# §2.1051, & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

# **Applicable Standard**

Requirements: CFR 47, § 2.1051 & §24.238(a).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1057.

# **Test Procedure**

The EUT output was connected to the input of the Spectrum Analyzer through a calibrated attenuator.

The resolution bandwidth of the Spectrum Analyzer was set to 30kHz, and th3e resulting data was plotted to show any out-of-band emissions up to the 10<sup>th</sup> harmonic.

## **Test Equipment List and Details**

| Manufacturer | Description       | Model   | Serial Number | Cal. Date    |
|--------------|-------------------|---------|---------------|--------------|
| HP           | Spectrum Analyzer | HP8564E | 3943A01781    | 2003-08-01   |
| HP           | Plotter           | HP7470A | 2541A49659    | Not Required |
| Weinschel    | Attenuator        | MS015   | 58633         | N/A          |

\* **Statement of Traceability: BACL Corp.** certifies that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

# **Environmental Conditions**

| Temperature:       | 28° C     |
|--------------------|-----------|
| Relative Humidity: | 37%       |
| ATM Pressure:      | 1032 mbar |

The testing was performed by Ming Jin on 2004-08-25.

# **Test Results**

Please refer to the hereinafter plots.

## FCC ID: RSNCM2000

|            |        |        |          |          |         | SM20          | 00   | CELL                  | 850   |
|------------|--------|--------|----------|----------|---------|---------------|------|-----------------------|-------|
|            |        |        |          |          |         |               |      | \$                    |       |
| MKA<br>823 | .8 M   | Hz     |          |          |         |               |      |                       |       |
| 16.        | 50 d   | Bm     |          |          |         |               | -    |                       |       |
|            |        |        |          |          |         |               |      |                       |       |
|            |        |        |          |          |         |               |      |                       |       |
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|            |        |        |          |          | 10      |               | 104  |                       |       |

START 30.0MHZ STOP 1.0000GHZ RBW 100KHZ VBW 100KHZ \*SWP 10.0sec

|                                  | GSM   | 000          | 1     | .85<br>L. |
|----------------------------------|---|--------------|-------|-----------|
|                                  |   |              |       |           |
| z                                |   |              |       |           |
| Bm                               |   |              |       |           |
|                                  |   |              |       | +         |
|                                  |   |              |       | +         |
|                                  |   |              |       |           |
|                                  |   |              |       |           |
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|                                  |   |              |       |           |
| OOGHz                            | STOP  | 10.0         | OOGH  | iz        |
| 00GHz<br>z VBW 100               | STOP<br><hz< td=""><td>10.0<br/>*SWP</td><td>00GH</td><td>iz o</td></hz<> | 10.0<br>*SWP | 00GH  | iz o      |

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|  |        |             | C         | M20      | 00      | CELL | 850   |
|--|--------|-------------|-----------|----------|---------|------|-------|
|  |        |             | G         | SM       |         |      | M . C |
|  | -      |             |           |          |         | \$   |       |
| MKA<br>836.7 MHz   |        |             | -         | -        |         |      |       |
| 16.00 dBm  |        |             |           |          |         |      |       |
|  |        |             |           |          |         |      |       |
|  |        |             |           |          |         |      |       |
|  |        |             |           |          |         |      |       |
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|  |        |             |           |          |         |      | -     |
|  |        |             |           |          |         | 1    | -     |

START 30.0MHZ STOP 1.0000GHZ RBW 100kHz VBW 100kHz \*SWP 10.0sec

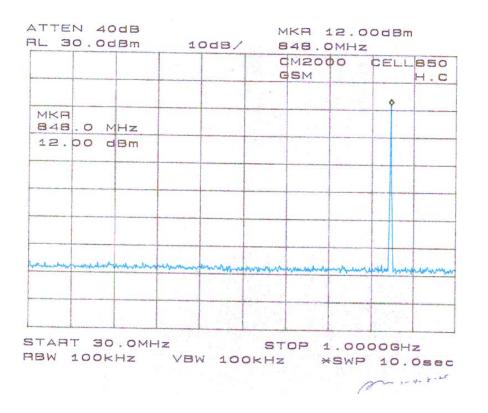
ATTEN 400B MKR -42.50dBm RL 30.0dBm 10dB/ 7.195GHz CM2000 CELLB50 GSM M.C MKR 7.195 GHz -42.50 dBm 8 M. Mar mountabled white mere START 1.000GHZ STOP 10.000GHZ RBW 100kHz VBW 100kHz \*SWP 50.0sec pm 2... 4. 8-21

## FCC ID: RSNCM2000

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|-------------|-------|--------------|-----|-------|-------|----------|--------|-----------------------|--------|
|             |       |              |     |       |       | SM       |        | and the second second | H.C    |
|             |       |              |     |       |       | -        |        |                       |        |
| MKR<br>7.1  | 80 G  | Hz           |     |       |       |          |        |                       |        |
| -44         | . 00  | dBm          | _   |       |       |          |        |                       |        |
|             |       |              |     |       |       |          |        |                       |        |
|             |       |              |     |       |       |          |        |                       |        |
| Menhanan ma | mulmu | perfordences | mmm | manue | maham | American | nehran | unhand                | window |
|             |       |              |     |       |       |          |        |                       |        |
|             |       |              |     |       |       |          |        |                       |        |

START 1.000GHZ STOP 10.000GHZ RBW 100kHz VBW 100kHz \*SWP 50.0sec

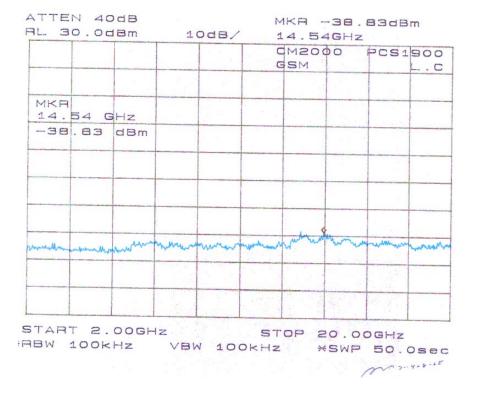
pr 2.04. 2.35



#### FCC ID: RSNCM2000

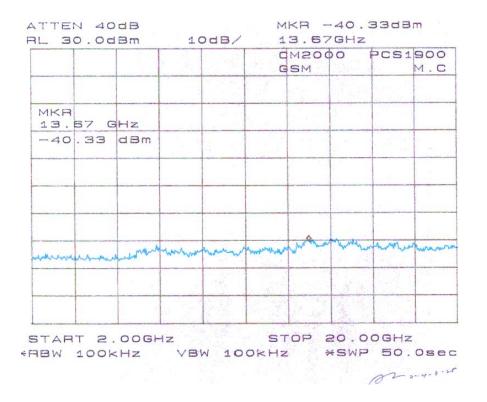
|            |       | -    |           |      |        | M200   | b0   | PCS1   | 1        |
|------------|-------|------|-----------|------|--------|--------|------|--------|----------|
|            |       |      |           |      | G      | SM     |      |        | L.C      |
|            |       |      | - Auguste |      |        |        |      |        | \$       |
| MKR<br>1.8 |       | GHz  |           |      |        |        |      |        |          |
| 13.        | 50    | dBm  |           |      |        | -      |      |        |          |
|            |       |      |           |      |        |        |      |        |          |
|            |       |      |           |      |        |        |      |        |          |
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|            |       |      |           |      |        |        |      |        |          |
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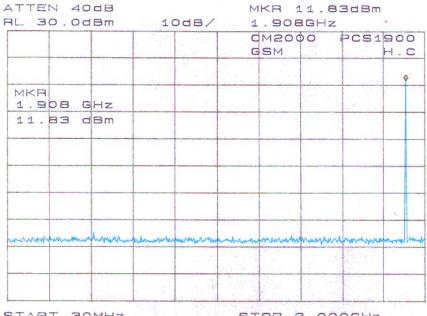
START 30MHZ STOP 2.000GHZ RBW 100KHZ VBW 100KHZ \*SWP 10.0sec



|                  | 1 100 14 |               |       | MSOC   | 90       | 1.       | 1.       |
|------------------|----------|---------------|-------|--------|----------|----------|----------|
|                  |          | 1 and a start | C     | SM     |          |          | M.C      |
|                  | 1.12     | 1.30          | 13.31 | 1.200  |          |          | 8        |
| MKR<br>1.879 GHz |          |               |       |        |          |          |          |
| 14.83 dBm        |          |               |       |        |          |          |          |
|                  |          |               |       |        |          |          |          |
|                  |          |               |       |        |          |          |          |
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|                  |          |               |       |        |          |          |          |
|                  | 1        |               |       | 1.11   | 1        | 1        | -        |

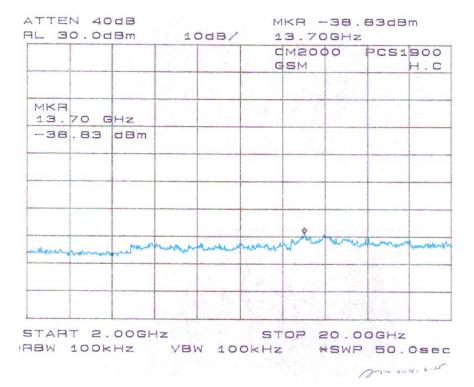
START 30MHZ STOP 2.000GHZ RBW 100KHZ VBW 100KHZ \*SWP 10.0sec





START 30MHZ STOP 2.000GHZ (RBW 100KHZ VBW 100KHZ \*SWP 10.0sec





# §2.1055 (a), §2.1055 (d), & §24.235 - FREQUENCY STABILITY

This EUT is an amplifier, not a transmitter. There is no oscillator circuit in the EUT, therefore there is no frequency stability measurement required.

# **§24.238 – BAND EDGE**

## **Applicable Standard**

According to \$24.238, 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  $43 + 10 \log(P) dB$ .

## **Test Procedure**

The EUT output was connected to the input of the Spectrum Analyzer through a calibrated attenuator.

The resolution bandwidth of the Spectrum Analyzer was set to 30kHz, and the center frequency was set to the band edge frequency.

## **Test Equipment List and Details**

| Manufacturer | Description       | Model   | Serial Number | Cal. Date    |
|--------------|-------------------|---------|---------------|--------------|
| HP           | Spectrum Analyzer | HP8564E | 3943A01781    | 2003-08-01   |
| HP           | Plotter           | HP7470A | 2541A49659    | Not Required |
| Weinschel    | Attenuator        | MS015   | 58633         | N/A          |

\* **Statement of Traceability: BACL Corp.** certifies that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

## **Environmental Conditions**

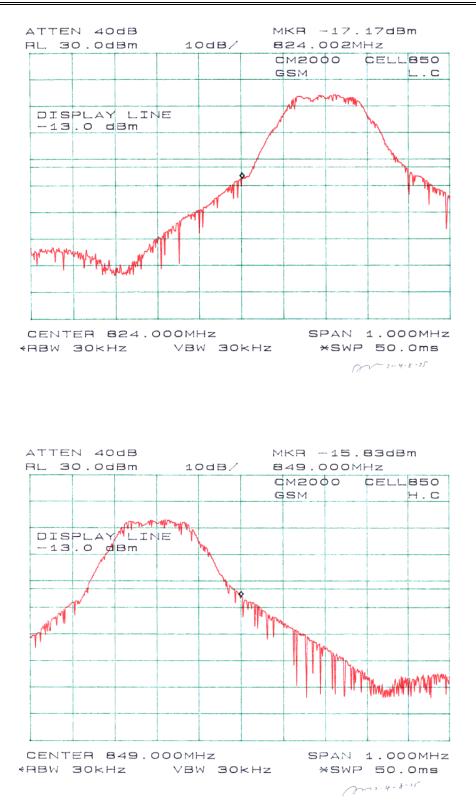
| Temperature:       | 28° C     |
|--------------------|-----------|
| Relative Humidity: | 37%       |
| ATM Pressure:      | 1032 mbar |

The testing was performed by Ming Jin on 2004-08-25.

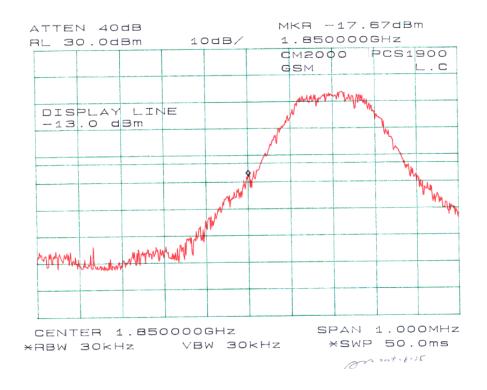
## **Test Results**

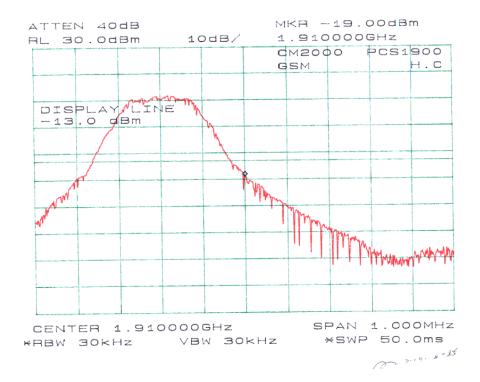
Please refer to the following plots.

FCC ID: RSNCM2000

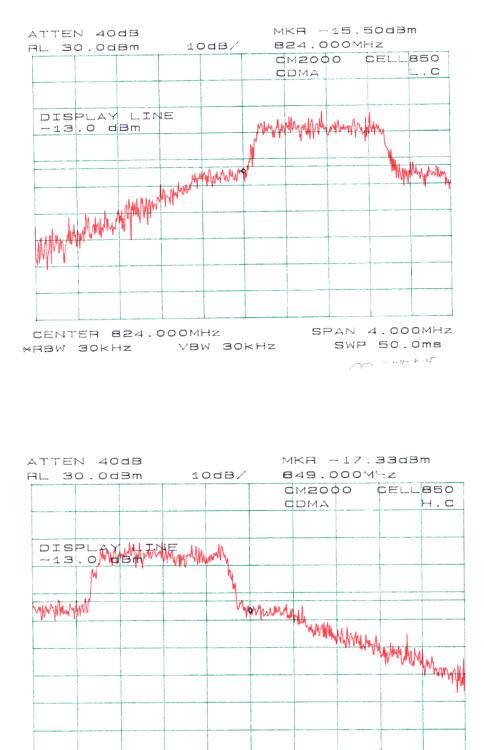


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CENTER 849.000MHz SPAN 4.000MHz RBW 30KHz VBW 30KHz SWP 50.0ms

FCC ID: RSNCM2000

