Testing Services	Annex B to Hearing Ai Report for the BlackBe			Page 1(13)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	Feb. 26-Mar. 04, 2010	RTS-2474-1003-01	L6ARCV70U	$^{\mathrm{J}}\mathbf{W}$

## Annex B: Probe and dipole descriptions and calibration certificates

## **B.2** Dipole calibration certificate



## Annex B to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCV71UW

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## Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage С

Servizio svizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

RTS (RIM Testing Services) Certificate No: CD835V3-1011\_Nov09 CALIBRATION CERTIFICATE CD835V3 - SN: 1011 Object QA CAL-20.v4 Calibration procedure(s) Calibration procedure for dipoles in air Calibration date: November 17, 2009

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

tion Equipment used (M&TE critical for calibration)

ID #	Cal Date (Certificate No.)	Scheduled Calibration
GB37480704	06-Oct-09 (No. 217-01086)	Oct-10
US37292783	06-Oct-09 (No. 217-01086)	Oct-10
SN: 2336	22-Dec-08 (No. ER3-2336_Dec08)	Dec-09
SN: 6065	22-Dec-08 (No. H3-6065Dec08)	Dec-09
SN: 781	20-Feb-09 (No. DAE4-781_Feb09)	Feb-10
ID#	Check Date (in house)	Scheduled Check
SN: GB42420191	09-Oct-09 (in house check Oct-09)	In house check: Oct-10
SN: 3318A09450	09-Oct-09 (in house check Oct-09)	In house check: Oct-10
SN: US37295597	09-Oct-09 (in house check Oct-09)	In house check: Oct-10
US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct-10
MY 41000675	03-Nov-04 (in house check Oct-09)	In house check: Oct-11
Name	Function	Signature
Mike Meil	Laboratory Technician	Meili
Fin Bomholt	Technical Director	F. Bowlell
		Issued: November 19, 2009
	GB37480704 US37292783 SN: 2336 SN: 6065 SN: 781  ID # SN: GB42420191 SN: 3318A09450 SN: US37390585 MY 41000675  Name Mike Meli	GB37480704 06-Oct-09 (No. 217-01086) US37292783 06-Oct-09 (No. 217-01086) SN: 2336 22-Dec-08 (No. ER3-2336_Dec08) SN: 6065 22-Dec-08 (No. H3-6065Dec08) SN: 781 20-Feb-09 (No. DAE4-781_Feb09)  ID # Check Date (in house) SN: GB42420191 09-Oct-09 (in house check Oct-09) SN: 3318A09450 09-Oct-09 (in house check Oct-09) US37390585 18-Oct-01 (in house check Oct-09) MY 41000675 03-Nov-04 (in house check Oct-09)  Name Function Mike Well Laboratory Technicien

Certificate No: CD835V3-1011\_Nov09

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This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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S Swiss Calibration Service

Accreditation No.: SCS 108

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

### References

[1] ANSI-C63.19-2006

American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

 ANSI-C63.19-2007
 American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

#### Methods Applied and Interpretation of Parameters:

- Coordinate System: y-axis is in the direction of the dipole arms. z-axis is from the basis of the antenna
  (mounted on the table) towards its feed point between the two dipole arms, x-axis is normal to the other
  axes. In coincidence with the standards [1, 2], the measurement planes (probe sensor center) are
  selected to be at a distance of 10 mm above the top edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate.
   All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- Antenna Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASYS Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- Feed Point Impedance and Return Loss: These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminating by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- E- field distribution: E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the antenna feed point. In accordance with [1, 2], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 10 mm (in z) above the top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, 10mm above the dipole surface.
- H-field distribution: H-field is measured with an isotropic H-field probe with 100mW forward power to the
  antenna feed point, in the x-y-plane. The scan area and sensor distance is equivalent to the E-field
  scan. The maximum of the field is available at the center (subgrid 5) above the feed point. The H-field
  value stated as calibration value represents the maximum of the interpolated H-field, 10mm above the
  dipole surface at the feed point.

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Daoud Attayi

Dates of Test **Feb. 26-Mar. 04, 2010** 

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### 1 Measurement Conditions

DASY system configuration, as far as not given on page 1

ASY system configuration, as far as n	iot given on page 1.	
DASY Version	DASY5	V5.2 B157
DASY PP Version	SEMCAD X	V14.0 B57
Phantom	HAC Test Arch	SD HAC P01 BA, #1070
Distance Dipole Top - Probe Center	10 mm	
Scan resolution	dx, dy = 5 mm	area = 20 x 180 mm
Frequency	835 MHz ± 1 MHz	
Forward power at dipole connector	20.0 dBm = 100mW	
Input power drift	< 0.05 dB	

## 2 Maximum Field values

H-field 10 mm above dipole surface	condition	interpolated maximum
Maximum measured	100 mW forward power	0.464 A/m

Uncertainty for H-field measurement: 8.2% (k=2)

E-field 10 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end-	100 mW forward power	168.6 V/m
Maximum measured above low end	100 mW forward power	157.4 V/m
Averaged maximum above arm	100 mW forward power	163.0 V/m

Uncertainty for E-field measurement: 12.8% (k=2)

### 3 Appendix

## 3.1 Antenna Parameters

Frequency	Return Loss	Impedance
800 MHz	15.7 dB	( 44.8 – j14.9 ) Ohm
835 MHz	31.8 dB	( 48.5 + j2.0 ) Ohm
900 MHz	17.7 dB	( 54.3 - j12.9 ) Ohm
950 MHz	20.5 dB	( 44.7 + j7.2 ) Ohm
960 MHz	16.3 dB	(51.0 + j15.7) Ohm

## 3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

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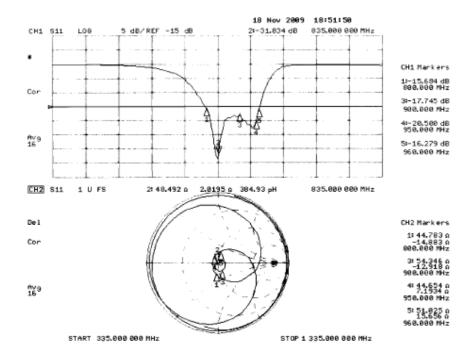
Report No RTS-2474-1003-01

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### 3.3 Measurement Sheets

### 3.3.1 Return Loss and Smith Chart





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### 3.3.2 DASY4 H-field Result

Date/Time: 17.11.2009 15:02:26

Test Laboratory: SPEAG Lab2

HAC RF\_CD835\_1011\_091117\_H\_MM

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011 Communication System: CW; Frequency: 835 MHz Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: H3DV6 - SN6065; ; Calibrated: 22.12.2008

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn781; Calibrated: 20.02.2009

Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
 Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

## Dipole H-Field measurement @ 835MHz/H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 0.464 A/m

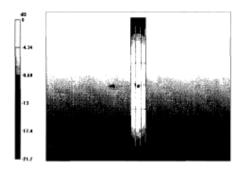
Probe Modulation Factor = 1

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.494 A/m; Power Drift = -0.00467 dB Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.384	0.405	0.386
M4	M4	M4
Grid 4	Grid 5	Grid 6
0.441	0.464	0.439
M4	M4	M4
Grid 7	Grid 8	Grid 9
0.390	0.409	0.382
M4	M4	M4



0 dB = 0.464 A/m

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### 3.3.3 DASY4 E-field Result

Date/Time: 17.11.2009 11:56:37

Test Laboratory: SPEAG Lab2

HAC RF\_CD835\_1011\_091117\_E\_MM

DUT: HAC-Dipole 835 MHz; Type: D835V3; Serial: 1011

Communication System: CW; Frequency: 835 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\varepsilon_r = 1$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 SN2336; ConvF(1, 1, 1); Calibrated: 22.12.2008
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 20.02,2009
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

## Dipole E-Field measurement @ 835MHz/E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 168.6 V/m

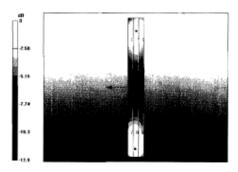
Probe Modulation Factor = 1

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 109.2 V/m; Power Drift = -0.023 dB Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid I	Grid 2	Grid 3
152.1	157.4	154.5
M4	M4	M4
Grid 4	Grid 5	Grid 6
84.1	<b>86.8</b>	84.5
M4	<b>M4</b>	M4
Grid 7	Grid 8	Grid 9
165.5	168.6	158.2
M4	M4	M4



0 dB = 168.6 V/m

Certificate No: CD835V3-1011\_Nov09



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FCC ID

## Calibration Laboratory of Schmid & Partner

Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland





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Client RTS

RTS (RIM Testing Services)

Certificate No: CD1880V3-1008\_Nov09

Accreditation No.: SCS 108

	CD1880V3 - SN	: 1008	THE STREET
		Canada Anna Canada Cana	
Calibration procedure(s)	QA CAL-20.v4		
	Calibration proc	edure for dipoles in air	
Calibration date:	November 18, 2	009	
This calibration certificate documents	ments the traceability to na	tional standards, which realize the physical un	its of measurements (SI).
		ory facility: environment temperature (22 ± 3)*0	
Calibration Equipment used (M8	TE critical for calibration)		
rimary Standards	ID#	Call Date (Certificate No.)	Scheduled Calibration
ower meter EPM-442A	GB37480704	06-Oct-09 (No. 217-01086)	Oct-10
Power sensor HP 8481A	US37292783	06-Oct-09 (No. 217-01086)	Oct-10
Probe ER3DV6	SN: 2336	22-Dec-08 (No. ER3-2336_Dec08)	Dec-09
Probe H3DV6	SN: 6065	22-Dec-08 (No. H3-6065Dec08)	Dec-09
DAE4	SN: 781	20-Feb-09 (No. DAE4-781_Feb09)	Feb-10
	Lea	Check Date (in house)	Scheduled Check
Secondary Standards	ID #		
	ID # SN: GB42420191		In house check: Oct-10
ower meter Agilent 4419B	SN: GB42420191	09-Oct-09 (in house check Oct-09)	in house check: Oct-10 in house check: Oct-10
Power meter Agilent 4419B Power sensor HP 8482H	SN: GB42420191 SN: 3318A09450	09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09)	In house check: Oct-10
Power meter Agilent 4419B Power sensor HP 8482H Power sensor HP 8482A	SN: GB42420191	09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09)	
Power meter Agilent 4419B Power sensor HP 8482H Power sensor HP 8482A Network Analyzer HP 8753E	SN: GB42420191 SN: 3318A09450 SN: US37295597	09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09)	In house check: Oct-10 In house check: Oct-10
Power meter Agilent 4419B Power sensor HP 8482H Power sensor HP 8482A Network Analyzer HP 8753E	SN: GB42420191 SN: 3318A09450 SN: US37295597 US37390585	09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 18-Oct-01 (in house check Oct-09)	In house check: Oct-10 In house check: Oct-10 In house check: Oct-10
Power meter Agilent 4419B Power sensor HP 8482H Power sensor HP 8482A Vetwork Analyzer HP 8753E RF generator E4433B	SN: GB42420191 SN: 3318A09450 SN: US37295597 US37390585 MY 41000675	09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 18-Oct-01 (in house check Oct-09) 03-Nov-04 (in house check Oct-09)	In house check: Oct-10 In house check: Oct-10 In house check: Oct-10
Secondary Standards Power meter Aglient 4419B Power sensor HP 8482H Power sensor HP 8482A Network Analyzer HP 8753E RF generator E4433B Calibrated by:	SN: GB42420191 SN: 3318A09450 SN: US37295597 US37390585 MY 41000675	09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 09-Oct-09 (in house check Oct-09) 18-Oct-01 (in house check Oct-09) 03-Nov-04 (in house check Oct-09)	In house check: Oct-10 In house check: Oct-10 In house check: Oct-10

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FCC ID

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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S Swiss Calibration Service

Accreditation No.: SCS 108

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#### References

[1] ANSI-C63.19-2006

American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

[2] ANSI-C63.19-2007

American National Standard for Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids.

### Methods Applied and Interpretation of Parameters:

- Coordinate System: y-axis is in the direction of the dipole arms, z-axis is from the basis of the antenna
  (mounted on the table) towards its feed point between the two dipole arms, x-axis is normal to the other
  axes. In coincidence with the standards [1, 2], the measurement planes (probe sensor center) are
  selected to be at a distance of 10 mm above the top edge of the dipole arms.
- Measurement Conditions: Further details are available from the hardcopies at the end of the certificate.
   All figures stated in the certificate are valid at the frequency indicated. The forward power to the dipole connector is set with a calibrated power meter connected and monitored with an auxiliary power meter connected to a directional coupler. While the dipole under test is connected, the forward power is adjusted to the same level.
- Antenna Positioning: The dipole is mounted on a HAC Test Arch phantom using the matching dipole positioner with the arms horizontal and the feeding cable coming from the floor. The measurements are performed in a shielded room with absorbers around the setup to reduce the reflections. It is verified before the mounting of the dipole under the Test Arch phantom, that its arms are perfectly in a line. It is installed on the HAC dipole positioner with its arms parallel below the dielectric reference wire and able to move elastically in vertical direction without changing its relative position to the top center of the Test Arch phantom. The vertical distance to the probe is adjusted after dipole mounting with a DASY5 Surface Check job. Before the measurement, the distance between phantom surface and probe tip is verified. The proper measurement distance is selected by choosing the matching section of the HAC Test Arch phantom with the proper device reference point (upper surface of the dipole) and the matching grid reference point (tip of the probe) considering the probe sensor offset. The vertical distance to the probe is essential for the accuracy.
- Feed Point Impedance and Return Loss; These parameters are measured using a HP 8753E Vector Network Analyzer. The impedance is specified at the SMA connector of the dipole. The influence of reflections was eliminating by applying the averaging function while moving the dipole in the air, at least 70cm away from any obstacles.
- E- field distribution: E field is measured in the x-y-plane with an isotropic ER3D-field probe with 100 mW forward power to the antenna feed point. In accordance with [1, 2], the scan area is 20mm wide, its length exceeds the dipole arm length (180 or 90mm). The sensor center is 10 mm (in z) above the top of the dipole arms. Two 3D maxima are available near the end of the dipole arms. Assuming the dipole arms are perfectly in one line, the average of these two maxima (in subgrid 2 and subgrid 8) is determined to compensate for any non-parallelity to the measurement plane as well as the sensor displacement. The E-field value stated as calibration value represents the maximum of the interpolated 3D-E-field, 10mm above the dipole surface.
- H-field distribution: H-field is measured with an isotropic H-field probe with 100mW forward power to the
  antenna feed point, in the x-y-plane. The scan area and sensor distance is equivalent to the E-field
  scan. The maximum of the field is available at the center (subgrid 5) above the feed point. The H-field
  value stated as calibration value represents the maximum of the interpolated H-field, 10mm above the
  dipole surface at the feed point.

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### 1. Measurement Conditions

DASY system configuration, as far as not given on page 1

DASY Version	DASY5	V5.2 B157
DASY PP Version	SEMCAD X	V14.0 B57
Phantom	HAC Test Arch	SD HAC P01 BA, #1070
Distance Dipole Top - Probe Center	10 mm	
Scan resolution	dx, dy = 5 mm	area = 20 x 90 mm
Frequency	1880 MHz ± 1 MHz	
Forward power at dipole connector	20.0 dBm = 100mW	
Input power drift	< 0.05 dB	

## 2. Maximum Field values

H-field 10 mm above dipole surface	condition	Interpolated maximum
Maximum measured	100 mW forward power	0.471 A/m

Uncertainty for H-field measurement: 8.2% (k=2)

E-field 10 mm above dipole surface	condition	Interpolated maximum
Maximum measured above high end	100 mW forward power	136.2 V/m
Maximum measured above low end	100 mW forward power	132.1 V/m
Averaged maximum above arm	100 mW forward power	134.2 V/m

Uncertainty for E-field measurement: 12.8% (k=2)

### 3. Appendix

## 3.1 Antenna Parameters

Frequency	Return Loss	Impedance
1710 MHz	22.8 dB	( 52.2 + j7.1 ) Ohm
1880 MHz	20.0 dB	( 50.5 + j10.1 ) Ohm
1900 MHz	20.9 dB	( 53.2 + j8.8 ) Ohm
1950 MHz	29.5 dB	( 52.3 + J2.6 ) Ohm
2000 MHz	18.7 dB	( 43.2 + j8.4 ) Ohm

## 3.2 Antenna Design and Handling

The calibration dipole has a symmetric geometry with a built-in two stub matching network, which leads to the enhanced bandwidth.

The dipole is built of standard semirigid coaxial cable. The internal matching line is open ended. The antenna is therefore open for DC signals.

Do not apply force to dipole arms, as they are liable to bend. The soldered connections near the feedpoint may be damaged. After excessive mechanical stress or overheating, check the impedance characteristics to ensure that the internal matching network is not affected.

After long term use with 40W radiated power, only a slight warming of the dipole near the feedpoint can be measured.



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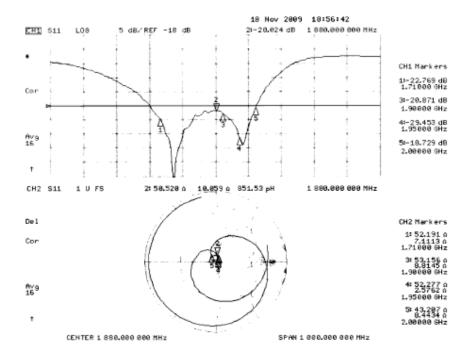
Report No RTS-2474-1003-01

FCC ID

L6ARCV70UW

### 3.3 Measurement Sheets

## 3.3.1 Return Loss and Smith Chart





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### 3.3.2 DASY4 H-Field Result

Date/Time: 18.11.2009 12:32:23

Test Laboratory: SPEAG Lab2

HAC RF CD1880 1008 091118 H CL

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1008

Communication System: CW; Frequency: 1880 MHz Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

Probe: H3DV6 - SN6065; ; Calibrated: 22.12.2008

Sensor-Surface: (Fix Surface)

Electronics: DAE4 Sn781; Calibrated: 20.02.2009

Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
 Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Versjon 14.0 Build 57

## Dipole H-Field measurement @ 1880 MHz/H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm Maximum value of peak Total field = 0.471 A/m

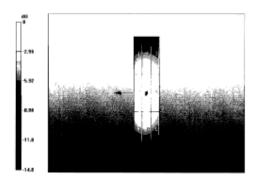
Probe Modulation Factor = 1

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 0.499 A/m; Power Drift = 0.00498 dB Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak H-field in A/m

Grid I	Grid 2	Grid 3
0.408	0.423	0.398
M2	M2	M2
Grid 4	Grid 5	Grid 6
0.456	0.471	0.439
M2	M2	M2
Grid 7	Grid 8	Grid 9
0.420	0.435	0.400
M2	M2	M2



0 dB = 0.471 A/m

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## Annex B to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCV71UW

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Author Data **Daoud Attayi** 

Dates of Test

Feb. 26-Mar. 04, 2010

Report No **RTS-2474-1003-01** 

L6ARCV70UW

FCC ID

### 3.3.3 DASY4 E-Field Result

Date/Time: 18.11.2009 17:16:43

Test Laboratory: SPEAG Lab2

HAC RF CD1880 1008 091118 E CL

DUT: HAC Dipole 1880 MHz; Type; CD1880V3; Serial: 1008

Communication System: CW; Frequency: 1880 MHz

Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ER3DV6 SN2336; ConvF(1, 1, 1); Calibrated: 22.12.2008
- Sensor-Surface: (Fix Surface)
- Electronics: DAE4 Sn781; Calibrated: 20.02.2009
- Phantom: HAC Test Arch with AMCC; Type: SD HAC P01 BA; Serial: 1070
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

## Dipole E-Field measurement @ 1880MHz/E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

Measurement grid: dx=5mm, dy=5mm

Maximum value of peak Total field = 136.2 V/m

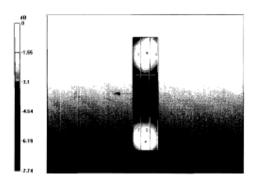
Probe Modulation Factor = 1

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 152.3 V/m; Power Drift = -0.00386 dB Hearing Aid Near-Field Category: M2 (AWF 0 dB)

Peak E-field in V/m

Grid I	Grid 2	Grid 3
124.7	132.1	131.1
M2	M2	M2
Grid 4	Grid 5	Grid 6
86.6	90.1	87.7
M3	M3	M3
Grid 7	Grid 8	Grid 9
130.7	136.2	132.2
M2	M2	M2



0 dB = 136.2V/m