TESTING CERT #3478.01

SAR TEST REPORT

EUT Description	**Wireless Module installed in Notebook/Tablet**
Brand Name	**Intel**
Model Name	**Intel® Dual Band Wireless-AC 7265**
Serial Number	**MAC: 00.15.00.EE.84.78**
FCC/IC ID	**FCC ID: PD97265NGU / IC: 1000W-7265NG**
Hardware/Software Version	**DRTU version: 1.7.3-895** **Driver version:17.0.0.20**
Date of Sample Receipt	**2014-10-01**
Date of Test	**2014-10-28**
Features	**WiFi: 802.11 a/b/g/n/ac 2.4/5.2/5.3/5.6/5.8 GHz** **Bluetooth: BDR/EDR v2.1, Bluetooth LE v4.0** (see section 7)
Description	**Wireless Module: Intel® 7265NGW** **Platform: Lenovo TP00070A PC** **Antenna: HIGH-TEK ELECTRONICS CO., LTD** **Main: DC33001M400** **Aux: DC33001M410**

Applicant	**Intel Mobile Communications**
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Reference Standards	**FCC 47 CFR Part §2.1093** **RSS-102, Issue 4** (see section 1)	
RF Exposure Environment	**Portable devices - General population/uncontrolled exposure**	
	SAR Result	SAR Limit
Maximum SAR Result & Limit	**1.52 W/kg (1g)**	**1.6 W/kg (1g)**
Min. test separation distance	**3.5mm**	

Test Report number	**14072301.TR01**
Revision Control	**Rev. 00**

The test results relate only to the samples tested.
The test report shall not be reproduced in full, without written approval of the laboratory.

Reviewed by	Approved by
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Table of Contents

1. Standards, reference documents and applicable test methods

1. FCC 47 CFR Part §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.
2. FCC OET KDB 248827 D01 – Measurement Procedures for 802.11 a/b/g Transmitters.
3. FCC OET KDB 447498 D01 – Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.
4. FCC OET KDB 616217 D04 – SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers.
5. FCC OET KDB 865664 D01 – SAR Measurement Requirements for 100 MHz to 6 GHz.
6. FCC OET KDB 865664 D02 – RF Exposure Compliance Reporting and Documentation Considerations.
7. IC RSS 102, Issue 4 – Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands).
8. IC Notice 2012-DRS0529 – SAR correction for measured conductivity and relative permittivity based on IEC 62209-2 standard.
9. IC Notice 2012-DRS1203 – Applicability of latest FCC RF Exposure KDB procedures (publication date October 24, 2012) and other procedures.
10. IC Notice 2013-DRS0911 – Latest publication of IEEE 1528-2013 and power exemption limits.
11. IEEE Std 1528-2003 - IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.
12. IEEE Std 1528-2013 – IEEE Recommended Practice Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques.

2. General conditions, competences and guarantees

- ✓ Intel Mobile Communications Wireless RF Lab (Intel WRF Lab) is a testing laboratory accredited by the American Association for Laboratory Accreditation (A2LA).
- ✓ Intel WRF Lab only provides testing services and is committed to providing reliable, unbiased test results and interpretations.
- ✓ Intel WRF Lab is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.
- ✓ Intel WRF Lab has developed calibration and proficiency programs for its measurement equipment to ensure correlated and reliable results to its customers.
- ✓ This report is only referred to the item that has undergone the test.
- ✓ This report does not imply an approval of the product by the Certification Bodies or competent Authorities.
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3. Environmental Conditions

✓ All tests were performed in a laboratory with an environment which avoids influence on SAR measurements by ambient EM sources and any reflection from the environment itself, and the following limits were not exceeded during the tests:

Temperature	23ºC ± 2ºC
Humidity	60% ± 10%
Liquid Temperature	23ºC ± 2ºC

4. Test samples

Sample	Test Item #	Description	Model	Serial #	Date of reception
#01	14072301.S03	Wireless Module installed in Notebook/Tablet	7265NGW + Lenovo TP00070A PC	MAC: 00.15.00.EE.84.78	2014-10-01

✓ Sample #01 has undergone all the test(s) requested by the applicant, following the standards specified in section 1.

5. Remarks and comments

1. Only the plots for the test positions with the highest measured SAR per band/mode are included in *Annex C. Test System Plots*, as required per FCC OET KDB 865664 D02, paragraph 2.3.8.

6. Document Revision History

Revision #	Date	Details
Rev. 00	2014-11-07	First Issue

7. Equipment Under Test

Brand Name	Intel
Model Name	Intel® Dual Band Wireless-AC 7265
FCC/IC ID	FCC ID: PD97265NGU / IC: 1000W-7265NG
Software Version	1.7.3-895
Driver Version	17.0.0.20
Prototype / Production	Production
Host Identification	Lenovo TP00070A PC
Exposure Conditions	Body worn
Supported Radios	802.11a/b/g/n/ac BDR/EDR v2.1 - Bluetooth LE v4.0
Antenna Information	**Main WLAN:** PIFA antenna. WiFi 2.4GHz & 5GHz **Aux WLAN:** PIFA antenna. WiFi 2.4GHz & 5GHz and BT. See *0* for more information about the location of each antenna within the device.
Simultaneous Transmission Configurations	WLAN 2.4GHz: Main + Aux antenna WLAN 5GHz: Main + Aux antenna WLAN 2.4GHz Main + BT Aux WLAN 5GHz Main + BT Aux
Additional Information	No WWAN transmitter is considered in this report.

Supported Radios

Mode	Duty Cycle	Modulation	Band	UL Freq Range (MHz)	Measured Max. Conducted Power (dBm)
BDR/EDR v2.1	77%	GFSK π/4 DQPSK 8DPSK	2.4GHz	2400-2483.5	4.98
Bluetooth LE v4.0	62%	GFSK	2.4GHz	2400-2483.5	2.61
802.11b/g/n	100%	BPSK QPSK 16QAM 64QAM	2.4GHz	2400-2483.5	17.22
802.11a/n/ac	100%	BPSK QPSK 16QAM 64QAM 256QAM	5.2GHz	5150-5250	16.23
			5.3GHz	5250-5350	15.88
			5.6GHz	5475-5725	16.25
			5.8GHz	5725-5850	16.25

8. Test Verdicts summary

Mode	Band	Highest Reported SAR (1g) (W/kg)	Verdict
802.11b/g/n	2.4GHz	0.62	P
802.11a/n/ac	5.2GHz	1.48	P
	5.3GHz	1.52	P
	5.6GHz	1.13	P
	5.8GHz	1.29	P
Bluetooth	2.4GHz	0.03	P

P: Pass
F: Fail
NM: Not Measured
NA: Not Applicable

According to the FCC OET KDB 690783 D01, this is the summary of the values for the Grant Listing:

Highest Reported SAR (1g) (W/kg)			
Exposure Condition	Equipment Class		
	DTS	DSS	NII
Body Worn	0.62	0.03	1.52
Simultaneous Tx	Sum-SAR: 0.99	Sum-SAR: 1.55	Sum-SAR: 2.25 SPLSR: 0.017

Considering the results of the performed test according to FCC 47CFR Part 2.1093 and IC RSS 102, Issue 4 the item under test is IN COMPLIANCE with the requested specifications specified in *1. Standards, reference documents and applicable test methods.*

Annex A. Test & System Description

A.1 SAR Definition

Specific Absorption rate is defined as the time derivative of the incremental energy (dW) absorbed by (dissipated in) and incremental mass (dm) contained in a volume element (dV) of a given density (ρ).

$$SAR = \frac{d}{dt} \cdot \left(\frac{dW}{dm}\right) = \frac{d}{dt} \cdot \left(\frac{dW}{\rho \cdot dV}\right)$$

SAR is expressed in units of watts per kilogram (W/kg). SAR can be related to the electric field at a point by

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

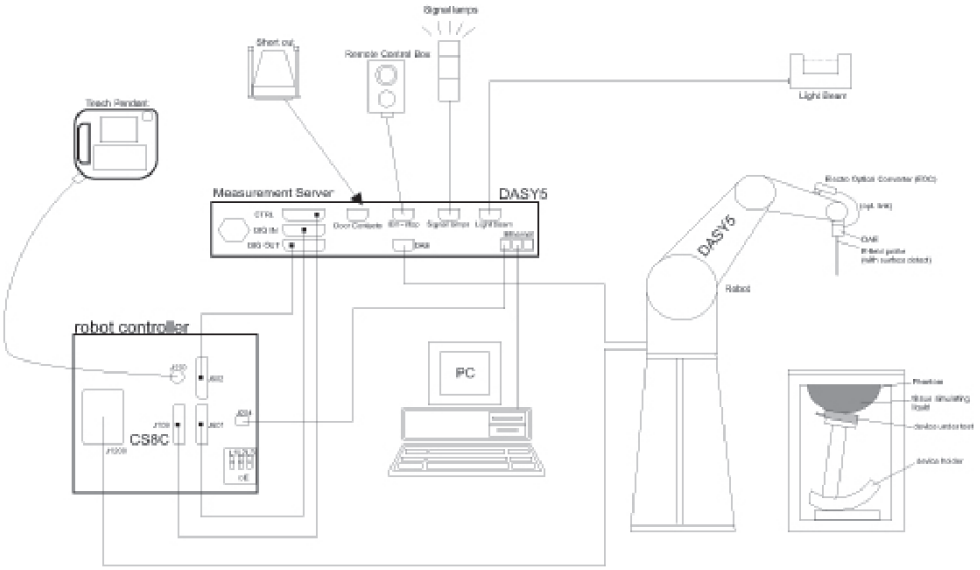
Where:

σ = Conductivity of the tissue (S/m)
ρ = Mass density of the tissue (kg/m3)
E = RMS electric field strength (V/m)

A.2 SPEAG SAR Measurement System

A.2.1 SAR Measurement Setup

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



- ✓ A standard high precision 6-axis robot (Staübli TX/RX family) with controller, teach pendant and software. It includes an arm extension for accommodating the data acquisition electronics (DAE)
- ✓ An isotropic field probe optimized and calibrated for the targeted measurements.
- ✓ 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. The EOC signal is transmitted to the measurement server.
- ✓ The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movements interrupts.
- ✓ The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- ✓ A computer running Win7 professional operating system 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.
- ✓ Tissue simulating liquid.
- ✓ System Validation dipoles.
- ✓ Network emulator or RF test tool

A.2.2 E-Field Measurement Probe

The probe is constructed using three orthogonal dipole sensors arranged on an interlocking, triangular prism core. The probe has built-in shielding against static charges and is contained within a PEEK cylindrical enclosure material at the tip.

The probe's characteristics are:

Frequency Range	30MHz – 6GHz
Length	337 mm
Probe tip external diameter	2.5 mm
Typical distance between dipoles and the probe tip	1 mm
Axial Isotropy (in human-equivalent liquids)	±0.3 dB
Hemispherical Isotropy (in human-equivalent liquids)	±0.5 dB
Linearity	±0.2 dB
Maximum operating SAR	100 W/kg
Lower SAR detection threshold	0.001 W/kg

A.2.3 SAM Phantom

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.

The phantom's characteristics are:

Material	Vinylester, glass fiber reinforced (VE-GF)
Shell thickness	2 mm ± 0.2 mm
Shell thickness at ERP	6 ± 0.2 mm
Filling volume	25 Liters
Dimensions	Length: 1000mm / Width: 500mm

A.2.4 Flat Phantom

Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points. The phantom is compatible with all SPEAG dosimetric probes and dipoles.

The phantom's characteristics are:

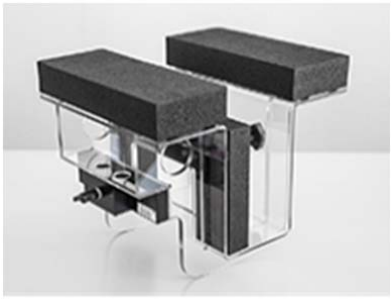
Material	Vinylester, glass fiber reinforced (VE-GF)
Shell thickness	2 mm ± 0.2 mm
Filling volume	30 Liters approx.
Dimensions	Major axis: 600mm / Minor axis: 400mm

A.2.5 Device Positioner

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of 0.5 mm would produce a SAR uncertainty of 20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ=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.



A simple but effective and easy-to-use extension for the Mounting Device; facilitates testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.); lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI and other Flat Phantoms.

A.3 Data Evaluation

- **Power Reference measurement**

The robot measures the E field in a specified reference position that can be either the selected section's grid reference point or a user point in this section at 4mm of the inner surface of the phantom, 2mm for frequencies above 3GHz.

- **Area Scan**

Measurement procedures for evaluating SAR from wireless handsets typically start with a coarse measurement grid to determine the approximate location of the local peak SAR values. This is known as the area-scan procedure. The SAR distribution is scanned along the inside surface of one side of the phantom head, at least for an area larger than the projection of the handset and antenna. An example grid is shown in Figure 11. The distance between the measured points and phantom surface should be less than 8 mm, and should remain constant (with variation less than ± 1 mm) during the entire scan in order to determine the locations of the local peak SAR with sufficient accuracy. The angle between the probe axis and the surface normal line is recommended but not required to be less than 30°. If this angle is larger than 30° and the closest point on the probe-tip housing to the phantom surface is closer than a probe diameter, the boundary effect may become larger and polarization dependent. This additional uncertainty needs to be analyzed and accounted for. To achieve this, modified test procedures and additional uncertainty analyses not described in this recommended practice may be required. The measurement and interpolation point spacing should be chosen such as to allow identification of the local peak locations to within one-half of the linear dimension of a side of the zoom-scan volume. Because a local peak having specific amplitude and steep gradients may produce a lower peak spatial-average SAR compared to peaks with slightly lower amplitude and less steep gradients, it is necessary to evaluate these other peaks as well. However, since the spatial gradients of local SAR peaks are a function of the wavelength inside the tissue-equivalent liquid and the incident magnetic field strength, it is not necessary to evaluate local peaks that are less than 2 dB or more below the global maximum peak. Two-dimensional spline algorithms (Brishoual et al. 2001; Press et al., 1996) are typically used to determine the peaks and gradients within the scanned area. If a peak is found at a distance from the scan border of less than one-half the edge dimension of the desired 1 g or 10 g cube, the measurement area should be enlarged if possible.

- **Zoom Scan**

To evaluate the peak spatial-average SAR values for 1 g or 10 g cubes, fine resolution volume scans, called zoom scans, are performed at the peak SAR locations identified during the area scan. The minimum zoom scan volume size should extend at least 1.5 times the edge dimension of a 1 g cube in all directions from the center of the scan volume, for both 1 g and 10 g peak spatial-average SAR evaluations. Along the phantom curved surfaces, the front face of the volume facing the tissue/liquid interface conforms to the curved boundary, to ensure that all SAR peaks are captured. The back face should be equally distorted to maintain the correct averaging mass. The flatness and orientation of the four side faces are unchanged from that of a cube whose orientation is within ± 30° of the line normal to the phantom at the center of the cube face next to the phantom surface. The peak local SAR locations that were determined in the area scan (interpolated values) should be used for the centers of the zoom scans. If a scan volume cannot be centered due to proximity of a phantom shape feature, the probe should be tilted to allow scan volume enlargement. If probe tilt is not feasible, the zoom-scan origin may be shifted, but not by more than half of the 1 g or 10 g cube edge dimension.

After the zoom-scan measurement, extrapolations from the closest measured points to the surface, for example along lines parallel to the zoom-scan centerline, and interpolations to a finer resolution between all measured and extrapolated points are performed. Extrapolation algorithm considerations are described in 6.5.3, and 3-D spline methods (Brishoual et al., 2001; Kreyszig, 1983; Press et al., 1996) can be used for interpolation. The peak spatial-average SAR is finally determined by a numerical averaging of the local SAR values in the interpolation grid, using for example a trapezoidal algorithm for the integration (averaging).

In some areas of the phantom, such as the jaw and upper head regions, the angle of the probe with respect to the line normal to the surface may be relatively large, e.g., greater than ± 30º, which could increase the boundary effect error to a larger level. In these cases, during the zoom scan a change in the orientation of the probe, the phantom, or both is recommended but not required for the duration of

the zoom scan, so that the angle between the probe axis and the line normal to the surface is within 30º for all measurement points.

- **Power Drift measurement**

The robot re-measures the E-Field in the same reference location measured at the Power Reference. The drift measurement gives the field difference in dB from the first to the last reference reading. This allows a user to monitor the power drift of the device under test that must remain within a maximum variation of ±5%.

- **Post-processing**

The procedure for spatial peak SAR evaluation has been implemented according to the IEEE1528 and IEC 62209-1/2 standards. It can be conducted for 1g and 10g.

The software allows evaluations that combine measured data and robot positions, such as:

- ✓ Maximum search
- ✓ Extrapolation
- ✓ Boundary correction
- ✓ Peak search for averaged SAR

Interpolation between the measured points is performed when the resolution of the grid is not fine enough to compute the average SAR over a given mass.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation is determined by the surface detection distance and the probe sensor offset. Several measurements at different distances are necessary for the extrapolation.

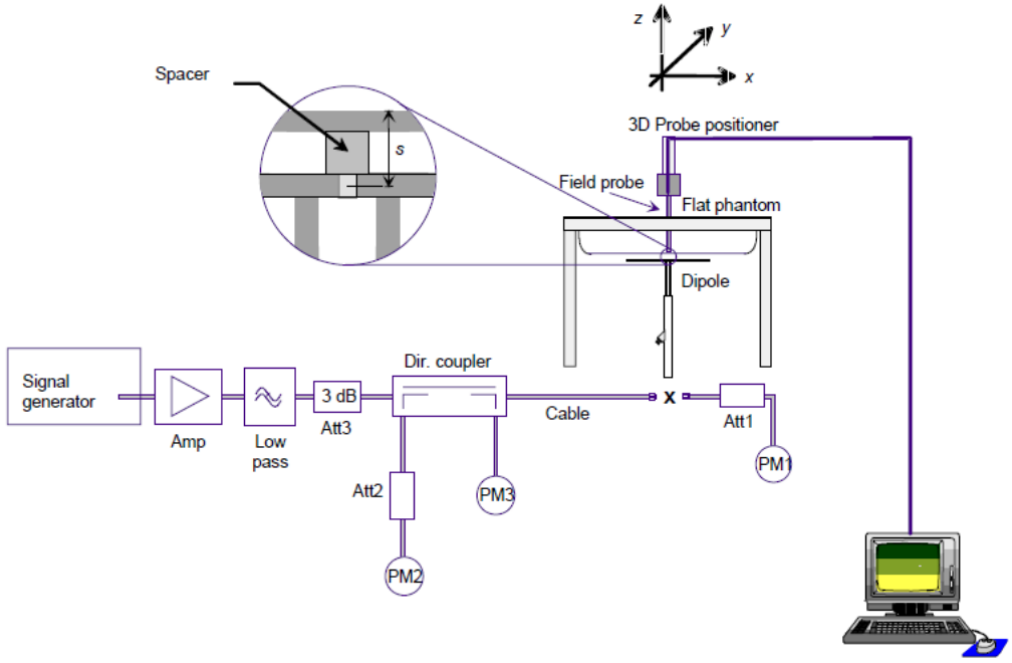
A.4 System and Liquid Check

A.4.1 System Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results.

The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

In the simplified setup for system check, the EUT is replaced by a calibrated dipole and the power source is replaced by a controlled continuous wave generated by a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the phantom at the correct distance.



The equipment setup is shown below:

- ✓ Signal Generator
- ✓ Amplifier
- ✓ Directional coupler
- ✓ Power meter
- ✓ Calibrated dipole

The output power on dipole port must be set to 20dBm (100mW) and SAR results are normalized to a forward power of 1W to compare the values with the calibration reports results as described at IEEE 1528 and IEC 62209 standards.

A.4.2 Liquid Check

The dielectric parameters check is done prior to the use of the tissue simulating liquid. The verification is made by comparing the relative permittivity and conductivity to the values recommended by the applicable standards.

The liquid verification was performed using the following test setup:

- ✓ VNA (Vector Network Analyzer)
- ✓ Open-Short-Load calibration kit
- ✓ RF Cable
- ✓ Open-Ended Coaxial probe
- ✓ OpenSAR/DAK software tool
- ✓ SAR Liquid
- ✓ De-ionized water
- ✓ Thermometer

These are the target dielectric properties of the tissue-equivalent liquid material as defined in FCC OET KDB 865664 D01.

Frequency	Body SAR	
(MHz)	ε_r	σ (S/m)
150	61.9	0.80
300	58.2	0.92
450	56.7	0.94
835	55.2	0.97
900	55.0	1.05
1450	54.0	1.30
1800-2000	53.3	1.52
2450	52.7	1.95
3000	52.0	2.73
5800	48.2	6.00

(ε_r = relative permittivity, σ = conductivity and ρ = 1000 kg/m3)

The measurement system implement a SAR error compensation algorithm as documented in IEEE Std 1528-2013 (equivalent to draft standard IEEE P1528-2011) to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters (applied to only scale up the measured SAR, and not downward) so, according to FCC OET KDB 865664 D01, the tolerance for ε_r and σ may be relaxed to ± 10%.

A.5 Test Equipment List

SPEAG SAR System

Device	Type/Model	Serial Number	Manufacturer	Calibration Date	Calibration Due
Dosimetric E-field Probe	EX3DV4	3978	SPEAG	2014-06-24	2015-06-24
Data Acquisition Electronics	DAE4	1429	SPEAG	2014-06-24	2015-06-24
Electro-Optical Converter	EOC60	-	SPEAG	NA	NA
Light Beam Unit	LB5 / 80	-	di-soric	NA	NA
6-axis Robot	TX60 L	F12/5MZ3A1/A/01	STAÜBLI	NA	NA
Robot Controller	CS8C	F12/5MZ3A1/C/01	STAÜBLI	NA	NA
Measurement Server	DASY5 P/N: SE UMS 011 EA	1444	SPEAG	NA	NA
SAM Phantom	Twin SAM v5.0	1838	SPEAG	NA	NA
Oval Flat Phantom	ELI v5.0	1260	SPEAG	NA	NA
Handset Positioner	P/N SD 000 H01 KA	-	SPEAG	NA	NA
Dielectric Probe Kit	DAKS-3.5	1037	SPEAG	2014-06-24	2016-06-24
Vector Reflectometer	PLANAR R140	0131013	Copper Mountain Technologies	2014-06-13	2016-06-13
2450MHz System Validation Dipole	D2450V2	937	SPEAG	2014-06-24	2016-06-24
5GHz System Validation Dipole	D5GHzv2	1164	SPEAG	2013-10-29	2015-10-29

Shared Instrumentation

Device	Type/Model	Serial Number	Manufacturer	Calibration Date	Calibration Due
USB Power Sensor	NRP-Z81	102278	R&S	2013-07-17	2015-07-17
USB Power Sensor	NRP-Z81	102279	R&S	2013-07-17	2015-07-17
Vector Signal Generator	ESG E4438C	MY45092885	Agilent	NA	NA
Power Amplifier	-	MODU-023-B-0001	SATIMO	NA	NA
Coupler	CD0.5-8-20-30	1251-002	Amd-group	NA	NA

Tissue Simulant Liquids

TSL	Manufacturer / Model	Freq Range (MHz)	Main Ingredients
Body 2450	SPEAG MSL2450V2	2400-2700	H_2O, NaCl, DGBE
Body 5GHz	SPEAG MBBL3500-5800v5	5000-6000	Mineral Oil, Emulsifiers, H_2O, NaCl

A.6 Measurement Uncertainty Evaluation

DASY5 Uncertainty Budget
According to IEEE 1528/2011 and IEC 62209-1/2011

Error Description	Uncert. value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) v_{eff}
Measurement System								
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^{m}	±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 %	∞
Max. SAR Eval.	±4.0 %	R	$\sqrt{3}$	1	1	±2.3 %	±2.3 %	∞
Test Sample Related								
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^{p}	±0 %	R	$\sqrt{3}$	1	1	±0.0 %	±0.0 %	∞
Phantom and Setup								
Phantom Uncertainty	±6.6 %	R	$\sqrt{3}$	1	1	±3.8 %	±3.8 %	∞
SAR correction	±1.9 %	R	$\sqrt{3}$	1	0.84	±1.1 %	±0.9 %	∞
Liquid Conductivity (mea.)^{DAK}	±2.5 %	R	$\sqrt{3}$	0.78	0.71	±1.1 %	±1.0 %	∞
Liquid Permittivity (mea.) ^{DAK}	±2.5 %	R	$\sqrt{3}$	0.26	0.26	±0.3 %	±0.4 %	∞
Temp. unc. - Conductivity ^{BB}	±3.4 %	R	$\sqrt{3}$	0.78	0.71	±1.5 %	±1.4 %	∞
Temp. unc. - Permittivity ^{BB}	±0.4 %	R	$\sqrt{3}$	0.23	0.26	±0.1 %	±0.1 %	∞
Combined Std. Uncertainty						±12.3 %	±12.2 %	748
Expanded STD Uncertainty						**±24.6 %**	**±24.5 %**	

SPEAG System Uncertainty budget (IEEE 1528-2011 & IEC 62209-1:2011)

DASY5 Uncertainty Budget
According to IEC 62209-2/2010

Error Description	Uncert. value	Prob. Dist.	Div.	(c_i) 1g	(c_i) 10g	Std. Unc. (1g)	Std. Unc. (10g)	(v_i) v_{eff}
Measurement System								
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 %	∞
Linearity	±4.7 %	R	$\sqrt{3}$	1	1	±2.7 %	±2.7 %	∞
Modulation Response^m	±2.4 %	R	$\sqrt{3}$	1	1	±1.4 %	±1.4 %	∞
System Detection Limits	±1.0 %	R	$\sqrt{3}$	1	1	±0.6 %	±0.6 %	∞
Boundary Effects	±2.0 %	R	$\sqrt{3}$	1	1	±1.2 %	±1.2 %	∞
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 %	∞
Test Sample Related								
Device Holder	±3.6 %	N	1	1	1	±3.6 %	±3.6 %	5
Test sample Positioning	±2.9 %	N	1	1	1	±2.9 %	±2.9 %	145
Power Scaling^p	±0 %	R	$\sqrt{3}$	1	1	±0.0 %	±0.0 %	∞
Power Drift	±5.0 %	R	$\sqrt{3}$	1	1	±2.9 %	±2.9 %	∞
Phantom and Setup								
Phantom Uncertainty	±7.9 %	R	$\sqrt{3}$	1	1	±4.6 %	±4.6 %	∞
SAR correction	±1.9 %	R	$\sqrt{3}$	1	0.84	±1.1 %	±0.9 %	∞
Liquid Conductivity (mea.)^{DAK}	±2.5 %	R	$\sqrt{3}$	0.78	0.71	±1.1 %	±1.0 %	∞
Liquid Permittivity (mea.) ^{DAK}	±2.5 %	R	$\sqrt{3}$	0.26	0.26	±0.3 %	±0.4 %	∞
Temp. unc. - Conductivity ^{BB}	±3.4 %	R	$\sqrt{3}$	0.78	0.71	±1.5 %	±1.4 %	∞
Temp. unc. - Permittivity ^{BB}	±0.4 %	R	$\sqrt{3}$	0.23	0.26	±0.1 %	±0.1 %	∞
Combined Std. Uncertainty						±12.5 %	±12.5 %	748
Expanded STD Uncertainty						**±25.1 %**	**±25.0 %**	

SPEAG System Uncertainty budget (IEC 62209-2:2010)

A.7 RF Exposure Limits

SAR assessments have been made in line with the requirements of FCC 47 CFR Part §2.1093 and RSS 102, Issue 4 on the limitation of exposure of the general population / uncontrolled exposure for portable devices.

Exposure Type	General Population / Uncontrolled Environment
Peak spatial-average SAR (averaged over any 1 gram of tissue)	**1.6 W/kg**
Whole body average SAR	**0.08 W/kg**
Peak spatial-average SAR (extremities) (averaged over any 10 grams of tissue)	**4.0 W/kg**

Annex B. Test Results

B.1 Test Conditions

B.1.1 SAR Test positions relative to the phantom

The device under test was the Intel® Dual Band Wireless-AC 7265 card inside a host notebook/tablet (Lenovo TP00070A PC) computer using a set of High-Tek antennas. The card was operated utilizing proprietary software (DRTU version 1.7.3-895) and each channel was measured using a broadband power meter to determine the maximum average power.

According to FCC OET KDB 616217 D04, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom. The SAR Test Exclusion Threshold in FCC OET KDB 447498 D01 can be applied to determine SAR test exclusion for adjacent edge configurations.
The closest distance from the antenna to an adjacent tablet edge is used to determine if SAR testing is required for the adjacent edges, with the adjacent edge positioned against the phantom and the edge containing the antenna positioned perpendicular to the phantom.

Considering the antenna location diagrams in *Annex E* and the test exclusions described before, the surfaces/edges to be measured for both antennas are:

- Laptop mode
- Lapheld mode
- Tablet Primary Landscape (Tablet PL) mode

See *B.1.3 Evaluation Exclusion and Test Reductions* for a more detailed list of the applied reductions.

B.1.2 Test signal, Output power and Test Frequencies

The device was put into operation by using an own control software (DRTU version 1.7.3-895) to program the test mode required for select the continuous transmission with 100% duty cycle.

The output power of the device was set to transmit at maximum power for all tests.

B.1.3 Evaluation Exclusion and Test Reductions

2.4GHz

Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Factory Upper Tolerance (mW)	Test Positions					
							Notebook	Lapheld	Tablet PL	Tablet PP	Tablet SL	Tablet SP
802.11b	20	1Mbps	1	2412	Main	42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			6	2437		53.09	T	T	T	R[3]	R[3]	R[3]
			11	2462		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			1	2412	Aux	42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			6	2437		53.09	T	T	T	R[3]	R[3]	R[3]
			11	2462		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
802.11g	20	6Mbps	1	2412	Main	23.71	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			6	2437		53.09	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			11	2462		16.79	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			1	2412	Aux	26.61	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			6	2437		53.09	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			11	2462		16.79	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
802.11n	20	HT0	1	2412	Main	23.71	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			6	2437		53.09	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			11	2462		16.79	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			1	2412	Aux	26.61	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			6	2437		53.09	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			11	2462		16.79	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
	40	HT0	3	2422	Main	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			6	2437		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			9	2452		16.79	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			3	2422	Aux	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			6	2437		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			9	2452		13.34	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]

T Tested configuration

R[1] Reduced. According to FCC OET KDB 248227 D01, SAR evaluation for 802.11g/n/ac modes is not required when the maximum average output power is < ¼ dB higher than that measured on the corresponding 802.11a/b channels.

R[2] Reduced. According to FCC OET KDB 447498 D01 testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

R[3] Reduced. According to FCC OET KDB 447498 D01, at 1500 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, where the Max allowed Power is including the tune-up tolerance:

$$Max\ allowed\ Power = \frac{3.0}{\sqrt{f(GHz)}} \cdot 50mm + (Test\ Sep\ Distance(mm) - 50mm) \cdot 10$$

5.2GHz

Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Factory Upper Tolerance (mW)	Test Positions					
							Notebook	Lapheld	Tablet PL	Tablet PP	Tablet SL	Tablet SP
802.11a	20	6Mbps	36	5180	Main	23.71	R[2]	R[2]	T	R[3]	R[3]	R[3]
			40	5200		29.85	T	T	T	R[3]	R[3]	R[3]
			44	5220		29.85	R[2]	R[2]	T	R[3]	R[3]	R[3]
			48	5240		29.85	R[2]	R[2]	T	R[3]	R[3]	R[3]
			36	5180	Aux	23.71	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			40	5200		29.85	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			44	5220		29.85	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			48	5240		29.85	T	T	T	R[3]	R[3]	R[3]
802.11n	20	HT0	36	5180	Main	23.71	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			40	5200		29.85	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			44	5220		29.85	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			48	5240		29.85	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			36	5180	Aux	23.71	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			40	5200		29.85	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			44	5220		29.85	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			48	5240		29.85	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
	40	HT0	38	5190	Main	14.96	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			46	5230		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			38	5190	Aux	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			46	5230		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
802.11ac	80	VTH0	42	5210	Main	21.13	R[1]	R[1]	T	R[3]	R[3]	R[3]
					Aux	21.13	R[1]	R[1]	T	R[3]	R[3]	R[3]

T Tested configuration

R[1] Reduced. According to FCC OET KDB 248227 D01, SAR evaluation for 802.11g/n/ac modes is not required when the maximum average output power is < ¼ dB higher than that measured on the corresponding 802.11a/b channels.

R[2] Reduced. According to FCC OET KDB 447498 D01 testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

R[3] Reduced. According to FCC OET KDB 447498 D01, at 1500 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, where the Max allowed Power is including the tune-up tolerance:

$$Max\ allowed\ Power = \frac{3.0}{\sqrt{f(GHz)}} \cdot 50mm + (Test\ Sep\ Distance(mm) - 50mm) \cdot 10$$

5.3GHz

Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Factory Upper Tolerance (mW)	Test Positions					
							Notebook	Lapheld	Tablet PL	Tablet PP	Tablet SL	Tablet SP
802.11a	20	6Mbps	52	5260	Main	37.58	T	T	T	R[3]	R[3]	R[3]
			56	5280		37.58	R[2]	R[2]	T	R[3]	R[3]	R[3]
			60	5300		37.58	R[2]	R[2]	T	R[3]	R[3]	R[3]
			64	5320		21.13	R[2]	R[2]	T	R[3]	R[3]	R[3]
			52	5260	Aux	42.17	T	T	T	R[3]	R[3]	R[3]
			56	5280		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			60	5300		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			64	5320		21.13	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
802.11n	20	HT0	52	5260	Main	37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			56	5280		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			60	5300		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			64	5320		21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			52	5260	Aux	42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			56	5280		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			60	5300		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			64	5320		21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
	40	HT0	54	5270	Main	42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			62	5310		21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			54	5270	Aux	42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			62	5310		21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
802.11ac	80	VTH0	58	5290	Main	21.13	R[1]	R[1]	T	R[3]	R[3]	R[3]
					Aux	21.13	R[1]	R[1]	T	R[3]	R[3]	R[3]

T Tested configuration

R[1] Reduced. According to FCC OET KDB 248227 D01, SAR evaluation for 802.11g/n/ac modes is not required when the maximum average output power is < ¼ dB higher than that measured on the corresponding 802.11a/b channels.

R[2] Reduced. According to FCC OET KDB 447498 D01 testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

R[3] Reduced. According to FCC OET KDB 447498 D01, at 1500 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, where the Max allowed Power is including the tune-up tolerance:

$$Max\ allowed\ Power = \frac{3.0}{\sqrt{f(GHz)}} \cdot 50mm + (Test\ Sep\ Distance(mm) - 50mm) \cdot 10$$

5.6GHz

Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Factory Upper Tolerance (mW)	Test Positions					
							Notebook	Lapheld	Tablet PL	Tablet PP	Tablet SL	Tablet SP
802.11a	20	6Mbps	100	5500	Main	21.13	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			104	5520		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			108	5540		37.58	R[2]	R[2]	T	R[3]	R[3]	R[3]
			112	5560		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			116	5580		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			120	5600		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			124	5620		37.58	R[2]	R[2]	T	R[3]	R[3]	R[3]
			128	5640		37.58	R[2]	R[2]	T	R[3]	R[3]	R[3]
			132	5660		37.58	T	T	T	R[3]	R[3]	R[3]
			136	5680		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			140	5700		18.84	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			100	5500	Aux	21.13	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			104	5520		42.17	T	T	T	R[3]	R[3]	R[3]
			108	5540		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			112	5560		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			116	5580		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			120	5600		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			124	5620		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			128	5640		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			132	5660		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			136	5680		42.17	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			140	5700		18.84	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
802.11n	20	HT0	100	5500	Main	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			104	5520		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			108	5540		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			112	5560		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			116	5580		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			120	5600		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			124	5620		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			128	5640		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			132	5660		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			136	5680		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			140	5700		18.84	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			100	5500	Aux	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			104	5520		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			108	5540		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			112	5560		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			116	5580		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			120	5600		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			124	5620		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			128	5640		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			132	5660		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			136	5680		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			140	5700		18.84	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]

5.6GHz

Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Factory Upper Tolerance (mW)	Test Positions					
							Notebook	Lapheld	Tablet PL	Tablet PP	Tablet SL	Tablet SP
802.11n	40	HT0	102	5510	Main	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			110	5550		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			118	5590		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			126	5630		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			134	5670		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			102	5510	Aux	23.71	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			110	5550		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			118	5590		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			126	5630		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			134	5670		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
802.11ac	20	VHT0	144	5720	Main	37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
					Aux	33.50	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
	40	VHT0	142	5710	Main	42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
					Aux	42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
	80	VHT0	106	5530	Main	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			122	5610		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			138	5690		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			106	5530	Aux	21.13	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			122	5610		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			138	5690		42.17	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]

T Tested configuration

R[1] Reduced. According to FCC OET KDB 248227 D01, SAR evaluation for 802.11g/n/ac modes is not required when the maximum average output power is < ¼ dB higher than that measured on the corresponding 802.11a/b channels.

R[2] Reduced. According to FCC OET KDB 447498 D01 testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

R[3] Reduced. According to FCC OET KDB 447498 D01, at 1500 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, where the Max allowed Power is including the tune-up tolerance:

$$Max\ allowed\ Power = \frac{3.0}{\sqrt{f(GHz)}} \cdot 50mm + (Test\ Sep\ Distance(mm) - 50mm) \cdot 10$$

5.8GHz

Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Factory Upper Tolerance (mW)	Test Positions					
							Notebook	Lapheld	Tablet PL	Tablet PP	Tablet SL	Tablet SP
802.11a	20	6Mbps	149	5745	Main	37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			153	5765		37.58	T	T	T	R[3]	R[3]	R[3]
			157	5785		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			161	5805		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			165	5825		37.58	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			149	5745	Aux	33.50	T	T	T	R[3]	R[3]	R[3]
			153	5765		33.50	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			157	5785		33.50	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			161	5805		33.50	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
			165	5825		33.50	R[2]	R[2]	R[2]	R[3]	R[3]	R[3]
802.11n	20	HT0	149	5745	Main	37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			153	5765		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			157	5785		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			161	5805		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			165	5825		37.58	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			149	5745	Aux	33.50	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			153	5765		33.50	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			157	5785		33.50	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			161	5805		33.50	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
			165	5825		33.50	R[1]	R[1]	R[1]	R[3]	R[3]	R[3]
	40	HT0	151	5755	Main	42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			159	5795		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			151	5755	Aux	42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
			159	5795		42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
802.11ac	80	VTH0	155	5775	Main	42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]
					Aux	42.17	R[1]	R[1]	T	R[3]	R[3]	R[3]

T Tested configuration

R[1] Reduced. According to FCC OET KDB 248227 D01, SAR evaluation for 802.11g/n/ac modes is not required when the maximum average output power is < ¼ dB higher than that measured on the corresponding 802.11a/b channels.

R[2] Reduced. According to FCC OET KDB 447498 D01 testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

R[3] Reduced. According to FCC OET KDB 447498 D01, at 1500 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following, where the Max allowed Power is including the tune-up tolerance:

$$Max\ allowed\ Power = \frac{3.0}{\sqrt{f(GHz)}} \cdot 50mm + (Test\ Sep\ Distance(mm) - 50mm) \cdot 10$$

B.2 Conducted Power Measurements

B.2.1 802.11 a/b/g/n/ac

Band	Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Averaged Power (dBm)	Factory Upper Tolerance (dBm)
2.4GHz	802.11b	20	1Mbps	1	2412	Main	15.74	16.25
				6	2437		17.03	17.25
				11	2462		16.19	16.25
				1	2412	Aux	16.20	16.25
				6	2437		17.20	17.25
				11	2462		16.18	16.25
	802.11g	20	6Mbps	1	2412	Main	13.55	13.75
				6	2437		17.18	17.25
				11	2462		11.78	12.25
				1	2412	Aux	14.16	14.25
				6	2437		17.20	17.25
				11	2462		12.19	12.25
	802.11n	20	HT0	1	2412	Main	13.45	13.75
				6	2437		17.14	17.25
				11	2462		12.08	12.25
				1	2412	Aux	14.25	14.25
				6	2437		17.22	17.25
				11	2462		12.18	12.25
		40	HT0	3	2422	Main	13.24	13.25
				6	2437		16.24	16.25
				9	2452		12.21	12.25
				3	2422	Aux	13.19	13.25
				6	2437		16.21	16.25
				9	2452		11.01	11.25
5.15GHz-5.25GHz	802.11a	20	6Mbps	36	5180	Main	13.72	13.75
				40	5200		14.35	14.75
				44	5220		14.32	14.75
				48	5240		14.32	14.75
				36	5180	Aux	13.69	13.75
				40	5200		14.35	14.75
				44	5220		14.34	14.75
				48	5240		14.39	14.75
	802.11n	20	HT0	36	5180	Main	13.71	13.75
				40	5200		14.09	14.75
				44	5220		14.10	14.75
				48	5240		14.25	14.75
				36	5180	Aux	13.66	13.75
				40	5200		14.32	14.75
				44	5220		14.33	14.75
				48	5240		14.25	14.75
		40	HT0	38	5190	Main	11.65	11.75
				46	5230		16.23	16.25
				38	5190	Aux	13.11	13.25
				46	5230		16.20	16.25
	802.11ac	80	VTH0	42	5210	Main	13.19	13.25
						Aux	13.18	13.25

Band	Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Averaged Power (dBm)	Factory Upper Tolerance (dBm)
5.25GHz-5.35GHz	802.11a	20	6Mbps	52	5260	Main	15.35	15.75
				56	5280		15.25	15.75
				60	5300		15.29	15.75
				64	5320		13.06	13.25
				52	5260	Aux	15.88	16.25
				56	5280		15.65	16.25
				60	5300		15.66	16.25
				64	5320		13.07	13.25
	802.11n	20	HT0	52	5260	Main	15.07	15.75
				56	5280		15.24	15.75
				60	5300		15.28	15.75
				64	5320		12.94	13.25
				52	5260	Aux	15.69	16.25
				56	5280		15.60	16.25
				60	5300		15.62	16.25
				64	5320		12.94	13.25
		40	HT0	54	5270	Main	15.85	16.25
				62	5310		13.20	13.25
				54	5270	Aux	15.86	16.25
				62	5310		13.15	13.25
	802.11ac	80	VTH0	58	5290	Main	12.93	13.25
						Aux	12.90	13.25
5.47GHz-5.725GHz	802.11a	20	6Mbps	100	5500	Main	13.24	13.25
				104	5520		15.28	15.75
				108	5540		15.23	15.75
				112	5560		15.25	15.75
				116	5580		15.24	15.75
				120	5600		15.25	15.75
				124	5620		15.28	15.75
				128	5640		15.31	15.75
				132	5660		15.33	15.75
				136	5680		15.32	15.75
				140	5700		12.69	12.75
				100	5500	Aux	13.17	13.25
				104	5520		16.22	16.25
				108	5540		16.14	16.25
				112	5560		16.10	16.25
				116	5580		16.09	16.25
				120	5600		16.06	16.25
				124	5620		16.07	16.25
				128	5640		16.01	16.25
				132	5660		16.21	16.25
				136	5680		16.19	16.25
				140	5700		12.72	12.75
	802.11n	20	HT0	100	5500	Main	13.18	13.25
				104	5520		15.08	15.75
				108	5540		15.09	15.75
				112	5560		15.17	15.75
				116	5580		15.15	15.75
				120	5600		15.18	15.75
				124	5620		15.18	15.75
				128	5640		15.22	15.75
				132	5660		15.31	15.75
				136	5680		15.25	15.75
				140	5700		12.35	12.75

Band	Mode	BW [MHz]	Data Rate	Channel	Frequency (MHz)	Antenna	Averaged Power (dBm)	Factory Upper Tolerance (dBm)
5.47GHz-5.725GHz	802.11n	20	HT0	100	5500	Aux	13.05	13.25
				104	5520		16.19	16.25
				108	5540		16.11	16.25
				112	5560		16.07	16.25
				116	5580		16.05	16.25
				120	5600		16.01	16.25
				124	5620		16.00	16.25
				128	5640		15.91	16.25
				132	5660		16.19	16.25
				136	5680		16.18	16.25
				140	5700		12.58	12.75
		40	HT0	102	5510	Main	13.05	13.25
				110	5550		16.10	16.25
				118	5590		16.16	16.25
				126	5630		15.92	16.25
				134	5670		15.91	16.25
				102	5510	Aux	13.16	13.75
				110	5550		16.18	16.25
				118	5590		16.14	16.25
				126	5630		16.15	16.25
				134	5670		16.19	16.25
	802.11ac	20	VHT0	144	5720	Main	15.25	15.75
						Aux	15.23	15.25
		40	VHT0	142	5710	Main	16.01	16.25
						Aux	16.25	16.25
		80	VHT0	106	5530	Main	13.19	13.25
				122	5610		16.18	16.25
				138	5690		16.09	16.25
				106	5530	Aux	13.24	13.25
				122	5610		16.16	16.25
				138	5690		16.19	16.25
5.725GHz-5.825GHz	802.11a	20	6Mbps	149	5745	Main	15.15	15.75
				153	5765		15.66	15.75
				157	5785		15.65	15.75
				161	5805		15.64	15.75
				165	5825		15.19	15.75
				149	5745	Aux	15.05	15.25
				153	5765		14.59	15.25
				157	5785		14.74	15.25
				161	5805		14.69	15.25
				165	5825		14.75	15.25
	802.11n	20	HT0	149	5745	Main	15.39	15.75
				153	5765		15.14	15.75
				157	5785		15.11	15.75
				161	5805		15.12	15.75
				165	5825		15.13	15.75
				149	5745	Aux	14.99	15.25
				153	5765		14.56	15.25
				157	5785		14.64	15.25
				161	5805		14.64	15.25
				165	5825		14.65	15.25
		40	HT0	151	5755	Main	16.24	16.25
				159	5795		16.25	16.25
				151	5755	Aux	16.14	16.25
				159	5795		15.95	16.25
	802.11ac	80	VTH0	155	5775	Main	16.25	16.25
						Aux	16.23	16.25

B.2.2 Bluetooth

Band	Mode	Data Rate	Channel	Frequency (MHz)	Antenna	Averaged Power (dBm)	Factory Upper Tolerance (dBm)
2.4GHz	Bluetooth v2.1	Basic rate GFSK	0	2402	Aux	4.17	6.76
			39	2441		4.80	6.76
			78	2480		4.98	6.76
	Bluetooth v2.1	Basic rate π/4 DQPSK	0	2402		1.00	6.76
			39	2441		1.71	6.76
			78	2480		1.96	6.76
	Bluetooth v2.1	Basic rate 8-DPSK	0	2402		0.12	6.76
			39	2441		0.58	6.76
			78	2480		0.90	6.76
	Bluetooth v4.0	Low energy GFSK	0	2412		1.88	6.76
			20	2437		2.35	6.76
			39	2480		2.61	6.76

B.3 Tissue Parameters Measurement

Body TSL

Freq. (MHz)	Target Parameters		Measured TSL Parameters		Deviation (%)		Date
	ε'	σ	ε'	σ	ε'	σ	
2450	52.70	1.95	48.91	2.00	-7.20	2.54	2014/10/28
5200	49.01	5.30	47.25	5.227	-3.64	-2.38	2014/10/13
5600	48.47	5.77	46.38	5.763	-4.33	-0.45	2014/10/24
5800	48.20	6.00	46.18	6.108	-4.20	1.81	2014/10/27

See *Annex E* for more details.

B.4 System Check Measurements

Body Measurements

Frequency (MHz)	Average	Target SAR (W/g)	Measured SAR (W/g)	Drift (%)	Limit (%)	Date
2450	1g	51.00	48.89	-4.14	10	2014/10/28
	10g	24.00	22.75	-5.22		
5200	1g	74.90	70.62	-5.71		2014/10/13
	10g	20.90	20.26	-3.05		
5600	1g	82.00	76.68	-6.49		2014/10/24
	10g	22.80	21.55	-5.47		
5800	1g	74.40	71.61	-3.75		2014/10/27
	10g	20.50	20.15	-1.71		

B.5 SAR Test Results

B.5.1 802.11b/g/n – 2.4GHz

Antenna	Mode	BW	Data Rate	Channel	Frequency (MHz)	Position	SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Plot #
Main	802.11b	20	1Mbps	6	2437	Lapheld	0.08	0.08	
						Tablet PL	0.59	0.62	1
						Notebook	0.09	0.10	
Aux	802.11b	20	1Mbps	6	2437	Lapheld	0.06	0.06	
						Tablet PL	0.37	0.37	2
						Notebook	0.08	0.08	

B.5.2 802.11a/n/ac – 5.2 GHz

Antenna	Mode	BW	Data Rate	Channel	Frequency (MHz)	Position	SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Plot #
Main	802.11a	20	6Mbps	40	5200	Notebook	0.25	0.28	
						Lapheld	0.05	0.06	
						Tablet PL	0.85	0.93	
				36	5180	Tablet PL	1.07	1.08	
				44	5220	Tablet PL	0.96	1.06	
				48	5240	Tablet PL	0.92	1.01	
	802.11n	40	HT0	46	5230	Tablet PL	1.47	1.48	3
	802.11ac	80	VHT0	42	5210	Tablet PL	0.90	0.91	
Aux	802.11a	20	6Mbps	48	5240	Notebook	0.21	0.22	
						Lapheld	0.03	0.03	
						Tablet PL	0.36	0.39	
	802.11n	40	HT0	46	5230	Tablet PL	0.72	0.73	4
	802.11ac	80	VHT0	42	5210	Tablet PL	0.48	0.49	

B.5.3 802.11a/n/ac – 5.3 GHz

Antenna	Mode	BW	Data Rate	Channel	Frequency (MHz)	Position	SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Plot #
Main	802.11a	20	6Mbps	52	5260	Lapheld	0.05	0.05	
						Notebook	0.19	0.21	
						Tablet PL	1.00	1.10	
				56	5280	Tablet PL	1.27	1.42	
				60	5300	Tablet PL	1.37	1.52	5
				64	5320	Tablet PL	0.67	0.70	
	802.11n	40	HT0	54	5270	Tablet PL	1.13	1.24	
	802.11ac	80	VHT0	58	5290	Tablet PL	0.94	1.01	
Aux	802.11a	20	6Mbps	52	5260	Lapheld	0.04	0.05	
						Notebook	0.34	0.37	
						Tablet PL	0.60	0.65	6
	802.11ac	80	VHT0	58	5290	Tablet PL	0.36	0.39	

B.5.4 802.11a/n/ac – 5.6 GHz

Antenna	Mode	BW	Data Rate	Channel	Frequency (MHz)	Position	SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Plot #
Main	802.11a	20	6Mbps	132	5560	Lapheld	0.07	0.07	
						Notebook	0.16	0.18	
						Tablet PL	0.62	0.68	
				124	5620	Tablet PL	0.77	0.86	
				108	5540	Tablet PL	0.96	1.08	
				128	5640	Tablet PL	0.76	0.84	
	802.11n	40	HT0	110	5550	Tablet PL	1.09	1.13	
		40		118	5590	Tablet PL	0.79	0.81	
		40		126	5630	Tablet PL	0.88	0.95	
		40		134	5670	Tablet PL	1.01	1.09	
	802.11ac	40	VHT0	142	5710	Tablet PL	0.83	0.87	
		80	VHT0	122	5610	Tablet PL	1.00	1.02	
				138	5690	Tablet PL	1.09	1.13	7
Aux	802.11a	20	6Mbps	104	5520	Lapheld	0.08	0.08	
						Notebook	0.49	0.49	
						Tablet PL	0.56	0.57	8

B.5.5 802.11a/n/ac – 5.8 GHz

Antenna	Mode	BW	Data Rate	Channel	Frequency (MHz)	Position	SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Plot #
Main	802.11a	20	6Mbps	153	5765	Lapheld	0.04	0.04	
						Notebook	0.20	0.21	
						Tablet PL	0.67	0.68	
	802.11n	40	HT0	151	5755	Tablet PL	0.82	0.83	
				159	5795	Tablet PL	1.08	1.08	
	802.11ac	80	VHT0	155	5775	Tablet PL	1.29	1.29	9
Aux	802.11a	20	6Mbps	149	5745	Tablet PL	0.46	0.49	
						Notebook	0.33	0.35	
						Lapheld	0.06	0.06	
	802.11n	40	HT0	151	5755	Tablet PL	0.52	0.53	10
				159	5795	Tablet PL	0.45	0.48	
	802.11ac	80	VHT0	155	5775	Tablet PL	0.49	0.49	

B.5.6 Bluetooth – 2.4GHz

Antenna	Mode	Data Rate	Channel	Frequency (MHz)	Position	SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Plot #
Aux	Basic rate GFSK	DH5	78	2480	Lapheld	0.00	0.00	
					Tablet PL	0.02	0.03	11
					Notebook	0.01	0.01	

B.6 SAR Measurement Variability

According to FCC OET KDB 865664, SAR Measurement variability is assessed when the maximum initial measured SAR is >0.8 W/kg for a certain band/mode. If the measured SAR value of the initial repeated measurement is <1.45 W/kg with <20% variation, only one repeated measurement is required to confirm that the results are not expected to have substantial variations.
A second repeated measurement is required only if the measured results for the initial repeated measurement are within 10% of the SAR limit or vary by more than 20%.

Band / Mode	Position	Channel	Freq. (MHz)	Measured SAR 1g (W/kg)	Repeated SAR 1g (W/Kg)	Ratio
5.2GHz 802.11n40 HT0	Tablet PL	46	5230	1.47	1.30	1.13
5.3GHz 802.11a 6Mbps	Tablet PL	60	5300	1.37	1.39	1.01
5.6GHz 802.11ac80 VHT0	Tablet PL	138	5690	1.09	1.03	1.06
5.8GHz 802.11ac80 VHT0	Tablet PL	155	5775	1.29	1.23	1.05

B.7 Simultaneous Transmission SAR Evaluation

According to FCC OET KDB 447498 D01, when the sum of 1g SAR for all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration.

Chain	Position	Highest Reported SAR (1g)		
		WLAN 2.4GHz	WLAN 5GHz	Bluetooth
Main	Lapheld	0.083	0.128	
	Notebook	0.096	0.310	
	Tablet PL	0.622	1.523	
Aux	Lapheld	0.061	0.079	0.001
	Notebook	0.084	0.490	0.013
	Tablet PL	0.373	0.732	0.030

Position	Simultaneous Tx Antenna Combination		Σ SAR 1g (W/Kg)	Limit (W/kg)
	Main Antenna	Aux Antenna		
Lapheld	WLAN 2.4GHz	WLAN 2.4GHz	0.14	1.6
	WLAN 5GHz	WLAN 5GHz	0.21	
	WLAN 2.4GHz	BT	0.08	
	WLAN 5GHz	BT	0.13	
Notebook	WLAN 2.4GHz	WLAN 2.4GHz	0.18	
	WLAN 5GHz	WLAN 5GHz	0.80	
	WLAN 2.4GHz	BT	0.11	
	WLAN 5GHz	BT	0.32	
Tablet PL	WLAN 2.4GHz	WLAN 2.4GHz	0.99	
	WLAN 5GHz	WLAN 5GHz	**2.25**	
	WLAN 2.4GHz	BT	0.65	
	WLAN 5GHz	BT	1.55	

In case the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio:

Position	Antenna	Reported SAR 1g (W/kg)	Σ SAR 1g (W/Kg)	Peak Location (cm) (x,y,z)	SAR to peak location separation ratio	Limit
Tablet PL	Main WLAN 5GHz	1.52	2.25	(-1.30, 8.88, -0.32)	0.017	0.04
	Aux WLAN 5GHz	0.73		(-1.74, -11.48, -0.39)		

Considering the results described above and according to the simultaneous transmission evaluation exclusions described in FCC OET KDB 447498 D01, no enlarged zoom scan measurements are required.

Annex C. Test System Plots

1. 2.4GHz - 802.11b, CH6, Main Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/28/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

Communication System: UID 0, 802.11 (0); Communication System Band: 2.4GHz; Frequency: 2437 MHz;Communication System PAR: 0 dB
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.981 S/m; ε_r = 48.966; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

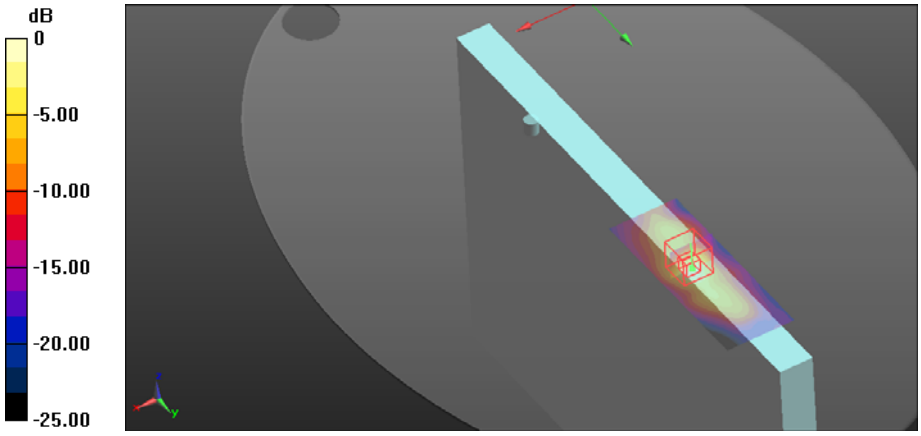
- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 2450MHz Edge/802.11b, 1Mbps, CH 6, Tablet PL, Main Antenna,/Area Scan Main Antenna (51x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.978 W/kg

Body 2450MHz Edge/802.11b, 1Mbps, CH 6, Tablet PL, Main Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 10.87 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.267 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.963 W/kg



0 dB = 0.963 W/kg = -0.16 dBW/kg

2. 2.4GHz - 802.11b, CH6, Aux Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/28/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

Communication System: UID 0, 802.11 (0); Communication System Band: 2.4HHz; Frequency: 2437 MHz;Communication System PAR: 0 dB
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.981 S/m; ε_r = 48.966; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

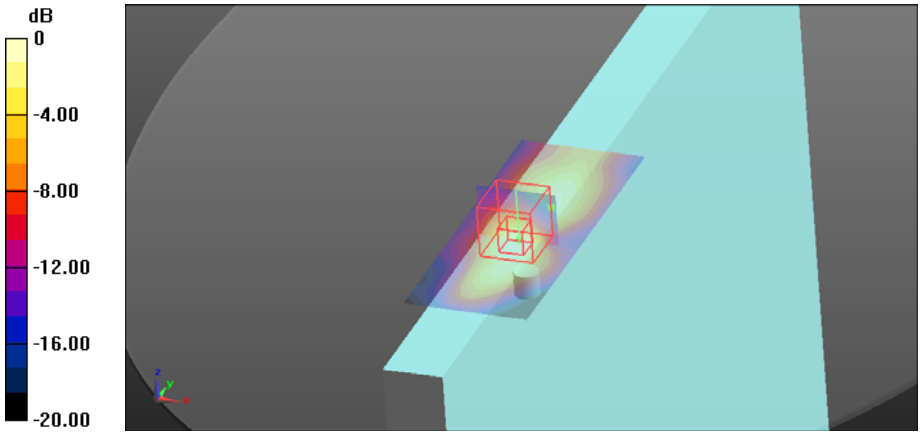
- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 2450MHz Edge/802.11b, 1Mbps, CH 6, Tablet PL, Aux Antenna,/Area Scan Main Antenna (51x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.672 W/kg

Body 2450MHz Edge/802.11b, 1Mbps, CH 6, Tablet PL, Aux Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.96 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.916 W/kg
SAR(1 g) = 0.388 W/kg; SAR(10 g) = 0.163 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.624 W/kg



0 dB = 0.624 W/kg = -2.05 dBW/kg

3. 5.2GHz - 802.11n40, CH46, Main Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/13/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

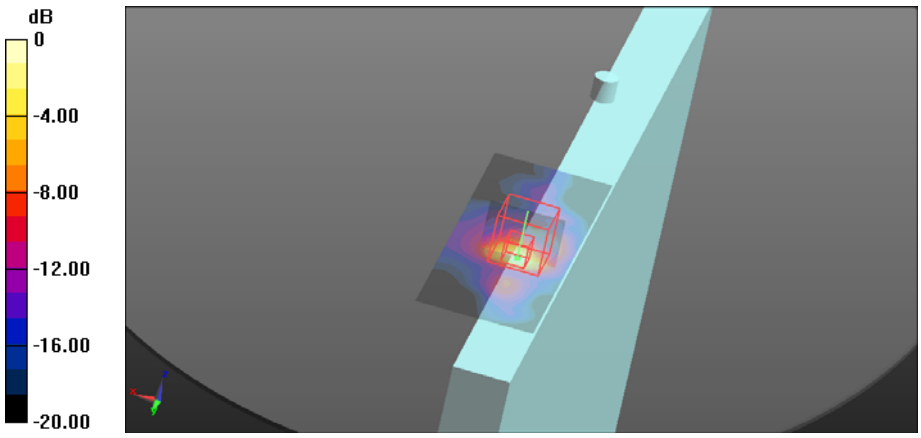
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5230 MHz; σ = 5.241 S/m; ε_r = 47.341; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.4, 4.4, 4.4); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5200-5300MHz Edge/802.11n, HT0, CH 46, Tablet PL, Main Antenna,/Area Scan Main Antenna (51x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.82 W/kg

Body 5200-5300MHz Edge/802.11n, HT0, CH 46, Tablet PL, Main Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.55 V/m; Power Drift = -0.25 dB
Peak SAR (extrapolated) = 6.03 W/kg
SAR(1 g) = 1.47 W/kg; SAR(10 g) = 0.437 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.99 W/kg



0 dB = 2.99 W/kg = 4.76 dBW/kg

4. 5.2GHz - 802.11n40, CH46, Aux Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/13/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

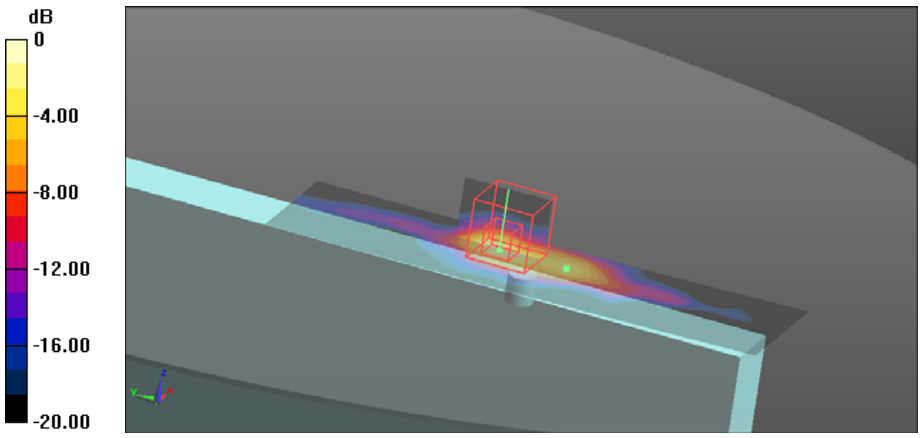
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5230 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5230 MHz; σ = 5.286 S/m; ε_r = 47.966; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.4, 4.4, 4.4); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -4.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5200MHz Edge/802.11n, HT0, CH 46, Tablet PL, Aux Antenna,/Area Scan Aux Antenna (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.18 W/kg

Body 5200MHz Edge/802.11n, HT0, CH 46, Tablet PL, Aux Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 17.27 V/m; Power Drift = -0.26 dB
Peak SAR (extrapolated) = 3.15 W/kg
SAR(1 g) = 0.721 W/kg; SAR(10 g) = 0.214 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.55 W/kg



0 dB = 1.55 W/kg = 1.90 dBW/kg

5. 5.3GHz - 802.11a, CH60, Main Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/13/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

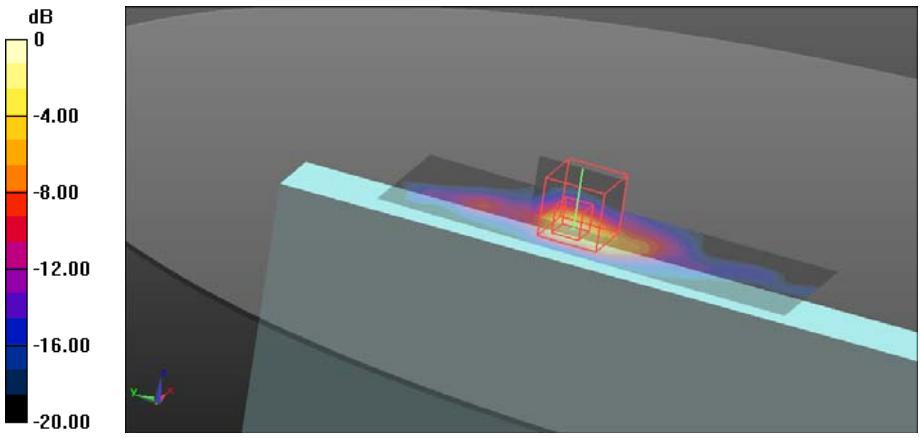
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5300 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5300 MHz; σ = 5.399 S/m; ε_r = 47.115; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.2, 4.2, 4.2); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5200-5300MHz Edge/802.11a, 6Mbps, CH 60, Tablet PL, Main Antenna/Area Scan Main Antenna (51x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.46 W/kg

Body 5200-5300MHz Edge/802.11a, 6Mbps, CH 60, Tablet PL, Main Antenna/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.99 V/m; Power Drift = -0.25 dB
Peak SAR (extrapolated) = 5.66 W/kg
SAR(1 g) = 1.37 W/kg; SAR(10 g) = 0.394 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.88 W/kg



0 dB = 2.88 W/kg = 4.59 dBW/kg

6. 5.3GHz - 802.11a, CH52, Aux Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/13/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

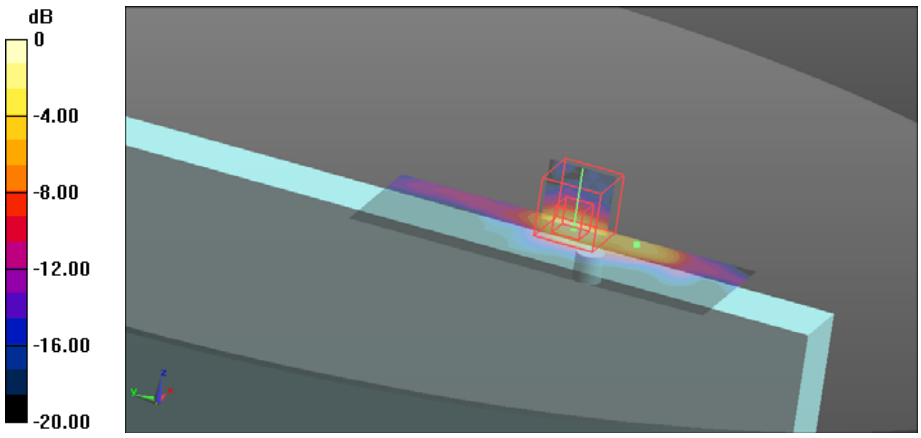
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5260 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5260 MHz; σ = 5.31 S/m; ε_r = 47.353; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.2, 4.2, 4.2); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -4.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5200-5300MHz Edge/802.11a, 6Mbps, CH 52, Tablet PL, Aux Antenna,/Area Scan Aux Antenna (51x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.990 W/kg

Body 5200-5300MHz Edge/802.11a, 6Mbps, CH 52, Tablet PL, Aux Antenna,/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 16.09 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 2.48 W/kg
SAR(1 g) = 0.598 W/kg; SAR(10 g) = 0.191 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

7. 5.6GHz - 802.11ac80, CH138, Main Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/24/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

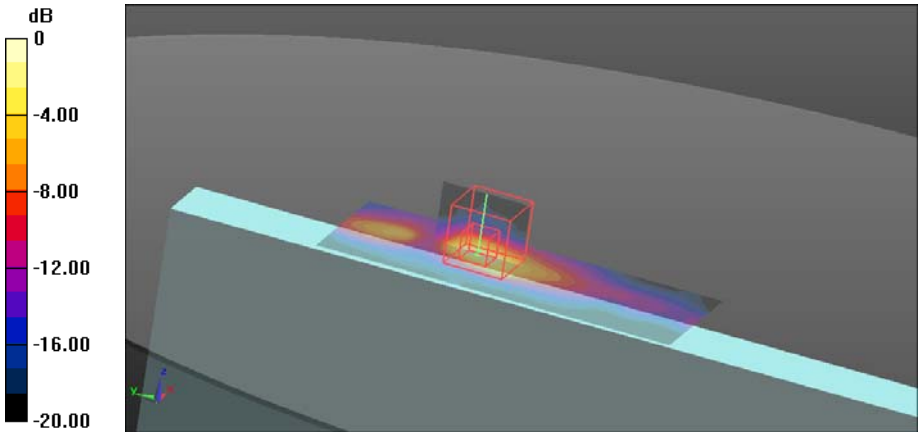
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5690 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5690 MHz; σ = 5.815 S/m; ε_r = 46.293; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.86, 3.86, 3.86); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5600MHz Edge/802.11ac, VHT0, CH 138, Tablet PL, Main Antenna,/Area Scan Main Antenna (51x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.85 W/kg

Body 5600MHz Edge/802.11ac, VHT0, CH 138, Tablet PL, Main Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 20.34 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 4.85 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.337 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 2.34 W/kg



0 dB = 2.34 W/kg = 3.69 dBW/kg

8. 5.6GHz - 802.11a, CH104, Aux Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/24/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

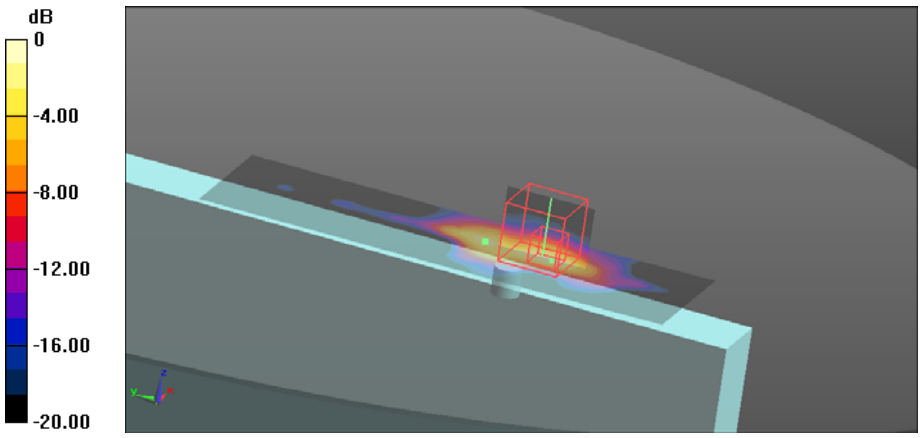
Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5520 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5520 MHz; σ = 5.738 S/m; ε_r = 46.449; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.97, 3.97, 3.97); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5600MHz Edge/802.11a, 6Mbps, CH 104, Tablet PL, Aux Antenna,/Area Scan (51x171x1):
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

Body 5600MHz Edge/802.11a, 6Mbps, CH 104, Tablet PL, Aux Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 7.639 V/m; Power Drift = -0.37 dB
Peak SAR (extrapolated) = 2.76 W/kg
SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.167 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 0.83 dBW/kg

9. 5.8GHz - 802.11ac80, CH155, Main Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/27/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5775 MHz;Communication System PAR: 0 dB
Medium parameters used (interpolated): f = 5775 MHz; σ = 6.06 S/m; ε_r = 46.203; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

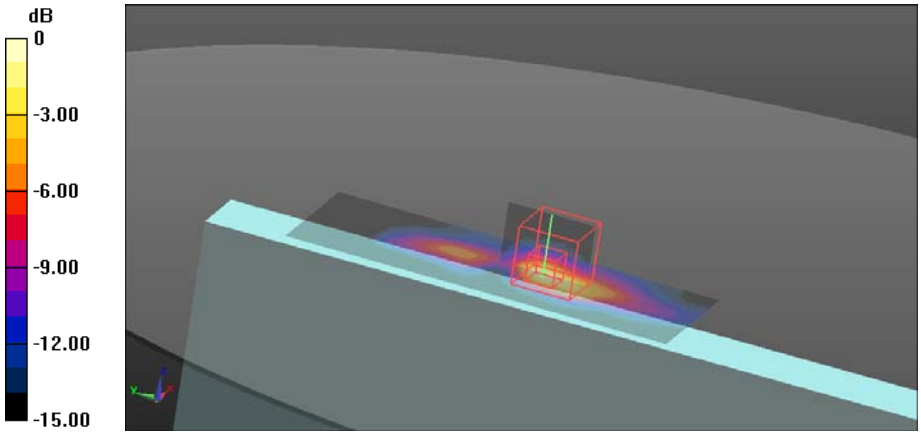
- Probe: EX3DV4 - SN3978; ConvF(3.96, 3.96, 3.96); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5800MHz Edge/802.11ac, VHT0, CH 155, Tablet PL, Main Antenna,/Area Scan Main Antenna (51x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 2.84 W/kg

Body 5800MHz Edge/802.11ac, VHT0, CH 155, Tablet PL, Main Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.52 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 5.68 W/kg
SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.426 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.69 W/kg



0 dB = 2.69 W/kg = 4.30 dBW/kg

10. 5.8GHz - 802.11n40, CH151, Aux Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/27/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

Communication System: UID 0, 802.11 (0); Communication System Band: 5GHz; Frequency: 5755 MHz;Communication System PAR: 0 dB
Medium parameters used (interpolated): f = 5755 MHz; σ = 6.077 S/m; ε_r = 46.21; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

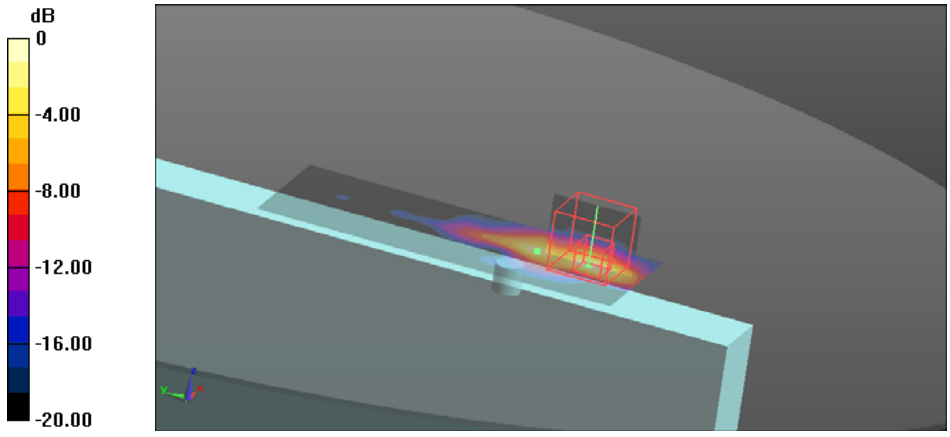
- Probe: EX3DV4 - SN3978; ConvF(3.96, 3.96, 3.96); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

Body 5800MHz Edge/802.11n, HT0, CH 151, Tablet PL, Aux Antenna,/Area Scan Main Antenna (51x131x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.16 W/kg

Body 5800MHz Edge/802.11n, HT0, CH 151, Tablet PL, Aux Antenna,/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 8.198 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.80 W/kg
SAR(1 g) = 0.522 W/kg; SAR(10 g) = 0.147 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 0.83 dBW/kg

11. 2.4GHz - 802.15, CH78, Aux Antenna – Tablet PL

Test Laboratory: Intel WRF Lab; Date/Time: 10/28/2014

DUT: 7265NGW + Lenovo TP00070A PC; Type: Tablet; Serial: MAC: 00.15.00.EE.84.78

Communication System: UID 0, 802.15 (0); Communication System Band: 2.4GHz; Frequency: 2480 MHz;Communication System PAR: 1.14 dB
Medium parameters used: f = 2480 MHz; σ = 1.95 S/m; ε_r = 49.576; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

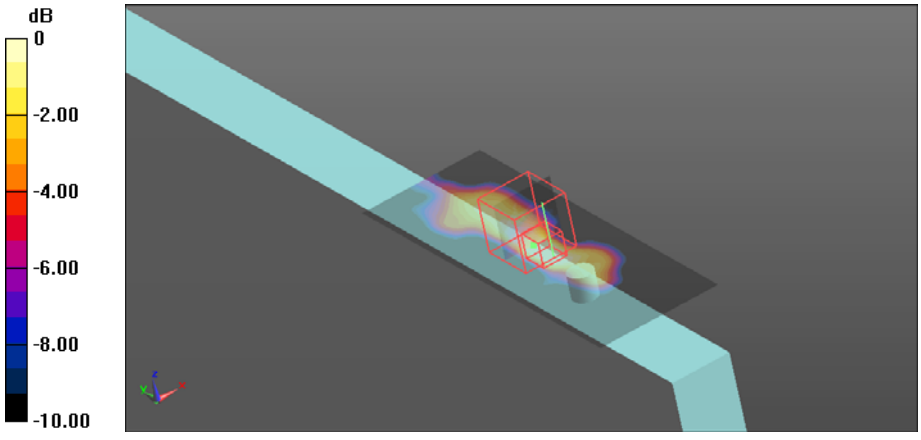
DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = -9.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

BT 2450 Edge/802.15, GFSK, DH5 CH78, Tablet PL, Aux Antenna,/Area Scan Main Antenna (51x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.0563 W/kg

BT 2450 Edge/802.15, GFSK, DH5 CH78, Tablet PL, Aux Antenna,/Zoom Scan (7x7x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.061 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 0.0490 W/kg
SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.00865 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.0330 W/kg



0 dB = 0.0330 W/kg = -14.81 dBW/kg

12. System Check Body Liquid 2450MHz

Test Laboratory: Intel WRF Lab; Date/Time: 10/28/2014

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:xxx

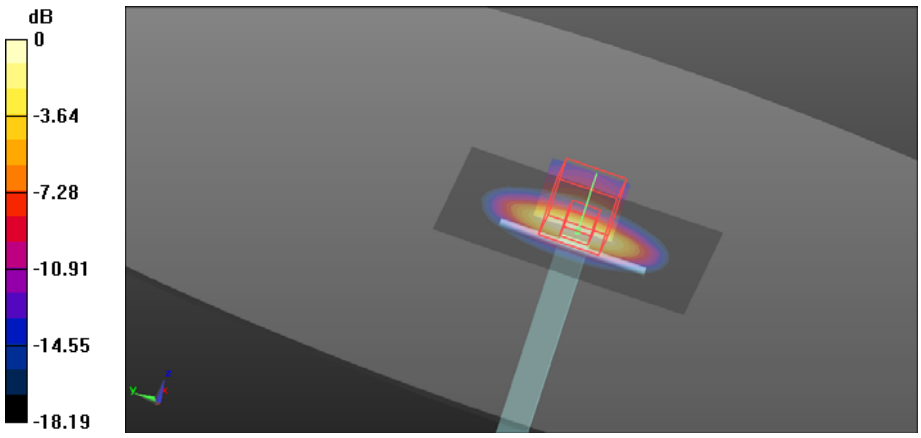
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz);
Frequency: 2450 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 2450 MHz; σ = 2 S/m; ε_r = 48.907; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(7.52, 7.52, 7.52); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

System Check 2450MHz/Validation 2450MHz/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 7.60 W/kg

System Check 2450MHz 10_27_2014/Validation 2450MHz/Zoom Scan (8x8x12)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 61.72 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 9.98 W/kg
SAR(1 g) = 4.9 W/kg; SAR(10 g) = 2.28 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 7.50 W/kg



0 dB = 7.50 W/kg = 8.75 dBW/kg

13. System Check Body Liquid 5200MHz

Test Laboratory: Intel WRF Lab; Date/Time: 10/13/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx

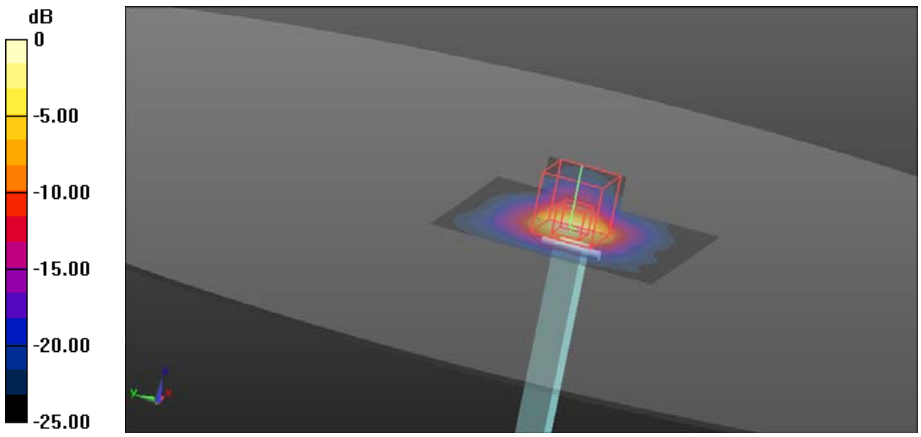
Communication System: UID 0, CW (0); Communication System Band: ITD5500 (5000.0 - 5900.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5200 MHz; σ = 5.271 S/m; ε_r = 48.309; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(4.4, 4.4, 4.4); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

System Check 5200MHz/Validation 5200MHz/Area Scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.6 W/kg

System Check 5200MHz/Validation 5200MHz/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 55.13 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 28.7 W/kg
SAR(1 g) = 7.11 W/kg; SAR(10 g) = 2.04 W/kg
Maximum value of SAR (measured) = 13.7 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

14. System Check Body Liquid 5600MHz

Test Laboratory: Intel WRF Lab; Date/Time: 10/24/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx

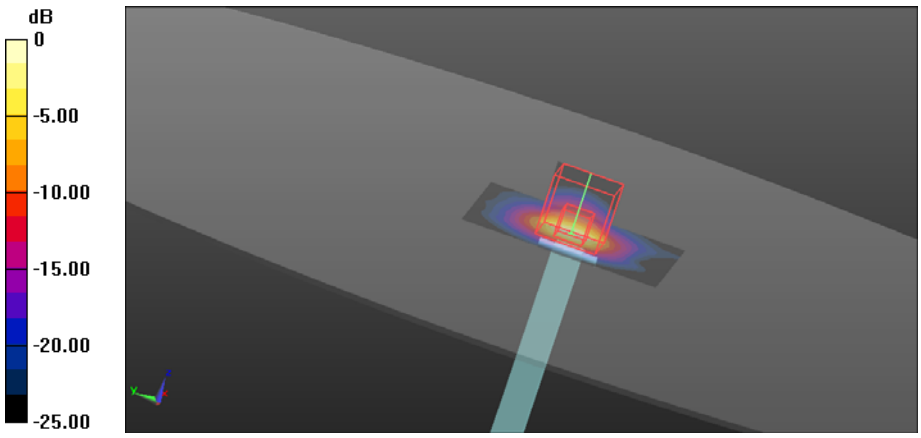
Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5600 MHz; σ = 5.781 S/m; ε_r = 46.144; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.86, 3.86, 3.86); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

System Check 5600MHz/Validation 5600MHz/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.4 W/kg

System Check 5600MHz/Validation 5600MHz/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.76 V/m; Power Drift = 0.28 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.17 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 16.4 W/kg



0 dB = 16.4 W/kg = 12.15 dBW/kg

15. System Check Body Liquid 5800MHz

Test Laboratory: Intel WRF Lab; Date/Time: 10/27/2014

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx

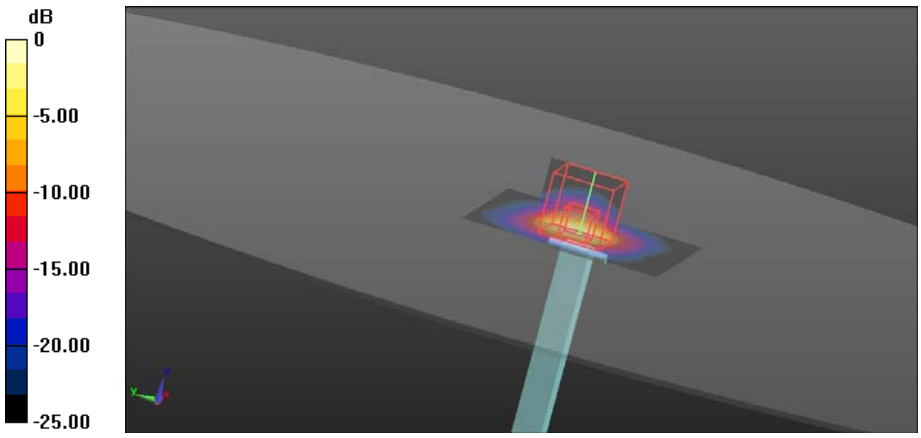
Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Communication System PAR: 0 dB
Medium parameters used: f = 5800 MHz; σ = 6.108 S/m; ε_r = 46.178; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3978; ConvF(3.96, 3.96, 3.96); Calibrated: 6/24/2014;
  - Modulation Compensation:
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 23.0
- Electronics: DAE4 Sn1429; Calibrated: 6/24/2014
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002BA;
- DASY52 52.8.8(1222);

System Check 5800MHz/Validation 5800MHz/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.3 W/kg

System Check 5800MHz/Validation 5800MHz/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.36 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 32.2 W/kg
SAR(1 g) = 7.25 W/kg; SAR(10 g) = 2.04 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 15.5 W/kg



0 dB = 15.5 W/kg = 11.90 dBW/kg

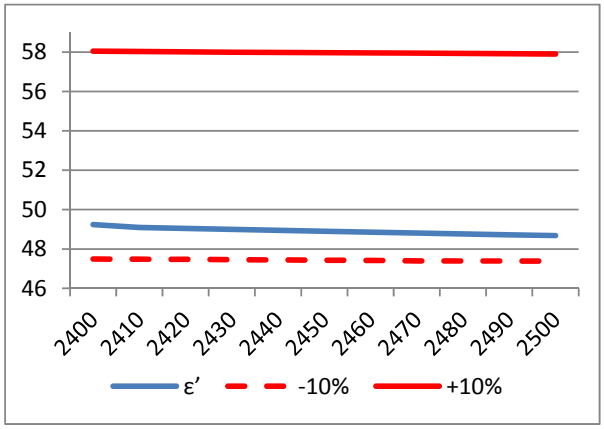
Annex D. Calibration Certificates

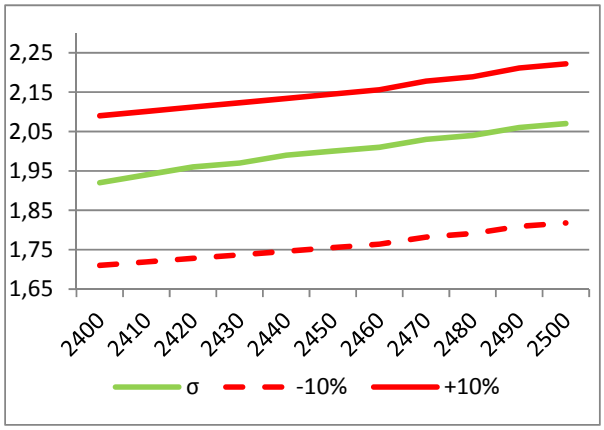
Device	Type/Model	Serial Number	Manufacturer	Calibration Certificate
Dosimetric E-field Probe	EX3DV4	3978	SPEAG	
2450MHz System Validation Dipole	D2450V2	937	SPEAG	
5GHz System Validation Dipole	D5GHzv2	1164	SPEAG	

Annex E. TSL Dielectric Parameters

Body 2450MHz

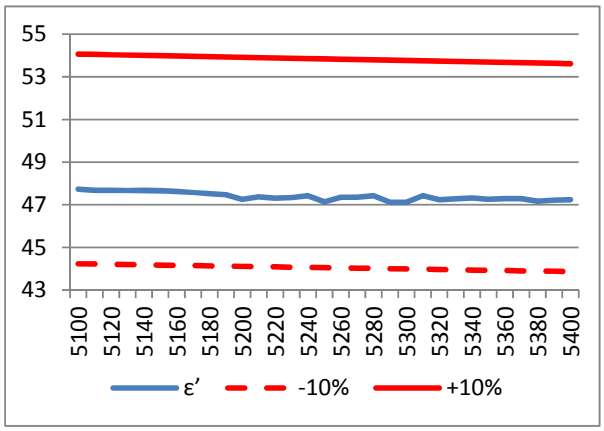
Freq. (MHz)	Target		Measured	
	ε'	σ	ε'	σ
2400	52.77	1.90	49.24	1.92
2410	52.75	1.91	49.09	1.94
2420	52.74	1.92	49.04	1.96
2430	52.73	1.93	48.99	1.97
2440	52.71	1.94	48.95	1.99
2450	52.70	1.95	48.91	2.00
2460	52.69	1.96	48.86	2.01
2470	52.67	1.98	48.80	2.03
2480	52.66	1.99	48.76	2.04
2490	52.65	2.01	48.72	2.06
2500	52.64	2.02	48.68	2.07

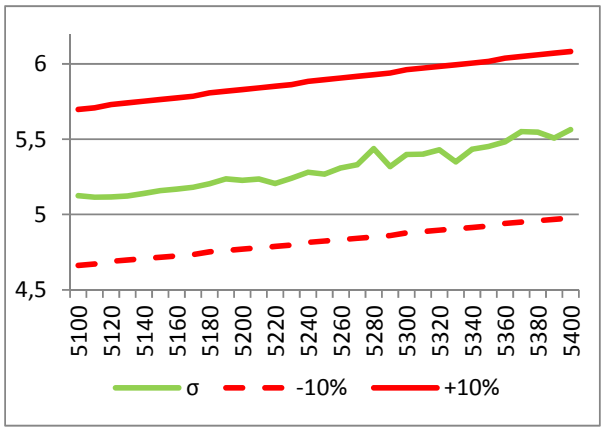




Body 5200MHz

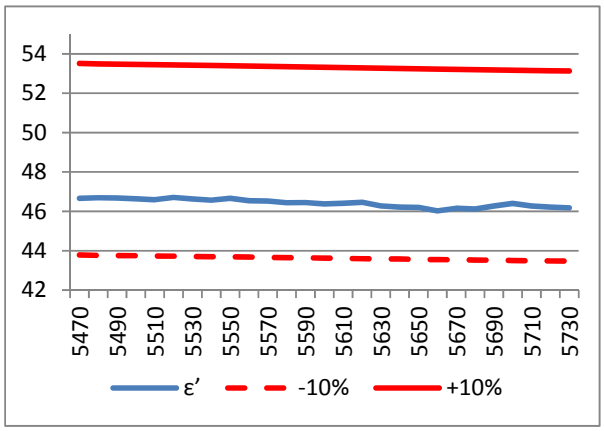
Freq. (MHz)	Target		Measured	
	ε'	σ	ε'	σ
5100	49.15	5.18	47.73	5.13
5110	49.14	5.19	47.68	5.12
5120	49.12	5.21	47.68	5.12
5130	49.11	5.22	47.66	5.12
5140	49.10	5.23	47.68	5.14
5150	49.08	5.24	47.66	5.16
5160	49.07	5.25	47.63	5.17
5170	49.06	5.26	47.57	5.18
5180	49.04	5.28	47.52	5.20
5190	49.03	5.29	47.47	5.24
5200	49.01	5.30	47.25	5.23
5210	49.00	5.31	47.37	5.24
5220	48.99	5.32	47.31	5.21
5230	48.97	5.33	47.34	5.24
5240	48.96	5.35	47.42	5.28
5250	48.95	5.36	47.14	5.27
5260	48.93	5.37	47.35	5.31
5270	48.92	5.38	47.36	5.33
5280	48.91	5.39	47.42	5.44
5290	48.89	5.40	47.12	5.32
5300	48.88	5.42	47.12	5.40
5310	48.87	5.43	47.43	5.40
5320	48.85	5.44	47.24	5.43
5330	48.84	5.45	47.28	5.35
5340	48.82	5.46	47.32	5.43
5350	48.81	5.47	47.26	5.45
5360	48.80	5.49	47.29	5.48
5370	48.78	5.50	47.29	5.55
5380	48.77	5.51	47.17	5.55
5390	48.76	5.52	47.22	5.51
5400	48.74	5.53	47.24	5.56

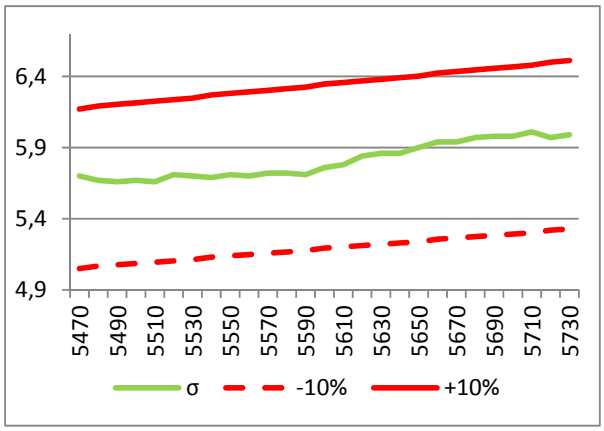




Body 5600MHz

Freq. (MHz)	Target		Measured	
	ε'	σ	ε'	σ
5470	48.65	5.61	46.66	5.70
5480	48.63	5.63	46.69	5.67
5490	48.62	5.64	46.68	5.66
5500	48.61	5.65	46.64	5.67
5510	48.59	5.66	46.59	5.66
5520	48.58	5.67	46.71	5.71
5530	48.57	5.68	46.63	5.70
5540	48.55	5.70	46.57	5.69
5550	48.54	5.71	46.66	5.71
5560	48.53	5.72	46.54	5.70
5570	48.51	5.73	46.52	5.72
5580	48.50	5.74	46.44	5.72
5590	48.49	5.75	46.45	5.71
5600	48.47	5.77	46.38	5.76
5610	48.46	5.78	46.41	5.78
5620	48.44	5.79	46.46	5.84
5630	48.43	5.80	46.28	5.86
5640	48.42	5.81	46.22	5.86
5650	48.40	5.82	46.20	5.90
5660	48.39	5.84	46.03	5.94
5670	48.38	5.85	46.16	5.94
5680	48.36	5.86	46.12	5.97
5690	48.35	5.87	46.27	5.98
5700	48.34	5.88	46.40	5.98
5710	48.32	5.89	46.27	6.01
5720	48.31	5.91	46.22	5.97
5730	48.30	5.92	46.18	5.99





Body 5800MHz

Freq. (MHz)	Target		Measured	
	ε'	σ	ε'	σ
5720	48.31	5.91	46.09	5.99
5730	48.30	5.92	46.12	6.09
5740	48.28	5.93	46.23	6.04
5750	48.27	5.94	46.31	6.08
5760	48.25	5.95	46.11	6.07
5770	48.24	5.96	46.17	6.10
5780	48.23	5.98	46.24	6.02
5790	48.21	5.99	46.65	6.02
5800	48.20	6.00	46.18	6.11
5810	48.19	6.01	46.36	6.05
5820	48.17	6.02	46.39	6.09
5830	48.16	6.04	46.17	6.03
5840	48.15	6.05	46.30	6.06
5850	48.13	6.06	46.27	6.05
5860	48.12	6.07	46.23	6.06