

FCC ID: PSMDATATAC002

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-2-0 Radio modem was connected together with a host computer, external power supply and a 20 dB external attenuator. The R802D-2-0 antenna output terminal was connected to the input of a 50 Ω spectrum analyzer through a matched 20 dB attenuator. The R802D-2-0 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.

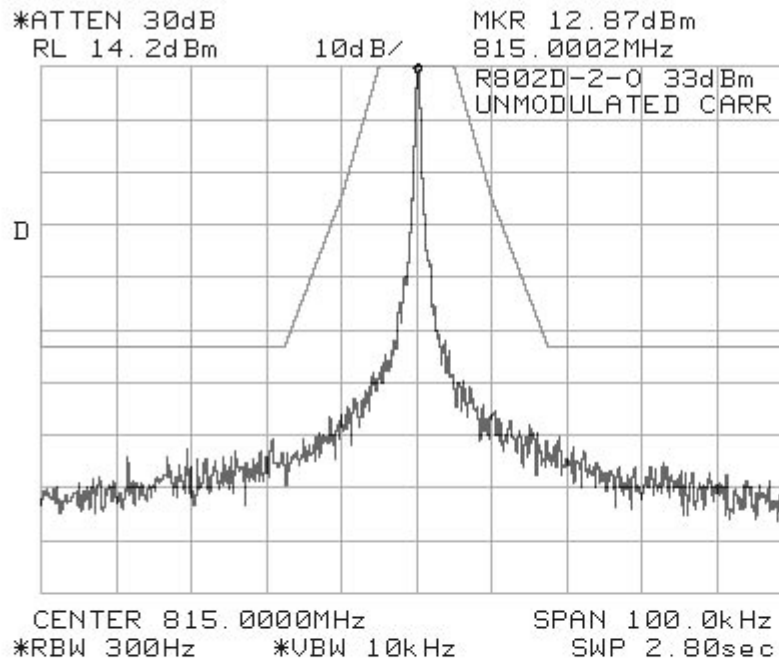
Internal Modulation: Please refer to the attached spectrum analyzer plots. 100% of the in-band modulation is below the specified mask per 90.210(g) for both RD_LAP and MDC protocols.

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

<u>Frequency (MHz)</u>	<u>Formula</u>	<u>Limit (Db)</u>
-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

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

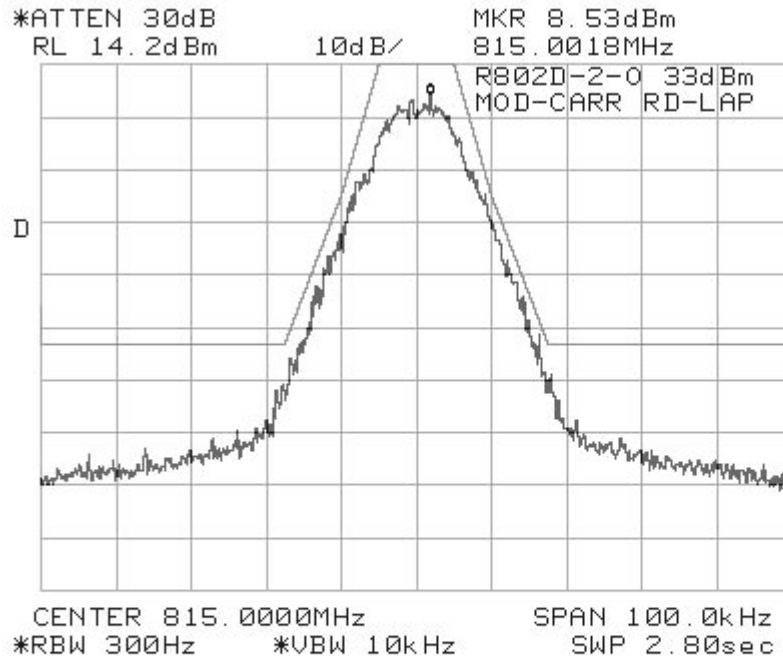
Date

August 30, 1999

Rev

Document

BW Masks



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