Certificate Number: 1449-02

MOTOROLA

ELECTROMAGNETIC EXPOSURE (EME) TESTING LABORATORY

8000 West Sunrise Blvd
Fort Lauderdale, Florida

S.A.R. TEST REPORT

FCC ID: AZ489FT4851
NUE2986A

August 29, 2001 - Rev. A

Tested By:	Andy Gessner, Pat Lomax SAR Test Technicians
Prepared By:	Wayne Phang Lead Engineer
Reviewed and Approved By:	Ken Enger Sr. Resource Manager Product Safety and EME Lab Director

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REVISION HISTORY

Date	Revision	Comments
8/27/01	O	Original release.
8/29/01	A	Modified final SAR derivation in section 7.0 per supplement C Appendix D "Test Device Operating Conditions"

1.0 Introduction

This report details the test setup, test equipment, and test results of the Specific Absorption Rate (SAR) measurement performed at the Motorola Florida Research Lab (MFRL) EME laboratory for XU2600 Portable Radio Product, model number NUE2986A (FCC ID: AZ489FT4851).

The applicable exposure environment is Occupational/Controlled.

The test results included herein represent the highest SAR levels applicable to this product and clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8.0 W/kg per the requirements of 47 CFR 2.1093(d).

2.0 Reference Standards and Guidelines

This product is designed to comply with the following national and international standards and guidelines.

- United States Federal Communications Commission, Code of Federal Regulations; 47 CFR part 2 sub-part J
- American National Standards Institute (ANSI) / Institute of Electrical and Electronic Engineers (IEEE) C95. 1-1992
- Institute of Electrical and Electronic Engineers (IEEE) C95.1-1999 Edition
- National Council on Radiation Protection and Measurements (NCRP) of the United States, Report 86, 1986
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6. Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz, 1999
- Australian Communications Authority Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 1999 (applicable to wireless phones only).

3.0 Description of Test Sample

The XU2600 Portable Radio, Model number NUE2986A is a handheld transceiver, which operates as a traditional simplex 2-way radio. It will be marketed to and used by employees solely for work - related operations, such as Retail Business, Construction, and Small Business Operation. User training is the responsibility of the business group, who can be expected to employ the usage instructions, safety information and operational cautions set forth in the user's manual, instructional sessions or other means. Motorola also makes available to its customers training classes on the proper use of two - way radios.

The intended use positions are "at the face" with the microphone 1 to 2 inches from the mouth or "at the waist or abdomen" secured to the user's belt. When operated at the waist or abdomen, the audio and push-to-talk functions are routed to a remote accessory, which connects to the side of the radio. The transmit duty cycle, 50% maximum for this type of device, is controlled by the user via the push – to - talk button.

This device transmits in the 461.0375 – 469.5625MHz band with 6 channels. The maximum conducted power, as defined by the production line final test station upper limit, is 2.2 watts. See section 5.0 for more detailed information on the maximum conducted power.

The sample unit tested for this report is an identical prototype to intended production units.

The XU2600 product is offered with a fixed non-removable antenna, and various accessories, listed below. (Refer to appendix D for a complete illustration of Body - worn accessories.)

Antenna:

Fixed	¼ wave 60mm helical, fixed non-retractable, freq. range 460-470MHz.

Battery:

AA	COTS (Commercial Off The Shelf) Alkaline
53871	XTN Series NiMH Rechargeable

Body-worn accessory:

1585176C03 XTN Series Carry Holster
53873 XTN Series Carry Case

Audio/push-to-talk:

Many different audio/push – to - talk accessories are available. They can generally be grouped into categories of 1) microphones, 2) earpieces, and 3) headsets depending on how they are used relative to the body. Representative samples were chosen as being typical within each group:

53862 Remote Speaker microphone
53865 Headset w/ Swivel Boom Mic
53866 Earbud w/ PTT Microphone

3.1 Test Signal

Test Signal Source:

Test Mode [ ] Base Station [ ] Simulator [ ] Native Transmission Mode [X]

Signal Modulation:

CW	**X**
TDMA	
Other	

3.2 Test Output Power

The conducted output power was measured across the transmit band using a HP RF Communication test set model 8920B.

4.0 Description of Test Equipment

4.1 Descriptions of SAR Measurement System

The laboratory utilizes a Dosimetric Assessment System (DASY™) SAR measurement system manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The SAR measurements were conducted with the probe ET3DV6 serial number 1418. The system performance check was conducted daily and within 24 hours prior to testing. Copy of the probe calibration certificates are included in appendix C, and the DASY output files of all of the system performance test results are

included in appendix B. The table below summarizes the average and range of all system performance checks.

Probe Serial #	Tissue Type	Probe Cal Date	Dipole Kit / Serial #	System Perf. Result when normalized to 1W (mW/g)	Reference SAR @ 1W (mW/g)
1418	Head	5/23/01	450-002	4.20	4.4
1418	Body	5/23/01	450-002	4.28	4.4

The DASY™ system is operated per the instructions in the DASY™ Users Manual. The entire manual is available directly from SPEAG™.

4.2 Description of Phantom

4.2.1 Body and Face Phantom:

Flat Phantom:
A rectangular shaped box made of plexi - glass and mounted on a supporting non-metallic structure that has an opening at the center for positioning the device.

Length	40.5 cm
Width	23.6 cm
Bottom Shell Thickness	0.2 cm

4.3 Simulated Tissue Properties:

4.3.1 Type of Simulated Tissue

The simulated tissue used is compliant to that specified in FCC Supplement C (Edition 01 - 01) to OET Bulletin 65 (Edition 97 - 01).

Simulated Tissue	Body Position
Body	Abdomen
Head	Face

4.3.2 Simulated Tissue Composition

	Frequency (450MHz)	
	Body	**Head**
Di-Water	53.06 %	40.45 %
Sugar	44.9 %	57 %
Salt	0.94 %	1.45 %
HEC	1.0 %	1.0 %
Dowicil75	0.1 %	0.1 %

Note: HEC (HYDROXYETHYL CELLULOSE) is a gelling agent and Dowicil 75 is anti bacterial compound.

Characterization of Simulated tissue materials and ambient conditions:
Simulated tissue prepared for SAR measurements is measured daily and within 24 hours prior to actual SAR testing to verify tissue is within 5% of target parameters at the center of the transmit band. This measurement is done using the Agilent (HP) probe kit model 85070C and a HP8753D Network Analyzer.

Target tissue parameters

	Body		Head	
Frequency(MHz)	**Di-electric Constant**	**Conductivity – S/m**	**Di-electric Constant**	**Conductivity – S/m**
464.6	56.6	0.94	43.4	0.87

4.4 Test conditions:

The EME Laboratory ambient environment is well controlled resulting in very stable simulated tissue temperature and therefore stable dielectric properties. Simulated tissue temperature is measured prior to each scan to insure it is within +/ - 2°C of the temperature at which the dielectric properties were determined. Additional precautions are routinely taken to ensure the stability of the simulated tissue such as covering the phantoms when scans are not actively in process in order to minimize evaporation. The lab environment is continuously monitored and the table below represents the environmental conditions during the SAR tests reported herein:

Ambient Temperature	24 ± 1°C
Relative Humidity	34 ± 4 %
Tissue Temperature	22.8 ± 1°C

The EME Lab RF environment is monitored with a Spectrum Analyzer to preclude extraneous large signal RF contaminants that could possibly affect the test results. If such unwanted signals are discovered the SAR scans are repeated however the lab environment is sufficiently protected that no SAR impacting interference has ever been experienced.

5.0 Description of Test Procedure

All antennas, batteries, and accessories listed in section 3.0 were included in the SAR test plan at the 464.5625Mhz transmit frequency (middle of band) to determine the highest SAR levels. The transmit power of the test sample was pre-adjusted, per production alignment procedures, to the maximum transmit power, defined as the production line final test station upper limit, which in this case is 2.2 watts. However, due to the higher than nominal initial voltage typical with a fully charged NiMH battery, and the difference in series impedance based on the battery chemistry, the maximum transmit power used is based on the maximum power achievable with each individual battery type. In this case, the maximum transmit power of the XU2600 radio with the NiMH 53871 rechargeable battery is 2.48W and with the AA alkaline batteries is 2.20W. The radio was always placed in continuous transmit mode (100% duty cycle) for the duration of the scan and each SAR scan was initiated with fresh AA Alkaline or fully charged NiMH battery as indicated.

The Antenna used on the XU2600 radio is fixed and not removable. This does not facilitate taking conducted power measurements before and after taking SAR readings. Instead, the power measurements were taken by disassembling the radio and connecting a coax cable directly to the antenna port. All battery combinations were used and the power readings recorded versus time, with the radio in continuous transmit mode (100% duty cycle). This data was used for the initial and end power measurements for each SAR scan and varied only by the type of battery used.

5.0.1 Abdomen

At the abdomen each combination of battery, and body-worn accessory was tested at the center of the transmit band. The transmit band of the XU2600 radio is less than 25 MHz.

All abdomen tests were conducted with an audio/push - to - talk accessory connected to the radio. All of the scans described above incorporated the 53862 Remote Speaker Microphone. Next the highest measured SAR combination of battery, body-worn accessory, and frequency was re-tested using two additional audio accessories. Although SAR is not expected to be influenced by different audio accessories these additional tests were included to cover the different categories of audio accessories: microphones, earpieces, and headsets. Engineering judgment concludes that any SAR variation observed when testing different audio accessories is due to repeatability and well within the system uncertainty; hence testing representative samples of audio accessories is more than adequate to demonstrate compliance.

5.0.2 Face

At the face each combination of battery was tested at the center of the transmit band.

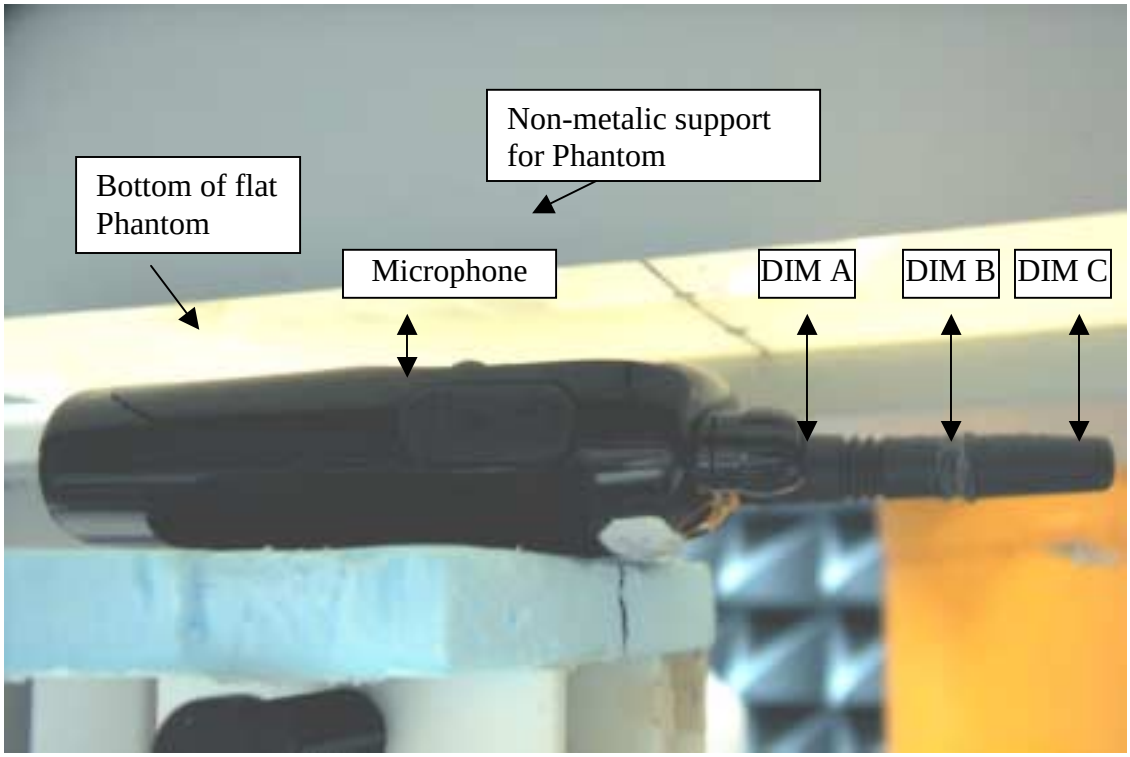
5.1 Device Test Positions

Abdomen - The test sample is positioned in a body - worn accessory and positioned under a flat phantom with the back of the body - worn accessory adjacent and parallel to the phantom. An audio/push-to-talk accessory and cable is connected to the radio with the cable routed orthogonal to and away from the radio at the point of connection to the radio.

Face - The test sample is positioned under a flat phantom with radio housing parallel to the phantom with the radio's microphone spaced 2.5cm from the bottom of the phantom surface.

Reference figures 1 and 2 for portable radio antenna orientation and distances relative to phantoms. Figure 3 provides an overall perspective of the phantom and support structure

Figure 1: Facial Position



Dim A = Distance from surface of antenna base to phantom surface = 35mm

Dim B= Distance from surface of antenna center to phantom surface = 35mm

Dim C= Distance from antenna surface tip to phantom = 35mm

Note: Radio is positioned with microphone 2.5cm from the bottom of the flat body phantom.
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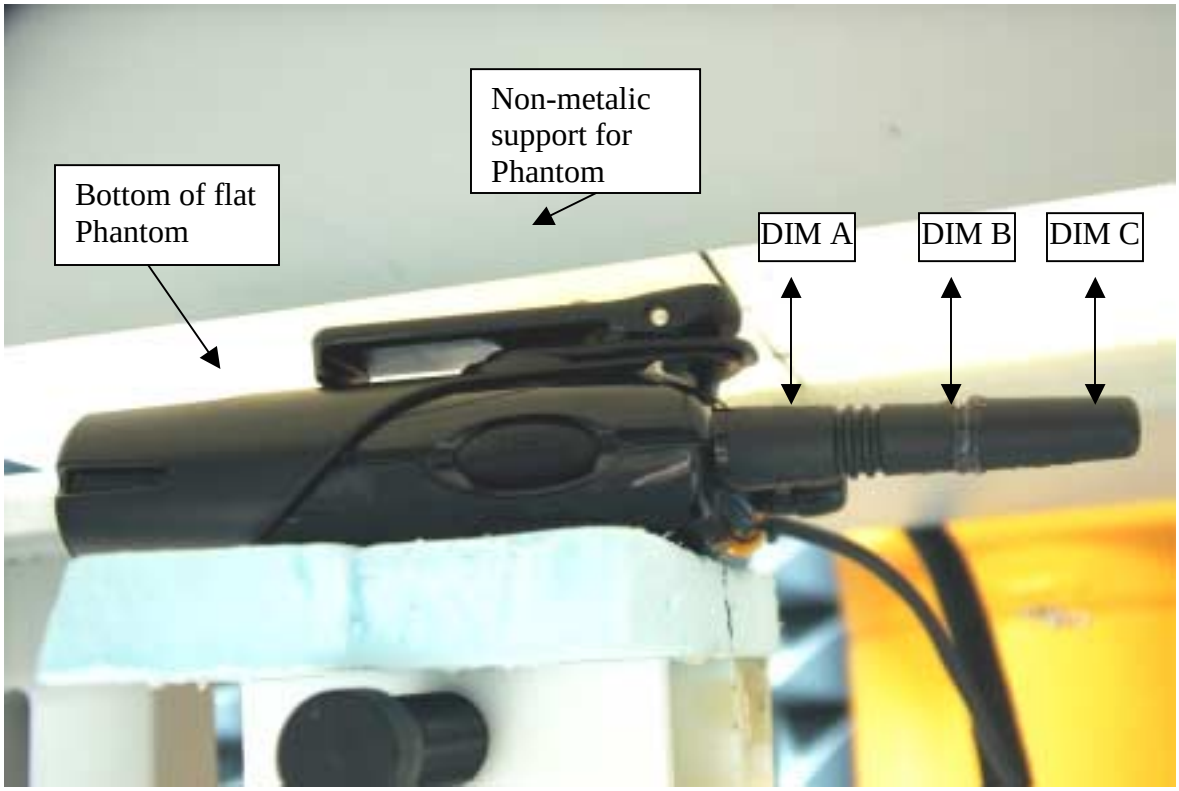
Figure 2: Abdominal Position

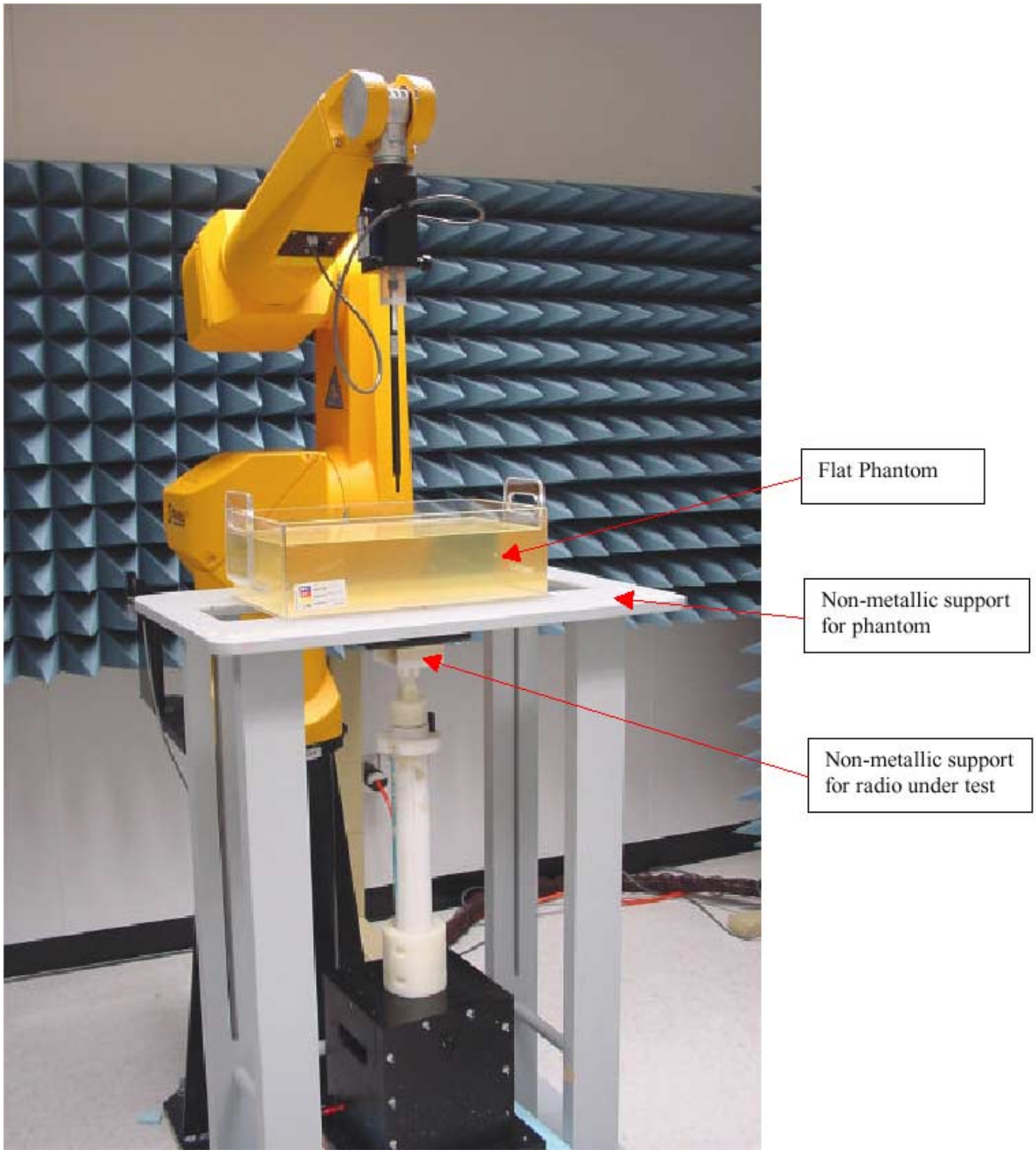


Dim A = Distance from surface of antenna base to phantom surface = 26mm

Dim B= Distance from surface of antenna center to phantom surface = 27mm

Dim C= Distance from antenna surface tip to phantom = 29mm

Figure 3: Robot Test System



5.2 Probe Scan Procedures

The E-field probe is first scanned in a coarse grid over a large area inside the phantom in order to locate the interpolated maximum SAR distribution. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The subsequent scan can directly use this position for reference for the cube evaluations.

6.0 Measurement Uncertainty:

The table below lists the uncertainty estimate of the possible errors that are associated with the measurement system.

Uncertainty Description	Standard Uncertainty
Probe Uncertainty	
- Axial Isotropy	±2.4 %
- Spherical Isotropy	±4.8 %
- Spatial Resolution	±0.5 %
- Linearity Error	±2.7 %
- Calibration Error	±8 %
Evaluation Uncertainty	
- Data Acquisition Error	±0.60 %
- ELF and RF Disturbances	±0.25 %
- Conductivity Assessment	±5 %
Spatial Peak SAR Evaluation Uncertainty	
- Extrapolation and boundary effects	±3%
- Probe positioning	±1 %
- Integration and cube orientation	±3 %
- Cube shape inaccuracies	±1.2 %
- Device positioning	±1.0 %

The Total Measurement Uncertainty is ± 12.1 %. The Expanded Measurement Uncertainty is ± 24.2 % (k=2)

7.0 SAR Test Results:

All SAR results yielded by the tests described in Section 5.0 are listed in the tables below for each body position. The DASY™ measurement system's output files for all the data indicated in the tables below are provided in appendix A.

7.1 SAR results at the abdomen:

Antenna/ Run Number	Freq.	Battery	Carry Acc	Audio Acc	Init. Power (W)	End Power (W)	Measured SAR (100% duty cycle)	SAR (50% duty cycle)
Fixed/ 010815-01	464.5625Mhz	53871	1585176C03	53862	2.48	2.11	3.06	1.53
Fixed/ 010815-03	464.5625Mhz	Alkaline	1585176C03	53862	1.92*	1.35	2.69	1.35
Fixed/ 010815-02	464.5625Mhz	53871	53873	53862	2.48	2.11	**3.19**	**1.60**
Fixed/ 010815-04	464.5625Mhz	Alkaline	53873	53862	1.92*	1.35	2.85	1.43
Fixed/ 010815-05	464.5625Mhz	53871	53873	53866	2.48	2.11	3.00	1.50
Fixed/ 010815-06	464.5625Mhz	53871	53873	53865	2.48	2.11	3.11	1.56

The configuration indicated highest SAR results for the abdomen included the fixed antenna, 53871 NiMH rechargeable battery, 53873 carry case and 53862 audio accessory.

7.2 SAR results at the Face:

Antenna	Freq.	Battery	Carry Acc	Audio Acc	Init. Power (W)	End Power (W)	Measured SAR (100% duty cycle)	SAR (50% duty cycle)
Fixed/ 010816-01	464.5625Mhz	53871	NONE	NONE	2.48	2.11	**2.34**	**1.17**
Fixed/ 010816-02	464.5625Mhz	AA Alkaline	NONE	NONE	1.92*	1.35	2.01	1.01

The configuration indicated highest SAR results for the face included the fixed antenna and the 53871 NiMH rechargeable battery.

*Initial power shown is at band center. Maximum power of 2.2 W for Alkaline batteries is the highest vs. frequency.

7.3 Peak SAR location

Refer to Appendix A for the detailed SAR scan distributions.

8.0 Conclusion

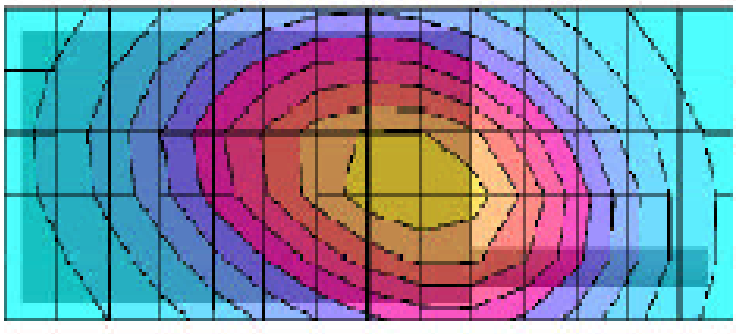
The highest Operational Maximum 1-gram average SAR values found for the portable radio model number NUE2986A based on a 50% duty cycle were:

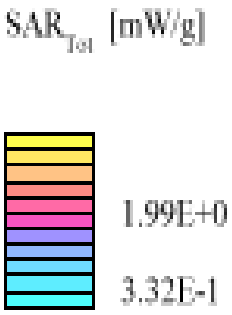
At the abdomen: 1.60 mW/g
At the face: 1.17 mW/g

These test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8.0 W/kg per the requirements of 47 CFR 2.1093(d)

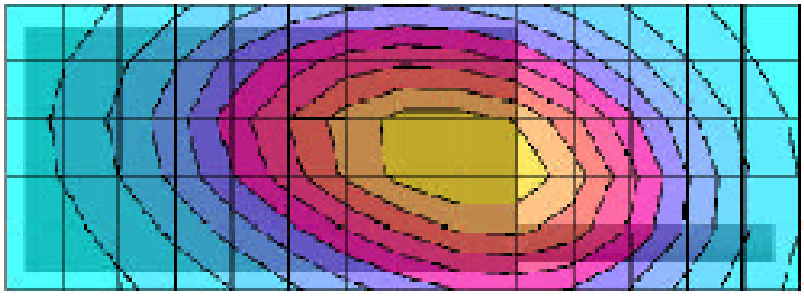
Appendix A: Data Results

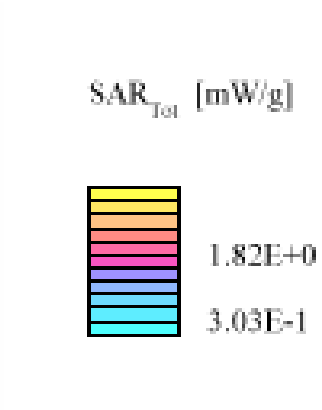
XU2600; Abdomen Test Date:08/15/01
Product: XU2600 Run Time:15 min
Run# 010815-01 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: NiMH 53871 Accessories: Carry Holster 1585176C03
Audio Acc: Remote Speaker mic. 53862
Room Temp:23.9 Simulant Temp:22.3
Flat Phantom Phantom; flat Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ= 0.91 mho/m εr = 57.2 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 3.06 mW/g, (Worst-case extrapolation)





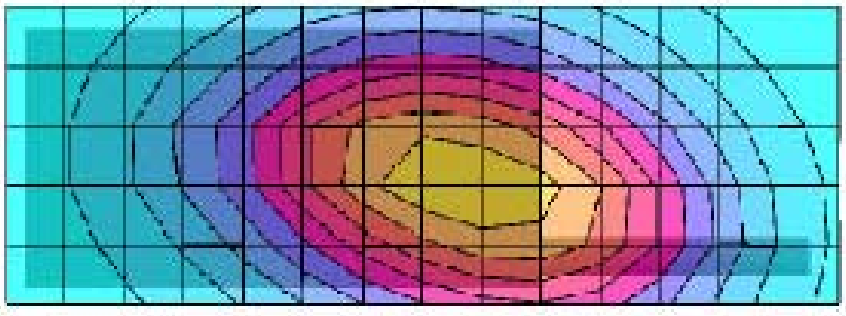
XU2600; Abdomen Test Date:08/15/01
Product: XU2600 Run Time:15 min
Run# 010815-03 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: AA Alkaline Accessories: Carry Holster 1585176C03
Audio Acc: Remote Speaker mic. 53862
Room Temp:23.9 Simulant Temp:22.3
Flat Phantom Phantom; flat Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ= 0.91 mho/m εr = 57.2 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 2.69 mW/g, (Worst-case extrapolation)



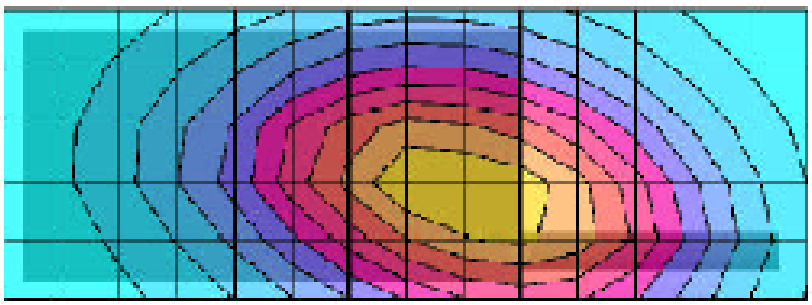


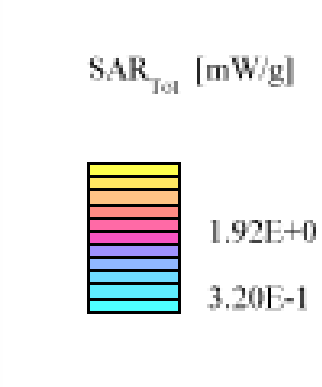
XU2600; Abdomen Test Date:08/15/01

Product: XU2600 Run Time:15 min
Run# 010815-02 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: NiMH 53871 Accessories: Carry Case 53873 Audio Acc: Remote Speaker mic. 53862
Room Temp:23.9 Simulant Temp:22.3
Flat Phantom Phantom; flat Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ= 0.91 mho/m εr = 57.2 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 3.19 mW/g, (Worst-case extrapolation)

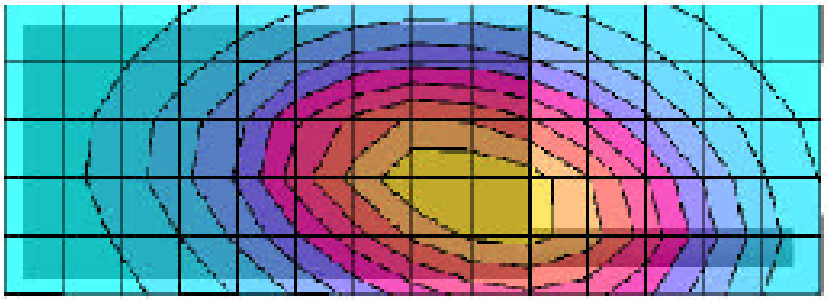


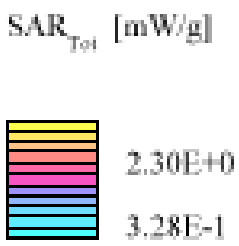
XU2600; Abdomen Test Date:08/16/01
Product: XU2600 Run Time:15 min
Run# 010815-04 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: AA Alkaline Accessories: Carry Case 53873 Audio Acc: Remote Speaker mic. 53862
Room Temp:23.9 Simulant Temp:22.3
Flat Phantom Phantom; flat Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ= 0.91 mho/m εr = 57.2 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 2.85 mW/g, (Worst-case extrapolation)



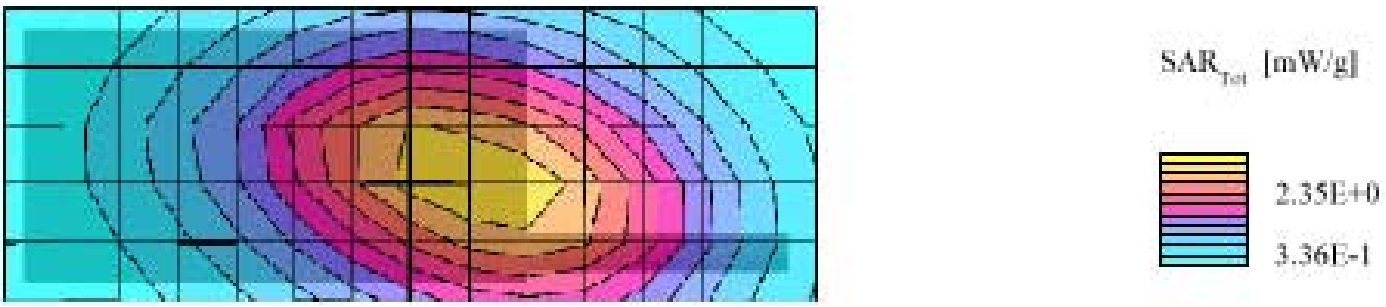


XU2600; Abdomen Test Date:08/16/01
Product: XU2600 Run Time:15 min
Run# 010815-05 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: NiMH 53871 Accessories: Carry Case 53873
Audio Acc: Earbud w/ PTT Microphone 53866
Room Temp:23.9 Simulant Temp:22.3
Flat Phantom Phantom; flat Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ= 0.91 mho/m εr = 57.2 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 3.00 mW/g, (Worst-case extrapolation)

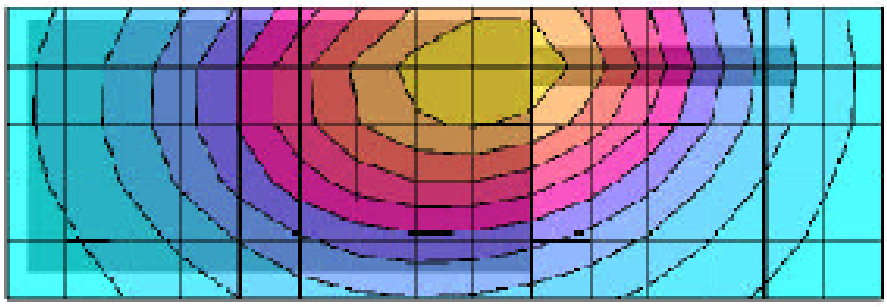




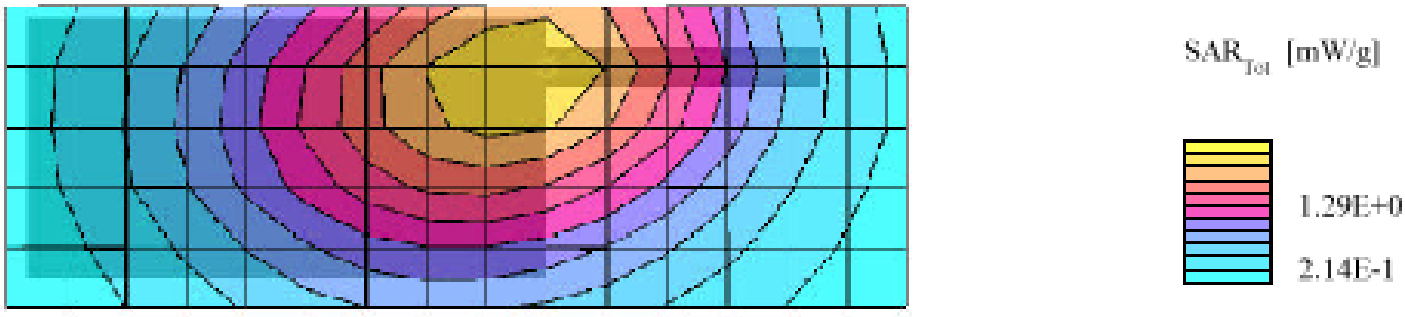
XU2600; Abdomen Test Date:08/16/01
Product: XU2600 Run Time:15 min
Run# 010815-06 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: NiMH 53871 Accessories: Carry Case 53873 Audio Acc: Headset w/boom mic 53865
Room Temp:23.9 Simulant Temp:22.3
Flat Phantom Phantom; flat Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ= 0.91 mho/m εr = 57.2 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 3.11 mW/g, (Worst-case extrapolation)



XU2600; Face Test Date:08/16/01
Product: XU2600 Run Time:15 min
Run# 010816-01 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: NiMH 53871 Accessories: None
Radio Mic placed @2.5cm from Phantom Surface
Room Temp:23.5 Simulant Temp:22.3
Probe Cal Date: 5/23/01
9x16 inch flat Phantom; general Section;
Probe: - SN1418; ConvF(6.81,6.81,6.81);
Crest factor: 1.0; head450: σ = 0.84 mho/m εr = 42.0 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 2.34 mW/g, (Worst-case extrapolation)

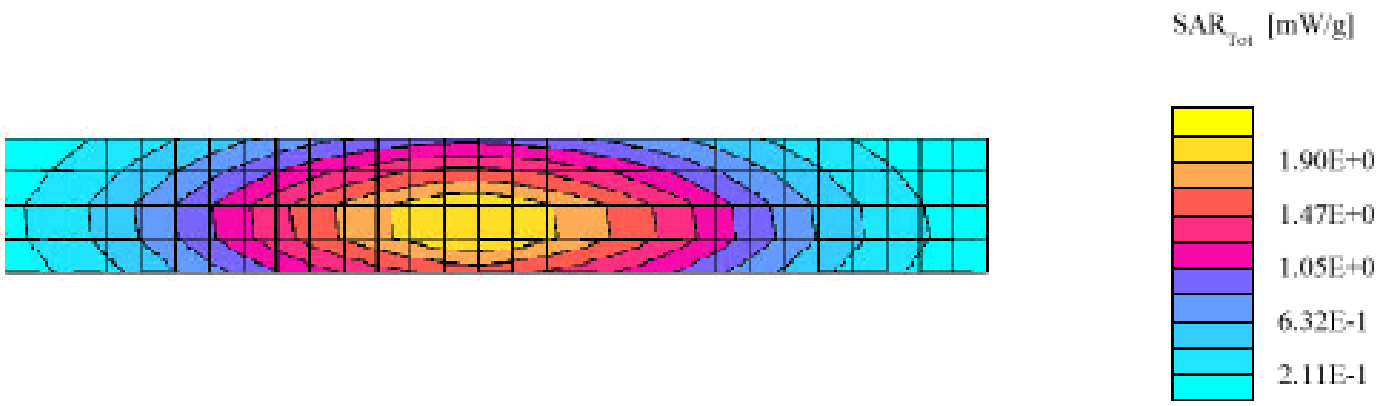


XU2600; Face Test Date:08/16/01
Product: XU2600 Run Time:15 min
Run# 010816-02 SN:158ABN0012 Model #: NUE2986A
TX Freq: 465Mhz Antenna Pos: Fixed
Battery: AA Alkaline Accessories: None
Radio Mic placed @2.5cm from Phantom Surface
Room Temp:23.5 Simulant Temp:22.3
Probe Cal Date: 5/23/01
9x16 inch flat Phantom; general Section;
Probe: - SN1418; ConvF(6.81,6.81,6.81);
Crest factor: 1.0; head450: σ = 0.84 mho/m εr = 42.0 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 2.01 mW/g, (Worst-case extrapolation)

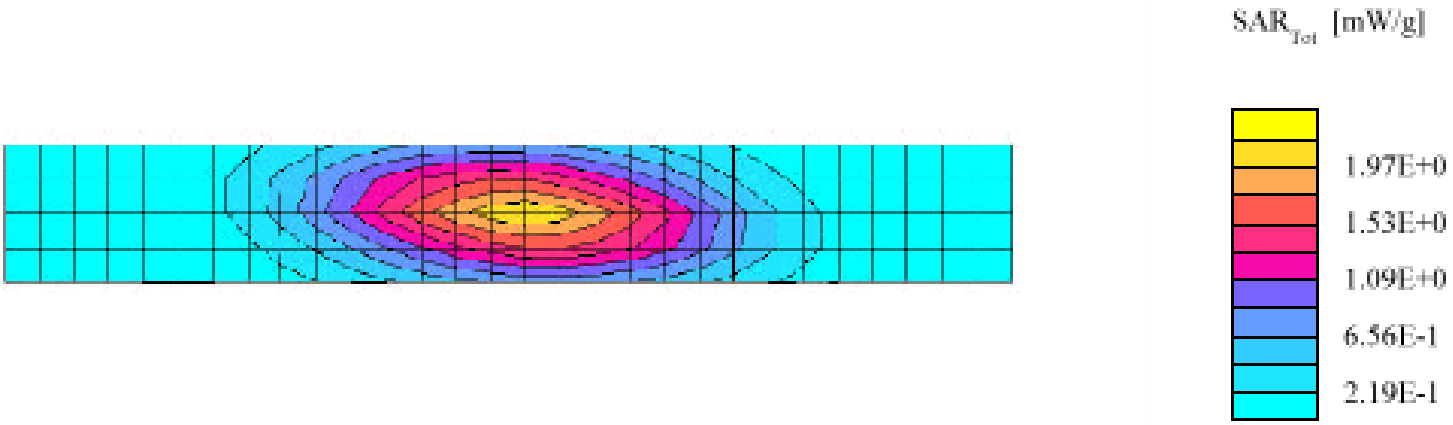


Appendix B: Dipole Validation Data Results

dipole 450;Test Date:08/16/01
Input power: 500mW
Room Temp:23.9 Mixture Temp:23.3
9x16 inch flat Phantom; Section;
Probe: - SN1418; ConvF(6.81,6.81,6.81);
Crest factor: 1.0; head450: σ = 0.84 mho/m εr = 42.0 ρ = 1.00 g/cm 3
Cubes (2): SAR (1g): 2.09 mW/g ± 0.02 dB, (Worst-case extrapolation)



dipole 450;Test Date:08/15/01
450 Body Validation. input power = 500mW
Target = 4.4mW/g @ 1W
flat phantom Phantom; Section;
Probe: - SN1418; ConvF(6.74,6.74,6.74);
Crest factor: 1.0; Muscle 450 MHz: σ = 0.90 mho/m εr = 57.4 ρ = 1.00 g/cm 3
Cube 5x5x7: SAR (1g): 2.14 mW/g, (Worst-case extrapolation)



Appendix C: Measurement Probe Calibration Certificate

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Calibration Certificate

Dosimetric E-Field Probe

Type:	**ET3DV6R**
Serial Number:	**1418**
Place of Calibration:	**Zurich**
Date of Calibration:	**May 23, 2001**
Calibration Interval:	**12 months**

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:	Nikolai E. Nevzorov
Approved by:	Katja Pokovic

DASY3 - Parameters of Probe: ET3DV6R SN:1418

Sensitivity in Free Space

NormX	2.32 $\mu V/(V/m)^2$	DCP X	97 mV
NormY	2.15 $\mu V/(V/m)^2$	DCP Y	97 mV
NormZ	2.39 $\mu V/(V/m)^2$	DCP Z	97 mV

Diode Compression

Sensitivity in Tissue Simulating Liquid

BIO CORRECTION

Head	450 MHz	ε_r = 43.5 ± 5%		σ = 0.87 ± 10% mho/m	
	ConvF X	6.18	extrapolated	Boundary effect:	
	ConvF Y	6.18	extrapolated	Alpha	1.00
	ConvF Z	6.18	extrapolated	Depth	1.56
Head	900 MHz	ε_r = 42 ± 5%		σ = 0.97 ± 10% mho/m	
	ConvF X	5.81	± 7% (k=2)	Boundary effect:	
	ConvF Y	5.81	± 7% (k=2)	Alpha	0.92
	ConvF Z	5.81	± 7% (k=2)	Depth	1.64
Head	1500 MHz	ε_r = 40.4 ± 5%		σ = 1.23 ± 10% mho/m	
	ConvF X	5.31	interpolated	Boundary effect:	
	ConvF Y	5.31	interpolated	Alpha	0.82
	ConvF Z	5.31	interpolated	Depth	1.75
Head	1800 MHz	ε_r = 40 ± 5%		σ = 1.40 ± 10% mho/m	
	ConvF X	5.06	± 7% (k=2)	Boundary effect:	
	ConvF Y	5.06	± 7% (k=2)	Alpha	0.77
	ConvF Z	5.06	± 7% (k=2)	Depth	1.81

Sensor Offset

Probe Tip to Sensor Center	2.7	mm

Schmid & Partner
Engineering AG

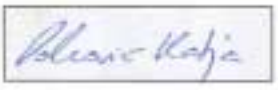
Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Additional Conversion Factors

for Dosimetric E-Field Probe

Type:	ET3DV6R
Serial Number:	1418
Place of Assessment:	Zurich
Date of Assessment:	May 25, 2001
Probe Calibration Date:	May 23, 2001

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1800 MHz.

Assessed by: 

Dosimetric E-Field Probe ET3DV6R SN:1418

Conversion factor (± standard deviation)

450 MHz	ConvF	6.51 ± 8%	ε_r = 47.0 44.65 – 49.35 σ = 0.63 mho/m .60 – .66 (brain tissue)
835 MHz	ConvF	5.93 ± 8%	ε_r = 44.0 41.8 – 46.2 σ = 0.90 mho/m .855 – .945 (brain tissue)
925 MHz	ConvF	5.77 ± 8%	ε_r = 44.0 41.8 – 46.2 σ = 0.93 mho/m .883 – .976 (brain tissue)
1500 MHz	ConvF	5.30 ± 8%	ε_r = 41.1 39.04 – 43.15 σ = 1.00 mho/m .95 – 1.05 (brain tissue)
1900 MHz	ConvF	4.82 ± 8%	ε_r = 39.9 37.90 – 41.90 σ = 1.42 mho/m 1.35 – 1.49 (brain tissue)
150 MHz	ConvF	7.71 ± 8%	ε_r = 70.00 66.5 – 73.5 σ = 0.75 mho/m .712 – .787 (muscle tissue)
450 MHz	ConvF	6.74 ± 8%	ε_r = 58.0 55.1 – 60.9 σ = 1.00 mho/m .95 – 1.05 (muscle tissue)
835 MHz	ConvF	5.89 ± 8%	ε_r = 52.0 49.4 – 54.6 σ = 1.10 mho/m 1.04 – 1.15 (muscle tissue)
925 MHz	ConvF	5.76 ± 8%	ε_r = 52.0 49.4 – 54.6 σ = 1.20 mho/m 1.14 – 1.26 (muscle tissue)
1500 MHz	ConvF	5.46 ± 8%	ε_r = 41.2 39.0 – 43.15 σ = 1.48 mho/m 1.40 – 1.55 (muscle tissue)
1920 MHz	ConvF	4.60 ± 8%	ε_r = 51.5 48.92 – 54.07 σ = 1.95 mho/m 1.85 – 2.05 (muscle tissue)

Appendix D: Illustrations of Body-worn Accessories

Illustration of Body-worn Accessories

The purpose of this appendix is to illustrate the body-worn carry accessories for the XU2600 FM Portable Radio.

Photos 1, 2 and 3 illustrate the 1585176C03 plastic carry holder with a swivel belt clip.

Photo 1
Front

Photo 2
Side view

Photo 3
Rear view

Photos 4, 5 and 6 illustrate the 53873 soft leather carry holder with belt clip.

Photo 4
Front

Photo 5
Side view

Photo 6
Rear