

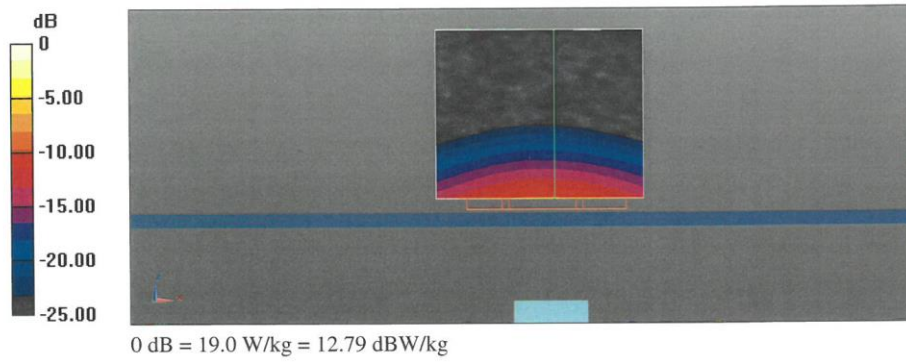
Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5300 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 67.12 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 29.1 W/kg
SAR(1 g) = 7.36 W/kg; SAR(10 g) = 2.06 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 66.1%
Maximum value of SAR (measured) = 17.3 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5500 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 68.41 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 33.0 W/kg
SAR(1 g) = 7.86 W/kg; SAR(10 g) = 2.17 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 64.2%
Maximum value of SAR (measured) = 19.0 W/kg

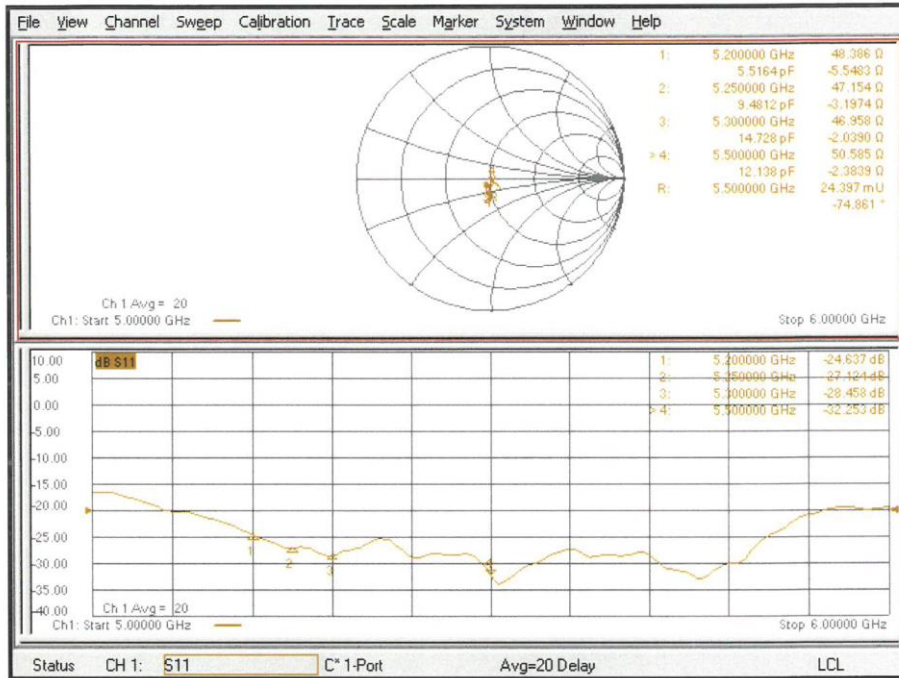
Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 67.25 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 33.2 W/kg
SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.15 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 63.4%
Maximum value of SAR (measured) = 18.7 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 65.67 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 34.2 W/kg
SAR(1 g) = 7.61 W/kg; SAR(10 g) = 2.11 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 62%
Maximum value of SAR (measured) = 18.7 W/kg

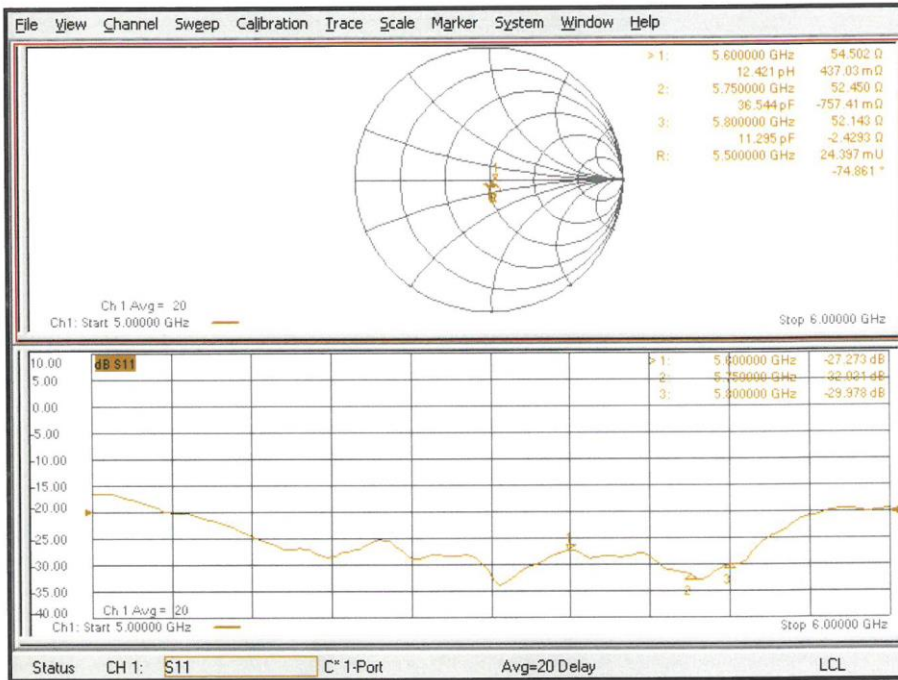
Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 65.55 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 32.7 W/kg
SAR(1 g) = 7.42 W/kg; SAR(10 g) = 2.04 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 62.5%
Maximum value of SAR (measured) = 18.2 W/kg



Impedance Measurement Plot for Body TSL (5200, 5250, 5300, 5500 MHz)



Impedance Measurement Plot for Body TSL (5600, 5750, 5800 MHz)



3700 MHz Dipole Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
 Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: **SCS 0108**

Client **CTTL-BJ (Auden)**

Certificate No: **D3700V2-1004_Jul20**

CALIBRATION CERTIFICATE

Object **D3700V2 - SN:1004**

 Calibration procedure(s) **QA CAL-22.v5
 Calibration Procedure for SAR Validation Sources between 3-10 GHz**

 Calibration date: **July 27, 2020**

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 Calibration
Power meter NRP	SN: 104778	01-Apr-20 (No. 217-03100/03101)	Apr-21
Power sensor NRP-Z91	SN: 103244	01-Apr-20 (No. 217-03100)	Apr-21
Power sensor NRP-Z91	SN: 103245	01-Apr-20 (No. 217-03101)	Apr-21
Reference 20 dB Attenuator	SN: BH9394 (20k)	31-Mar-20 (No. 217-03106)	Apr-21
Type-N mismatch combination	SN: 310982 / 06327	31-Mar-20 (No. 217-03104)	Apr-21
Reference Probe EX3DV4	SN: 3503	31-Dec-19 (No. EX3-3503_Dec19)	Dec-20
DAE4	SN: 601	27-Dec-19 (No. DAE4-601_Dec19)	Dec-20

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

Calibrated by:	Name Michael Weber	Function Laboratory Technician	Signature
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 28, 2020

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

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:

- 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"

Additional Documentation:

- DASY4/5 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%.

Measurement Conditions

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

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	3700 MHz \pm 1 MHz 3800 MHz \pm 1 MHz	

Head TSL parameters at 3700 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.7	3.12 mho/m
Measured Head TSL parameters	(22.0 \pm 0.2) °C	37.4 \pm 6 %	3.05 mho/m \pm 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 3700 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.69 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	67.1 W/kg \pm 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.1 W/kg \pm 19.5 % (k=2)

Head TSL parameters at 3800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.6	3.22 mho/m
Measured Head TSL parameters	(22.0 \pm 0.2) °C	37.3 \pm 6 %	3.13 mho/m \pm 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 3800 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	65.7 W/kg \pm 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.39 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.9 W/kg \pm 19.5 % (k=2)

Body TSL parameters at 3700 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	51.0	3.55 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.3 ± 6 %	3.54 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 3700 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	6.37 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	63.5 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.28 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.7 W/kg ± 19.5 % (k=2)

Body TSL parameters at 3800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	50.9	3.66 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	50.2 ± 6 %	3.65 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 3800 MHz

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	6.12 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	61.0 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.21 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.1 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)
Antenna Parameters with Head TSL at 3700 MHz

Impedance, transformed to feed point	47.5 Ω - 6.8 j Ω
Return Loss	- 22.6 dB

Antenna Parameters with Head TSL at 3800 MHz

Impedance, transformed to feed point	57.9 Ω - 6.3 j Ω
Return Loss	- 20.6 dB

Antenna Parameters with Body TSL at 3700 MHz

Impedance, transformed to feed point	47.8 Ω - 4.1 j Ω
Return Loss	- 26.4 dB

Antenna Parameters with Body TSL at 3800 MHz

Impedance, transformed to feed point	58.9 Ω - 4.1 j Ω
Return Loss	- 20.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.139 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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DASY5 Validation Report for Head TSL

Date: 23.07.2020

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN: 1004

Communication System: UID 0 - CW; Frequency: 3700 MHz, Frequency: 3800 MHz

Medium parameters used: $f = 3700$ MHz; $\sigma = 3.05$ S/m; $\epsilon_r = 37.4$; $\rho = 1000$ kg/m³,Medium parameters used: $f = 3800$ MHz; $\sigma = 3.13$ S/m; $\epsilon_r = 37.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(7.73, 7.73, 7.73) @ 3700 MHz, ConvF(7.73, 7.73, 7.73) @ 3800 MHz; Calibrated: 31.12.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.12.2019
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3700MHz/Zoom Scan, dist=1.4mm (8x8x8)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 70.79 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 6.69 W/kg; SAR(10 g) = 2.41 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 73.5%

Maximum value of SAR (measured) = 13.0 W/kg

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3800MHz/Zoom Scan, dist=1.4mm (8x8x8)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 68.69 V/m; Power Drift = -0.01 dB

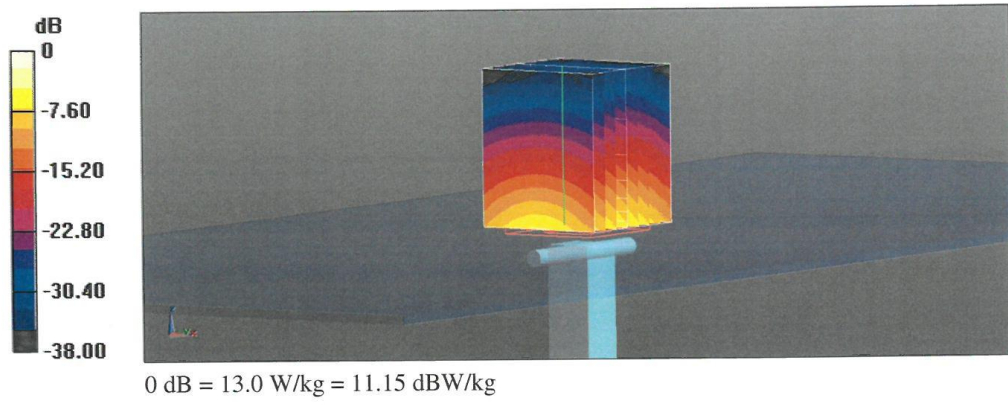
Peak SAR (extrapolated) = 18.8 W/kg

SAR(1 g) = 6.55 W/kg; SAR(10 g) = 2.39 W/kg

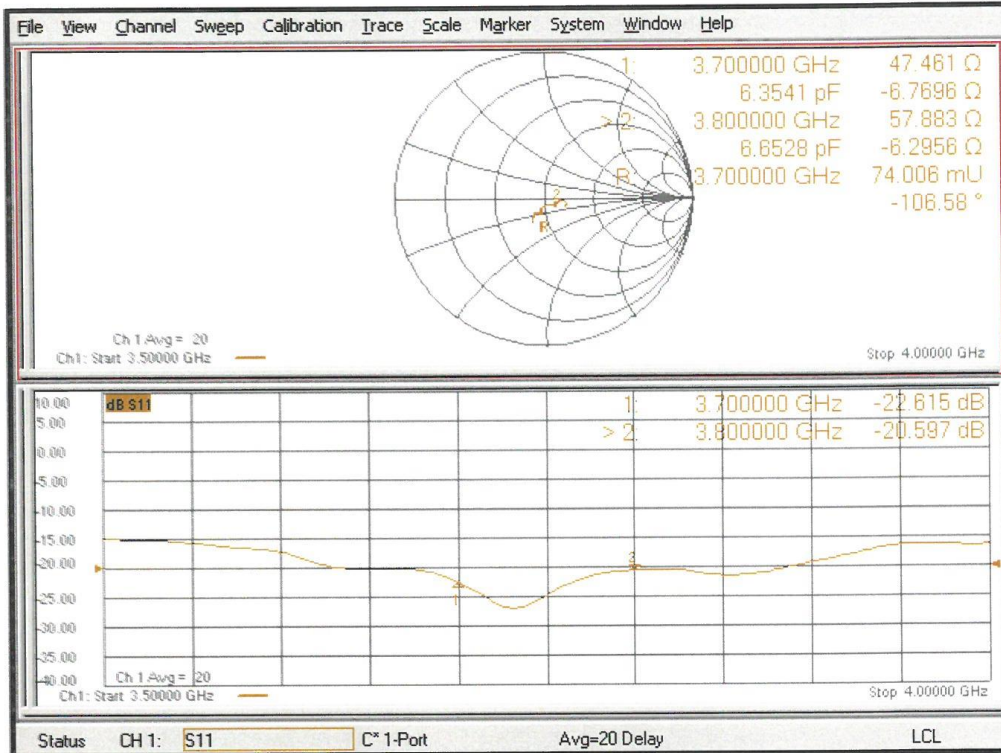
Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 73.2%

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



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 27.07.2020

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN: 1004

Communication System: UID 0 - CW; Frequency: 3700 MHz, Frequency: 3800 MHz

Medium parameters used: $f = 3700$ MHz; $\sigma = 3.54$ S/m; $\epsilon_r = 50.3$; $\rho = 1000$ kg/m³,

Medium parameters used: $f = 3800$ MHz; $\sigma = 3.65$ S/m; $\epsilon_r = 50.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(7.31, 7.31, 7.31) @ 3700 MHz, ConvF(7.31, 7.31, 7.31) @ 3800 MHz; Calibrated: 31.12.2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 27.12.2019
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Body Tissue/Pin=100 mW, d=10mm, f=3700MHz/Zoom Scan , dist=1.4mm (8x8x8)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 64.62 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 17.7 W/kg

SAR(1 g) = 6.37 W/kg; SAR(10 g) = 2.28 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 74.4%

Maximum value of SAR (measured) = 12.3 W/kg

Dipole Calibration for Body Tissue/Pin=100 mW, d=10mm, f=3800MHz/Zoom Scan , dist=1.4mm (8x8x8)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 61.65 V/m; Power Drift = -0.03 dB

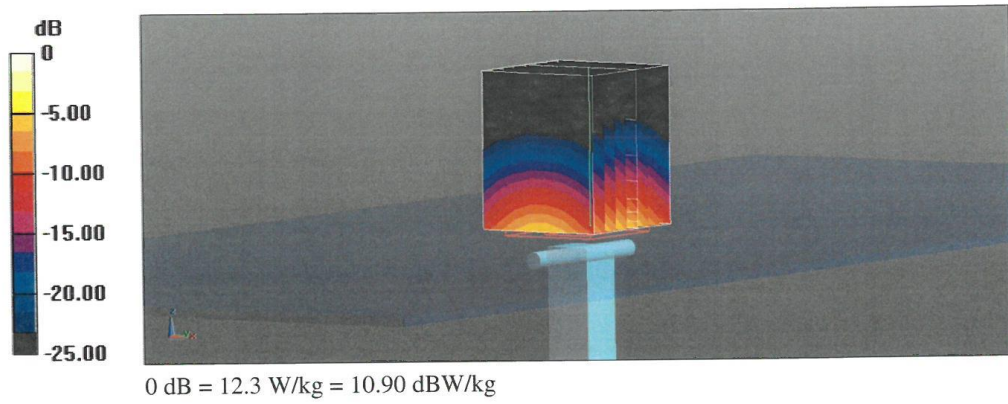
Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 6.12 W/kg; SAR(10 g) = 2.21 W/kg

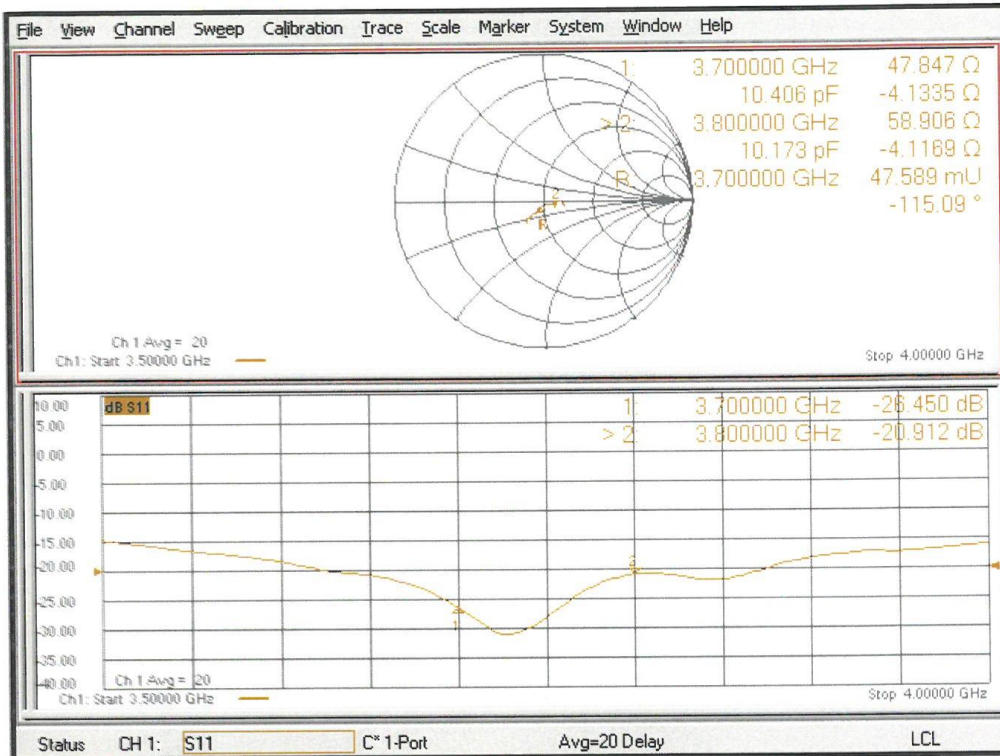
Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 73.7%

Maximum value of SAR (measured) = 11.9 W/kg

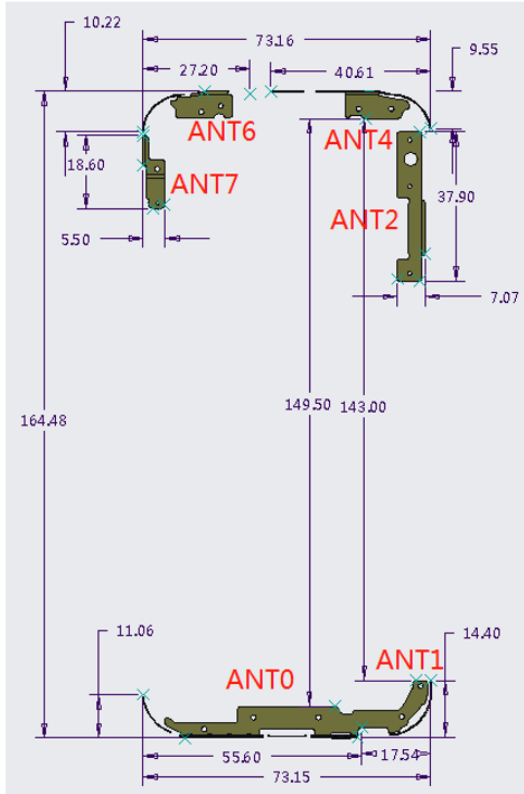


Impedance Measurement Plot for Body TSL



ANNEX I Sensor Triggering Data Summary

SAR sensor trigger distance



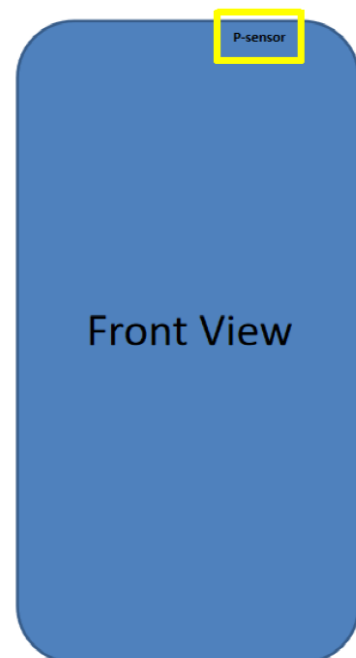
Antenna	Trigger Position	Trigger Distance (mm)
ANT0	Back	17
	Bottom	19
	Front	11
	Right	4
ANT1	Back	17
	Bottom	12
	Front	9
	Left	12
ANT4	Back	17
	Top	18
	Front	10
	Left	7
ANT6	Back	17
	Top	16
	Front	11
	Right	9

P-Sensor Trigger region

Trigger area in yellow box

Receiver & P-sensor for Head SAR

1. The receiver works and the P-Sensor detects the object approaching (5cm)
2. The AP monitors the status changes of the handset and P-Sensor, and then performs interrupt processing with the defined keyValue
3. The upper layer according to the KeyValue, to execute (send AT instruction) to reduce/restore the antenna power.





Per FCC KDB Publication 616217 D04v01r02, this device was tested by the manufacturer to determine the proximity sensor triggering distances for the rear and bottom edge of the device. The measured output power within ± 5 mm of the triggering points (or until touching the phantom) is included for rear and each applicable edge.

To ensure all production units are compliant it is necessary to test SAR at a distance 1mm less than the smallest distance from the device and SAR phantom (determined from these triggering tests according to the KDB 616217 D04v01r02) with the device at maximum output power without power reduction. These SAR tests are included in addition to the SAR tests for the device touching the SAR phantom, with reduced power.

We tested the power and got the different proximity sensor triggering distances for rear, bottom, front and right edge for ANT0. The manufacturer has declared 17mm is the most conservative triggering distance for ANT0 with rear edge. The 19mm distance for bottom edge. The 11mm distance for front edge. The 4mm distance for right edge. So base on the most conservative triggering distance of 17/19/11/4mm, additional SAR measurements were required at 16/18/10/3mm from the highest SAR position between rear/bottom/front/right edge of main antenna.

We tested the power and got the different proximity sensor triggering distances for rear, bottom, front and left edge for ANT1. The manufacturer has declared 17mm is the most conservative triggering distance for ANT1 with rear edge. The 12mm distance for bottom edge. The 9mm distance for front edge. The 12mm distance for left edge. So base on the most conservative triggering distance of 17/12/9/12mm, additional SAR measurements were required at 16/11/8/11mm from the highest SAR position between rear/bottom/front/left edge of main antenna.

We tested the power and got the different proximity sensor triggering distances for rear, top, front and left edge for ANT4. The manufacturer has declared 17mm is the most conservative triggering distance for ANT4 with rear edge. The 18mm distance for top edge. The 10mm distance for front edge. The 7mm distance for left edge. So base on the most conservative triggering distance of 17/18/10/7mm, additional SAR measurements were required at 16/17/9/6mm from the highest SAR position between rear/top/front/left edge of main antenna.

We tested the power and got the different proximity sensor triggering distances for rear, top, front and right edge for ANT6. The manufacturer has declared 17mm is the most conservative triggering distance for ANT6 with rear edge. The 16mm distance for top edge. The 11mm distance for front edge. The 9mm distance for right edge. So base on the most conservative triggering distance of 17/16/11/9mm, additional SAR measurements were required at 16/15/10/8mm from the highest SAR position between rear/top/front/right edge of main antenna.

We tested the power and got the different proximity sensor triggering distances for front edge for P sensor. The manufacturer has declared 50mm is the most conservative triggering distance for P-sensor with front edge.

Main antenna - ANTO
Rear

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	22	21	20	19	18	17	16	15	14	13	12
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	12	13	14	15	16	17	18	19	20	21	22
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Bottom

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	24	23	22	21	20	19	18	17	16	15	14
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	14	15	16	17	18	19	20	21	22	23	24
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Front Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	16	15	14	13	12	11	10	9	8	7	6
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	6	7	8	9	10	11	12	13	14	15	16
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Right Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	9	8	7	6	5	4	3	2	1	0	/
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	/

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	/	0	1	2	3	4	5	6	7	8	9
Main antenna	/	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Main antenna – ANT1

Rear

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	22	21	20	19	18	17	16	15	14	13	12
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	12	13	14	15	16	17	18	19	20	21	22
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Bottom

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	17	16	15	14	13	12	11	10	9	8	7
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	7	8	9	10	11	12	13	14	15	16	17
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Front Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	14	13	12	11	10	9	8	7	6	5	4
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	4	5	6	7	8	9	10	11	12	13	14
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Left Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	17	16	15	14	13	12	11	10	9	8	7
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	7	8	9	10	11	12	13	14	15	16	17
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Main antenna – ANT4

Rear

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	22	21	20	19	18	17	16	15	14	13	12
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	12	13	14	15	16	17	18	19	20	21	22
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Top

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	23	22	21	20	19	18	17	16	15	14	13
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	13	14	15	16	17	18	19	20	21	22	23
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Front Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	15	14	13	12	11	10	9	8	7	6	5
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	5	6	7	8	9	10	11	12	13	14	15
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Left Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	12	11	10	9	8	7	6	5	4	3	2
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	2	3	4	5	6	7	8	9	10	11	12
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Main antenna – ANT6
Rear

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	22	21	20	19	18	17	16	15	14	13	12
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	12	13	14	15	16	17	18	19	20	21	22
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Top

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	21	20	19	18	17	16	15	14	13	12	11
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	11	12	13	14	15	16	17	18	19	20	21
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Front Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	16	15	14	13	12	11	10	9	8	7	6
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	6	7	8	9	10	11	12	13	14	15	16
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

Right Edge

Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	14	13	12	11	10	9	8	7	6	5	4
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near

Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)											
Distance [mm]	4	5	6	7	8	9	10	11	12	13	14
Main antenna	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

P-sensor
Front

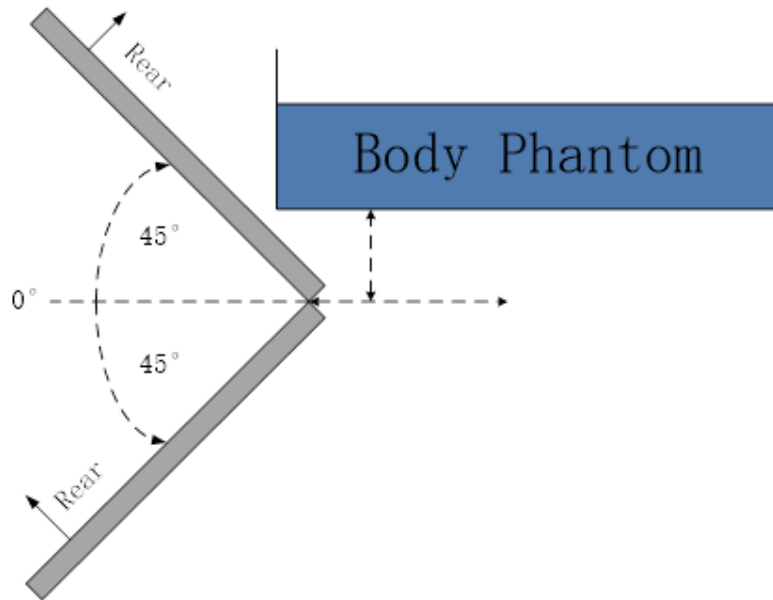
Moving device toward the phantom:

sensor near or far(KDB 616217 6.2.6)																
Distance [mm]	55	54	53	52	51	50	49	48	47	46	45	40	35	30	20	10
Main antenna	Far	Far	Far	Far	Far	Near	Near	Near	Near	Near	Near	Near	Near	Near	Near	Near

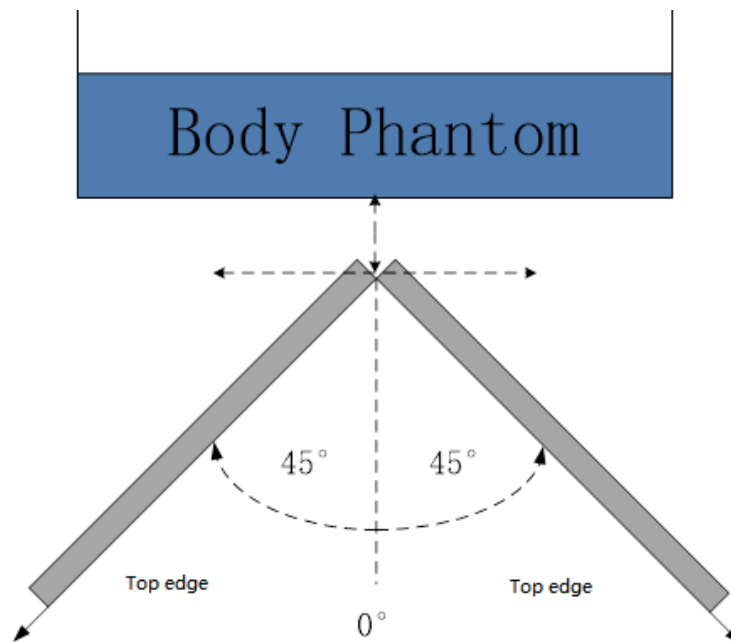
Moving device away from the phantom:

sensor near or far(KDB 616217 6.2.6)																
Distance [mm]	10	20	30	35	40	45	46	47	48	49	50	51	52	53	54	55
Main antenna	Near	Near	Near	Near	Near	Near	Near	Near	Near	Near	Near	Far	Far	Far	Far	Far

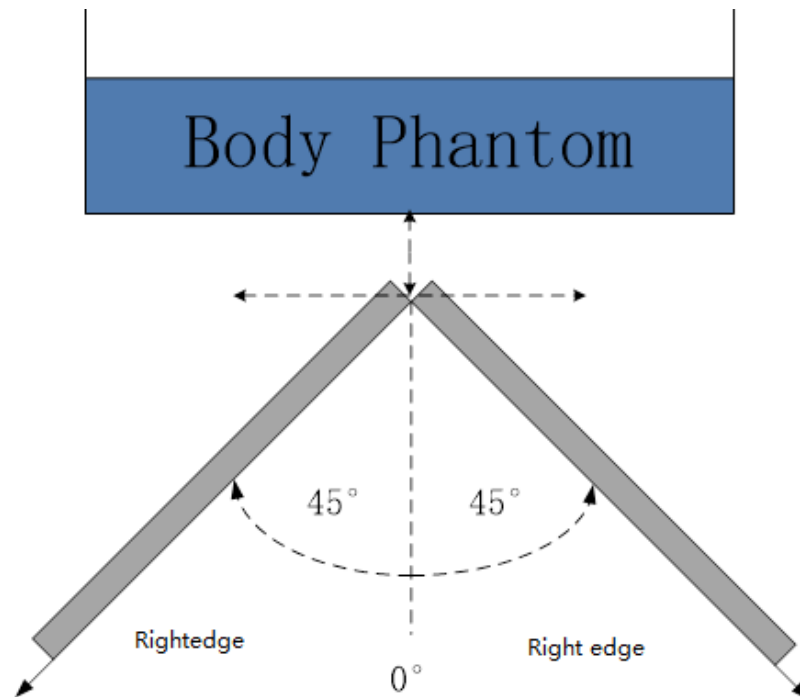
Per FCC KDB Publication 616217 D04v01r02, the influence of table tilt angles to proximity sensor triggering is determined by positioning each edge that contains a transmitting antenna, perpendicular to the flat phantom, at the smallest sensor triggering test distance by rotating the device around the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



The front/rear evaluation



The bottom/top edge evaluation



The Left edge evaluation

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 $\pm 45^\circ$ range at the smallest sensor triggering test distance declared by manufacturer.

ANNEX J SAR Test Result for new bands

J.1 Tissue and Verification

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

Measurement Date yyyy/mm/dd	Frequency	Type	Permittivity ϵ	Drift (%)	Conductivity σ (S/m)	Drift (%)
2021/9/18	835 MHz	Head	41.94	1.06	0.9078	0.87
2021/9/22	1900 MHz	Head	39.17	-2.08	1.49	6.43

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
2021/9/18	835 MHz	6.24	9.63	6.36	9.64	1.92%	0.10%
2021/9/22	1900 MHz	20.9	40.1	20.28	39.48	-2.97%	-1.55%

J.2 Conducted Power Result

Table J.2-1: The tune up for LTE B5 and 5G NR n2/n5

Band	Tune up (dBm)					
	Receiver off+ Sensor off (DSI0)	Receiver off+ Hotspot on (DSI1)	Receiver on+ WLAN off (DSI2)	Receiver on+ WLAN on (DSI3)	Receiver off+ sensor on+ Hotspot off+ WLAN off (DSI4)	Receiver off+ sensor on+ Hotspot off+ WLAN on (DSI5)
	Power Level A1	Power Level B1	Power Level C1	Power Level D1	Power Level E1	Power Level F1
LTE B5	24	24	24	24	24	24
n2	24	23	17	17	24	23
n5	24	24	24	24	24	24

Table J.2-2: The conducted Power for LTE B5

LTE B5-Power Level A1/B1/C1/D1/E1/F1						
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM	
1.4MHz	1RB-High (5)	848.3 (20643)	23.13	22.35	21.21	
		836.5 (20525)	23.13	22.25	21.27	
		824.7 (20407)	23.17	22.42	21.24	
	1RB-Middle (3)	848.3 (20643)	23.15	22.39	21.22	
		836.5 (20525)	23.13	22.34	21.29	
		824.7 (20407)	23.15	22.36	21.30	
	1RB-Low (0)	848.3 (20643)	23.13	22.30	21.28	
		836.5 (20525)	23.12	22.33	21.28	
		824.7 (20407)	23.16	22.41	21.24	
	3RB-High (3)	848.3 (20643)	23.19	22.15	21.19	
		836.5 (20525)	23.14	22.15	21.12	
		824.7 (20407)	23.15	22.07	21.23	
	3RB-Middle (1)	848.3 (20643)	23.16	22.22	21.24	
		836.5 (20525)	23.15	22.18	21.18	
		824.7 (20407)	23.14	22.18	21.24	
	3RB-Low (0)	848.3 (20643)	23.15	22.22	21.21	
		836.5 (20525)	23.13	22.17	21.19	
		824.7 (20407)	23.18	22.19	21.23	
	6RB (0)	848.3 (20643)	22.16	21.25	20.07	
		836.5 (20525)	22.14	21.23	20.04	
		824.7 (20407)	22.15	21.19	20.11	
	3MHz	1RB-High (14)	847.5 (20635)	23.13	22.20	21.31
			836.5 (20525)	23.15	22.34	21.24
			825.5 (20415)	23.15	22.41	21.35
		1RB-Middle (7)	847.5 (20635)	23.18	22.33	21.30
			836.5 (20525)	23.14	22.33	21.26
			825.5 (20415)	23.16	22.35	21.32
1RB-Low (0)		847.5 (20635)	23.14	22.37	21.27	
		836.5 (20525)	23.14	22.24	21.31	
		825.5 (20415)	23.13	22.28	21.29	
8RB-High (7)		847.5 (20635)	22.10	21.15	20.11	
		836.5 (20525)	22.08	21.15	20.09	
		825.5 (20415)	22.09	21.18	20.16	
8RB-Middle (4)		847.5 (20635)	22.15	21.21	20.11	
		836.5 (20525)	22.10	21.15	20.13	
		825.5 (20415)	22.13	21.20	20.17	
8RB-Low (0)		847.5 (20635)	22.12	21.20	20.11	
		836.5 (20525)	22.09	21.15	20.08	
		825.5 (20415)	22.11	21.16	20.12	
15RB (0)		847.5 (20635)	22.14	21.13	20.08	
		836.5 (20525)	22.11	21.14	20.11	
		825.5 (20415)	22.09	21.09	20.08	

5MHz	1RB-High (24)	846.5 (20625)	23.17	22.37	21.23	
		836.5 (20525)	23.17	22.38	21.23	
		826.5 (20425)	23.12	22.38	21.22	
	1RB-Middle (12)	846.5 (20625)	23.25	22.44	21.27	
		836.5 (20525)	23.16	22.37	21.20	
		826.5 (20425)	23.20	22.43	21.32	
	1RB-Low (0)	846.5 (20625)	23.20	22.48	21.34	
		836.5 (20525)	23.19	22.37	21.23	
		826.5 (20425)	23.18	22.43	21.27	
	12RB-High (13)	846.5 (20625)	22.10	21.02	20.10	
		836.5 (20525)	22.08	21.01	20.07	
		826.5 (20425)	22.07	21.06	20.06	
	12RB-Middle (6)	846.5 (20625)	22.12	21.05	20.10	
		836.5 (20525)	22.12	21.09	20.14	
		826.5 (20425)	22.13	21.10	20.12	
	12RB-Low (0)	846.5 (20625)	22.18	21.18	20.13	
		836.5 (20525)	22.17	21.11	20.17	
		826.5 (20425)	22.15	21.14	20.15	
	25RB (0)	846.5 (20625)	22.16	21.17	20.12	
		836.5 (20525)	22.06	21.10	20.05	
		826.5 (20425)	22.11	21.17	20.08	
	10MHz	1RB-High (49)	844 (20600)	23.19	22.37	21.23
			836.5 (20525)	23.12	22.27	21.26
			829 (20450)	23.11	22.25	21.18
1RB-Middle (24)		844 (20600)	23.21	22.38	21.30	
		836.5 (20525)	23.18	22.44	21.24	
		829 (20450)	23.22	22.47	21.25	
1RB-Low (0)		844 (20600)	23.20	22.40	21.22	
		836.5 (20525)	23.15	22.36	21.18	
		829 (20450)	23.18	22.40	21.33	
25RB-High (25)		844 (20600)	22.08	21.06	20.06	
		836.5 (20525)	22.06	21.10	20.05	
		829 (20450)	22.13	21.16	20.07	
25RB-Middle (12)		844 (20600)	22.14	21.20	20.08	
		836.5 (20525)	22.13	21.12	20.11	
		829 (20450)	22.12	21.17	20.13	
25RB-Low (0)		844 (20600)	22.18	21.17	20.17	
		836.5 (20525)	22.14	21.13	20.07	
		829 (20450)	22.19	21.13	20.15	
50RB (0)		844 (20600)	22.13	21.17	20.08	
		836.5 (20525)	22.11	21.08	20.09	
		829 (20450)	22.17	21.13	20.13	

Table J.2-3: The conducted Power for n2/n5

5G n2-Power Level A1/E1									
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		Frequency	NR Test CH.	QRCT Test CH.	Tune up	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1907.5	381500	381050	24.00	23.15
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1880	376000	375550	24.00	23.42
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1852.5	370500	370050	24.00	23.37
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1900	380000	378092	24.00	23.54
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1880	376000	374092	24.00	23.57
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1860	372000	370092	24.00	23.52
15	20	DFT-s-OFDM PI/2 BPSK	Inner_Full	50@25	1880	376000	370050	24.00	23.46
15	20	DFT-s-OFDM 16QAM	Inner_Full	50@25	1880	376000	370050	23.00	22.58
15	20	DFT-s-OFDM 64QAM	Inner_Full	50@25	1880	376000	370050	22.00	21.11
15	20	DFT-s-OFDM 256QAM	Inner_Full	50@25	1880	376000	370050	20.00	19.08
15	20	CP-OFDM QPSK	Inner_Full	53@26	1880	376000	370050	23.00	22.09
15	20	CP-OFDM 16QAM	Inner_Full	53@26	1880	376000	370050	22.00	21.53
15	20	CP-OFDM 64QAM	Inner_Full	53@26	1880	376000	370050	21.00	20.03
15	20	CP-OFDM 256QAM	Inner_Full	53@26	1880	376000	370050	18.00	16.98
15	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@104	1880	376000	370050	23.00	22.46
15	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1880	376000	370050	23.00	22.47
15	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@104	1880	376000	370050	24.00	23.19
15	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1880	376000	370050	24.00	23.33
15	20	DFT-s-OFDM QPSK	Outer_Full	100@0	1880	376000	370050	24.00	22.57
15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	1880	376000	370064	24.00	23.33
15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	1880	376000	370078	24.00	23.46

5G n2-Power Level B1/F1									
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		Frequency	NR Test CH.	QRCT Test CH.	Tune up	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1907.5	381500	381050	23.00	22.50
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1880	376000	375550	23.00	22.70
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1852.5	370500	370050	23.00	22.64
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1900	380000	378092	23.00	22.56
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1880	376000	374092	23.00	22.74
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1860	372000	370092	23.00	22.67
15	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	50@25	1880	376000	370050	23.00	22.59
15	20	DFT-s-OFDM 16QAM	Inner_Full	50@25	1880	376000	370050	22.00	22.58
15	20	DFT-s-OFDM 64QAM	Inner_Full	50@25	1880	376000	370050	21.50	21.07
15	20	DFT-s-OFDM 256QAM	Inner_Full	50@25	1880	376000	370050	19.50	19.06
15	20	CP-OFDM QPSK	Inner_Full	53@26	1880	376000	370050	22.50	22.08
15	20	CP-OFDM 16QAM	Inner_Full	53@26	1880	376000	370050	21.50	21.51
15	20	CP-OFDM 64QAM	Inner_Full	53@26	1880	376000	370050	20.50	20.02
15	20	CP-OFDM 256QAM	Inner_Full	53@26	1880	376000	370050	18.00	17.01
15	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@104	1880	376000	370050	23.00	22.40
15	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1880	376000	370050	23.00	22.5
15	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@104	1880	376000	370050	23.00	22.35
15	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1880	376000	370050	23.00	22.45
15	20	DFT-s-OFDM QPSK	Outer_Full	100@0	1880	376000	370050	23.00	22.55
15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	1880	376000	370064	23.00	22.46
15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	1880	376000	370078	23.00	22.61

5G n2-Power Level C1/D1									
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		Frequency	NR Test CH.	QRCT Test CH.	Tune up	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1907.5	381500	381050	17.00	16.44
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1880	376000	375550	17.00	16.59
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1852.5	370500	370050	17.00	16.55
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1900	380000	378092	17.00	16.49
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1880	376000	374092	17.00	16.62
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1860	372000	370092	17.00	16.57
15	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	50@25	1880	376000	370050	17.00	16.55
15	20	DFT-s-OFDM 16QAM	Inner_Full	50@25	1880	376000	370050	17.00	16.56
15	20	DFT-s-OFDM 64QAM	Inner_Full	50@25	1880	376000	370050	17.00	16.6
15	20	DFT-s-OFDM 256QAM	Inner_Full	50@25	1880	376000	370050	17.00	16.61
15	20	CP-OFDM QPSK	Inner_Full	53@26	1880	376000	370050	17.00	16.57
15	20	CP-OFDM 16QAM	Inner_Full	53@26	1880	376000	370050	17.00	16.47
15	20	CP-OFDM 64QAM	Inner_Full	53@26	1880	376000	370050	17.00	16.52
15	20	CP-OFDM 256QAM	Inner_Full	53@26	1880	376000	370050	17.00	16.60
15	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@104	1880	376000	370050	17.00	16.34
15	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1880	376000	370050	17.00	16.47
15	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@104	1880	376000	370050	17.00	16.27
15	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1880	376000	370050	17.00	16.39
15	20	DFT-s-OFDM QPSK	Outer_Full	100@0	1880	376000	370050	17.00	16.47
15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	1880	376000	370064	17.00	16.4
15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	1880	376000	370078	17.00	16.56

5G n5-Power Level A1/B1/C1/D1/E1/F1									
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		Frequency	NR Test CH.	QRCT Test CH.	Tune up	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	846.5	169300	168850	24.00	23.12
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	836.5	167300	166850	24.00	23.14
15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	826.5	165300	164850	24.00	23.06
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	839	167800	165892	24.00	23.09
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	836.5	167300	165392	24.00	23.15
15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	834	166800	164892	24.00	23.04
15	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	50@25	836.5	167300	165392	24.00	23.04
15	20	DFT-s-OFDM 16QAM	Inner_Full	50@25	836.5	167300	165392	23.00	22.01
15	20	DFT-s-OFDM 64QAM	Inner_Full	50@25	836.5	167300	165392	22.00	20.54
15	20	DFT-s-OFDM 256QAM	Inner_Full	50@25	836.5	167300	165392	19.50	18.5
15	20	CP-OFDM QPSK	Inner_Full	53@26	836.5	167300	165392	23.00	21.54
15	20	CP-OFDM 16QAM	Inner_Full	53@26	836.5	167300	165392	22.00	20.98
15	20	CP-OFDM 64QAM	Inner_Full	53@26	836.5	167300	165392	21.00	19.43
15	20	CP-OFDM 256QAM	Inner_Full	53@26	836.5	167300	165392	18.00	16.57
15	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@104	836.5	165300	165392	23.00	21.93
15	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	836.5	165300	165392	23.00	21.91
15	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@104	836.5	165300	165392	24.00	22.88
15	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	836.5	165300	165392	24.00	22.92
15	20	DFT-s-OFDM QPSK	Outer_Full	100@0	836.5	165300	165392	23.00	22.04
15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	836.5	167300	166436	24.00	22.87
15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	836.5	167300	165932	24.00	23.03

J.3 SAR Test Result

Table J.3-1: SAR Values (LTE Band5 - Head)

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C						
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20450	829	1RB_Mid	Left	Cheek	/	23.22	24	0.152	0.18	0.211	0.25	0.14
20450	829	1RB_Mid	Left	Tilt	/	23.22	24	0.076	0.09	0.101	0.12	0.17
20450	829	1RB_Mid	Right	Cheek	Fig.J.1	23.22	24	0.172	0.21	0.224	0.27	0.18
20450	829	1RB_Mid	Right	Tilt	/	23.22	24	0.095	0.11	0.129	0.15	-0.17
20450	829	25RB-Low	Left	Cheek	/	22.19	23	0.13	0.16	0.182	0.22	-0.16
20450	829	25RB-Low	Left	Tilt	/	22.19	23	0.058	0.07	0.078	0.09	0.00
20450	829	25RB-Low	Right	Cheek	/	22.19	23	0.134	0.16	0.19	0.23	-0.05
20450	829	25RB-Low	Right	Tilt	/	22.19	23	0.074	0.09	0.101	0.12	-0.12

Note1: The LTE mode is QPSK_10MHz.

Table J.3-2: SAR Values (LTE Band5 - Body)

Ambient Temperature: 22.9°C						Liquid Temperature: 22.5°C					
Frequency		Mode	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz										
20450	829	1RB_Mid Front	/	23.22	24	0.18	0.22	0.255	0.31	-0.10	
20450	829	1RB_Mid Rear	Fig.J.2	23.22	24	0.219	0.26	0.373	0.45	-0.07	
20450	829	1RB_Mid Left	/	23.22	24	0.108	0.13	0.162	0.19	0.14	
20450	829	1RB_Mid Right	/	23.22	24	0.191	0.23	0.284	0.34	0.00	
20450	829	1RB_Mid Bottom	/	23.22	24	0.131	0.16	0.23	0.28	-0.17	
20450	829	25RB-Low Front	/	22.19	23	0.156	0.19	0.221	0.27	-0.02	
20450	829	25RB-Low Rear	/	22.19	23	0.168	0.20	0.283	0.34	0.02	
20450	829	25RB-Low Left	/	22.19	23	0.089	0.11	0.132	0.16	0.17	
20450	829	25RB-Low Right	/	22.19	23	0.153	0.18	0.225	0.27	-0.02	
20450	829	25RB-Low Bottom	/	22.19	23	0.103	0.12	0.18	0.22	0.04	

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The LTE mode is QPSK_10MHz.

Table J.3-3: SAR Values (n2 - Head)

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C				
376000	1880	Left Cheek	/	16.62	17	0.145	0.16	0.29	0.32	-0.05
376000	1880	Left Tilt	/	16.62	17	0.148	0.16	0.303	0.33	0.13
376000	1880	Right Cheek	/	16.62	17	0.192	0.21	0.431	0.47	-0.05
376000	1880	Right Tilt	Fig.J.3	16.62	17	0.204	0.22	0.448	0.49	0.19

Table J.3-4: SAR Values (n2 – Body worn)

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C				
376000	1880	Front	/	23.57	24	0.173	0.19	0.297	0.33	-0.17
376000	1880	Rear	Fig.J.4	23.57	24	0.224	0.25	0.399	0.44	-0.12

Note1: The distance between the EUT and the phantom bottom is 15mm

Table J.3-5: SAR Values (n2 – Body)

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C				
376000	1880	Front	/	22.74	23	0.212	0.23	0.379	0.40	0.10
376000	1880	Rear	Fig.J.5	22.74	23	0.285	0.30	0.532	0.56	-0.17
376000	1880	Left	/	22.74	23	0.1	0.11	0.171	0.18	0.14
376000	1880	Top	/	22.74	23	0.186	0.20	0.363	0.39	-0.06

Note1: The distance between the EUT and the phantom bottom is 10mm

Table J.3-6: SAR Values (n5 - Head)

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5 °C				
167300	836.5	Left Cheek	/	23.15	24	0.092	0.11	0.114	0.14	0.10
167300	836.5	Left Tilt	/	23.15	24	0.049	0.06	0.059	0.07	-0.18
167300	836.5	Right Cheek	Fig.J.6	23.15	24	0.109	0.13	0.138	0.17	0.20
167300	836.5	Right Tilt	/	23.15	24	0.054	0.07	0.066	0.08	0.10

Table J.3-7: SAR Values (n5 – Body)

Frequency		Test Position	Figure No.	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5°C				Power Drift (dB)
Ch.	MHz			Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	
167300	836.5	Front	/	23.15	24	0.08	0.10	0.127	0.15	-0.08
167300	836.5	Rear	Fig.J.7	23.15	24	0.126	0.15	0.216	0.26	-0.10
167300	836.5	Left	/	23.15	24	0.034	0.04	0.051	0.06	-0.03
167300	836.5	Right	/	23.15	24	0.073	0.09	0.107	0.13	0.13
167300	836.5	Bottom	/	23.15	24	0.078	0.09	0.149	0.18	0.11

J.4 MAIN TEST INSTRUMENTS

Table J.4-1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 14, 2021	One year
02	Power meter	NRP2	106276	May 11, 2021	One year
03	Power sensor	NRP6A	101369		
04	Signal Generator	E4438C	MY49071430	February 1, 2021	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	E-field Probe	SPEAG EX3DV4	7548	June 25, 2021	One year
07	DAE	SPEAG DAE4	1331	September 1, 2021	One year
08	Dipole Validation Kit	SPEAG D835V2	4d069	July 21,,2021	One year
09	Dipole Validation Kit	SPEAG D1900V2	5d101	July 15,2021	One year