

 RESEARCH IN MOTION	Document Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN		Page 1(1)
Author Data Daoud Attayi	Dates of Test Sep. 09 - 16, 2003	Test Report No RIM-0057-0309-01	FCC ID L6ARAL10IN

APPENDIX A: SAR DISTRIBUTION COMPARISON FOR THE ACCURACY VERIFICATION

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			2(2)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/09/03 11:47:47

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.6 °C

Liquid Temperature : 21.8 °C

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 MHz Head ($\sigma = 0.9149$ mho/m, $\epsilon_r = 42.5113$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 111.0 V/m

Power Drift = 0.03 dB

Maximum value of SAR = 10.7 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

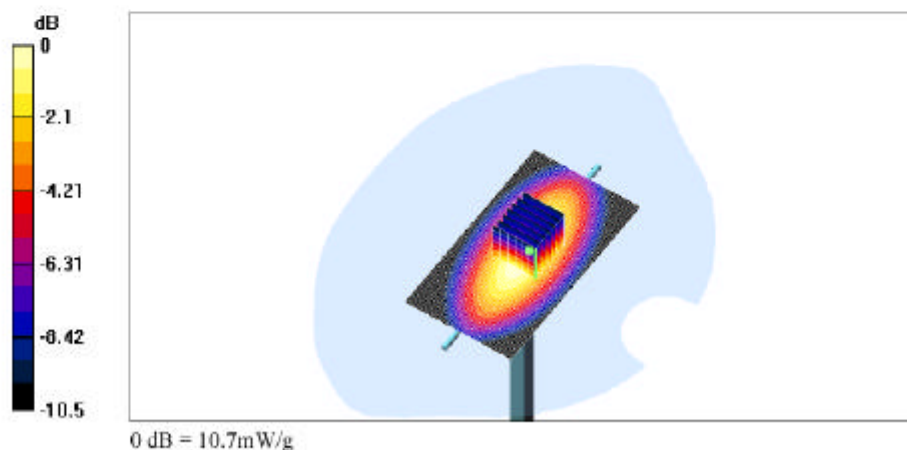
Peak SAR (extrapolated) = 14.4 W/kg

SAR(1 g) = 9.96 mW/g; SAR(10 g) = 6.48 mW/g

Reference Value = 111.0 V/m

Power Drift = 0.03 dB

Maximum value of SAR = 10.7 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\validation%20835%20MH-2.htm

16/09/2003

 RESEARCH IN MOTION	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			3(3)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/11/03 10:37:00

Test Laboratory: Research In Motion Limited

Ambient Temperature : 21.5 °C

Liquid Temperature : 20.6 °C

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (81x151x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 113.1 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 11.1 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

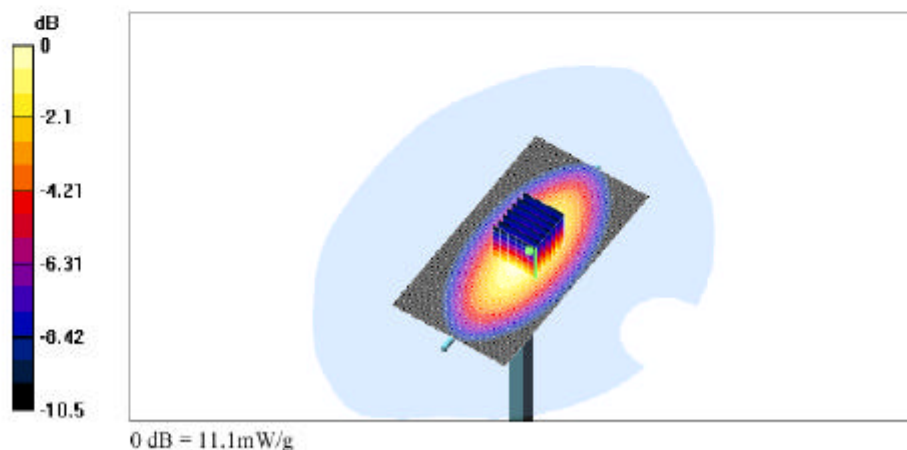
Peak SAR (extrapolated) = 15.4 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 6.62 mW/g

Reference Value = 113.1 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 11.1 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\validation%20835%20MH%20Sep.... 16/09/2003

 RESEARCH IN MOTION	Document Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			Page 4(4)
Author Data Daoud Attayi	Dates of Test Sep. 09 - 16, 2003	Test Report No RIM-0057-0309-01	FCC ID L6ARAL10IN	

Page 1 of 1

Date/Time: 09/14/03 13:02:05

Test Laboratory: Research In Motion Limited

Ambient Temperature : 21.5 °C Liquid Temperature : 20.6 °C

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 111.0 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 10.6 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

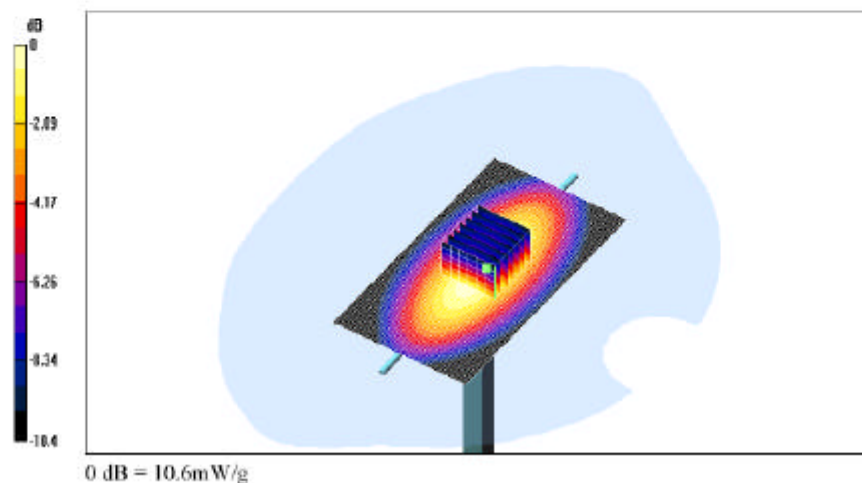
Peak SAR (extrapolated) = 14.5 W/kg

SAR(1 g) = 9.9 mW/g; SAR(10 g) = 6.43 mW/g

Reference Value = 111.0 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 10.6 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\validation%20835%20MH%20Sep.... 16/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			5(5)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 11:08:42

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.0 °C

Liquid Temperature : 21.2 °C

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.22$, $\rho = 1000$ kg/m³)
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 112.2 V/m

Power Drift = -0.05 dB

Maximum value of SAR = 11 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

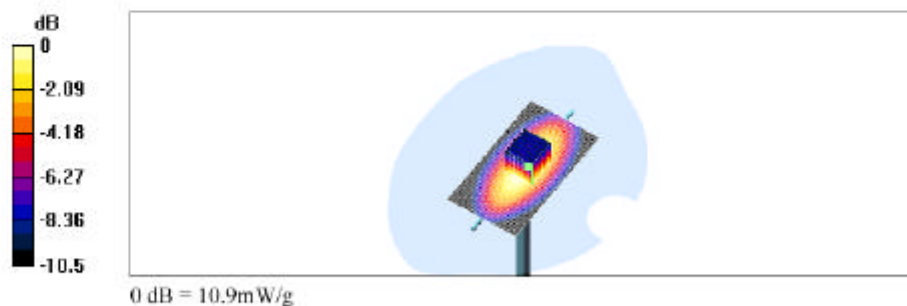
Peak SAR (extrapolated) = 15 W/kg

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 6.55 mW/g

Reference Value = 112.2 V/m

Power Drift = -0.05 dB

Maximum value of SAR = 10.9 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\validation%20835%20MH%20Sep.... 16/09/2003

 RESEARCH IN MOTION	Document Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			Page 6(6)
Author Data Daoud Attayi	Dates of Test Sep. 09 - 16, 2003	Test Report No RIM-0057-0309-01	FCC ID L6ARAL10IN	

APPENDIX B: SAR DISTRIBUTION PLOTS FOR HEAD CONFIGURATION

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			7(7)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/11/03 12:45:30

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.4 °C Liquid Temperature : 21.2 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); Serial: N/A

Communication System: IDEN ; Frequency: 815.5 MHz;Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 29.2 V/m

Power Drift = -0.08 dB

Maximum value of SAR = 0.773 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

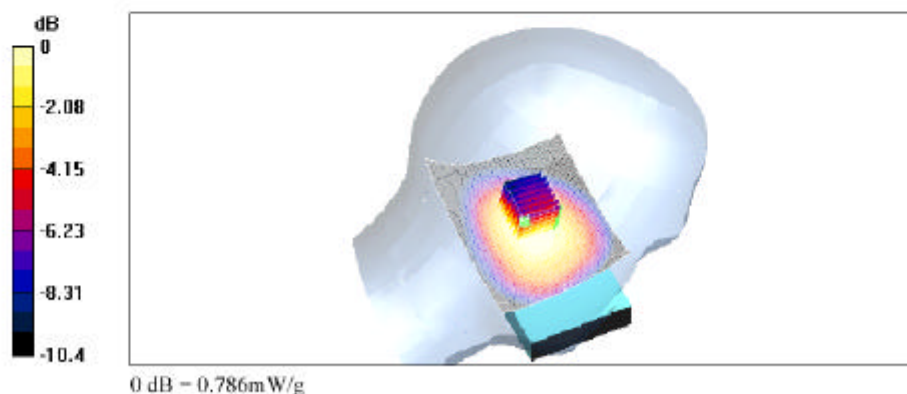
Peak SAR (extrapolated) = 0.97 W/kg

SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.547 mW/g

Reference Value = 29.2 V/m

Power Drift = -0.08 dB

Maximum value of SAR = 0.786 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Left%20side%20of%20head%20tou... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			8(8)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 2

Date/Time: 09/11/03 14:02:49

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.4 °C Liquid Temperature : 21.2 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN Ext; Type: Sample (Extended Ant.);
Serial: N/A

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 22.6 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.506 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

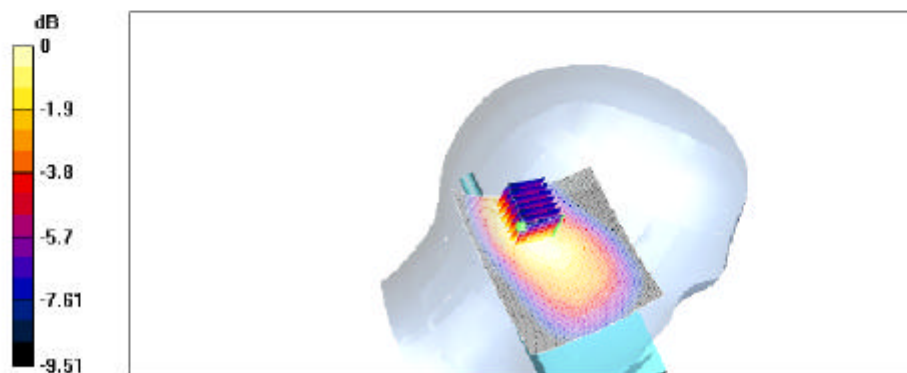
Peak SAR (extrapolated) = 0.657 W/kg

SAR(1 g) = 0.481 mW/g; SAR(10 g) = 0.338 mW/g

Reference Value = 22.6 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.525 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Left%20side%20of%20head%20tilt... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			9(9)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/10/03 19:28:20

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.6 °C

Liquid Temperature : 21.6 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.);

Serial: N/A

Communication System: IDEN 800 MHz; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.9149$ mho/m, $\epsilon_r = 42.5113$, $\rho = 1000$ kg/m³)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 26.5 V/m

Power Drift = 0.2 dB

Maximum value of SAR = 0.934 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

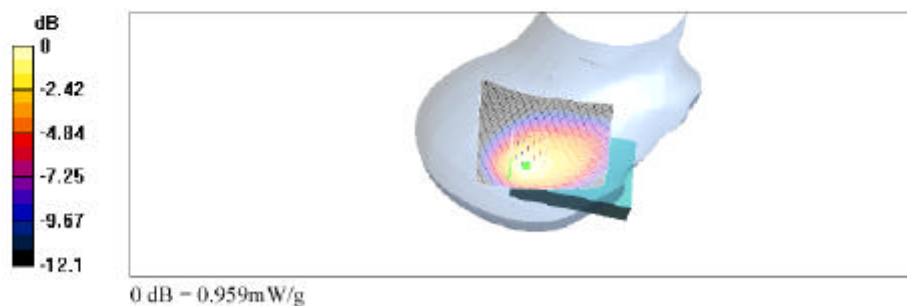
Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.9 mW/g; SAR(10 g) = 0.588 mW/g

Reference Value = 26.5 V/m

Power Drift = 0.2 dB

Maximum value of SAR = 0.959 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\P1528-RightHandSide-835%20mid... 16/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			10(10)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/10/03 18:47:28

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.6 °C

Liquid Temperature : 21.6 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN Ext; Type: Sample (Extended Ant.);

Serial: N/A

Communication System: IDEN 800 MHz; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.9149$ mho/m, $\epsilon_r = 42.5113$, $\rho = 1000$ kg/m³)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 19.8 V/m

Power Drift = -0.09 dB

Maximum value of SAR = 0.582 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

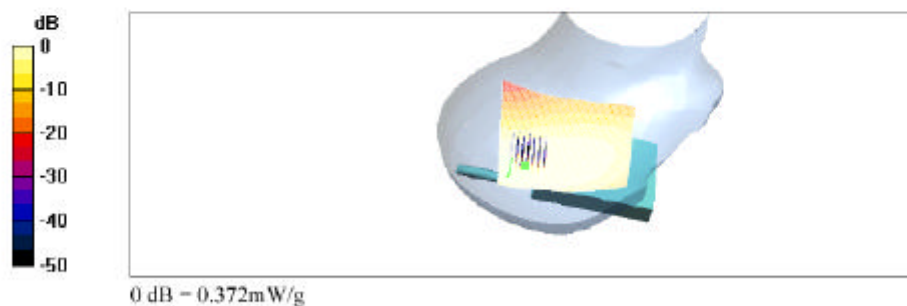
Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.101 mW/g

Reference Value = 19.8 V/m

Power Drift = -0.09 dB

Maximum value of SAR = 0.372 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\P1528-RightHandSide-835%20mid... 16/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			11(11)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/11/03 15:59:13

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.6 °C Liquid Temperature : 21.4 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); Higher capacity battery; Serial: N/A

Communication System: IDEN ; Frequency: 815.5 MHz;Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 29.3 V/m

Power Drift = 0.06 dB

Maximum value of SAR = 0.741 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

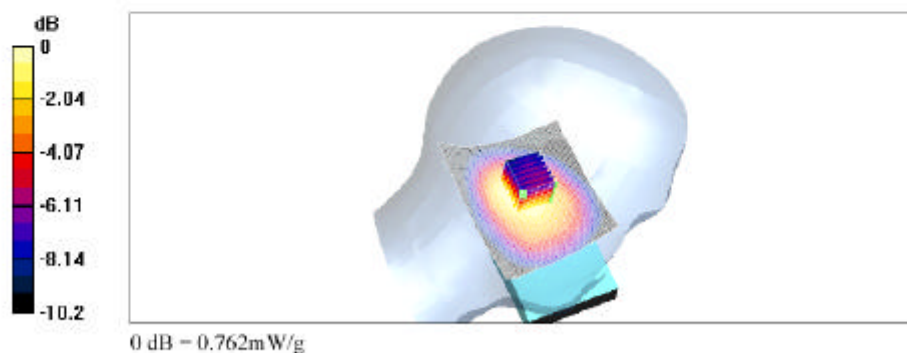
Peak SAR (extrapolated) = 0.941 W/kg

SAR(1 g) = 0.699 mW/g; SAR(10 g) = 0.497 mW/g

Reference Value = 29.3 V/m

Power Drift = 0.06 dB

Maximum value of SAR = 0.762 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Left%20side%20of%20head%20tilt... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			12(12)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/11/03 16:35:42

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.6 °C Liquid Temperature : 21.4 °C

DUT: BlackBerry Wireless Handheld Model RAN10IN Ext; Type: Sample (Extended Ant.); With higher capacity battery.

Communication System: IDEN ; Frequency: 815.5 MHz;Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 23 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.475 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

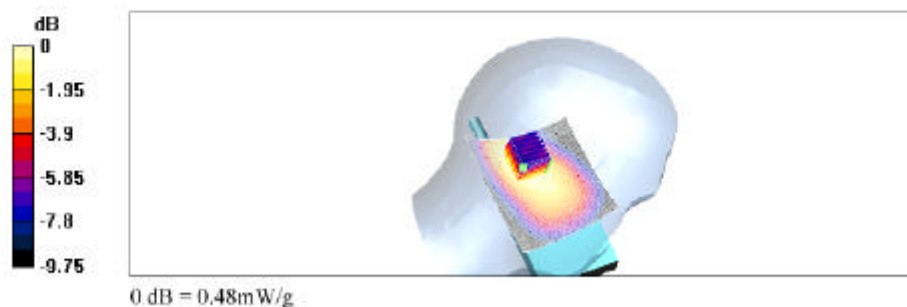
Peak SAR (extrapolated) = 0.586 W/kg

SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.309 mW/g

Reference Value = 23 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.48 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Left%20side%20of%20head%20tilt... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			13(13)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/14/03 14:53:53

Test Laboratory: Research In Motion Limited

Ambient Temperature : 21.5 °C Liquid Temperature : 20.6 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); With larger capacity battery.

Communication System: IDEN ; Frequency: 806.013 MHz;Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 26.6 V/m

Power Drift = 0.03 dB

Maximum value of SAR = 0.934 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

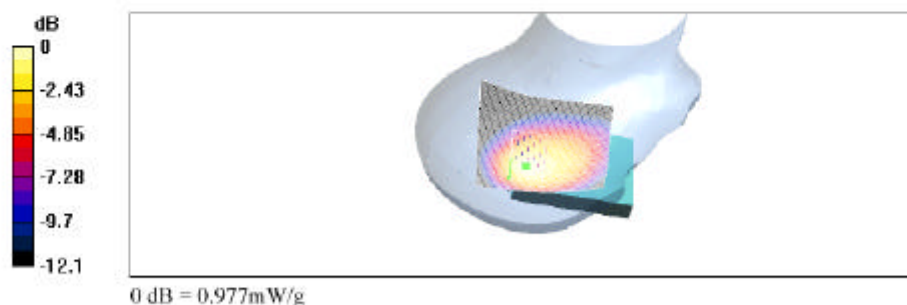
Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.909 mW/g; SAR(10 g) = 0.595 mW/g

Reference Value = 26.6 V/m

Power Drift = 0.03 dB

Maximum value of SAR = 0.977 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Right%20side%20of%20head%20til... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			14(14)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/14/03 17:27:45

Test Laboratory: Research In Motion Limited

Ambient Temperature : 21.6 °C Liquid Temperature : 20.8 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN Ext; Type: Sample (Extended Ant.); With higher capacity battery

Communication System: IDEN ; Frequency: 815.5 MHz;Duty Cycle: 1:3

Medium: 835 MHz Head ($\sigma = 0.91$ mho/m, $\epsilon_r = 42.73$, $\rho = 1000$ kg/m³)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.6, 6.6, 6.6); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 20.8 V/m

Power Drift = 0.03 dB

Maximum value of SAR = 0.506 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

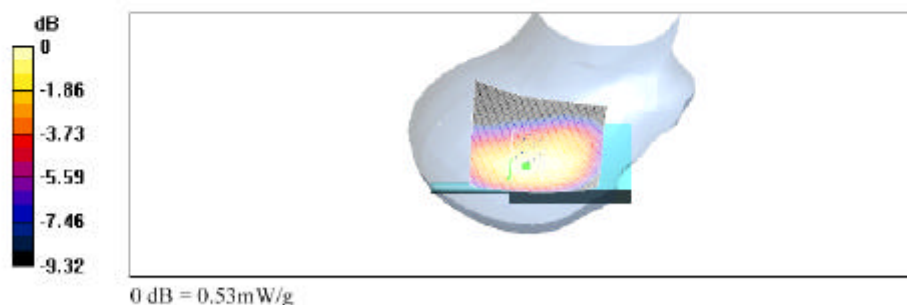
Peak SAR (extrapolated) = 0.751 W/kg

SAR(1 g) = 0.499 mW/g; SAR(10 g) = 0.347 mW/g

Reference Value = 20.8 V/m

Power Drift = 0.03 dB

Maximum value of SAR = 0.53 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Right%20side%20of%20head%20to... 17/09/2003

 RESEARCH IN MOTION	Document Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN		Page 15(15)
Author Data Daoud Attayi	Dates of Test Sep. 09 - 16, 2003	Test Report No RIM-0057-0309-01	FCC ID L6ARAL10IN

APPENDIX C: SAR DISTRIBUTION PLOTS FOR BODY-WORN SAR CONFIGURATION

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			16(16)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 12:10:14

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.8 °C Liquid Temperature : 21.5 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); Body-worn with holster

Communication System: IDEN ; Frequency: 815.5 MHz;Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98 \text{ mho/m}$, $\epsilon_r = 53.79$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 24.4 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.531 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

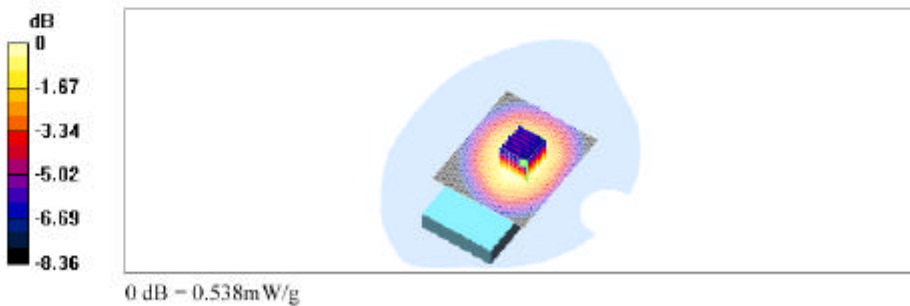
Peak SAR (extrapolated) = 0.638 W/kg

SAR(1 g) = 0.501 mW/g; SAR(10 g) = 0.377 mW/g

Reference Value = 24.4 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.538 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20holster... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			17(17)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 13:58:13

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.7 °C Liquid Temperature : 21.7 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN Ext; Type: Sample (Extended Ant.); Body worn with holster

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.79$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x141x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 20.1 V/m

Power Drift = 0.1 dB

Maximum value of SAR = 0.392 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

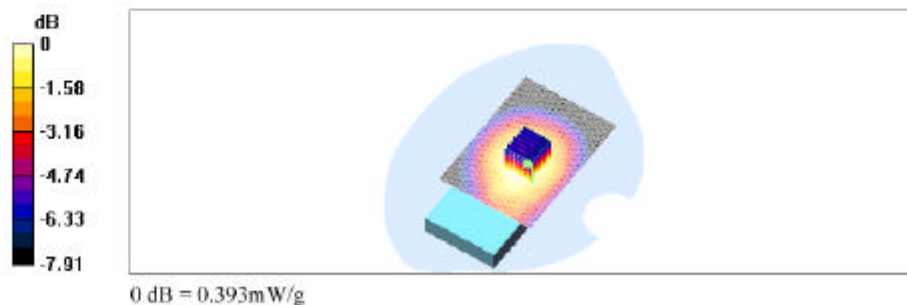
Peak SAR (extrapolated) = 0.462 W/kg

SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.279 mW/g

Reference Value = 20.1 V/m

Power Drift = 0.1 dB

Maximum value of SAR = 0.393 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20holster... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			18(18)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 15:12:54

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.4 °C Liquid Temperature : 21.2 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); Body worn with leather holster

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.79$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 23.7 V/m

Power Drift = -0.3 dB

Maximum value of SAR = 0.52 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

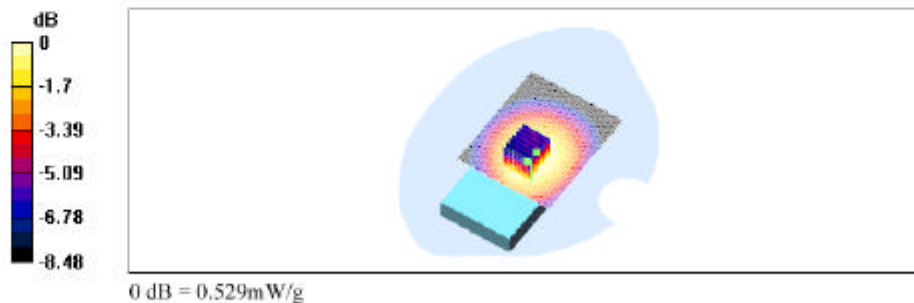
Peak SAR (extrapolated) = 0.635 W/kg

SAR(1 g) = 0.494 mW/g; SAR(10 g) = 0.372 mW/g

Reference Value = 23.7 V/m

Power Drift = -0.3 dB

Maximum value of SAR = 0.529 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20leather... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			19(19)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 15:50:27

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.3 °C Liquid Temperature : 21.2 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN Ext; Type: Sample (Extended Ant.); Body worn with leather holster

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.86$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 20.5 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.392 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

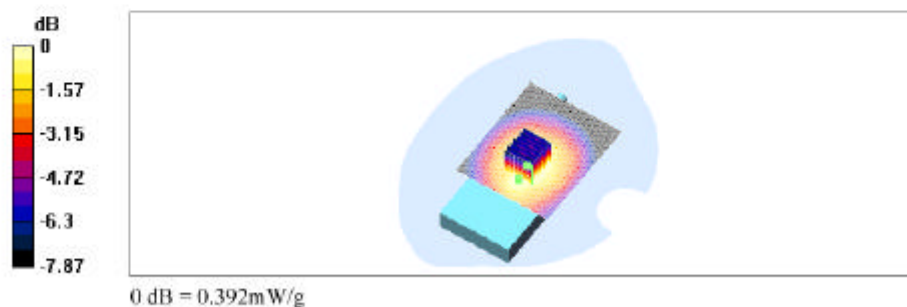
Peak SAR (extrapolated) = 0.468 W/kg

SAR(1 g) = 0.363 mW/g; SAR(10 g) = 0.277 mW/g

Reference Value = 20.5 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.392 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20leather... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			20(20)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 16:24:29

Test Laboratory: Research In Motion Limited

Ambient Temperature : 21.8 °C Liquid Temperature : 21.0 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); Body worn with holster and higher capacity battery

Communication System: IDEN ; Frequency: 815.5 MHz;Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.79$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 24.2 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.537 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

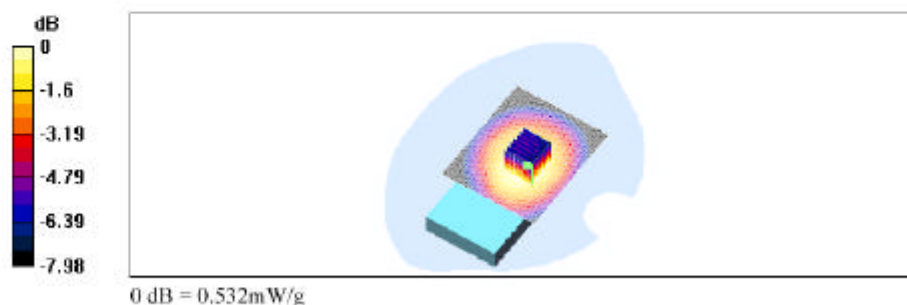
Peak SAR (extrapolated) = 0.636 W/kg

SAR(1 g) = 0.502 mW/g; SAR(10 g) = 0.378 mW/g

Reference Value = 24.2 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.532 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20holster... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			21(21)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/15/03 17:32:54

Test Laboratory: Research In Motion Limited

Ambient Temperature : 21.8 °C Liquid Temperature : 21.0 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Extended Ant.); Body worn with holster and higher capacity battery

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.79$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 20.9 V/m

Power Drift = -0.09 dB

Maximum value of SAR = 0.392 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

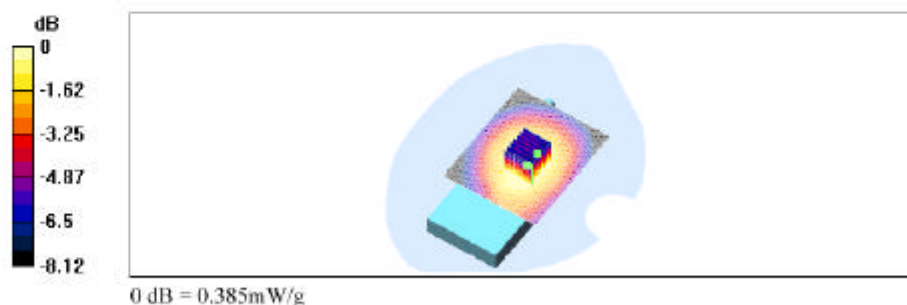
Peak SAR (extrapolated) = 0.462 W/kg

SAR(1 g) = 0.364 mW/g; SAR(10 g) = 0.276 mW/g

Reference Value = 20.9 V/m

Power Drift = -0.09 dB

Maximum value of SAR = 0.385 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20holster... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			22(22)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/16/03 09:24:24

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.5 °C Liquid Temperature : 21.3 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Retracted Ant.); Body worn with leather holster and higher capacity battery

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.86$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 23.3 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.505 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

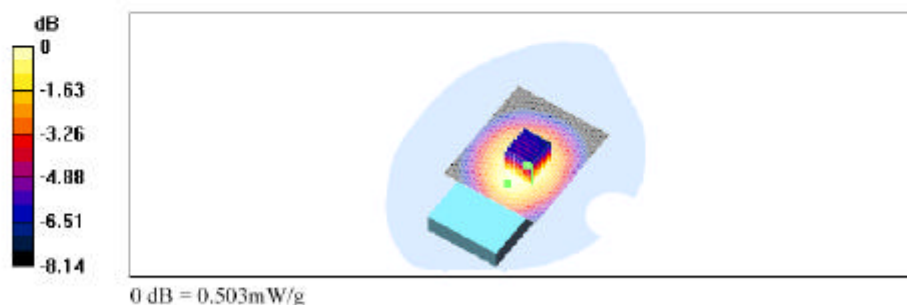
Peak SAR (extrapolated) = 0.593 W/kg

SAR(1 g) = 0.47 mW/g; SAR(10 g) = 0.361 mW/g

Reference Value = 23.3 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.503 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20leather... 17/09/2003

	Document			Page
	Appendices to SAR Compliance Test Report for BlackBerry Wireless Handheld Model No. RAL10IN			23(23)
Author Data	Dates of Test	Test Report No	FCC ID	
Daoud Attayi	Sep. 09 - 16, 2003	RIM-0057-0309-01	L6ARAL10IN	

Page 1 of 1

Date/Time: 09/16/03 09:58:08

Test Laboratory: Research In Motion Limited

Ambient Temperature : 22.5 °C Liquid Temperature : 21.3 °C

DUT: BlackBerry Wireless Handheld Model RAL10IN; Type: Sample (Extended Ant.); Body worn with leather holster and higher capacity battery

Communication System: IDEN ; Frequency: 815.5 MHz; Duty Cycle: 1:3

Medium: M 835 ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.79$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.4, 6.4, 6.4); Calibrated: 21/10/2002
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 19/08/2003
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Unnamed procedure/Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Reference Value = 24 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.519 mW/g

Unnamed procedure/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

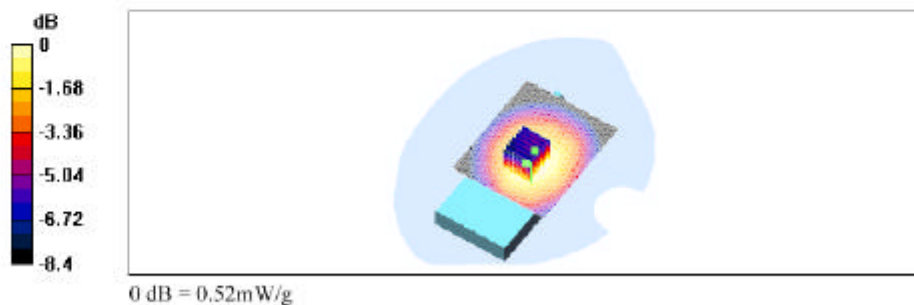
Peak SAR (extrapolated) = 0.65 W/kg

SAR(1 g) = 0.485 mW/g; SAR(10 g) = 0.368 mW/g

Reference Value = 24 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.52 mW/g



file://C:\Program%20Files\DASY4\Print_Templates\Body%20worn%20with%20leather... 17/09/2003