

Appendix E. – Dipole Calibration Data

Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **HCT**
Gyeonggi-do, Republic of Korea

Certificate No. **D2450V2-1049_Mar25**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 1049**

Calibration procedure(s) **QA CAL-05.v12**
Calibration Procedure for SAR Validation Sources between 0.7 - 3 GHz

Calibration date **March 13, 2025**

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 Cal
Power Sensor R&S NRP-33T	SN: 100987	28-Mar-24 (No. 217-04038)	Mar-25
Power Sensor R&S NRP18A	SN: 101859	06-Feb-25 (No. 4030A315006541)	Feb-26
Spectrum Analyzer R&S FSV40	SN: 101832	29-Jan-25 (No. 4030A315006558)	Jan-26
Mismatch; Short (S4188) Attenuator (S4423)	SN: 1152	28-Mar-24 (No. 217-04050)	Mar-25
OCP DAK-12	SN: 1016	24-Sept-24 (No. OCP-DAK12-1016_Sep24)	Sep-25
OCP DAK-3.5	SN: 1249	23-Sept-24 (No. OCP-DAK3.5-1249_Sep24)	Sep-25
Reference Probe EX30V4	SN: 7349	10-Jan-25 (No. EX3-7349_Jan25)	Jan-26
DAE4ip	SN: 1836	28-Oct-24 (No. DAE4ip-1836_Oct24)	Oct-25

Secondary Standards	ID	Check Date (in house)	Scheduled Check
ACAD Source Box	SN: 1000	28-May-24 (No. 675-ACAD_Source_Box-240528)	May-25
Signal Generator R&S SMB100A	SN: 182081	28-May-24 (No. 675-CAL16-S4588-240528)	May-25
Mismatch; SMA	SN: 1102	22-May-24 (No. 675-Mismatch_SMA-240522)	May-25

	Name	Function	Signature
Calibrated by	Krešimir Franjić	Laboratory Technician	
Approved by	Sven Kühn	Technical Manager	
Issued: March 14, 2025			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

결	담당자	확인자
재	73=12	
직위/성명	DC 1224	457 14164
일	2025.04.01	2025.04.01

Certificate No: D2450V2-1049_Mar25

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Calibration Laboratory of Schmid & Partner Engineering AG

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Accreditation No.: **SCS 0108**

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

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation

- DASY 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%.

D2450V2 - SN: 1049

March 13, 2025

Measurement Conditions

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

DASY Version	DASY8 Module SAR	16.4.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with spacer
Zoom Scan Resolution	dx, dy = 5mm, dz = 1.5mm	Graded Ratio = 1.5 mm (Z direction)
Frequency	2450MHz $\pm$ 1MHz	

HSL parameters at 2450 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal HSL parameters	22.0 °C	39.2	1.80 mho/m
Measured HSL parameters	(22.0 $\pm$ 0.2) °C	37.9 $\pm$ 6%	1.86 mho/m $\pm$ 6%
HSL temperature change during test	< 0.5 °C		

SAR result with HSL at 2450 MHz

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	24 dBm input power	13.2 W/kg
SAR for nominal HSL parameters	normalized to 1W	52.6 W/kg $\pm$ 17.0% (k = 2)

SAR averaged over 10 cm ³ (10 g) of HSL	Condition	
SAR for nominal HSL parameters	24 dBm input power	6.18 W/kg
SAR for nominal HSL parameters	normalized to 1W	24.6 W/kg $\pm$ 16.5% (k = 2)

D2450V2 - SN: 1049

March 13, 2025

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with HSL at 2450 MHz

Impedance	$49.5 \Omega + 8.6 j\Omega$
Return Loss	-21.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.16 ns
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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
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D2450V2 - SN: 1049

March 13, 2025

System Performance Check Report

Summary

Dipole	Frequency (MHz)	TSL	Power (dBm)
D2450V2 - SN1049	2450	HSL	24

Exposure Conditions

Phantom Section, TSL	Test Distance (mm)	Band	Group, UID	Frequency (MHz), Channel Number	Conversion Factor	TSL Conductivity (S/m)	TSL Permittivity
Hsl	10	CN, 0—		2450, 0	7.06	1.86	37.5

Hardware Setup

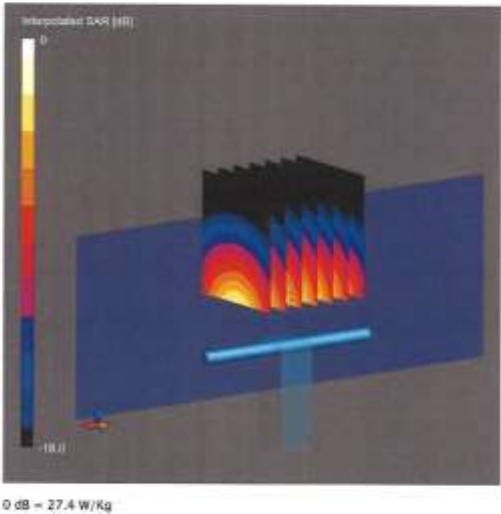
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
MTP VES Center	HSL, 2025-03-13	EX304N - SN7349, 2025-01-10	DAE4p SN1896, 2024-10-28

Scans Setup

	Zoom Scan
Grid Extent (mm)	30 x 30 x 30
Grid Steps (mm)	5.0 x 5.0 x 1.5
Sensor Surface (mm)	1.4
Graded Grid	Yes
Grading Ratio	1.5
NAA	N/A
Surface Detection	VMS + 6p
Scan Method	Measured

Measurement Results

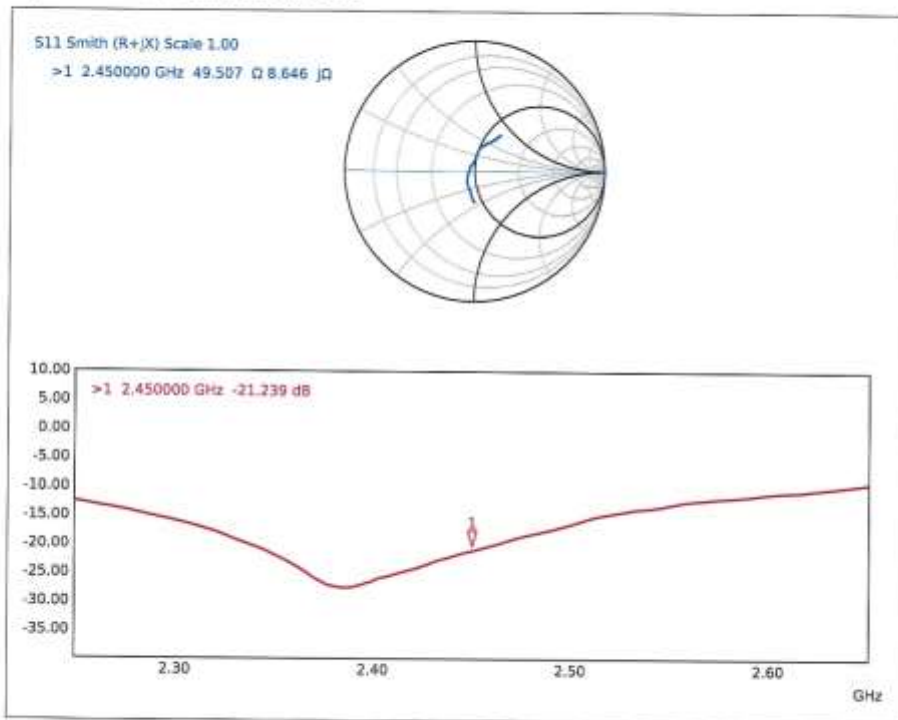
	Zoom Scan
Date	2025-03-13
psSAR1g (W/Kg)	13.3
psSAR10g (W/Kg)	6.18
Power Dens (dB)	8.02
Power Scaling	Disabled
Scaling Factor (dB)	
TSL Correction	Positive / Negative



D2450V2 - SN: 1049

March 13, 2025

Impedance Measurement Plot for HSL



Appendix: Transfer Calibration at Four Validation Locations on SAM Head[†]

Evaluation Condition

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L
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SAR result with SAM Head (Top $\cong$ C0)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	56.1 W/kg $\pm$ 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	26.1 W/kg $\pm$ 16.9 % (k=2)

SAR result with SAM Head (Mouth $\cong$ F90)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	57.2 W/kg $\pm$ 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	27.4 W/kg $\pm$ 16.9 % (k=2)

SAR result with SAM Head (Neck $\cong$ H0)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	53.9 W/kg $\pm$ 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	25.0 W/kg $\pm$ 16.9 % (k=2)

SAR result with SAM Head (Ear $\cong$ D90)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	34.5 W/kg $\pm$ 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	17.4 W/kg $\pm$ 16.9 % (k=2)

[†] Additional assessments outside the current scope of SCS 0108

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Accreditation No.: **SCS 0108**

Client **HCT**
Gyeonggi-do, Republic of Korea

Certificate No. **D5GHzV2-1253_Sep25**

CALIBRATION CERTIFICATE

Object **D5GHzV2 - SN: 1253**

Calibration procedure(s) **QA CAL-22.v8**
Calibration Procedure for SAR Validation Sources between 3 - 10 GHz

Calibration date **September 26, 2025**

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 Cal
Power Sensor R&S NRP-33T	SN: 100967	30-Apr-25 (No. 1020-300791789)	Apr-26
Power Sensor R&S NRP18A	SN: 101859	05-Feb-25 (No. 4030A315009541)	Feb-26
Spectrum Analyzer R&S FSV40	SN: 101832	29-Jan-25 (No. 4030A315009658)	Jan-26
3.5mm mismatch combination	SN: 1152	24-Mar-25 (No. 217-04293)	Mar-26
OCP DAK-12	SN: 1016	16-Sept-25 (No. OCP-DAK12-1016_Sep25)	Sep-26
OCP DAK-3.5	SN: 1249	16-Sept-25 (No. OCP-DAK3.5-1249_Sep25)	Sep-26
Reference Probe EX3DV4	SN: 7349	10-Jan-25 (No. EX3-7349_Jan25)	Jan-26
DAE4ip	SN: 1836	04-Sep-25 (No. DAE4ip-1836_Sep25)	Sep-26

Secondary Standards	ID	Check Date (in house)	Scheduled Check
ACAD Setup 1	SN: 1000	27-May-25 (No. 675-ACAD_Source_Box-250527)	May-26
Signal Generator R&S SMB100A	SN: 182081	27-May-25 (No. 675-CAL16-S4588-250527)	May-26
Mismatch; SMA	SN: 1102	24-Apr-25 (No. 675-Mismatch_SMA-250424)	Apr-26
OCP DAK-12	SN: 1029	27-Feb-25 (No. OCP-DAK12-1029_Feb25)	Feb-26
OCP DAK-3.5	SN: 1336	09-Dec-24 (No. OCP-DAK3.5-1336_Dec24)	Dec-25

	Name	Function	Signature
Calibrated by	Krešimir Franjić	Laboratory Technician	
Approved by	Sven Kühn	Technical Manager	
Issued: September 29, 2025 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			

결	담당자	확인자
제	김지훈	
직위/성명	DL / 김지훈	DL / 김지훈
일 자	2025.10.17	2025.10.17

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Accreditation No.: SCS 0108

Glossary

TSL tissue simulating liquid
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- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation

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- *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%.

D5GHzV2 - SN: 1253

September 26, 2025

Measurement Conditions

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

DASY Version	DASY8 Module SAR	17.0.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with spacer
Zoom Scan Resolution	dx, dy = 4mm, dz = 1.4mm	Graded Ratio = 1.4 mm (Z direction)
Frequency	5250MHz $\pm$ 1MHz 5600MHz $\pm$ 1MHz 5750MHz $\pm$ 1MHz 5800MHz $\pm$ 1MHz	

HSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal HSL parameters	22.0 °C	35.9	4.71 mho/m
Measured HSL parameters	(22.0 $\pm$ 0.2)°C	36.4 $\pm$ 6%	4.62 mho/m $\pm$ 6%
HSL temperature change during test	< 0.5 °C		

SAR result with HSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	7.92 W/kg
SAR for nominal HSL parameters	normalized to 1W	79.2 W/kg $\pm$ 19.9% (k = 2)

SAR averaged over 10 cm ³ (10 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	2.26 W/kg
SAR for nominal HSL parameters	normalized to 1W	22.6 W/kg $\pm$ 19.5% (k = 2)

D5GHzV2 - SN: 1253

September 26, 2025

HSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal HSL parameters	22.0 °C	35.5	5.07 mho/m
Measured HSL parameters	(22.0 ±0.2)°C	35.8 ±6%	5.02 mho/m ±6%
HSL temperature change during test	< 0.5 °C		

SAR result with HSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	8.15 W/kg
SAR for nominal HSL parameters	normalized to 1W	81.5 W/kg ±19.9% (k = 2)

SAR averaged over 10 cm ³ (10 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	2.34 W/kg
SAR for nominal HSL parameters	normalized to 1W	23.4 W/kg ±19.5% (k = 2)

HSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal HSL parameters	22.0 °C	35.4	5.22 mho/m
Measured HSL parameters	(22.0 ±0.2)°C	35.6 ±6%	5.18 mho/m ±6%
HSL temperature change during test	< 0.5 °C		

SAR result with HSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	8.06 W/kg
SAR for nominal HSL parameters	normalized to 1W	80.6 W/kg ±19.9% (k = 2)

SAR averaged over 10 cm ³ (10 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	2.29 W/kg
SAR for nominal HSL parameters	normalized to 1W	22.9 W/kg ±19.5% (k = 2)

D5GHzV2 - SN: 1253

September 26, 2025

HSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal HSL parameters	22.0 °C	35.3	5.27 mho/m
Measured HSL parameters	(22.0 ±0.2)°C	35.5 ±6%	5.23 mho/m ±6%
HSL temperature change during test	< 0.5 °C		

SAR result with HSL at 5800 MHz

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	8.06 W/kg
SAR for nominal HSL parameters	normalized to 1W	80.6 W/kg ±19.9% (k = 2)

SAR averaged over 10 cm ³ (10 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	2.29 W/kg
SAR for nominal HSL parameters	normalized to 1W	22.9 W/kg ±19.5% (k = 2)

D5GHzV2 - SN: 1253

September 26, 2025

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with HSL at 5250 MHz

Impedance	50.4 Ω + 4.2 j Ω
Return Loss	-27.5 dB

Antenna Parameters with HSL at 5600 MHz

Impedance	56.3 Ω - 2.1 j Ω
Return Loss	-24.1 dB

Antenna Parameters with HSL at 5750 MHz

Impedance	56.7 Ω + 0.8 j Ω
Return Loss	-24.0 dB

Antenna Parameters with HSL at 5800 MHz

Impedance	54.3 Ω - 0.6 j Ω
Return Loss	-27.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.196 ns
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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

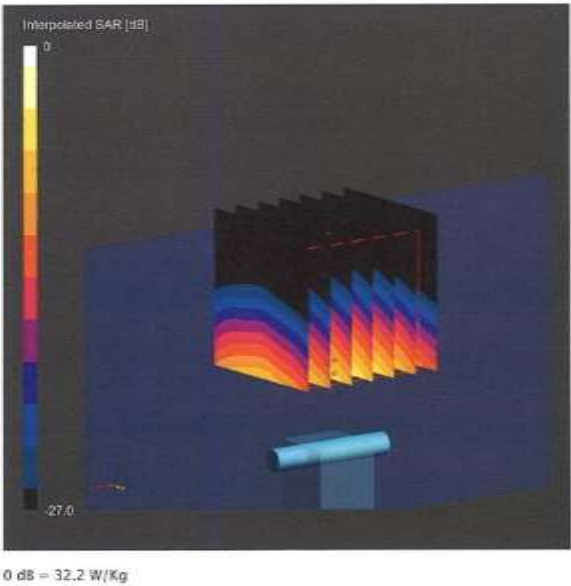
Manufactured by	SPEAG
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D5GHzV2 - SN: 1253

September 26, 2025

System Performance Check Report

Summary								
Dipole		Frequency [MHz]			TSL	Power [dBm]		
DSGHV2 - SN1253		5250			HSL	20		
Exposure Conditions								
Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	
Flat	10	CW, 0---		5250, 0	5.68	4.62	36.4	
Hardware Setup								
Phantom	TSL, Measured Date			Probe, Calibration Date		DAE, Calibration Date		
MFP V8.0 Center	HSL, 2025-09-26			EX3DV4 - SN7349, 2625-01-10		DAE4ip Sn1836, 2025-09-04		
Scans Setup				Measurement Results				
				Zoom Scan	Zoom Scan			
Grid Extents [mm]				22 x 22 x 22	Date			
Grid Steps [mm]				4.0 x 4.0 x 1.4	psSAR1g [W/Kg]			
Sensor Surface [mm]				1.4	psSAR10g [W/Kg]			
Graded Grid				Yes	Power Drift [dB]			
Grading Ratio				1.4	Power Scaling			
MSAA				N/A	Scaling Factor [dB]			
Surface Detection				VMS + 6p	TSL Correction			
Scan Method				Measured	Positive / Negative			

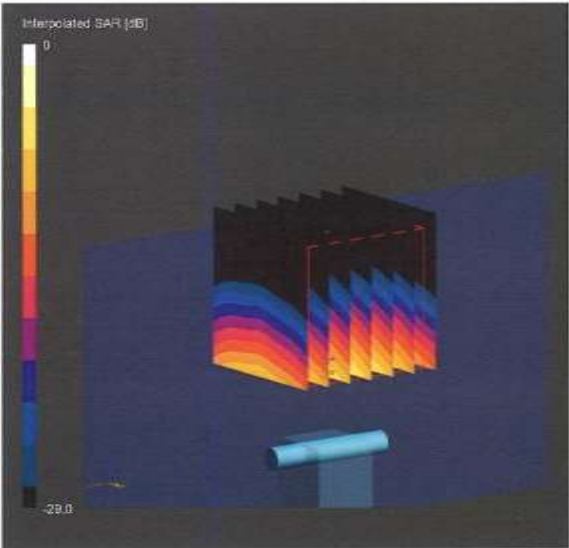


D5GHzV2 - SN: 1253

September 26, 2025

System Performance Check Report

Summary								
Dipole	Frequency [MHz]			TSL	Power [dBm]			
DSGH2V2 - SN1253	5600			HSL	20			
Exposure Conditions								
Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	
Flat	10		CW, 0---	5600, 0	5.21	5.02	35.8	
Hardware Setup								
Phantom	TSL, Measured Date		Probe, Calibration Date			DAE, Calibration Date		
MFP V8.0 Center	HSL, 2025-09-26		EX30V4 - SN7345, 2025-01-10			DAE4ip Sn1836, 2025-09-04		
Scans Setup				Measurement Results				
Zoom Scan				Zoom Scan				
Grid Extents [mm]				22 x 22 x 22				
Grid Steps [mm]				4.0 x 4.0 x 1.4				
Sensor Surface [mm]				1.4				
Graded Grid				Yes				
Grading Ratio				1.4				
MAIA				N/A				
Surface Detection				VMS + Bp				
Scan Method				Measured				
				Date				
				2025-09-26				
				psSAR1g [W/Kg]				
				8.15				
				psSAR10g [W/Kg]				
				2.34				
				Power Drift [dB]				
				-0.01				
				Power Scaling				
				Disabled				
				Scaling Factor [dB]				
				TSL Correction				
				Positive / Negative				

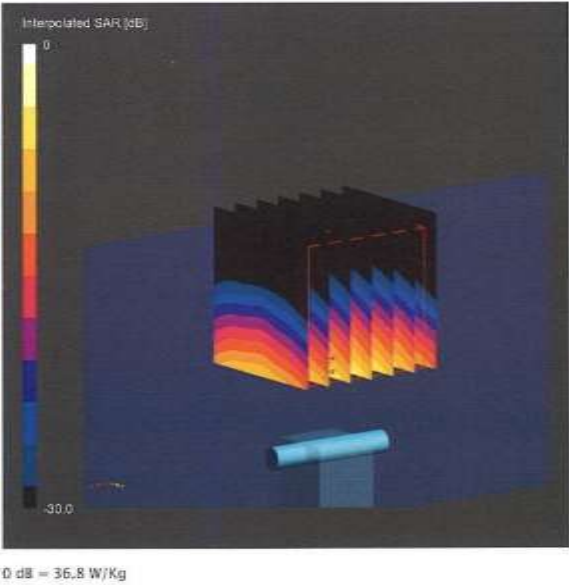


D5GHzV2 - SN: 1253

September 26, 2025

System Performance Check Report

Summary								
Dipole	Frequency [MHz]			TSL	Power [dBm]			
D5GHzV2 - SN1253	5750			HSL	20			
Exposure Conditions								
Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number		Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat	10	CW, 0---		5750, 0		5.38	5.18	35.6
Hardware Setup								
Phantom	TSL, Measured Date		Probe, Calibration Date			DAE, Calibration Date		
MFP V8.0 Center	HSL, 2025-09-26		EX3DV4 - SN0349, 2025-01-10			DAE4ip Sn1836, 2025-09-04		
Scans Setup				Measurement Results				
Zoom Scan				Zoom Scan				
Grid Extents [mm]				Date				
22 x 22 x 22				2025-09-26				
Grid Steps [mm]				psSAR1g [W/Kg]				
4.0 x 4.0 x 1.4				8.06				
Sensor Surface [mm]				psSAR10g [W/Kg]				
1.4				2.29				
Graded Grid				Power Drift [dB]				
Yes				-0.07				
Grading Ratio				Power Scaling				
1.4				Disabled				
MAJA				Scaling Factor [dB]				
N/A				TSL Correction				
Surface Detection				Positive / Negative				
VMS + 6p								
Scan Method				Measured				

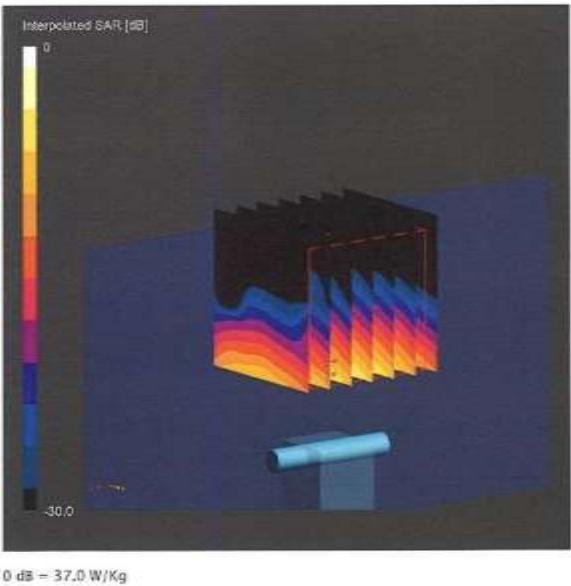


D5GHzV2 - SN: 1253

September 26, 2025

System Performance Check Report

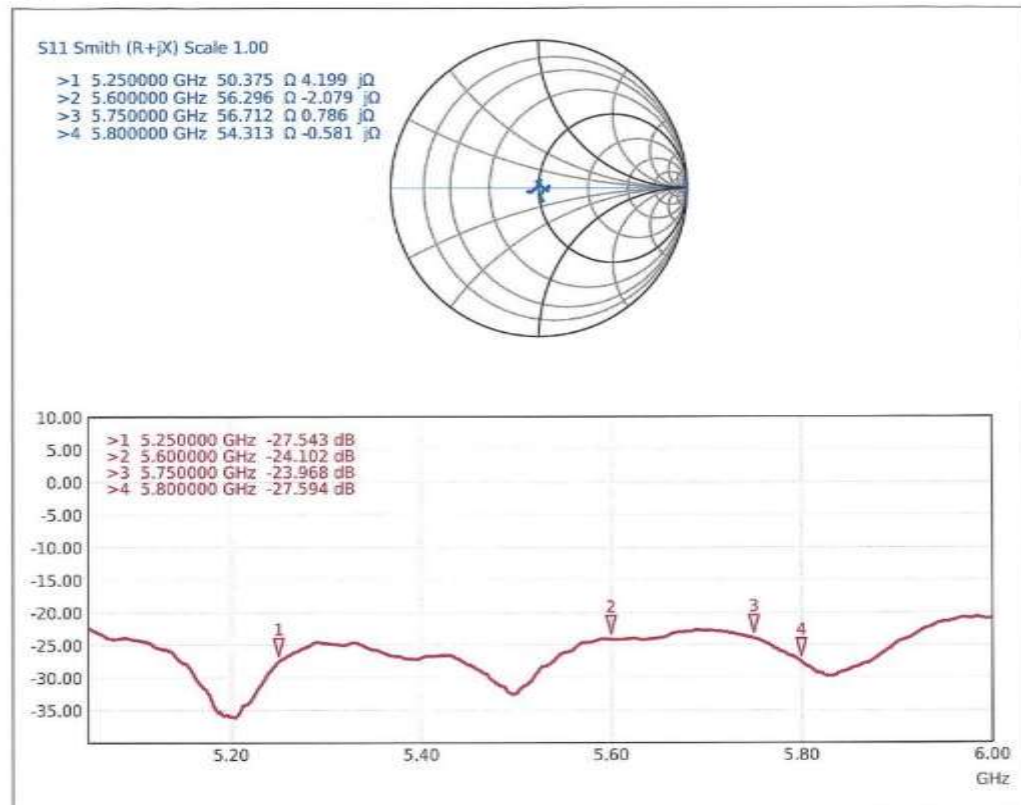
Summary								
Dipole	Frequency [MHz]			TSL	Power [dBm]			
D5GHzV2 - SN1253	5800			HSL	70			
Exposure Conditions								
Phantom Section, TSL	Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity	
Flat	10	CW, 0---	5800, 0		5.17	5.23	35.5	
Hardware Setup								
Phantom	TSL, Measured Date		Probe, Calibration Date			DAE, Calibration Date		
MFP V8.0 Center	HSL, 2025-09-26		EX3DV4 - SN7349, 2025-01-10			DAE4ip Sn1836, 2025-09-04		
Scans Setup				Measurement Results				
				Zoom Scan				
Grid Extents [mm]				22 x 22 x 22				
Grid Steps [mm]				4.0 x 4.0 x 1.4				
Sensor Surface [mm]				1.4				
Graded Grid				Yes				
Grading Ratio				1.4				
HANA				N/A				
Surface Detection				VMS + Ep				
Scan Method				Measured				
				Zoom Scan				
				Date				
				2025-09-26				
				psSAR1g [W/Kg]				
				8.66				
				psSAR10g [W/Kg]				
				2.29				
				Power Drift [dB]				
				0.00				
				Power Scaling				
				Disabled				
				Scaling Factor [dB]				
				TSL Correction				
				Positive / Negative				



D5GHzV2 - SN: 1253

September 26, 2025

Impedance Measurement Plot for HSL



Appendix: Transfer Calibration at Four Validation Locations on SAM Head¹

Evaluation Conditions (f=5250 MHz)

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L
---------	------------------	-----------------------------

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	84.8 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	24.3 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	84.0 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	23.4 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	82.1 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	23.4 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	53.1 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	17.9 W/kg ± 19.9 % (k=2)

¹ Additional assessments outside the current scope of SCS 0108

Appendix: Transfer Calibration at Four Validation Locations on SAM Head²

Evaluation Conditions (f=5800 MHz)

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L
---------	------------------	-----------------------------

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	83.8 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	23.8 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	90.6 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	25.8 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	80.8 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	22.8 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	normalized to 1W	57.6 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm ³ (10 g) of HSL	condition	
SAR for nominal HSL parameters	normalized to 1W	19.4 W/kg ± 19.9 % (k=2)

² Additional assessments outside the current scope of SCS 0108

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Accreditation No.: **SCS 0108**

Client **HCT**
 Gyeonggi-do, Republic of Korea

Certificate No. **D6.5GHzV2-1012_Sep25**

CALIBRATION CERTIFICATE

Object **D6.5GHzV2 - SN: 1012**

Calibration procedure(s) **QA CAL-22.v7**
Calibration Procedure for SAR Validation Sources between 3 - 10 GHz

Calibration date **September 10, 2025**

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 $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.
 Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Cal
Power Sensor R&S NRP-33T	SN: 100967	30-Apr-25 (No. 1020-300791789)	Apr-26
Power Sensor R&S NRP18A	SN: 101859	06-Feb-25 (No. 4030A315009541)	Feb-26
Spectrum Analyzer R&S FSV40	SN: 101832	29-Jan-25 (No. 4030A315009658)	Jan-26
3.5mm mismatch combination	SN: 1152	24-Mar-25 (No. 217-04293)	Mar-26
OCP DAK-12	SN: 1016	24-Sept-24 (No. OCP-DAK12-1016_Sep24)	Sep-25
OCP DAK-3.5	SN: 1249	23-Sept-24 (No. OCP-DAK3.5-1249_Sep24)	Sep-25
Reference Probe EX3DV4	SN: 7349	10-Jan-25 (No. EX3-7349_Jan25)	Jan-26
DAE4ip	SN: 1836	04-Sep-25 (No. DAE4ip-1836_Sep25)	Sep-26

Secondary Standards	ID	Check Date (in house)	Scheduled Check
ACAD Setup 1	SN: 1000	27-May-25 (No. 675-ACAD_Source_Box-250527)	May-26
Signal Generator R&S SMB100A	SN: 182081	27-May-25 (No. 675-CAL16-S4588-250527)	May-26
Mismatch; SMA	SN: 1102	24-Apr-25 (No. 675-Mismatch_SMA-250424)	Apr-26
OCP DAK-12	SN: 1029	27-Feb-25 (No. OCP-DAK12-1029_Feb25)	Feb-26
OCP DAK-3.5	SN: 1336	09-Dec-24 (No. OCP-DAK3.5-1336_Dec24)	Dec-25

	Name	Function	Signature
Calibrated by	Paulo Pina	Laboratory Technician	
Approved by	Sven Kühn	Technical Manager	

Issued: September 11, 2025

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결	담당자	화인자
재	김민준	
직위/성명	QC 7024	2025.09.25
일자	2025.09.25	2025.09.25

Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: **SCS 0108**

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

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation

- DASY 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%.

D6.5GHzV2 - SN: 1012

September 10, 2025

Measurement Conditions

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

DASY Version	DASY8 Module SAR	17.0.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	5 mm	with spacer
Zoom Scan Resolution	dx, dy = 3.4mm, dz = 1.4mm	Graded Ratio = 1.4 mm (Z direction)
Frequency	6500MHz $\pm$ 1MHz	

HSL parameters at 6500 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal HSL parameters	22.0 °C	34.5	6.07 mho/m
Measured HSL parameters	(22.0 $\pm$ 0.2) °C	35.0 $\pm$ 6%	6.22 mho/m $\pm$ 6%
HSL temperature change during test	< 0.5 °C		

SAR result with HSL at 6500 MHz

SAR averaged over 1 cm ³ (1 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	29.0 W/kg
SAR for nominal HSL parameters	normalized to 1W	290 W/kg $\pm$ 24.7% (k = 2)

SAR averaged over 8 cm ³ (8 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	6.54 W/kg
SAR for nominal HSL parameters	normalized to 1W	65.4 W/kg $\pm$ 24.4% (k = 2)

SAR averaged over 10 cm ³ (10 g) of HSL	Condition	
SAR for nominal HSL parameters	20 dBm input power	5.39 W/kg
SAR for nominal HSL parameters	normalized to 1W	53.9 W/kg $\pm$ 24.4% (k = 2)

D6.5GHzV2 - SN: 1012

September 10, 2025

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with HSL at 6500 MHz

Impedance	49.0 Ω - 7.2 j Ω
Return Loss	-22.7 dB

APD (Absorbed Power Density)

APD averaged over 1 cm ³	Condition	
APD measured	20 dBm input power	290 W/kg
APD measured	normalized to 1W	2900 W/kg $\pm$ 29.2% (k = 2)

APD averaged over 4 cm ³	Condition	
APD measured	20 dBm input power	131 W/kg
APD measured	normalized to 1W	1310 W/kg $\pm$ 28.9% (k = 2)

*The reported APD values have been derived using the psSAR1g and psSAR8g.

D6.5GHzV2 - SN: 1012

September 10, 2025

General Antenna Parameters and Design

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

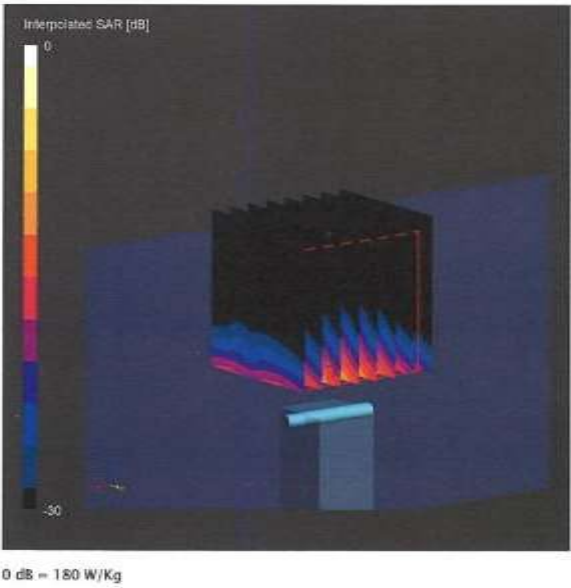
Manufactured by	SPEAG
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D6.5GHzV2 - SN: 1012

September 10, 2025

System Performance Check Report

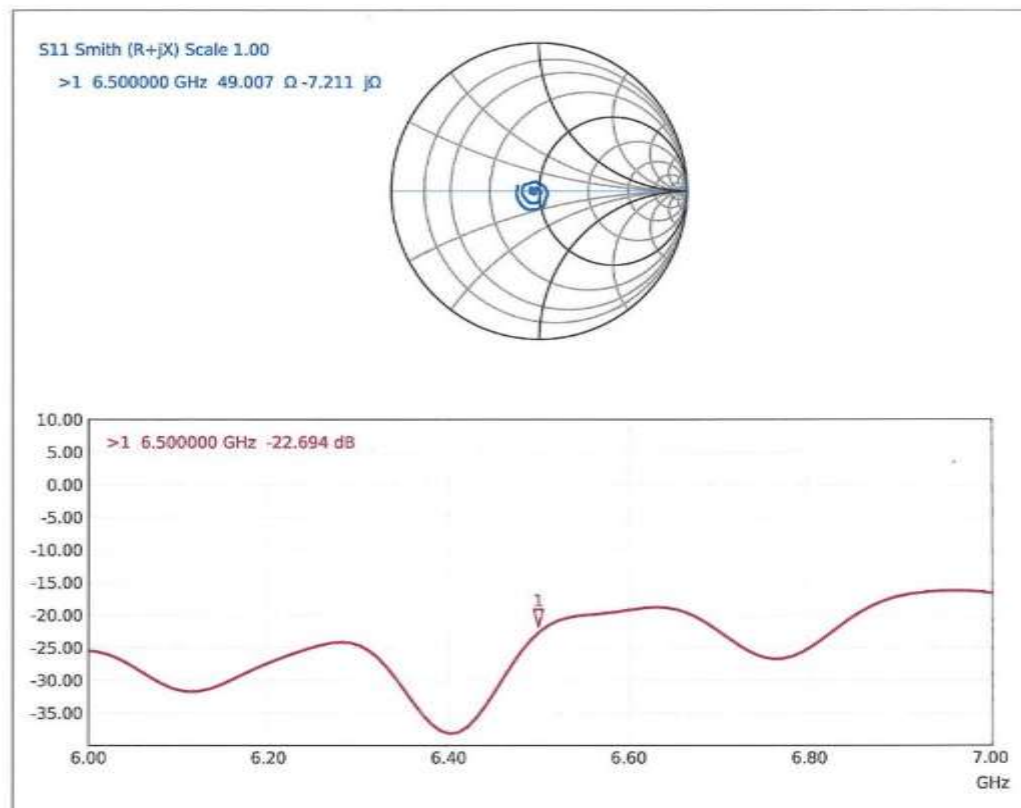
Summary								
Dipole		Frequency [MHz]			TSL		Power [dBm]	
D6.5GHzV2 - SN1012		6500			HSL		20	
Exposure Conditions								
Phantom Section, TSL		Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat		5		CW, 0—	6500, 0	5.49	6.22	35.0
Hardware Setup								
Phantom		TSL Measured Date			Probe, Calibration Date		DAE, Calibration Date	
MFP V8.0 Center		HSL, 2025-09-10			EX3DV4 - SN7349, 2025-01-10		DAE4tp Sn1836, 2025-09-04	
Scans Setup					Measurement Results			
Zoom Scan					Zoom Scan			
Grid Extents [mm]					22 x 22 x 22			
Grid Steps [mm]					3.4 x 3.4 x 1.4			
Sensor Surface [mm]					1.4			
Graded Grid					Yes			
Grading Ratio					1.4			
MAIA					N/A			
Surface Detection					VMS + Ep			
Scan Method					Measured			



D6.5GHzV2 - SN: 1012

September 10, 2025

Impedance Measurement Plot for HSL



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **HCT**
Gyeonggi-do, Republic of Korea

Certificate No. **5G-Veri10-1018_Apr25**

CALIBRATION CERTIFICATE

Object **5G Verification Source 10 GHz - SN: 1018**

Calibration procedure(s) **QA CAL-45.v5**
Calibration procedure for sources in air > 6 GHz

Calibration date **April 11, 2025**

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 $(22 \pm 3)^\circ\text{C}$ and humidity < 70%.
Calibration Equipment used (MATE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Cal
Reference Probe SPREAD EUMMWV3	SN: 9374	28-Aug-24 (No. Eummw_9374_Aug24)	Aug-25
DAE4ip	SN: 1602	06-Nov-24 (No. DAE4ip-1602_Nov24)	Nov-25

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Signal Generator R&S SMF100A	SN: 100184	26-Nov-24 (No. 5G-Source-Cal-IHC-202411)	Nov-25
Power Sensor R&S NRP18S-10	SN: 101258	26-Nov-24 (No. 5G-Source-Cal-IHC-202411)	Nov-25
Network Analyzer Keysight E6063A	SN: MY54504221	30-Sept-24 (No. 675-CAL18-54489-Sep24)	Sep-26

결	담당자	확인자
재	김지현	김지현
재/일	PL 14.11	PL 14.11
일	2025.05.03	2025.05.03

	Name	Function	Signature
Calibrated by	Joanna Llesha	Laboratory Technician	
Approved by	Sven Köhn	Technical Manager	

Issued: April 14, 2025

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Accreditation No.: **SCS 0108**

Glossary

CW Continuous wave

Calibration is Performed According to the Following Standards

- Internal procedure QA CAL-45, Calibration procedure for sources in air above 6 GHz.
- IEC/IEEE 63195-1, "Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz)", May 2022

Methods Applied and Interpretation of Parameters

- Coordinate System:** z-axis in the waveguide horn boresight, x-axis is in the direction of the E-field, y-axis normal to the others in the field scanning plane parallel to the horn flare and horn flange.
- Measurement Conditions:** (1) 10 GHz: The radiated power is the forward power to the horn antenna minus ohmic and mismatch loss. The forward power is measured prior and after the measurement with a power sensor. During the measurements, the horn is directly connected to the cable and the antenna ohmic and mismatch losses are determined by far-field measurements. (2) 30, 45, 60 and 90 GHz: The verification sources are switched on for at least 30 minutes. Absorbers are used around the probe cub and at the ceiling to minimize reflections.
- Horn Positioning:** The waveguide horn is mounted vertically on the flange of the waveguide source to allow vertical positioning of the EUmmW probe during the scan. The plane is parallel to the phantom surface. Probe distance is verified using mechanical gauges positioned on the flare of the horn.
- E-field distribution:** The E-field is measured in two x-y-planes (10mm, 10mm + $\lambda/4$) with a vectorial E-field probe. The E-field value stated as calibration value represents the E-field-maxima and the averaged (1cm² and 4cm²) power density values at 10mm in front of the horn.
- Field polarization:** Above the open horn, linear polarization of the field is expected. This is verified graphically in the field representation.

Calibrated Quantity

- Local peak E-field (V/m) and average of peak spatial components of the poynting vector (W/m²) averaged over the surface area of 1 cm² and 4cm² at the nominal operational frequency of the verification source. Both square and circular averaging results are listed.

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%.

5G Verification Source 10 GHz - SN: 1018

April 11, 2025

Measurement Conditions

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

DASY Version	DASY8 Module mmWave	V3.2
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
Number of measured planes	2 (10mm, 10mm + $\lambda/4$)	
Frequency	10.0 GHz $\pm$ 10 MHz	

Calibration Parameters, 10 GHz

Circular Averaging

Distance Horn Aperture to Measurement Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density Avg (psPDn+, psPDtot+, psPDmod+) (W/m ²)		Uncertainty (k = 2)
				1cm ²	4cm ²	
10 mm	93.3	155	1.27 dB	61.0	56.7	1.28 dB

Distance Horn Aperture to Measurement Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Power Density psPDn+, psPDtot+, psPDmod+ (W/m ²)		Uncertainty (k = 2)
				1cm ²	4cm ²	
10 mm	93.3	155	1.27 dB	60.7, 61.0, 61.3	56.4, 56.8, 57.0	1.28 dB

Square Averaging

Distance Horn Aperture to Measurement Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density Avg (psPDn+, psPDtot+, psPDmod+) (W/m ²)		Uncertainty (k = 2)
				1cm ²	4cm ²	
10 mm	93.3	155	1.27 dB	61.0	56.6	1.28 dB

Distance Horn Aperture to Measurement Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Power Density psPDn+, psPDtot+, psPDmod+ (W/m ²)		Uncertainty (k = 2)
				1cm ²	4cm ²	
10 mm	93.3	155	1.27 dB	60.7, 61.0, 61.3	56.3, 56.6, 56.9	1.28 dB

Max Power Density

Distance Horn Aperture to Measurement Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Max Power Density Sn, Stot, Stot (W/m ²)	Uncertainty (k = 2)
10 mm	93.3	155	1.27 dB	62.5, 63.1, 63.2	1.28 dB

¹ Assessed ohmic and mismatch loss plus numerical offset: 0.30 dB

5G Verification Source 10 GHz - SN: 1018

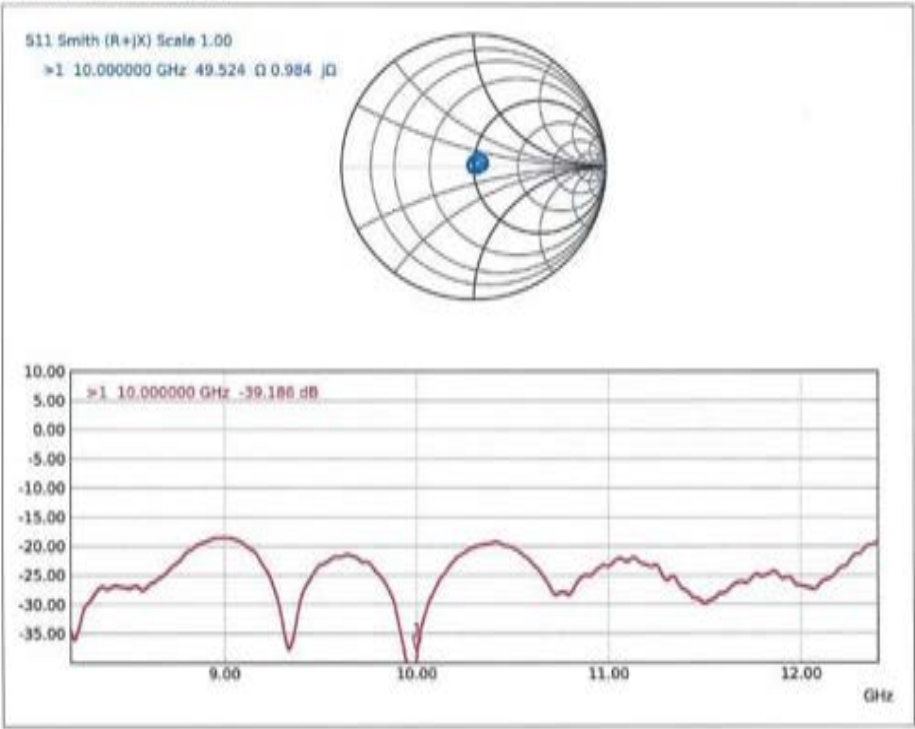
April 11, 2025

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters

Impedance, transformed to feed point	49.5 Ω + 1.0 j Ω
Return Loss	-39.2 dB

Impedance Measurement Plot



5G Verification Source 10 GHz - SN: 1018

April 11, 2025

DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000.0 (10000.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions (mm)	MSI	Sniff Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1018	-

Exposure Conditions

Function Section	Position, Test Distance (mm)	Band	Group, UID	Frequency (MHz), Channel Number	Conversion Factor
5G -	10.0 mm	Verification band	CW, 0 -	10000.0, 10000	1.0

Hardware Setup

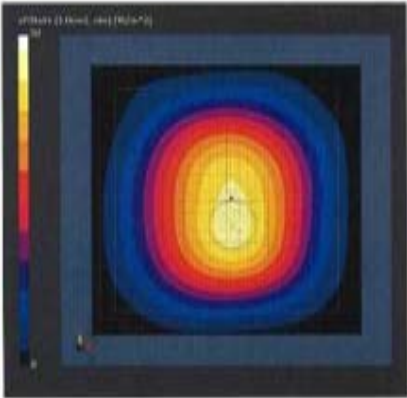
Function	Medium	Probe, Calibration Date	DAS, Calibration Date
remote Phantom -	Air -	GütemWV3 - SN0174_F1 - 51GHz, 2024-08-28	DACap - SN1602, 2024-11-06

Scans Setup

Sensor Surface (mm)	10.0
MMA	MMA not used

Measurement Results

Scan Type	5G Scan
Date	2025-04-11
Avg. Area (cm ²)	1.00
Avg. Type	Circular Averaging
µW/m ² (0W/m ²)	65.7
µW/m ² (0W/m ²)	61.0
µW/m ² (0W/m ²)	61.3
Max(0W/m ²)	62.5
Max(Std) (0W/m ²)	61.1
Max(Std) (0W/m ²)	63.2
S _{max} (W/m ²)	155
Power (dBm)	6.0



5G Verification Source 10 GHz - SN: 1018

April 11, 2025

DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000.0 (10000.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions (mm)	IMEI	IMEI Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1018	-

Exposure Conditions

Platform Section	Position, Test Distance (mm)	Band	Group, U/E	Frequency (MHz), Channel Number	Correction Factor
5G -	10.0 mm	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

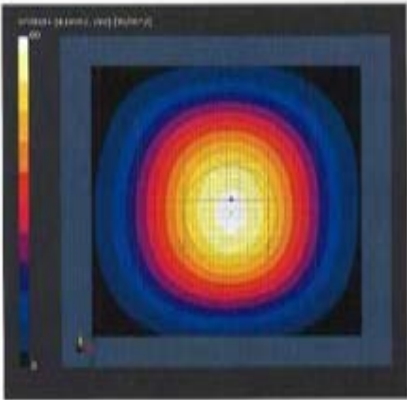
Platform	Medium	Probe, Calibration Date	DAS, Calibration Date
emWave Platform -	Air -	OpenMV3 - SN6374_F3 - 55GHz, 2024-08-28	DASig - SN1682, 2024-11-08

Scans Setup

Sensor Surface (mm)	19.0
MMA	MMA not used

Measurement Results

Scan Type	5G Scan
Date	2025-04-11
Avg. Area (m²)	4.00
Avg. Type	Circular Averaging
μPDI (W/m²)	56.4
μPDIrot (W/m²)	58.8
μPDIrad (W/m²)	57.8
Max(Sz) (W/m²)	62.1
Max(Sx) (W/m²)	61.1
Max(Sy) (W/m²)	63.2
E _{max} (V/m)	195
Power (dBm)	0.0



5G Verification Source 10 GHz - SN: 1018

April 11, 2025

DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 --, Channel 10000.0 (10000.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions (mm)	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 160.0 x 172.0	SN: 1018	-

Exposure Conditions

Phantom Section	Position, Test Distance (mm)	Band	Group, UID	Frequency (MHz), Channel Number	Correction Factor
5G --	10.0 mm	Validation Band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

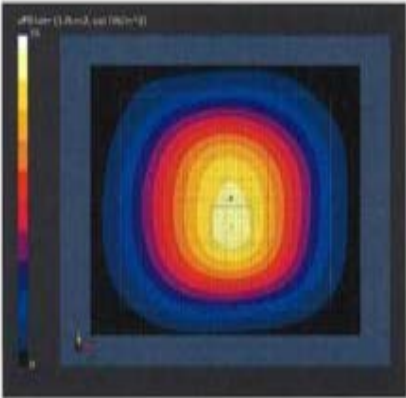
Phantom	Medium	Probe, Calibration Date	DAS, Calibration Date
miWave Phantom --	Air --	SIW00V3 - SN9374.F1-11GHz, 2024-08-28	DAE4ip - SN1602, 2024-11-06

Scans Setup

Sensor Surface (mm)	10.0
MAJA	MAJA not used

Measurement Results

Scan Type	3D Scan
Date	2025-04-11
Avg Area (cm²)	1.00
Avg. Type	Square Averaging
ptFOct+ (W/m²)	60.9
ptFOct+ (W/m²)	61.0
ptFOct+ (W/m²)	61.3
Max(Sin) (W/m²)	82.5
Max(Sin) (W/m²)	85.1
Max(Sin) (W/m²)	63.2
E _{max} (V/m)	155
Power Dens (dB)	0.0



5G Verification Source 10 GHz - SN: 1018

April 11, 2025

DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000.0 (10000.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions (mm)	MMI	DUT Type
5G Verification Source 10 GHz	105.6 x 180.6 x 122.0	SN: 1018	-

Exposure Conditions

Phantom Section	Position, Test Distance (mm)	Band	Group, UID	Frequency (MHz), Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW, 0=-	10000.0, 10000	1.0

Hardware Setup

Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
3mWave Phantom -	Air -	SIEMENS - SN374_F1 - 15GHz, 2024-08-28	DAE0p - SN1602, 2024-11-06

Scans Setup

Sensor Surface (mm)	10.0
MAIA	MAIA not used

Measurement Results

Scan Type	5G Scan
Date	2025-04-11
Avg. Area (m²)	4.00
Avg. Type	Square Averaging
gTDe (W/m²)	66.3
gTDet (W/m²)	35.8
gTDirStd (W/m²)	36.9
Max(Sr) (W/m²)	62.3
Max(Std) (W/m²)	68.1
Max(Std) (W/m²)	63.2
E _{max} (V/m)	155
Power Strb (dB)	0.0

