

 Nemko Italy S.p.A. Via del Carroccio 4, 20046, Biassono, Italy.	Appendix B: Block diagrams
	Report Number: 210165-7TRFWL
	Specification: FCC 24 Subpart E



PART 2



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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

Specification: FCC 24 Subpart E

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: 2012-06-04

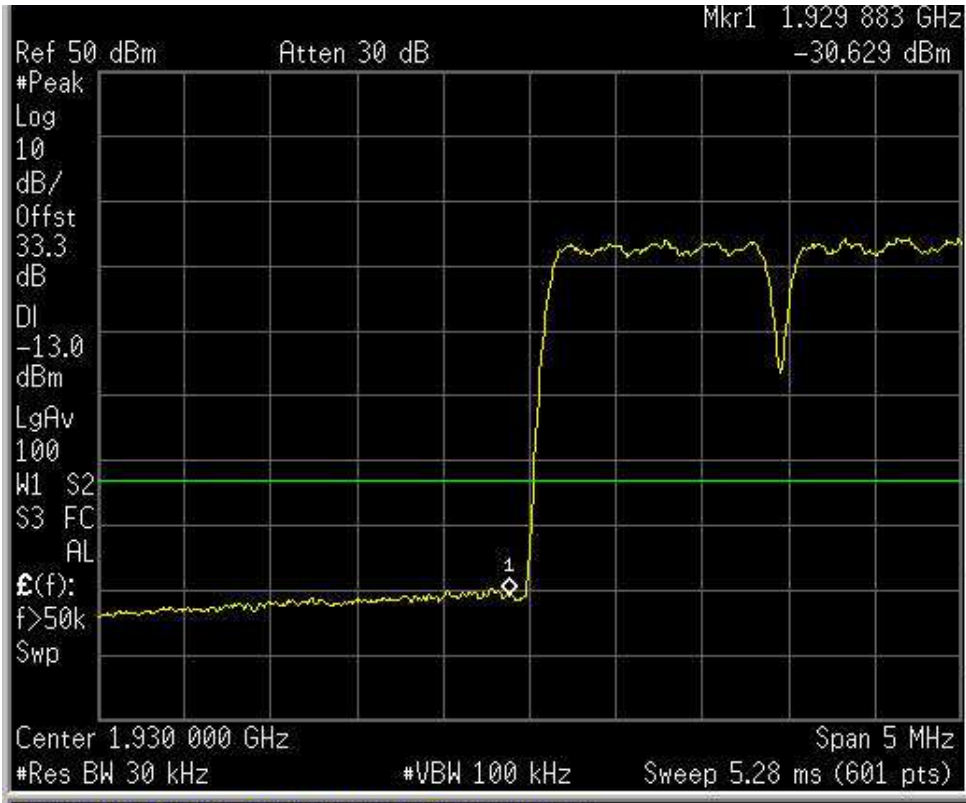
Test results: **Pass**

Special notes

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

Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation
CDMA
Downlink





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

CDMA

Downlink





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

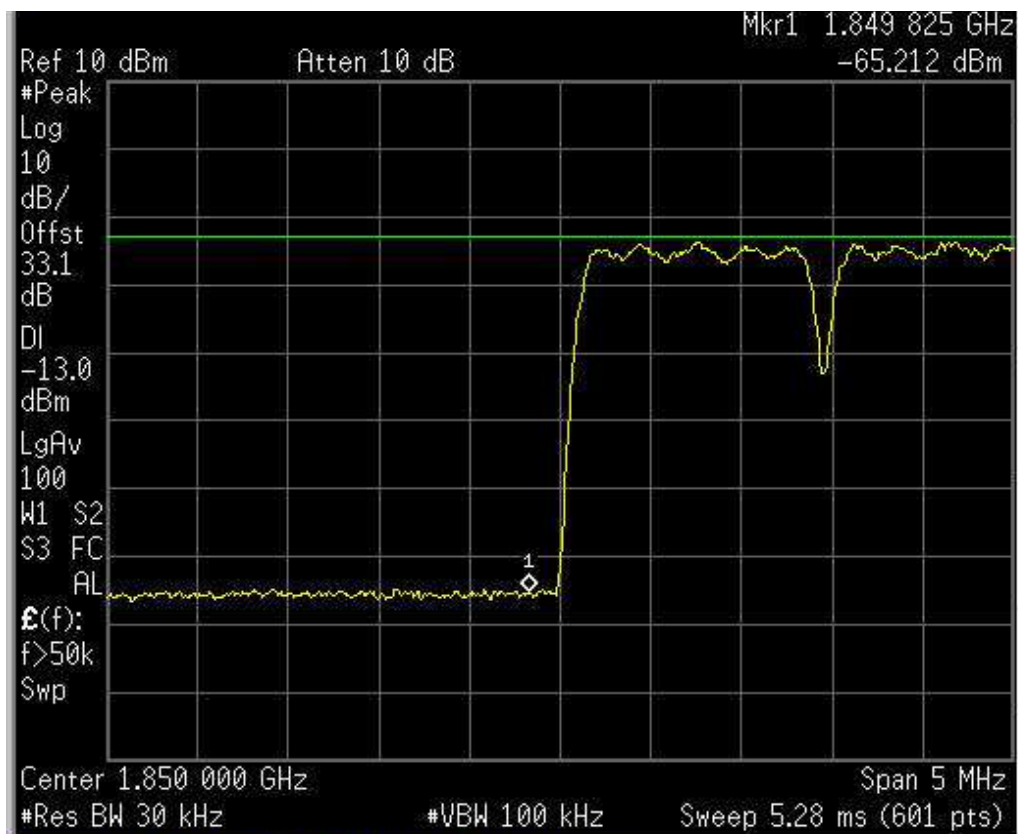
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

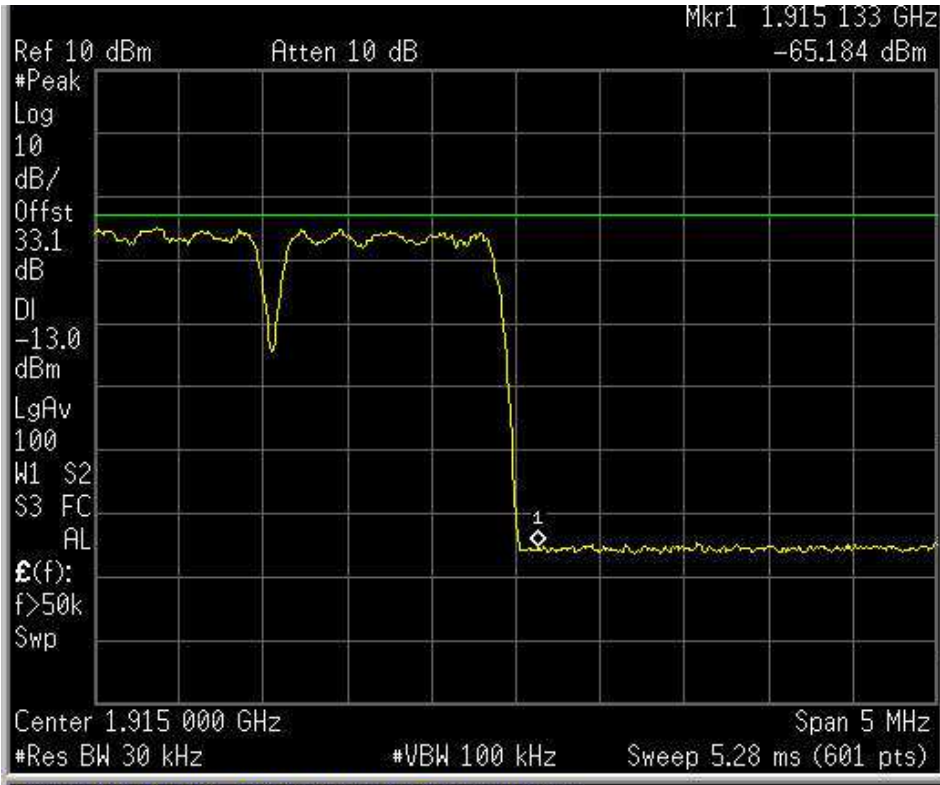
CDMA

Uplink



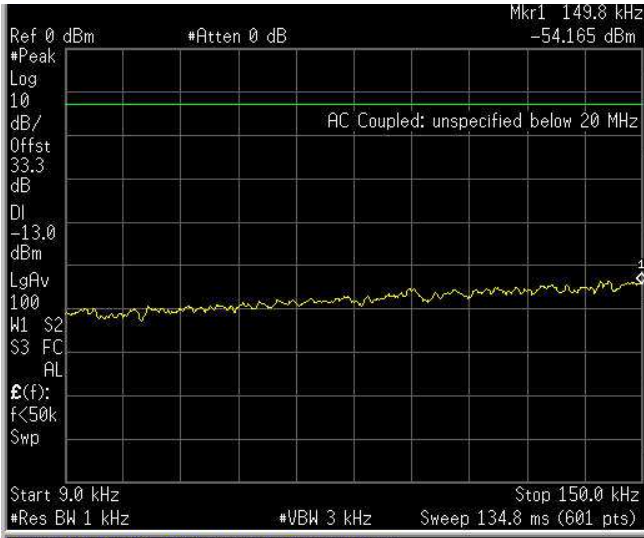
Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation
 CDMA
 Uplink

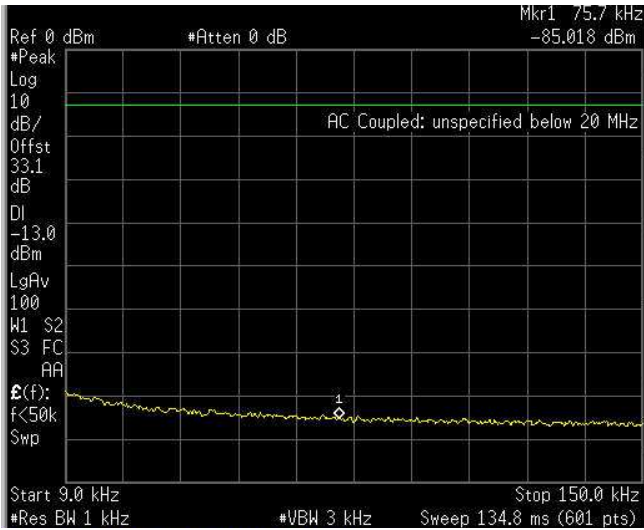


Test Data – Spurious Emissions at Antenna Terminals

Spurs – CDMA – Downlink 9 -150 kHz

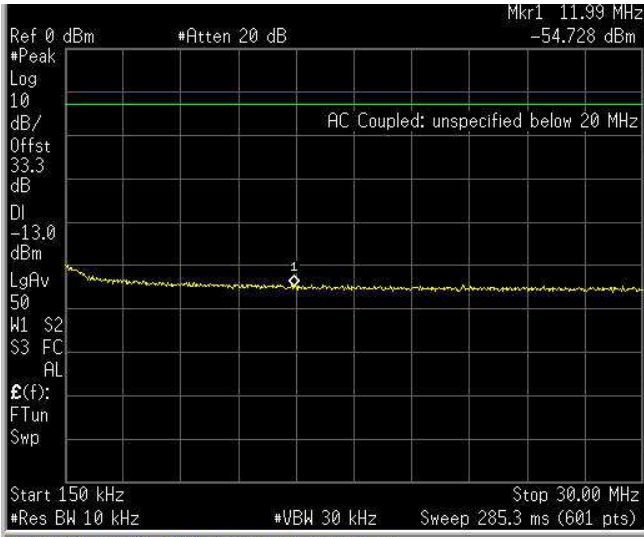


Spurs – CDMA – Uplink 9 -150 kHz

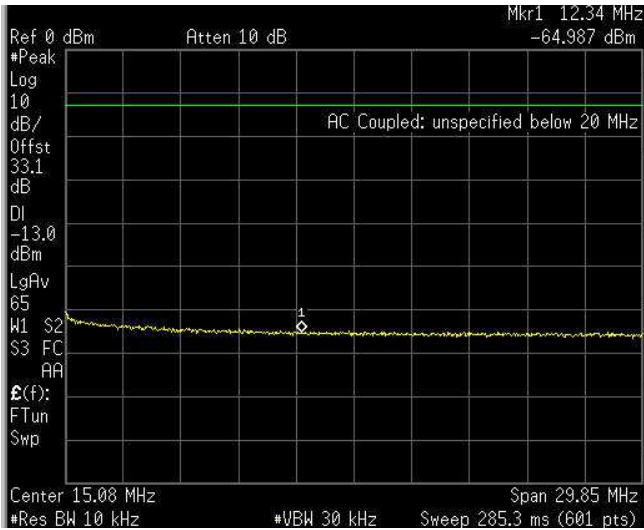


Test Data – Spurious Emissions at Antenna Terminals

Spurs – CDMA – Downlink 150 kHz – 30 MHz

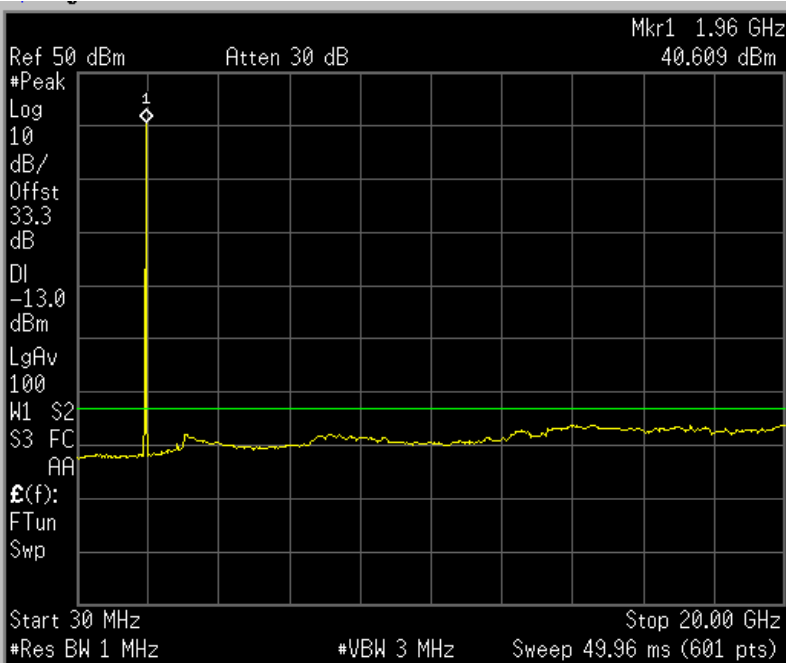


Spurs – CDMA – Uplink 150 kHz – 30 MHz

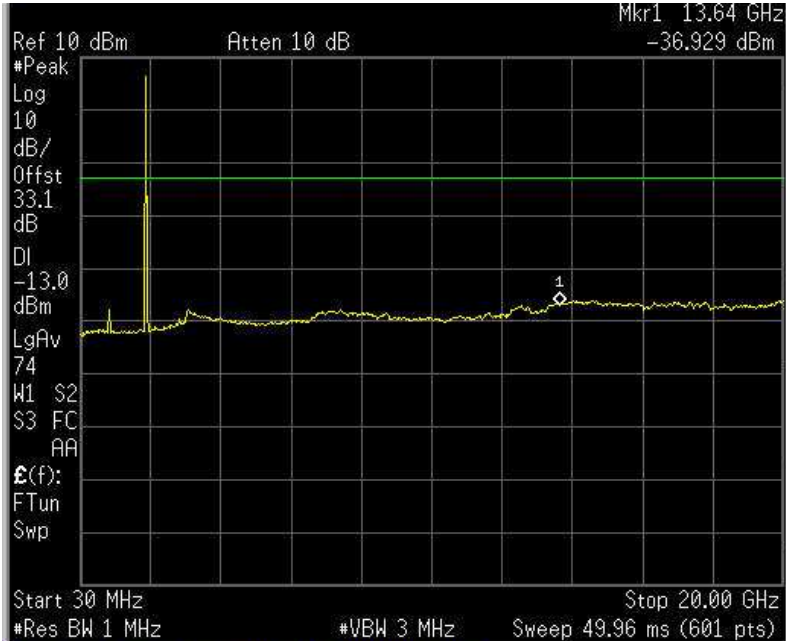


Test Data – Spurious Emissions at Antenna Terminals

Spurs – CDMA – Downlink 30 MHz – 20 GHz



Spurs – CDMA – Uplink 30 MHz – 20 GHz





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Via del Carroccio 4, 20046, Biassono, Italy.

Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

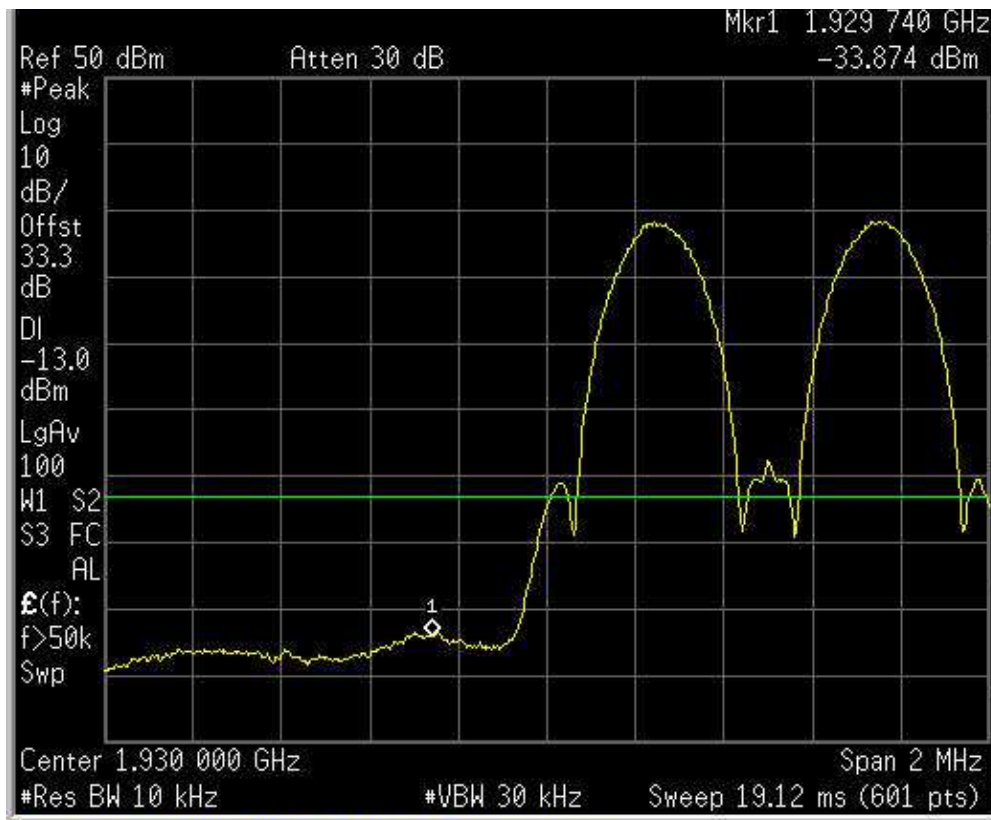
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

EDGE

Downlink





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

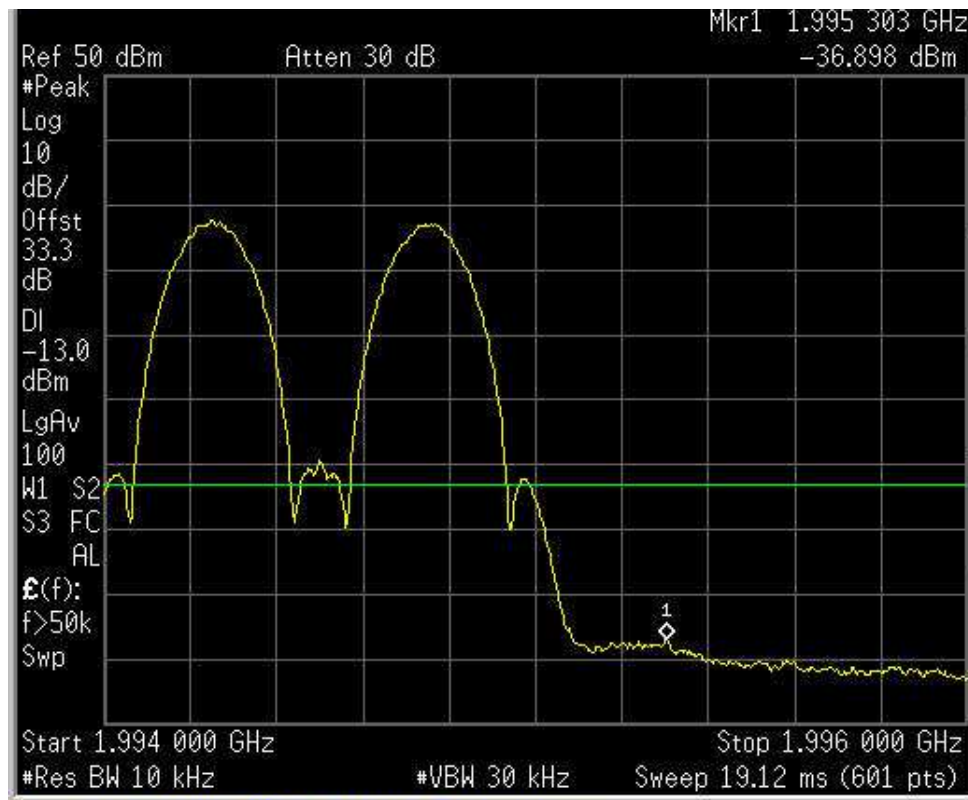
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

EDGE

Downlink

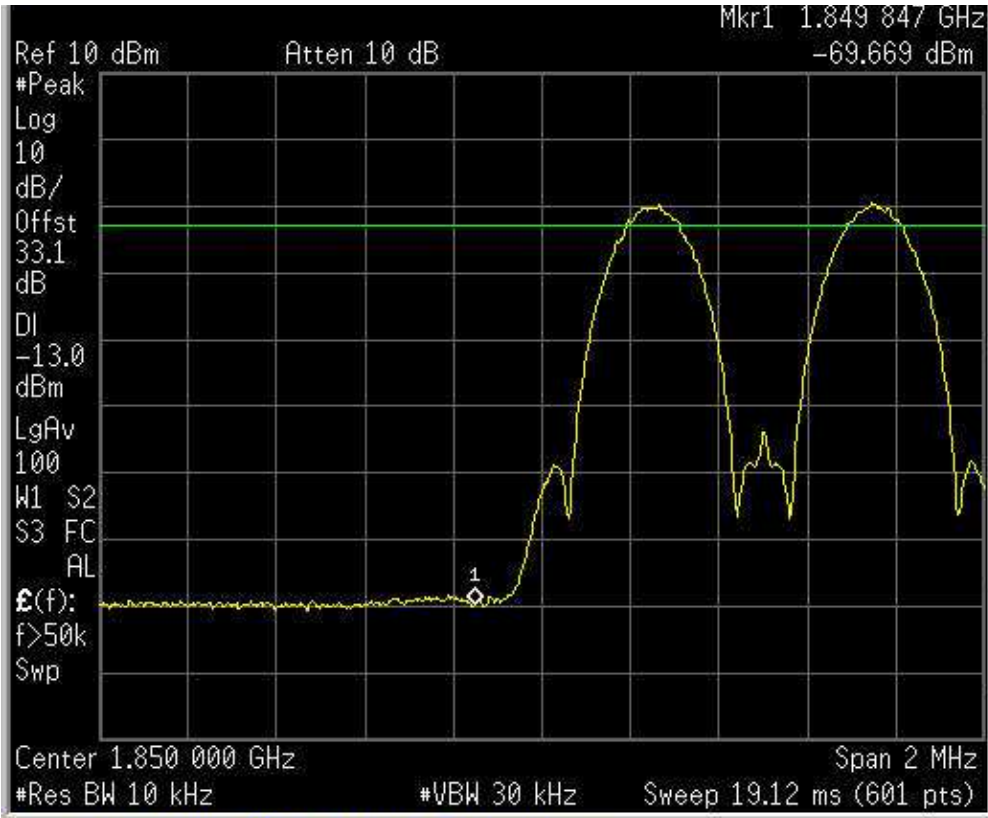


Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

EDGE

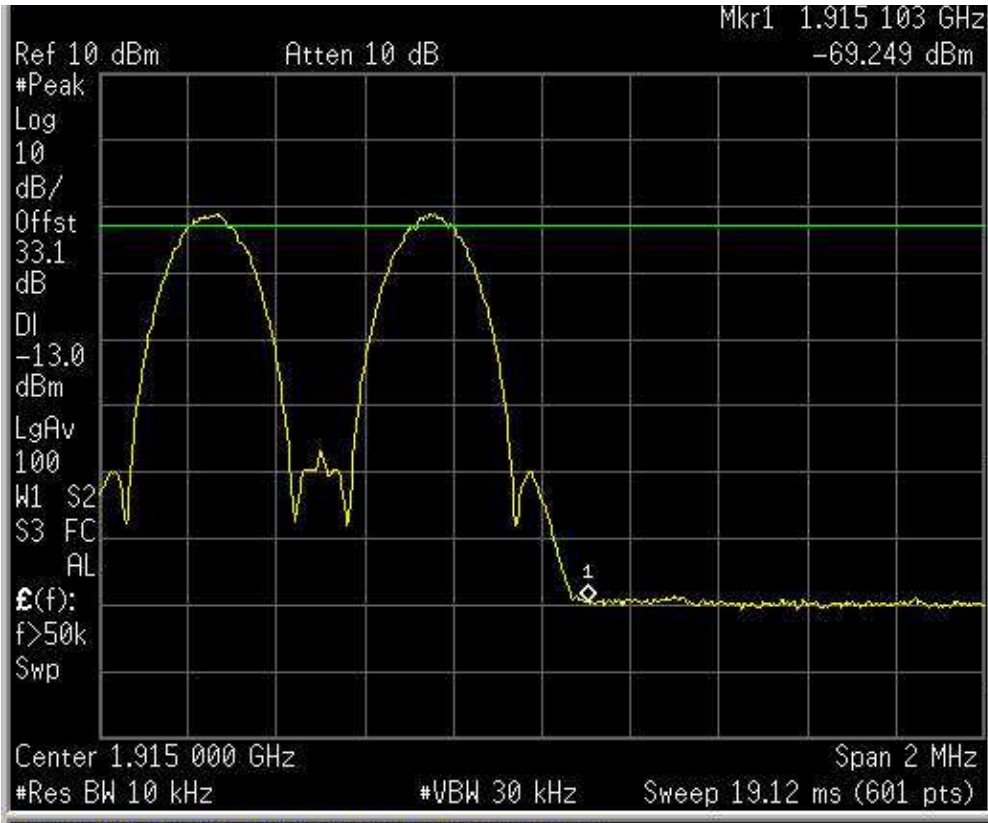
Uplink



<div>  </div> <div> Nemko Italy S.p.A. Via del Carroccio 4, 20046, Biassono, Italy. </div>	Appendix B: Block diagrams
	Report Number: 210165-7TRFWL
	Specification: FCC 24 Subpart E

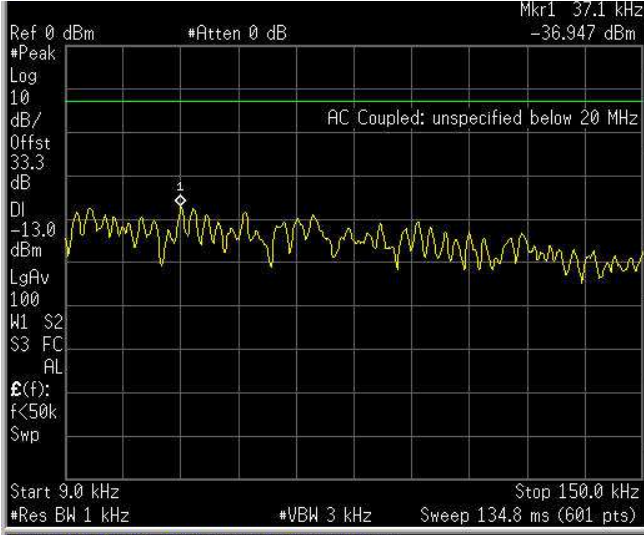
Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation
 EDGE
 Uplink



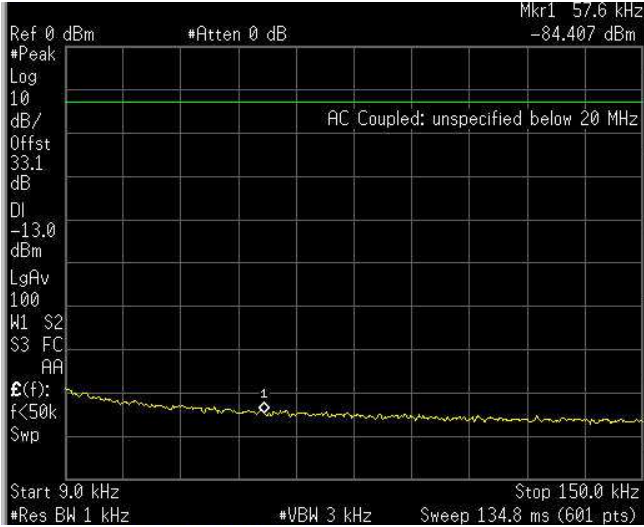
Test Data – Spurious Emissions at Antenna Terminals

Spurs – EDGE – Downlink 9 – 150 kHz



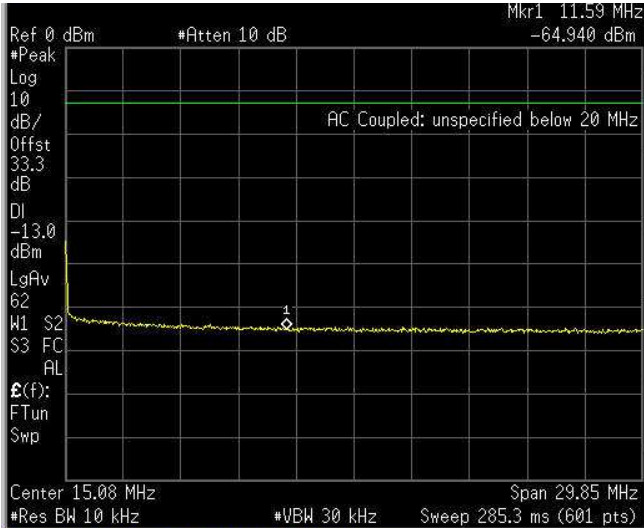
Spurs – EDGE – Uplink

9 – 150 kHz

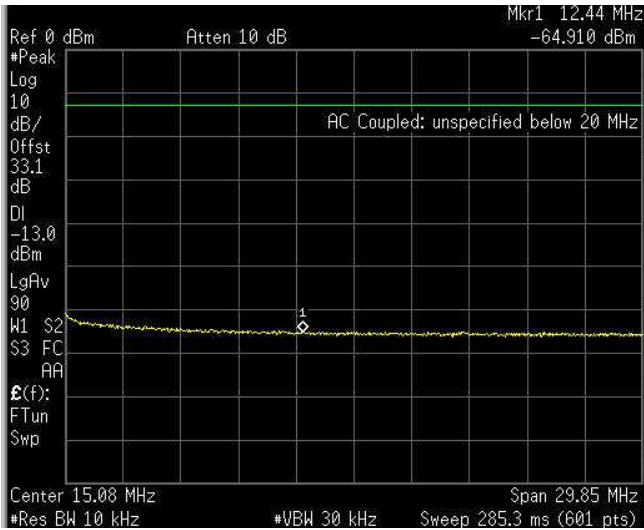


Test Data – Spurious Emissions at Antenna Terminals

Spurs – EDGE – Downlink 150 kHz – 30 MHz

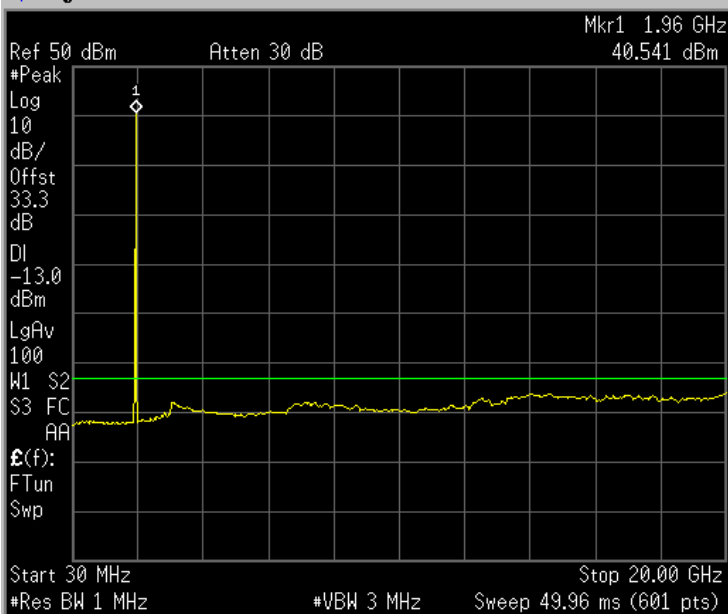


Spurs – EDGE – Uplink 150 kHz – 30 MHz

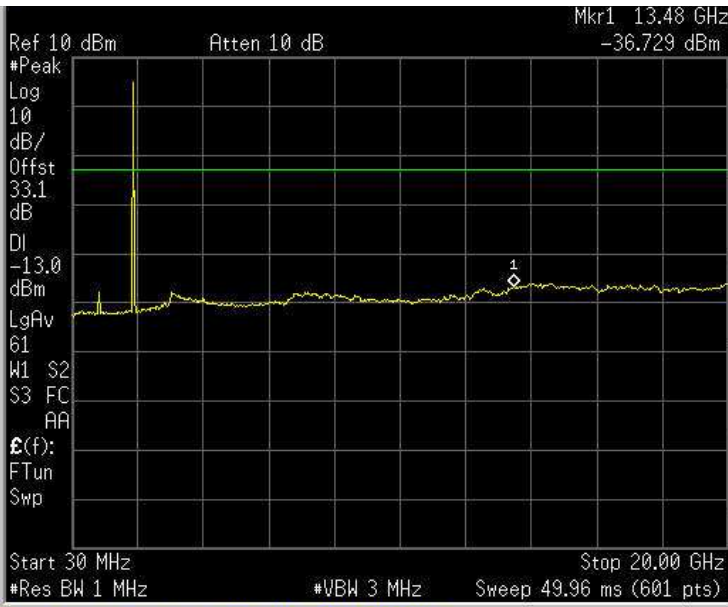


Test Data – Spurious Emissions at Antenna Terminals

Spurs – EDGE – Downlink 30 MHz – 20 GHz



Spurs – EDGE – Uplink 30 MHz – 20 GHz





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

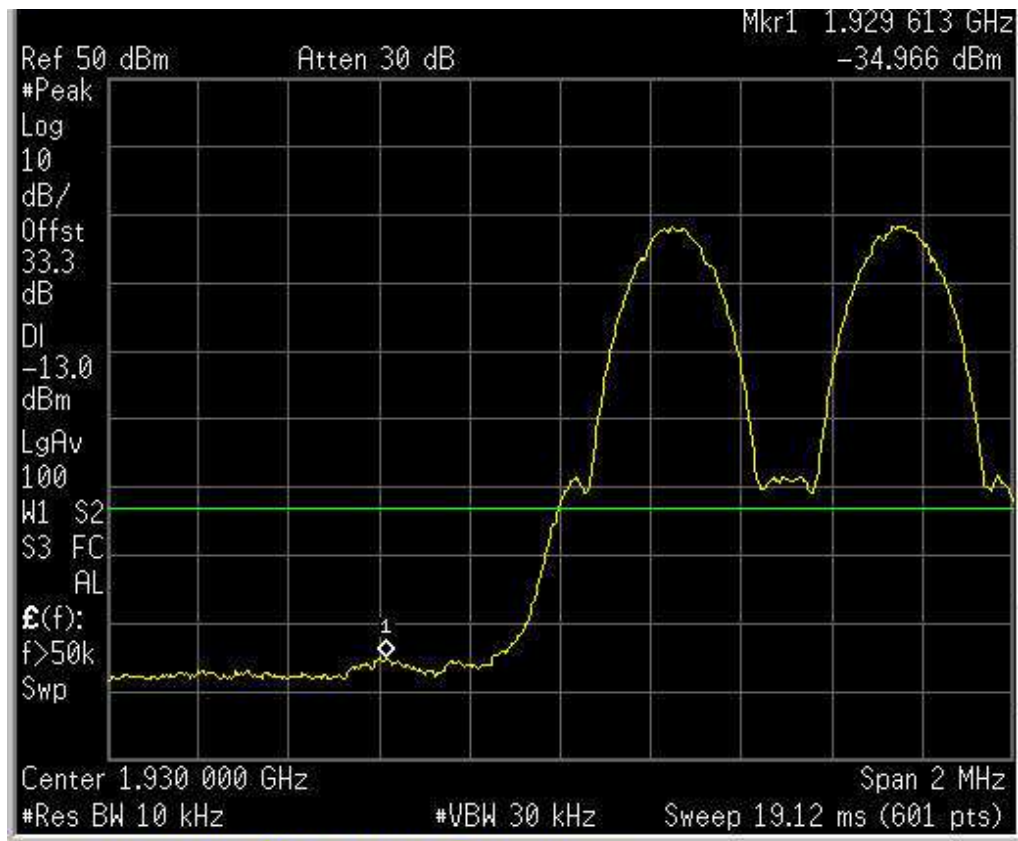
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Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

GSM

Downlink





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

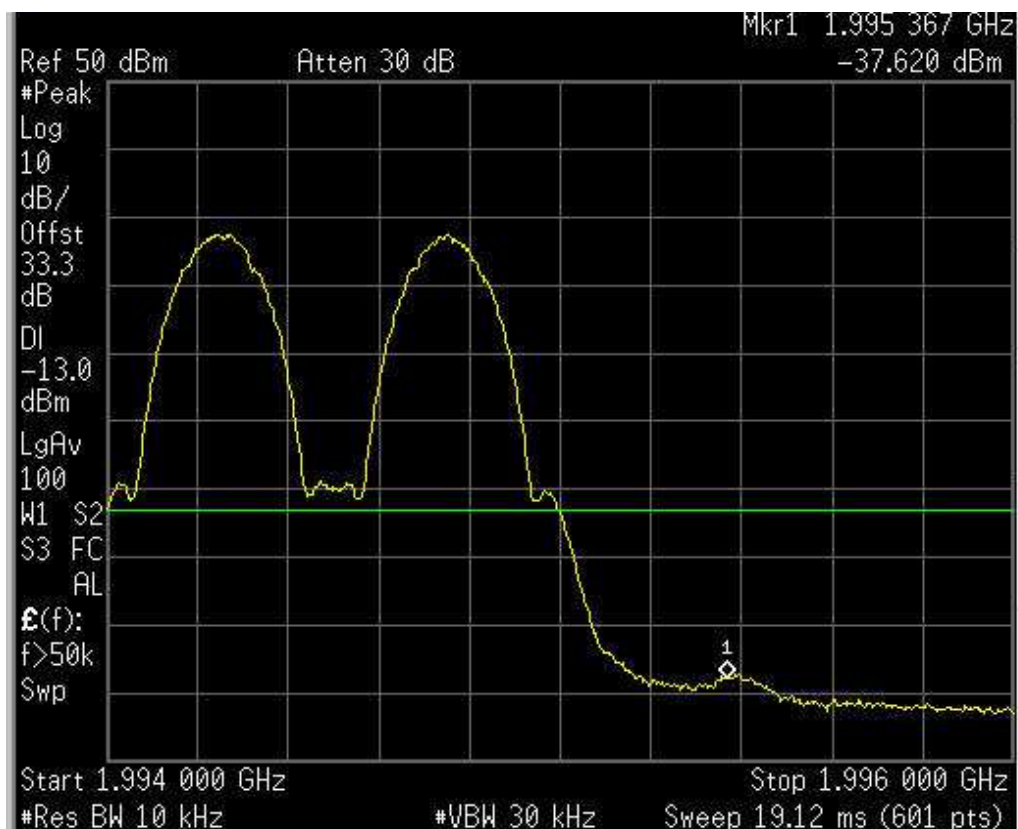
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

GSM

Downlink





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

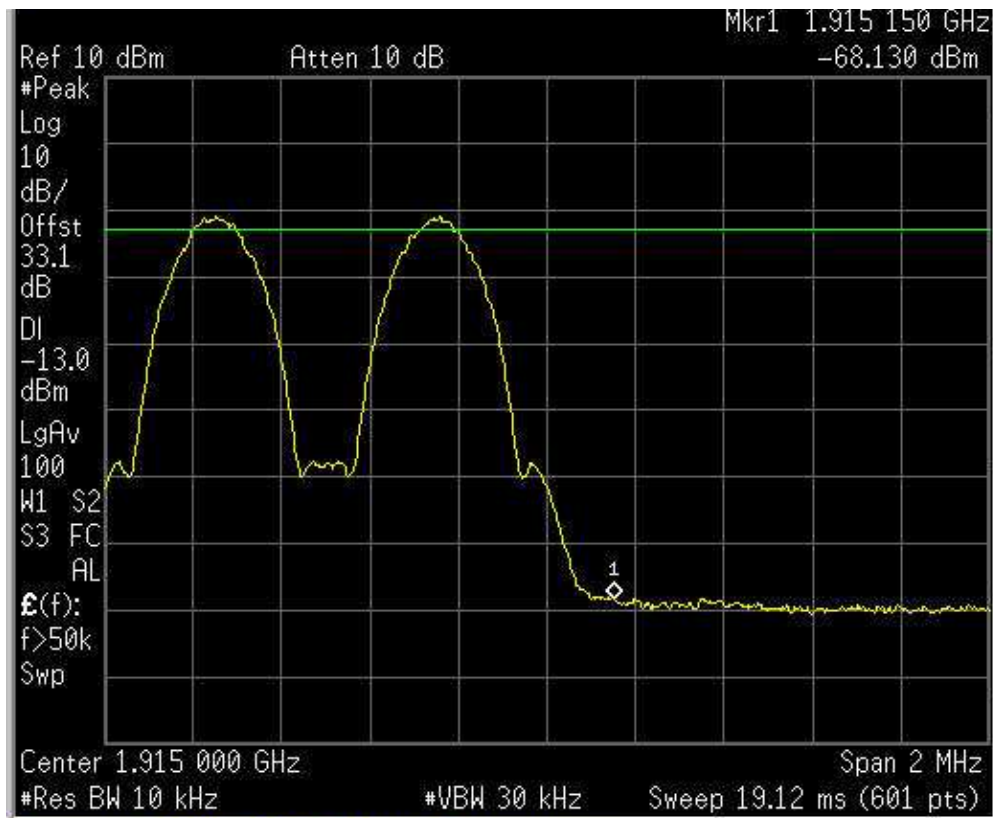
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

GSM

Uplink

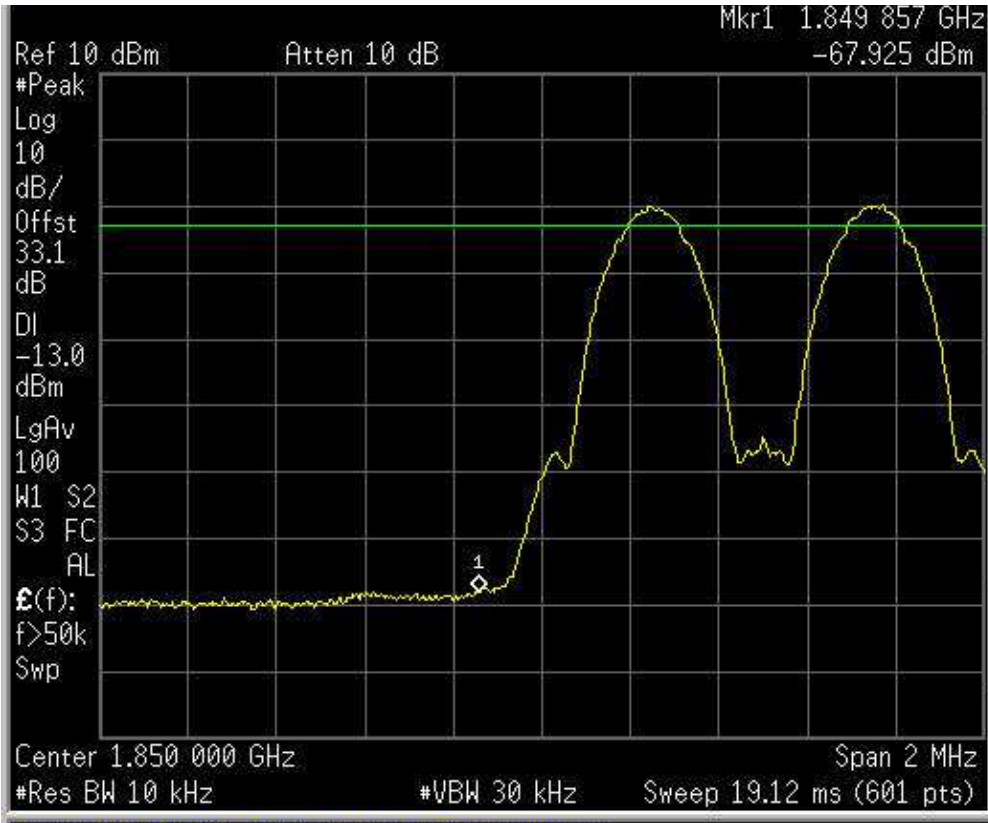


Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

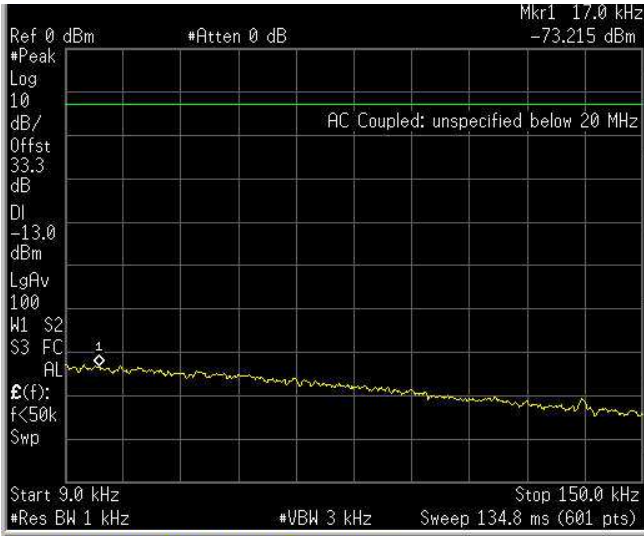
GSM

Uplink



Test Data – Spurious Emissions at Antenna Terminals

Spurs – GSM – Downlink 9 – 150 kHz



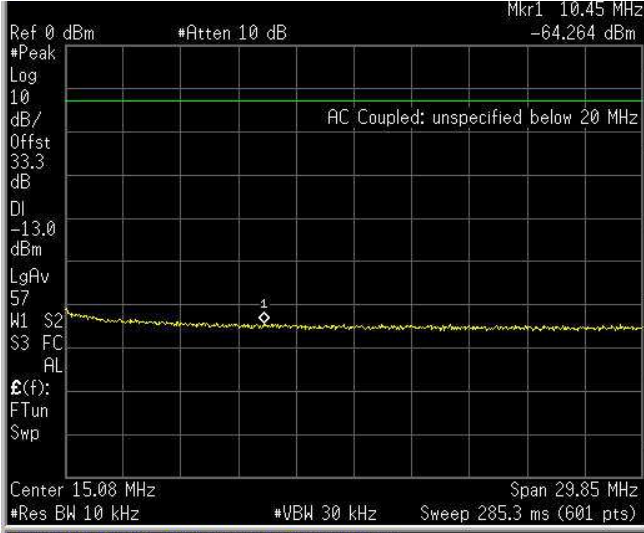
Spurs – GSM – Uplink

9 – 150 kHz



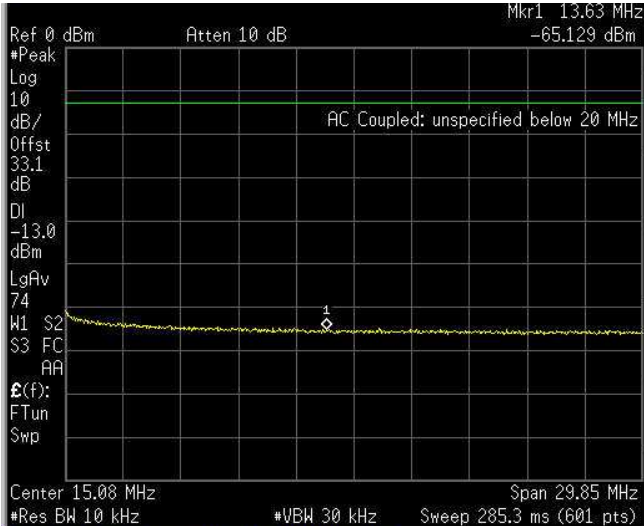
Test Data – Spurious Emissions at Antenna Terminals

Spurs – GSM – Downlink 150 kHz – 30 MHz



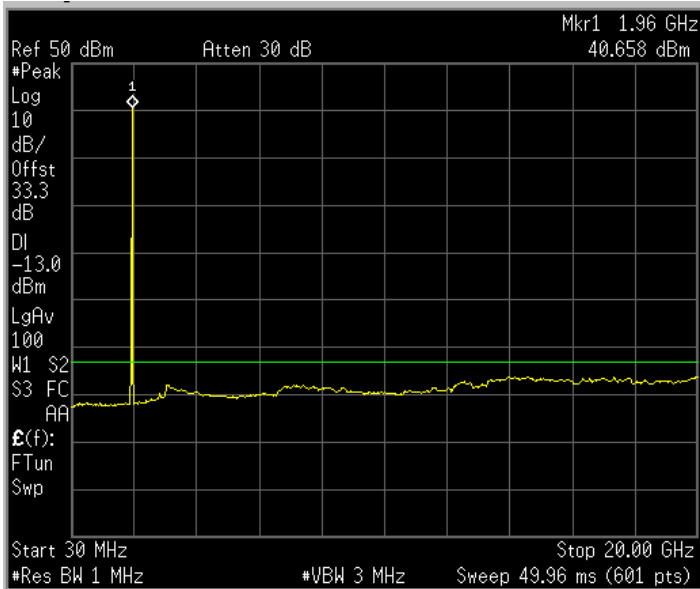
Spurs – GSM – Uplink

150 kHz – 30 MHz



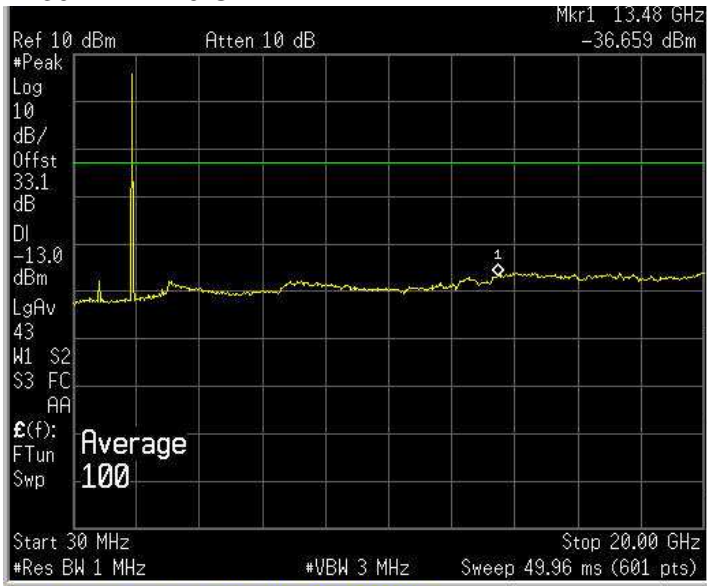
Test Data – Spurious Emissions at Antenna Terminals

Spurs – GSM – Downlink 30 MHz – 20 GHz



Test Data – Spurious Emissions at Antenna Terminals

Spurs – GSM – Uplink 30 MHz – 20 GHz





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Via del Carroccio 4, 20046, Biassono, Italy.

Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

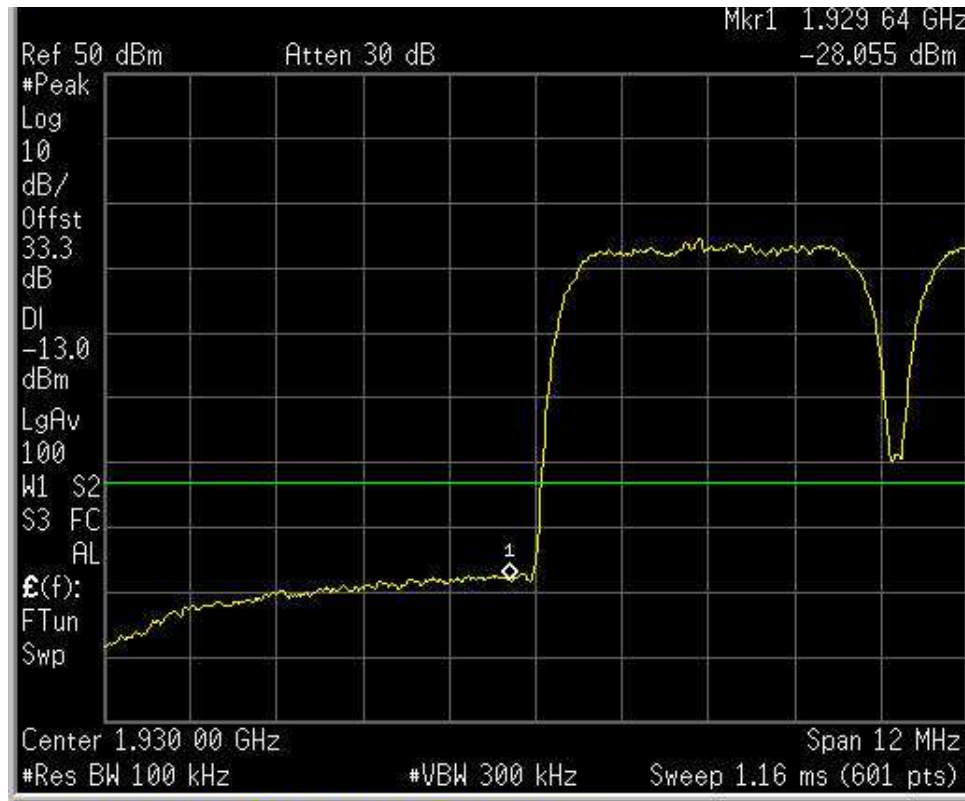
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

W-CDMA

Downlink





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Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

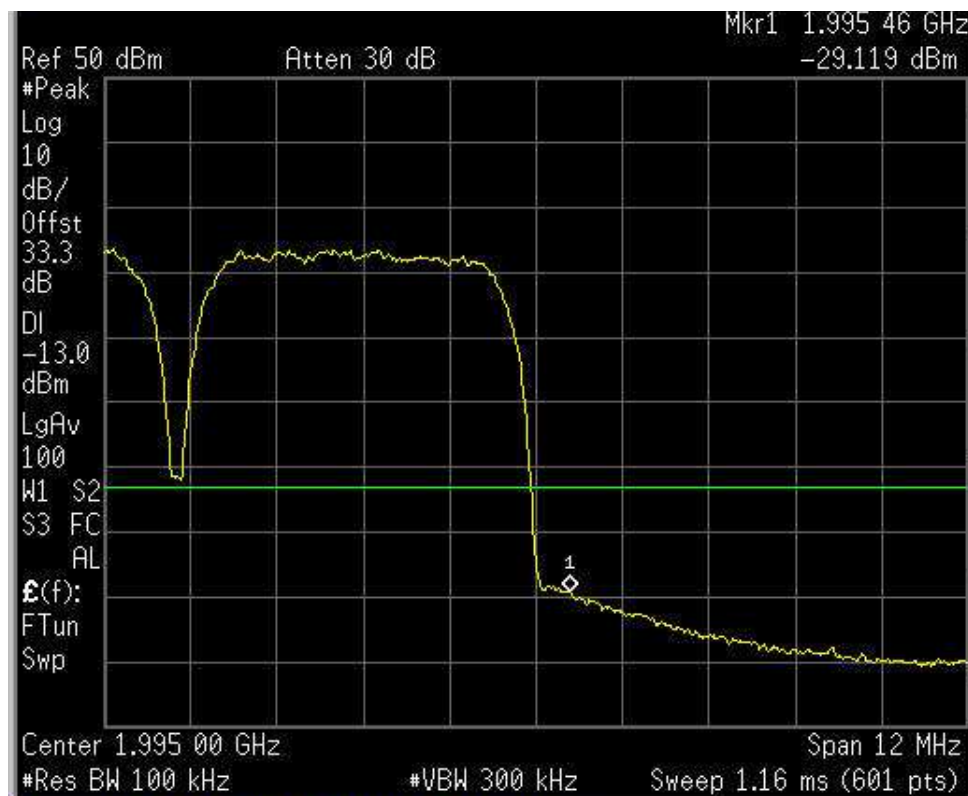
Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

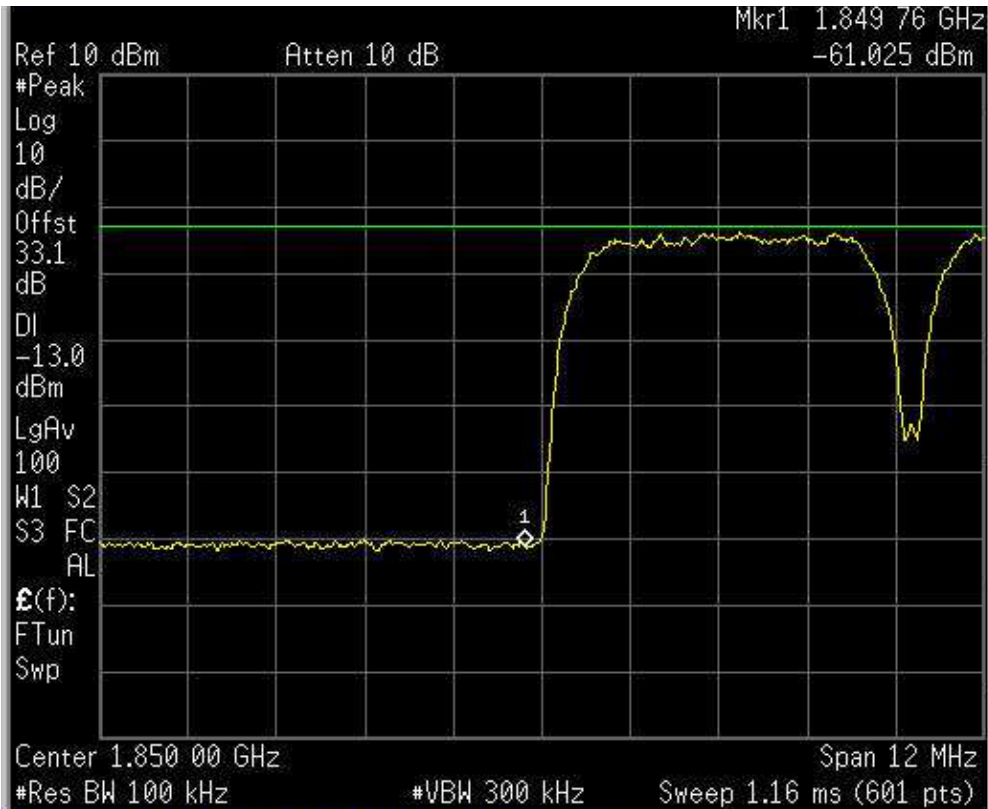
Upper Bandedge Intermodulation

W-CDMA

Downlink



Test Data – Spurious Emissions at Antenna Terminals
 Lower Bandedge Intermodulation
 W-CDMA
 Uplink





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Via del Carroccio 4, 20046, Biassono, Italy.

Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

Specification: FCC 24 Subpart E

Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

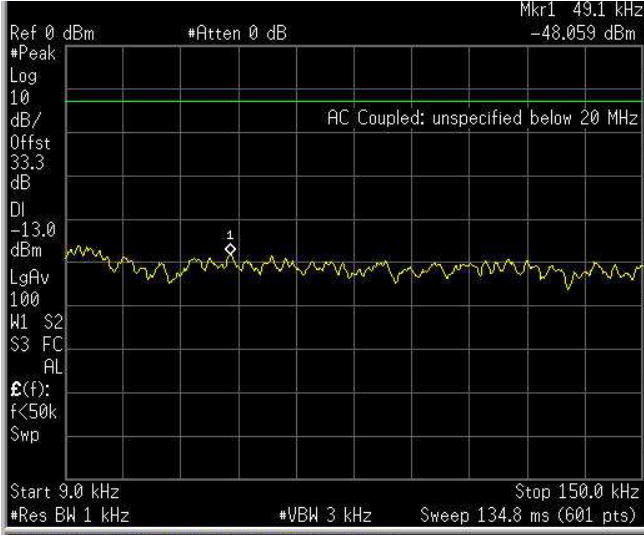
W-CDMA

Uplink

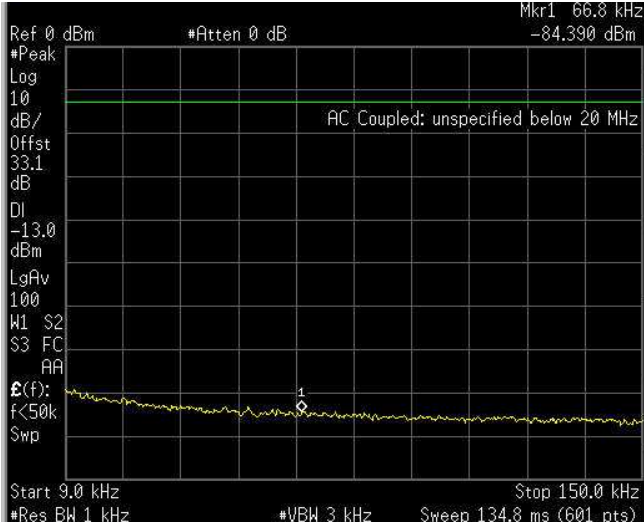


Test Data – Spurious Emissions at Antenna Terminals

Spurs – W-CDMA – Downlink 9 – 150 kHz

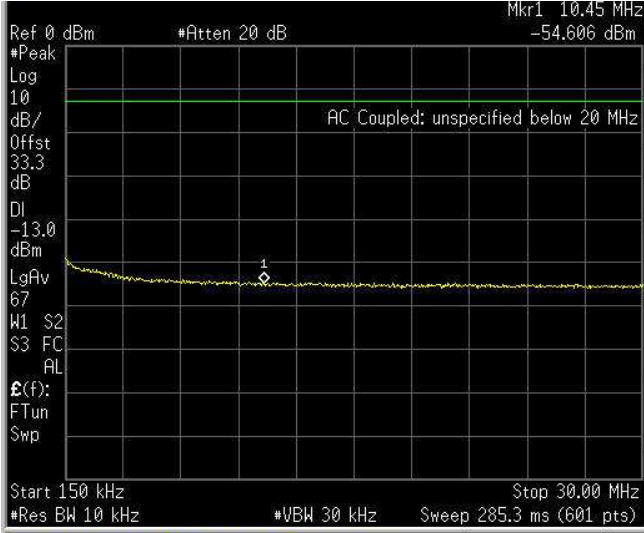


Spurs – W-CDMA – Uplink 9 – 150 kHz

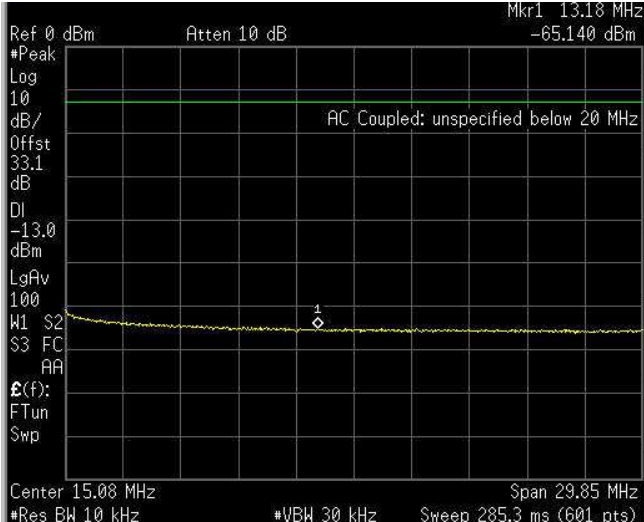


Test Data – Spurious Emissions at Antenna Terminals

Spurs – W-CDMA – Downlink 150 kHz – 30 MHz

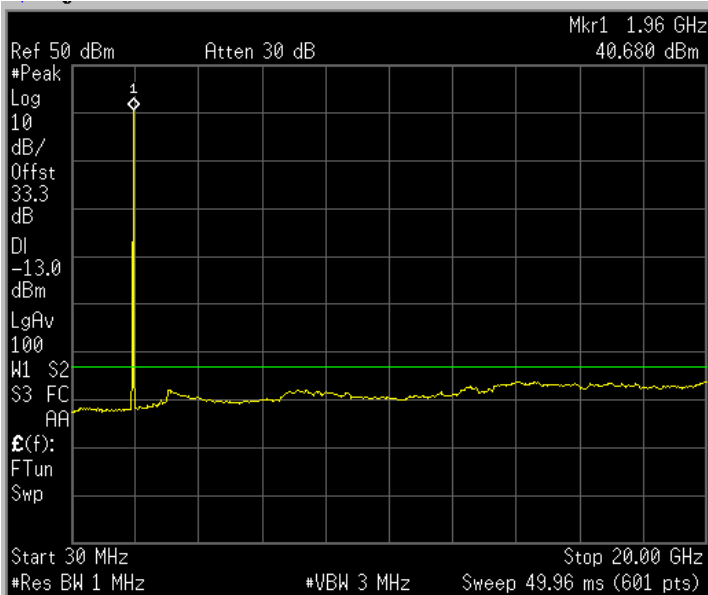


Spurs – W-CDMA – Uplink 150 kHz – 30 Mhz

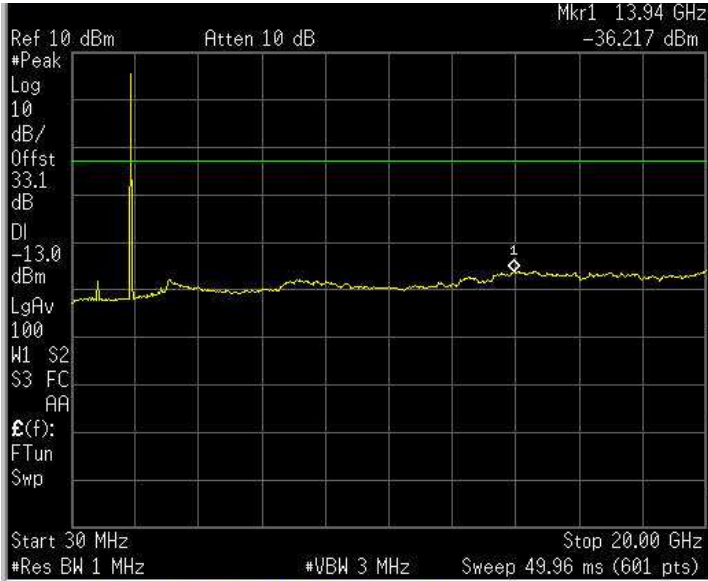


Test Data – Spurious Emissions at Antenna Terminals

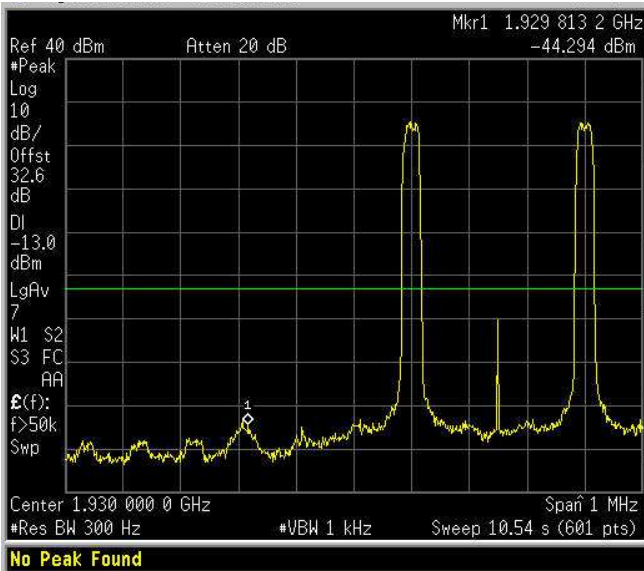
Spurs – W-CDMA – Downlink 30 MHz – 20 GHz



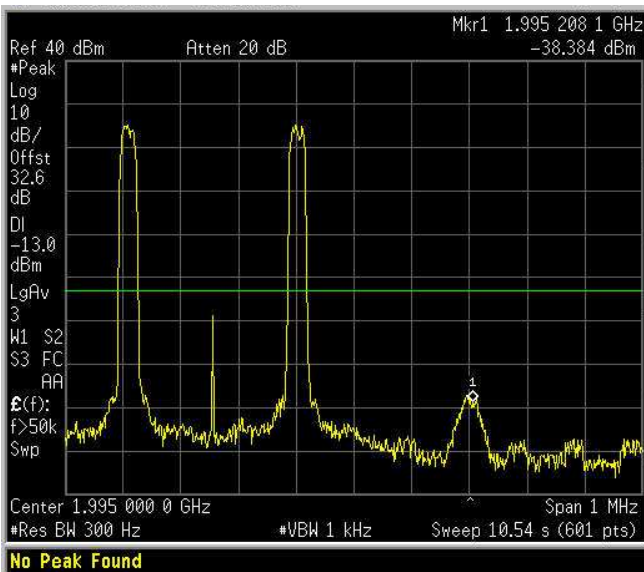
Spurs – W-CDMA – Uplink 30 Mhz – 20 GHz



Downlink – 30 kHz TDMA
LOW BAND EDGE

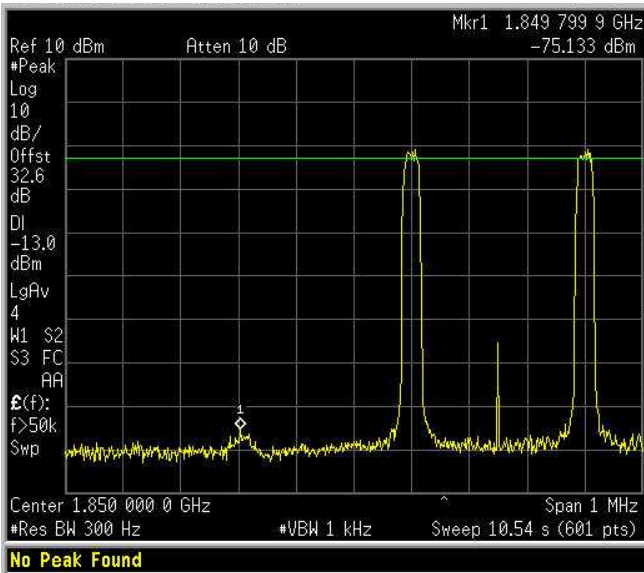


Downlink – 30 kHz TDMA
HIGH BAND EDGE

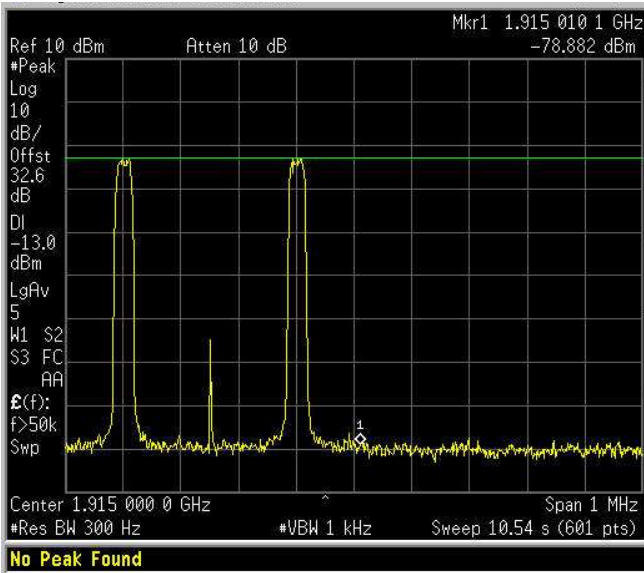


Test data, continued band edges:

Uplink – 30 kHz TDMA
LOW BAND EDGE

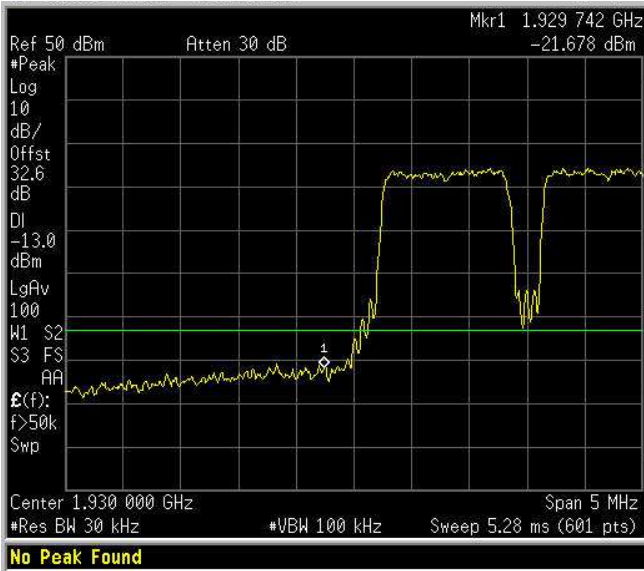


Uplink – 30 kHz TDMA
HIGH BAND EDGE

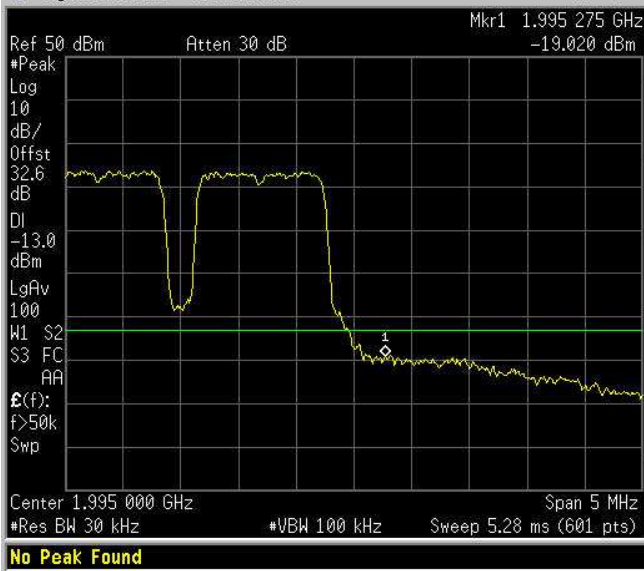


Test data, continued band edges Inter modulation

Downlink – 1.4 QAM
LOW BAND EDGE

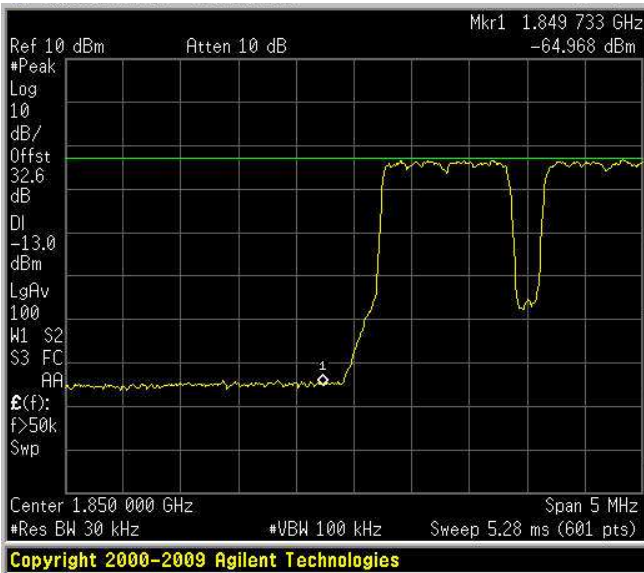


Downlink – 1.4 QAM
HIGH BAND EDGE

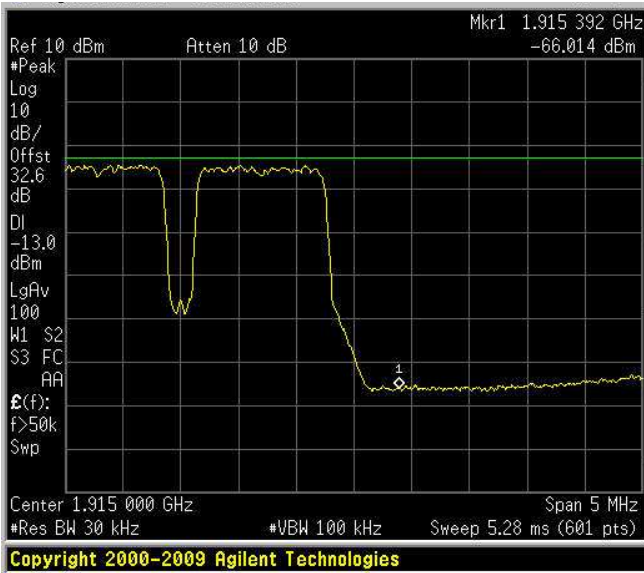


Test data, continued band edges:

Uplink – 1.4 QAM
LOW BAND EDGE

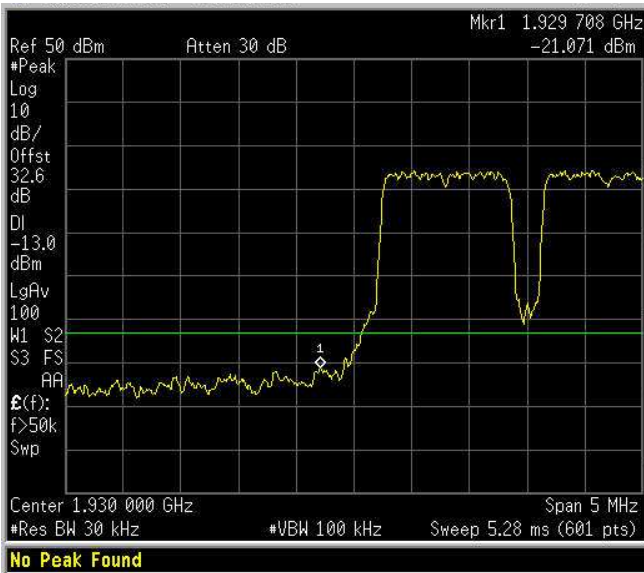


Uplink – 1.4 QAM
HIGH BAND EDGE

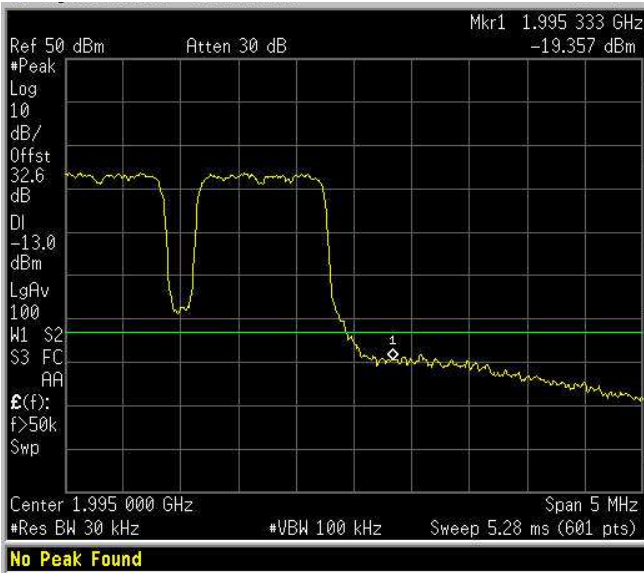


Test data, continued band edges:

Downlink – 1.4 QPSK
LOW BAND EDGE



Downlink – 1.4 QPSK
HIGH BAND EDGE





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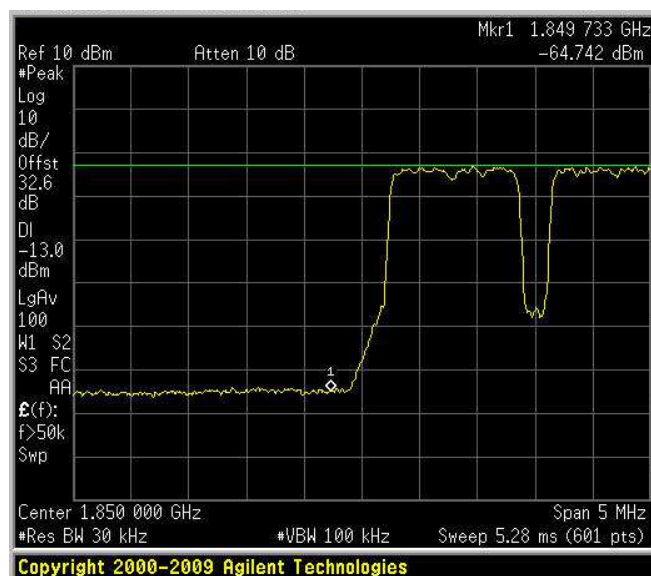
Appendix B: Block diagrams

Report Number: **210165-7TRFWL**

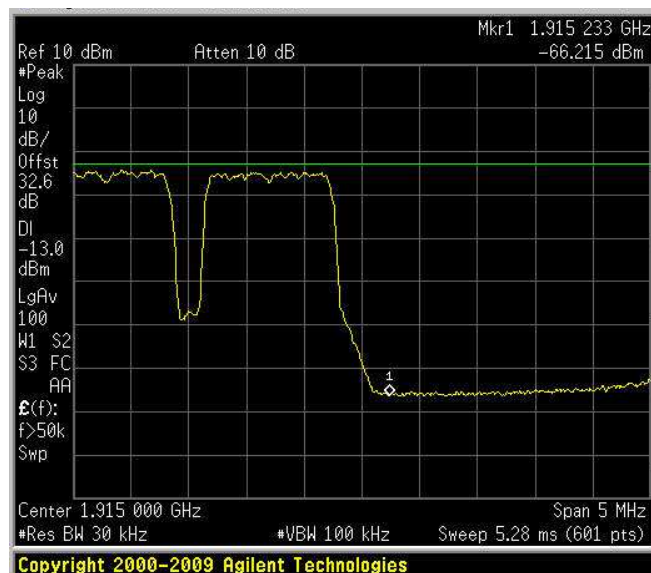
Specification: FCC 24 Subpart E

Test data, continued band edges:

Uplink – 1.4 QPSK
LOW BAND EDGE

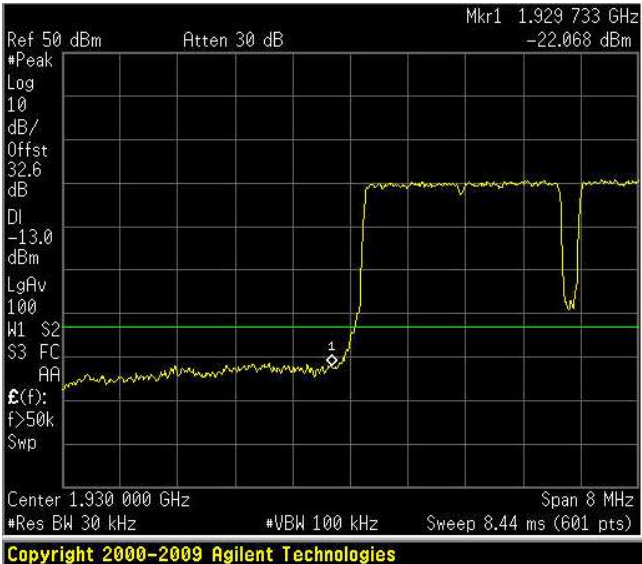


Uplink – 1.4 QPSK
HIGH BAND EDGE



Test data, continued band edges:

Downlink – 3 QAM
LOW BAND EDGE



Downlink – 3 QAM
HIGH BAND EDGE





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Appendix B: Block diagrams

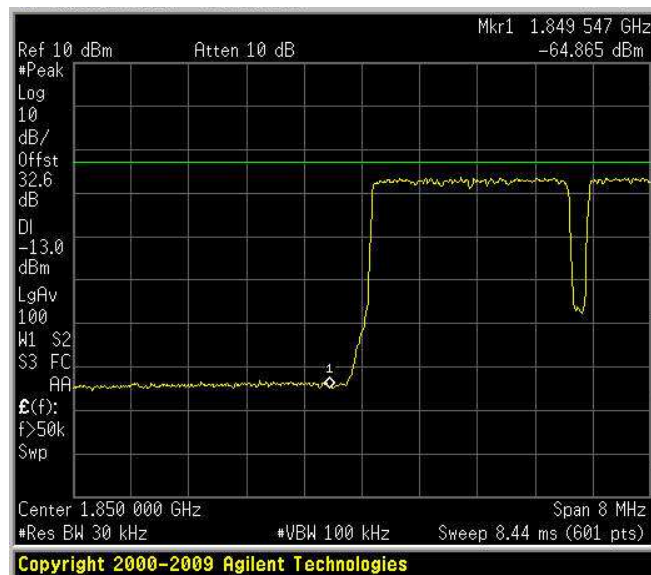
Report Number: **210165-7TRFWL**

Specification: FCC 24 Subpart E

Test data, continued band edges:

Uplink – 3 QAM

LOW BAND EDGE



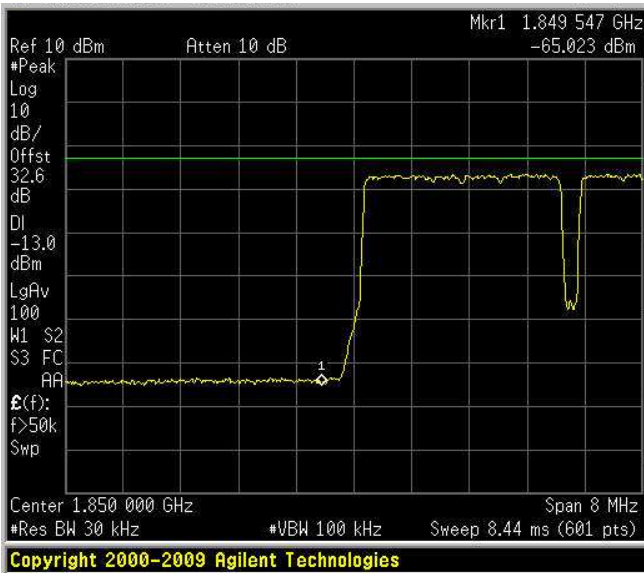
Uplink – 3 QAM

HIGH BAND EDGE



Test data, continued band edges:

Uplink – 3 QPSK
LOW BAND EDGE



Uplink – 3 QPSK
HIGH BAND EDGE

