

6. Spurious Emissions at Antenna Terminal

6.1. Limit

FCC §22.917(a), 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.

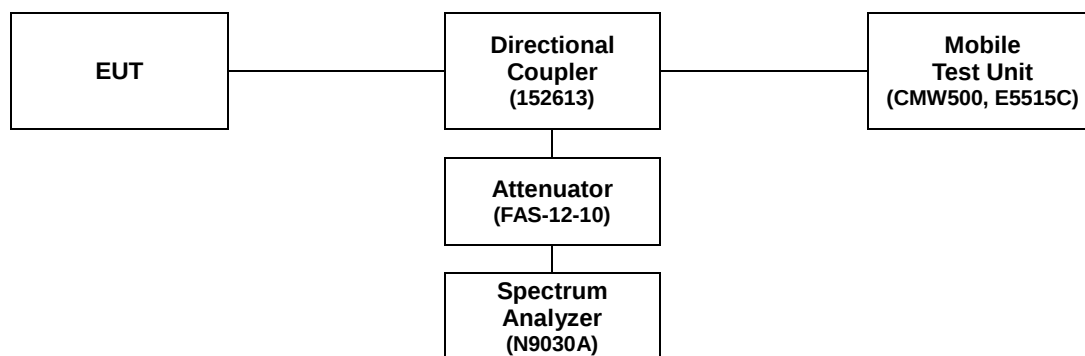
FCC §24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

FCC §27.53(g), except as otherwise specified below, for operations in the 1710-1755 MHz, 2110-2155 MHz, 2000-2020 MHz, 2180-2200 MHz, 1915-1920 MHz, and 1995-2000 MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least $43 + 10 \log_{10}(P)$ dB.

FCC §27.53(h), when an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

6.2. Test Procedure

1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 1 MHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



6.2.1 Actual equipment used for Peak-Average Ratio

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due.
Signal Generator	Agilent	E8257d	MY51501169	Jul. 23, 2013	Annual	Jul. 23, 2014
Spectrum Analyzer	Agilent	N9030A	US51350132	Oct. 08, 2013	Annual	Oct. 08, 2014
Spectrum Analyzer	R&S	FSV30	100768	Mar. 27, 2014	Annual	Mar. 27, 2015
Mobile Test Unit	Agilent	E5515C	GB43345198	Mar. 28, 2014	Annual	Mar. 28, 2015
Mobile Test Unit	R&S	CMW500	144035	Mar. 03, 2014	Annual	Mar. 03, 2015
Directional Coupler	KRYTAR	152613	140972	Jun. 07, 2013	Annual	Jun. 07, 2014
Attenuator	MCLI	FAS-12-10	1	Jun. 19, 2013	Annual	Jun. 19, 2014
DC Power Supply	Agilent	U8002A	MY50060028	Mar. 27, 2014	Annual	Mar. 27, 2015

Note;

- Mobile test unit(E5515C) is used to test for GSM 850 & 1900
- Mobile test unit(CMW500) is used to test for WCDMA 850 & 1900 and LTE band 7

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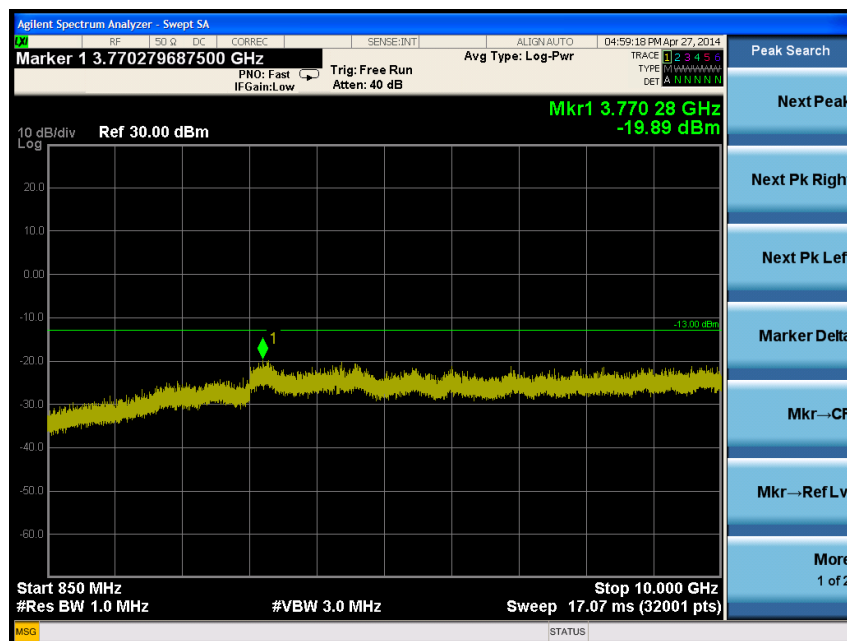
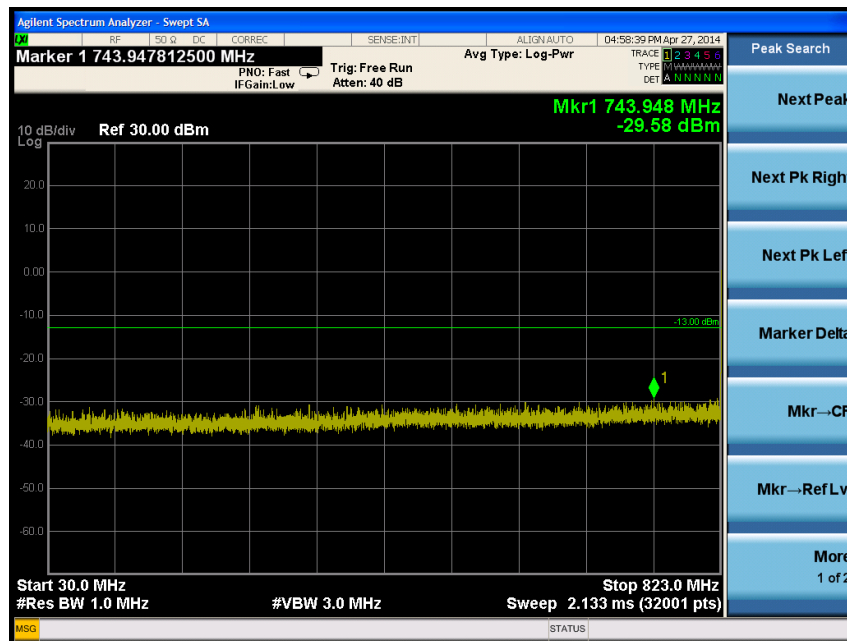
6.3. Test Results

Ambient temperature : (24 ± 2) °C
Relative humidity : 47 % R.H.

Please refer to the following plots.

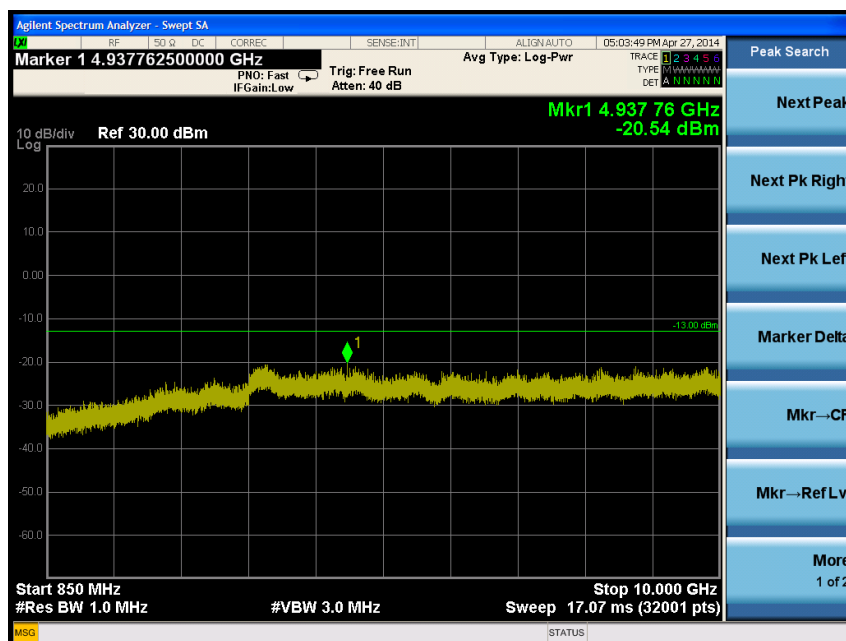
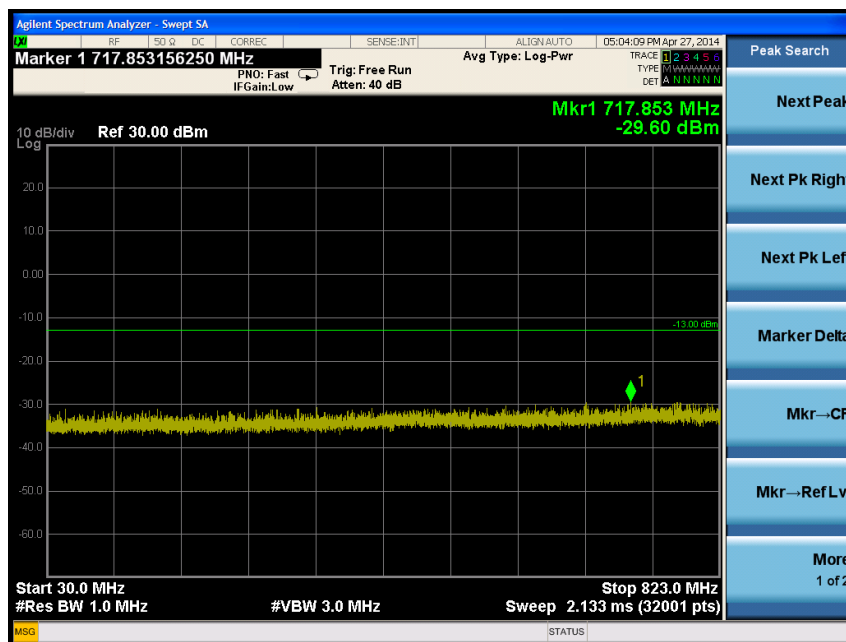
GSM850

Low Channel



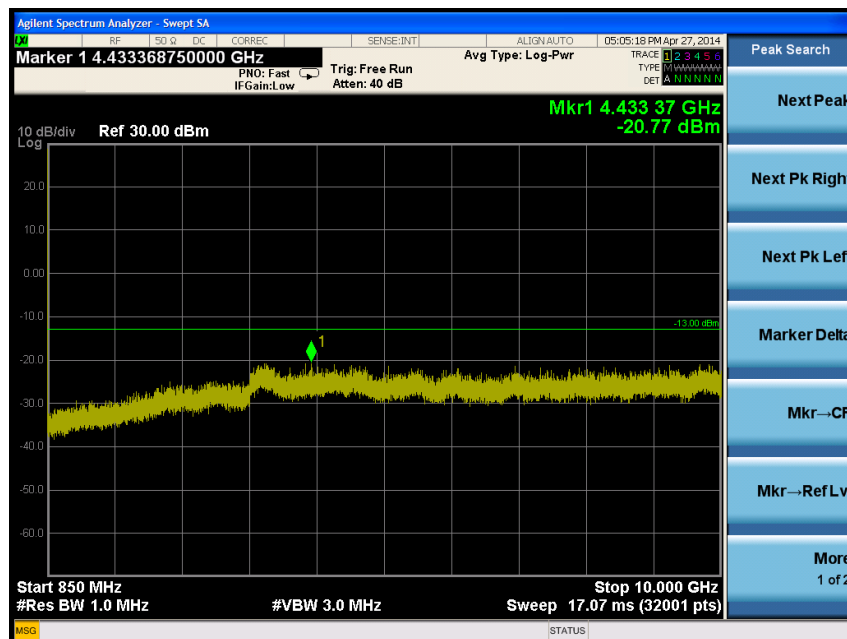
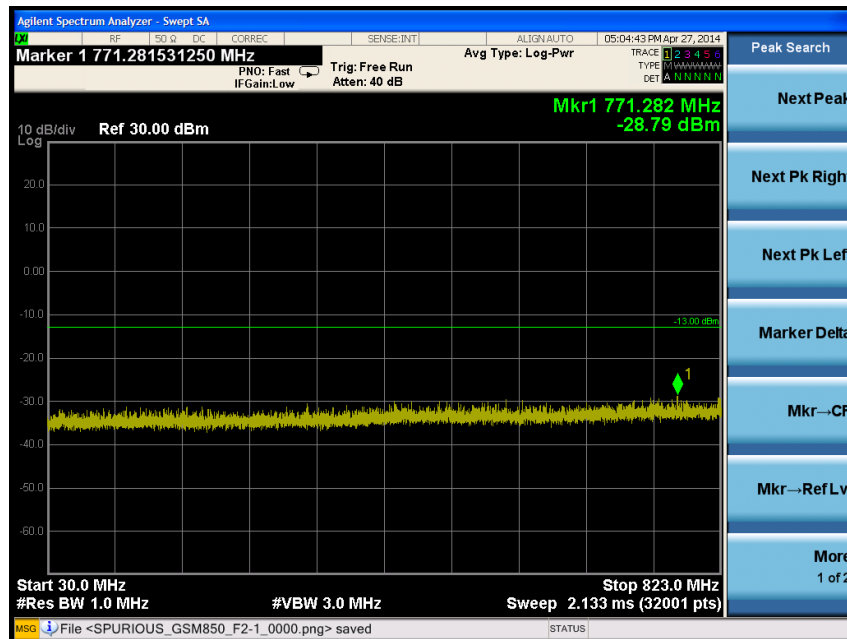
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Middle Channel



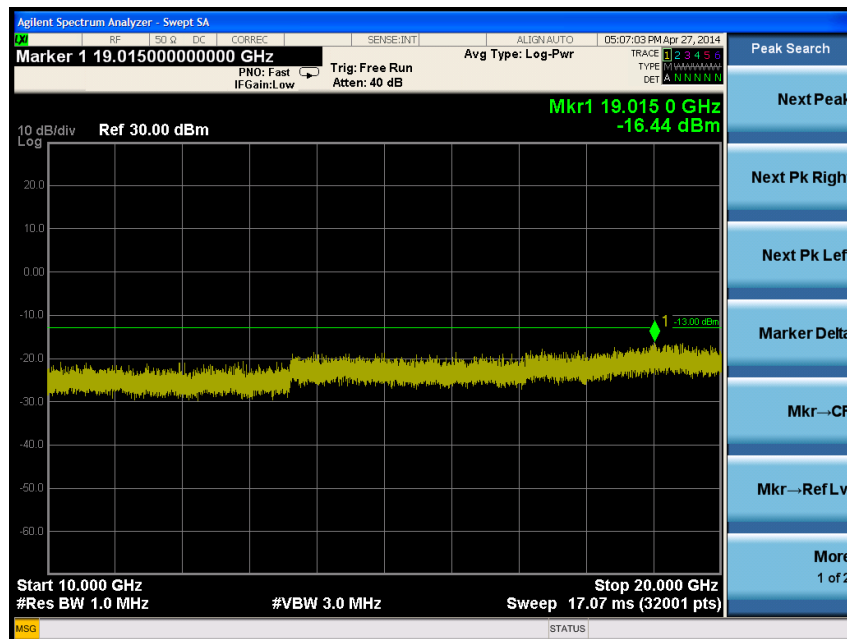
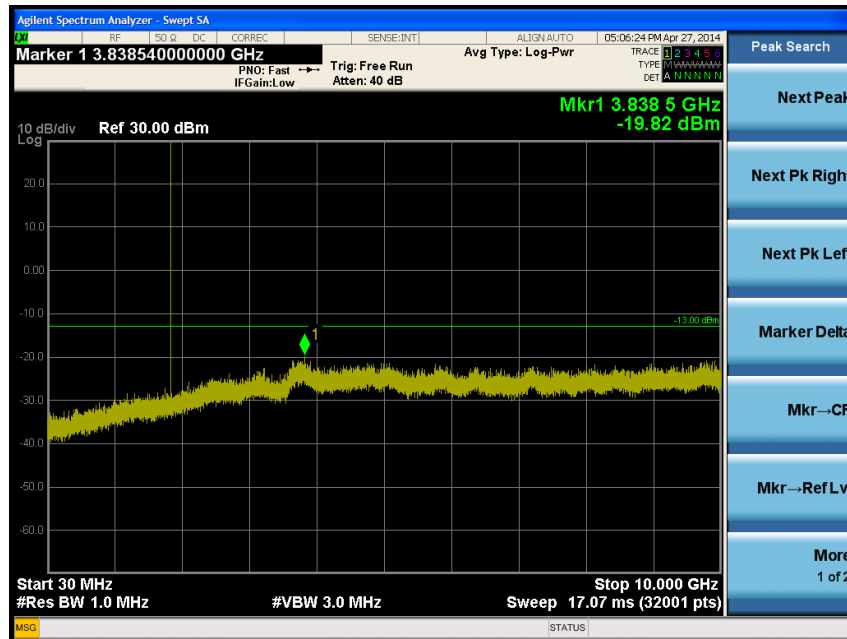
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High Channel



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GSM1900 Low Channel



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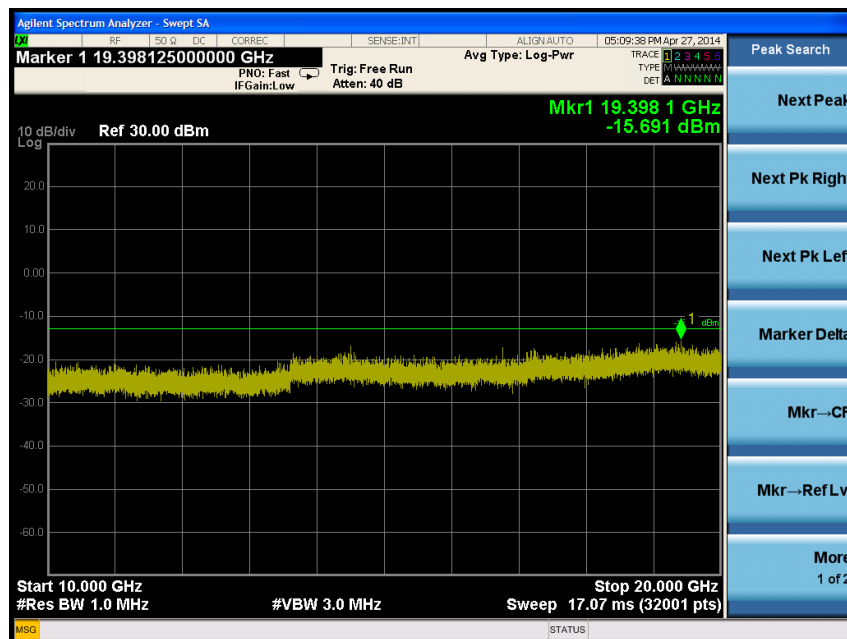
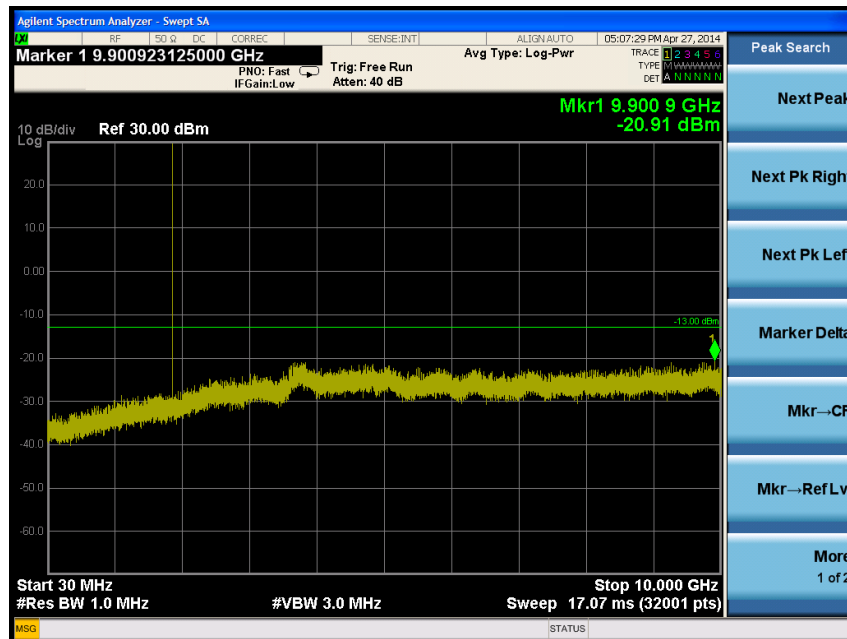
<http://www.sgsgroup.kr>

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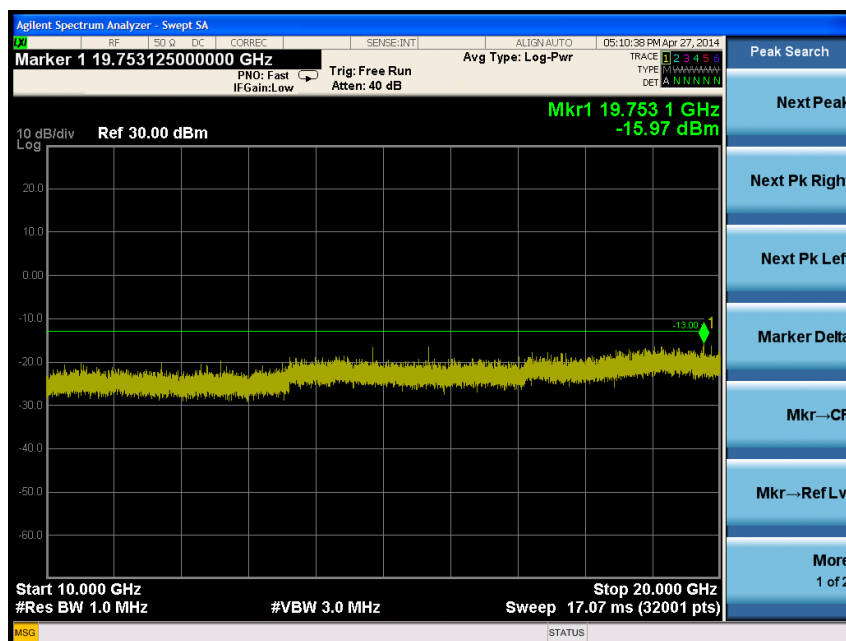
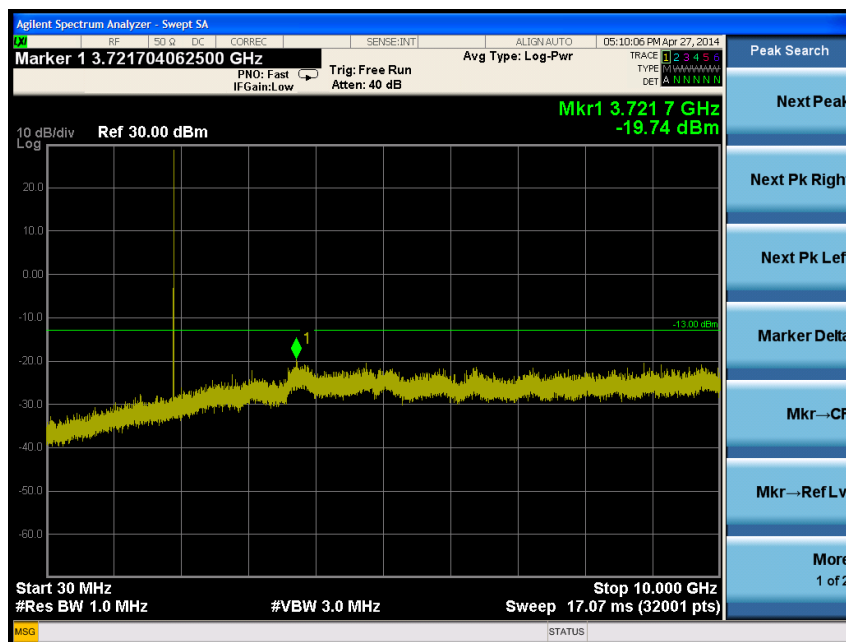
A4(210 mm x 297 mm)

Middle Channel



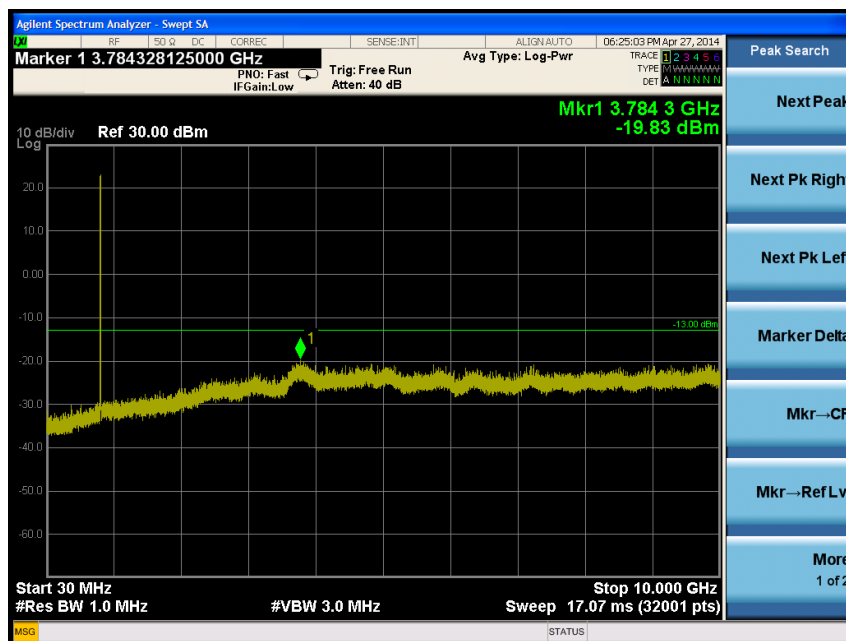
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High Channel

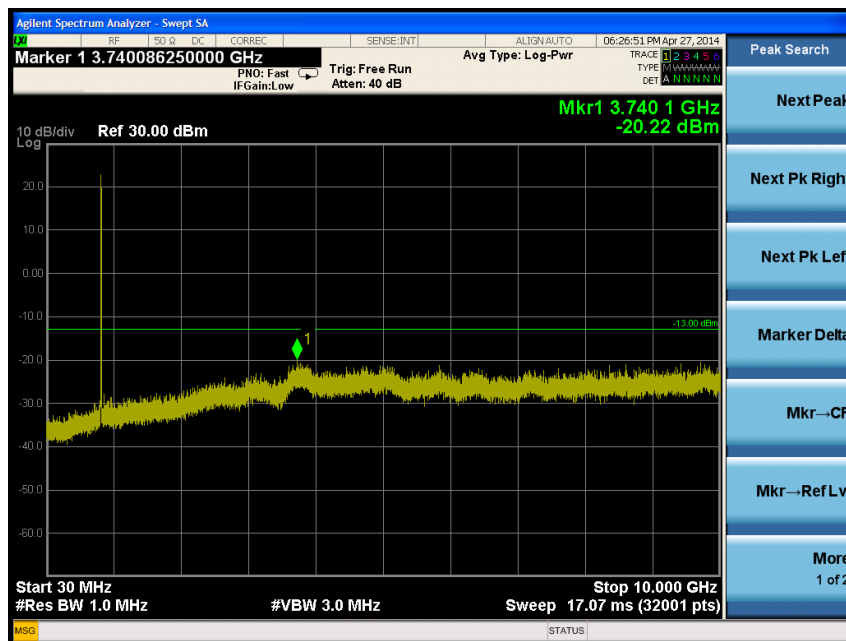


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WCDMA850 Low Channel

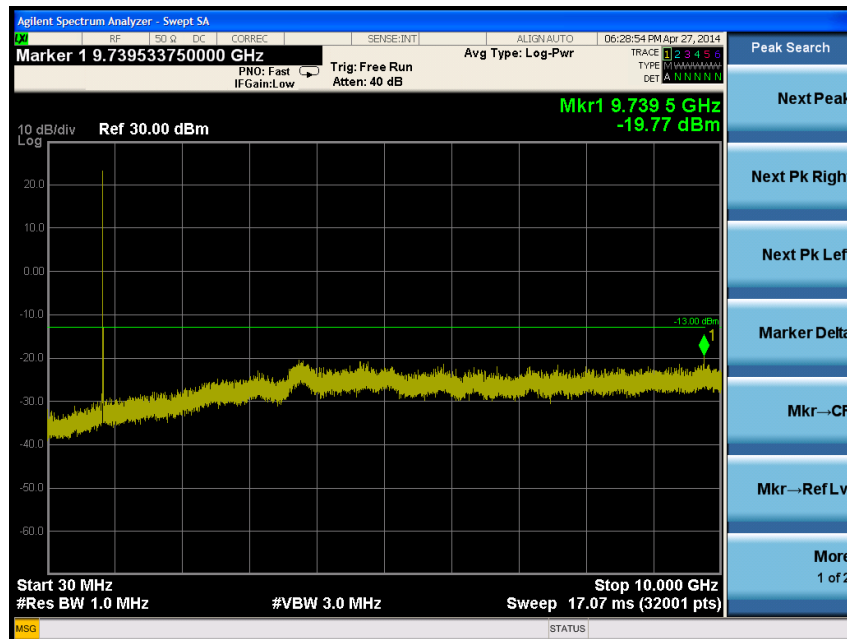


Middle Channel



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High Channel



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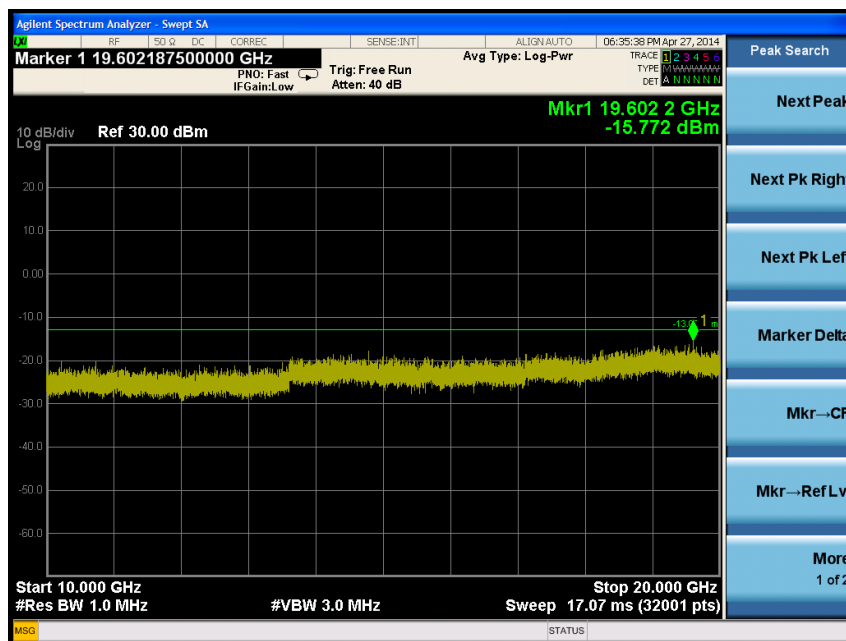
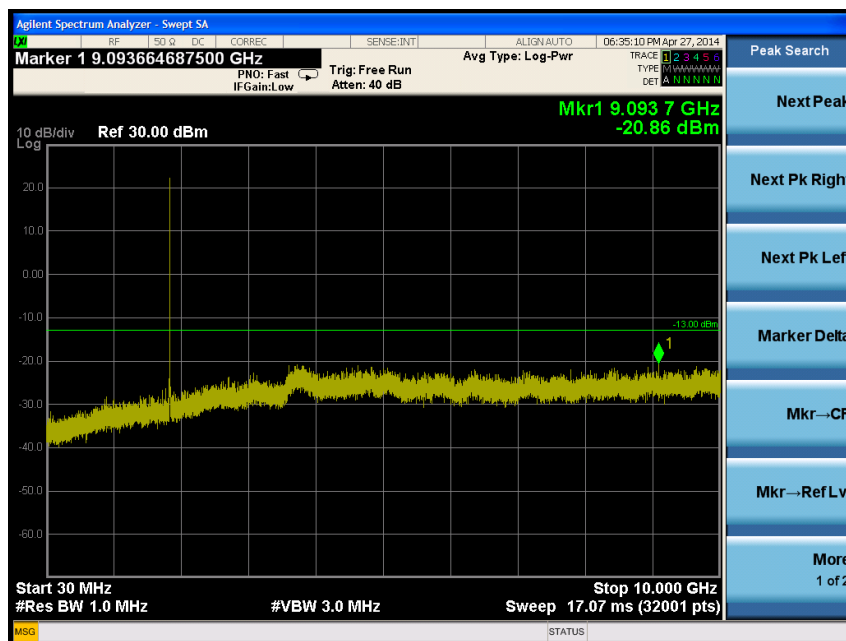
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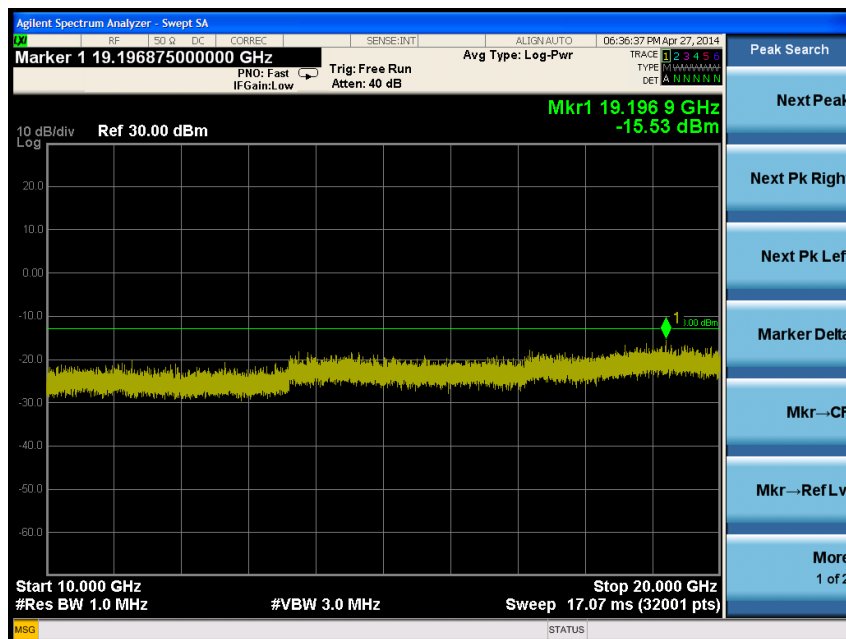
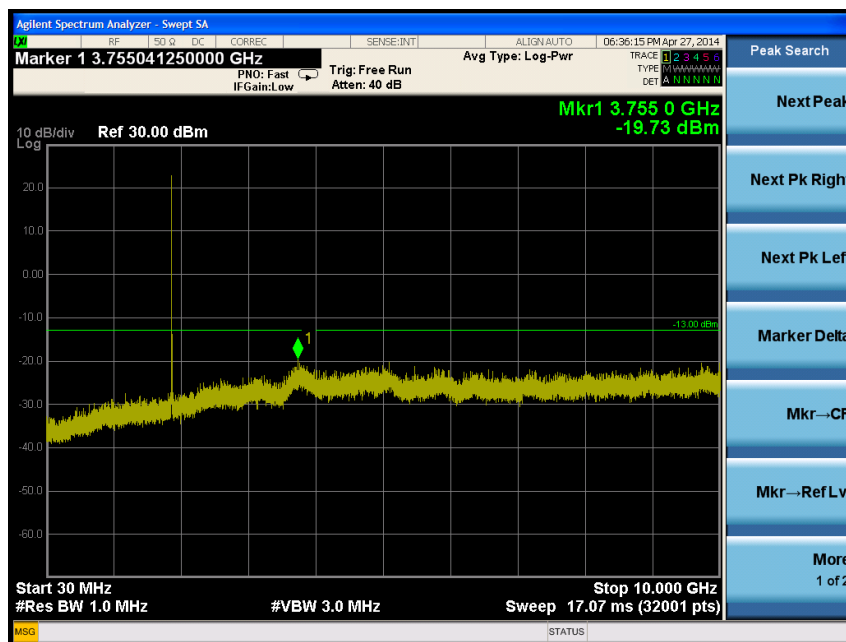
A4(210 mm x 297 mm)

WCDMA1900 Low Channel



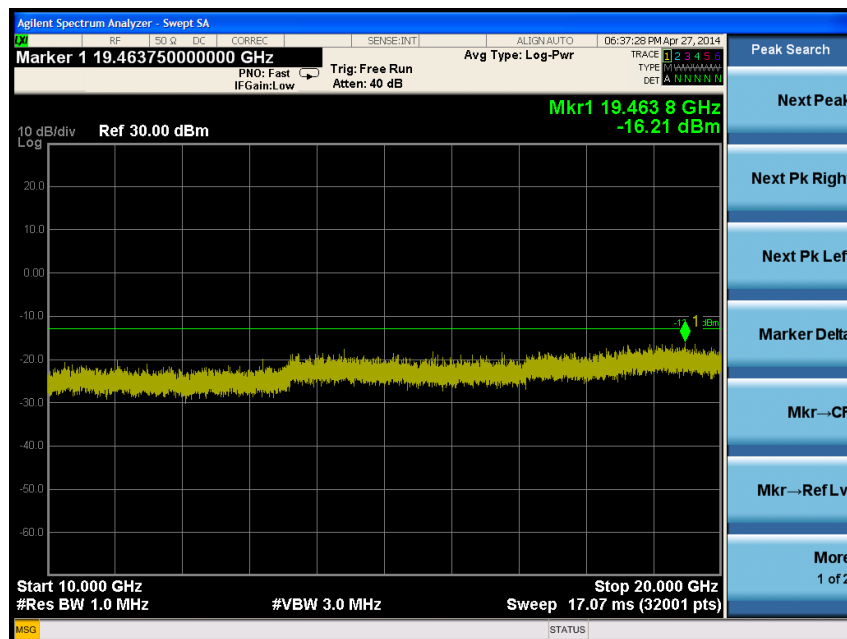
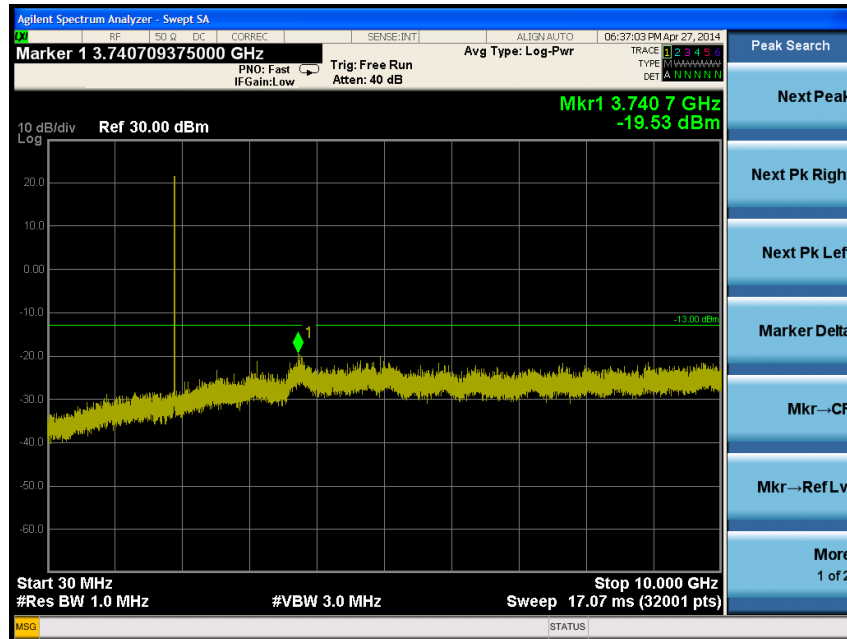
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Middle Channel



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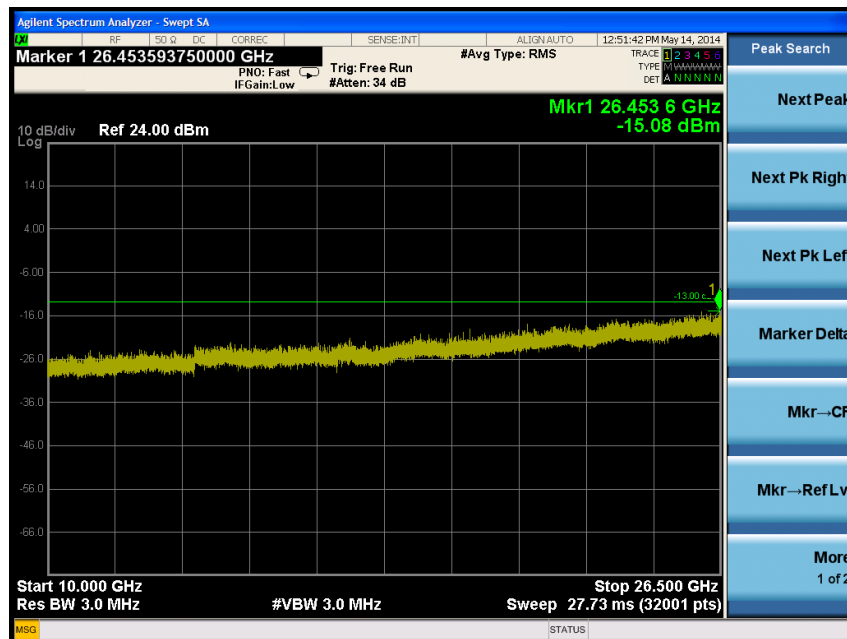
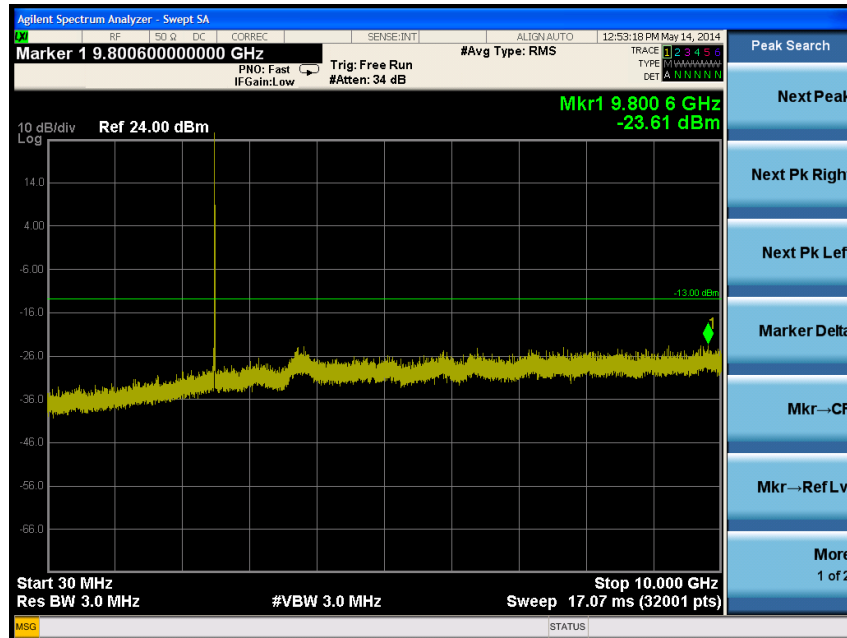
High Channel



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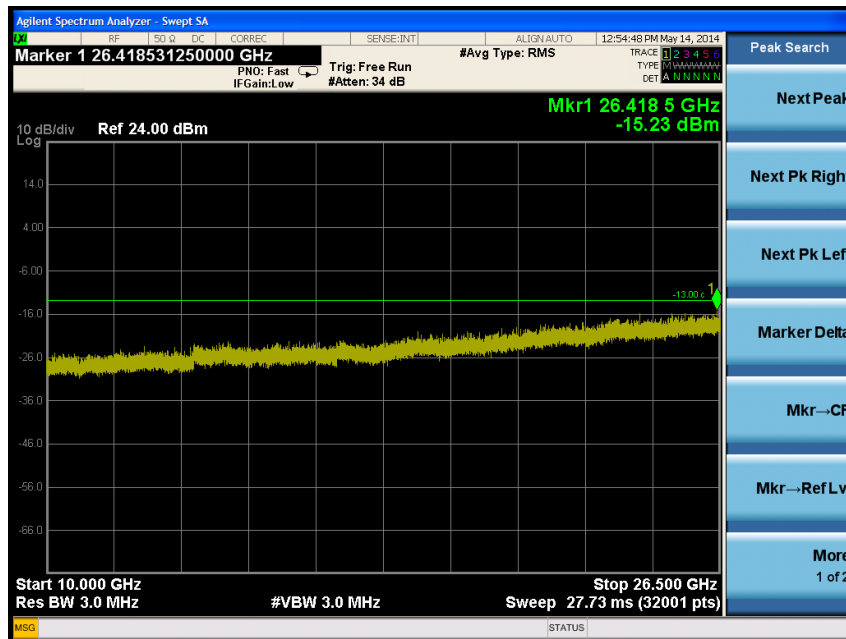
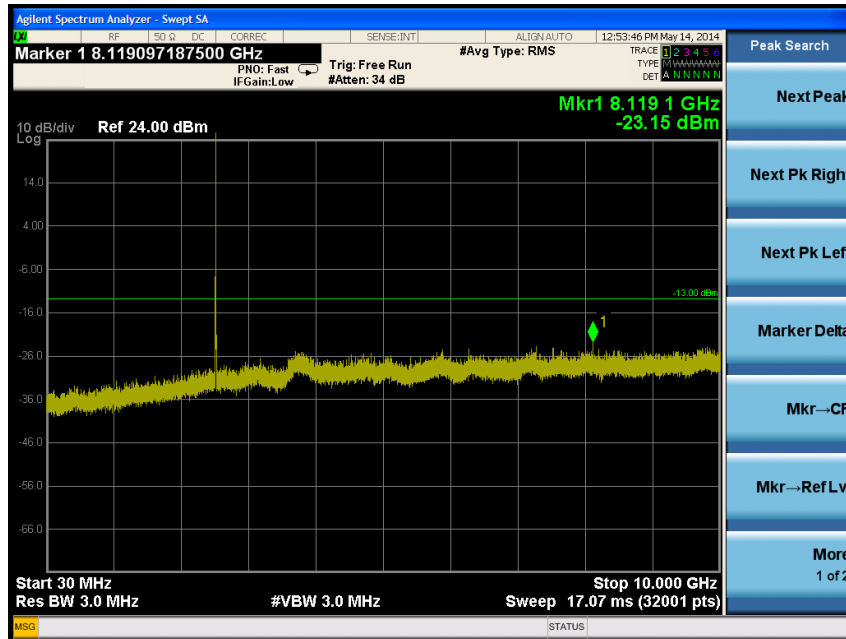
LTE band 7 (5 MHz – QPSK_RB 1_Offset 0)

Low Channel



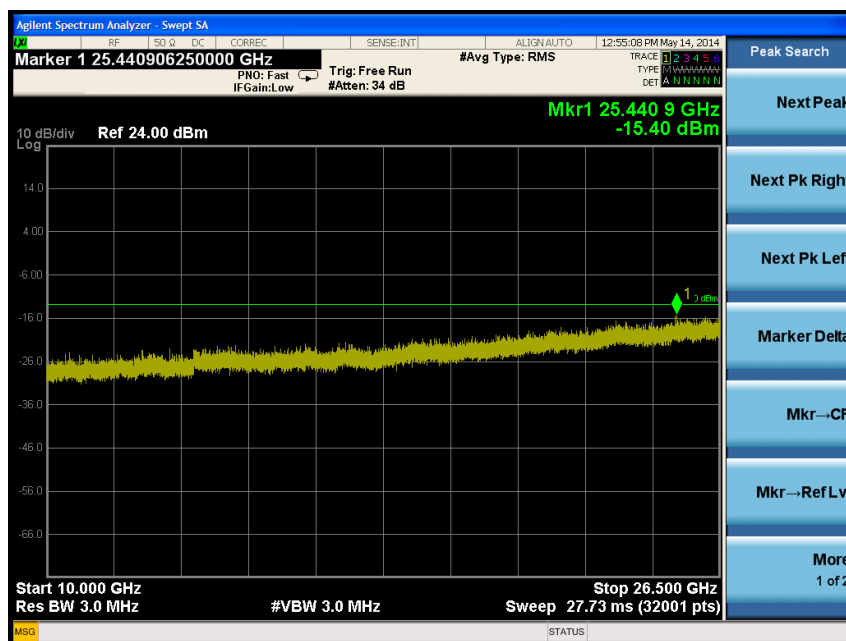
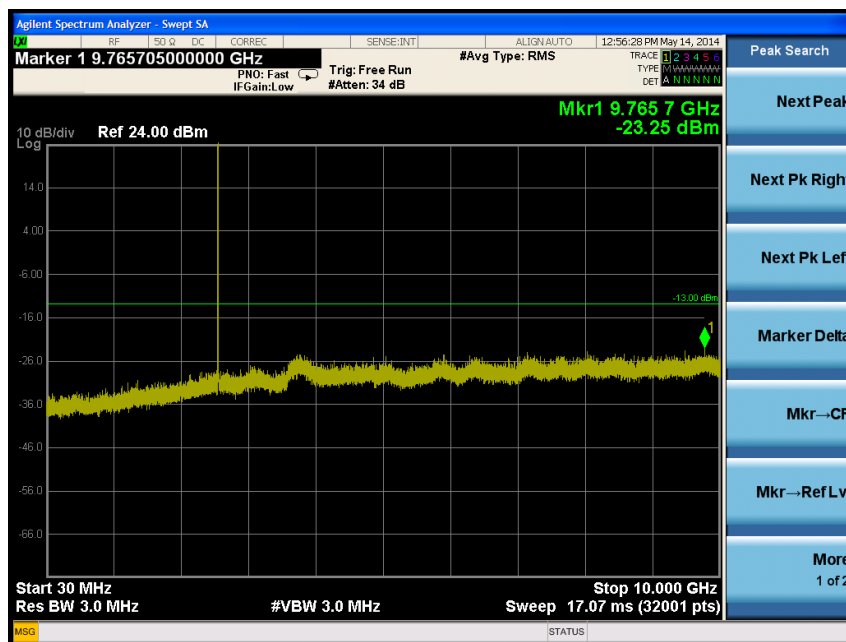
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Middle Channel



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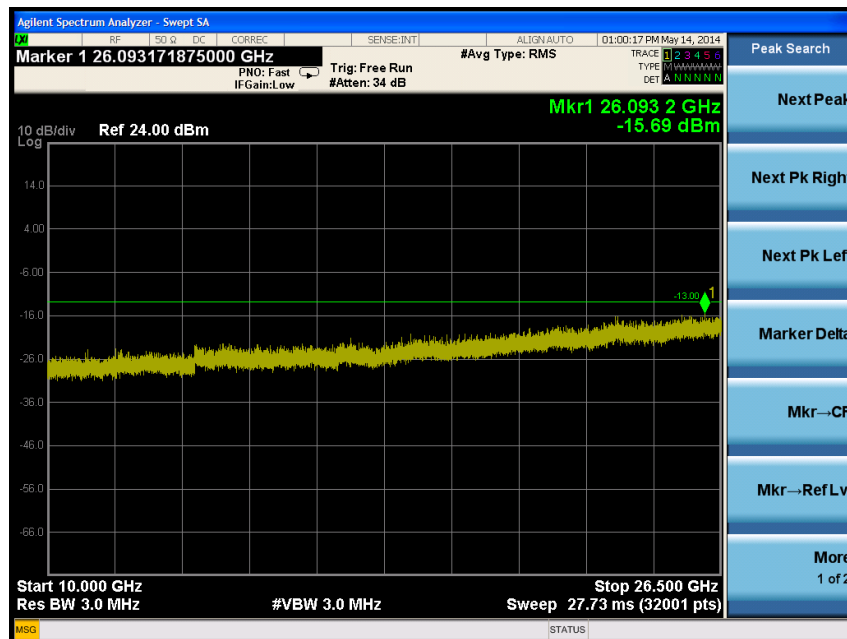
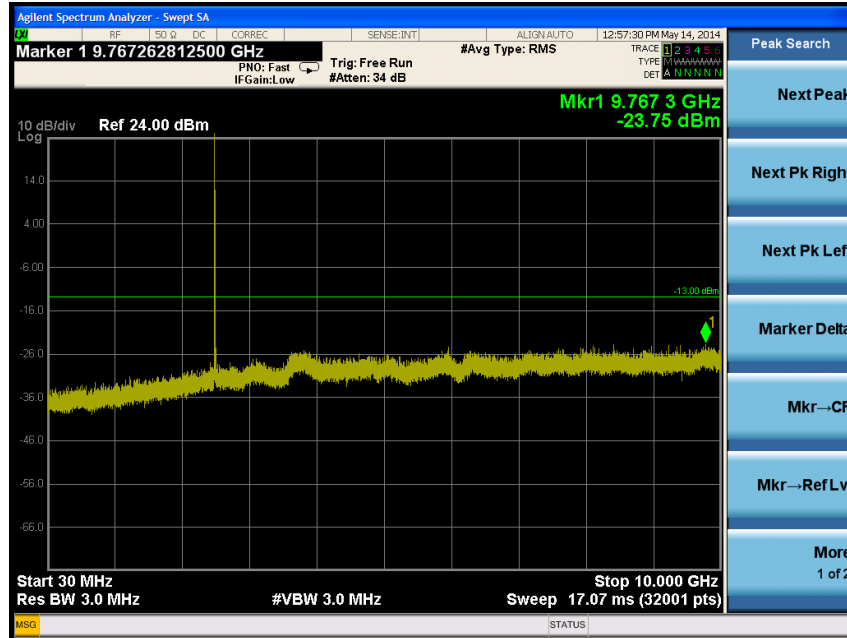
High Channel



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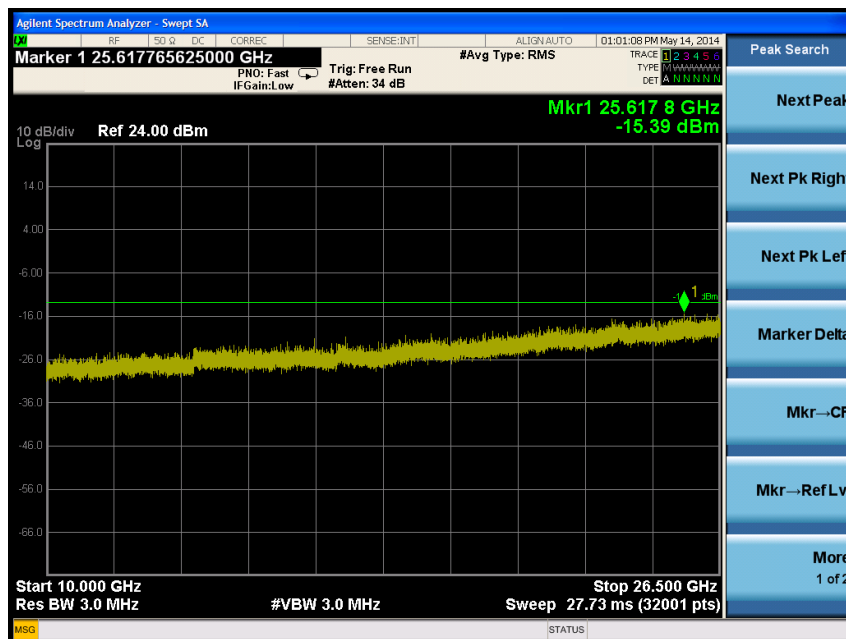
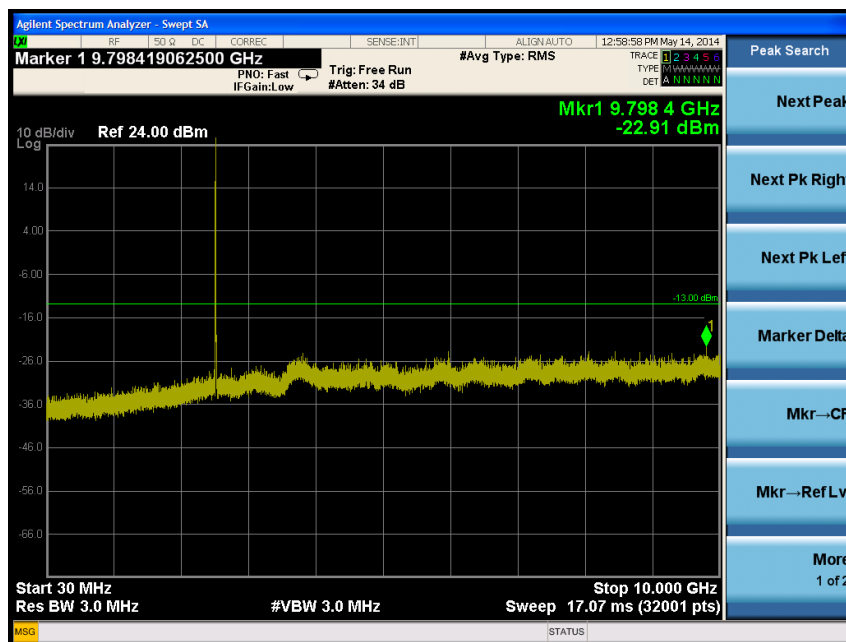
LTE band 7 (10 MHz – QPSK_RB 1_Offset 0)

Low Channel



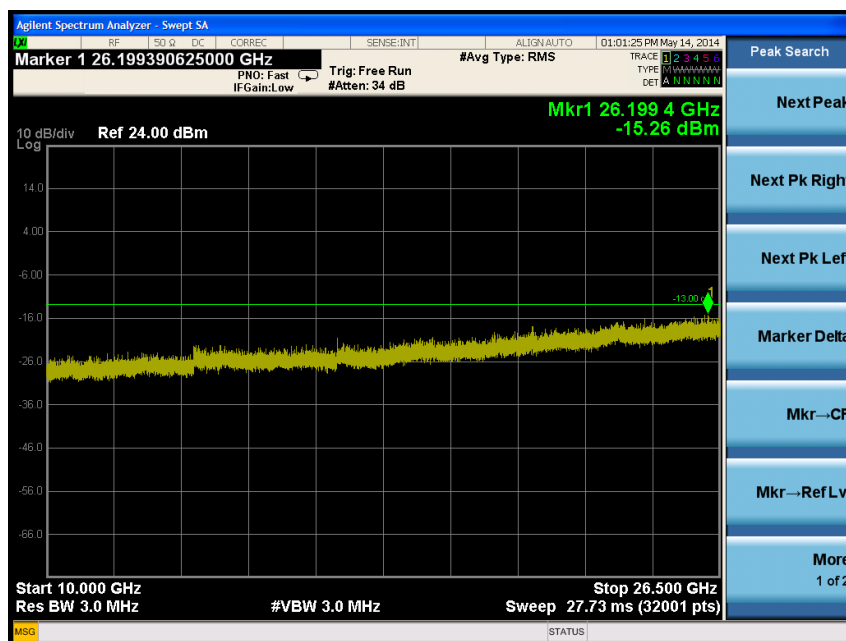
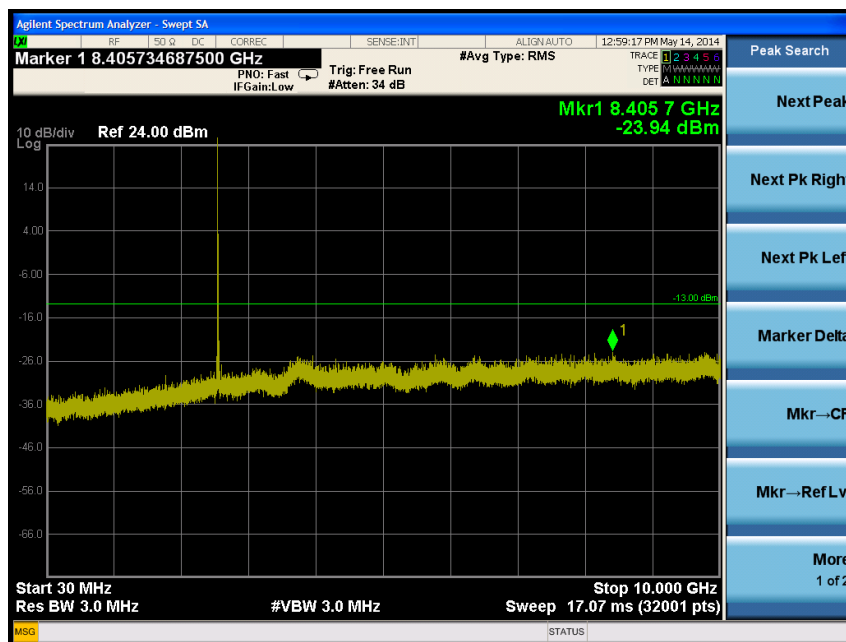
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Middle Channel



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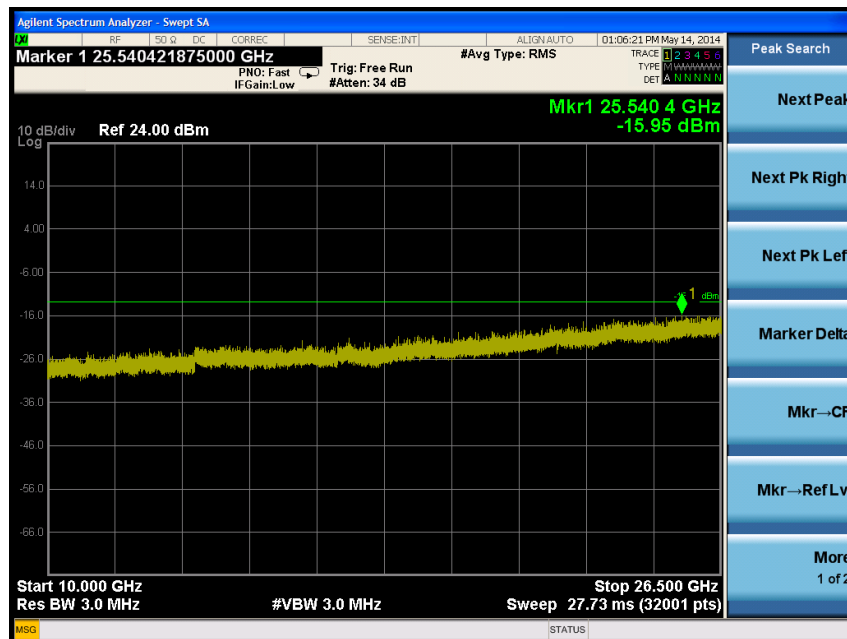
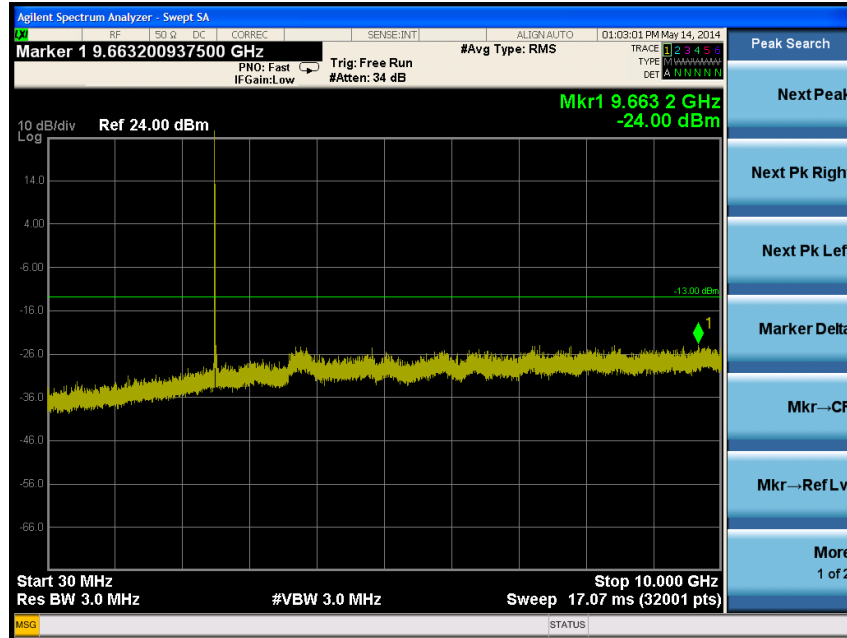
High Channel



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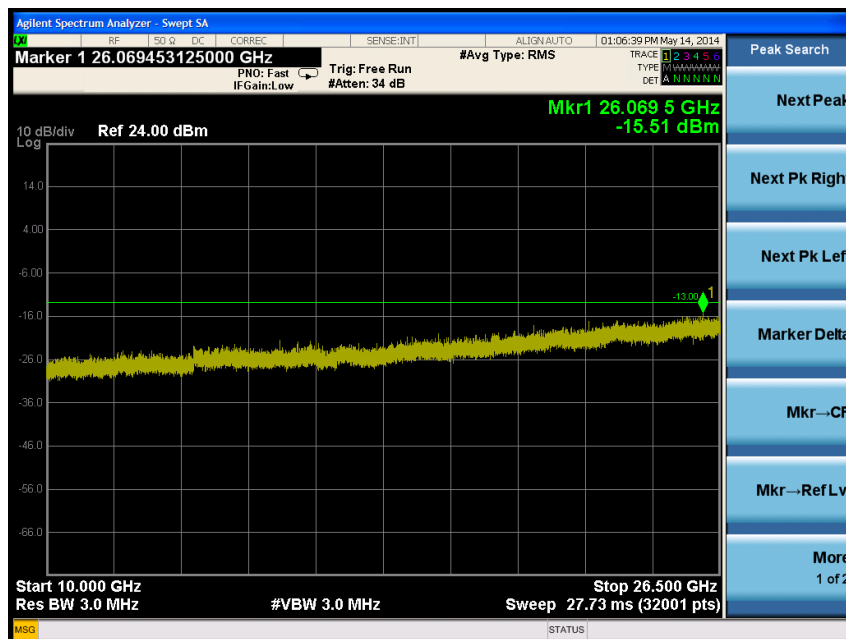
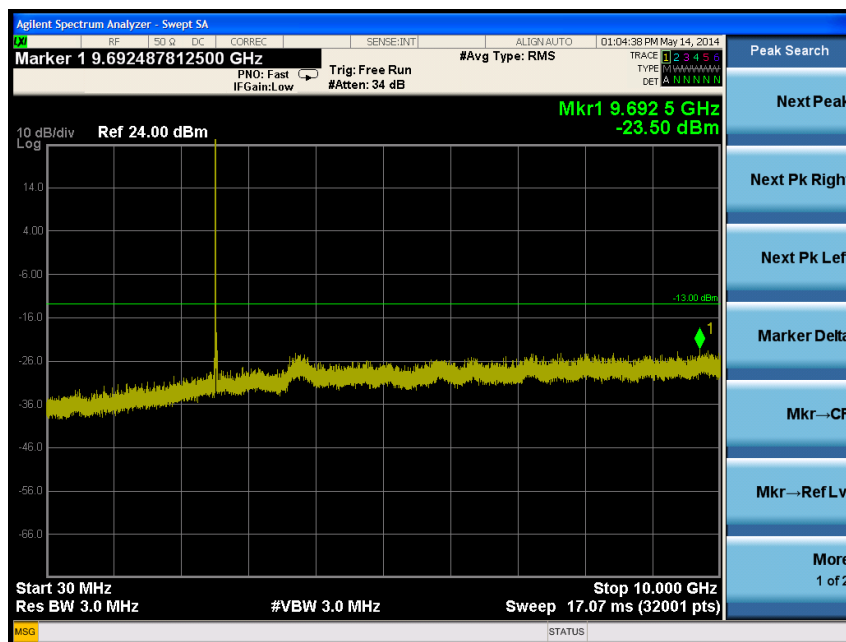
LTE band 7 (15 MHz – QPSK_RB 1_Offset 0)

Low Channel



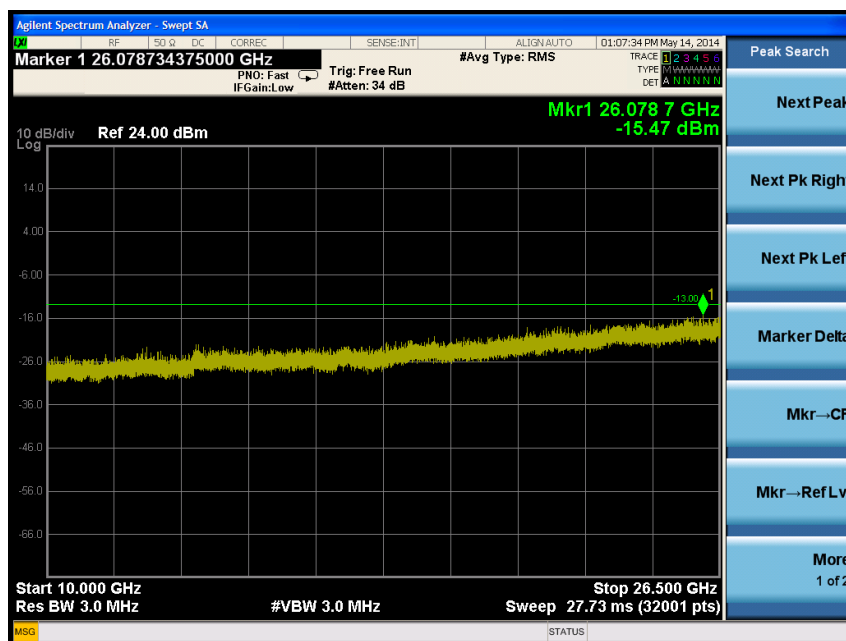
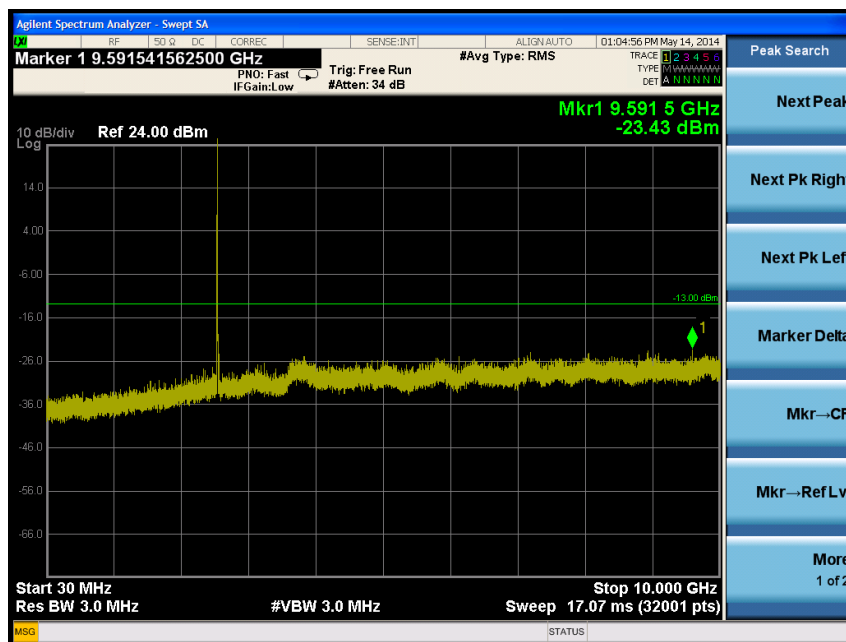
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Middle Channel



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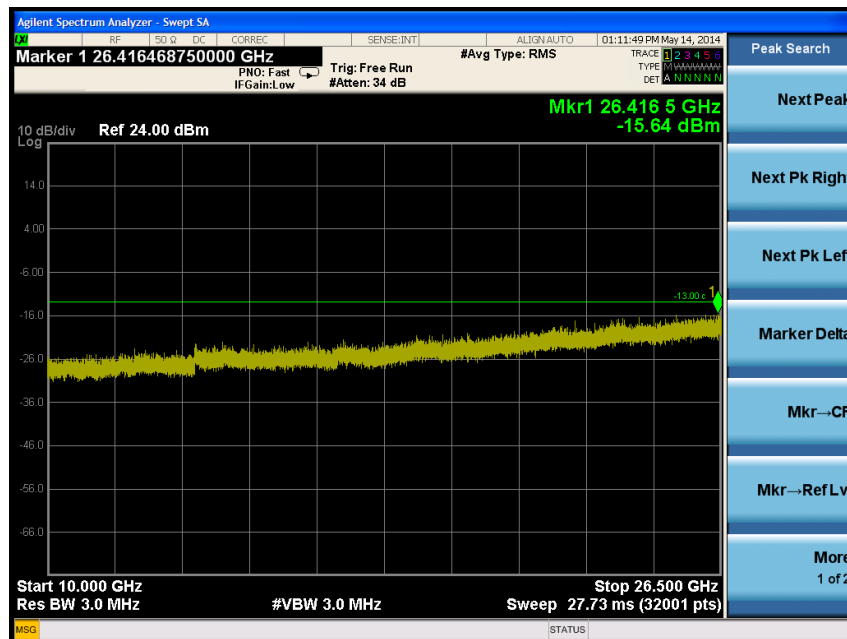
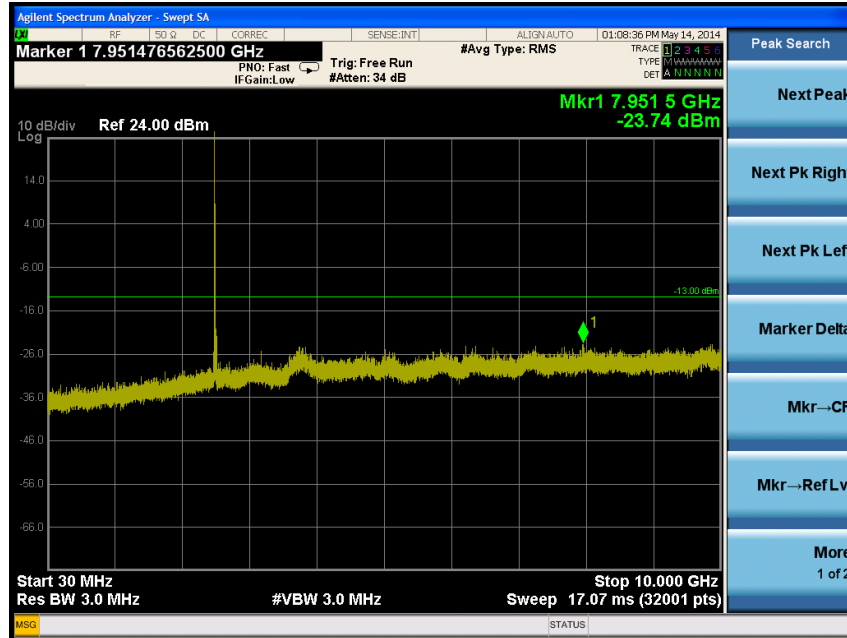
High Channel



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LTE band 7 (20 MHz – QPSK_RB 1_Offset 0)

Low Channel



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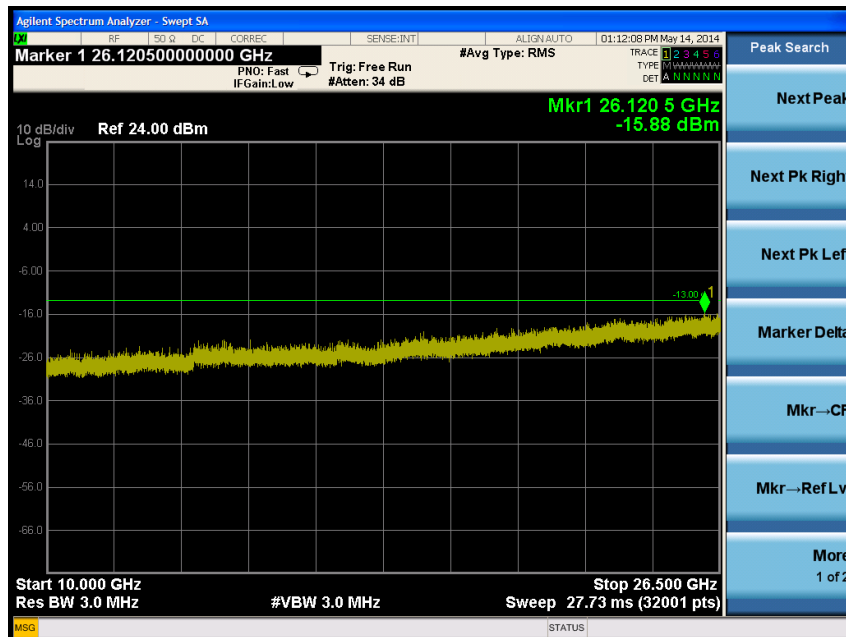
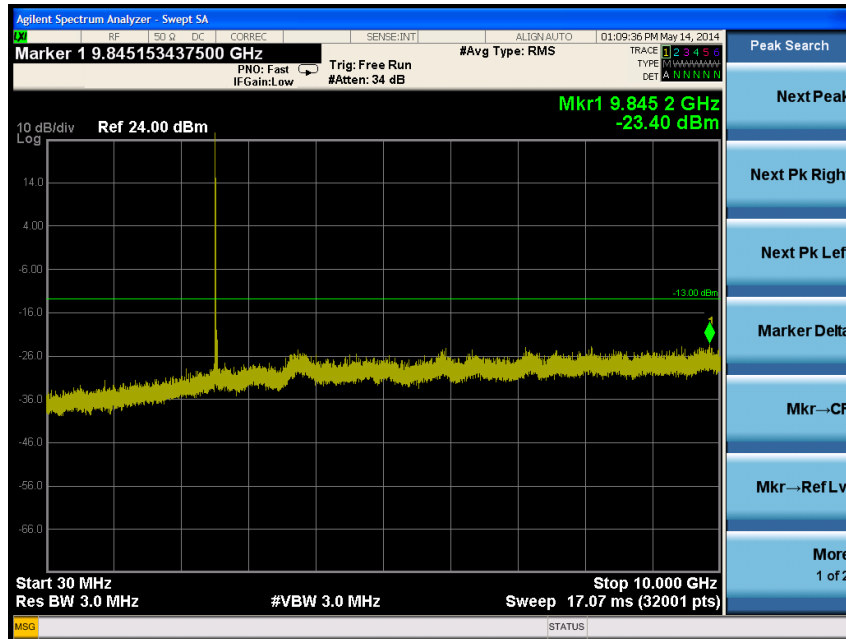
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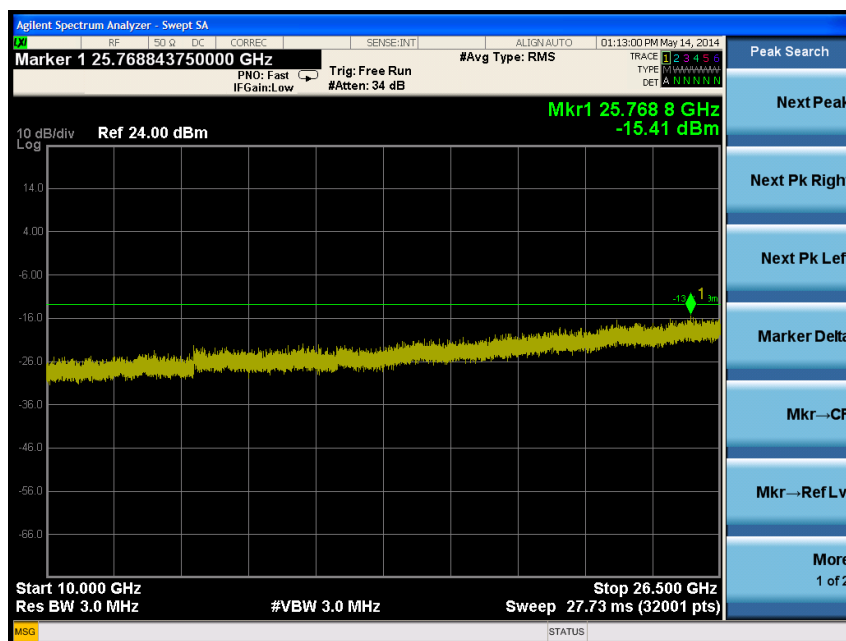
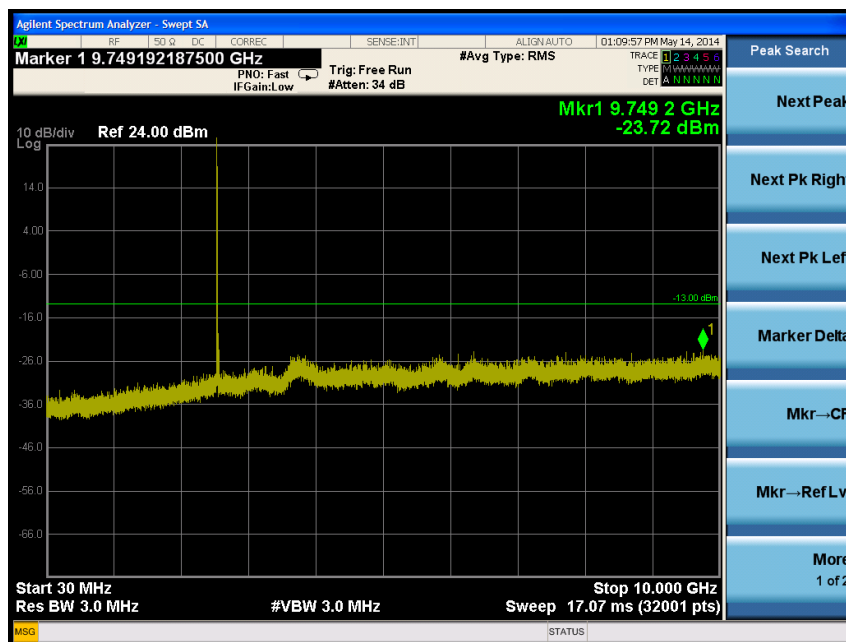
A4(210 mm x 297 mm)

Middle Channel



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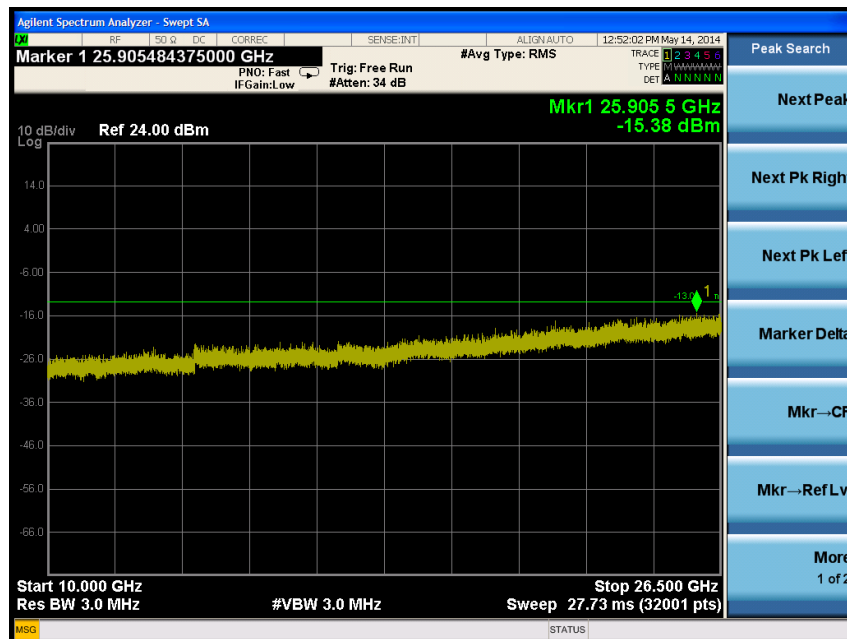
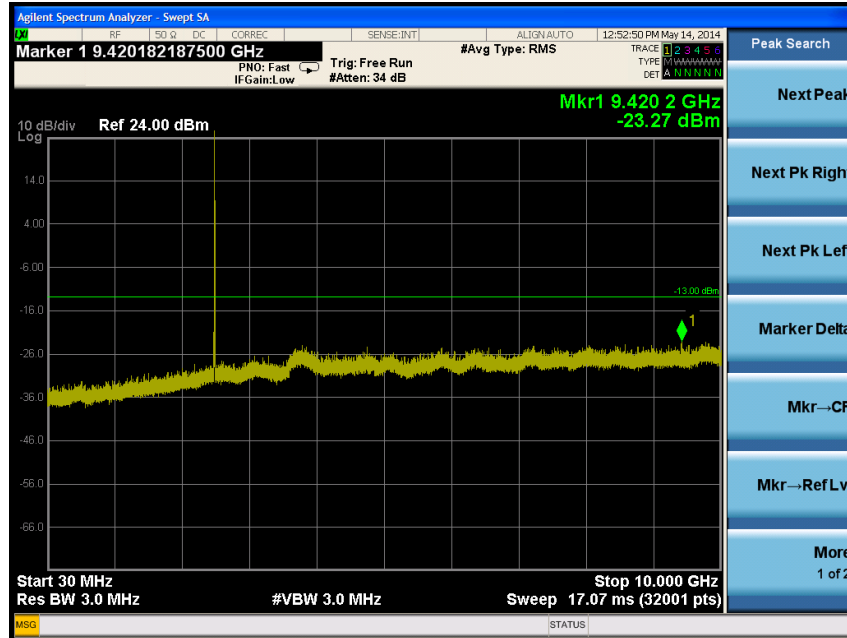
High Channel



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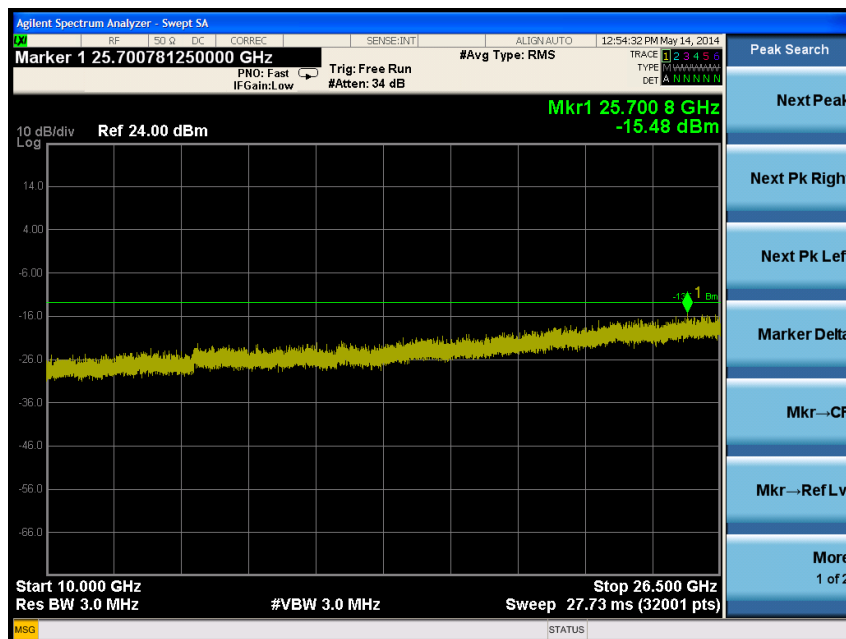
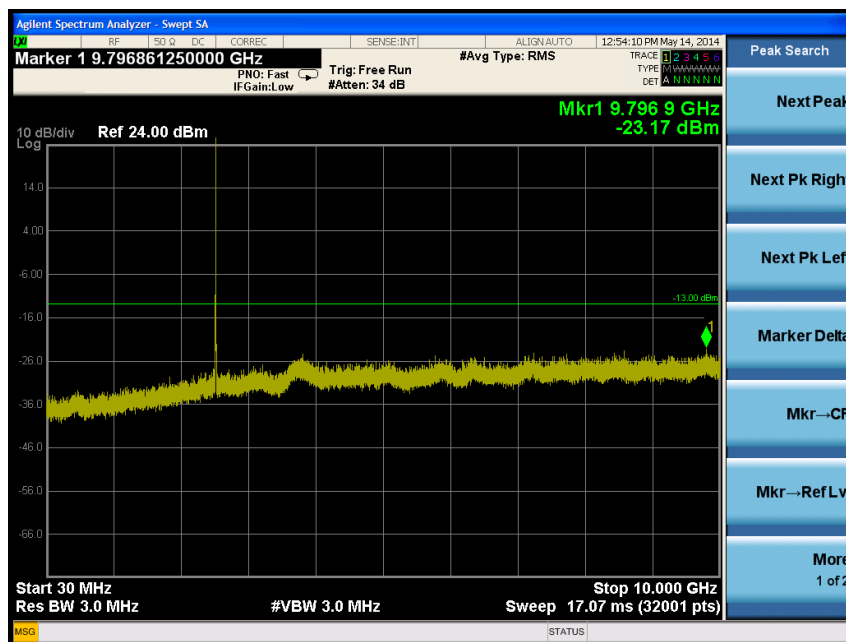
LTE band 7 (5 MHz – 16QAM_RB 1_Offset 0)

Low Channel



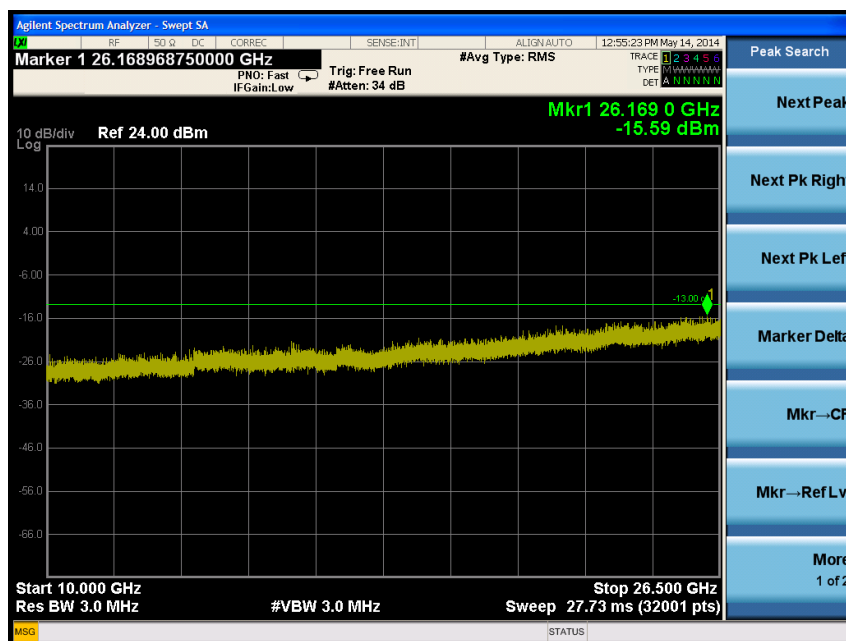
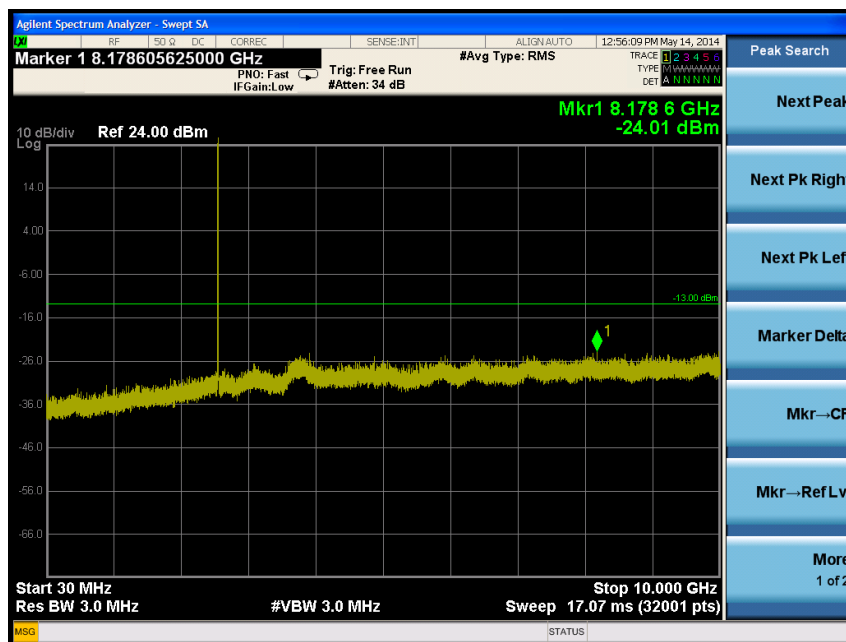
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Middle Channel



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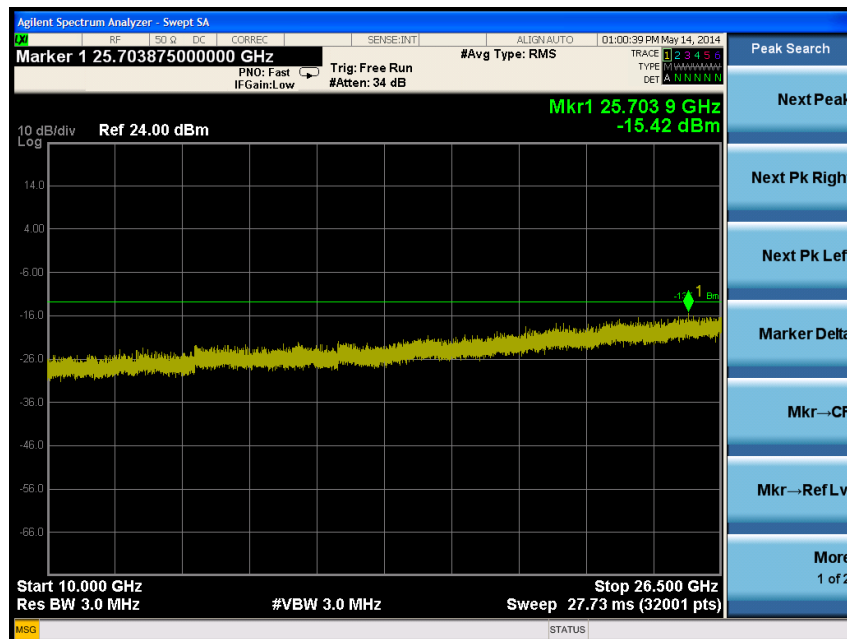
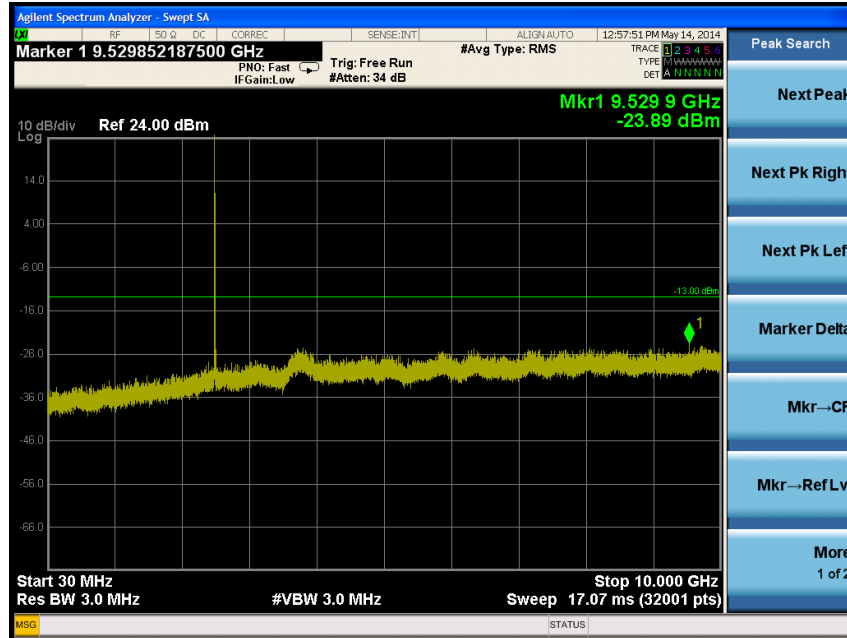
High Channel



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LTE band 7 (10 MHz – 16QAM_RB 1_Offset 0)

Low Channel



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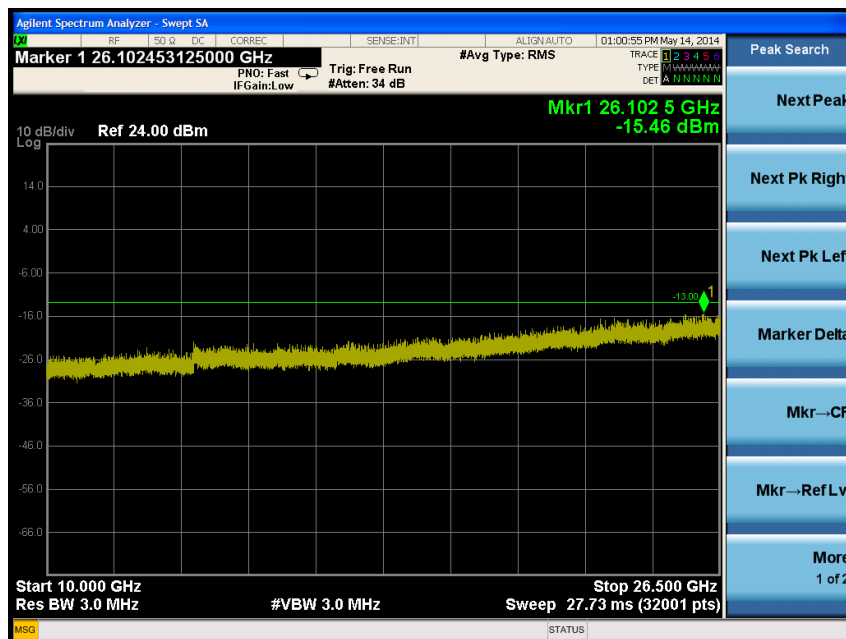
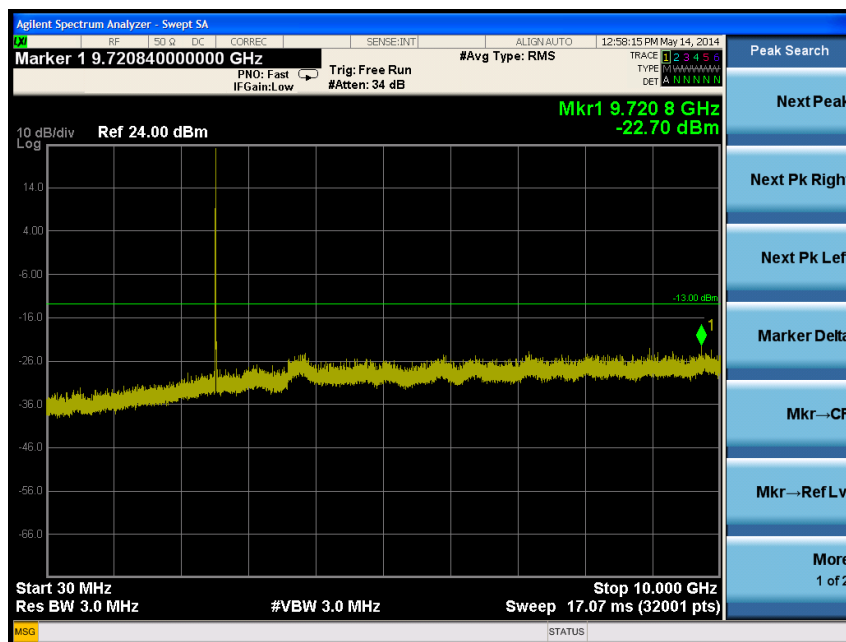
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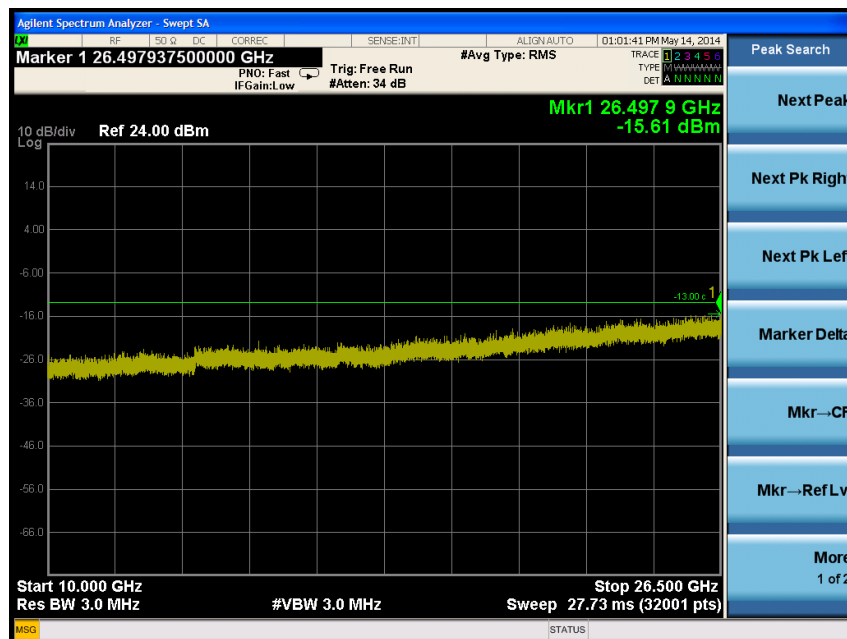
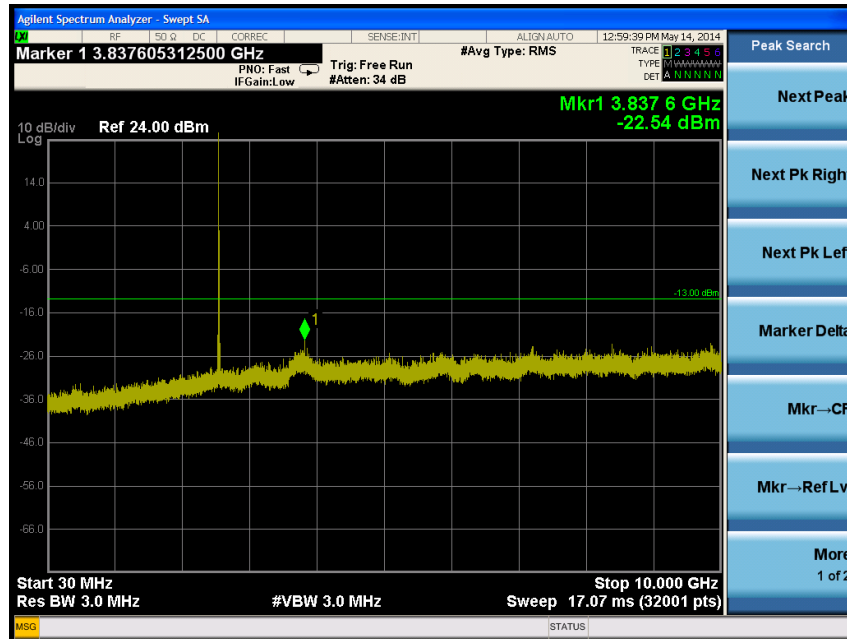
A4(210 mm x 297 mm)

Middle Channel



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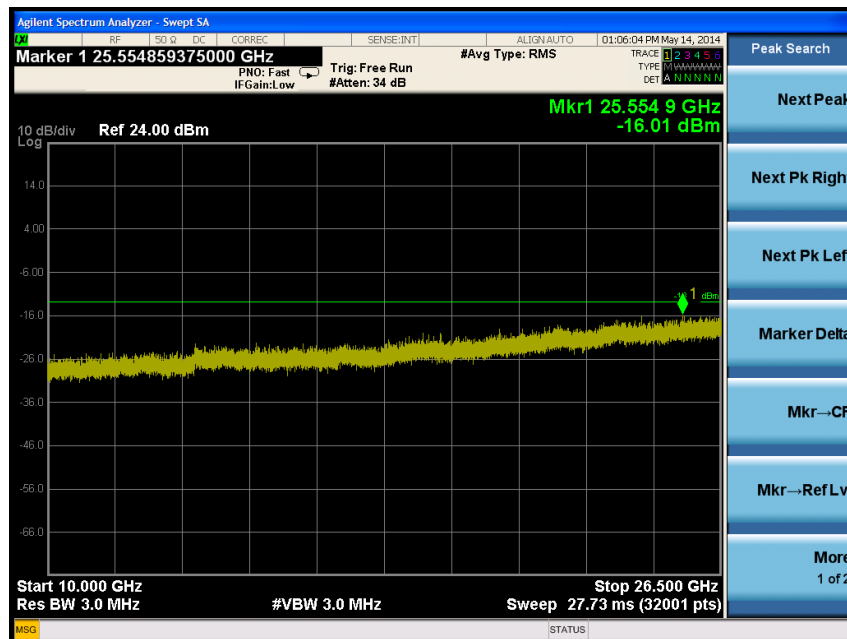
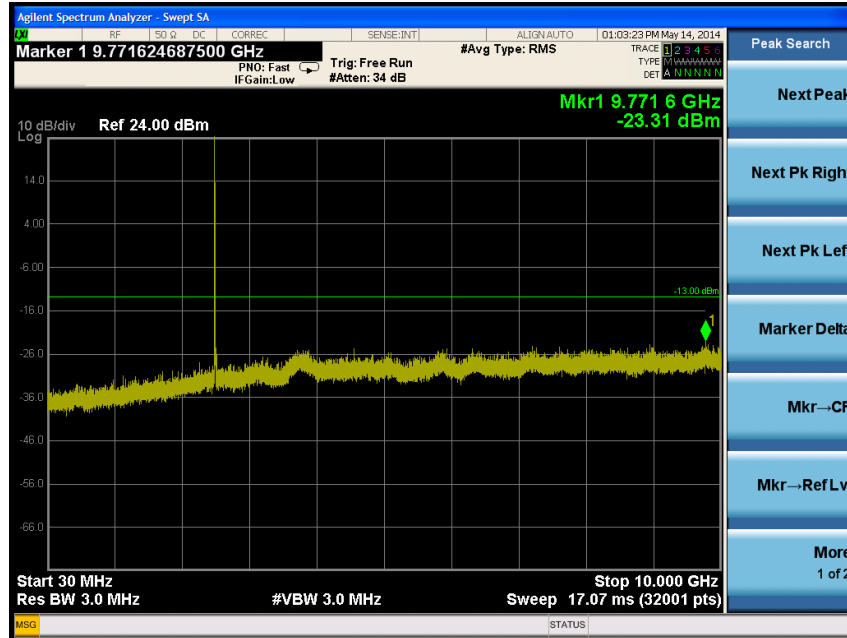
High Channel



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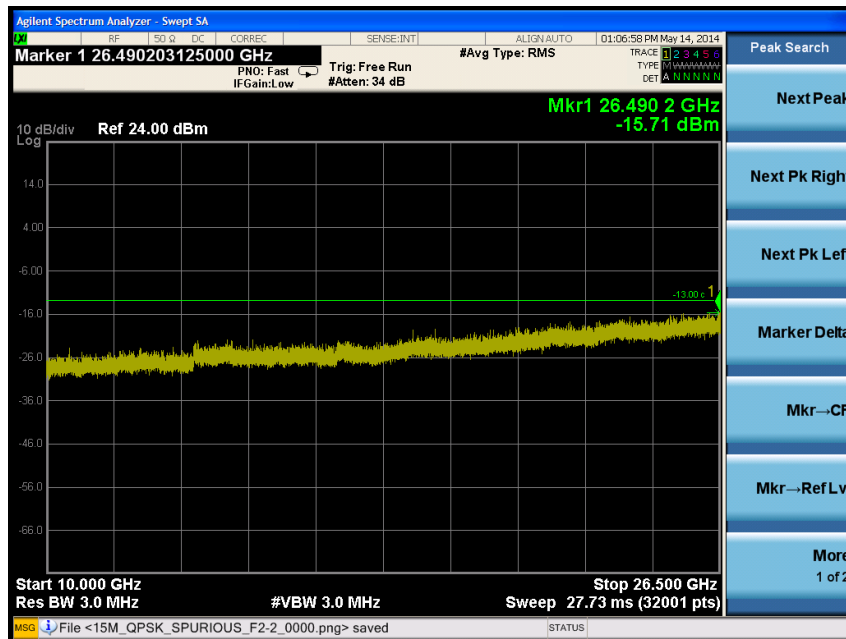
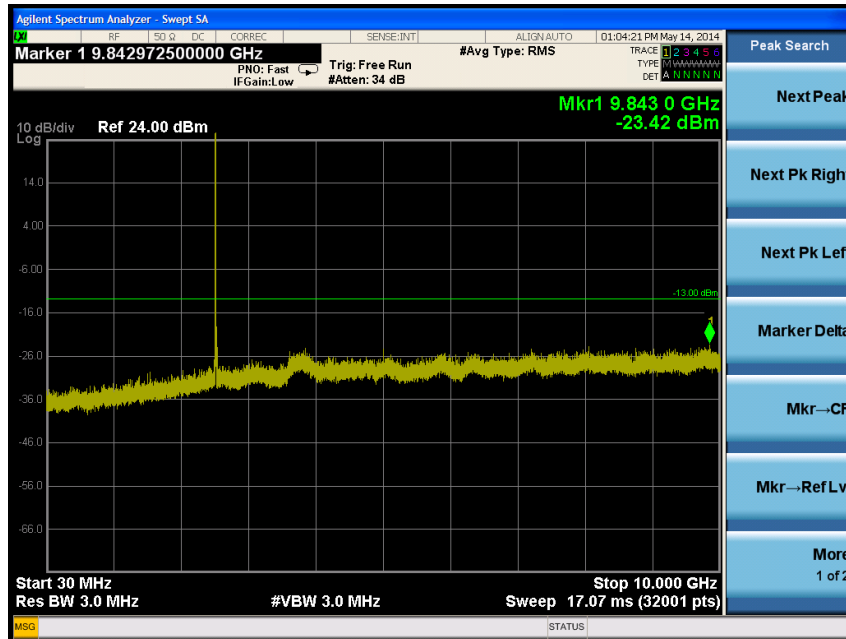
LTE band 7 (15 MHz – 16QAM_RB 1_Offset 0)

Low Channel



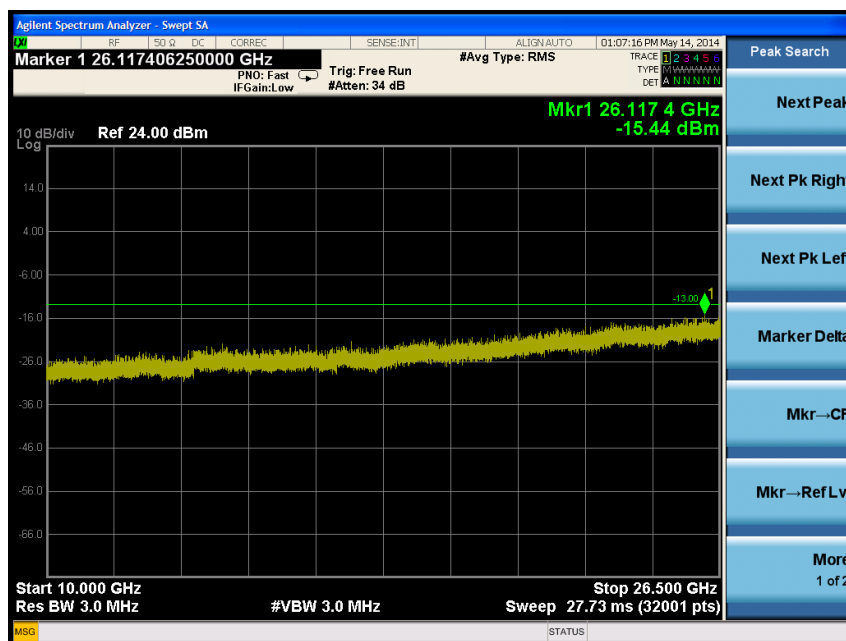
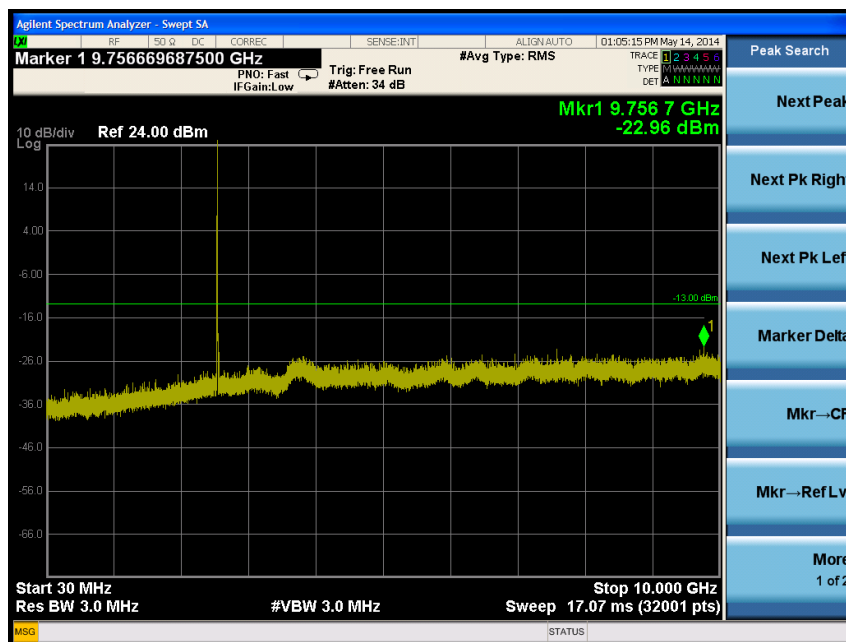
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Middle Channel



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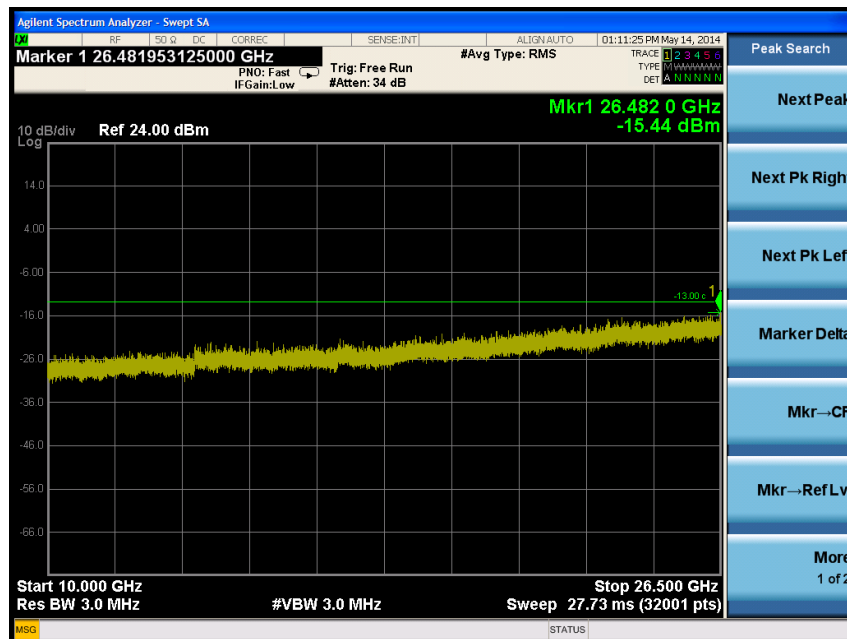
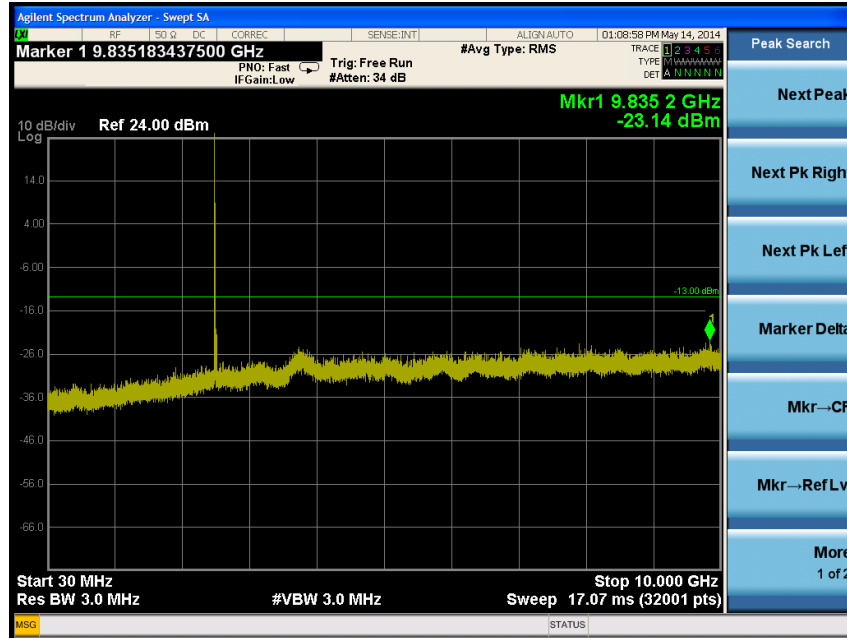
High Channel



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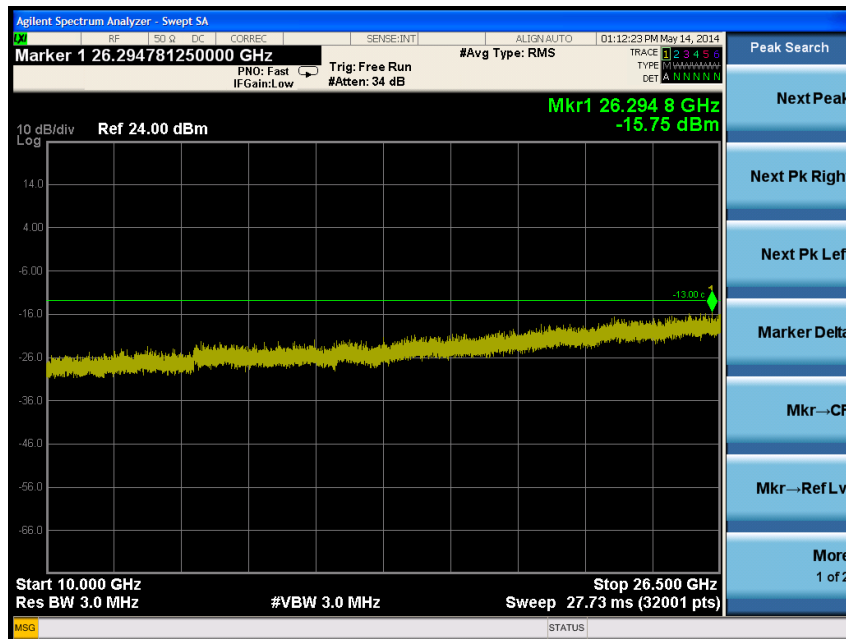
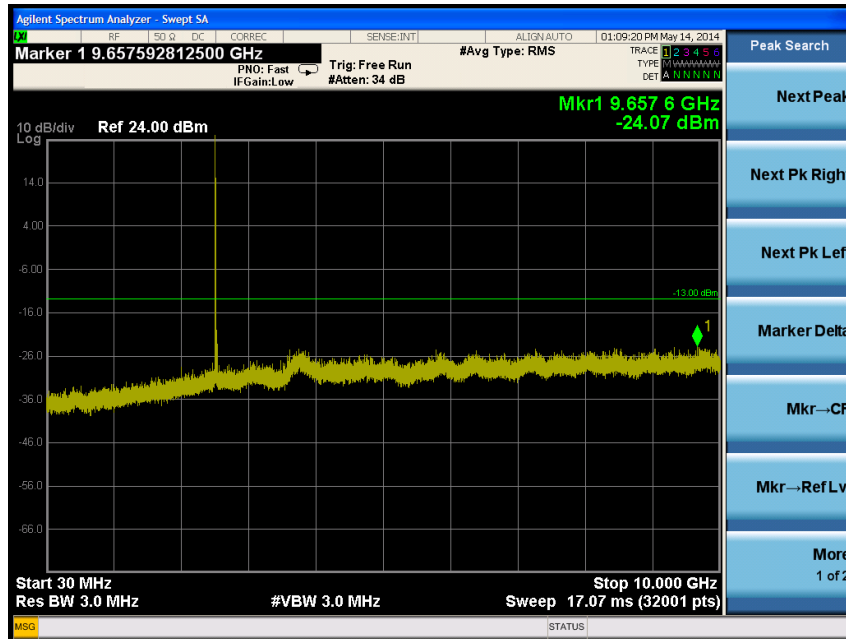
LTE band 7 (20 MHz – 16QAM_RB 1_Offset 0)

Low Channel



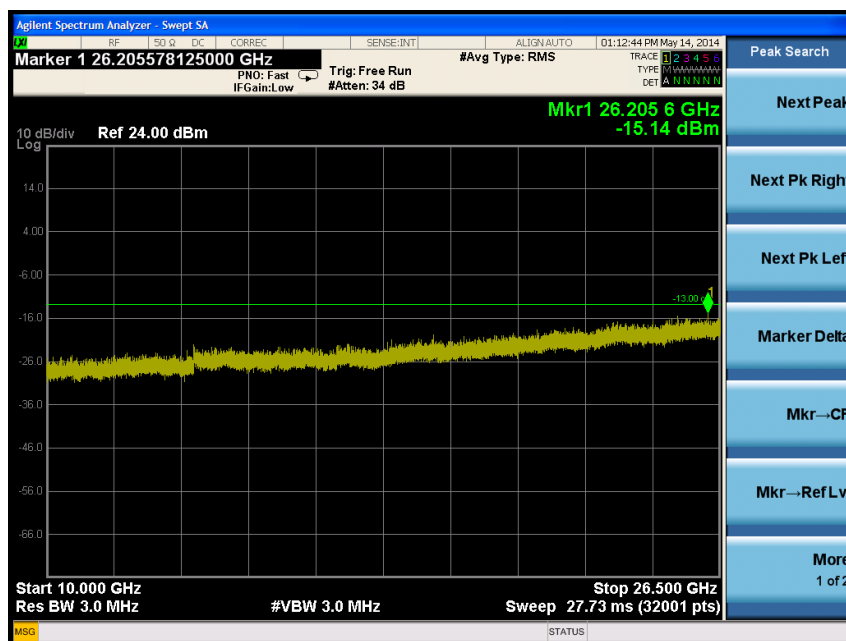
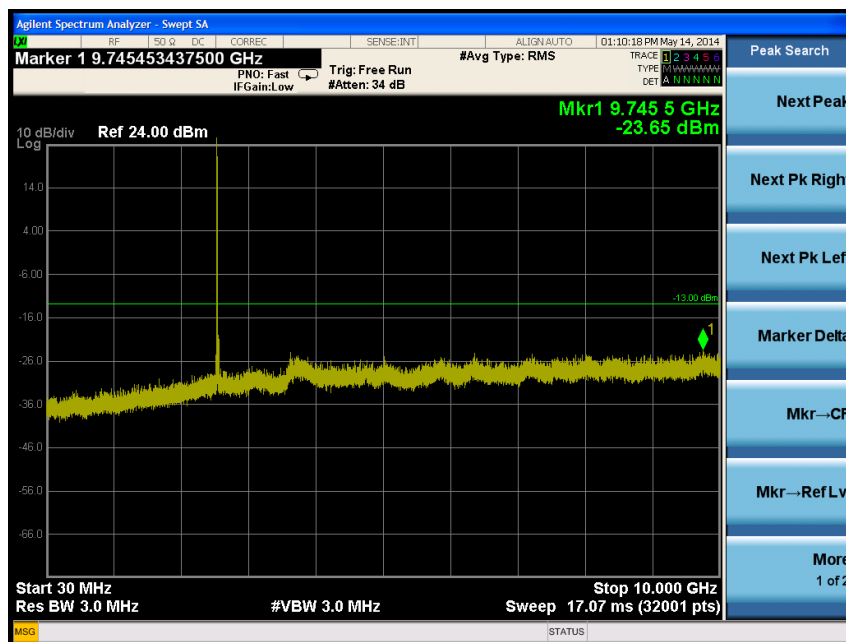
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Middle Channel



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High Channel



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