EMC Technologies Pty Ltd
ABN 82 057 105 549
176 Harrick Road
Keilor Park
Victoria Australia 3042

Ph: + 613 9365 1000
Fax: + 613 9331 7455
email: melb@emctech.com.au

SAR Test Report

Report Number: M110841

Test Sample:	Rugged Portable TABLET Computer
Radio Module:	Bluetooth WT41E-HCI3
Host PC Model Number:	CC61
Tested For:	Handheld Group AB
PC System FCC ID:	YY3-017LRBT
Date of Issue:	6th September 2011

CONTENTS

SAR TEST REPORT

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1.0 GENERAL INFORMATION

Table 1

Test Sample:	Rugged Portable TABLET Computer
Model Name:	CC61
Radio Module:	Bluetooth WT41E-HCI3
Interface Type:	Mini-PCI Module
Device Category:	Portable Transmitter
Test Device:	Pre-Production Unit
PC System FCC ID:	YY3-017LRBT
RF exposure Category:	General Population/Uncontrolled
Tested for:	Handheld Group AB
Address:	Kinnegatan 17A SE-531 33 Lidkoping, Sweden
Contact:	Jerker Hellstrom
Phone:	+46 510 54 71 70
Test Standard/s:	**1.** Evaluating Compliance with FCC Guidelines For Human Exposure to Radiofrequency Electromagnetic Fields Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01) **2.** Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands), RSS-102
Statement Of Compliance:	The Handheld TABLET Computer CC61 with Bluetooth module WT41E-HCI3 complied with the FCC General public/uncontrolled RF exposure limits of 1.6mW/g per requirements of 47CFR2.1093(d). It also complied with IC RSS-102 requirements.
Test Dates:	26th August and 1st September 2011
Test Officer:	Jason Cameron
Authorised Signature:	Peter Jakubiec

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SAR TEST REPORT
Portable TABLET Computer
Model: CC61
Report Number: M110841

2.0 INTRODUCTION (Information supplied by the client)

Testing was performed on the Handheld Rugged TABLET PC, Model: CC61 with Mini-PCI BLUEGIGA Bluetooth Module, Model: WT41E-HCI3. The Bluetooth module is an OEM product. The Mini-PCI Bluetooth Module was tested in the dedicated host Model CC61. The OEM Bluetooth module WT41E is modular certified under FCC ID: QOQWT41E. The Host tablet PC CC61 also is previously certified under FCC ID: YY3-017LRBT

The system tested will be referred to as the DUT throughout this report.

SAR testing was conducted on the sample that is equipped with the Bluetooth transmitter and Bluetooth antenna. Additionally the test sample had the WWAN and WLAN antennas present during testing but WWAN and WLAN antennas were not transmitting.

The intention of this reporting is to add the WT41E Bluetooth module to the host tablet PC CC61. All required WT41E-HCI3 Bluetooth SAR test results are reported within this report. There are colour variations of the tablet PC, gray colour or yellow colour case. The material, size, and shape of the case is identical, it's just the colour that is different.
This report is to be used in conjunction with Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch report Number SA990819C03. The measurement test results mentioned herein only apply to the 2450MHz Bluetooth frequency band.

3.0 TEST SAMPLE TECHNICAL INFORMATION

(Information supplied by the client)

3.1 DUT (Bluetooth) Details

Table 2

Transmitter:	Bluetooth
FCC ID:	QOQWT41E-HCI3-E
Model Number:	WT41E-HCI3
Manufacturer:	BLUEGIGA
Network Standard:	Bluetooth™ RF Test Specification
Modulation Type:	Frequency Hopping Spread Spectrum (FHSS)
Frequency Range:	2402 MHz to 2480 MHz
Number of Channels:	79
Carrier Spacing:	1.0 MHz
Antenna Type:	FXP70 Freedom 2.4GHz 5dBi Gain
Max. Output Power:	16dBm

Table 3

Channel Number	Frequency (MHz)	Bluetooth Utility power setting	
		Power (Ext, Int)	Configuration
1	**2402**	255, 51	Packet Type = 15 Packet Size = 339 CFG PKT
2	2403		
-	-		
39	2440		
40	**2441**	255, 56	
41	2442		
-	-		
78	2479		
79	**2480**	255, 51	

3.2 Test Sample Accessories

3.2.1 Battery Types

One type of Handheld Lithium Ion battery is used to power the DUT.

Table 4 Battery Details

Model	Li-Polymer ALG7-08A
V/mAh	7.4V/2600mAh
Serial Number Batt. #1	JTA110200068
Serial Number Batt. #2	JTA104000031

4.0 TEST SIGNAL, FREQUENCY AND OUTPUT POWER

CSR's BluTest test tool was used to configure the Bluetooth for testing. The DUT Bluetooth had a total of 79 channels within the 2402 to 2480 MHz frequency band. For the SAR measurements the device was operating in continuous transmit mode using programming codes supplied by Handheld. The fixed frequency channels used in the testing are shown in Table Below.

The frequency span of the 2450 MHz range Band was more than 10MHz consequently; the SAR levels of the test sample were measured for lowest, centre and highest channels in the applicable modes. There were no wires or other connections to the DUT during the SAR measurements.

At the beginning of the SAR tests, the conducted power of the device was measured after temporary modification of antenna connector inside the device's TX RX compartment. Measurements were performed with a calibrated Power Meter.

Table 5 Frequency and Conducted Power Results Bluetooth

Channel	Channel Frequency MHz	Maximum Conducted Output Power Measured (dBm)
Channel 01	2402	16.41
Channel 40	2441	18.61
Channel 79	2480	17.60

4.1 Battery Status

The device battery was fully charged prior to commencement of measurement. Each SAR test was completed within 30 minutes. The battery condition was monitored by measuring the RF field at a defined position inside the phantom before the commencement of each test and again after the completion of the test. It was not possible to perform conducted power measurements at the output of the device, at the beginning and end of each scan due to lack of a suitable antenna port. The uncertainty associated with the power drift was less than 12% and was assessed in the uncertainty budget.

5.0 DETAILS OF TEST LABORATORY

5.1 Location

EMC Technologies Pty Ltd
176 Harrick Road
Keilor Park, (Melbourne) Victoria
Australia 3042

Telephone: +61 3 9365 1000
Facsimile: +61 3 9331 7455
email: melb@emctech.com.au
website: www.emctech.com.au

5.2 Accreditations

EMC Technologies Pty. Ltd. is accredited by the National Association of Testing Authorities, Australia (NATA).
NATA Accredited Laboratory Number: 5292

EMC Technologies Pty Ltd is NATA accredited for the following standards:

Table 6

AS/NZS 2772.1:	RF and microwave radiation hazard measurement
ACMA:	Radio communications (Electromagnetic Radiation - Human Exposure) Standard 2003 + Amdt (No. 1):2007
FCC:	Guidelines for Human Exposure to RF Electromagnetic Field OET65C 01/01
EN 50360: 2001	Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3 GHz)
EN 62209-1:2006	Human Exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models instrumentation and procedures. **Part 1:** Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (300 MHz to 3 GHz)
***EN62209-2:2010**	Human Exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models instrumentation and procedures **Part 2**: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz
IEEE 1528: 2003	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head Due to Wireless Communications Devices: Measurement Techniques.

*NATA accreditation pending.
Refer to NATA website www.nata.asn.au for the full scope of accreditation.

5.3 Environmental Factors

The measurements were performed in a shielded room with no background RF signals. The temperature in the laboratory was controlled to within 20±1°C, the humidity was in the range 45% to 48%. The liquid parameters are measured daily prior to the commencement of each test. Tests were performed to check that reflections within the environment did not influence the SAR measurements. The noise floor of the DASY5 SAR measurement system using the SN1380 probe was less than 5μV in both air and liquid mediums.

6.0 DESCRIPTION OF SAR MEASUREMENT SYSTEM

Table 7

Applicable Head Configurations	: None
Applicable Body Configurations	: Lap Held Position
	: Edge On Position

6.1 Probe Positioning System

The measurements were performed with the state-of-the-art automated near-field scanning system **DASY5 Version 52** from Schmid & Partner Engineering AG (SPEAG). The DASY5 fully complies with the OET65 C (01-01), IEEE 1528, EN62209-1 and EN62209-2 SAR measurement requirements.

6.2 E-Field Probe Type and Performance

The SAR measurements were conducted with SPEAG dosimetric probe ET3DV6 Serial: 1380. Please refer to appendix C for detailed information.

6.3 System verification

6.3.1 System verification Results @ 2450MHz

The following tables lists the dielectric properties of the tissue simulating liquid measured prior to SAR system verification. The results of the system verification are listed in columns 4 and 5. The forward power into the reference dipole for SAR system verification was adjusted to 250 mW.

Table 8 System verification Results (Dipole: SPEAG D2450V2 SN: 724)

1. System verification Date	2. ϵr (measured)	3. σ (mho/m) (measured)	4. Measured SAR 1g (mW/g)	5. Measured SAR 10g (mW/g)
26th Aug 2011	51.3	1.98	14.8	6.98
1st Sept 2011	51.0	1.95	14.6	6.88

6.3.2 Deviation from reference system verification values

The reference SAR value is the SAR system verification result obtained in a specific dielectric liquid using the validation dipole (D2450V2) after system component calibration. The measured one-gram SAR should be within 10% of the expected target reference values shown in table below.

Table 9 Deviation from reference system verification values @ 2450MHz

Date	Measured SAR 1g (mW/g)	Measured SAR 1g (Normalized to 1W)	EMCT Calibration reference SAR Value 1g (mW/g)	Deviation From EMCT Reference 1g (%)
26th Aug 2011	14.8	59.20	60	-1.33
1st Sept 2011	14.6	58.40	60	-2.67

NOTE: All reference system verification values are referenced to 1W input power.

6.3.3 Liquid Depth 15cm

During the SAR measurement process the liquid level was maintained to a level of 15cm with a tolerance of 0.5cm.

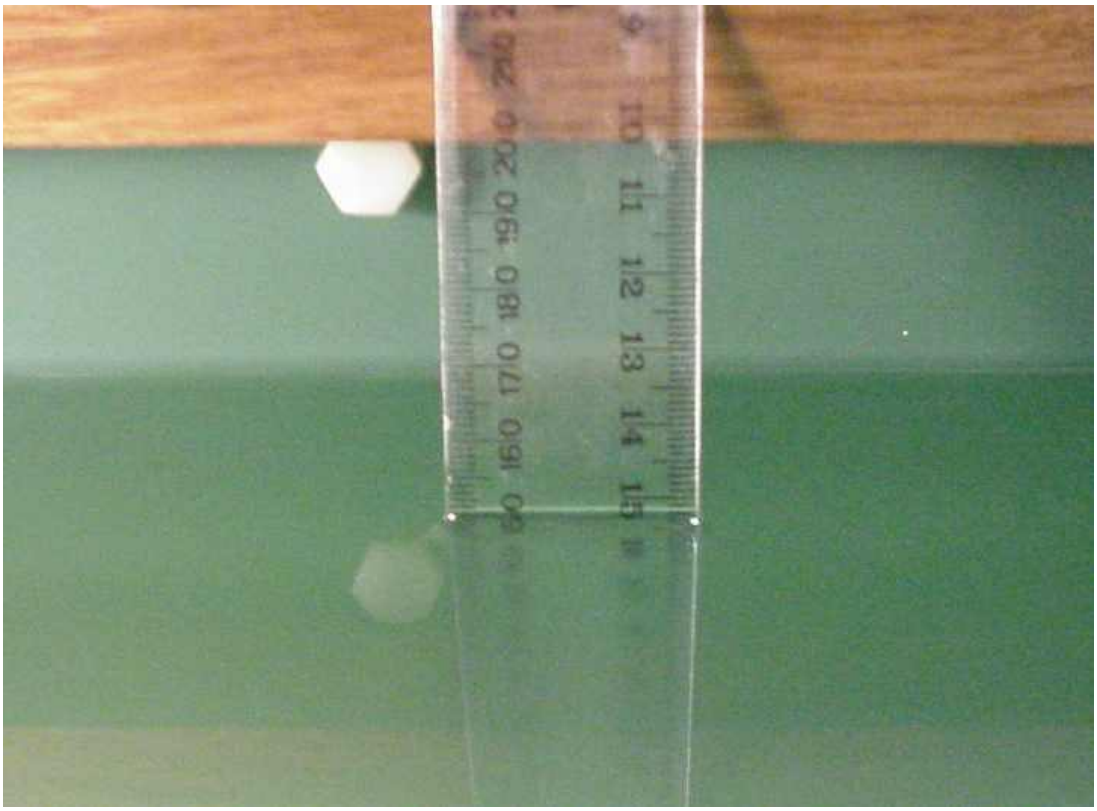

Photo of liquid Depth in Flat Phantom

6.4 Phantom Properties

The phantoms used during the testing comply with the OET65 C (01-01), IEEE 1528 and EN62209-1 and EN62209-2 SAR measurement requirements.

6.5 Tissue Material Properties

The dielectric parameters of the brain simulating liquid were measured prior to SAR assessment using the HP85070A dielectric probe kit and HP8753ES Network Analyser. The actual dielectric parameters are shown in the following table.

Table 10 Measured Body Simulating Liquid Dielectric Values

Frequency Band	∈r (measured range)	∈r (target)	σ (mho/m) (measured range)	σ (target)	ρ kg/m^3
2402 MHz Muscle	51.3	52.7 ±5% (50.1 to 55.3)	1.88	1.95 ±5% (1.85 to 2.05)	1000
2441 MHz Muscle	51.3	52.7 ±5% (50.1 to 55.3)	1.96	1.95 ±5% (1.85 to 2.05)	1000
2480 MHz Muscle	50.9	52.7 ±5% (50.1 to 55.3)	1.99	1.95 ±5% (1.85 to 2.05)	1000

NOTE: The brain and muscle liquid parameters were within the required tolerances of ±5%.

6.5.1 Liquid Temperature and Humidity

The humidity and dielectric/ambient temperatures were recorded during the assessment of the tissue material dielectric parameters. The difference between the ambient temperature of the liquid during the dielectric measurement and the temperature during tests was less than |2|°C.

Table 11 Temperature and Humidity recorded for each day

Date	Ambient Temperature (°C)	Liquid Temperature (°C)	Humidity (%)
26th Aug 2011	19.8	19.7	48
1st Sept 2011	20.5	20.3	45

6.6 Simulated Tissue Composition Used for SAR Test

The tissue simulating liquids are created prior to the SAR evaluation and often require slight modification each day to obtain the correct dielectric parameters.

Table 12 Tissue Type: Brain @ 2450MHz

Volume of Liquid: 30 Litres

Approximate Composition	% By Weight
Distilled Water	62.7
Salt	0.5
Triton X-100	36.8

*Refer "OET Bulletin 65 97/01 P38"

Table 13 Tissue Type: Muscle @ 2450MHz

Volume of Liquid: 60 Litres

Approximate Composition	% By Weight
Distilled Water	73.2
Salt	0.04
DGBE	26.7

6.7 Device Holder for Laptops and P 10.1 Phantom

A low loss clamp was used to position the DUT underneath the phantom surface.
Refer to Appendix A for photographs of device positioning

7.0 SAR MEASUREMENT PROCEDURE USING DASY5

The SAR evaluation was performed with the SPEAG DASY5 system. A summary of the procedure follows:

a) A measurement of the SAR value at a fixed location is used as a reference value for assessing the power drop of the DUT. The SAR at this point is measured at the start of the test, and then again at the end of the test.

b) The SAR distribution at the exposed flat section of the flat phantom is measured at a distance of 4 mm from the inner surface of the shell. The area covers the entire dimension of the DUT and the horizontal grid spacing is 15 mm x 15 mm. The actual Area Scan has dimensions of 90mm x 270mm surrounding the test device. Based on this data, the area of the maximum absorption is determined by Spline interpolation.

c) Around this point, a volume of 30 mm x 30 mm x 30 mm is assessed by measuring 7 x 7 x 7 points. On the basis of this data set, the spatial peak SAR value is evaluated with the following procedure:

(i) The data at the surface are extrapolated, since the centre of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 4 mm. The extrapolation is based on a least square algorithm. A polynomial of the fourth order is calculated through the points in z-axes. This polynomial is then used to evaluate the points between the surface and the probe tip.

(ii) The maximum interpolated value is searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g and 10 g) are computed using the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the “Not a knot”- condition (in x, y and z-direction). The volume is integrated with the trapezoidal – algorithm. One thousand points (10 x 10 x 10) are interpolated to calculate the averages.

(iii) All neighbouring volumes are evaluated until no neighbouring volume with a higher average value is found.

(iv) The SAR value at the same location as in Step (a) is again measured to evaluate the actual power drift.

8.0 MEASUREMENT UNCERTAINTY

The uncertainty analysis is based on the template listed in the IEEE Std 1528-2003 for both device SAR tests and System verification uncertainty. The measurement uncertainty of a specific device is evaluated independently and the total uncertainty for both evaluations (95% confidence level) must be less than 30%.

Table 14 Uncertainty Budget for DASY5 Version 52 – DUT SAR test 2450MHz

Error Description	Uncert. Value	Prob. Dist.	Div.	C_i (1g)	C_i (10g)	1g u_i	10g u_i	v_i
Measurement System								
Probe Calibration	5.5	N	1.00	1	1	5.50	5.50	∞
Axial Isotropy	4.7	R	1.73	0.7	0.7	1.90	1.90	∞
Hemispherical Isotropy	9.6	R	1.73	0.7	0.7	3.88	3.88	∞
Boundary Effects	1	R	1.73	1	1	0.58	0.58	∞
Linearity	4.7	R	1.73	1	1	2.71	2.71	∞
System Detection Limits	1	R	1.73	1	1	0.58	0.58	∞
Readout Electronics	0.3	N	1.00	1	1	0.30	0.30	∞
Response Time	0.8	R	1.73	1	1	0.46	0.46	∞
Integration Time	2.6	R	1.73	1	1	1.50	1.50	∞
RF Ambient Noise	3	R	1.73	1	1	1.73	1.73	∞
RF Ambient Reflections	3	R	1.73	1	1	1.73	1.73	∞
Probe Positioner	0.4	R	1.73	1	1	0.23	0.23	∞
Probe Positioning	2.9	R	1.73	1	1	1.67	1.67	∞
Max. SAR Eval.	1	R	1.73	1	1	0.58	0.58	∞
Test Sample Related								
Test Sample Positioning	2.9	N	1.00	1	1	2.90	2.90	145
Device Holder Uncertainty	3.6	N	1.00	1	1	3.60	3.60	5
Output Power Variation – SAR Drift Measurement	10.46	R	1.73	1	1	6.04	6.04	∞
Phantom and Setup								
Phantom Uncertainty	4	R	1.73	1	1	2.31	2.31	∞
Liquid Conductivity – Deviation from target values	5	R	1.73	0.64	0.43	1.85	1.24	∞
Liquid Conductivity – Measurement uncertainty	2.5	N	1.00	0.64	0.43	1.60	1.08	∞
Liquid Permittivity – Deviation from target values	5	R	1.73	0.6	0.49	1.73	1.41	∞
Liquid Permittivity – Measurement uncertainty	2.5	N	1.00	0.6	0.49	1.50	1.23	∞
Combined standard Uncertainty (u_c)						12.0	11.8	
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k= 2			23.9	23.5	

Estimated total measurement uncertainty for the DASY5 measurement system was ±12.0%. The extended uncertainty (K = 2) was assessed to be ±23.9% based on 95% confidence level. The uncertainty is not added to the measurement result.

Table 15 Uncertainty Budget for DASY5 Version 52 – System verification 2450MHz

Error Description	Uncert. Value	Prob. Dist.	Div.	C_i (1g)	C_i (10g)	1g u_i	10g u_i	v_i
Measurement System								
Probe Calibration	5.5	N	1.00	1	1	5.50	5.50	∞
Axial Isotropy	4.7	R	1.73	1	1	2.71	2.71	∞
Hemispherical Isotropy	9.6	R	1.73	0	0	0.00	0.00	∞
Boundary Effects	1	R	1.73	1	1	0.58	0.58	∞
Linearity	4.7	R	1.73	1	1	2.71	2.71	∞
System Detection Limits	1	R	1.73	1	1	0.58	0.58	∞
Readout Electronics	0.3	N	1.00	1	1	0.30	0.30	∞
Response Time	0	R	1.73	1	1	0.00	0.00	∞
Integration Time	0	R	1.73	1	1	0.00	0.00	∞
RF Ambient Noise	1	R	1.73	1	1	0.58	0.58	∞
RF Ambient Reflections	1	R	1.73	1	1	0.58	0.58	∞
Probe Positioner	0.8	R	1.73	1	1	0.46	0.46	∞
Probe Positioning	6.7	R	1.73	1	1	3.87	3.87	∞
Max. SAR Eval.	2	R	1.73	1	1	1.15	1.15	∞
Dipole Related								
Deviation of exp. dipole	5.5	R	1.73	1	1	3.18	3.18	∞
Dipole Axis to Liquid Dist.	2	R	1.73	1	1	1.15	1.15	∞
Input power & SAR drift	5.00	R	1.73	1	1	2.89	2.89	∞
Phantom and Setup								
Phantom Uncertainty	4	R	1.73	1	1	2.31	2.31	∞
SAR Correction	1.9	R	1.73	1	0.84	1.10	0.92	∞
Liquid Conductivity (meas.)	2.5	N	1.00	0.78	0.71	1.95	1.78	∞
Liquid Permittivity (meas.)	2.5	N	1.00	0.26	0.26	0.65	0.65	∞
Temp.unc. - Conductivity	1.7	R	1.73	0.78	0.71	0.77	0.70	∞
Temp. unc. - Permittivity	0.3	R	1.73	0.23	0.26	0.04	0.05	∞
Combined standard Uncertainty (u_c)						9.7	9.6	
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k= 2			19.4	19.3	

Estimated total measurement uncertainty for the DASY5 measurement system was ±9.7%. The extended uncertainty (K = 2) was assessed to be ±19.4% based on 95% confidence level. The uncertainty is not added to the System verification measurement result.

9.0 EQUIPMENT LIST AND CALIBRATION DETAILS

Table 16 SPEAG DASY5 Version 52

Equipment Type	Manufacturer	Model Number	Serial Number	Calibration Due	Used For this Test?
Robot - Six Axes	Staubli	RX90BL	N/A	Not applicable	✓
Robot Remote Control	SPEAG	CS7MB	RX90B	Not applicable	✓
SAM Phantom	SPEAG	N/A	1260	Not applicable	
SAM Phantom	SPEAG	N/A	1060	Not applicable	
Flat Phantom	AndreT	10.1	P 10.1	Not Applicable	✓
Flat Phantom	AndreT	9.1	P 9.1	Not Applicable	
Flat Phantom	SPEAG	ELI 4.0	1101	Not Applicable	
Data Acquisition Electronics	SPEAG	DAE3 V1	359	11-July-2012	
Data Acquisition Electronics	SPEAG	DAE3 V1	442	09-Dec-2011	✓
Probe E-Field - Dummy	SPEAG	DP1	N/A	Not applicable	
Probe E-Field	SPEAG	ET3DV6	1380	09-Dec-2011	✓
Probe E-Field	SPEAG	ET3DV6	1377	8-July-2012	
Probe E-Field	SPEAG	ES3DV6	3029	Not Used	
Probe E-Field	SPEAG	EX3DV4	3563	21-July-2012	
Probe E-Field	SPEAG	EX3DV4	3657	13-Dec-2011	
Antenna Dipole 300 MHz	SPEAG	D300V3	1012	30-Nov-2012	
Antenna Dipole 450 MHz	SPEAG	D450V3	1074	30-Nov-2012	
Antenna Dipole 900 MHz	SPEAG	D900V2	047	5-July-2012	
Antenna Dipole 1640 MHz	SPEAG	D1640V2	314	9-July-2012	
Antenna Dipole 1800 MHz	SPEAG	D1800V2	242	13-July-2012	
Antenna Dipole 1950 MHz	SPEAG	D1950V3	1113	10-Dec -2012	
Antenna Dipole 3500 MHz	SPEAG	D3500V2	1002	13-July-2013	
Antenna Dipole 2450 MHz	SPEAG	D2450V2	724	09-Dec-2012	✓
Antenna Dipole 5600 MHz	SPEAG	D5GHzV2	1008	16-Dec-2011	
RF Amplifier	EIN	603L	N/A	*In test	
RF Amplifier	Mini-Circuits	ZHL-42	N/A	*In test	✓
RF Amplifier	Mini-Circuits	ZVE-8G	N/A	*In test	
Synthesized signal generator	Hewlett Packard	ESG-D3000A	GB37420238	*In test	✓
RF Power Meter	Hewlett Packard	437B	3125012786	23-Aug-2012	✓
RF Power Sensor 0.01 - 18 GHz	Hewlett Packard	8481H	1545A01634	23-Aug-2012	✓
RF Power Meter	Rohde & Schwarz	NRP	101415	5-May-2011	
RF Power Sensor	Rohde & Schwarz	NRP - Z81	100174	16-July-2011	
RF Power Meter Dual	Hewlett Packard	435A	1733A05847	*In test	✓
RF Power Sensor	Hewlett Packard	8482A	2349A10114	*In test	✓
Network Analyser	Hewlett Packard	8714B	GB3510035	22-Sept-2011	
Network Analyser	Hewlett Packard	8753ES	JP39240130	10-Nov-2011	✓
Dual Directional Coupler	Hewlett Packard	778D	1144 04700	*In test	
Dual Directional Coupler	NARDA	3022	75453	*In test	✓

* Calibrated during the test for the relevant parameters.

10.0 TEST METHODOLOGY

The DUT can only be used in Tablet configuration. The Bluetooth antenna location in the DUT is closest to the top left edge of the screen when used in a Primary Landscape configuration.

10.1 Positions

10.1.1 "Lap Held" Position Definition (0mm spacing)

The DUT was tested in the 2.00 mm flat section of the AndreT Flat phantom for the "Lap Held" position. The Transceiver was placed at the bottom of the phantom and suspended in such way that the back of the DUT was touching the phantom. This device orientation simulates the PC's normal use – being held on the lap of the user. A spacing of 0mm ensures that the SAR results are conservative and represent a worst-case position.

10.1.2 "Edge On" Position (Portrait or Landscape)

The DUT was tested in the (2.00 mm) flat section of the AndreT Flat phantom for the "Edge On" position. The Antenna edge of the Transceiver was placed underneath the flat section of the phantom and suspended until the edge touched the phantom. *Refer to Appendix A for photos of measurement positions.*

10.2 List of All Test Cases (Antenna In/Out, Test Frequencies, User Modes)

The DUT has a fixed antenna. Depending on the measured SAR level up to three test channels with the test sample operating at maximum power were recorded. The following table represents the matrix used to determine what testing was required. All relevant provisions of KDB 447498 are applied for SAR measurements of the host system. Due to the screen size <12 inches, KDB 616217 was not used in the SAR evaluation instead "Supplement to the KDB 616217" was followed.

Table 17 Testing configurations

Phantom Configuration	Test Configurations		
	Channel (Low)	Channel (Middle)	Channel (High)
Lap Held		X	
Edge On		X	

Legend

X	Testing Required in this configuration
	Testing required in this configuration only if SAR of middle channel is more than 3dB below the SAR limit or it is the worst case.

11.0 SAR MEASUREMENT RESULTS

The SAR values averaged over 1g tissue masses were determined for the sample DUT for all test configurations listed in section 10.2.

11.1 2450MHz SAR Results

Table below displays the SAR results.

Table 18 SAR MEASUREMENT RESULTS

Test Position	Plot No.	Test Channel	Test Freq (MHz)	Measured 1g SAR Results	Measured Drift (dB)
Lap Held	1	40	2441	0.043	0.18
Edge On Primary Landscape	2	40	2441	0.005	-0.48
Edge On Primary Portrait	3	40	2441	0.003	-0.22
Edge On Secondary Portrait	4	40	2441	0.051	0.16
Edge On Secondary Landscape	5	01	2402	1.13	-0.21
	6	40	2441	**1.21**	0.005
	7	79	2480	1.17	-0.37

NOTE: The measurement uncertainty of 23.9% for 2.45GHz was not added to the result.

The highest SAR level recorded was 1.21 mW/g as evaluated in a 1g cube of averaging mass. This value was obtained in Edge On Secondary Landscape position, utilizing channel 40 (2441 MHz).

12.0 COMPLIANCE STATEMENT

The Handheld TABLET PC, Model: CC61 with Mini-PCI BLUEGIGA Bluetooth Module, Model: WT41E-HCI3 was found to comply with the FCC and RSS-102 SAR requirements.

The highest SAR level recorded was 1.21 mW/g for a 1g cube. This was below the limit of 1.6 mW/g for uncontrolled exposure, even taking into account the measurement uncertainty of 23.9%.

13.0 MULTIBAND EVALUATION CONSIDERATIONS

Handheld Tablet PC, Model: CC61 is equipped with WWAN and WLAN transmitters in addition to the Bluetooth. Report of Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch report Number SA990819C03 relates to SAR testing of CC61 sample WWAN and WLAN transmitters.

According to the FCC SAR evaluation procedures mentioned in KDB447498, when the sum of SAR results (simultaneously transmitting antennas WLAN, WWAN and Bluetooth) is > 1.6mW/g, or the ratio of above sum to the distance between peak SAR locations > 0.3, simultaneous transmission SAR evaluation is required.

According to the results from Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch report Number SA990819C03 report multiband evaluation of Bluetooth and WWAN and Bluetooth and WLAN transmitters was not required because the sum of the highest SAR results for applicable configurations was below the 1.6mW/g SAR limit, and also less than 3dB below the 1.6 mW/g limit threshold, which allowed not testing in upper and lower Bluetooth channels:

Summary of the highest SAR results considered for multiband evaluation:

1) Worst case WWAN SAR: Primary Landscape ”Edge” (report number SA990819C03) position: 0.023 mW/g
   Worst case WLAN SAR: Primary Landscape ”Edge” (report number SA990819C03) position: 0.529 mW/g
   Worst case Bluetooth SAR: Primary Landscape position: 0.005 mW/g

   Sum SAR = 0.023 + 0.529 + 0.005 mW/g <1.6mw/g

2) Worst case WWAN SAR: Lap Held ”Bottom” (report number SA990819C03) position: 0.306 mW/g
   Worst case WLAN SAR: Lap Held ”Bottom” (report number SA990819C03) position: 0.09 mW/g
   Worst case Bluetooth SAR: Lap Held position: 0.042 mW/g

   Sum SAR = 0.306 + 0.09 + 0.042 mW/g <1.6mw/g