

Schmid &amp; Partner Engineering AG

**s p e a g**

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## Additional Conversion Factors for Dosimetric E-Field Probe

Type:

**ET3DV6**

Serial Number:

**1383**

Place of Assessment:

**Zurich**

Date of Assessment:

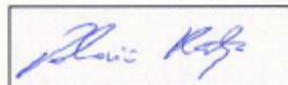
**February 28, 2005**

Probe Calibration Date:

**February 24, 2005**

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:



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**Dosimetric E-Field Probe ET3DV6 SN:1383**Conversion factor ( $\pm$  standard deviation)**150 MHz**      *ConvF*       **$8.6 \pm 10\%$** 

$\epsilon_r = 52.3$   
 $\sigma = 0.76 \text{ mho/m}$   
 (head tissue)

**236 MHz**      *ConvF*       **$7.9 \pm 10\%$** 

$\epsilon_r = 48.2$   
 $\sigma = 0.82 \text{ mho/m}$   
 (head tissue)

**784 MHz**      *ConvF*       **$6.6 \pm 7\%$** 

$\epsilon_r = 41.8$   
 $\sigma = 0.90 \text{ mho/m}$   
 (head tissue)

**Important Note:**

**For numerically assessed probe conversion factors, parameters Alpha and Delta in the DASY software must have the following entries: Alpha = 0 and Delta = 1.**

**Please see also Section 4.7 of the DASY4 Manual.**

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**Dosimetric E-Field Probe ET3DV6 SN:1383**Conversion factor ( $\pm$  standard deviation)

150 MHz	<i>ConvF</i>	$8.2 \pm 10\%$	$\epsilon_r = 61.9$ $\sigma = 0.80 \text{ mho/m}$ (body tissue)
236 MHz	<i>ConvF</i>	$7.9 \pm 10\%$	$\epsilon_r = 59.8$ $\sigma = 0.87 \text{ mho/m}$ (body tissue)
300 MHz	<i>ConvF</i>	$7.8 \pm 9\%$	$\epsilon_r = 58.2$ $\sigma = 0.92 \text{ mho/m}$ (body tissue)
350 MHz	<i>ConvF</i>	$7.6 \pm 9\%$	$\epsilon_r = 57.7$ $\sigma = 0.93 \text{ mho/m}$ (body tissue)
784 MHz	<i>ConvF</i>	$6.3 \pm 7\%$	$\epsilon_r = 55.4$ $\sigma = 0.97 \text{ mho/m}$ (body tissue)

**Important Note:**

**For numerically assessed probe conversion factors, parameters Alpha and Delta in the DASY software must have the following entries: Alpha = 0 and Delta = 1.**

**Please see also Section 4.7 of the DASY4 Manual.**

## **Appendix C**

### **Dipole Certificates**

Calibration Laboratory of  
Schmid & Partner  
Engineering AG  
Zeughausstrasse 43, 8004 Zurich, Switzerland

Client **Motorola CGISS**

## CALIBRATION CERTIFICATE

Object(s) **D835V2 - SN:426**

Calibration procedure(s) **QA CAL-05.v2  
Calibration procedure for dipole validation kits**

Calibration date: **March 22, 2004**



Condition of the calibrated item **In Tolerance (according to the specific calibration document)**

This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.

All calibrations have been conducted in the closed laboratory facility; environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8461A	US37292783	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8461A	MY41 092317	18-Oct-02 (Agilent, No. 20021018)	Oct-04
RF generator R&S SML-03	100698	27-Mar-2002 (R&S, No. 20-92389)	In house check: Mar-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Judith Mueller	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: March 23, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.



## 1. Measurement Conditions

The measurements were performed in the flat section of the SAM twin phantom filled with head simulating solution of the following electrical parameters at 835 MHz:

Relative Dielectricity	42.1	± 5%
Conductivity	0.89 mho/m	± 5%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 6.3 at 835 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 15mm from dipole center to the solution surface. The included distance spacer was used during measurements for accurate distance positioning.

The coarse grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration.

The dipole input power (forward power) was  $250 \text{ mW} \pm 3 \%$ . The results are normalized to 1W input power.

## 2. SAR Measurement with DASY4 System

Standard SAR-measurements were performed according to the measurement conditions described in section 1. The results (see figure supplied) have been normalized to a dipole input power of 1W (forward power). The resulting averaged SAR-values measured with the dosimetric probe ET3DV6 SN:1507 and applying the advanced extrapolation are:

averaged over $1 \text{ cm}^3$ (1 g) of tissue:	$10.0 \text{ mW/g} \pm 16.8 \% (k=2)^1$
averaged over $10 \text{ cm}^3$ (10 g) of tissue:	$6.52 \text{ mW/g} \pm 16.2 \% (k=2)^1$

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<sup>1</sup> validation uncertainty

### **3. Dipole Impedance and Return Loss**

The impedance was measured at the SMA-connector with a network analyzer and numerically transformed to the dipole feedpoint. The transformation parameters from the SMA-connector to the dipole feedpoint are:

Electrical delay:	<b>1.377 ns</b>	(one direction)
Transmission factor:	<b>0.986</b>	(voltage transmission, one direction)

The dipole was positioned at the flat phantom sections according to section 1 and the distance holder was in place during impedance measurements.

Feedpoint impedance at 835 MHz:	$\text{Re}\{Z\} = 51.9 \, \Omega$
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$\text{Im}\{Z\} = 0.7 \, \Omega$
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Return Loss at 835 MHz	<b>-34.2 dB</b>
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### **4. Handling**

Do not apply excessive force to the dipole arms, because they might bend. Bending of the dipole arms stresses the soldered connections near the feedpoint leading to a damage of the dipole.

### **5. Design**

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

### **6. Power Test**

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN426**

Communication System: CW-835; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL 835 MHz;

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.89 \text{ mho/m}$ ;  $\epsilon_r = 42.1$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1507; ConvF(6.3, 6.3, 6.3); Calibrated: 1/23/2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn411; Calibrated: 11/6/2003
- Phantom: SAM with CRP - TP1006; Type: SAM 4.0; Serial: TP:1006;
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

**Pin = 250 mW; d = 15 mm/Area Scan (81x81x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Reference Value = 57 V/m; Power Drift = -0.009 dB

Maximum value of SAR (interpolated) = 2.68 mW/g

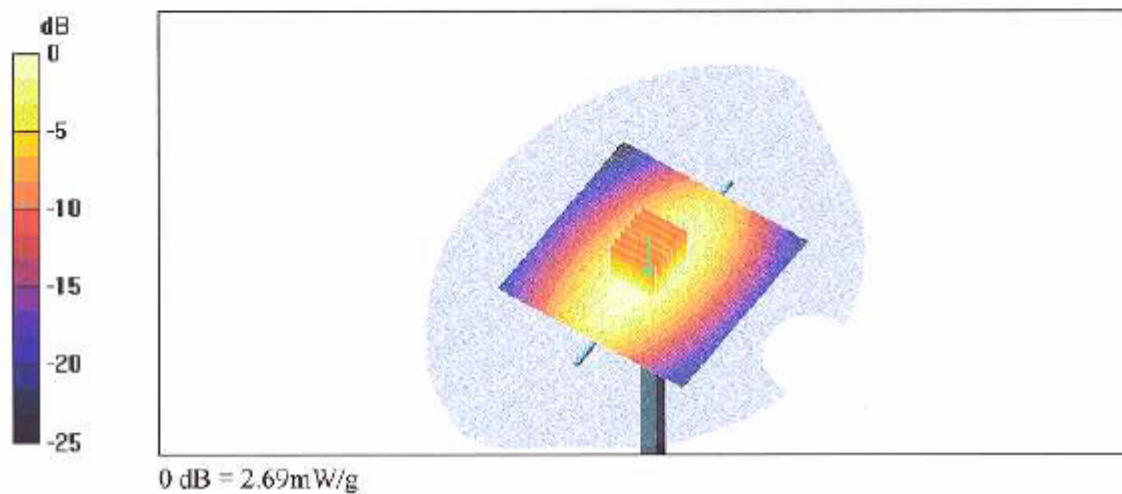
**Pin = 250 mW; d = 15 mm/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 57 V/m; Power Drift = -0.009 dB

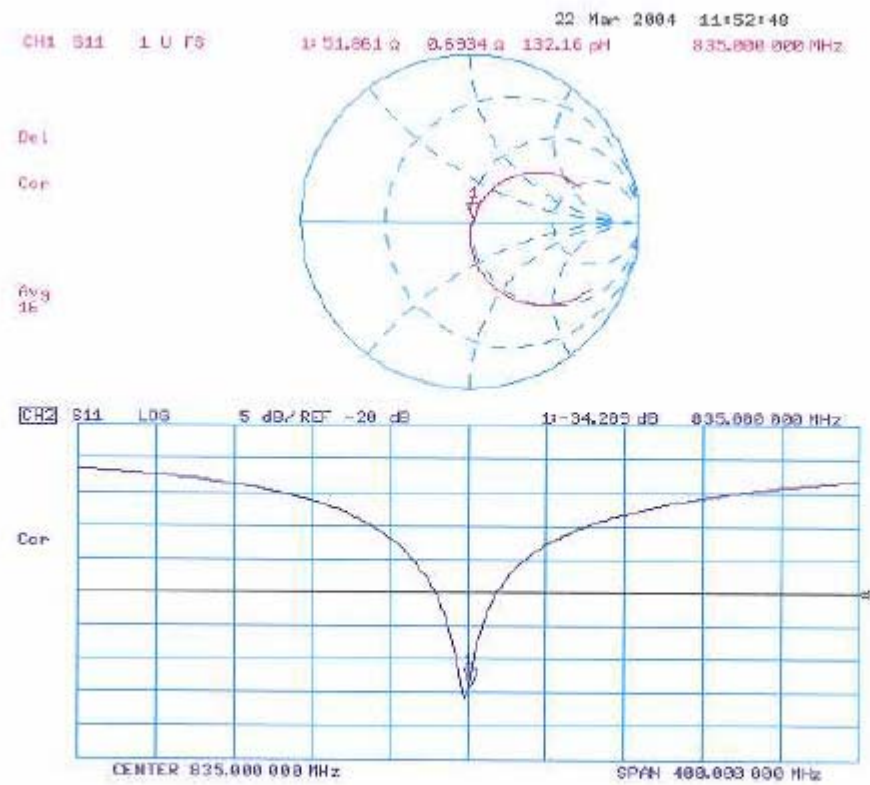
Maximum value of SAR (measured) = 2.69 mW/g

Peak SAR (extrapolated) = 3.73 W/kg

SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.63 mW/g







## **Appendix D**

### **Test System Verification Scans**

Note: Dipole validation scans at the head from SPEAG are provided in APPENDIX D. The GEMS EME lab validated the dipole to the applicable IEEE system performance targets. Within the same day system validation was performed using FCC body tissue parameters to generate the system performance target values for body at the applicable frequency. The results of the GEMS EME system performance validation are provided herein. To assess the isotropic characteristics of the measurement probe, two system performance zoom scans (0 and 90 degrees) were measured. The results were averaged together and adjusted to account for the power drift in order to obtain the final calculated 1 and 10 gram results.

**Motorola GEMS EME Lab****SPEAG 825 MHz Dipole; Model D835V2, SN 426; Test Date: 7/12/05**

Run #: 050712-01

Sim.Tissue Temp: 22.2 (C)

Model #: D835V2 S/N: 426

TX Freq: 835 (MHz) Start power: 250 (mW)

Target:

9.37 mW/g for 1g SAR 6.20 mW/g for 10g SAR

9.39 mW/g calculated 1g-SAR; + 0.26% from target (including drift)

6.18 mW/g calculated 10g-SAR; - 0.39% from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03),

Duty Cycle: 1:1, Medium: 835 MHz FCC Body, Medium parameters used:  $\sigma = 0.99$  mho/m,  $\epsilon_r = 54$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

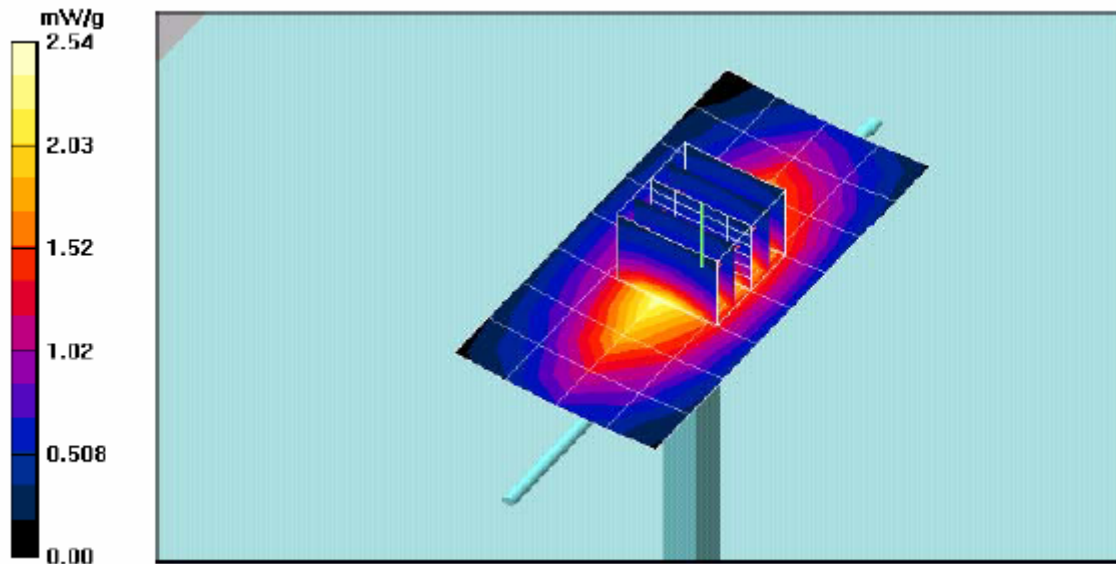
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 52.5 V/m; Power Drift = 0.00275 dB; Peak SAR (extrapolated) = 3.34 W/kg

**SAR(1 g) = 2.35 mW/g; SAR(10 g) = 1.55 mW/g****System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 52.5 V/m; Power Drift = 0.00275 dB; Peak SAR (extrapolated) = 3.37 W/kg

**SAR(1 g) = 2.35 mW/g; SAR(10 g) = 1.54 mW/g**

**Motorola GEMS EME Lab****SPEAG 835 MHz Dipole; Model D835V2, SN 426; Test Date: 7/14/05**

Run #: 050714-01

Sim.Tissue Temp: 21.4 (C)

Model #: D835V2 S/N: 426

TX Freq: 835 (MHz) Start power: 250 (mW)

Target:

9.37 mW/g for 1g SAR 6.20 mW/g for 10g SAR

9.76 mW/g calculated 1g-SAR; + 4.19% from target (including drift)

6.43 mW/g calculated 10g-SAR; + 3.70% from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03),

Duty Cycle: 1:1, Medium: 835 MHz FCC Body, Medium parameters used:  $\sigma = 0.99$  mho/m,  $\epsilon_r = 54.2$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

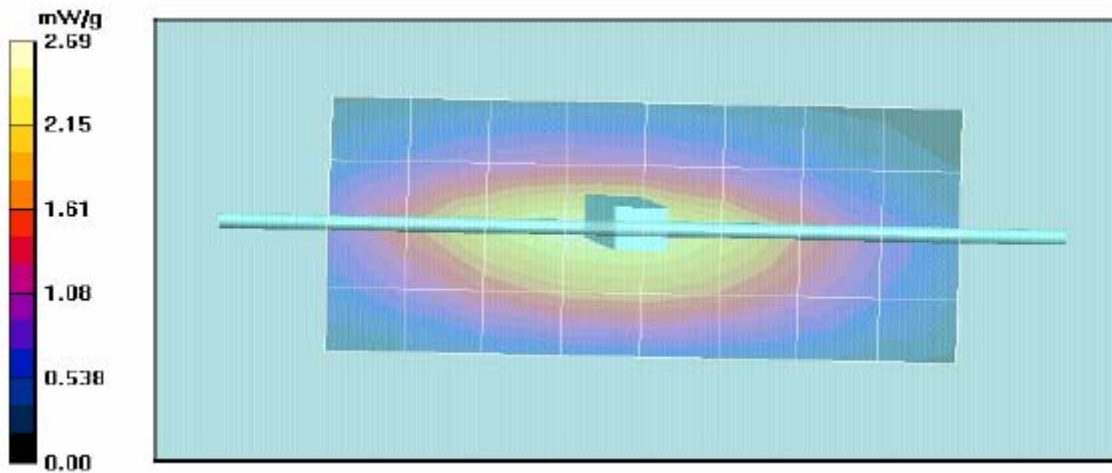
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 53.4 V/m; Power Drift = 0.0607 dB; Peak SAR (extrapolated) = 3.51 W/kg

**SAR(1 g) = 2.47 mW/g; SAR(10 g) = 1.63 mW/g****System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 53.4 V/m; Power Drift = 0.0607 dB; Peak SAR (extrapolated) = 3.54 W/kg

**SAR(1 g) = 2.48 mW/g; SAR(10 g) = 1.63 mW/g**

**Motorola GEMS EME Lab****SPEAG 835 MHz Dipole; Model D835V2, SN 426; Test Date: 7/19/05**

Run #: CM-SYSP-835B-050719-06

Sim.Tissue Temp: 20.4 (C)

Model #: D835V2 S/N: 426

TX Freq: 835 (MHz) Start power: 250 (mW)

Target:

9.37 mW/g for 1g SAR 6.20 mW/g for 10g SAR

10.15 mW/g calculated 1g-SAR; + 8.28% from target (including drift)

6.67 mW/g calculated 10g-SAR; + 7.59% from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03),

Duty Cycle: 1:1, Medium: 835 MHz FCC Body, Medium parameters used:  $\sigma = 1.01$  mho/m,  $\epsilon_r = 53.9$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

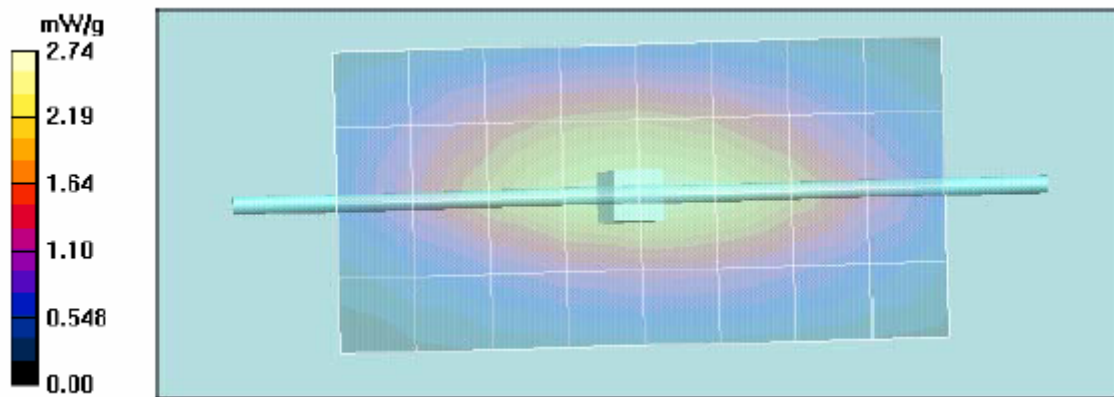
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 54.3 V/m; Power Drift = -0.0198dB; Peak SAR (extrapolated) = 3.60 W/kg

**SAR(1 g) = 2.53 mW/g; SAR(10 g) = 1.66 mW/g****System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 54.3 V/m; Power Drift = -0.0198 dB; Peak SAR (extrapolated) = 3.58 W/kg

**SAR(1 g) = 2.52 mW/g; SAR(10 g) = 1.66 mW/g**



**Motorola GEMS EME Lab****SPEAG 835 MHz Dipole; Model D835V2, SN 426; Test Date: 7/20/05**

Run #: JsT-SYSP-835B-050720-01

Sim.Tissue Temp: 21.8 (C)

Model #: D835V2 S/N: 426

TX Freq: 835 (MHz) Start power: 250 (mW)

Target:

9.37 mW/g for 1g SAR 6.20 mW/g for 10g SAR

10.05 mW/g calculated 1g-SAR; + 7.27% from target (including drift)

6.60 mW/g calculated 10g-SAR; + 6.46% from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.03, 6.03, 6.03),

Duty Cycle: 1:1, Medium: 835 MHz FCC Body, Medium parameters used:  $\sigma = 1$  mho/m,  $\epsilon_r = 52.6$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

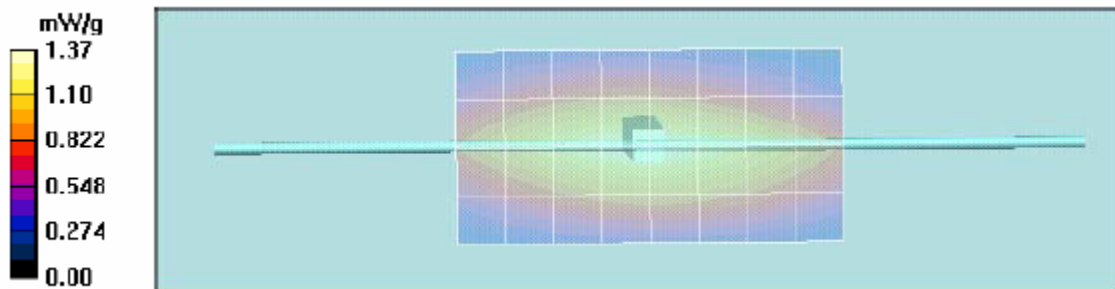
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 54.9 V/m; Power Drift = 0.0126 dB; Peak SAR (extrapolated) = 3.67 W/kg

**SAR(1 g) = 2.54 mW/g; SAR(10 g) = 1.67 mW/g****System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 54.9 V/m; Power Drift = 0.0126 dB; Peak SAR (extrapolated) = 3.55 W/kg

**SAR(1 g) = 2.5 mW/g; SAR(10 g) = 1.64 mW/g**

SYSTEM PERFORMANCE TARGET CHECK

Date: 28 March 2005 Frequency (MHz): 835  
Lab Location: GEMS-EME Mixture Type: 835-Body  
Robot System: GEMS-EME -2 Ambient Temp.(°C): 22.0  
Probe Serial #: 1393 Tissue Temp.(°C): 21.7  
DAE Serial #: DAE3V1 SN406

Tissue Characteristics Phantom Type/SN: 80302002D-S14  
Permittivity: 53.2 Distance (mm): 15  
Conductivity: 0.96

Reference Source: Dipole (Dipole/Handset)  
Reference SN: 426

Power to Dipole: 250 mW  
Power Output (radio): N/A mW

Measured SAR Value: 2.355 mW/g, 1.56 mW/g (10g avg.)  
Power Drift: 0.0248 dB

Measured SAR Value: 9.37 mW/g, 6.20 mW/g (10g avg.)  
(normalized to 1.0 W,  
with drift compensation)

Test performed by: Dave Hopper Initial: WDH

**DUT: Dipole 835 MHz;** Date/Time: 03/28/05 07:45:22

Run #: 050328-01

Test operator: Dave Hopper

Robot = GEMS-2

Phantom #: 80302002D-S14

Sim.Tissue Temp: 21.7 (C)

Model #: D835V2

S/N: 426

TX Freq: 835(MHz)

Start power: 250 (mW)

Target:

Establishing New Body Targets

9.37 mW/g calculated 1g-SAR; 0 % from target (including drift)

6.20 mW/g calculated 10g-SAR; 0 % from target (including drift)

Probe: ET3DV6 - SN1393, Calibrated: 4/28/2004, ConvF(6.35, 6.35, 6.35)

Duty Cycle: 1:1, Medium: 835 MHz FCC Body, Medium parameters used:  $\sigma = 0.96$ ; mho/m,  $\epsilon_r = 53.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 52.9 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 3.32 W/kg

**SAR(1 g) = 2.34 mW/g; SAR(10 g) = 1.55 mW/g**

Maximum value of SAR (measured) = 2.53 mW/g

**System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 52.9 V/m; Power Drift = 0.0 dB

Peak SAR (extrapolated) = 3.33 W/kg

**SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.57 mW/g**

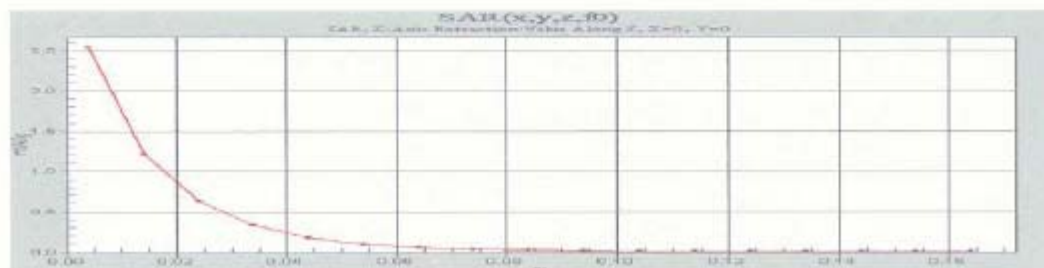
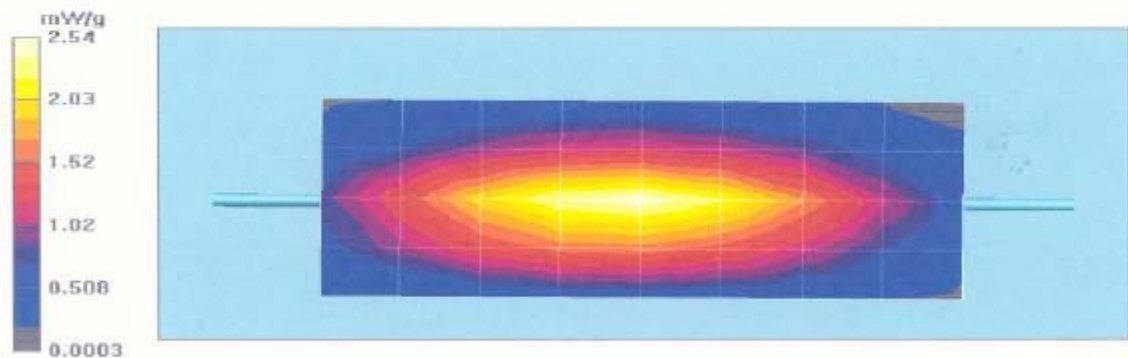
Maximum value of SAR (measured) = 2.57 mW/g

**System Performance Check/Dipole Area Scan (5x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.49 mW/g

**System Performance Check/Z-Axis Retraction (1x1x17):** Measurement grid: dx=20mm, dy=20mm, dz=10mm

Maximum value of SAR (measured) = 2.54 mW/g

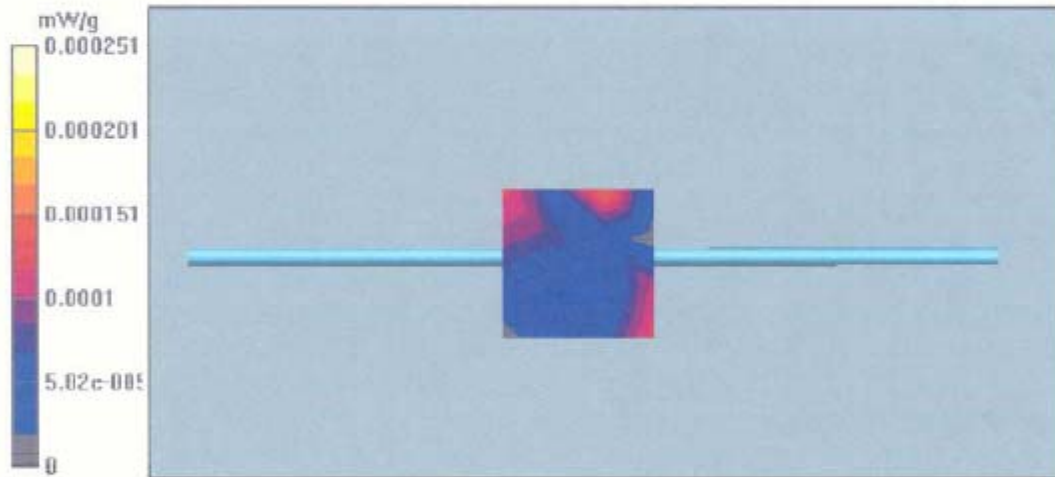


DUT: Dipole 835 MHz; Date/Time: 03/28/05 07:45:22  
Run #: 050328-01 Test operator: Dave Hopper  
Robot = GEMS-2 Phantom #: 80302002D-S14 Sim.Tissue Temp: 21.7 (C)  
Model #: D835V2 S/N: 426  
TX Freq: 835(MHz) Start power: 250 (mW)  
Target:

Establishing New Body Targets  
9.37 mW/g calculated 1g-SAR: 0 % from target (including drift)  
6.20 mW/g calculated 10g-SAR: 0 % from target (including drift)

Probe: ET3DV6 - SN1393, Calibrated: 4/28/2004, ConvF(6.35, 6.35, 6.35)  
Duty Cycle: 1:1, Medium: 835 MHz FCC Body, Medium parameters used:  $\sigma = 0.96$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**System Performance Check/Zoom Scan (4x4x7)/Cube 0:** Measurement grid: dx=10mm, dy=10mm, dz=5mm  
Reference Value = 52.9 V/m; Power Drift = **not measured**  
Maximum value of SAR (measured) = 0.000251 mW/g



## **Appendix E**

### **DUT Scans (Shortened scans & Highest SAR configurations)**



**Motorola GEMS EME Laboratory****FCC ID: ABZ99FT5000; Test Date: 7/19/2005**

Run #: CM-Face-050719-10

Test operator: C. Miller

Sim. Tissue Temp: 20.3 (C)

Model #: PMUF1105A

SN: 008TCL1865

Antenna: NAF5083A

TX Freq (MHz): 776

Battery: NNTN5332A (AA Shell Pack)

Start power: 2.86 W

Carry acc.: NTN8266B belt clip fixed to battery

Audio acc.: None

Comments:

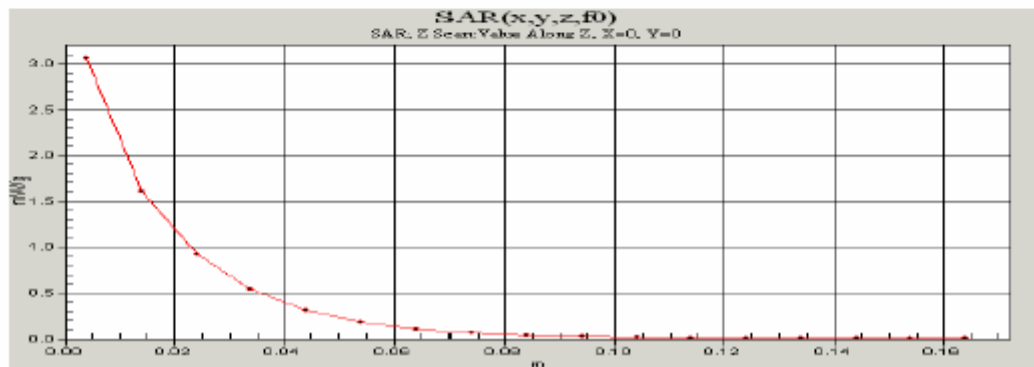
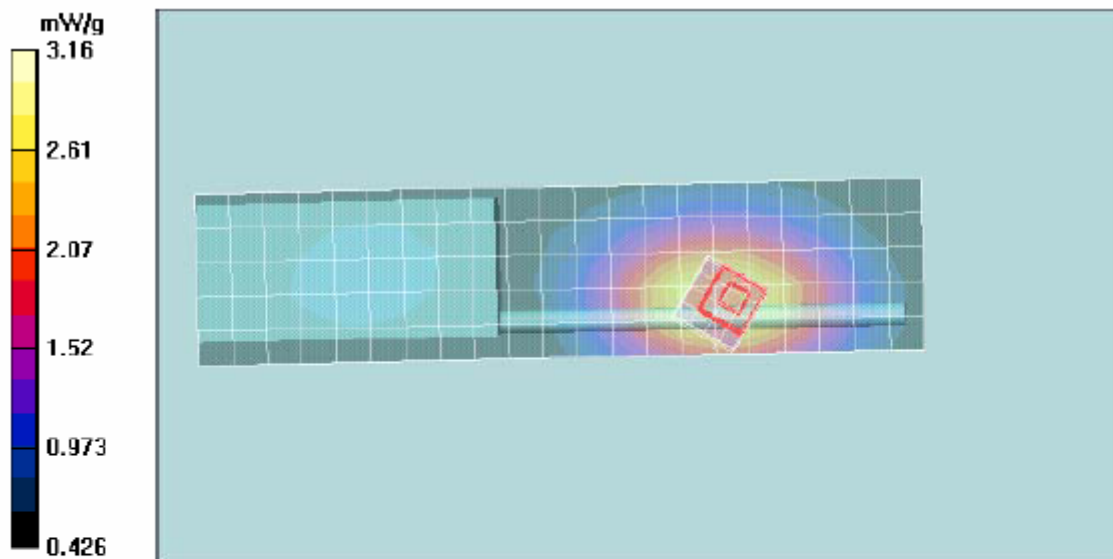
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.6, 6.6, 6.6)

Duty Cycle: 1:1, Medium: 770 IEEE MHz Head, Medium parameters used:  $\sigma = 0.93$  mho/m,  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**Face template/5x5x7 Zoom Scan/Cube 0:** Measurement grid: dx=7.5mm, dy=7.5mm, dz=7.5mm

Reference Value = 54.4 V/m; Power Drift = -0.336 dB

**SAR(1 g) = 3.02 mW/g; SAR(10 g) = 2.15 mW/g****Comments: Short Scan at the face with front of unit 2.5 cm.****Shortened scan reflects highest S.A.R. producing configuration; Run time 6 minutes.****Representative "normal" scan run time was 23 minutes****"Shortened" scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.71mW/g; 10-g Avg. = 1.22mW/g****"Normal" scan max calculated S.A.R. using S.A.R. drift: 1-g Avg. = 1.92mW/g; 10-g Avg. = 1.36mW/g****(See part 1 of 1 section 9.0 run #CM-Face-050719-07 )**

**Motorola GEMS EME Laboratory****FCC ID: ABZ99FT5000; Test Date: 7/19/2005**

Run #: CM-Face-050719-07

Test operator: C. Miller

Sim. Tissue Temp: 20.4 (C)

Model #: PMUF1105A

SN: 008TCL1865

Antenna: NAF5083A

TX Freq (MHz): 776

Battery: NNTN5332A (AA Shell Pack)

Start power: 2.83 W

Carry acc.: NTN8266B belt clip fixed to battery

Audio acc.: None

Comments:

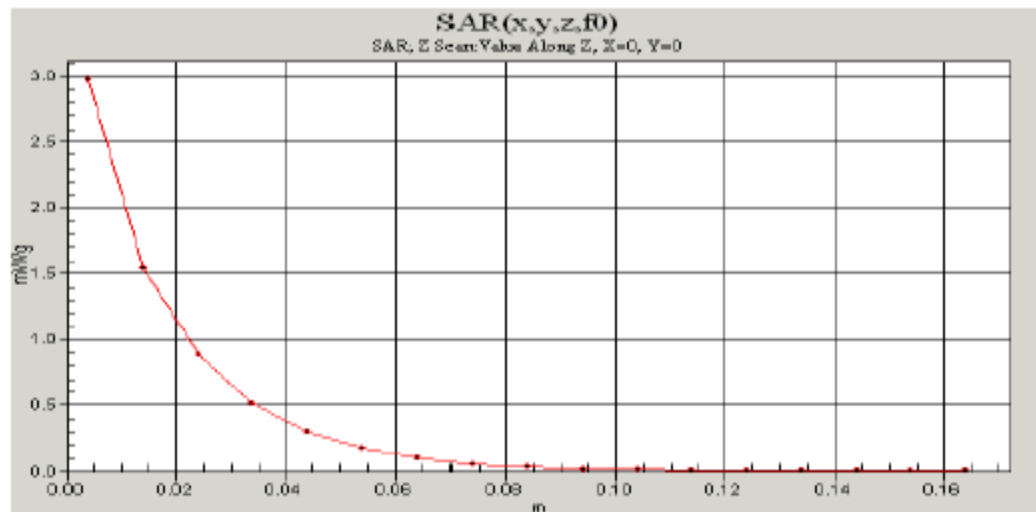
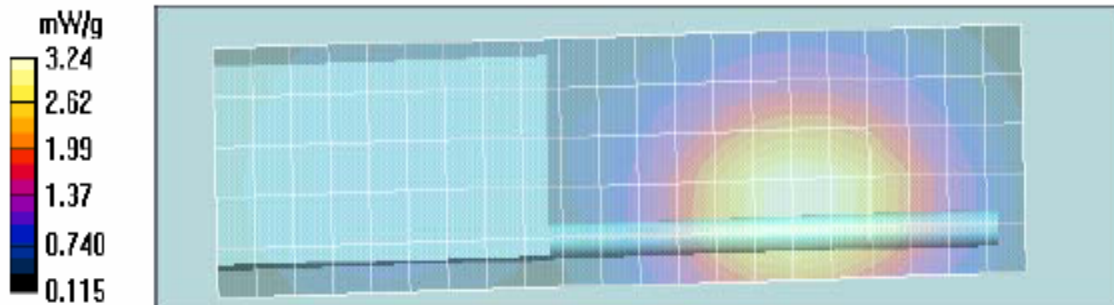
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.6, 6.6, 6.6)

Duty Cycle: 1:1, Medium: 770 IEEE MHz Head, Medium parameters used:  $\sigma = 0.93$  mho/m,  $\epsilon_r = 43$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Electronics: DAE3 Sn406, Calibrated: 11/17/2004

**Face template/7x7x7 Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5.0mm, dy=5.0mm, dz=5.0mm

Reference Value = 58.5 V/m; Power Drift = -0.935 dB

**SAR(1 g) = 2.92 mW/g; SAR(10 g) = 2.07 mW/g**

**Motorola GEMS EME Laboratory****FCC ID: ABZ99FT5000; Test Date: 7/20/2005**

Run #: CM-Ab-050720-05

Test operator: C. Miller

Sim. Tissue Temp: 21.4 (C)

Model #: PMUF1105A

SN: 008TCL1865

Antenna: NAF5083A

TX Freq (MHz): 776

Battery: NNTN5332A (AA Shell Pack)

Start power: 2.95 W

Carry acc.: NTN8266B belt clip fixed to battery

Audio acc.: PMLN4418B

Comments:

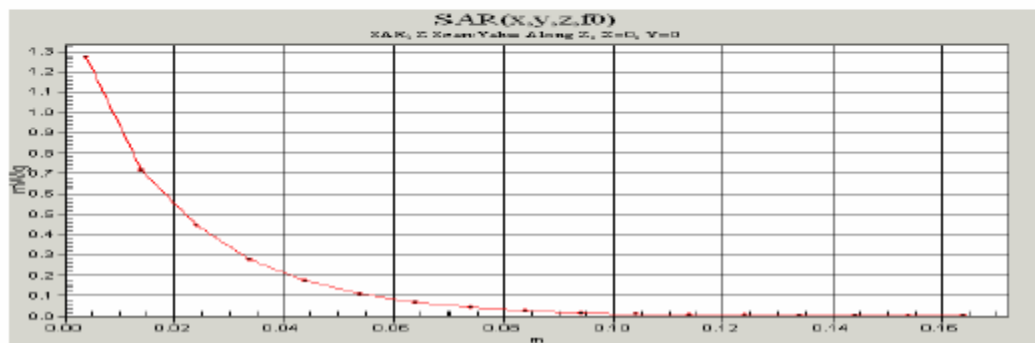
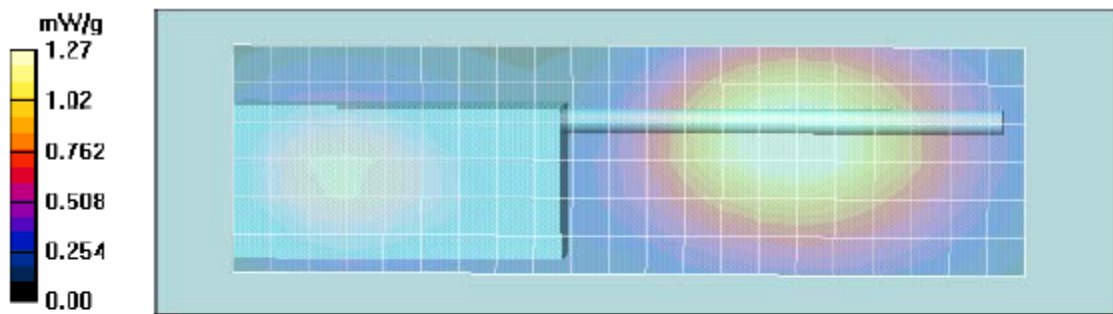
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(6.3, 6.3, 6.3)

Duty Cycle: 1:1, Medium: 770 MHz FCC Head, Medium parameters used:  $\sigma = 0.92$  mho/m,  $\epsilon_r = 53.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Electronics: DAE3 Sn406, Calibrated: 11/17/2004

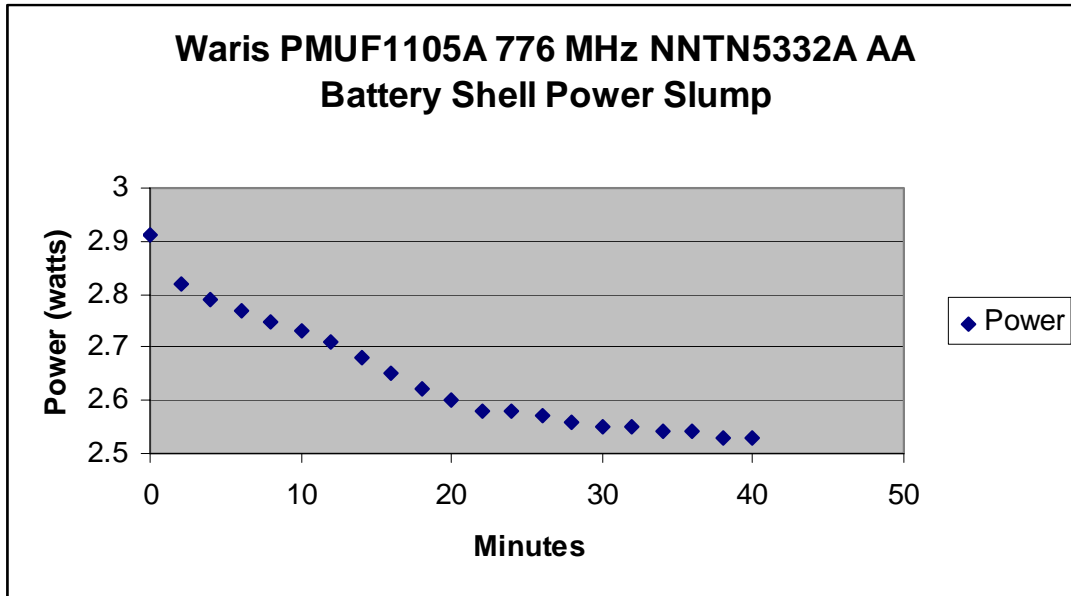
**Body template/7x7x7 Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 39.8 V/m; Power Drift = -0.775 dB

**SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.920 mW/g**

## **APPENDIX F**

### **DUT Supplementary Data (Power slump)**



Minutes	Power
0	2.91
2	2.82
4	2.79
6	2.77
8	2.75
10	2.73
12	2.71
14	2.68
16	2.65
18	2.62
20	2.60
22	2.58
24	2.58
26	2.57
28	2.56
30	2.55
32	2.55
34	2.54
36	2.54
38	2.53
40	2.53



## **Appendix G**

### **DUT Test Position Photos**

**Figure 1: Highest S.A.R. Test Position (Face)**  
**Front of radio separated 2.5cm**



**Figure 2: Highest S.A.R. Test Position (Body)**  
**Unit back against phantom**  
**Audio accessory model PMLN4418B attached.**

