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





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Accreditation No.: SCS 108

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

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DT&C (Dymstec) Client

#### Certificate No: D2450V2-920\_Nov14 CALIBRATION CERTIFICATE Object D2450V2 - SN: 920 Calibration procedure(s) QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz Calibration date: November 19, 2014 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 (Certificate No.) Scheduled Calibration Power meter EPM-442A GB37480704 07-Oct-14 (No. 217-02020) Oct-15 Power sensor HP 8481A US37292783 07-Oct-14 (No. 217-02020) Oct-15 Power sensor HP 8481A MY41092317 07-Oct-14 (No. 217-02021) Oct-15 Reference 20 dB Attenuator SN: 5058 (20k) 03-Apr-14 (No. 217-01918) Apr-15 Type-N mismatch combination SN: 5047.2 / 06327 03-Apr-14 (No. 217-01921) Apr-15 Reference Probe ES3DV3 SN: 3205 30-Dec-13 (No. ES3-3205\_Dec13) Dec-14 DAF4 SN: 601 18-Aug-14 (No. DAE4-601\_Aug14) Aug-15 Secondary Standards ID# Check Date (in house) Scheduled Check RF generator R&S SMT-06 100005 04-Aug-99 (in house check Oct-13) In house check: Oct-16 Network Analyzer HP 8753E US37390585 S4206 18-Oct-01 (in house check Oct-14) In house check: Oct-15 Name Function Calibrated by: Michael Weber Laboratory Technician Approved by: Katja Pokovic Technical Manager Issued: November 19, 2014 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

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Accreditation No.: SCS 108

Zeughausstrasse 43, 8004 Zurich, Switzerland

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#### Glossary:

TSL

tissue simulating liquid

ConvF N/A

sensitivity in TSL / NORM x,y,z not applicable or not measured

# Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

#### Additional Documentation:

d) DASY4/5 System Handbook

## Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

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#### **Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, $dy$ , $dz = 5 mm$	
Frequency	2450 MHz ± 1 MHz	

## **Head TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.0 ± 6 %	1.86 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

#### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.4 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.7 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.20 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.6 W/kg ± 16.5 % (k=2)

## **Body TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.9 ± 6 %	2.03 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

## SAR result with Body TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.2 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	51.4 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.08 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.9 W/kg ± 16.5 % (k=2)

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**Report No.**: DRRFCC1503-0031(1) **FCC ID**: ZNFH520G **Date of issue**: Mar. 30, 2015

# Appendix (Additional assessments outside the scope of SCS108)

## Antenna Parameters with Head TSL

Impedance, transformed to feed point	57.2 Ω + 2.6 jΩ	
Return Loss	- 22.9 dB	

# Antenna Parameters with Body TSL

Impedance, transformed to feed point	53.0 $\Omega$ + 4.6 j $\Omega$	
Return Loss	- 25.4 dB	

## General Antenna Parameters and Design

Electrical Delay (one direction)	1.153 ns
Carta Marting Control	

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

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. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

#### **Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	December 19, 2012

Certificate No: D2450V2-920\_Nov14

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#### **DASY5 Validation Report for Head TSL**

Date: 18.11.2014

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 920

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz;  $\sigma = 1.86 \text{ S/m}$ ;  $\epsilon_r = 39$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY52 Configuration:

Probe: ES3DV3 - SN3205; ConvF(4.53, 4.53, 4.53); Calibrated: 30.12.2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 18.08.2014

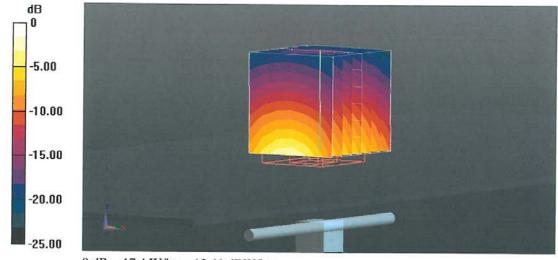
Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

# Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 100.7 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 27.5 W/kg SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.2 W/kg

Maximum value of SAR (measured) = 17.4 W/kg

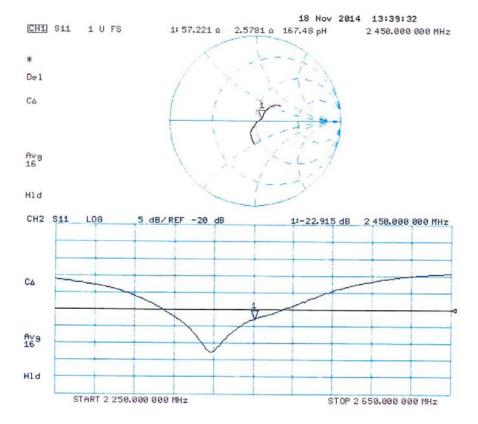


0 dB = 17.4 W/kg = 12.41 dBW/kg

Certificate No: D2450V2-920\_Nov14

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# Impedance Measurement Plot for Head TSL



Certificate No: D2450V2-920\_Nov14

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Date: 19.11.2014

Test Laboratory: SPEAG, Zurich, Switzerland

# DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 920

Communication System: UID 0 - CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz;  $\sigma = 2.03 \text{ S/m}$ ;  $\varepsilon_r = 50.9$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

## DASY52 Configuration:

Report No.: DRRFCC1503-0031(1)

Probe: ES3DV3 - SN3205; ConvF(4.35, 4.35, 4.35); Calibrated: 30.12.2013;

- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 18.08.2014
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

## Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

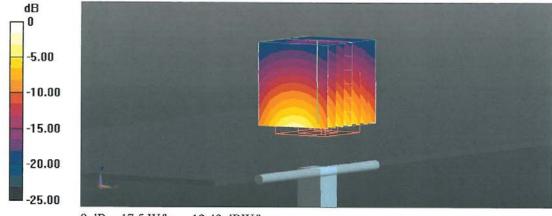
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.67 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.08 W/kg

Maximum value of SAR (measured) = 17.5 W/kg

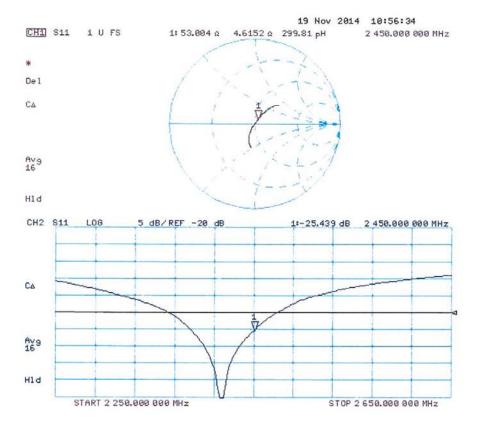


0 dB = 17.5 W/kg = 12.43 dBW/kg

Certificate No: D2450V2-920\_Nov14

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# Impedance Measurement Plot for Body TSL



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Client

Digital EMC (Dymstec)

Certificate No: D2600V2-1016\_May14

Accreditation No.: SCS 108

#### CALIBRATION CERTIFICATE D2600V2 - SN: 1016 Object Calibration procedure(s) QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz Calibration date: May 20, 2014 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) Scheduled Calibration ID# Cal Date (Certificate No.) Primary Standards GB37480704 09-Oct-13 (No. 217-01827) Oct-14 Power meter EPM-442A Oct-14 Power sensor HP 8481A US37292783 09-Oct-13 (No. 217-01827) Oct-14 Power sensor HP 8481A MY41092317 09-Oct-13 (No. 217-01828) Apr-15 Reference 20 dB Attenuator SN: 5058 (20k) 03-Apr-14 (No. 217-01918) Apr-15 03-Apr-14 (No. 217-01921) Type-N mismatch combination SN: 5047.2 / 06327 Dec-14 Reference Probe ES3DV3 SN: 3205 30-Dec-13 (No. ES3-3205\_Dec13) Apr-15 DAE4 SN: 601 30-Apr-14 (No. DAE4-601\_Apr14) Scheduled Check Secondary Standards ID# Check Date (in house) In house check: Oct-16 04-Aug-99 (in house check Oct-13) RF generator R&S SMT-06 100005 In house check: Oct-14 Network Analyzer HP 8753E US37390585 S4206 18-Oct-01 (in house check Oct-13) Signature Function Name Claudio Leubler Laboratory Technician Calibrated by: Technical Manager Approved by: Katia Pokovic Issued: May 21, 2014 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D2600V2-1016\_May14

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#### Glossary:

TSL tissue simulating liquid

ConvF sensitivity in TSL / NORM x,y,z N/A not applicable or not measured

#### Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

## **Additional Documentation:**

d) DASY4/5 System Handbook

#### Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
  of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed
  point exactly below the center marking of the flat phantom section, with the arms oriented
  parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point.
   No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

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%.

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**Report No.**: DRRFCC1503-0031(1)

#### **Measurement Conditions**

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.8
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, $dy$ , $dz = 5 mm$	
Frequency	2600 MHz ± 1 MHz	

# **Head TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity		
Nominal Head TSL parameters	22.0 °C	39.0	1.96 mho/m		
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.0 ± 6 %	2.01 mho/m ± 6 %		
Head TSL temperature change during test	< 0.5 °C				

#### SAR result with Head TSL

SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	14.7 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	57.8 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.54 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	25.9 W/kg ± 16.5 % (k=2)

## **Body TSL parameters**

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity		
Nominal Body TSL parameters	22.0 °C	52.5	2.16 mho/m		
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.3 ± 6 %	2.21 mho/m ± 6 %		
Body TSL temperature change during test	< 0.5 °C				

## SAR result with Body TSL

SAR averaged over 1 cm3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	14.4 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	56.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm <sup>3</sup> (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.36 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	25.1 W/kg ± 16.5 % (k=2)

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**Report No.**: DRRFCC1503-0031(1) **FCC ID**: ZNFH520G **Date of issue**: Mar. 30, 2015

## Appendix

#### Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.0 Ω - 5.0 jΩ
Return Loss	- 26.0 dB

## Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.0 Ω - 3.8 jΩ
Return Loss	- 26.1 dB

#### General Antenna Parameters and Design

Floatrical Dalay (one direction)	1.152 ns
Electrical Delay (one direction)	1.132115

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

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. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

#### **Additional EUT Data**

Manufactured by	SPEAG
Manufactured on	October 30, 2007

Certificate No: D2600V2-1016\_May14

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# **DASY5 Validation Report for Head TSL**

Date: 20.05.2014

Test Laboratory: SPEAG, Zurich, Switzerland

#### DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1016

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz;  $\sigma = 2.01 \text{ S/m}$ ;  $\varepsilon_r = 38$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

#### DASY52 Configuration:

Report No.: DRRFCC1503-0031(1)

Probe: ES3DV3 - SN3205; ConvF(4.46, 4.46, 4.46); Calibrated: 30.12.2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.04.2014

Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

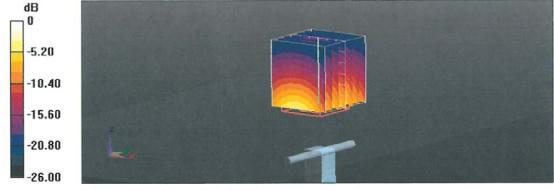
# Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 102.6 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 31.4 W/kg

SAR(1 g) = 14.7 W/kg; SAR(10 g) = 6.54 W/kg

Maximum value of SAR (measured) = 19.2 W/kg

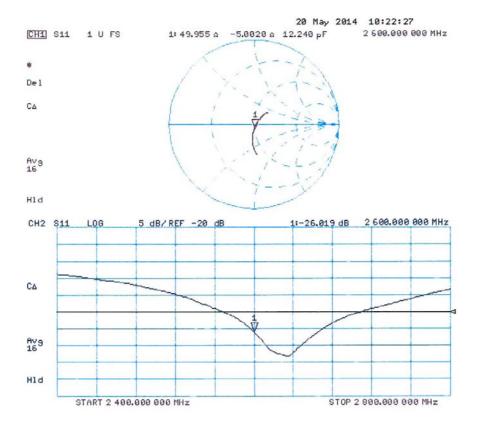


0 dB = 19.2 W/kg = 12.83 dBW/kg

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## Impedance Measurement Plot for Head TSL



Certificate No: D2600V2-1016\_May14

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#### **DASY5 Validation Report for Body TSL**

Date: 20.05.2014

Test Laboratory: SPEAG, Zurich, Switzerland

#### DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN: 1016

Communication System: UID 0 - CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz;  $\sigma = 2.21 \text{ S/m}$ ;  $\varepsilon_r = 50.3$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

#### DASY52 Configuration:

Report No.: DRRFCC1503-0031(1)

Probe: ES3DV3 - SN3205; ConvF(4.24, 4.24, 4.24); Calibrated: 30.12.2013;

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE4 Sn601; Calibrated: 30.04.2014

Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002

DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

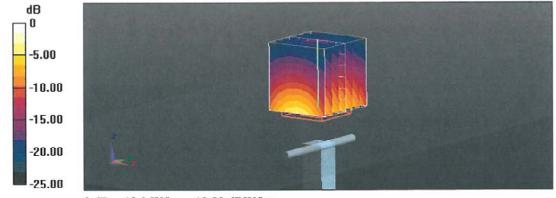
# Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 96.71 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 31.2 W/kg

SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.36 W/kg

Maximum value of SAR (measured) = 19.2 W/kg

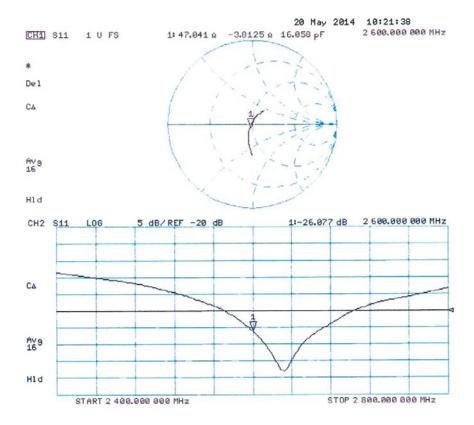


0 dB = 19.2 W/kg = 12.83 dBW/kg

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## Impedance Measurement Plot for Body TSL



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# **Attachment 3. – SAR SYSTEM VALIDATION**

#### **SAR System Validation**

Per FCC KDB 865664 D02v01r01, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB 865664 D01v01r03 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

**Table Attachment 3.1 SAR System Validation Summary** 

SAR	Freq.		Probe	Probe Probe	Probe CAL.		robe Probe CAL.		PERM.	COND.		CW Validation	n	М	OD. Validatio	on
System	[MHz]	Date	SN	Туре		oint	(ɛr)	(σ)	Sensi- tivity	Probe Linearity	Probe Isortopy	MOD. Type	Duty Factor	PAR		
А	835	2014-06-02	3327	EX3DV4	835	Head	41.513	0.915	PASS	PASS	PASS	GMSK	PASS	N/A		
А	1800	2014-06-06	3866	EX3DV4	1800	Head	41.223	1.385	PASS	PASS	PASS	N/A	N/A	N/A		
А	1900	2014-06-03	3866/ 3327	EX3DV4	1900	Head	41.103	1.382	PASS	PASS	PASS	GMSK	PASS	N/A		
А	2450	2014-06-04	3327	EX3DV4	2450	Head	37.912	1.769	PASS	PASS	PASS	OFDM	N/A	PASS		
А	2600	2014-06-07	3866	EX3DV4	2600	Head	37.684	1.988	PASS	PASS	PASS	N/A	N/A	N/A		
А	5200	2014-06-05	3327	EX3DV4	5200	Head	35.432	4.546	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5300	2014-06-05	3327	EX3DV4	5300	Head	35.391	4.797	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5500	2014-06-05	3327	EX3DV4	5500	Head	36.539	5.108	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5600	2014-06-05	3327	EX3DV4	5600	Head	36.355	5.230	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5800	2014-06-05	3327	EX3DV4	5800	Head	35.992	5.463	PASS	PASS	PASS	OFDM	N/A	PASS		
А	835	2014-06-09	3327	EX3DV4	835	Body	55.633	0.997	PASS	PASS	PASS	GMSK	PASS	N/A		
А	1800	2014-06-13	3866	EX3DV4	1800	Body	54.912	1.481	PASS	PASS	PASS	N/A	N/A	N/A		
А	1900	2014-06-10	3866/ 3327	EX3DV4	1900	Body	54.833	1.491	PASS	PASS	PASS	GMSK	PASS	N/A		
А	2450	2014-06-11	3327	EX3DV4	2450	Body	54.086	1.961	PASS	PASS	PASS	OFDM	N/A	PASS		
А	2600	2014-06-14	3866	EX3DV4	2600	Body	53.504	2.108	PASS	PASS	PASS	N/A	N/A	N/A		
А	5200	2014-06-12	3327	EX3DV4	5200	Body	47.391	5.388	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5300	2014-06-12	3327	EX3DV4	5300	Body	48.081	5.512	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5500	2014-06-12	3327	EX3DV4	5500	Body	47.684	5.793	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5600	2014-06-12	3327	EX3DV4	5600	Body	46.555	5.948	PASS	PASS	PASS	OFDM	N/A	PASS		
А	5800	2014-06-12	3327	EX3DV4	5800	Body	47.297	6.011	PASS	PASS	PASS	OFDM	N/A	PASS		

NOTE: While the probes have been calibrated for both a CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r03 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to KDB 865664.