


	<u>Date(s) of Evaluation</u> Aug 20-30, Oct 4-10, 2012	<u>Test Report Serial No.</u> 081612ALH-T1190-S90V	<u>Test Report Revision No.</u> Rev. 1.0 (1st Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> Oct. 22, 2012	<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:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F1

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 461.7 \text{ MHz}$; $\sigma = 0.85 \text{ mho/m}$; $\epsilon_r = 43.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.05 mW/g

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

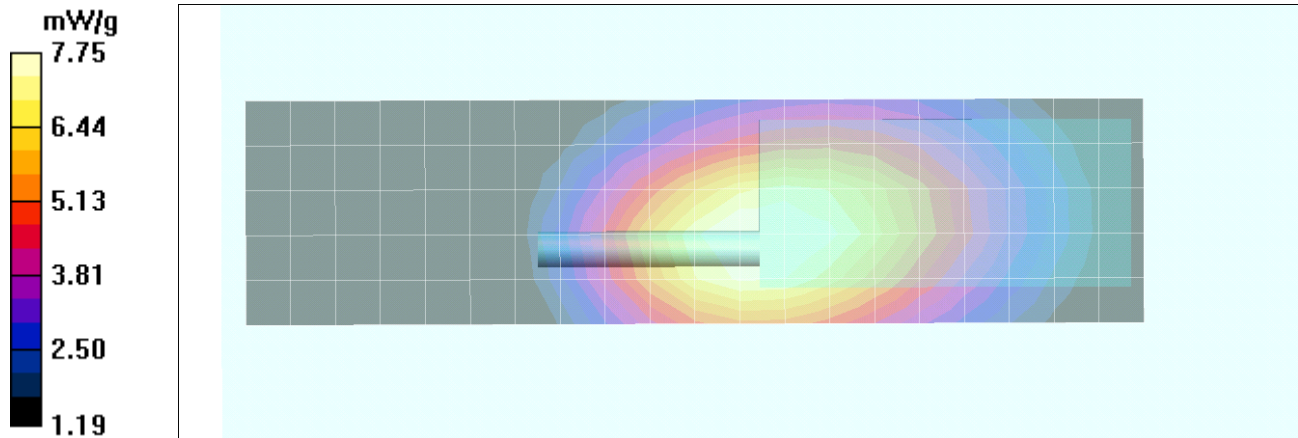
Reference Value = 96.8 V/m; Power Drift = -0.445 dB

Peak SAR (extrapolated) = 10.3 W/kg



SAR(1 g) = 7.39 mW/g; SAR(10 g) = 5.39 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.75 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F2

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 485 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 485 \text{ MHz}$; $\sigma = 0.86 \text{ mho/m}$; $\epsilon_r = 42.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 6.52 mW/g

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

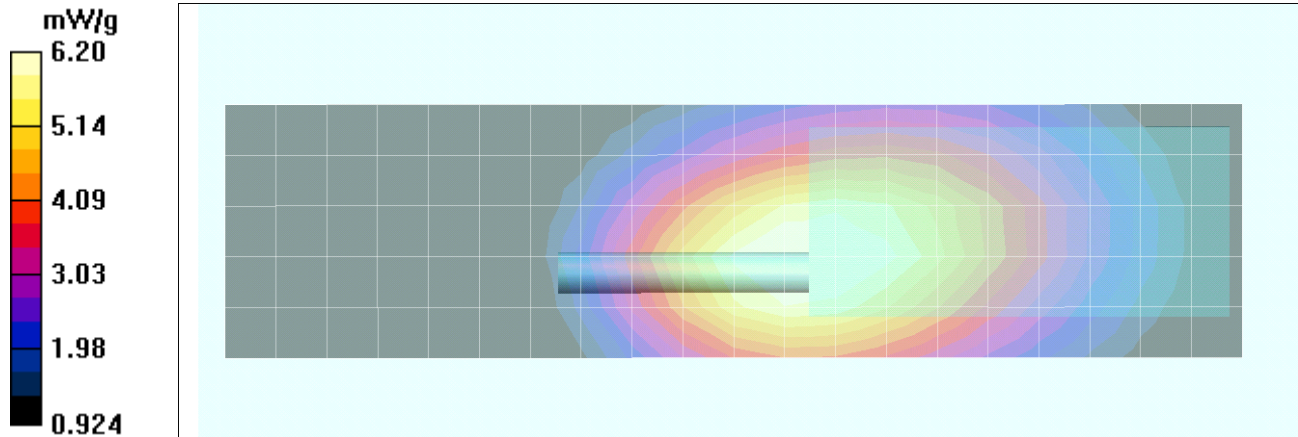
Reference Value = 88.6 V/m; Power Drift = -0.656 dB

Peak SAR (extrapolated) = 8.26 W/kg



SAR(1 g) = 5.9 mW/g; SAR(10 g) = 4.29 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 6.20 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F3

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.86 \text{ mho/m}$; $\epsilon_r = 42.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.36 mW/g

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

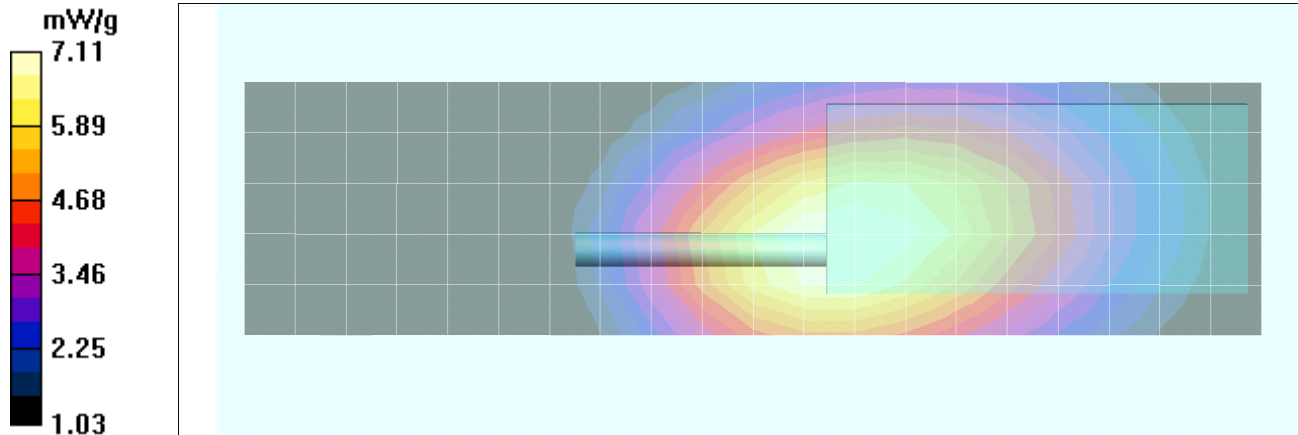
Reference Value = 92.4 V/m; Power Drift = -0.519 dB

Peak SAR (extrapolated) = 9.48 W/kg



SAR(1 g) = 6.75 mW/g; SAR(10 g) = 4.88 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.11 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F4

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.85$ mho/m; $\epsilon_r = 43.5$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.34 mW/g

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

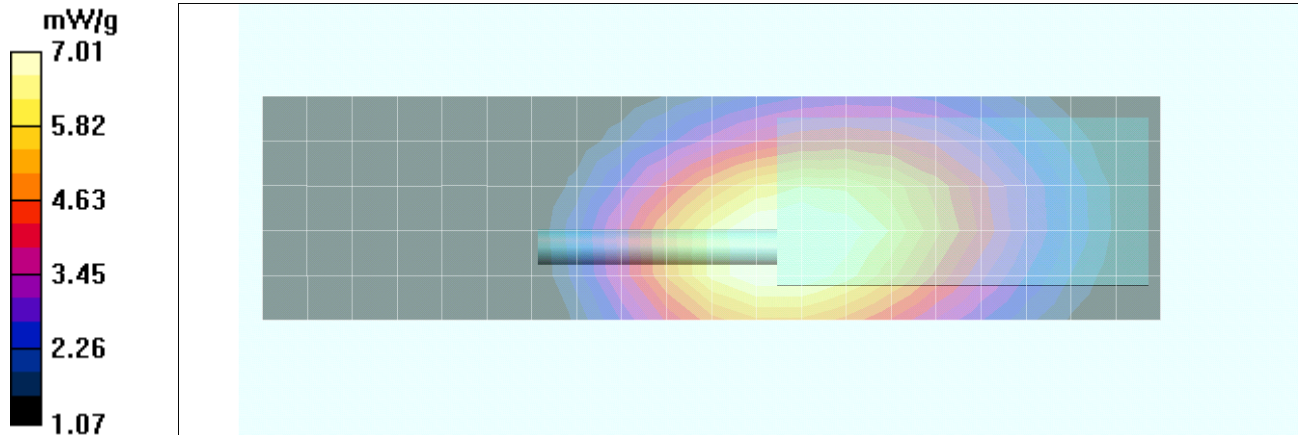
Reference Value = 91.9 V/m; Power Drift = -0.619 dB

Peak SAR (extrapolated) = 9.35 W/kg



SAR(1 g) = 6.69 mW/g; SAR(10 g) = 4.87 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.01 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F5

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 484$ MHz; $\sigma = 0.86$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 6.42 mW/g

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

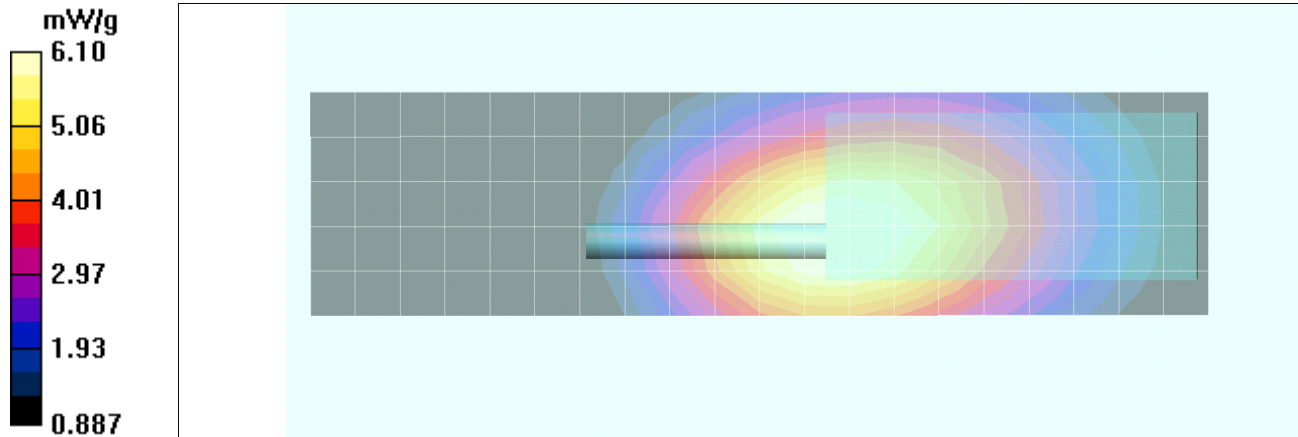
Reference Value = 87.7 V/m; Power Drift = -0.738 dB

Peak SAR (extrapolated) = 8.12 W/kg



SAR(1 g) = 5.8 mW/g; SAR(10 g) = 4.21 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

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



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F6

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.85$ mho/m; $\epsilon_r = 43.5$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.01 mW/g

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

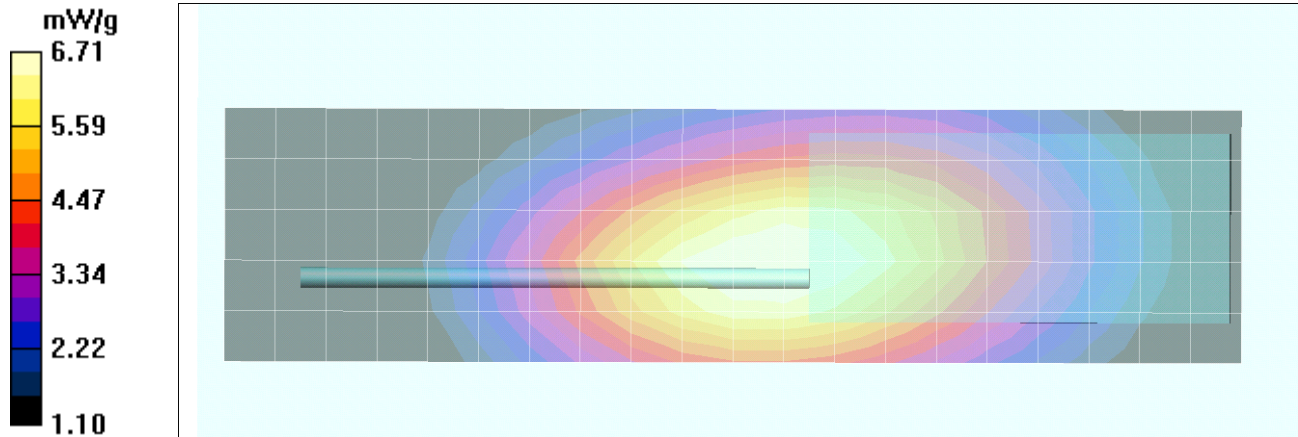
Reference Value = 90.6 V/m; Power Drift = -0.458 dB

Peak SAR (extrapolated) = 8.93 W/kg



SAR(1 g) = 6.41 mW/g; SAR(10 g) = 4.68 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 6.71 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F7

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 484$ MHz; $\sigma = 0.86$ mho/m; $\epsilon_r = 42.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.59 mW/g

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

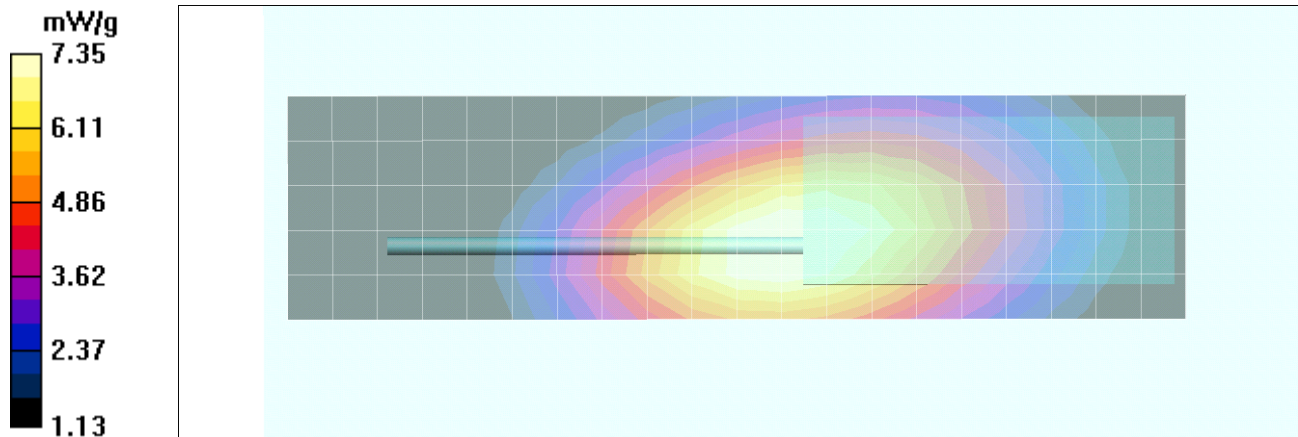
Reference Value = 93.0 V/m; Power Drift = -0.586 dB

Peak SAR (extrapolated) = 9.77 W/kg



SAR(1 g) = 6.98 mW/g; SAR(10 g) = 5.07 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.35 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F8

Date Tested: 10/05/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 21.4C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.867$ mho/m; $\epsilon_r = 44.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 6.41 mW/g

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

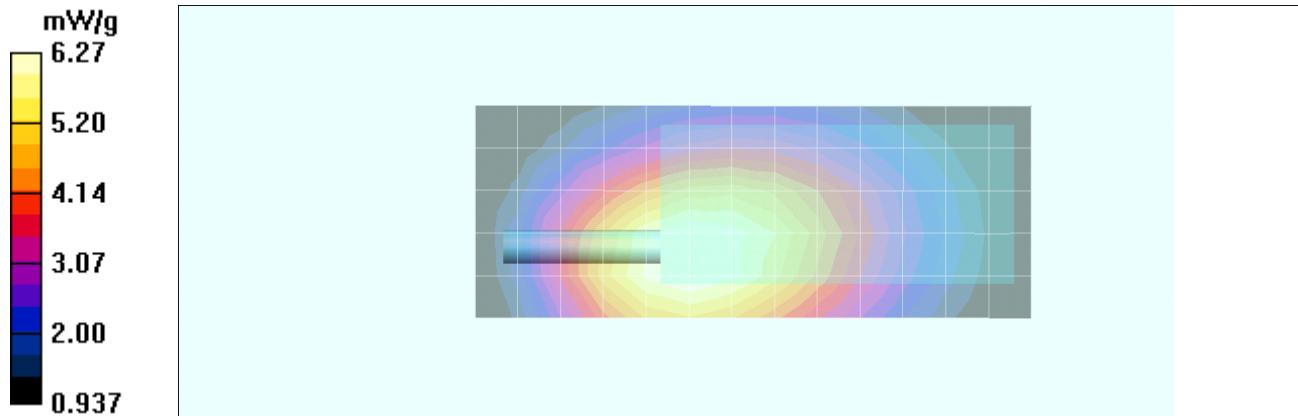
Reference Value = 80.2 V/m; Power Drift = -0.414 dB

Peak SAR (extrapolated) = 8.29 W/kg

SAR(1 g) = 5.96 mW/g; SAR(10 g) = 4.35 mW/g

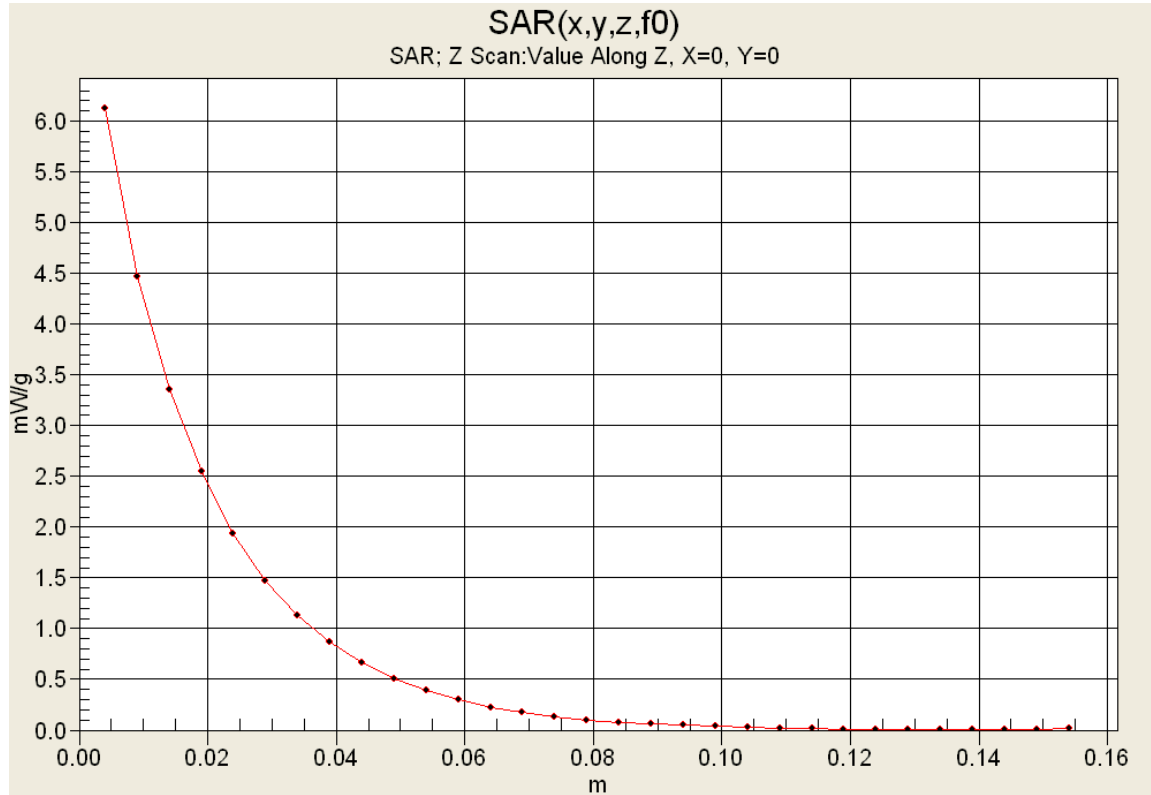
Info: Interpolated medium parameters used for SAR evaluation.



Maximum value of SAR (measured) = 6.27 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan



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Face SAR Plot F9

Date Tested: 10/05/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 21.4C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 484$ MHz; $\sigma = 0.89$ mho/m; $\epsilon_r = 44.5$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.99 mW/g

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

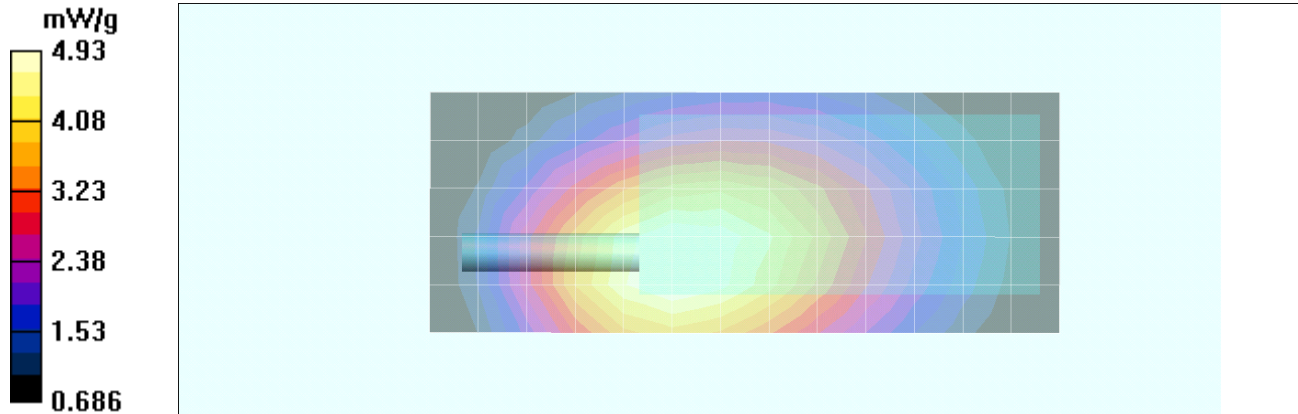
Reference Value = 70.4 V/m; Power Drift = -0.496 dB

Peak SAR (extrapolated) = 6.56 W/kg



SAR(1 g) = 4.68 mW/g; SAR(10 g) = 3.38 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.93 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Face SAR Plot F10

Date Tested: 08/22/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 23.3C; Barometric Pressure: 101.1 kPa; Humidity: 32%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: HSL450 Medium parameters used (interpolated): $f = 461.7$ MHz; $\sigma = 0.85$ mho/m; $\epsilon_r = 43.5$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.54, 7.54, 7.54); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.30 mW/g

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

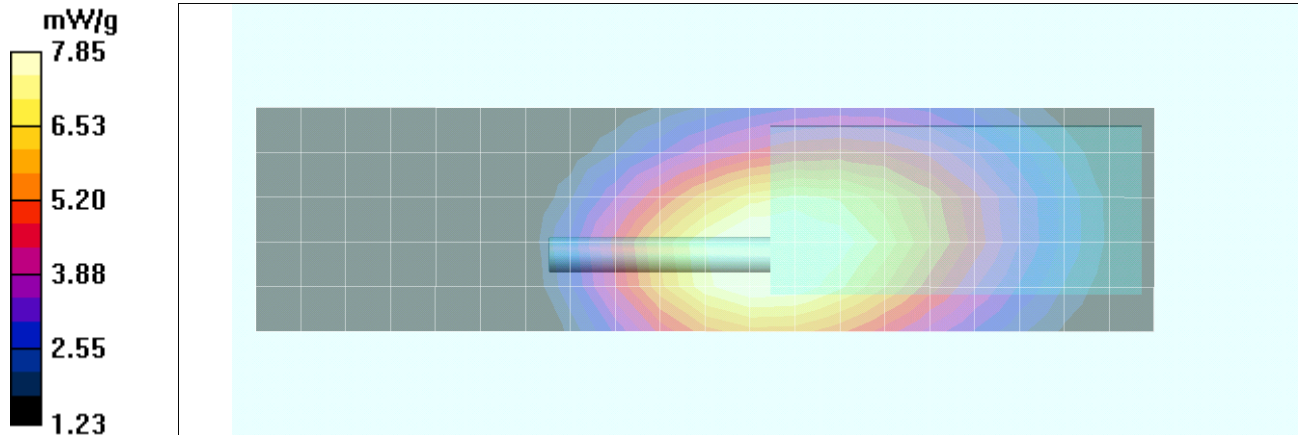
Reference Value = 99.3 V/m; Power Drift = -0.735 dB

Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 7.49 mW/g; SAR(10 g) = 5.46 mW/g

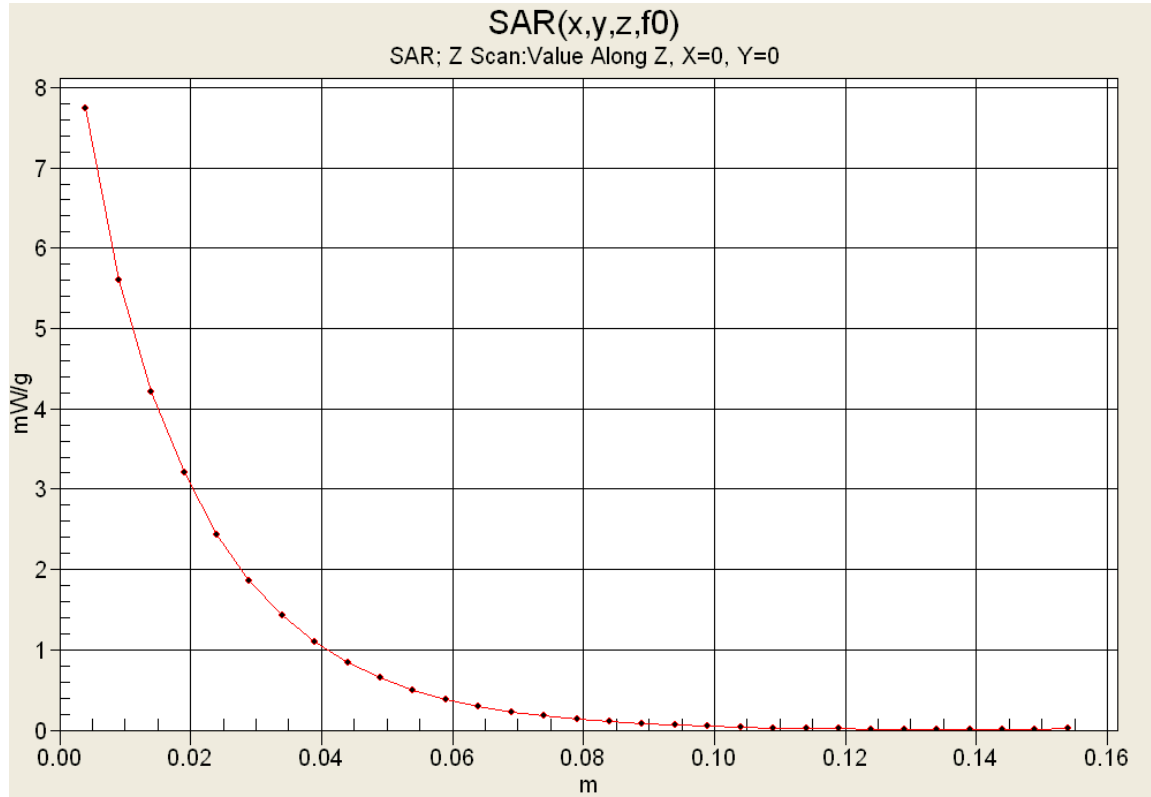
Info: Interpolated medium parameters used for SAR evaluation.



Maximum value of SAR (measured) = 7.85 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan



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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B1

Date Tested: 08/20/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.8C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 56.1$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x20x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 7.62 mW/g

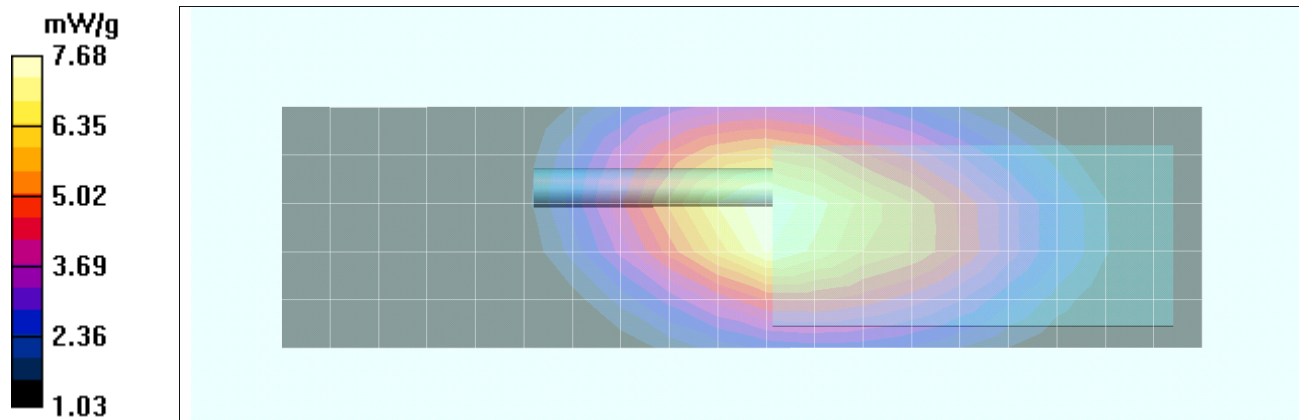
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 91.1 V/m; Power Drift = -0.008 dB



Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 7.32 mW/g; SAR(10 g) = 5.17 mW/g

Maximum value of SAR (measured) = 7.68 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Date(s) of Evaluation</u> Aug 20-30, Oct 4-10, 2012	<u>Test Report Serial No.</u> 081612ALH-T1190-S90V	<u>Test Report Revision No.</u> Rev. 1.0 (1st Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B2

Date Tested: 08/20/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.8C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 461.7$ MHz; $\sigma = 0.942$ mho/m; $\epsilon_r = 56.3$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x20x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.9 mW/g

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

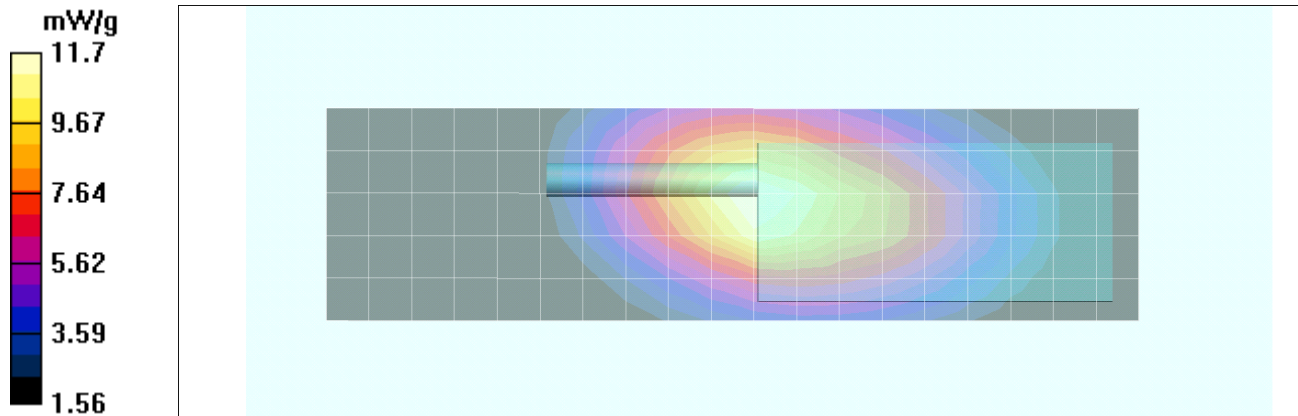
Reference Value = 116.4 V/m; Power Drift = -0.553 dB

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 11 mW/g; SAR(10 g) = 7.75 mW/g

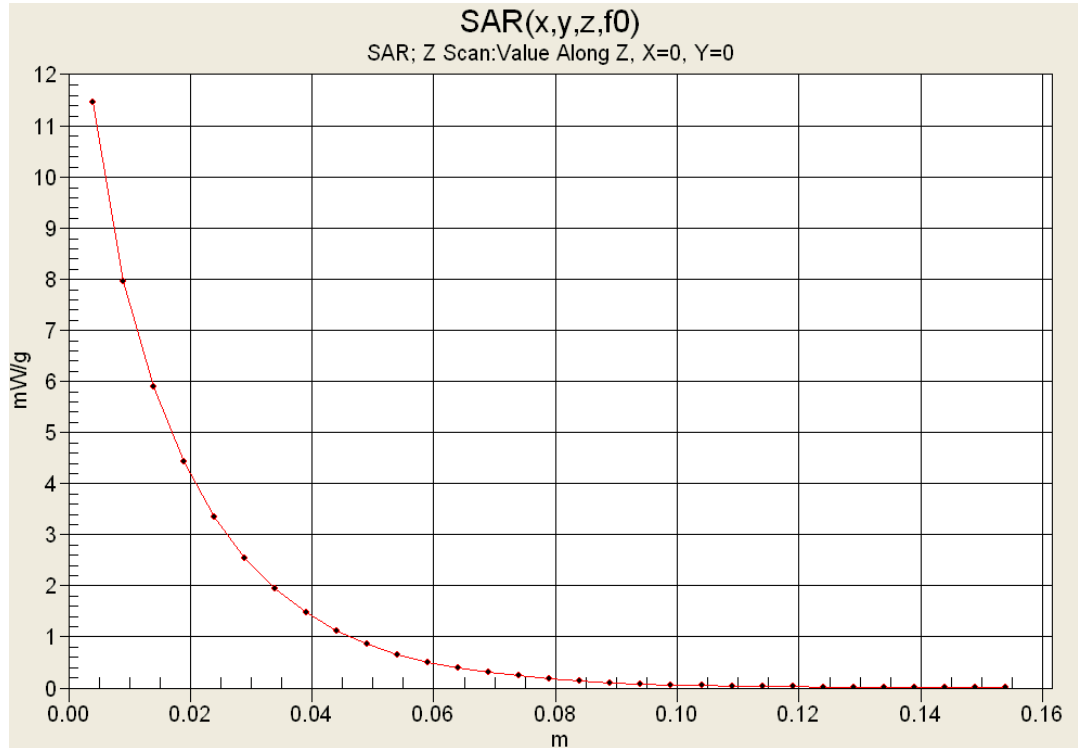
Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.7 mW/g

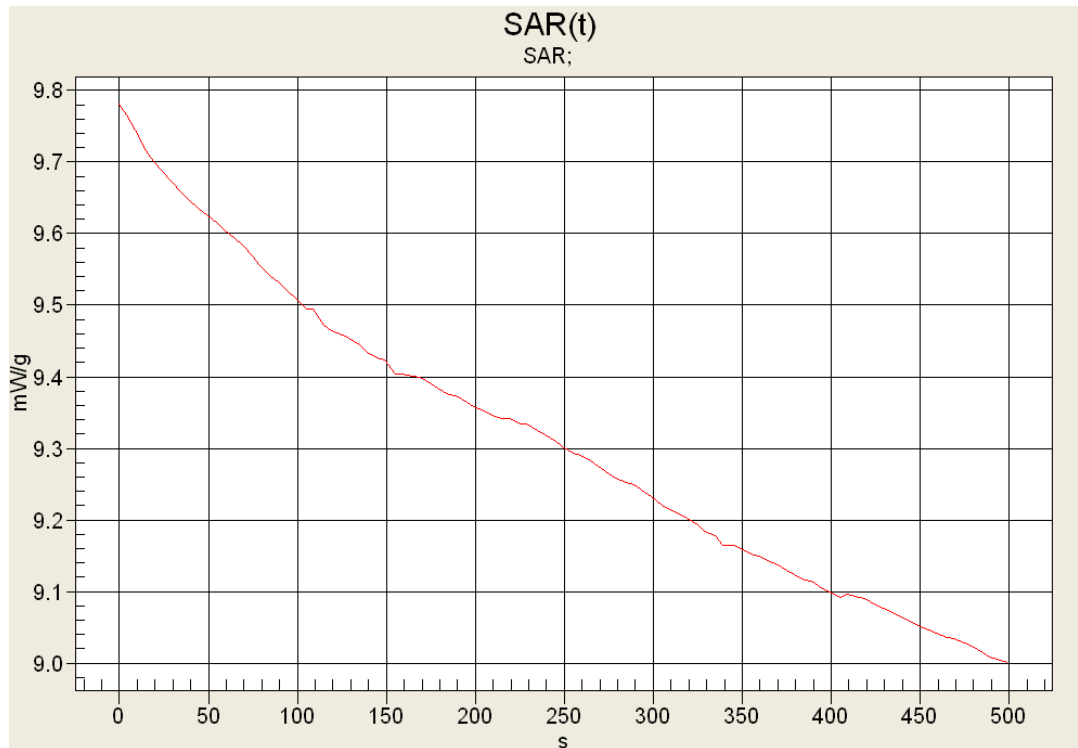




Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan



SAR-versus-Time



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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B3

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 473.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 473.3$ MHz; $\sigma = 0.933$ mho/m; $\epsilon_r = 55.3$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

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

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

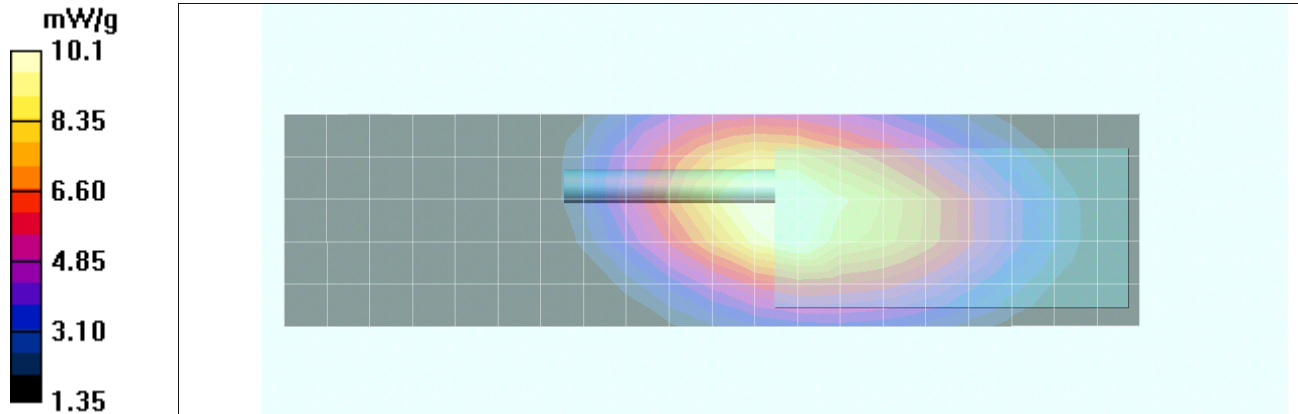
Reference Value = 109.4 V/m; Power Drift = -0.609 dB

Peak SAR (extrapolated) = 14.2 W/kg



SAR(1 g) = 9.59 mW/g; SAR(10 g) = 6.78 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

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



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B4

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 485 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 485 \text{ MHz}$; $\sigma = 0.94 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.45 mW/g

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

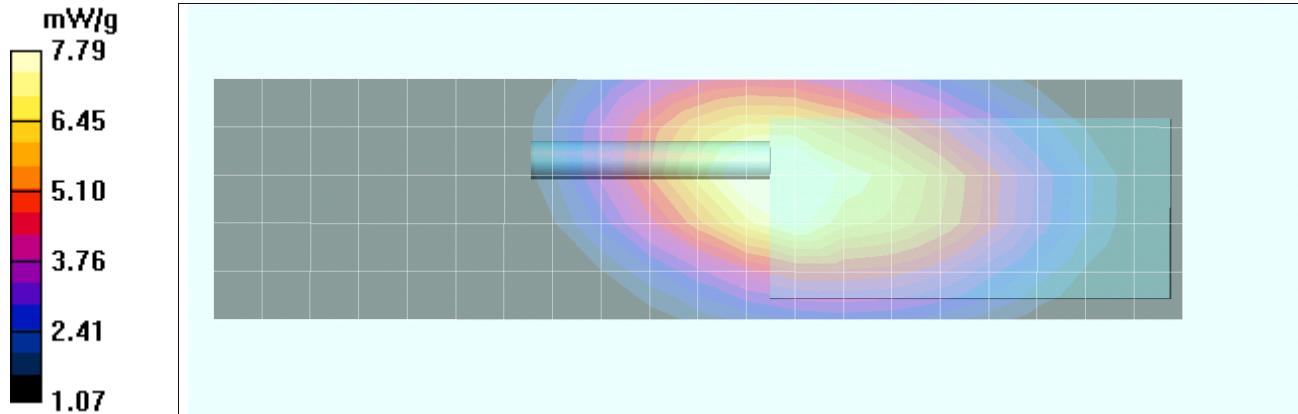
Reference Value = 95.3 V/m; Power Drift = -0.701 dB

Peak SAR (extrapolated) = 10.9 W/kg



SAR(1 g) = 7.38 mW/g; SAR(10 g) = 5.22 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.79 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B5

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 470 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 55.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 11.2 mW/g

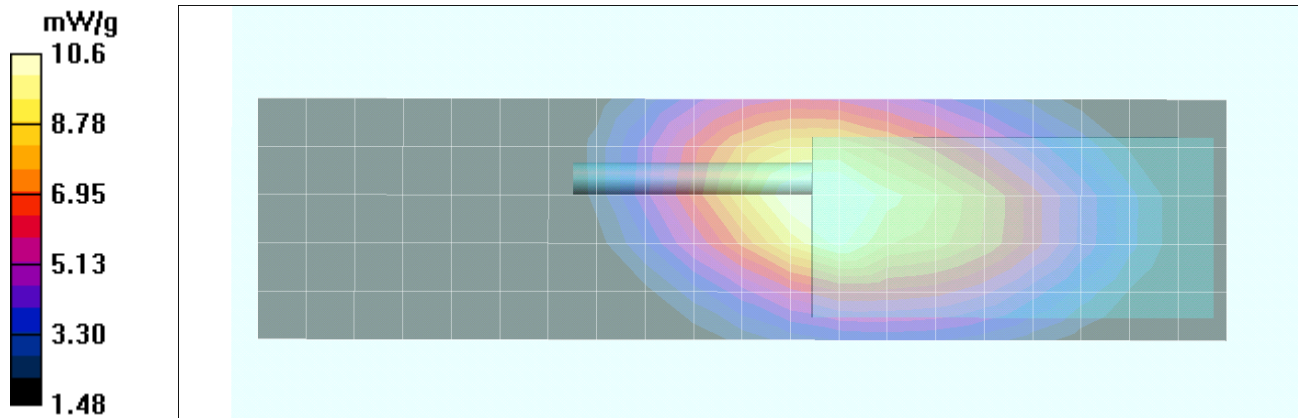
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 109.8 V/m; Power Drift = -0.513 dB

Peak SAR (extrapolated) = 14.8 W/kg

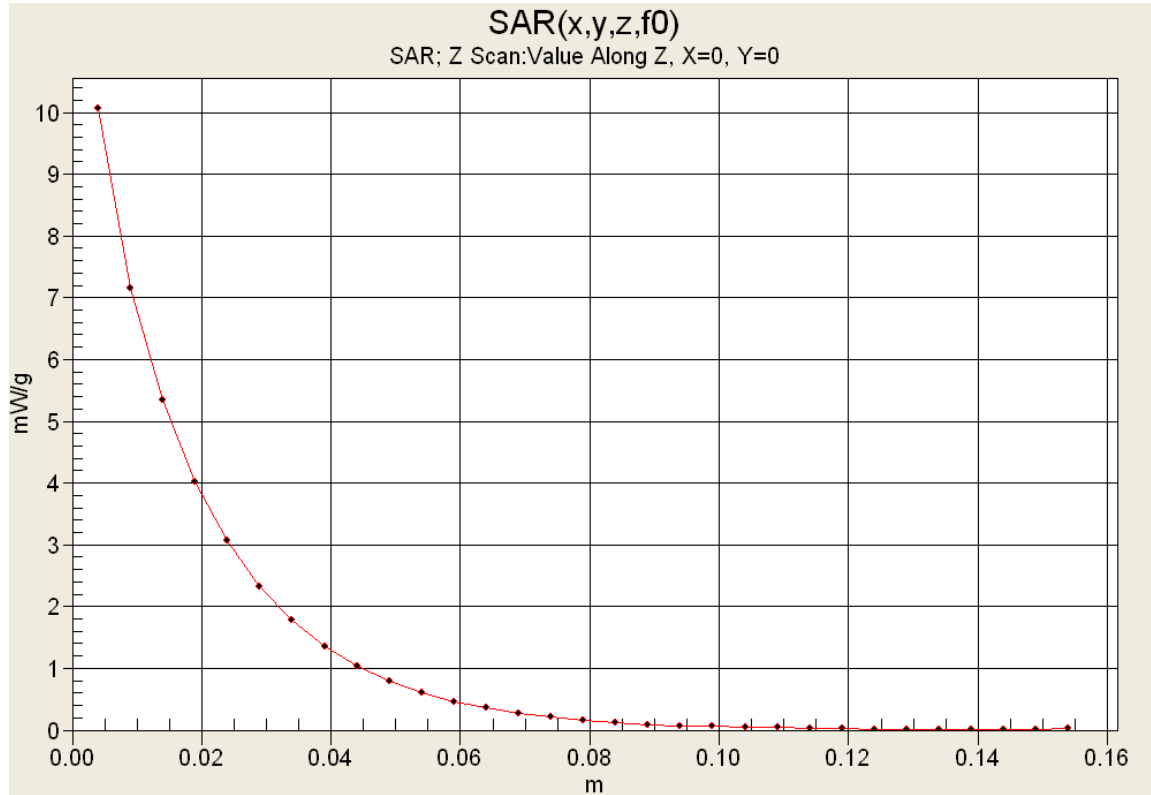
SAR(1 g) = 10 mW/g; SAR(10 g) = 7.12 mW/g



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



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan



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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B6

Date Tested: 08/21/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.5C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.948 \text{ mho/m}$; $\epsilon_r = 55.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.1 mW/g

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

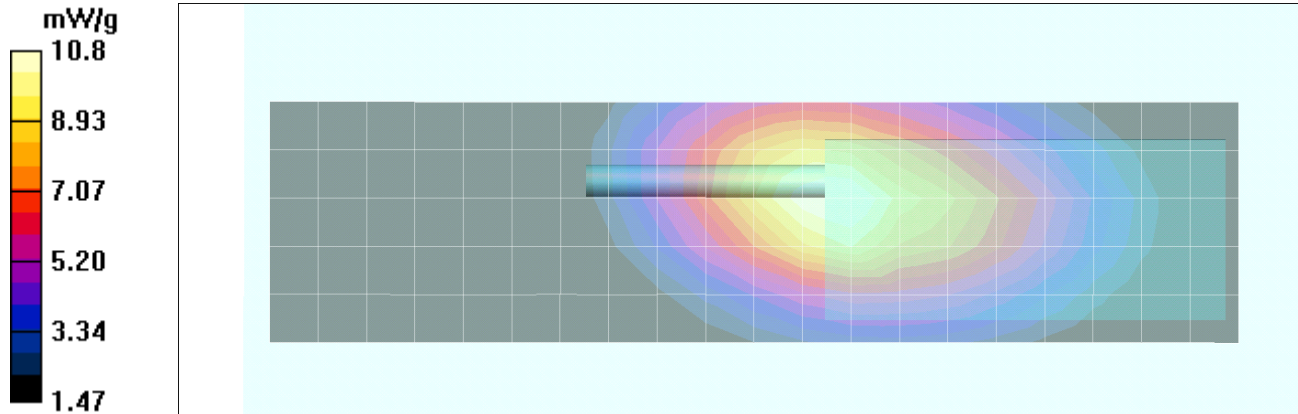
Reference Value = 108.8 V/m; Power Drift = -0.501 dB

Peak SAR (extrapolated) = 15.3 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 7.22 mW/g

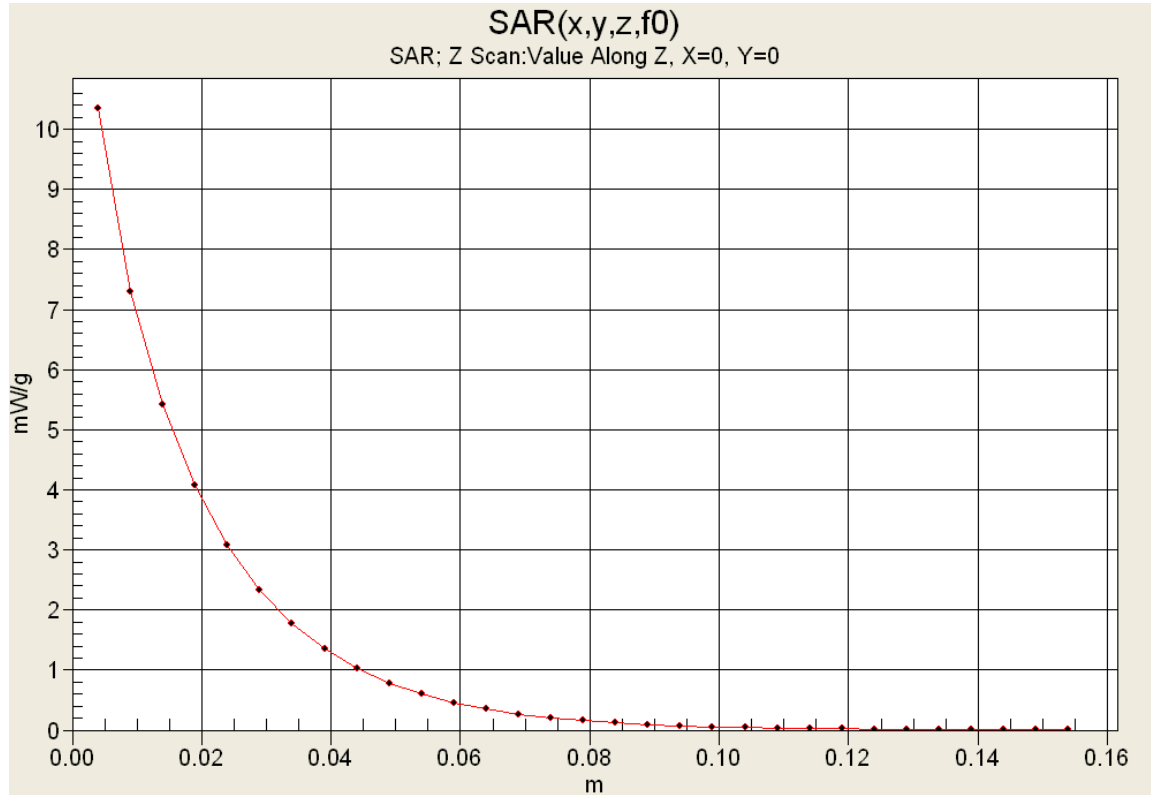
Info: Interpolated medium parameters used for SAR evaluation.



Maximum value of SAR (measured) = 10.8 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan



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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B7

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 498 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 498 \text{ MHz}$; $\sigma = 0.948 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.19 mW/g

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

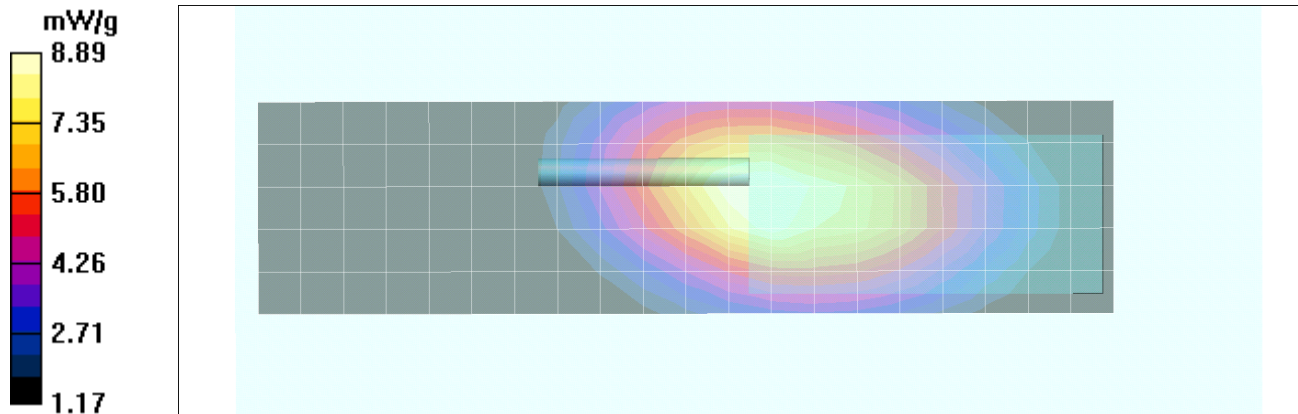
Reference Value = 101.6 V/m; Power Drift = -0.560 dB

Peak SAR (extrapolated) = 12.4 W/kg



SAR(1 g) = 8.42 mW/g; SAR(10 g) = 5.96 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.89 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B8

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.964 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.42 mW/g

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

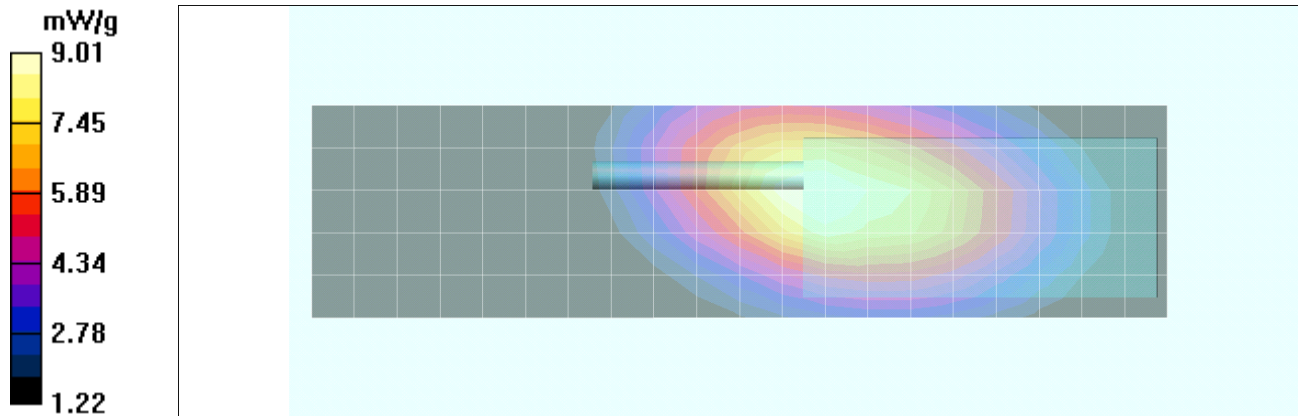
Reference Value = 96.6 V/m; Power Drift = -0.319 dB

Peak SAR (extrapolated) = 12.5 W/kg



SAR(1 g) = 8.48 mW/g; SAR(10 g) = 6.01 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.01 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B9

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 8.95 mW/g

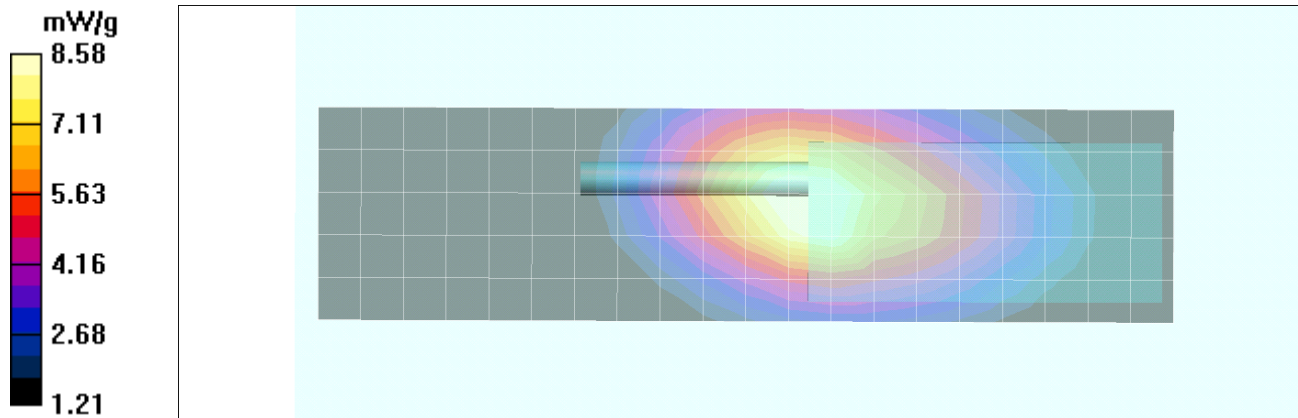
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 96.8 V/m; Power Drift = -0.124 dB



Peak SAR (extrapolated) = 12.0 W/kg

SAR(1 g) = 8.16 mW/g; SAR(10 g) = 5.8 mW/g

Maximum value of SAR (measured) = 8.58 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B10

Date Tested: 08/20/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.8C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.943$ mho/m; $\epsilon_r = 56.2$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x20x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 10.7 mW/g

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

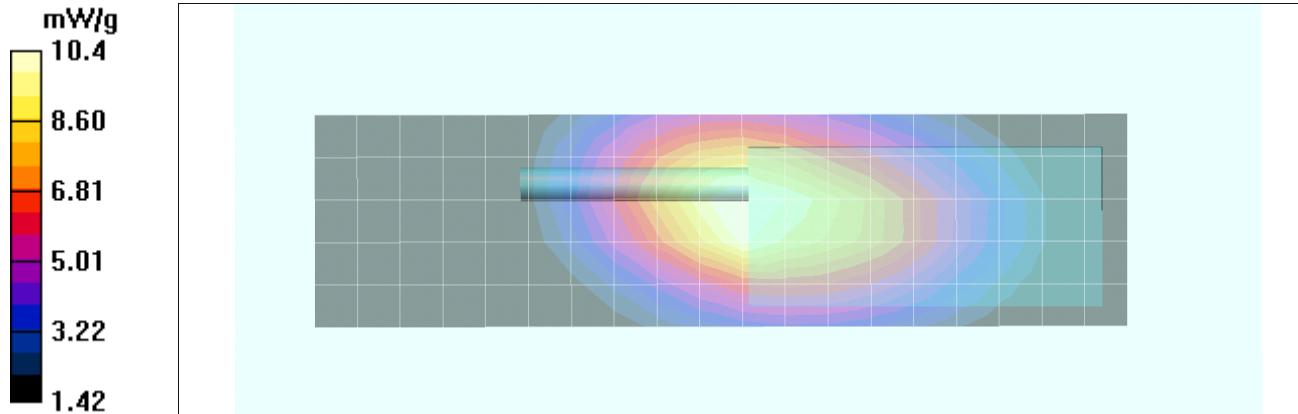
Reference Value = 111.8 V/m; Power Drift = -0.674 dB

Peak SAR (extrapolated) = 14.6 W/kg



SAR(1 g) = 9.82 mW/g; SAR(10 g) = 6.94 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

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



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B11

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7$ MHz; $\sigma = 0.937$ mho/m; $\epsilon_r = 55.2$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASy4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.90 mW/g

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

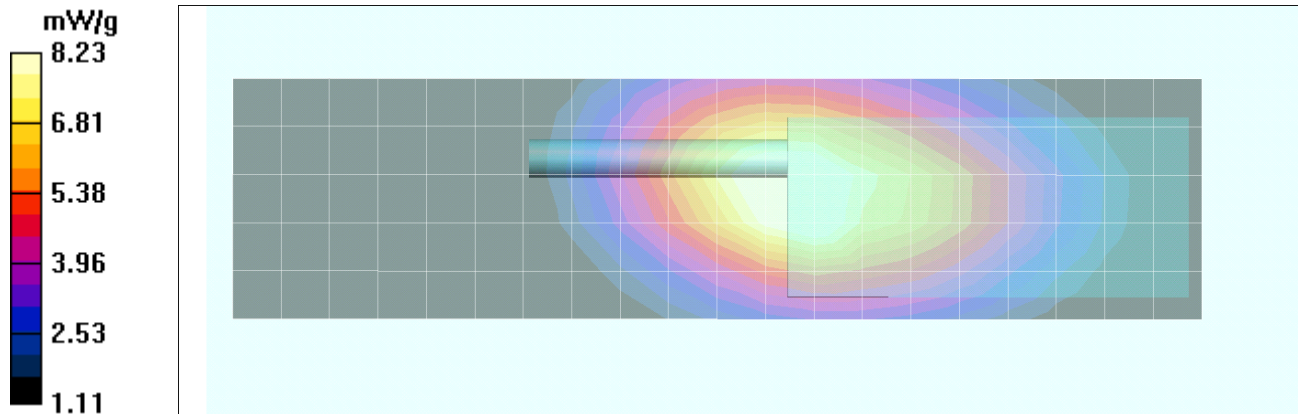
Reference Value = 102.0 V/m; Power Drift = -0.909 dB

Peak SAR (extrapolated) = 11.5 W/kg



SAR(1 g) = 7.76 mW/g; SAR(10 g) = 5.48 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.23 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B12

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 470 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 55.4$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 10.9 mW/g

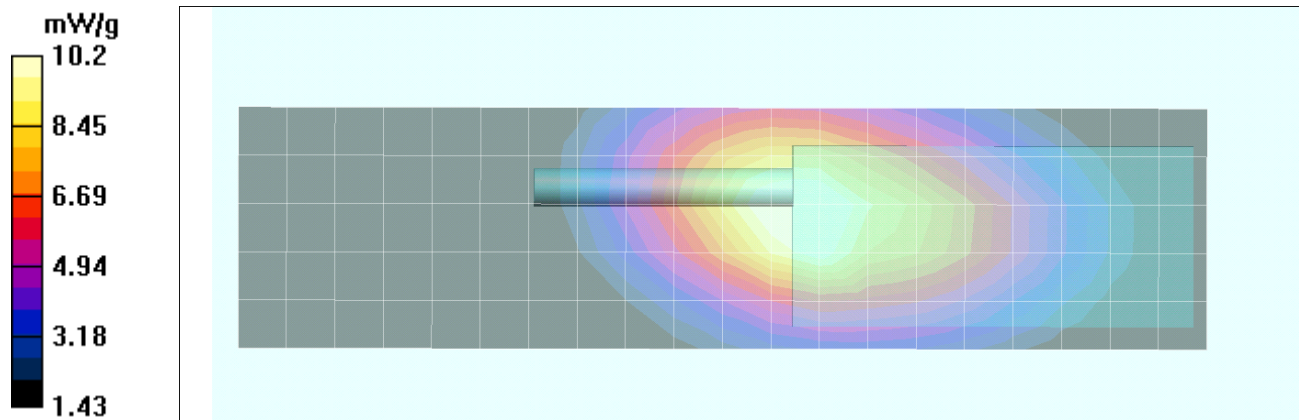
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 108.7 V/m; Power Drift = -0.557 dB



Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 9.68 mW/g; SAR(10 g) = 6.85 mW/g

Maximum value of SAR (measured) = 10.2 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B13

Date Tested: 08/21/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.5C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.948 \text{ mho/m}$; $\epsilon_r = 55.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.90 mW/g

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

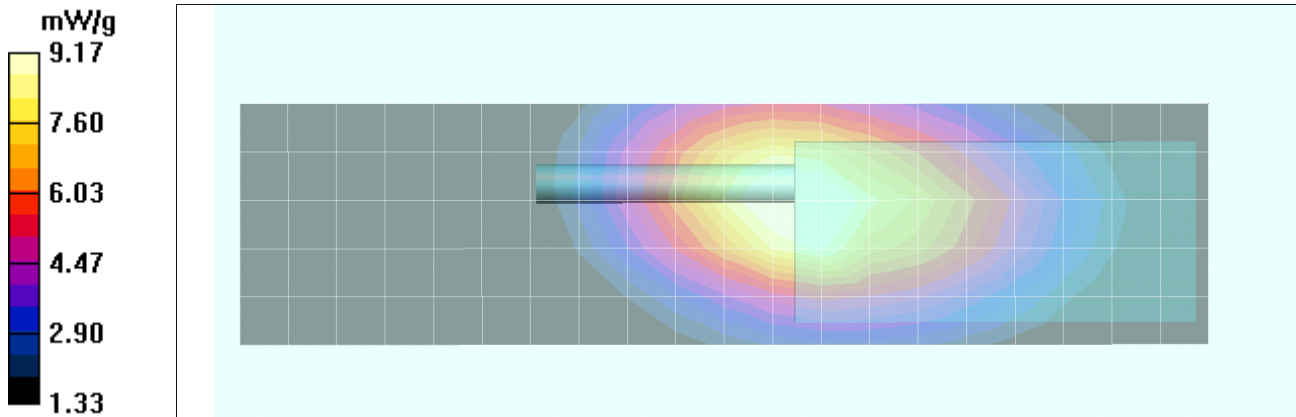
Reference Value = 102.9 V/m; Power Drift = -0.600 dB

Peak SAR (extrapolated) = 12.8 W/kg



SAR(1 g) = 8.73 mW/g; SAR(10 g) = 6.2 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.17 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B14

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 498 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 498 \text{ MHz}$; $\sigma = 0.948 \text{ mho/m}$; $\epsilon_r = 54.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.67 mW/g

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

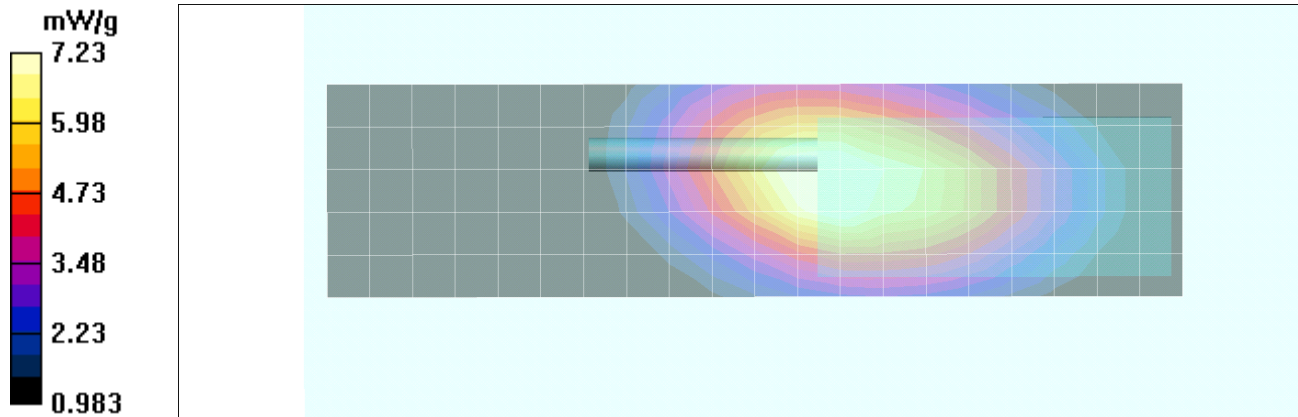
Reference Value = 93.7 V/m; Power Drift = -0.810 dB

Peak SAR (extrapolated) = 10.1 W/kg



SAR(1 g) = 6.84 mW/g; SAR(10 g) = 4.85 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.23 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B15

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 55.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 8.49 mW/g

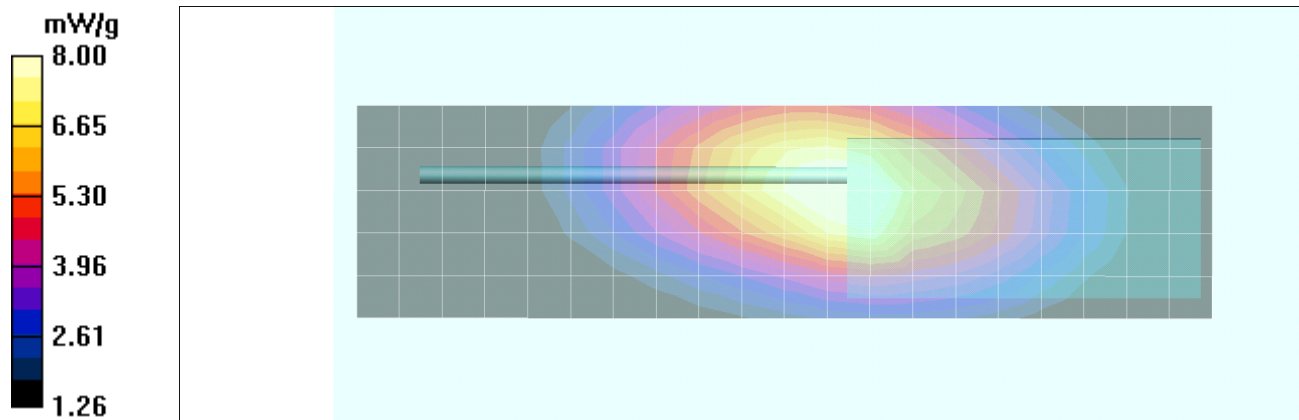
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 94.6 V/m; Power Drift = -0.330 dB



Peak SAR (extrapolated) = 11.1 W/kg

SAR(1 g) = 7.64 mW/g; SAR(10 g) = 5.5 mW/g

Maximum value of SAR (measured) = 8.00 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B16

Date Tested: 08/20/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.8C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.943$ mho/m; $\epsilon_r = 56.2$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x20x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.97 mW/g

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

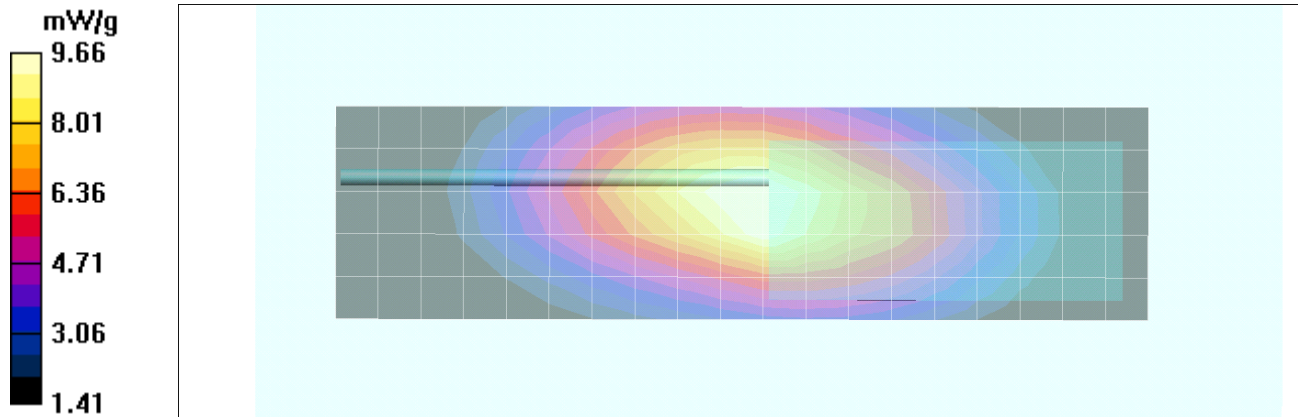
Reference Value = 106.8 V/m; Power Drift = -0.507 dB

Peak SAR (extrapolated) = 13.7 W/kg



SAR(1 g) = 9.22 mW/g; SAR(10 g) = 6.57 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.66 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B17

Date Tested: 08/29/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7 \text{ MHz}$; $\sigma = 0.937 \text{ mho/m}$; $\epsilon_r = 55.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.72 mW/g

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

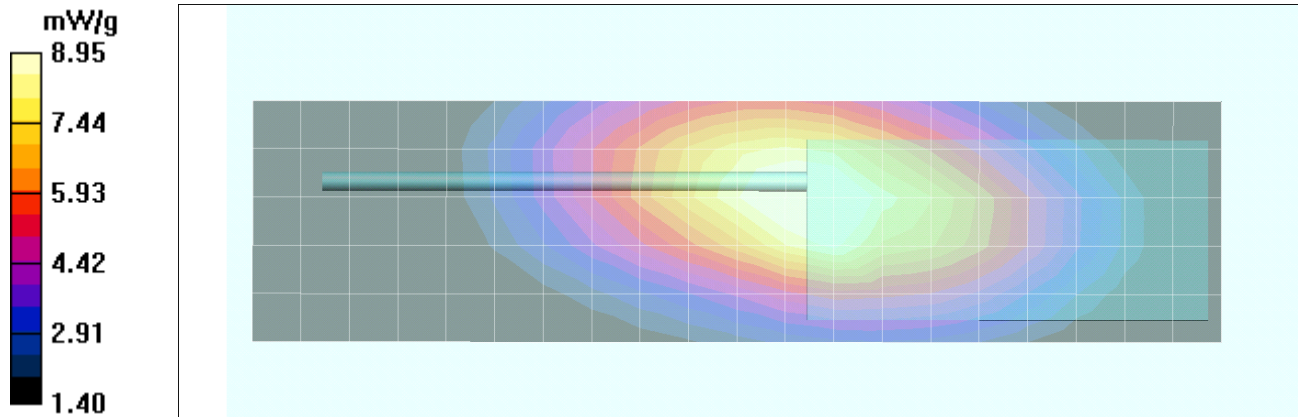
Reference Value = 101.8 V/m; Power Drift = -0.618 dB

Peak SAR (extrapolated) = 12.4 W/kg



SAR(1 g) = 8.52 mW/g; SAR(10 g) = 6.12 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.95 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B18

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 490 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 490 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 8.24 mW/g

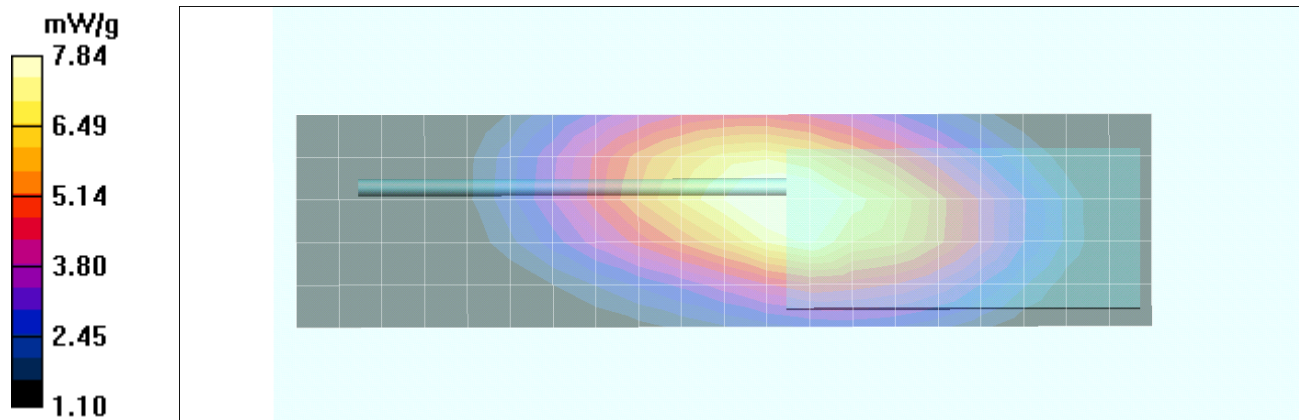
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 93.0 V/m; Power Drift = -0.507 dB



Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 7.44 mW/g; SAR(10 g) = 5.28 mW/g

Maximum value of SAR (measured) = 7.84 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B19

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 470 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 56.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)) Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 10.3 mW/g

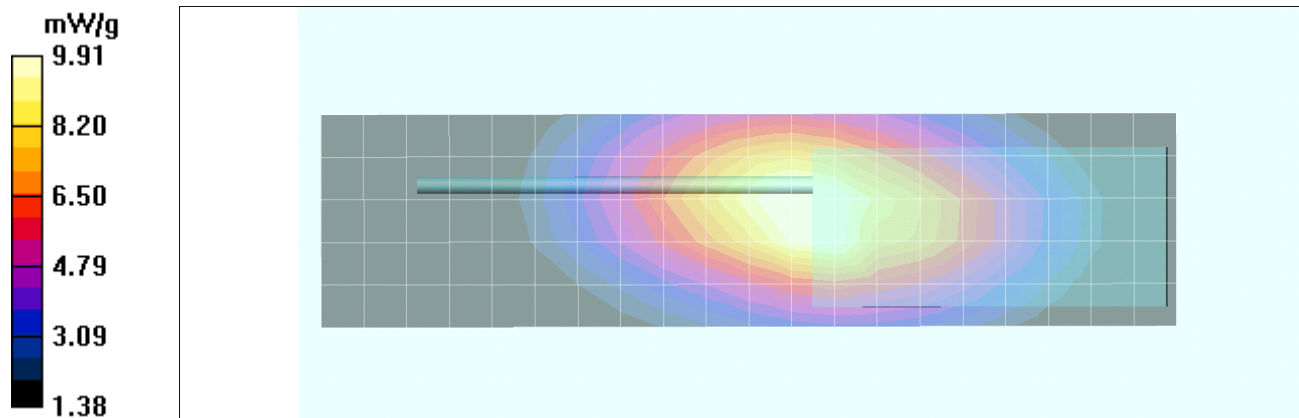
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 107.3 V/m; Power Drift = -0.524 dB



Peak SAR (extrapolated) = 13.9 W/kg

SAR(1 g) = 9.4 mW/g; SAR(10 g) = 6.66 mW/g

Maximum value of SAR (measured) = 9.91 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Date(s) of Evaluation</u> Aug 20-30, Oct 4-10, 2012	<u>Test Report Serial No.</u> 081612ALH-T1190-S90V	<u>Test Report Revision No.</u> Rev. 1.0 (1st Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B20

Date Tested: 08/21/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 24.0C; Fluid Temp: 22.5C; Barometric Pressure: 101.1 kPa; Humidity: 31%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.948 \text{ mho/m}$; $\epsilon_r = 55.6$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 10.8 mW/g

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

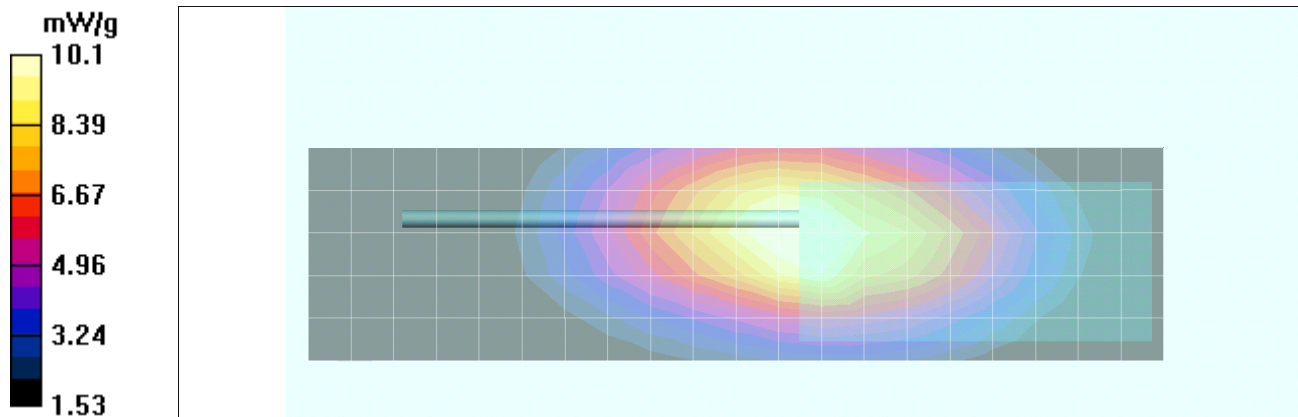
Reference Value = 106.9 V/m; Power Drift = -0.582 dB

Peak SAR (extrapolated) = 14.1 W/kg



SAR(1 g) = 9.58 mW/g; SAR(10 g) = 6.81 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

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



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B21

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 498 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 498 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 55.2$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.2 mW/g

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

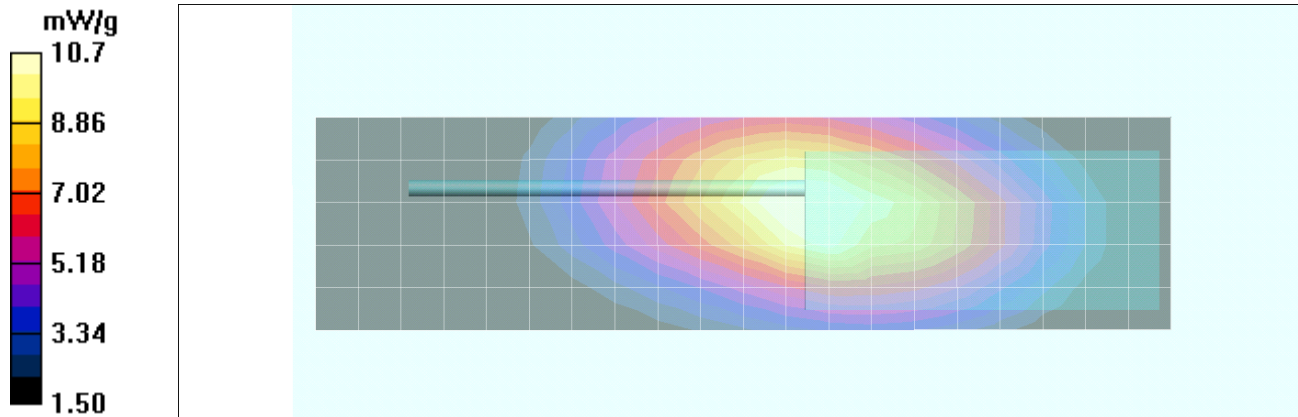
Reference Value = 108.2 V/m; Power Drift = -0.381 dB

Peak SAR (extrapolated) = 15.0 W/kg



SAR(1 g) = 10.2 mW/g; SAR(10 g) = 7.24 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 10.7 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B22

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.984 \text{ mho/m}$; $\epsilon_r = 55.1$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.2 mW/g

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

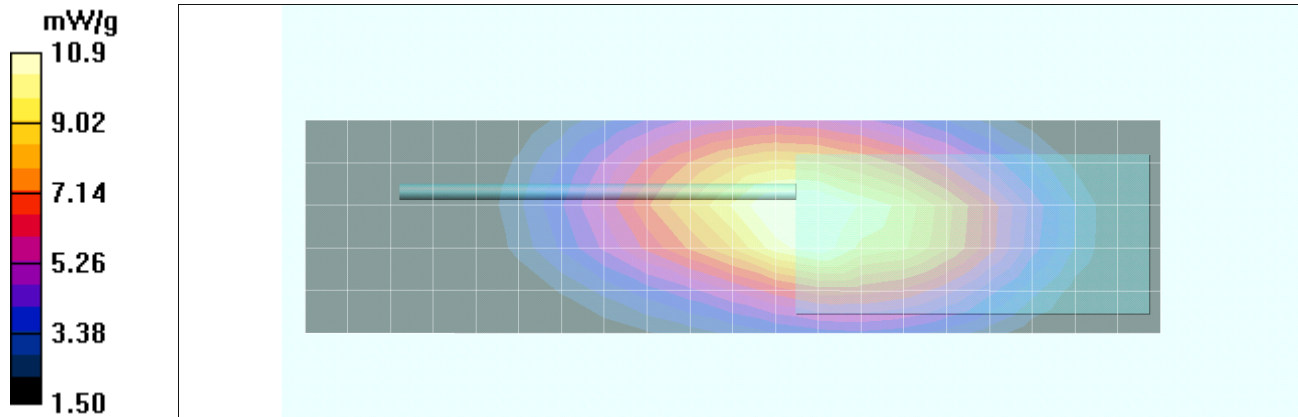
Reference Value = 110.3 V/m; Power Drift = -0.506 dB

Peak SAR (extrapolated) = 15.3 W/kg



SAR(1 g) = 10.3 mW/g; SAR(10 g) = 7.29 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 10.9 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B23

Date Tested: 10/10/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 450 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 450 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 56.9$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DAS4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 4.62 mW/g

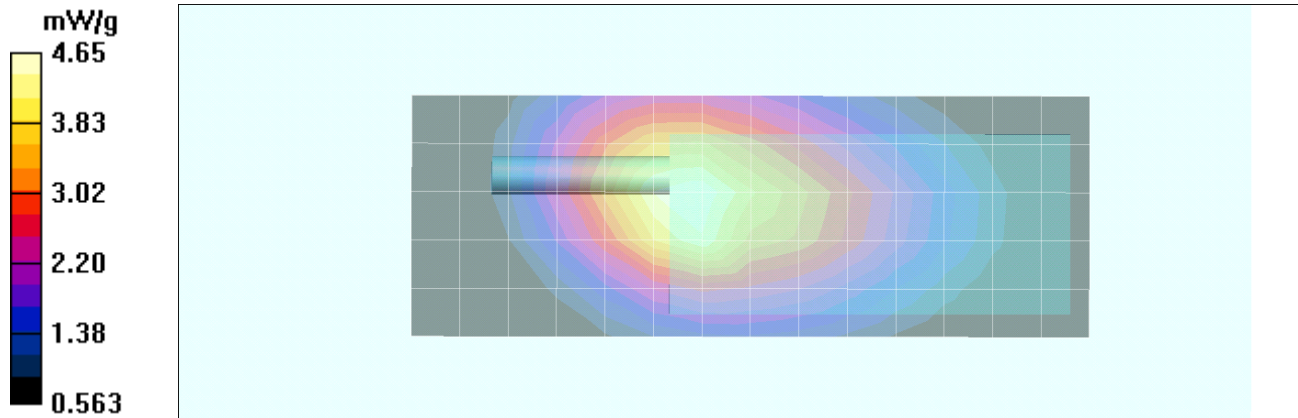
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 71.4 V/m; Power Drift = -0.234 dB



Peak SAR (extrapolated) = 6.61 W/kg

SAR(1 g) = 4.43 mW/g; SAR(10 g) = 3.11 mW/g

Maximum value of SAR (measured) = 4.65 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B24

Date Tested: 10/09/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.7C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.51 mW/g

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

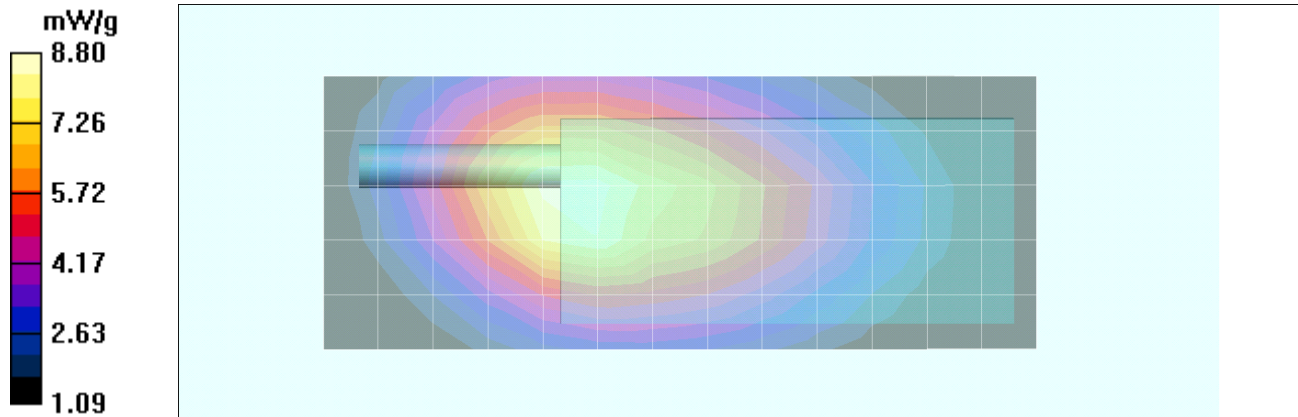
Reference Value = 100.1 V/m; Power Drift = -0.296 dB

Peak SAR (extrapolated) = 12.4 W/kg



SAR(1 g) = 8.31 mW/g; SAR(10 g) = 5.83 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.80 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B25

Date Tested: 10/10/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 476.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 476.7$ MHz; $\sigma = 0.927$ mho/m; $\epsilon_r = 55.9$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)) Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.32 mW/g

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

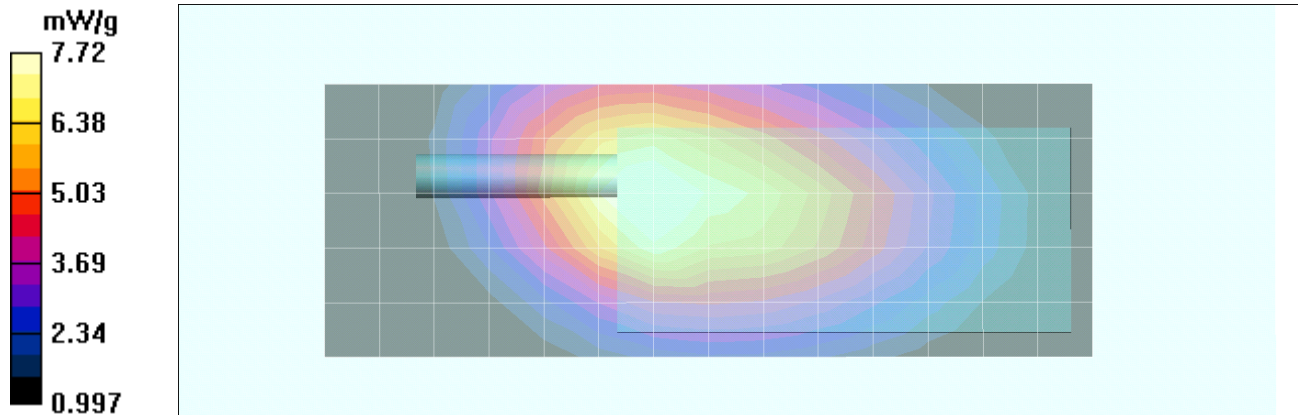
Reference Value = 90.2 V/m; Power Drift = -0.498 dB

Peak SAR (extrapolated) = 10.9 W/kg



SAR(1 g) = 7.33 mW/g; SAR(10 g) = 5.16 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.72 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B26

Date Tested: 10/09/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.7C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.93 \text{ mho/m}$; $\epsilon_r = 55.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

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

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

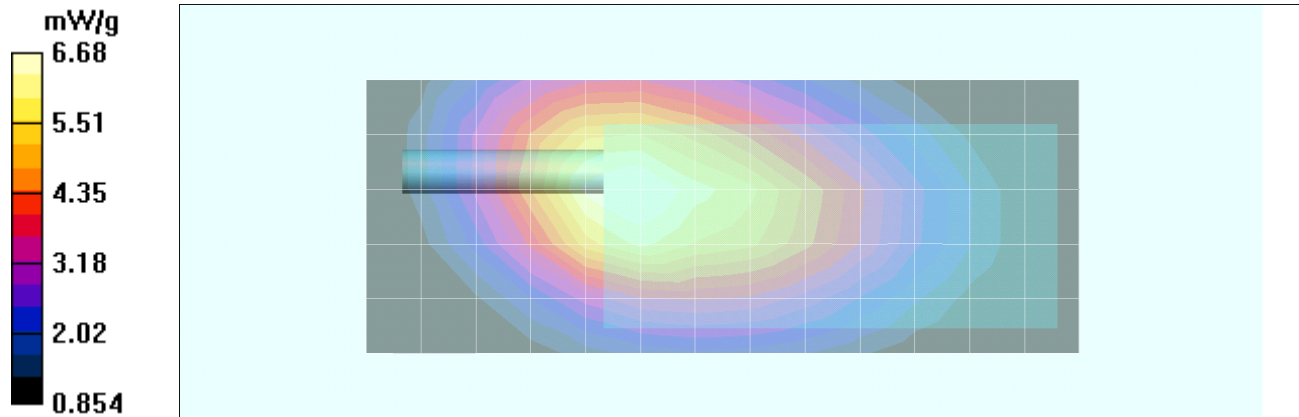
Reference Value = 85.2 V/m; Power Drift = -0.389 dB

Peak SAR (extrapolated) = 9.53 W/kg



SAR(1 g) = 6.38 mW/g; SAR(10 g) = 4.47 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 6.68 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K		TK-3402-K	
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B27

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 461.7 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 56.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 12.4 mW/g

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

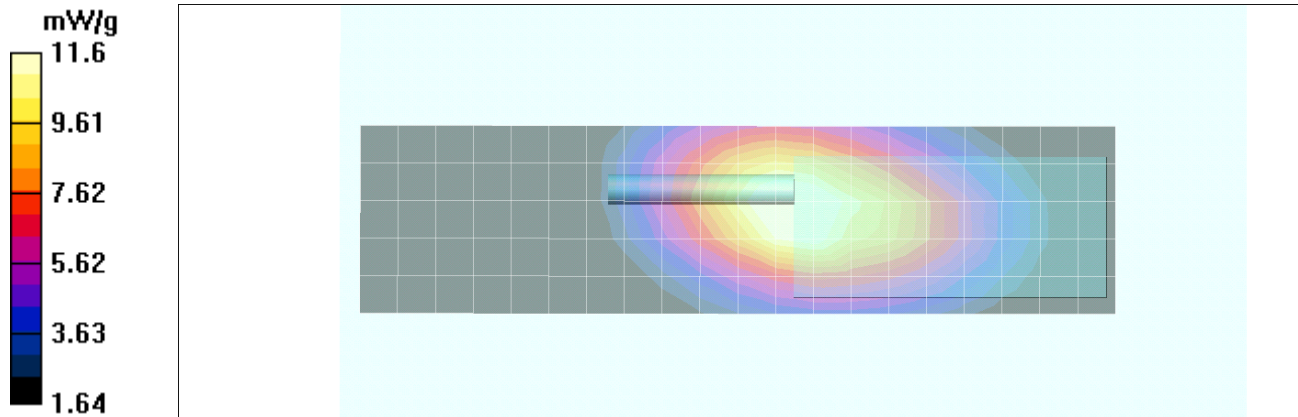
Reference Value = 118.6 V/m; Power Drift = -0.751 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 11 mW/g; SAR(10 g) = 7.79 mW/g

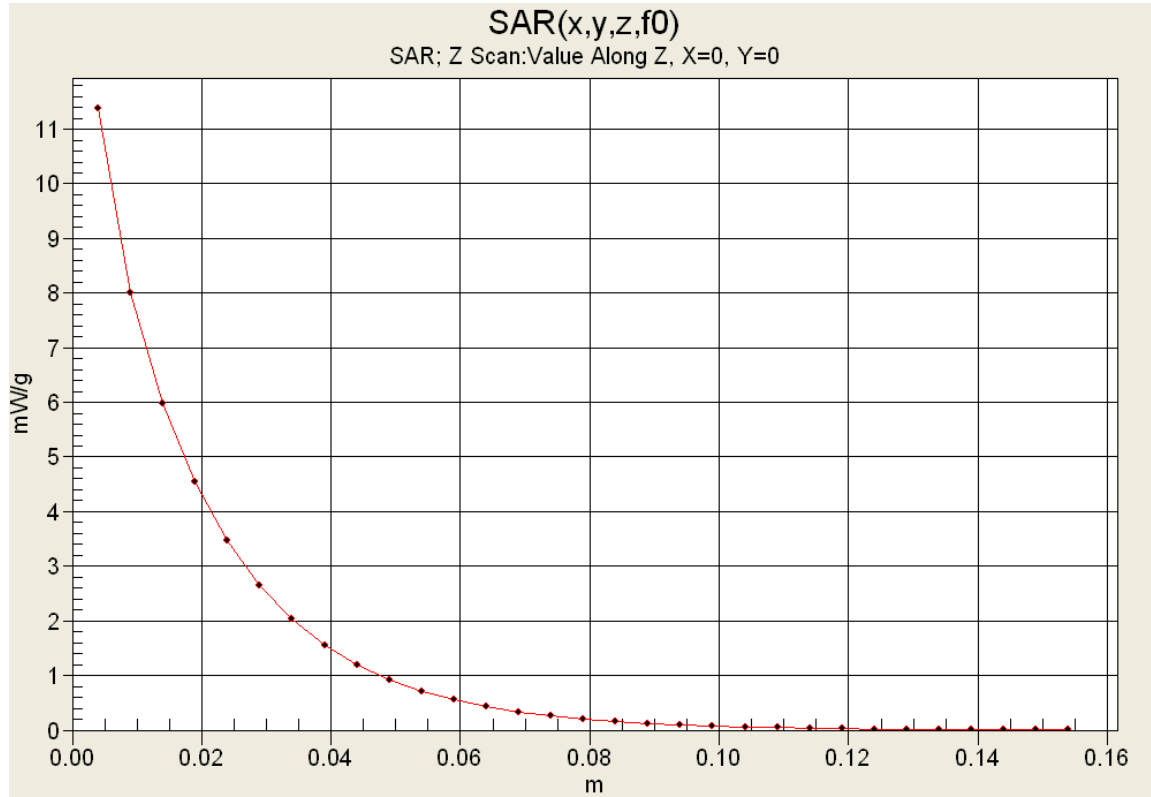
Info: Interpolated medium parameters used for SAR evaluation.



Maximum value of SAR (measured) = 11.6 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan



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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B28

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 484 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 484 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 55.7$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

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

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

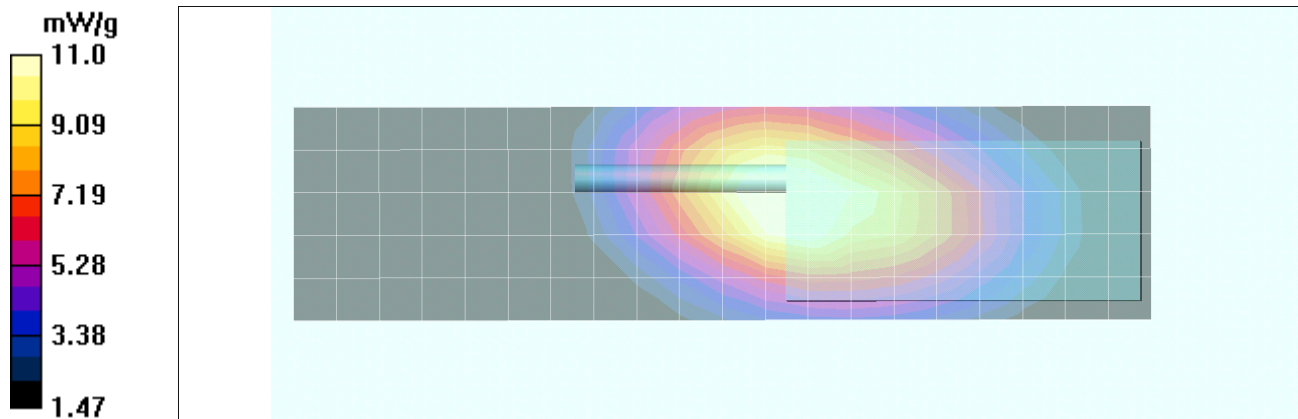
Reference Value = 117.9 V/m; Power Drift = -1.08 dB

Peak SAR (extrapolated) = 15.4 W/kg



SAR(1 g) = 10.4 mW/g; SAR(10 g) = 7.37 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.0 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B29

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 56.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

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

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

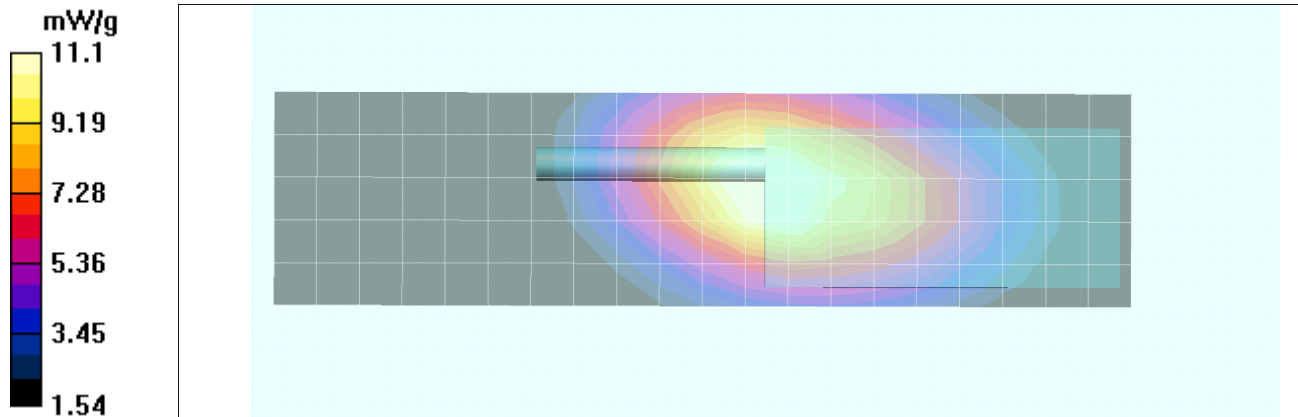
Reference Value = 118.6 V/m; Power Drift = -0.952 dB

Peak SAR (extrapolated) = 15.4 W/kg



SAR(1 g) = 10.5 mW/g; SAR(10 g) = 7.46 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.1 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B30

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 470 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used: $f = 470 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 56.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used)) Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 11.2 mW/g

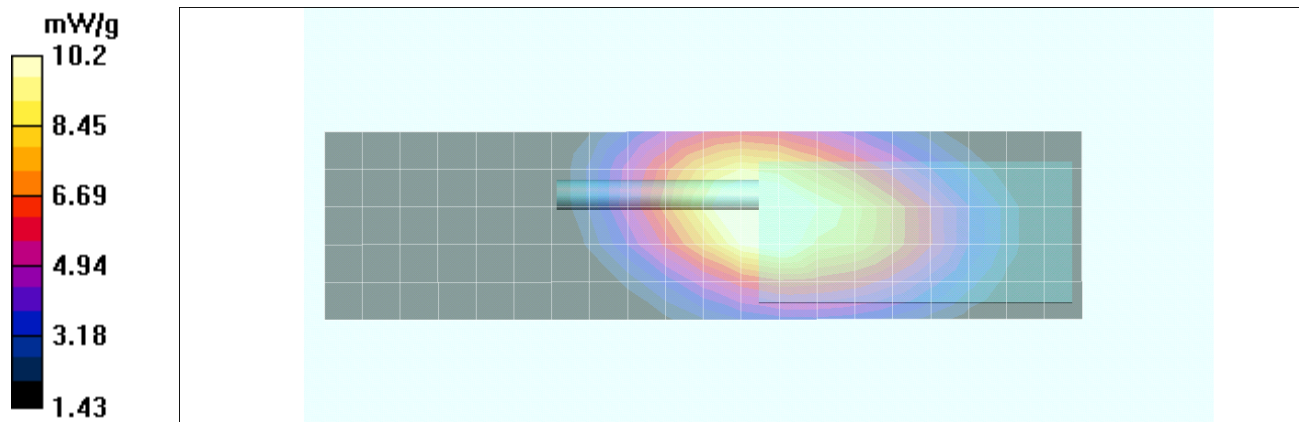
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 115.3 V/m; Power Drift = -1.23 dB



Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 9.68 mW/g; SAR(10 g) = 6.87 mW/g

Maximum value of SAR (measured) = 10.2 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B31

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3 \text{ MHz}$; $\sigma = 0.95 \text{ mho/m}$; $\epsilon_r = 56.5$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 10.5 mW/g

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

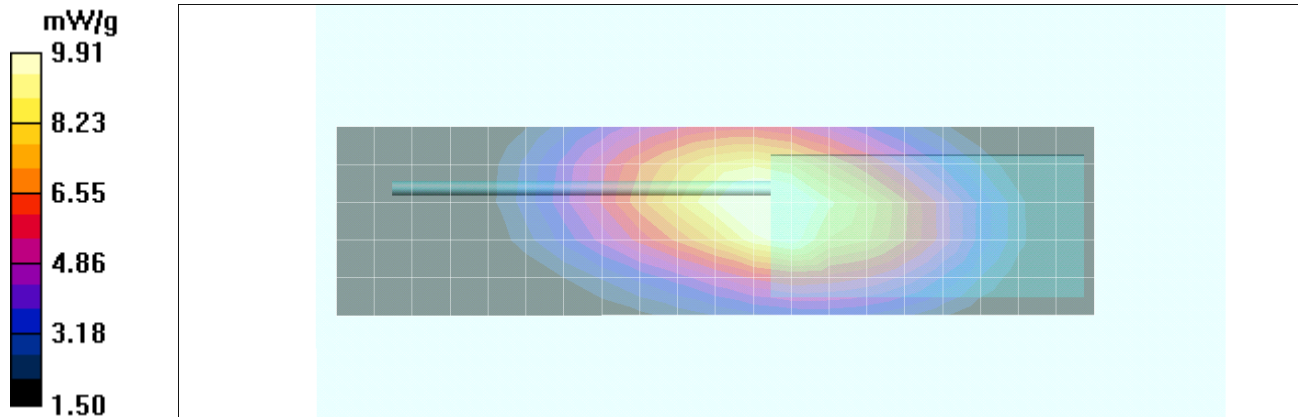
Reference Value = 108.5 V/m; Power Drift = -0.641 dB

Peak SAR (extrapolated) = 13.7 W/kg



SAR(1 g) = 9.44 mW/g; SAR(10 g) = 6.77 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.91 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B32

Date Tested: 08/30/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 23.0C; Fluid Temp: 23.8C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 512 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 512 \text{ MHz}$; $\sigma = 0.984 \text{ mho/m}$; $\epsilon_r = 55.1$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x21x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 12.0 mW/g

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

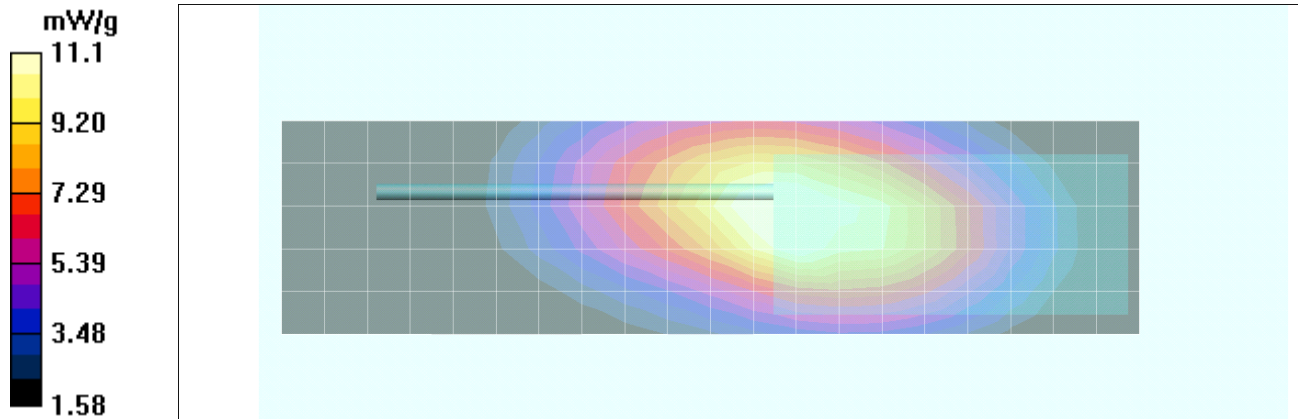
Reference Value = 111.4 V/m; Power Drift = -0.674 dB

Peak SAR (extrapolated) = 15.4 W/kg



SAR(1 g) = 10.5 mW/g; SAR(10 g) = 7.46 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.1 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot B33

Date Tested: 10/10/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 463.3 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 463.3$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.56 mW/g

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

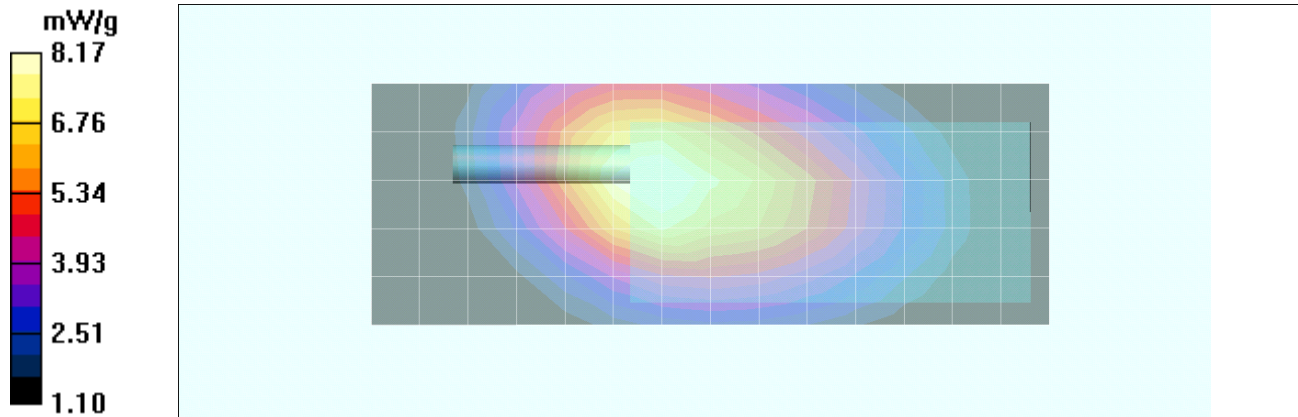
Reference Value = 94.7 V/m; Power Drift = -0.486 dB

Peak SAR (extrapolated) = 11.5 W/kg



SAR(1 g) = 7.77 mW/g; SAR(10 g) = 5.48 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.17 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot A1

Date Tested: 10/09/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.7C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 461.7$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.0 mW/g

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

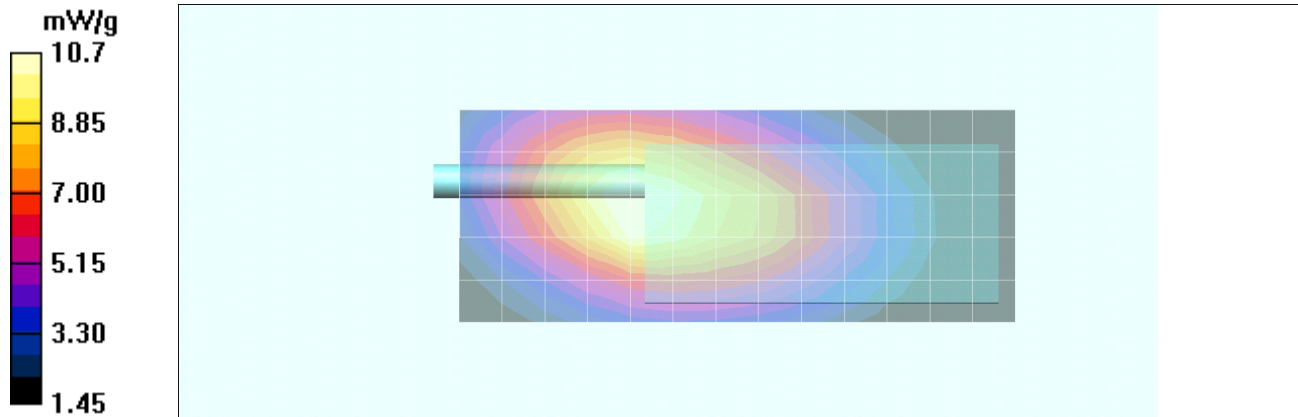
Reference Value = 115.4 V/m; Power Drift = -0.613 dB

Peak SAR (extrapolated) = 15.1 W/kg



SAR(1 g) = 10.2 mW/g; SAR(10 g) = 7.22 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 10.7 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot A2

Date Tested: 10/09/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.7C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 461.7 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 55.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

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

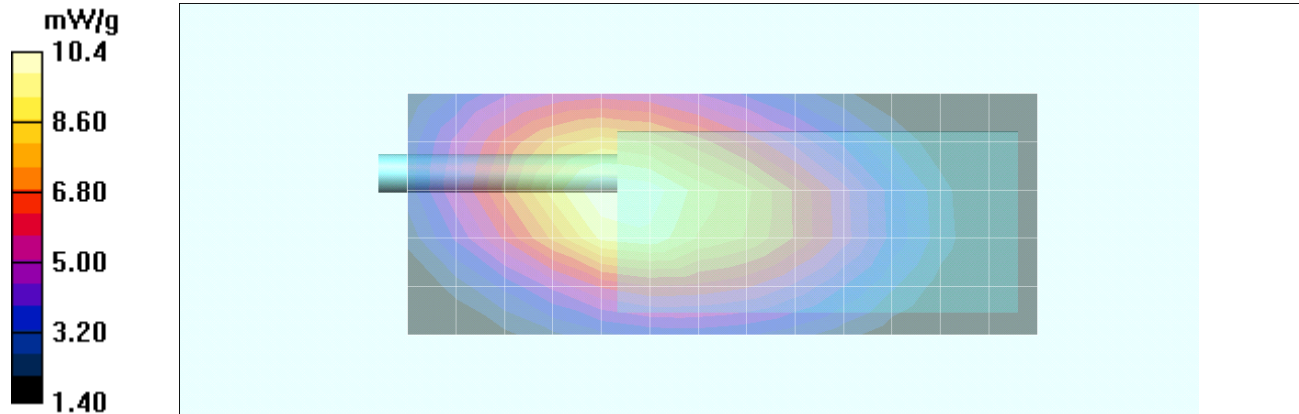
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 110.5 V/m; Power Drift = -0.396 dB



Peak SAR (extrapolated) = 14.7 W/kg

SAR(1 g) = 9.92 mW/g; SAR(10 g) = 7.05 mW/g

Info: Interpolated medium parameters used for SAR evaluation.



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K		TK-3402-K	
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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot A3

Date Tested: 10/09/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.7C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 461.7$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.7 mW/g

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

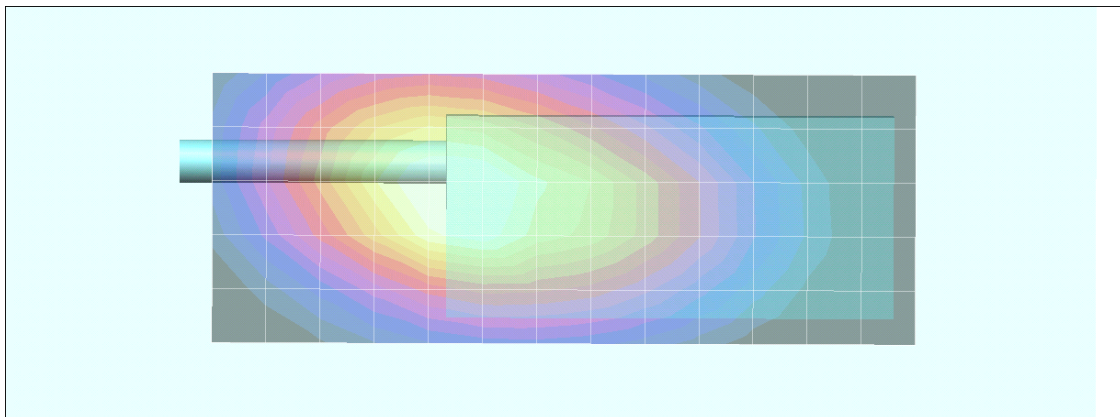
Reference Value = 118.0 V/m; Power Drift = -0.755 dB

Peak SAR (extrapolated) = 15.9 W/kg

SAR(1 g) = 10.7 mW/g; SAR(10 g) = 7.56 mW/g

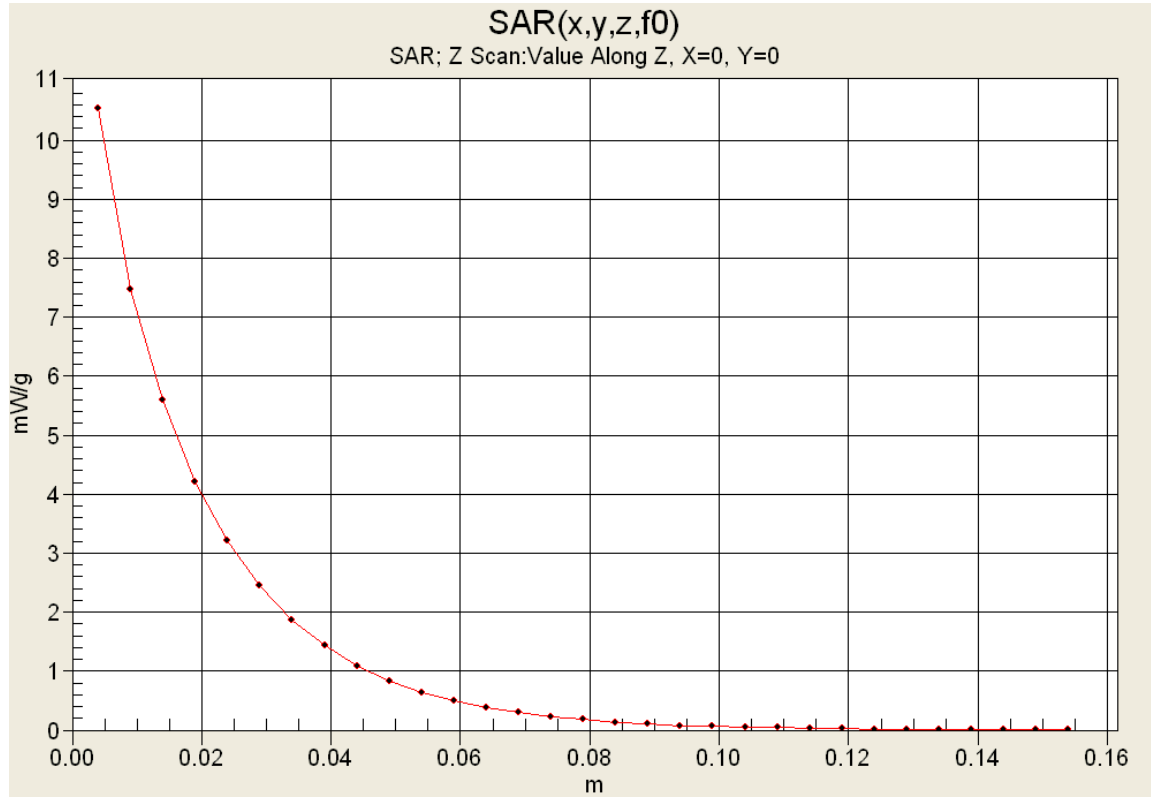
Info: Interpolated medium parameters used for SAR evaluation.



Maximum value of SAR (measured) = 11.3 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K		TK-3402-K	
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Z-Axis Scan



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	<u>Test Report Issue Date</u> Oct. 22, 2012	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> Occupational (Controlled)	

Body SAR Plot A4

Date Tested: 10/10/2012

DUT: Kenwood TK-3402U-K; Type: Portable FM UHF PTT Radio Transceiver; Serial: 0422

Program Notes: Ambient Temp: 22.0C; Fluid Temp: 21.6C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: UHF 400-512

Frequency: 461.7 MHz; Duty Cycle: 1:1

Medium: M450 Medium parameters used (interpolated): $f = 461.7 \text{ MHz}$; $\sigma = 0.92 \text{ mho/m}$; $\epsilon_r = 55.8$; $\rho = 1000 \text{ kg/m}^3$

- Probe: ET3DV6 - SN1590; ConvF(7.93, 7.93, 7.93); Calibrated: 24/04/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection (Locations From Previous Scan Used))Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 19/04/2012
- Phantom: Barski Industries; Type: Fiberglass Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Area Scan (6x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Info: Interpolated medium parameters used for SAR evaluation.

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

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

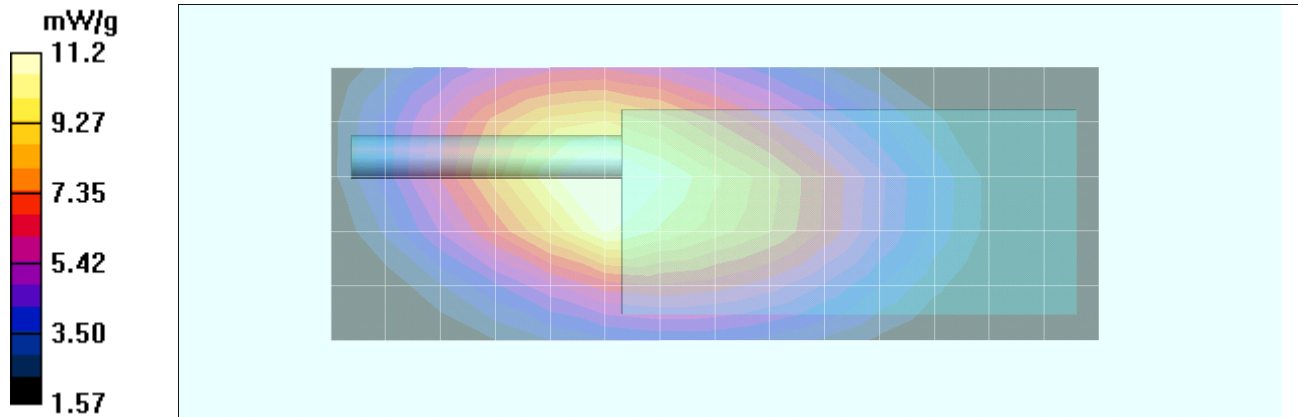
Reference Value = 117.6 V/m; Power Drift = -0.646 dB

Peak SAR (extrapolated) = 15.8 W/kg

SAR(1 g) = 10.6 mW/g; SAR(10 g) = 7.54 mW/g

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 11.2 mW/g



Applicant:	Kenwood USA Corporation	FCC ID:	ALH435000	Freq.:	450.0 - 512.0 MHz	KENWOOD
DUT Type:	Portable UHF PTT Radio Transceiver	Models:	TK-3402U-K	TK-3402-K		
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Z-Axis Scan

