

 Celltech Testing and Engineering Services Ltd.	Date(s) of Evaluation	Test Report Serial No.	Test Report Revision No.	 ILAC-MRA ACCREDITED
	August 05, 2009	080409R9M-T976-S15W	Rev. 1.0 (Initial Release)	
Test Report Issue Date	Description of Test(s)	RF Exposure Category		
August 11, 2009	Specific Absorption Rate	General Population		Test Lab Certificate No. 2470.01

SAR TEST REPORT (FCC/IC)

RF EXPOSURE EVALUATION		SPECIFIC ABSORPTION RATE		
MANUFACTURER / APPLICANT	INTELLIDOT CORPORATION			
DEVICE UNDER TEST (DUT)	802.11B/G WLAN MODULE			
TRANSMIT FREQUENCY RANGE	2412 - 2462 MHz (ISM Band)			
DUT MODEL NUMBER	200524-01			
HOST DEVICE TESTED	MT200 HANDHELD CARE TM POINT-OF-CARE TERMINAL			
DEVICE IDENTIFIER(S)	FCC ID:	R9M-IDOT-002		
	IC:	7701A-IDOT002		
APPLICATION TYPE	FCC/IC Certification (Limited Modular Approval)			
STANDARD(S) APPLIED	FCC 47 CFR §2.1093			
	Health Canada Safety Code 6			
PROCEDURE(S) APPLIED	FCC KDB 447498 D01 v03r03		Mobile & Portable RF Exp. Proc.	
	FCC KDB 248227 D01 v01r02		SAR Procedures for 802.11a/b/g	
	FCC KDB 450824 D01 v01r01		SAR Probe Cal. & System Verif.	
	FCC OET Bulletin 65, Supplement C (01-01)			
	Industry Canada RSS-102 Issue 3			
	IEEE 1528-2003			
	IEC 62209-1:2005			
	IEC 62209-2 (Draft)			
RF EXPOSURE CATEGORY	General Population / Uncontrolled			
RF EXPOSURE EVALUATION(S)	Body-worn			
DATE(S) OF EVALUATION(S)	August 05, 2009			
TEST REPORT SERIAL NO.	080409R9M-T976-S15W			
TEST REPORT REVISION NO.	Revision 1.0	Initial Release	August 11, 2009	
TEST REPORT SIGNATORIES	Testing Performed By		Test Report Prepared By	
	Sean Johnston Celltech Labs Inc.		Jonathan Hughes Celltech Labs Inc.	
TEST LAB AND LOCATION	Celltech Compliance Testing and Engineering Lab			
	21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada			
TEST LAB CONTACT INFO.	Tel.: 250-765-7650		Fax: 250-765-7645	
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TEST LAB ACCREDITATION(S)	ISO/IEC 17025:2005 (A2LA Test Lab Certificate No. 2470.01)			

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002		
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARE TM Point-of-Care Terminal					
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DECLARATION OF COMPLIANCE SAR RF EXPOSURE EVALUATION

Test Lab Information	Name	CELLTECH LABS INC.	Address	21-364 Lougheed Road, Kelowna, B.C. V1X 7R8 Canada										
Applicant Information	Name	INTELLIDOT CORPORATION												
	Address	5375 Mira Sorrento Place, Suite 500, San Diego, CA 92121 United States												
Standard(s) Applied	FCC	47 CFR §2.1093			IC	Health Canada Safety Code 6								
Procedure(s) Applied	FCC	KDB 447498 D01 v03r03			KDB 248227 D01 v01r02			KDB 450824 D01 v01r01						
		OET Bulletin 65, Supplement C (Edition 01-01)				IC	RSS-102 Issue 3							
	IEEE	1528-2003		IEC	62209-1:2005		IEC	62209-2 (Draft)						
Application Type	FCC/IC	Certification (LMA)			RF Exposure Category		General Population / Uncontrolled							
Device Identifier(s)	FCC ID:	R9M-IDOT-002			IC	7701A-IDOT002								
Device-Under-Test Description	802.11b/g WLAN Module installed in Handheld CAREt™ Point-of-Care Terminal													
Device-Under-Test Model(s)	200524-01 (802.11b/g Module)					MT200 (Handheld CAREt™ Point-of-Care Terminal)								
Test Sample Serial No.(s)	023-X1-0236 (802.11b/g Module)					MT200: 43 (Identical Prototype)								
Hardware Revision No.	200524-01 Revision A			Software Revision No.			Version 2.6.11.44-SAR							
Transmitter Frequency Range	2412 - 2462 MHz (ISM Band)			Co-located Transmitter(s)		None								
Data Rates / Modulation(s)	1, 2, 5.5, 11 Mbps (802.11b - DSSS/CCK)				6, 9, 12, 18, 24, 36, 48, 54 Mbps (802.11g - OFDM)									
Manufacturer's Rated Power	+16.7 dBm (+0/-1 dB) - Peak Conducted (802.11b)				+16.0 dBm (+0/-1 dB) - Peak Conducted (802.11g)									
Measured RF Output Power	Test Freq.	Test Channel		Mode	Data Rate	Average Conducted		Peak Conducted						
						dBm	mW	dBm	mW					
	2412 MHz	Low	1	802.11b	1 Mbps	14.1	25.7	16.7	46.8					
	2442 MHz	Middle	7	802.11b	1 Mbps	14.0	25.1	16.5	44.7					
	2462 MHz	High	11	802.11b	1 Mbps	14.0	25.1	16.5	44.7					
	2412 MHz	Low	1	802.11g	6 Mbps	10.9	12.3	15.5	35.5					
Note: The conducted output power levels measured for the higher data rates were < 0.25 dB > the lowest data rate														
Duty Cycle Tested	100% (Source-Based Time-Averaged)													
Antenna Type(s) Tested	Internal (antenova® Mica 2.4 GHz SMD Antenna Part No. 3030A5645)													
Battery Type(s) Tested	Lithium-ion	3.7 V		2400 mAh	Totex Manufacturing Inc. Model: U80126-3									
Body-worn Accessory Tested	None (DUT was evaluated in five alternate touch positions in order to capture maximum next-to-body SAR level)													
	Note: DUT was evaluated for body-worn SAR based on transmit operations in-pocket and with lanyard accessory													
Audio Accessory Tested	None (DUT does not support voice operations)													
Max. SAR Level(s) Measured	Body	0.073 W/kg	1g average	FCC/IC SAR Limit	1.6 W/kg	1g average								

Celltech Labs Inc. declares under its sole responsibility that this wireless portable device was compliant with the Specific Absorption Rate (SAR) RF exposure requirements specified in FCC 47 CFR §2.1093 and Health Canada's Safety Code 6 for the General Population / Uncontrolled Exposure environment. The device was tested in accordance with the measurement standards and procedures specified in FCC OET Bulletin 65, Supplement C (Edition 01-01), Industry Canada RSS-102 Issue 3, IEEE Standard 1528-2003 and International Standards IEC 62209-1:2005 and IEC 62209-2 (Draft). All measurements were performed in accordance with the SAR system manufacturer recommendations.

I attest to the accuracy of data. All measurements were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

The results and statements contained in this report pertain only to the device(s) evaluated.

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Test Report Approved By

Sean John

Sean Johnston

Celltech Labs Inc.



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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Test Lab Certificate No. 2470.01

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Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal					

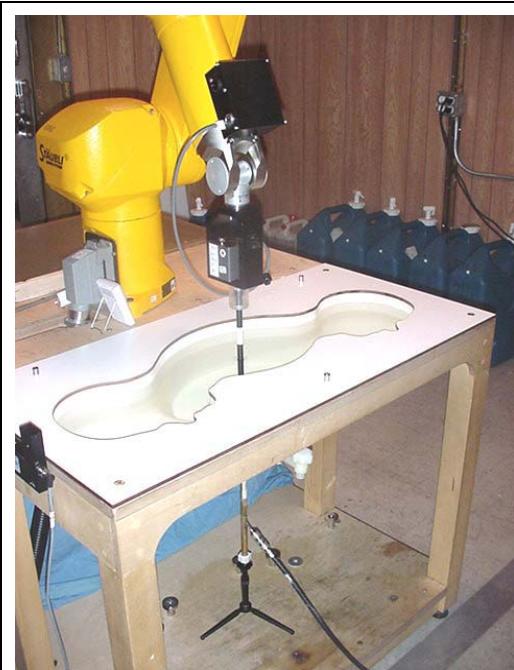
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1.0 INTRODUCTION

This measurement report demonstrates that the IntelliDOT Corporation Model: 200524-01 802.11b/g Module installed in the MT200 Handheld CAREt™ Point-of-Care Terminal complies with the SAR (Specific Absorption Rate) RF exposure requirements specified in FCC 47 CFR §2.1093 (see reference [1]) and Health Canada's Safety Code 6 (see reference [2]) for the General Population / Uncontrolled Exposure environment. The test procedures described in FCC OET Bulletin 65, Supplement C, Edition 01-01 (see reference [3]), IC RSS-102 Issue 3 (see reference [4]), IEEE Standard 1528-2003 (see reference [5]), International Standard IEC 62209-1:2005 (see reference [6]) and International Standard IEC 62209-2 Draft (see reference [7]) were employed. A description of the product and operating configuration, detailed summary of the test results, methodology and procedures used in the evaluation, equipment used, and the various provisions of the rules are included within this test report.

2.0 SAR MEASUREMENT SYSTEM

Celltech Labs Inc. SAR measurement facility utilizes the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY4 measurement system is comprised of the measurement server, robot controller, computer, near-field probe, probe alignment sensor, specific anthropomorphic mannequin (SAM) phantom, and various planar phantoms for brain and/or body SAR evaluations. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the DASY4 measurement server. The DAE4 utilizes a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16-bit AD-converter and a command decoder and control logic unit. Transmission to the DASY4 measurement server is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. The sensor systems are also used for mechanical surface detection and probe collision detection. The robot utilizes a controller with a built in VME-bus computer.



DASY4 System with SAM Twin Phantom V4.0C



DASY4 Measurement Server

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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3.0 MEASUREMENT SUMMARY

BODY SAR EVALUATION SUMMARY

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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4.0 DETAILS OF SAR EVALUATION

The IntelliDOT Corporation Model: 200524-01 802.11b/g Module installed in the MT200 Handheld CAREt™ Point-of-Care Terminal was compliant for localized Specific Absorption Rate (Uncontrolled Exposure) based on the test provisions and conditions described below. The SAR test setup photographs are shown in Appendix D.

Test Configuration(s)

1. The DUT was evaluated for body-worn SAR in five (5) alternate test configurations. The test configurations were selected based on the location of the internal antenna (see Appendix D) and the end-user operating scenarios during transmit operations prescribed by the manufacturer as described below. The planar section of the SAM phantom was utilized for the SAR evaluations. The lanyard accessory was not utilized for the SAR evaluations.

TEST POSITION	ANTENNA DIST. TO PHANTOM	USER CONFIGURATION
Back Side 2-Point Touch	3.0 cm	Lanyard or In-Pocket
Front Side 2-Point Touch	3.0 cm	Lanyard or In-Pocket
Top Edge 2-Point Touch	1.0 cm	Lanyard or In-Pocket
Top Edge 1-Point Touch	1.0 cm	Lanyard or In-Pocket
Left (Connector) Side Touch	2.7 cm	Lanyard or In-Pocket

Test Mode

2. Prior to the SAR evaluations the DUT was set to the appropriate test mode using HyperTerminal test program and programmed via PC connected to the DUT via serial cable. Using HyperTerminal test program the DUT was transmitting with a modulated DSSS signal at the maximum RF output power level and source-based time-averaged duty cycle as described in this test report and specified by the manufacturer. The HyperTerminal test program also enabled adjustment of the test frequency and data rate required for the SAR evaluations.

5.0 EVALUATION PROCEDURES

- (i) The evaluation was performed in the applicable area of the phantom depending on the type of device being tested. For devices held to the ear during normal operation, both the left and right ear positions were evaluated using the SAM phantom.
(ii) For body-worn and face-held devices a planar phantom was used.
- b. The SAR was determined by a pre-defined procedure within the DASY4 software. Upon completion of a reference and optical surface check, the exposed region of the phantom was scanned near the inner surface with a grid spacing of 15mm x 15mm.
An area scan was determined as follows:
c. Based on the defined area scan grid, a more detailed grid is created to increase the points by a factor of 10. The interpolation function then evaluates all field values between corresponding measurement points.
- d. A linear search is applied to find all the candidate maxima. Subsequently, all maxima are removed that are >2 dB from the global maximum. The remaining maxima are then used to position the cube scans.
A 1g and 10g spatial peak SAR was determined as follows:
- e. Extrapolation is used to find the points between the dipole center of the probe and the surface of the phantom. This data cannot be measured, since the center 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 1.4 mm (see probe calibration document in Appendix F). The extrapolation was based on trivariate quadratics computed from the previously calculated 3D interpolated points nearest the phantom surface.
- f. Interpolated data is used to calculate the average SAR over 1g and 10g cubes by spatially discretizing the entire measured cube. The volume used to determine the averaged SAR is a 1mm grid (42875 interpolated points).
- g. A zoom scan volume of 32 mm x 32 mm x 30 mm (5 x 5 x 7 points) centered at the peak SAR location determined from the area scan is used for all zoom scans for devices with a transmit frequency < 800 MHz. Zoom scans for frequencies ≥ 800 MHz are determined with a scan volume of 30 mm x 30 mm x 30 mm (7 x 7 x 7) to ensure complete capture of the peak spatial-average SAR.

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6.0 SYSTEM PERFORMANCE CHECK

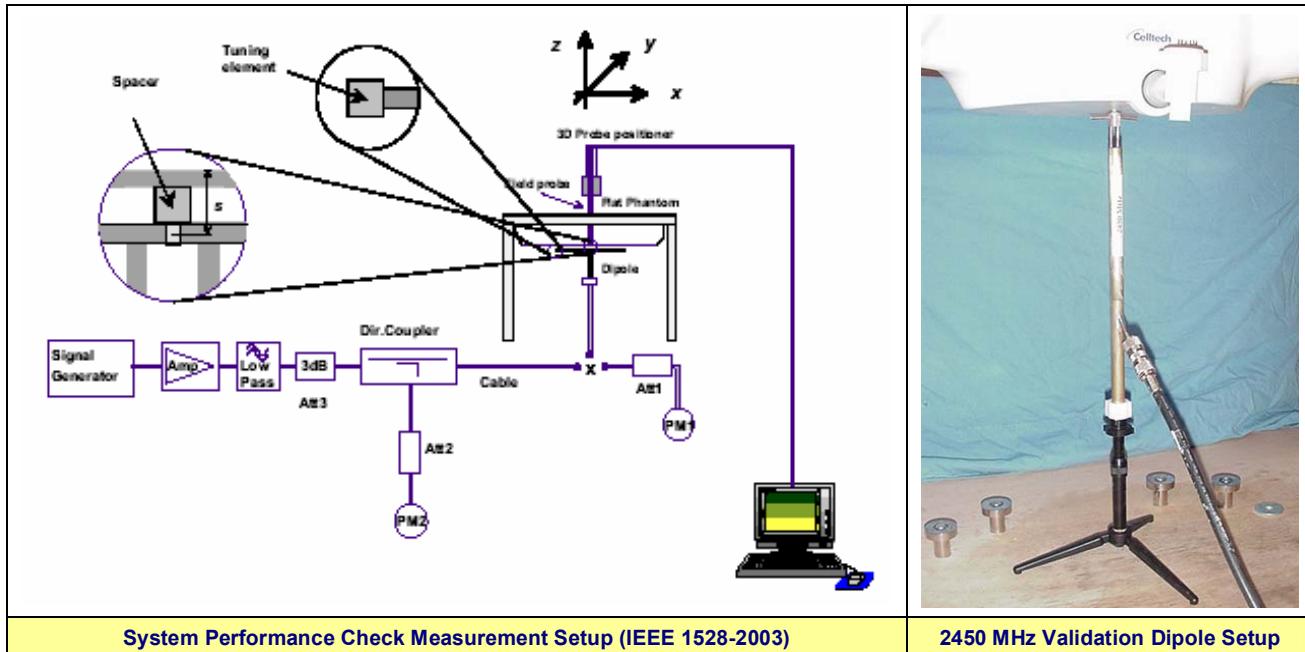
Prior to the SAR evaluations a daily system check was performed at the planar section of the SAM phantom with a 2450MHz SPEAG dipole (see Appendix B for system performance check test plot) in accordance with the procedures described in IEEE Standard 1528-2003 (see reference [5]) and International Standard IEC 62209-1:2005 (see reference [6]). A forward power of 250 mW was applied to the dipole and the system was verified to a tolerance of $\pm 10\%$ from the system manufacturer's dipole calibration target SAR value (see Appendix E for system manufacturer's dipole calibration procedures).

SYSTEM PERFORMANCE CHECK EVALUATION SUMMARY

Test Date	Equiv. Tissue	SAR (1g) (W/kg)		Dielectric Constant ϵ_r			Conductivity σ (mho/m)			ρ (Kg/m ³)	Amb. Temp. (°C)	Fluid Temp. (°C)	Fluid Depth (cm)	Humid. (%)	Barom. Press. (kPa)	
	2450 MHz	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.	SPEAG Target	Meas.	Dev.						
Aug 05	BODY	12.9 ±10%	14.1	+9.3%	54.4 ± 5%	51.7	-4.9%	1.98 ± 5%	1.95	-1.5%	1000	24.5	24.8	≥ 15	30	101.1

Note(s)

1. The target SAR values are the measured values from the dipole calibration performed by SPEAG (see Appendix E).
2. The target dielectric parameters are the measured values from the dipole calibration performed by SPEAG (see Appendix E).
3. The fluid temperature was measured prior to and after the system performance check to ensure the temperature remained within +/- 2°C of the fluid temperature reported during the dielectric parameter measurements.
4. The dielectric parameters of the simulated tissue mixture were measured prior to the system performance check using a Dielectric Probe Kit and a Network Analyzer (see Appendix C).



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Specific Absorption Rate

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7.0 SAR PROBE CALIBRATION & MEASUREMENT FREQUENCIES

The following procedures are recommended for measurements at 150 MHz - 3 GHz to minimize probe calibration and tissue dielectric parameter discrepancies. In general, SAR measurements below 300 MHz should be within ± 50 MHz of the probe calibration frequency. At 300 MHz to 3 GHz, measurements should be within ± 100 MHz of the probe calibration frequency. Measurements exceeding 50% of these intervals, ± 25 MHz $<$ 300 MHz and ± 50 MHz \geq 300 MHz, require additional steps (per FCC KDB 450824 D01 v01r01, SAR Probe Calibration and System Verification Considerations for Measurements at 150 MHz - 3 GHz - see reference [10]).

Probe Calibration Freq.	Device Measurement Freq.	Frequency Interval	± 50 MHz \geq 300 MHz
2450 MHz	2412 MHz	38 MHz	< 50 MHz

The probe calibration and measurement frequency interval is < 50 MHz; therefore the additional steps are not required.

8.0 SIMULATED EQUIVALENT TISSUES

The simulated equivalent Body tissue recipe in the table below is derived from the SAR system manufacturer's suggested recipe in the DASY4 manual (see reference [10]) in accordance with the procedures and requirements specified in IEEE Standard 1528-2003 (see reference [5]) and IEC Standard 62209-1:2005 (see reference [6]). The ingredient percentage may have been adjusted minimally in order to achieve the appropriate target dielectric parameters within the specified tolerance.

SIMULATED EQUIVALENT TISSUE MIXTURE	
INGREDIENT	2450 MHz BODY
Water	69.98 %
Glycol Monobutyl	30.00 %
Salt	0.02 %

9.0 SAR LIMITS

SAR RF EXPOSURE LIMITS			
FCC 47 CFR 2.1093	Health Canada Safety Code 6	(General Population / Uncontrolled Exposure)	(Occupational / Controlled Exposure)
Spatial Average (averaged over the whole body)		0.08 W/kg	0.4 W/kg
Spatial Peak (averaged over any 1 g of tissue)		1.6 W/kg	8.0 W/kg
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)		4.0 W/kg	20.0 W/kg
The Spatial Average value of the SAR averaged over the whole body.			
The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.			
The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.			
Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.			
Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.			

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10.0 ROBOT SYSTEM SPECIFICATIONS

<u>Specifications</u>	
Positioner	Stäubli Unimation Corp. Robot Model: RX60L
Repeatability	0.02 mm
No. of axis	6
<u>Data Acquisition Electronic (DAE) System</u>	
<u>Cell Controller</u>	
Processor	AMD Athlon XP 2400+
Clock Speed	2.0 GHz
Operating System	Windows XP Professional
<u>Data Converter</u>	
Features	Signal Amplifier, multiplexer, A/D converter, and control logic
Software	Measurement Software: DASY4, V4.7 Build 44
	Postprocessing Software: SEMCAD, V1.8 Build 171
Connecting Lines	Optical downlink for data and status info.; Optical uplink for commands and clock
<u>DASY4 Measurement Server</u>	
Function	Real-time data evaluation for field measurements and surface detection
Hardware	PC/104 166MHz Pentium CPU; 32 MB chipdisk; 64 MB RAM
Connections	COM1, COM2, DAE, Robot, Ethernet, Service Interface
<u>E-Field Probe</u>	
Model	EX3DV4
Serial No.	3600
Construction	Symmetrical design with triangular core
Frequency	10 MHz to 6 GHz
Linearity	±0.2 dB (30 MHz to 3 GHz)
<u>Phantom(s)</u>	
Type	SAM V4.0C
Shell Material	Fiberglass
Thickness	2.0 ±0.1 mm
Volume	Approx. 25 liters

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11.0 PROBE SPECIFICATIONS (EX3DV4)

Construction:	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g. DGBE)
Calibration:	Basic Broadband Calibration in air: 10-3000 MHz Conversion Factors (CF) for HSL 900 and HSL 1750
Frequency:	10 MHz to >6 GHz; Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity:	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range:	10 μ W/g to >100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 \square W/g)
Dimensions:	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm)
Application:	Typical distance from probe tip to dipole centers: 1.0 mm High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better than 30%.



FX3DV4 E-Field Probe

12.0 SAM TWIN PHANTOM V4.0C

The SAM Twin Phantom V4.0C is a fiberglass shell phantom with a 2.0 mm (+/-0.2 mm) shell thickness for left and right head and flat planar area integrated in a wooden table. The shape of the fiberglass shell corresponds to the phantom defined by SCC34-SC2. The device holder positions are adjusted to the standard measurement positions in the three sections (see Appendix G for specifications of the SAM Twin Phantom V4.0C).



SAM Twin Phantom V4 OC

13.0 DEVICE HOLDER

The DASY4 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. For evaluation of devices with a larger footprint (e.g. Laptop PC, Tablet PC), or to avoid perturbation due to device holder clamps for devices with a smaller footprint, a Plexiglas platform is attached to the device holder.



Device Holder

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Test Lab Certificate No. 2470.01

14.0 TEST EQUIPMENT LIST

TEST EQUIPMENT		ASSET NO.	SERIAL NO.	PREVIOUS CALIBRATION	CALIBRATION DUE DATE
USED	DESCRIPTION				
x	Schmid & Partner DASY4 System	-	-	-	-
x	-DASY4 Measurement Server	00158	1078	CNR	CNR
x	-Robot	00046	599396-01	CNR	CNR
x	-DAE4	00019	353	28Apr09	28Apr10
x	-EX3DV4 E-Field Probe	00213	3600	28Apr09	28Apr10
x	-D2450V2 Validation Dipole	00219	825	17Apr09	17Apr10
x	-SAM Twin Phantom V4.0C	00154	1033	CNR	CNR
x	HP 85070C Dielectric Probe Kit	00033	none	CNR	CNR
x	HP E4408B Spectrum Analyzer	00015	US39240170	23Apr08	28Apr10
x	Gigatronics 8652A Power Meter	00007	1835272	23Apr08	28Apr10
x	Gigatronics 80701A Power Sensor	00014	1833699	23Apr08	28Apr10
x	HP 8753ET Network Analyzer	00134	US39170292	28Apr08	28Apr10
x	Rohde & Schwarz SMR20 Signal Generator	00006	100104	CNR	CNR
x	Amplifier Research 5S1G4 Power Amplifier	00106	26235	CNR	CNR
Abbr.	CNR = Calibration Not Required				

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal			
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15.0 MEASUREMENT UNCERTAINTIES

Uncertainty Budget for Device Evaluation									
Uncertainty Component	IEEE 1528 Section	Uncertainty Value ±%	Probability Distribution	Divisor	ci 1g	ci 10g	Uncertainty Value ±% (1g)	Uncertainty Value ±% (10g)	V_i or V_{eff}
Measurement System									
Probe Calibration (2450 MHz)	E.2.1	5.5	Normal	1	1	1	5.5	5.5	∞
Axial Isotropy	E.2.2	4.7	Rectangular	1.732050808	0.7	0.7	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	Rectangular	1.732050808	0.7	0.7	3.9	3.9	∞
Boundary Effect	E.2.3	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	Rectangular	1.732050808	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.3	Normal	1	1	1	0.3	0.3	∞
Response Time	E.2.7	0.8	Rectangular	1.732050808	1	1	0.5	0.5	∞
Integration Time	E.2.8	2.6	Rectangular	1.732050808	1	1	1.5	1.5	∞
RF Ambient Conditions	E.6.1	3	Rectangular	1.732050808	1	1	1.7	1.7	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	Rectangular	1.732050808	1	1	0.2	0.2	∞
Probe Positioning wrt Phantom Shell	E.6.3	2.9	Rectangular	1.732050808	1	1	1.7	1.7	∞
Extrapolation, interpolation & integration algorithms for max. SAR evaluation	E.5	1	Rectangular	1.732050808	1	1	0.6	0.6	∞
Test Sample Related									
Test Sample Positioning	E.4.2	2.9	Normal	1	1	1	2.9	2.9	12
Device Holder Uncertainty	E.4.1	3.6	Normal	1	1	1	3.6	3.6	8
SAR Drift Measurement	6.6.2	5	Rectangular	1.732050808	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4	Rectangular	1.732050808	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5	Rectangular	1.732050808	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measured)	E.3.3	4.1	Normal	1	0.64	0.43	2.6	1.8	∞
Liquid Permittivity (target)	E.3.2	5	Rectangular	1.732050808	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measured)	E.3.3	1.1	Normal	1	0.6	0.49	0.7	0.5	∞
Combined Standard Uncertainty				RSS			10.70	10.38	
Expanded Uncertainty (95% Confidence Interval)				k=2			21.40	20.75	

 Celltech Testing and Engineering Services Ltd	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA ACCREDITED Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

16.0 REFERENCES

- [1] Federal Communications Commission - "Radiofrequency radiation exposure evaluation: portable devices", Rule Part 47 CFR §2.1093.
- [2] Health Canada - "Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz", Safety Code 6: 1999.
- [3] Federal Communications Commission - "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields", OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.
- [4] Industry Canada - "Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)", Radio Standards Specification RSS-102 Issue 3: November 2005.
- [5] IEEE Standard 1528-2003 - "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques": December 2003.
- [6] International Standard IEC 62209-1:2005 - "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures."
- [7] International Standard IEC 62209-2 Draft (106-62209-2-CDV_090323) - "Human exposure to radio frequency fields from hand-held & body-mounted wireless comm. devices - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (30 MHz to 6 GHz)".
- [8] Federal Communications Commission, Office of Engineering and Technology - "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies"; KDB 447498 D01 v03r03: January 2009.
- [9] Federal Communications Commission, Office of Engineering and Technology - "SAR Measurement Procedures for 802.11a/b/g Transmitters"; KDB 248227 D01 v01r02: May 2007.
- [10] Federal Communications Commission, Office of Engineering and Technology - "Application Note: SAR Probe Calibration and System Verification Considerations for Measurements at 150 MHz - 3 GHz"; KDB 450824 D01 v01r01: January 2007.
- [11] Schmid & Partner Engineering AG - DASY4 Manual V4.6, Chapter 18 Application Note, Body Tissue Recipe: Sept. 2005.

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal			
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	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX A - SAR MEASUREMENT DATA

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Test Lab Certificate No. 2470.01

Date Tested: 08/05/2009

Body SAR - 802.11b Mode - 1 Mbps - 2412 MHz - Channel 1 - Back Side of MT200 (2-Point Touch)

DUT: IntelliDOT; Type: Handheld CAREt™ Point-of-Care Terminal with 802.11b/g; Serial: 43 (Identical Prototype)

Ambient Temp: 24.5°C; Fluid Temp: 24.8°C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: DSSS WLAN

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

- Probe: EX3DV4 - SN3600; ConvF(6.25, 6.25, 6.25); Calibrated: 28/04/2009

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn353; Calibrated: 28/04/2009

- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Back Side of DUT Touching Planar Section of SAM Phantom (2-Point Touch)

Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm.

Maximum value of SAR (measured) = 0.010 mW/g

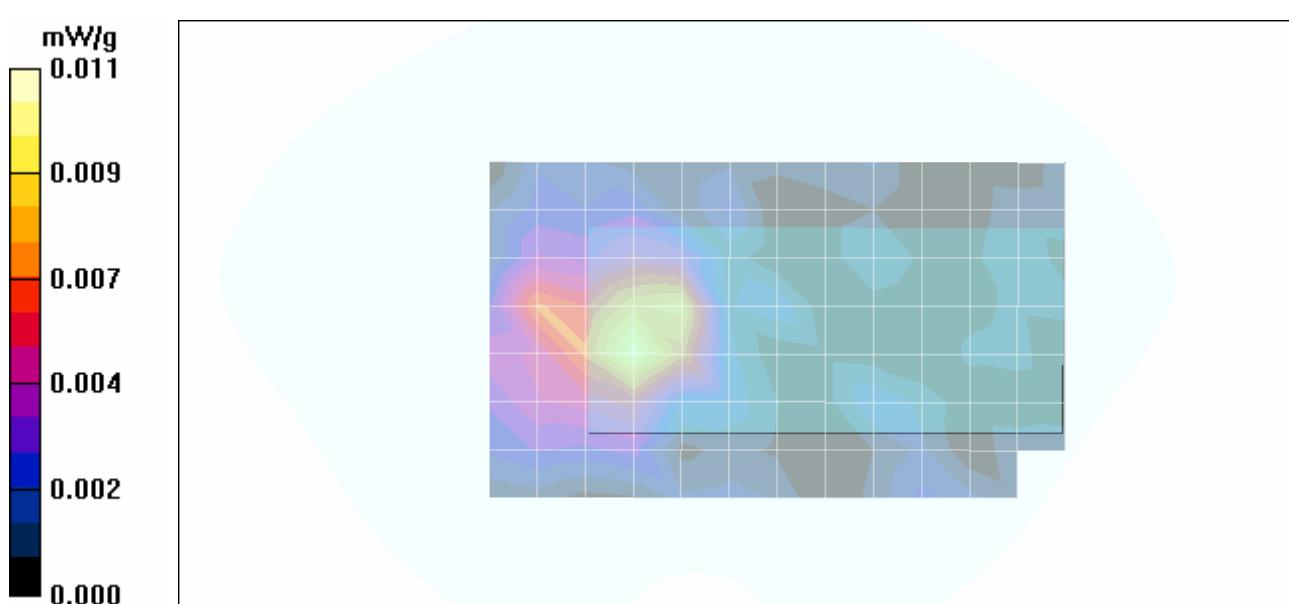
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.21 V/m; Power Drift = -0.188 dB

Peak SAR (extrapolated) = 0.019 W/kg

SAR(1 g) = 0.00794 mW/g; SAR(10 g) = 0.00332 mW/g

Maximum value of SAR (measured) = 0.011 mW/g



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal			
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 Testing and Engineering Services Ltd	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 08/05/2009

Body SAR - 802.11b Mode - 1 Mbps - 2412 MHz - Channel 1 - Front Side of MT200 (2-Point Touch)

DUT: IntelliDOT; Type: Handheld CAREt™ Point-of-Care Terminal with 802.11b/g; Serial: 43 (Identical Prototype)

Ambient Temp: 24.5°C; Fluid Temp: 24.8°C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: DSSS WLAN

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

- Probe: EX3DV4 - SN3600; ConvF(6.25, 6.25, 6.25); Calibrated: 28/04/2009

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn353; Calibrated: 28/04/2009

- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Front Side of DUT Touching Planar Section of SAM Phantom (2-Point Touch)

Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm.

Maximum value of SAR (measured) = 0.070 mW/g

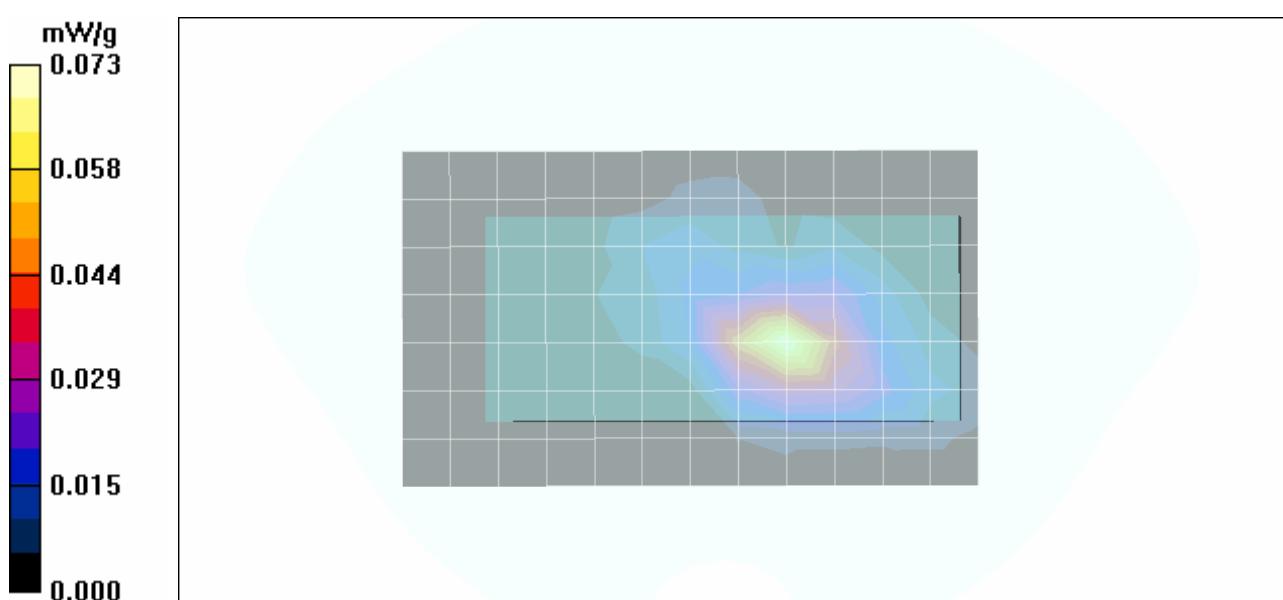
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.21 V/m; Power Drift = -0.130 dB

Peak SAR (extrapolated) = 0.103 W/kg

SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.030 mW/g

Maximum value of SAR (measured) = 0.073 mW/g



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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 Testing and Engineering Services Ltd	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 08/05/2009

Body SAR - 802.11b Mode - 1 Mbps - 2412 MHz - Channel 1 - Top Edge of MT200 (2-Point Touch)

DUT: IntelliDOT; Type: Handheld CAREt™ Point-of-Care Terminal with 802.11b/g; Serial: 43 (Identical Prototype)

Ambient Temp: 24.5°C; Fluid Temp: 24.8°C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: DSSS WLAN

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

- Probe: EX3DV4 - SN3600; ConvF(6.25, 6.25, 6.25); Calibrated: 28/04/2009

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn353; Calibrated: 28/04/2009

- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Top Edge of DUT Touching Planar Section of SAM Phantom (2-Point Touch)

Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm.

Maximum value of SAR (measured) = 0.084 mW/g

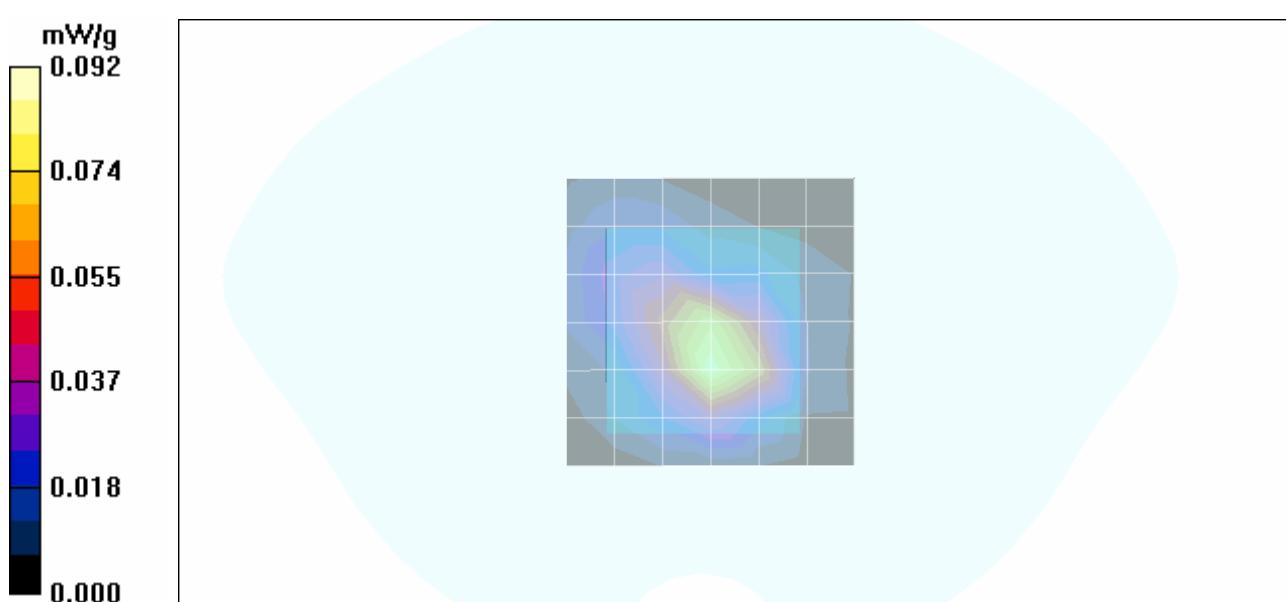
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.72 V/m; Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.145 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.037 mW/g

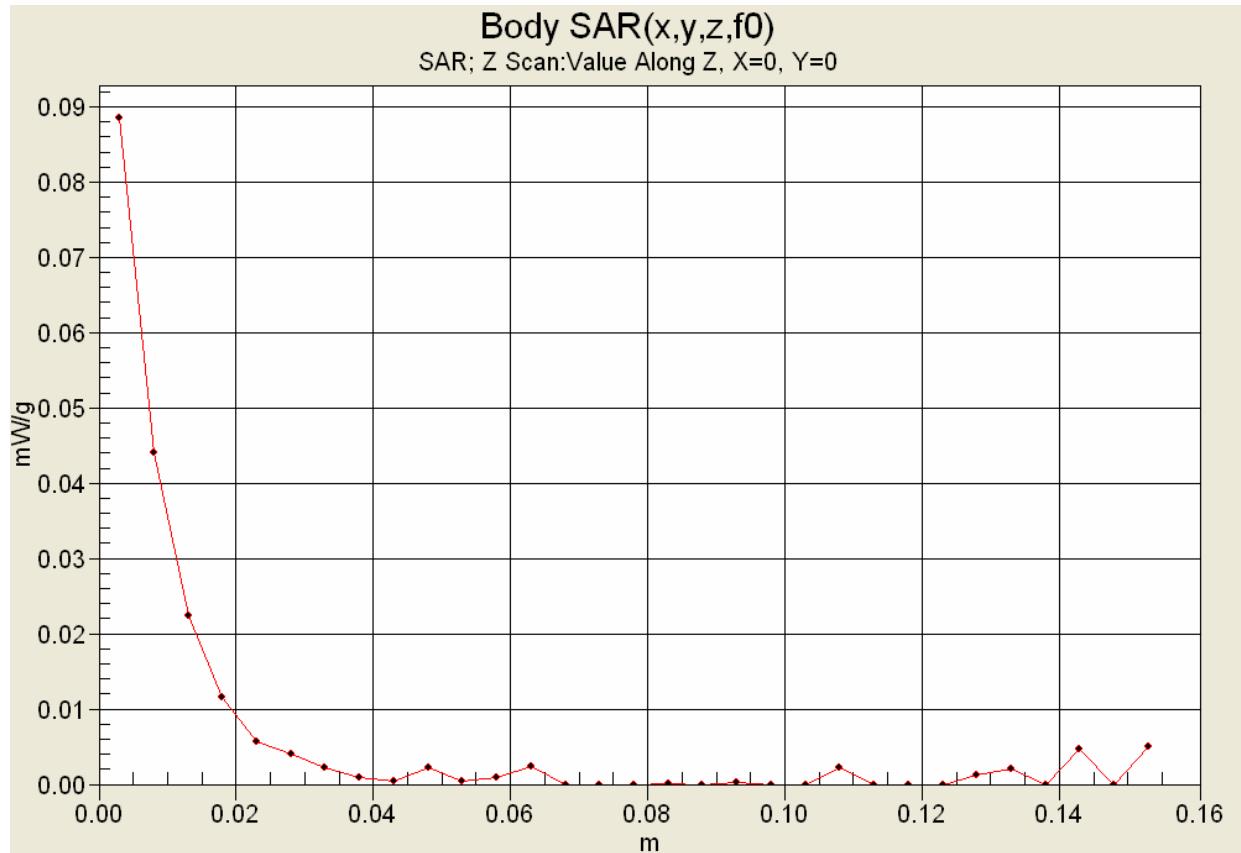
Maximum value of SAR (measured) = 0.092 mW/g



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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Z-Axis Scan



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 08/05/2009

Body SAR - 802.11b Mode - 1 Mbps - 2412 MHz - Channel 1 - Top Edge of MT200 (1-Point Touch)

DUT: IntelliDOT; Type: Handheld CAREt™ Point-of-Care Terminal with 802.11b/g; Serial: 43 (Identical Prototype)

Ambient Temp: 24.5°C; Fluid Temp: 24.8°C; Barometric Pressure: 101.1 kPa; Humidity: 30%
Communication System: DSSS WLAN
Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: M2450 Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.87 \text{ mho/m}$; $\epsilon_r = 52.1$; $\rho = 1000 \text{ kg/m}^3$
- Probe: EX3DV4 - SN3600; ConvF(6.25, 6.25, 6.25); Calibrated: 28/04/2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Top Edge of DUT Touching Planar Section of SAM Phantom (1-Point Touch)

Area Scan (7x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$.

Maximum value of SAR (measured) = 0.054 mW/g

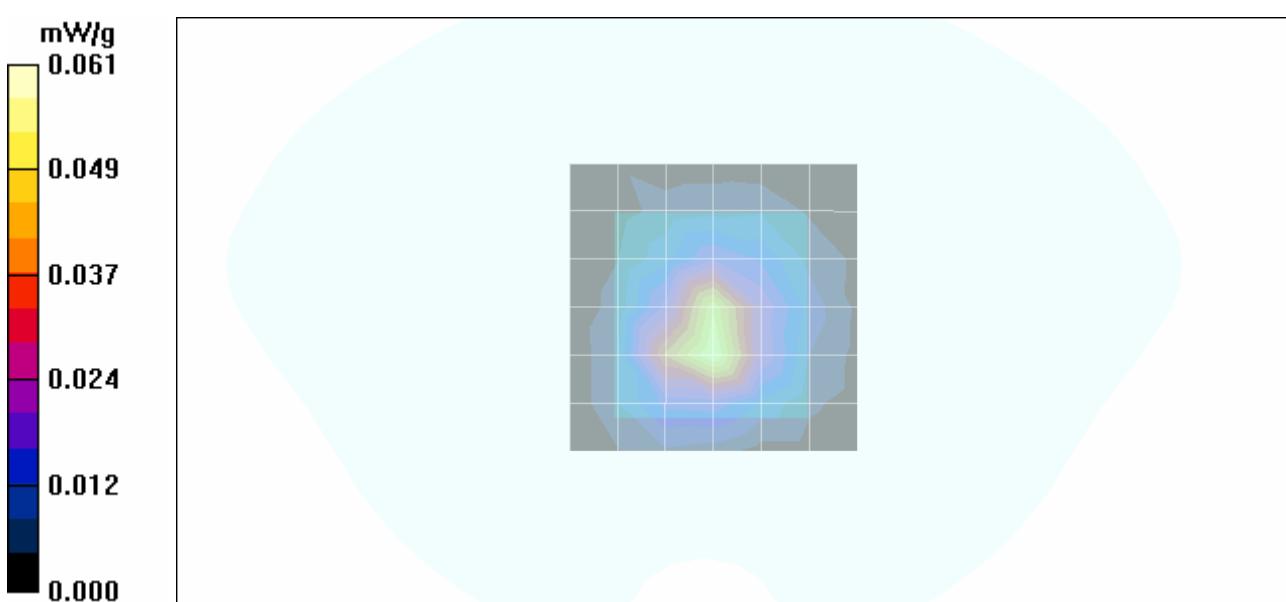
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.34 V/m; Power Drift = -0.063 dB

Peak SAR (extrapolated) = 0.094 W/kg

SAB(1 g) = 0.047 mW/g; SAB(10 g) = 0.024 mW/g

Maximum value of SAB (measured) = 0.061 mW/g



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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 Testing and Engineering Services Ltd	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 Test Lab Certificate No. 2470.01
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 08/05/2009

Body SAR - 802.11b Mode - 1 Mbps - 2412 MHz - Channel 1 - Left (Connector) Side of MT200

DUT: IntelliDOT; Type: Handheld CAREt™ Point-of-Care Terminal with 802.11b/g; Serial: 43 (Identical Prototype)

Ambient Temp: 24.5°C; Fluid Temp: 24.8°C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: DSSS WLAN

Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³

- Probe: EX3DV4 - SN3600; ConvF(6.25, 6.25, 6.25); Calibrated: 28/04/2009

- Sensor-Surface: 3mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn353; Calibrated: 28/04/2009

- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body SAR - Left Side of DUT Touching Planar Section of SAM Phantom

Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm.

Maximum value of SAR (measured) = 0.021 mW/g

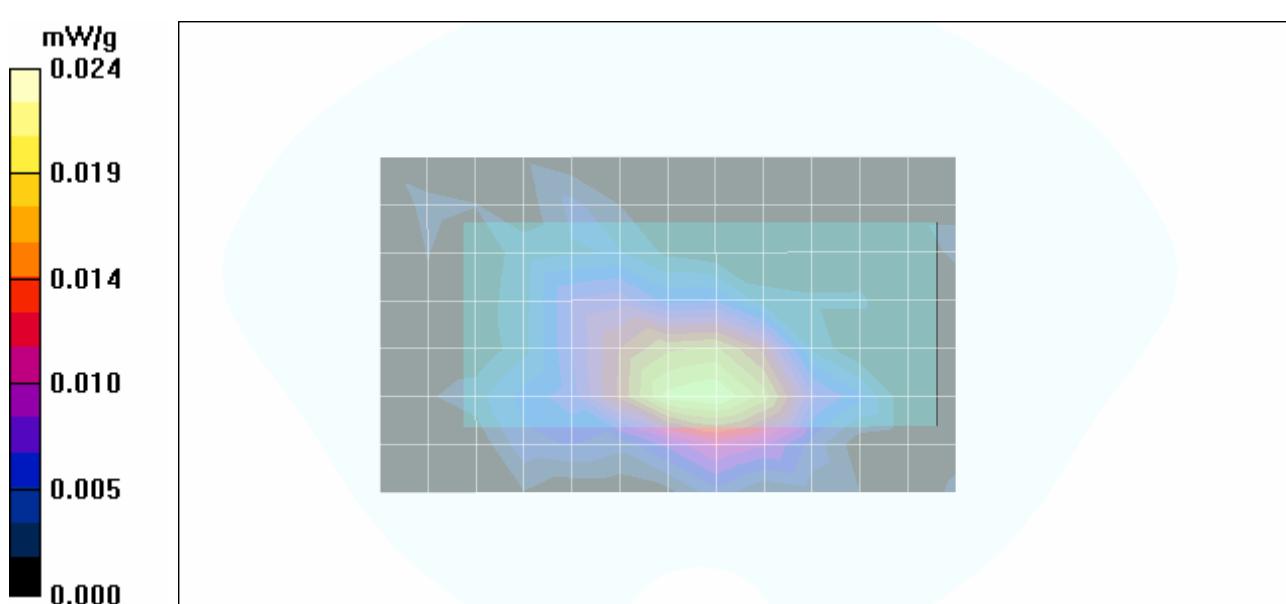
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.47 V/m; Power Drift = 0.204 dB

Peak SAR (extrapolated) = 0.085 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.00802 mW/g

Maximum value of SAR (measured) = 0.024 mW/g



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX B - SYSTEM PERFORMANCE CHECK DATA

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Date Tested: 08/05/2009

System Performance Check - 2450 MHz Dipole - MSL

DUT: Dipole D2450V2; Asset: 00219; Serial: 825; Calibration: 04/17/2009

Ambient Temp: 24.5°C; Fluid Temp: 24.8°C; Barometric Pressure: 101.1 kPa; Humidity: 30%

Communication System: CW

Forward Conducted Power: 250 mW

Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.95$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

- Probe: EX3DV4 - SN3600; ConvF(6.25, 6.25, 6.25); Calibrated: 28/04/2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn353; Calibrated: 28/04/2009
- Phantom: SAM 4.0; Type: Fiberglas; Serial: 1033
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

System Performance Check - 2450 MHz Dipole

Area Scan (6x10x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 17.6 mW/g

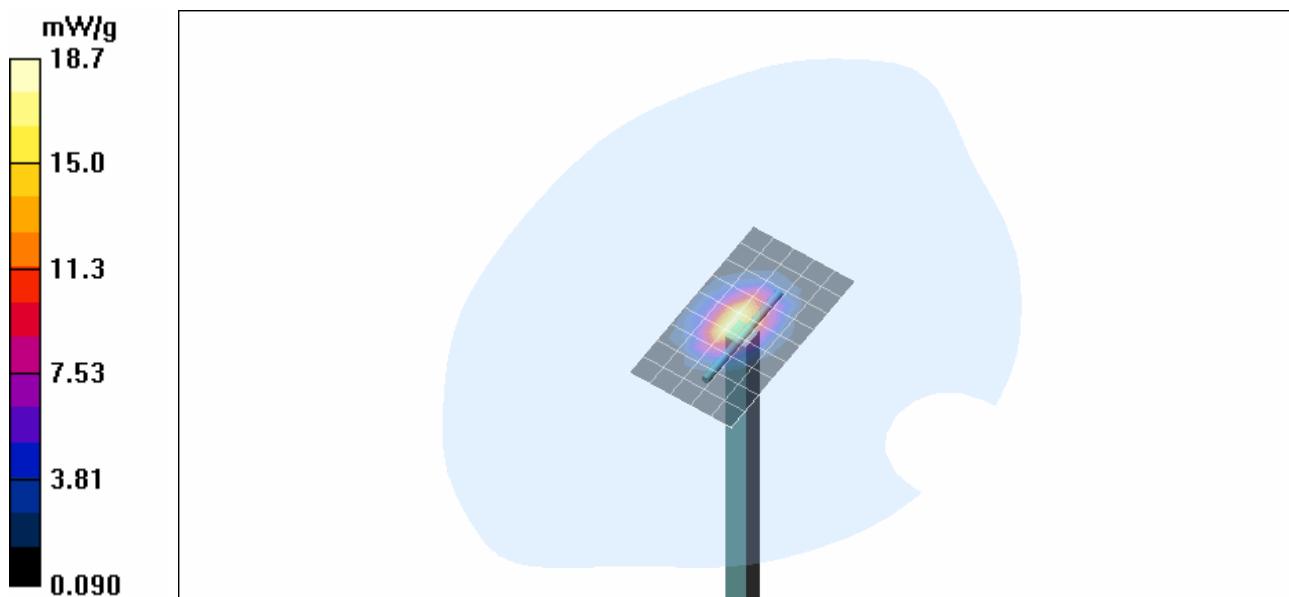
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 95.4 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 30.1 W/kg

SAR(1 g) = 14.1 mW/g; SAR(10 g) = 6.43 mW/g

Maximum value of SAB (measured) = 18.7 mW/g



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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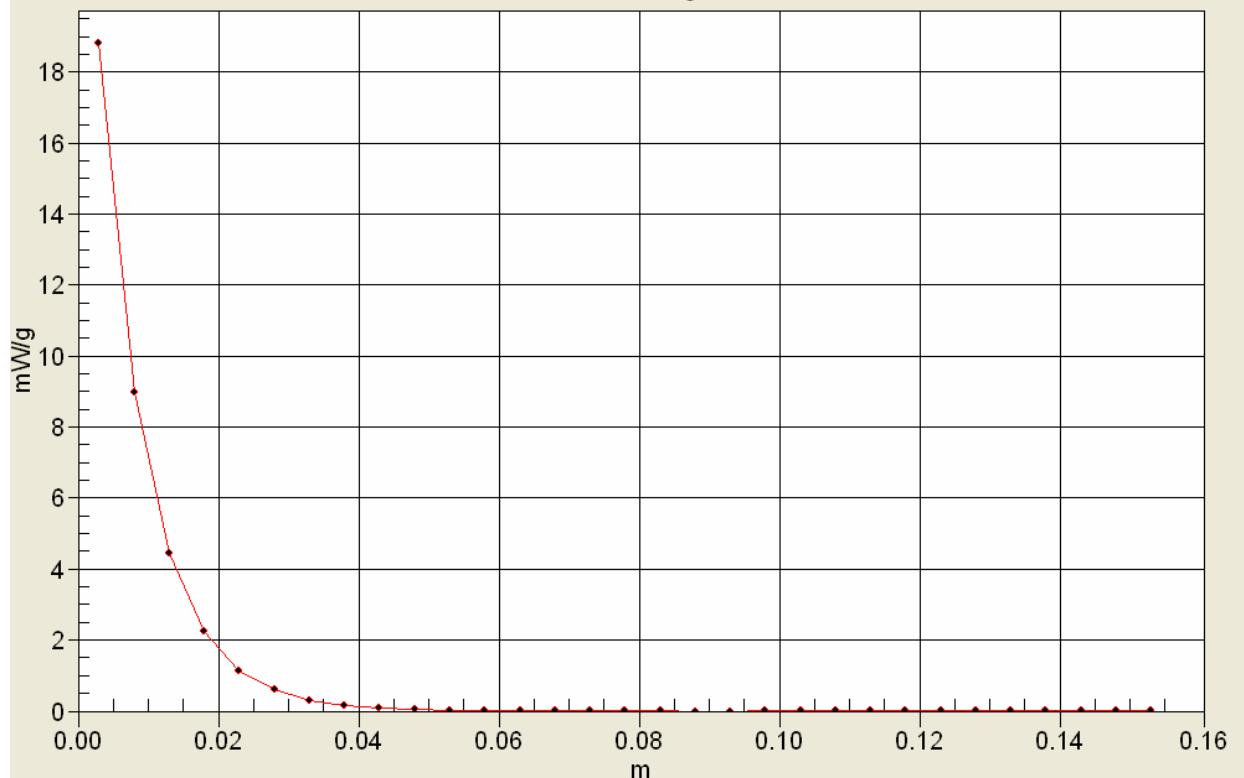
 Testing and Engineering Services Ltd	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA ACCREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

Test Lab Certificate No. 2470.01

Z-Axis Scan

2450 MHz System Performance Check SAR(x,y,z,f0)

SAR; Z Scan: Value Along Z, X=0, Y=0



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal			
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 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX C - MEASURED FLUID DIELECTRIC PARAMETERS

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

2450 MHz System Performance Check & 2412 MHz DUT Evaluation (Body)

Celltech Labs Inc.
Test Result for UIM Dielectric Parameter
05/Aug/2009
Frequency (GHz)
FCC_eB FCC Limits for Body Epsilon
FCC_sb FCC Limits for Body Sigma
Test_e Epsilon of UIM
Test_s Sigma of UIM

Freq	FCC_eB	FCC_sB	Test_e	Test_s
2.3500	52.83	1.85	51.99	1.80
2.3600	52.82	1.86	52.05	1.82
2.3700	52.81	1.87	51.98	1.82
2.3800	52.79	1.88	52.11	1.82
2.3900	52.78	1.89	51.98	1.85
2.4000	52.77	1.90	52.05	1.85
2.4100	52.75	1.91	52.05	1.87
2.4200	52.74	1.92	51.81	1.89
2.4300	52.73	1.93	51.95	1.92
2.4400	52.71	1.94	51.91	1.91
2.4500	52.70	1.95	51.70	1.95
2.4600	52.69	1.96	51.61	1.95
2.4700	52.67	1.98	51.95	1.97
2.4800	52.66	1.99	51.62	2.00
2.4900	52.65	2.01	51.79	2.01
2.5000	52.64	2.02	51.68	2.01
2.5100	52.62	2.04	51.78	2.01
2.5200	52.61	2.05	51.57	2.02
2.5300	52.60	2.06	51.54	2.02
2.5400	52.59	2.08	51.50	2.08
2.5500	52.57	2.09	51.27	2.06

 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX D - SAR TEST SETUP & DUT PHOTOGRAPHS

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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Date(s) of Evaluation
August 05, 2009

Test Report Serial No.
080409R9M-T976-S15W

Test Report Revision No.
Rev. 1.0 (Initial Release)

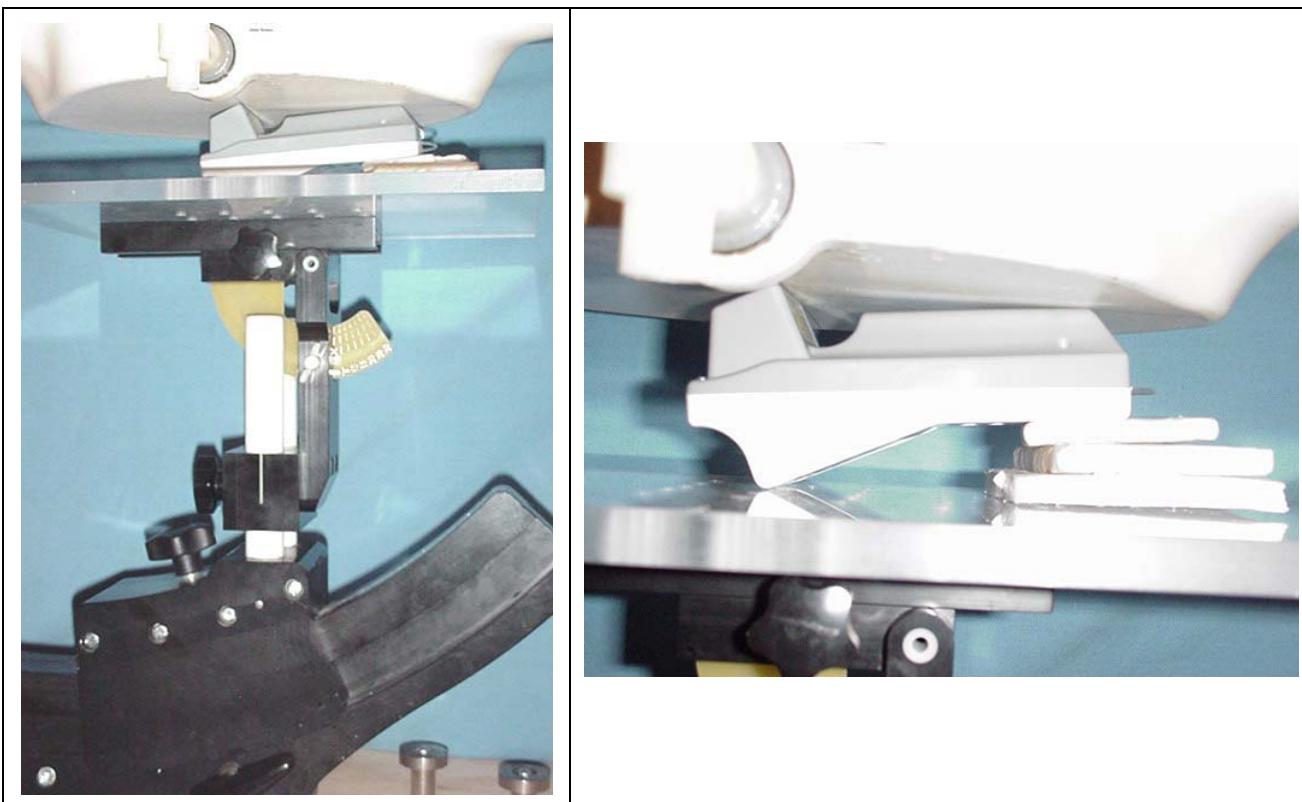
Test Report Issue Date
August 11, 2009

Description of Test(s)
Specific Absorption Rate

RF Exposure Category
General Population



BODY SAR TEST SETUP PHOTOGRAPHS
Back Side of DUT Touching Planar Section of SAM Phantom (2-Point Touch)
3 cm Antenna Distance



Applicant:	IntelliDOT Corporation			FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	IntelliDOT
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal				
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Date(s) of Evaluation
August 05, 2009

Test Report Serial No.
080409R9M-T976-S15W

Test Report Revision No.
Rev. 1.0 (Initial Release)

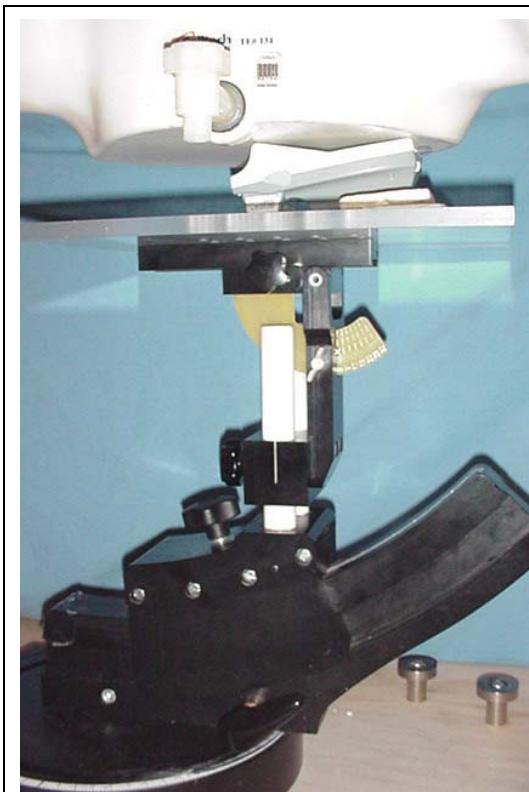
Test Report Issue Date
August 11, 2009

Description of Test(s)
Specific Absorption Rate

RF Exposure Category
General Population



BODY SAR TEST SETUP PHOTOGRAPHS
Front Side of DUT Touching Planar Section of SAM Phantom (2-Point Touch)
3 cm Antenna Distance



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal			
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Date(s) of Evaluation
August 05, 2009

Test Report Serial No.
080409R9M-T976-S15W

Test Report Revision No.
Rev. 1.0 (Initial Release)

Test Report Issue Date
August 11, 2009

Description of Test(s)
Specific Absorption Rate

RF Exposure Category
General Population



BODY SAR TEST SETUP PHOTOGRAPHS
Top Edge of DUT Touching Planar Section of SAM Phantom (2-Point Touch)
1 cm Antenna Distance



Applicant:	IntelliDOT Corporation			FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal					
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Date(s) of Evaluation
August 05, 2009

Test Report Serial No.
080409R9M-T976-S15W

Test Report Revision No.
Rev. 1.0 (Initial Release)

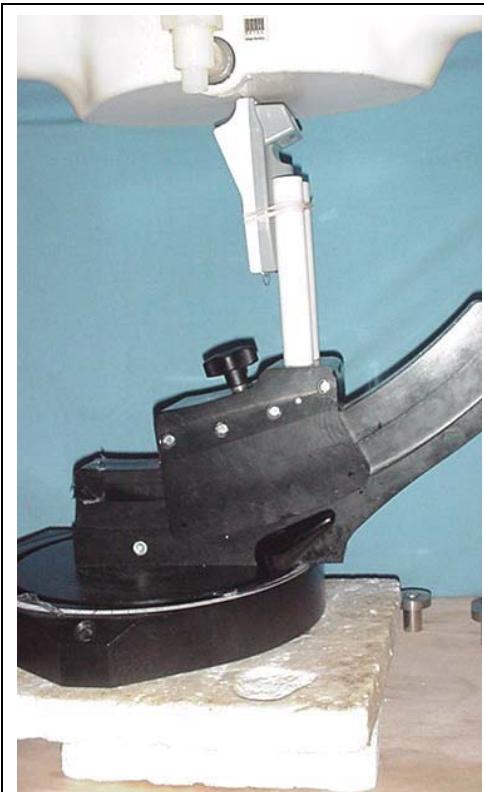
Test Report Issue Date
August 11, 2009

Description of Test(s)
Specific Absorption Rate

RF Exposure Category
General Population



BODY SAR TEST SETUP PHOTOGRAPHS
Top Edge of DUT Touching Planar Section of SAM Phantom (1-Point Touch)
1 cm Antenna Distance



Applicant:	IntelliDOT Corporation			FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal					
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Date(s) of Evaluation

August 05, 2009

Test Report Serial No.

080409R9M-T976-S15W

Test Report Revision No.

Rev. 1.0 (Initial Release)

Test Report Issue Date

August 11, 2009

Description of Test(s)

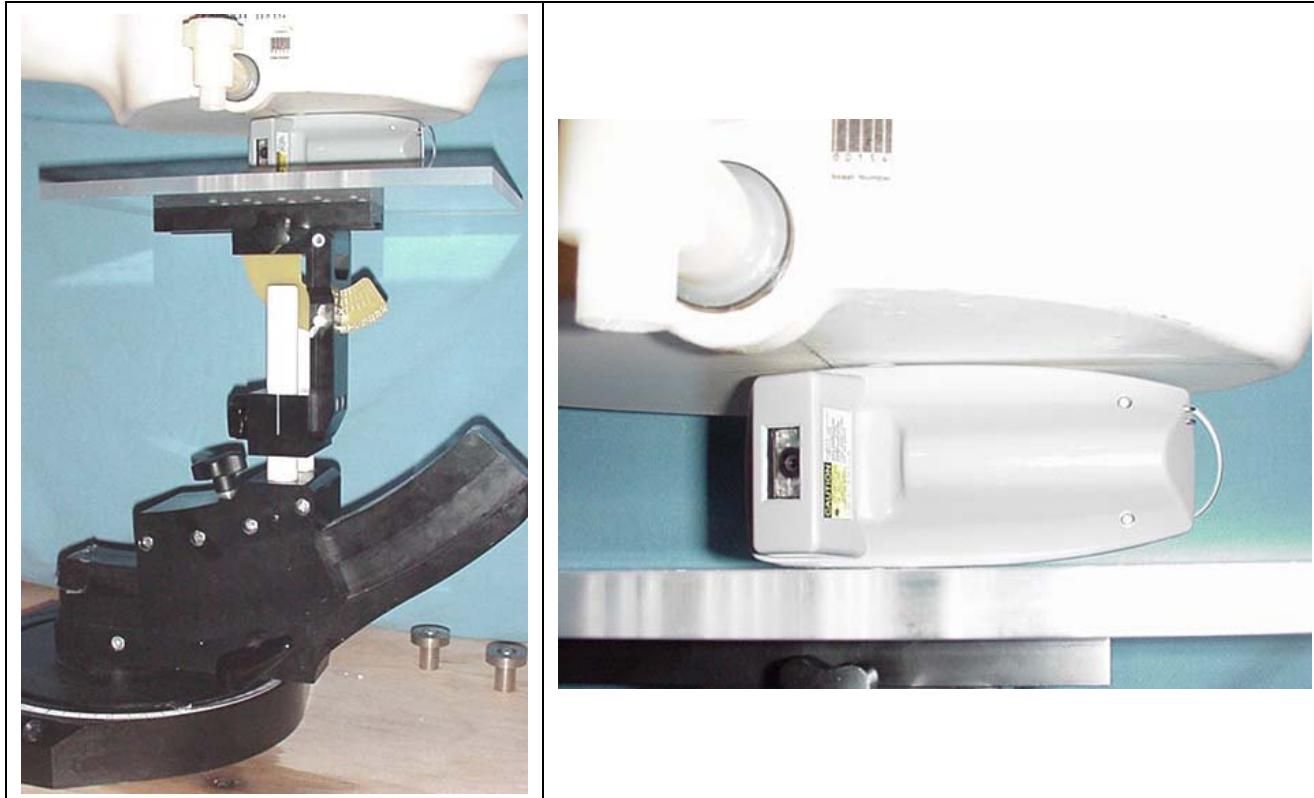
Specific Absorption Rate

RF Exposure Category

General Population



BODY SAR TEST SETUP PHOTOGRAPHS
Left Side of DUT Touching Planar Section of SAM Phantom
2.7 cm Antenna Distance



Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	IntelliDOT
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal				
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Date(s) of Evaluation

August 05, 2009

Test Report Serial No.

080409R9M-T976-S15W

Test Report Revision No.

Rev. 1.0 (Initial Release)

Test Report Issue Date

August 11, 2009

Description of Test(s)

Specific Absorption Rate

RF Exposure Category

General Population



DUT PHOTOGRAPHS



Applicant:	IntelliDOT Corporation			FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal					
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Date(s) of Evaluation

August 05, 2009

Test Report Serial No.

080409R9M-T976-S15W

Test Report Revision No.

Rev. 1.0 (Initial Release)

Test Report Issue Date

August 11, 2009

Description of Test(s)

Specific Absorption Rate

RF Exposure Category

General Population



Test Lab Certificate No. 2470.01

DUT PHOTOGRAPHS



Bottom End Face-Up (with Lanyard accessory provision)

Bottom End Face-Down (with Lanyard accessory provision)

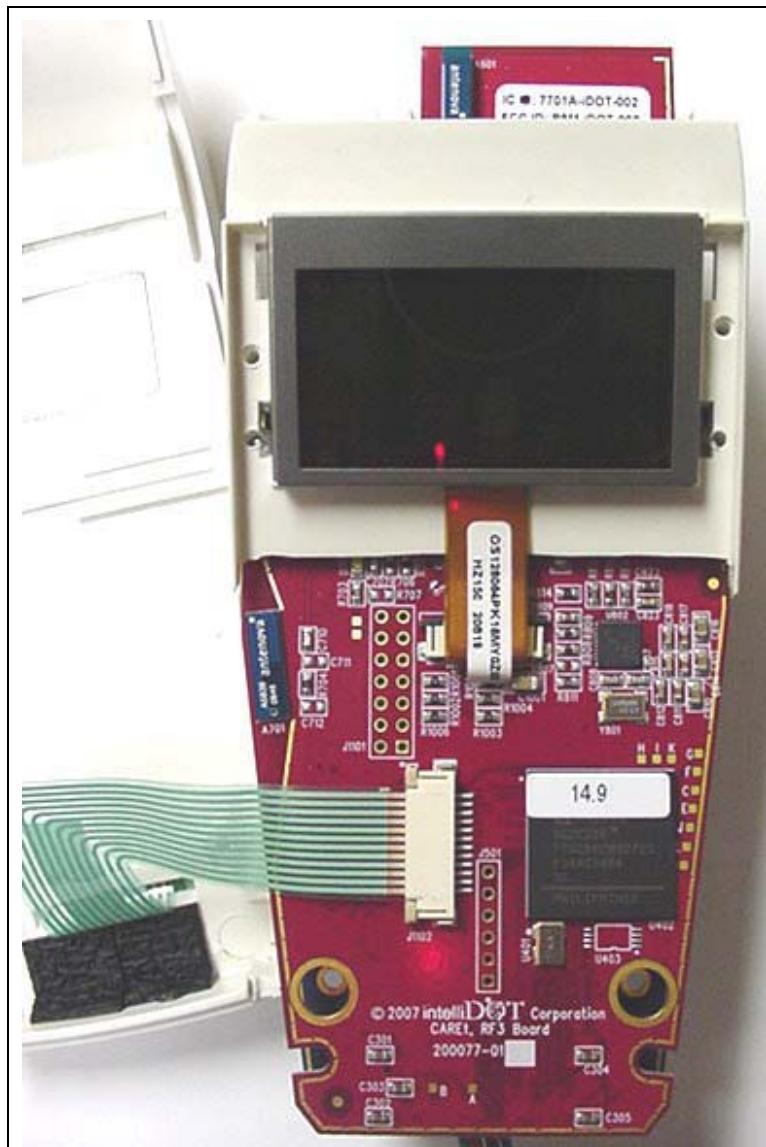


Left Side of DUT

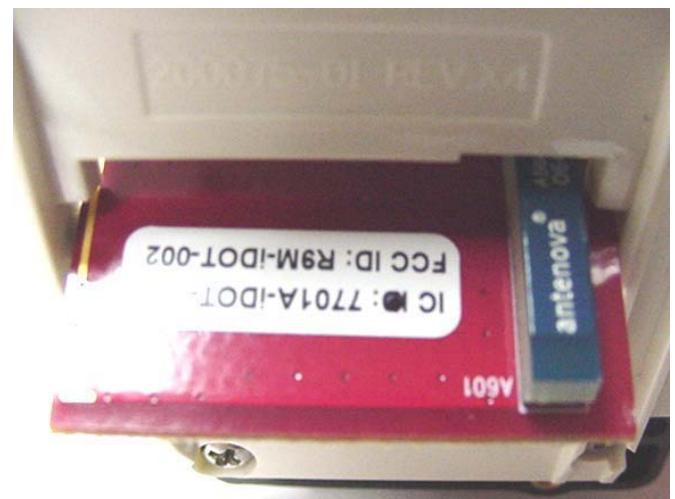
Right Side of DUT

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01		DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal			
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DUT PHOTOGRAPHS

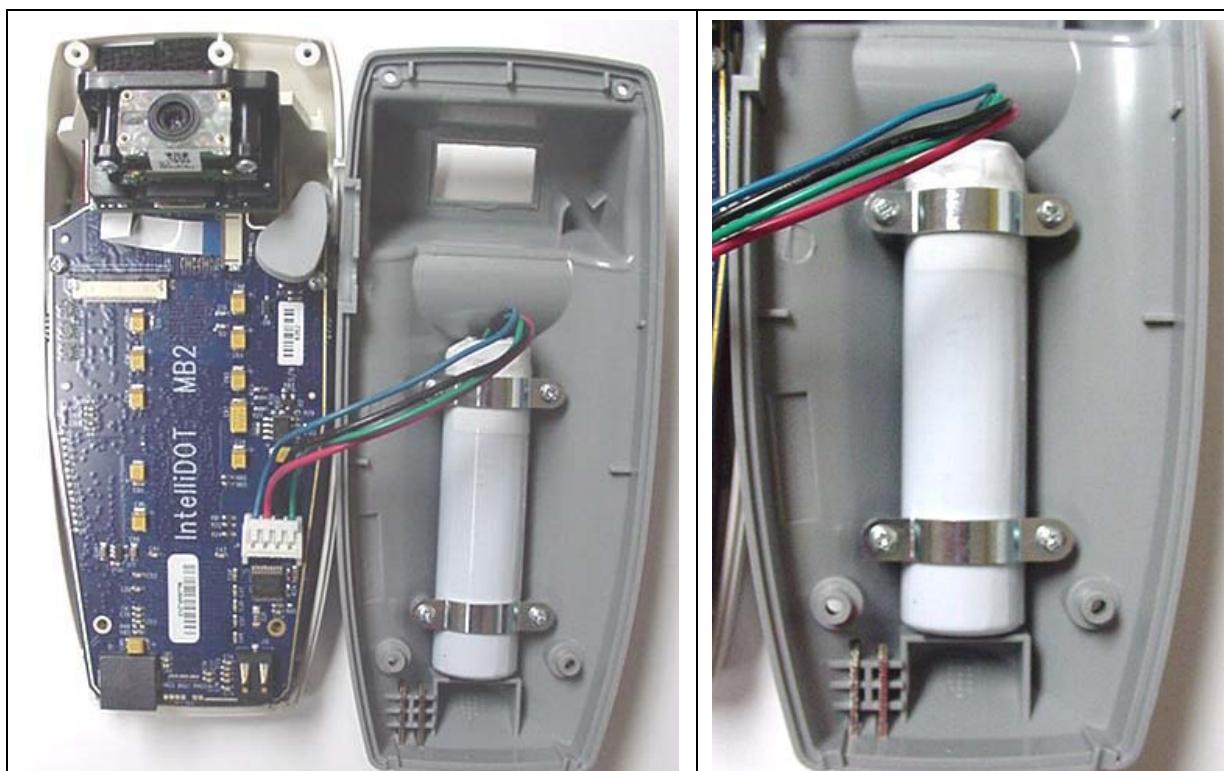


DUT Enclosure Removed



802.11b/g WLAN Antenna

DUT PHOTOGRAPHS



DUT Lithium-ion Battery Location

DUT Lithium-ion Battery Close-up



Top End view of DUT with enclosure open

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CARET™ Point-of-Care Terminal				
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 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX E - DIPOLE CALIBRATION

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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Accredited by the Swiss Accreditation Service (SAS)
 The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client

Celltech

Certificate No.: **D2450V2-825_Apr09**

CALIBRATION CERTIFICATE

Object **D2450V2 - SN: 825**

Calibration procedure(s) **QA CAL-05.v7**
Calibration procedure for dipole validation kits

Calibration date: **April 17, 2009**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	08-Oct-08 (No. 217-00898)	Oct-09
Power sensor HP 8481A	US37292783	08-Oct-08 (No. 217-00898)	Oct-09
Reference 20 dB Attenuator	SN: 5086 (20g)	31-Mar-09 (No. 217-01025)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ES3DV2	SN: 3025	28-Apr-08 (No. ES3-3025_Apr08)	Apr-09
DAE4	SN: 601	07-Mar-09 (No. DAE4-601_Mar09)	Mar-10
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-07)	In house check: Oct-09
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by: Name **Claudio Leubler** Function **Laboratory Technician**

Signature

Approved by: Name **Katja Pokovic** Function **Technical Manager**

Issued: April 22, 2009

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TS	tissue simulating liquid
ConvF	sensitivity in TS / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
- c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

- d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TS:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TS parameters:* The measured TS parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V5.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz \pm 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 \pm 0.2) °C	38.0 \pm 6 %	1.82 mho/m \pm 6 %
Head TSL temperature during test	(22.0 \pm 0.2) °C	—	—

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.6 mW / g
SAR normalized	normalized to 1W	54.4 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	53.7 mW /g \pm 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	6.29 mW / g
SAR normalized	normalized to 1W	25.2 mW / g
SAR for nominal Head TSL parameters ¹	normalized to 1W	25.0 mW /g \pm 16.5 % (k=2)

¹ Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.4 ± 6 %	1.98 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	—	—

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.9 mW / g
SAR normalized	normalized to 1W	51.6 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	51.6 mW /g ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	6.05 mW / g
SAR normalized	normalized to 1W	24.2 mW / g
SAR for nominal Body TSL parameters ²	normalized to 1W	24.2 mW /g ± 16.5 % (k=2)

² Correction to nominal TSL parameters according to d), chapter "SAR Sensitivities"

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	$54.5 \Omega + 4.7 \text{ j}\Omega$
Return Loss	- 24.1 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$49.2 \Omega + 5.6 \text{ j}\Omega$
Return Loss	- 24.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.160 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	December 11, 2008

DASY5 Validation Report for Head TSL

Date/Time: 17.04.2009 12:17:23

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN825

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL U10 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.82$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.4, 4.4, 4.4); Calibrated: 28.04.2008
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:

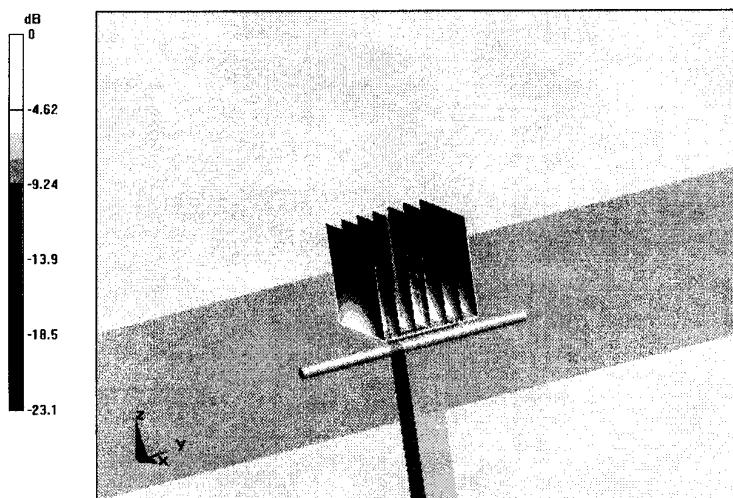
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.1 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 28.4 W/kg

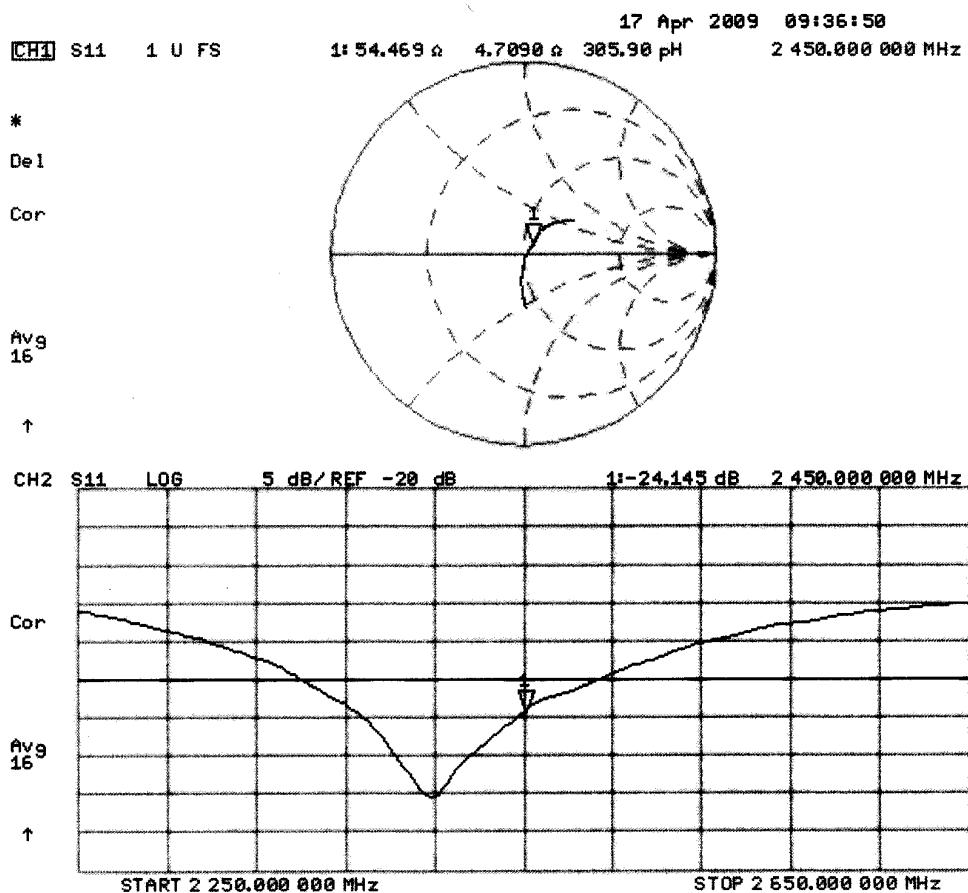
SAR(1 g) = 13.6 mW/g; SAR(10 g) = 6.29 mW/g

Maximum value of SAR (measured) = 17.7 mW/g



0 dB = 17.7mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date/Time: 17.04.2009 14:54:34

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:825

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: MSL U10 BB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 54.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC)

DASY5 Configuration:

- Probe: ES3DV2 - SN3025; ConvF(4.07, 4.07, 4.07); Calibrated: 28.04.2008
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 07.03.2009
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Pin = 250 mW; d = 10 mm/Zoom Scan (7x7x7)/Cube 0:

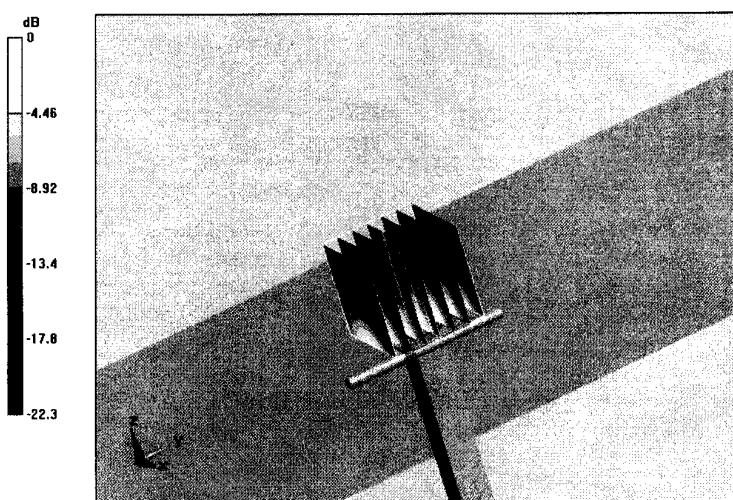
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.6 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 26.1 W/kg

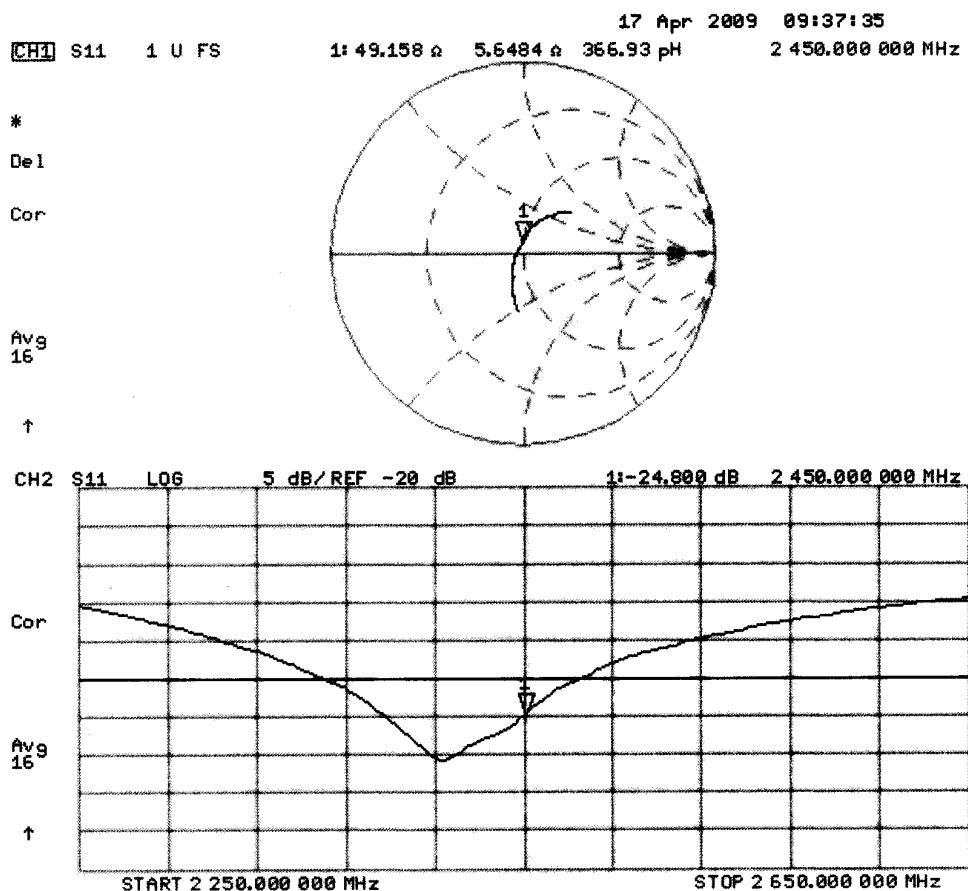
SAR(1 g) = 12.9 mW/g; SAR(10 g) = 6.05 mW/g

Maximum value of SAR (measured) = 16.6 mW/g



0 dB = 16.6mW/g

Impedance Measurement Plot for Body TSL



 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX F - PROBE CALIBRATION

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 108**

The Swiss Accreditation Service is one of the signatories to the EA
 Multilateral Agreement for the recognition of calibration certificates

Client

Celltech

Certificate No: **EX3-3600_Apr09**

CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:3600**

Calibration procedure(s) **QA CAL-01.v6, QA CAL-14.v3 and QA CAL-23.v3
 Calibration procedure for dosimetric E-field probes**

Calibration date: **April 28, 2009**

Condition of the calibrated item **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

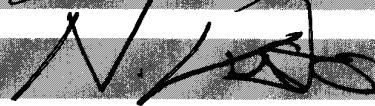
All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	9-Sep-08 (No. DAE4-660_Sep08)	Sep-09

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-08)	In house check: Oct-09

Calibrated by: **Katja Pokovic** **Technical Manager** 

Approved by: **Niels Kuster** **Quality Manager** 

Issued: April 28, 2009

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



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S Swiss Calibration Service

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Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
NORM x,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORM x,y,z
DCP	diode compression point
Polarization ϕ	ϕ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORM x,y,z :** Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM x,y,z are only intermediate values, i.e., the uncertainties of NORM x,y,z does not effect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f) $x,y,z = NORMx,y,z * frequency_response$** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z:** DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- ConvF and Boundary Effect Parameters:** Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM $x,y,z * ConvF$ whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy):** in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset:** The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe EX3DV4

SN:3600

Manufactured:	January 10, 2007
Last calibrated:	April 19, 2008
Recalibrated:	April 28, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: EX3DV4 SN:3600

Sensitivity in Free Space ^A			Diode Compression ^B		
NormX	0.51 \pm 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	90 mV	
NormY	0.51 \pm 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	89 mV	
NormZ	0.40 \pm 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	90 mV	

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **1810 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR _{be} [%]	Without Correction Algorithm	7.6	3.9
SAR _{be} [%]	With Correction Algorithm	0.6	0.3

TSL **5200 MHz** **Typical SAR gradient: 25 % per mm**

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR _{be} [%]	Without Correction Algorithm	19.9	10.2
SAR _{be} [%]	With Correction Algorithm	0.5	0.3

Sensor Offset

Probe Tip to Sensor Center 1.0 mm

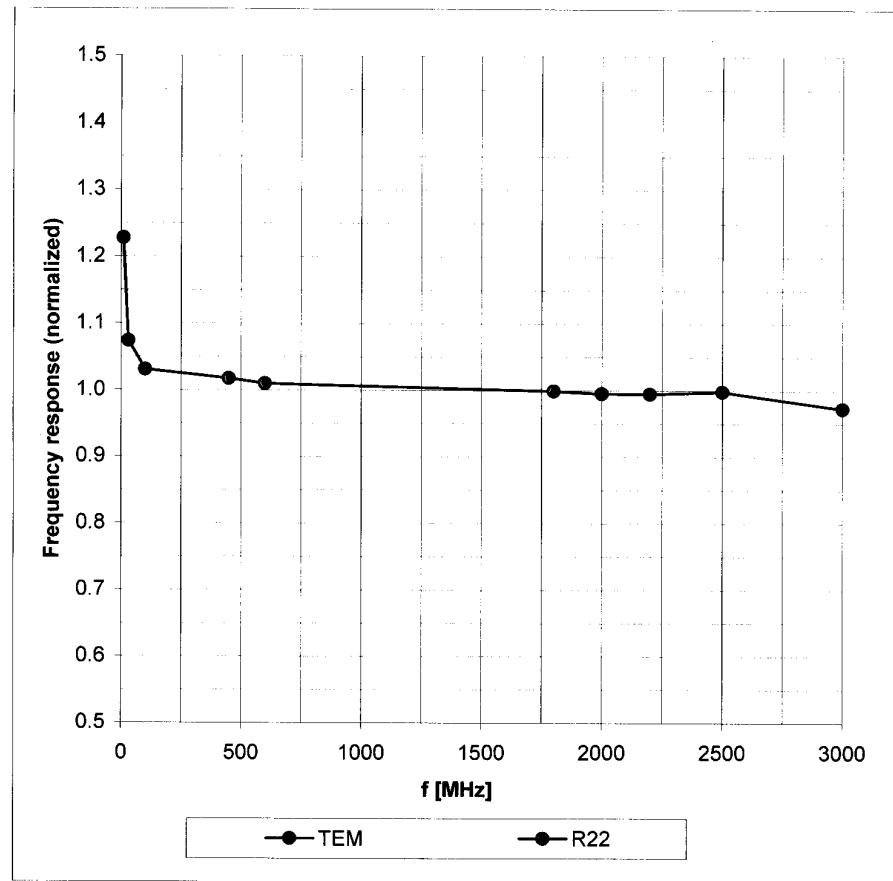
The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Page 8).

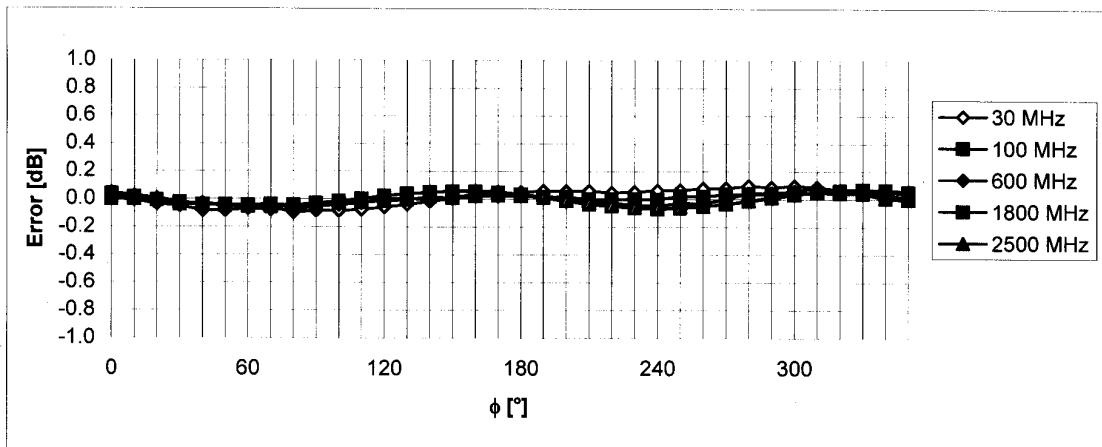
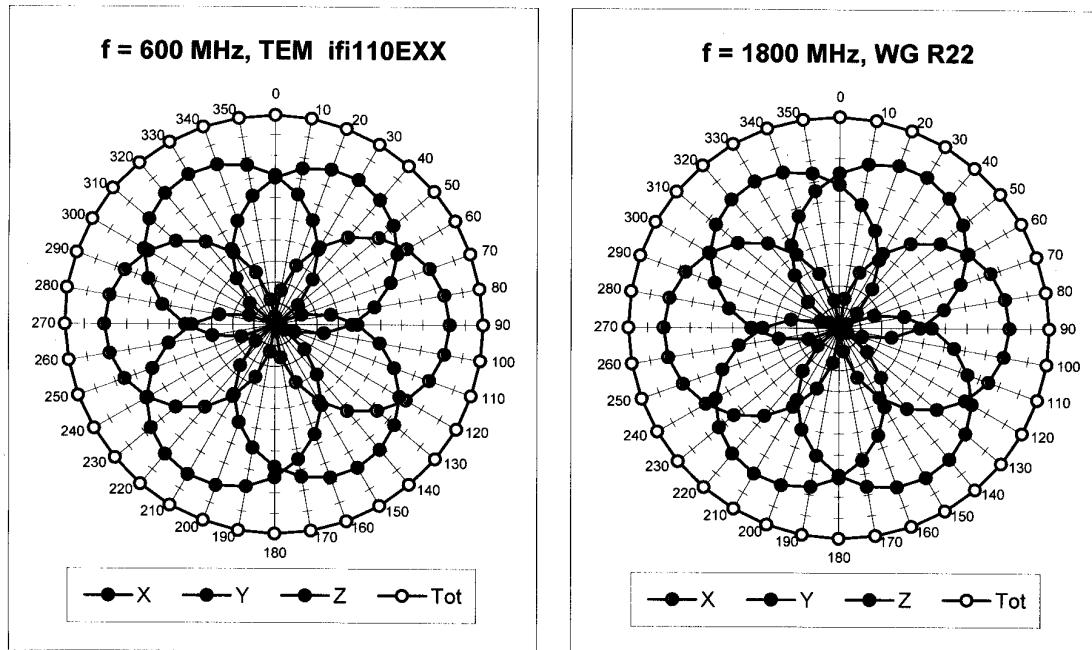
^b Numerical linearization parameter: uncertainty not required.

Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



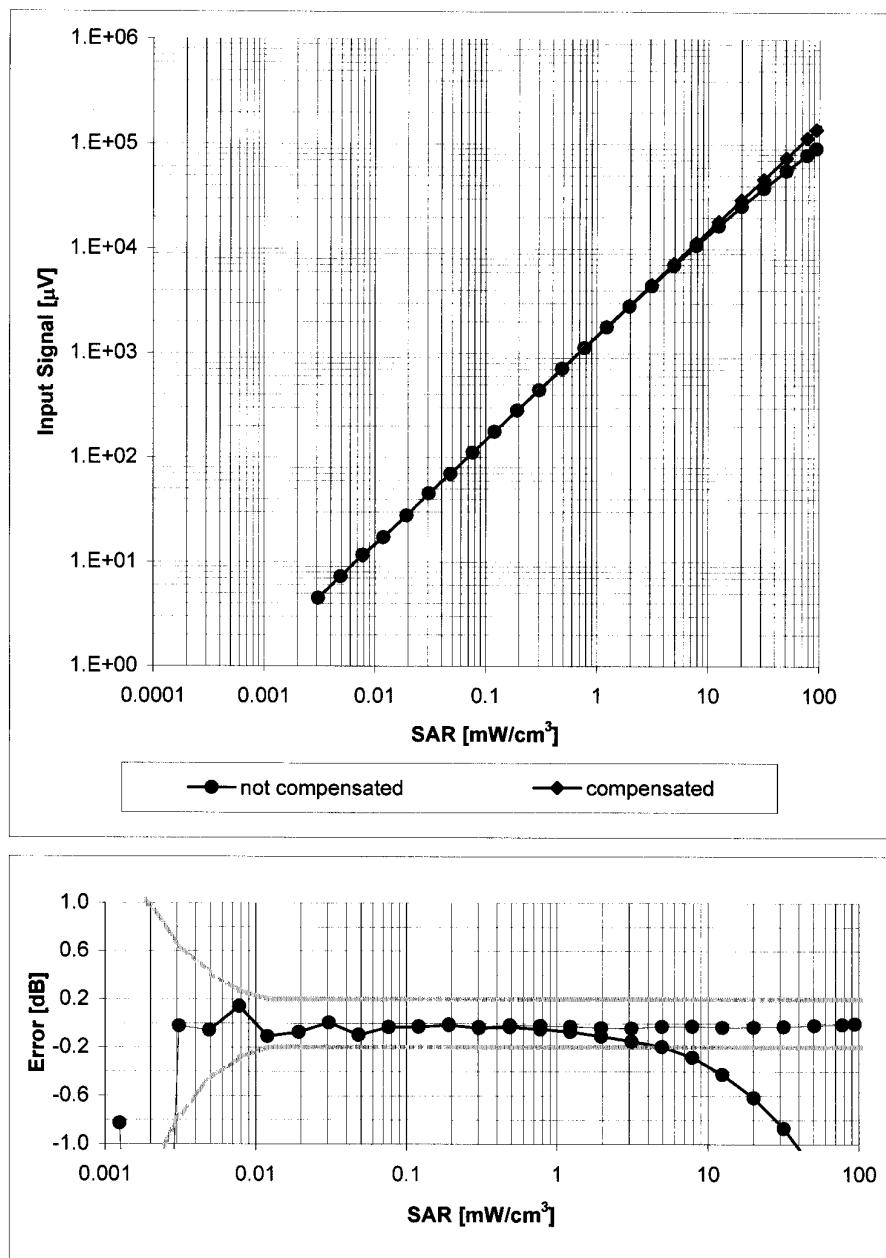
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$ 

Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

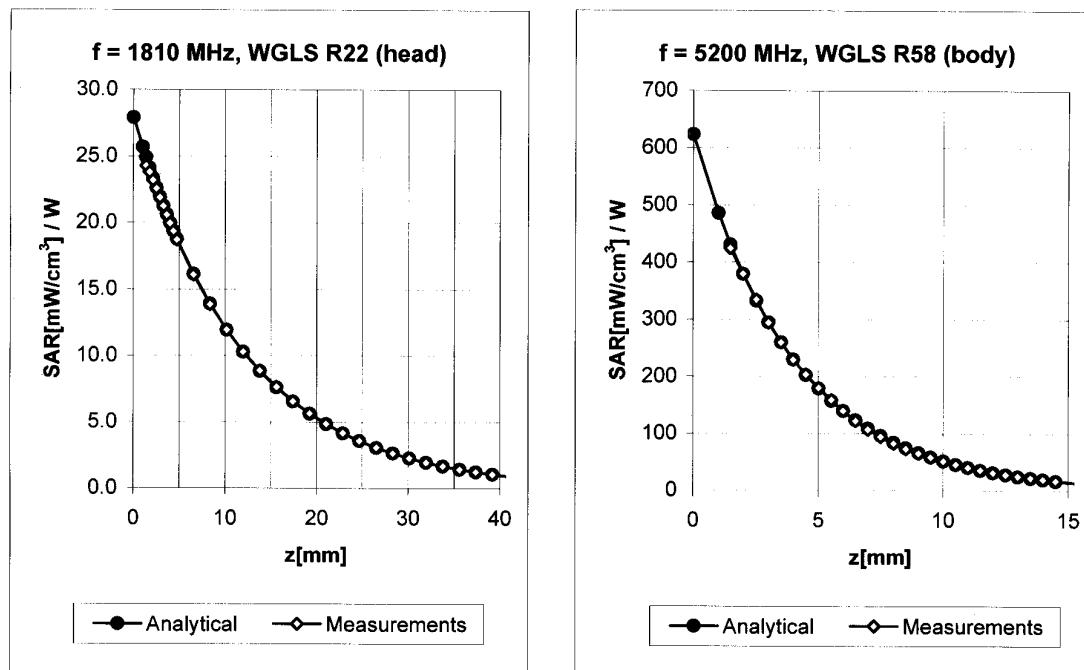
Dynamic Range f(SAR_{head})

(Waveguide R22, f = 1800 MHz)



Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



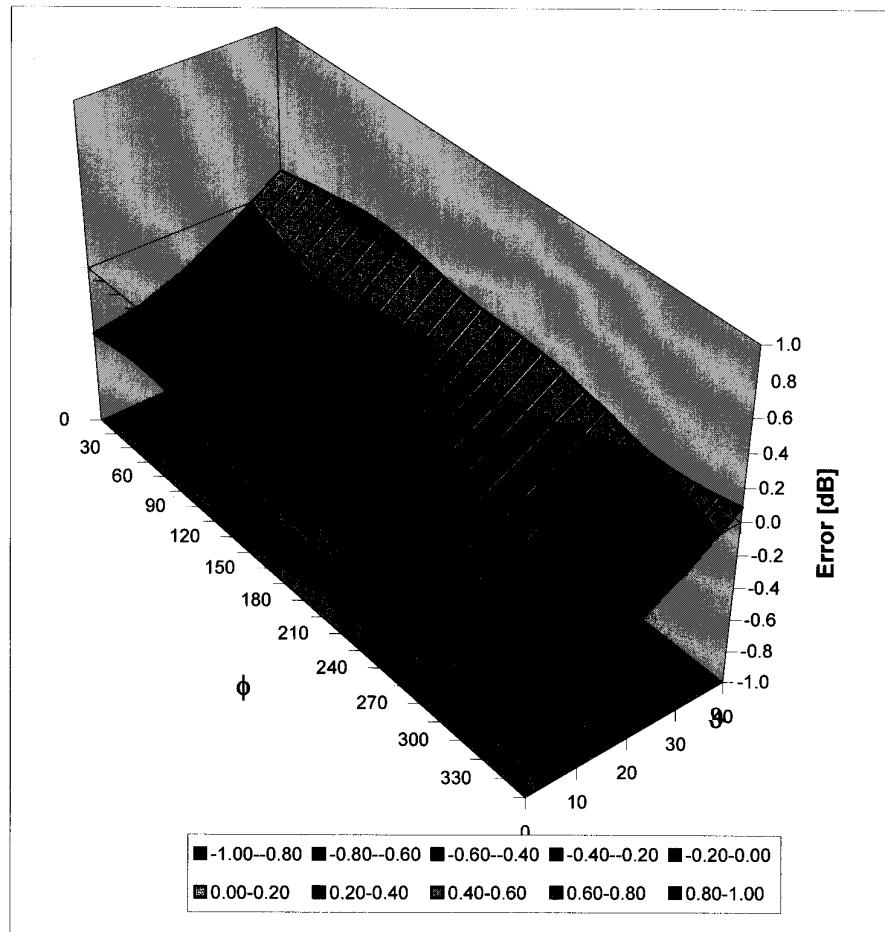
f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF	Uncertainty
1810	$\pm 50 / \pm 100$	Head	$40.0 \pm 5\%$	$1.40 \pm 5\%$	0.70	0.61	$6.77 \pm 11.0\% \text{ (k=2)}$	
1950	$\pm 50 / \pm 100$	Head	$40.0 \pm 5\%$	$1.40 \pm 5\%$	0.66	0.62	$6.62 \pm 11.0\% \text{ (k=2)}$	
2450	$\pm 50 / \pm 100$	Head	$39.2 \pm 5\%$	$1.80 \pm 5\%$	0.50	0.90	$6.30 \pm 11.0\% \text{ (k=2)}$	

1810	$\pm 50 / \pm 100$	Body	$53.3 \pm 5\%$	$1.52 \pm 5\%$	0.66	0.71	$6.68 \pm 11.0\% \text{ (k=2)}$
1950	$\pm 50 / \pm 100$	Body	$53.3 \pm 5\%$	$1.52 \pm 5\%$	0.39	0.92	$6.64 \pm 11.0\% \text{ (k=2)}$
2450	$\pm 50 / \pm 100$	Body	$52.7 \pm 5\%$	$1.95 \pm 5\%$	0.30	1.06	$6.25 \pm 11.0\% \text{ (k=2)}$
5200	$\pm 50 / \pm 100$	Body	$49.0 \pm 5\%$	$5.30 \pm 5\%$	0.50	1.80	$3.93 \pm 13.1\% \text{ (k=2)}$
5500	$\pm 50 / \pm 100$	Body	$48.6 \pm 5\%$	$5.65 \pm 5\%$	0.55	1.80	$3.70 \pm 13.1\% \text{ (k=2)}$
5800	$\pm 50 / \pm 100$	Body	$48.2 \pm 5\%$	$6.00 \pm 5\%$	0.60	1.80	$3.65 \pm 13.1\% \text{ (k=2)}$

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

Deviation from Isotropy in HSL

Error (ϕ, θ), $f = 900$ MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)

 Celltech <small>Testing and Engineering Services Lab</small>	<u>Date(s) of Evaluation</u> August 05, 2009	<u>Test Report Serial No.</u> 080409R9M-T976-S15W	<u>Test Report Revision No.</u> Rev. 1.0 (Initial Release)	 ILAC-MRA  ACREDITED
	<u>Test Report Issue Date</u> August 11, 2009	<u>Description of Test(s)</u> Specific Absorption Rate	<u>RF Exposure Category</u> General Population	

APPENDIX G - SAM PHANTOM CERTIFICATE OF CONFORMITY

Applicant:	IntelliDOT Corporation		FCC ID:	R9M-IDOT-002	IC:	7701A-IDOT002	
Model(s):	200524-01	DUT:	802.11b/g Module installed in Handheld CAREt™ Point-of-Care Terminal				
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Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 BA
Series No	TP-1002 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

The series production process used allows the limitation to test of first articles. Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series units (called samples).

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz – 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards	Liquid type HSL 1800 and others according to the standard.	Pre-series, First article

Standards

- [1] CENELEC EN 50361
- [2] IEEE P1528-200x draft 6.5
- [3] IEC PT 62209 draft 0.9

(*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date

18.11.2001

Signature / Stamp

Schmid & Partner
Engineering AG

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