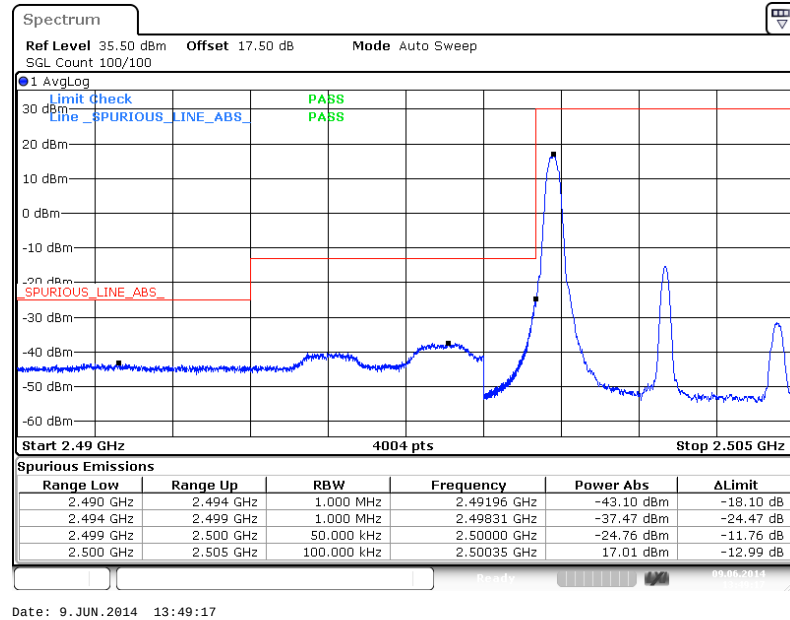


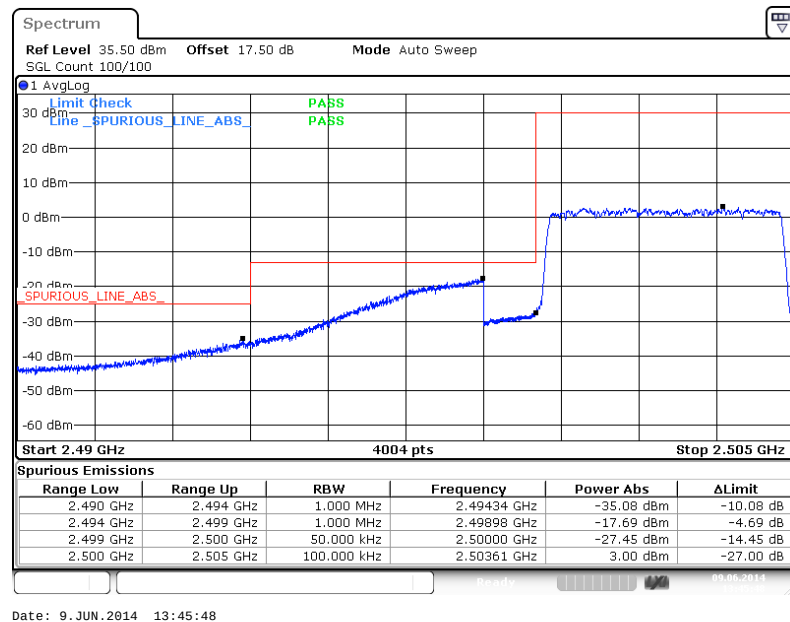


Band :	LTE Band 7	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

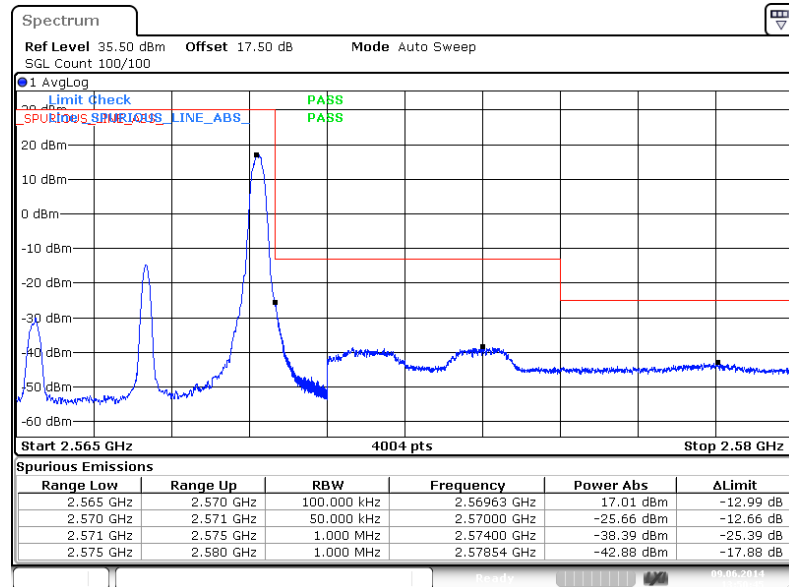


Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

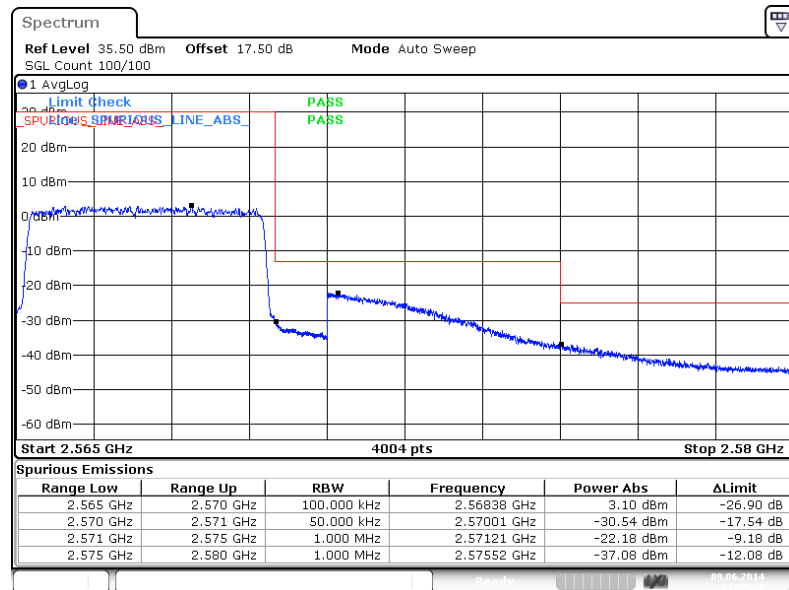




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



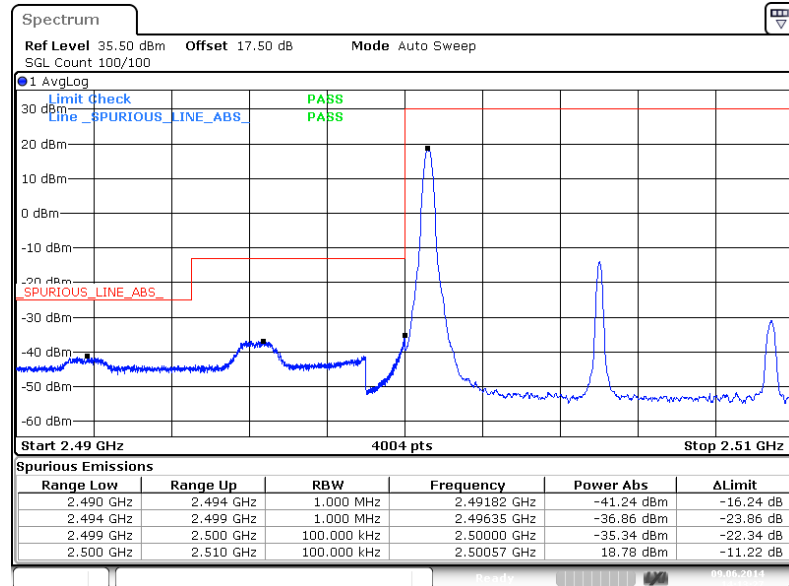
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



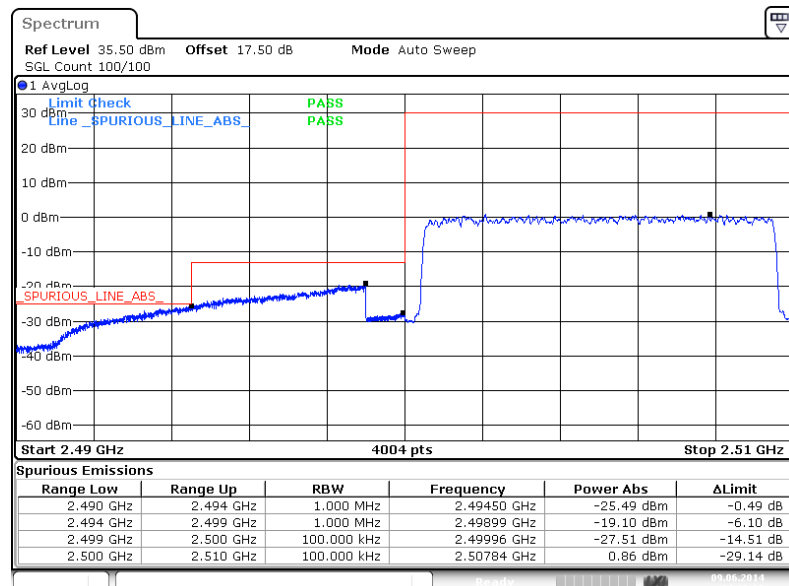


Band :	LTE Band 7	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

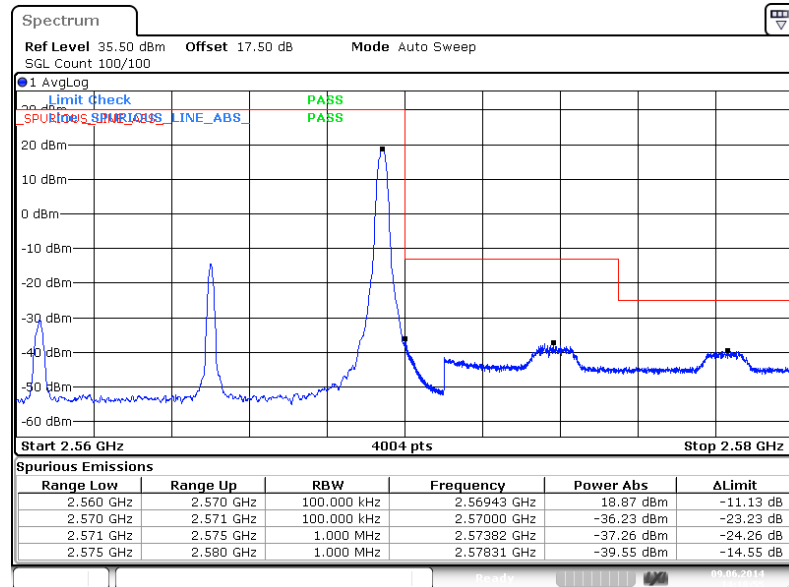


Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

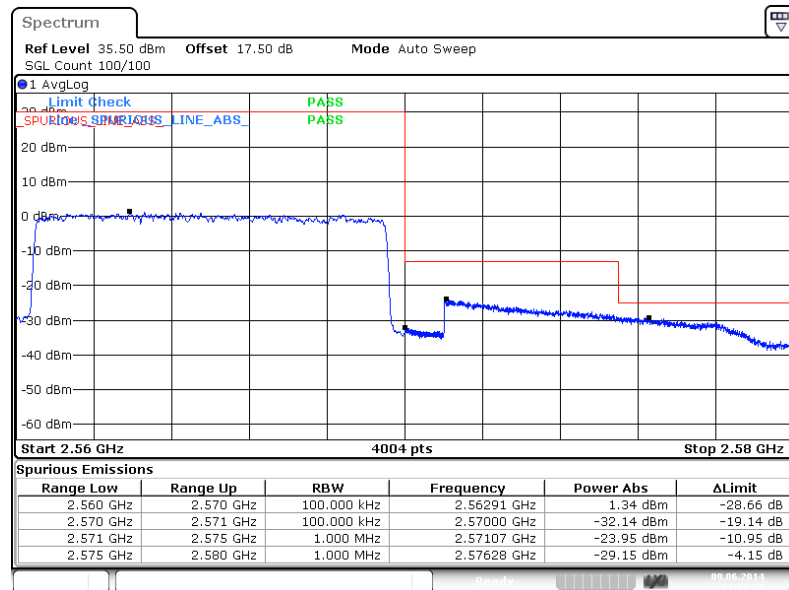




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



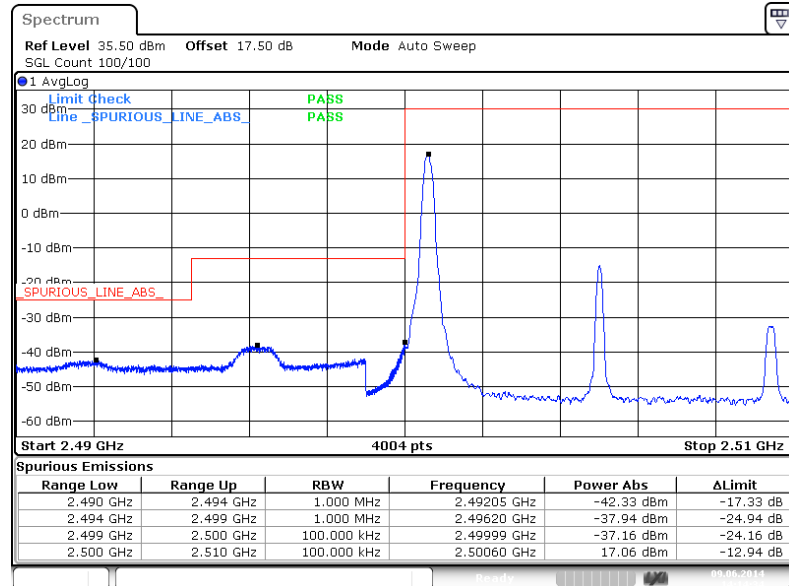
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



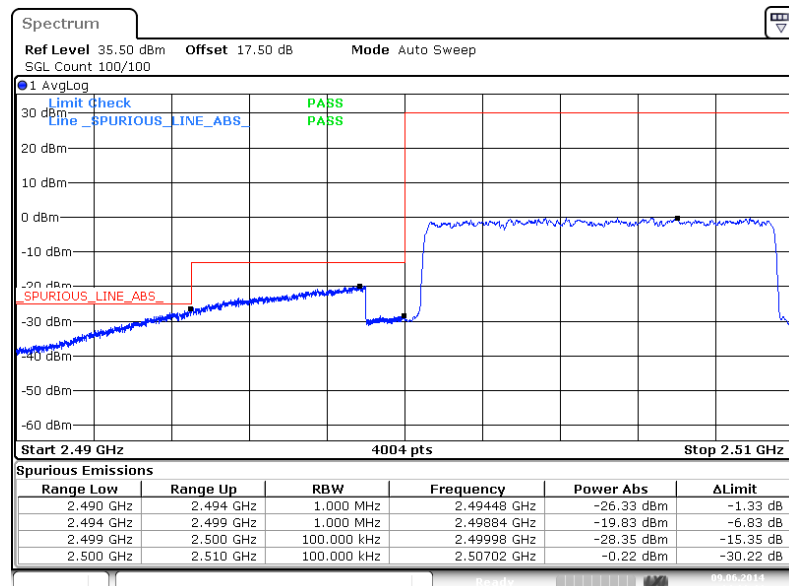


Band :	LTE Band 7	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

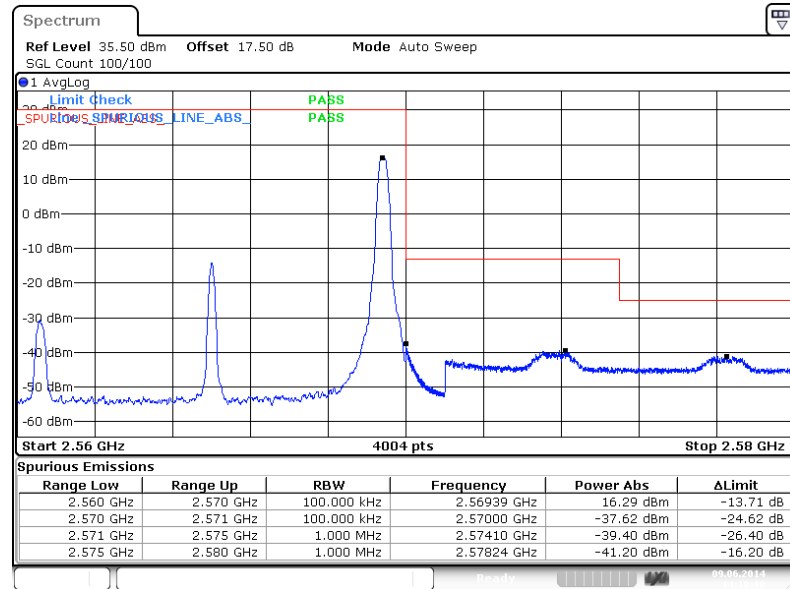


Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

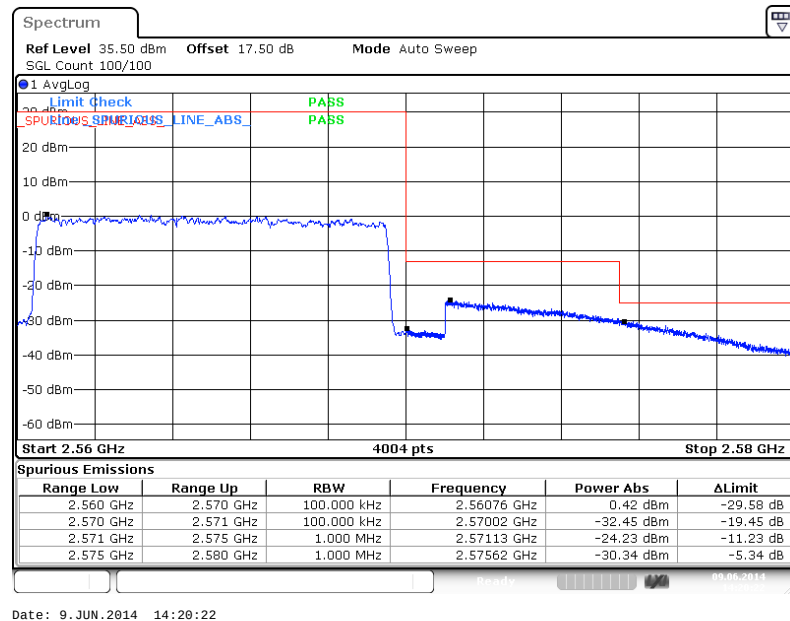




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



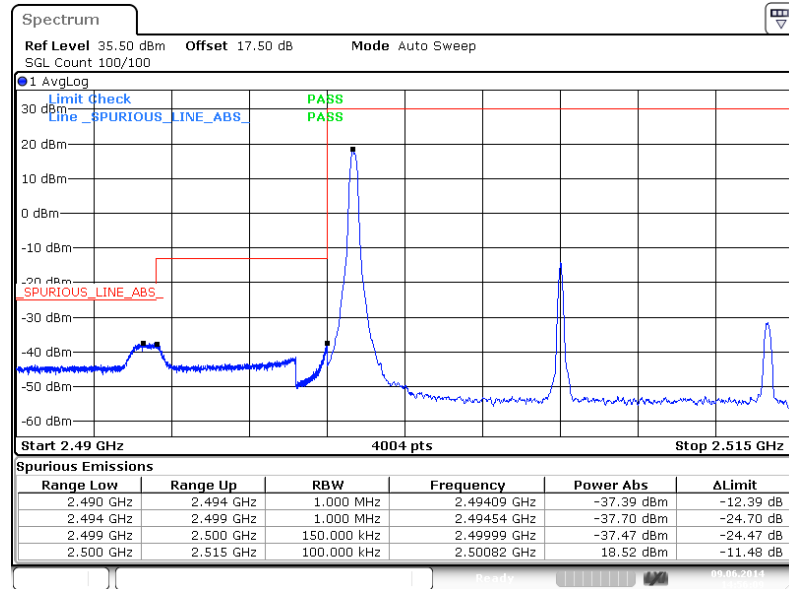
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



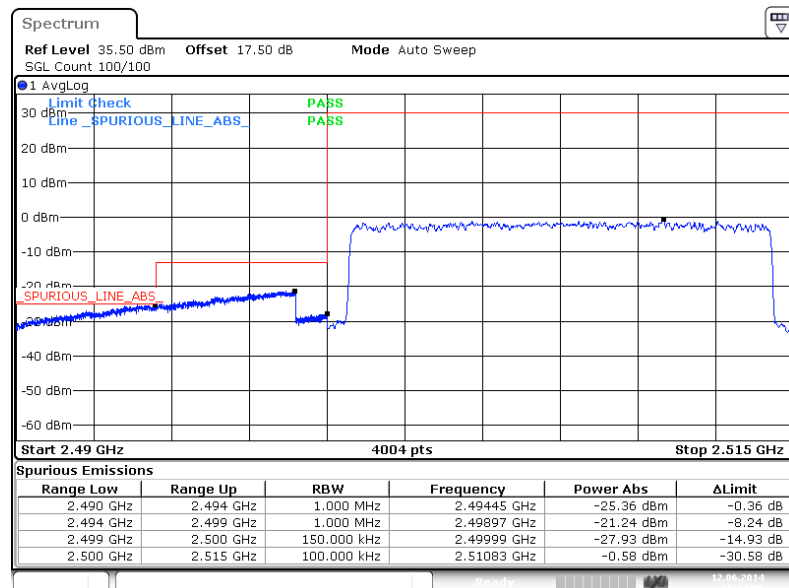


Band :	LTE Band 7	Band Width :	15MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

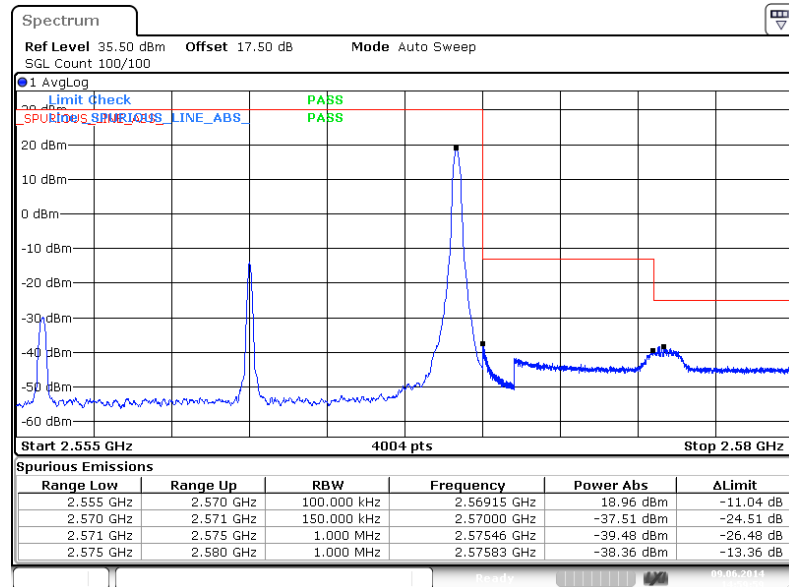


Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0

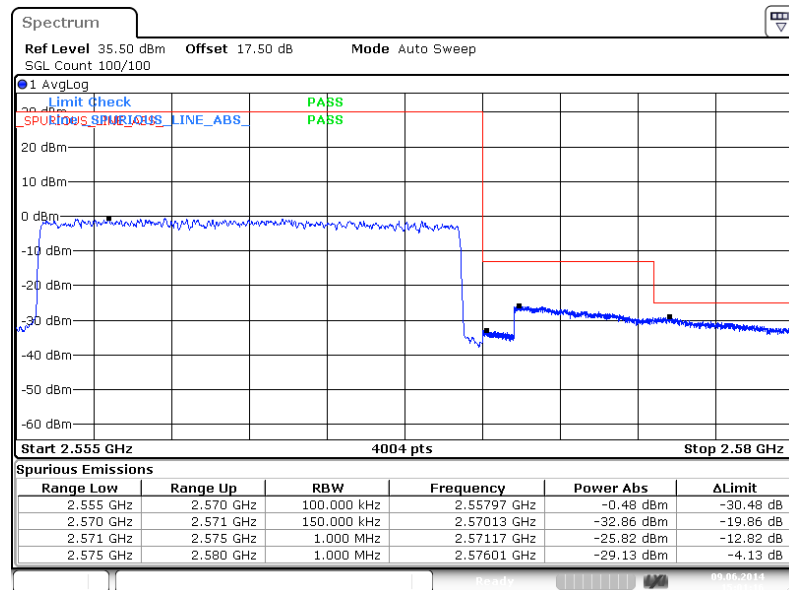




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



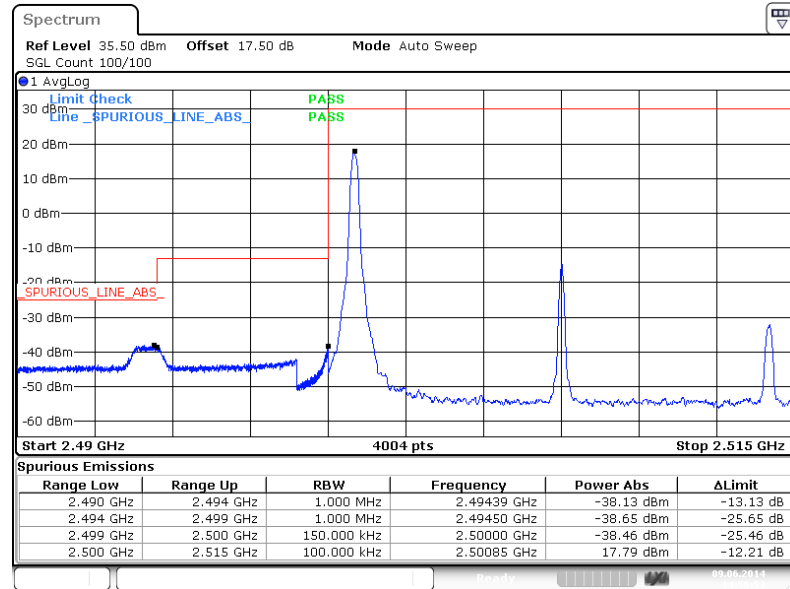
Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



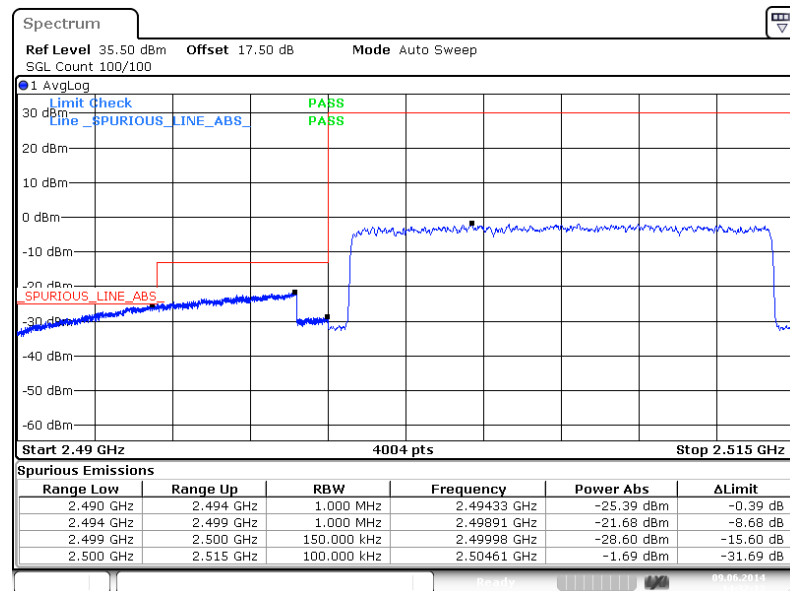


Band :	LTE Band 7	Band Width :	15MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

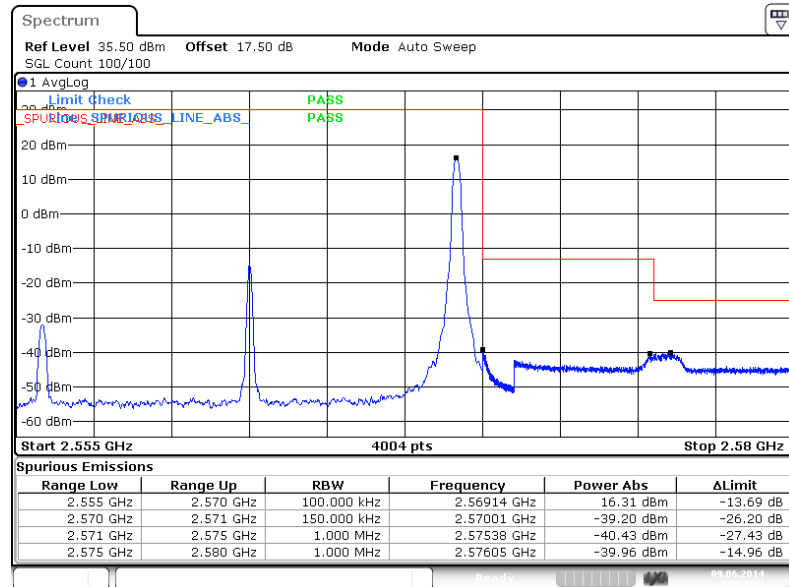


Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

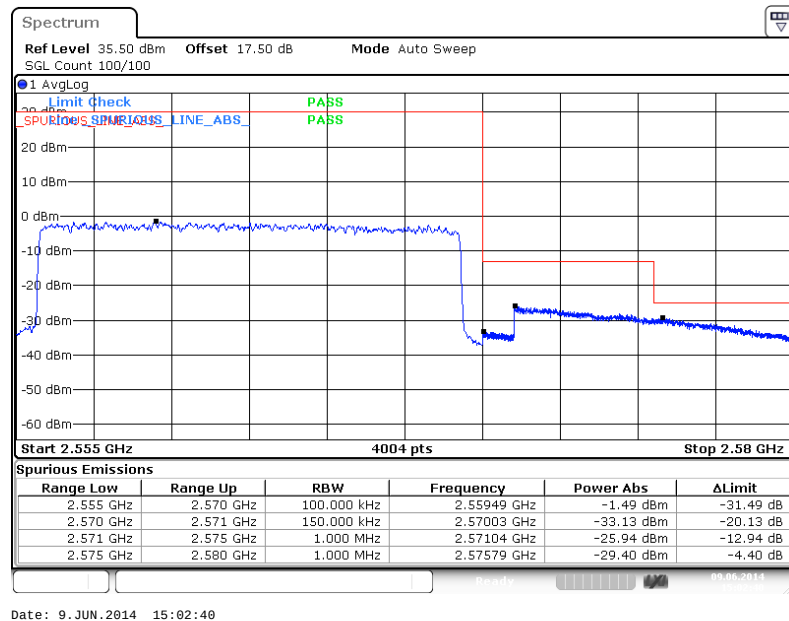




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



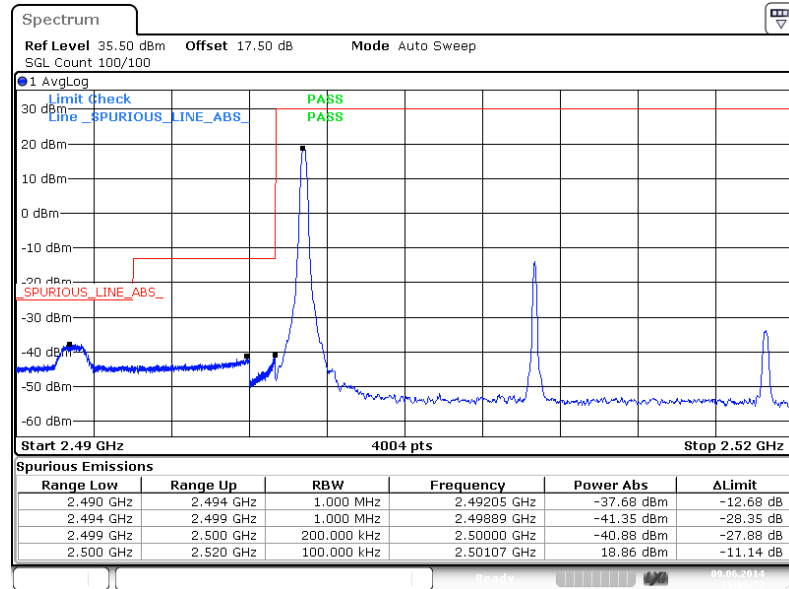
Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



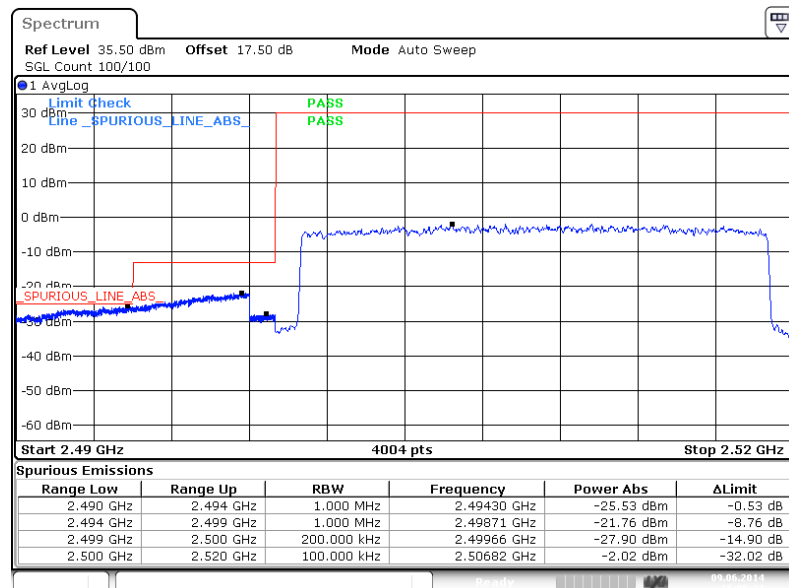


Band :	LTE Band 7	Band Width :	20MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

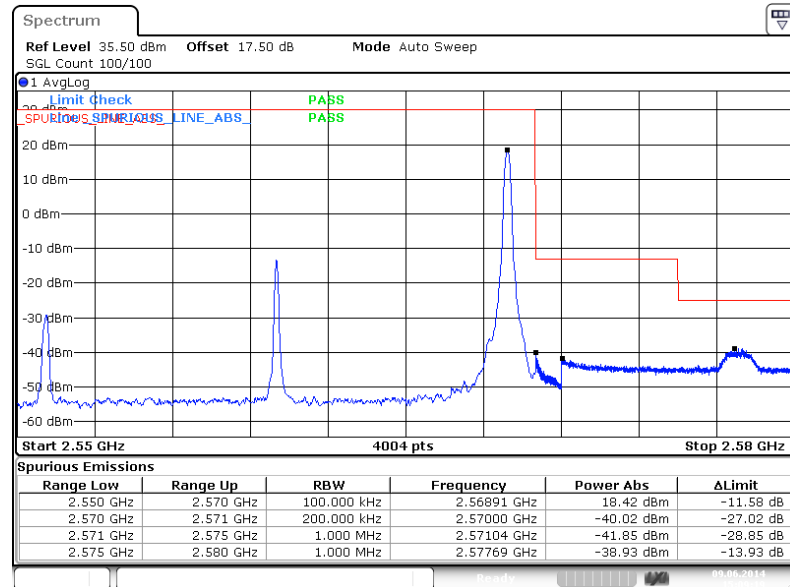


Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0

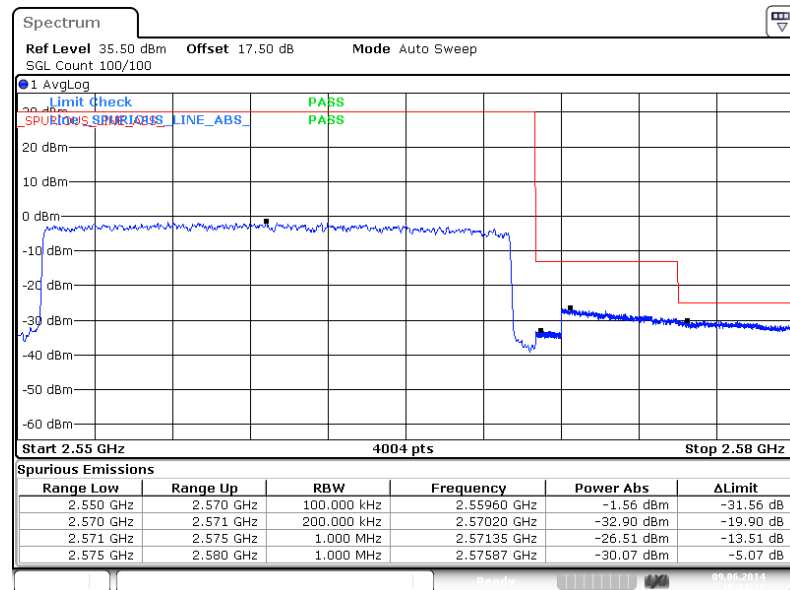




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



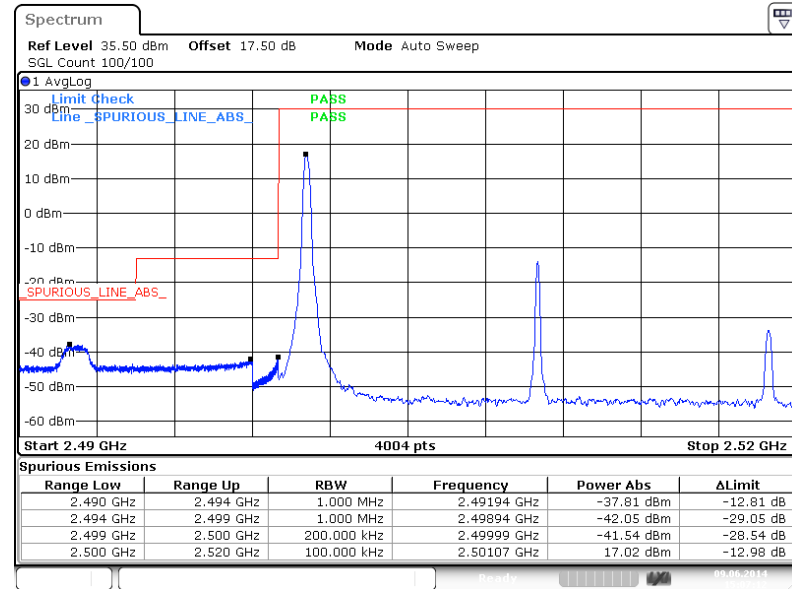
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



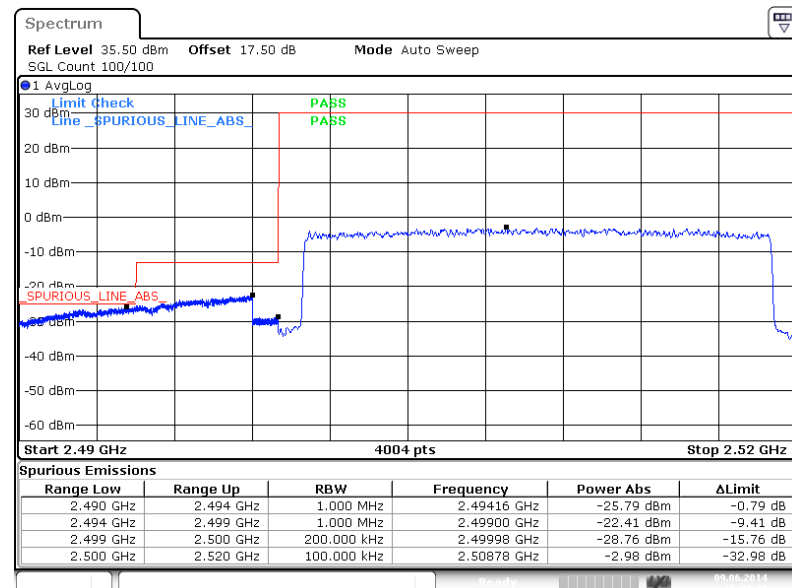


Band :	LTE Band 7	Band Width :	20MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

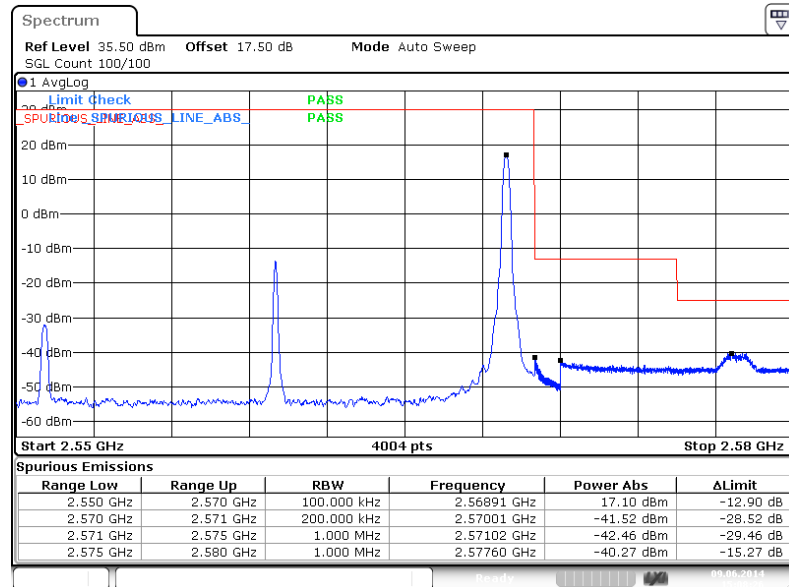


Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

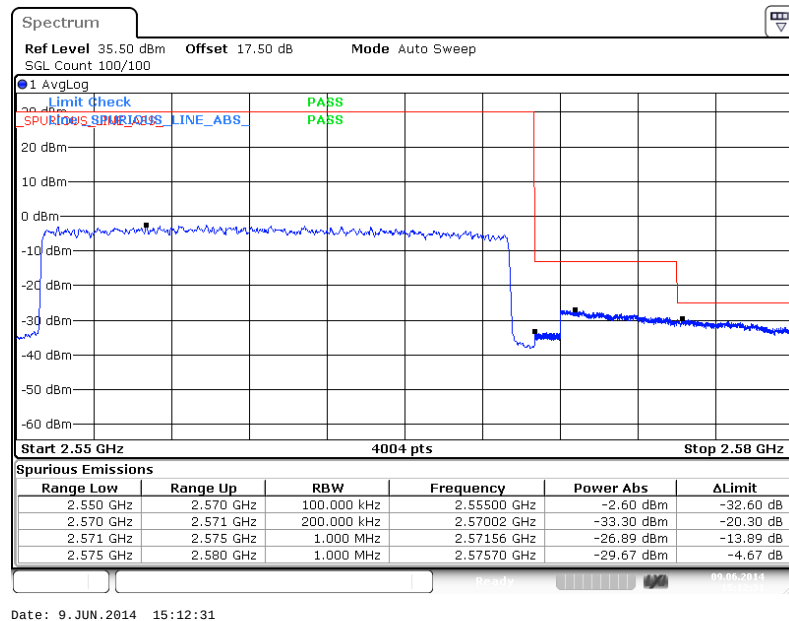




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



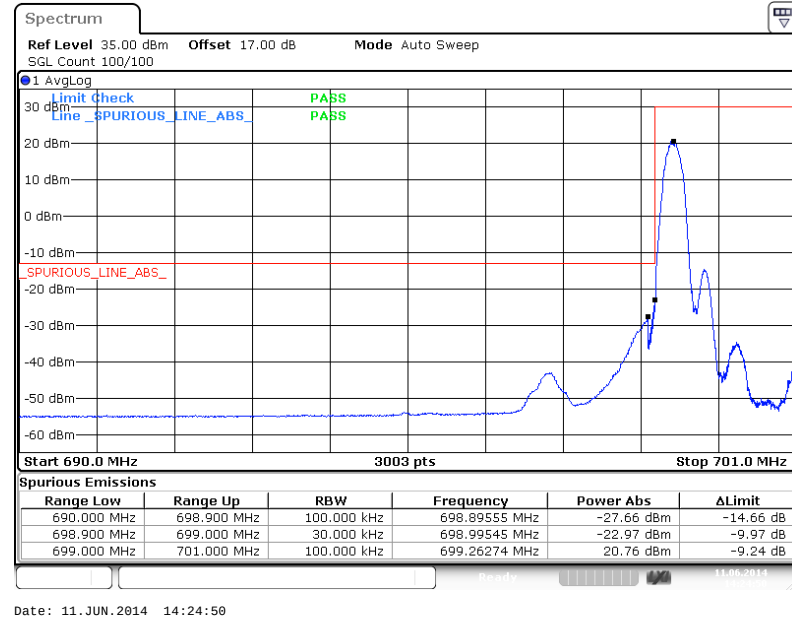
Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



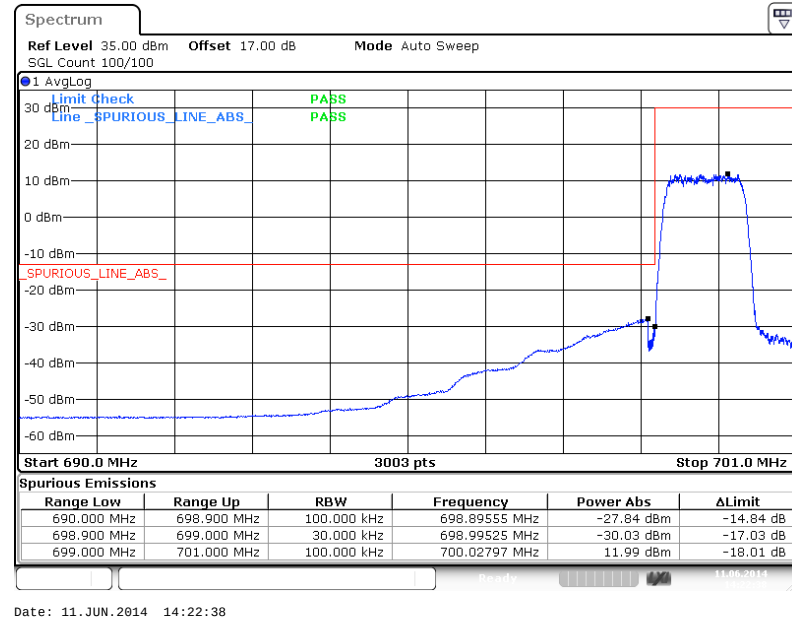


Band :	LTE Band 12	Band Width :	1.4MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

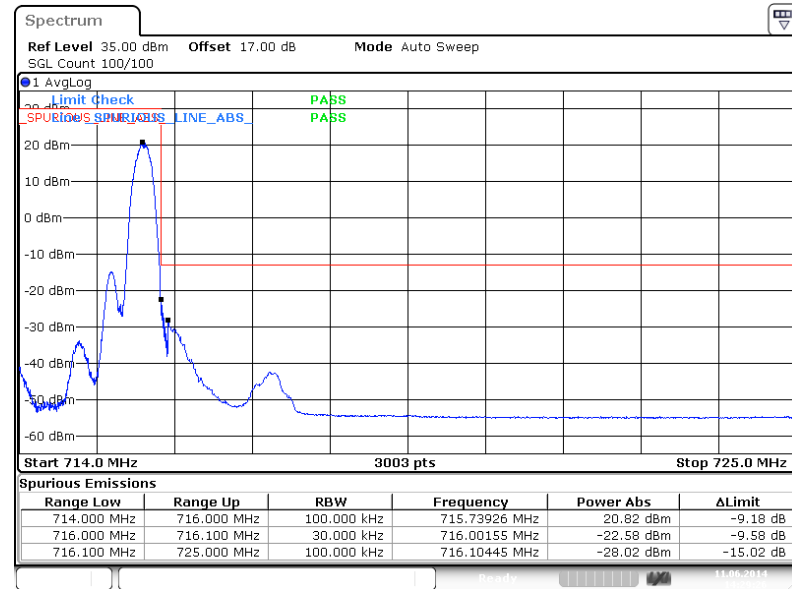


Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0

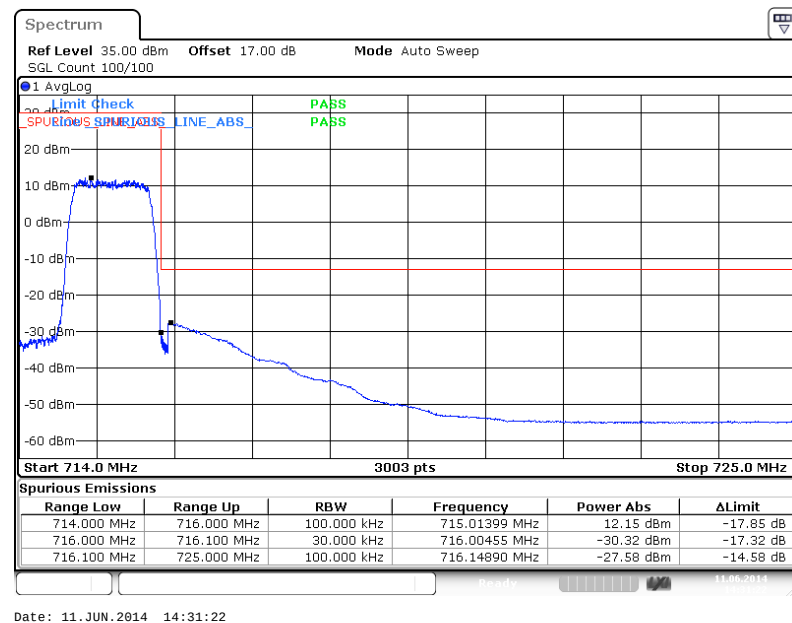




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



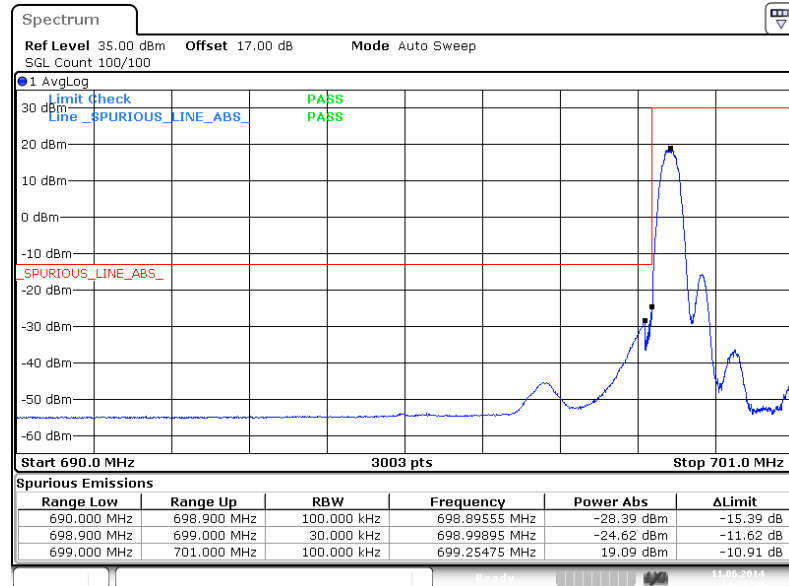
Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0



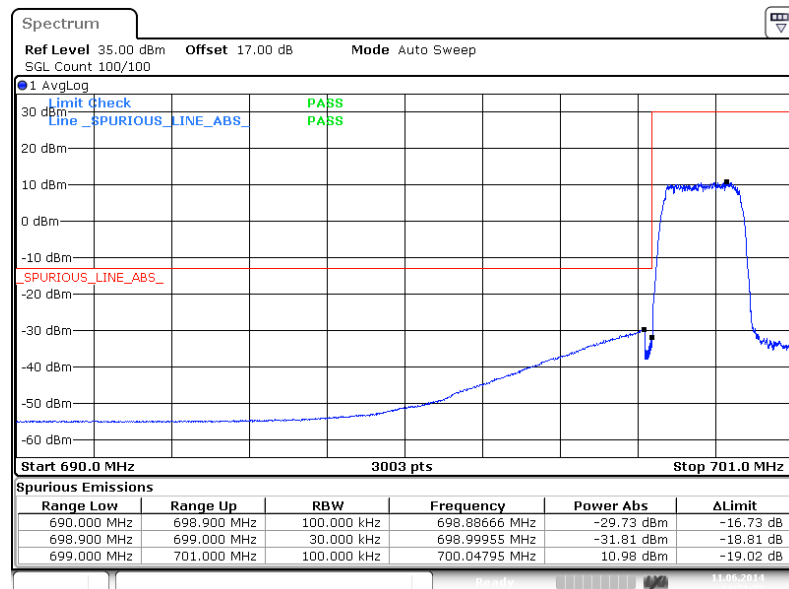


Band :	LTE Band 12	Band Width :	1.4MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

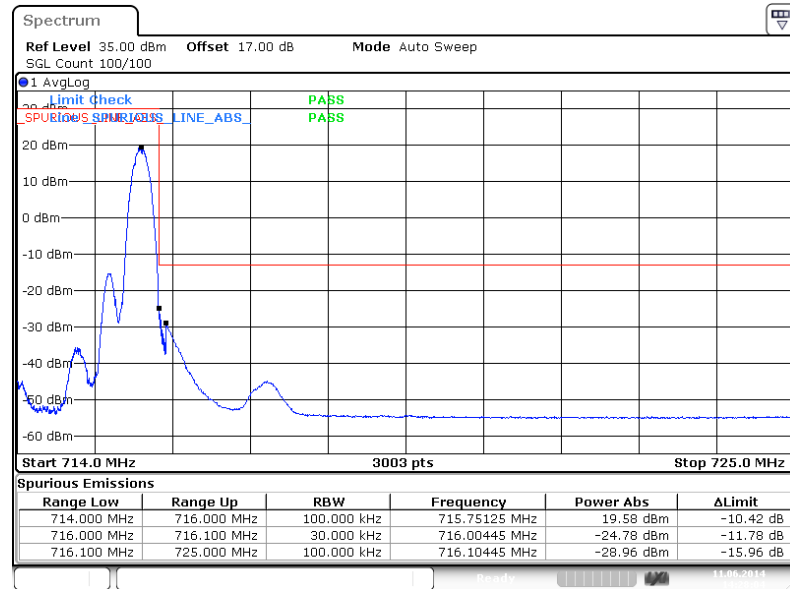


Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

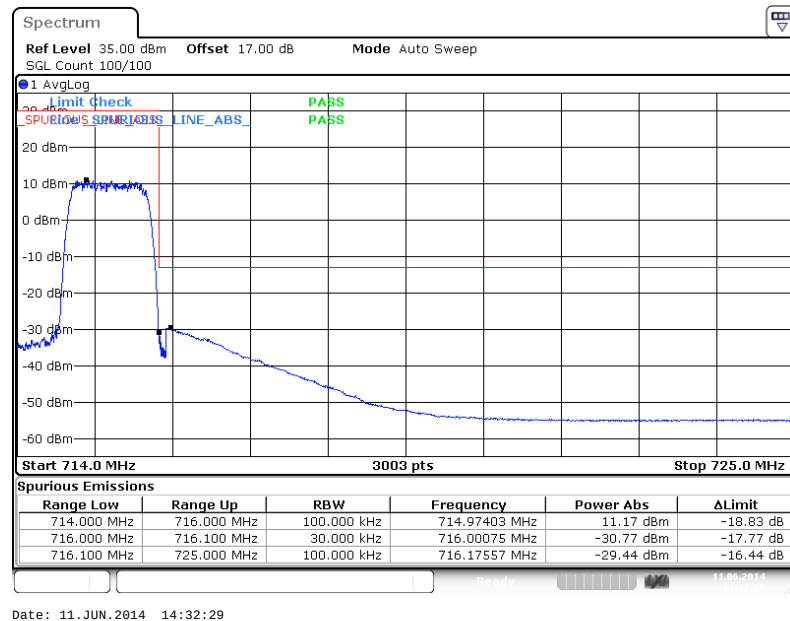




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



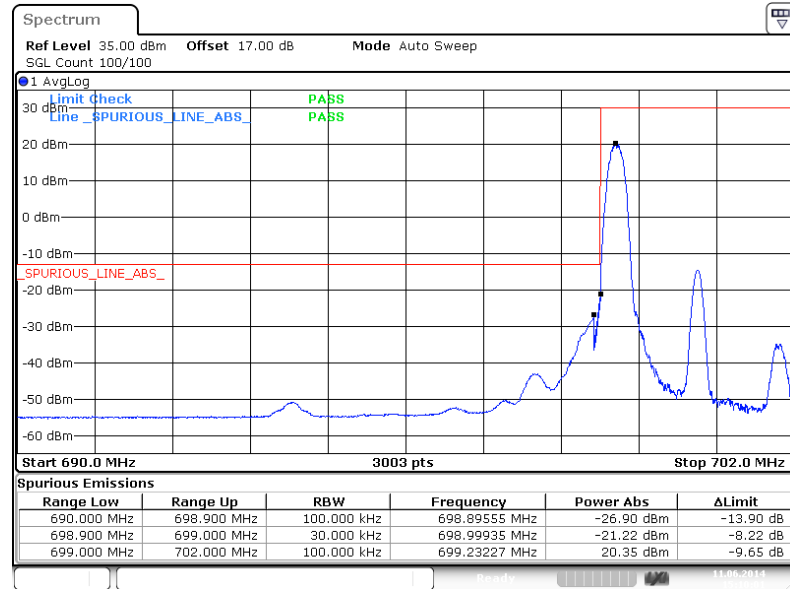
Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0



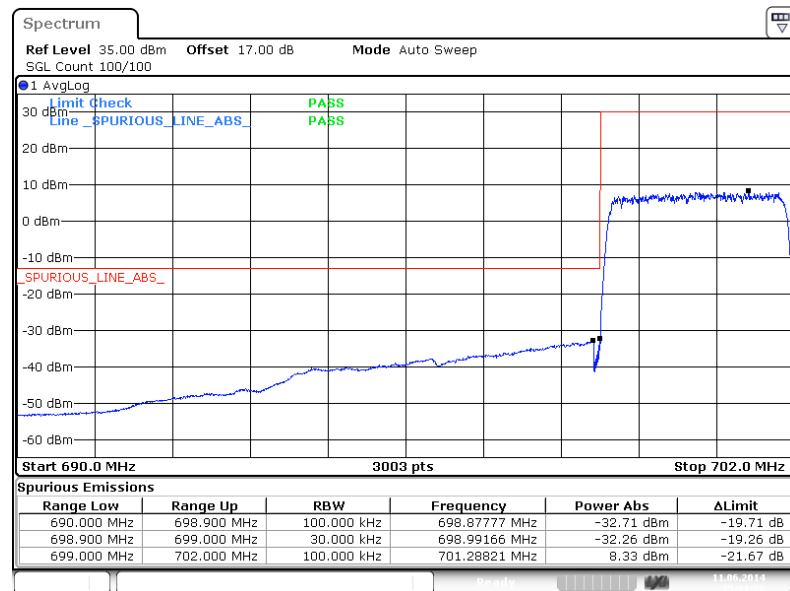


Band :	LTE Band 12	Band Width :	3MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

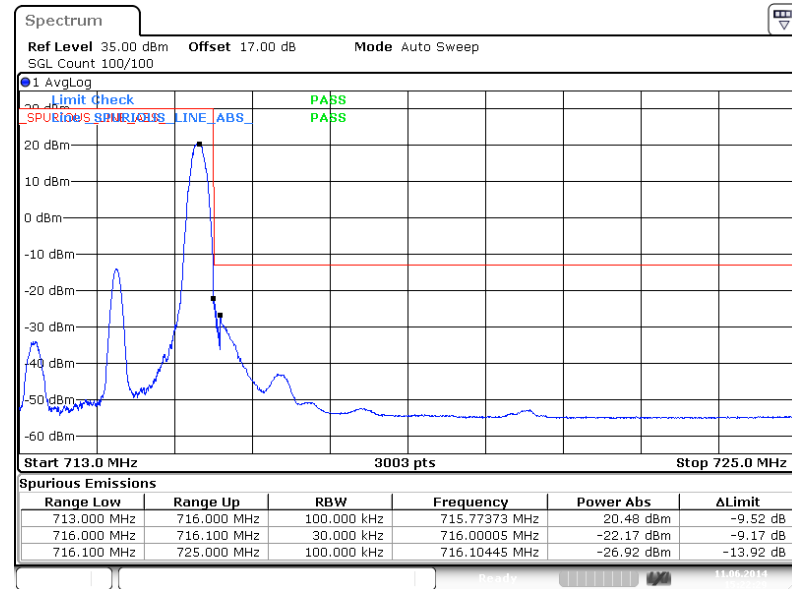


Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0

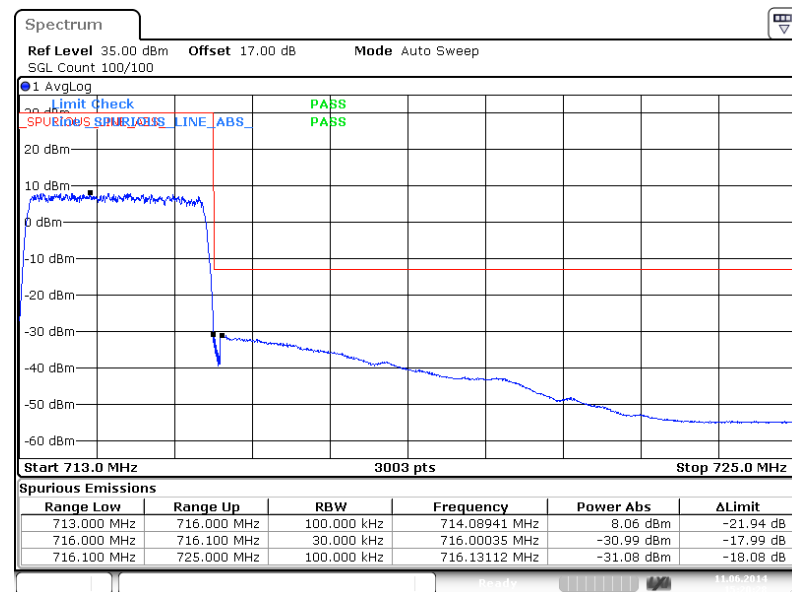




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



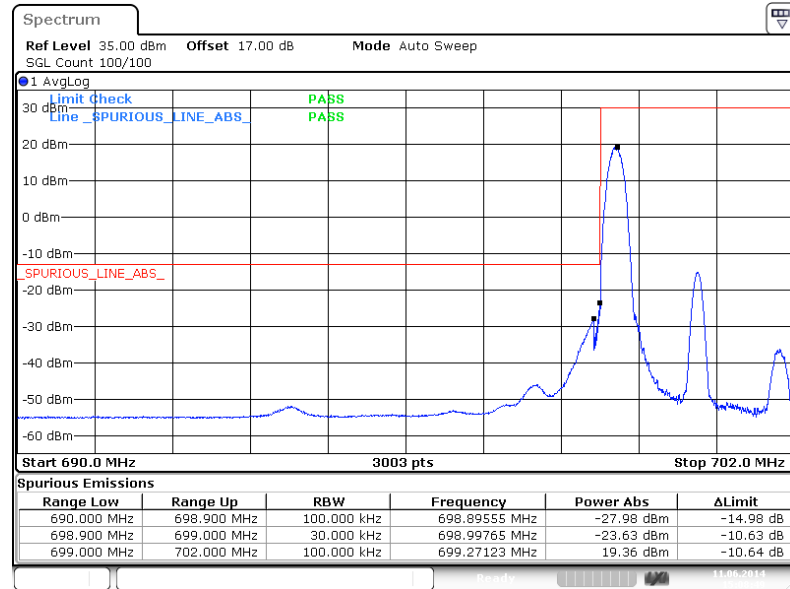
Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0



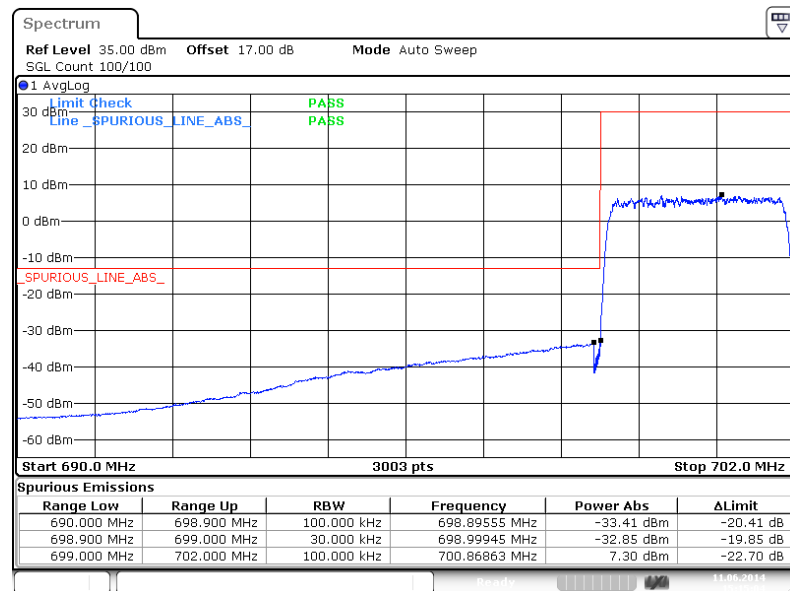


Band :	LTE Band 12	Band Width :	3MHz /16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

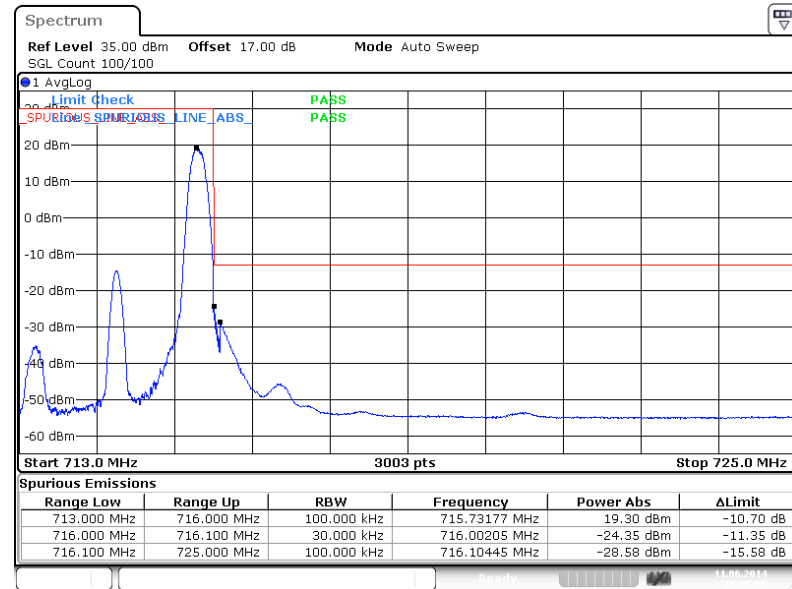


Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

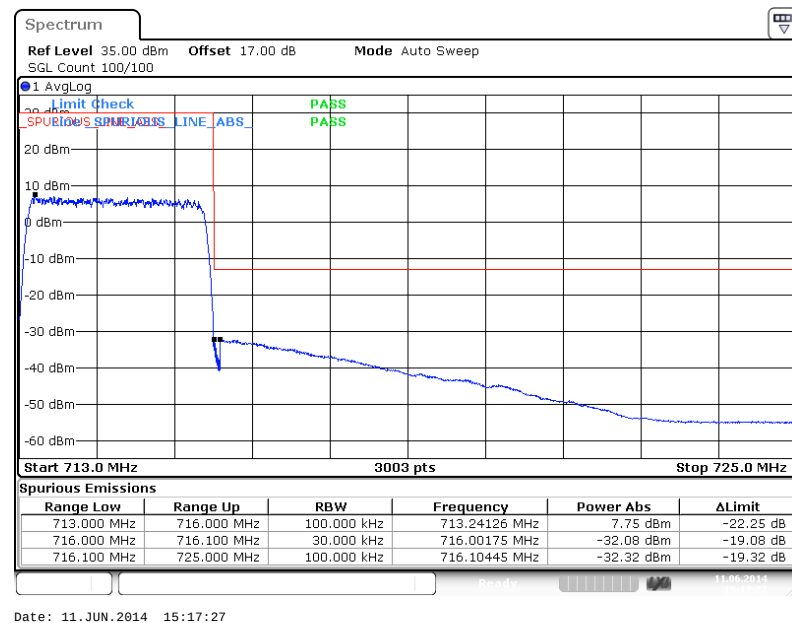




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



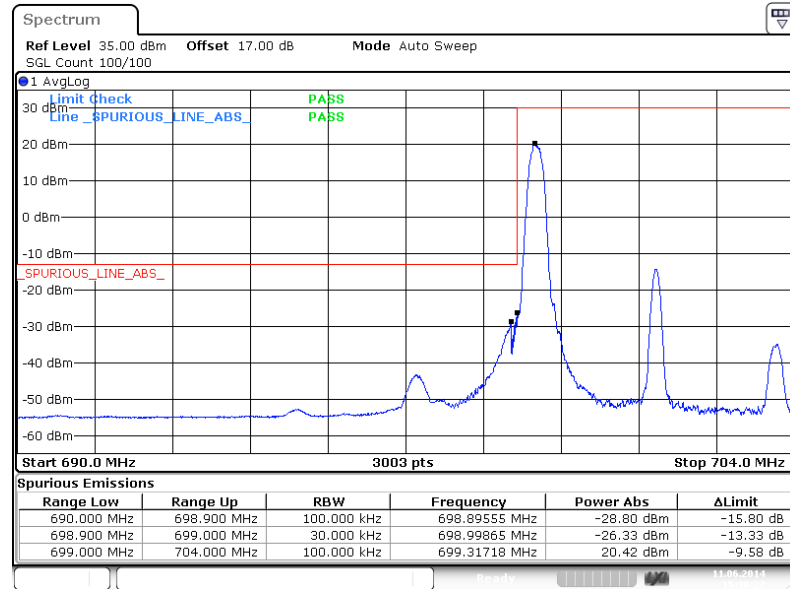
Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



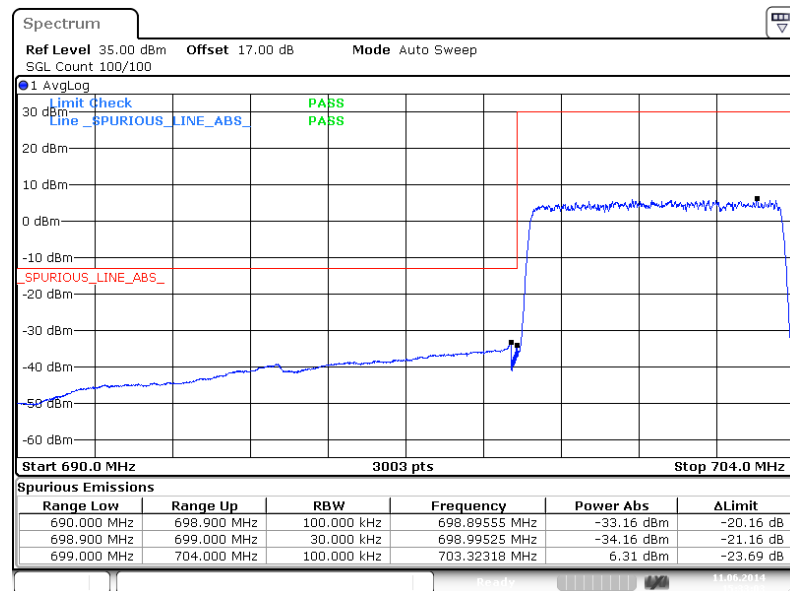


Band :	LTE Band 12	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

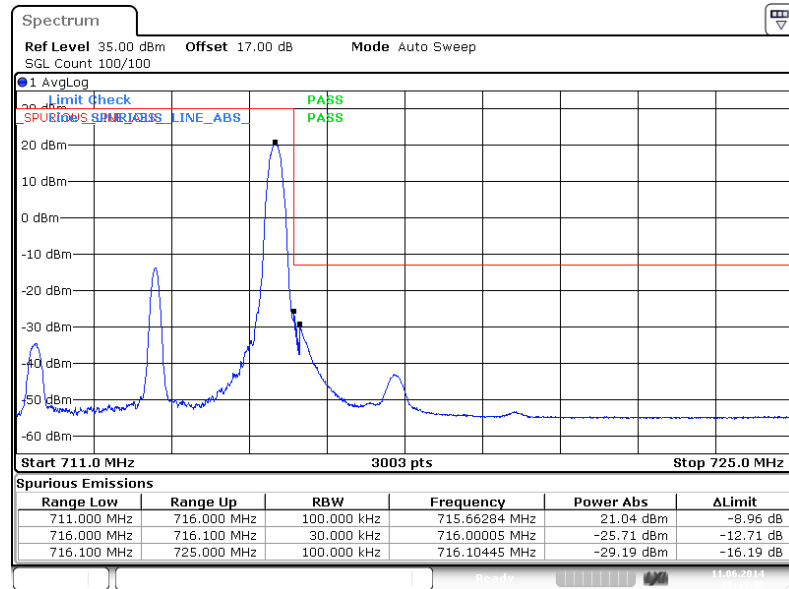


Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0

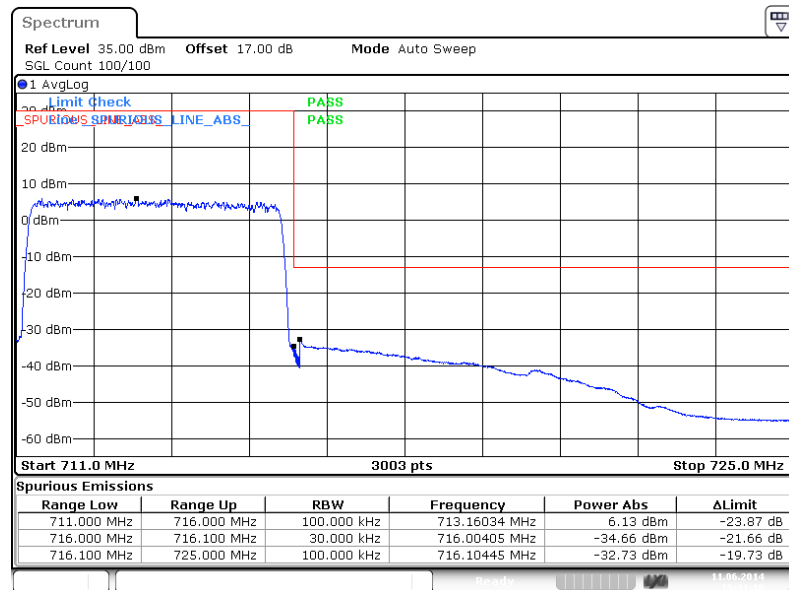




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



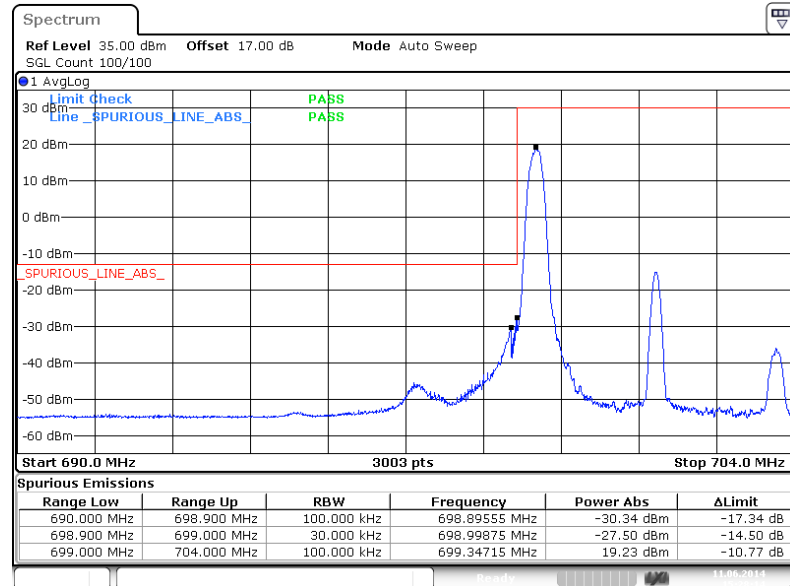
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



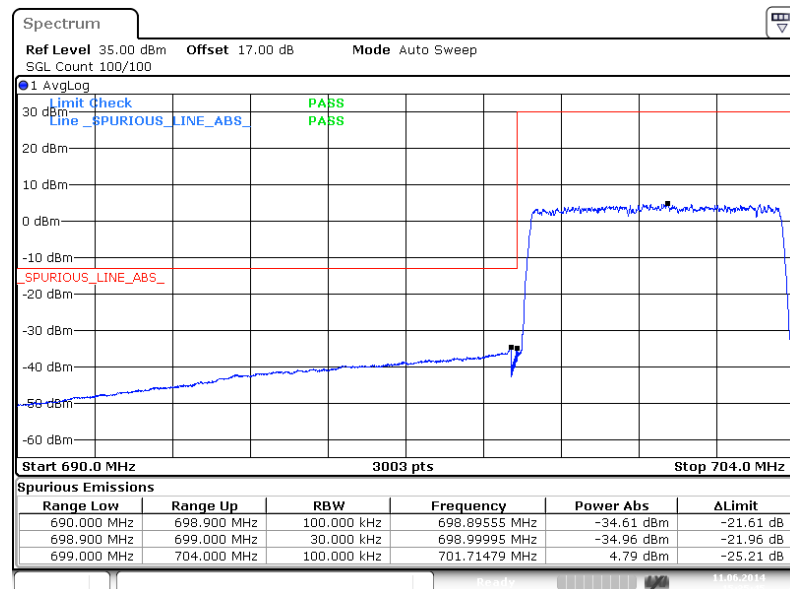


Band :	LTE Band 12	Band Width :	5MHz /16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

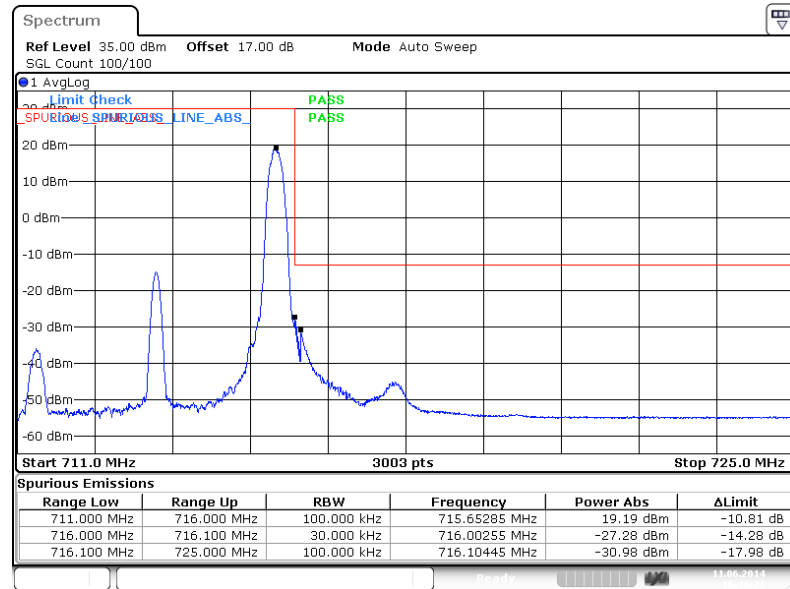


Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

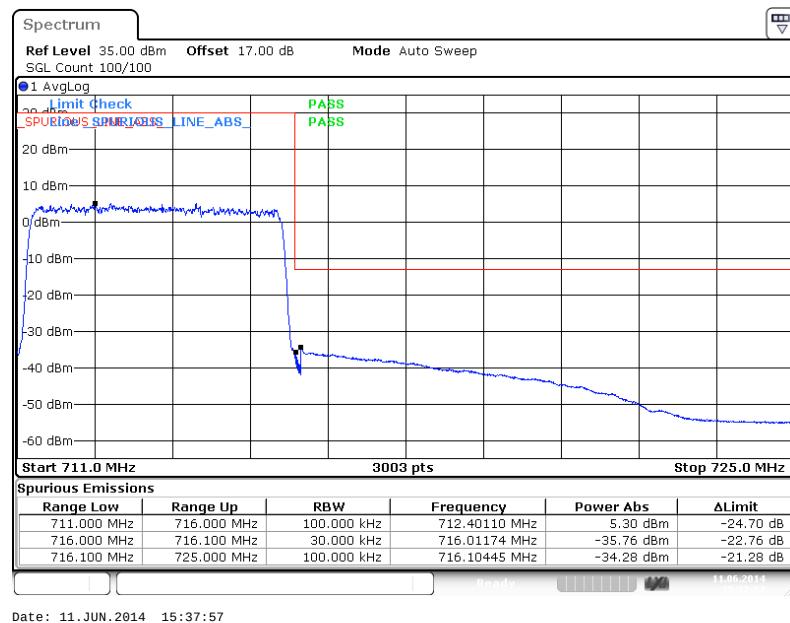




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



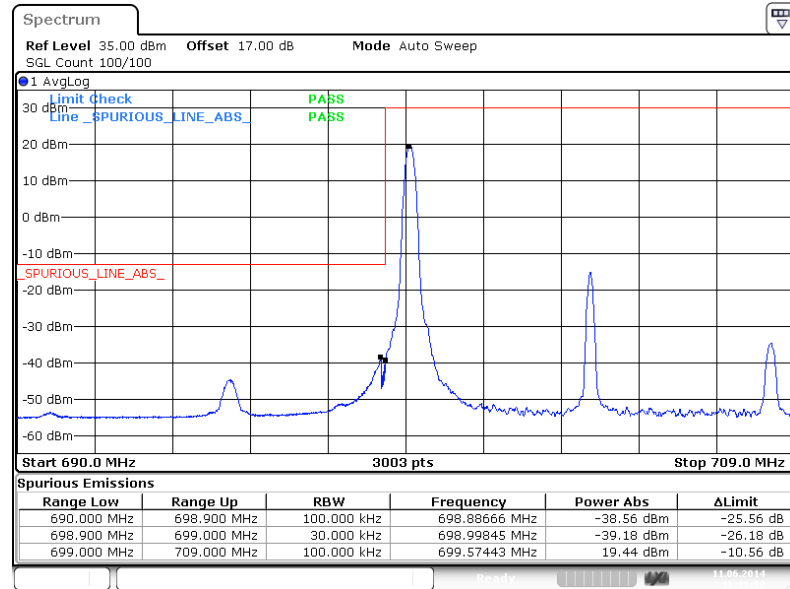
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



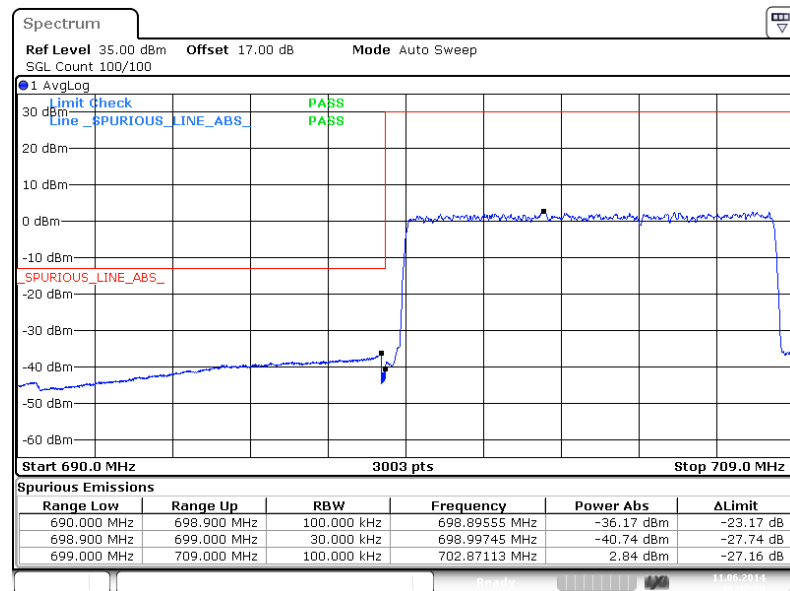


Band :	LTE Band 12	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

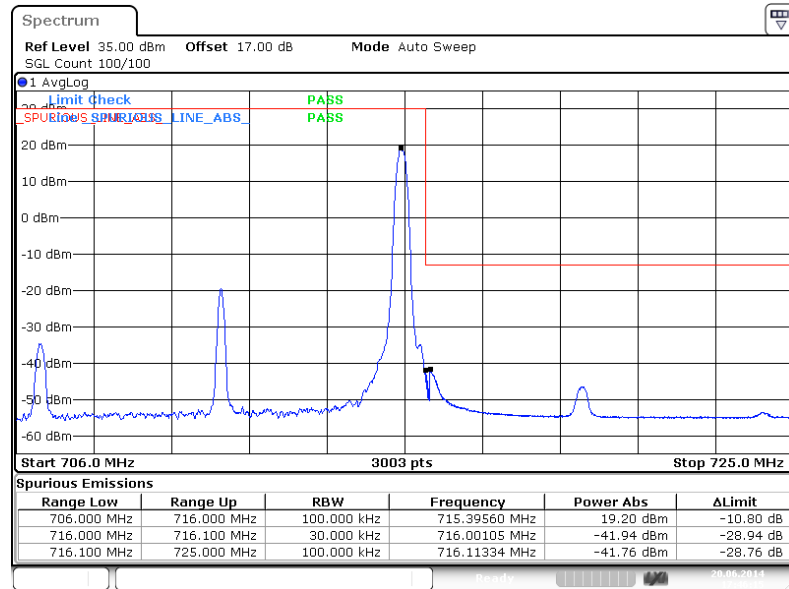


Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

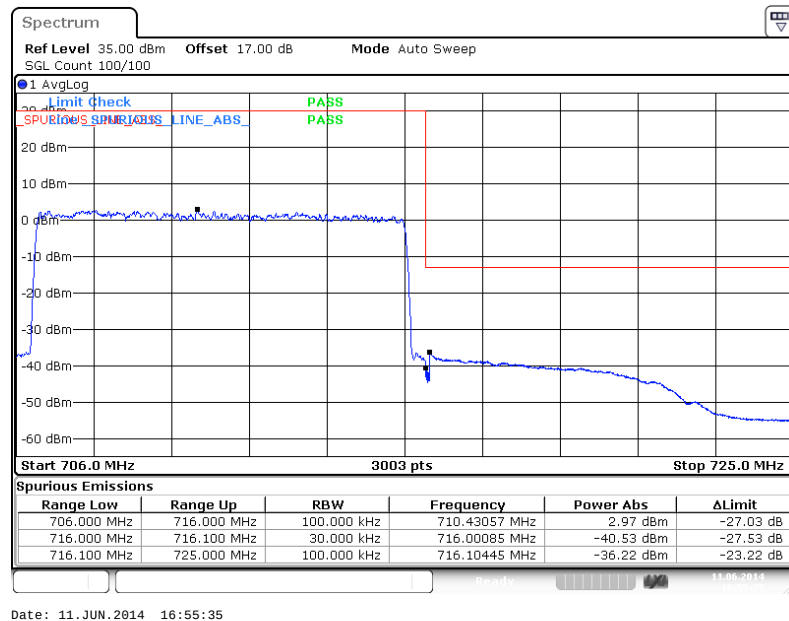




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



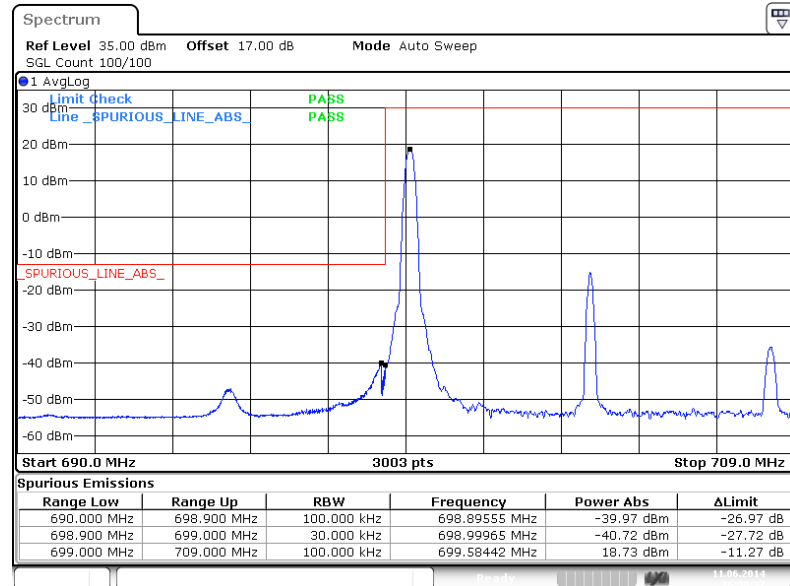
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



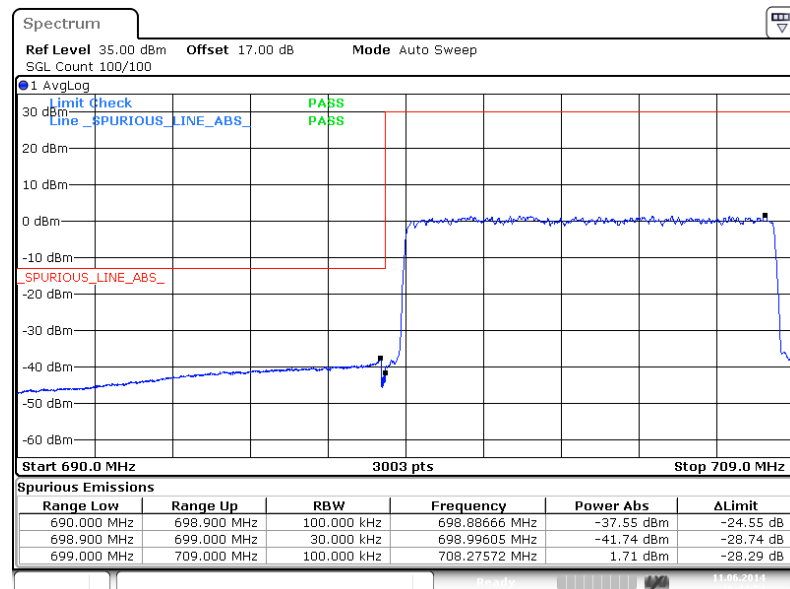


Band :	LTE Band 12	Band Width :	10MHz /16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

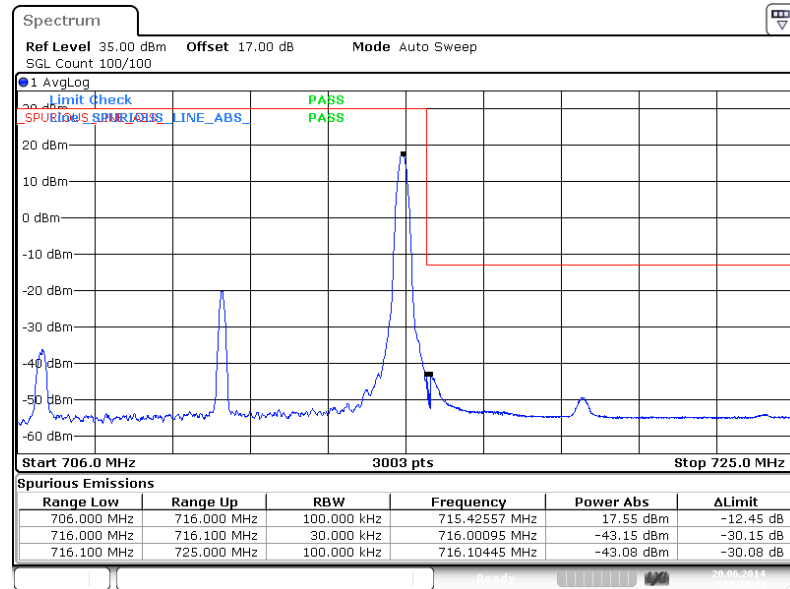


Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

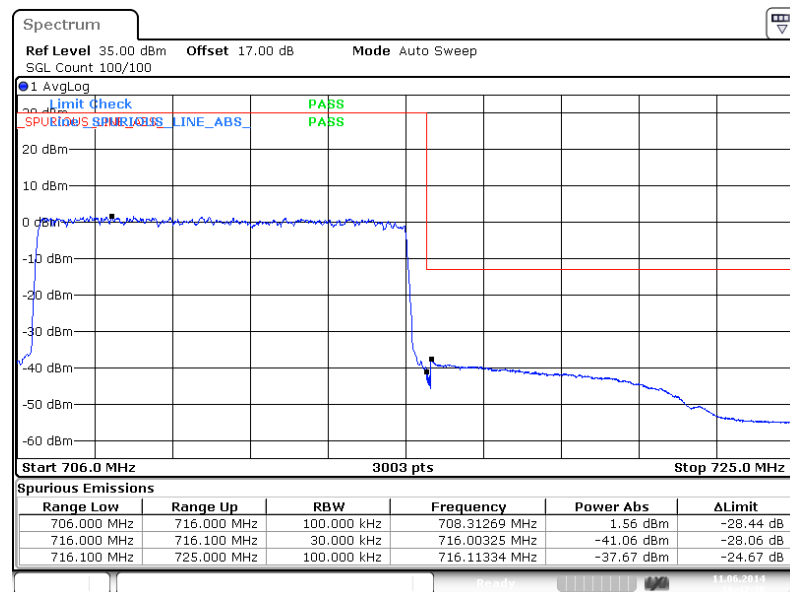




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



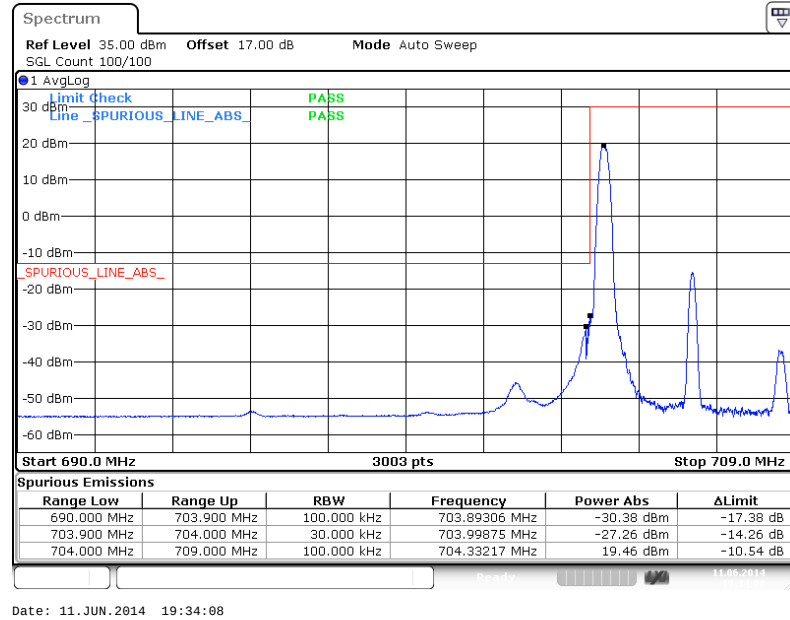
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



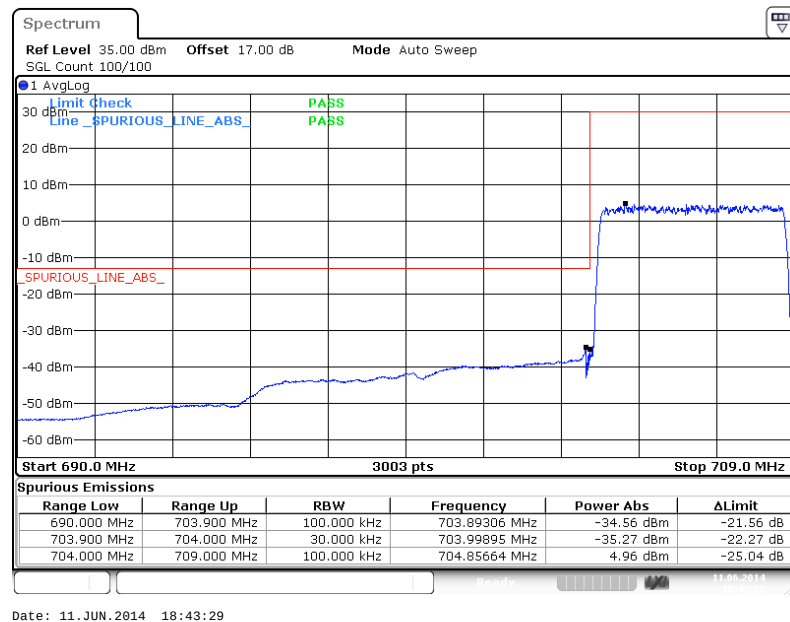


Band :	LTE Band 17	Band Width :	5MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

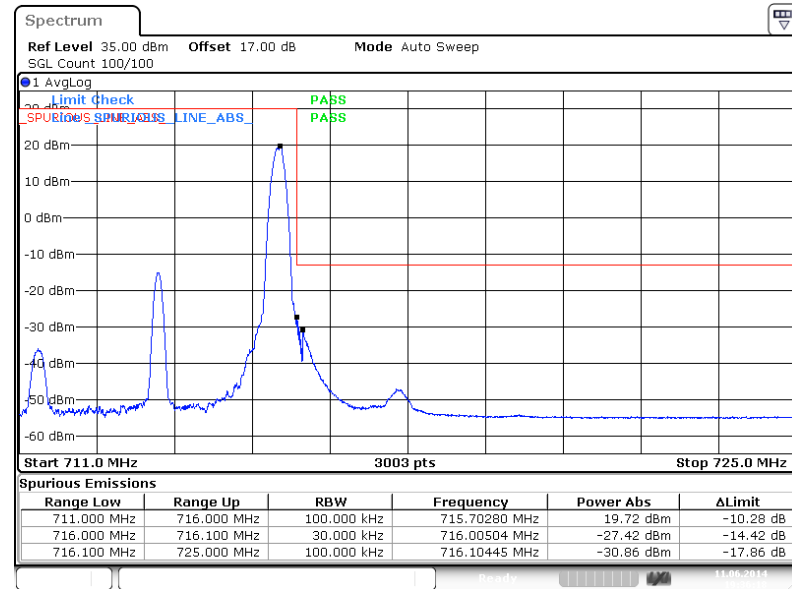


Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0

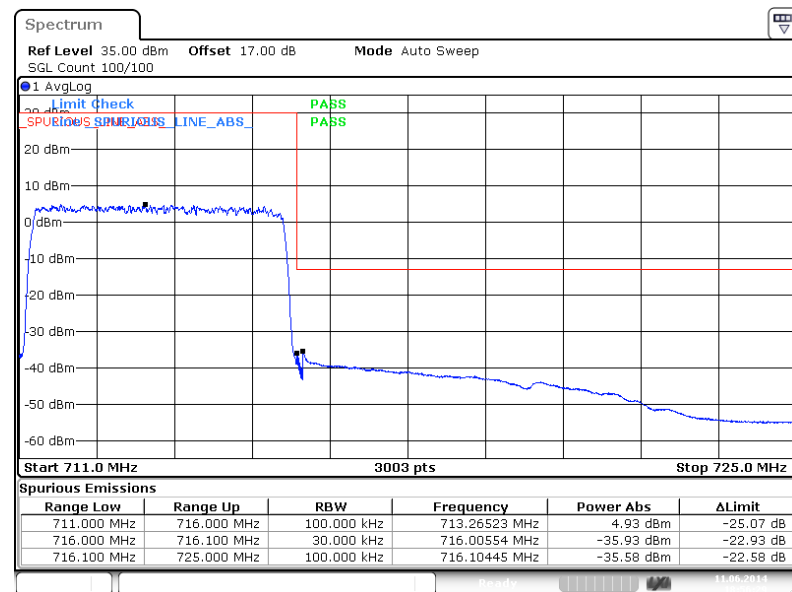




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



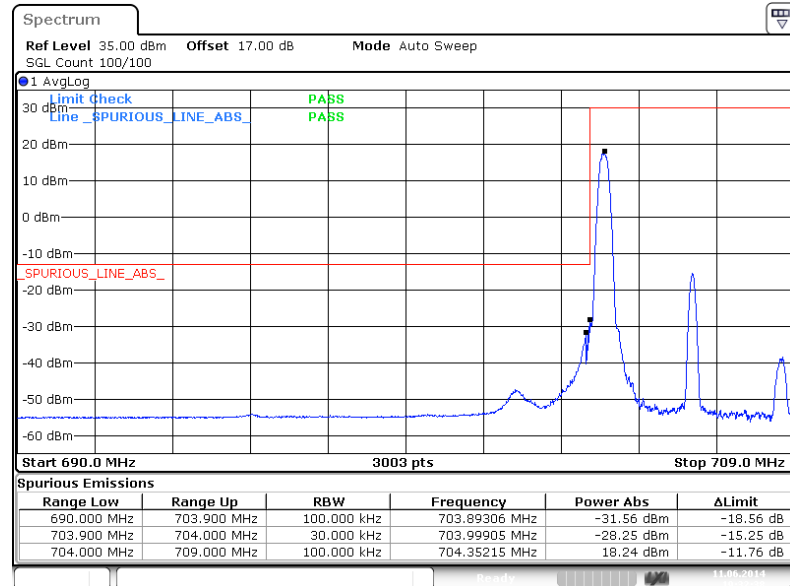
Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0



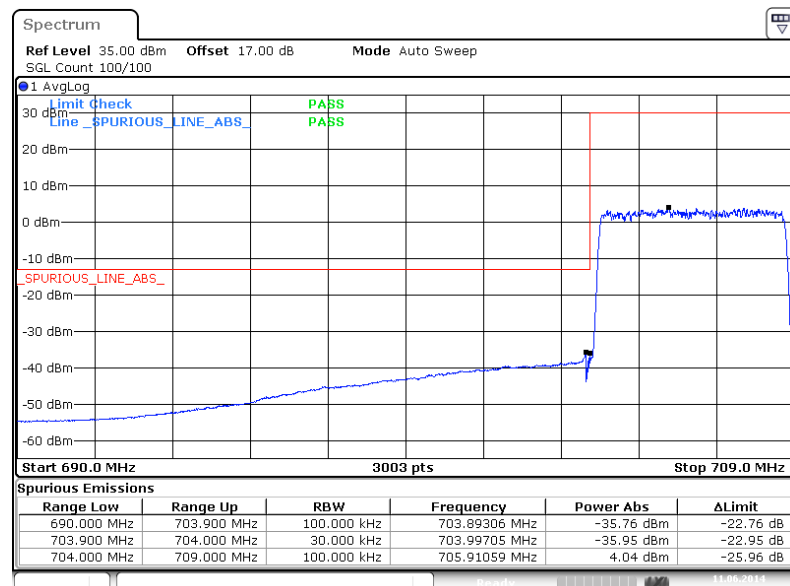


Band :	LTE Band 17	Band Width :	5MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

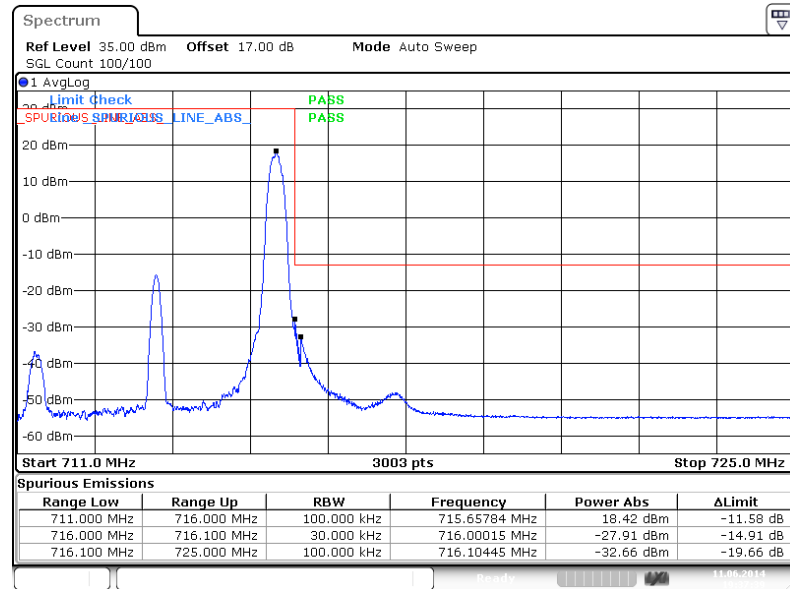


Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

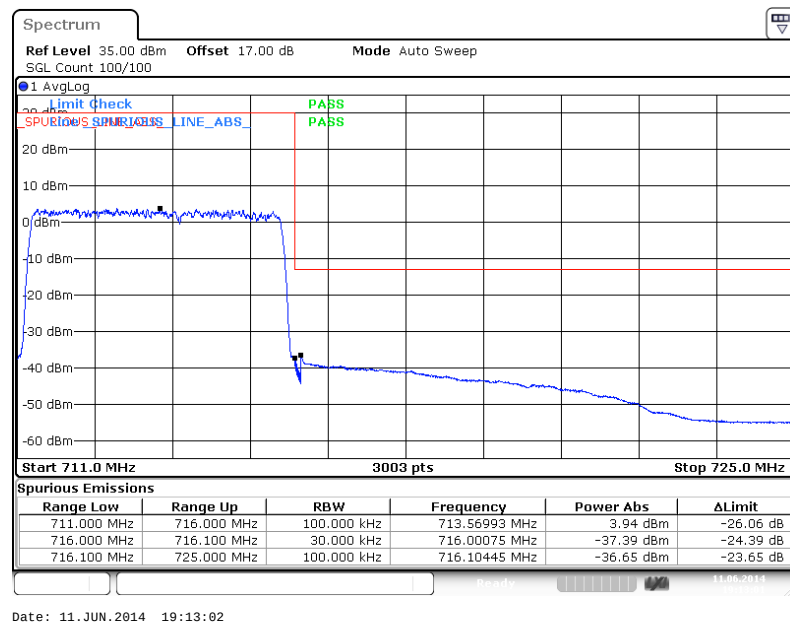




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



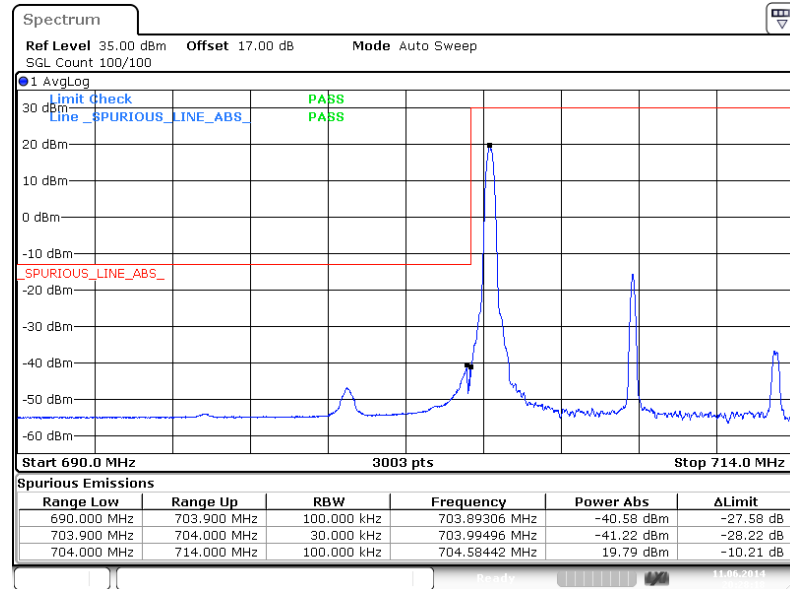
Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



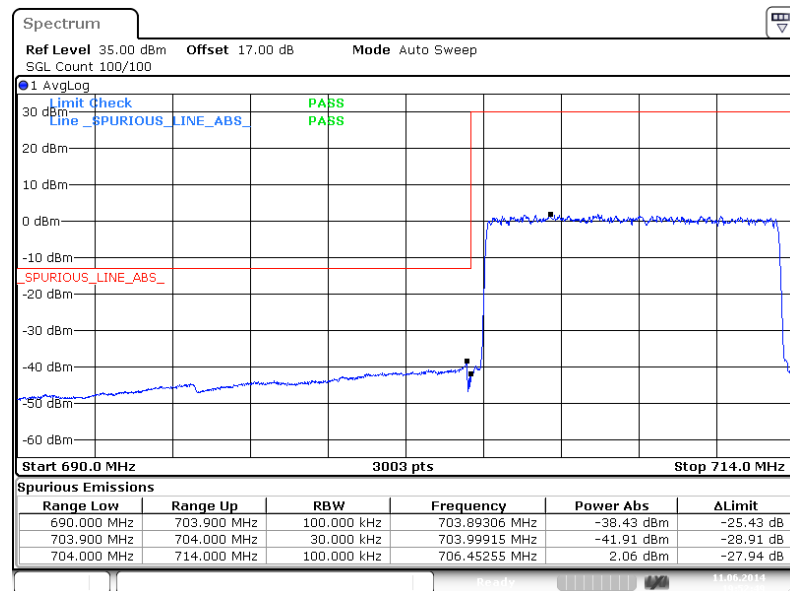


Band :	LTE Band 17	Band Width :	10MHz / QPSK
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Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

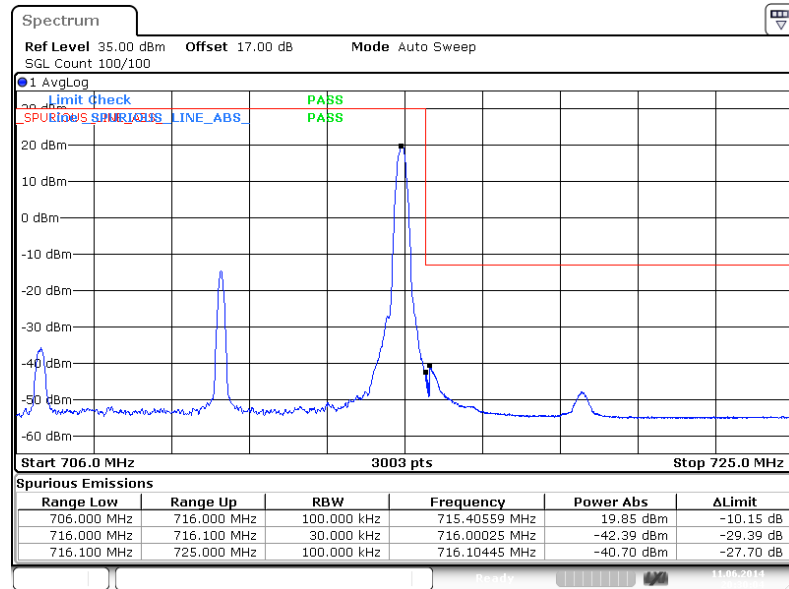


Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

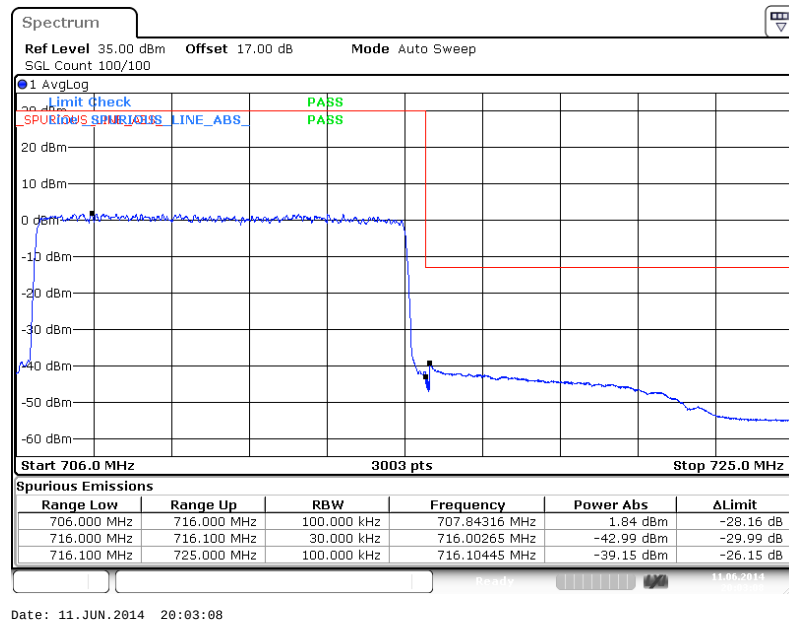




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



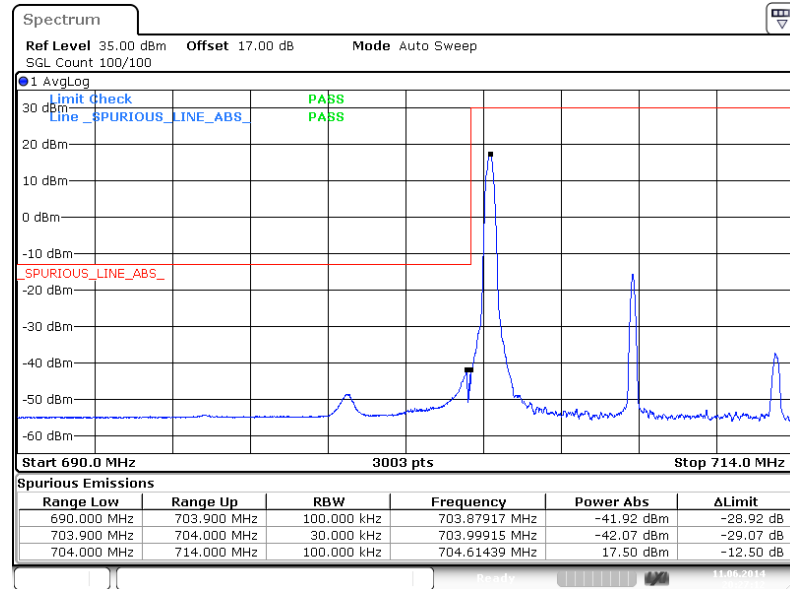
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



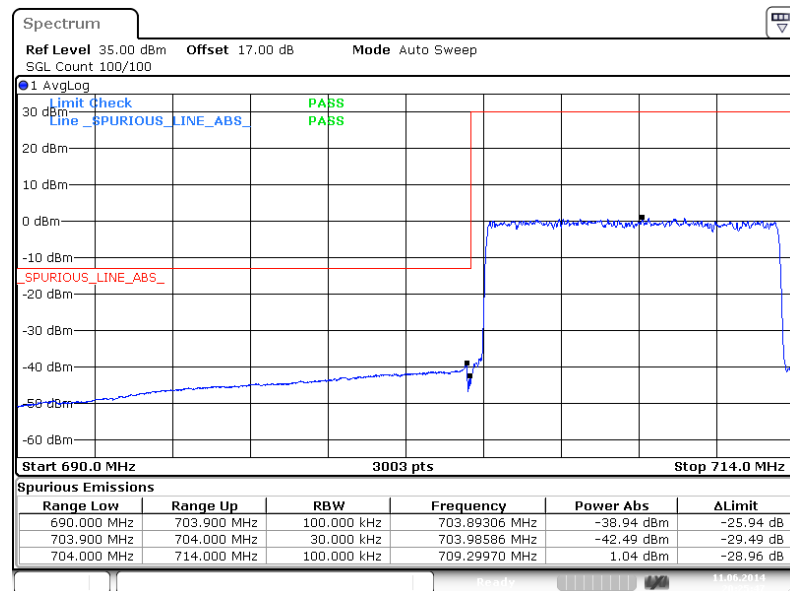


Band :	LTE Band 17	Band Width :	10MHz / 16QAM
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Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

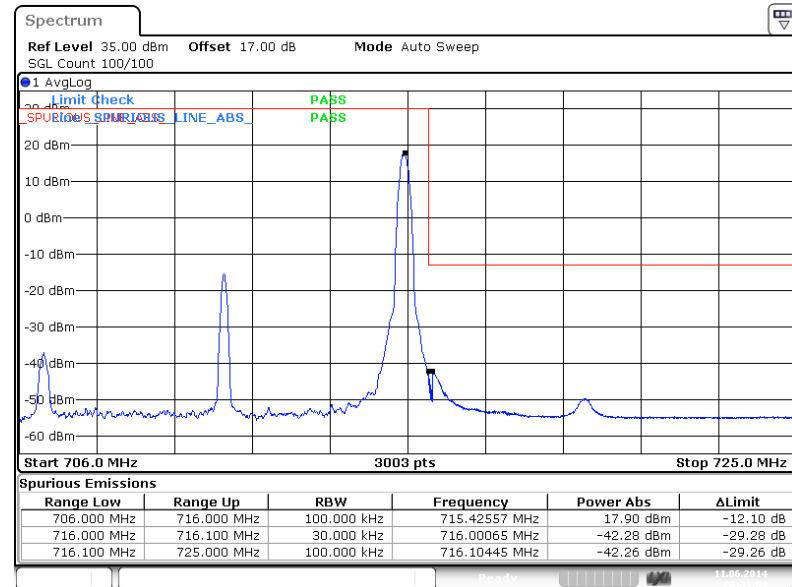


Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

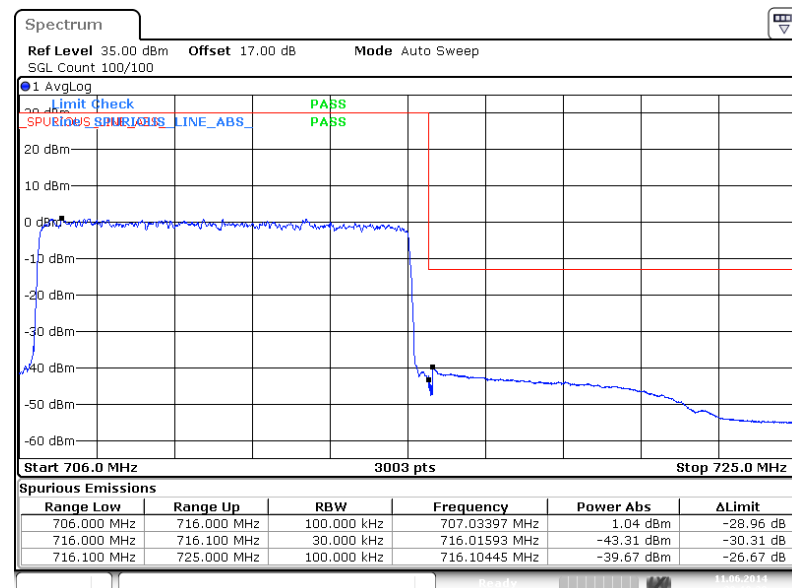




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



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



3.6 Conducted Spurious Emission Measurement

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30MHz up to a frequency including its 10th harmonic.

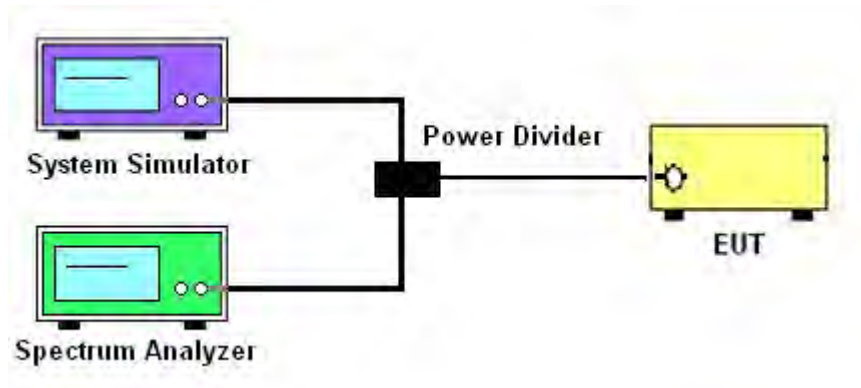
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. 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.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm.
8. For Band 7
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)

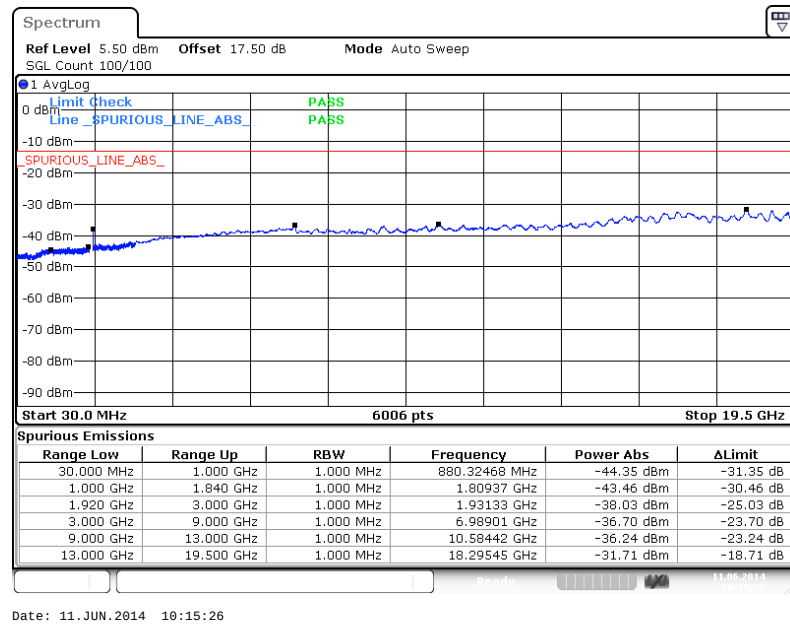
3.6.4 Test Setup



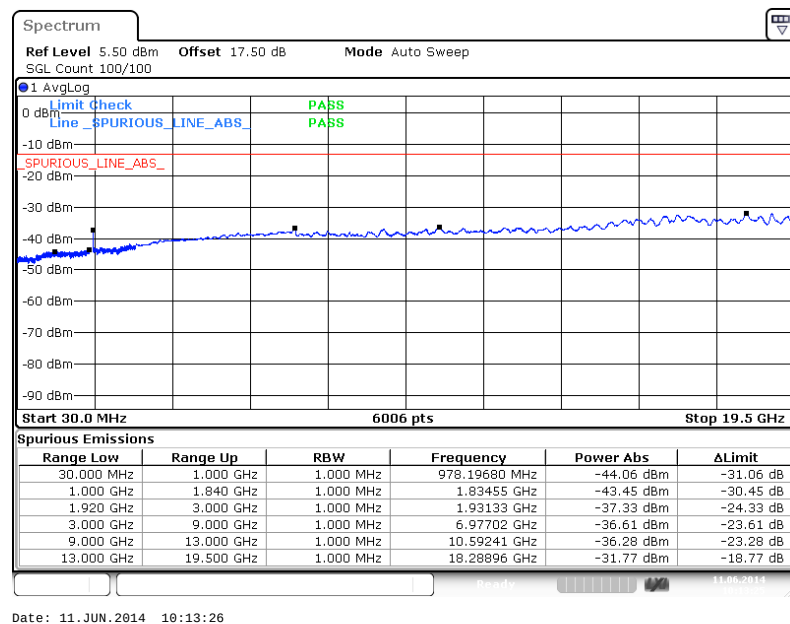
3.6.5 Test Result (Plots) of Conducted Spurious Emission

Band :	LTE Band 2	Channel :	CH18607 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



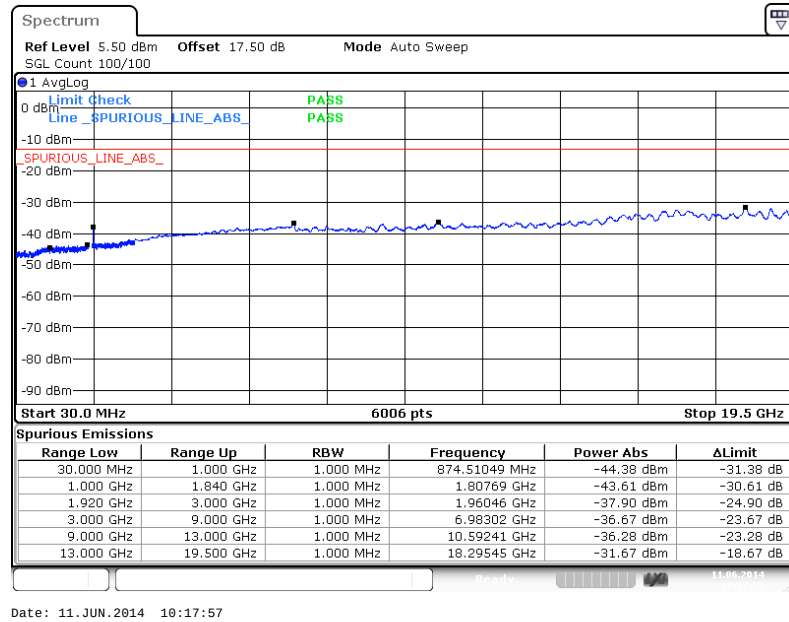
16QAM (RB Size 1, RB Offset 0)



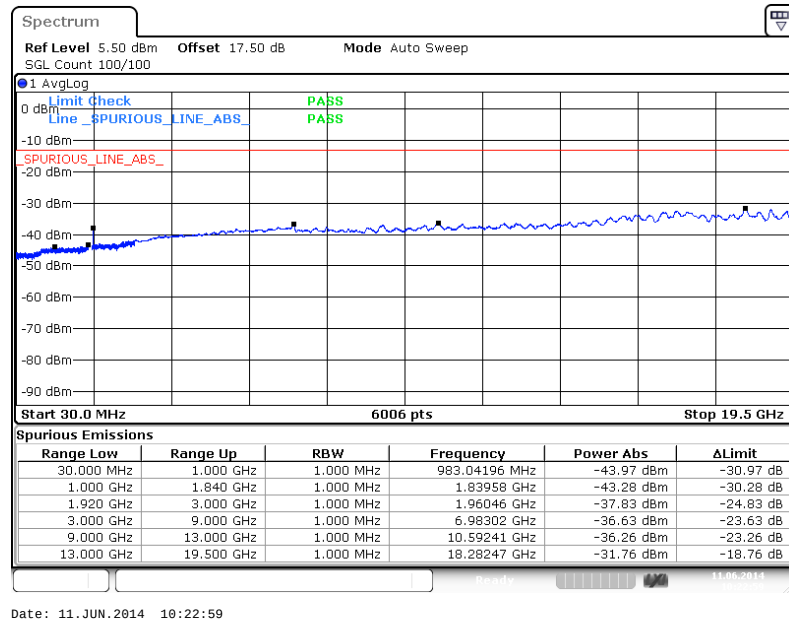


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



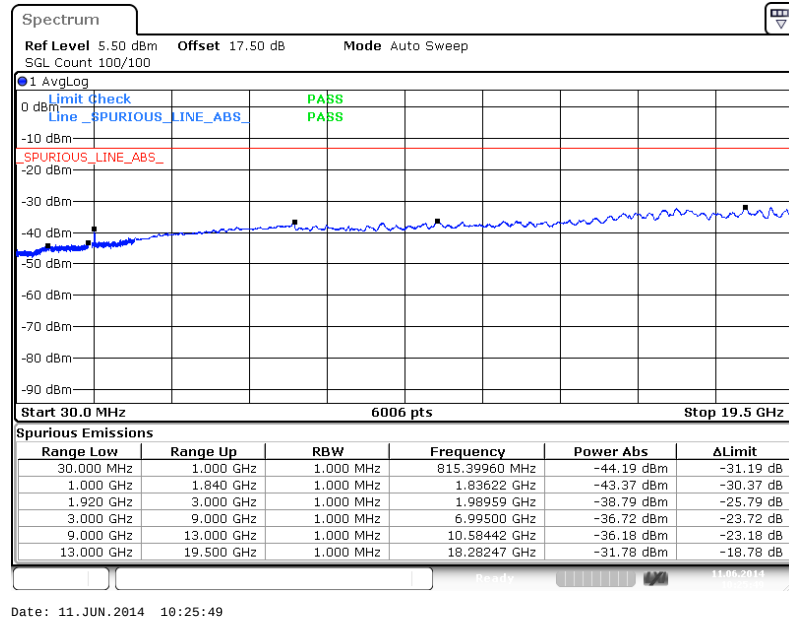
16QAM (RB Size 1, RB Offset 0)



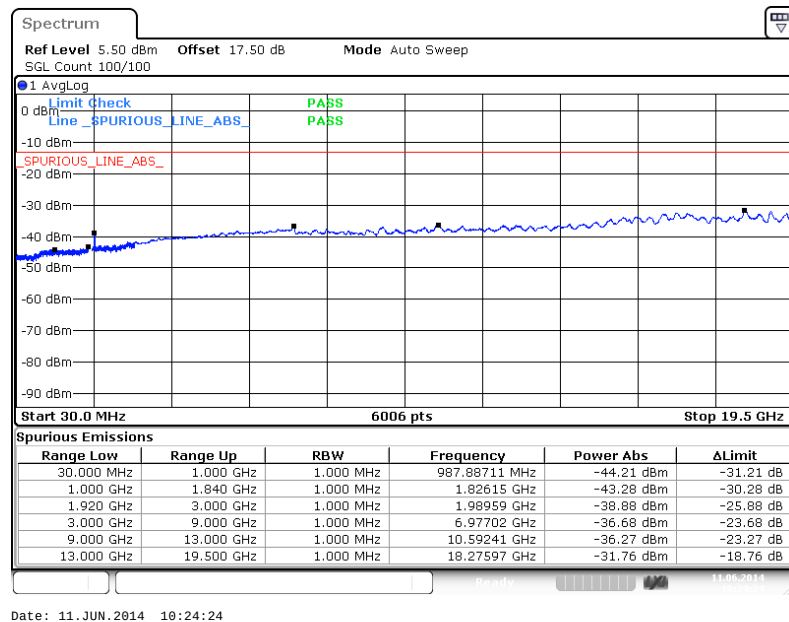


Band :	LTE Band 2	Channel :	CH19193 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)



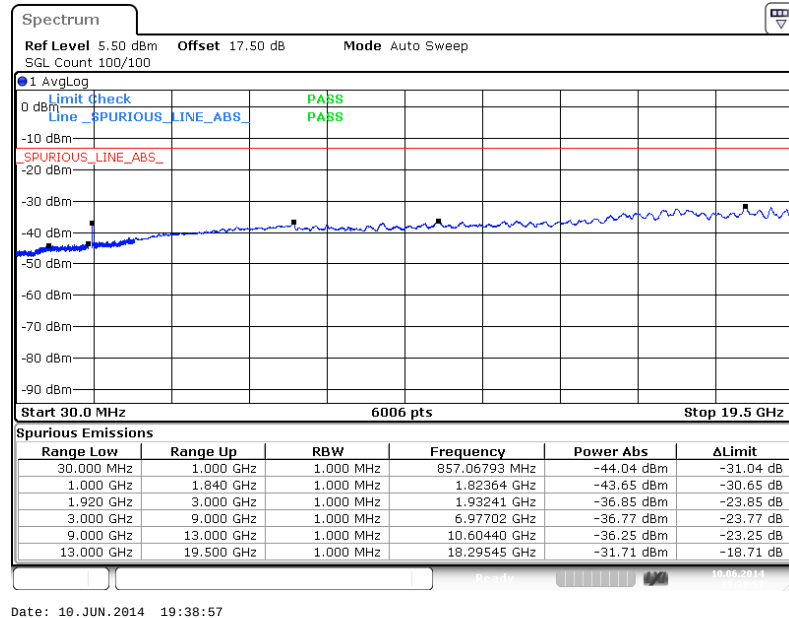
16QAM (RB Size 1, RB Offset 0)



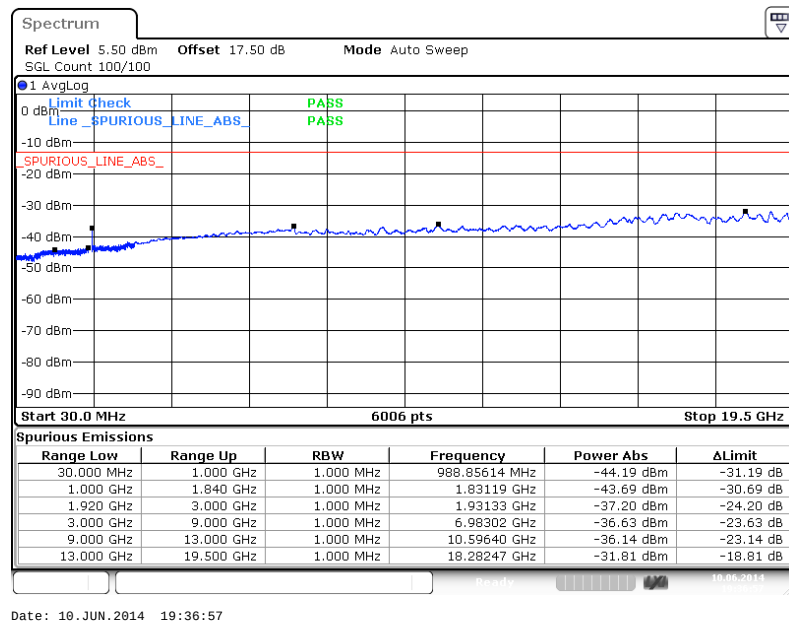


Band :	LTE Band 2	Channel :	CH18615 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



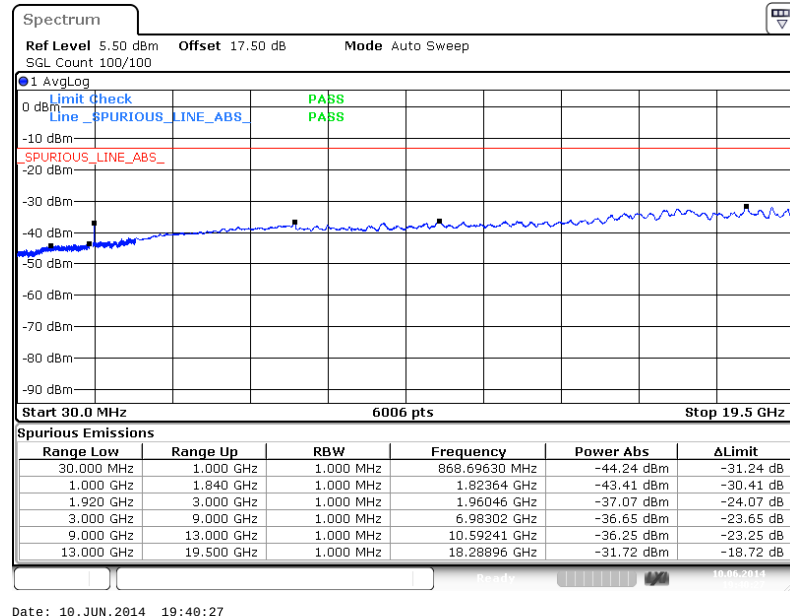
16QAM (RB Size 1, RB Offset 0)



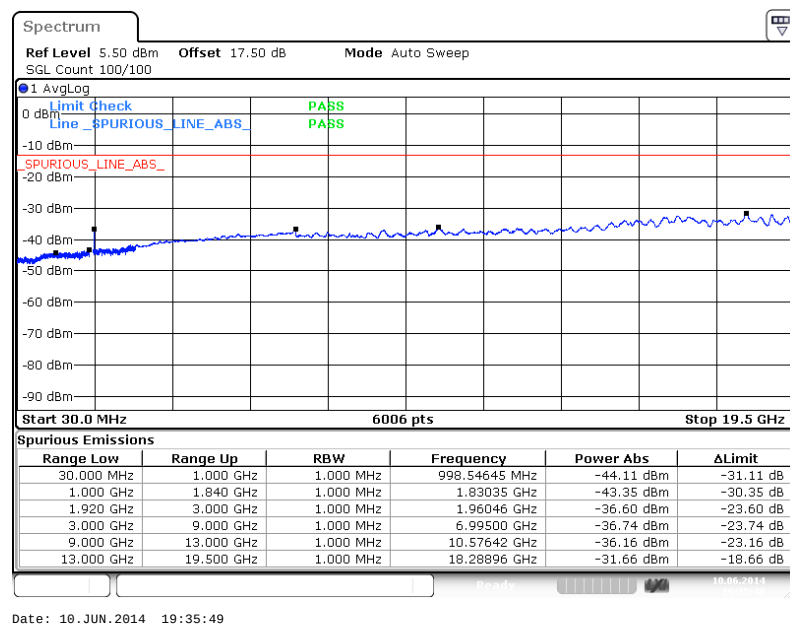


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

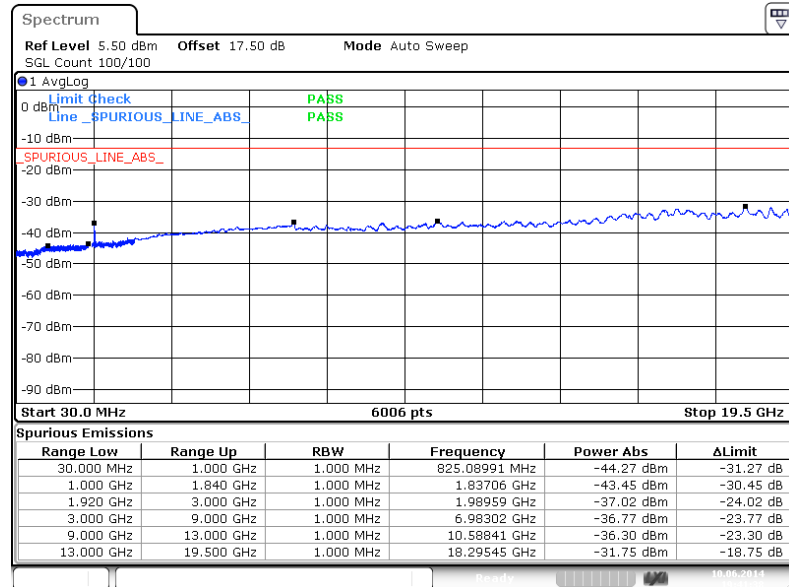


16QAM (RB Size 1, RB Offset 0)

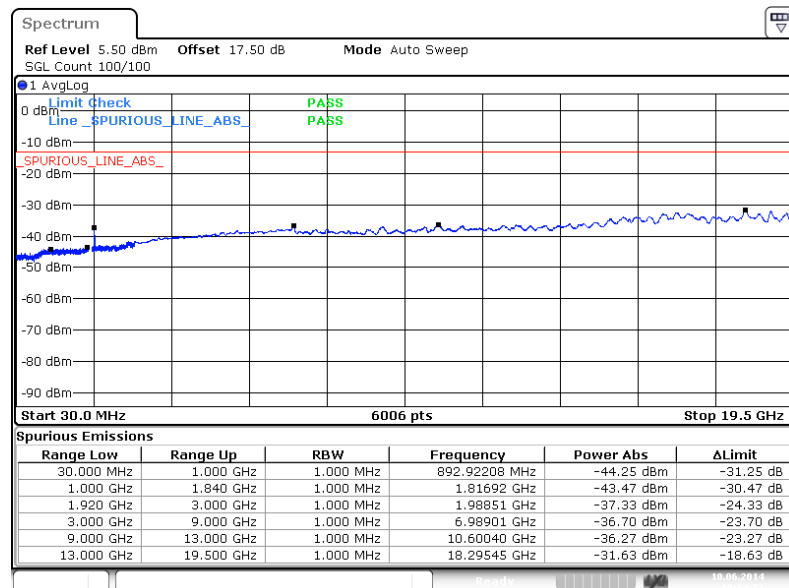




Band :	LTE Band 2	Channel :	CH19185 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 10. JUN. 2014 19:41:39

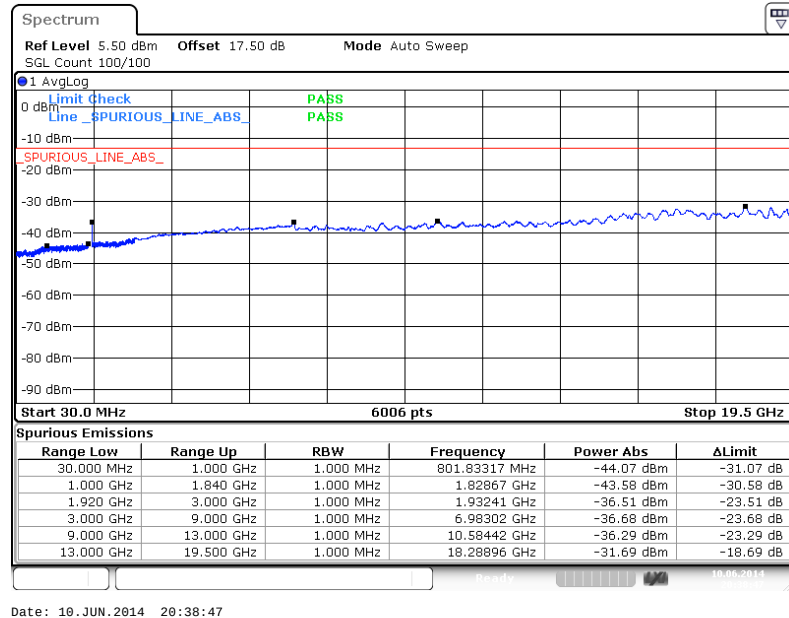
16QAM (RB Size 1, RB Offset 0)

Date: 10. JUN. 2014 19:34:51

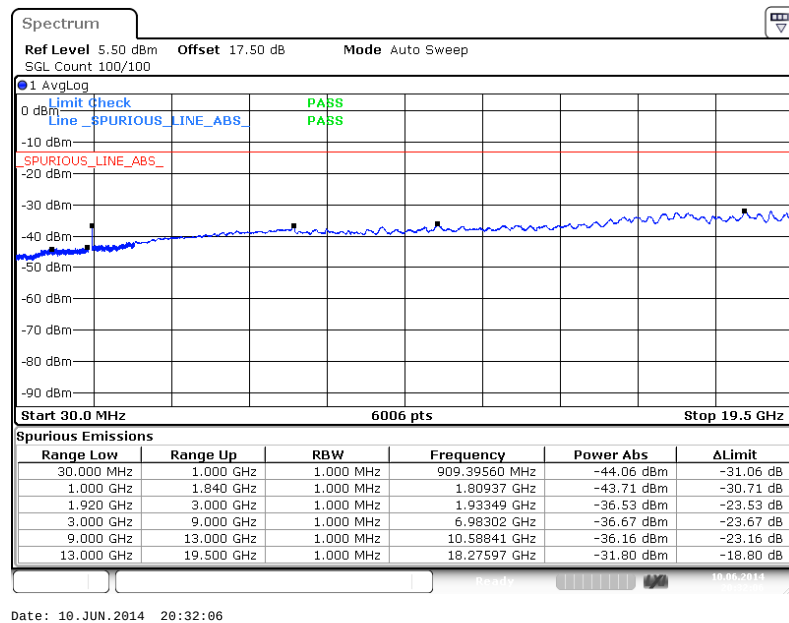


Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

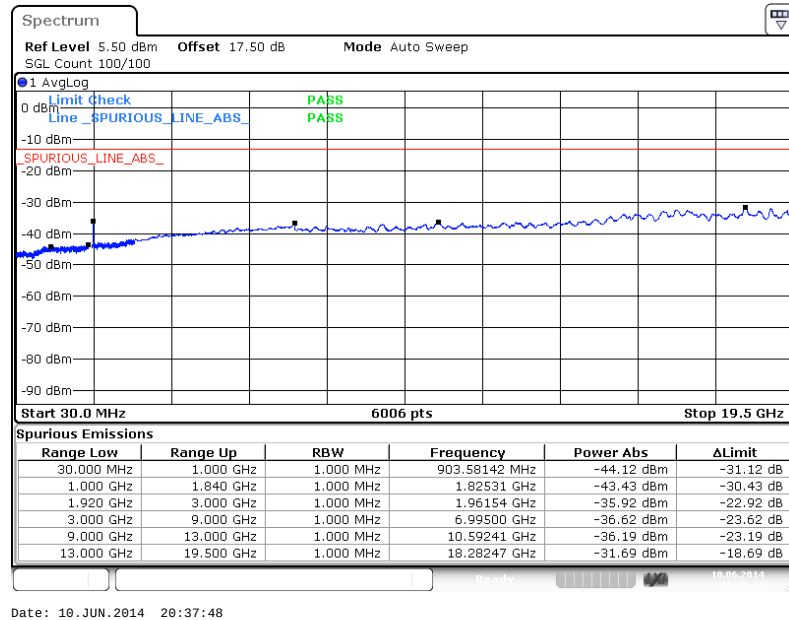
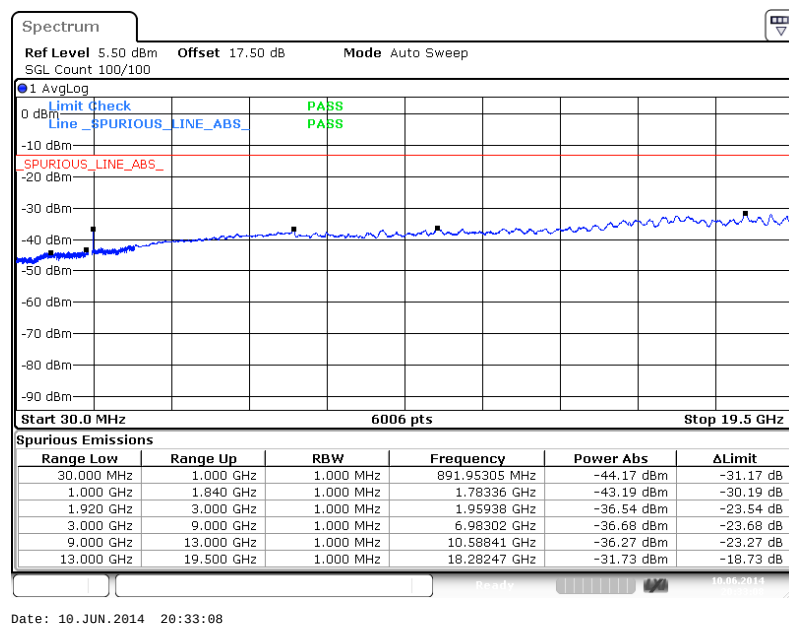


16QAM (RB Size 1, RB Offset 0)



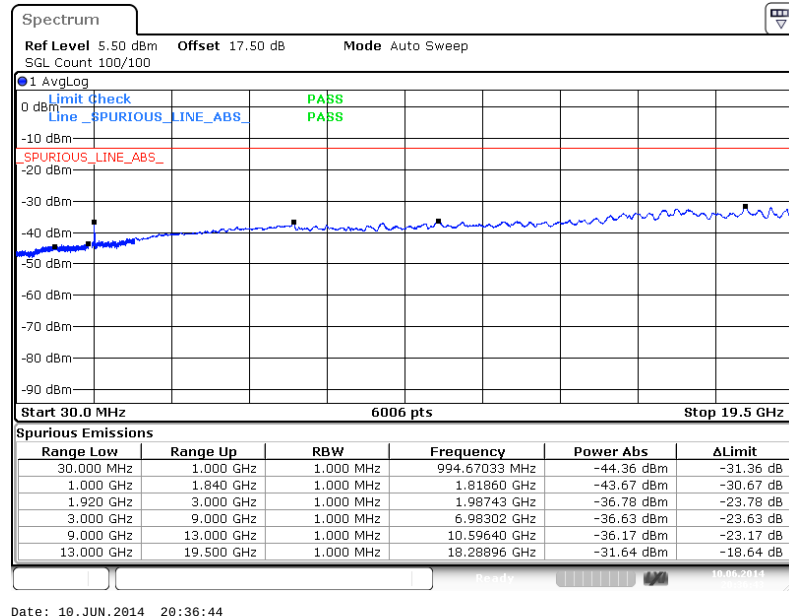
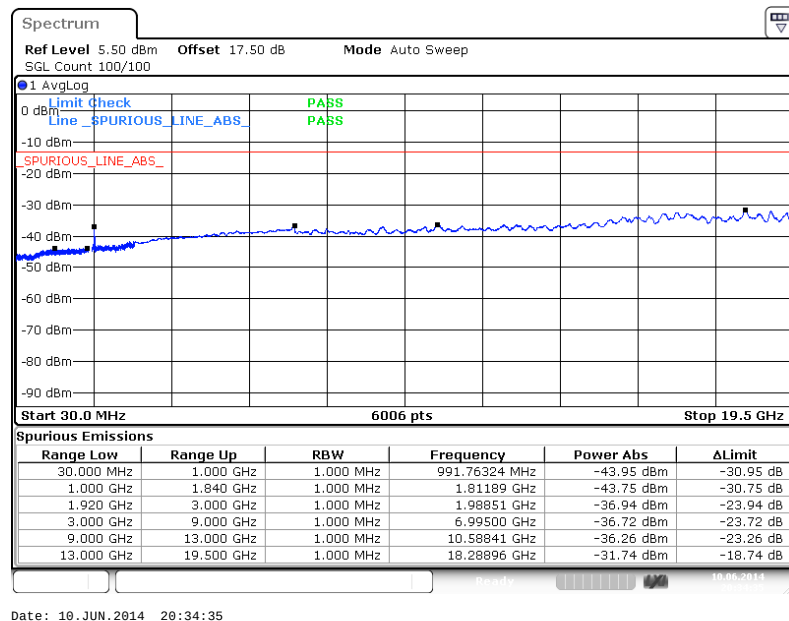


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



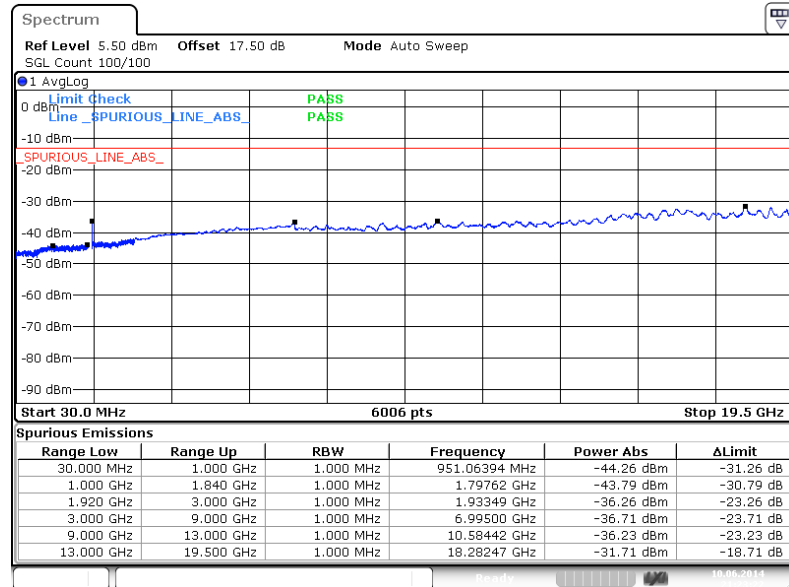
Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



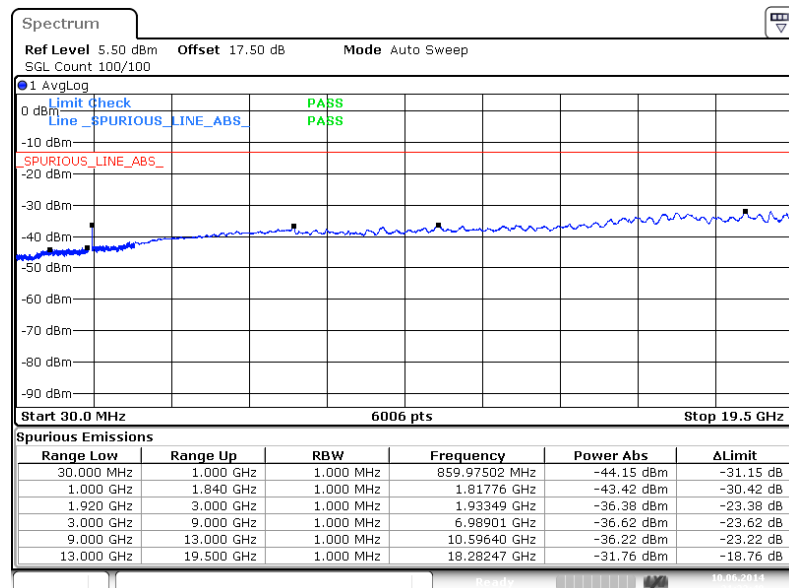
Band :	LTE Band 2	Channel :	CH18650 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 10. JUN. 2014 21:23:22

16QAM (RB Size 1, RB Offset 0)

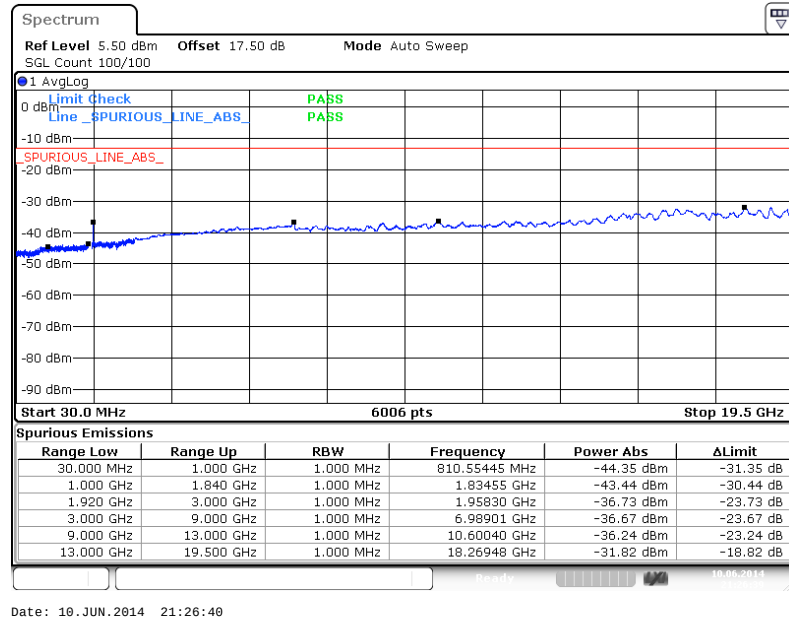


Date: 10. JUN. 2014 21:33:49

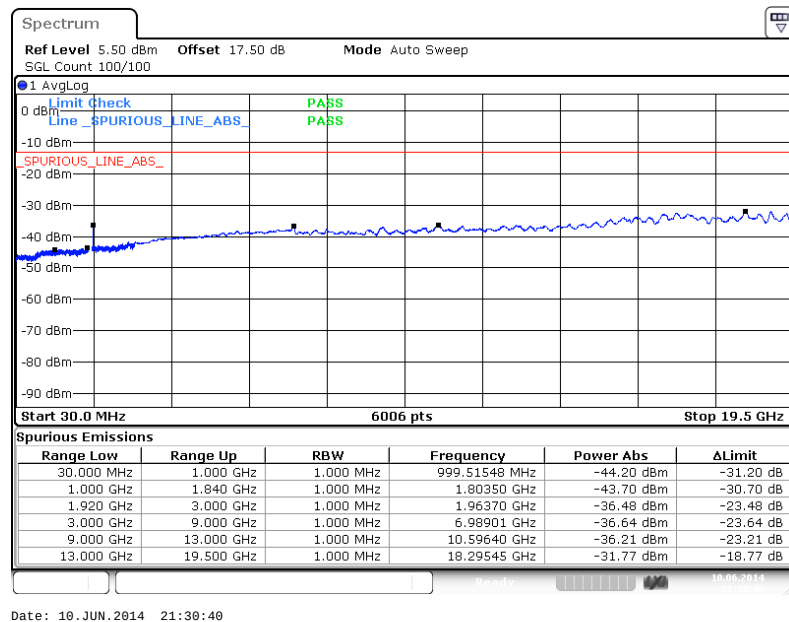


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



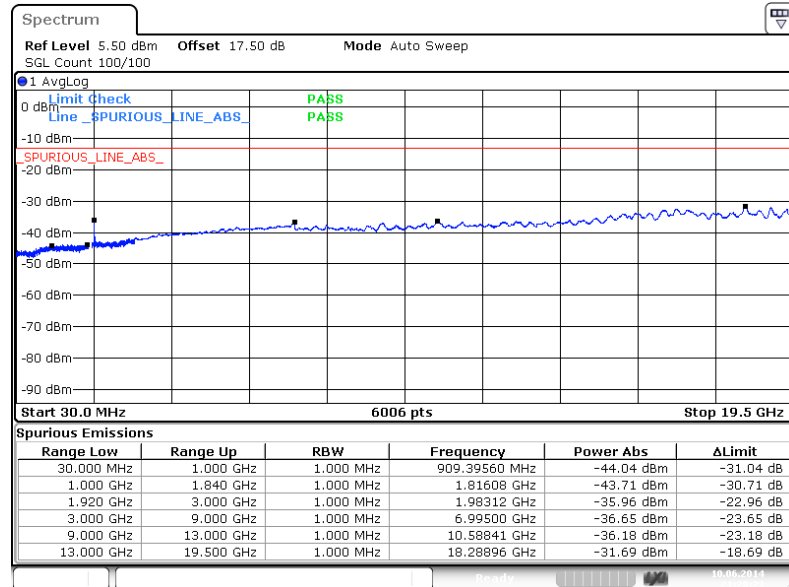
16QAM (RB Size 1, RB Offset 0)





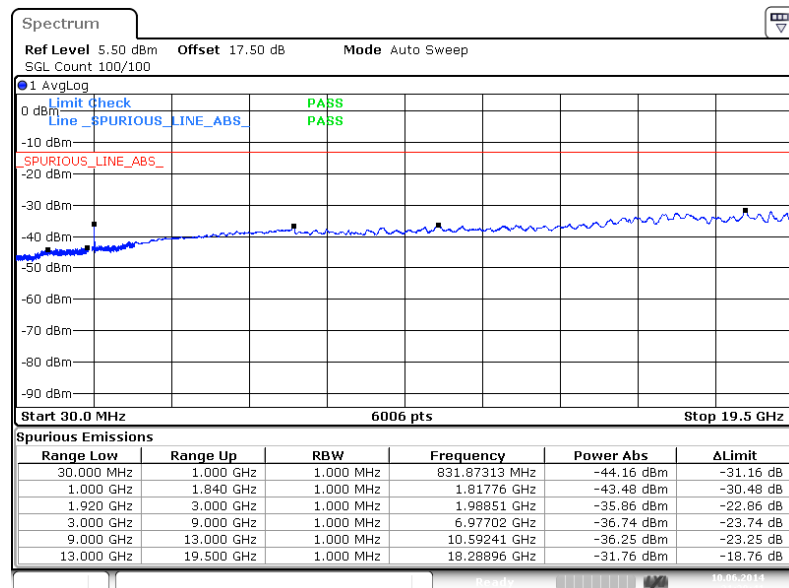
Band :	LTE Band 2	Channel :	CH19150 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 10. JUN. 2014 21:28:23

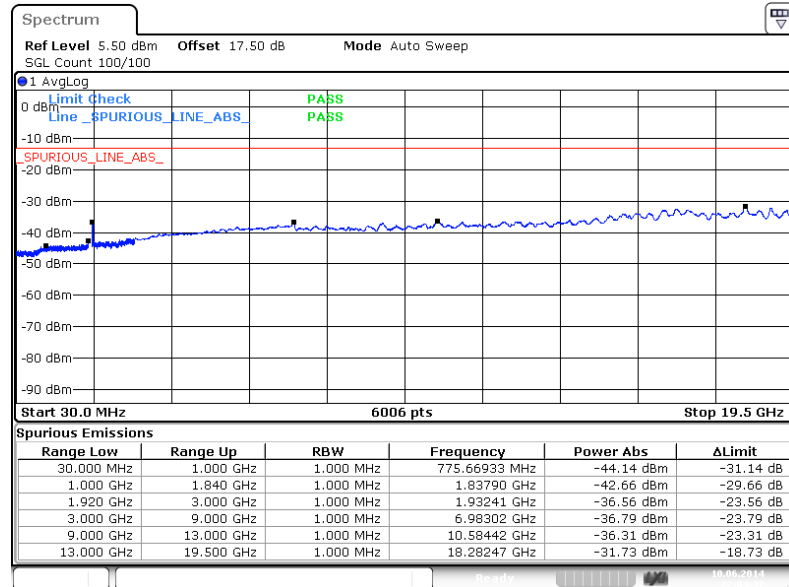
16QAM (RB Size 1, RB Offset 0)



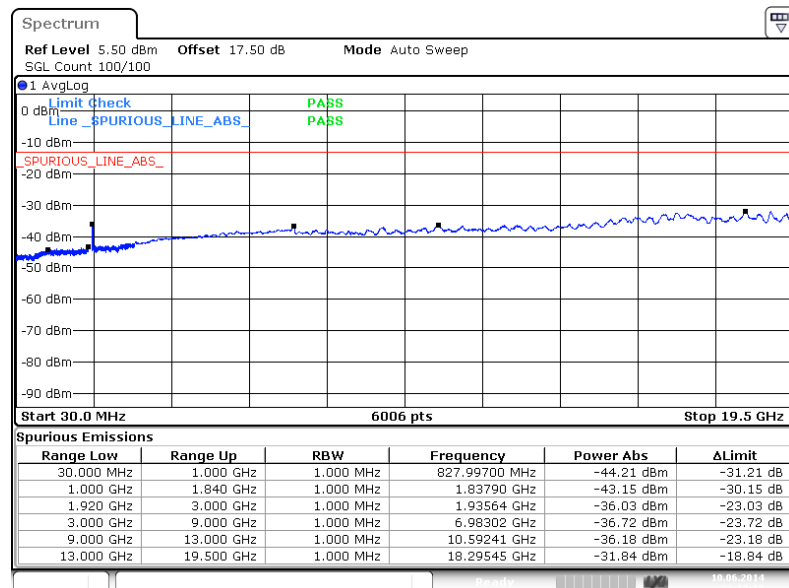
Date: 10. JUN. 2014 21:29:41



Band :	LTE Band 2	Channel :	CH18675 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

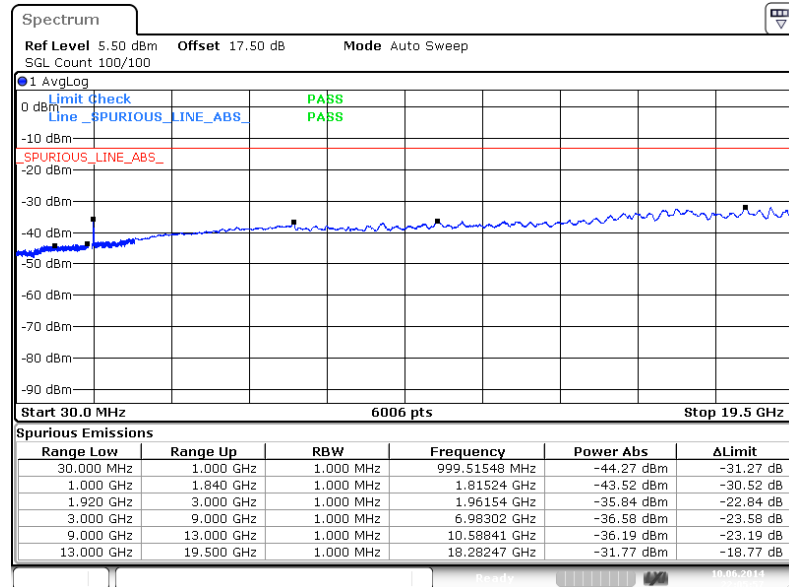
Date: 10. JUN. 2014 22:04:38

16QAM (RB Size 1, RB Offset 0)

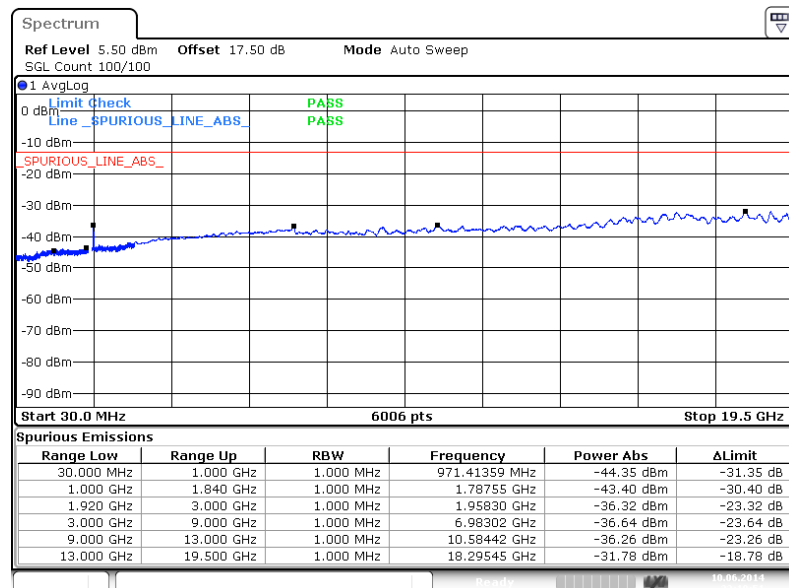
Date: 10. JUN. 2014 22:13:10



Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

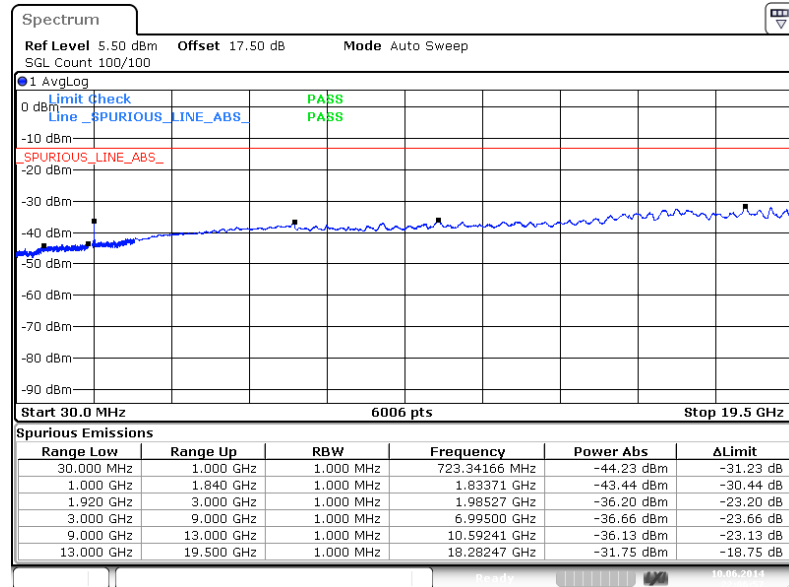
Date: 10. JUN. 2014 22:05:57

16QAM (RB Size 1, RB Offset 0)

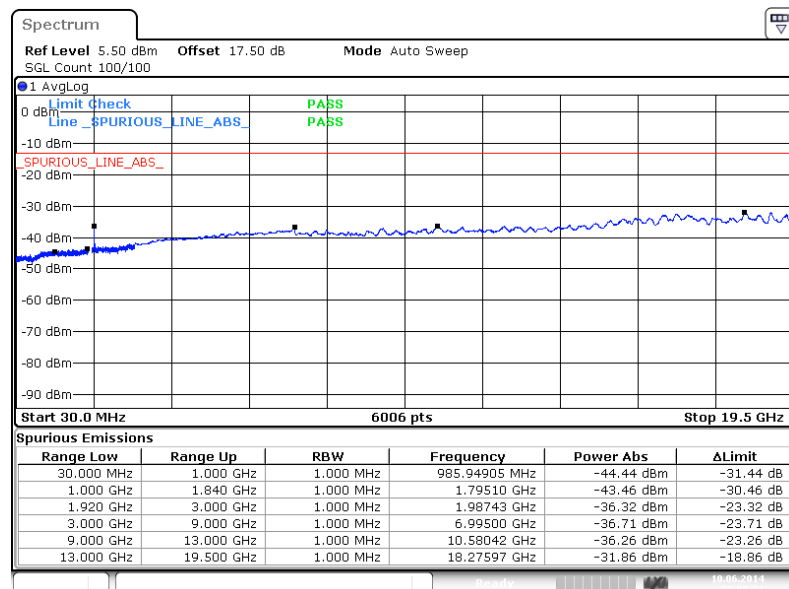
Date: 10. JUN. 2014 22:10:51



Band :	LTE Band 2	Channel :	CH19125 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 10 JUN. 2014 22:06:58

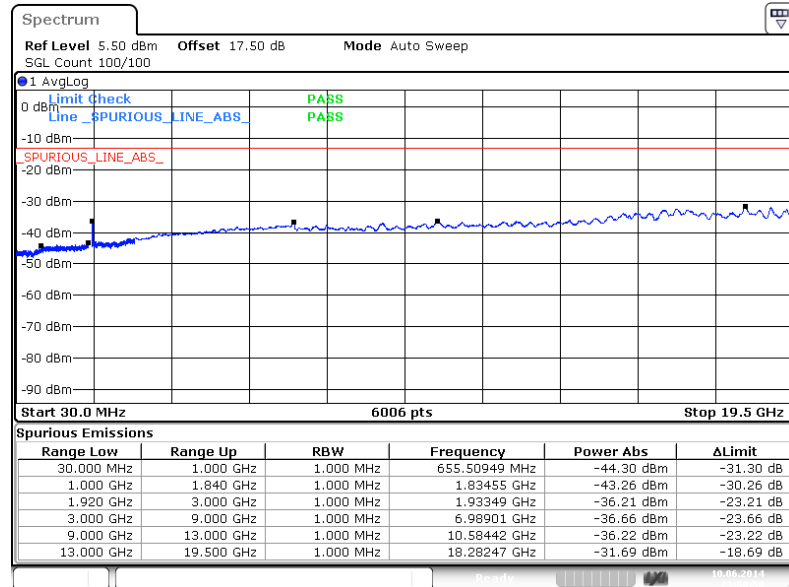
16QAM (RB Size 1, RB Offset 0)

Date: 10 JUN. 2014 22:08:01



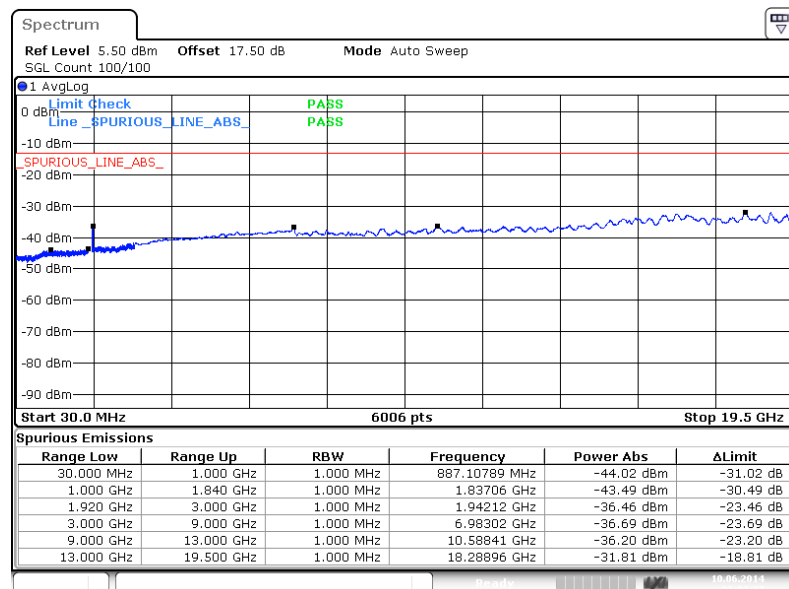
Band :	LTE Band 2	Channel :	CH18700 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 10 JUN. 2014 23:08:50

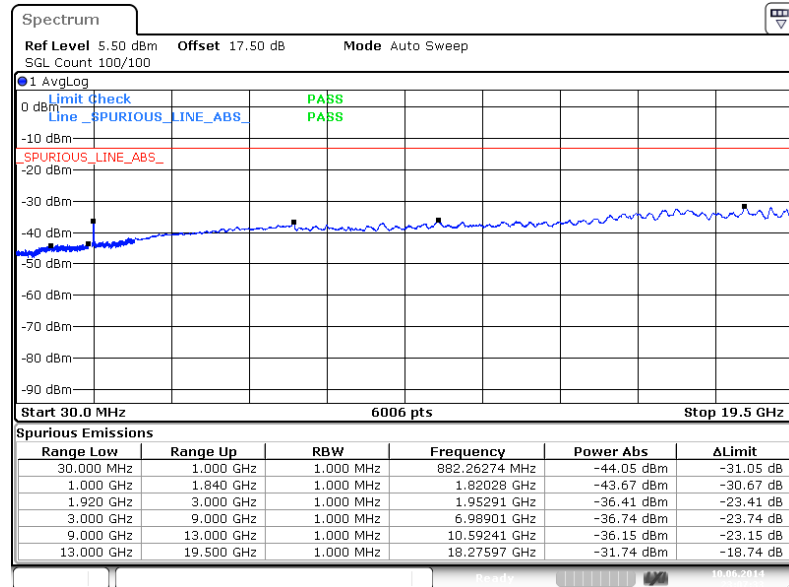
16QAM (RB Size 1, RB Offset 0)



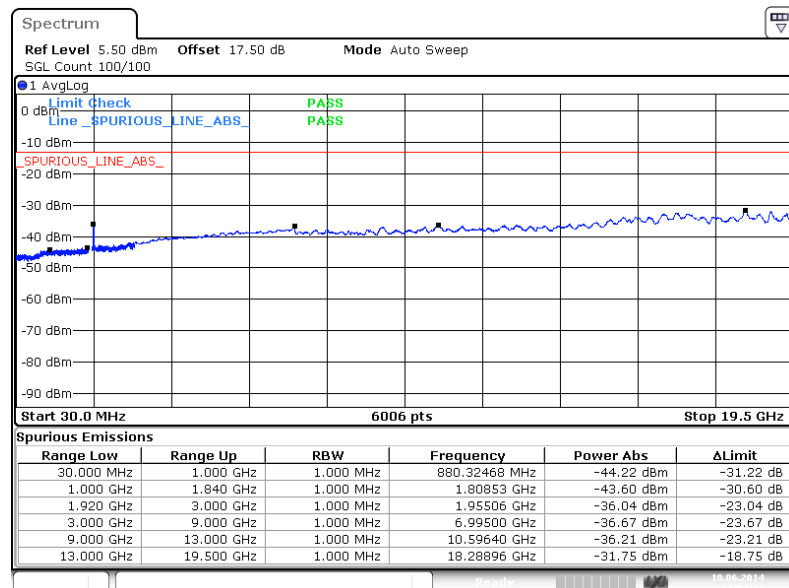
Date: 10 JUN. 2014 23:02:37



Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

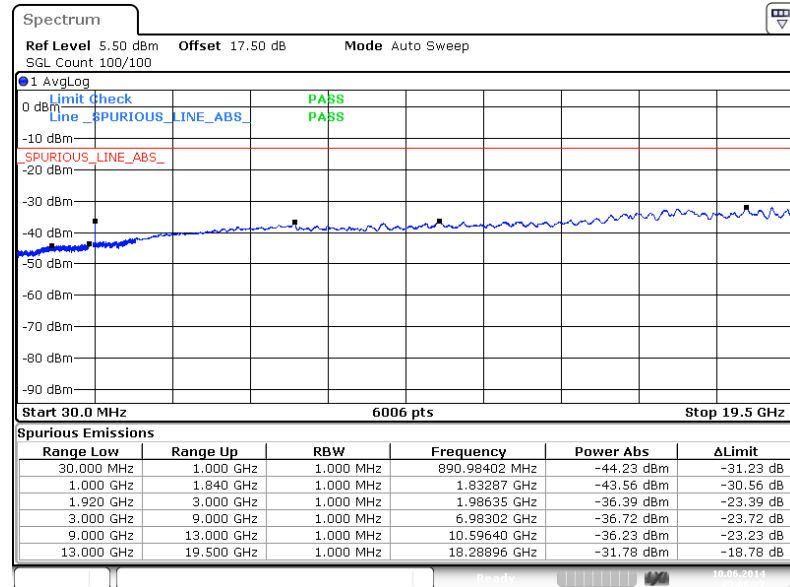
Date: 10. JUN. 2014 23:07:33

16QAM (RB Size 1, RB Offset 0)

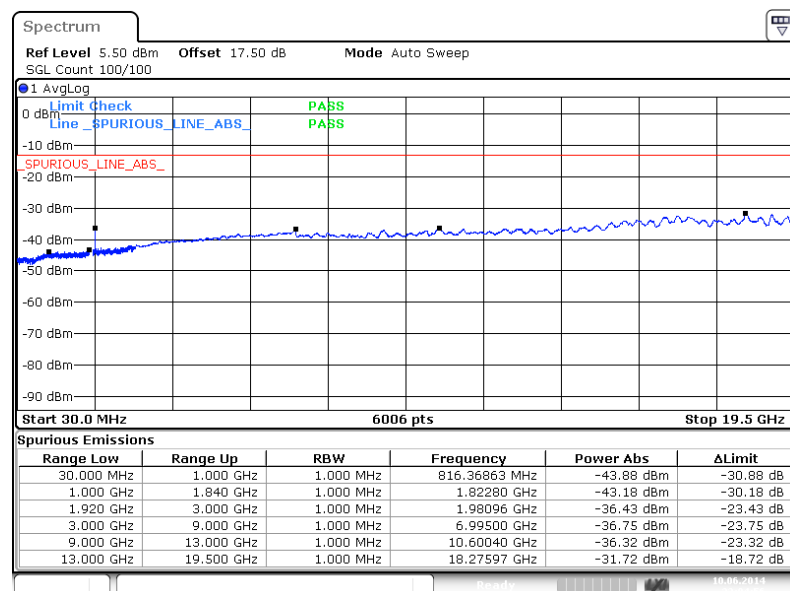
Date: 10. JUN. 2014 23:03:34



Band :	LTE Band 2	Channel :	CH19100 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

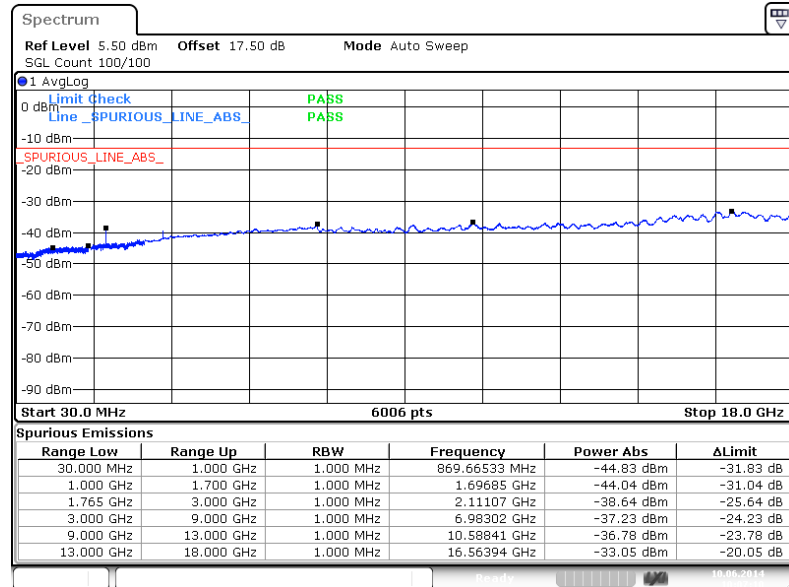
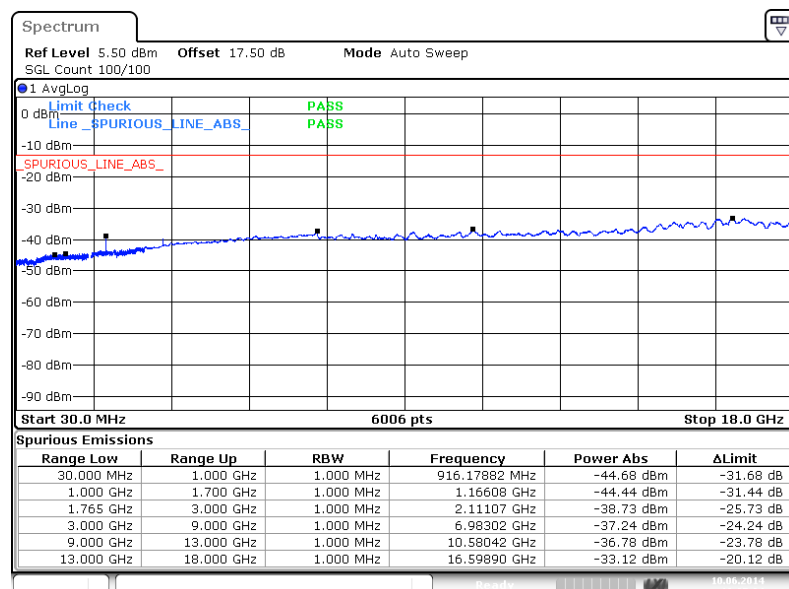
Date: 10 JUN. 2014 23:06:27

16QAM (RB Size 1, RB Offset 0)

Date: 10 JUN. 2014 23:04:56

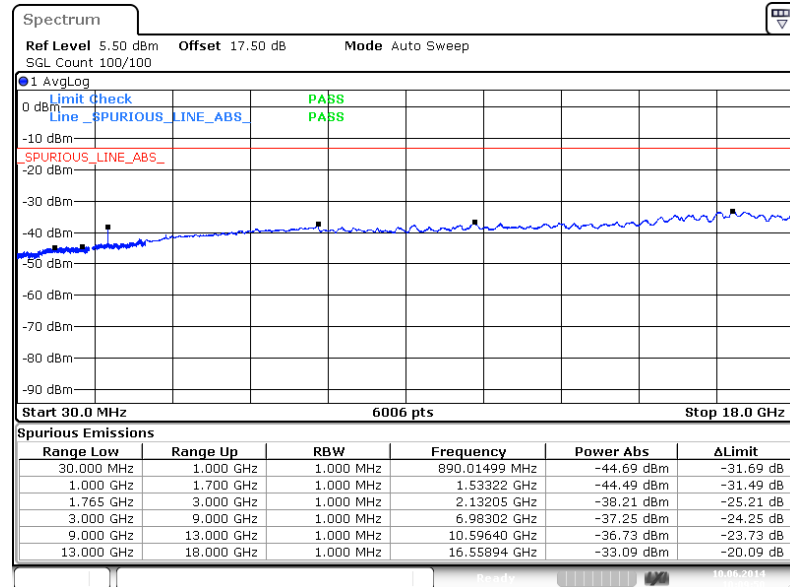


Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

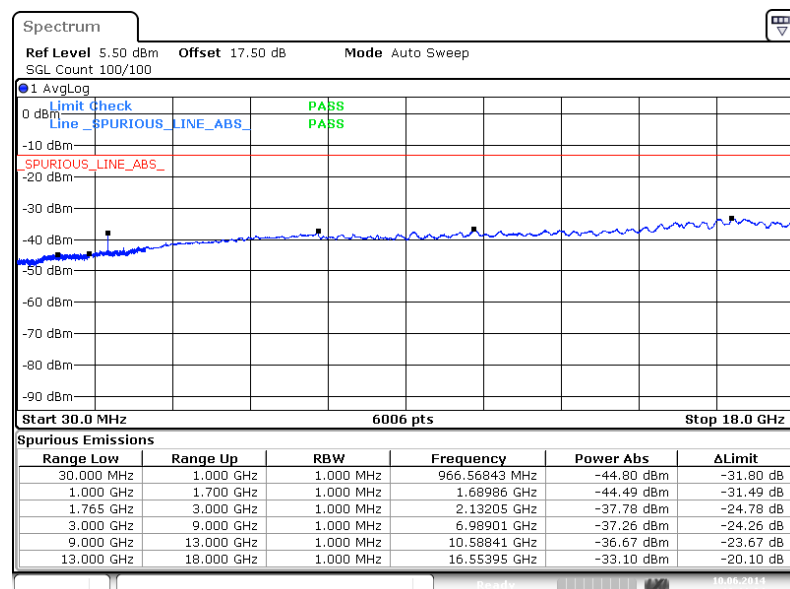
QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 10. JUN. 2014 10:09:50

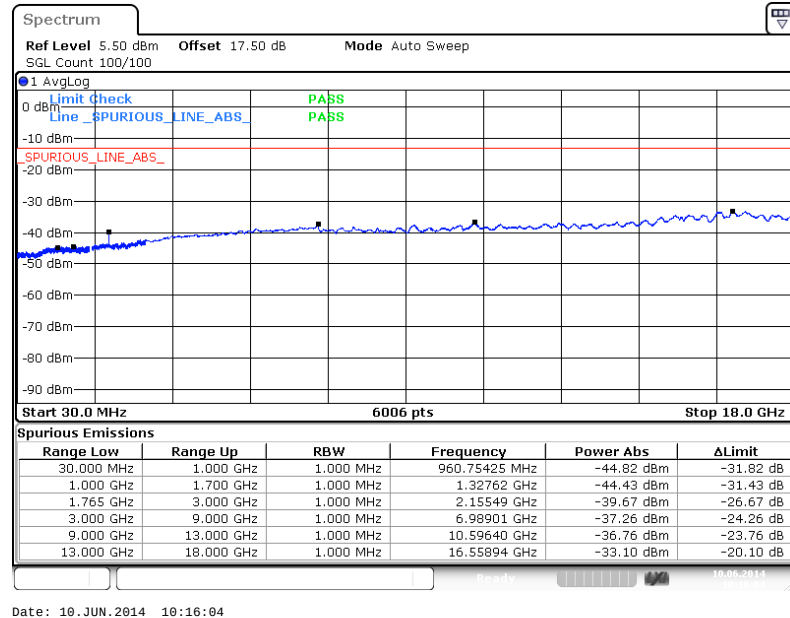
16QAM (RB Size 1, RB Offset 0)

Date: 10. JUN. 2014 10:11:25

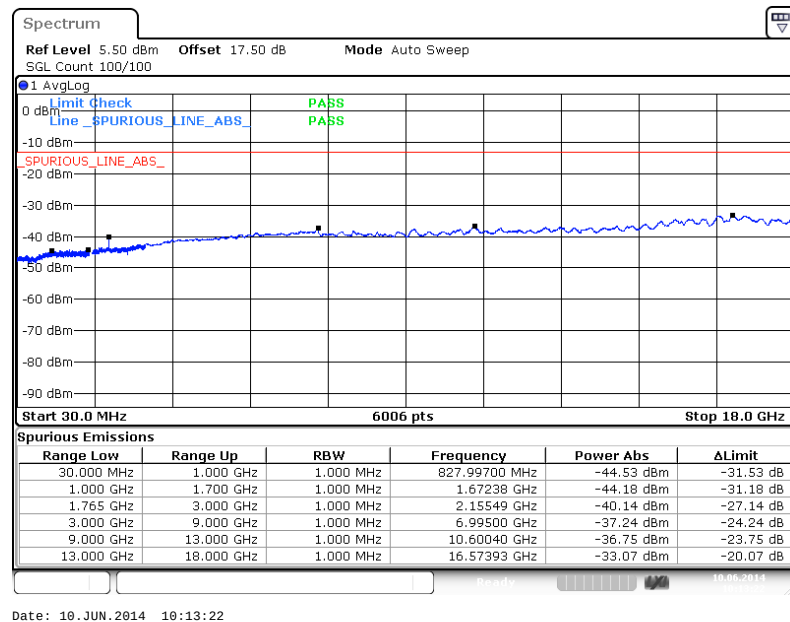


Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)

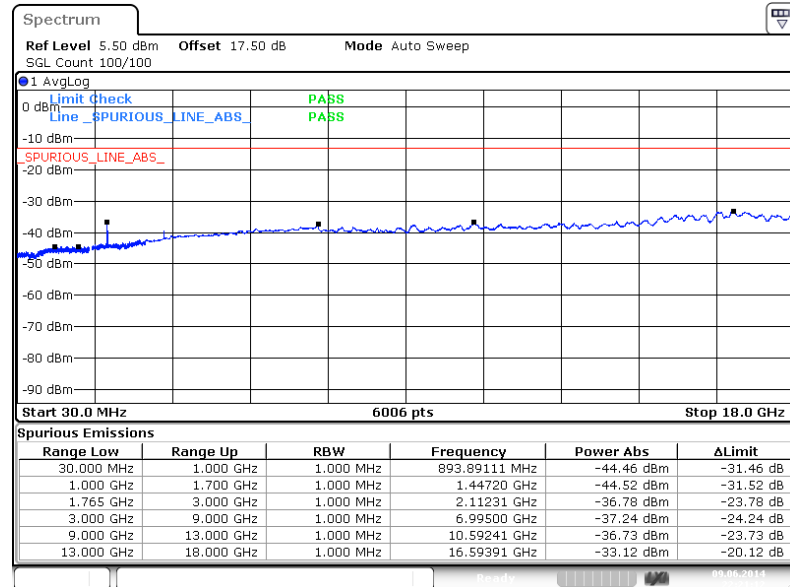


16QAM (RB Size 1, RB Offset 0)

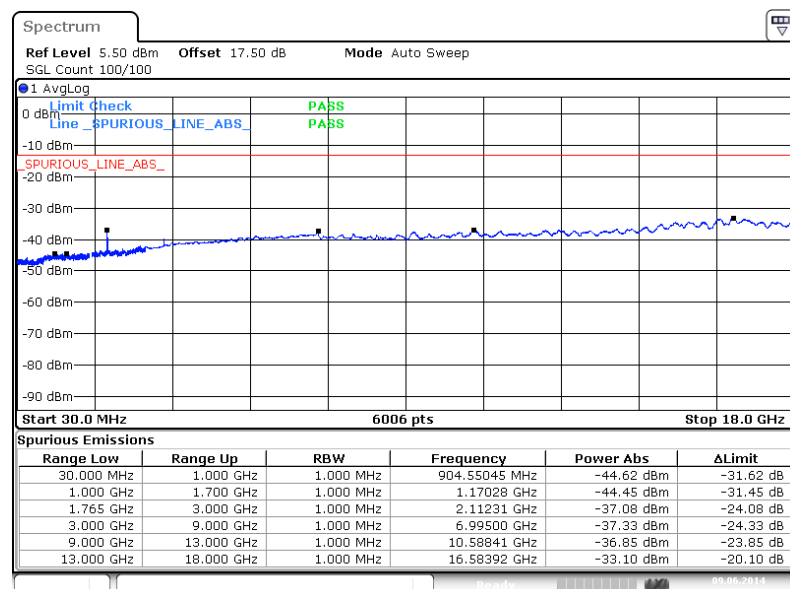




Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 9.JUN.2014 22:21:13

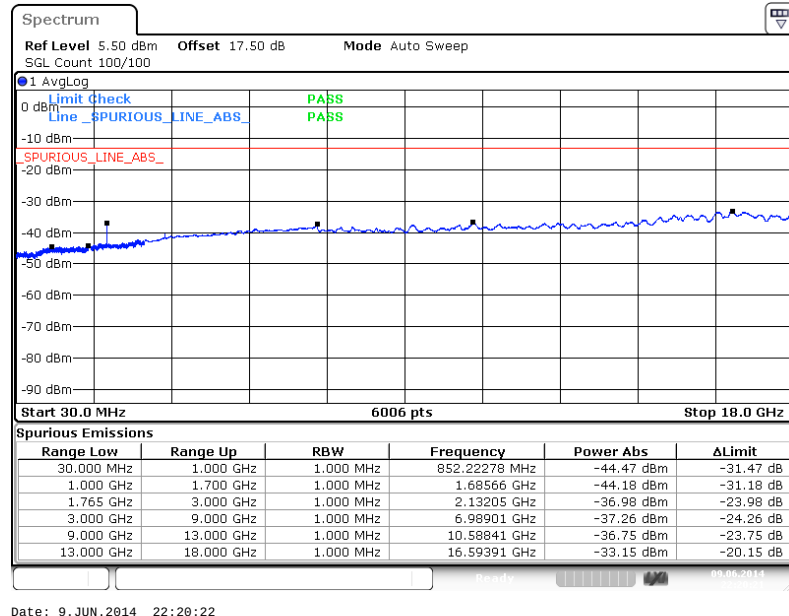
16QAM (RB Size 1, RB Offset 0)

Date: 9.JUN.2014 22:22:32

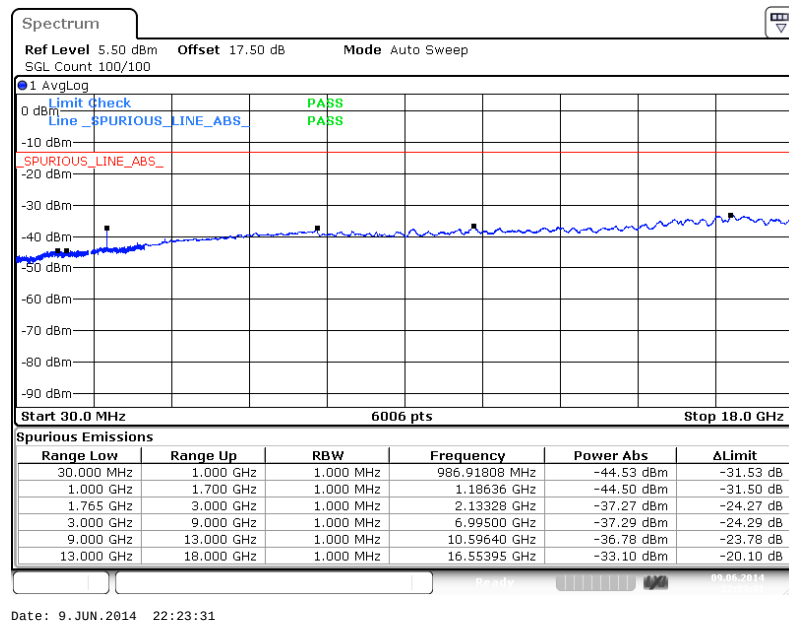


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



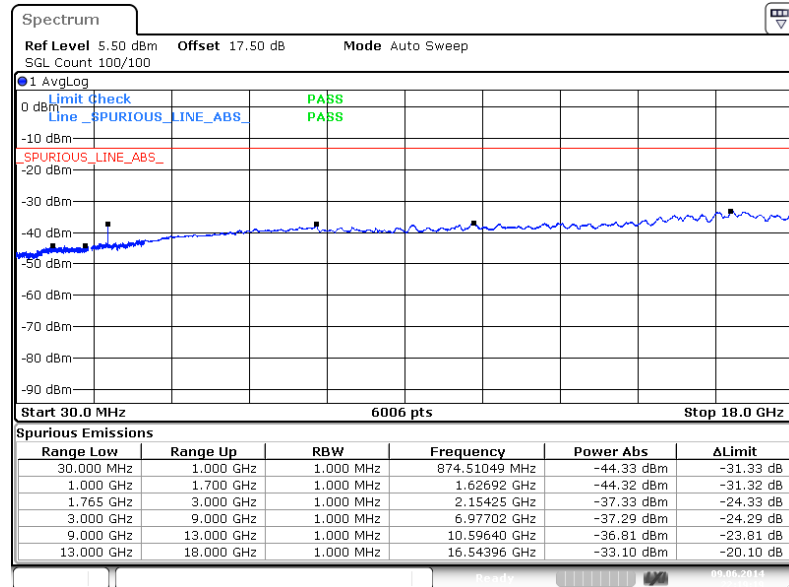
16QAM (RB Size 1, RB Offset 0)



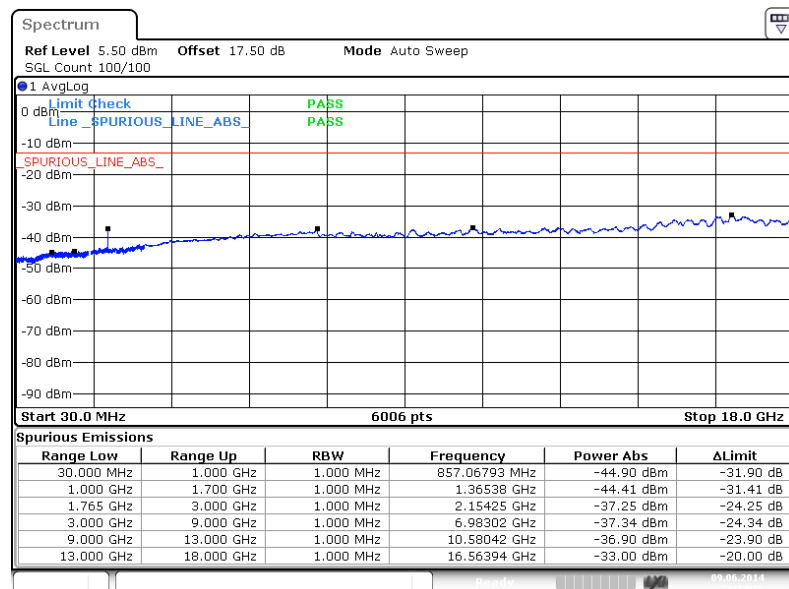


Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

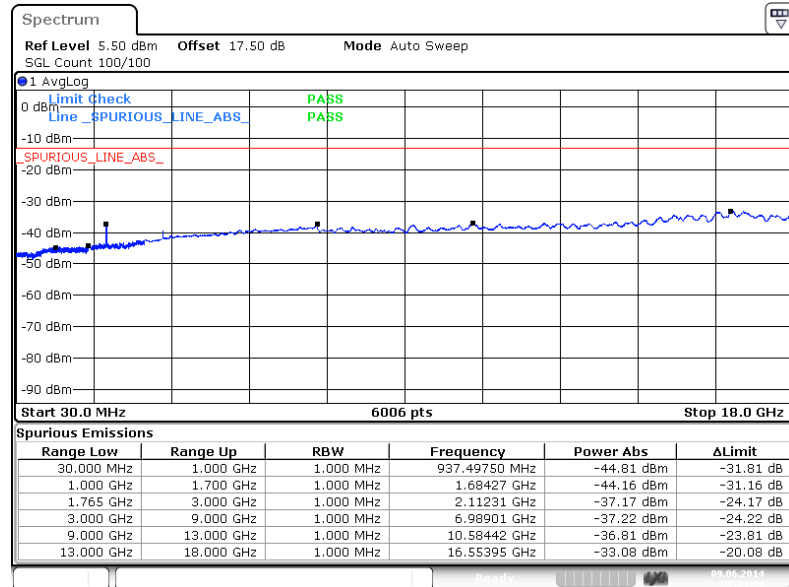


16QAM (RB Size 1, RB Offset 0)

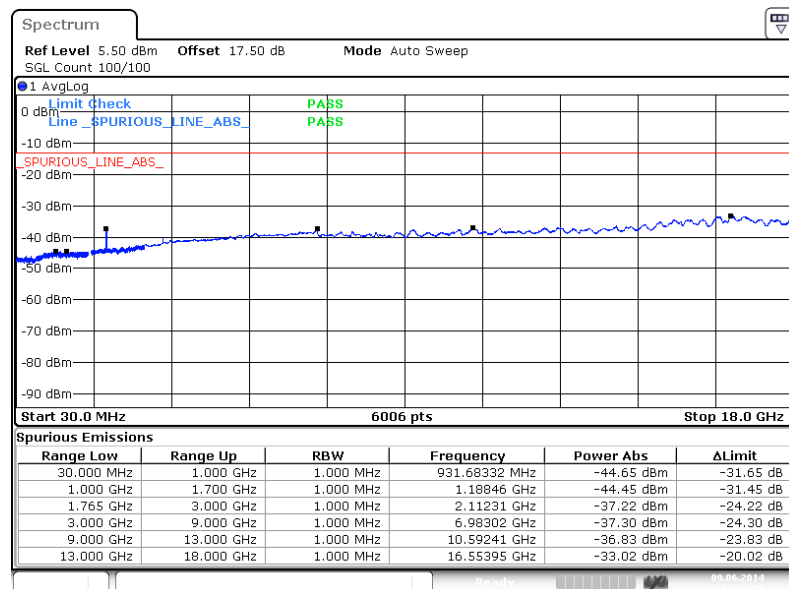




Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

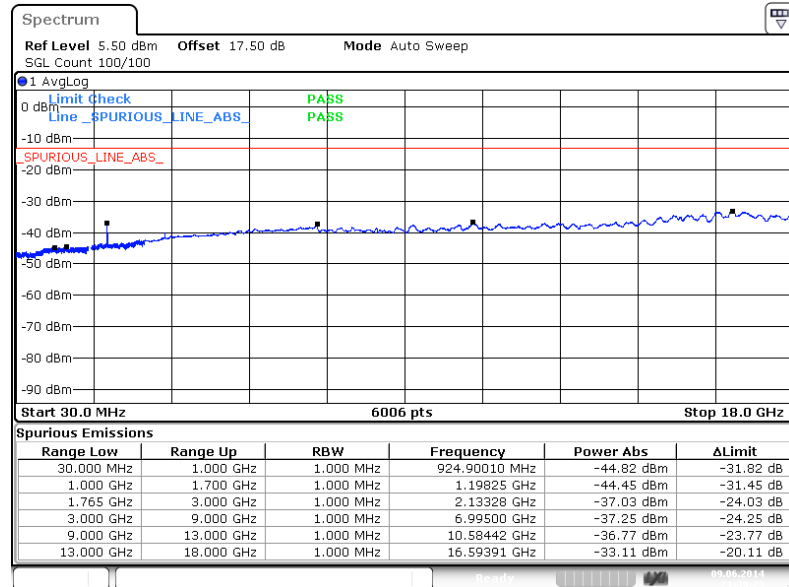
Date: 9.JUN.2014 21:34:29

16QAM (RB Size 1, RB Offset 0)

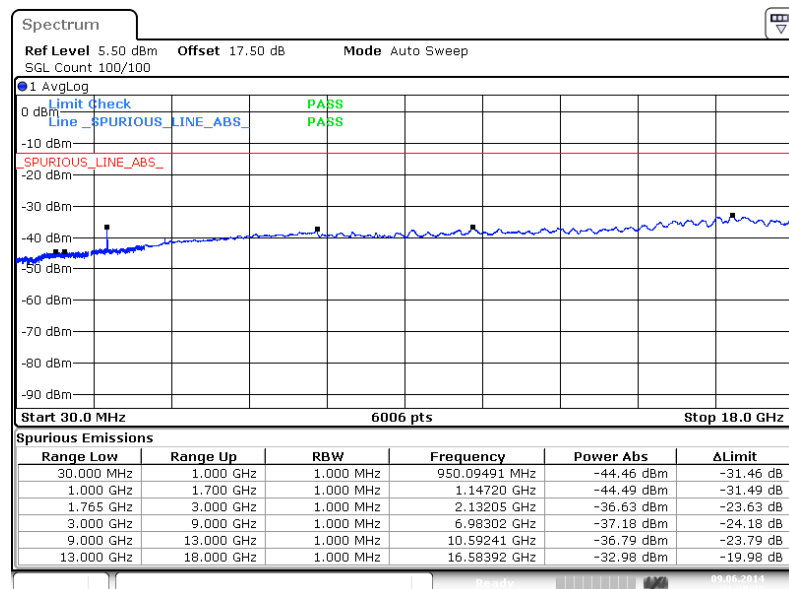
Date: 9.JUN.2014 21:35:55



Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 9.JUN.2014 21:39:23

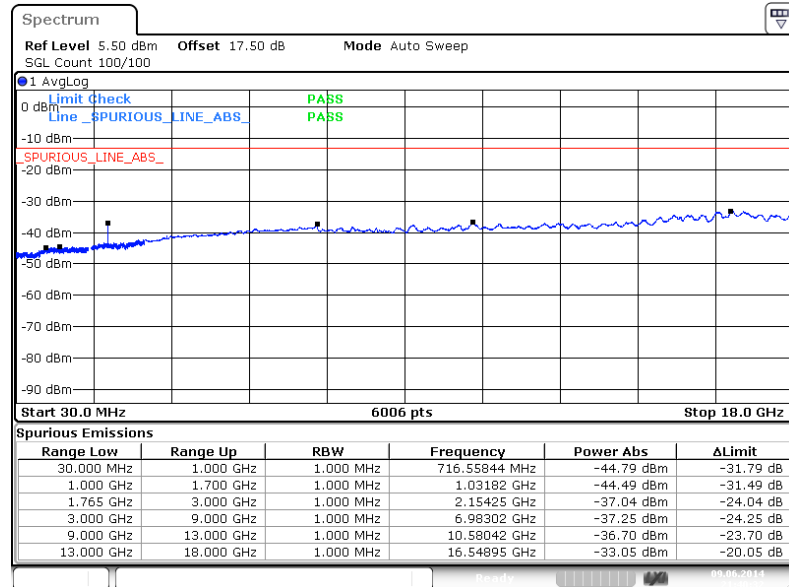
16QAM (RB Size 1, RB Offset 0)

Date: 9.JUN.2014 21:38:28



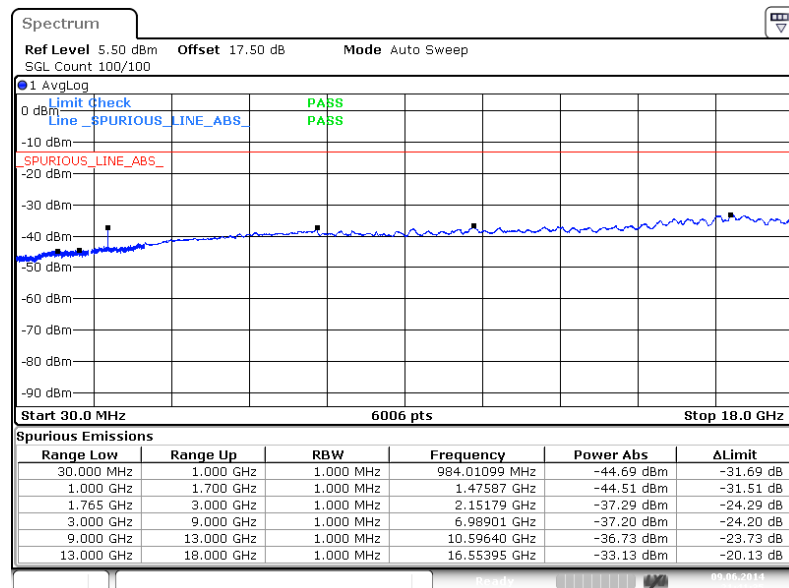
Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 9.JUN.2014 21:40:32

16QAM (RB Size 1, RB Offset 0)

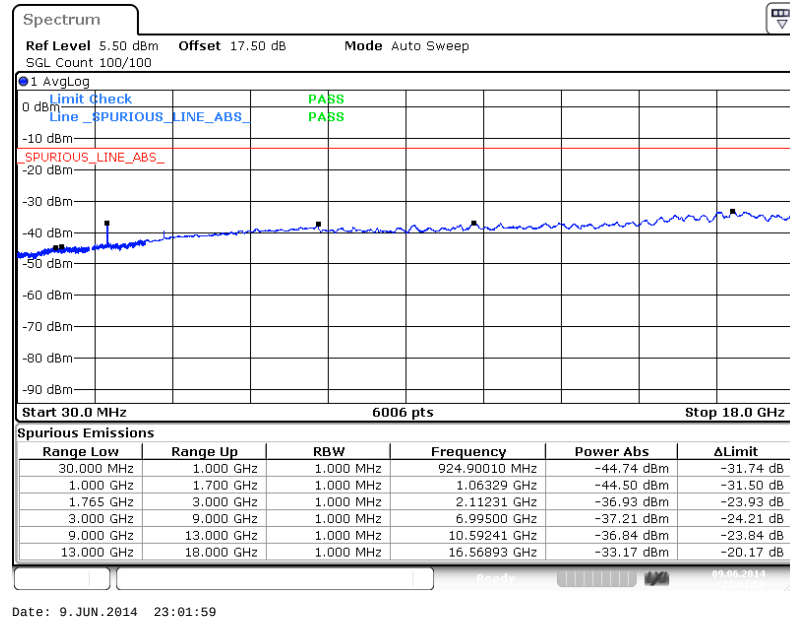


Date: 9.JUN.2014 21:41:35

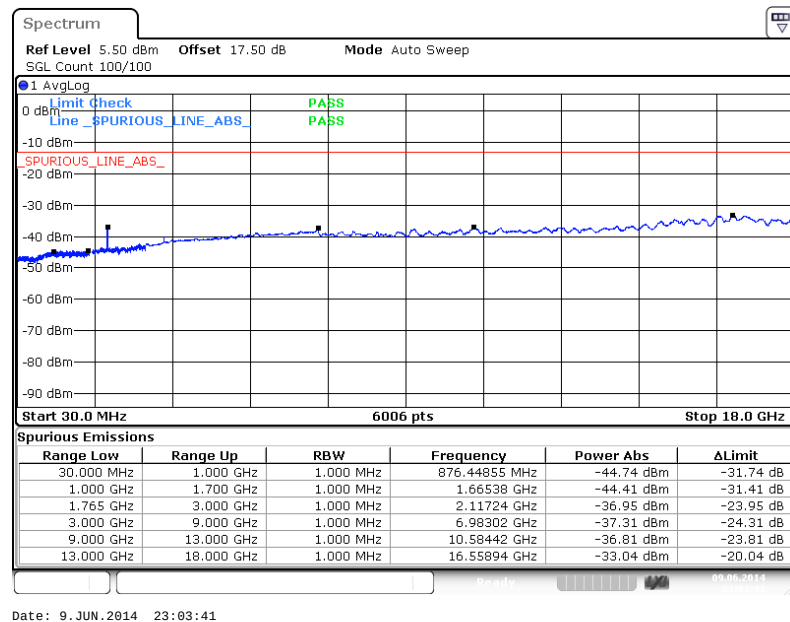


Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

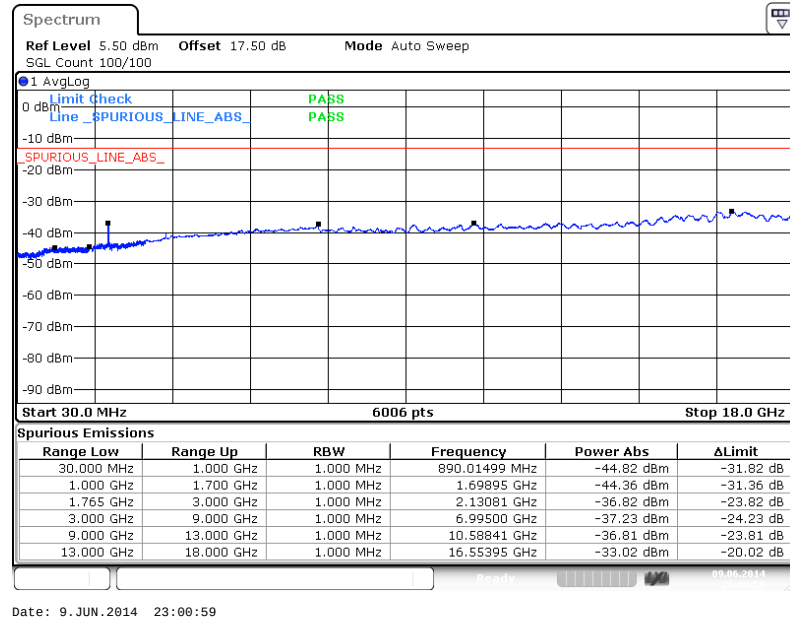
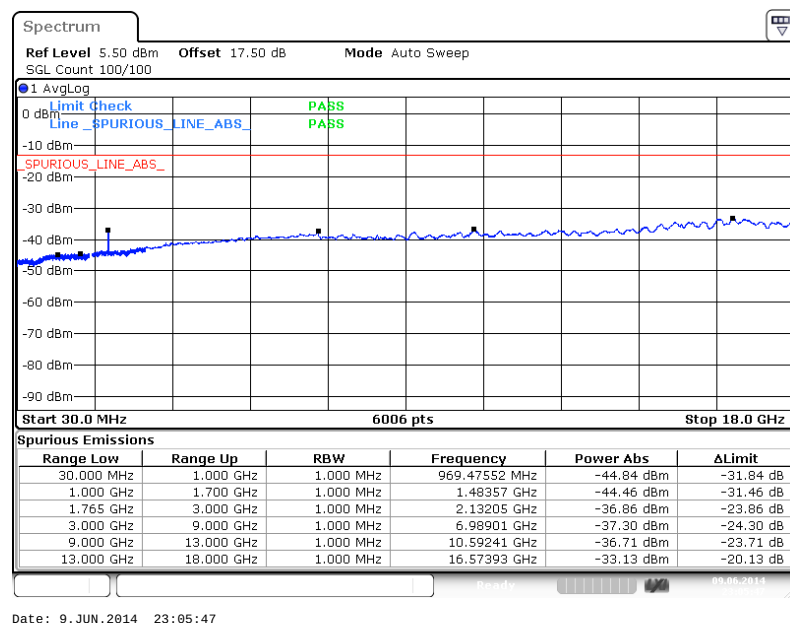


16QAM (RB Size 1, RB Offset 0)



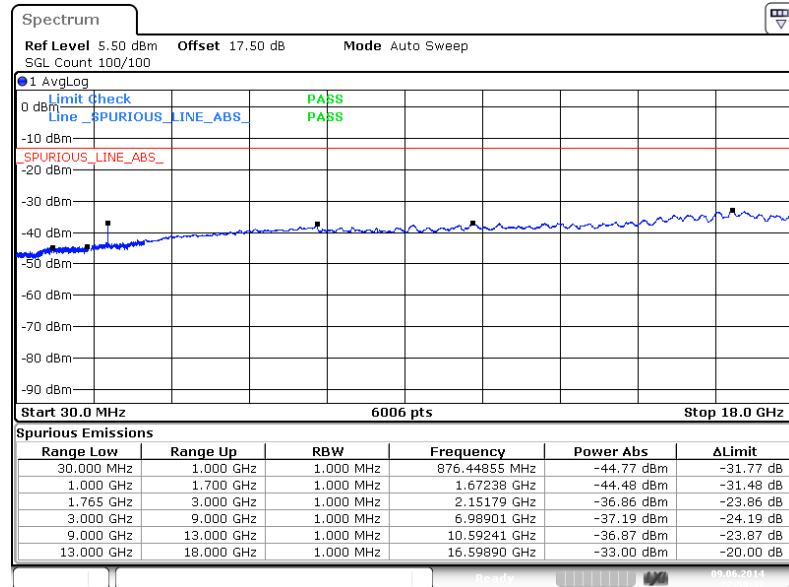
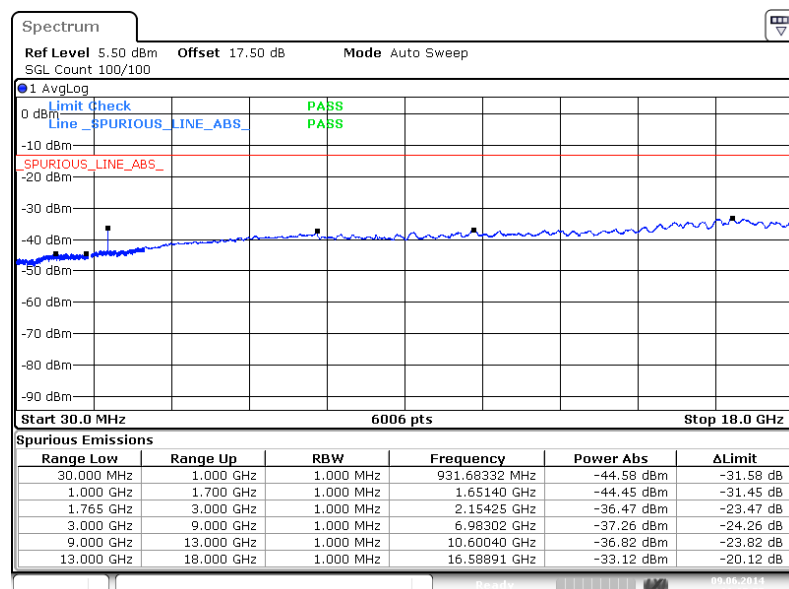


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

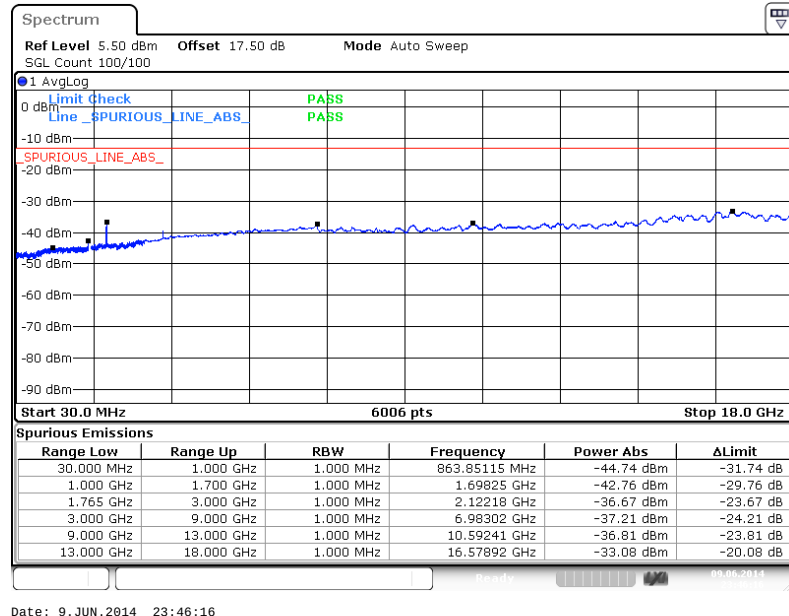
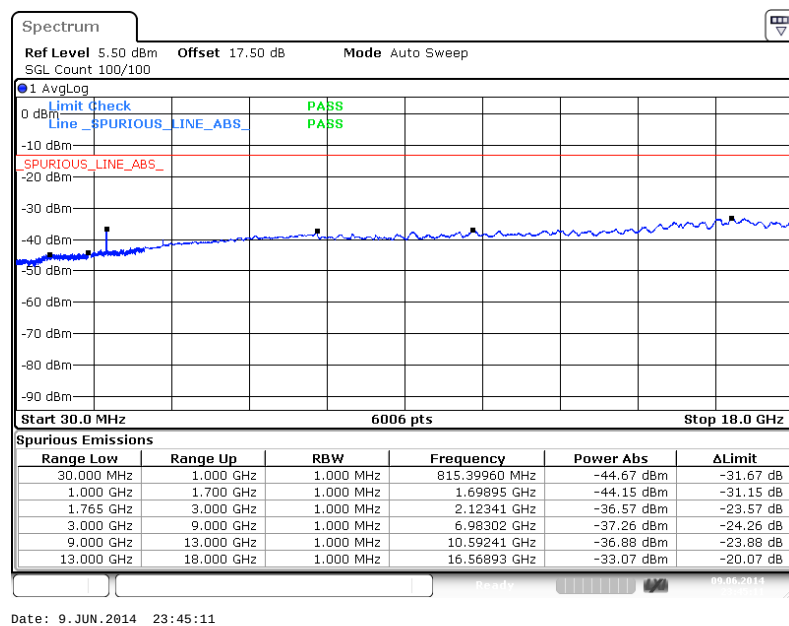


Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

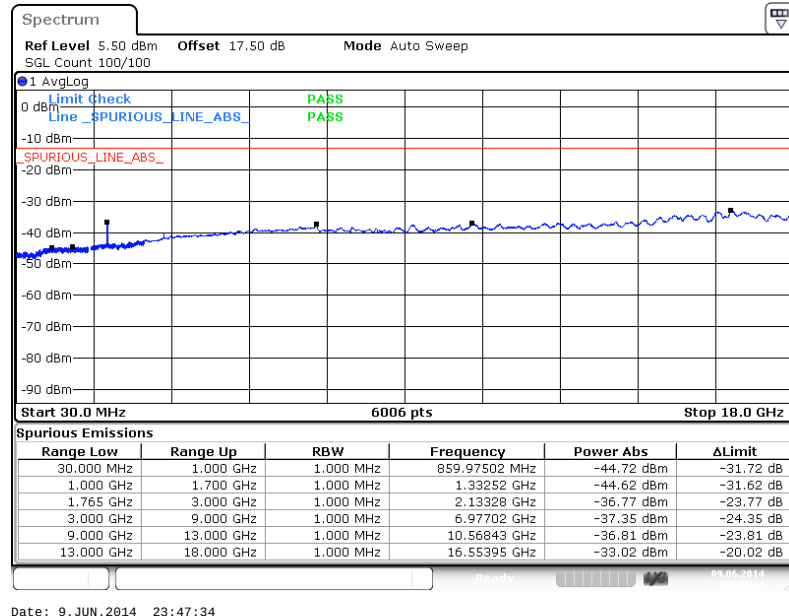


Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

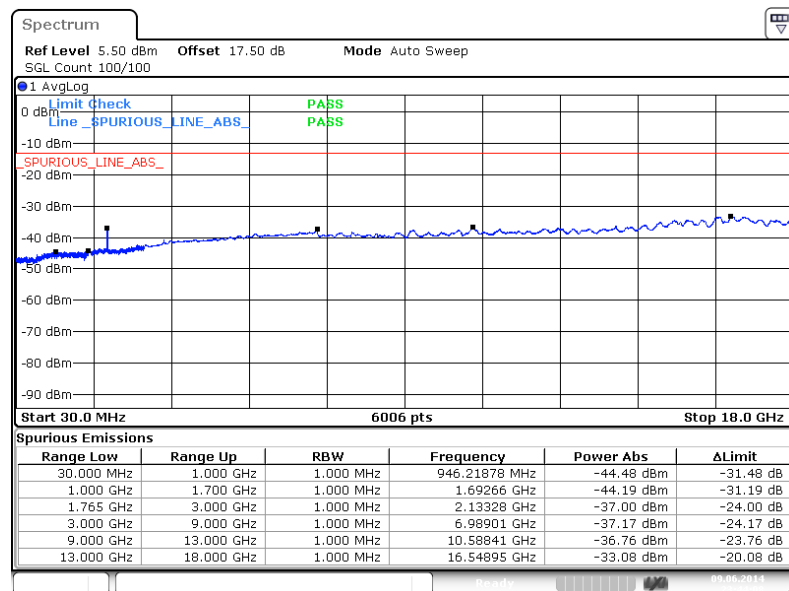
QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

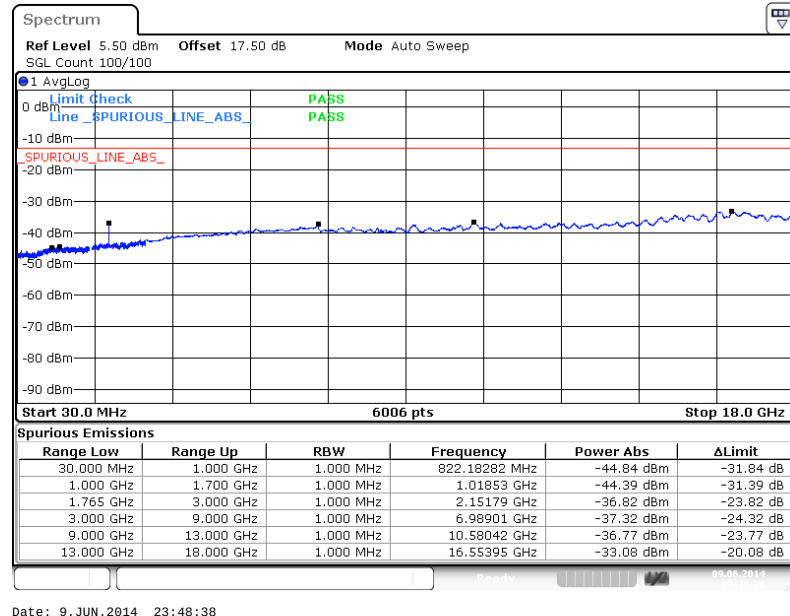
Date: 9.JUN.2014 23:47:34

16QAM (RB Size 1, RB Offset 0)

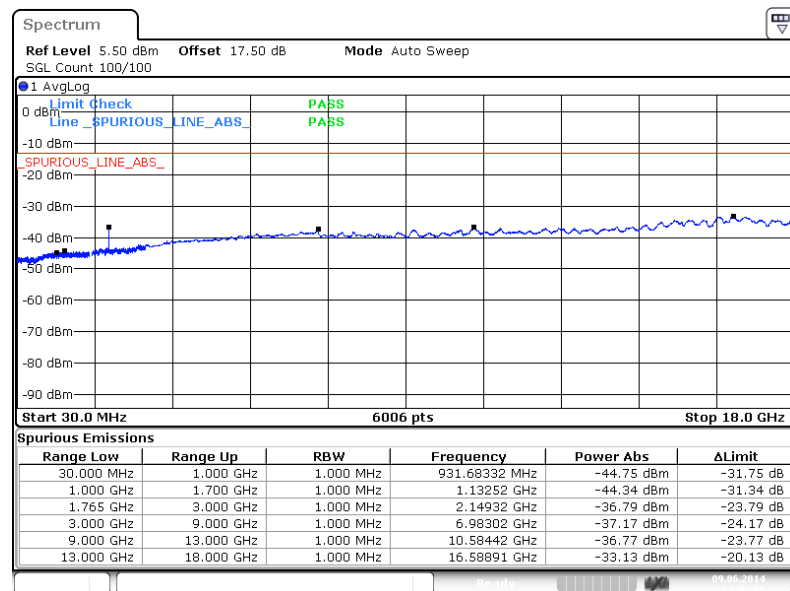
Date: 9.JUN.2014 23:44:08



Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

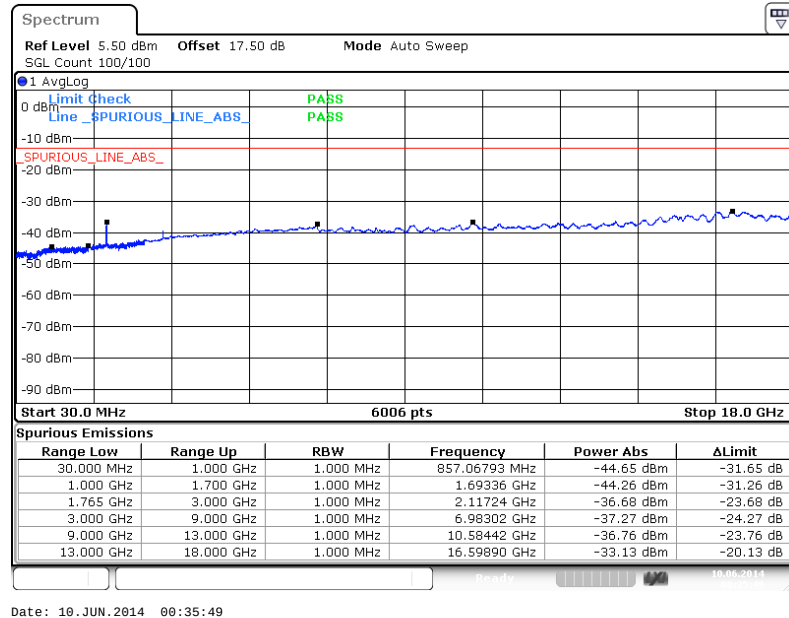
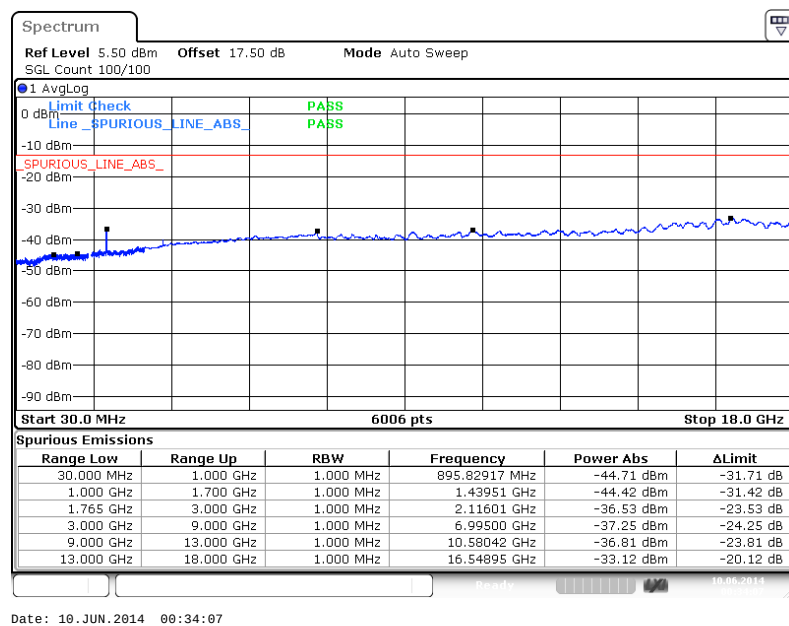
Date: 9.JUN.2014 23:48:38

16QAM (RB Size 1, RB Offset 0)

Date: 9.JUN.2014 23:43:05



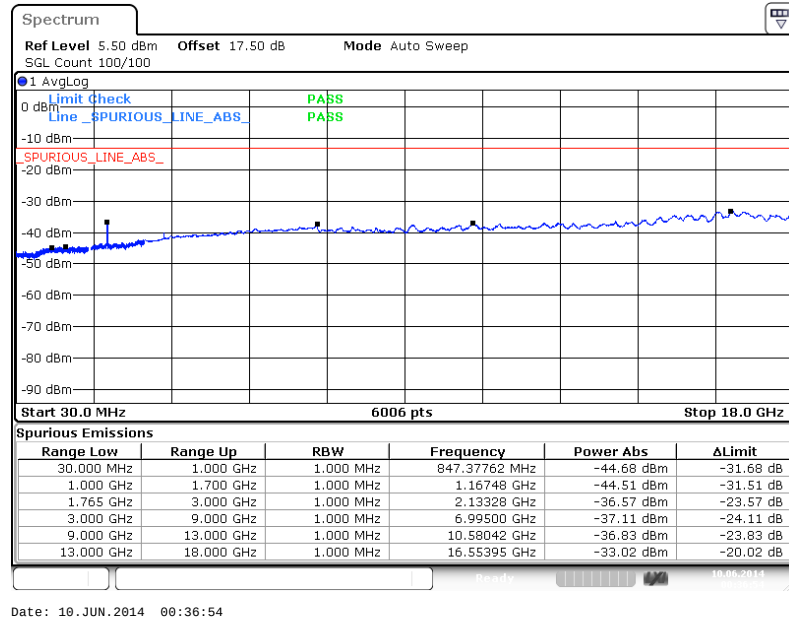
Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

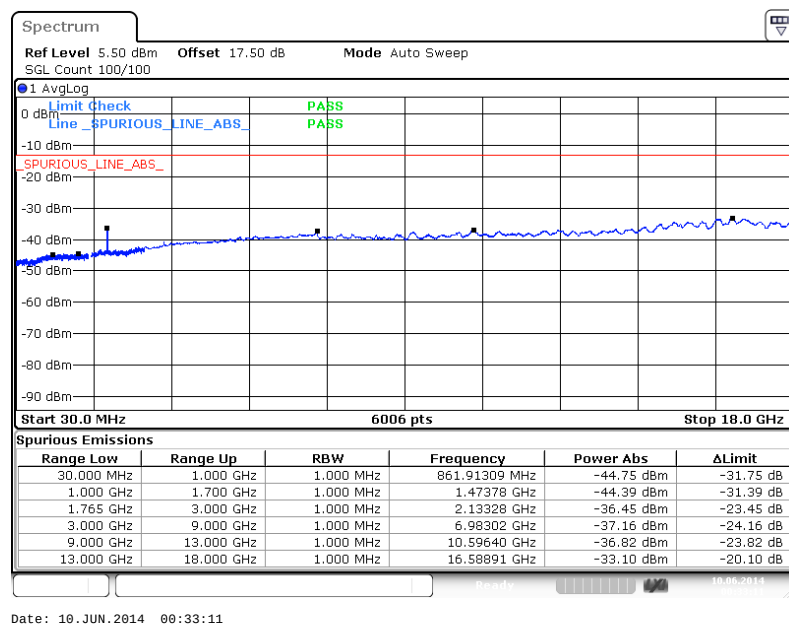


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)



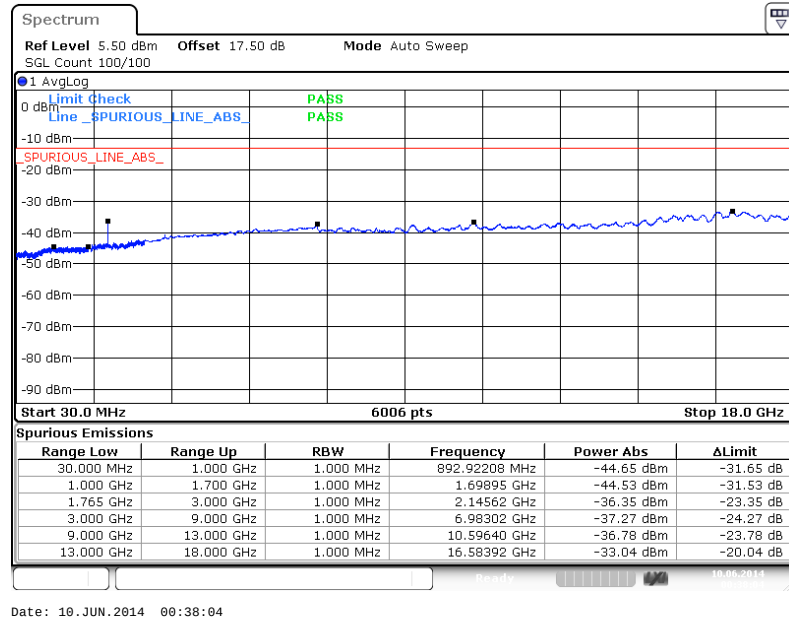
16QAM (RB Size 1, RB Offset 0)



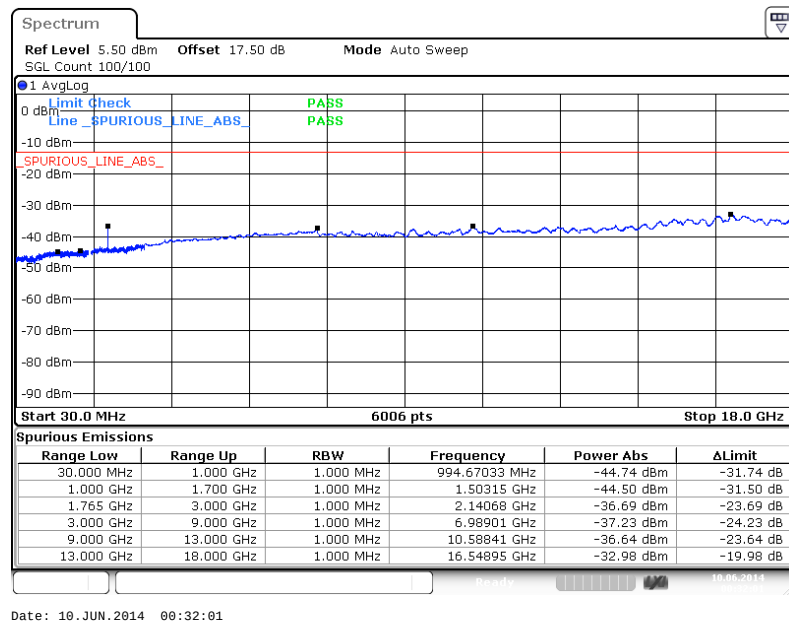


Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

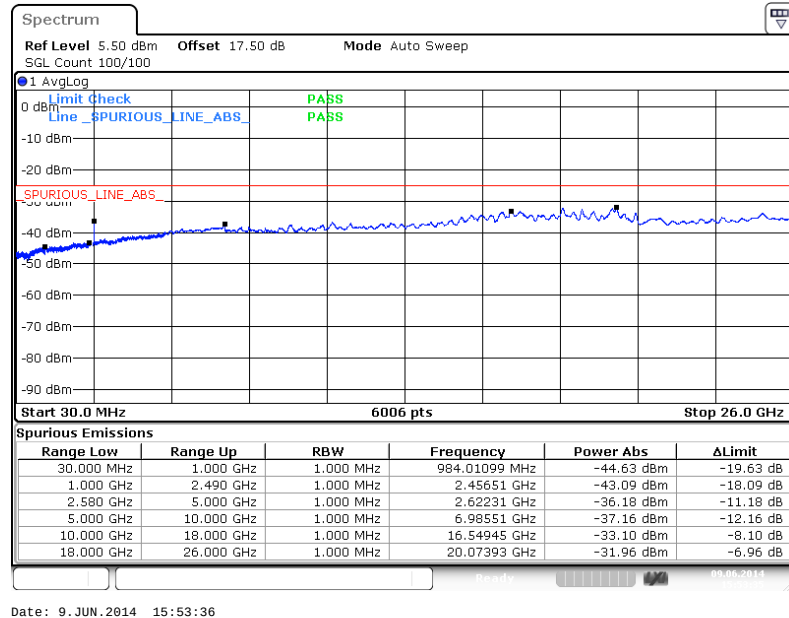
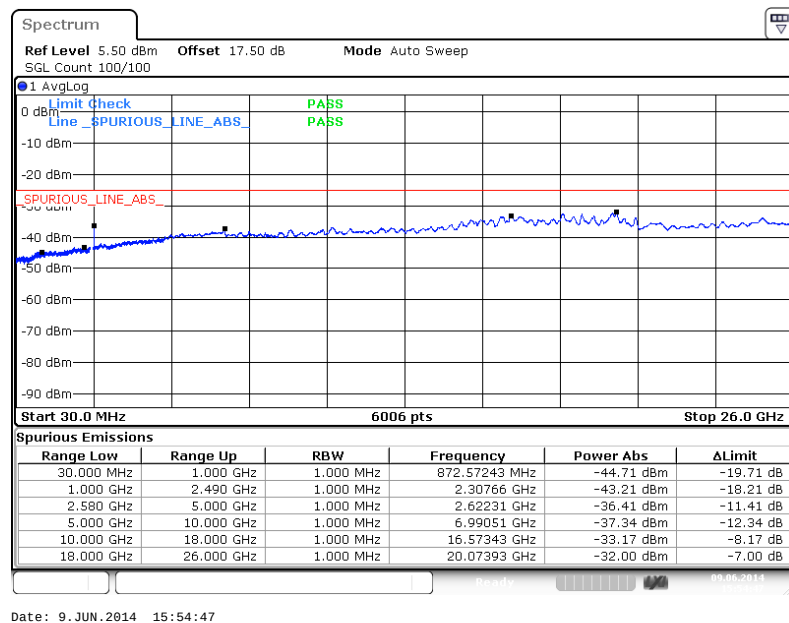


16QAM (RB Size 1, RB Offset 0)



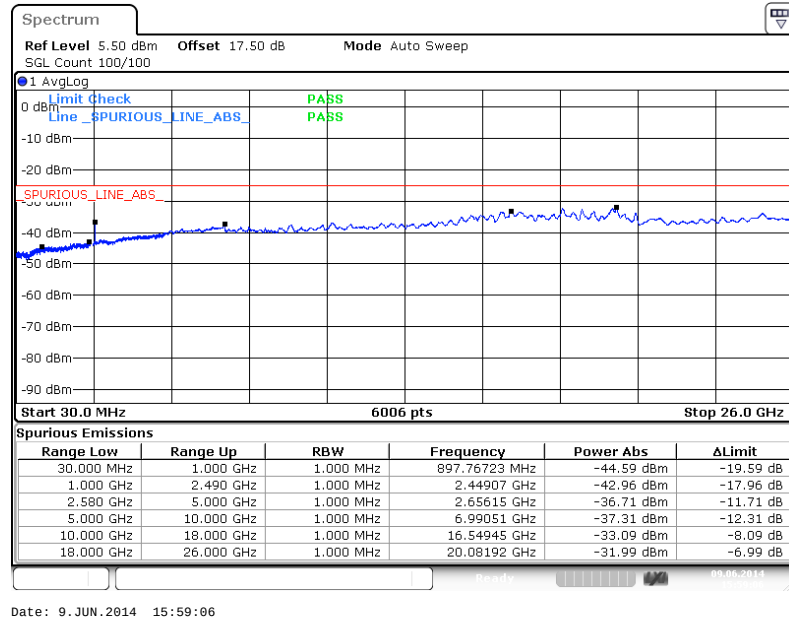
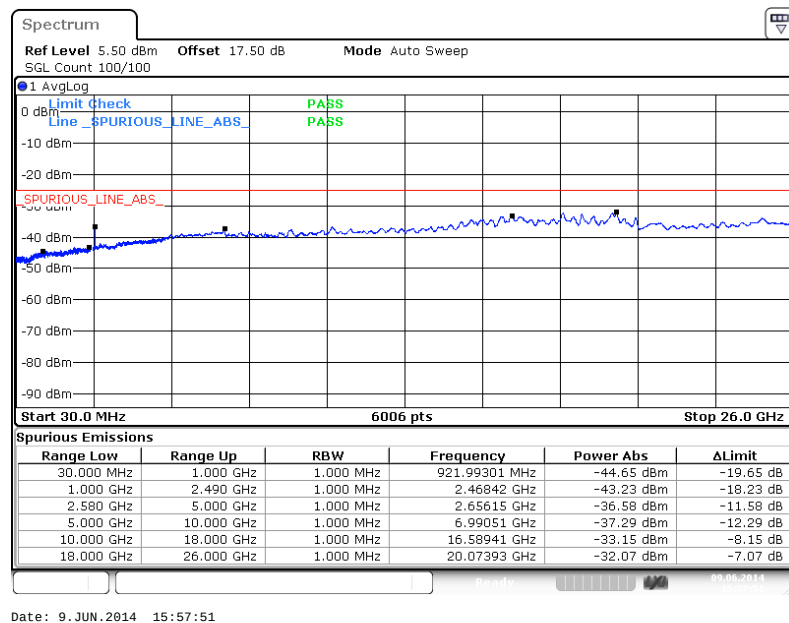


Band :	LTE Band 7	Channel :	CH20775 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



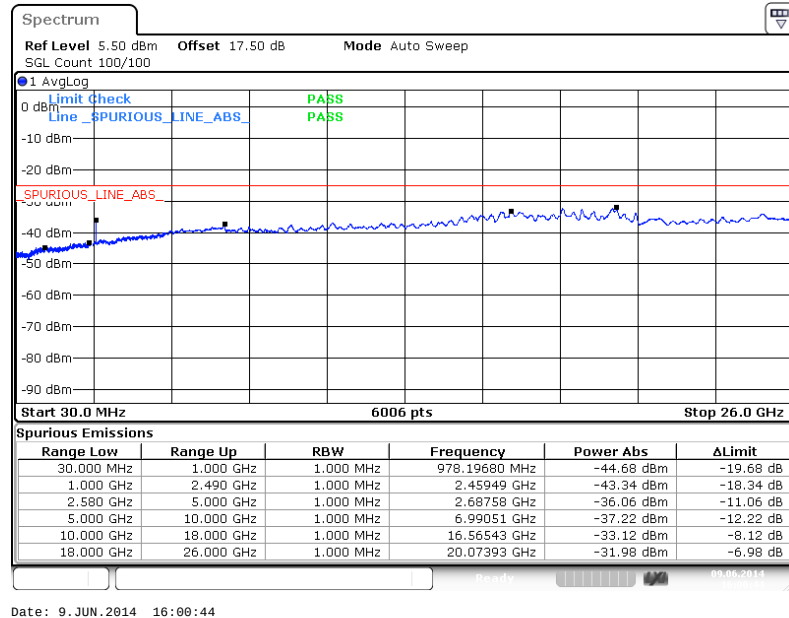
Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

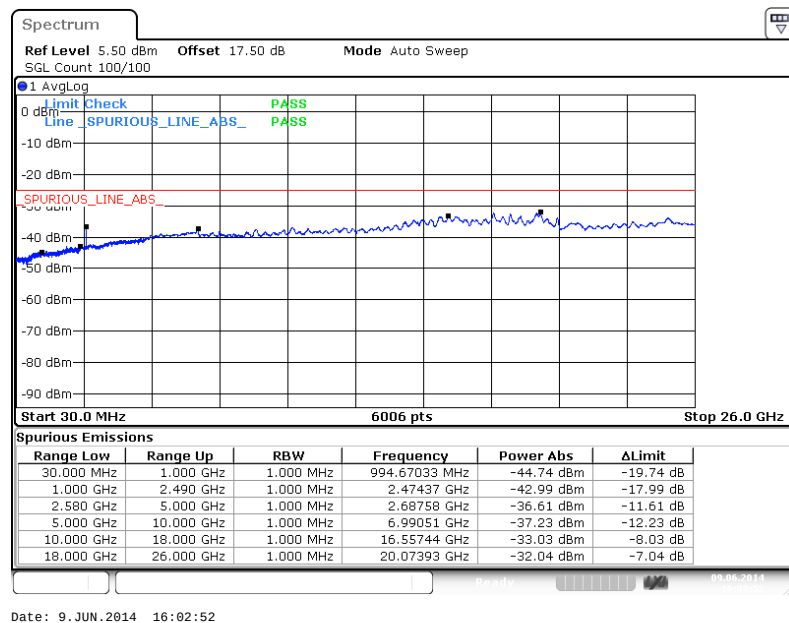


Band :	LTE Band 7	Channel :	CH21425 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

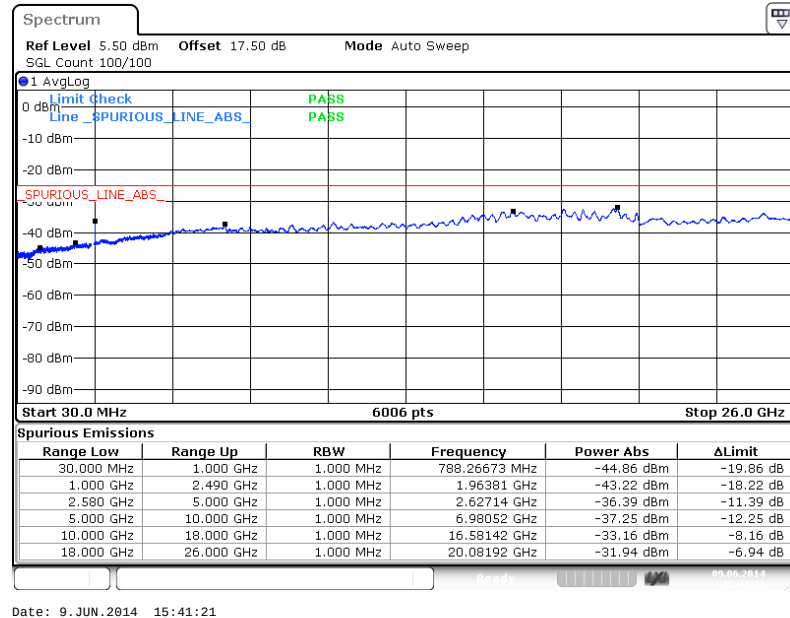
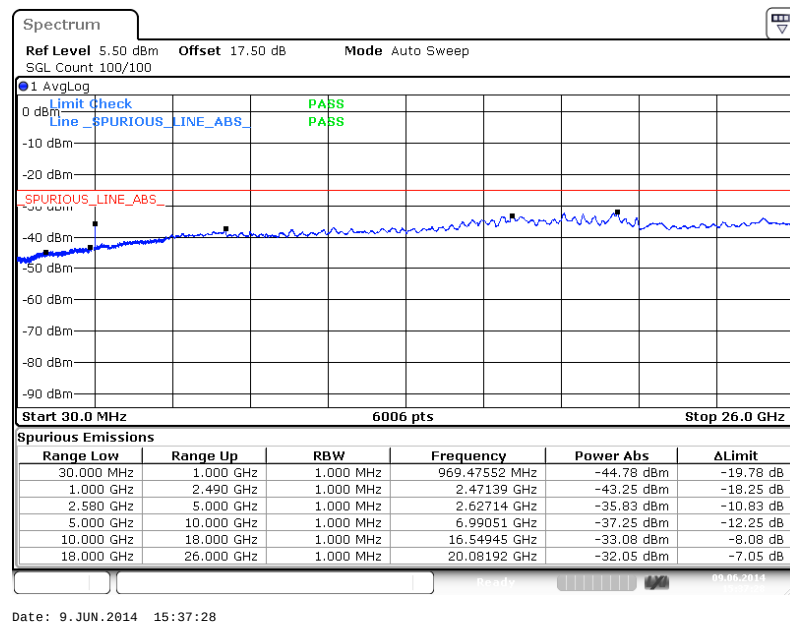


16QAM (RB Size 1, RB Offset 0)





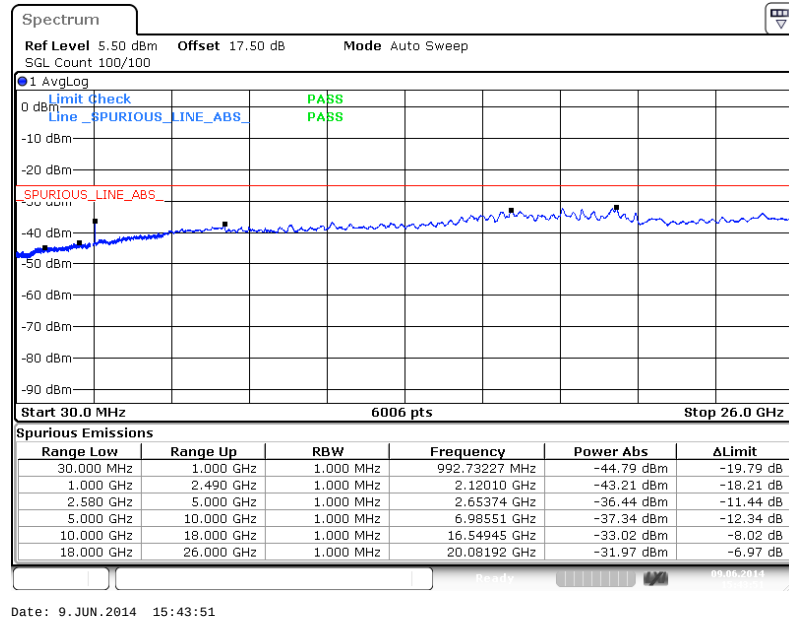
Band :	LTE Band 7	Channel :	CH20800 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

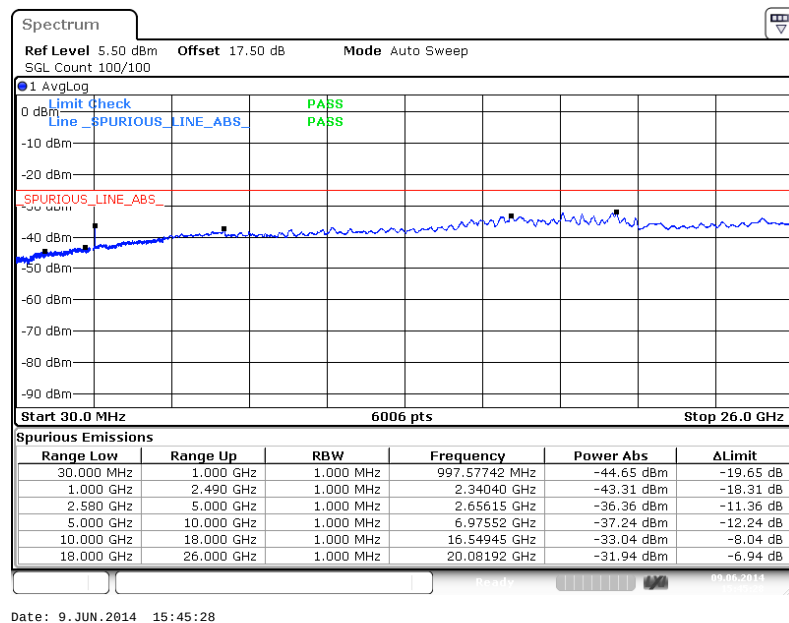


Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

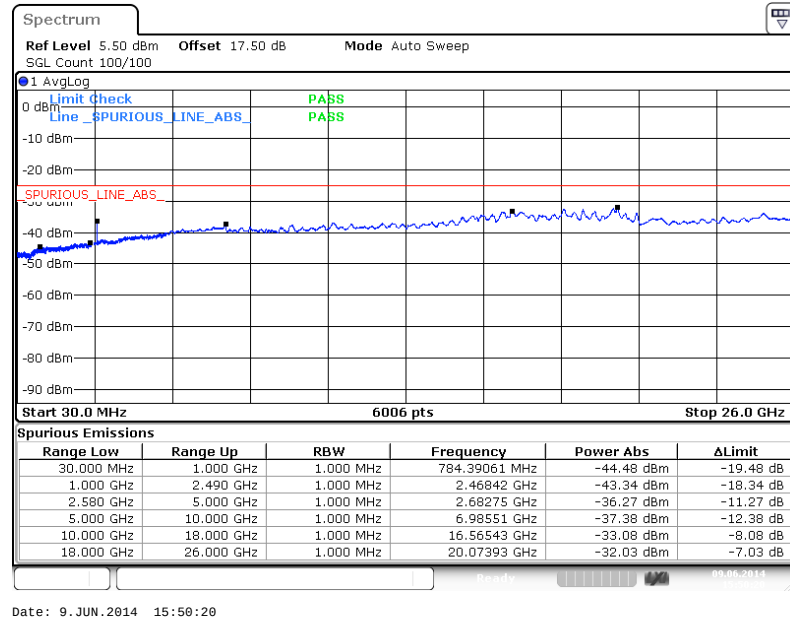
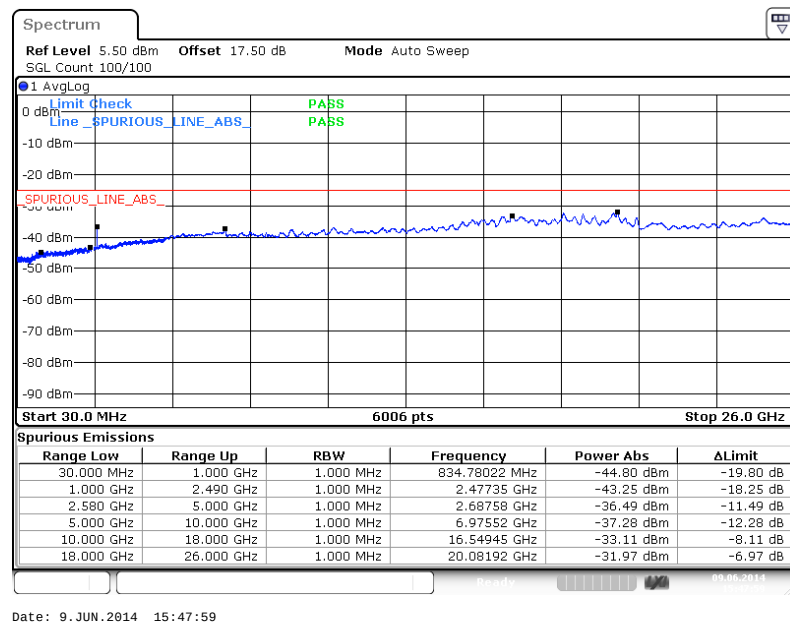


16QAM (RB Size 1, RB Offset 0)



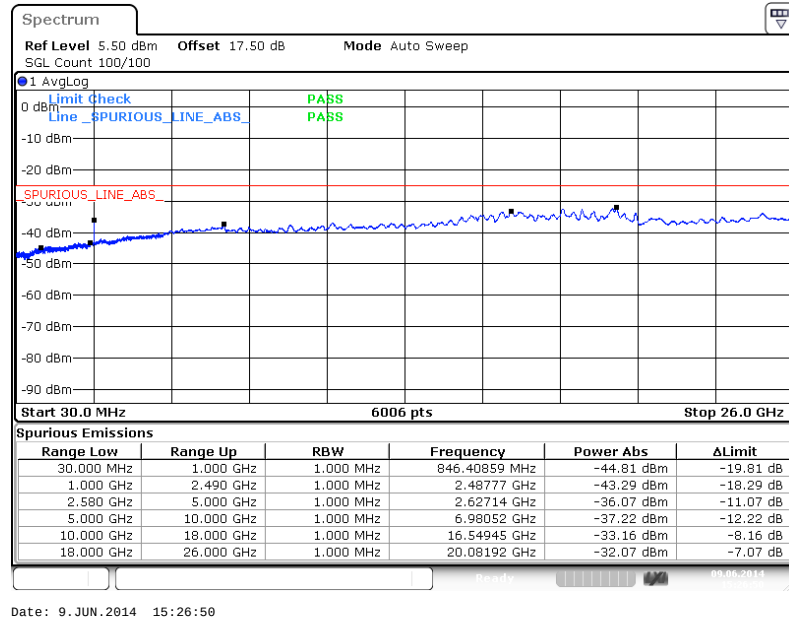
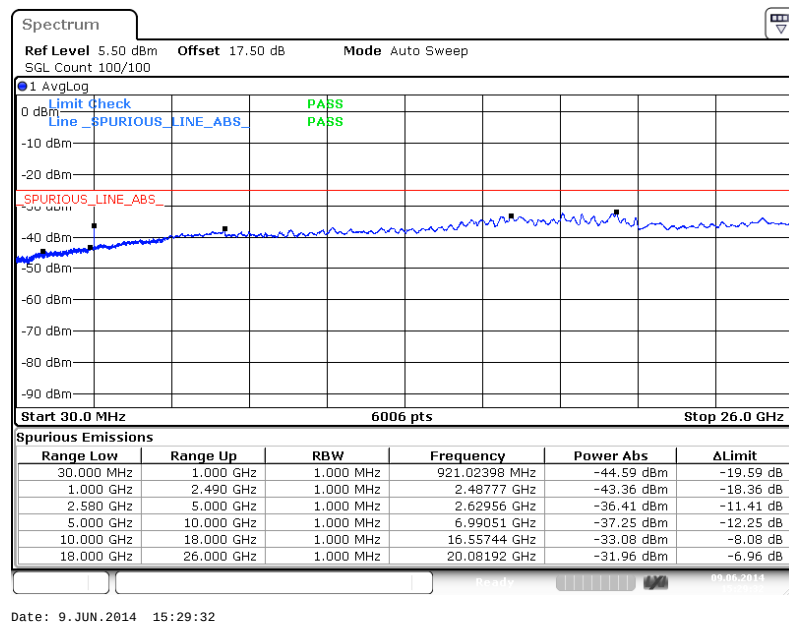


Band :	LTE Band 7	Channel :	CH21400 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

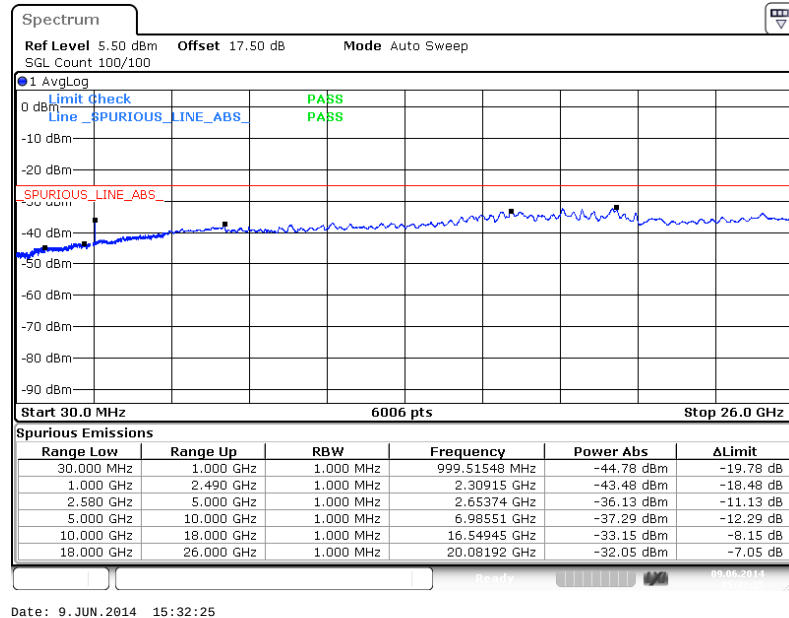
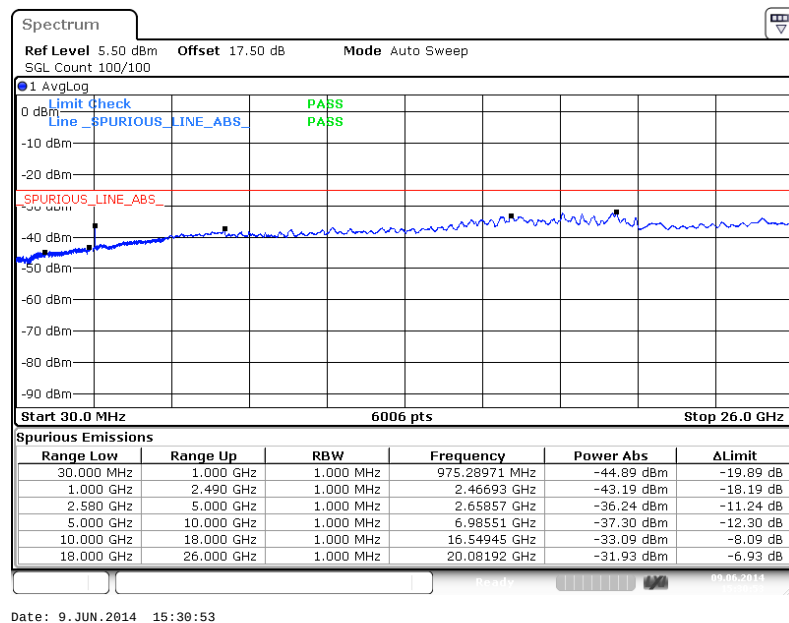


Band :	LTE Band 7	Channel :	CH20825 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

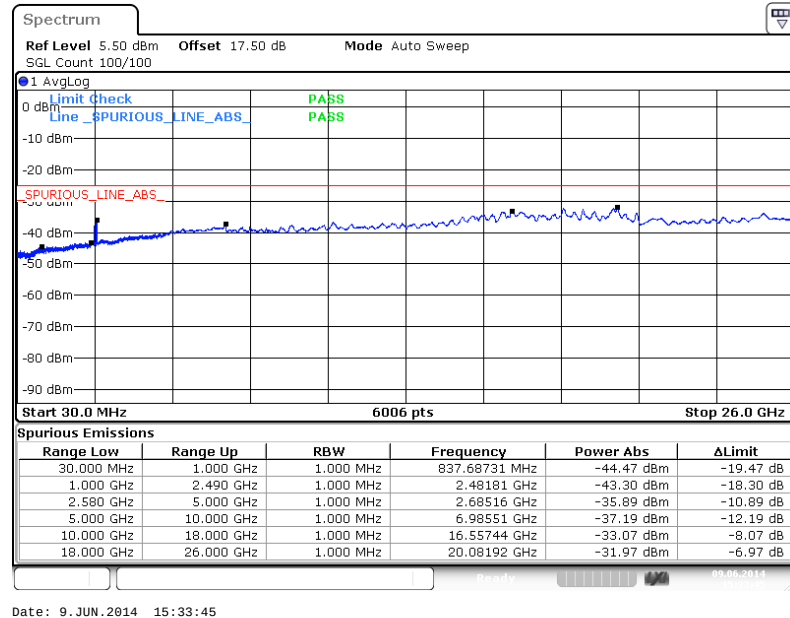
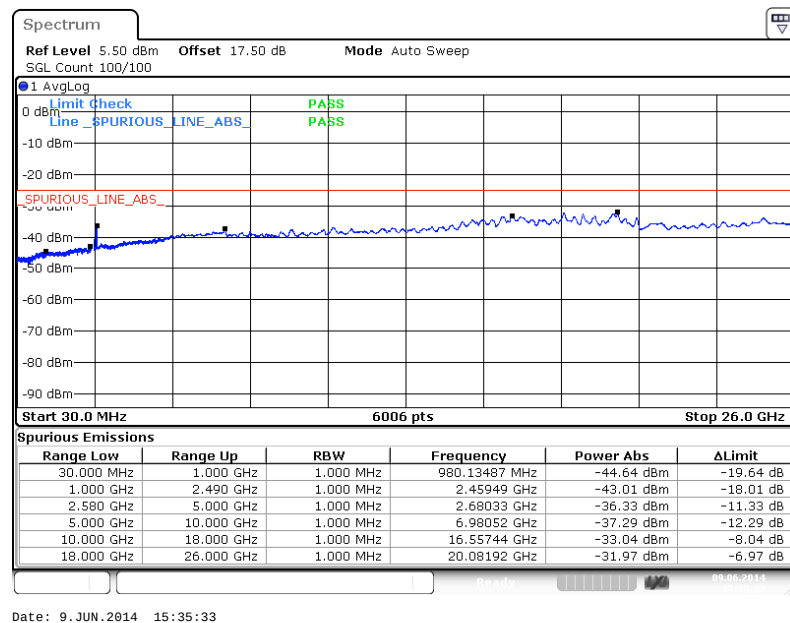


Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



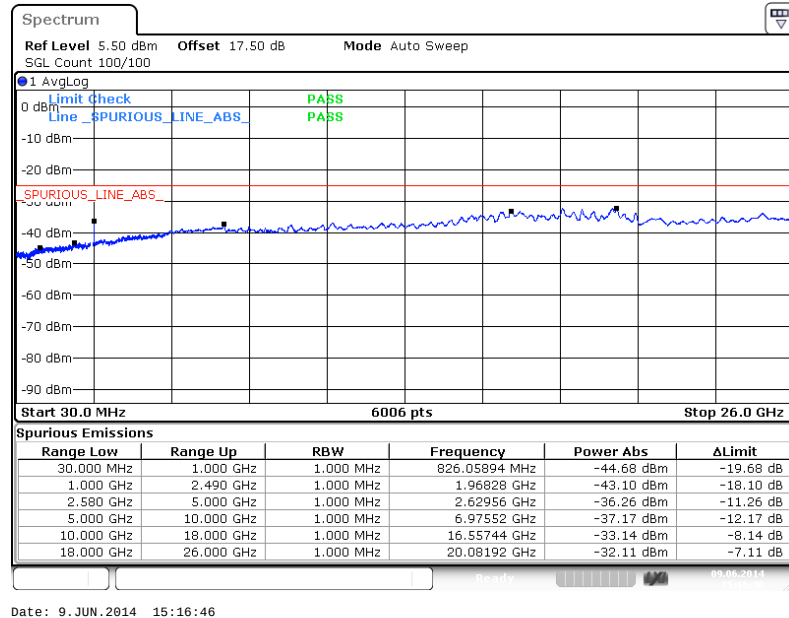
Band :	LTE Band 7	Channel :	CH21375 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

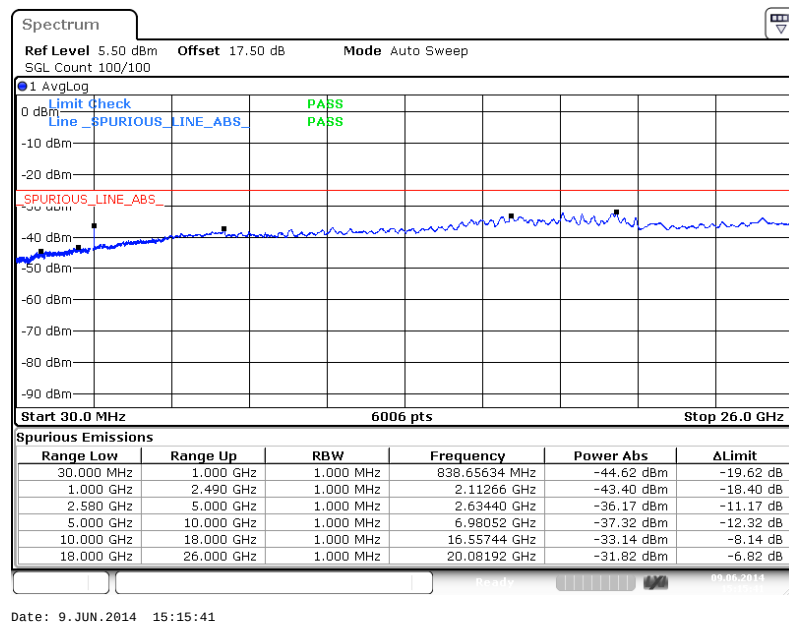


Band :	LTE Band 7	Channel :	CH20850 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

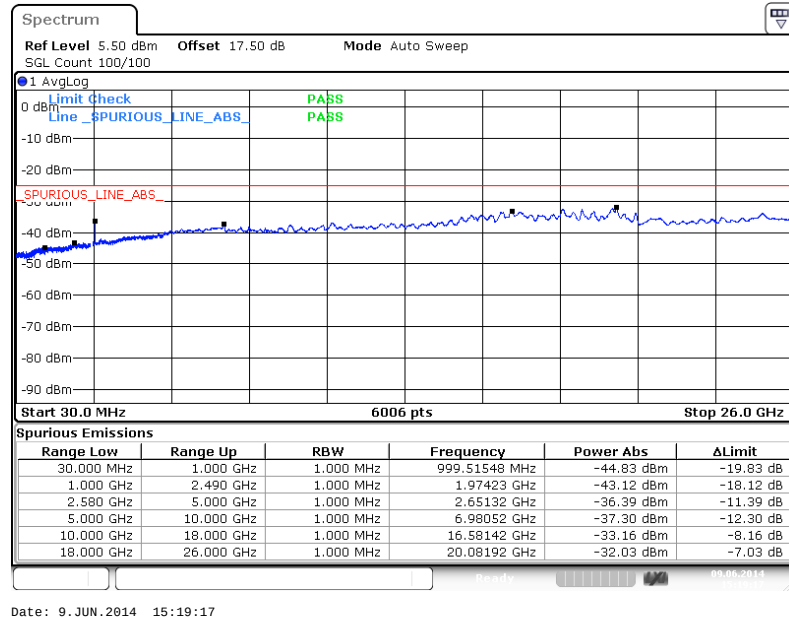
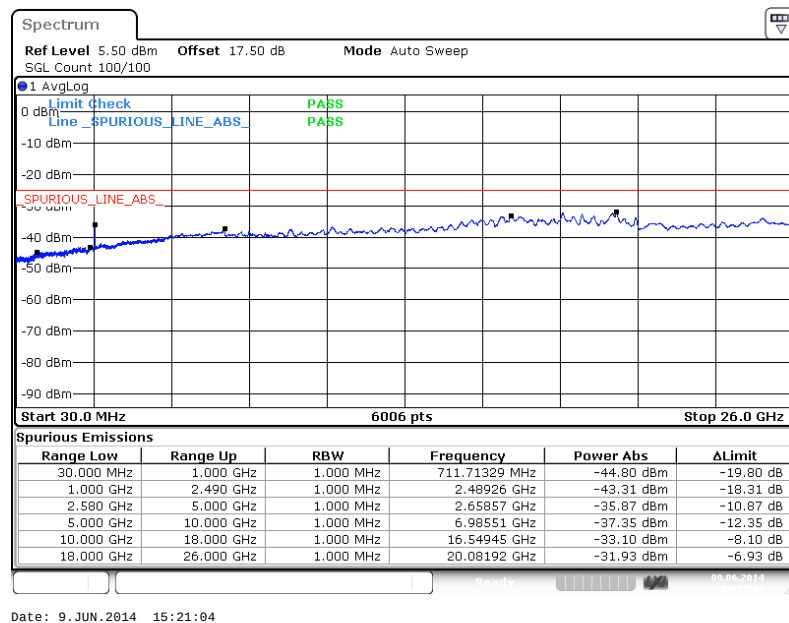


16QAM (RB Size 1, RB Offset 0)



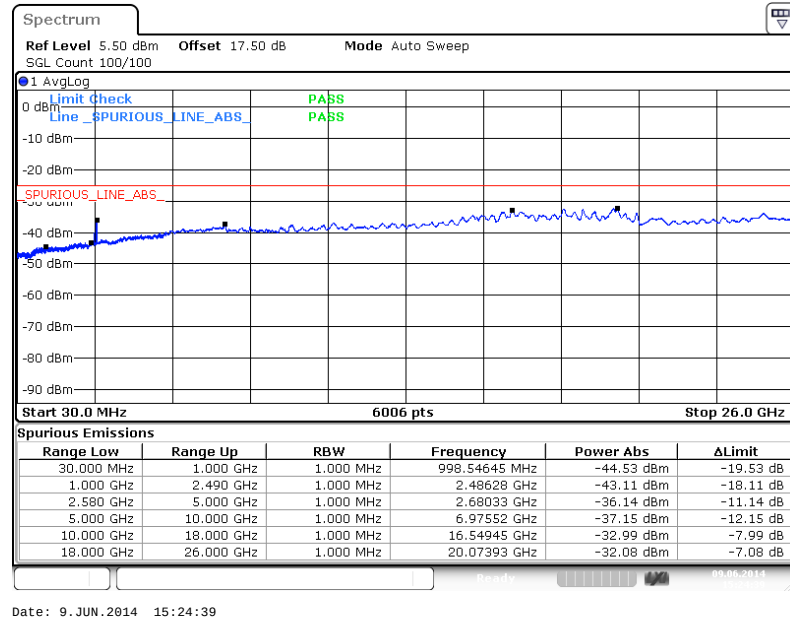
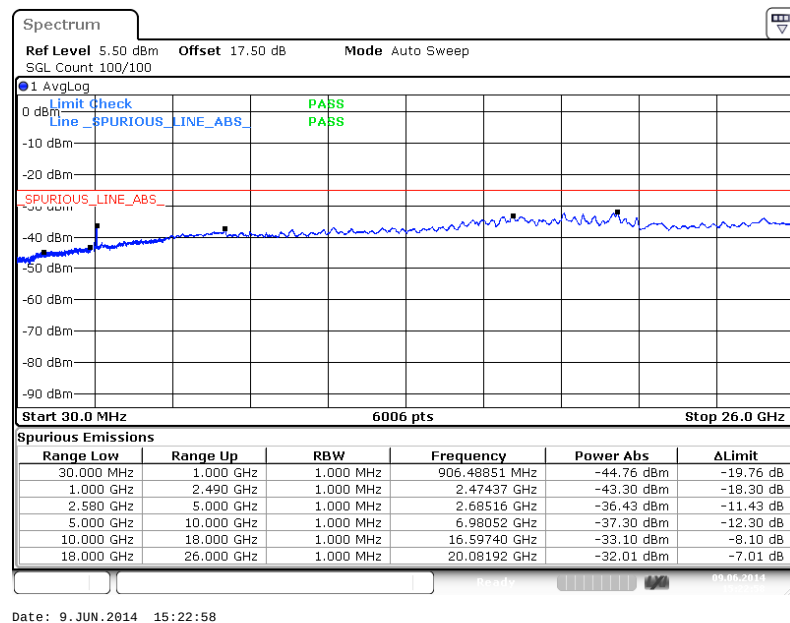


Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



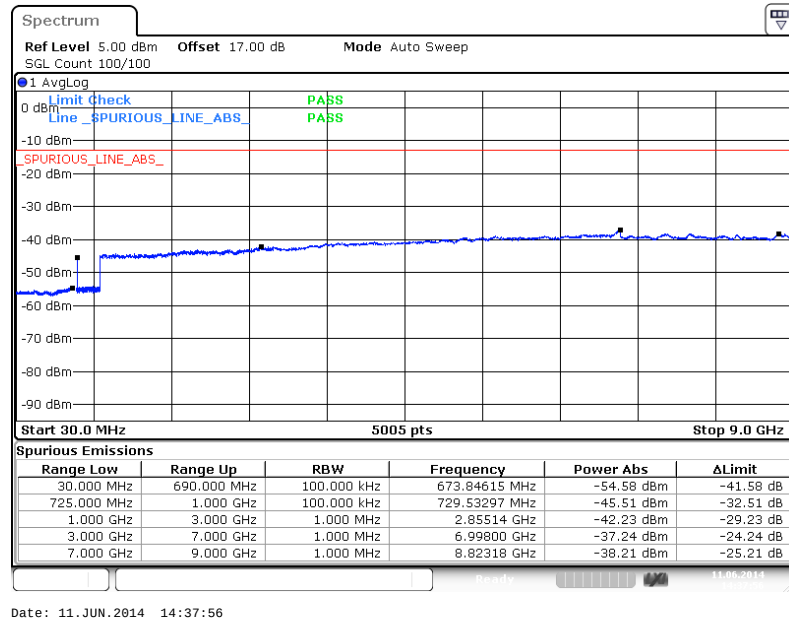
Band :	LTE Band 7	Channel :	CH21350 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

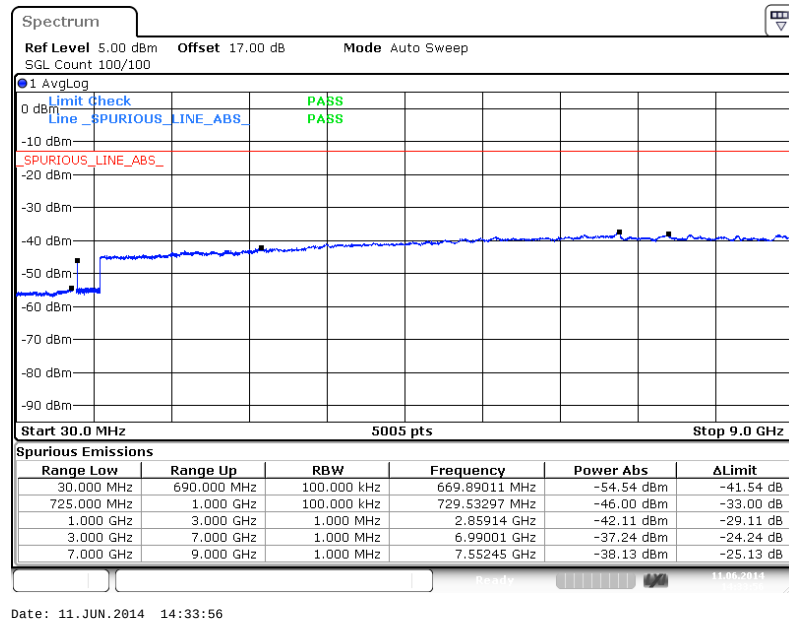


Band :	LTE Band 12	Channel :	CH23017 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)

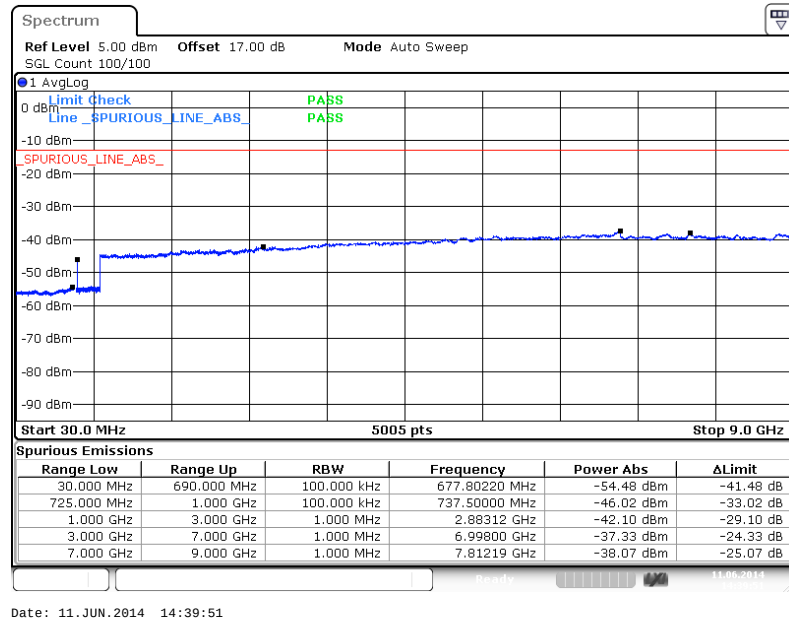
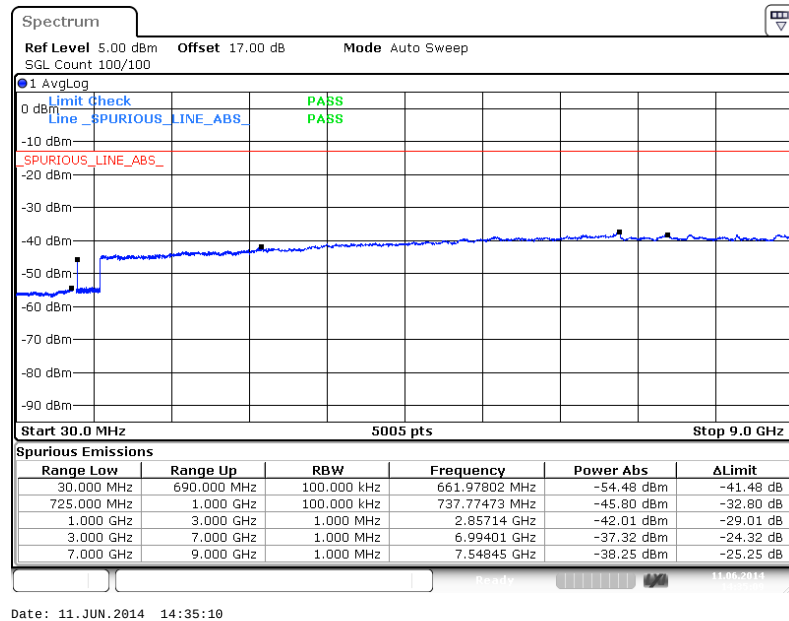


16QAM (RB Size 1, RB Offset 0)





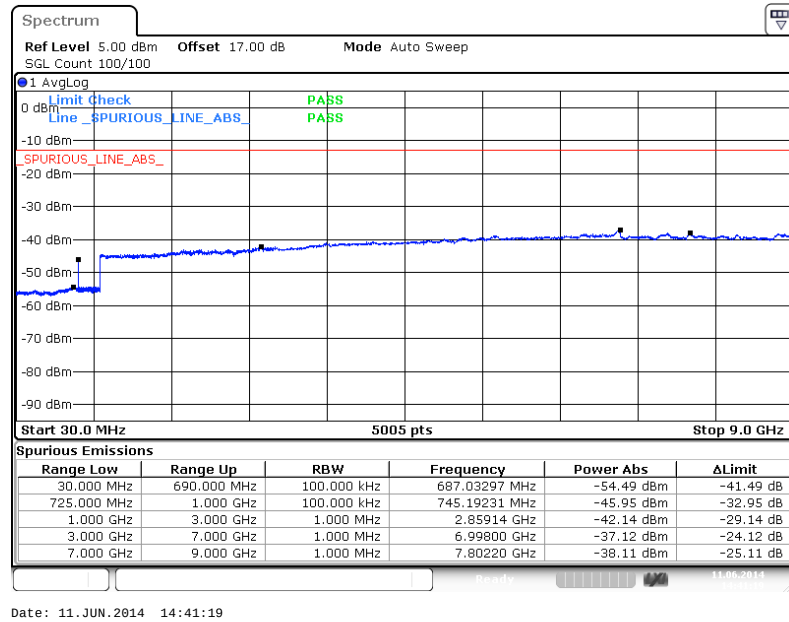
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

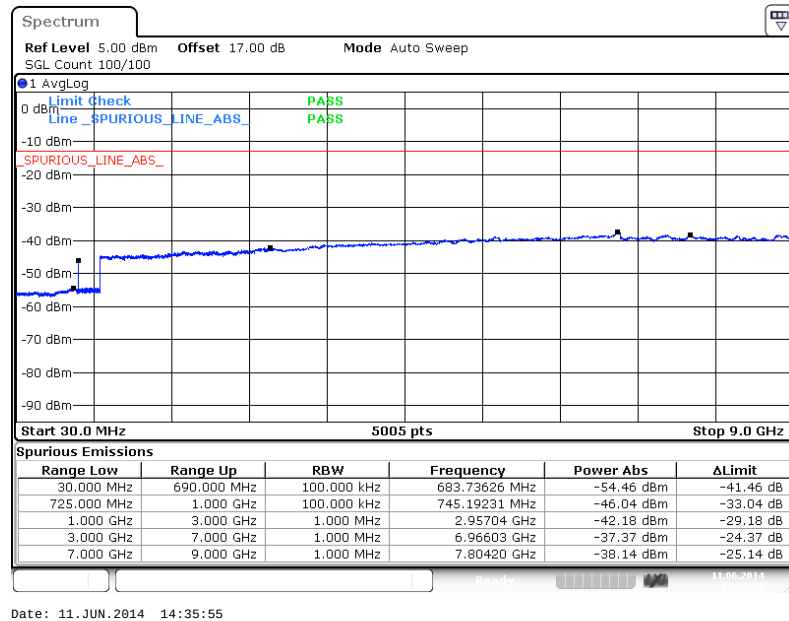


Band :	LTE Band 12	Channel :	CH23173 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 0)

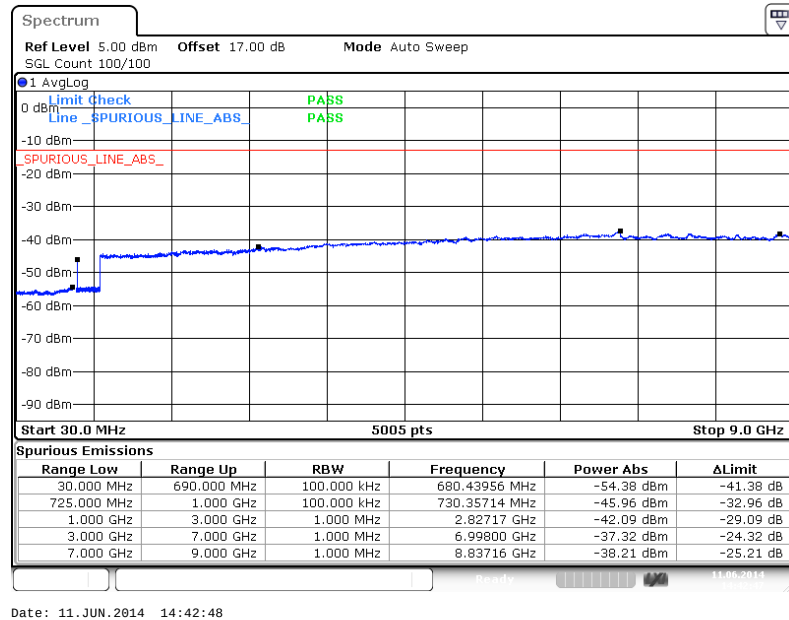
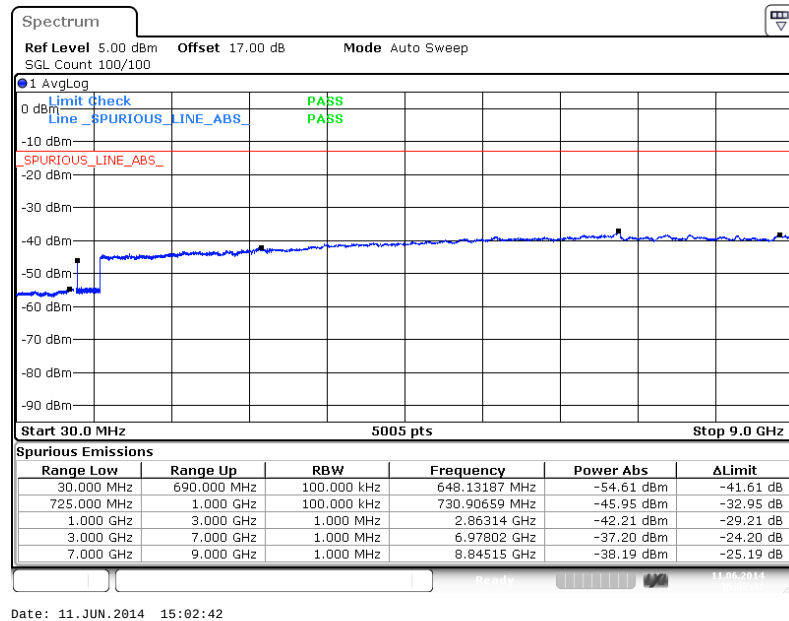


16QAM (RB Size 1, RB Offset 0)



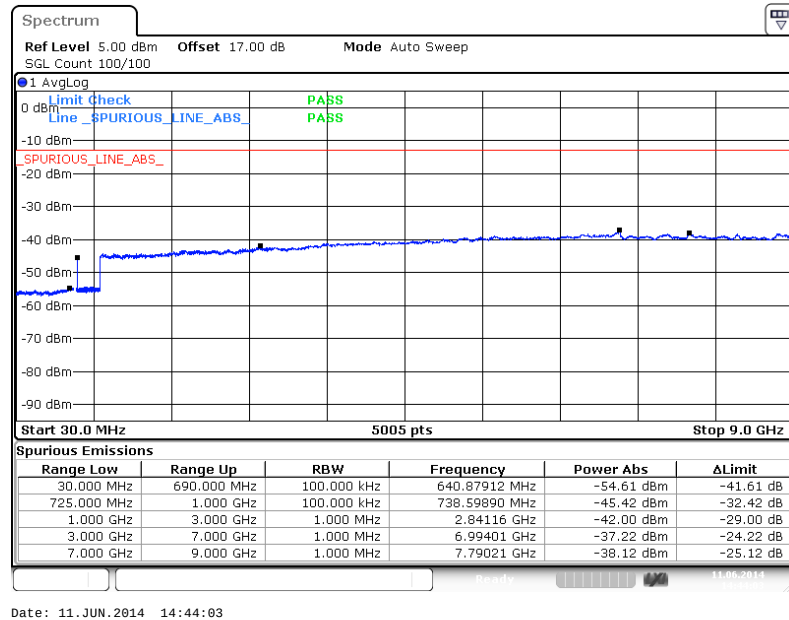
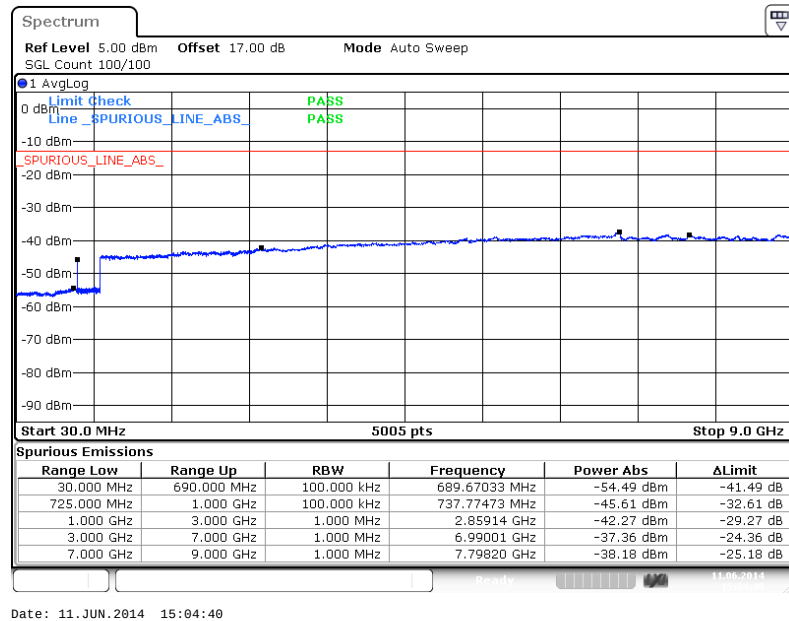


Band :	LTE Band 12	Channel :	CH23025 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

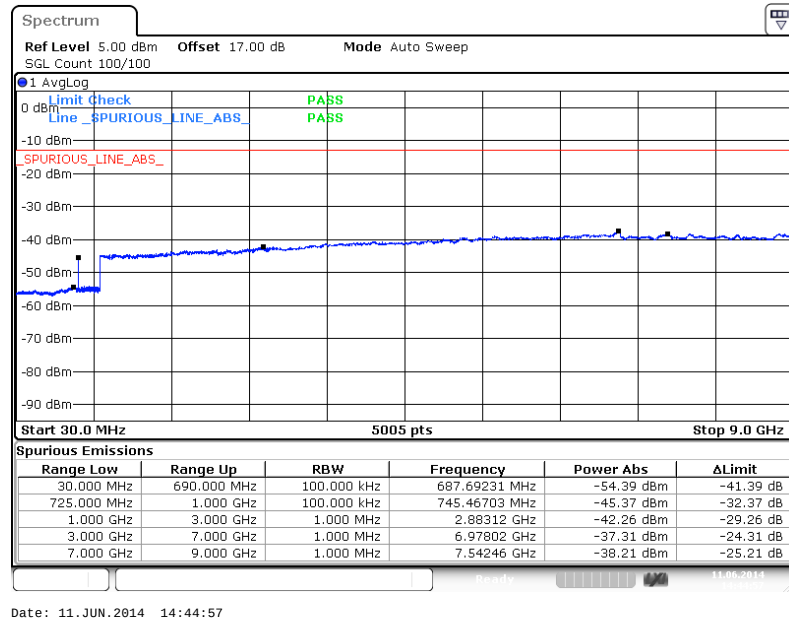
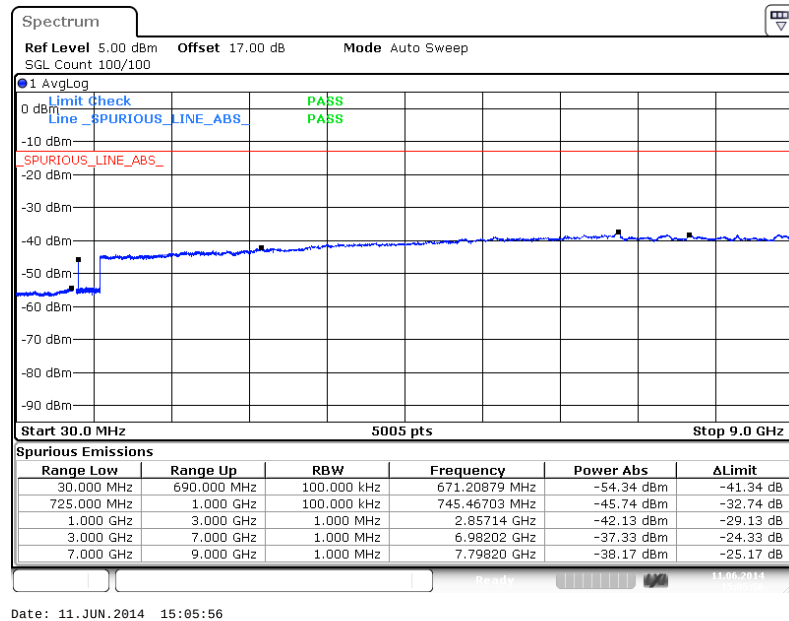


Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

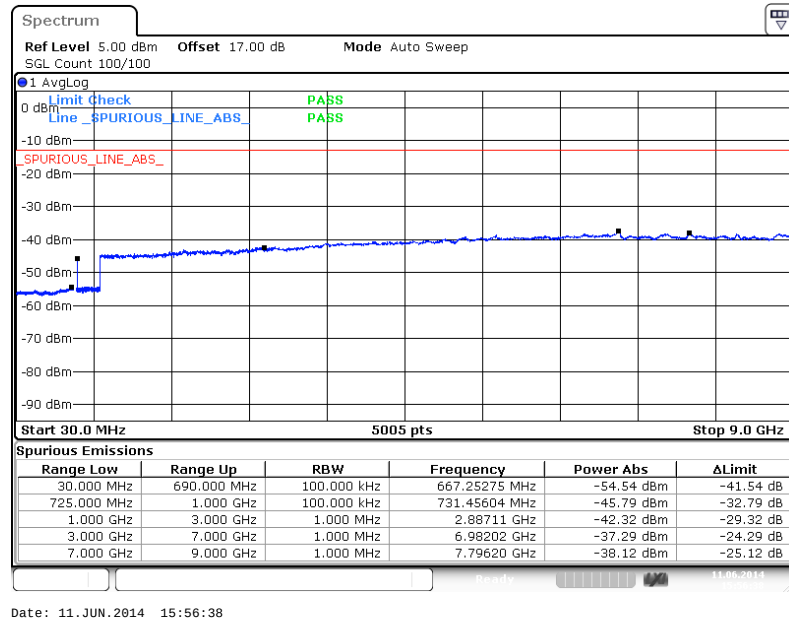
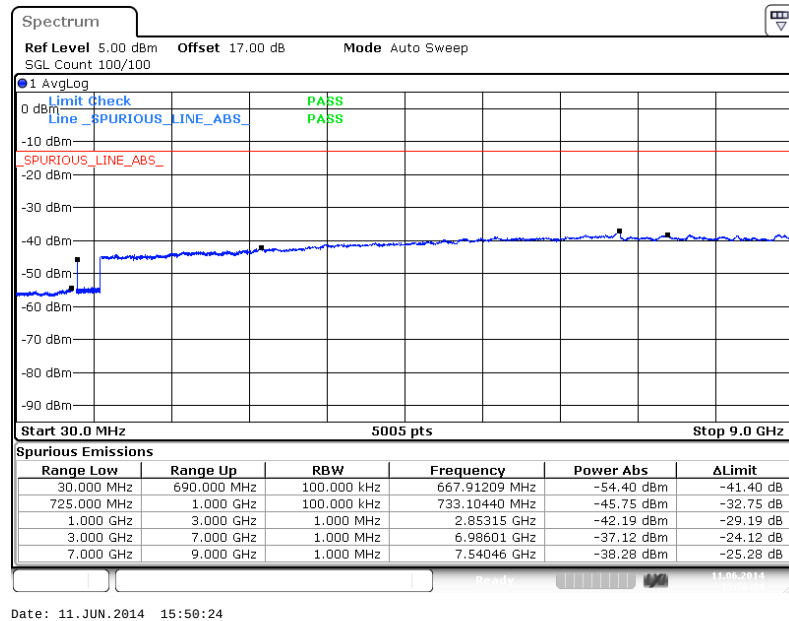


Band :	LTE Band 12	Channel :	CH23165 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

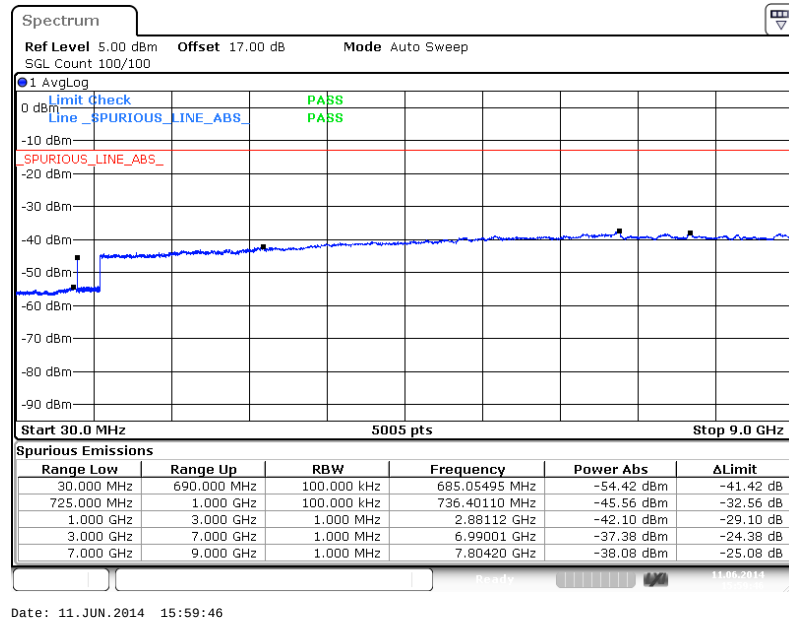
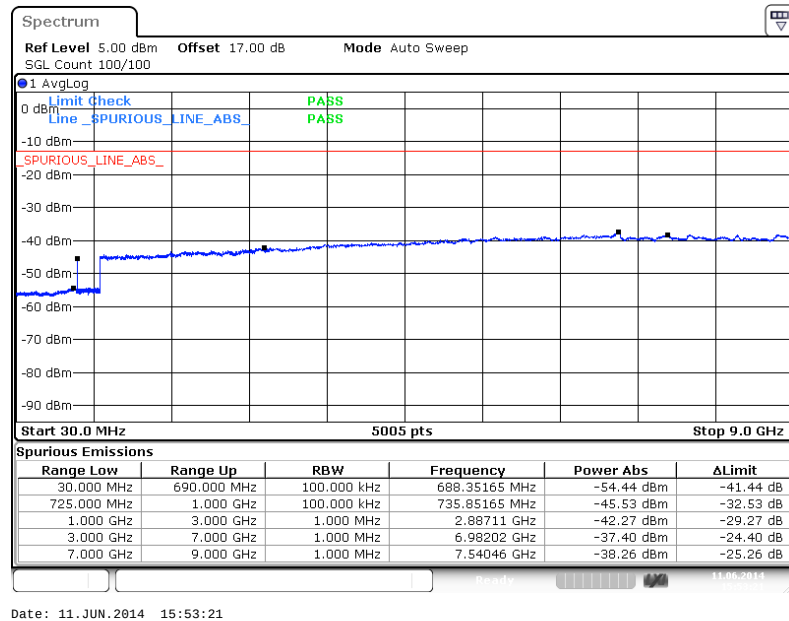


Band :	LTE Band 12	Channel :	CH23035 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

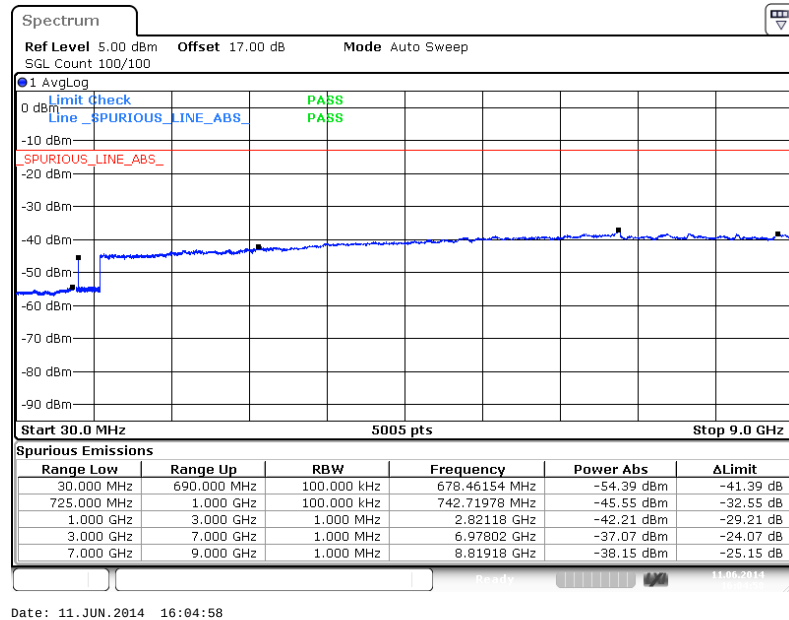
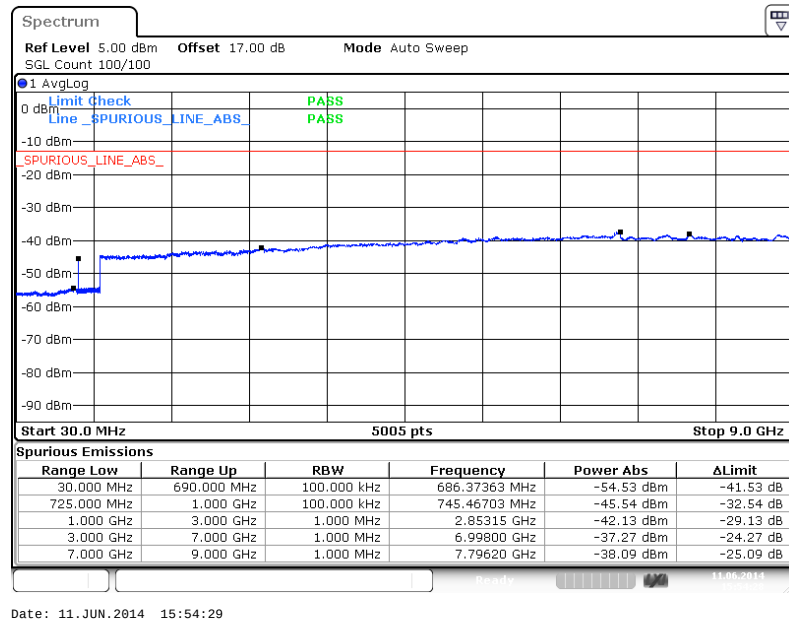


Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

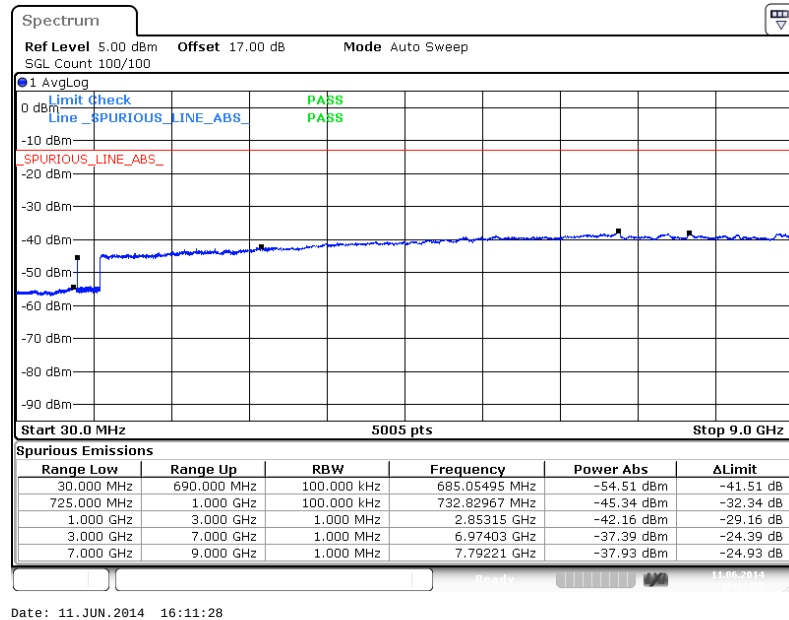
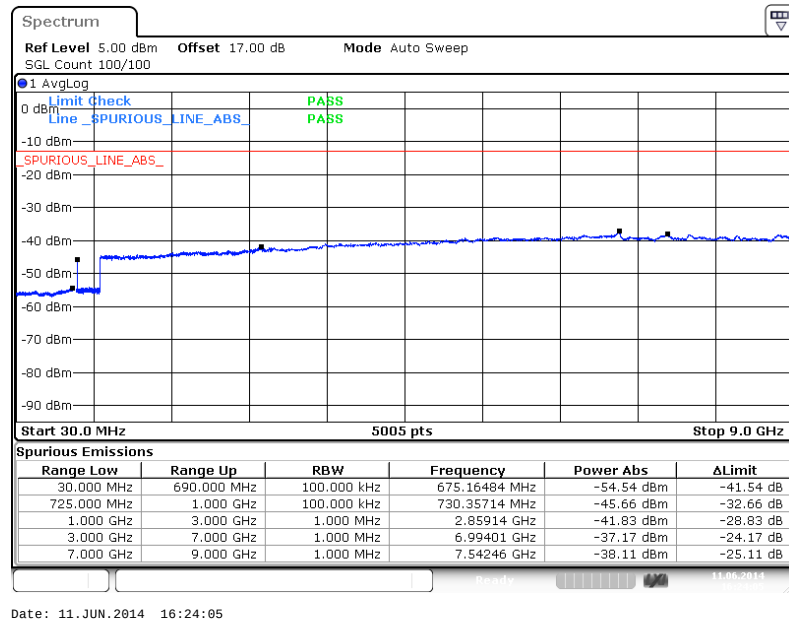


Band :	LTE Band 12	Channel :	CH23155 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

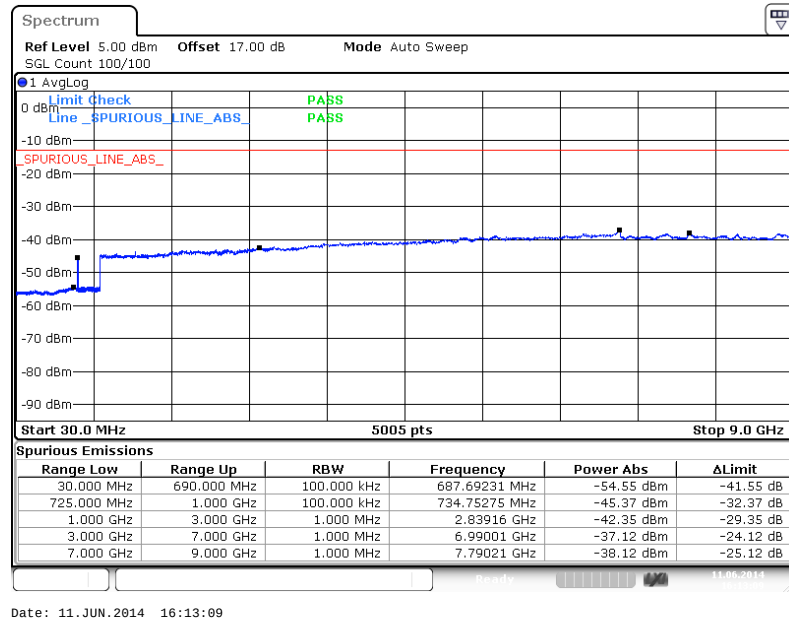
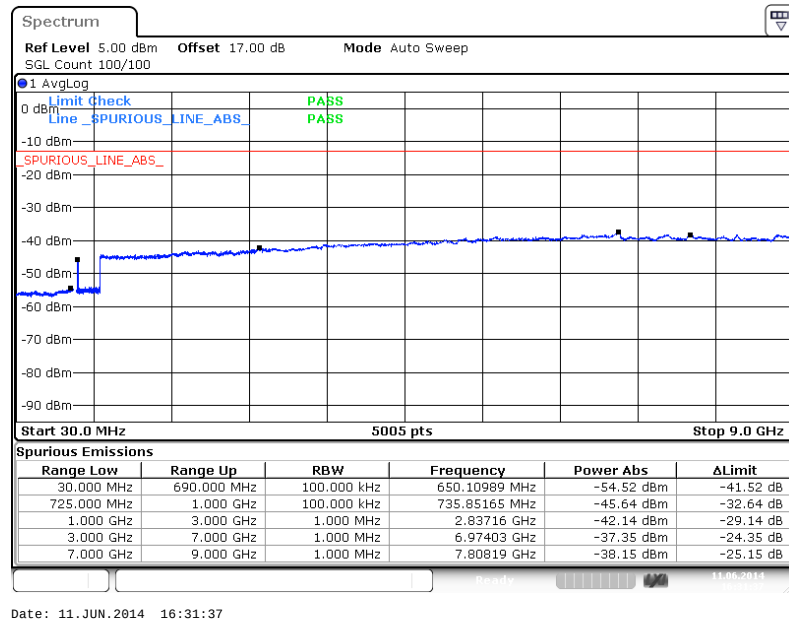


Band :	LTE Band 12	Channel :	CH23060 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



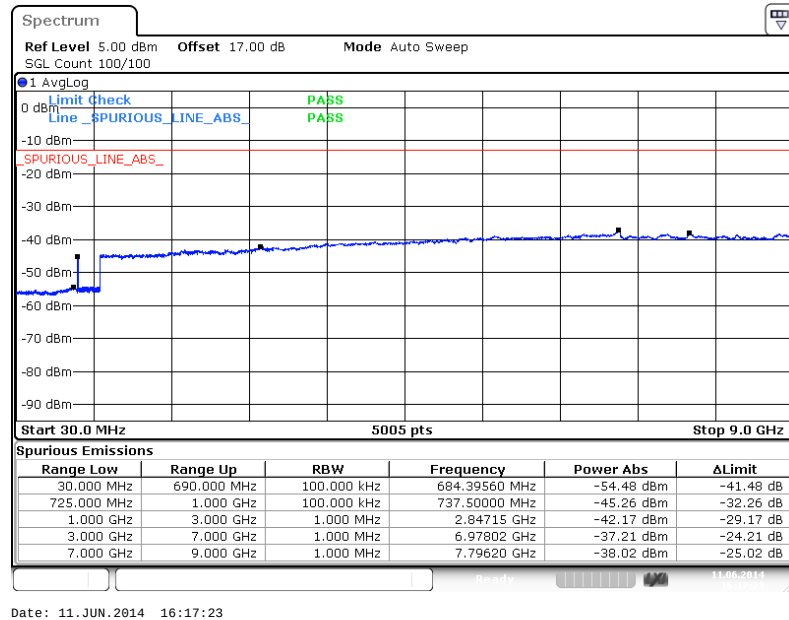
Band :	LTE Band 12	Channel :	CH23095 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**

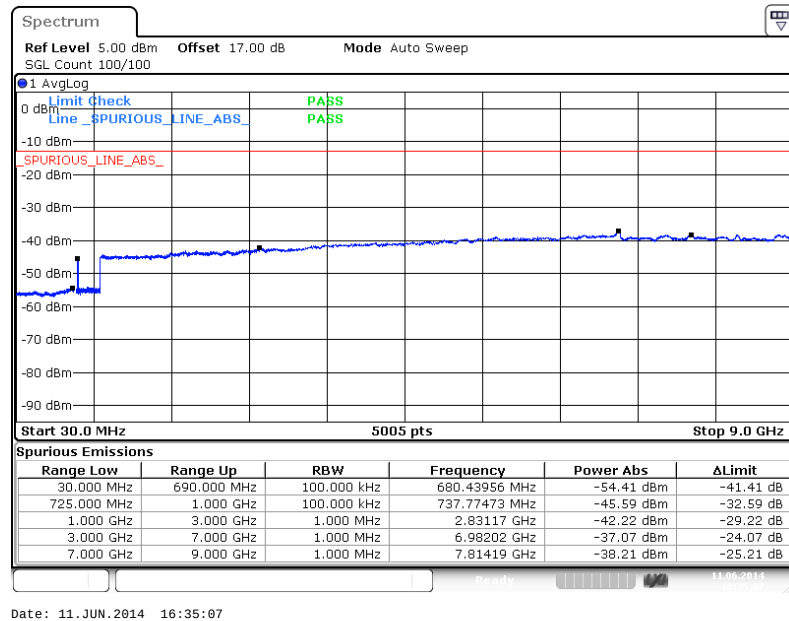


Band :	LTE Band 12	Channel :	CH23130 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

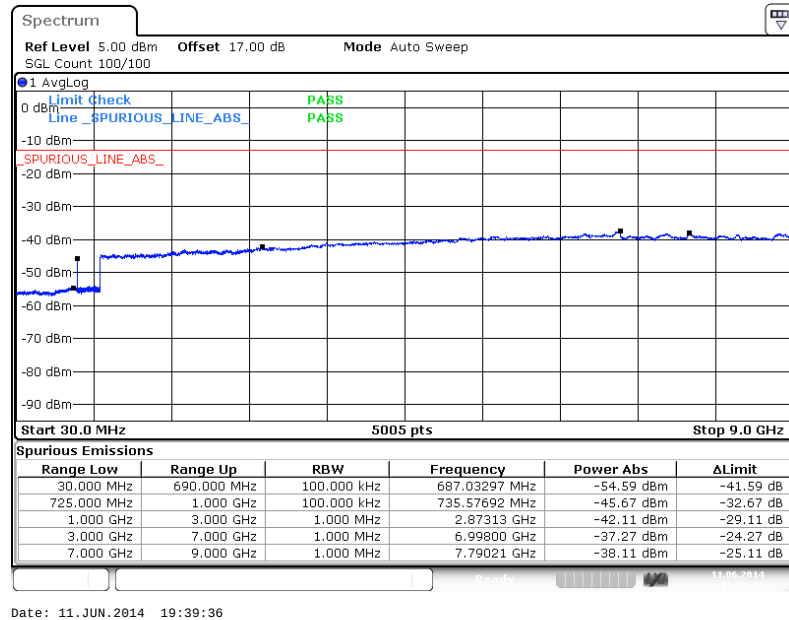
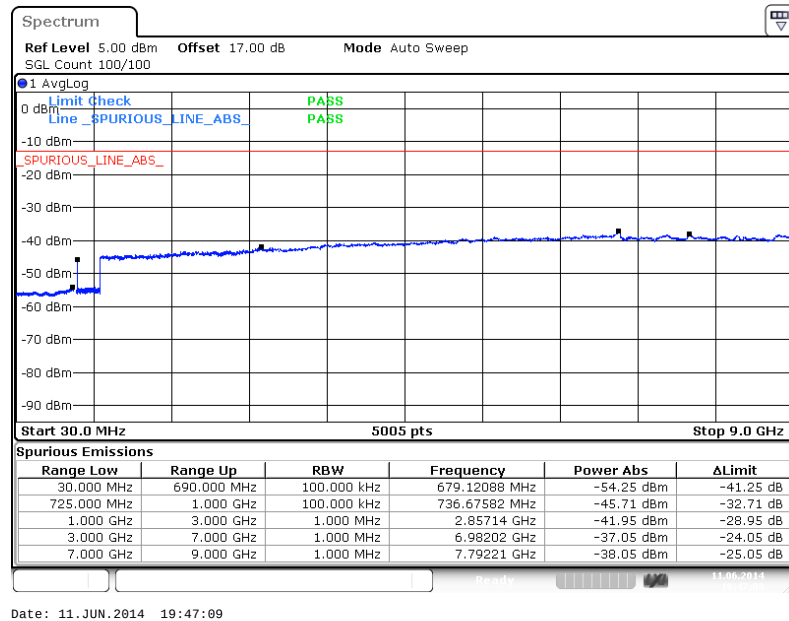


16QAM (RB Size 1, RB Offset 0)



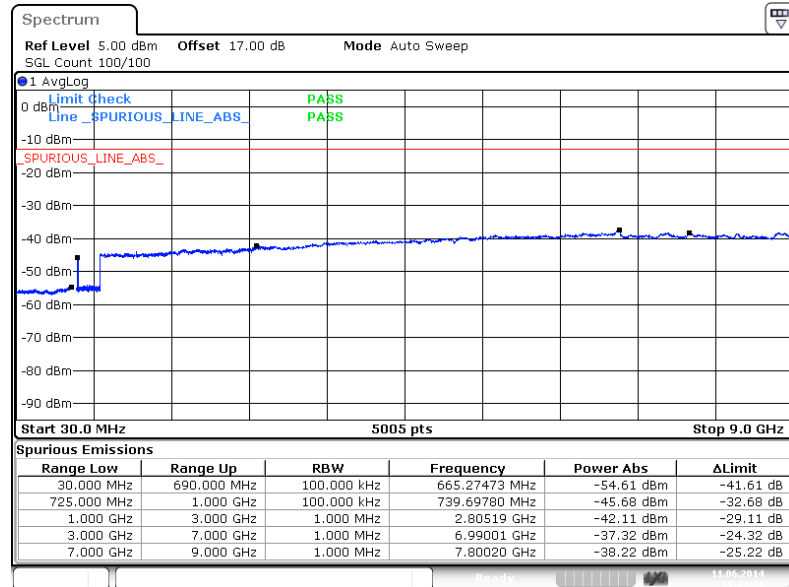


Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width :	5MHz		

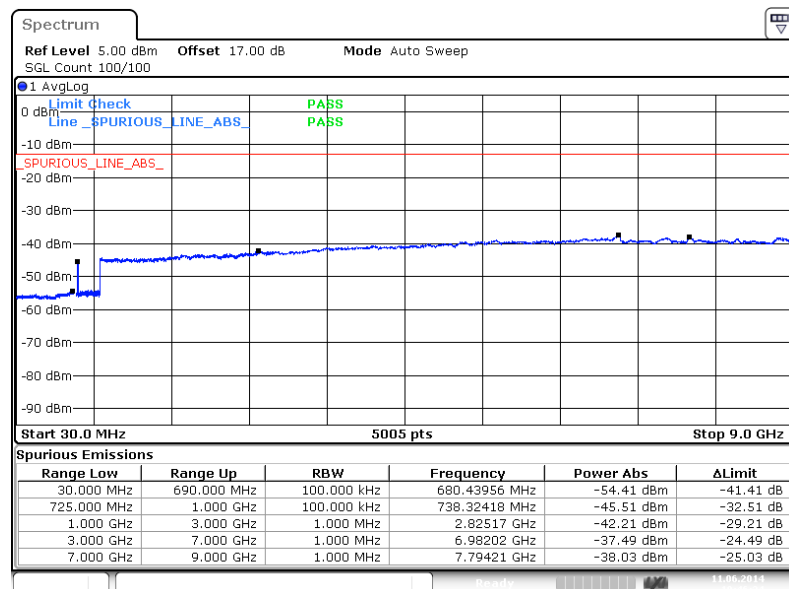
QPSK (RB Size 1, RB Offset 0)**16QAM (RB Size 1, RB Offset 0)**



Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 11. JUN. 2014 19:41:22

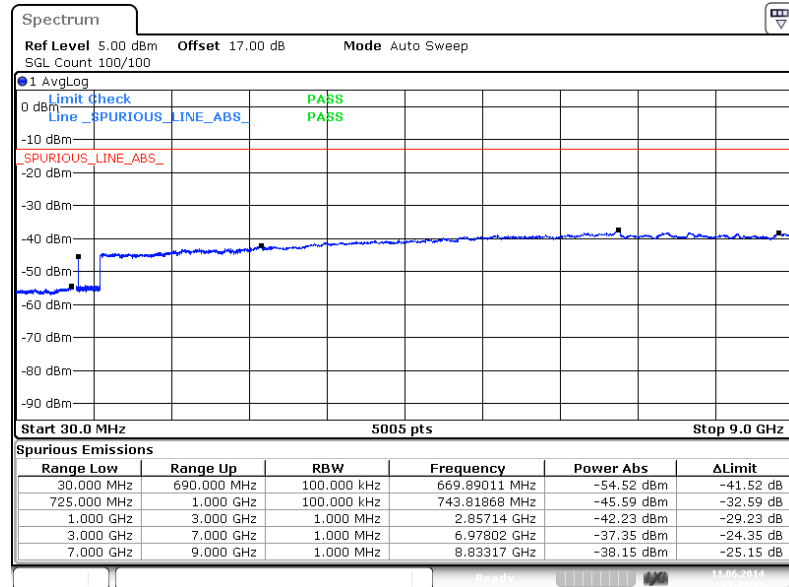
16QAM (RB Size 1, RB Offset 0)

Date: 11. JUN. 2014 19:46:24



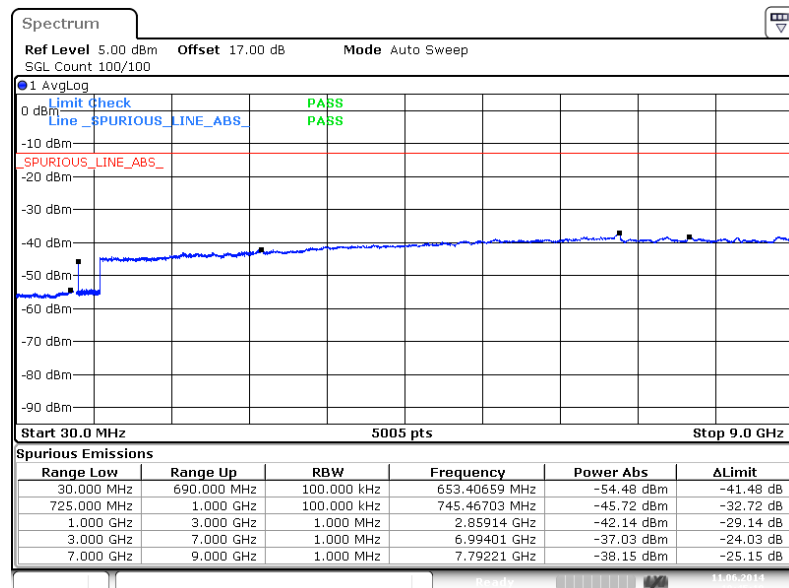
Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 11. JUN. 2014 19:43:39

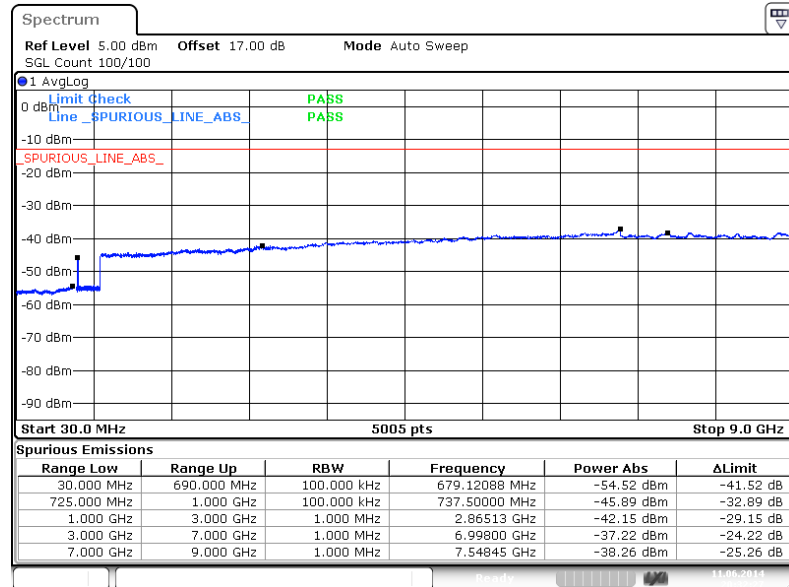
16QAM (RB Size 1, RB Offset 0)



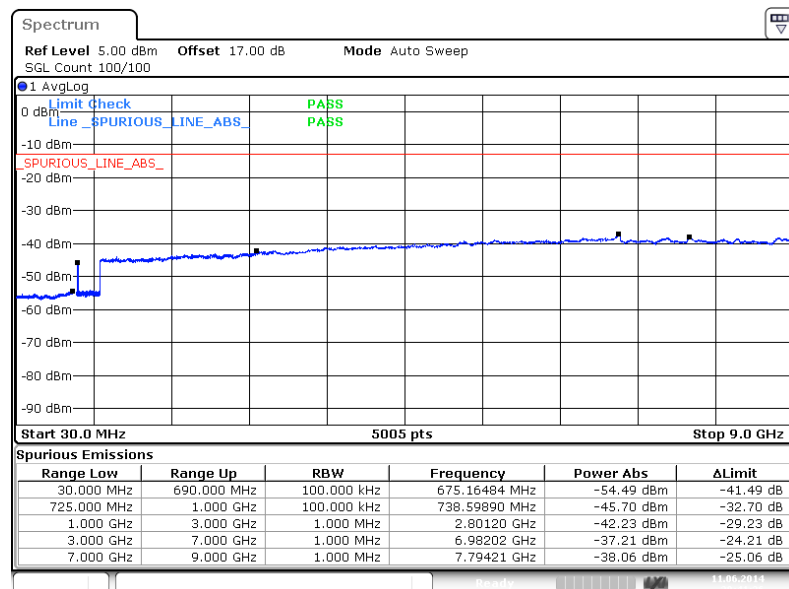
Date: 11. JUN. 2014 19:45:19



Band :	LTE Band 17	Channel :	CH23780 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

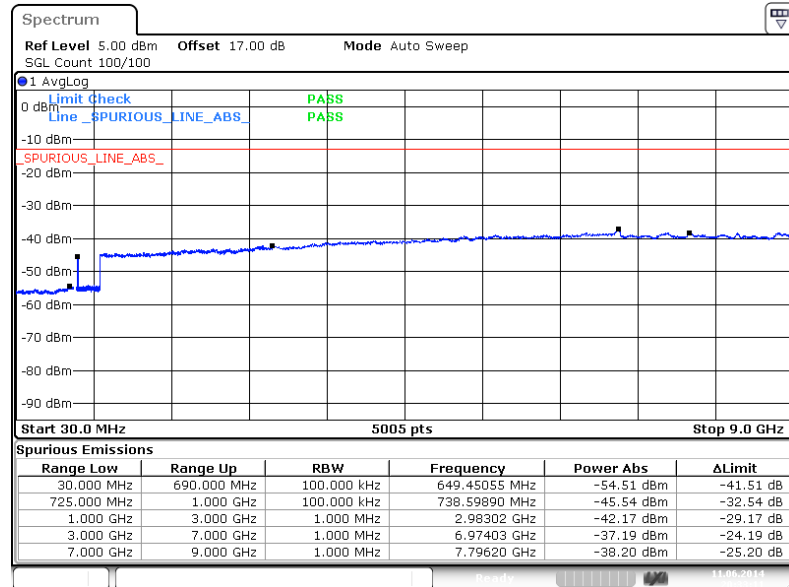
Date: 11. JUN. 2014 20:32:28

16QAM (RB Size 1, RB Offset 0)

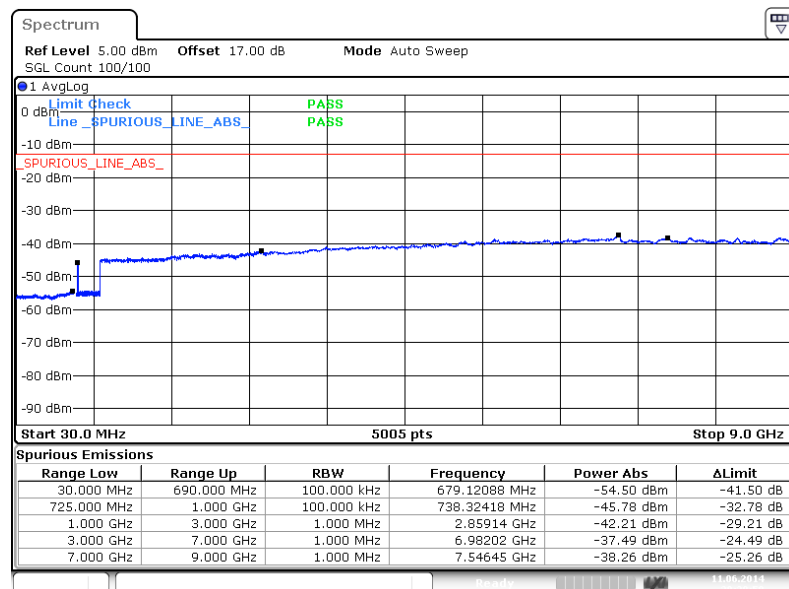
Date: 11. JUN. 2014 20:41:26



Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

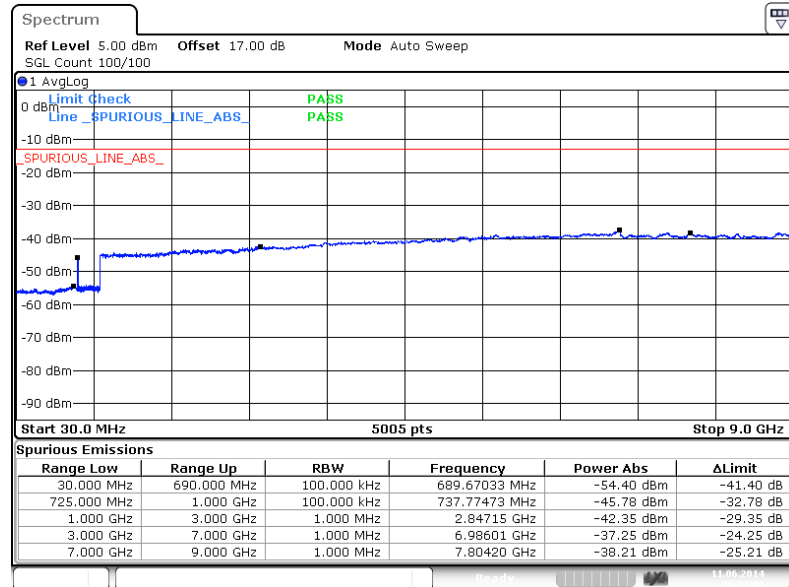
Date: 11. JUN. 2014 20:33:12

16QAM (RB Size 1, RB Offset 0)

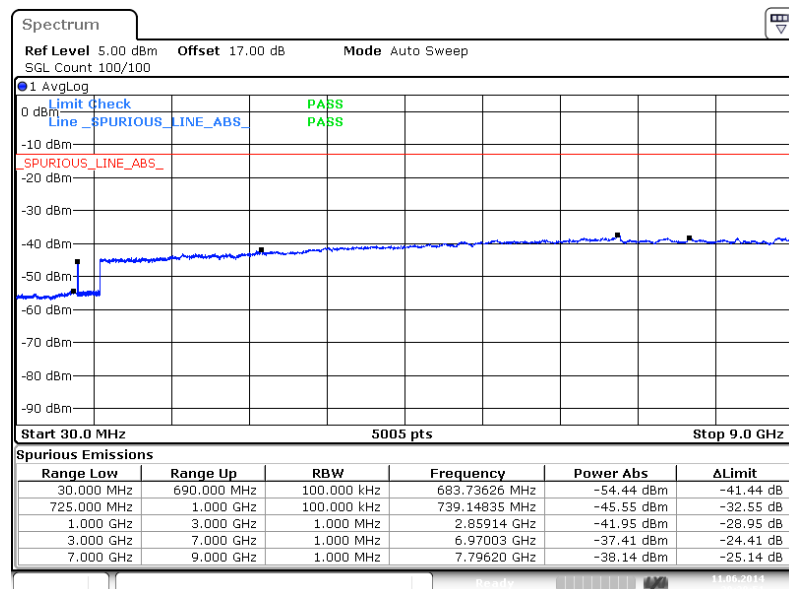
Date: 11. JUN. 2014 20:40:00



Band :	LTE Band 17	Channel :	CH23800 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

Date: 11. JUN. 2014 20:34:09

16QAM (RB Size 1, RB Offset 0)

Date: 11. JUN. 2014 20:38:52

3.7 Radiated Spurious Emission Measurement

3.7.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

$$= P(W) - [43 + 10\log(P)] \text{ (dB)}$$

$$= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$$

$$= -13\text{dBm.}$$

For Band 7

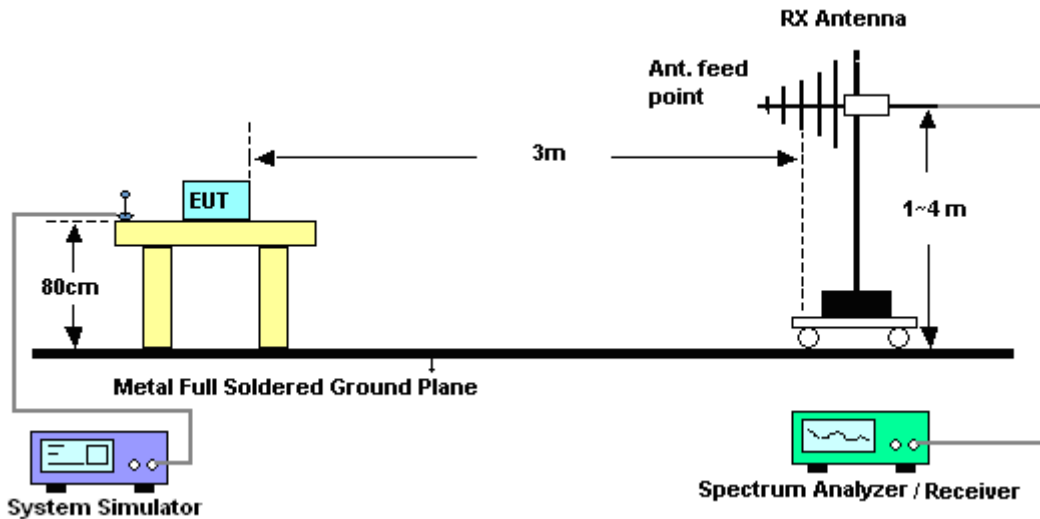
The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)

$$11. \text{ EIRP (dBm)} = \text{S.G. Power} - \text{Tx Cable Loss} + \text{Tx Antenna Gain}$$

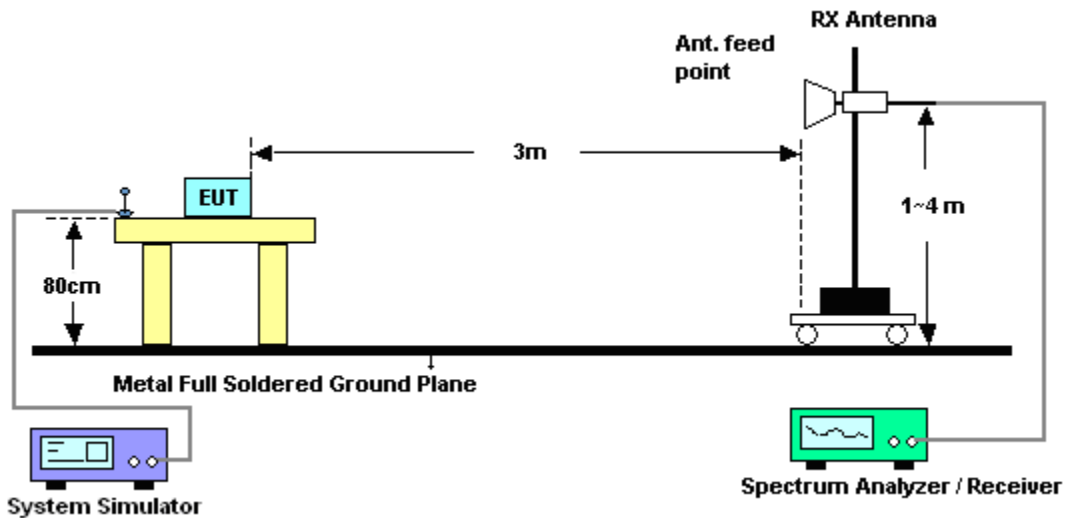
$$12. \text{ ERP (dBm)} = \text{EIRP} - 2.15$$

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.7.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-46.17	-13	-33.17	-61.07	-52.47	2.51	8.81	H	Pass
5639	-27.61	-13	-14.61	-48	-35.32	2.99	10.70	H	Pass
7522	-34.74	-13	-21.74	-59.27	-43.27	3.59	12.12	H	Pass

Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-47.36	-13	-34.36	-62.52	-53.66	2.51	8.81	V	Pass
5639	-30.44	-13	-17.44	-49.79	-38.15	2.99	10.70	V	Pass
7522	-34.02	-13	-21.02	-57.37	-42.55	3.59	12.12	V	Pass



Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	3MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-46.72	-13	-33.72	-61.6	-53.02	2.51	8.81	H	Pass
5639	-28.62	-13	-15.62	-49.03	-36.33	2.99	10.70	H	Pass
7515	-36.26	-13	-23.26	-60.99	-44.79	3.59	12.12	H	Pass

Band :	LTE Band 2	Temperature :	21~24°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)	(dB)	(dB)	(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3756	-49.58	-13	-36.58	-64.58	-55.88	2.51	8.81	V	Pass
5639	-29.98	-13	-16.98	-48.99	-37.69	2.99	10.70	V	Pass
7515	-32.01	-13	-19.01	-55.59	-40.54	3.59	12.12	V	Pass



Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-47.25	-13	-34.25	-62.3	-53.55	2.51	8.81	H	Pass
5632	-27.62	-13	-14.62	-47.88	-35.33	2.99	10.70	H	Pass
7508	-34.69	-13	-21.69	-59.34	-43.22	3.59	12.12	H	Pass

Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3756	-49.49	-13	-36.49	-64.74	-55.79	2.51	8.81	V	Pass
5632	-27.02	-13	-14.02	-46.19	-34.73	2.99	10.70	V	Pass
7506	-35.58	-13	-22.58	-59.2	-44.11	3.59	12.12	V	Pass



Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	10MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3749	-47.18	-13	-34.18	-62.44	-53.48	2.51	8.81	H	Pass
5625	-28.50	-13	-15.50	-48.78	-36.21	2.99	10.70	H	Pass
7501	-39.93	-13	-26.93	-64.76	-48.46	3.59	12.12	H	Pass

Band :	LTE Band 2				Temperature :	21~24°C			
Test Mode :	10MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3749	-49.04	-13	-36.04	-63.88	-55.34	2.51	8.81	V	Pass
5625	-31.57	-13	-18.57	-50.62	-39.28	2.99	10.70	V	Pass
7501	-39.73	-13	-26.73	-63.35	-48.26	3.59	12.12	V	Pass



Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	15MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3749	-46.92	-13	-33.92	-61.91	-53.22	2.51	8.81	H	Pass
5618	-31.08	-13	-18.08	-51.47	-38.79	2.99	10.70	H	Pass
7494	-40.80	-13	-27.80	-65.47	-49.33	3.59	12.12	H	Pass

Band :	LTE Band 2	Temperature :	21~24°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
			Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
3749	-48.39	-13	-35.39	-63.39	-54.69	2.51	8.81	V	Pass
5618	-31.41	-13	-18.41	-50.22	-39.12	2.99	10.70	V	Pass
7494	-36.49	-13	-23.49	-60.43	-45.02	3.59	12.12	V	Pass



Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	20MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3742	-47.83	-13	-34.83	-62.63	-54.13	2.51	8.81	H	Pass
5611	-28.50	-13	-15.50	-48.64	-36.21	2.99	10.70	H	Pass
7487	-39.82	-13	-26.82	-64.57	-48.35	3.59	12.12	H	Pass

Band :	LTE Band 2					Temperature :	21~24°C		
Test Mode :	20MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3742	-47.39	-13	-34.39	-62.56	-53.69	2.51	8.81	V	Pass
5611	-31.43	-13	-18.43	-50.33	-39.14	2.99	10.70	V	Pass
7487	-39.32	-13	-26.32	-63.08	-47.85	3.59	12.12	V	Pass



Band :	LTE Band 4	Temperature :	21~24°C						
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3462	-44.52	-13	-31.52	-57.6	-48.35	4.48	8.31	H	Pass
5198	-35.04	-13	-22.04	-54.5	-39.68	5.332	9.98	H	Pass
6927	-35.62	-13	-22.62	-59	-40.86	6.1	11.34	H	Pass

Band :	LTE Band 4					Temperature :	21~24°C		
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3462	-46.14	-13	-33.14	-59.58	-49.97	4.48	8.31	V	Pass
5198	-30.69	-13	-17.69	-49.49	-35.33	5.332	9.98	V	Pass
6927	-30.52	-13	-17.52	-53.43	-35.76	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	21~24°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)			(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3462	-46.28	-13	-33.28	-58.95	-50.11	4.48	8.31	H	Pass
5191	-40.42	-13	-27.42	-59.84	-45.06	5.332	9.98	H	Pass
6927	-33.70	-13	-20.70	-57.2	-38.94	6.1	11.34	H	Pass

Band :	LTE Band 4	Temperature :	21~24°C						
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3462	-45.19	-13	-32.19	-58.6	-49.02	4.48	8.31	V	Pass
5191	-36.04	-13	-23.04	-55.06	-40.68	5.332	9.98	V	Pass
6927	-35.77	-13	-22.77	-58.55	-41.01	6.1	11.34	V	Pass



Band :	LTE Band 4					Temperature :	21~24°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3462	-45.68	-13	-32.68	-58.57	-49.51	4.48	8.31	H	Pass
5191	-36.49	-13	-23.49	-55.85	-41.13	5.332	9.98	H	Pass
6920	-34.65	-13	-21.65	-58.12	-39.89	6.1	11.34	H	Pass

Band :	LTE Band 4				Temperature :	21~24°C			
Test Mode :	5MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3462	-48.10	-13	-35.10	-61.58	-51.93	4.48	8.31	V	Pass
5191	-33.47	-13	-20.47	-52.3	-38.11	5.332	9.98	V	Pass
6920	-33.43	-13	-20.43	-56.23	-38.67	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	21~24°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over Limit	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	loss	Gain	(H/V)	
3455	-45.93	-13	-32.93	-58.64	-49.76	4.48	8.31	H	Pass
5184	-39.64	-13	-26.64	-58.88	-44.28	5.332	9.98	H	Pass
6913	-35.04	-13	-22.04	-58.49	-40.28	6.1	11.34	H	Pass

Band :	LTE Band 4	Temperature :	21~24°C						
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Vertical						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
			Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
3455	-43.32	-13	-30.32	-56.8	-47.15	4.48	8.31	V	Pass
5184	-31.41	-13	-18.41	-50.13	-36.05	5.332	9.98	V	Pass
6913	41.75	-13	54.75	-54.26	36.51	6.1	11.34	V	Pass



Band :	LTE Band 4	Temperature :	21~24°C						
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	44~48%						
Test Engineer :	Kyle Jhuang	Polarization :	Horizontal						
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain	(H/V)	
(dB)	(dB)	(dB)	(dB)	(dBm)	(dBm)	(dB)	(dBi)		
3455	-43.27	-13	-30.27	-55.99	-47.1	4.48	8.31	H	Pass
5177	-36.37	-13	-23.37	-55.59	-41.01	5.332	9.98	H	Pass
6906	-37.19	-13	-24.19	-60.53	-42.43	6.1	11.34	H	Pass

Band :	LTE Band 4					Temperature :	21~24°C		
Test Mode :	15MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3455	-45.28	-13	-32.28	-58.82	-49.11	4.48	8.31	V	Pass
5177	-36.38	-13	-23.38	-54.98	-41.02	5.332	9.98	V	Pass
6906	-33.24	-13	-20.24	-55.97	-38.48	6.1	11.34	V	Pass



Band :	LTE Band 4					Temperature :	21~24°C		
Test Mode :	20MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
3448	-45.52	-13	-32.52	-58.49	-49.35	4.48	8.31	H	Pass
5170	-38.62	-13	-25.62	-58.12	-43.26	5.332	9.98	H	Pass
6892	-37.31	-13	-24.31	-60.53	-42.55	6.1	11.34	H	Pass

Band :	LTE Band 4				Temperature :		21~24°C		
Test Mode :	20MHz QPSK RB Size 1 Offset 0				Relative Humidity :		44~48%		
Test Engineer :	Kyle Jhuang				Polarization :		Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
3448	-46.45	-13	-33.45	-60	-50.28	4.48	8.31	V	Pass
5170	-35.04	-13	-22.04	-53.78	-39.68	5.332	9.98	V	Pass
6892	-33.81	-13	-20.81	-56.3	-39.05	6.1	11.34	V	Pass



Band :	LTE Band 7					Temperature :	21~24°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5065	-33.85	-25	-8.85	-53.2	-37.34	6.86	10.35	H	Pass
7599	-37.50	-25	-12.50	-62.19	-40.39	9.34	12.23	H	Pass
10135	-36.57	-25	-11.57	-63.03	-40.67	8.64	12.74	H	Pass

Band :	LTE Band 7				Temperature :	21~24°C			
Test Mode :	5MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5065	-37.03	-25	-12.03	-55.52	-40.52	6.86	10.35	V	Pass
7599	-36.15	-25	-11.15	-59.15	-39.04	9.34	12.23	V	Pass
10135	-38.77	-25	-13.77	-64	-42.87	8.64	12.74	V	Pass



Band :	LTE Band 7					Temperature :	21~24°C		
Test Mode :	10MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5058	-40.02	-25	-15.02	-59.28	-43.51	6.86	10.35	H	Pass
7592	-37.16	-25	-12.16	-61.82	-40.05	9.34	12.23	H	Pass
10144	-39.47	-25	-14.47	-66.16	-43.57	8.64	12.74	H	Pass

Band :	LTE Band 7				Temperature :	21~24°C			
Test Mode :	10MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5065	-35.10	-25	-10.10	-53.71	-38.59	6.86	10.35	V	Pass
7592	-36.32	-25	-11.32	-59.41	-39.21	9.34	12.23	V	Pass
10144	-40.42	-25	-15.42	-65.79	-44.52	8.64	12.74	V	Pass



Band :	LTE Band 7					Temperature :	21~24°C		
Test Mode :	15MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5058	-38.52	-25	-13.52	-57.91	-42.01	6.86	10.35	H	Pass
7585	-38.42	-25	-13.42	-62.93	-41.31	9.34	12.23	H	Pass
10117	-37.51	-25	-12.51	-63.96	-41.61	8.64	12.74	H	Pass

Band :	LTE Band 7				Temperature :	21~24°C			
Test Mode :	15MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5058	-40.56	-25	-15.56	-58.95	-44.05	6.86	10.35	V	Pass
7585	-40.36	-25	-15.36	-63.71	-43.25	9.34	12.23	V	Pass
10117	-39.08	-25	-14.08	-64.58	-43.18	8.64	12.74	V	Pass



Band :	LTE Band 7					Temperature :	21~24°C		
Test Mode :	20MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5051	-41.12	-25	-16.12	-60.32	-44.61	6.86	10.35	H	Pass
7578	-39.44	-25	-14.44	-63.9	-42.33	9.34	12.23	H	Pass
10099	-39.65	-25	-14.65	-66.12	-43.75	8.64	12.74	H	Pass

Band :	LTE Band 7				Temperature :	21~24°C			
Test Mode :	20MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	EIRP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
5051	-40.12	-25	-15.12	-58.77	-43.61	6.86	10.35	V	Pass
7578	-40.36	-25	-15.36	-63.73	-43.25	9.34	12.23	V	Pass
10099	-40.28	-25	-15.28	-65.67	-44.38	8.64	12.74	V	Pass



Band :	LTE Band 12					Temperature :	21~24°C		
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-49.06	-13	-36.06	-53.81	-50.76	1.47	5.32	H	Pass
2120	-52.95	-13	-39.95	-61.92	-54.92	1.86	5.98	H	Pass
2832	-50.64	-13	-37.64	-60.81	-53.71	2.21	7.43	H	Pass

Band :	LTE Band 12				Temperature :	21~24°C			
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
			Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
1416	-52.14	-13	-39.14	-56.54	-53.84	1.47	5.32	V	Pass
2120	-53.72	-13	-40.72	-63.14	-55.69	1.86	5.98	V	Pass
2832	-50.69	-13	-37.69	-62.48	-53.76	2.21	7.43	V	Pass



Band :	LTE Band 12					Temperature :	21~24°C		
Test Mode :	3MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-51.01	-13	-38.01	-55.97	-52.71	1.47	5.32	H	Pass
2120	-53.88	-13	-40.88	-62.79	-55.85	1.86	5.98	H	Pass
2832	-52.36	-13	-39.36	-62.38	-55.43	2.21	7.43	H	Pass

Band :	LTE Band 12				Temperature :	21~24°C			
Test Mode :	3MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-53.88	-13	-40.88	-58.38	-55.58	1.47	5.32	V	Pass
2120	-54.14	-13	-41.14	-63.54	-56.11	1.86	5.98	V	Pass
2832	-51.87	-13	-38.87	-63.61	-54.94	2.21	7.43	V	Pass



Band :	LTE Band 12					Temperature :	21~24℃		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-49.98	-13	-36.98	-54.52	-51.68	1.47	5.32	H	Pass
2120	-53.93	-13	-40.93	-62.95	-55.9	1.86	5.98	H	Pass
2832	-53.65	-13	-40.65	-63.55	-56.72	2.21	7.43	H	Pass

Band :	LTE Band 12				Temperature :		21~24°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0				Relative Humidity :		44~48%		
Test Engineer :	Kyle Jhuang				Polarization :		Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-52.93	-13	-39.93	-56.92	-54.63	1.47	5.32	V	Pass
2120	-52.87	-13	-39.87	-62.63	-54.84	1.86	5.98	V	Pass
2832	-51.48	-13	-38.48	-63.24	-54.55	2.21	7.43	V	Pass



Band :	LTE Band 12					Temperature :	21~24℃		
Test Mode :	10MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1408	-45.89	-13	-32.89	-50.65	-47.59	1.47	5.32	H	Pass
2112	-53.64	-13	-40.64	-62.31	-55.61	1.86	5.98	H	Pass
2816	-50.05	-13	-37.05	-60.23	-53.12	2.21	7.43	H	Pass

Band :	LTE Band 12					Temperature :	21~24°C		
Test Mode :	10MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1408	-47.88	-13	-34.88	-52.21	-49.58	1.47	5.32	V	Pass
2112	-53.77	-13	-40.77	-63.04	-55.74	1.86	5.98	V	Pass
2816	-49.99	-13	-36.99	-61.84	-53.06	2.21	7.43	V	Pass



Band :	LTE Band 17					Temperature :	21~24℃		
Test Mode :	5MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-52.24	-13	-39.24	-56.97	-56.32	1.53	5.61	H	Pass
2120	-54.58	-13	-41.58	-63.42	-58.75	1.85	6.02	H	Pass
2832	-53.14	-13	-40.14	-63.14	-57.9	2.24	7.00	H	Pass

Band :	LTE Band 17				Temperature :		21~24°C		
Test Mode :	5MHz QPSK RB Size 1 Offset 0				Relative Humidity :		44~48%		
Test Engineer :	Kyle Jhuang				Polarization :		Vertical		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1416	-53.11	-13	-40.11	-57.65	-57.19	1.53	5.61	V	Pass
2120	-55.07	-13	-42.07	-64.54	-59.24	1.85	6.02	V	Pass
2832	-52.87	-13	-39.87	-64.26	-57.63	2.24	7.00	V	Pass



Band :	LTE Band 17					Temperature :	21~24°C		
Test Mode :	10MHz QPSK RB Size 1 Offset 0					Relative Humidity :	44~48%		
Test Engineer :	Kyle Jhuang					Polarization :	Horizontal		
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
(MHz)	(dBm)	(dBm)	Limit (dB)	Reading (dBm)	Power (dBm)	loss (dB)	Gain (dBi)	(H/V)	
1408	-49.47	-13	-36.47	-54.09	-53.55	1.53	5.61	H	Pass
2112	-54.52	-13	-41.52	-63.09	-58.69	1.85	6.02	H	Pass
2816	-53.00	-13	-40.00	-62.92	-57.76	2.24	7.00	H	Pass

Band :	LTE Band 17				Temperature :	21~24°C			
Test Mode :	10MHz QPSK RB Size 1 Offset 0				Relative Humidity :	44~48%			
Test Engineer :	Kyle Jhuang				Polarization :	Vertical			
Remark :	Spurious emissions within 30-10th harmonic were found more than 20dB below limit line.								
Frequency	ERP	Limit	Over	SPA	S.G.	TX Cable	TX Antenna	Polarization	Result
			Limit	Reading	Power	loss	Gain		
(MHz)	(dBm)	(dBm)	(dB)	(dBm)	(dBm)	(dB)	(dBi)	(H/V)	
1408	-52.18	-13	-39.18	-56.57	-56.26	1.53	5.61	V	Pass
2112	-55.64	-13	-42.64	-64.85	-59.81	1.85	6.02	V	Pass
2816	-50.70	-13	-37.70	-62.49	-55.46	2.24	7.00	V	Pass

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.8.2 Measuring Instruments

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

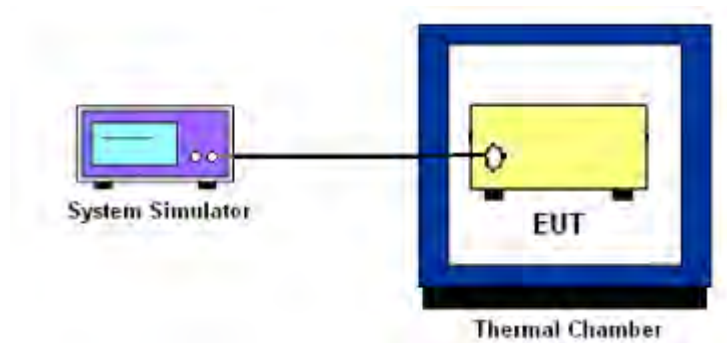
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation (FCC)

Band :	LTE Band 2 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	+0.0064	PASS	
40	+0.0053		
30	+0.0048		
20(Ref.)	+0.0053		
10	+0.0053		
0	+0.0059		
-10	+0.0053		
-20	+0.0043		
-30	+0.0059		

Band :	LTE Band 4 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	+0.0058	PASS	
40	+0.0052		
30	+0.0058		
20(Ref.)	+0.0046		
10	+0.0052		
0	+0.0058		
-10	+0.0052		
-20	+0.0046		
-30	+0.0052		

Band :	LTE Band 7 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	+0.0107	PASS	
40	+0.0103		
30	+0.0087		
20(Ref.)	+0.0099		
10	+0.0095		
0	+0.0107		
-10	+0.0110		
-20	+0.0103		
-30	+0.0110		

Band :	LTE Band 12 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	+0.0085	PASS	
40	+0.0071		
30	+0.0085		
20(Ref.)	+0.0085		
10	+0.0057		
0	+0.0071		
-10	+0.0085		
-20	+0.0085		
-30	+0.0071		



Band :	LTE Band 17 (QPSK)	Limit (ppm) :	2.5
Temperature (°C)	BW 10MHz	Result	
	Deviation (ppm)		
50	+0.0085	PASS	
40	+0.0056		
30	+0.0070		
20(Ref.)	+0.0056		
10	+0.0070		
0	+0.0056		
-10	+0.0085		
-20	+0.0070		
-30	+0.0070		

3.8.7 Test Result of Voltage Variation (FCC)

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 2	10M	4.35	+0.0059	2.5	PASS
		Normal	+0.0064		
		3.5	+0.0053		
LTE Band 4	10M	4.35	+0.0058	2.5	PASS
		Normal	+0.0052		
		3.5	+0.0058		
LTE Band 7	10M	4.35	+0.0107	2.5	PASS
		Normal	+0.0099		
		3.5	+0.0110		
LTE Band 12	10M	4.35	+0.0085	2.5	PASS
		Normal	+0.0071		
		3.5	+0.0085		
LTE Band 17	10M	4.35	+0.0085	2.5	PASS
		Normal	+0.0070		
		3.5	+0.0085		

Remark:

1. Normal Voltage = 3.8V.
2. The manufacturer declared that the EUT could work properly between voltage 3.5V ~ 4.35V.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	May 08, 2014	May 30, 2014~ Jun. 20, 2014	May 07, 2015	Conducted (TH01-SZ)
Thermal Chamber	Hongzhan	LP-150U	HD20120425	-40℃~150℃	Feb. 21, 2014	May 30, 2014~ Jun. 20, 2014	Feb. 20, 2015	Conducted (TH01-SZ)
Spectrum Analyzer	Rohde & Schwarz	FSV30	101749	10Hz ~ 30GHz	Feb. 10, 2014	Jun. 14, 2014	Feb. 09, 2015	Radiation (03CH07-HY)
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Jun. 14, 2014	Oct. 09, 2014	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Jun. 14, 2014	Aug. 21, 2014	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 03, 2013	Jun. 14, 2014	Oct. 02, 2014	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10 MHz ~ 1000MHz	Mar. 17, 2014	Jun. 14, 2014	Mar. 16, 2015	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Nov. 29, 2013	Jun. 14, 2014	Nov. 28, 2014	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Jun. 14, 2014	N/A	Radiation (03CH07-HY)
Antenna Mast	ChainTek	M-400-0	114/8000604/L	N/A	N/A	Jun. 14, 2014	N/A	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Sep. 03, 2013	Jun. 02, 2014~ Jun. 05, 2014	Sep. 02, 2014	ERP/EIRP (OTA01-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000M Hz	NCR	Jun. 02, 2014~ Jun. 05, 2014	NCR	ERP/EIRP (OTA01-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	NCR	Jun. 02, 2014~ Jun. 05, 2014	NCR	ERP/EIRP (OTA01-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	NCR	Jun. 02, 2014~ Jun. 05, 2014	NCR	ERP/EIRP (OTA01-SZ)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5
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