MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT3807
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 2 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

Date of Report: March 15, 2006
Report Revision: Rev. 0
Report ID: PCII rpt_XTS2500 VHF Submersible_Rev 0_060315 SR3669_3742

Responsible Engineer:	Deanna Zakharia (Elect. Principle Staff Eng.)
Date/s Tested:	3/1/2006-3/8/2006
Manufacturer/Location:	Motorola, Penang
Sector/Group/Div.:	GEMS
Date submitted for test:	2/17/2006
DUT Description:	Portable Transceiver; 1-5W, Digital, 512 channels, 3x6 keypad, 6-line display, submersible and secure option & no display or keypad, submersible Non secured
Test TX mode(s):	CW
Max. Power output:	5.7 Watts
Nominal Power:	5.0 Watts
Tx Frequency Bands:	136-174 MHz
Signaling type:	FM
Model(s) Tested:	PMUD2154A/H46KDH9PW7BN & PMUD2145A/H46KDC9PW5BN
Model(s) Certified:	PMUD2154A/H46KDH9PW7BN & PMUD2145A/H46KDC9PW5BN
Serial Number(s):	407T000035 & 407T000004
Classification:	Occupational/Controlled
Rule Part(s):	90

Approved Accessories:
Antenna(s):
NAD6563A (Whip 136-174MHz ¼ wave; -10.0dBi); NAD6566A (136-150.8MHz ¼ wave; -9dBi); NAD6567A (150.8-162MHz ¼ wave; -8dBi); NAD6568A (162-174MHz ¼ wave; -7dBi)
Battery(ies):
NNTN6263A (JedRay NiMH Impress FM Submersible.), NTN9857C (Nickel Metal Hydride Ultra-Hi Capacity Factory Mutual Intrinsically Safe 1800 mAh), NTN9816A (NiCAD Hi Capacity Factory Mutual Intrinsically Safe 1525 mAh), NTN9815B (NiCAD Hi Capacity 1525 mAh), NTN9858B (Nickel Metal Hydride Ultra-Hi Capacity 1800 mAh)
Body worn accessory:
NNTN4115A (Bonded case 3 inch loop with swivel), NNTN4116A (Bonded case 2.5 inch loop with swivel), NNTN4117A (Bonded case belt loop 3 inch), HLN9844A (2 inch belt clip), HLN6853A (2.25 inch belt clip), TDN9675B (Wrist strap for carrying radio), NLN6349A (Shoulder strap for carrying radio), NTN5243A (Shoulder strap for carrying radio)

Audio Accessories
See section 3.0 for list of approved audio acc.

Max. Calc. 1-g/10-g Avg. SAR: 2.37/1.47 mW/g (Body-worn)
Max. Calc. 1-g/10-g Avg. SAR: 1.89/1.40 mW/g (Face)

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 2.0 of this report.
This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Signature on file – Ken Enger
Ken Enger CGISS EME Lab Senior Resource Manager, Laboratory Director

Approval Date: 3/16/2006

Certification Date: 3/16/2006

Certification No.: L1060362 & L1060323

APPENDIX C
Dipole Calibration Certificates

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

Client **Motorola CGISS**

CALIBRATION CERTIFICATE

Object(s)	D300V2 - SN:1002
Calibration procedure(s)	QA CAL-15.v2 Calibration procedure for dipole validation kits below 800 MHz
Calibration date:	May 29, 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 calibrationprocedures 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 E4419B	GB41293874	5-May-04 (METAS, No 251-00388)	May-05
Power sensor E4412A	MY41495277	5-May-04 (METAS, No 251-00388)	May-05
Reference 20 dB Attenuator	SN: 5086 (20b)	3-May-04 (METAS, No 251-00389)	May-05
Fluke Process Calibrator Type 702	SN: 6295803	8-Sep-03 (Sintrel SCS No. E-030020)	Sep-04
Power sensor HP 8481A	MY41092180	18-Sep-02 (SPEAG, in house check Oct-03)	In house check: Oct 05
RF generator HP 8684C	US3642U01700	4-Aug-99 (SPEAG, in house check Aug-02)	In house check: Aug-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Oct-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Laboratory Director	
Approved by:	Niels Kuster	Quality Manager	

Date issued: May 29, 2004

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

880-KP0301061-A Page 1 (1)

D300V2- SN:1002

1. Measurement Conditions

The measurements were performed in the 6mm thick flat phantom filled with **head** simulating liquid of the following electrical parameters at 300 MHz:

Relative Dielectricity	**45.8**	± 5%
Conductivity	**0.89 mho/m**	± 5%

The DASY4 System with a dosimetric E-field probe ET3DV6 (SN:1507, Conversion factor 8.75 at 300 MHz) was used for the measurements.

The dipole was mounted on the small tripod so that the dipole feedpoint was positioned below the center of the flat phantom and the dipole was oriented parallel to the longer side of the phantom. The standard measuring distance was 15mm from dipole center to the liquid surface including the 6mm thick phantom shell. 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 398 mW ± 3 %. The results are normalized to 1W input power.

2. SAR Measurement with DASY 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 cm^3 (1 g) of tissue:	**2.81 mW/g** ± 20.7 % (k=2)[1]
averaged over 10 cm^3 (10 g) of tissue:	**1.87 mW/g** ± 20.2 % (k=2)[1]

[1] validation uncertainty

May 04

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:	**1.740 ns**	(one direction)
Transmission factor:	**0.994**	(voltage transmission, one direction)

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

Feedpoint impedance at 300 MHz:	Re{Z} = **51.7 Ω**
	Im {Z} = **-14.9 Ω**
Return Loss at 300 MHz	**-16.8 dB**

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.

Date/Time: 05/29/04 17:07:22

Test Laboratory: SPEAG, Zurich, Switzerland
DUT: Dipole 300 MHz; Serial: D300V2 - SN:1002

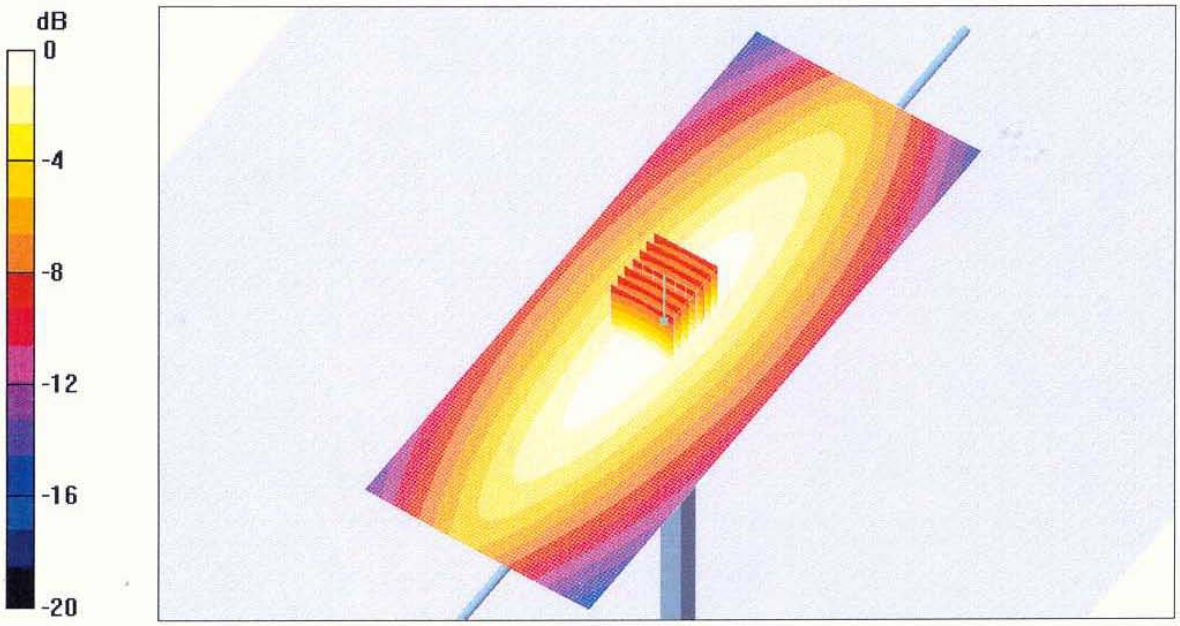
Communication System: CW;Duty Cycle: 1:1; Medium: HSL300
Medium parameters used: f = 300 MHz; σ = 0.89 mho/m; ε_r = 45.8; ρ = 1000 kg/m^3
Phantom: Flat Phantom 4.4; Phantom section: Flat Section

DASY4 Configuration:

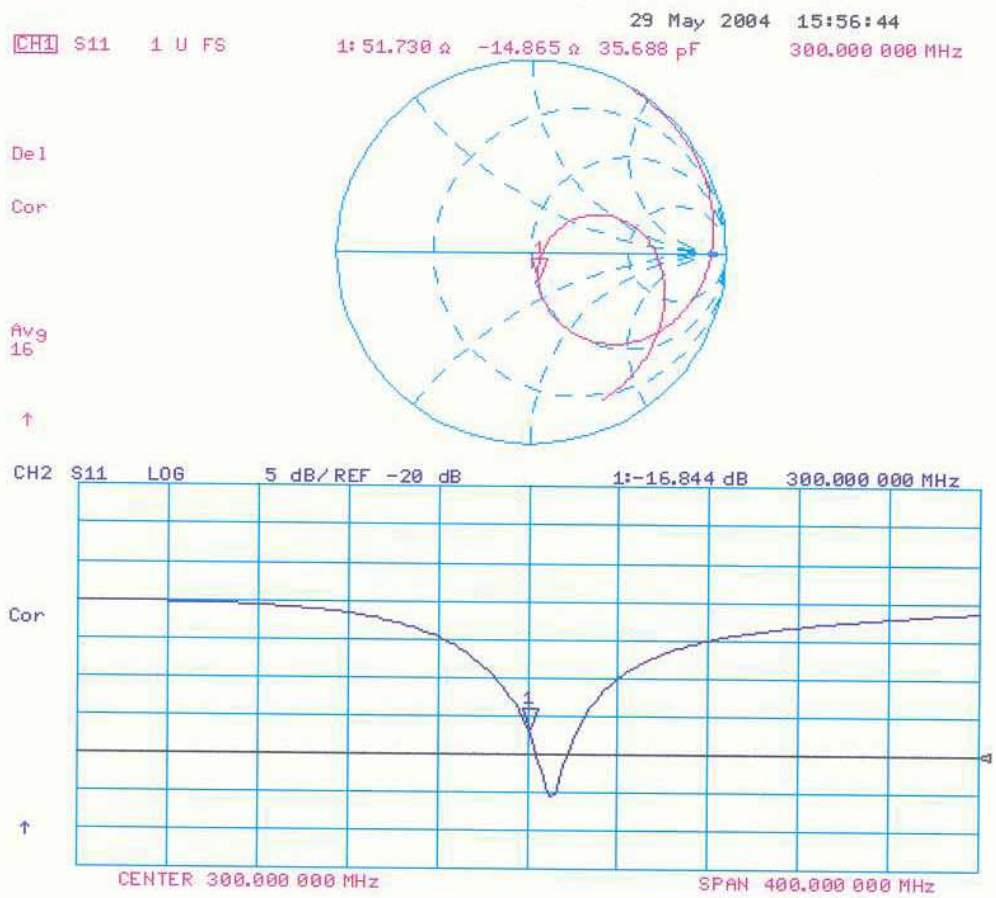
- Probe: ET3DV6 - SN1507 (low frequencies); ConvF(8.75, 8.75, 8.75);
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 600; Calibrated: 9/30/2003
- Measurement SW: DASY4, V4.2 Build 44;

d=15mm, Pin=398mW/Area Scan (71x181x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 37.6 V/m; Power Drift = -0.2 dB
Maximum value of SAR (interpolated) = 1.19 mW/g

d=15mm, Pin=398mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.6 V/m; Power Drift = -0.2 dB
Maximum value of SAR (measured) = 1.19 mW/g
Peak SAR (extrapolated) = 1.77 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.744 mW/g



0 dB = 1.19mW/g


29 May 2004 15:56:44
CH1 S11 1 U FS
1: 51.730 Ω -14.865 Ω 35.688 pF
300.000 000 MHz
Del
Cor
Avg
16
CH2 S11 LOG 5 dB/ REF -20 dB
1:-16.844 dB 300.000 000 MHz
Cor
CENTER 300.000 000 MHz
SPAN 400.000 000 MHz

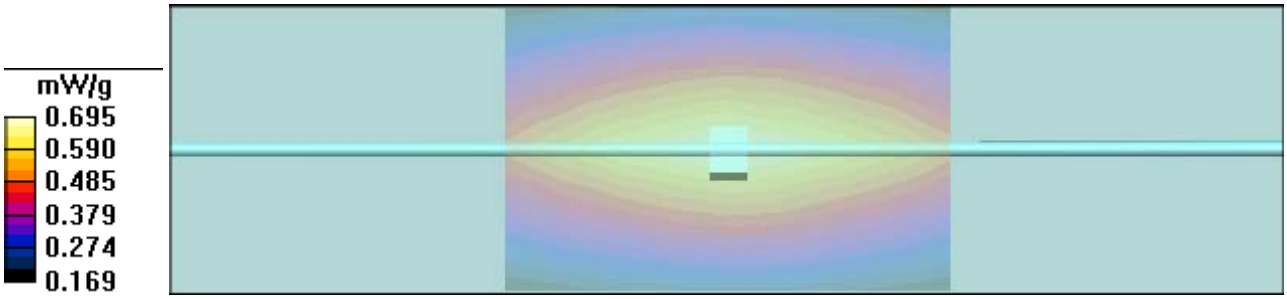
Appendix D
Test System Verification Scans

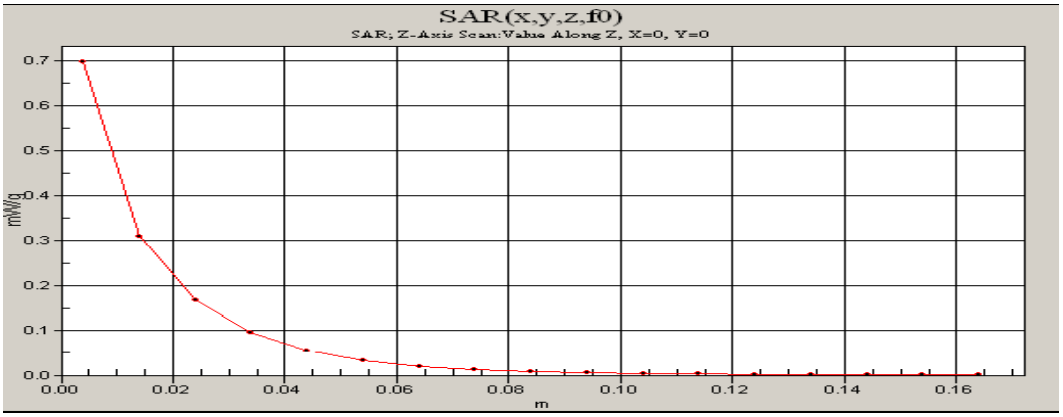
Note: Dipole validation scans at the head from SPEAG are provided in APPENDIX D. The GEMS EME lab validated the dipole to the applicable IEEE system performance targets. Within the same day system validation was performed using FCC body tissue parameters to generate the system performance target values 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.

SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/1/06
Motorola GEMS EME Lab
Run #: HvH-SYSP-300B-060301-02
Sim.Tissue Temp: 21.1 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR
2.69 mW/g calculated 1g-SAR; -3.60 % from target (including drift)
1.76 mW/g calculated 10g-SAR; -3.55 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8)
Duty Cycle: 1:1, Medium: 300MHz FCC Body, Medium parameters used: f = 300 MHz; σ = 0.91 mho/m; εr = 58.9; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.00238 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.664 mW/g; SAR(10 g) = 0.436 mW/g
Maximum value of SAR (measured) = 0.698 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.00238 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.680 mW/g; SAR(10 g) = 0.446 mW/g
Maximum value of SAR (measured) = 0.711 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.695 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm

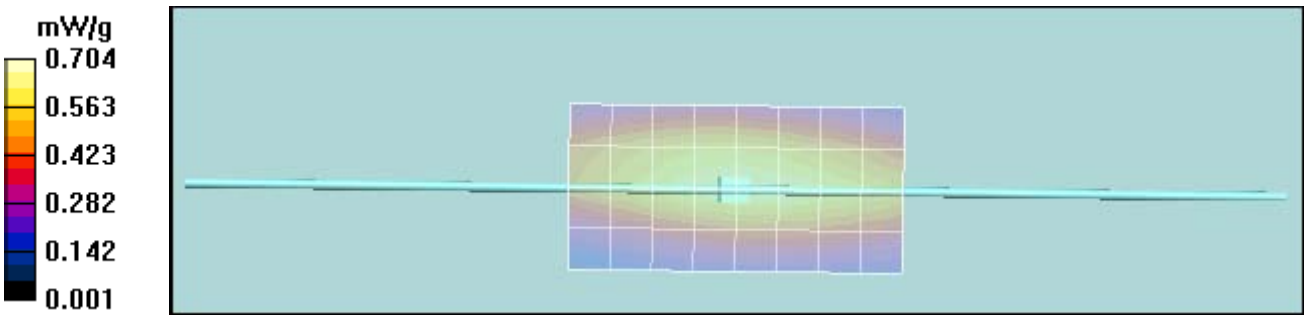


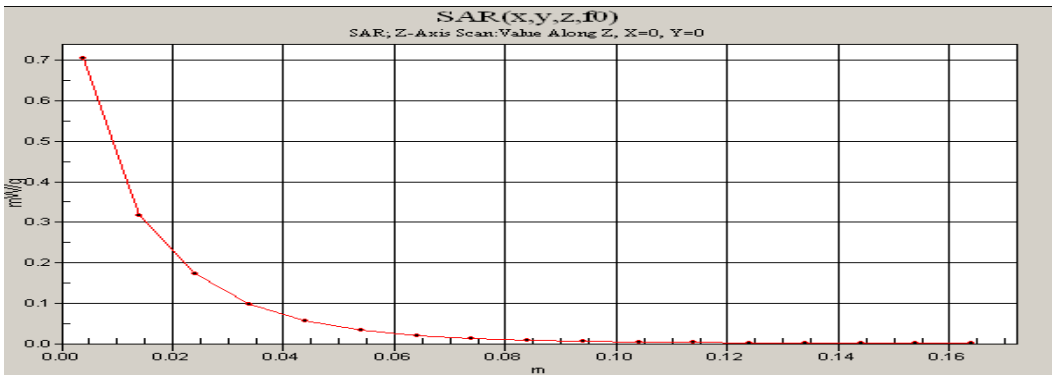


SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/2/06
Motorola GEMS EME Lab
Run #: ErC-SYSP-300B-060302-01
Sim.Tissue Temp: 21.1 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR
2.74 mW/g calculated 1g-SAR; -1.75 % from target (including drift)
1.81 mW/g calculated 10g-SAR; -1.32 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8),
Duty Cycle: 1:1, Medium: 300MHz FCC Body, Medium parameters used: f = 300 MHz; σ = 0.93 mho/m; εr = 58.9; ρ = 1000 kg/m3 ;
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.3 V/m; Power Drift = -0.00336 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.673 mW/g; SAR(10 g) = 0.443 mW/g
Maximum value of SAR (measured) = 0.706 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.3 V/m; Power Drift = -0.00336 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.687 mW/g; SAR(10 g) = 0.452 mW/g
Maximum value of SAR (measured) = 0.720 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.688 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.704 mW/g

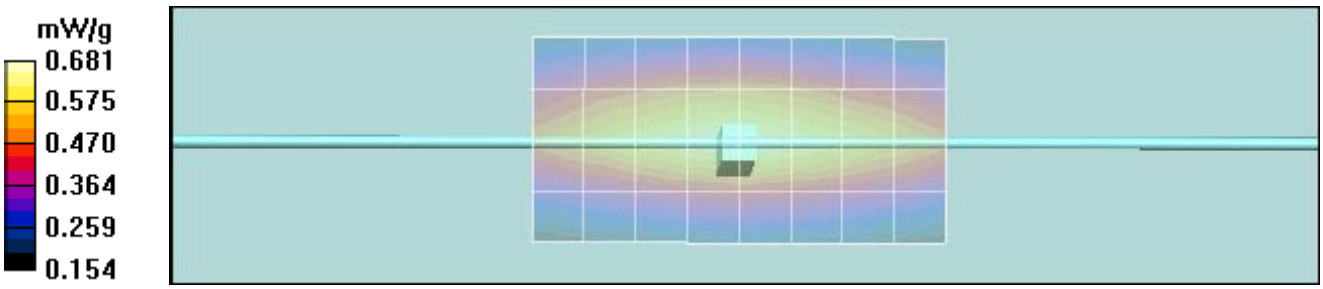


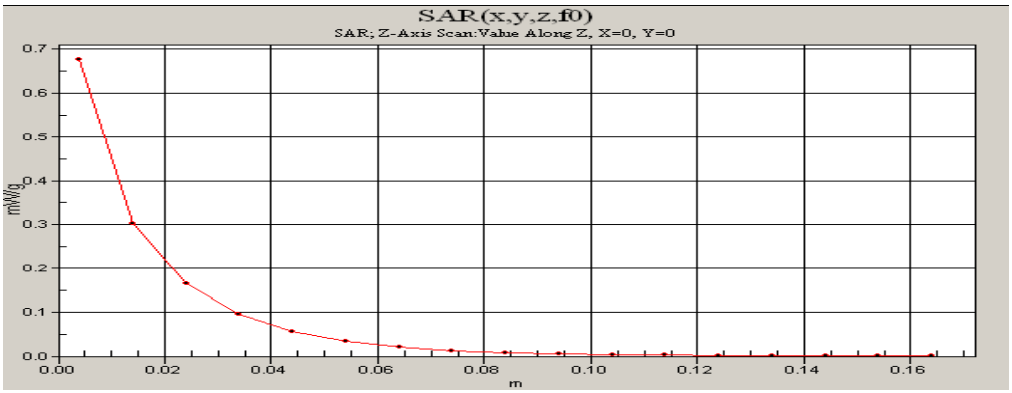


SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/3/06
Motorola GEMS EME Lab
Run #: ErC-SYSP-300B-060303-14
Sim.Tissue Temp: 20.9 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR
2.64 mW/g calculated 1g-SAR; -5.22 % from target (including drift)
1.74 mW/g calculated 10g-SAR; -4.70 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8),
Duty Cycle: 1:1, Medium: 300MHz FCC Body, Medium parameters used: f = 300 MHz; σ = 0.9 mho/m; εr = 58.2; ρ = 1000 kg/m3 ;
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0602 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.644 mW/g; SAR(10 g) = 0.426 mW/g
Maximum value of SAR (measured) = 0.674 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0602 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.660 mW/g; SAR(10 g) = 0.434 mW/g
Maximum value of SAR (measured) = 0.692 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.681 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.677 mW/g

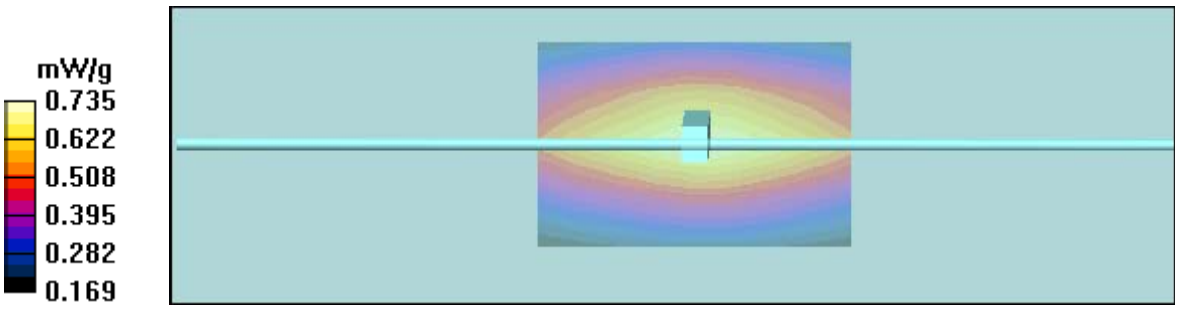


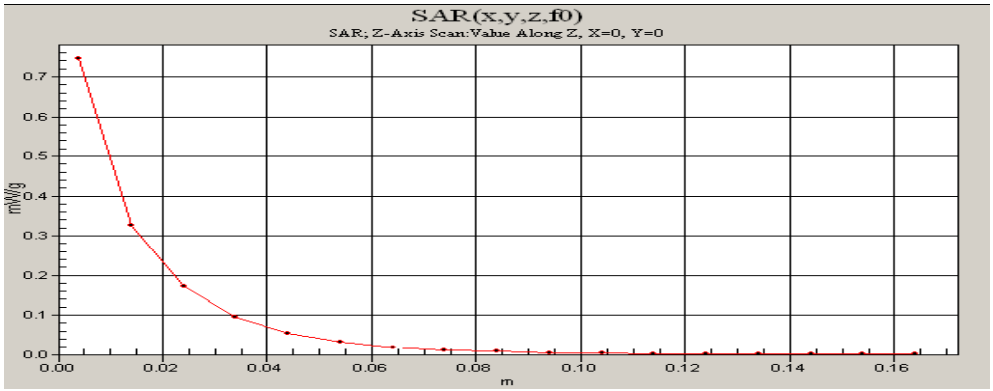


SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/4/06
Motorola GEMS EME Lab
Run #: JsT-SYSP-300H-060304-10
Sim.Tissue Temp: 20.9 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.85 mW/g for 1g SAR 1.87 mW/g for 10g SAR
2.85 mW/g calculated 1g-SAR; 0.12 % from target (including drift)
1.86 mW/g calculated 10g-SAR; -0.48 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8)
Duty Cycle: 1:1, Medium: 300 IEEE Head, Medium parameters used: f = 300 MHz; σ = 0.88 mho/m; εr = 47.2; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.9 V/m; Power Drift = 0.0161 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.709 mW/g; SAR(10 g) = 0.463 mW/g
Maximum value of SAR (measured) = 0.747 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.9 V/m; Power Drift = 0.0161 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.722 mW/g; SAR(10 g) = 0.471 mW/g
Maximum value of SAR (measured) = 0.756 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.735 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.746 mW/g

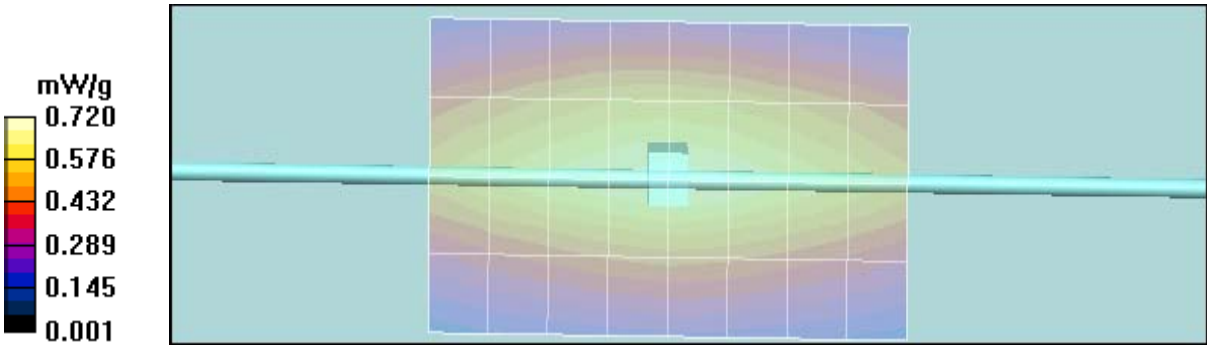


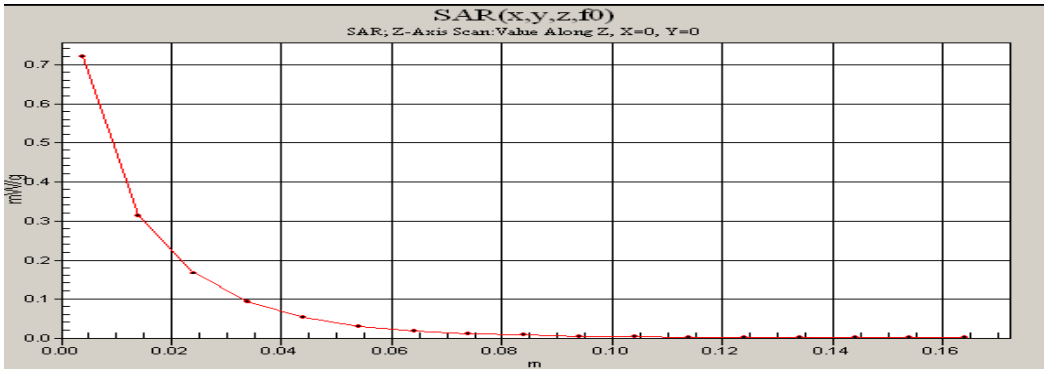


SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/6/06
Motorola GEMS EME Lab
Run #: ErC-SYSP-300H-060306-01
Sim.Tissue Temp: 21.4 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.85 mW/g for 1g SAR 1.87 mW/g for 10g SAR
2.74 mW/g calculated 1g-SAR; -3.79 % from target (including drift)
1.81 mW/g calculated 10g-SAR; -2.96 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8),
Duty Cycle: 1:1, Medium: 300 IEEE Head, Medium parameters used: f = 300 MHz; σ = 0.87 mho/m; εr = 46.8; ρ = 1000 kg/m3 ;
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.7 V/m; Power Drift = -0.0159 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.688 mW/g; SAR(10 g) = 0.448 mW/g
Maximum value of SAR (measured) = 0.722 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.7 V/m; Power Drift = -0.016 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.700 mW/g; SAR(10 g) = 0.455 mW/g
Maximum value of SAR (measured) = 0.734 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.713 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.720 mW/g

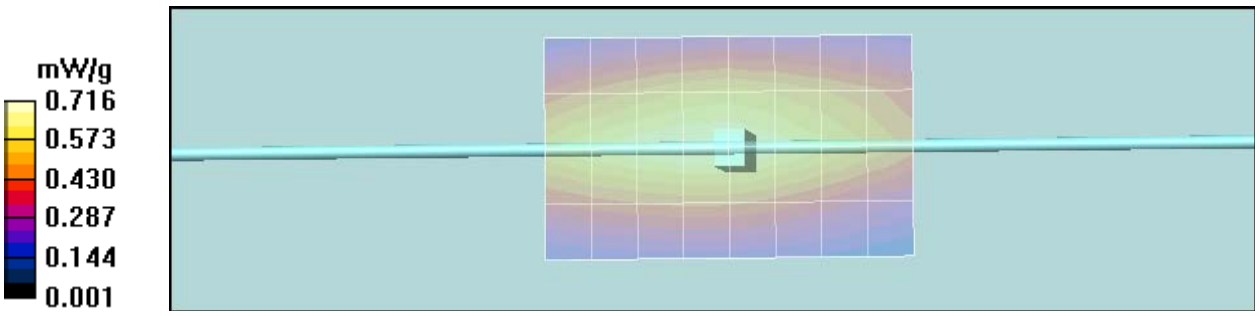


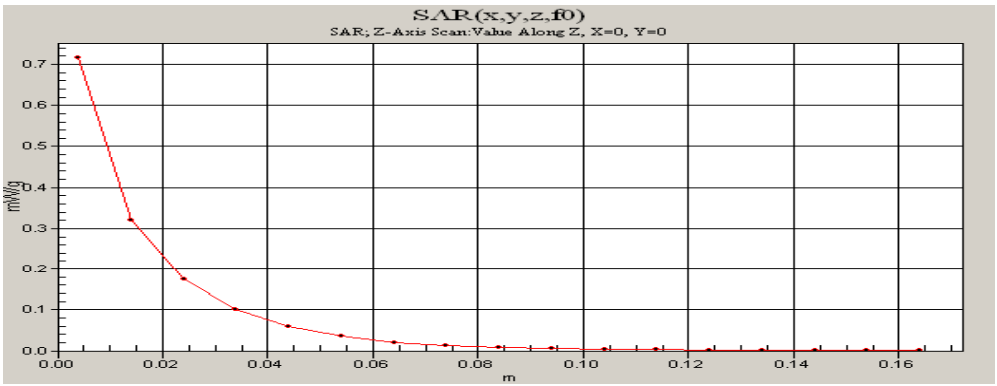


SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/7/06
Motorola GEMS EME Lab
Run #: ErC-SYSP-300B-060307-01
Sim.Tissue Temp: 20.6 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR
2.76 mW/g calculated 1g-SAR; -1.10 % from target (including drift)
1.82 mW/g calculated 10g-SAR; -0.80 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8),
Duty Cycle: 1:1, Medium: 300MHz FCC Body, Medium parameters used: f = 300 MHz; σ = 0.92 mho/m; εr = 59.1; ρ = 1000 kg/m3 ;
Electronics: DAE3 Sn406, Calibrated: 11/21/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0177 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.681 mW/g; SAR(10 g) = 0.448 mW/g
Maximum value of SAR (measured) = 0.717 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0177 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.456 mW/g
Maximum value of SAR (measured) = 0.727 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.699 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.716 mW/g

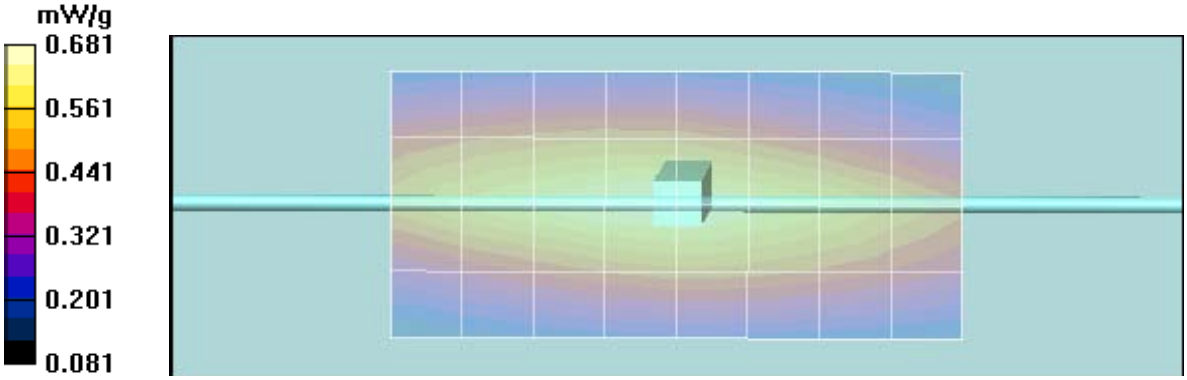


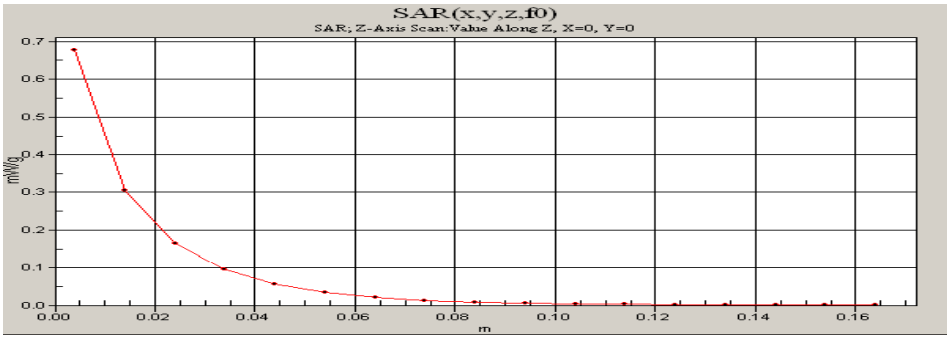


SPEAG 300 MHz Dipole; Model D300V2, SN 1002; Test Date: 3/8/06
Motorola GEMS EME Lab
Run #: ErC-SYSP-300B-060308-01
Sim.Tissue Temp: 20.7 (C)
TX Freq: 300(MHz) Start power: 250 (mW)

Target: 2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR
2.63 mW/g calculated 1g-SAR; -5.82 % from target (including drift)
1.73 mW/g calculated 10g-SAR; -5.67 % from target (including drift)

Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(8, 8, 8),
Duty Cycle: 1:1, Medium: 300MHz FCC Body, Medium parameters used: f = 300 MHz; σ = 0.89 mho/m; εr = 58.8; ρ = 1000 kg/m3 ;
Electronics: DAE3 Sn406, Calibrated: 11/21/2005
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0257 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.425 mW/g
Maximum value of SAR (measured) = 0.681 mW/g
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = -0.0257 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.658 mW/g; SAR(10 g) = 0.433 mW/g
Maximum value of SAR (measured) = 0.687 mW/g
System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.678 mW/g
System Performance Check/Z-Axis Scan (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.677 mW/g





SYSTEM VALIDATION

Date:	7/18/2005	Frequency (MHz):	300
Lab Location:	GEMS	Mixture Type:	IEEE Head
Robot System:	GEMS-2	Ambient Temp.(°C):	21.2
Probe Serial #:	1383	Tissue Temp.(°C):	22.1
DAE Serial #:	406		

Tissue Characteristics

Permitivity:	46.5	Phantom Type/SN:	80602002B
Conductivity:	0.88	Distance (mm):	15 (tissue/dipole cnt)

Reference Source:	300 MHz	(Dipole)
Reference SN:	1002	

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

Target SAR Value: (normalized to 1.0 W)	3	mW/g,	2	mW/g (10g avg.)
Measured SAR Value:	0.707	mW/g,	0.464	mW/g (10g avg.)
Power Drift:	-0.0353	dB		
Measured SAR Value: (normalized to 1.0 W, including drift)	2.85	mW/g,	1.87	mW/g (10g avg.)

Percent Difference From Target (MUST be within System Uncertainty): 5.00 % (1g ave)
6.50 % (10g ave)

Test performed by: C. Miller Initial: Signature on file

Motorola Internal Use Only Sys. Valid. Form: 021024

DUT: Dipole 300 MHz; Date/Time: 7/18/2005 4:36:32 PMDate/Time: 7/18/2005 4:42:15 PMDate/Time: 7/18/2005 4:32:19 PMDate/Time: 7/18/2005 4:48:19 PM

Run #: CM-SYSP-300H-050718-01 | Sim.Tissue Temp: 22.1 (C)
Robot: GEMS-2 | Phantom #: 80602002B-S13
Model #: D300V2 | S/N: 1002
TX Freq: 300 (MHz) | Start power: 250 (mW)
Target:
2.85 mW/g for 1g SAR 1.87 mW/g for 10g SAR
2.85 mW/g calculated 1g-SAR; 0.00 % from target (including drift)
1.87 mW/g calculated 10g-SAR; 0.00 % from target (including drift)

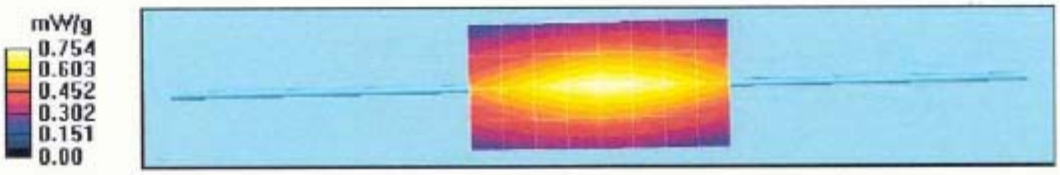
Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(7.96, 7.96, 7.96)
Duty Cycle: 1:1, Medium: 300 IEEE Head, Medium parameters used: $\sigma = 0.88$ mho/m, $\varepsilon_r = 46.5$; $\rho = 1000$ kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

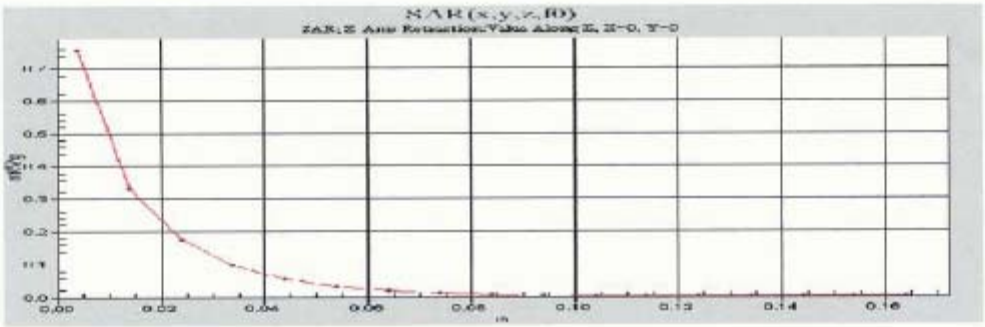
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = -0.0353 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.711 mW/g; SAR(10 g) = 0.466 mW/g
Maximum value of SAR (measured) = 0.749 mW/g

System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = -0.0353 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.703 mW/g; SAR(10 g) = 0.461 mW/g
Maximum value of SAR (measured) = 0.740 mW/g

System Performance Check/Dipole Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 29.3 V/m; Power Drift = -0.0353 dB
Motorola Fast SAR: SAR(1 g) = 0.704 mW/g; SAR(10 g) = 0.512 mW/g
Maximum value of SAR (interpolated) = 0.745 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.754 mW/g





DUT: Dipole 300 MHz; Date/Time: 7/18/2005 4:53:42 PM

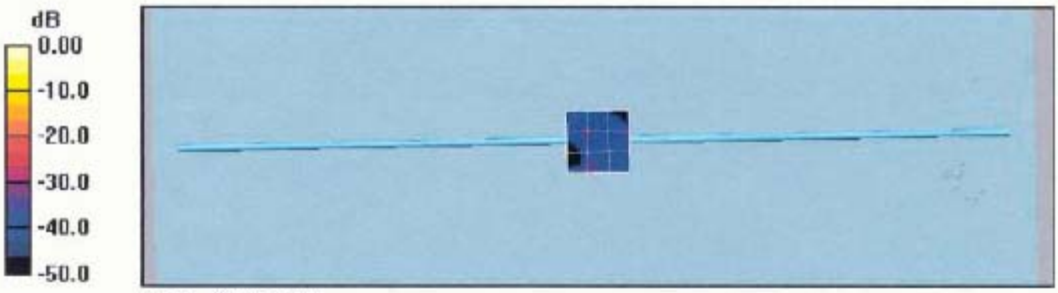
Run #: CM-SYSP-300H-050718-01 Sim.Tissue Temp: 22.1 (C)
Robot: GEMS-2 Phantom #: 80602002B-S13
Model #: D300V2 S/N: 1002
TX Freq: 300 (MHz) Start power: 250 (mW)
Target:
2.85 mW/g for 1g SAR 1.87 mW/g for 10g SAR
2.85 mW/g calculated 1g-SAR; 0.00 % from target (including drift)
1.87 mW/g calculated 10g-SAR; 0.00 % from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(7.96, 7.96, 7.96)
Duty Cycle: 1:1, Medium: 300 IEEE Head, Medium parameters used: $\sigma = 0.88$ mho/m, $\varepsilon_r = 46.5$; $\rho = 1000$ kg/m^3
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 = 29.3 V/m; Power Drift = not measured
Maximum value of SAR (measured) = 0.00 mW/g

System Performance Check/Zoom Scan (4x4x7)/Cube 0: Measurement grid: dx=10mm, dy=10mm, dz=5mm
Reference Value = 29.3 V/m; Power Drift = not measured
Peak SAR (extrapolated) = 0.00 W/kg
SAR(1 g) = 2.88e-005 mW/g; SAR(10 g) = 5.22e-006 mW/g

Warning: Maximum averaged SAR over 1 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement. Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.



0 dB = 0.00mW/g

SYSTEM PERFORMANCE CHECK TARGET SAR

Date:	7/18/2005	Frequency (MHz):	300
Lab Location:	GEMS	Mixture Type:	FCC Body
Robot System:	GEMS-2	Ambient Temp.(°C):	21.4
Probe Serial #:	1383	Tissue Temp.(°C):	21.6
DAE Serial #:	406		

Tissue Characteristics

Permitivity:	58.4	Phantom Type/SN:	80602002C
Conductivity:	0.92	Distance (mm):	15 (tissue/dipole cnt)

Reference Source: 300 MHz (Dipole)
Reference SN: 1002

Power to Dipole: 250 mW

Measured SAR Value: 0.695 mW/g, 0.457 mW/g (10g avg.)
Power Drift: -0.0115 dB

New Target/Measured
SAR Value: 2.79 mW/g, 1.83 mW/g (10g avg.)
(normalized to 1.0 W, including drift)

Test performed by: C. Miller Initial: Signature on file

Sys. Per. Chk. Form: 021024

DUT: Dipole 300 MHz; Date/Time: 7/18/2005 7:29:17 PMDate/Time: 7/18/2005 7:35:22 PMDate/Time: 7/18/2005 7:24:12 PMDate/Time: 7/18/2005 7:42:20 PM

Run #: CM-SYSP-300B-050718-02
Robot: GEMS-2
Model #: D300V2
TX Freq: 300 (MHz)
Target:
2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR

Sim.Tissue Temp: 21.6 (C)
Phantom #: 80602002C-S3
S/N: 1002
Start power: 250 (mW)

2.79 mW/g calculated 1g-SAR; 0.00 % from target (including drift)
1.83 mW/g calculated 10g-SAR; 0.00 % from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(7.8, 7.8, 7.8)
Duty Cycle: 1:1, Medium: 300 Body, Medium parameters used: $\sigma = 0.92$ mho/m, $\varepsilon_r = 58.4$; $\rho = 1000$ kg/m^3
Electronics: DAE3 Sn406, Calibrated: 11/17/2004

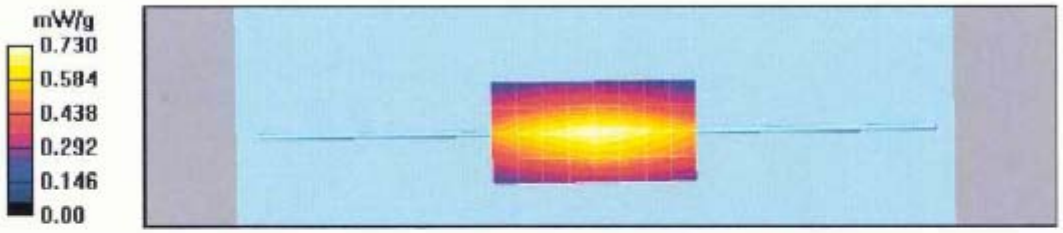
System Performance Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.0 V/m; Power Drift = -0.0115 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.698 mW/g; SAR(10 g) = 0.459 mW/g
Maximum value of SAR (measured) = 0.732 mW/g

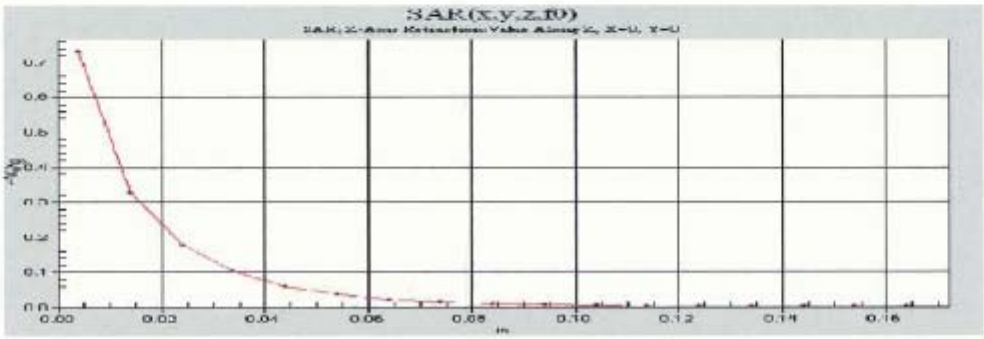
System Performance Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 28.0 V/m; Power Drift = -0.0115 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.691 mW/g; SAR(10 g) = 0.455 mW/g
Maximum value of SAR (measured) = 0.724 mW/g

System Performance Check/Dipole Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.720 mW/g

System Performance Check/Dipole Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 28.0 V/m; Power Drift = -0.0115 dB
Motorola Fast SAR: SAR(1 g) = 0.685 mW/g; SAR(10 g) = 0.496 mW/g
Maximum value of SAR (interpolated) = 0.725 mW/g

System Performance Check/Z-Axis Retraction (1x1x17): Measurement grid: dx=20mm, dy=20mm, dz=10mm
Maximum value of SAR (measured) = 0.730 mW/g





DUT: Dipole 300 MHz; Date/Time: 7/18/2005 7:45:35 PM

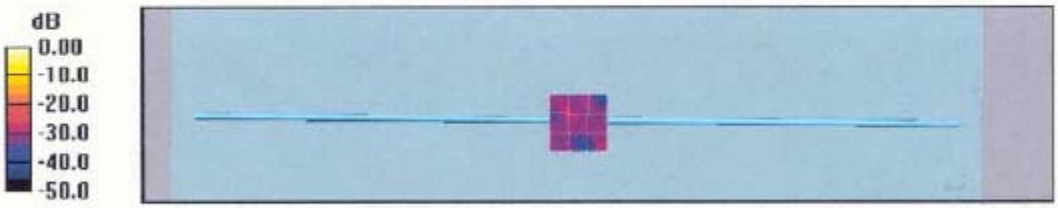
Run #: CM-SYSP-300B-050718-02 Sim.Tissue Temp: 21.6 (C)
Robot: GEMS-2 Phantom #: 80602002C-S3
Model #: D300V2 S/N: 1002
TX Freq: 300 (MHz) Start power: 250 (mW)
Target:
2.79 mW/g for 1g SAR 1.83 mW/g for 10g SAR
2.79 mW/g calculated 1g-SAR; 0.00 % from target (including drift)
1.83 mW/g calculated 10g-SAR; 0.00 % from target (including drift)

Probe: ET3DV6 - SN1383, Calibrated: 2/24/2005, ConvF(7.8, 7.8, 7.8)
Duty Cycle: 1:1, Medium: 300 Body, Medium parameters used: $\sigma = 0.92$ mho/m, $\varepsilon_r = 58.4$; $\rho = 1000$ kg/m^3
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 = 28.0 V/m; Power Drift = not measured
Maximum value of SAR (measured) = 0.00 mW/g

System Performance Check/Zoom Scan (4x4x7)/Cube 0: Measurement grid: dx=10mm, dy=10mm, dz=5mm
Reference Value = 28.0 V/m; Power Drift = not measured
Peak SAR (extrapolated) = 0.00 W/kg
SAR(1 g) = 0.000205 mW/g; SAR(10 g) = 3.57e-005 mW/g

Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.



0 dB = 0.00mW/g