FCC SAR Report

Report No.	:	**SESF1705161**
Client/Manufacturer	:	**IFLYTEK CO.,LTD**
Address	:	**West Wangjiang Rd.666,Hefei,Anhui, China**
Product	:	**iflytek translating machine**
Model	:	**Easy trans600**
FCC ID	:	**2AMI5-EASYTRANS-600**
Standards	:	**FCC 47 CFR Part 2 (2.1093) / IEEE C95.1:2005 / IEEE 1528-2013 / KDB 865664 D01 v01r04 / KDB 447498 D01 v06 / KDB 248227 D01 v02r02 / KDB 941225 D01v03r01**
Test Date	:	**July 01th, 2016~ July 12th, 2016**

Statement of Compliance:

The SAR values measured for the test sample are below the maximum recommended level of 1.6W/kg averaged over any 1g tissue according to FCC Knowledge Data Base/ FCC 47CFR Part 2 (2.1093) / IEEE Std.1528-2013.

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

Prepared By: _____
Leo Chen

Approved By: _____
Miro Chueh

CERPASS Technology (SuZhou) Co., Ltd.
TAF LAB Code: 2877
NVLAP LAB Code: 200814-0

Release Version

Report No.	Issue Date	Description
SESF1705161	2017-07-06	Initial release

Contents

1. Summary of Maximum SAR Value

Equipment Class	Highest Reported SAR_{1-g}(W/kg)
WCDMA Band II	0.62
WCDMA Band V	0.57
CDMA2000 Cellular	0.54
2.4G WIFI	0.17
Highest Simultaneous SAR	Highest Simultaneous SAR_{1-g}(W/kg)
WCDMA+2.4G WIFI	0.79
CDMA2000 Cellular+2.4G WIFI	0.71

2. Description of Equipment under Test

Product Name	iflytek translating machine
Model No.	Easy trans600
Device Category	Portable
Hotspot function	Not support
RF Exposure Environment	Uncontrolled
WCDMA	
Support Band	WCDMA Band II/WCDMA Band V
Uplink	WCDMA Band II: 1850~1910MHz WCDMA Band V: 824~849MHz
Downlink	WCDMA Band II: 1930~1990MHz WCDMA Band V: 869~894MHz
Release Version	Rel-6
Type of modulation	QPSK
Antenna Gain	WCDMA Band II: -3.96dBi WCDMA Band V: -5.24dBi
Antenna Type	Monopole
CDMA2000 Cellular (1xEV-DO)	
Support Band	BC0
Uplink	BC0: 824~849MHz
Downlink	BC0: 869~894MHz
Release Version	Rel-A
Type of Modulation	GMSK, QPSK
Peak Antenna Gain	BC0: -5.24dBi
Antenna Type	IFA

Wi-Fi	
Modulation Techniques:	**802.11b:** CCK, DQPSK, DBPSK **802.11a/g:** 64QAM, 16QAM, QPSK, BPSK **802.11n:** BPSK, QPSK, 16QAM, 64QAM
Data Rate	802.11b: 11, 5.5, 2, 1 Mbps 802.11a/g: 54, 48, 36, 24, 18, 12, 9, 6 Mbps 802.11n: MCS 0 to 15 for HT20MHz, MCS 0 to 15 for HT40MHz 802.11ac: MCS 0 to 8 for HT20MHz, MCS 0 to 9 for HT40MHz, MCS 0 to 9 for HT80MHz
Wi-Fi Frequency	**For 15.247:** 2.4GHz: 2.412 ~ 2.462GHz
	For 15.407: 802.11a: 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.5~5.72GHz, 5.745 ~ 5.825GHz
Modulation Technology	**For 15.247(2.4GHz):** 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40)
	For 15.247(5GHz): 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT80)
	For 15.407: 802.11a, 802.11n (HT20), 802.11n (HT40), 802.11ac (VHT80)
Antenna Gain	-3.76dBi for 2.40~2.50GHz band
Antenna Type	Monopole
Bluetooth	
Bluetooth Frequency	2402~2480MHz
Bluetooth Version	V4.0+ HS, LE
Type of modulation	FHSS
Data Rate	1Mbps(GFSK), 2Mbps(Pi/4 DQPSK), 3Mbps (8DPSK)
Antenna Gain	-3.76dBi
Antenna Type	Monopole

3. General Information

Our Lab,

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

4. Basic restrictions and Standards

4.1. Test Standards

1. FCC 47 CFR Part 2 (2.1093)
2. IEEE C95.1:2005
3. IEEE Std.1528-2013
4. FCC KDB Publication 447498 D01 General RF Exposure Guidance v06
5. FCC KDB Publication 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
6. FCC KDB Publication 941225 D01 3G SAR Procedures v03r01
7. FCC KDB Publication 248227 D01 802 11 Wi-Fi SAR v02r02

4.2. 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

4.3. 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.

5. DASY5 Measurement System

DASY5 Measurement System

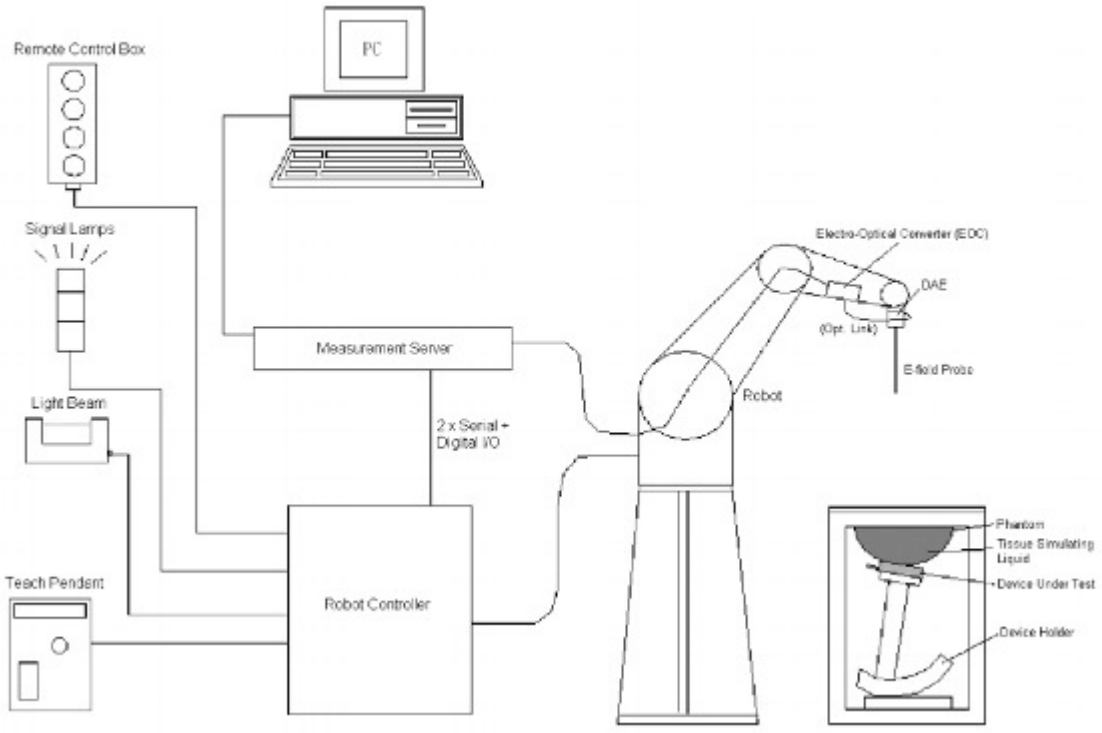


Figure 2.1 SPEAG DASY5 System Configurations

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

5.1. 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.

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

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

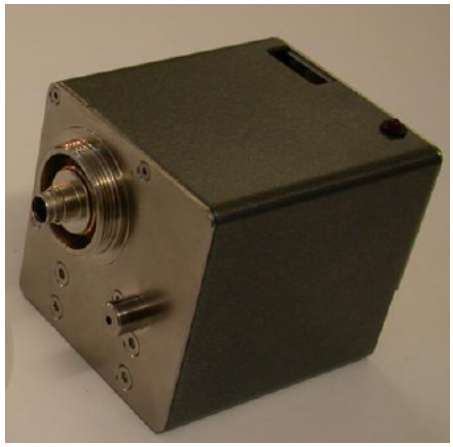
$$f_3(x,y,z) = A\frac{a^2}{\frac{a^2}{4}+x'^2+y'^2}\left(e^{-\frac{2z}{a}}+\frac{a^2}{2(a+2z)^2}\right)$$

5.2. 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	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%.	

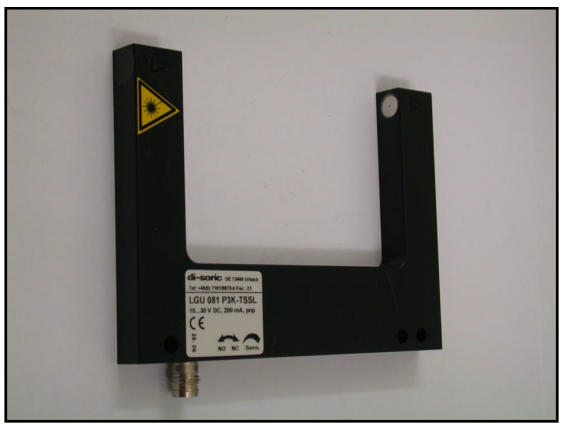
5.3. Data Acquisition Electronics (DAE)

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.	

5.4. 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	

5.5. 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.	

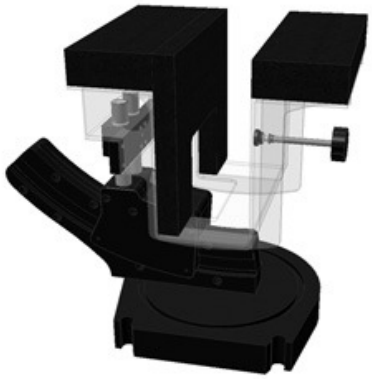
5.6. Measurement Server

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.	

5.7. 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.	

5.8. 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.	

5.9. Test Equipment List

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	D850V2	1008	2017.05.22	2018.05.21
Dipole Validation Kits	Speag	D1900V2	5d174	2017.05.22	2018.05.21
Dipole Validation Kits	Speag	D2450V2	914	2017.05.23	2018.05.22
Twin SAM Phantom	Speag	V5.0	1211	N/A	N/A
Laptop Holder	Speag	SM LH1 001CD	N/A	N/A	N/A
Data Acquisition Electronic	Speag	DAE4	1379	2017.05.23	2018.05.22
E-Field Probe	Speag	EX3DV4	3927	2017.05.25	2018.05.24
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	2017.03.22	2018.03.21
Vector Network	Agilent	E5071C	MY4631693	2017.01.15	2018.01.14
Signal Generator	R&S	SML	103287	2017.03.09	2018.03.08
Power Meter	R&S	BLWA0830-160/100/40D	76659	2017.03.26	2018.03.25
AUG Power Sensor	R&S	NRP-Z91	100384	2017.03.09	2018.03.08

6. The SAR Measurement Procedure

6.1. System Performance Check

6.1.1 Purpose

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

6.1.2 Tissue Dielectric Parameters for Head and Body Phantoms

Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
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	**40.08**	**1.37**	**53.3**	**1.52**
2450	**40.0**	**1.40**	**52.7**	**1.95**
3000	39.2	1.80	52.0	2.73
5200	38.5	2.40	49.0	5.30
5300	35.99	4.66	48.88	5.42
5600	35.64	4.96	48.5	5.77
5800	35.59	5.01	48.2	6.00

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

6.1.3 Tissue Simulating Liquid Information

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

Item Name	Test Frequency (MHz)	Main Ingredients
Head Tissue Simulating Liquid (HSL900V2)	750-950	Water, Sugar
Head Tissue Simulating Liquid (HSL1550-1950V3)	1550-1950	Water, Tween
Head Tissue Simulating Liquid (HBBL1900-3800V3)	1900-3800	Water, Tween
Head Tissue Simulating Liquid (HBBL3500-5800V5)	3500-5800	Water, Oil
Body Tissue Simulating Liquid (MSL900V2)	750-950	Water, Sugar
Body Tissue Simulating Liquid (MBBL1550-1950V3)	1550-1950	Water, Tween
Body Tissue Simulating Liquid (MBBL1900-3800V3)	1900-3800	Water, Tween
Body Tissue Simulating Liquid (MBBL3500-5800V5)	3500-5800	Water, Oil

6.1.4 Tissue Calibration Result

■ The dielectric parameters of the liquids were verified prior to the SAR evaluation using DASY5 Diel -ectric Assessment Kit and Agilent Vector Network Analyzer E5071C.

Tissue parameter for head							
Fre. <MHz>	Permittivity	Conductivity	Target Permittivity	Target Conductivity	Delta Permittivity%	Delta Conductivity	Tissue Temperature℃
12-07-2017							
850	41.18	0.918	41.50	0.92	-0.77	-0.22	21.0
825.4	41.66	0.914	41.50	0.92	0.39	-0.65	21.0
848.31	41.54	0.915	41.50	0.92	0.10	-0.54	21.0
12-07-2017							
1900	40.41	1.45	40.00	1.40	1.02	3.57	21.0
1907.6	40.65	1.43	40.00	1.40	1.63	2.14	21.0
12-07-2017							
2450	39.62	1.84	39.20	1.80	1.07	2.22	21.0
2437	39.74	1.83	39.74	1.83	0.00	0.00	21.0
Tissue parameter for body							
Fre. <MHz>	Permittivity	Conductivity	Target Permittivity	Target Conductivity	Delta Permittivity%	Delta Conductivity %	Tissue Temperature℃
01-07-2017							
850	55.14	0.98	55.15	0.99	-0.02	-0.40	21.0
824.70	55.24	0.96	55.20	0.97	0.07	-0.52	21.0
836.52	55.20	0.97	55.18	0.98	0.04	-0.20	21.0
848.31	55.18	0.98	55.16	0.98	0.04	0.00	21.0
826.4	55.22	0.96	55.20	0.97	0.04	-0.62	21.0
836.4	55.19	0.98	55.18	0.98	0.02	-0.20	21.0
846.6	55.17	0.98	55.16	0.98	0.02	0.00	21.0
03-07-2017							
1900	53.26	1.51	53.30	1.52	-0.08	-0.46	21.0
1852.4	53.34	1.49	53.35	1.49	-0.02	0.00	21.0
1880	53.31	1.50	53.33	1.51	-0.04	-0.66	21.0
1907.6	53.21	1.53	53.29	1.53	-0.15	0.00	21.0
04-07-2017							
2450	52.46	1.94	52.70	1.95	-0.46	-0.51	21.0
2412	52.54	1.91	52.75	1.91	-0.40	0.00	21.0
2437	52.51	1.92	52.73	1.93	-0.42	-0.52	21.0
2462	52.41	1.96	52.69	1.96	-0.53	0.00	21.0

Note: 1. The Delta Permittivity% and Delta Conductivity% should be both within ±5% limit of target values.

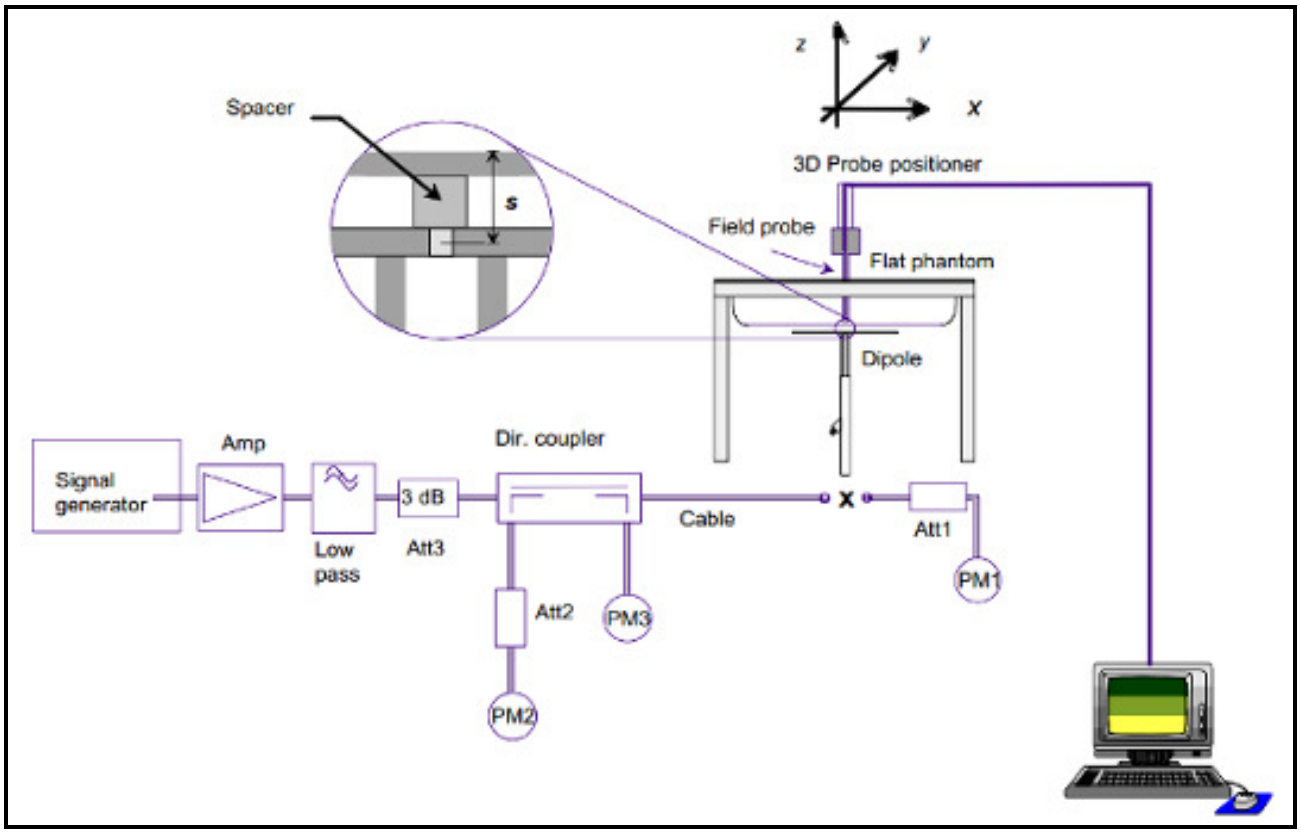
2. Refer to KDB 865664 D01 v01r04, The depth of body tissue-equivalent liquid in a phantom must be ≥ 15.0 cm with ≤ ± 0.5 cm variation for SAR measurements ≤ 3 GHz and ≥ 10.0 cm with ≤ ± 0.5 cm variation for measurements > 3 GHz.

6.1.5 System Performance Check Procedure

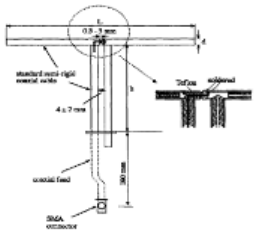
The DASY5 installation includes predefined files with recommended procedures for measurements and the system performance check. They are read-only document files and destined as fully defined but unmeasured masks, so the finished system performance check must be saved under a different name. The system 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.

6.1.6 System Performance Check Setup



6.1.7 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.	

6.1.8 Result of System Performance Check: Valid Result

System Performance Check at 850MHz, 1900MHz, 2450MHz for Head.

Verification Dipole: D850V2-SN 1008

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
850MHz	Reference result ± 10% window	9.80 (8.82~10.78)	6.30 (5.67~6.93)	N/A
	12-07-2017	9.44	6.16	21.0
Verification Dipole: D1900V2-SN 5d174				
1900MHz	Reference result ± 10% window	41.1 (36.99~45.21)	21.6 (19.44~23.76)	N/A
	12-07-2017	41.2	21.08	21.0
Validation Kit: D2450V2-SN: 914				
2450MHz	Reference result ± 10% window	52.1 (46.89~57.31)	24.3 (21.87~26.73)	N/A
	12-07-2017	51.6	23.48	21.0

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

System Performance Check at 850MHz, 1900MHz and 2450MHz for Body.

Verification Dipole: D850V2-SN 1008

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
850 MHz	Reference result ± 10% window	9.96 8.964 to 10.956	6.52 5.868 to 7.172	21.0
	01-07-2017	9.92	6.36	

Verification Dipole: D1900V2-SN 5d174

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
1900MHz	Reference result ± 10% window	40.7 36.63 to 44.77	21.7 19.53 to 23.87	21.0
	03-07-2017	40.8	21.52	

Verification Dipole: D2450V2-SN 914

Frequency [MHz]	Description	SAR [w/kg] 1g	SAR [w/kg] 10g	Tissue Temp. [°C]
2450 MHz	Reference result ± 10% window	49.8 44.82 to 54.78	23.3 20.97 to 25.63	21.0
	04-07-2017	49.6	23.0	

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

6.2. Test Requirements

6.2.1 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·$\Delta z_{Zoom}(n-1)$	
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.

6.2.2 Test Channel

For 3GPP/3GPP2

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

WIFI

Per KDB248227 D01 v02r01, channel selection procedures below apply to both the initial test configu -ration and subsequent test configureation(s):

1) 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n.

2) The largest channel bandwidth configuration is selected among the multiple configurations in a freq -uency band with the same specified maximum output power.

3) If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is sele -cted.

4) If multiple configurations have the same specified maximum output power, largest channel band -width and lowest order modulation, the lowest data rate configuration among these configurations is seleced.

5) The same procedures also apply to subsequent highest output power channel(s) selection.

a> The channel closest to mid-band frequency is selected for SAR measurement.

b> For channels with equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement.

7. Wi-Fi/Bluetooth SAR Exclusion and Results

7.1. Maximum Tune-up Conducted Average Power

WCDMA/HSDPA/HSUPA/HSPA+

Mode	3GPP Subtest	Band II (1900MHz) Channel			Band V (850MHz) Channel			MPR
		Conducted Power (dBm)						
		9262	9400	9538	4132	4183	4233	
WCDMA R99	1	22.89	22.94	22.88	23.53	23.44	23.44	N/A
Rel5 HSDPA	1	22.57	22.63	22.59	23.38	23.34	23.35	0
	2	22.32	22.42	22.41	23.32	23.31	23.29	0
	3	22.14	22.25	22.23	22.79	22.73	22.71	0.5
	4	22.04	22.13	22.08	22.75	22.71	22.70	0.5
Rel6 HSUPA	1	21.84	21.95	21.91	22.67	22.65	22.63	0.0
	2	20.04	20.15	20.06	20.64	20.63	20.61	2.0
	3	21.48	21.58	21.51	21.67	21.62	21.59	1.0
	4	20.06	20.17	20.09	20.69	20.63	20.58	2.0
	5	21.72	21.83	21.76	22.64	22.61	22.58	0.0
Rel7 HSPA+	1	21.85	21.98	21.93	21.99	21.93	21.89	N/A

Band II	Channel	Frequency (MHz)	Max. Power (dBm)	Avg. Burst Power (dBm)
WCDMA R99	9262	1852.4	23.0	22.89
	9400	1880	23.0	22.94
	9538	1907.6	23.0	22.88
Rel5 HSDPA	9262	1852.4	23.0	22.57
	9400	1880	23.0	22.63
	9538	1907.6	23.0	22.59
Rel6 HSUPA	9262	1852.4	22.0	21.84
	9400	1880	22.0	21.95
	9538	1907.6	22.0	21.91
Rel7 HSPA+	9262	1852.4	22.0	21.85
	9400	1880	22.0	21.98
	9538	1907.6	22.0	21.93

Band V	Channel	Frequency (MHz)	Max. Power (dBm)	Avg. Burst Power(dBm)
WCDMA R99	4132	826.4	23.8	23.53
	4183	836.6	23.8	23.44
	4233	846.6	23.8	23.44
Rel5 HSDPA	4132	826.4	23.5	23.38
	4183	836.6	23.5	23.34
	4233	846.6	23.5	23.35
Rel6 HSUPA	4132	826.4	23.0	22.67
	4183	836.6	23.0	22.65
	4233	846.6	23.0	22.63
Rel7 HSPA+	9262	1852.4	22.0	21.99
	9400	1880	22.0	21.93
	9538	1907.6	22.0	21.89

CDMA2000

Mode	Test Case			BC0 (850MHz) Channel		
	Num.	FWD RC/TAP	REV RC/TAP	Conducted Power (dBm)		
				1013	384	777
1x	1	RC1	RC1 (SO2)	23.07	23.11	23.15
	2	RC1	RC1 (SO55)	23.12	23.15	23.23
	3	RC2	RC2 (SO9)	23.13	23.18	23.25
	4	RC2	RC2 (SO55)	23.05	23.11	23.17
	5	RC3	RC3 (SO55)	23.09	23.12	23.18
	6	RC3	RC3 (SO32)	23.08	23.13	23.20
1x EV-DO Rel0	7a	FTAP rate = 307kbps (2 slot, QPSK)	RTAP rate = 9.6kbps	22.88	22.93	22.96
	7b		RTAP rate = 19.2kbps	22.75	22.81	22.93
	7c		RTAP rate = 38.4kbps	22.73	22.82	22.89
	7d		RTAP rate = 76.8kbps	22.77	22.83	22.88
	7e		RTAP rate = 153.6kbps	22.81	22.85	22.92
1x EV-DO Rev A	8a	FETAP rate = 307kbps (2 slot, ACK channel is transmitted at all the slots)	RETAP – payload size = 128	22.47	22.69	22.87
	8b		RETAP – payload size = 256	22.48	22.67	22.86
	8c		RETAP – payload size = 512	22.50	22.66	22.85
	8d		RETAP – payload size = 768	22.53	22.62	22.83
	8e		RETAP – payload size = 1024	22.55	22.73	22.84
	8f		RETAP – payload size = 1536	22.61	22.63	22.89
	8g		RETAP – payload size = 2048	22.62	22.64	22.93
	8h		RETAP – payload size = 3072	22.53	22.67	22.87
	8i		RETAP – payload size = 4096	22.55	22.66	22.89
	8j		RETAP – payload size = 6144	22.60	22.73	22.88
	8k		RETAP – payload size = 8192	22.63	22.74	22.94
	8l		RETAP – payload size = 12288	22.64	22.75	22.96

Band	Modulation	Channel	Frequency (MHz)	Max. Power (dBm)	Avg. Burst Power (dBm)
CDMA 2000 1X BC0	GMSK	1013	824.70	23.5	23.07
		384	836.52	23.5	23.11
		777	848.31	23.5	23.15
CDMA 2000 1X EVDO Rel-0 BC0	QPSK	1013	824.70	23.0	22.88
		384	836.52	23.0	22.93
		777	848.31	23.0	22.96
CDMA 2000 1X EVDO Rel-A	QPSK	1013	824.70	23.0	22.47
		384	836.52	23.0	22.69
		777	848.31	23.0	22.87

WIFI 2.4G

Mode	Channel	Freq(MHz)	Max. Power (dBm)	Avg. Burst Power(dBm)
802.11b	1	2412	15.5	15.02
	6	2437	15.5	14.55
	11	2462	15.5	14.56
802.11b	1	2412	12.0	10.25
	6	2437	12.0	11.39
	11	2462	12.0	11.83
HT20	1	2412	11.5	10.41
	6	2437	11.5	10.88
	11	2462	11.5	11.35
HT40	3	2422	10.0	9.32
	6	2437	10.0	9.15
	9	2452	10.0	9.47

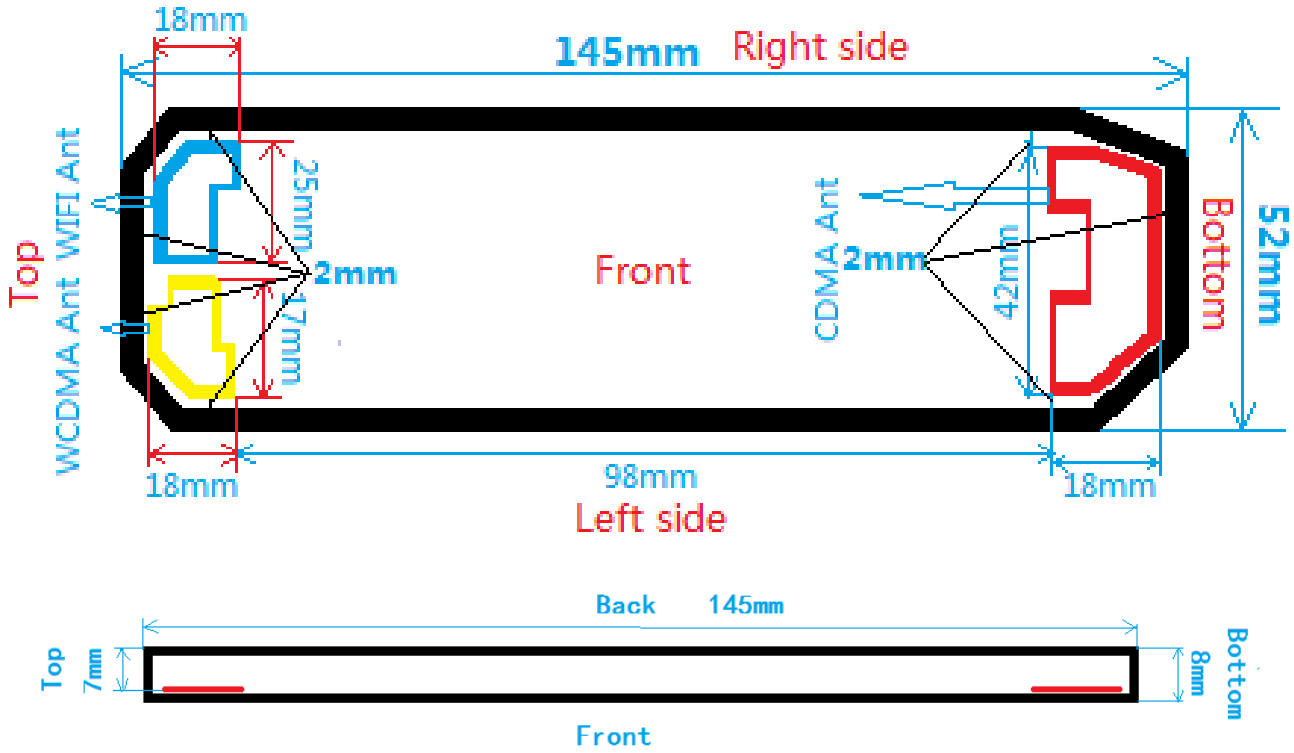
Bluetooth

Mode	Ch.	Freq(MHz)	Max. Power(dBm)	Avg. Burst Power(dBm)
BLE	00	2402	-5.0	-5.26
	19	2440	-6.0	-7.05
	39	2480	-6.0	-6.37

Note:

1. Max. Power above is the tune-up power.
2. All conducted measurements are based on a RMS detector.

7.2. Antenna Location



Antenna	Antenna Distance to Edges(mm)					
	Back	Front	Top	Right side	Bottom	Left side
WCDMA	7	2	125	2	2	2
CDMA2000	7	2	2	2	125	2
2.4G WIFI/BT	7	2	2	2	2	2
Antenna	Antenna Distance to User(mm)					
	Back	Front	Top	Right side	Bottom	Left side
WCDMA	12	7	130	7	7	7
CDMA2000	12	7	7	7	130	7
2.4G WIFI/BT	12	7	7	7	7	7

7.3. SAR Test Exclusion

Per FCC KDB 447498 D01v06 for 100MHz~6GHz:

1) The 1g-SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{Max\ Power\ of\ \ Channel(mW)}{Test\ Separation\ Distance(mm)} \times \sqrt{Frequency(GHz)} \le 3.0$$

7mm Antenna-to-user distance

Test Mode		Frq.(MHz)	Antenna-to-user distance (mm)	Thresholds (mW)	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	SAR Test(Y/N
WCDMA	Band II	1907.6	7	15	23.0	199.5	Y
	Band V	836.6	7	23	23.5	223.9	Y
CDMA2k	Cellular	848.31	7	23	23.5	223.9	Y
WiFi	802.11b	2437	7	13	15.5	35.5	Y
	802.11g	2437	7	13	12.0	15.8	Y
	802.11n(HT20)	2437	7	13	11.5	14.1	Y
	802.11n(HT40)	2437	7	13	10.0	10.0	Y
Bluetooth	BLE	2440	7	13	-6.0	0.3	N

12mm Antenna-to-user distance

Test Mode		Frq.(MHz)	Antenna-to-user distance (mm)	Thresholds (mW)	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	SAR Test(Y/N
WCDMA	Band II	1907.6	12	26	23.0	199.5	Y
	Band V	836.6	12	39	23.5	223.9	Y
CDMA2k	Cellular	848.31	12	39	23.5	223.9	Y
WiFi	802.11b	2437	12	23	15.5	35.5	Y
	802.11g	2437	12	23	12.0	15.8	N
	802.11n(HT20)	2437	12	23	11.5	14.1	N
	802.11n(HT40)	2437	12	23	10.0	10.0	N
Bluetooth	BLE	2440	12	23	-6.0	0.3	N

2) At test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following:

a. [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50mm)·(f (MHz)/150)] mW, at 100 MHz to 1500 MHz

b. [Power allowed at numeric threshold for 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

130mm Antenna-to-user distance

Test Mode		Frq.(MHz)	Antenna-to-user distance (mm)	Thresholds (mW)	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	SAR Test(Y/N
WCDMA	Band II	1907.6	130	909	23.0	199.5	N
	Band V	836.6	130	964	23.5	223.9	N
CDMA2k	Cellular	848.31	130	963	23.5	223.9	N
WiFi	802.11b	2437	130	896	15.5	35.5	N
	802.11g	2437	130	896	12.0	15.8	N
	802.11n(HT20)	2437	130	896	11.5	14.1	N
	802.11n(HT40)	2437	130	896	10.0	10.0	N
Bluetooth	BLE	2440	130	896	-6.0	0.3	N

Note: The exclusion calculation tables for antenna-to-user separation distances greater than 200 mm are unnecessary since these are mobile RF exposure conditions.

7.4. 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	Max. Tune-up Power(dBm)	Max. Tune-up Power(mW)	Estimated SAR(W/kg)
Back	Bluetooth GFSK	2440	7	-6.0	-7.1	＜0.01
Front	Bluetooth GFSK	2440	0	-6.0	-7.1	＜0.01
Top	Bluetooth GFSK	2440	0	-6.0	-7.1	＜0.01
Bottom	Bluetooth GFSK	2440	125	-6.0	-7.1	＜0.01
Left side	Bluetooth GFSK	2440	2	-6.0	-7.1	＜0.01
Right side	Bluetooth GFSK	2440	2	-6.0	-7.1	＜0.01

Note: An estimated SAR of 0.4 W/kg was used to determine simultaneous transmission SAR for test separate on distances >50mm per 447498 D01v06.

7.5. SAR Test Results Summary

■ **Test Mode: WCDMA Band II（Head）**

Plot No.	Ch.	Frequency	Test Position	Dist. mm	Max. Tune-up Power(dB	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
3	9538	1907.6	Front of face	5	23.0	22.88	1.005	0.11	0.468	0.47

■ **Test Mode: WCDMA Band V（Head）**

Plot No.	Ch.	Frequency	Test Position	Dist. mm	Max. Tune-up Power(dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
1	4132	825.4	Front of face	5	23.8	23.53	1.011	0.06	0.443	0.45

■ **Test Mode: CDMA2000 1x（Head）**

Plot No.	Ch.	Frequency	Test Position	Dist. mm	Max. Tune-up Power(dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
2	777	848.31	Front of face	5	23.5	23.11	1.017	0.03	0.286	0.29

■ **Tablet Mode- DTS_WLAN 2.4GHz（Head）**

Plot No.	Band	Mode	Test Position	Dist. mm	Ch.	Fre.	Max. Tune-up Power(dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
4	802.11b	CCK	Front	5	6	2437	15.5	14.55	1.065	0.07	0.113	0.12

■ **Test Mode: WCDMA Band II（Body）**

Plot No.	Ch.	Frequency	Test Position	Dist. mm	Max. Tune-up Power(dB	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
7	**9538**	**1907.6**	**Front**	**5**	**23.0**	**22.88**	**1.005**	**0.07**	**0.619**	**0.62**
	9262	1852.4	Front	5	23.0	22.89	1.005	-0.02	0.595	0.60
	9400	1880	Front	5	23.0	22.94	1.003	-0.08	0.609	0.61
	9538	1907.6	Back	5	23.0	22.88	1.005	0.09	0.413	0.42
	9538	1907.6	Top	5	23.0	22.88	1.005	0.11	0.011	0.01
	9538	1907.6	Bottom	5	23.0	22.88	1.005	-0.13	0.415	0.42
	9538	1907.6	Left side	5	23.0	22.88	1.005	0.02	0.509	0.51
	9538	1907.6	Right side	5	23.0	22.88	1.005	0.05	0.045	0.05

■ **Test Mode: WCDMA Band V（Body）**

Plot No.	Ch.	Frequency	Test Position	Dist. mm	Max. Tune-up Power(dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
5	**4132**	**825.4**	**Front**	**5**	**23.8**	**23.53**	**1.011**	**0.03**	**0.561**	**0.57**
	4182	836.4	Front	5	23.8	23.44	1.015	0.04	0.523	0.53
	4233	846.6	Front	5	23.8	23.44	1.015	-0.03	0.529	0.54
	4132	825.4	Back	5	23.8	23.53	1.011	0.12	0.384	0.39
	4132	825.4	Top	5	23.8	23.53	1.011	0.01	0.017	0.02
	4132	825.4	Bottom	5	23.8	23.53	1.011	0.14	0.443	0.45
	4132	825.4	Left side	5	23.8	23.53	1.011	-0.02	0.457	0.46
	4132	825.4	Right side	5	23.8	23.53	1.011	0.07	0.046	0.05

■ **Test Mode: CDMA2000 1x（Body）**

Plot No.	Ch.	Frequency	Test Position	Dist. mm	Max. Tune-up Power(dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
6	**777**	**848.31**	**Front**	**5**	**23.5**	**23.11**	**1.017**	**-0.05**	**0.532**	**0.54**
	1013	824.7	Front	5	23.5	23.07	1.019	0.04	0.474	0.48
	384	836.52	Front	5	23.5	23.15	1.015	0.02	0.487	0.49
	777	848.31	Back	5	23.5	23.11	1.017	0.11	0.412	0.42
	777	848.31	Top	5	23.5	23.11	1.017	-0.06	0.018	0.02
	777	848.31	Bottom	5	23.5	23.11	1.017	-0.07	0.374	0.38
	777	848.31	Right side	5	23.5	23.11	1.017	0.04	0.460	0.47
	777	848.31	Left side	5	23.5	23.11	1.017	0.08	0.057	0.06

■ **Tablet Mode- DTS_WLAN 2.4GHz（Body）**

Plot No.	Band	Mode	Test Position	Dist. mm	Ch.	Fre.	Max. Tune-up Power(dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift(dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
8	**802.11b**	**CCK**	**Front**	**5**	**6**	**2437**	**15.5**	**14.55**	**1.065**	**0.03**	**0.159**	**0.17**
	802.11b	CCK	Front	5	1	2412	15.5	15.02	1.032	0.12	0.112	0.12
	802.11b	CCK	Front	5	11	2462	15.5	14.56	1.065	0.04	0.123	0.13
	802.11b	CCK	Back	5	6	2437	15.5	14.55	1.065	-0.02	0.154	0.16
	802.11b	CCK	Top	5	6	2437	15.5	14.55	1.065	0.07	0.053	0.06
	802.11b	CCK	Bottom	5	6	2437	15.5	14.55	1.065	0.09	0.000	0.00
	802.11b	CCK	Right side	5	6	2437	15.5	14.55	1.065	-0.11	0.029	0.03
	802.11b	CCK	Left side	5	6	2437	15.5	14.55	1.065	0.15	0.052	0.06
	802.11g	OFDM	Front	5	6	2437	12.0	11.39	1.054	0.09	0.067	0.07
	802.11n	HT20	Front	5	6	2437	11.5	10.88	1.057	0.05	0.071	0.07
	802.11n	HT40	Front	5	6	2437	10.0	9.15	1.093	0.04	0.076	0.08

Note:

1. **Per KDB248227 D01 v02r02 section 5.2.1 2), 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.**
2. **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, 802.11g/n OFDM SAR is not required, per KDB248227 D01 v02r01 section 5.2.2 2)**

8. Simultaneous Transmission Analysis

8.1. Simultaneous Transmission Condition

RF Exposure Condition	Capable Transmit Configurations	Remark
Body-worn Accessory	1. WCDMA Band II/V+ BT	N/A
	2. WCDMA Band II/V+ WiFi 2.4GHz	N/A
	3. CDMA2000+ BT	N/A
	4. CDMA2000+ WiFi 2.4GHz	N/A
Note: 1. WiFi 2.4GHz Radio cannot transmit simultaneously with Bluetooth Radio, as they share the same antenna. 2. Per KDB 447498 D01v06 section4.1 c), SAR compliance for simultaneous transmission must be considered when the maximum duration of overlapping transmissions, including network hand-offs, is greater than 30 seconds.		

8.2. Max. Simultaneous SAR

■ Simultaneous transmission with Bluetooth

Configurations	Test Position	SAR_1(W/kg)	$SAR_{2(BT)}$(W/kg)	∑ SAR(W/kg)
WCDMA Band II+ Bluetooth(Head)	Front of face	0.47	＜0.01	0.63
WCDMA Band V+ Bluetooth(Head)	Front of face	0.45	＜0.01	0.57
CDMA2000+ Bluetooth(Head)	Front of face	0.29	＜0.01	0.55

Configurations	Test Position	SAR_1(W/kg)	$SAR_{2(BT)}$(W/kg)	∑ SAR(W/kg)
WCDMA Band II+ Bluetooth(Body)	Front	0.62	＜0.01	0.63
	Back	0.42	＜0.01	0.43
	Top	0.01	＜0.01	0.03
	Bottom	0.42	＜0.01	0.43
	Right side	0.51	＜0.01	0.52
	Left side	0.05	＜0.01	0.06
WCDMA Band V+ Bluetooth(Body)	Front	0.56	＜0.01	0.57
	Back	0.38	＜0.01	0.39
	Top	0.02	＜0.01	0.03
	Bottom	0.44	＜0.01	0.45
	Right side	0.46	＜0.01	0.47
	Left side	0.05	＜0.01	0.06
CDMA2000+ Bluetooth(Body)	Front	0.54	＜0.01	0.55
	Back	0.42	＜0.01	0.43
	Top	0.02	＜0.01	0.03
	Bottom	0.38	＜0.01	0.39
	Right side	0.47	＜0.01	0.48
	Left side	0.06	＜0.01	0.07

■ Simultaneous transmission with WLAN

Configurations	Test Position	SAR_1(W/kg)	$SAR_{2(WIFI)}$(W/kg)	∑ SAR(W/kg)
WCDMA Band II+ WIFI(Head)	Front of face	0.47	0.12	0.59
WCDMA Band V+ WIFI(Head)	Front of face	0.45	0.12	0.57
CDMA2000+ WIFI(Head)	Front of face	0.29	0.12	0.41

Configurations	Test Position	SAR_1(W/kg)	$SAR_{2(WIFI)}$(W/kg)	∑ SAR(W/kg)
WCDMA Band II+ WIFI(Body)	Front	0.62	0.17	0.79
	Back	0.42	0.16	0.58
	Top	0.01	0.06	0.07
	Bottom	0.42	0	0.42
	Right side	0.51	0.03	0.54
	Left side	0.05	0.06	0.11
WCDMA Band V+ WIFI(Body)	Front	0.56	0.17	0.73
	Back	0.38	0.16	0.54
	Top	0.02	0.06	0.08
	Bottom	0.44	0	0.44
	Right side	0.46	0.03	0.49
	Left side	0.05	0.06	0.11
CDMA2000+ WIFI(Body)	Front	0.54	0.17	0.71
	Back	0.42	0.16	0.58
	Top	0.02	0.06	0.08
	Bottom	0.38	0	0.38
	Right side	0.47	0.03	0.5
	Left side	0.06	0.06	0.12

Note:

1. An estimated SAR of 0.4 W/kg was used to determine simultaneous transmission SAR for test separate on distances >50mm per 447498 D01v06.

8.3. Simultaneous Transmission Conclusion

The above numerical summed SAR results for all the worst-case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06.

9. 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)

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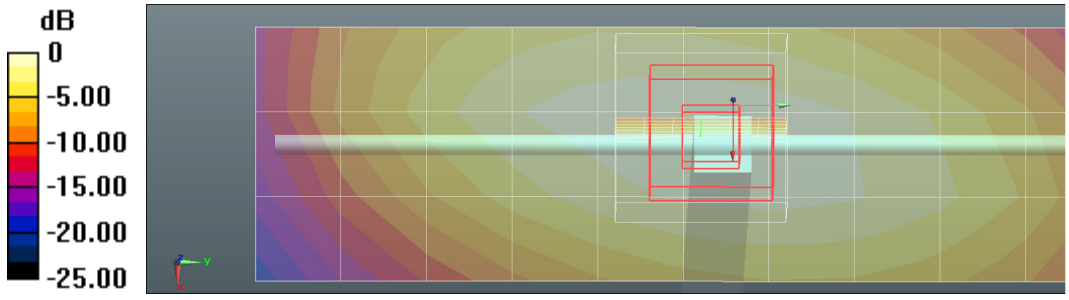
APPENDIX A. SAR System Verification Data

Date/Time: 12/07/2017

Test Laboratory: Cerpass Lab
SystemPerformanceCheck-D850 Head
DUT: Dipole 850 MHz D850V2; Type: D850V2; Serial: D850V2
Communication System: CW; Frequency: 850 MHz
Medium parameters used: f = 850 MHz; σ = 0.918 S/m; εr = 41.18; 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(10.28,10.28,10.28); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/SystemPerformanceCheck-D850 Head/Area Scan (4x12x1):
Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 2.41 W/kg
Configuration/SystemPerformanceCheck-D850 Head/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 44.22 V/m; Power Drift = 0.03 dB, Peak SAR (extrapolated) = 3.54 W/kg
SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.54 W/kg Maximum value of SAR (measured) = 2.55 W/kg



0 dB = 2.55 W/kg = 4.07 dBW/kg

Date/Time: 12/07/2017

Test Laboratory: Cerpass Lab

SystemPerformanceCheck-D1900 Head

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; σ = 1.45 S/m; εr = 40.41; 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(8.72,8.72,8.72); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

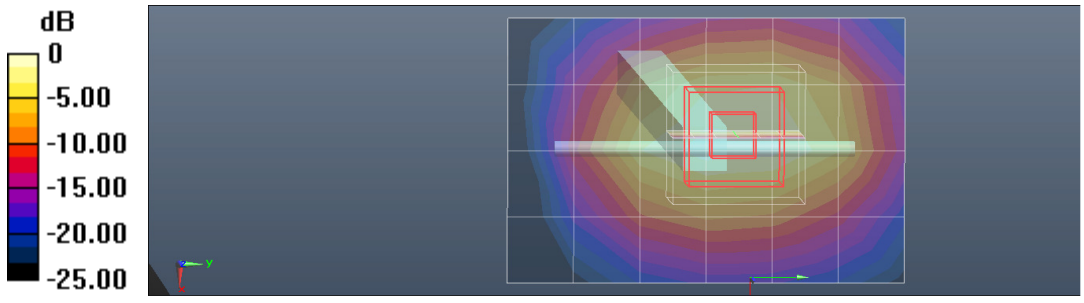
Configuration/SystemPerformanceCheck-D1900 Head/Area Scan (7x7x1):

Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 10.1 W/kg

Configuration/SystemPerformanceCheck-D1900 Head/Zoom Scan (9x9x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 84.96 V/m; Power Drift = 0.07 dB, Peak SAR (extrapolated) = 19.3 W/kg

SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.27 W/kg Maximum value of SAR (measured) = 11.5 W/kg



0 dB = 11.5 W/kg = 10.61 dBW/kg

Date/Time: 12/07/2017

Test Laboratory: Cerpass Lab

SystemPerformanceCheck-D2450 Head

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

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; σ = 1.84 S/m; εr = 39.62; 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(8.00,8.00,8.00); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

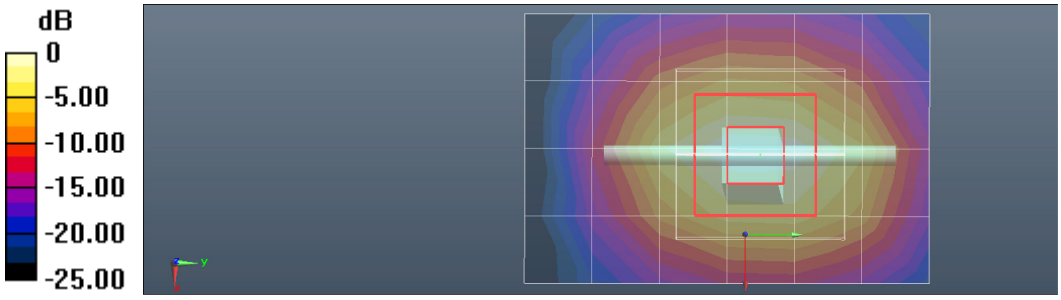
Configuration/SystemPerformanceCheck-D2450 Head/Area Scan (7x7x1):

Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 13.6 W/kg

Configuration/SystemPerformanceCheck-D2450 Head/Zoom Scan (9x9x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 87.28 V/m; Power Drift = 0.10 dB, Peak SAR (extrapolated) = 26.4 W/kg

SAR(1 g) = 12.9 W/kg; SAR(10 g) = 5.87 W/kg Maximum value of SAR (measured) = 14.9 W/kg



0 dB = 14.9 W/kg = 11.73 dBW/kg

Date/Time: 01/07/2017

Test Laboratory: CERPASS TECH

Dipole Calibration for Body Tissue Pin=250mW, dist=10mm, f=850 MHz

DUT: Dipole 850 MHz D850V2; Type: D850V2; Serial: D850V2

Communication System: CW; Frequency: 850 MHz

Medium parameters used: f = 850 MHz; σ = 0.98 S/m; εr = 55.14; ρ = 1000 kg/m3

Phantom section: Flat Section;

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

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(10.44, 10.44, 10.44); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

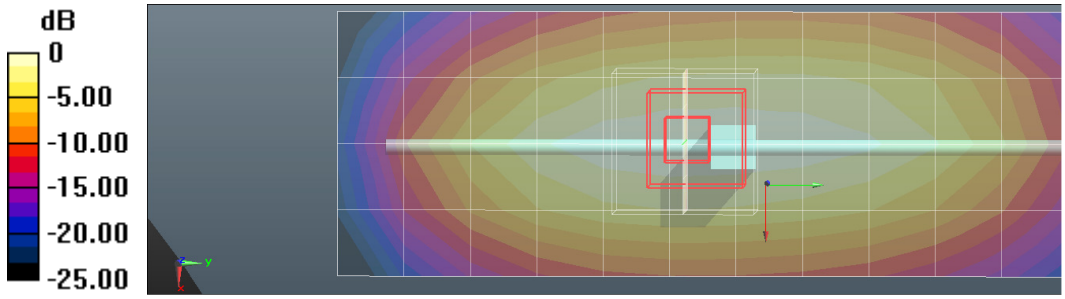
Configuration/SystemPerformanceCheck-D850 Body/Area Scan (5x13x1):

Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 3.16 W/kg

Configuration/SystemPerformanceCheck-D850 Body/Zoom Scan (5x5x5)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 40.83 V/m; Power Drift = 0.06 dB, Peak SAR (extrapolated) = 3.72 W/kg

SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.59 W/kg Maximum value of SAR (measured) = 3.17 W/kg



0 dB = 3.17 W/kg = 5.01 dBW/kg

Date/Time: 03/07/2017

Test Laboratory: CERPASS TECH

Dipole Calibration for Body Tissue Pin=250mW, dist=10mm, f=1900 MHz

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: f = 1900 MHz; σ = 1.51 S/m; εr = 53.26; ρ = 1000 kg/m3

Phantom section: Flat Section;

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

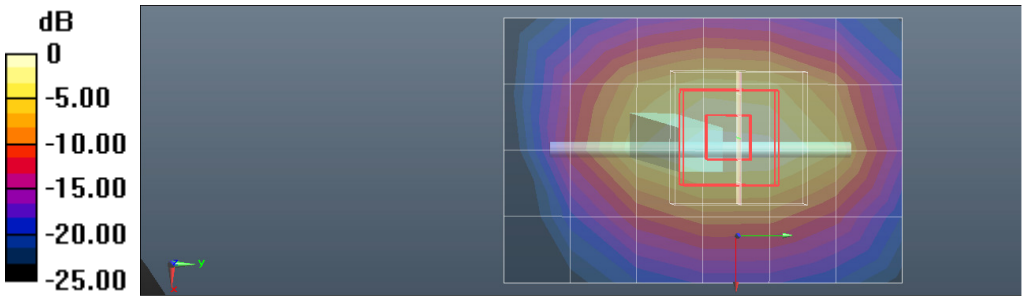
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(8.46, 8.46, 8.46); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/SystemPerformanceCheck-D1900 Body/Area Scan (5x7x1):
Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 10.2 W/kg

Configuration/SystemPerformanceCheck-D1900 Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 83.83 V/m; Power Drift = 0.05 dB, Peak SAR (extrapolated) = 18.0W/kg

SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.38 W/kg Maximum value of SAR (measured) = 11.5 W/kg



0 dB = 11.5 W/kg = 10.61 dBW/kg

Date/Time: 04/05/2017

Test Laboratory: CERPASS TECH

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 = 1.94 S/m; εr = 52.46; ρ = 1000 kg/m3

Phantom section: Flat Section;

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

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(8.09, 8.09, 8.09); 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)

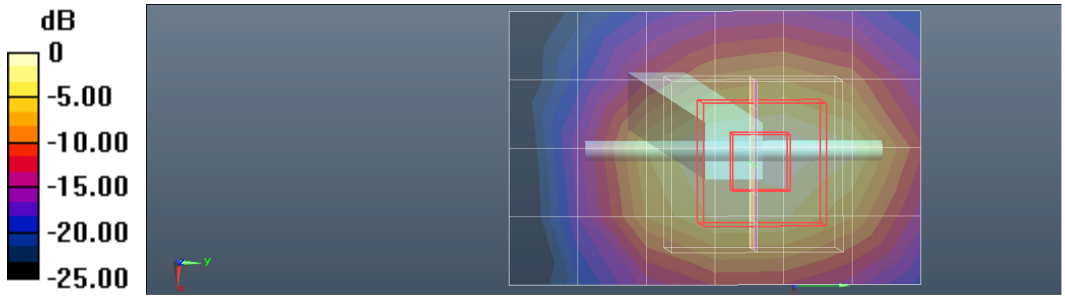
Configuration/SystemPerformanceCheck-D2450 Body/Area Scan (5x7x1):

Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 14.8 W/kg

Configuration/SystemPerformanceCheck-D2450 Body/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm, Reference Value = 79.46 V/m; Power Drift = 0.01 dB, Peak SAR (extrapolated) = 24.7 W/kg

SAR(1 g) = 12.4 W/kg; SAR(10 g) = 5.75 W/kg Maximum value of SAR (measured) = 14.2 W/kg



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

APPENDIX B. SAR measurement Data

Date/Time: 12/07/2017

Plot1

Test Laboratory: CERPASS TECH

WCDMA Band V 825.4MHz Front of face

DUT: iflytek translating machine; Type: Easy trans600

Communication System: WCDMA; Frequency: 825.4 MHz

Medium parameters used: f = 825.4 MHz; σ = 0.914 S/m; εr = 41.66; ρ = 1000 kg/m3

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(10.28,10.28,10.28); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

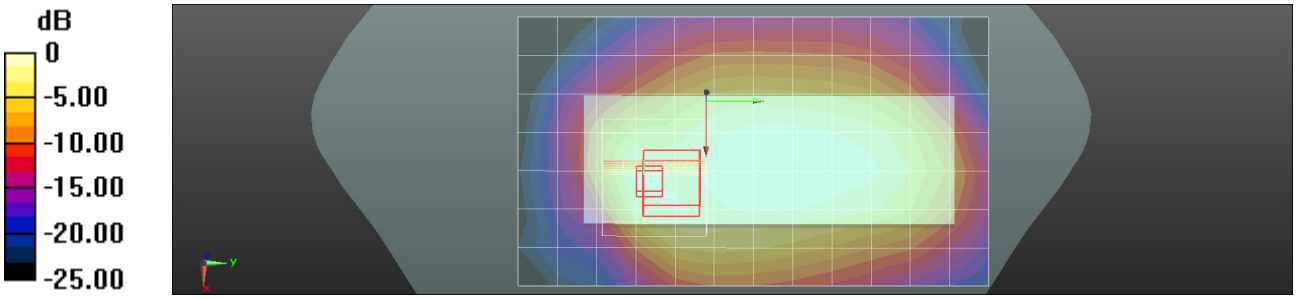
Configuration/ WCDMA Band V 825.4MHz Front of face /Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 0.574 W/kg

Configuration/ WCDMA Band V 825.4MHz Front of face /Zoom Scan (8x8x6)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 0.319 V/m; Power Drift = 0.06 dB, Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.443 W/kg; SAR(10 g) = 0.283 W/kg Maximum value of SAR (measured) = 0.571 W/kg



0 dB = 0.571 W/kg = -2.43 dBW/kg

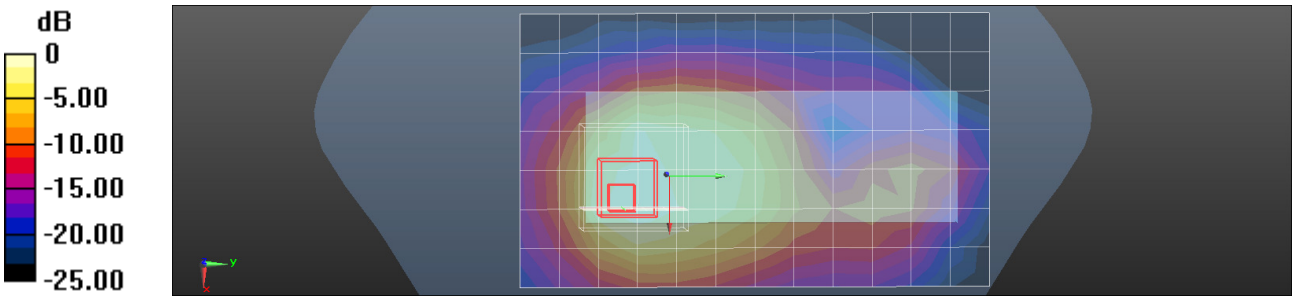
Date/Time:12/07/2017

Plot2

Test Laboratory: CERPASS TECH
CDMA2000 1x BC0 848.31MHz Front of face
DUT: iflytek translating machine; Type: Easy trans600
Communication System: CDMA2000; Frequency: 848.31 MHz
Medium parameters used: f = 848.31 MHz; σ = 0.915 S/m; εr = 41.54; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(10.28,10.28,10.28); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/CDMA2000 BC0 848.31MHz Front of face /Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 0.346 W/kg
Configuration/CDMA2000 BC0 848.31MHz Front of face /Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 0.482 V/m; Power Drift = 0.03 dB, Peak SAR (extrapolated) = 0.460 W/kg
SAR(1 g) = 0.286 W/kg; SAR(10 g) = 0.172 W/kg Maximum value of SAR (measured) = 0.376 W/kg



0 dB = 0.376 W/kg = -4.25 dBW/kg

Date/Time: 12/07/2017

Plot3

Test Laboratory: CERPASS TECH

WCDMA Band II 1907.6MHz Front of face

DUT: iflytek translating machine; Type: Easy trans600

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: f = 1907.6 MHz; σ = 1.43 S/m; εr = 40.65; ρ = 1000 kg/m3

Phantom section: Flat Section

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

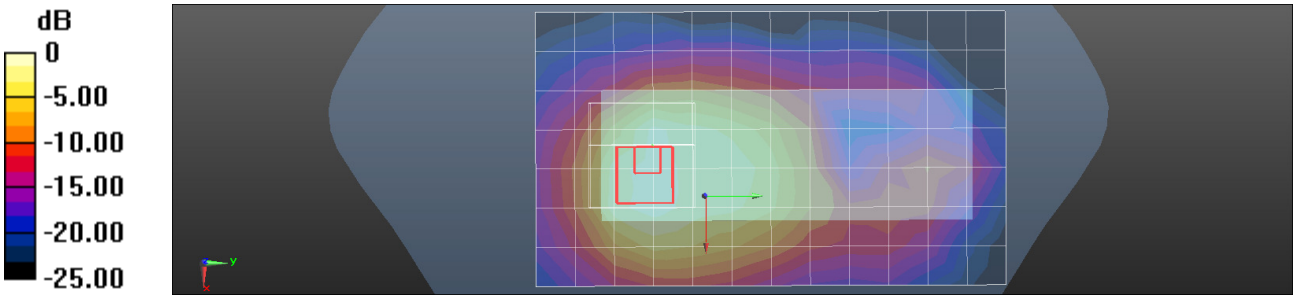
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(8.72,8.72,8.72); Calibrated: 2017/5/25;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/WCDMA Band II 1907.6MHz Front/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 0.708 W/kg

Configuration/WCDMA Band II 1907.6MHz Front /Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0.795 V/m; Power Drift = 0.11 dB, Peak SAR (extrapolated) = 0.773 W/kg

SAR(1 g) = 0.468 W/kg; SAR(10 g) = 0.277 W/kg Maximum value of SAR (measured) = 0.627 W/kg



0 dB = 0.627 W/kg = -2.03 dBW/kg

Date/Time: 12/07/2017

Plot4

Test Laboratory: CERPASS TECH

802.11b 2437MHz Front of face

DUT: iflytek translating machine; Type: Easy trans600

Communication System: 2.4GHz Wi-Fi; Frequency: 2437 MHz

Medium parameters used: f = 2437 MHz; σ = 1.83 S/m; εr = 39.74; ρ = 1000 kg/m3

Phantom section: Flat Section

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

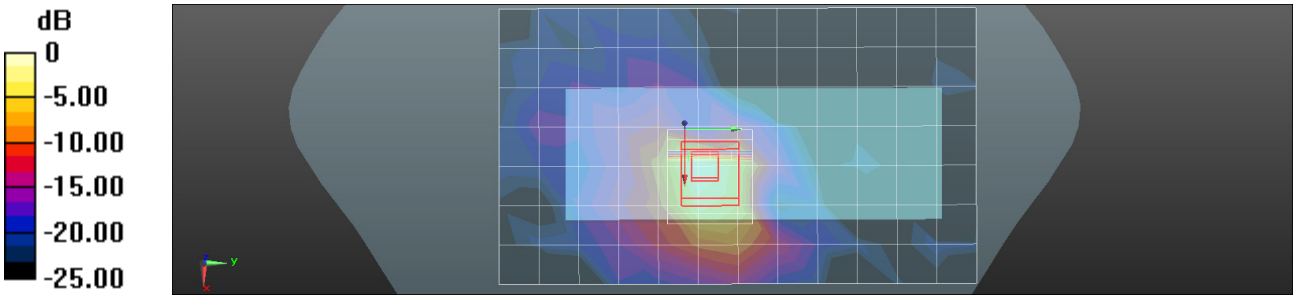
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(8.00,8.00,8.00); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2017/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/802.11g 2437MHz Front of face/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm, Maximum value of SAR (measured) = 0.185 W/kg

Configuration/802.11g 2437MHz Front of face /Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 0.914 V/m; Power Drift = 0.07 dB, Peak SAR (extrapolated) = 0.261 W/kg

SAR(1 g) = 0.113 W/kg; SAR(10 g) = 0.050 W/kg Maximum value of SAR (measured) = 0.169 W/kg



0 dB = 0.169 W/kg = -7.72 dBW/kg

Date/Time: 01/07/2017

Plot5

Test Laboratory: CERPASS TECH

WCDMA Band V 826.4MHz Front

DUT: iflytek translating machine; Type: Easy trans600

Communication System: WCDMA; Frequency: 826.4 MHz

Medium parameters used: f = 826.4 MHz; σ = 0.96 S/m; εr = 55.22; ρ = 1000 kg/m3

Phantom section: Flat Section

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

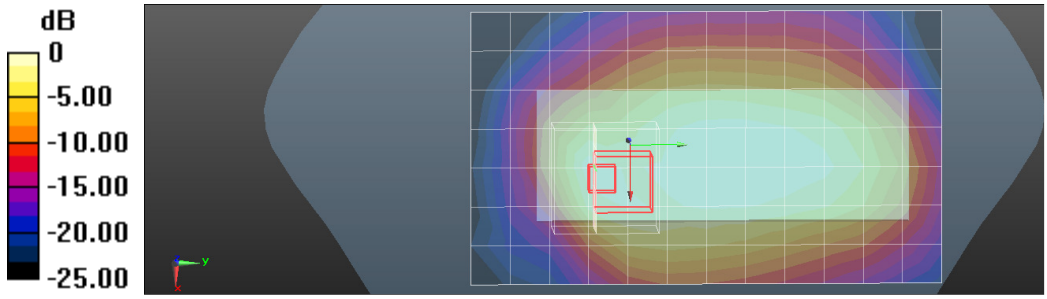
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(10.44, 10.44, 10.44); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/ WCDMA Band V 826.4MHz Front /Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 0.727 W/kg

Configuration/ WCDMA Band V 826.4MHz Front /Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value =21.12 V/m; Power Drift = 0.07 dB, Peak SAR (extrapolated) = 0.876 W/kg

SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.358 W/kg Maximum value of SAR (measured) = 0.723 W/kg



0 dB = 0.723 W/kg = -1.41 dBW/kg

Date/Time: 02/07/2017

Plot6

Test Laboratory: CERPASS TECH

CDMA2000 1x BC0 848.31MHz Front

DUT: iflytek translating machine; Type: Easy trans600

Communication System: CDMA2000; Frequency: 848.31 MHz

Medium parameters used: f = 848.31 MHz; σ = 0.98 S/m; εr = 55.18; ρ = 1000 kg/m3

Phantom section: Flat Section

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

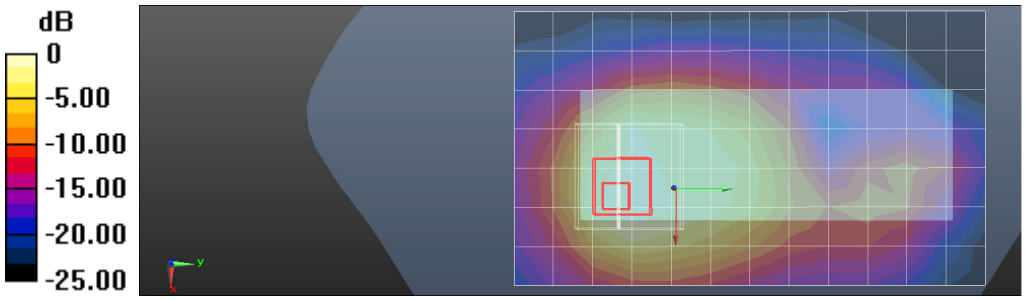
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(10.44, 10.44, 10.44); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/ CDMA2000 BC0 848.31MHz Front/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm, Maximum value of SAR (measured) = 0.644 W/kg

Configuration/ CDMA2000 BC0 848.31MHz Front /Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value =15.53 V/m; Power Drift = 0.03 dB, Peak SAR (extrapolated) = 0.857 W/kg

SAR(1 g) = 0.532 W/kg; SAR(10 g) = 0.320 W/kg Maximum value of SAR (measured) = 0.700 W/kg



0 dB = 0.700 W/kg = -1.55 dBW/kg

Date/Time: 03/07/2017

Plot7

Test Laboratory: CERPASS TECH

WCDMA Band II 1907.6MHz Front

DUT: iflytek translating machine; Type: Easy trans600

Communication System: WCDMA; Frequency: 1907.6 MHz

Medium parameters used: f = 1907.6 MHz; σ =1.53 S/m; εr = 53.21; ρ = 1000 kg/m3

Phantom section: Flat Section

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

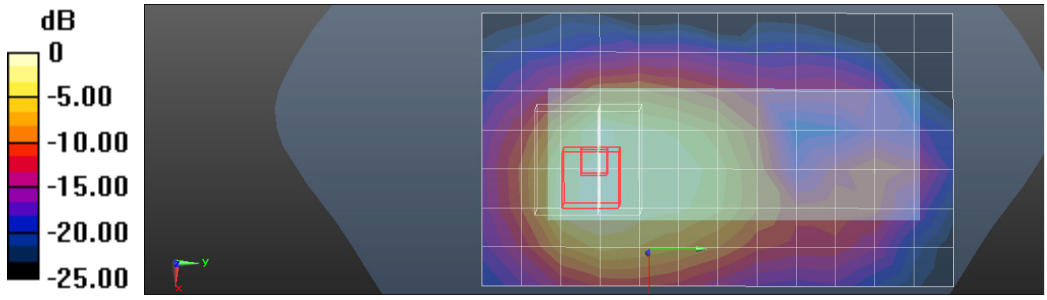
DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(8.46, 8.46, 8.46); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/ WCDMA Band II 1907.6MHz Front /Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 0.748 W/kg

Configuration/ WCDMA Band II 1907.6MHz Front/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value =16.69V/m; Power Drift = -0.05 dB, Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.619 W/kg; SAR(10 g) = 0.366 W/kg Maximum value of SAR (measured) = 0.830 W/kg



0 dB = 0.830 W/kg = -0.81 dBW/kg

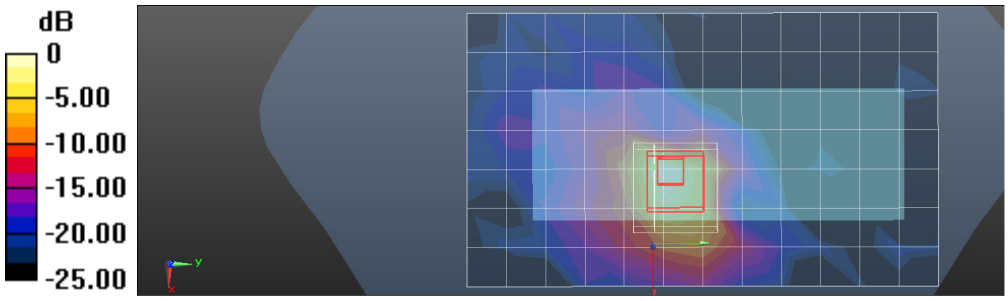
Date/Time: 04/07/2017

Plot8

Test Laboratory: CERPASS TECH
802.11b 2437MHz Front
DUT: iflytek translating machine; Type: Easy trans600
Communication System: 2.4GHz Wi-Fi; Frequency: 2437 MHz
Medium parameters used: f = 2437 MHz; σ = 1.92 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(8.09, 8.09, 8.09); Calibrated: 2017/5/25;
- Sensor-Surface: 4mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1379; Calibrated: 2018/5/23
- 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 Front/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm, Maximum value of SAR (measured) = 0.251W/kg
Configuration4/802.11b 2437MHz Front /Zoom Scan (8x8x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm, Reference Value = 8.104 V/m; Power Drift = 0.03 dB, Peak SAR (extrapolated) = 0.351 W/kg
SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.069 W/kg Maximum value of SAR (measured) = 0.228 W/kg



0 dB = 0.228 W/kg = -6.42 dBW/kg

APPENDIX C. Calibration Data for Probe, Dipole and DAE

Please refer to attached files.

APPENDIX D. Photographs of EUT and Setup

Please refer to attached files.