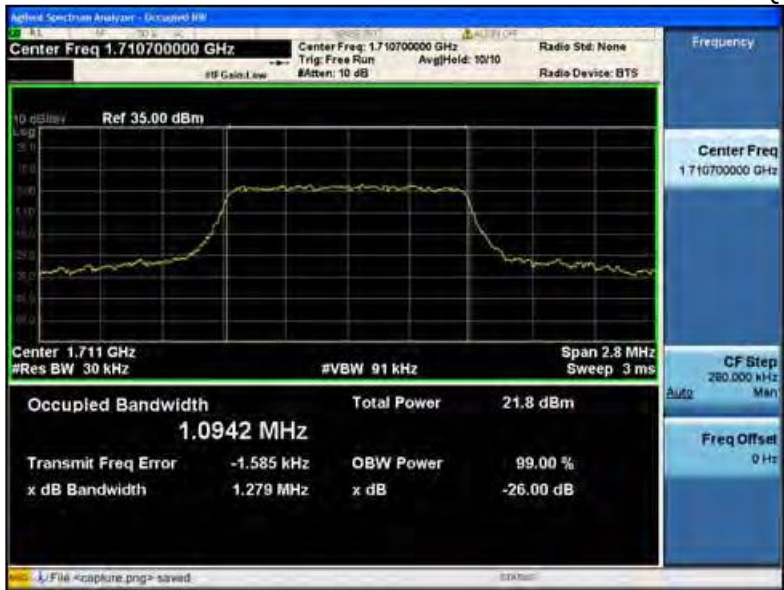
1.1.1. Test Result

EUT Mode Bandwidth	Modulation	Frequency (MHz)	99% Occupy bandwidth (MHz)	-26dB bandwidth (MHz)
LTE Band 4 1.4MHz	QPSK	1710.7	1.09	1.28
		1732.5	1.10	1.29
		1754.3	1.10	1.28
LTE Band 4 1.4 MHz	16-QAM	1710.7	1.09	1.29
		1732.5	1.10	1.27
		1754.3	1.10	1.31
LTE Band 4 3 MHz	QPSK	1711.5	2.69	2.92
		1732.5	2.69	2.93
		1753.5	2.69	2.92
LTE Band 4 3 MHz	16-QAM	1711.5	2.69	2.93
		1732.5	2.69	2.92
		1753.5	2.69	2.93
LTE Band 4 5 MHz	QPSK	1712.5	4.50	4.94
		1732.5	4.50	4.92
		1752.5	4.50	4.90
LTE Band 4 5 MHz	16-QAM	1712.5	4.51	4.90
		1732.5	4.50	4.93
		1752.5	4.49	4.93
LTE Band 4 10 MHz	QPSK	1715	8.98	9.72
		1732.5	8.95	9.68
		1750	9.00	9.77
LTE Band 4 10 MHz	16-QAM	1715	8.98	10.32
		1732.5	9.00	9.75
		1750	8.98	9.73
LTE Band 4 15 MHz	QPSK	1717.5	13.42	14.48
		1732.5	13.43	14.41
		1747.5	13.52	14.62
LTE Band 4 15 MHz	16-QAM	1717.5	13.49	14.54
		1732.5	13.50	14.52
		1747.5	13.48	14.48
LTE Band 4 20 MHz	QPSK	1720	17.89	19.22
		1732.5	17.92	19.29
		1745	17.97	19.82
LTE Band 4 20 MHz	16-QAM	1720	18.02	19.37
		1732.5	17.94	19.34
		1745	17.95	19.32

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

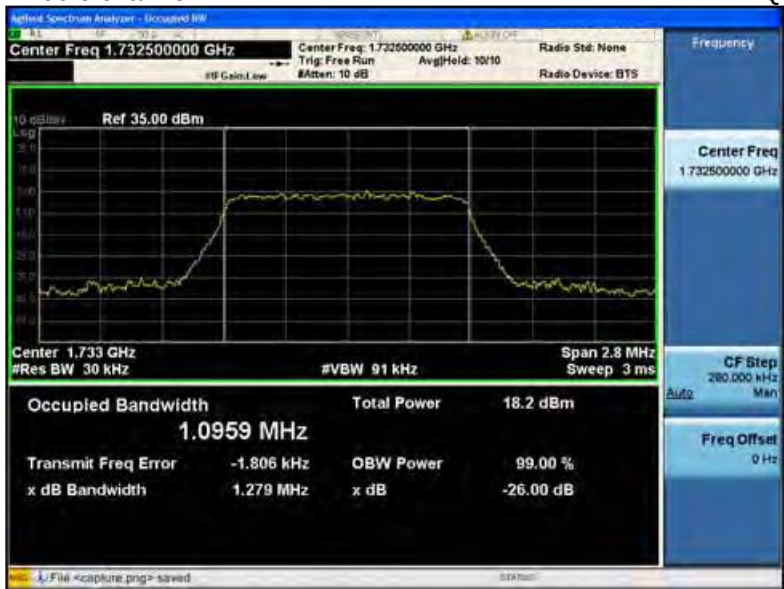
LTE Band 4 Lowest channel

1.4 MHz QPSK



LTE Band 4 Middle channel

1.4 MHz QPSK



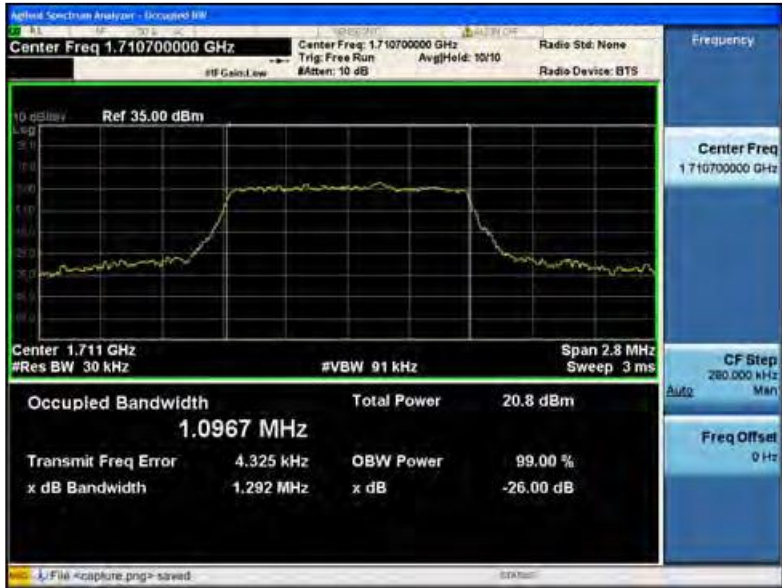
LTE Band 4 Highest channel:

1.4 MHz QPSK



LTE Band 4 Lowest channel

1.4 MHz 16-QAM



LTE Band 4 Middle channel

1.4 MHz 16-QAM



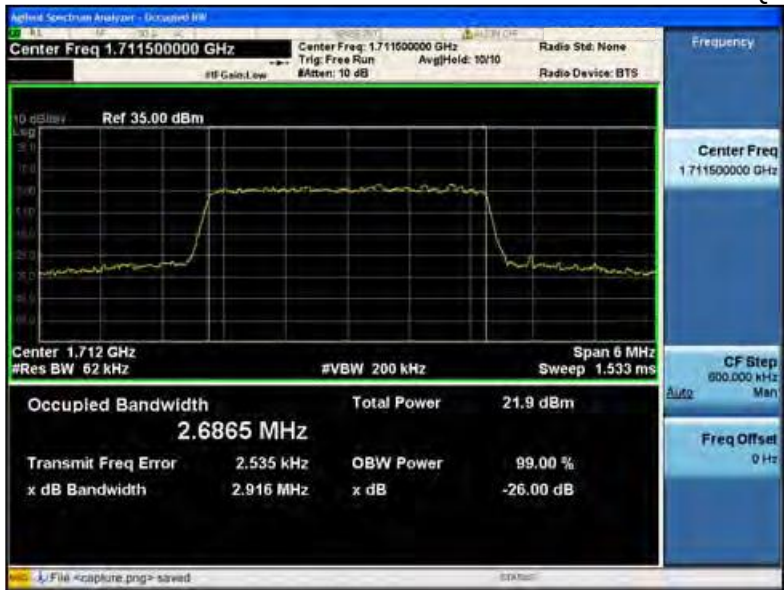
LTE Band 4 Highest channel:

1.4 MHz 16-QAM



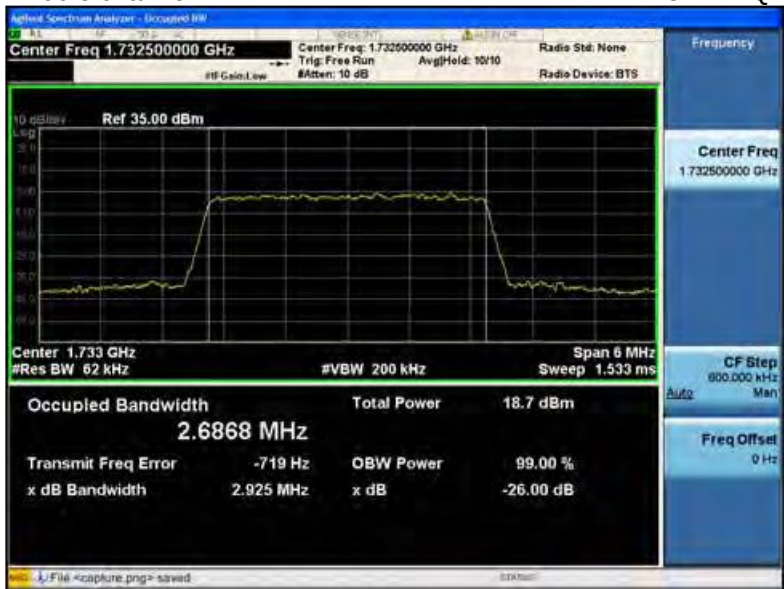
LTE Band 4 Lowest channel

3 MHz QPSK



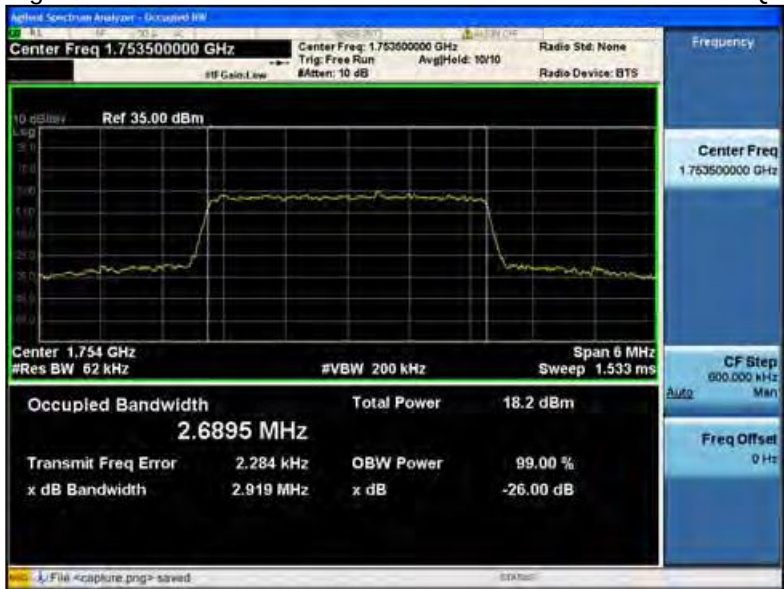
LTE Band 4 Middle channel

3 MHz QPSK



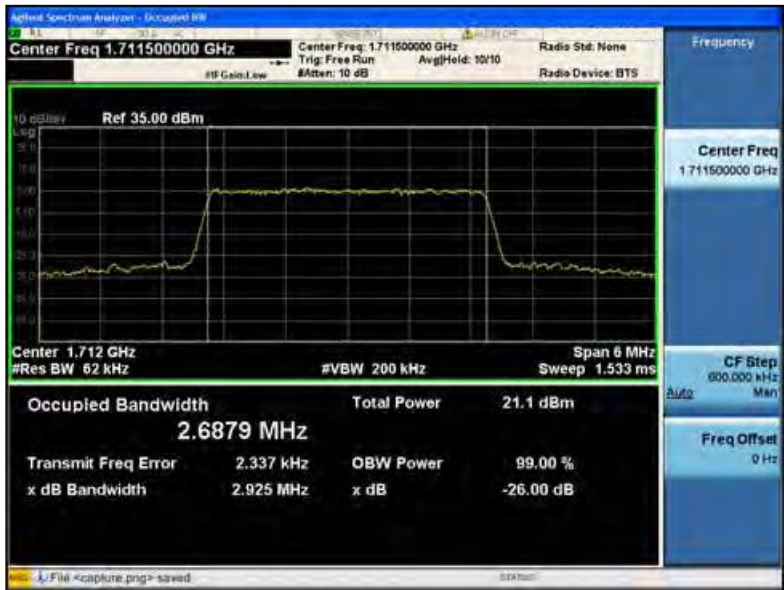
LTE Band 4 Highest channel:

3 MHz QPSK



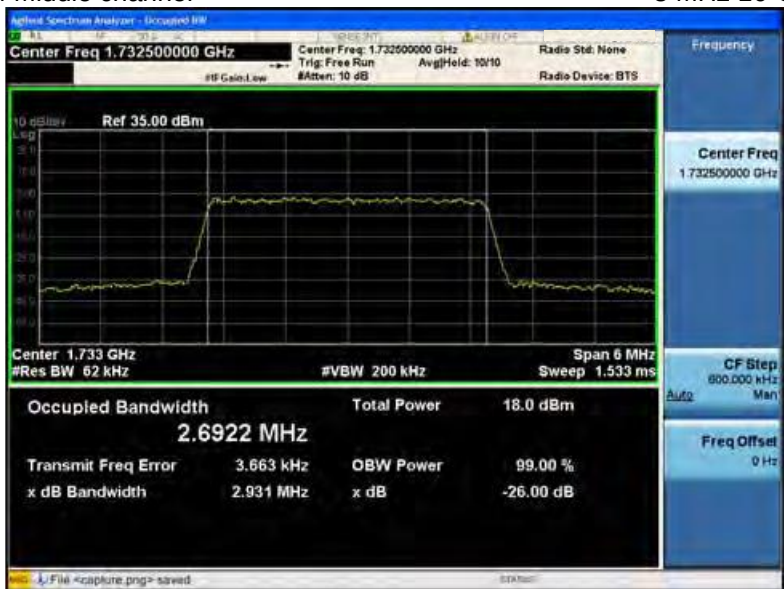
LTE Band 4 Lowest channel

3 MHz 16-QAM



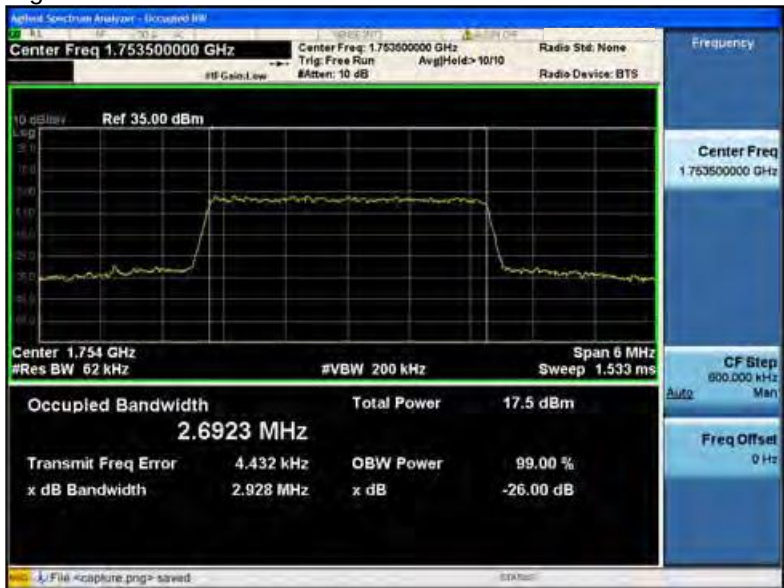
LTE Band 4 Middle channel

3 MHz 16-QAM



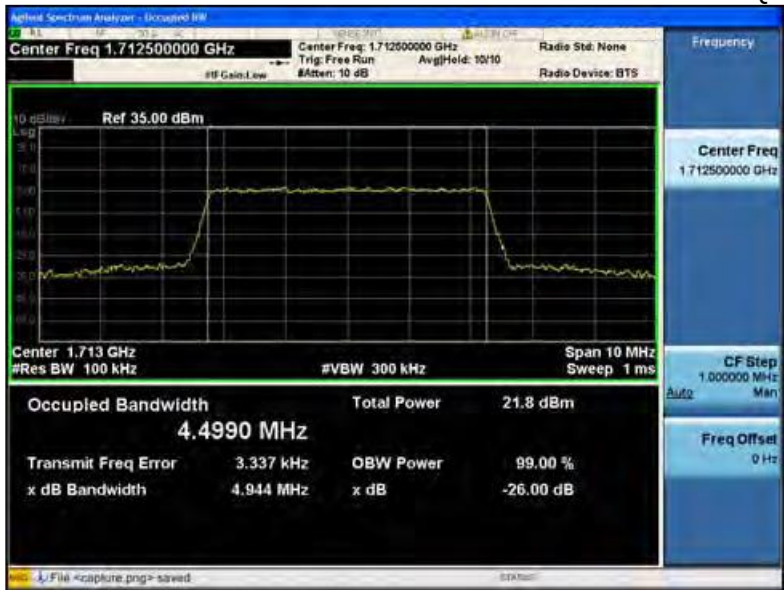
LTE Band 4 Highest channel:

3 MHz 16-QAM



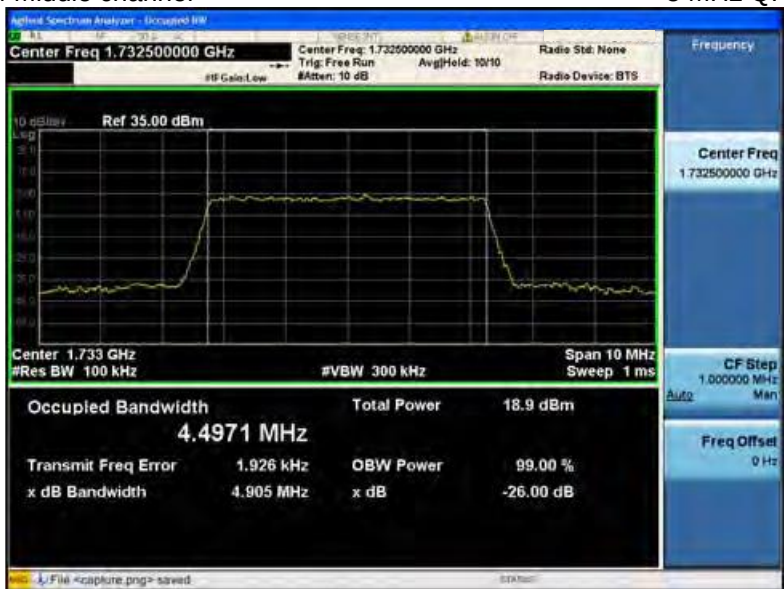
LTE Band 4 Lowest channel

5 MHz QPSK



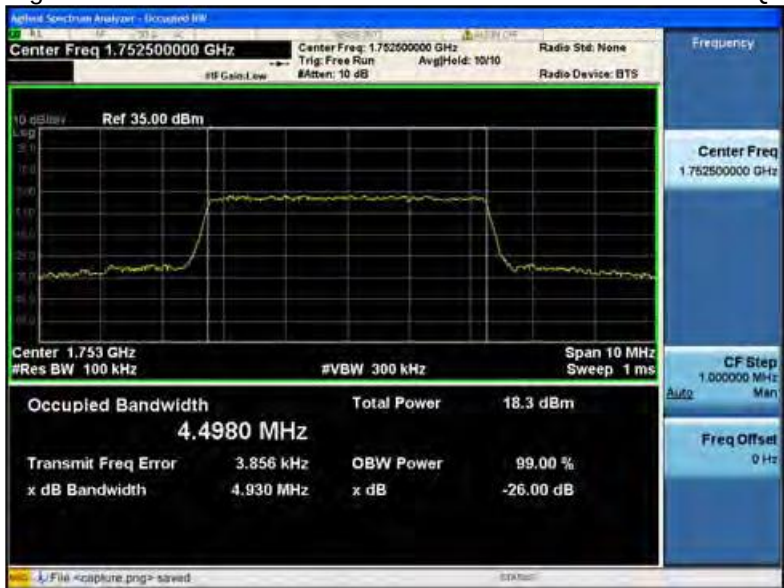
LTE Band 4 Middle channel

5 MHz QPSK



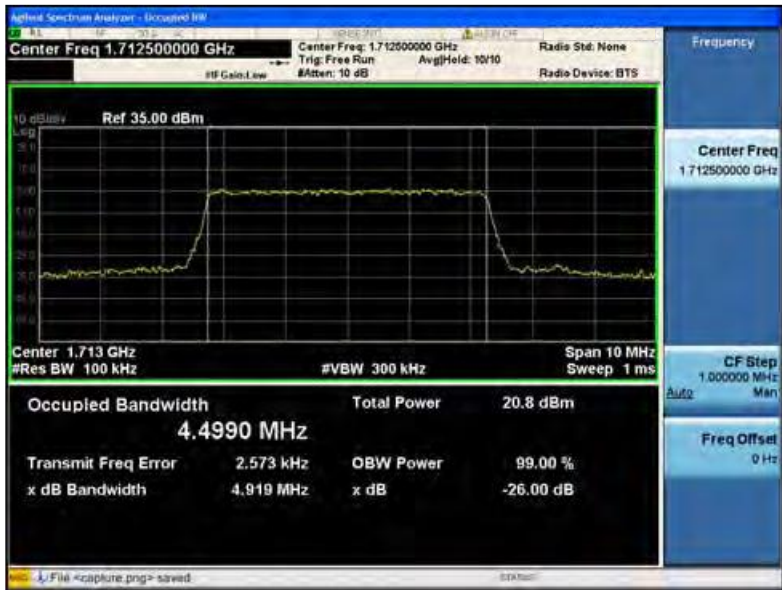
LTE Band 4 Highest channel:

5 MHz QPSK



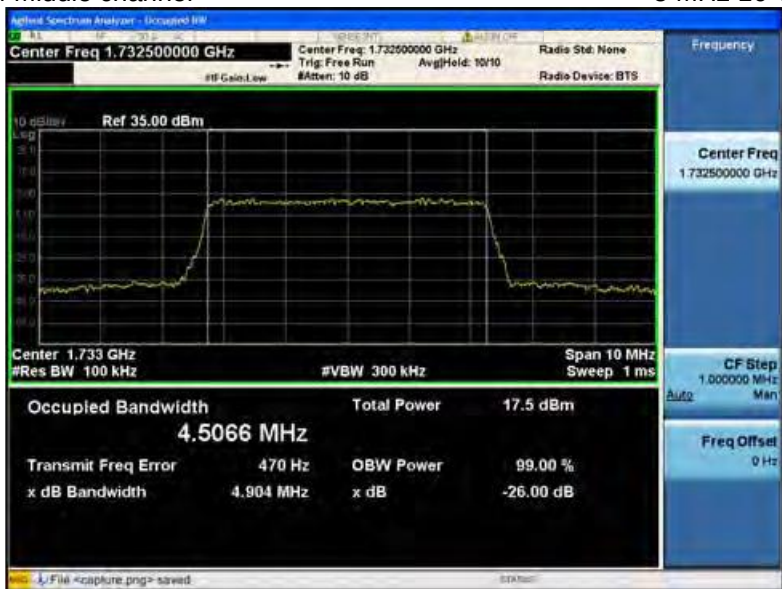
LTE Band 4 Lowest channel

5 MHz 16-QAM



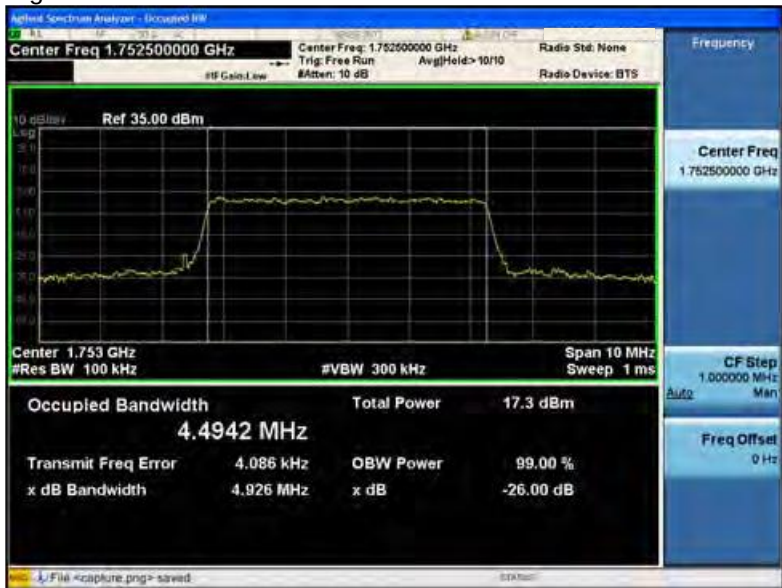
LTE Band 4 Middle channel

5 MHz 16-QAM



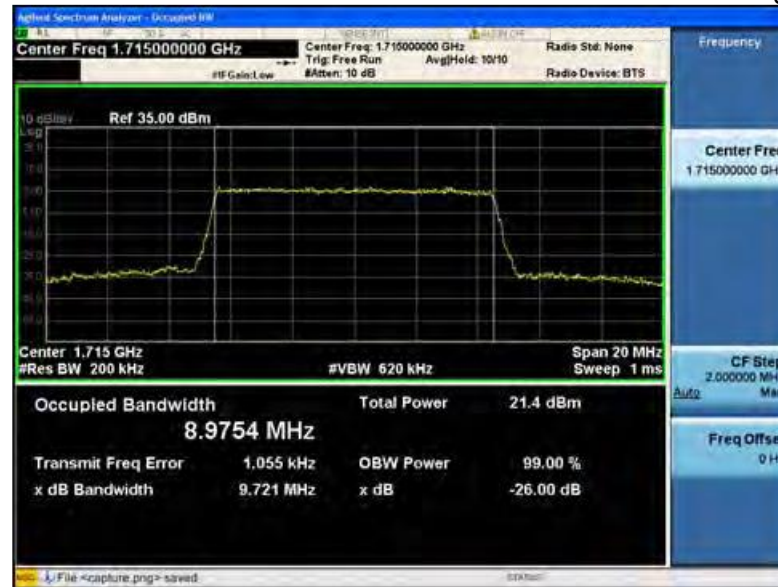
LTE Band 4 Highest channel:

5 MHz 16-QAM



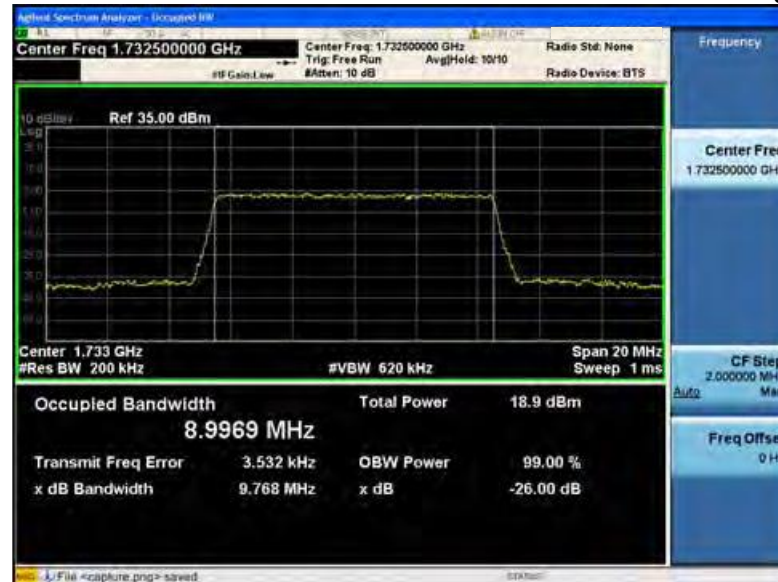
LTE Band 4 Lowest channel

10 MHz QPSK



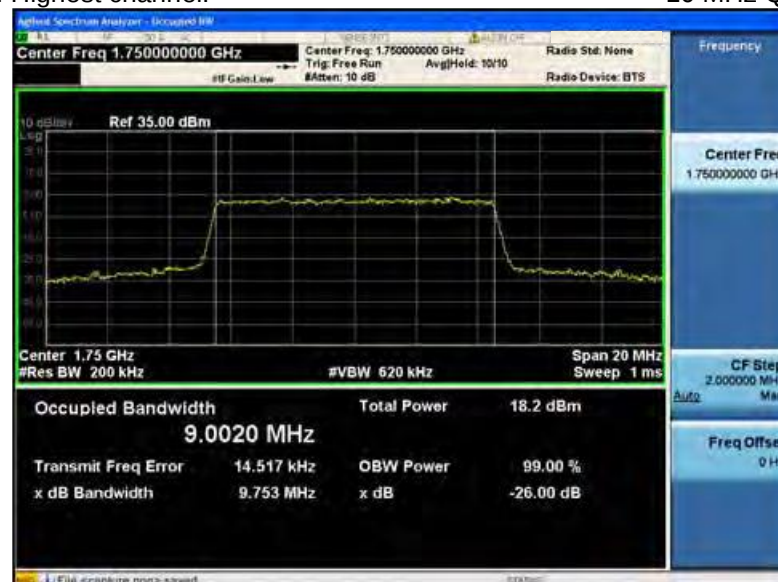
LTE Band 4 Middle channel

10 MHz QPSK



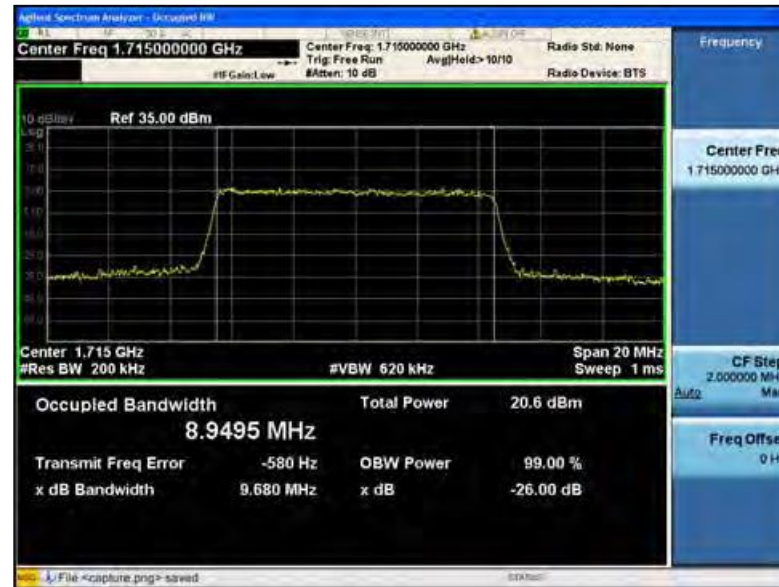
LTE Band 4 Highest channel:

10 MHz QPSK



LTE Band 4 Lowest channel

10 MHz 16-QAM



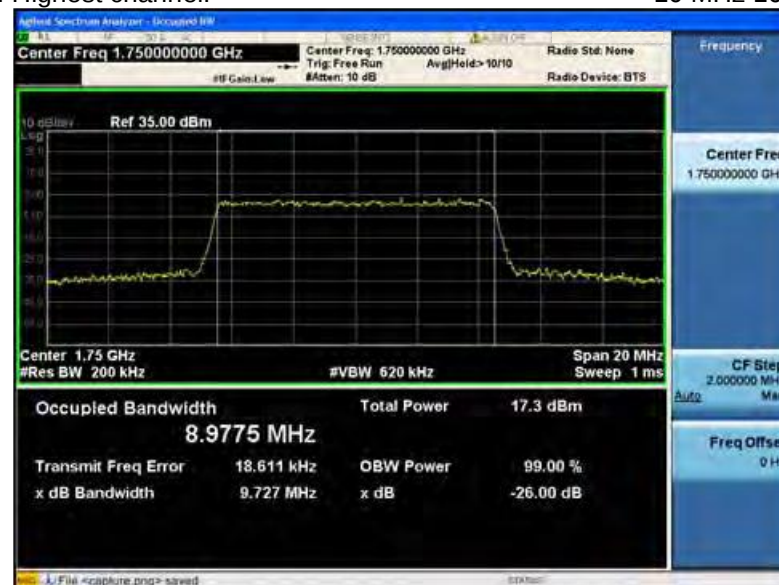
LTE Band 4 Middle channel

10 MHz 16-QAM



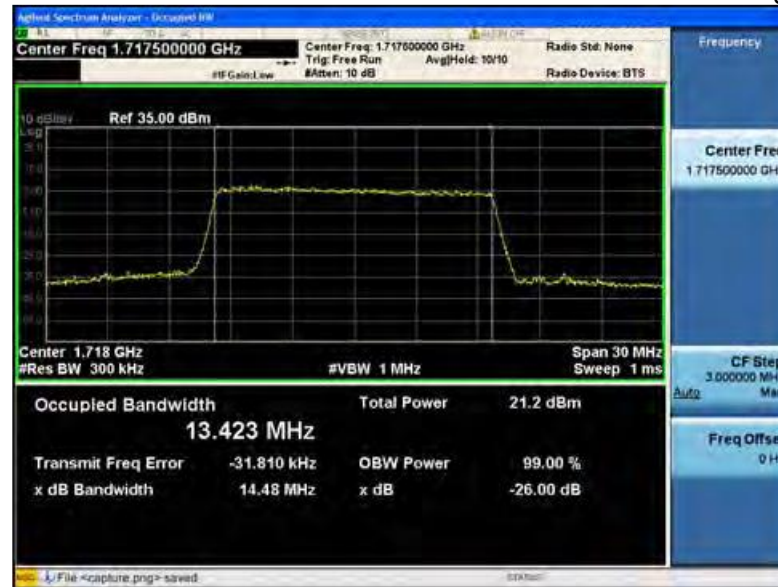
LTE Band 4 Highest channel:

10 MHz 16-QAM



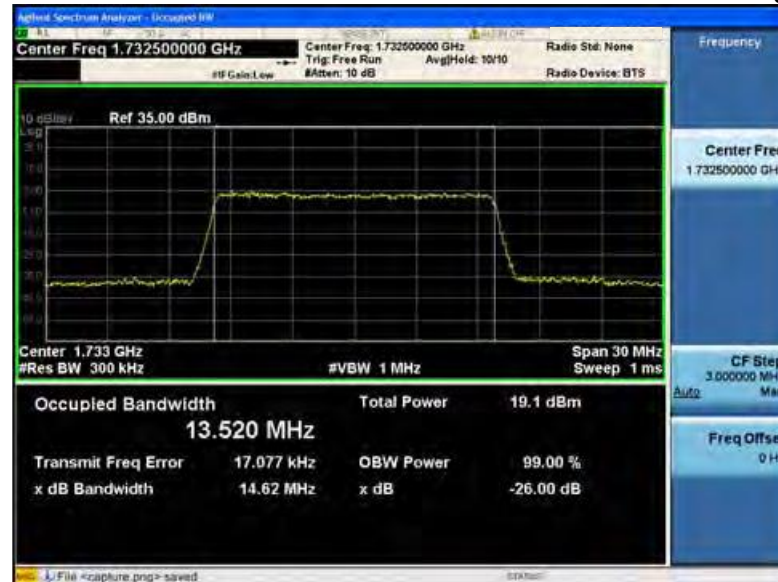
LTE Band 4 Lowest channel

15 MHz QPSK



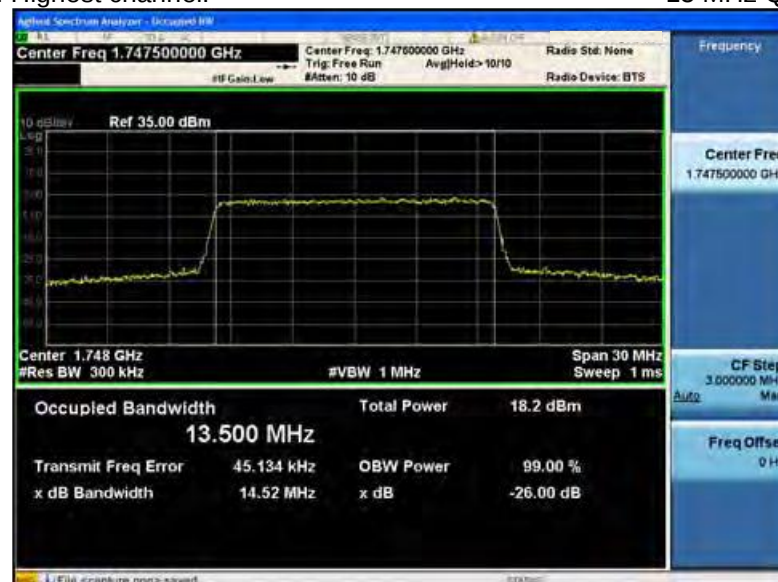
LTE Band 4 Middle channel

15 MHz QPSK



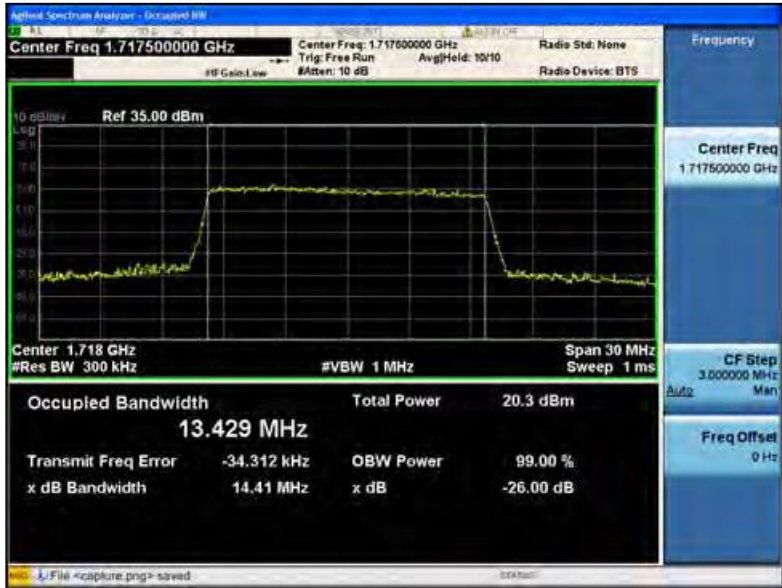
LTE Band 4 Highest channel:

15 MHz QPSK



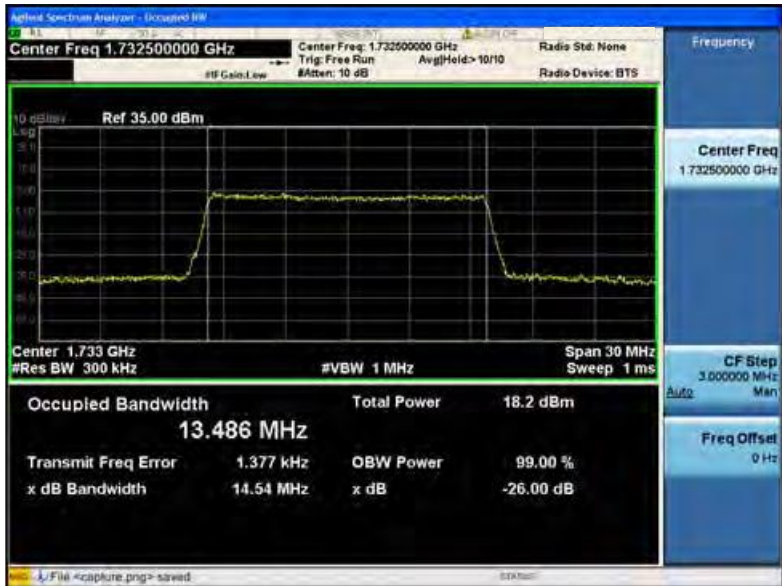
LTE Band 4 Lowest channel

15 MHz 16-QAM



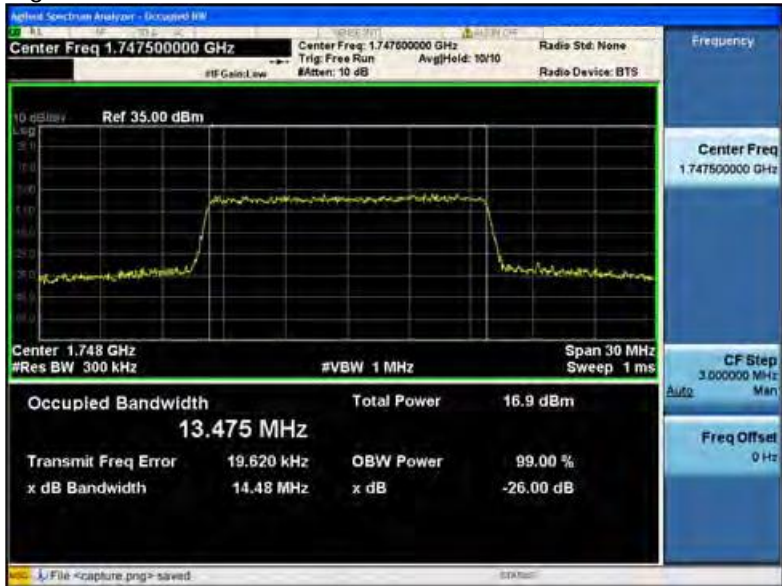
LTE Band 4 Middle channel

15 MHz 16-QAM



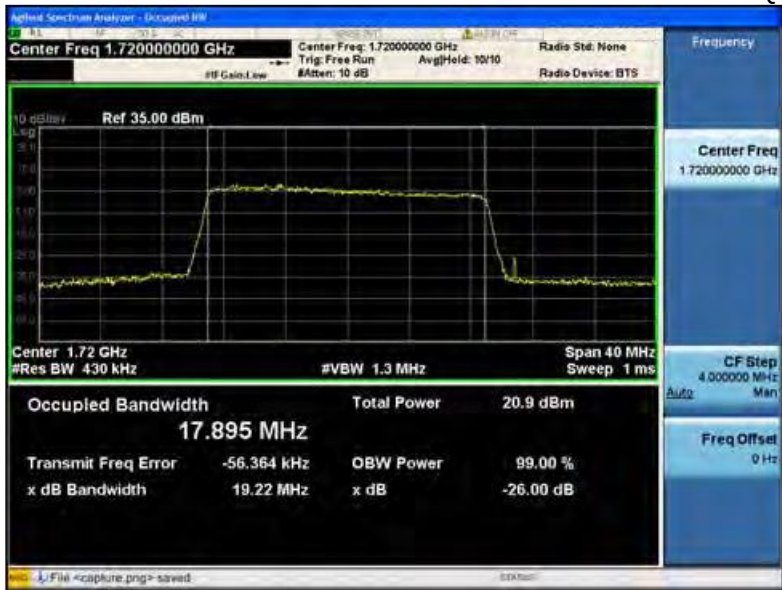
LTE Band 4 Highest channel:

15 MHz 16-QAM



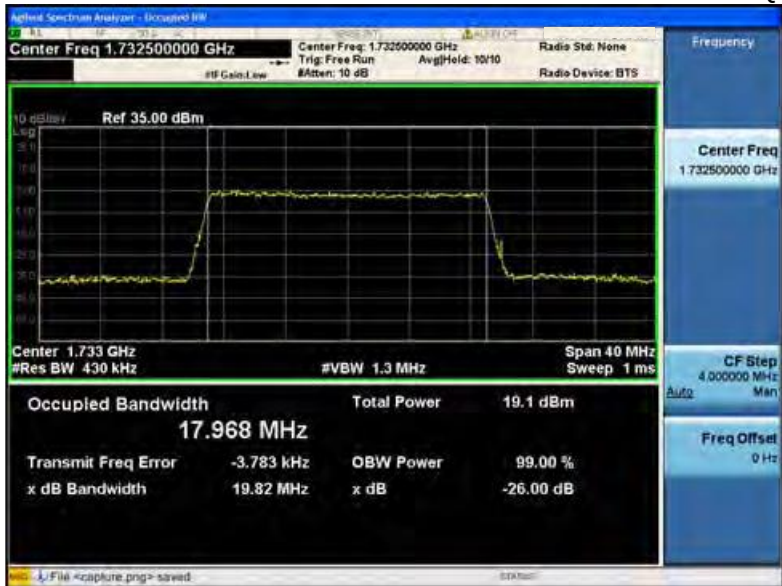
LTE Band 4 Lowest channel

20 MHz QPSK



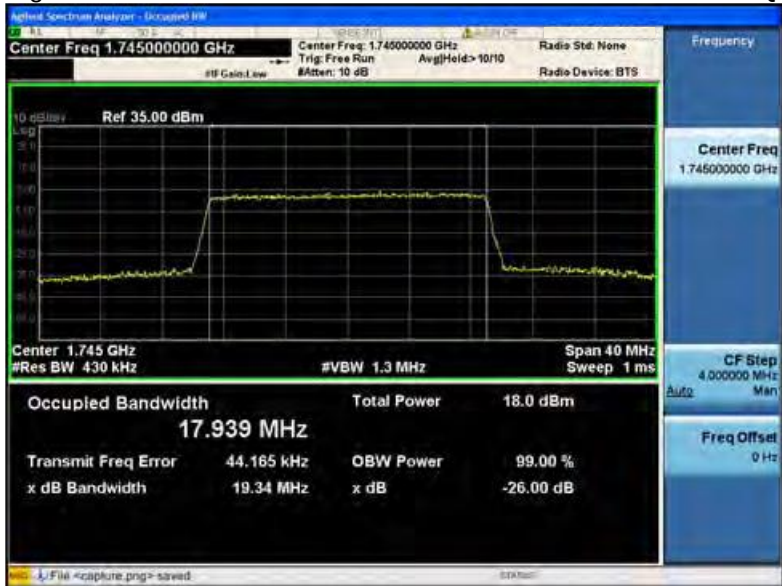
LTE Band 4 Middle channel

20 MHz QPSK



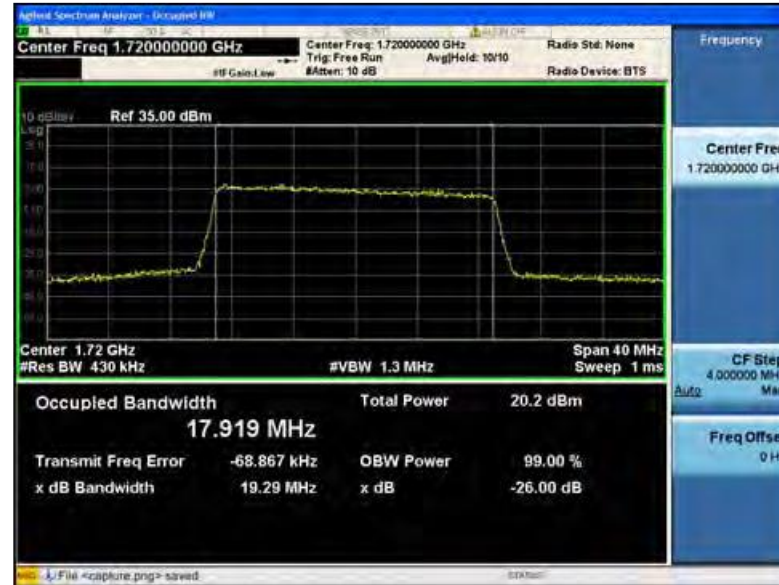
LTE Band 4 Highest channel:

20 MHz QPSK



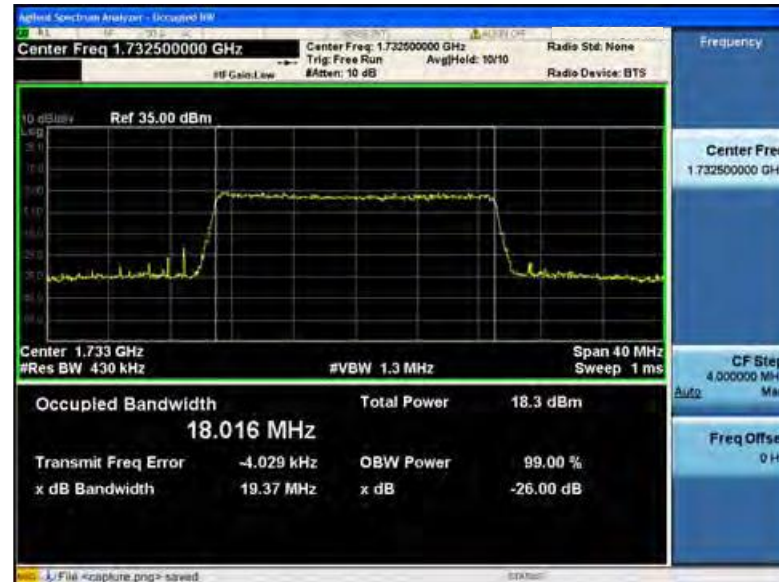
LTE Band 4 Lowest channel

20 MHz 16-QAM



LTE Band 4 Middle channel

20 MHz 16-QAM



LTE Band 4 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.

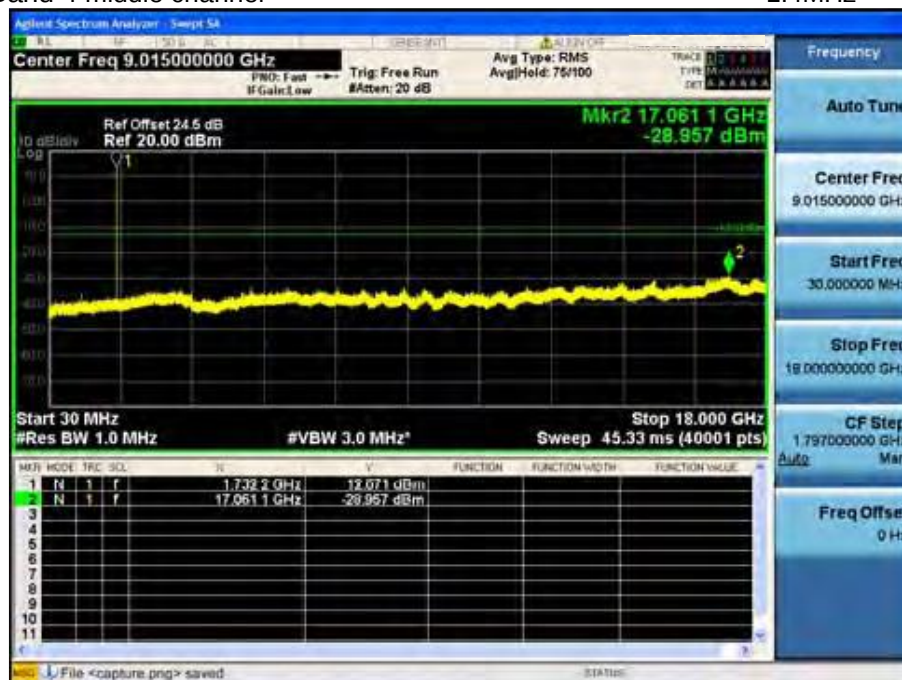
LTE Band 4 Lowest channel

1.4MHz



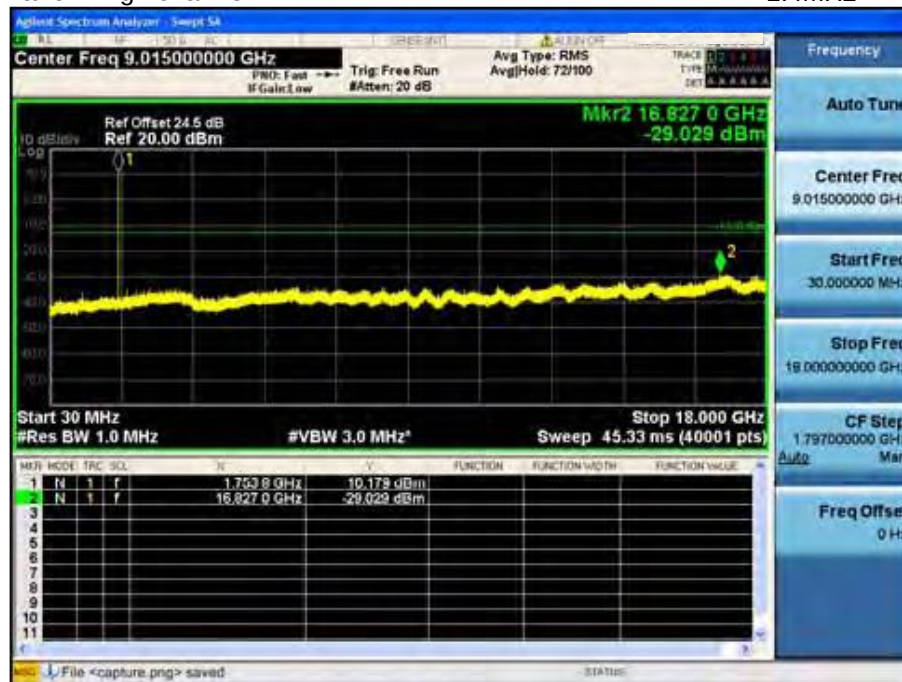
LTE Band 4 middle channel

1.4MHz



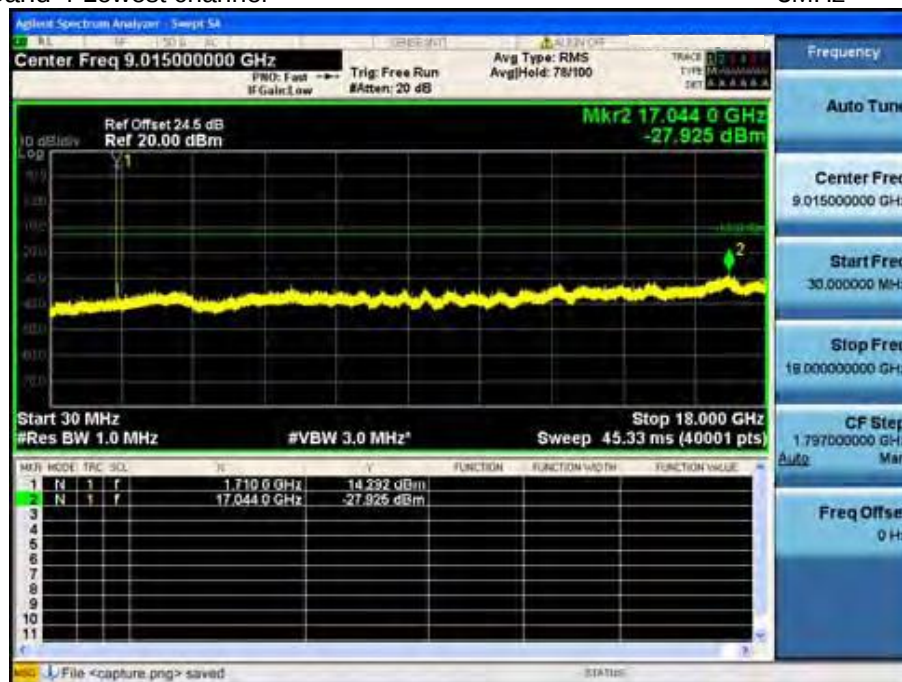
LTE Band 4 high channel

1.4MHz



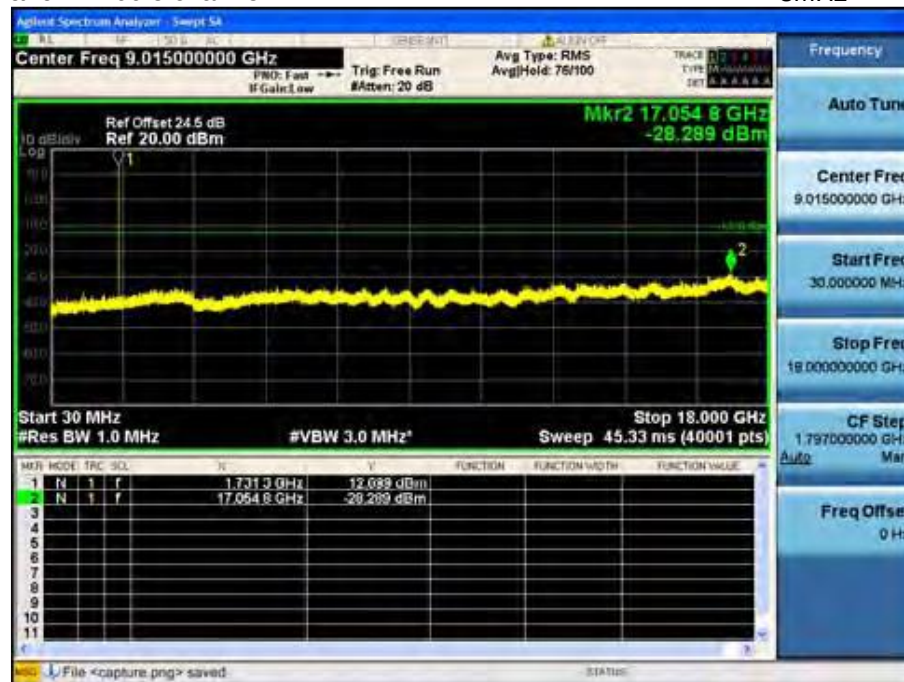
LTE Band 4 Lowest channel

3MHz



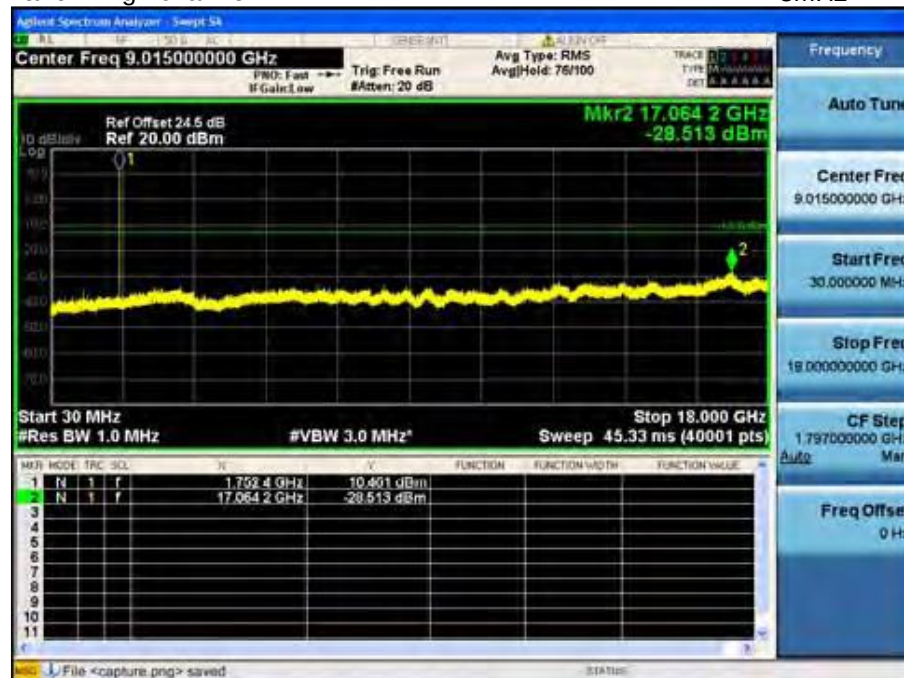
LTE Band 4 middle channel

3MHz



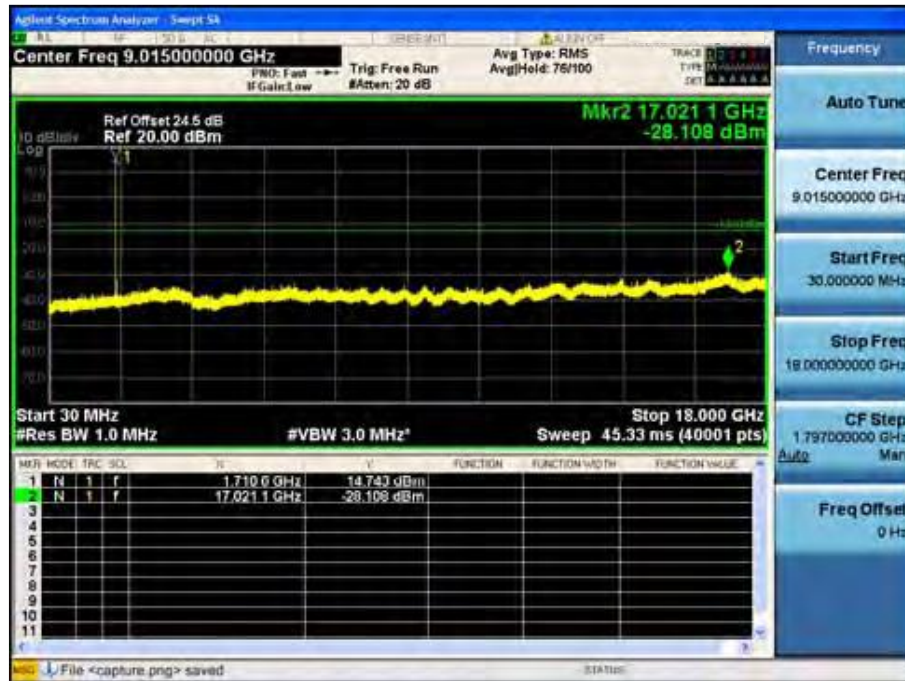
LTE Band 4 high channel

3MHz



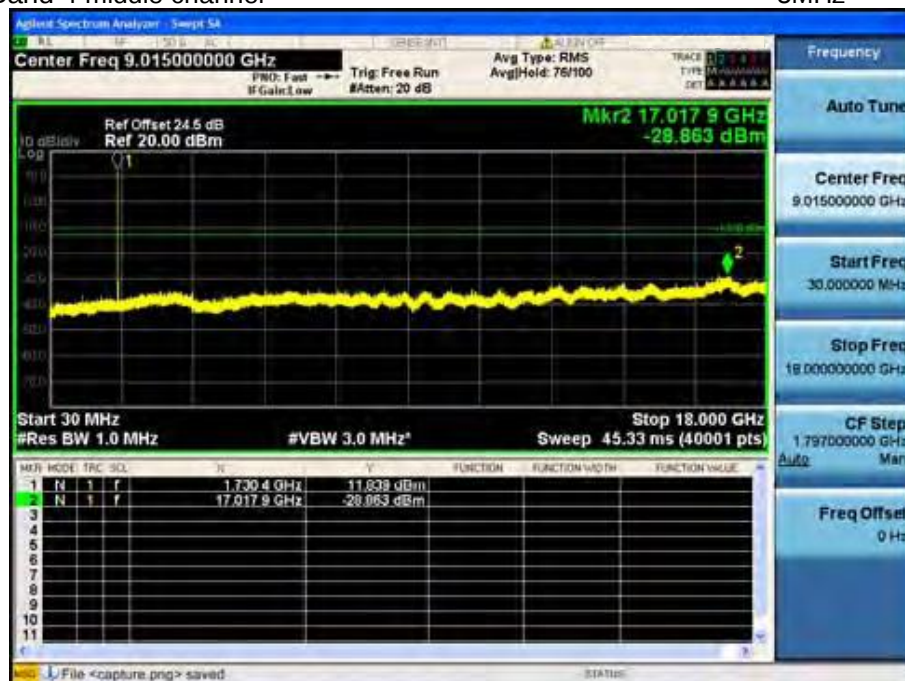
LTE Band 4 Lowest channel

5MHz



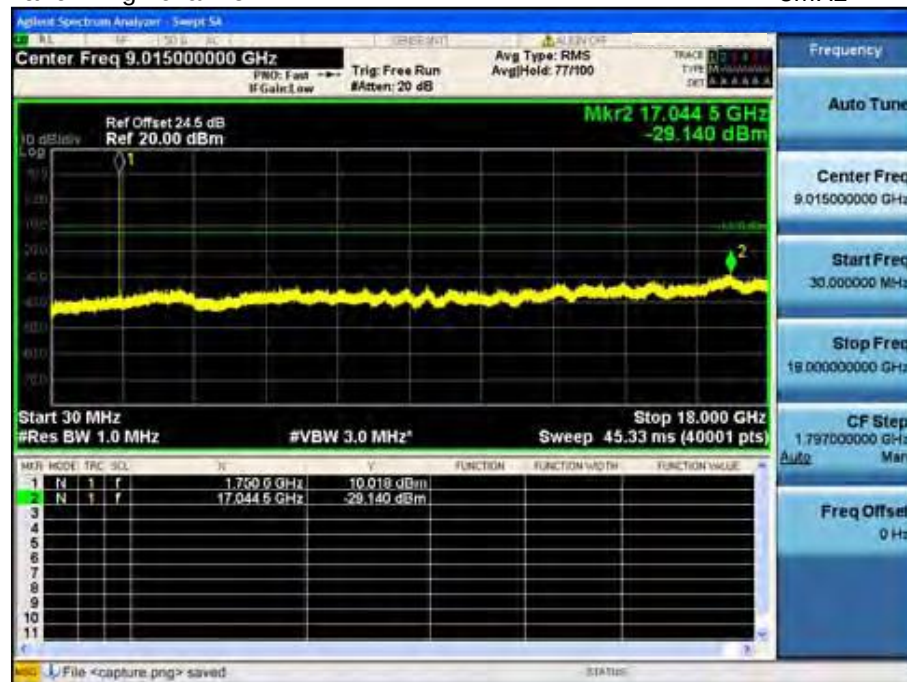
LTE Band 4 middle channel

5MHz



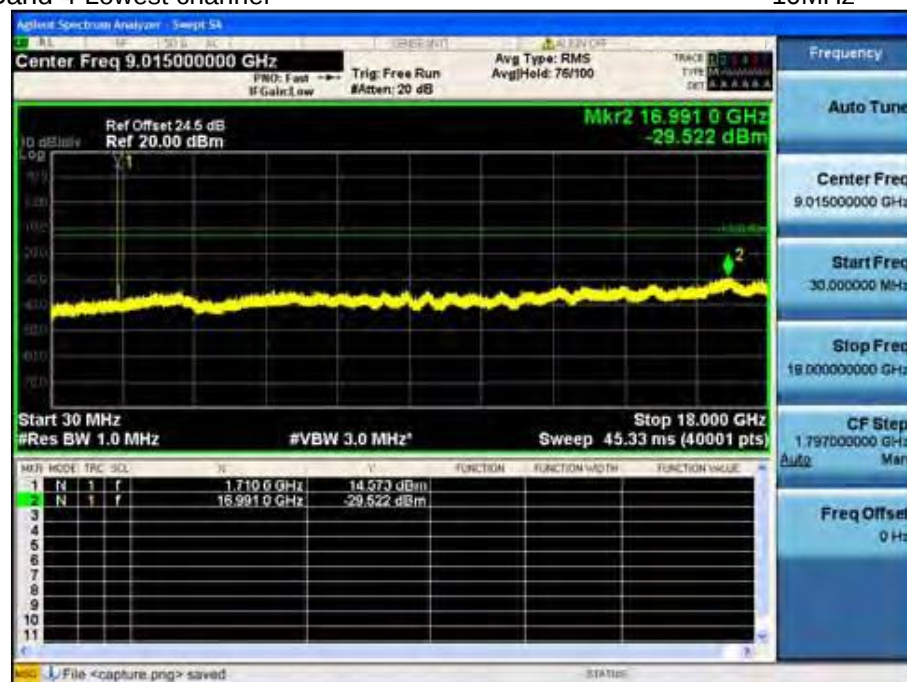
LTE Band 4 high channel

5MHz



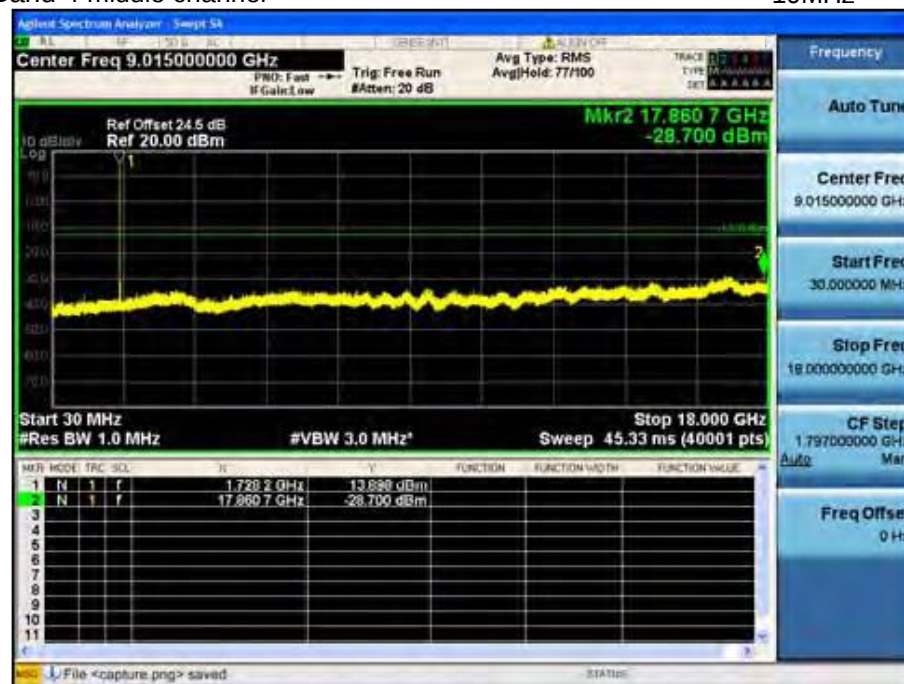
LTE Band 4 Lowest channel

10MHz



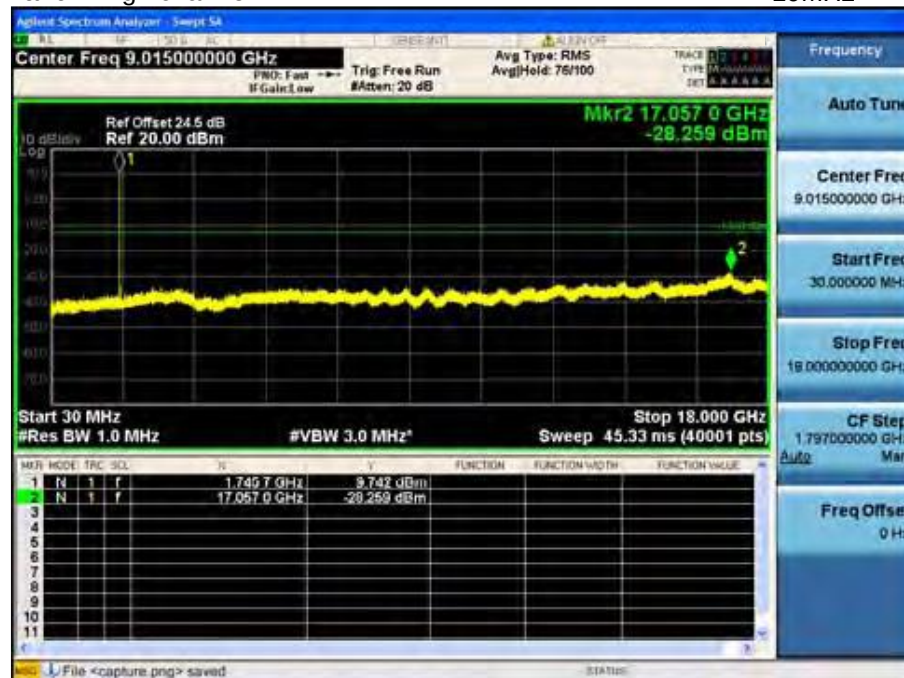
LTE Band 4 middle channel

10MHz



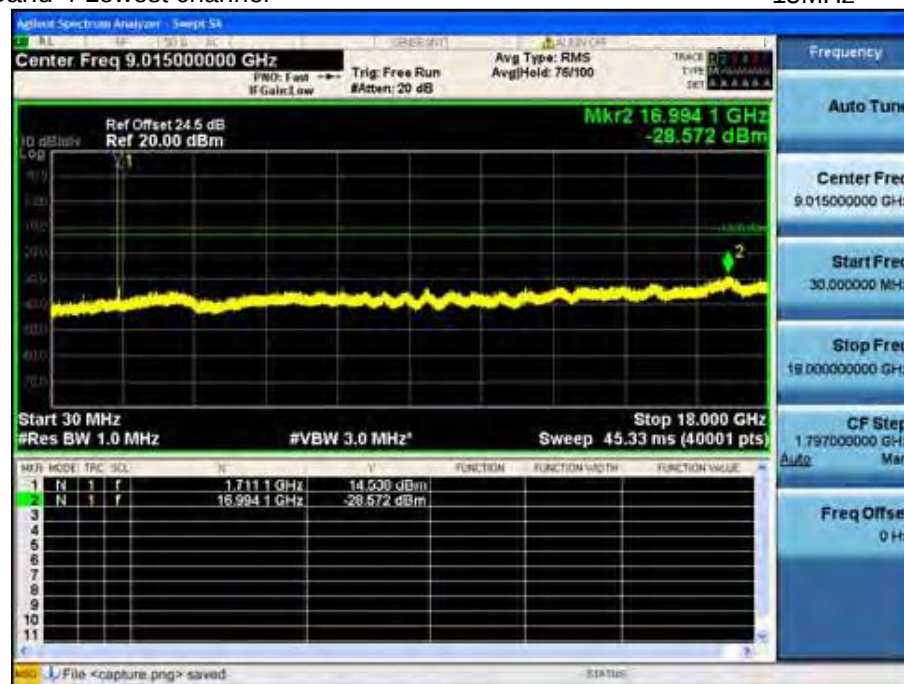
LTE Band 4 high channel

10MHz



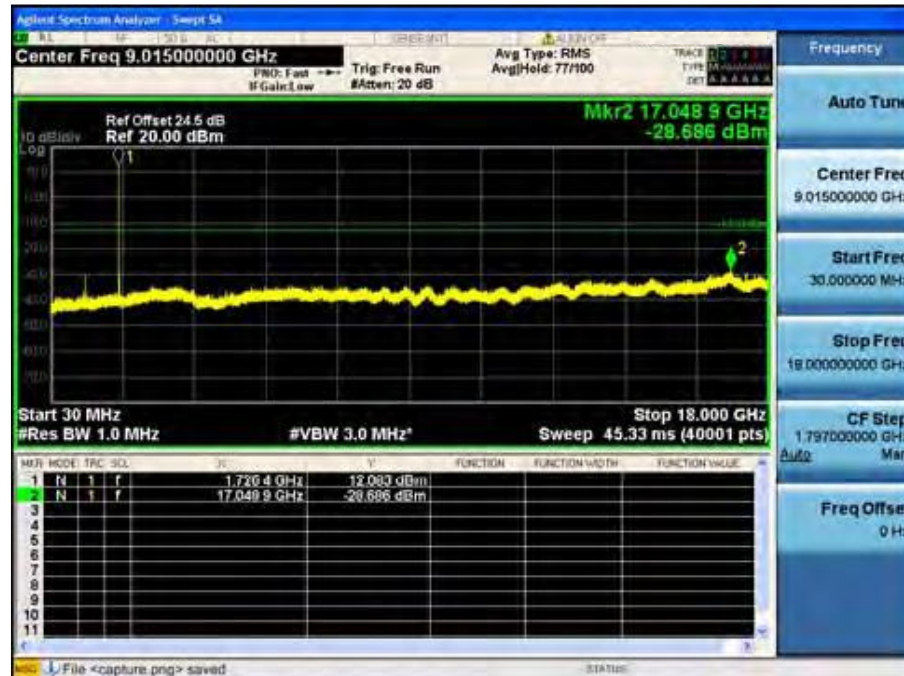
LTE Band 4 Lowest channel

15MHz



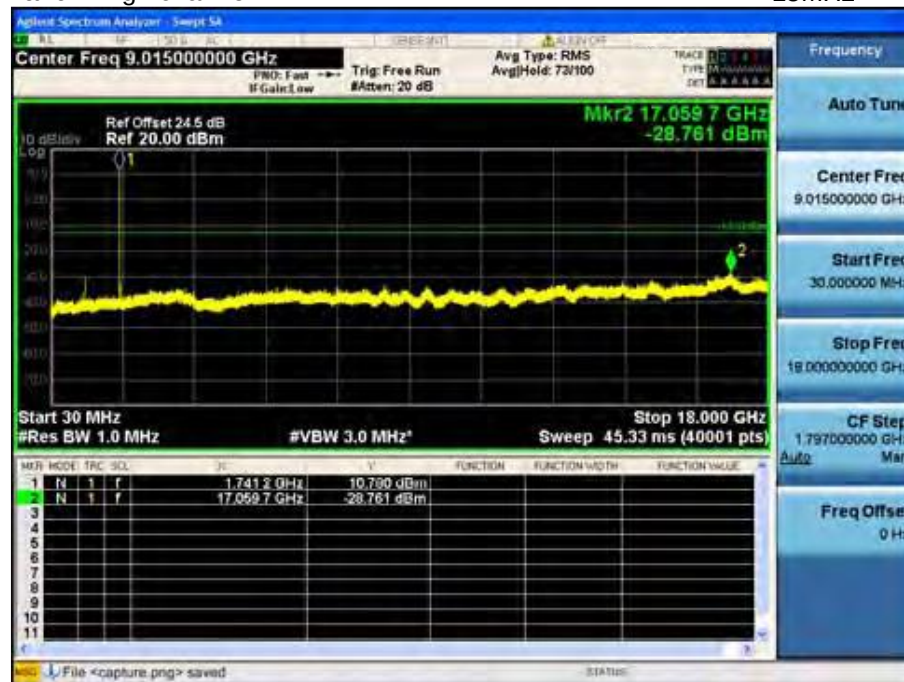
LTE Band 4 middle channel

15MHz



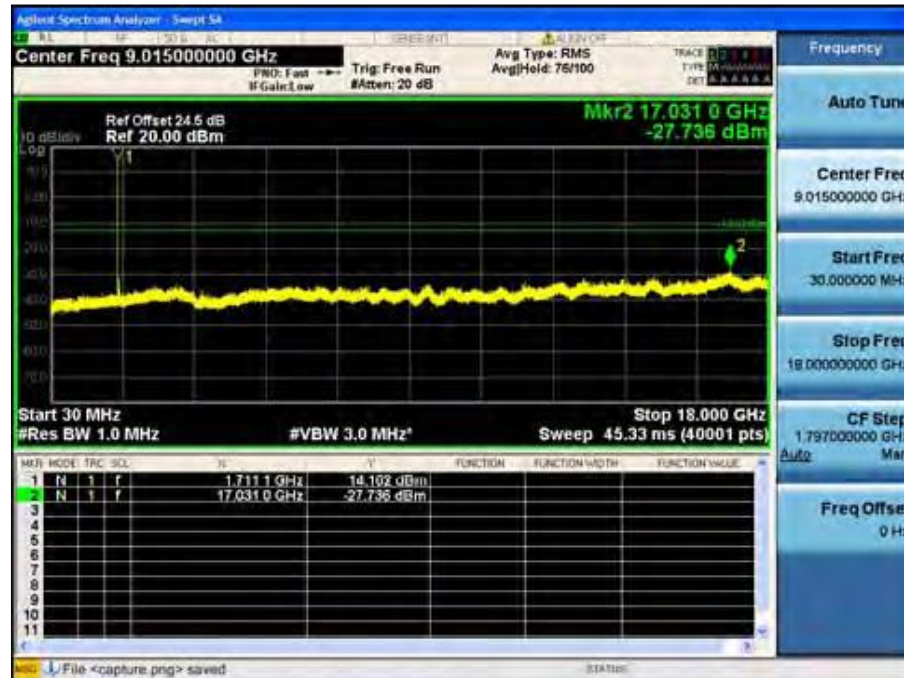
LTE Band 4 high channel

15MHz



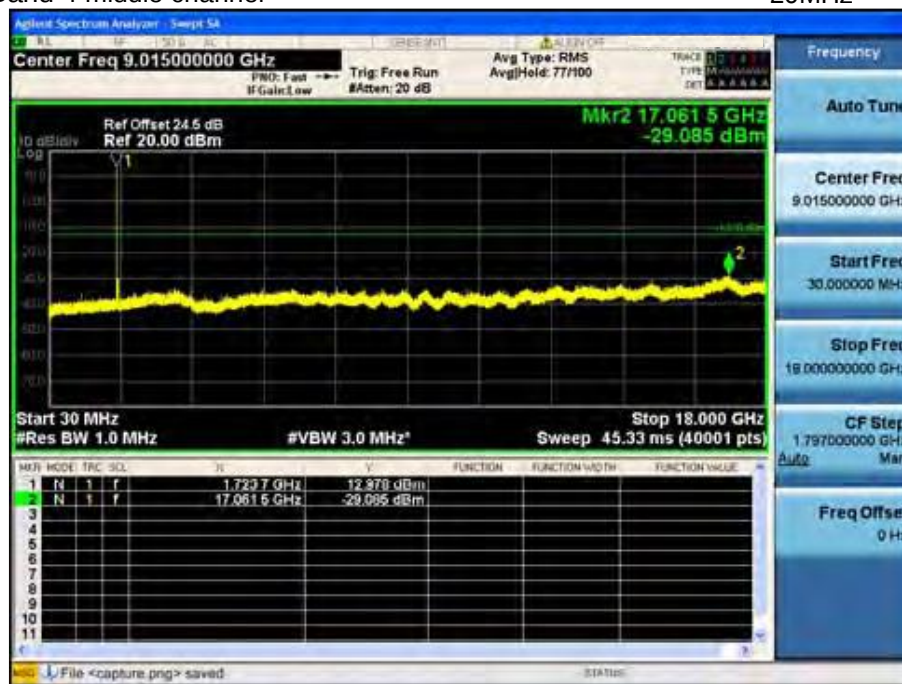
LTE Band 4 Lowest channel

20MHz



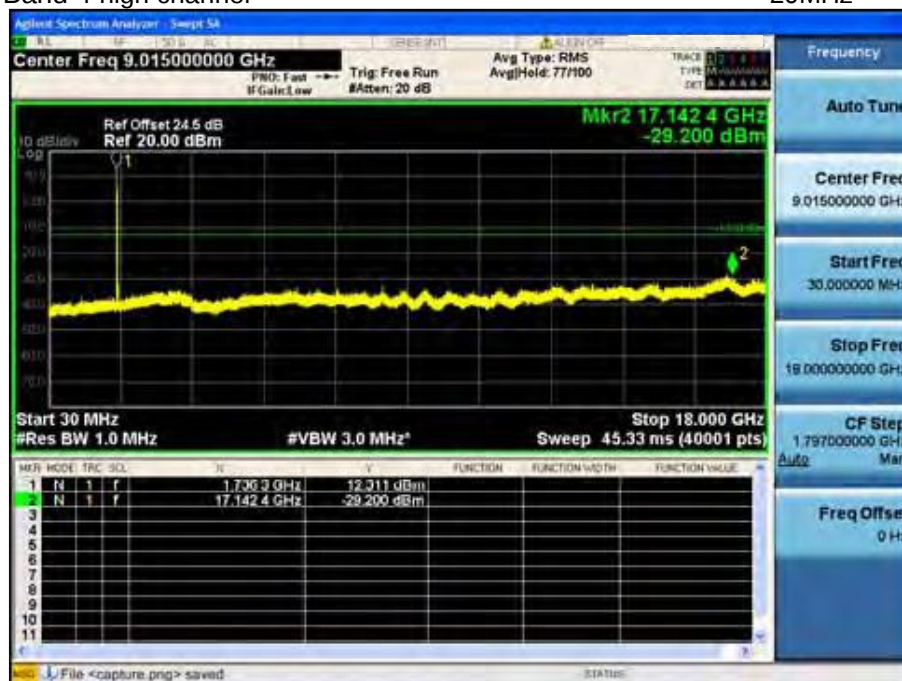
LTE Band 4 middle channel

20MHz



LTE Band 4 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 Lowest channel

1.4MHz 1RB



LTE Band 4 Lowest channel

1.4MHz 6RB



LTE Band 4 Highest channel:

1.4MHz 1RB



LTE Band 4 Highest channel:

1.4MHz 6RB



LTE Band 4 Lowest channel

3MHz 1RB



LTE Band 4 Lowest channel

3MHz 15RB



LTE Band 4 Highest channel:

3MHz 1RB



LTE Band 4 Highest channel:

3MHz 15RB



LTE Band 4 Lowest channel

5MHz 1RB



LTE Band 4 Lowest channel

5MHz 25RB



LTE Band 4 Highest channel:

5MHz 1RB



LTE Band 4 Highest channel:

5MHz 25RB



LTE Band 4 Lowest channel

10MHz 1RB



LTE Band 4 Lowest channel

10MHz 50RB



LTE Band 4 Highest channel:

10MHz 1RB



LTE Band 4 Highest channel:

10MHz 50RB



LTE Band 4 Lowest channel

15MHz 1RB



LTE Band 4 Lowest channel

15MHz 75RB



LTE Band 4 Highest channel:

15MHz 1RB



LTE Band 4 Highest channel:

15MHz 75RB



LTE Band 4 Lowest channel

20MHz 1RB



LTE Band 4 Lowest channel

20MHz 75RB



LTE Band 4 Highest channel:

20MHz 1RB



LTE Band 4 Highest channel:

20MHz 75RB



***** END *****