

**FCC ID: PQ9MCW4**

**Exhibit 2c**

**Engineering Report on**

**Bandwidth (2.1049) Modulation Characteristics (2.1047)**

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Approved Masud S. Attayi	Rev	File / Reference BW Masks

## OCCUPIED BANDWIDTH/BANDWIDTH LIMITATIONS

### TEST PROCEDURE:

The Research In Motion Limited R802D-2-O Radio modem was connected together with a host computer, external power supply and a 20 dB external attenuator. The R802D-2-O antenna output terminal was connected to the input of a 50  $\Omega$  spectrum analyzer through a matched 20 dB attenuator. The R802D-2-O transmitter was operating at full output power with and without internal data modulation.

### TEST RESULTS:

UNMODULATED CARRIER, High Power: **12.87dBm** with a 20dB external pad and a 1 m Sucoflex cable with a total loss of 0.18 dB.

Internal Modulation: Please refer to the attached spectrum analyzer plots. 100% of the in-band modulation is below the specified mask per 90.210(g) for both RD\_LAP and MDC protocols.

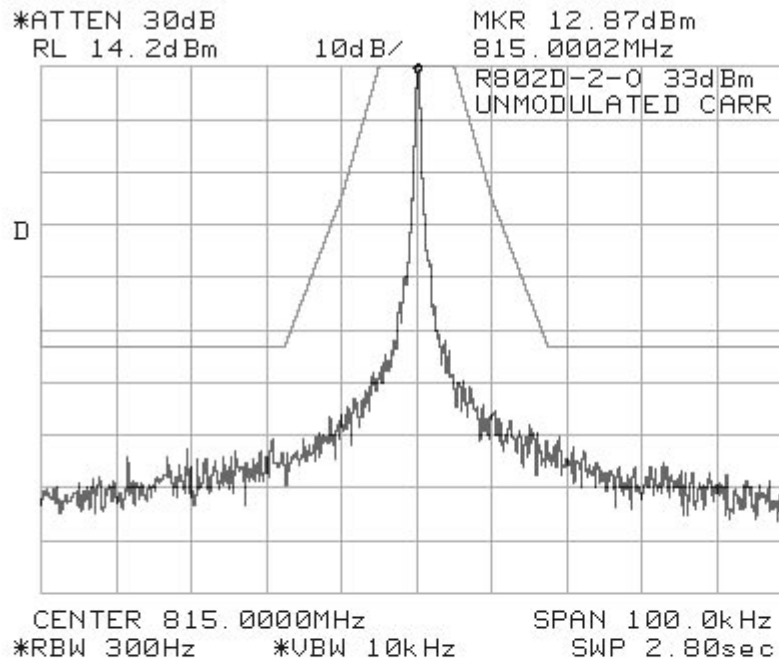
Below is the **description of the mask** for band 806-821/851-866 MHz (DataTAC) : 2.0 Watts transmitter

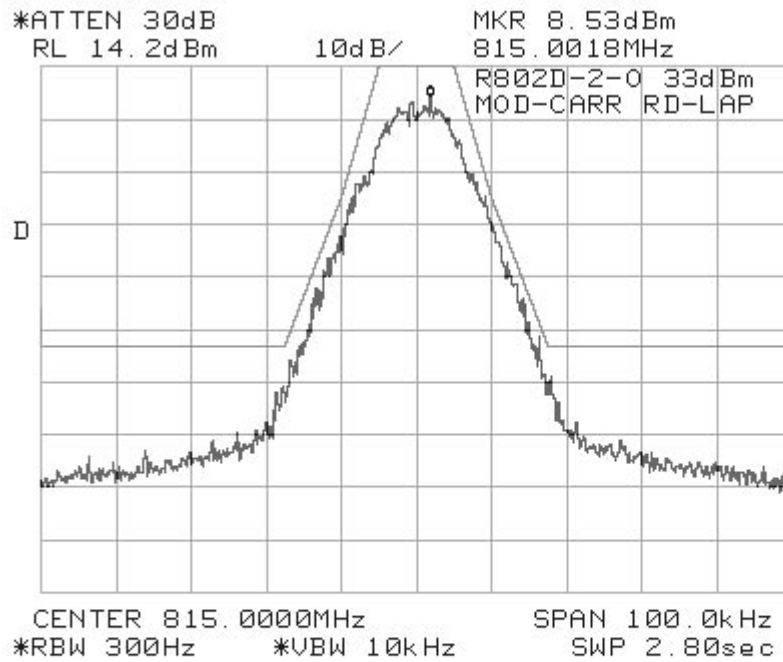
<u>Frequency</u> (MHz)	<u>Formula</u>	<u>Limit</u> (Db)
-26500	$43+10 \log (P)$	-46
-0.050	$43+10 \log (P)$	-46
-0.050	$50+10 \log (P)$	-53
-0.0175	$116 \log (f_d / 6.1)$	-53
-0.010	$116 \log (f_d / 6.1)$ or $83 \log (f_d / 5)$	-25
-0.005	$83 \log (f_d / 5)$	0.0
0.005	$83 \log (f_d / 5)$	0.0
0.010	$116 \log (f_d / 6.1)$ or $83 \log (f_d / 5)$	-25
0.0175	$116 \log (f_d / 6.1)$	-53
0.050	$50+10 \log (P)$	-53
0.050	$43+10 \log (P)$	-46
26500	$43+10 \log (P)$	-46

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## EQUIPMENT:

- H.P. 8563E Spectrum Analyzer 9.0 KHz - 26.5 GHz
- HP6632B DC POWER SUPPLY
- Mini Circuits 20 dB att. # NAT-20 0 Hz - 1.5 GHz

OCCUPIED BANDWIDTH/BANDWIDTH LIMITATIONS  
UNMODULATED CARRIER

OCCUPIED BANDWIDTH/BANDWIDTH LIMITATIONS  
MODULATED CARRIER - RD\_LAP





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**OCCUPIED BANDWIDTH/BANDWIDTH LIMITATIONS****MODULATED CARRIER MDC**