

<b>RTS</b> <b>RIM Testing Services</b>	<small>Document</small> <b>Hearing Aid Compatibility RF Emissions Test Report for BlackBerry 7130e Wireless Handheld Model RAV20CW</b>		
<small>Author Data</small> <b>Lauren Weber</b>	<small>Dates</small> <b>July 05-08, 2005</b>	<small>Report No</small> <b>RTS-0181-0507-01</b>	<small>FCC ID</small> <b>L6ARAV20CW</b>

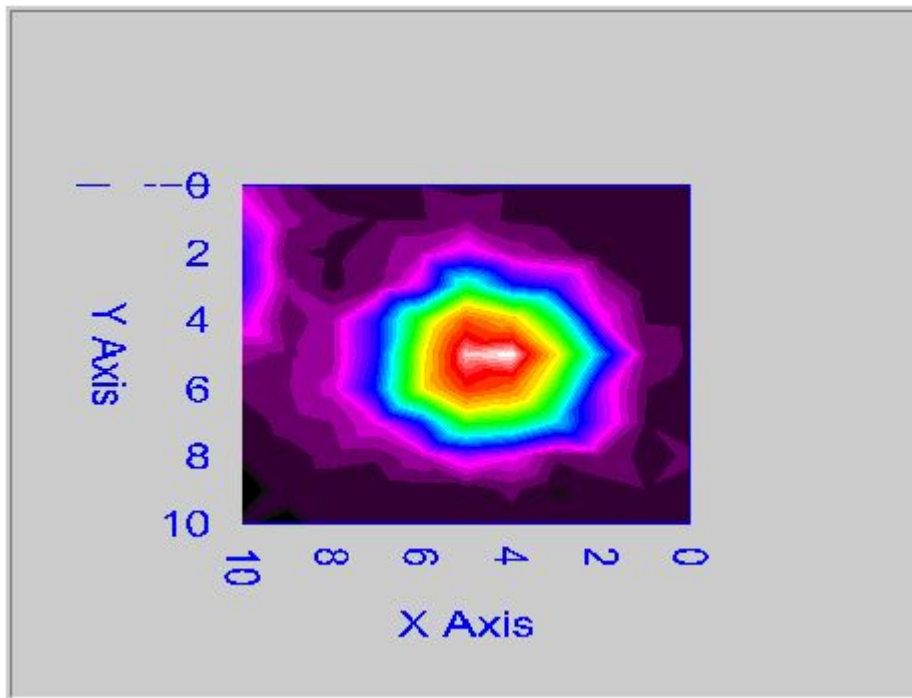
## 8.0 Annexes

<b>RTS</b> RIM Testing Services	Document <b>Hearing Aid Compatibility RF Emissions Test Report for BlackBerry 7130e Wireless Handheld Model RAV20CW</b>		
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## Annex A: Measurement plots and data

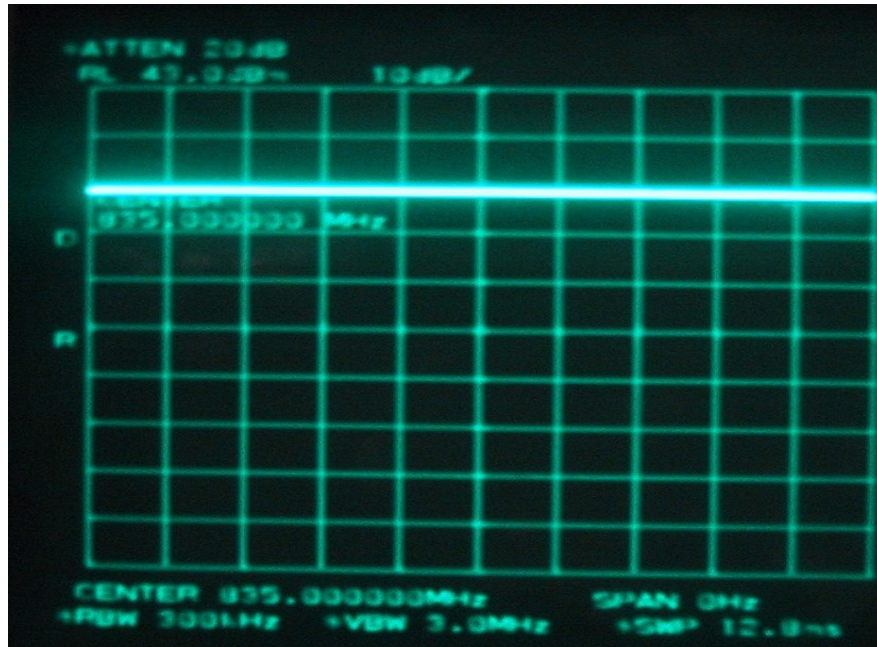
### A.1 T-Coil axial data and plot

	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	X-Axis (cm)
0.0	-32.979	-33.097	-33.077	-33.121	-33.072	-33.029	-33.192	-33.175	-32.874	-33.115	-33.162	
0.5	-33.036	-32.981	-33.135	-33.209	-32.992	-32.585	-32.958	-32.97	-33.123	-32.971	-33.014	
1.0	-33.265	-33.116	-33.27	-32.278	-31.402	-28.422	-30.939	-30.764	-32.603	-33.167	-33.13	
1.5	-33.027	-33.121	-32.731	-30.028	-25.996	-23.084	-25.171	-27.639	-32.868	-33.39	-33.116	
2.0	-33.025	-33.05	-32.344	-29.207	-22.361	-17.2	-20.982	-25.629	-31.503	-32.838	-33.152	
2.5	-33.082	-32.689	-31.12	-26.346	-20.611	-17.83	-19.861	-25.059	-30.839	-33.201	-33.285	
3.0	-32.957	-32.994	-32.171	-31.132	-24.909	-23.574	-23.41	-29.334	-32.162	-33.154	-33.264	
3.5	-33.09	-32.979	-32.753	-32.636	-29.787	-29.702	-29.164	-31.644	-32.884	-33.283	-33.112	
4.0	-33.277	-32.866	-33.059	-33.096	-32.212	-32.322	-31.957	-32.575	-32.818	-33.161	-33.149	
4.5	-32.78	-32.421	-32.896	-32.45	-32.932	-32.652	-32.623	-32.777	-33.127	-33.175	-33.53	
5.0	-31.859	-30.891	-29.901	-29.9	-30.968	-32.471	-32.818	-33.248	-33.314	-33.595	-33.315	
Y-Axis (cm)												

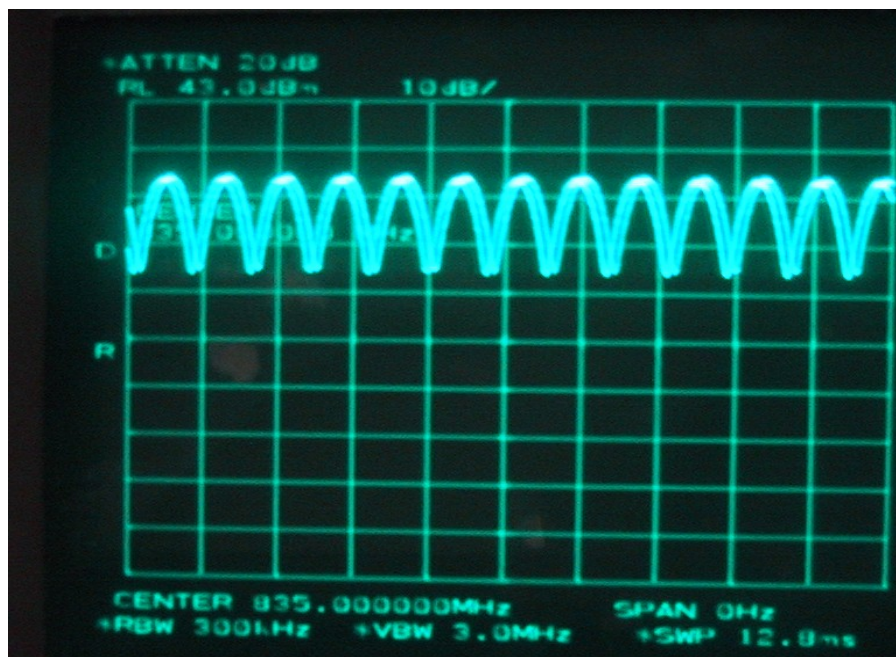


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**A.2 Spectrum analyser plots: CW, 80% AM and CDMA signals**



**0 Hz Span CW Plot (835MHz)**

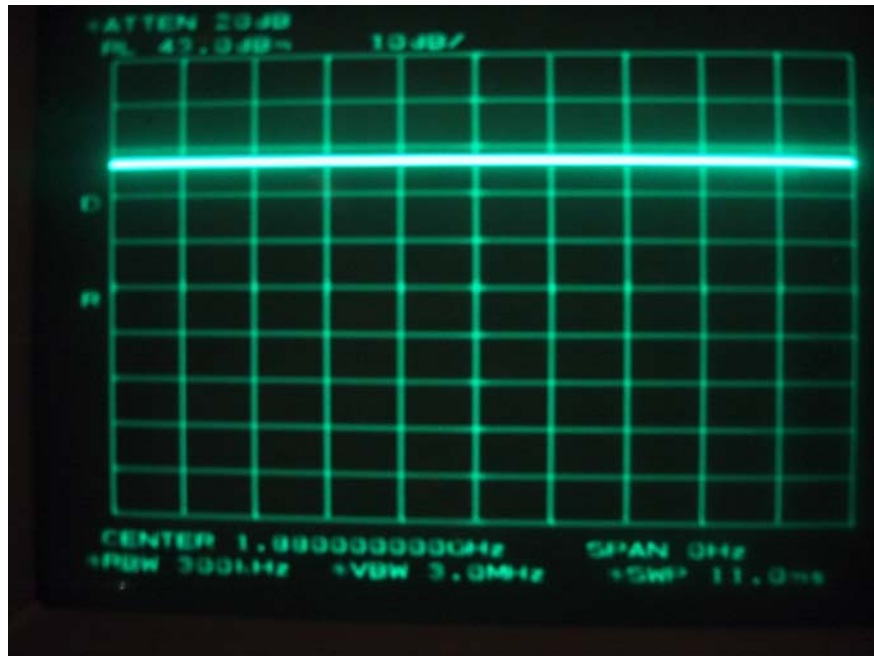


**0 Hz Span 80% AM Plot (835MHz)**

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	Author Data <b>Lauren Weber</b>	Dates <b>July 05-08, 2005</b>	Report No <b>RTS-0181-0507-01</b>

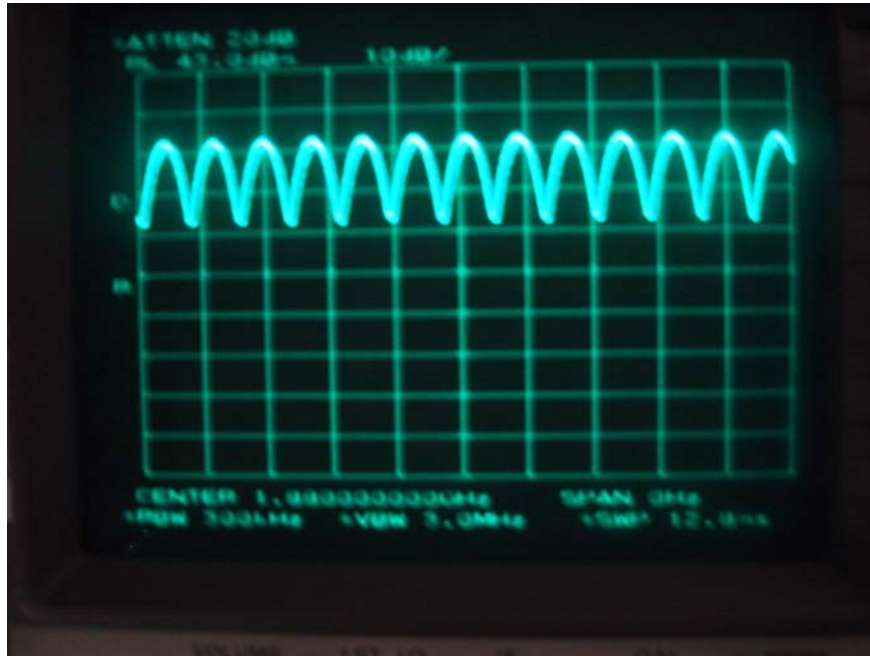


0 Hz Span CDMA Full Rate Plot (835MHz)

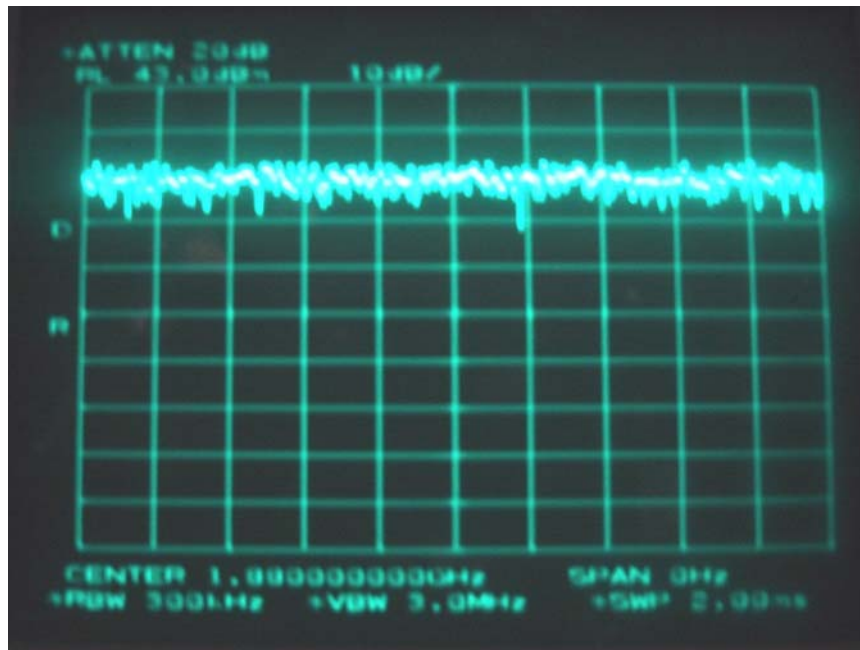


0 Hz Span CW Plot (1880MHz)

<b>RTS</b> RIM Testing Services	Document <b>Hearing Aid Compatibility RF Emissions Test Report for BlackBerry 7130e Wireless Handheld Model RAV20CW</b>		
	Author Data <b>Lauren Weber</b>	Dates <b>July 05-08, 2005</b>	Report No <b>RTS-0181-0507-01</b>



**0 Hz Span 80% AM Plot (1880MHz)**



**0 Hz Span CDMA Full Rate Plot (1880MHz)**



<b>RTS</b> RIM Testing Services	Document <b>Hearing Aid Compatibility RF Emissions Test Report for BlackBerry 7130e Wireless Handheld Model RAV20CW</b>		
	Author Data <b>Lauren Weber</b>	Dates <b>July 05-08, 2005</b>	Report No <b>RTS-0181-0507-01</b>



0 Hz Span CDMA 1/8 Gating Plot (1880MHz)

<b>RTS</b> <b>RIM Testing Services</b>	Document <b>Hearing Aid Compatibility RF Emissions Test Report for  BlackBerry 7130e Wireless Handheld Model RAV20CW</b>		
	Author Data <b>Lauren Weber</b>	Dates <b>July 05-08, 2005</b>	Report No <b>RTS-0181-0507-01</b>

### A.3 Dipole validation and probe modulation factor plots

Please note that the colours in the contour plots refer to RMS average levels.

Date/Time: 05/07/2005 11:40:37 AM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_835MHz\_CW\_20dBm\_07-05-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 166.2 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 160.6 V/m

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

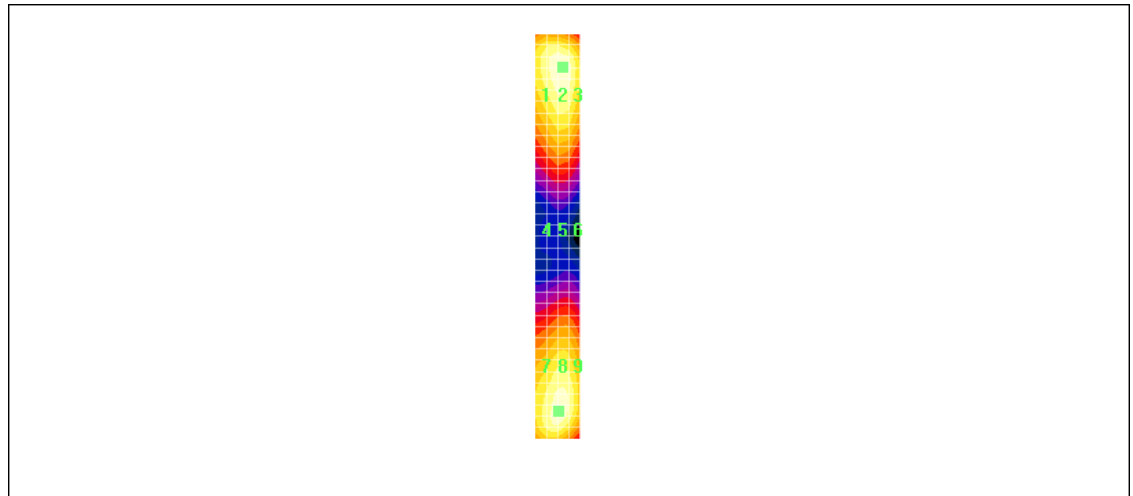
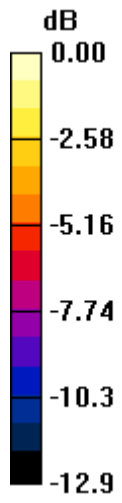
E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>153.2</b>	<b>167.2</b>	<b>165.5</b>
Grid 4	Grid 5	Grid 6
<b>82.1</b>	<b>90.0</b>	<b>88.0</b>
Grid 7	Grid 8	Grid 9
<b>148.2</b>	<b>160.6</b>	<b>156.8</b>

Grid 1	Grid 2	Grid 3
<b>153.2</b>	<b>167.2</b>	<b>165.5</b>
Grid 4	Grid 5	Grid 6
<b>82.1</b>	<b>90.0</b>	<b>88.0</b>
Grid 7	Grid 8	Grid 9
<b>148.2</b>	<b>160.6</b>	<b>156.8</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 167.2V/m

Date/Time: 05/07/2005 12:06:53 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_835MHz\_CW\_12.5dBm\_07-05-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 69.9 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 68.8 V/m

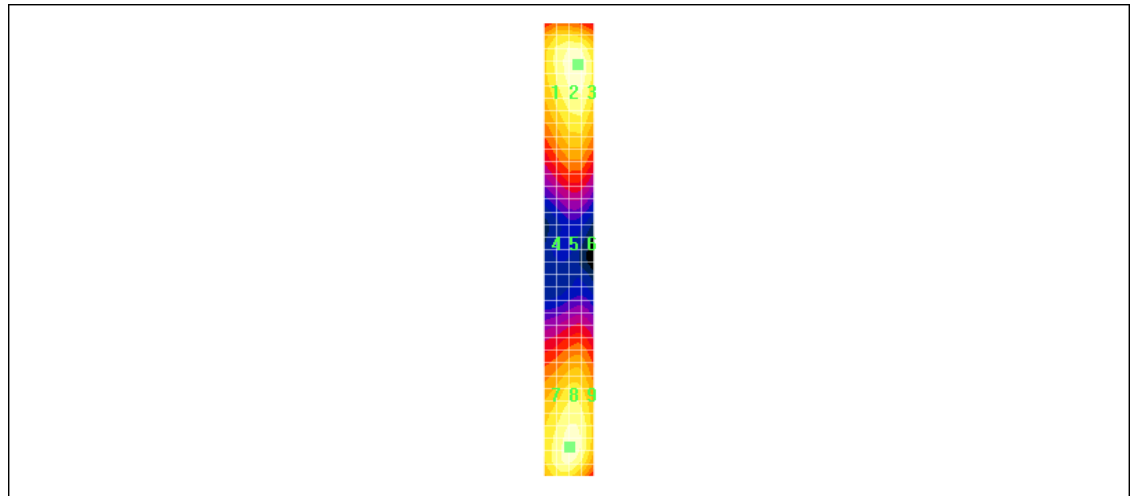
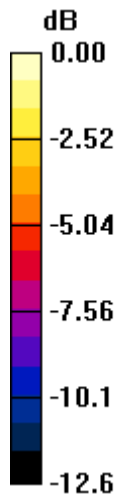
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
63.3	71.6	71.6
Grid 4	Grid 5	Grid 6
35.7	39.8	39.6
Grid 7	Grid 8	Grid 9
63.6	68.8	66.7

Grid 1	Grid 2	Grid 3
63.3	71.6	71.6
Grid 4	Grid 5	Grid 6
35.7	39.8	39.6
Grid 7	Grid 8	Grid 9
63.6	68.8	66.7

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 71.6V/m

Date/Time: 05/07/2005 12:39:32 PM

**Lab: RIM Testing Services (RTS)**

HAC\_E\_Dipole\_835MHz\_AM80%\_12.5dBm\_07-05-2005

**DUT: HAC-Dipole 835 MHz; Type: D835V3**

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test**

**(5x37x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 43.4 V/m

**E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test**

**(41x361x1):** Measurement grid: dx=5mm, dy=5mm

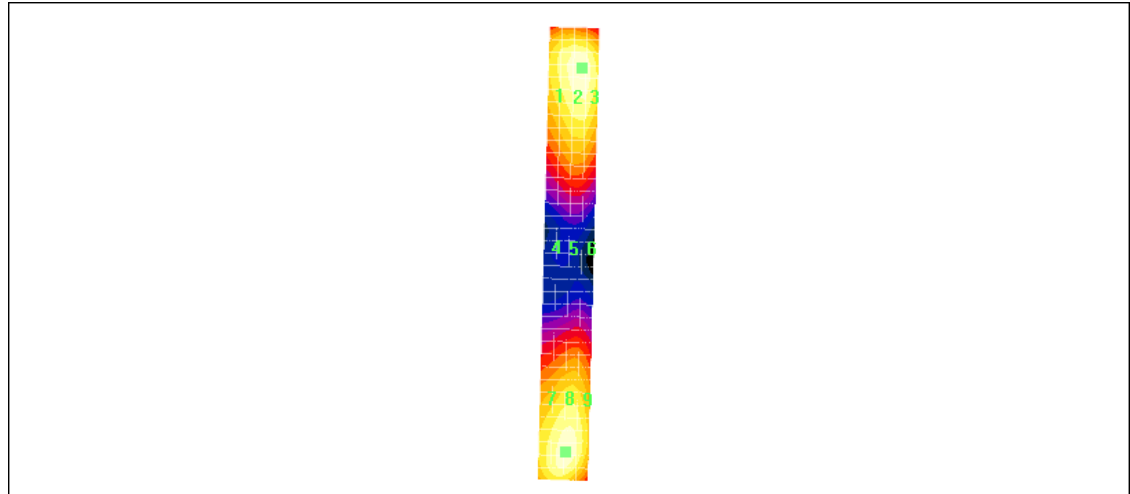
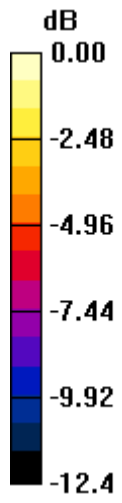
Maximum value of Total field (slot averaged) = 42.7 V/m

**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
39.5	44.4	44.4	39.5	44.4	44.4
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
22.5	24.9	24.8	22.5	24.9	24.8
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
39.5	42.7	42.0	39.5	42.7	42.0

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 44.4V/m

Date/Time: 05/07/2005 2:03:44 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_835MHz\_CDMA\_full\_12.5dBm\_07-05-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 69.8 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 66.4 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

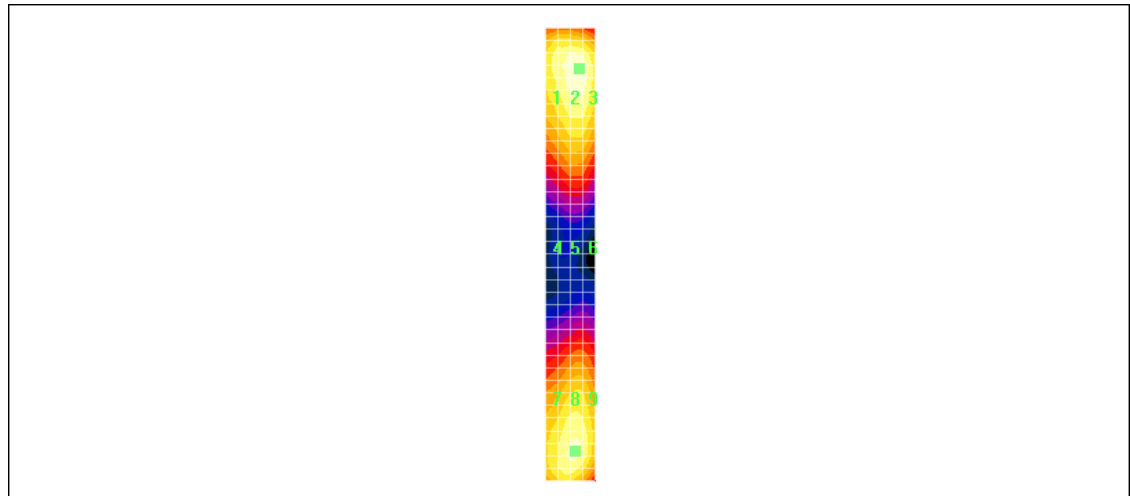
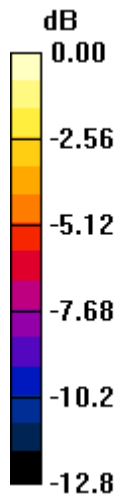
E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
64.4	71.3	71.5
Grid 4	Grid 5	Grid 6
35.6	40.0	40.0
Grid 7	Grid 8	Grid 9
60.5	66.4	65.8

Grid 1	Grid 2	Grid 3
64.4	71.3	71.5
Grid 4	Grid 5	Grid 6
35.6	40.0	40.0
Grid 7	Grid 8	Grid 9
60.5	66.4	65.8

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 71.5V/m

Date/Time: 05/07/2005 2:14:18 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_835MHz\_CDMA\_12.5%gating\_12.5dBm\_07-05-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 24.5 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 23.2 V/m

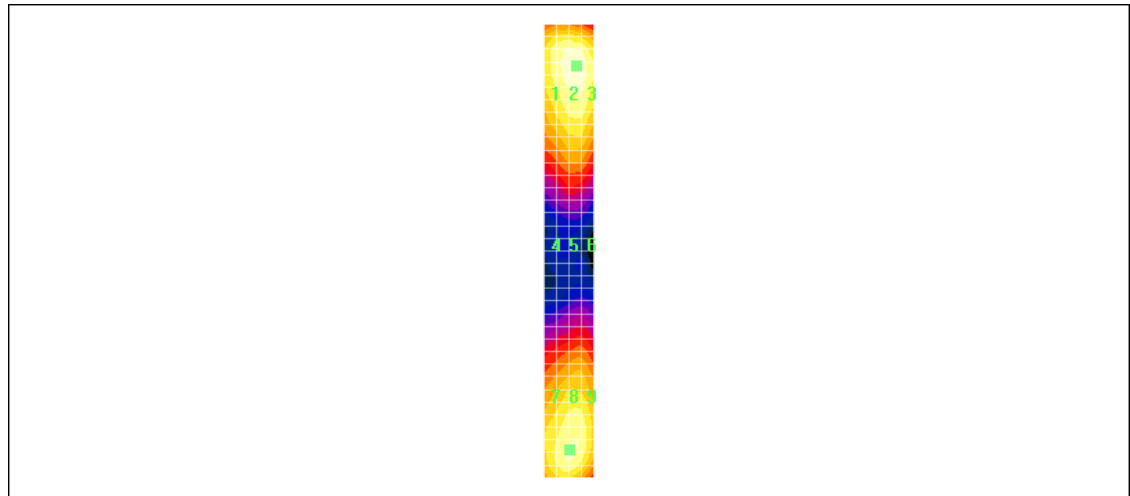
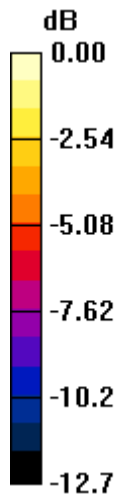
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
23.0	25.1	25.0
Grid 4	Grid 5	Grid 6
12.8	13.9	13.8
Grid 7	Grid 8	Grid 9
21.6	23.2	22.8

Grid 1	Grid 2	Grid 3
23.0	25.1	25.0
Grid 4	Grid 5	Grid 6
12.8	13.9	13.8
Grid 7	Grid 8	Grid 9
21.6	23.2	22.8

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 25.1V/m

Date/Time: 05/07/2005 3:17:10 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_1880MHz\_CW\_20dBm\_07-05-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 129.6 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

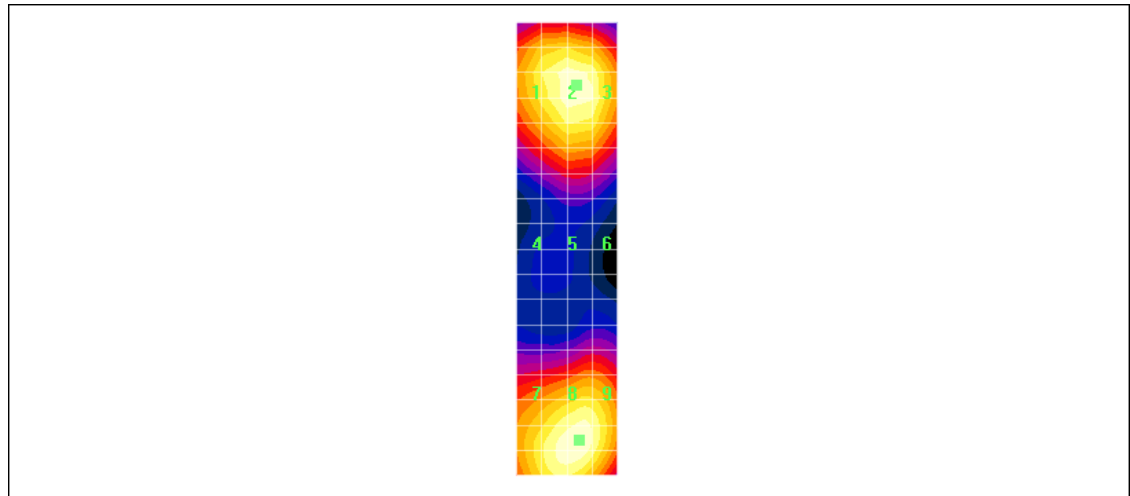
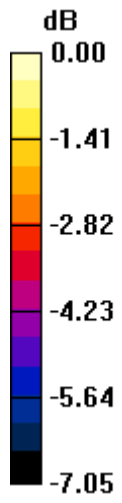
Maximum value of Total field (slot averaged) = 130.3 V/m

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
122.7	132.3	131.4	122.7	132.3	131.4
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
81.1	89.0	88.1	81.1	89.0	88.1
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
120.9	130.3	129.4	120.9	130.3	129.4

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 132.3V/m

Date/Time: 05/07/2005 3:52:35 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_1880MHz\_CW\_11.1dBm\_07-05-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 46.6 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 46.9 V/m

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

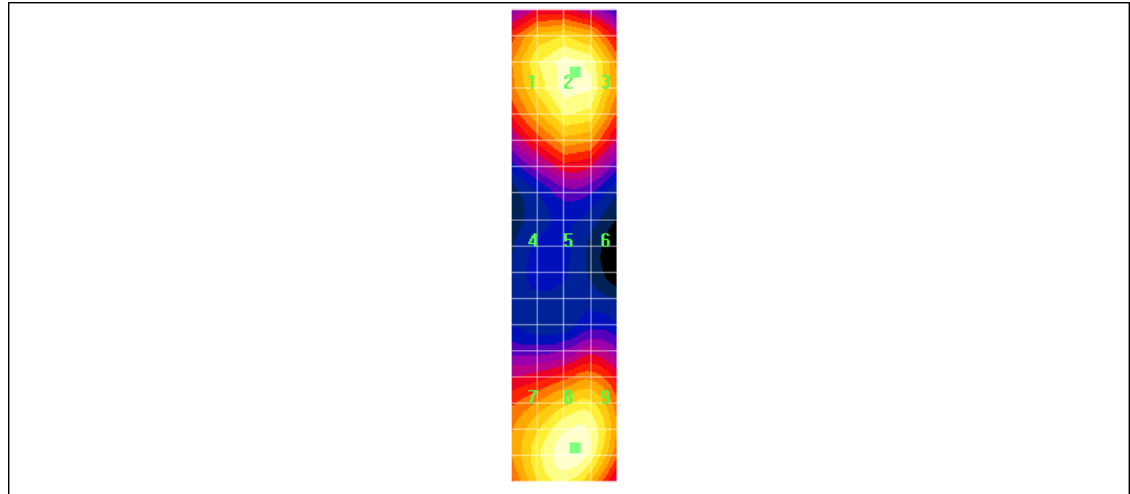
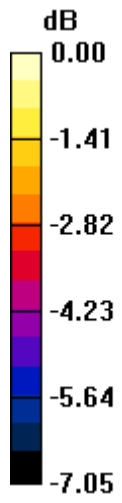
E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
44.0	47.6	47.3
Grid 4	Grid 5	Grid 6
29.2	32.1	31.7
Grid 7	Grid 8	Grid 9
43.2	46.9	46.6

Grid 1	Grid 2	Grid 3
44.0	47.6	47.3
Grid 4	Grid 5	Grid 6
29.2	32.1	31.7
Grid 7	Grid 8	Grid 9
43.2	46.9	46.6

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 47.6V/m

Date/Time: 05/07/2005 4:01:43 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_1880MHz\_AM80%\_11.1dBm\_07-05-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 29.3 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 29.5 V/m

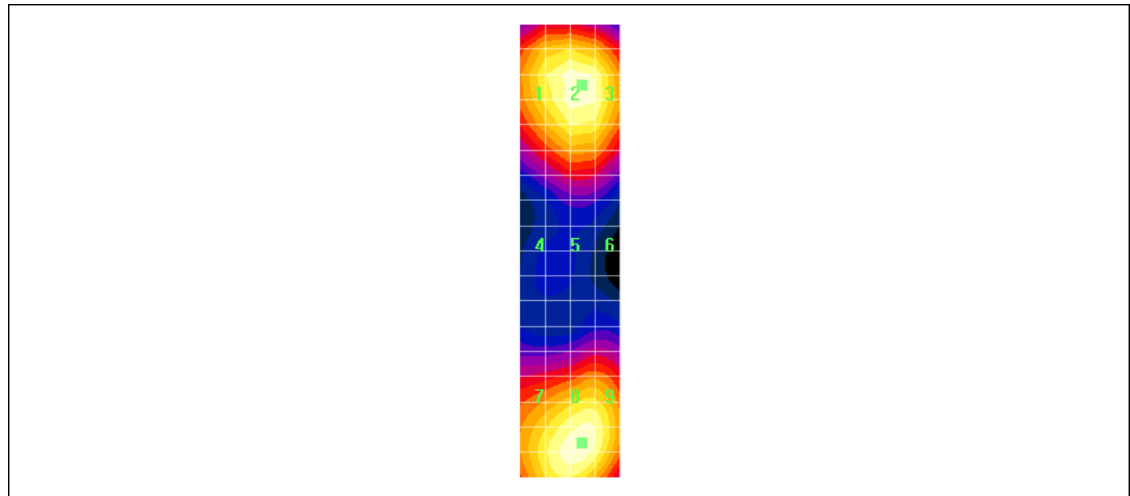
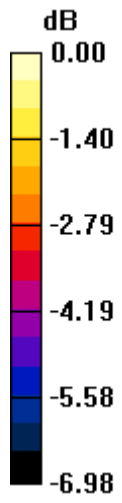
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
27.7	30.0	29.8
Grid 4	Grid 5	Grid 6
18.4	20.3	20.1
Grid 7	Grid 8	Grid 9
27.2	29.5	29.3

Grid 1	Grid 2	Grid 3
27.7	30.0	29.8
Grid 4	Grid 5	Grid 6
18.4	20.3	20.1
Grid 7	Grid 8	Grid 9
27.2	29.5	29.3

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 30.0V/m

Date/Time: 05/07/2005 4:14:39 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_1880MHz\_CDMA\_full\_11.1dBm\_07-05-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 46.6 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 45.1 V/m

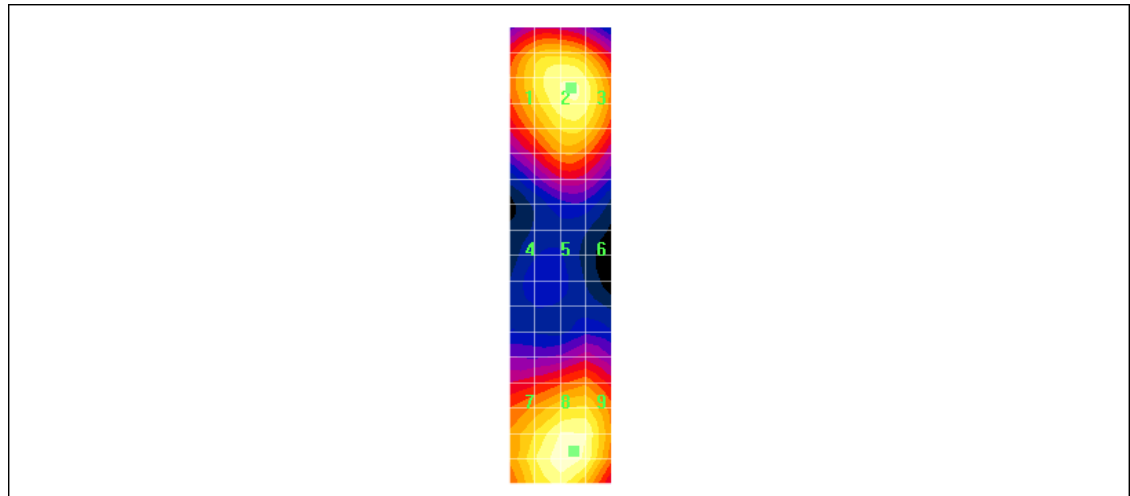
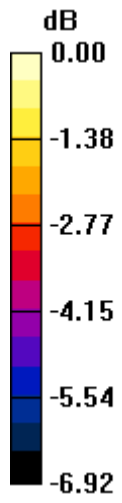
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
42.0	45.1	44.9
Grid 4	Grid 5	Grid 6
27.7	30.8	30.5
Grid 7	Grid 8	Grid 9
43.5	47.2	47.0

Grid 1	Grid 2	Grid 3
42.0	45.1	44.9
Grid 4	Grid 5	Grid 6
27.7	30.8	30.5
Grid 7	Grid 8	Grid 9
43.5	47.2	47.0

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 47.2V/m

Date/Time: 05/07/2005 4:23:20 PM

Lab: RIM Testing Services (RTS)

HAC\_E\_Dipole\_1880MHz\_CDMA\_12.5%gating\_11.1dBm\_07-05-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 16.2 V/m

### E Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 16.0 V/m

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

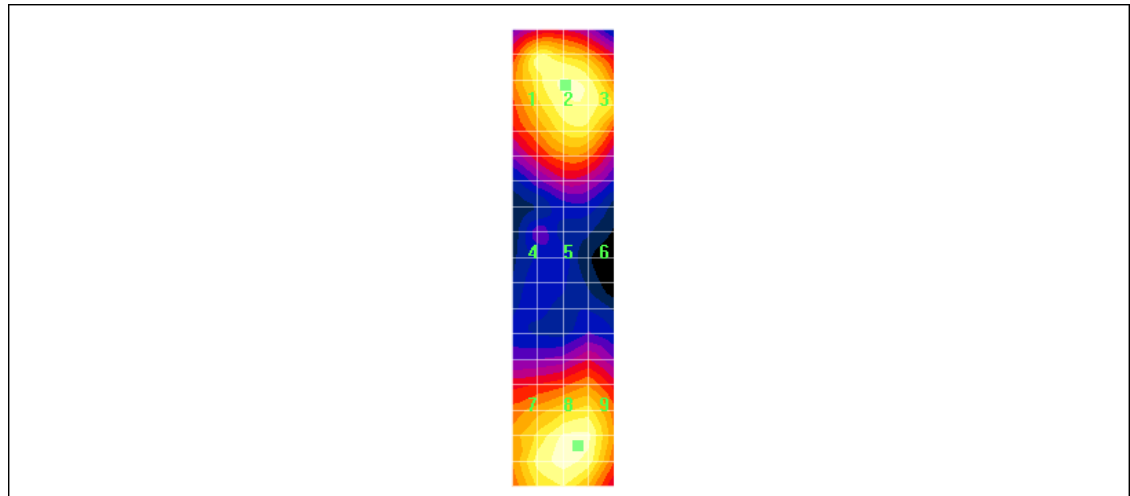
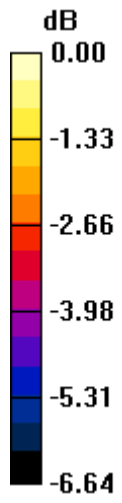
E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>15.7</b>	<b>16.0</b>	<b>15.9</b>
Grid 4	Grid 5	Grid 6
<b>9.99</b>	<b>10.9</b>	<b>10.7</b>
Grid 7	Grid 8	Grid 9
<b>15.7</b>	<b>16.6</b>	<b>16.5</b>

Grid 1	Grid 2	Grid 3
<b>15.7</b>	<b>16.0</b>	<b>15.9</b>
Grid 4	Grid 5	Grid 6
<b>9.99</b>	<b>10.9</b>	<b>10.7</b>
Grid 7	Grid 8	Grid 9
<b>15.7</b>	<b>16.6</b>	<b>16.5</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 16.6V/m

HAC\_H\_Dipole\_835MHz\_CW\_20dBm\_07-06-2005

**DUT: HAC-Dipole 835 MHz; Type: D835V3**

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test**

**(5x37x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.415 A/m

**H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test**

**(41x361x1):** Measurement grid: dx=5mm, dy=5mm

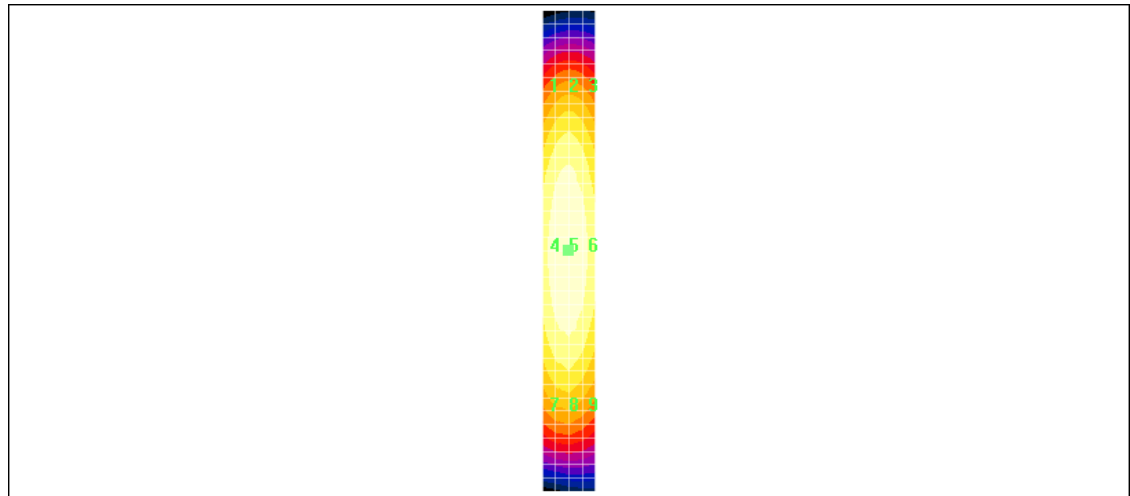
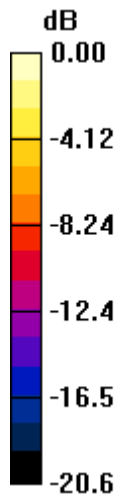
Maximum value of Total field (slot averaged) = 0.415 A/m

**Hearing Aid Near-Field Category: M2 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1 <b>0.347</b>	Grid 2 <b>0.361</b>	Grid 3 <b>0.344</b>	Grid 1 <b>0.347</b>	Grid 2 <b>0.361</b>	Grid 3 <b>0.344</b>
Grid 4 <b>0.395</b>	Grid 5 <b>0.415</b>	Grid 6 <b>0.395</b>	Grid 4 <b>0.395</b>	Grid 5 <b>0.415</b>	Grid 6 <b>0.395</b>
Grid 7 <b>0.349</b>	Grid 8 <b>0.363</b>	Grid 9 <b>0.344</b>	Grid 7 <b>0.349</b>	Grid 8 <b>0.363</b>	Grid 9 <b>0.344</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.415A/m

Date/Time: 07/07/2005 9:34:01 AM

Lab: RIM Testing Services (RTS)

HAC\_H\_Dipole\_835MHz\_CW\_12.5dBm\_07-07-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.181 A/m

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.181 A/m

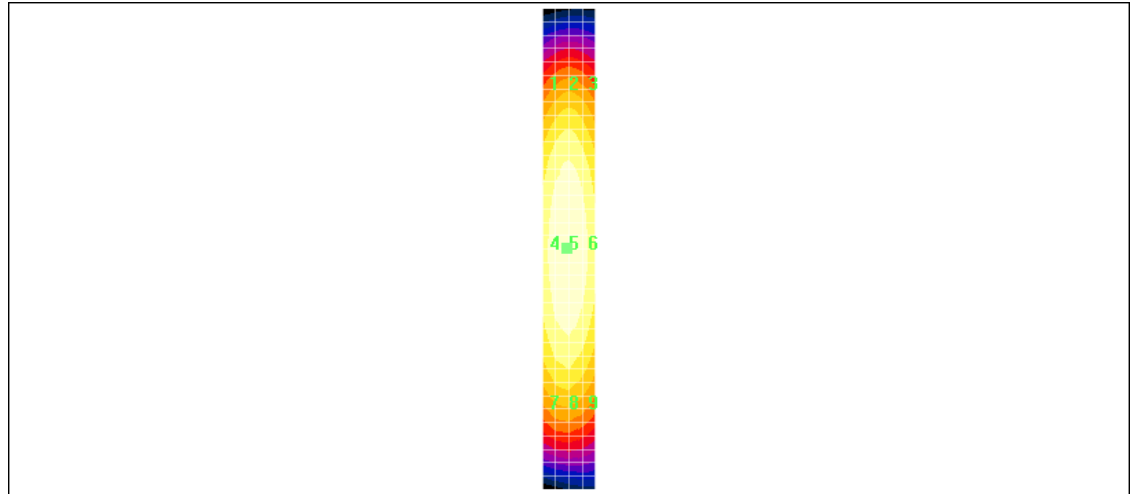
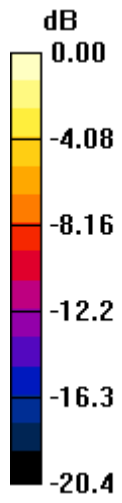
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.152</b>	<b>0.159</b>	<b>0.150</b>
Grid 4	Grid 5	Grid 6
<b>0.174</b>	<b>0.181</b>	<b>0.172</b>
Grid 7	Grid 8	Grid 9
<b>0.154</b>	<b>0.159</b>	<b>0.150</b>

Grid 1	Grid 2	Grid 3
<b>0.152</b>	<b>0.159</b>	<b>0.150</b>
Grid 4	Grid 5	Grid 6
<b>0.174</b>	<b>0.181</b>	<b>0.172</b>
Grid 7	Grid 8	Grid 9
<b>0.154</b>	<b>0.159</b>	<b>0.150</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.181A/m

Date/Time: 07/07/2005 9:55:52 AM

Lab: RIM Testing Services (RTS)

HAC\_H\_Dipole\_835MHz\_AM80%\_12.5dBm\_07-07-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.114 A/m

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.114 A/m

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

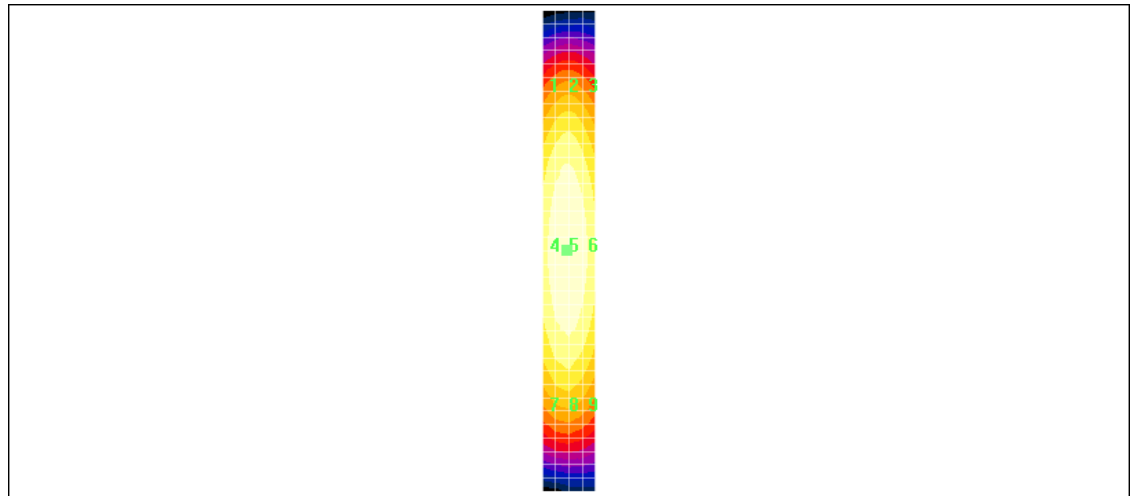
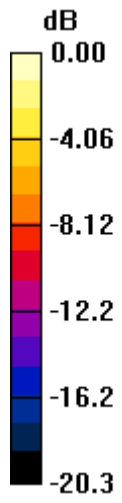
H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.096</b>	<b>0.100</b>	<b>0.094</b>
Grid 4	Grid 5	Grid 6
<b>0.110</b>	<b>0.114</b>	<b>0.108</b>
Grid 7	Grid 8	Grid 9
<b>0.096</b>	<b>0.100</b>	<b>0.094</b>

Grid 1	Grid 2	Grid 3
<b>0.096</b>	<b>0.100</b>	<b>0.094</b>
Grid 4	Grid 5	Grid 6
<b>0.110</b>	<b>0.114</b>	<b>0.108</b>
Grid 7	Grid 8	Grid 9
<b>0.096</b>	<b>0.100</b>	<b>0.094</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 0.114A/m

Date/Time: 07/07/2005 8:44:05 AM

Lab: RIM Testing Services (RTS)

HAC\_H\_Dipole\_835MHz\_CDMA\_full\_12.5dBm\_07-07-2005

DUT: HAC-Dipole 835 MHz; Type: D835V3

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(5x37x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.184 A/m

### H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test

(41x361x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.184 A/m

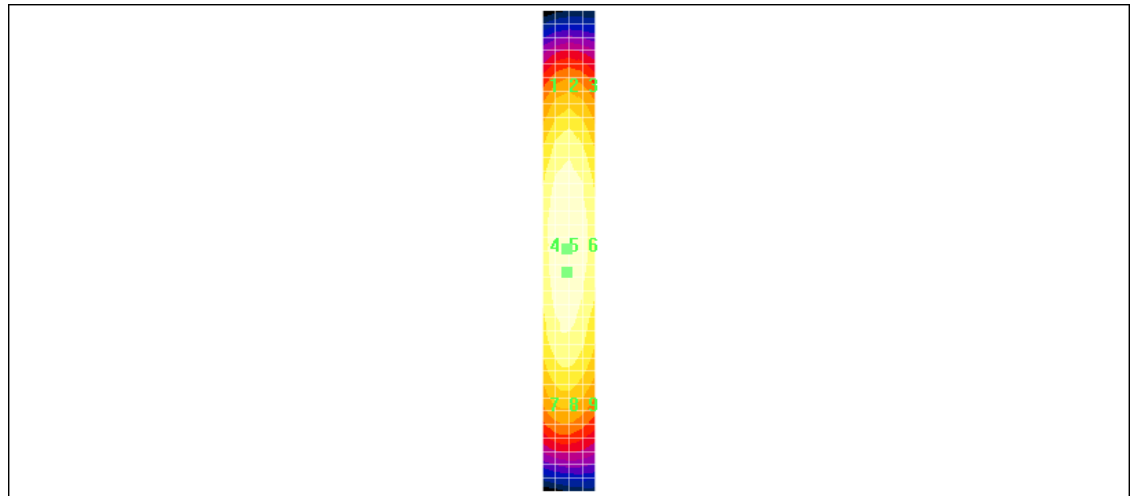
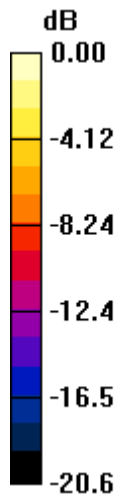
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.158</b>	<b>0.164</b>	<b>0.154</b>
Grid 4	Grid 5	Grid 6
<b>0.178</b>	<b>0.184</b>	<b>0.174</b>
Grid 7	Grid 8	Grid 9
<b>0.155</b>	<b>0.158</b>	<b>0.147</b>

Grid 1	Grid 2	Grid 3
<b>0.158</b>	<b>0.164</b>	<b>0.154</b>
Grid 4	Grid 5	Grid 6
<b>0.178</b>	<b>0.184</b>	<b>0.174</b>
Grid 7	Grid 8	Grid 9
<b>0.155</b>	<b>0.158</b>	<b>0.147</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.184A/m

Date/Time: 07/07/2005 8:58:34 AM

**Lab: RIM Testing Services (RTS)**

HAC\_H\_Dipole\_835MHz\_CDMA\_12.5%gating\_12.5dBm\_07-07-2005

**DUT: HAC-Dipole 835 MHz; Type: D835V3**

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

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test**

**(5x37x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.066 A/m

**H Scan 10mm above CD 835 MHz/Hearing Aid Compatibility Test**

**(41x361x1):** Measurement grid: dx=5mm, dy=5mm

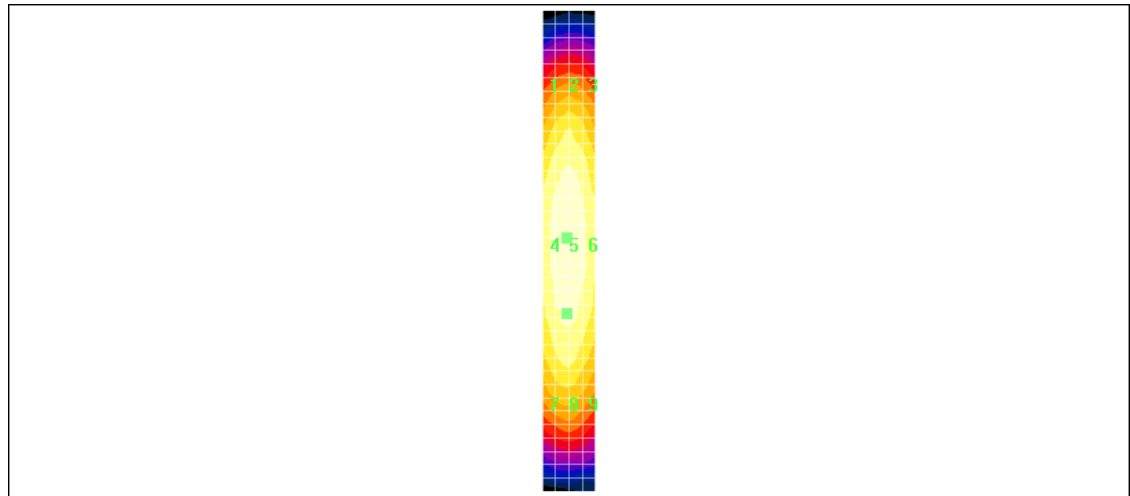
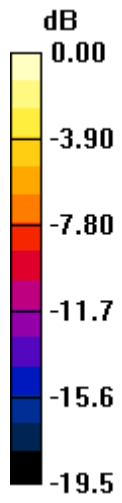
Maximum value of Total field (slot averaged) = 0.066 A/m

**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.055</b>	<b>0.059</b>	<b>0.056</b>	<b>0.055</b>	<b>0.059</b>	<b>0.056</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.063</b>	<b>0.066</b>	<b>0.062</b>	<b>0.063</b>	<b>0.066</b>	<b>0.062</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.053</b>	<b>0.056</b>	<b>0.053</b>	<b>0.053</b>	<b>0.056</b>	<b>0.053</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.066A/m

Date/Time: 06/07/2005 6:33:39 PM

Lab: RIM Testing Services (RTS)

HAC\_H\_Dipole\_1880MHz\_CW\_20dBm\_07-06-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.405 A/m

### H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.405 A/m

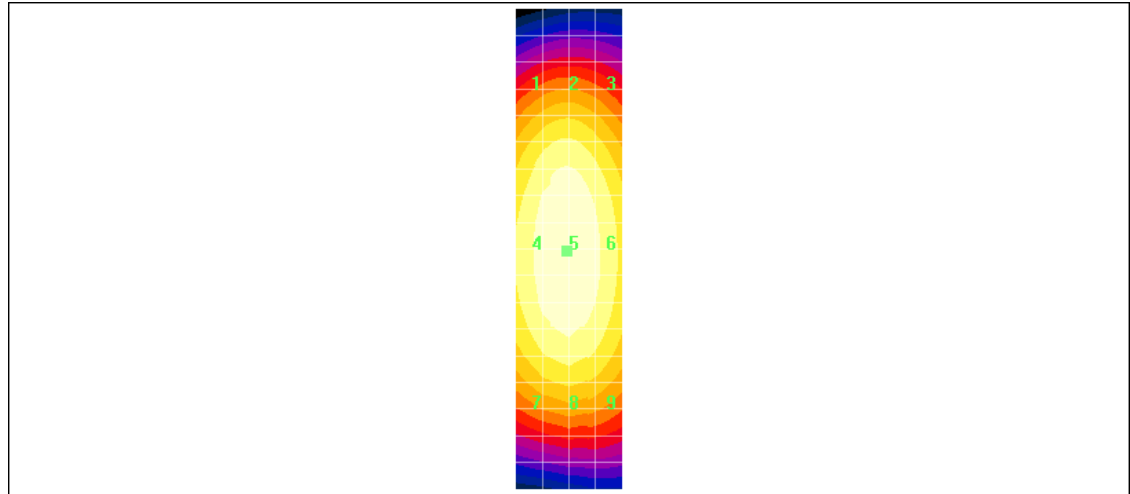
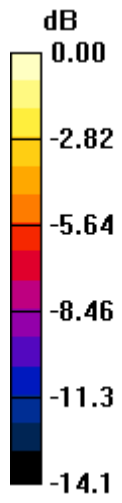
Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.349</b>	<b>0.364</b>	<b>0.345</b>
Grid 4	Grid 5	Grid 6
<b>0.390</b>	<b>0.405</b>	<b>0.386</b>
Grid 7	Grid 8	Grid 9
<b>0.360</b>	<b>0.374</b>	<b>0.357</b>

Grid 1	Grid 2	Grid 3
<b>0.349</b>	<b>0.364</b>	<b>0.345</b>
Grid 4	Grid 5	Grid 6
<b>0.390</b>	<b>0.405</b>	<b>0.386</b>
Grid 7	Grid 8	Grid 9
<b>0.360</b>	<b>0.374</b>	<b>0.357</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.405A/m

Date/Time: 07/07/2005 11:22:37 AM

**Lab: RIM Testing Services (RTS)**

HAC\_H\_Dipole\_1880MHz\_CW\_11.1dBm\_07-07-2005

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test**

**(5x19x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.148 A/m

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test**

**(41x181x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.148 A/m

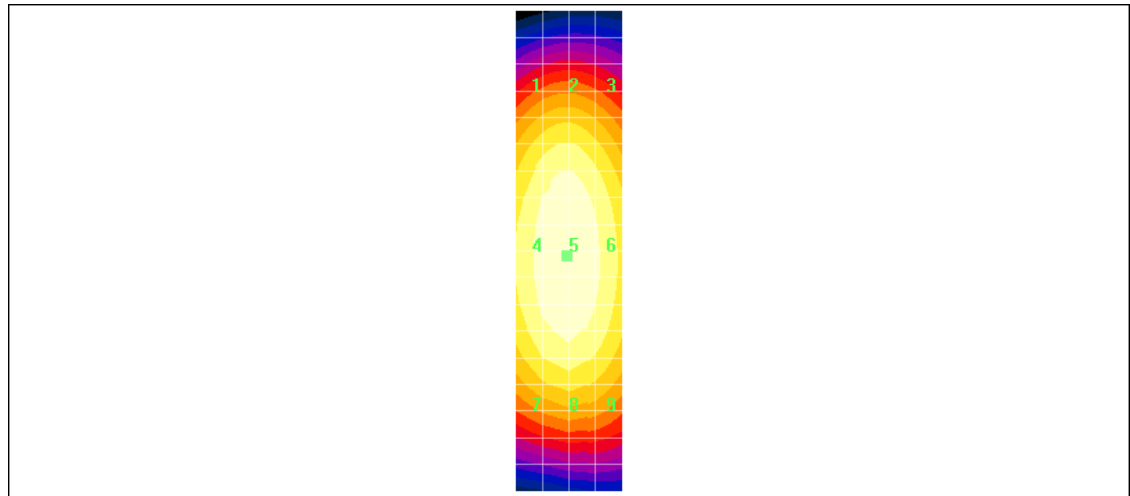
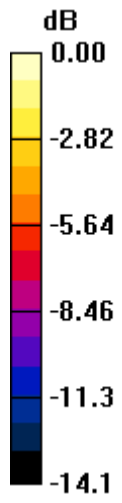
**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.127</b>	<b>0.132</b>	<b>0.125</b>	<b>0.127</b>	<b>0.132</b>	<b>0.125</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.143</b>	<b>0.148</b>	<b>0.141</b>	<b>0.143</b>	<b>0.148</b>	<b>0.141</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.132</b>	<b>0.138</b>	<b>0.131</b>	<b>0.132</b>	<b>0.138</b>	<b>0.131</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 0.148A/m

Date/Time: 07/07/2005 11:35:52 AM

**Lab: RIM Testing Services (RTS)**

HAC\_H\_Dipole\_1880MHz\_AM80%\_11.1dBm\_07-07-2005

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test**

**(5x19x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.094 A/m

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test**

**(41x181x1):** Measurement grid: dx=5mm, dy=5mm

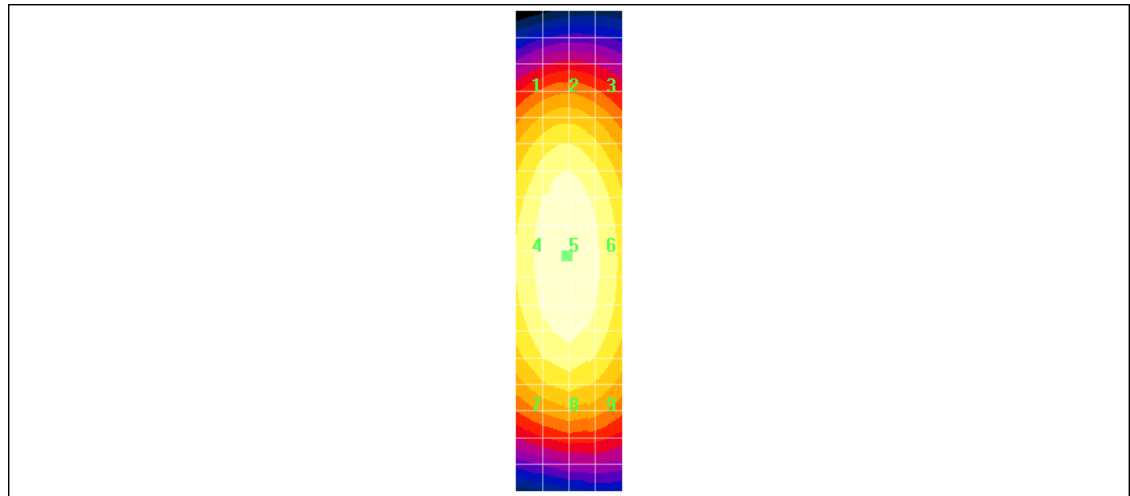
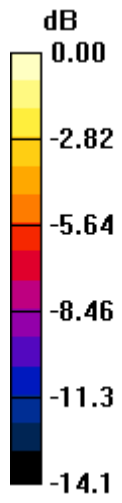
Maximum value of Total field (slot averaged) = 0.094 A/m

**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.080</b>	<b>0.083</b>	<b>0.079</b>	<b>0.080</b>	<b>0.083</b>	<b>0.079</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.090</b>	<b>0.094</b>	<b>0.089</b>	<b>0.090</b>	<b>0.094</b>	<b>0.089</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.084</b>	<b>0.088</b>	<b>0.084</b>	<b>0.084</b>	<b>0.088</b>	<b>0.084</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.094A/m

Date/Time: 07/07/2005 10:46:11 AM

**Lab: RIM Testing Services (RTS)**

HAC\_H\_Dipole\_1880MHz\_CDMA\_full\_11.1dBm\_07-07-2005

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test

**(5x19x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.145 A/m

### H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test

**(41x181x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.145 A/m

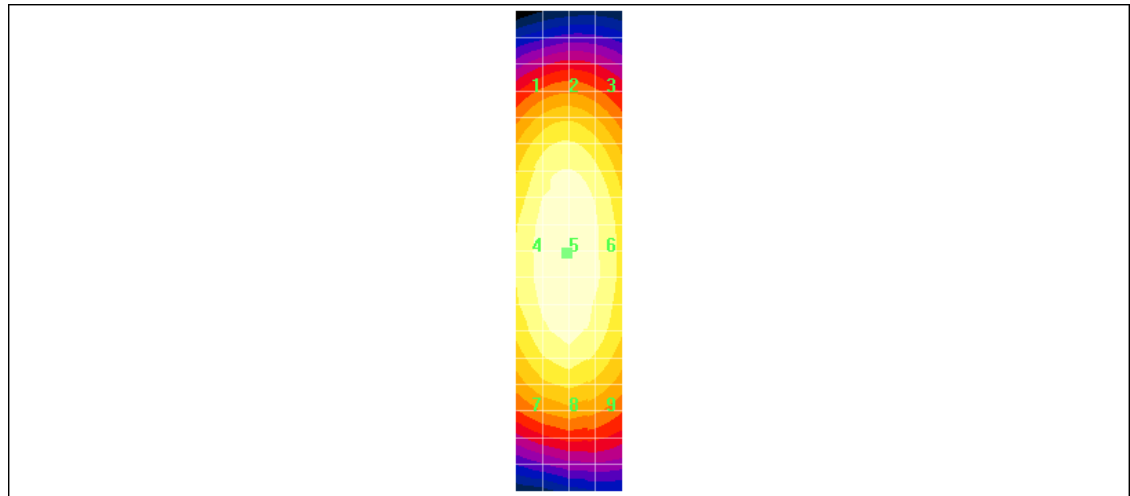
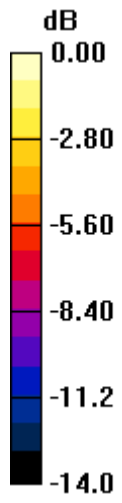
**Hearing Aid Near-Field Category: M4 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.125</b>	<b>0.130</b>	<b>0.124</b>
Grid 4	Grid 5	Grid 6
<b>0.140</b>	<b>0.145</b>	<b>0.138</b>
Grid 7	Grid 8	Grid 9
<b>0.130</b>	<b>0.137</b>	<b>0.129</b>

Grid 1	Grid 2	Grid 3
<b>0.125</b>	<b>0.130</b>	<b>0.124</b>
Grid 4	Grid 5	Grid 6
<b>0.140</b>	<b>0.145</b>	<b>0.138</b>
Grid 7	Grid 8	Grid 9
<b>0.130</b>	<b>0.137</b>	<b>0.129</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.145A/m

Date/Time: 07/07/2005 10:54:27 AM

Lab: RIM Testing Services (RTS)

HAC\_H\_Dipole\_1880MHz\_CDMA\_12.5%gating\_11.1dBm\_07-07-2005

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test

(5x19x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.051 A/m

### H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test

(41x181x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.052 A/m

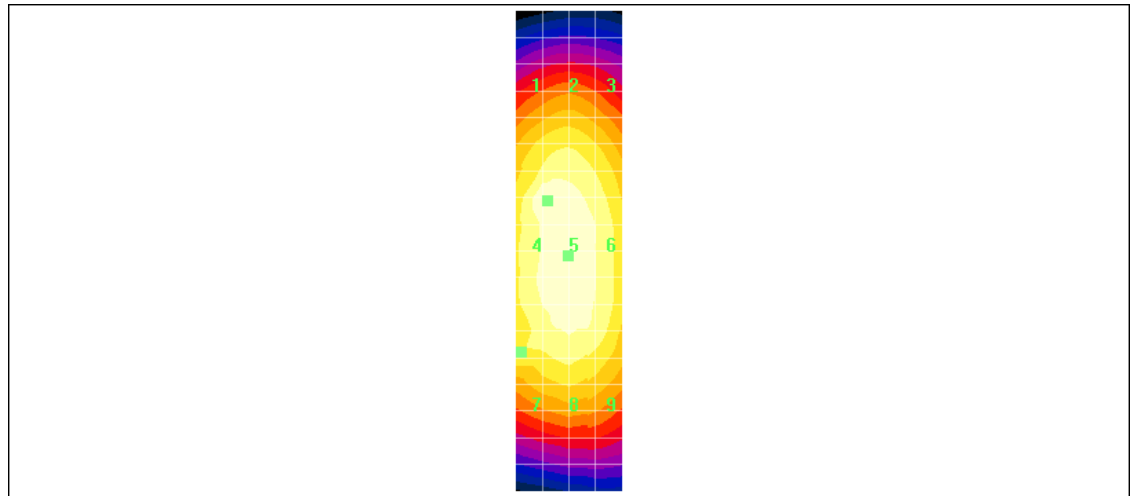
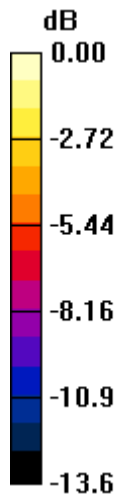
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.044</b>	<b>0.045</b>	<b>0.043</b>
Grid 4	Grid 5	Grid 6
<b>0.052</b>	<b>0.052</b>	<b>0.049</b>
Grid 7	Grid 8	Grid 9
<b>0.046</b>	<b>0.047</b>	<b>0.047</b>

Grid 1	Grid 2	Grid 3
<b>0.044</b>	<b>0.045</b>	<b>0.043</b>
Grid 4	Grid 5	Grid 6
<b>0.052</b>	<b>0.052</b>	<b>0.049</b>
Grid 7	Grid 8	Grid 9
<b>0.046</b>	<b>0.047</b>	<b>0.047</b>

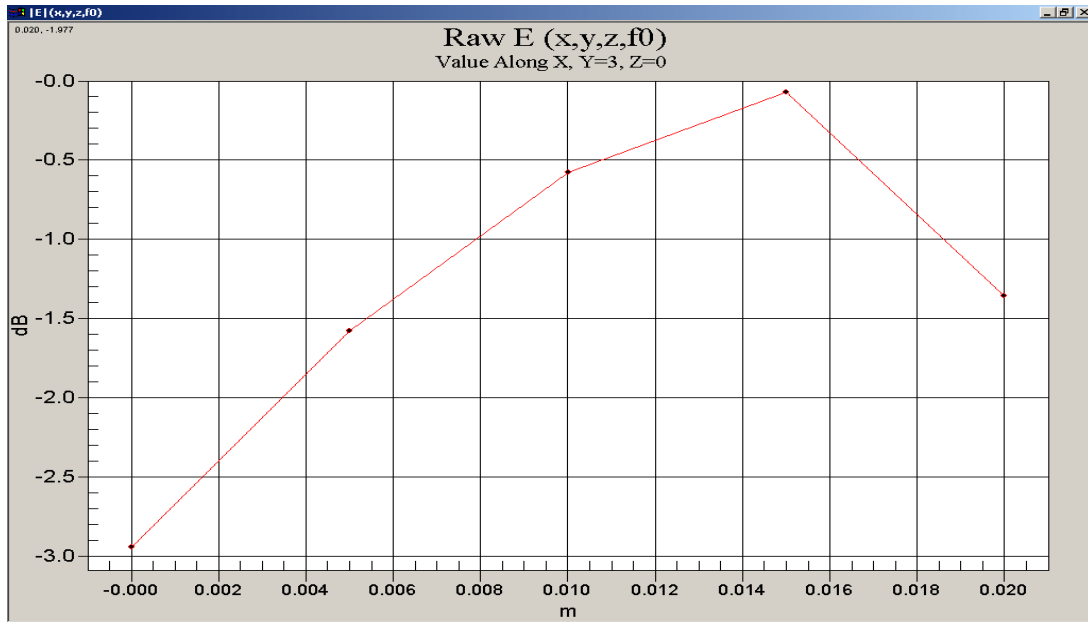
Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



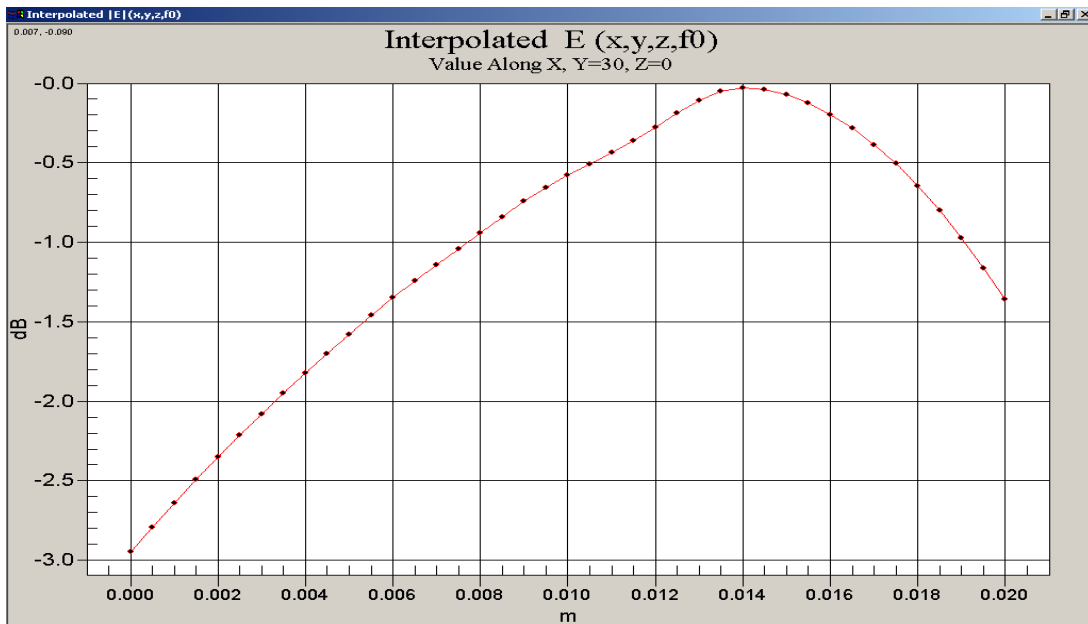
0 dB = 0.052A/m

## Justification of Step Size and Interpolation

This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.

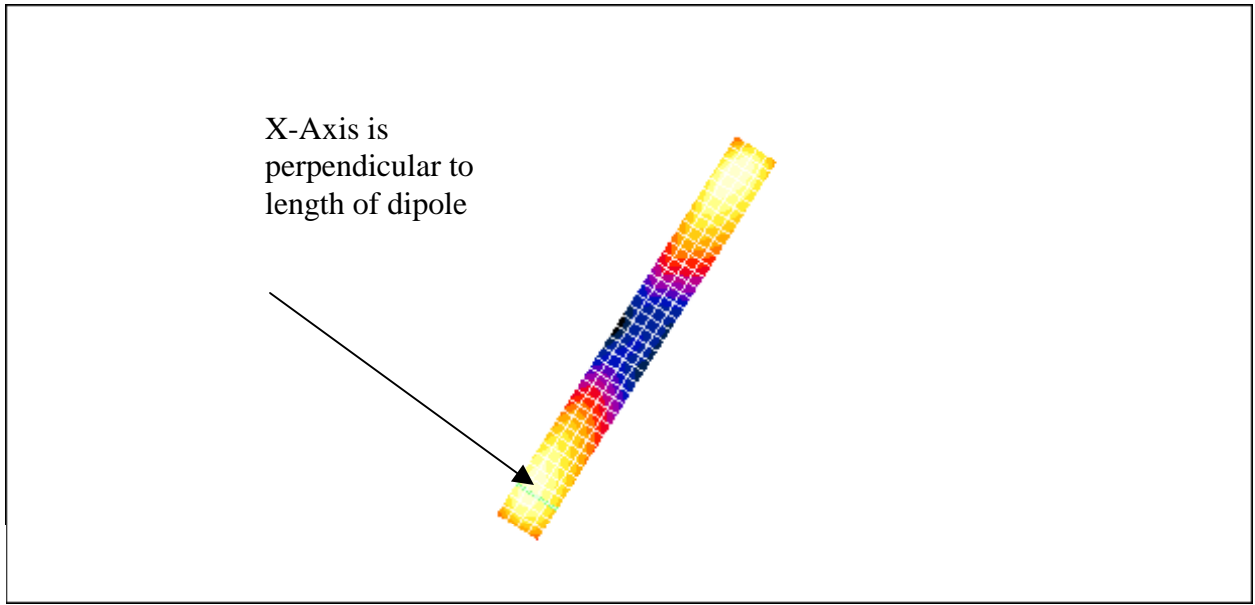


The figure above shows the raw measured field strength perpendicular to the length of the validation dipole. The TCB guidance slides require the 3dB width to be much larger than the step size. The width between -3dB points is > 21mm, at least 4 times the step size.



This figure shows the interpolated field strength perpendicular to the dipole. The interpolated points follow the raw points with no inconsistencies.





The green line in this figure shows the axis along which the points lie.

#### **Comparison of 5mm and 2mm step sizes**

An additional set of measurements was taken: dipole validations were performed using 5mm and 2mm step sizes. The delta between the two readings is insignificant for both field types ( $< 0.4\%$  for E and  $0\%$  for H), demonstrating that 5mm is sufficient. The plots follow.

Date/Time: 14/07/2005 11:35:24 AM

**Lab: RIM Testing Services (RTS)****Dipole Validation 1880 MHz\_E-Field 07\_14\_05****DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: H Device Section

## DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):**

Measurement grid: dx=5mm, dy=5mm  
 Maximum value of Total (measured) = 134.8 V/m

**E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):**

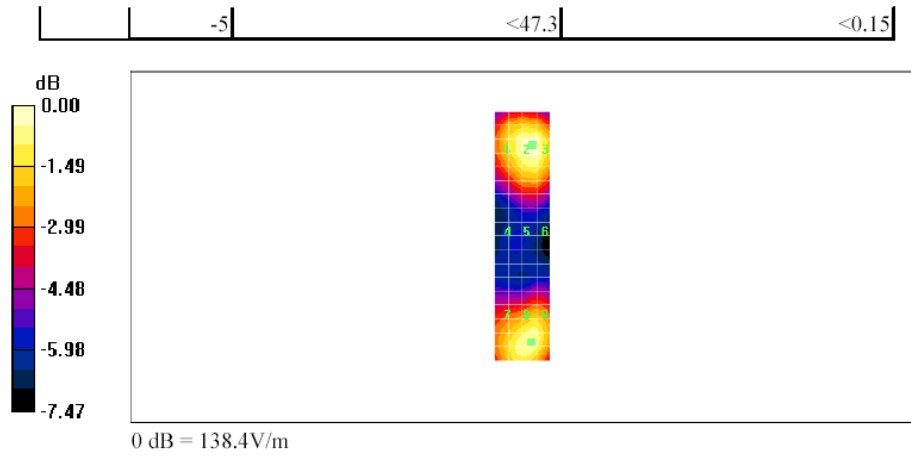
Measurement grid: dx=5mm, dy=5mm  
 Maximum value of Total field (slot averaged) = 131.0 V/m

**Hearing Aid Near-Field Category: M2 (AWF 0 dB)**

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>123.2</b>	<b>138.1</b>	<b>138.4</b>	<b>123.2</b>	<b>138.1</b>	<b>138.4</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>80.9</b>	<b>92.3</b>	<b>92.2</b>	<b>80.9</b>	<b>92.3</b>	<b>92.2</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>119.8</b>	<b>131.0</b>	<b>130.7</b>	<b>119.8</b>	<b>131.0</b>	<b>130.7</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19



Date/Time: 14/07/2005 11:44:51 AM

**Lab: RIM Testing Services (RTS)****Dipole Validation 1880 MHz\_2mm step\_E-Field 07\_14\_05****DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Phantom section: H Device Section

## DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):**

Measurement grid: dx=2mm, dy=2mm  
 Maximum value of Total (measured) = 138.0 V/m

**E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):**

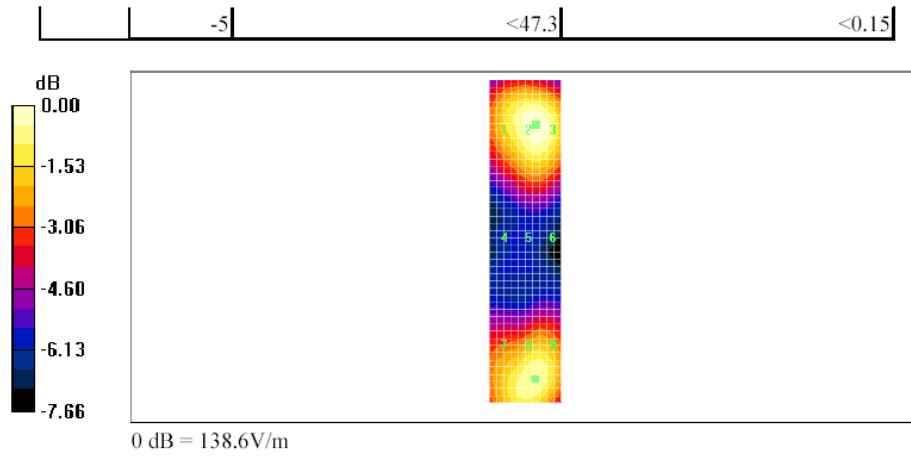
Measurement grid: dx=2mm, dy=2mm  
 Maximum value of Total field (slot averaged) = 131.2 V/m

**Hearing Aid Near-Field Category: M2 (AWF 0 dB)**

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>123.1</b>	<b>138.6</b>	<b>138.6</b>	<b>123.1</b>	<b>138.6</b>	<b>138.6</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>81.4</b>	<b>92.1</b>	<b>91.6</b>	<b>81.4</b>	<b>92.1</b>	<b>91.6</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>121.3</b>	<b>131.2</b>	<b>131.0</b>	<b>121.3</b>	<b>131.2</b>	<b>131.0</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19



**Lab: RIM Testing Services (RTS)**

**HAC\_H\_Dipole\_CW 1880\_5 mm step\_07\_14\_05**

**DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz;Duty Cycle: 1:1  
 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>  
 Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):**

Measurement grid: dx=5mm, dy=5mm  
 Maximum value of Total (measured) = 0.406 A/m

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):**

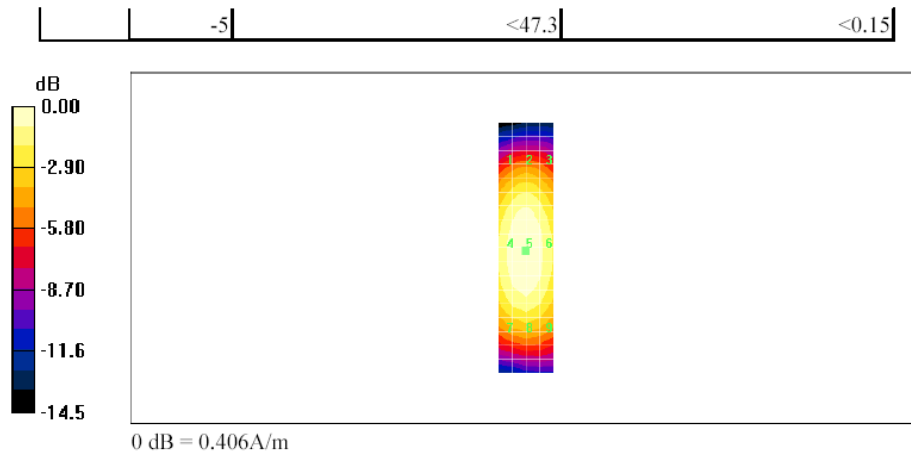
Measurement grid: dx=5mm, dy=5mm  
 Maximum value of Total field (slot averaged) = 0.406 A/m

**Hearing Aid Near-Field Category: M2 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.342</b>	<b>0.359</b>	<b>0.344</b>	<b>0.342</b>	<b>0.359</b>	<b>0.344</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.389</b>	<b>0.406</b>	<b>0.389</b>	<b>0.389</b>	<b>0.406</b>	<b>0.389</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.363</b>	<b>0.378</b>	<b>0.363</b>	<b>0.363</b>	<b>0.378</b>	<b>0.363</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19



Date/Time: 14/07/2005 12:53:40 PM

**Lab: RIM Testing Services (RTS)****HAC\_H\_Dipole\_CW 1880\_2 mm step\_07\_14\_05****DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1  
 Medium: Air Medium parameters used:  $\sigma = 0$  mho/m,  $\epsilon_r = 1$ ;  $\rho = 1$  kg/m<sup>3</sup>  
 Phantom section: H Dipole Section

## DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):**

Measurement grid: dx=2mm, dy=2mm  
 Maximum value of Total (measured) = 0.406 A/m

**H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):**

Measurement grid: dx=2mm, dy=2mm  
 Maximum value of Total field (slot averaged) = 0.406 A/m

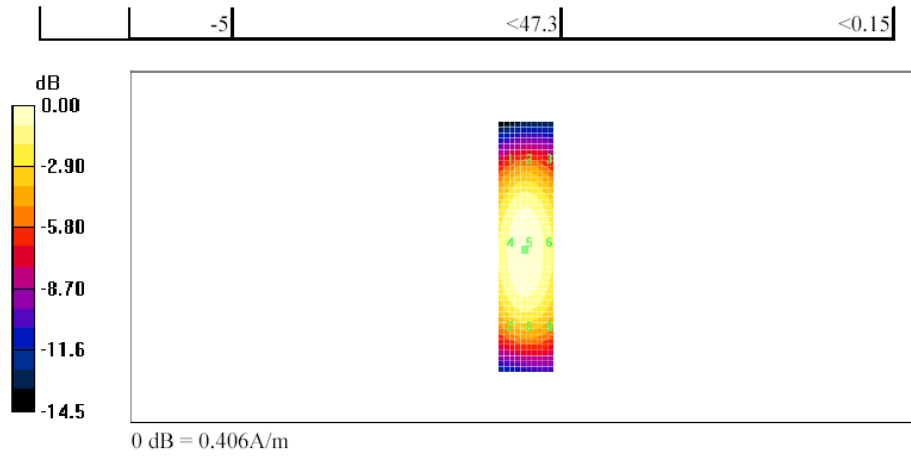
**Hearing Aid Near-Field Category: M2 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.347</b>	<b>0.361</b>	<b>0.348</b>	<b>0.347</b>	<b>0.361</b>	<b>0.348</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.394</b>	<b>0.406</b>	<b>0.391</b>	<b>0.394</b>	<b>0.406</b>	<b>0.391</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.367</b>	<b>0.380</b>	<b>0.365</b>	<b>0.367</b>	<b>0.380</b>	<b>0.365</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19





<b>RTS</b> <b>RIM Testing Services</b>	<small>Document</small> <b>Hearing Aid Compatibility RF Emissions Test Report for BlackBerry 7130e Wireless Handheld Model RAV20CW</b>		
	<small>Author Data</small> <b>Lauren Weber</b>	<small>Dates</small> <b>July 05-08, 2005</b>	<small>Report No</small> <b>RTS-0181-0507-01</b>

#### **A.4 RF emission field plots**

Please note that the colours in the contour plots refer to RMS average levels.

For plots where the probe was rotated, an 'X' marks the location of rotation.

Date/Time: 05/07/2005 5:17:05 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtSpeaker\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 89.6 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

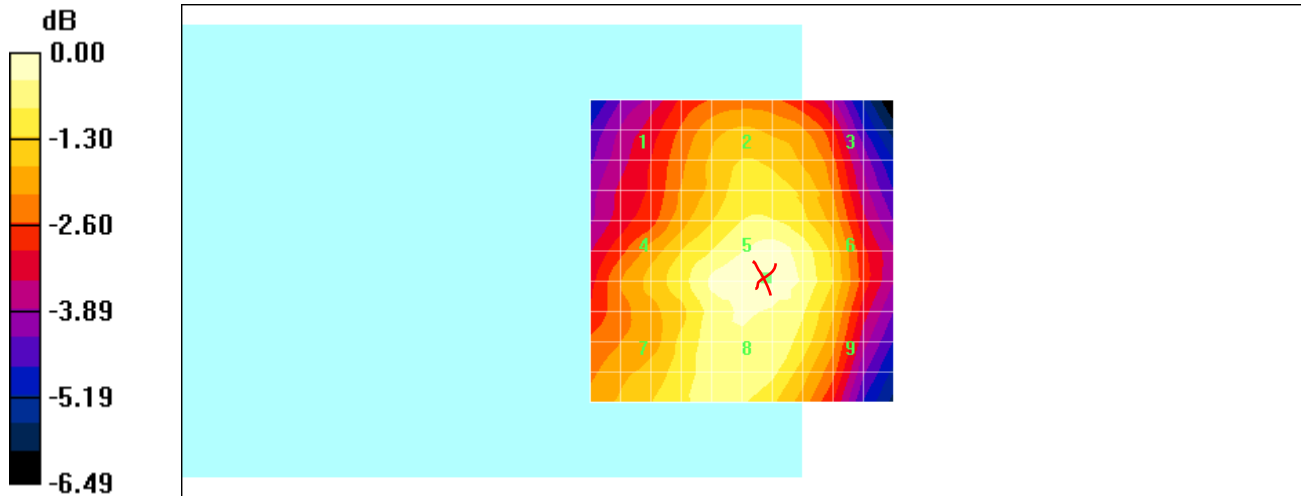
Maximum value of Total field (slot averaged) = 89.7 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

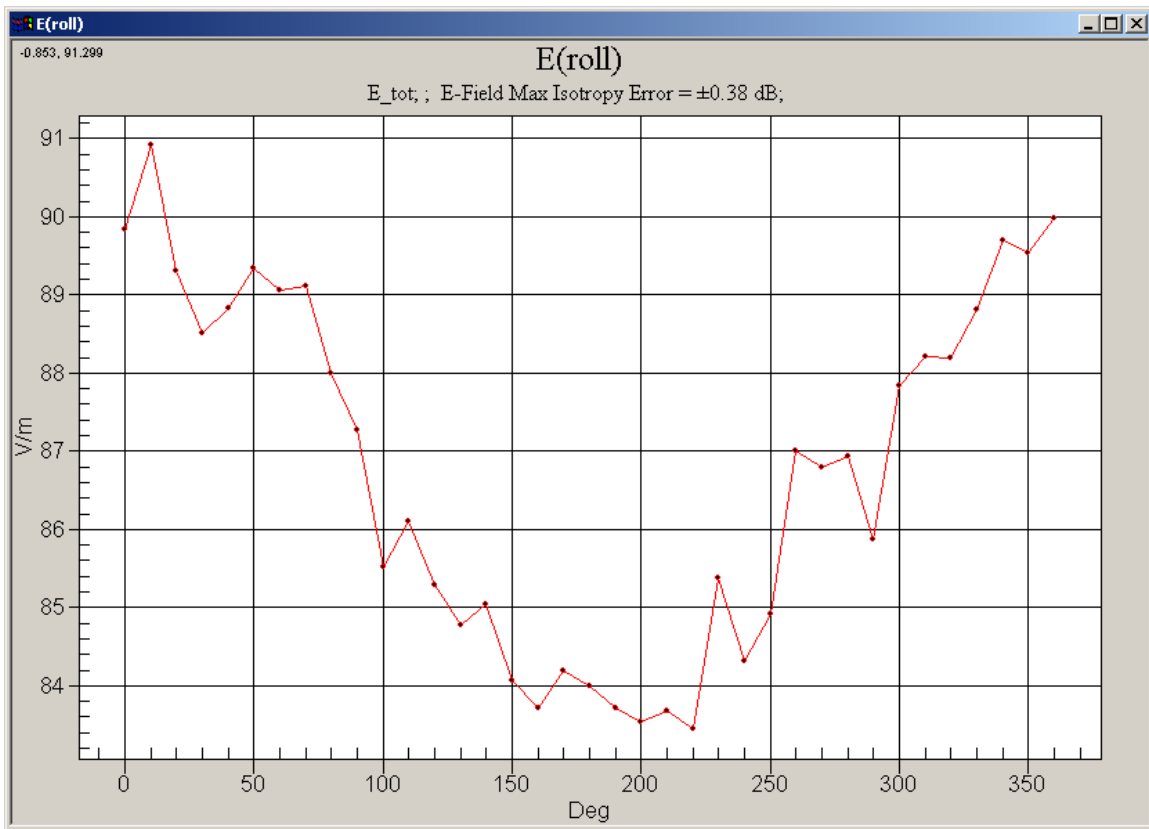
E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
71.7	80.1	78.0	71.7	80.1	78.0
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
80.9	89.7	86.9	80.9	89.7	86.9
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
81.1	87.0	84.3	81.1	87.0	84.3

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 89.7V/m



Peak after rotation = Eroll\_max x PMF  
 = 90.9x 1.00  
 = 90.9V/m

# Screen capture showing power drift for worst-case scan

**Locked Setup**

Item	Status
Server	
DAE3 Sn472	
ER3DV6 - SN2285	Not installed
Bigfoot RX90L	Power is off - Lefty-Above-NoFlip
HAC Test Arch...	
Air	Not installed
BlackBerry Wir...	
CDMA 800	Not installed
DASY4 (High Pr...	ANSI-C63.19 Hearing Aid Compatibility

**HAC E Device**

- Phantom Adjustment and Verification (CDMA 800, Channel 384 'Middle', 836.52 MHz, Crest Factor: 1, Mod. Frequency: 0 Hz)
  - Surface Check (HAC)
    - Verify Height 0.5mm above Center (User point 'Height Check')
    - Delay 1 (10 s)
    - Verify Height for Scan (Section grid reference)
  - E Scan 10mm above Device Reference (CDMA 800, Channel 384 'Middle', 836.52 MHz, Crest Factor: 1, Mod. Frequency: 0 Hz)
    - Power Reference Measurement 100% done, 91.5 V/m
    - Hearing Aid Compatibility Test 100% done, Max (Interp.) = 89.75 V/m
    - Power Drift Measurement 100% done, 92.2 V/m, 0.0663 dB**
    - Robot Command (Interpolated maximum of 'E Scan 10mm above Device Reference/Hearing Aid Compatibility Test')
    - Rotation (1D) 100% done, 86.8 V/m  $\pm$ 0.37 dB
    - Robot Command 2 (Section park)

**Robot Terminal**

```
rom ES received, communication starting up
Timeout while waiting for header 21 0.336
*** Watchdog: Communication error
serf: 0.3%
Initial message from ES received, communication starting up
*** Probe collision
```

Date/Time: 06/07/2005 8:49:23 AM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtT-Coil\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 87.4 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

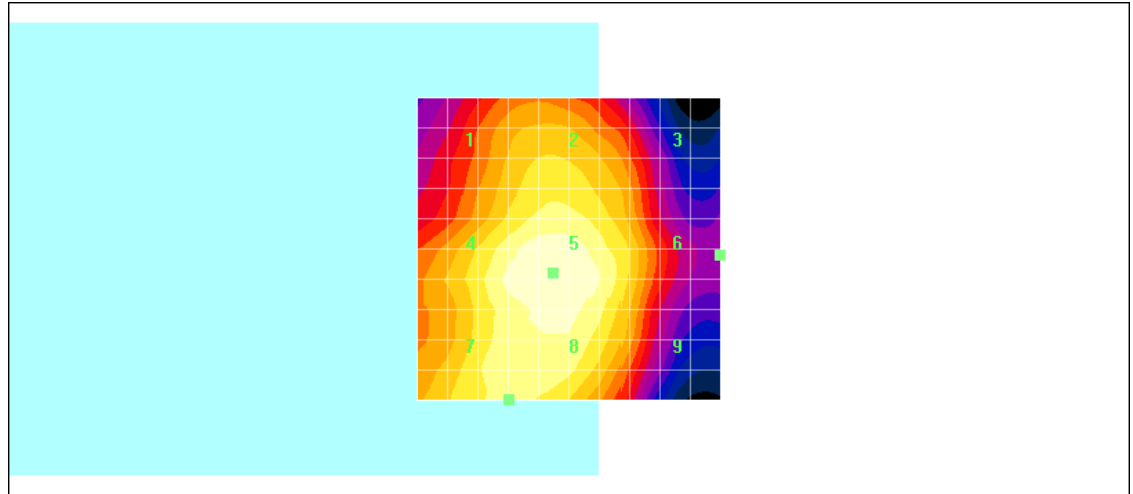
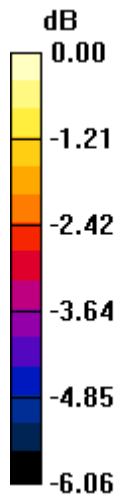
Maximum value of Total field (slot averaged) = 87.8 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
76.1	79.6	73.4	76.1	79.6	73.4
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
86.0	87.8	79.0	86.0	87.8	79.0
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
83.6	86.3	77.2	83.6	86.3	77.2

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 87.8V/m

Date/Time: 06/07/2005 9:01:07 AM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_high\_ch\_centerAtT-Coil\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:1

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 83.0 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 83.4 V/m

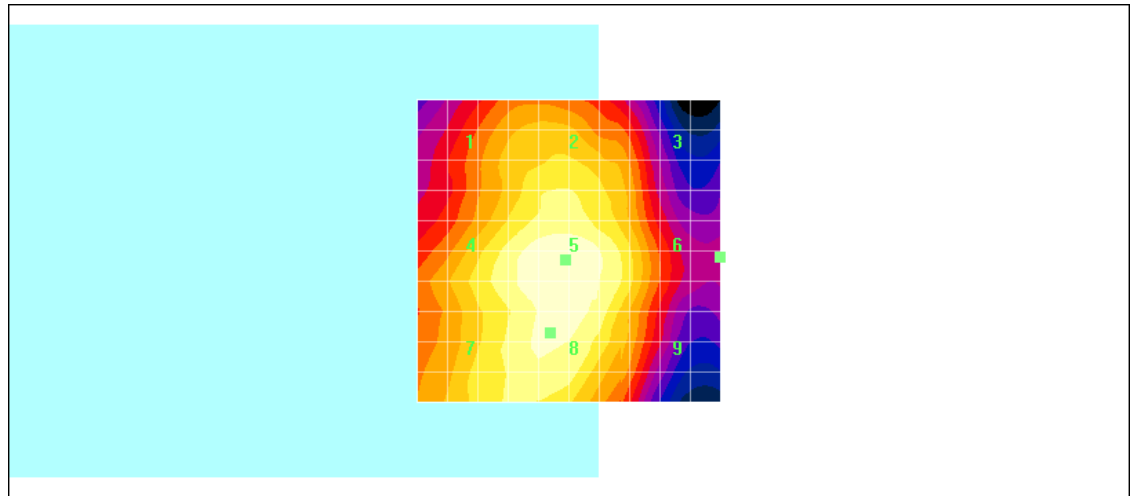
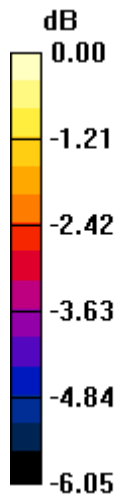
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>71.6</b>	<b>76.7</b>	<b>71.0</b>	<b>71.6</b>	<b>76.7</b>	<b>71.0</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>79.5</b>	<b>83.4</b>	<b>76.4</b>	<b>79.5</b>	<b>83.4</b>	<b>76.4</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>77.5</b>	<b>82.2</b>	<b>73.4</b>	<b>77.5</b>	<b>82.2</b>	<b>73.4</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 83.4V/m

Date/Time: 06/07/2005 9:36:01 AM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtSpeaker\_batt2

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 86.6 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

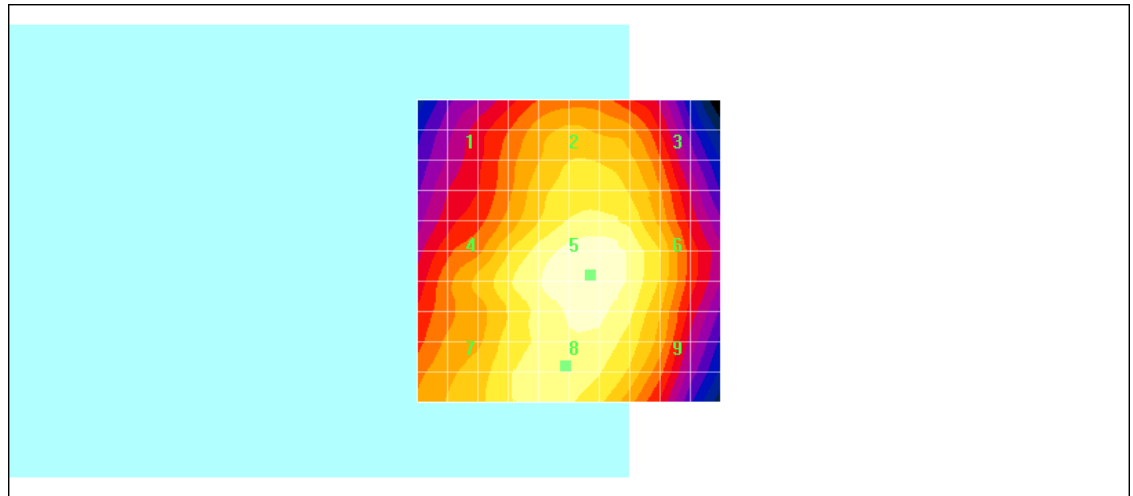
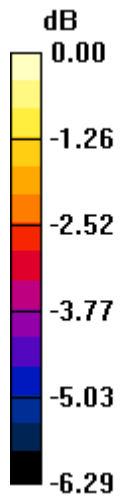
Maximum value of Total field (slot averaged) = 86.9 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>69.1</b>	<b>78.0</b>	<b>76.6</b>	<b>69.1</b>	<b>78.0</b>	<b>76.6</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>79.3</b>	<b>86.9</b>	<b>84.6</b>	<b>79.3</b>	<b>86.9</b>	<b>84.6</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>79.2</b>	<b>85.1</b>	<b>82.5</b>	<b>79.2</b>	<b>85.1</b>	<b>82.5</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 86.9V/m

Date/Time: 06/07/2005 9:56:33 AM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtSpeaker\_batt3

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 79.9 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

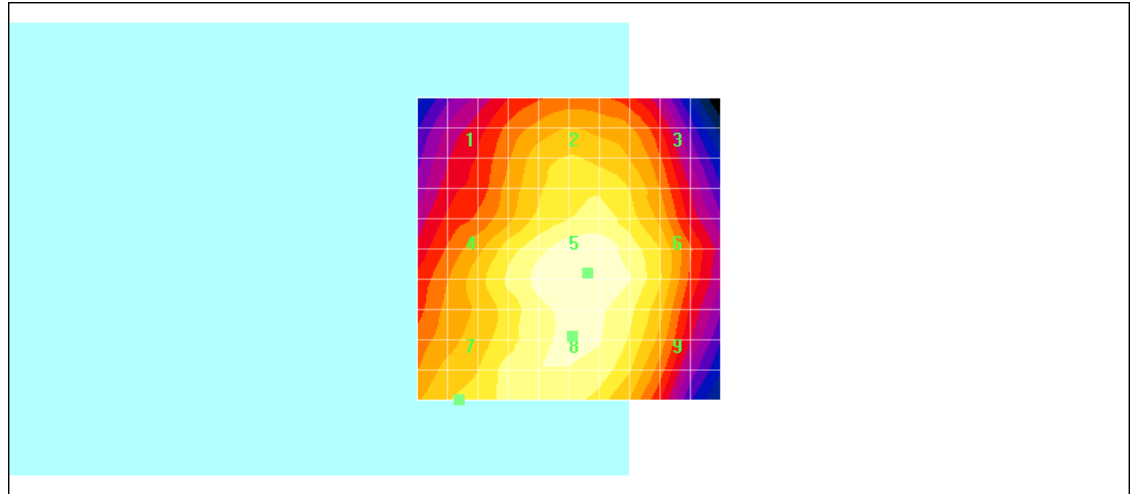
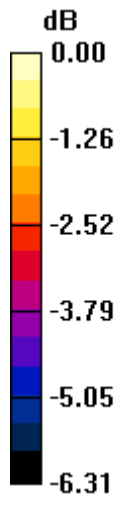
Maximum value of Total field (slot averaged) = 80.3 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
65.5	72.9	71.1	65.5	72.9	71.1
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
74.4	80.3	78.2	74.4	80.3	78.2
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
75.1	78.5	76.2	75.1	78.5	76.2

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 80.3V/m

Date/Time: 06/07/2005 10:27:02 AM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtSpeaker\_batt4

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 87.5 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

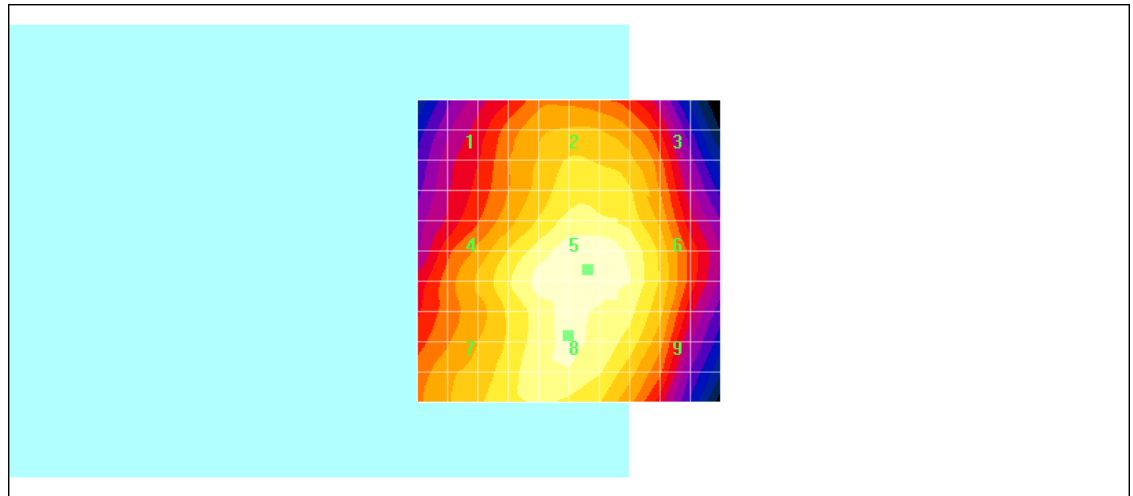
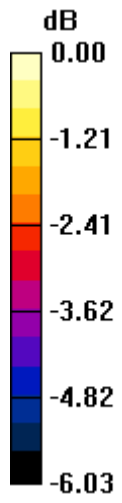
Maximum value of Total field (slot averaged) = 88.2 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
71.3	80.0	78.9	71.3	80.0	78.9
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
81.1	88.2	86.1	81.1	88.2	86.1
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
79.9	86.5	83.7	79.9	86.5	83.7

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 88.2V/m

Date/Time: 06/07/2005 10:55:54 AM

**Lab: RIM Testing Services (RTS)**

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtSpeaker\_12.5%gating\_batt1

**DUT: BlackBerry Wireless Handheld; Type: Sample**

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:8.14

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**E Scan 10mm above Device Reference/Hearing Aid Compatibility Test**

**(11x11x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 30.9 V/m

**E Scan 10mm above Device Reference/Hearing Aid Compatibility Test**

**(101x101x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 88.2 V/m

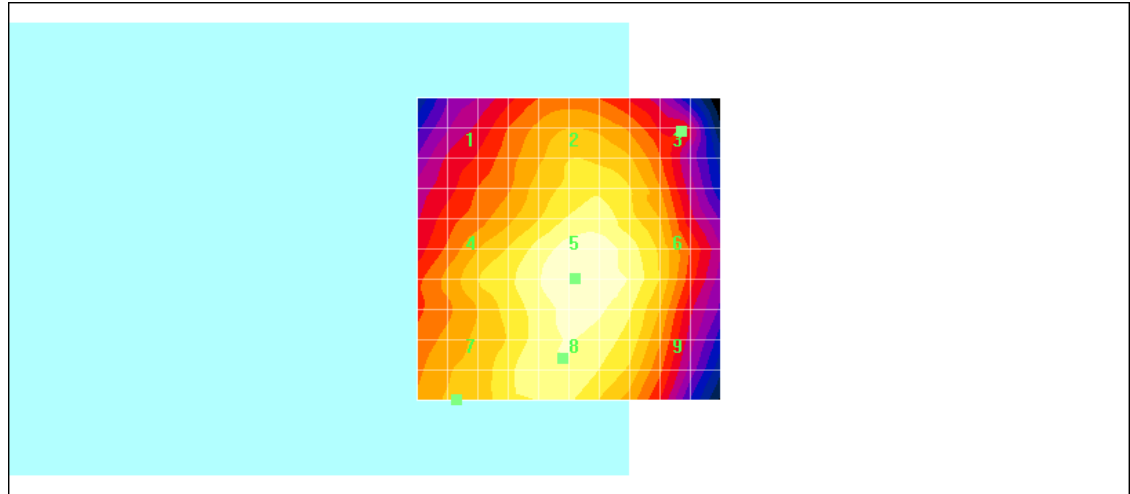
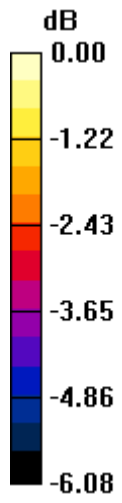
**Hearing Aid Near-Field Category: M3 (AWF 0 dB)**

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>24.8</b>	<b>28.1</b>	<b>27.6</b>	<b>70.8</b>	<b>80.2</b>	<b>78.6</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>28.1</b>	<b>30.9</b>	<b>29.9</b>	<b>80.3</b>	<b>88.2</b>	<b>85.4</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>28.2</b>	<b>30.3</b>	<b>29.2</b>	<b>80.3</b>	<b>86.5</b>	<b>83.4</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 30.9V/m

Date/Time: 06/07/2005 11:44:23 AM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtSpeaker\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1.02

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 67.6 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

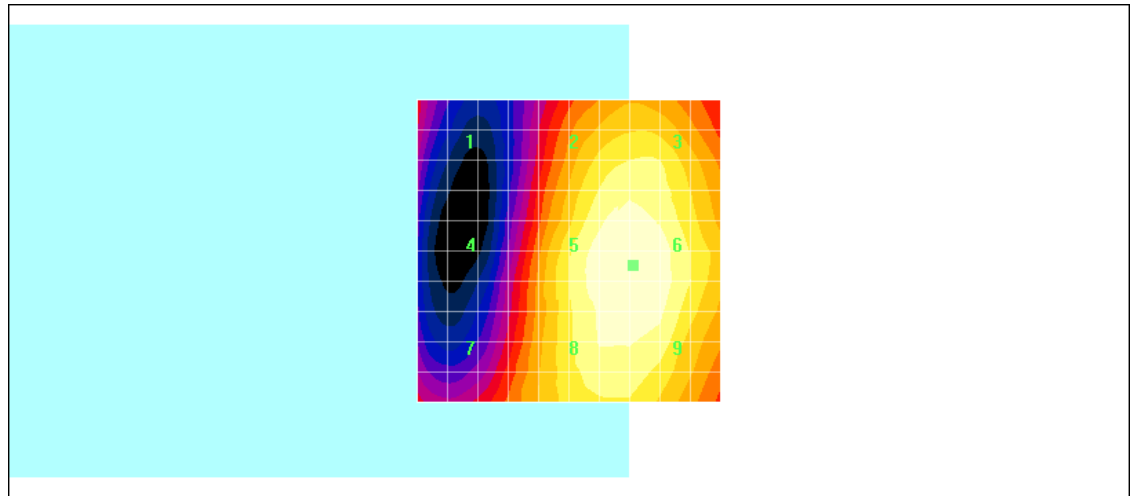
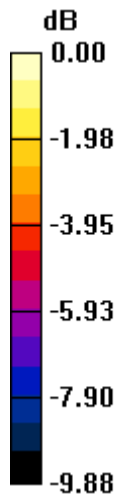
Maximum value of Total field (slot averaged) = 68.2 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>38.7</b>	<b>61.8</b>	<b>62.6</b>	<b>39.1</b>	<b>62.4</b>	<b>63.2</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>38.0</b>	<b>67.5</b>	<b>67.8</b>	<b>38.3</b>	<b>68.2</b>	<b>68.5</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>45.1</b>	<b>66.5</b>	<b>67.2</b>	<b>45.6</b>	<b>67.2</b>	<b>67.8</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 67.8V/m

Date/Time: 06/07/2005 4:45:11 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_low\_ch\_centerAtT-Coil\_batt4

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1.02

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 68.5 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 69.2 V/m

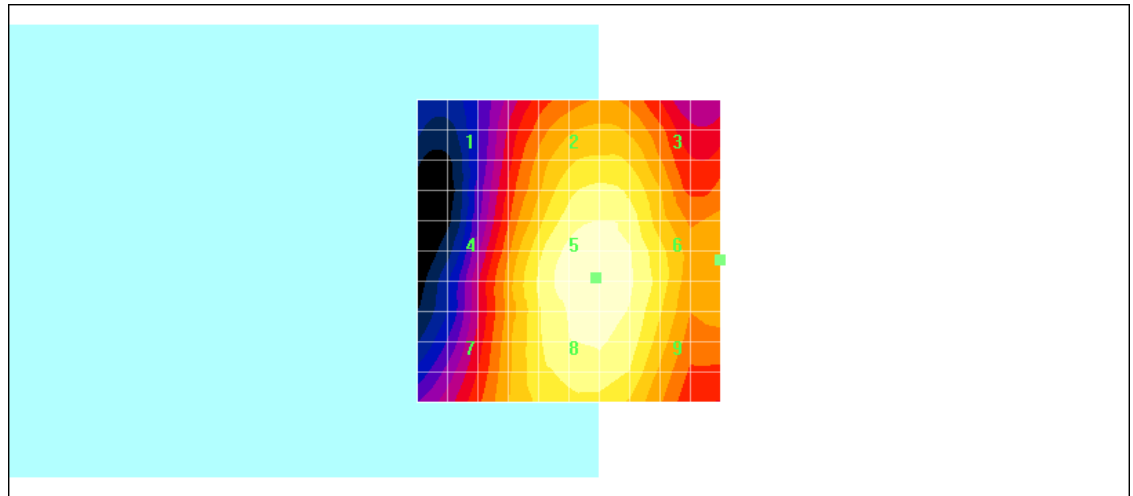
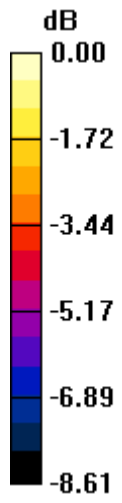
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>46.5</b>	<b>61.8</b>	<b>61.1</b>
Grid 4	Grid 5	Grid 6
<b>53.5</b>	<b>68.6</b>	<b>66.8</b>
Grid 7	Grid 8	Grid 9
<b>53.8</b>	<b>67.6</b>	<b>66.0</b>

Grid 1	Grid 2	Grid 3
<b>46.9</b>	<b>62.4</b>	<b>61.7</b>
Grid 4	Grid 5	Grid 6
<b>54.0</b>	<b>69.2</b>	<b>67.4</b>
Grid 7	Grid 8	Grid 9
<b>54.4</b>	<b>68.3</b>	<b>66.6</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 68.6V/m

Date/Time: 06/07/2005 4:55:54 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_low\_ch\_centerAtT-Coil\_12.5%gating\_batt4

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:8.22

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

Phantom section: E Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 24.1 V/m

### E Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

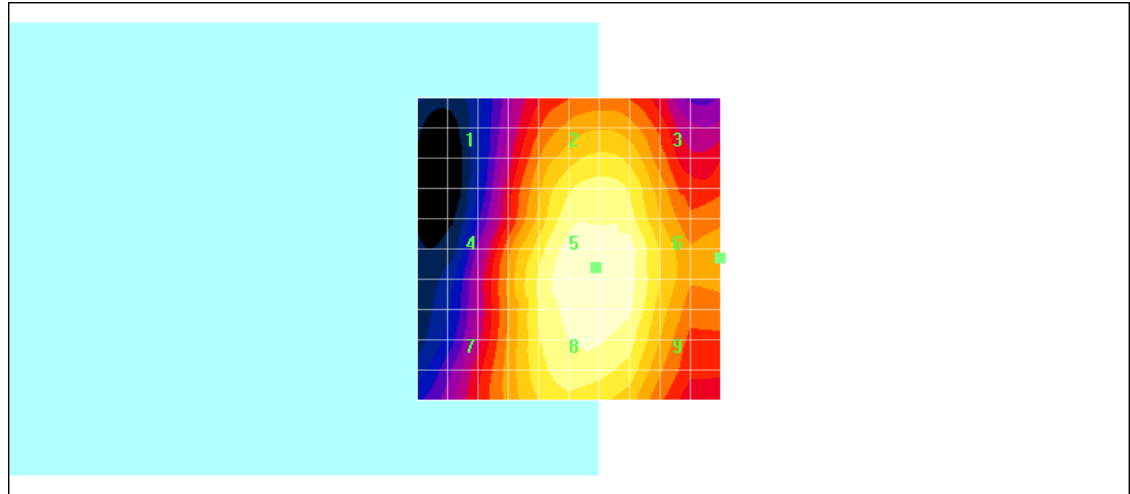
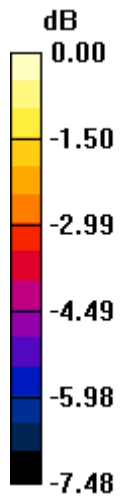
Maximum value of Total field (slot averaged) = 69.2 V/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

E in V/m (Time averaged)    E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
16.6	22.2	21.9	47.5	63.7	62.9
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
19.2	24.1	24.0	55.1	69.2	68.7
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
19.1	23.9	23.7	54.8	68.6	67.8

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 24.1V/m

Date/Time: 07/07/2005 1:40:41 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtSpeaker\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.188 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.134 A/m

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

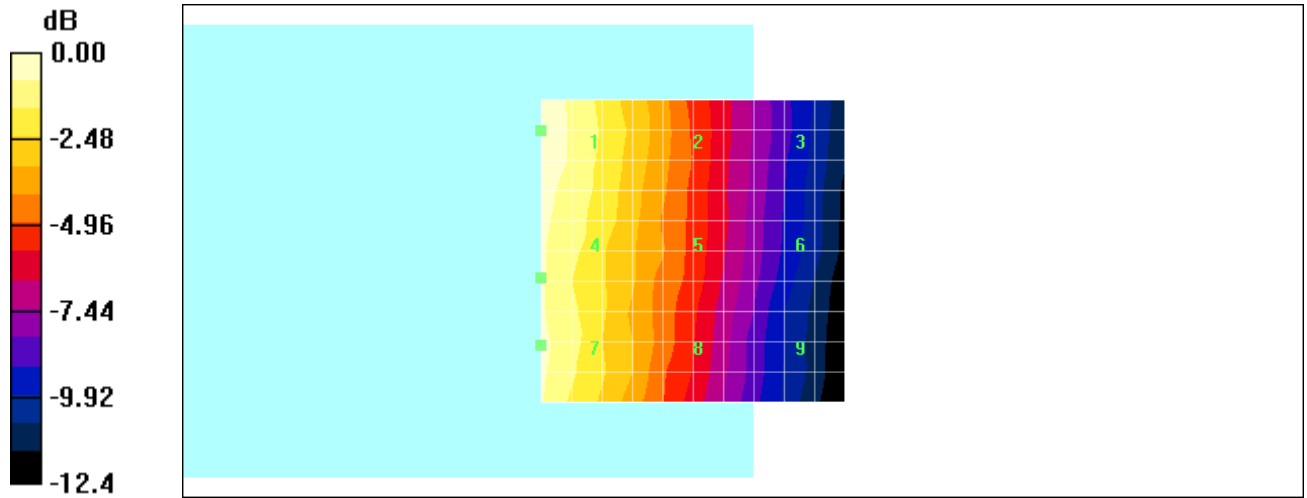
H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.188</b>	<b>0.134</b>	<b>0.083</b>
Grid 4	Grid 5	Grid 6
<b>0.176</b>	<b>0.129</b>	<b>0.081</b>
Grid 7	Grid 8	Grid 9
<b>0.175</b>	<b>0.124</b>	<b>0.077</b>

Grid 1	Grid 2	Grid 3
<b>0.188</b>	<b>0.134</b>	<b>0.083</b>
Grid 4	Grid 5	Grid 6
<b>0.176</b>	<b>0.129</b>	<b>0.081</b>
Grid 7	Grid 8	Grid 9
<b>0.175</b>	<b>0.124</b>	<b>0.077</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15





0 dB = 0.188A/m

Date/Time: 07/07/2005 2:11:35 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_800\_mid\_ch\_centerAtT-Coil\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.176 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.122 A/m

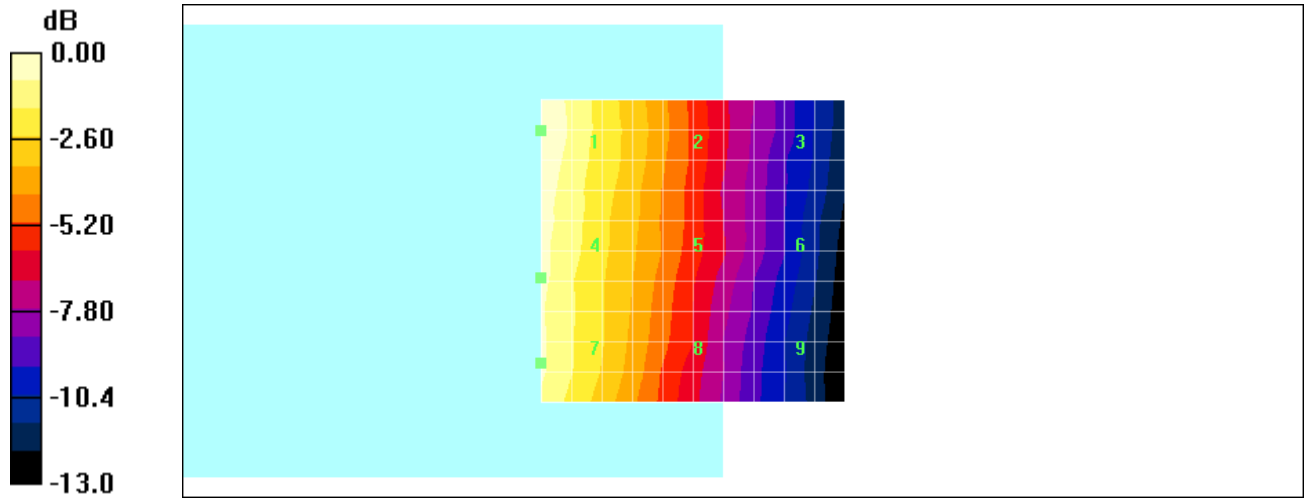
Hearing Aid Near-Field Category: M4 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.176</b>	<b>0.122</b>	<b>0.075</b>
Grid 4	Grid 5	Grid 6
<b>0.168</b>	<b>0.118</b>	<b>0.072</b>
Grid 7	Grid 8	Grid 9
<b>0.163</b>	<b>0.113</b>	<b>0.068</b>

Grid 1	Grid 2	Grid 3
<b>0.176</b>	<b>0.122</b>	<b>0.075</b>
Grid 4	Grid 5	Grid 6
<b>0.168</b>	<b>0.118</b>	<b>0.072</b>
Grid 7	Grid 8	Grid 9
<b>0.163</b>	<b>0.113</b>	<b>0.068</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.176A/m

Date/Time: 07/07/2005 3:55:45 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtSpeaker\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1.04

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.218 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

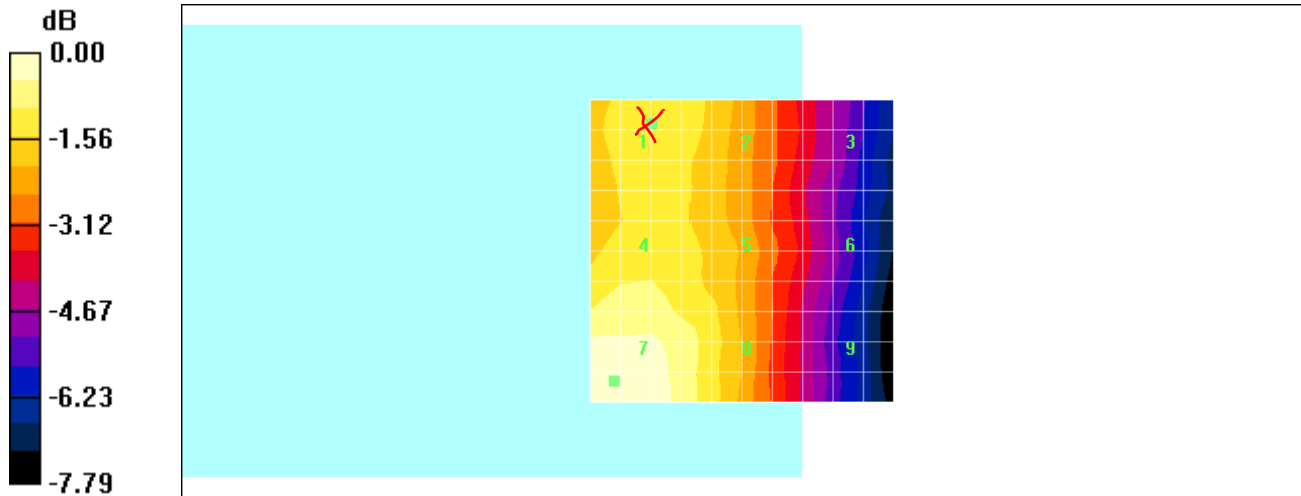
Maximum value of Total field (slot averaged) = 0.196 A/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

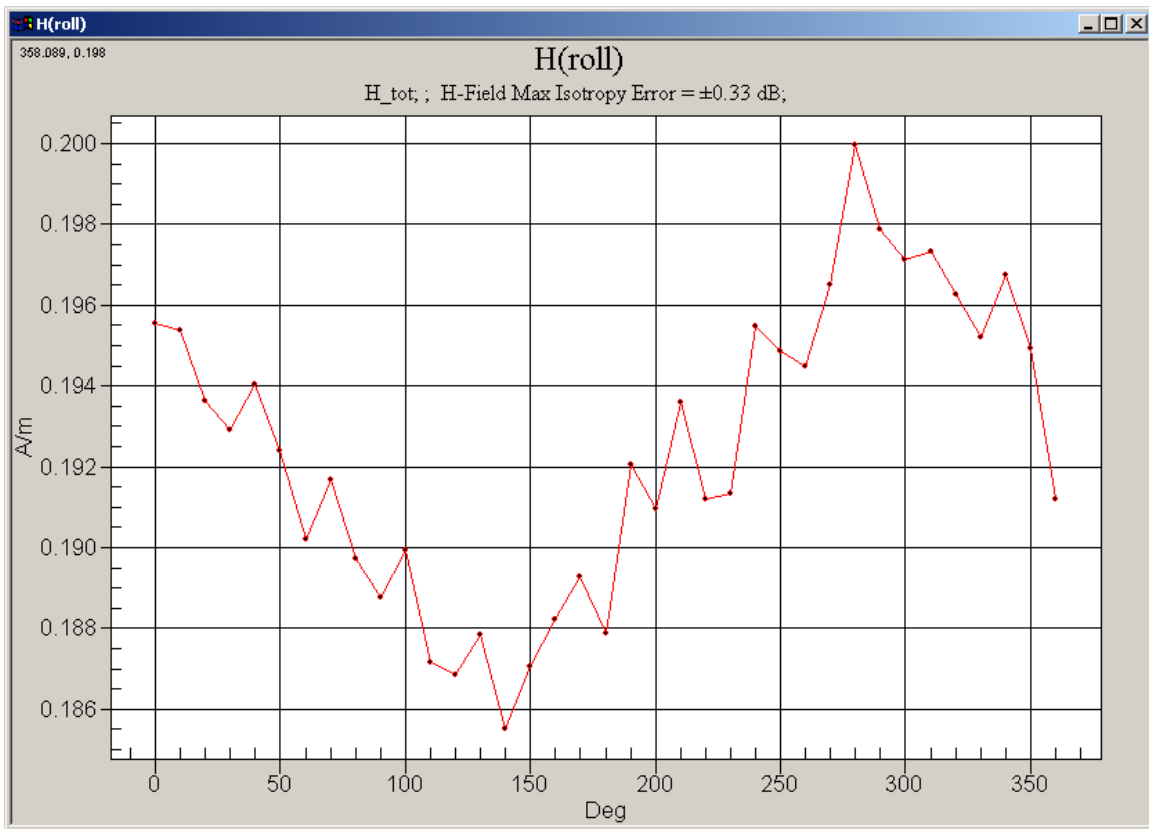
H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.192</b>	<b>0.186</b>	<b>0.146</b>	<b>0.196</b>	<b>0.190</b>	<b>0.149</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.197</b>	<b>0.189</b>	<b>0.146</b>	<b>0.201</b>	<b>0.192</b>	<b>0.148</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.218</b>	<b>0.198</b>	<b>0.140</b>	<b>0.223</b>	<b>0.201</b>	<b>0.143</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.218A/m



Peak after rotation = Hroll\_max x PMF  
 = 0.200 x 1.02  
 = 0.204A/m

# Screen capture showing power drift for worst-case scan

The screenshot displays a software application window titled "DASY4 - [BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerATSpeaker\_batt1.da4]". The interface includes a menu bar (File, Edit, View, Tools, Window, Help), a toolbar, and a main workspace. On the left, a "Locked Setup" table lists various components and their status. Below this, a tree view shows the "HAC H Device" configuration, including "Phantom Adjustment and Verification" and "H Scan 10mm above Device Reference". The "H Scan" section lists several test results, with "Hearing Aid Compatibility Test 100% done, Max (interp.) = 0.2183 A/m" highlighted. The main workspace shows a 3D model of a device with a grid of blue spheres representing measurement points. A red diagonal line is visible on the model. At the bottom, a "Robot Terminal" window displays the following text:

```
rom ES received, communication starting up
Timeout while waiting for header 21 0.336
*** Watchdog: Communication error
serf: 0.3%
Initial message from ES received, communication starting up
*** Probe collision
```

Date/Time: 07/07/2005 4:29:38 PM

Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtT-Coil\_batt1

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1.04

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.220 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

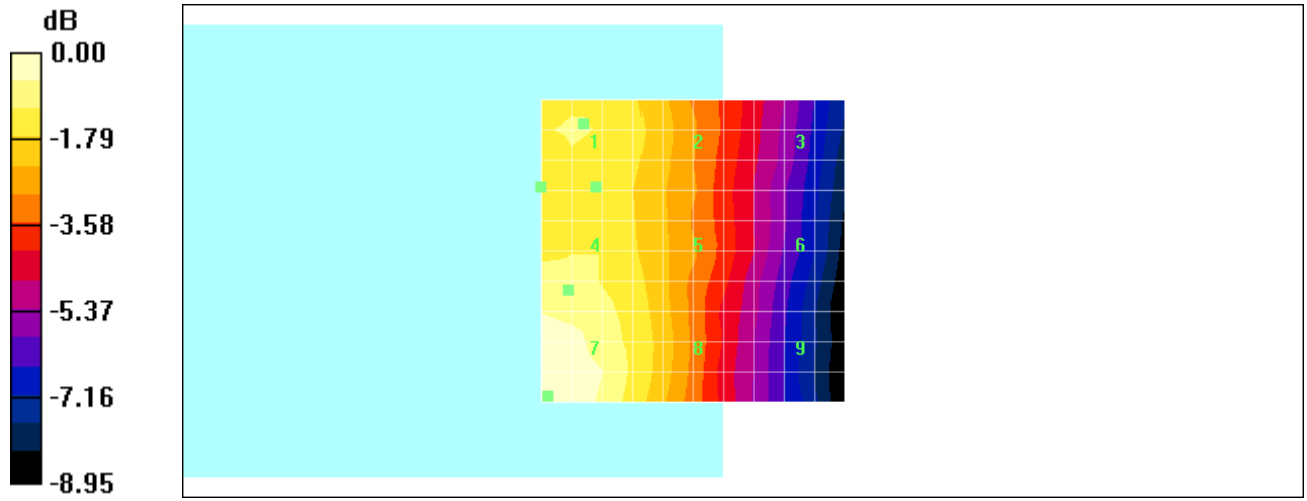
Maximum value of Total field (slot averaged) = 0.189 A/m

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.193</b>	<b>0.180</b>	<b>0.135</b>	<b>0.197</b>	<b>0.184</b>	<b>0.138</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.202</b>	<b>0.182</b>	<b>0.132</b>	<b>0.206</b>	<b>0.186</b>	<b>0.135</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.220</b>	<b>0.185</b>	<b>0.126</b>	<b>0.224</b>	<b>0.189</b>	<b>0.129</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.220A/m



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Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtSpeaker\_batt2

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1.04

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.217 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

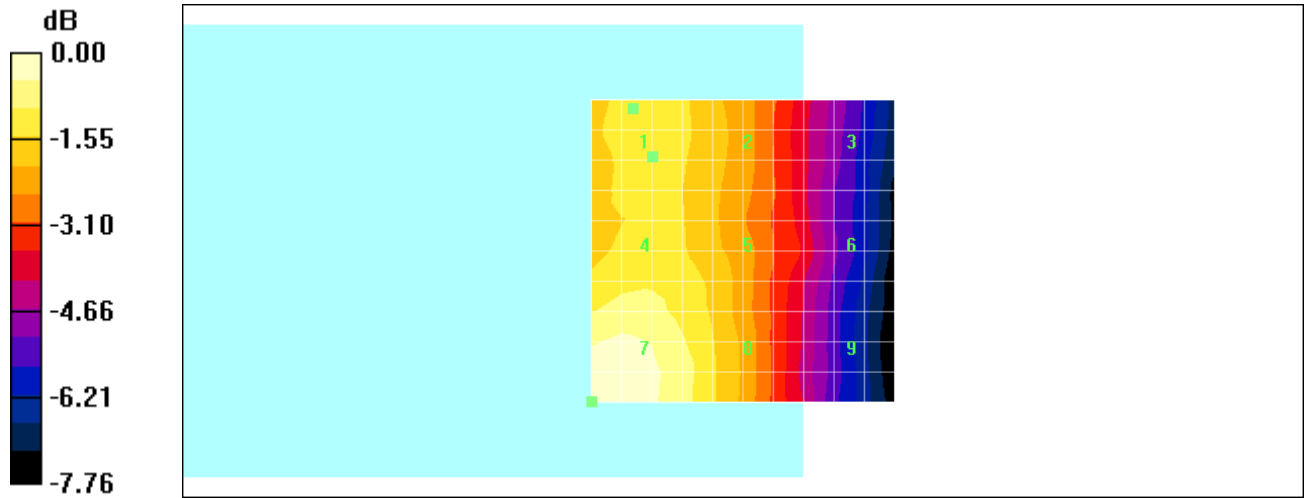
Maximum value of Total field (slot averaged) = 0.193 A/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.189</b>	<b>0.182</b>	<b>0.143</b>	<b>0.193</b>	<b>0.185</b>	<b>0.146</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.195</b>	<b>0.186</b>	<b>0.146</b>	<b>0.199</b>	<b>0.190</b>	<b>0.149</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.217</b>	<b>0.195</b>	<b>0.140</b>	<b>0.221</b>	<b>0.199</b>	<b>0.143</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.217A/m

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Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtSpeaker\_batt3

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1.04

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.212 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

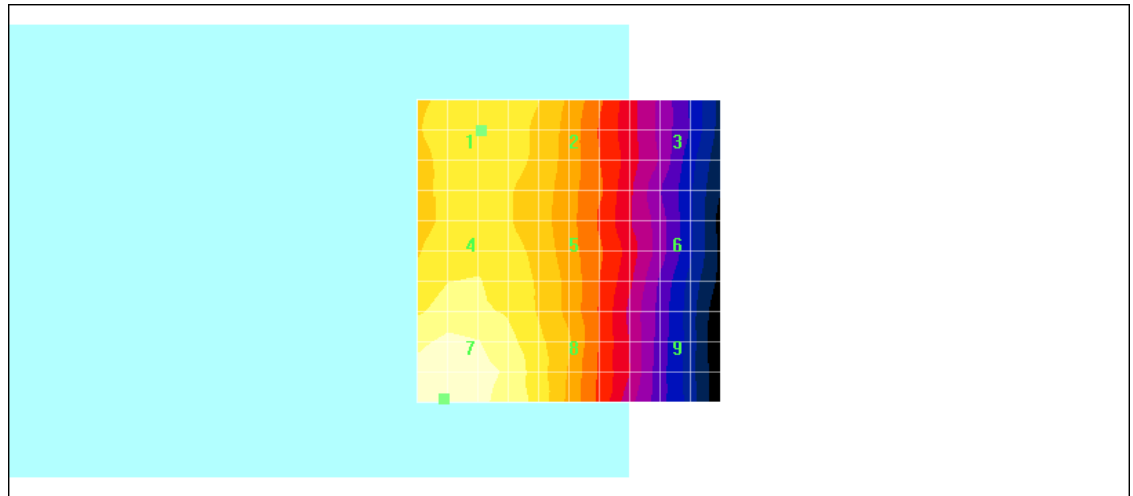
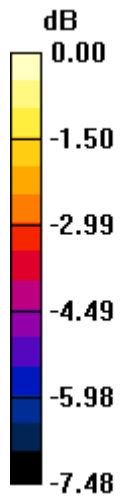
Maximum value of Total field (slot averaged) = 0.191 A/m

Hearing Aid Near-Field Category: M3 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.187</b>	<b>0.184</b>	<b>0.142</b>	<b>0.191</b>	<b>0.187</b>	<b>0.145</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.192</b>	<b>0.184</b>	<b>0.143</b>	<b>0.195</b>	<b>0.187</b>	<b>0.145</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.212</b>	<b>0.195</b>	<b>0.139</b>	<b>0.216</b>	<b>0.199</b>	<b>0.142</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.212A/m

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Lab: RIM Testing Services (RTS)

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtSpeaker\_batt4

DUT: BlackBerry Wireless Handheld; Type: Sample

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1.04

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004

- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)

- Electronics: DAE3 Sn472; Calibrated: 03/01/2005

- Phantom: HAC Test Arch; Type: SD HAC P01 BA;

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(11x11x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.215 A/m

### H Scan 10mm above Device Reference/Hearing Aid Compatibility Test

(101x101x1): Measurement grid: dx=5mm, dy=5mm

Maximum value of Total field (slot averaged) = 0.193 A/m

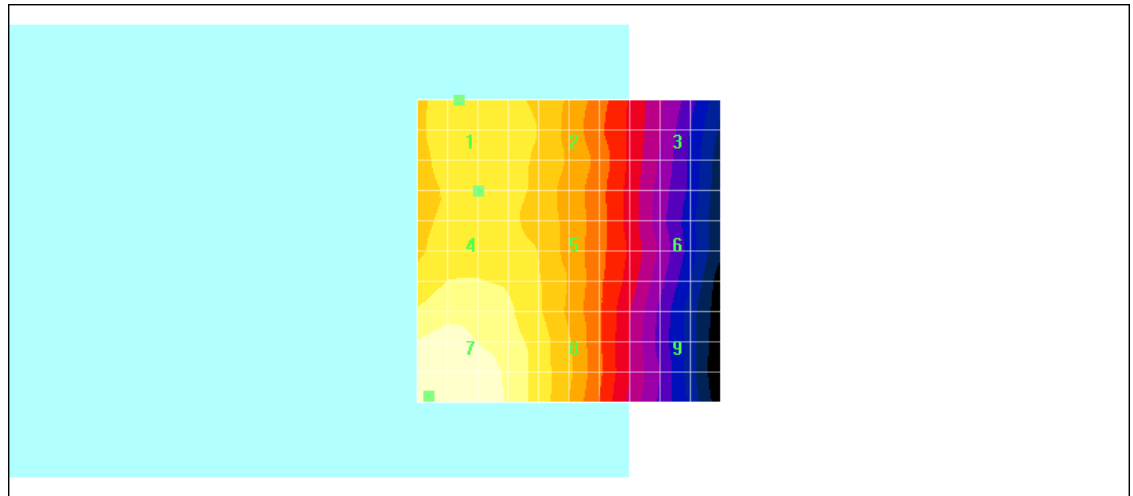
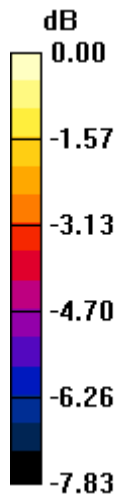
Hearing Aid Near-Field Category: M3 (AWF 0 dB)

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3
<b>0.190</b>	<b>0.185</b>	<b>0.145</b>
Grid 4	Grid 5	Grid 6
<b>0.196</b>	<b>0.189</b>	<b>0.144</b>
Grid 7	Grid 8	Grid 9
<b>0.215</b>	<b>0.197</b>	<b>0.140</b>

Grid 1	Grid 2	Grid 3
<b>0.193</b>	<b>0.189</b>	<b>0.148</b>
Grid 4	Grid 5	Grid 6
<b>0.200</b>	<b>0.193</b>	<b>0.147</b>
Grid 7	Grid 8	Grid 9
<b>0.220</b>	<b>0.201</b>	<b>0.143</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.215A/m

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**Lab: RIM Testing Services (RTS)**

BB7130\_model\_RAV20CW\_CDMA\_1900\_mid\_ch\_centerAtSpeaker\_12.5gating\_batt1

**DUT: BlackBerry Wireless Handheld; Type: Sample**

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.1

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

Phantom section: H Device Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

**H Scan 10mm above Device Reference/Hearing Aid Compatibility Test**

**(11x11x1):** Measurement grid: dx=5mm, dy=5mm

Maximum value of Total (measured) = 0.078 A/m

**H Scan 10mm above Device Reference/Hearing Aid Compatibility Test**

**(101x101x1):** Measurement grid: dx=5mm, dy=5mm

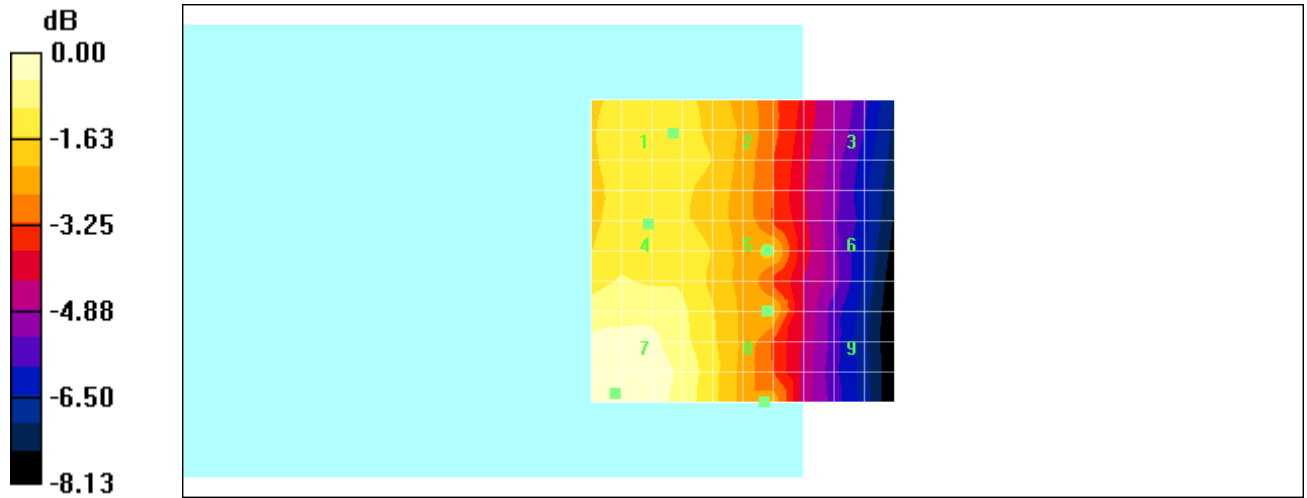
Maximum value of Total field (slot averaged) = 0.194 A/m

**Hearing Aid Near-Field Category: M3 (AWF 0 dB)**

H in A/m (Time averaged)    H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
<b>0.068</b>	<b>0.067</b>	<b>0.051</b>	<b>0.194</b>	<b>0.190</b>	<b>0.146</b>
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
<b>0.071</b>	<b>0.068</b>	<b>0.051</b>	<b>0.202</b>	<b>0.193</b>	<b>0.146</b>
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
<b>0.078</b>	<b>0.071</b>	<b>0.050</b>	<b>0.222</b>	<b>0.201</b>	<b>0.143</b>

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19
	-5	<47.3	<0.15



0 dB = 0.078A/m