TEST REPORT (SAR EVALUATION)

Applicant	:	SANYO Electric Co., Ltd.
Address	:	1-1 Sanyo-cho, Daito-shi, Osaka, 574-8534 Japan
Products	:	Digital Camera
Model No.	:	M81 *
Serial No.	:	1013
FCC ID	:	RYYWYAAAVD *
Test Standard	:	FCC/OET Bulletin 65 Supplement C (Edition 01-01)
Test Results	:	Passed
Date of Test	:	June 7, 2012

* This product has the WLAN & Bluetooth combo module "WYAAAVDXA-1".
FCC ID "RYYWYAAAVD" is given in this module.

VLAC-001-2

Kousei Shibata
Manager
Japan Quality Assurance Organization
KITA-KANSAI Testing Center
SAITO EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

- The measurement values stated in Test Report was made with traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan, National Institute of Information and Communications Technology (NICT) of Japan , and Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zürich, Switzerland.
- The applicable standard, testing condition and testing method which were used for the tests are based on the request of the applicant.
- The test results presented in this report relate only to the offered test sample.
- The contents of this test report cannot be used for the purposes, such as advertisement for consumers.
- This test report shall not be reproduced except in full without the written approval of JQA.
- VLAC does not approve, certify or warrant the product by this test report.

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1 Description of the Equipment Under Test

1.	Manufacturer	: SANYO Electric Co., Ltd. 1-1 Sanyo-cho, Daito-shi, Osaka, 574-8534 Japan
2.	Products	: Digital Camera
3.	Model No.	: M81 **
4.	Serial No.	: 1013
5.	Product Type	: Pre-production
6.	Date of Manufacture	: --
7.	Transmitting Frequency	: 2412 MHz – 2462 MHz (WLAN 802.11b/g/n) 2402 MHz – 2480 MHz (Bluetooth)
8.	Battery Option	: Lithium-ion Battery (1050mAh)
9.	Power Rating	: 3.7VDC
10.	EUT Grounding	: None
11.	Device Category	: Portable Device (§2.1093)
12.	Exposure Category	: General Population/Uncontrolled Exposure
13.	FCC Rule Part(s)	: 15.247
14.	EUT Authorization	: Certification
15.	Received Date of EUT	: June 5, 2012

**) This product has the WLAN & Bluetooth combo module "WYAAAVDXA-1" made by TAIYO YUDEN.
FCC ID : RYYWYAAAVD
IC ID : 4389B-WYAAAVD

2 Summary of Test Results

Applied Standard : FCC/OET Bulletin 65 Supplement C (Edition 01-01)
Evaluating Compliance with FCC Guidelines for Human Exposure to Radio-frequency Electromagnetic Fields
Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions

Band	CH	Freq. (MHz)	Region	Test Position	1g SAR (mW/g)	Results
WLAN 802.11b	11	2462	Body	Right Edge	0.866	PASSED

In the approval of test results,
- Determining compliance with the limits in this report was based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- No deviations were employed from the applied standard.
- No modifications were conducted by JQA to achieve compliance to the limitations.

Reviewed by:

S. Kino

Shigeru Kinoshita
Deputy Manager
JQA KITA-KANSAI Testing Center
SAITO EMC Branch

Tested by:

Y. Sakai

Yasuhisa Sakai
Deputy Manager
JQA KITA-KANSAI Testing Center
SAITO EMC Branch

3 Test Procedure

The tests documented in this report were performed in accordance with FCC/OET Bulletin 65 Supplement C (Edition 01-01), IEEE Std.1528–2003 and the following KDB Procedures.

248227 D01 SAR meas for 802 11 a b g v01r02

Exposure limits are specified in ANSI/IEEE Std. C95.1–1991.

4 Test Location

Japan Quality Assurance Organization (JQA)
KITA-KANSAI Testing Center
7-7, Ishimaru, 1-chome, Minoh-shi, Osaka, 562-0027, Japan
SAITO EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

5 Recognition of Test Laboratory

JQA KITA-KANSAI Testing Center SAITO EMC Branch is accredited under ISO/IEC 17025 by following accreditation bodies and the test facility is registered by the following bodies.

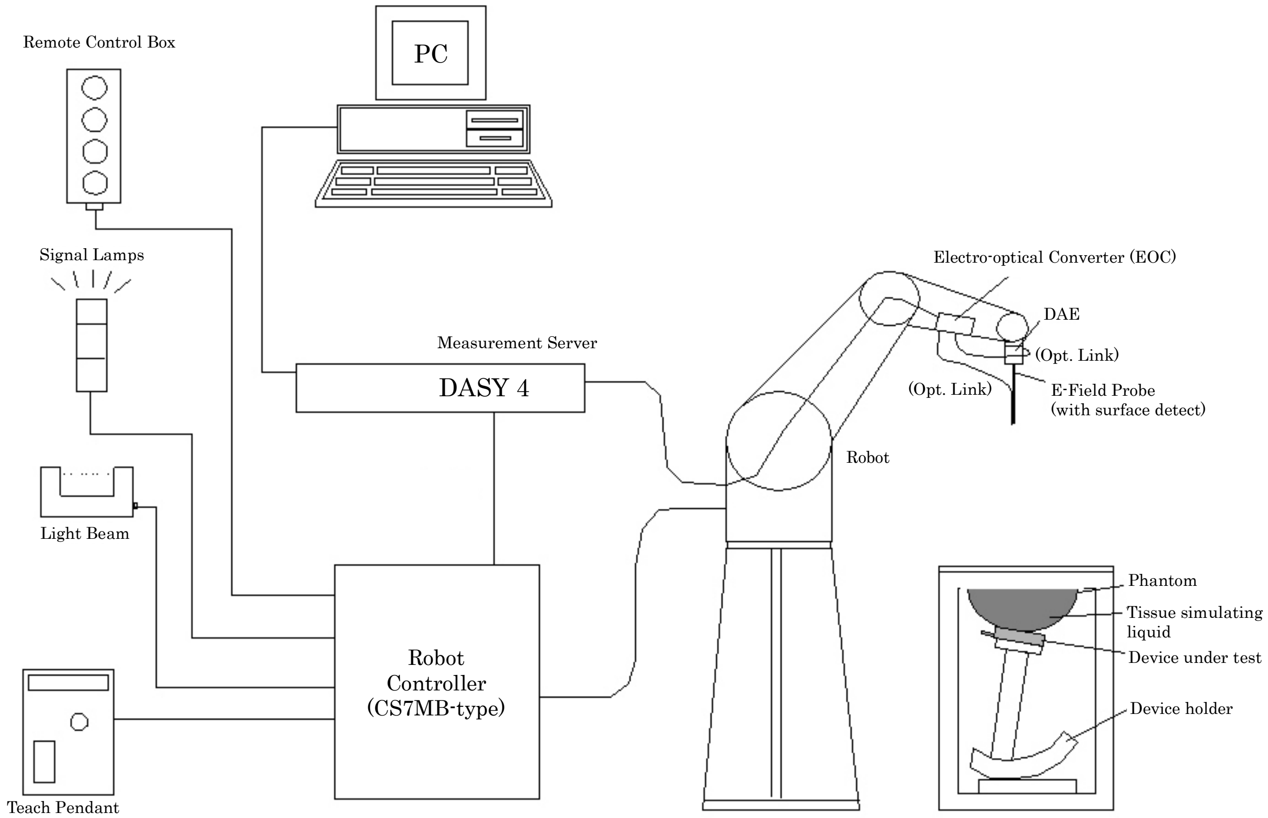
VLAC Accreditation No.	:	VLAC-001-2 (Expiry date : March 30, 2014)
VCCI Registration No.	:	A-0002 (Expiry date : March 30, 2014)
BSMI Registration No.	:	SL2-IS-E-6006, SL2-IN-E-6006, SL2-AI-E-6006 (Expiry date : September 14, 2013)
IC Registration No.	:	2079E-3, 2079E-4 (Expiry date : July 20, 2014)

Accredited as conformity assessment body for Japan electrical appliances and material law by METI. (Expiry date : February 22, 2013)

6 Measurement System Diagram

These measurements are performed using the DASY4 automated dosimetric assessment system (manufactured by Schmid & Partner Engineering AG (SPEAG) in Zürich, Switzerland). It consists of high precision robotics system, cell controller system, DASY4 measurement server, personal computer with DASY4 software, data acquisition electronic (DAE) circuit, the Electro-optical converter (EOC), near-field probe, and the twin SAM phantom containing the equivalent tissue. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF).

The Robot is connected to the cell controller to allow software manipulation of the robot. The DAE is connected to the EOC. The DAE performs the signal amplification, signal multiplexing, A/D conversion, offset measurements, mechanical surface detection, collision detection, etc. The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the DASY4 measurement server.



7 System Components

7.1 Probe Specification ET3DV6

Construction : Symmetrical design with triangular core
Built-in optical fiber for surface detection system
Built-in shielding against static changes
PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

Calibration : In air form 10 MHz to 2.3 GHz
In head tissue simulating liquid (HSL) and
muscle tissue simulating liquid
835 MHz (accuracy ± 12.0%; k=2)
900 MHz (accuracy ± 12.0%; k=2)
1450 MHz (accuracy ± 12.0%; k=2)
1750 MHz (accuracy ± 12.0%; k=2)
1900 MHz (accuracy ± 12.0%; k=2)
1950 MHz (accuracy ± 12.0%; k=2)

Frequency : 10 MHz to 2.3 GHz
Linearity: ± 0.2 dB (30 MHz to 2.3 GHz)

Directivity : ± 0.2 dB in HSL (rotation around probe axis)
± 0.4 dB in HSL (rotation normal to probe axis)

Dynamic Range : 5 μW/g to >100 mW/g; Linearity: ± 0.2 dB

Surface Detection : ± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces

Dimensions : Overall length 337 mm
Tip length 16 mm
Body diameter 12 mm
Tip diameter 6.8 mm
Distance from probe tip to dipole centers 2.7 mm

7.2 Probe Specification EX3DV4

Construction	:	Symmetrical design with triangular core Built-in shielding against static changes PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	:	In air form 10 MHz to 6 GHz In head tissue simulating liquid (HSL) and muscle tissue simulating liquid 2300 MHz (accuracy ± 12.0%; k=2) 2450 MHz (accuracy ± 12.0%; k=2) 2600 MHz (accuracy ± 12.0%; k=2) 3500 MHz (accuracy ± 13.1%; k=2) 5200 MHz (accuracy ± 13.1%; k=2) 5300 MHz (accuracy ± 13.1%; k=2) 5500 MHz (accuracy ± 13.1%; k=2) 5600 MHz (accuracy ± 13.1%; k=2) 5800 MHz (accuracy ± 13.1%; k=2)

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 337 mm Tip length 20 mm Body diameter 12 mm Tip diameter 2.5 mm Distance from probe tip to dipole centers 1 mm

7.3 Twin SAM Phantom

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

Shell Thickness	: 2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	: Volume Approx. 25 liters
Dimensions	: 810 × 1000 × 500 mm (H × L × W)

7.4 ELI4 Flat Phantom

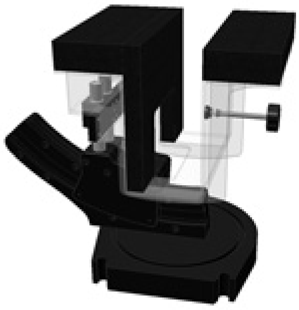
Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard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

Shell Thickness	: 2 ± 0.2 mm (sagging: <1%)
Filling Volume	: Volume Approx. 30 liters
Dimensions	: Major ellipse axis : 600 mm
	Minor axis : 400 mm

7.5 Mounting Device for Transmitters

In combination with the Twin SAM Phantom V4.0/V4.0c or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, CENELEC, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat point).

7.6 Laptop Extensions Kit for Mounting Device



Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.) It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI4 and SAM v6.0 Phantoms.

7.7 Typical Composition of Ingredients for Liquid Tissue

Ingredients (% by weight)	Frequency (MHz)					
	835		1900		2450	
	Head	Body	Head	Body	Head	Body
Water	41.45	52.40	54.90	40.40	62.70	73.20
Salt (NaCl)	1.45	1.40	0.18	0.50	0.50	0.04
Sugar	56.00	45.00	0.00	58.00	0.00	0.00
HEC	1.00	1.00	0.00	1.00	0.00	0.00
Bactericide	0.10	0.10	0.00	0.10	0.00	0.00
Triton X-100	0.00	0.00	0.00	0.00	36.80	0.00
DGBE	0.00	0.00	44.92	0.00	0.00	26.70

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-tetramethylbuthyl)phenyl]ether

The composition of ingredients is according to FCC/OET Bulletin 65 Supplement C.

8 Measurement Process

Area Scan for Maximum Search :

The SAR distribution at the exposed side of the head was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15 mm × 15 mm. The evaluation on the measured area scan gives the interpolated maximum (hot spot) of the measured area.

Cube Scan for Spatial Peak SAR Evaluation :

The 1g and 10g peak evaluations were available for the predefined cube 5×5×7 scans. The grid spacing was 8 mm × 8 mm × 5 mm. The first procedure is an extrapolation to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume in a 1mm grid (35000 points). In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is moved around until the highest averaged SAR is found. This last procedure is repeated for a 10g cube. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

Extrapolation :

The extrapolation is based on a least square algorithm. Through the points in the first 3 cm in all z-axis, polynomials of order four are calculated. This polynomial is then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from one another.

Interpolation :

The maximum interpolated value is searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) are computed by the 3D spline algorithm. The 3D spline is composed of three one-dimensional splines with the "Not a knot" –condition (x, y and z –directions). The volume is integrated with the trapezoidal algorithm.

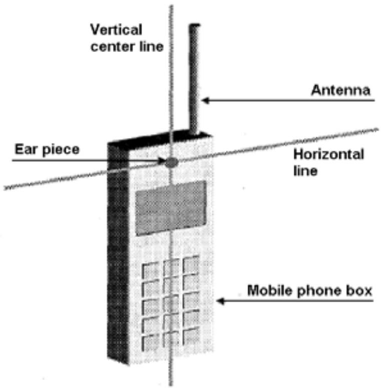
9 Measurement Uncertainties

Uncertainty Component	**Tol. (± %)**	**Prob. Dist.**	**Div.**	**c_i (1g)**	**c_i (10g)**	**Std. Unc. (± %)**		**v_i**
						1g	**10g**	
Measurement System								
Probe calibration	6.0	N	1	1	1	6.0	6.0	∞
Axial isotropy	4.7	R	√3	0.7	0.7	1.9	1.9	∞
Hemispherical isotropy	9.6	R	√3	0.7	0.7	3.9	3.9	∞
Boundary effect	1.0	R	√3	1	1	0.6	0.6	∞
Linearity	4.7	R	√3	1	1	2.7	2.7	∞
System detection limits	1.0	R	√3	1	1	0.6	0.6	∞
Readout electronics	0.3	N	1	1	1	0.3	0.3	∞
Response time	0.8	R	√3	1	1	0.5	0.5	∞
Integration time	2.6	R	√3	1	1	1.5	1.5	∞
RF ambient conditions – noise	3.0	R	√3	1	1	1.7	1.7	∞
RF ambient conditions – reflections	3.0	R	√3	1	1	1.7	1.7	∞
Probe positioner mechanical tolerance	0.4	R	√3	1	1	0.2	0.2	∞
Probe positioning with respect to phantom shell	2.9	R	√3	1	1	1.7	1.7	∞
Extrapolation, interpolation and integration algorithms for max. SAR evaluation	1.0	R	√3	1	1	0.6	0.6	∞
Test Sample Related								
Test sample positioning	3.4	N	1	1	1	3.4	3.4	23
Device holder uncertainty	2.9	N	1	1	1	2.9	2.9	5
Output power variation – SAR drift measurement	5.0	R	√3	1	1	2.9	2.9	∞
Phantom and Tissue Parameters								
Phantom uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid conductivity – deviation from target	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid Conductivity – measurement uncertainty	3.2	N	1	0.64	0.43	2.0	1.4	5
Liquid Permittivity – deviation from target	5.0	R	√3	0.6	0.49	1.7	1.4	∞
Liquid Permittivity – measurement uncertainty	3.0	N	1	0.6	0.49	1.8	1.5	5
Combined Standard Uncertainty		RSS				11.0	10.8	
Expanded Uncertainty (95% Confidence Interval)		k=2				**22.1**	**21.5**	

NOTES
1. Tol. : tolerance in influence quantity
2. Prob. Dist. : probability distributions
3. N, R : normal, rectanglar
4. Div. : divisor used to obtain standard uncertainty
5. c_i : sensitivity coefficient
6. Std. Unc. : standard uncertainty
7. Measurement uncertainties are according to IEEE Std. 1528 and IEC 62209-1.

10 Test Arrangement

10.1 Cheek-Touch Position



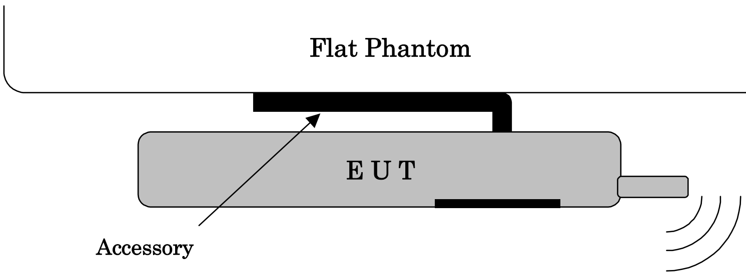
1. Position the device with the vertical center line of the body of the device and the horizontal line crossing the center of the ear piece in a plane parallel to the sagittal plane of the phantom.
2. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference points (M, RE and LE) and align the center of the ear piece with the line RE-LE.
3. Translate the mobile phone box towards the phantom with the ear piece aligned with the line RE-LE until the phone touches the ear.
4. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the box until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.

10.2 Ear-Tilt Position

1. Position the device in the “Cheek/Touch Position”.
2. While maintaining the device in the reference plane and pivoting against the ear, move it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

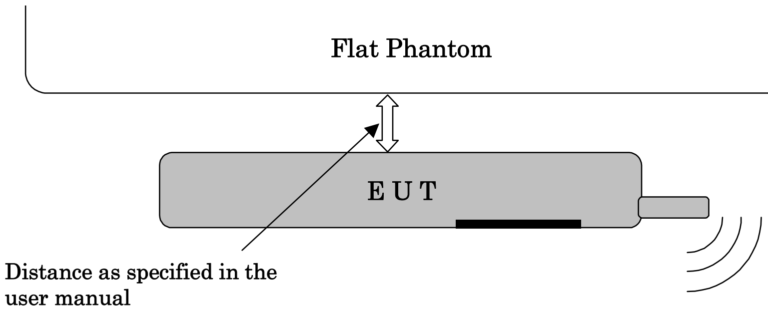
10.3 Body-worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. Both the physical spacing to the body of the user as dictated by the accessory and the materials used in an accessory affect the SAR produced by the transmitting device. For purpose of determining test requirements, accessories may be divided into two categories: those that do not contain metallic components and those that do.



When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

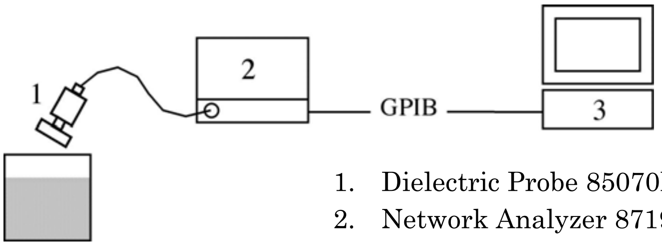
Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.



Lap-held device (e.g. laptop computer)
SAR is tested for a lap-held position with the bottom of the computer in direct contact against a flat phantom.

11 Tissue Verification

The tissue dielectric parameters of the tissue medium at the middle of a device transmission band should be within ±5% of the parameters specified at that target frequency. It is verified by using the dielectric probe and the network analyzer.



1. Dielectric Probe 85070D
2. Network Analyzer 8719ET
3. Personal Computer

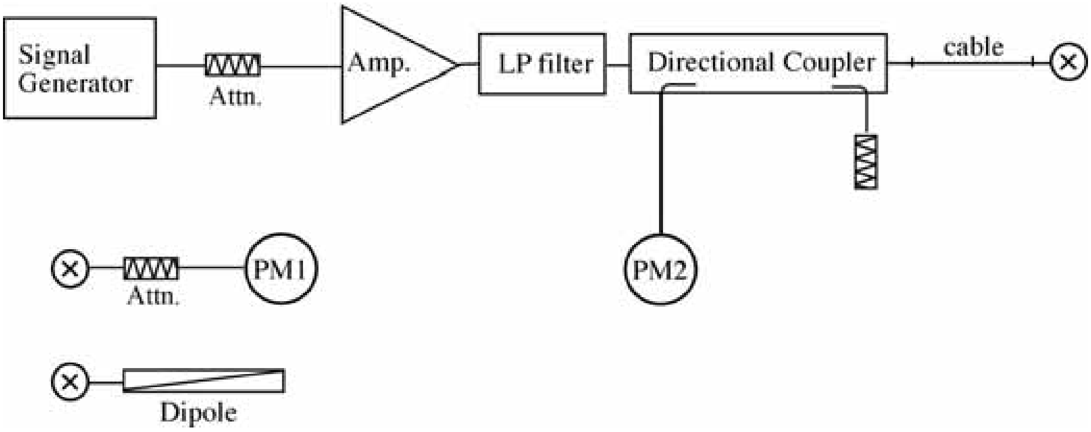
Tissue Verification Results :

Ambient Conditions : 23°C 58%						Date : June 7, 2012	
Liquid	Freq. [MHz]	Temp. [°C]	Parameters	Target	Measured	Deviation [%]	Limit [%]
Body	2450	23.0	Permittivity	52.7	52.08	-1.18	± 5
			Conductivity	1.95	1.945	-0.26	± 5

12 System Validation

The power meter PM1 (including Attenuator) measures the forward power at the location of the validation dipole connector. The signal generator is adjusted for 250 mW at the dipole connector and the power meter PM2 is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2.

The dipole antenna is matched to be used near flat phantom filled with tissue simulating solution. A specific distance holder is used in the positioning of the antenna to ensure correct spacing between the phantom and the dipole.



12.1 System Validation Results for 2450 MHz

System Validation Dipole : D2450V2, S/N: 714								
Ambient Conditions : 23°C 58%			Depth of Liquid : 15.0 cm			Date : June 7, 2012		
Liquid	Freq. [MHz]	Temp. [°C]	Measured SAR (mW/g)		Normalized to 1 W	Target	Deviation [%]	Limit [%]
Body	2450	23.0	1g	13.3	53.20	51.6	+3.10	± 10
			10g	6.19	24.76	24.2	+2.31	± 10

NOTES :
1. The results were normalized to 1 W forward power.
2. The target SAR values of SPEAG validation dipoles are given in the calibration data.
3. Please refer to attachment for the result presentation in plot format.

13 RF Output Power Measurements

The following procedures had been used to prepare the EUT for the SAR test.

13.1 WLAN

To setup the desire channel frequency and the maximum output power, RF test mode prepared by the manufacturer was used to program the EUT.

Conducted power measurement results

Mode		Conducted Average Power (dBm)		
		1 ch (2412 MHz)	6 ch (2437 MHz)	11 ch (2462 MHz)
802.11b	1 Mbps	15.12	15.26	15.35
	2 Mbps	15.15	15.30	15.39
	5.5 Mbps	15.12	15.26	15.36
	11 Mbps	15.16	15.23	15.34
802.11g	6 Mbps	12.29	12.49	12.53
	9 Mbps	12.24	12.45	12.51
	12 Mbps	12.25	12.42	12.47
	18 Mbps	12.28	12.50	12.53
	24 Mbps	12.19	12.41	12.42
	36 Mbps	12.12	12.33	12.35
	48 Mbps	12.15	12.37	12.40
	54 Mbps	12.15	12.34	12.39
802.11n	6.5 Mbps	11.18	11.31	11.36
	13 Mbps	11.18	11.30	11.36
	19.5 Mbps	11.17	11.29	11.36
	26 Mbps	11.16	11.29	11.35
	39 Mbps	11.16	11.28	11.34
	52 Mbps	11.18	11.29	11.34
	58.5 Mbps	11.18	11.28	11.35
	65 Mbps	11.18	11.29	11.36

Note(s):

1. KDB 248227 – SAR is not required for 802.11g/n channels when the maximum average output power is less than ¼ dB higher than that measured on the corresponding 802.11b channels.
2. KDB 248227 – SAR testing at higher data rates is not required when the maximum average output power for each of these configurations is less than ¼ dB higher than those measured at the lowest data rate.

13.2 Bluetooth

For the Bluetooth operation, the client supplied a special driving program to program the EUT to continually transmit the specified maximum power.

Conducted power measurement results

Mode		Conducted Average Power (dBm)		
		0 ch (2402 MHz)	39 ch (2441 MHz)	78 ch (2480 MHz)
Bluetooth	BDR	5.02	5.32	5.36
	EDR	5.74	6.06	6.08

The output of Bluetooth transmitter is ≤ 60 / f $_{(GHz)}$ [mW], so the SAR evaluation for Bluetooth is not required.

14 SAR Measurements

802.11b (1 Mbps) – Duty Cycle 100%					Date : June 7, 2012	
Test Position	Ch No.	Frequency [MHz]	Tx Power [dBm]	Limit [mW/g]	1g SAR [mW/g]	Tissue Temp. [°C]
Top Edge	6	2437	15.26	1.6	0.089	23.0
Bottom Edge	6	2437	15.26	1.6	0.158	23.0
Left Edge	6	2437	15.26	1.6	0.036	23.0
Right Edge	1	2412	15.12	1.6	0.725	23.0
	6	2437	15.26		0.694	23.0
	11	2462	15.35		0.866	23.0
Front Side	6	2437	15.26	1.6	0.102	23.0
Rear Side	6	2437	15.26	1.6	0.243	23.0

NOTES :
1. Depth of Liquid : 15.0 cm
2. Transmitter power was measured at the antenna-conducted terminal.
3. SAR test was performed in the middle channel only as the measured level was <50% (0.8 mW/g) of the SAR limit as stated in FCC “Public Notice DA 02-1438” by the SCC-34/SC-2. Testing in the low and high channel is optional.
4. SAR is tested directly against the flat phantom.
5. Please refer to attachment for the result presentation in plot format.

16 Test Instruments

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
E-Field Probe	EX3DV4	SPEAG	S-17	2011/9	1 Year
DAE	DAE4	SPEAG	S-3	2011/11	1 Year
Robot	RX60L	SPEAG	S-7	------	N/A
Probe Alignment Unit	LB1RX60L	SPEAG	S-13	------	N/A
Network Analyzer	8719ET	Agilent	B-53	2011/9	1 Year
Dielectric Probe Kit	85070D	Agilent	B-54	------	N/A
2450MHz Dipole	D2450V2	SPEAG	S-6	2011/11	1 Year
Signal Generator	MG3681A	Anritsu	B-3	2011/9	1 Year
RF Power Amplifier	A0840-3833-R	R&K	A-34	------	N/A
Low Pass Filter	LSM2700-3BA	LARK	D-92	2011/11	1 Year
Power Meter	N1911A	Agilent	B-63	2011/7	1 Year
Power Sensor	N1921A	Agilent	B-64	2011/7	1 Year
Attenuator	2-10	Weinschel	D-40	2011/9	1 Year

17 Appendix

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