

OVFKWC-KX12

Initial Application for Type Acceptance

FCC ID: OVFKWC-KX12

Assessment NO.: AN05T5236

Response A

Lin Lu

Regulatory Engineer, Principal

10-27-2005

This document is generated in response to the queries asked in the e-mail from titled "FCC ID: OVFKWC-KX12" with Assessment NO.: AN05T5236. The queries asked in the e-mail received by Lin Lu on 24th of October 2005 are listed below followed by the responses for each of the questions.

X-BigFish: vps-26(z6cdjb7bjba6i519iz1922h128aO3116J145fP1435R3117N19c2izzzzz2fh)
X-Language-Identified: TRUE
thread-index: AcXYpQ1eOTxazjLnQwKyhBDnQnzVQw==
X-Brightmail-Tracker: AAAAAQAAA+k=
Importance: normal
Priority: normal
From: "Compliance Certification Services" <charvey-tcb@ccsemc.com>
To: <llu@kyocera-wireless.com>
Cc: <charvey-tcb@ccsemc.com>
Date: Mon, 24 Oct 2005 14:05:27 (GMT)
X-Mailer: AspMail 3.53 (QSMTC6B1AE)
Subject: Kyocera Wireless Corp, FCC ID: OVFKWC-KX12, Assessment NO.: AN05T5236, Notice#1
X-OriginalArrivalTime: 24 Oct 2005 14:13:05.0321 (UTC) FILETIME=[0D3CA990:01C5D8A5]
X-MIME-Autoconverted: from quoted-printable to 8bit by mail2.intra.kyocera-wireless.com id HAA13726

Dear Lin Lu,

I have reviewed the above referenced TCB application and find that the following items need to be addressed before this review can be completed:

1. The Users manual states that this handset has a mode called Touch2Talk, which is a Walkie-talkie held to face mode. There does not seem to be a technical description of this mode included in the application. Please update the operational description to include the details of this mode of operation, including frequency of operation, bandwidth, modulation, whether it uses the same radio as used for the PCS/Cellular, etc.
2. Please provide SAR compliance information/data for the Held-To-Face operation of the Touch2Talk mode of operation.

Please let me know if you have any questions.

Best regards,
Chris Harvey
charvey-tcb@ccsemc.com

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date

may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address above

Question: A) The Users manual states that this handset has a mode called Touch2Talk, which is a Walkie-talkie held to face mode. There does not seem to be a technical description of this mode included in the application. Please update the operational description to include the details of this mode of operation, including frequency of operation, bandwidth, modulation, whether it uses the same radio as used for the PCS/Cellular, etc.

The KX12 integrates a third party proprietary software solution that uses existing CDMA and analog voice service options to allow group, 2-way voice interaction. The operation description has been updated to include the description of this mode as requested. The updated operation description is submitted along with this response. The updates were highlighted as yellow.

Question: B) Please provide SAR compliance information/data for the Held-To-Face operation of the Touch2Talk mode of operation.

Per FCC, the SAR measurement for the held-to-face operation is optional.

Per the request, we have done the additional SAR measurements in both Cell and PCS bands. The results and plots are showing below.

AMPS		Channel:			991	383	799
		Frequency (MHz):			824.04	836.49	848.97
		Conducted Power (dBm):			25.46	25.45	25.47
Configuration	Accessories	Test Position	Phone Position	SAR, 1g (W/kg)			
KX12	Air Gap – 1inch	Flat	Face Up		0.501		

CDMA 800		Channel:			1013	383	777
		Frequency (MHz):			824.70	836.49	848.31
		Conducted Power (dBm):			25.48	25.45	25.46
Configuration	Accessories	Test Position	Phone Position	SAR, 1g (W/kg)			
KX12	Air Gap – 1inch	Flat	Face Up		0.487		

CDMA 1900		Channel:			25	600	1175
		Frequency (MHz):			1851.25	1880	1908.75
		Conducted Power (dBm):			23.44	23.48	23.46
Configuration	Accessories	Test Position	Phone Position	SAR, 1g (W/kg)			
KX12	Air Gap – 1inch	Flat	Face Up		0.112		

Date/Time: 10/24/2005 3:33:01 PM

Test Laboratory: Kyocera

KX12-PTT #XZ3N AMPS ch383 FLAT phone Face Up with 1in Air Space

Communication System: AMPS, Frequency: 836.49 MHz, Duty Cycle: 1:1

Medium: HSL900, Medium parameters used (interpolated): $f = 836.49$ MHz; $\sigma = 0.904$ mho/m; $\epsilon_r = 42.4$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvF(6.29, 6.29, 6.29), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

Electronics: DAB4 Sa530, Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.3 Build 159

Temperature

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

AMPS Ch383/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm.

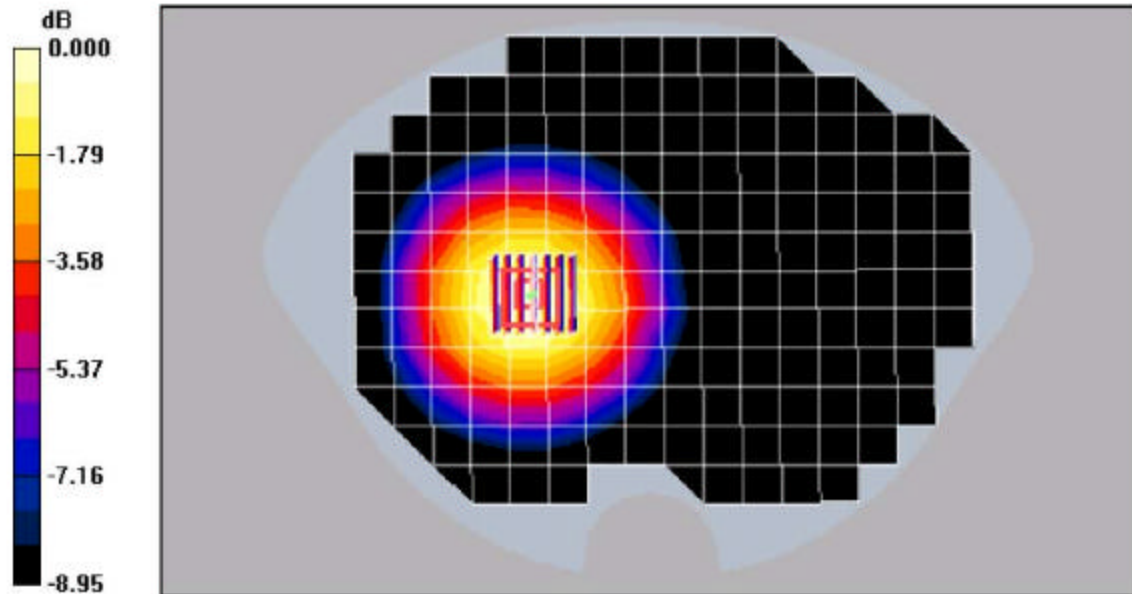
Reference Value = 14.3 W/m, Power Drift = 0.090 dB

Peak SAR (extrapolated) = 0.651 W/kg

SAR(1g) = 0.501 mW/g SAR(10g) = 0.364 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.535 mW/g



0 dB = 0.535mW/g

Date/Time: 10/24/2005 2:51:18 PM

Test Laboratory: Kyocera

KX12-PTT #XZ3N CDMA-800 ch383 FLAT phone Face Up with 1in Air Space

Communication System: CDMA-800, Frequency: 816.49 MHz, Duty Cycle: 1:1

Medium: HSL900, Medium parameters used (interpolated): $f = 816.49$ MHz, $\sigma = 0.904$ rho/ro, $\epsilon_r = 42.4$, $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1713, ConvP(6.29, 6.29, 6.29), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection).

Electronics: DAE4 Sn530, Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 159

Temperature:

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

CDMA-800 Ch383/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

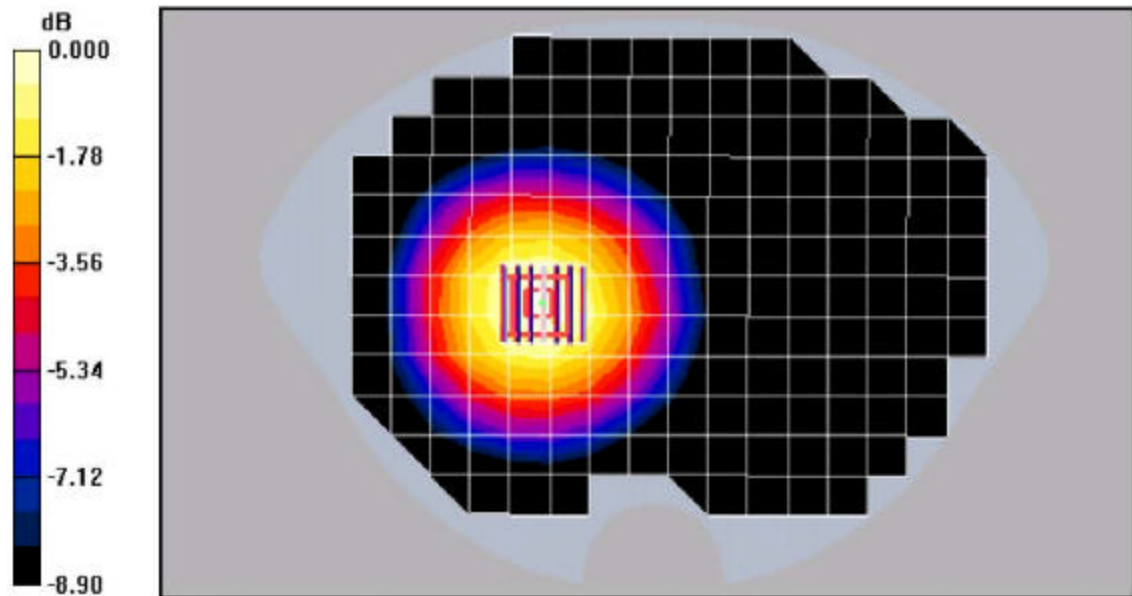
Reference Value = 15.2 V/m, Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.641 W/kg

SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.352 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.518 mW/g



0 dB = 0.518mW/g

Date/Time: 10/24/2005 6:37:35 PM

Test Laboratory: Kyocera

KX12-PTT #XZ3N CDMA-1900 ch600 FLAT phone Face Up with 1in Air Space

Communication System: CDMA-1900, Frequency: 1880 MHz, Duty Cycle: 1:1

Medium: HSL1800, Medium parameters used: $f = 1880$ MHz, $\sigma = 1.43$ mho/m, $\epsilon_r = 40.5$, $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1713, Coax(F(5.18, 5.18, 5.18)), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

Electronics: DAB4 Sa530, Calibrated: 1/9/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 159

Temperature

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

PCS Ch600 FLAT/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.32 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 0.171 W/kg

SAR(1 g) = 0.112 mW/g; SAR(10 g) = 0.072 mW/g

Maximum value of SAR (measured) = 0.120 mW/g

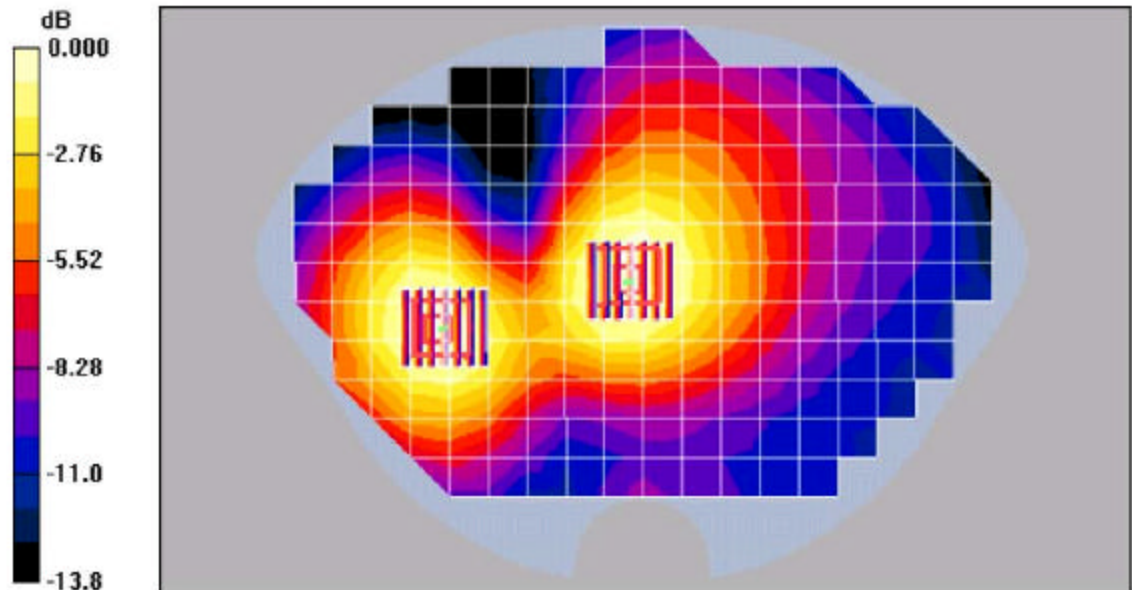
PCS Ch600 FLAT/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.32 V/m; Power Drift = -0.151 dB

Peak SAR (extrapolated) = 0.159 W/kg

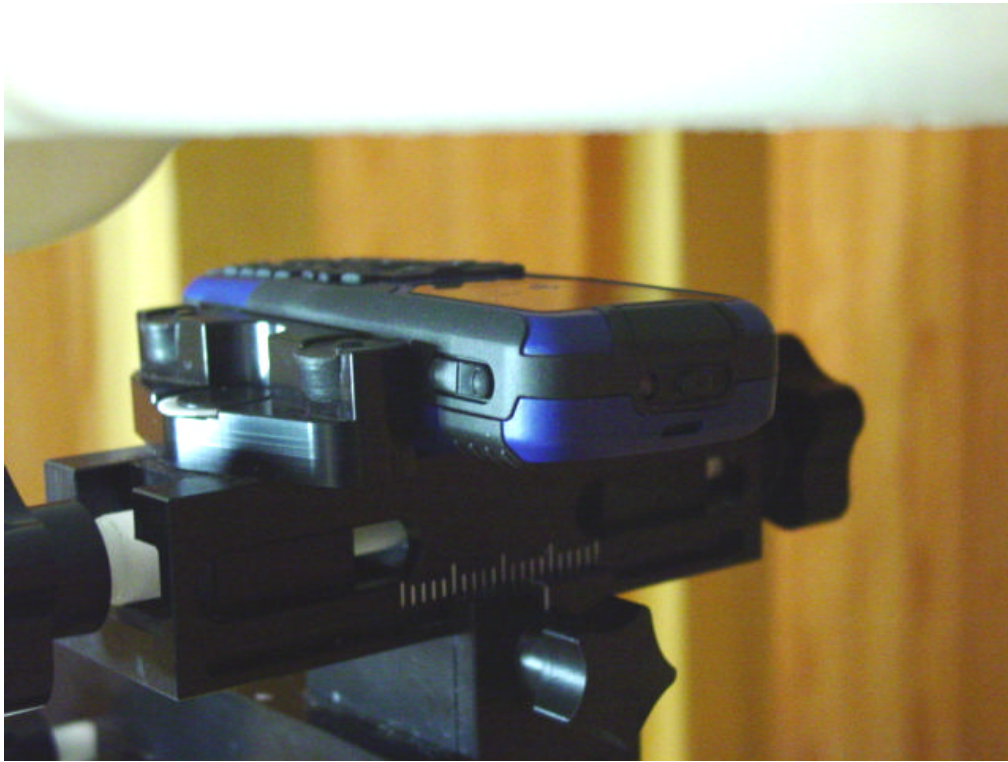
SAR(1 g) = 0.105 mW/g; SAR(10 g) = 0.068 mW/g

Maximum value of SAR (measured) = 0.112 mW/g



0 dB = 0.112mW/g

The test setup is -



The validation data and plots are shown as follows. The manufacture's information of dipoles and the probe were submitted with the original application.

Tissue	Freq. (MHz)	Description	Validation SAR (mW/g), 1g	Dielectric Parameters		Temp. (°C)	Test date	Comments Validation testing -
				ϵ_r	σ (S/m)			
Head	835	Measured	1.01	42.4	0.904	22±1	10-24-05	For device testing in head liquid
		SPEAG Reference	1.02	42.8	0.94	--	04-20-04	
		FCC Reference*	--	41.5	0.90	20-26	--	
	1900	Measured	4.35	40.5	1.43	22±1	10-24-05	For device testing in head liquid
		SPEAG Reference	4.28	38.8	1.47	--	03-17-04	
		FCC Reference*	--	40.0	1.40	20-26	--	

Date/Time: 10/24/2005 8:57:14 AM

Test Laboratory: Kyocera

835MHz Validation @ 20.00dBm, Probe #1713, DAE #530, Dipole #454

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

Medium: HSL900, Medium parameters used: $f = 835 \text{ MHz}$, $\sigma = 0.904 \text{ mho/m}$, $\epsilon_r = 42.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom: SAM 1.2, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3D-V6 - SH1713, Core F(6.29, 6.29, 6.29), Calibrated: 5/19/2005

Sensor: Surface: 4mm (Mechanical And Optical Surface Detection),

Electronics: DAE4 S#530, Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 159

Temperature

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

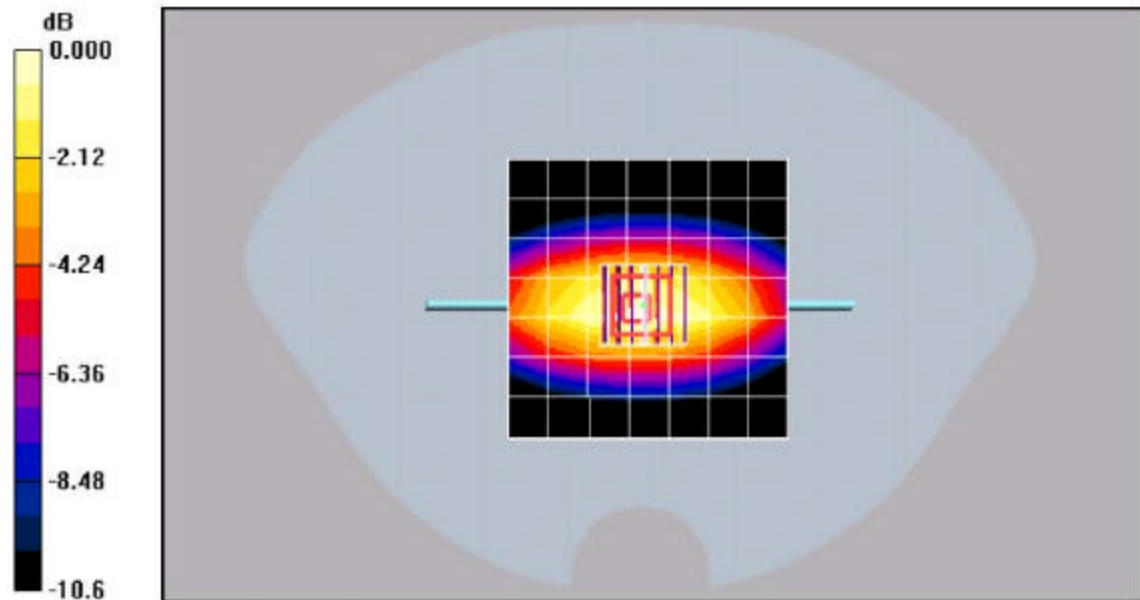
Validation Flat/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 36.2 W/m, Power Drift = -0.002 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1g) = 1.01 mW/g; SAR(10g) = 0.054 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.09mW/g

Date/Time: 10/24/2005 6:01:48 PM

Test Laboratory: Kyocera

1900MHz Validation @ 20.00dBm, Probe #1713, DAE #530, Dipole #5d005

Communication System: CW 1900, Frequency: 1900 MHz, Duty Cycle: 1:1

Medium: HSL1800, Medium parameters used (interpolated): $f = 1900$ MHz, $\sigma = 1.43$ nS/m, $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom: SAM 12, Phantom section: Flat Section

DASY4 Configuration:

Probe: ET3DV6 - SN1713, CoreF(5.18, 5.18, 5.18), Calibrated: 5/19/2005

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

Electronics: DAB4 Sa530, Calibrated: 1/4/2005

Measurement SW: DASY4, V4.4 Build 3

Postprocessing SW: SEMCAD, V1.8 Build 159

Temperature

Room T = 21.8 +/- 1 deg C, Liquid T = 22.0 +/- 1 deg C

1900Mhz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

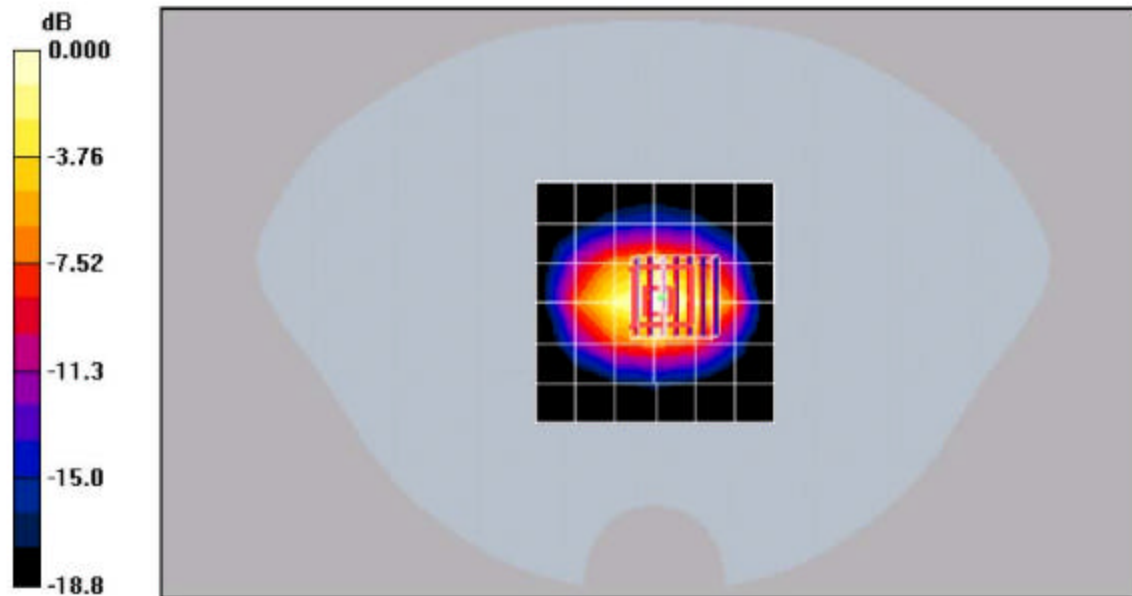
Reference Value = 61.9 V/m, Power Drift = 0.023 dB

Peak SAR (extrapolated) = 7.75 W/kg

SAR(1 g) = 4.35 mW/g; SAR(10 g) = 2.28 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.95 mW/g



0 dB = 4.95mW/g