FCC OET BULLETIN 65 SUPPLEMENT C 01-01
Class II Permissive Change
IC RSS-102 ISSUE 4

(Enable EVDO mode for Gobi2000)
SAR EVALUATION REPORT

For

Gobi2000 PCI Express Mini Card
Tested inside of Fujitsu LifeBook T Series (T730/TH700)

MODEL: Gobi2000
FCC ID: N7NGOBI2
IC: 2417C-GOBI2

REPORT NUMBER: 10U13550-1, Revision A1

ISSUE DATE: December 22, 2010

Prepared for

Fujitsu Australia Ltd.
570 St Kilda Road
Melbourne, Victoria 3004, Australia

Prepared by

COMPLIANCE CERTIFICATION SERVICES (UL CCS)
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	December 20, 2010	Initial Issue	--
A	December 21, 2010	Updated report, includes 1. Added “Enable EVDO mode for Gobi2000” on cover page and page 5. 2. Fixed some typos on page 5.	Sunny Shih
A1	December 22, 2010	Corrected report number in header	A. Zaffar

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1. ATTESTATION OF TEST RESULTS

Tested for:	Fujitsu Australia Ltd. 570 St Kilda Road Melbourne, Victoria 3004, Australia
EUT description:	Gobi2000 PCI Express Mini Card Tested inside of Fujitsu LifeBook T Series (T730/TH700) (Enable EVDO mode for Gobi2000. Refer to original grant for Gobi2000 UMTS dated 6/3/2010 by disabled EVDO mode)
Model number:	Gobi2000
Device category:	Portable
Exposure category:	General Population/Uncontrolled Exposure
Date tested:	December 9-10, 2010

FCC / IC Rule Parts	Freq. Range [MHz]	Highest 1-g SAR (mW/g)	Limit (mW/g)
22H / RSS-132	824 - 849	0.423 Tablet - Bottom face (Ant open)	1.6
24E / RSS-133	1850 - 1910	1.26 Tablet - Secondary Landscape (Ant closed)	

Applicable Standards	Test Results
FCC OET Bulletin 65 Supplement C 01-01 IC RSS 102 Issue 4	Pass

Compliance Certification Services, Inc. (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government (NIST Handbook 150, Annex A). This report is written to support regulatory compliance of the applicable standards stated above.

Approved & Released For UL CCS By:	Tested By:
Sunny Shih	Devin Chang
Sunny Shih Engineering Team Leader Compliance Certification Services (UL CCS)	Devin Chang EMC Engineer Compliance Certification Services (UL CCS)

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC OET Bulletin 65 Supplement C 01-01, IEEE Std 1528-2003, IC RSS 102 Issue 4 and the following specific FCC Test Procedures.

- KDB 941225 D01 SAR test for 3G devices v02
- KDB 941225 D03 SAR Test Reduction GSM/GPRS/EDGE vo1
- KDB 447498 D01 Mobile Portable RF Exposure v04
- KDB 616217 D03 SAR Supp Note and Netbook Laptop v01

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

Name of Equipment	Manufacturer	Type/Model	Serial No.	Cal. Due date		
				MM	DD	Year
Robot - Six Axes	Stäubli	RX90BL	N/A	N/A		
Robot Remote Control	Stäubli	CS7MB	3403-91535	N/A		
DASY4 Measurement Server	SPEAG	SEUMS001BA	1041	N/A		
Probe Alignment Unit	SPEAG	LB (V2)	261	N/A		
SAM Phantom (SAM1)	SPEAG	QD000P40CA	1185	N/A		
SAM Phantom (SAM2)	SPEAG	QD000P40CA	1050	N/A		
Oval Flat Phantom (ELI 4.0)	SPEAG	QD OVA001 B	1003	N/A		
Dielectric Probe Kit	HP	85070C	N/A	N/A		
S-Parameter Network Analyzer	Agilent	E5071B	MY42100131	8	2	2011
Signal Generator	Agilent	E5071B	MY42100131	8	2	2011
E-Field Probe	SPEAG	EX3DV3	3531	2	23	2011
Thermometer	ERTCO	639-1S	1718	4	30	2011
Data Acquisition Electronics	SPEAG	DAE3 V1	427	7	21	2011
System Validation Dipole	SPEAG	D835V2	4d002	4	23	2011
System Validation Dipole	SPEAG	D1900V2	5d043	11	24	2011
Amplifier	Mini-Circuits	ZVE-8G	90606	N/A		
Amplifier	Mini-Circuits	ZHL-42W	D072701-5	N/A		
Simulating Liquid	SPEAG	M1900	N/A	Within 24 hrs of first test		
Simulating Liquid	SPEAG	M835	N/A	Within 24 hrs of first test		

Note: Per KDB 450824 D02 requirements for dipole calibration, UL CCS has adopted three years calibration intervals. On annual basis, each measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole
2. System validation with specific dipole is within 10% of calibrated value.
3. Return-loss is within 20% of calibrated measurement (test data on file in UL CCS)
4. Impedance is within 5Ω of calibrated measurement (test data on file in UL CCS)

4.2. MEASUREMENT UNCERTAINTY

Measurement uncertainty for 300 MHz to 3 GHz averaged over 1 gram

Component	error, %	Probe Distribution	Divisor	Sensitivity	U (Xi), %
Measurement System					
Probe Calibration (k=1)	5.50	Normal	1	1	5.50
Axial Isotropy	1.15	Rectangular	1.732	0.7071	0.47
Hemispherical Isotropy	2.30	Rectangular	1.732	0.7071	0.94
Boundary Effect	0.90	Rectangular	1.732	1	0.52
Probe Linearity	3.45	Rectangular	1.732	1	1.99
System Detection Limits	1.00	Rectangular	1.732	1	0.58
Readout Electronics	0.30	Normal	1	1	0.30
Response Time	0.80	Rectangular	1.732	1	0.46
Integration Time	2.60	Rectangular	1.732	1	1.50
RF Ambient Conditions - Noise	3.00	Rectangular	1.732	1	1.73
RF Ambient Conditions - Reflections	3.00	Rectangular	1.732	1	1.73
Probe Positioner Mechanical Tolerance	0.40	Rectangular	1.732	1	0.23
Probe Positioning with respect to Phantom	2.90	Rectangular	1.732	1	1.67
Extrapolation, Interpolation and Integration	1.00	Rectangular	1.732	1	0.58
Test Sample Related					
Test Sample Positioning	2.90	Normal	1	1	2.90
Device Holder Uncertainty	3.60	Normal	1	1	3.60
Output Power Variation - SAR Drift	5.00	Rectangular	1.732	1	2.89
Phantom and Tissue Parameters					
Phantom Uncertainty (shape and thickness)	4.00	Rectangular	1.732	1	2.31
Liquid Conductivity - deviation from target	5.00	Rectangular	1.732	0.64	1.85
Liquid Conductivity - measurement (1900MHz Body)	-2.89	Normal	1	0.64	-1.85
Liquid Permittivity - deviation from target	5.00	Rectangular	1.732	0.6	1.73
Liquid Permittivity - measurement (1900MHz Body)	-1.40	Normal	1	0.6	-0.84
Combined Standard Uncertainty Uc(y) =					9.66
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =				19.31	%
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =				1.53	dB

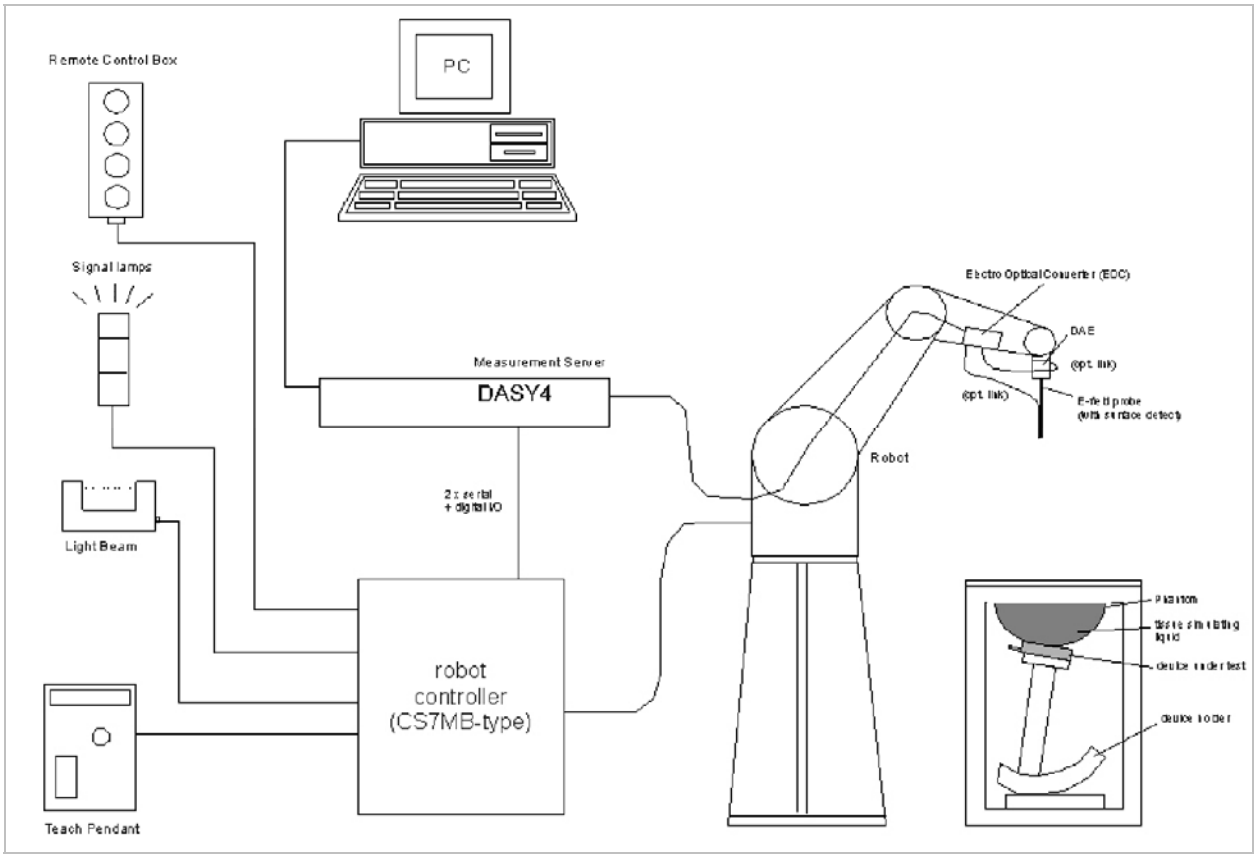
Measurement uncertainty for 300 MHz to 3 GHz averaged over 10 gram

Component	error, %	Probe Distribution	Divisor	Sensitivity	U (Xi), %
Measurement System					
Probe Calibration (k=1)	5.50	Normal	1	1	5.50
Axial Isotropy	1.15	Rectangular	1.732	0.7071	0.47
Hemispherical Isotropy	2.30	Rectangular	1.732	0.7071	0.94
Boundary Effect	0.90	Rectangular	1.732	1	0.52
Probe Linearity	3.45	Rectangular	1.732	1	1.99
System Detection Limits	1.00	Rectangular	1.732	1	0.58
Readout Electronics	0.30	Normal	1	1	0.30
Response Time	0.80	Rectangular	1.732	1	0.46
Integration Time	2.60	Rectangular	1.732	1	1.50
RF Ambient Conditions - Noise	3.00	Rectangular	1.732	1	1.73
RF Ambient Conditions - Reflections	3.00	Rectangular	1.732	1	1.73
Probe Positioner Mechanical Tolerance	0.40	Rectangular	1.732	1	0.23
Probe Positioning with respect to Phantom	2.90	Rectangular	1.732	1	1.67
Extrapolation, Interpolation and Integration	1.00	Rectangular	1.732	1	0.58
Test Sample Related					
Test Sample Positioning	2.90	Normal	1	1	2.90
Device Holder Uncertainty	3.60	Normal	1	1	3.60
Output Power Variation - SAR Drift	5.00	Rectangular	1.732	1	2.89
Phantom and Tissue Parameters					
Phantom Uncertainty (shape and thickness)	4.00	Rectangular	1.732	1	2.31
Liquid Conductivity - deviation from target	5.00	Rectangular	1.732	0.43	1.24
Liquid Conductivity - measurement (1900MHz Body)	-2.89	Normal	1	0.43	-1.24
Liquid Permittivity - deviation from target	5.00	Rectangular	1.732	0.49	1.41
Liquid Permittivity - measurement (1900MHz Body)	-1.40	Normal	1	0.49	-0.69
Combined Standard Uncertainty Uc(y), % =					9.39
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =				18.79	%
Expanded Uncertainty U, Coverage Factor = 2, > 95 % Confidence =				1.50	dB

5. EQUIPMENT UNDER TEST

Gobi2000 PCI Express Mini Card (Manufacturer by Qualcomm / Sierra Wireless) Tested inside of Fujitsu LifeBook T Series (T730/TH700), 12" display screen. T700 and TH700 are identical to each other except color, target market and model designation. The Gobi2000 Module has the features of CDMA2000/1xEVDO data at 850 and 1900 MHz with diversity support for both bands; UMTS/HSDPA/HSUPA data at 850 MHz, Japan 800 MHz, 900 MHz and 2100 MHz with diversity support for all three bands; GSM/GPRS/EDGE data at 850 MHz, 900 MHz, 1800 MHz and 1900 MHz. In the US and Canada, only 850 MHz (Cellular) and 1900 MHz (PCS) bands are used for CDMA2000, UMTS/HSPA and GSM/GPRS/EDGE operation. The Gobi2000 Module was only tested in those two bands for FCC IC application. GPRS Multi-slot class: Class 10 **Note:** The Gobi200 was only tested in CDMA2000 for this filling. Other mode (UMTS/HSPA and GSM/GPRS/EDGE has been addressed in a separate FCC application filed under WWAN application.	
Normal operation:	Laptop mode (display open at 90° to the keyboard) Tablet bottom face, and Tablet edges - Multiple display orientations supporting both portrait and landscape configurations
WWAN Antenna tested:	Nissei Electric Pre-Installed in Fujitsu LifeBook T Series (T730/TH700)
Simultaneous transmission:	WWAN can transmit simultaneously with WiFi and Bluetooth

6. SYSTEM SPECIFICATIONS



The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A 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 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.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 2000 or Windows XP.
- DASY4 software.
- Remote controls with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing validating the proper functioning of the system.

7. COMPOSITION OF INGREDIENTS FOR TISSUE SIMULATING LIQUIDS

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 MΩ+ 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

8. LIQUID PARAMETERS CHECK

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectric parameters are within the tolerances of the specified target values. For frequencies in 300 MHz to just under 2 GHz, the measured conductivity and relative permittivity should be within ± 5% of the target values. For frequencies in the range of 2–3 GHz and above the measured conductivity should be within ± 5% of the target values. The measured relative permittivity tolerance can be relaxed to no more than ± 10%.

Reference Values of Tissue Dielectric Parameters for Head and Body Phantom

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in IEEE Standard 1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations and extrapolated according to the head parameters specified in IEEE Standard 1528.

Target Frequency (MHz)	Head		Body	
	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.8
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.9	55.2	0.97
900	41.5	0.97	55	1.05
915	41.5	0.98	55	1.06
1450	40.5	1.2	54	1.3
1610	40.3	1.29	53.8	1.4
1800 – 2000	40	1.4	53.3	1.52
2450	39.2	1.8	52.7	1.95
3000	38.5	2.4	52	2.73
5800	35.3	5.27	48.2	6

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

8.1. LIQUID CHECK RESULTS FOR 835 MHZ

Simulating Liquid Dielectric Parameters for Body 835 MHz Measured by: David Lee

f (MHz)	Liquid Parameters			Measured	Target	Delta (%)	Limit (%)
835	e'	54.73	Relative Permittivity (ϵ_r):	54.732	55.2	-0.85	± 5
	e"	21.18	Conductivity (σ):	0.984	0.97	1.44	± 5

Liquid Check
Ambient temperature: 24 deg. C; Liquid temperature: 23 deg. C; Relative humidity = 47%
December 10, 2010 06:43 AM

Frequency	e'	e"
800000000.	54.9348	21.3031
805000000.	54.9168	21.2896
810000000.	54.8989	21.2789
815000000.	54.8785	21.2679
820000000.	54.8457	21.2563
825000000.	54.8193	21.2371
830000000.	54.7799	21.2066
835000000.	**54.7317**	**21.1830**
840000000.	54.6760	21.1474
845000000.	54.6182	21.1082
850000000.	54.5526	21.0703
855000000.	54.4881	21.0289
860000000.	54.4193	20.9934
865000000.	54.3488	20.9570
870000000.	54.2827	20.9268
875000000.	54.2136	20.8954
880000000.	54.1555	20.8678
885000000.	54.0991	20.8508
890000000.	54.0430	20.8330
895000000.	53.9912	20.8169
900000000.	53.9546	20.8059
905000000.	53.9240	20.8062
910000000.	53.8968	20.8014
915000000.	53.8790	20.7981
920000000.	53.8531	20.7946
925000000.	53.8333	20.7949
930000000.	53.8106	20.7873
935000000.	53.7893	20.7811
940000000.	53.7682	20.7701
945000000.	53.7309	20.7548
950000000.	53.6900	20.7377

The conductivity (σ) can be given as:

$$\sigma = \omega \varepsilon_0 e'' = 2 \pi f \varepsilon_0 e''$$

where f = target $f * 10^6$
$\varepsilon_0 = 8.854 * 10^{-12}$

8.2. LIQUID CHECK RESULTS FOR 1900 MHz

Simulating Liquid Dielectric Parameters for Body 1900 MHz Measured by: David Lee

f (MHz)	Muscle Liquid Parameters			Measured	Target	Delta (%)	Limit (%)
1900	e'	52.556	Relative Permittivity (ϵ_r):	52.5558	53.3	-1.40	± 5
	e"	13.964	Conductivity (σ):	1.47602	1.52	-2.89	± 5

Liquid Check
Ambient temperature: 24 deg. C; Liquid temperature: 23 deg. C; Relative humidity = 47%
December 09, 2010 07:13 AM

Frequency	e'	e''
1710000000.	53.0697	13.2779
1720000000.	53.0553	13.3162
1730000000.	53.0440	13.3587
1740000000.	53.0336	13.4096
1750000000.	53.0174	13.4597
1760000000.	52.9880	13.5025
1770000000.	52.9519	13.5388
1780000000.	52.9076	13.5704
1790000000.	52.8671	13.5934
1800000000.	52.8272	13.6173
1810000000.	52.7912	13.6435
1820000000.	52.7683	13.6726
1830000000.	52.7485	13.7146
1840000000.	52.7375	13.7625
1850000000.	52.7167	13.8177
1860000000.	52.6911	13.8665
1870000000.	52.6636	13.9038
1880000000.	52.6254	13.9308
1890000000.	52.5906	13.9473
1900000000.	**52.5558**	**13.9643**
1910000000.	52.5267	13.9837

The conductivity (σ) can be given as:

$$\sigma = \omega \varepsilon_0 e'' = 2 \pi f \varepsilon_0 e''$$

where f = target $f * 10^6$

$\varepsilon_0 = 8.854 * 10^{-12}$

9. SYSTEM VERIFICATION

The system performance check is performed prior to any usage of the system in order to verify SAR system measurement accuracy. The system performance check verifies that the system operates within its specifications of ±10%.

System Performance Check Measurement Conditions

- The measurements were performed in the flat section of the SAM twin phantom filled with Head or Body simulating liquid of the following parameters.
- The DASY4 system with an Isotropic E-Field Probe EX3DV3 SN3531 was used for the measurements.
- The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- The coarse grid with a grid spacing of 15 mm was aligned with the dipole.
  For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- Special 7x7x7 fine cube was chosen for cube
- Distance between probe sensors and phantom surface was set to 3 mm.
  For 5 GHz band - Distance between probe sensors and phantom surface was set to 2.5 mm
- The dipole input power (forward power) was 100 mW
- The results are normalized to 1 W input power.

Reference SAR Values for HEAD & BODY-tissue from calibration certificate of SPEAG.

System validation dipole	Cal. certificate #	Cal. date	SAR Avg (mW/g)		
			Tissue:	Head	Body
D835V2	D835V2-4d002_Apr09	04/23/09	SAR_{1g}:	9.64	9.96
			SAR_{10g}:	6.28	6.56
D1900V2	D1900V2-5d043_Nov09	11/24/09	SAR_{1g}:	39.8	40.4
			SAR_{10g}:	20.7	21.4

9.1. SYSTEM CHECK RESULTS FOR D835V2

System validation dipole	Date Tested	Measured (Normalized to 1 W)		Target	Delta (%)	Tolerance (%)
		Tissue:	Body			
D835V2	12/10/10	SAR_{1g}:	10.0	9.96	0.40	±10
		SAR_{10g}:	6.61	6.56	0.76	

9.2. SYSTEM CHECK RESULTS FOR D1900V2

System validation dipole	Date Tested	Measured (Normalized to 1 W)		Target	Delta (%)	Tolerance (%)
		Tissue:	Body			
D1900V2	12/09/10	SAR_{1g}:	40.3	40.4	-0.25	±10
		SAR_{10g}:	21.4	21.4	0.00	

SYSTEM CHECK PLOT for D835V2

Date/Time: 12/10/2010 7:11:08 AM

Test Laboratory: Compliance Certification Services

System Performance Check - D835V2

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d002

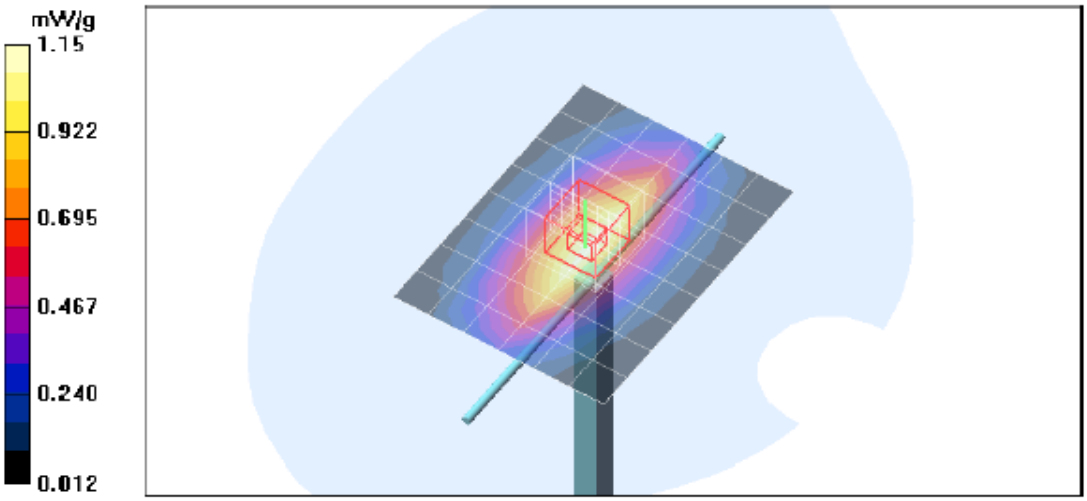
Communication System: CW 835; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.984 mho/m; ε_r = 54.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(10.18, 10.18, 10.18); Calibrated: 2/23/2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: SAM 2 (Twin); Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=100 mW/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.15 mW/g

d=15mm, Pin=100 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.4 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 1 mW/g; SAR(10 g) = 0.661 mW/g
Maximum value of SAR (measured) = 1.16 mW/g



Z-Axis PLOT for D835V2

Date/Time: 12/10/2010 7:35:54 AM

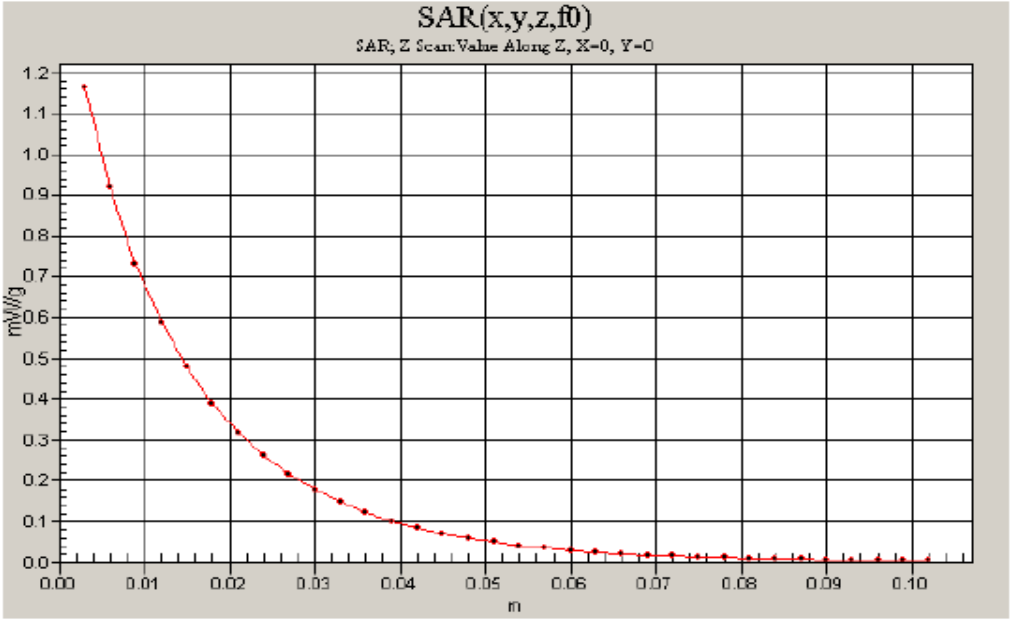
Test Laboratory: Compliance Certification Services

System Performance Check - D835V2

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d002

Communication System: CW 835; Frequency: 835 MHz;Duty Cycle: 1:1

d=15mm, Pin=100 mW/Z Scan (1x1x34): Measurement grid: dx=20mm, dy=20mm, dz=3mm
Maximum value of SAR (measured) = 1.16 mW/g



SYSTEM CHECK PLOT for D1900V2

Date/Time: 12/9/2010 7:33:26 AM

Test Laboratory: Compliance Certification Services

System Performance Check - D1900V2

DUT: Dipole; Type: D1900V2; Serial: 5d043

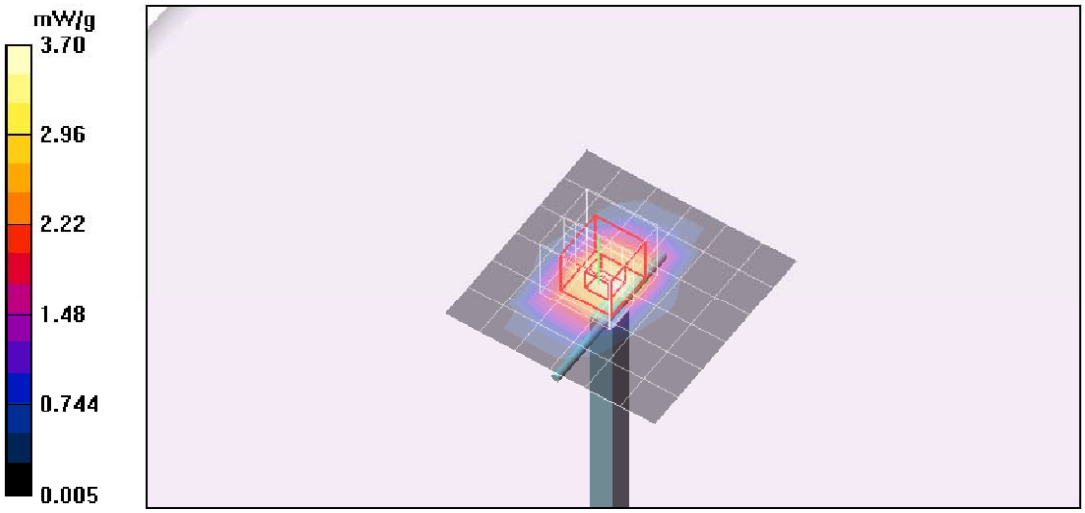
Communication System: System Check Signal - CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.55 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(8.04, 8.04, 8.04); Calibrated: 2/23/2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=10mm, Pin=100mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.70 mW/g

d=10mm, Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.0 V/m; Power Drift = 0.070 dB
Peak SAR (extrapolated) = 7.19 W/kg
SAR(1 g) = 4.03 mW/g; SAR(10 g) = 2.14 mW/g
Maximum value of SAR (measured) = 5.06 mW/g



Z-Axis PLOT for D1900V2

Date/Time: 12/9/2010 7:50:35 AM

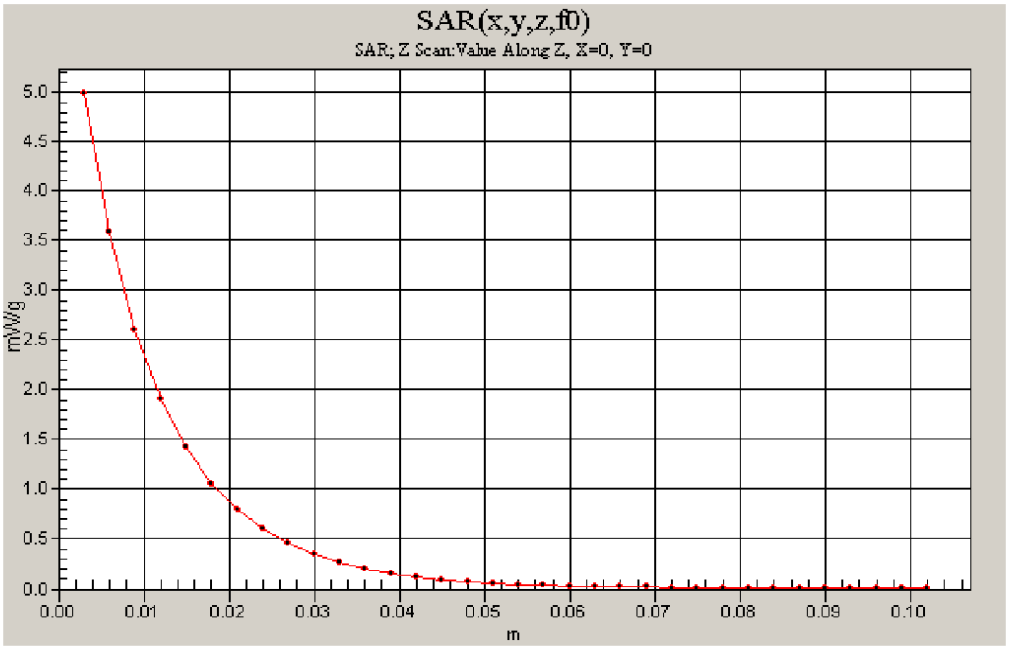
Test Laboratory: Compliance Certification Services

System Performance Check - D1900V2

DUT: Dipole; Type: D1900V2; Serial: 5d043

Communication System: System Check Signal - CW; Frequency: 1900 MHz;Duty Cycle: 1:1

d=10mm, Pin=100mW/Z Scan (1x1x34): Measurement grid: dx=20mm, dy=20mm, dz=3mm
Maximum value of SAR (measured) = 4.99 mW/g



10. DASY4 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 2.1 mm. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties (for example, 1.2 mm for an EX3DV3 probe type).

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 DASY4 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, EN 50361 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.

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 7 x 7 x 9 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.

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.

11. RF OUTPUT POWER VERIFICATION

11.1. CDMA2000 1xRTT

Maximum output power is verified on the Low, Middle and High channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E for 1xRTT.

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
CDMA2000 Mobile Test	B.15.18

- Protocol Rev > 6 (IS-2000-0)
- System ID: 8 (Cell) & 4183 (PCS); NID: 65535 (Cell & PCS); Reg. Ch. #.: 384 (Cell) & 600 (PCS)
- Radio Config (RC) > Please see following table for details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps
  > R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

Cellular Band

Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)					
		Ch. 1013 / 824.7MHz		Ch. 384 / 836.52 MHz		Ch. 777 / 848.31 MHz	
		Average	Peak	Average	Peak	Average	Peak
RC1	2 (Loopback)	24.56		24.30		24.41	
	55 (Loopback)	24.55		24.61		24.42	
RC2	9 (Loopback)	24.53		24.60		24.50	
	55 (Loopback)	24.54		24.65		24.50	
RC3	55 (Loopback)	24.57		24.66		24.55	
	32 (+ F-SCH)	**24.58**		**24.76**		**24.60**	

PCS Band

Radio Configuration (RC)	Service Option (SO)	Conducted Output Power (dBm)					
		Ch. 25 / 1851.25 MHz		Ch. 600 / 1880 MHz		Ch. 1175 / 1908.75 MHz	
		Average	Peak	Average	Peak	Average	Peak
RC1	2 (Loopback)	24.92		25.01		24.52	
	55 (Loopback)	24.73		25.04		24.53	
RC2	9 (Loopback)	24.66		24.96		24.47	
	55 (Loopback)	24.50		24.91		24.44	
RC3	55 (Loopback)	24.68		25.11		24.54	
	32 (+ F-SCH)	**25.01**		**25.12**		**25.10**	

11.2. CDMA200 1xEv-Do

Maximum output power is verified on the Low, Middle and High channels according to procedures in section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rel. 0 and section 4.3.4 of 3GPP2 C.S0033-A for Rev. A.

11.2.1. Release 0 (Rel. 0)

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00800580 (Cell, Reg. # 589): 00000000 : 00000000 : 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > RTAP
  - RTAP Rate > 153.6 kbps
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00840AC0 : 00000000 : 00000000 : 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Parms:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > FTAP (default)
  - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press “Start Data Connection” when “Session Open” appear in “Active Cell”
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

RF Power Output for EV-DO Rel 0

Band	FTAP Rate	RTAP Rate	Channel	f (MHz)	Conducted power (dBm)	
					Average	Peak
Cellular	307.2 kbps (2 slot, QPSK)	153.6 kbps	1013	824.70	24.40	
			384	836.52	24.50	
			777	848.31	24.30	
PCS	307.2 kbps (2 slot, QPSK)	153.6 kbps	25	1851.25	24.50	
			600	1880.00	24.70	
			1175	1908.75	24.30	

11.2.2. Revision A (Rev. A)

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

Application	Rev, License
1xEV-DO Terminal Test	A.09.13

EVDO Rev. A – RETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > RETAP
- R-Data Pkt Size > 4096
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2 > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00800580 (Cell, Reg # 589): 00000000: 00000000: > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

EVDO Rev. A - FETAP

- Call Setup > Shift & Preset
- Cell Power > -60 dBm/1.23 MHz
- Protocol Rev > A (1xEV-DO-A)
- Application Config > Enhanced Test Application Protocol > FETAP
- F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
- Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2 > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00840AC0: 00000000: 00000000: 00000000 > Subnet Mask > 0
- Generator Info > Termination Parameters > Max Forward Packet Duration >16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
- Rvs Power Ctrl > All Up bits (to get the maximum power)

Band	FETAP Traffic Format	RETAP Data Payload Size	Channel	f (MHz)	Conducted power (dBm)	
					Average	Peak
Cellular	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	1013	824.70	24.10	
			384	836.52	24.20	
			777	848.31	24.10	
PCS	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	25	1851.25	24.26	
			600	1880.00	24.28	
			1175	1908.75	24.00	

12. SUMMARY OF SAR TEST RESULTS

12.1. CDMA Cellular

Due to the maximum average output of 1x RTT (RC3, SO32) is greater than ¼ dB higher than that measured for Rel. 0 and Rev A, thus Body SAR measurement was performed with 1xRTT (RC3, SO32).

1. Laptop Mode - Lap-held (with the display open at 90° to the keyboard)

SAR is not required due to separation distance is greater than 20 cm (23.4) from Main antenna-to-user/phantom.

2. Tablet – Bottom face

Separation distance: 3.2 cm from Main antenna-to-phantom

Band	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
Cellular	1xRTT (RC3, SO32)	Retracted (closed)	1013	824.70		
			384	836.52	0.00587	0.00485
			777	848.31		
		Extended (open)	1013	824.70		
			384	836.52	**0.423**	0.303
			777	848.31		

3. Tablet Mode - Primary Landscape (No SAR)

SAR is not required due to separation distance is greater than 20 cm (21.1) from Main antenna-to-user/phantom.

4. Tablet Mode - Secondary Landscape

Separation distance: 0.4 cm from Main antenna-to-phantom

Band	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
Cellular	1xRTT (RC3, SO32)	Retracted (closed)	1013	824.70		
			384	836.52	0.303	0.153
			777	848.31		

5. Tablet Mode - Primary Portrait

Separation distance: 4.7 cm from Main antenna-to-phantom

Band	Mode	Antenna	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
Cellular	1xRTT (RC3, SO32)	Retracted (closed)	1013	824.70		
			384	836.52	0.00863	0.00511
			777	848.31		

Separation distance: 9.9 cm from Main antenna-to-phantom

Band	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
Cellular	1xRTT (RC3, SO32)	Extended (open)	1013	824.70		
			384	836.52	0.292	0.182
			777	848.31		

6. Tablet Mode - Secondary Portrait (No SAR)

Separation distance: 18.4 cm from Main antenna-to-phantom

This is not the most conservative antenna-to-user distance at edge mode. According to KDB 447498 4) b) ii) (2), SAR is required only for the edge with the most conservative exposure conditions.

12.2. CDMA PCS

Due to the maximum average output of 1x RTT (RC3, SO32) is greater than ¼ dB higher than that measured for Rel. 0 and Rev A, thus Body SAR measurement was performed with 1xRTT (RC3, SO32).

1. Laptop Mode - Lap-held (No SAR)

SAR is not required due to separation distance is greater than 20 cm (23.4) from Main antenna-to-user/phantom.

2. Tablet – Bottom face

Separation distance: 3.2 cm from Main antenna-to-phantom

Antenna position	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
PCS	1xRTT (RC3, SO32)	Retracted	25	1851.25		
			600	1880.00	0.018	0.015
			1175	1908.75		
		Extended	25	1851.25		
			600	1880.00	0.257	0.165
			1175	1908.75		

3. Tablet Mode - Primary Landscape (No SAR)

SAR is not required due to separation distance is greater than 20 cm (21.1) from Main antenna-to-user/phantom.

4. Tablet Mode - Secondary Landscape

Separation distance: 0.4 cm from Main antenna-to-phantom

Band	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
PCS	1xRTT (RC3, SO32)	Retracted	25	1851.25	0.996	0.436
			600	1880.00	1.19	0.513
			1175	1908.75	**1.26**	0.542

5. Tablet Mode - Primary Portrait

Separation distance: 4.7 cm from Main antenna-to-phantom

Band	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
PCS	1xRTT (RC3, SO32)	Retracted	25	1851.25		
			600	1880.00	0.074	0.039
			1175	1908.75		

Separation distance: 9.9 cm from Main antenna-to-phantom

Band	Mode	Antenna position	Ch No.	f (MHz)	SAR (mW/g)	
					1-g	10-g
PCS	1xRTT (RC3, SO32)	Extended	25	1851.25		
			600	1880.00	0.436	0.250
			1175	1908.75		

6. Tablet Mode - Secondary Portrait (No SAR)

Separation distance: 18.4 cm from Main antenna-to-phantom

This is not the most conservative antenna-to-user distance at edge mode. According to KDB 447498 4) b) ii) (2), SAR is required only for the edge with the most conservative exposure conditions.

13. WORST-CASE SAR TEST PLOTS

Worst-case SAR Plot for Part 22

Date/Time: 12/10/2010 12:41:35 PM

Test Laboratory: Compliance Certification Services

Cellular 850_Bottom face

DUT: Fujitsu-Australia; Type: NA; Serial: NA

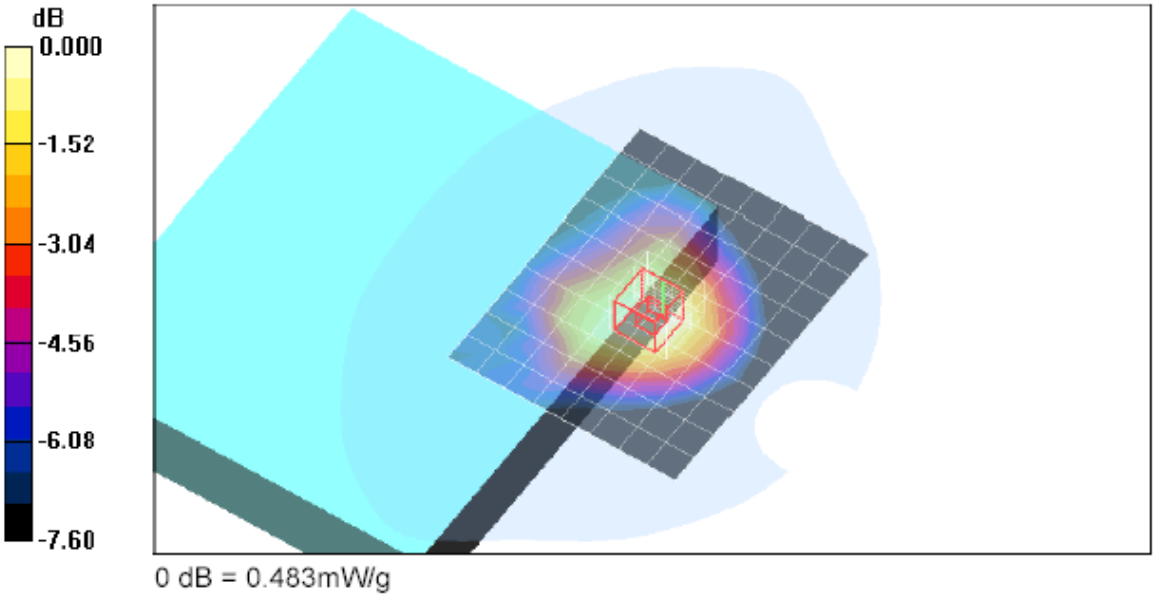
Communication System: CDMA Cell Band; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.985 mho/m; ε_r = 54.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(10.18, 10.18, 10.18); Calibrated: 2/23/2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: SAM 2 (Twin); Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

M-ch_Ant extended/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.468 mW/g

M-ch_Ant extended/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 22.2 V/m; Power Drift = -0.217 dB
Peak SAR (extrapolated) = 0.607 W/kg
SAR(1 g) = 0.423 mW/g; SAR(10 g) = 0.303 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.483 mW/g



0 dB = 0.483mW/g

Worst-case SAR Plot for Part 22 – Z plot

Date/Time: 12/10/2010 1:06:00 PM

Test Laboratory: Compliance Certification Services

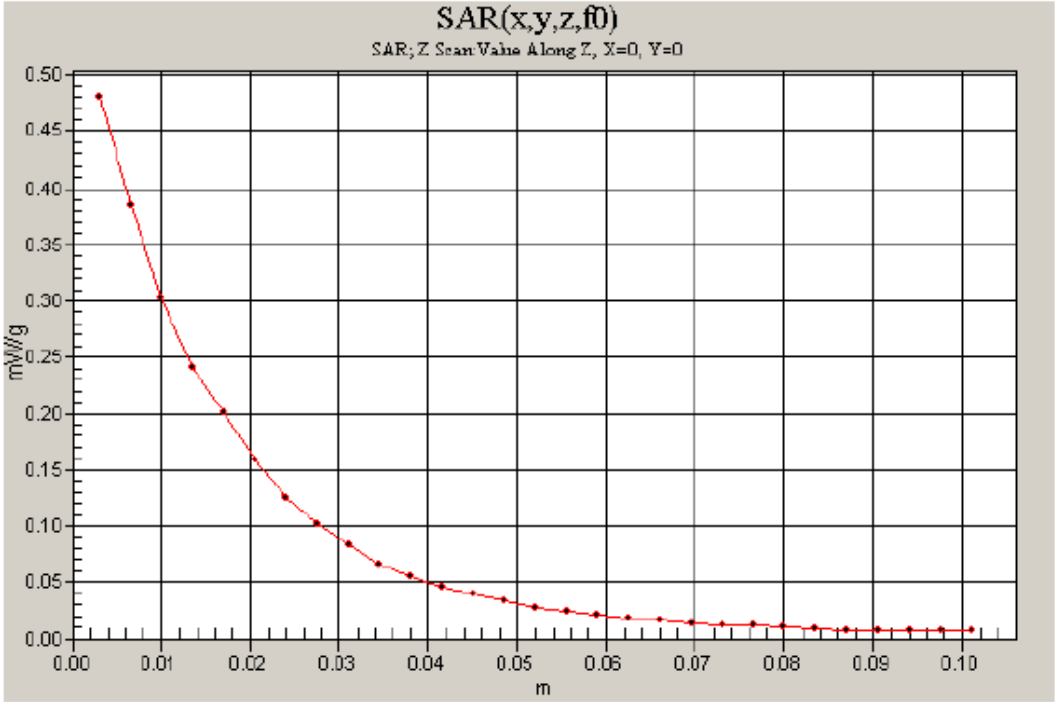
Cellular 850_Bottom face

DUT: Fujitsu-Australia; Type: NA; Serial: NA

Communication System: CDMA Cell Band; Frequency: 836.52 MHz;Duty Cycle: 1:1

M-ch_Ant extended/Z Scan (1x1x29): Measurement grid: dx=20mm, dy=20mm, dz=3.5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.480 mW/g



Worst-case SAR Plot for Part 24

Date/Time: 12/9/2010 1:10:56 PM

Test Laboratory: Compliance Certification Services

CDMA2000 PCS_Secondary Landscape

DUT: Fujitsu-Australia; Type: NA; Serial: NA

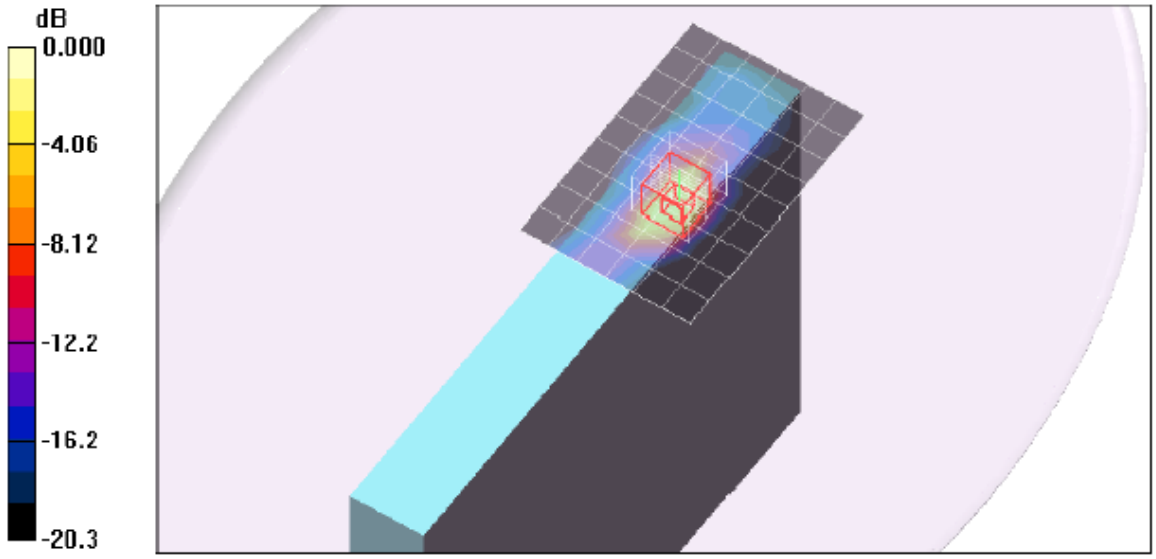
Communication System: CDMA PCS Band; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.42 mho/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 deg. C

DASY4 Configuration:
- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(8.04, 8.04, 8.04); Calibrated: 2/23/2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 7/21/2010
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H-ch_Ant retracted/Area Scan (7x10x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.11 mW/g

H-ch_Ant retracted/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm
Reference Value = 28.6 V/m; Power Drift = -0.142 dB
Peak SAR (extrapolated) = 2.96 W/kg
SAR(1 g) = 1.26 mW/g; SAR(10 g) = 0.542 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.74 mW/g



0 dB = 1.74mW/g

Worst-case SAR Plot for Part 24 - Z plot

Date/Time: 12/9/2010 1:34:41 PM

Test Laboratory: Compliance Certification Services

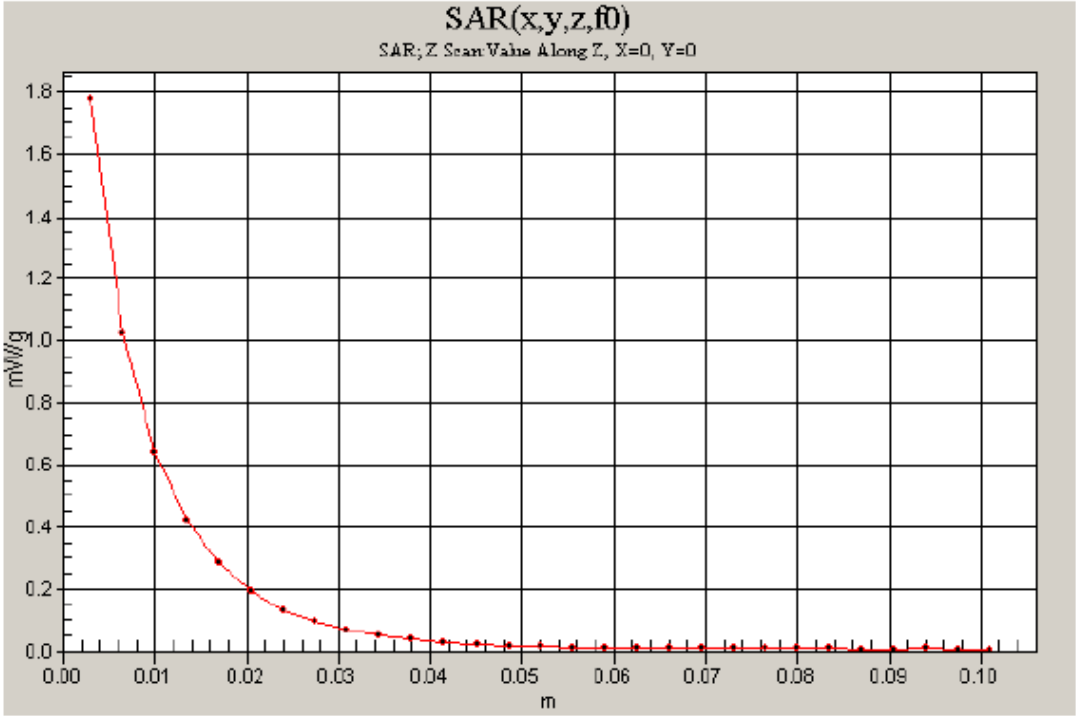
CDMA2000 PCS_Secondary Landscape

DUT: Fujitsu-Australia; Type: NA; Serial: NA

Communication System: CDMA PCS Band; Frequency: 1851.25 MHz;Duty Cycle: 1:1

H-ch_Ant retracted/Z Scan (1x1x29): Measurement grid: dx=20mm, dy=20mm, dz=3.5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.78 mW/g



14. KDB 447498 SIMULTANEOUS TRANSMISSION SAR EVAULATION

Acc. to KDB 447498 4) b)
iii) For each edge positioned closest to the user, simultaneous transmission SAR evaluation is not required when the simultaneous transmitting antennas along that edge are:
(1) located < 5 cm from the edge and the sum of the stand-alone SAR is < the SAR limit for these antennas or the SAR to peak location separation ratios are < 0.3 for all antenna pairs.

Finding: When the EUT is positioned at the edge (Secondary Landscape) configuration, WWAN and WiFi antenna are within 5 cm to the body of user.

The sum of the stand-alone SAR and the SAR to peak location separation ratios
WWAN (Gobi2000) & WiFi (Fujitsu, FCC ID: EJE-WB0081/EJE-WL0021)

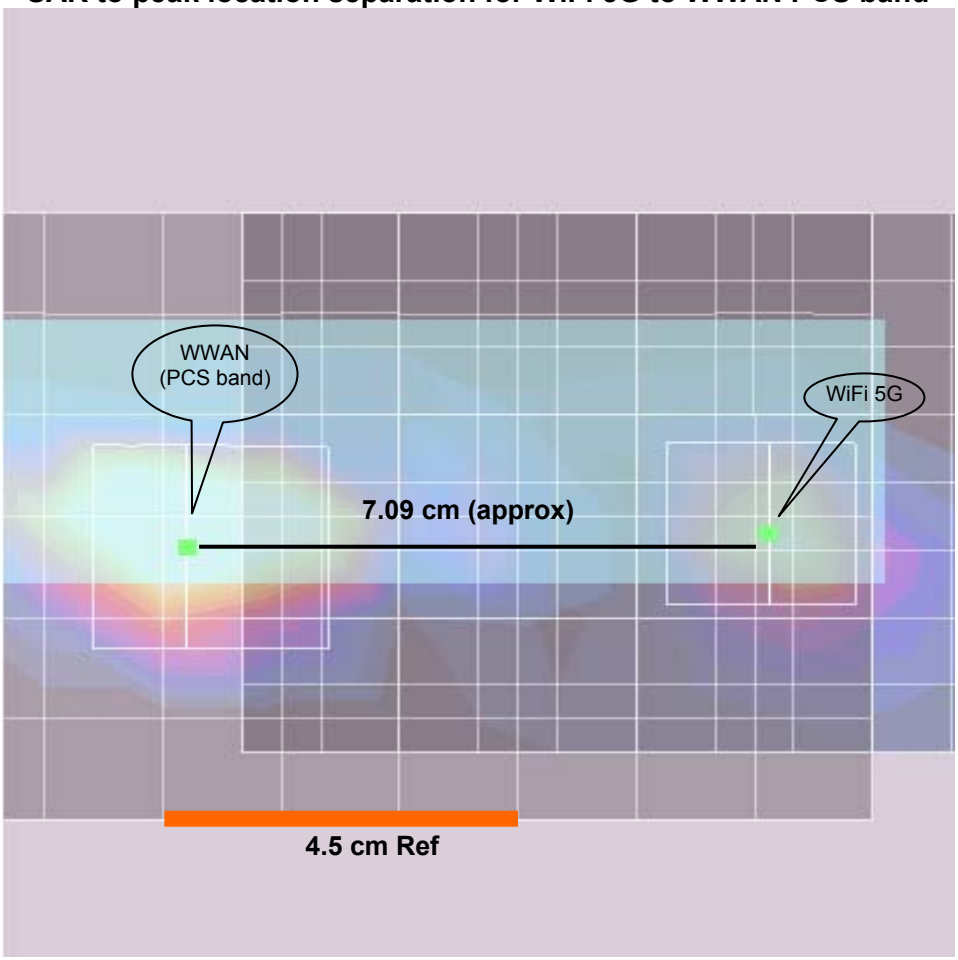
WWAN Cell Band + WiFi						
Tes position	Highest 1-g SAR (W/kg)			∑ 1g SAR (W/kg)	SAR to peak location	
	WWAN		WiFi 2.4G (Ant B)		Separation (cm)	Ratio
Edge - Secondary Landscape	CDMA Cell	0.303	0.110	0.413	n/a	n/a
	Highest 1-g SAR (W/kg)			∑ 1g SAR (W/kg)	SAR to peak location	
	WWAN		WiFi 5 G (Ant B)		Separation (cm)	Ratio
	CDMA Cell	0.303	0.517	0.820	n/a	n/a
WWAM PCS Band + WiFi						
Tes position	Highest 1-g SAR (W/kg)			∑ 1g SAR (W/kg)	SAR to peak location	
	WWAN		WiFi 2.4G (Ant B)		Separation (cm)	Ratio
Edge - Secondary Landscape	CDMA PCS	1.260	0.110	1.370	n/a	n/a
	Highest 1-g SAR (W/kg)			∑ 1g SAR (W/kg)	SAR to peak location	
	WWAN		WiFi 5G (Ant B)		Separation (cm)	Ratio
	CDMA PCS	1.260	0.517	**1.777**	7.09	0.251

CONCLUSIONS:

WWAN – WiFi (EJE-WL0021): Simultaneous transmission SAR is not required for WWAN & WiFi because the sum of the 1-g SA is < 1.6 W/kg or the SAR to peak location separation ratios are < 0.3 for all antenna pairs.

WWAN – WiFi/BT (EJE-WB0081): Simultaneous transmission SAR is not required for WWAN & WiFi/BT because the sum of the 1-g SA is < 1.6 W/kg or the SAR to peak location separation ratios are < 0.3 for all antenna pairs.

SAR to peak location separation for WiFi 5G to WWAN PCS band

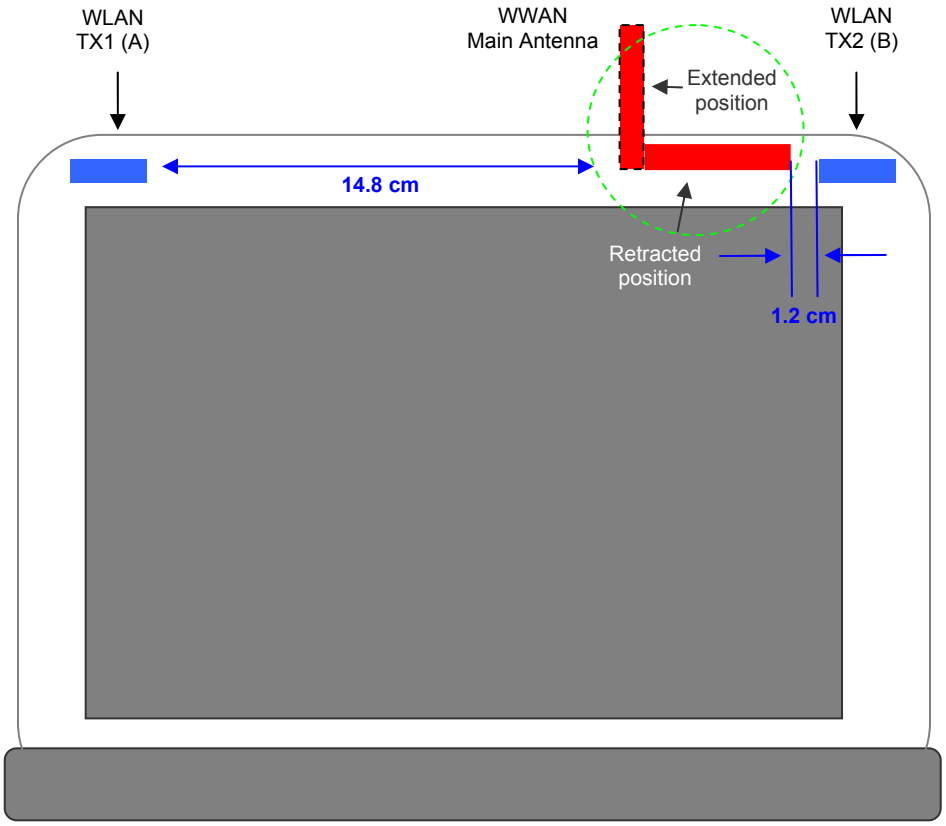


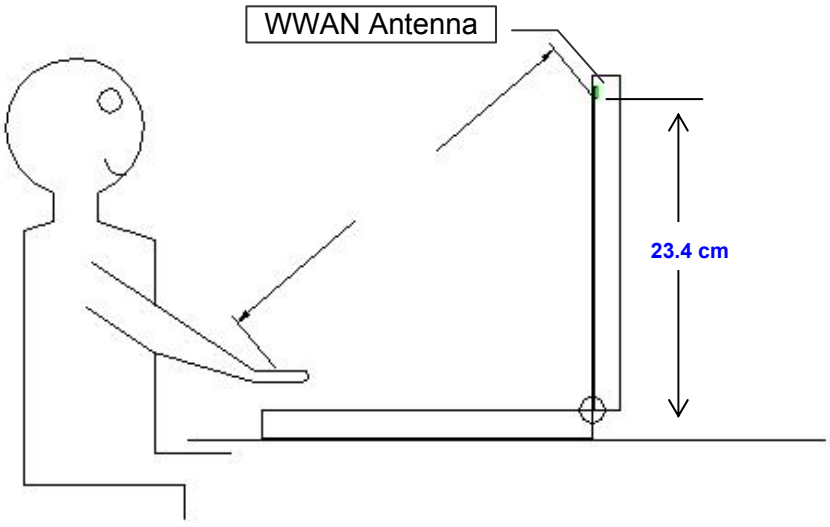
15. ATTACHMENTS

No.	Contents	No. of page (s)
1-1	SAR Test Plots for CDMA2000 Cellular Band	6
1-2	SAR Test Plots for CDMA2000 PCS Band	8
2	Certificate of E-Field Probe - EX3DV3 SN 3531	11
3	Certificate of System Validation Dipole - D835V2 SN:4d002	9
4	Certificate of System Validation Dipole - D1900V2 SN:5d043	9

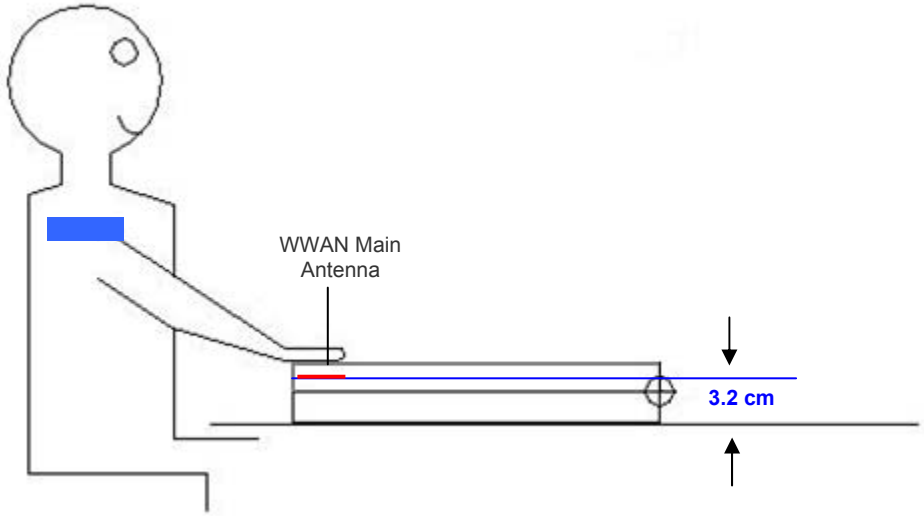
16. ANTENNAS LOCATIONS AND SEPARATION DISTANCES

Laptop Mode





Tablet – Bottom Face



Tablet – Edges (Landscape & Portrait)