

**FCC ID: ESD-SA806866R8**

**Exhibit 2**

**Engineering Report**  
**d) Spurious Emissions, Antenna Terminal (2.1051)**



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## **SPURIOUS EMISSIONS AT ANTENNA TERMINALS**

### **TEST PROCEDURE:**

The Research In Motion Limited R802D-2-O radio modem device was connected together with a radio monitor board 02120-001, host computer, external power supply, a 30 dB external attenuator, and a 0.80 dB coaxial cable. The R802D-2-O antenna output terminal was connected to the input of a  $50 \Omega$  spectrum analyzer through a matched 30 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 +2.50 dBm, including the 30 dB external attenuator and 0.8 dB cable loss, is equal to +33.30 dBm. The actual limit is 46.3 dBc lower, or -13.0 dB.

## **TEST RESULTS:**

Ref 815 +33.30 (- 46.3) -13.0

<b>FREQUENCY MHz</b>	<b>LEVEL dBm</b>	<b>LIMIT DB</b>
815	+33.30	
1630	-40.87	-13.00
2445	-46.70	-13.00
3260	-57.37	-13.00
4075	-47.70	-13.00
4890	-56.20	-13.00
5705	-57.37	-13.00
6520	NOT FOUND	-13.00
7335	NOT FOUND	-13.00

**NOTE:**

The above limits take into account the unmodulated carrier level of +33.30 dBm inclusive of the 30 dB external attenuator and 0.80 dB coaxial cable loss. The modulation used for spurious harmonics 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
- RIM OEM Interface wth AC adaptor P/N:WR91A2400CCP
- Radio: R802D-2-O
- Mini Circuits 20 dB att. # NAT-20 0 Hz - 10.5 GHz
- MD west microwave att. # 0217NNN-02 10dB DC - 8.0 GHz