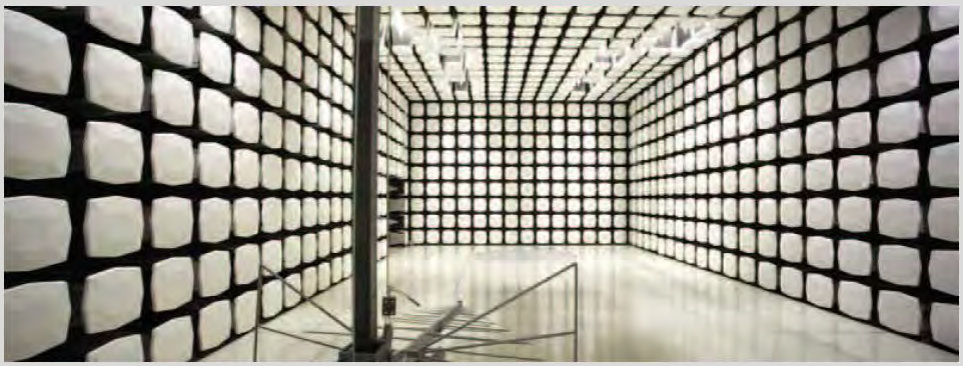
Intel Corporation
WSBUB-SDS

SAR Evaluation Report #: INTE5434

WLAN Radio Evaluated to the following SAR Specification:

FCC 2.1093:2014



Report Prepared By Northwest EMC Inc.

NORTHWEST EMC – (888) 364-2378 – www.nwemc.com

California – Minnesota – Oregon – New York – Washington

NORTHWEST EMC

WTD 12.5.23

CERTIFICATE OF TEST

Last Date of Test: April 11, 2014
Intel Corporation
Model: WSBUB-SDS

WLAN Radio

Applicable Standard

Test Description	Specification	Test Method	Pass/Fail
SAR Evaluation	FCC 2.1093:2014 FCC 15.247:2014	IEEE Std 1528:2003	Pass
		FCC KDB 447498 D01 v05r02	
		FCC KDB 248227 D01 v01r02	
		FCC KDB 616217 D04 v01r01	
		FCC KDB 865664 D01 v01r03 and D02 v01r01	

Highest SAR Values:

Frequency Bands (GHz)	Body (W/kg)	Limit (W/kg)	Exposure Environment
	1g	1g	
2.4	1.28	**1.6**	**General Population**
5.0	1.49	**1.6**	

Deviations From Test Standards

None

Approved By:

Don Facteau, IS Manager

NVLAP®

NVLAP Lab Code: 200630-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

NORTHWEST EMC
REV 2012.08.02

REVISION HISTORY

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

REV 2012.05.24

ACCREDITATIONS AND AUTHORIZATIONS

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC Guide 65 as a product certifier. This allows Northwest EMC to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

IC - Recognized by Industry Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with IC.

European Union

European Commission – Validated by the European Commission as a Conformity Assessment Body (CAB) under the EMC directive and as a Notified Body under the R&TTE Directive.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

KCC / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Hong Kong

OFTA – Recognized by OFTA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

Russia

GOST – Accredited by Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC to perform EMC and Hygienic testing for Information Technology products to GOST standards.

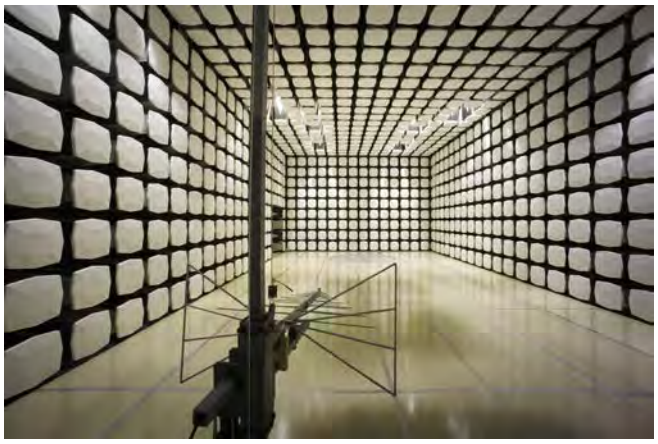
SCOPE

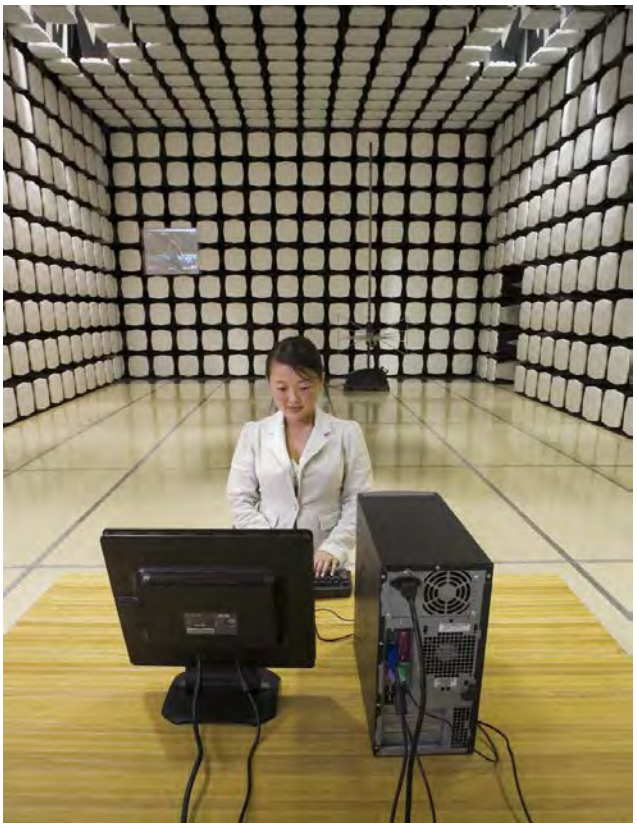
For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

FACILITIES

REV 2013.01.07

Oregon	California	New York	Minnesota	Washington
Labs EV01-12 22975 NW Evergreen Pkwy Hillsboro, OR 97124 (503) 844-4066	Labs OC01-13 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs WA01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 685-0796	Labs MN01-08 9349 W Broadway Ave. Brooklyn Park, MN 55445 (763) 425-2281	Labs NC01-05,SU02,SU07 19201 120th Ave. NE Bothell, WA 98011 (425) 984-6600
VCCI				
A-0108	A-0029		A-0109	A-0110
Industry Canada				
2834D-1, 2834D-*2*	2834B-1, 2834B-2, 2834B-3		2834E-1	2834C-1





PRODUCT DESCRIPTION

WTD 12.5.23

Client and Equipment Under Test (EUT) Information

Company Name:	Intel Corporation
Address:	5200 NE Elam Young Pkwy
City, State, Zip:	Hillsboro, OR 97124
Test Requested By:	Mike Lowe/Bill Jones
Model:	WSBUB-SDS
First Date of Test:	March 29, 2014
Last Date of Test:	April 11, 2014
Receipt Date of Samples:	March 29, 2014
Equipment Design Stage:	Production
Equipment Condition:	No Damage

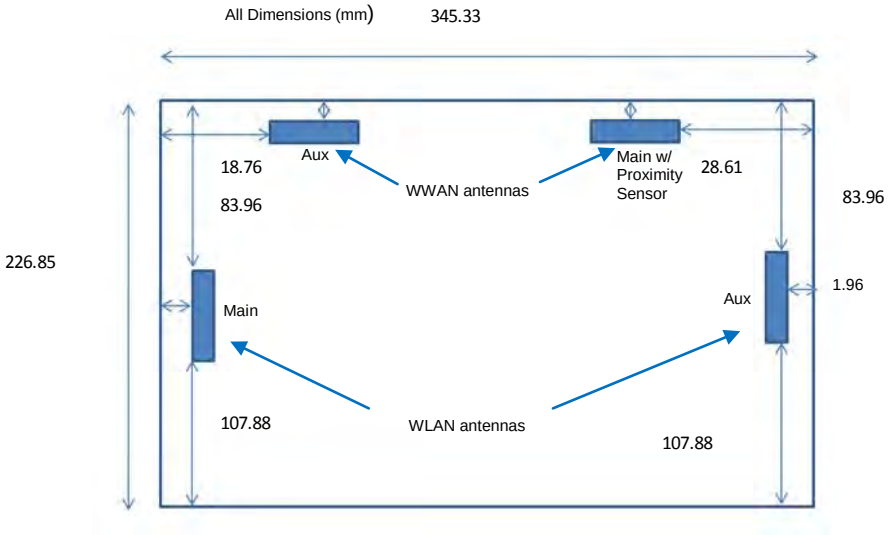
Information Provided by the Party Requesting the Test

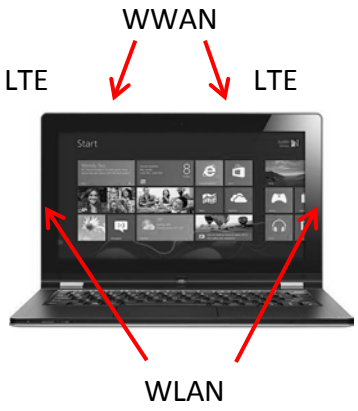
Functional Description of the EUT (Equipment Under Test):

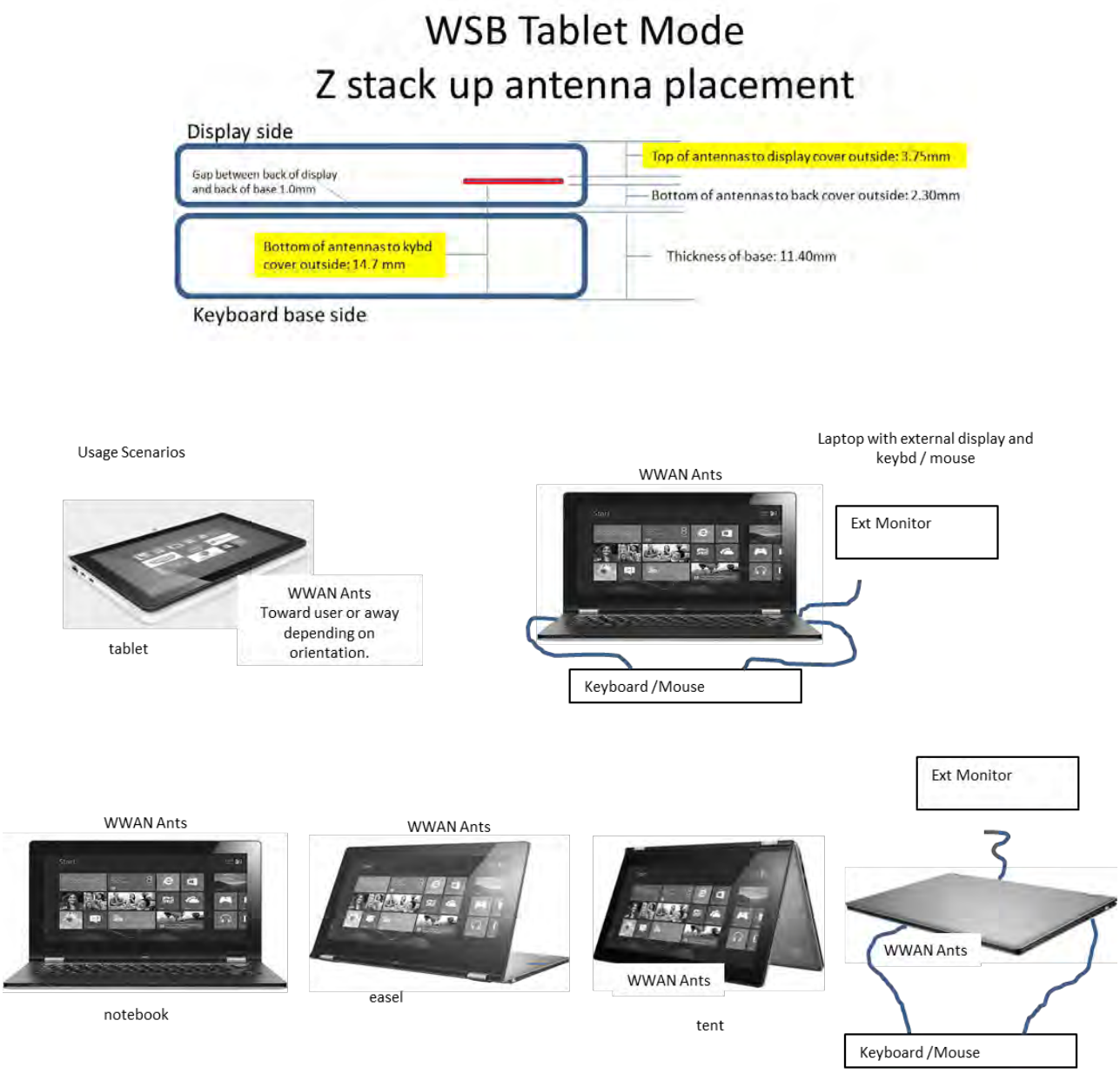
The EUT is the Model WSBUB-SDS laptop / tablet convertible computer containing a NFC radio. Previously certified WWAN (FCC ID: RYQ-NF2) and WLAN / Bluetooth (FCC ID: PD97265NG) modular radios are installed. The WLAN radio is the subject of this SAR evaluation.

The WLAN radio is an 802.11abgnac 2x2 MIMO. The 2.4 and 5 GHz band use 20 & 40 MHz channel bandwidths for Chain A or B, and A+B combinations. The 5 GHz bands also support 802.11 ac for 20, 40, and 80 MHz channel bandwidths for Chain A or B, and A+B combinations.

The WLAN antennas are monopole antennas that are integral to the computer. The main antenna has a peak gain of 1.5 dBi in the 2.4 GHz band and 4.2 dBi in the 5 GHz band. The auxiliary antenna has a peak gain of 1.3 dBi in the 2.4 GHz band and 1.8 dBi in the 5 GHz band.







After a review of the usage scenarios displayed above, the following positions were tested for the WLAN radio: right edge, left edge, and back side adjacent to the antennas. Each of these positions was tested with the keyboard folded under the display ("tablet mode") or extended away from the display ("tent mode").

The diagonal screen size is greater than 20cm (7.9) inches therefore KDB 941225 is not applicable; instead, KDB 616217 is applicable.

There is no usage model for operation near the head. There are no authorized accessories to wear the device on the body. When used in "tablet mode", only the tablet configurations anticipated by KDB 616217 are applicable. Testing was done with a 0 cm spacing to the phantom.

PRODUCT DESCRIPTION

Testing Objective:

To demonstrate compliance with the SAR requirements of FCC 2.1093.

Test Locations

KDB 447498 D01 General RF Exposure Guidance v05r02 is the FCC's starting point for RF exposure policy. Section 4.3.1, Item #1 provides the SAR test exclusion thresholds for test separation distances ≤ 50mm:

> [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where
>
> - f(GHz) is the RF channel transmit frequency in GHz
> - Power and distance are rounded to the nearest mW and mm before calculation
> - The result is rounded to one decimal place for comparison
> - 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below
>
> The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 5) in section 4.1 is applied to determine SAR test exclusion.

Using the formula above, sides or edges with greater than 72 mm (2.8 inches) separation from the antenna are excluded from stand-alone SAR testing.

Conducted Output Power on FCC Grant (mW)	Duty Cycle	Exclusion Threshold	Transmit Frequency Band (GHz)	Minimum Test Separation (mm)	Minimum Test Separation (inches)
104	1	3	2.45	54	2.14
44	1	3	5.2	33	1.32
92	1	3	5.3	71	2.78
91	1	3	5.6	72	2.83
89	1	3	5.8	71	2.81

The WLAN MAIN antenna is closest to the left side of the display. The WLAN AUX antenna is closest to the right side of the display. The back side of the display can be used next to the torso. Since they are all closer than 72 mm to the antennas, the left and right edges as well as the back side adjacent to the antennas were tested. Each of these positions was tested with the keyboard folded under the display ("tablet mode") or extended away from the display ("tent mode"). Please see the discussion above regarding usage scenarios.

The bottom edge has greater than 72 mm separation from the antenna and is excluded from SAR testing. The front surface of the tablet is excluded from SAR testing per Section 4.3 of KDB 616217 D04 v01r01.

The highest output power of the Bluetooth radio is equal to 3 mW. Using the formula above, the exclusion threshold is 0.9; therefore it is excluded from stand-alone SAR testing.

Simultaneous Transmission

MIMO measurements for the WLAN are contained in this SAR report. A discussion of the simultaneous transmission of the other co-located radios is found in the SAR report for the WWAN radio.

PRODUCT DESCRIPTION

MIMO Evaluation

The FCC's Guidance for SAR testing of 802.11 a/b/g device is found in KDB 248227. It states:

> "SAR for MIMO is measured with all antennas transmitting simultaneously.
>
> For many low-power devices, when the peak SAR locations are more than 5 cm apart, the 1-g SAR can usually be treated independently with little or no noticeable impact. Therefore spatial summing could be optional"

MIMO SAR evaluations were conducted in the 2.4 and 5 GHz bands to show that with a 30 cm antenna spacing, there were no overlapping SAR regions. The zoom scans of each hot spot were centered on the individual antennas.

Scope

The stand-alone SAR evaluation documented in this report is for the 802.11abgnac portion of the EUT.

CONFIGURATIONS

WTD 12.5.23

Configuration INTE5434- 1

Software/Firmware Running during test	
Description	**Version**
Diagnostic and Regulatory Testing Utility	1.7.3-859

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop/Tablet Convertible Computer	Intel Corporation	WSBUB-SDS	010

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	Delta Electronics, Inc.	ADP-45BE AA	None

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Power	No	1.5	PA	Tablet Computer	AC Adapter
AC Power	No	0.65	No	AC Adapter	AC Mains
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

MODIFICATIONS

WTD 12.5.23

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	3/29/2014	SAR Evaluation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test
2	4/11/2014	SAR Evaluation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

TISSUE – EQUIVALENT LIQUID

Characterization of tissue-equivalent liquid dielectric properties

Per IEEE 1528: 2003, Section 5.2.2, the permittivity and conductivity of the tissue material should be measured at least within 24 hours of any full-compliance test. The measured values must be within +/- 5% of the target values. The temperature variation in the liquid during SAR measurements must be within +/- 2 degrees C of that recorded when the dielectric properties were measured.

The dielectric parameters of the tissue-equivalent liquids were measured within 24 hours of the start of testing using the HP85070E dielectric probe kit. The dielectric measurements were made across the frequency range of the liquid. The attached data sheets show that the dielectric parameters of the liquid were within the required 5% tolerances.

Target values of dielectric parameters

Per KDB 865664 D01 v01r03, Appendix A.1:

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

Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

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

TISSUE – EQUIVALENT LIQUID

Composition of Ingredients for Liquid Tissue Phantoms

Northwest EMC uses tissue-equivalent liquids prepared by SPEAG and confirmed by them to be within +/- 5% from the target values. Their recipes are based upon the following formulations as found in IEEE 1528: 2003, Annex C:

"The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation."

Ingredients (% by weight)	**Frequency (MHz)**									
	450		835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78

Salt: 99^{+}% Pure Sodium Chloride Sugar: 98^{+}% Pure Sucrose
Water: De-ionized, 16 MΩ^{+} resistivity HEC: Hydroxyethyl Cellulose
DGBE: 99^{+}% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]
Triton X-100 (ultra pure): Polyethylene glycol mono [4-(1,1, 3, 3-tetramethylbutyl)phenyl]ether

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	INTE5434
Equipment ID:	SAM	Date:	03/28/2014
Customer:	Intel Corporation	Temperature:	22.4°C
Customer Project:	None	Liquid Temperature:	22°C
Tested By:	Ethan Schoonover	Relative Humidity:	45.4%
Job Site:	EV08	Bar. Pressure:	1010 mb

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
2450	51.3	1.97	52.7	1.95	2.66	-1.03

Frequency (MHz)	Relative Permittivity	Conductivity
1900	61.9	4.895
1925	56.6	1.124
1950	56.6	0.987
1975	56.5	0.983
2000	56.4	1.018
2025	56.1	1.062
2050	56	1.119
2100	55.5	1.231
2125	55.1	1.281
2150	54.9	1.351
2175	54.6	1.405
2200	54.3	1.461
2225	54.1	1.525
2250	53.7	1.577
2300	53	1.677
2325	52.8	1.725
2350	52.4	1.764
2375	52.2	1.816
2400	51.9	1.87
2425	51.6	1.918
2450	51.3	1.97
2500	50.7	2.062
2525	50.4	2.106
2550	50.1	2.152
2575	49.7	2.197
2600	49.4	2.239
2625	49.1	2.283
2675	48.4	2.355
2700	48.1	2.384

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	INTE5434
Equipment ID:	SAV	Date:	03/31/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Customer Project:	None	Liquid Temperature:	22°C
Tested By:	Ethan Schoonover	Relative Humidity:	37.2%
Job Site:	EV08	Bar. Pressure:	1010 mb

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
5800	46.6	6.228	48.2	6	3.32	-3.8

Frequency (MHz)	Relative Permittivity	Conductivity
3400	56.8	5.321
3450	56.9	2.405
3550	56.5	2.445
3650	55.9	2.605
3750	55.3	2.787
3850	54.9	2.976
3900	54.6	3.061
4000	54.1	3.237
4100	53.7	3.421
4200	53.2	3.593
4300	52.7	3.77
4350	52.5	3.847
4450	52.1	4.022
4550	51.7	4.202
4650	51.2	4.374
4750	50.8	4.555
4850	50.3	4.729
4900	50.1	4.813
5000	49.6	4.961
5100	49.2	5.106
5200	48.8	5.258
5300	48.5	5.406
5350	48.3	5.484
5450	48	5.652
5550	47.6	5.821
5650	47.2	5.99
5750	46.8	6.151
5800	46.6	6.228
5850	46.4	6.312
5900	46.2	6.391

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	INTE5434
Equipment ID:	SAV	Date:	04/04/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Customer Project:	None	Liquid Temperature:	21.7°C
Tested By:	Ethan Schoonover	Relative Humidity:	37.2
Job Site:	EV08	Bar. Pressure:	1015

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
5800	46.7	6.176	48.2	6	3.11	-2.93

Frequency (MHz)	Relative Permittivity	Conductivity
3400	23.8	0.205
3450	57.2	2.36
3550	56.2	2.419
3650	55.7	2.619
3750	55.3	2.782
3850	54.8	2.952
3900	54.6	3.032
4000	54.1	3.197
4100	53.6	3.371
4200	53.2	3.548
4300	52.8	3.713
4350	52.5	3.806
4450	52.2	3.987
4550	51.8	4.181
4650	51.4	4.366
4750	50.8	4.531
4850	50.3	4.689
4900	50.1	4.766
5000	49.6	4.893
5100	49.2	5.041
5200	49	5.205
5300	48.7	5.337
5350	48.5	5.418
5450	48.1	5.588
5550	47.7	5.762
5650	47.3	5.927
5750	46.9	6.076
5800	46.7	6.176
5850	46.5	6.25
5900	46.4	6.319

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	INTE5434
Equipment ID:	SAV	Date:	04/07/2014
Customer:	Intel Corporation	Temperature:	23.1°C
Customer Project:	None	Liquid Temperature:	21.6°C
Tested By:	Ethan Schoonover	Relative Humidity:	37.5
Job Site:	EV08	Bar. Pressure:	1025

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
5800	46.7	6.215	48.2	6	3.11	-3.58

Frequency (MHz)	Relative Permittivity	Conductivity
3400	18.2	-1.919
3450	57.3	2.323
3550	56.2	2.405
3650	55.7	2.621
3750	55.4	2.785
3850	54.9	2.953
3900	54.7	3.035
4000	54.2	3.207
4100	53.6	3.389
4200	53.1	3.57
4300	52.7	3.734
4350	52.5	3.826
4450	52.2	3.993
4550	51.8	4.167
4650	51.4	4.343
4750	50.9	4.519
4850	50.4	4.694
4900	50.2	4.778
5000	49.7	4.911
5100	49.2	5.066
5200	49	5.234
5300	48.7	5.36
5350	48.5	5.438
5450	48.1	5.603
5550	47.7	5.772
5650	47.3	5.944
5750	46.9	6.103
5800	46.7	6.215
5850	46.5	6.285
5900	46.4	6.366

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	INTE5434
Equipment ID:	SAV	Date:	04/11/2014
Customer:	Intel Corporation	Temperature:	22.7°C
Customer Project:	None	Liquid Temperature:	22.1°C
Tested By:	Ethan Schoonover	Relative Humidity:	33.2
Job Site:	EV08	Bar. Pressure:	1024

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
5800	47.4	6.223	48.2	6	1.66	-3.72

Frequency (MHz)	Relative Permittivity	Conductivity
3400	44.4	3.512
3450	58.2	2.382
3550	57.5	2.457
3650	56.9	2.656
3750	56.4	2.832
3850	55.9	3.01
3900	55.6	3.092
4000	55	3.27
4100	54.5	3.453
4200	54	3.638
4300	53.5	3.8
4350	53.3	3.878
4450	53	4.05
4550	52.5	4.218
4650	52	4.389
4750	51.5	4.562
4850	51.1	4.737
4900	50.9	4.823
5000	50.4	4.972
5100	50	5.109
5200	49.7	5.253
5300	49.3	5.381
5350	49.1	5.458
5450	48.7	5.629
5550	48.3	5.819
5650	48	5.999
5750	47.7	6.15
5800	47.4	6.223
5850	47.2	6.289
5900	47	6.353

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	INTE5434
Equipment ID:	SAM	Date:	04/11/2014
Customer:	Intel Corporation	Temperature:	22.7°C
Customer Project:	None	Liquid Temperature:	22.1°C
Tested By:	Ethan Schoonover	Relative Humidity:	33.2
Job Site:	EV08	Bar. Pressure:	1024

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
2450	50.5	1.961	52.7	1.95	4.17	-0.56

Frequency (MHz)	Relative Permittivity	Conductivity
1900	53.5	5.527
1925	56.2	1.154
1950	56.1	0.999
1975	56	1.002
2000	55.8	1.027
2025	55.6	1.072
2050	55.4	1.122
2100	54.8	1.234
2125	54.6	1.292
2150	54.3	1.347
2175	54	1.405
2200	53.7	1.455
2225	53.3	1.512
2250	53.1	1.561
2300	52.5	1.666
2325	52.2	1.719
2350	51.9	1.77
2375	51.5	1.823
2400	51.2	1.877
2425	50.8	1.92
2450	50.5	1.961
2500	49.9	2.047
2525	49.6	2.089
2550	49.3	2.13
2575	49	2.175
2600	48.6	2.219
2625	48.3	2.259
2675	47.6	2.33
2700	47.3	2.363

SAR SYSTEM VERIFICATION

REQUIREMENT

Per IEEE 1528, Section 8.2.1, "System checks are performed prior to compliance tests and the results must always be within ± 10% of the target value corresponding to the test frequency, liquid, and the source used. The target values are 1 g or 10 g averaged SAR values measured on systems having current system validation and calibration status, and using the system check setup as shown in Figure 14. These target values should be determined using a standard source."

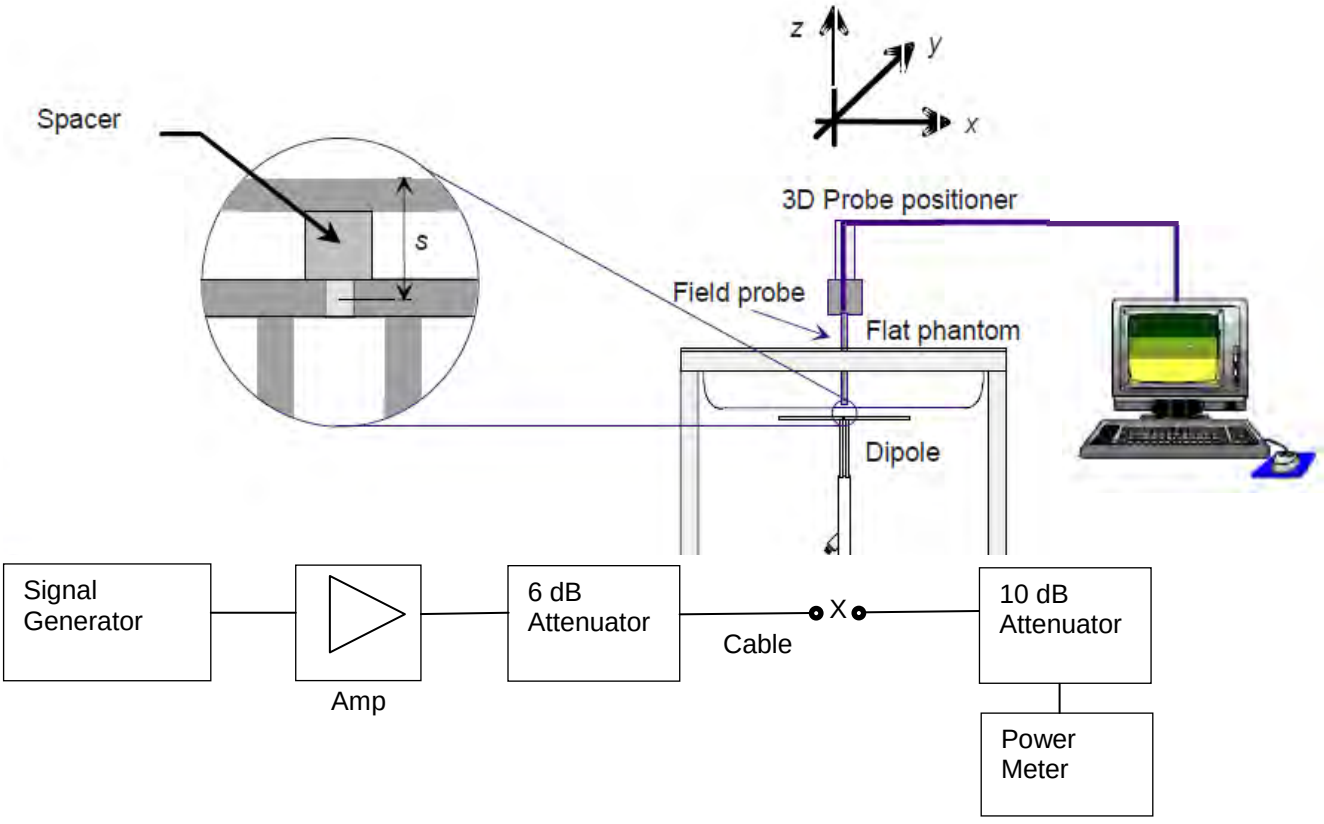
TEST DESCRIPTION

Within 24 hours of a measurement, then every 72 hours thereafter, Northwest EMC used the system validation kit (calibrated reference dipole) to test whether the system was operating within its specifications. The validation was performed in the indicated bands by making SAR measurements of the reference dipole with the phantom filled with the tissue-equivalent liquid. First, a signal generator and power amplifier were used to produce a 100mW level as measured with a power meter at the antenna terminals of the dipole (X). Then, the reference dipole was positioned below the bottom of the phantom and centered with its axis parallel to the longest side of the phantom. A low loss and low relative permittivity spacer was used to establish the correct distance between the center axis of the reference dipole and the liquid.

For the reference dipoles, the spacing distance s is given by:

s = 15mm, +/- 0.2mm for 300MHz ≤ f ≥ 1000 MHz:
s = 10mm, +/- 0.2mm for 1000MHz ≤ f ≥ 6000MHz

The measured 1 g and 10 g spatial average SAR values were normalized to a 1W dipole input power for comparison to the calibration data. The results are summarized in the attached table. The deviation is less than 10% in all cases, indicating that the system performance check was within tolerance.



SAR SYSTEM VERIFICATION

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 865664 D01 v01r03 and D02 v01r01

RESULTS

Date	Liquid part number and frequency	Conducted Power into the Dipole (dBm)	Correction Factor	Measured		Normalized to 1W		Target (Normalized to 1W) Get from Dipole Calibration Certificate		% Difference	
				1g	10g	1g	10g	1g	10g	1g	10g
3/28/2014	MSL 2450 (2450 MHz)	20.35	9.23	5.91	2.72	54.55	25.11	50.40	23.70	8.23	5.95
3/30/2014	MSL 501 (5200 MHz)	19.63	10.89	7.40	2.12	80.59	23.09	75.30	21.00	7.03	9.95
3/30/2014	MSL 501 (5500 MHz)	19.02	12.53	6.88	1.93	86.21	24.18	80.70	22.30	6.83	8.43
3/30/2014	MSL 501 (5800 MHz)	17.84	16.44	4.73	1.33	77.76	21.87	75.60	20.80	2.86	5.14

SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.4
Date:	3/28/2014	Liquid Temperature (°C):	22
Configuration:	Body	Humidity (%RH):	45.7
		Bar. Pressure (mb):	1010

MSL2450 System Check 3-28-14b
DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:855
Communication System: UID 10000, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2450 MHz; σ = 1.934 S/m; ε_r = 51.624; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

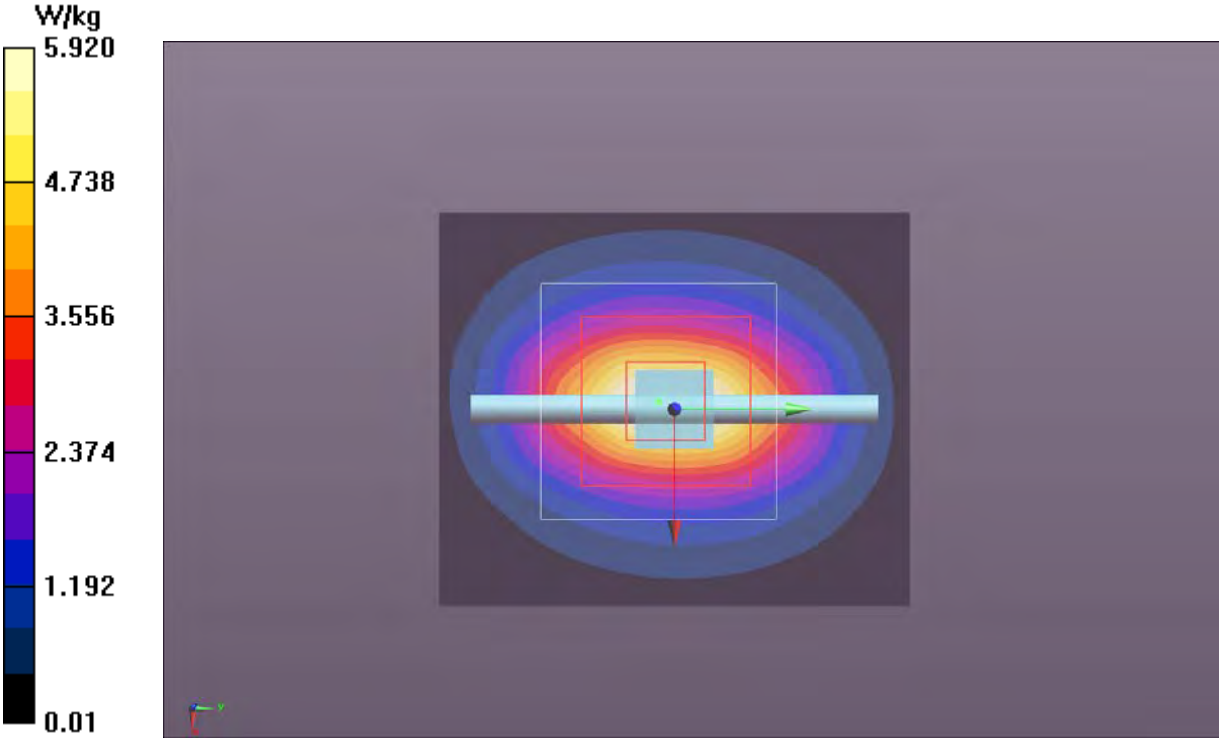
System Check/System Check/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.23 W/kg

System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 66.13 V/m

System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.211 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 12.2 W/kg
SAR(1 g) = 5.91 W/kg; SAR(10 g) = 2.72 W/kg
Maximum value of SAR (measured) = 5.92 W/kg

Approved By

MSL2450 System Check 3-28-14b



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.1
Date:	3/31/2014	Liquid Temperature (°C):	22.0
Configuration:	Body	Humidity (%RH):	35.6
		Bar. Pressure (mb):	1010

MSL501 5200MHz System Check, 3-31-14
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1066
Communication System: UID 10000, CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 5.258 S/m; ε_r = 48.843; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

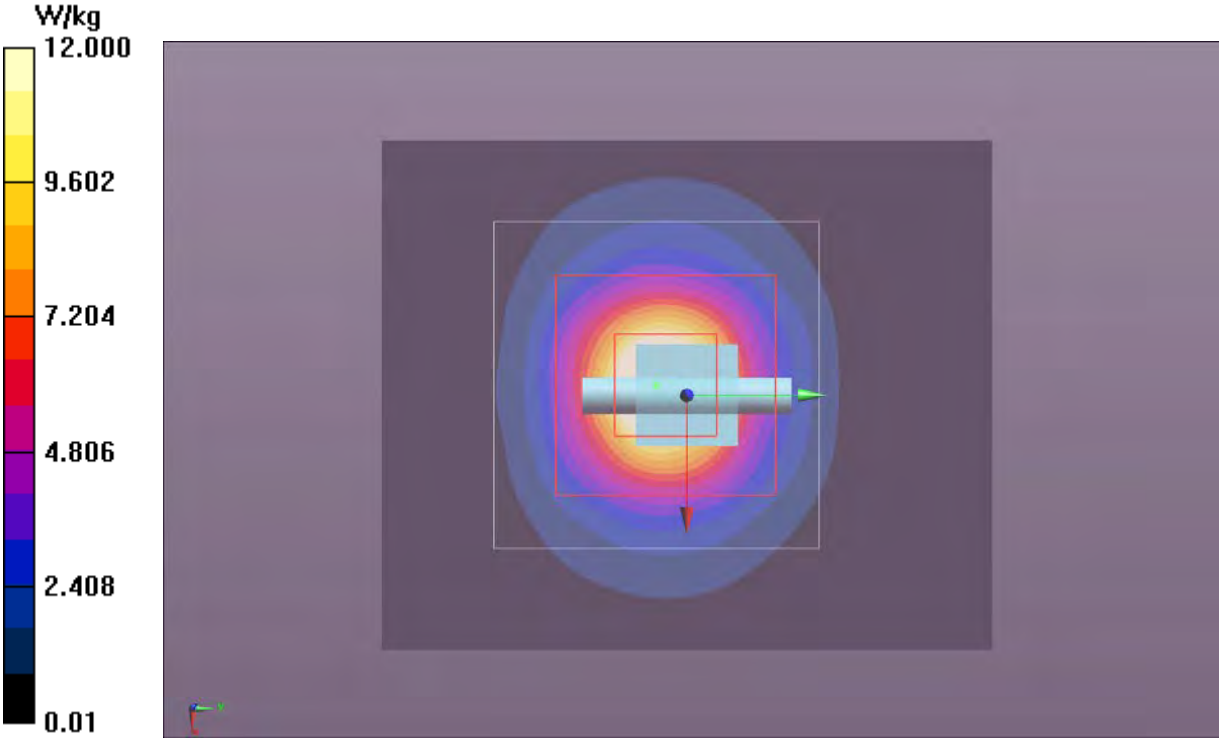
System Check/System Check - Low Channel/Zoom Scan (7x9x7) (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 57.146 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 28.1 W/kg
SAR(1 g) = 7.4 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 15.3 W/kg

System Check/System Check - Low Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.4 W/kg

System Check/System Check - Low Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 25.96 V/m
Maximum value of SAR (measured) = 3.54 W/kg

Approved By

MSL501 5200MHz System Check, 3-31-14



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.1
Date:	3/31/2014	Liquid Temperature (°C):	22.0
Configuration:	Body	Humidity (%RH):	35.6
		Bar. Pressure (mb):	1010

MSL501 5500MHz System Check, 3-31-14
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1066
Communication System: UID 10000, CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5500 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5500 MHz; σ = 5.733 S/m; ε_r = 47.794; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

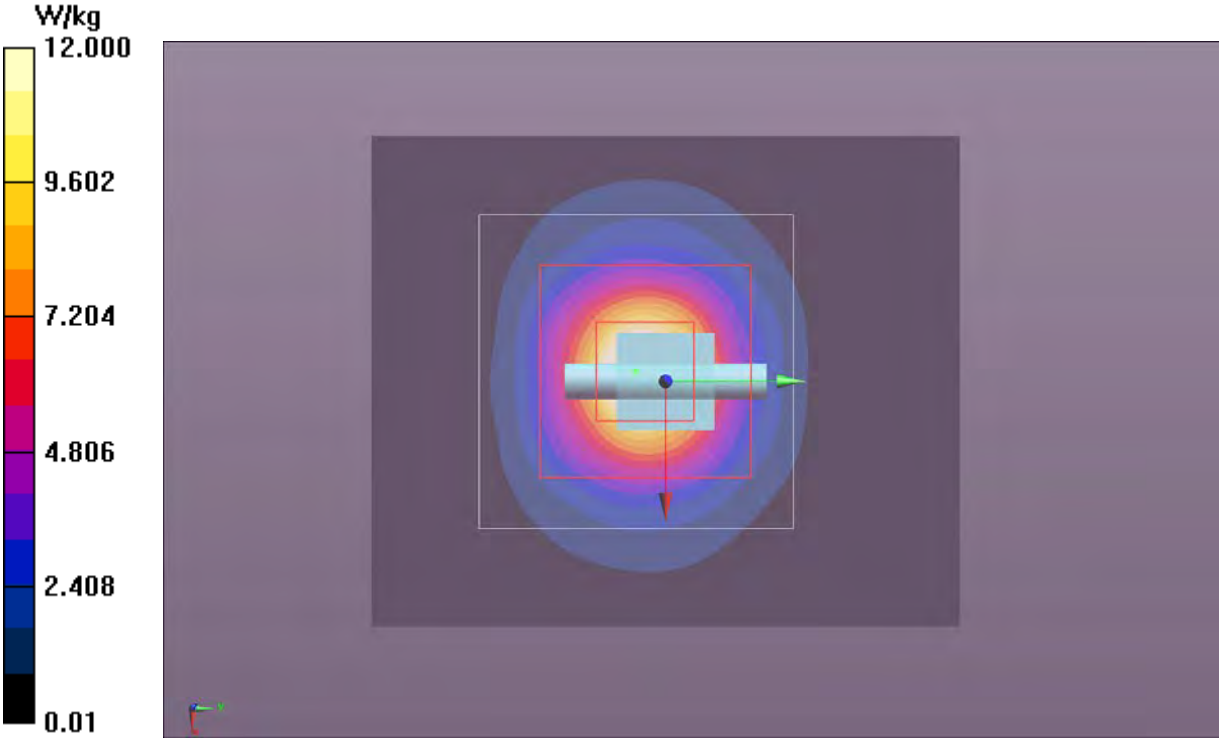
System Check/System Check - Mid Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.0 W/kg

System Check/System Check - Mid Channel/Zoom Scan (7x9x7) (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 53.933 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 28.0 W/kg
SAR(1 g) = 6.88 W/kg; SAR(10 g) = 1.93 W/kg
Maximum value of SAR (measured) = 14.5 W/kg

System Check/System Check - Mid Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 22.78 V/m
Maximum value of SAR (measured) = 2.97 W/kg

Approved By

MSL501 5500MHz System Check, 3-31-14



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.1
Date:	3/31/2014	Liquid Temperature (°C):	22.0
Configuration:	Body	Humidity (%RH):	35.6
		Bar. Pressure (mb):	1010

MSL501 5800MHz System Check, 3-31-14
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1066
Communication System: UID 10000, CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5800 MHz; σ = 6.228 S/m; ε_r = 46.597; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

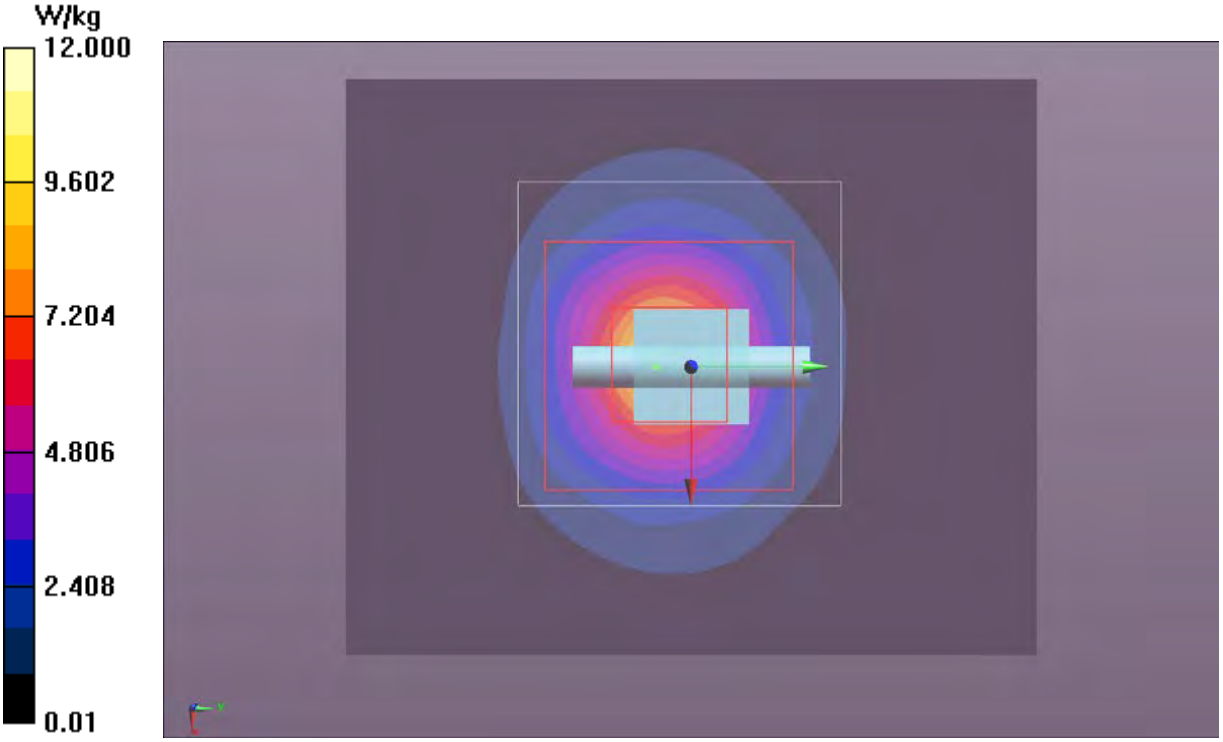
System Check/System Check - High Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 10.4 W/kg

System Check/System Check - High Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 14.10 V/m

System Check/System Check - High Channel/Zoom Scan (7x9x7) (8x8x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 34.455 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 20.7 W/kg
SAR(1 g) = 4.73 W/kg; SAR(10 g) = 1.33 W/kg
Maximum value of SAR (measured) = 10.1 W/kg
Maximum value of SAR (measured) = 1.24 W/kg

Approved By

MSL501 5800MHz System Check, 3-31-14



2.4 AND 5 GHz Bands

Per FCC KDB 248227, the conducted output power was measured at the “default test channels” and at the “required test channels” in each band. Measurements were made while the EUT transmitted at the lowest, middle and the highest data rates for each channel.

Per FCC KDB 248227, among the channels required for normal testing, SAR must be measured on the highest output channel (highlighted). When the SAR measured on the highest output channel is >0.8 W/kg, SAR evaluation for the other required test channels is necessary.

Output power measurements are on the following pages.

OUTPUT POWER

EUT:	WSBUB-SDS	Work Order:	INTE5343
Serial Number:	10	Date:	3/28/14
Customer:	Intel Corporation	Temperature:	21.1°C
Attendees:	Mike Low, Bill Jones	Relative Humidity:	39.4%
Customer Project:	None	Bar. Pressure:	1002.3 mb
Tested By:	Brandon Hobbs	Job Site:	EV06
Power:	Default	Configuration:	INTE5343-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 248227 D01 v01r02

COMMENTS

Conducted output power. Radio was operated by customer.

DEVIATIONS FROM TEST STANDARD

None

RESULTS (20MHz Bandwidth)

Channel	Frequency (MHz)	Radio Mode	Data Rate (Mbps)	Modulation	Conducted Power (Average) Antenna Port 1 dBm	Antenna Port 1 W	Antenna Port 2 dBm	Antenna Port 2 W	Software Level
1	2412	802.11n	MCS0	BPSK	11.0	12.474	10.0	9.931	15
			MCS7	64-QAM	9.9	9.727	9.8	9.572	15
			MCS8	BPSK	7.6	5.741	7.7	5.929	15
			MCS15	64-QAM	7.7	5.902	7.3	5.383	15
6	2437	802.11n	MCS0	OFDM	11.8	15.031	10.3	10.789	15
			MCS7	OFDM	10.6	11.561	9.8	9.550	15
			MCS8	OFDM	7.8	6.026	7.5	5.585	15
			MCS15	OFDM	7.5	5.559	7.5	5.623	15
11	2462	802.11n	MCS0	OFDM	13.4	21.627	12.4	17.219	15
			MCS7	OFDM	10.8	12.134	10.8	11.885	15
			MCS8	OFDM	10.0	10.000	9.8	9.550	15
			MCS15	OFDM	9.8	9.550	9.3	8.570	15

OUTPUT POWER

RESULTS (40MHz Bandwidth)

Channel	Frequency (MHz)	Radio Mode	Data Rate (Mbps)	Modulation	Antenna Port 1 dBm	Antenna Port 1 W	Antenna Port 2 dBm	Antenna Port 2 W
1/5	2422	802.11n	MCS0	BPSK	11.0	12.474	10.0	9.931
			MCS7	64-QAM	9.9	9.727	9.8	9.572
			MCS8	BPSK	7.6	5.741	7.7	5.929
			MCS15	64-QAM	7.7	5.902	7.3	5.383
4/8	2437	802.11n	MCS0	OFDM	11.8	15.031	10.3	10.789
			MCS7	OFDM	10.6	11.561	9.8	9.550
			MCS8	OFDM	7.8	6.026	7.5	5.585
			MCS15	OFDM	7.5	5.559	7.5	5.623
7/11	2452	802.11n	MCS0	OFDM	13.4	21.627	12.4	17.219
			MCS7	OFDM	10.8	12.134	10.8	11.885
			MCS8	OFDM	10.0	10.000	9.8	9.550
			MCS15	OFDM	9.8	9.550	9.3	8.570

Tested By

OUTPUT POWER

WTD.2012.10.24

EUT:	WSBUB-SDS	Work Order:	INTE5343
Serial Number:	10	Date:	3/28/14
Customer:	Intel Corporation	Temperature:	21.1°C
Attendees:	Mike Low, Bill Jones	Relative Humidity:	39.4%
Customer Project:	None	Bar. Pressure:	1002.3 mb
Tested By:	Brandon Hobbs	Job Site:	EV06
Power:	Default	Configuration:	INTE5343-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 248227 D01 v01r02

COMMENTS

Conducted output power. Radio was operated by customer.

DEVIATIONS FROM TEST STANDARD

None

RESULTS (20MHz Bandwidth)

					Conducted Power (Average)				
					Antenna Port A		Antenna Port B		
Channel	Frequency (MHz)	Radio Mode	Data Rate (Mbps)	Modulation	dBm	W	dBm	W	Software Level
36	5180	802.11a	6	BPSK	9.1	8.185	10.3	10.641	15
			54	64-QAM	9.8	9.441	9.9	9.863	15
		802.11n	MCS7	64-QAM	9.6	9.183	10.2	10.423	15
			MCS15	64-QAM	6.2	4.198	9.8	9.572	15
		802.11ac (SISO)	MCS0	64-QAM	10.3	10.715	10.6	11.402	15
			MCS08	256-QAM	8.6	7.194	8.7	7.379	15
		802.11ac (MIMO)	MCS0	64-QAM	6.4	4.345	7.7	5.929	15
			MCS08	256-QAM	6.4	4.365	6.2	4.207	15
40	5200	802.11a	6	BPSK	12.6	18.239	13.0	19.770	15
			54	64-QAM	10.9	12.359	11.3	13.490	15
		802.11n	MCS7	64-QAM	10.5	11.194	10.7	11.776	15
			MCS15	64-QAM	8.3	6.792	8.6	7.194	15
		802.11ac (SISO)	MCS0	64-QAM	12.5	17.620	13.2	20.845	15
			MCS08	256-QAM	8.3	6.745	9.2	8.260	15
		802.11ac (MIMO)	MCS0	64-QAM	8.7	7.328	8.0	6.310	15
			MCS08	256-QAM	7.8	6.039	9.0	7.962	15

OUTPUT POWER

44	5220	802.11a	6	BPSK	12.8	18.880	13.5	22.387	15
			6	BPSK			12.4	17.378	14
			54	64-QAM	10.7	11.614	11.4	13.709	15
		802.11n	MCS7	64-QAM	10.1	10.116	10.8	11.995	15
			MCS15	64-QAM	8.0	6.310	8.8	7.603	15
		802.11ac (SISO)	MCS0	64-QAM	13.0	19.724	13.0	20.045	15
			MCS08	256-QAM	9.1	8.035	9.7	9.290	15
		802.11ac (MIMO)	MCS0	64-QAM	8.7	7.328	9.2	8.318	15
			MCS08	256-QAM	8.3	6.699	8.1	6.516	15
48	5240	802.11a	6	BPSK	13.3	21.135	13.1	20.277	15
			6	BPSK	11.5	14.125	12.5	17.783	14
			54	64-QAM	11.1	12.735	11.4	13.772	15
		802.11n	MCS7	64-QAM	10.7	11.614	10.8	12.134	15
			MCS15	64-QAM	8.6	7.161	9.0	7.980	15
		802.11ac (SISO)	MCS0	64-QAM	13.0	19.907	13.4	21.727	15
			MCS08	256-QAM	9.5	8.954	9.3	8.472	15
		802.11ac (MIMO)	MCS0	64-QAM	8.9	7.762	9.1	8.147	15
			MCS08	256-QAM	8.4	6.950	8.6	7.261	15
52	5260	802.11a	6	BPSK	13.0	19.815	13.4	21.827	15
			6	BPSK			12.2	16.558	14
			54	64-QAM	10.9	12.162	11.3	13.366	15
		802.11n	MCS7	64-QAM	10.3	10.715	10.8	11.885	15
			MCS15	64-QAM	8.1	6.427	9.1	8.035	15
		802.11ac (SISO)	MCS0	64-QAM	13.1	20.184	13.3	21.135	15
			MCS08	256-QAM	9.8	9.441	9.3	8.433	15
		802.11ac (MIMO)	MCS0	64-QAM	8.5	7.145	8.6	7.178	15
			MCS08	256-QAM	8.1	6.427	8.6	7.228	15
56	5280	802.11a	6	BPSK	13.0	20.091	13.3	21.232	15
			54	64-QAM	11.4	13.646	11.2	13.122	15
		802.11n	MCS7	64-QAM	10.9	12.388	10.6	11.561	15
			MCS15	64-QAM	8.9	7.834	8.6	7.261	15
		802.11ac (SISO)	MCS0	64-QAM	13.0	19.724	13.1	20.512	15
			MCS08	256-QAM	9.4	8.610	9.2	8.260	15
		802.11ac (MIMO)	MCS0	64-QAM	9.1	8.204	9.1	8.147	15
			MCS08	256-QAM	8.8	7.499	8.9	7.780	15

OUTPUT POWER

60	5300	802.11a	6	BPSK	13.3	21.135	13.1	20.230	15
			6	BPSK	12.5	17.701			14
			54	64-QAM	11.1	12.972	11.0	12.647	15
		802.11n	MCS7	64-QAM	10.6	11.561	9.5	8.954	15
			MCS15	64-QAM	8.7	7.328	8.3	6.808	15
		802.11ac (SISO)	MCS0	64-QAM	12.7	18.408	12.2	16.558	15
			MCS08	256-QAM	9.2	8.222	9.1	8.185	15
		802.11ac (MIMO)	MCS0	64-QAM	8.9	7.834	9.0	7.980	15
			MCS08	256-QAM	9.0	7.943	8.5	7.031	15
64	5320	802.11a	6	BPSK	11.1	12.735	9.9	9.705	15
			54	64-QAM	10.9	12.162	9.6	9.204	15
		802.11n	MCS7	64-QAM	10.2	10.495	9.5	8.933	15
			MCS15	64-QAM	6.9	4.887	6.2	4.121	15
		802.11ac (SISO)	MCS0	64-QAM	10.5	11.092	10.3	10.593	15
			MCS08	256-QAM	9.7	9.333	8.9	7.727	15
		802.11ac (MIMO)	MCS0	64-QAM	6.8	4.831	6.5	4.498	15
			MCS08	256-QAM	6.8	4.732	7.0	4.955	15
100	5500	802.11a	6	BPSK	9.7	9.226	10.9	12.331	15
			54	64-QAM	9.4	8.690	9.8	9.506	15
		802.11n	MCS7	64-QAM	9.3	8.511	9.7	9.268	15
			MCS15	64-QAM	4.8	3.048	5.6	3.631	15
		802.11ac (SISO)	MCS0	64-QAM	9.6	9.036	10.8	11.940	15
			MCS08	256-QAM	9.2	8.299	10.0	9.977	15
		802.11ac (MIMO)	MCS0	64-QAM	5.2	3.342	6.1	4.093	15
			MCS08	256-QAM	4.7	2.958	6.5	4.487	15
104	5520	802.11a	6	BPSK	12.5	17.579	13.5	22.284	15
			6	BPSK	10.3	10.715			12
			6	BPSK			12.7	18.621	13
			54	64-QAM	11.3	13.490	11.9	15.488	15
		802.11n	MCS7	64-QAM	10.2	10.520	10.4	10.889	15
			MCS15	64-QAM	8.2	6.668	8.4	6.950	15
		802.11ac (SISO)	MCS0	64-QAM	12.4	17.298	13.3	21.380	15
			MCS08	256-QAM	9.3	8.453	9.8	9.462	15
		802.11ac (MIMO)	MCS0	64-QAM	8.1	6.486	9.1	8.110	15
			MCS08	256-QAM	7.6	5.702	9.0	7.998	15

OUTPUT POWER

108	5540	802.11a	6	BPSK	12.1	16.255	13.2	20.989	15
			54	64-QAM	11.4	13.804	12.1	16.106	15
		802.11n	MCS7	64-QAM	10.4	10.839	10.6	11.455	15
			MCS15	64-QAM	8.3	6.699	8.6	7.178	15
		802.11ac (SISO)	MCS0	64-QAM	12.8	19.011	12.9	19.679	15
			MCS08	256-QAM	9.7	9.268	9.5	8.872	15
		802.11ac (MIMO)	MCS0	64-QAM	8.1	6.412	8.9	7.745	15
			MCS08	256-QAM	7.6	5.754	9.3	8.472	15
112	5560	802.11a	6	BPSK	12.8	19.099	13.0	19.724	15
			54	64-QAM	13.0	19.861	11.3	13.490	15
		802.11n	MCS7	64-QAM	10.3	10.666	10.3	10.617	15
			MCS15	64-QAM	8.4	6.934	8.2	6.653	15
		802.11ac (SISO)	MCS0	64-QAM	12.8	19.231	12.3	16.904	15
			MCS08	256-QAM	9.3	8.551	9.2	8.375	15
		802.11ac (MIMO)	MCS0	64-QAM	8.7	7.430	8.5	6.998	15
			MCS08	256-QAM	8.6	7.161	8.9	7.780	15
116	5580	802.11a	6	BPSK	13.0	19.724	13.0	19.724	15
			6	BPSK			11.1	12.942	14
			54	64-QAM	10.8	11.885	11.8	15.066	15
		802.11n	MCS7	64-QAM	10.1	10.139	10.0	9.931	15
			MCS15	64-QAM	8.0	6.368	7.9	6.109	15
		802.11ac (SISO)	MCS0	64-QAM	12.1	16.032	12.9	19.409	15
			MCS08	256-QAM	9.0	7.852	9.2	8.356	15
		802.11ac (MIMO)	MCS0	64-QAM	8.1	6.516	8.6	7.261	15
			MCS08	256-QAM	9.1	8.091	8.7	7.345	15
132	5660	802.11a	6	BPSK	12.2	16.406	12.1	16.255	15
			54	64-QAM	11.0	12.618	10.5	11.092	15
		802.11n	MCS7	64-QAM	9.1	8.166	9.5	8.831	15
			MCS15	64-QAM	7.0	5.058	7.5	5.559	15
		802.11ac (SISO)	MCS0	64-QAM	12.1	16.069	11.3	13.583	15
			MCS08	256-QAM	8.6	7.244	8.4	6.855	15
		802.11ac (MIMO)	MCS0	64-QAM	7.3	5.346	7.7	5.861	15
			MCS08	256-QAM	6.8	4.786	7.2	5.248	15

OUTPUT POWER

136	5680	802.11a	6	BPSK	11.9	15.311	12.0	15.885	15
			6	BPSK			11.6	14.454	14
			54	64-QAM	10.8	11.940	10.9	12.162	15
		802.11n	MCS7	64-QAM	9.3	8.570	9.9	9.772	15
			MCS15	64-QAM	6.8	4.808	7.7	5.916	15
		802.11ac (SISO)	MCS0	64-QAM	11.0	12.445	12.0	15.704	15
			MCS08	256-QAM	7.8	6.053	8.8	7.621	15
		802.11ac (MIMO)	MCS0	64-QAM	7.1	5.176	8.1	6.412	15
			MCS08	256-QAM	8.1	6.516	7.6	5.741	15
140	5700	802.11a	6	BPSK	9.0	7.943	8.8	7.586	15
			54	64-QAM	8.1	6.427	8.6	7.228	15
		802.11n	MCS7	64-QAM	8.0	6.295	8.1	6.471	15
			MCS15	64-QAM	4.4	2.780	4.8	3.048	15
		802.11ac (SISO)	MCS0	64-QAM	8.3	6.683	8.8	7.516	15
			MCS08	256-QAM	7.9	6.124	8.4	6.950	15
		802.11ac (MIMO)	MCS0	64-QAM	4.8	3.048	5.0	3.192	15
			MCS08	256-QAM	4.3	2.716	5.4	3.467	15
149	5745	802.11a	6	BPSK	11.9	15.382	12.8	18.880	15
			54	64-QAM	10.6	11.535	11.2	13.062	15
		802.11n	MCS7	64-QAM	9.2	8.279	9.7	9.397	15
			MCS15	64-QAM	7.1	5.176	8.5	7.031	15
		802.11ac (SISO)	MCS0	64-QAM	11.3	13.335	13.1	20.559	15
			MCS08	256-QAM	8.3	6.699	8.7	7.379	15
		802.11ac (MIMO)	MCS0	64-QAM	7.3	5.420	8.4	6.855	15
			MCS08	256-QAM	6.4	4.375	8.4	6.871	15
153	5765	802.11a	6	BPSK	12.4	17.418	13.1	20.277	15
			54	64-QAM	10.7	11.668	11.8	15.136	15
		802.11n	MCS7	64-QAM	9.2	8.375	9.9	9.661	15
			MCS15	64-QAM	7.5	5.675	8.0	6.368	15
		802.11ac (SISO)	MCS0	64-QAM	12.3	16.788	12.9	19.364	15
			MCS08	256-QAM	8.3	6.808	8.8	7.621	15
		802.11ac (MIMO)	MCS0	64-QAM	7.6	5.808	8.9	7.780	15
			MCS08	256-QAM	6.5	4.498	8.2	6.531	15

OUTPUT POWER

157	5785	802.11a	6	BPSK	12.5	17.579	13.1	20.277	15
			54	64-QAM	10.7	11.803	11.5	13.996	15
		802.11n	MCS7	64-QAM	9.3	8.511	10.0	9.931	15
			MCS15	64-QAM	7.5	5.559	8.3	6.699	15
		802.11ac (SISO)	MCS0	64-QAM	11.4	13.646	13.4	21.627	15
			MCS08	256-QAM	8.4	6.839	9.4	8.630	15
		802.11ac (MIMO)	MCS0	64-QAM	8.0	6.310	9.6	9.120	15
			MCS08	256-QAM	7.6	5.689	8.7	7.345	15
161	5805	802.11a	6	BPSK	12.6	17.989	12.8	19.099	15
			54	64-QAM	11.4	13.646	11.5	14.223	15
		802.11n	MCS7	64-QAM	9.4	8.750	10.0	10.069	15
			MCS15	64-QAM	7.3	5.420	8.5	7.079	15
		802.11ac (SISO)	MCS0	64-QAM	11.5	14.125	13.0	19.815	15
			MCS08	256-QAM	7.9	6.194	9.5	8.810	15
		802.11ac (MIMO)	MCS0	64-QAM	7.6	5.808	9.1	8.147	15
			MCS08	256-QAM	7.5	5.649	8.2	6.668	15
165	5825	802.11a	6	BPSK	13.1	20.184	13.0	19.953	15
			54	64-QAM	11.4	13.836	11.4	13.804	15
		802.11n	MCS7	64-QAM	9.6	9.016	9.9	9.817	15
			MCS15	64-QAM	7.9	6.109	8.4	6.918	15
		802.11ac (SISO)	MCS0	64-QAM	12.1	16.368	12.9	19.320	15
			MCS08	256-QAM	8.9	7.674	9.4	8.690	15
		802.11ac (MIMO)	MCS0	64-QAM	8.5	7.079	8.5	7.145	15
			MCS08	256-QAM	7.6	5.728	8.6	7.244	15

KEY

	Highest channel/modulation (SISO) from antenna A
	Highest channel/modulation (SISO)from antenna B
	Highest channel/modulation (MIMO) from antenna A & B
	Reduced power used in report

Tested By

OUTPUT POWER

EUT:	WSBUB-SDS	Work Order:	INTE5343
Serial Number:	10	Date:	3/28/14
Customer:	Intel Corporation	Temperature:	21.1°C
Attendees:	Mike Low, Bill Jones	Relative Humidity:	39.4%
Customer Project:	None	Bar. Pressure:	1002.3 mb
Tested By:	Brandon Hobbs	Job Site:	EV06
Power:	Default	Configuration:	INTE5343-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 248227 D01 v01r02

COMMENTS

Conducted output power. Radio was operated by customer.

DEVIATIONS FROM TEST STANDARD

None

RESULTS (40 MHz Bandwidth)

Channels	Frequency (MHz)	Radio Mode	Data Rate (Mbps)	Modulation	Conducted Power (Average) Antenna Port 1 dBm	Antenna Port 1 W	Antenna Port 2 dBm	Antenna Port 2 W	Software Level
36/40	5190	802.11n	MCS7	64-QAM	6.7	4.677	7.4	5.483	15
			MCS15	64-QAM	4.3	2.667	3.9	2.438	15
		802.11ac (SISO)	MCS0	64-QAM	7.7	5.834	7.6	5.794	15
			MCS09	256-QAM	6.5	4.498	6.5	4.508	15
		802.11ac (MIMO)	MCS0	64-QAM	4.3	2.716	8.2	6.653	15
			MCS09	256-QAM	4.5	2.825	6.6	4.519	15
44/48	5230	802.11n	MCS7	64-QAM	9.7	9.290	10.2	10.568	15
			MCS15	64-QAM	7.6	5.808	8.1	6.516	15
		802.11ac (SISO)	MCS0	64-QAM	11.9	15.488	12.5	17.579	15
			MCS0	64-QAM	11.2	13.183	12.5	17.579	14
			MCS09	256-QAM	6.7	4.624	9.7	9.268	15
		802.11ac (MIMO)	MCS0	64-QAM	8.6	7.228	8.6	7.311	15
			MCS09	256-QAM	5.6	3.589	6.5	4.467	15
52/56	5270	802.11n	MCS7	64-QAM	10.9	12.303	10.3	10.715	15
			MCS15	64-QAM	7.9	6.223	8.5	7.047	15
		802.11ac (SISO)	MCS0	64-QAM	12.3	16.788	12.8	18.836	15
			MCS0	64-QAM	12.0	15.959			14
			MCS09	256-QAM	7.2	5.188	7.1	5.129	15
		802.11ac (MIMO)	MCS0	64-QAM	8.4	6.966	8.7	7.430	15
			MCS09	256-QAM	5.8	3.811	5.6	3.614	15

OUTPUT POWER

60/64	5310	802.11n	MCS7	64-QAM	9.8	9.441	9.8	9.441	15
			MCS15	64-QAM	6.0	3.945	6.1	4.093	15
		802.11ac (SISO)	MCS0	64-QAM	9.9	9.661	9.9	9.661	15
			MCS09	256-QAM	7.0	4.955	6.1	4.111	15
		802.11ac (MIMO)	MCS0	64-QAM	6.7	4.721	6.6	4.529	15
			MCS09	256-QAM	6.4	4.315	5.1	3.266	15
100/104	5510	802.11n	MCS7	64-QAM	8.9	7.762	10.2	10.351	15
			MCS15	64-QAM	5.2	3.311	10.8	12.078	15
		802.11ac (SISO)	MCS0	64-QAM	9.1	8.035	10.9	12.303	15
			MCS0	64-QAM			9.5	8.913	11.5
			MCS09	256-QAM	6.0	3.990	8.4	6.855	15
		802.11ac (MIMO)	MCS0	64-QAM	5.7	3.690	7.1	5.176	15
			MCS09	256-QAM	4.8	3.048	6.8	4.742	15
108/112	5550	802.11n	MCS7	64-QAM	10.6	11.350	10.8	12.134	15
			MCS15	64-QAM	8.5	7.145	8.4	6.918	15
		802.11ac (SISO)	MCS0	64-QAM	11.3	13.614	12.7	18.750	15
			MCS0	64-QAM	11.2	13.183			14
			MCS0	64-QAM			10.2	10.495	13
			MCS09	256-QAM	6.5	4.436	8.0	6.237	15
		802.11ac (MIMO)	MCS0	64-QAM	8.3	6.823	9.0	7.943	15
			MCS09	256-QAM	5.7	3.741	7.0	5.058	15
132/136	5670	802.11n	MCS7	64-QAM	9.2	8.337	9.9	9.661	15
			MCS15	64-QAM	6.7	4.721	7.0	5.012	15
		802.11ac (SISO)	MCS0	64-QAM	10.6	11.508	10.4	10.839	15
			MCS0	64-QAM	9.2	8.318			13
			MCS0	64-QAM			10.0	10.093	13
			MCS09	256-QAM	5.8	3.828	6.6	4.581	15
		802.11ac (MIMO)	MCS0	64-QAM	6.9	4.898	7.9	6.223	15
			MCS09	256-QAM	5.0	3.126	5.6	3.664	15
149/153	5755	802.11n	MCS7	64-QAM	9.2	8.279	10.0	9.886	15
			MCS15	64-QAM	6.9	4.909	8.2	6.668	15
		802.11ac (SISO)	MCS0	64-QAM	11.5	13.996	12.7	18.408	15
			MCS0	64-QAM	10.9	12.303			14
			MCS09	256-QAM	6.0	3.954	7.0	5.000	15
		802.11ac (MIMO)	MCS0	64-QAM	7.2	5.188	8.7	7.413	15
			MCS09	256-QAM	4.1	2.582	5.5	3.581	15

OUTPUT POWER

157/161	5795	802.11n	MCS7	64-QAM	9.4	8.690	9.7	9.226	15
			MCS15	64-QAM	7.0	4.966	8.2	6.607	15
		802.11ac (SISO)	MCS0	64-QAM	11.3	13.335	11.8	14.997	15
			MCS0	64-QAM	11.2	13.032			14
			MCS09	256-QAM	5.6	3.589	5.9	3.899	15
		802.11ac (MIMO)	MCS0	64-QAM	7.3	5.395	9.0	8.017	15
			MCS09	256-QAM	5.3	3.350	5.7	3.715	15

KEY

	Highest channel/modulation (SISO) from antenna A
	Highest channel/modulation (SISO)from antenna B
	Highest channel/modulation (MIMO) from antenna A & B
	Reduced power used in report

Tested By

OUTPUT POWER

WTD.2012.10.24

EUT:	WSBUB-SDS	Work Order:	INTE5343
Serial Number:	10	Date:	3/28/14
Customer:	Intel Corporation	Temperature:	21.1°C
Attendees:	Mike Low, Bill Jones	Relative Humidity:	39.4%
Customer Project:	None	Bar. Pressure:	1002.3 mb
Tested By:	Brandon Hobbs	Job Site:	EV06
Power:	Default	Configuration:	INTE5343-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014	IEEE Std 1528:2003 FCC KDB 248227 D01 v01r02

COMMENTS

Conducted output power. Radio was operated by customer.

DEVIATIONS FROM TEST STANDARD

None

RESULTS (80MHz bandwidth)

Channels	Frequency (MHz)	Radio Mode	Data Rate (Mbps)	Modulation	Conducted Power (Average) Antenna Port 1 dBm	Antenna Port 1 W	Antenna Port 2 dBm	Antenna Port 2 W	Software Level
42	5210	802.11ac (SISO)	MCSO	64-QAM	8.4	6.918	9.2	8.241	15
			MCS9	256-QAM	4.2	2.630	5.6	3.589	15
42	5210	802.11ac (MIMO)	MCSO	64-QAM	5.0	3.192	5.3	3.396	15
			MCS9	256-QAM	3.7	2.360	4.0	2.535	15
58	5290	802.11ac (SISO)	MCSO	64-QAM	11.1	12.735	10.5	11.092	15
			MCS9	256-QAM	6.0	3.954	6.4	4.315	15
58	5290	802.11ac (MIMO)	MCSO	64-QAM	6.9	4.898	6.4	4.395	15
			MCS9	256-QAM	3.9	2.477	4.8	3.048	15
106	5530	802.11ac (SISO)	MCSO	64-QAM	9.4	8.710	9.3	8.511	15
			MCS9	256-QAM	5.3	3.350	6.4	4.315	15
106	5530	802.11ac (MIMO)	MCSO	64-QAM	5.3	3.396	5.4	3.499	15
			MCS9	256-QAM	3.8	2.371	4.8	2.992	15
155	5775	802.11ac (SISO)	MCSO	64-QAM	12.6	17.989	11.7	14.791	15
			MCSO	64-QAM	10.7	11.749			13.5
			MCS9	256-QAM	4.7	2.917	5.8	3.758	15
155	5775	802.11ac (MIMO)	MCSO	64-QAM	6.4	4.406	8.4	6.982	15
			MCS9	256-QAM	4.1	2.541	5.4	3.428	15

OUTPUT POWER

WTD.2012.10.24

KEY

	Highest channel/modulation (SISO) from antenna A
	Highest channel/modulation (SISO)from antenna B
	Highest channel/modulation (MIMO) from antenna A & B
	Reduced power used in report

Tested By

Test Configurations

Test Locations

Per FCC KDB 447498, section 4.3.1, Item #1, the left and right edges as well as the back side adjacent to the antennas were tested. Each of these positions was tested with the keyboard folded under the display ("tablet mode") or extended away from the display ("tent mode"). Testing was done with a 0 cm spacing to the phantom.

The bottom edge has greater than 72 mm separation from the antenna and is excluded from stand-alone SAR testing. The front surface of the tablet is excluded from SAR testing per Section 4.3 of KDB 616217.

The highest output power of the Bluetooth radio is equal to 3 mW. Using the formula from KDB 447498, section 4.3.1, Item #1, it is below the exclusion threshold limit of 3; therefore it is excluded from stand-alone SAR testing.

Simultaneous Transmission

MIMO measurements for the WLAN are contained in this SAR report. A discussion of the simultaneous transmission of the other co-located radios is found in the SAR report for the WWAN radio.

MIMO Evaluation

The FCC's Guidance for SAR testing of 802.11 a/b/g device is found in KDB 248227. It states:

> "SAR for MIMO is measured with all antennas transmitting simultaneously.
>
> For many low-power devices, when the peak SAR locations are more than 5 cm apart, the 1-g SAR can usually be treated independently with little or no noticeable impact. Therefore spatial summing could be optional"

MIMO SAR evaluations were conducted in the 2.4 and 5 GHz bands to show that with a 30 cm antenna spacing, there were no overlapping SAR regions. The zoom scans of each hot spot were centered on the individual antennas.

Operating Mode

All testing was performed with the EUT configured in a worst – case configuration and operating mode to produce the highest SAR levels. The EUT used client provided test software that permitted the selection of transmit channel, modulation type, and data rate. The radio module operated continuously at nearly 100% duty cycle at the maximum rated power.

Summary

The following tables summarize the measured SAR values.

Per FCC KDB 248227, among the channels required for normal testing, SAR must be measured on the channel with the highest conducted output power. When the SAR measured on the highest output channel is >0.8 W/kg, SAR evaluation for the other required test channels is necessary.

Also, when the measured SAR is >0.8 W/kg, SAR measurement variability is assessed per FCC KDB 865664 D01 v01r03, Section 2.8.1.

SAR TEST DATA

EUT:	WSBUB-SDS	Work Order:	INTE5434
Customer:	Intel Corporation	Job Site:	EV08
Attendees:	Mike Lowe, Bill Jones	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014 FCC 15.247:2014	IEEE Std 1528:2003 FCC KDB 447498 D01 v05r02 FCC KDB 248227 D01 v01r02 FCC KDB 616217 D04 v01r01 FCC 865664 D01 v01r03 and D02 v01r01

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Channel Bandwidth (MHz)	Antenna Port	Mode	EUT Position	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Measured 10g SAR Level (mW/g)	Test #
Body	2.4	2462	11	1 Mbit	20	A	Tablet	Right Side	-0.36	0.21	0.08	1a
Body	2.4	2462	11	1 Mbit	20	A	Tablet	Back	N/A	0.06	0.06	2
Body	2.4	2462	11	1 Mbit	20	A	Tent	Right Side	-0.11	0.30	0.12	3a
Body	2.4	2462	11	1 Mbit	20	A	Tent	Back	0.21	1.28	0.54	4
Body	2.4	2412	1	1 Mbit	20	A	Tent	Back	0.05	0.89	0.38	4a
Body	2.4	2437	6	1 Mbit	20	A	Tent	Back	-0.03	1.00	0.42	4b
Body	2.4	2462	11	1 Mbit	20	B	Tablet	Left Side	0.03	0.34	0.13	5
Body	2.4	2462	11	1 Mbit	20	B	Tablet	Back	0.56	1.04	0.45	6a
Body	2.4	2412	1	1 Mbit	20	B	Tablet	Back	-0.28	0.43	0.18	6b
Body	2.4	2437	6	1 Mbit	20	B	Tablet	Back	0.02	0.78	0.32	6c
Body	2.4	2462	11	1 Mbit	20	B	Tent	Left Side	0.00	0.22	0.10	7
Body	2.4	2462	11	1 Mbit	20	B	Tent	Back	-0.03	0.50	0.22	8
Body	2.4	2452	7/11	MCS0	40	A	Tablet	Right Side	-0.28	0.27	0.11	9
Body	2.4	2452	7/11	MCS0	40	A	Tablet	Back	0.20	0.07	0.05	10
Body	2.4	2452	7/11	MCS0	40	A	Tent	Right Side	-0.07	0.33	0.14	11
Body	2.4	2452	7/11	MCS0	40	A	Tent	Back	-0.13	0.70	0.30	12
Body	2.4	2452	7/11	MCS0	40	B	Tablet	Left Side	-0.14	0.20	0.08	13
Body	2.4	2452	7/11	MCS0	40	B	Tablet	Back	0.03	0.76	0.33	14a
Body	2.4	2452	7/11	MCS0	40	B	Tent	Left Side	-0.04	0.23	0.10	15
Body	2.4	2452	7/11	MCS0	40	B	Tent	Back	0.26	0.55	0.25	16

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8
Date:	3/29/2014	Liquid Temperature (°C):	21.7
Serial Number:	010	Humidity (%RH):	39.9
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 1a
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (9x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.288 V/m; Power Drift = -0.36 dB
Peak SAR (extrapolated) = 0.576 W/kg
SAR(1 g) = 0.206 W/kg; SAR(10 g) = 0.085 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.299 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.289 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

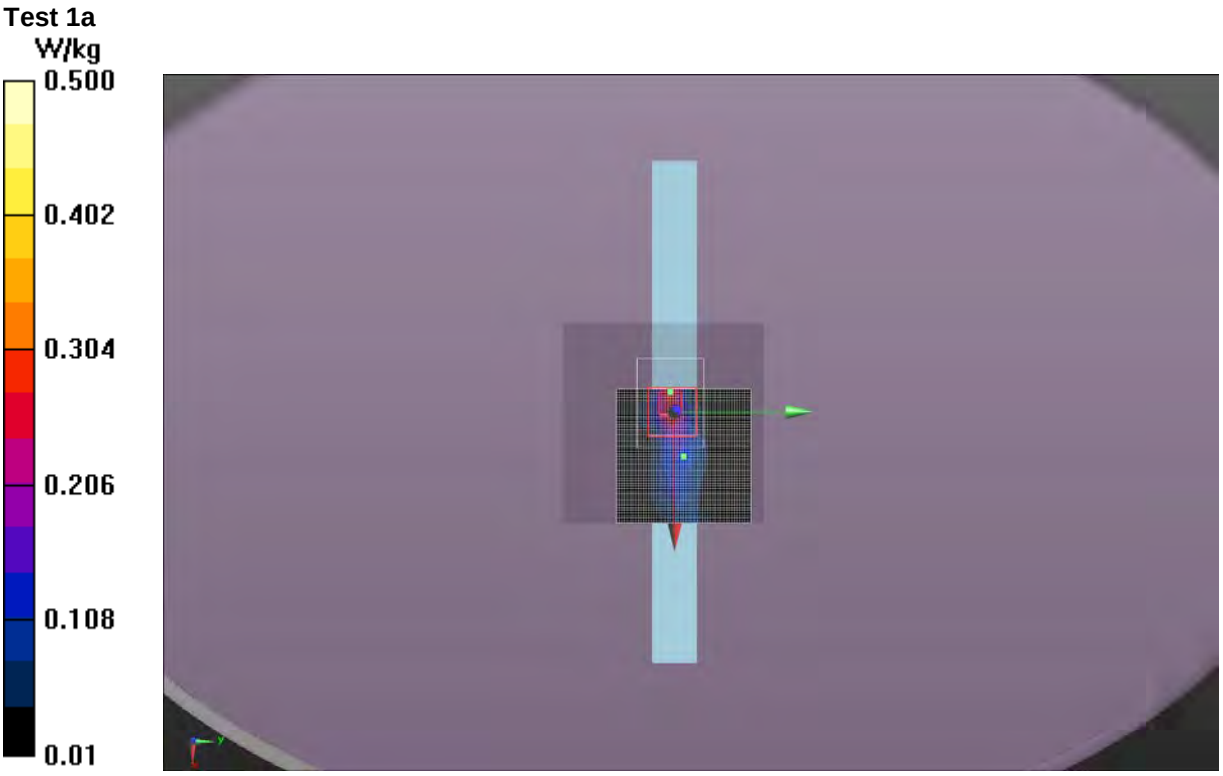
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 7.171 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0860 W/kg

Approved By

Test 1a



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8
Date:	3/29/2014	Liquid Temperature (°C):	21.7
Serial Number:	010	Humidity (%RH):	39.9
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 2
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

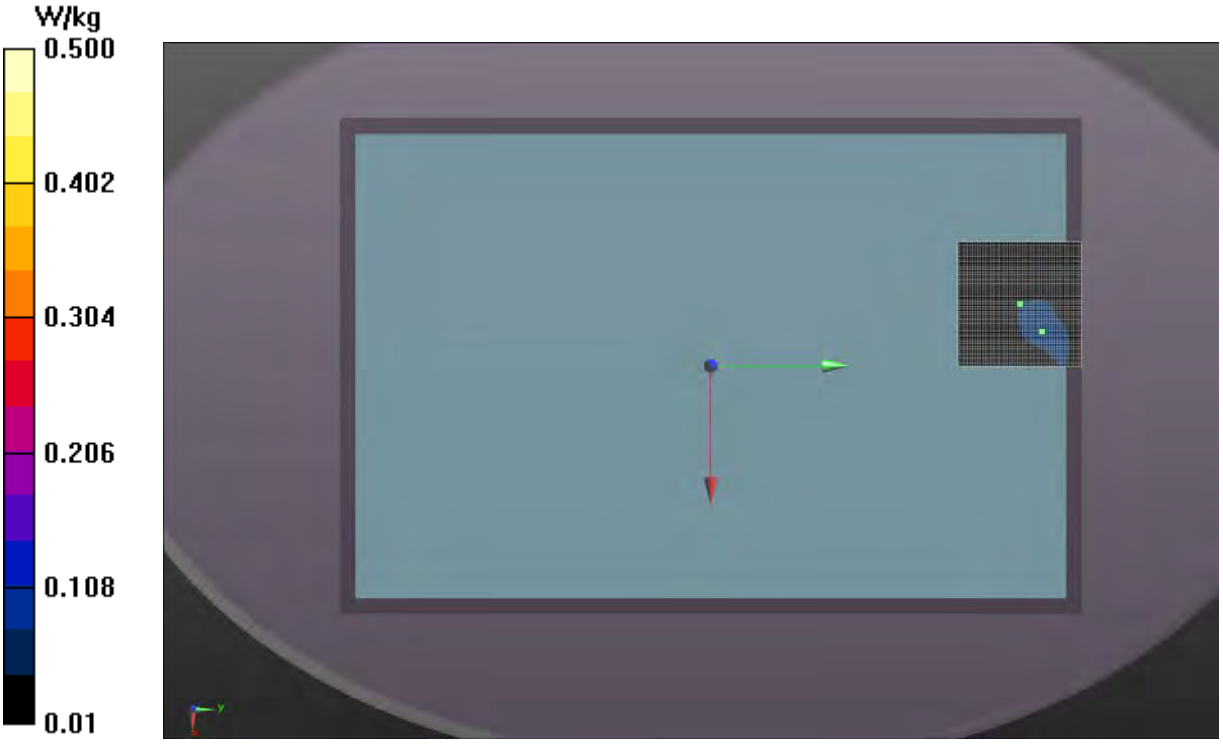
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0631 W/kg

Body/Body/Reference scan (81x121x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0494 W/kg

Approved By

Test 2



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8
Date:	3/29/2014	Liquid Temperature (°C):	21.7
Serial Number:	010	Humidity (%RH):	39.9
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 3a
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.879 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.789 W/kg
SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.122 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.427 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.448 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

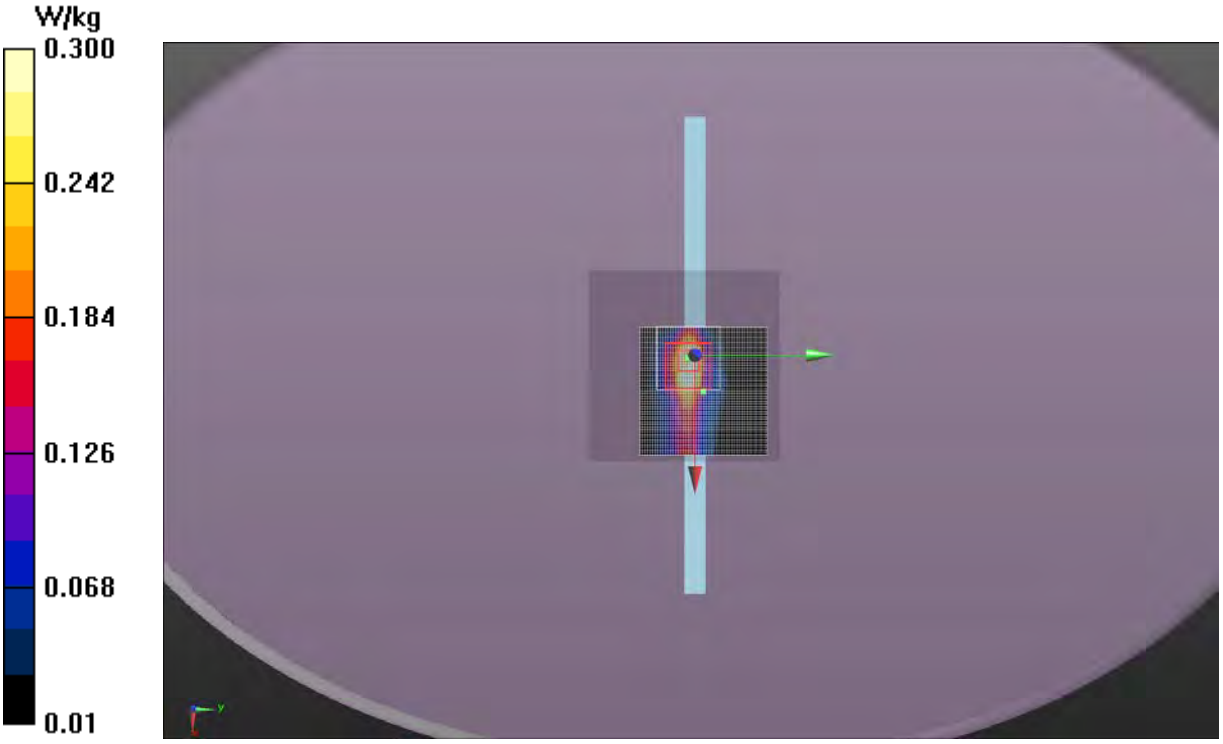
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 9.471 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0440 W/kg

Approved By

Test 3a



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23
Date:	3/29/2014	Liquid Temperature (°C):	21.9
Serial Number:	010	Humidity (%RH):	38.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 4
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.566 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 3.18 W/kg
SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.542 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.69 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

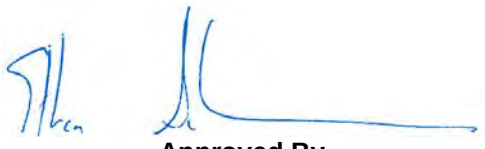
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.97 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

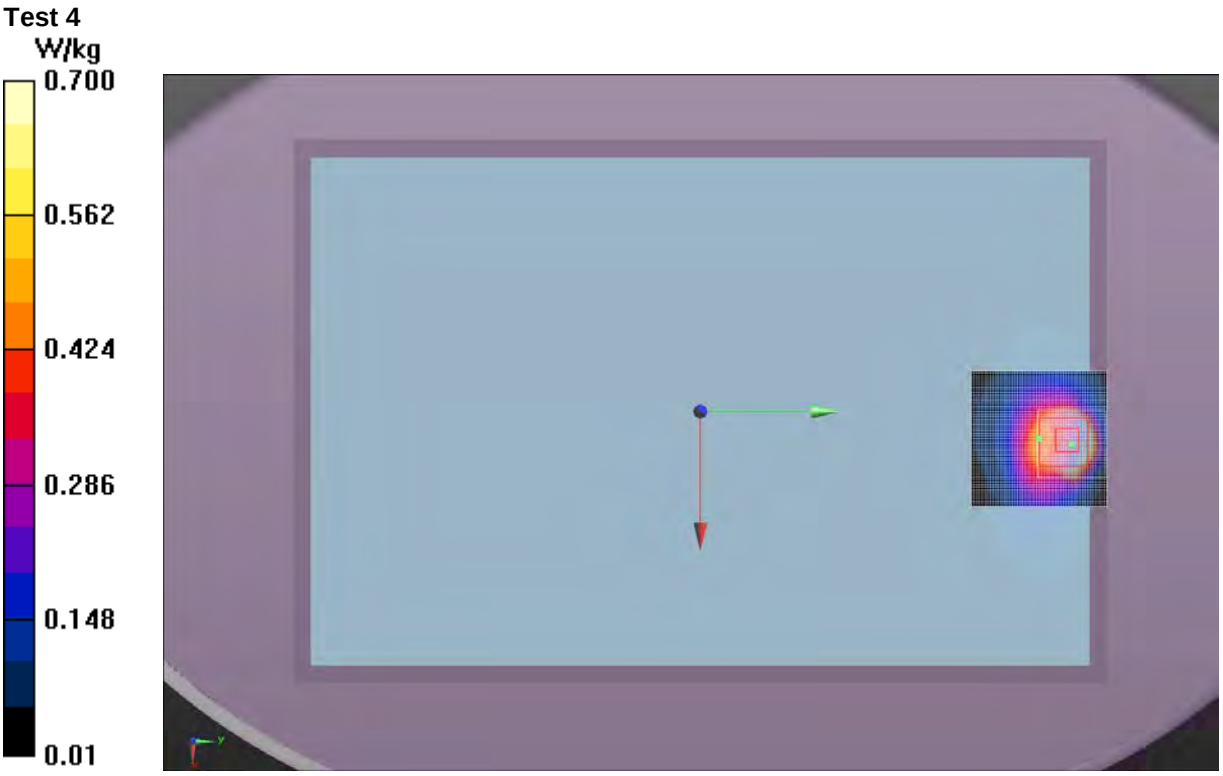
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 19.12 V/m

Body/Body/Reference scan (81x121x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.410 W/kg
Maximum value of SAR (measured) = 0.727 W/kg



Approved By


Test 4
W/kg
0.700
0.562
0.424
0.286
0.148
0.01

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23
Date:	3/29/2014	Liquid Temperature (°C):	21.9
Serial Number:	010	Humidity (%RH):	38.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 4a
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2412 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.893 S/m; ε_r = 51.755; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.586 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.16 W/kg
SAR(1 g) = 0.889 W/kg; SAR(10 g) = 0.384 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.16 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.55 W/kg

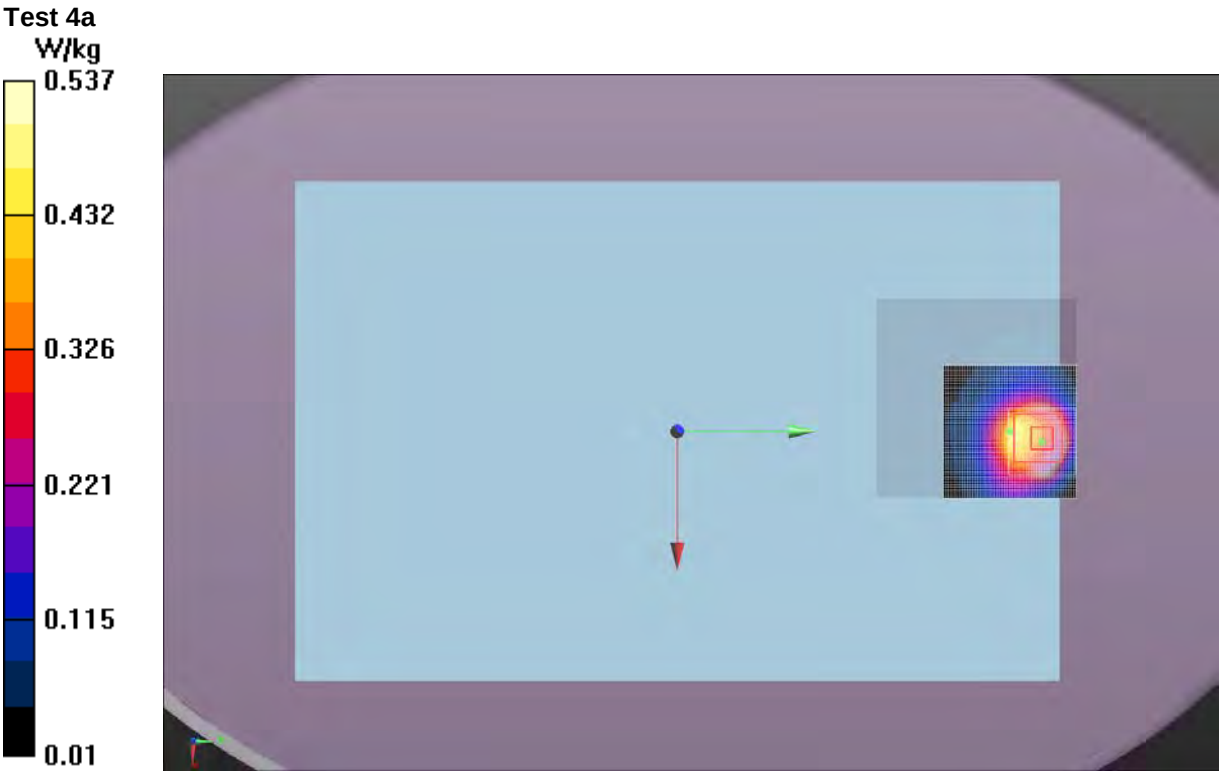
Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 16.84 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.464 W/kg
Maximum value of SAR (measured) = 0.537 W/kg

Approved By


Test 4a
W/kg
0.537
0.432
0.326
0.221
0.115
0.01

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23
Date:	3/29/2014	Liquid Temperature (°C):	21.9
Serial Number:	010	Humidity (%RH):	38.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 4b
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.943 S/m; ε_r = 51.483; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.413 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.43 W/kg
SAR(1 g) = 0.997 W/kg; SAR(10 g) = 0.425 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.34 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

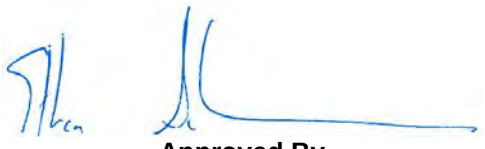
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.58 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

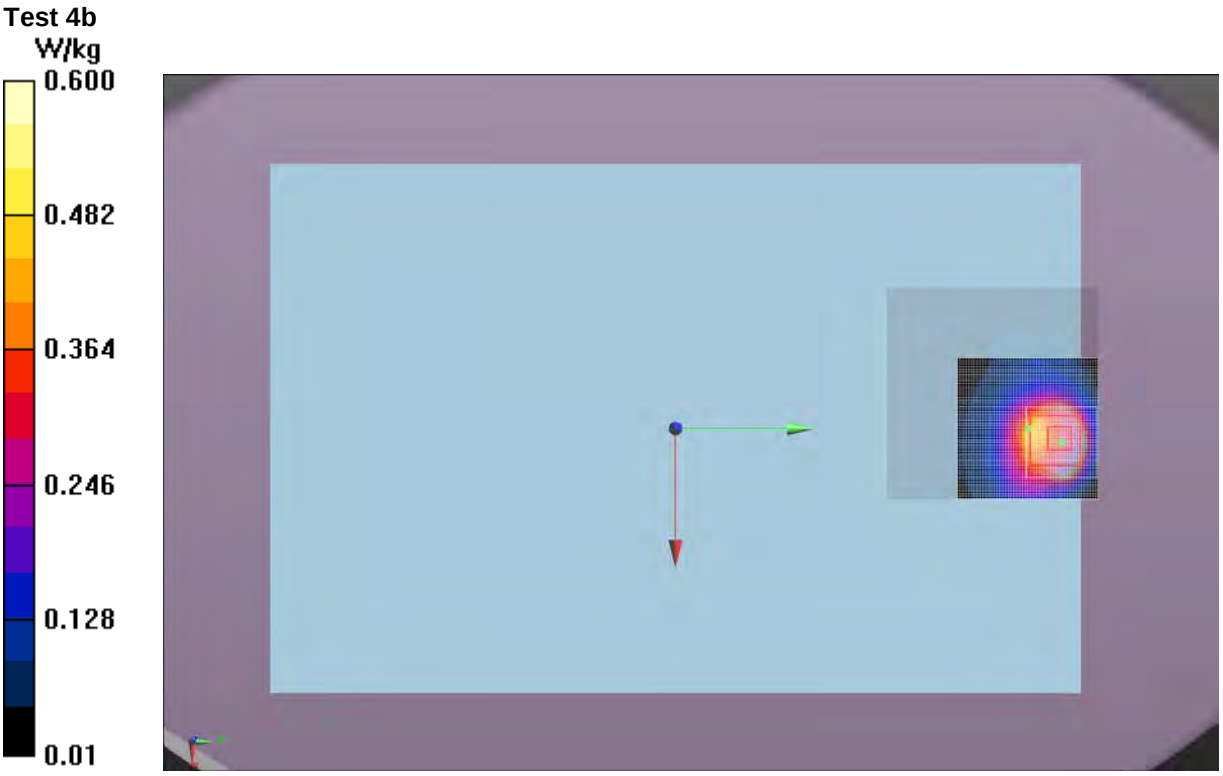
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 17.63 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.425 W/kg
Maximum value of SAR (measured) = 0.604 W/kg



Approved By


Test 4b
W/kg
0.600
0.482
0.364
0.246
0.128
0.01

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.5
Date:	3/29/2014	Liquid Temperature (°C):	21.4
Serial Number:	010	Humidity (%RH):	43.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 5
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.917 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.338 W/kg; SAR(10 g) = 0.132 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.507 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

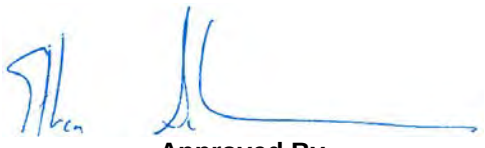
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.541 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 9.577 V/m

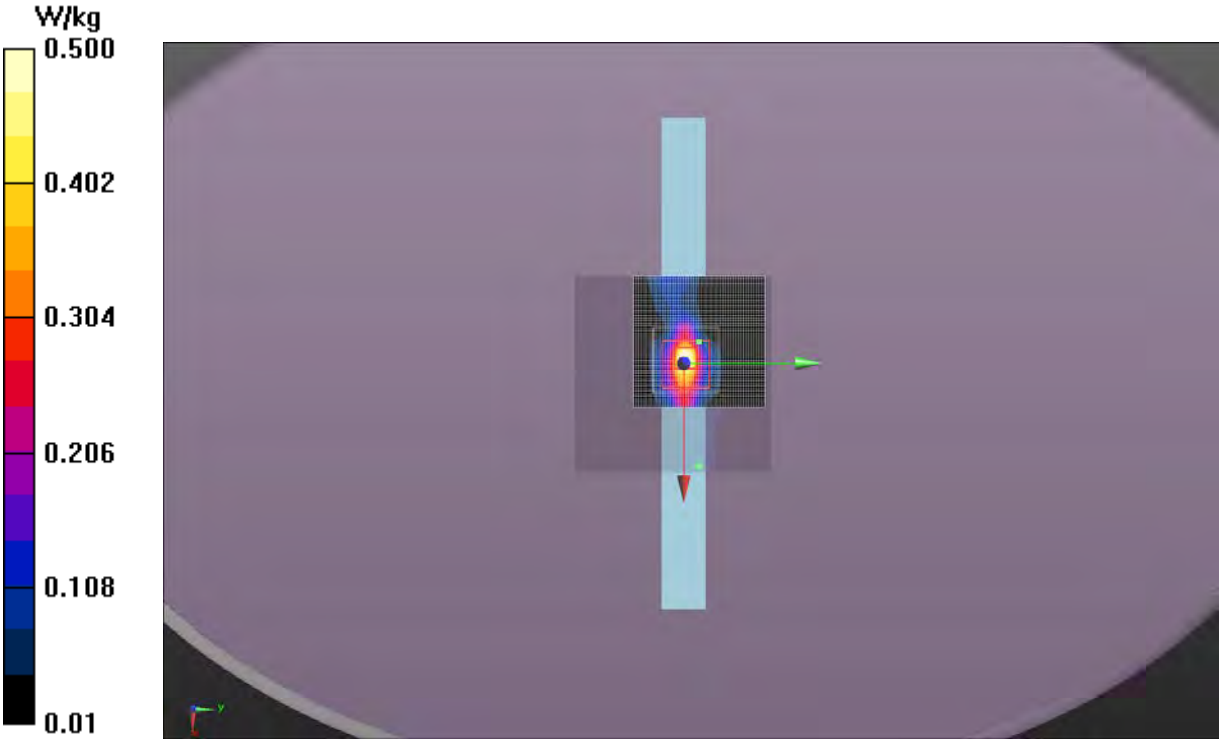
Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.106 W/kg



Approved By

Test 5



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.4
Date:	3/30/2014	Liquid Temperature (°C):	21.6
Serial Number:	010	Humidity (%RH):	43.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1016
Comments:	None		

Test 6a
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.709 V/m; Power Drift = 0.56 dB
Peak SAR (extrapolated) = 2.36 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.452 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.39 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.35 W/kg

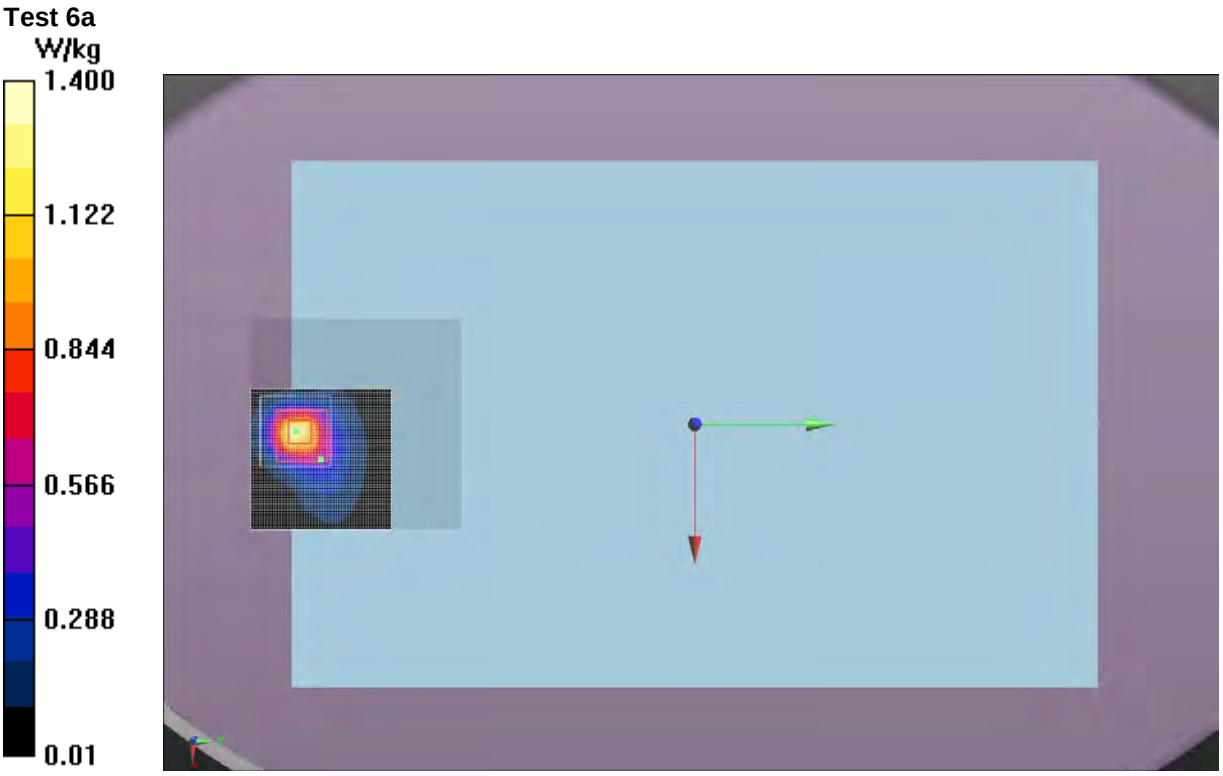
Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 17.84 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.551 W/kg
Maximum value of SAR (measured) = 0.634 W/kg

Approved By


Test 6a
W/kg
1.400
1.122
0.844
0.566
0.288
0.01

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.9
Date:	4/11/2014	Liquid Temperature (°C):	22.2
Serial Number:	010	Humidity (%RH):	32.3
Configuration:	INTE5434-1	Bar. Pressure (mb):	1020
Comments:	None		

Test 6b
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2412 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.898 S/m; ε_r = 50.98; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.100 V/m; Power Drift = -0.28 dB
Peak SAR (extrapolated) = 0.961 W/kg
SAR(1 g) = 0.432 W/kg; SAR(10 g) = 0.182 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.588 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

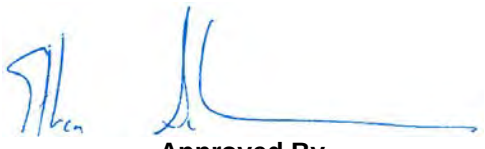
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.601 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 12.02 V/m

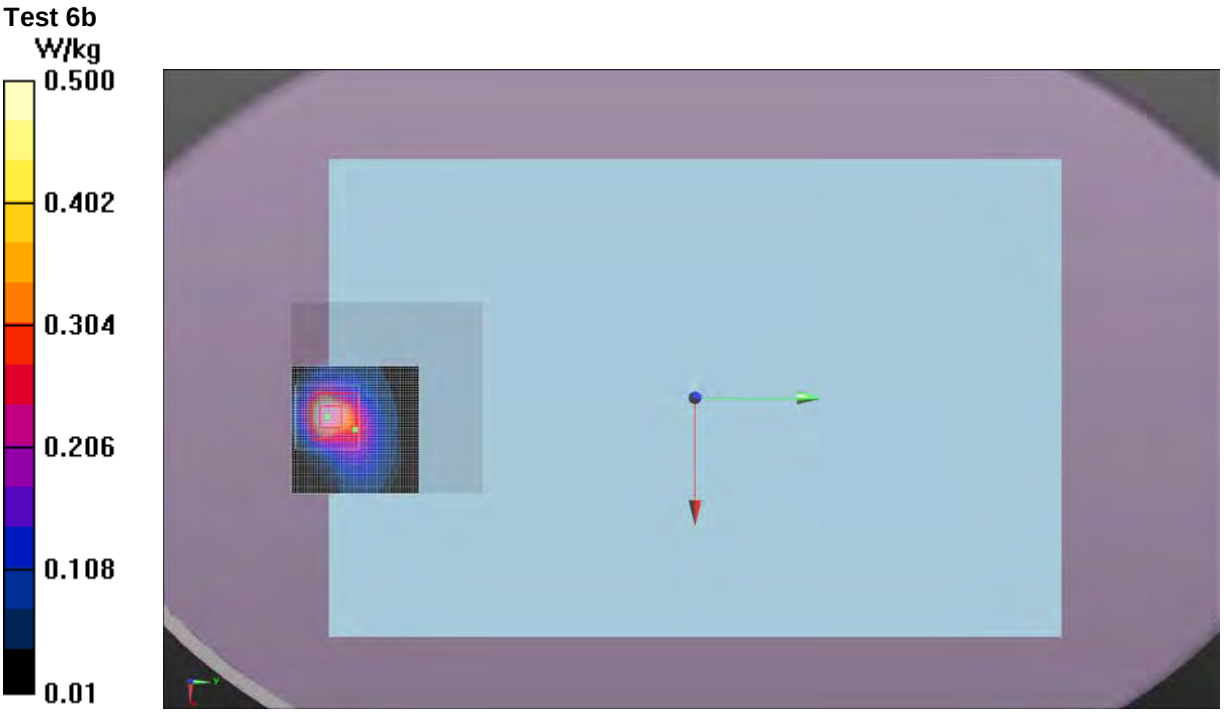
Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.282 W/kg
Maximum value of SAR (measured) = 0.274 W/kg



Approved By

Test 6b



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.9
Date:	4/11/2014	Liquid Temperature (°C):	22.2
Serial Number:	010	Humidity (%RH):	32.3
Configuration:	INTE5434-1	Bar. Pressure (mb):	1020
Comments:	None		

Test 6c
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.94 S/m; ε_r = 50.63; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.682 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 0.778 W/kg; SAR(10 g) = 0.325 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.07 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

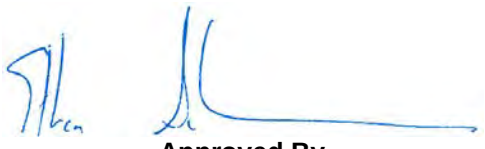
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.00 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

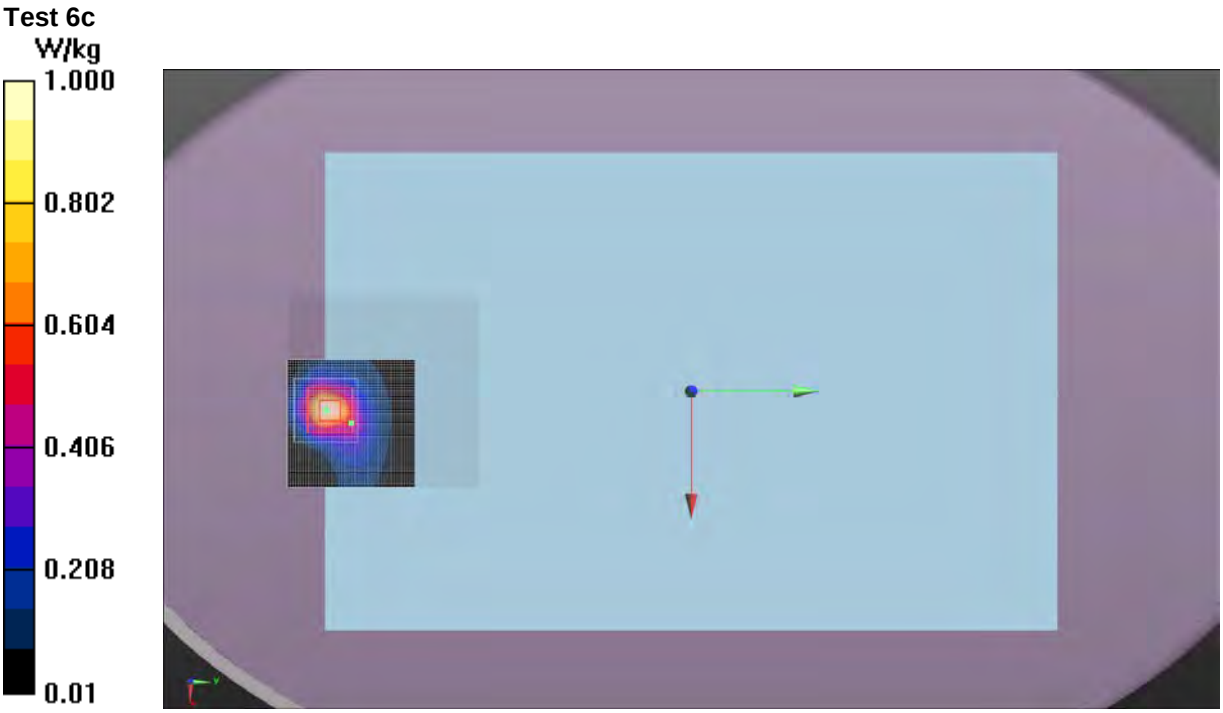
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 16.16 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.492 W/kg
Maximum value of SAR (measured) = 0.506 W/kg



Approved By


Test 6c
W/kg
1.000
0.802
0.604
0.406
0.208
0.01

SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.6
Serial Number:	010	Humidity (%RH):	40.2
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 7
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.578 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.575 W/kg
SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.095 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.307 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

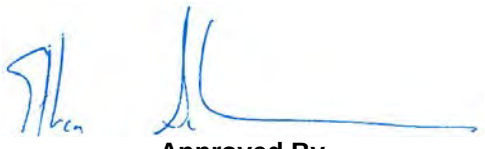
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.343 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 8.109 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0588 W/kg
Maximum value of SAR (measured) = 0.131 W/kg



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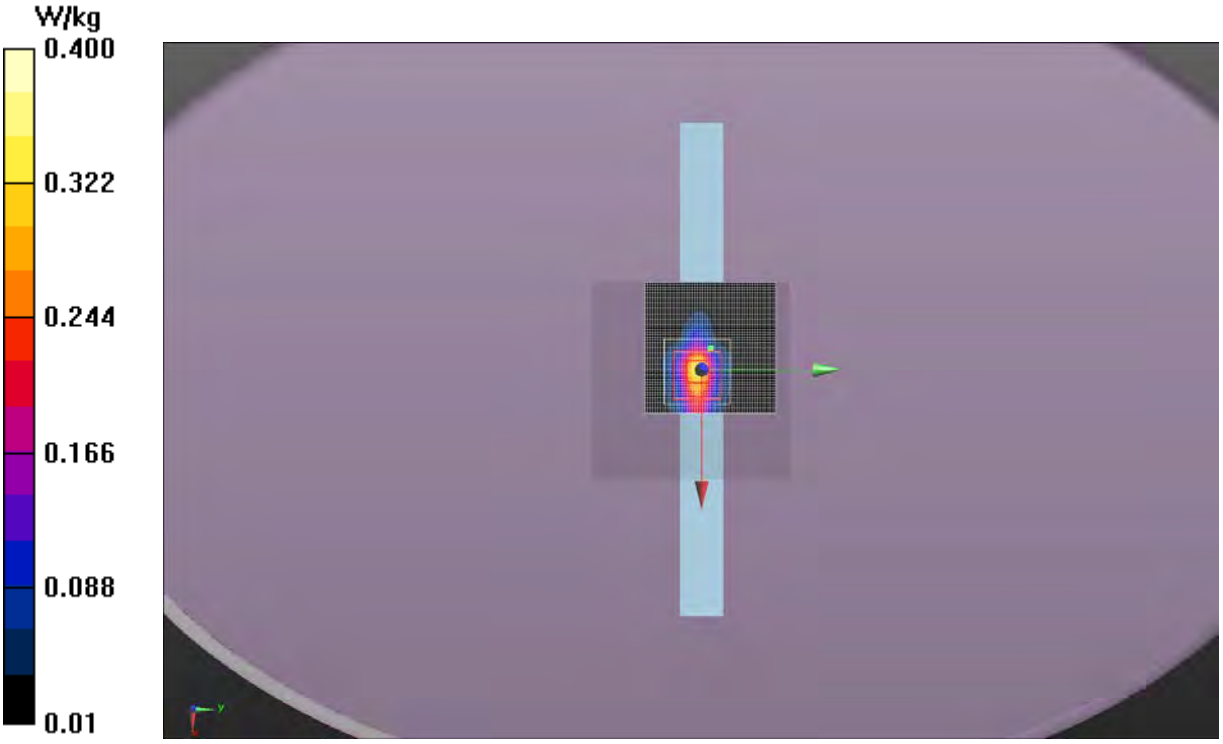
Test 7



SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.6
Serial Number:	010	Humidity (%RH):	40.2
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 8
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.567 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.499 W/kg; SAR(10 g) = 0.225 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.664 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

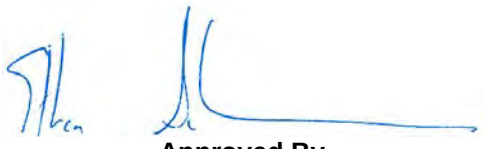
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.623 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 12.18 V/m

Body/Body/Reference scan (81x121x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.220 W/kg
Maximum value of SAR (measured) = 0.295 W/kg



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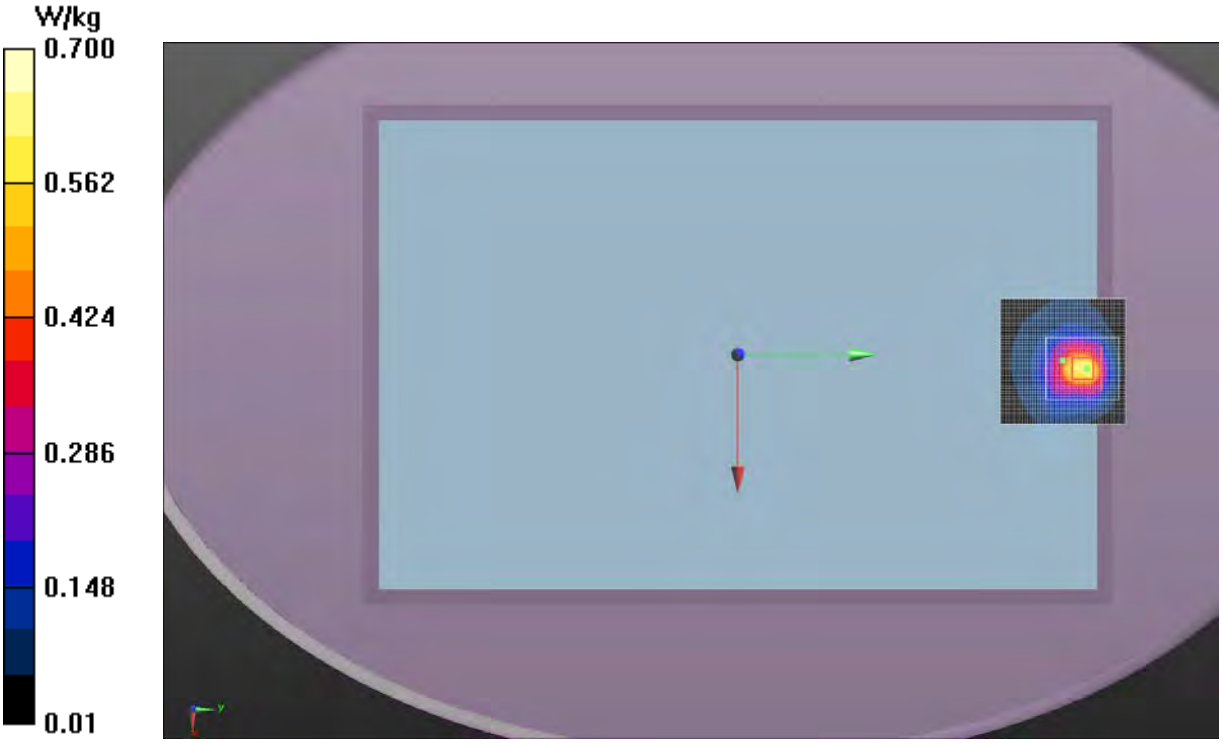
Test 8



SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.6
Serial Number:	010	Humidity (%RH):	40.2
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 9
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (9x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.988 V/m; Power Drift = -0.28 dB
Peak SAR (extrapolated) = 0.770 W/kg
SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.113 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.374 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

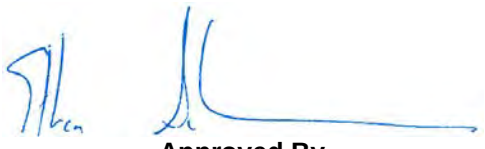
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.396 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 8.810 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0482 W/kg
Maximum value of SAR (measured) = 0.154 W/kg



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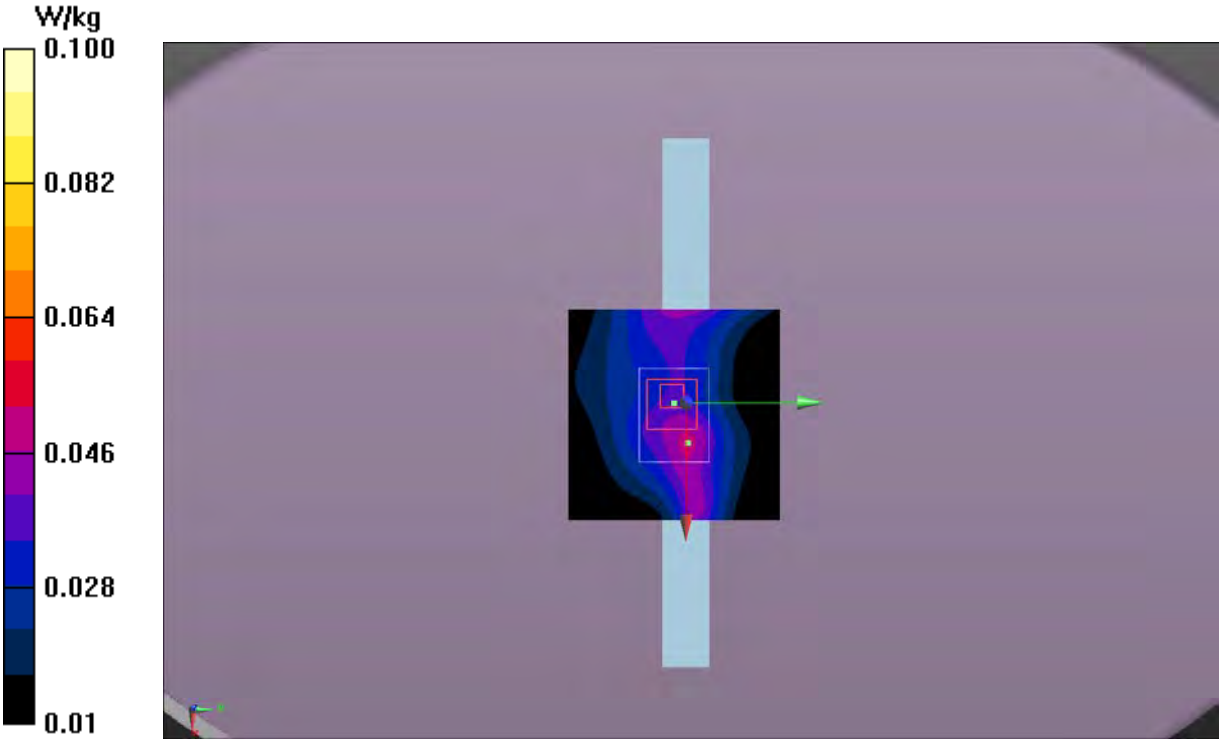
Test 9



SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.6
Serial Number:	010	Humidity (%RH):	39.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1008
Comments:	None		

Test 10
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.248 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.135 W/kg
SAR(1 g) = 0.074 W/kg; SAR(10 g) = 0.047 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0900 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

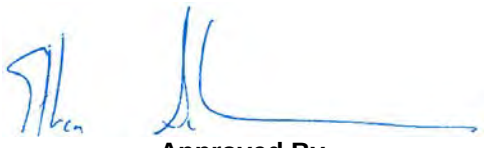
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0875 W/kg

Body/Body/Reference scan (81x121x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0452 W/kg

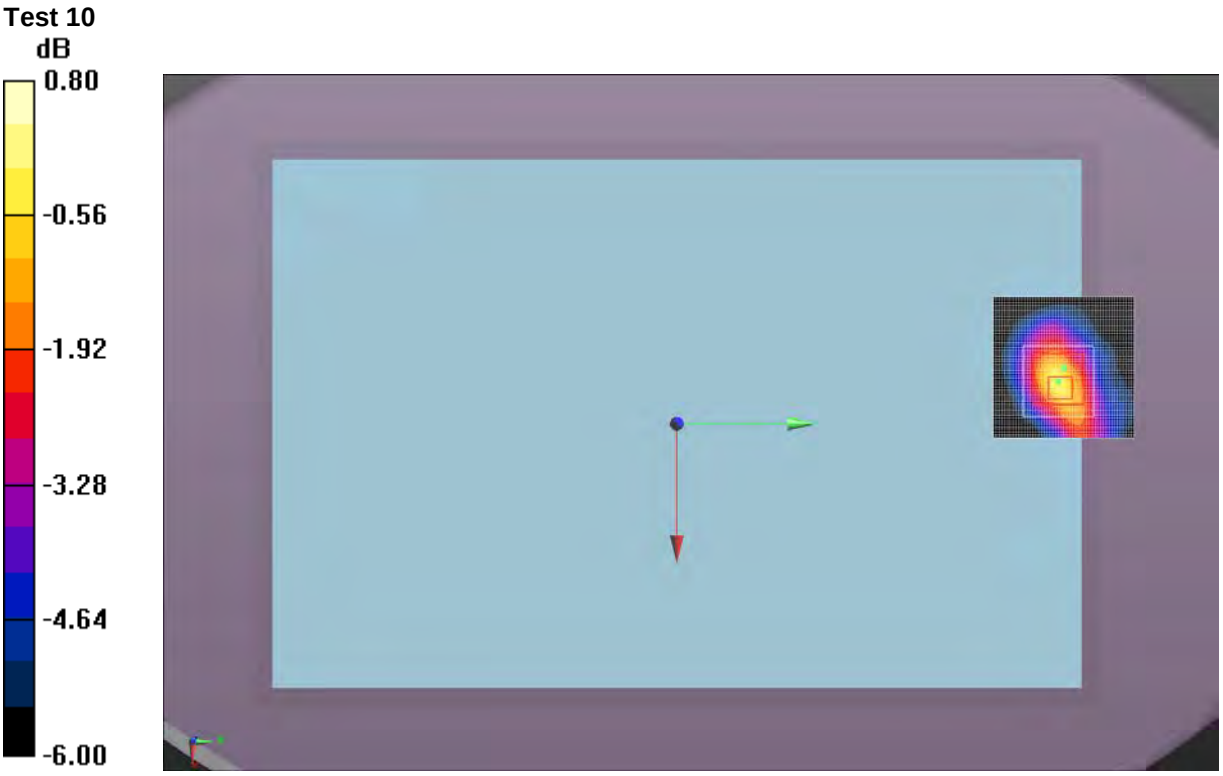
Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.248 V/m; Power Drift = 0.20 dB

Info: Interpolated medium parameters used for SAR evaluation.



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.6
Serial Number:	010	Humidity (%RH):	44.3
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010.6
Comments:	None		

Test 11
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.053 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.839 W/kg
SAR(1 g) = 0.327 W/kg; SAR(10 g) = 0.136 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.441 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

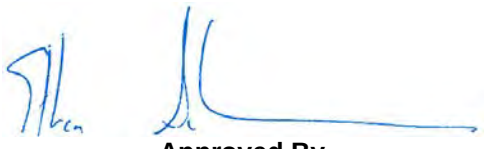
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.460 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 9.739 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0558 W/kg
Maximum value of SAR (measured) = 0.189 W/kg



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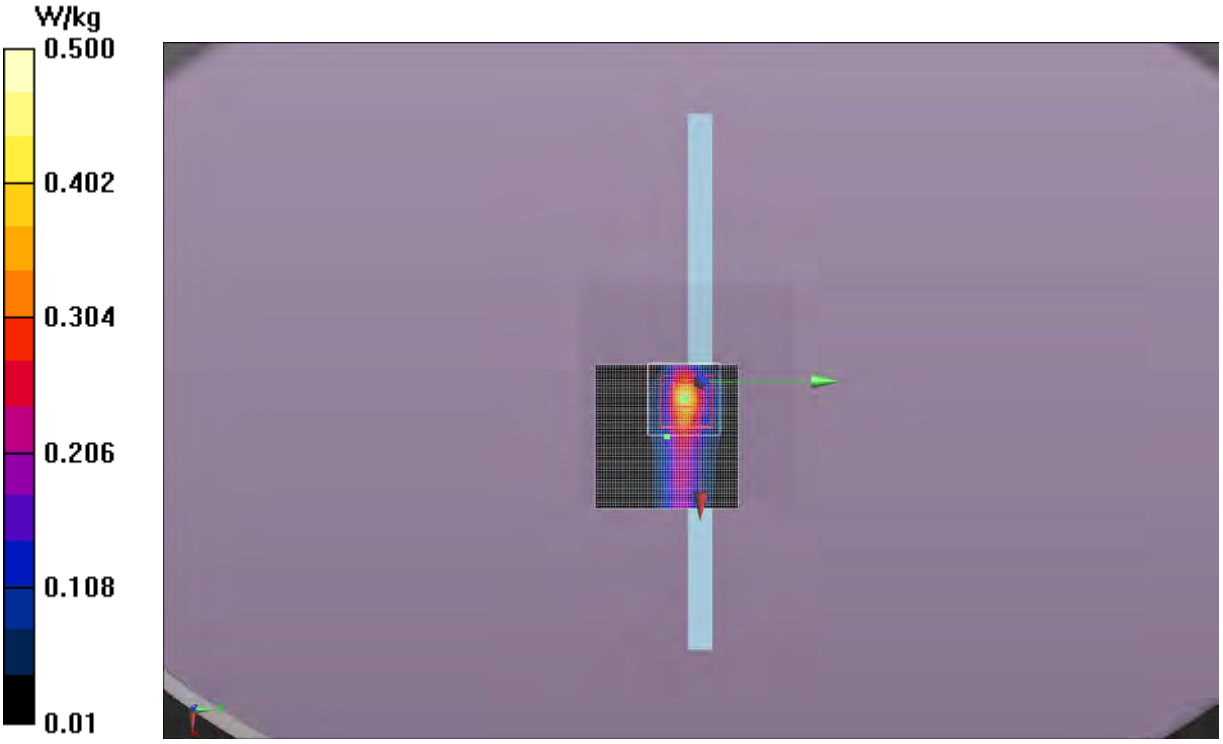
Test 11



SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23
Date:	3/29/2014	Liquid Temperature (°C):	21.1
Serial Number:	010	Humidity (%RH):	43.2
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010.6
Comments:	None		

Test 12
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.111 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.77 W/kg
SAR(1 g) = 0.697 W/kg; SAR(10 g) = 0.301 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.968 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.07 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 14.06 V/m

Body/Body/Reference scan (81x121x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.446 W/kg
Maximum value of SAR (measured) = 0.394 W/kg

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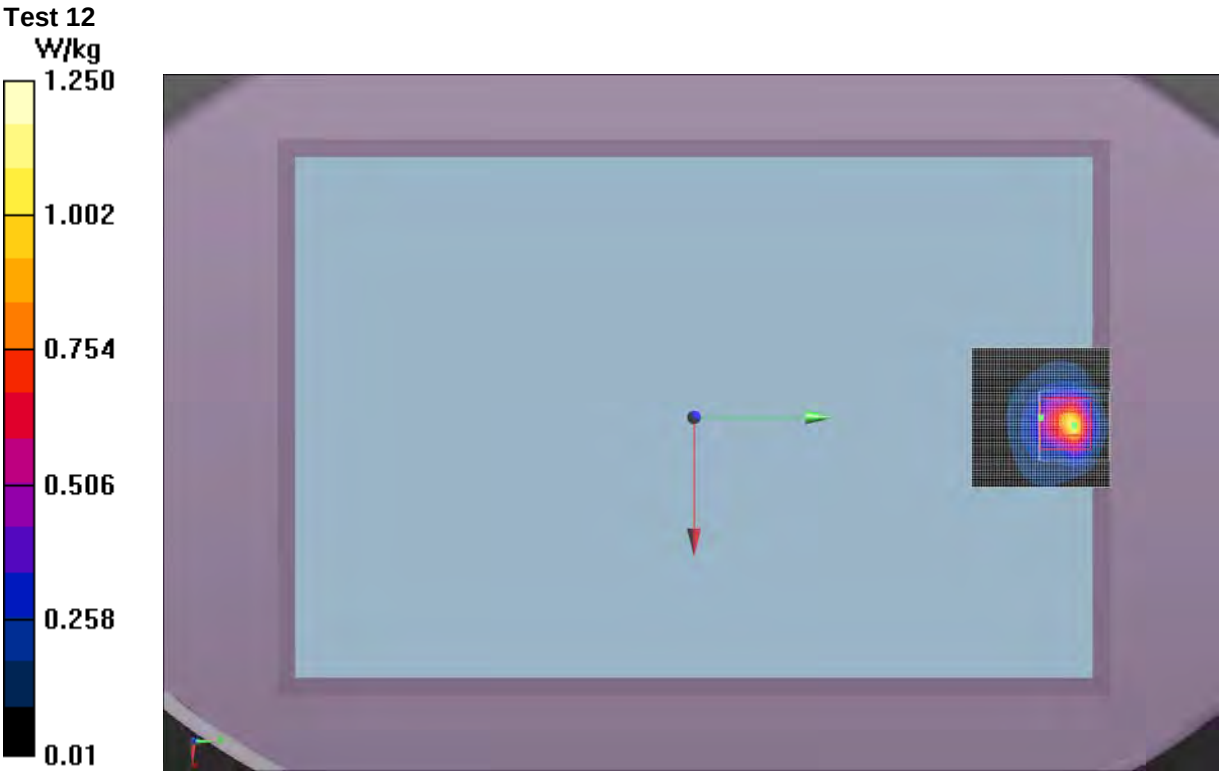

Test 12
W/kg
1.250
1.002
0.754
0.506
0.258
0.01

SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	22.9
Date:	3/29/2014	Liquid Temperature (°C):	20.8
Serial Number:	010	Humidity (%RH):	42.8
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010
Comments:	None		

Test 13
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.945 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.583 W/kg
SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.083 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.299 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

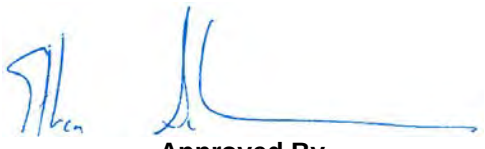
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.285 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 7.448 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0681 W/kg
Maximum value of SAR (measured) = 0.110 W/kg



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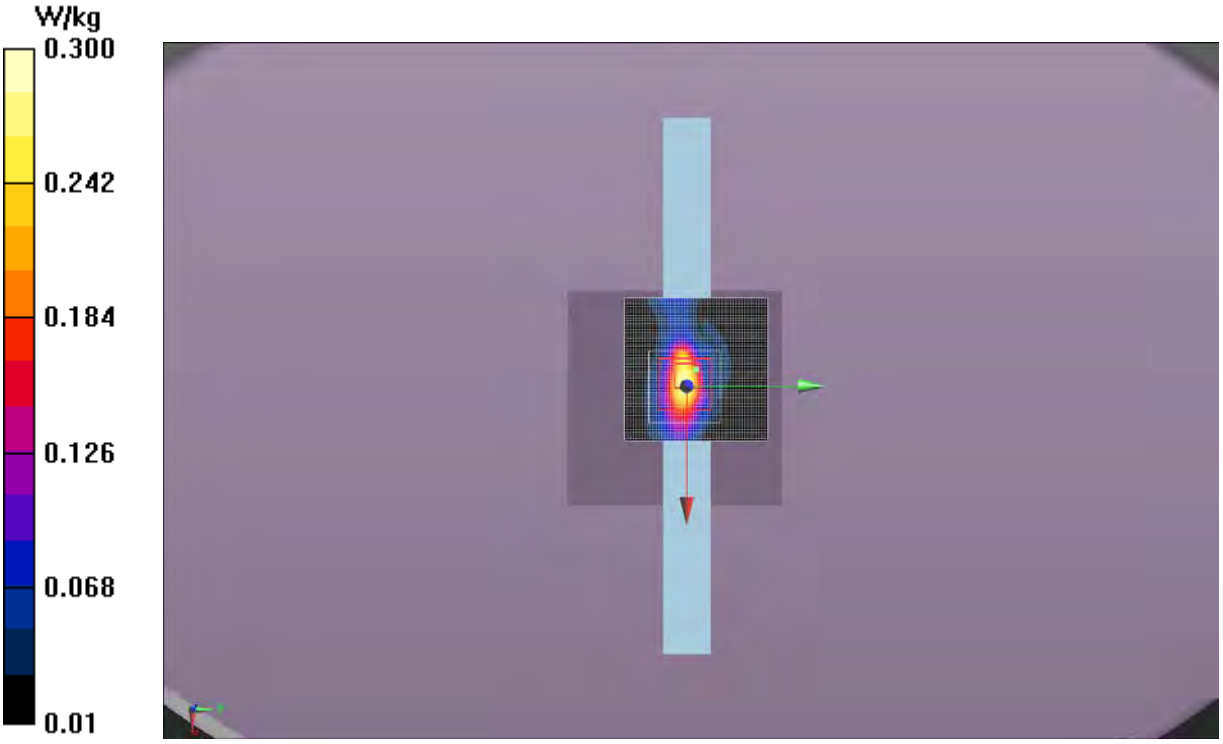
Test 13



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.4
Date:	3/30/2014	Liquid Temperature (°C):	21.6
Serial Number:	010	Humidity (%RH):	31
Configuration:	INTE5434-1	Bar. Pressure (mb):	1016
Comments:	None		

Test 14a
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.415 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.757 W/kg; SAR(10 g) = 0.330 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.04 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.04 W/kg

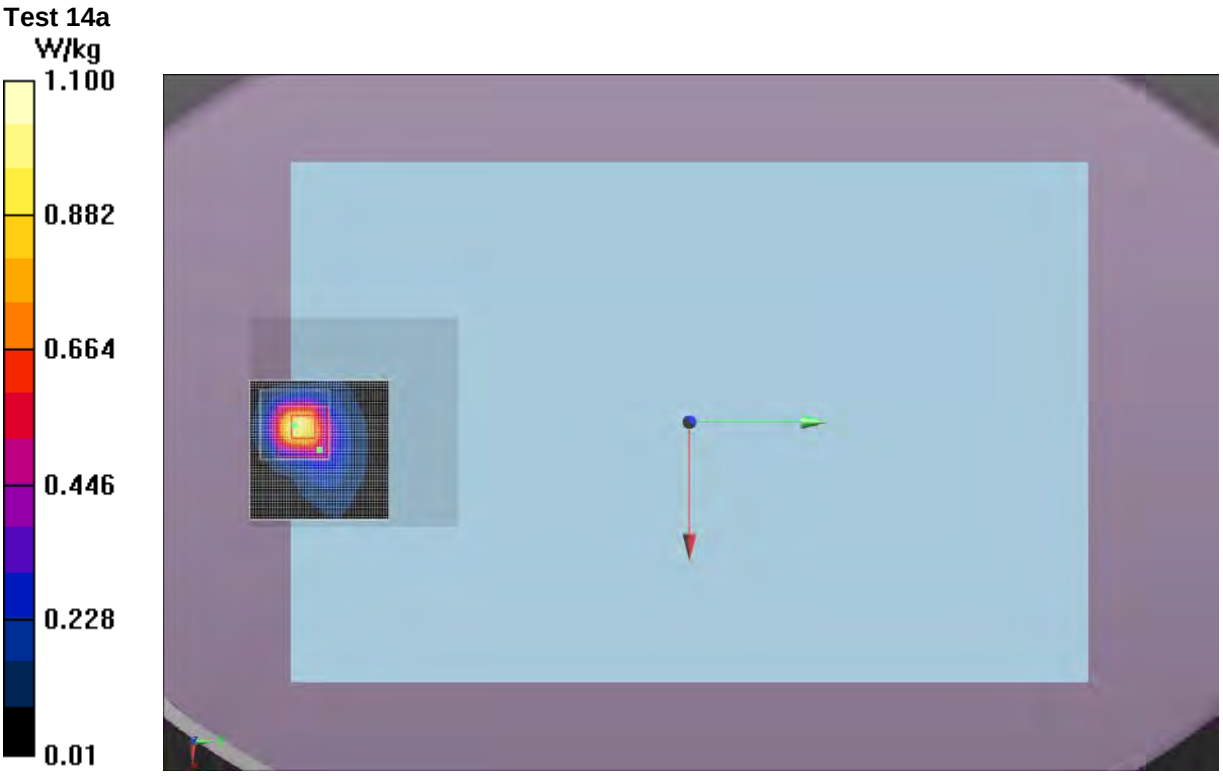
Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 14.55 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.394 W/kg
Maximum value of SAR (measured) = 0.422 W/kg

Approved By


Test 14a
W/kg
1.100
0.882
0.664
0.446
0.228
0.01

SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.5
Serial Number:	010	Humidity (%RH):	38.8
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010
Comments:	None		

Test 15
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.611 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.638 W/kg
SAR(1 g) = 0.230 W/kg; SAR(10 g) = 0.098 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.318 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

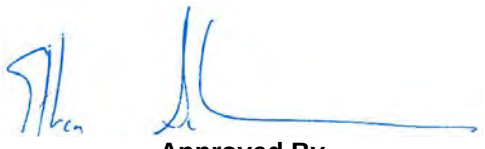
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.326 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 7.886 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0710 W/kg
Maximum value of SAR (measured) = 0.124 W/kg



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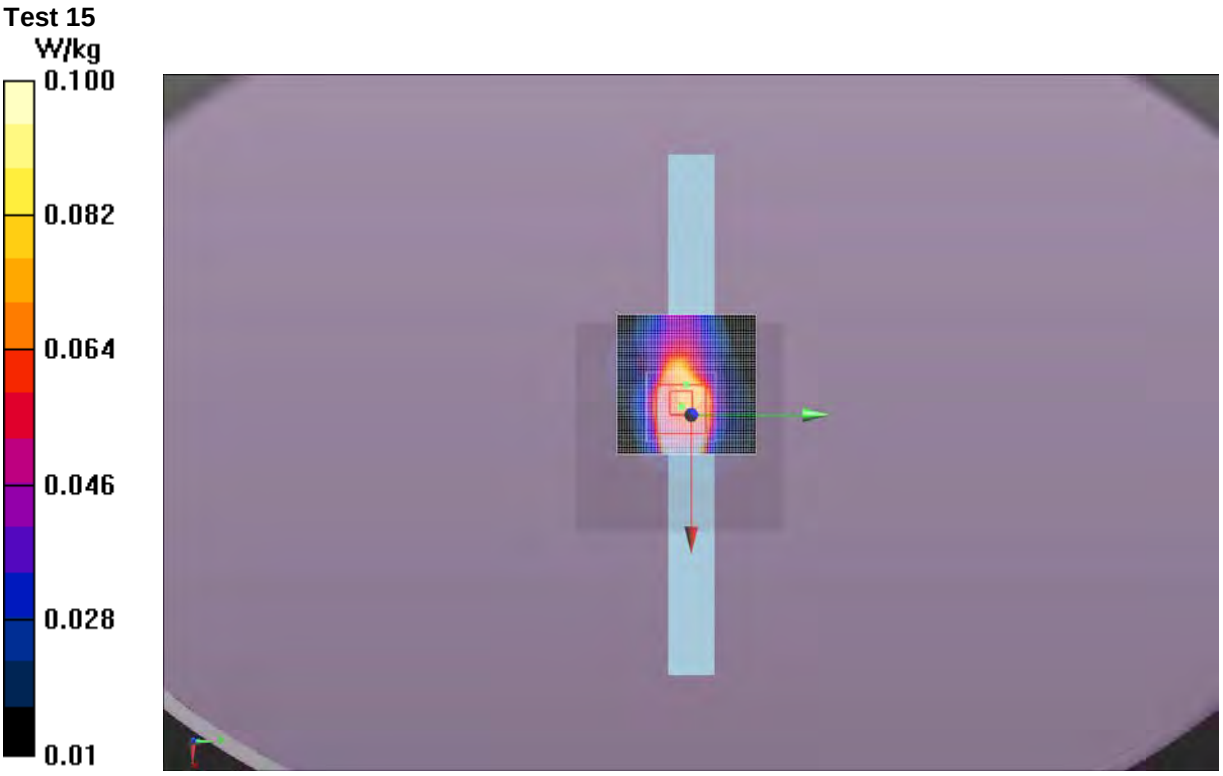

Test 15
W/kg
0.100
0.082
0.064
0.046
0.028
0.01

SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	23.6
Date:	3/29/2014	Liquid Temperature (°C):	20.5
Serial Number:	010	Humidity (%RH):	38.8
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010
Comments:	None		

Test 16
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.99 S/m; ε_r = 51.196; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.874 V/m; Power Drift = 0.26 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.551 W/kg; SAR(10 g) = 0.246 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.720 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

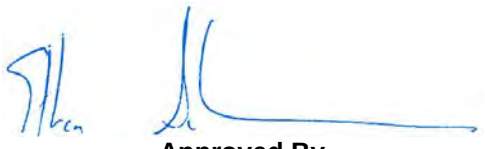
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.778 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 13.65 V/m

Body/Body/Reference scan (81x121x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.331 W/kg
Maximum value of SAR (measured) = 0.371 W/kg



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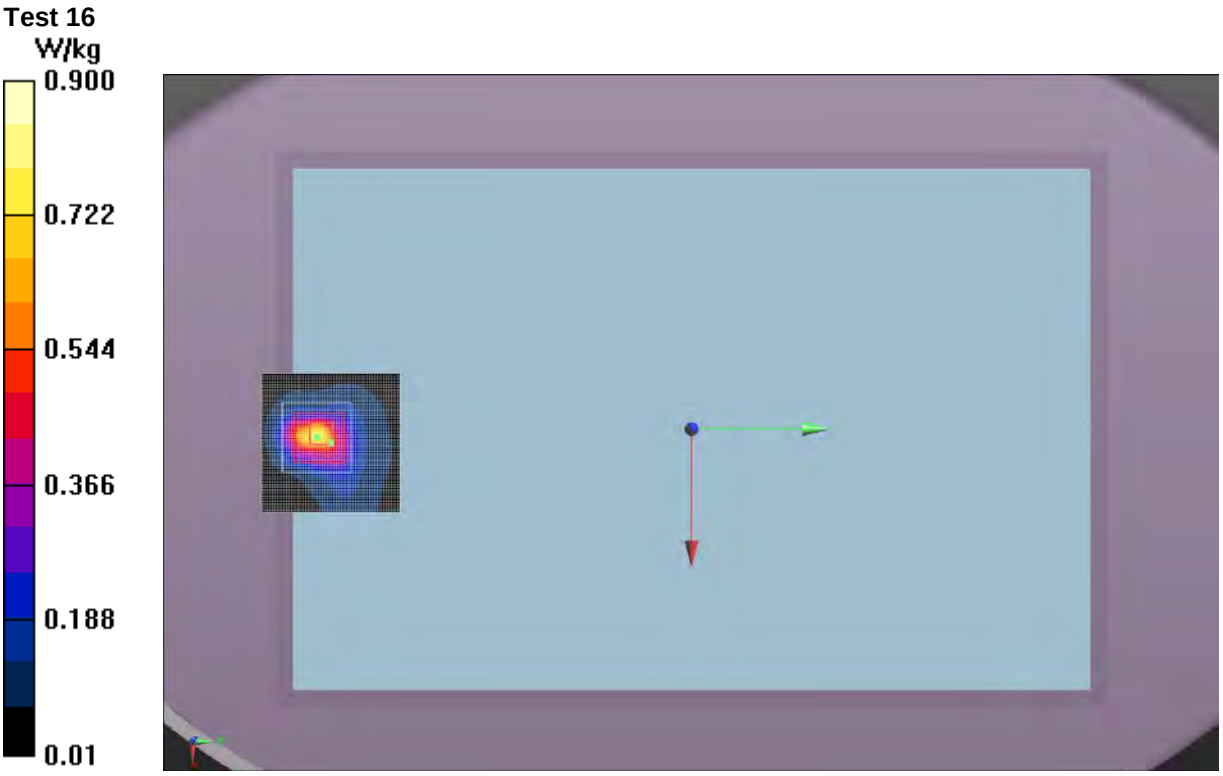
Test 16
W/kg
0.900
0.722
0.544
0.366
0.188
0.01

SAR TEST DATA

WSTD.2013.09.09

EUT:	WSBUB-SDS	Work Order:	INTE5434
Customer:	Intel Corporation	Job Site:	EV08
Attendees:	Mike Lowe, Bill Jones	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2014 FCC 15.247:2014	IEEE Std 1528:2003 FCC KDB 447498 D01 v05r02 FCC KDB 248227 D01 v01r02 FCC KDB 616217 D04 v01r01 FCC 865664 D01 v01r03 and D02 v01r01

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Channel Bandwidth (MHz)	Antenna Port	Mode	EUT Position	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Measured 10g SAR Level (mW/g)	Test #
Body	2.4	2437	6	MCS8	20	A&B	None	Back	-0.23	0.30	0.14	18
Body	2.4	2437	6	MCS8	20	A&B	None	Back	-0.02	0.36	0.16	19
Body	2.4	2437	6	MCS8	40	A&B	None	Back	-0.30	0.32	0.15	20
Body	2.4	2437	6	MCS8	40	A&B	None	Back	0.02	0.34	0.16	21

SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	24.5
Date:	3/29/2014	Liquid Temperature (°C):	21.6
Serial Number:	010	Humidity (%RH):	37.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010.6
Comments:	Antenna A		

Test 18
DUT: Tablet Computer; Type: WSBUB-SUS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.943 S/m; ε_r = 51.483; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.880 V/m; Power Drift = -0.23 dB
Peak SAR (extrapolated) = 0.716 W/kg
SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.137 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.412 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.467 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 9.598 V/m

Body/Body/Reference scan (81x61x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.163 W/kg
Maximum value of SAR (measured) = 0.179 W/kg

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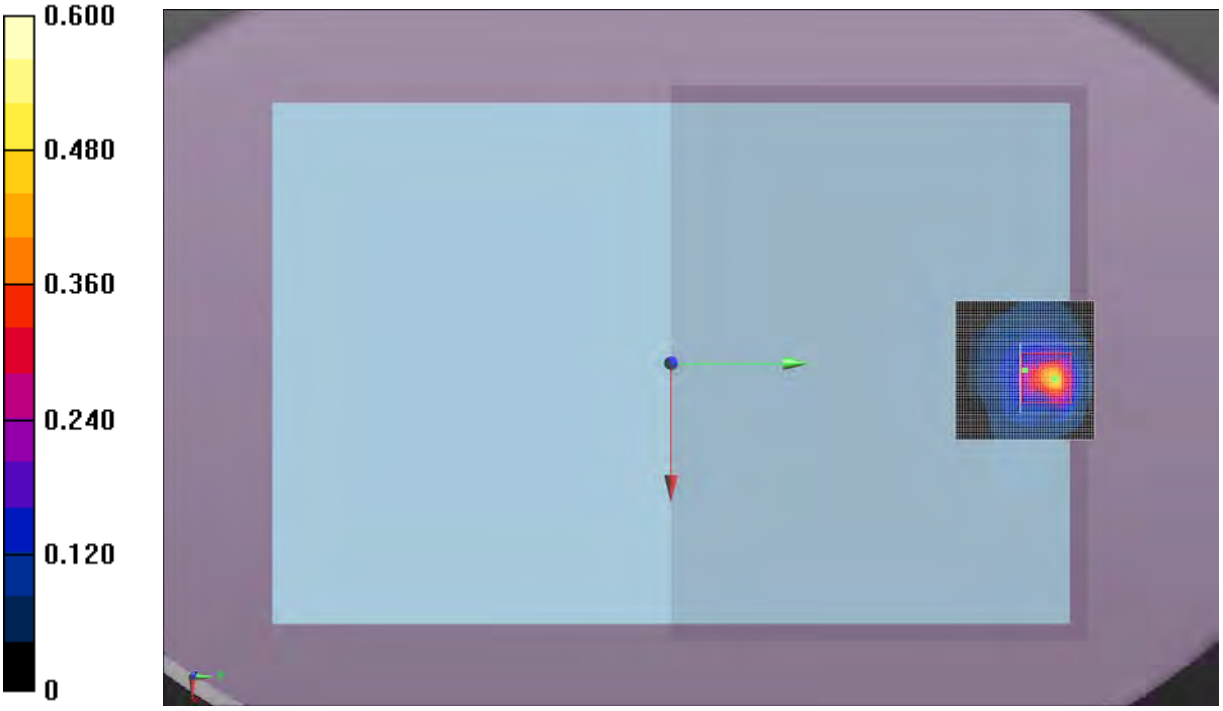
SAR TEST DATA

Test 18



SAR TEST DATA

Tested By:	Cole Ghizzone	Room Temperature (°C):	24.5
Date:	3/29/2014	Liquid Temperature (°C):	21.6
Serial Number:	010	Humidity (%RH):	37.7
Configuration:	INTE5434-1	Bar. Pressure (mb):	1010.6
Comments:	Antenna B		

Test 19
DUT: Tablet Computer; Type: WSBUB-SUS; Serial: 010
Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.943 S/m; ε_r = 51.483; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.992 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.806 W/kg
SAR(1 g) = 0.361 W/kg; SAR(10 g) = 0.161 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.490 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

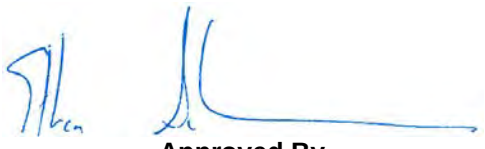
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.520 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 11.32 V/m

Body/Body/Reference scan (81x61x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.204 W/kg
Maximum value of SAR (measured) = 0.249 W/kg



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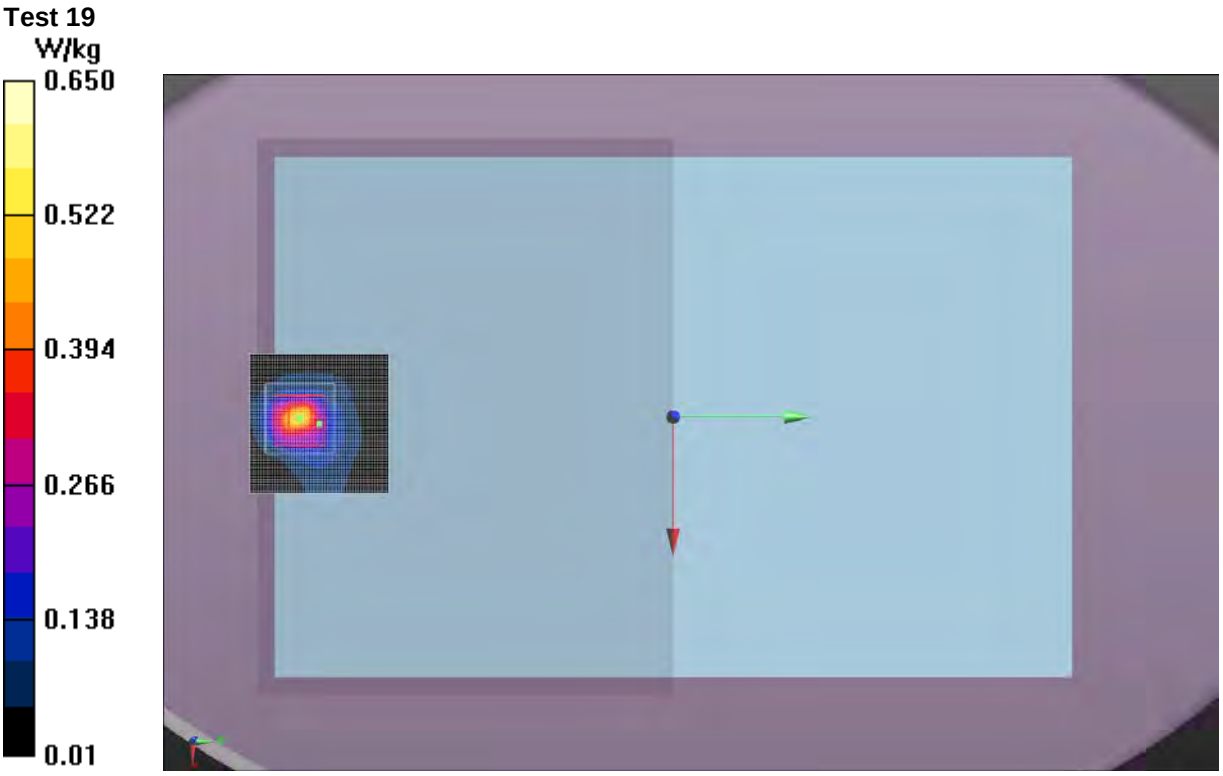
SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.5
Date:	3/30/2014	Liquid Temperature (°C):	21.7
Serial Number:	010	Humidity (%RH):	34
Configuration:	INTE5434-1	Bar. Pressure (mb):	1016
Comments:	Antenna A		

Test 20
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.943 S/m; ε_r = 51.483; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.455 V/m; Power Drift = -0.30 dB
Peak SAR (extrapolated) = 0.767 W/kg
SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.147 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.428 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

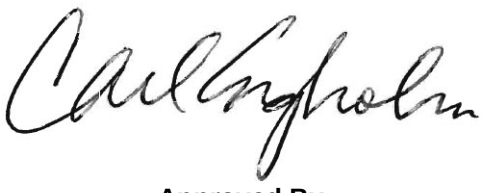
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.516 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 10.28 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.241 W/kg
Maximum value of SAR (measured) = 0.205 W/kg



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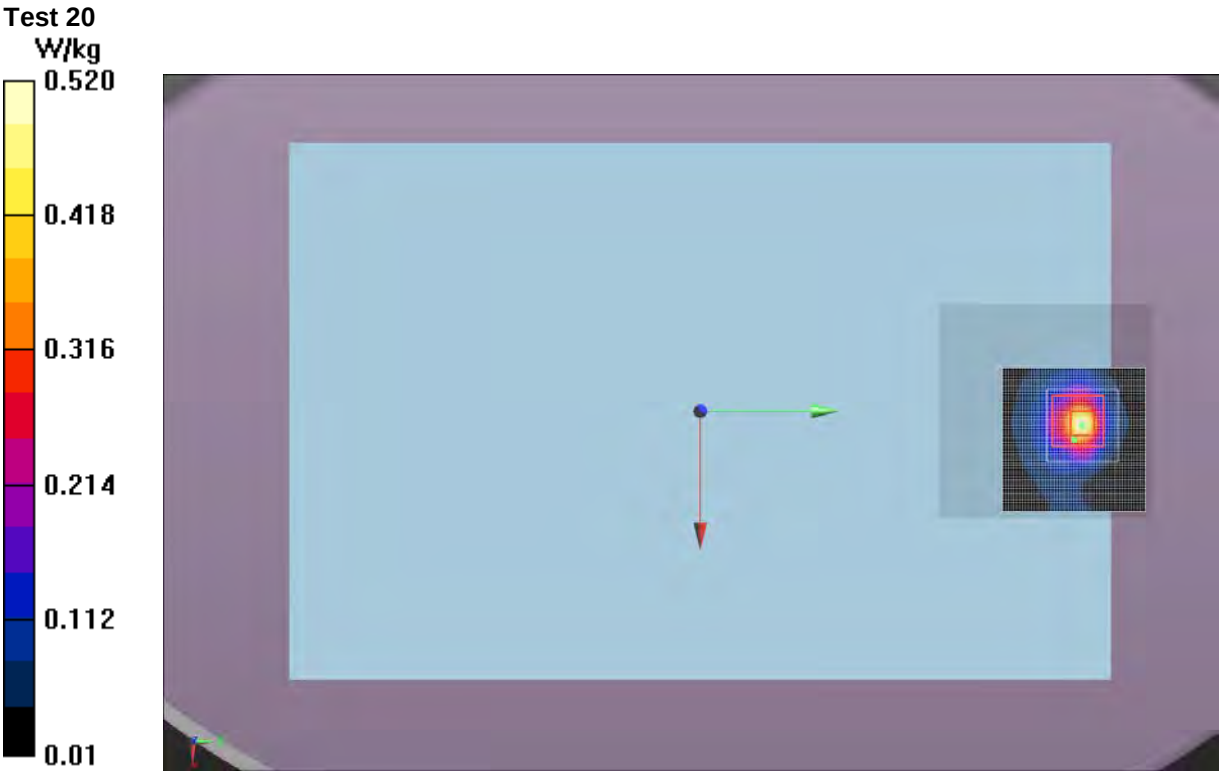
SAR TEST DATA



SAR TEST DATA

WSTD.2013.09.09

Tested By:	Carl Engholm	Room Temperature (°C):	22.8
Date:	3/30/2014	Liquid Temperature (°C):	21.6
Serial Number:	010	Humidity (%RH):	32
Configuration:	INTE5434-1	Bar. Pressure (mb):	1016
Comments:	Antenna B		

Test 21
DUT: Tablet Computer; Type: WSBUB-SDS; Serial: 010
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2437 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.943 S/m; ε_r = 51.483; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 S/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.566 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.765 W/kg
SAR(1 g) = 0.343 W/kg; SAR(10 g) = 0.155 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.459 W/kg

Body/Body/Area scan (51x51x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

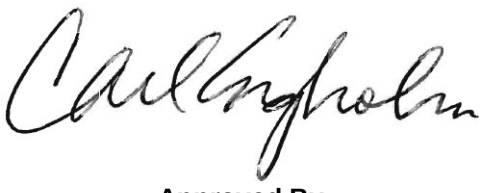
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.462 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 11.17 V/m

Body/Body/Reference scan (31x31x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.224 W/kg
Maximum value of SAR (measured) = 0.242 W/kg



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SAR TEST DATA

Test 21