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May 1, 2003

Steve Dayhoff
Federal Communications Commission,
Equipment Authorization Division
Application Processing Branch
7435 Oakland Mills Road
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Subject: Response to the FCC Correspondence Reference # 25115 for additional information on RIM
BlackBerry Wireless Handheld FCC ID: L6AR6230GE, 731 Confirmation # EA702771

Dear Steve:

The following addresses the comments on your **Correspondence Reference # 25115**, dated April 28, 2003

ITEM 1:

The DASY3 software that is presently used does not have the capability to evaluate secondary hot spots automatically. The DASY4 software which can automatically evaluate secondary hot spots is on order but the installation and training will not occur for several more months.

To deal with the current concern the SAR report submitted was reviewed and it was concluded that the issue is that the two peaks shown for the hand SAR on page 10 of the Appendices (SAR value reported in Table 16 in the Report) since all the other reported SAR values are 8dB or more (<15%) of the applicable SAR limit (see Tables 14 and 15).

In remeasuring the hand SAR values in response to ITEM 2 (see below) it was noticed that one peak was present when the handset was firmly in contact with the phantom and two when the handset was barely touching the phantom. Since the handset should be firmly in contact, the appropriate SAR plot has only one peak.

ITEM 2:

SAR data for low, middle and high frequencies in handheld test position with and without the headset:

2.1 System accuracy verification

f (MHz)	Tissue Type	Limits / Measured	Dielectric Parameters		Liquid Temp (°C)
			ϵ_r	σ [S/m]	
	Muscle	Measured	52.8	1.48	22.5
		Recommended Limits	54.0	1.45	N/A

2.2 1900 MHz muscle tissue dielectric parameter data

Title
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Frequency	e'	e''
1.700000000 GHz	53.3625	13.2893
1.710000000 GHz	53.3254	13.3130
1.720000000 GHz	53.3159	13.3542
1.730000000 GHz	53.3263	13.3642
1.740000000 GHz	53.3061	13.3920
1.750000000 GHz	53.3014	13.4141
1.760000000 GHz	53.2795	13.4651
1.770000000 GHz	53.2697	13.5021
1.780000000 GHz	53.2345	13.5535
1.790000000 GHz	53.1971	13.5744
1.800000000 GHz	53.1471	13.6246
1.810000000 GHz	53.0981	13.6815
1.820000000 GHz	53.0451	13.7313
1.830000000 GHz	53.0263	13.7514
1.840000000 GHz	52.9879	13.7963
1.850000000 GHz	52.9387	13.8511
1.860000000 GHz	52.9360	13.8826
1.870000000 GHz	52.9078	13.9155
1.880000000 GHz	52.8808	13.9437
1.890000000 GHz	52.8482	13.9557
1.900000000 GHz	52.8047	13.9853
1.910000000 GHz	52.7642	14.0160

2.3 SAR Measurement results at highest power measured for hand

Mode	Device Configuration touching flat phantom	f (MHz)	Conducted Output Power (dBm)	Liquid Temp (°C)	SAR, averaged over 10 g (W/kg)	SAR, averaged over 10 g with headset (W/kg)
PCS 1900	back	1850.20	30.0	22.6	2.76	2.75
	back	1880.00	30.1	22.5	2.71	2.67
	back	1908.80	30.2	22.5	2.05	2.19

2.4 SAR plots for hand held test position

04/29/03

BlackBerry Wireless Handheld Model No. R6230GE

SAM 2; Flat

Probe: ET3DV6 - SN1644; ConvF(5.10,5.10,5.10); Crest factor: 8.0; Muscle 1900 MHz: $\sigma = 1.48 \text{ mho/m}$ $\epsilon_r = 52.8$ $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: Peak: 13.8 mW/g, SAR (1g): 6.37 mW/g, SAR (10g): 2.76 mW/g * Max outside, (Worst-case extrapolation)

Penetration depth: 7.1 (6.6, 8.5) [mm]

Powerdrift: -0.05 dB

Date: April 29, 2003

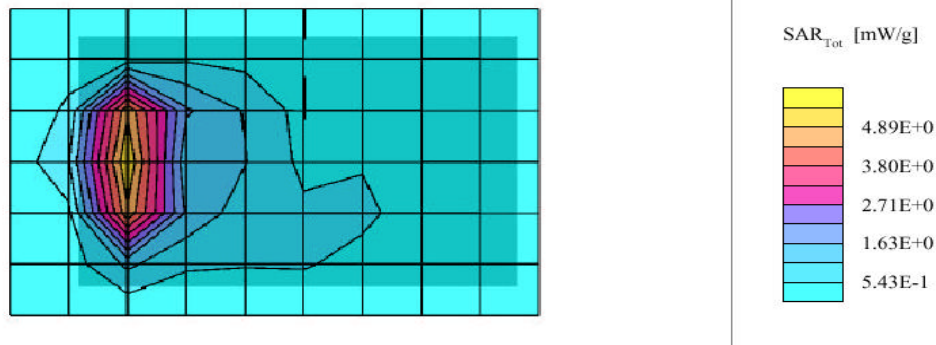
Ambient temperature: 24.2 °C

Liquid temperature: 22.6 °C

Band: PCS 1900

Channel: 512

Configuration: Back side of handheld touching flat phantom for hand SAR



04/29/03

BlackBerry Wireless Handheld Model No. R6230GE

SAM 2; Flat

Probe: ET3DV6 - SN1644; ConvF(5.10,5.10,5.10); Crest factor: 8.0; Muscle 1900 MHz: $\sigma = 1.48 \text{ mho/m}$ $\epsilon_r = 52.8$ $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: Peak: 15.4 mW/g, SAR (1g): 6.93 mW/g, SAR (10g): 2.75 mW/g, (Worst-case extrapolation)

Penetration depth: 7.0 (6.5, 8.2) [mm]

Powerdrift: -0.09 dB

Date: April 29, 2003

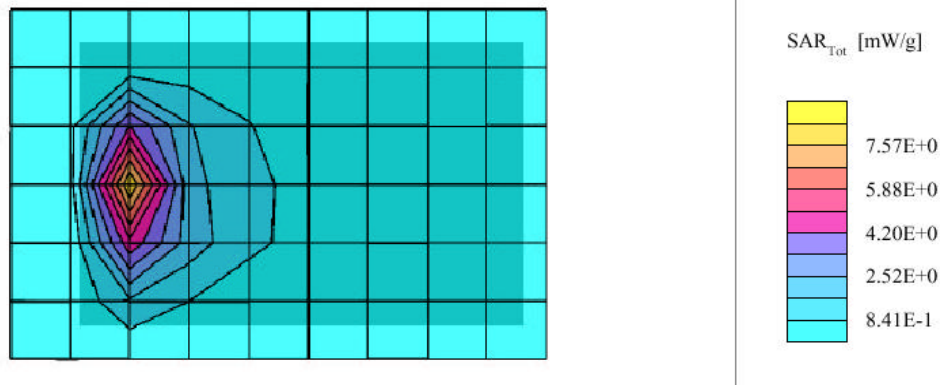
Ambient temperature: 24.2 °C

Liquid temperature: 22.6 °C

Band: PCS 1900

Channel: 512

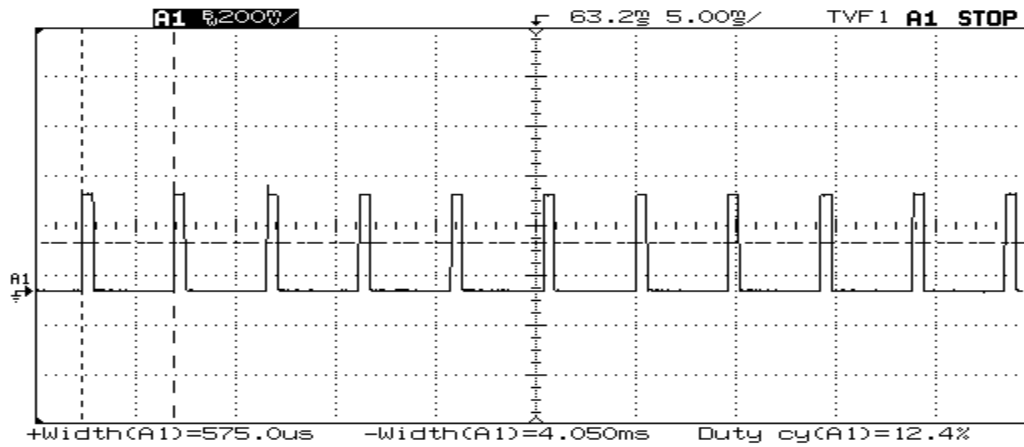
Configuration: Back side of handheld touching flat phantom for hand SAR with headset



ITEM 3:

The BlackBerry Wireless Handheld is restricted to operating with only one uplink timeslot per frame, therefore the maximum transmit duty factor will be 12.5% (1/8 timeslot per frame).

Oscilloscope plot showing TDMA burst with and burst repetition rate for GPRS.



I trust that this fully addresses your questions, however if further clarification is required please do not hesitate to contact the undersigned.

Sincerely yours,

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