



**Nemko Test Report:** 41242RUS2

**Applicant:** Andrew Corporation  
620 N. Greenfield Parkway  
Garner, NC 27529  
USA

**Equipment Under Test:** MR8518/1918/1918  
(E.U.T.)

**FCC Identifier:** BCR-851919

**In Accordance With:** **CFR 47, Part 24, Subpart E**  
Broadband PCS Repeaters

**Tested By:** Nemko USA, Inc.  
802 N. Kealy  
Lewisville, TX 75057-3136

**TESTED BY:**

A handwritten signature in black ink, appearing to read 'David Light', written over a horizontal line.

David Light, Senior Wireless Engineer

**DATE:** 26 January 2010

**APPROVED BY:**

A handwritten signature in blue ink, appearing to read 'Tom Tidwell', written over a horizontal line.

Tom Tidwell, Telecom Direct

**DATE:** 26 January 2010

**Number of Pages: 54**

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EQUIPMENT: MR8518/1918/1918

## Section 1. Summary of Test Results

Manufacturer: Andrew Corporation

Model No.: MR8518/1918/1918

Serial No.: 10

General: All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with CFR 47, Part 24, Subpart E.

☐

New Submission

☒

Production Unit

☒

Class II Permissive Change

☐

Pre-Production Unit

Reason for Class II change: Gain has been increased from 70 dB to 78 dB. Output power remains at 18 dBm. The increase in gain is accomplished by removing attenuation in the system. There was no degradation in the performance of the device.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See "Summary of Test Data".



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**Summary Of Test Data**

| NAME OF TEST                            | PARA.<br>NO. | SPEC.            | RESULT     |
|-----------------------------------------|--------------|------------------|------------|
| RF Power Output                         | 24.232       | 100W             | Not tested |
| Occupied Bandwidth                      | 2.1049       | Input/Output     | Complies   |
| Spurious Emissions at Antenna Terminals | 24.238(a)    | -13 dBm          | Complies   |
| Field Strength of Spurious Emissions    | 24.238(a)    | -13 dBm E.I.R.P. | Not tested |
| Frequency Stability                     | 24.235       |                  | NA         |

**Footnotes:**

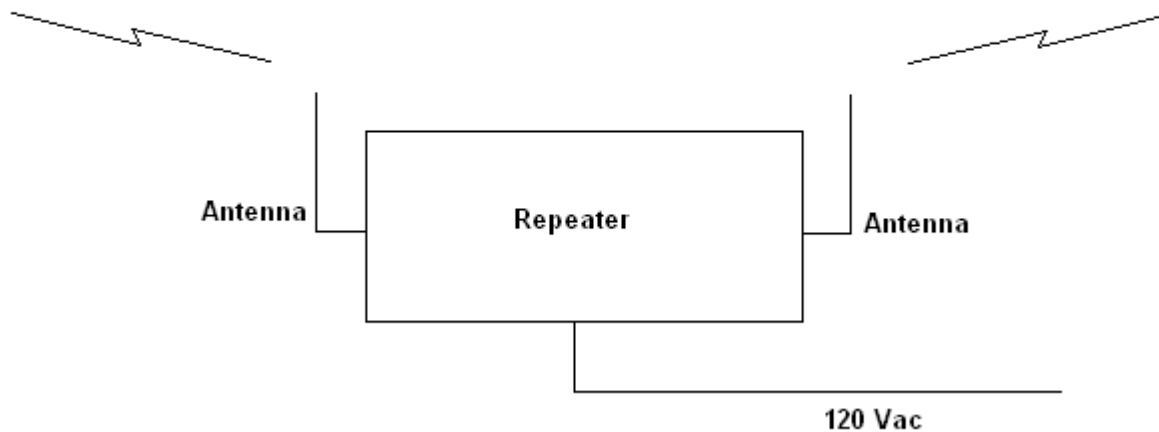
**Section 2. General Equipment Specification**

|                                           |                                                        |                                                    |                                                      |
|-------------------------------------------|--------------------------------------------------------|----------------------------------------------------|------------------------------------------------------|
| <b>Supply Voltage Input:</b>              | 120 Vac                                                |                                                    |                                                      |
| <b>Frequency Range:</b>                   | <b>Downlink:</b>                                       | 1930 to 1990 MHz*                                  |                                                      |
| <b>Frequency Range:</b>                   | <b>Uplink:</b>                                         | 1850 to 1910 MHz*                                  |                                                      |
| <b>Type of Modulation and Designator:</b> | CDMA<br>(F9W)                                          | GSM<br>(GXW)                                       | EDGE<br>(G7W)    W-CDMA<br>(F9W)                     |
| <b>Output Impedance:</b>                  | 50 ohms                                                |                                                    |                                                      |
| <b>RF Output (Rated):</b>                 | <b>Downlink</b>                                        | 18 dBm (63.1 mW)                                   |                                                      |
| <b>RF Output (Rated):</b>                 | <b>Uplink</b>                                          | 18 dBm (63.1 mW)                                   |                                                      |
| <b>Frequency Translation:</b>             | <b>F1-F1</b><br><input type="checkbox"/>               | <b>F1-F2</b><br><input type="checkbox"/>           | <b>N/A</b><br><input checked="" type="checkbox"/>    |
| <b>Band Selection:</b>                    | <b>Software</b><br><input checked="" type="checkbox"/> | <b>Duplexer Change</b><br><input type="checkbox"/> | <b>Fullband Coverage</b><br><input type="checkbox"/> |

\* Band employs two variable bandwidth filters adjustable from 200 kHz to 25 MHz

**Description of EUT**

The miniRepeaters are bi-directional amplifiers used to enhance signals between a mobile and a base station in a wireless network. They have been designed to increase signal strength in small and medium sized areas such as offices, shops, basements and manufacturing facilities. They are dual band coverage of the 850 cell band and 1900 PCS band.

**System Diagram**

**Section 3. Occupied Bandwidth**

|                                  |                       |
|----------------------------------|-----------------------|
| NAME OF TEST: Occupied Bandwidth | PARA. NO.: 24.238     |
| TESTED BY: David Light           | DATE: 26 January 2010 |

**Test Results:** Complies.

**Test Data:** See attached plot(s).

**Equipment Used:** 1036-1082-1472

**Measurement Uncertainty:** 1X10<sup>-7</sup> ppm

**Temperature:** 22 °C

**Relative Humidity:** 30 %

EQUIPMENT: MR8518/1918/1918

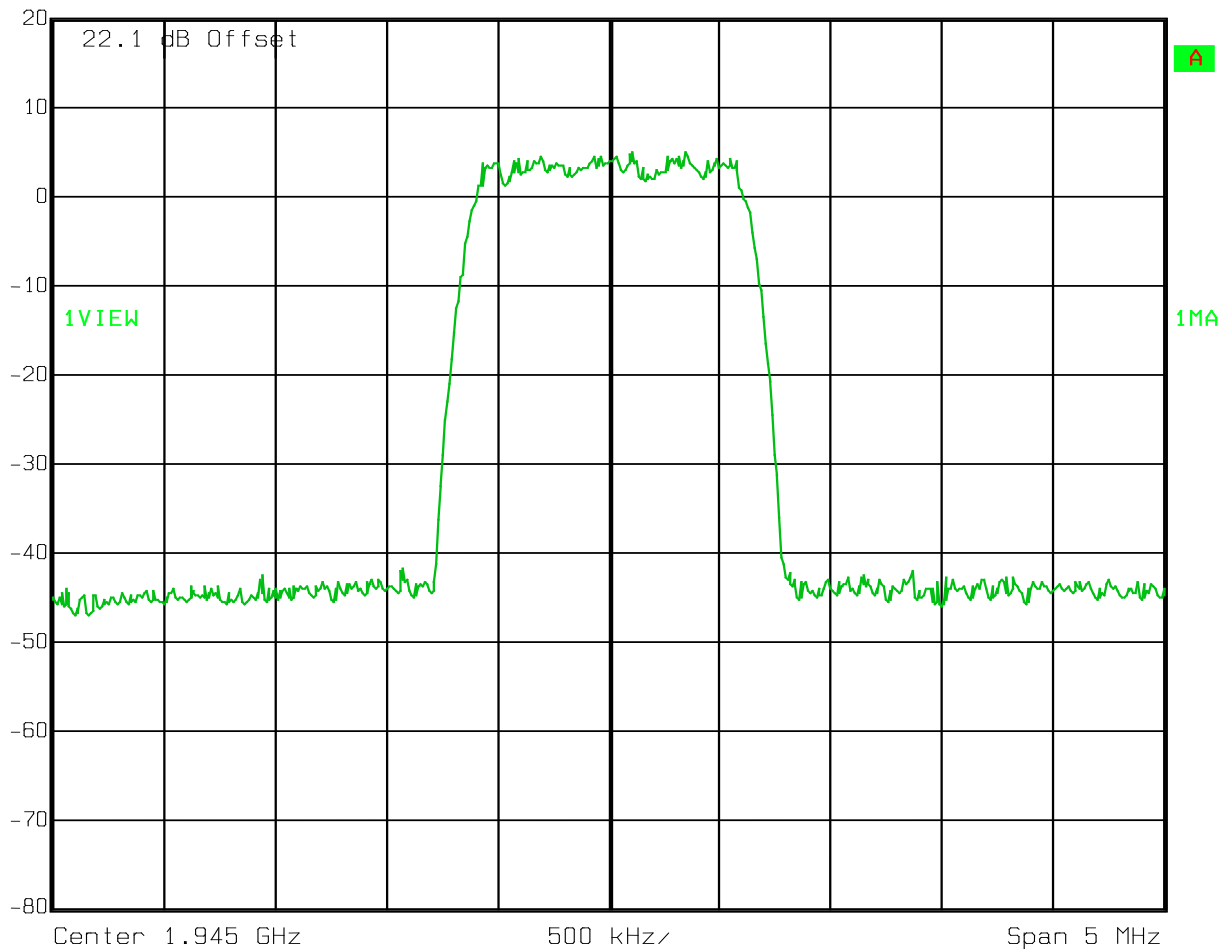
# Test Data – Occupied Bandwidth

CDMA - Output  
Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 10 dB   |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:29:07



EQUIPMENT: MR8518/1918/1918

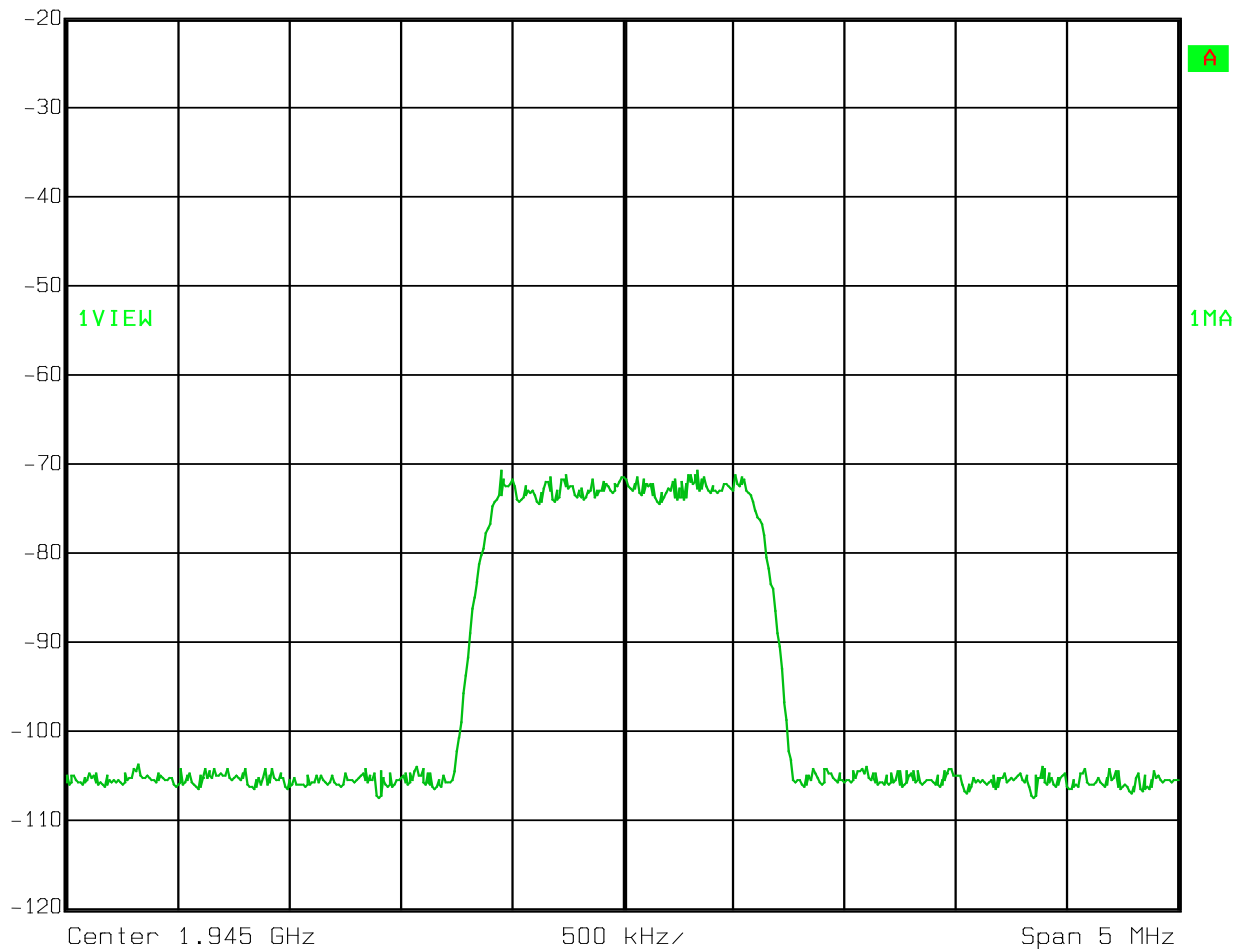
# Test Data – Occupied Bandwidth

CDMA - Input  
Downlink



Ref Lvl  
-20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 0 dB    |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:42:40

EQUIPMENT: MR8518/1918/1918

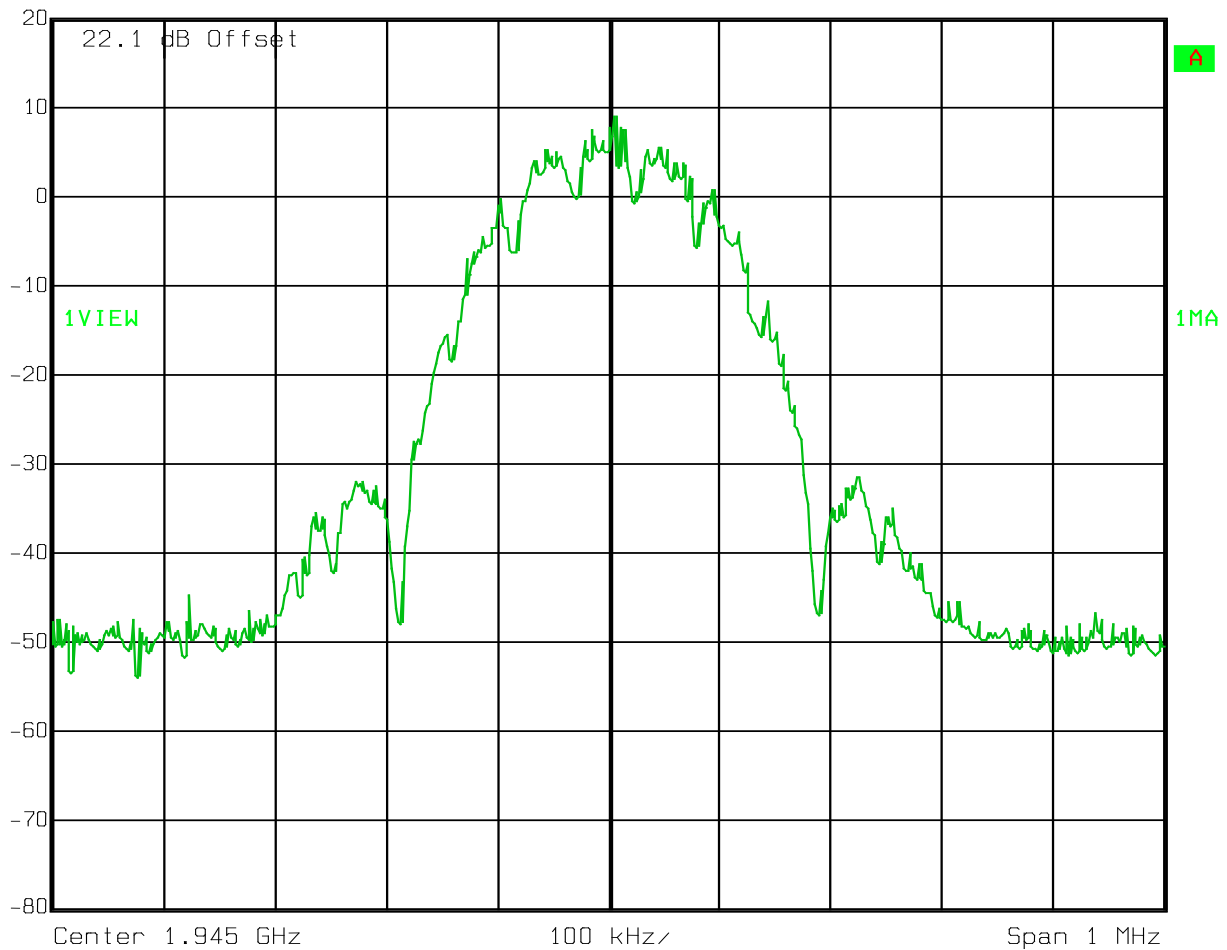
## Test Data – Occupied Bandwidth

EDGE - Output

Downlink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:30:42

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

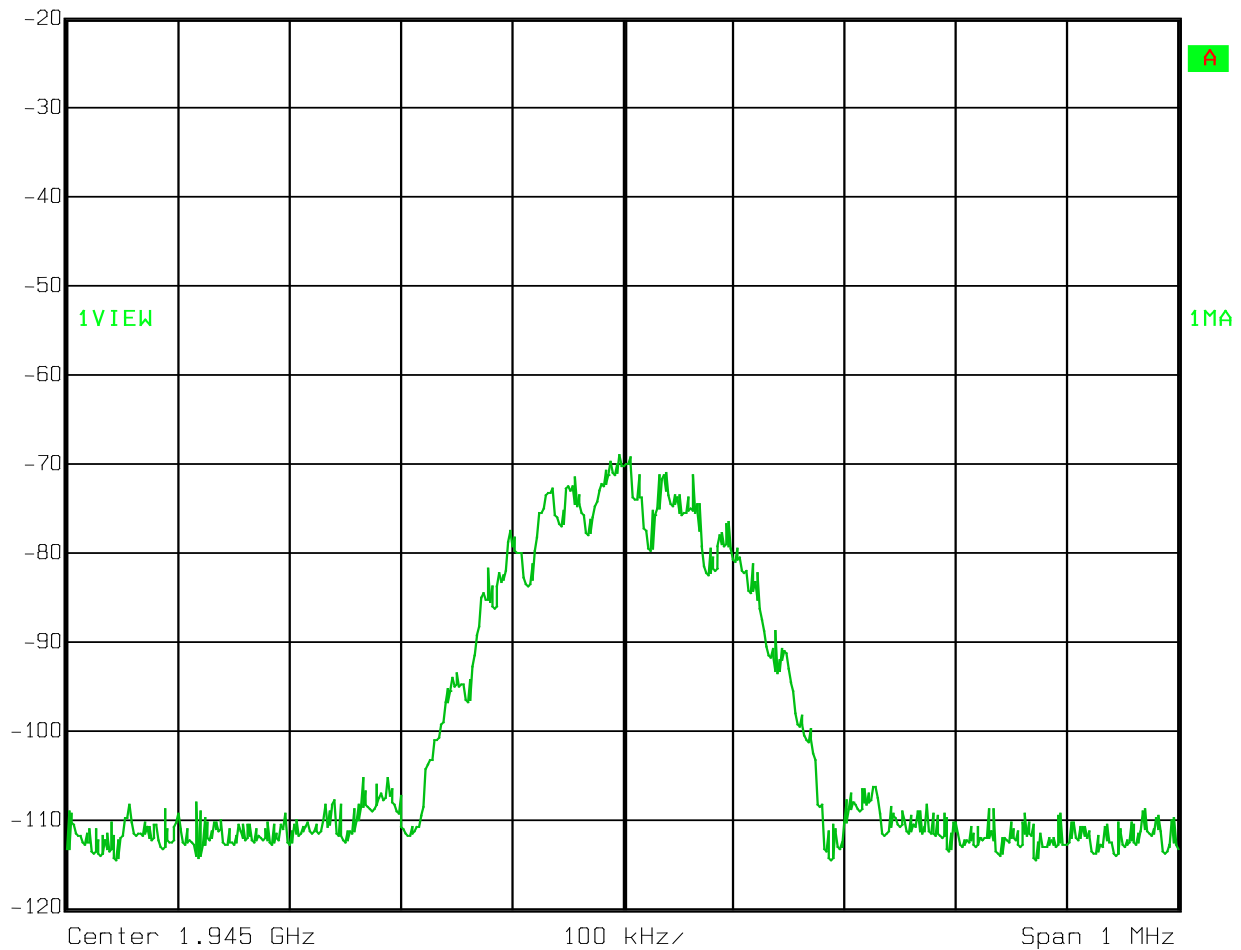
EDGE - Input

Downlink



Ref Lvl  
-20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 0 dB    |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:41:51

EQUIPMENT: MR8518/1918/1918

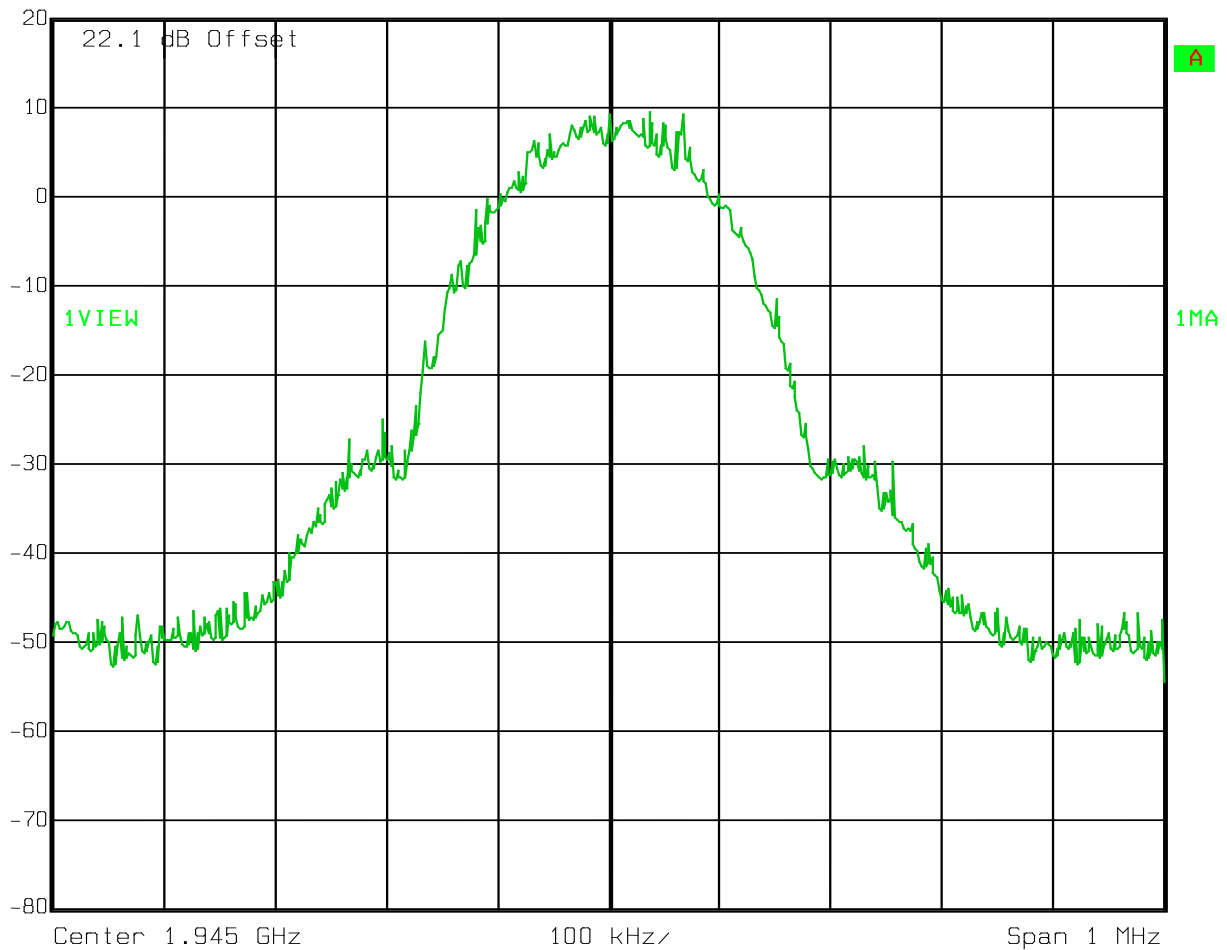
# Test Data – Occupied Bandwidth

GSM - Output  
Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:31:58

EQUIPMENT: MR8518/1918/1918

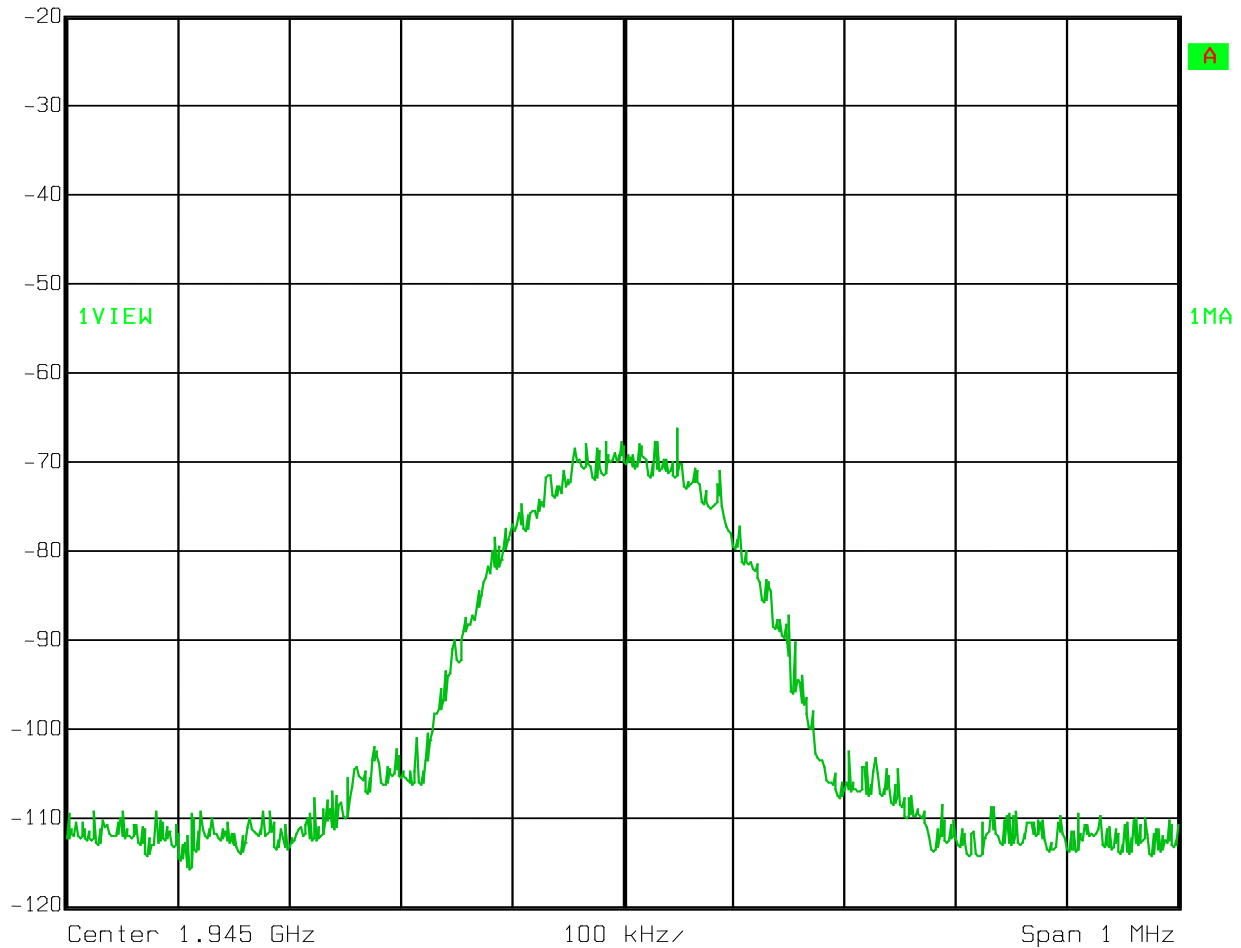
Test Data – Occupied Bandwidth

GSM - Input  
Downlink



Ref Lvl  
-20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 0 dB    |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:39:36

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

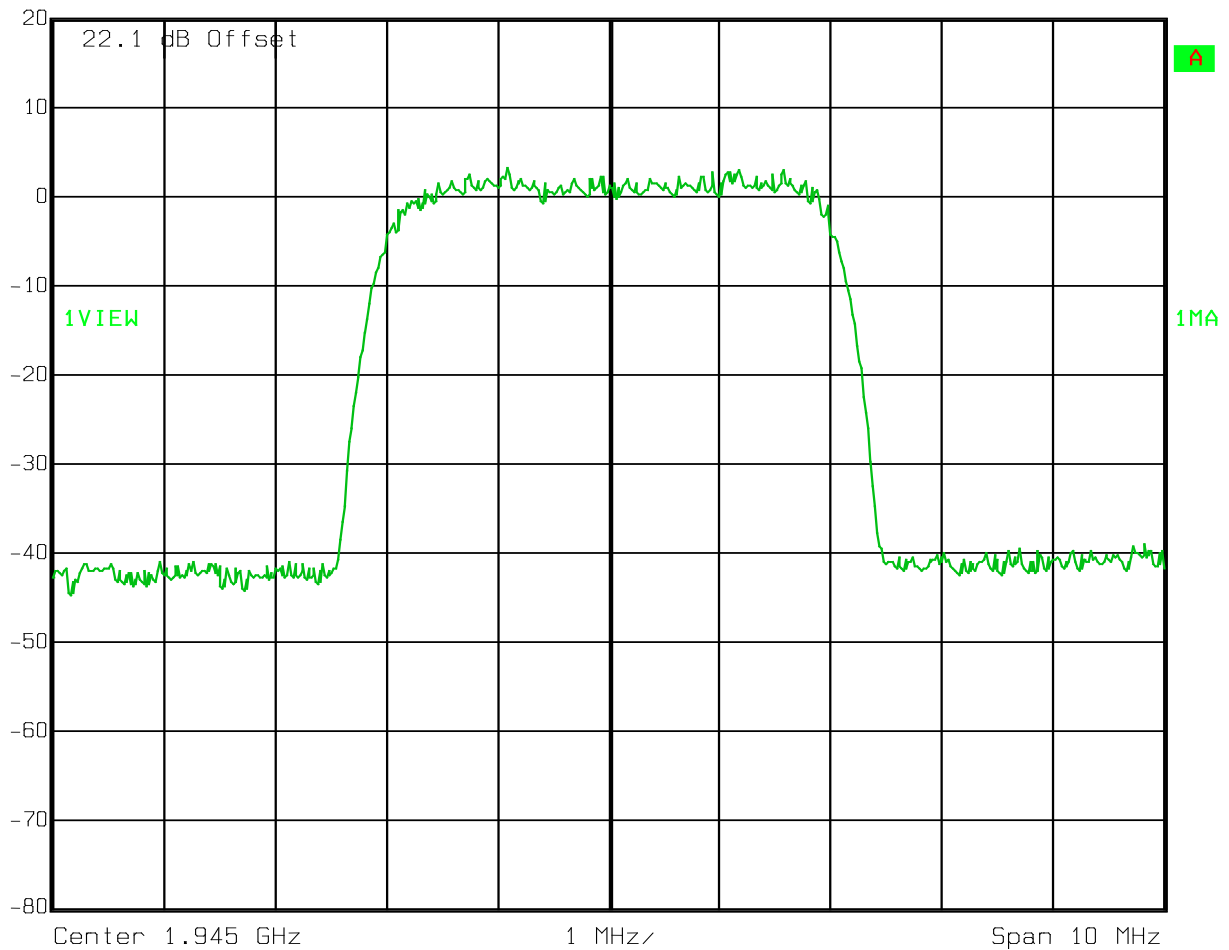
W-CDMA - Output

Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 10 dB   |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 10 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:33:27

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

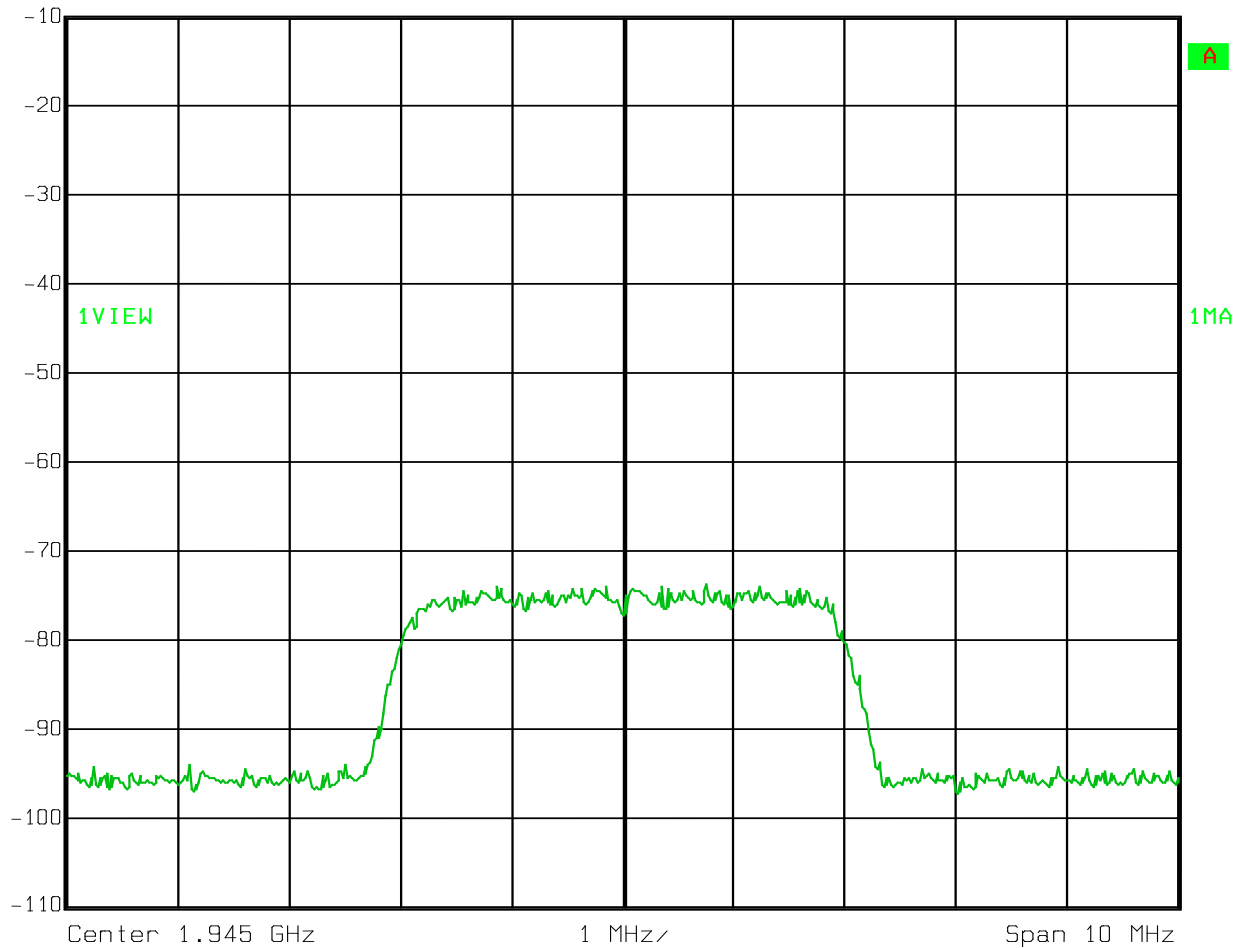
W-CDMA - Input

Downlink



Ref Lvl  
-10 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 0 dB    |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 10 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:38:54

EQUIPMENT: MR8518/1918/1918

**Test Data – Occupied Bandwidth**

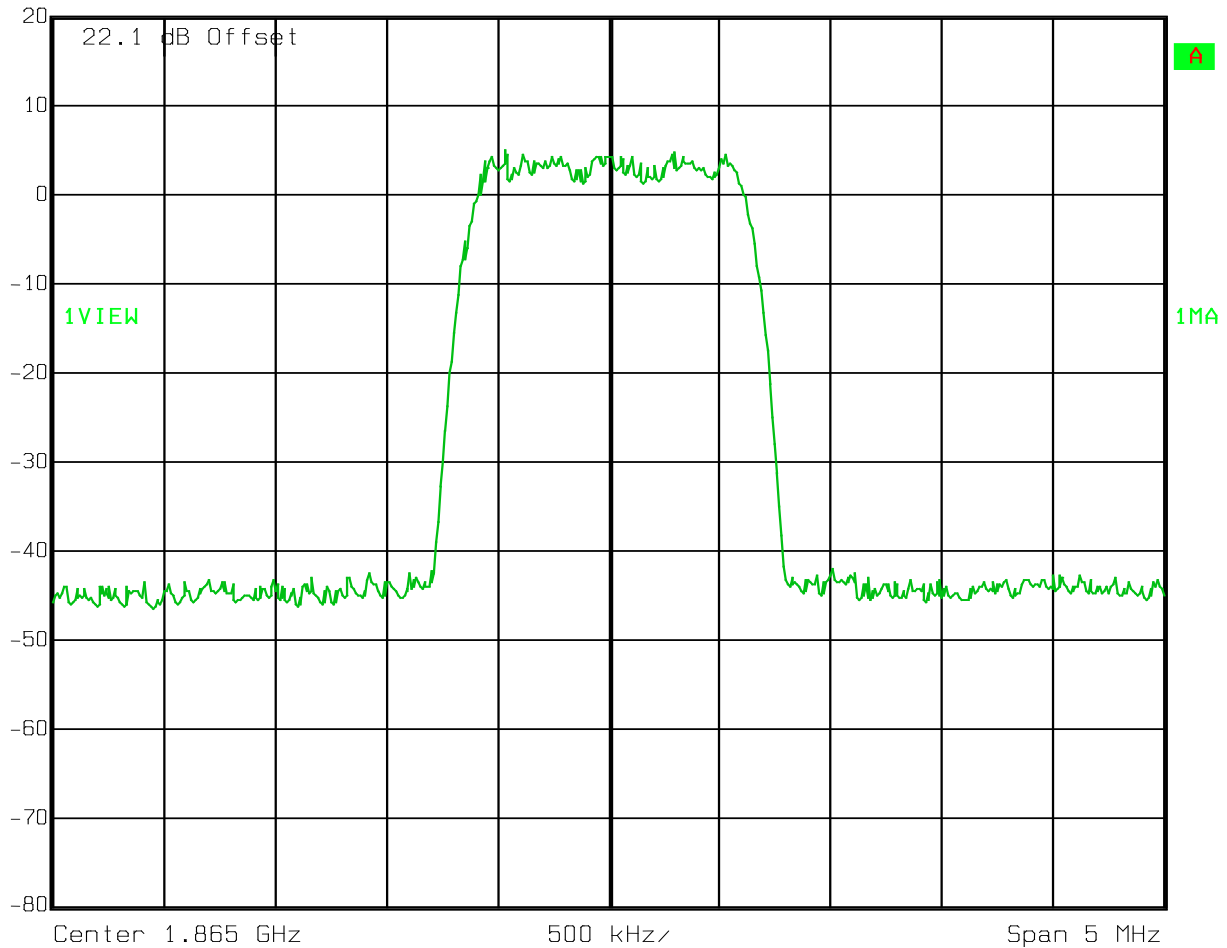
CDMA - Output

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 10 dB   |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:35:34



EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

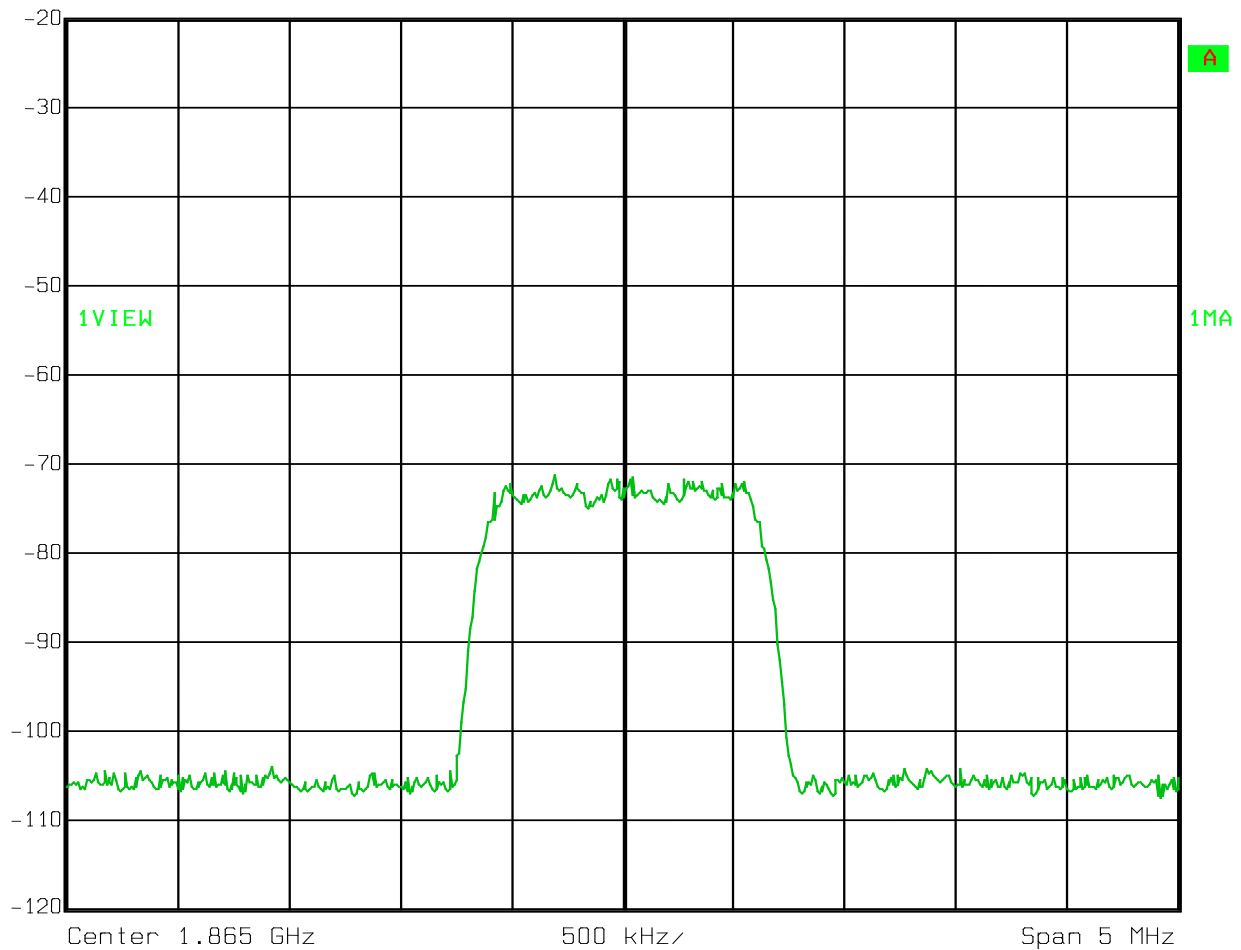
CDMA - Input

Uplink



Ref Lvl  
-20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 0 dB    |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:43:10

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

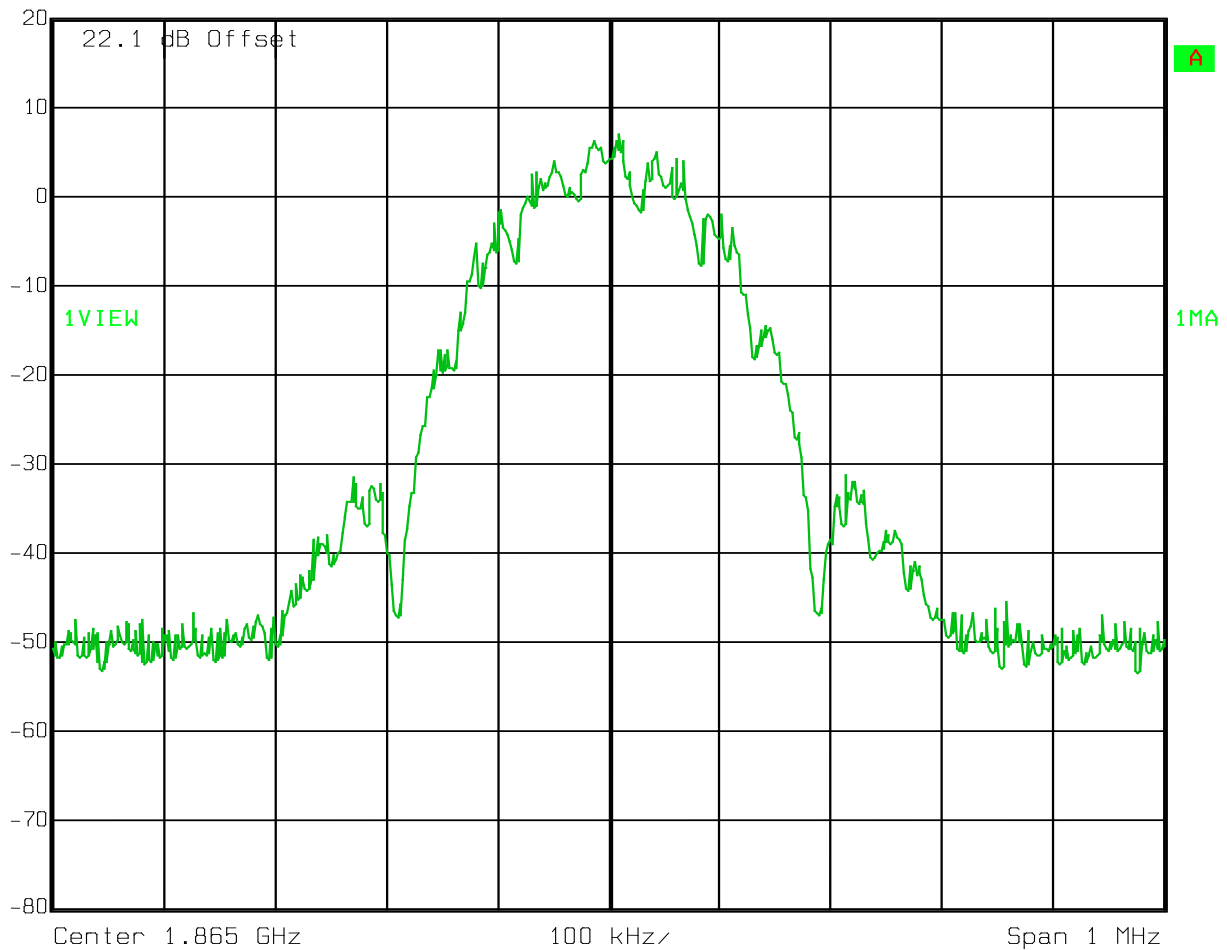
EDGE - Output

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:36:12

EQUIPMENT: MR8518/1918/1918

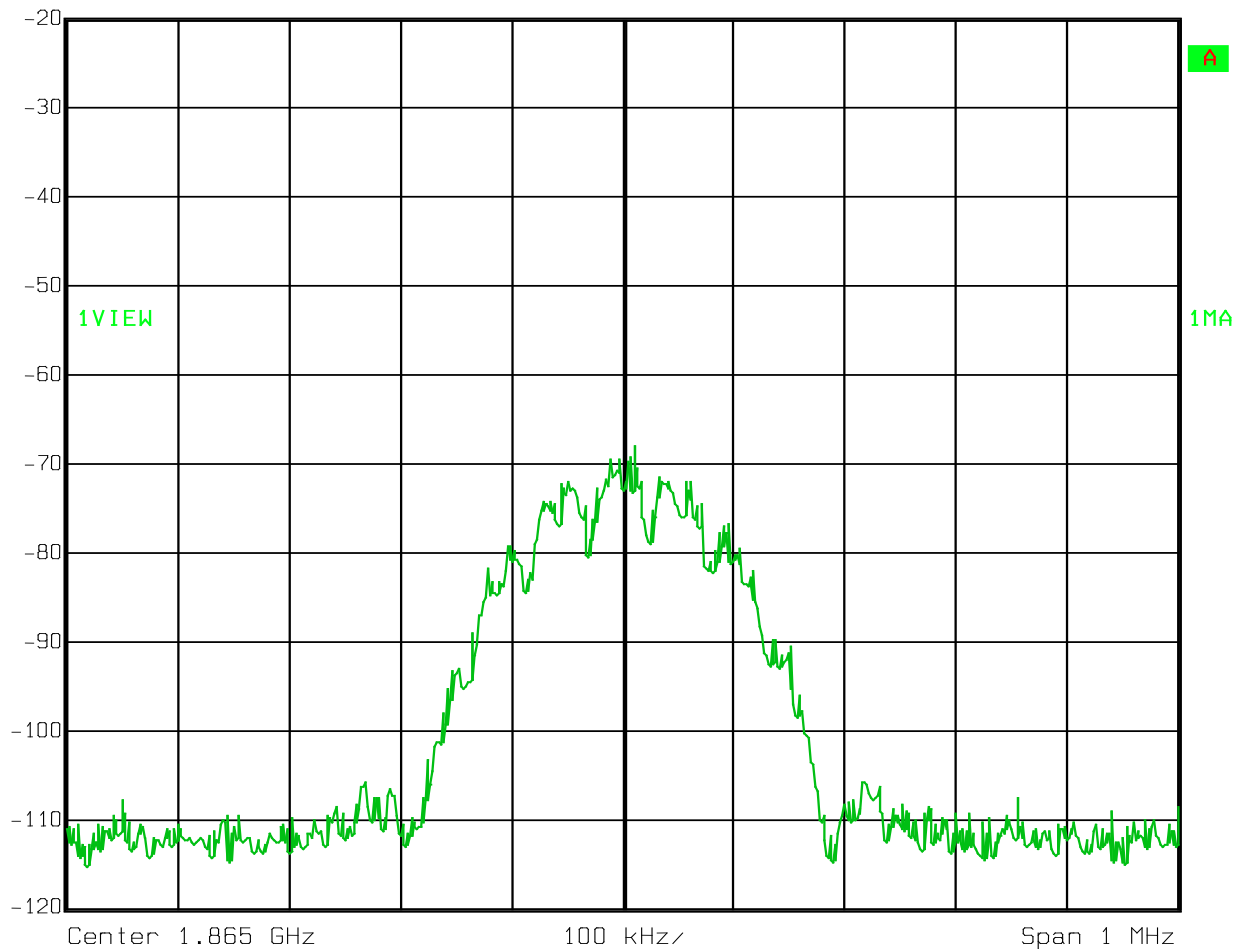
## Test Data – Occupied Bandwidth

EDGE - Input

Uplink

Ref Lvl  
-20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 0 dB    |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:41:00

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

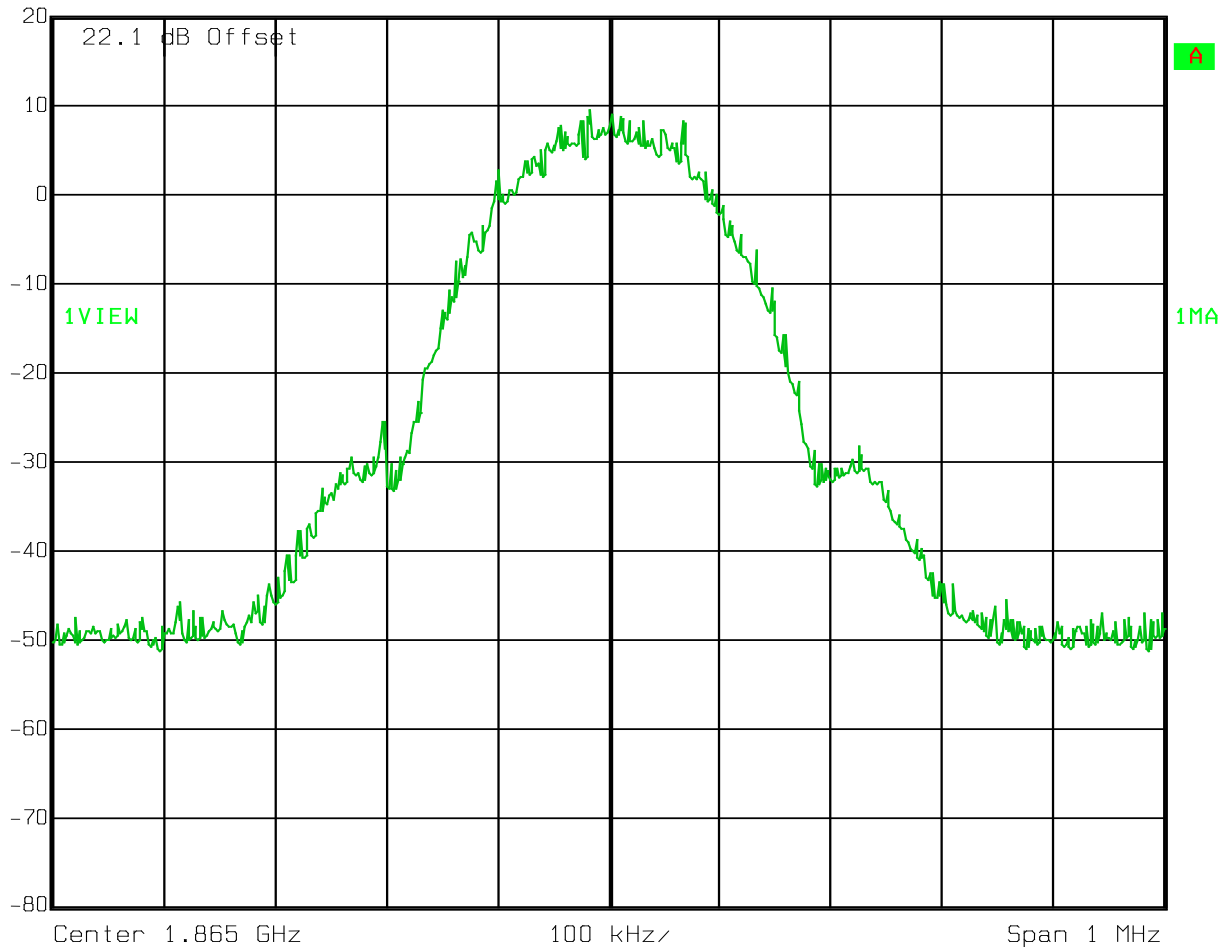
GSM - Output

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:36:36

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

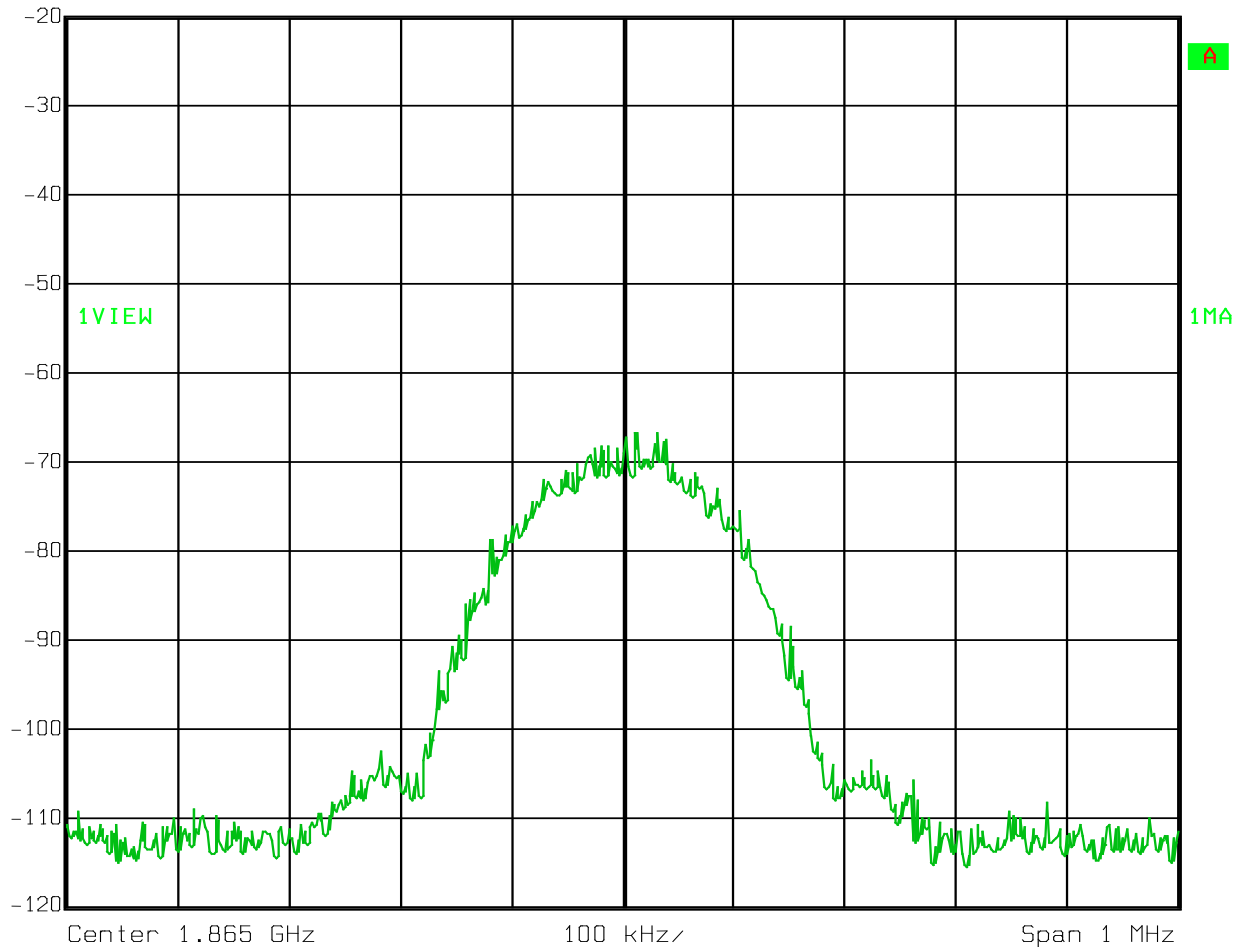
GSM - Input

Uplink



Ref Lvl  
-20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 0 dB    |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 280 ms | Unit   | dBm     |



Date: 26.JAN.2010 11:39:58

EQUIPMENT: MR8518/1918/1918

**Test Data – Occupied Bandwidth**

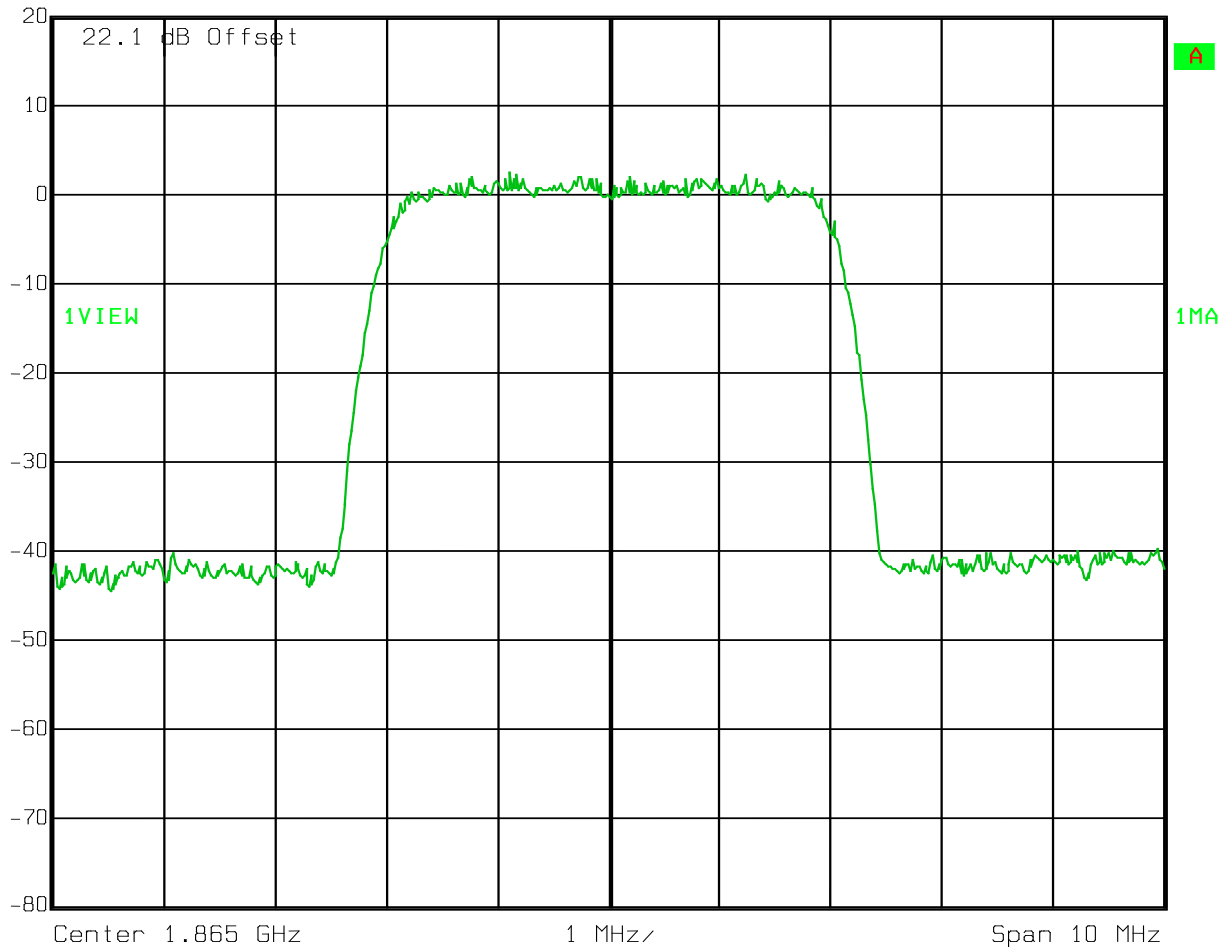
W-CDMA - Output

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 10 dB   |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 10 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:37:09

EQUIPMENT: MR8518/1918/1918

# Test Data – Occupied Bandwidth

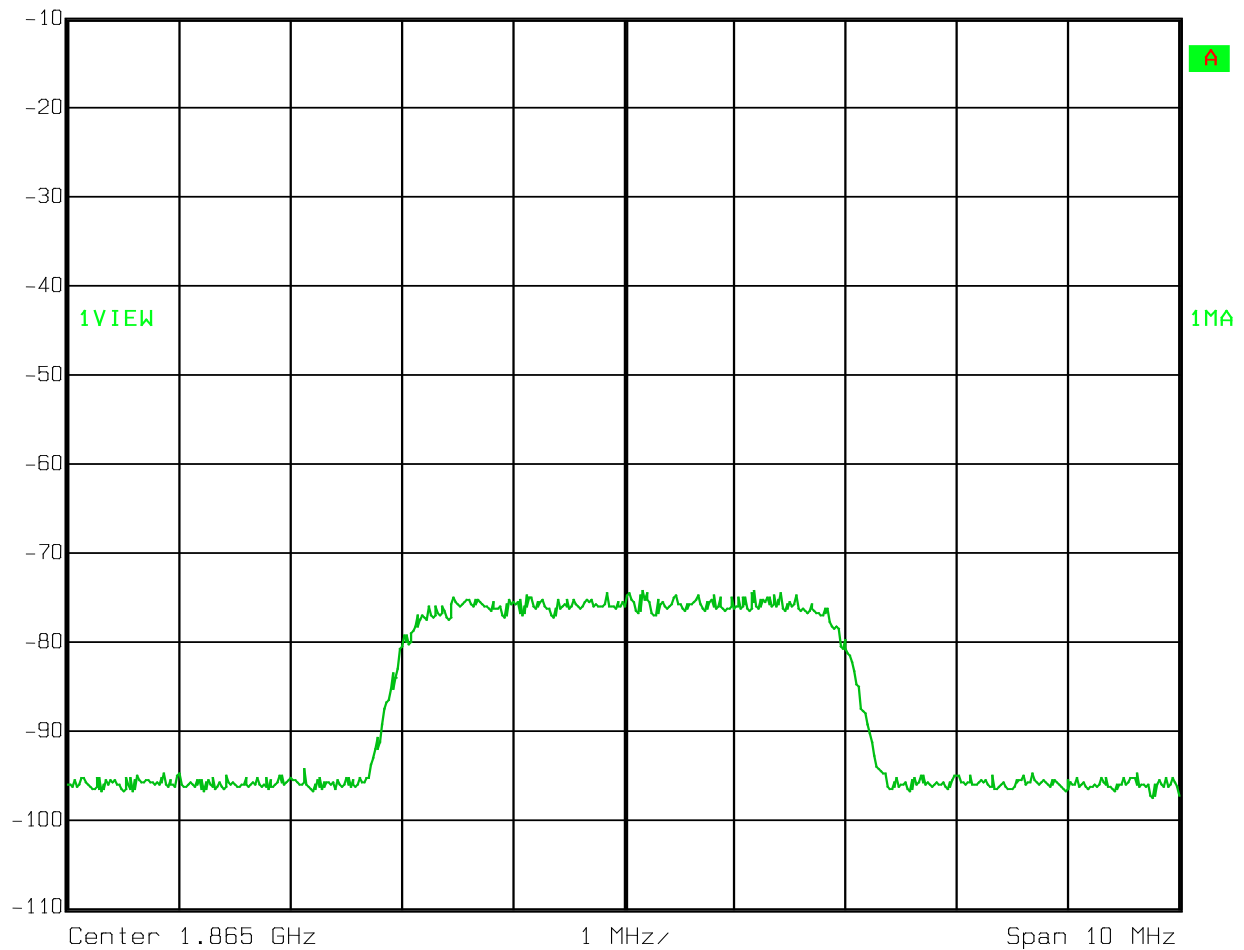
W-CDMA - Input

Uplink



Ref Lvl  
-10 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 0 dB    |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 10 ms  | Unit   | dBm     |



Date: 26.JAN.2010 11:38:16

## **Section 4. Spurious Emissions at Antenna Terminals**

|                                                      |                       |
|------------------------------------------------------|-----------------------|
| NAME OF TEST: Spurious Emissions @ Antenna Terminals | PARA. NO.: 24.238     |
| TESTED BY: David Light                               | DATE: 26 January 2010 |

**Test Results:** Complies.

**Test Data:** See attached plot(s).

**Equipment Used:** 1036-1082-1472

**Measurement Uncertainty:** +/- 1.7 dB

**Temperature:** 22 °C

**Relative Humidity:** 32 %



EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

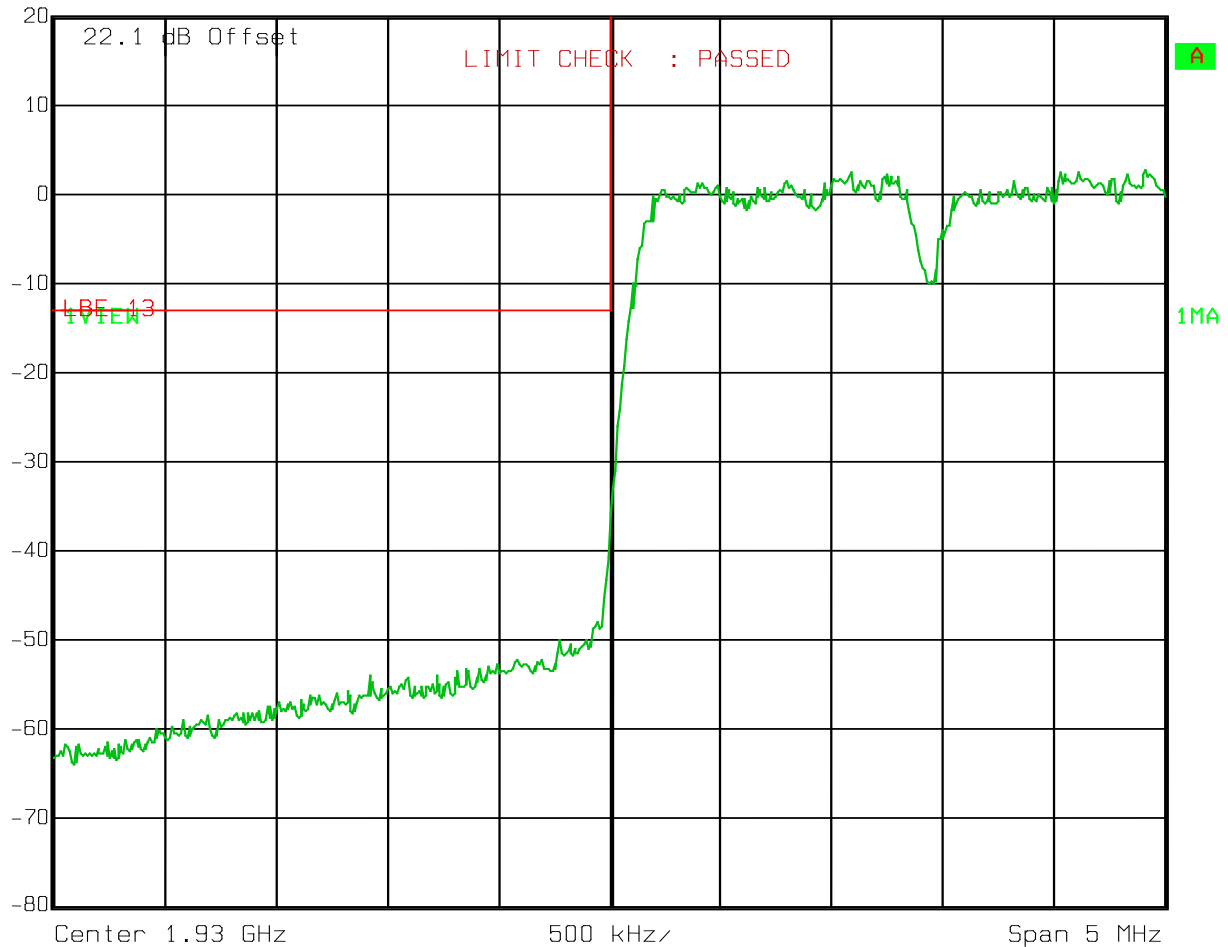
CDMA

Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 10 dB   |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 13:20:52

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

Upper Bandedge Intermodulation

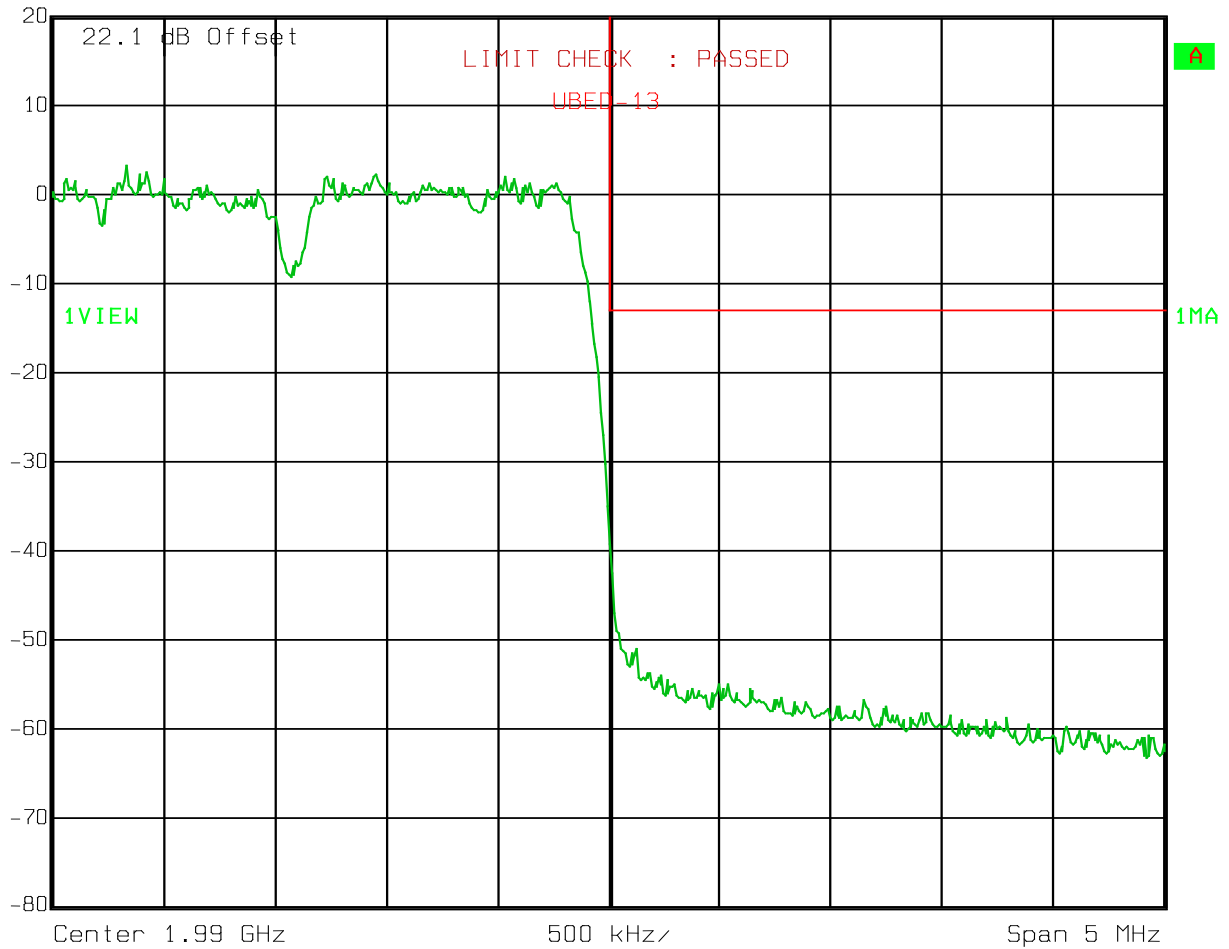
CDMA

Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 10 dB   |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



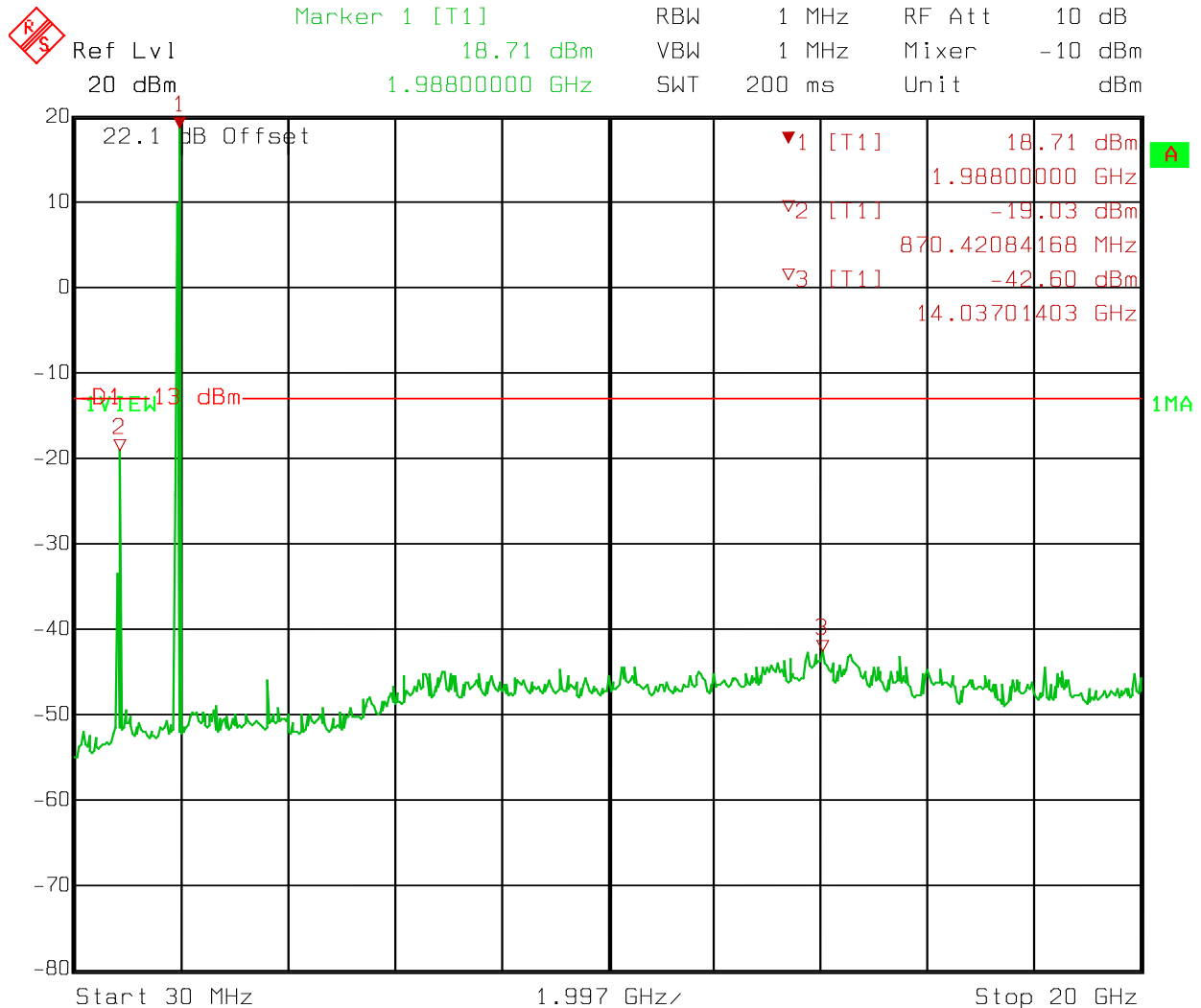
Date: 26.JAN.2010 13:21:54

EQUIPMENT: MR8518/1918/1918

## Test Data – Spurious Emissions at Antenna Terminals

Spurs – CDMA

Downlink



Date: 26.JAN.2010 13:23:29

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

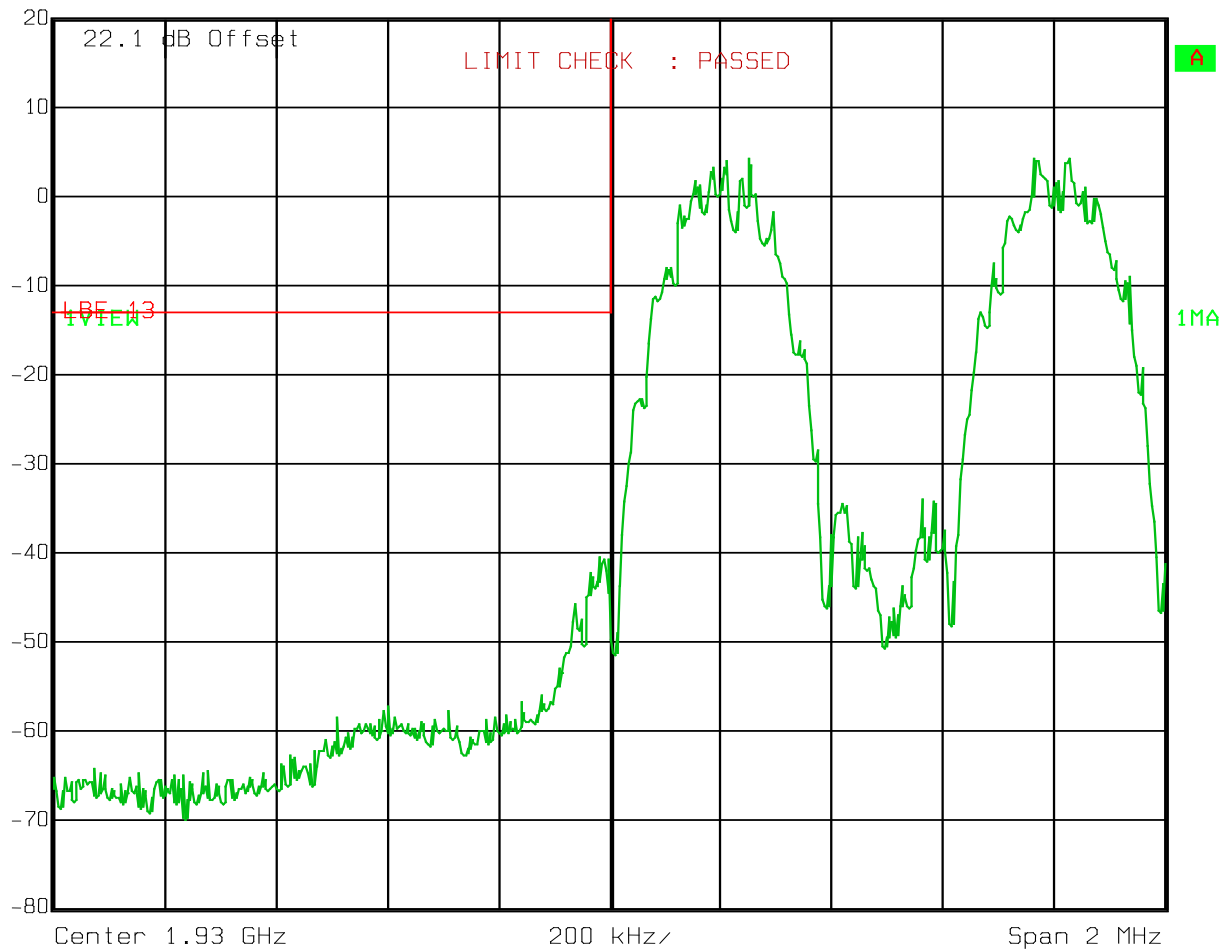
Lower Bandedge Intermodulation

EDGE

Downlink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:25:15

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

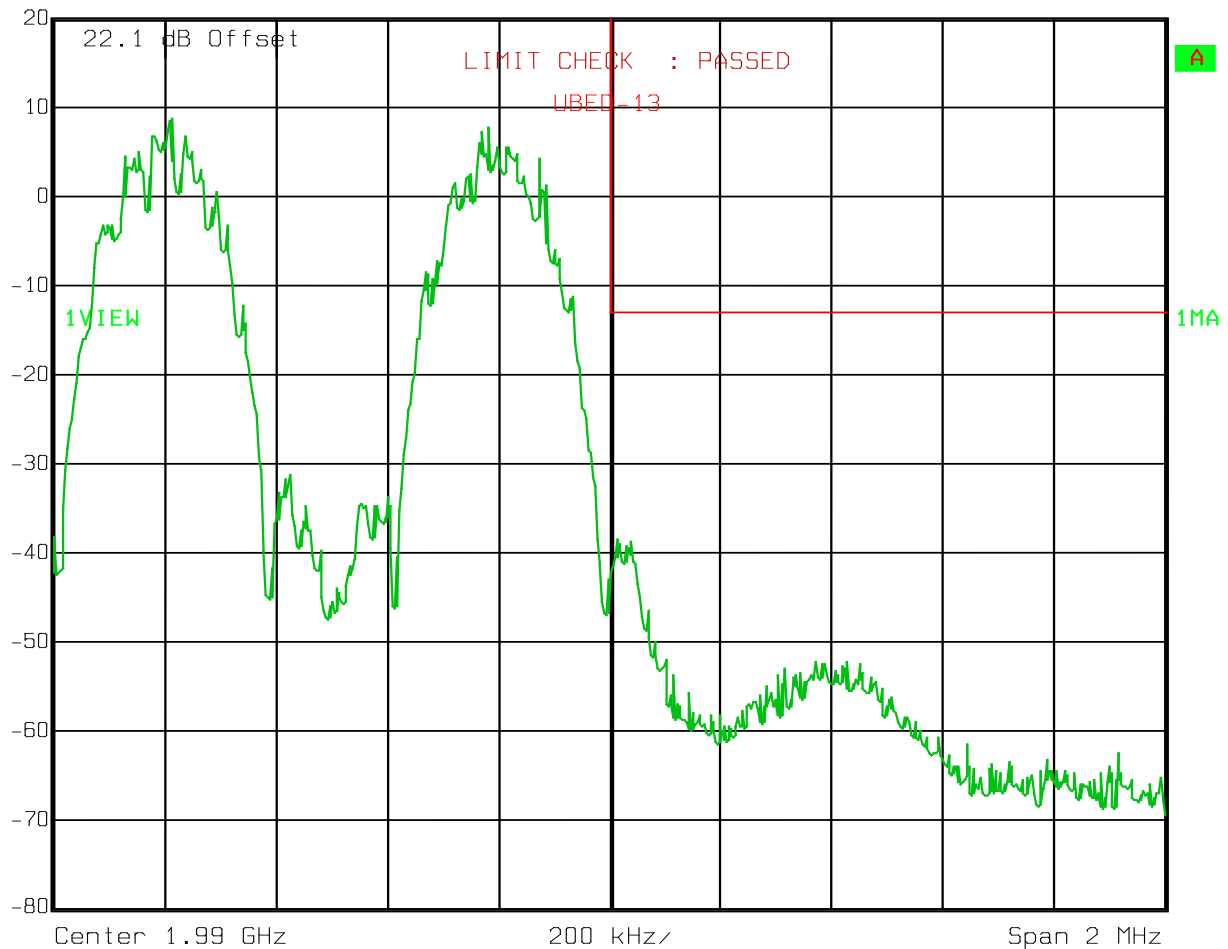
Upper Bandedge Intermodulation

EDGE

Downlink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:26:02

EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Spurs – EDGE

Downlink



Marker 1 [T1] RBW 1 MHz RF Att 10 dB  
Ref Lvl 18.25 dBm VBW 1 MHz Mixer -10 dBm  
20 dBm 1.98900000 GHz SWT 200 ms Unit dBm



Date: 26.JAN.2010 13:27:31

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

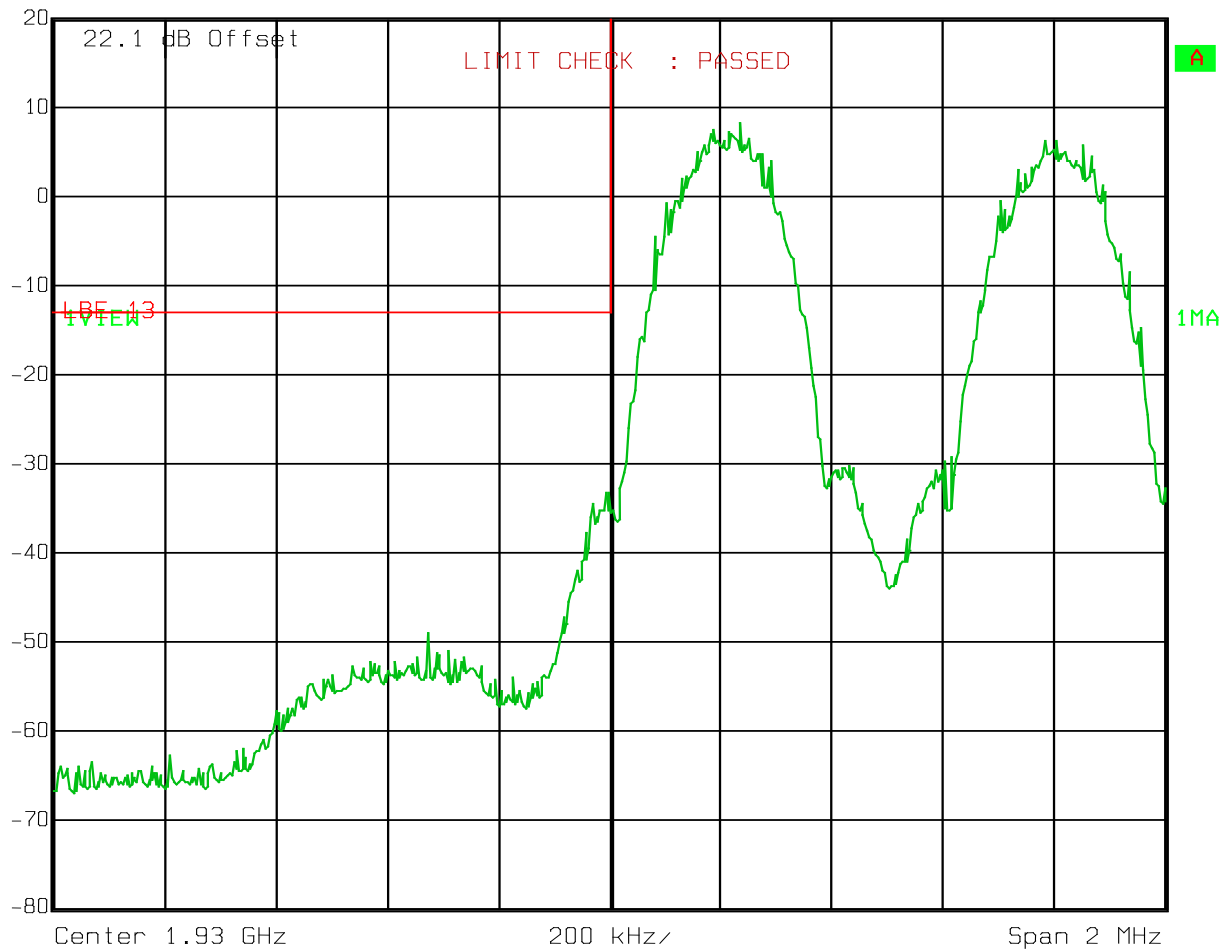
Lower Bandedge Intermodulation

GSM

Downlink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:29:20

EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

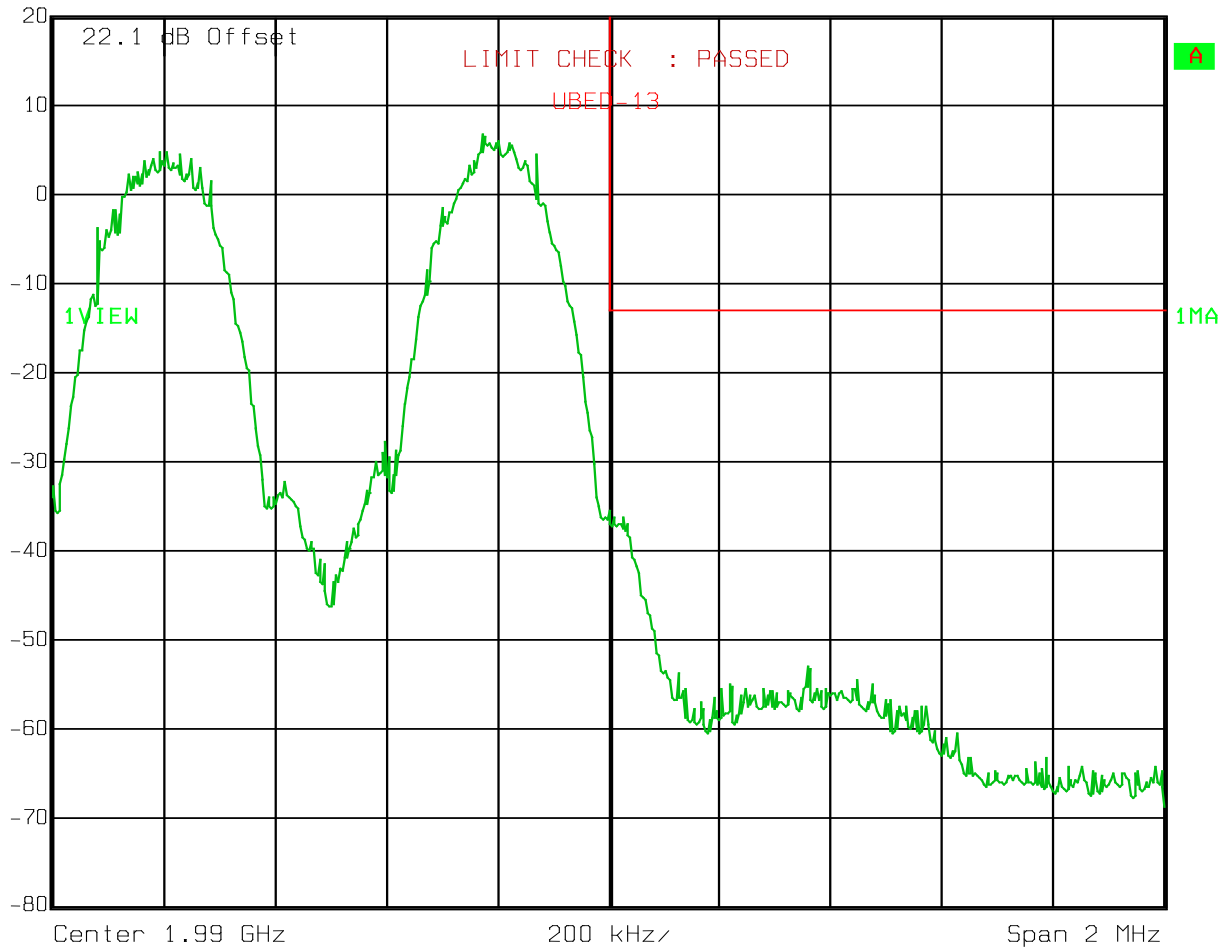
GSM

Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:30:18

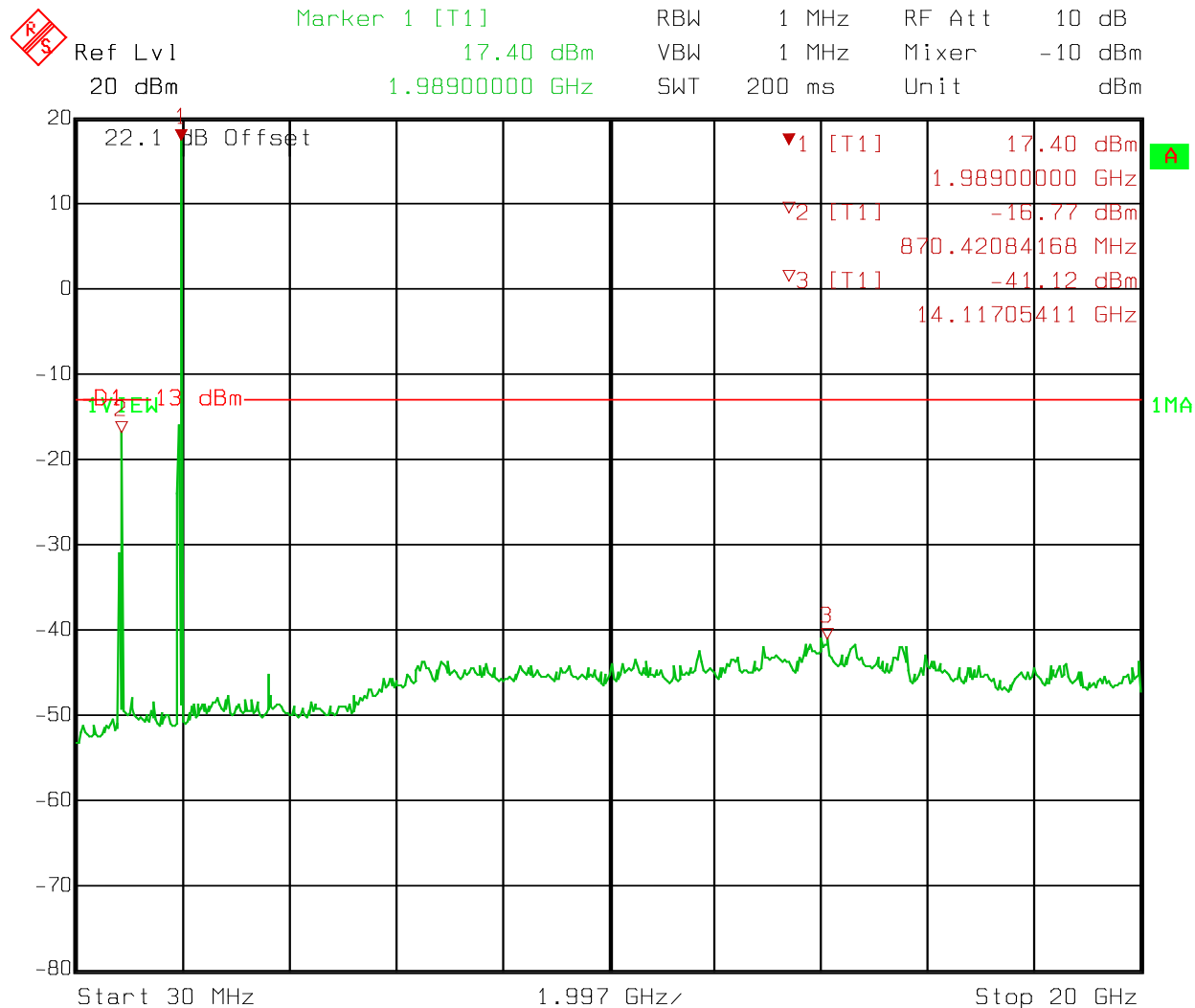


EQUIPMENT: MR8518/1918/1918

## Test Data – Spurious Emissions at Antenna Terminals

Spurs – GSM

Downlink



Date: 26.JAN.2010 13:31:10

EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

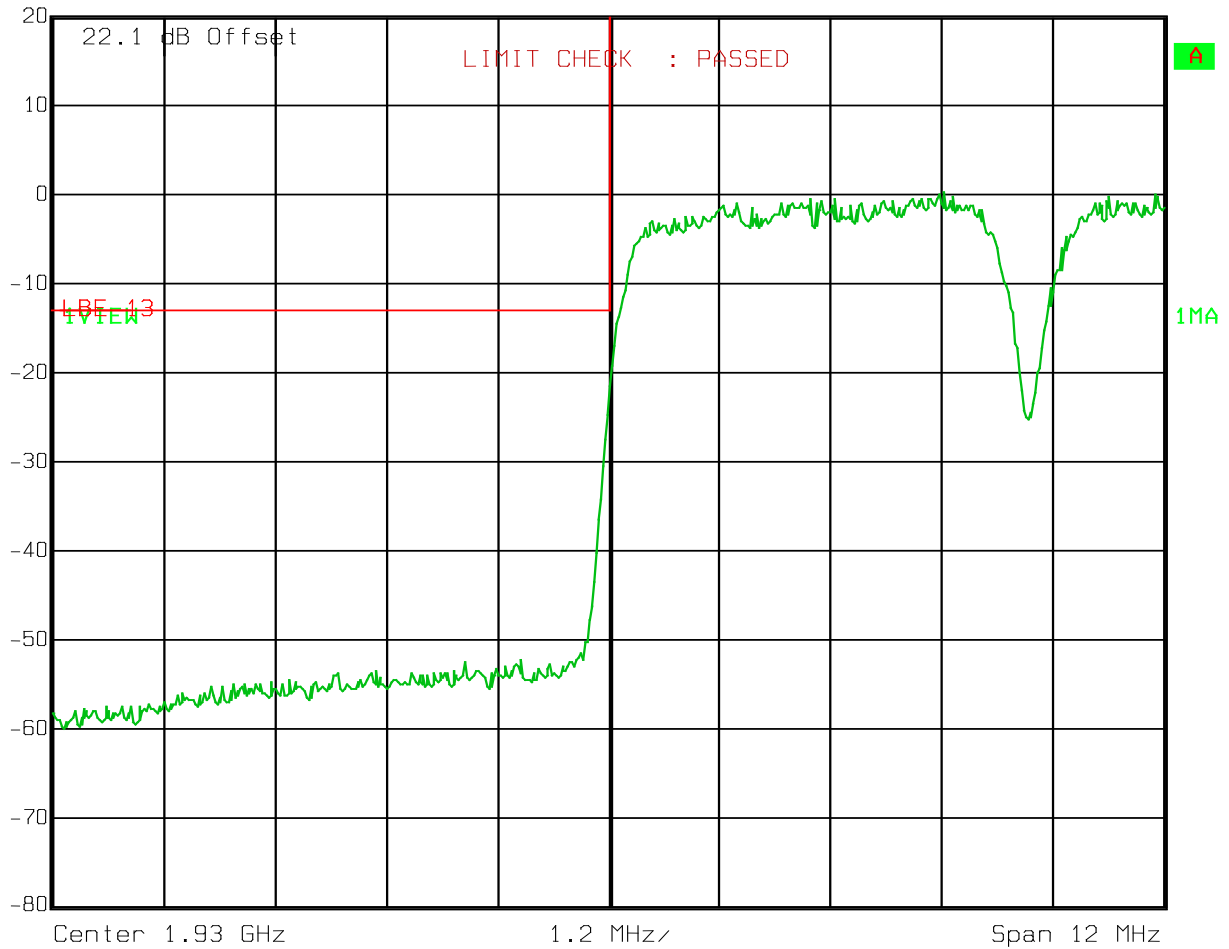
W-CDMA

Downlink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 10 dB   |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 12 ms  | Unit   | dBm     |



Date: 26.JAN.2010 13:34:08

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

Upper Bandedge Intermodulation

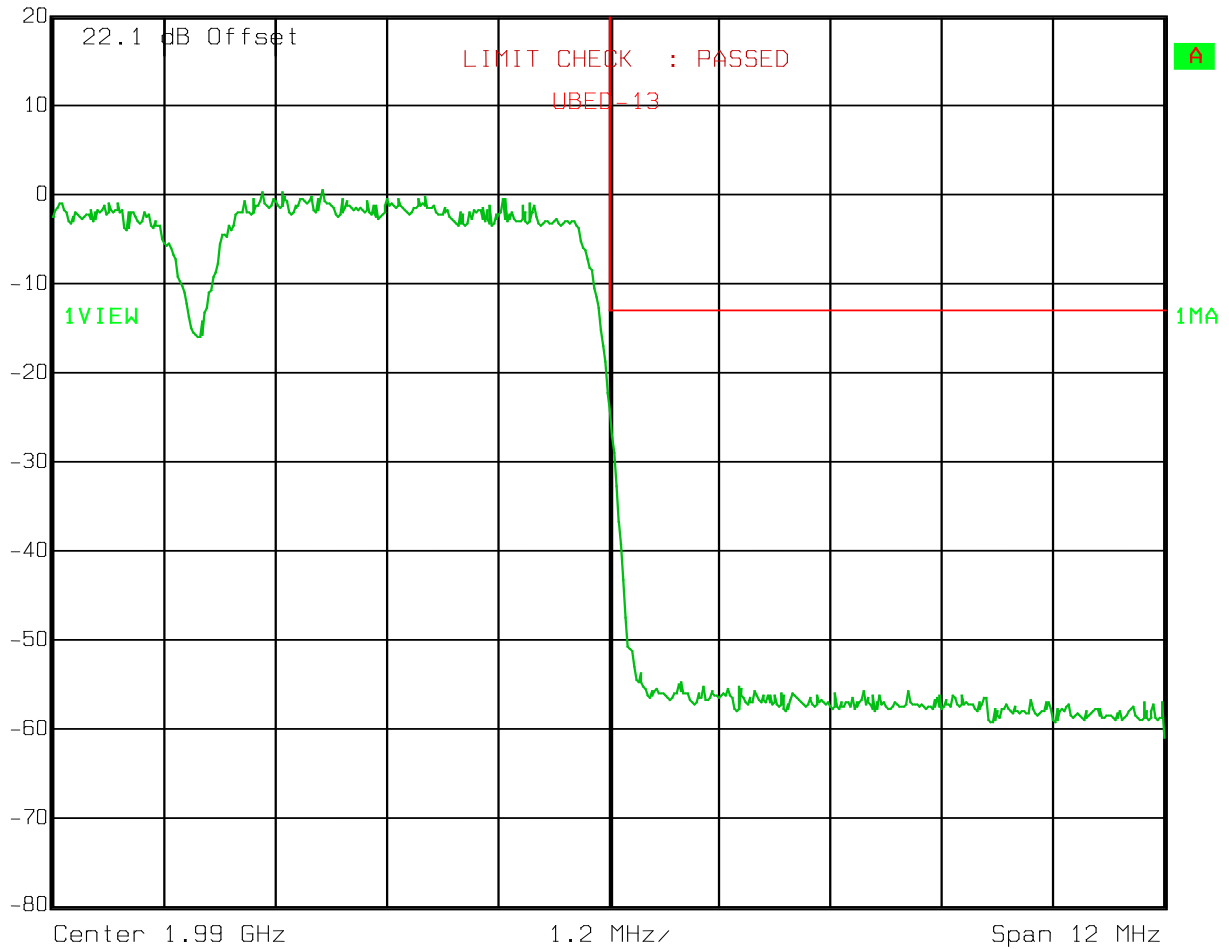
W-CDMA

Downlink



Ref Lvl  
20 dBm

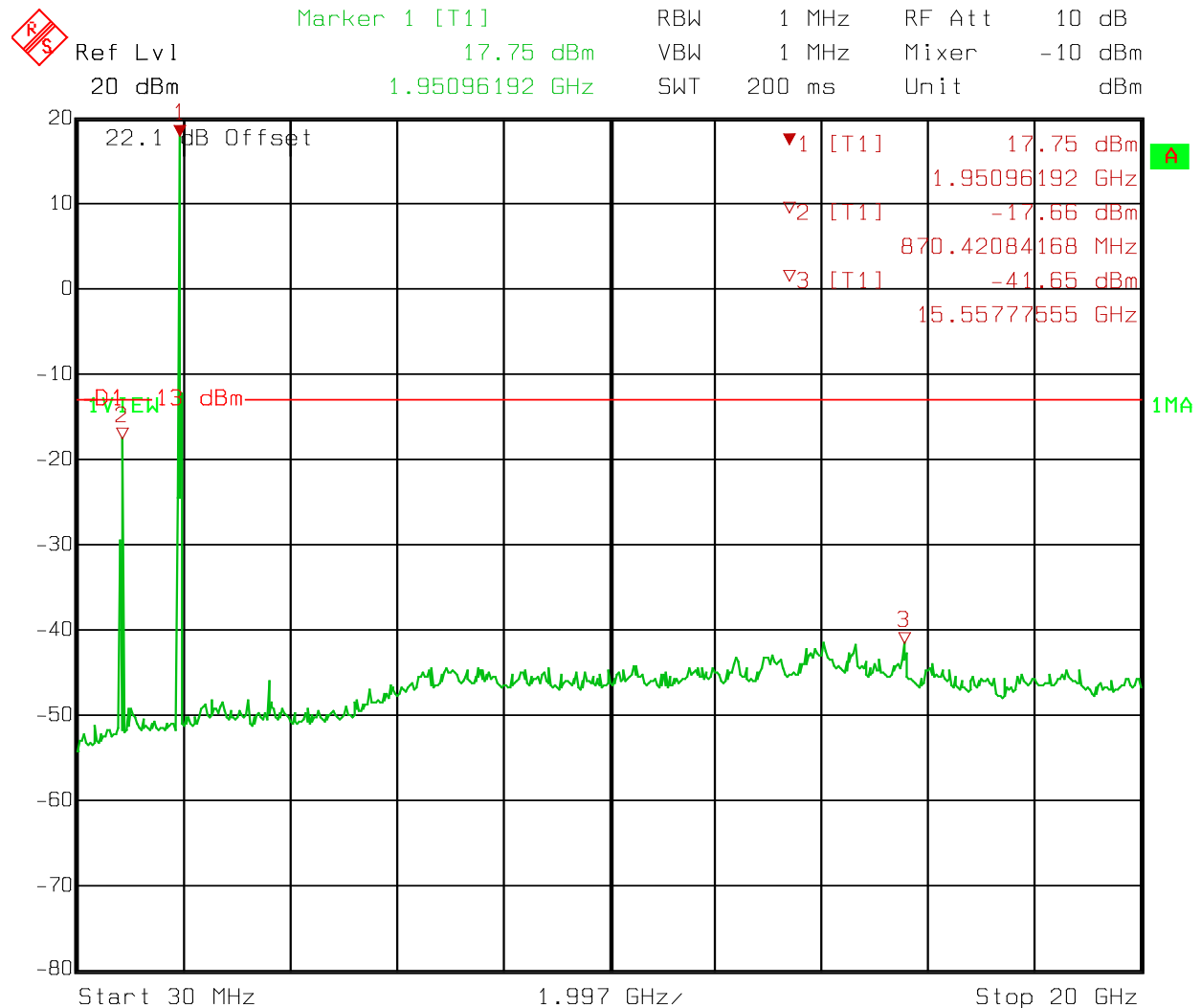
|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 10 dB   |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 12 ms  | Unit   | dBm     |



Date: 26.JAN.2010 13:35:08

## Test Data – Spurious Emissions at Antenna Terminals

Spurs – W-CDMA -  
Downlink



Date: 26.JAN.2010 13:36:10

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

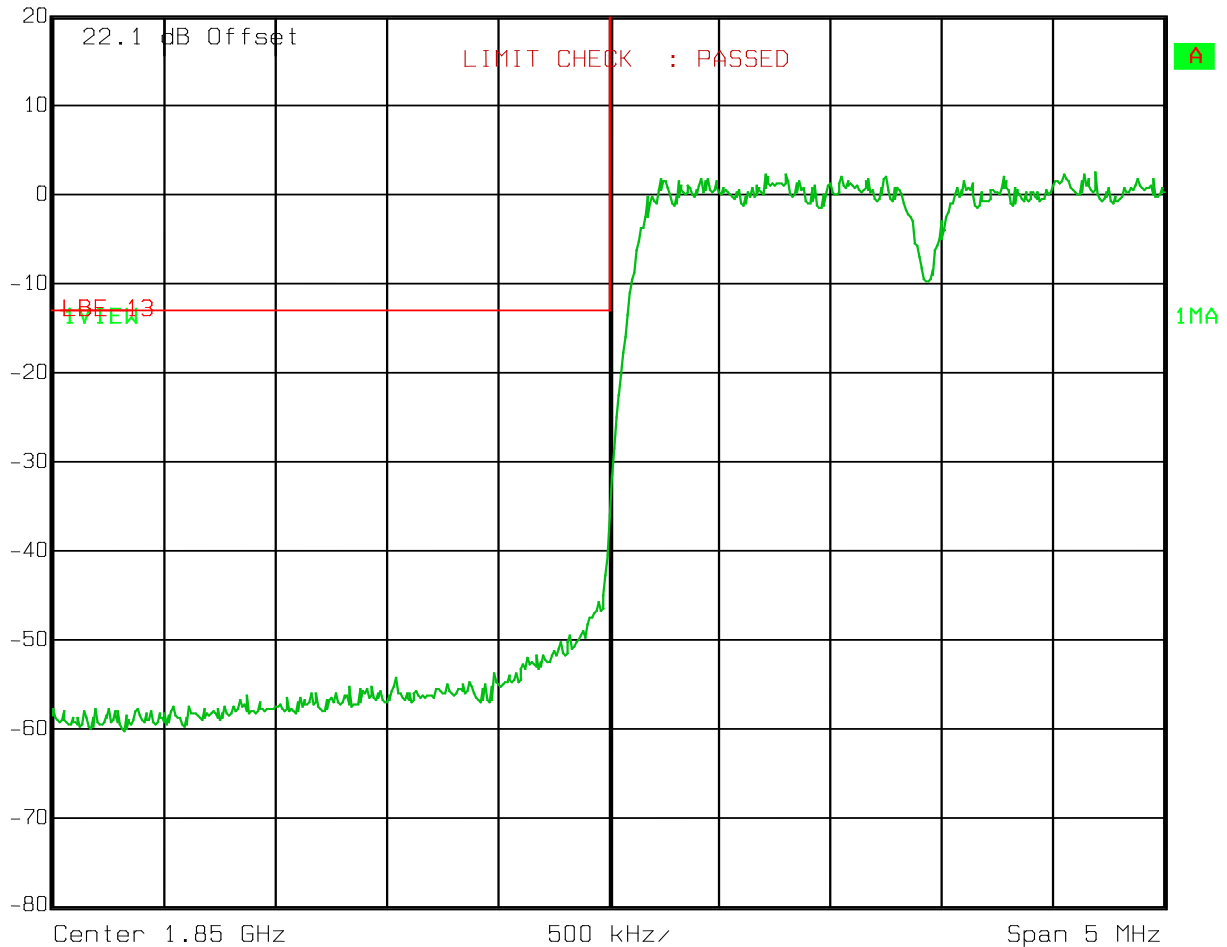
Lower Bandedge Intermodulation

CDMA

Uplink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 10 dB   |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 12:59:52

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

Upper Bandedge Intermodulation

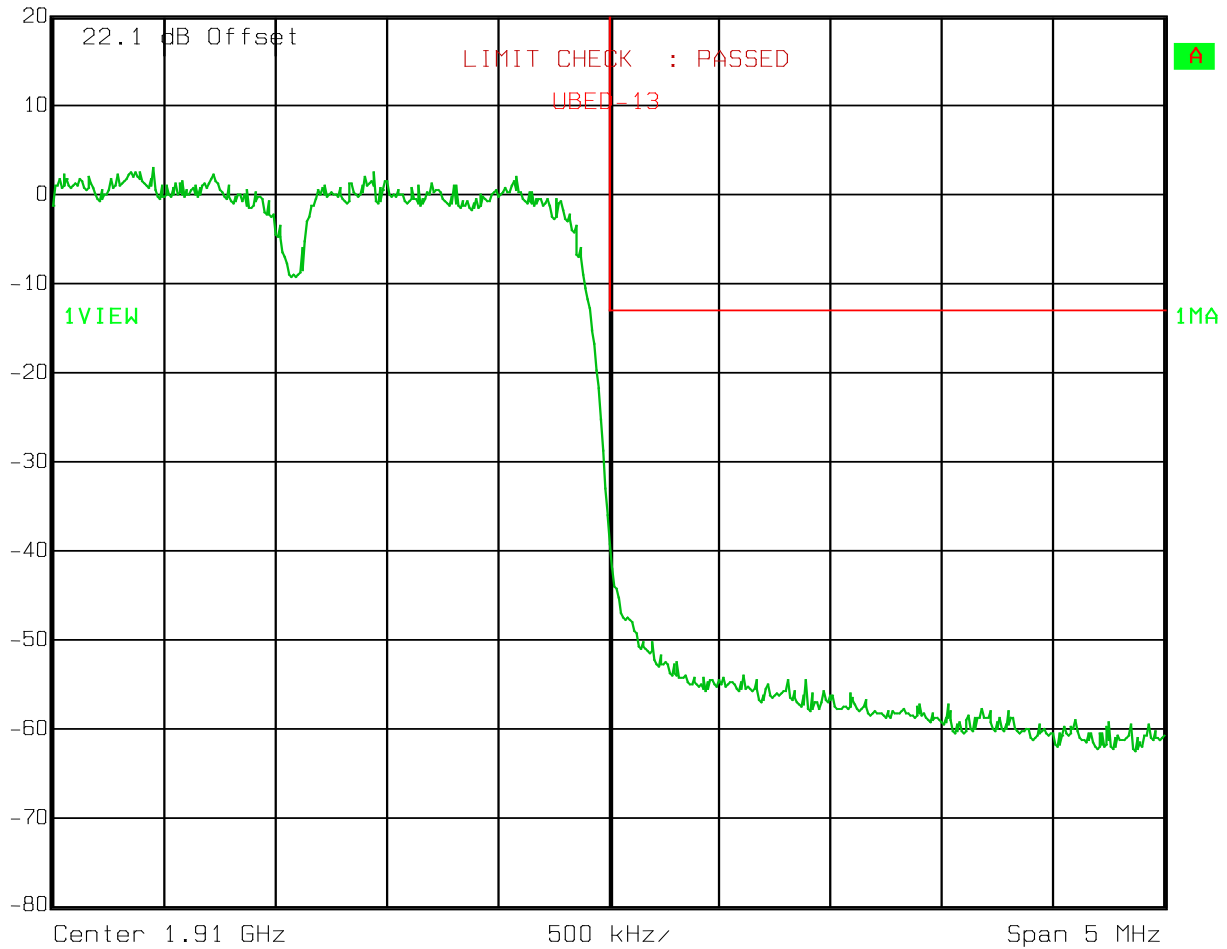
CDMA

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 30 kHz | RF Att | 10 dB   |
| VBW | 30 kHz | Mixer  | -10 dBm |
| SWT | 14 ms  | Unit   | dBm     |



Date: 26.JAN.2010 13:01:14

EQUIPMENT: MR8518/1918/1918

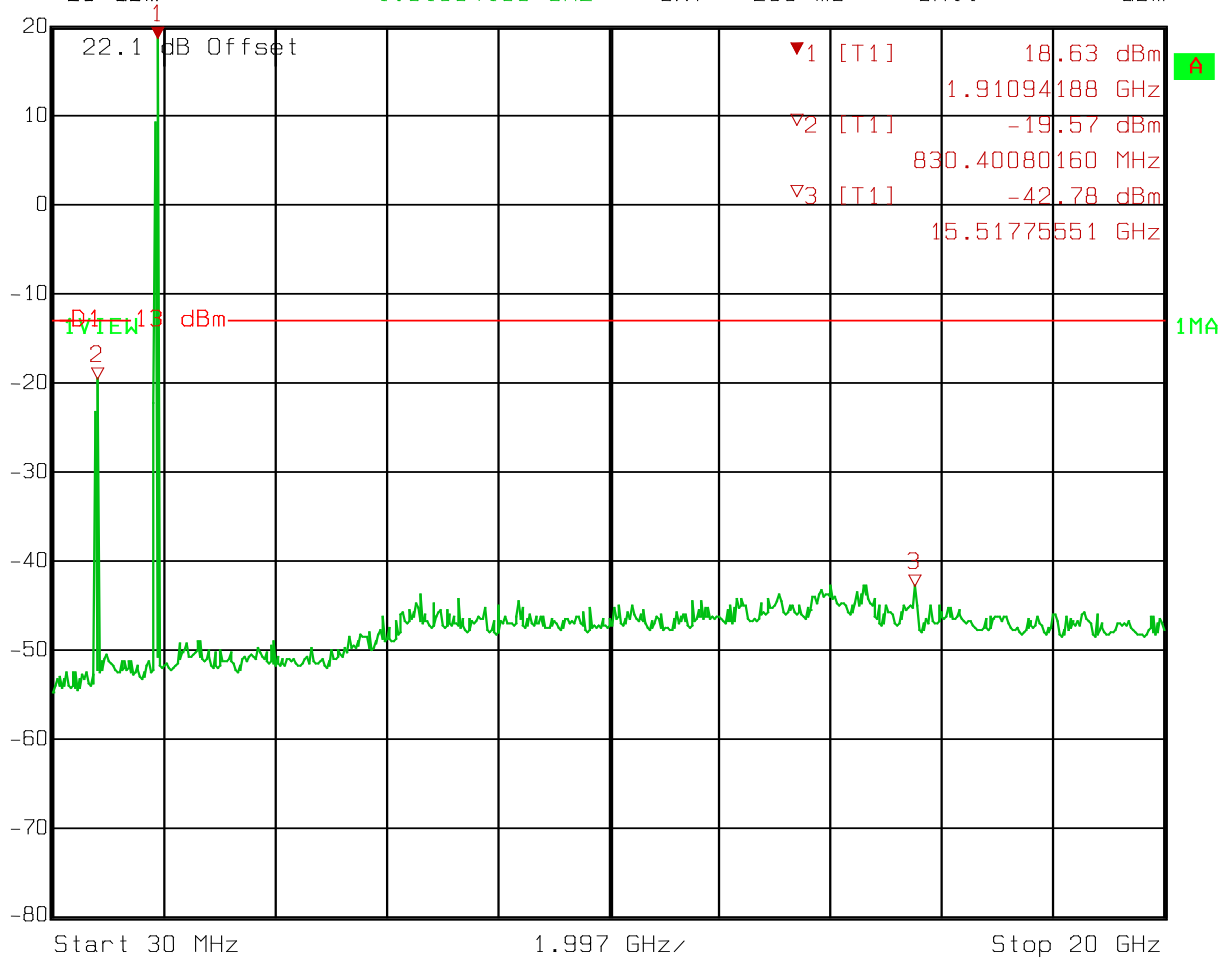
## Test Data – Spurious Emissions at Antenna Terminals

Spurs – CDMA

Uplink



Marker 1 [T1] RBW 1 MHz RF Att 10 dB  
Ref Lvl 18.63 dBm VBW 1 MHz Mixer -10 dBm  
20 dBm 1.91094188 GHz SWT 200 ms Unit dBm



Date: 26.JAN.2010 13:02:32

EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

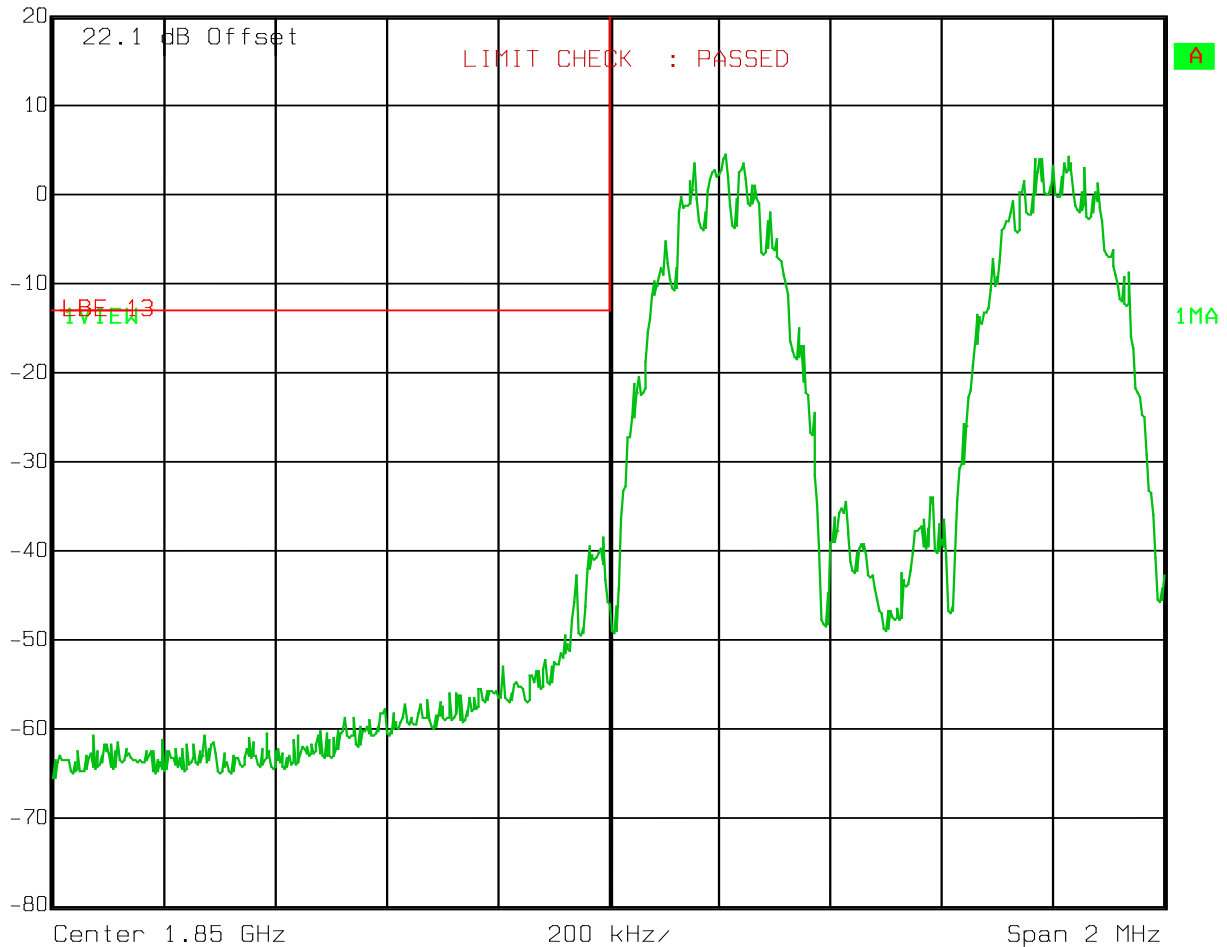
EDGE

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:04:44



EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

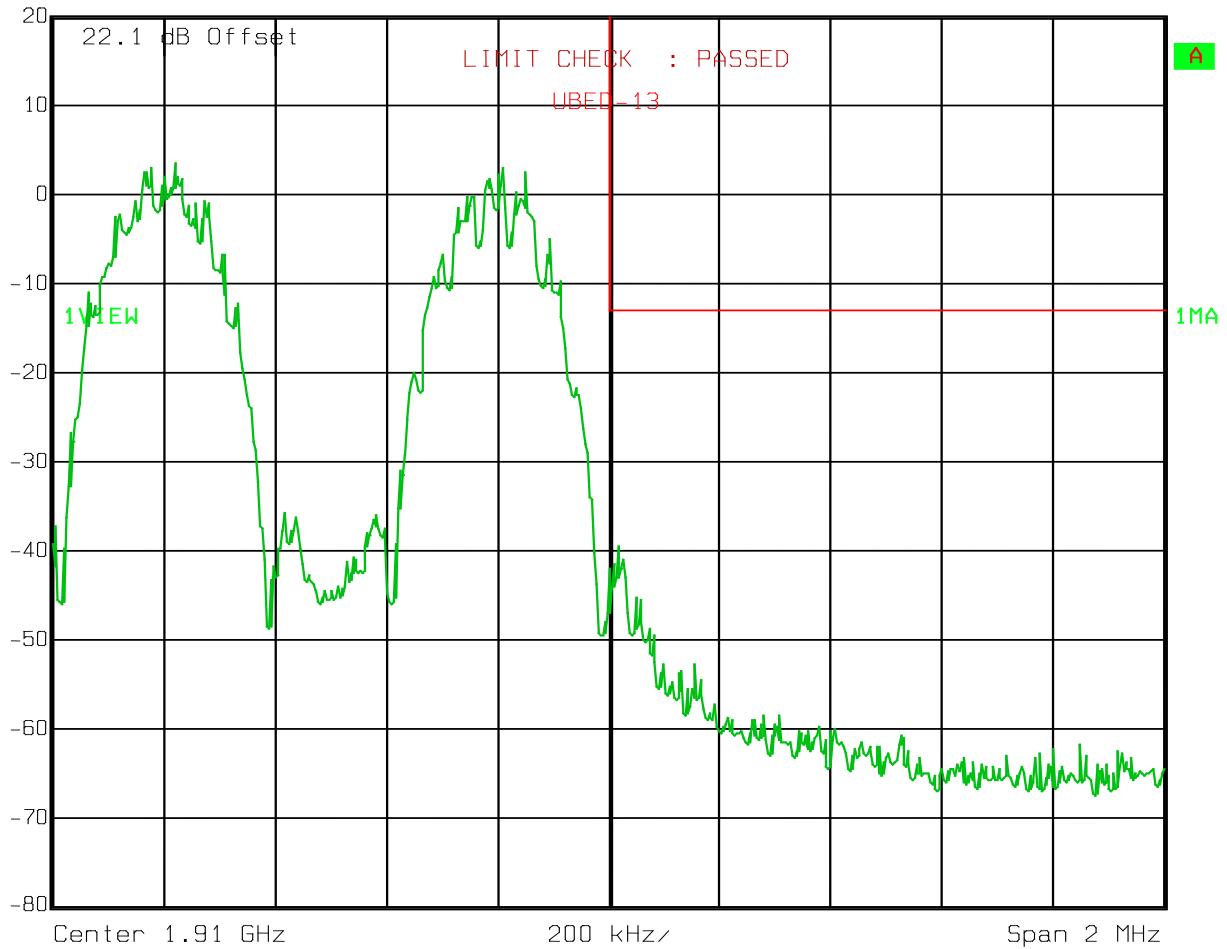
EDGE

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:05:32

## Uplink



EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Lower Bandedge Intermodulation

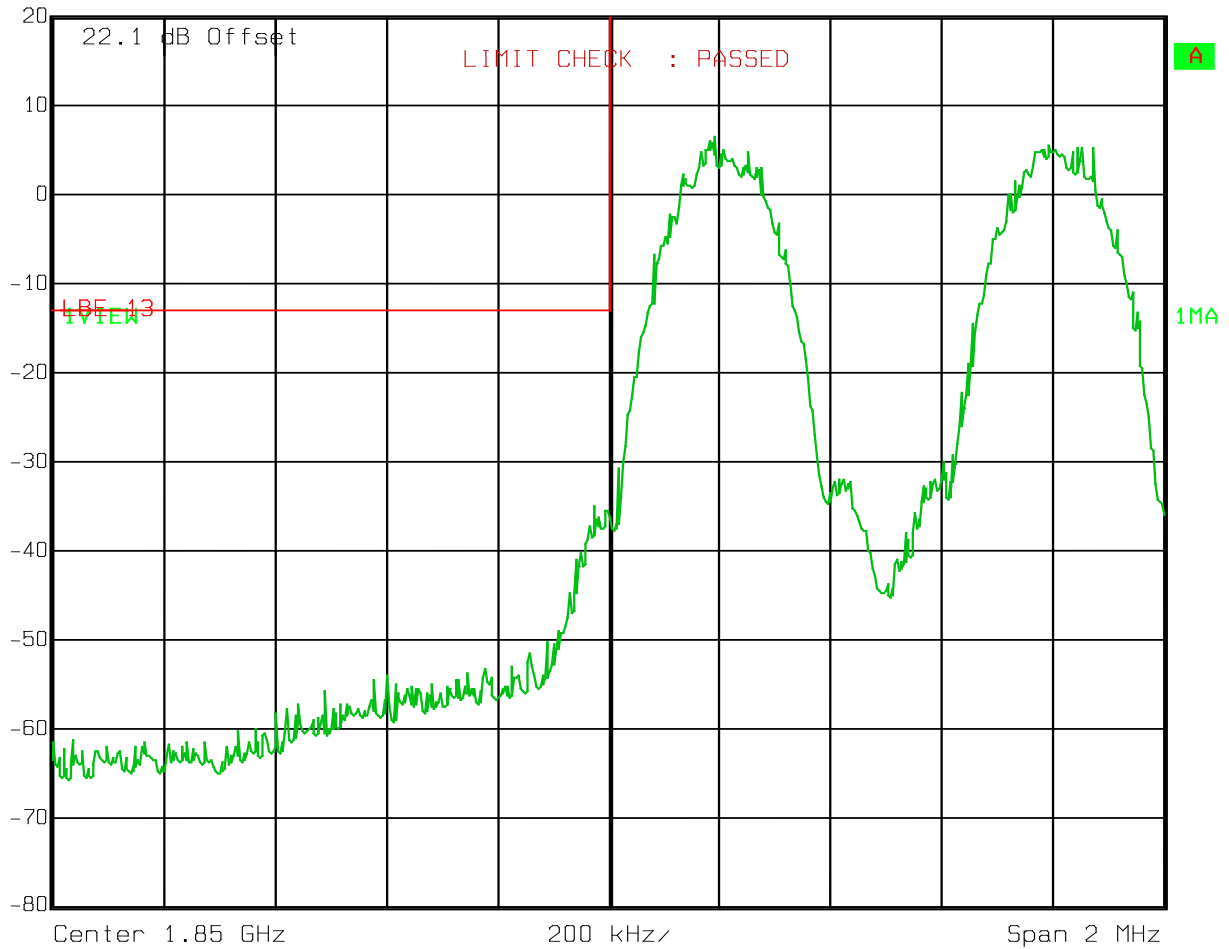
GSM

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:08:29

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

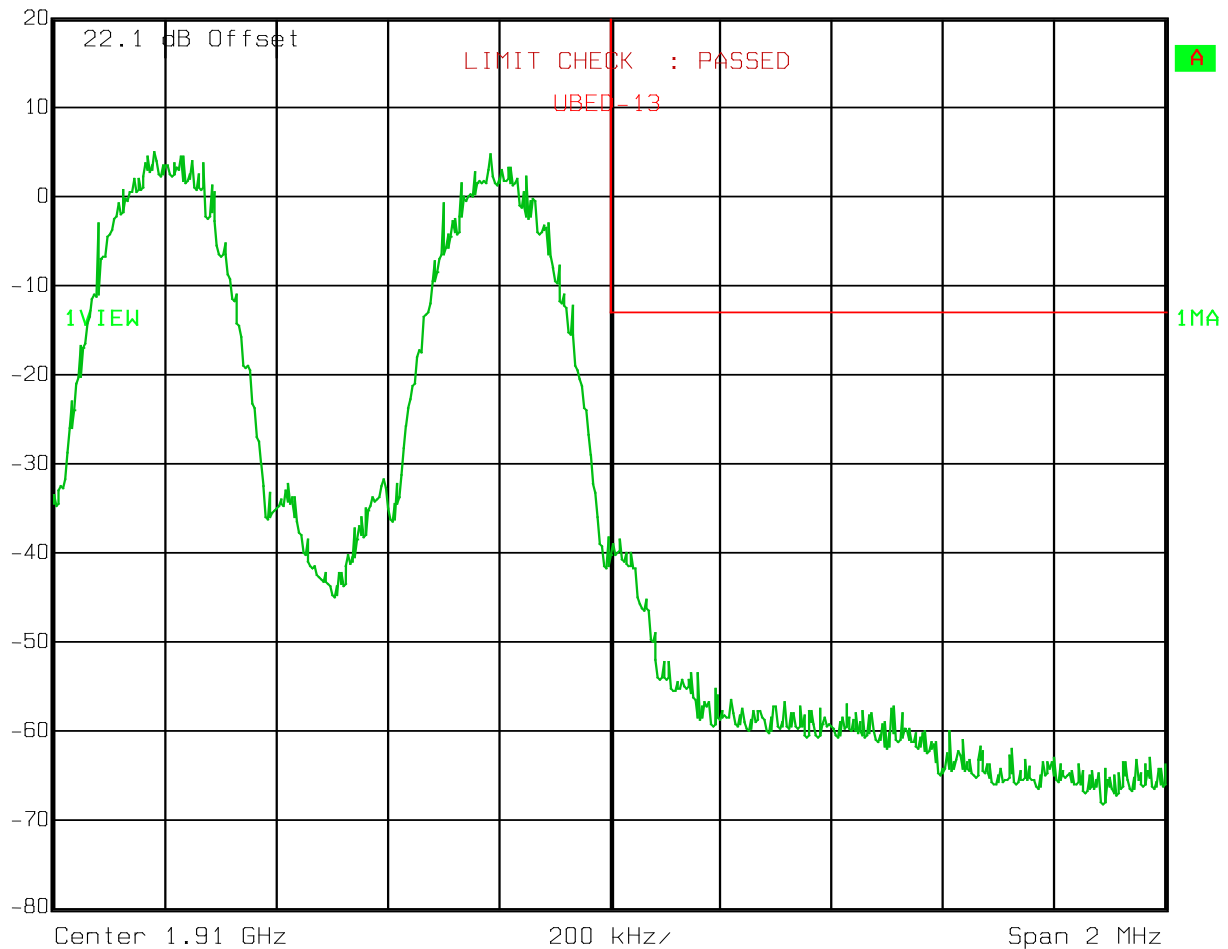
Upper Bandedge Intermodulation

GSM

Uplink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 3 kHz  | RF Att | 10 dB   |
| VBW | 3 kHz  | Mixer  | -10 dBm |
| SWT | 560 ms | Unit   | dBm     |



Date: 26.JAN.2010 13:09:23

EQUIPMENT: MR8518/1918/1918

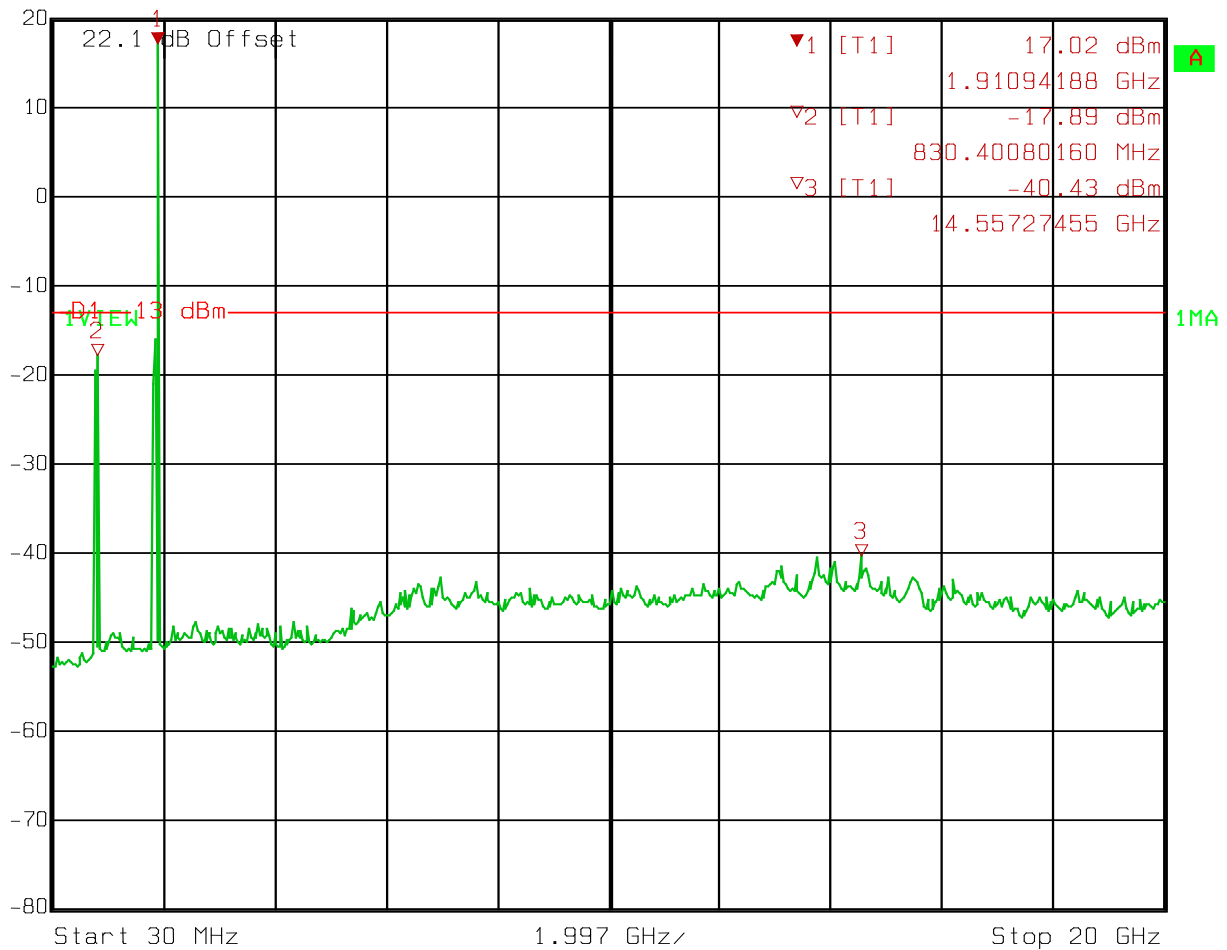
## Test Data – Spurious Emissions at Antenna Terminals

Spurs – GSM

Uplink



Marker 1 [T1] RBW 1 MHz RF Att 10 dB  
Ref Lvl 17.02 dBm VBW 1 MHz Mixer -10 dBm  
20 dBm 1.91094188 GHz SWT 200 ms Unit dBm



Date: 26.JAN.2010 13:10:20

EQUIPMENT: MR8518/1918/1918

**Test Data – Spurious Emissions at Antenna Terminals**

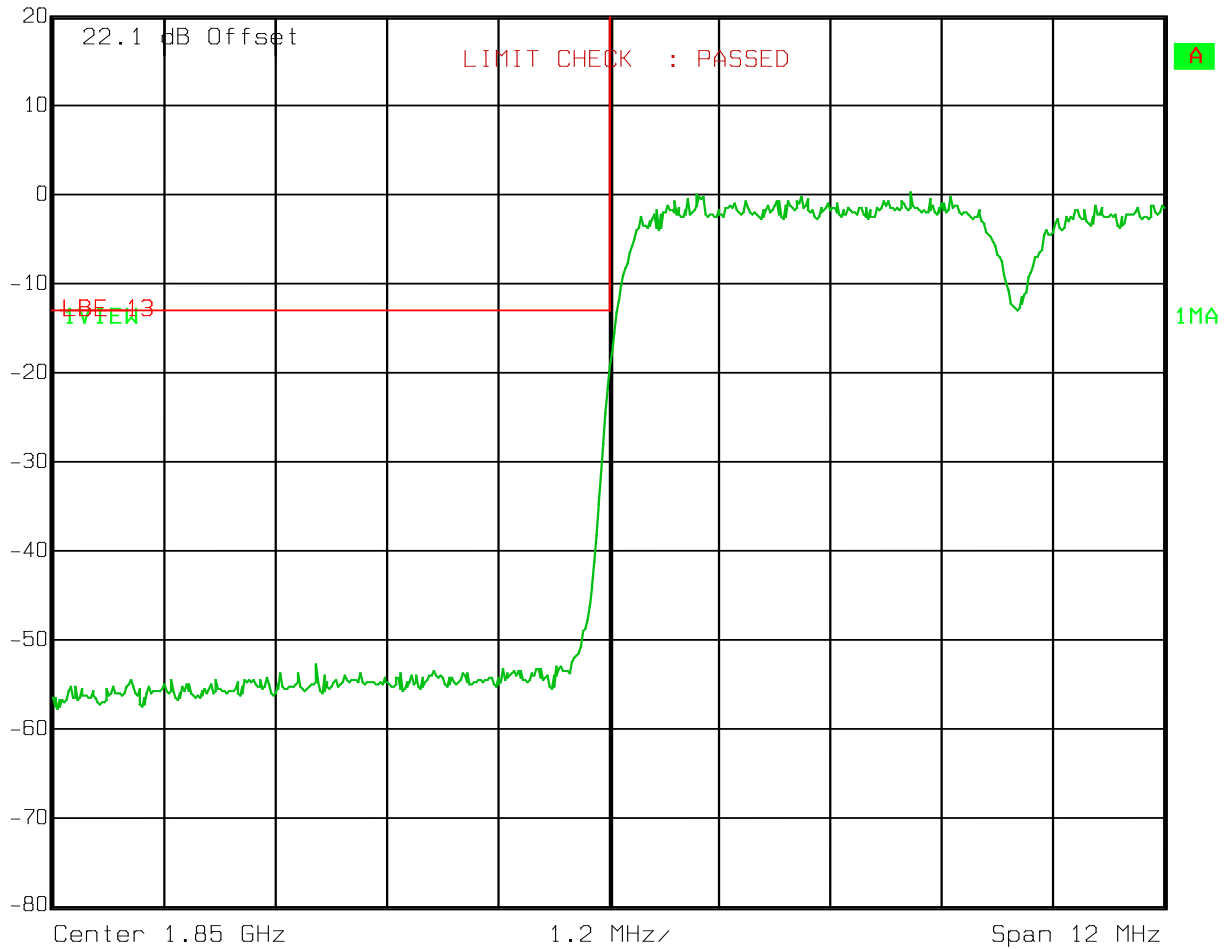
Lower Bandedge Intermodulation

W-CDMA

Uplink

Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 10 dB   |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 12 ms  | Unit   | dBm     |



Date: 26.JAN.2010 13:15:53

EQUIPMENT: MR8518/1918/1918

# Test Data – Spurious Emissions at Antenna Terminals

Upper Bandedge Intermodulation

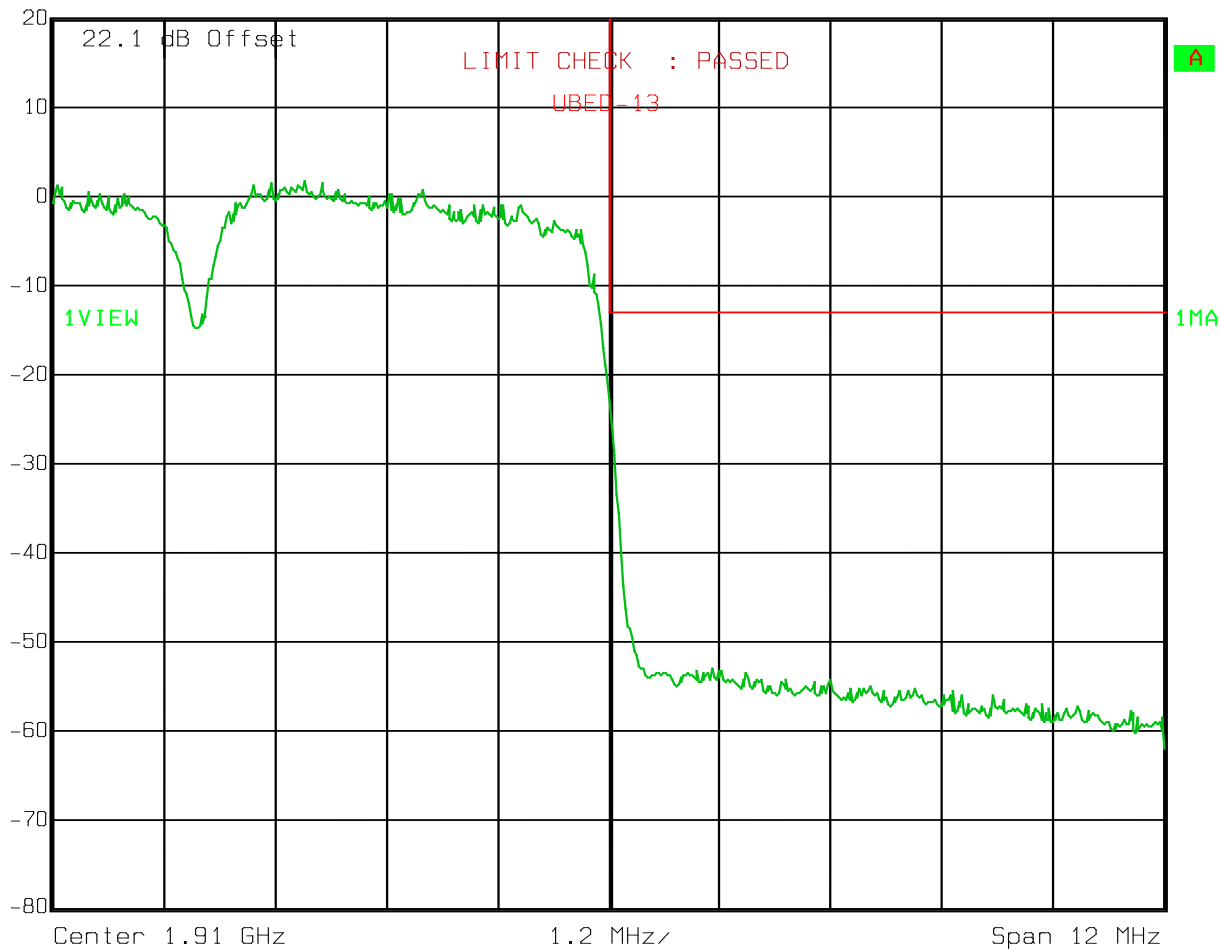
W-CDMA

Uplink



Ref Lvl  
20 dBm

|     |        |        |         |
|-----|--------|--------|---------|
| RBW | 50 kHz | RF Att | 10 dB   |
| VBW | 50 kHz | Mixer  | -10 dBm |
| SWT | 12 ms  | Unit   | dBm     |



Date: 26.JAN.2010 13:14:48

Spurs – W-CDMA -  
Uplink



**Section 5. Test Equipment List**

| Nemko ID | Description               | Manufacturer<br>Model Number   | Serial Number | Calibration<br>Date | Calibration<br>Due |
|----------|---------------------------|--------------------------------|---------------|---------------------|--------------------|
| 1036     | SPECTRUM ANALYZER         | ROHDE & SCHWARZ<br>FSEK30      | 830844/006    | 01/19/09            | 01/20/11           |
| 1082     | CABLE 2m                  | Astrolab<br>32027-2-29094-72TC | N/A           | CBU                 | N/A                |
| 1472     | 20db Attenuator DC 18 Ghz | Omni Spectra<br>20600-20db     | NONE          | CBU                 | N/A                |

## **ANNEX A - TEST DETAILS**

**NAME OF TEST: Occupied Bandwidth**

**PARA. NO.: 2.1049**

**Minimum Standard:** Input/Output

**Method Of Measurement:**

CDMA

Spectrum analyzer settings:  
RBW=VBW=30 kHz  
Span: 5 MHz  
Sweep: Auto

GSM / EDGE

RBW=VBW= 3 kHz  
Span: 1 MHz  
Sweep: Auto

TDMA

RBW=VBW= 1 kHz  
Span: 1 MHz  
Sweep: Auto

W-CDMA

RBW=VBW= 100 kHz  
Span: 10 MHz  
Sweep: Auto

**NAME OF TEST: Spurious Emission at Antenna Terminals PARA. NO.: 24.238****Minimum Standard:**

Para. No.24.238(a). On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power by at least  $43 + 10 \log (P)$  dB.

**Method Of Measurement:**

Spectrum analyzer settings:

CDMA

RBW: 1 MHz (> 1 MHz from Band Edge)  
RBW: 30 kHz (< 1 MHz from Band Edge)  
VBW:  $\geq$  RBW  
Sweep: Auto  
Video Avg: 6 Sweeps

GSM / EDGE

RBW: 1 MHz (> 1 MHz from Band Edge)  
RBW: 3 kHz (< 1 MHz from Band Edge)  
VBW:  $\geq$  RBW  
Sweep: Auto  
Video Avg: Disabled

TDMA

RBW: 1 MHz (> 1 MHz from Band Edge)  
RBW: 3 kHz (< 1 MHz from Band Edge)  
VBW:  $\geq$  RBW  
Sweep: Auto  
Video Avg: Disabled

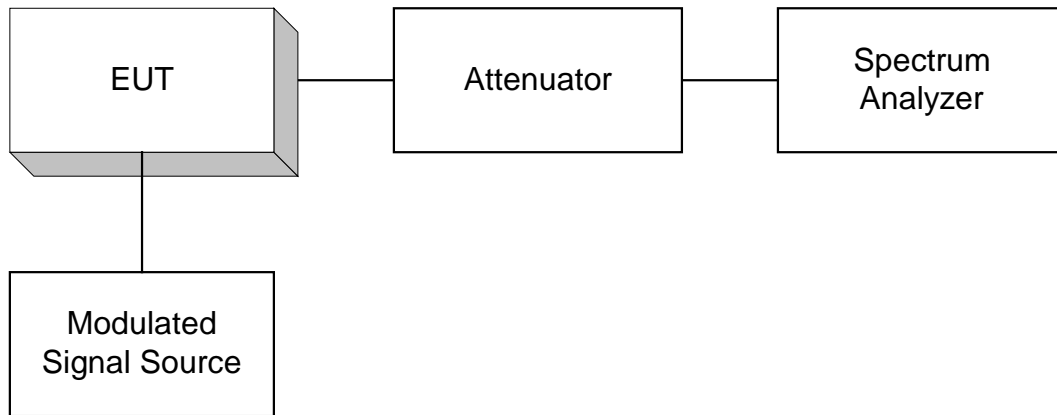
W-CDMA

RBW: 1 MHz (> 1 MHz from Band Edge)  
RBW: 100 kHz (< 1 MHz from Band Edge)  
VBW:  $\geq$  RBW  
Sweep: Auto  
Video Avg: 6 Sweeps

To demonstrate compliance at band edges the frequency of the input signal is set to the lowest and highest assigned channel and the center frequency of the spectrum analyzer is set to the upper and lower edges of the appropriate frequency block.

## **ANNEX B - TEST DIAGRAMS**

**Para. No. 2.989 - Occupied Bandwidth**



**Para. No. 2.991 Spurious Emissions at Antenna Terminals**

