Measurement Conditions

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

DASY Version	cDASY6 Module mmWave	V2.4
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
XY Scan Resolution	dx, dy = 7.5 mm	
Number of measured planes	2 (10mm, 10mm + λ/4)	
Frequency	10 GHz ± 10 MHz	

Calibration Parameters, 10 GHz

Circular Averaging

Distance Horn Aperture to Measured 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)
				1 cm^2	**4** cm^2	
10 mm	86.1	**147**	1.27 dB	**54.4**	**51.2**	1.28 dB

Square Averaging

Distance Horn Aperture to Measured 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)
				1 cm^2	**4** cm^2	
10 mm	86.1	**147**	1.27 dB	**54.5**	**51.1**	1.28 dB

[1] Assessed ohmic and mismatch loss plus numerical offset: 0.55 dB

DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1005	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

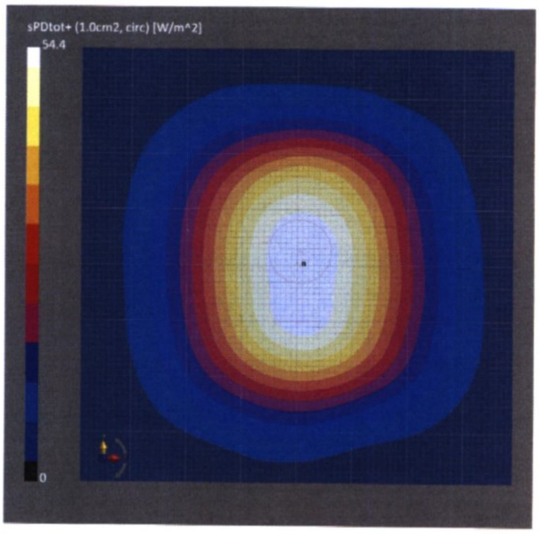
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2021-06-25

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-01-24, 07:50
Avg. Area [cm²]	1.00
psPDn+ [W/m²]	54.2
psPDtot+ [W/m²]	54.4
psPDmod+ [W/m²]	54.6
E_{max} [V/m]	147
Power Drift [dB]	0.01



DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1005	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

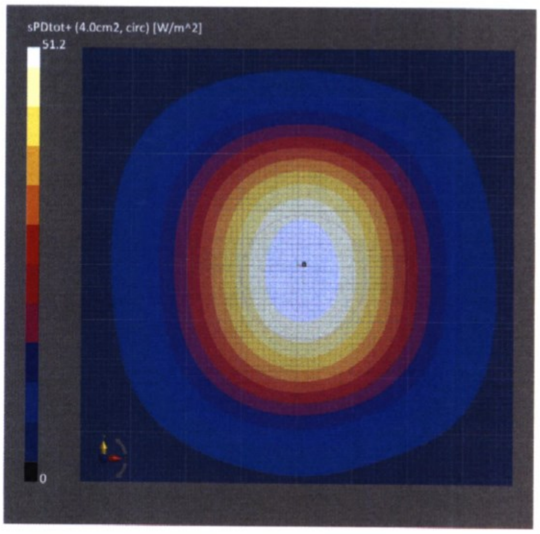
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2021-06-25

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-01-24, 07:50
Avg. Area [cm²]	4.00
psPDn+ [W/m²]	51.0
psPDtot+ [W/m²]	51.2
psPDmod+ [W/m²]	51.4
E_{max} [V/m]	147
Power Drift [dB]	0.01



DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1005	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

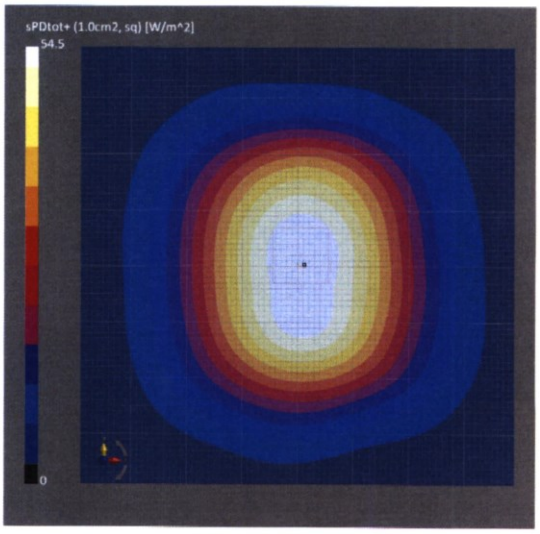
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2021-06-25

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-01-24, 07:50
Avg. Area [cm²]	1.00
psPDn+ [W/m²]	54.3
psPDtot+ [W/m²]	54.5
psPDmod+ [W/m²]	54.6
E_{max} [V/m]	147
Power Drift [dB]	0.01



DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1005	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

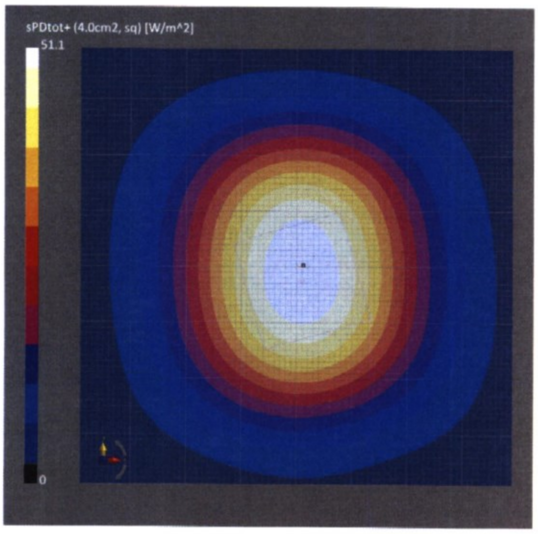
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2021-06-25

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-01-24, 07:50
Avg. Area [cm²]	4.00
psPDn+ [W/m²]	50.9
psPDtot+ [W/m²]	51.1
psPDmod+ [W/m²]	51.2
E_{max} [V/m]	147
Power Drift [dB]	0.01



ANNEX I Sensor Triggering Data Summary

Antenna number	Sensing surface	Trigger distance N
ANT1	Back	16mm
	Top	16mm
ANT3	Back	16mm
	Bottom	16mm
ANT5	Back	16mm
	Left	16mm
ANT7	Back	16mm
	Right	16mm

Rear, Top, Bottom, Left and Right of the DUT was placed directly below the flat phantom. The DUT was moved toward the phantom in accordance with the steps outlined in KDB 616217 to determine the trigger distance for enabling power reduction. The DUT was moved away from the phantom to determine the trigger distance for resuming full power.

ANT1

Back

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

Top

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

ANT3

Back

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

Bottom

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

ANT5

Back

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

Left

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

ANT7

Back

Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

Right

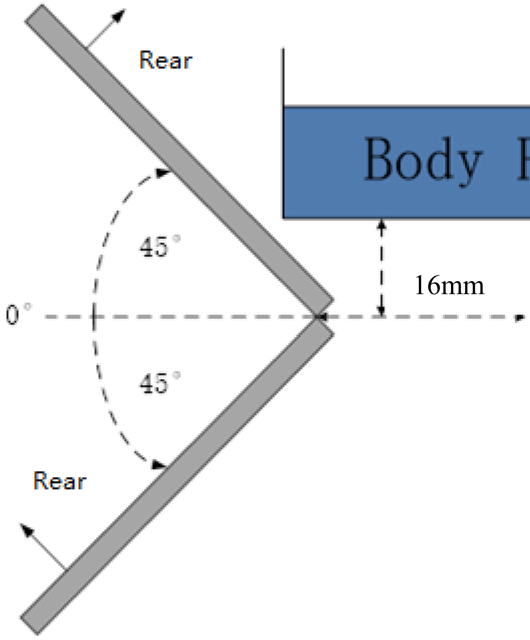
Moving device toward the phantom:

The power state											
Distance [mm]	**21**	**20**	**19**	**18**	**17**	**16**	**15**	**14**	**13**	**12**	**11**
Main antenna	Normal	Normal	Normal	Normal	Normal	Low	Low	Low	Low	Low	Low

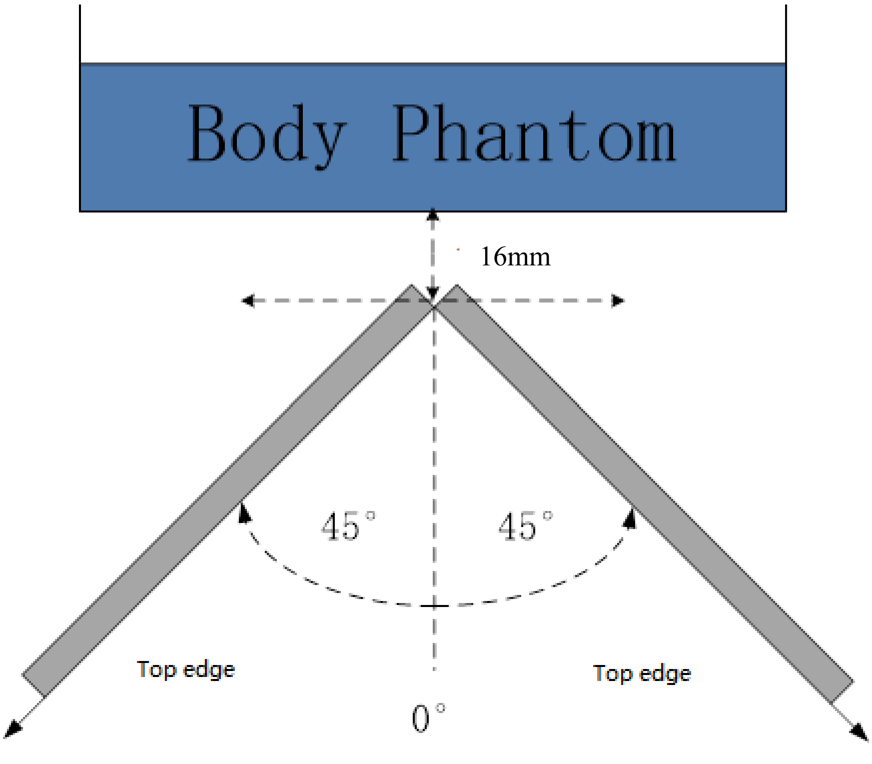
Moving device away from the phantom:

The power state											
Distance [mm]	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**
Main antenna	Low	Low	Low	Low	Low	Low	Normal	Normal	Normal	Normal	Normal

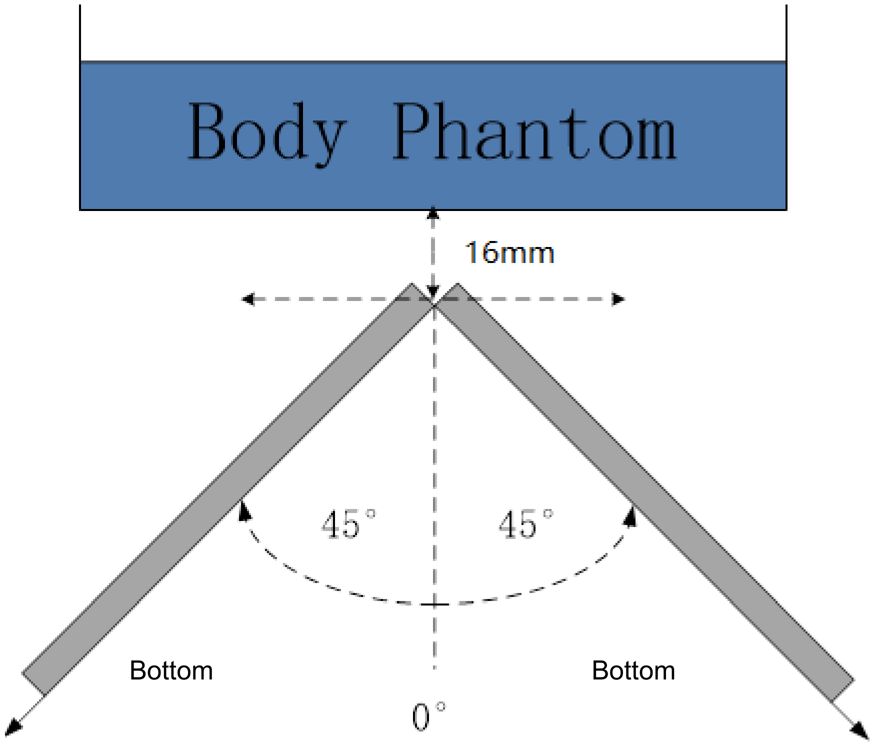
Per FCC KDB Publication 616217 D04v01r02, the influence of table tilt angles to proximity sensor triggering is determined by positioning each edge that contains a transmitting antenna, perpendicular to the flat phantom, at the smallest sensor triggering test distanceby rotating the device around the edge next to the phantom in ≤ 10° increments until the tablet is ±45° or more from the vertical position at 0°.



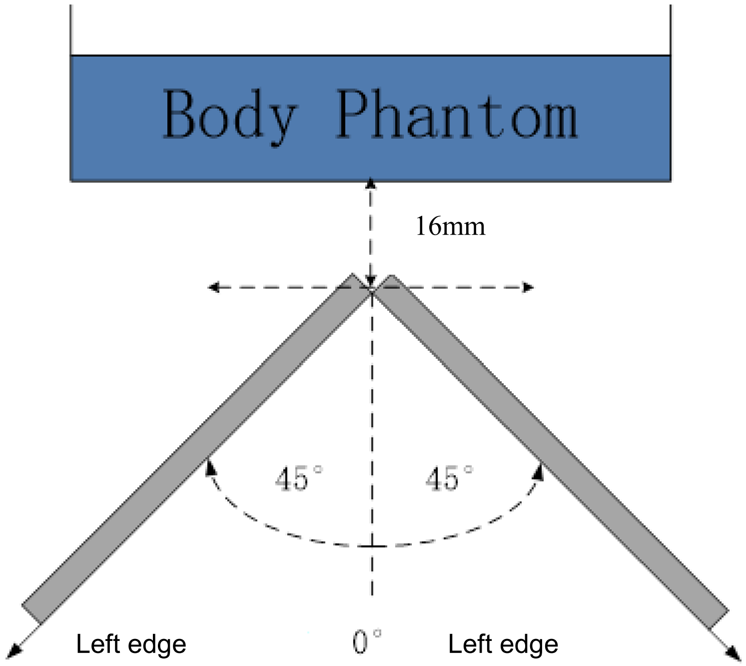
The Back evaluation for ANT1/3/5/7



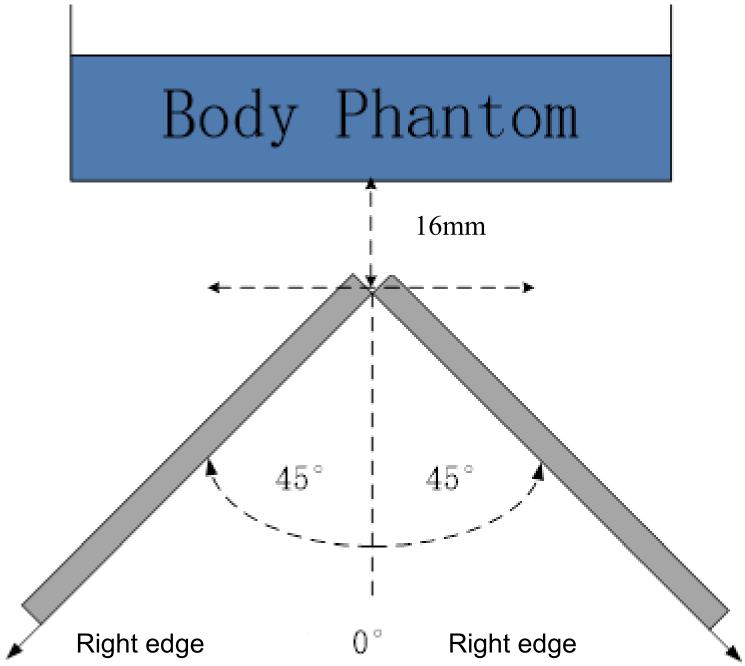
The Top edge evaluation for ANT1



The Bottom edge evaluation for ANT3



The Left edge evaluation for ANT5



The Right edge evaluation for ANT7

Based on the above evaluation, we come to the conclusion that the sensor triggering is not released and normal maximum output power is not restored within the ±45° range at the smallest sensor triggering test distance declared by manufacturer.

ANNEX J SPOT CHECK

J.1 Dielectric Performance and System Validation

Table J.1-1: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2024/3/5	Head	3500 MHz	38.7	2.03	2.85	-2.06

Table J.1-2: System Validation of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value(W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2024/3/5	3500 MHz	25.2	66.90	25.3	66.7	0.40%	-0.30%

J.2 Measurement result

ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
7	Body	N77-L	633334	3500.01	DFT-QPSK 30K 10M 12_6	Rear	15mm	24.14	25.00	0.618	**0.75**	0.302	**0.37**	-0.19

J.3 Reported SAR Comparison

Mode		Antenna	Highest Reported SAR (1g) Original	Highest Reported SAR (1g) Spot check
LTE	LTE Band 2	ANT1	1.17	/
	LTE Band 2	ANT3	1.19	/
	LTE Band 5	ANT1	0.73	/
	LTE Band 7	ANT1	1.10	/
	LTE Band 12	ANT1	0.52	/
	LTE Band 13	ANT1	0.74	/
	LTE Band 48	ANT5	0.61	/
	LTE Band 66	ANT1	0.99	/
	LTE Band 66	ANT3	0.63	/
NR	N2	ANT1	0.86	/
	N2	ANT3	0.90	/
	N5	ANT1	0.64	/
	N48	ANT5	0.56	/
	N66	ANT1	0.75	/
	N66	ANT3	1.07	/
	n77-L	ANT5	0.87	/
	n77-H	ANT5	1.13	/
	n77-L	ANT7	1.36	0.75
	n77-H	ANT7	1.35	/

WLAN 2.4 GHz	ANT9	0.08	/
WLAN 5 GHz		0.36	/
WLAN 6 GHz		<0.01	/
WLAN 2.4 GHz	ANT10	0.06	/
WLAN 5 GHz		0.66	/
WLAN 6 GHz		0.17	/
WLAN 2.4 GHz	MIMO	0.02	/
WLAN 5 GHz		0.24	/
WLAN 6 GHz		0.11	/

J.4 Main Test Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	N5239A	MY55491241	June 5, 2023	One year
02	Power sensor	NRP50S	101488	June 14, 2023	One year
03	Power sensor	NRP50S	101489		
04	Signal Generator	MG3700A	6201052605	June 12 2023	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	DAE	SPEAG DAE4	1525	September 14,2023	One year
07	E-field Probe	SPEAG EX3DV4	7600	December 19，2023	One year
08	Dipole Validation Kit	SPEAG D3500V2	1016	June 21,2023	One year

J.5 Graph Results

N77-L Body

Date: 3/5/2024

Electronics: DAE4 Sn1525

Medium: H700-6000M

Medium parameters used (interpolated): f = 3500.01 MHz; σ = 2.85 S/m; εr = 38.686; ρ = 1000 kg/m3

Ambient Temperature:23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, 5g n77 (0) Frequency: 3500.01 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.29, 7.29, 7.29);

Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.11 W/kg

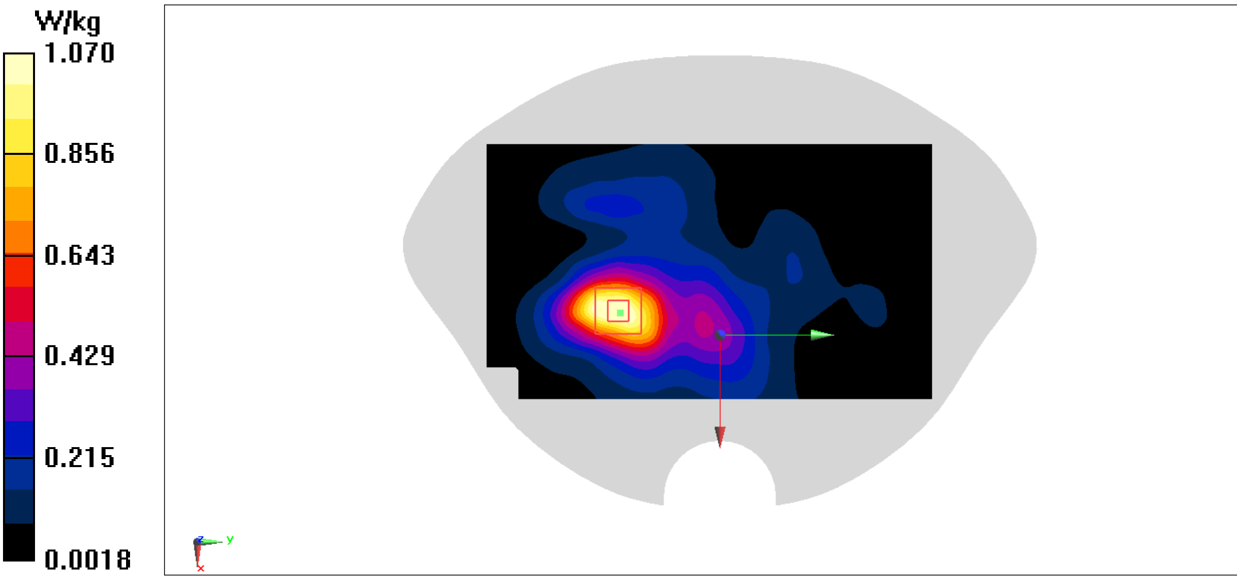
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 9.837 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.618 W/kg; SAR(10 g) = 0.302 W/kg

Maximum value of SAR (measured) = 1.07 W/kg



J.6 System Validation Results

3500MHz

Date: 3/5/2024

Electronics: DAE4 Sn1525

Medium: H700-6000M

Medium parameters used: f = 3500 MHz; σ = 2.85 S/m; εr = 38.7; ρ = 1000 kg/m3

Ambient Temperature:23.3ºC Liquid Temperature: 22.5ºC

Communication System: CW (0) Frequency: 3500 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.29, 7.29, 7.29);

Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 12.8 W/kg

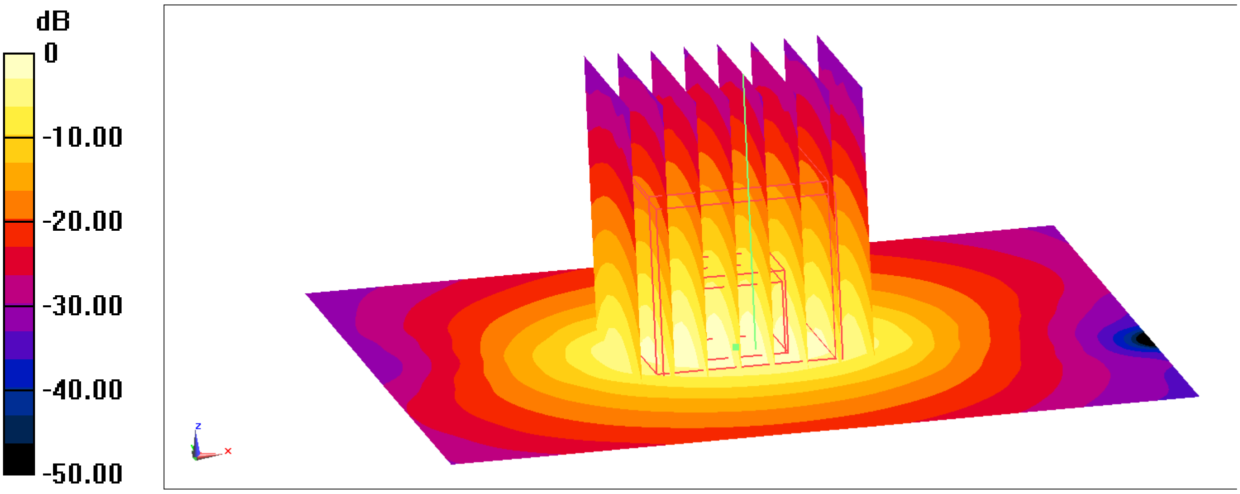
Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 79.86 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 6.67 W/kg; SAR(10 g) = 2.53 W/kg

Maximum value of SAR (measured) = 12.5 W/kg



0 dB = 12.5 W/kg = 10.97 dBW/kg

J.7 Probe Calibration Certificate

Probe 7600 Calibration Certificate

In Collaboration with speag CALIBRATION LABORATORY

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn http://www.caict.ac.cn

中国认可 国际互认 校准 CALIBRATION CNAS L0570

Client CTTL Certificate No: 23J02Z80177

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN : 7600

Calibration Procedure(s): FF-Z11-004-02
Calibration Procedures for Dosimetric E-field Probes

Calibration date: December 19, 2023

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
Power Meter NRP2	101919	12-Jun-23(CTTL, No.J23X05435)	Jun-24
Power sensor NRP-Z91	101547	12-Jun-23(CTTL, No.J23X05435)	Jun-24
Power sensor NRP-Z91	101548	12-Jun-23(CTTL, No.J23X05435)	Jun-24
Reference 10dBAttenuator	18N50W-10dB	19-Jan-23(CTTL, No.J23X00212)	Jan-25
Reference 20dBAttenuator	18N50W-20dB	19-Jan-23(CTTL, No.J23X00211)	Jan-25
Reference Probe EX3DV4	SN 3846	31-May-23(SPEAG, No.EX-3846_May23)	May-24
DAE4	SN 1555	24-Aug-23(SPEAG, No.DAE4-1555_Aug23)	Aug-24
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
SignalGenerator MG3700A	6201052605	12-Jun-23(CTTL, No.J23X05434)	Jun-24
Network Analyzer E5071C	MY46110673	10-Jan-23(CTTL, No.J23X00104)	Jan-24
Reference 10dBAttenuator	BT0520	11-May-23(CTTL, No.J23X04061)	May-25
Reference 20dBAttenuator	BT0267	11-May-23(CTTL, No.J23X04062)	May-25
OCP DAK-3.5	SN 1040	18-Jan-23(SPEAG, No.OCP-DAK3.5-1040_Jan23)	Jan-24

	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: December 21, 2023

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

Certificate No: 23J02Z80177 Page 1 of 9

In Collaboration with
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CALIBRATION LABORATORY

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn http://www.caict.ac.cn

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,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), i θ=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:

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, "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

c) 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

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,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.
- *DCPx,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.
- *Ax,y,z; Bx,y,z; Cx,y,z;VRx,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≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. 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 NORMx,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±50MHz to±100MHz.
- *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 *NORMx* (no uncertainty required).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7600

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.67	0.65	0.67	±10.0%
DCP(mV)[B]	111.0	110.7	109.8	

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	210.1	±2.1%
		Y	0.0	0.0	1.0		204.2	
		Z	0.0	0.0	1.0		209.2	

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] Uncertainly 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:7600

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)	Unct. (*k*=2)
750	41.9	0.89	10.95	10.95	10.95	0.13	1.42	±12.7%
900	41.5	0.97	10.47	10.47	10.47	0.14	1.45	±12.7%
1450	40.5	1.20	9.28	9.28	9.28	0.19	1.05	±12.7%
1750	40.1	1.37	8.98	8.98	8.98	0.24	1.05	±12.7%
1900	40.0	1.40	8.63	8.63	8.63	0.27	1.00	±12.7%
2000	40.0	1.40	8.55	8.55	8.55	0.24	1.08	±12.7%
2300	39.5	1.67	8.34	8.34	8.34	0.55	0.75	±12.7%
2450	39.2	1.80	8.08	8.08	8.08	0.55	0.76	±12.7%
2600	39.0	1.96	7.89	7.89	7.89	0.62	0.69	±12.7%
3300	38.2	2.71	7.45	7.45	7.45	0.40	0.98	±13.9%
3500	37.9	2.91	7.29	7.29	7.29	0.40	1.03	±13.9%
3700	37.7	3.12	7.12	7.12	7.12	0.40	1.06	±13.9%
3900	37.5	3.32	6.94	6.94	6.94	0.35	1.35	±13.9%
4100	37.2	3.53	6.85	6.85	6.85	0.35	1.28	±13.9%
4200	37.1	3.63	6.75	6.75	6.75	0.35	1.35	±13.9%
4400	36.9	3.84	6.64	6.64	6.64	0.35	1.35	±13.9%
4600	36.7	4.04	6.54	6.54	6.54	0.35	1.40	±13.9%
4800	36.4	4.25	6.49	6.49	6.49	0.35	1.48	±13.9%
4950	36.3	4.40	6.22	6.22	6.22	0.35	1.50	±13.9%
5250	35.9	4.71	5.65	5.65	5.65	0.40	1.52	±13.9%
5600	35.5	5.07	5.00	5.00	5.00	0.45	1.48	±13.9%
5750	35.4	5.22	5.11	5.11	5.11	0.40	1.58	±13.9%

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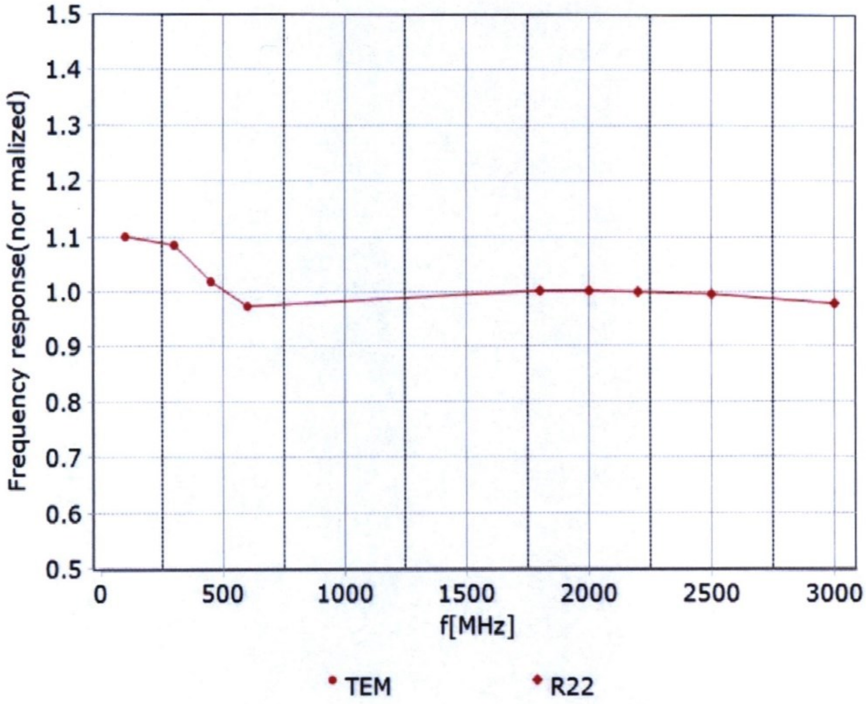
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (*k*=2)

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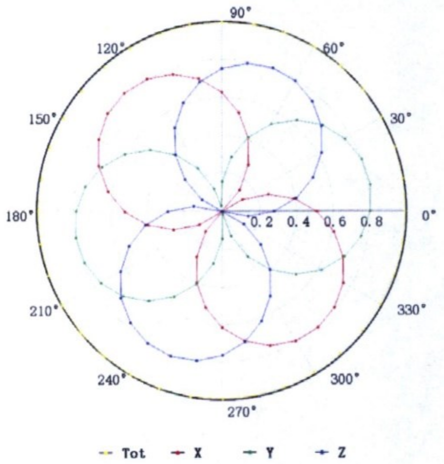
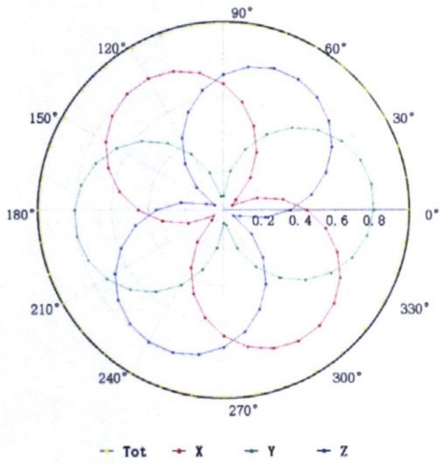
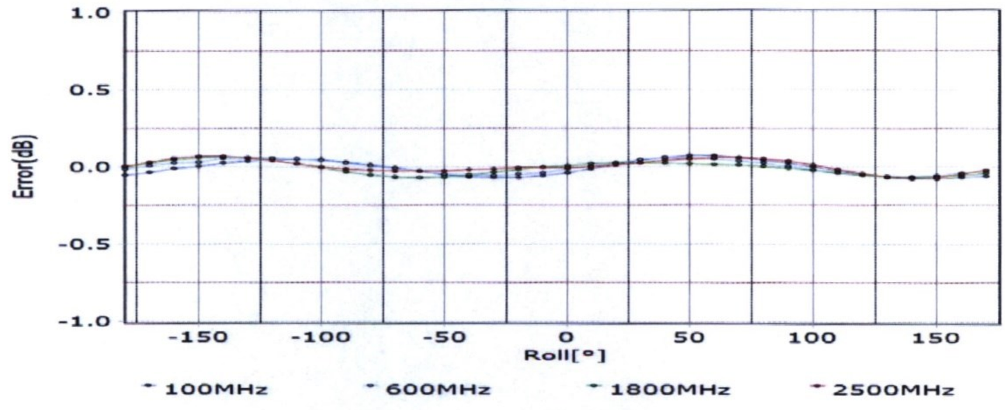
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±1.2% (*k*=2)

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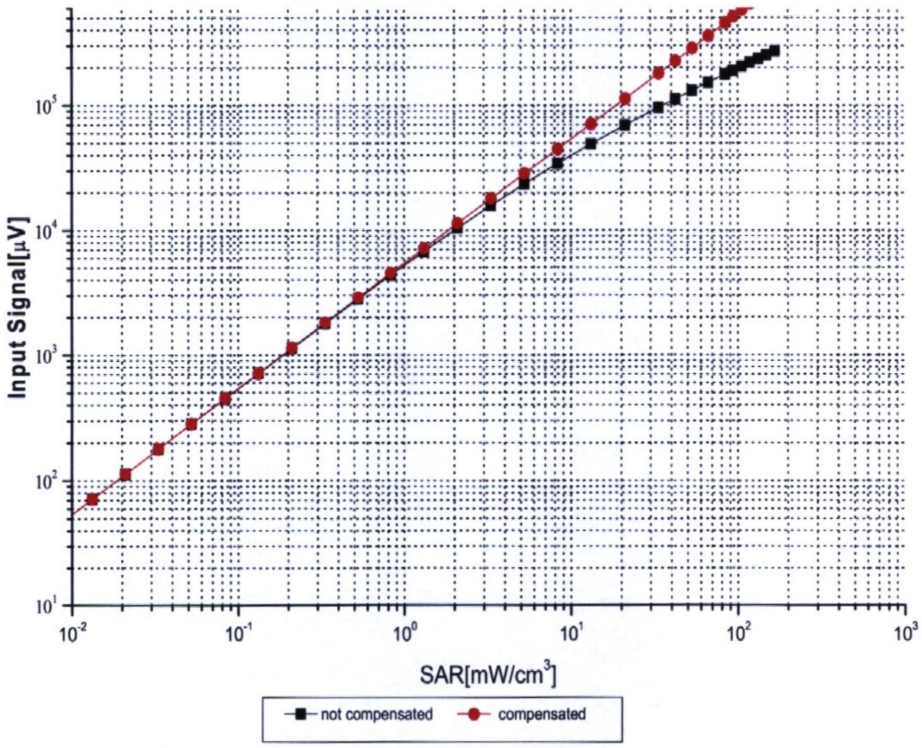
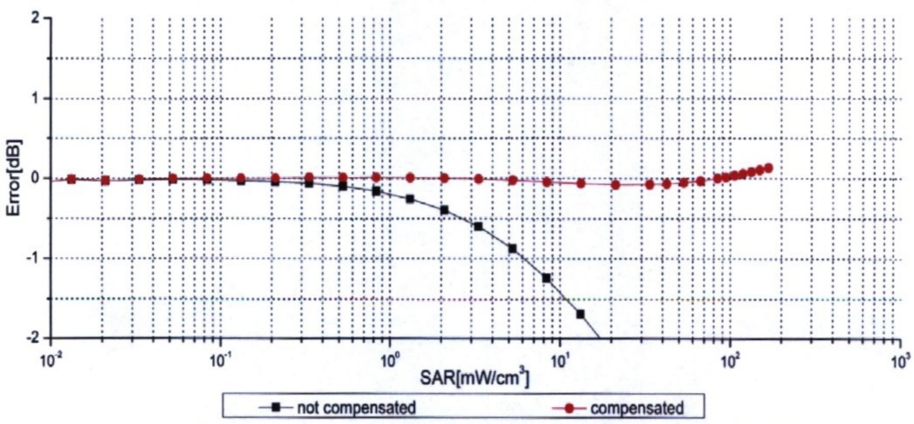
Dynamic Range f(SAR$_{head}$)
(TEM cell, f = 900 MHz)





Uncertainty of Linearity Assessment: ±0.9% (*k*=2)

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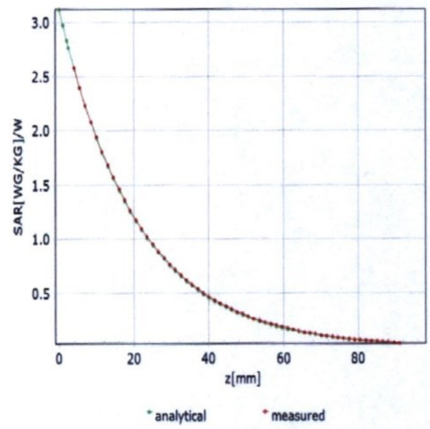
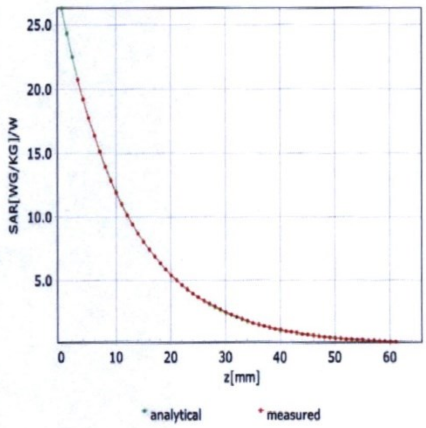
Conversion Factor Assessment

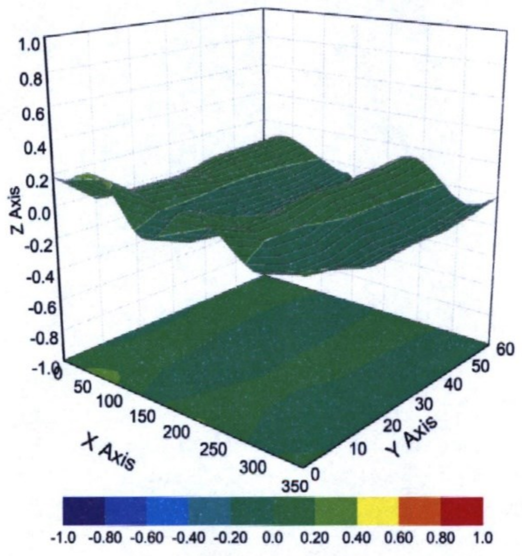
f=750 MHz,WGLS R9(H_convF)



f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±3.2% (*k*=2)