

# FCC SAR Test Report

Product Name : Notebook Computers

Model No. : 14T90P,14TD90P,14TG90P,14TB90P

Applicant : LG Electronics USA

Address : 111 Sylvan Avenue North Bulding Englewood Cliffs New Jerssy  
United States

Date of Receipt : 2020/11/03

Issued Date : 2020/11/30

Report No. : 20B0091R-E3082130003

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

# Test Report

Issued Date: 2020/11/30

Report No.: 20B0091R-E3082130003



Product Name : Notebook Computers  
 Applicant : LG Electronics USA  
 Address : 111 Sylvan Avenue North Bulding Englewood Cliffs New Jerssy United States  
 Manufacturer : LG Electronics Inc.  
 Model No. : 14T90P,14TD90P,14TG90P,14TB90P  
 Trade Name : LG  
 FCC ID : BEJNT-14T90P  
 Applicable Standard : IEEE 1528-2013  
 KDB 447498 D01 v06  
 KDB 865664 D01 v01r04  
 Measurement procedures : 47CFR § 2.1093  
 KDB 248227 D01 v02r02  
 KDB 616217 D04 v01r02  
 Test Result : Max. SAR Measurement (1g)

Band	Body SAR (1g) - Yageo	Body SAR (1g) – Hong-Bo
2.4 GHz	<b>1.167</b> W/kg	<b>0.911</b> W/kg
5 GHz	<b>1.076</b> W/kg	<b>1.141</b> W/kg

Application Type : Certification

The above equipment has been tested by DEKRA, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report.

Documented By : Peggy Tu  
 ( Adm. Assistant / Peggy Tu )

Tested By : Vorana Chen  
 ( Senior Engineer / Vorana Chen )

Approved By : [Signature]  
 ( Director / Vincent Lin )

## TABLE OF CONTENTS

Description	Page
<b>1. General Information</b> .....	<b>5</b>
1.1 EUT Description .....	5
1.2 Antenna List .....	6
1.3 SAR Test Exclusion Calculation .....	7
1.4 Test Environment.....	11
<b>2. SAR Measurement System</b> .....	<b>12</b>
2.1 DASY5 System Description.....	12
2.1.1 Applications.....	13
2.1.2 Area Scans.....	13
2.1.3 Zoom Scan (Cube Scan Averaging).....	13
2.1.4 Uncertainty of Inter-/Extrapolation and Averaging .....	13
2.2 DASY5 E-Field Probe.....	14
2.2.1 Isotropic E-Field Probe Specification.....	14
2.3 Boundary Detection Unit and Probe Mounting Device .....	15
2.4 DATA Acquisition Electronics (DAE) and Measurement Server .....	15
2.5 Robot.....	16
2.6 Light Beam Unit.....	16
2.7 Device Holder.....	17
2.8 SAM Twin Phantom.....	17
<b>3. Tissue Simulating Liquid</b> .....	<b>18</b>
3.1 The composition of the tissue simulating liquid .....	18
3.2 Tissue Calibration Result.....	18
3.3 Tissue Dielectric Parameters for Head and Body Phantoms .....	20
<b>4. SAR Measurement Procedure</b> .....	<b>21</b>
4.1 SAR System Check.....	21
4.1.1 Dipoles .....	21
4.1.2 System Check Result.....	21
4.2 SAR Measurement Procedure .....	23
<b>5. SAR Exposure Limits</b> .....	<b>24</b>
<b>6. Test Equipment List</b> .....	<b>25</b>
<b>7. Measurement Uncertainty</b> .....	<b>26</b>
<b>8. Conducted Power Measurement (Including tolerance allowed for production unit)</b> .....	<b>28</b>
<b>9. Test Results</b> .....	<b>31</b>
9.1 SAR Test Results Summary .....	31
9.2 Simultaneous Transmission .....	35
9.2.1 Simultaneous transmission of MIMO in 802.11 test exclusion considerations.....	35
9.2.2 simultaneous transmission of Wi-Fi and other wireless technologies .....	37
<b>10. SAR measurement variability</b> .....	<b>39</b>
Appendix	
Appendix A. SAR System Check Data	
Appendix B. SAR measurement Data	
Appendix C. Test Setup Photographs & EUT Photographs	
Appendix D. Probe Calibration Data	
Appendix E. Dipole Calibration Data	

## Revision History

Report No.	Version	Description	Issued Date
20B0091R-E3082130003	V1.0	Initial issue of report.	2020-11-30

## 1. General Information

### 1.1 EUT Description

Product Name	Notebook Computers				
Trade Name	LG				
Model No.	14T90P,14TD90P,14TG90P,14TB90P				
FCC ID	BEJNT-14T90P				
TX Frequency	802.11b/g/n/ax-20MHz:2412MHz~2472MHz 802.11n/ax-40MHz: 2422MHz~2462MHz 802.11a/n/ax-20:5180-5320MHz,5500-5720MHz, 5745-5825MHz 802.11n/ax-40MHz: 5190-5310MHz, 5510-5670MHz, 5755-5795MHz 802.11ac/ax-20MHz: 5720MHz, 802.11ac/ax-40MHz: 5710MHz 802.11ac/ax-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz 802.11ac/ax-160: 5250MHz, 5570MHz, BT : 2402 – 2480MHz				
Channel separation	802.11b/g/n/ax-20MHz: 13, n/ax-40MHz: 9 802.11a/n/ax-20MHz: 24; 802.11n/ax-40MHz: 11 802.11ac/ax-20MHz: 1, 802.11ac/ax-40MHz: 1,802.11ac/ax-80MHz: 6 802.11ac/ax-160MHz: 2, BT : 79 , BLE : 40				
Number of Channels	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps 802.11ac-80MHz: up to 866.7MHz, 802.11ac-160MHz: up to 1733MHz 802.11ax-20MHz:17.2-286.8Mbps, 802.11ax-40MHz:34.4-573.5Mbps 802.11ax-80MHz:72.1-1201Mbps, 802.11ax-160MHz:144.1-2402Mbps BT : 3Mbps , BLE : 1Mbps				
Data Rate	802.11b/g/n-20/ax-20/n-40/ax40: 5 MHz 802.11a/n/ac/ax-20MHz: 20MHz 802.11n-40/ac/ax-40MHz: 40MHz, 802.11ac/ax-80MHz: 80MHz 802.11ac/ax-160MHz: 320MHz, BT : 1MHz , BLE : 2MHz				
Type of Modulation	802.11b:DSSS, DBPSK, DQPSK, CCK 802.11a/g/n/ac: OFDM, BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM FHSS: GFSK(1Mbps) / $\pi$ /4DQPSK(2Mbps) / 8DPSK(3Mbps)				
Antenna Type	PIFA				
Device Category	Portable				
RF Exposure Environment	Uncontrolled				
Summary of test result –Reported 1g SAR (W/Kg)					
Test configuration	DTS(Main)	DTS(Aux)	U-NII(Main)	U-NII(Aux)	DTS(BT)
Body-Standalone (Yageo)	1.167	0.983	1.076	0.732	0.271
Body-Standalone (Hong-Bo)	0.911	0.633	0.795	1.141	0.226
Test configuration	DTS (Main + Aux)		U-NII (Main + Aux)		UNII (Main+Aux)+BT
Body-Simultaneous (Yageo)	1.727 (SPLSR=0.04)		1.808 (SPLSR=0.04)		1.808 (SPLSR=0.04)
Body-Simultaneous (Hong-Bo)	1.554		1.936 (SPLSR=0.04)		1.936 (SPLSR=0.04)
When BT and WIFI transmitter does simultaneously transmitter, WIFI will transmit on Main and BT will transmit on Aux					
Model Difference: All models are electrically identical, different model names are for marketing purpose.					

## 1.2 Antenna List

No.	Manufacturer	Part No.(Vendor)	Antenna Type	Peak Gain
1	YAGEO	DQ601419200 (Main) DQ601419200(Aux)	PIFA	1.16dBi for 2.4GHz 2.15dBi for 5.15~5.25GHz 1.92dBi for 5.25~5.35GHz 2.53dBi for 5.47~5.725GHz 2.67dBi for 5.725~5.850GHz
2	Hong-Bo	260-23806 (Main) 260-23806 (Aux)	PIFA	0.24dBi for 2.4GHz -0.85dBi for 5.15~5.25GHz -0.85dBi for 5.25~5.35GHz 0.58dBi for 5.47~5.725GHz 0.45dBi for 5.725~5.850GHz

### 1.3 SAR Test Exclusion Calculation

According to KDB Publication 447498 D01, section 4.3.1, per the calculations of item 1 (Power(mW)/separation (mm)\*sqrt(f(GHz)≤3.0), SAR is required as shown in the table below where calculated values are greater than 3.0 :

According to KDB Publication 616217 D04, section 4.2.b), When between the antenna and user is more than 5mm, edge SAR is not required for NB mode.

#### NB Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna < 50mm from the user :

Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value (≤3.0 SAR is not required)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Main	WiFi	2462	14.5	28	13	218	65	223	3	204	3.4	>50mm	>50mm	>50mm	8.8	>50mm
Main	WiFi	5240	7.5	6	13	218	65	223	3	204	1.0	>50mm	>50mm	>50mm	2.6	>50mm
Main	WiFi	5320	7.5	6	13	218	65	223	3	204	1.0	>50mm	>50mm	>50mm	2.6	>50mm
Main	WiFi	5700	8.5	7	13	218	65	223	3	204	1.3	>50mm	>50mm	>50mm	3.4	>50mm
Main	WiFi	5825	8.5	7	13	218	65	223	3	204	1.3	>50mm	>50mm	>50mm	3.4	>50mm

#### NB Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna > 50mm from the user :

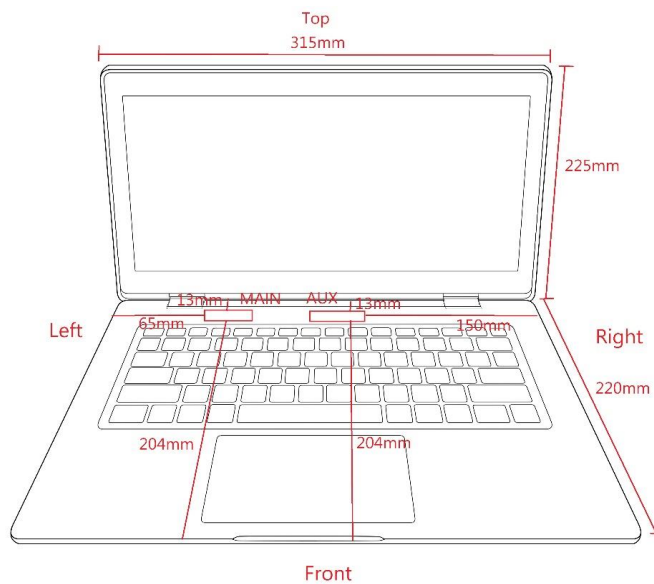
Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value (SAR test exclusion power,mW)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Main	WiFi	2462	14.5	28	13	218	65	223	3	204	<50mm	1775.6	245.6	1825.6	<50mm	1635.6
Main	WiFi	5240	7.5	6	13	218	65	223	3	204	<50mm	1745.5	215.5	1795.5	<50mm	1605.5
Main	WiFi	5320	7.5	6	13	218	65	223	3	204	<50mm	1745.0	215.0	1795.0	<50mm	1605.0
Main	WiFi	5700	8.5	7	13	218	65	223	3	204	<50mm	1742.8	212.8	1792.8	<50mm	1602.8
Main	WiFi	5825	8.5	7	13	218	65	223	3	204	<50mm	1742.2	212.2	1792.2	<50mm	1602.2

**NB Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna < 50mm from the user :**

Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value ( $\leq 3.0$ SAR is not required)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Aux	WiFi	2462	14.5	28	13	150	115	223	3	204	3.4	>50mm	>50mm	>50mm	8.8	>50mm
Aux	WiFi	5240	7.5	6	13	150	115	223	3	204	1.0	>50mm	>50mm	>50mm	2.6	>50mm
Aux	WiFi	5320	7.5	6	13	150	115	223	3	204	1.0	>50mm	>50mm	>50mm	2.6	>50mm
Aux	WiFi	5700	8.5	7	13	150	115	223	3	204	1.3	>50mm	>50mm	>50mm	3.4	>50mm
Aux	WiFi	5825	8.5	7	13	150	115	223	3	204	1.3	>50mm	>50mm	>50mm	3.4	>50mm
Aux	BT	2480	9.5	9	13	150	115	223	3	204	1.1	>50mm	>50mm	>50mm	2.8	>50mm

**NB Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna > 50mm from the user :**

Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value (SAR test exclusion power,mW)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Aux	WiFi	2462	14.5	28	13	150	115	223	3	204	<50mm	1095.6	745.6	1825.6	<50mm	1635.6
Aux	WiFi	5240	7.5	6	13	150	115	223	3	204	<50mm	1065.5	715.5	1795.5	<50mm	1605.5
Aux	WiFi	5320	7.5	6	13	150	115	223	3	204	<50mm	1065.0	715.0	1795.0	<50mm	1605.0
Aux	WiFi	5700	8.5	7	13	150	115	223	3	204	<50mm	1062.8	712.8	1792.8	<50mm	1602.8
Aux	WiFi	5825	8.5	7	13	150	115	223	3	204	<50mm	1062.2	712.2	1792.2	<50mm	1602.2
Aux	BT	2480	9.5	9	13	150	115	223	3	204	<50mm	1095.3	745.3	1825.3	<50mm	1635.3





**PAD Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna < 50mm from the user :**

Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value (≤3.0 SAR is not required)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Main	WiFi	2462	14.5	28	3	218	65	204	6	3	8.8	>50mm	>50mm	>50mm	7.4	8.8
Main	WiFi	5240	7.5	6	3	218	65	204	6	3	2.6	>50mm	>50mm	>50mm	2.1	2.6
Main	WiFi	5320	7.5	6	3	218	65	204	6	3	2.6	>50mm	>50mm	>50mm	2.2	2.6
Main	WiFi	5700	8.5	7	3	218	65	204	6	3	3.4	>50mm	>50mm	>50mm	2.8	3.4
Main	WiFi	5825	8.5	7	3	218	65	204	6	3	3.4	>50mm	>50mm	>50mm	2.8	3.4

**PAD Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna > 50mm from the user :**

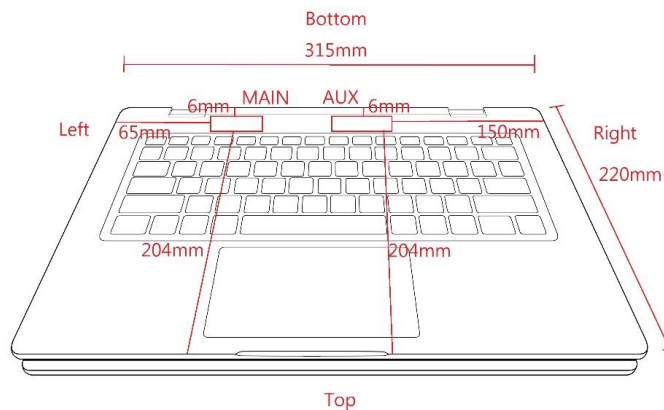
Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value (SAR test exclusion power,mW)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Main	WiFi	2462	14.5	28	3	218	65	204	6	3	<50mm	1775.6	245.6	1635.6	<50mm	<50mm
Main	WiFi	5240	7.5	6	3	218	65	204	6	3	<50mm	1745.5	215.5	1605.5	<50mm	<50mm
Main	WiFi	5320	7.5	6	3	218	65	204	6	3	<50mm	1745.0	215.0	1605.0	<50mm	<50mm
Main	WiFi	5700	8.5	7	3	218	65	204	6	3	<50mm	1742.8	212.8	1602.8	<50mm	<50mm
Main	WiFi	5825	8.5	7	3	218	65	204	6	3	<50mm	1742.2	212.2	1602.2	<50mm	<50mm

**PAD Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna < 50mm from the user :**

Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value ( $\leq 3.0$ SAR is not required)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Aux	WiFi	2462	14.5	28	3	150	115	204	6	3	8.8	>50mm	>50mm	>50mm	7.4	8.8
Aux	WiFi	5240	7.5	6	3	150	115	204	6	3	2.6	>50mm	>50mm	>50mm	2.1	2.6
Aux	WiFi	5320	7.5	6	3	150	115	204	6	3	2.6	>50mm	>50mm	>50mm	2.2	2.6
Aux	WiFi	5700	8.5	7	3	150	115	204	6	3	3.4	>50mm	>50mm	>50mm	2.8	3.4
Aux	WiFi	5825	8.5	7	3	150	115	204	6	3	3.4	>50mm	>50mm	>50mm	2.8	3.4
Aux	BT	2480	9.5	9	3	150	115	204	6	3	2.8	>50mm	>50mm	>50mm	2.3	2.8

**PAD Mode SAR exclusion calculations for WiFi-SISO and Bluetooth for antenna > 50mm from the user :**

Antenna	Tx	Frequency (MHz)	Output Power		Separation distances (mm)						Calculated Threshold Value (SAR test exclusion power,mW)					
			dBm	mW	Back	Right	Left	Top	Bottom	Front	Back	Right	Left	Top	Bottom	Front
Aux	WiFi	2462	14.5	28	3	150	115	204	6	3	<50mm	1095.6	745.6	1635.6	<50mm	<50mm
Aux	WiFi	5240	7.5	6	3	150	115	204	6	3	<50mm	1065.5	715.5	1605.5	<50mm	<50mm
Aux	WiFi	5320	7.5	6	3	150	115	204	6	3	<50mm	1065.0	715.0	1605.0	<50mm	<50mm
Aux	WiFi	5700	8.5	7	3	150	115	204	6	3	<50mm	1062.8	712.8	1602.8	<50mm	<50mm
Aux	WiFi	5825	8.5	7	3	150	115	204	6	3	<50mm	1062.2	712.2	1602.2	<50mm	<50mm
Aux	BT	2480	9.5	9	3	150	115	204	6	3	<50mm	1095.3	745.3	1635.3	<50mm	<50mm



## 1.4 Test Environment

Ambient conditions in the laboratory:

Test Date: Nov. 18, 2020

Items	Required	Actual
Temperature (°C)	18-25	23.8± 2
Humidity (%RH)	30-70	53

Test Date: Nov. 23, 2020

Items	Required	Actual
Temperature (°C)	18-25	23.5± 2
Humidity (%RH)	30-70	50

**USA : FCC Registration Number: TW3023**

**Canada : IC Registration Number: 4075A**

Site Description : Accredited by TAF  
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd  
Address : No.5-22, Ruishukeng, Linkou Dist.,  
New Taipei City 24451, Taiwan, R.O.C.

Phone number : 886-2-8601-3788

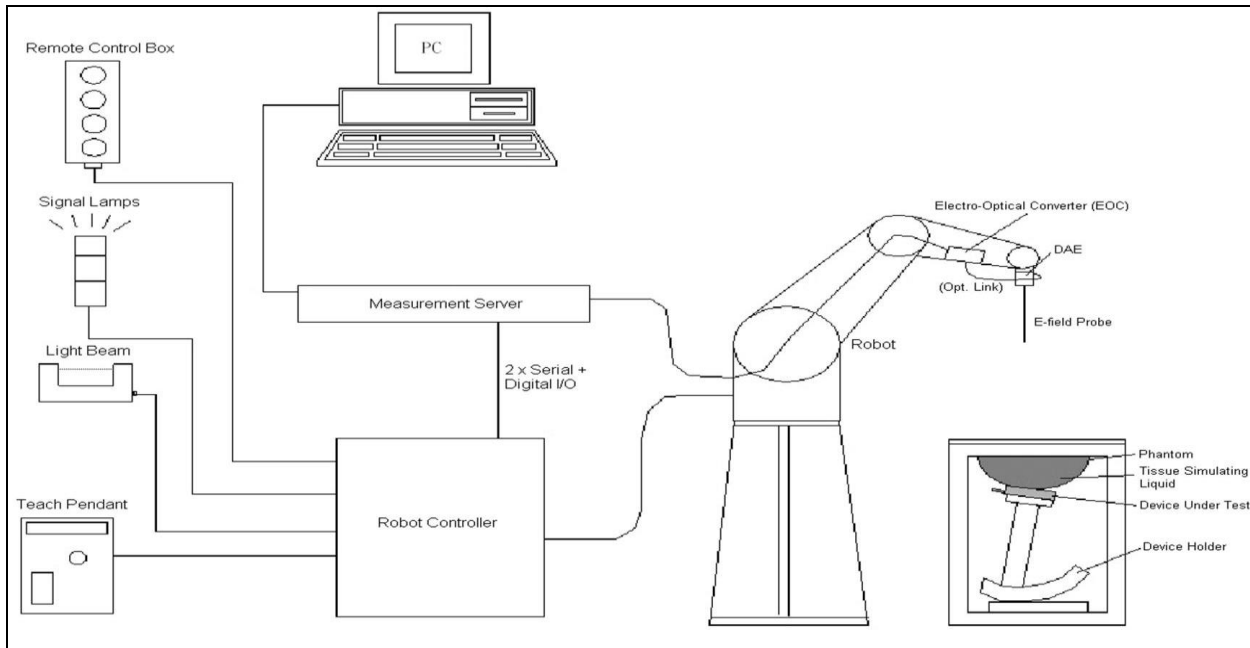
Fax number : 886-2-8601-3789

Email address : [info.tw@dekra.com](mailto:info.tw@dekra.com)

Website : <http://www.dekra.com.tw>

## 2. SAR Measurement System

### 2.1 DASY5 System Description



The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

### **2.1.1 Applications**

Predefined procedures and evaluations for automated compliance testing with all worldwide standards, e.g., IEEE 1528, OET 65, IEC 62209-1, IEC 62209-2, EN 50360, EN 50383 and others.

### **2.1.2 Area Scans**

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 10mm<sup>2</sup> step integral, with 1mm interpolation used to locate the peak SAR area used for zoom scan assessments.

When an Area Scan has measured all reachable points, it computes the field maxima found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE 1528-2013, EN 50361 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan).

### **2.1.3 Zoom Scan (Cube Scan Averaging)**

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. A density of 1000 kg/m<sup>3</sup> is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 5x5x7 (8mmx8mmx5mm) providing a volume of 32mm in the X & Y axis, and 30mm in the Z axis.

### **2.1.4 Uncertainty of Inter-/Extrapolation and Averaging**

In order to evaluate the uncertainty of the interpolation, extrapolation and averaged SAR calculation algorithms of the Postprocessor, DASY5 allows the generation of measurement grids which are artificially predefined by analytically based test functions. Therefore, the grids of area scans and zoom scans can be filled with uncertainty test data, according to the SAR benchmark functions of IEEE 1528. The three analytical functions shown in equations as below are used to describe the possible range of the expected SAR distributions for the tested handsets. The field gradients are covered by the spatially flat

distribution  $f_1$ , the spatially steep distribution  $f_3$  and  $f_2$  accounts for H-field cancellation on the phantom/tissue surface.

$$f_1(x, y, z) = Ae^{-\frac{z}{2a}} \cos^2 \left( \frac{\pi \sqrt{x'^2 + y'^2}}{2 \cdot 5a} \right)$$

$$f_2(x, y, z) = Ae^{-\frac{z}{a}} \frac{a^2}{a^2 + x'^2} \left( 3 - e^{-\frac{2z}{a}} \right) \cos^2 \left( \frac{\pi y'}{2 \cdot 3a} \right)$$


$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \left( e^{-\frac{2z}{a}} + \frac{a^2}{2(a + 2z)^2} \right)$$

## 2.2 DASY5 E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency.

SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528, EN 62209-1, IEC 62209, etc.) under ISO 17025. The calibration data are in Appendix D.

### 2.2.1 Isotropic E-Field Probe Specification

Model	Ex3DV4	
<b>Construction</b>	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
<b>Frequency</b>	10 MHz to 6 GHz Linearity: $\pm 0.2$ dB (30 MHz to 6 GHz)	
<b>Directivity</b>	$\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)	
<b>Dynamic Range</b>	10 $\mu$ W/g to 100 mW/g Linearity: $\pm 0.2$ dB (noise: typically $< 1$ $\mu$ W/g)	
<b>Dimensions</b>	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	
<b>Application</b>	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.	

### 2.3 Boundary Detection Unit and Probe Mounting Device

The DASY probes use a precise connector and an additional holder for the probe, consisting of a plastic tube and a flexible silicon ring to center the probe. The connector at the DAE is flexibly mounted and held in the default position with magnets and springs. Two switching systems in the connector mount detect frontal and lateral probe collisions and trigger the necessary software response.



### 2.4 DATA Acquisition Electronics (DAE) and Measurement Server

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit.

Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE4 is 200M Ohm; the inputs are symmetrical and floating. Common mode rejection is above 80dB.



The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chipdisk and 128MB RAM. The necessary circuits for communication with the DAE electronics box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.



## 2.5 Robot

The DASY5 system uses the high precision robots TX90 XL type out of the newer series from Stäubli SA (France). For the 6-axis controller DASY5 system, the CS8C robot controller version from Stäubli is used.

The XL robot series have many features that are important for our application:

- High precision (repeatability 0.02 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)
- 6-axis controller



## 2.6 Light Beam Unit

The light beam switch allows automatic “tooling” of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.





## 2.7 Device Holder

The DASY5 device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The DASY5 device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity  $\epsilon_r = 3$  and loss tangent  $\delta = 0.02$ . The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



## 2.8 SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

- Left head
- Right head
- Flat phantom



The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

### 3. Tissue Simulating Liquid

#### 3.1 The composition of the tissue simulating liquid

INGREDIENT (% Weight)	2450MHz Head	5200MHz Head	5800MHz Head
<b>Water</b>	46.7	67.63	68.29
<b>Salt</b>	0.00	0.00	0.00
<b>Sugar</b>	0.00	0.00	0.00
<b>HEC</b>	0.00	0.00	0.00
<b>Preventol</b>	0.00	0.00	0.00
<b>DGBE</b>	53.3	3.38	2.44
<b>Triton X-100</b>	0.00	28.99	29.27

#### 3.2 Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using APREL Dielectric Probe Kit and Agilent E5071C Vector Network Analyzer.

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		$\epsilon_r$	$\sigma$ [s/m]	
2450 MHz	Reference result $\pm 5\%$ window	39.2 37.24 to 41.16	1.8 1.71 to 1.89	N/A
	18-Nov-20	39.20	1.81	22.5
2412 MHz	Low channel	39.32	1.76	22.5
2437 MHz	Mid channel	39.24	1.79	22.5
2480 MHz	High channel	39.11	1.85	22.5

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		$\epsilon_r$	$\sigma$ [s/m]	
5250 MHz	Reference result $\pm 5\%$ window	35.95 34.15 to 37.75	4.71 4.47 to 4.95	N/A
	23-Nov-20	36.42	4.71	22.0
5210 MHz	Channel 42	36.50	4.67	22.0
5290 MHz	Channel 58	36.28	4.78	22.0

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		$\epsilon_r$	$\sigma$ [s/m]	
5600 MHz	Reference result $\pm 5\%$ window	35.5 33.73 to 37.28	5.07 4.82 to 5.32	N/A
	23-Nov-20	35.42	5.20	22.0
5530 MHz	Low channel	36.01	4.83	22.0
5610 MHz	Mid channel	35.4	5.21	22.0
5690 MHz	High channel	35.18	5.31	22.0

Head Tissue Simulate Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp. [°C]
		$\epsilon_r$	$\sigma$ [s/m]	
5800 MHz	Reference result $\pm 5\%$ window	35.3 33.54 to 37.07	5.27 5.01 to 5.53	N/A
	23-Nov-20	34.87	5.46	22.0
5775 MHz	Channel 155	34.94	5.42	22.0

### 3.3 Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEC 62209-1 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head tissue parameters that have not been specified are interpolated according to the head parameters specified in IEC 62209-1

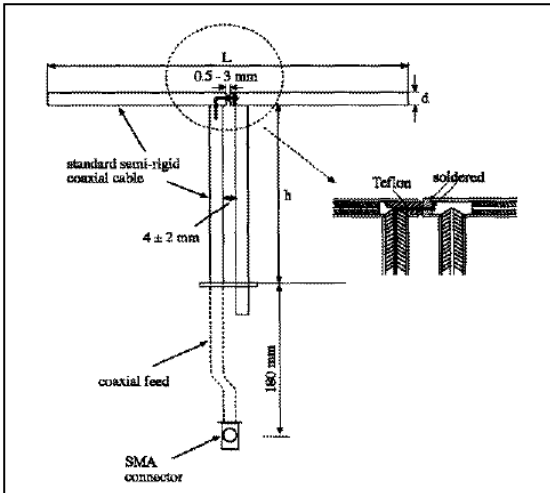
Target Frequency (MHz)	Head	
	$\epsilon_r$	$\sigma$ (S/m)
300	45.3	0.87
450	43.5	0.87
750	41.9	0.89
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1640	40.2	1.31
1750	40.1	1.37
1800 – 2000	40.0	1.40
2450	39.2	1.80
3000	38.5	2.40
5000	36.2	4.45
5200	36.0	4.66
5400	35.8	4.86
5600	35.3	5.27
5800	35.3	5.27
6000	35.1	5.48

( $\epsilon_r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho = 1000 \text{ kg/m}^3$ )

## 4. SAR Measurement Procedure

### 4.1 SAR System Check

#### 4.1.1 Dipoles



The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. the table below provides details for the mechanical and electrical specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
2450MHz	51.5	30.4	3.6
5200M~5800MHz	20.6	40.3	3.6

#### 4.1.2 System Check Result

System Performance Check at 2450MHz				
Dipole Kit: D2450V2				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
2450 MHz	Reference result ± 10% window	53.1 47.79 to 58.41	24.6 22.14 to 27.06	N/A
	18-Nov-20	51.2	23.64	22.5

Note: (1) The power level is used 250mW  
 (2) All SAR values are normalized to 1W forward power.  
 (3) The reference result is from Appendix E.

<b>System Performance Check at 5250MHz</b>				
<b>Dipole Kit: D5GHzV2</b>				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
5250 MHz	Reference result ± 10% window	81.6 73.44 to 89.76	23.2 20.88 to 25.52	N/A
	23-Nov-20	85	24.5	22.0
Note: (1) The power level is used 100mW (2) All SAR values are normalized to 1W forward power. (3) The reference result is from Appendix E.				

<b>System Performance Check at 5600MHz</b>				
<b>Dipole Kit: D5GHzV2</b>				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
5600 MHz	Reference result ± 10% window	85.9 77.31 to 94.49	24.2 21.78 to 26.62	N/A
	23-Nov-20	87	25.1	22.0
Note: (1) The power level is used 100mW (2) All SAR values are normalized to 1W forward power. (3) The reference result is from Appendix E.				

<b>System Performance Check at 5800MHz</b>				
<b>Dipole Kit: D5GHzV2</b>				
Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
5800 MHz	Reference result ± 10% window	82.0 73.80 to 90.20	22.8 20.52 to 25.08	N/A
	23-Nov-20	76.4	21.7	22.0
Note: (1) The power level is used 100mW (2) All SAR values are normalized to 1W forward power. (3) The reference result is from Appendix E.				

## 4.2 SAR Measurement Procedure

The Dasy5 calculates SAR using the following equation,

$$SAR = \frac{\sigma |E|^2}{\rho}$$

$\sigma$ : represents the simulated tissue conductivity

$\rho$ : represents the tissue density

The EUT is set to transmit at the required power in line with product specification, at each frequency relating to the LOW, MID, and HIGH channel settings.

Pre-scans are made on the device to establish the location for the transmitting antenna, using a large area scan in either air or tissue simulation fluid.

The EUT is placed against the Universal Phantom where the maximum area scan dimensions are larger than the physical size of the resonating antenna. When the scan size is not large enough to cover the peak SAR distribution, it is modified by either extending the area scan size in both the X and Y directions, or the device is shifted within the predefined area.

The area scan is then run to establish the peak SAR location (interpolated resolution set at 1mm<sup>2</sup>) which is then used to orient the center of the zoom scan. The zoom scan is then executed and the 1g and 10g averages are derived from the zoom scan volume (interpolated resolution set at 1mm<sup>3</sup>).

## 5. SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 “Uncontrolled Environments” limits. These limits apply to a location which is deemed as “Uncontrolled Environment” which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

### Limits for General Population/Uncontrolled Exposure (W/kg)

Type Exposure	Uncontrolled Environment Limit
Spatial Peak SAR (1g cube tissue for brain or body)	<b>1.60 W/kg</b>
Spatial Average SAR (whole body)	<b>0.08 W/kg</b>
Spatial Peak SAR (10g for hands, feet, ankles and wrist)	<b>4.00 W/kg</b>



## 6. Test Equipment List

Instrument	Manufacturer	Model No.	Serial No.	Last Calibration	Next Calibration
Stäubli Robot TX60L	Stäubli	TX60L	F09/5BL1A1/A06	2009/05/18	only once
Controller	Speag	CS8c	N/A	2009/05/18	only once
Reference Dipole 2450MHz	Speag	D2450V2	930	2019/11/21	2022/11/20
Reference Dipole 5GHz	Speag	D5GHzV2	1041	2020/05/25	2023/05/24
SAM Twin Phantom	Speag	QD000 P40 CA	Tp 1515	N/A	N/A
Device Holder	Speag	N/A	N/A	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	679	2020/05/06	2021/05/05
E-Field Probe	Speag	EX3DV4	3975	2020/05/20	2021/05/19
SAR Software	Speag	DASY52	V52.10.0.1446	N/A	N/A
Apral Dipole Spaccer	Apral	ALS-DS-U	QTK-295	N/A	N/A
Power Amplifier	Mini-Circuit	ZHL-42	D051404-20	N/A	N/A
Directional Coupler	Agilent	87300C	MY44300353	N/A	N/A <sup>1</sup>
Vector Network	Woken	WATT-218FS-10	N/A	N/A	N/A <sup>1</sup>
Signal Generator	Mini-Circuit	BW-S20W2+	N/A	N/A	N/A <sup>1</sup>
Power Meter	Agilent	E5071C	MY46106342	2020/10/04	2021/10/03
Wide Bandwidth Sensor	Anritsu	MG3694A	041902	2020/08/31	2021/08/30
Power Meter	Anritsu	ML2487A	6K00001447	2020/11/06	2021/11/05
Temperature	Anritsu	MA2411B	1339194	2020/11/06	2021/11/05

Note: 1. System Check, the path loss measured by the network analyzer, includes the signal generator, amplifier, cable, attenuator and directional coupler.

## 7. Measurement Uncertainty

DASY5 Uncertainty (According to IEEE 1528-2013)								
Measurement uncertainty for 30 MHz to 3 GHz								
Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(vi) V <sub>eff</sub>
<b>Measurement System</b>								
Probe Calibration	±6%	N	1	1	1	±6.0%	±6.0%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Modulation Response	±2.4%	R	$\sqrt{3}$	1	1	±1.4%	±1.4%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	$\sqrt{3}$	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±4.0%	R	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
<b>Test Sample Related</b>								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Power Scaling	±0%	R	$\sqrt{3}$	1	1	±0.0%	±0.0%	
<b>Phantom and Setup</b>								
Phantom Uncertainty	±6.1%	R	$\sqrt{3}$	1	1	±3.5%	±3.5%	∞
SAR correction	±1.9%	R	$\sqrt{3}$	1	0.84	±1.1%	±0.9%	∞
Liquid Conductivity (meas.)	±2.5%	R	$\sqrt{3}$	0.78	0.71	±1.1%	±1.0%	∞
Liquid Permittivity (meas.)	±2.5%	R	$\sqrt{3}$	0.26	0.26	±0.3%	±0.4%	∞
Temp. unc. - Conductivity	±3.4%	R	$\sqrt{3}$	0.78	0.71	±1.5%	±1.4%	∞
Temp. unc. - Permittivity	±0.4%	R	$\sqrt{3}$	0.23	0.26	±0.1%	±0.1%	∞
<b>Combined Std. Uncertainty</b>						±11.2%	±11.1%	361
<b>Expanded STD Uncertainty</b>						±22.3%	±22.2%	

<b>DASY5 Uncertainty (According to IEEE 1528-2013)</b>								
<b>Measurement uncertainty for 3GHz to 6 GHz</b>								
Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(vi) V <sub>eff</sub>
<b>Measurement System</b>								
Probe Calibration	±6.55%	N	1	1	1	±6.55%	±6.55%	∞
Axial Isotropy	±4.7%	R	$\sqrt{3}$	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	$\sqrt{3}$	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effects	±2.0%	R	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
Linearity	±4.7%	R	$\sqrt{3}$	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6%	±0.6%	∞
Modulation Response	±2.4%	R	$\sqrt{3}$	1	1	±1.4%	±1.4%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	$\sqrt{3}$	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.8%	R	$\sqrt{3}$	1	1	±0.5%	±0.5%	∞
Probe Positioning	±6.7%	R	$\sqrt{3}$	1	1	±3.9%	±3.9%	∞
Post-processing	±4.0%	R	$\sqrt{3}$	1	1	±2.3%	±2.3%	∞
<b>Test Sample Related</b>								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	$\sqrt{3}$	1	1	±2.9%	±2.9%	∞
Power Scaling	±0%	R	$\sqrt{3}$	1	1	±0.0%	±0.0%	
<b>Phantom and Setup</b>								
Phantom Uncertainty	±6.6%	R	$\sqrt{3}$	1	1	±3.8%	±3.8%	∞
SAR correction	±1.9%	R	$\sqrt{3}$	1	1	±1.1%	±0.9%	∞
Liquid Conductivity (meas.)	±2.5%	R	$\sqrt{3}$	1	0.84	±1.1%	±1.0%	∞
Liquid Permittivity (meas.)	±2.5%	R	$\sqrt{3}$	0.26	0.26	±0.3%	±0.4%	∞
Temp. unc. - Conductivity	±3.4%	R	$\sqrt{3}$	0.78	0.71	±1.5%	±1.4%	∞
Temp. unc. - Permittivity	±0.4%	R	$\sqrt{3}$	0.23	0.26	±0.1%	±0.1%	∞
<b>Combined Std. Uncertainty</b>						±12.3%	±12.2%	748
<b>Expanded STD Uncertainty</b>						±24.6%	±24.5%	

### 8. Conducted Power Measurement (Including tolerance allowed for production unit)

#### WLAN 2.4G 2TX SISO

	Frequency	Mode	BW	SISO-Main(TX1) Chain B				SISO-Aux(TX2) Chain A			
				CH	PK Power	AV Power	AV Target	CH	PK Power	AV Power	AV Target
DSSS/OFDM mode specified maximum output power at an antenna port	WLAN 2.4GHz	b	20	1	16.84	13.98	14.5	1	16.84	13.95	14.5
				6	17.25	14.44	14.5	6	16.94	14.00	14.5
				11	16.89	14.40	14.5	11	16.89	13.99	14.5
				12	16.13	13.87	14.5	12	17.74	13.92	14.5
				13	17.45	13.83	14.5	13	17.52	13.89	14.5
		g	20	1	19.31	13.93	14.5	1	19.49	13.94	14.5
				6	19.09	13.95	14.5	6	19.56	14.00	14.5
				11	19.34	13.96	14.5	11	19.73	14.00	14.5
				12	19.28	13.88	14.5	12	19.58	13.90	14.5
				13	11.51	1.50	1.5	13	12.53	1.96	2
		n (HT)	20	1	19.10	13.92	14.5	1	19.01	14.00	14.5
				6	19.41	13.93	14.5	6	19.22	14.00	14.5
				11	19.48	13.95	14.5	11	19.42	13.98	14.5
				12	19.30	13.90	14.5	12	19.33	14.00	14.5
				13	11.78	1.35	1.5	13	12.50	2.00	2
			40	3	19.90	14.00	14.5	3	19.87	14.00	14.5
				6	19.85	14.00	14.5	6	19.72	13.96	14.5
				9	19.84	14.00	14.5	9	19.60	13.91	14.5
				10	18.49	12.50	12.5	10	18.74	13.00	13
		ax (VHT)	20	1	19.55	13.98	14.5	1	19.53	14.00	14.5
				6	19.50	13.96	14.5	6	19.59	13.98	14.5
				11	19.53	14.00	14.5	11	19.52	14.00	14.5
				12	19.41	13.95	14.5	12	19.68	14.00	14.5
				13	11.85	1.48	1.5	13	11.93	1.97	2
			40	3	19.88	14.00	14.5	3	19.84	14.00	14.5
				6	19.89	13.98	14.5	6	19.81	13.97	14.5
				9	19.67	13.92	14.5	9	19.72	13.95	14.5
				10	18.09	12.43	12.5	10	19.54	12.93	13
				11	15.69	4.99	5	11	14.62	4.89	5

**WLAN 5G 2TX SISO**

OFDM mode specified maximum output power at an antenna port	Frequency	Mode	BW	SISO-Main(TX1) Chain B			SISO-Aux(TX2) Chain A			Frequency	Mode	BW	SISO-Main(TX1) Chain B			SISO-Aux(TX2) Chain A		
				CH	AV Power	AV Target	CH	AV Power	AV Target				CH	AV Power	AV Target	CH	AV Power	AV Target
				U-NII-1 (5150 ~5250MHz)	a	20	36	7.33	7.5				36	7.07	7.5	a	20	52
40	7.30	7.5	40				6.99	7.5	56	7.15	7.5	56	7.07	7.5				
44	7.20	7.5	44				7.12	7.5	60	7.11	7.5	60	7.26	7.5				
48	7.19	7.5	48				7.26	7.5	64	7.09	7.5	64	7.12	7.5				
n(HT)	20	36	7.37		7.5	36	7.18	7.5	n(HT)	20	52	7.31	7.5	52	7.19	7.5		
		40	7.33		7.5	40	7.01	7.5			56	7.19	7.5	56	7.16	7.5		
		44	7.25		7.5	44	7.07	7.5			60	7.16	7.5	60	7.22	7.5		
		48	7.21		7.5	48	7.23	7.5			64	7.10	7.5	64	7.13	7.5		
40	38	7.21	7.5		38	7.01	7.5	40	54	7.07	7.5	54	7.15	7.5				
	46	7.26	7.5		46	7.09	7.5		62	7.03	7.5	62	7.05	7.5				
ac	80	42	6.96		7.5	42	6.96	7.5	ac	80	58	6.98	7.5	58	7.00	7.5		
		160	50		7.41	7.5	50	7.39		7.5								
U-NII-2A (5250 ~5350MHz)	a	20	36		7.16	7.5	36	7.18	7.5	a	20	52	7.22	7.5	52	7.07	7.5	
			40		7.11	7.5	40	7.13	7.5			56	7.08	7.5	56	7.02	7.5	
			44		7.15	7.5	44	7.31	7.5			60	7.05	7.5	60	7.19	7.5	
			48		7.10	7.5	48	7.32	7.5			64	7.01	7.5	64	7.11	7.5	
	40	38	7.18		7.5	38	7.04	7.5	40	54	7.16	7.5	54	7.15	7.5			
		46	7.14		7.5	46	7.03	7.5		62	7.04	7.5	62	7.17	7.5			
	80	42	7.01		7.5	42	7.07	7.5	80	58	6.86	7.5	58	7.13	7.5			
		160	50		7.15	7.5	50	7.25		7.5								
	U-NII-2C (5470 ~5650MHz)	a	20		100	8.19	8.5	100	8.02	8.5	a	20	132	8.19	8.5	132	7.94	8.5
					112	7.93	8.5	112	8.05	8.5			149	8.23	8.5	149	8.14	8.5
					116	8.02	8.5	116	8.01	8.5			165	8.08	8.5	165	8.26	8.5
					128	8.21	8.5	128	7.99	8.5								
		n(HT)	20	100	8.16	8.5	100	8.01	8.5	n(HT)	20	132	8.19	8.5	132	7.93	8.5	
				0	7.89	8.5	112	8.04	8.5			149	8.23	8.5	149	8.13	8.5	
				116	7.99	8.5	116	8.02	8.5			165	8.08	8.5	165	8.28	8.5	
				128	8.22	8.5	128	7.98	8.5									
		40	102	8.26	8.5	102	8.10	8.5	40	134	8.34	8.5	134	8.14	8.5			
			110	8.13	8.5	110	8.07	8.5		151	8.32	8.5	151	8.11	8.5			
			118	8.24	8.5	118	8.26	8.5		159	8.25	8.5	159	8.15	8.5			
			126	8.35	8.5	126	8.01	8.5										
		ac	80	106	8.05	8.5	106	8.15	8.5	ac	20	144	8.08	8.5	144	8.14	8.5	
				122	7.90	8.5	122	7.97	8.5		40	142	8.17	8.5	142	8.29	8.5	
		160	114	7.92	8.5	114	7.92	8.5	80	138	7.85	8.5	138	8.11	8.5			
			155	7.99	8.5	155	7.88	8.5										
U-NII-3 (5725 ~5850MHz)		a	20	100	7.95	8.5	100	8.08	8.5	a	20	132	8.24	8.5	132	8.02	8.5	
				112	8.27	8.5	112	8.11	8.5			149	8.34	8.5	149	8.01	8.5	
				116	8.26	8.5	116	8.07	8.5			165	8.11	8.5	165	8.11	8.5	
				128	8.21	8.5	128	8.05	8.5									
		n(HT)	20	100	7.95	8.5	100	8.08	8.5	n(HT)	20	132	8.24	8.5	132	8.02	8.5	
				112	8.27	8.5	112	8.11	8.5			149	8.34	8.5	149	8.01	8.5	
				116	8.26	8.5	116	8.07	8.5			165	8.11	8.5	165	8.11	8.5	
				128	8.21	8.5	128	8.05	8.5									
	40	102	8.22	8.5	102	8.07	8.5	40	134	8.24	8.5	134	8.14	8.5				
		110	8.06	8.5	110	8.11	8.5		151	8.20	8.5	151	8.08	8.5				
		118	8.19	8.5	118	8.09	8.5		159	8.22	8.5	159	8.01	8.5				
		126	8.25	8.5	126	8.13	8.5											
	80	106	7.89	8.5	106	7.98	8.5	80	20	144	8.01	8.5	144	8.01	8.5			
		122	8.02	8.5	122	8.12	8.5		40	142	7.93	8.5	142	8.18	8.5			
	160	114	8.11	8.5	114	7.12	8.5	80	138	7.99	8.5	138	8.05	8.5				
		155	7.89	8.5	155	7.98	8.5											

**BT Only Support Aux**

Bluetooth mode maximum output power	Frequency	Mode	Modulation	SISO-Main(TX1)				SISO-Aux(TX2)			
				Chain B				Chain A			
				CH	PK Power	AV Power	AV Target	CH	PK Power	AV Power	AV Target
BT 2.4GHz	BR	GFSK	0	N/A	N/A	N/A	0	9.62	7.24	9.50	
			39	N/A	N/A	N/A	39	10.05	7.83	9.50	
			78	N/A	N/A	N/A	78	10.57	8.47	9.50	
	EDR	8DPSK	0	N/A	N/A	N/A	0	9.12	5.54	8.50	
			39	N/A	N/A	N/A	39	9.54	6.07	8.50	
			78	N/A	N/A	N/A	78	9.85	6.46	8.50	
	BLE	GFSK	0	N/A	N/A	N/A	0	8.59	4.61	7.00	
			19	N/A	N/A	N/A	19	8.80	5.06	7.00	
			39	N/A	N/A	N/A	39	9.14	5.47	7.00	

## 9. Test Results

### 9.1 SAR Test Results Summary

SAR MEASUREMENT									
Ambient Temperature (°C) : 22.5 ±2					Relative Humidity (%) : 53				
Liquid Temperature (°C) : 23.8 ±2					Depth of Liquid (cm) : >15				
Test Position Body	Antenna Position	Dist (mm)	Frequency		Conducted Power (dBm)		SAR 1g (W/kg)		Limit (W/kg)
			Channel	MHz	Measurement	Tune-up Limit	Measurement	Tune-up Scaled	
Test Mode: 802.11b_Main_Yageo									
Bottom(NB)	Fixed	0	6	2437	14.44	14.5	0.547	0.555	1.6
Bottom(PAD)	Fixed	0	1	2412	13.98	14.5	0.956	1.078	1.6
Bottom(PAD)	Fixed	0	6	2437	14.44	14.5	1.090	1.105	1.6
Bottom(PAD)	Fixed	0	11	2462	14.40	14.5	1.140	1.167	1.6
Back(PAD)	Fixed	0	6	2437	14.44	14.5	0.658	0.667	1.6
Test Mode: 802.11b_Aux_Yageo									
Bottom(NB)	Fixed	0	1	2412	13.95	14.5	0.749	0.850	1.6
Bottom(NB)	Fixed	0	6	2437	14.00	14.5	0.854	0.958	1.6
Bottom(NB)	Fixed	0	11	2462	13.99	14.5	0.874	0.983	1.6
Bottom(PAD)	Fixed	0	6	2437	14.00	14.5	0.499	0.560	1.6
Back(PAD)	Fixed	0	6	2437	14.00	14.5	0.301	0.338	1.6
Test Mode: BT-1M_Aux_Yageo									
Bottom(NB)	Fixed	0	78	2480	8.47	9.5	0.214	0.271	1.6
<p>Note : 1. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is <math>\leq 1.2</math> W/kg, SAR is not required.</p> <p>2. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is <math>\leq 0.8</math> W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.</p>									

SAR MEASUREMENT									
Ambient Temperature (°C) : 22.5 ±2					Relative Humidity (%): 53				
Liquid Temperature (°C) : 23.8 ±2					Depth of Liquid (cm):>15				
Test Position Body	Antenna Position	Dist (mm)	Frequency		Conducted Power (dBm)		SAR 1g (W/kg)		Limit (W/kg)
			Channel	MHz	Measurement	Tune-up Limit	Measurement	Tune-up Scaled	
Test Mode: 802.11b_Main_Hong-Bo									
Bottom(NB)	Fixed	0	6	2437	14.44	14.5	0.588	0.596	1.6
Bottom(PAD)	Fixed	0	1	2412	13.98	14.5	0.735	0.828	1.6
Bottom(PAD)	Fixed	0	6	2437	14.44	14.5	0.880	0.892	1.6
Bottom(PAD)	Fixed	0	11	2462	14.40	14.5	0.890	0.911	1.6
Back(PAD)	Fixed	0	6	2437	14.44	14.5	0.482	0.489	1.6
Test Mode: 802.11b_Aux_Hong-Bo									
Bottom(NB)	Fixed	0	6	2437	14.00	14.5	0.464	0.521	1.6
Bottom(PAD)	Fixed	0	1	2412	13.98	14.5	0.562	0.633	1.6
Bottom(PAD)	Fixed	0	6	2437	14.00	14.5	0.562	0.631	1.6
Bottom(PAD)	Fixed	0	11	2462	13.99	14.5	0.447	0.503	1.6
Back(PAD)	Fixed	0	6	2437	14.00	14.5	0.492	0.552	1.6
Test Mode: BT-1M_Aux_Hong-Bo									
Bottom(PAD)	Fixed	0	78	2480	8.47	9.5	0.178	0.226	1.6
<p>Note : 1. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required.</p> <p>2. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.</p>									



SAR MEASUREMENT									
Ambient Temperature (°C) : 23.5 ±2					Relative Humidity (%): 50				
Liquid Temperature (°C) : 22.0 ±2					Depth of Liquid (cm):>15				
Test Position Body	Antenna Position	Dist (mm)	Frequency		Conducted Power (dBm)		SAR 1g (W/kg)		Limit (W/kg)
			Channel	MHz	Measurement	Tune-up Limit	Measurement	Tune-up Scaled	
Test Mode: 802.11ac-80M_Main_Yageo									
Bottom(NB)	Fixed	0	58	5290	6.98	7.5	0.617	0.695	1.6
Bottom(NB)	Fixed	0	106	5530	8.05	8.5	0.966	1.071	1.6
Bottom(NB)	Fixed	0	122	5610	7.90	8.5	0.925	1.062	1.6
Bottom(NB)	Fixed	0	138	5690	7.85	8.5	0.926	1.076	1.6
Bottom(NB)	Fixed	0	155	5775	7.99	8.5	0.478	0.538	1.6
Bottom(PAD)	Fixed	0	58	5290	6.98	7.5	0.263	0.296	1.6
Bottom(PAD)	Fixed	0	106	5530	8.05	8.5	0.136	0.151	1.6
Bottom(PAD)	Fixed	0	155	5775	7.99	8.5	0.104	0.117	1.6
Back(PAD)	Fixed	0	58	5290	6.98	7.5	0.134	0.151	1.6
Back(PAD)	Fixed	0	106	5530	8.05	8.5	0.030	0.033	1.6
Back(PAD)	Fixed	0	155	5775	7.99	8.5	0.011	0.012	1.6
Test Mode: 802.11ac-80M_Aux_Yageo									
Bottom(NB)	Fixed	0	58	5290	7.00	7.5	0.514	0.577	1.6
Bottom(NB)	Fixed	0	106	5530	8.15	8.5	0.675	0.732	1.6
Bottom(NB)	Fixed	0	155	5775	7.88	8.5	0.339	0.391	1.6
Bottom(PAD)	Fixed	0	58	5290	7.00	7.5	0.285	0.320	1.6
Bottom(PAD)	Fixed	0	106	5530	8.15	8.5	0.325	0.352	1.6
Bottom(PAD)	Fixed	0	155	5775	7.88	8.5	0.174	0.201	1.6
Back(PAD)	Fixed	0	58	5290	7.00	7.5	0.083	0.093	1.6
Back(PAD)	Fixed	0	106	5530	8.15	8.5	0.118	0.128	1.6
Back(PAD)	Fixed	0	155	5775	7.88	8.5	0.075	0.087	1.6
Note : 1. When multiple transmission modes (802.11 n) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected 2. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required in that exposure configuration. 3. When the reported SAR of the highest measured maximum U-NII-2A for the exposure configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.									

SAR MEASUREMENT									
Ambient Temperature (°C) : 23.5 ±2					Relative Humidity (%) : 50				
Liquid Temperature (°C) : 22.0 ±2					Depth of Liquid (cm):>15				
Test Position Body	Antenna Position	Dist (mm)	Frequency		Conducted Power (dBm)		SAR 1g (W/kg)		Limit (W/kg)
			Channel	MHz	Measurement	Tune-up Limit	Measurement	Tune-up Scaled	
Test Mode: 802.11ac-80M_Main_Hong-Bo									
Bottom(NB)	Fixed	0	58	5290	6.98	7.5	0.235	0.265	1.6
Bottom(NB)	Fixed	0	106	5530	8.26	8.5	0.254	0.268	1.6
Bottom(NB)	Fixed	0	155	5775	8.25	8.5	0.316	0.335	1.6
Bottom(PAD)	Fixed	0	58	5290	6.98	7.5	0.191	0.215	1.6
Bottom(PAD)	Fixed	0	106	5530	8.26	8.5	0.367	0.388	1.6
Bottom(PAD)	Fixed	0	155	5775	8.25	8.5	0.751	0.795	1.6
Back(PAD)	Fixed	0	58	5290	6.98	7.5	0.024	0.027	1.6
Back(PAD)	Fixed	0	106	5530	8.26	8.5	0.155	0.164	1.6
Back(PAD)	Fixed	0	155	5775	8.25	8.5	0.170	0.180	1.6
Test Mode: 802.11ac-80M_Aux_Hong-Bo									
Bottom(NB)	Fixed	0	58	5290	7.38	7.5	0.751	0.772	1.6
Bottom(NB)	Fixed	0	106	5530	8.15	8.5	0.770	0.835	1.6
Bottom(NB)	Fixed	0	122	5610	7.97	8.5	0.799	0.903	1.6
Bottom(NB)	Fixed	0	138	5690	8.11	8.5	0.802	0.877	1.6
Bottom(NB)	Fixed	0	155	5775	7.88	8.5	0.687	0.792	1.6
Bottom(PAD)	Fixed	0	42	5210	6.96	7.5	0.926	1.049	1.6
Bottom(PAD)	Fixed	0	58	5290	7.38	7.5	1.110	1.141	1.6
Bottom(PAD)	Fixed	0	106	5530	8.15	8.5	0.849	0.920	1.6
Bottom(PAD)	Fixed	0	122	5610	7.97	8.5	0.821	0.928	1.6
Bottom(PAD)	Fixed	0	138	5690	8.11	8.5	0.955	1.045	1.6
Bottom(PAD)	Fixed	0	155	5775	7.88	8.5	0.752	0.867	1.6
Back(PAD)	Fixed	0	58	5290	7.38	7.5	0.475	0.488	1.6
Back(PAD)	Fixed	0	106	5530	8.15	8.5	0.441	0.478	1.6
Back(PAD)	Fixed	0	155	5775	7.88	8.5	0.261	0.301	1.6
Note : 1. When multiple transmission modes (802.11 n) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected 2. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required in that exposure configuration. 3. When the reported SAR of the highest measured maximum U-NII-2A for the exposure configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.									

## 9.2 Simultaneous Transmission

Simultaneous Transmission Configurations	
1	WLAN 2.4GHz Main + WLAN 2.4GHz Aux
2	WLAN 2.4GHz Main + BT Aux
3	WLAN 5GHz Main + BT Aux
4	WLAN 5GHz Main + WLAN 5GHz Aux
5	WLAN 5GHz Main + WLAN 5GHz Aux + BT Aux

### 9.2.1 Simultaneous transmission of MIMO in 802.11 test exclusion considerations

ANTENNA:YAGEO						
Frequency (GHz)	Test Position (Body)	WLAN Main SAR (W/Kg)	WLAN Aux SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
2.4	Bottom(NB)	0.555	0.983	1.538	N/A	N/A
2.4	Bottom(PAD)	1.167	0.560	1.727	61.61	0.04
2.4	Back(PAD)	0.667	0.338	1.005	N/A	N/A
5	Bottom(NB)	1.076	0.732	1.808	68.02	0.04
5	Bottom(PAD)	0.296	0.352	0.648	N/A	N/A
5	Back(PAD)	0.151	0.128	0.279	N/A	N/A

ANTENNA:HONG-BO						
Frequency (GHz)	Test Position (Body)	WLAN Main SAR (W/Kg)	WLAN Aux SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
2.4	Bottom(NB)	0.596	0.521	1.117	N/A	N/A
2.4	Bottom(PAD)	0.911	0.633	1.544	N/A	N/A
2.4	Back(PAD)	0.489	0.552	1.041	N/A	N/A
5	Bottom(NB)	0.335	0.903	1.238	N/A	N/A
5	Bottom(PAD)	0.795	1.141	1.936	61.62	0.04
5	Back(PAD)	0.180	0.488	0.668	N/A	N/A

Note : The sum of value is less than 1.6W/Kg or the ratio is determined by  $(SAR1 + SAR2)1.5/R_i$ , rounded to two decimal digits, and must be  $\leq 0.04$  for all antenna pairs in the configuration to qualify for SAR test exclusion.

Yageo Antenna 2.4G

<input type="checkbox"/> <b>Maxima and position w.r.t. Grid Reference Point</b>   associated 1g averages	
<input type="checkbox"/> <b>Zoom Scan (7x7x7) (C:\Users\Owner\Desktop\20B0091R 14T90P\802.11b_11-Bott...</b>	
Max. 1 at (-5.80, 72.00, -3.96) mm	1.14 W/kg
<input type="checkbox"/> <b>Zoom Scan (7x7x7) (C:\Users\Owner\Desktop\20B0091R 14T90P\802.11b_6-Botto...</b>	
Max. 2 at (-4.60, 10.40, -4.22) mm	0.50 W/kg
<input type="checkbox"/> <b>Distances and Separation Ratios</b>	
Max. 1 - Max. 2	Distance [mm]: 61.61

Yageo Antenna 5G

<input type="checkbox"/> <b>Maxima and position w.r.t. Grid Reference Point</b>   associated 1g averages	
<input type="checkbox"/> <b>Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\FCC\WLAN 5G\...</b>	
Max. 1 at (-1.60, -81.20, -2.78) mm	0.93 W/kg
<input type="checkbox"/> <b>Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\FCC\WLAN 5G\...</b>	
Max. 2 at (-3.40, -13.20, -3.03) mm	0.67 W/kg
<input type="checkbox"/> <b>Distances and Separation Ratios</b>	
Max. 1 - Max. 2	Distance [mm]: 68.02

Hong-Bo Antenna 5G

<input type="checkbox"/> <b>Maxima and position w.r.t. Grid Reference Point</b>   associated 1g averages	
<input type="checkbox"/> <b>Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\802.11ac-80M_...</b>	
Max. 1 at (-2.80, 66.40, -3.58) mm	0.75 W/kg
<input type="checkbox"/> <b>Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\802.11ac-80M_...</b>	
Max. 2 at (-4.20, 4.80, -3.73) mm	1.11 W/kg
<input type="checkbox"/> <b>Distances and Separation Ratios</b>	
Max. 1 - Max. 2	Distance [mm]: 61.62

**9.2.2.2 simultaneous transmission of Wi-Fi and other wireless technologies**

When the sum of SAR is larger than the limit, The ratio is determined by  $(SAR1 + SAR2)^{1.5/R_i}$ , rounded to two decimal digits, and must be  $\leq 0.04$  for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion. The estimation result as below:

**For Yageo DTS Band:**

Mode	WLAN Main SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	1.167	0.271	1.438	N/A	N/A

The sum of value is less than 1.6W/Kg, thus simultaneous SAR testing is not needed.

**For Yageo U-NII Band:**

Mode	WLAN Main SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	1.076	0.271	1.347	N/A	N/A

The sum of value is less than 1.6W/Kg, thus simultaneous SAR testing is not needed.

Mode	WLAN Main SAR (W/Kg)	WLAN Aux SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	1.076	0.732	0.271	2.079	N/A	N/A

Mode	WLAN Main SAR (W/Kg)	WLAN Aux SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	1.076	0.732	--	1.808	68.02	0.04
Bottom(NB)	1.076	--	0.271	1.347	N/A	N/A
Bottom(NB)	--	0.732	0.271	1.003	N/A	N/A

The sum of value is less than 1.6W/Kg, thus simultaneous SAR testing is not needed.

Yageo Antenna 5G

Maxima and position w.r.t. Grid Reference Point   associated 1g averages	
Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\FCC\WLAN 5G\...	
Max. 1 at (-1.60, -81.20, -2.78) mm	0.93 W/kg
Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\FCC\WLAN 5G\...	
Max. 2 at (-3.40, -13.20, -3.03) mm	0.67 W/kg
<b>Distances and Separation Ratios</b>	
Max. 1 - Max. 2	Distance [mm]: 68.02

**For Hong-Bo DTS Band:**

Mode	WLAN Main SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	0.911	0.226	1.137	N/A	N/A

The sum of value is less than 1.6W/Kg, thus simultaneous SAR testing is not needed.

**For Hong-Bo U-NII Band:**

Mode	WLAN Main SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	0.795	0.226	1.021	N/A	N/A

The sum of value is less than 1.6W/Kg, thus simultaneous SAR testing is not needed.

Mode	WLAN Main SAR (W/Kg)	WLAN Aux SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	0.795	1.141	0.226	2.162	N/A	N/A

Mode	WLAN Main SAR (W/Kg)	WLAN Aux SAR (W/Kg)	BT SAR (W/Kg)	Simultaneous Transmission (W/Kg)	Antenna pair in mm	Peak location separation ratio
Bottom(NB)	0.795	1.141	--	1.936	61.62	0.04
Bottom(NB)	0.795	--	0.226	1.021	N/A	N/A
Bottom(NB)	--	1.141	0.226	1.367	N/A	N/A

The sum of value is less than 1.6W/Kg, thus simultaneous SAR testing is not needed.

**Hong-Bo Antenna 5G**

<input type="checkbox"/> <b>Maxima and position w.r.t. Grid Reference Point</b>   associated 1g averages	
<input type="checkbox"/> <b>Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\802.11ac-80M_...</b>	
Max. 1 at (-2.80, 66.40, -3.58) mm	0.75 W/kg
<input type="checkbox"/> <b>Zoom Scan (7x7x12) (C:\Users\Owner\Desktop\20B0091R 14T90P\802.11ac-80M_...</b>	
Max. 2 at (-4.20, 4.80, -3.73) mm	1.11 W/kg
<input type="checkbox"/> <b>Distances and Separation Ratios</b>	
Max. 1 - Max. 2	Distance [mm]: 61.62

## 10. SAR measurement variability

- 1) Repeated measurement is not required when the original highest measured SAR is  $< 0.80$  W/kg; steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is  $\geq 0.80$  W/kg, repeat that measurement once.
- 3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is  $> 1.20$  or when the original or repeated measurement is  $\geq 1.45$  W/kg ( $\sim 10\%$  from the 1-g SAR limit).
- 4) Perform a third repeated measurement only if the original, first or second repeated measurement is  $\geq 1.5$  W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

### Yageo Antenna:

Frequency		SAR 1g (W/kg)						
Channel	MHz	Original	First Repeated		Second Repeated		Third Repeated	
			Value	Ratio	Value	Ratio	Value	Ratio
11	2462	1.140	1.130	1.009	N/A	N/A	N/A	N/A
106	5530	0.966	0.902	1.071	N/A	N/A	N/A	N/A

### Hong-Bo Antenna:

Frequency		SAR 1g (W/kg)						
Channel	MHz	Original	First Repeated		Second Repeated		Third Repeated	
			Value	Ratio	Value	Ratio	Value	Ratio
11	2462	0.890	0.880	1.011	N/A	N/A	N/A	N/A
58	5290	1.110	1.060	1.047	N/A	N/A	N/A	N/A

---

**Appendix**

**Appendix A. SAR System Check Data**

**Appendix B. SAR measurement Data**

**Appendix C. Test Setup Photographs & EUT Photographs**

**Appendix D. Probe Calibration Data**

**Appendix E. Dipole Calibration Data**



## Appendix A. SAR System Check Data

Test Laboratory: DEKRA

Date/Time: 2020/11/18

### System Performance Check\_2450MHz-Head

#### DUT: Dipole 2450 MHz; Type: D2450V2

Communication System: UID 10000, CW; Frequency: 2450 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.81$  S/m;  $\epsilon_r = 39.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/2450MHz\_Head/Area Scan (8x9x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 15.5 W/kg

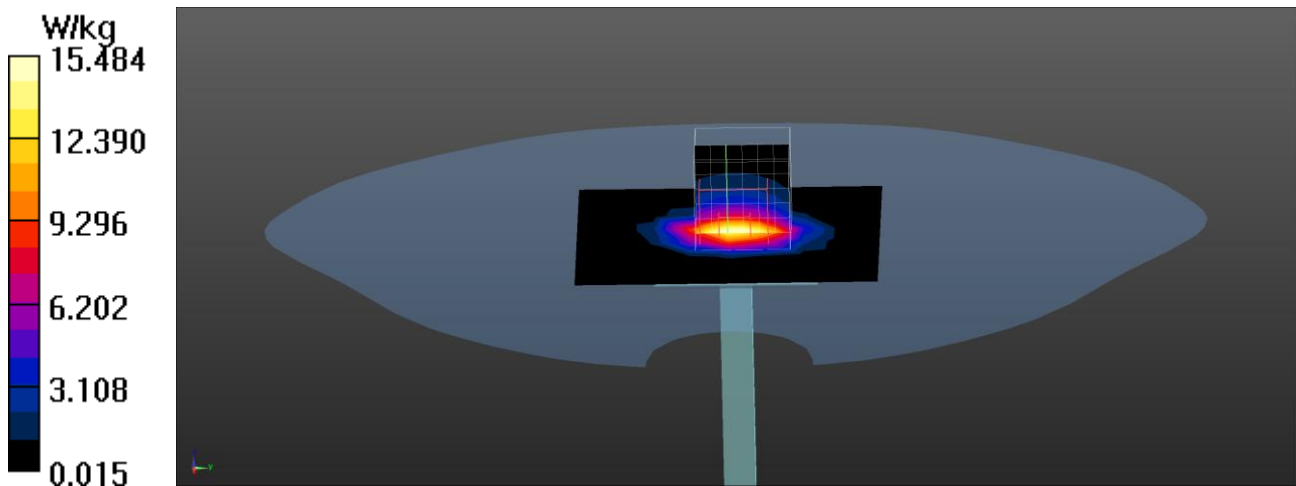
**Configuration/2450MHz\_Head/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.15 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 26.9 W/kg

**SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.91 W/kg**

Maximum value of SAR (measured) = 16.7 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**System Performance Check\_5250MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5250 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5250$  MHz;  $\sigma = 4.71$  S/m;  $\epsilon_r = 36.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.34, 5.34, 5.34); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/5250MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 12.2 W/kg

**Configuration/5250MHz-Head/Zoom Scan (7x7x12), dist=1.4mm (7x7x12)/Cube 0:**

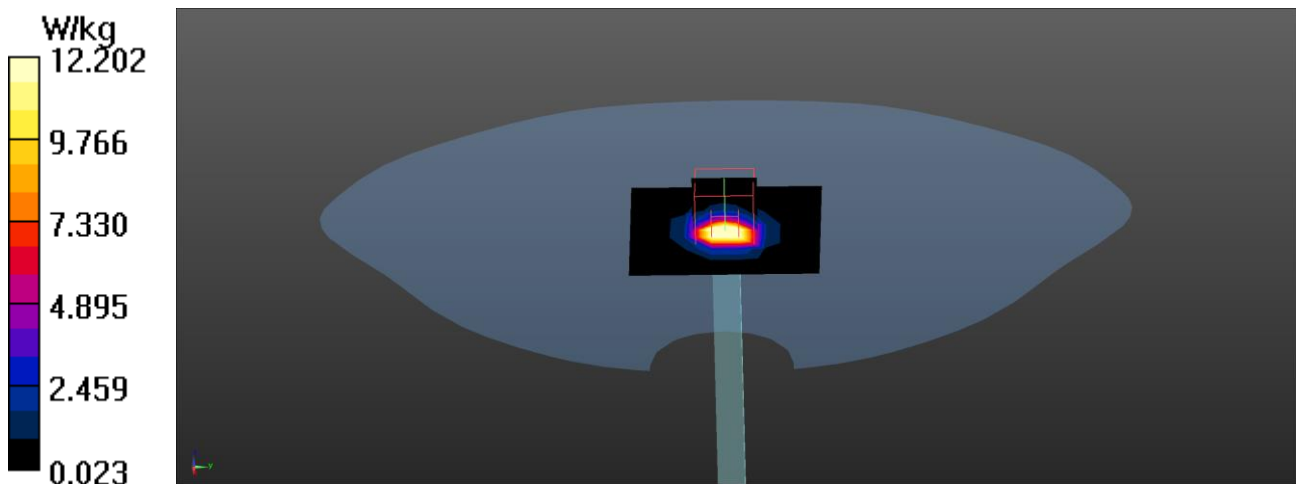
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 77.01 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 30.2 W/kg

**SAR(1 g) = 8.5 W/kg; SAR(10 g) = 2.45 W/kg**

Maximum value of SAR (measured) = 21.4 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**System Performance Check\_5600MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW (0); Frequency: 5600 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.2$  S/m;  $\epsilon_r = 35.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/5600MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 14.7 W/kg

**Configuration/5600MHz-Head/Zoom Scan (7x7x12), dist=1.4mm (7x7x12)/Cube 0:**

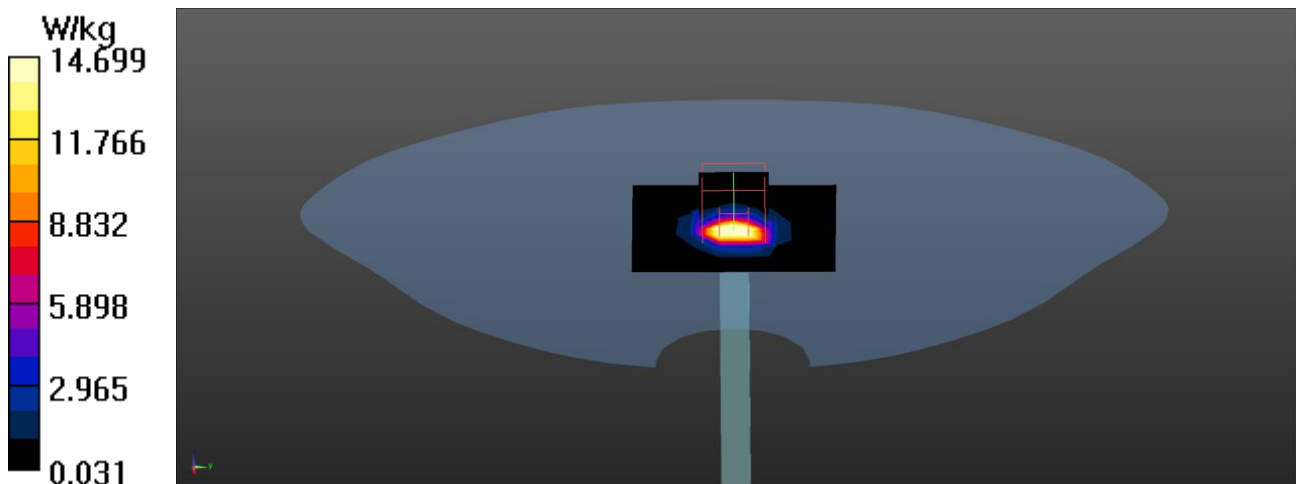
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 76.86 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 35.0 W/kg

**SAR(1 g) = 8.7 W/kg; SAR(10 g) = 2.51 W/kg**

Maximum value of SAR (measured) = 25.4 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**System Performance Check\_5800MHz-Head****DUT: Dipole 5GHz; Type: D5GHzV2**

Communication System: UID 0, CW; Frequency: 5800 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5800$  MHz;  $\sigma = 5.46$  S/m;  $\epsilon_r = 34.87$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/5800MHz-Head/Area Scan (8x8x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 12.0 W/kg

**Configuration/5800MHz-Head/Zoom Scan (7x7x12), dist=1.4mm (7x7x12)/Cube 0:**

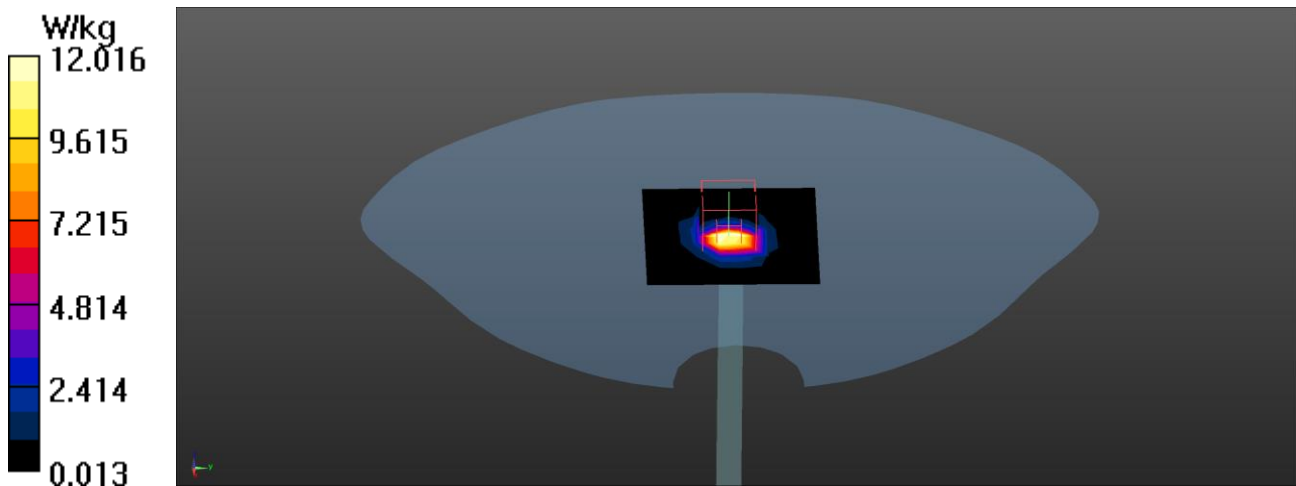
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 67.51 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 32.5 W/kg

**SAR(1 g) = 7.64 W/kg; SAR(10 g) = 2.17 W/kg**

Maximum value of SAR (measured) = 20.2 W/kg



## Appendix B. SAR measurement Data

Test Laboratory: DEKRA

Date/Time: 2020/11/18

### 802.11b\_6-Bottom(NB)-Main Yageo

**DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.687 W/kg

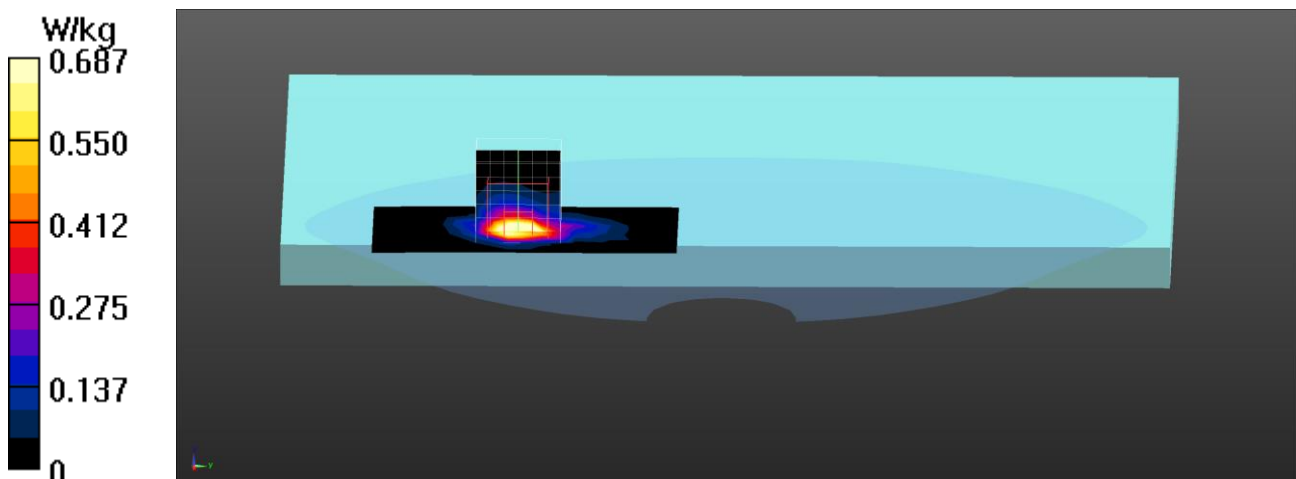
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.422 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.67 W/kg

**SAR(1 g) = 0.547 W/kg; SAR(10 g) = 0.206 W/kg**

Maximum value of SAR (measured) = 1.12 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_1-Bottom(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2412 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.76$  S/m;  $\epsilon_r = 39.32$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.09 W/kg

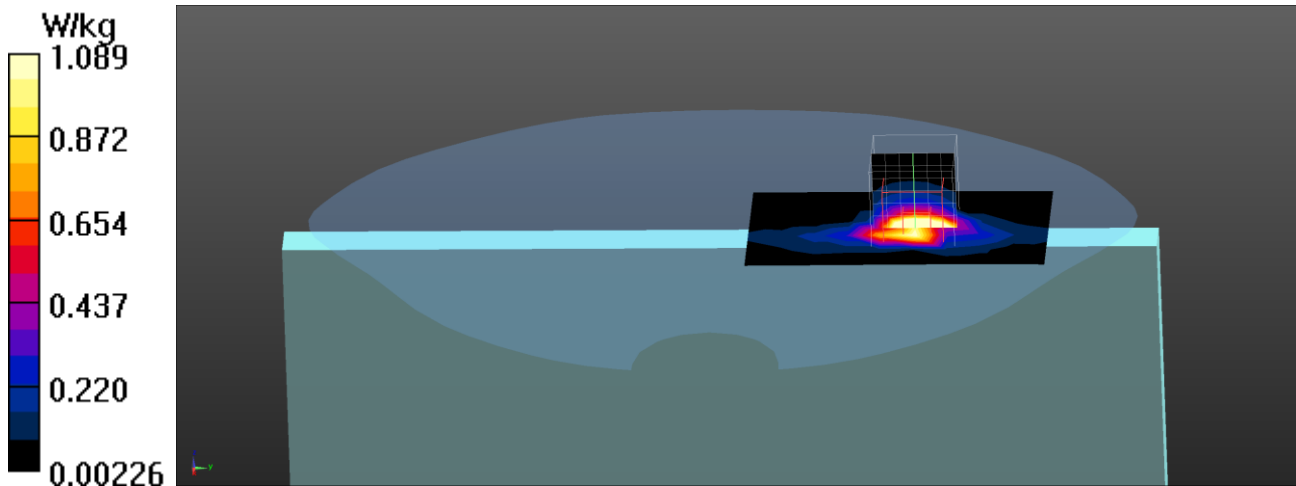
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.881 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.03 W/kg

**SAR(1 g) = 0.956 W/kg; SAR(10 g) = 0.347 W/kg**

Maximum value of SAR (measured) = 2.14 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.38 W/kg

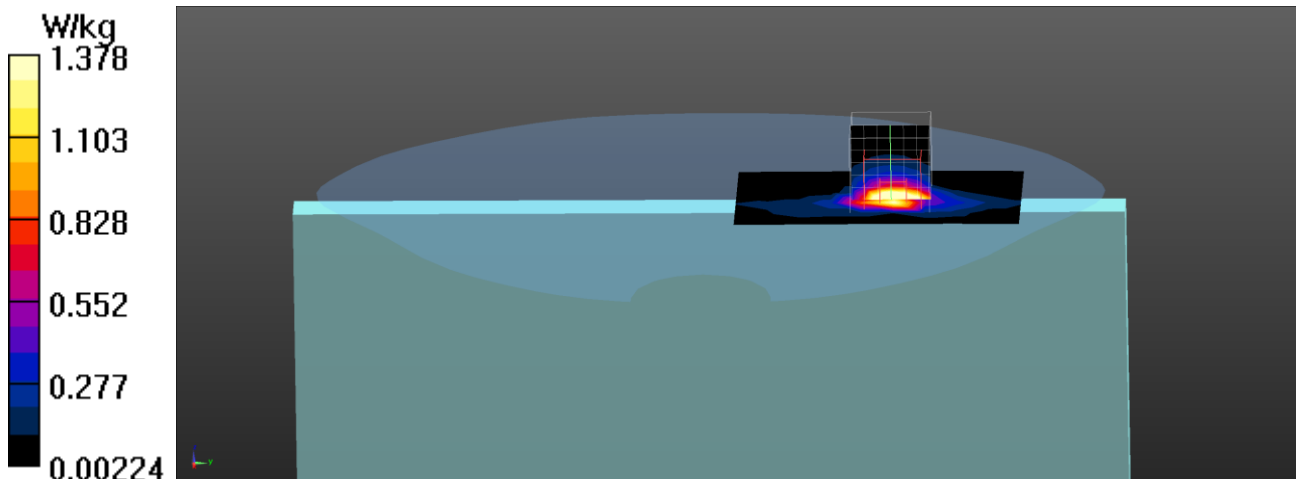
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.422 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.44 W/kg

**SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.384 W/kg**

Maximum value of SAR (measured) = 2.33 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_11-Bottom(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2462 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.83$  S/m;  $\epsilon_r = 39.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.45 W/kg

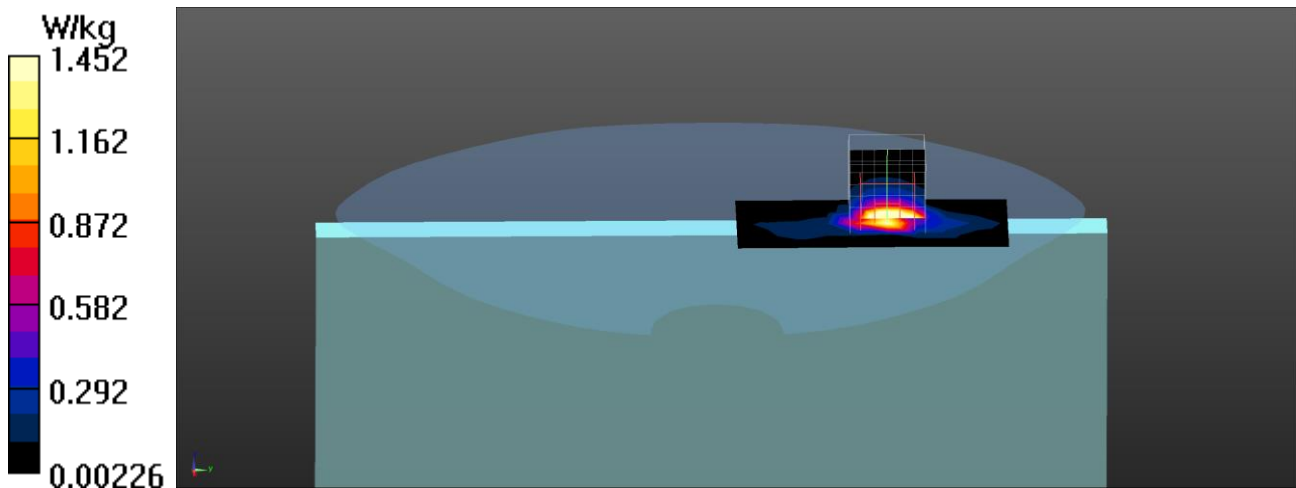
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.831 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 3.64 W/kg

**SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.404 W/kg**

Maximum value of SAR (measured) = 2.56 W/kg





Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Back(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.30 W/kg

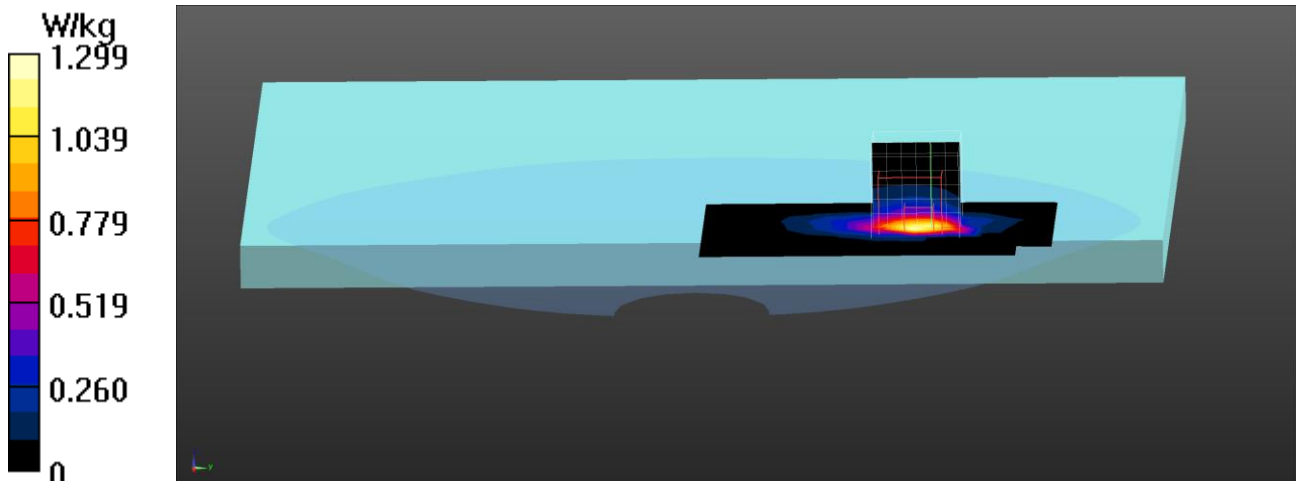
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.950 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.93 W/kg

**SAR(1 g) = 0.658 W/kg; SAR(10 g) = 0.272 W/kg**

Maximum value of SAR (measured) = 1.26 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_1-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2412 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.76$  S/m;  $\epsilon_r = 39.32$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.22 W/kg

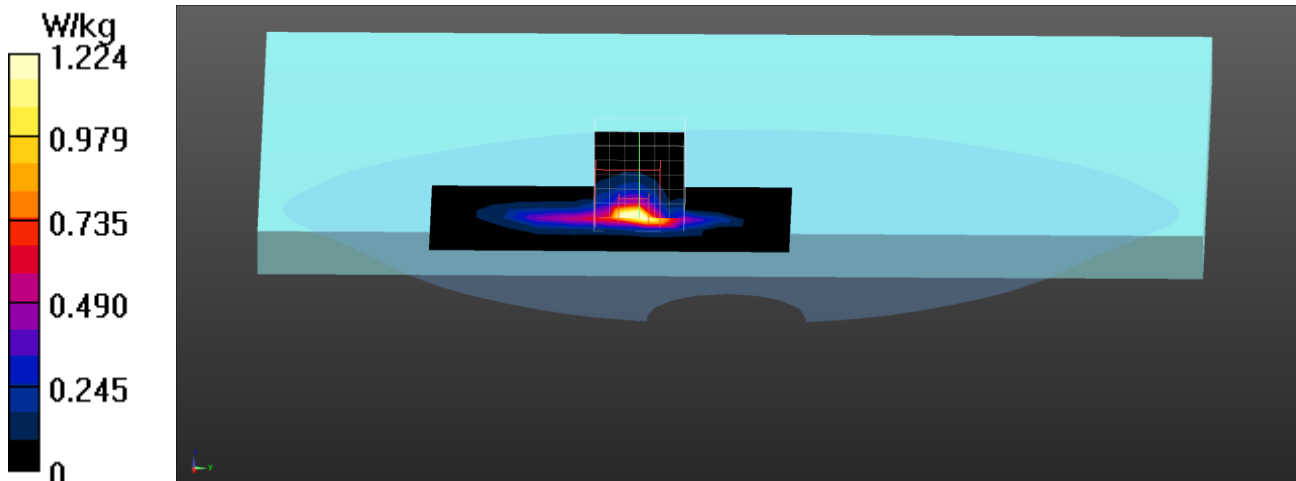
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.115 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 2.46 W/kg

**SAR(1 g) = 0.749 W/kg; SAR(10 g) = 0.255 W/kg**

Maximum value of SAR (measured) = 1.60 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.53 W/kg

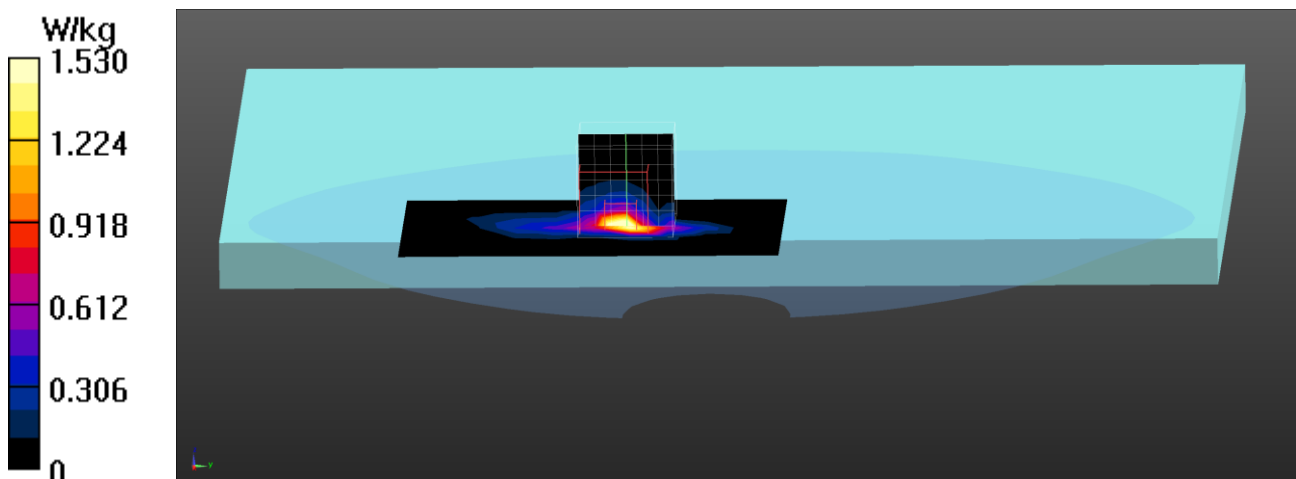
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.680 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.91 W/kg

**SAR(1 g) = 0.854 W/kg; SAR(10 g) = 0.287 W/kg**

Maximum value of SAR (measured) = 1.93 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_11-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2462 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.83$  S/m;  $\epsilon_r = 39.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.02 W/kg

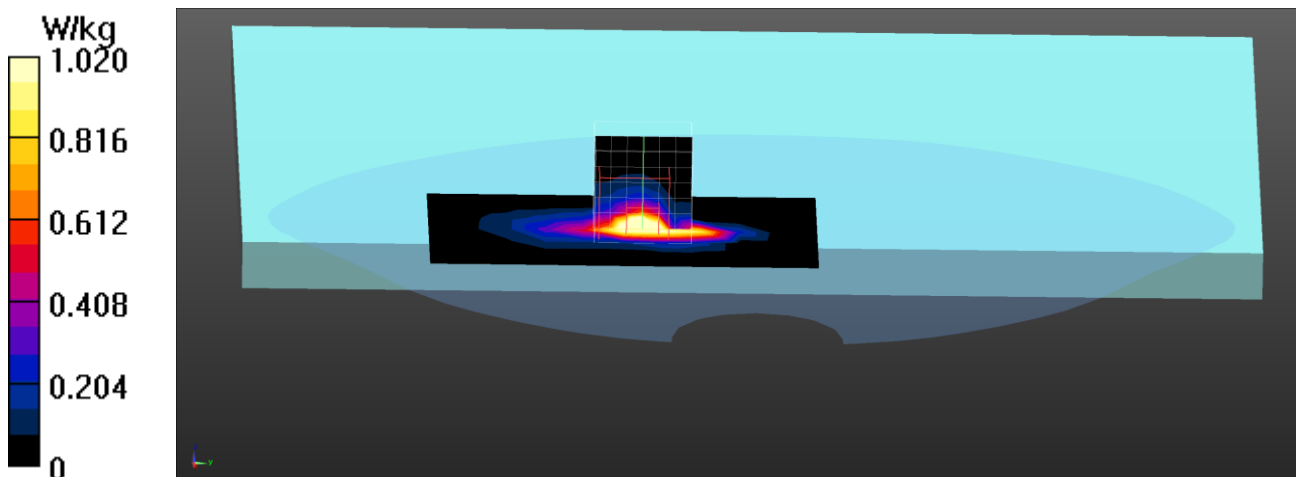
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.444 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 3.06 W/kg

**SAR(1 g) = 0.874 W/kg; SAR(10 g) = 0.292 W/kg**

Maximum value of SAR (measured) = 2.09 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.786 W/kg

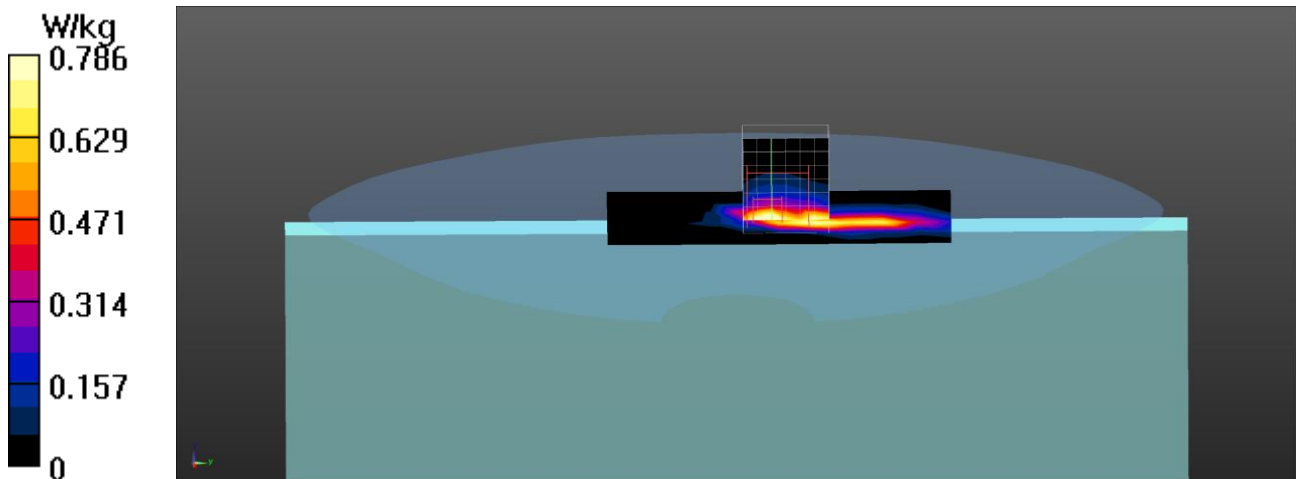
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.47 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 1.47 W/kg

**SAR(1 g) = 0.499 W/kg; SAR(10 g) = 0.184 W/kg**

Maximum value of SAR (measured) = 1.01 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Back(PAD)-Aux Yageo**

**DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437 \text{ MHz}$ ;  $\sigma = 1.79 \text{ S/m}$ ;  $\epsilon_r = 39.24$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Ambient Temperature ( $^{\circ}\text{C}$ ) : 23.8, Liquid Temperature ( $^{\circ}\text{C}$ ) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid:  $dx=12\text{mm}$ ,  $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.645 W/kg

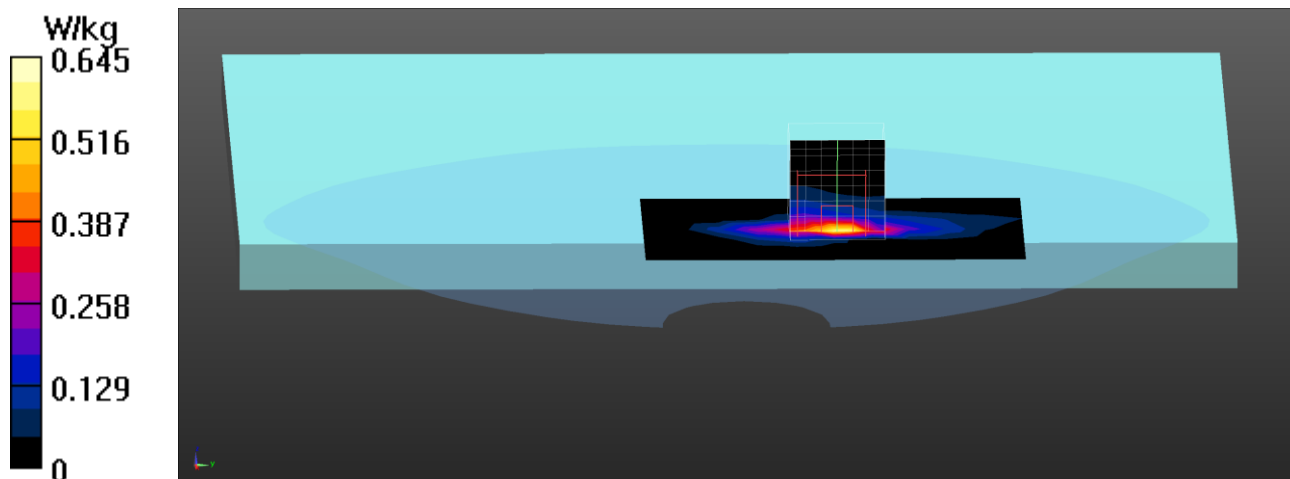
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5\text{mm}$ ,  $dy=5\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 12.00 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.08 W/kg

**SAR(1 g) = 0.301 W/kg; SAR(10 g) = 0.120 W/kg**

Maximum value of SAR (measured) = 0.598 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**BT-1M\_78-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, BT 1M&amp;3M&amp;BLE; Frequency: 2480 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.85$  S/m;  $\epsilon_r = 39.11$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.438 W/kg

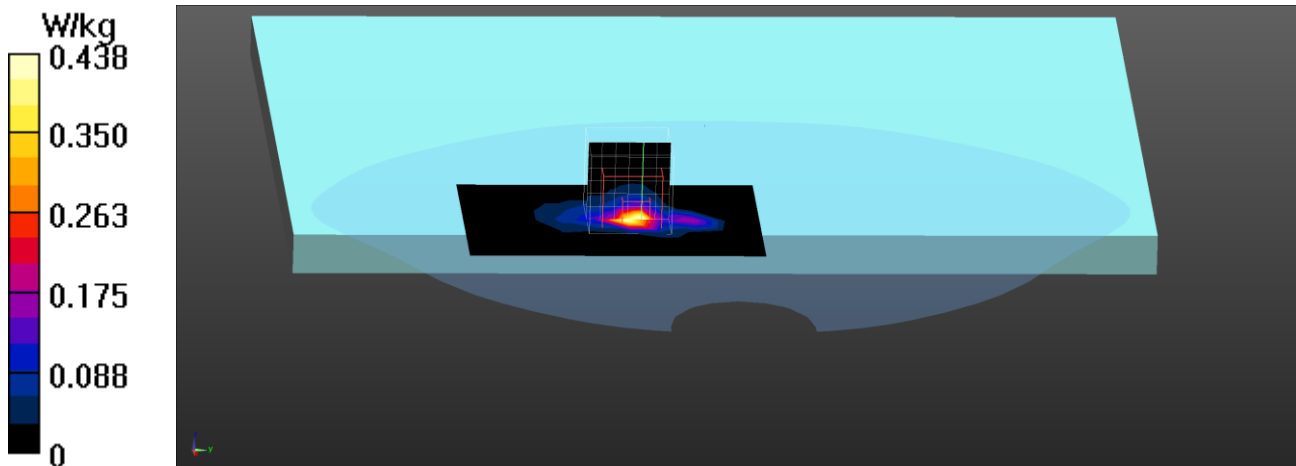
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.282 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.750 W/kg

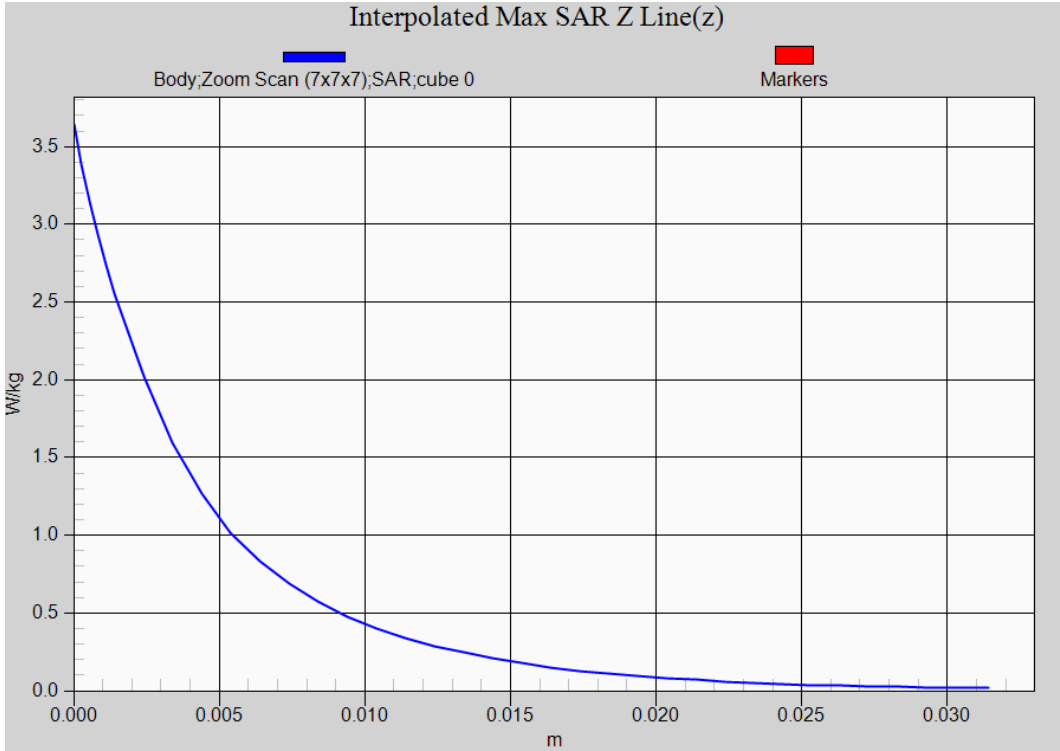
**SAR(1 g) = 0.214 W/kg; SAR(10 g) = 0.071 W/kg**

Maximum value of SAR (measured) = 0.501 W/kg



**802.11b EUT Bottom (PAD Main Yageo), Z-Axis plot**

**Channel: 11**





Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(NB)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.740 W/kg

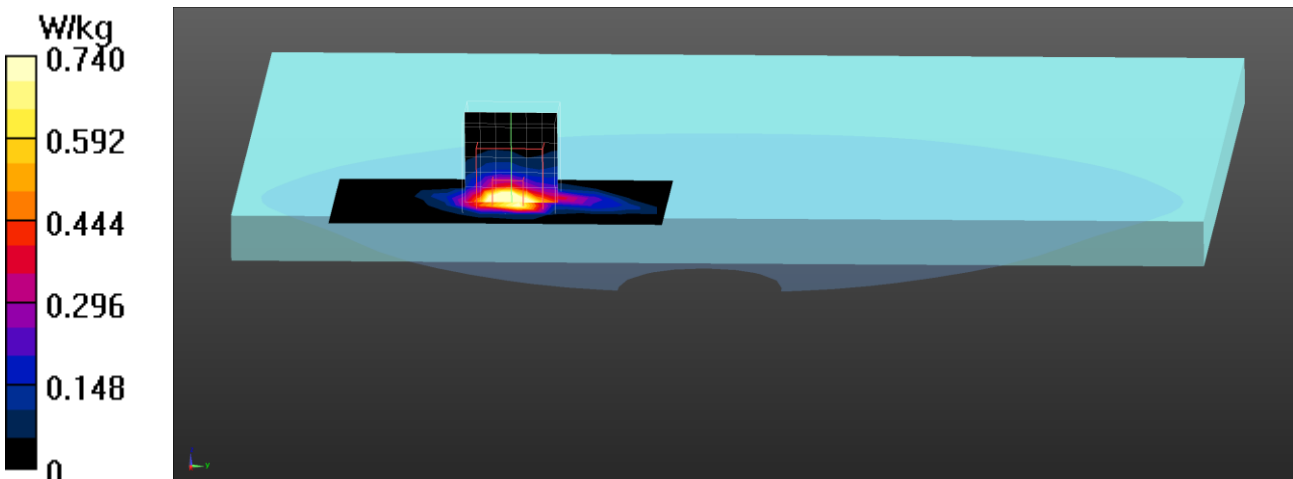
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.520 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.85 W/kg

**SAR(1 g) = 0.588 W/kg; SAR(10 g) = 0.213 W/kg**

Maximum value of SAR (measured) = 1.32 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_1-Bottom(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2412 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.76$  S/m;  $\epsilon_r = 39.32$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.03 W/kg

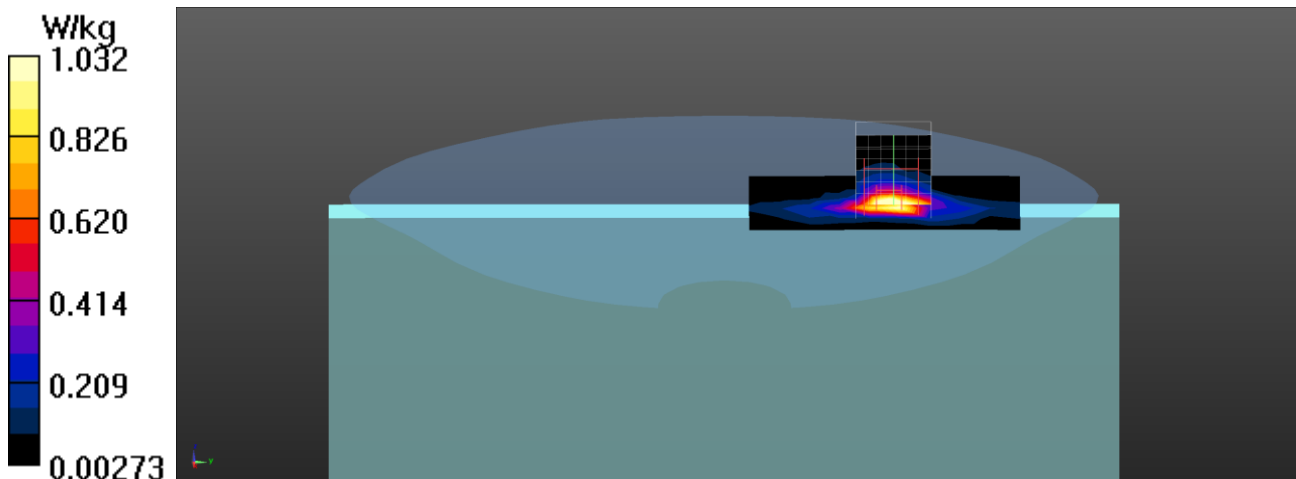
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.261 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 2.15 W/kg

**SAR(1 g) = 0.735 W/kg; SAR(10 g) = 0.272 W/kg**

Maximum value of SAR (measured) = 1.47 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.43 W/kg

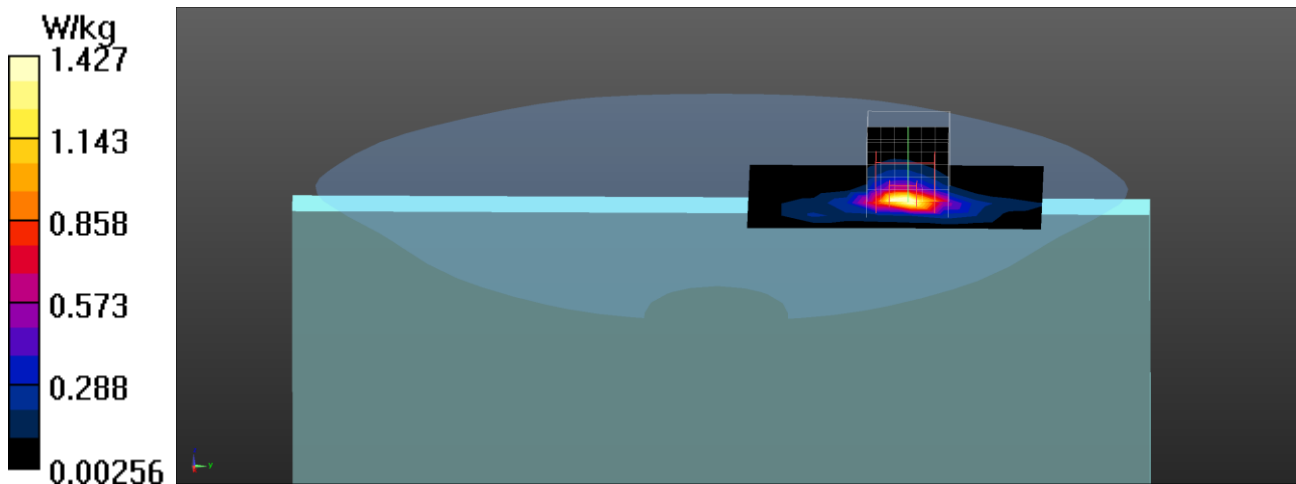
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.100 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.47 W/kg

**SAR(1 g) = 0.880 W/kg; SAR(10 g) = 0.324 W/kg**

Maximum value of SAR (measured) = 1.73 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_11-Bottom(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2462 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.83$  S/m;  $\epsilon_r = 39.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.33 W/kg

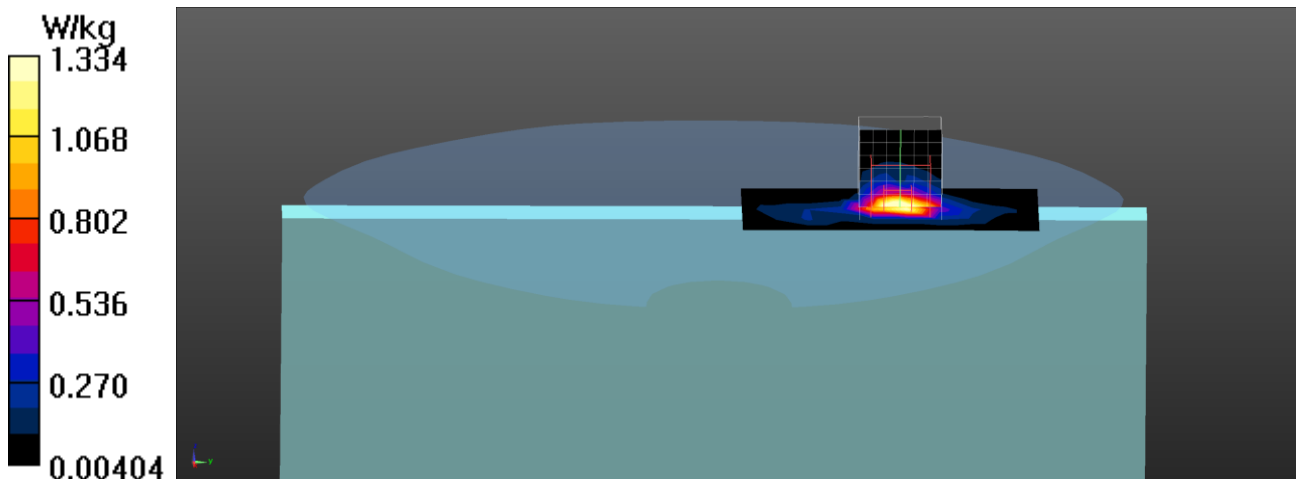
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.743 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.39 W/kg

**SAR(1 g) = 0.890 W/kg; SAR(10 g) = 0.323 W/kg**

Maximum value of SAR (measured) = 1.79 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Back(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.900 W/kg

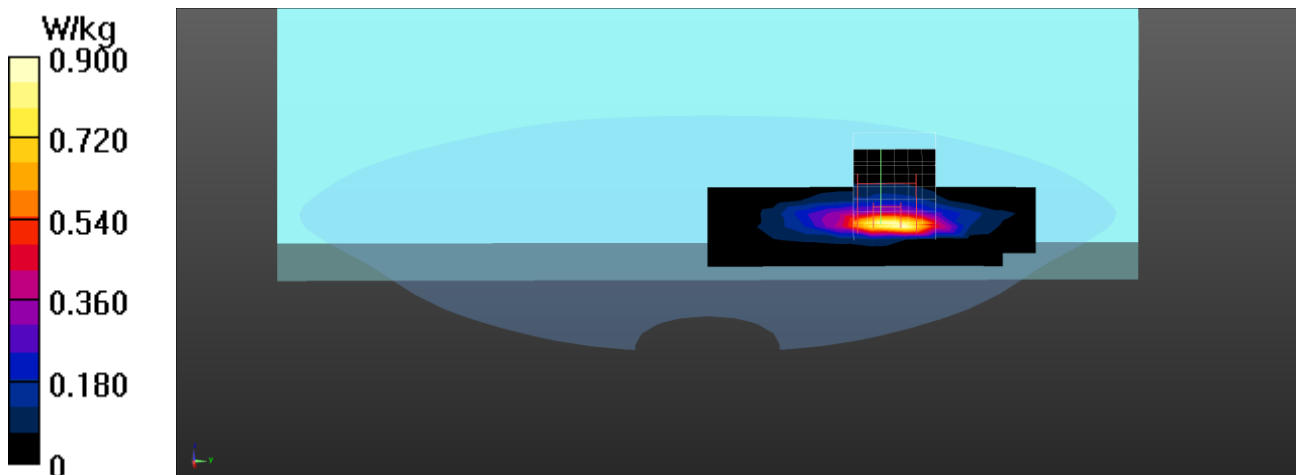
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.858 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 1.40 W/kg

**SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.210 W/kg**

Maximum value of SAR (measured) = 0.908 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(NB)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.743 W/kg

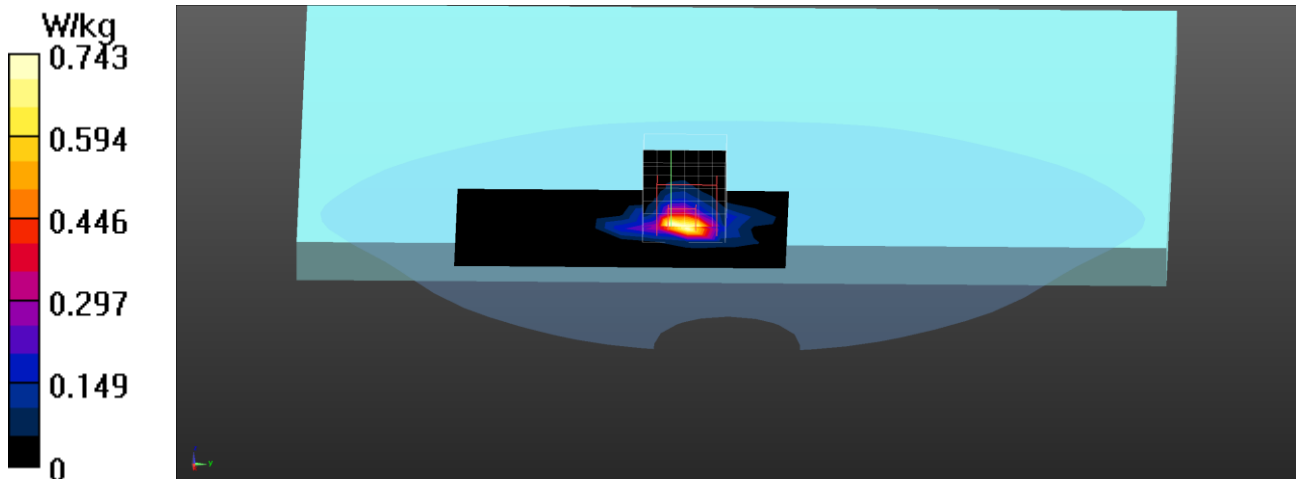
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.946 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.15 W/kg

**SAR(1 g) = 0.464 W/kg; SAR(10 g) = 0.169 W/kg**

Maximum value of SAR (measured) = 0.859 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_1-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2412 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.76$  S/m;  $\epsilon_r = 39.32$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.02 W/kg

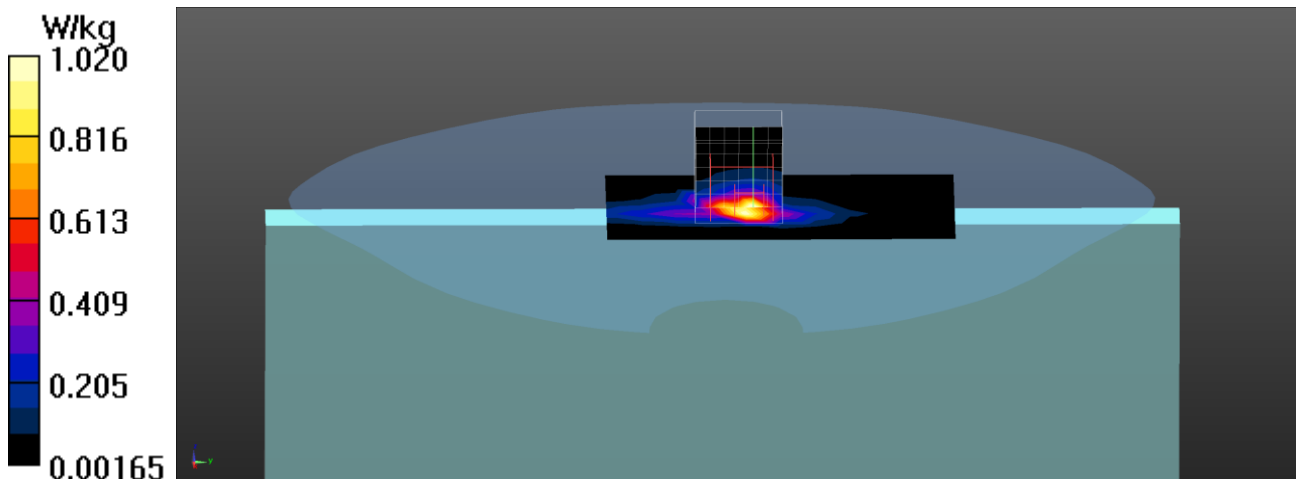
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.52 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.66 W/kg

**SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.218 W/kg**

Maximum value of SAR (measured) = 1.13 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.926 W/kg

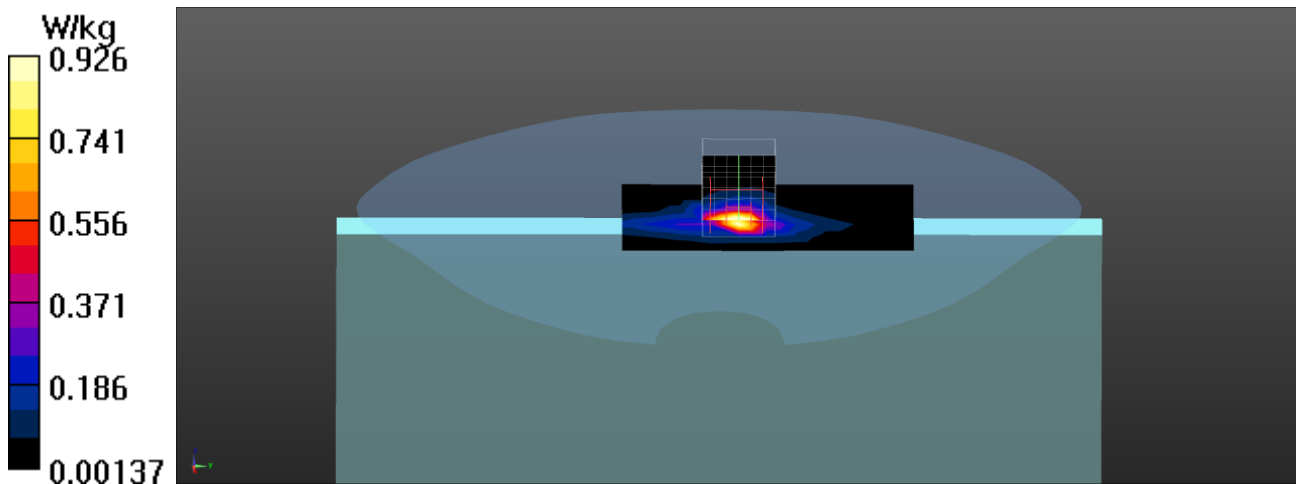
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.58 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.78 W/kg

**SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.218 W/kg**

Maximum value of SAR (measured) = 1.14 W/kg





Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_11-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2462 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.83$  S/m;  $\epsilon_r = 39.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.734 W/kg

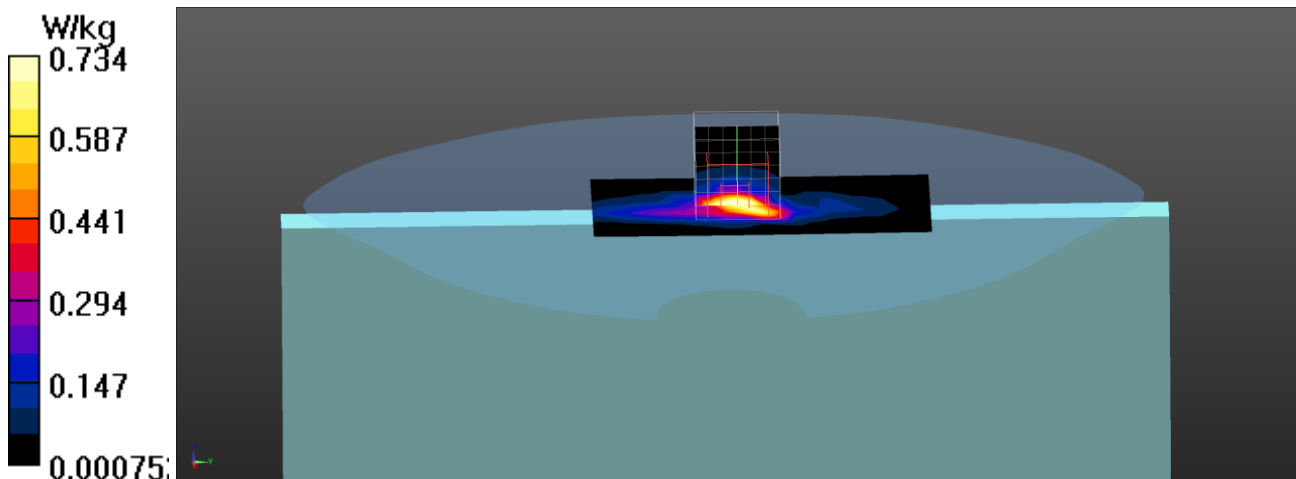
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.03 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.60 W/kg

**SAR(1 g) = 0.447 W/kg; SAR(10 g) = 0.176 W/kg**

Maximum value of SAR (measured) = 0.978 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_6-Back(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2437 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.79$  S/m;  $\epsilon_r = 39.24$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.996 W/kg

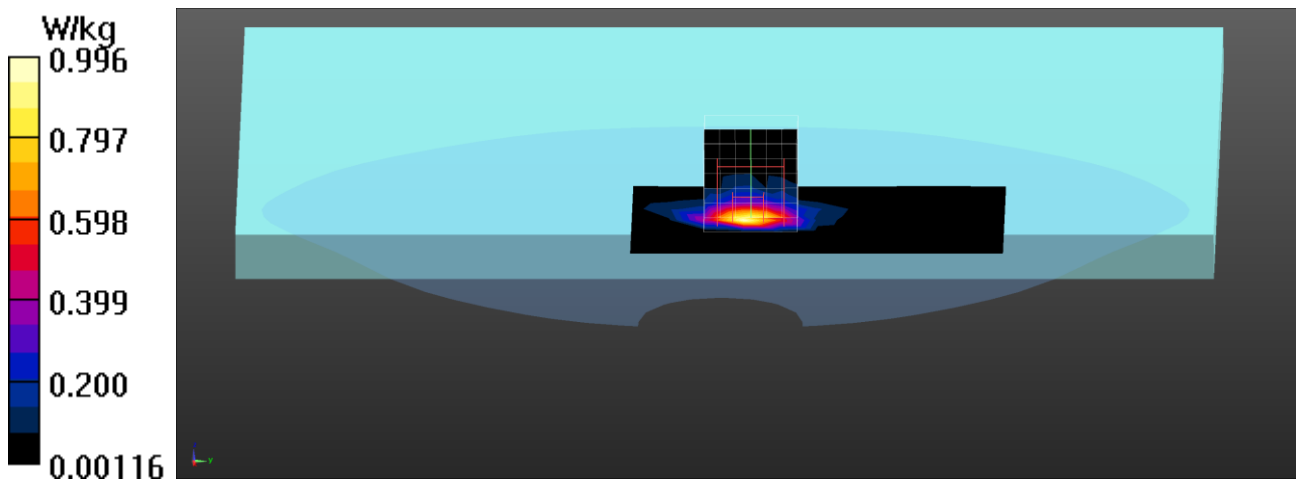
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.43 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 1.41 W/kg

**SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.201 W/kg**

Maximum value of SAR (measured) = 0.922 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**BT-1M\_78-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, BT 1M&amp;3M&amp;BLE; Frequency: 2480 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.85$  S/m;  $\epsilon_r = 39.11$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.230 W/kg

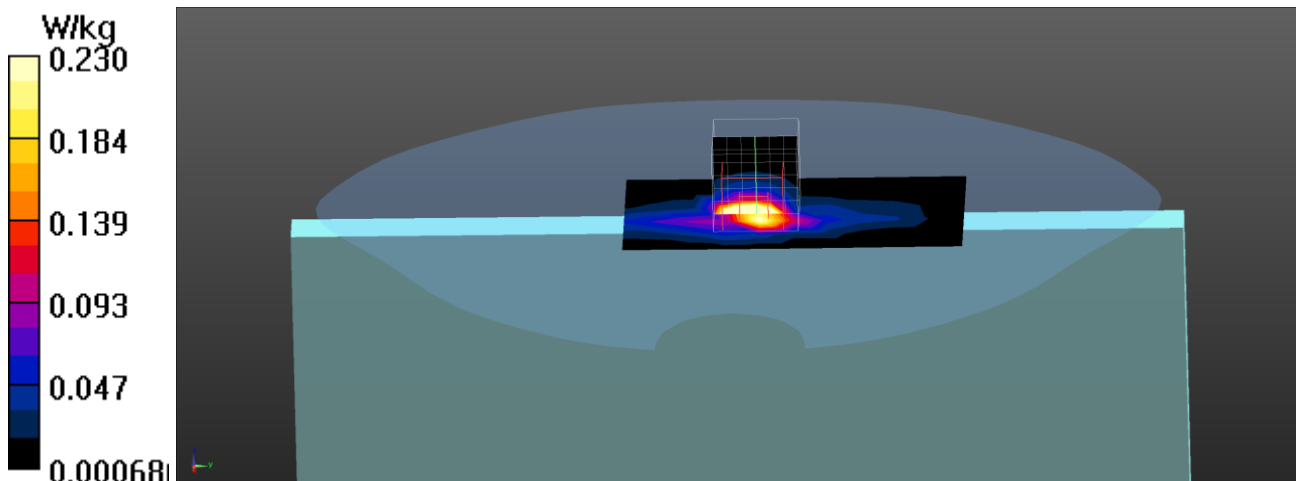
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.912 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.621 W/kg

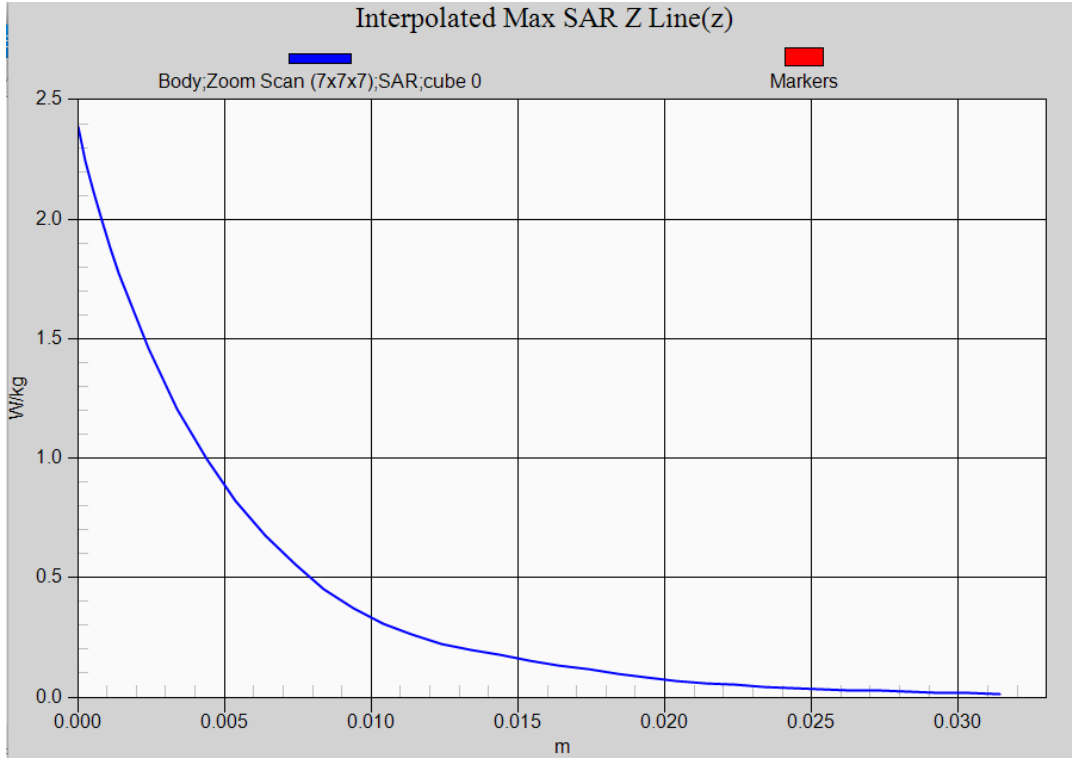
**SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.066 W/kg**

Maximum value of SAR (measured) = 0.423 W/kg



**802.11b EUT Bottom (PAD Main Hong-Bo), Z-Axis plot**

**Channel: 11**



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(NB)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.04 W/kg

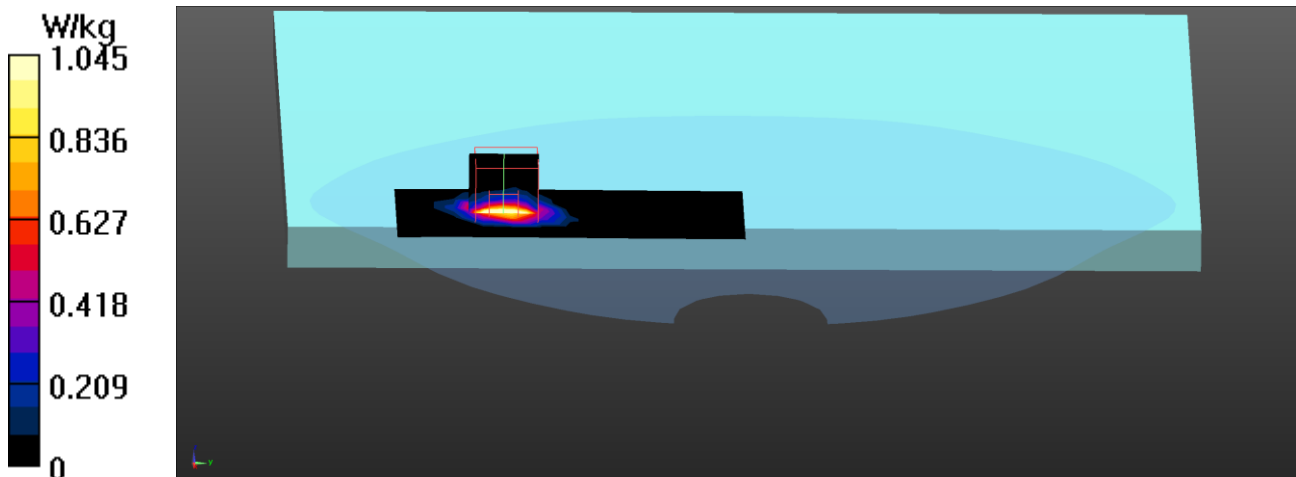
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.49 W/kg

**SAR(1 g) = 0.617 W/kg; SAR(10 g) = 0.171 W/kg**

Maximum value of SAR (measured) = 1.70 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(NB)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.11 W/kg

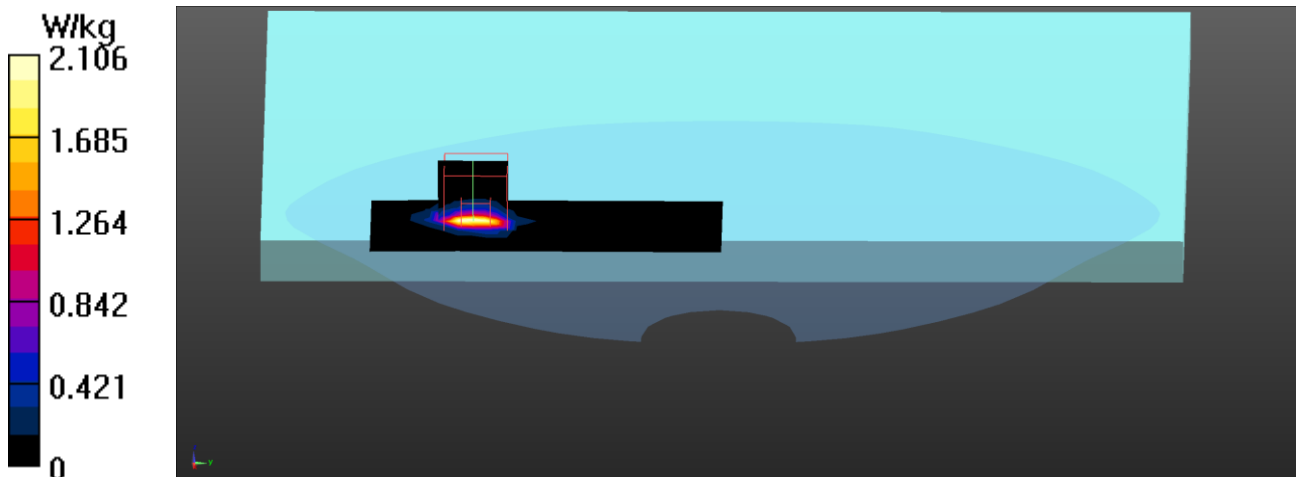
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.305 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 5.60 W/kg

**SAR(1 g) = 0.966 W/kg; SAR(10 g) = 0.252 W/kg**

Maximum value of SAR (measured) = 2.46 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_122-Bottom(NB)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5610 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5610$  MHz;  $\sigma = 5.21$  S/m;  $\epsilon_r = 35.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x8x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.87 W/kg

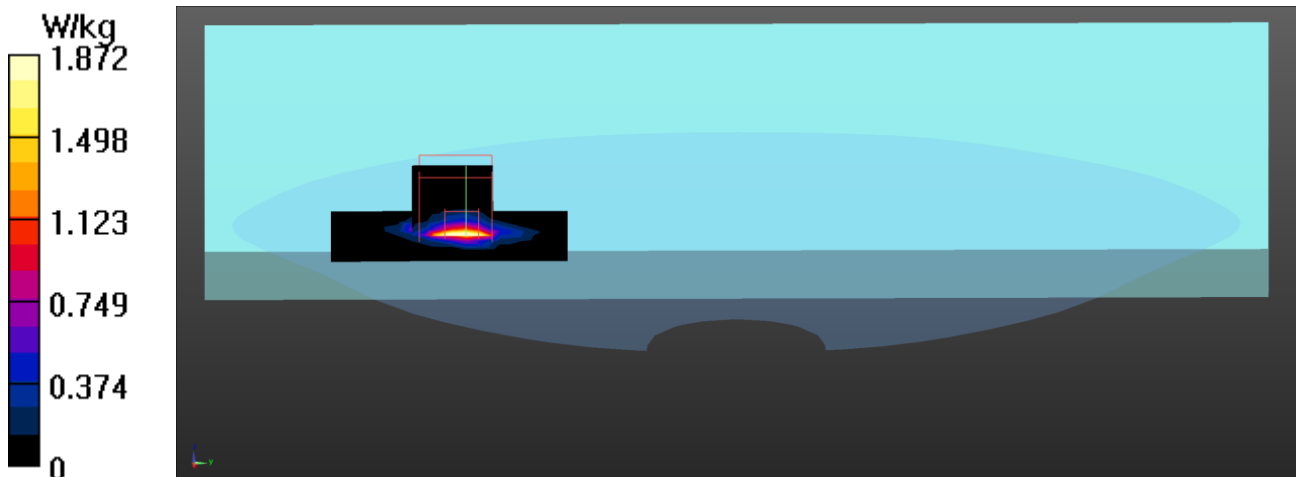
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 24.83 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 5.28 W/kg

**SAR(1 g) = 0.925 W/kg; SAR(10 g) = 0.236 W/kg**

Maximum value of SAR (measured) = 2.47 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_138-Bottom(NB)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5690 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5690$  MHz;  $\sigma = 5.31$  S/m;  $\epsilon_r = 35.18$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x8x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.99 W/kg

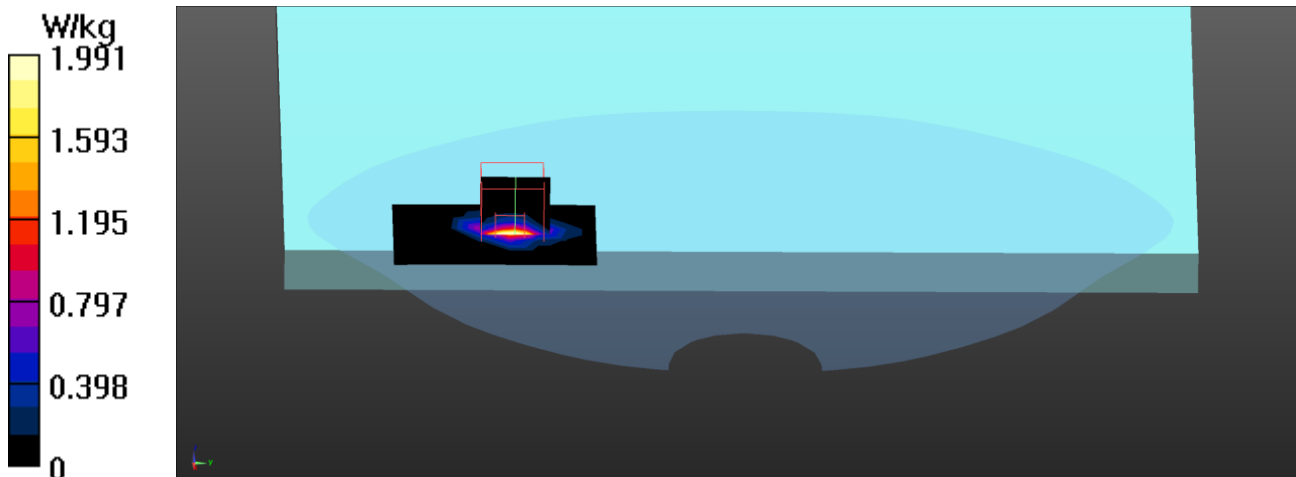
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 21.07 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 5.30 W/kg

**SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.236 W/kg**

Maximum value of SAR (measured) = 2.50 W/kg





Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(NB)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.42 W/kg

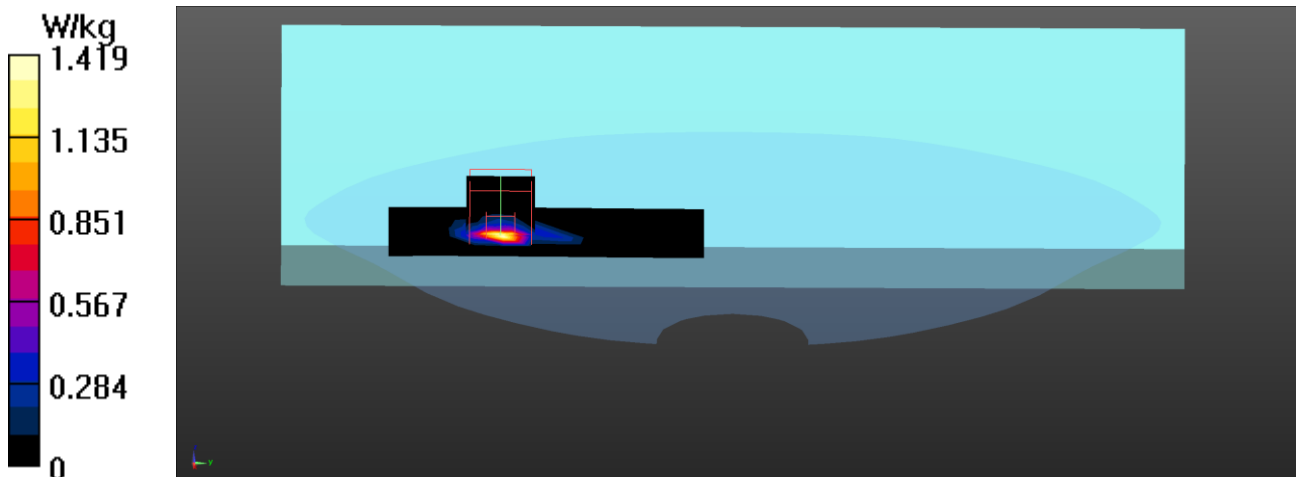
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.925 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 4.08 W/kg

**SAR(1 g) = 0.478 W/kg; SAR(10 g) = 0.120 W/kg**

Maximum value of SAR (measured) = 1.56 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.896 W/kg

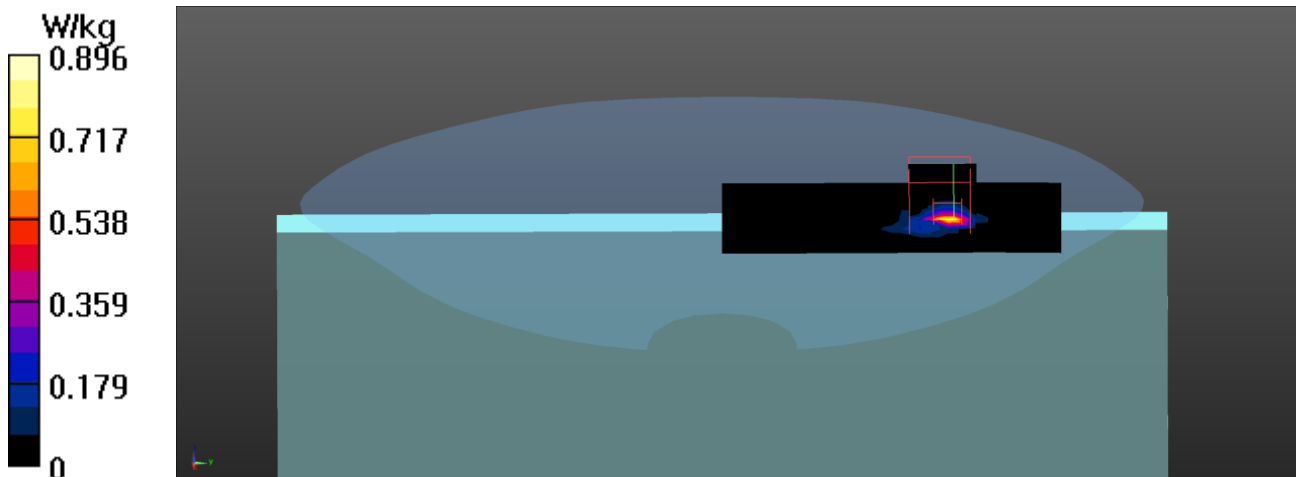
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 14.88 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.57 W/kg

**SAR(1 g) = 0.263 W/kg; SAR(10 g) = 0.053 W/kg**

Maximum value of SAR (measured) = 0.892 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.398 W/kg

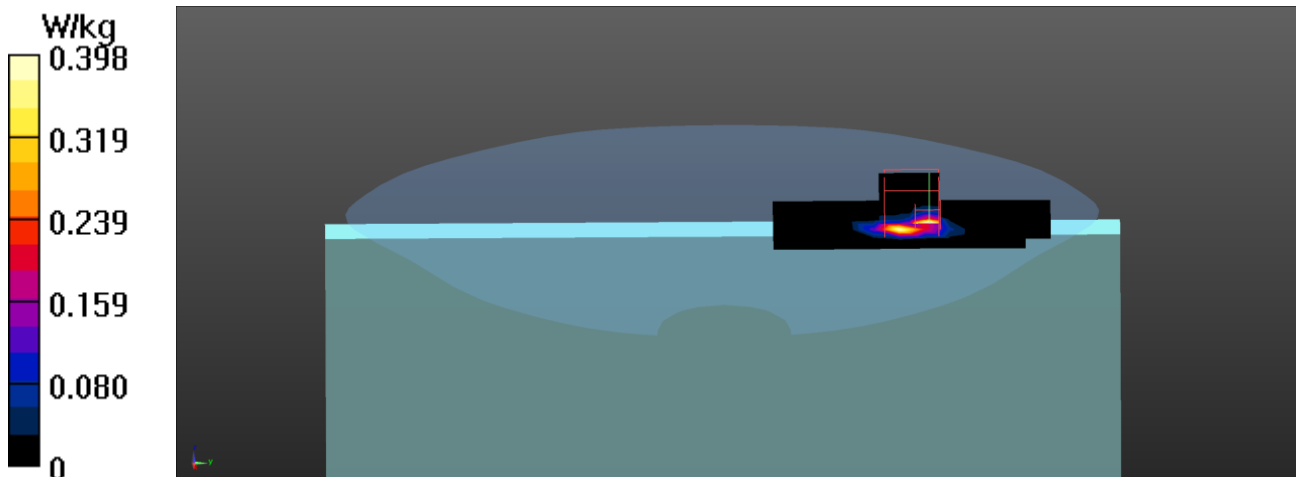
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.785 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.900 W/kg

**SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.041 W/kg**

Maximum value of SAR (measured) = 0.496 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.294 W/kg

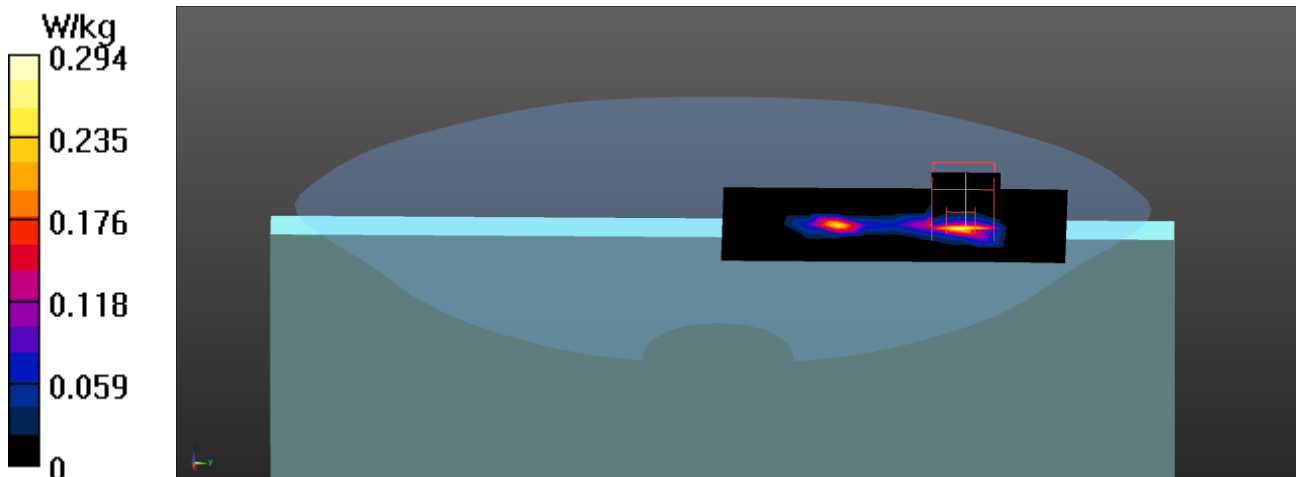
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 12.11 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.518 W/kg

**SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.027 W/kg**

Maximum value of SAR (measured) = 0.299 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Back(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.331 W/kg

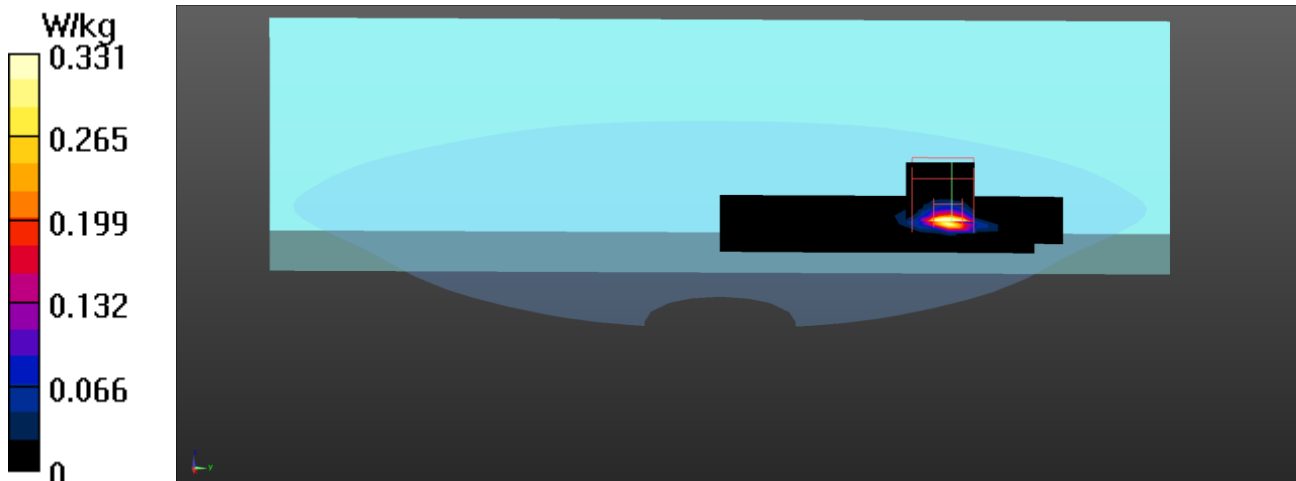
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 10.12 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.41 W/kg

**SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.025 W/kg**

Maximum value of SAR (measured) = 0.460 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Back(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.0663 W/kg

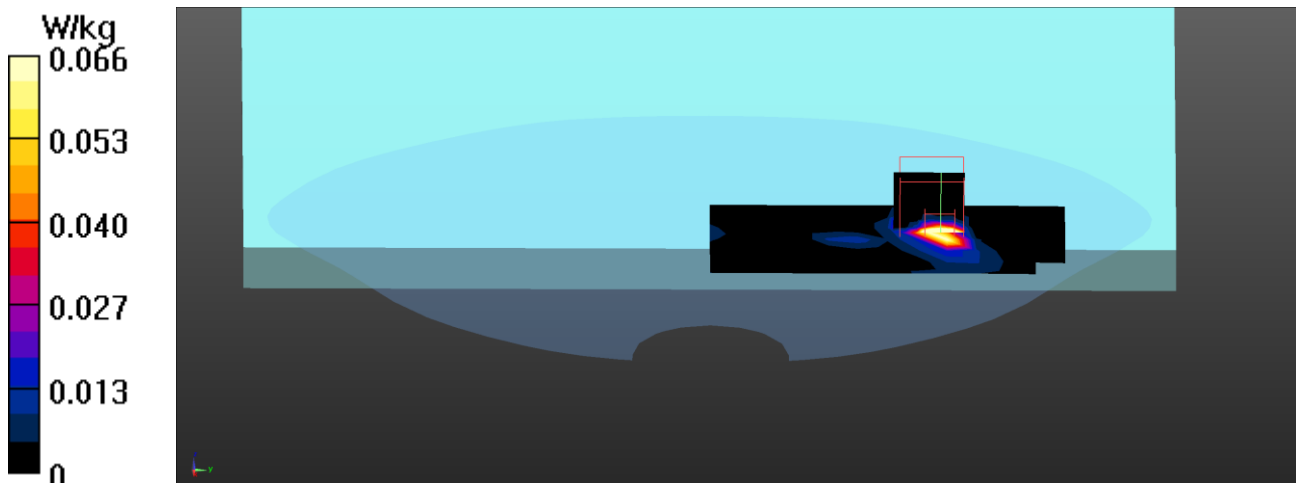
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.298 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.223 W/kg

**SAR(1 g) = 0.030 W/kg; SAR(10 g) = 0.00674 W/kg**

Maximum value of SAR (measured) = 0.124 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Back(PAD)-Main Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.0306 W/kg

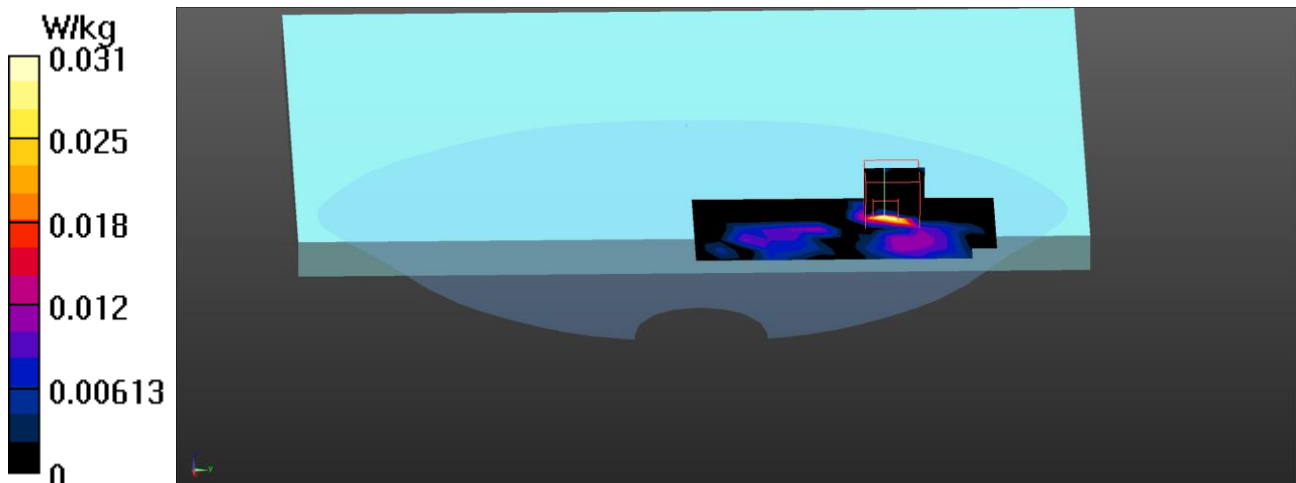
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.642 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.180 W/kg

**SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.002 W/kg**

Maximum value of SAR (measured) = 0.0434 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.731 W/kg

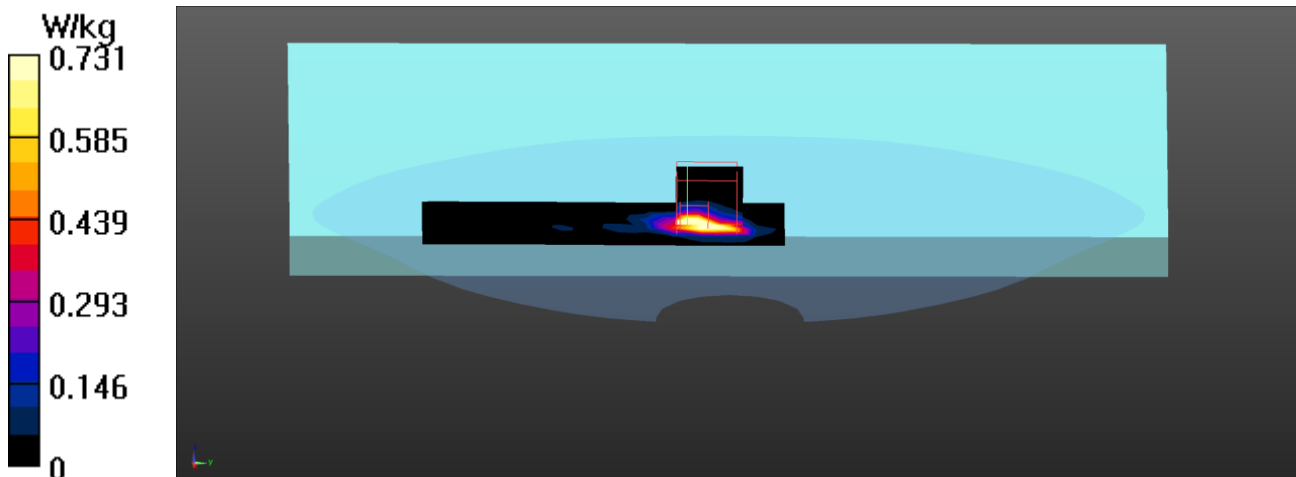
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 9.567 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 3.50 W/kg

**SAR(1 g) = 0.514 W/kg; SAR(10 g) = 0.122 W/kg**

Maximum value of SAR (measured) = 1.74 W/kg





Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.87 W/kg

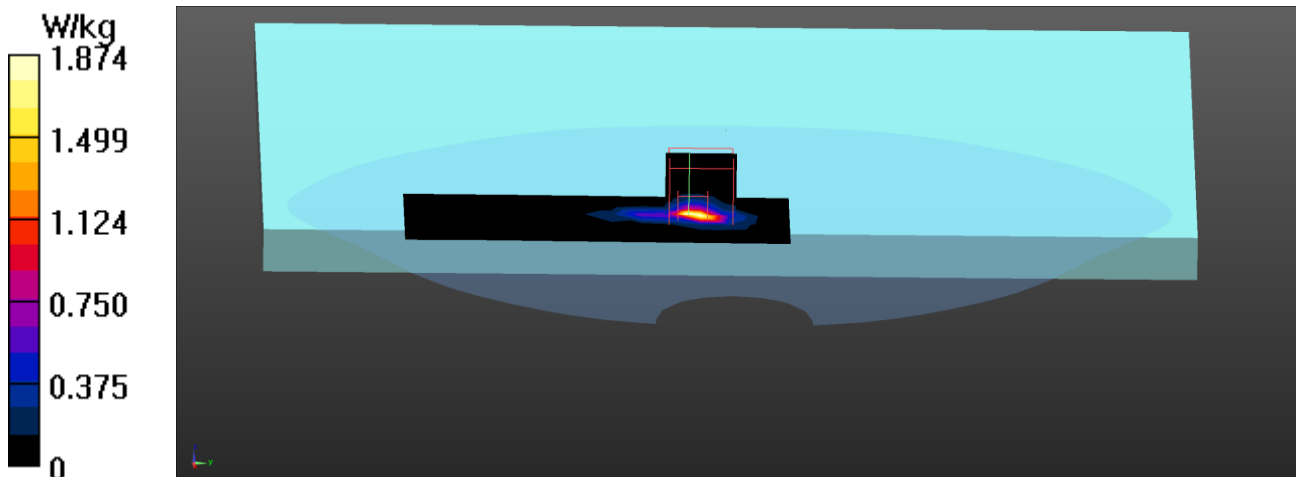
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 11.73 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 5.08 W/kg

**SAR(1 g) = 0.675 W/kg; SAR(10 g) = 0.149 W/kg**

Maximum value of SAR (measured) = 2.21 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(NB)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.574 W/kg

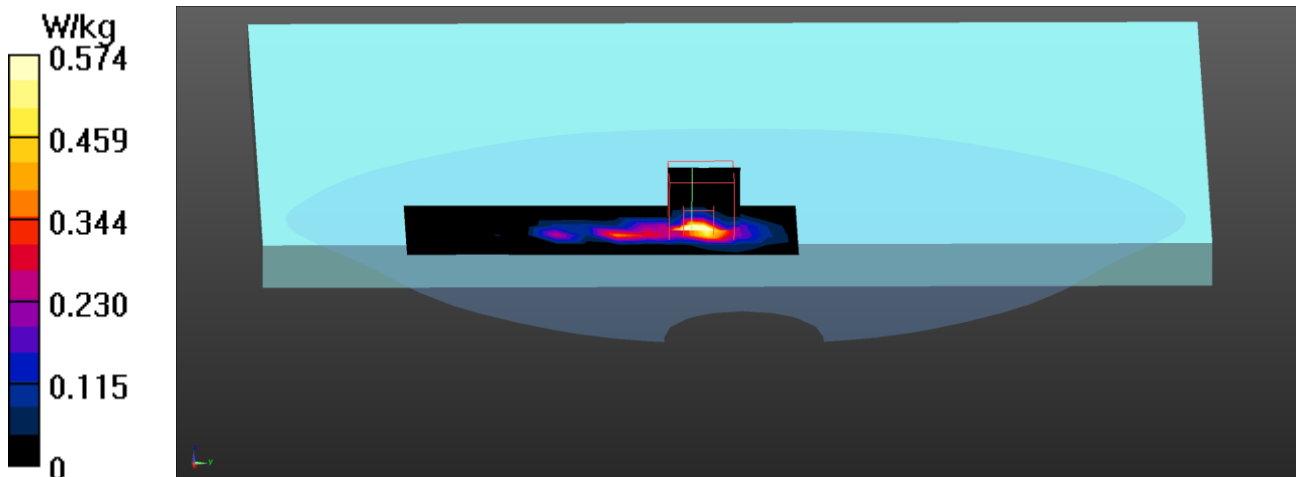
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 9.526 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 2.69 W/kg

**SAR(1 g) = 0.339 W/kg; SAR(10 g) = 0.072 W/kg**

Maximum value of SAR (measured) = 1.12 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.641 W/kg

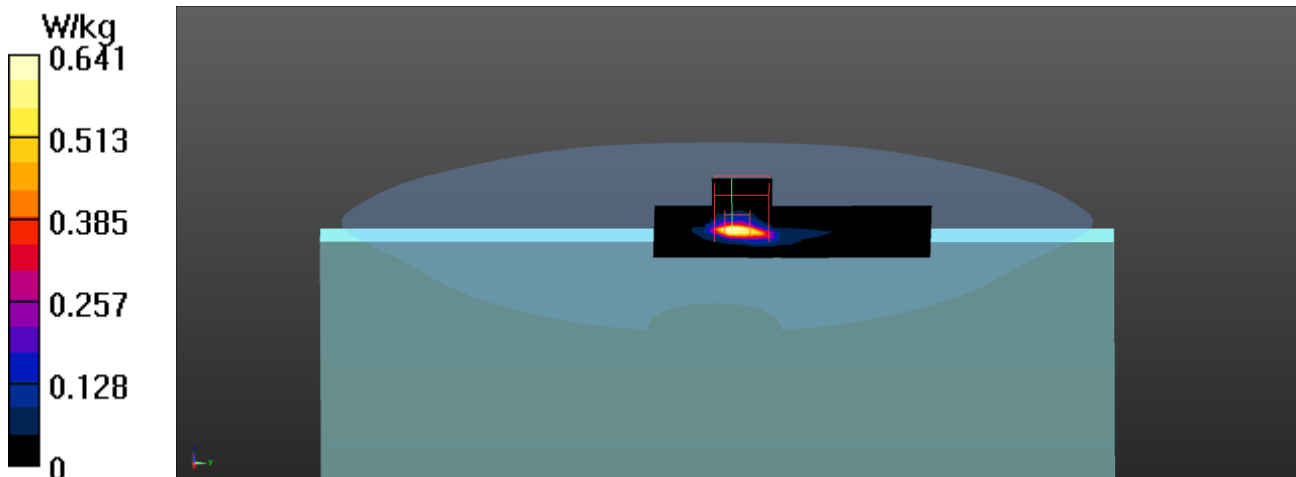
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 9.548 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.43 W/kg

**SAR(1 g) = 0.285 W/kg; SAR(10 g) = 0.072 W/kg**

Maximum value of SAR (measured) = 0.878 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.672 W/kg

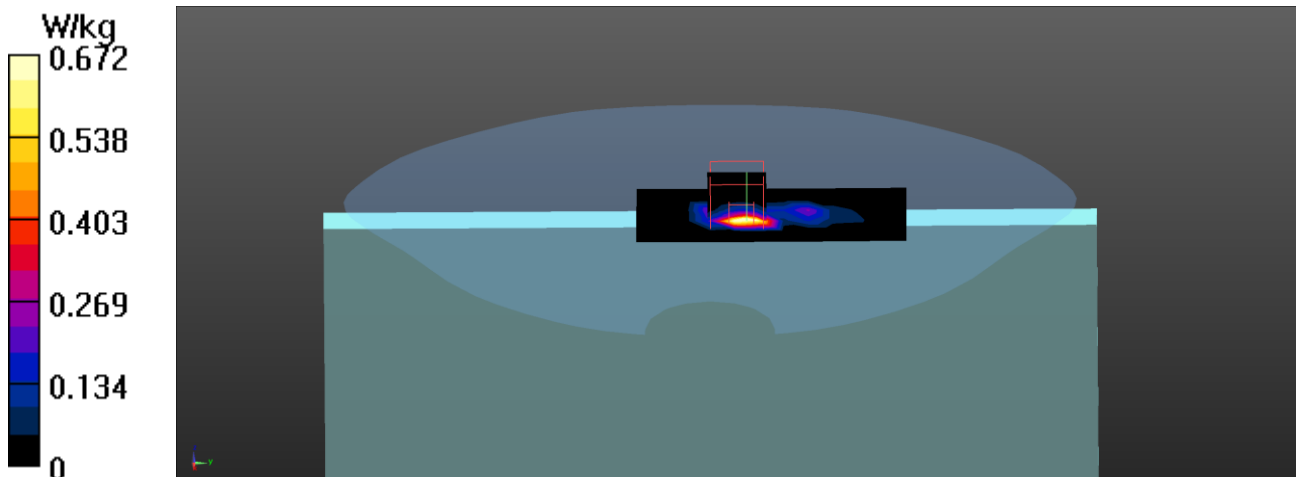
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 8.363 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.77 W/kg

**SAR(1 g) = 0.325 W/kg; SAR(10 g) = 0.090 W/kg**

Maximum value of SAR (measured) = 0.883 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.607 W/kg

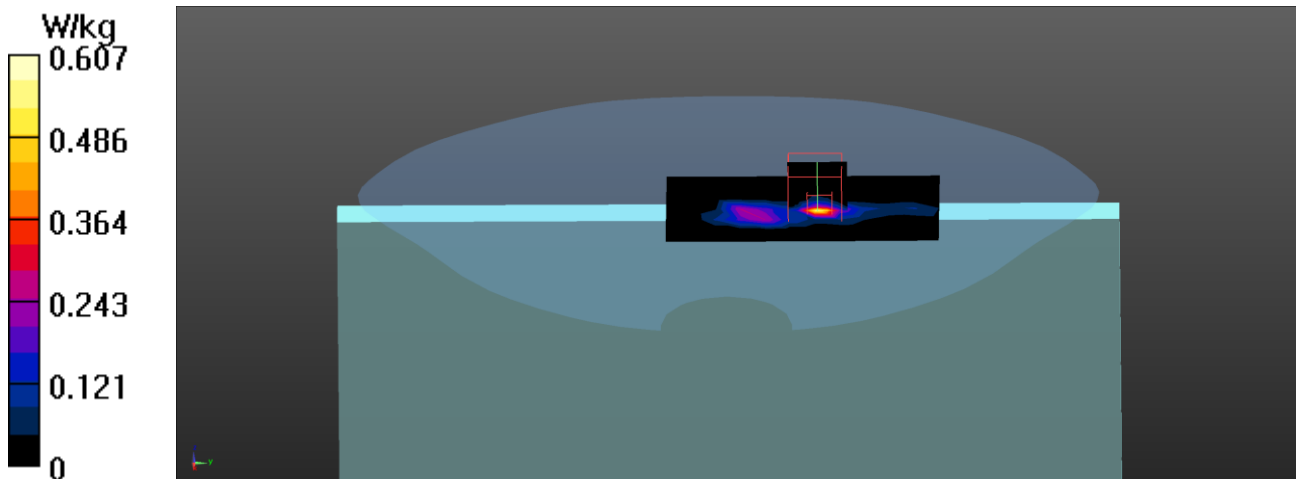
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.659 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.04 W/kg

**SAR(1 g) = 0.174 W/kg; SAR(10 g) = 0.034 W/kg**

Maximum value of SAR (measured) = 0.583 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Back(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.178 W/kg

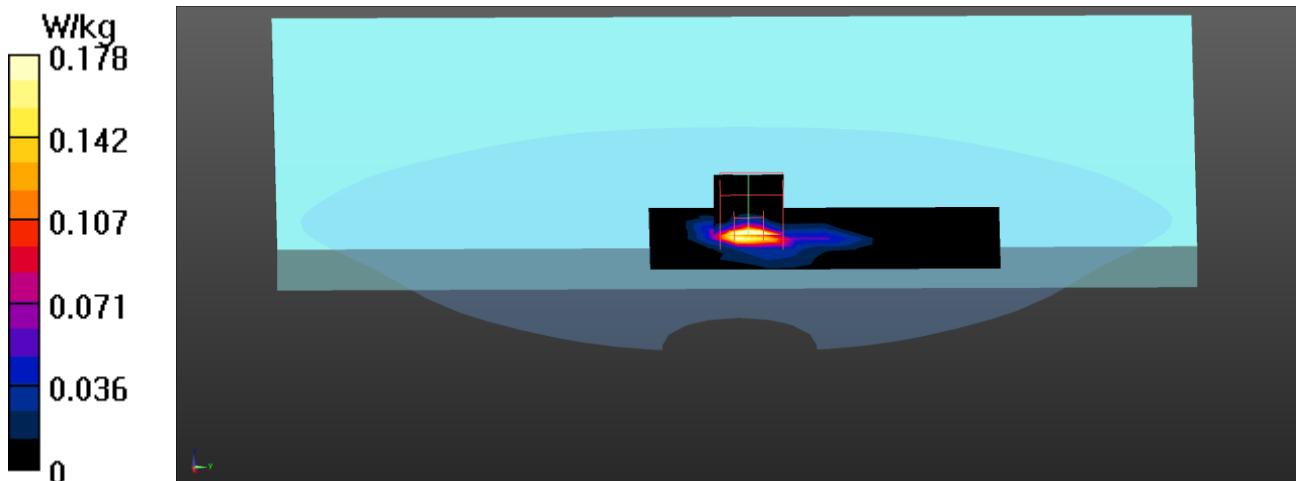
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.497 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.531 W/kg

**SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.017 W/kg**

Maximum value of SAR (measured) = 0.312 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Back(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.232 W/kg

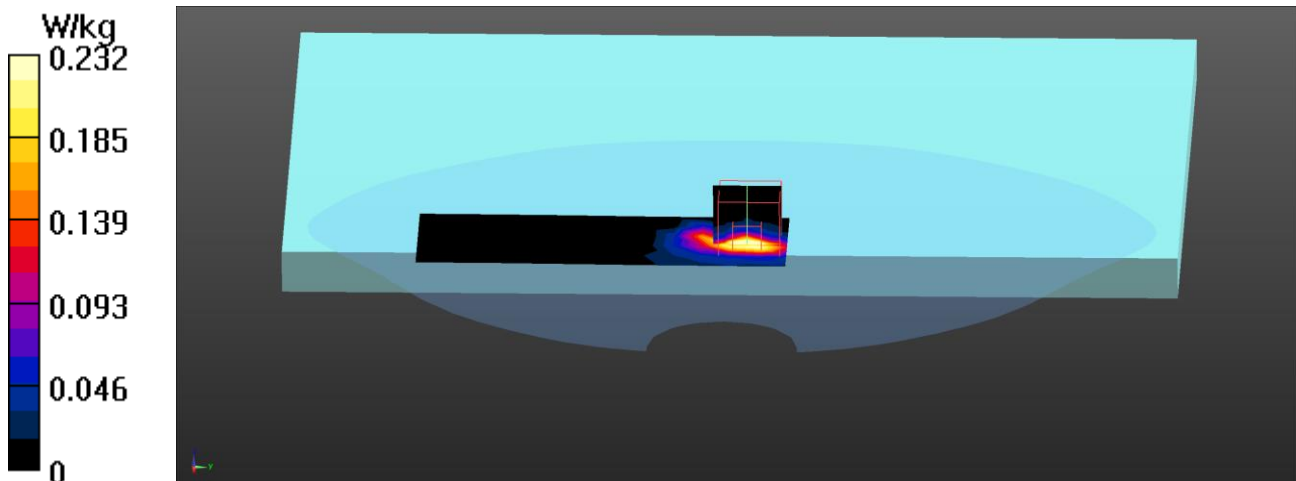
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.883 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.629 W/kg

**SAR(1 g) = 0.118 W/kg; SAR(10 g) = 0.029 W/kg**

Maximum value of SAR (measured) = 0.387 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Back(PAD)-Aux Yageo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.249 W/kg

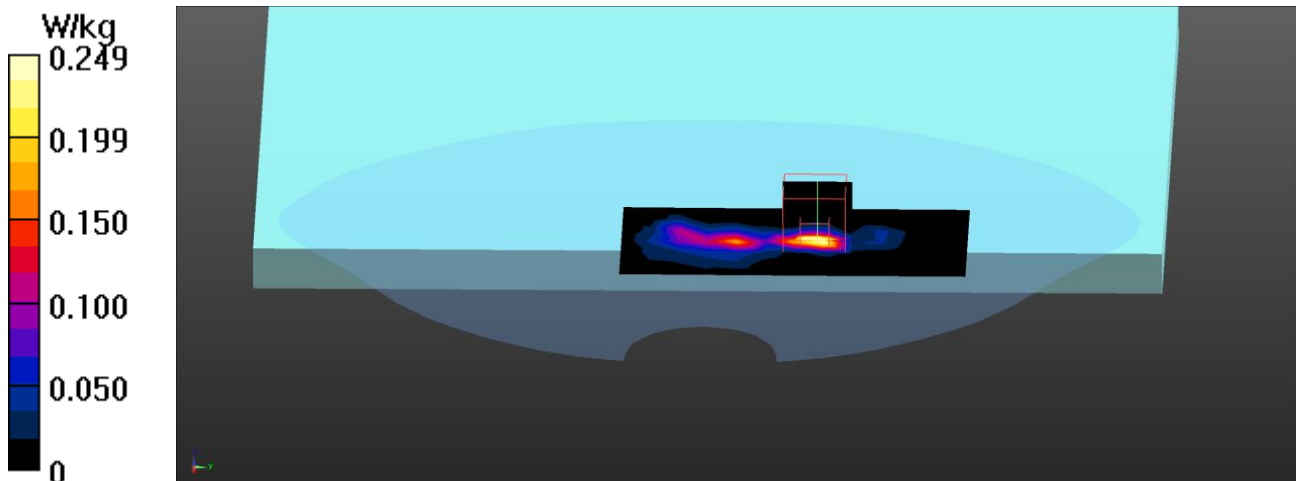
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.853 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.533 W/kg

**SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.016 W/kg**

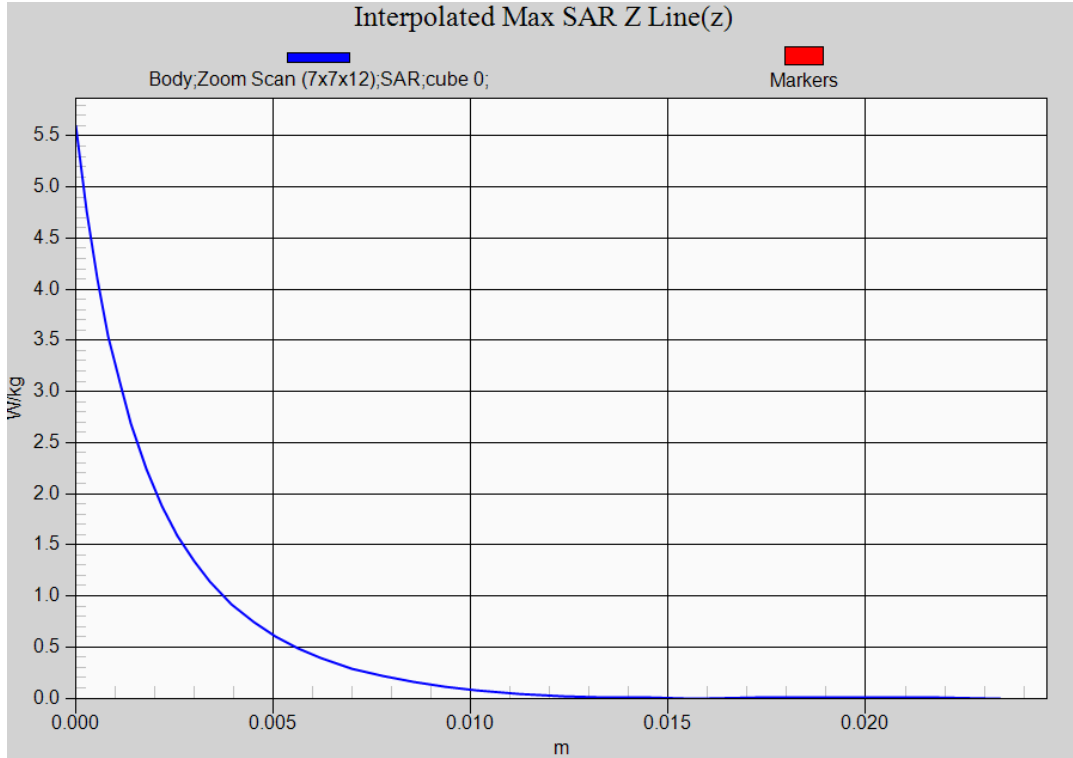
Maximum value of SAR (measured) = 0.307 W/kg





**802.11ac (80M) EUT Bottom (NB Main Yageo), Z-Axis plot**

**Channel: 106**



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(NB)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.612 W/kg

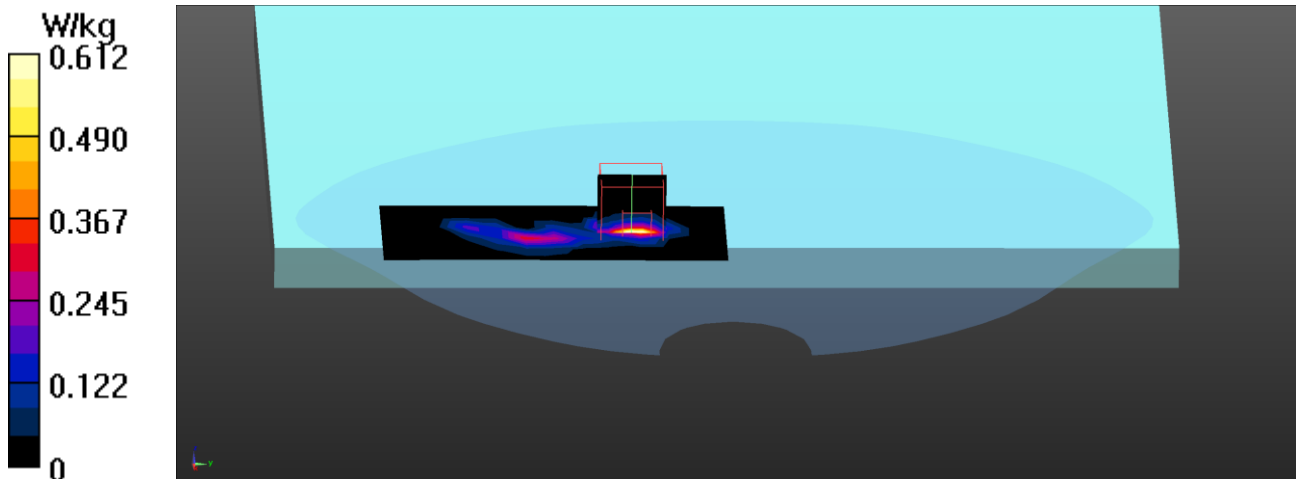
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.9390 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.79 W/kg

**SAR(1 g) = 0.235 W/kg; SAR(10 g) = 0.063 W/kg**

Maximum value of SAR (measured) = 0.741 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(NB)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.569 W/kg

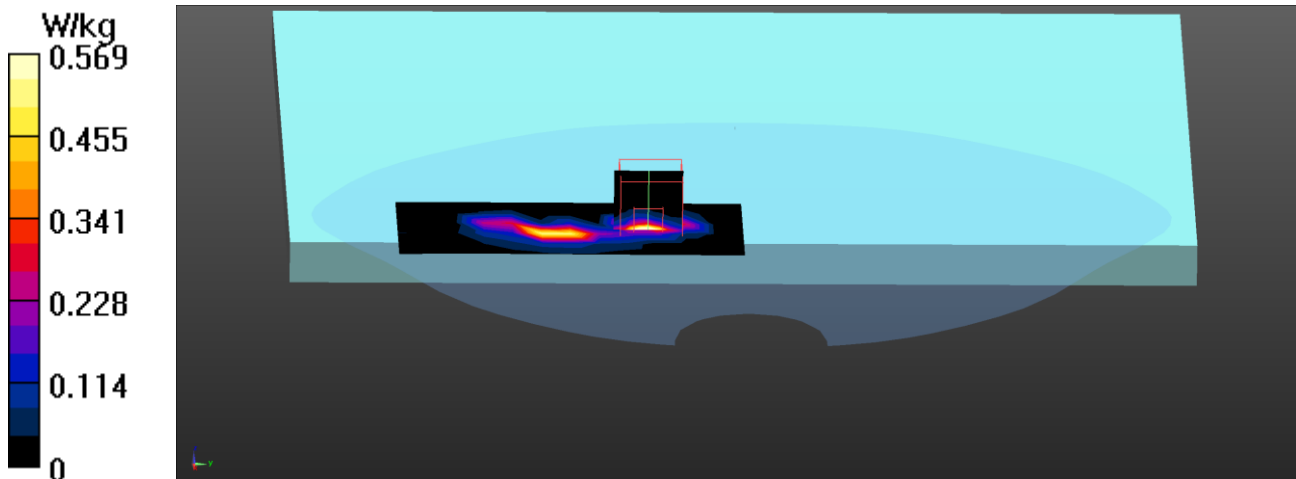
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 14.27 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.76 W/kg

**SAR(1 g) = 0.254 W/kg; SAR(10 g) = 0.061 W/kg**

Maximum value of SAR (measured) = 0.774 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(NB)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.738 W/kg

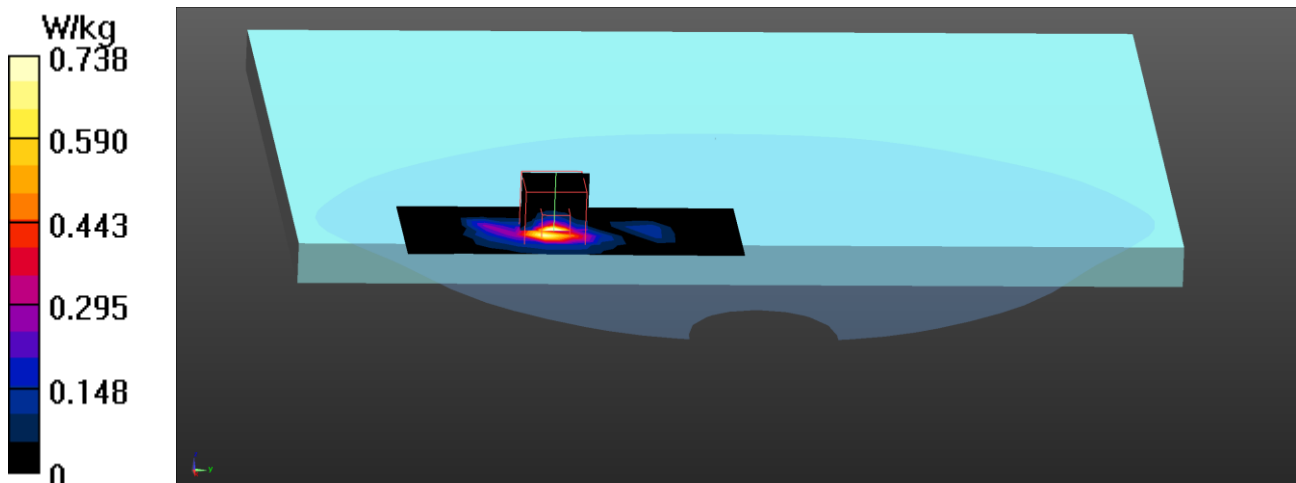
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 13.95 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.94 W/kg

**SAR(1 g) = 0.316 W/kg; SAR(10 g) = 0.075 W/kg**

Maximum value of SAR (measured) = 1.03 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.646 W/kg

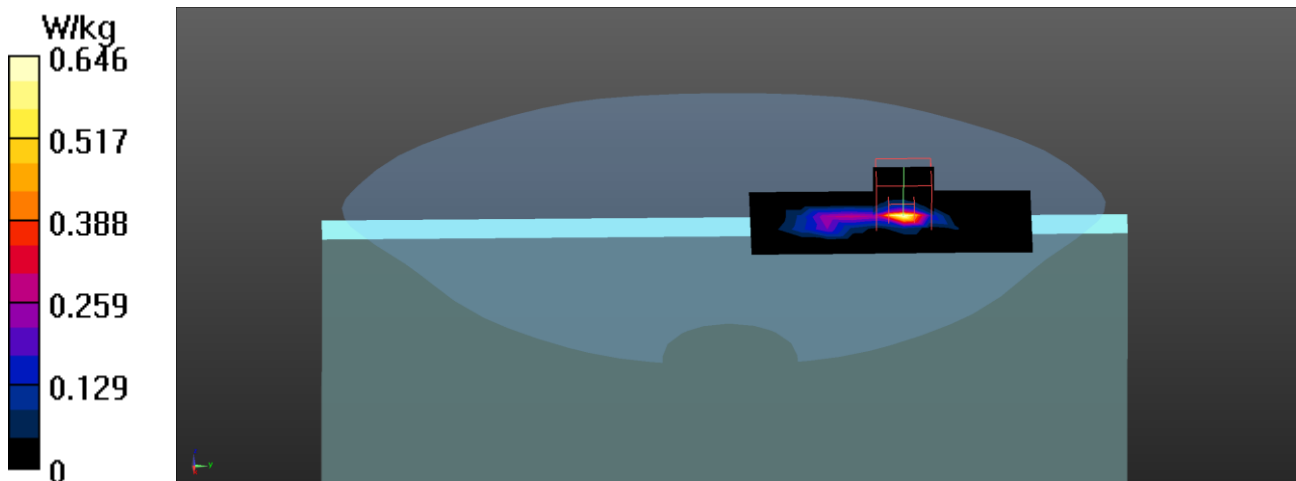
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.7620 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.18 W/kg

**SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.035 W/kg**

Maximum value of SAR (measured) = 0.701 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.813 W/kg

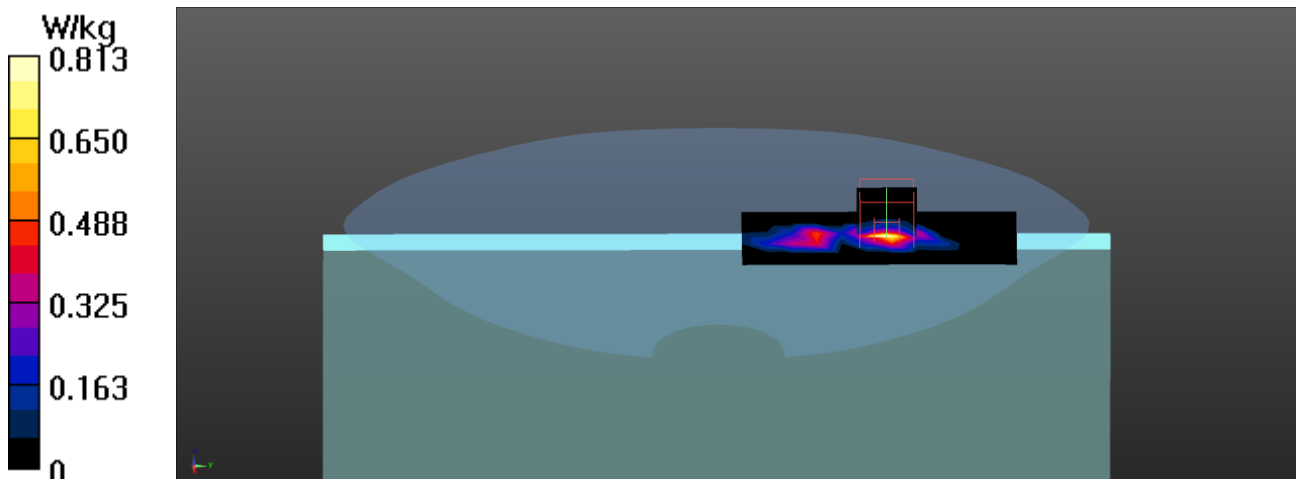
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.404 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 2.02 W/kg

**SAR(1 g) = 0.367 W/kg; SAR(10 g) = 0.092 W/kg**

Maximum value of SAR (measured) = 0.977 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.76 W/kg

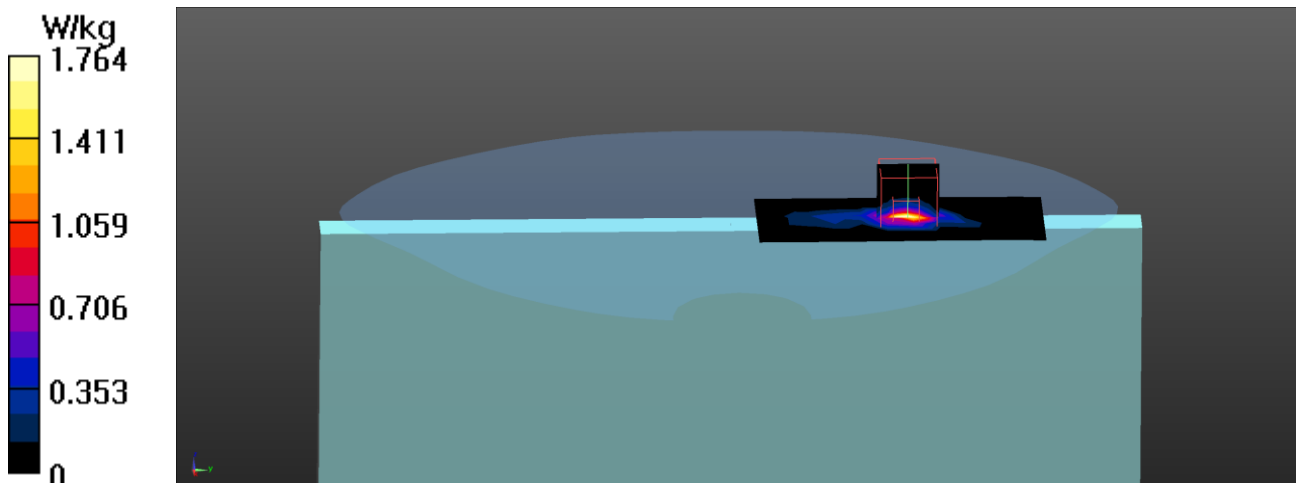
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.173 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 4.37 W/kg

**SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.179 W/kg**

Maximum value of SAR (measured) = 2.13 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Back(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.122 W/kg

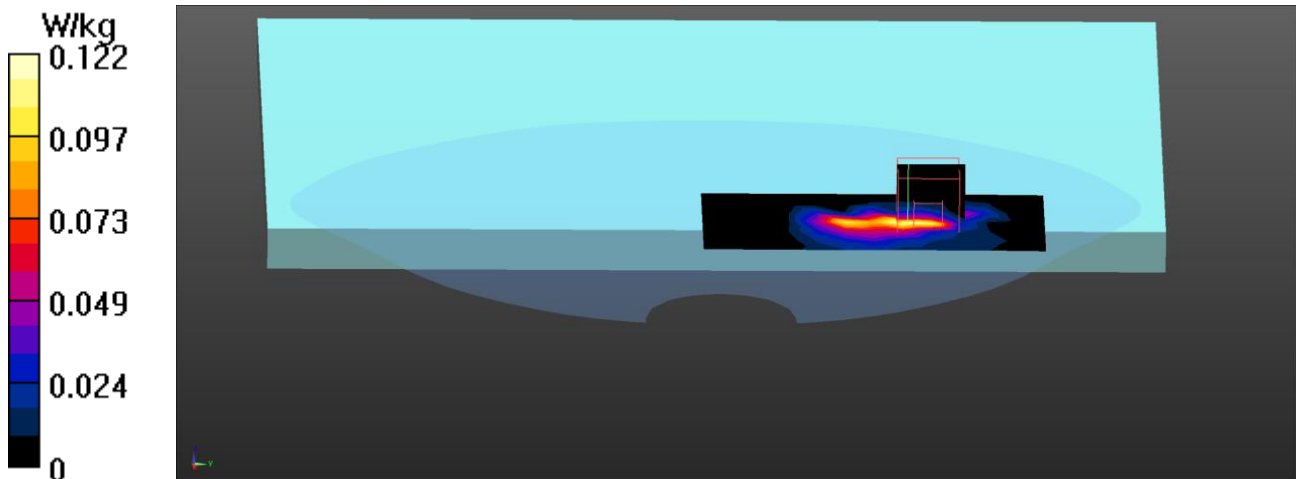
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.139 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.602 W/kg

**SAR(1 g) = 0.024 W/kg; SAR(10 g) = 0.00261 W/kg**

Maximum value of SAR (measured) = 0.125 W/kg





Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Back(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.388 W/kg

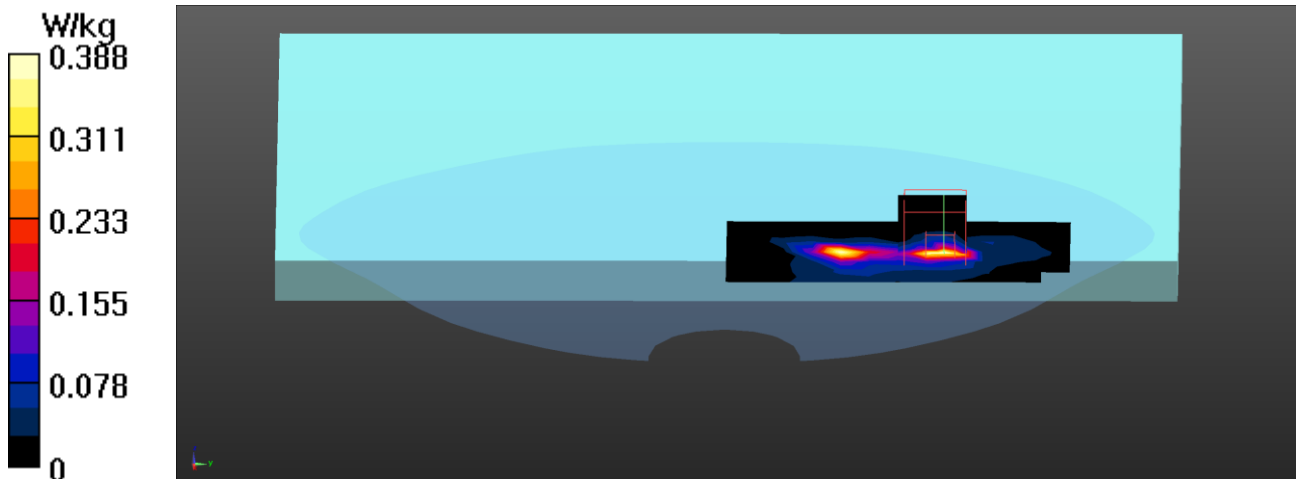
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.8190 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.45 W/kg

**SAR(1 g) = 0.155 W/kg; SAR(10 g) = 0.036 W/kg**

Maximum value of SAR (measured) = 0.463 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Back(PAD)-Main Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.313 W/kg

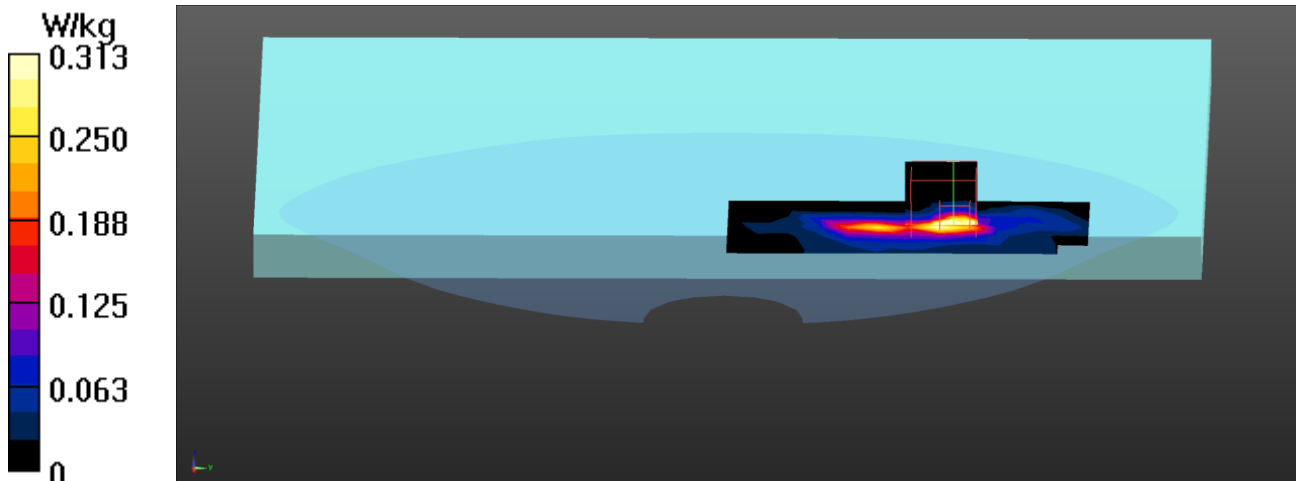
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.185 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.971 W/kg

**SAR(1 g) = 0.170 W/kg; SAR(10 g) = 0.044 W/kg**

Maximum value of SAR (measured) = 0.573 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(NB)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

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

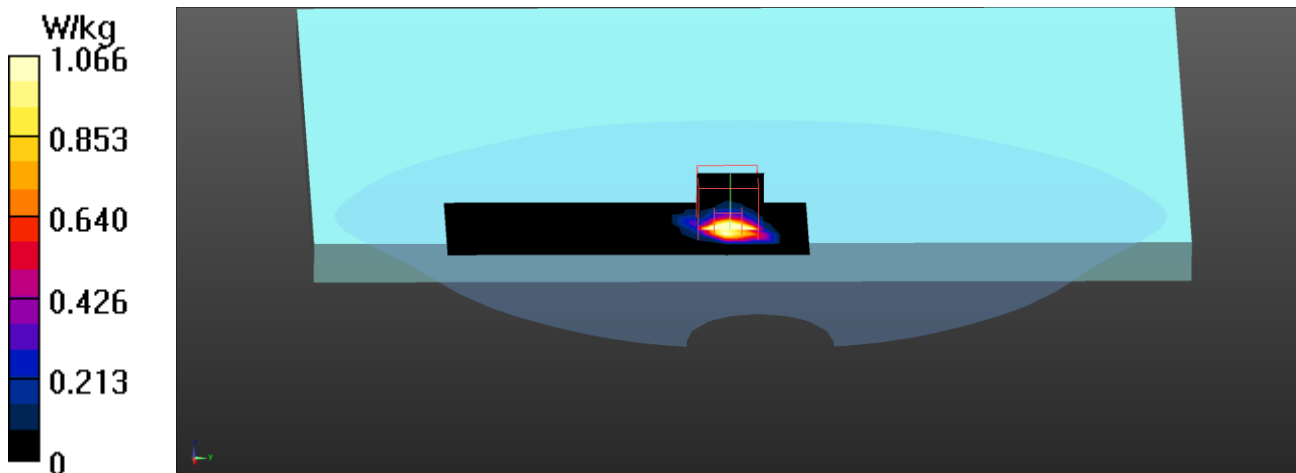
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 16.16 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 4.18 W/kg

**SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.169 W/kg**

Maximum value of SAR (measured) = 2.24 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(NB)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.17 W/kg

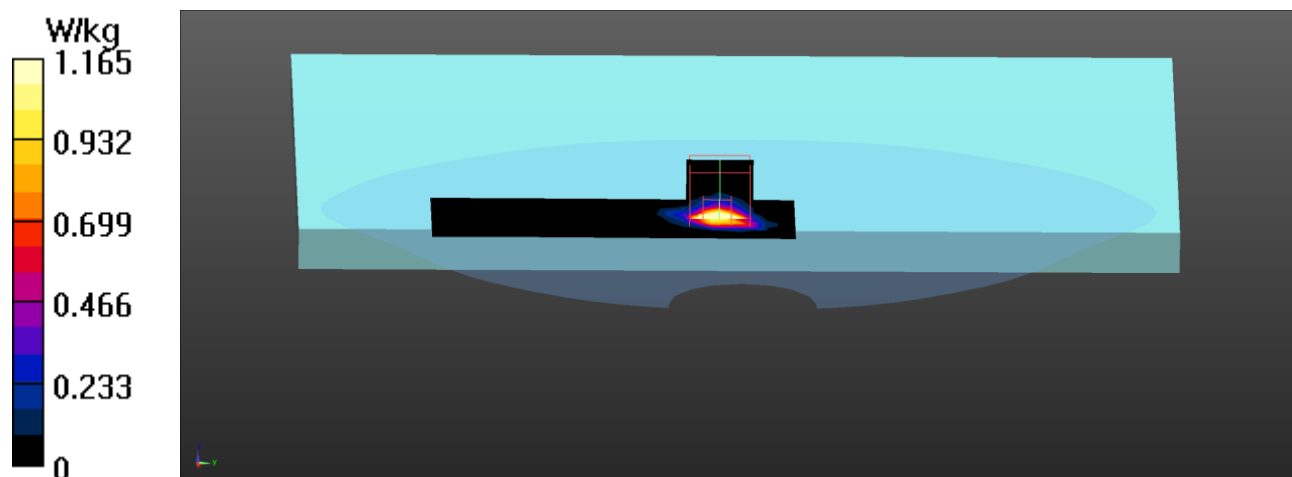
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 17.94 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 4.73 W/kg

**SAR(1 g) = 0.770 W/kg; SAR(10 g) = 0.175 W/kg**

Maximum value of SAR (measured) = 2.40 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_122-Bottom(NB)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5610 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5610$  MHz;  $\sigma = 5.21$  S/m;  $\epsilon_r = 35.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x9x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.30 W/kg

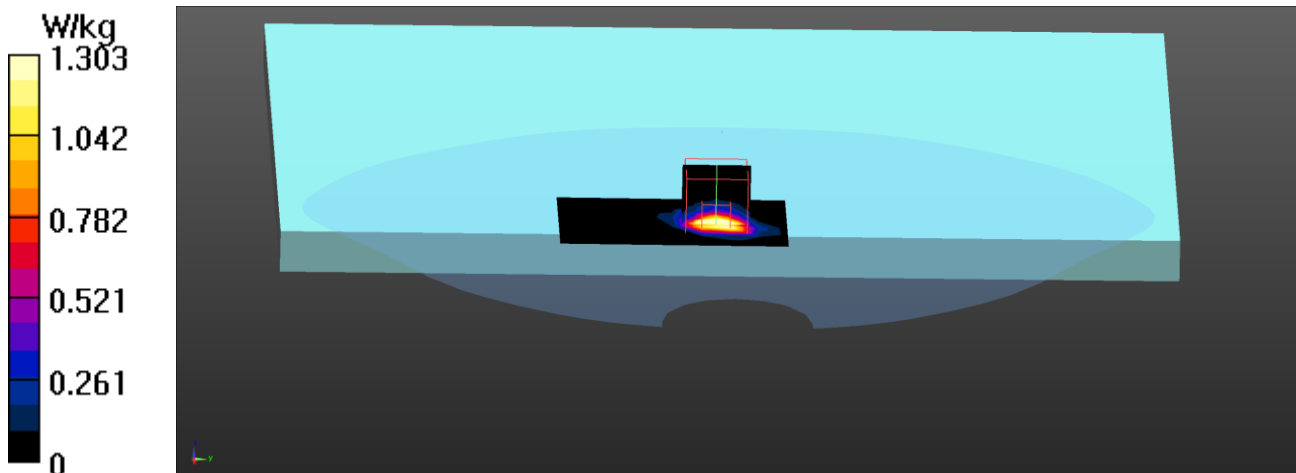
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 19.05 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 4.78 W/kg

**SAR(1 g) = 0.799 W/kg; SAR(10 g) = 0.182 W/kg**

Maximum value of SAR (measured) = 2.50 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_138-Bottom(NB)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5690 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5690$  MHz;  $\sigma = 5.31$  S/m;  $\epsilon_r = 35.18$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x9x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.20 W/kg

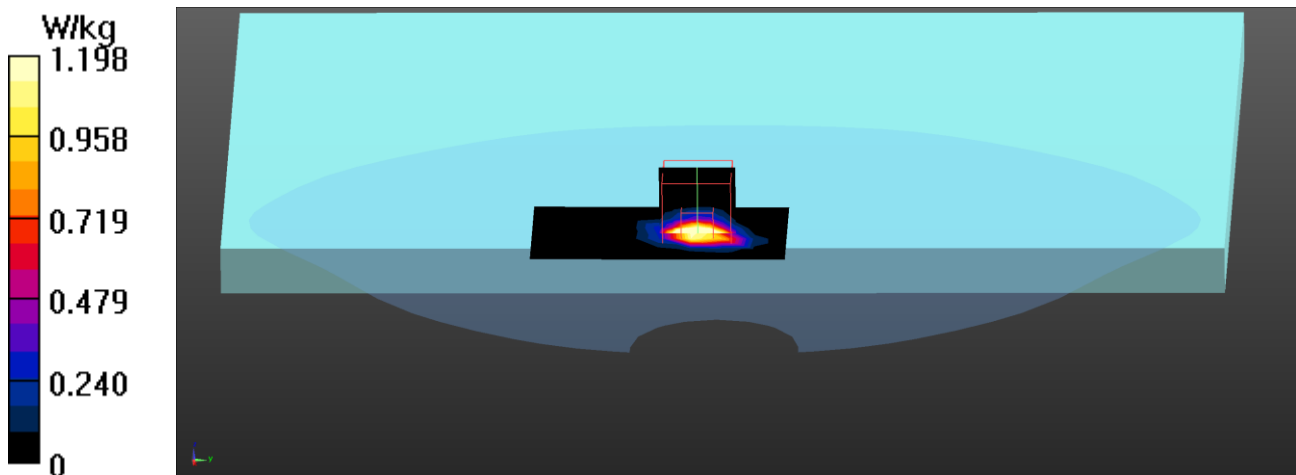
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 15.85 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 4.90 W/kg

**SAR(1 g) = 0.802 W/kg; SAR(10 g) = 0.188 W/kg**

Maximum value of SAR (measured) = 2.52 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(NB)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x14x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.09 W/kg

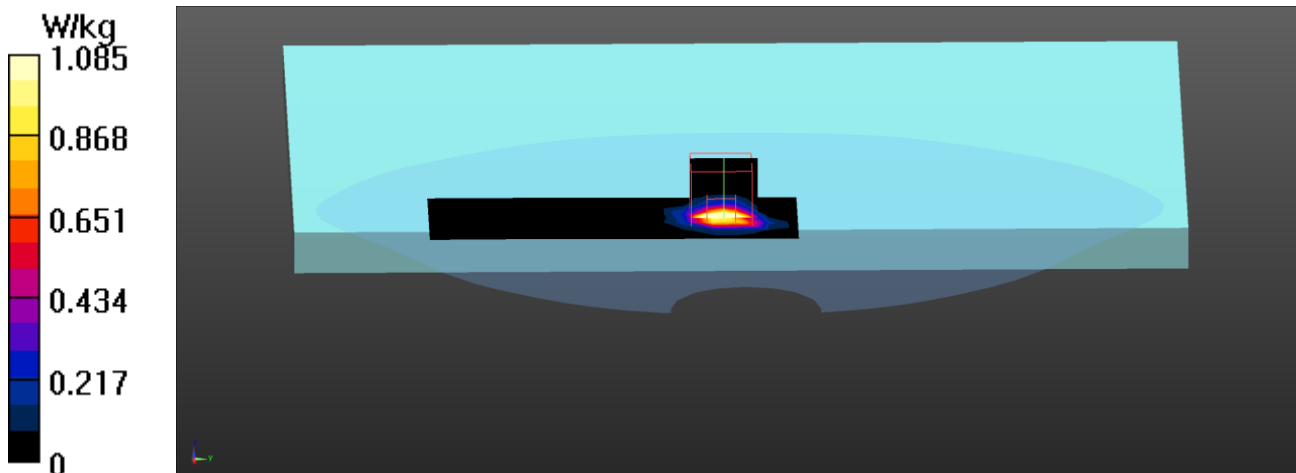
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 17.08 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 4.32 W/kg

**SAR(1 g) = 0.687 W/kg; SAR(10 g) = 0.167 W/kg**

Maximum value of SAR (measured) = 2.16 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_42-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5210 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5210$  MHz;  $\sigma = 4.67$  S/m;  $\epsilon_r = 36.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.34, 5.34, 5.34); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.90 W/kg

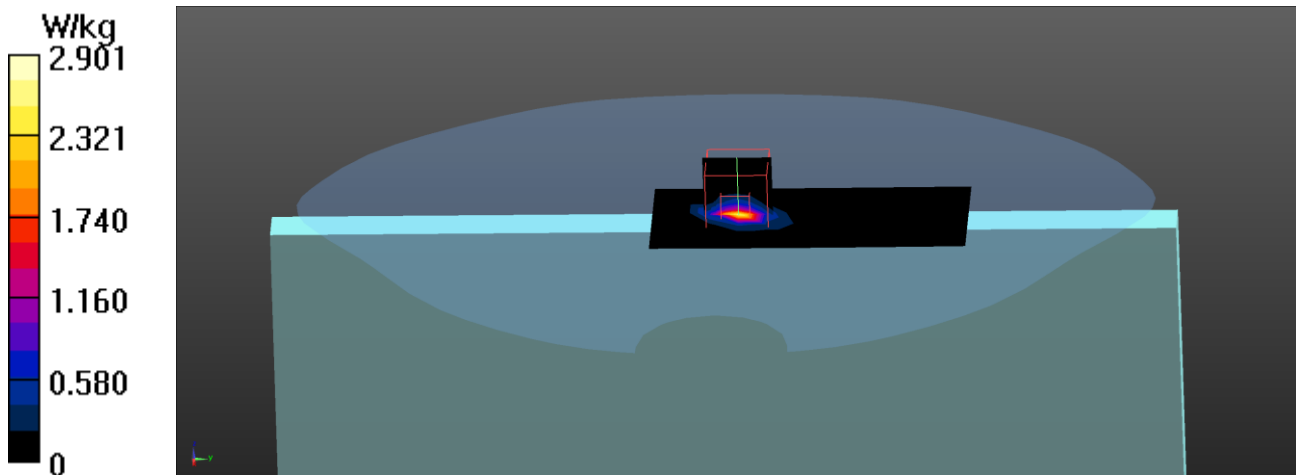
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 16.27 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 5.44 W/kg

**SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.200 W/kg**

Maximum value of SAR (measured) = 2.66 W/kg





Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.81 W/kg

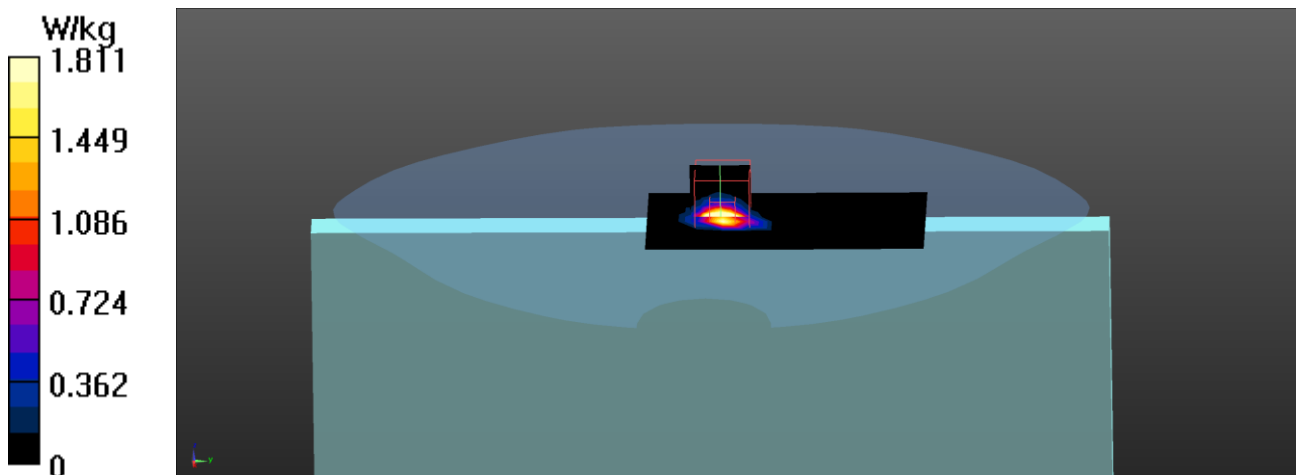
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 19.08 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 6.28 W/kg

**SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.241 W/kg**

Maximum value of SAR (measured) = 3.40 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.11 W/kg

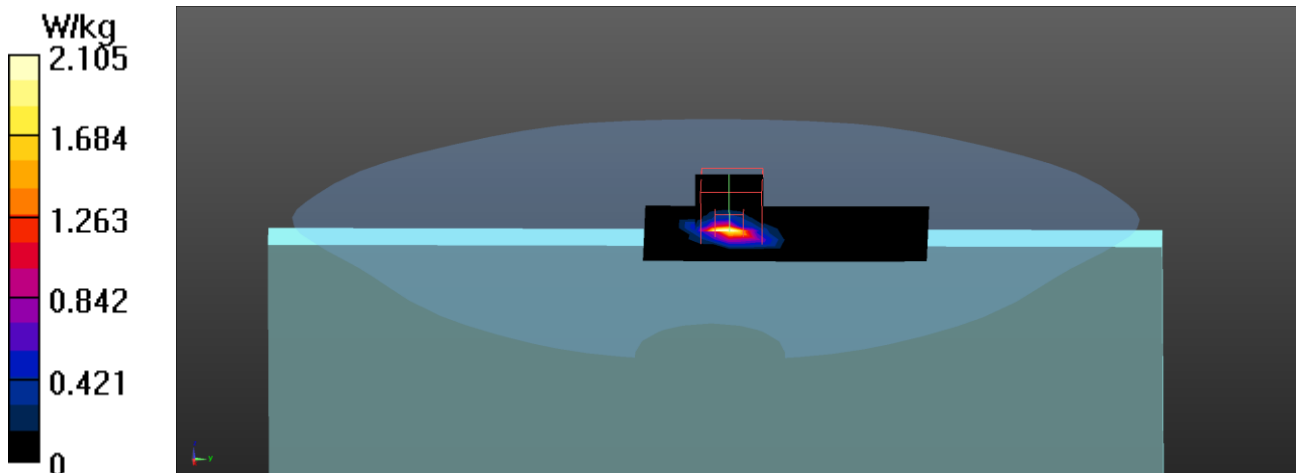
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 19.18 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 7.67 W/kg

**SAR(1 g) = 0.849 W/kg; SAR(10 g) = 0.197 W/kg**

Maximum value of SAR (measured) = 2.55 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_122-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5610 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5610$  MHz;  $\sigma = 5.21$  S/m;  $\epsilon_r = 35.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.85 W/kg

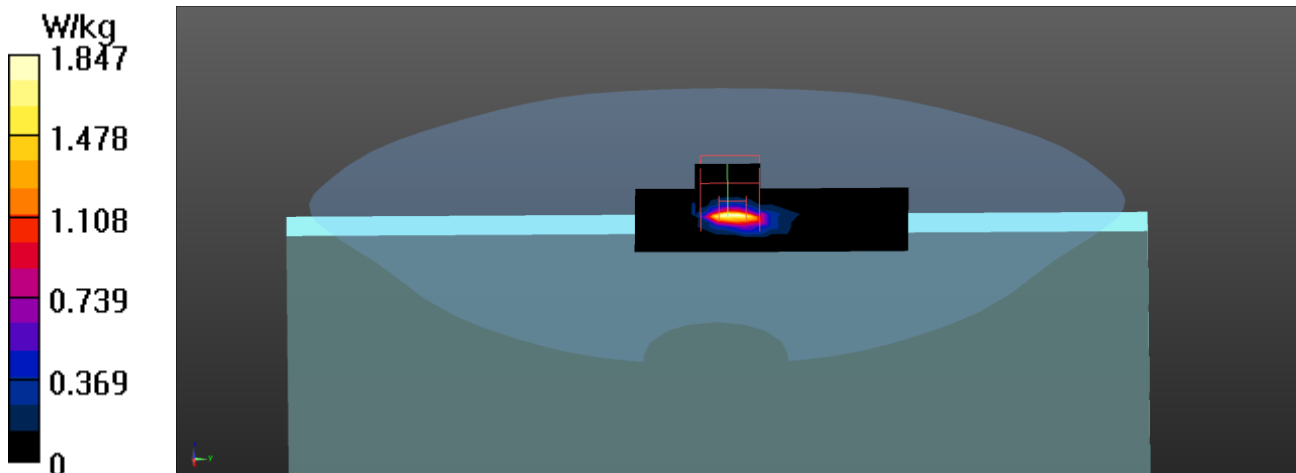
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 12.89 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 4.94 W/kg

**SAR(1 g) = 0.821 W/kg; SAR(10 g) = 0.182 W/kg**

Maximum value of SAR (measured) = 2.40 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_138-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5690 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5690$  MHz;  $\sigma = 5.31$  S/m;  $\epsilon_r = 35.18$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.76, 4.76, 4.76); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.16 W/kg

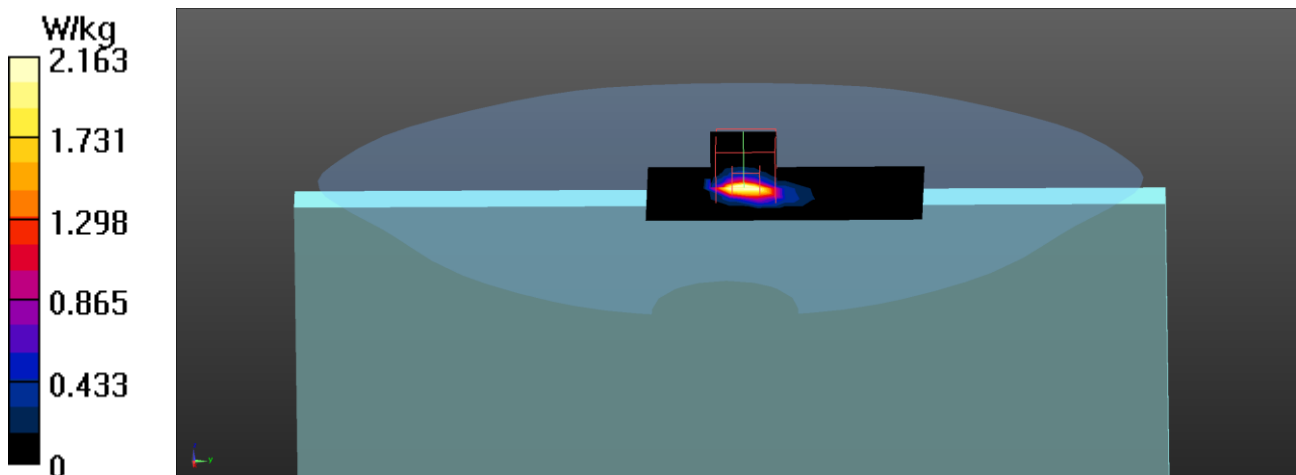
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 14.48 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 5.85 W/kg

**SAR(1 g) = 0.955 W/kg; SAR(10 g) = 0.223 W/kg**

Maximum value of SAR (measured) = 2.80 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Bottom(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.79 W/kg

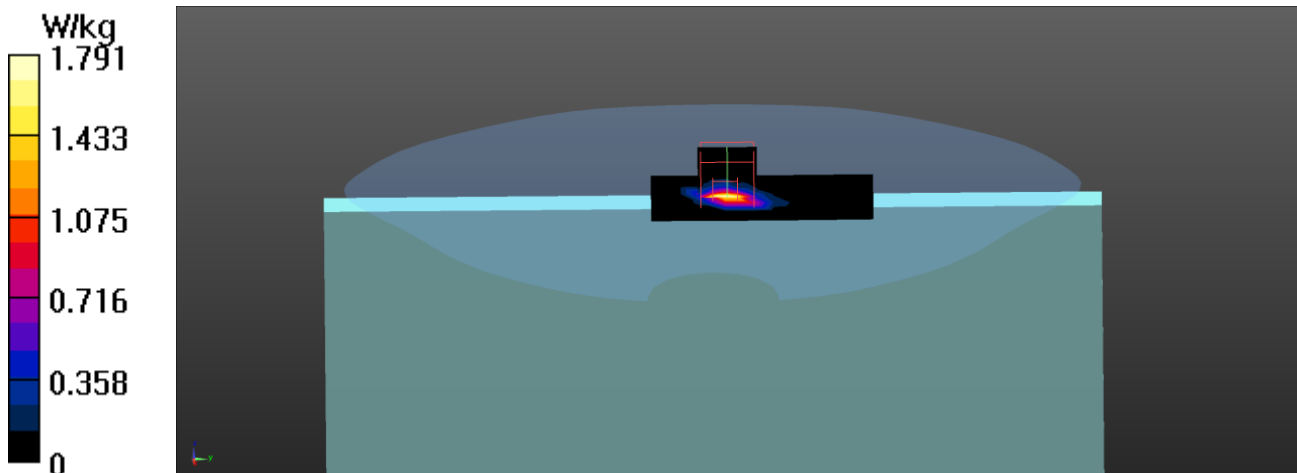
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 17.48 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 4.67 W/kg

**SAR(1 g) = 0.752 W/kg; SAR(10 g) = 0.179 W/kg**

Maximum value of SAR (measured) = 2.04 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Back(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.670 W/kg

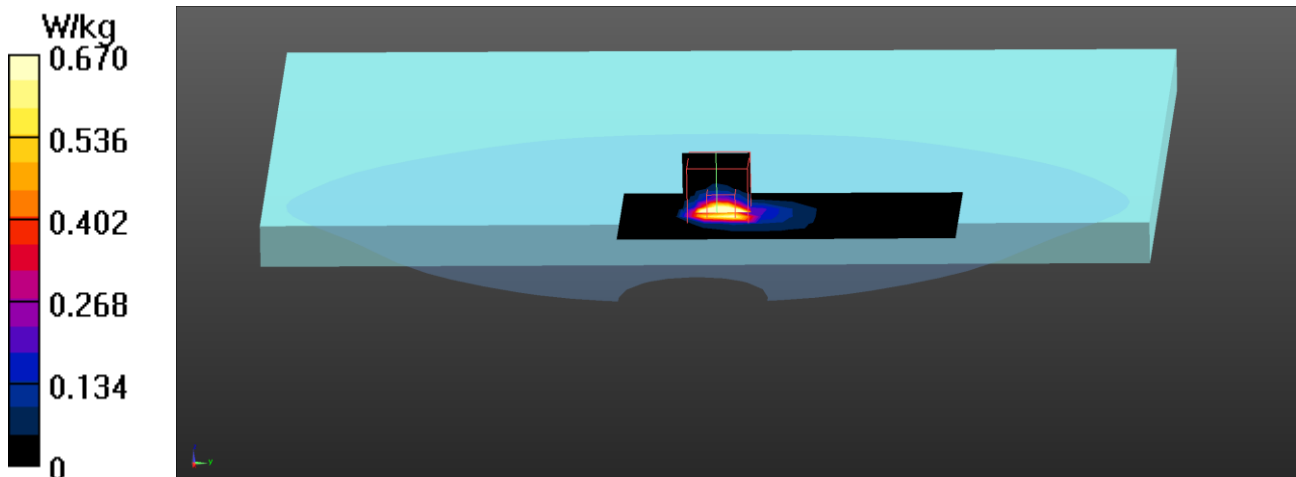
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 15.40 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.12 W/kg

**SAR(1 g) = 0.475 W/kg; SAR(10 g) = 0.101 W/kg**

Maximum value of SAR (measured) = 1.42 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Back(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.15 W/kg

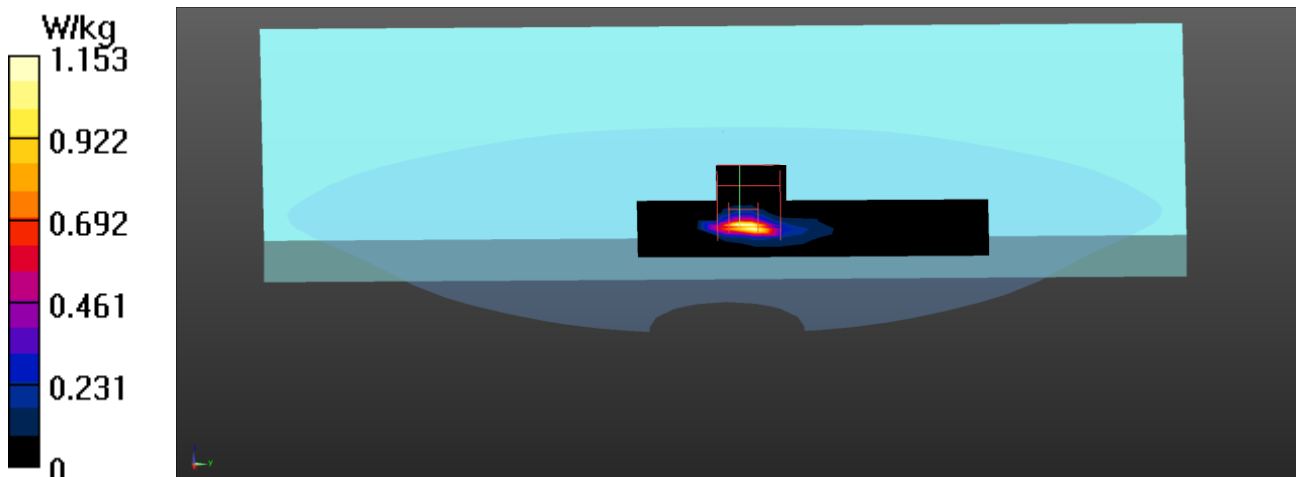
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 10.85 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.84 W/kg

**SAR(1 g) = 0.441 W/kg; SAR(10 g) = 0.093 W/kg**

Maximum value of SAR (measured) = 1.34 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_155-Back(PAD)-Aux Hong-Bo****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5775 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.42$  S/m;  $\epsilon_r = 34.94$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.79, 4.79, 4.79); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (7x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.766 W/kg

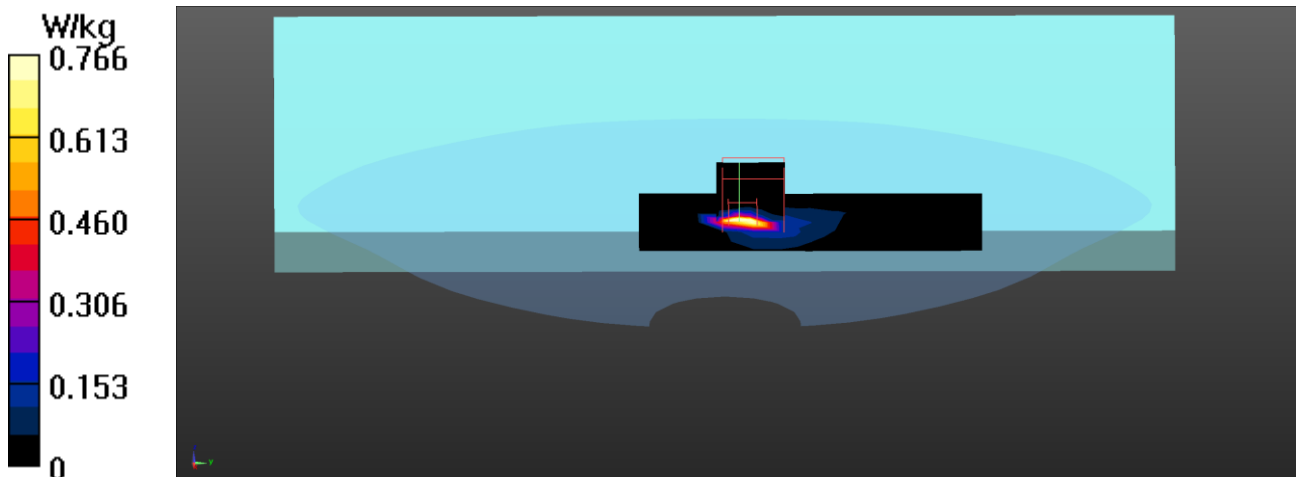
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 10.39 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.34 W/kg

**SAR(1 g) = 0.261 W/kg; SAR(10 g) = 0.044 W/kg**

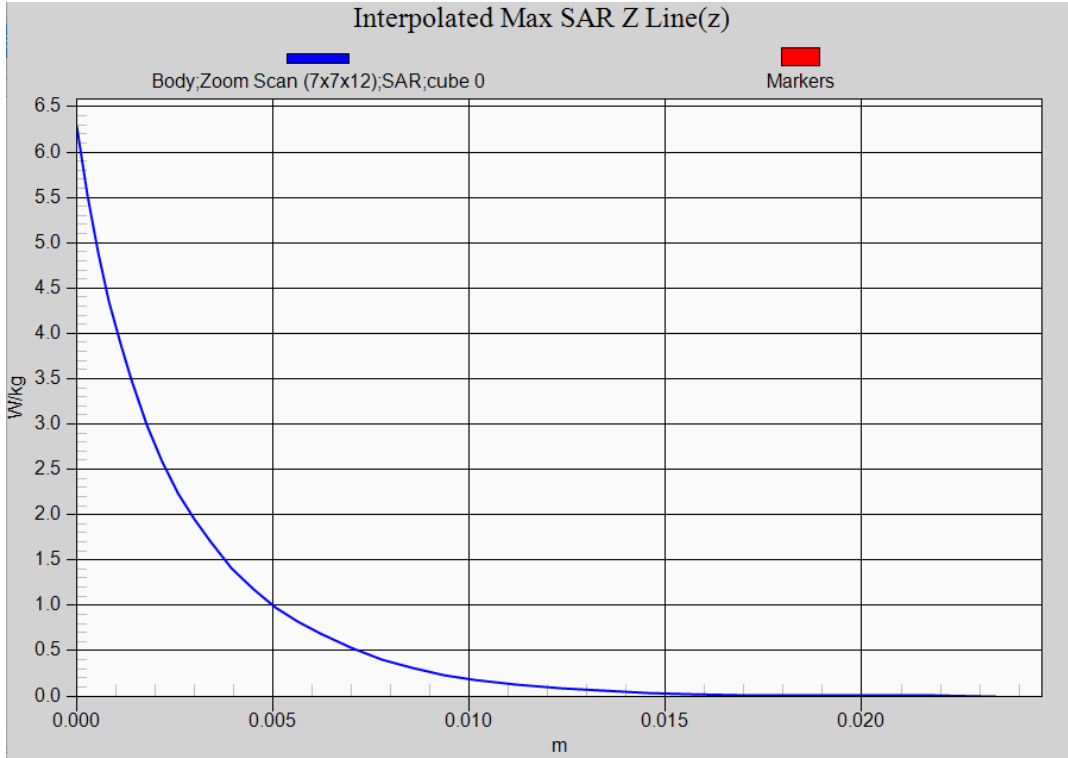
Maximum value of SAR (measured) = 1.18 W/kg





**802.11ac (80M) EUT Bottom (PAD Aux Hong-Bo), Z-Axis plot**

**Channel: 58**



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_11-Bottom(PAD)-Main Yageo-Verify****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2462 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.83$  S/m;  $\epsilon_r = 39.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.44 W/kg

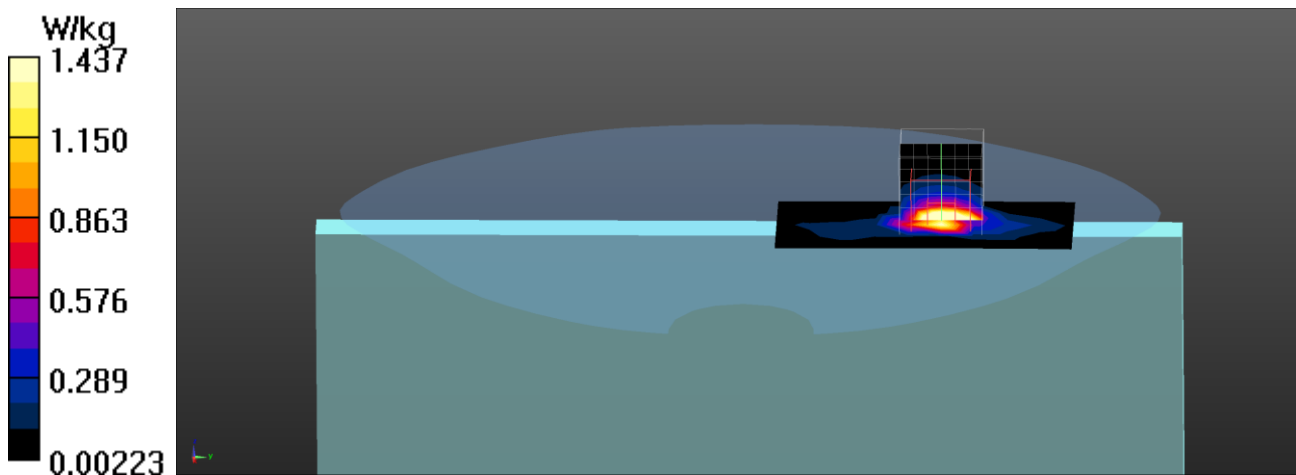
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.831 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.60 W/kg

**SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.400 W/kg**

Maximum value of SAR (measured) = 2.53 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/18

**802.11b\_11-Bottom(PAD)-Main Hong-Bo-Verify****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 2.4G; Frequency: 2462 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.83$  S/m;  $\epsilon_r = 39.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.8, Liquid Temperature (°C) : 22.5

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(7.56, 7.56, 7.56); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with left table; Type: SAM;
- Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.32 W/kg

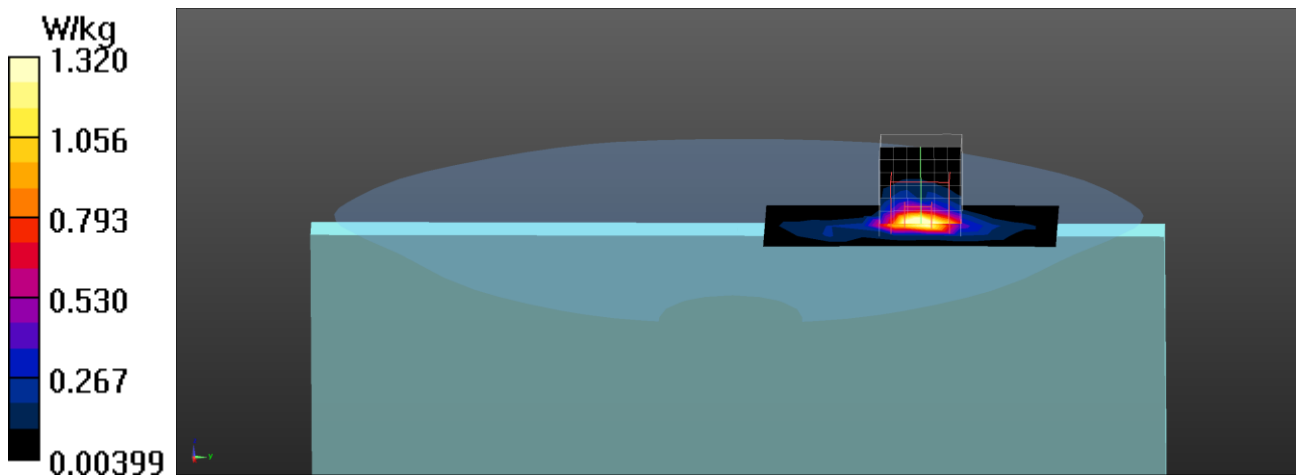
**Configuration/Body/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.743 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 2.36 W/kg

**SAR(1 g) = 0.880 W/kg; SAR(10 g) = 0.319 W/kg**

Maximum value of SAR (measured) = 1.77 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_106-Bottom(NB)-Main Yageo-Verify****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5530 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.83$  S/m;  $\epsilon_r = 36.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(4.95, 4.95, 4.95); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x13x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.38 W/kg

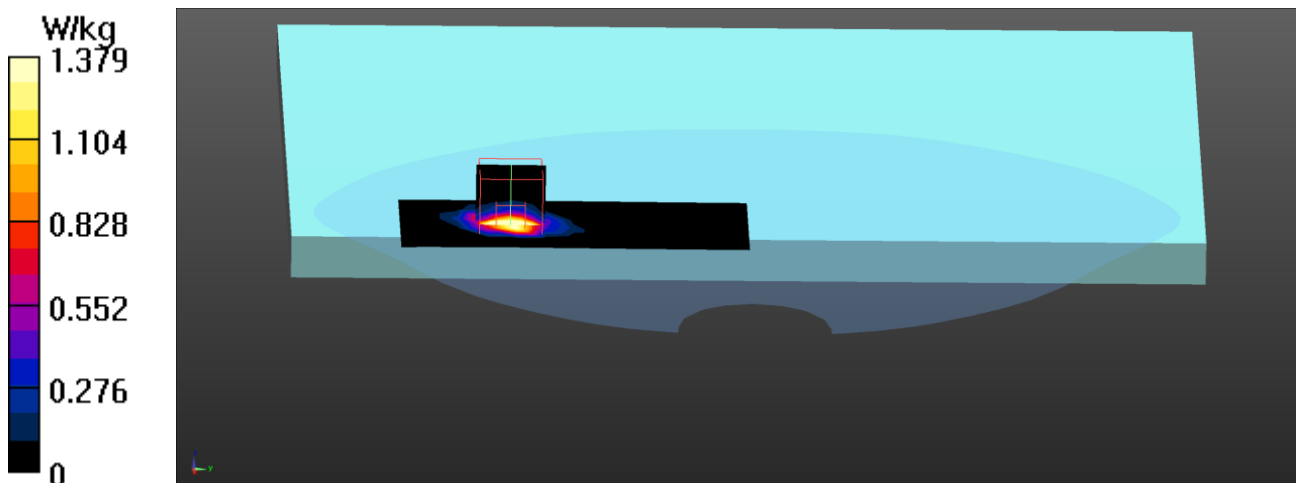
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 19.14 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 5.37 W/kg

**SAR(1 g) = 0.902 W/kg; SAR(10 g) = 0.234 W/kg**

Maximum value of SAR (measured) = 2.53 W/kg



Test Laboratory: DEKRA

Date/Time: 2020/11/23

**802.11ac-80M\_58-Bottom(PAD)-Aux Hong-Bo-Verify****DUT: Notebook Computers; Type: 14T90P**

Communication System: UID 0, WLAN 5G; Frequency: 5290 MHz;

Communication System PAR: 0 dB

Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.78$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature (°C) : 23.5, Liquid Temperature (°C) : 22.0

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3975; ConvF(5.13, 5.13, 5.13); Calibrated: 2020/05/20;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn679; Calibrated: 2020/05/06
- Phantom: SAM with right table; Type: SAM;
- Measurement SW: DASYS2, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

**Configuration/Body/Area Scan (6x11x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.36 W/kg

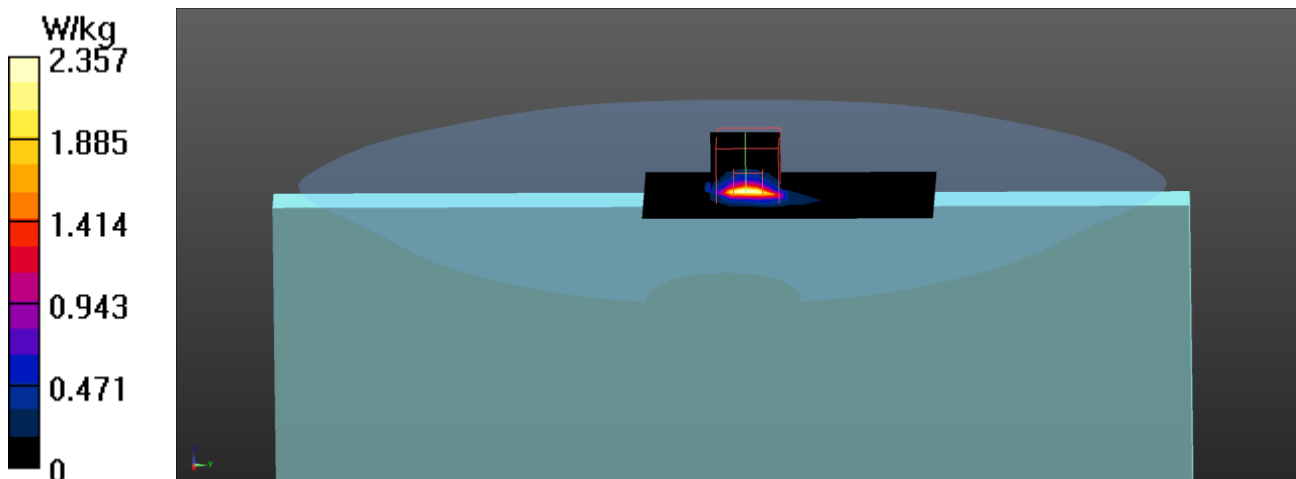
**Configuration/Body/Zoom Scan (7x7x12) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 16.80 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 6.05 W/kg

**SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.231 W/kg**

Maximum value of SAR (measured) = 3.07 W/kg





## Appendix D. Probe Calibration Data

Object: EX3DV4 - SN:3975





In Collaboration with  
**s p e a g**  
CALIBRATION LABORATORY



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L0570

Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com [Http://www.chinattl.cn](http://www.chinattl.cn)

Client

**Auden**

Certificate No: **Z20-60149**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN : 3975**

Calibration Procedure(s) **FF-Z11-004-01**  
**Calibration Procedures for Dosimetric E-field Probes**

Calibration date: **May 20, 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(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	18-Jun-19(CTTL, No.J19X05125)	Jun-20
Power sensor NRP-Z91	101547	18-Jun-19(CTTL, No.J19X05125)	Jun-20
Power sensor NRP-Z91	101548	18-Jun-19(CTTL, No.J19X05125)	Jun-20
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 3617	30-Jan-20(SPEAG, No.EX3-3617_Jan20/2)	Jan-21
DAE4	SN 1556	4-Feb-20(SPEAG, No.DAE4-1556_Feb20)	Feb-21

Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	18-Jun-19(CTTL, No.J19X05127)	Jun-20
Network Analyzer E5071C	MY46110673	10-Feb-20(CTTL, No.J20X00515)	Feb-21

	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: May 22, 2020

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





## Glossary:

TSL	tissue simulating liquid
NORM <sub>x,y,z</sub>	sensitivity in free space
ConvF	sensitivity in TSL / NORM <sub>x,y,z</sub>
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization $\Phi$	$\Phi$ rotation around probe axis
Polarization $\theta$	$\theta$ 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<sub>x,y,z</sub>**: Assessed for E-field polarization  $\theta=0$  ( $f \leq 900\text{MHz}$  in TEM-cell;  $f > 1800\text{MHz}$ : waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not effect the  $E^2$ -field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub>** = NORM<sub>x,y,z</sub> \* 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<sub>x,y,z</sub>**: 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<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: 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  $f \leq 800\text{MHz}$ ) and inside waveguide using analytical field distributions based on power measurements for  $f > 800\text{MHz}$ . 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<sub>x,y,z</sub> \* 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  $\pm 50\text{MHz}$  to  $\pm 100\text{MHz}$ .
- 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<sub>x</sub> (no uncertainty required).





## DASY/EASY – Parameters of Probe: EX3DV4 – SN:3975

### Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup>	0.41	0.46	0.51	$\pm 10.0\%$
DCP(mV) <sup>B</sup>	104.4	101.4	102.1	

### Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Unc <sup>E</sup> (k=2)
0	CW	X	0.0	0.0	1.0	0.00	145.8	$\pm 2.3\%$
		Y	0.0	0.0	1.0		161.0	
		Z	0.0	0.0	1.0		166.0	

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%.

<sup>A</sup> The uncertainties of Norm X, Y, Z do not affect the E<sup>2</sup>-field uncertainty inside TSL (see Page 4).

<sup>B</sup> Numerical linearization parameter: uncertainty not required.

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





## DASY/EASY – Parameters of Probe: EX3DV4 – SN:3975

### Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz] <sup>C</sup>	Relative Permittivity <sup>F</sup>	Conductivity (S/m) <sup>F</sup>	ConvF X	ConvF Y	ConvF Z	Alpha <sup>G</sup>	Depth <sup>G</sup> (mm)	Unct. (k=2)
750	41.9	0.89	9.90	9.90	9.90	0.40	0.75	±12.1%
835	41.5	0.90	9.56	9.56	9.56	0.14	1.41	±12.1%
900	41.5	0.97	9.52	9.52	9.52	0.14	1.39	±12.1%
1450	40.5	1.20	8.63	8.63	8.63	0.30	0.81	±12.1%
1750	40.1	1.37	8.36	8.36	8.36	0.27	0.97	±12.1%
1900	40.0	1.40	7.95	7.95	7.95	0.28	1.02	±12.1%
2000	40.0	1.40	7.93	7.93	7.93	0.24	1.09	±12.1%
2300	39.5	1.67	7.78	7.78	7.78	0.61	0.68	±12.1%
2450	39.2	1.80	7.56	7.56	7.56	0.61	0.70	±12.1%
2600	39.0	1.96	7.34	7.34	7.34	0.63	0.68	±12.1%
3300	38.2	2.71	6.84	6.84	6.84	0.42	0.94	±13.3%
3500	37.9	2.91	6.79	6.79	6.79	0.44	0.94	±13.3%
3700	37.7	3.12	6.53	6.53	6.53	0.44	0.93	±13.3%
3900	37.5	3.32	6.42	6.42	6.42	0.40	1.20	±13.3%
4100	37.2	3.53	6.40	6.40	6.40	0.40	1.20	±13.3%
4200	37.1	3.63	6.28	6.28	6.28	0.40	1.20	±13.3%
4400	36.9	3.84	6.15	6.15	6.15	0.40	1.20	±13.3%
4600	36.7	4.04	6.09	6.09	6.09	0.45	1.15	±13.3%
4800	36.4	4.25	6.04	6.04	6.04	0.45	1.25	±13.3%
4950	36.3	4.40	5.91	5.91	5.91	0.45	1.25	±13.3%
5200	36.0	4.66	5.34	5.34	5.34	0.40	1.60	±13.3%
5300	35.9	4.76	5.13	5.13	5.13	0.40	1.60	±13.3%
5500	35.6	4.96	4.95	4.95	4.95	0.40	1.55	±13.3%
5600	35.5	5.07	4.76	4.76	4.76	0.45	1.40	±13.3%
5800	35.3	5.27	4.79	4.79	4.79	0.45	1.60	±13.3%

<sup>C</sup> 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.

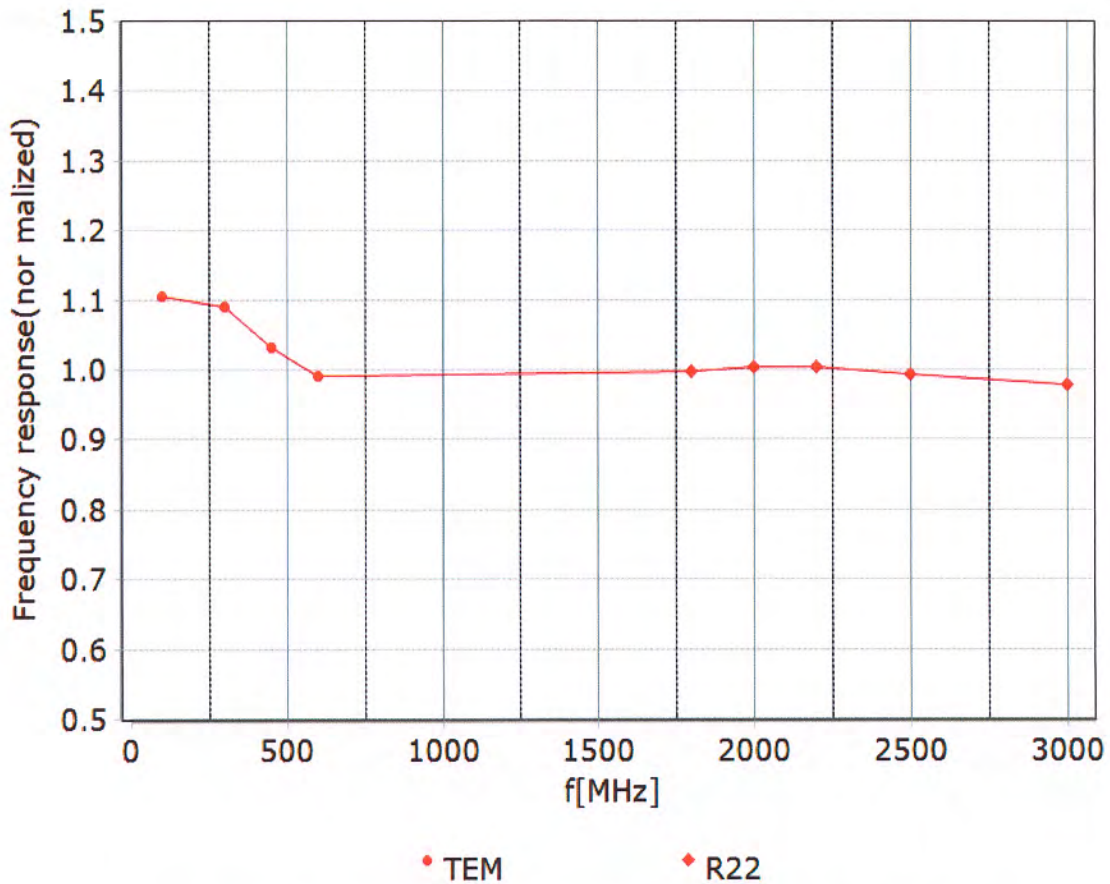
<sup>F</sup> At frequency below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> 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.





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



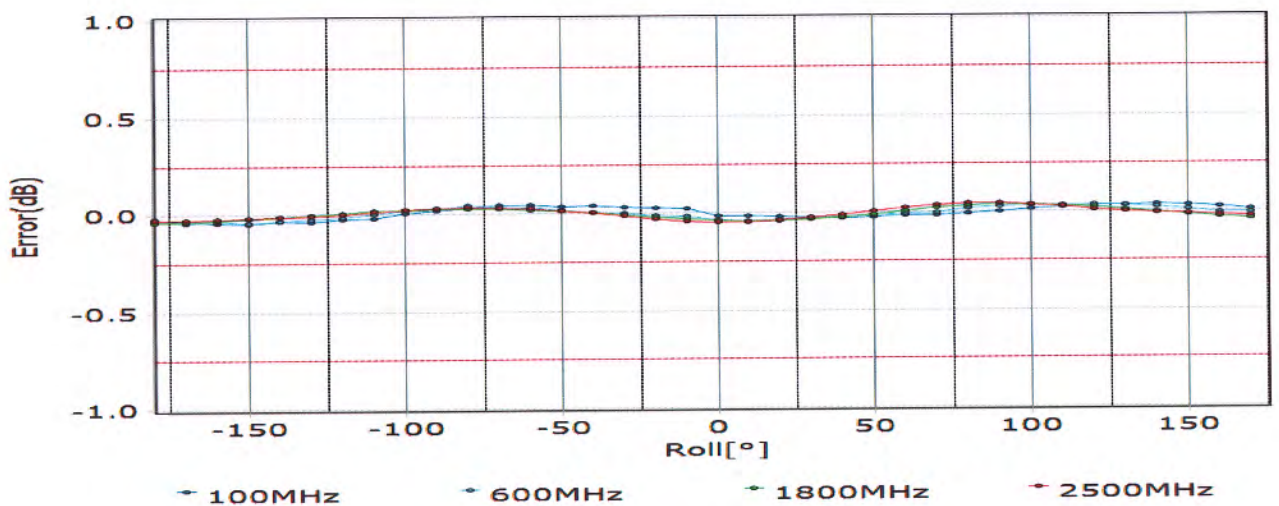
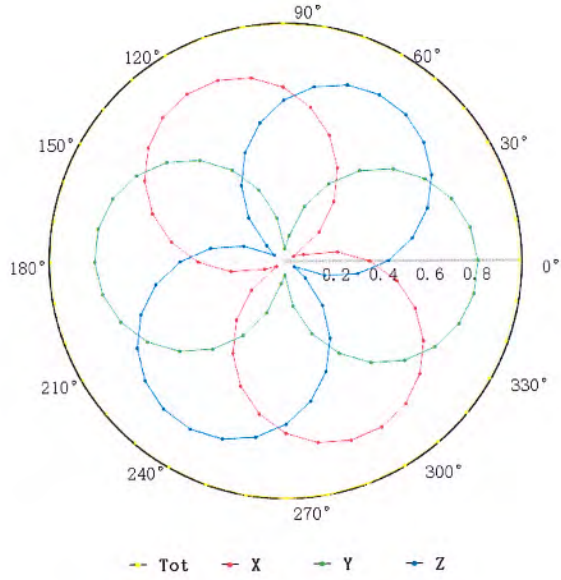
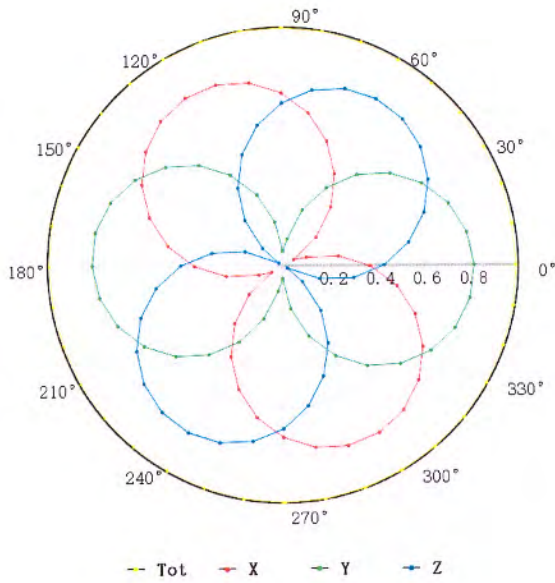
Uncertainty of Frequency Response of E-field:  $\pm 7.4\%$  ( $k=2$ )



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

**f=600 MHz, TEM**

**f=1800 MHz, R22**

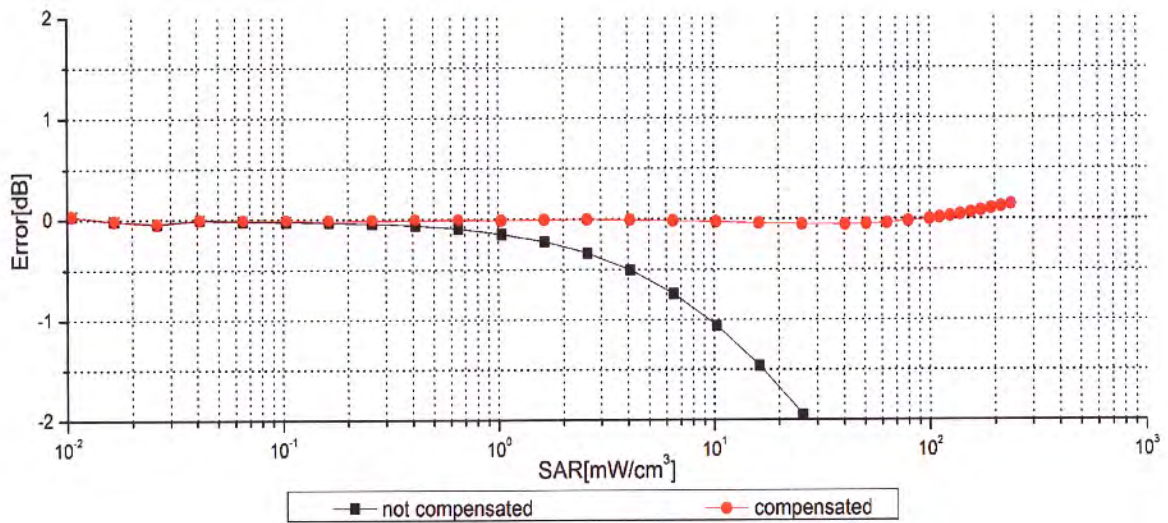
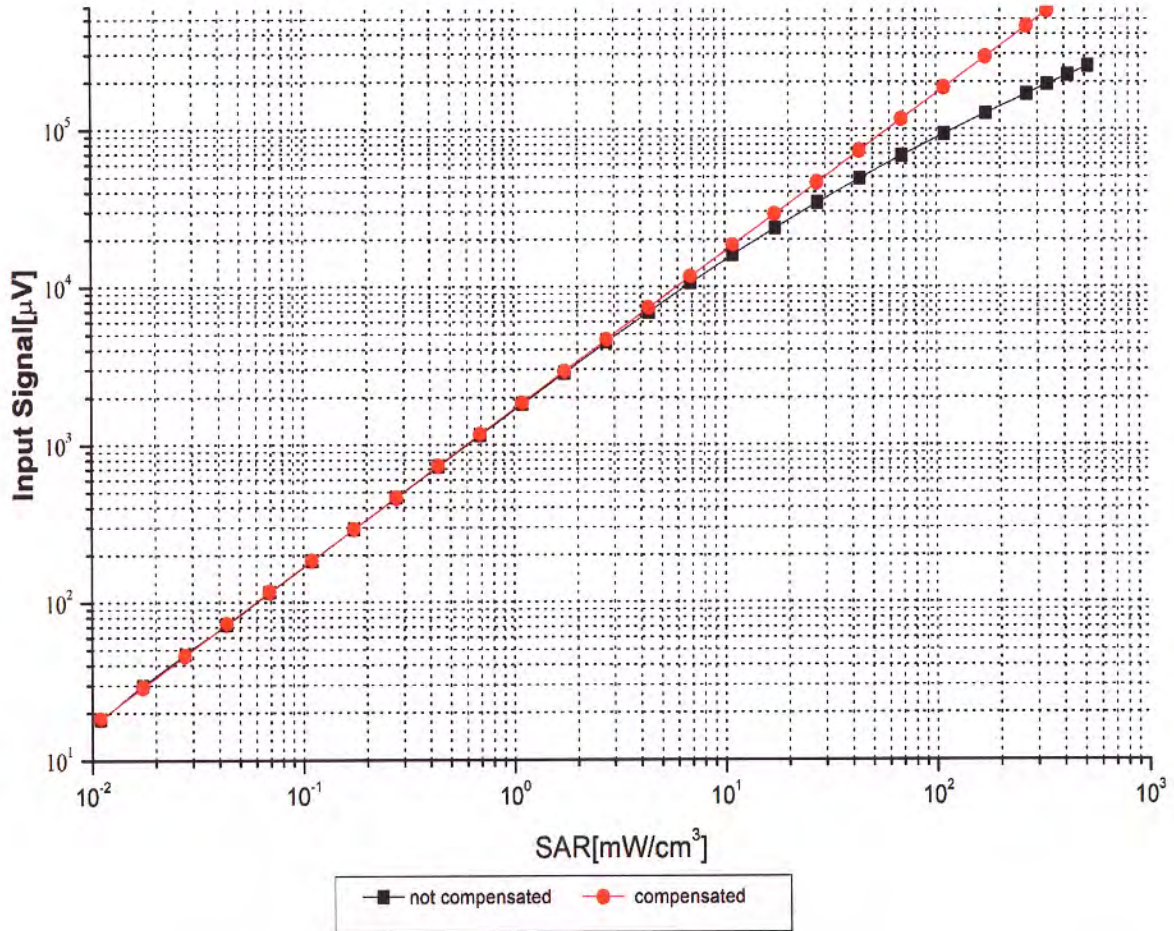


Uncertainty of Axial Isotropy Assessment:  $\pm 1.2\%$  ( $k=2$ )





## Dynamic Range f(SAR<sub>head</sub>) (TEM cell, f = 900 MHz)



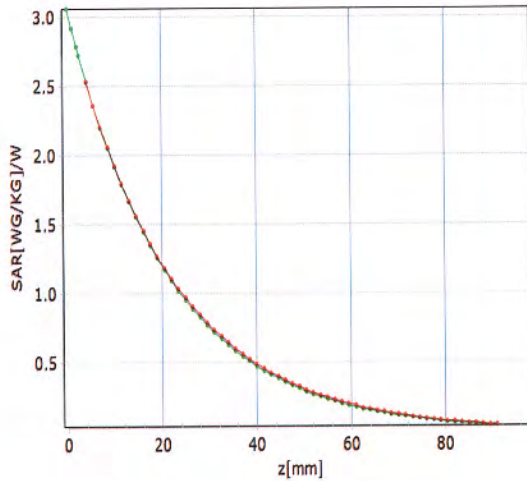
Uncertainty of Linearity Assessment: ±0.9% (k=2)



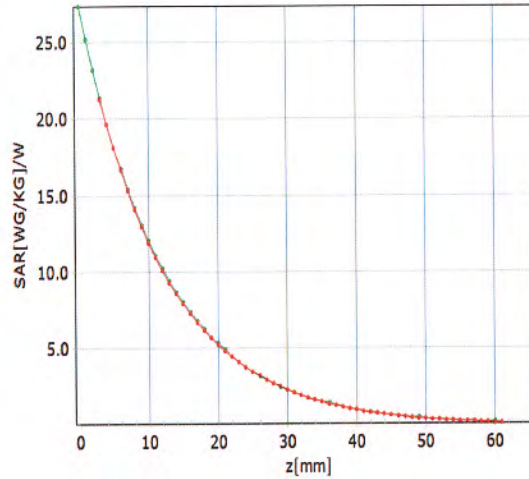
## Conversion Factor Assessment

f=750 MHz,WGLS R9(H\_convF)

f=1750 MHz,WGLS R22(H\_convF)

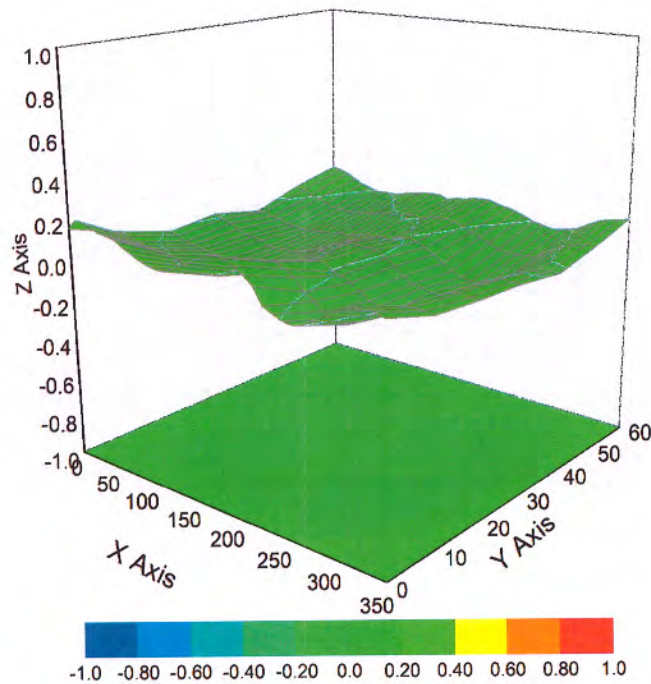


+ analytical + measured



+ analytical + measured

## Deviation from Isotropy in Liquid



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





## DASY/EASY – Parameters of Probe: EX3DV4 – SN:3975

### Other Probe Parameters

<b>Sensor Arrangement</b>	<b>Triangular</b>
<b>Connector Angle (°)</b>	<b>84.3</b>
<b>Mechanical Surface Detection Mode</b>	<b>enabled</b>
<b>Optical Surface Detection Mode</b>	<b>disable</b>
<b>Probe Overall Length</b>	<b>337mm</b>
<b>Probe Body Diameter</b>	<b>10mm</b>
<b>Tip Length</b>	<b>10mm</b>
<b>Tip Diameter</b>	<b>2.5mm</b>
<b>Probe Tip to Sensor X Calibration Point</b>	<b>1mm</b>
<b>Probe Tip to Sensor Y Calibration Point</b>	<b>1mm</b>
<b>Probe Tip to Sensor Z Calibration Point</b>	<b>1mm</b>
<b>Recommended Measurement Distance from Surface</b>	<b>1.4mm</b>