

**FCC ID: PP9P2000MOBITEX**

**Exhibit 2d**

**Engineering Report on**

**Spurious Emissions at Antenna Terminal (2.1051)**



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## SPURIOUS EMISSIONS AT ANTENNA TERMINALS

### **TEST PROCEDURE:**

The Research In Motion Limited R902M-2-O radio modem device was connected together with a radio monitor board 02120-001, host computer, external power supply, a 20 dB external attenuator, and a coaxial cable. The R902M-2-O antenna output terminal was connected to the input of a 50  $\Omega$  spectrum analyzer through a matched 20 dB attenuator and a coaxial cable. The transmitter was operating at full output power with and without internal data modulation. The calculated limit below the unmodulated carrier at +12.1 dBm, including the 20 dB external attenuator and 1 dB cable loss, is +33.1 dBm. The actual limit is 53.1 dBc lower, or -20.0 dB.

## TEST RESULTS:

Ref 899 +33.1 (- 53.1) -20.0

<b>FREQUENCY MHz</b>	<b>LEVEL dBm</b>	<b>LIMIT dB</b>
899	33.1	
1,798	-37.0	-20.0
2,697	-39.3	-20.0
3,596	-62.9	-20.0
4,495	-55.1	-20.0
5,394	-39.8	-20.0
6,293	-41.7	-20.0
7,192	-73.1	-20.0
8,091	-57.2	-20.0
8,990	-66.5	-20.0

**NOTE:**

The above limits take into account the unmodulated carrier level of 33.1 dBm inclusive of the 20 dB external attenuator and 1 dB coaxial cable loss. The modulation used was a worst case, random data pattern while still representing a normal modulation pattern.

## EQUIPMENT:

- H.P. 8563E Spectrum Analyzer 9.0 KHz - 26.5 GHz
- HP6632A DC POWER SUPPLY
- Mini Circuits 20 dB att. # NAT-20 0 Hz - 1.5 GHz