

Test Report Issue Date March 17, 2010 <u>Test Report Serial No.</u> 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



# **APPENDIX A - SAR MEASUREMENT DATA**

Applicant:	Telt	ronic S.A.U.	FCC ID:	FCC ID: WT		TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	eiver	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	Printed printed and
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<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
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RF Exposure Category
Occupational (Controlled)



Date Tested: 03/08/2010

#### Face-held SAR - 409.0 MHz

#### DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 24.2°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 409 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 409 MHz;  $\sigma = 0.839$  mho/m;  $\varepsilon_r = 43.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

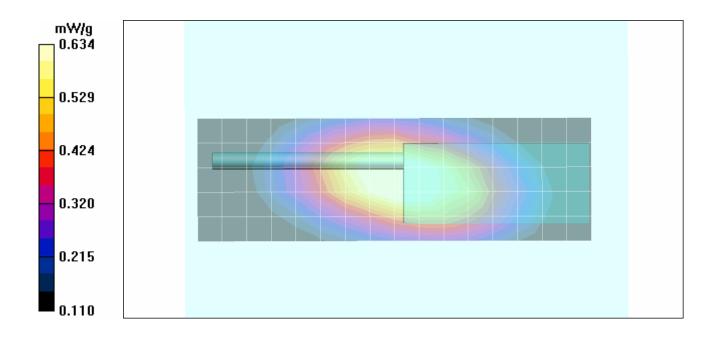
Maximum value of SAR (measured) = 0.681 mW/g

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

Reference Value = 29.4 V/m; Power Drift = -0.497 dB

Peak SAR (extrapolated) = 0.927 W/kg

SAR(1 g) = 0.604 mW/g; SAR(10 g) = 0.447 mW/g Maximum value of SAR (measured) = 0.634 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	Principal and instantion	
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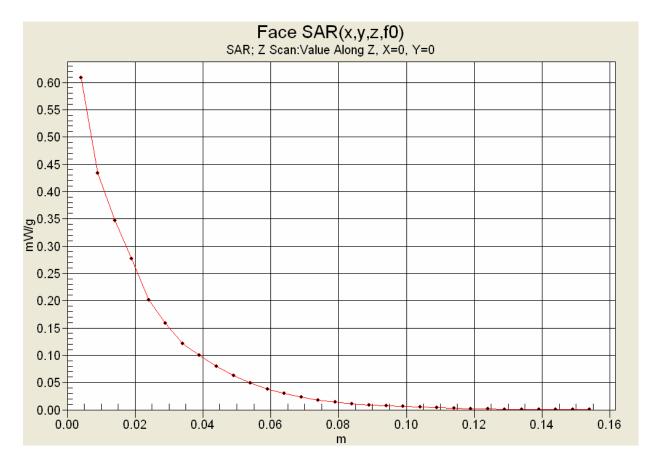
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Occupational (Controlled)



# **Z-Axis Scan**



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal grissis introduction	
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Date Tested: 03/08/2010

#### Face-held SAR - 424.25 MHz

#### DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 24.2°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 424.25 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 424.25 MHz;  $\sigma = 0.85$  mho/m;  $\epsilon_r = 43.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

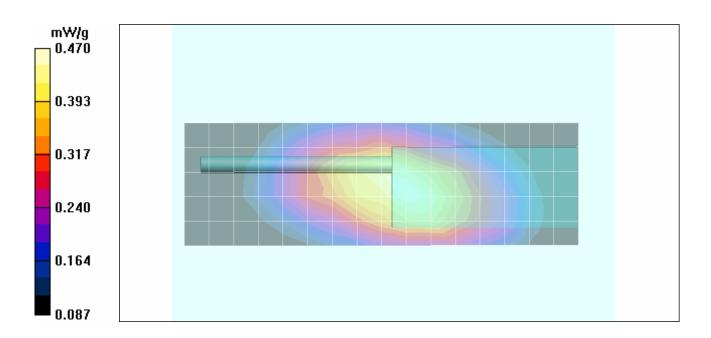
Maximum value of SAR (measured) = 0.463 mW/g

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

Reference Value = 23.3 V/m; Power Drift = 0.256 dB

Peak SAR (extrapolated) = 0.626 W/kg

**SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.335 mW/g** Maximum value of SAR (measured) = 0.470 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	eiver	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal grissis introduction
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Description of Test(s) RF Exposure Category Specific Absorption Rate

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Test Lab Certificate No. 2470.01



Occupational (Controlled)

Date Tested: 03/08/2010

#### Face-held SAR - 439.5 MHz

#### DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 24.2°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 439.5 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used: f = 440 MHz;  $\sigma = 0.87$  mho/m;  $\varepsilon_f = 42.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

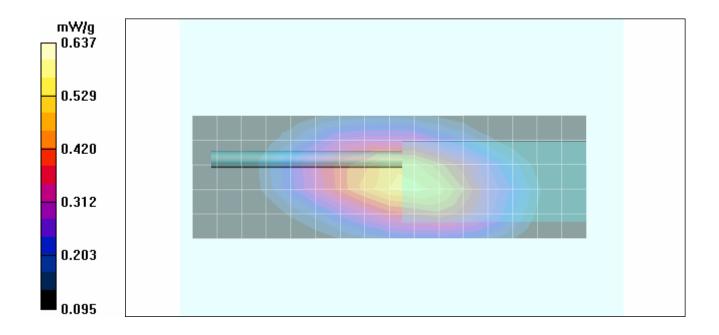
Maximum value of SAR (measured) = 0.544 mW/g

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

Reference Value = 26.0 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.869 W/kg

SAR(1 g) = 0.599 mW/g; SAR(10 g) = 0.437 mW/gMaximum value of SAR (measured) = 0.637 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute	
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Date Tested: 03/08/2010

#### Face-held SAR - 454.75 MHz

#### DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 24.2°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.874$  mho/m;  $\varepsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

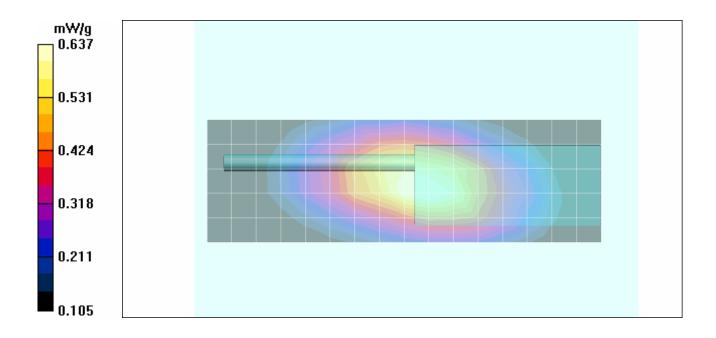
Maximum value of SAR (measured) = 0.662 mW/g

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

Reference Value = 28.8 V/m; Power Drift = -0.499 dB

Peak SAR (extrapolated) = 0.826 W/kg

**SAR(1 g) = 0.596 mW/g; SAR(10 g) = 0.436 mW/g**Maximum value of SAR (measured) = 0.637 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute	
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RF Exposure Category
Occupational (Controlled)



Date Tested: 03/08/2010

#### Face-held SAR - 470.0 MHz

#### DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 24.2°C; Fluid Temp: 22.9°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 470 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 42.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

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

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

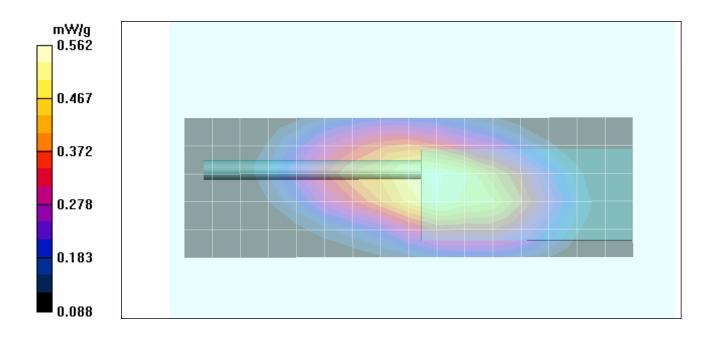
Maximum value of SAR (measured) = 0.540 mW/g

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

Reference Value = 24.3 V/m; Power Drift = 0.306 dB

Peak SAR (extrapolated) = 0.746 W/kg

**SAR(1 g) = 0.526 mW/g; SAR(10 g) = 0.387 mW/g**Maximum value of SAR (measured) = 0.562 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute	
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RF Exposure Category



Date Tested: 03/04/2010

# Body-worn SAR - 409.0 MHz

DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Body-worn Accessory: Nylon Case with Metal Belt-Clip; Audio Accessory: Speaker-Microphone

Ambient Temp: 23.8°C; Fluid Temp: 22.8°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 409 MHz; Duty Cycle: 1:4

Medium: M450 Medium parameters used (interpolated): f = 409 MHz;  $\sigma = 0.89$  mho/m;  $\varepsilon_r = 58.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Body-worn SAR - 1.5 cm Nylon Case & Belt-Clip Spacing from Back Side of DUT to Planar Phantom

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

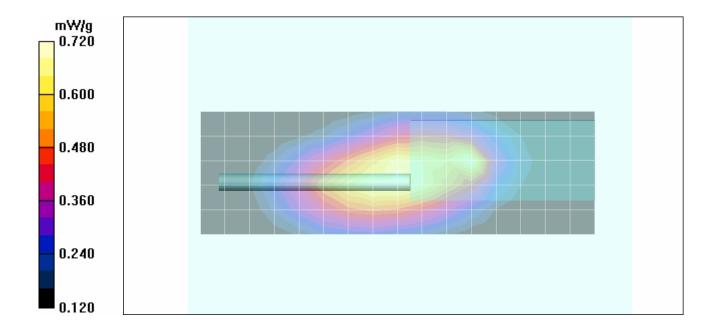
Maximum value of SAR (measured) = 0.709 mW/g

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

Reference Value = 27.4 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 1.05 W/kg

**SAR(1 g) = 0.683 mW/g; SAR(10 g) = 0.501 mW/g**Maximum value of SAR (measured) = 0.720 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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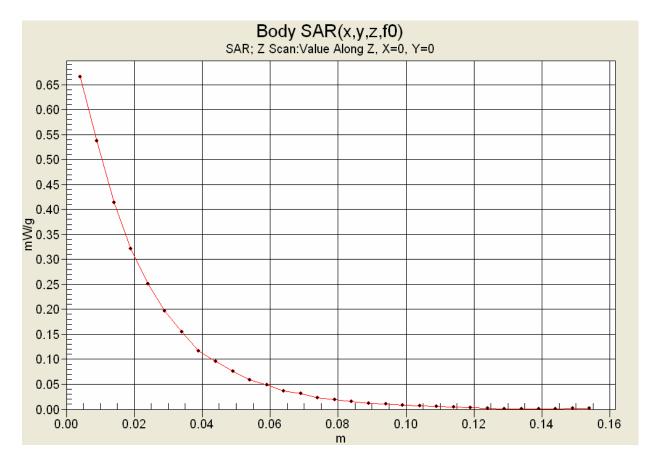
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# **Z-Axis Scan**



Applicant:	Telf	tronic S.A.U.	FCC ID:	W	T7PTRKTH	TT500410	IC:	8624A-PTRKT410	teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	probability printed managements	
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Date Tested: 03/04/2010

# Body-worn SAR - 424.25 MHz

DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Body-worn Accessory: Nylon Case with Metal Belt-Clip; Audio Accessory: Speaker-Microphone

Ambient Temp: 23.8°C; Fluid Temp: 22.8°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 424.25 MHz; Duty Cycle: 1:4

Medium: M450 Medium parameters used (interpolated): f = 424.25 MHz;  $\sigma = 0.909 \text{ mho/m}$ ;  $\epsilon_r = 58.1$ ;  $\rho = 1000 \text{ kg/m}^3$ 

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Body-worn SAR - 1.5 cm Nylon Case & Belt-Clip Spacing from Back Side of DUT to Planar Phantom

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

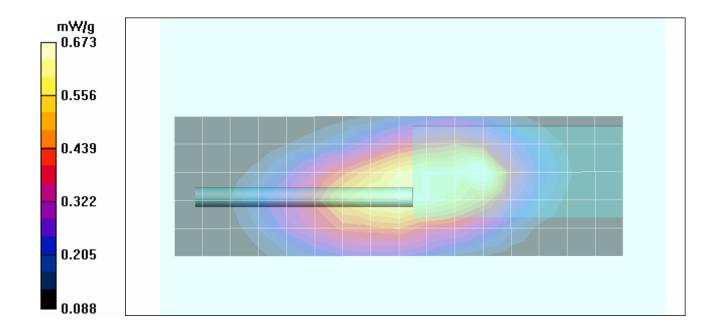
Maximum value of SAR (measured) = 0.740 mW/g

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

Reference Value = 26.3 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.958 W/kg

**SAR(1 g) = 0.630 mW/g; SAR(10 g) = 0.458 mW/g**Maximum value of SAR (measured) = 0.673 mW/g



Applicant:	Telt				T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute	
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Date Tested: 03/04/2010

# Body-worn SAR - 439.5 MHz

DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Body-worn Accessory: Nylon Case with Metal Belt-Clip; Audio Accessory: Speaker-Microphone

Ambient Temp: 23.8°C; Fluid Temp: 22.8°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 439.5 MHz; Duty Cycle: 1:4

Medium: M450 Medium parameters used: f = 440 MHz;  $\sigma$  = 0.93 mho/m;  $\varepsilon_r$  = 57.9;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Body-worn SAR - 1.5 cm Nylon Case & Belt-Clip Spacing from Back Side of DUT to Planar Phantom

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

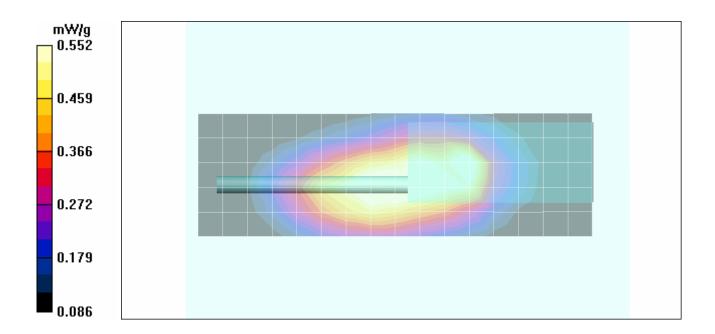
Maximum value of SAR (measured) = 0.648 mW/g

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

Reference Value = 22.9 V/m; Power Drift = -0.167 dB

Peak SAR (extrapolated) = 0.784 W/kg

SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.382 mW/g Maximum value of SAR (measured) = 0.552 mW/g



Applicant:	Telt			VT7PTRKTHTT500410		IC:	8624A-PTRKT410	(T)teltronic	
DUT Type:	Porta	ble UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal grand agreements
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Description of Test(s)

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RF Exposure Category

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Test Report Revision No.

Rev. 1.0 (Initial Release)



Date Tested: 03/04/2010

# Body-worn SAR - 454.75 MHz

DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Body-worn Accessory: Nylon Case with Metal Belt-Clip; Audio Accessory: Speaker-Microphone

Ambient Temp: 23.8°C; Fluid Temp: 22.8°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: M450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.918$  mho/m;  $\epsilon_r = 57.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Body-worn SAR - 1.5 cm Nylon Case & Belt-Clip Spacing from Back Side of DUT to Planar Phantom

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

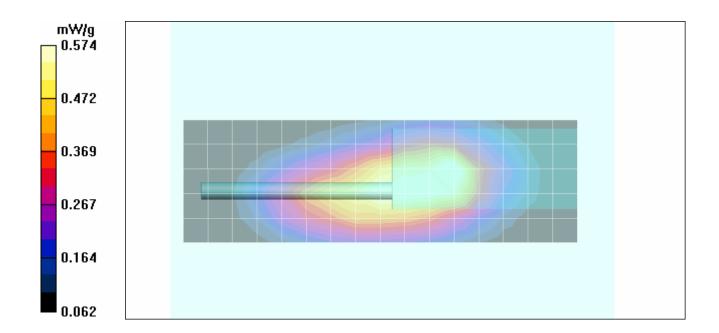
Maximum value of SAR (measured) = 0.627 mW/g

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

Reference Value = 26.9 V/m; Power Drift = -0.393 dB

Peak SAR (extrapolated) = 0.897 W/kg

**SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.377 mW/g** Maximum value of SAR (measured) = 0.574 mW/g



Applicant:	Telt	onic S.A.U. FCC ID: W			WT7PTRKTHTT500410		IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	eiver	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	Principal and instantion
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Description of Test(s)

Specific Absorption Rate

Oc

Test Report Revision No. Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/04/2010

# Body-worn SAR - 470.0 MHz

DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Body-worn Accessory: Nylon Case with Metal Belt-Clip; Audio Accessory: Speaker-Microphone

Ambient Temp: 23.8°C; Fluid Temp: 22.8°C; Barometric Pressure: 101.1 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 470 MHz; Duty Cycle: 1:4

Medium: M450 Medium parameters used: f = 470 MHz;  $\sigma$  = 0.95 mho/m;  $\varepsilon_r$  = 57.6;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: Barski Industries; Type: Fiberglas Planar; Serial: 03-01
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Body-worn SAR - 1.5 cm Nylon Case & Belt-Clip Spacing from Back Side of DUT to Planar Phantom

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

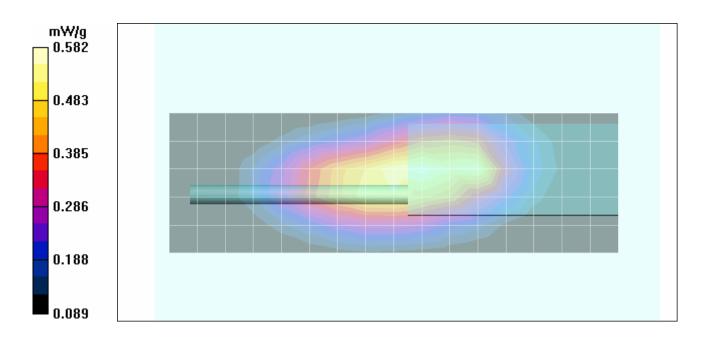
Maximum value of SAR (measured) = 0.569 mW/g

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

Reference Value = 25.3 V/m; Power Drift = -0.425 dB

Peak SAR (extrapolated) = 0.807 W/kg

SAR(1 g) = 0.553 mW/g; SAR(10 g) = 0.402 mW/g Maximum value of SAR (measured) = 0.582 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date
March 17, 2010

Test Report Serial No. 020510WT7-T1003-S90U

Description of Test(s) RF Exposure Category
Specific Absorption Rate Occupational (Controlled)





Date Tested: 03/05/2010

## Head SAR - Left Head Section - Cheek-Touch Position - 424.25 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 424.25 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 424.25 MHz;  $\sigma = 0.834$  mho/m;  $\varepsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Head SAR - Left Head Section - Cheek-Touch Position

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

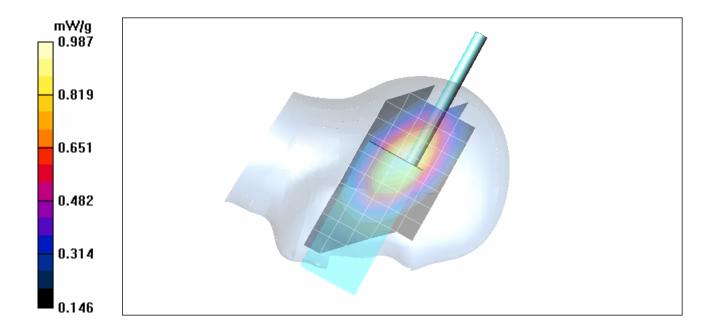
Maximum value of SAR (measured) = 0.998 mW/g

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

Reference Value = 34.2 V/m; Power Drift = -0.494 dB

Peak SAR (extrapolated) = 1.45 W/kg

**SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.652 mW/g**Maximum value of SAR (measured) = 0.987 mW/g



Applica	ant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Ty	ype:	Porta	ble UHF TDMA	Radio Transce	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	Principal and instantion	
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Test Report Issue Date March 17, 2010

## <u>Test Report Serial No.</u> 020510WT7-T1003-S90U

Description of Test(s)
Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Ear-Tilt Position - 424.25 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 424.25 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 424.25 MHz;  $\sigma = 0.834$  mho/m;  $\epsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

## **Head SAR - Left Head Section - Ear-Tilt Position**

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

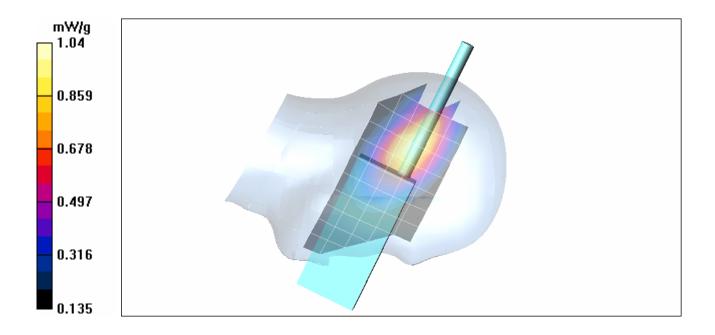
Maximum value of SAR (measured) = 1.09 mW/g

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

Reference Value = 27.7 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 0.963 mW/g; SAR(10 g) = 0.683 mW/g**Maximum value of SAR (measured) = 1.04 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date
March 17, 2010

<u>Test Report Serial No.</u> 020510WT7-T1003-S90U

Description of Test(s)

Specific Absorption Rate

RF Exposure Category

Occupational (Controlled)

Test Report Revision No.

Rev. 1.0 (Initial Release)



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Cheek-Touch Position - 424.25 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 424.25 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 424.25 MHz;  $\sigma = 0.834$  mho/m;  $\varepsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

# Head SAR - Right Head Section - Cheek-Touch Position

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

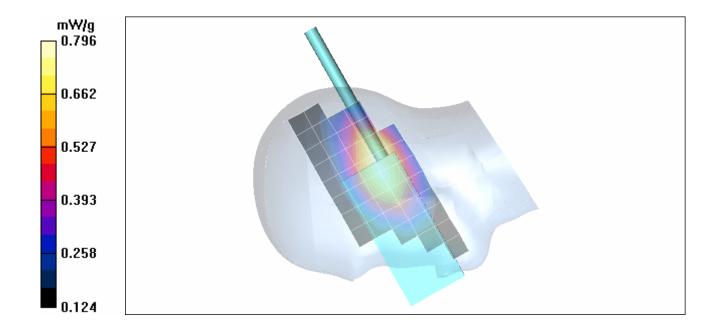
Maximum value of SAR (measured) = 0.795 mW/g

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

Reference Value = 29.4 V/m; Power Drift = 0.205 dB

Peak SAR (extrapolated) = 1.08 W/kg

**SAR(1 g) = 0.741 mW/g; SAR(10 g) = 0.550 mW/g**Maximum value of SAR (measured) = 0.796 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date
March 17, 2010

## <u>Test Report Serial No.</u> 020510WT7-T1003-S90U

Description of Test(s) RF
Specific Absorption Rate Occu

Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Ear-Tilt Position - 424.25 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 424.25 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 424.25 MHz;  $\sigma = 0.834$  mho/m;  $\varepsilon_r = 44.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

# **Head SAR - Right Head Section - Ear-Tilt Position**

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

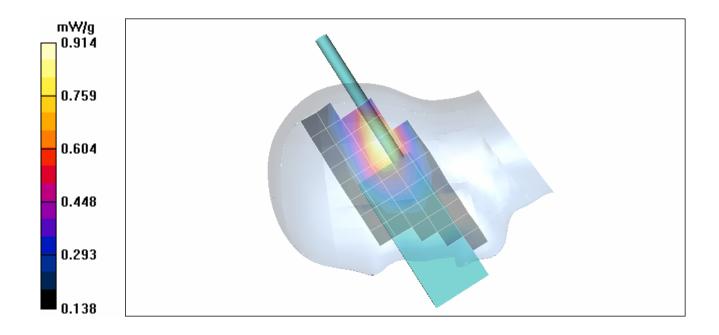
Maximum value of SAR (measured) = 0.919 mW/g

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

Reference Value = 28.6 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 1.22 W/kg

**SAR(1 g) = 0.872 mW/g; SAR(10 g) = 0.617 mW/g**Maximum value of SAR (measured) = 0.914 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date
March 17, 2010

<u>Test Report Serial No.</u> 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Cheek-Touch Position - 454.75 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.86$  mho/m;  $\varepsilon_r = 43.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Head SAR - Left Head Section - Cheek-Touch Position

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

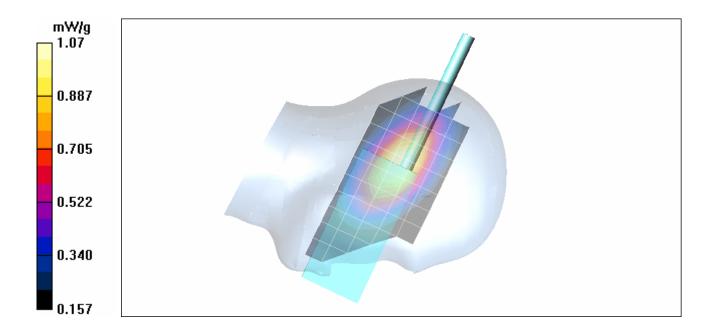
Maximum value of SAR (measured) = 1.04 mW/g

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

Reference Value = 33.8 V/m; Power Drift = -0.114 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.997 mW/g; SAR(10 g) = 0.717 mW/g Maximum value of SAR (measured) = 1.07 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date
March 17, 2010

Test Report Serial No. 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No. Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Ear-Tilt Position - 454.75 MHz

## DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.86$  mho/m;  $\epsilon_r = 43.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

## **Head SAR - Left Head Section - Ear-Tilt Position**

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

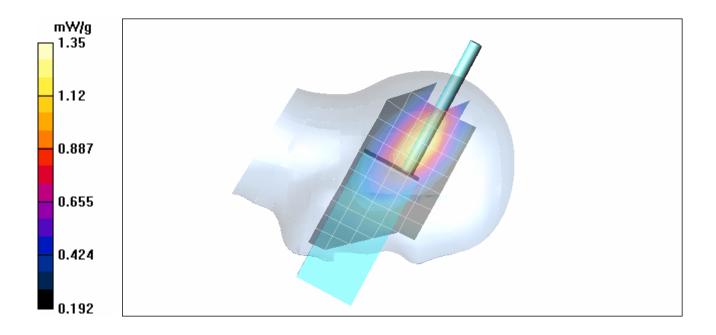
Maximum value of SAR (measured) = 1.38 mW/g

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

Reference Value = 34.5 V/m; Power Drift = -0.415 dB

Peak SAR (extrapolated) = 1.95 W/kg

SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.886 mW/g Maximum value of SAR (measured) = 1.35 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ole UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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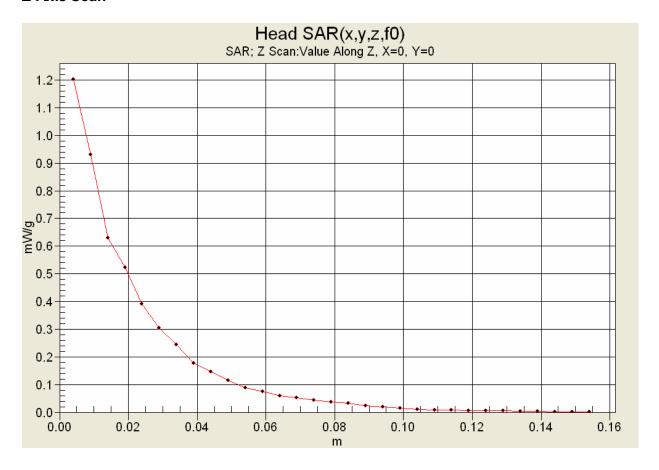
<u>Test Report Issue Date</u> March 17, 2010 <u>Test Report Serial No.</u> 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



# **Z-Axis Scan**



Applicant:	Telt	ronic S.A.U. FCC ID: WT			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	able UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal grissis introduction
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Test Report Issue Date March 17, 2010

Test Report Serial No. 020510WT7-T1003-S90U

Description of Test(s) Occupational (Controlled) Specific Absorption Rate

Test Report Revision No. Rev. 1.0 (Initial Release) RF Exposure Category

Test Lab Certificate No. 2470.01



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Cheek-Touch Position - 454.75 MHz

#### DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.86$  mho/m;  $\varepsilon_f = 43.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

# Head SAR - Right Head Section - Cheek-Touch Position

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

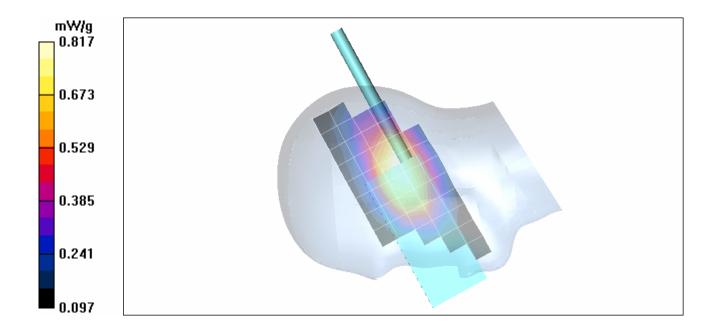
Maximum value of SAR (measured) = 0.821 mW/g

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

Reference Value = 30.7 V/m; Power Drift = -0.397 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.776 mW/g; SAR(10 g) = 0.560 mW/gMaximum value of SAR (measured) = 0.817 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date
March 17, 2010

<u>Test Report Serial No.</u> 020510WT7-T1003-S90U

Description of Test(s) RF
Specific Absorption Rate Occu

Rev. 1.0 (Initial Release)

RF Exposure Category

Occupational (Controlled)

Test Report Revision No.



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Ear-Tilt Position - 454.75 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.86$  mho/m;  $\epsilon_r = 43.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

# Head SAR - Right Head Section - Ear-Tilt Position

Area Scan (6x17x1): Measurement grid: dx=20mm, dy=20mm

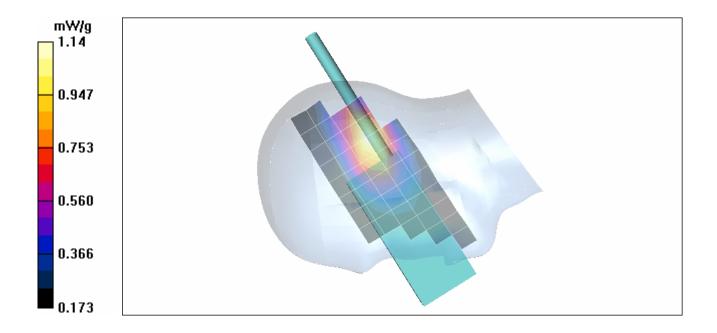
Maximum value of SAR (measured) = 1.12 mW/g

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

Reference Value = 31.5 V/m; Power Drift = 0.341 dB

Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.764 mW/g**Maximum value of SAR (measured) = 1.14 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date March 17, 2010 <u>Test Report Serial No.</u> 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Ear-Tilt Position - 409.0 MHz

## DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 409 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 409 MHz;  $\sigma = 0.83$  mho/m;  $\varepsilon_r = 44.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Head SAR - Left Head Section - Ear-Tilt Position

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

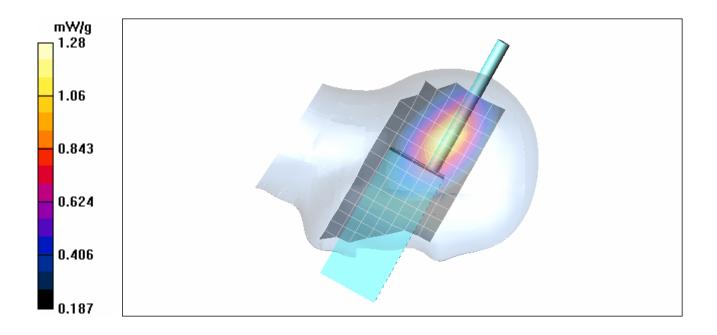
Maximum value of SAR (measured) = 1.20 mW/g

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

Reference Value = 34.1 V/m; Power Drift = -0.516 dB

Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.828 mW/g Maximum value of SAR (measured) = 1.28 mW/g



Applicant:	Telt	ronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute		
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Test Report Issue Date March 17, 2010

Test Report Serial No. 020510WT7-T1003-S90U

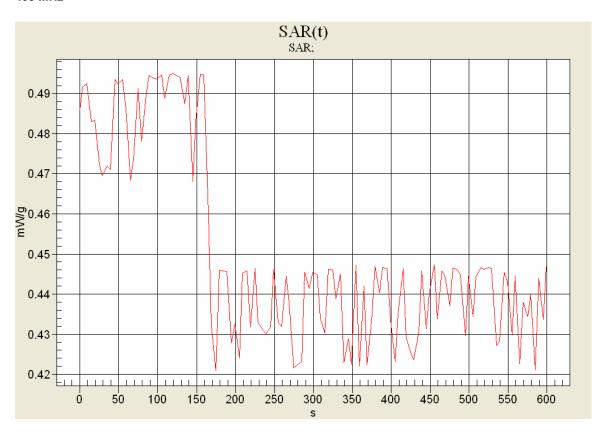
Description of Test(s) Specific Absorption Rate Test Report Revision No. Rev. 1.0 (Initial Release)





# **SAR-versus-Time Droop Evaluation**

**Head Configuration Left Head Section - Ear-Tilt Position** 409 MHz



0.494 0s start 340s 0.423 -0.673 dB zoom scan 0.421 500s -0.694 dB area scan

Applicant:	Telt	ronic S.A.U.	FCC ID:	W	T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ble UHF TDMA	Radio Transce	eiver	Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal proof consultation
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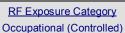


Test Report Issue Date
March 17, 2010

## <u>Test Report Serial No.</u> 020510WT7-T1003-S90U

# Description of Test(s) Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (Initial Release)





Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Ear-Tilt Position - 439.5 MHz

## DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 439.5 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used: f = 440 MHz;  $\sigma$  = 0.86 mho/m;  $\epsilon_r$  = 43.8;  $\rho$  = 1000 kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Head SAR - Left Head Section - Ear-Tilt Position

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

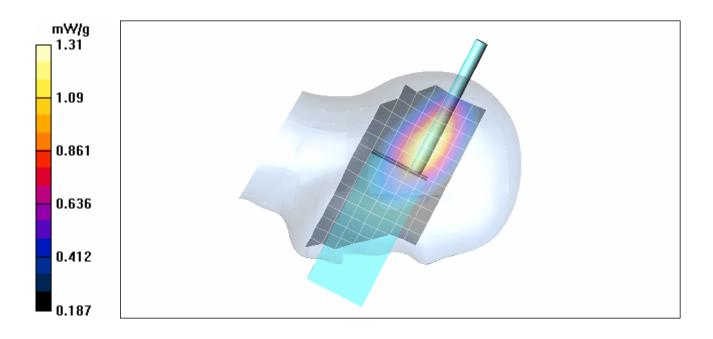
Maximum value of SAR (measured) = 1.24 mW/g

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

Reference Value = 30.7 V/m; Power Drift = 0.364 dB

Peak SAR (extrapolated) = 1.92 W/kg

**SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.868 mW/g**Maximum value of SAR (measured) = 1.31 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: WT			T7PTRKTHTT500410		IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	ortable UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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Test Report Issue Date
March 17, 2010

<u>Test Report Serial No.</u> 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate

Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Ear-Tilt Position - 470.0 MHz

## DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 470 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Head SAR - Left Head Section - Ear-Tilt Position

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

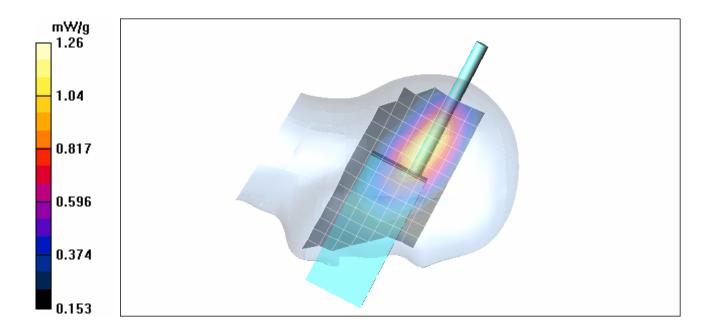
Maximum value of SAR (measured) = 1.15 mW/g

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

Reference Value = 33.7 V/m; Power Drift = -0.515 dB

Peak SAR (extrapolated) = 1.97 W/kg

SAR(1 g) = 1.17 mW/g; SAR(10 g) = 0.818 mW/g Maximum value of SAR (measured) = 1.26 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: WT			T7PTRKTHTT500410		IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	rtable UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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March 17, 2010

Test Report Issue Date

<u>Test Report Serial No.</u> 020510WT7-T1003-S90U

Description of Test(s)

Specific Absorption Rate

Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)

Test Report Revision No.



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Ear-Tilt Position - 409.0 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 409 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 409 MHz;  $\sigma = 0.83$  mho/m;  $\varepsilon_r = 44.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### Head SAR - Right Head Section - Ear-Tilt Position

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

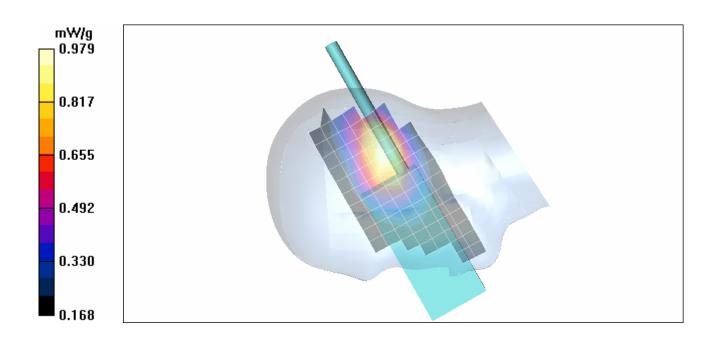
Maximum value of SAR (measured) = 1.05 mW/g

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

Reference Value = 29.2 V/m; Power Drift = 0.130 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.681 mW/g Maximum value of SAR (measured) = 0.979 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: WT			T7PTRKTHTT500410		IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	rtable UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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Test Report Issue Date
March 17, 2010

Test Report Serial No. 020510WT7-T1003-S90U

<u>Description of Test(s)</u> Specific Absorption Rate Test Report Revision No.
Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Ear-Tilt Position - 439.5 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 439.5 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used: f = 440 MHz;  $\sigma = 0.86$  mho/m;  $\varepsilon_r = 43.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

# Head SAR - Right Head Section - Ear-Tilt Position

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

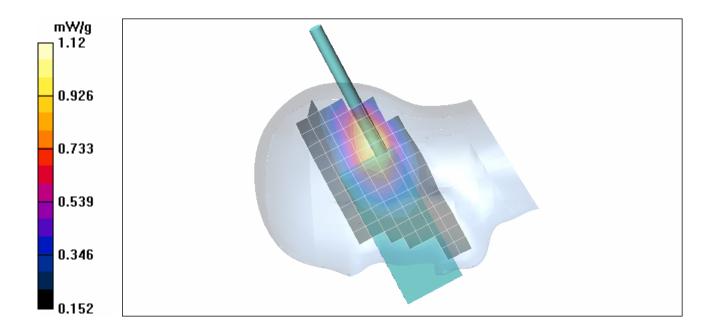
Maximum value of SAR (measured) = 1.01 mW/g

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

Reference Value = 32.3 V/m; Power Drift = -0.207 dB

Peak SAR (extrapolated) = 1.62 W/kg

**SAR(1 g) = 1.05 mW/g; SAR(10 g) = 0.750 mW/g**Maximum value of SAR (measured) = 1.12 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	rtable UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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Test Report Issue Date
March 17, 2010

#### Test Report Serial No. 020510WT7-T1003-S90U

Description of Test(s)
Specific Absorption Rate

Test Report Revision No. Rev. 1.0 (Initial Release)

RF Exposure Category
Occupational (Controlled)



Date Tested: 03/05/2010

# Head SAR - Right Head Section - Ear-Tilt Position - 470.0 MHz

# DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 470 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used: f = 470 MHz;  $\sigma = 0.87$  mho/m;  $\epsilon_r = 42.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

# Head SAR - Right Head Section - Ear-Tilt Position

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

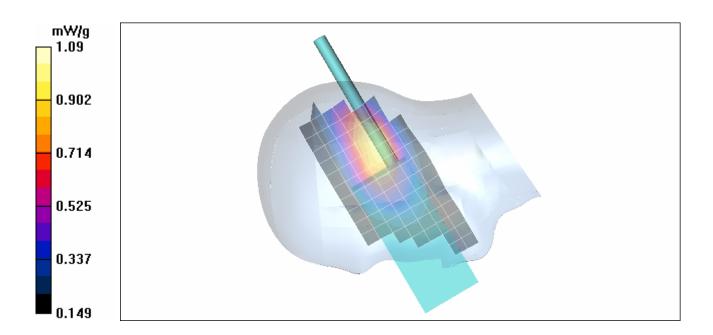
Maximum value of SAR (measured) = 0.947 mW/g

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

Reference Value = 32.1 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 1.72 W/kg

**SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.720 mW/g**Maximum value of SAR (measured) = 1.09 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	rtable UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	principal principal substitute
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<u>Test Report Serial No.</u> 020510WT7-T1003-S90U

Rev. 1.0 (Initial Release)

RF Exposure Category

Test Report Revision No.



Test Report Issue Date
March 17, 2010

<u>Description of Test(s)</u> <u>RF Exposure Category</u>
Specific Absorption Rate Occupational (Controlled)

Date Tested: 03/05/2010

#### Head SAR - Left Head Section - Ear-Tilt Position - 454.75 MHz

## DUT: Teltronic HTT-500; Type: Portable UHF TDMA Digital Radio Transceiver; Serial: D378Y21N1 (Pre-production)

#### **DUT inside Nylon Case Accessory**

Ambient Temp: 23.8°C; Fluid Temp: 22.5°C; Barometric Pressure: 101.8 kPa; Humidity: 35%

Communication System: TDMA 1/4 Frequency: 454.75 MHz; Duty Cycle: 1:4

Medium: HSL450 Medium parameters used (interpolated): f = 454.75 MHz;  $\sigma = 0.86$  mho/m;  $\varepsilon_r = 43.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

- Probe: ET3DV6 SN1590; ConvF(7.34, 7.34, 7.34); Calibrated: 16/07/2009
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

#### **Head SAR - Left Head Section - Ear-Tilt Position**

Area Scan (8x22x1): Measurement grid: dx=15mm, dy=15mm

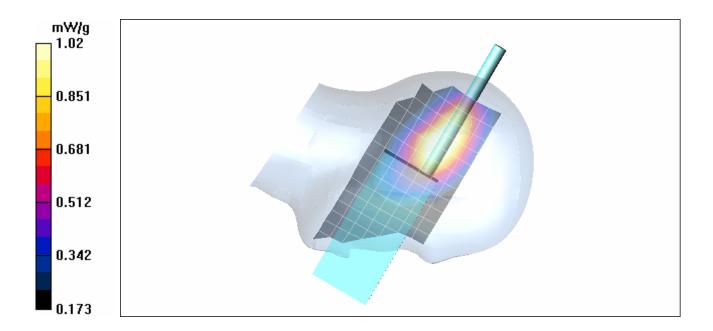
Maximum value of SAR (measured) = 1.15 mW/g

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

Reference Value = 28.5 V/m; Power Drift = 0.411 dB

Peak SAR (extrapolated) = 1.31 W/kg

**SAR(1 g) = 0.936 mW/g; SAR(10 g) = 0.686 mW/g**Maximum value of SAR (measured) = 1.02 mW/g



Applicant:	Telt	tronic S.A.U. FCC ID: W			T7PTRKTH	TT500410	IC:	8624A-PTRKT410	(T)teltronic
DUT Type:	Porta	rtable UHF TDMA Radio Transceiver			Model:	HTT-500	Tx Freq.:	409.0 - 470.0 MHz	Principal and instantion
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