Note: This report is issued subject to TÜV SÜD PSB's "Terms and Conditions Governing Technical Services". The terms and conditions governing the issue of this report are set out as attached within this report.

COMPLIANCE REPORT ON TESTING IN ACCORDANCE WITH
SAR (SPECIFIC ABSORPTION RATE) REQUIREMENTS

Supplement C (Edition 01-01)
FCC OET Bulletin 65 (Edition 97-01)

OF A

802.11b/g VoIP WiFi SIP PHONE
[Model : CYBERPHONE xx]

TEST FACILITY	TÜV SÜD PSB Pte. Ltd, Telecoms & EMC, Testing Group, 1 Science Park Drive, Singapore 118221
PREPARED FOR	Mr. Chong Soon Keen Daviscomms (S) Pte Ltd Blk 70, Ubi Crescent, #01-07, Ubi Techpark Singapore 408570

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QUOTATION NUMBER	56Q0700202
JOB NUMBER	56S070446
TEST PERIOD	07-Jun-2007 – 08-Jun-2007

PREPARED BY

Gary Ng Ah Chye
Team Leader

APPROVED BY

Daniel Yeo
Product Manager

TEST SUMMARY

The product was tested in accordance with the following standards.

Test Results Summary

Test Standards	Description	Pass / Fail
• Supplement C (Edition 01-01) to FCC OET Bulletin 65 (Edition 97-01)	SAR Measurement Device at head phantom	Pass *
• ANSI/IEEE Standard C95.1-1993	SAR Measurement Body Worn Configuration Only	Pass *

Note:

1. The worst-case SAR value was found to be **0.3530W/kg** which is lower than the maximum limit of 1.60 W/kg, over 1g of tissue.

* Based on spatial peak uncontrolled exposure / general population level:
Head: 1.60 W/kg, over 1g of tissue.
Body: 1.60 W/kg, over 1g of tissue.

Modifications

No modification was made.

DEVICE DESCRIPTION

Description	The Equipment Under Test (EUT) is a 802.11b/g VoIP WiFi SIP PHONE.
Manufacturer	Daviscomms (Malaysia) Sdn Bhd Plot 18, Lorong Perusahaan Maju 1, Kawasan Perusahaan Perai 4, 13600 Perai, Malaysia.
Device Category	Mobile Device
Exposure Environment	General Population /Uncontrolled exposure
Test Device Type	Production Unit
Brand Name	DAVISCOMMS
Model	CYBERPHONE xx
Serial Numbers	CW1Xxxxxxx ~ CW1Xxxxxxx xx – (the 1st TWO xx represents the year & the month of the product manufactured) xxxx – (the next FOUR xx represents, serial numbers)
FCC ID	VDQCYBER80211

DEVICE OPERATING CONFIGURATION

Operating Frequencies	Channel 01 (2.412GHz) Channel 06 (2.437GHz) Channel 11 (2.462GHz)
Operating Temperature Tolerance	(-10 ~ 50) Degree Celsius
Operating Voltage Tolerance	(3.4 - 4.2) Volt DC
Continuous Transmission Tolerance	The EUT shall cause no problem after transmitting for 5 hours.
Rated Output Power	16dBm ± 2dBm, Maximum (802.11b)
Antenna Type	SMT Chip Antenna
EUT Crest Factor	8.3
Input Power	650mAh lithium ion battery
Accessories	Hand Phone with Ear Piece only.

DEVICE OPERATING CONDITION

For every SAR measurement, the EUT was set to maximum output power level using fully charged battery.

TEMPERATURE AND HUMIDITY

Head Measurement
Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Body Measurement
Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

TEST RESULTS

The measurement results were obtained with the EUT tested in the conditions described in this report (Annex A).

Table 1 - SAR Test Results – Device at head phantom

Phantom Configuration	Antenna Position	Device Test Positions	SAR (W/kg), over 1g Tissue Device Test Channel & Frequency		
			Channel: 1 2412MHz	Channel: 6 2437MHz	Channel: 11 2462MHz
Left Side of Head	fixed	Cheek / Touch	0.2290	0.2060	0.1670
		Ear / Tilt	0.2880	0.2490	0.2030
Right Side of Head	fixed	Cheek / Touch	0.2870	0.3530	0.2300
		Ear / Tilt	0.2690	0.2580	0.2280
Conducted Output Power (dBm) Before Test			16.9	17.2	17.5
Conducted Output Power (dBm) After Test			16.6	16.9	17.1

Remarks:
1. All modes of operations were investigated and the worst-case SAR levels are reported.
2. A fully charged lithium ion battery was used for each mode of operation.
3. For the worst-case SAR value was found to be **0.3530W/Kg** (over a 1g tissue) at **Channel 6** which is lower than the maximum limit of 1.60 W/Kg, please refer to the above table.
4. The SAR limit of 1.60W/Kg (Spatial Peak level for Uncontrolled Exposure / General Population) is based on the Test Standards:
   a) Supplement C (Edition 01-01) to FCC OET Bulletin 65 (Edition 97-01)
   b) ANSI/IEEE Standard C95.1-1993

The measurement results were obtained with the EUT tested in the conditions described in this report (Annex A).

Table 2 – Body Worn Position SAR Test Results, device with belt clip (15mm spacing).

Phantom Configuration	Device Test Positions	Antenna Position	SAR (W/kg), over 1g Tissue Device Test Channel & Frequency		
			Channel: 1 2412MHz	Channel: 6 2437MHz	Channel: 11 2462MHz
Flat Phantom	EUT Rear - 15mm Gap	Stowed Pos.	0.0510	0.0500	0.1700
Flat Phantom	EUT Front Touched Phantom	Stowed Pos.	0.3450	0.3270	0.2620
Conducted Output Power (dBm) Before Test			16.9	17.2	17.5
Conducted Output Power (dBm) After Test			16.6	16.9	17.1

Remarks:

1. All modes of operations were investigated and the worst-case SAR levels are reported.

2. A fully charged lithium ion battery was used for each mode of operation.

3. For the worst-case SAR value was found to be **0.3450W/Kg** (over a 1g tissue) at **Channel 1** which is lower than the maximum limit of 1.60 W/Kg, please refer to the above table.

4. The SAR limit of 1.60W/Kg (Spatial Peak level for Uncontrolled Exposure / General Population) is based on the Test Standards:
   a) Supplement C (Edition 01-01) to FCC OET Bulletin 65 (Edition 97-01)
   b) ANSI/IEEE Standard C95.1-1993

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2412MHz_Left Head_0 Deg_CH 01_Data 7.da4

Program Name: Job Nos.: 56S070446

Phantom section: Left Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2412MHz_Left Head_0 Deg_CH 01_Data 7/Area Scan (10x15x1): Measurement
grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.240 mW/g

2412MHz_Left Head_0 Deg_CH 01_Data 7/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.3 V/m; Power Drift = -0.480 dB
Peak SAR (extrapolated) = 0.431 W/kg
SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.125 mW/g
Maximum value of SAR (measured) = 0.252 mW/g

TEST RESULTS
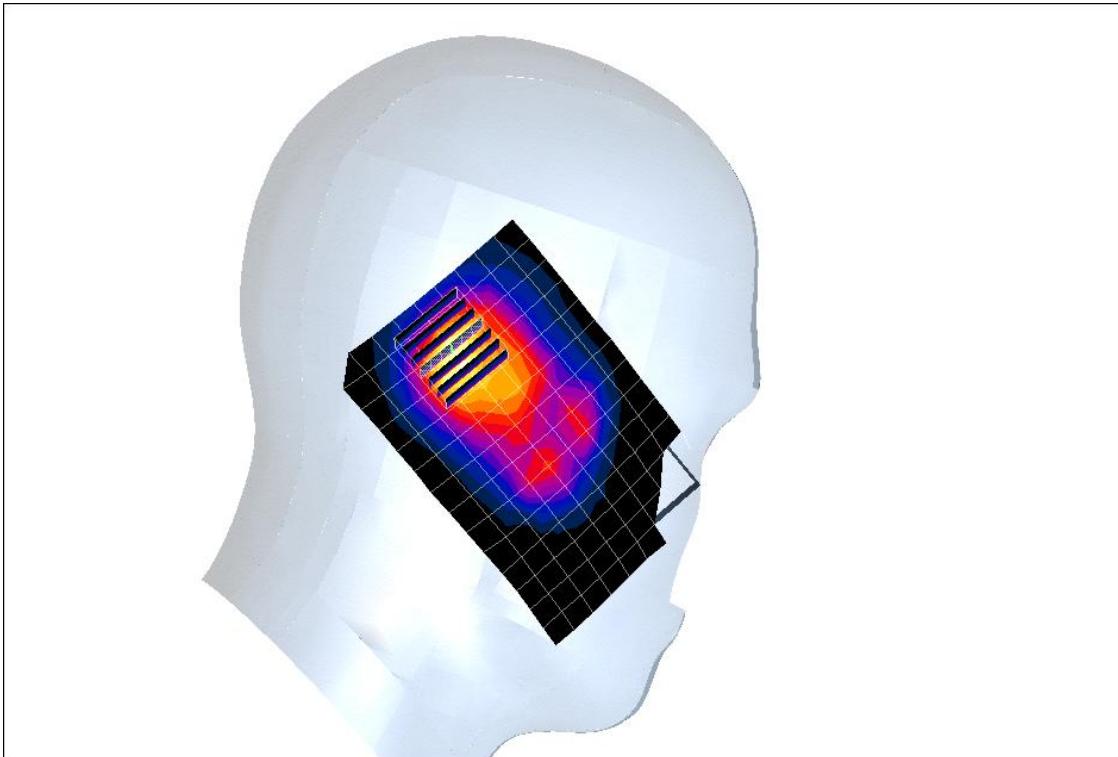
Ambient Temperature: $24 \pm 1^0\,C$
Tissue Temperature: $23 \pm 1^0\,C$
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2412MHz_Left Head_15 Deg_CH 01_Data 8.da4

Program Name: Job Nos.: 56S070446

Phantom section: Left Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2412MHz_Left Head_15 Deg_CH 01_Data 8/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.304 mW/g

2412MHz_Left Head_15 Deg_CH 01_Data 8/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.0 V/m; Power Drift = -0.358 dB
Peak SAR (extrapolated) = 0.556 W/kg
SAR(1 g) = 0.288 mW/g; SAR(10 g) = 0.148 mW/g
Maximum value of SAR (measured) = 0.323 mW/g

TEST RESULTS
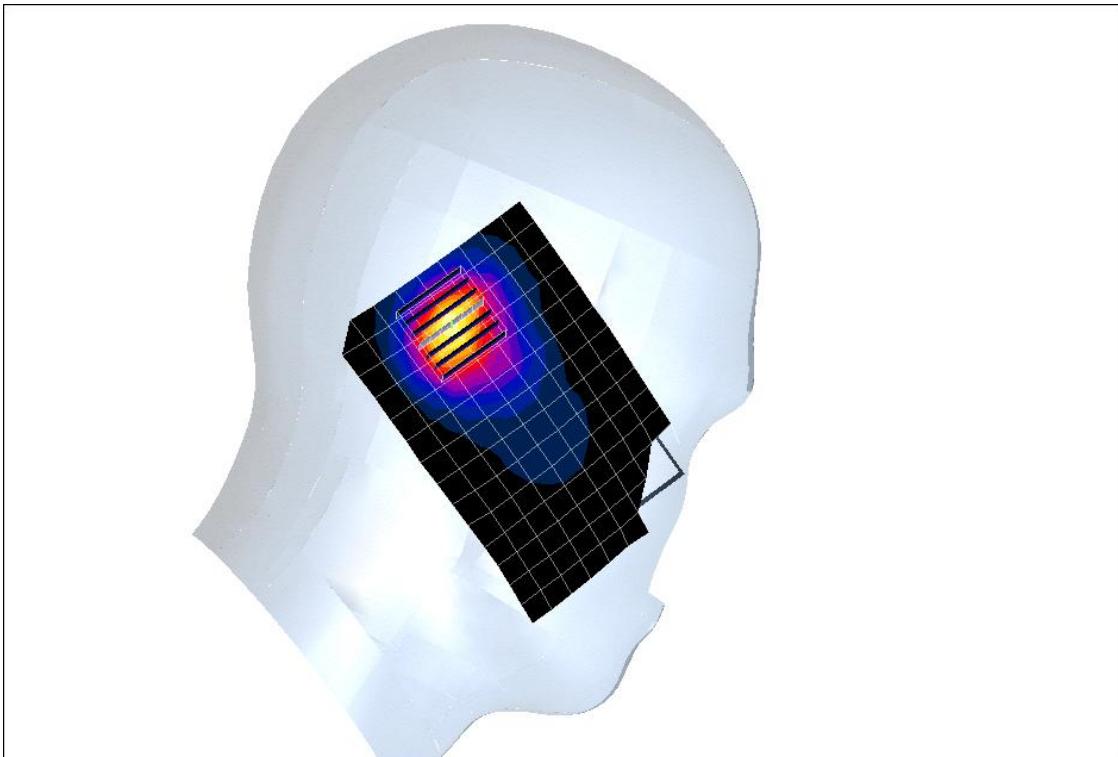
Ambient Temperature: $24 \pm 1^0 C$
Tissue Temperature: $23 \pm 1^0 C$
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: $24 \pm 1^0\,C$
Tissue Temperature: $23 \pm 1^0\,C$
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2437MHz_Left Head_0 Deg_CH 06_Data 9.da4

Program Name: Job Nos.: 56S070446

Phantom section: Left Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2437MHz_Left Head_0 Deg_CH 06_Data 9/Area Scan (10x15x1): Measurement
grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.220 mW/g

2437MHz_Left Head_0 Deg_CH 06_Data 9/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.31 V/m; Power Drift = -0.159 dB
Peak SAR (extrapolated) = 0.397 W/kg
SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.110 mW/g
Maximum value of SAR (measured) = 0.226 mW/g

TEST RESULTS
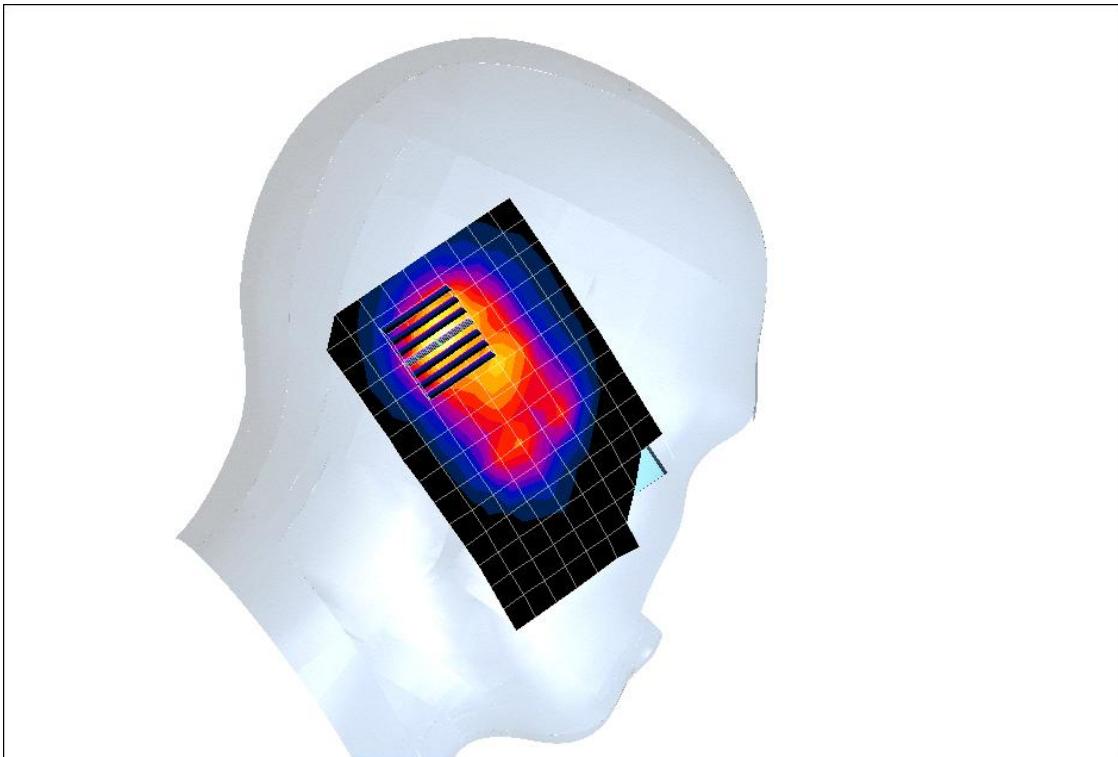
Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: $24 \pm 1^0\,C$
Tissue Temperature: $23 \pm 1^0\,C$
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2437MHz_Left Head_15 Deg_CH 06_Data 10.da4

Program Name: Job Nos.: 56S070446

Phantom section: Left Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2437MHz_Left Head_15 Deg_CH 06_Data 10/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.266 mW/g

2437MHz_Left Head_15 Deg_CH 06_Data 10/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.45 V/m; Power Drift = -0.129 dB
Peak SAR (extrapolated) = 0.484 W/kg
SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.127 mW/g
Maximum value of SAR (measured) = 0.279 mW/g

TEST RESULTS
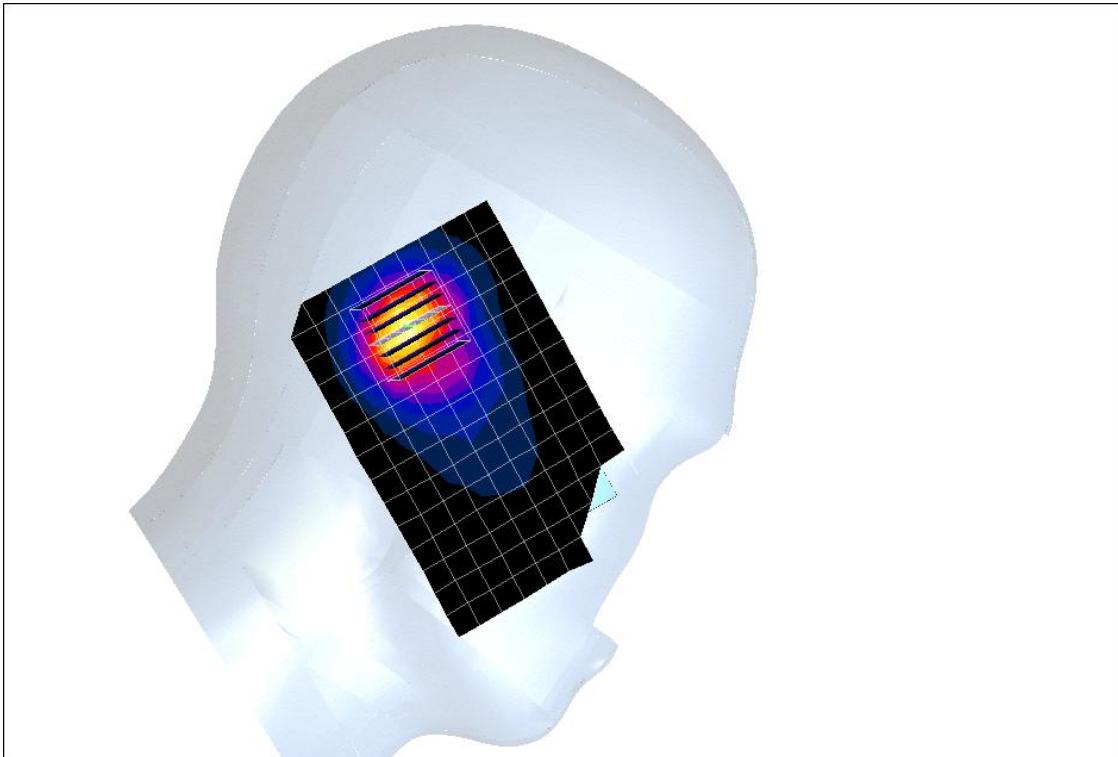
Ambient Temperature: $24 \pm 1^0\,$C
Tissue Temperature: $23 \pm 1^0\,$C
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2462MHz_Left Head_0 Deg_CH 11_Data 11.da4

Program Name: Job Nos.: 56S070446

Phantom section: Left Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2462MHz_Left Head_0 Deg_CH 11_Data 11/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.175 mW/g

2462MHz_Left Head_0 Deg_CH 11_Data 11/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.11 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 0.325 W/kg
SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.089 mW/g
Maximum value of SAR (measured) = 0.184 mW/g

TEST RESULTS
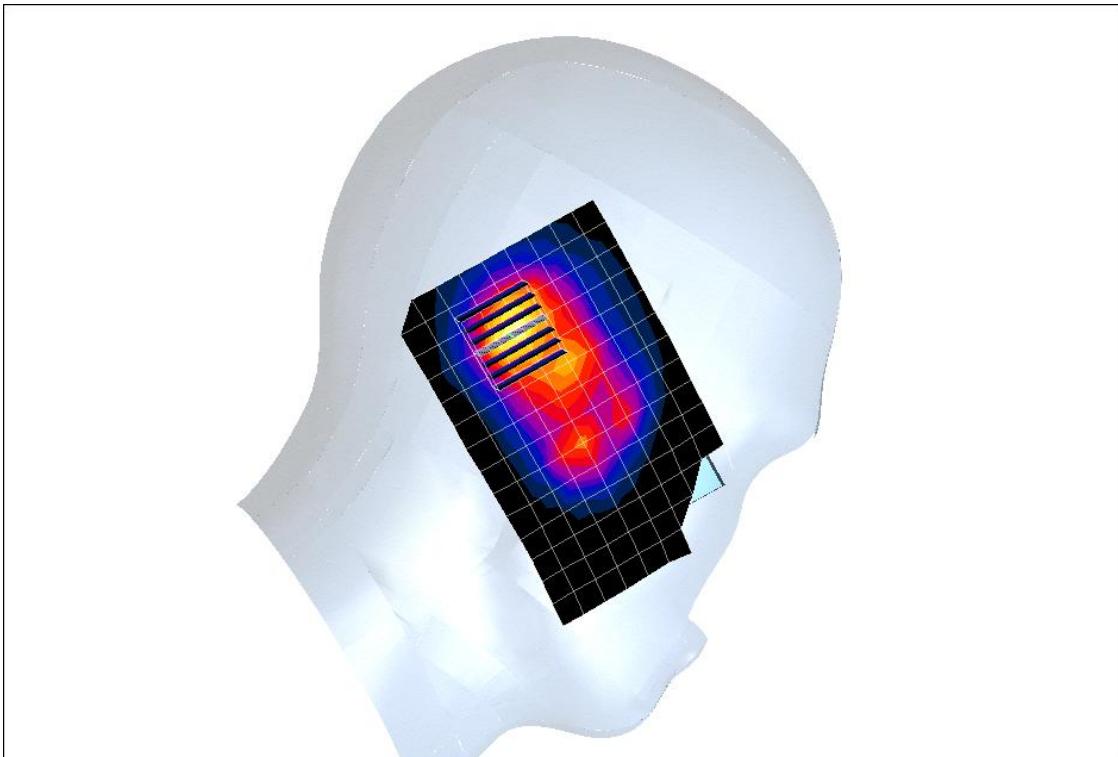
Ambient Temperature: $24 \pm 1^0\,$C
Tissue Temperature: $23 \pm 1^0\,$C
Humidity: 58% to 62%

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2462MHz_Left Head_15 Deg_CH 11_Data 12.da4

Program Name: Job Nos.: 56S070446

Phantom section: Left Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2462MHz_Left Head_15 Deg_CH 11_Data 12/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.212 mW/g

2462MHz_Left Head_15 Deg_CH 11_Data 12/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.34 V/m; Power Drift = -0.167 dB
Peak SAR (extrapolated) = 0.400 W/kg
SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.104 mW/g
Maximum value of SAR (measured) = 0.229 mW/g

TEST RESULTS
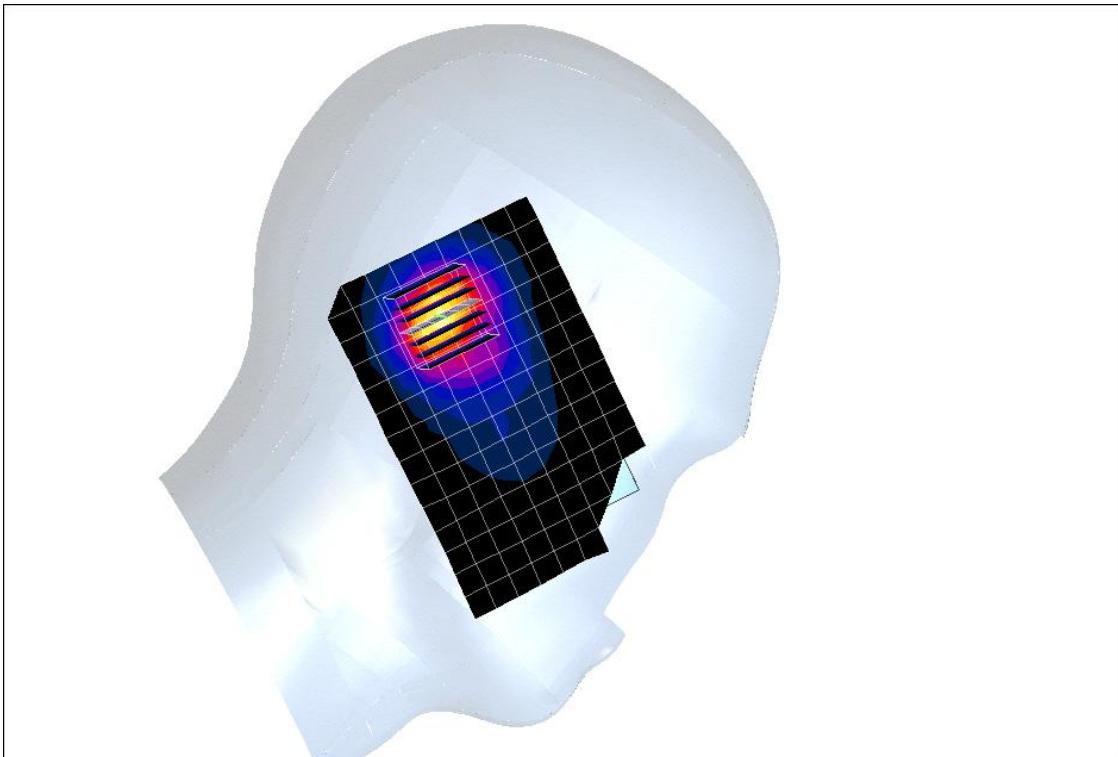
Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2412MHz_Right Head_0 Deg_CH 01_Data 1.da4

Program Name: Job Nos.: 56S070446

Phantom section: Right Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2412MHz_Right Head_0 Deg_CH 01_Data 1/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.315 mW/g

2412MHz_Right Head_0 Deg_CH 01_Data 1/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.291 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.158 mW/g
Maximum value of SAR (measured) = 0.320 mW/g

TEST RESULTS
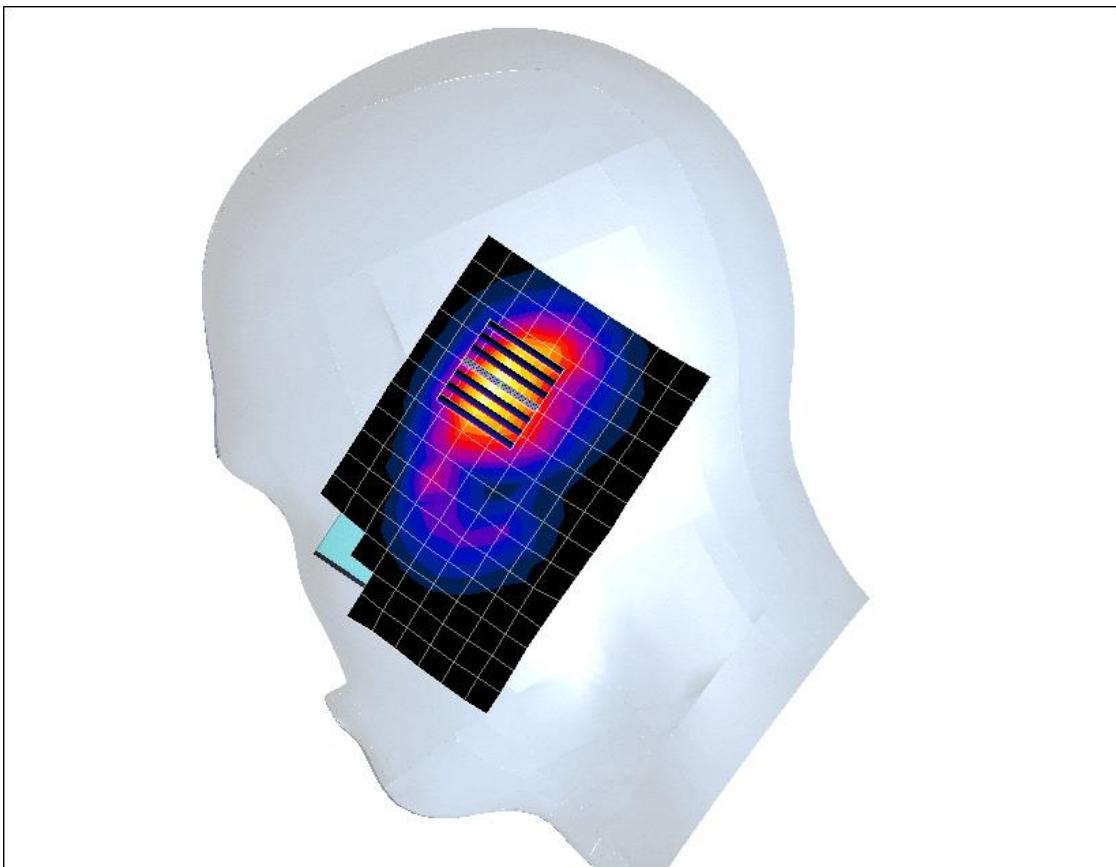
Ambient Temperature: 24 ± 1^0C
Tissue Temperature: 23 ± 1^0C
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2412MHz_Right Head_15 Deg_CH 01_Data 2.da4

Program Name: Job Nos.: 56S070446

Phantom section: Right Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2412MHz_Right Head_15 Deg_CH 01_Data 2/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.283 mW/g

2412MHz_Right Head_15 Deg_CH 01_Data 2/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.118 dB
Peak SAR (extrapolated) = 0.529 W/kg
SAR(1 g) = 0.269 mW/g; SAR(10 g) = 0.146 mW/g
Maximum value of SAR (measured) = 0.297 mW/g

TEST RESULTS
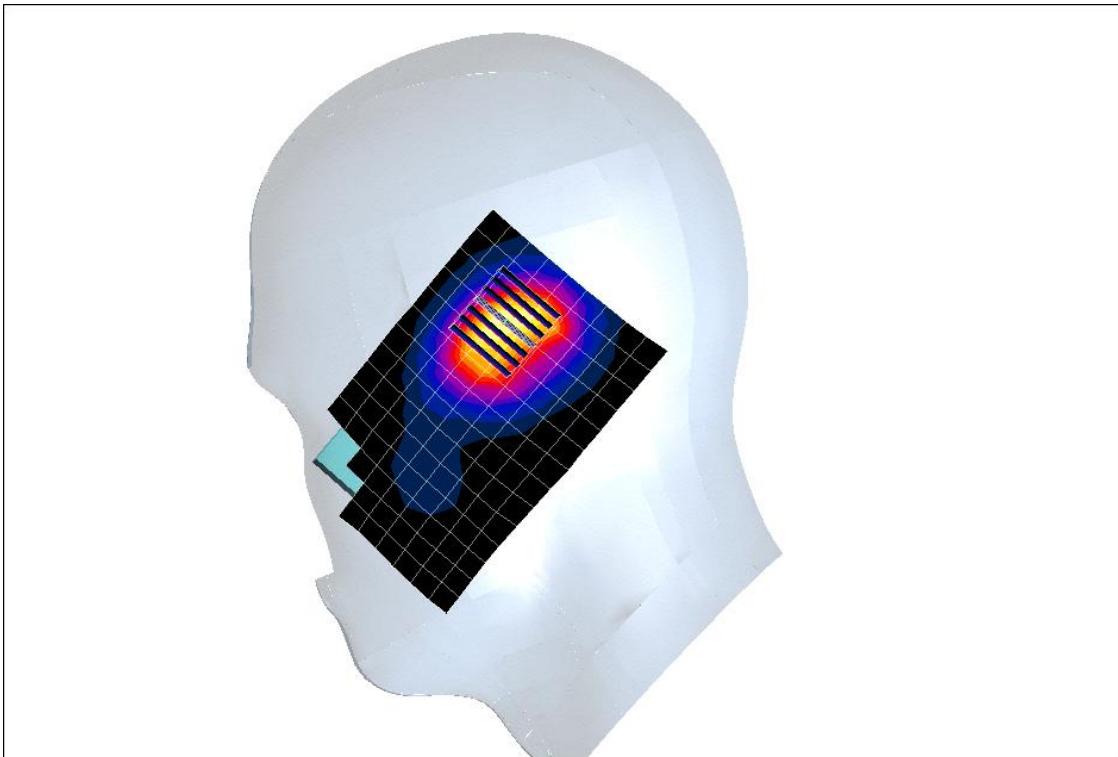
Ambient Temperature: $24 \pm 1^0 \text{C}$
Tissue Temperature: $23 \pm 1^0 \text{C}$
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2437MHz_Right Head_0 Deg_CH 06_Data 3.da4

Program Name: Job Nos.: 56S070446

Phantom section: Right Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2437 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2437MHz_Right Head_0 Deg_CH 06_Data 3/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.363 mW/g

2437MHz_Right Head_0 Deg_CH 06_Data 3/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.9 V/m; Power Drift = -0.394 dB
Peak SAR (extrapolated) = 0.559 W/kg
SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.261 mW/g
Maximum value of SAR (measured) = 0.371 mW/g

TEST RESULTS

Ambient Temperature: $24 \pm 1^0\,C$
Tissue Temperature: $23 \pm 1^0\,C$
Humidity: 58% to 62%
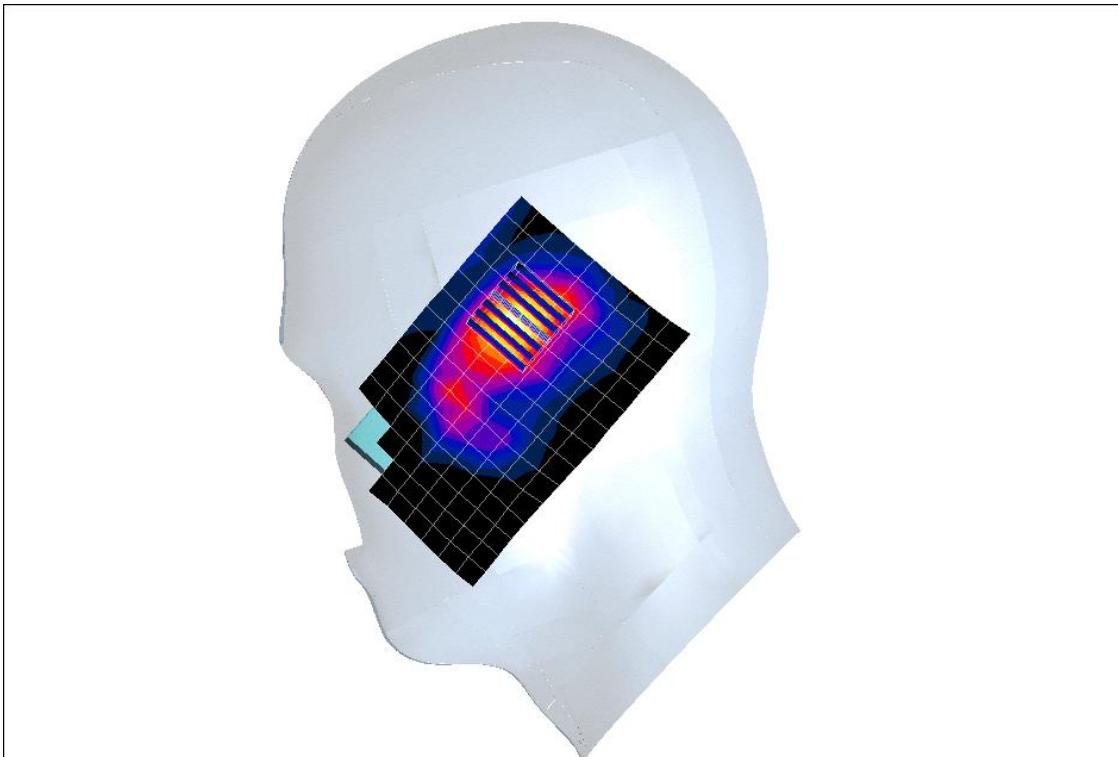
Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2437MHz_Right Head_15 Deg_CH 06_Data 4.da4

Program Name: Job Nos.: 56S070446

Phantom section: Right Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2437 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2437MHz_Right Head_15 Deg_CH 06_Data 4/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.271 mW/g

2437MHz_Right Head_15 Deg_CH 06_Data 4/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.69 V/m; Power Drift = -0.110 dB
Peak SAR (extrapolated) = 0.497 W/kg
SAR(1 g) = 0.258 mW/g; SAR(10 g) = 0.134 mW/g
Maximum value of SAR (measured) = 0.287 mW/g

TEST RESULTS
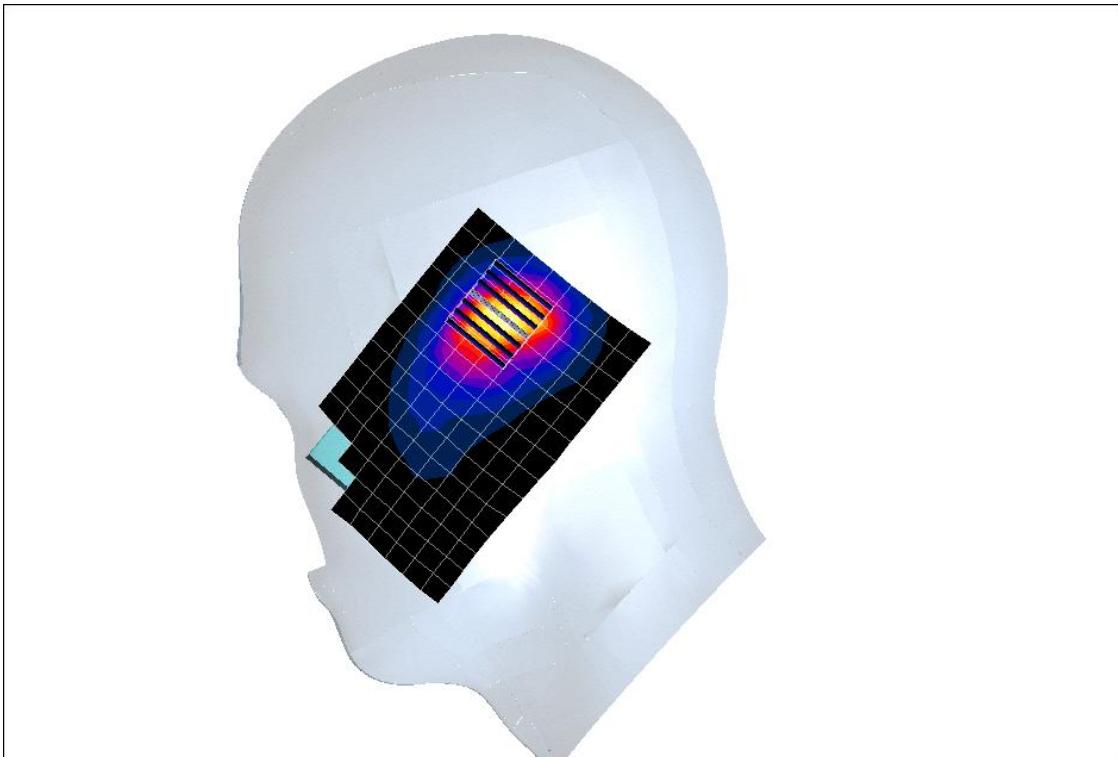
Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2462MHz_Right Head_0 Deg_CH 11_Data 5.da4

Program Name: Job Nos.: 56S070446

Phantom section: Right Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2462 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

 DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

 2462MHz_Right Head_0 Deg_CH 11_Data 5/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.262 mW/g

2462MHz_Right Head_0 Deg_CH 11_Data 5/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.17 V/m; Power Drift = -0.574 dB
Peak SAR (extrapolated) = 0.435 W/kg
SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.122 mW/g
Maximum value of SAR (measured) = 0.256 mW/g

TEST RESULTS
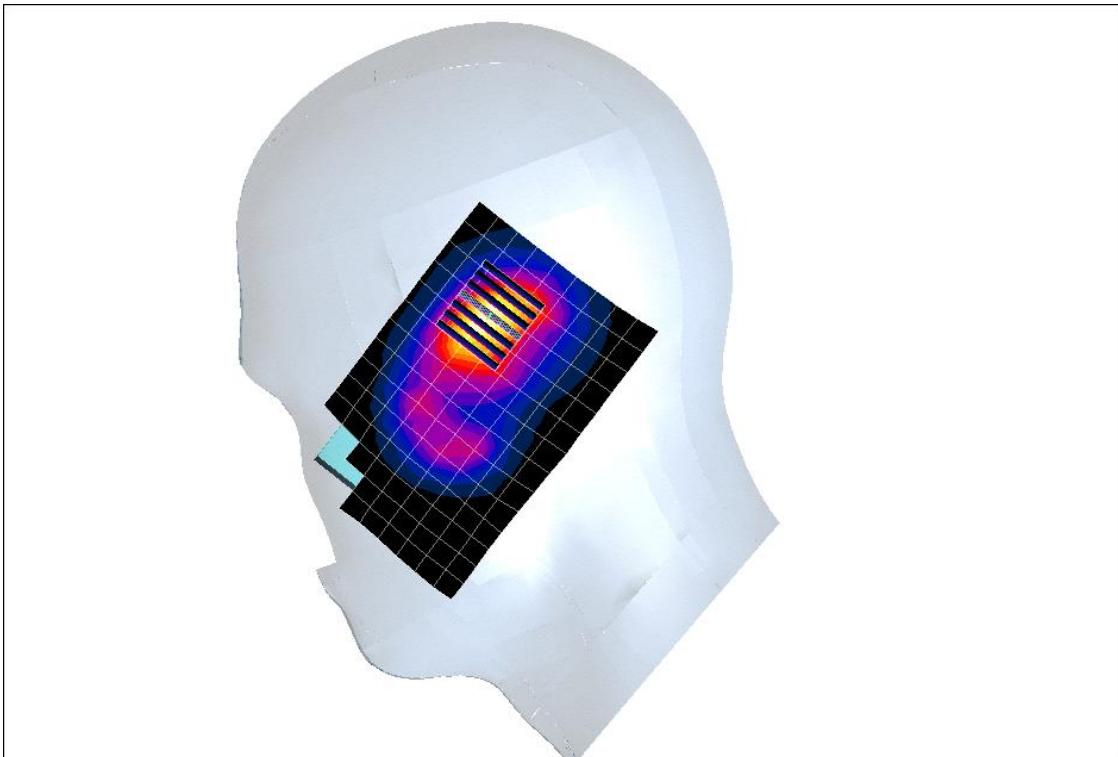
Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 24 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 58% to 62%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2462MHz_Right Head_15 Deg_CH 11_Data 6.da4

Program Name: Job Nos.: 56S070446

Phantom section: Right Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2462 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2462MHz_Right Head_15 Deg_CH 11_Data 6/Area Scan (10x15x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.235 mW/g

2462MHz_Right Head_15 Deg_CH 11_Data 6/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.01 V/m; Power Drift = -0.166 dB
Peak SAR (extrapolated) = 0.448 W/kg
SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.118 mW/g
Maximum value of SAR (measured) = 0.254 mW/g

TEST RESULTS
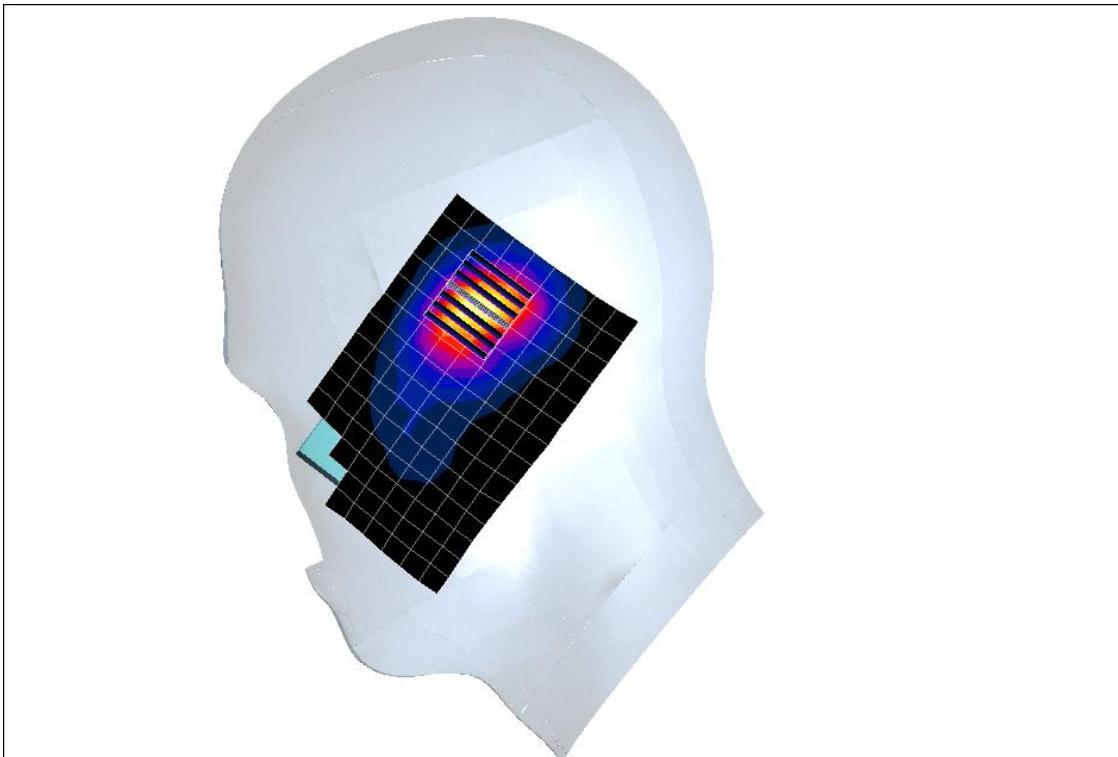
Ambient Temperature: $24 \pm 1^0 C$
Tissue Temperature: $23 \pm 1^0 C$
Humidity: 58% to 62%

TEST RESULTS

Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: EUT Front Touched Phantom_Ch 1_2412MHz_Data 13.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

EUT Front Touched Phantom_Ch 1_2412MHz_Data 13/Area Scan (10x14x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.339 mW/g

EUT Front Touched Phantom_Ch 1_2412MHz_Data 13/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.93 V/m; Power Drift = 0.181 dB
Peak SAR (extrapolated) = 0.678 W/kg
SAR(1 g) = 0.345 mW/g; SAR(10 g) = 0.179 mW/g
Maximum value of SAR (measured) = 0.383 mW/g

TEST RESULTS
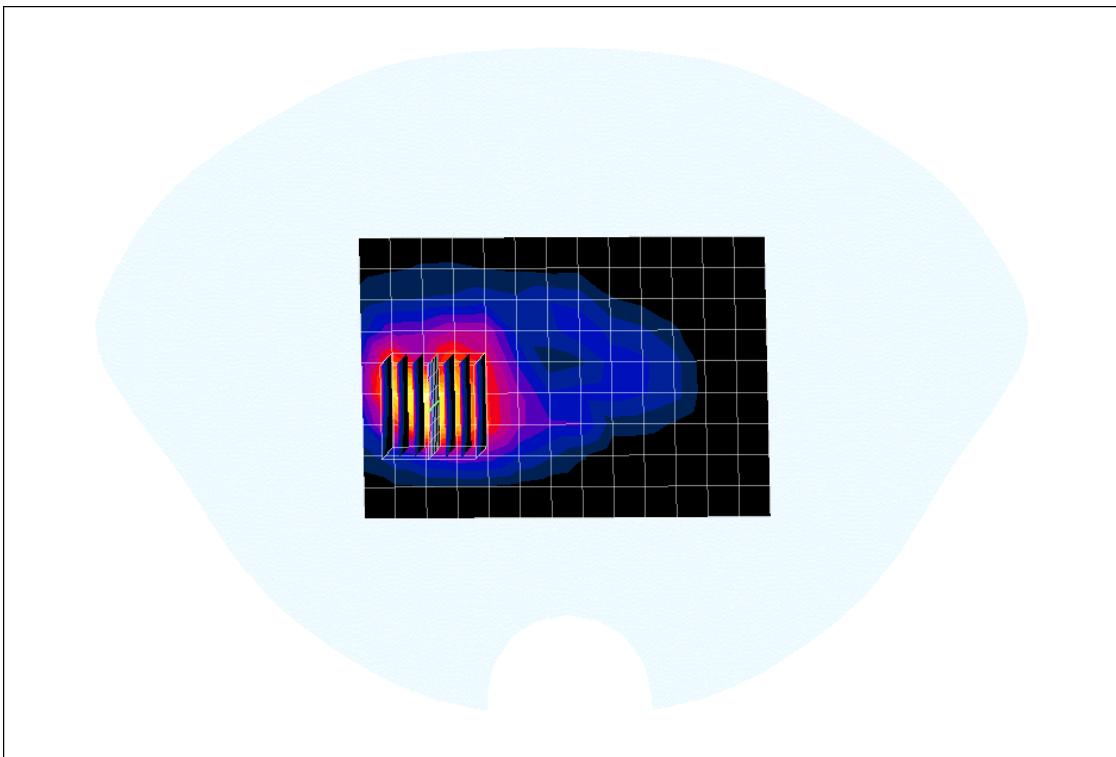
Ambient Temperature: 23 ± 1^0C
Tissue Temperature: 23 ± 1^0C
Humidity: 55% to 60%

TEST RESULTS

Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: EUT Front Touched Phantom_Ch 6_2437MHz_Data 14.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2437 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

EUT Front Touched Phantom_Ch 6_2437MHz_Data 14/Area Scan (10x14x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.337 mW/g

EUT Front Touched Phantom_Ch 6_2437MHz_Data 14/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.10 V/m; Power Drift = -0.446 dB
Peak SAR (extrapolated) = 0.644 W/kg
SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.172 mW/g
Maximum value of SAR (measured) = 0.362 mW/g

TEST RESULTS
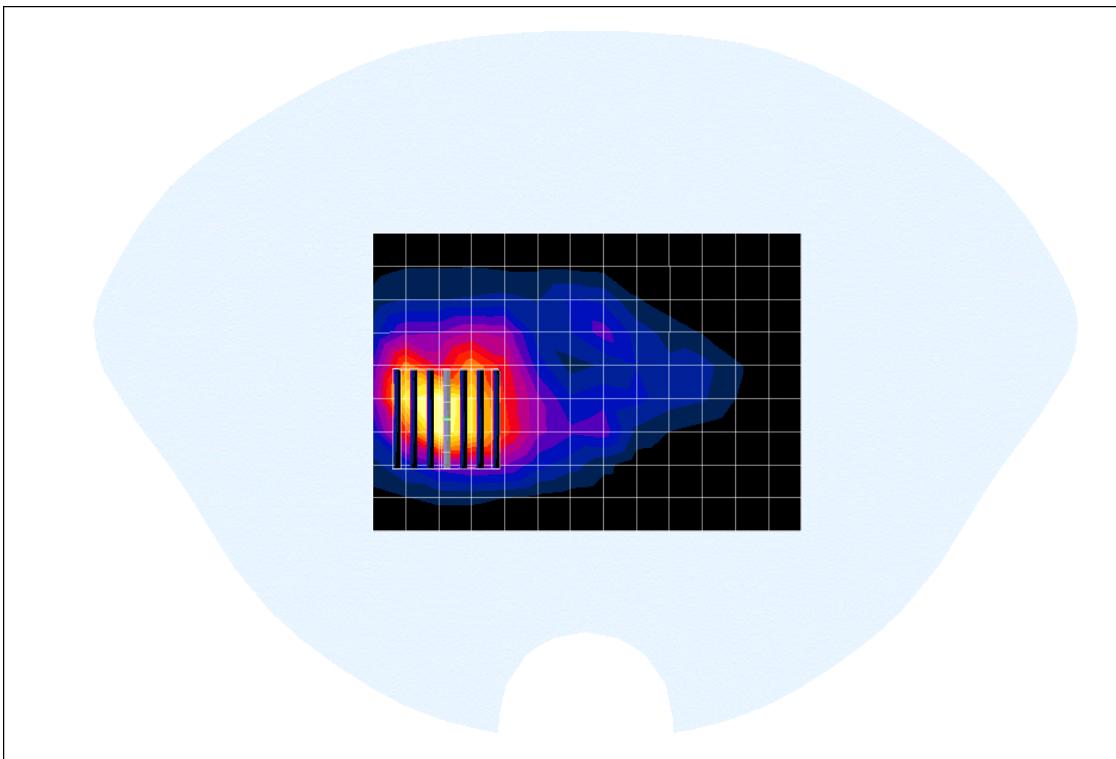
Ambient Temperature: $23 \pm 1^0 C$
Tissue Temperature: $23 \pm 1^0 C$
Humidity: 55% to 60%

TEST RESULTS

Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: EUT Front Touched Phantom_Ch 11_2462MHz_Data 15.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2462 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

EUT Front Touched Phantom_Ch 11_2462MHz_Data 15/Area Scan (10x14x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.282 mW/g

EUT Front Touched Phantom_Ch 11_2462MHz_Data 15/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.47 V/m; Power Drift = -0.324 dB
Peak SAR (extrapolated) = 0.523 W/kg
SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.138 mW/g
Maximum value of SAR (measured) = 0.289 mW/g

TEST RESULTS
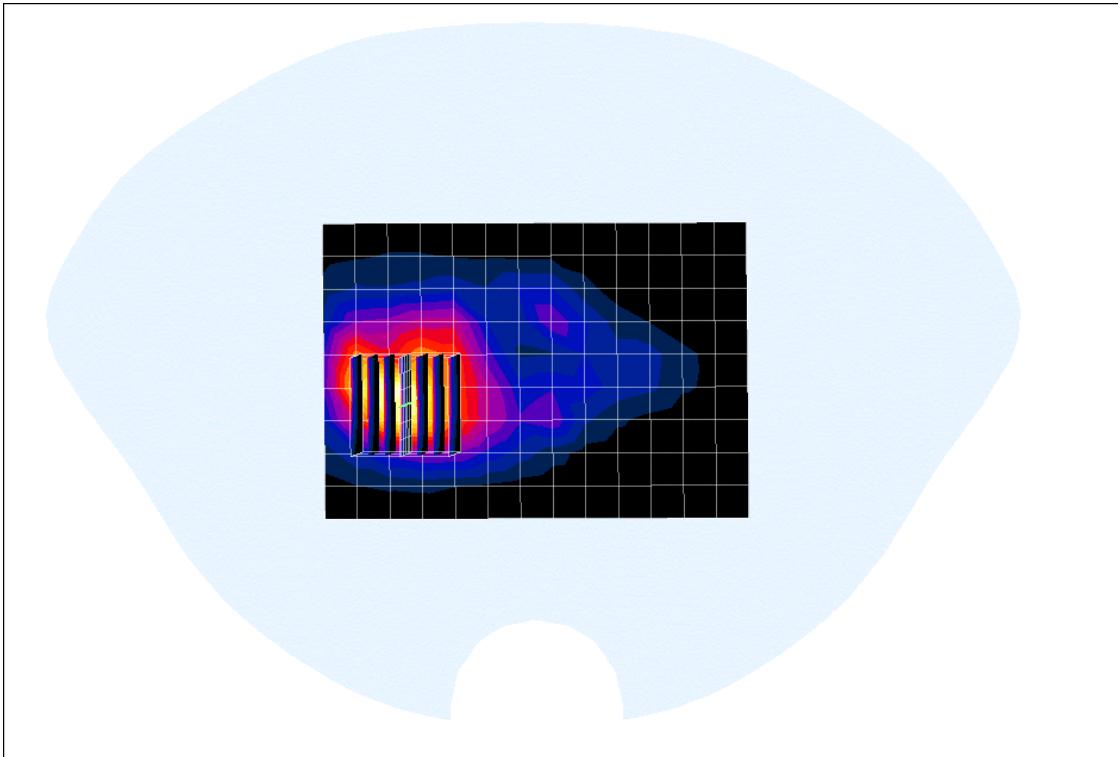
Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: EUT Rear 15mm Gap_Ch 1_2412MHz_Data 16.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2412 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

 DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

 EUT Rear 15mm Gap_Ch 1_2412MHz_Data 16/Area Scan (10x14x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.059 mW/g

EUT Rear 15mm Gap_Ch 1_2412MHz_Data 16/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.44 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 0.084 W/kg
SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.030 mW/g
Maximum value of SAR (measured) = 0.057 mW/g

TEST RESULTS
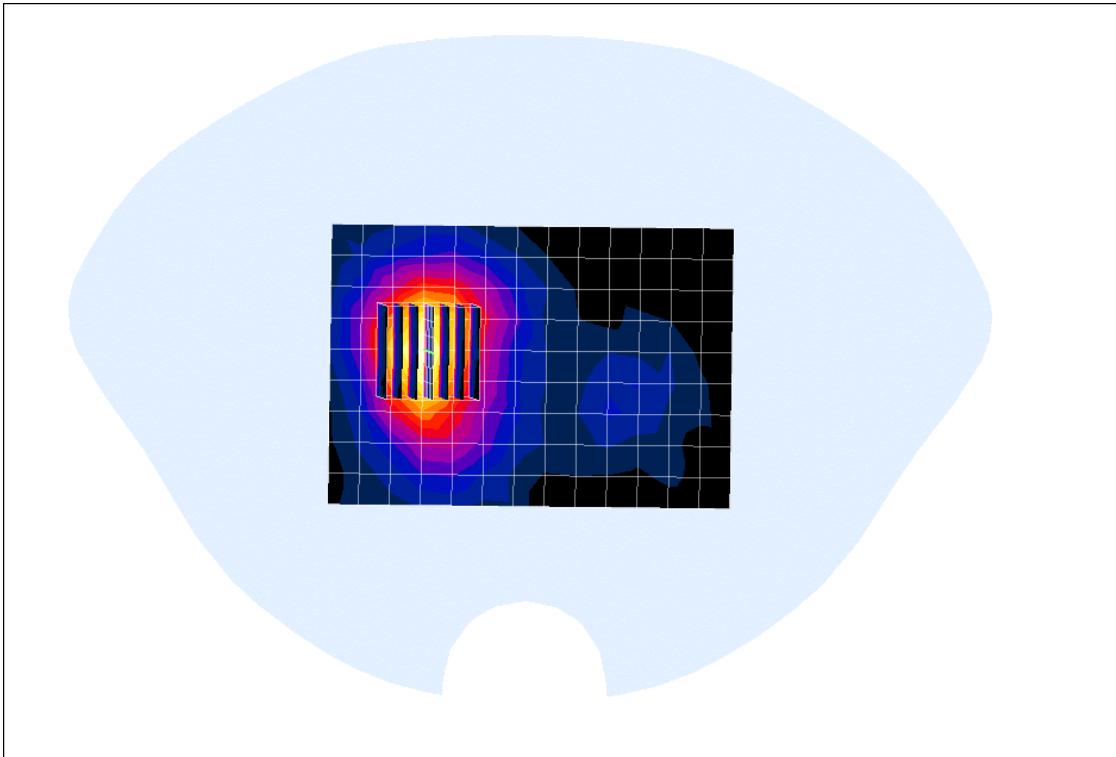
Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Ambient Temperature: $23 \pm 1^0\,\text{C}$
Tissue Temperature: $23 \pm 1^0\,\text{C}$
Humidity: 55% to 60%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: EUT Rear 15mm Gap_Ch 6_2437MHz_Data 17.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2437 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

EUT Rear 15mm Gap_Ch 6_2437MHz_Data 17/Area Scan (10x14x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.054 mW/g

EUT Rear 15mm Gap_Ch 6_2437MHz_Data 17/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.29 V/m; Power Drift = 0.261 dB
Peak SAR (extrapolated) = 0.079 W/kg
SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.030 mW/g

TEST RESULTS
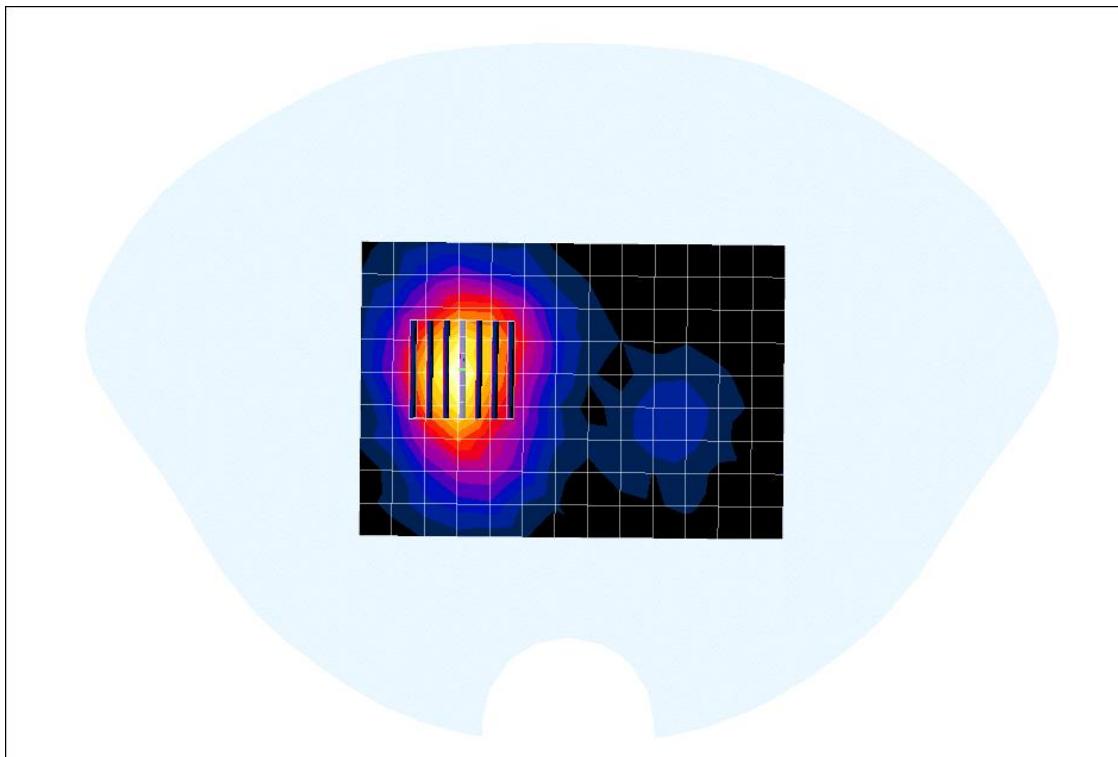
Ambient Temperature: $23 \pm 1^0\,$C
Tissue Temperature: $23 \pm 1^0\,$C
Humidity: 55% to 60%

TEST RESULTS

Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: EUT Rear 15mm Gap_Ch 11_2462MHz_Data 18.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: SIP Phone

Communication System: WiFi

Frequency: 2462 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

EUT Rear 15mm Gap_Ch 11_2462MHz_Data 18/Area Scan (10x14x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.189 mW/g

EUT Rear 15mm Gap_Ch 11_2462MHz_Data 18/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.65 V/m; Power Drift = -0.448 dB
Peak SAR (extrapolated) = 0.285 W/kg
SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.097 mW/g
Maximum value of SAR (measured) = 0.186 mW/g

TEST RESULTS

Ambient Temperature: 23 ± 1^0 C
Tissue Temperature: 23 ± 1^0 C
Humidity: 55% to 60%
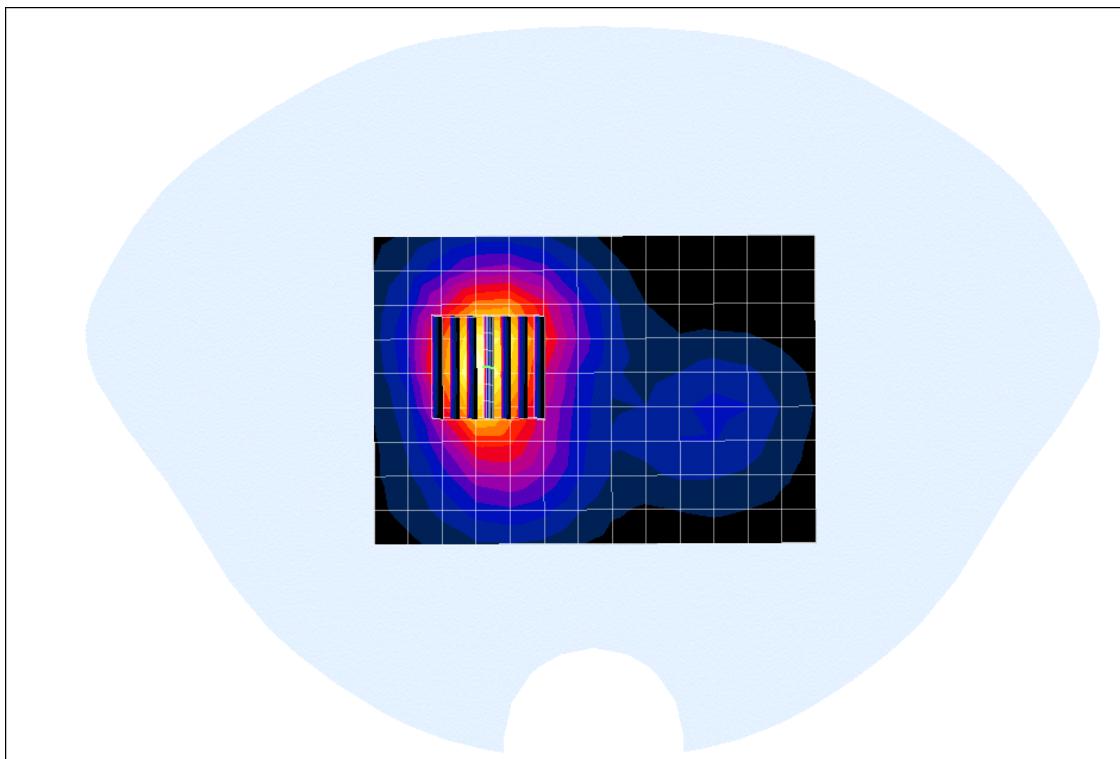
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1. Results of the testing/calibration in the form of a report will be issued immediately after the service has been completed or terminated.

2. Unless otherwise requested, a report shall contain only technical results. Analysis and interpretation of the results and professional opinion and recommendations expressed thereupon, if required, shall be clearly indicated and additional fee paid for, by the Client.

3. This report applies to the sample of the specific product/equipment given at the time of its testing/calibration. The results are not used to indicate or imply that they are applicable to other similar items. In addition, such results must not be used to indicate or imply that TÜV SÜD PSB approves, recommends or endorses the manufacturer, supplier or user of such product/equipment, or that TÜV SÜD PSB in any way "guarantees" the later performance of the product/equipment.

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May 2007

ANNEX A

TEST INSTRUMENTATION
&
GENERAL PROCEDURE

TEST INSTRUMENTATION & GENERAL PROCEDURES   ANNEX A

A.1a   General Test Procedure

In the SAR measurement, the positioning of the probes must be performed with sufficient accuracy to obtain repeatable measurements in the presence of rapid spatial attenuation phenomena. The accurate positioning of the E-field probe is accomplished by using a high precision robot. The robot can be taught to position the probe sensor following a specific pattern of points. In a first sweep, the sensor is positioned as close as possible to the interface, with the sensor enclosure touching the inside of the fiberglass shell. The SAR is measured on a grid of points, which covers the curved surface of the phantom in an area larger than the size of the EUT. After the initial scan, a high- resolution grid is used to locate the absolute maximum measured energy point. At this location, attenuation versus depth scan will be accomplished by the measurement system to calculate the SAR value.

A.2   Test Instrumentation

Measurement System

- **Positioning Equipment**
  Type: High Precision Industrial Robot, RX90.
  Precision: High precision (repeatability 0.02mm)
  Reliability: High reliability (industrial design)

- **Compaq Computer**
  Type: 2.4GHz Pentium
  Memory: 512MB   SDRAM
  Operating System: Windows 2000
  Dell Monitor: 17" LCD

- **Measurement Probes**
  Dosimetric E-Field Probe   Type: ET3DV6

- **Phantom & Tissue**
  SAM Twin Phantom: "Phantom SAM 12", manufactured by SPEAG.
  Tissue: Simulated Tissue with electrical characteristics similar to those of the
                            human at normal body temperature ($23 \pm 1°C$)
  Shell: Fiberglass shell phantom with 2mm thickness
  Dimension: A100cm x 50cm x 85cm (L x W x H)

TEST INSTRUMENTATION & GENERAL PROCEDURES   ANNEX A

A.3   Test Setup

SAM Twin Phantom

The "Phantom SAM 12", manufactured by SPEAG is a fiberglass shell phantom with 2 mm shell thickness. It has three measurement areas:

- Left hand
- Right hand
- Flat phantom

The phantom table comes in the sizes: A 100x50x85 cm (LxWxH) table for use with free standing robots.

Simulated tissue
Simulated Tissue: Suggested in a paper by George Hartsgrove and colleagues in University of Ottawa Ref.: Bioelectromagnetics 8:29-36 (1987)

This simulated tissue is mainly composed of water, sugar and salt. At higher frequencies, in order to achieve the proper conductivity, the solution does not contain salt. Also, at these frequencies, D.I. water and alcohol is preferred.
Tissue Density : Approximately 1.25 g/cm^3

- **Preparation**
  The ingredients (i.e. water, sugar, salt, etc) required to prepare the simulated tissue are carefully weighed and poured into a clean container for mixing. A stirring paddle, that is attached to a hand drill is used to stir the solution for a duration of about 30 minutes or more. When the ingredients are completely dissolved, the solution is left in the container for the air bubbles to disappear.

- **Measurement of Electrical Characteristics of Simulated Tissue**
  1) S-PARAMETER Network Analyzer, Agilent 8753ES (30kHz – 6GHz)
  2) Agilent 85070D Dielectric Probe Kit

ELECTRICAL CHARACTERISTIC
MEASUREMENT SETUP
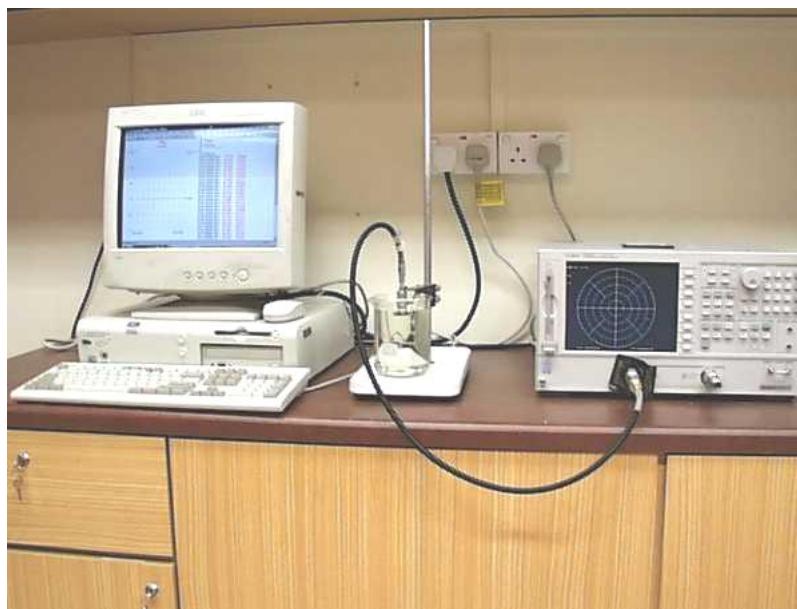
- **Description of the Agilent 85070D Dielectric Probe Kit**

The 85070D is a dielectric probe that is used to measure the intrinsic electrical properties of materials in the RF and microwave frequency bands. The 85070D software allows you to measure the complex dielectric constant (also called permittivity) of liquids and semi-solids, incuding the dielectric loss factor of loss tangent.

To obtain data at hundreds of frequencies in seconds, simply immerse the probe into liquids or semi-solids - no special fixtures or containers are required. The 85070D must be used in conjunction with an Agilent network analyzer. The network analyzer provides the high frequency stimulus, and measures the reflected response.

The probe transmits a signal into the material under test (MUT). The measured reflected response from the materials is then related to its dielectric properties. A computer controls the system, and runs software that guides the user through a measurement sequence. An effort is made to keep the results dielectric constant and conductivity within 5 % of published data.

TEST INSTRUMENTATION & GENERAL PROCEDURES   ANNEX A

Tissue Depth

The tissue depth at the "Phantom SAM 12", "450MHz Flat Phantom – 6mm Shell Thickness" and "450MHz Flat Phantom – 2mm Shell Thickness" is approximately 15cm ±0.5cm.
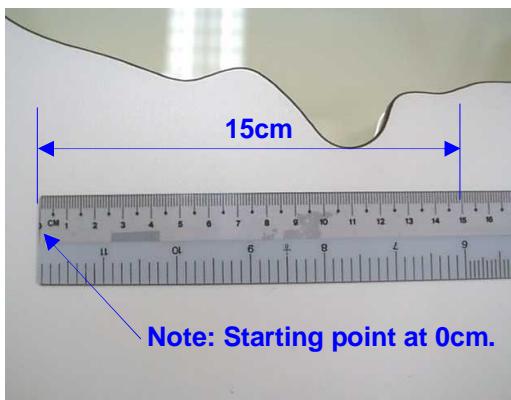
At "Phantom SAM 12"
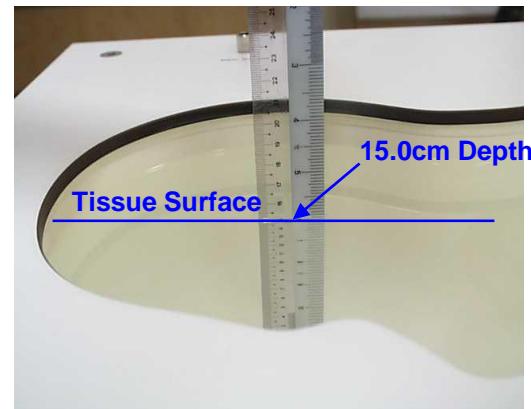
Tissue – 15.0cm Depth

TEST INSTRUMENTATION & GENERAL PROCEDURES   ANNEX A

Positioning of EUT
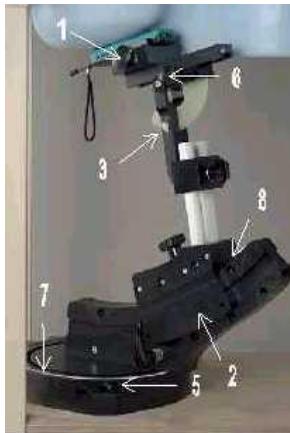
The DASY4 holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65º. The intended use position in the CENELEC document is has a rotation angle of 65º and an inclination angle of 80º. The rotation centers for both scales is the ear opening. Thus the device needs no repositioning when changing the angles. The device rotation around the device axis is not changed in the holder. In the CENELEC standard it is always 0º. If the standard changes, a support will be provided with the new angle.

1. **"Cheek/Touch Position"** – the device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom. This test position is established:

i) When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

ii) (Or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivotingpoint, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

2. **"Ear/Tilt Position"** – With the handset aligned in the "Cheek/Touch Position":

i) If the earpiece of the handset is not in full contact with the phantom's ear spacer (in the "Cheek/Touch position") and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

ii) (Otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both "ear reference points" (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the handset is tilted away from the mouth with respect to the "test device reference point" by 15°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

3. **Body Worn Configuration**
   All body worn accessories are tested for the FCC RF exposure compliance. The phone is positioned into carrying case (if available) and placed below of the flat phantom. Headset or ear piece (if available) is connected during measurements.

TEST INSTRUMENTATION & GENERAL PROCEDURES   ANNEX A

Instrument	Model	S/No	Cal Due Date	
Boonton RF Power Meter (Dual Channel)	4532	97701	28 Feb 2008	X
Boonton Power Sensor (used as reference)	51075	32002	28 Feb 2008	X
Boonton Power Sensor	51075	32097	28 Feb 2008	X
S-Parameter Network Analyzer (30kHz – 6GHz)	8753ES	MY40001026	15 Mar 2008	X
Agilent 85070D Dielectric Probe Kit	85075D	21356	-	X
Anritsu RF Signal Generator (10MHz – 20GHz)	68347C	04306	-	X
Amplifier Research Power Amplifier (1MHz – 1000MHz)	25W1000B	27225	-	
Amplifier Research Power Amplifier (800MHz – 4.2GHz)	25S1G4A	29346	-	X
Agilent Dual Directional Coupler (0.1~2.0)GHz	HP778D	18289	-	
AR Directional Coupler (0.8~4.2)GHz	DC7144	29245	-	X
2450MHz System Validation Dipole	D2450V2	752	19 Jun 2008	X
Data Acquisition Electronics (DAE4)	DAE4	627	11 Jun 2007	X
Dosimetric E-field Probe	EX3DV4	3542	23 Jun 2007	X

ANNEX B

TEST SETUP PHOTOGRAPHS

TEST SETUP PHOTOGRAPHS   **ANNEX B**

SAR Test Setup Photographs

SAR Test Setup (Device at Head Phantom)

TEST SETUP PHOTOGRAPHS   **ANNEX B**

SAR Test Setup Photographs
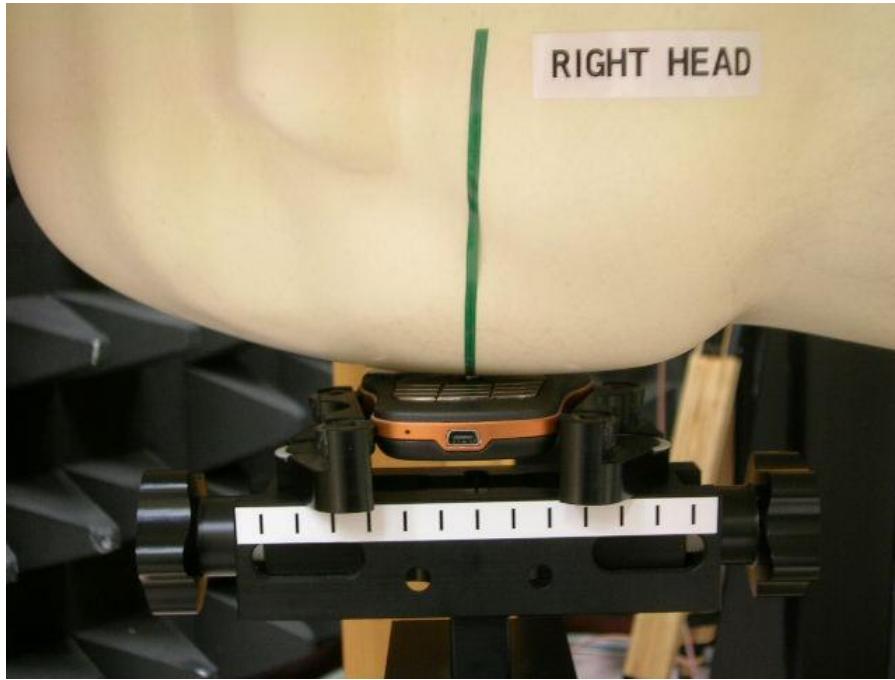
SAR Test Setup (Device at Head Phantom) – Closer Front View **(Cheek/Touch)**

SAR Test Setup (Device at Head Phantom) – Closer Side View **(Cheek/Touch)**

TEST SETUP PHOTOGRAPHS ANNEX B

SAR Test Setup Photographs
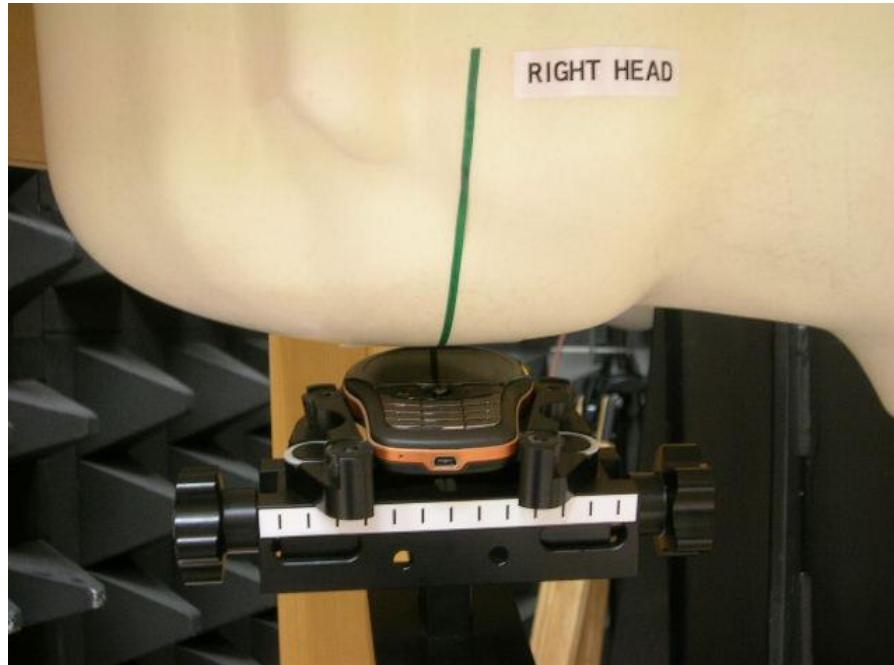
SAR Test Setup (Device at Head Phantom) – Closer Front View **(Ear/Tilt)**

SAR Test Setup (Device at Head Phantom) – Closer Side View **(Ear/Tilt)**

TEST SETUP PHOTOGRAPHS   **ANNEX B**

SAR Test Setup Photographs

SAR Test Setup At Flat Phantom

TEST SETUP PHOTOGRAPHS ANNEX B

SAR Test Setup Photographs
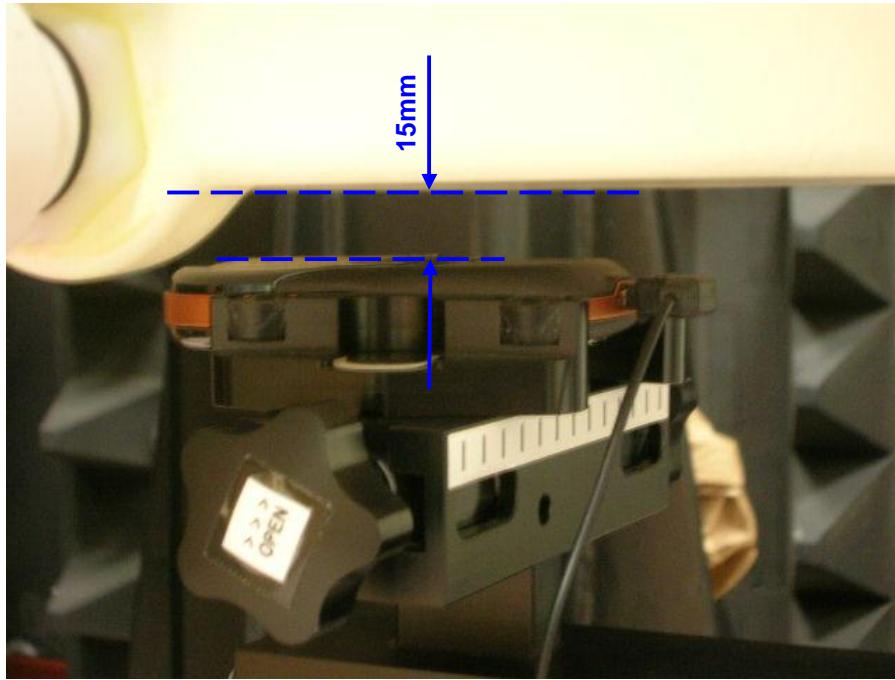
SAR Test Setup At Flat Phantom – Closer Front View (EUT **Rear** To Phantom)
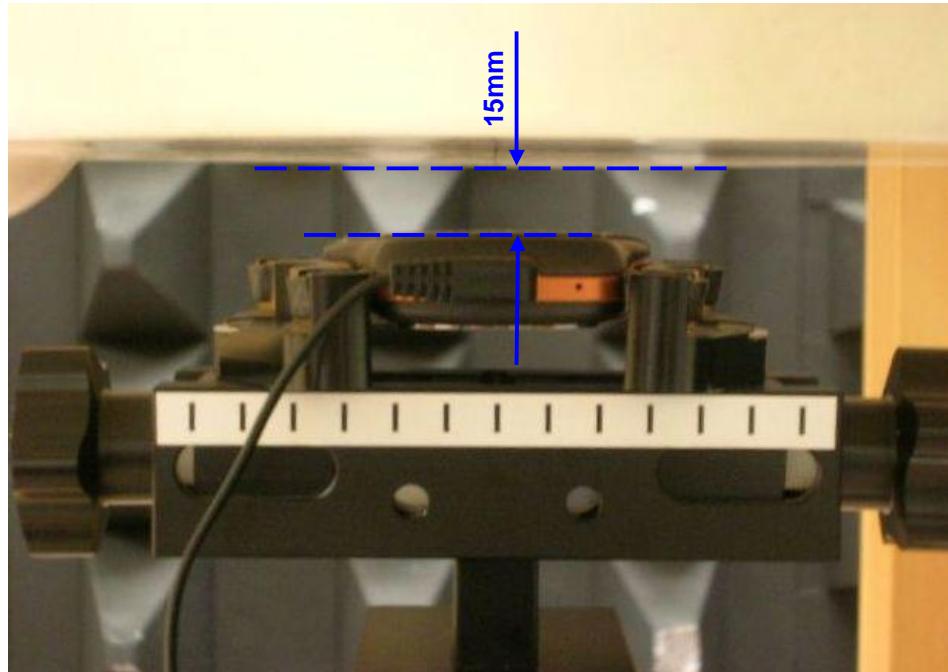
SAR Test Setup At Flat Phantom – Closer Side View (EUT **Rear** To Phantom)

TEST SETUP PHOTOGRAPHS   **ANNEX B**

SAR Test Setup Photographs
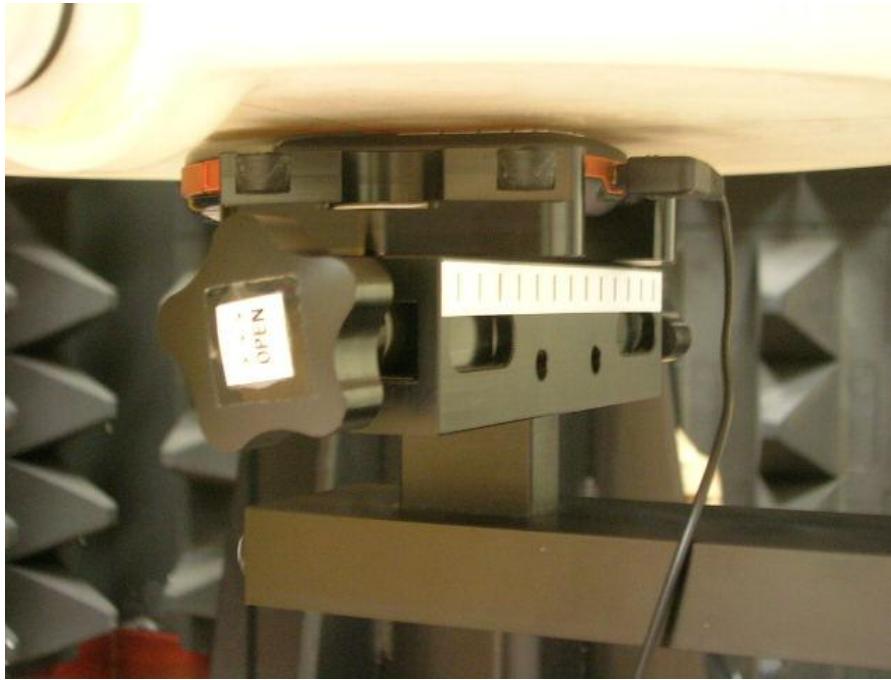
SAR Test Setup At Flat Phantom – Closer Front View (EUT **Front** Touched Phantom)
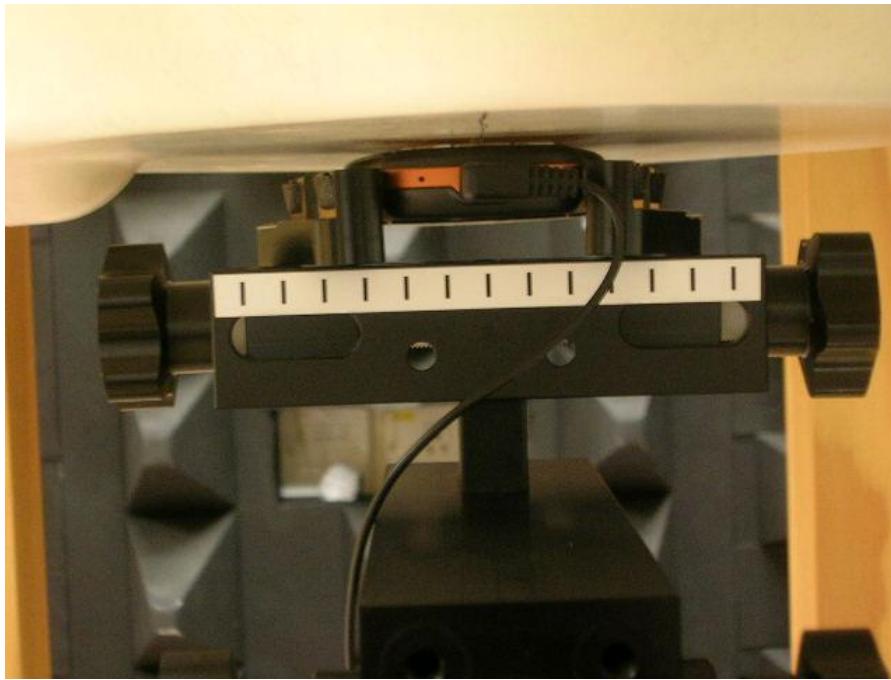
SAR Test Setup At Flat Phantom – Closer Side View (EUT **Front** Touched Phantom)

TEST SETUP PHOTOGRAPHS   ANNEX B

Conducted Power Measurement Setup

Conducted Power Measurement Setup

TEST SETUP PHOTOGRAPHS   **ANNEX B**

EUT PHOTOGRAPHS

Front of EUT

Rear of EUT

ANNEX C

TISSUE SIMULANT DATA SHEETS

TISSUE SIMULANT DATA SHEETS ANNEX C

Type of Tissue	Head	Body
Target Frequency (MHz)	2450	2450
Target Dielectric Constant	39.2	52.7
Target Conductivity (S/m)	1.8	1.95
Composition (by weight)	Water (56.69%) Glycol (43.31%) Sugar (0%) Salt (0%) HEC (0%) Preventol D7 (0%)	Water (72.55%) Glycol (27.34%) Sugar (0%) Salt (0.11%) HEC (0%) Preventol D7 (0%)
Measured Dielectric Constant	39.24	54.61
Measured Conductivity (S/m)	1.7981	1.9998

Probe Name	Dosimetric E-field Probe ET3DV4	Dosimetric E-field Probe ET3DV4
Probe Serial Number	3542	3542
Sensor Offset (mm)	1.2	1.2
Conversion Factor	$7.77 \pm 11.8\ \%$	$7.77 \pm 11.8\ \%$
Probe Calibration Due Date (DD/MM/YY)	23 June 2007	23 June 2007

TISSUE SIMULANT DATA SHEETS   ANNEX C

Head Tissue at 2450MHz

Frequency	e'	e"	Conductivity
2440000000	39.28	13.18	1.7871
2441000000	39.28	13.19	1.7882
2442000000	39.26	13.18	1.7878
2443000000	39.27	13.19	1.7901
2444000000	39.26	13.20	1.7922
2445000000	39.26	13.20	1.7931
2446000000	39.26	13.21	1.7944
2447000000	39.25	13.20	1.7950
2448000000	39.25	13.22	1.7979
2449000000	39.23	13.20	1.7966
2450000000	**39.24**	**13.21**	**1.7981**
2451000000	39.23	13.22	1.8001
2452000000	39.23	13.21	1.7990
2453000000	39.23	13.22	1.8012
2454000000	39.22	13.22	1.8029
2455000000	39.22	13.23	1.8038
2456000000	39.21	13.24	1.8059
2457000000	39.21	13.23	1.8052
2458000000	39.22	13.23	1.8062
2459000000	39.21	13.23	1.8075
2460000000	39.20	13.22	1.8073
2461000000	39.18	13.24	1.8099
2462000000	39.18	13.24	1.8109
2463000000	39.19	13.24	1.8111
2464000000	39.19	13.24	1.8124
2465000000	39.17	13.26	1.8157
2466000000	39.18	13.25	1.8159
2467000000	39.16	13.25	1.8160
2468000000	39.17	13.26	1.8174
2469000000	39.16	13.26	1.8189
2470000000	39.16	13.26	1.8197
2471000000	39.16	13.27	1.8218
2472000000	39.14	13.26	1.8213
2473000000	39.14	13.27	1.8229
2474000000	39.13	13.28	1.8250
2475000000	39.13	13.28	1.8261
2476000000	39.14	13.28	1.8270
2477000000	39.12	13.28	1.8275
2478000000	39.12	13.29	1.8291
2479000000	39.11	13.29	1.8297
2480000000	39.12	13.30	1.8330

(e' = Dielectric Constant)

(e" = Loss Factor)

Tested by: NAC
Date : 7 June 07
Frequency: 2450MHz
Mixture: Head Tissue
Tissue temp: 24°C

Composition		
Tap Water	0.0g	0.00%
Ultra Pure Water	20000.0g	56.69%
Sugar	0.0g	0.00%
Glyco	15278.0g	43.31%
Salt	0.0g	0.00%
Preventol D7	0.0g	0.00%
Total Weight	35278.0g	100.0%

Result (FCC)	Dielectric Constant	Conductivity
Measured	39.24	1.7981
Target (FCC)	39.2	1.8
Low Limit	37.24	1.71
High Limit	41.16	1.89
% Off Target	0.11	-0.11

TISSUE SIMULANT DATA SHEETS **ANNEX C**

Body Tissue at 2450MHz

Frequency	e'	e"	Conductivity
2440000000	54.67	14.85	2.0134
2441000000	54.65	14.85	2.0133
2442000000	54.67	14.81	2.0097
2443000000	54.66	14.80	2.0093
2444000000	54.66	14.80	2.0092
2445000000	54.65	14.78	2.0074
2446000000	54.66	14.76	2.0056
2447000000	54.63	14.73	2.0023
2448000000	54.65	14.72	2.0024
2449000000	54.62	14.69	1.9992
2450000000	**54.61**	**14.69**	**1.9998**
2451000000	54.59	14.67	1.9972
2452000000	54.56	14.65	1.9955
2453000000	54.55	14.61	1.9915
2454000000	54.51	14.61	1.9912
2455000000	54.49	14.59	1.9893
2456000000	54.46	14.55	1.9858
2457000000	54.43	14.53	1.9835
2458000000	54.40	14.51	1.9807
2459000000	54.36	14.49	1.9801
2460000000	54.33	14.47	1.9776
2461000000	54.31	14.45	1.9758
2462000000	54.27	14.43	1.9740
2463000000	54.23	14.41	1.9719
2464000000	54.18	14.38	1.9690
2465000000	54.15	14.36	1.9667
2466000000	54.09	14.34	1.9649
2467000000	54.06	14.31	1.9616
2468000000	54.03	14.31	1.9618
2469000000	53.98	14.28	1.9589
2470000000	53.93	14.27	1.9581
2471000000	53.88	14.27	1.9587
2472000000	53.85	14.24	1.9554
2473000000	53.81	14.23	1.9553
2474000000	53.75	14.23	1.9561
2475000000	53.71	14.20	1.9522
2476000000	53.67	14.19	1.9519
2477000000	53.64	14.17	1.9503
2478000000	53.58	14.17	1.9512
2479000000	53.56	14.16	1.9506
2480000000	53.54	14.17	1.9525

(e' = Dielectric Constant)

(e" = Loss Factor)

Tested by: NAC
Date : 8 JUNE 07
Frequency: 2450MHz
Mixture: Body Tissue
Tissue temp: 24°C

Composition		
Tap Water	0.0g	0.00%
Ultra Pure Water	25500.0g	72.55%
Sugar	0.0g	0.00%
Glyco	9610.0g	27.34%
Salt	38.4g	0.11%
Preventol D7	0.0g	0.00%
Total Weight	35148.4g	100.0%

Result (FCC)	Dielectric Constant	Conductivity
Measured	54.61	1.9998
Target (FCC)	52.7	1.95
Low Limit	50.065	1.8525
High Limit	55.335	2.0475
% Off Target	3.62	2.55

ANNEX D

SAR VALIDATION RESULTS

SAR VALIDATION RESULTS   ANNEX D

SAR Validation – Head Tissue at 2450MHz (Dipole forward power = 250mW)

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/7/2007

File Name: 2450MHz Head_System Validation_7th Jun 07.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: Dipole 2450MHz

Communication System: CW

Frequency: 2450 MHz

Duty Cycle: 1:1

Medium: 2450MHz Head TissueMedium parameters used: f = 2450 MHz; σ = 1.8 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2450MHz Head_System Validation/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.6 mW/g

2450MHz Head_System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 82.6 V/m; Power Drift = -0.049 dB
Peak SAR (extrapolated) = 26.8 W/kg
**SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.36 mW/g**
Maximum value of SAR (measured) = 15.0 mW/g

SAR VALIDATION RESULTS   **ANNEX D**

SAR Validation – Head Tissue at 2450MHz (Dipole forward power = 250mW)

SAR VALIDATION RESULTS   ANNEX D

SAR Validation – Body Tissue at 2450MHz (Dipole forward power = 250mW)

Test Laboratory: TÜV SÜD PSB Pte Ltd, Telecoms & EMC.

Date: 6/8/2007

File Name: 2450MHz Body_System Validation.da4

Program Name: Job Nos.: 56S060446

Phantom section: Flat Section

DUT: Dipole 2450MHz

Communication System: CW

Frequency: 2450 MHz

Duty Cycle: 1:1

Medium: Body 2450 MHzMedium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3

DASY4 Configuration:

Electronics: DAE4 Sn627   Calibrated: 6/12/2006

Phantom: SAM 12   Measurement SW: DASY4, V4.7 Build 53

Probe: EX3DV4 - SN3542   ConvF(7.77, 7.77, 7.77)   Calibrated: 6/23/2006

Postprocessing SW: SEMCAD, V1.8 Build 172

Sensor-Surface: 4mm (Mechanical Surface Detection)

2450MHz Body_System Validation/Area Scan (7x10x1): Measurement grid:
dx=10mm, dy=10mm
Maximum value of SAR (measured) = 12.4 mW/g

2450MHz Body_System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement
grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.0 V/m; Power Drift = 0.004 dB
Peak SAR (extrapolated) = 22.3 W/kg
SAR(1 g) = 11.8 mW/g; SAR(10 g) = 5.79 mW/g
Maximum value of SAR (measured) = 13.5 mW/g

SAR Validation – Body Tissue at 2450MHz (Dipole forward power = 250mW)

SAR VALIDATION RESULTS   **ANNEX D**

ANNEX E

MEASUREMENT UNCERTAINTY

MEASUREMENT UNCERTAINTY   **ANNEX E**

Measurement Uncertainty

All test measurement carried out are traceable to national standards. The uncertainty of measurement at a confidence level of 95%, with a coverage of 2, is ±**20.6%.**

Error Description	Uncertainty Value ± %	Probability Distribution	Divisor	ci 1g	Standard Unc.(1g)	Vi or Veff
Measurement System						
Probe Calibration	± 4.8	normal	1	1	± 4.8	∞
Axial isotropy	± 4.7	rectangular	√3	(1-cp)^1/2	± 1.9	∞
Hemispherical Isotropy	± 9.6	rectangular	√3	(cp)^1/2	± 3.9	∞
Spatial resolution	± 0.0	rectangular	√3	1	± 0.0	∞
Boundary effects	± 1.0	rectangular	√3	1	± 0.6	∞
Linearity	± 4.7	rectangular	√3	1	± 2.7	∞
System Detection limit	± 1.0	rectangular	√3	1	± 0.6	∞
Readout electronics	± 1.0	normal	1	1	± 1.0	∞
Response time	± 0.8	rectangular	√3	1	± 0.5	∞
Integration time	± 2.6	rectangular	√3	1	± 1.5	∞
RF ambient conditions	± 3.0	rectangular	√3	1	± 1.7	∞
Probe Positioning Mechanical Tolerance	± 0.4	rectangular	√3	1	± 0.2	∞
Probe Positioning with respect to Phantom Shell	± 2.9	rectangular	√3	1	± 1.7	∞
Extrapolation, Interpolation and Integration Algorithms for Max. SAR Evaluation	± 1.0	rectangular	√3	1	± 0.6	∞
Test Sample Related						
Device positioning	± 2.9	normal	1	1	± 2.9	145
Device holder uncertainty	± 3.6	normal	1	1	± 3.6	5
Power drift	± 5.0	rectangular	√3	1	± 2.9	∞
Phantom and Tissue Parameters						
Phantom uncertainty	± 4.0	rectangular	√3	1	± 2.3	∞
Liquid conductivity (target)	± 5.0	rectangular	√3	0.64	± 1.8	∞
Liquid conductivity (meas)	± 2.5	normal	1	0.64	± 1.6	∞
Liquid permittivity (target)	± 5.0	rectangular	√3	0.6	± 1.7	∞
Liquid permittivity (meas)	± 2.5	normal	1	0.6	± 1.5	∞
Combined Standard Uncertainty					± 10.3	330
Coverage Factor for 95%		**k=2**				
Extended Standard Uncertainty					± 20.6	

ANNEX F

SAR PROBE CALIBRATION CERTIFICATES

SAR PROBE CALIBRATION CERTIFICATES   ANNEX F

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

ilac-MRA

S	Schweizerischer Kalibrierdienst
C	Service suisse d'étalonnage
S	Servizio svizzero di taratura
	Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client   **PSB**   Certificate No: **EX3-3542_Jun06**

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3542
Calibration procedure(s)	QA CAL-01.v5 and QA CAL-14.v3
Calibration procedure for dosimetric E-field probes
Calibration date:	June 23, 2006
Condition of the calibrated item	In Tolerance

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41495277	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Power sensor E4412A	MY41498087	5-Apr-06 (METAS, No. 251-00557)	Apr-07
Reference 3 dB Attenuator	SN: S5054 (3c)	11-Aug-05 (METAS, No. 251-00499)	Aug-06
Reference 20 dB Attenuator	SN: S5086 (20b)	4-Apr-06 (METAS, No. 251-00558)	Apr-07
Reference 30 dB Attenuator	SN: S5129 (30b)	11-Aug-05 (METAS, No. 251-00500)	Aug-06
Reference Probe ES3DV2	SN: 3013	2-Jan-06 (SPEAG, No. ES3-3013_Jan06)	Jan-07
DAE4	SN: 654	2-Feb-06 (SPEAG, No. DAE4-654_Feb06)	Feb-07

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Nov-05)	In house check: Nov-07
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-05)	In house check: Nov 06

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

Issued: June 24, 2006

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: EX3-3542_Jun06   Page 1 of 9

SAR PROBE CALIBRATION CERTIFICATES   ANNEX F

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Federal Office of Metrology and Accreditation
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:
  a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
  b) CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001

Methods Applied and Interpretation of Parameters:
  - *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ (f $\leq$ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
  - *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
  - *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
  - *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f $\leq$ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from $\pm$ 50 MHz to $\pm$ 100 MHz.
  - *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
  - *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Certificate No: EX3-3542_Jun06   Page 2 of 9

SAR PROBE CALIBRATION CERTIFICATES   **ANNEX F**

EX3DV4 SN:3542   June 23, 2006

Probe EX3DV4

SN:3542

Manufactured:	May 3, 2004
Last calibrated:	September 27, 2005
Recalibrated:	June 23, 2006

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

Certificate No: EX3-3542_Jun06   Page 3 of 9

SAR PROBE CALIBRATION CERTIFICATES   **ANNEX F**

EX3DV4 SN:3542   June 23, 2006

DASY - Parameters of Probe: EX3DV4 SN:3542

Sensitivity in Free Space^A Diode Compression^B

NormX	$0.32 \pm 10.1\%$	$\mu V/(V/m)^2$	DCP X	93 mV
NormY	$0.31 \pm 10.1\%$	$\mu V/(V/m)^2$	DCP Y	94 mV
NormZ	$0.54 \pm 10.1\%$	$\mu V/(V/m)^2$	DCP Z	91 mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL	900 MHz	Typical SAR gradient: 5 % per mm		
			3.7 mm	4.7 mm
	Sensor Center to Phantom Surface Distance			
SAR_{be} [%]	Without Correction Algorithm		3.7	1.2
SAR_{be} [%]	With Correction Algorithm		0.0	0.0

TSL	1750 MHz	Typical SAR gradient: 10 % per mm		
			3.7 mm	4.7 mm
	Sensor Center to Phantom Surface Distance			
SAR_{be} [%]	Without Correction Algorithm		1.5	0.8
SAR_{be} [%]	With Correction Algorithm		0.1	0.6

Sensor Offset

Probe Tip to Sensor Center   1.2 mm

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^{A} The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Page 8).

^{B} Numerical linearization parameter: uncertainty not required.

Certificate No: EX3-3542_Jun06   Page 4 of 9

SAR PROBE CALIBRATION CERTIFICATES   ANNEX F

EX3DV4 SN:3542   June 23, 2006

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)
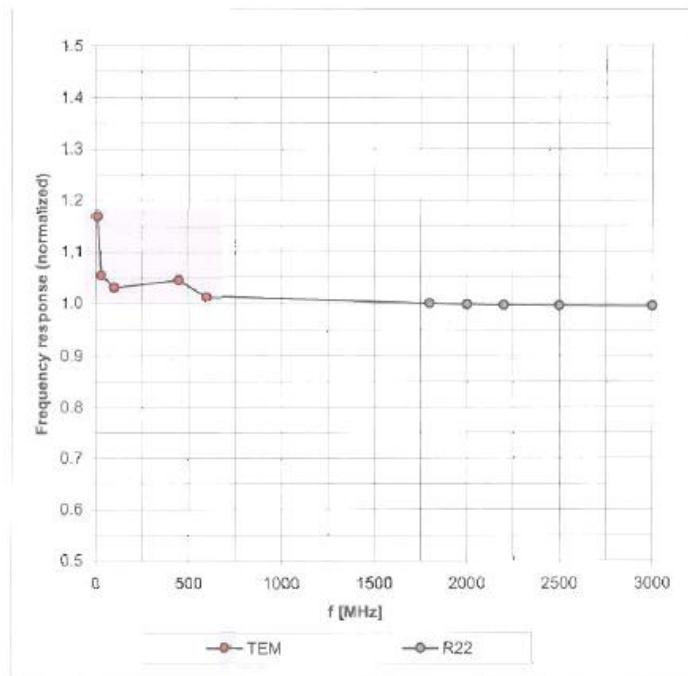

Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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SAR PROBE CALIBRATION CERTIFICATES   **ANNEX F**

EX3DV4 SN:3542   June 23, 2006

Receiving Pattern (φ), ϑ = 0°

f = 600 MHz, TEM ifi110EXX   f = 1800 MHz, WG R22
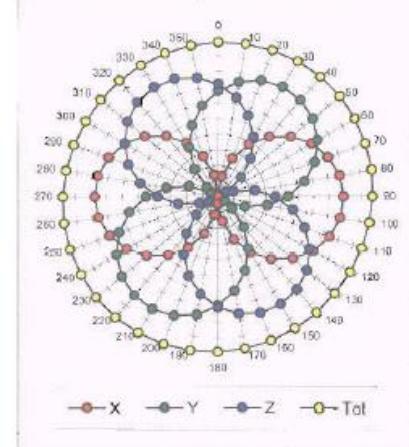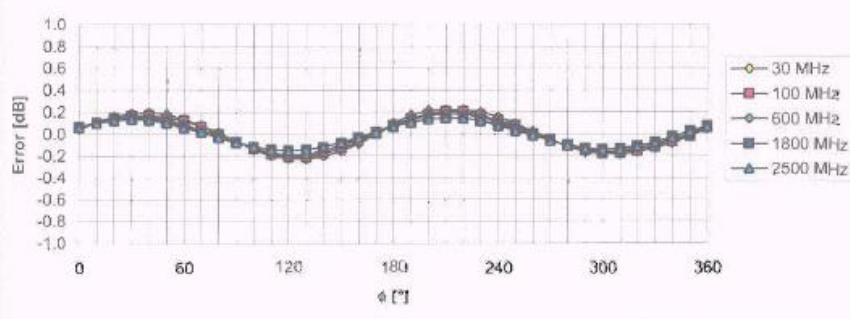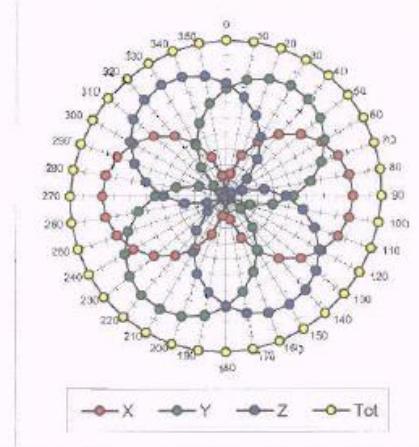
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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Dynamic Range f(SAR_head)

(Waveguide R22, f = 1800 MHz)

Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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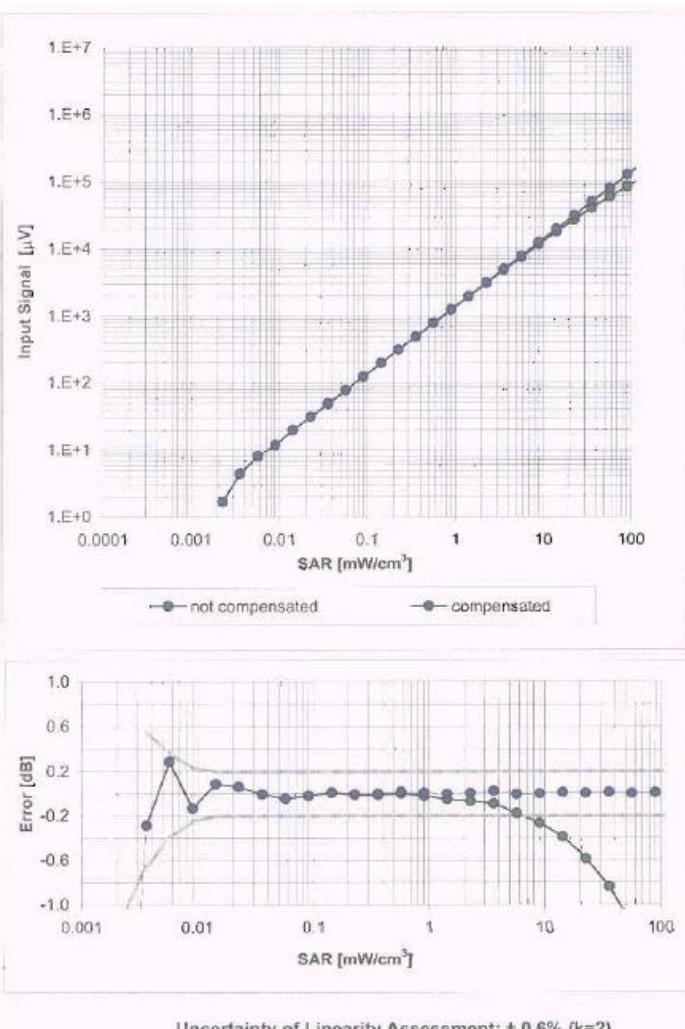
## SAR PROBE CALIBRATION CERTIFICATES   ANNEX F

EX3DV4 SN:3542   June 23, 2006

Conversion Factor Assessment
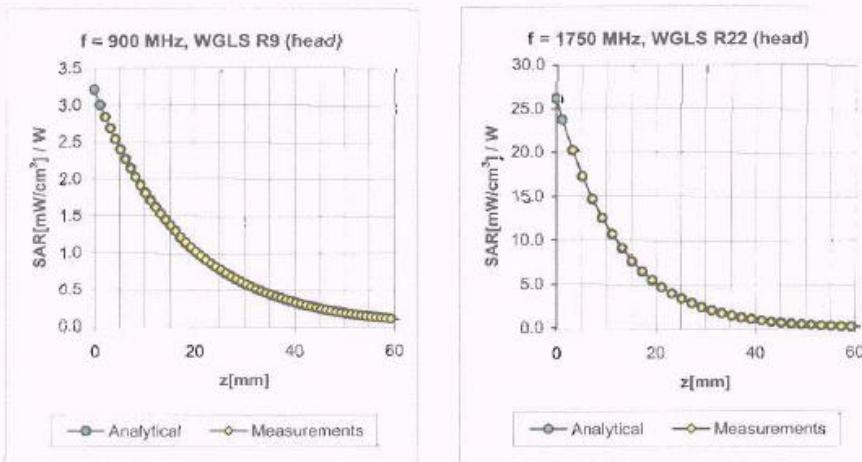
f [MHz]	Validity [MHz]^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF	Uncertainty
835	± 50 / ± 100	Head	41.5 ± 5%	0.90 ± 5%	0.24	1.13	9.13	± 11.0% (k=2)
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.28	1.00	9.58	± 11.0% (k=2)
1750	± 50 / ± 100	Head	40.1 ± 5%	1.37 ± 5%	0.20	1.01	8.53	± 11.0% (k=2)
1900	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.25	1.01	8.35	± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.39	1.00	7.77	± 11.8% (k=2)
5200	± 50 / ± 100	Head	36.0 ± 5%	4.66 ± 5%	0.52	1.61	5.35	± 13.1% (k=2)
5500	± 50 / ± 100	Head	35.6 ± 5%	4.96 ± 5%	0.50	1.71	4.94	± 13.1% (k=2)
5800	± 50 / ± 100	Head	35.3 ± 5%	5.27 ± 5%	0.52	1.70	4.72	± 13.1% (k=2)
635	± 50 / ± 100	Body	55.2 ± 5%	0.97 ± 5%	0.29	1.00	9.55	± 11.0% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.30	1.05	9.58	± 11.0% (k=2)
1750	± 50 / ± 100	Body	53.4 ± 5%	1.49 ± 5%	0.20	1.01	7.94	± 11.0% (k=2)
1900	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.20	1.19	7.73	± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.42	1.00	7.77	± 11.8% (k=2)
5200	± 50 / ± 100	Body	49.0 ± 5%	5.30 ± 5%	0.49	1.70	5.08	± 13.1% (k=2)
5500	± 50 / ± 100	Body	48.6 ± 5%	5.65 ± 5%	0.55	1.65	4.34	± 13.1% (k=2)
5800	± 50 / ± 100	Body	48.2 ± 5%	6.00 ± 5%	0.55	1.70	4.53	± 13.1% (k=2)

^{c} The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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Deviation from Isotropy in HSL
Error (ϕ, ϑ), f = 900 MHz

Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

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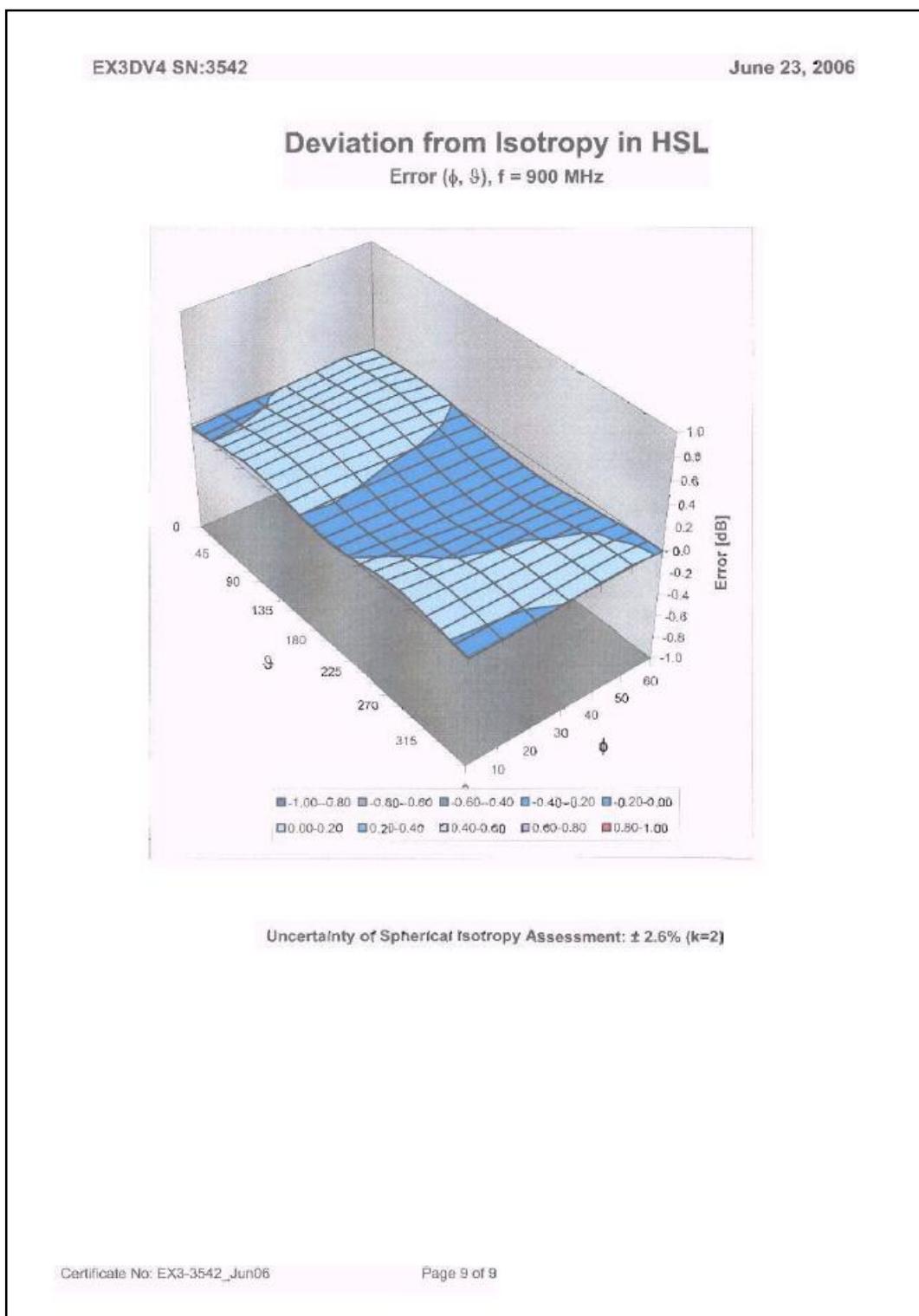
ANNEX G

REFERENCES

REFERENCES   **ANNEX G**

The methods and procedures used for the measurements contained in this report are details in the following reference standards:

Publications	Year	Title
Supplement C (Edition 01-01) to FCC OET Bulletin 65 (Edition 97-01)	2001	"Evaluating Compliance with FCC Guidelines for Human Exposure to radio Frequency Fields"
IEEE Standard 1528-200X	2000	"Product Performance Standards Relative to the safe Use of Electromagnetic Energy"
ANSI/IEEE C95.3	1992	"Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave"
ANSI/IEEE C95.1	1992	"Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300GHz"
ACA, Radio Communications (EMR Human Exposure)	2000 (No.2)	"Radiocommunication (Electromagnetic Radiation – Human Exposure)"
EN50360	2001	Product Standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300MHz – 3GHz)
EN50361	2001	Basic Standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phone (300MHz – 3GHz)