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Head TSL parameters at 5600MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.6 ± 6 %	5.00 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	—	—

SAR result with Head TSL at 5600MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.16 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.1 W/kg ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.30 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.8 W/kg ± 24.2 % (k=2)

Head TSL parameters at 5750MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.4 ± 6 %	5.16 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	—	—

SAR result with Head TSL at 5750MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.83 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	77.8 W/kg ± 24.4 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.19 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	21.7 W/kg ± 24.2 % (k=2)



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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 5250MHz

Impedance, transformed to feed point	47.3Ω- 7.19jΩ
Return Loss	- 22.1dB

Antenna Parameters with Head TSL at 5600MHz

Impedance, transformed to feed point	53.9Ω- 2.14jΩ
Return Loss	- 27.4dB

Antenna Parameters with Head TSL at 5750MHz

Impedance, transformed to feed point	53.2Ω- 5.17jΩ
Return Loss	- 24.6dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.111 ns
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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
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DASY5 Validation Report for Head TSL

Date: 2023-08-23

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1174

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

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.627$ S/m; $\epsilon_r = 35.17$; $\rho = 1000$ kg/m³

Medium parameters used: $f = 5600$ MHz; $\sigma = 5$ S/m; $\epsilon_r = 34.58$; $\rho = 1000$ kg/m³

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.162$ S/m; $\epsilon_r = 34.36$; $\rho = 1000$ kg/m³

Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(5.5, 5.5, 5.5) @ 5250 MHz; ConvF(5.01, 5.01, 5.01) @ 5600 MHz; ConvF(5.15, 5.15, 5.15) @ 5750 MHz; Calibrated: 2023-03-31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2023-01-11
- 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 /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 = 61.33 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 7.76 W/kg; SAR(10 g) = 2.2 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 65.5%

Maximum value of SAR (measured) = 18.1 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 = 62.15 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 35.2 W/kg

SAR(1 g) = 8.16 W/kg; SAR(10 g) = 2.3 W/kg

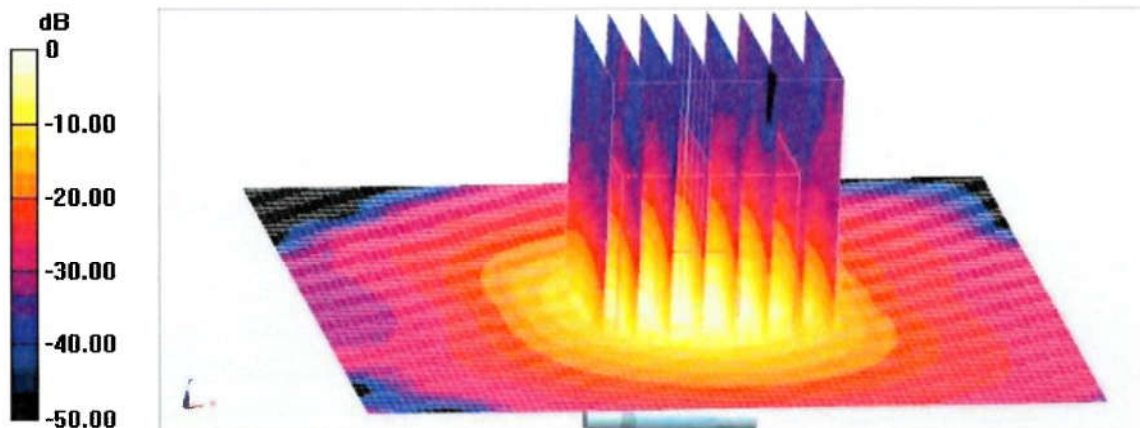
Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 62.9%

Maximum value of SAR (measured) = 19.6 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 = 59.71 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 35.1 W/kg
SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.19 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.4 mm
 Ratio of SAR at M2 to SAR at M1 = 61.7%
 Maximum value of SAR (measured) = 19.6 W/kg

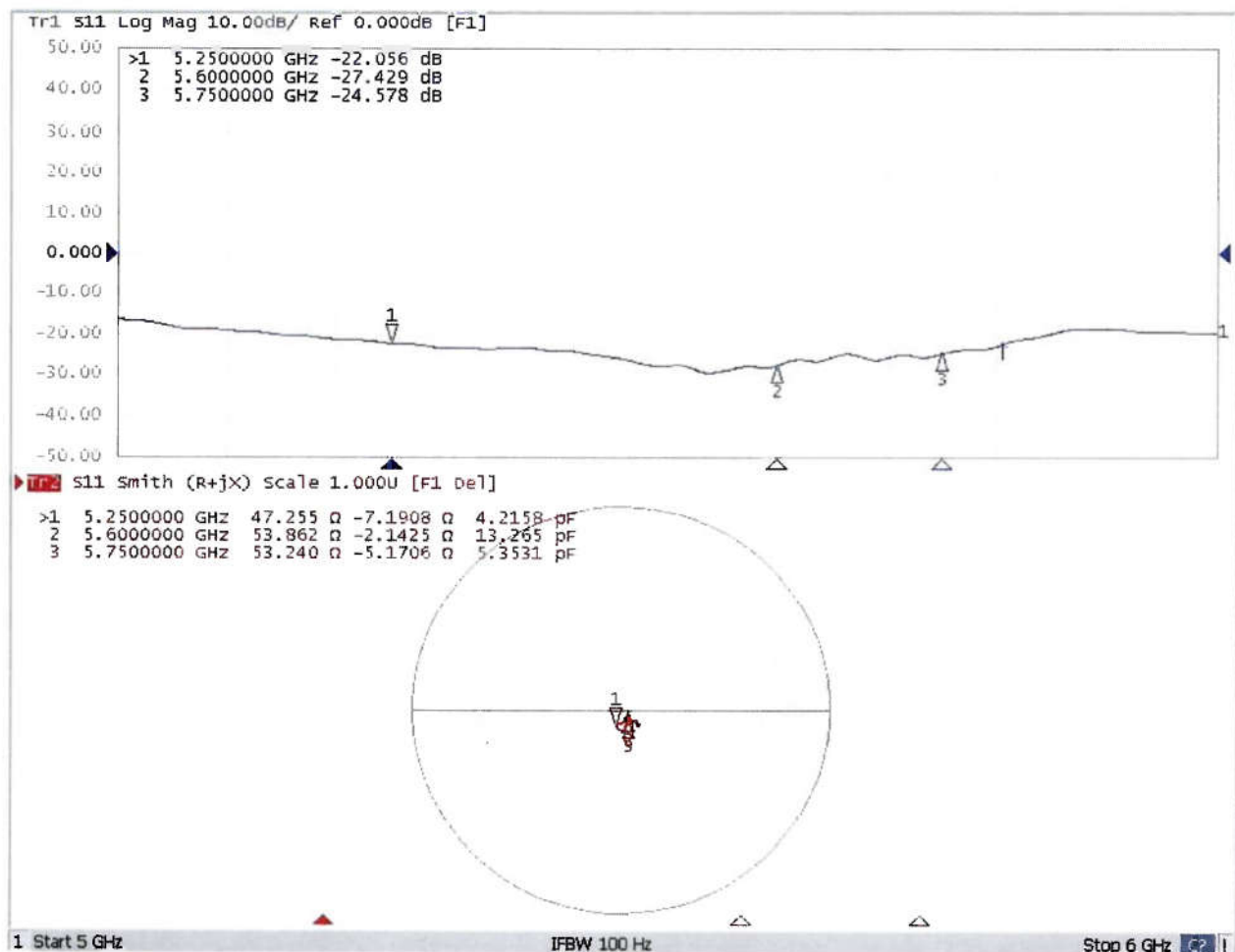


0 dB = 19.6 W/kg = 12.92 dBW/kg



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Impedance Measurement Plot for Head TSL



Client:

SGS

Suzhou

Certificate No: 25J02Z000661

CALIBRATION CERTIFICATE

Object

DAE4 - SN: 1245

Calibration Procedure(s)

FF-Z11-002-01

Calibration Procedure for the Data Acquisition Electronics
(DAEx)

Calibration date:

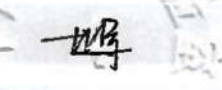
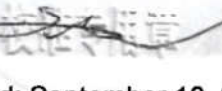
September 08, 2025

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)℃ 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	11-Jun-25 (CTTL, No.25J02X004977)	Jun-26

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

Issued: September 10, 2025

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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.



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DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1 μ V, full range = -100...+300 mV

Low Range: 1LSB = 61nV, full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	403.271 $\pm$ 0.15% (k=2)	403.323 $\pm$ 0.15% (k=2)	403.329 $\pm$ 0.15% (k=2)
Low Range	3.97277 $\pm$ 0.7% (k=2)	3.99531 $\pm$ 0.7% (k=2)	3.94495 $\pm$ 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	273° $\pm$ 1 °
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Client

SGS

Suzhou

Certificate No: 25J02Z000928

CALIBRATION CERTIFICATE

Object EX3DV4 - SN : 3923

Calibration Procedure(s) FF-Z11-0004-03
Calibration Procedures for Dosimetric E-field Probes

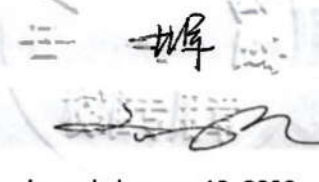
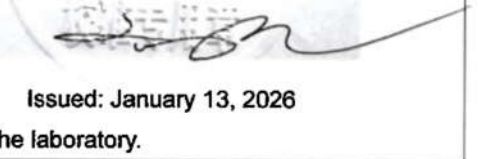
Calibration date: January 12, 2026

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 NRP2	106277	20-Oct-25(CTTL, No.25J02X100272)	Oct-26
Power sensor NRP8S	104291	20-Oct-25(CTTL, No.25J02X100272)	Oct-26
Power sensor NRP8S	104292	20-Oct-25(CTTL, No.25J02X100272)	Oct-26
Reference 10dBAttenuator	18N50W-10dB	22-Jan-25(CTTL, No.25J02X000465)	Jan-27
Reference 20dBAttenuator	18N50W-20dB	22-Jan-25(CTTL, No.25J02X000466)	Jan-27
Reference Probe EX3DV4	SN 7307	27-May-25(SPEAG, No.EX-7307_May25)	May-26
DAE4	SN 1525	12-Sep-25(SPEAG, No.DAE4-1525_Sep25)	Sep-26
DAE4	SN 771	22-Jan-25(SPEAG, No.DAE4-771_Jan25)	Jan-26
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	10-Jun-25(CTTL, No.25J02X004975)	Jun-26
SignalGenerator APSIN26G	181-33A6D0700-1959	27-Mar-25(CTTL, No.25J02X001962)	Mar-26
Network Analyzer E5071C	MY46110673	26-Nov-25(CTTL, No.25J02X102468)	Nov-26
Reference 10dBAttenuator	BT0520	15-May-25(CTTL, No.25J02X003069)	May-27
Reference 20dBAttenuator	BT0267	15-May-25(CTTL, No. 25J02X003070)	May-27
OCP DAKS-3.5	SN 0015	20-Oct-25(SPEAG, No. OCP-DAKS-0015_Oct25)	Oct-26

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

Issued: January 13, 2026

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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
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), $\theta=0$ is normal to probe axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- 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
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}:** Assessed for E-field polarization $\theta=0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,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.
- DCP_{x,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.
- PAR:** PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; VR_{x,y,z}; A,B,C** are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- 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 valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,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 ± 50 MHz to ± 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.
- Connector Angle:** The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).



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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3923

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm($\mu\text{V}/(\text{V/m})^2$) ^A	0.57	0.58	0.48	±10.0%
DCP(mV) ^B	102.3	106.0	104.7	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB/ μV	C	D dB	VR mV	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	185.8	±2.0%
		Y	0.0	0.0	1.0		194.2	
		Z	0.0	0.0	1.0		172.4	

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 Norm X, Y, Z do not affect the E^2 -field uncertainty inside TSL (see Page 4).

^B Numerical linearization parameter: uncertainty not required.

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3923

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz] ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Uct. (k=2)
750	41.9	0.89	10.54	10.54	10.54	0.14	1.23	±13%
835	41.5	0.90	10.09	10.09	10.09	0.14	1.28	±13%
1640	40.3	1.29	8.89	8.89	8.89	0.21	1.04	±13%
1750	40.1	1.37	8.78	8.78	8.78	0.26	0.96	±13%
1900	40.0	1.40	8.43	8.43	8.43	0.19	1.13	±13%
2100	39.8	1.49	8.41	8.41	8.41	0.17	1.21	±13%
2300	39.5	1.67	8.21	8.21	8.21	0.53	0.67	±13%
2450	39.2	1.80	7.95	7.95	7.95	0.52	0.70	±13%
2600	39.0	1.96	7.75	7.75	7.75	0.57	0.67	±13%
3300	38.2	2.71	7.31	7.31	7.31	0.45	0.87	±14%
3500	37.9	2.91	7.15	7.15	7.15	0.38	1.05	±14%
3700	37.7	3.12	6.95	6.95	6.95	0.38	1.09	±14%
3900	37.5	3.32	6.90	6.90	6.90	0.30	1.50	±14%
5250	35.9	4.71	5.57	5.57	5.57	0.50	1.30	±14%
5600	35.5	5.07	4.97	4.97	4.97	0.45	1.40	±14%
5750	35.4	5.22	5.10	5.10	5.10	0.50	1.30	±14%

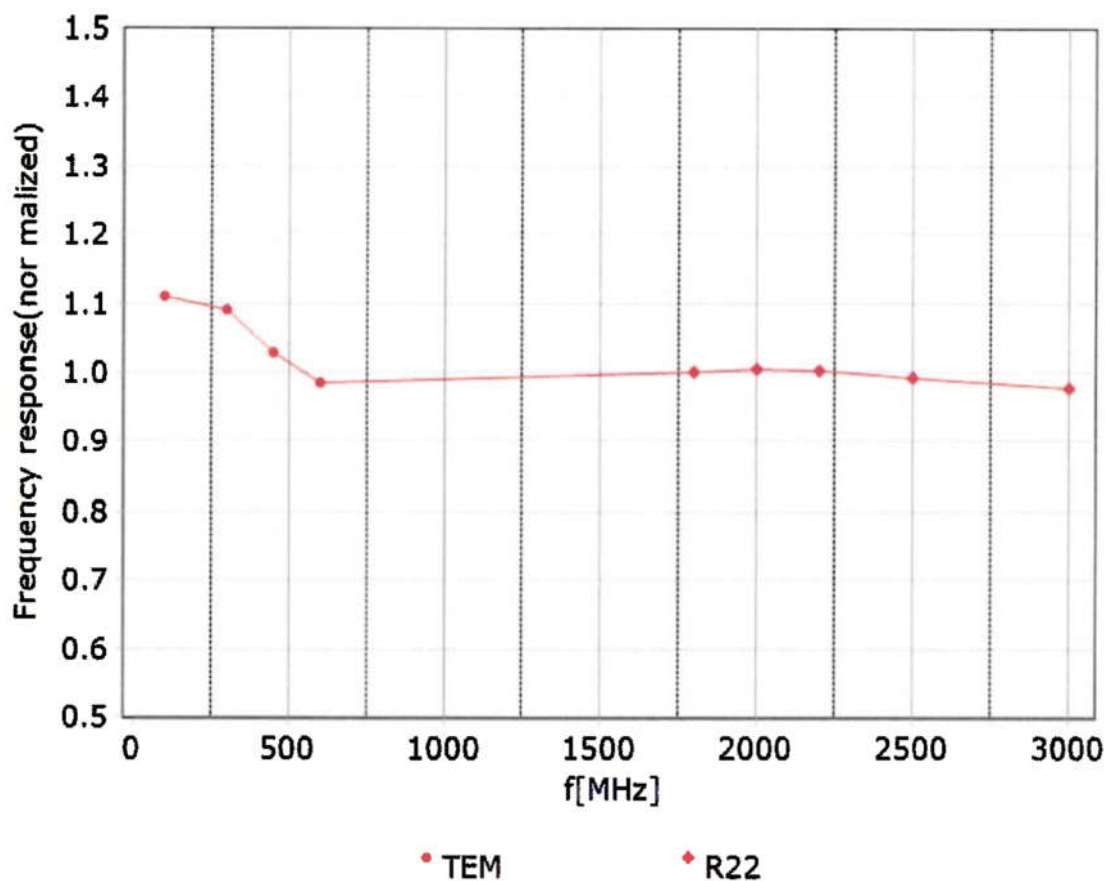
^C Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

^F At frequency up to 6 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: $\pm 7.4\%$ ($k=2$)

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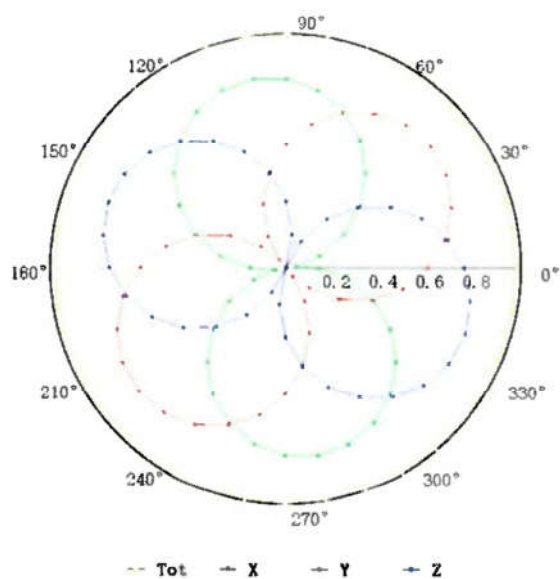
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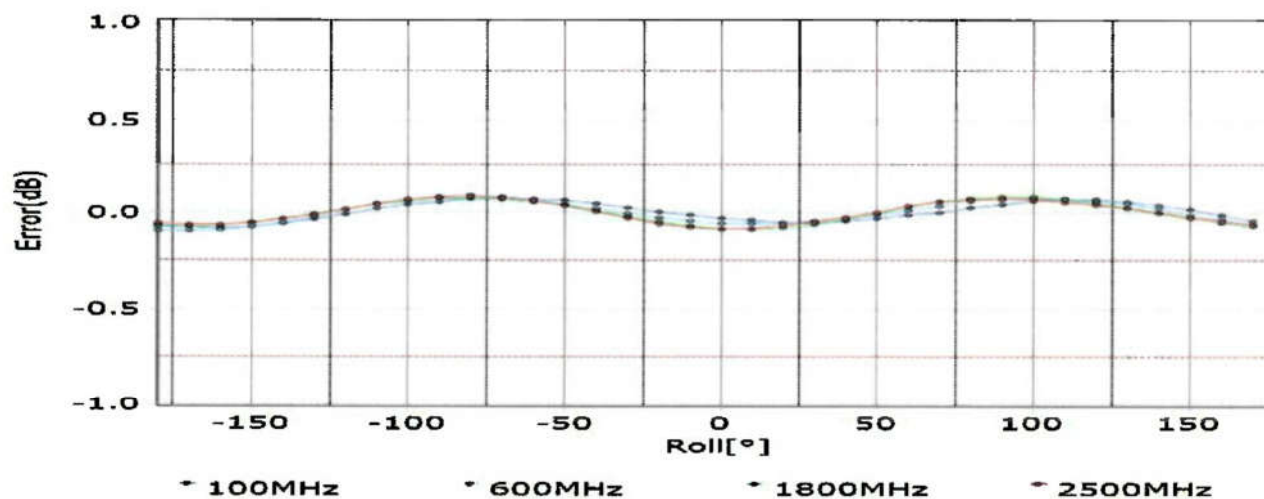
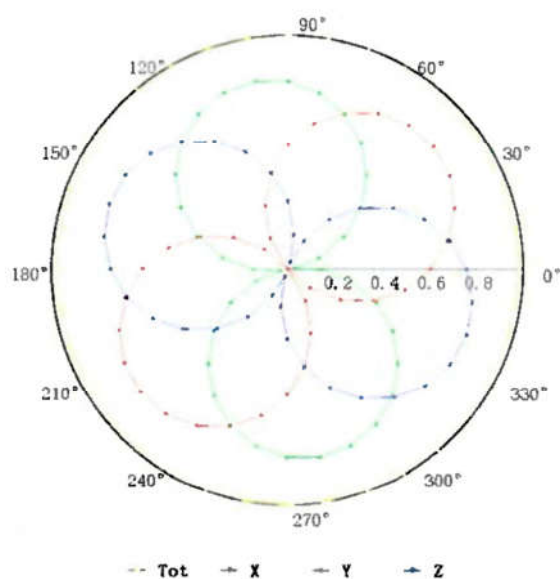
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Receiving Pattern (Φ), $\theta=0^\circ$

f=600 MHz, TEM



f=1800 MHz, R22



Uncertainty of Axial Isotropy Assessment: $\pm 1.2\%$ ($k=2$)

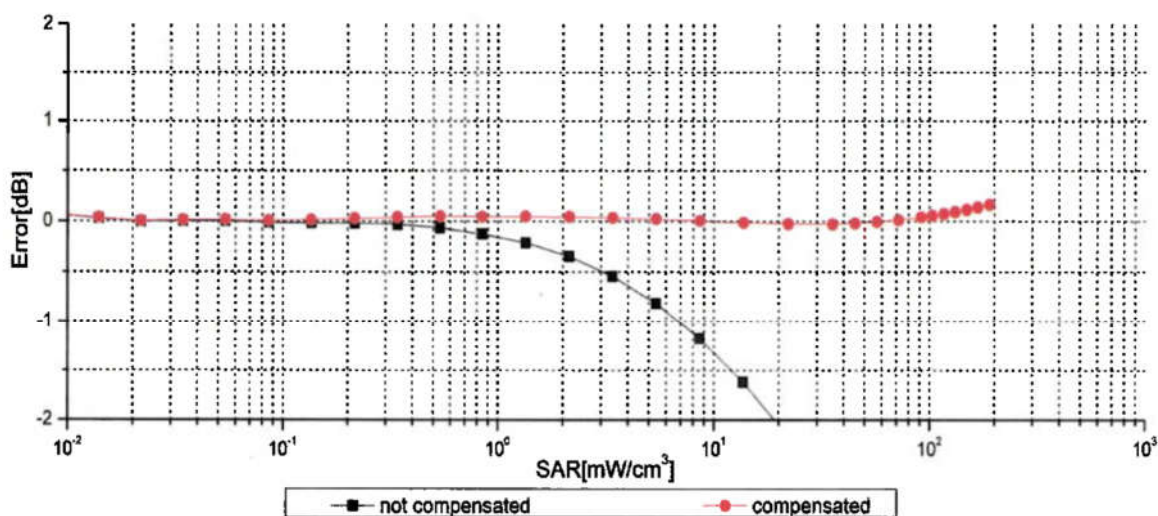
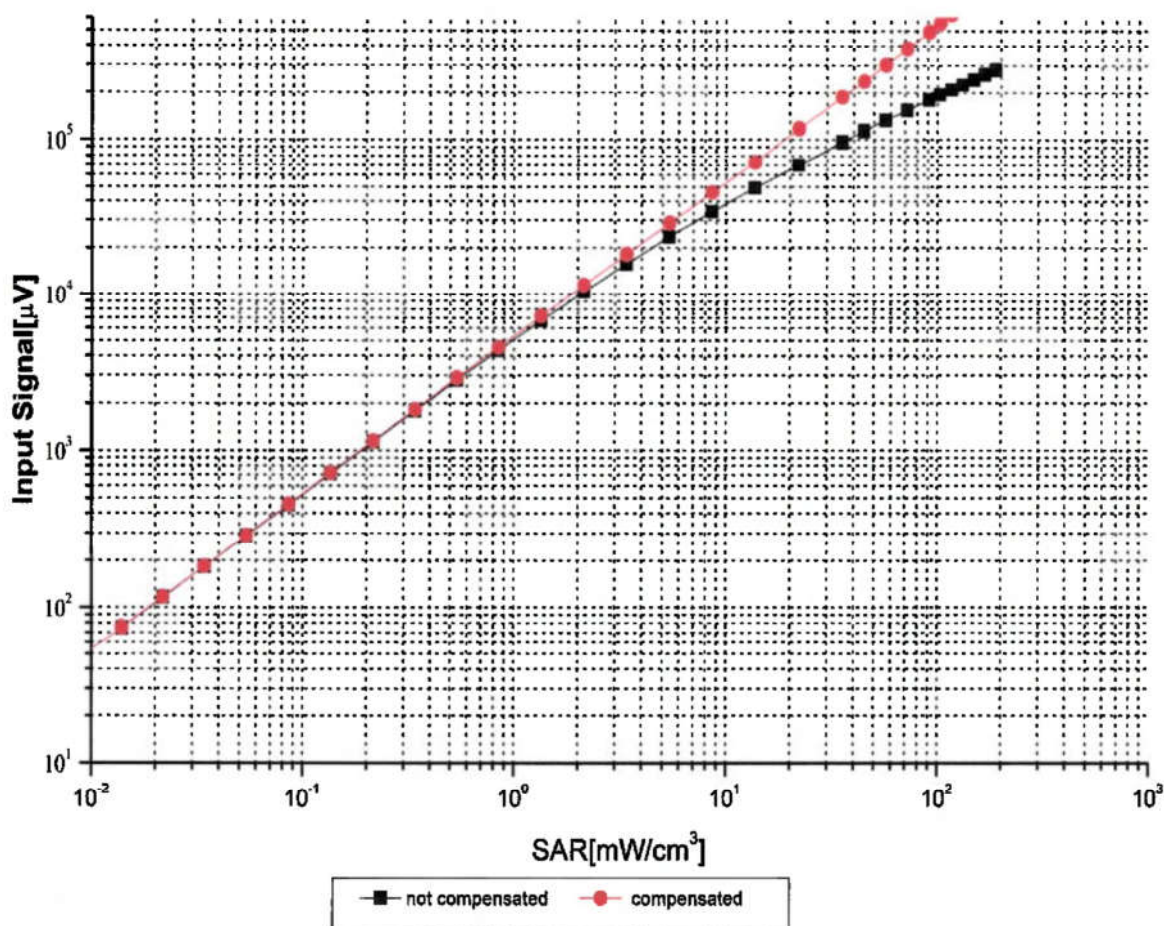
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Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f = 900 \text{ MHz}$)



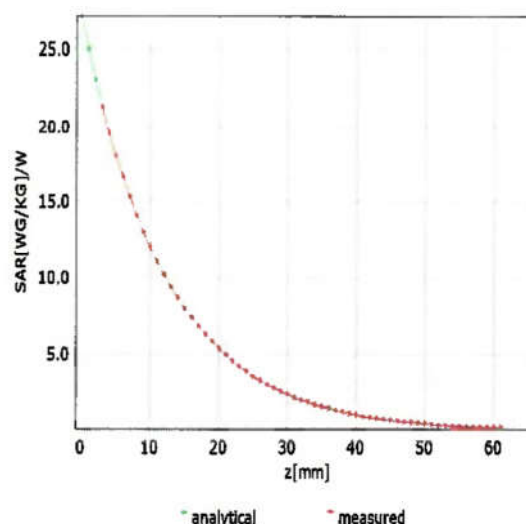
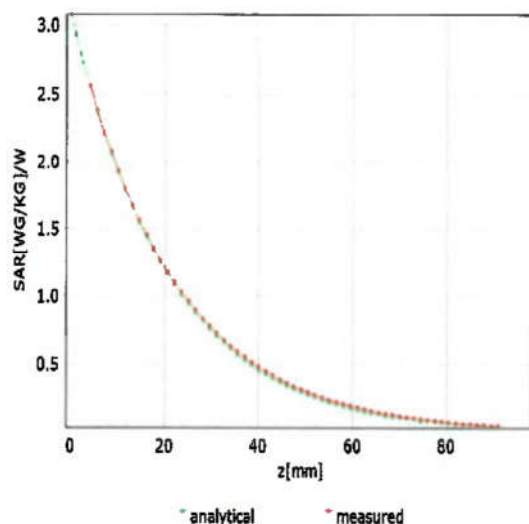
Uncertainty of Linearity Assessment: $\pm 0.9\%$ ($k=2$)

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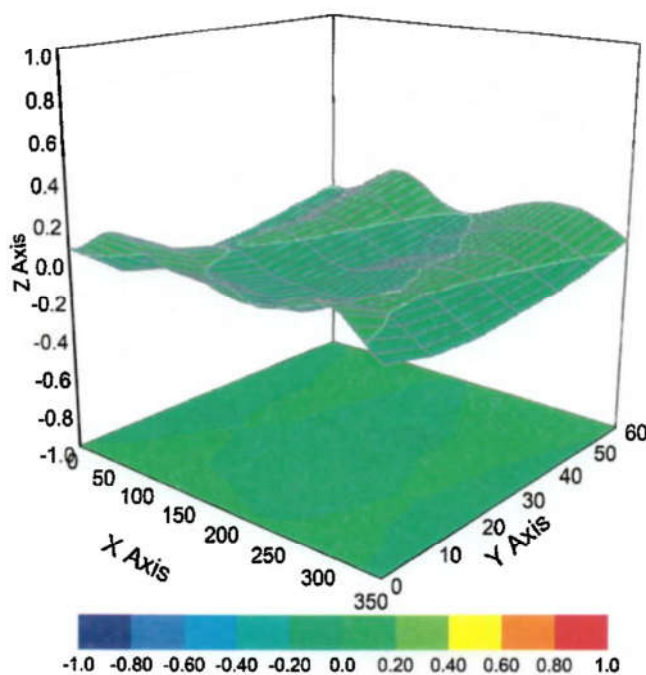
Conversion Factor Assessment

f=750 MHz,WGLS R9(H_convF)

f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: $\pm 3.2\%$ ($k=2$)



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CALIBRATION LABORATORY



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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3923

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	178.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

Dipole D750V3 SN 1214						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-04-01	-30.1	/	50.7	/	-3.08	/
2026-03-31	-29.8	1.00%	50.5	0.2	-3.28	0.2

Dipole D835V2 SN 4d161						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2023-08-25	-29.3	/	50.3	/	-3.44	/
2024-08-24	-29.1	0.68%	50.1	0.2	-3.59	0.15
2025-08-23	-29.2	0.34%	50.2	0.1	-3.52	0.08

Dipole D1750V2 SN 1105						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2023-11-03	-29.1	/	47.8	/	-2.61	/
2024-11-02	-28.9	0.69%	47.7	0.1	-2.71	0.1
2025-11-01	-28.5	2.06%	47.6	0.2	-2.88	0.27

Dipole D2300V2 SN1096						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-04-01	-26.1	/	46.6	/	-3.40	/
2026-03-31	-25.8	1.15%	47.5	0.9	-2.71	0.69

Dipole D2450V2 SN 922						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2023-08-28	-24.3	/	53.2	/	5.45	/
2024-08-27	-24.1	0.82%	52.9	0.3	5.23	0.22
2025-08-26	-24.2	0.41%	53	0.2	5.29	0.16

Dipole D2600V2 SN 1158						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-03-31	-23.8	/	46.9	/	5.43	/
2026-03-30	-23.5	1.26%	46.7	0.2	5.58	0.15

Dipole D3500V2 SN1133						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-04-02	-37.4	/	50.9	/	1.00	/
2026-03-31	-35.7	4.55%	49.8	1.1	-0.15	1.15

Dipole D3700V2 SN1108						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-04-01	-22.8	/	44.3	/	3.82	/
2026-03-31	-23.7	3.95%	41.5	2.8	3.85	0.03

Dipole D3900V2 SN1083						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-03-31	-21.9	/	44.0	/	-4.62	/
2026-03-31	-22.8	4.11%	42.8	1.2	-3.82	0.8

Dipole D4100V2 SN1083						
Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2025-03-31	-24.9	/	55.9	/	1.21	/
2026-03-31	-23.8	4.4%	55.7	0.2	2.38	1.17

Dipole D5GHzV2 SN 1174						
5250MHz Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2023-08-23	-22.1	/	47.3	/	-7.19	/
2024-08-22	-21.9	0.90%	47.1	0.2	-7.35	0.16
2025-08-21	-22	0.45%	47.2	0.1	-7.28	0.09
5600MHz Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2023-08-23	-27.4	/	53.9	/	-2.14	/
2024-08-22	-27.1	1.09%	53.7	0.2	-2.35	0.21
2025-08-21	-27.2	1.09%	53.8	0.1	-2.23	0.09
5750MHz Head Liquid						
Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$	Impedance imaginary ($j\Omega$)	$\Delta j\Omega$
2023-08-23	-24.6	/	53.2	/	-5.17	/
2024-08-22	-24.2	1.63%	52.9	0.3	-5.39	0.22
2025-08-21	-24.4	1.63%	53.1	0.1	-5.27	0.1

- End of the Appendix -