

# TEST REPORT FROM RFI GLOBAL SERVICES LTD

Test of: Dell Latitude XT2 Notebook Tablet PC

To: OET Bulletin 65 Supplement C: (2001-01)

**Test Report Serial No:**  
RFI/SAR4/RP74162JD01A

**Supersedes Test Report Serial No:**  
RFI/SAR3/RP74162JD01A

**This Test Report Is Issued Under The Authority  
Of Stuart Thomas, General Manager Cellular  
Services:**

pp



**Checked By:** Scott D'Adamo



**Report Copy No:** PDF01

**Issue Date:** 30 January 2009

**Test Dates:** 13 December to 18 December 2008

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## **1. Customer Information**

<b>Company Name:</b>	Dell Inc.
<b>Address:</b>	One Dell Way Round Rock TX 78682 USA
<b>Contact Name:</b>	Mr. T Nguyen

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## **2. Equipment Under Test (EUT)**

### **2.1. Description of EUT**

The equipment under test is a Dell Latitude XT2 Notebook Tablet PC fitted with an Ericsson mobile broadband module F3507g, alternate model name Dell Wireless 5530 HSPA Mobile Broadband Mini-card.

### **2.2. Identification of Equipment Under Test (EUT)**

<b>Description:</b>	Notebook Tablet PC
<b>Brand Name:</b>	Dell
<b>Model Name or Number:</b>	Latitude XT2
<b>Serial Number:</b>	CN0AE2C170166888000N
<b>IMEI Number:</b>	004401700148642
<b>Hardware Version Number:</b>	A00
<b>Software Version Number:</b>	Rev.A
<b>Hardware Revision of GSM Module:</b>	R1
<b>Software Revision of GSM Module:</b>	R1B003
<b>FCC ID Number:</b>	VV7-MBMF3507G-D
<b>Country of Manufacture:</b>	F3507G: China; Notebook Tablet PC: USA
<b>Date of Receipt:</b>	04 November 2006

### **2.3. Modifications Incorporated in the EUT**

There were no modifications incorporated in the EUT during the test duration.

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#### **2.4. Support Equipment**

The following support equipment was used to exercise the EUT during testing:

<b>Description:</b>	Radio Communication Analyser
<b>Brand Name:</b>	Anritsu
<b>Model Name or Number:</b>	MT8820A
<b>Serial Number:</b>	6K00000647
<b>Cable Length and Type:</b>	1.5m Utiflex Cable
<b>Connected to Port:</b>	RF (Input/Output) Air Link

<b>Description:</b>	Wireless Communication Test Set
<b>Brand Name:</b>	Agilent
<b>Model Name or Number:</b>	8960 Series 10
<b>Serial Number:</b>	GB46310157
<b>Cable Length and Type:</b>	1.5m Utiflex Cable
<b>Connected to Port:</b>	RF (Input/Output) Air Link

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## 2.5. Additional Information Related to Testing

<b>Equipment Category</b>	GPRS850/900/1800/1900; EGPRS850/900/1800/1900; UMTS FDD1/FDD2/FDD5 HSPA; WiFi 802.11a/b/g/n; Bluetooth		
<b>Type of Unit</b>	Portable Transceiver		
<b>Intended Operating Environment:</b>	Within GSM, 3G, WiFi and Bluetooth coverage		
<b>Transmitter Maximum Output Power Characteristics:</b>	GPRS/EGPRS850	33dBm	
	GPRS/EGPRS1900	30dBm	
	UMTS/HSPA FDD V	24dBm	
	UMTS/HSPA FDD II	24dBm	
<b>Transmitter Frequency Range:</b>	GPRS/EGPRS850	824 to 849 MHz	
	GPRS/EGPRS1900	1850 to 1910 MHz	
	UMTS/HSPA FDD V	826 to 847 MHz	
	UMTS/HSPA FDD II	1880 to 1908 MHz	
<b>Transmitter Frequency Allocation of EUT When Under Test:</b>	Channel Number	Channel Description	Frequency (MHz)
	128	Low	824.2
	189	Middle	836.4
	251	High	848.8
	512	Low	1850.2
	660	Middle	1879.8
	810	High	1909.8
	9262	Low	1852.4
	9400	Middle	1880.0
	9538	High	1907.6
	4132	Low	826.4
	4183	Middle	836.6
	4233	High	846.6
<b>Modulation(s):</b>	GMSK:217Hz, QPSK:0Hz		
<b>Modulation Scheme (Crest Factor):</b>	GMSK(GPRS/EGPRS):4, QPSK(UMTS/HSPA):1		
<b>Antenna Type:</b>	Integral fixed onto the screen surrounding.		
<b>Antenna Length:</b>	Internal antennas of unknown lengths		
<b>Number of Antenna Positions:</b>	1 Fixed		
<b>Power Supply Requirement:</b>	14.8V dc		
<b>Battery Type(s):</b>	Li-ion		

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### **3. Test Specification, Methods and Procedures**

#### **3.1. Test Specification**

<b>Reference:</b>	OET Bulletin 65 Supplement C: (2001-01)
<b>Title:</b>	Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
<b>Purpose of Test:</b>	To determine whether the equipment met the basic restrictions as defined in OET Bulletin 65 Supplement C: (2001-01) using the SAR averaging method as described in the test specification above.

#### **3.2. Methods and Procedures Reference Documentation**

The methods and procedures used were as detailed in:

Federal Communications Commission, "Evaluating compliance with FCC Guidelines for human exposure to radio frequency electromagnetic fields", OET Bulletin 65 Supplement C, FCC, Washington, D.C, 20554, 2001.

Thomas Schmid, Oliver Egger and Neils Kuster, "Automated E-field scanning system for dosimetric assessments", IEEE Transaction on microwave theory and techniques, Vol. 44, pp. 105-113, January 1996.

Neils Kuster, Ralph Kastle and Thomas Schmid, "Dosimetric evaluation of mobile communications equipment with known precision", IEICE Transactions of communications, Vol. E80-B, No.5, pp. 645-652, May 1997.

KDB 447498 D01 Mobile Portable RF Exposure v03.

KDB 616217 D01 SAR for Laptop with Screen Ant v01

KDB 941225 D01 SAR test for 3G devices v02

KDB 941225 D03 SAR Test Reduction GSM/GPRS/EDGE v01

KDB 450824 D01 SAR Prob Cal and Ver Meas v01r01

3GPP TS 34.121

#### **3.3. Definition of Measurement Equipment**

The measurement equipment used complied with the requirements of the standards referenced in the methods & procedures section above. Appendix 1 contains a list of the test equipment used.

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#### **4. Deviations from the Test Specification**

Test was performed as per “FCC KDB 447498 D01 Mobile Portable RF Exposure v03” according to the body-worn procedures in consideration with FCC KDB 616217 and OET Bulletin 65 Supplement C 01-01 specific FCC test procedures, KDB 941225 D01 SAR test for 3G devices v02, KDB 941225 D03 SAR Test Reduction GSM/GPRS/EDGE v01 and KDB 450824.

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## **5. Operation and Configuration of the EUT during Testing**

### **5.1. Operating Modes**

The EUT was tested in the following operating mode(s) unless otherwise stated:

- GPRS850 /GPRS1900 Data allocated mode
- EGPRS850 / EGPRS1900 Data allocated mode
- UMTS FDD - RMC 12.2kbps with Test loop mode 1 and TPC bits configured to All "1's"
- UMTS FDD - RMC 12.2kbps with Test loop mode 1 and TPC bits configured to All "1's" with HSDPA enabled.
- UMTS FDD - FRC configured to HS-DPCCH Sub-test 1 and H-Set 1 and QPSK settings with HSPA enabled.
- The EUT does not support simultaneous transmission.

The reason for choosing these operating modes was that they have been defined by the customer as being typical of normal use and likely to be worst case.

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## **5.2. Configuration and Peripherals**

The EUT was tested in the following configuration(s) unless otherwise stated:

- The test configuration with the highest 1-g SAR for the host platform and device configuration, in UMTS FDD V was evaluated to determine if additional SAR evaluation is required due to enhanced energy coupling at increased separation distances. (1) The probe tip is positioned at the peak SAR location determined at a distance of one half the probe tip diameter from the phantom surface. With the probe fixed at this location, the device is moved away from the phantom in 5 mm increments from the initial touching or minimum separation position. A single point SAR is measured for each of these device positions until the SAR is less than 50% of that measured at the initial position. (2) When the device position with the highest point SAR is > 25% of that measured at the initial position, a complete 1-g SAR evaluation was carried out for this configuration. The worst case configuration was at 0mm and the entire test was performed at this separation distance.
- Standalone Battery Operated.
- The Multi-slot class for GPRS is Class 10 and the Multi-slot class for EGPRS is also Class 10. Testing has been performed in GPRS mode based on GPRS providing higher power measurements than EGPRS mode. For 850/1900 worst-case testing is performed in EGPRS mode based on the worst-case configuration obtained in GPRS mode. In EGPRS 1900 mode, the SAR level is lower than GPRS mode while in EGPRS 850 mode, the worst-case SAR level is within 0.003W/kg of GPRS mode.
- The power measurements at maximum output power is verified on the High, Middle and Low channels according to Release 6 procedures in section 5.2 of 3GPP TS 34.121 using the appropriate RMC, FRC and E-DCH configurations.

### **Body Configuration**

- a) The EUT was placed in a normal operating position where the centre of EUT was aligned with the centre reference point on the flat section of the 'OVAL 3mm' phantom.
- b) With the EUT touching the phantom at an imaginary centre line. The EUT was aligned with a marked plane (X and Y axis) consisting of two lines.
- c) For the touch-safe position the handset was gradually moved towards the flat section of the 'Oval 3mm' phantom until any point of the EUT touched the phantom.
- d) For position(s) greater than 0mm separation the EUT was positioned as per the touch-safe position, and then the vertical height was decreased/adjusted as required.
- e) SAR measurements were evaluated at maximum power and the unit was operated for an appropriate period prior to the evaluation in order to minimise the drift.
- f) The device was keyed to operate continuously in the transmit mode for the duration of the test.
- g) The location of the maximum spatial SAR distribution (hot spot) was determined relative to the handset and its antenna.
- h) The EUT was transmitting at predefined power stated in section 5.1 throughout the duration of the test.

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## 6. Summary of Test Results

Test Name	Specification Reference	Result
Specific Absorption Rate-GPRS850 Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-EGPRS850 Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-UMTS FDD V Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-HSDPA & HSUPA FDD V Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-GPRS1900 Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-EGPRS1900 Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-UMTS FDD II Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied
Specific Absorption Rate-HSDPA & HSUPA FDD II Body Configuration 1g	OET Bulletin 65 Supplement C: 2001	Complied

### Individual Evaluations

Module Name	device, mode	Frequency (MHz)	Pi = Module Avg Power Level stated in FCC Grant Conducted (mW)	Pth = 60/f (mW)	n (cm)	r (cm)	R (cm)	single SAR	remarks
F3705g	WWAN, PCS1900	1900.00	870	32	28	2.10	19.23	Y	{P <sub>PCS1900</sub> >P <sub>th</sub> } {r <sub>PCS1900</sub> <R <sub>PCS1900</sub> }
	WWAN, GSM850	850.00	2000	71	29	2.10	19.37	Y	{P <sub>GSM850</sub> >P <sub>th</sub> } {r <sub>GSM850</sub> <R <sub>GSM850</sub> }
	WWAN, UMTS V	850.00	500	71	7	2.10	8.59	Y	{P <sub>UMTS V</sub> >P <sub>th</sub> } {r <sub>UMTS V</sub> <R <sub>UMTS V</sub> }
	WWAN, UMTS II	1900.00	500	32	16	2.10	13.18	Y	{P <sub>UMTS II</sub> >P <sub>th</sub> } {r <sub>UMTS II</sub> <R <sub>UMTS II</sub> }
Dell 365	BT, Bluetooth	2410.00	4	25	0	0.35	5.08	n/a	Not required {Pi<=P <sub>th</sub> } {r <sub>BT</sub> <5cm}

### 6.1. Location of Tests

All the measurements described in this report were performed at the premises of RFI Global Services Ltd, Pavilion A, Ashwood Park, Ashwood Way, Basingstoke, Hampshire, RG23 8BG, United Kingdom

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## **7. Measurements, Examinations and Derived Results**

### **7.1. General Comments**

This section contains test results only.

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to section 8 for details of measurement uncertainties.

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## **7.2. Test Results**

### **7.2.1. Specific Absorption Rate - GPRS850 Body Configuration 1g**

#### **Test Summary:**

Tissue Volume:	1g
Maximum Level (W/kg):	0.468

#### **Environmental Conditions:**

Temperature Variation in Lab (°C):	25.0 to 25.0
Temperature Variation in Liquid (°C):	24.0 to 24.0

#### **Results:**

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Base of EUT Facing Phantom	Flat (OVAL 3mm)	189	0.459	1.600	1.141	-	Complied
Edge of EUT Facing Phantom Portrait	Flat (OVAL 3mm)	189	0.020	1.600	1.580	-	Complied
Edge of EUT Facing Phantom Landscape	Flat (OVAL 3mm)	189	0.017	1.600	1.583	-	Complied
Edge of EUT Facing Phantom Secondary Portrait	Flat (OVAL 3mm)	189	0.468	1.600	1.132	-	Complied

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### **7.2.2. Specific Absorption Rate - EGPRS850 Body Configuration 1g**

#### **Test Summary:**

Tissue Volume:	1g
Maximum Level (W/kg):	0.471

#### **Environmental Conditions:**

Temperature Variation in Lab (°C):	25.0 to 25.0
Temperature Variation in Liquid (°C):	24.0 to 24.0

#### **Results:**

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Edge of EUT Facing Phantom Secondary Portrait	Flat (OVAL 3mm)	189	0.471	1.600	1.129	1	Complied

#### **Note(s):**

1. Worst-case configuration in GPRS mode applied to EGPRS configuration.

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### **7.2.3. Specific Absorption Rate - UMTS FDD V Body Configuration 1g**

#### **Test Summary:**

<b>Tissue Volume:</b>	1g
<b>Maximum Level (W/kg):</b>	0.460

#### **Environmental Conditions:**

<b>Temperature Variation in Lab (°C):</b>	25.0 to 25.0
<b>Temperature Variation in Liquid (°C):</b>	24.0 to 24.0

#### **Results:**

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Base of EUT Facing Phantom	Flat (OVAL 3mm)	4183	0.460	1.600	1.140	1	Complied
Base of EUT Facing Phantom at 5mm	Flat (OVAL 3mm)	4183	0.267	1.600	1.333	1, 2	Complied
Base of EUT Facing Phantom at 10mm	Flat (OVAL 3mm)	4183	0.163	1.600	1.437	1, 3	Complied
Edge of EUT Facing Phantom Portrait	Flat (OVAL 3mm)	4183	0.016	1.600	1.584	1	Complied
Edge of EUT Facing Phantom Landscape	Flat (OVAL 3mm)	4183	0.019	1.600	1.581	1	Complied
Edge of EUT Facing Phantom Secondary Portrait	Flat (OVAL 3mm)	4183	0.223	1.600	1.377	1	Complied

#### **Note(s):**

1. 12.2 kbps RMC.
2. Worst case SAR configuration applied at 5mm separation
3. Worst case SAR configuration applied at 10mm separation

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#### **7.2.4. Specific Absorption Rate – HSDPA & HSUPA FDD V Body Configuration 1g**

##### **Test Summary:**

Tissue Volume:	1g
Maximum Level (W/kg):	0.193

##### **Environmental Conditions:**

Temperature Variation in Lab (°C):	23.0 to 23.0
Temperature Variation in Liquid (°C):	23.0 to 23.0

##### **Results:**

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Base of EUT Facing Phantom	Flat (OVAL 3mm)	4183	0.167	1.600	1.433	1, 2	Complied
Base of EUT Facing Phantom	Flat (OVAL 3mm)	4183	0.193	1.600	1.407	1, 3	Complied

##### **Note(s):**

1. Worst-case configuration in UMTS RMC 12.2 kbps mode applied to HSDPA and HSUPA configuration.
2. FRC with H-Set 1 in Sub-test 1 and 12.2kbps RMC + **HSDPA** enabled
3. E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2 + **HSPA** enabled

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### **7.2.5. Specific Absorption Rate - GPRS1900 Body Configuration 1g**

#### **Test Summary:**

<b>Tissue Volume:</b>	1g
<b>Maximum Level (W/kg):</b>	0.394

#### **Environmental Conditions:**

<b>Temperature Variation in Lab (°C):</b>	25.0 to 25.0
<b>Temperature Variation in Liquid (°C):</b>	24.0 to 24.0

#### **Results:**

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Base of EUT Facing Phantom	Flat (OVAL 3mm)	660	0.394	1.600	1.206	-	Complied
Edge of EUT Facing Phantom Portrait	Flat (OVAL 3mm)	660	0.061	1.600	1.539	-	Complied
Edge of EUT Facing Phantom Landscape	Flat (OVAL 3mm)	660	0.005	1.600	1.595	-	Complied
Edge of EUT Facing Phantom Secondary Portrait	Flat (OVAL 3mm)	660	0.321	1.600	1.279	-	Complied

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### 7.2.6. Specific Absorption Rate - EGPRS1900 Body Configuration 1g

#### Test Summary:

Tissue Volume:	1g
Maximum Level (W/kg):	0.197

#### Environmental Conditions:

Temperature Variation in Lab (°C):	25.0 to 24.0
Temperature Variation in Liquid (°C):	24.0 to 24.0

#### Results:

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Base of EUT Facing Phantom	Flat (OVAL 3mm)	660	0.197	1.600	1.403	1	Complied

#### Note(s):

1. Worst-case configuration in GPRS mode applied to EGPRS configuration.

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### **7.2.7. Specific Absorption Rate - UMTS FDD II Body Configuration 1g**

#### **Test Summary:**

<b>Tissue Volume:</b>	1g
<b>Maximum Level (W/kg):</b>	0.373

#### **Environmental Conditions:**

<b>Temperature Variation in Lab (°C):</b>	25.0 to 24.0
<b>Temperature Variation in Liquid (°C):</b>	24.0 to 24.0

#### **Results:**

EUT Position	Phantom Configuration	Channel Number	Level (W/kg)	Limit (W/kg)	Margin (W/kg)	Note(s)	Result
Base of EUT Facing Phantom	Flat (OVAL 3mm)	9400	0.373	1.600	1.227	1	Complied
Edge of EUT Facing Phantom Portrait	Flat (OVAL 3mm)	9400	0.089	1.600	1.511	1	Complied
Edge of EUT Facing Phantom Landscape	Flat (OVAL 3mm)	9400	0.007	1.600	1.593	1	Complied
Edge of EUT Facing Phantom Secondary Portrait	Flat (OVAL 3mm)	9400	0.337	1.600	1.263	1	Complied

#### **Note(s):**

1. 12.2 kbps RMC

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### **7.2.8. Specific Absorption Rate – HSDPA & HSPA FDD II Body Configuration 1g**

#### **Test Summary:**

<b>Tissue Volume:</b>	1g
<b>Maximum Level (W/kg):</b>	0.399

#### **Environmental Conditions:**

<b>Temperature Variation in Lab (°C):</b>	23.0 to 23.0
<b>Temperature Variation in Liquid (°C):</b>	23.0 to 23.0

#### **Results:**

<b>EUT Position</b>	<b>Phantom Configuration</b>	<b>Channel Number</b>	<b>Level (W/kg)</b>	<b>Limit (W/kg)</b>	<b>Margin (W/kg)</b>	<b>Note(s)</b>	<b>Result</b>
Base of EUT Facing Phantom	Flat (OVAL 3mm)	9400	0.399	1.600	1.201	1, 2	Complied
Base of EUT Facing Phantom	Flat (OVAL 3mm)	9400	0.339	1.600	1.261	1, 3	Complied

#### **Note(s):**

1. Worst-case configuration in UMTS RMC 12.2 kbps mode applied to HSDPA and HSUPA configuration.
2. FRC with H-Set 1 in Sub-test 1 and 12.2kbps RMC + **HSDPA** enabled
3. E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2 + **HSPA** enabled

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**7.2.9. Conducted Power Measurement****GPRS/EGPRS**

Channel Number	Frequency (MHz)	GPRS TX Power before Test (dBm)	EGPRS TX Power before Test (dBm)	Note
128	824.2	26.48	26.38	Average Power
189	836.4	26.18	26.28	Average Power
251	848.8	26.16	25.96	Average Power
512	1850.2	23.79	20.99	Average Power
660	1879.8	24.19	21.09	Average Power
810	1909.8	23.96	20.86	Average Power

**UMTS/HSPA – Average Power Measurements**

Modes		HSDPA				HSPA					WCDMA
Sets		1	2	3	4	1	2	3	4	5	Voice / RMC 12.2kbps
Band	Channel	Power [dBm]									
850	4132	21.85	20.44	20.65	20.78	20.90	20.50	20.34	20.11	20.48	21.12
	4183	22.28	21.03	20.90	20.78	21.22	20.70	20.45	20.49	21.05	21.48
	4233	21.97	19.49	20.78	20.41	20.90	20.00	20.70	20.60	20.60	21.60
1900	9262	21.61	20.70	20.42	20.54	20.64	20.70	20.30	21.00	20.80	21.49
	9400	22.51	20.37	20.20	20.33	20.60	20.50	20.20	21.20	21.50	21.56
	9538	21.80	21.22	20.20	19.70	20.67	20.10	19.70	20.80	20.80	20.46
Bc		2	12	15	15	11	6	15	2	15	
Bd		15	15	8	4	15	15	15	15	15	
ACK, NACK, CQI		8	8	8	8	8	8	8	8	8	
AGV		-	-	-	-	20	12	15	17	21	

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## **8. Measurement Uncertainty**

No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document "approximately" is interpreted as meaning "effectively" or "for most practical purposes".

Test Name	Confidence Level	Calculated Uncertainty
Specific Absorption Rate- GPRS850 / EGPRS850 Body Configuration 1g	95%	18.03%
Specific Absorption Rate- GPRS1900 / EGPRS1900 Body Configuration 1g	95%	18.30%

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

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**Measurement Uncertainty (Continued)****8.1. Specific Absorption Rate Uncertainty at 850 MHz Body 1g, GPRS Modulation Scheme calculated in accordance with IEC 62209-1 & IEEE 1528**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	C <sub>i</sub> (10 <sup>3</sup> )	Standard Uncertainty		u <sub>i</sub> or u <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	11.000	11.000	normal (k=2)	2.0000	1.0000	5.500	5.500	∞
B	Axial Isotropy	0.500	0.500	normal (k=2)	2.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	2.600	2.600	normal (k=2)	2.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.560	0.560	normal (k=2)	2.0000	1.0000	0.280	0.280	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration/ Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	0.584	0.584	normal (k=1)	1.0000	1.0000	0.584	0.584	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	3.600	3.600	normal (k=1)	1.0000	0.6400	2.304	2.304	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	4.000	4.000	normal (k=1)	1.0000	0.6000	2.400	2.400	5
	Combined standard uncertainty			t-distribution			9.20	9.20	>500
	Expanded uncertainty			k = 1.96			18.03	18.03	>500

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**8.2. Specific Absorption Rate Uncertainty at 1900 MHz Body 1g, GPRS Modulation Scheme**  
**calculated in accordance with IEC 62209-1 & IEEE 1528**

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	c <sub>i</sub> (10 <sup>3</sup> )	Standard Uncertainty		v <sub>i</sub> or v <sub>eff</sub>
							+ u (%)	- u (%)	
B	Probe calibration	11.000	11.000	normal (k=2)	2.0000	1.0000	5.500	5.500	∞
B	Axial Isotropy	0.500	0.500	normal (k=2)	2.0000	1.0000	0.250	0.250	∞
B	Hemispherical Isotropy	2.600	2.600	normal (k=2)	2.0000	1.0000	1.300	1.300	∞
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞
B	Linearity	0.600	0.600	Rectangular	1.7321	1.0000	0.346	0.346	∞
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞
B	Readout Electronics	0.560	0.560	normal (k=2)	2.0000	1.0000	0.280	0.280	∞
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞
B	Integration Time	1.730	1.730	Rectangular	1.7321	1.0000	0.999	0.999	∞
B	RF Ambient conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞
B	Extrapolation and integration/ Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞
A	Test Sample Positioning	0.584	0.584	normal (k=1)	1.0000	1.0000	0.584	0.584	10
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞
B	Drift of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	0.6400	1.848	1.848	∞
A	Liquid Conductivity (measured value)	4.170	4.170	normal (k=1)	1.0000	0.6400	2.669	2.669	5
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	0.6000	1.732	1.732	∞
A	Liquid Permittivity (measured value)	4.230	4.230	normal (k=1)	1.0000	0.6000	2.538	2.538	5
Combined standard uncertainty				t-distribution			9.34	9.34	>400
Expanded uncertainty				k = 1.96			18.30	18.30	>400