



Nemko Italy S.p.A.
Via del Carroccio 4, 20046, Biassono, Italy.

Appendix B: Block diagrams

Report Number: **209925-7TRFWL**

Specification: FCC 24 Subpart E



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PART 2



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Test data

Clause 24.238(b) Occupied bandwidth

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

Test date: 2012-06-11

Test results: Pass

Special notes

Resolution bandwidth was set wider or equal than occupied bandwidth. Reference peak power was measured.



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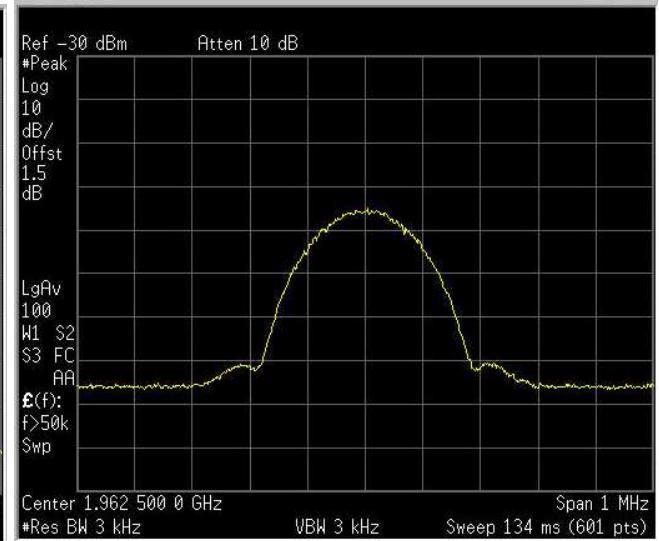
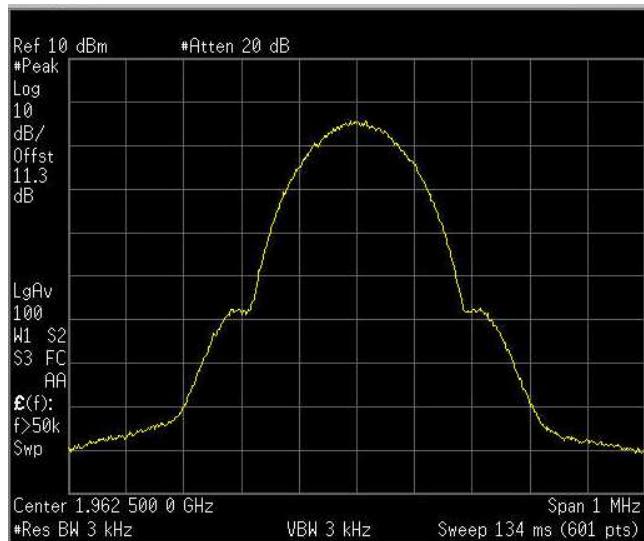
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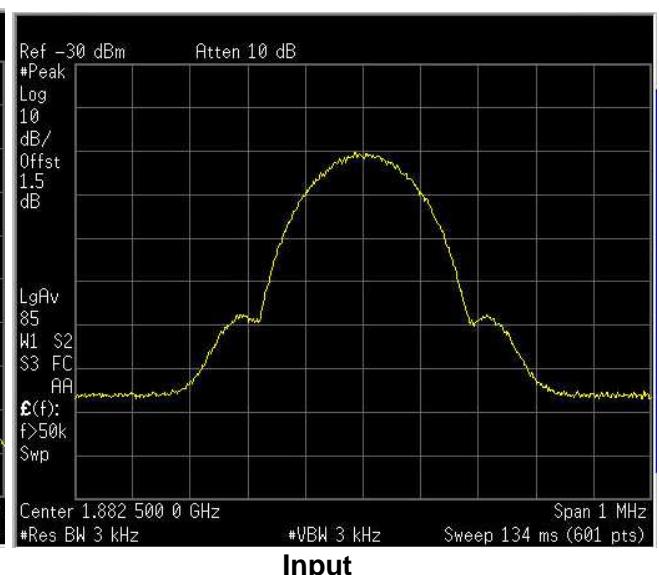
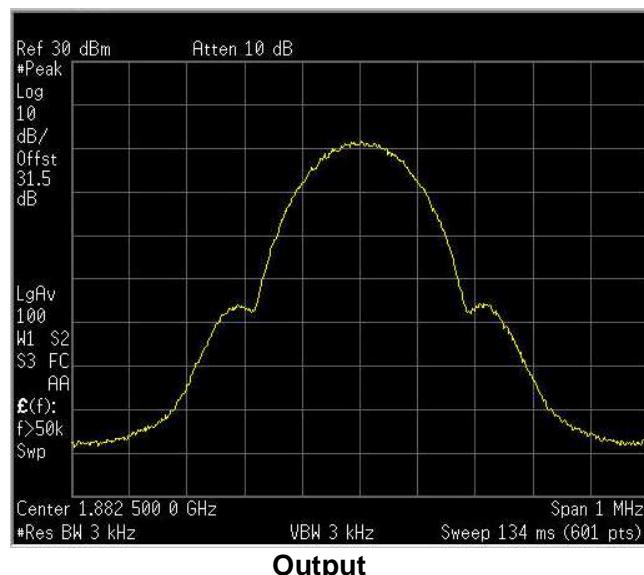
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Clause 24.238(b) Occupied bandwidth, continued

Mod. GSM (Down-link)



Mod. GSM (Up-link)





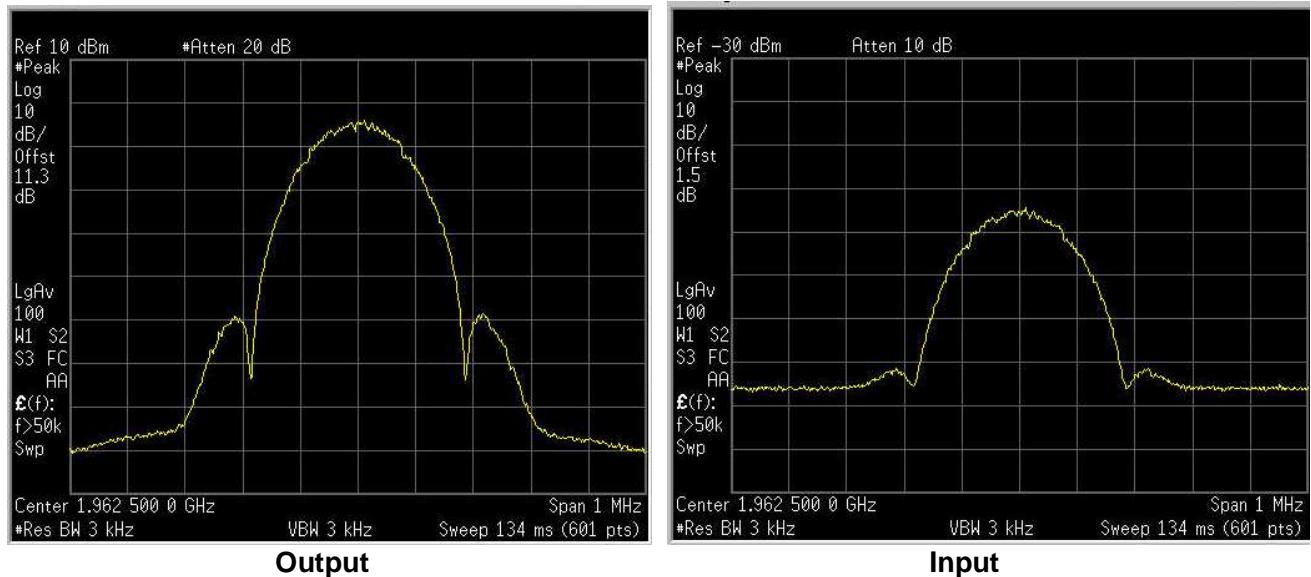
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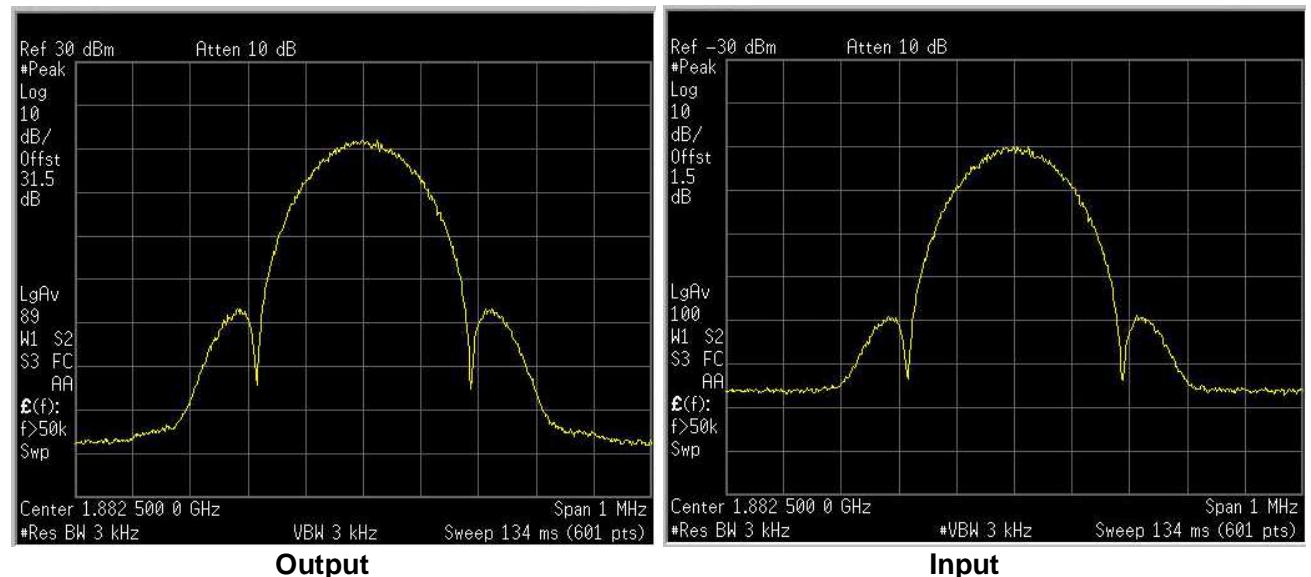
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Mod. EDGE (Down-link)



Mod. EDGE (Up-link)





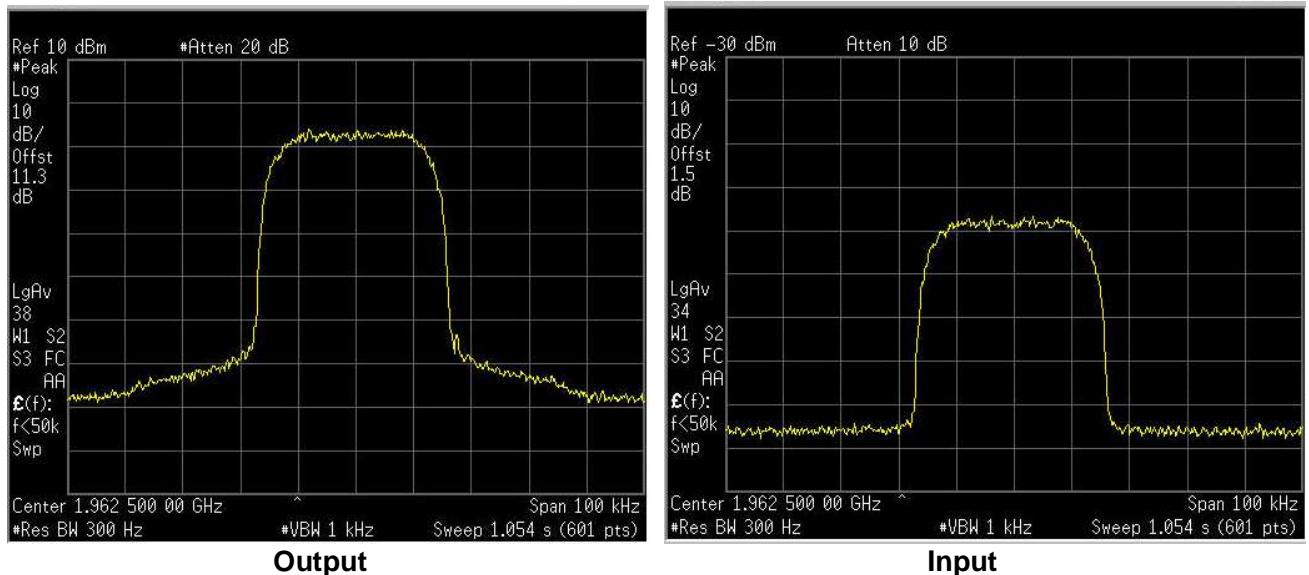
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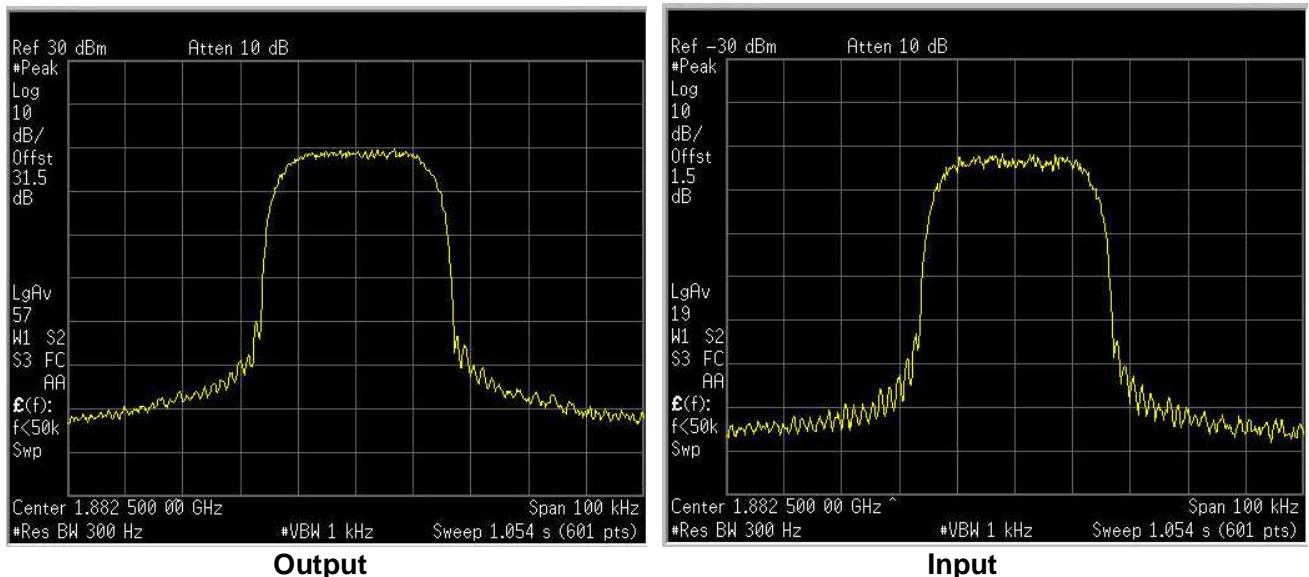
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Mod. TDMA (Down-link)



Mod. TDMA (Up-link)





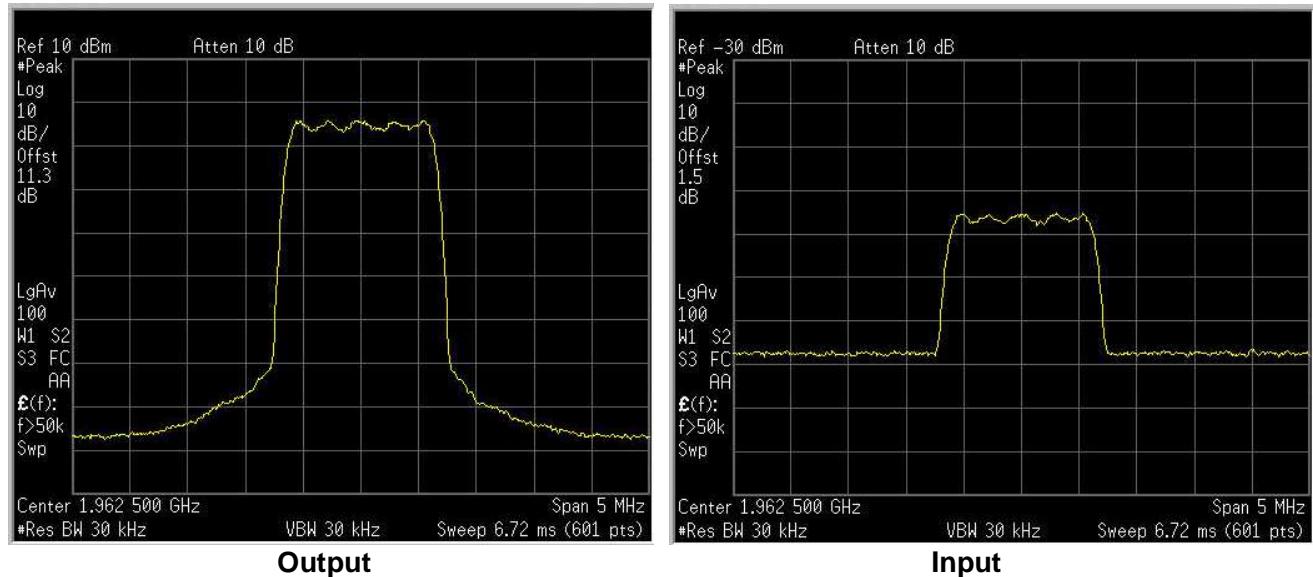
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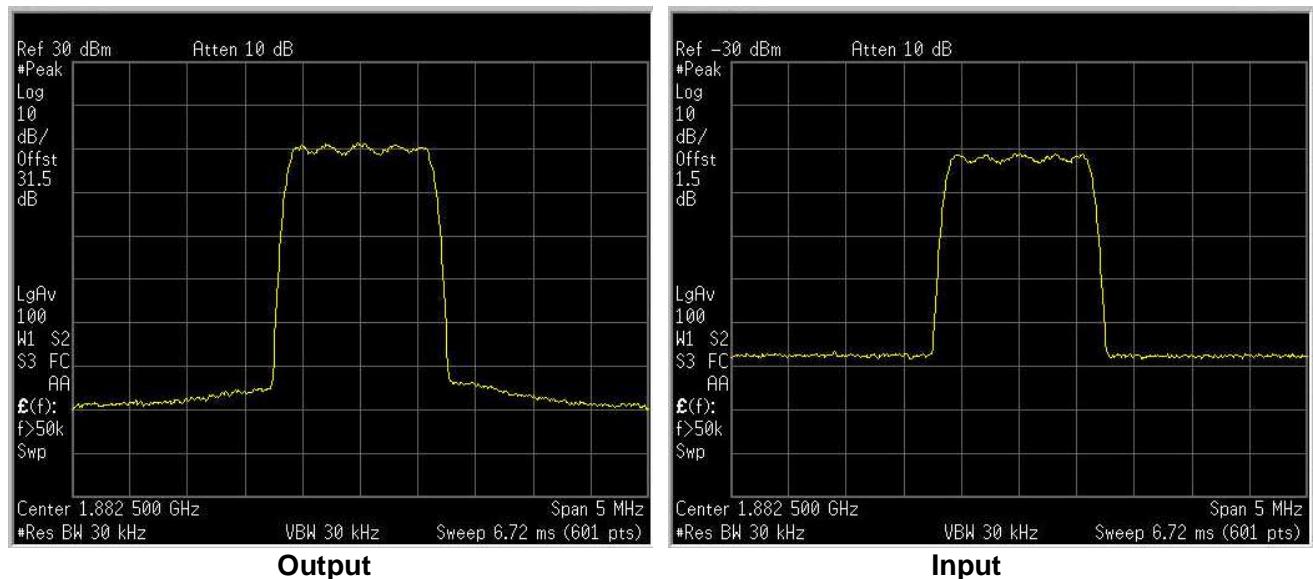
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Mod. CDMA (Down-link)



Mod. CDMA (Up-link)





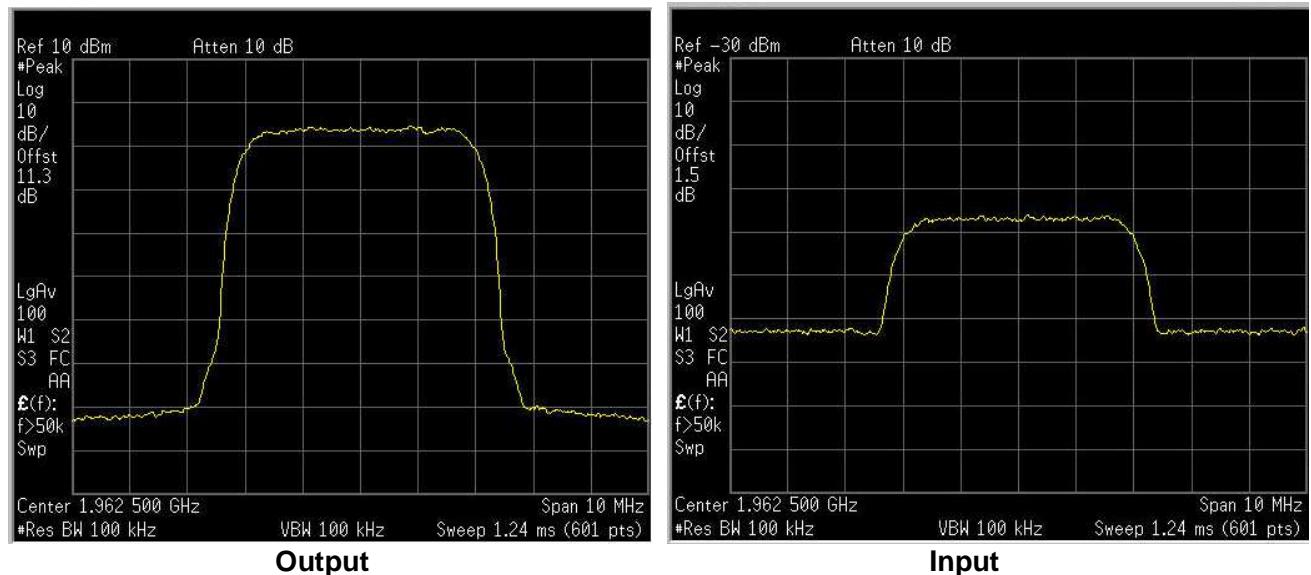
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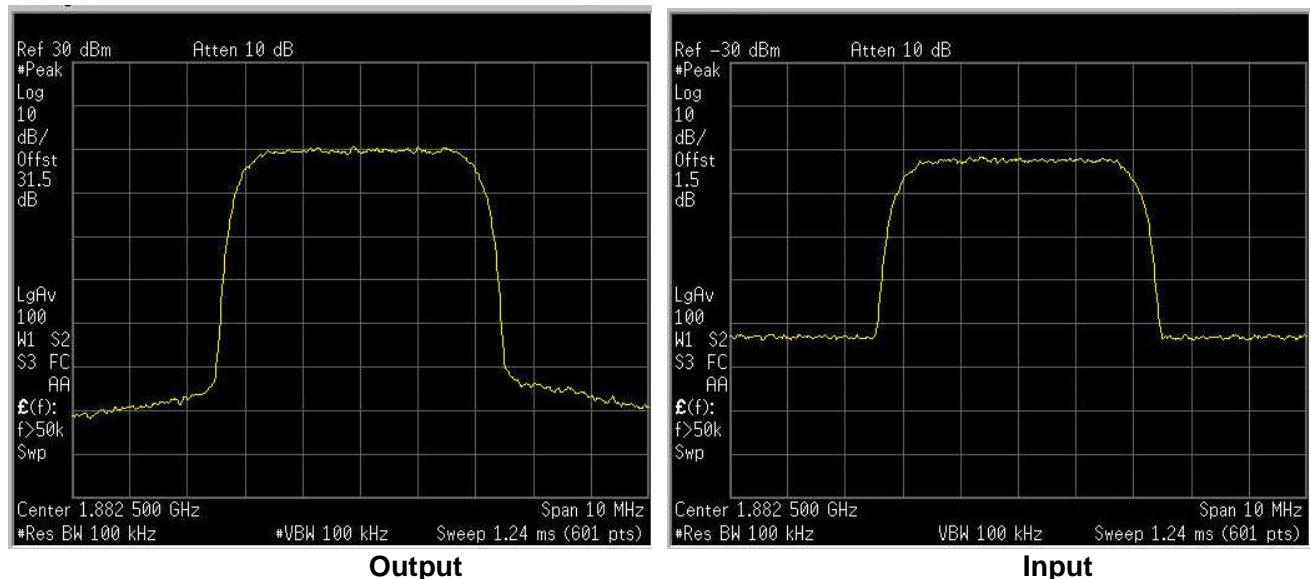
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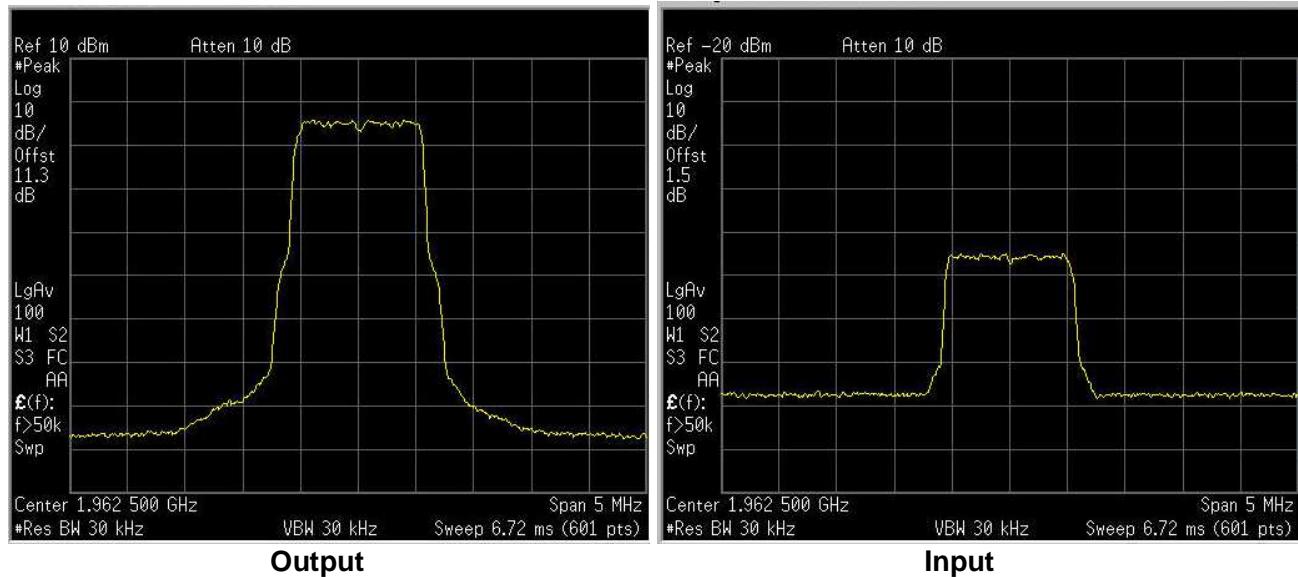
Mod. WCDMA (Down-link)



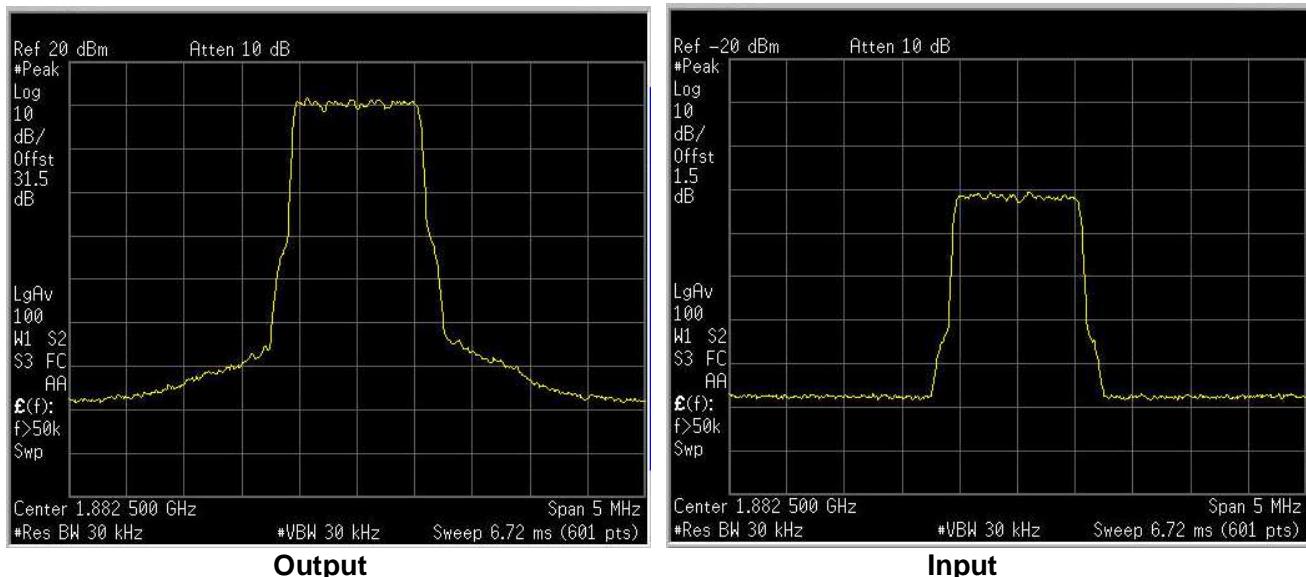
Mod. WCDMA (Up-link)



Mod. LTE 1.4MHz (QAM) (Down-link)



Mod. LTE 1.4MHz (QAM) (Up-link)





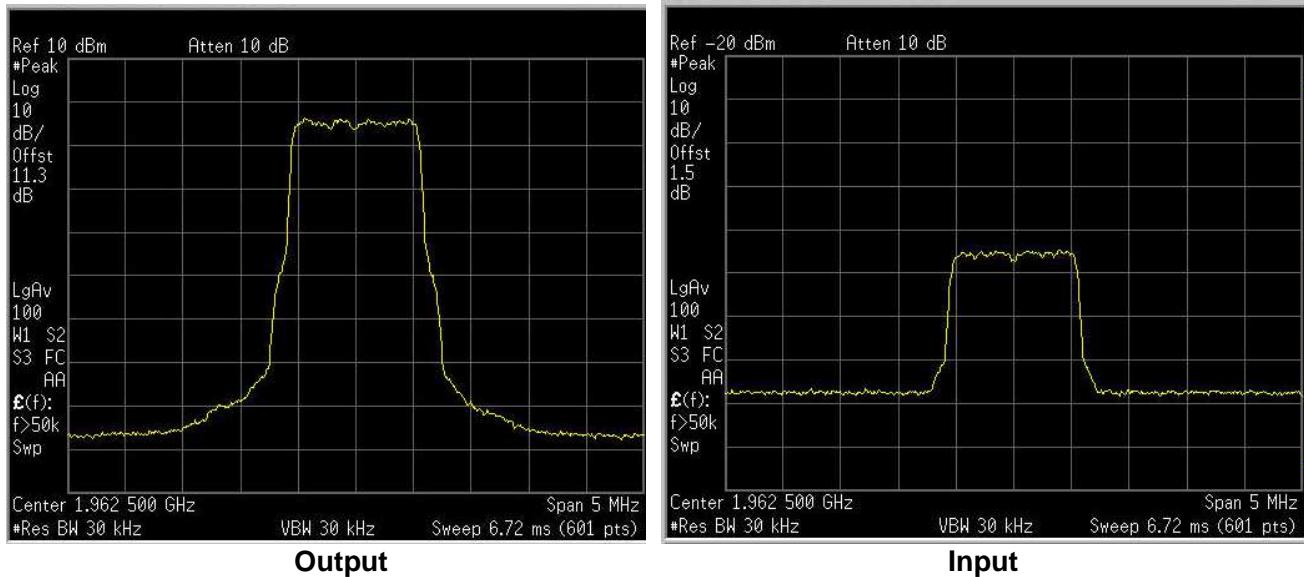
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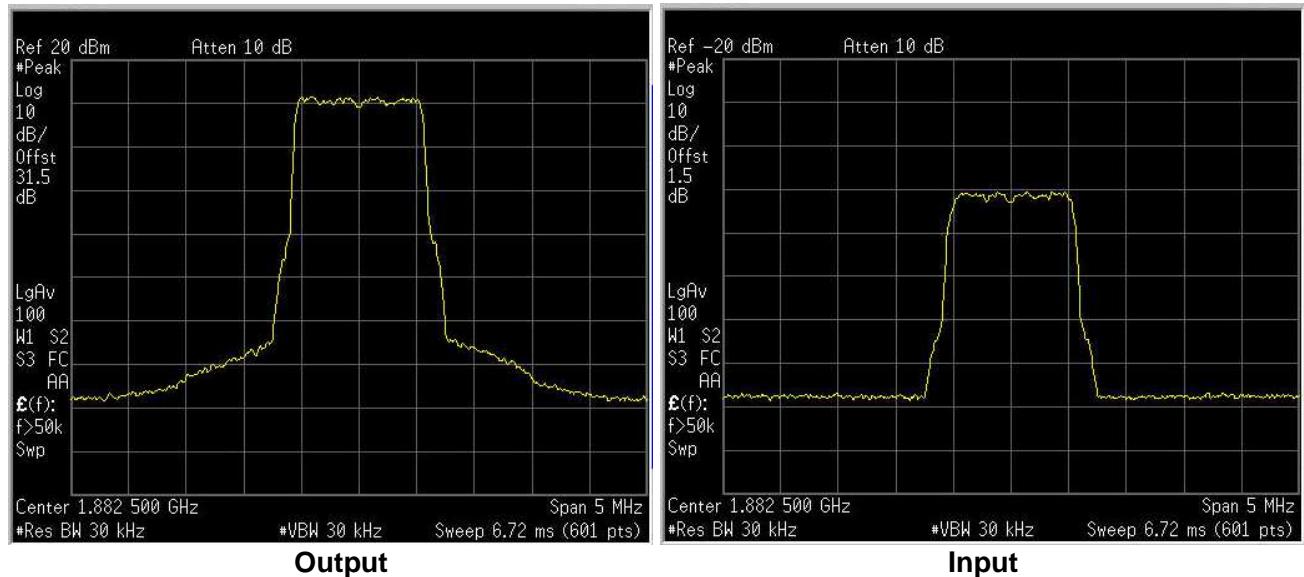
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Mod. LTE 1.4MHz (QPSK) (Down-link)



Mod. LTE 1.4MHz (QPSK) (Up-link)





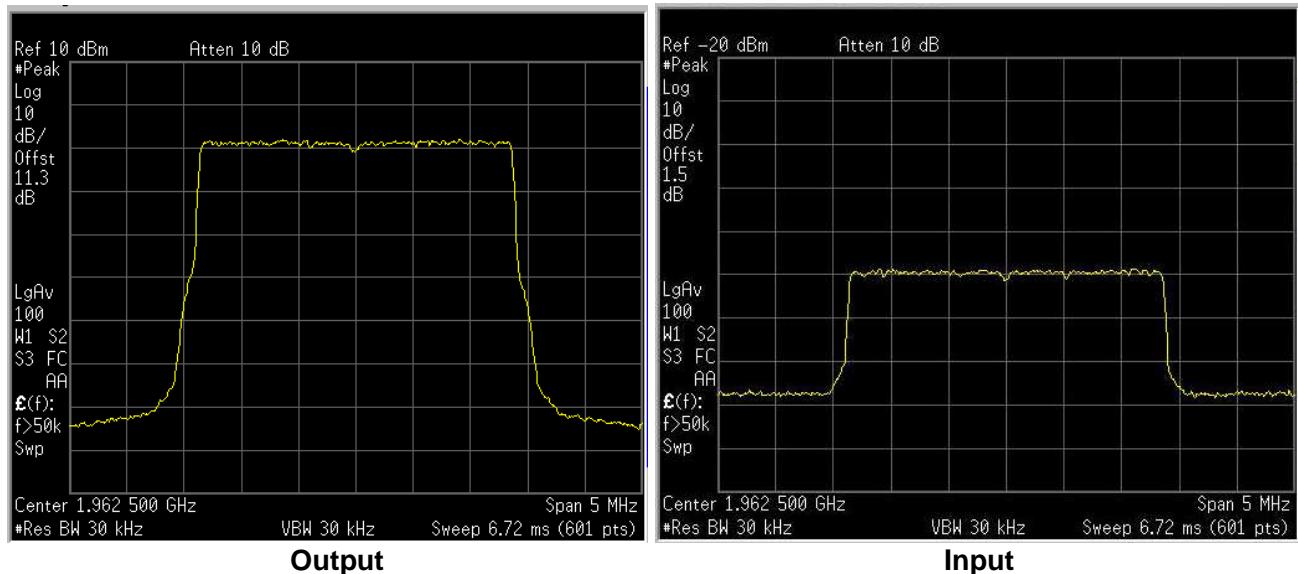
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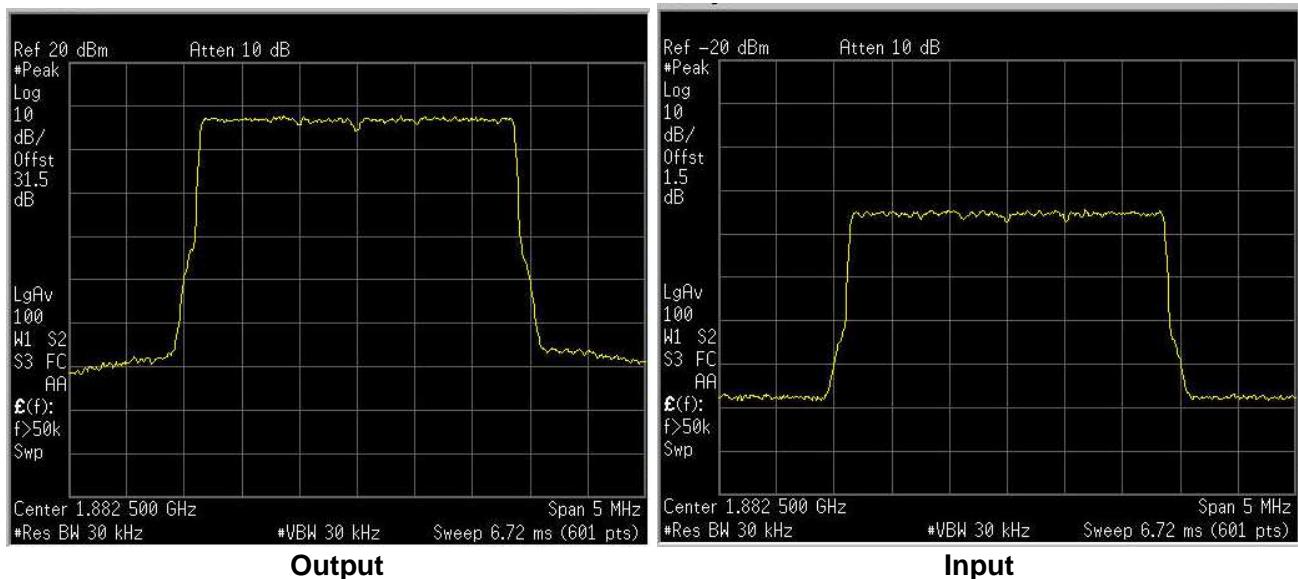
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Mod. LTE 3MHz (QAM) (Down-link)



Mod. LTE 3MHz (QAM) (Up-link)





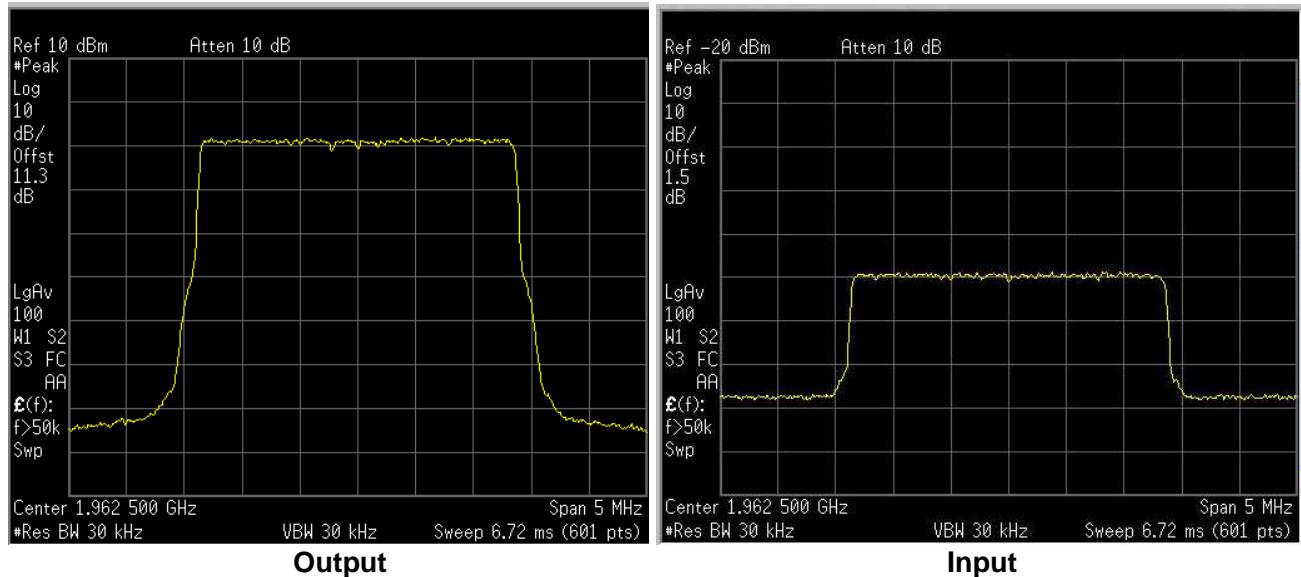
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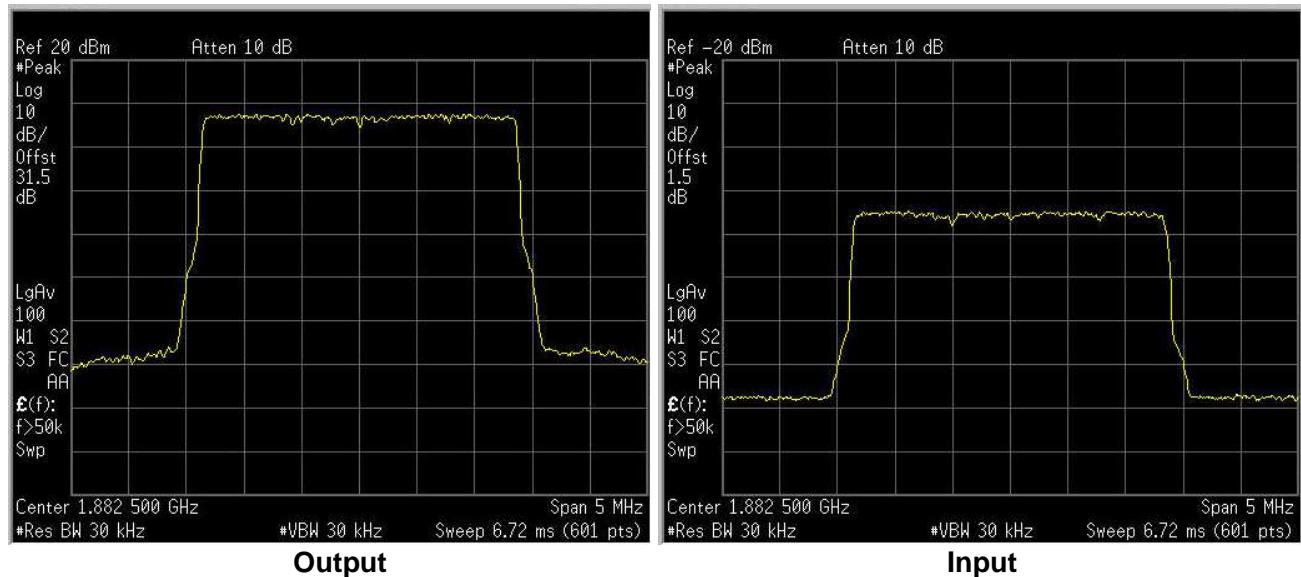
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Mod. LTE 3MHz (QPSK) (Down-link)



Mod. LTE 3MHz (QPSK) (Up-link)





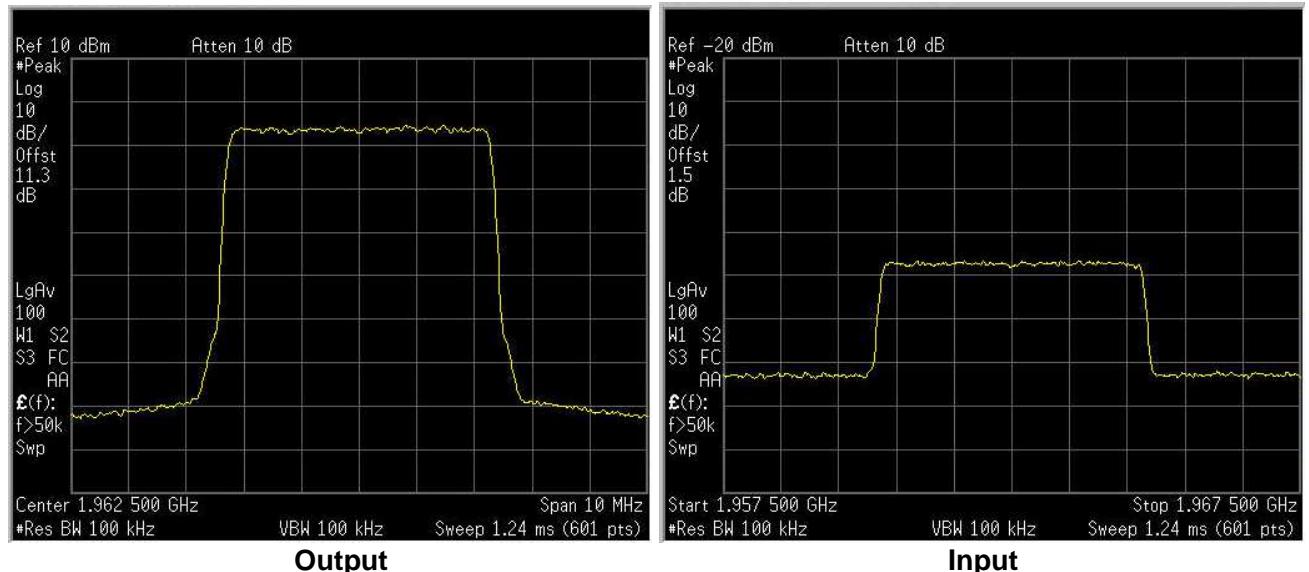
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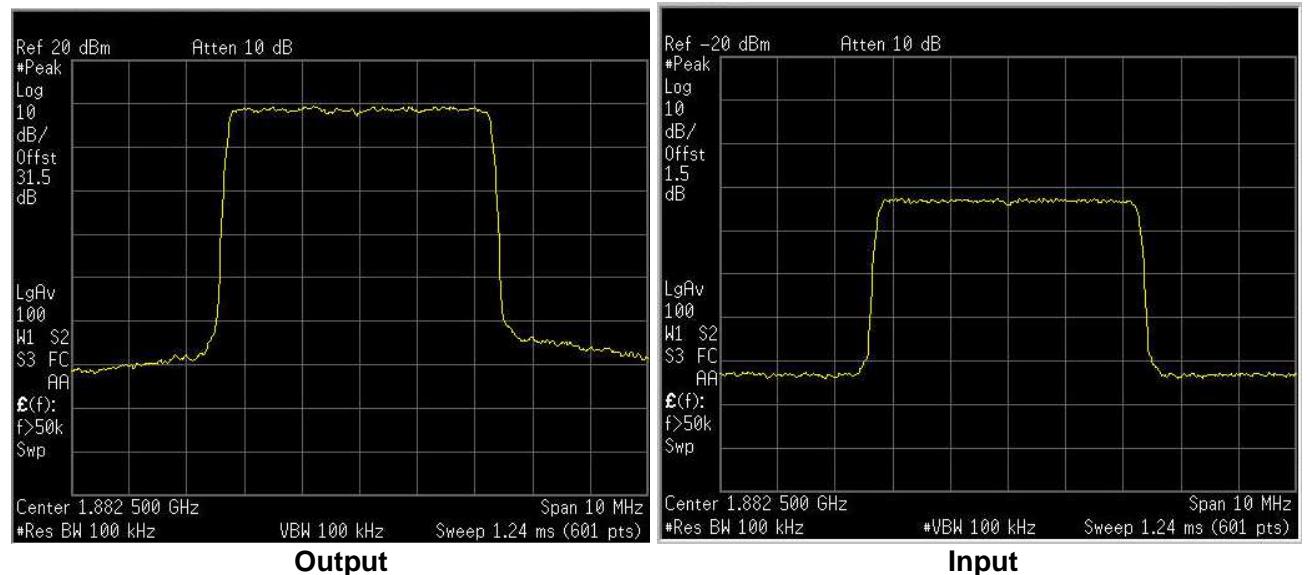
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Mod. LTE 5MHz (QAM) (Down-link)



Mod. LTE 5MHz (QAM) (Up-link)





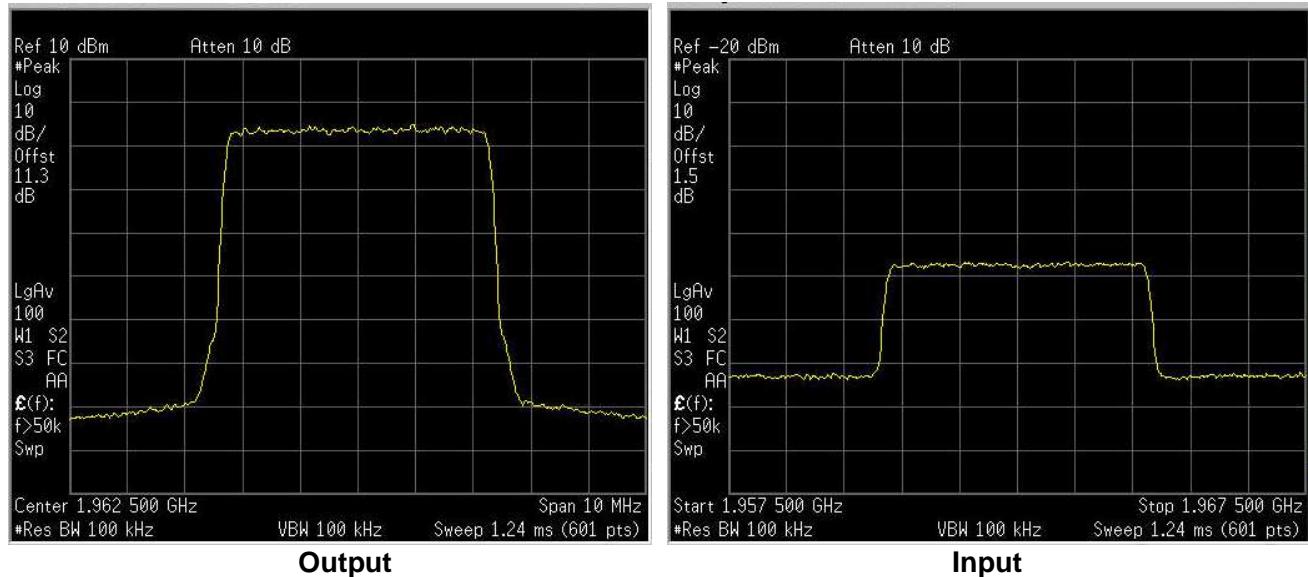
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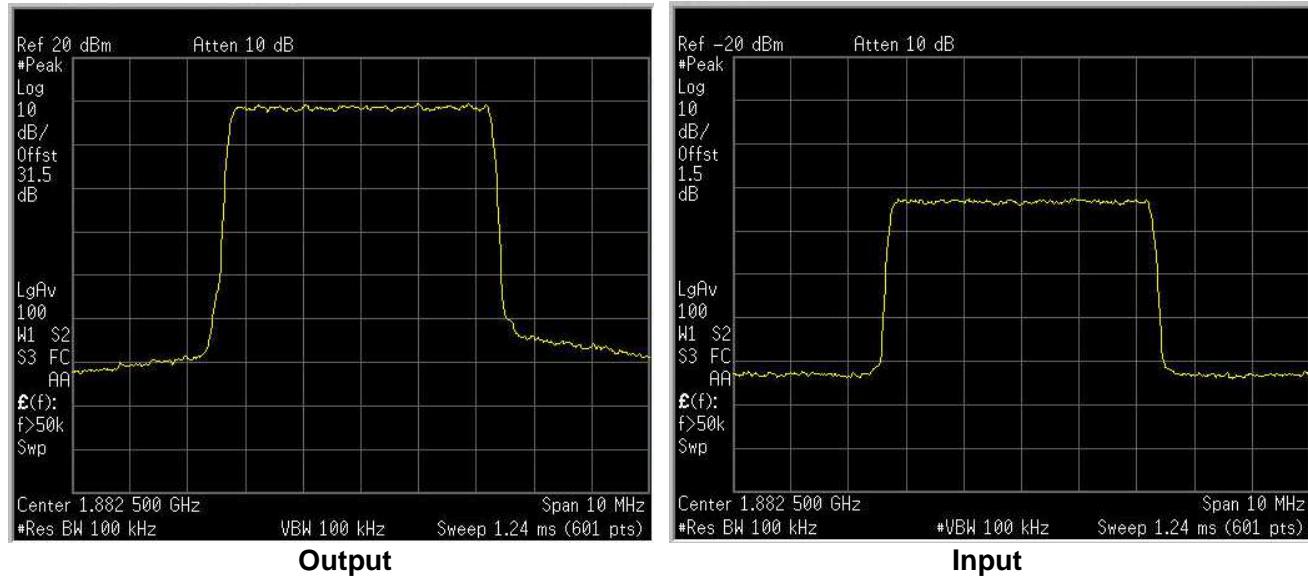
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Mod. LTE 5MHz (QPSK) (Down-link)



Mod. LTE 5MHz (QPSK) (Up-link)





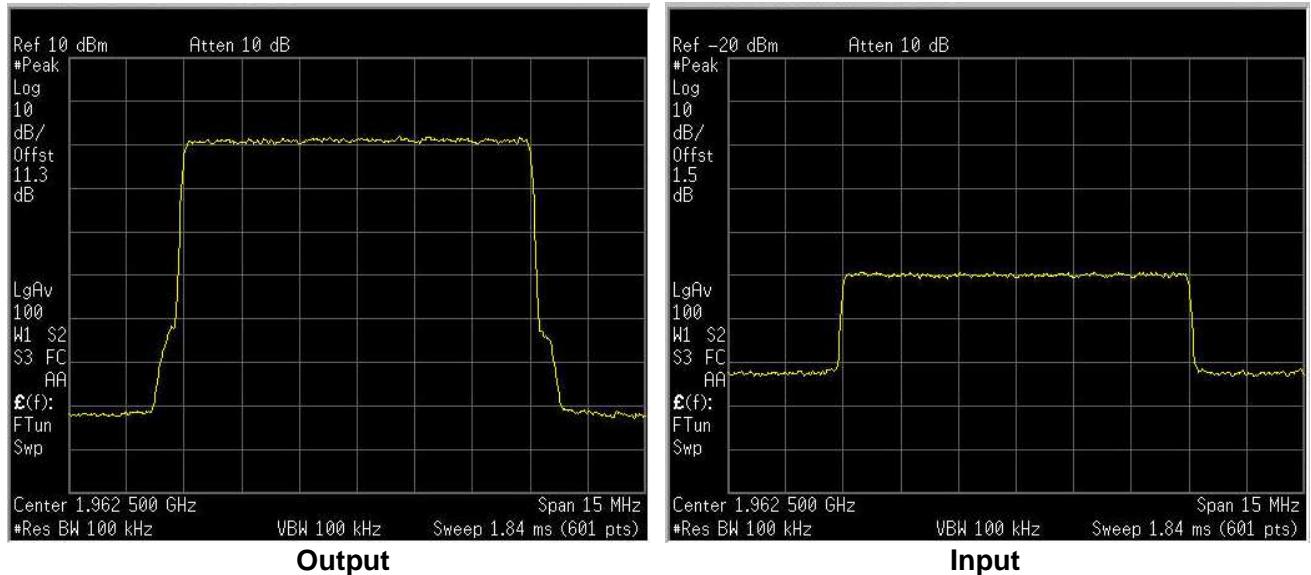
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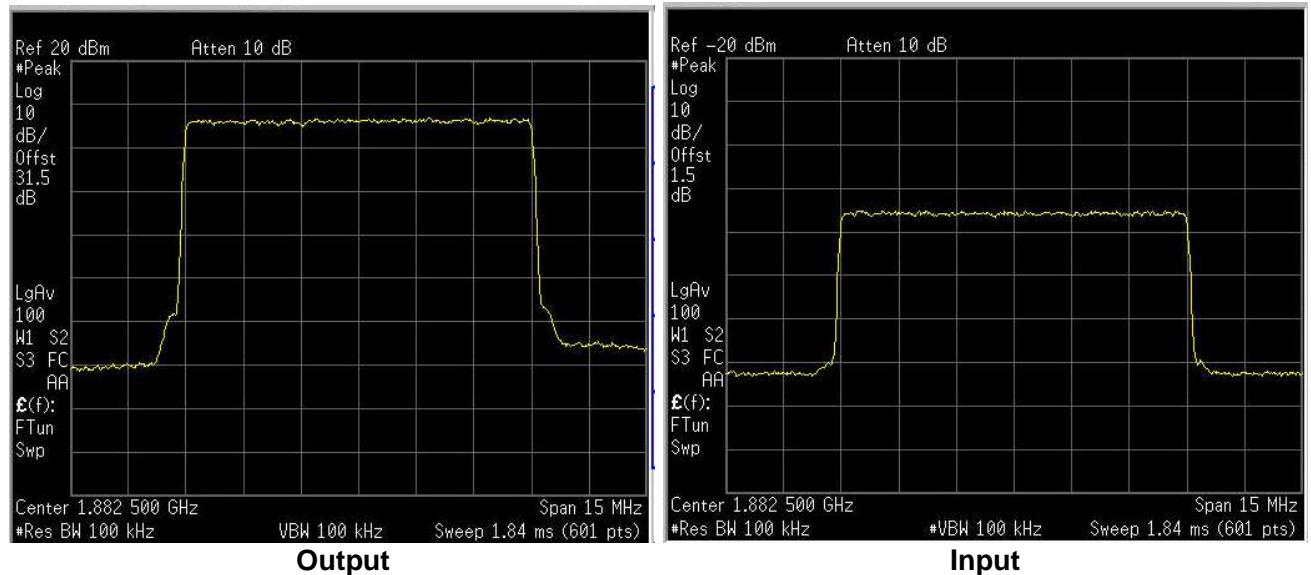
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Mod. LTE 10MHz (QAM) (Down-link)



Mod. LTE 10MHz (QAM) (Up-link)





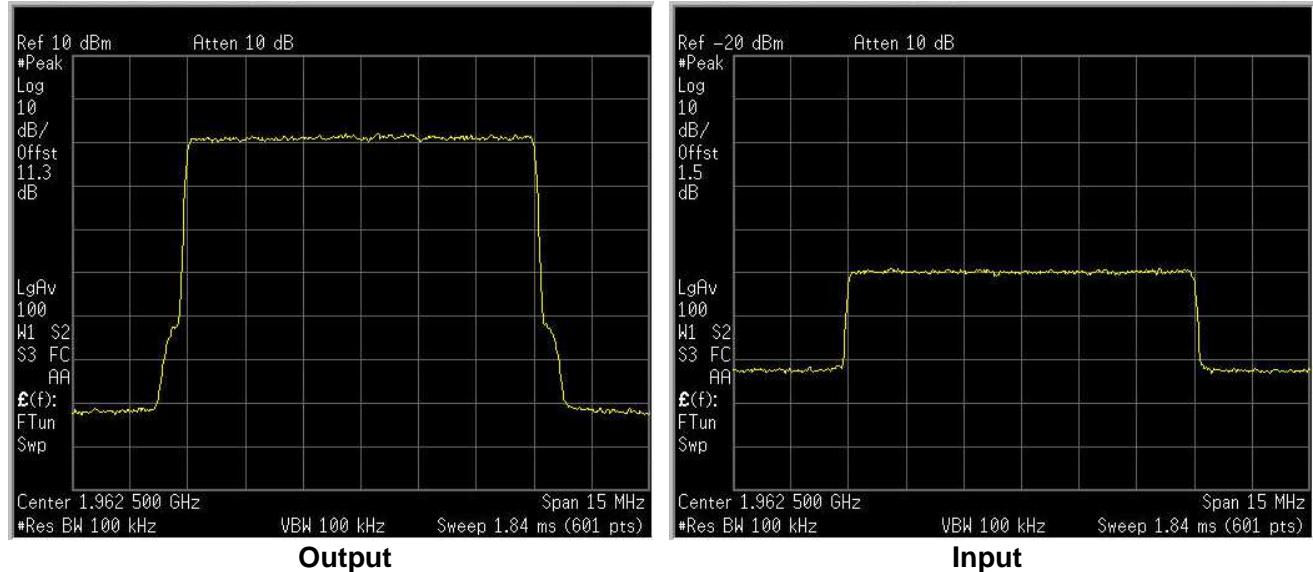
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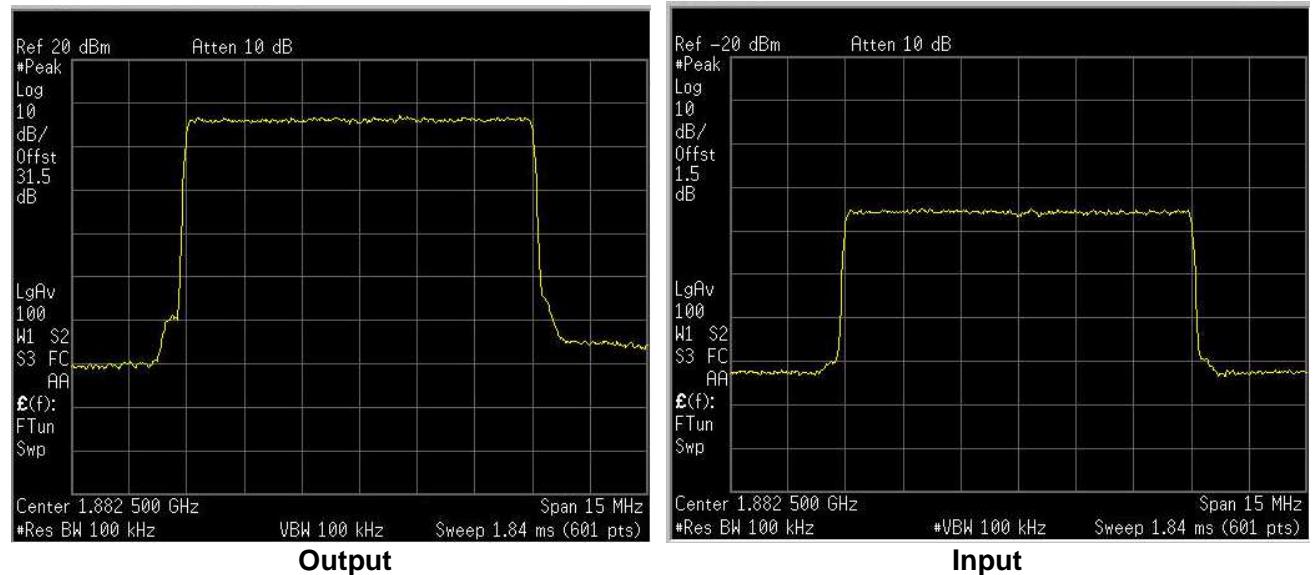
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Mod. LTE 10MHz (QPSK) (Down-link)



Mod. LTE 10MHz (QPSK) (Up-link)





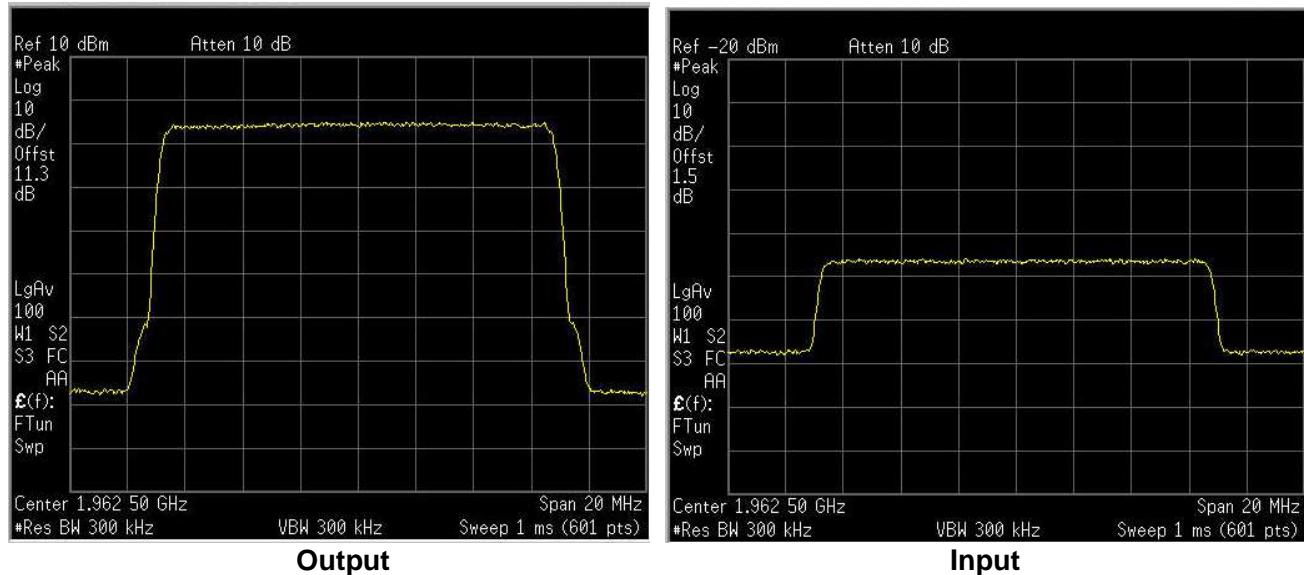
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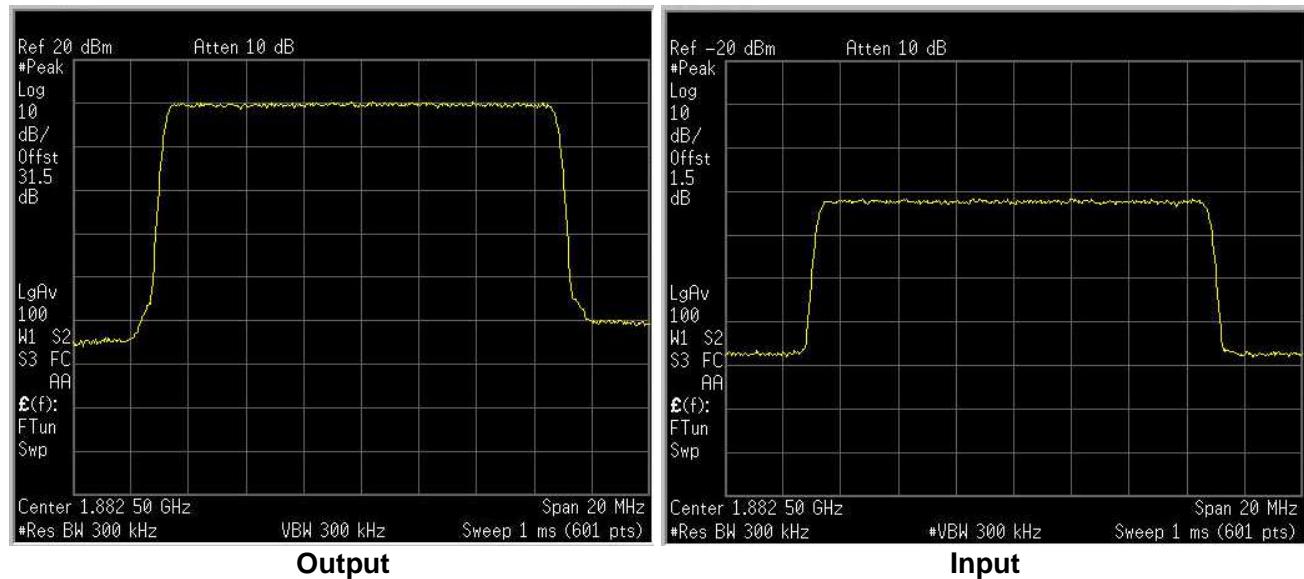
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Mod. LTE 15MHz (QAM) (Down-link)



Mod. LTE 15MHz (QAM) (Up-link)





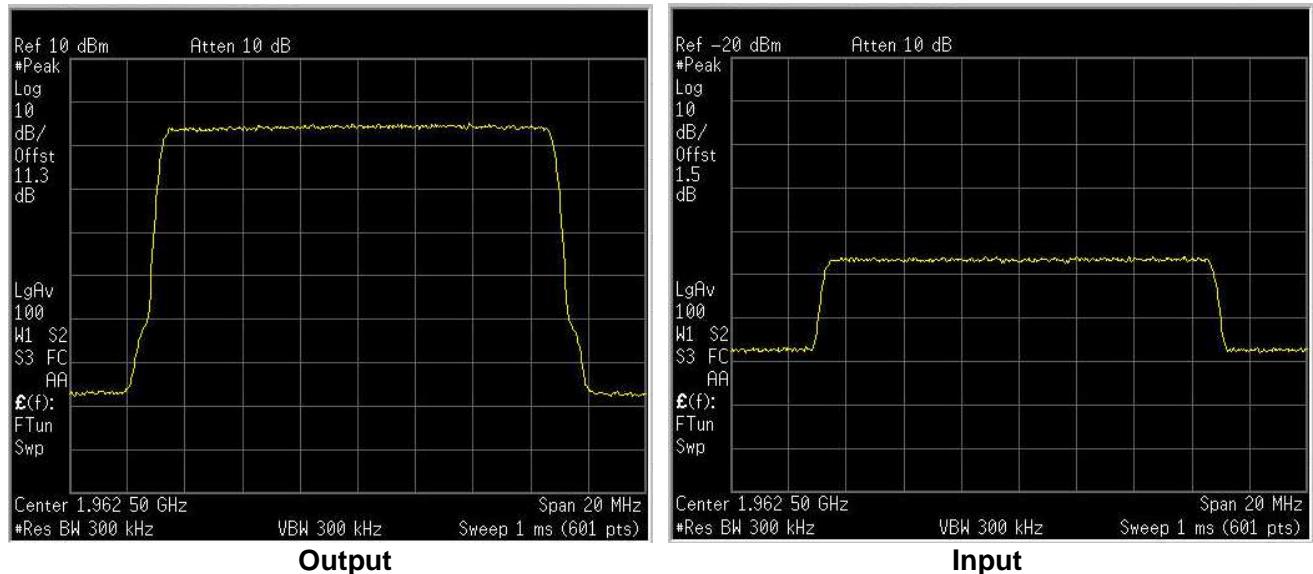
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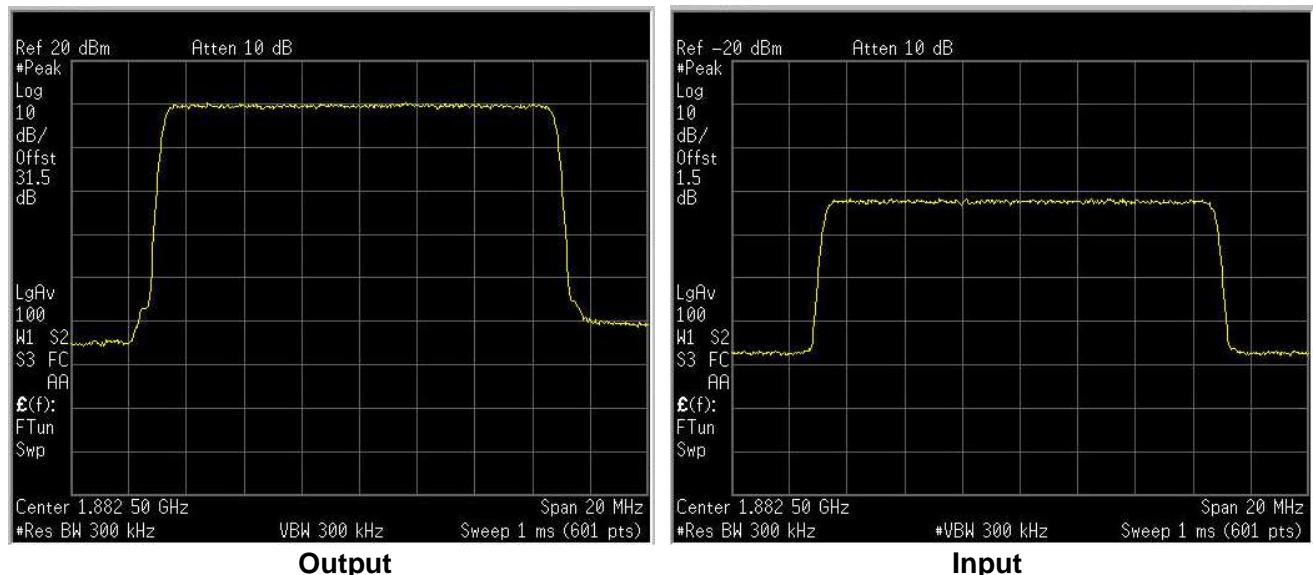
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Mod. LTE 15MHz (QPSK) (Down-link)



Mod. LTE 15MHz (QPSK) (Up-link)





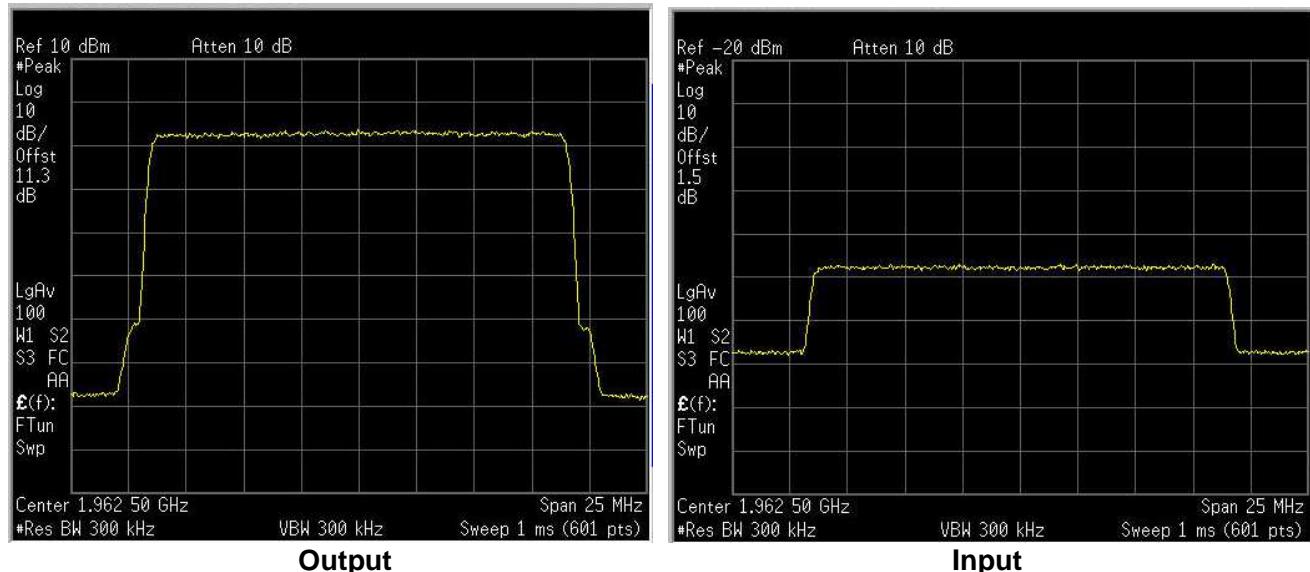
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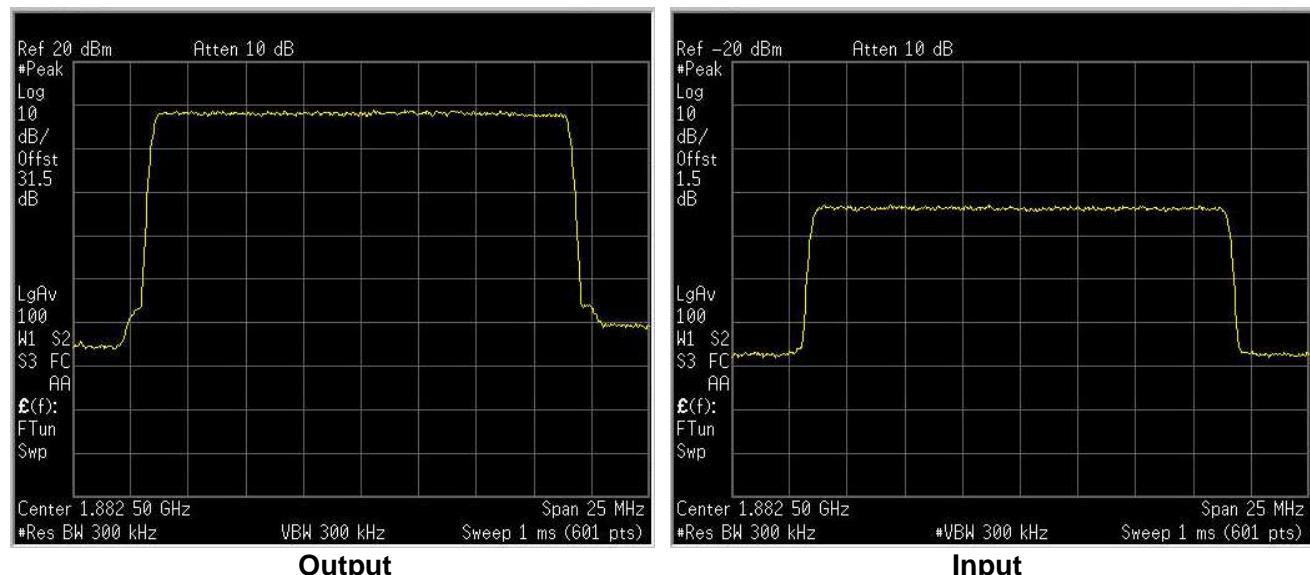
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Mod. LTE 20MHz (QAM) (Down-link)



Mod. LTE 20MHz (QAM) (Up-link)





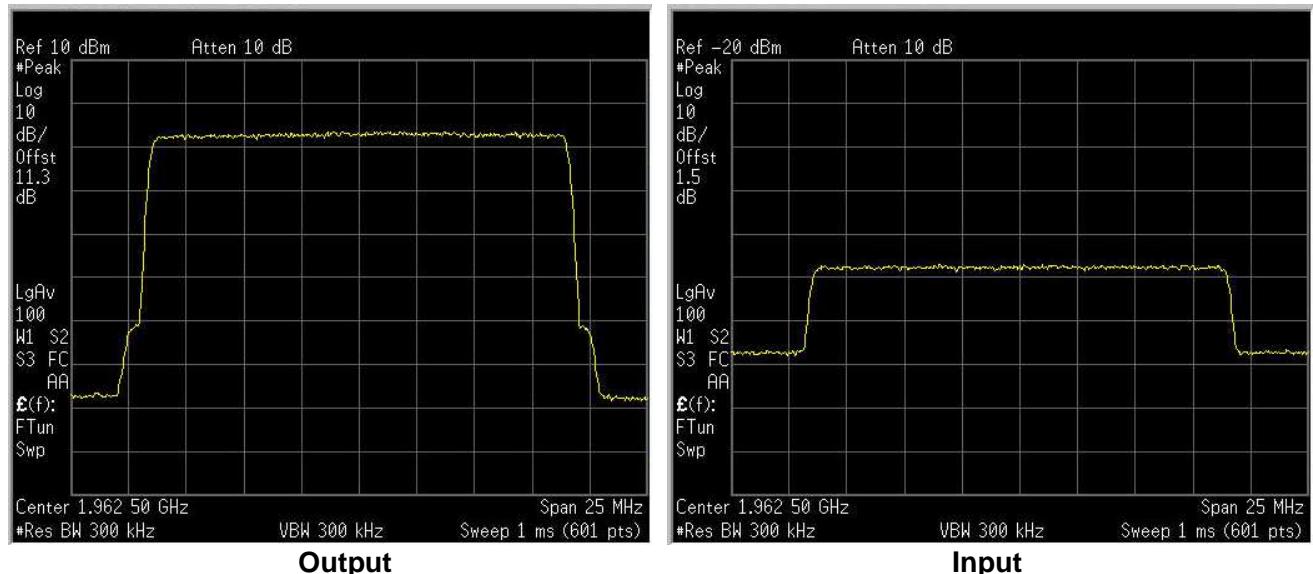
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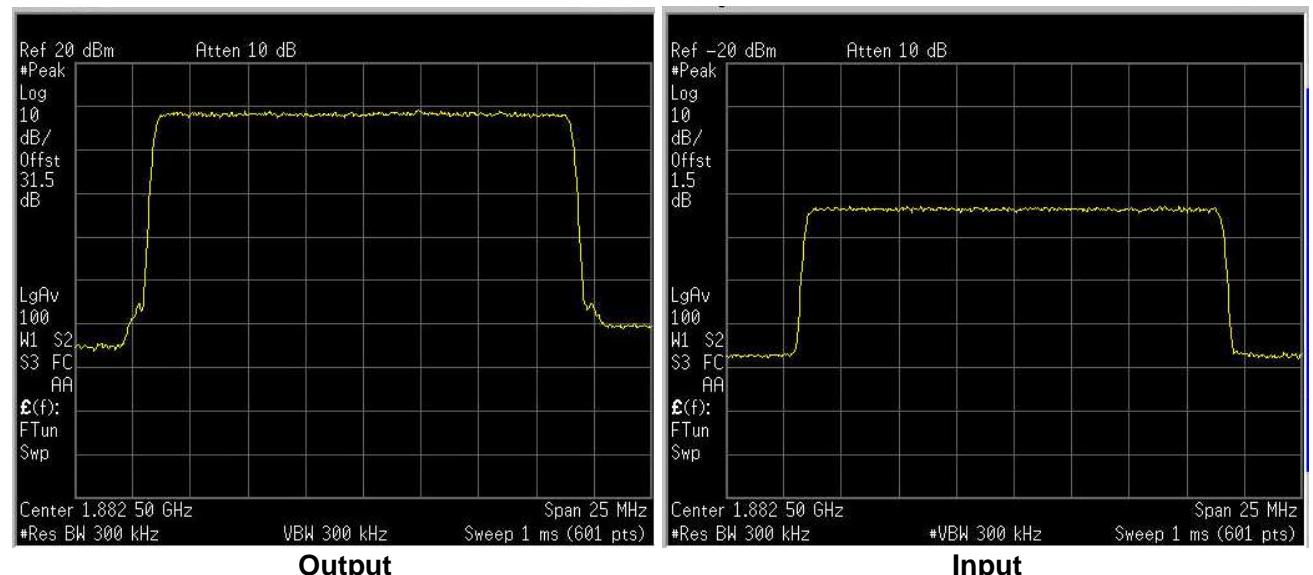
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Mod. LTE 20MHz (QPSK) (Down-link)



Mod. LTE 20MHz (QPSK) (Up-link)





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Clause 24.238(a) Spurious emissions at antenna terminal

(a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

Frequency, MHz	Attenuation below carrier, dBc	ERP of spurious, dBm
30–10 th harmonic	$43 + 10 \log(P)$	-13

(b) *Measurement procedure.* Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified).

Test date: 2012-11-06

Test results: Pass

Special notes

- The spectrum was searched from 30 MHz up to 10th harmonic
- Only the worst data presented in the test report.



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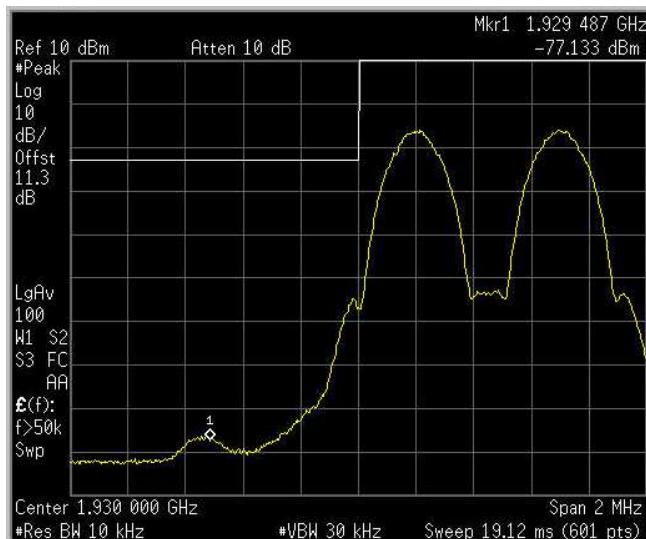
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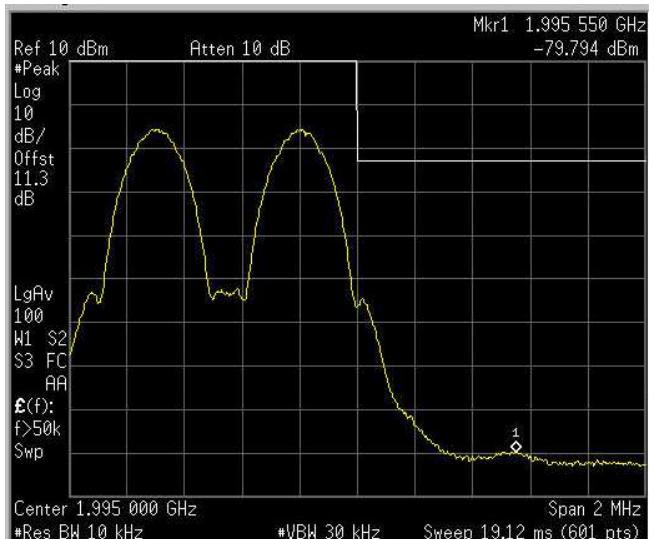
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Clause 24.238 Out of band spurious emissions at antenna terminal,

Mod. GSM (Down-link)

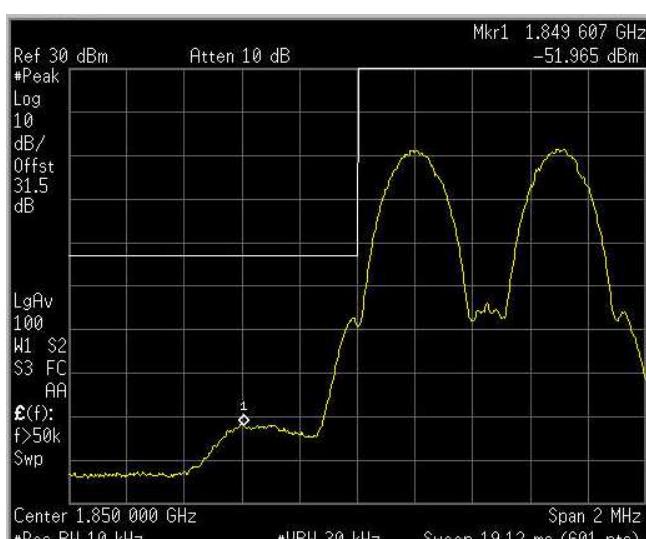


Low Band Edge

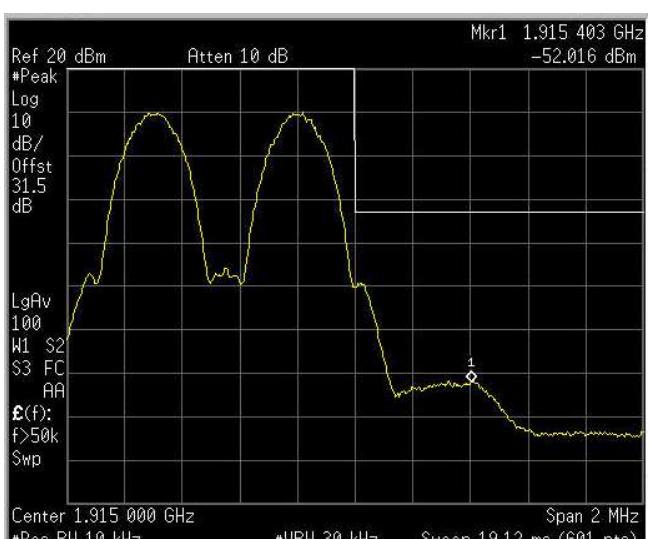


High Band Edge

Mod. GSM (Up-link)



Low Band Edge



High Band Edge



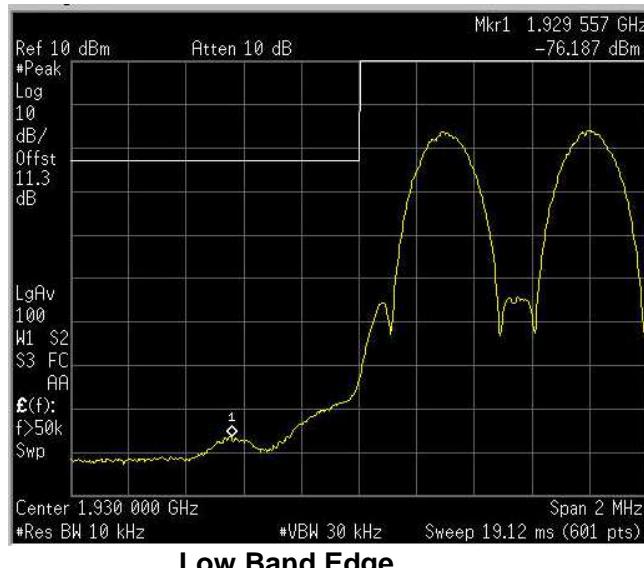
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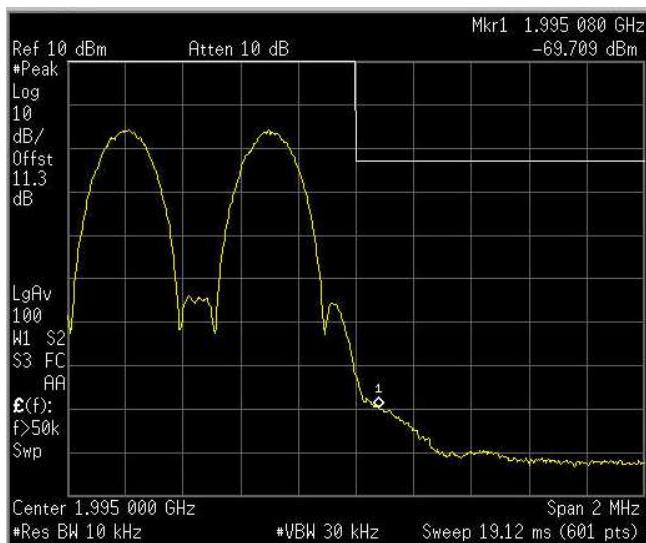
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Mod. EDGE (Down-link)

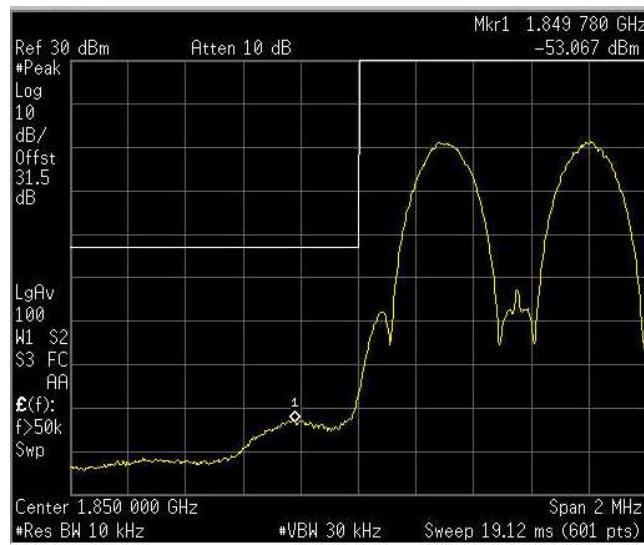


Low Band Edge

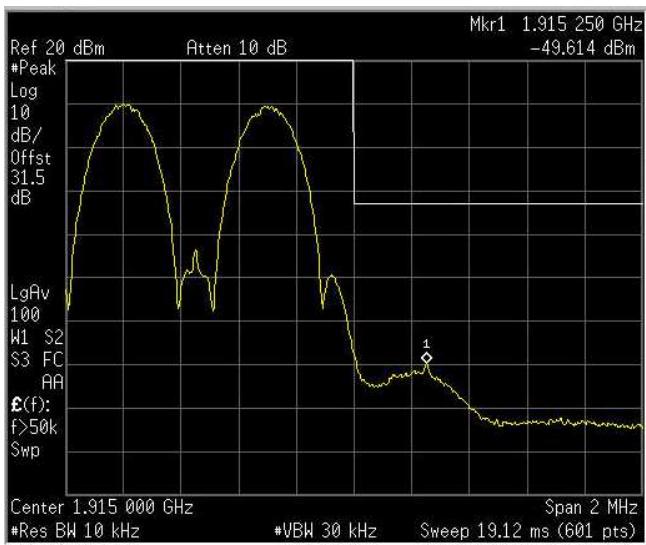


High Band Edge

Mod. EDGE (Up-link)

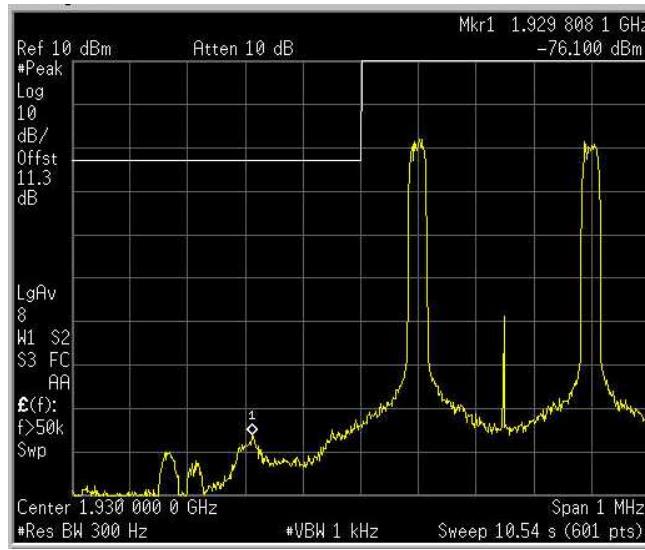
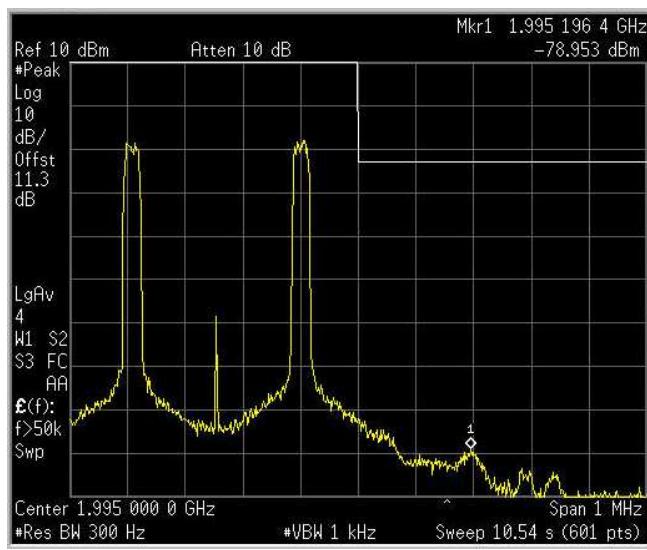


Low Band Edge

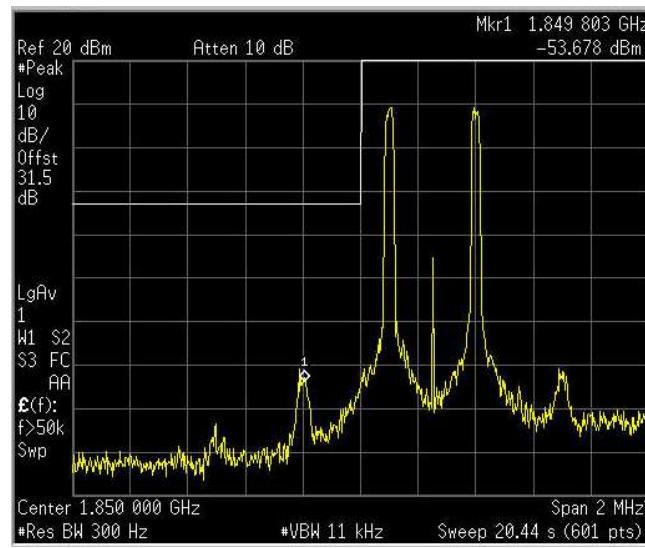
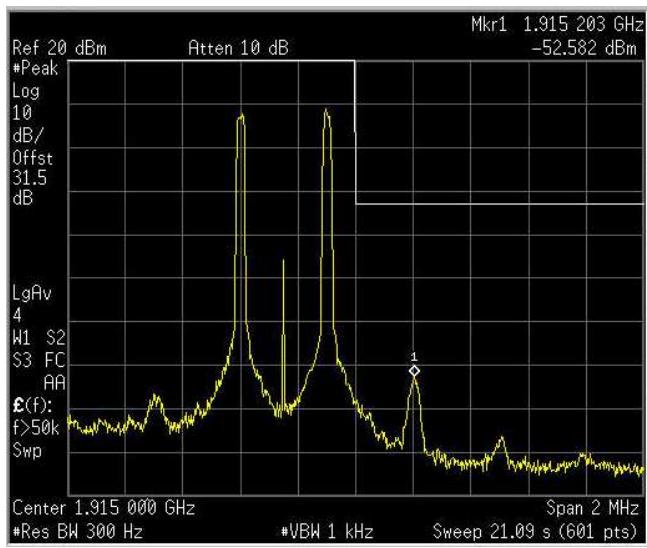


High Band Edge

Mod. TDMA (Down-link)


Low Band Edge

High Band Edge

Mod. TDMA (Up-link)


Low Band Edge

High Band Edge



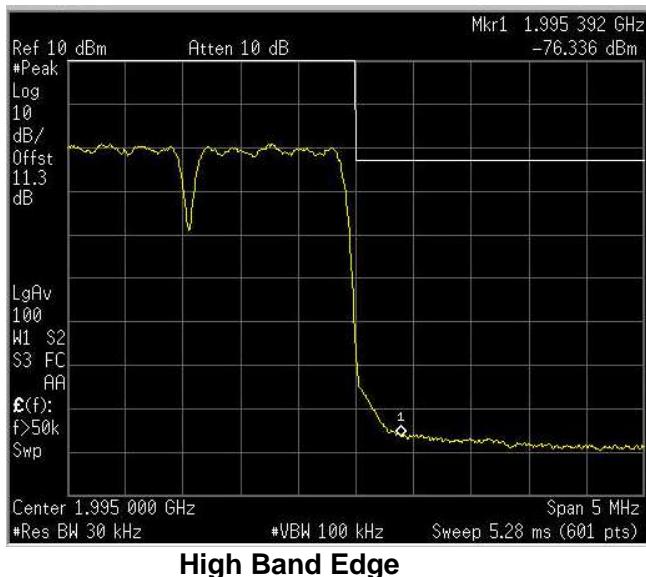
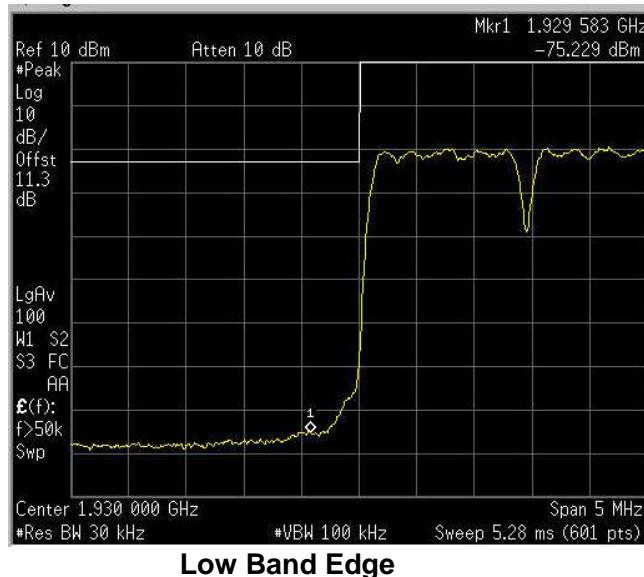
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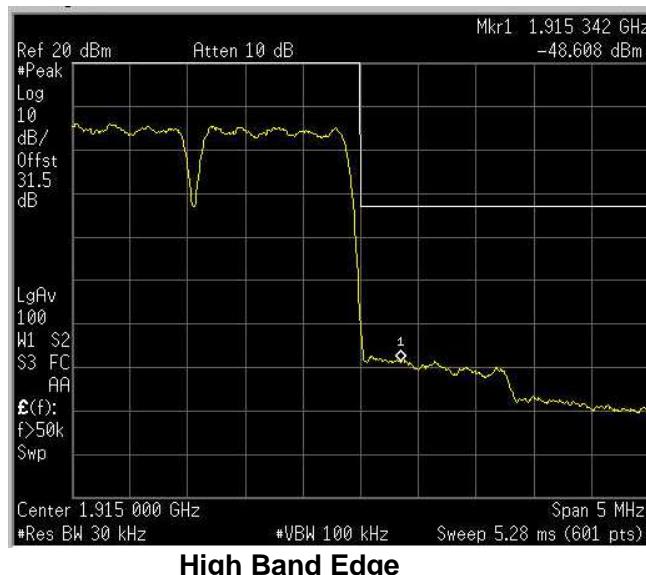
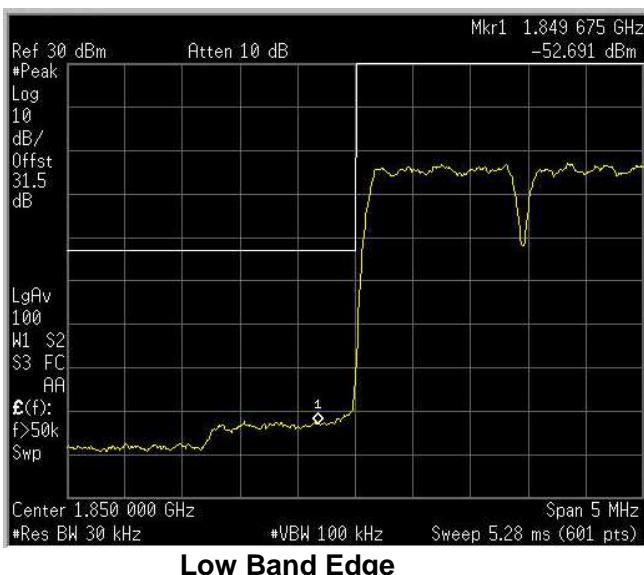
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Mod. CDMA (Down-link)



Mod. CDMA (Up-link)





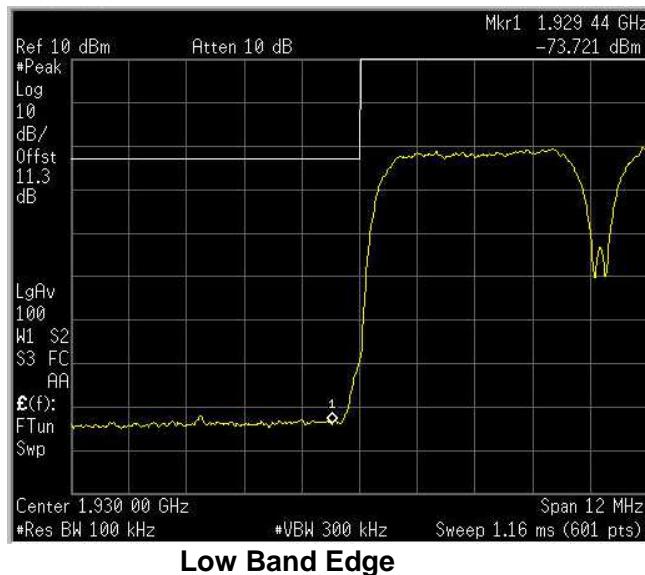
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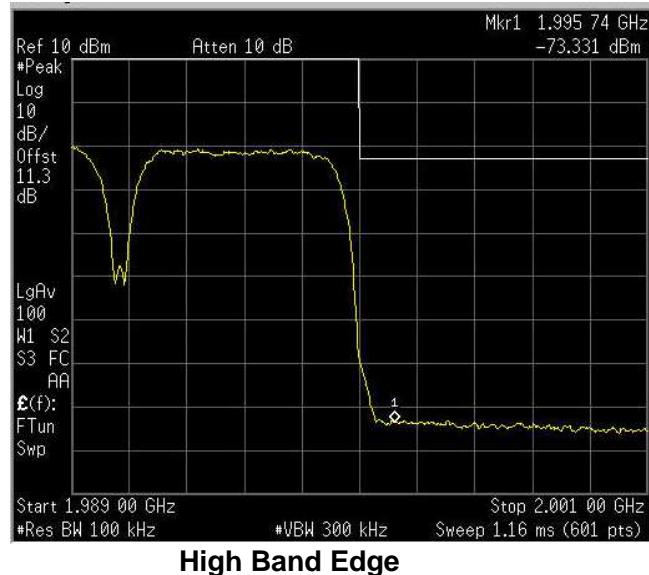
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Mod. WCDMA (Down-link)

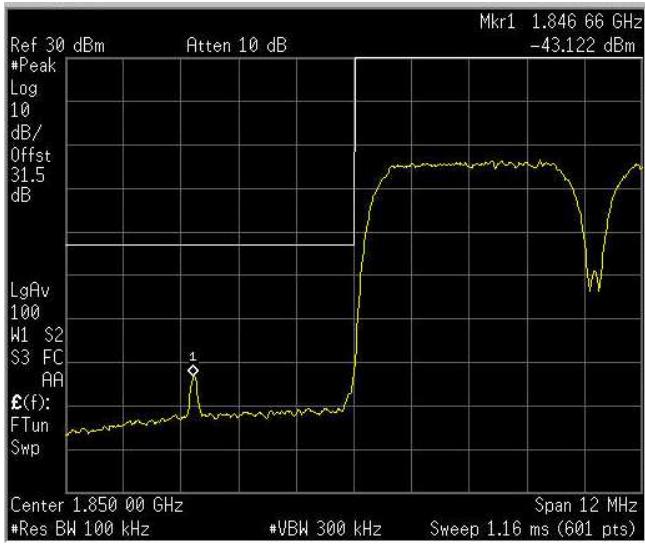


Low Band Edge

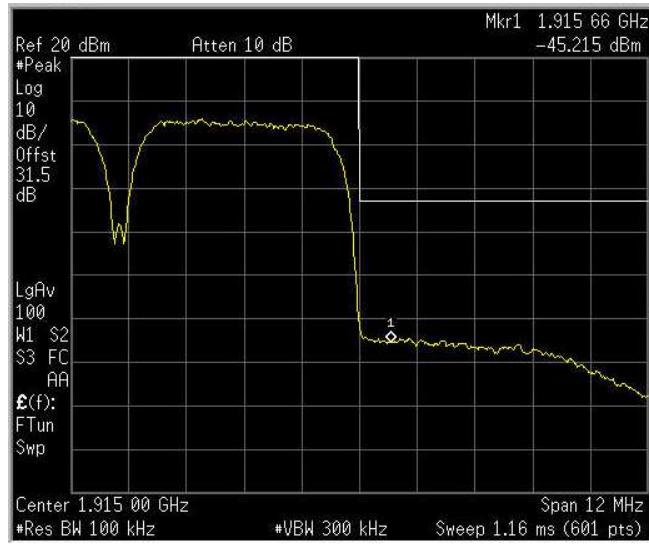


High Band Edge

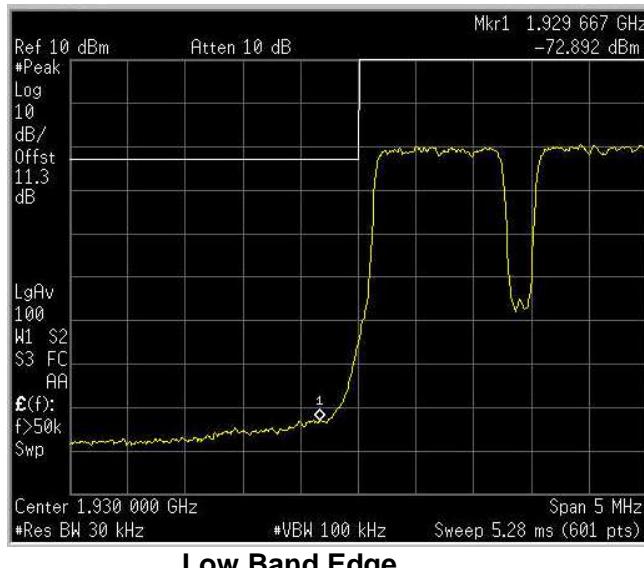
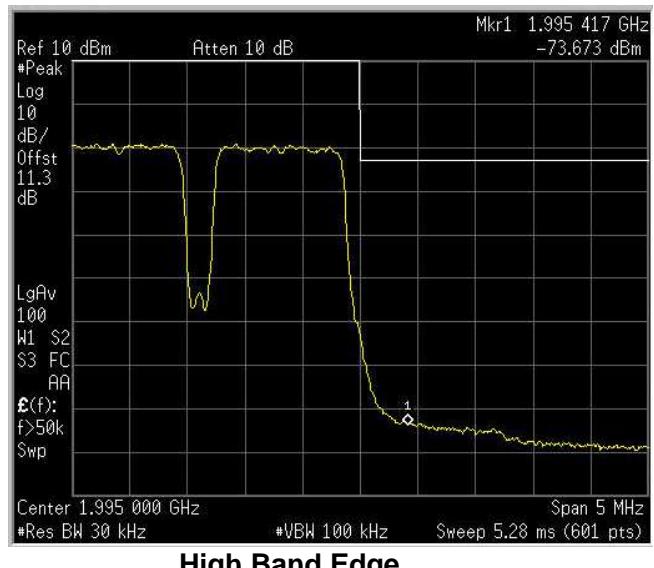
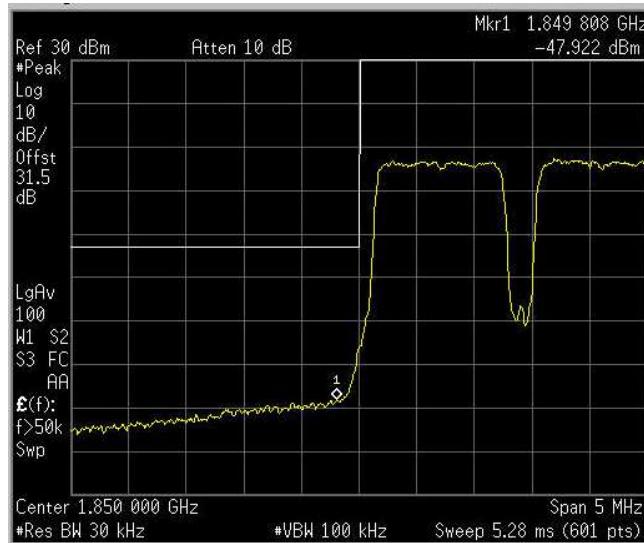
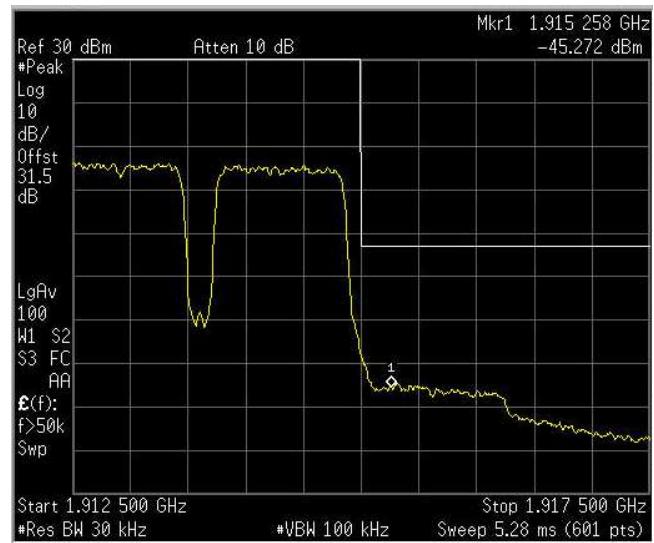
Mod. WCDMA (Up-link)

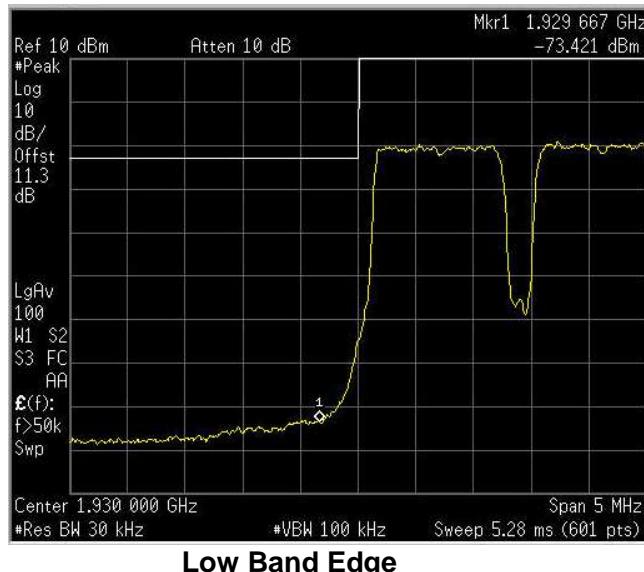
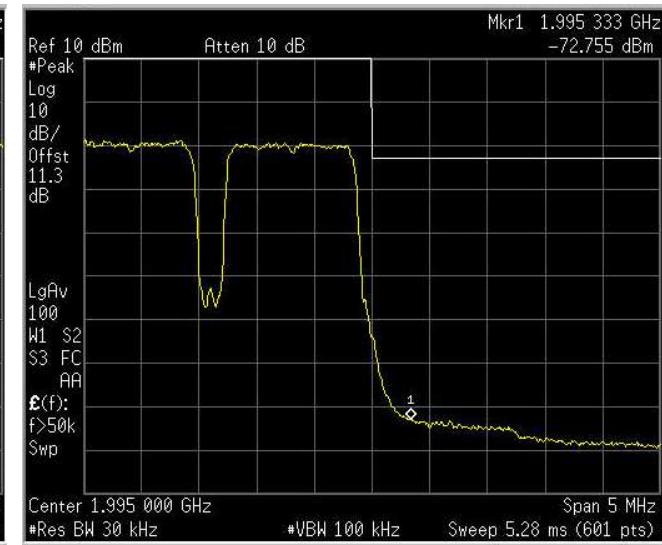
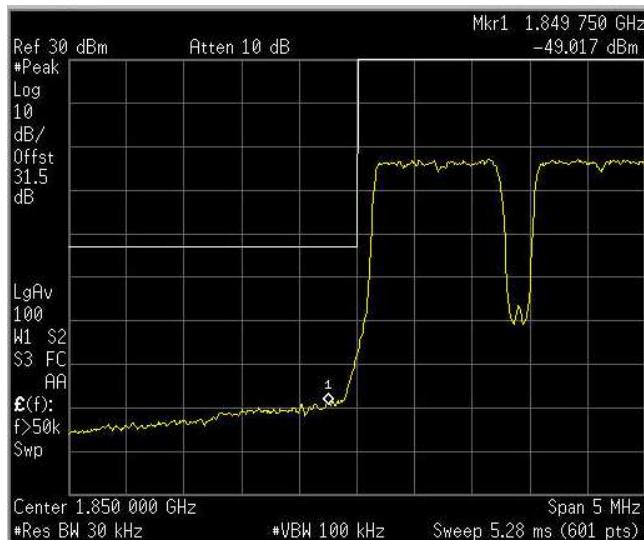
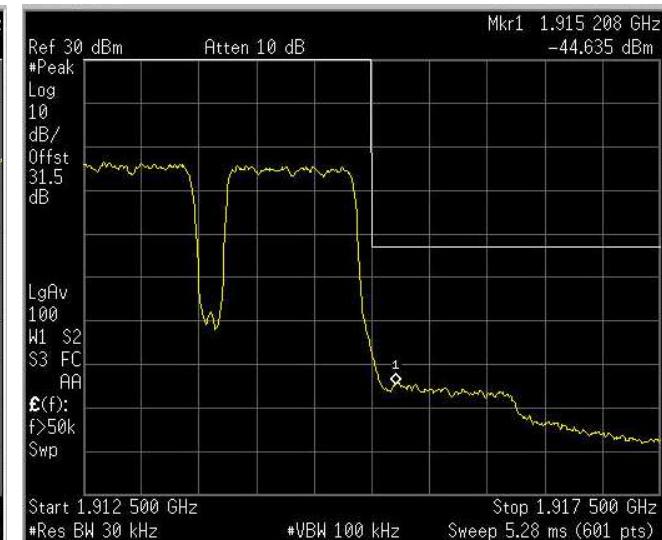


Low Band Edge



High Band Edge

Mod. LTE 1.4MHz (QAM) (Down-link)

Low Band Edge

High Band Edge
Mod. LTE 1.4MHz (QAM) (Up-link)

Low Band Edge

High Band Edge

Mod. LTE 1.4MHz (QPSK) (Down-link)

Low Band Edge

High Band Edge
Mod. LTE 1.4MHz (QPSK) (Up-link)

Low Band Edge

High Band Edge



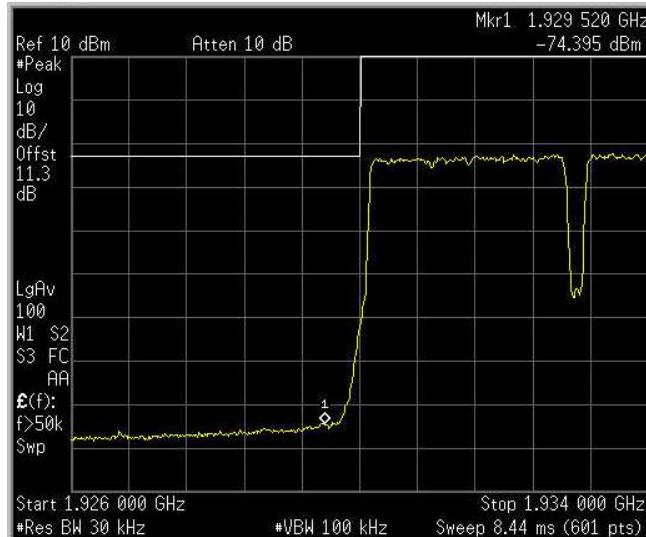
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Appendix B: Block diagrams

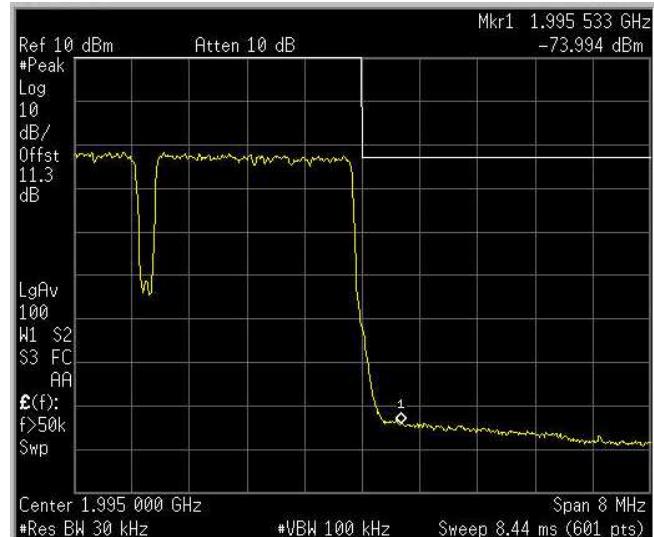
Report Number: 209925-7TRFWL

Specification: FCC 24 Subpart E

Mod. LTE 3MHz (QAM) (Down-link)

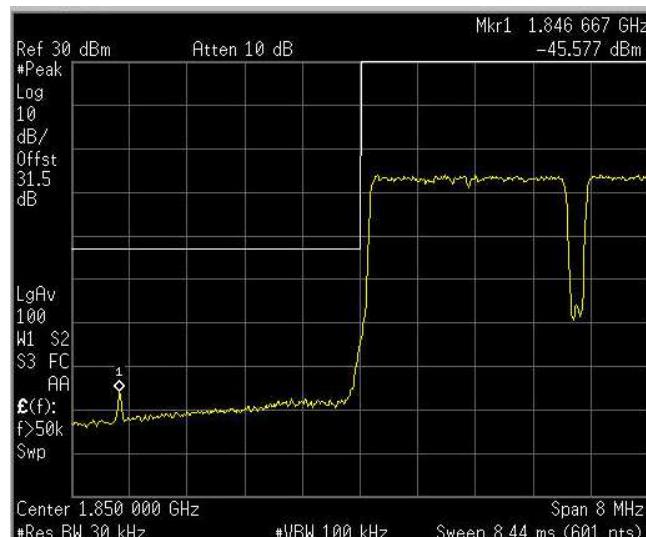


Low Band Edge



High Band Edge

Mod. LTE 3MHz (QAM) (Up-link)

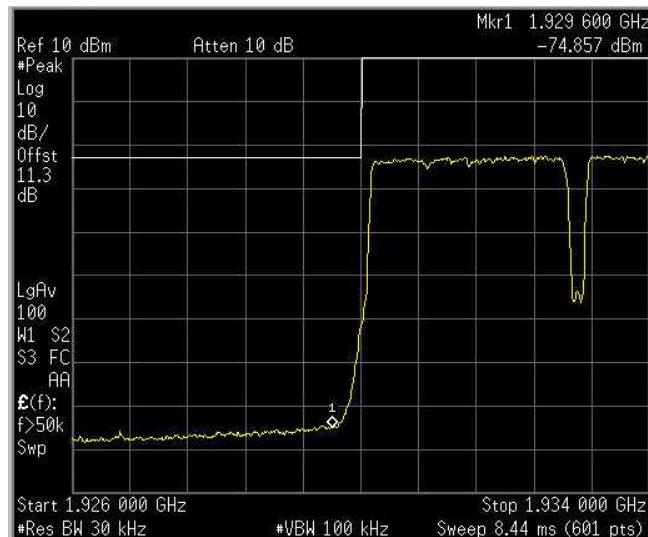
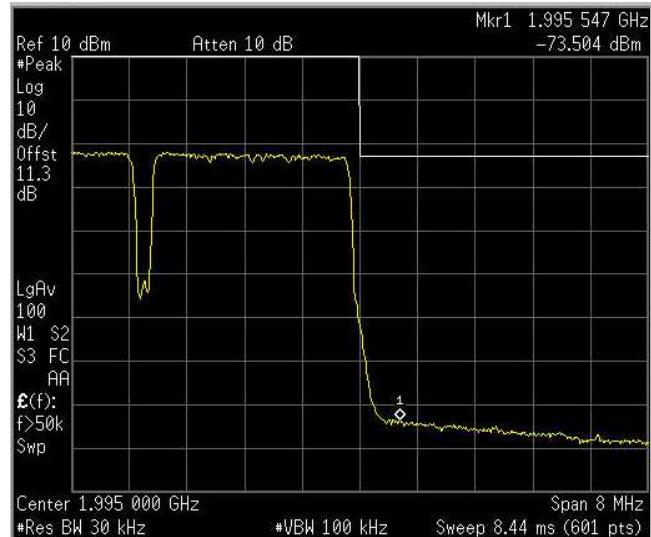


Low Band Edge

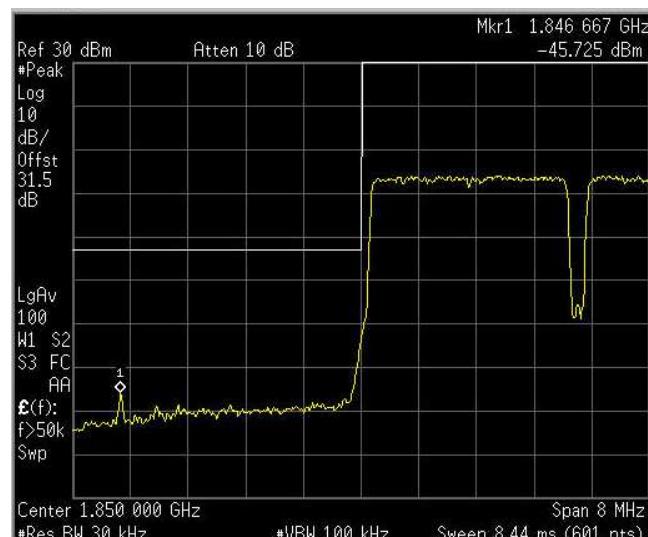


High Band Edge

Mod. LTE 3MHz (QPSK) (Down-link)


Low Band Edge

High Band Edge

Mod. LTE 3MHz (QPSK) (Up-link)


Low Band Edge

High Band Edge



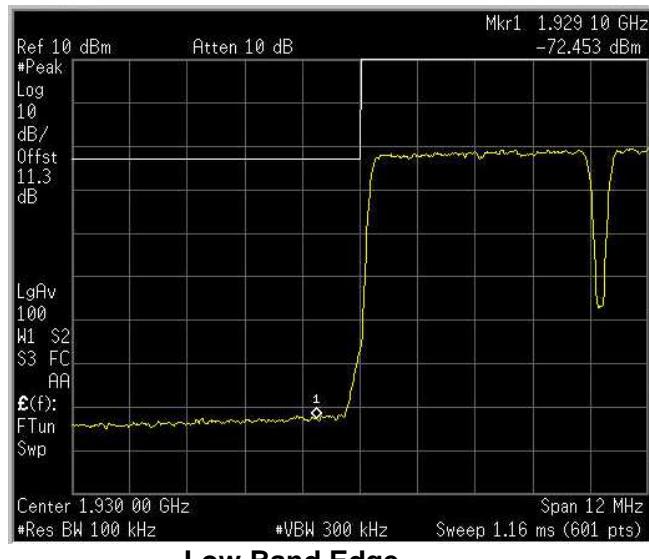
Nemko Italy S.p.A.
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Appendix B: Block diagrams

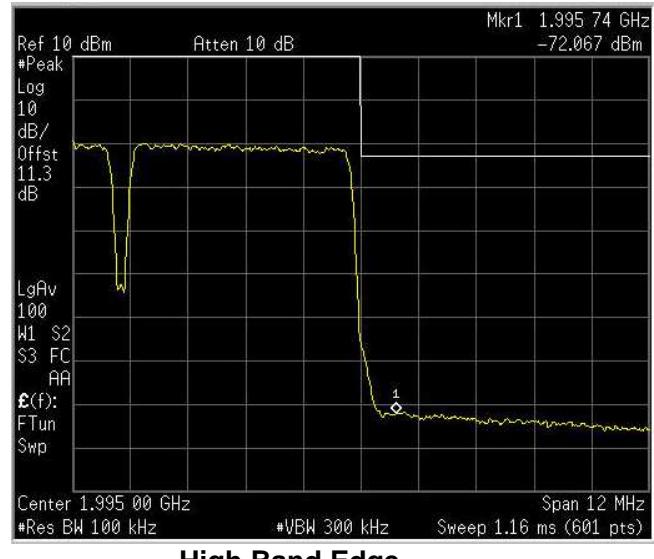
Report Number: 209925-7TRFWL

Specification: FCC 24 Subpart E

Mod. LTE 5MHz (QAM) (Down-link)

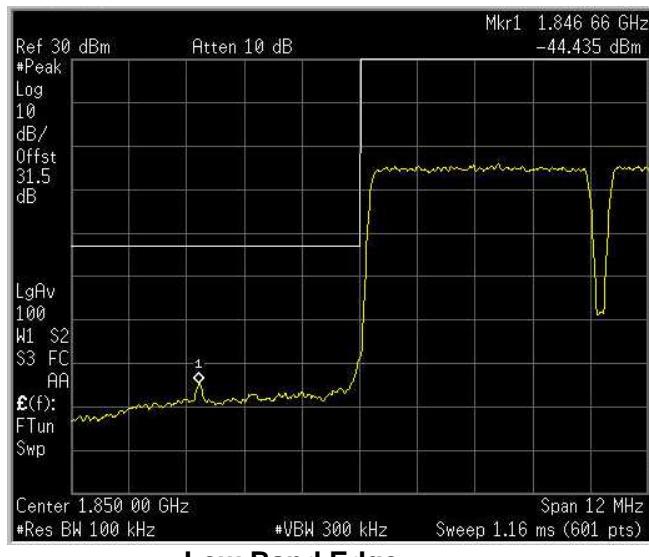


Low Band Edge

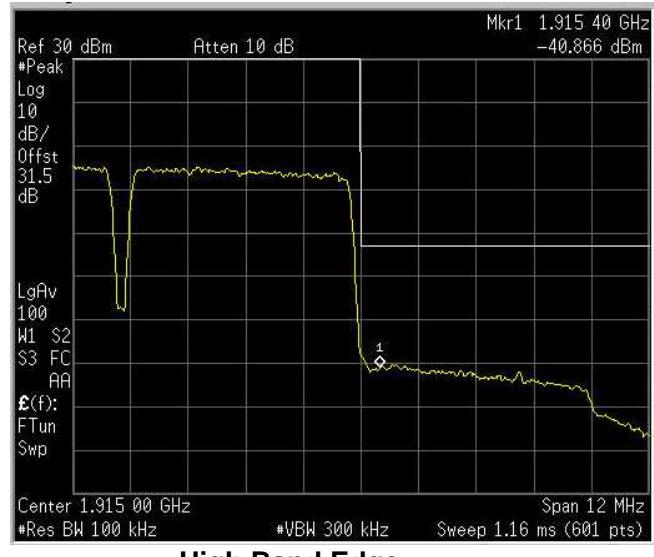


High Band Edge

Mod. LTE 5MHz (QAM) (Up-link)



Low Band Edge



High Band Edge



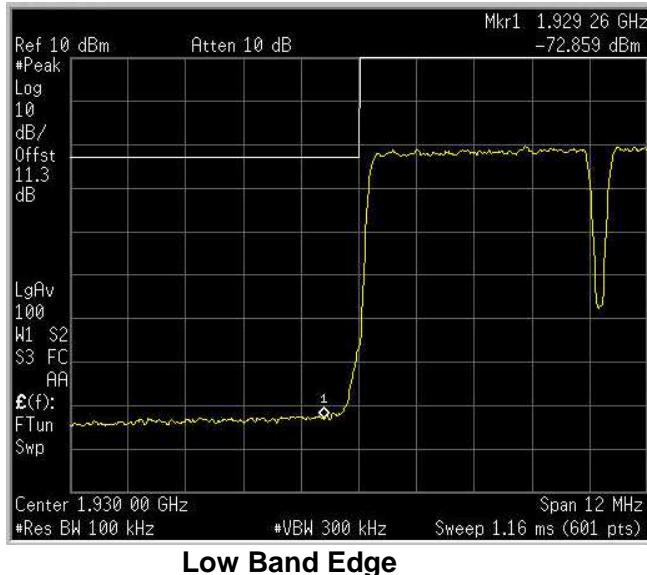
Nemko Italy S.p.A.
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Appendix B: Block diagrams

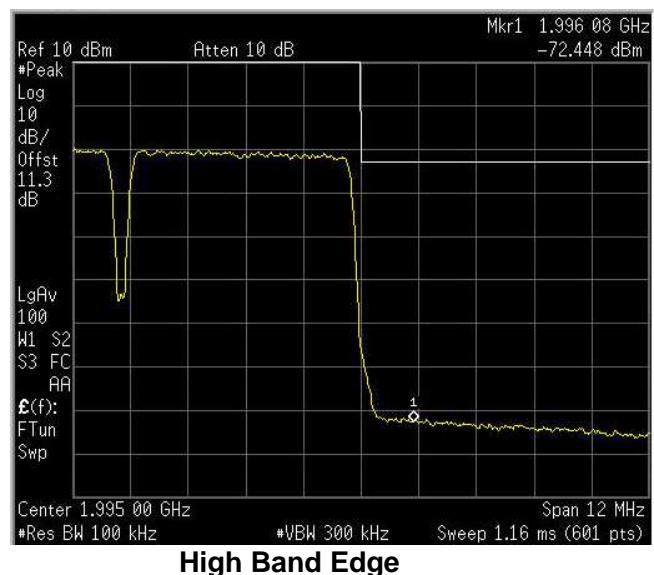
Report Number: 209925-7TRFWL

Specification: FCC 24 Subpart E

Mod. LTE 5MHz (QPSK) (Down-link)

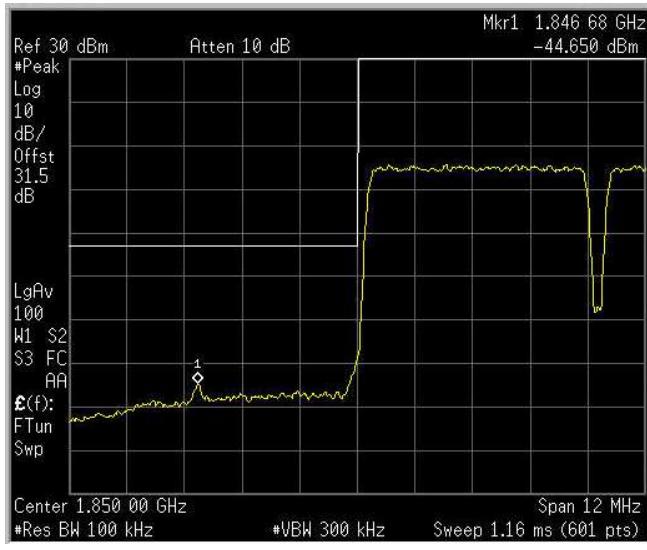


Low Band Edge

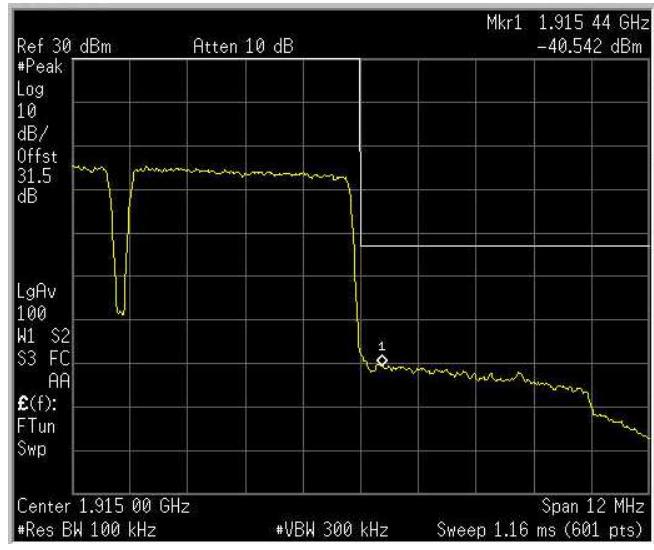


High Band Edge

Mod. LTE 5MHz (QPSK) (Up-link)

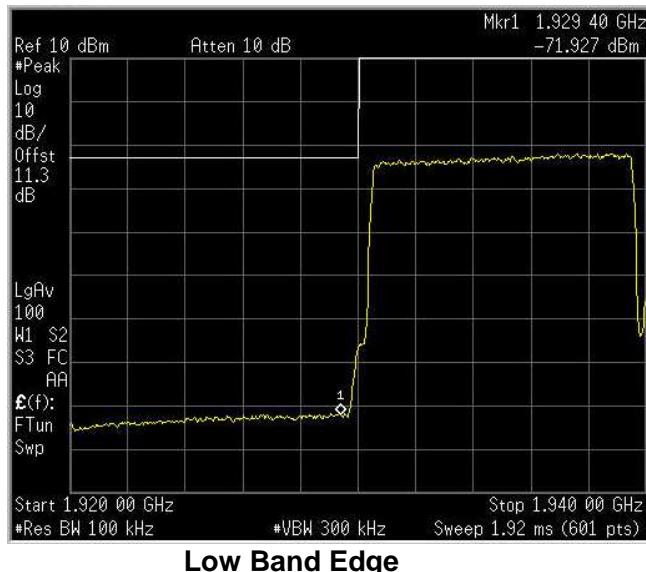
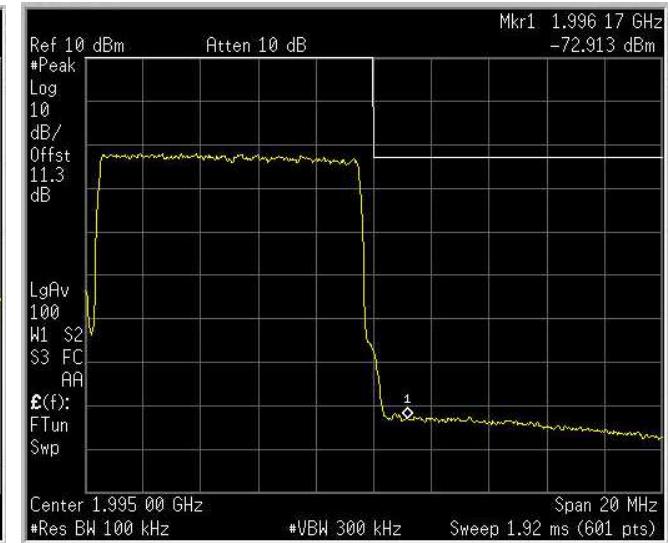


Low Band Edge

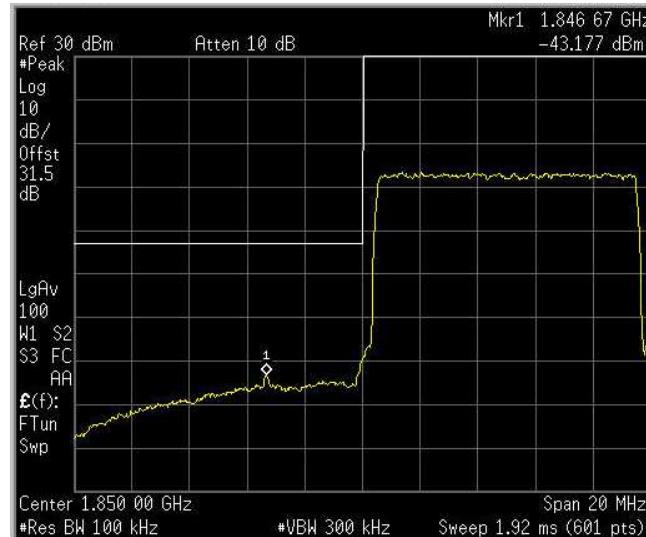
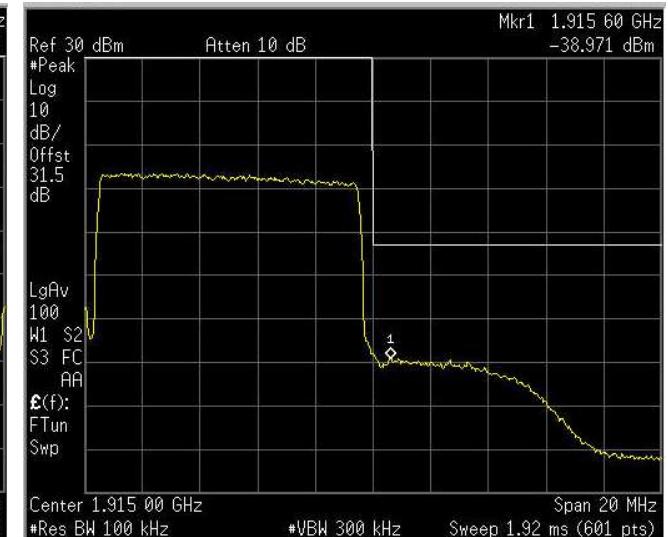


High Band Edge

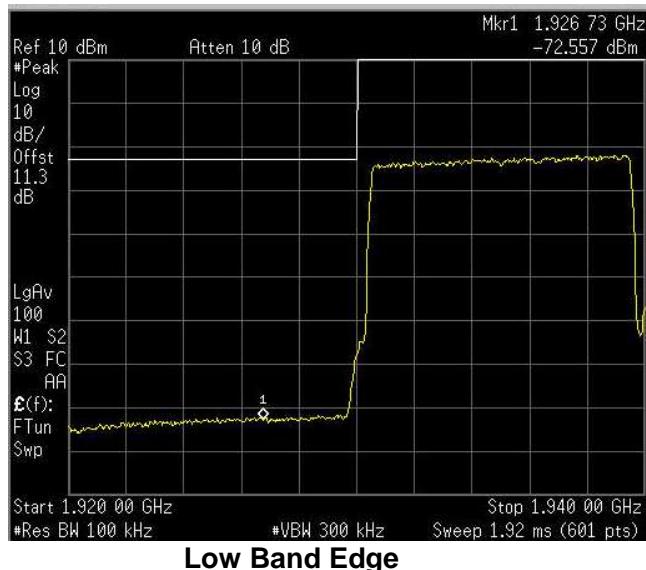
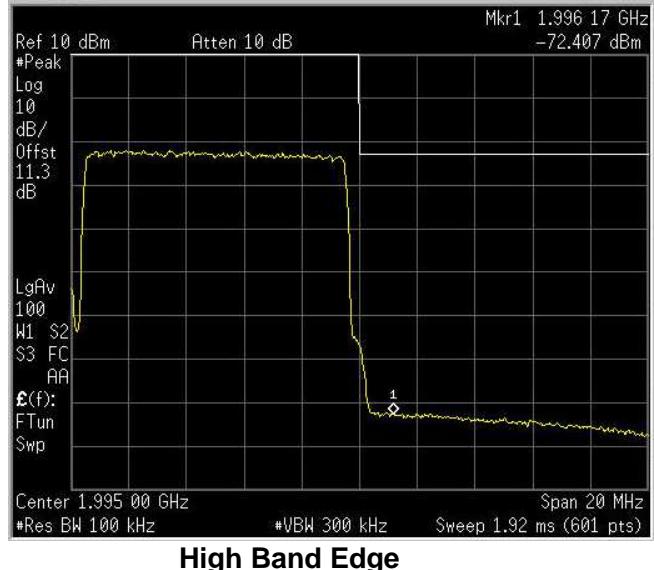
Mod. LTE 10MHz (QAM) (Down-link)


Low Band Edge

High Band Edge

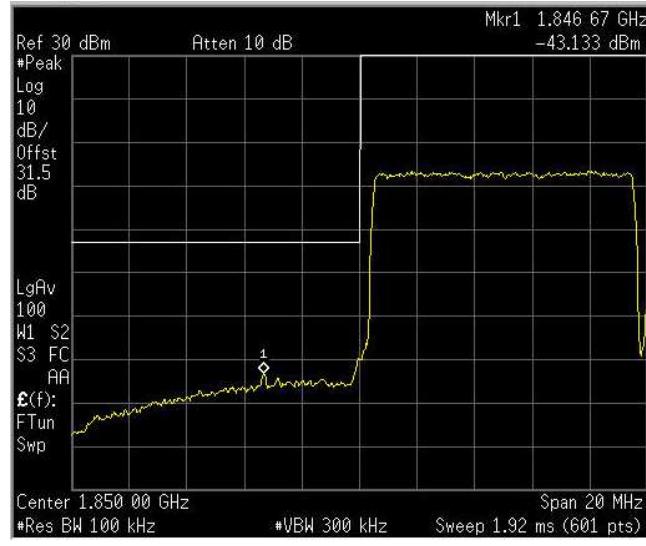
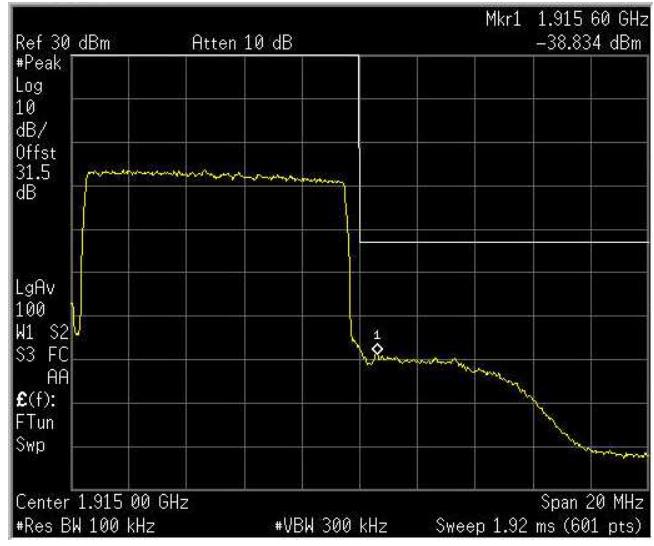
Mod. LTE 10MHz (QAM) (Up-link)


Low Band Edge

High Band Edge

Mod. LTE 10MHz (QPSK) (Down-link)


Low Band Edge

High Band Edge

Mod. LTE 10MHz (QPSK) (Up-link)


Low Band Edge

High Band Edge



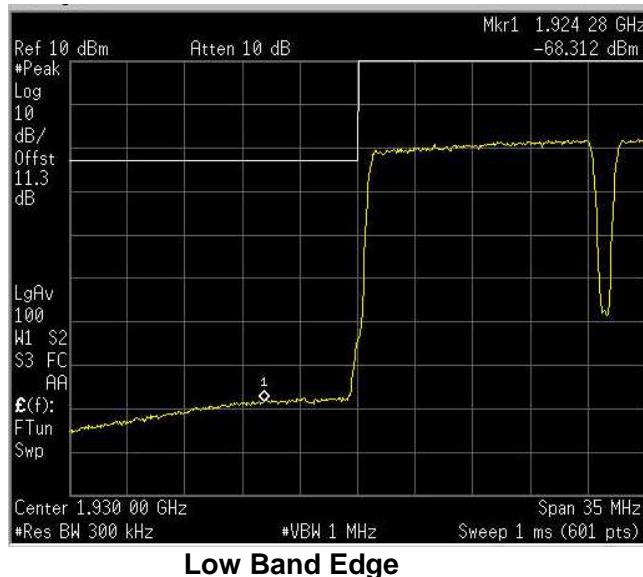
Nemko Italy S.p.A.
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Appendix B: Block diagrams

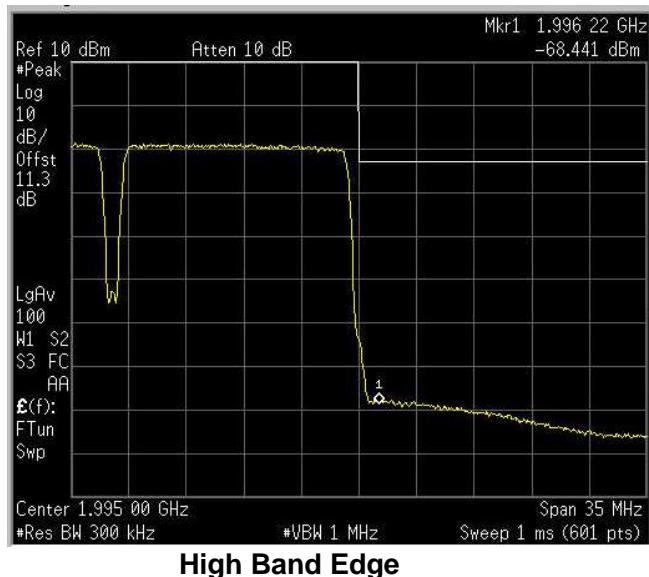
Report Number: 209925-7TRFWL

Specification: FCC 24 Subpart E

Mod. LTE 15MHz (QAM) (Down-link)

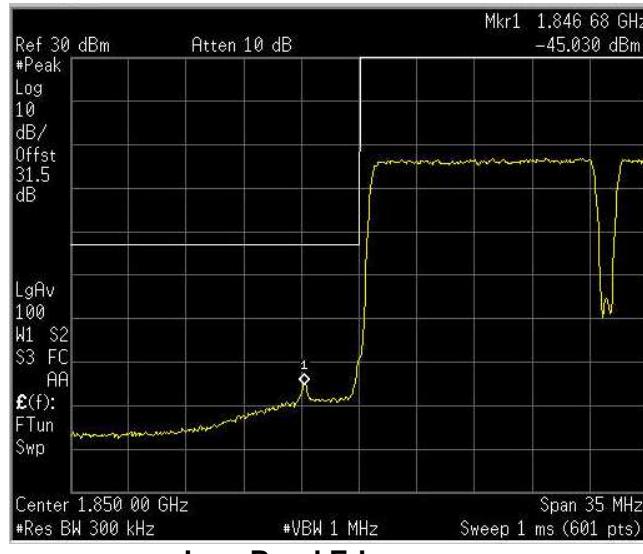


Low Band Edge

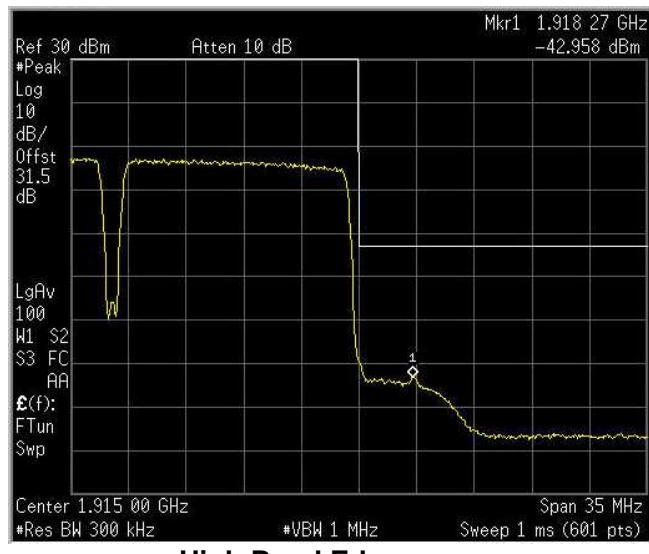


High Band Edge

Mod. LTE 15MHz (QAM) (Up-link)



Low Band Edge



High Band Edge



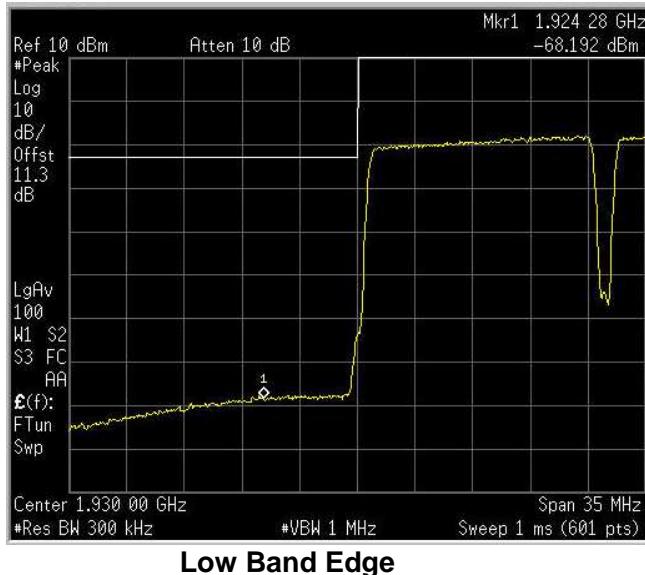
Nemko Italy S.p.A.
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Appendix B: Block diagrams

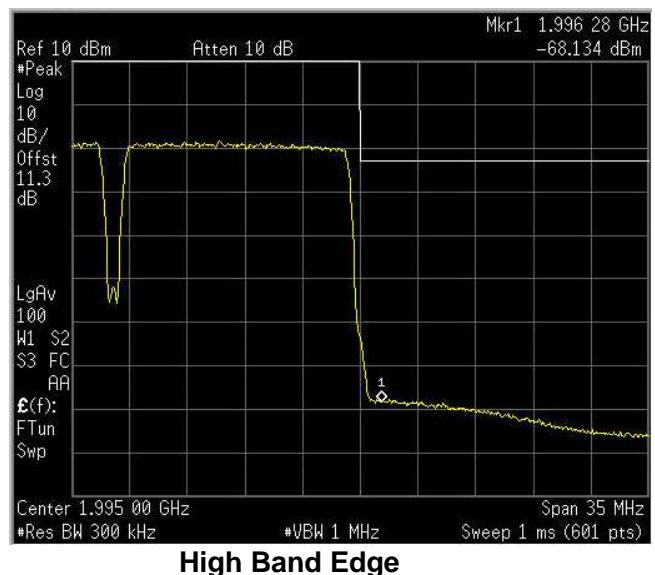
Report Number: 209925-7TRFWL

Specification: FCC 24 Subpart E

Mod. LTE 15MHz (QPSK) (Down-link)

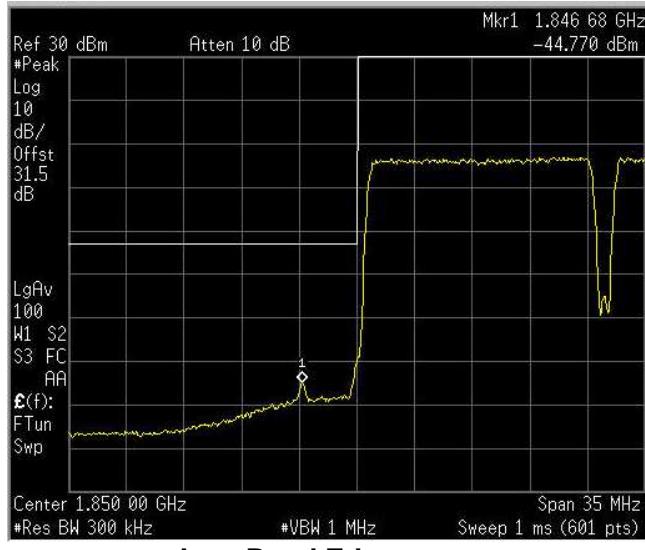


Low Band Edge

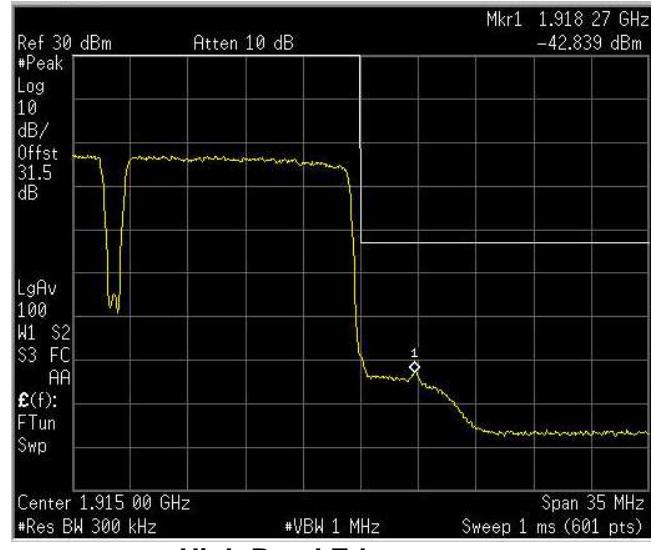


High Band Edge

Mod. LTE 15MHz (QPSK) (Up-link)

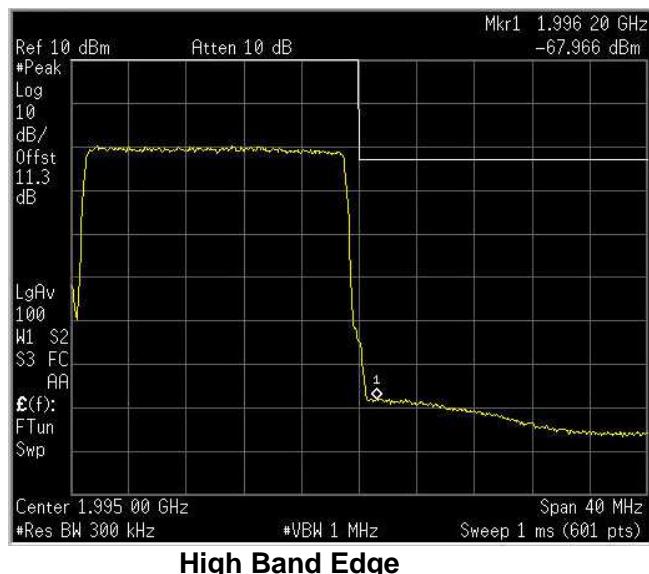


Low Band Edge

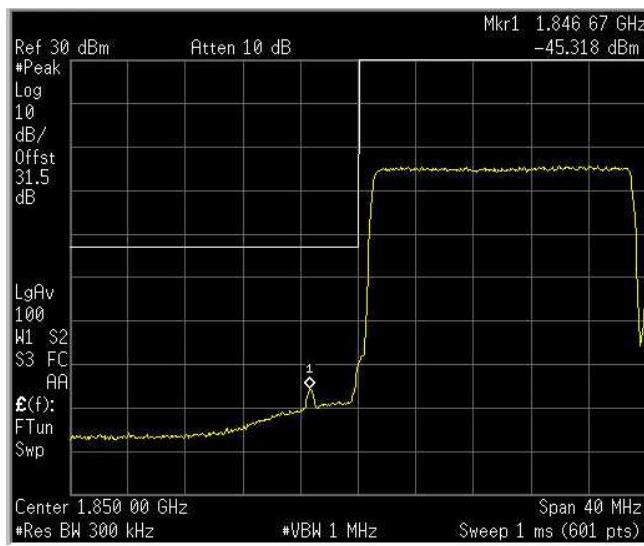
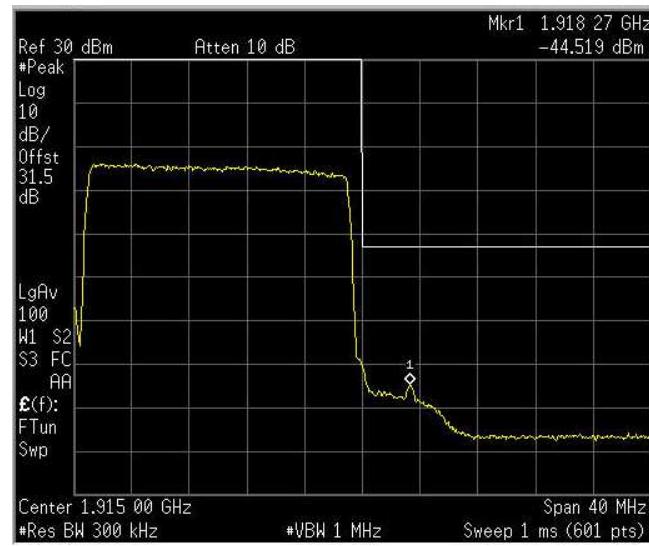


High Band Edge

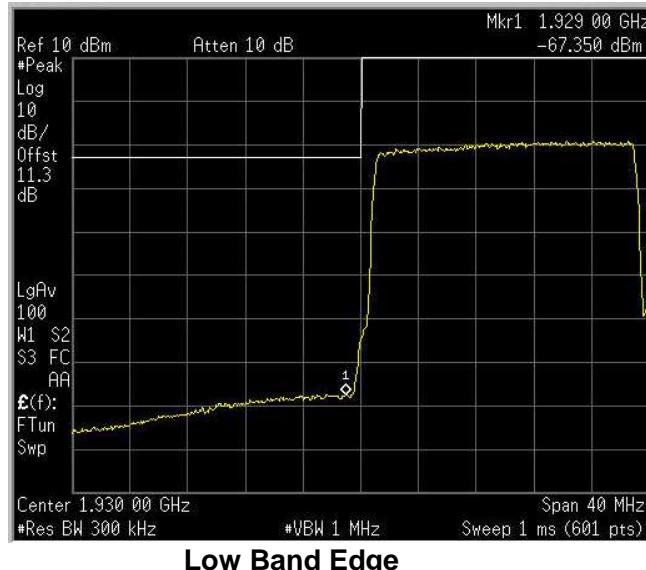
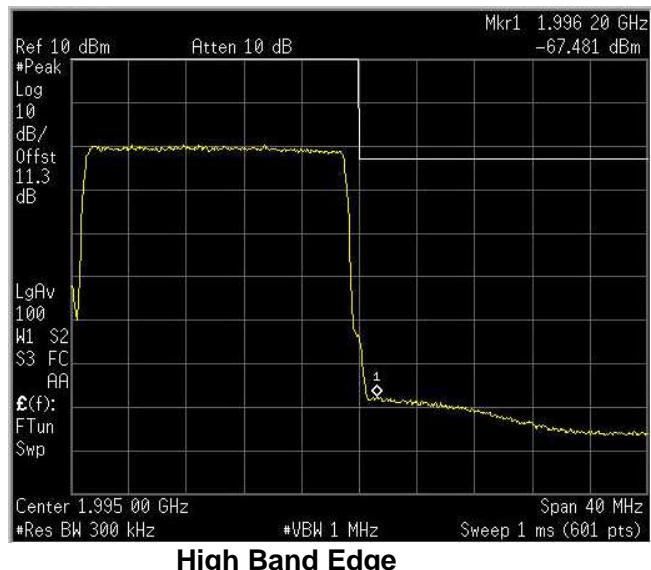
Mod. LTE 20MHz (QAM) (Down-link)


Low Band Edge

High Band Edge

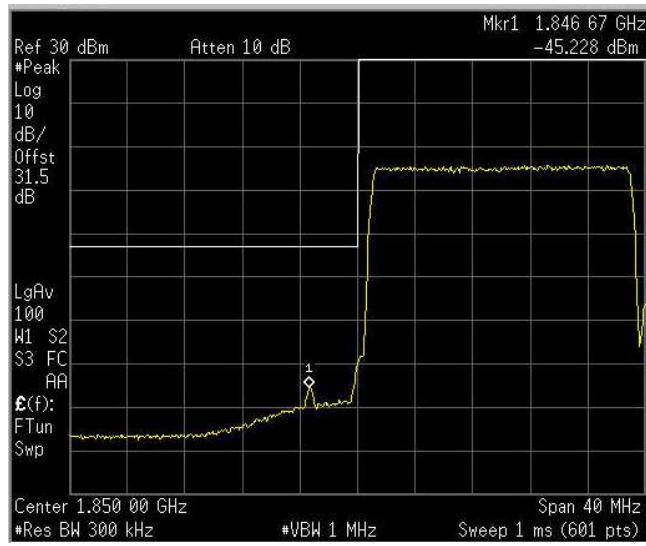
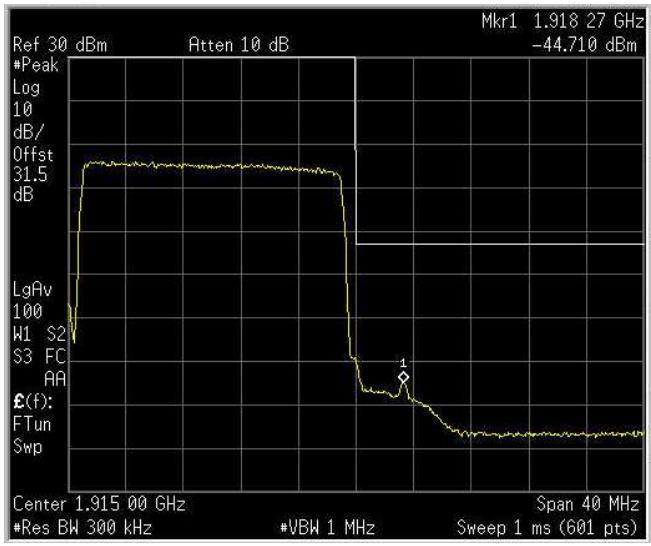
Mod. LTE 20MHz (QAM) (Up-link)


Low Band Edge

High Band Edge

Mod. LTE 20MHz (QPSK) (Down-link)


Low Band Edge

High Band Edge

Mod. LTE 20MHz (QPSK) (Up-link)


Low Band Edge

High Band Edge
To be continued