



	<u>Date(s) of Evaluation</u> Jan. 4,6,26-28,31, 2011	<u>Test Report Serial No.</u> 121510ALH-T1070-S90U	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

APPENDIX A - SAR MEASUREMENT PLOTS

Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Face SAR Plot #1 (F1)

Date Tested: 01/06/2011

Face-held SAR - KRA-23M “Antenna A” - KNB-57L 2000mAh Li-ion “Battery a” – 450.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.88 \text{ mho/m}$; $\epsilon_r = 45.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.80 mW/g

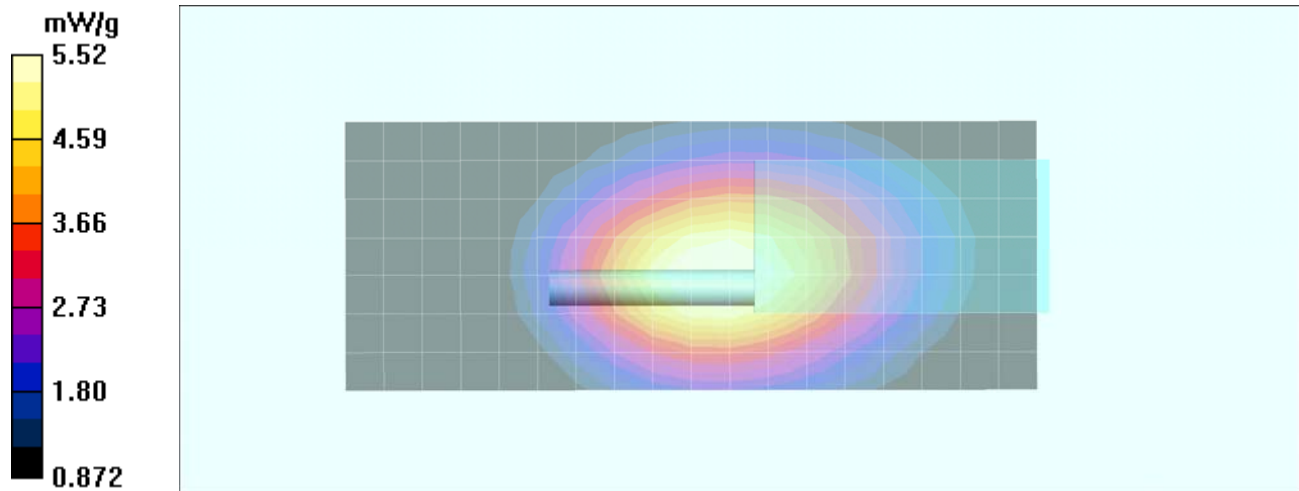
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 75.4 V/m; Power Drift = 0.071 dB



Peak SAR (extrapolated) = 7.19 W/kg

SAR(1 g) = 5.28 mW/g; SAR(10 g) = 3.93 mW/g

Maximum value of SAR (measured) = 5.52 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Face SAR Plot #2 (F2)

Date Tested: 01/06/2011

Face-held SAR - KRA-23M2 “Antenna B” - KNB-57L 2000mAh Li-ion “Battery a” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 44.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.78 mW/g

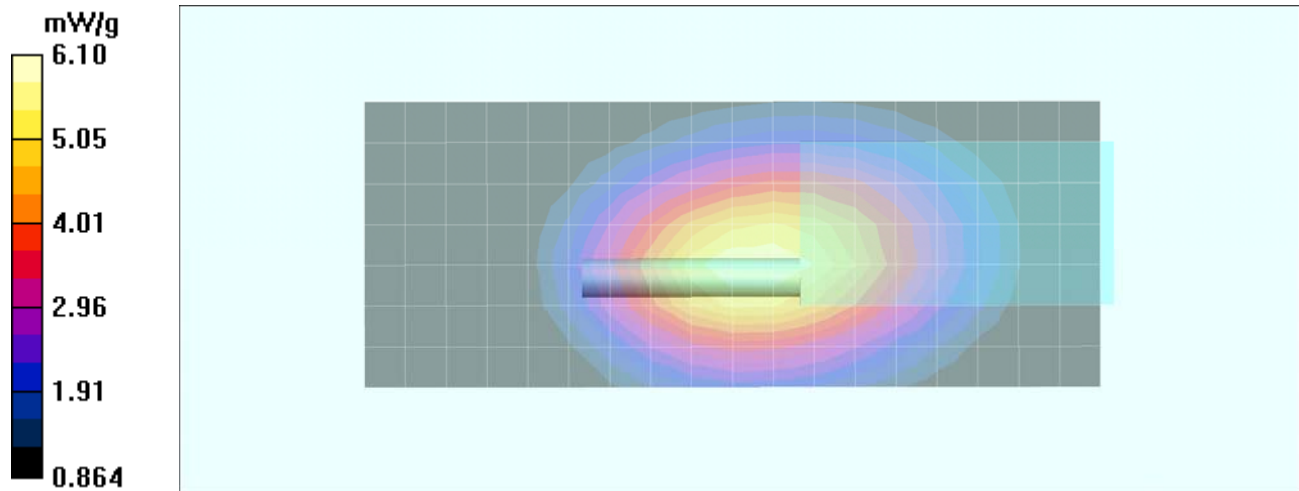
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 79.0 V/m; Power Drift = -0.188 dB



Peak SAR (extrapolated) = 8.01 W/kg

SAR(1 g) = 5.82 mW/g; SAR(10 g) = 4.28 mW/g

Maximum value of SAR (measured) = 6.10 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Face SAR Plot #3 (F3)

Date Tested: 01/06/2011

Face-held SAR - KRA-27M “Antenna C” - KNB-57L 2000mAh Li-ion “Battery a” – 450.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used: f = 450 MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 45.6$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 5.75 mW/g

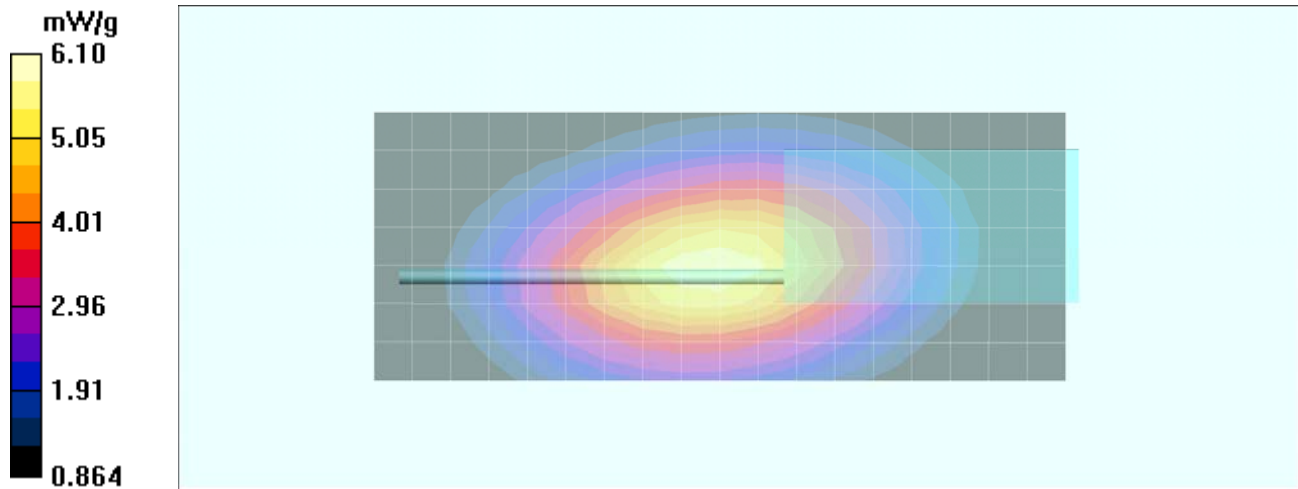
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 80.8 V/m; Power Drift = -0.129 dB



Peak SAR (extrapolated) = 7.87 W/kg

SAR(1 g) = 5.79 mW/g; SAR(10 g) = 4.32 mW/g

Maximum value of SAR (measured) = 6.06 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Face SAR Plot #4 (F4)

Date Tested: 01/06/2011

Face-held SAR - KRA-27M2 “Antenna D” - KNB-57L 2000mAh Li-ion “Battery a” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 44.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.89 mW/g

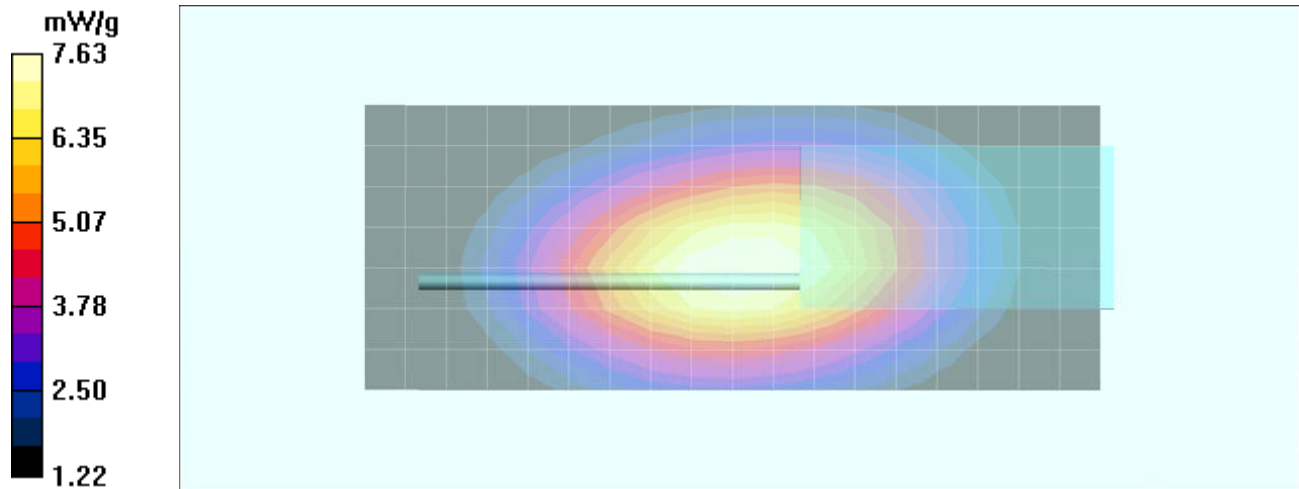
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 90.8 V/m; Power Drift = -0.357 dB

Peak SAR (extrapolated) = 10.0 W/kg

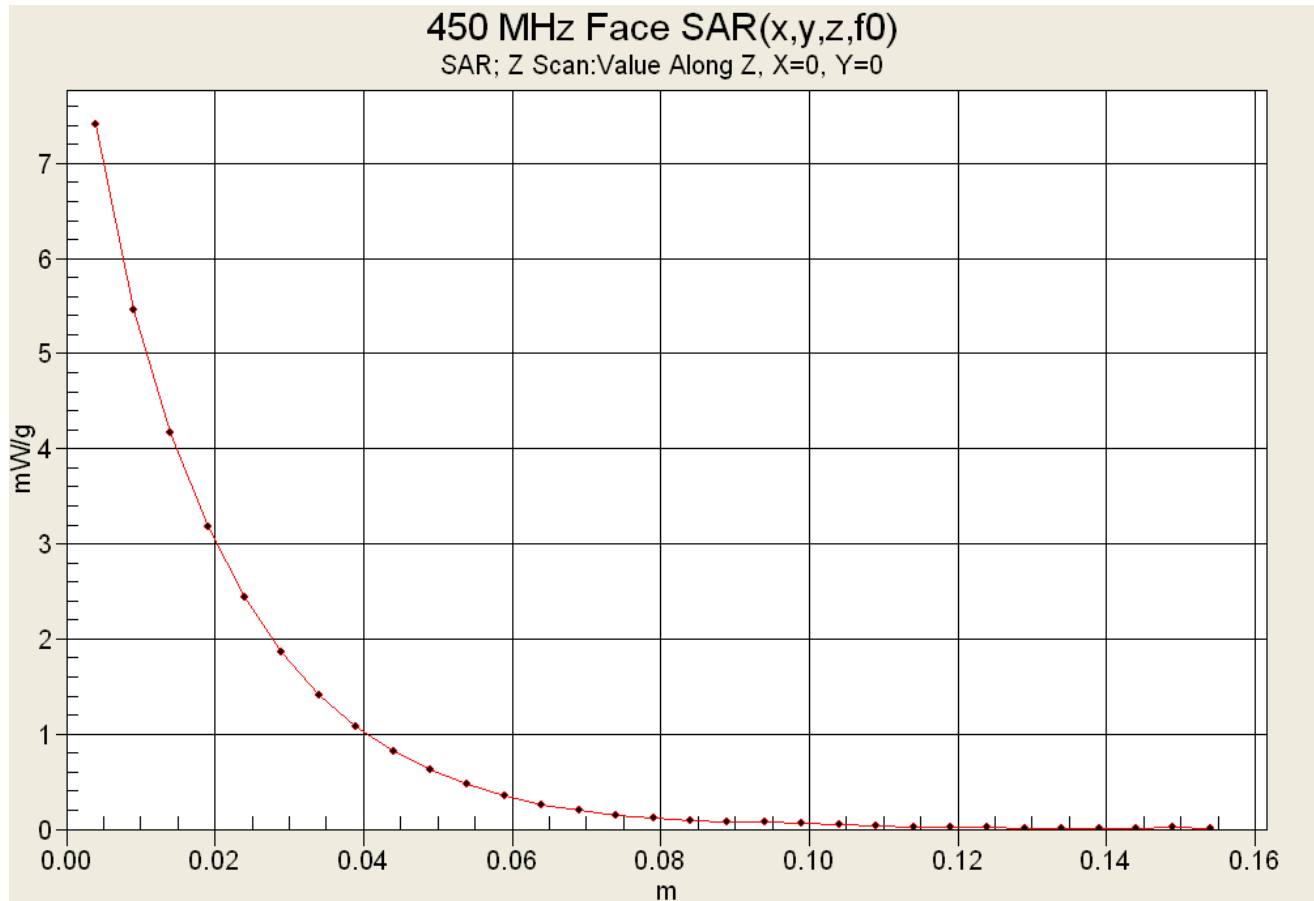
SAR(1 g) = 7.33 mW/g; SAR(10 g) = 5.44 mW/g



Maximum value of SAR (measured) = 7.63 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Z-Axis Scan



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Face SAR Plot #5 (F5)

Date Tested: 01/06/2011

Face-held SAR - KRA-27M2 “Antenna D” - KNB-55L 1480mAh Li-ion “Battery b” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 512$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 44.6$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.82 mW/g

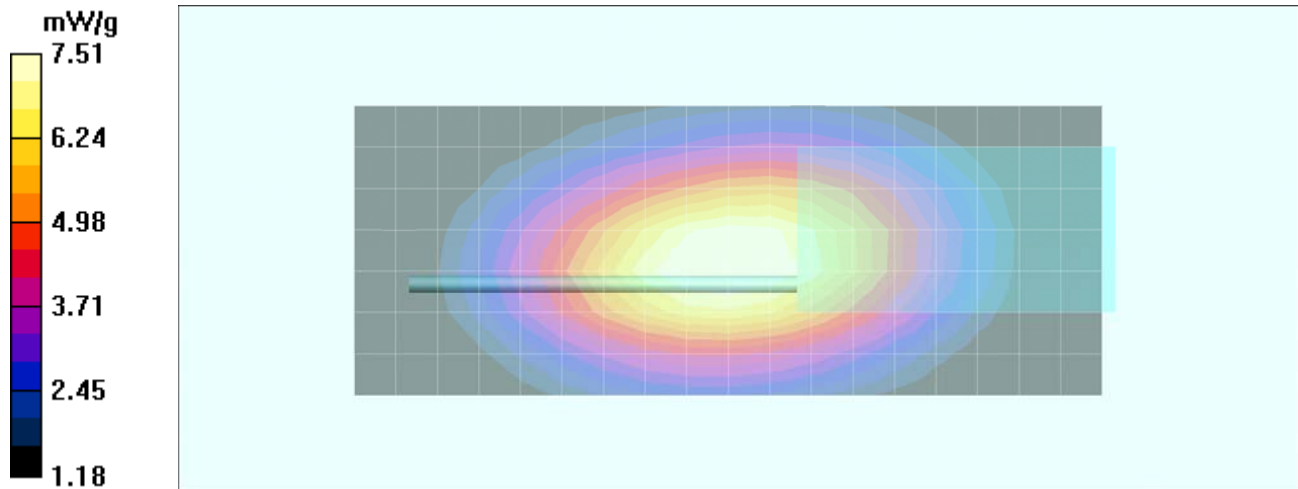
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 91.8 V/m; Power Drift = -0.260 dB



Peak SAR (extrapolated) = 9.89 W/kg

SAR(1 g) = 7.2 mW/g; SAR(10 g) = 5.34 mW/g

Maximum value of SAR (measured) = 7.51 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Face SAR Plot #6 (F6)

Date Tested: 01/06/2011

Face-held SAR - KRA-27M2 “Antenna D” - KNB-56N 1400mAh Ni-MH “Battery c” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 44.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.04 mW/g

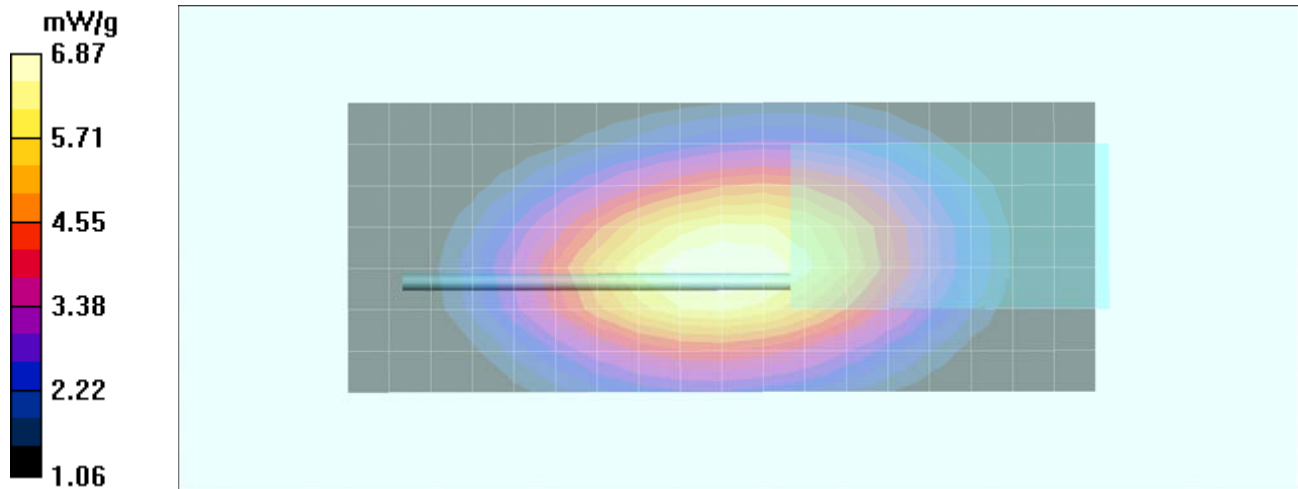
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$


Reference Value = 87.7 V/m; Power Drift = -0.475 dB



Peak SAR (extrapolated) = 9.01 W/kg

SAR(1 g) = 6.57 mW/g; SAR(10 g) = 4.86 mW/g

Maximum value of SAR (measured) = 6.87 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Face SAR Plot #7 (F7)

Date Tested: 01/06/2011

Face-held SAR - KRA-27M2 “Antenna D” – KBP-5 9V AAx6 “Battery d” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No.10

Ambient Temp: 23.5°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.1 kPa; Humidity: 40%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 44.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.25, 7.25, 7.25); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Face-held SAR - 2.5 cm Spacing from Front of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.86 mW/g

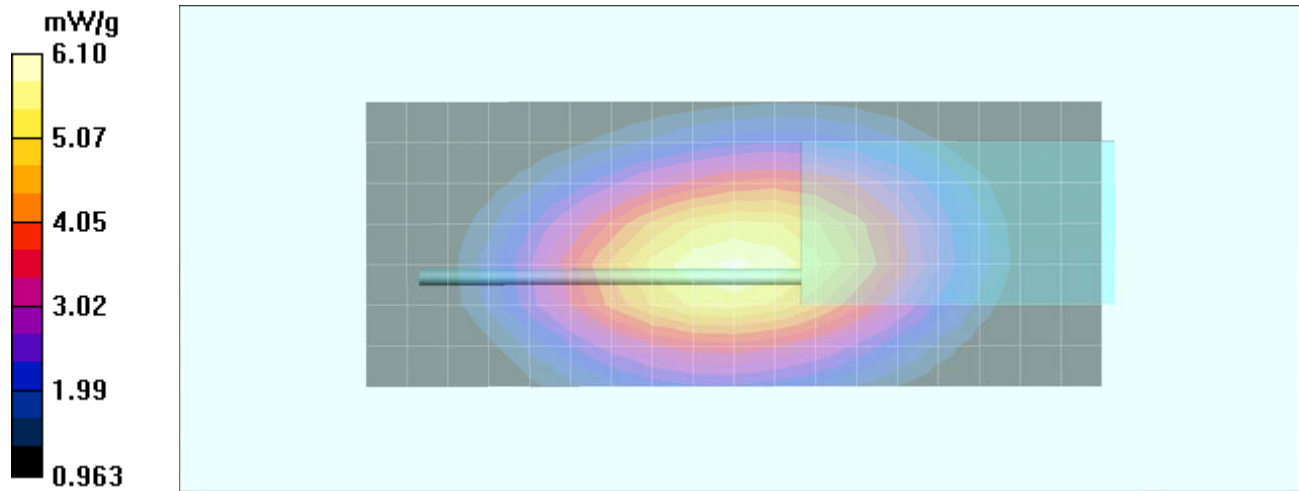
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 89.4 V/m; Power Drift = -1.21 dB

Peak SAR (extrapolated) = 8.06 W/kg

SAR(1 g) = 5.81 mW/g; SAR(10 g) = 4.28 mW/g

Maximum value of SAR (measured) = 6.10 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #1 (B1)

Date Tested: 01/04/2011

Body-worn SAR - KRA-23M "Antenna A" - KNB-55L 1480mAh Li-ion "Battery b" – 450.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 58.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 8.59 mW/g

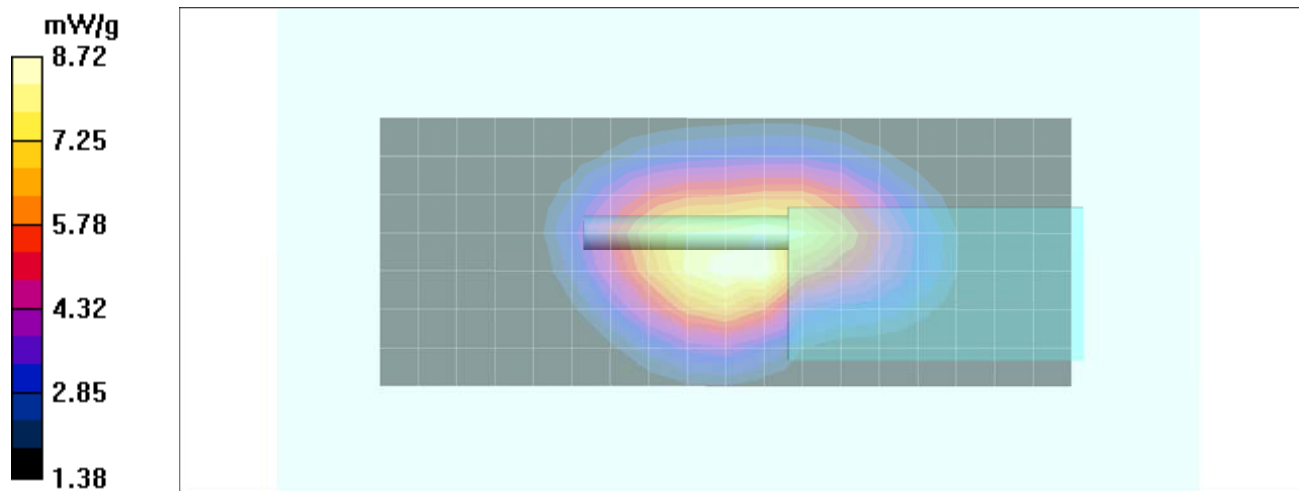
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 93.0 V/m; Power Drift = -0.124 dB



Peak SAR (extrapolated) = 12.3 W/kg

SAR(1 g) = 8.32 mW/g; SAR(10 g) = 6.06 mW/g

Maximum value of SAR (measured) = 8.72 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #2 (B2)

Date Tested: 01/04/2011

Body-worn SAR - KRA-23M "Antenna A" - KNB-55L 1480mAh Li-ion "Battery b" – 463.3 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 59.1$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.1 mW/g

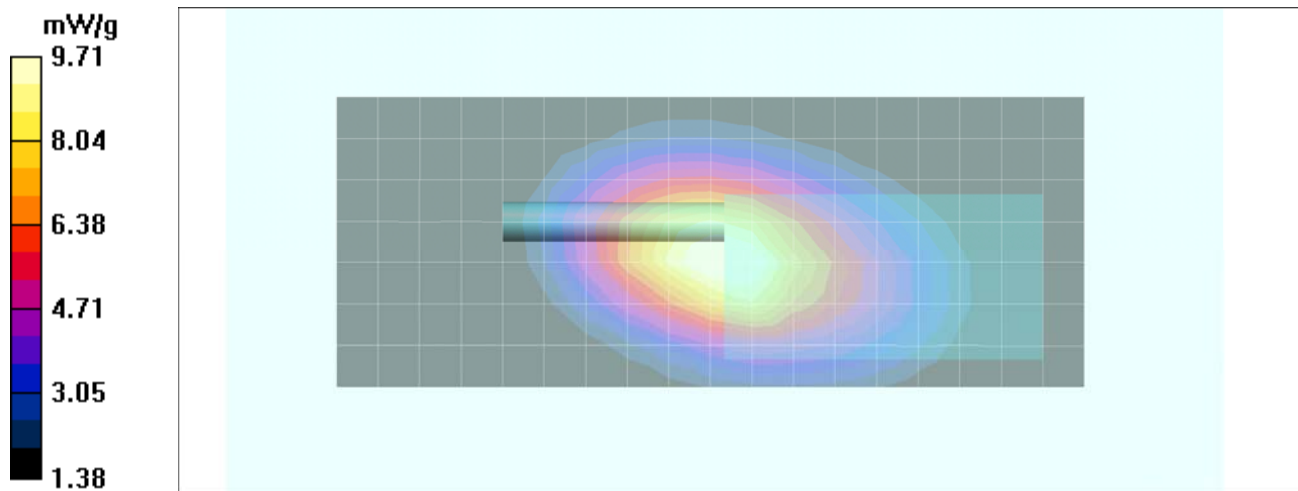
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 104.6 V/m; Power Drift = -0.306 dB



Peak SAR (extrapolated) = 13.7 W/kg

SAR(1 g) = 9.24 mW/g; SAR(10 g) = 6.58 mW/g

Maximum value of SAR (measured) = 9.71 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #3 (B3)

Date Tested: 01/04/2011

Body-worn SAR - KRA-23M "Antenna A" - KNB-55L 1480mAh Li-ion "Battery b" – 476.7 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7$ MHz; $\sigma = 0.94$ mho/m; $\epsilon_r = 58.5$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.89 mW/g

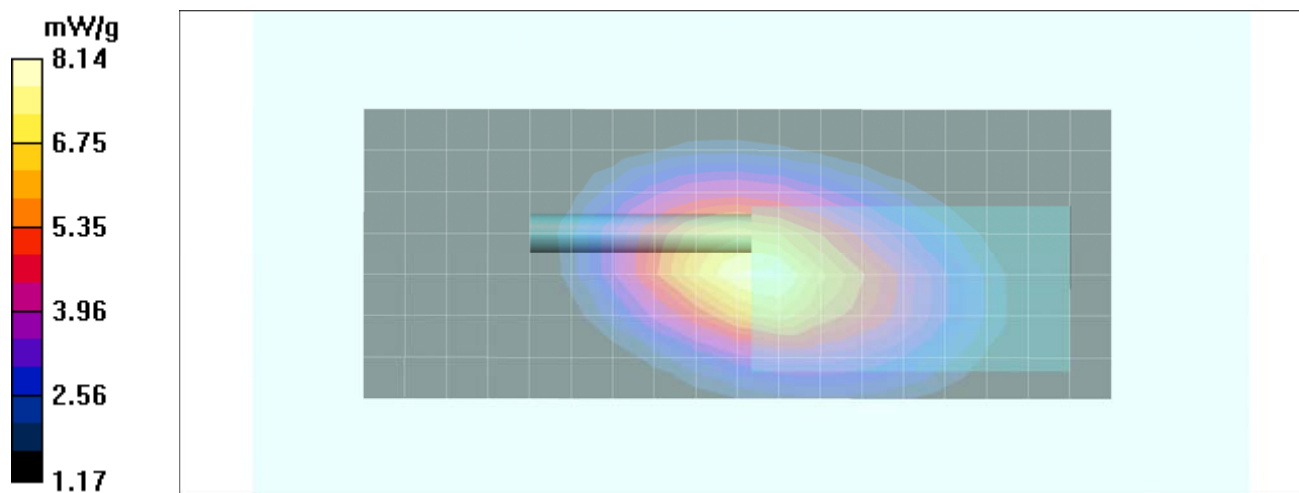
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 97.5 V/m; Power Drift = -0.681 dB



Peak SAR (extrapolated) = 11.5 W/kg

SAR(1 g) = 7.74 mW/g; SAR(10 g) = 5.5 mW/g

Maximum value of SAR (measured) = 8.14 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #4 (B4)

Date Tested: 01/04/2011

Body-worn SAR - KRA-23M "Antenna A" - KNB-55L 1480mAh Li-ion "Battery b" – 490.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 490 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 490 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 58.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 5.71 mW/g

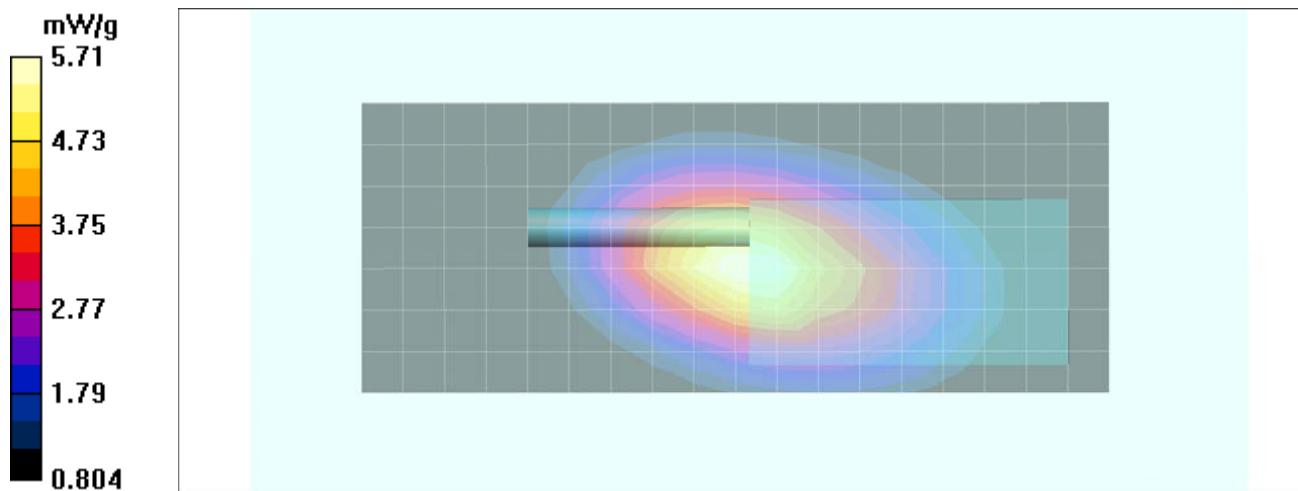
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 79.8 V/m; Power Drift = -0.303 dB



Peak SAR (extrapolated) = 8.10 W/kg

SAR(1 g) = 5.43 mW/g; SAR(10 g) = 3.84 mW/g

Maximum value of SAR (measured) = 5.71 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #5 (B5)

Date Tested: 01/26/2011

Body-worn SAR - KRA-23M "Antenna A" - KNB-57L 2000mAh Li-ion "Battery a" – 463.3 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.913$ mho/m; $\epsilon_r = 57.6$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.6 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.6 mW/g

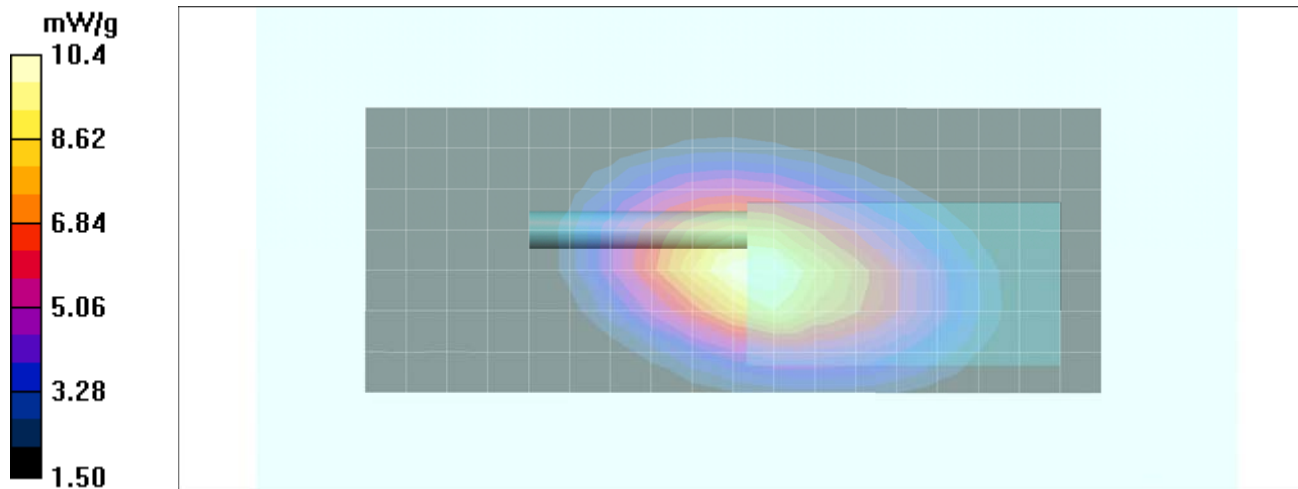
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 105.2 V/m; Power Drift = -0.145 dB

Peak SAR (extrapolated) = 14.7 W/kg

SAR(1 g) = 9.95 mW/g; SAR(10 g) = 7.07 mW/g

Maximum value of SAR (measured) = 10.4 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #6 (B6)

Date Tested: 01/26/2011

Body-worn SAR - KRA-23M "Antenna A" - KNB-56N 1400mAh Li-ion "Battery c" – 463.3 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3 \text{ MHz}$; $\sigma = 0.913 \text{ mho/m}$; $\epsilon_r = 57.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.7 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 9.84 mW/g

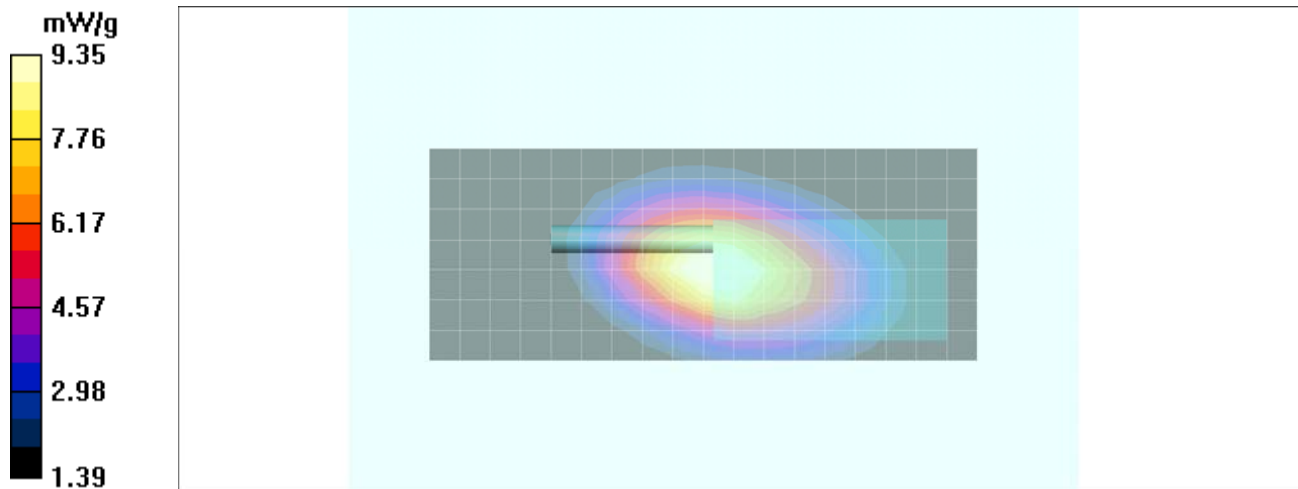
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 102.5 V/m; Power Drift = -0.326 dB

Peak SAR (extrapolated) = 13.0 W/kg

SAR(1 g) = 8.93 mW/g; SAR(10 g) = 6.43 mW/g

Maximum value of SAR (measured) 9.35 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #7 (B7)

Date Tested: 01/26/2011

Body-worn SAR - KRA-23M "Antenna A" – KBP-5 9V AAx6 "Battery d" – 463.3 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3 \text{ MHz}$; $\sigma = 0.913 \text{ mho/m}$; $\epsilon_r = 57.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.7 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.27 mW/g

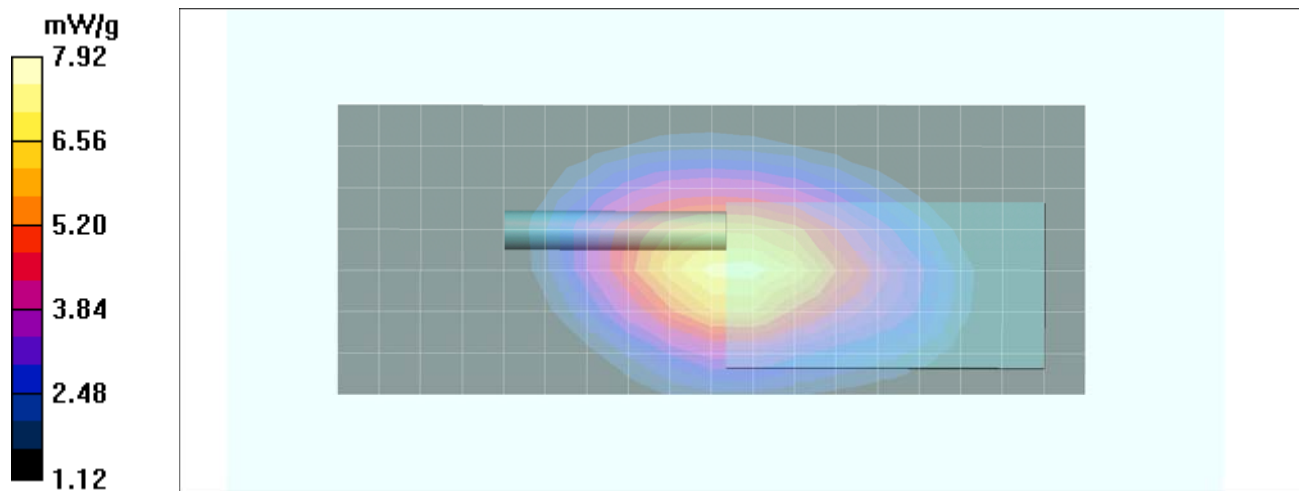
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 103.3 V/m; Power Drift = -1.23 dB



Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 7.6 mW/g; SAR(10 g) = 5.56 mW/g

Maximum value of SAR (measured) 7.92 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #8 (B8)

Date Tested: 01/04/2011

Body-worn SAR - KRA-23M2 “Antenna B” – KNB-55L Li-ion “Battery b” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.972 \text{ mho/m}$; $\epsilon_r = 58.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 9.29 mW/g

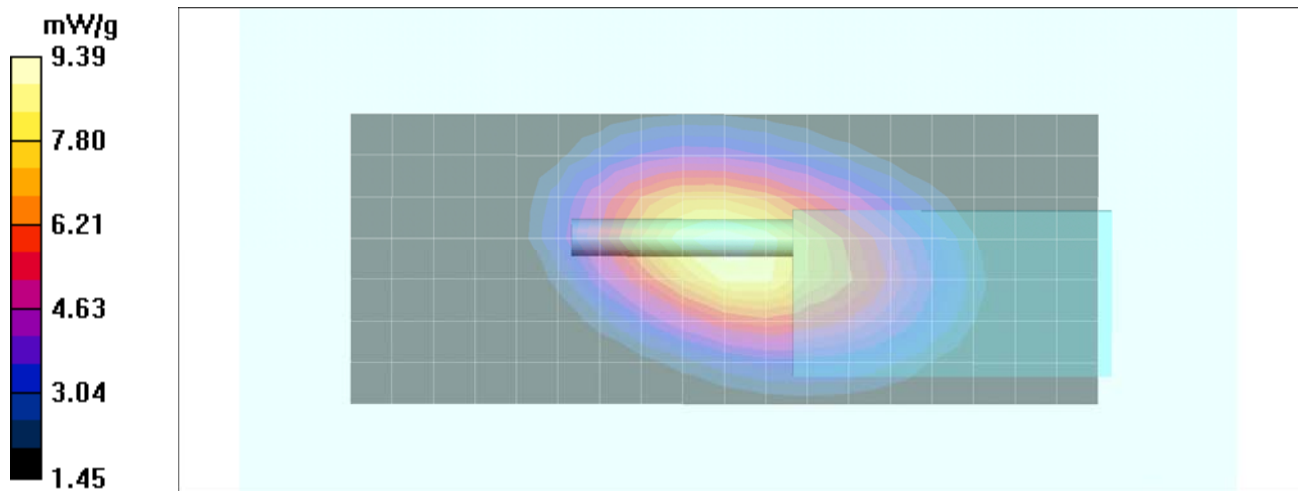
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 90.6 V/m; Power Drift = -0.091 dB



Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 8.94 mW/g; SAR(10 g) = 6.43 mW/g

Maximum value of SAR (measured) 9.39 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #9 (B9)

Date Tested: 01/04/2011

Body-worn SAR - KRA-23M2 “Antenna B” – KNB-55L Li-ion “Battery b” – 498.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 498 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 498 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 58.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 6.77 mW/g

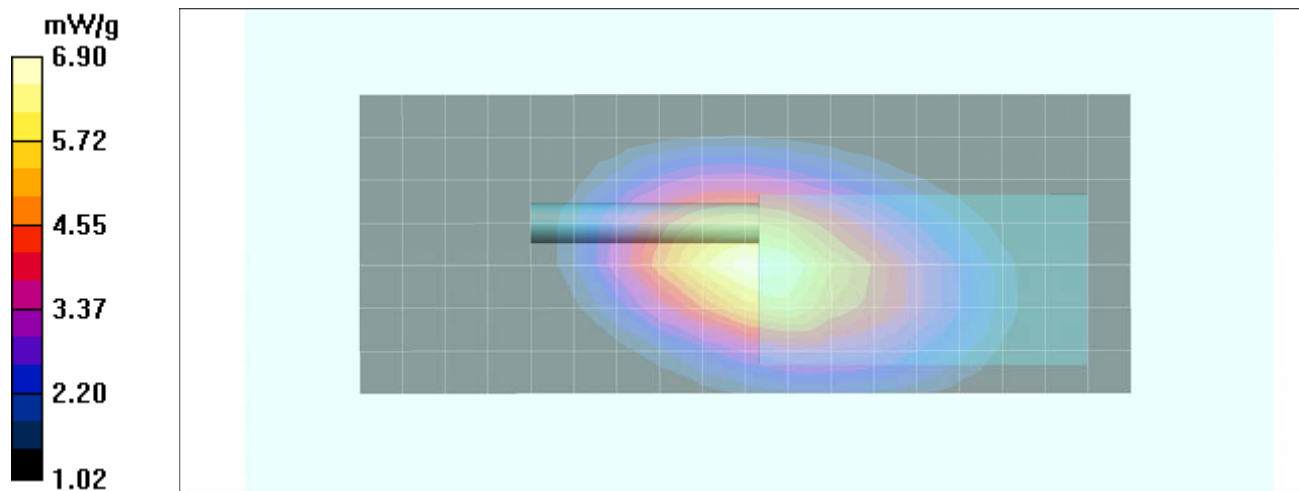
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 86.3 V/m; Power Drift = -0.480 dB



Peak SAR (extrapolated) = 9.76 W/kg

SAR(1 g) = 6.6 mW/g; SAR(10 g) = 4.67 mW/g

Maximum value of SAR (measured) 6.90 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #10 (B10)

Date Tested: 01/26/2011

Body-worn SAR - KRA-23M2 “Antenna B” – KNB-57L Li-ion “Battery a” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 57.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.6 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 8.41 mW/g

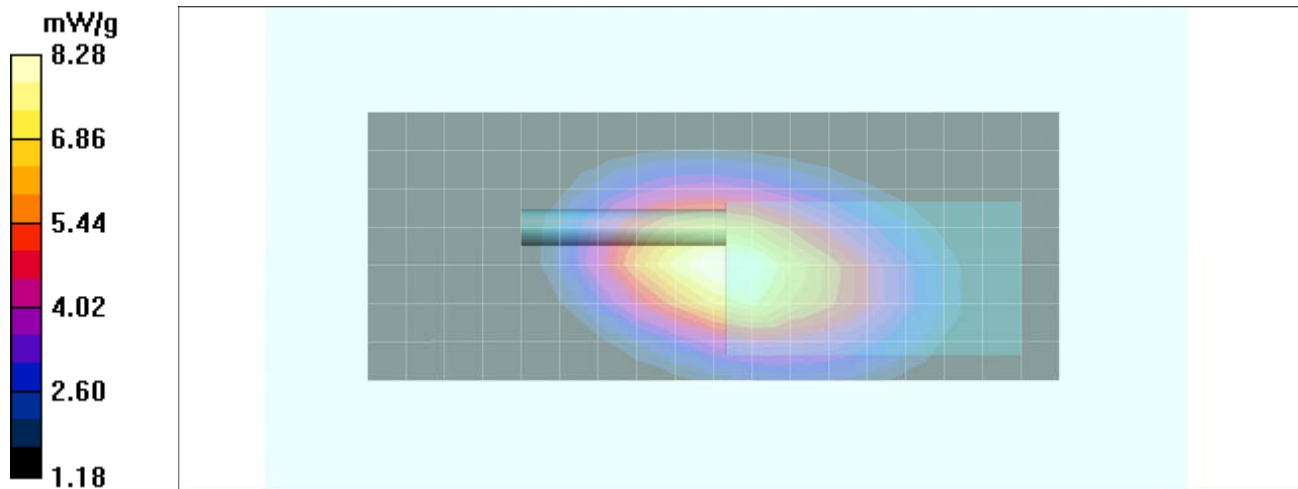
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 94.9 V/m; Power Drift = -0.475 dB



Peak SAR (extrapolated) = 11.6 W/kg

SAR(1 g) = 7.87 mW/g; SAR(10 g) = 5.57 mW/g

Maximum value of SAR (measured) 8.28 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #11 (B11)

Date Tested: 01/26/2011

Body-worn SAR - KRA-23M2 “Antenna B” – KNB-56N Ni-MH “Battery c” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 57.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.7 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.97 mW/g

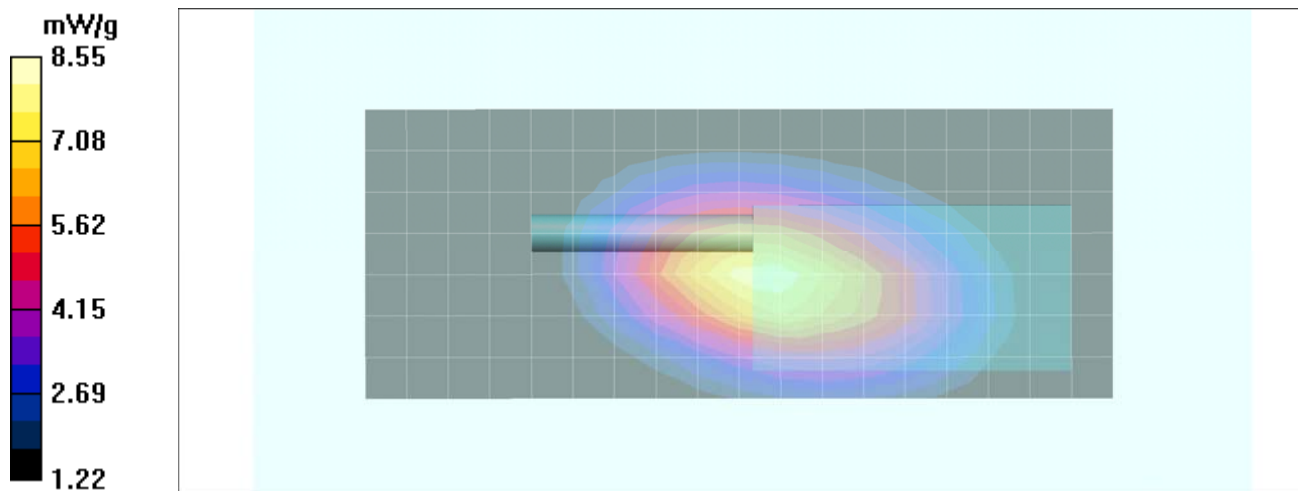
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 95.2 V/m; Power Drift = -0.311 dB



Peak SAR (extrapolated) = 11.9 W/kg

SAR(1 g) = 8.09 mW/g; SAR(10 g) = 5.73 mW/g

Maximum value of SAR (measured) 8.55 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #12 (B12)

Date Tested: 01/26/2011

Body-worn SAR - KRA-23M2 “Antenna B” – KBP-5 9V AAx6 “Battery d” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 57.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.7 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 6.83 mW/g

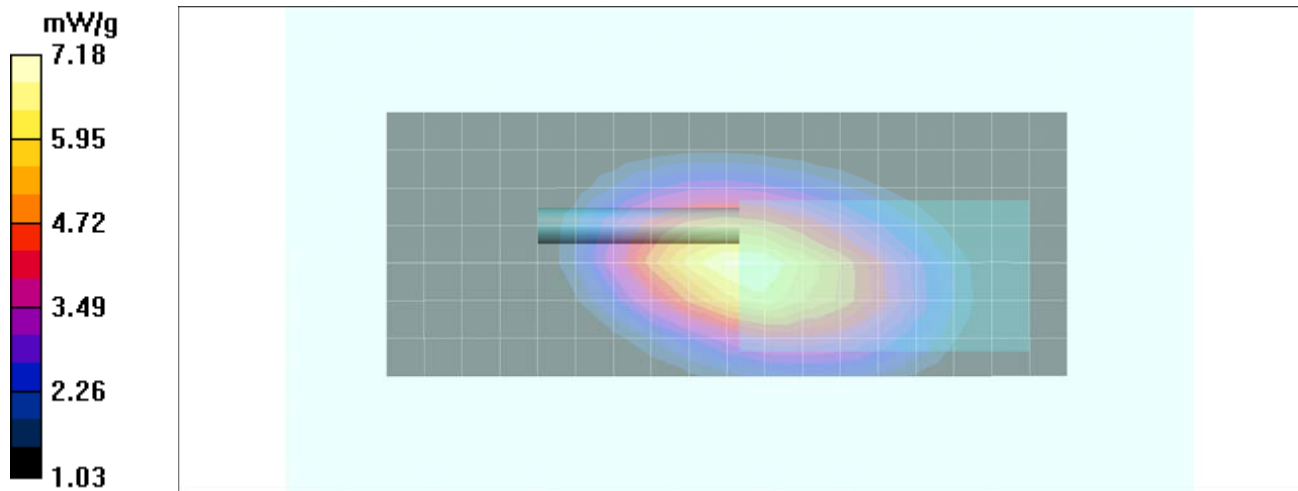
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 95.4 V/m; Power Drift = -1.13 dB



Peak SAR (extrapolated) = 10.1 W/kg

SAR(1 g) = 6.85 mW/g; SAR(10 g) = 4.89 mW/g

Maximum value of SAR (measured) 7.18 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #13 (B13)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M "Antenna C" – KNB-55L Li-ion "Battery b" – 450.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 58.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.82 mW/g

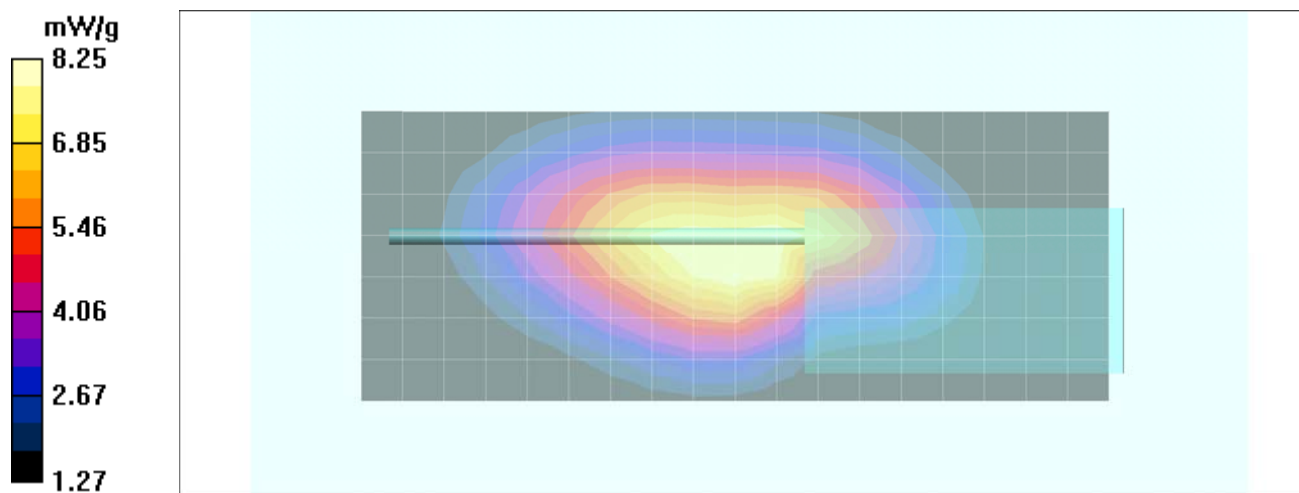
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 94.1 V/m; Power Drift = -0.480 dB



Peak SAR (extrapolated) = 12.0 W/kg

SAR(1 g) = 7.94 mW/g; SAR(10 g) = 5.77 mW/g

Maximum value of SAR (measured) 8.25 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #14 (B14)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M "Antenna C" – KNB-55L Li-ion "Battery b" – 463.3 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 59.1$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.4 mW/g

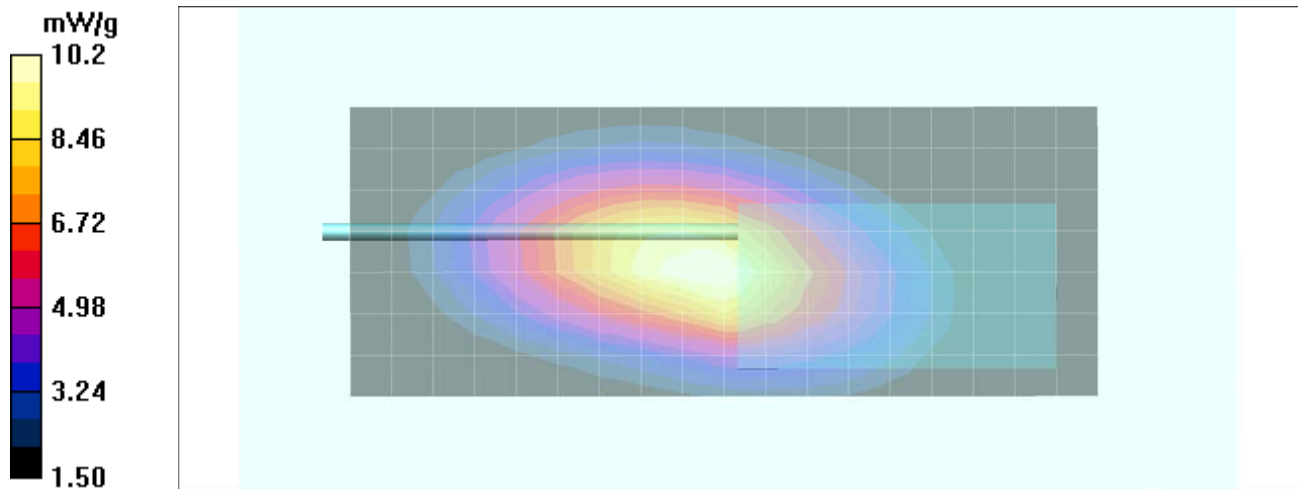
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 106.1 V/m; Power Drift = -0.228 dB



Peak SAR (extrapolated) = 14.2 W/kg

SAR(1 g) = 9.73 mW/g; SAR(10 g) = 7.05 mW/g

Maximum value of SAR (measured) 10.2 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #15 (B15)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M "Antenna C" – KNB-55L Li-ion "Battery b" – 476.7 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7$ MHz; $\sigma = 0.94$ mho/m; $\epsilon_r = 58.5$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.53 mW/g

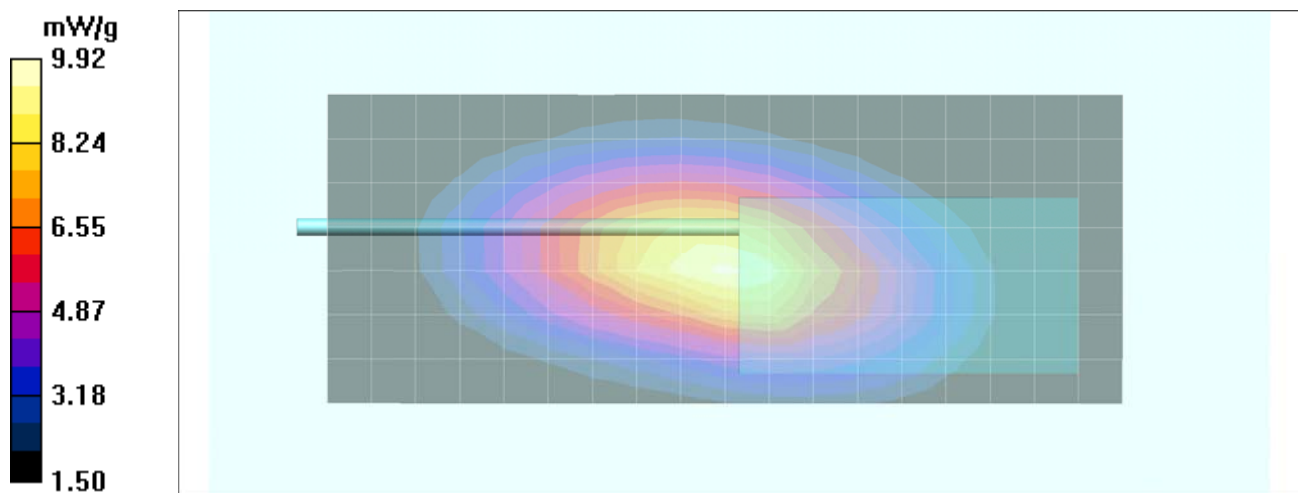
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 105.3 V/m; Power Drift = -0.428 dB



Peak SAR (extrapolated) = 13.9 W/kg

SAR(1 g) = 9.46 mW/g; SAR(10 g) = 6.79 mW/g

Maximum value of SAR (measured) 9.92 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #16 (B16)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M "Antenna C" – KNB-55L Li-ion "Battery b" – 490.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 490 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 490 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 58.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.78 mW/g

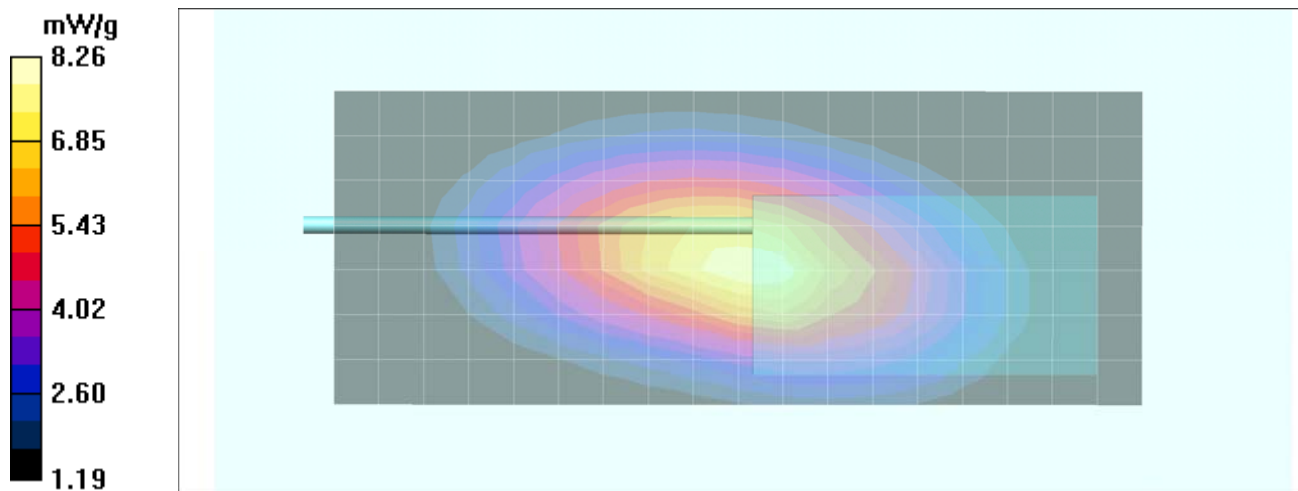
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 94.7 V/m; Power Drift = -0.349 dB



Peak SAR (extrapolated) = 11.7 W/kg

SAR(1 g) = 7.85 mW/g; SAR(10 g) = 5.6 mW/g

Maximum value of SAR (measured) 8.26 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #17 (B17)

Date Tested: 01/26/2011

Body-worn SAR - KRA-27M "Antenna C" – KNB-57L Li-ion "Battery a" – 476.7 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7$ MHz; $\sigma = 0.927$ mho/m; $\epsilon_r = 56.9$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.6 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.41 mW/g

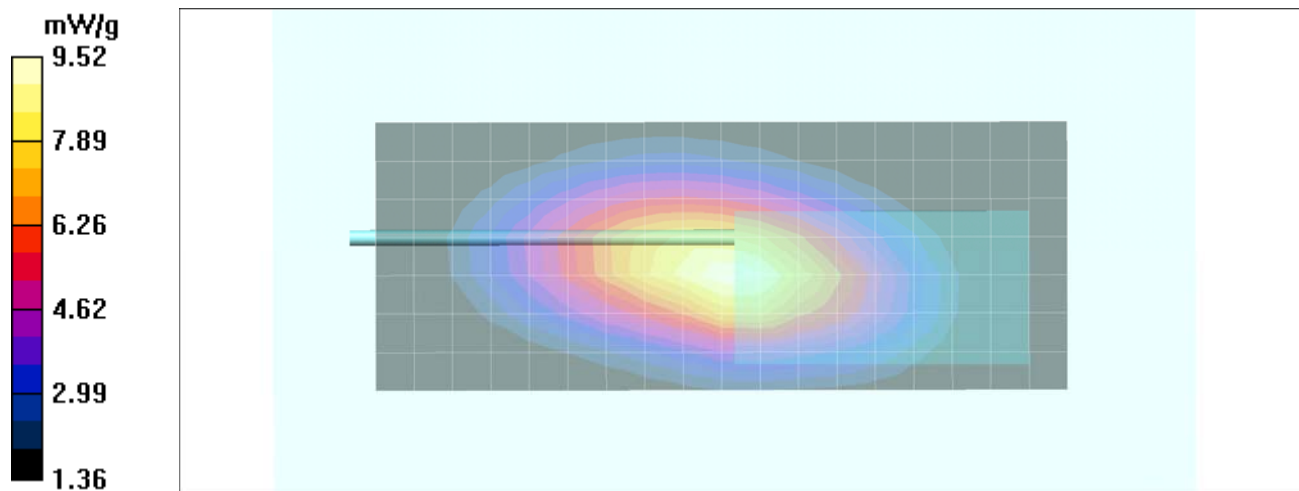
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 103.2 V/m; Power Drift = -0.228 dB



Peak SAR (extrapolated) = 13.3 W/kg

SAR(1 g) = 9.1 mW/g; SAR(10 g) = 6.56 mW/g

Maximum value of SAR (measured) 9.52 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #18 (B18)

Date Tested: 01/26/2011

Body-worn SAR - KRA-27M "Antenna C" – KNB-56N Ni-MH "Battery c" – 476.7 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7 \text{ MHz}$; $\sigma = 0.927 \text{ mho/m}$; $\epsilon_r = 56.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.7 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 10.1 mW/g

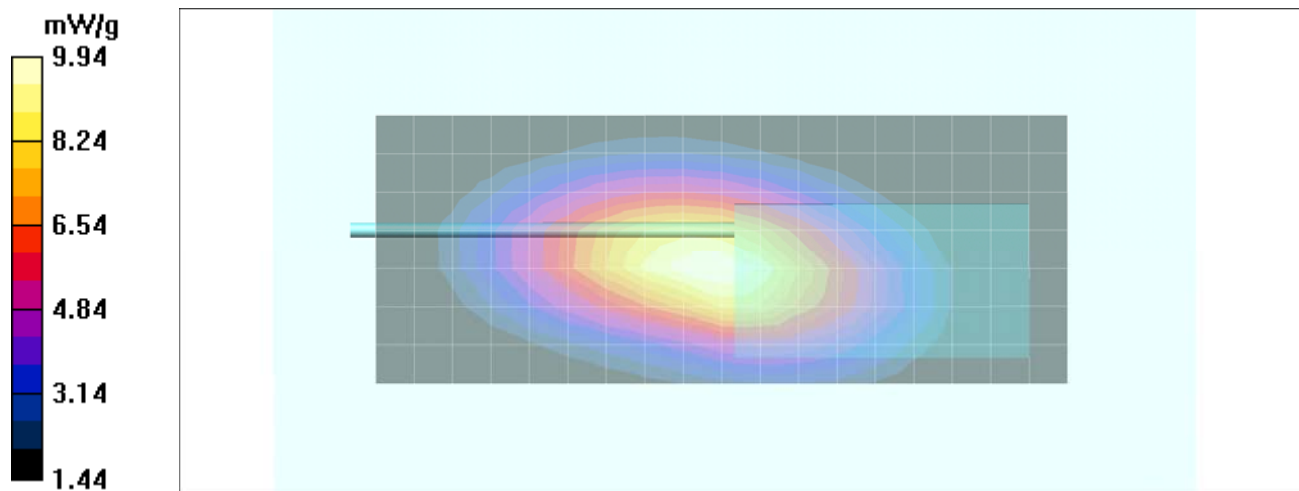
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 106.4 V/m; Power Drift = -0.384 dB



Peak SAR (extrapolated) = 13.8 W/kg

SAR(1 g) = 9.52 mW/g; SAR(10 g) = 6.9 mW/g

Maximum value of SAR (measured) 9.94 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #19 (B19)

Date Tested: 01/26/2011

Body-worn SAR - KRA-27M "Antenna C" – KBP-5 9V AAx6 "Battery d" – 476.7 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.3°C; Fluid Temp: 22.7°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7 \text{ MHz}$; $\sigma = 0.927 \text{ mho/m}$; $\epsilon_r = 56.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.7 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 8.67 mW/g

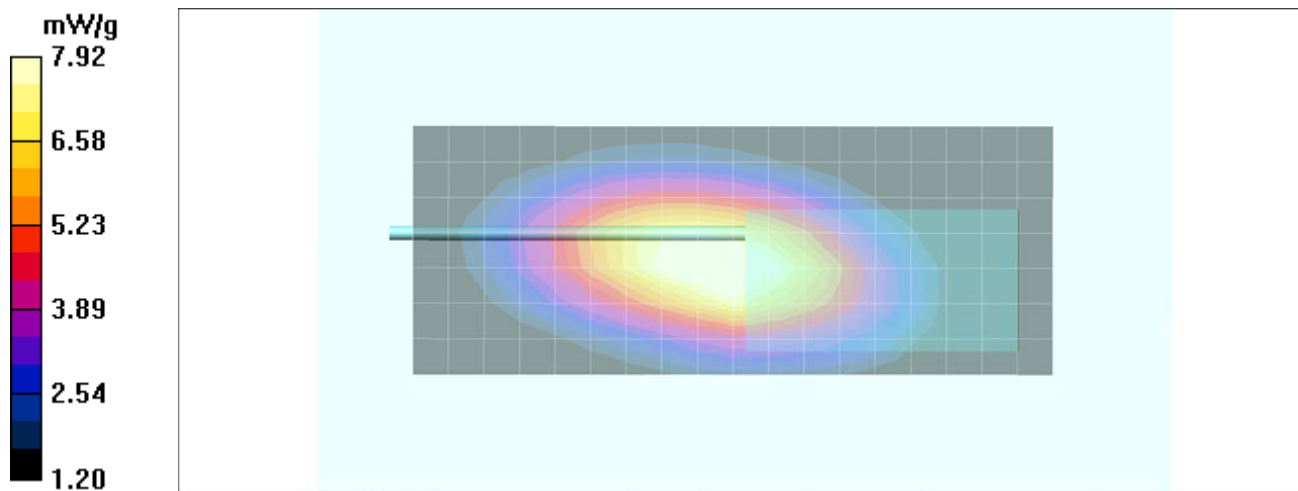
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 100.5 V/m; Power Drift = -1.17 dB



Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 7.58 mW/g; SAR(10 g) = 5.55 mW/g

Maximum value of SAR (measured) 7.92 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Body SAR Plot #20 (B20)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M2 “Antenna D” – KNB-55L Li-ion “Battery b” – 512.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.972 \text{ mho/m}$; $\epsilon_r = 58.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 13.0 mW/g

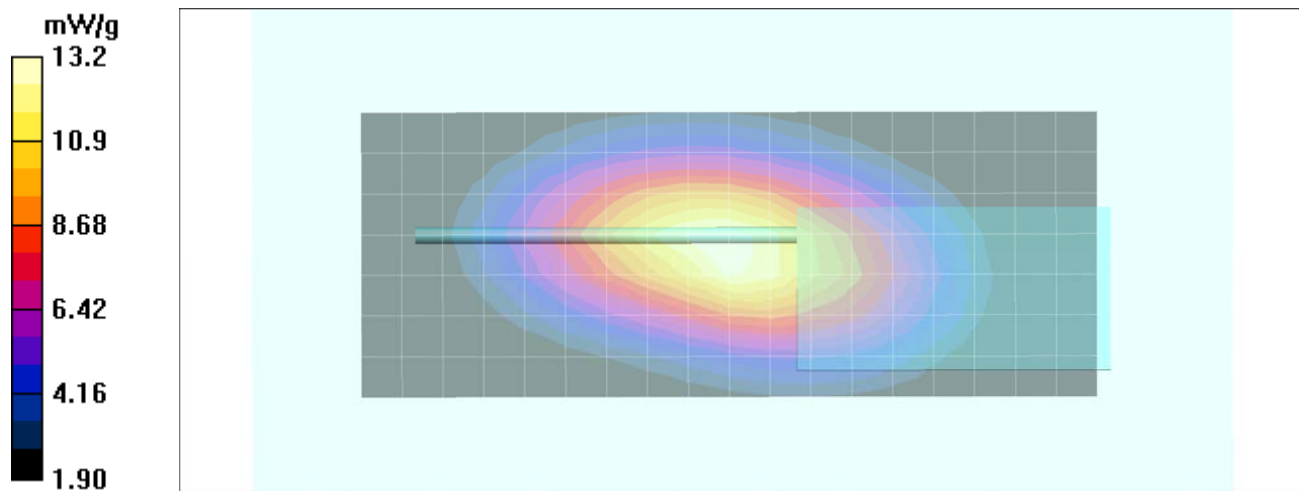
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 104.3 V/m; Power Drift = -0.261 dB

Peak SAR (extrapolated) = 18.4 W/kg

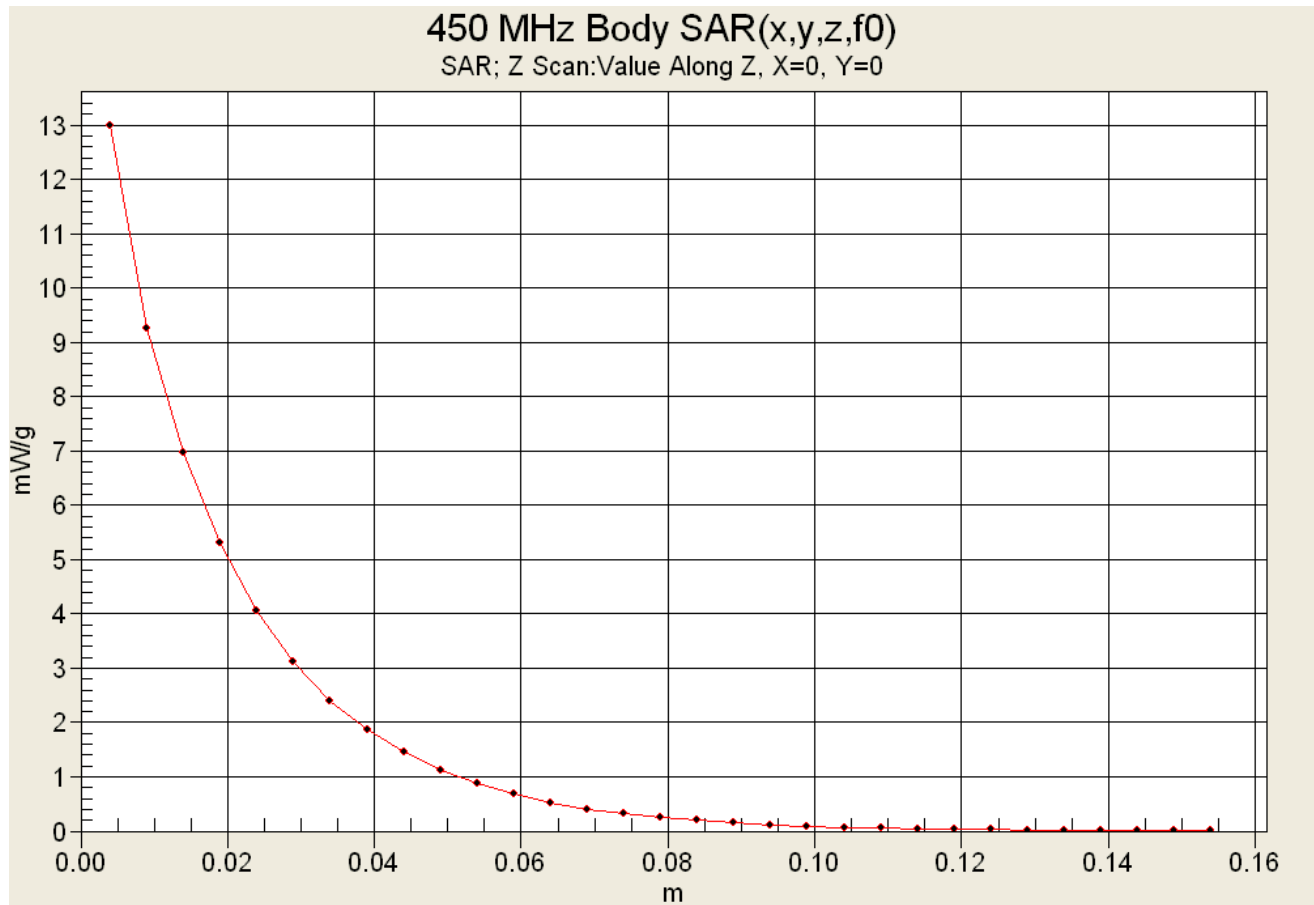
SAR(1 g) = 12.7 mW/g; SAR(10 g) = 9.08 mW/g



Maximum value of SAR (measured) 13.2 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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Z-Axis Scan



	<u>Date(s) of Evaluation</u> Jan. 4,6,26-28,31, 2011	<u>Test Report Serial No.</u> 121510ALH-T1070-S90U	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #21 (B21)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M2 “Antenna D” – KNB-55L Li-ion “Battery b” – 498.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 498 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 498 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 58.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 12.6 mW/g

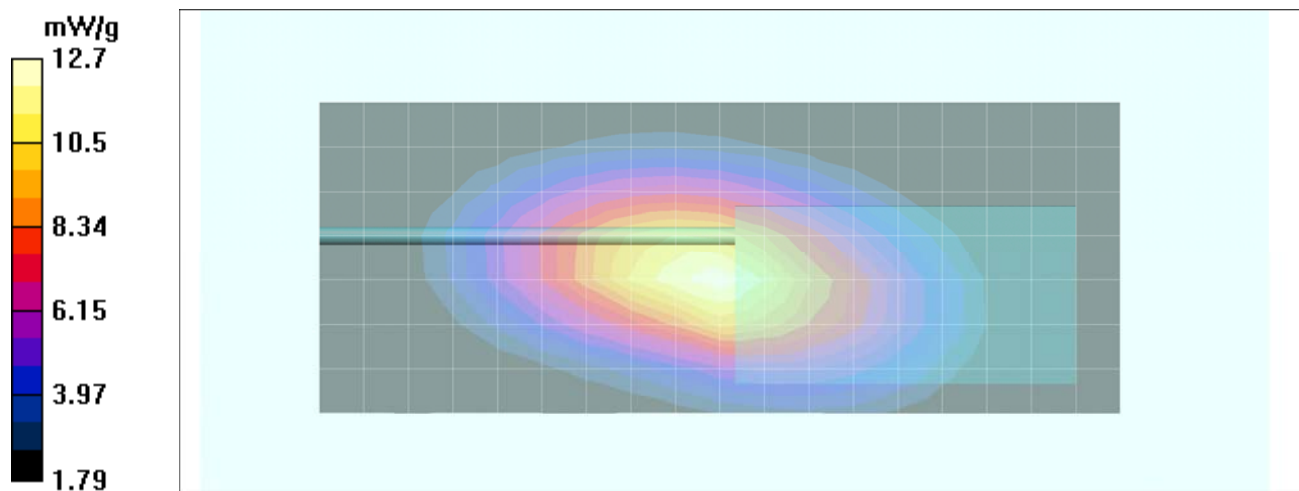
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 117.8 V/m; Power Drift = -0.305 dB



Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 12.1 mW/g; SAR(10 g) = 8.68 mW/g

Maximum value of SAR (measured) 12.7 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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	<u>Date(s) of Evaluation</u> Jan. 4,6,26-28,31, 2011	<u>Test Report Serial No.</u> 121510ALH-T1070-S90U	<u>Test Report Revision No.</u> Rev. 1.2 (3rd Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> March 24, 2011	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot #22 (B22)

Date Tested: 01/04/2011

Body-worn SAR - KRA-27M2 “Antenna D” – KNB-55L Li-ion “Battery b” – 484.0 MHz

DUT: Kenwood NX-320-K3; Type: Portable FM UHF-H PTT Radio Transceiver; Serial: No. 10
Default Audio Accessory: Noise Reduction Headset (Behind-the-Head) (P/N: KHS-10-BH)
Body-worn Accessory 1: Belt-Clip (P/N: KBH-12)

Ambient Temp: 23.0°C; Fluid Temp: 22.4°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: CW

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 58.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.73, 7.73, 7.73); Calibrated: 15/07/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 27/04/2010
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body-worn SAR – 1.5 cm Belt-Clip Spacing from Back of DUT to Planar Phantom

Area Scan (8x19x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 11.8 mW/g

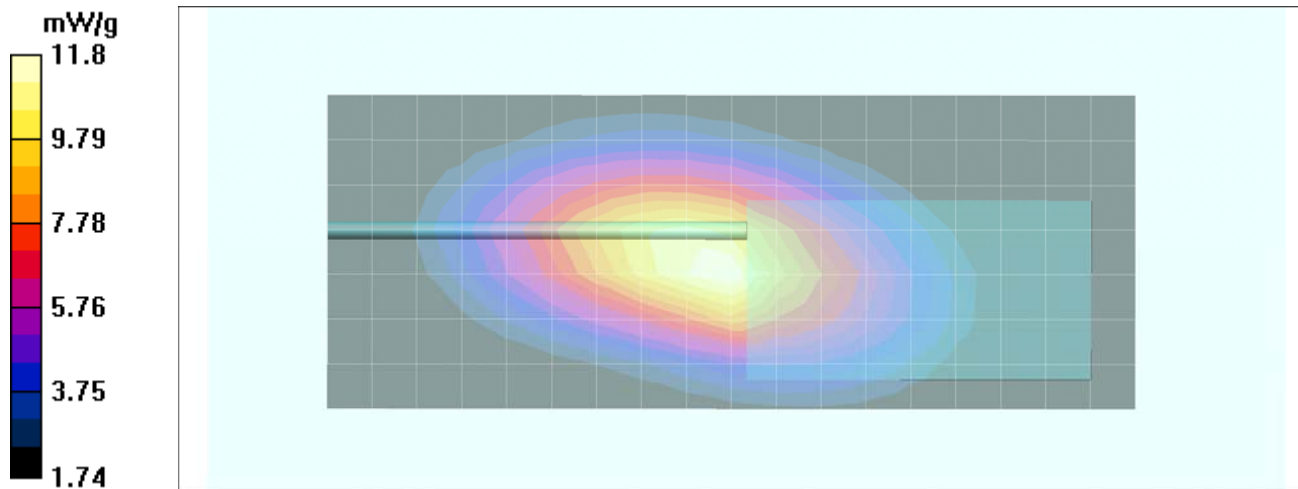
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 112.9 V/m; Power Drift = -0.262 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 11.3 mW/g; SAR(10 g) = 8.01 mW/g

Maximum value of SAR (measured) 11.8 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH431000	DUT Model:	NX-320-K3	KENWOOD
DUT Type:	Portable UHF-H PTT Radio Transceiver	Transmitter Frequency Range:		450.0 - 512.0 MHz		
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