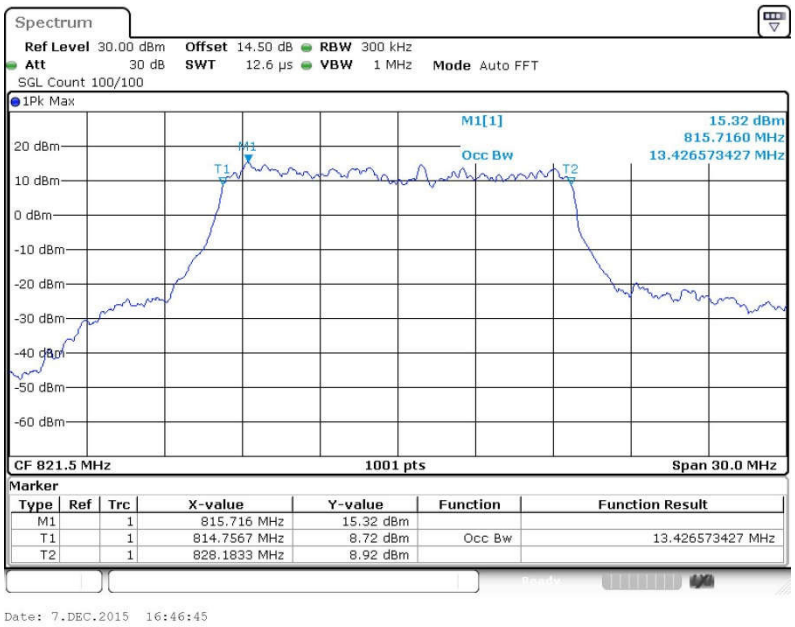
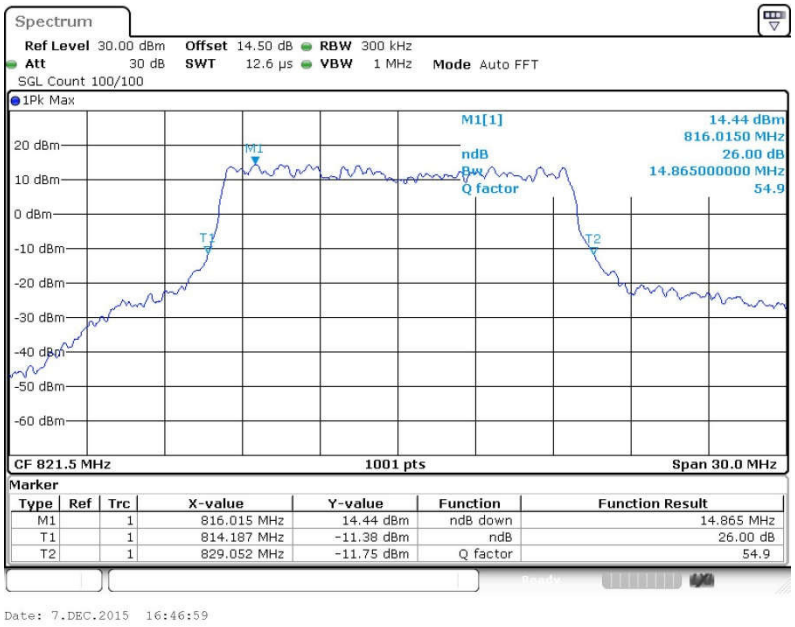
99% Occupied Bandwidth Plot on Channel 26765 for QPSK-RB Size 75, RB Offset 0



Date: 7.DEC.2015 16:46:45

26dB Bandwidth Plot on Channel 26765

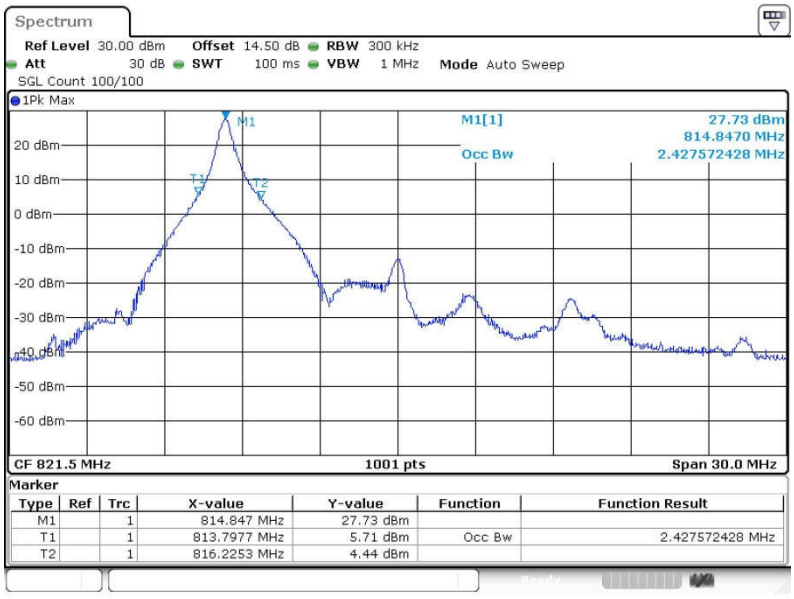


Date: 7.DEC.2015 16:46:59

Band :	LTE Band 26	BW / Mod. :	15MHz / 16QAM

99% Occupied Bandwidth Plot on Channel 26765 for

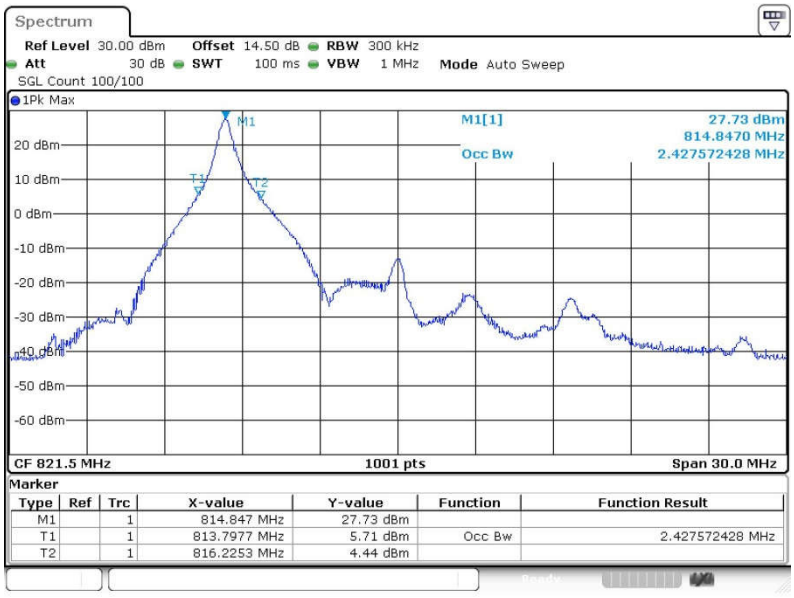
16QAM-RB Size 1, RB Offset 0



Date: 22.JAN.2016 01:25:00

99% Occupied Bandwidth Plot on Channel 26765 for

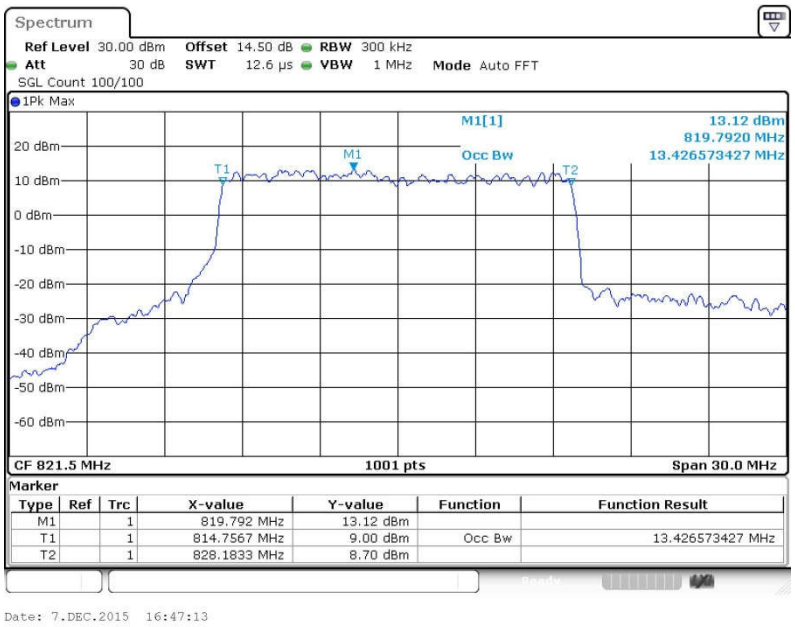
16QAM-RB Size 1, RB Offset 74



Date: 22.JAN.2016 01:25:00

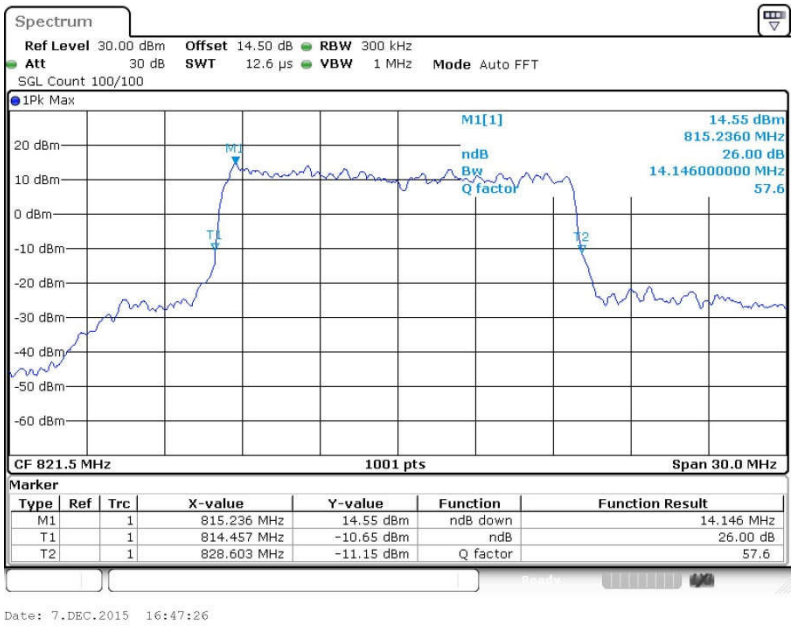
99% Occupied Bandwidth Plot on Channel 26765 for

16QAM-RB Size 75, RB Offset 0



Date: 7.DEC.2015 16:47:13

26dB Bandwidth Plot on Channel 26765



Date: 7.DEC.2015 16:47:26

3.3 Emissions Mask Measurement

3.3.1 Description of Emissions Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691.(a)

(a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log_{10}(f/6.1) decibels or 50 + 10 Log_{10}(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log_{10}(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

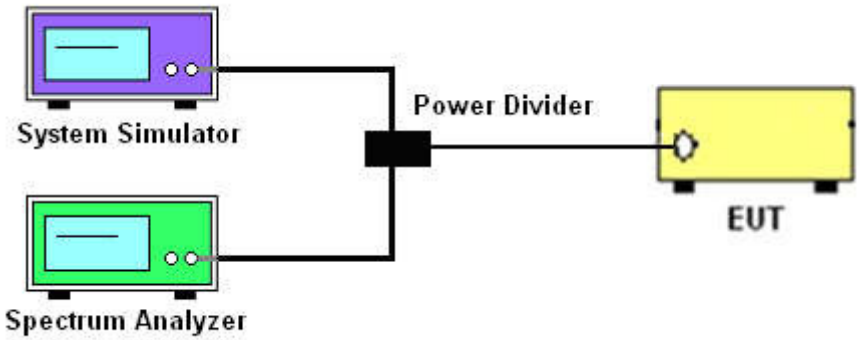
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The band edges of low and high channels for the highest RF powers were measured.
4. Set spectrum analyzer with RMS detector.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. Checked that all the results comply with the emission limit line.

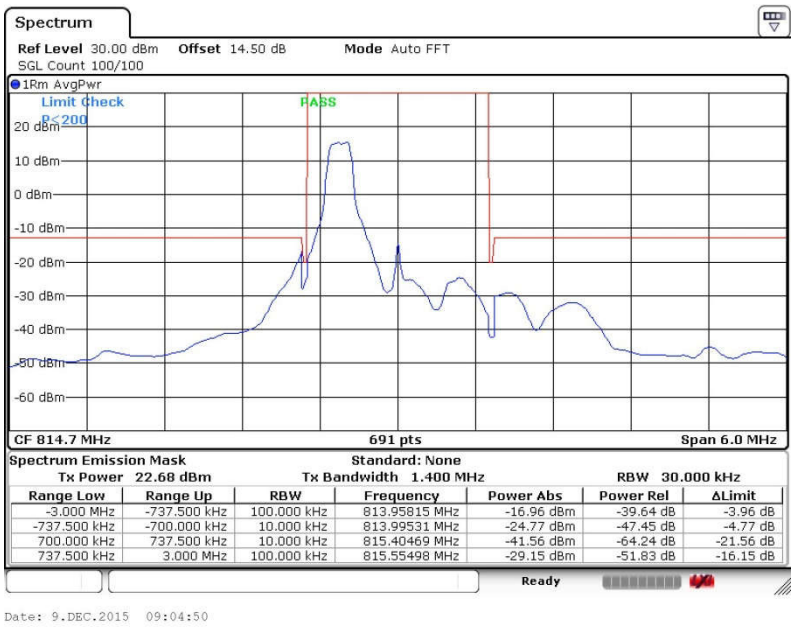
3.3.4 Test Setup



3.3.5 Test Result (Plots) of Conducted Emissions Mask

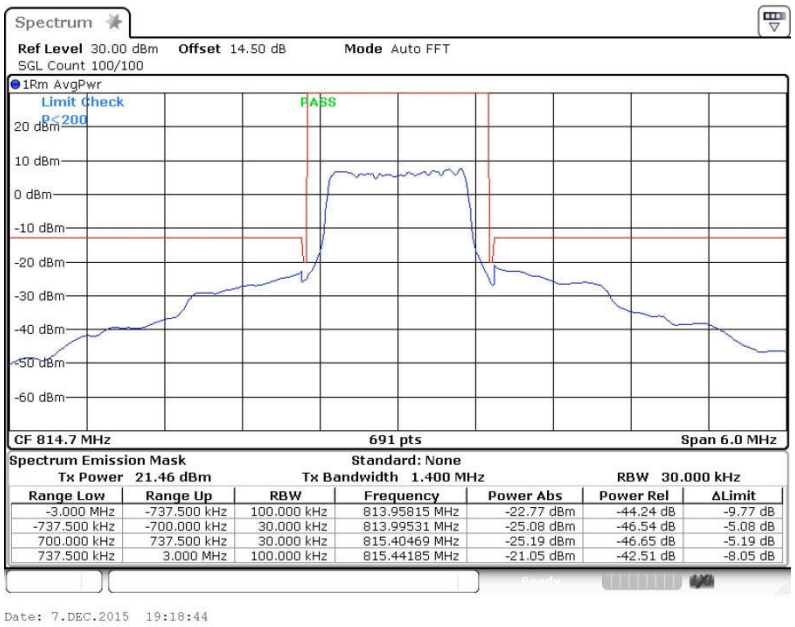
Band :	LTE Band 26	Band Width :	1.4MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



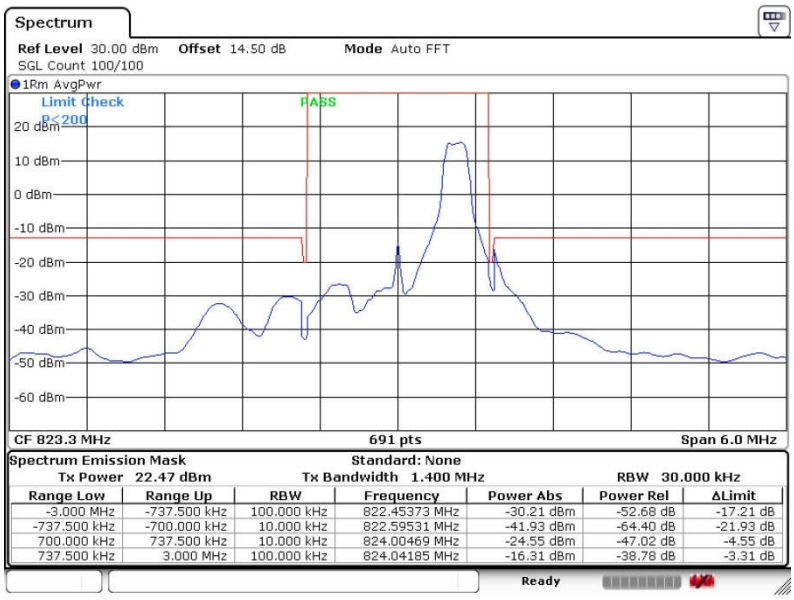
Date: 9.DEC.2015 09:04:50

Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0



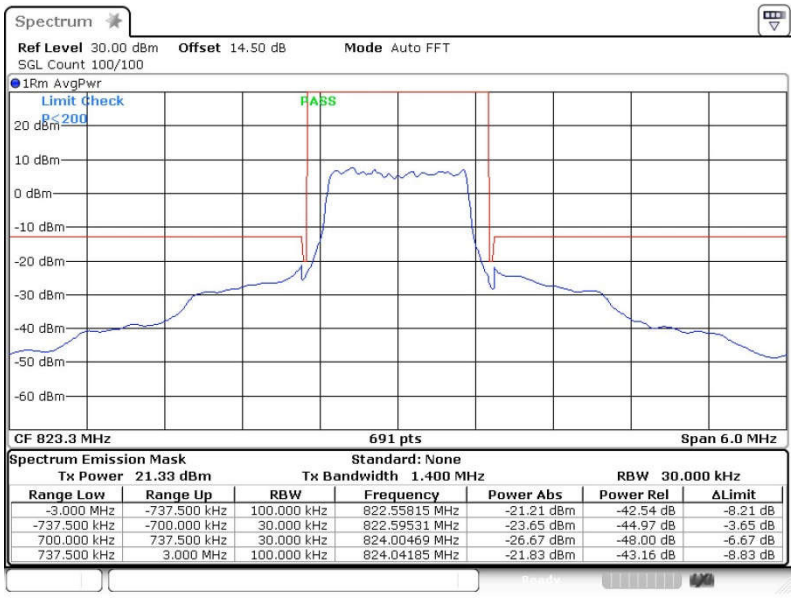
Date: 7.DEC.2015 19:18:44

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Date: 9.DEC.2015 09:19:18

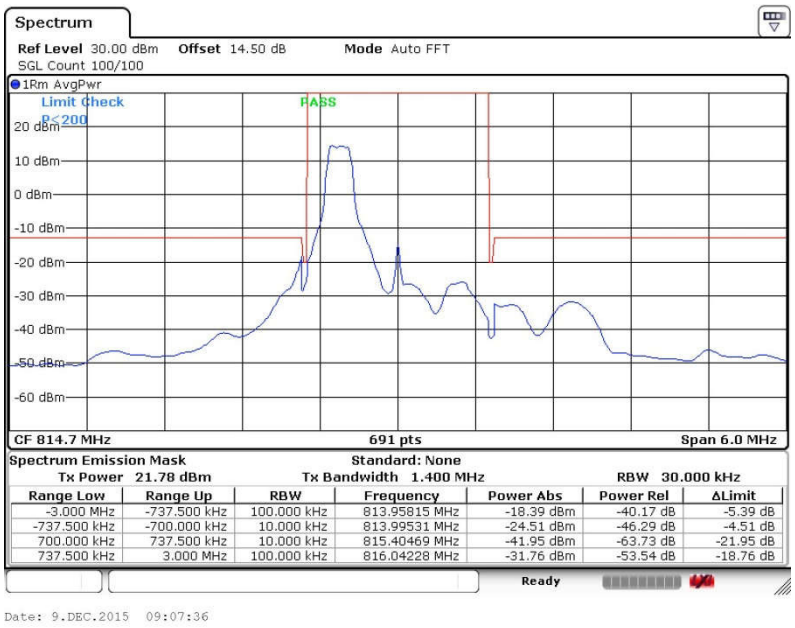
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



Date: 7.DEC.2015 19:20:27

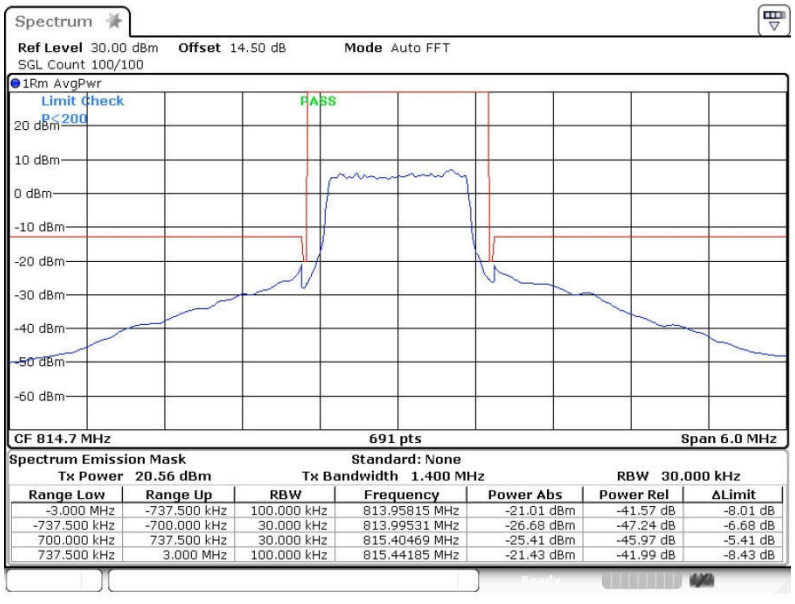
Band :	LTE Band 26	Band Width :	1.4MHz / 16QAM

Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



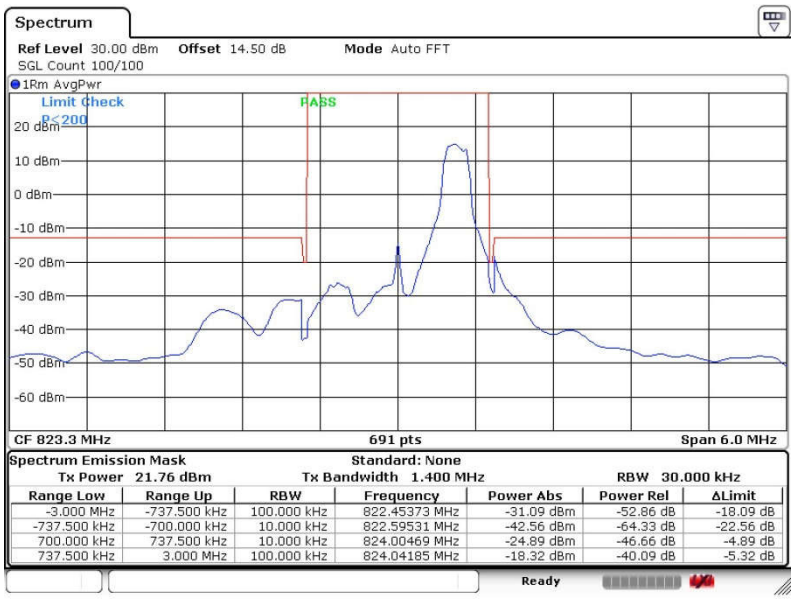
Date: 9.DEC.2015 09:07:36

Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



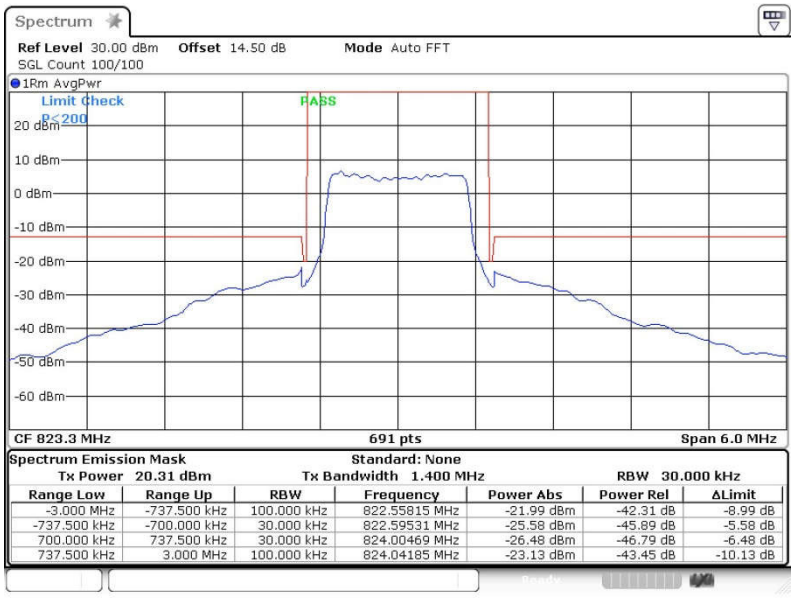
Date: 7.DEC.2015 19:19:36

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Date: 9.DEC.2015 09:18:45

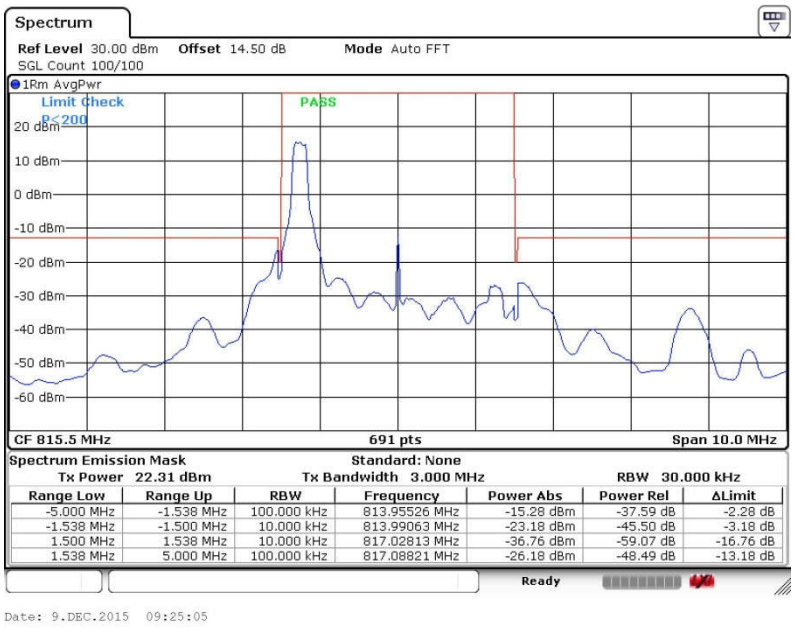
Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



Date: 7.DEC.2015 19:20:02

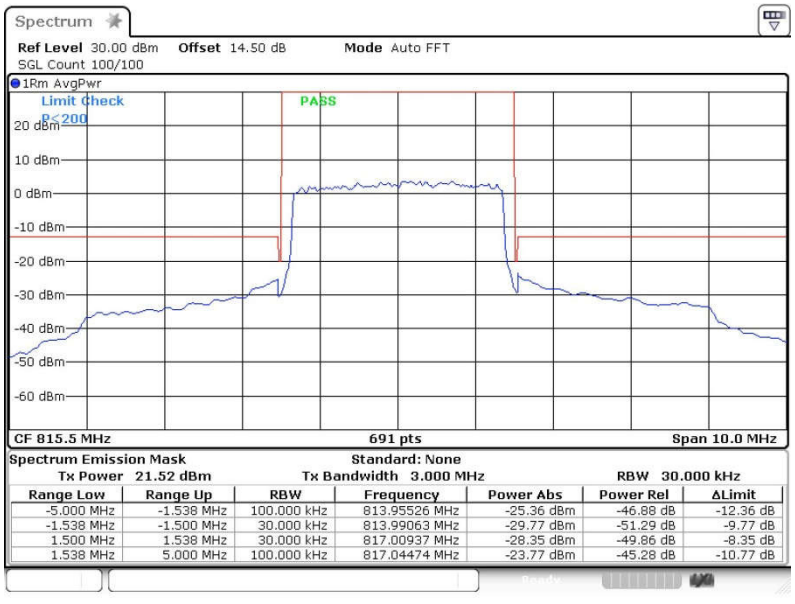
Band :	LTE Band 26	Band Width :	3MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



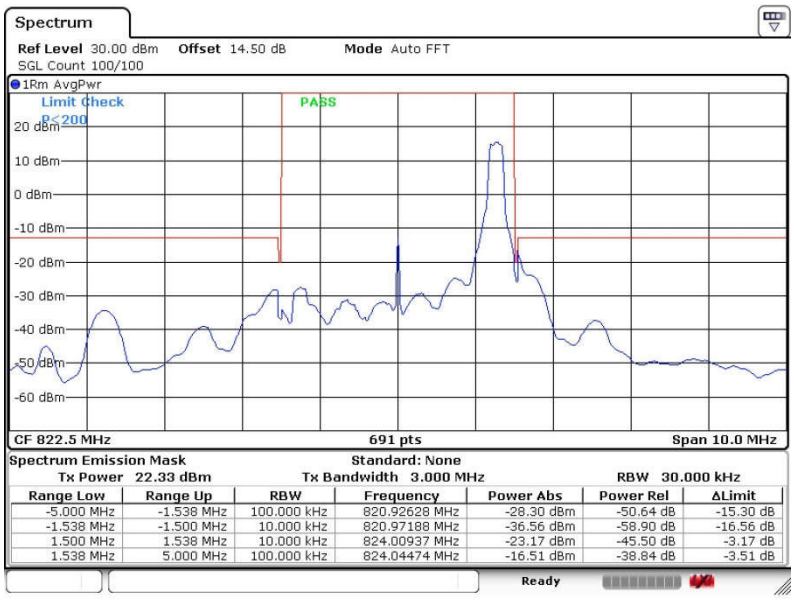
Date: 9.DEC.2015 09:25:05

Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



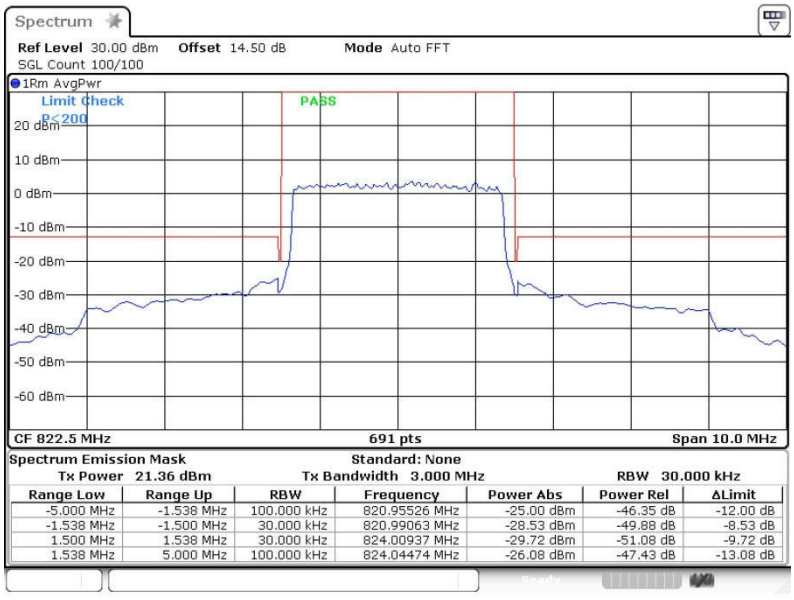
Date: 7.DEC.2015 19:16:24

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 9.DEC.2015 09:35:11

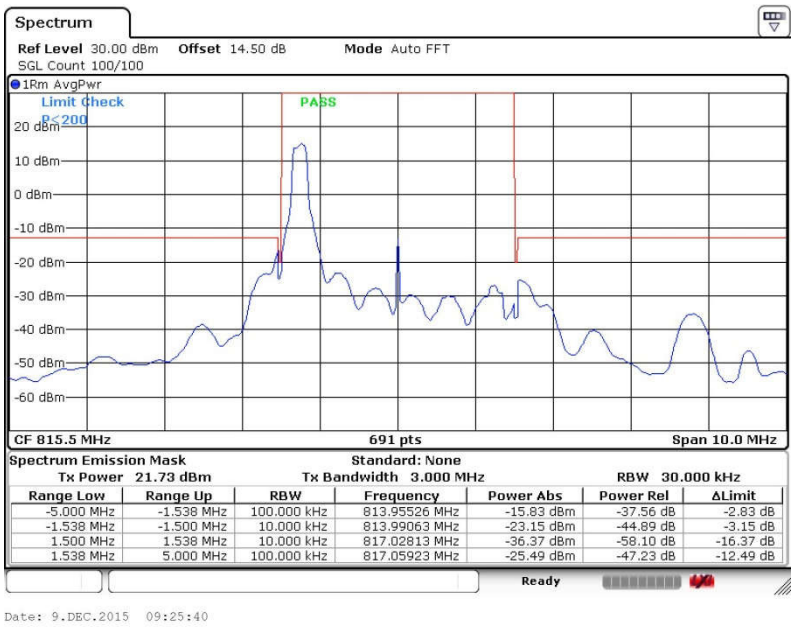
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



Date: 7.DEC.2015 19:16:54

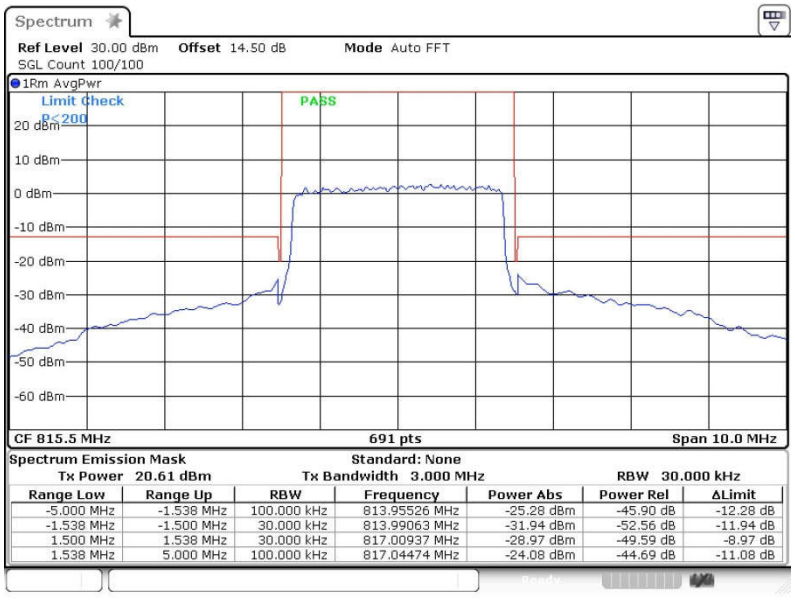
Band :	LTE Band 26	Band Width :	3MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



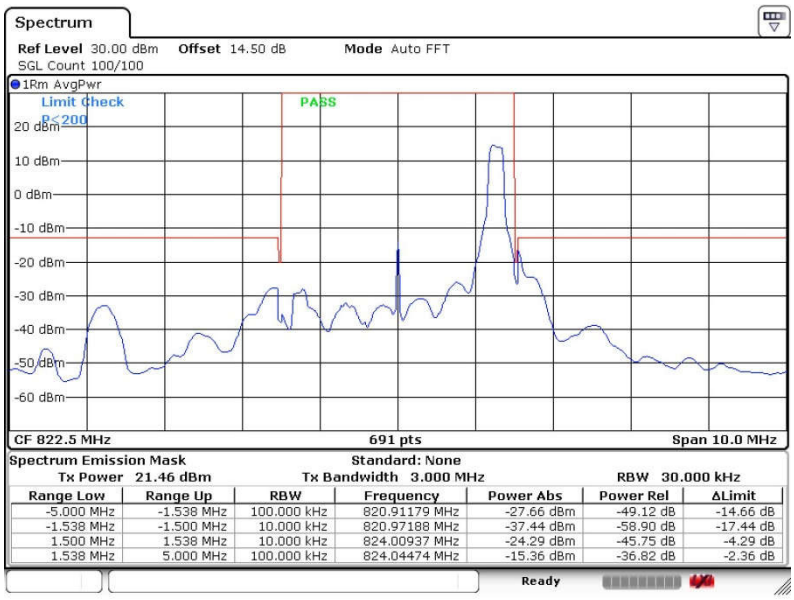
Date: 9.DEC.2015 09:25:40

Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



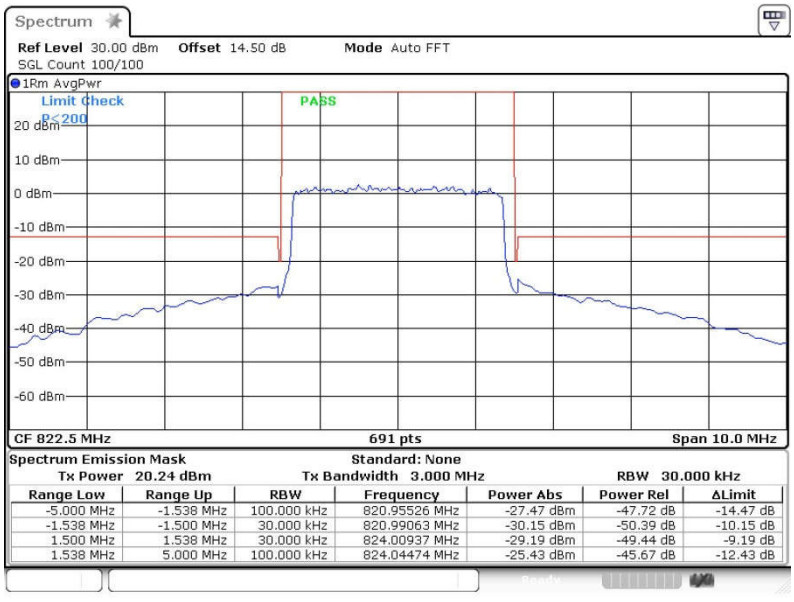
Date: 7.DEC.2015 19:15:56

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Date: 9.DEC.2015 09:35:52

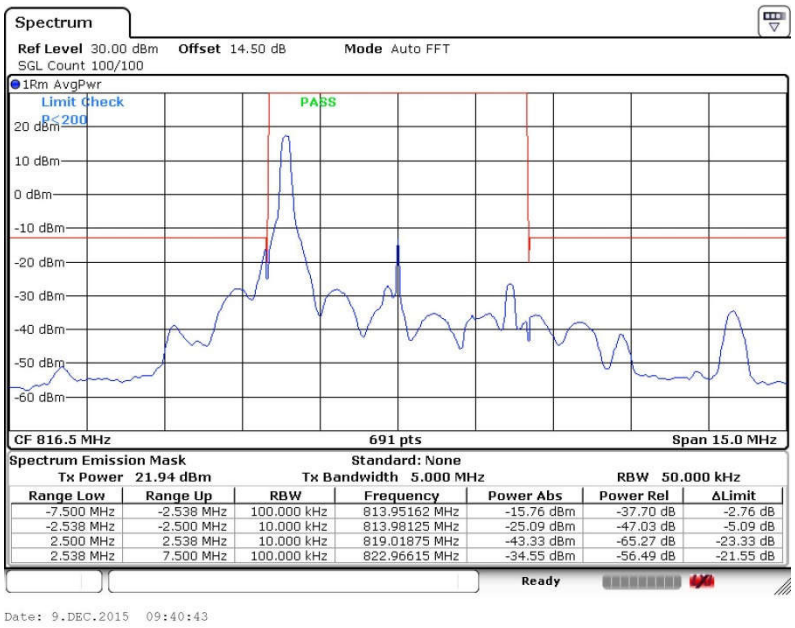
Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



Date: 7.DEC.2015 19:17:26

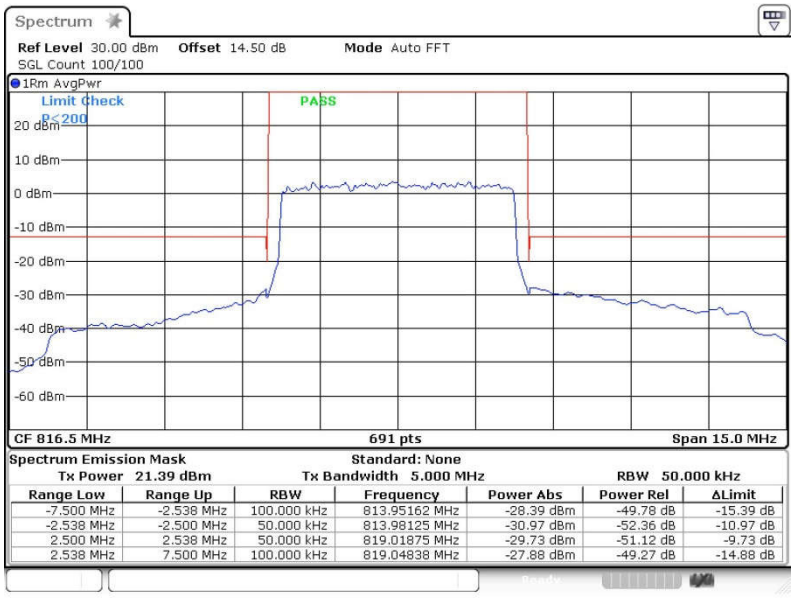
Band :	LTE Band 26	Band Width :	5MHz / QPSK

Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0



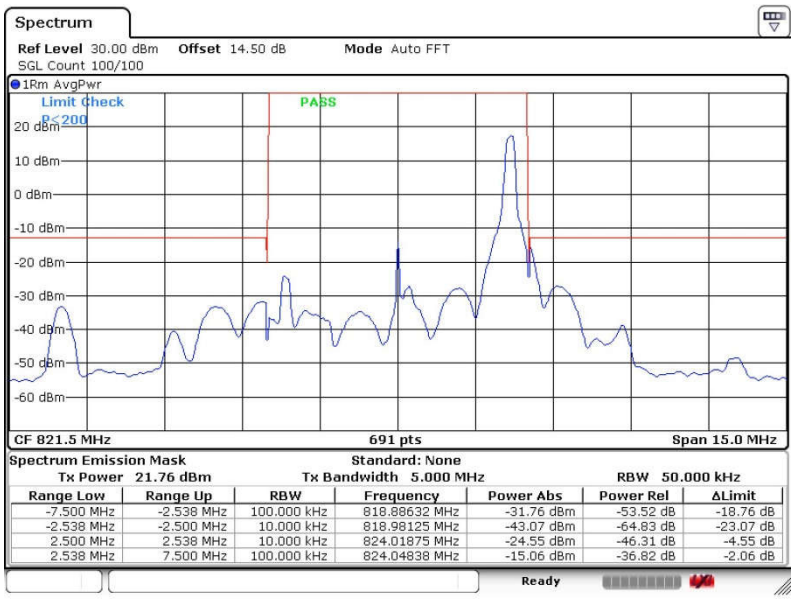
Date: 9.DEC.2015 09:40:43

Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



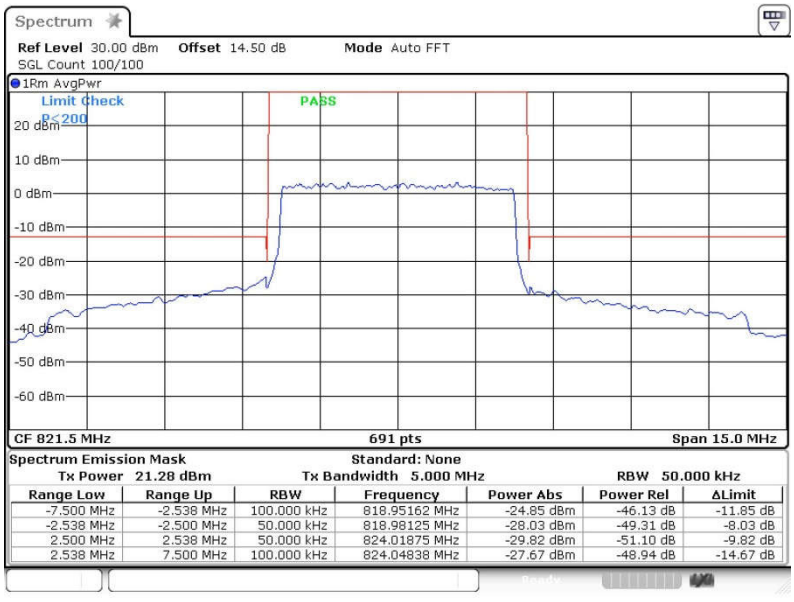
Date: 7.DEC.2015 19:13:59

Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 9.DEC.2015 09:39:31

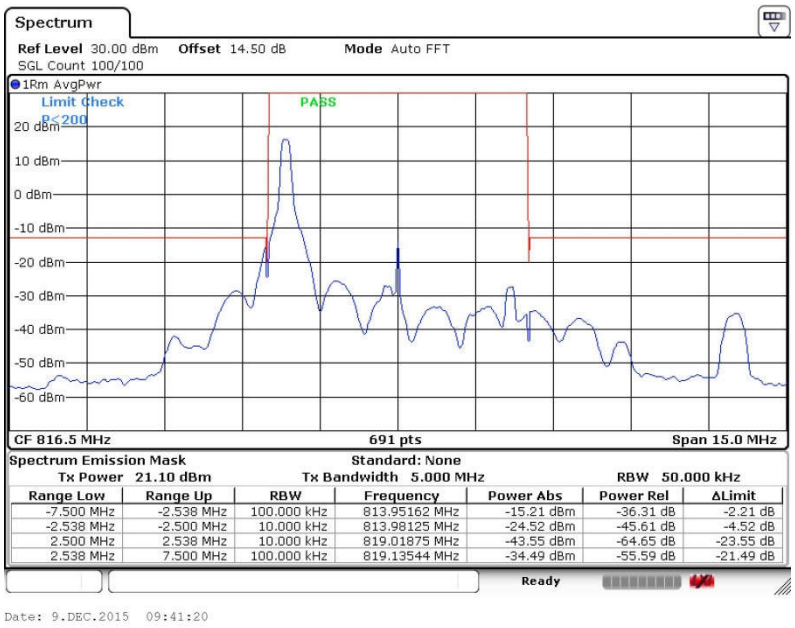
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



Date: 7.DEC.2015 19:14:31

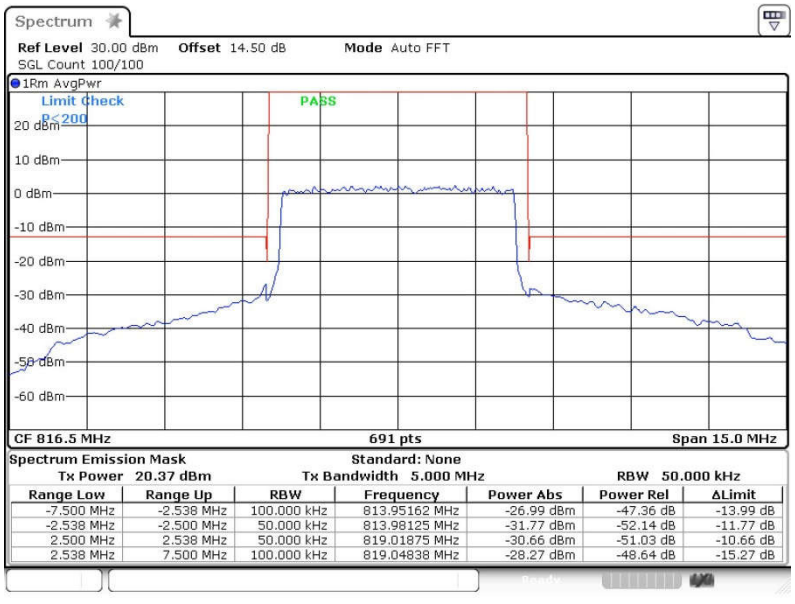
Band :	LTE Band 26	Band Width :	5MHz / 16QAM

Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



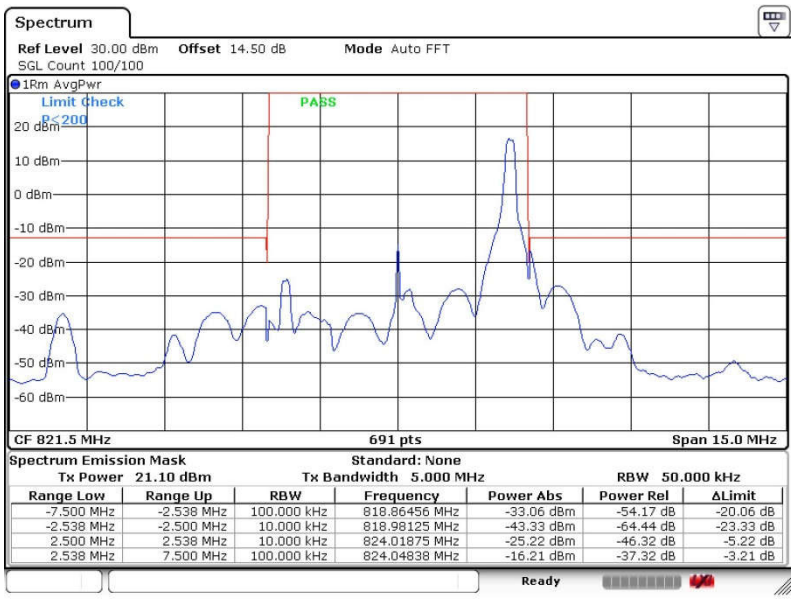
Date: 9.DEC.2015 09:41:20

Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



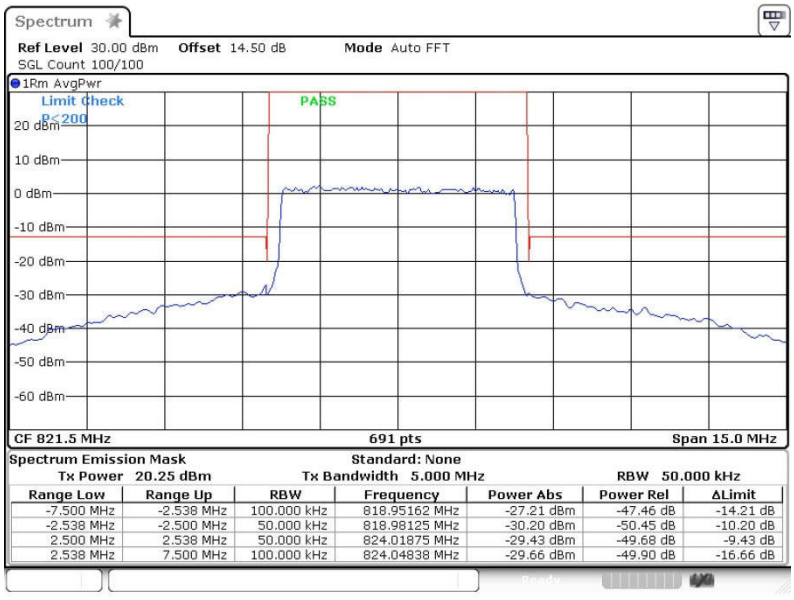
Date: 7.DEC.2015 19:13:30

Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 9.DEC.2015 09:38:17

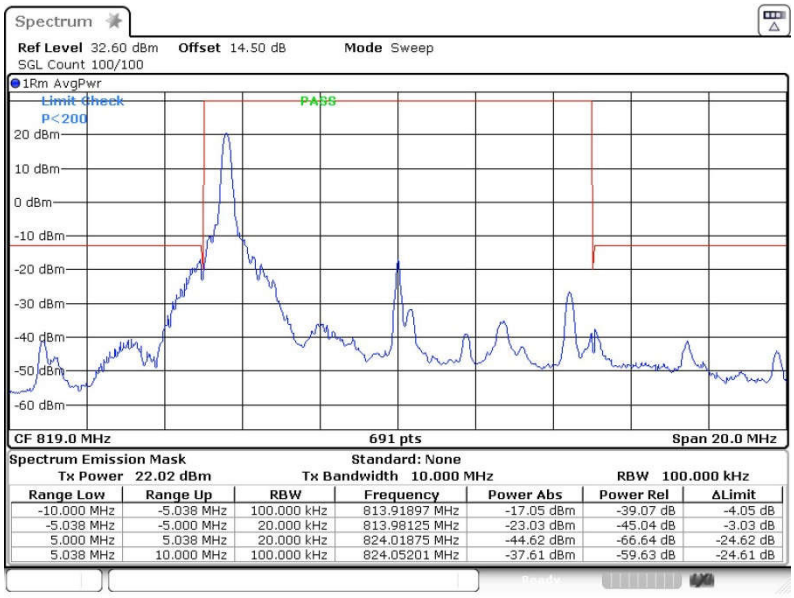
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



Date: 7.DEC.2015 19:15:01

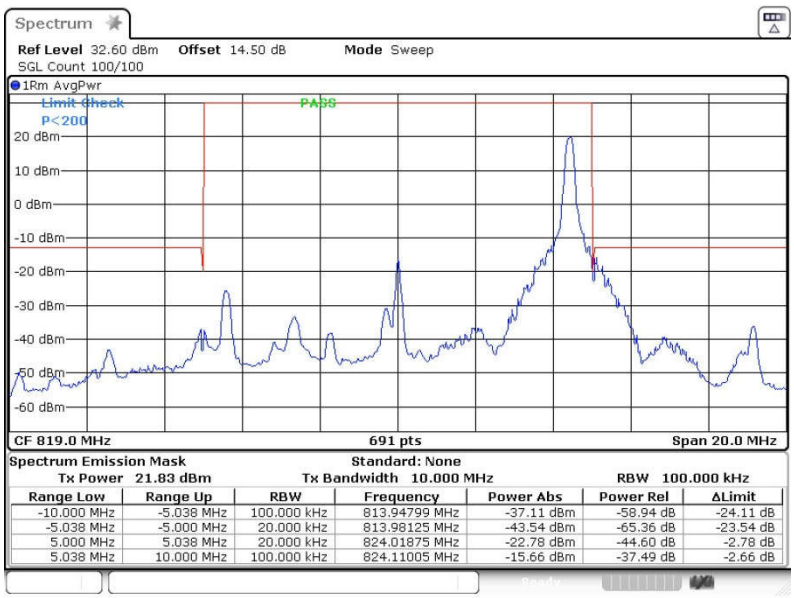
Band :	LTE Band 26	Band Width :	10MHz / QPSK

Band Edge Plot for QPSK-RB Size 1, RB Offset 0



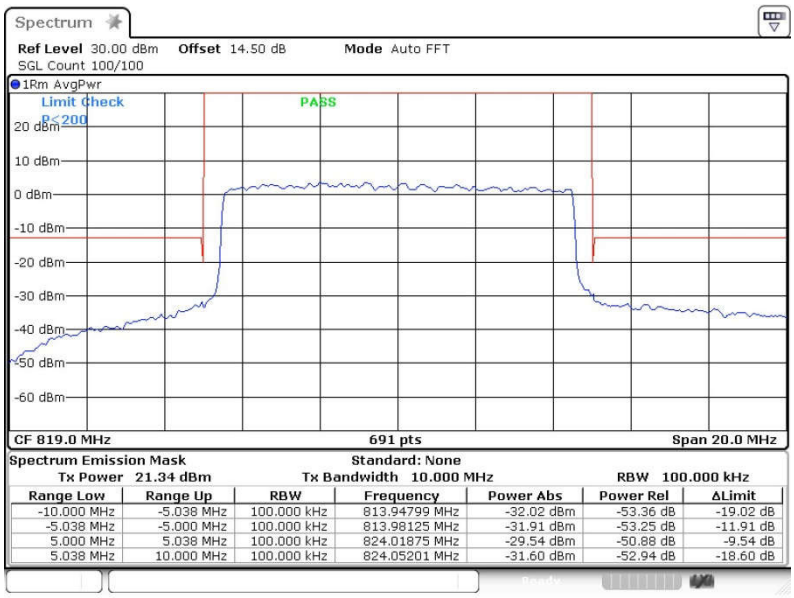
Date: 21.JAN.2016 23:22:31

Band Edge Plot for QPSK-RB Size 1, RB Offset 49



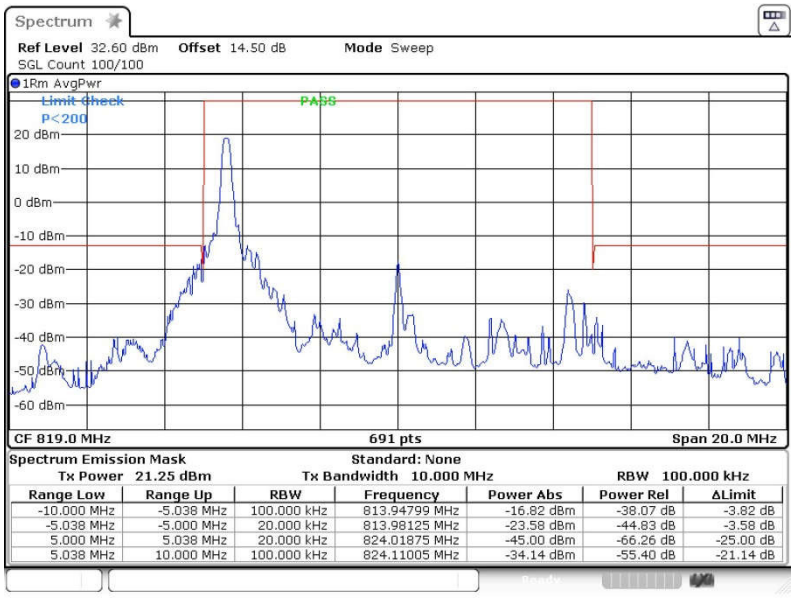
Date: 21.JAN.2016 23:23:52

Band Edge Plot for QPSK-RB Size 50 RB Offset 0



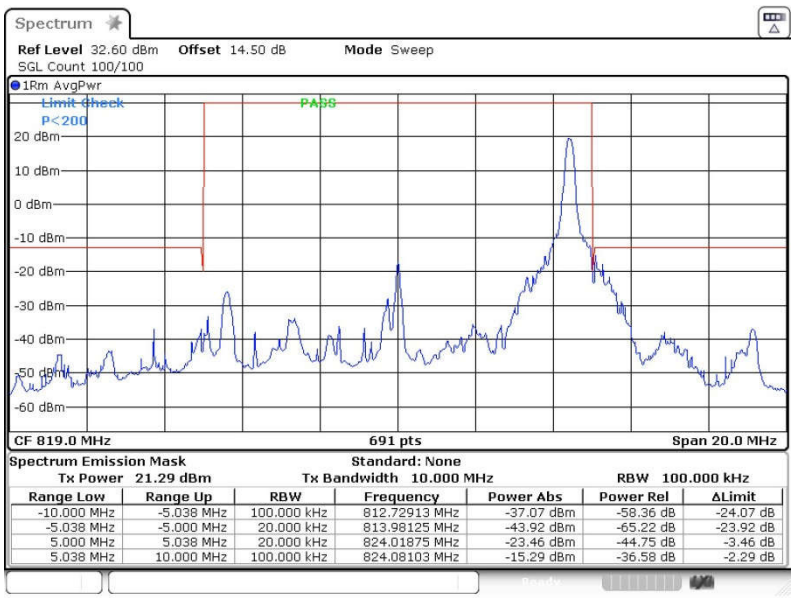
Band :	LTE Band 26	Band Width :	10MHz / 16QAM

Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



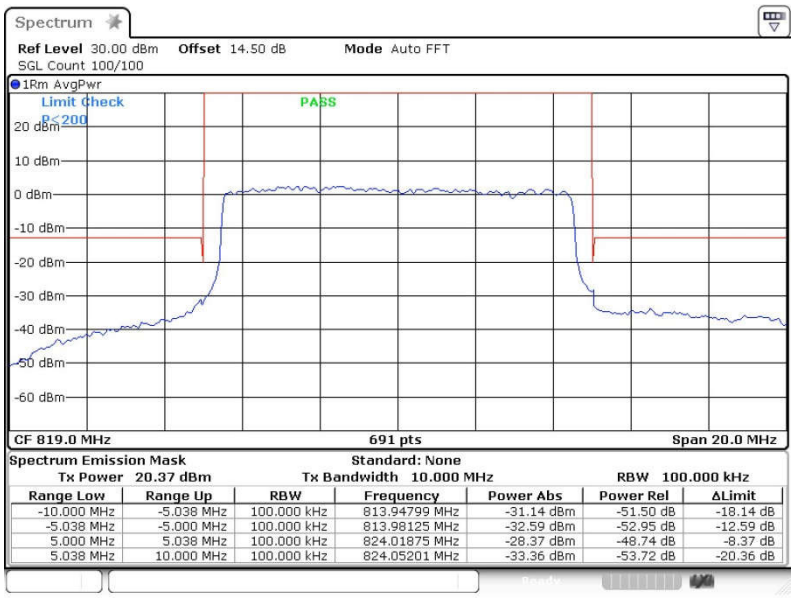
Date: 21.JAN.2016 23:21:25

Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



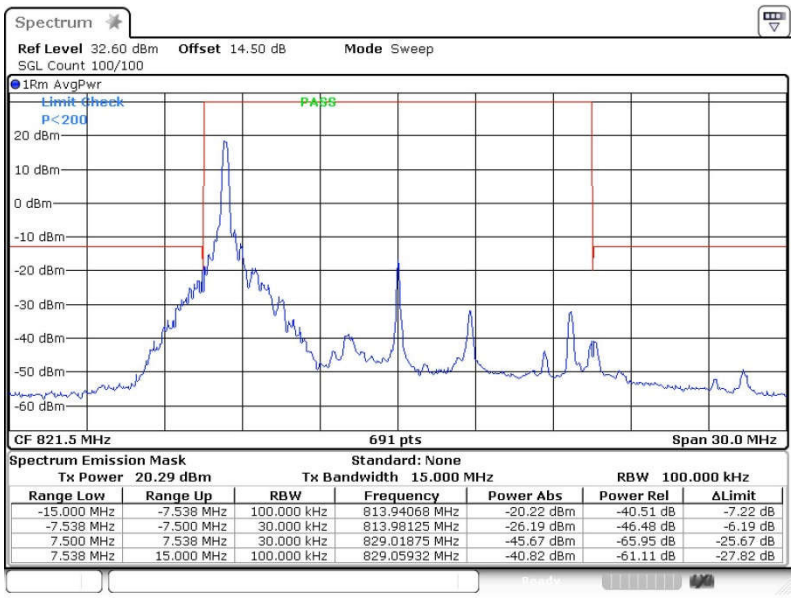
Date: 21.JAN.2016 23:24:47

Band Edge Plot for 16QAM-RB Size 50 RB Offset 0

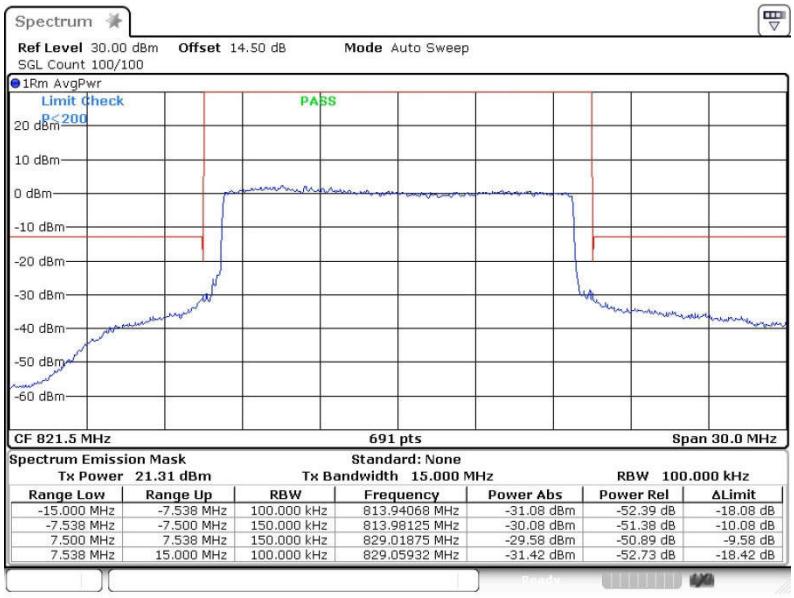


Band :	LTE Band 26	Band Width :	15MHz / QPSK

Band Edge Plot for QPSK-RB Size 1, RB Offset 0

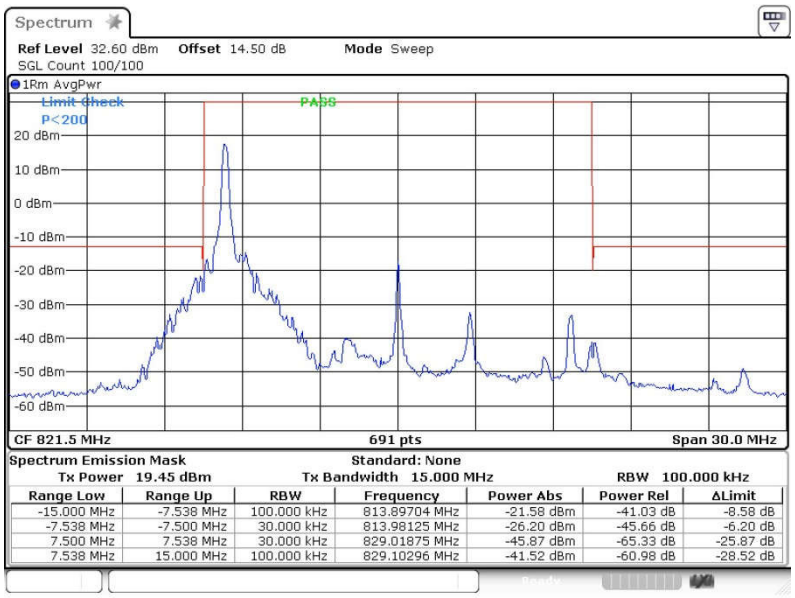


Band Edge Plot for QPSK-RB Size 75, RB Offset 0

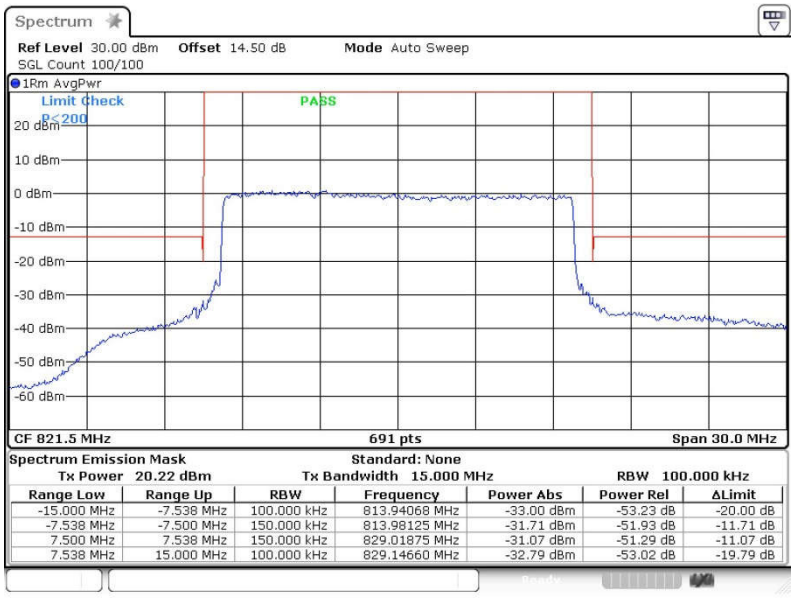


Band :	LTE Band 26	Band Width :	15MHz / 16QAM

Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



3.4 Emissions Mask – Out Of Band Emissions Measurement

3.4.1 Description of Conducted Emissions Out of band emissions measurement

The power of any emission FCC Part 90.691 (a)(2) on any frequency removed from the assigned frequency by out of the authorized bandwidth at least 43 + 10 log (P) dB. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

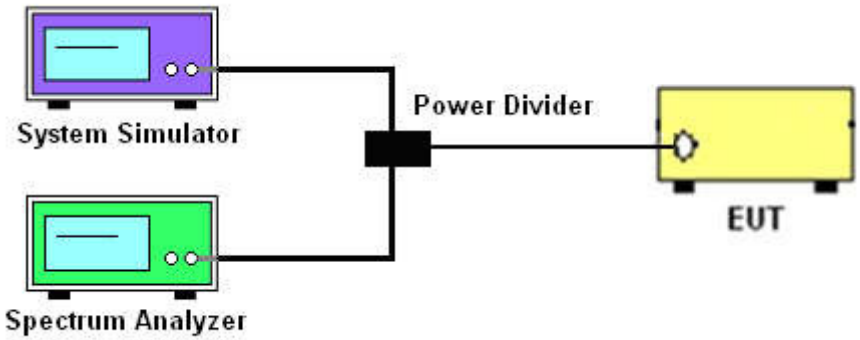
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 6.0.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The Low/ middle/ High channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz.
7. Set spectrum analyzer with RMS detector.
8. Taking the record of maximum spurious emission.
9. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
10. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.

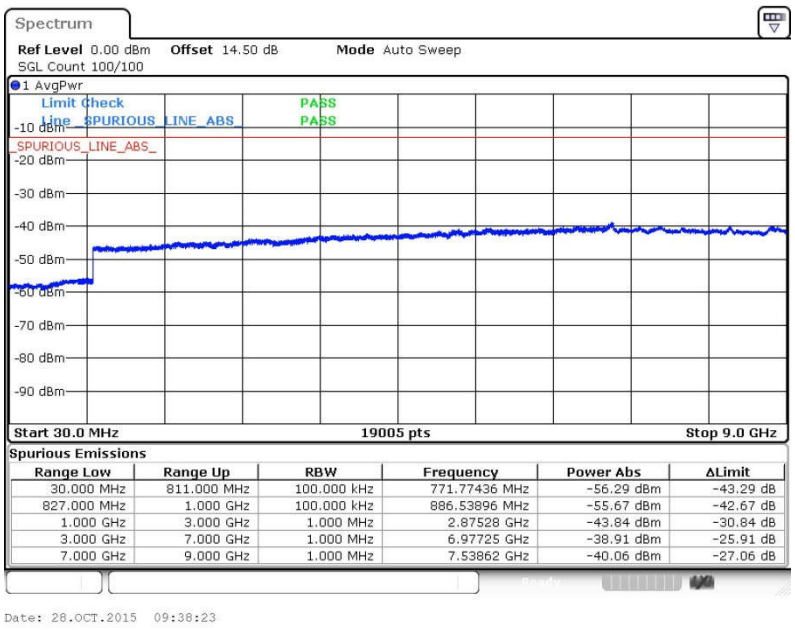
3.4.4 Test Setup



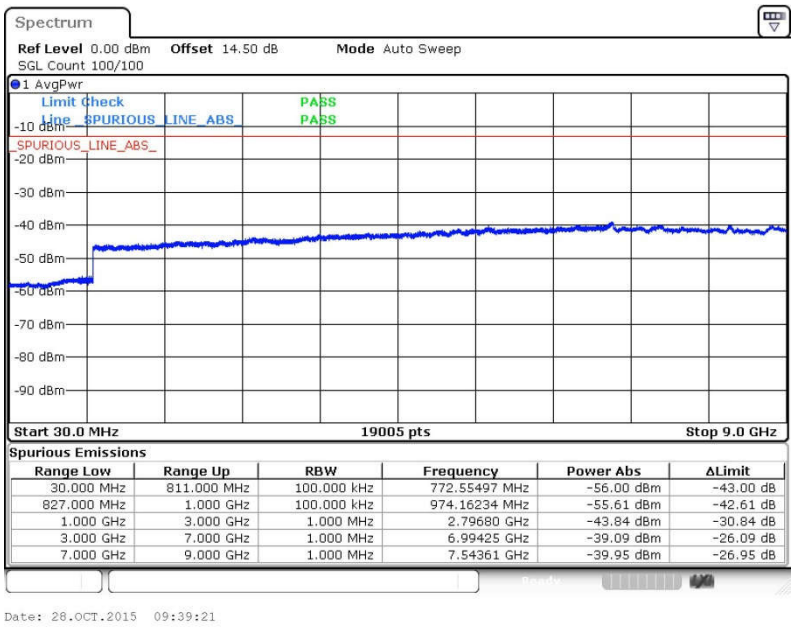
3.4.5 Test Result (Plots) of Conducted Emission

Band :	LTE Band 26	Channel :	CH26697 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)

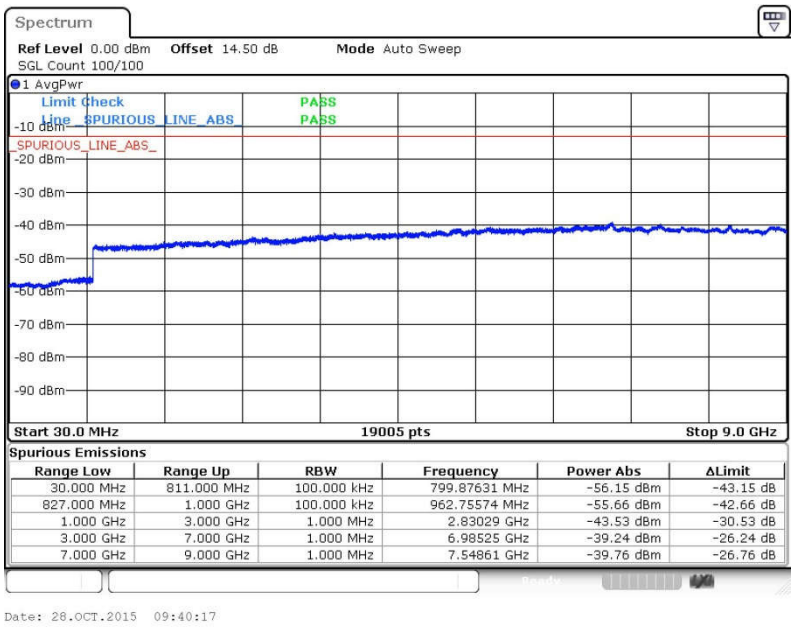


16QAM (RB Size 1, RB Offset 0)



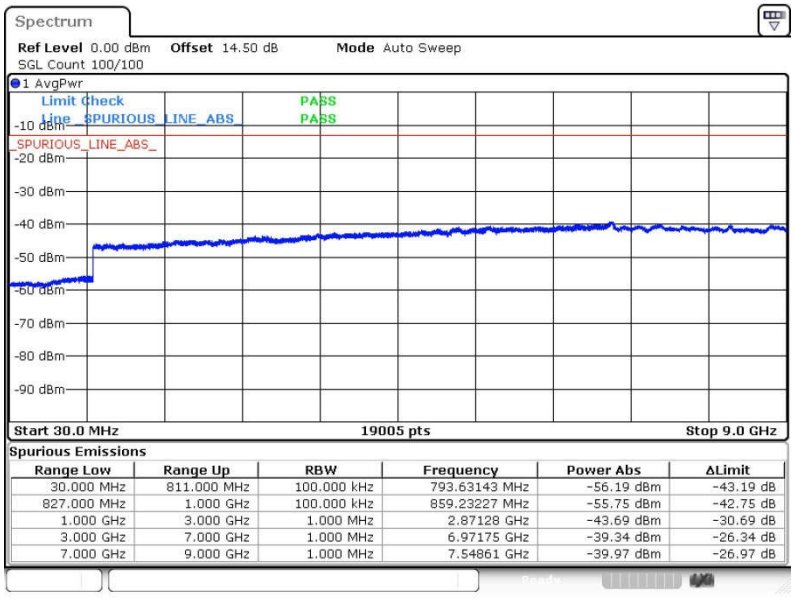
Band :	LTE Band 26	Channel :	CH26740 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:40:17

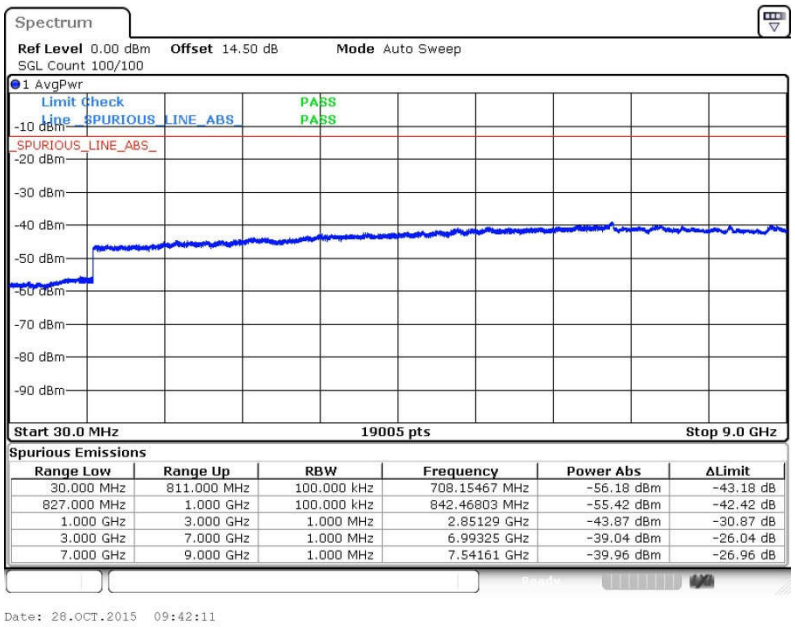
16QAM (RB Size 1, RB Offset 0)



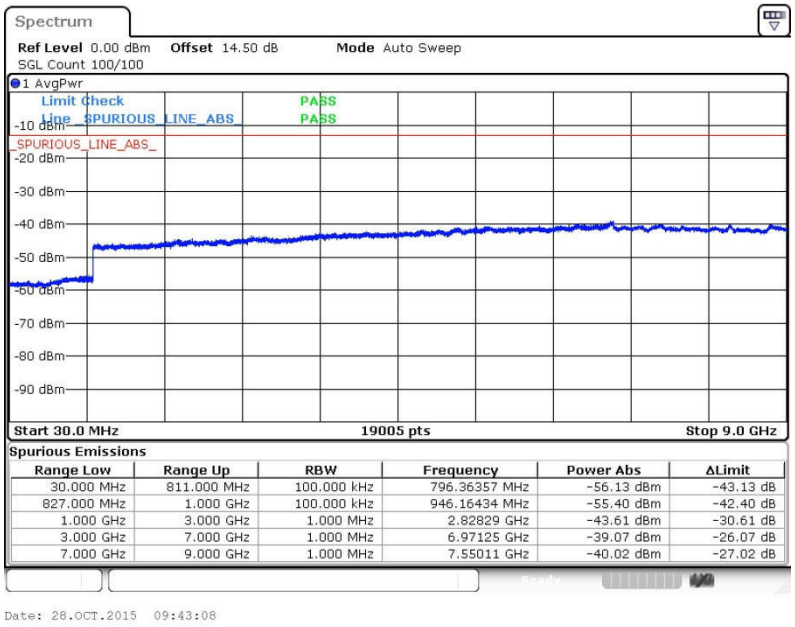
Date: 28.OCT.2015 09:41:15

Band :	LTE Band 26	Channel :	CH26783 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)

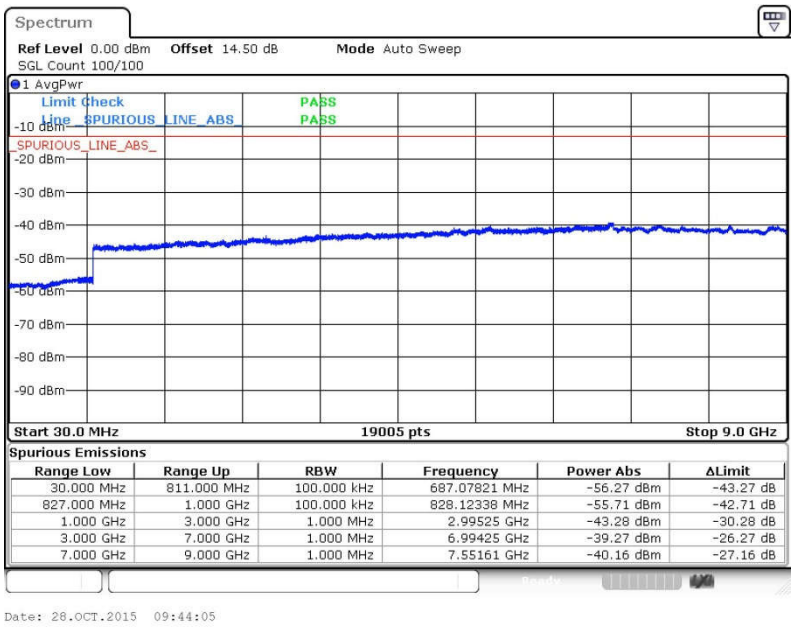


16QAM (RB Size 1, RB Offset 0)



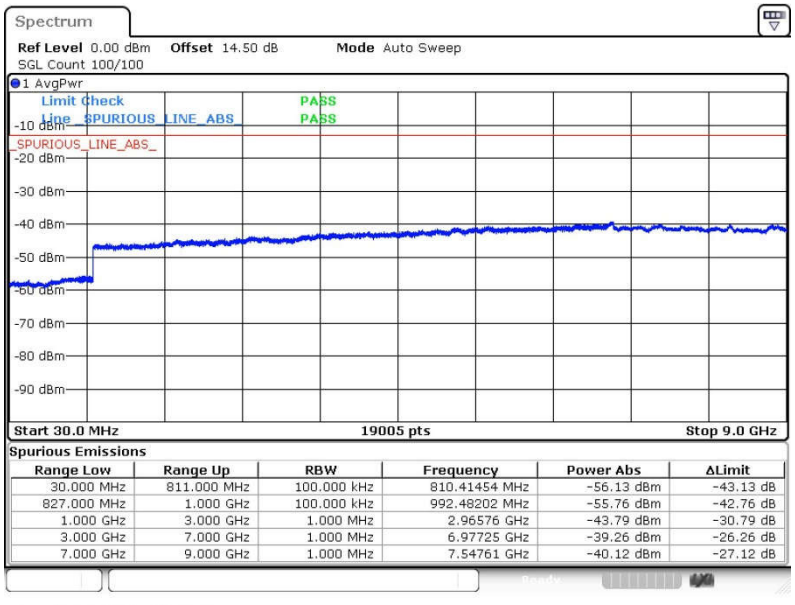
Band :	LTE Band 26	Channel :	CH26705 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:44:05

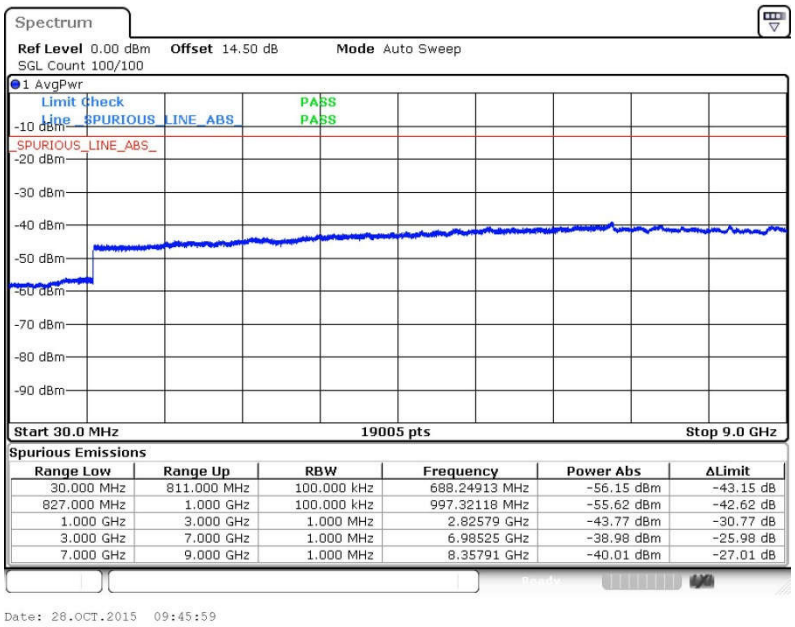
16QAM (RB Size 1, RB Offset 0)



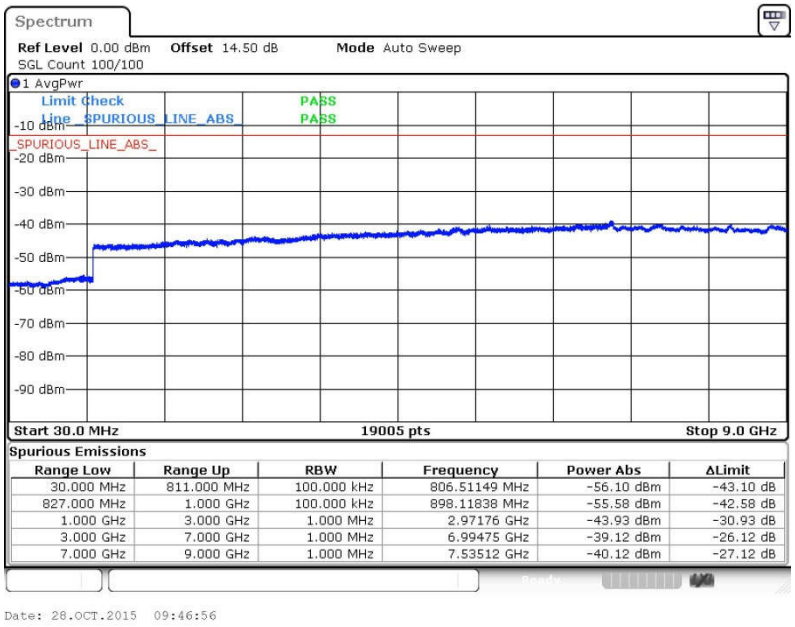
Date: 28.OCT.2015 09:45:02

Band :	LTE Band 26	Channel :	CH26740 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

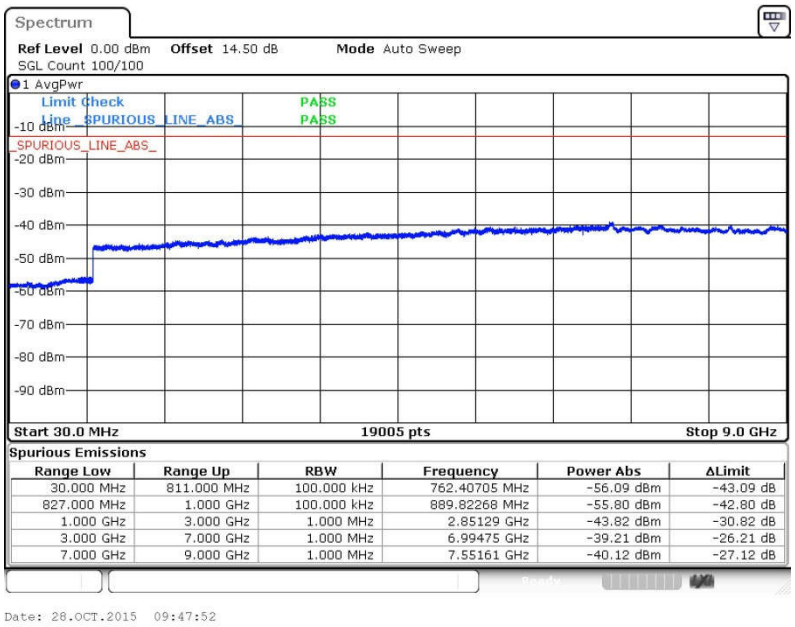


16QAM (RB Size 1, RB Offset 0)



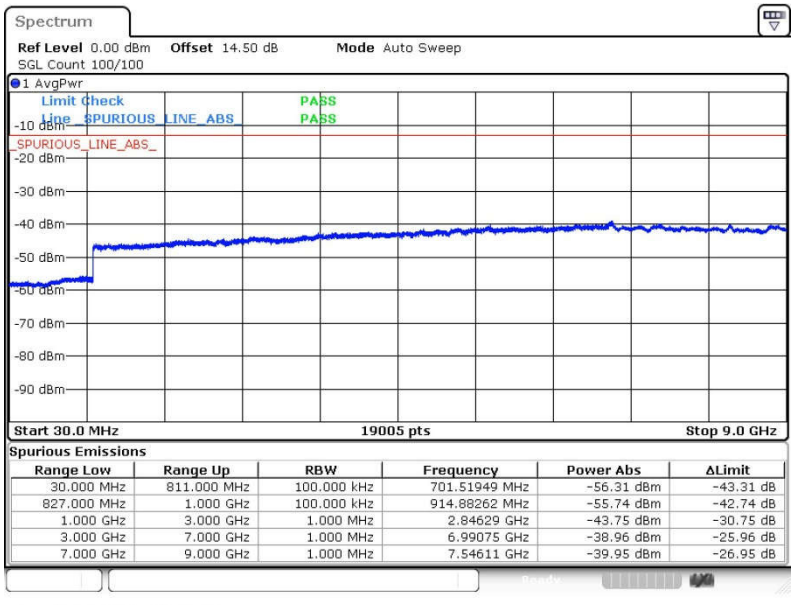
Band :	LTE Band 26	Channel :	CH26775 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:47:52

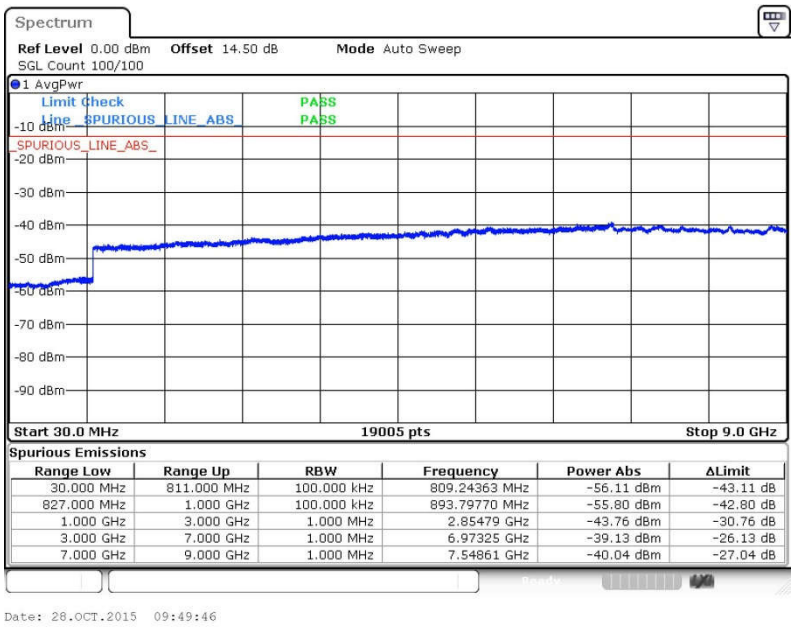
16QAM (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:48:49

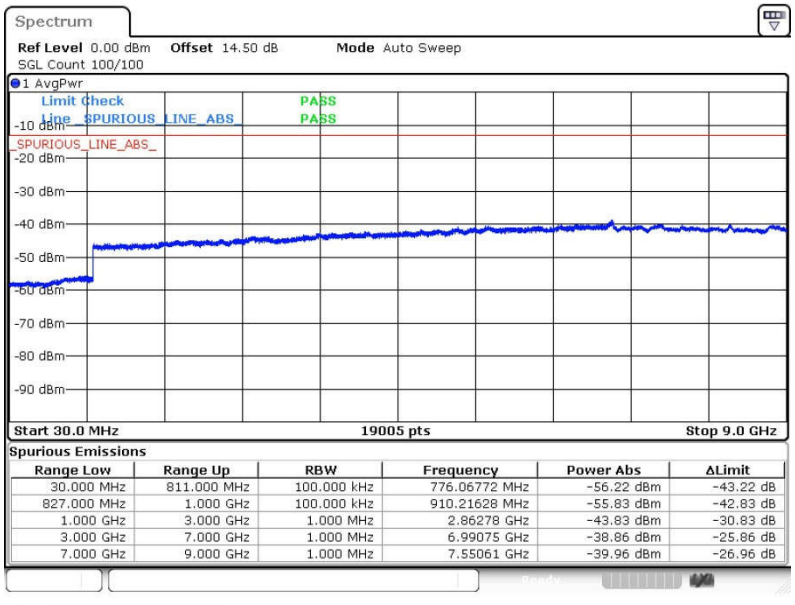
Band :	LTE Band 26	Channel :	CH26715 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:49:46

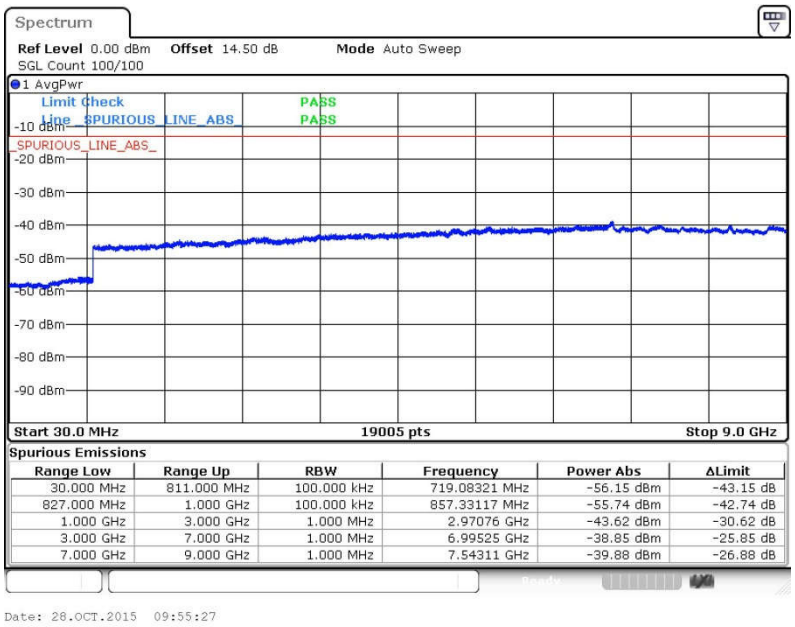
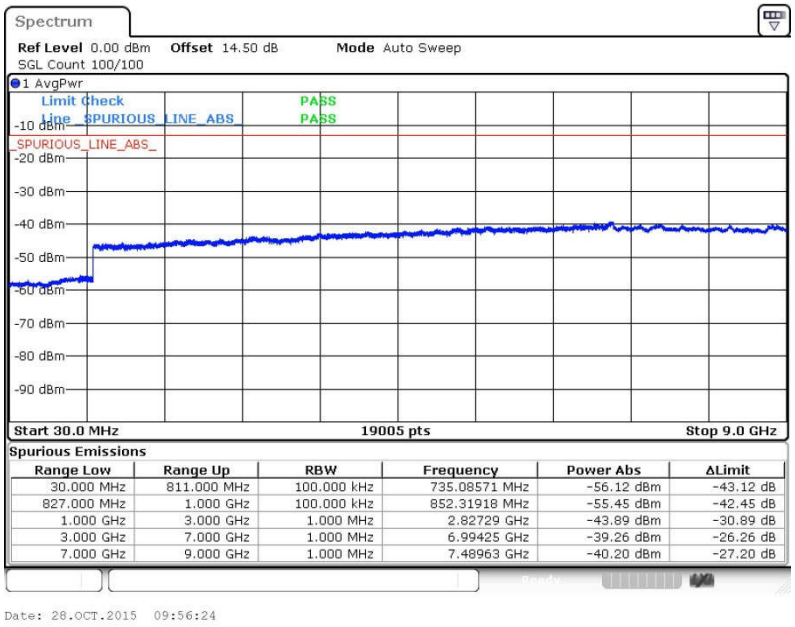
16QAM (RB Size 1, RB Offset 0)



Date: 28.OCT.2015 09:50:43

Band :	LTE Band 26	Channel :	CH26740 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



16QAM (RB Size 1, RB Offset 0)