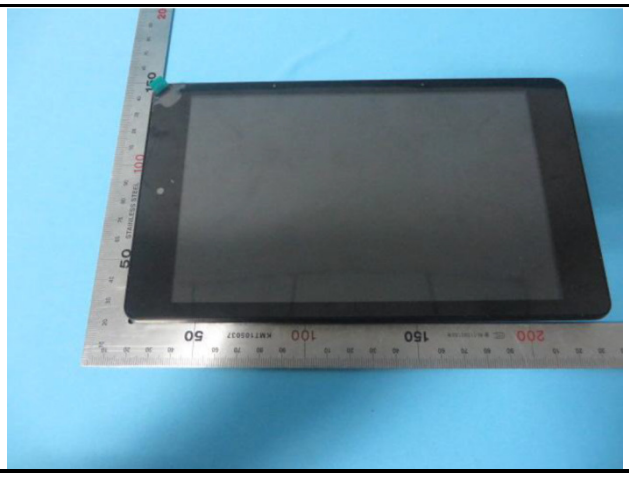
Prüfbericht-Nr.: *Test Report No.*:	**50080311 001**	**Auftrags-Nr.:** *Order No.*:	**154243386**	**Seite 1 von 49** *Page 1 of 49*
Kunden-Referenz-Nr.: *Client Reference No.*:	**52195766**	**Auftragsdatum:** *Order date*:	**04.27.2017**	

Auftraggeber: *Client*:	**Lightcomm Technology Co.,Ltd.** RM 1808 18/F, FO TAN INDUSTRIAL CENTRE, NOS. 26-28 AU PUI WAN STREET, FO TAN SHATIN NEW TERRITORIES, HONGKONG
Prüfgegenstand: *Test item*:	**MID**
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	**MID8006-L, DL8006, DL80XXXXXX (x=0-9, A-Z, a-z, - or blank, for market purpose only, all models are identical except the model number, brand or color)** **FCC ID: XMF-MID8006L**
Auftrags-Inhalt: *Order content*:	**Complete test**
Prüfgrundlage: *Test specification*:	**CFR Title 47 Part 2 Section 2.1093** **IEEE 1528-2013** **KDB 865664 D01 v01r04** **KDB 248227 D01 v02r02** **KDB 447498 D01 v06** **KDB 865664 D02 v01r02** **KDB 616217 D04 v01r02**
Wareneingangsdatum: *Date of receipt*:	**04.01.2017**
Prüfmuster-Nr.: *Test sample No.*:	**A000567056-003**
Prüfzeitraum: *Testing period*:	**04.01.2017 to 07.04.2017**
Ort der Prüfung: *Place of testing*:	**Cerpass Technology (SuZhou) Co., Ltd.**
Prüflaboratorium: *Testing laboratory*:	**TÜV Rheinland (Shanghai) Co., Ltd.**
Prüfergebnis*: *Test result**:	**Pass**



geprüft von / *tested by*:

07.06.2017Elliot Zhang / Assistant Project Manager

Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

kontrolliert von / *reviewed by*:

07.06.2017Shi Li / Department Manager

Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*

FCC ID: XMF-MID8006L

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

STATEMENT OF COMPLIANCE

Test Item	Sepcification	Result
Specific Absorption Rate – Wi-Fi 802.11a/b/g/n – 2.4GHz & 5GHz	Refer to Secification as below	Pass

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz

KDB865664 D02 RF Exposure Reporting v01r02: RF EXPOSURE COMPLIANCE REPORTING AND DOCUMENTATION CONSIDERATIONS.

KDB 447498 D01 General RF Exposure Guidance v06: RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Table Device

KDB 616217 D04 SAR for Laptop and Tablets v01r02: SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers

KDB 248227 D01 802.11 Wi-Fi SAR v02r02: SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

This device complies with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg) specified in CFR Title 47 Part 2 Subpart J Section 2.1093 and ANSI/IEEE C95.1-1992. The maximum results of Specific Absorption Rate (SAR) durning testing as below.

Frequency Band	Exposure Position	Highest Reported 1g SAR Value (W/kg)
802.11b/g/n – 2.4GHz Band	Body	1.255
802.11a – 5.2GHz Band	Body	1.239
802.11a – 5.8GHz Band	Body	0.852

Frequency Band	Exposure Position	WiFi Highest Reported 1g SAR(W/kg)	Highest BT Estimated 1g SAR(W/kg)	Highest Simultaneous 1g SAR Value (W/kg)
DTS+BT	Body	1.255	0.24	1.495
UNII+BT	Body	1.239	0.24	1.479

Table of Contents

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following Appendix:
Appendix A: System performance verification
Appendix B: Highest SAR Measurement results
Appendix C: Test Setup Photos
Appendix D: Calibration Certificate

2. Test Sites

2.1 Test Facilities

Test Site: Cerpass Technology (SuZhou) Co., Ltd.
Address: No.66, Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China

FCC Registration No.: 916572, 331395

Note: The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Instrument	Manufacturer	Model No.	Serial No.	Cali. Date	Cali. Due Date
Stäubli Robot TX60L	Stäubli	TX60L	5P6VA1/A/01	only once	only once
Robot Controller	Stäubli	CS8C	5P6VA1/C/01	only once	only once
Dipole Validation Kits	Speag	D2450V2	914	2015.05.19	2017.05.18[Note]
Dipole Validation Kits	Speag	D5GHzV2	1156	2015.05.22	2017.05.21[Note]
SAM ELI Phantom	Speag	SAM	1211	N/A	N/A
Laptop Holder	Speag	SM LH1 001CD	N/A	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	1379	2016.05.23	2017.05.22
E-Field Probe	Speag	EX3DV4	3927	2016.05.25	2017.05.24
SAR Software	Speag	DASY5	V5.2 Build 162	N/A	N/A
Power Amplifier	Mini-Circuit	ZVA-183W-S+	MN136701248	2015.09.03	2017.09.02
Directional Coupler	Agilent	772D	MY52180104	2015.09.03	2017.09.02
Spectrum Analyzer	R&S	FSP40	100324	2017.03.26	2018.03.25
Vector Network	Agilent	E5071C	MY4631693	2017.03.26	2018.03.25
Signal Generator	R&S	SML	103287	2017.03.26	2018.03.25
Power Meter	R&S	BLWA0830-160/100/40D	76659	2017.03.26	2018.03.25
AUG Power Sensor	R&S	NRP-Z91	100384	2017.03.26	2018.03.25

Note: For dipole calibration, instead of the typical annual calibration recommended by measurement standards, longer calibration intervals of up to three years may be considered when it is demonstrated that the SAR target, impedance and return loss of a dipole have remain stable according to the requirements in KDB 865664 Section 3.2.2. We usually return the dipoles to the SAR system manufacturer or its designated calibration facilities for re-calibration every two years. The supporting information internal check of dipole is as follows.

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a 'Tablet PC' device.It supports Bluetooth 4.0 (Dual mode) & 2.4GHz Wi-Fi 802.11 b/g/n(HT20)/n(HT40) & 5GHz Wi-Fi 802.11 a wireless technology.
The 2.4GHz WIFI, 5GHz WIFI and Bluetooth can TX simultaneously

For details refer to the User Manual and Circuit Diagram.

The EUT is a tablet PC which supports WiFi, Bluetooth functions. And it doesn't support next to ear mode.
Refer to user manual and circuit diagram for details.

3.2 Product Technical Details

General Description of EUT	
Product Name:	MID
Brand Name:	digiland
Model No.:	MID8006-L, DL8006, DL80XXXXXX(x=0-9, A-Z, a-z, - or blank, for market purpose only, all models are identical except the model number, brand or color)
Operation Voltage	DC 3.7V 6000mAh via internal rechargeable Li-Poly battery DC 5.0V 2.5A via AC/DC adapter for charging
Hardware Version:	MID1023MA-PCDDR3-VER1_1
Type of Product	Tablet PC
Bluetooth	
Bluetooth Version:	V3.0+HS, V4.0
Frequency Range:	2402 ~ 2480MHz
Type of Modulation:	GFSK, π/4DQPSK, 8DPSK
Channel Separation:	1M, 2M
Type of Antenna:	PIFA Antenna
Antenna Gain:	1.28 dBi
WiFi	
Frequency Range:	2412 ~ 2462MHz, 5180 ~ 5240MHz, 5745 ~ 5825MHz
Type of Modulation:	802.11b: DSSS(DBPSK/DQPSK/CCK) 802.11a/g/n: OFDM(BPSK/QPSK/16QAM/64QAM)
Channel Separation:	5MHz for 2.4GHz; 20MHz for 5GHz
Type of Antenna:	PIFA Antenna
Antenna Gain:	1.28 dBi for 2.4GHz; 1.12 dBi for 5GHz

3.3 Submitted Documents

3.3.1 Test specification(s)

IEEE 1528-2013 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES.

KDB865664 D01SAR measurement 100 MHz to 6 GHz v01r04: SAR MEASUREMENT REQUIREMENTS FOR 100 MHz TO 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF EXPOSURE COMPLIANCE REPORTING AND DOCUMENTATION CONSIDERATIONS.

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS.

3.3.2 Environment Condition

Item	Target	Measured
Ambient Temperature(℃)	18~25	21.5±2
Temperature of Simulant(℃)	20~22	21±2
Relative Humidity(%RH)	30~70	52

3.3.3 RF Exposure Limits

Human Exposure	Basic restrictions for electric, magnetic and electromagnetic fields. (Unit in mW/g or W/kg)
Spatial Peak SAR[1](Head and Body)	1.60
Spatial Average SAR[2](Whole Body)	0.08
Spatial Peak SAR[3](Arms and Legs)	4.00

Notes:

1. The Spatial Peak value of the SAR averaged over any 1gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over appropriate averaging time.

4. DASY5 Measurement System

DASY5 Measurement System

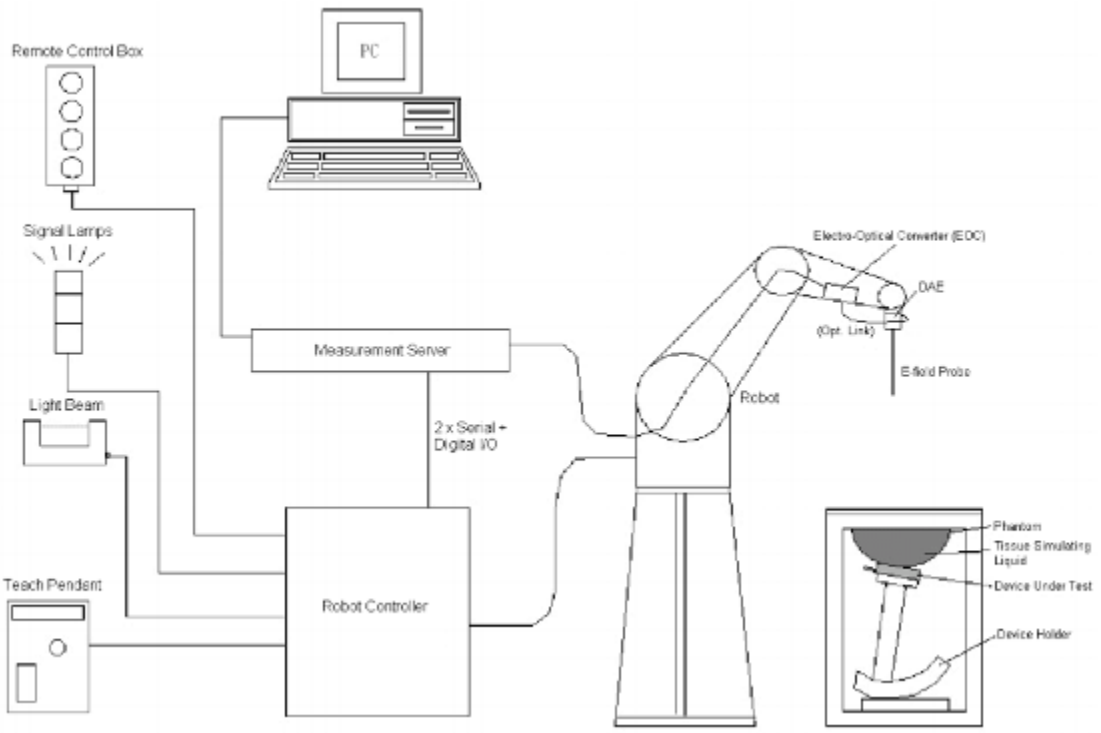


Figure 2.1 SPEAG DASY5 System Configurations

The DASY5 system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic(DAE)attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter(ECO)performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows 7
- DASY5 software
- Remove control with teach pendant additional circuitry for robot safety such as warming lamps, etc.
- The SAM twin phantom
- A device holder
- Tissue simulating liquid
- Dipole for evaluating the proper functioning of the system

4.1 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 f1, the spatially steep distribution f3 and f2 accounts for H-field cancellation on the phantom/tissue surface.

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

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

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

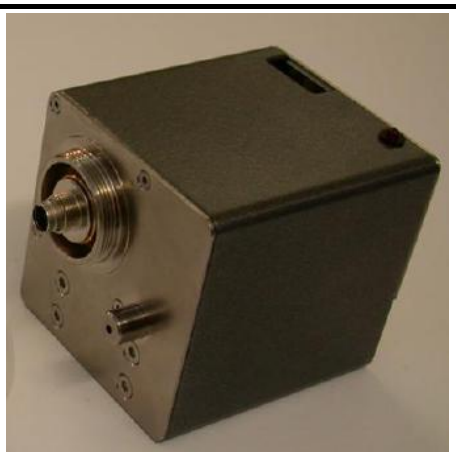
4.2 DASY5 E-Field Probe

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.

Model	EX3DV4	
Construction *4.2.1.1.1.1.1.1*	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 µW/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions	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	
Application	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%.	

4.3 Data Acquisition Electronics (DAE)

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.



4.4 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

4.5 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.

4.6 Measurement Server

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.

4.7 SAM Phantom

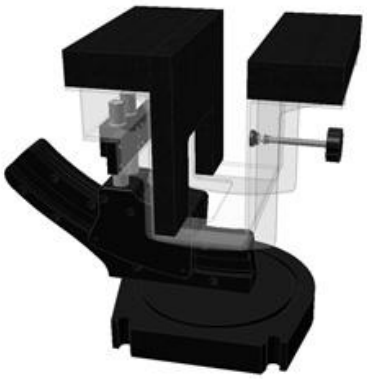
The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

- Left head
- Right head
- Flat phantom

The ELI4 Phantom also is a fiberglass shell phantom with 2mm shell thickness. It has 30 liters filling volume, and with a dimension of 600mm for major ellipse axis, 400mm for minor axis. It is intended for compliance testing of handheld and body-mounted wireless devices in frequency range of 30 MHz to 6GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

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.

4.8 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 εr =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.	
The laptop extension is lightweight and made of POM, acrylic glass and foam. It fits easily on upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.	

5. The SAR Measurement Procedure

5.1 System Performance Check

5.1.1 Purpose

1. To verify the simulating liquids are valid for testing.
2. To verify the performance of testing system is valid for testing.

5.1.2 Tissue Dielectric Parameters for Head and Body Phantoms

Target Tissue Parameters

Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
835	41.5	0.90	55.2	0.97
850	41.5	0.92	55.2	0.99
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	**52.7**	**1.95**
3000	38.5	2.40	52.0	2.73
5200	36.0	4.66	**49.0**	**5.30**
5300	35.87	4.76	48.88	5.42
5600	35.5	5.07	48.5	5.77
5800	35.3	5.27	**48.2**	**6.00**

(ε_r = relative permittivity, σ = conductivity and ρ = 1000 kg/m^3)

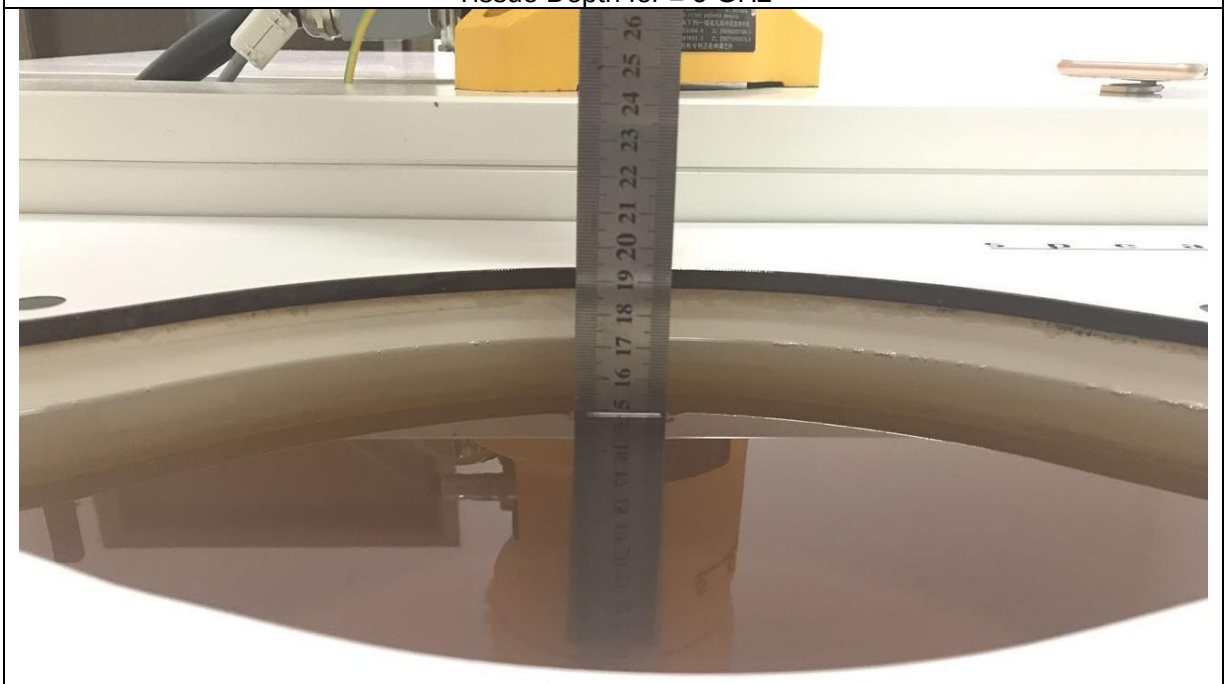
Measured Tissue Parameters

Tissue parameter for body							
Fre. <MHz>	**Permittivity**	**Conductivity**	**Target Permittivity**	**Target Conductivity**	**Delta Permittivity%**	**Delta Conductivity %**	**Tissue Temperature℃**
20-03-2017							
2450	52.48	1.92	52.70	1.95	-0.42	-1.54	21.0
2412	52.56	1.88	52.70	1.90	-0.27	-1.05	21.0
2437	52.51	1.91	52.70	1.93	-0.36	-1.04	21.0
2462	52.47	1.94	52.70	1.97	-0.44	-1.52	21.0
20-03-2017							
5200	49.02	5.41	49.00	5.30	0.04	2.08	21.0
21-03-2017							
5800	48.22	5.92	48.20	6.00	0.04	-1.33	21.0

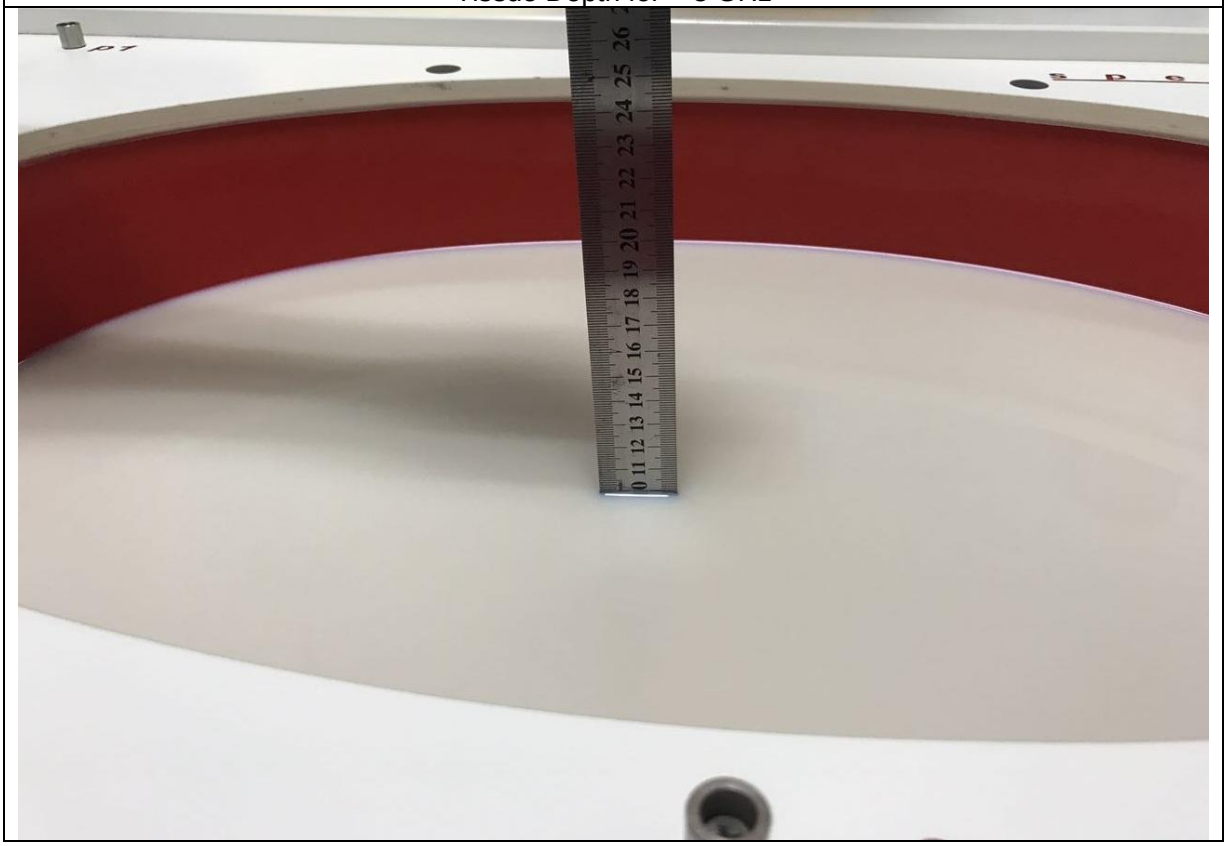
Tissue Depth

Refer to KDB 865664 D01 v01r04, The depth of body tissue-equivalent liquid in a phantom must be ≥ 15.0 cm with ≤ ± 0.5 cm variation for SAR measurements ≤ 3 GHz and ≥ 10.0 cm with ≤ ± 0.5 cm variation for measurements > 3 GHz.

Tissue Depth for ≤ 3 GHz



Tissue Depth for > 3 GHz



5.1.3 Tissue Simulating Liquid Information

Our simulating Liquid is manufactured by SPEAG, the main information is listed below:

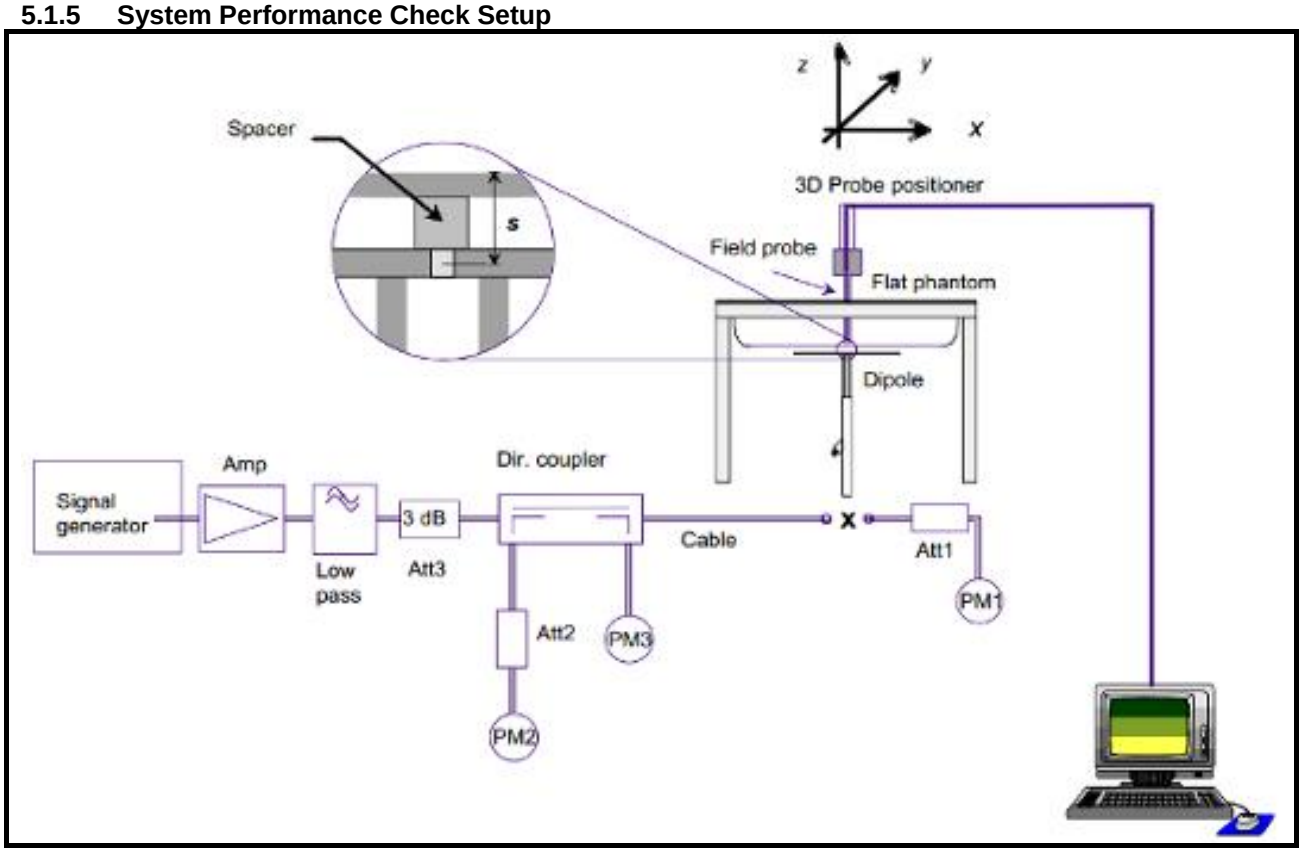
Item Name	Product No.	Test Frequency (MHz)	Main Ingredients
Body Tissue Simulating Liquid (MBBL1900-3800V3)	SL AAM 196 AB	1900-3800	Water, Tween
Body Tissue Simulating Liquid (MBBL3500-5800V5)	SL AAM 501 EA	3500-5800	Water, Oil

5.1.4 System Performance Check Procedure

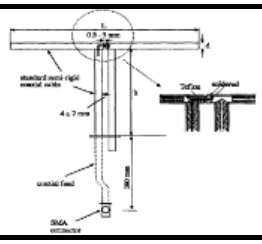
The DASY5 installation includes predefined files with recommended procedures for measurements and the system performance check. They are read-only document files and destined as fully defined but unmeasured masks, so the finished system performance check must be saved under a different name. The system performance check document requires the SAM Twin Phantom or ELI4 Phantom, so the phantom must be properly installed in your system. (User defined measurement procedures can be created by opening a new document or editing an existing document file). Before you start the system performance check, you need only to tell the system with which components (probe, medium, and device) you are performing the system performance check; the system will take care of all parameters.

- **The Power Reference Measurement and Power Drift Measurement** jobs are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the Dipole output power. If it is too high (above ±0.2 dB), the system performance check should be repeated;
- **The Surface Check** job tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ±0.1mm). In that case it is better to abort the system performance check and stir the liquid;
- **The Area Scan** job measures the SAR above the dipole on a plane parallel to the surface. It is used to locate the approximate location of the peak SAR. The proposed scan uses large grid spacing for faster measurement; due to the symmetric field, the peak detection is reliable;
- **The Zoom Scan** job measures the field in a volume around the peak SAR value assessed in the previous Area Scan job (for more information see the application note on SAR evaluation). If the system performance check gives reasonable results. The dipole input power(forward power) was 250mW, 1 g and 10 g spatial average SAR values normalized to 1W dipole input power give reference data for comparisons and it’s equal to 10x(dipole forward power). The next sections analyze the expected uncertainties of these values, as well as additional checks for further information or troubleshooting.

5.1.5 System Performance Check Setup



5.1.6 Validation Dipoles

The dipoles use is based on the IEEE Std.1528-2013 and FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04 standard, and is complied with mechanical and electrical specifications in line with the requirements of both EN62209-1 and EN62209-2. The table below provides details for the mechanical and electrical specifications for the dipoles.	

5.1.7 Result of System Performance Check: Valid Result

System Performance Check at 2450MHz, 5200MHz and 5800MHz for Body.

Validation Dipole: D2450V2-SN 914

Freq. [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Cond.	Perm	Tissue Temp. [°C]	Validation Signal Type
2450 MHz	Reference result ± 10% window	52.5 47.25 to 57.75	24.6 22.14 to 27.06	1.92	52.48	21.0	CW
	20-03-2017	49.6	22.84				

Validation Dipole: D5GHzV2-SN1156

Freq. [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Cond.	Perm	Tissue Temp. [°C]	Validation Signal Type
5200MHz	Reference result ± 10% window	75 67.5 to 82.5	21 18.9 to 23.1	5.41	49.02	21.0	CW
	20-03-2017	75.5	21.3				
Freq. [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Cond.	Perm	Tissue Temp. [°C]	Validation Signal Type
5800MHz	Reference result ± 10% window	76.6 68.94 to 84.26	21.1 18.99 to 23.21	5.92	48.22	21.0	CW
	21-03-2017	76.2	21.3				

Note: All SAR values are normalized to 1W forward power.

5.2 Test Requirements

5.2.1 Test Procedures

Step 1 Setup a Connection

First, engineer should record the conducted power before the test. Then establish a call in handset at the maximum power level with a base station simulator via air interface, or make the EUT estimate by itself in testing band. Place the EUT to the specific test location. After the testing, must export SAR test data by SEMCAD. Then writing down the conducted power of the EUT into the report, also the SAR values tested.

Step 2 Power Reference Measurements

To measure the local E-field value at a fixed location which value will be taken as a reference value for calculating a possible power drift.

Step 3 Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal 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 Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01v01r04

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Step 4 Zoom Scan
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. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB 865664 D01 v01r04

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ $1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

Step 5 Power Drift Measurements
Repetition of the E-field measurement at the fixed location mentioned in Step 1 to make sure the two results differ by less than ± 0.2 dB.

6. Wi-Fi/Bluetooth SAR Exclusion and Results

6.1 Maximum Tune-up Conducted Average Power

<MID_WIFI 1x1Tx_ Single Chain Power> (Unit: dBm)

Mode	Conducted Power (dBm)		
	2412MHz	2437MHz	2462MHz
11b (1Mbps)	14.62	14.85	**15.12**
11b (5.5Mbps)	14.59	14.80	15.03
11b (11Mbps)	14.55	14.76	14.93
11g (6Mbps)	12.96	**14.83**	14.46
11g (24Mbps)	12.91	14.77	14.40
11g (54Mbps)	12.83	14.72	14.32
11n-HT20 (MCS0)	12.83	**14.89**	13.13
11n-HT20 (MCS4)	12.76	14.81	12.99
11n-HT20 (MCS7)	12.69	14.72	12.95
11n-HT40 (MCS0)	12.46	**14.41**	11.66
11n-HT40 (MCS4)	12.40	14.34	11.61
11n-HT40 (MCS7)	12.29	14.29	11.54

Mode	Conducted Power (dBm)		
	5180MHz	5220MHz	5240MHz
11a (6Mbps)	7.12	6.78	**7.31**
11a (24Mbps)	7.03	6.69	7.23
11a (54Mbps)	6.95	6.52	7.17

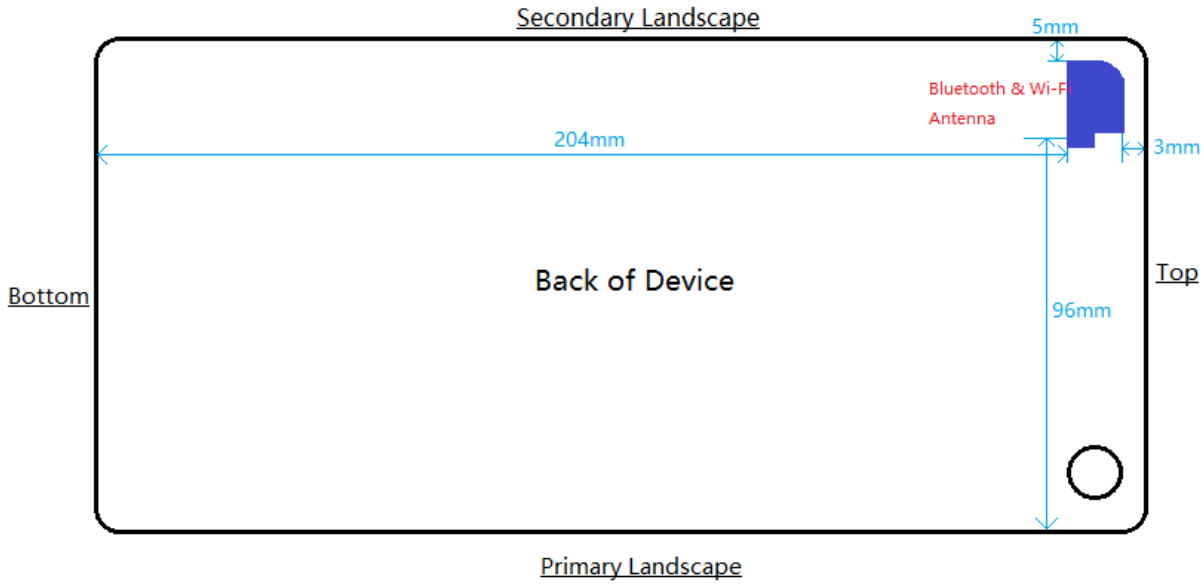
Mode	Conducted Power (dBm)		
	5745MHz	5785MHz	5825MHz
11a (6Mbps)	7.22	**7.56**	7.18
11a (24Mbps)	7.17	7.50	7.01
11a (54Mbps)	7.05	7.45	6.74

Bluetooth - Maximum Average Power			
Test Mode	Channel	Data Rate	Average Power(dBm)
DH5	CH 00	1Mbps	**2.30**
	CH 39	1Mbps	2.08
	CH 78	1Mbps	1.76
2DH5	CH 00	2Mbps	2.04
	CH 39	2Mbps	1.97
	CH 78	2Mbps	1.56
3DH5	CH 00	3Mbps	2.20
	CH 39	3Mbps	2.11
	CH 78	3Mbps	1.71

Bluetooth - Maximum Average Power				
Test Mode	Data Rate	Channel	Frequency (MHz)	Average Power (dBm)
BLE	1Mbps	CH 00	2402	-4.26
		CH 19	2440	-3.80
		CH 39	2480	-4.27

Remark:
1. Per KDB 248227 D01 v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
2. SAR is not required for 802.11g/n when
a) KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
b) 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.
3. Each channel should be tested at the lowest data rate, and repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
4. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

6.2 Antenna Location



6.3 Simultaneous Transmission Configurations

2.4GHz/5GHz Wi-Fi and Bluetooth share the same antenna path and cannot transmit simultaneously.

6.4 SAR exclusion

Per FCC KDB 447498 D01v06 section 4.3:
For 100 MHz to 6 GHz and *test separation distances* ≤ 50 mm, the 1-g and 10-g *SAR test exclusion thresholds* are determined by the following:
[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√$f_{(GHz)}$] ≤ 3.0 for 1-g SAR, and ≤ *7.5* for 10-g extremity SAR, where

- $f_{(GHz)}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

5mm Test Separation

Test Mode	Frq. (MHz)	Test separation distance (mm)	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	Test threshold (mW)	SAR Test (Y/N)
BT (GFSK)	2402	5	2.5	1.78	9.68	N
	2441	5	2.5	1.78	9.60	N
	2480	5	2.5	1.78	9.53	N
BLE	2402	5	-3.5	0.45	9.68	N
	2440	5	-3.5	0.45	9.60	N
	2480	5	-3.5	0.45	9.53	N
802.11b	2412	5	15.5	35.48	9.66	Y
	2437	5	15.5	35.48	9.61	Y
	2462	5	15.5	35.48	9.56	Y
802.11g	2412	5	13.5	22.39	9.66	Y
	2437	5	15.0	31.62	9.61	Y
	2462	5	15.0	31.62	9.56	Y
802.11n (HT20)	2412	5	13.5	22.39	9.66	Y
	2437	5	15.0	31.62	9.61	Y
	2462	5	13.5	22.39	9.56	Y
802.11n (HT40)	2412	5	13.0	19.95	9.66	Y
	2437	5	14.5	28.18	9.61	Y
	2462	5	12.0	15.85	9.56	Y
802.11a	5180	5	7.5	5.62	6.59	N
	5220	5	7.5	5.62	6.57	N
	5240	5	7.5	5.62	6.55	N
802.11a	5745	5	8.0	6.31	6.26	Y
	5785	5	8.0	6.31	6.24	Y
	5825	5	8.0	6.31	6.22	Y

For 100 MHz to 6 GHz and test separation distances > 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
1) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·(f(MHz)/150)]} mW, for 100 MHz to 1500 MHz
2) {[Power allowed at numeric threshold for 50 mm in step a)] + [(test separation distance – 50 mm)·10]} mW, for > 1500 MHz and ≤ 6 GHz

96mm Test Separation

Test Mode	Frq. (MHz)	Test separation distance (mm)	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	Test threshold (mW)	SAR Test (Y/N)
BT (GFSK)	2402	96	2.5	1.78	556.78	N
	2441	96	2.5	1.78	556.01	N
	2480	96	2.5	1.78	555.25	N
BLE	2402	96	-3.5	0.45	556.78	N
	2440	96	-3.5	0.45	556.03	N
	2480	96	-3.5	0.45	555.25	N
802.11b	2412	96	15.5	35.48	556.58	N
	2437	96	15.5	35.48	556.09	N
	2462	96	15.5	35.48	555.60	N
802.11g	2412	96	13.5	22.39	556.58	N
	2437	96	15.0	31.62	556.09	N
	2462	96	15.0	31.62	555.60	N
802.11n (HT20)	2412	96	13.5	22.39	556.58	N
	2437	96	15.0	31.62	556.09	N
	2462	96	13.5	22.39	555.60	N
802.11n (HT40)	2412	96	13.0	19.95	556.58	N
	2437	96	14.5	28.18	556.09	N
	2462	96	12.0	15.85	555.60	N
802.11a	5180	96	7.5	5.62	525.91	N
	5220	96	7.5	5.62	525.65	N
	5240	96	7.5	5.62	525.53	N
802.11a	5745	96	8.0	6.31	522.58	N
	5785	96	8.0	6.31	522.36	N
	5825	96	8.0	6.31	522.15	N

Note:
1. Per KDB 447498 D01 v06 section 4.1 f), the test separation distance is determined by the smallest distance between the outer surface of the device and the user; therefore, 0mm between outer surface and phantom is a conservative test separation distance for laptop.
2. SAR is not required for 802.11g/n when
a) KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
b) 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.
3. Each channel should be tested at the lowest data rate, and repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
4. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

6.5 Required Edges for SAR Testing

Test Mode	Back	Primary Landscape	Secondary Landscape	Top	Bottom
BT(GFSK, LE)	NO	NO	NO	NO	NO
802.11b	YES	NO	YES	YES	NO
802.11g	YES	NO	YES	YES	NO
802.11n(HT20)	YES	NO	YES	YES	NO
802.11n(HT40)	YES	NO	YES	YES	NO
802.11a	YES	NO	YES	YES	NO
802.11a	YES	NO	YES	YES	NO

Note: According to KDB 248227 D01 v02r01, SAR test configuration may be reduced when test.

6.6 Estimated SAR

This device contains transmitters that may operate simultaneously. Therefore simultaneous transmission analysis is required. Per FCC KDB 447498 D01v06, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is≤1.6W/kg. When standalone SAR is not required to be measured, per FCC KDB 447498 D01v06 4.3.2 2, the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission assessment involving that transmitter.

$$Estimated\ SAR = \frac{\sqrt{f(GHz)}}{7.5} * \frac{(Max\ Power\ of\ channel, mW)}{Min. Separation, mm}$$

Where: Test separation distances ≤ 50mm.

Bluetooth

Test Position	Test Mode	Frq.(MHz)	Test Separations (mm)	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	Estimated SAR(W/kg)
Back	Bluetooth	2402	1.5	2.5	1.8	0.24

7. Measurement Uncertainty

Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std.Unc. (1g)	Std. nc. (10g)	(vi) veff
Measurement System								
Probe Calibration	±6.0%	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.	±2.0%	R	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
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 Scalingp	±0%	R	$\sqrt{3}$	0	0	±0%	±0%	∞
Phantom and Setup								
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 (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. – ConductivityBB	±3.4%	R	$\sqrt{3}$	0.78	0.71	±1.5%	±1.4%	∞
Temp. unc. – PermittivityBB	±0.4%	R	$\sqrt{3}$	0.23	0.26	±0.1%	±0.1%	∞
Combined Std. Uncertainty						±11.2%	±11.1%	361
Expanded STD Uncertainty(k=2)						**±22.3%**	**±22.2%**	

DASY5 Uncertainty Budget, according to IEEE 1528/2011 and IEC 62209-1/2011(0.3-3GHz)

Error Description	Uncert. value	Prob. Dist.	Div.	(ci) 1g	(ci) 10g	Std.Unc. (1g)	Std. nc. (10g)	(vi) veff
Measurement System								
Probe Calibration	±6.55%	N	1	0	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	±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.	±2.0%	R	$\sqrt{3}$	1	1	±1.2%	±1.2%	∞
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	$\sqrt{3}$	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(Coverage factor=2)						**±24.6%**	**±24.5%**	

DASY5 Uncertainty Budget, according to IEEE 1528/2011 and IEC 62209-1/2011(3-6GHz)

7.1 Test Results for Standalone SAR Test

Body-worn SAR

Test Mode: 802.11b									
Test Position Body at 0mm	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Back	Fixed	01	2412	14.62	0.13	0.882	1.225	1.080	1.6
Back	Fixed	06	2437	14.85	-0.01	0.947	1.161	1.099	1.6
Back	Fixed	11	2462	15.12	0.06	1.140	1.091	1.244	1.6
* Back	Fixed	11	2462	15.12	0.05	1.150	1.091	1.255	1.6
Secondary Landscape	Fixed	11	2462	15.12	0.11	0.218	1.091	0.238	1.6
Top Side	Fixed	11	2462	15.12	0.10	0.841	1.091	0.918	1.6
Top Side	Fixed	06	2437	14.85	0.09	0.668	1.161	0.776	1.6

Remark: Per KDB248227 D01 v02r02 section 5.2.2, SAR is not required for 2.4 GHz 802.11g/n OFDM configurations 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.
DSSS Max Scaled SAR{Max OFDM Power (mW)/ Max DSSS Power (mW)} =1.255W/kg*{30.832mW (14.89dBm)/32.509mW (15.12dBm)} =1.19W/kg<1.2 W/kg*

Test Mode: 802.11a 5180 ~ 5240MHz									
Test Position Body at 0mm	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Back	Fixed	36	5180	7.12	0.00	0.607	1.091	0.662	1.6
Secondary Landscape	Fixed	36	5180	7.12	0.00	0.021	1.091	0.023	1.6
Top Side	Fixed	36	5180	7.12	0.01	1.070	1.091	1.167	1.6
* Top Side	Fixed	36	5180	7.12	0.01	0.956	1.091	1.043	1.6
Top Side	Fixed	44	5220	6.78	0.11	1.050	1.180	1.239	1.6
Top Side	Fixed	48	5240	7.31	0.13	0.843	1.045	0.881	1.6

Remark:
1. 802.11a 5180 ~ 5240MHz SAR is determined for conservative results.

Test Mode: 802.11a 5745 ~ 5825MHz									
Test Position Body at 0mm	Antenna Position	Frequency		Frame Power (dBm)	Power Drift (<±0.2)	SAR 1g (W/kg)	Scaling Factor	Scaled SAR 1g (W/kg)	Limit (W/kg)
		Channel	MHz						
Back	Fixed	157	5785	7.56	0.00	0.768	1.107	0.850	1.6
Secondary Landscape	Fixed	157	5785	7.56	0.00	0.054	1.107	0.060	1.6
Top Side	Fixed	157	5785	7.56	0.00	0.593	1.107	0.656	1.6
* Back	Fixed	157	5785	7.56	0.00	0.770	1.107	0.852	1.6
Back	Fixed	149	5745	7.22	0.00	0.696	1.197	0.833	1.6

Remark:
1. Per KDB 447498 D01 v06, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
2. Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg;
3. * mark is the repeated SAR

7.2 SAR Test Notes

General Notes:

1. Batteries are fully charged at the beginning of the SAR measurements.
2. Liquid tissue depth was at least 15.0 cm for all frequencies.
3. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
4. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v05r02.
5. Per FCC KDB 616217 D04 Section 4.3, SAR tests are required for the back surface and edges of the tablet with the tablet touching the phantom. The SARExclusion Threshold in FCC KDB 447498 D01v05r02 was applied to determine SAR test exclusion for adjacentedge configurations. SAR tests were required for bottom and secondary landscape for the WLAN antenna and bottom and primary landscape for the BT Antenna.

WLAN/BT Notes:

1. Justification for reduced test configurations for Wi-Fi channels per KDB Publication 248227 D01v02 and April 2010 FCC/TCB Meeting Notes for 2.4 GHz Wi-Fi:Highest average RF output power channel for the lowest data rate was selected for SAR evaluation in 802.11b. Other IEEE 802.11 modes (including 802.11g/n) were not investigated since the average output powers over all channels and data rates were not more than 0.25 dB higher than the tested channelin the lowest data rate of IEEE 802.11b mode.
2. When the maximum extrapolated peak SAR of the zoom scan for the maximum output channel is <1.6 W/kg and the reported 1g averaged SAR is <0.8 W/kg, SAR testing on other default channels is not required

Appendix A. SAR System Verification Data

Test Date: 20/03/2017

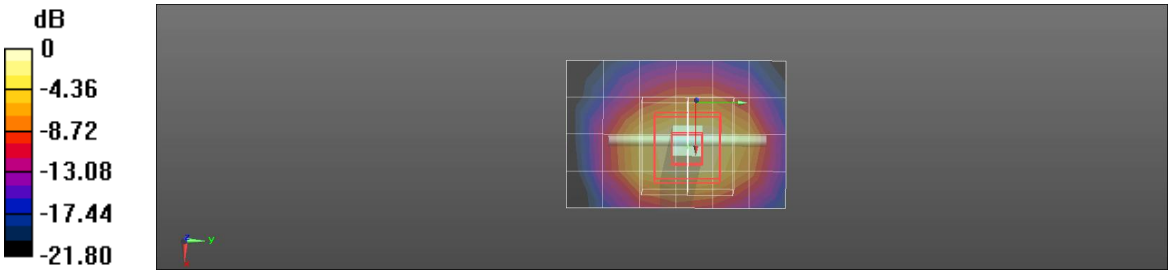
Test Laboratory: Cerpass Lab
Dipole Calibration for Body Tissue Pin=250mW, dist=10mm, f=2450 MHz
DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2
Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.92 S/m; εr = 52.48; ρ = 1000 kg/m3

Phantom section: Flat Section; Meas. Ambient Temp (celsius) -22℃; Input power-250mW

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

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/SystemPerformanceCheck-D2450 Body/Area Scan (5x7x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 11.4 W/kg
Configuration/SystemPerformanceCheck-D2450 Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 78.36 V/m; Power Drift = 0.01 dB, Peak SAR (extrapolated) = 25.4 W/kg
SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.71 W/kg Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

Test Date: 20/03/2017

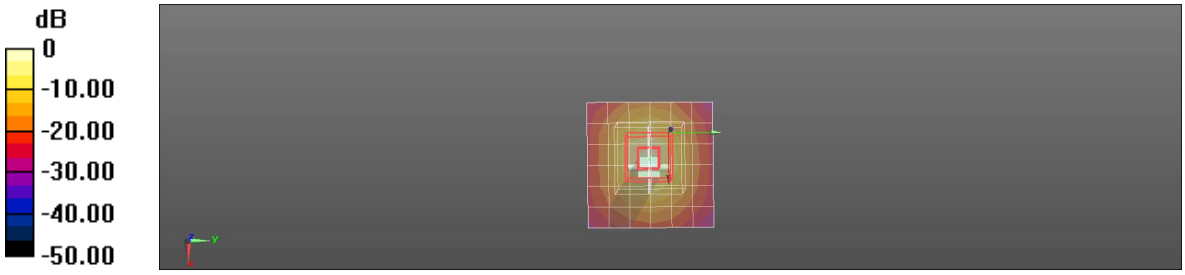
Test Laboratory: Cerpass Lab
Dipole Calibration for Body Tissue Pin=100mW, dist=10mm, f=5200 MHz
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2
Communication System: CW; Frequency: 5200 MHz
Medium parameters used: f = 5200 MHz; σ = 5.41 S/m; εr = 49.02; ρ = 1000 kg/m3

Phantom section: Flat Section; Meas. Ambient Temp (celsius) -22℃; Input power-100mW

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

- Probe: EX3DV4 - SN3927; ConvF(4.6, 4.6, 4.6); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 14.1 W/kg
Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan (9x9x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm, Reference Value = 39.26 V/m; Power Drift = 0.13 Db, Peak SAR (extrapolated) = 30.5 W/kg
SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.13 W/kg Maximum value of SAR (measured) = 15.9 W/kg



0 dB = 15.9 W/kg = 12.01 dBW/kg

Test Date: 21/03/2017

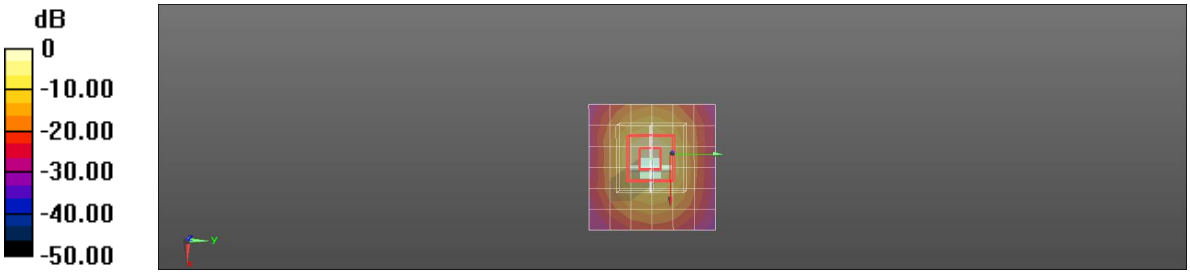
Test Laboratory: Cerpass Lab
Dipole Calibration for Body Tissue Pin=100mW, dist=10mm, f=5800 MHz
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2
Communication System: CW; Frequency: 5800 MHz
Medium parameters used: f = 5800 MHz; σ = 5.92 S/m; εr = 48.22; ρ = 1000 kg/m3

Phantom section: Flat Section; Meas. Ambient Temp (celsius) -22℃; Input power-100mW

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

- Probe: EX3DV4 - SN3927; ConvF(3.8, 3.8, 3.8); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 13.0 W/kg
Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan (9x9x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm, Reference Value = 35.26 V/m; Power Drift = 0.18 dB, Peak SAR (extrapolated) = 30.8 W/kg
SAR(1 g) = 7.62 W/kg; SAR(10 g) = 2.13 W/kg Maximum value of SAR (measured) = 15.9 W/kg



0 dB = 15.9 W/kg = 12.01 dBW/kg

Appendix B. SAR Measurement Data

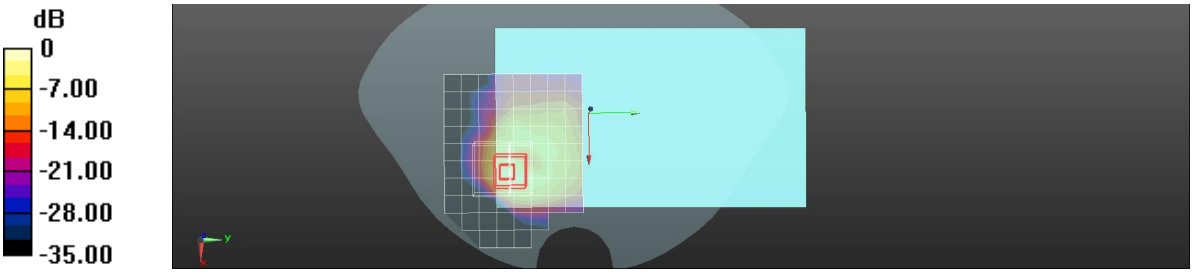
Test Date: 20/03/2017

Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11b 2412MHz Back of MID
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2412 MHz
Medium parameters used: f = 2412 MHz; σ = 1.88 S/m; εr = 52.56; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2412MHz Back of tablet/Area Scan (11x9x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 0.815 W/kg

Configuration/802.11b 2412MHz Back of tablet/Zoom Scan (8x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 5.746 V/m; Power Drift = 0.13 dB, Peak SAR (extrapolated) = 2.40 W/kg
SAR(1 g) = 0.882 W/kg; SAR(10 g) = 0.327 W/kg, Maximum value of SAR (measured) = 1.46 W/kg



0 dB = 1.46 W/kg = 1.64 dBW/kg

Test Date: 20/03/2017

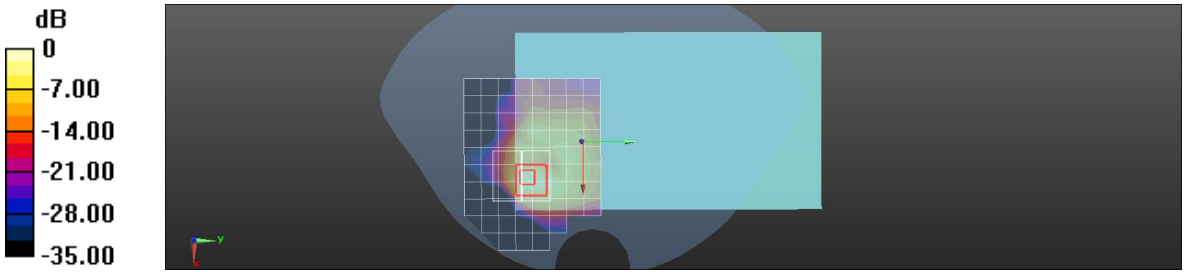
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11b 2437MHz Back of MID
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2437 MHz
Medium parameters used: f = 2437 MHz; σ = 1.91 S/m; εr = 52.51; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2437MHz Back of tablet/Area Scan (11x9x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 1.02 W/kg

Configuration/802.11b 2437MHz Back of tablet/Zoom Scan (8x9x16)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 6.369 V/m; Power Drift = -0.01 dB, Peak SAR (extrapolated) = 2.54 W/kg

SAR(1 g) = 0.947 W/kg; SAR(10 g) = 0.354 W/kg, Maximum value of SAR (measured) = 1.57 W/kg



0 dB = 1.57 W/kg = 1.96 dBW/kg

Test Date: 20/03/2017

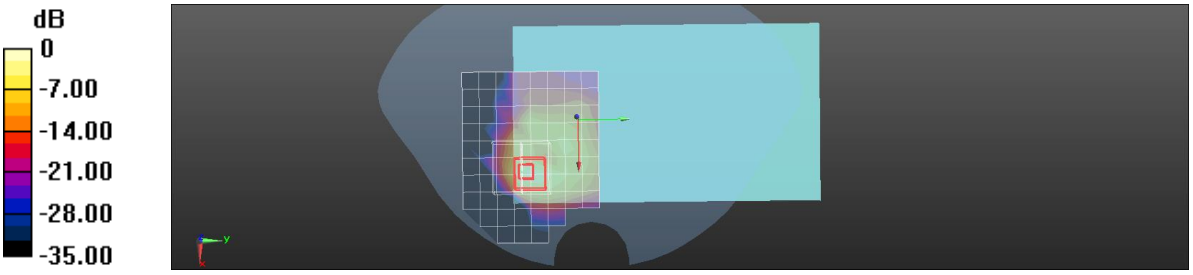
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11b 2462MHz Back of MID
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2462 MHz
Medium parameters used: f = 2462 MHz; σ = 1.94 S/m; εr = 52.47; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2462MHz Back of tablet/Area Scan (11x9x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 1.35 W/kg

Configuration/802.11b 2462MHz Back of tablet/Zoom Scan (8x9x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 6.811 V/m; Power Drift = 0.06 dB, Peak SAR (extrapolated) = 3.13 W/kg

SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.419 W/kg, Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.98 W/kg = 2.97 dBW/kg

Test Date: 20/03/2017

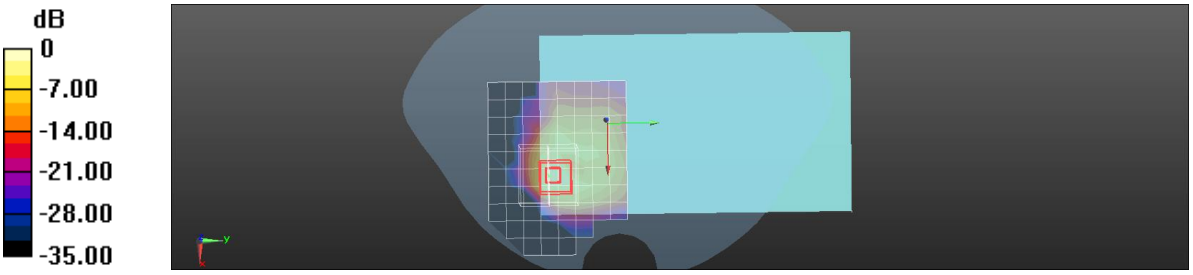
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11b 2462MHz Back of MID (Repeated SAR)
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2462 MHz
Medium parameters used: f = 2462 MHz; σ = 1.94 S/m; εr = 52.47; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2462MHz Back of tablet/Area Scan (11x9x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 1.19 W/kg

Configuration/802.11b 2462MHz Back of tablet/Zoom Scan (9x9x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 7.280 V/m; Power Drift = 0.05 dB, Peak SAR (extrapolated) = 3.20 W/kg

SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.426 W/kg, Maximum value of SAR (measured) = 2.06 W/kg



0 dB = 2.06 W/kg = 3.14 dBW/kg

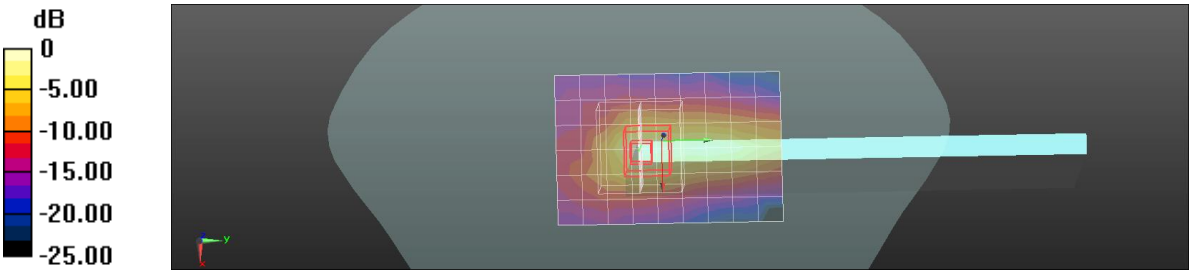
Test Date: 20/03/2017

Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11b 2462MHz Secondary Landscape of MID
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2462 MHz
Medium parameters used: f = 2462 MHz; σ = 1.94 S/m; εr = 52.47; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2462MHz Rightside of tablet/Area Scan (7x10x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 0.313 W/kg

Configuration/802.11b 2462MHz Rightside of tablet/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 10.85 V/m; Power Drift = 0.11 dB, Peak SAR (extrapolated) = 0.468 W/kg
SAR(1 g) = 0.218 W/kg; SAR(10 g) = 0.098 W/kg, Maximum value of SAR (measured) = 0.336 W/kg



0 dB = 0.336 W/kg = -4.74 dBW/kg

Test Date: 20/03/2017

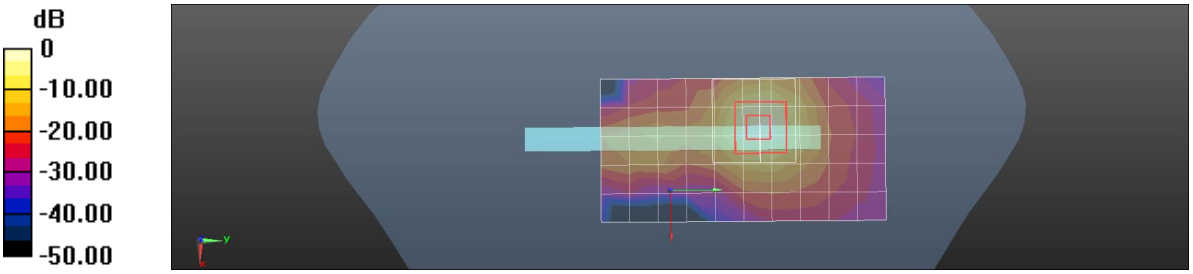
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11b 2462MHz Top of MID
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2462 MHz
Medium parameters used: f = 2462 MHz; σ = 1.94 S/m; εr = 52.47; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2462MHz Top of tablet/Area Scan (6x11x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 0.993 W/kg

Configuration/802.11b 2462MHz Top of tablet/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 4.476 V/m; Power Drift = 0.10 dB, Peak SAR (extrapolated) = 1.95 W/kg

SAR(1 g) = 0.841 W/kg; SAR(10 g) = 0.323 W/kg, Maximum value of SAR (measured) = 1.39 W/kg



0 dB = 1.39 W/kg = 1.43 dBW/kg

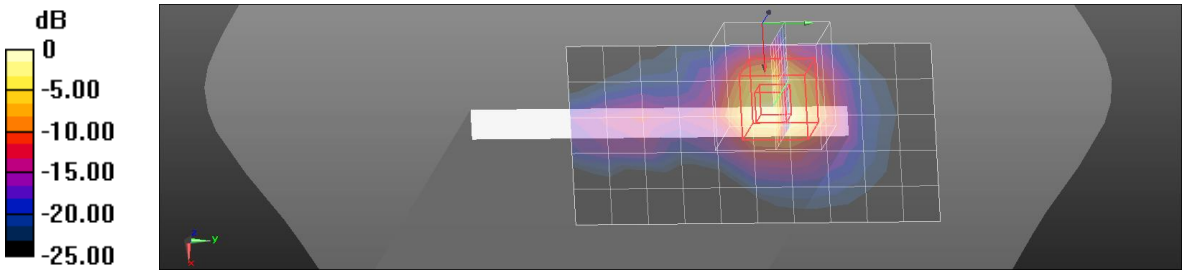
Test Date: 20/03/2017

Test Laboratory: Cerpass Lab
802.11b 2437MHz Top of Tablet
DUT: Tablet; Type: DL8006; Serial: Not Specified
Communication System: MID, 2.4GHz Wi-Fi; Frequency: 2437 MHz
Medium parameters used: f = 2437 MHz; σ = 1.91 S/m; εr = 52.51; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.68, 7.68, 7.68); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11b 2437MHz Top of Tablet/Area Scan (6x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.788 W/kg

Configuration/802.11b 2437MHz Top of Tablet/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 4.258 V/m; Power Drift = 0.09 dB, Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.668 W/kg; SAR(10 g) = 0.257 W/kg, Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 1.11 W/kg = 0.45 dBW/kg

Test Date: 20/03/2017

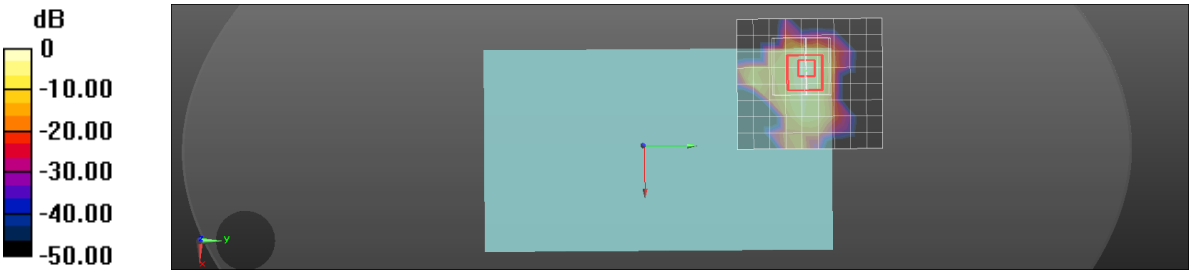
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5180MHz Back of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5180 MHz
Medium parameters used: f = 5180 MHz; σ = 5.39 S/m; εr = 49.04; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.41, 4.41, 4.41); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5180MHz Back of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 1.15 W/kg

Configuration/802.11a 5180MHz Back of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.00 dB, Peak SAR (extrapolated) = 2.52 W/kg

SAR(1 g) = 0.607 W/kg; SAR(10 g) = 0.150 W/kg, Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 2.44 W/kg = 3.87 dBW/kg

Test Date: 20/03/2017

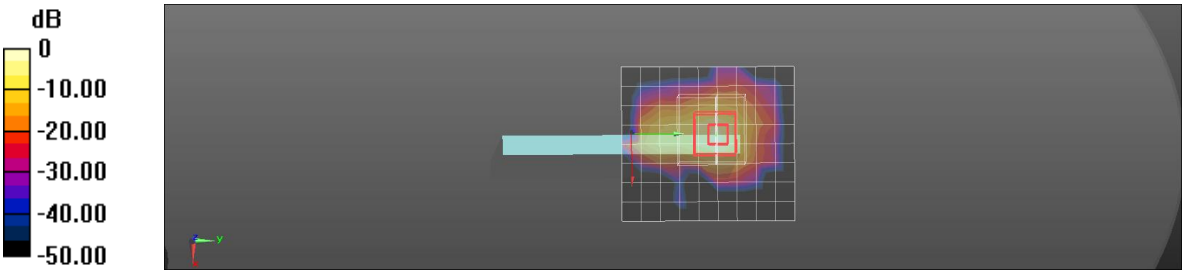
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5180MHz Top of MID (Repeated SAR)
Communication System: MID 5GHz Wi-Fi; Frequency: 5180 MHz
Medium parameters used: f = 5180 MHz; σ = 5.39 S/m; εr = 49.04; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.41, 4.41, 4.41); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5180MHz Top of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 1.46 W/kg

Configuration/802.11a 5180MHz Top of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.01 dB, Peak SAR (extrapolated) = 4.52 W/kg

SAR(1 g) = 0.956 W/kg; SAR(10 g) = 0.236 W/kg, Maximum value of SAR (measured) = 2.19 W/kg



0 dB = 2.19 W/kg = 3.40 dBW/kg

Test Date: 20/03/2017

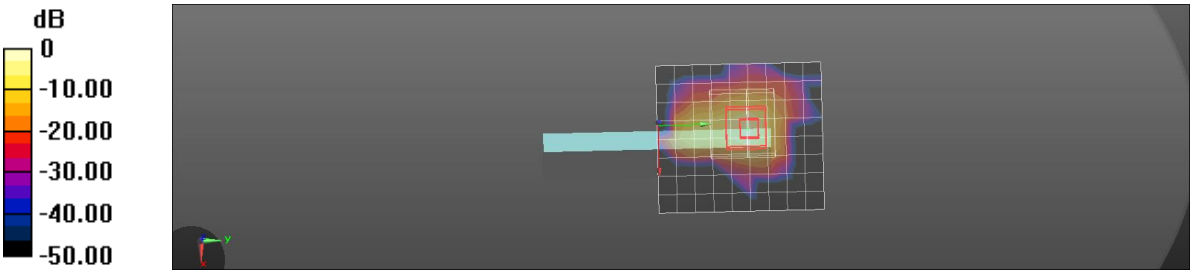
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5220MHz Top of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5220 MHz
Medium parameters used: f = 5220MHz; σ = 5.43 S/m; εr = 49.01; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.41, 4.41, 4.41); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5220MHz Top of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 1.62 W/kg

Configuration/802.11a 5220MHz Top of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.11 dB, Peak SAR (extrapolated) = 4.94 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.262 W/kg, Maximum value of SAR (measured) = 2.40 W/kg



0 dB = 2.40 W/kg = 3.80 dBW/kg

Test Date: 20/03/2017

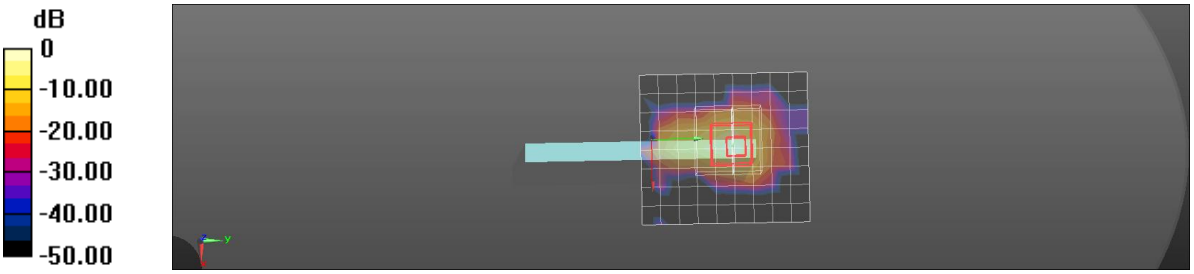
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5240MHz Top of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5240 MHz
Medium parameters used: f = 5240 MHz; σ = 5.44 S/m; εr = 48.98; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.41, 4.41, 4.41); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5240MHz Top of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 1.74 W/kg

Configuration/802.11a 5240MHz Top of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.13 dB, Peak SAR (extrapolated) = 3.93 W/kg

SAR(1 g) = 0.843 W/kg; SAR(10 g) = 0.206 W/kg, Maximum value of SAR (measured) = 1.86 W/kg



0 dB = 1.86 W/kg = 2.70 dBW/kg

Test Date: 21/03/2017

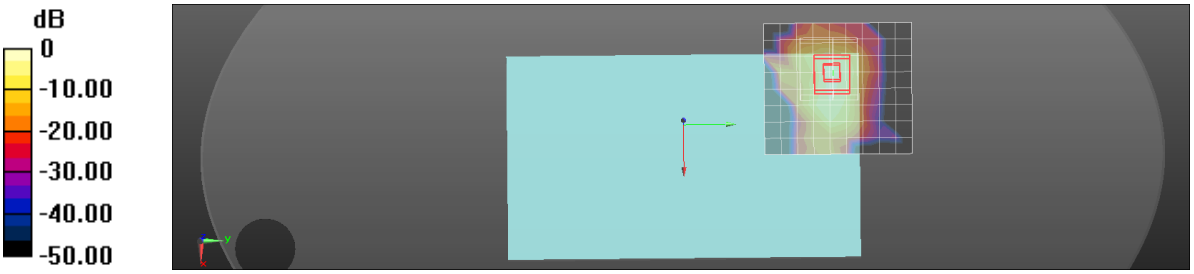
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5785MHz Back of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5785 MHz
Medium parameters used: f = 5785 MHz; σ = 5.91 S/m; εr = 48.24; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(3.82, 3.82, 3.82); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5785MHz Back of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 1.60 W/kg

Configuration/802.11a 5785MHz Back of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.00 dB, Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 0.768 W/kg; SAR(10 g) = 0.225 W/kg, Maximum value of SAR (measured) = 1.76 W/kg



0 dB = 1.76 W/kg = 2.46 dBW/kg

Test Date: 21/03/2017

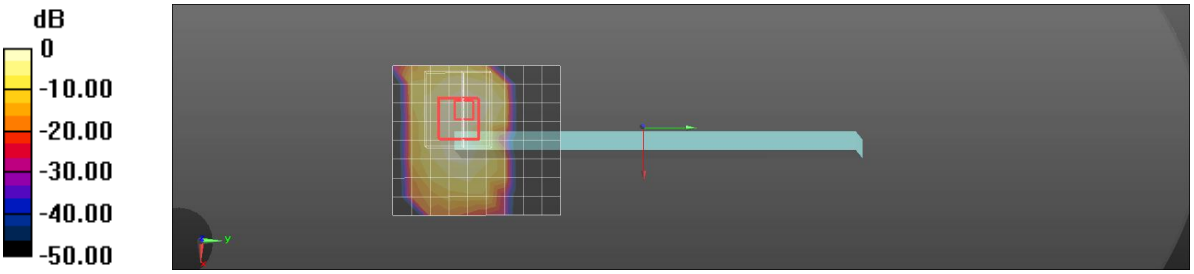
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5785MHz Secondary Landscape of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5785 MHz
Medium parameters used: f = 5785 MHz; σ = 5.91 S/m; εr = 48.24; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(3.82, 3.82, 3.82); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5785MHz Rightside of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 0.110 W/kg

Configuration/802.11a 5785MHz Rightside of tablet/Zoom Scan (9x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.00 dB, Peak SAR (extrapolated) = 0.310 W/kg

SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.020 W/kg, Maximum value of SAR (measured) = 0.121 W/kg



0 dB = 0.121 W/kg = -9.17 dBW/kg

Test Date: 21/03/2017

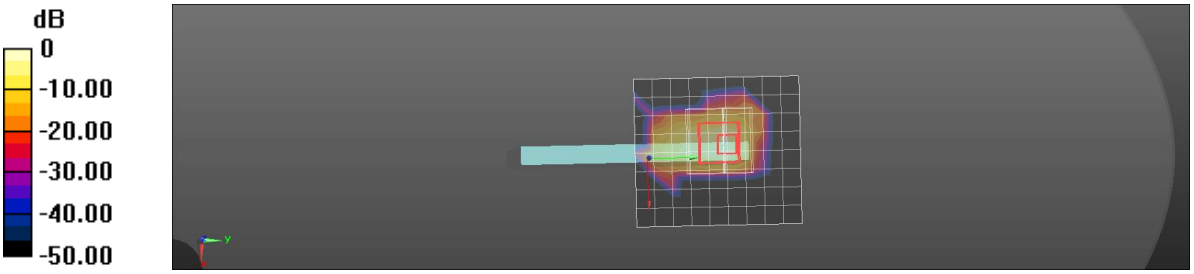
Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5785MHz Top of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5785 MHz
Medium parameters used: f = 5785 MHz; σ = 5.91 S/m; εr = 48.24; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(3.82, 3.82, 3.82); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5785MHz Top of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 0.984 W/kg

Configuration/802.11a 5785MHz Top of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.00 dB, Peak SAR (extrapolated) = 2.57 W/kg

SAR(1 g) = 0.593 W/kg; SAR(10 g) = 0.159 W/kg, Maximum value of SAR (measured) = 1.38 W/kg



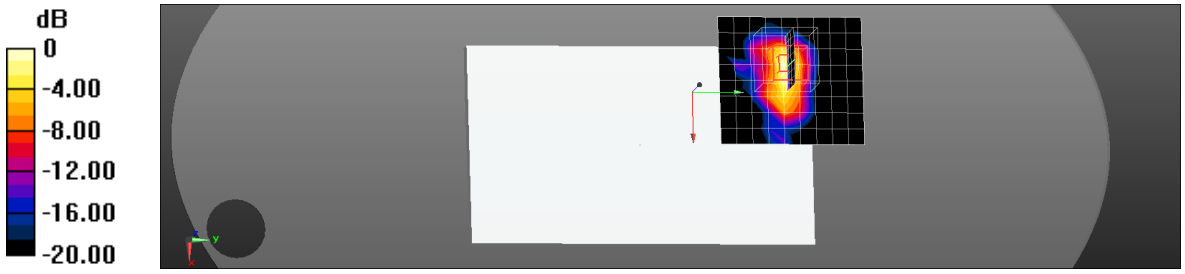
0 dB = 1.38 W/kg = 1.40 dBW/kg

Test Date: 21/03/2017

Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5785MHz Top of MID
Communication System: MID 5GHz Wi-Fi; Frequency: 5745 MHz
Medium parameters used: f = 5745 MHz; σ = 5.87 S/m; εr = 48.27; ρ = 1000 kg/m3
Phantom section: Flat Section
DASY5 Configuration:

- Probe: EX3DV4 - SN3927; ConvF(3.82, 3.82, 3.82); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/802.11a 5745MHz Back of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.45 W/kg
Configuration/802.11a 5745MHz Back of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.00 dB, Peak SAR (extrapolated) = 3.25 W/kg
SAR(1 g) = 0.696 W/kg; SAR(10 g) = 0.204 W/kg Maximum value of SAR (measured) = 1.60 W/kg



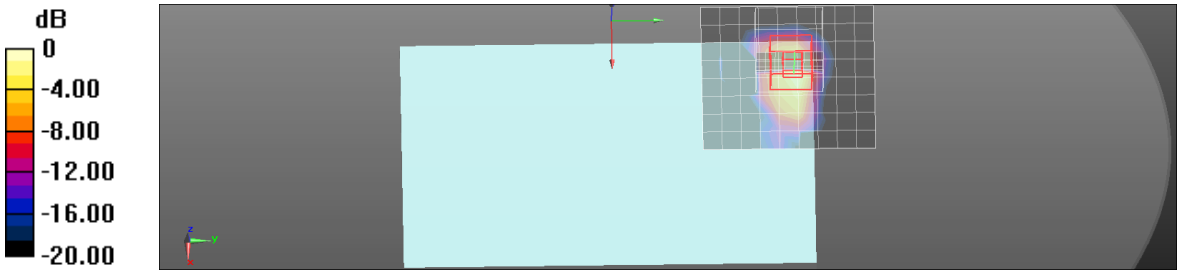
0 dB = 1.60 W/kg = 2.04 dBW/kg

Test Date: 21/03/2017

Test Laboratory: Cerpass Lab
DUT: MID; Type: DL8006; 802.11a 5785MHz Back of MID*
Communication System: MID 5GHz Wi-Fi; Frequency: 5785 MHz
Medium parameters used: f =σ = 5.91 S/m; εr = 48.24; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(3.82, 3.82, 3.82); Calibrated: 2016/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2016/5/23
- Phantom: ELI v5.0 (20deg probe tilt); Type: QDOVA002AA
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11a 5785MHz Back of tablet/Area Scan (9x10x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 1.42 W/kg
Configuration/802.11a 5785MHz Back of tablet/Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0 V/m; Power Drift = 0.00 dB, Peak SAR (extrapolated) = 3.52 W/kg
SAR(1 g) = 0.770 W/kg; SAR(10 g) = 0.225 W/kg, Maximum value of SAR (measured) = 1.78 W/kg



0 dB = 1.78 W/kg = 2.50 dBW/kg

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