Testing Services™	Document Appendix B for the BlackBerry® Smartphone Model RCV72UW SAR Report		
Author Data	Dates of Test	Test Report No	FCC ID:
Andrew Becker	March 15 – March 16, 2010	RTS-2474-1003-24	L6ARCV70UW

#### APPENDIX B: SAR DISTRIBUTION PLOTS FOR HEAD CONFIGURATION



Date/Time: 3/16/2010 10:43:21 AM

Test Laboratory: RIM TESTING SERVICES File Name: LeftHandSide EDGE850 high chan Amb Tem 22.5 Liq Tem 21.1 C.da4

#### **DUT: BlackBerry Smartphone; Type: Sample ; Serial: 21FA2D14 Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)**

Communication System: EDGE 850 (2slots); Frequency: 848.8 MHz;Duty Cycle: 1:4.2 Medium parameters used (interpolated): f = 848.8 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 42.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 SN1644; ConvF(6.08, 6.08, 6.08); Calibrated: 11/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Touch position -/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (interpolated) = 1.26 mW/g

# Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 13.3 V/m; Power Drift = -0.168 dB Peak SAR (extrapolated) = 1.64 W/kg SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.790 mW/g

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (measured) = 1.26 mW/g





Date/Time: 3/16/2010 11:21:38 AM

Test Laboratory: RIM TESTING SERVICES File Name: LeftHandSide UMTS Band V high chan Amb Tem 22.6 Liq Tem 21.0C.da4

#### DUT: BlackBerry Smartphone; Type: Sample ; Serial: 21FA2D14 Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)

Communication System: WCDMA FDD V; Frequency: 846.6 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): f = 846.6 MHz;  $\sigma = 0.867$  mho/m;  $\epsilon_r = 42.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section

### DASY4 Configuration:

- Probe: ET3DV6 SN1644; ConvF(6.08, 6.08, 6.08); Calibrated: 11/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Touch position -/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (interpolated) = 1.16 mW/g

### Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 13.6 V/m; Power Drift = -0.105 dB Peak SAR (extrapolated) = 1.53 W/kg SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.742 mW/g

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (measured) = 1.16 mW/g





Date/Time: 3/16/2010 9:35:29 PM

Test Laboratory: RIM TESTING SERVICES File Name: LeftHandSide EDGE1900 mid chan Amb Tem 22.5 Liq Tem 21.3 C.da4

#### DUT: BlackBerry Smartphone; Type: Sample ; Serial: 21FA2D14 Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)

Communication System: EDGE 1900; Frequency: 1880 MHz;Duty Cycle: 1:4.2 Medium parameters used: f = 1880 MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 SN1644; ConvF(5.17, 5.17, 5.17); Calibrated: 11/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Touch position -/Area Scan (61x81x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.415 mW/g

# Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 3.37 V/m; Power Drift = 0.004 dB Peak SAR (extrapolated) = 0.719 W/kg SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.198 mW/g Maximum value of SAR (measured) = 0.436 mW/g



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Date/Time: 3/16/2010 8:41:13 PM

Test Laboratory: RIM TESTING SERVICES File Name: RightHandSide UMTS band II mid chan Amb Tem 22.3 Lig Tem 21.1C.da4

#### DUT: BlackBerry Smartphone; Type: Sample ; Serial: 21FA2D14 Program Name: Compliance Testing: P1528 Protocol (Right-Hand Side)

Communication System: WCDMA FDD II; Frequency: 1880 MHz;Duty Cycle: 1:1 Medium parameters used: f = 1880 MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 SN1644; ConvF(5.17, 5.17, 5.17); Calibrated: 11/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Touch position -/Area Scan (51x81x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.617 mW/g

# Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 4.52 V/m; Power Drift = -0.056 dB Peak SAR (extrapolated) = 0.827 W/kg SAR(1 g) = 0.527 mW/g; SAR(10 g) = 0.298 mW/g Maximum value of SAR (measured) = 0.582 mW/g



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Andrew Becker	March 15 – March 16, 2010	RTS-2474-1003-24	L6ARCV'	70UW

Date/Time: 3/15/2010 12:09:31 PM

Test Laboratory: RIM TESTING SERVICES File Name: <u>LeftHandSide\_802.11b\_low\_chan\_Amb\_Tem\_23.0\_Liq\_Tem\_21.2\_C.da4</u>

## DUT: BlackBerry Smartphone; Type: Sample ; Serial: 21FA2D14 Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)

Communication System: 802.11 b (2450); Frequency: 2412 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): f = 2412 MHz;  $\sigma = 1.83$  mho/m;  $\varepsilon_r = 38.1$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 SN1644; ConvF(4.5, 4.5, 4.5); Calibrated: 11/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Touch position -/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (interpolated) = 0.597 mW/g

# Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 13.2 V/m; Power Drift = -0.030 dB Peak SAR (extrapolated) = 1.18 W/kg SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.223 mW/g

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (measured) = 0.485 mW/g





 $0 \, dB = 0.485 \, mW/g$ 

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Andrew Becker	March 15 – March 16, 2010	RTS-2474-1003-24	L6ARCV	70UW

Date/Time: 3/15/2010 1:45:19 PM

File Name: RightHandSide 802.11b low chan Amb Tem 23.1 Liq Tem 21.2C.da4

## DUT: BlackBerry Smartphone; Type: Sample ; Serial: 21FA2D14 Program Name: Compliance Testing: P1528 Protocol (Right-Hand Side)

Communication System: 802.11 b (2450); Frequency: 2412 MHz;Duty Cycle: 1:1 Medium parameters used (interpolated): f = 2412 MHz;  $\sigma = 1.83$  mho/m;  $\varepsilon_r = 38.1$ ;  $\rho = 1000$  kg/m<sup>3</sup> Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 SN1644; ConvF(4.5, 4.5, 4.5); Calibrated: 11/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Touch position -/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (interpolated) = 0.386 mW/g

# Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:

dx=7.5mm, dy=7.5mm, dz=5mm Reference Value = 14.7 V/m; Power Drift = -0.070 dB Peak SAR (extrapolated) = 0.692 W/kg SAR(1 g) = 0.376 mW/g; SAR(10 g) = 0.196 mW/g

Info: Interpolated medium parameters used for SAR evaluation. Maximum value of SAR (measured) = 0.403 mW/g



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## Z axis plot for the worst case head configuration:



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