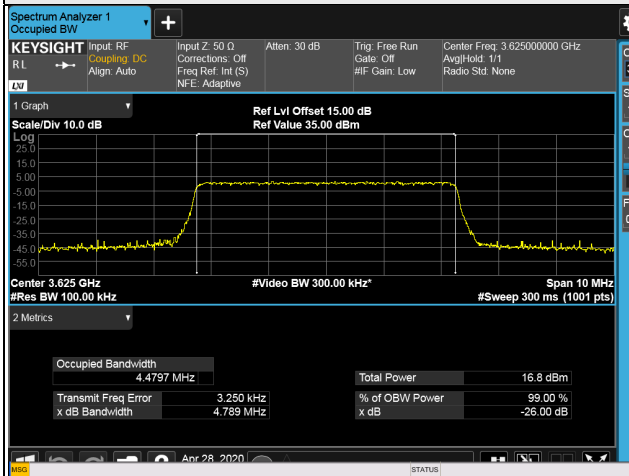
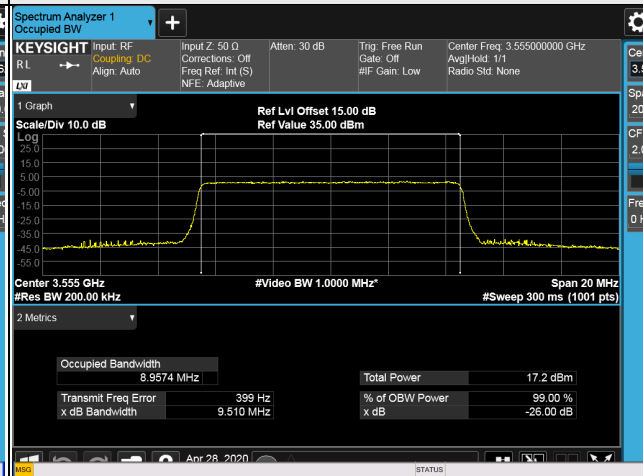


Spectrum Plot of Worst Value

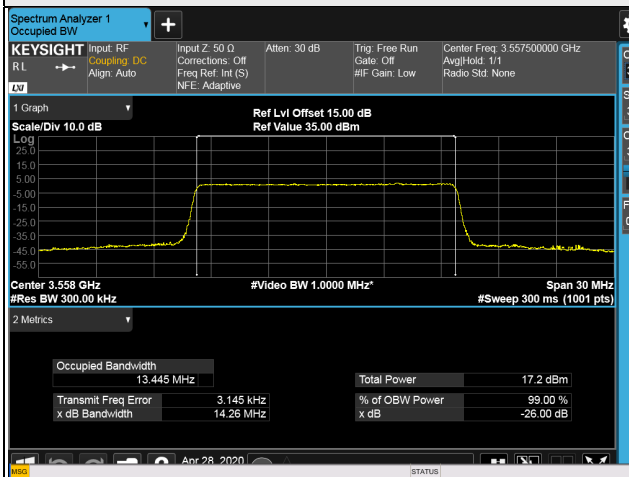
5MHz / 256QAM



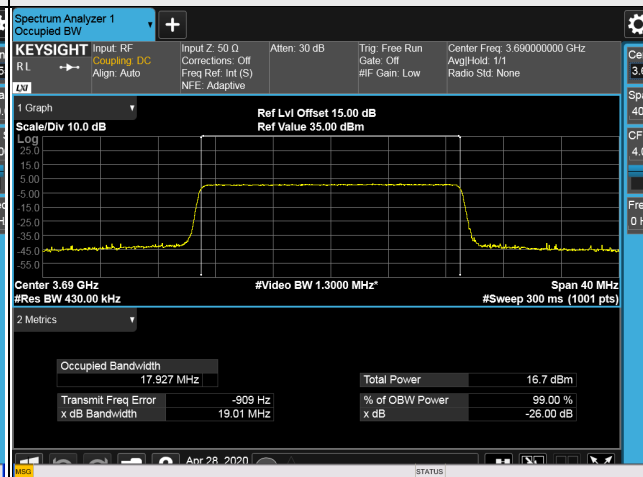
10MHz / 256QAM



15MHz / 256QAM



20MHz / 256QAM



LTE Band 66

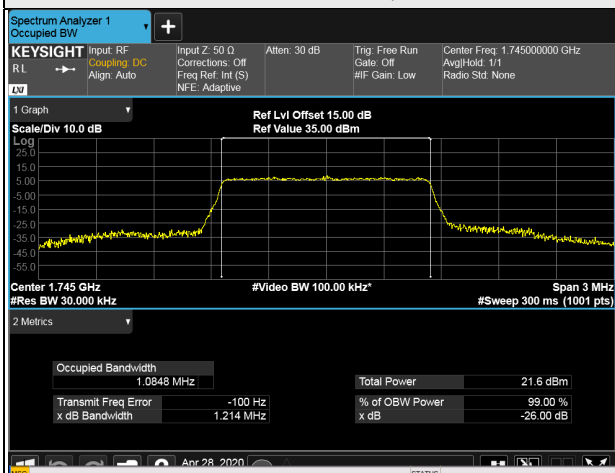
LTE Band 66, Channel Bandwidth 1.4MHz		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
		256QAM
131979	1710.7	1.21
132322	1745.0	1.21
132665	1779.3	1.21
LTE Band 66, Channel Bandwidth 3MHz		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
		256QAM
131987	1711.5	2.92
132322	1745.0	2.92
132657	1778.5	2.91
LTE Band 66, Channel Bandwidth 5MHz		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
		256QAM
131997	1712.5	4.80
132322	1745.0	4.81
132647	1777.5	4.75
LTE Band 66, Channel Bandwidth 10MHz		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
		256QAM
132022	1715.0	9.51
132322	1745.0	9.51
132622	1775.0	9.51
LTE Band 66, Channel Bandwidth 15MHz		
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
		256QAM
132047	1717.5	14.22
132322	1745.0	14.26
132597	1772.5	14.28

LTE Band 66, Channel Bandwidth 20MHz

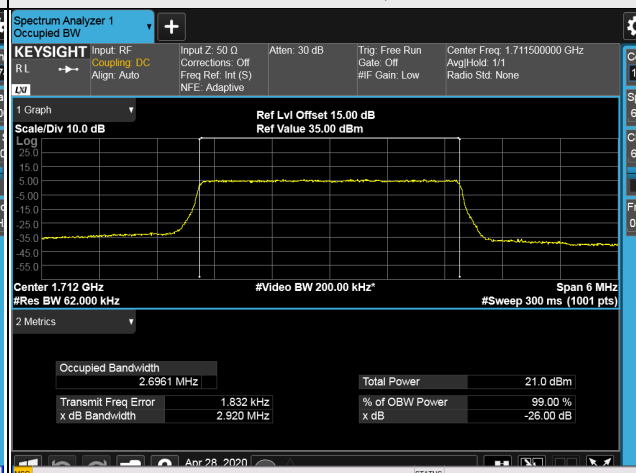
Channel	Frequency (MHz)	26dB Bandwidth (MHz)
		256QAM
132072	1720.0	19.00
132322	1745.0	19.05
132572	1770.0	19.11

Spectrum Plot of Worst Value

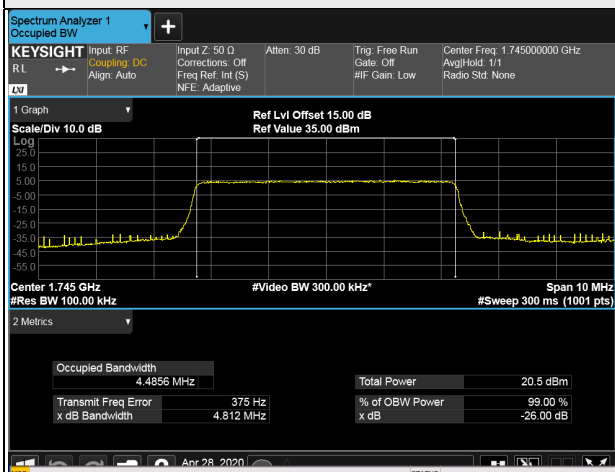
1.4MHz / 256QAM



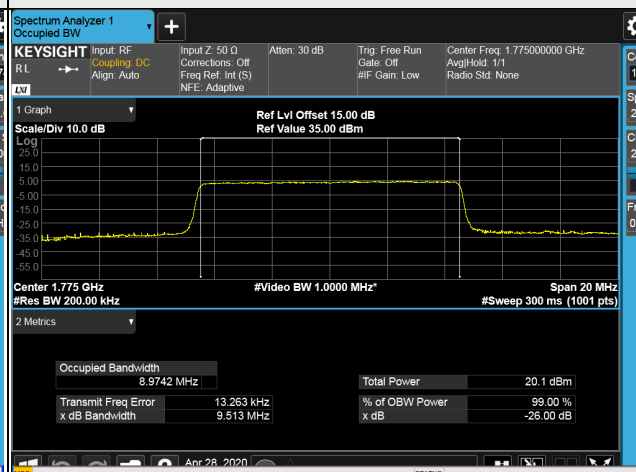
3MHz / 256QAM



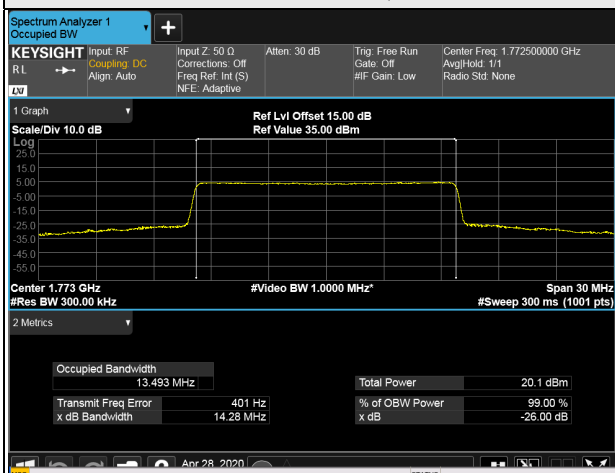
5MHz / 256QAM



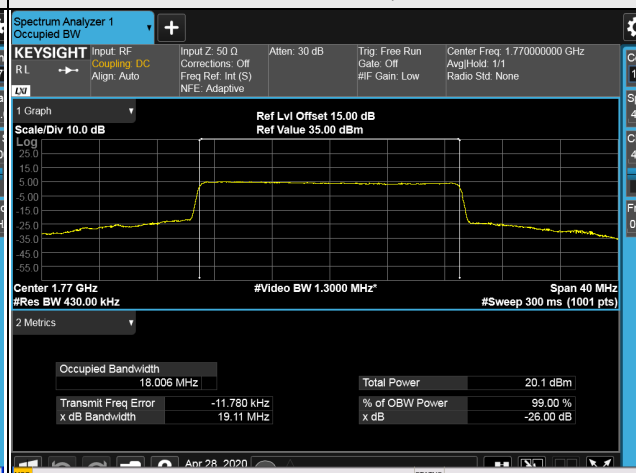
10MHz / 256QAM



15MHz / 256QAM



20MHz / 256QAM



4.5 Band Edge Measurement

4.5.1 Limits of Band Edge Measurement

For n5, LTE Band 2

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

For LTE Band 7

According to FCC 27.53(m)(4) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less that $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed.

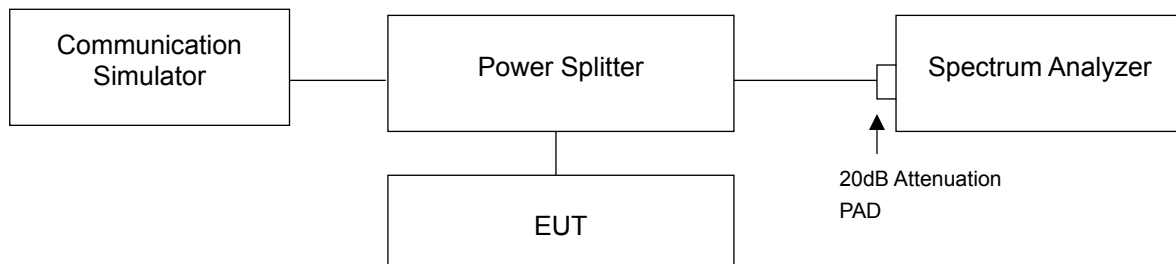
For LTE Band 12

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

For LTE Band 66

According to FCC 27.53(h) for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log(P)$ dB.

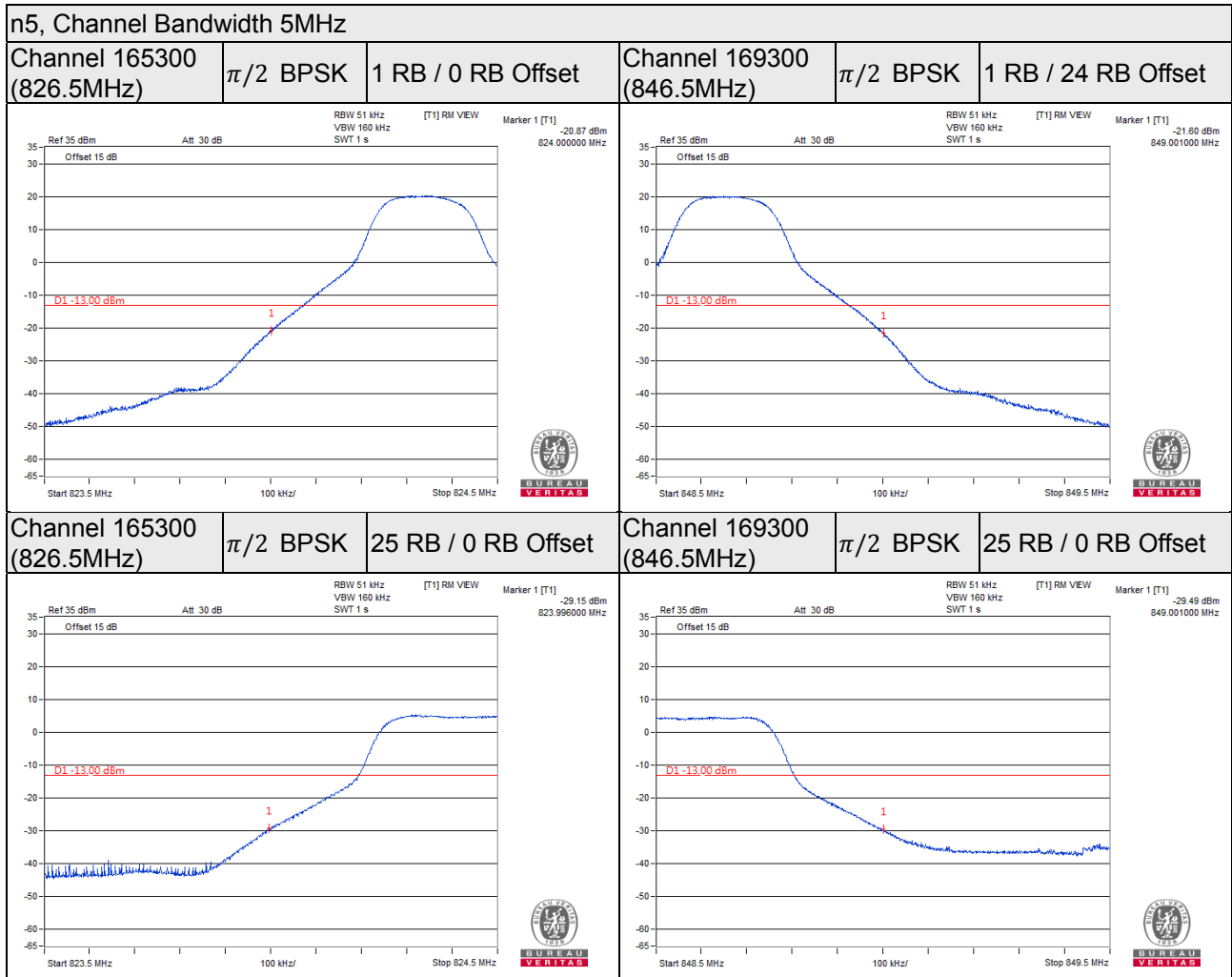
4.5.2 Test Setup



4.5.3 Test Procedures

- a. All measurements were done at low and high operational frequency range.
- b. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 15kHz and VB of the spectrum is 51kHz (LTE Channel Bandwidth 1.4MHz).
- c. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 30kHz and VB of the spectrum is 100kHz (LTE Channel Bandwidth 3MHz).
- d. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (Channel Bandwidth 5MHz).
- e. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (Channel Bandwidth 10MHz).
- f. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (Channel Bandwidth 15MHz).
- g. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 200kHz and VB of the spectrum is 1MHz (Channel Bandwidth 20MHz).
- h. Record the max trace plot into the test report.

4.5.4 Test Results



n5, Channel Bandwidth 10MHz

Channel 165800
(829.0MHz)

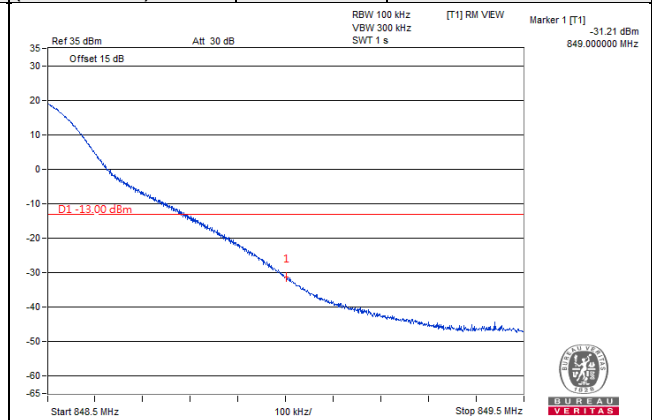
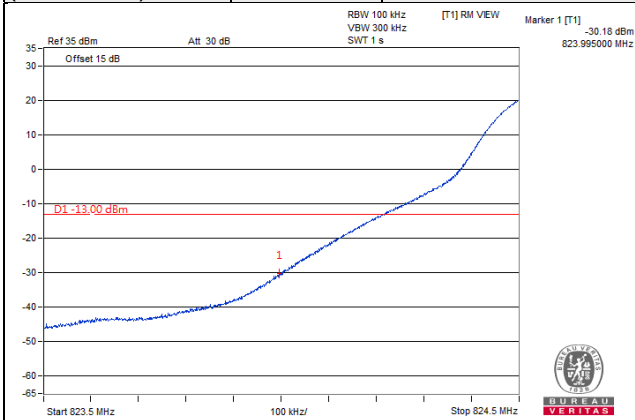
$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 168800
(844.0MHz)

$\pi/2$ BPSK

1 RB / 51 RB Offset



Channel 165800
(829.0MHz)

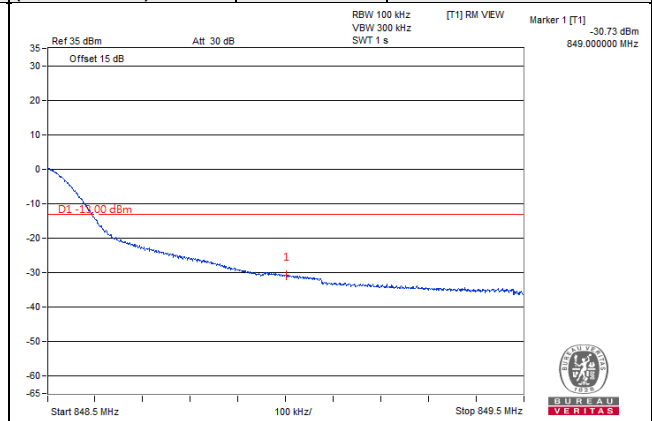
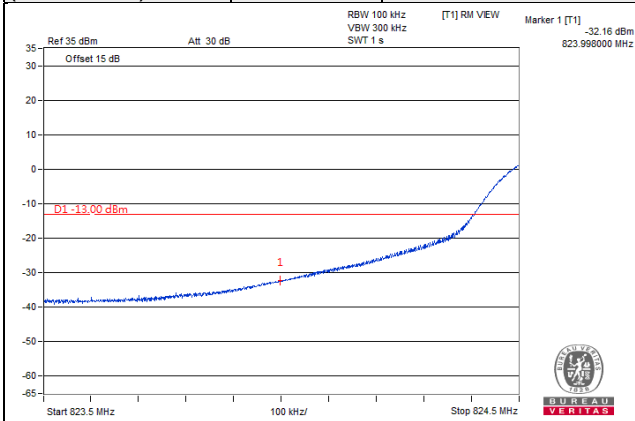
$\pi/2$ BPSK

52 RB / 0 RB Offset

Channel 168800
(844.0MHz)

$\pi/2$ BPSK

52 RB / 0 RB Offset



n5, Channel Bandwidth 15MHz

Channel 166300
(831.5MHz)

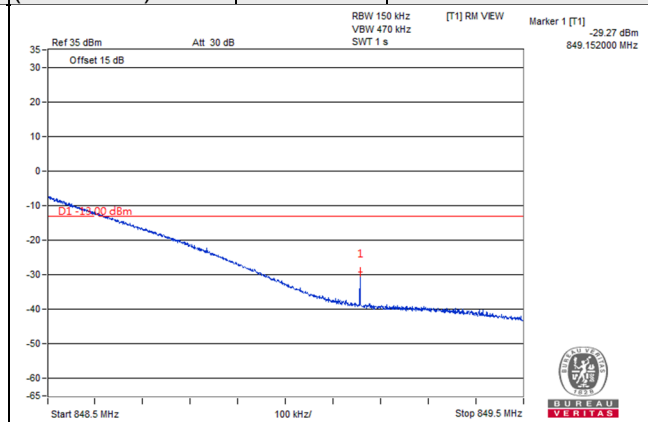
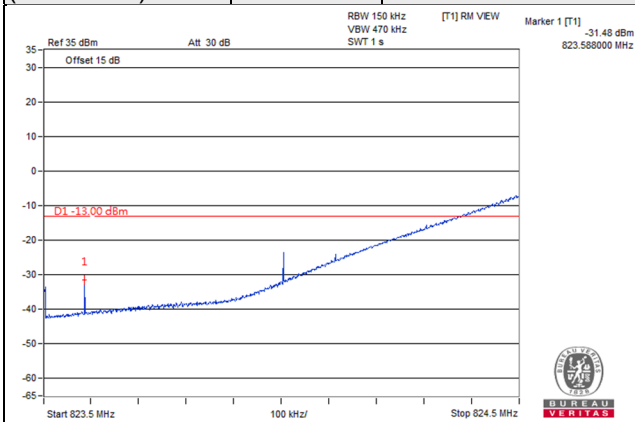
$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 168300
(841.5MHz)

$\pi/2$ BPSK

1 RB / 78 RB Offset



Channel 166300
(831.5MHz)

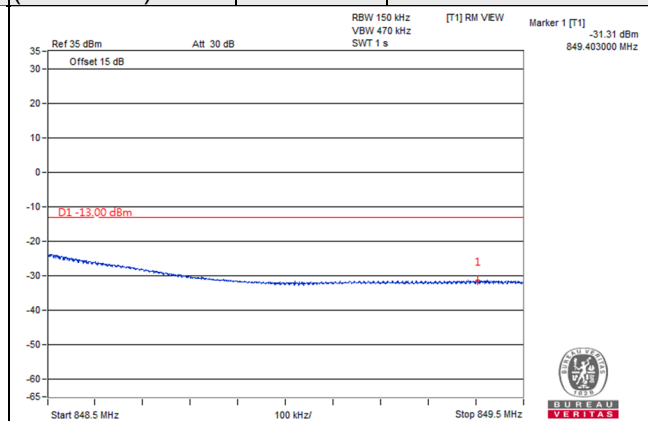
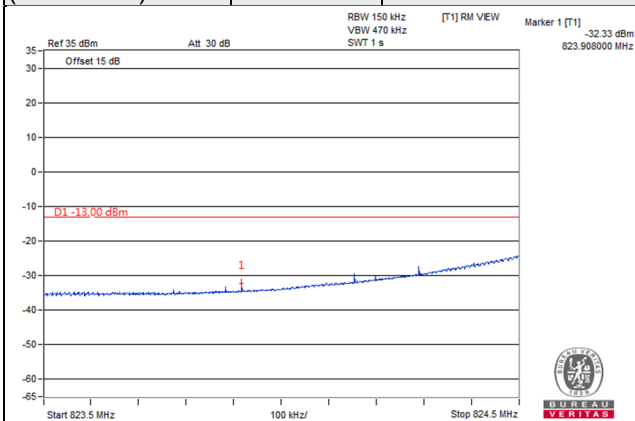
$\pi/2$ BPSK

79 RB / 0 RB Offset

Channel 168300
(841.5MHz)

$\pi/2$ BPSK

79 RB / 0 RB Offset



n5, Channel Bandwidth 20MHz

Channel 166800
(834.0MHz)

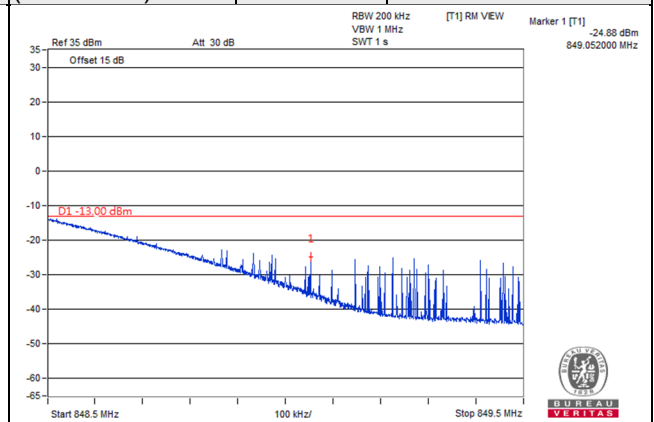
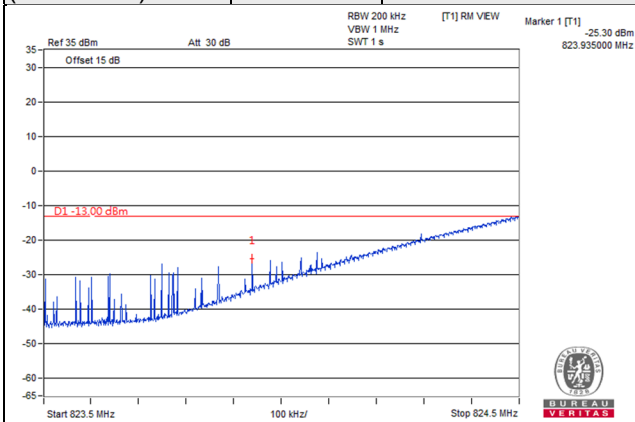
$\pi/2$ BPSK

1 RB / 0 RB Offset

Channel 167800
(839.0MHz)

$\pi/2$ BPSK

1 RB / 105 RB Offset



Channel 166800
(834.0MHz)

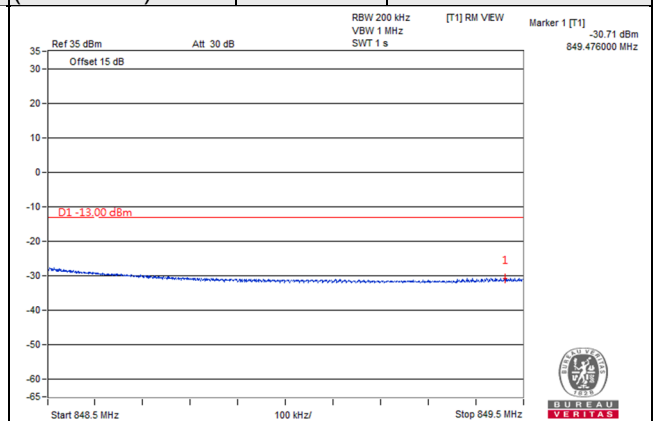
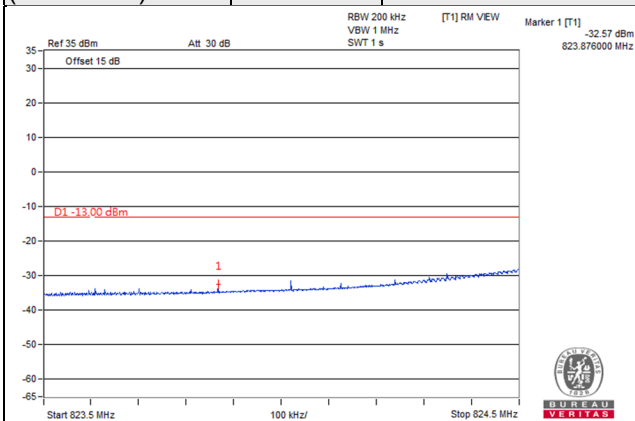
$\pi/2$ BPSK

106 RB / 0 RB Offset

Channel 167800
(839.0MHz)

$\pi/2$ BPSK

106 RB / 0 RB Offset



LTE Band 2, Channel Bandwidth 1.4MHz

Channel 18607
(1850.70MHz)

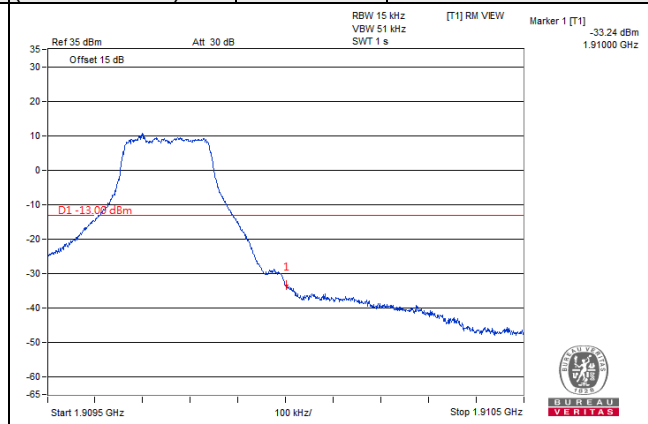
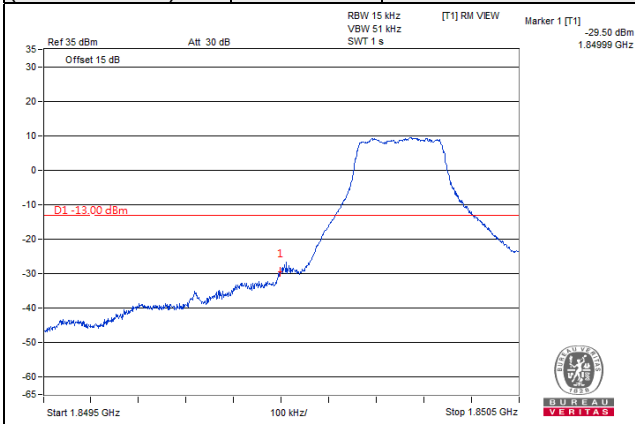
256QAM

1 RB / 0 RB Offset

Channel 19193
(1909.30MHz)

256QAM

1 RB / 5 RB Offset



Channel 18607
(1850.70MHz)

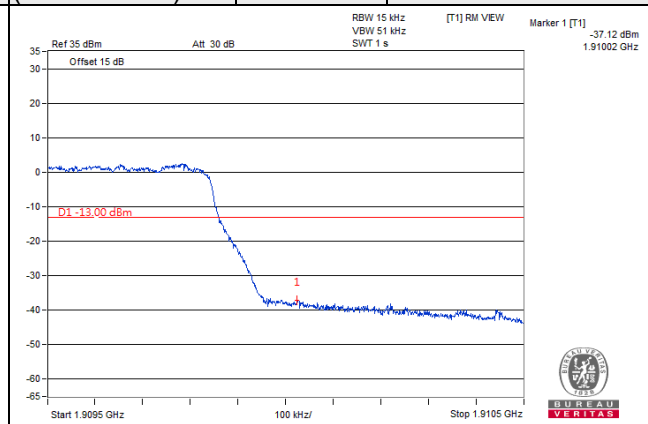
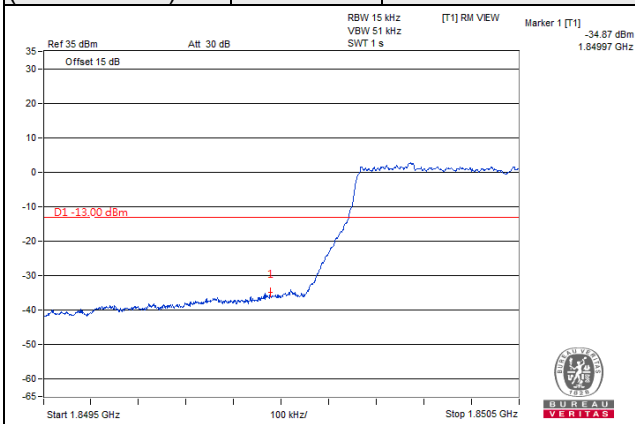
256QAM

6 RB / 0 RB Offset

Channel 19193
(1909.30MHz)

256QAM

6 RB / 0 RB Offset



LTE Band 2, Channel Bandwidth 3MHz

Channel 18615
(1851.50MHz)

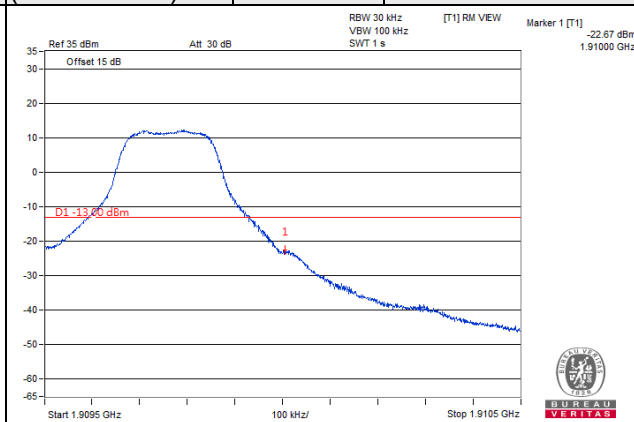
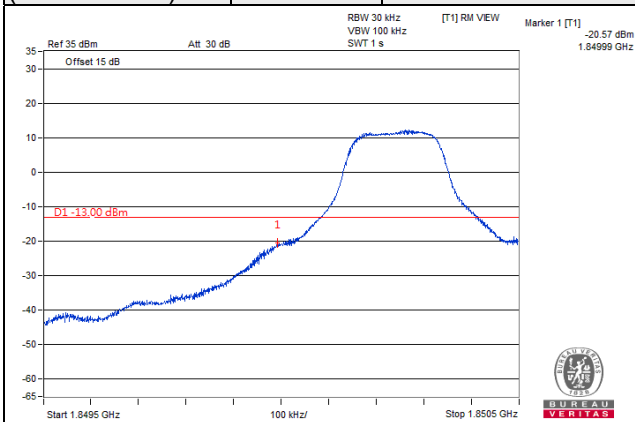
256QAM

1 RB / 0 RB Offset

Channel 19185
(1908.50MHz)

256QAM

1 RB / 14 RB Offset



Channel 18615
(1851.50MHz)

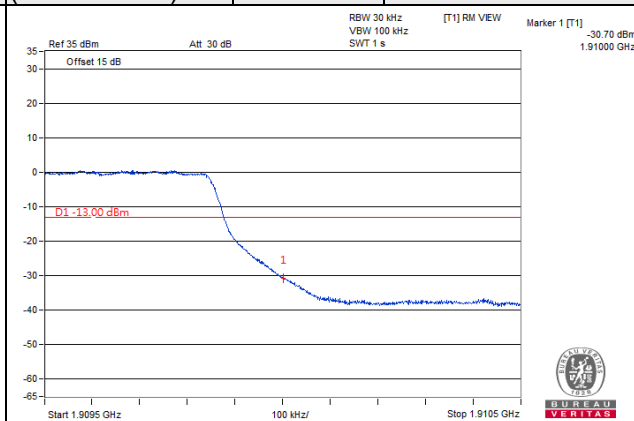
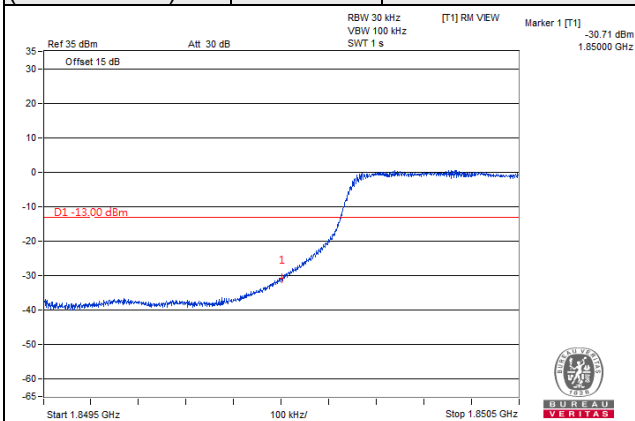
256QAM

15 RB / 0 RB Offset

Channel 19185
(1908.50MHz)

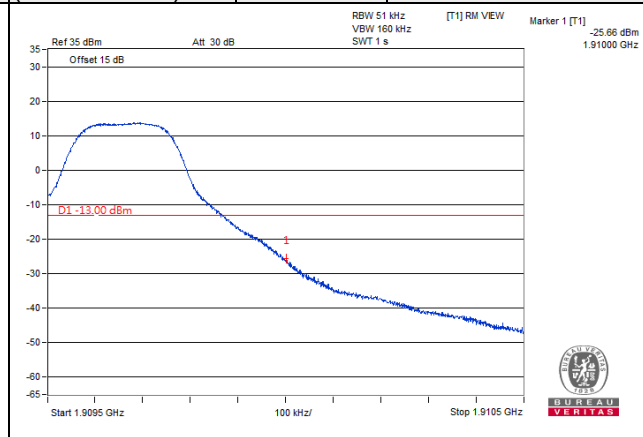
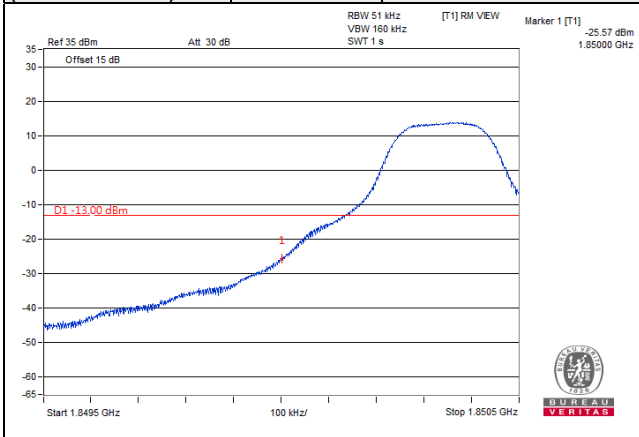
256QAM

15 RB / 0 RB Offset

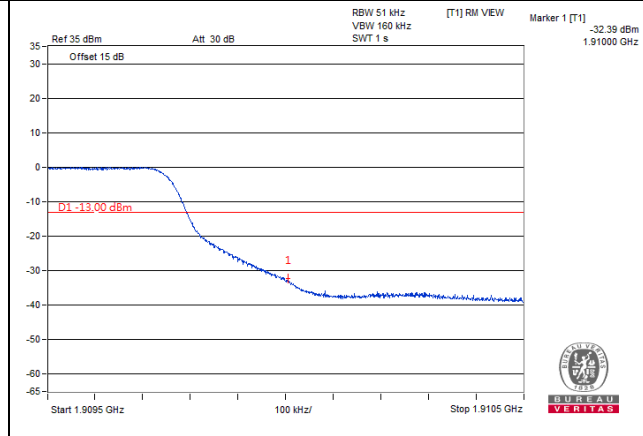
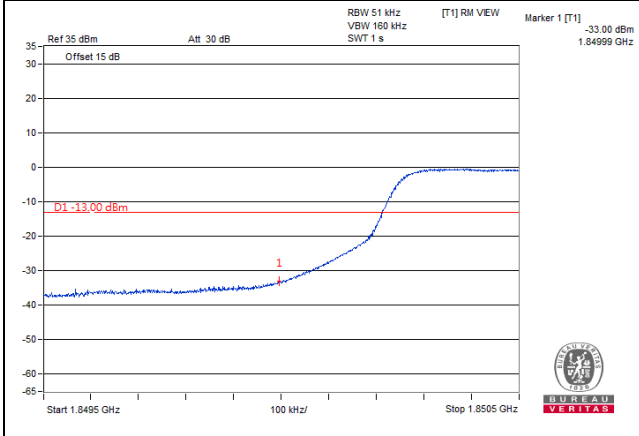


LTE Band 2, Channel Bandwidth 5MHz

Channel 18625 (1852.50MHz)	256QAM	1 RB / 0 RB Offset	Channel 19175 (1907.50MHz)	256QAM	1 RB / 24 RB Offset
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Channel 18625 (1852.50MHz)	256QAM	25 RB / 0 RB Offset	Channel 19175 (1907.50MHz)	256QAM	25 RB / 0 RB Offset
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LTE Band 2, Channel Bandwidth 10MHz

**Channel 18650
(1855.00MHz)**

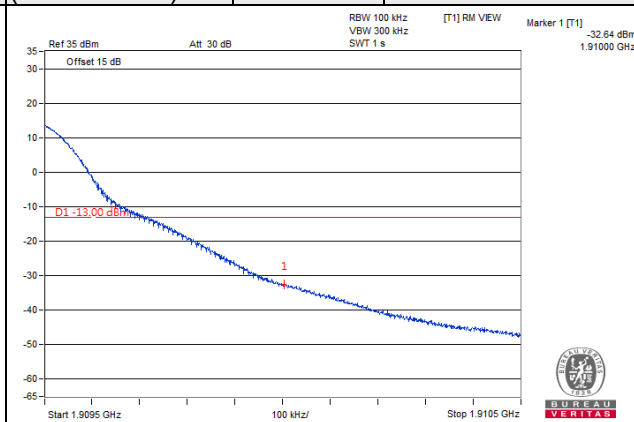
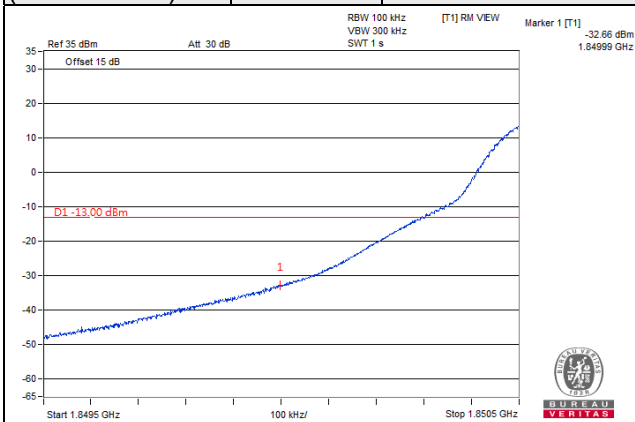
256QAM

1 RB / 0 RB Offset

**Channel 19150
(1905.00MHz)**

256QAM

1 RB / 49 RB Offset



**Channel 18650
(1855.00MHz)**

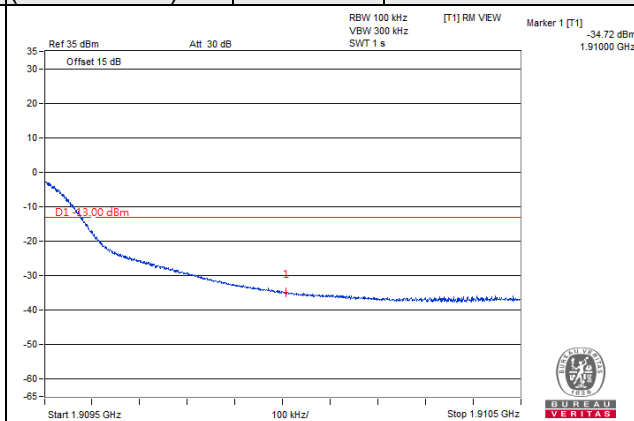
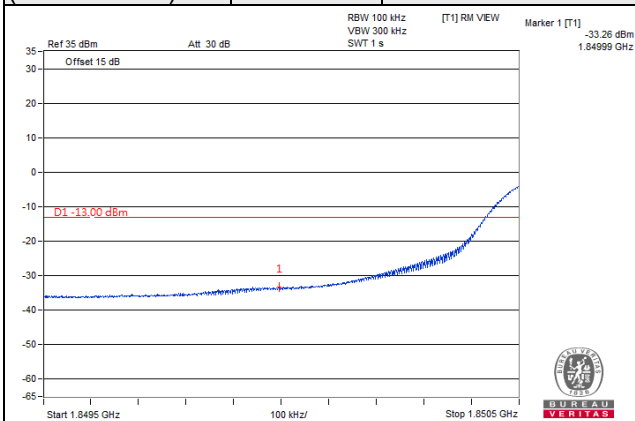
256QAM

50 RB / 0 RB Offset

**Channel 19150
(1905.00MHz)**

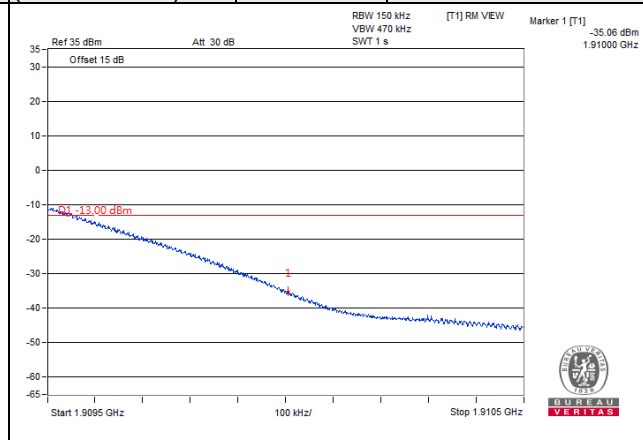
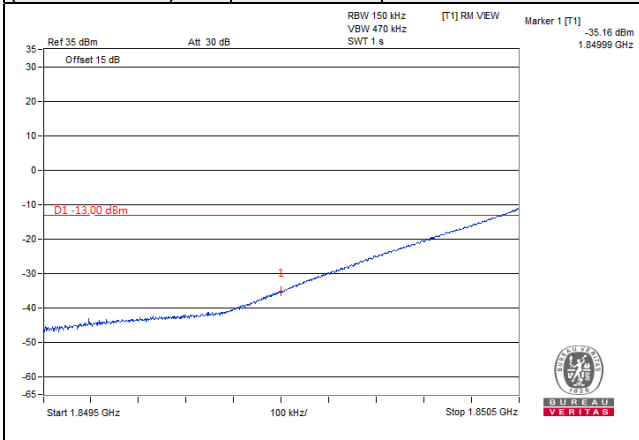
256QAM

50 RB / 0 RB Offset

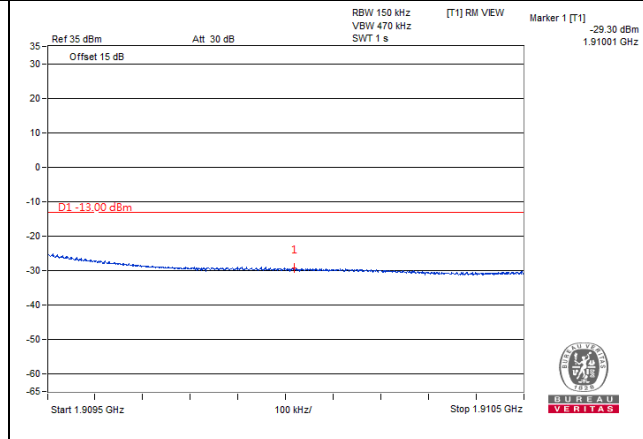
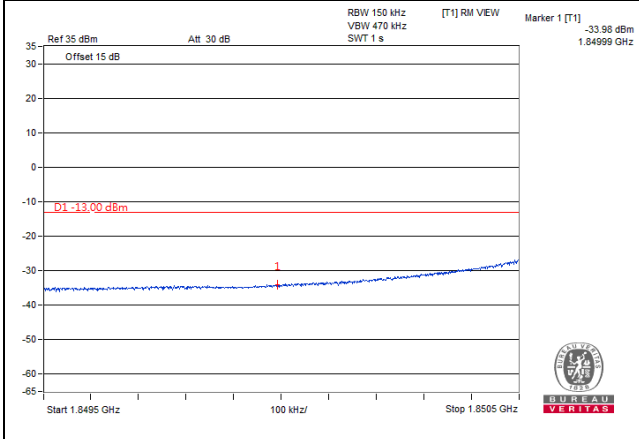


LTE Band 2, Channel Bandwidth 15MHz

Channel 18675 (1857.50MHz)	256QAM	1 RB / 0 RB Offset	Channel 19125 (1902.50MHz)	256QAM	1 RB / 74 RB Offset
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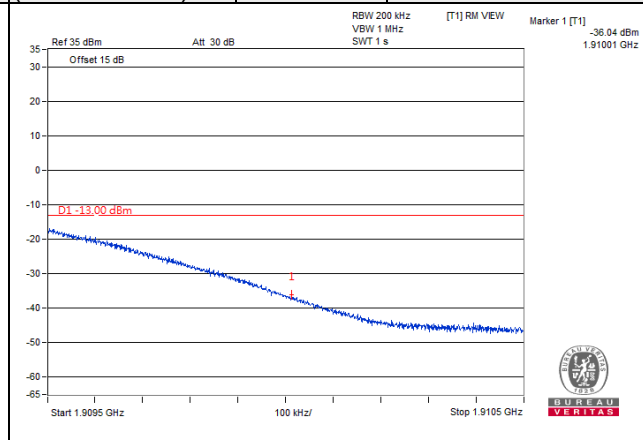
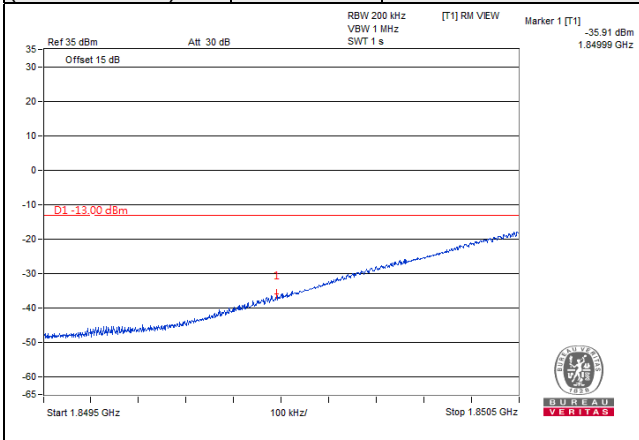


Channel 18675 (1857.50MHz)	256QAM	75 RB / 0 RB Offset	Channel 19125 (1902.50MHz)	256QAM	75 RB / 0 RB Offset
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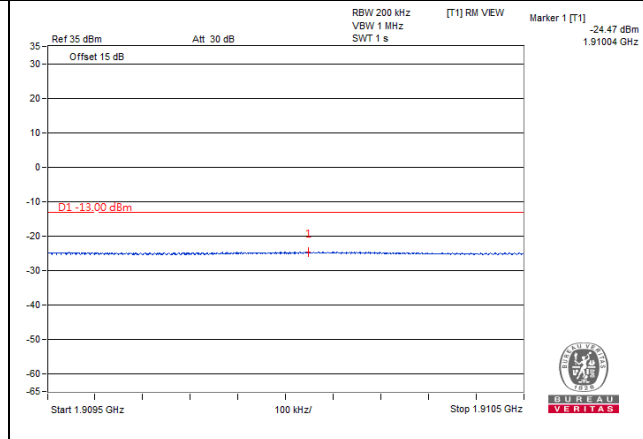
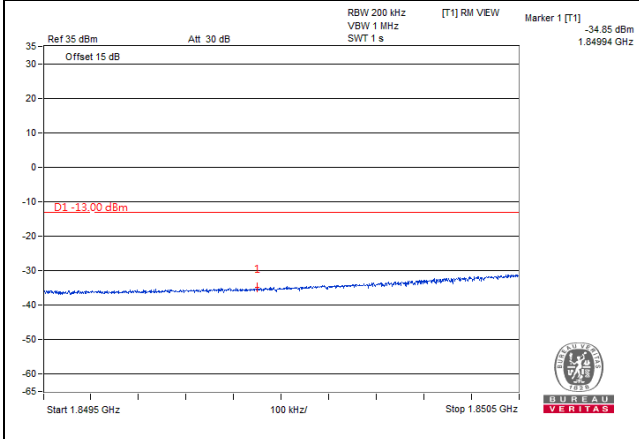


LTE Band 2, Channel Bandwidth 20MHz

Channel 18700 (1860.00MHz)	256QAM	1 RB / 0 RB Offset	Channel 19100 (1900.00 MHz)	256QAM	1 RB / 99 RB Offset
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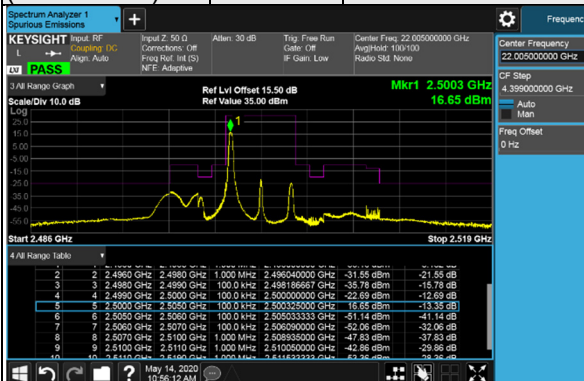
Channel 18700 (1860.00MHz)	256QAM	100 RB / 0 RB Offset	Channel 19100 (1900.00 MHz)	256QAM	100 RB / 0 RB Offset
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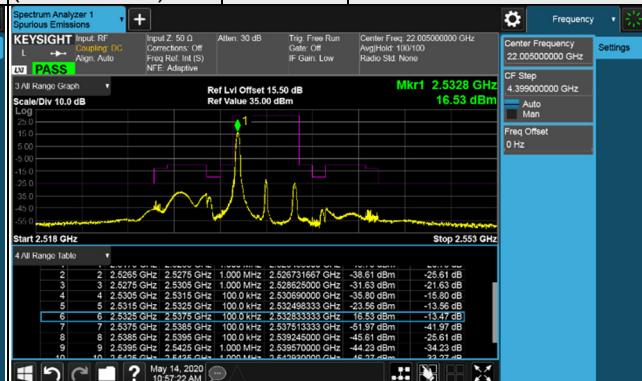
LTE Band 7
Emission Mask:

Channel Bandwidth: 5MHz

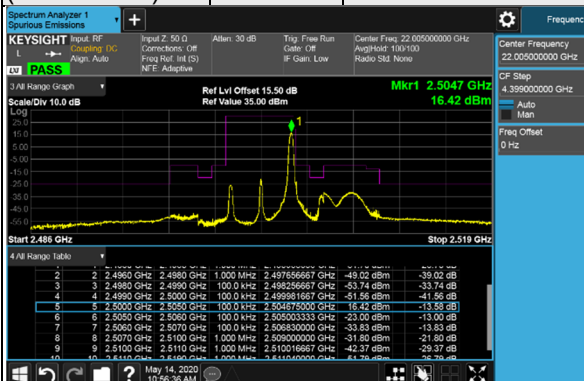
Channel 20775 (2502.5MHz) 256QAM 1 RB / 0 RB Offset



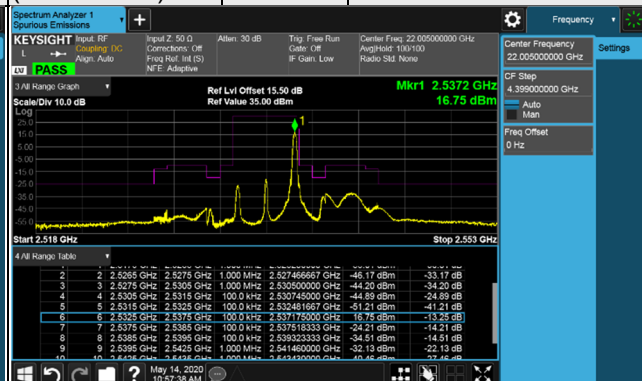
Channel 21100 (2535.0MHz) 256QAM 1 RB / 0 RB Offset



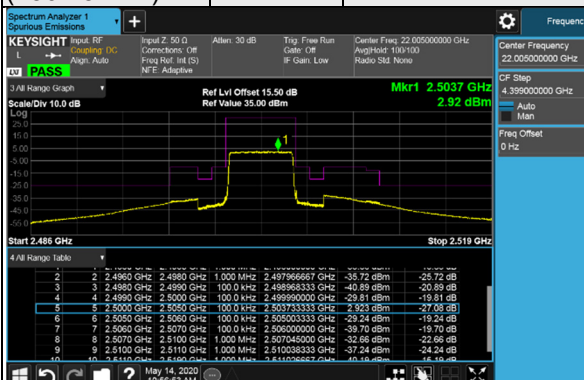
Channel 20775 (2502.5MHz) 256QAM 1 RB / 24 RB Offset



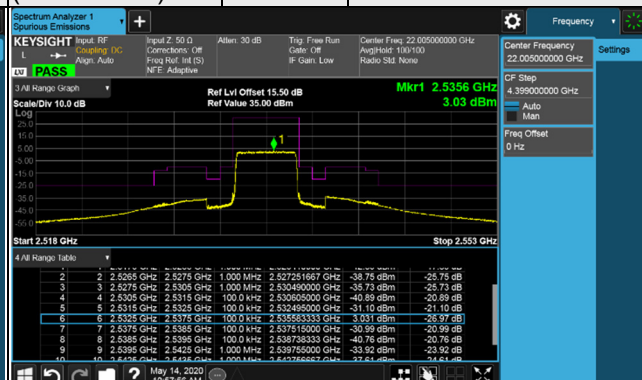
Channel 21100 (2535.0MHz) 256QAM 1 RB / 24 RB Offset



Channel 20775 (2502.5MHz) 256QAM 25 RB / 0 RB Offset

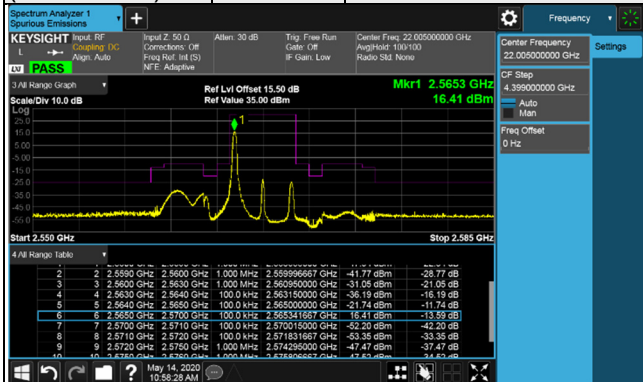


Channel 21100 (2535.0MHz) 256QAM 25 RB / 0 RB Offset

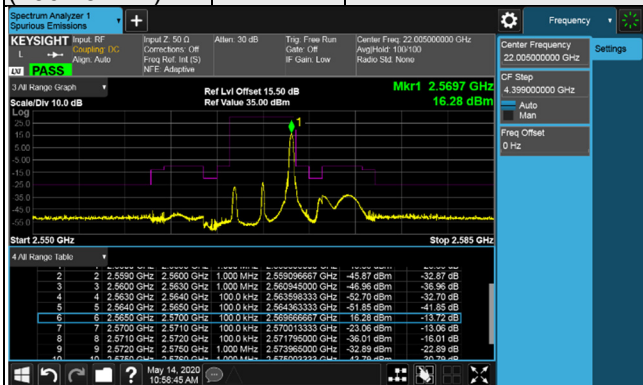


Channel Bandwidth: 5MHz

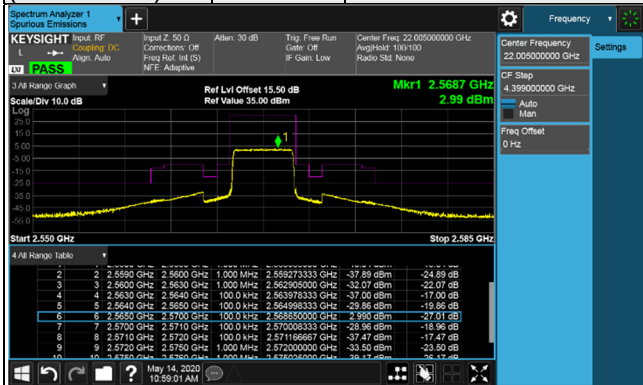
Channel 21425 (2567.5MHz) 256QAM 1 RB / 0 RB Offset



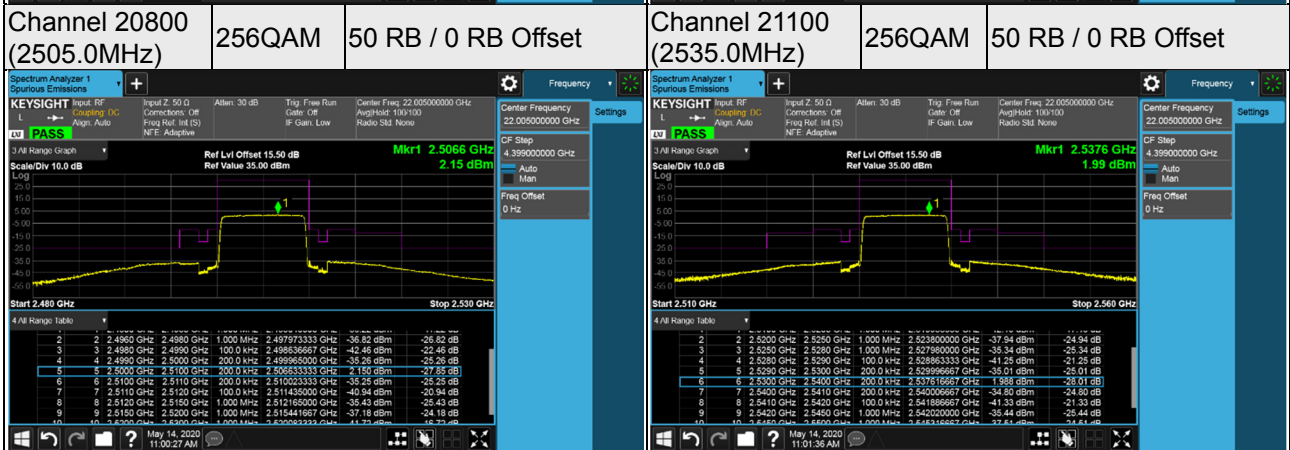
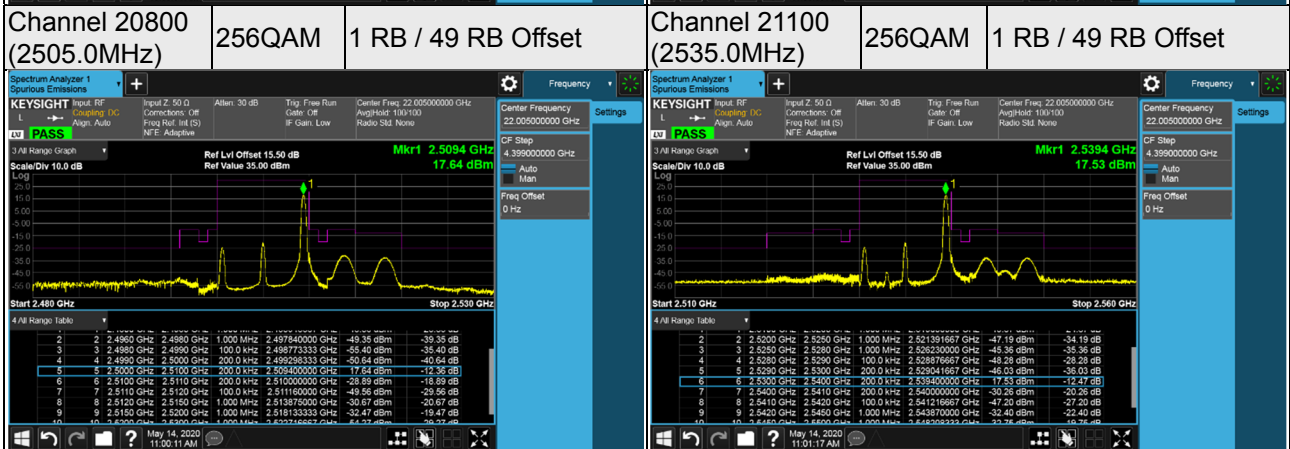
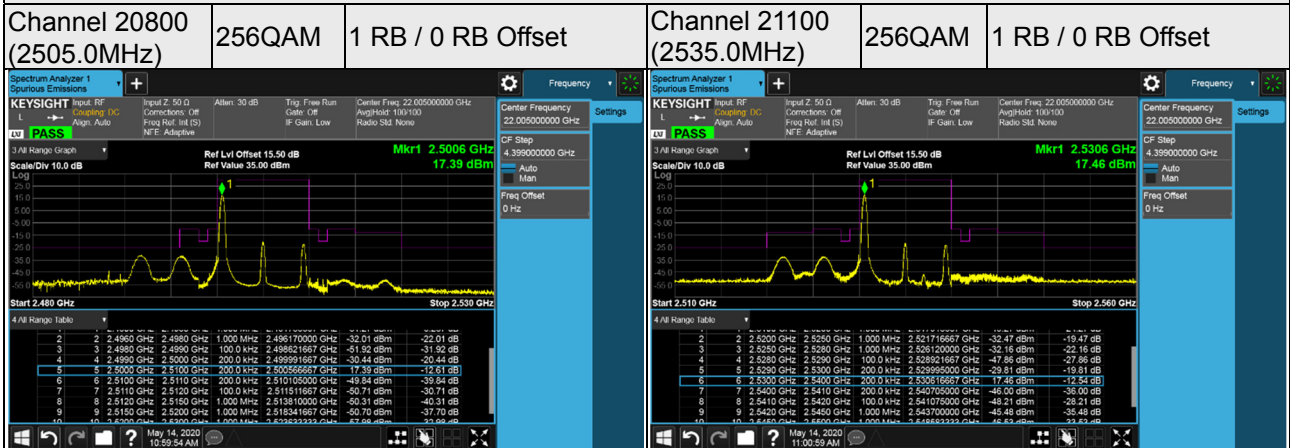
Channel 21425 (2567.5MHz) 256QAM 1 RB / 24 RB Offset



Channel 21425 (2567.5MHz) 256QAM 25 RB / 0 RB Offset

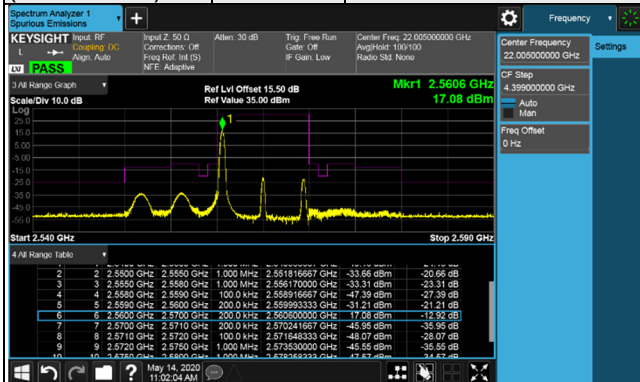


Channel Bandwidth: 10MHz

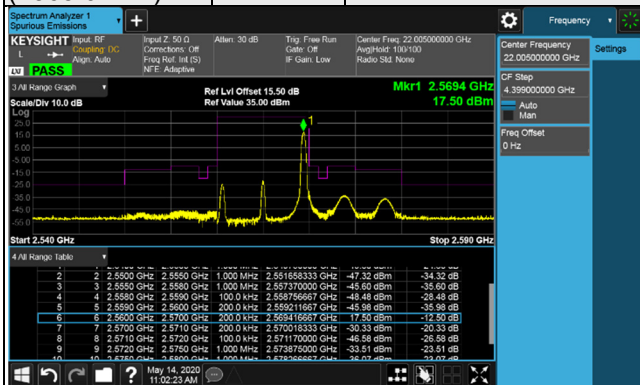


Channel Bandwidth: 10MHz

Channel 21400 (2565.0MHz) 256QAM 1 RB / 0 RB Offset



Channel 21400 (2565.0MHz) 256QAM 1 RB / 49 RB Offset



Channel 21400 (2565.0MHz) 256QAM 50 RB / 0 RB Offset

