731 Enterprise Drive
Lexington, KY 40510

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TEST REPORT

Report Number: 101078559LEX-002
Project Number: G101078559

Evaluation of Model Number: iX101T1

FCCID: Q2GMC7750

Tested to the SAR Criteria in
FCC OET Bulletin 65, Supplement C (Edition 01-01)

For

Xplore Technologies

Test Performed by:	Test Authorized by:
Intertek 731 Enterprise Drive Lexington, KY 40510	Xplore Technologies 1400 Summit Dr Austin , TX 78728

Prepared By:_____ **Date:** 7/25/2013

Jason Centers, Senior Project Engineer

Approved By:_____ **Date:** 7/25/2013

Bryan Taylor, Team Leader

TABLE OF CONTENTS

1.0 DOCUMENT HISTORY

Revision/ Project Number	Writer Initials	Date	Change
1.0 /G101078559	JC	7/25/2013	Original document
2.0 /G101078559	JC	7/25/2013	Updated Calibration & Added Table 6

2.0 INTRODUCTION

At the request of Xplore Technologies, the Rugged Tablet was evaluated for SAR in accordance with the requirements for RF Exposure compliance testing defined in FCC OET Bulletin 65, Supplement C (Edition 01-01). Testing was performed at the Intertek facility in Lexington, Kentucky.

For the evaluation, the dosimetric assessment system DASY52 was used. The total uncertainty for the evaluation of the spatial peak SAR values averaged over a cube of 1g tissue mass had been assessed for this system to be ±21.4%.

The iX101T1 was tested at the maximum output power measured by Intertek. Maximum output power measurements are tabulated under 9.0 Tabular Test Results.

The maximum spatial peak SAR value for the sample device averaged over 1g was found to be:

Transmit Band (MHz)	Mode	Channel	Frequency (MHz)	Conducted Output Power (dBm)	Reported SAR_{1g} – Body Mode (W/kg)	Limit (W/kg)
777-787	LTE	23230	782.0	21.95	0.33	1.6
824-849	CDMA Cell	777	848.31	20.27	0.86	1.6
1850-1910	CDMA PCS	1175	1909.92	24.39	1.3	1.6

Table 1: Maximum Measured SAR

Based on the worst-case data presented above, the Rugged Tablet was found to be **compliant** with the 1.6 mW/g requirement defined in OET Bulletin 65, Supplement C (Edition 01-01) for general population / uncontrolled exposure.

Modifications made to test sample

Intertek implemented no modifications.

3.0 TEST SITE DESCRIPTION

The SAR test site located at 731 Enterprise Drive, Lexington KY 40510 is comprised of the SPEAG model DASY 5.2 automated near-field scanning system, which is a package, optimized for dosimetric evaluation of mobile radios [3]. This system is installed in an ambient-free shielded chamber. The ambient temperature is controlled to 22.0 $\pm 2^{O}$C. During the SAR evaluations, the RF ambient conditions are monitored continuously for signals that might interfere with the test results. The tissue simulating liquid is also stored in this area in order to keep it at the same constant ambient temperature as the room.

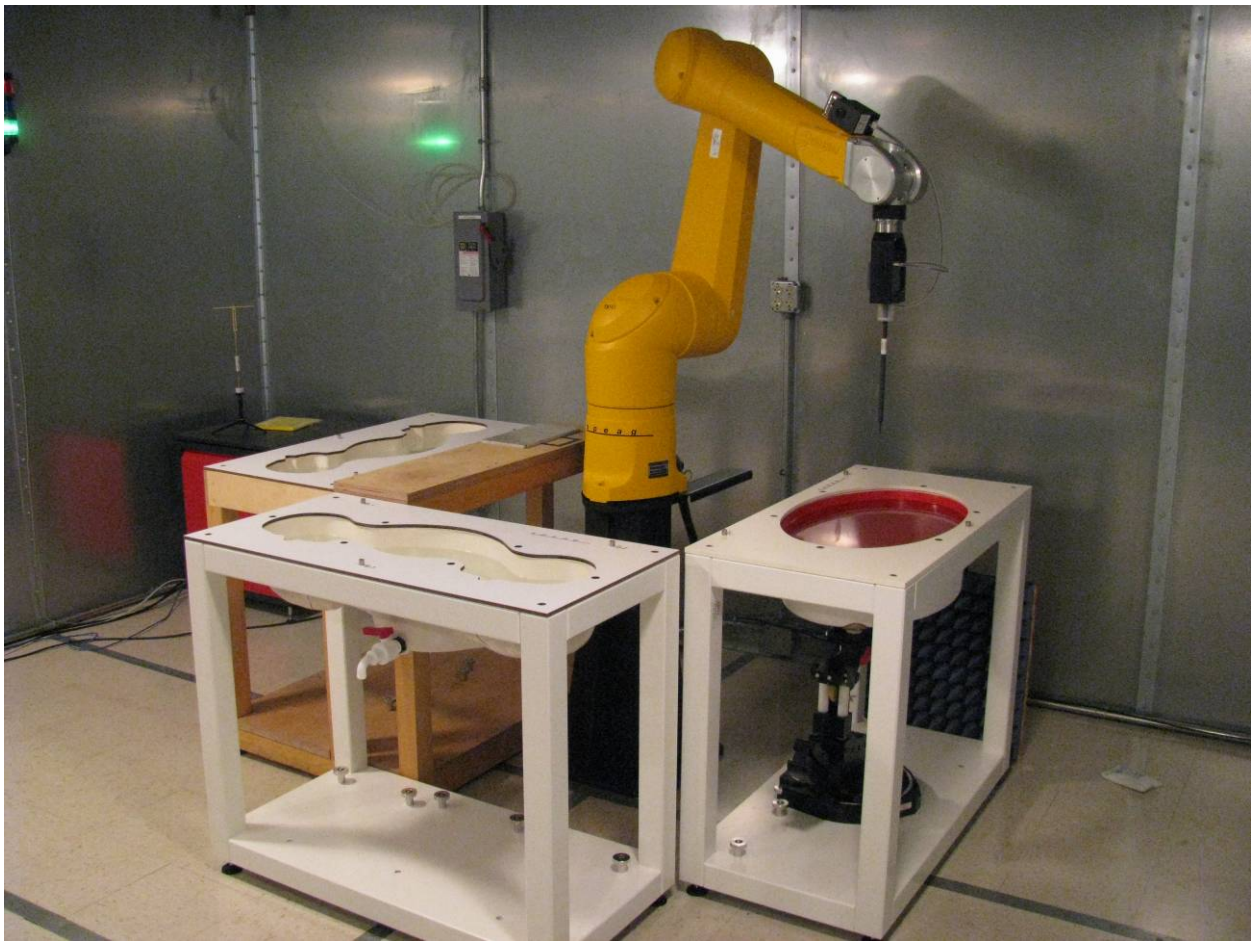

Figure 1: Intertek SAR Test Site

Measurement Equipment

The following major equipment/components were used for the SAR evaluation:

Description	Serial Number	Manufacture	Model	Cal. Date	Cal. Due	Eq. Used
SAR Probe	3516	Speag	EXDV3	12/10/12	12/10/13	☒
System Verification Dipole	1042	Speag	D750V3	9/20/12	9/20/13	☐
System Verification Dipole	4d122	Speag	D835V2	9/14/12	9/14/13	☒
System Verification Dipole	13	Speag	D900V2	12/7/12	12/7/13	☐
System Verification Dipole	224	Speag	D1800V2	12/5/12	12/5/13	☒
System Verification Dipole	718	Speag	D2450V2	12/4/12	12/4/13	☐
System Verification Dipole	1025	Speag	D5GHzV2	12/11/12	12/11/13	☐
DAE	358	Speag	DAE4	9/11/12	9/11/13	☒
Signal Generator	2065	HP	83620B	3/19/13	3/19/14	☒
Vector Signal Generator	257708	Rohde & Schwarz	SMBV100A	5/30/13	5/30/14	☐
Network Analyzer	US39173983	Agilent	8753ES	3/20/13	3/20/14	☒
Power Meter	1838538	Gigatronics	8542C	6/29/12	6/29/13	☒
Power Sensor	1830320	Gigatronics	80601A	6/29/12	6/29/13	☒
USB Power Sensor	100705	Rohde & Schwarz	NRP-Z51	9/1/12	9/1/13	☒
Spectrum Analyzer	3099	Rohde & Schwarz	FSP7	9/11/12	9/11/13	☒
Base Station Simulator	100401	Rohde & Schwarz	CMU200	8/12/12	8/12/13	☒
Base Station Simulator	1065295	Rohde & Schwarz	CMW500	6/14/12	6/14/13	☒
Dielectric Probe Kit	3080	Agilent	85070D	NCR	NCR	☒
Dielectric Probe Kit	1111	Speag	DAK-3.5	NCR	NCR	☐
Caliber	0048183	Mitutoyo	CD-12” CP	7/30/12	7/30/13	☒
Guage Block Set	1301517	Mitutoyo	516-960-26	TOU	TOU	☒
ELI5 Phantom	1144	Speag	QDOVA002AA	NCR	NCR	☒
Twin SAM Phantom	1663	Speag	QD000P40CD	NCR	NCR	☐
Twin SAM Phantom	1243	Speag	QD000P40CA	NCR	NCR	☐
6-axis robot	F11/5H1YA/A/01	Staubli	RX-90	NCR	NCR	☒

Table 2: Test Equipment Used for SAR Evaluation

Measurement Uncertainty

The Table below includes the uncertainty budget suggested by the IEEE Std 1528-2003 and determined by SPEAG for the DASY5 measurement System.

Error Description	Uncertainty Value	Prob. Dist.	Div.	c_i (1g)	c_i (10g)	Std.Unc. (1g)	Std.Unc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±5.5%	N	1	1	1	±5.5%	±5.5%	∞
Axial Isotropy	±4.7%	R	√3	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	√3	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effect	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	√3	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	√3	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.4%	R	√3	1	1	±0.2%	±0.2%	∞
Probe Positioning	±2.9%	R	√3	1	1	±1.7%	±1.7%	∞
Max. SAR Eval.	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Test sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	√3	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	√3	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (target)	±5.0%	R	√3	0.64	0.43	±1.8%	±1.2%	∞
Liquid Conductivity (meas.)	±2.5%	N	1	0.64	0.43	±1.6%	±1.1%	∞
Liquid Permittivity (target)	±5.0%	R	√3	0.6	0.49	±1.7%	±1.4%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.6	0.49	±1.5%	±1.2%	∞
Combined Standard Uncertainty						±10.7%	±10.5%	387
Expanded STD Uncertainty						**±21.4%**	**±21.0%**	

Notes.

1. Worst Case uncertainty budget for DASY5 assessed according to IEEE 1528-2003. The budget is valid for the frequency range 300 MHz – 3 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerably smaller.

Error Description	Uncertainty Value	Prob. Dist.	Div.	c_i (1g)	c_i (10g)	Std.Unc. (1g)	Std.Unc. (10g)	(v_i) v_{eff}
Measurement System								
Probe Calibration	±6.55%	N	1	1	1	±6.55%	±6.55%	∞
Axial Isotropy	±4.7%	R	√3	0.7	0.7	±1.9%	±1.9%	∞
Hemispherical Isotropy	±9.6%	R	√3	0.7	0.7	±3.9%	±3.9%	∞
Boundary Effect	±2.0%	R	√3	1	1	±1.2%	±1.2%	∞
Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%	∞
System Detection Limits	±1.0%	R	√3	1	1	±0.6%	±0.6%	∞
Readout Electronics	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	±0.8%	R	√3	1	1	±0.5%	±0.5%	∞
Integration Time	±2.6%	R	√3	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
RF Ambient Reflections	±3.0%	R	√3	1	1	±1.7%	±1.7%	∞
Probe Positioner	±0.8%	R	√3	1	1	±0.5%	±0.5%	∞
Probe Positioning	±9.9%	R	√3	1	1	±5.7%	±5.7%	∞
Max. SAR Eval.	±4.0%	R	√3	1	1	±2.3%	±2.3%	∞
Test sample Related								
Device Positioning	±2.9%	N	1	1	1	±2.9%	±2.9%	145
Device Holder	±3.6%	N	1	1	1	±3.6%	±3.6%	5
Power Drift	±5.0%	R	√3	1	1	±2.9%	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	±4.0%	R	√3	1	1	±2.3%	±2.3%	∞
Liquid Conductivity (target)	±5.0%	R	√3	0.64	0.43	±1.8%	±1.2%	∞
Liquid Conductivity (meas.)	±2.5%	N	1	0.64	0.43	±1.6%	±1.1%	∞
Liquid Permittivity (target)	±5.0%	R	√3	0.6	0.49	±1.7%	±1.4%	∞
Liquid Permittivity (meas.)	±2.5%	N	1	0.6	0.49	±1.5%	±1.2%	∞
Combined Standard Uncertainty						±12.8%	±12.8%	330
Expanded STD Uncertainty						**±25.6%**	**±25.2%**	

Notes.

Worst Case uncertainty budget for DASY5 assessed according to IEEE 1528-2003. The budget is valid for the frequency range 3 GHz – 6 GHz and represents a worst-case analysis. Probe calibration error reflects uncertainty of the EX3D probe. For specific tests and configurations, the uncertainty could be considerably smaller.

4.0 JOB DESCRIPTION

At the request of Xplore Technologies, the iX101T1 was evaluated to the requirements defined in OET Bulletin 65, Supplement C. Xplore Technologies has implemented the Xplore 4G module (FCCID Q2GMC7750) into their iX101T1 tablet PC (FCCID: Q2GWG7550).

Test sample	
Manufacturer	Xplore Technologies
Model Number	iX101T1
Serial Number	SYS00BO0010
Receive Date	5/31/2013
Device Received Condition	Good
Device Category	Portable
RF Exposure Category	General Population/Uncontrolled Environment
Antenna Type	Internal
Test sample Accessories	
Battery Pack	Li Polymer Battery 3.7V 9600mAh/35.52 Wh
Power Supply	Elementech International Co. Ltd. Model: AU12412030
Contact Information	
Contact Name	Dave Gosline
Phone Number	(888) 449-7567
Email Address	dgosline@xploretech.com

Table 3: Product Information

Operating Bands	Frequency Range (MHz)	Modulation	Duty Cycle
LTE Band 13	777-787	QPSK/16-QAM	1:1
CDMA Cell	824-849	CDMA	1:1
CDMA PCS	1850-1910	CDMA	1:1

Table 4: Operating Bands

Test Sample Pictures:

Photographs of the test sample and its accessories are shown in Figure 2 through Figure 3.

Figure 2: Front of Test Sample

Figure 3: Back of Test Sample

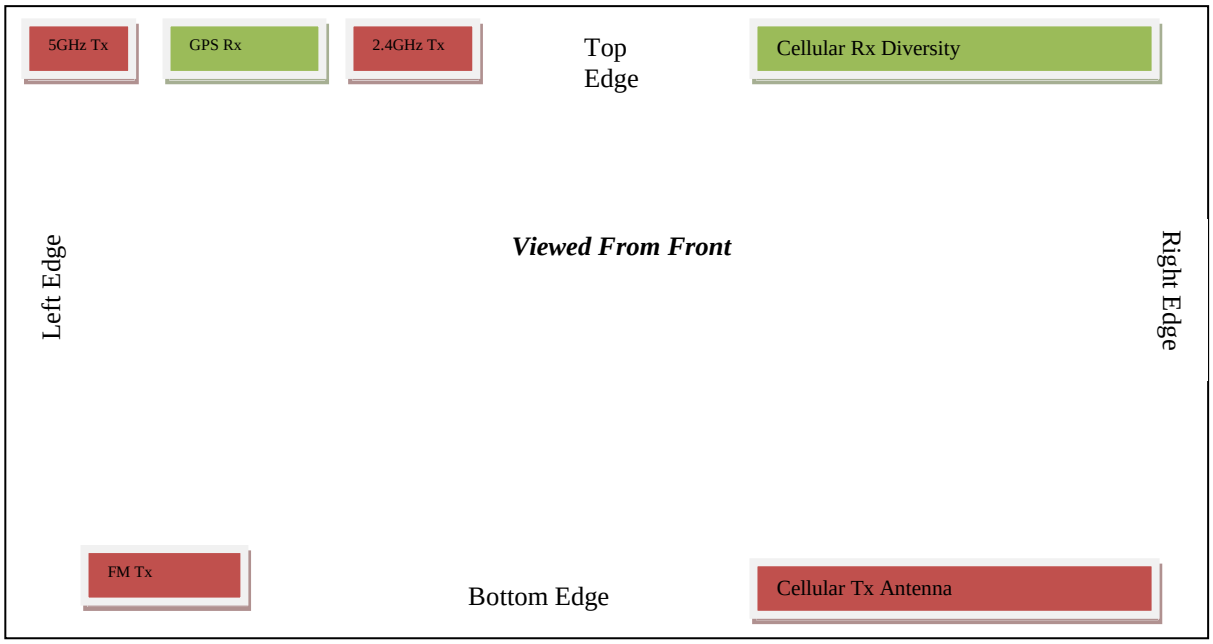

Figure 4: Antenna Locations (Viewed from Front of Tablet)

	Separation Distances (mm)			
	Cellular Tx Antenna	**2.4GHz Ant.**	**5GHz Ant.**	**FM Ant.**
Cellular Tx Ant.				
2.4GHz Ant.	169.2			
5GHz Ant.	209.5	52.1		
FM Ant.	121.4	156.9	152.12	
Top Edge	169.13	11.32	11.32	174.5
Left Edge	181.3	94.5	23.5	36.1
Right Edge	27.0	175.9	246.6	228.8
Bottom Edge	10.0	164.2	169.4	10.9

Table 5: Antenna Separation Distances

Surface/Location	Distance (mm)
Bottom Edge/WWAN	4.7
Back Surface	1.5
Side Edges	3.2

Table 6: Separation Distance Introduced by Edge Bumpers[1]

[1] The bumper spacing was measured with a production sample by placing the sample on a flat surface and measuring the distance with gauge blocks.

Proximity Sensor Details

Proximity sensors are used in the iX101T1 to ensure RF exposure when the cellular antenna is positioned close to the user's body. The device implements 2 proximity sensors to provide coverage areas on each edge and backside surrounding the transmitting cellular antenna. The design provides a single stage power-back off when the sensor is triggered. The amount of power reduction is static but is different for each transmit band as summarized in Table 7. Power reduction is not applied to the WLAN transmitters located in the tablet.

The proximity sensor triggering distances and angles were determined according to KDB 616217. The tablet had software that displayed the triggering state of power reduction. The sensors can also be disabled through special development software. This software is not available to the end user and is only used for development. The tablet was placed under the phantom and moved toward the phantom in the step sequence described in KDB 616217 until the proximity sensor triggering distance was determined. The sequence was repeated with the tablet placed against the phantom to determine the distance where the proximity sensor is no longer triggered. The most conservative distance determined minus 1mm was used as the test distance for the SAR scans. This process performed on the backside and the bottom edge surfaces. The process was performed for cell band and pcs band with the phantom filled with the respective fluid. The triggering distance for the right side edge surface nearest the antenna was not determined since the SAR scans were performed with the proximity sensors disabled at full power. See Figure 5 through Figure 8 for the triggering distance test results.

The influence of the tablet tilt angles to proximity sensor triggering investigated, as described in KDB 616217, by positioning the tablet edge that contains the transmitting antenna perpendicular to the flat phantom and rotating the edge ±45º from the vertical at 0º. During this process, the tablets proximity sensors remained triggered. The test was performed at the distance triggering distance performed above. See Figure 9 and Figure 10 for details. The sensors were verified to remain triggered for both Cellular and PCS bands.

The device used multiple proximity sensors that are spatially offset from the antenna so the sensor coverage area was determined. The procedure for determining the coverage area is described in KDB 616217. The measured coverage area for the tablet is shown in Figure 11 and Figure 12. The measured peak SAR values fall within the sensor coverage area.

Band	Target Power Reduction (dB)
LTE Band 13	1.5
CDMA Cell	4.5
CDMA PCS	6.5

Table 7: Target Power Reduction

Tablet Surface	Trigger Distance (mm)	
	Cell Band	PCS Band
Back Side	16	18
Bottom Edge	16	16
Side Edge (nearest WWAN Antenna)	Tested full power against phantom with 0mm spacing.	

Table 8: Proximity Sensor Trigger Distance Summary

Distance (mm)	Output Power (dBm)	
	Approaching	Retracting
0	20.59	20.59
1	20.59	20.59
2	20.59	20.59
3	20.59	20.59
4	20.59	20.59
5	20.59	20.59
6	20.59	20.59
7	20.59	20.59
8	20.59	20.59
9	20.59	20.59
10	20.59	20.59
11	20.59	20.59
12	20.59	20.59
13	20.59	20.59
14	20.59	20.59
15	20.59	20.59
16	20.59	20.59
17	24.85	20.59
18	24.85	20.59
19	24.85	20.59
20	24.85	20.59
21	24.85	20.59
22	24.85	20.59
23	24.85	20.59
24	24.85	20.59
25	24.85	20.59
26	24.85	20.59
27	24.85	20.59
28	24.85	20.59
29	24.85	20.59
30	24.85	20.59
31	24.85	20.59
32	24.85	24.85
33	24.85	24.85
34	24.85	24.85
35	24.85	24.85
36	24.85	24.85
37	24.85	24.85
38	24.85	24.85
39	24.85	24.85
40	24.85	24.85

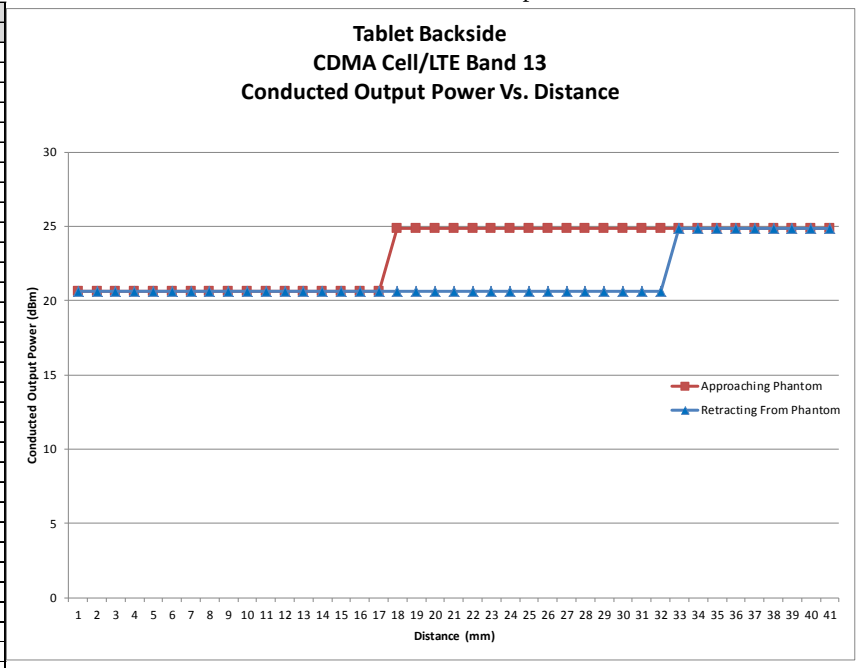

Figure 5: CDMA Cell Band: Output Power vs Trigger Distance – Tablet Backside

Distance (mm)	Output Power (dBm)	
	Approaching	Retracting
0	20.59	20.59
1	20.59	20.59
2	20.59	20.59
3	20.59	20.59
4	20.59	20.59
5	20.59	20.59
6	20.59	20.59
7	20.59	20.59
8	20.59	20.59
9	20.59	20.59
10	20.59	20.59
11	20.59	20.59
12	20.59	20.59
13	20.59	20.59
14	20.59	20.59
15	20.59	20.59
16	20.59	20.59
17	24.85	20.59
18	24.85	20.59
19	24.85	20.59
20	24.85	20.59
21	24.85	20.59
22	24.85	20.59
23	24.85	24.85
24	24.85	24.85
25	24.85	24.85
26	24.85	24.85
27	24.85	24.85
28	24.85	24.85
29	24.85	24.85
30	24.85	24.85
31	24.85	24.85
32	24.85	24.85
33	24.85	24.85
34	24.85	24.85
35	24.85	24.85
36	24.85	24.85
37	24.85	24.85
38	24.85	24.85
39	24.85	24.85
40	24.85	24.85

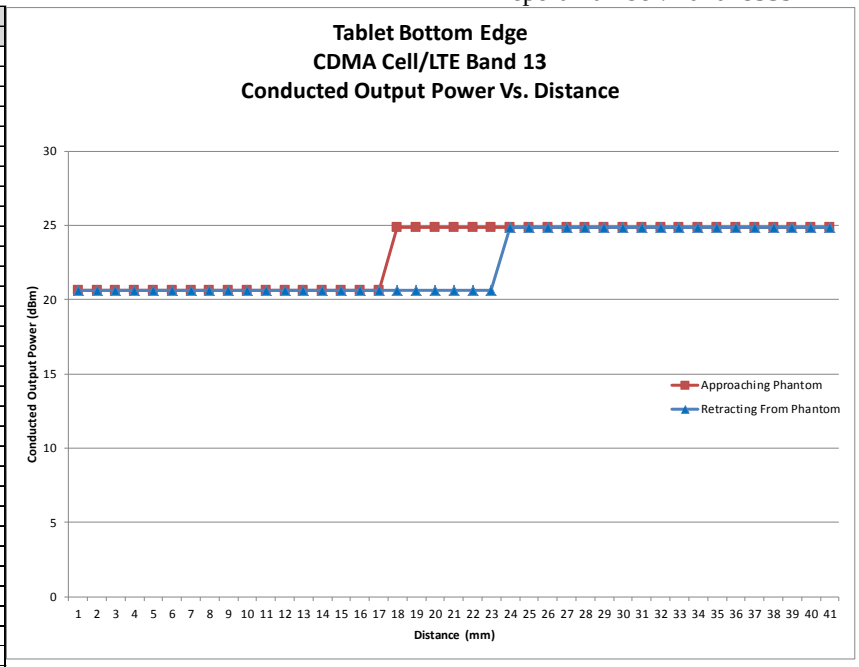

Figure 6: CDMA Cell Band: Output Power vs Trigger Distance – Tablet Bottom Edge

Distance (mm)	Output Power (dBm)	
	Approaching	Retracting
0	16.76	16.76
1	16.76	16.76
2	16.76	16.76
3	16.76	16.76
4	16.76	16.76
5	16.76	16.76
6	16.76	16.76
7	16.76	16.76
8	16.76	16.76
9	16.76	16.76
10	16.76	16.76
11	16.76	16.76
12	16.76	16.76
13	16.76	16.76
14	16.76	16.76
15	16.76	16.76
16	16.76	16.76
17	16.76	16.76
18	16.76	16.76
19	16.76	24.65
20	16.76	24.65
21	16.76	24.65
22	16.76	24.65
23	24.65	24.65
24	24.65	24.65
25	24.65	24.65
26	24.65	24.65
27	24.65	24.65
28	24.65	24.65
29	24.65	24.65
30	24.65	24.65
31	24.65	24.65
32	24.65	24.65
33	24.65	24.65
34	24.65	24.65
35	24.65	24.65
36	24.65	24.65
37	24.65	24.65
38	24.65	24.65
39	24.65	24.65
40	24.65	24.65

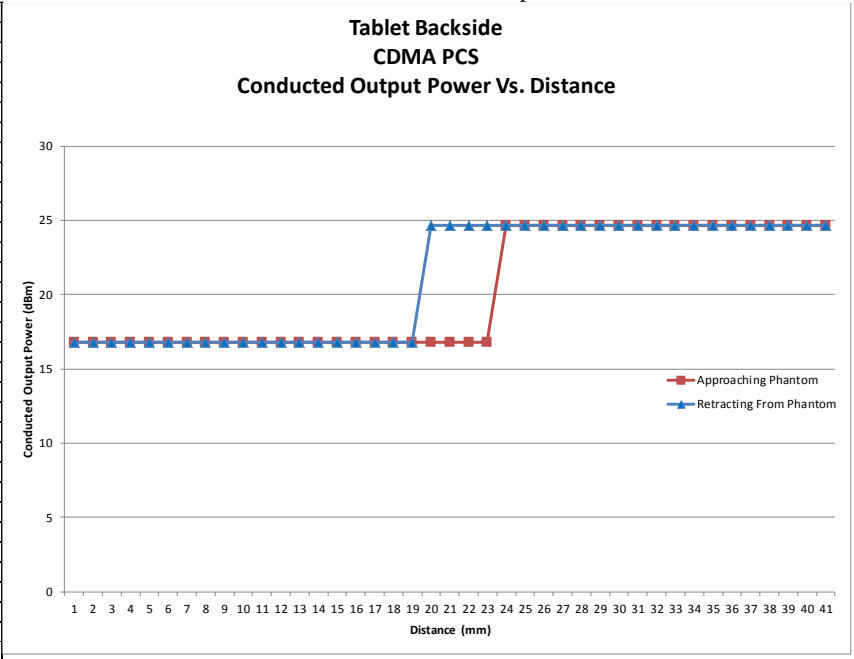

Figure 7: CDMA PCS Band: Output Power vs Trigger Distance – Tablet Backside

Distance (mm)	Output Power (dBm)	
	Approaching	Retracting
0	16.76	16.76
1	16.76	16.76
2	16.76	16.76
3	16.76	16.76
4	16.76	16.76
5	16.76	16.76
6	16.76	16.76
7	16.76	16.76
8	16.76	16.76
9	16.76	16.76
10	16.76	16.76
11	16.76	16.76
12	16.76	16.76
13	16.76	16.76
14	16.76	16.76
15	16.76	16.76
16	16.76	16.76
17	24.65	16.76
18	24.65	16.76
19	24.65	24.65
20	24.65	24.65
21	24.65	24.65
22	24.65	24.65
23	24.65	24.65
24	24.65	24.65
25	24.65	24.65
26	24.65	24.65
27	24.65	24.65
28	24.65	24.65
29	24.65	24.65
30	24.65	24.65
31	24.65	24.65
32	24.65	24.65
33	24.65	24.65
34	24.65	24.65
35	24.65	24.65
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37	24.65	24.65
38	24.65	24.65
39	24.65	24.65
40	24.65	24.65

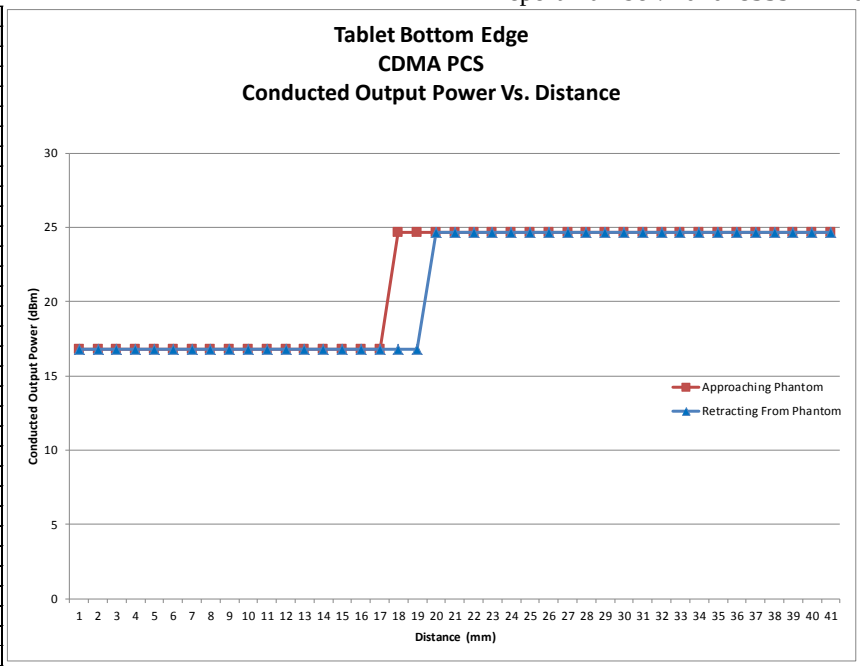


Figure 8: CDMA PCB Band: Output Power vs Trigger Distance – Tablet Bottom Edge

Angle from Phantom to EUT (deg)	Proximity Sensor Status
0	Triggered
5	Triggered
10	Triggered
15	Triggered
20	Triggered
25	Triggered
30	Triggered
35	Triggered
40	Triggered
45	Triggered
50	Triggered
55	Triggered
60	Triggered
65	Triggered
70	Triggered
75	Triggered
80	Triggered
85	Triggered
90	Triggered

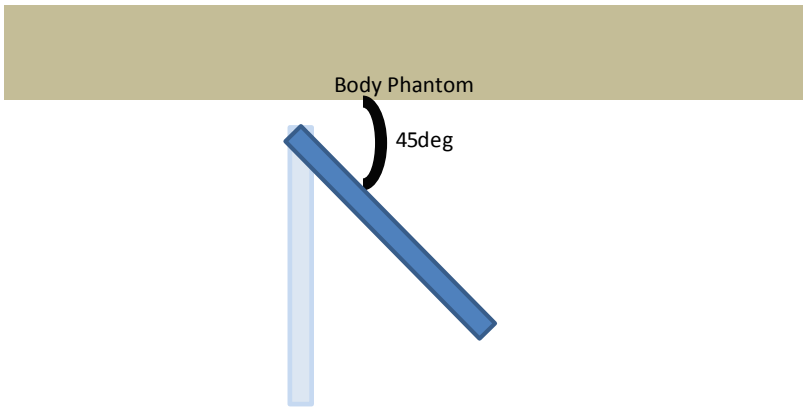


Figure 9: Tablet Tilt Angle Influence on Proximity Sensor Triggering – Tablet Backside

Angle from Phantom to EUT (deg)	Proximity Sensor Status
-45	Triggered
-40	Triggered
-35	Triggered
-30	Triggered
-25	Triggered
-20	Triggered
-15	Triggered
-10	Triggered
-5	Triggered
0	Triggered
5	Triggered
10	Triggered
15	Triggered
20	Triggered
25	Triggered
30	Triggered
35	Triggered
40	Triggered
45	Triggered

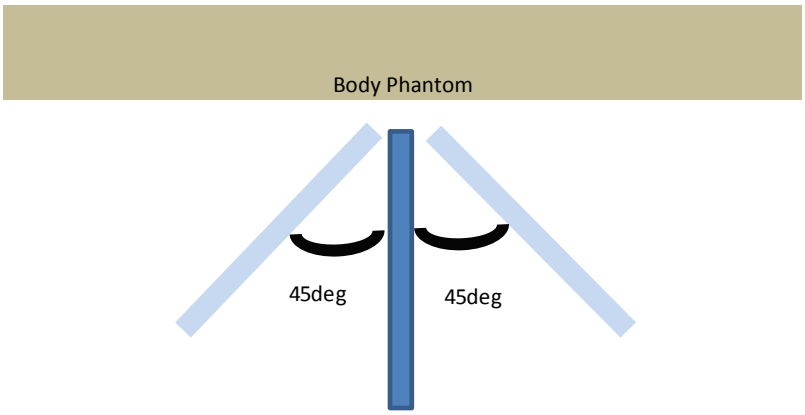


Figure 10: Tablet Tilt Angle Influence on Proximity Sensor Triggering – Tablet Bottom Edge

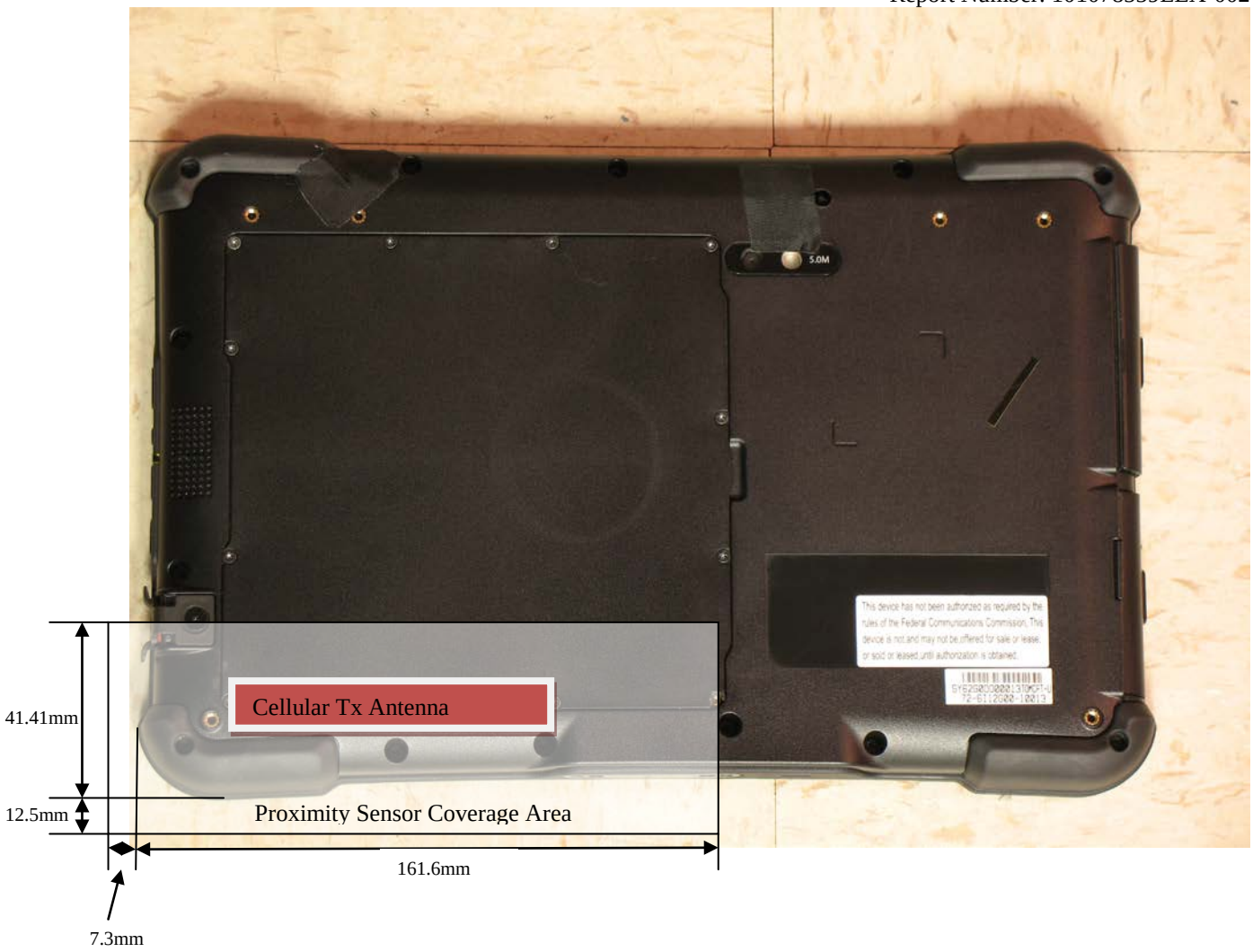


Figure 11: Proximity Sensor Coverage Area – Tablet Backside

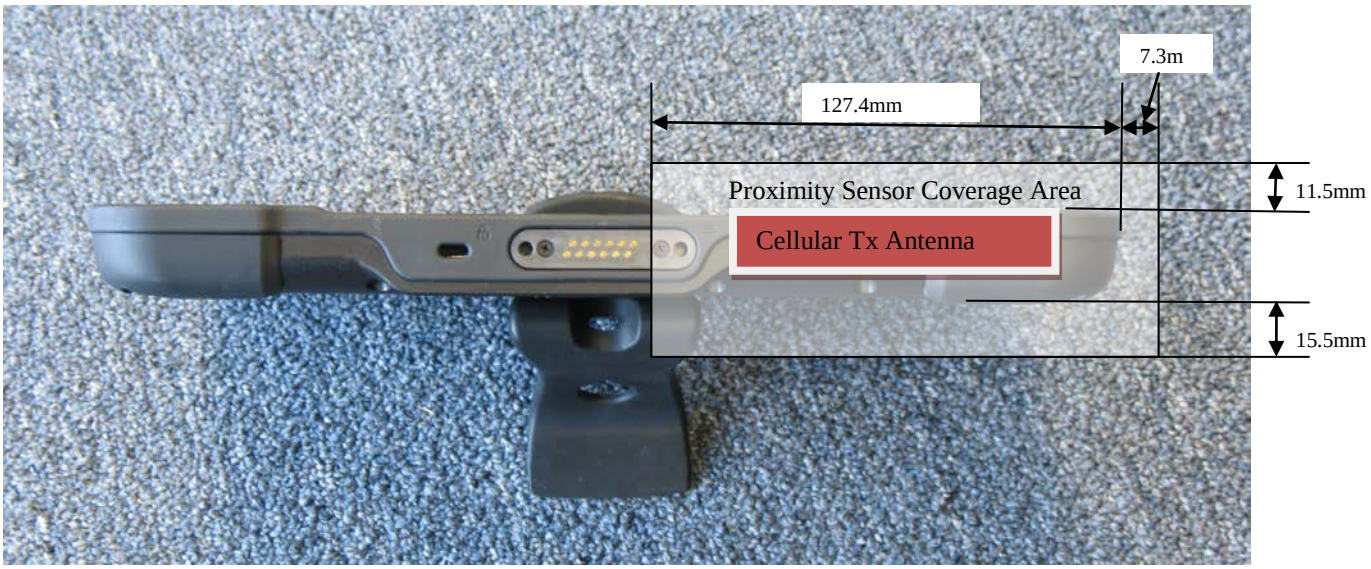


Figure 12: Proximity Sensor Coverage Area – Bottom Edge Backside

5.0 SYSTEM VERIFICATION

System Validation

Prior to the assessment, the system was verified to be within ±10% of the specifications by using the system validation kit. The system validation procedure tests the system against reference SAR values and the performance of probe, readout electronics and software. The test setup utilizes a phantom and reference dipole. The results from the system verifications with a dipole are shown in Figure 1

.

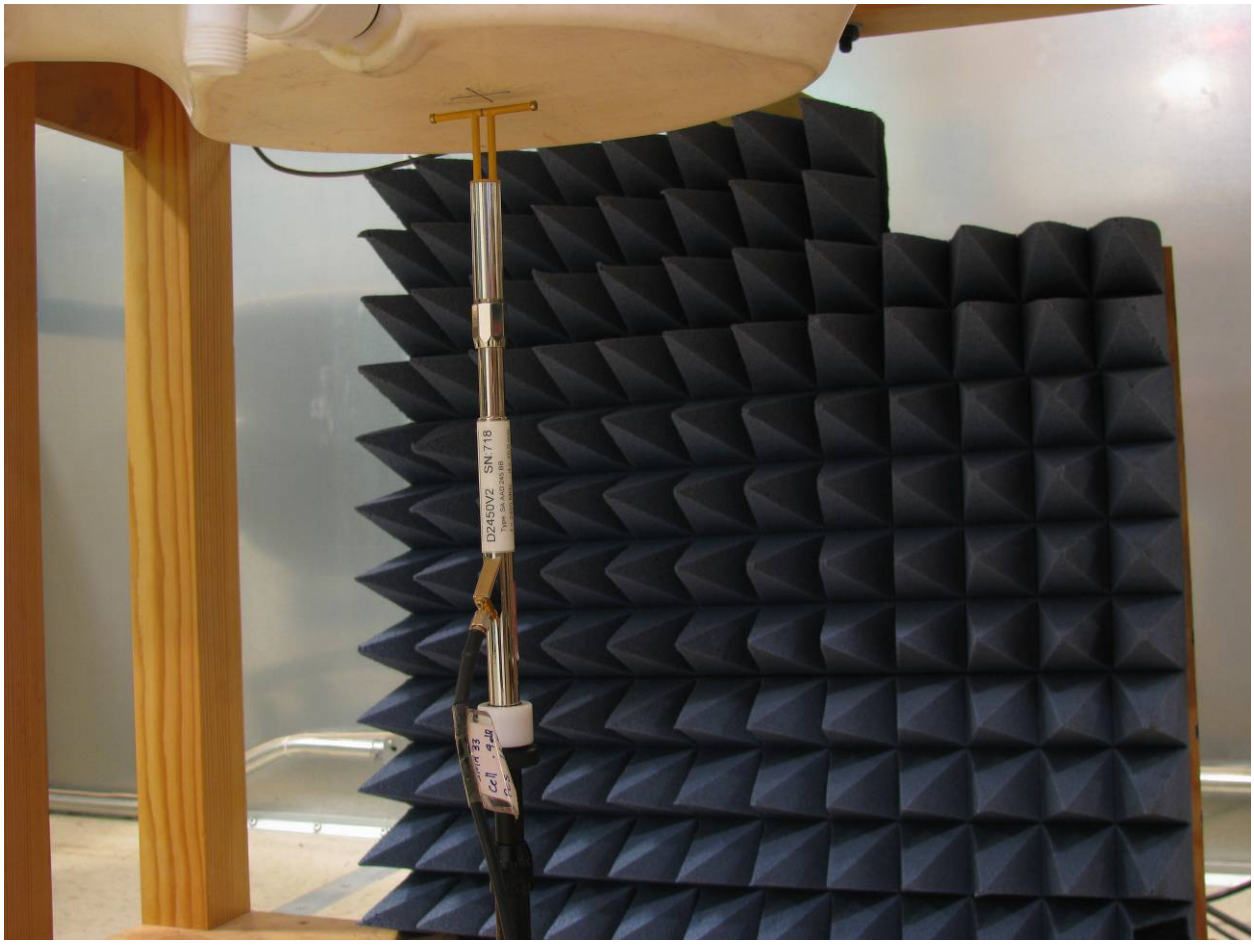


Figure 13: System Verification Setup

Reference Dipole Validation									
Ambient Temp (ºC)	Fluid Temp (ºC)	Frequency (MHz)	Dipole	Fluid Type	Dipole Power Input	Cal. Lab SAR (1g)	Measured SAR (1g)	% Error SAR (1g)	Date
22.7	22.2	1800	D1800V2	MSL1800	1W	38.3	35.7	6.79	6/1/13
22.8	22.9	835	D835V2	MSL900	1W	9.46	8.96	5.29	6/5/13
22.6	22.3	1800	D1800V2	MSL1800	1W	38.3	36.6	4.44	6/11/13

Table 9: Dipole Validation

Tissue Simulating Liquid Description and Validation

The dielectric parameters were verified to be within 5% of the target values prior to assessment. The dielectric parameters (ε_r, σ) are shown in Table 10. A recipe for the tissue simulating fluid used is shown in Table 11.

Measured Tissue Properties									
Tissue Type	Frequency Measure (MHz)	Dielectric Constant Target	Conductivity Target	Dielectric Constant Measure	Imaginary Part	Conductivity Measure	Dielectric % Deviation	Conductivity % Deviation	Date
	1800	53.3	1.52	51.04	14.86	1.49	4.24	2.17	6/1/13
	1850	53.3	1.52	50.87	14.89	1.5315	4.56	0.75	6/1/13
	1880	53.3	1.52	50.78	14.91	1.5584	4.73	2.53	6/1/13
1800 MSL	1910	53.3	1.52	50.74	14.95	1.5875	4.80	4.44	6/1/13

Measured Tissue Properties									
Tissue Type	Frequency Measure (MHz)	Dielectric Constant Target	Conductivity Target	Dielectric Constant Measure	Imaginary Part	Conductivity Measure	Dielectric % Deviation	Conductivity % Deviation	Date
	785	55.48	0.965	53.75	22.11	0.96	3.12	0.01	6/5/13
	824	55.2	0.969	53.36	21.88	1.0023	3.33	3.43	6/5/13
	835	55.154	0.97	53.31	21.83	1.0134	3.34	4.47	6/5/13
835 MSL	850	55.284	0.988	53.22	21.80	1.0303	3.73	4.28	6/5/13

Measured Tissue Properties									
Tissue Type	Frequency Measure (MHz)	Dielectric Constant Target	Conductivity Target	Dielectric Constant Measure	Imaginary Part	Conductivity Measure	Dielectric % Deviation	Conductivity % Deviation	Date
	1800	53.3	1.52	51.2	14.6	1.46	3.94	3.88	6/11/13
	1850	53.3	1.52	51.02	14.83	1.5253	4.28	0.35	6/11/13
	1880	53.3	1.52	50.98	14.88	1.5553	4.35	2.32	6/11/13
1800 MSL	1910	53.3	1.52	51.05	14.91	1.5833	4.22	4.16	6/11/13

Table 10: Dielectric Parameter Validation

Table 11: Tissue Simulating Fluid Recipe

TYPICAL COMPOSITION OF INGREDIENTS FOR LIQUID TISSUE PHANTOMS, Supplement C Edition 01-01 to OET Bulletin 65 Edition 97-01, Page 36. (450MHz to 2450 MHz data only)												
Ingredient (% by weight)	f (MHz)											
	450		835		915		1900		2450		5500	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	38.56	51.16	41.45	52.4	41.05	56	54.9	70.45	62.7	68.64	65.53	78.67
Salt (NaCl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.36	0.5	0	0	0
Sugar	56.32	46.78	56	45	56.5	41.76	0	0	0	0	0	0
HEC	0.98	0.52	1	1	1	1.21	0	0	0	0	0	0
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0	0	0	0	0	0
Triton X-100	0	0	0	0	0	0	0	0	36.8	0	17.235	10.665
DGBE	0	0	0	0	0	0	44.92	29.18	0	31.37	0	0
DGHE	0	0	0	0	0	0	0	0	0	0	17.235	10.665
Dielectric Constant	43.42	58	42.54	56.1	42	56.8	39.9	53.3	39.8	52.7		
Conductivity (S/m)	0.85	0.83	0.91	0.95	1	1.07	1.42	1.52	1.88	1.95		

Tissue Simulating Liquid for 5GHz, MBBL3500-5800V5 Manufactured by SPEAG (proprietary mixture)

Ingredients	**(% by weight)**
Water	78
Mineral oil	11
Emulsifiers	9
Additives and Salt	2

6.0 EVALUATION PROCEDURES

Prior to any testing, the appropriate fluid was used to fill the phantom to a depth of 15 cm ±0.2cm. The fluid parameters were verified and the dipole validation was performed as described in the previous sections.

Test Positions:

The Device was positioned against the SAM and flat phantom using the exact procedure described in Supplement C Edition 01 – 01 of Federal Communications Commission, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", OET Bulletin 65, FCC, Washington, D.C. 20554, 1997 and KDB 447498.

Reference Power Measurement:

The measurement probe was positioned at a fixed location above the reference point. A power measurement was made with the probe above this reference position so it could used for the assessing the power drift later in the test procedure.

Area Scan:

A coarse area scan was performed in order to find the approximate location of the peak SAR value. This scan was performed with the measurement probe at a constant height in the simulating fluid. A two dimensional spline interpolation algorithm was then used to determine the peaks and gradients within the scanned area. The area scan resolution conformed to the requirements of KDB 865664 as shown in Table 12.

Zoom Scan:

A zoom scan was performed around the approximate location of the peak SAR as determined from the area scan. On the basis of this data set, the spatial peak SAR value was evaluated with the following procedure. The zoom scan resolution conformed to the requirements of KDB 865664 as shown in Table 12.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

* When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

Table 12: SAR Area and Zoom Scan Resolutions

Interpolation, Extrapolation and Detection of Maxima:

The probe is calibrated at the center of the dipole sensors which is located 1 to 2.7 mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated.

In DASY5, the choice of the coordinate system defining the location of the measurement points has no influence on the uncertainty of the interpolation, Maxima Search and extrapolation routines. The interpolation, extrapolation and maximum search routines are all based on the modified Quadratic Shepard's method.

Thereby, the interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation. The DASY5 routines construct a once-continuously differentiable function that interpolates the measurement values as follows:

- For each measurement point a trivariate (3-D) / bivariate (2-D) quadratic is computed. It interpolates the measurement values at the data point and forms a least-square fit to neighboring measurement values.
- The spatial location of the quadratic with respect to the measurement values is attenuated by an inverse distance weighting. This is performed since the calculated quadratic will fit measurement values at nearby points more accurate than at points located further away.
- After the quadratics are calculated for at all measurement points, the interpolating function is calculated as a weighted average of the quadratics.

There are two control parameters that govern the behavior of the interpolation method. One specifies the number of measurement points to be used in computing the least-square fits for the local quadratics. These measurement points are the ones nearest the input point for which the quadratic is being computed. The second parameter specifies the number of measurement points that will be used in calculating the weights for the quadratics to produce the final function. The input data points used there are the ones nearest the point at which the interpolation is desired. Appropriate defaults are chosen for each of the control parameters.

The trivariate quadratics that have been previously computed for the 3-D interpolation and whose input data are at the closest distance from the phantom surface, are used in order to extrapolate the fields to the surface of the phantom.

In order to determine all the field maxima in 2-D (Area Scan) and 3-D (Zoom Scan), the measurement grid is refined by a default factor of 10 and the interpolation function is used to evaluate all field values between corresponding measurement points. Subsequently, a linear search is applied to find all the candidate maxima. In a last step, non-physical maxima are removed and only those maxima which are within 2 dB of the global maximum value are retained.

Averaging and Determination of Spatial Peak SAR

The interpolated data is used to average the SAR over the 1g and 10g cubes by spatially discretizing the entire measured volume. The resolution of this spatial grid used to calculate the averaged SAR is 1mm or about 42875 interpolated points. The resulting volumes are defined as cubical volumes containing the appropriate tissue parameters that are centered at the location. The location is defined as the center of the incremental volume.

The spatial-peak SAR must be evaluated in cubical volumes containing a mass that is within 5% of the required mass. The cubical volume centered at each location, as defined above, should be expanded in all directions until the desired value for the mass is reached, with no surface boundaries of the averaging volume extending beyond the outermost surface of the considered region. In addition, the cubical volume should not consist of more than 10% of air. If these conditions are not satisfied then the center of the averaging volume is moved to the next location. Otherwise, the exact size of the final sampling cube is found using an inverse polynomial approximation algorithm, leading to results with improved accuracy. If one boundary of the averaging volume reaches the boundary of the measured volume during its expansion, it will not be evaluated at all. Reference is kept of all locations used and those not used for averaging the SAR. All average SAR values are finally assigned to the centered location in each valid averaging volume.

All locations included in an averaging volume are marked to indicate that they have been used at least once. If a location has been marked as used, but has never been assigned to the center of a cube, the highest averaged SAR value of all other cubical volumes which have used this location for averaging is assigned to this location. Only those locations that are not part of any valid averaging volume should be marked as unused. For the case of an unused location, a new averaging volume must be constructed which will have the unused location centered at one surface of the cube. The remaining five surfaces are expanded evenly in all directions until the required mass is enclosed, regardless of the amount of included air. Of the six possible cubes with one surface centered on the unused location, the smallest cube is used, which still contains the required mass.

If the final cube containing the highest averaged SAR touches the surface of the measured volume, an appropriate warning is issued within the postprocessing engine.

Power Drift Measurement:

The probe was positioned at precisely the same reference point and the reference power measurement was repeated. The difference between the initial reference power and the final one is referred to as the power drift. The power drift measurement was used to assess the output power stability of the test sample throughout the SAR scan.

RF Ambient Activity:

During the entire SAR evaluation, the RF ambient activity was monitored using a spectrum analyzer with an antenna connected to it. The spectrum analyzer was tuned to the frequency of measurement and with one trace set to max hold mode. In this way, it was possible to determine if at any point during the SAR measurement there was an interfering ambient signal. If an ambient signal was detected, then the SAR measurement was repeated.

7.0 TEST CONFIGURATION

For the purpose of this evaluation, the iX101T1 was considered to be a device that could be operated when held against the body. All SAR scans were performed with a freshly charged battery installed.

The test channels and operating modes were selected using a basestation simulator. The device was positioned against the bottom of the phantom with zero clearance during the evaluation. The test positions were performed as described in KDB 616217. The test positions for device tested with the proximity sensor active are shown in Figure 14, Figure 16 and Figure 18. The device was also tested with the proximity sensors disabled at full output power with at the proximity sensor triggering distance determined previously (minus 1mm). This test setup is shown in Figure 15 and Figure 17.

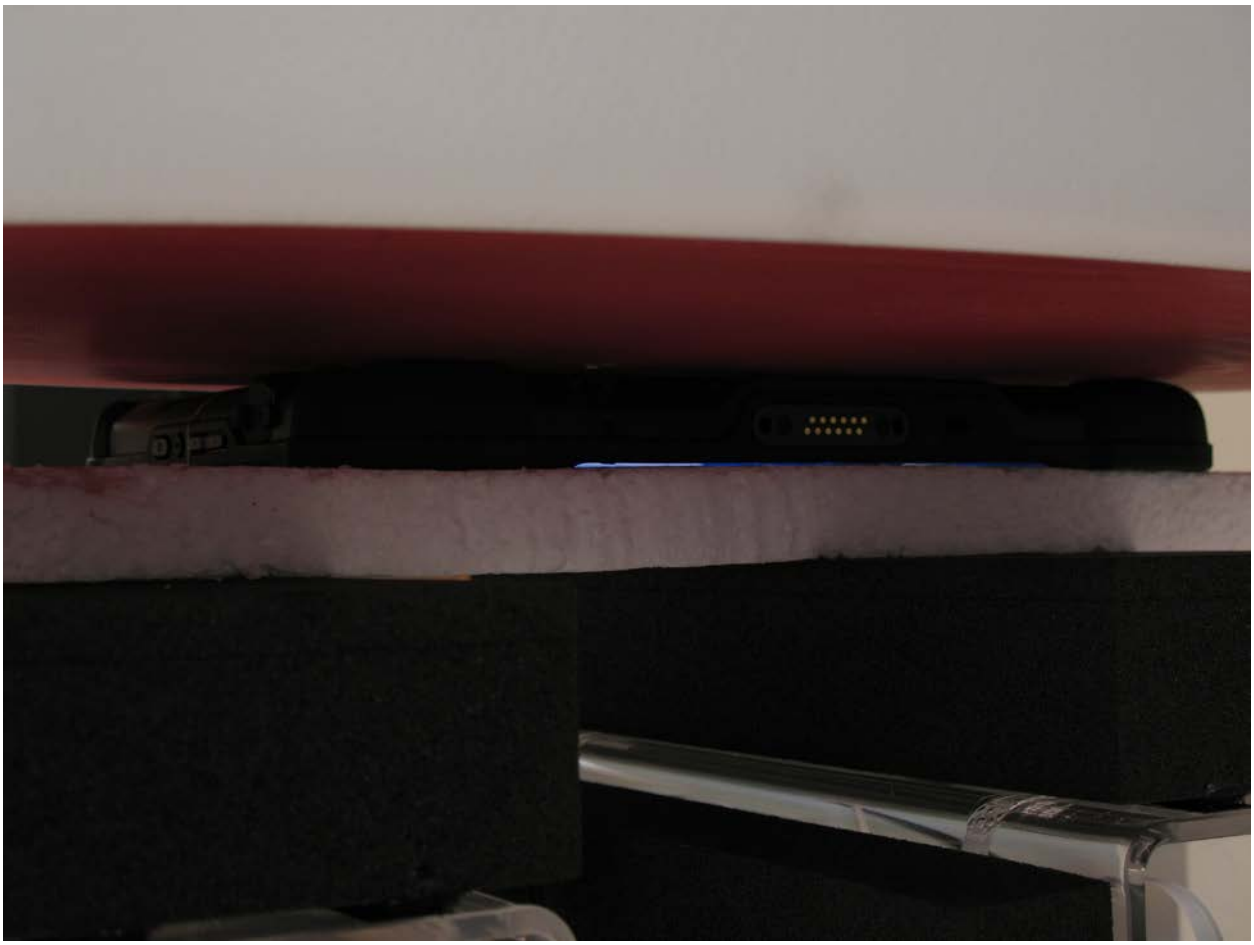


Figure 14: Device Positioning for SAR Scans – Lap Position – Back Against Phantom with No Spacing

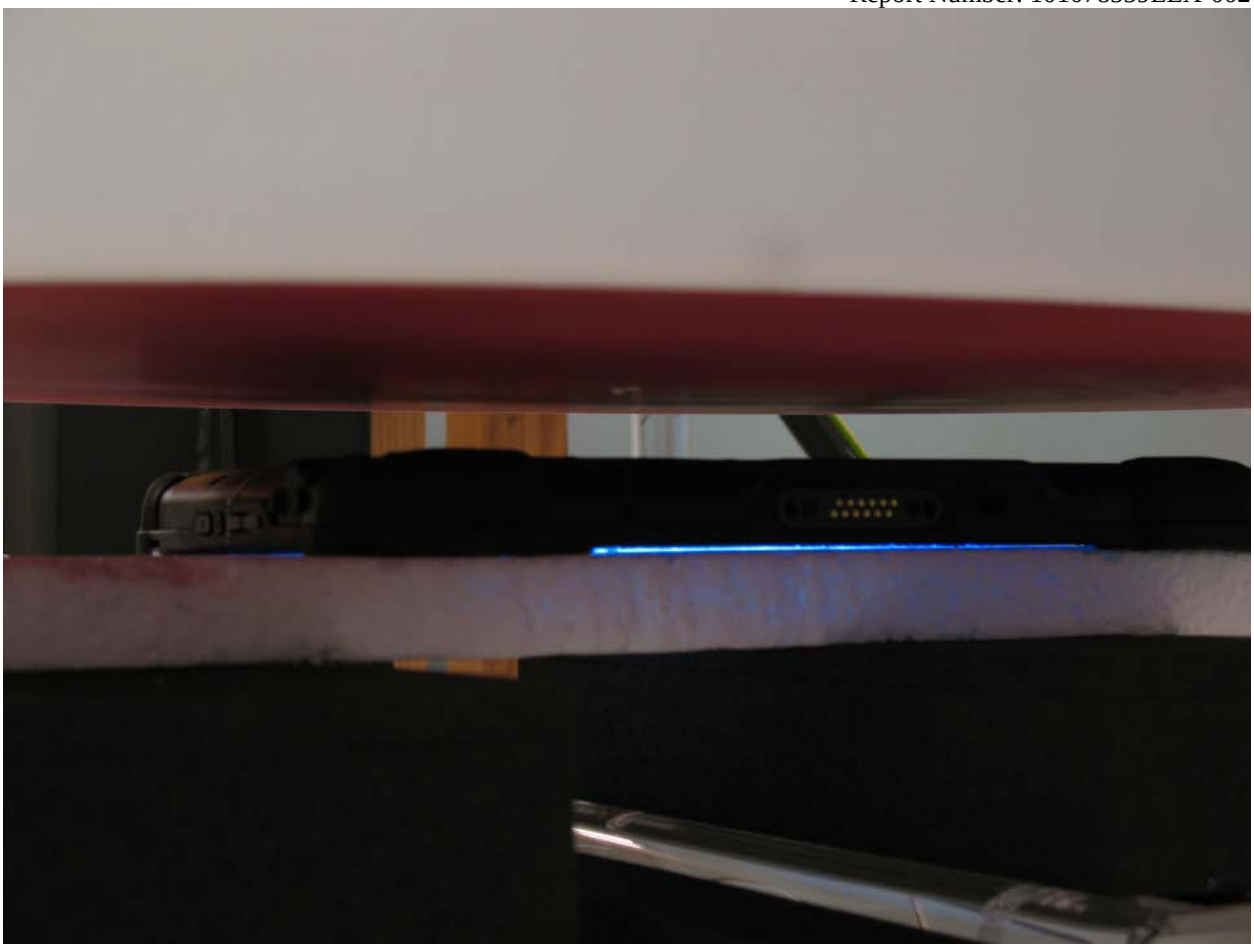


Figure 15: Device Positioning for SAR Scans – Lap Position – Back Against Phantom with 15mm Spacing

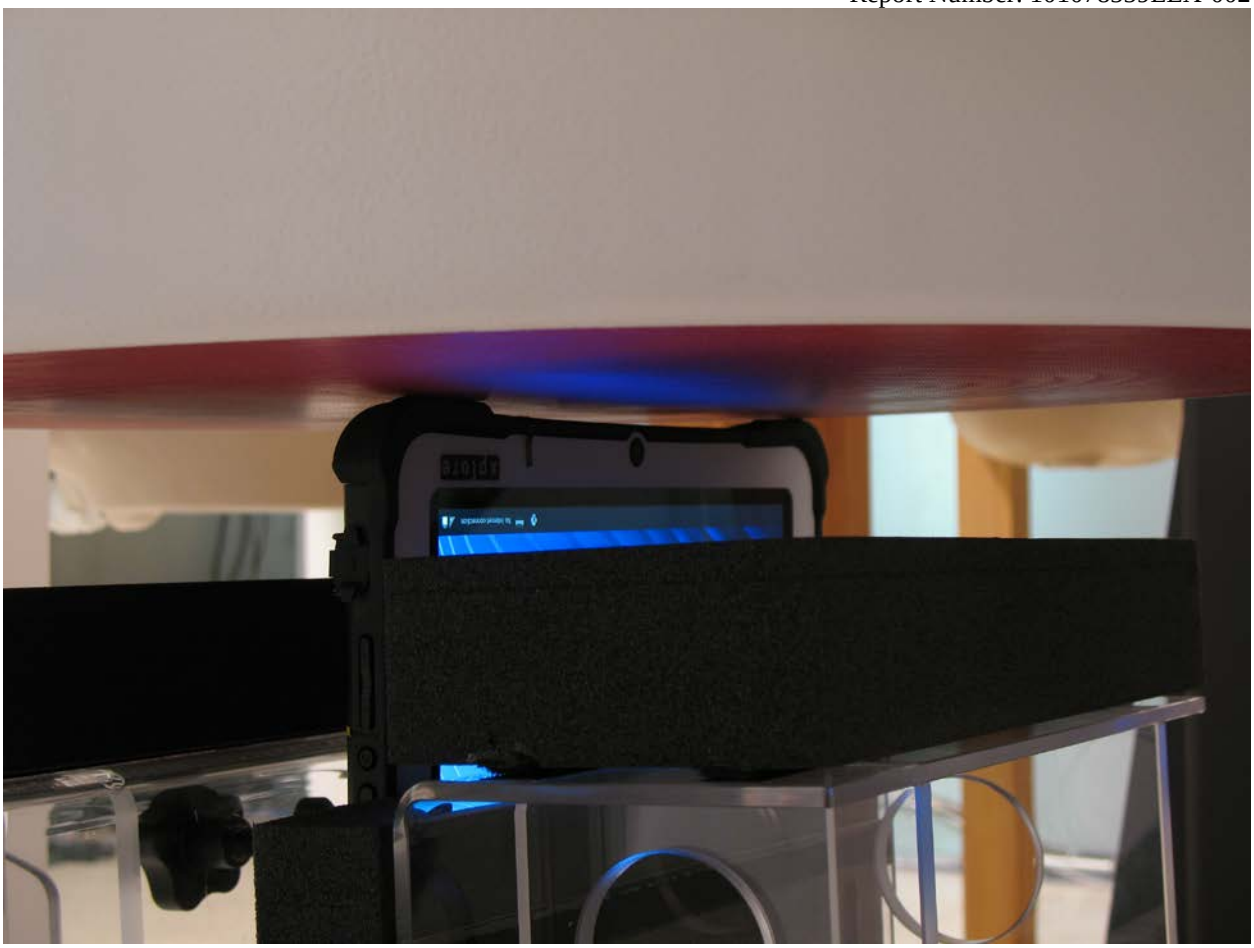


Figure 16: Device Positioning for SAR Scans – Lap Position – Back Against Phantom with no Spacing

Figure 17: Device Positioning for SAR Scans – Lap Position – Back Against Phantom with 15mm Spacing

Figure 18: Device Positioning for SAR Scans – Side Edge Nearest WWAN Antennas with no Spacing

8.0 CRITERIA

The following FCC limits for SAR apply to portable devices operating in the General Population/Uncontrolled Exposure environment:

Exposure **(General Population/Uncontrolled Exposure environment)**	**SAR** **(W/kg)**
Average over the whole body	0.08
Spatial Peak (1g)	1.60
Spatial Peak for hands, wrists, feet and ankles (10g)	4.00

9.0 TABULAR TEST RESULTS

The results on the following page(s) were obtained when the device was transmitting at maximum output power. Detailed measurement data and plots, which reveal information about the location of the maximum SAR with respect to the device, are referenced under APPENDIX A – SAR Plots**.**

Conducted Power Measurements

The conducted power measurements for the cellular module in the iX101T1 were performed in accordance with KDB 941225. A basestation simulator was used to place cellular module into a call and transmit at maximum power in the modes shown below. The values shown below have been corrected to account for cable loss. In LTE mode, A-MPR was disabled for conducted measurements as well as SAR measurements.

Band	Channel	Frequency (MHz)	RC1/SO55	RC3/SO55	RC3/SO32 (+F-SCH)	RC3/SO32 (+SCH)	1xEvDO Rev. 0 (RTAP)	1xEvDO Rev. A (RETAP)
	1013	824.7	24.53	24.59	24.56	24.48	24.13	23.87
	384	836.52	24.8	24.85	24.61	24.55	23.98	23.83
Cellular	777	848.31	24.4	24.41	24.3	24.28	24.07	23.93
	25	1851.25	24.62	24.65	24.53	24.55	24.18	24.02
	600	1880	24.29	24.05	24.01	24.12	24.03	23.8
PCS	1175	1908.75	24.51	24.35	24.39	24.17	24.26	24.11

Table 13: CDMA Conducted Output Power - Proximity Sensor Disabled

Band	Channel	Frequency (MHz)	RC1/SO55	RC3/SO55	RC3/SO32 (+F-SCH)	RC3/SO32 (+SCH)	1xEvDO Rev. 0 (RTAP)	1xEvDO Rev. A (RETAP)
	1013	824.7	20.59	20.55	20.52	20.45	20.02	19.79
	384	836.52	20.58	20.59	20.48	20.43	19.83	19.71
Cellular	777	848.31	20.44	20.4	20.27	20.24	20.04	19.95
	25	1851.25	16.75	16.76	16.65	16.28	16.28	16.11
	600	1880	16.8	16.84	16.73	16.37	16.68	16.38
PCS	1175	1908.75	16.77	16.8	16.71	16.27	16.44	16.46

Table 14: CDMA Conducted Output Power - Proximity Sensor Enabled

Frequency	BW	Modulation	RB Size	RB Offset	Max. Avg. Power (dBm)	Target MPR (dB)	MPR Allowed by 3GPP (dB)
782 MHz	10 MHz	QPSK	1	0	23.75	0	0
		16QAM	1	0	22.03	1	0-1
		QPSK	1	49	23.75	0	0
		16QAM	1	49	22.27	1	0-1
		QPSK	25	12	21.95	0	0-1
		16QAM	25	12	20.76	1	0-2
		QPSK	50	0	21.77	0	0-1
		16QAM	50	0	20.78	1	0-2

Table 15: CDMA Conducted Output Power - Proximity Sensor Disabled

Frequency	BW	Modulation	RB Size	RB Offset	Max. Avg. Power (dBm)	Target MPR (dB)	MPR Allowed by 3GPP (dB)
782 MHz	10 MHz	QPSK	1	0	21.52	0	0
		16QAM	1	0	21.62	1	0-1
		QPSK	1	49	21.49	0	0
		16QAM	1	49	21.51	1	0-1
		QPSK	25	12	21.25	0	0-1
		16QAM	25	12	20.72	1	0-2
		QPSK	50	0	21.27	0	0-1
		16QAM	50	0	20.71	1	0-2

Table 16: CDMA Conducted Output Power - Proximity Sensor Enabled

Body Mode SAR Test Results

The device was evaluated according to the specific requirements found in FCC KDB 447498[9] and 616217[8]. The WWAN module was configured in accordance to FCC KDB 941225. The worst case 1-g SAR value was less than the 1.6mW/g limit.

Exclusions:

- The CDMA mode selected for testing was 1xRTT (RC3/SO32) since it produced the highest output power. Other modes were not evaluated since they were < 0.25dB higher than the results measured in 1XRTT mode.
- Testing was performed with the proximity sensors active at reduced power with 0mm of separation to the phantom. Testing was repeated with the proximity sensor disabled (using special development firmware) at the proximity sensor triggering distances shown in section 4.0. To compensate for manufacture variance 1mm was subtracted from this distance to provide a more conservative test distance.
- Testing on the right side (edge nearest WWAN antenna) was performed at full power with the proximity sensors disabled and placed against the phantom with 0mm of separation.
- The measured SAR values were scaled based on the tune-up tolerance for the module. The scaled SAR values are shown in the table below as “Reported SAR”.

SAR Measurement Results at the Body - WWAN Module - Tablet Back Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
Cell	Low	824.70	CDMA	Standard	0	0.01	0.72	0.71	20.52	20.50	
Cell	Mid	836.52	CDMA	Standard	0	-0.05	0.80	0.81	20.48	20.50	
Cell	High	848.31	CDMA	Standard	0	0.00	0.82	0.86	20.27	20.50	
Cell	Mid	836.52	CDMA	Standard	0	-0.16	0.83	0.83	20.48	20.50	Repeatability. Plot A1
PCS	Low	1851.25	CDMA	Standard	0			0.00	16.65	18.50	
PCS	Mid	1880.00	CDMA	Standard	0	-0.04	0.310	0.47	16.73	18.50	Plot A2
PCS	High	1909.92	CDMA	Standard	0			0.00	16.71	18.50	

SAR Measurement Results at the Body - WWAN Module - Tablet Bottom Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
Cell	Low	824.70	CDMA	Standard	0	0.02	0.57	0.56	20.52	20.50	
Cell	Mid	836.52	CDMA	Standard	0	-0.14	0.67	0.68	20.48	20.50	
Cell	High	848.31	CDMA	Standard	0	-0.10	0.72	0.75	20.27	20.50	Plot A3
PCS	Low	1851.25	CDMA	Standard	0	0.05	0.569	0.87	16.65	18.50	
PCS	Mid	1880.00	CDMA	Standard	0	-0.19	0.610	0.92	16.73	18.50	
PCS	High	1909.92	CDMA	Standard	0	-0.09	0.737	1.11	16.71	18.50	Plot A4
PCS	High	1909.92	CDMA	Standard	0	-0.06	0.728	1.10	16.71	18.50	Repeatability

SAR Measurement Results at the Body - WWAN Module - Tablet Side Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
Cell	Low	824.70	CDMA	Standard	0			0.00	20.52	20.50	
Cell	Mid	836.52	CDMA	Standard	0	-0.22	0.05	0.05	20.48	20.50	Plot A5
Cell	High	848.31	CDMA	Standard	0			0.00	20.27	20.50	
PCS	Low	1851.25	CDMA	Standard	0			0.00	16.65	18.50	
PCS	Mid	1880.00	CDMA	Standard	0	-0.39	0.094	0.14	16.73	18.50	Plot A6
PCS	High	1909.92	CDMA	Standard	0			0.00	16.71	18.50	

SAR Measurement Results at the Body - WWAN Module - Tablet Back Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
LTE Band 13	23230	782.00	QPSK/1RB High	Standard	0	-0.08	0.63	0.79	21.52	22.50	
LTE Band 13	23230	782.00	QPSK/1RB Low	Standard	0	0.05	0.54	0.69	21.49	22.50	
LTE Band 13	23230	782.00	QPSK/25RB Mid	Standard	0	0.04	0.61	0.82	21.25	22.50	Plot A7

SAR Measurement Results at the Body - WWAN Module - Tablet Bottom Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
LTE Band 13	23230	782.00	QPSK/1RB High	Standard	0	0.10	0.45	0.56	21.52	22.50	Plot A8
LTE Band 13	23230	782.00	QPSK/1RB Low	Standard	0	-0.06	0.34	0.43	21.49	22.50	
LTE Band 13	23230	782.00	QPSK/25RB Mid	Standard	0	-0.06	0.39	0.52	21.25	22.50	

SAR Measurement Results at the Body - WWAN Module - Tablet Side Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
LTE Band 13	23230	782.00	QPSK/1RB High	Standard	0	0.02	0.05	0.07	21.52	22.50	Plot A9
LTE Band 13	23230	782.00	QPSK/1RB Low	Standard	0	0.10	0.04	0.05	21.49	22.50	
LTE Band 13	23230	782.00	QPSK/25RB Mid	Standard	0	-0.10	0.05	0.06	21.25	22.50	

Table 17: Body Mode SAR Results – Proximity Sensor Enabled

SAR Measurement Results at the Body - WWAN Module - Tablet Back Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
Cell	Low	824.70	CDMA	Standard	-			0.00	24.56	25.00	
Cell	Mid	836.52	CDMA	Standard	15	0.07	0.40	0.43	24.61	25.00	Plot A10
Cell	High	848.31	CDMA	Standard	-			0.00	24.30	25.00	
PCS	Low	1851.25	CDMA	Standard	-			0.00	24.53	25.00	
PCS	Mid	1880.00	CDMA	Standard	17	0.01	0.221	0.28	24.01	25.00	Plot A11
PCS	High	1909.92	CDMA	Standard	-			0.00	24.39	25.00	

SAR Measurement Results at the Body - WWAN Module - Tablet Bottom Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
Cell	Low	824.70	CDMA	Standard	15			0.00	24.56	25.00	
Cell	Mid	836.52	CDMA	Standard	15	-0.15	0.45	0.50	24.61	25.00	Plot A12
Cell	High	848.31	CDMA	Standard	15			0.00	24.30	25.00	
PCS	Low	1851.25	CDMA	Standard	15	-0.06	0.742	0.83	24.53	25.00	
PCS	Mid	1880.00	CDMA	Standard	15	0.00	1.010	1.27	24.01	25.00	
PCS	High	1909.92	CDMA	Standard	15	-0.02	1.130	**1.30**	24.39	25.00	Plot A13
PCS	High	1909.92	CDMA	Standard	15	-0.03	1.080	1.24	24.39	25.00	Repeatability

SAR Measurement Results at the Body - WWAN Module - Tablet Side Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
Cell	Low	824.70	CDMA	Standard	0			0.00	24.56	25.00	
Cell	Mid	836.52	CDMA	Standard	0	0.03	0.12	0.13	24.61	25.00	Plot A14
Cell	High	848.31	CDMA	Standard	0			0.00	24.30	25.00	
PCS	Low	1851.25	CDMA	Standard	0			0.00	24.53	25.00	
PCS	Mid	1880.00	CDMA	Standard	0	0.11	0.489	0.61	24.01	25.00	Tested at full power with 0mm sep. Plot A15
PCS	High	1909.92	CDMA	Standard	0			0.00	24.39	25.00	

SAR Measurement Results at the Body - WWAN Module - Tablet Back Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
LTE Band 13	23230	782.00	QPSK/1RB High	Standard	15	0.01	0.28	0.30	23.75	24.00	
LTE Band 13	23230	782.00	QPSK/1RB Low	Standard	15	-0.05	0.22	0.23	23.75	24.00	
LTE Band 13	23230	782.00	QPSK/25RB Mid	Standard	15	0.13	0.21	**0.33**	21.95	24.00	Plot A16

SAR Measurement Results at the Body - WWAN Module - Tablet Bottom Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
LTE Band 13	23230	782.00	QPSK/1RB High	Standard	15	0.00	0.25	0.26	23.75	24.00	
LTE Band 13	23230	782.00	QPSK/1RB Low	Standard	15	-0.09	0.18	0.19	23.75	24.00	
LTE Band 13	23230	782.00	QPSK/25RB Mid	Standard	15	0.14	0.18	0.28	21.95	24.00	Plot A17

SAR Measurement Results at the Body - WWAN Module - Tablet Side Edge Positioned Against Phantom											
Band	Channel	Frequency (MHz)	Mode	Battery	Seperation Distance (mm)	Power Drift (dB)	Measured SAR 1g (W/kg)	Reported SAR 1g (W/kg)	Measured Conducted Output Power (dBm)	Maximum Conducted Output Power (dBm)	Notes
LTE Band 13	23230	782.00	QPSK/1RB High	Standard	0	-0.15	0.06	0.06	23.75	24.00	
LTE Band 13	23230	782.00	QPSK/1RB Low	Standard	0	-0.04	0.06	0.07	23.75	24.00	Plot A18
LTE Band 13	23230	782.00	QPSK/25RB Mid	Standard	0	0.09	0.04	0.07	21.95	24.00	

Table 18: Body Mode SAR Results – Proximity Sensor Disabled

Simultaneous Transmission Test Results

The WWAN transmitter cannot operate simultaneously with the 2.4GHz WLAN transmitter, 5GHz WLAN transmitter or Bluetooth transmitter. The tablet firmware prevents operation of the transmitters simultaneously.

10.0 REFERENCES

[1] ANSI, *ANSI/IEEE C95.1-1991: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz*, The Institute of electrical and Electronics Engineers, Inc., New York, NY 10017, 1992

[2] Federal Communications Commission, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01), FCC, Washington, D.C. 20554, 1997

[3] Thomas Schmid, Oliver Egger, and Niels Kuster, "Automated E-field scanning system for dosimetric assessments", *IEEE Transaction on Microwave Theory and Techniques*, vol. 44, pp. 105-113, Jan. 1996.

[4] Niels Kuster, Ralph Kastle, and Thomas Schmid, "Dosimetic evaluation of mobile communications equipment with know precision", IEICE Transactions on Communications, vol. E80-B, no. 5, pp.645-652, May 1997.

[5] NIS81, NAMAS, "The treatment of uncertainty in EMC measurement", Tech. Rep., NAMAS Executive, National Physical Laboratory, Teddinton, Middlesex, England, 1994.

[6] Barry N. Tayor and Chris E. Kuyatt, "Guidelines for evaluating and expressing the uncertainty of NIST measurement results", Tech. Rep., National Institute of Standards and Technology, 1994.

[7] Federal Communications Commission, KDG 248227 - "SAR Measurement Procedures for 802.11 a/b/g Transmitters"

[8] Federal Communications Commission, KDB 648474 – "SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas".

[9] Federal Communications Commission, KDB 447498 – "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies".

[10] Federal Communications Commission, KDB 616217 – "SAR Evaluation Considerations for Laptop Computers with Antennas Built-in on Display Screens".

[11] Federal Communications Commission, KDB 450824 – "SAR Probe Calibration and System Verification Considerations for Measurements at 150MHz – 3GHz".

[12] Federal Communications Commission, KDB 865664 – "SAR Measurement Requirements for 3-6GHz".

[13] Federal Communications Commission, KDB 941225 – "SAR Measurement Procedures for 3G Devices".

[14] ANSI, ANSI/IEEE C63.10-2009: American National Standard for Testing Unlicensed Wireless Devices.

11.0 APPENDIX A – SAR PLOTS

Plot A 1

Date/Time: 6/6/2013 8:47:49 AM, Date/Time: 6/6/2013 8:57:08 AM

Test Laboratory: Intertek

WWAN Testing Backside of Tablet Power Reduction Enabled_Reapeatability

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

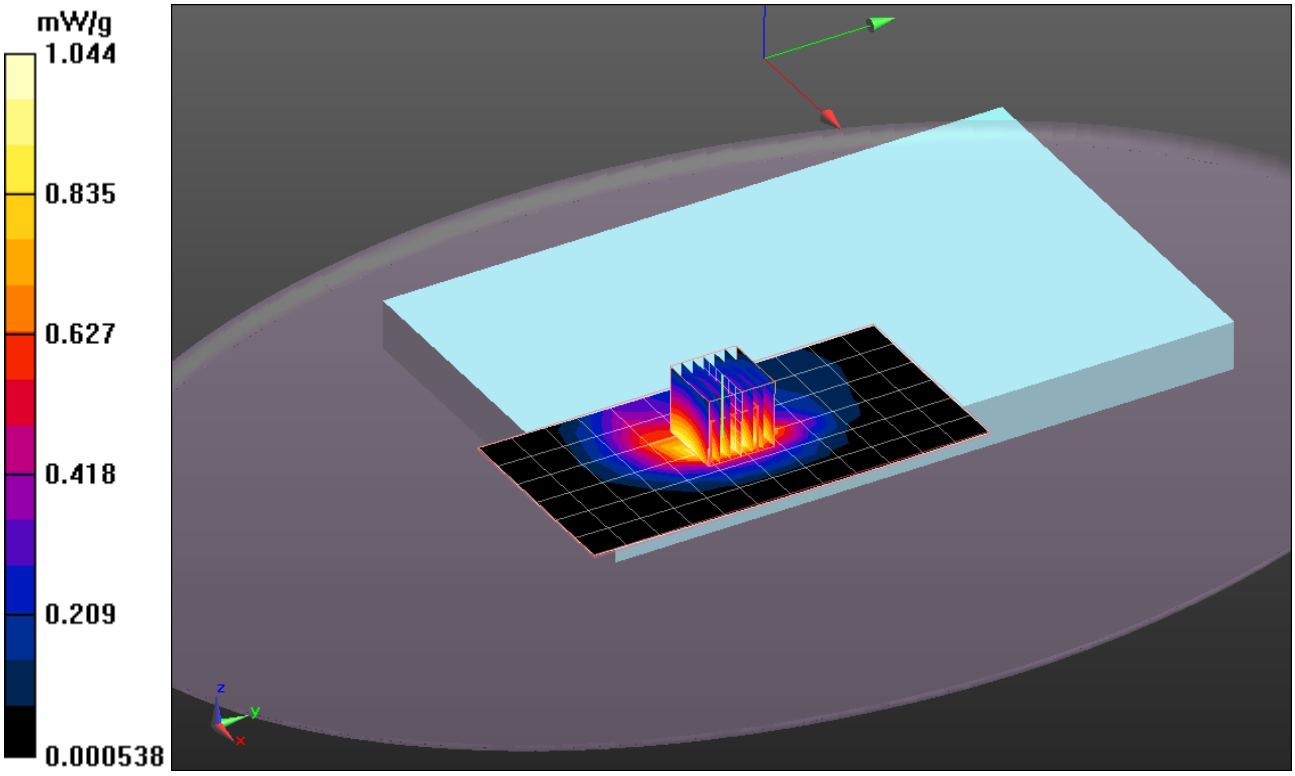
- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.044 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.260 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.337 W/kg
SAR(1 g) = 0.829 mW/g; SAR(10 g) = 0.501 mW/g

Maximum value of SAR (measured) = 0.913 mW/g


mW/g
1.044
0.835
0.627
0.418
0.209
0.000538

Plot A 2

Date/Time: 6/4/2013 10:50:05 AM, Date/Time: 6/4/2013 10:57:58 AM

Test Laboratory: Intertek

WWAN Testing Backside of Tablet PCS Band Power Reduction Enabled

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

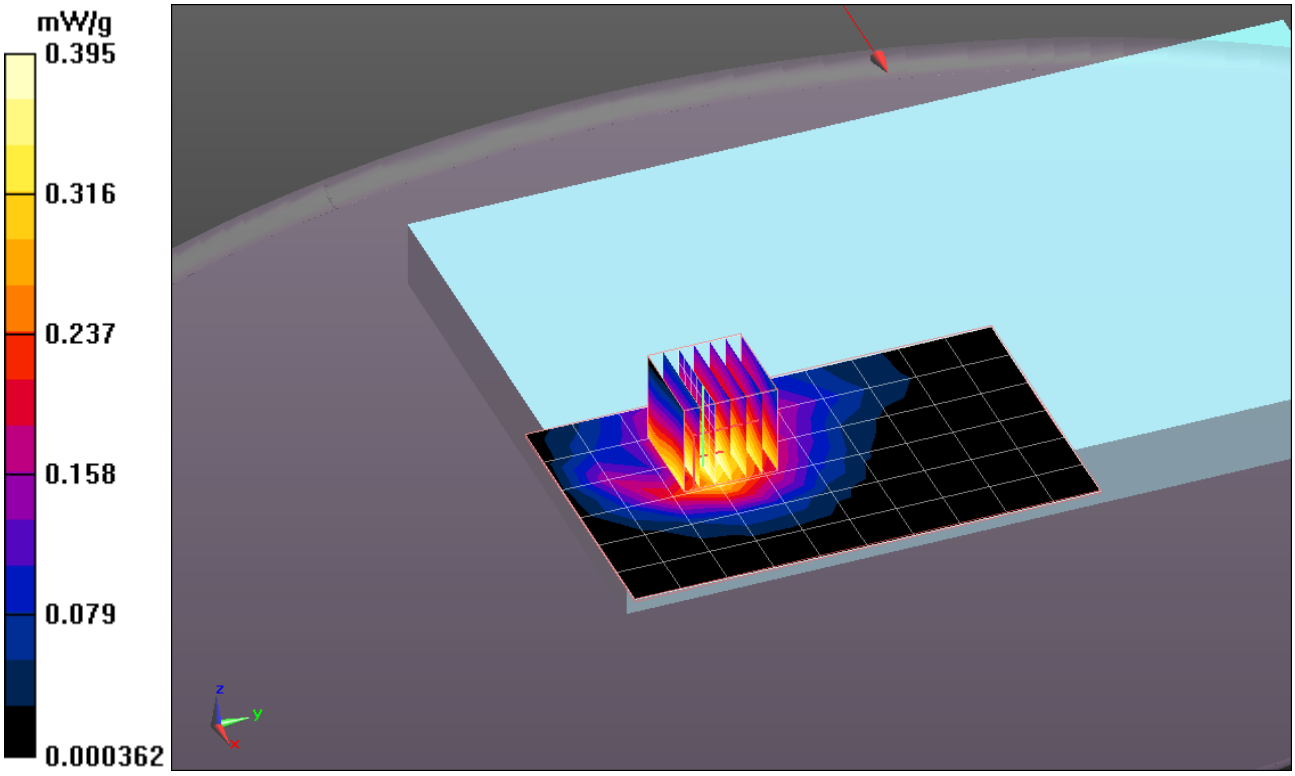
Communication System: Generic CDMA; Communication System Band: CDMA PCS Band; Frequency: 1880 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ε_r = 50.78; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(8.44, 8.44, 8.44); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.395 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.771 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.528 W/kg
SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.175 mW/g
Maximum value of SAR (measured) = 0.344 mW/g


mW/g
0.395
0.316
0.237
0.158
0.079
0.000362

Plot A 3

Date/Time: 6/5/2013 1:49:50 PM, Date/Time: 6/5/2013 1:54:58 PM

Test Laboratory: Intertek

WWAN Bottom Edge of Tablet Power Reduction Enabled

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 848.31 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1.029 mho/m; ε_r = 53.23; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

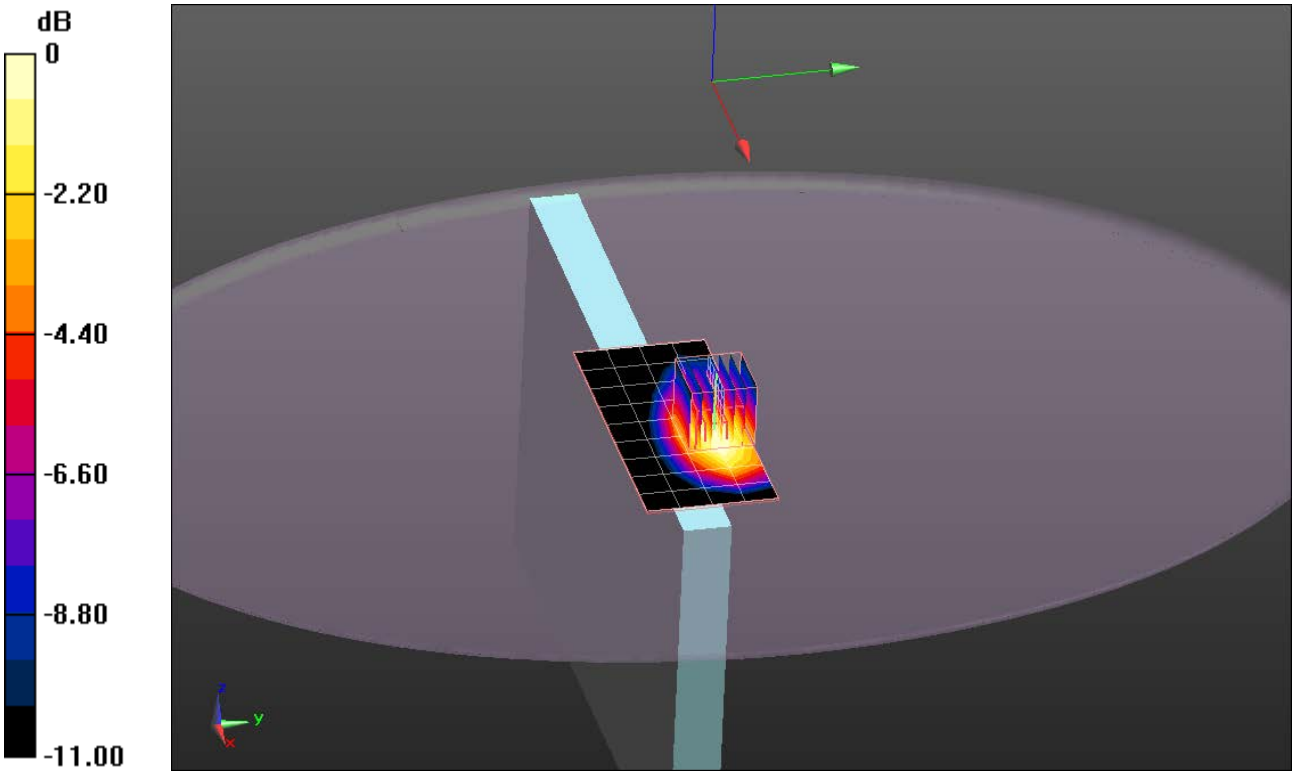
Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed 3/Area Scan (10x5x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.923 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed 3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.580 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.114 W/kg
SAR(1 g) = 0.716 mW/g; SAR(10 g) = 0.452 mW/g

Maximum value of SAR (measured) = 0.776 mW/g



0 dB = 0.780mW/g

Plot A 4

Date/Time: 6/3/2013 2:22:40 PM, Date/Time: 6/3/2013 2:28:50 PM

Test Laboratory: Intertek

WWAN Bottom Edge of Tablet PCS Band Power Reduction Enabled

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

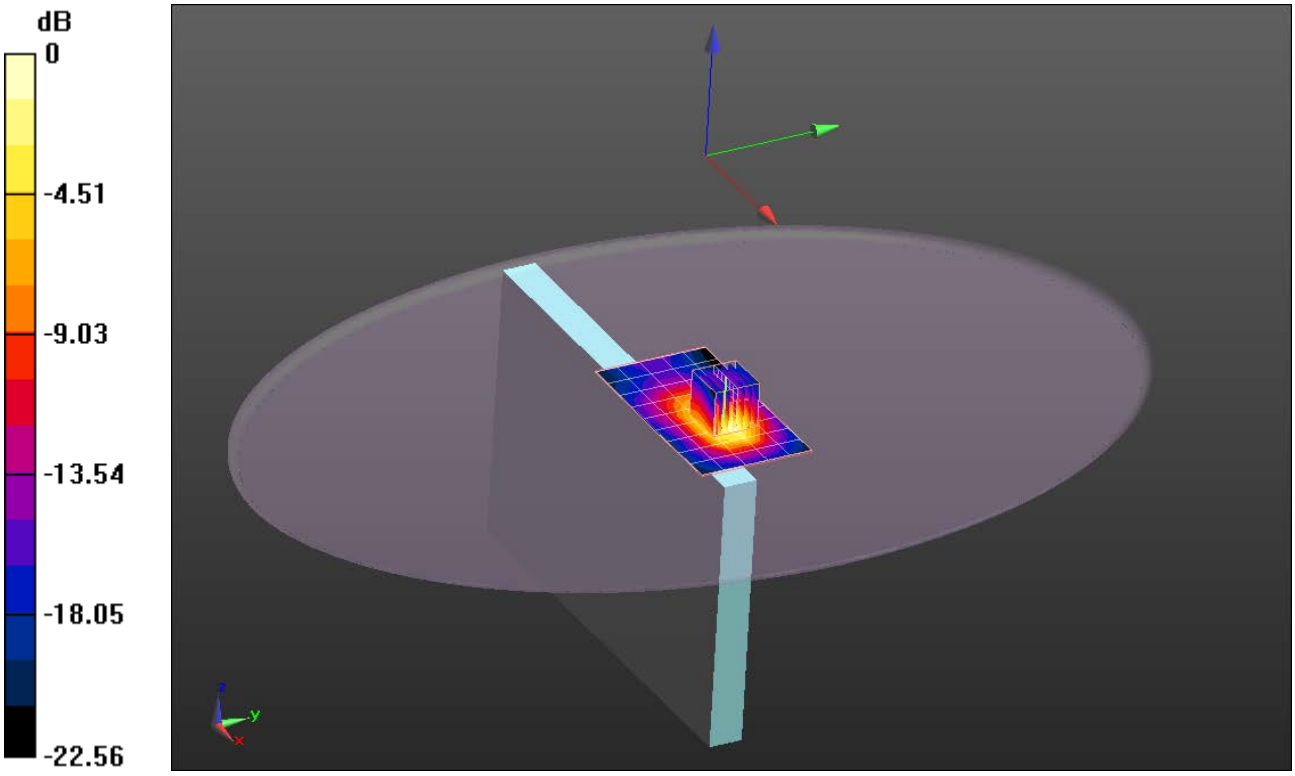
Communication System: Generic CDMA; Communication System Band: CDMA PCS Band; Frequency: 1909.92 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; ε_r = 50.74; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(8.44, 8.44, 8.44); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed Power Reduction Enabled 2 2/Area Scan (10x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.889 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed Power Reduction Enabled 2 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.524 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.310 W/kg
SAR(1 g) = 0.737 mW/g; SAR(10 g) = 0.380 mW/g
Maximum value of SAR (measured) = 0.835 mW/g



0 dB = 0.830mW/g

Plot A 5

Date/Time: 6/5/2013 3:10:48 PM, Date/Time: 6/5/2013 3:17:15 PM

Test Laboratory: Intertek

WWAN Testing Side Edge of Tablet Power Reduction Enabled

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

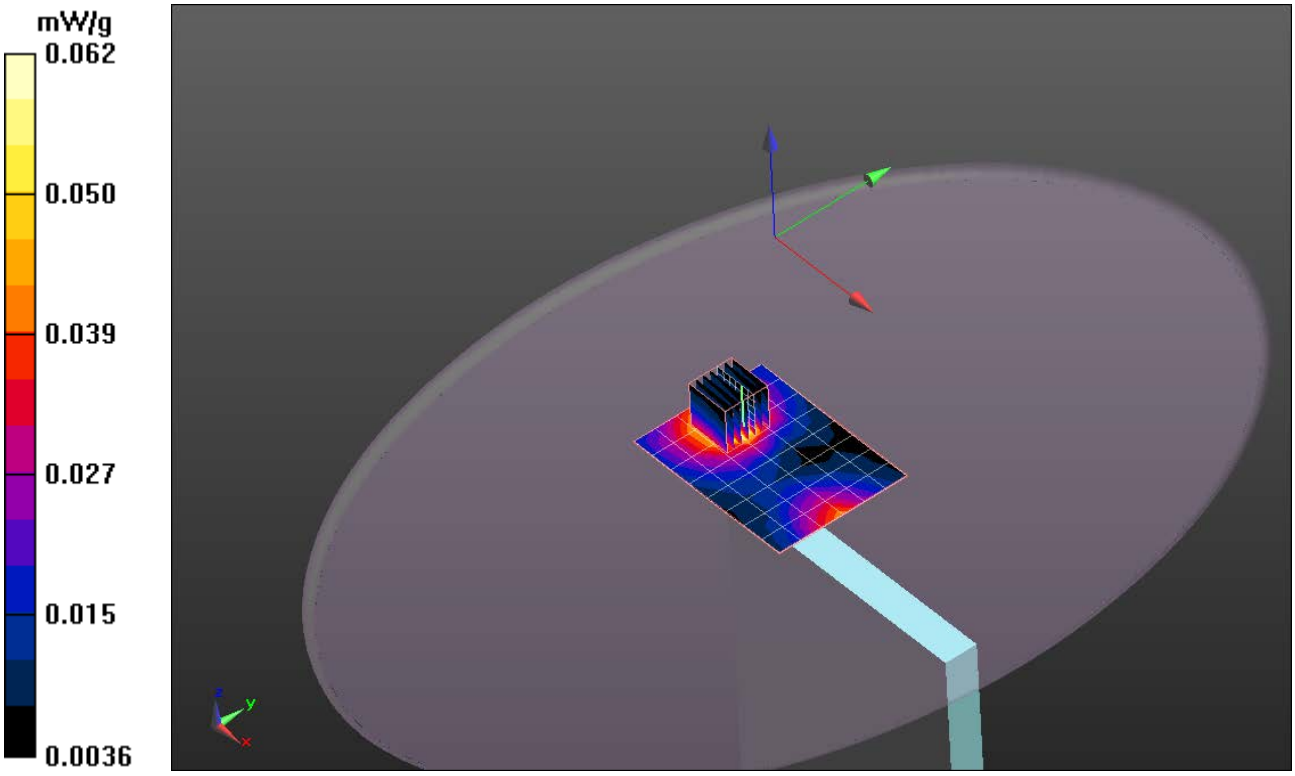
Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed/Area Scan (9x7x1): Measurement grid: dx=15mm, dy=15mm

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

Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.442 V/m; Power Drift = -0.22 dB
Peak SAR (extrapolated) = 0.099 W/kg
SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.062 mW/g


mW/g
0.062
0.050
0.039
0.027
0.015
0.0036

Plot A 6

Date/Time: 6/4/2013 12:01:51 PM, Date/Time: 6/4/2013 12:07:24 PM

Test Laboratory: Intertek

WWAN Testing Side Edge of Tablet PCS Band Power Reduction Enabled

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA PCS Band; Frequency: 1880 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ε_r = 50.78; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

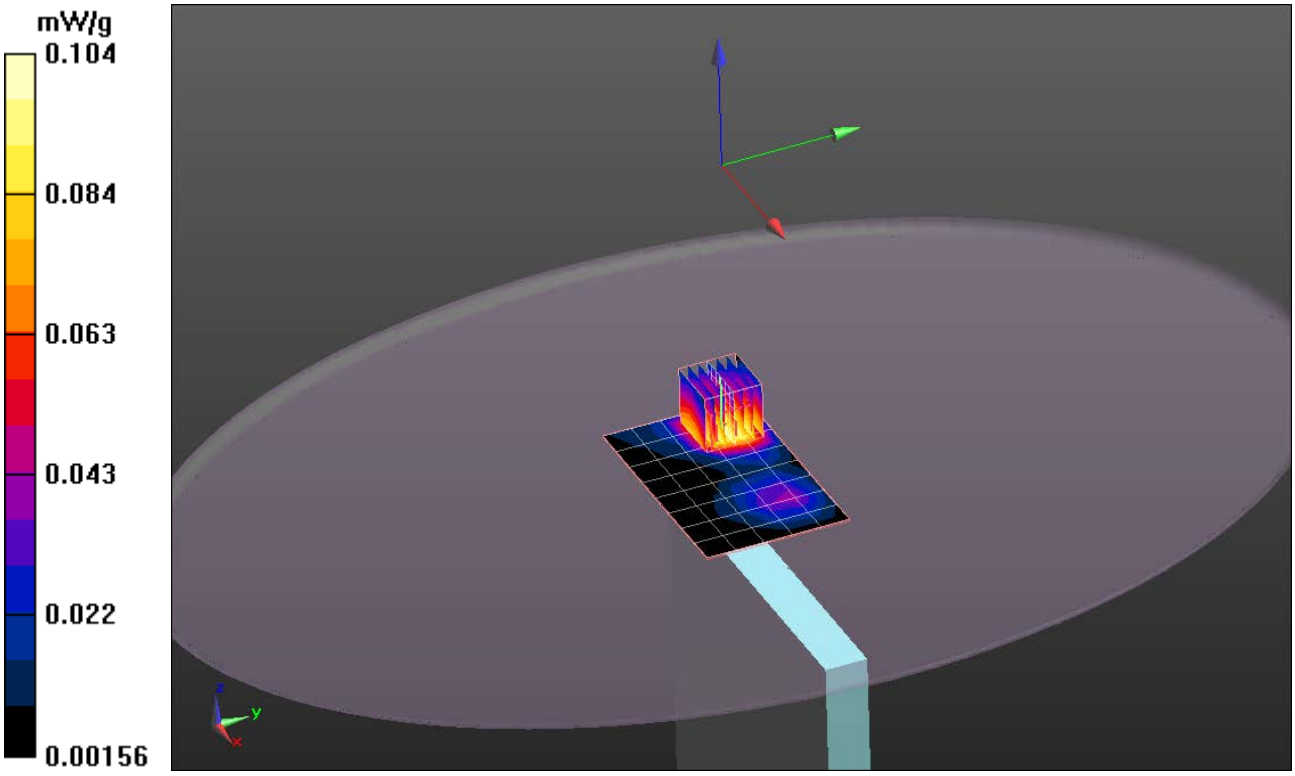
- Probe: EX3DV3 - SN3516; ConvF(8.44, 8.44, 8.44); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed/Area Scan (9x6x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.091 mW/g

Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.166 V/m; Power Drift = 0.39 dB
Peak SAR (extrapolated) = 0.157 W/kg
SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.050 mW/g
Maximum value of SAR (measured) = 0.104 mW/g


mW/g
0.104
0.084
0.063
0.043
0.022
0.00156

Plot A 7

Date/Time: 6/6/2013 11:41:20 AM, Date/Time: 6/6/2013 11:50:39 AM

Test Laboratory: Intertek

WWAN LTE Band 13 Testing Backside of Tablet

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic LTE; Communication System Band: Band 13; Frequency: 782 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 782 MHz; σ = 0.962 mho/m; ε_r = 53.774; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

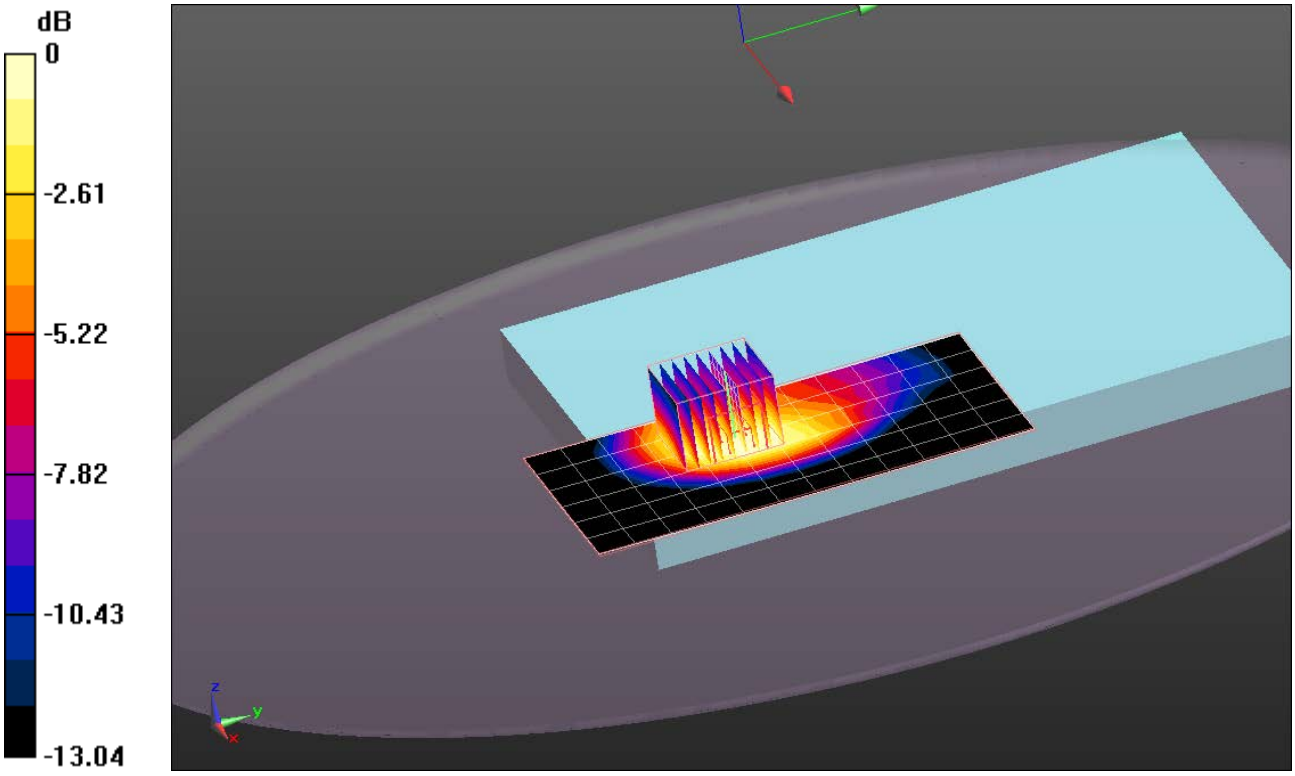
- Probe: EX3DV3 - SN3516; ConvF(10.64, 10.64, 10.64); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/QPSK 25RB Mid - Body Mode Back of Device Against Phantom Bumpers Installed 2 2/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.729 mW/g

Flat-Section MSL Testing/QPSK 25RB Mid - Body Mode Back of Device Against Phantom Bumpers Installed 2 2/Zoom Scan (8x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.989 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.935 W/kg
SAR(1 g) = 0.614 mW/g; SAR(10 g) = 0.396 mW/g

Maximum value of SAR (measured) = 0.667 mW/g



0 dB = 0.670mW/g

Plot A 8

Date/Time: 6/6/2013 2:45:44 PM, Date/Time: 6/6/2013 2:50:52 PM

Test Laboratory: Intertek

WWAN LTE Band 13 Bottom Edge of Tablet

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

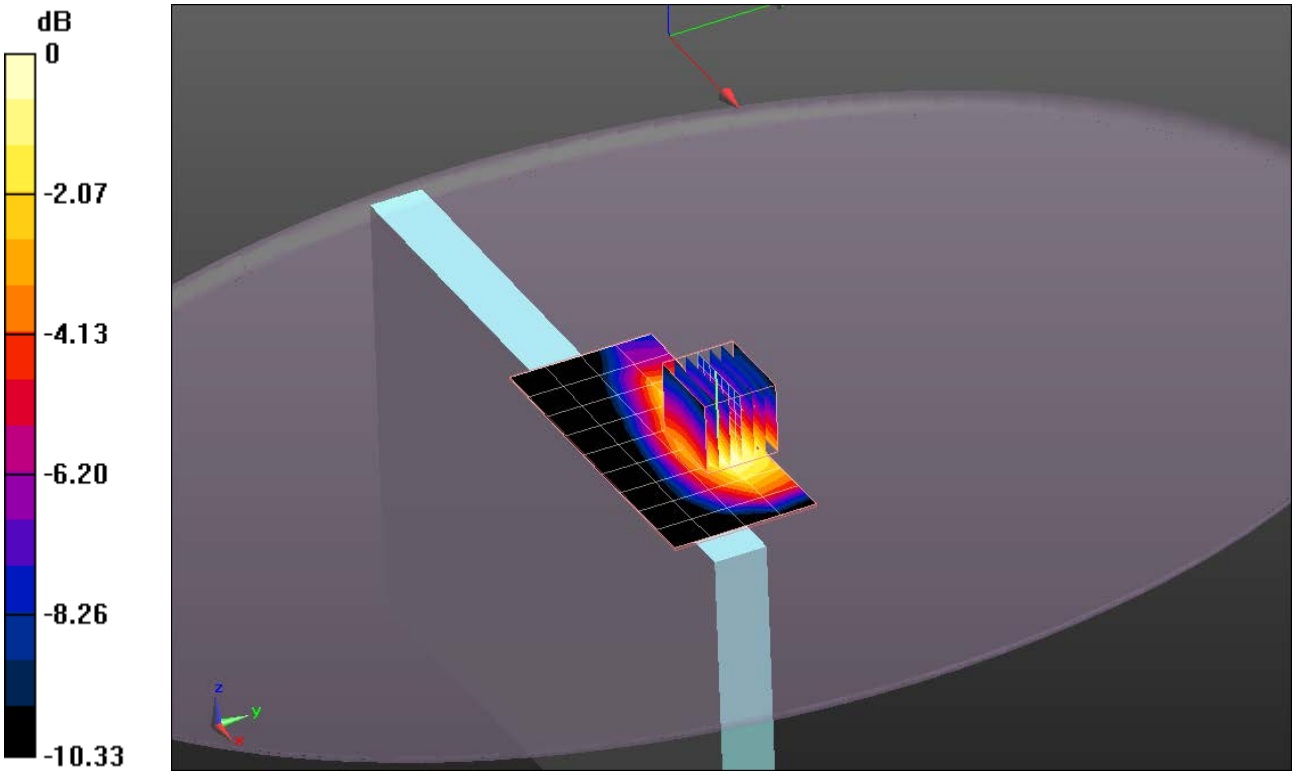
- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/QPSK with 1RB High - Body Mode Bottom Edge of Device Against Phantom Bumpers Installed 2/Area Scan (10x5x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.538 mW/g

Flat-Section MSL Testing/QPSK with 1RB High - Body Mode Bottom Edge of Device Against Phantom Bumpers Installed 2/Zoom Scan (8x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.911 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.665 W/kg
SAR(1 g) = 0.447 mW/g; SAR(10 g) = 0.292 mW/g

Maximum value of SAR (measured) = 0.486 mW/g



0 dB = 0.490mW/g

Plot A 9

Date/Time: 6/6/2013 3:43:11 PM, Date/Time: 6/6/2013 3:52:11 PM

Test Laboratory: Intertek

WWAN LTE Band 13 Testing Side Edge of Tablet

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic LTE; Communication System Band: Band 13; Frequency: 782 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 782 MHz; σ = 0.962 mho/m; ε_r = 53.774; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

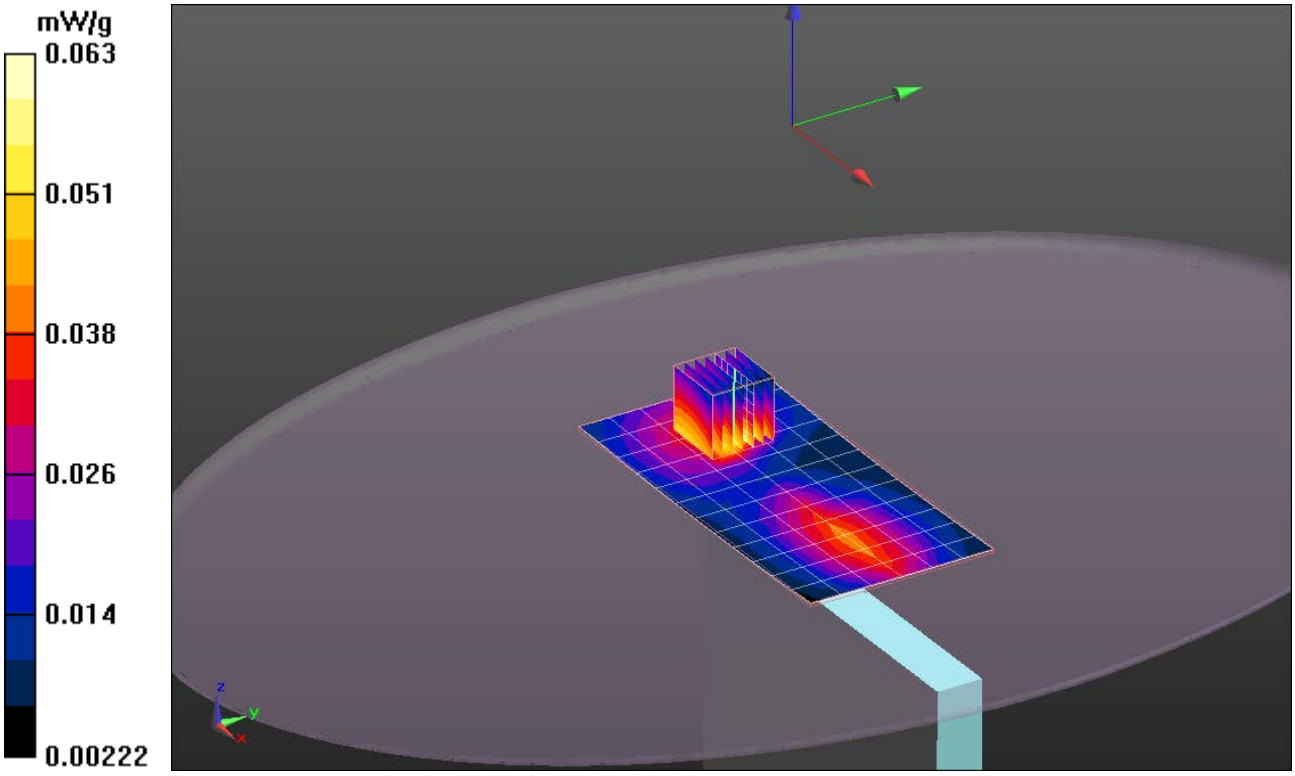
- Probe: EX3DV3 - SN3516; ConvF(10.64, 10.64, 10.64); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/QPSK 1RB High - Body Mode Back of Device Against Phantom Bumpers Installed/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

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

Flat-Section MSL Testing/QPSK 1RB High - Body Mode Back of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.133 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.054 mW/g; SAR(10 g) = 0.030 mW/g

Maximum value of SAR (measured) = 0.063 mW/g


mW/g
0.063
0.051
0.038
0.026
0.014
0.00222

Plot A 10

Date/Time: 6/5/2013 11:30:47 AM, Date/Time: 6/5/2013 11:40:08 AM

Test Laboratory: Intertek

WWAN Testing Backside of Tablet Power Reduction Disabled Seperation 15mm

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

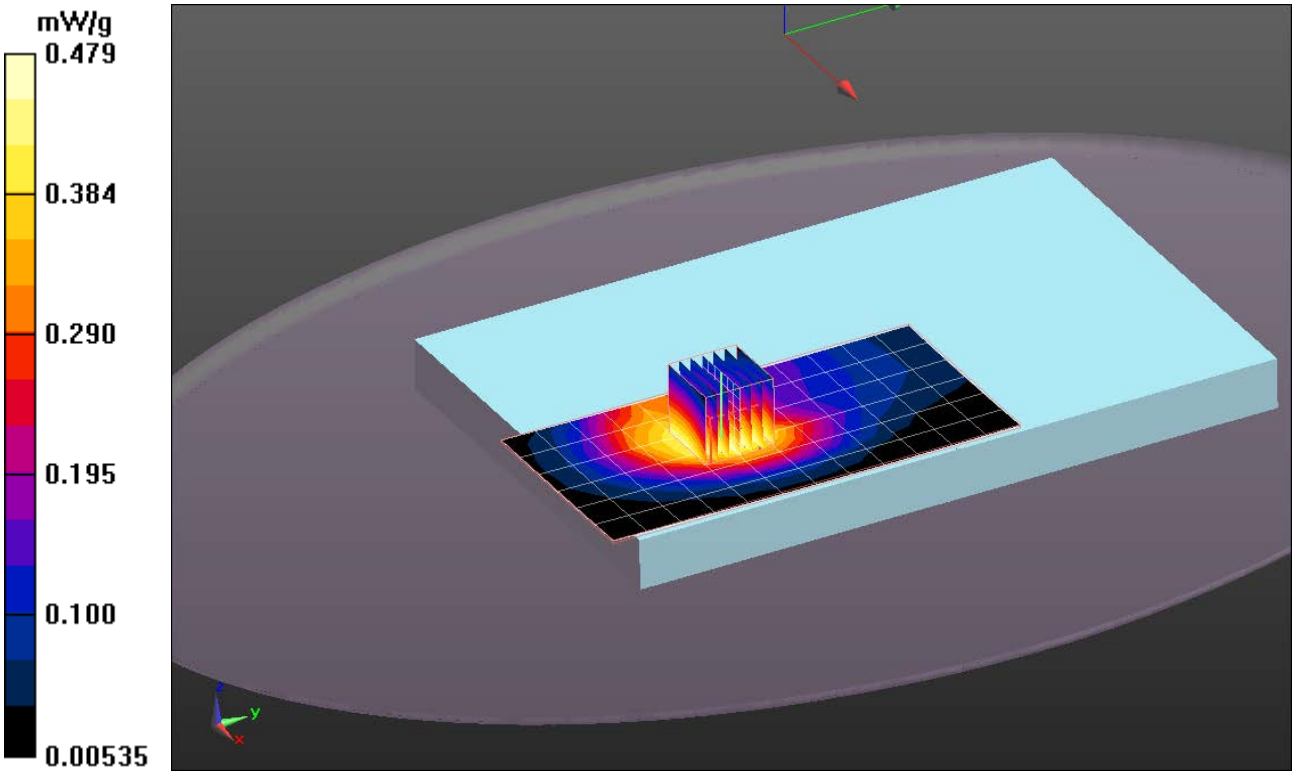
Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.479 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.151 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.549 W/kg
SAR(1 g) = 0.397 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.422 mW/g


mW/g
0.479
0.384
0.290
0.195
0.100
0.00535

Plot A 11

Date/Time: 6/3/2013 9:42:59 AM, Date/Time: 6/3/2013 9:50:49 AM

Test Laboratory: Intertek

WWAN Testing Backside of Tablet PCS Band Power Reduction Disabled 17mm seperation

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

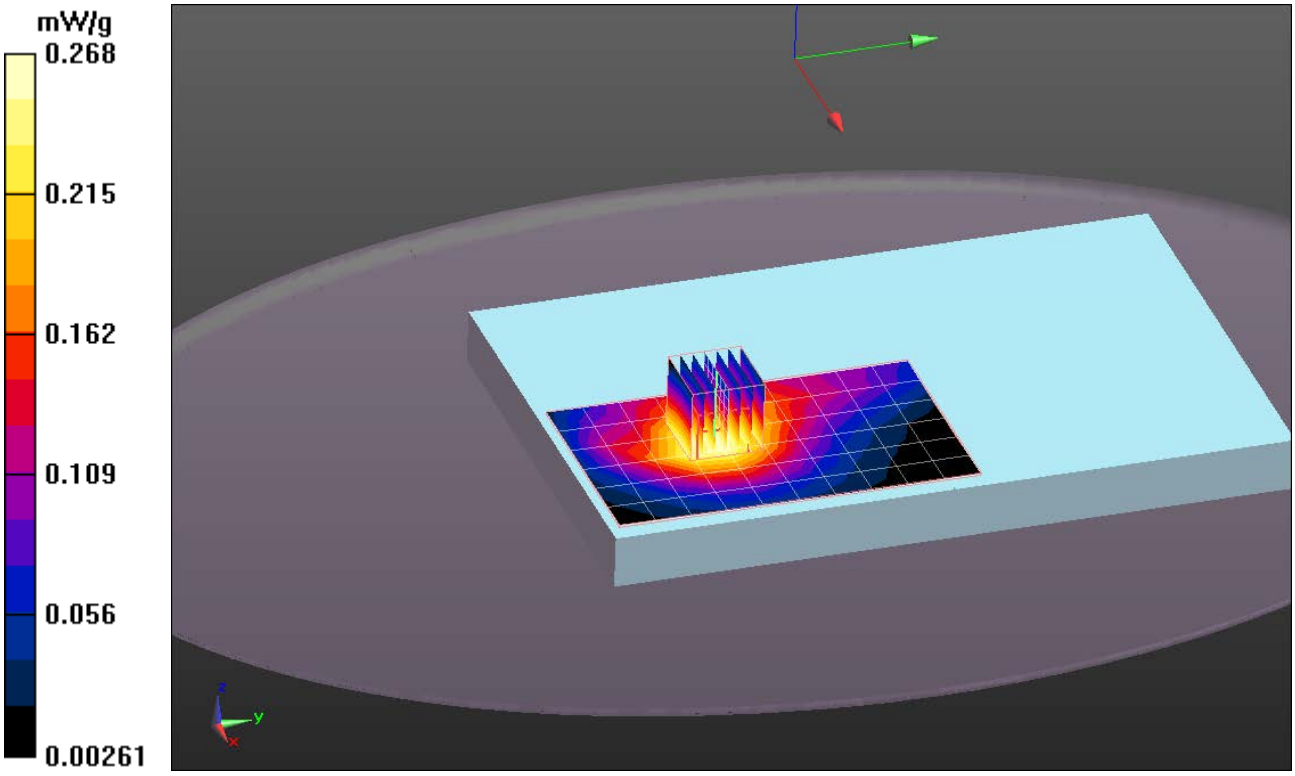
Communication System: Generic CDMA; Communication System Band: CDMA PCS Band; Frequency: 1880 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ε_r = 50.78; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(8.44, 8.44, 8.44); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.268 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.119 V/m; Power Drift = 0.0059 dB
Peak SAR (extrapolated) = 0.348 W/kg
SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.140 mW/g
Maximum value of SAR (measured) = 0.237 mW/g


mW/g
0.268
0.215
0.162
0.109
0.056
0.00261

Plot A 12

Date/Time: 6/5/2013 10:18:45 AM, Date/Time: 6/5/2013 10:23:54 AM

Test Laboratory: Intertek

WWAN Bottom Edge of Tablet Power Reduction Disabled Seperation 15mm

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed Power Reduction Disabled Seperation 15mm/Area Scan (10x5x1):

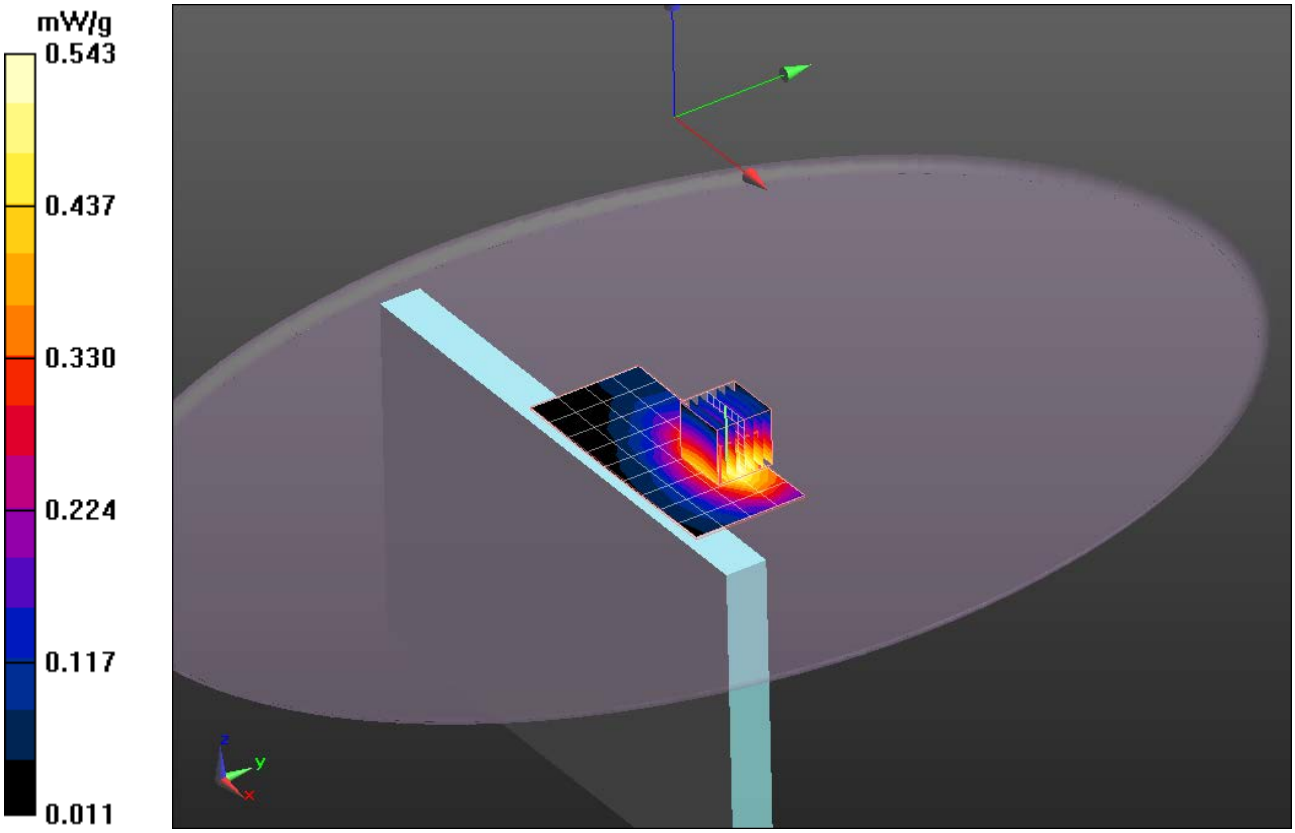
Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.543 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed Power Reduction Disabled Seperation 15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.614 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.616 W/kg
SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.315 mW/g

Maximum value of SAR (measured) = 0.484 mW/g


mW/g
0.543
0.437
0.330
0.224
0.117
0.011

Plot A 13

Date/Time: 6/3/2013 10:48:40 AM, Date/Time: 6/3/2013 10:54:49 AM

Test Laboratory: Intertek

WWAN Bottom Edge of Tablet PCS Band Power Reduction Disabled 15mm seperation

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA PCS Band; Frequency: 1909.92 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1910 MHz; σ = 1.58 mho/m; ε_r = 50.74; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

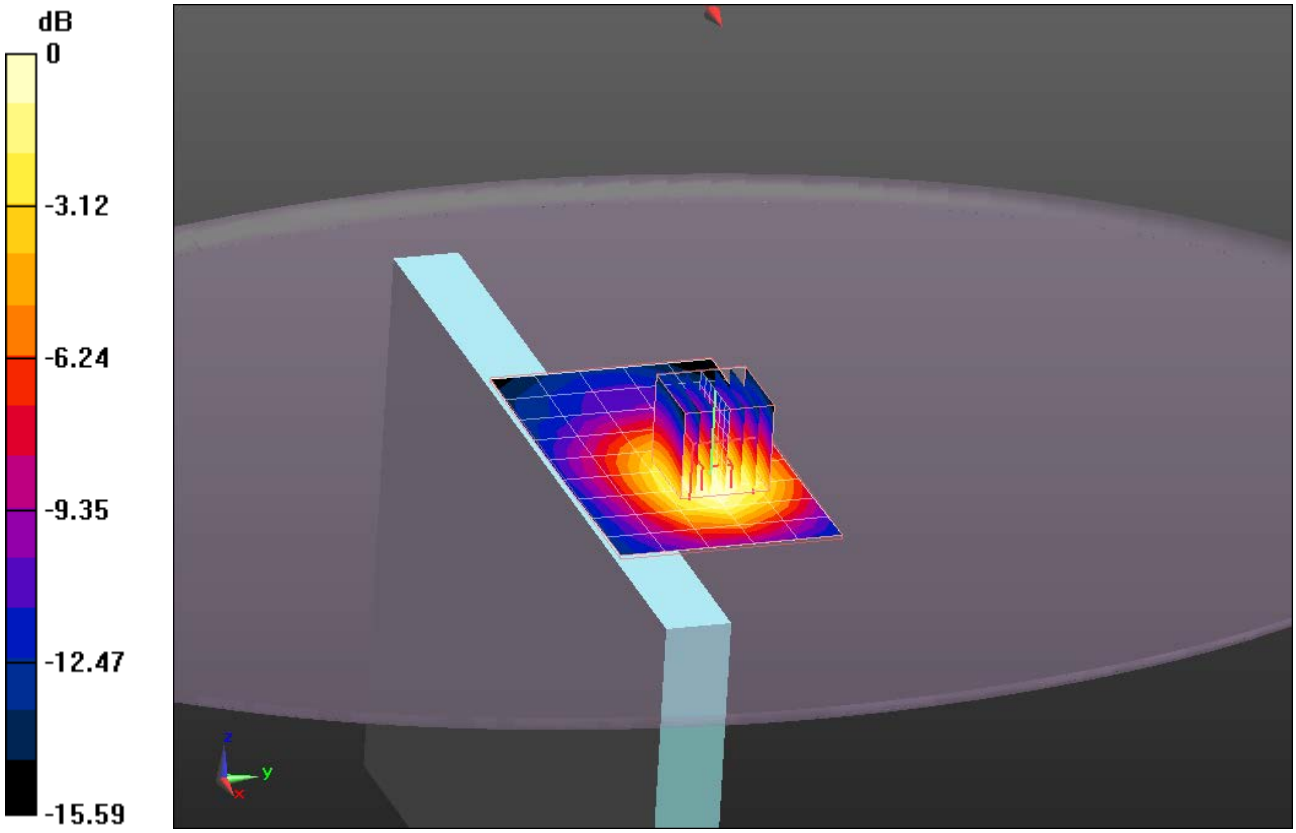
- Probe: EX3DV3 - SN3516; ConvF(8.44, 8.44, 8.44); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed Power Reduction Disabled 15mm seperation 2 2/Area Scan (10x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.470 mW/g

Flat-Section MSL Testing/Body Mode Back of Device Against Phantom Bumpers Installed Power Reduction Disabled 15mm seperation 2 2/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.339 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.868 W/kg
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.661 mW/g
Maximum value of SAR (measured) = 1.244 mW/g



0 dB = 1.240mW/g

Plot A 14

Date/Time: 6/5/2013 12:31:37 PM, Date/Time: 6/5/2013 12:38:05 PM

Test Laboratory: Intertek

WWAN Testing Side Edge of Tablet Power Reduction Disabled Sepeartion 0mm

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

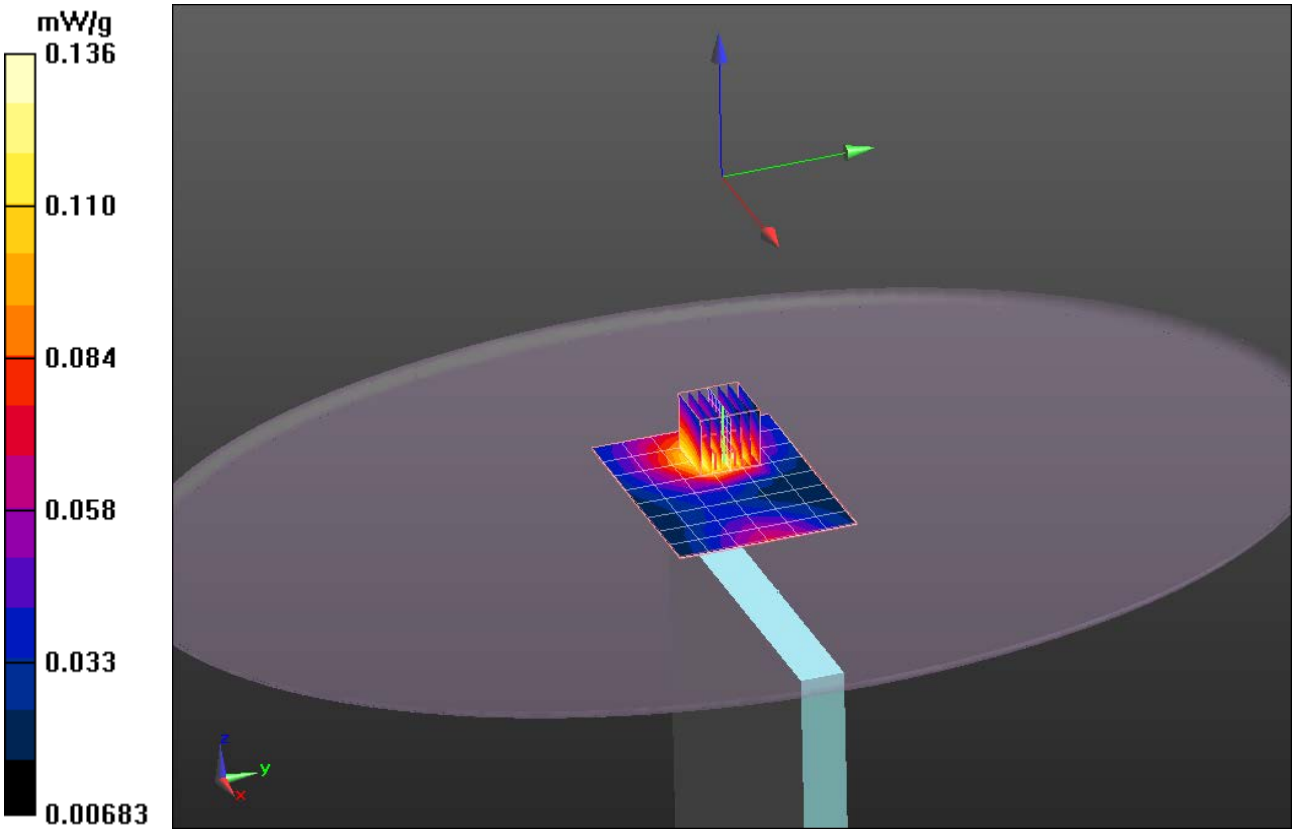
Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed/Area Scan (9x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.131 mW/g

Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.297 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.237 W/kg
SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.074 mW/g

Maximum value of SAR (measured) = 0.136 mW/g


mW/g
0.136
0.110
0.084
0.058
0.033
0.00683

Plot A 15

Date/Time: 6/3/2013 12:17:50 PM, Date/Time: 6/3/2013 12:23:23 PM

Test Laboratory: Intertek

WWAN Testing Side Edge of Tablet PCS Band Power Reduction Disabled 0mm seperation

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

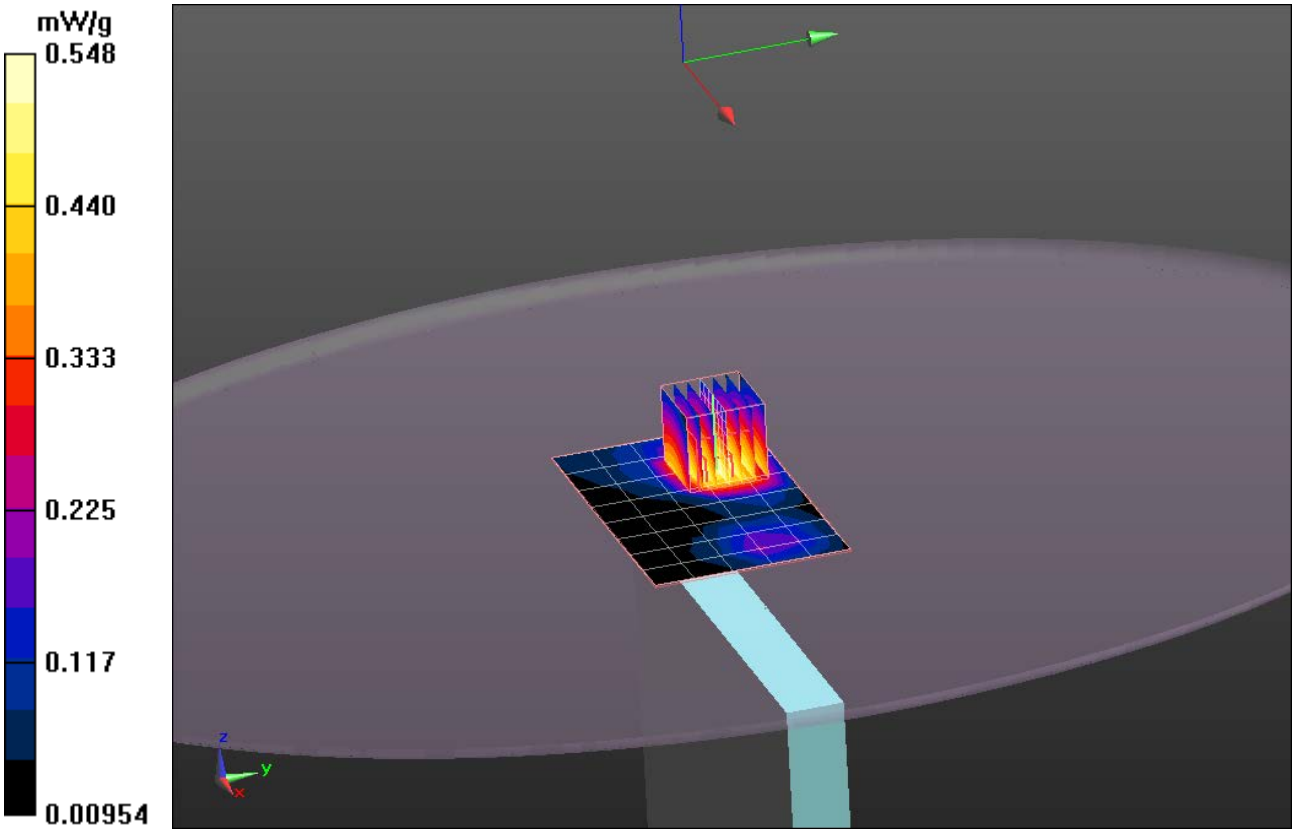
Communication System: Generic CDMA; Communication System Band: CDMA PCS Band; Frequency: 1880 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1880 MHz; σ = 1.55 mho/m; ε_r = 50.78; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(8.44, 8.44, 8.44); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed Power Reduction Disabled/Area Scan (9x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.548 mW/g

Flat-Section MSL Testing/Body Mode Side of Device Against Phantom Bumpers Installed Power Reduction Disabled/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.155 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.822 W/kg
SAR(1 g) = 0.489 mW/g; SAR(10 g) = 0.264 mW/g
Maximum value of SAR (measured) = 0.543 mW/g


mW/g
0.548
0.440
0.333
0.225
0.117
0.00954

Plot A 16

Date/Time: 6/7/2013 8:52:04 AM, Date/Time: 6/7/2013 9:01:24 AM

Test Laboratory: Intertek

WWAN LTE Band 13 Testing Backside of Tablet

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic LTE; Communication System Band: Band 13; Frequency: 782 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 782 MHz; σ = 0.962 mho/m; ε_r = 53.774; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

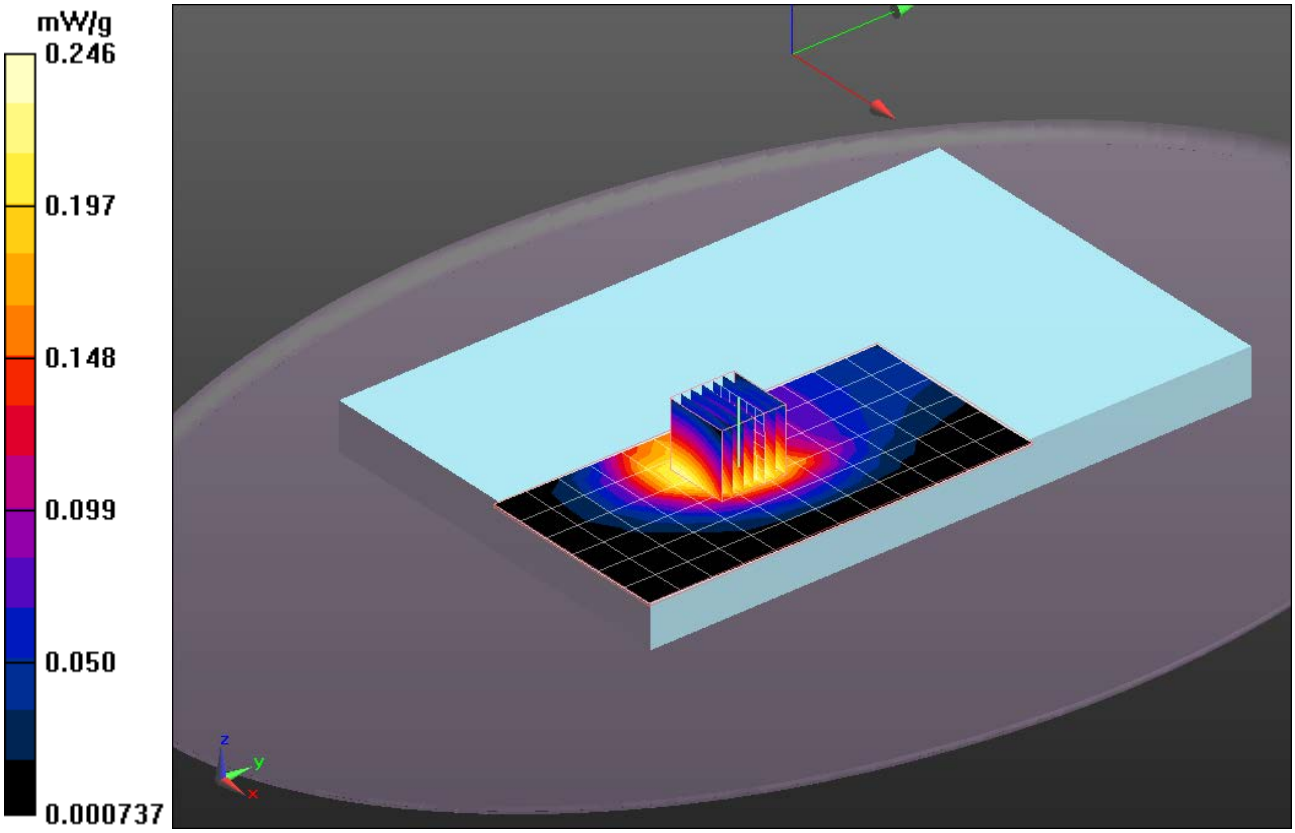
- Probe: EX3DV3 - SN3516; ConvF(10.64, 10.64, 10.64); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/QPSK 25RB Mid - Body Mode Back of Device Against Phantom Bumpers Installed 2 2/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.246 mW/g

Flat-Section MSL Testing/QPSK 25RB Mid - Body Mode Back of Device Against Phantom Bumpers Installed 2 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.208 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.287 W/kg
SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.141 mW/g

Maximum value of SAR (measured) = 0.218 mW/g


mW/g
0.246
0.197
0.148
0.099
0.050
0.000737

Plot A 17

Date/Time: 6/7/2013 11:30:27 AM, Date/Time: 6/7/2013 11:36:51 AM

Test Laboratory: Intertek

WWAN LTE Band 13 Bottom Edge of Tablet

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic CDMA; Communication System Band: CDMA Cell Band; Frequency: 836.52 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 836.52 MHz; σ = 1.016 mho/m; ε_r = 53.301; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/QPSK with 25RB Centered - Body Mode Bottom Edge of Device Against Phantom Bumpers Installed 2 2/Area Scan (10x5x1):

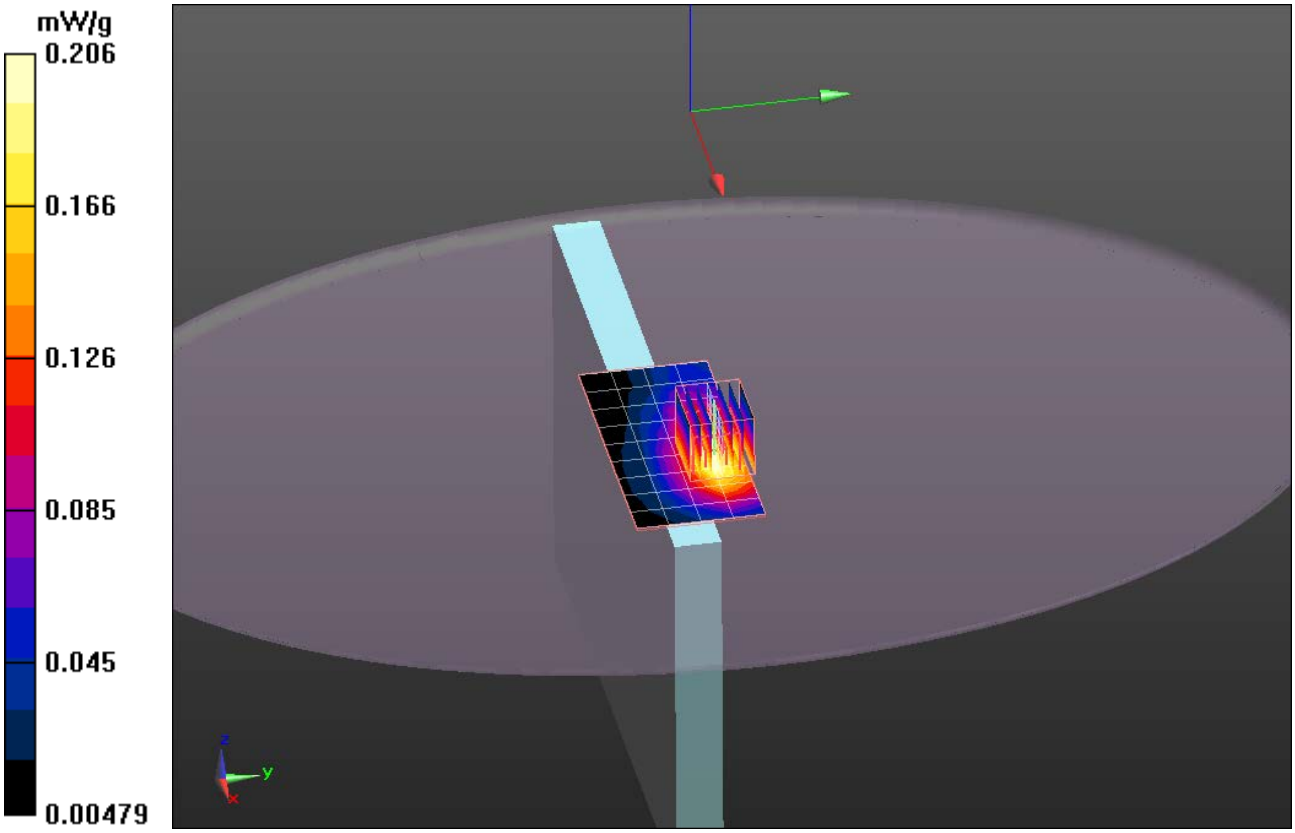
Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.206 mW/g

Flat-Section MSL Testing/QPSK with 25RB Centered - Body Mode Bottom Edge of Device Against Phantom Bumpers Installed 2 2/Zoom Scan (8x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.986 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.247 W/kg
SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.120 mW/g

Maximum value of SAR (measured) = 0.189 mW/g


mW/g
0.206
0.166
0.126
0.085
0.045
0.00479

Plot A 18

Date/Time: 6/7/2013 3:38:04 PM, Date/Time: 6/7/2013 3:47:08 PM

Test Laboratory: Intertek

WWAN LTE Band 13 Testing Side Edge of Tablet

DUT: Xplore Tomcat ; Type: Tablet; Serial: SYS00B00010

Communication System: Generic LTE; Communication System Band: Band 13; Frequency: 782 MHz;Communication System PAR: 0 dB;
Medium parameters used (interpolated): f = 782 MHz; σ = 0.962 mho/m; ε_r = 53.774; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

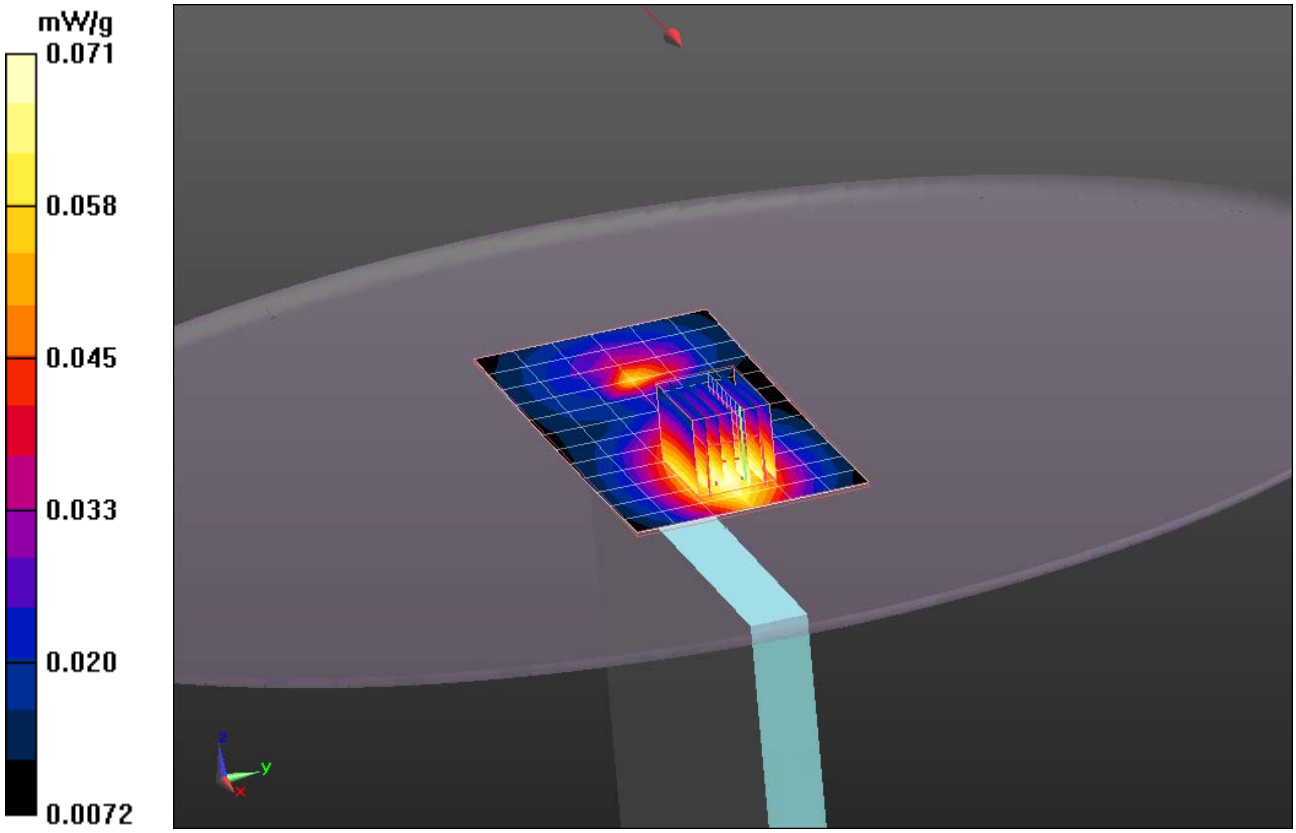
- Probe: EX3DV3 - SN3516; ConvF(10.64, 10.64, 10.64); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

Flat-Section MSL Testing/QPSK 1RB Low - Body Mode Back of Device Against Phantom Bumpers Installed 2/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.071 mW/g

Flat-Section MSL Testing/QPSK 1RB Low - Body Mode Back of Device Against Phantom Bumpers Installed 2/Zoom Scan (9x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.613 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.081 W/kg
SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.045 mW/g

Maximum value of SAR (measured) = 0.065 mW/g


mW/g
0.071
0.058
0.045
0.033
0.020
0.0072

12.0 APPENDIX B – SYSTEM VERIFICATION PLOTS

Plot B 1

Date/Time: 6/1/2013 2:15:32 PM, Date/Time: 6/1/2013 2:18:27 PM

Test Laboratory: Intertek

1800MHz Dipole Validation 6_1_13

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:xxx

Communication System: CW; Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1800 MHz; σ = 1.49 mho/m; ε_r = 51.04; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

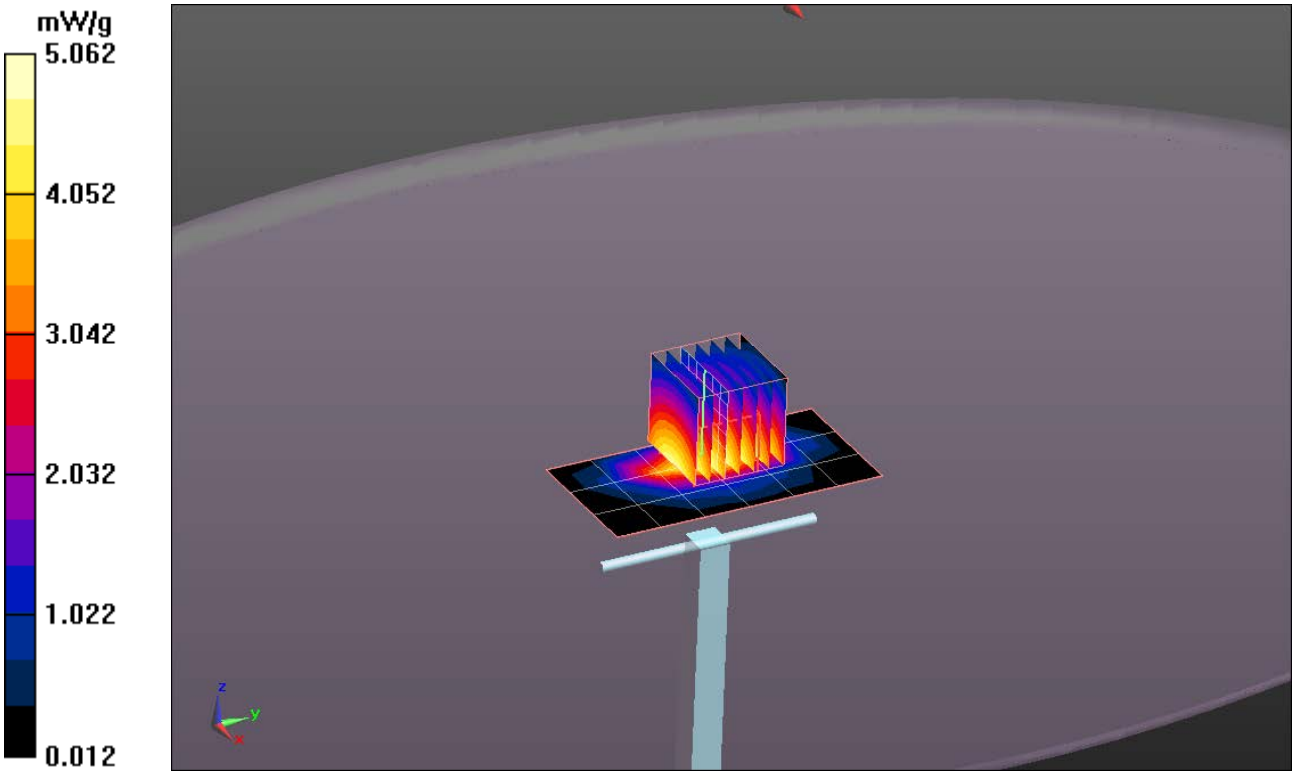
- Probe: EX3DV3 - SN3516; ConvF(8.76, 8.76, 8.76); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=100 mW with 10db attenuator at dipole, dist=2.0mm (EX-Probe)/Area Scan (4x7x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.062 mW/g

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=100 mW with 10db attenuator at dipole, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.931 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 65.576 W/kg
SAR(1 g) = 35.7 mW/g; SAR(10 g) = 18.6 mW/g
Normalized to target power = 1 W and actual power = 0.1 W
Maximum value of SAR (measured) = 40.114 mW/g


mW/g
5.062
4.052
3.042
2.032
1.022
0.012

Plot B 2

Date/Time: 6/5/2013 8:38:11 AM, Date/Time: 6/5/2013 8:43:33 AM

Test Laboratory: Intertek

835MHz Dipole Validation 6_5_2013

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d122

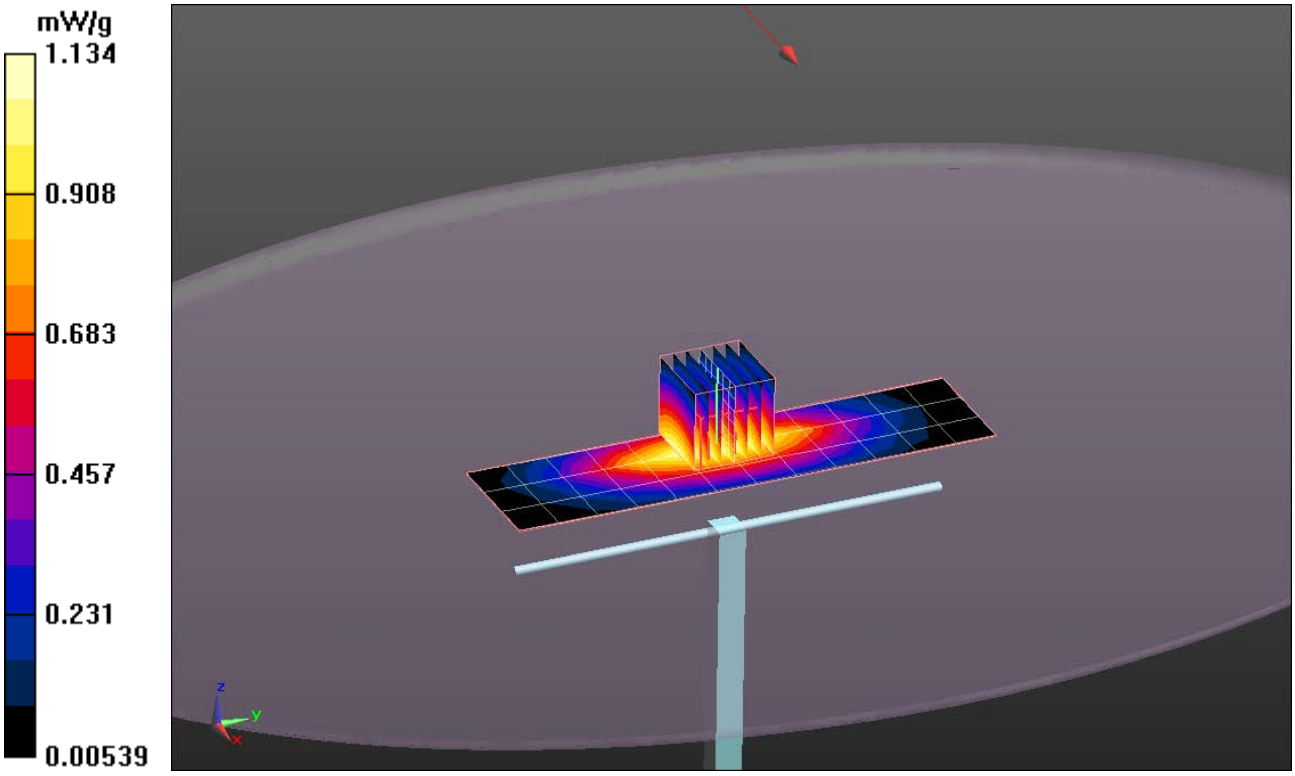
Communication System: CW; Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 835 MHz; σ = 0.96 mho/m; ε_r = 55.87; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV3 - SN3516; ConvF(10.47, 10.47, 10.47); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=100 mW, dist=2.0mm (EX-Probe)/Area Scan (4x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.134 mW/g

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=100 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.236 V/m; Power Drift = -0.0051 dB
Peak SAR (extrapolated) = 13.359 W/kg
SAR(1 g) = 8.96 mW/g; SAR(10 g) = 5.88 mW/g
Normalized to target power = 1 W and actual power = 0.1 W
Maximum value of SAR (measured) = 9.669 mW/g


mW/g
1.134
0.908
0.683
0.457
0.231
0.00539

Plot B 3

Date/Time: 6/11/2013 11:43:58 AM, Date/Time: 6/11/2013 11:46:52 AM

Test Laboratory: Intertek

1800MHz Dipole Validation 6_11_13

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:xxx

Communication System: CW; Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Communication System PAR: 0 dB;
Medium parameters used: f = 1800 MHz; σ = 1.46 mho/m; ε_r = 51.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

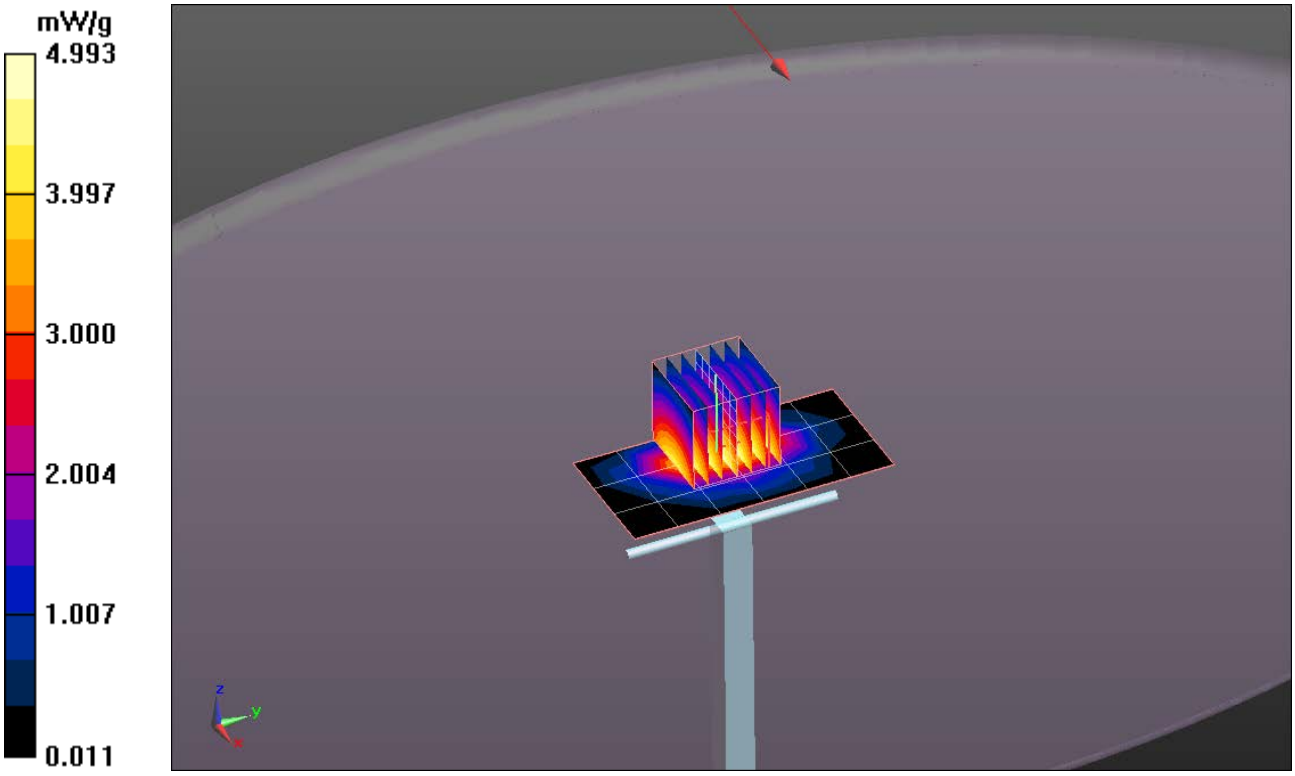
- Probe: EX3DV3 - SN3516; ConvF(8.76, 8.76, 8.76); Calibrated: 12/10/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: 4mm (Mechanical Surface Detection), z =
- Electronics: DAE4 Sn358; Calibrated: 9/11/2012
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.5(1059); SEMCAD X 14.4.5(3634)

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=100 mW with 10db attenuator at dipole, dist=2.0mm (EX-Probe)/Area Scan (4x7x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.993 mW/g

System Performance Check at Frequencies above 1 GHz/d=10mm, Pin=100 mW with 10db attenuator at dipole, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.519 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 66.435 W/kg
SAR(1 g) = 36.6 mW/g; SAR(10 g) = 19.2 mW/g
Normalized to target power = 1 W and actual power = 0.1 W
Maximum value of SAR (measured) = 41.121 mW/g


mW/g
4.993
3.997
3.000
2.004
1.007
0.011

13.0 APPENDIX C – SYSTEM VALIDATION SUMMARY

Per FCC KDB 865664, a tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters have been included in the summary table below. The validation was performed with reference dipoles using the required tissue equivalent media for system validation according to KDB 865664. Each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point. All measurements were performed using probes calibrated for CW signals. Modulations in the table above represent test configurations for which the SAR system has been validated. The SAR system was also validated with modulated signals per KDB 865664.

				Probe Calibration Point		Dielectric Properties		CW Validation			Modulation Validation		
Frequency (MHz)	Date	Probe (SN#)	Probe (Model #)	Frequency (MHz)	Fluid Type	σ	ϵ_r	Sensitivity	Probe Linearity	Probe Isotropy	Mod. Type	Duty Factor	PAR
835	1/11/2013	3516	EX3DV3	835	Body	53.1	1.01	Pass	Pass	Pass	GMSK	Pass	N/A
1800	1/11/2013	3516	EX3DV3	1800	Body	51.7	1.48	Pass	Pass	Pass	GMSK	Pass	N/A
1900	1/11/2013	3516	EX3DV3	1900	Body	51.4	1.59	Pass	Pass	Pass	GMSK	Pass	N/A

Table 19: SAR System Validation Summary