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## **Measurement Conditions**

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

DAST System configuration, as far as	That given on page 1:	
DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution dx, dy, dz = 5 mm		

**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	40.0 ± 6 %	1.82 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C		

### **SAR** result with Head TSL

IN ICSUIT WITH FICUA FOL		
SAR averaged over 1 $cm^3$ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.2 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.8 W/kg ± 18.8 % ( <i>k</i> =2)
SAR averaged over 10 $$ $cm^3$ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	6.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.5 W/kg ± 18.7 % ( <i>k</i> =2)

Certificate No: 24J02Z000099 Page 3 of 6





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# Appendix (Additional assessments outside the scope of CNAS L0570)

#### **Antenna Parameters with Head TSL**

Impedance, transformed to feed point	52.9Ω+ 3.41jΩ
Return Loss	- 27.3dB

## **General Antenna Parameters and Design**

Electrical Delay (one direction)	1.067 ns
Electrical Delay (one direction)	1.007 118

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

## **Additional EUT Data**

Manufactured by	SPEAG

Certificate No: 24J02Z000099 Page 4 of 6





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

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 933

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

Medium parameters used: f = 2450 MHz;  $\sigma = 1.817 \text{ S/m}$ ;  $\varepsilon_r = 39.96$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

**DASY5** Configuration:

- Probe: EX3DV4 SN3846; ConvF(6.8, 7.06, 7.55) @ 2450 MHz;
  Calibrated: 2023-05-31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2024-01-03
- Phantom: MFP\_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

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

Reference Value = 100.0 V/m; Power Drift = -0.07 dB

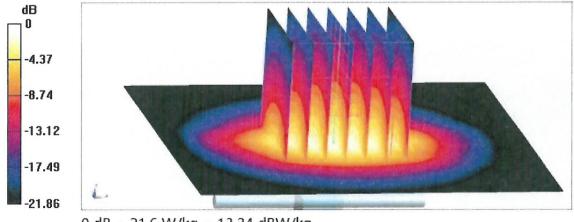
Peak SAR (extrapolated) = 26.3 W/kg

SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.13 W/kg

Smallest distance from peaks to all points 3 dB below = 8.9 mm

Ratio of SAR at M2 to SAR at M1 = 50.8%

Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 21.6 W/kg = 13.34 dBW/kg

Certificate No: 24J02Z000099 Page 5 of 6