SAR TEST REPORT

Test report No:	**EMC-FCC-A0014**
Type of Equipment:	**REMOVU RUN**
Model Name:	**R1**
Applicant:	**ESSEL-T CO., LTD.**
FCC ID:	**2AC73-RMVR1**
FCC Rule Part:	**CFR §2.1093**
Test standards	**IEEE 1528, 2003**
	ANSI/IEEE C95.1
	KDB Publication
Max. SAR(10g)	**0.136 W/kg**
Test result:	**Complied**

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all pro ducts in series production are in conformity with the product sample detailed in this report.
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Date of receipt: 2014.09.15

Date of testing: 2014.10.08 Issued date: 2014. 10.16

Tested by: Min Kyoung-hoo

Approved by: Choi Cheon-sig

Contents

1. Applicant information

Applicant:	ESSEL-T CO., LTD.
Address:	1113, 555 Dunchondaero, Jungwon-Gu, Seongnam-Si, Gyeonggi-Do, Korea
Telephone No. :	031-777-3151
Facsimile No.:	031-777-3450
Contact Person:	Sin Dong Cheol / dcshin75@gmail.com

Manufacturer:	ESSEL-T CO., LTD.
Address:	1113, 555 Dunchondaero, Jungwon-Gu, Seongnam-Si, Gyeonggi-Do, Korea

2. Laboratory information

Address

EMC compliance Ltd.

65, Sinwon-ro, Yeongtong-gu, Suwon- si, Gyeonggi-do, 443-390, Korea

Telephone No.: 82-31-336-9919   Facsimile No.: 82-505-299-8311

Certificate

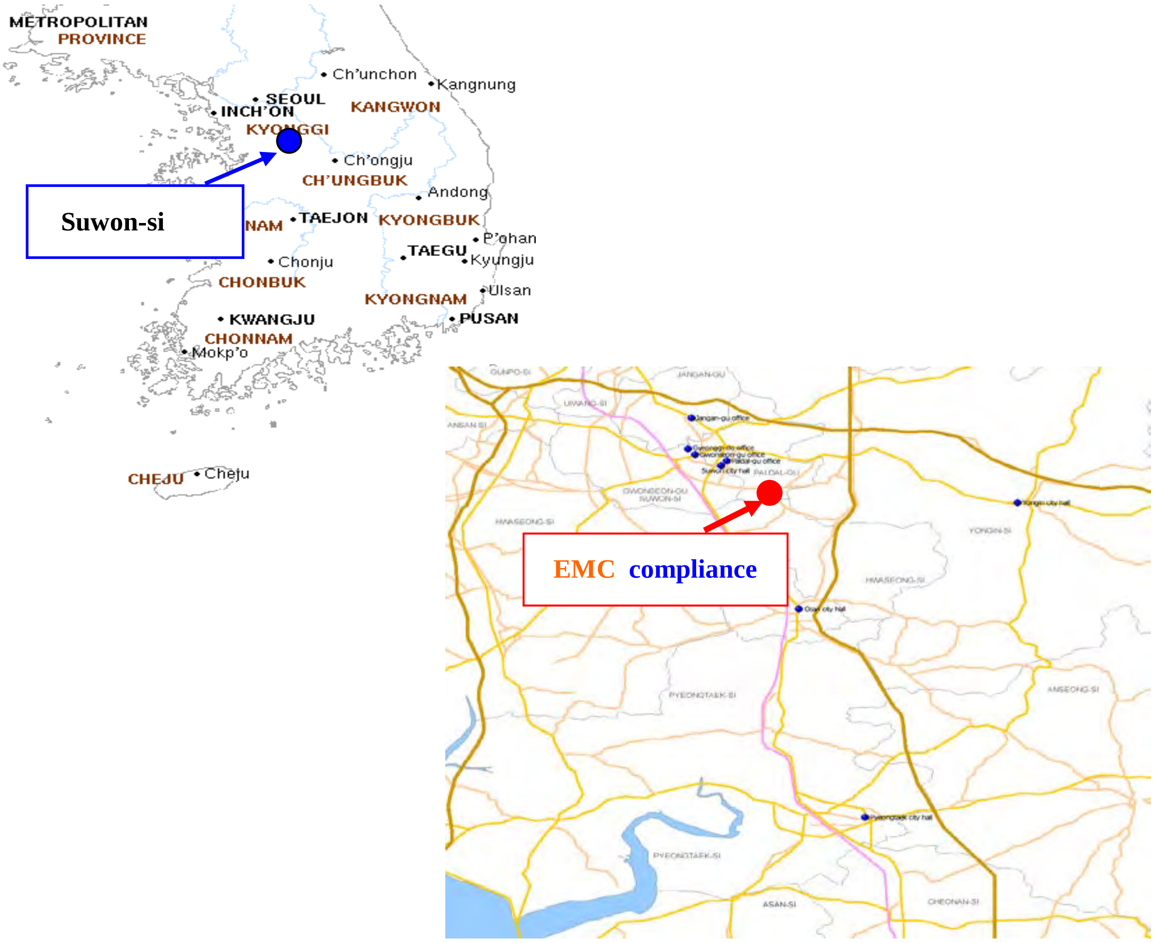
KOLAS No.: 231

FCC Site Registration No.: 687132

VCCI Site Registration No.: R-3327, G-198, C-3706, T-1849

IC Site Registration No.: 8035A-2

SITE MAP



3. Identification of Sample

Mode of Operation	WLAN(802.11b/g/n(HT20))
Model Number	R1
Serial Number	N/A
Sample Version	N/A
Tx Freq.Range	2 412 ~ 2 462 MHz
Rx Freq.Range	2 412 ~ 2 462 MHz
RF Output Power	802.11b : 18 dBm 802.11g : 17 dBm 802.11n(HT-20) : 16 dBm
Antenna Type	PIFA Antenna
Antenna Gain	-1 dBi
Normal Voltae	DC 3.7 V 1050 mA(Li-ion Polymer Battery)

4.Test Result Summary

Frequency		RF Output Power (dBm)	Max. tune up power (dBm)	Scaling Factor	EUT Position	Distance (mm)	Measured 10 g SAR (W/kg)	Scaled 1 g SAR (W/kg)
MHz	Ch.							
2437	6	16.35	18.0	1.462	Back	0	0.093	**0.136**

5. Report Overview

This report details the results of testing carried out on the samples listed in section 3, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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6. Test Lab Declaration or Comments

None

7. Applicant Declaration or Comments

None

8. Measurement Uncertainty

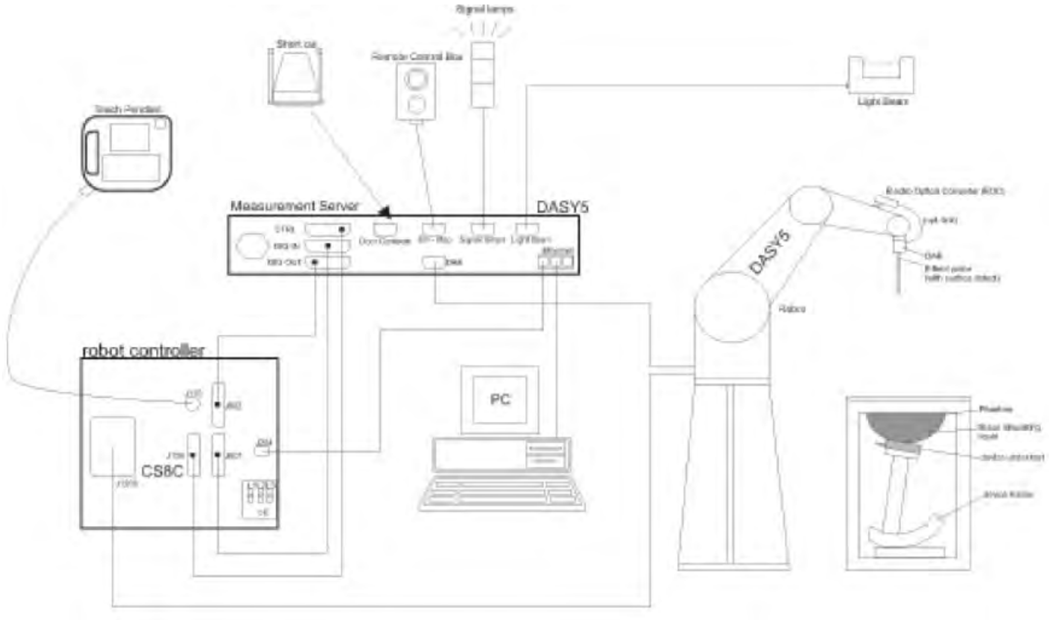
All measurements and results are recorded and maintained at the laboratory performing the tests and measurement uncertainties are taken into account when comparing measurements to pass / fail criteria.

8.1 Uncertainty of SAR equipments for measurement Body 300 MHz to 3GHz

2013 FCC SAR Measurement Uncertainty

A	*b*	*c*	D	*e = f(d,k)*	*g*	*i = c x g / e*	*k*
Source of Uncertainty	Description IEEE P1528 (0.3 ~ 3 GHz)	Tolerance/ Uncertainty value ± %	Probability Distribution	Div.	Ci (1 g)	Standard uncertainty ± %, (1 g)	Vi or Veff
Measurement System							
Probe calibration(k=1)	E.2.1	6.30	N	1	1	6.30	∞
Axial isotropy	E.2.2	0.50	R	1.73	0.71	0.20	∞
Hemispherical isotropy	E.2.2	2.60	R	1.73	0.71	1.06	∞
Linearity	E.2.4	0.60	R	1.73	1	0.35	∞
Boundary effect	E.2.3	1.00	R	1.73	1	0.58	∞
System detection limits	E.2.5	1.00	R	1.73	1	0.58	∞
Readout electronics	E.2.6	0.30	N	1	1	0.30	∞
Response time	E.2.7	0.80	R	1.73	1	0.46	∞
Integration time	E.2.8	2.60	R	1.73	1	1.50	∞
RF ambient conditions–noise	E.6.1	3.00	R	1.73	1	1.73	∞
RF ambient conditions–reflections	E.6.1	3.00	R	1.73	1	1.73	∞
Probe positioner mechanical tolerance	E.6.2	0.40	R	1.73	1	0.23	∞
Probe positioning with respect to phantom shell	E.6.3	2.90	R	1.73	1	1.67	∞
Extrapolation, interpolation, and integration algorithms for max. SAR evaluation	E.5	2.00	R	1.73	1	1.15	∞
Test Sample Related							
Test sample positioning	E.4.2	4.71	N	1	1	4.71	9
Device holder uncertainty	E.4.1	3.60	N	1	1	3.60	5
Output power variation—SAR drift measurement	6.6.2	5.00	R	1.73	1	2.89	∞
Phantom and Tissue Parameters							
Phantom uncertainty (shape and thickness tolerances)	E.3.1	7.50	R	1.73	1	4.33	∞
Liquid conductivity-measurement uncertainty	E.3.3	1.53	N	1	0.64	0.98	5
Liquid permittivity-measurement uncertainty	E.3.3	3.07	N	1	0.6	1.84	5
Liquid conductivity-deviation from target values	E.3.2	5.00	R	1.73	0.64	1.85	∞
Liquid permittivity-deviation from target values	E.3.2	5.00	R	1.73	0.6	1.73	∞
Combined standard uncertainty				RSS		11.29	183
Expanded uncertainty (95% CONFIDENCE INTERVAL)				K=2		22.57	

9. The SAR Measurement System



<SAR System Configuration>

- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- Data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

9.1 Isotropic E-field Probe EX3DV4

<EX3DV4 E-field Probe>

Construction	**:**	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g. DGBE).
Calibration	**:**	In air from 10 MHz to 6 GHz In brain simulating tissue (accuracy ± 6.3 %)
Frequency	**:**	10 MHz to > 6 GHz; Linearity: ±0.2 dB (30 MHz to 6 GHz)
Directivity	**:**	±0.2 dB in brain tissue (rotation around probe axis) ±0.4 dB in brain tissue (rotation normal to probe axis)
Dynamic Range	**:**	5 μW/g to >100 mW/g; Linearity: ±0.2 dB
Srfce. Detect	**:**	±0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces
Dimensions	**:**	Overall length: 337 mm Tip length: 9 mm Body diameter: 10 mm Tip diameter: 2.5 mm Distance from probe tip to dipole centers: 2 mm
Application	**:**	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing frequencies up to 6 GHz with precision of better 30%.

9.2 Phantom

<SAM Twin Phantom>

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

- Left head
- Right head
- Flat phantom

A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on the cover are possible.

On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

Phantom specification:

Description The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528-2003, IEC 62209-1 and IEC 62209-2. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.

Shell Thickness 2 ± 0.2 mm (6 ± 0.2 mm at ear point)

Filling Volume Approx.25 liters

Dimensions Length : 1 000 mm, Width : 500 mm, Height : 850 mm (Adjustable feet)

9.3 Device Holder for Transmitters

<Device Holder for Transmitters>

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

The DASY device holder is designed to cope with 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 centers for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity = 3 and loss tangent = 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.

10. System Verification

10.1 Tissue Verification

The dielectric properties for this Tissue Simulant Liquids were measured by using the Speag DAK-3.5 in conjunction with Agilent E5071B Network Analyzer. The Conductivity (σ) and Permittivity (ρ) are listed in Table 1. For the SAR measurement given in this report. The temperature variation of the Tissue Simulant Liquids was (21 ± 2) ℃.

Freq. (MHz)	Tissue Type	Limit/Measured	Permittivity (ρ)	Conductivity (σ)	Temp (℃)
2 412	Body	Recommended Limit	52.75± 5 % (50.11 ~ 55.39)	1.91± 5 % (1.82 ~ 2.01)	21 ± 2
		Measured, 2014-10-08	51.39	1.91	21.08
2 437	Body	Recommended Limit	52.72 ± 5 % (50.08 ~ 55.35)	1.94 ± 5 % (1.84 ~ 2.03)	21 ± 2
		Measured, 2014-10-08	51.28	1.96	21.08
2 450	Body	Recommended Limit	52.70 ± 5 % (50.07 ~ 55.34)	1.95 ± 5 % (1.85 ~ 2.05)	21 ± 2
		Measured, 2014-10-08	51.23	1.97	21.08
2 462	Body	Recommended Limit	52.69 ± 5 % (50.05 ~ 55.32)	1.93 ± 5 % (1.84 ~ 2.03)	21 ± 2
		Measured, 2014-10-08	51.06	2.00	21.08

<Table 1. Measurement result of Tissue electric parameters>

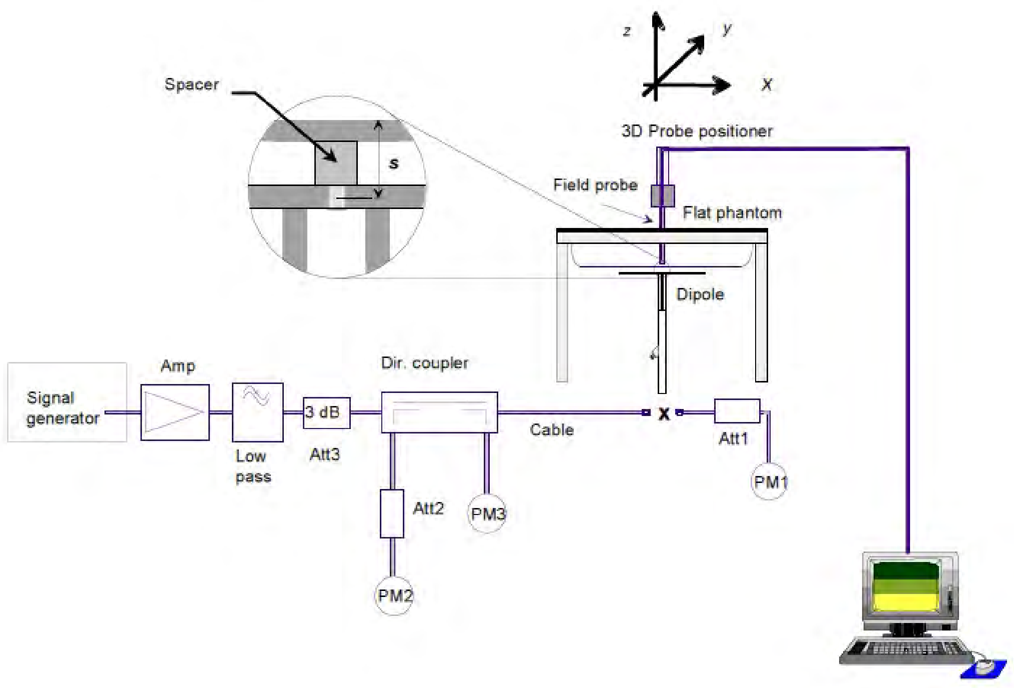
The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients (% by weight)	Frequency (MHz)									
	450		835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99^{+}% Pure Sodium Chloride
Sugar: 98^{+}% Pure Sucrose
Water: De-ionized, 16 $M\Omega^{+}$ resistivity
HEC: Hydroxyethyl Cellulose
DGBE: 99^{+}% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]
Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

10.2 Test System Verification

The microwave circuit arrangement for system verification is sketched below picture. The da ily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within ± 10 % from the tar get SAR values. These tests were done at 2450 MHz. The tests were conducted on the sam e days as the measurement of the EUT. The obtained results from the system accuracy verif ication are displayed in the table Table 2 (A power level of 250 ㎽ was input to the dipole antenna). During the tests, the ambient temperature of the laboratory was in the range (21 ± 2) ℃, the relative humidity was in the range (50 ± 20) % and the liquid depth above th e ear/grid reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the referen ce values.



Validation Kit	Dipole Ant. S/N	Frequency (MHz)	Tissue Type	Limit/Measurement (Normalized to 1 W)		
					1 g	10 g
D2450V2	895	2450	MSL2450	Recommended Limit (Normalized)	50.9 ± 10 % (45.81 ~ 55.99)	23.6 ± 10 % (21.24 ~ 25.96)
				Measured, 2014-10-08	13.4	6.14

<Table 2. Test System Verification Result>

11. Operation Configurations

For the Wireless Transceiver SAR tests, a communication link is set up with the operating mode for can be controlled by EUT. The Absolute Radio Frequency Channel Number is allocated to 1, 6 and 11 respectively in the case of 2412 ~ 2462 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode.

12. SAR Measurement Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The Minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2 mm. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: 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 D01 SAR Measument 100 MHz to 6 GHz v01r03.

	≤ 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 3: 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 5x5x7 points 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 SAR Measument 100 MHz to 6 GHz v01r03.

<table>
<tr><th colspan="3"></th><th>$\leq$ 3 GHz</th><th>$>$ 3 GHz</th></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>$\leq$ 2 GHz: $\leq$ 8 mm
2 – 3 GHz: $\leq$ 5 mm*</td><td>3 – 4 GHz: $\leq$ 5 mm*
4 – 6 GHz: $\leq$ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>$\leq$ 5 mm</td><td>3 – 4 GHz: $\leq$ 4 mm
4 – 5 GHz: $\leq$ 3 mm
5 – 6 GHz: $\leq$ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>$\leq$ 4 mm</td><td>3 – 4 GHz: $\leq$ 3 mm
4 – 5 GHz: $\leq$ 2.5 mm
5 – 6 GHz: $\leq$ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>$\geq$ 30 mm</td><td>3 – 4 GHz: $\geq$ 28 mm
4 – 5 GHz: $\geq$ 25 mm
5 – 6 GHz: $\geq$ 22 mm</td></tr>
<tr><td colspan="5">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 <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is $\leq$ 1.4 W/kg, $\leq$ 8 mm, $\leq$ 7 mm and $\leq$ 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.</td></tr>
</table>

Step 4: Power drift measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

Step 5: Z-Scan

The Z Scan measures points along a vertical straight line. The line runs along the Z-axis of a one dimensional grid. In order to get a reasonable extrapolation, the extrapolated distance should not be larger than the step size in Z-direction.

* Z Scan Report on Liquid Measure the height Annex A.4 Liquid Depth photo to replace

13. Test Equipment Information

Test Platform	SPEAG DASY5 System			
Description	SAR Test System (Frequency range 300MHz-6GHz)			
Software Reference	DASY5: V52.8.8.1222, SEMCAD: V14.6.10 (7331)			
Hardware Reference				
Equipment	Model	Serial Number	Date of Calibration	Due date of next Calibration
DASY5 Robot	TX90XL Speag	F12/5L7FA1/A/01	N/A	N/A
DASY5 Controller	TX90XL Speag	F12/5L7FA1/C/01	N/A	N/A
Phantom	TwinSAM Phantom	1724	N/A	N/A
Phantom	TwinSAM Phantom	1728	N/A	N/A
Mounting Device	Mounting Device	None	N/A	N/A
DAE	DAE4	1342	2014-07-24	2015-07-24
Probe	EX3DV4	3928	2014-01-15	2015-01-15
Dipole Validation Kits	D2450V2	895	2014-07-24	2016-07-24
Network Analyzer	E5071B	MY42403524	2014-07-15	2015-07-15
Dielectric Assessment Kit	DAK-3.5	1078	2014-08-19	2015-08-19
Dual Directional Coupler	772D	2839A00719	2014-08-29	2015-08-29
Signal Generator	E4438C	MY42080486	2014-02-11	2015-02-11
Power Amplifier	2055 BBS3Q7E9I	1005D/C0521	2014-05-15	2015-05-15
Dual Power Meter	E4419B	GB43312301	2014-07-17	2015-07-17
Power Sensor	8481H	3318A19377	2014-08-30	2015-08-30
Power Sensor	8481H	3318A19379	2014-08-30	2015-08-30
LP Filter	LA-30N	40058	2014-08-28	2015-08-28
Humidity/Data Recorder	MHB-382SD	73871	2014-08-26	2015-08-26

14. RF Power

14.1 Average Conducted Output Power

WLAN	2 412 MHz	2 437 MHz	2 462 MHz
802.11b 1 Mbps	16.50 dBm	16.35 dBm	16.05 dBm
802.11g 6 Mbps	15.60 dBm	15.46 dBm	15.27 dBm
802.11n(HT-20) 6.5 Mbps	14.50 dBm	14.20 dBm	14.12 dBm

14.2 Max. tune up power

WLAN	802.11b	802.11g	802.11n(HT-20)
Max. Allowed Power	18 dBm	17 dBm	16 dBm

15. SAR Test Results

15.1 SAR Result for Limbs(separation distance is 0 mm gap)

Frequency		**Average Power (dBm)**	**Max. tune up power (dBm)**	**Scaling Factor**	**EUT Position**	**Distance (mm)**	**Measured 10 g SAR (W/kg)**	**Scaled 10 g SAR (W/kg)**	**10g SAR Limit (W/kg)**
MHz	**Ch.**								
2 437	6	16.35	18.0	1.462	Back	0	0.093	**0.136**	4.0
2 412	1	16.50	18.0	1.413	Back	0	0.091	0.129	
2 462	11	16.05	18.0	1.567	Back	0	0.075	0.117	

16. Test System Verification Results

System check for 2450 MHz (2014-10-08)

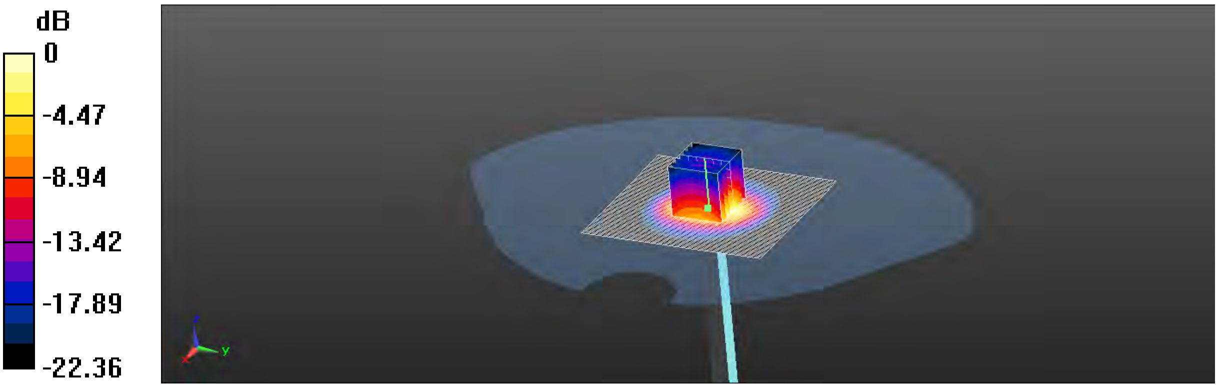
DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:895
Procedure Name: d=10mm, Pin=250 mW, dist=2.0mm (EX-Probe)

Communication System: UID 0, cw1; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.971 S/m; ε_r = 51.227; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY5 Configuration:

- Probe: EX3DV4 - SN3928; ConvF(6.84, 6.84, 6.84); Calibrated: 2014-01-15;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1342; Calibrated: 2014-07-24
- Phantom: SAM twin 1728; Type: QD000P40CD; Serial: TP:1728
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequencies/d=10mm, Pin=250 mW, dist=2.0mm (EX-Probe)/Area Scan (81x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 21.5 W/kg

System Performance Check at Frequencies/d=10mm, Pin=250 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 102.0 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 28.1 W/kg
SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.14 W/kg
Maximum value of SAR (measured) = 20.1 W/kg



0 dB = 20.1 W/kg = 13.03 dBW/kg

17. Test Results

Limbs_2437 MHz_Body_Back_Gap 0mm

DUT: ESSEL-T R1; Type: REMOVU RUN; Serial: N/A

Procedure Name: 802.11b_ch6_f2 437_Body Back_gap 0mm

Communication System: UID 0, 2.4GWLAN (0); Frequency: 2437 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2437 MHz; σ = 1.959 S/m; ε_r = 51.299; ρ = 1000 kg/m^3

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3928; ConvF(6.84, 6.84, 6.84); Calibrated: 2014-01-15;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1342; Calibrated: 2014-07-24
- Phantom: SAM twin 1728; Type: QD000P40CD; Serial: TP:1728
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

ESSEL-T R1/802.11b_ch6_f2 437_Body Back_gap 0mm/Area Scan (61x81x1):

Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.239 W/kg

ESSEL-T R1/802.11b_ch6_f2 437_Body Back_gap 0mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.463 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.307 W/kg

SAR(1 g) = 0.169 W/kg; SAR(10 g) = 0.093 W/kg

Maximum value of SAR (measured) = 0.237 W/kg