



In Collaboration with

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CALIBRATION LABORATORY

Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China  
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## DASY5 Validation Report for Body TSL

Date: 12.21.2020

Test Laboratory: CTTL, Beijing, China

**DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1203**

Communication System: CW; Frequency: 5250 MHz, Frequency: 5600 MHz,  
Frequency: 5750 MHz,

Medium parameters used:  $f = 5250$  MHz;  $\sigma = 5.368$  S/m;  $\epsilon_r = 48.82$ ;  $\rho = 1000$  kg/m<sup>3</sup>, Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.846$  S/m;  $\epsilon_r = 48.15$ ;  $\rho = 1000$  kg/m<sup>3</sup>, Medium parameters used:  $f = 5750$  MHz;  $\sigma = 6.077$  S/m;  $\epsilon_r = 47.81$ ;  $\rho = 1000$  kg/m<sup>3</sup>,

Phantom section: Left Section

### DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(4.7, 4.7, 4.7) @ 5250 MHz; ConvF(4.23, 4.23, 4.23) @ 5600 MHz; ConvF(4.36, 4.36, 4.36) @ 5750 MHz; Calibrated: 2020-01-30,
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn771; Calibrated: 2020-02-10
- Phantom: MFP\_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

### Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan,

**dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.50 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 26.5 W/kg

**SAR(1 g) = 7.2 W/kg; SAR(10 g) = 2.06 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 67.7%

Maximum value of SAR (measured) = 16.4 W/kg

### Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan,

**dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 65.82 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 31.0 W/kg

**SAR(1 g) = 7.69 W/kg; SAR(10 g) = 2.2 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.4 mm

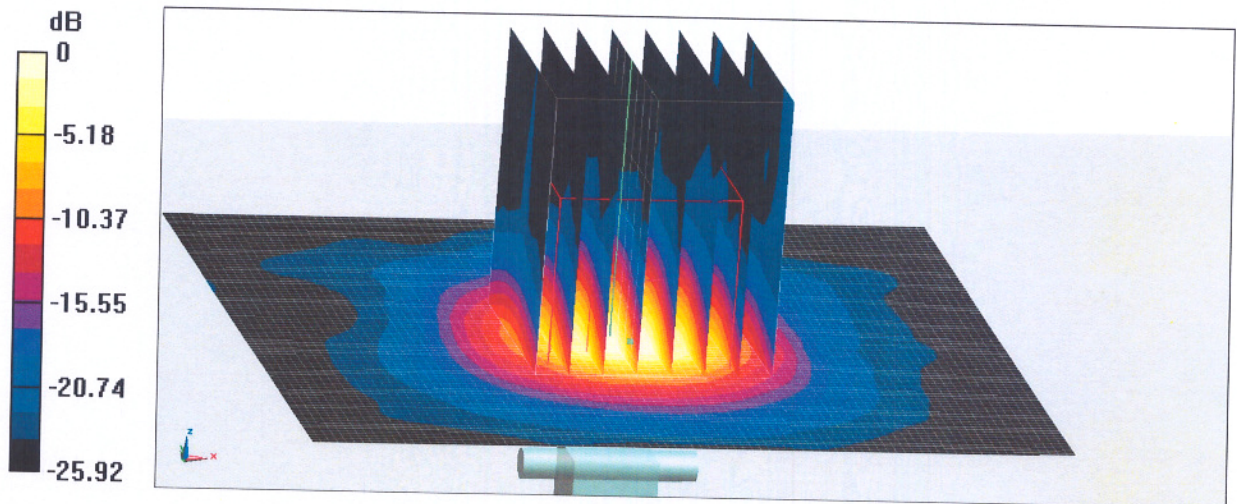
Ratio of SAR at M2 to SAR at M1 = 64.7%

Maximum value of SAR (measured) = 18.8 W/kg



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**Dipole Calibration /Pin=100mW, d=10mm, f=5750 MHz/Zoom Scan,**  
**dist=1.4mm (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 63.28 V/m; Power Drift = -0.08 dB  
Peak SAR (extrapolated) = 30.5 W/kg  
**SAR(1 g) = 7.26 W/kg; SAR(10 g) = 2.06 W/kg**  
Smallest distance from peaks to all points 3 dB below = 7.2 mm  
Ratio of SAR at M2 to SAR at M1 = 63.4%  
Maximum value of SAR (measured) = 18.0 W/kg

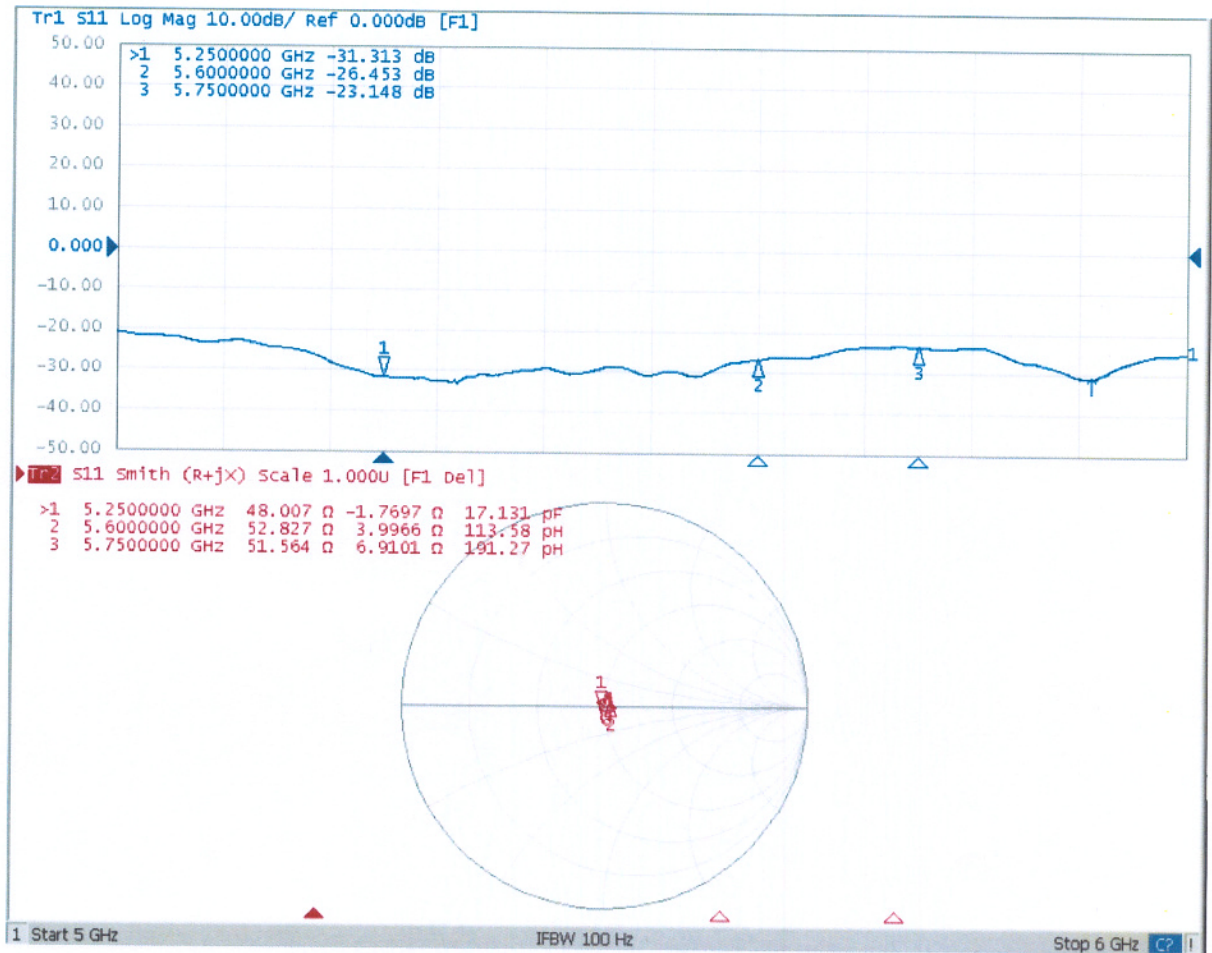


0 dB = 18.0 W/kg = 12.55 dBW/kg



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### Impedance Measurement Plot for Body TSL





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Client : **Auden**

Certificate No: **Z21-60256**

## CALIBRATION CERTIFICATE

Object: **DAE4 - SN: 905**

Calibration Procedure(s): **FF-Z11-002-01**  
Calibration Procedure for the Data Acquisition Electronics (DAEx)

Calibration date: **June 22, 2021**

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
Process Calibrator 753	1971018	15-Jun-21 (CTTL, No.J21X04465)	Jun-22

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: June 24, 2021

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



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### Glossary:

DAE data acquisition electronics  
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

### Methods Applied and Interpretation of Parameters:

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The report provide only calibration results for DAE, it does not contain other performance test results.