



SAR TEST REPORT

Test Report No. : 33IE0012-HO-E-R3

Applicant : SAMSUNG ELECTRONICS CO., LTD.
Type of Equipment : GSM/GPRS 850/1900 and WCDMA1900 Phone with BT v4.0(LE), 802.11b/g/n
Model No. : GT-S6810E
FCC ID : A3LGTS6810E
Test regulation : FCC47CFR 2.1093
FCC OET Bulletin 65, Supplement C (Edition 01-01)
Test Result : **Complied**
Reported SAR(1g) Value
FCC Part 22H Head : 0.254 W/kg
Body-hotspot : 0.543 W/kg (10mm distance)
FCC Part 24E Head : 1.095 W/kg
Body-hotspot : 0.756 W/kg (10mm distance)
FCC Part15.247 Head : 0.404 W/kg
Body-hotspot : 0.319W/kg (10mm distance)

The highest reported SAR (1g) Value for the device is 1.095 W/kg.


Simultaneous transmission test was excluded.

The highest sum of SAR (1g) for the simultaneous antennas Value for the device is 1.499 W/kg.


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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
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6. This report is a revised version of 33IE0012-HO-E-R2. 33IE0012-HO-E-R2 is replaced with this report.

Date of test: April 22 to May 15, 2013

Representative test engineer:


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Leader of WiSE Japan,
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NVLAP LAB CODE: 200572-0

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SECTION 1: Customer information

Company Name : SAMSUNG ELECTRONICS CO., LTD.
Address : 416, MAETAN 3-DONG, YEONGTONG-GU SUWON-CITY,
GYEONGGI-DO 443-742, SOUTH KOREA

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : GSM/GPRS 850/1900 and WCDMA1900 Phone with
BT v4.0(LE), 802.11b/g/n
Model No. : GT-S6810E
Serial No. : Refer to Section 4, Clause 4.2
Rating : AC100-240V/50-60Hz (AC Adapter)
DC3.7V/1200mAh (Battery)
Receipt Date of Sample : April 15, 2013
Modification of EUT : No Modification by the test lab

2.2 Product description

Radio Specification

Bluetooth (BDR/EDR)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	FHSS
Bandwidth & Channel spacing	1MHz & 1MHz
Antenna Type	FPCB Antenna
Antenna Gain	-1.41dBi

Bluetooth (Low Energy)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	DSSS, FHSS
Bandwidth & Channel spacing	1MHz & 2MHz
Antenna Type	FPCB Antenna
Antenna Gain	-1.41dBi

WLAN (IEEE802.11b/g/n-20)

Equipment Type	Transceiver
Frequency of Operation	2412-2462MHz
Type of Modulation	DSSS, OFDM
Bandwidth & Channel spacing	20MHz & 5MHz
Antenna Type	FPCB Antenna
Antenna Gain	-1.41dBi

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GSM

Equipment Type	Transceiver
Frequency of Operation	[Up Link] GSM850: 824 – 849MHz PCS: 1850 – 1910MHz [Down Link] GSM850: 869 – 894MHz PCS: 1930 – 1990MHz
Type of Modulation	GMSK
Emission Designator	GSM850: 250KGXW PCS: 250KGXW
Antenna Type	MID/PIFA internal Antenna
Antenna Gain	GSM850: -2.3dBi PCS: -2.3dBi

W-CDMA

Equipment Type	Transceiver
Frequency of Operation	[Up Link] Band II: 1850 – 1910MHz [Down Link] Band II: 1930 – 1990MHz
Type of Modulation	QPSK
Emission Designator	Band II: 4M15F9W
Antenna Type	MID/PIFA internal Antenna
Antenna Gain	Band II: -2.3dBi

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SECTION 3 : Test standard information

3.1 Test Specification

Title : **Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01):**

Supplement C (Edition 01-01) - Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions
OET Bulletin 65 (Edition 97-01) - Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

: **IEEE Std 1528-2003:**

IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques Supplement C

In additions;

- KDB450824D01(v01r01)** SAR Prob Cal and Ver Meas
- KDB450824D02(v01r01)** Dipole SAR Validation Verification
- KDB447498D01(v05)** Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies
- KDB447498D02(v02)** SAR Measurement Procedures for USB Dongle Transmitters
- KDB648474D04(v01)** SAR Evaluation Considerations for Wireless Handsets
- KDB941225D01(v02)** SAR Measurement Procedures for 3G Devices
- KDB941225D02(v02v01)** 3GPP R6 HSPA and R7 HSPA+ SAR Guidance
- KDB941225D03(v01)** Recommended SAR Test Reduction Procedures for GSM/GPRS/EDGE
- KDB941225D04(v01)** Evaluating SAR for GSM/(E)GPRS Dual Transfer Mode
- KDB941225D05(v02)** SAR for LTE Devices
- KDB941225D06(v01)** SAR test procedures for devices incorporating SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities (Hot Spot SAR)
- KDB941225D07(v01)** SAR Evaluation Procedures for UMPC Mini-Tablet Devices
- KDB 616217D04(v01)** SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers
- KDB865664D01(v01)** SAR Measurement Requirements for 100MHz to 6 GHz
- KDB248227D01(v01r02)** SAR Measurement Procedures for 802.11a/b/g Transmitters

Reference

- [1]ANSI, ANSI/IEEE C95.1-1992: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz, The Institute of Electrical and Electronics Engineers, Inc., New York, NY 10017, 1992.
[2]SPEAG uncertainty document (AN 15-7/AN19-17) for DASY 5 System from SPEAG (Shimid & Partner Engineering AG).

3.2 Procedure

Transmitter	WWAN	WLAN	Bluetooth
Test Procedure	FCC OET BULLETIN 65, SUPPLEMENT C	FCC OET BULLETIN 65, SUPPLEMENT C	FCC OET BULLETIN 65, SUPPLEMENT C
	SAR	SAR	SAR
Category	FCC47CFR 2.1093	FCC47CFR 2.1093	FCC47CFR 2.1093
Note: UL Japan, Inc. 's SAR Work Procedures 13-EM-W0429 and 13-EM-W0430			

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3.3 Exposure limit

(A) Limits for Occupational/Controlled Exposure (W/kg)

Spatial Average (averaged over the whole body)	Spatial Peak (averaged over any 1g of tissue)	Spatial Peak (hands/wrists/feet/ankles averaged over 10g)
0.4	8.0	20.0

(B) Limits for General population/Uncontrolled Exposure (W/kg)

Spatial Average (averaged over the whole body)	Spatial Peak (averaged over any 1g of tissue)	Spatial Peak (hands/wrists/feet/ankles averaged over 10g)
0.08	1.6	4.0

Occupational/Controlled Environments: are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

General Population/Uncontrolled Environments: are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

**NOTE:GENERAL POPULATION/UNCONTROLLED EXPOSURE
SPATIAL PEAK(averaged over any 1g of tissue) LIMIT
1.6 W/kg**

3.4 Test Location

*Shielded room for SAR testings
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SECTION 4 : Test result

4.1 Stand-alone SAR result

Stand-alone SAR Procedure

No.	Capable Tx configurations		Head SAR	Body-worn SAR	Body SAR (HotSpot)	Note
1	WWAN	GSM/GPRS 850 MHz	Yes	Exemption*1	Yes	With VOIP
2		GSM/GPRS 1900 MHz	Yes	Exemption*1	Yes	With VOIP
3		WCDMA II 12.2kRMC	Yes	Exemption*1	Yes	With VOIP
4	WLAN	WLAN 2.4G	Yes	Exemption*1	Yes	With VOIP
5	Bluetooth	Bluetooth BDR/EDR	Yes*2	Exemption*1	Yes	-

Note

*1 It is not necessary to test Body-worn SAR if the test separation distance(10mm) for hotspot mode is more conservative than Body-worn test(15mm),according to KDB 941225 D06 Hotspot SAR procedure.

*2 The case where the data communications by Bluetooth are carried out at the time of the voice telephone call of WWAN or the VOIP of WWAN is taken into consideration.

Reported SAR

Mode	1g Head SAR [W/kg]	1g Body-worn SAR [W/kg]	1g BodySAR [W/kg]
GSM850	0.254	Exemption	0.543
PCS1900	0.688	Exemption	0.554
WCDMA band II	1.095	Exemption	0.756
WLAN 11b/g/n(2.4G)	0.404	Exemption	0.319
Bluetooth	0.114	Exemption	0.038

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4.2 Simultaneous transmission SAR result

Simultaneous Procedure

This EUT has the unlicensed transmitter such as WLAN (802.11b/g/n) & Bluetooth devices besides licensed transmitter WWAN (GSM/WCDMA), and the following simultaneous transmission is possible.

No.	Capable Tx configurations		Head SAR	Body SAR (HotSpot)	Note
1	WWAN+WLA	GSM/GPRS + WLAN2.4G	Yes	Yes	-
2	N	WCDMA + WLAN2.4G	Yes	Yes	-
3	WWAN+Bluetooth		Yes	Yes	-
4	WLAN+Bluetooth		No operating		

Simultaneous transmission SAR

<WWAN + WLAN >

Simultaneous transmitter evaluation based on the KDB447498D01 Refer to the clause 4.3.2..

Step1	Standalone SAR test exclusion considerations. Refer to Section 6.
Step2	Measured Stand-alone SAR for WWAN.
Step3	Measured Stand-alone SAR for WLAN.
Step4	Simultaneous transmission is possible (WWAN+ WLAN) Simultaneous transmission SAR test exclusion considerations
Step5	1.6W/kg > \sum 1g SAR (WWAN + WLAN) Head: 1.499 W/kg Body: 1.074 W/kg Refer to Section 10.
Step6	SAR test for simultaneous transmission is not measured.

<WWAN + Bluetooth >

Simultaneous transmitter evaluation based on the KDB447498D01 Refer to the clause 4.3.2..

Step1	Standalone SAR test exclusion considerations. Refer to Section 6.
Step2	Measured Stand-alone SAR for WWAN.
Step3	Measured Stand-alone SAR for Bluetooth.
Step4	Simultaneous transmission is possible (WWAN+ Bluetooth) Simultaneous transmission SAR test exclusion considerations.
Step5	1.6W/kg > \sum 1g SAR (WWAN + Bluetooth) Head: 1.209 W/kg Body: 0.792 W/kg Refer to Section 10
Step6	SAR test for simultaneous transmission is not measured.

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SECTION 5 : Description of the operating mode

5.1 Output power operating modes

Band	Duty cycle or Multi class(GSM)	Test Frequency	Mode
GSM850	Multi class 12	824.2MHz (128ch) 836.6MHz(190ch) 848.8MHz(251ch)	GSM GPRS (CS-1)
PCS1900	Multi class 12	1850.2MHz(512ch) 1880.0MHz(661ch) 1909.8MHz(810ch)	
WCDMA V	100%	826.4MHz (4132ch) 836.6MHz(4183ch) 846.6MHz(4233ch)	AMR 12.2k RMC HSDPA HSUPA
WWAN setting			
<p>The communication link was set up with the Wireless Communications Test Set (Agilent M/N: E5515C). The EUT was command to operate at maximum transmit power. GSM850 :PCL 5 PCS1900 :PCL 0 W-CDMA :All up bits</p>			

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Mode	Duty cycle	Frequency Band	Test Frequency	Modulation
IEEE802.11b	100%	2412-2462MHz	2412MHz (1ch) 2437MHz(6ch) 2462MHz(11ch)	DSSS (DBPSK.DQPSK.CCK)
IEEE802.11g	100%	2412-2462MHz	2412MHz (1ch) 2437MHz(6ch) 2462MHz(11ch)	OFDM (BPSK.QPSK.16QAM,64QAM)
IEEE802.11n20 (2.4G)	100%	2412-2462MHz	2412MHz (1ch) 2437MHz(6ch) 2462MHz(11ch)	
Bluetooth	78.8%(DH5) 78.2%(3DH5) 66.5%(LE)	2402-2480MHz	2402MHz(1ch) 2441MHz(39ch) 2480MHz(79ch)	FHSS (GFSK, π /4DQPSK,8DPSK)

WLAN and Bluetooth Setting

Power of the EUT was set by the software as follows:

H/W version: REV1.0
S/W version: S6810E.010

[Power Setting]

11b: 14 dBm

11g: 12 dBm

11n-20: 11 dBm

BT: Maximum power of the EUT was transmitted on Bluetooth testing mode.

*The above setting of the software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product.

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5.2 Output power measurement results

Output power measurement for GSM

[GSM]

*Connection Type > AUTO
*Power control level >5(GSM850),0(PCS1900)

[GPRS]

*Connection Type > Type B
*Power control level > 5(GSM850),0(PCS1900)
*Coding Scheme > CS-1

1) GSM850

GSM850 SAR Power												
Mode		Crest Factor (typical)	Ch	Frequency [MHz]	Time-based Average				Average burst power			
					Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]
GSM	1slot	8.3	128	824.2	5.92	10.00	7.34	23.26	26.20	0.00	6.46	32.66
			190	836.6	5.90	10.00	7.34	23.24	26.24	0.00	6.46	32.70
			251	848.8	5.80	10.00	7.34	23.14	26.18	0.00	6.46	32.64
GPRS (CS1)	1slot	8.3	128	824.2	5.77	10.00	7.34	23.11	26.20	0.00	6.46	32.66
			190	836.6	5.76	10.00	7.34	23.10	26.24	0.00	6.46	32.70
			251	848.8	5.72	10.00	7.34	23.06	26.17	0.00	6.46	32.63
	2slots	4.2	128	824.2	6.40	10.00	7.34	23.74	23.65	0.00	6.46	30.11
			190	836.6	6.35	10.00	7.34	23.69	23.71	0.00	6.46	30.17
			251	848.8	6.27	10.00	7.34	23.61	23.66	0.00	6.46	30.12
	3slots	2.8	128	824.2	6.15	10.00	7.34	23.49	21.65	0.00	6.46	28.11
			190	836.6	6.13	10.00	7.34	23.47	21.68	0.00	6.46	28.14
			251	848.8	6.02	10.00	7.34	23.36	21.64	0.00	6.46	28.10
	4slots	2.1	128	824.2	6.41	10.00	7.34	23.75	20.59	0.00	6.46	27.05
			190	836.6	6.45	10.00	7.34	23.79	20.65	0.00	6.46	27.11
			251	848.8	6.32	10.00	7.34	23.66	20.62	0.00	6.46	27.08

Time based AVG Results = P/M Reading + Atten.Loss + Cable Loss

Slotted AVG Results = Agilent Reading + Cable Loss

Maximum time based AVG power mode

SAR test channel

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2) PCS1900

PCS1900 SAR Power												
Mode		Crest Factor (typical)	Ch	Frequency [MHz]	Time-based Average				Average burst power			
					Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]	Reading [dBm]	Atten. [dB]	Cable Loss [dB]	Result [dBm]
GSM	1slot	8.3	512	1850.2	1.71	10.03	7.85	19.59	22.09	0.00	6.66	28.75
			661	1880.0	1.90	10.03	7.86	19.79	22.33	0.00	6.66	28.99
			810	1909.8	1.75	10.04	7.88	19.67	22.18	0.00	6.67	28.85
GPRS (CS1)	1slot	8.3	512	1850.2	1.49	10.03	7.85	19.37	22.08	0.00	6.66	28.74
			661	1880.0	1.67	10.03	7.86	19.56	22.33	0.00	6.66	28.99
			810	1909.8	1.48	10.04	7.88	19.40	22.17	0.00	6.67	28.84
	2slots	4.2	512	1850.2	1.97	10.03	7.85	19.85	19.52	0.00	6.66	26.18
			661	1880.0	2.31	10.03	7.86	20.20	19.83	0.00	6.66	26.49
			810	1909.8	2.15	10.04	7.88	20.07	19.71	0.00	6.67	26.38
	3slots	2.8	512	1850.2	1.90	10.03	7.85	19.78	17.44	0.00	6.66	24.10
			661	1880.0	2.07	10.03	7.86	19.96	17.80	0.00	6.66	24.46
			810	1909.8	2.05	10.04	7.88	19.97	17.72	0.00	6.67	24.39
	4slots	2.1	512	1850.2	2.03	10.03	7.85	19.91	16.37	0.00	6.66	23.03
			661	1880.0	2.32	10.03	7.86	20.21	16.81	0.00	6.66	23.47
			810	1909.8	2.20	10.04	7.88	20.12	16.68	0.00	6.67	23.35

Time based AVG Results = P/M Reading + Atten.Loss + Cable Loss

Slotted AVG Results = Agilent Reading + Cable Loss

Maximum time based AVG power mode

SAR test channel

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Output power measurement for W-CDMA

Maximum output power for W-CDMA and HSPA was verified on the high, middle and low channels according to the procedures described in section 5.2 of 3GPP TS 34.121 and "KDB 941225 document".

The WCDMA and HSPA modes of EUT were verified each channel and "sub-tests" according to Release-6 procedures in section 5.2 of 3GPP TS 34.121.

[Rel.99]

The communication test set was using a 12.2k RMC (reference measurement channel) with TPC (transmit power control) set to all "1's" configured in Test Loop Mode 1.

[HSDPA]

The communication test set was using an FRC (Fixed reference channel) with H-set 1 and 12.2kbps RMC with TPC (transmit power control) set to all "1's". Output power was measured according requirements for HS-DPCCH Sub-test 1-4.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15	15/15	64	12/15	24/15	1.0	0.0
	(Note 4)	(Note 4)		(Note 4)			
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Test Equipment Setting Summary Table

The following table is the key parameters that was configured in test equipment.

Subtest	Mode	Loopback Mode	Rel99 RMC	HSDPA FRC	HSUPA Test	Common Setting		β_c/β_d	MPR	Power Class 3 limit
						β_c	β_d			
	Rel99	Test Mode 1	12.2kbps RMC	-	-			8/15		24(+1.7/-3.7dB)
1	Rel6 HSDPA	Test Mode 1	12.2kbps RMC	H-Set 1 (HPSK)	-	2/15	15/15	2/15	0	24(+1.7/-3.7dB)
2	Rel6 HSDPA	Test Mode 1	12.2kbps RMC	H-Set 1 (HPSK)	-	12/15	15/15	12/15	0	24(+1.7/-3.7dB)
3	Rel6 HSDPA	Test Mode 1	12.2kbps RMC	H-Set 1 (HPSK)	-	15/15	8/15	15/8	0.5	23.5(+2.2/-3.7dB)
4	Rel6 HSDPA	Test Mode 1	12.2kbps RMC	H-Set 1 (HPSK)	-	15/15	4/15	15/4	0.5	23.5(+2.2/-3.7dB)

Subtest	HSDPA Specific Settings						
	Δ_{ACK}	Δ_{NACK}	Δ_{CQI}	Ack-Nack repetition factor	CQI Feedback	CQI Repetition Factor	A _{hs} = β_{hs}/β_c
Rel 6 HSDPA							
1	8	8	8	3	4ms	2	30/15
2	8	8	8	3	4ms	2	30/15
3	8	8	8	3	4ms	2	30/15
4	8	8	8	3	4ms	2	30/15

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3) WCDMA II

WCDMA II band					
Mode	Ch	Frequency [MHz]	Reading AVG [dBm]	Cable loss [dB]	Result [dBm]
RMC 12.2kbps	9262	1852.4	21.44	0.45	21.89
	9400	1880.0	21.39	0.45	21.84
	9538	1907.6	21.31	0.45	21.76
AMR	9262	1852.4	21.32	0.45	21.77
	9400	1880.0	21.20	0.45	21.65
	9538	1907.6	21.26	0.45	21.71
HSDPA Subtest1	9262	1852.4	21.28	0.45	21.73
	9400	1880.0	21.19	0.45	21.64
	9538	1907.6	21.05	0.45	21.50
HSDPA Subtest2	9262	1852.4	21.21	0.45	21.66
	9400	1880.0	21.16	0.45	21.61
	9538	1907.6	21.03	0.45	21.48
HSDPA Subtest3	9262	1852.4	21.17	0.45	21.62
	9400	1880.0	21.09	0.45	21.54
	9538	1907.6	21.03	0.45	21.48
HSDPA Subtest4	9262	1852.4	21.18	0.45	21.63
	9400	1880.0	21.09	0.45	21.54
	9538	1907.6	21.03	0.45	21.48
HSUPA Subtest1	9262	1852.4	20.63	0.45	21.08
	9400	1880.0	20.63	0.45	21.08
	9538	1907.6	20.58	0.45	21.03
HSUPA Subtest2	9262	1852.4	17.64	0.45	18.09
	9400	1880.0	17.67	0.45	18.12
	9538	1907.6	17.73	0.45	18.18
HSUPA Subtest3	9262	1852.4	18.75	0.45	19.20
	9400	1880.0	18.59	0.45	19.04
	9538	1907.6	18.73	0.45	19.18
HSUPA Subtest4	9262	1852.4	17.71	0.45	18.16
	9400	1880.0	17.56	0.45	18.01
	9538	1907.6	17.69	0.45	18.14
HSUPA Subtest5	9262	1852.4	21.11	0.45	21.56
	9400	1880.0	21.38	0.45	21.83
	9538	1907.6	21.24	0.45	21.69

Results = Reading + Loss

Maximum power mode
SAR test channel

Note: HSUPA

The enhanced power reduction may result in around 1dB of variance from the MPR target values depending on HSPA channel configuration (e.g. 34.121 subtest) and characteristics of hardware RF design.

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Output power measurement for WLAN

4) WLAN (11b/g/n(2.4G))

IEEE802.11b 1Mbps

Ch	Frequency [MHz]	P/M Reading	Cable Loss [dB]	Atten. [dB]	Result	
		AVG			[dBm] AVG	[mW] AVG
1	2412	2.84	1.00	10.01	13.85	24.27
6	2437	3.46	1.00	10.01	14.47	27.99
11	2462	3.13	1.00	10.01	14.14	25.94

Sample Calculation: Result = Reading + Cable Loss + Attenuator

2437MHz

11b Data Rate	Reading AVG [dBm]	Remark
1	6.80	*
2	6.74	
5.5	6.69	
11	6.50	

*: Worst Rate

All comparizon were carried out on same frequency and measurement factors.

IEEE802.11g 6Mbps

Ch	Frequency [MHz]	P/M Reading	Cable Loss [dB]	Atten. [dB]	Result	
		AVG			[dBm] AVG	[mW] AVG
1	2412	1.20	1.00	10.01	12.21	16.63
6	2437	0.81	1.00	10.01	11.82	15.21
11	2462	0.42	1.00	10.01	11.43	13.90

Sample Calculation: Result = Reading + Cable Loss + Attenuator

2437MHz

11g Data Rate	Reading AVG [dBm]	Remark
6	2.03	*
9	2.01	
12	1.89	
18	1.64	
24	1.41	
36	0.98	
48	0.46	
54	0.41	

*: Worst Rate

All comparizon were carried out on same frequency and measurement factors.

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IEEE802.11n-20 MCS0

Ch	Frequency [MHz]	P/M Reading	Cable Loss [dB]	Atten. [dB]	Result	
		AVG			[dBm] AVG	[mW] AVG
1	2412	0.20	1.00	10.01	11.21	13.21
6	2437	-0.25	1.00	10.01	10.76	11.91
11	2462	-0.58	1.00	10.01	10.43	11.04

Sample Calculation: Result = Reading + Cable Loss + Attenuator

2437MHz

11n-20 MCS Number	Reading AVG [dBm]	Remark
0	0.09	*
1	-0.18	
2	-0.42	
3	-0.55	
4	-1.03	
5	-1.27	
6	-1.40	
7	-1.52	

*: Worst MCS

All comparizon were carried out on same frequency and measurement factors.

5) Bluetooth

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result	
					[dBm]	[mW]
DH5	2402.0	-1.72	1.00	10.08	9.36	8.63
DH5	2441.0	-1.95	1.00	10.08	9.13	8.18
DH5	2480.0	-2.44	1.00	10.08	8.64	7.31
2DH5	2402.0	-5.23	1.00	10.08	5.85	3.85
2DH5	2441.0	-5.40	1.00	10.08	5.68	3.70
2DH5	2480.0	-6.18	1.00	10.08	4.90	3.09
3DH5	2402.0	-5.22	1.00	10.08	5.86	3.85
3DH5	2441.0	-5.42	1.00	10.08	5.66	3.68
3DH5	2480.0	-6.17	1.00	10.08	4.91	3.10

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

Bluetooth Low Energy

Freq. [MHz]	Reading AVG [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
				[dBm]	[mW]	[dBm]	[mW]	
2402	-7.81	2.23	10.03	4.45	2.79	30.00	1000	25.55
2440	-7.70	2.24	10.03	4.57	2.86	30.00	1000	25.43
2480	-8.16	2.25	10.03	4.12	2.58	30.00	1000	25.88

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

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5.3 SAR testing operating modes

The operating mode for SAR testing was decided by the output power

1) SAR measurement for GSM, W-CDMA

Position	Band	Test Frequency	Mode	Crest factor	Note
Head	GSM850	836.6MHz(190ch) *1	GSM GPRS (CS-1) 4 slots *2	8.3 2.1	*4 1)
	PCS1900	1880.0MHz(661ch) *1	GSM GPRS (CS-1) 4 slots *2	8.3 2.1	*4 1)
	WCDMA II	1852.4MHz(9262ch) 1880.0MHz(9400ch)*2 1907.6MHz(9538ch)	12.2k RMC *3	1	*4 2)
Body	GSM850	836.6MHz(190ch) *1	GSM GPRS (CS-1) 4 slots *2	8.3 2.1	*4 1)
	PCS1900	1880.0MHz(661ch) *1	GSM GPRS (CS-1) 4 slots *2	8.3 2.1	*4 1)
	WCDMA II	1880.0MHz(9400ch) *1	12.2k RMC *3	1	*4 1)
WWAN					
The communication link was set up with the Wireless Communications Test Set (Agilent M/N: E5515C). The EUT was command to operate at maximum transmit power. GSM850 :PCL 5 PCS1900 :PCL 0 W-CDMA :All up bits					

*1 The other channel was not required since maximum average output power channel SAR value is less than 0.8W/kg.

*2 The GPRS 4up mode was maximum time-based average power. The other slots SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured GPRS 4up mode.

*3 The 12.2k RMC mode was maximum average power. The AMR/HSDPA/HSUPA SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured 12.2k RMC mode.

*4

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

2) SAR measurement for WLAN

Decision of SAR test channel

The operating mode for SAR testing was decided by the output power

The average output power for 802.11a was measured on all channels in each frequency band.

Mode	GHz	Channel	"Default Test Channel"		UNII		
			FCC 15.247				
			802.11b	802.11g			
802.11 b/g/n20	2.412	1	√	Δ			
	2.437	6	√	Δ			
	2.462	11	√	Δ			
802.11a/n20	UNII	5.18	36			√	
		5.20	40				*
		5.22	44				*
		5.24	48			√	
		5.26	52			√	
		5.28	56				*
		5.30	60				*
		5.32	64			√	
		5.50	100				*
		5.52	104			√	
		5.54	108				*
		5.56	112				*
		5.58	116			√	
		5.60	120				*
		5.62	124			√	
		5.64	128				*
		5.66	132				*
	5.68	136			√		
	5.70	140				*	
	UNII or FCC 15.247	5.745	149	√		√	
5.765		153		*		*	
5.785		157	√			*	
5.805		161		*	√		
FCC 15.247	5.825	165	√				
802.11n40	UNII	5.19	38			√	
		5.23	46			√	
		5.27	54			√	
		5.31	62			√	
		5.51	102			√	
		5.55	110			√	
		5.59	118				*
		5.63	126			√	
	5.67	134			√		
	UNII or FCC 15.247	5.755	151	√		√	
FCC 15.247	5.795	159	√		√		

√ = "default test channels"

* = Possible 802.11a channels with maximum average output > the "default test channels"

Δ = Possible 802.11g channels with maximum average output ¼ dB ≥ the "default test channels"

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Position	Mode	Test Frequency	Modulation	Crest factor	Note
Head	IEEE802.11b	2437MHz(6ch) *1	DBPSK(1Mbps) *2	1	*4 1)
	Bluetooth	2402MHz(1ch) *1	GFSK(DH5) *3	1	*4 1)
Body	IEEE802.11b	2437MHz(6ch) *1	DBPSK(1Mbps) *2	1	*4 1)
	Bluetooth	2402MHz(1ch) *1	GFSK(DH5) *3	1	*4 1)

WLAN /BT setting

Power of the EUT was set by the software as follows:

H/W version: REV1.0
S/W version: S6810E.010

[Power Setting]

11b: 14 dBm

11g: 12 dBm

11n-20: 11 dBm

BT: Maximum power of the EUT was transmitted on Bluetooth testing mode.

*The above setting of the software is the worst case. Any conditions under the normal use do not exceed the condition of setting. In addition, end users cannot change the settings of the output power of the product.

*1 The other channel was not required since maximum average output power channel SAR value is less than 0.8W/kg.

*2 The 11b mode was maximum average power. The 11g/n SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured 11b mode.

*3 The DH5 mode was maximum average power. The 2DH5, 3DH5, LE SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured DH5 mode.

*4

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

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5.4 Confirmation before SAR testing

Correlation of Output Power between EMC and SAR tests

It was checked that the antenna port power was correlated within 0~+5% (FCC requirements)
SAR power is equal to DATA of EMC test based on the following reason.

- EMC and SAR tests are performed with the same test sample such as serial number under the same condition.
- EMC and SAR tests are performed at the same laboratory.

5.5 Confirmation after SAR testing

It was checked that the power drift [W] is within +/-5%. The verification of power drift during the SAR test is that DASY5 system calculates the power drift by measuring the e-field at the same location at beginning and the end of the scan measurement for each test position.

DASY5 system calculation Power drift value[dB] = $20\log(Ea)/(Eb)$

Before SAR testing : $Eb[V/m]$

After SAR testing : $Ea[V/m]$

Limit of power drift[W] = +/-5%

$X[dB]=10\log[P]=10\log(1.05/1)=10\log(1.05)-10\log(1)=0.212dB$

from E-field relations with power.

$p=E^2/\eta=E^2/$

Therefore, The correlation of power and the E-field

$XdB=10\log(P)=10\log(E)^2=20\log(E)$

Therefore,

The calculated power drift of DASY5 System must be the less than +/-0.212dB.

SECTION 6 SAR test exclusion considerations

6.1 Standalone SAR test exclusion considerations

WWAN GSM850

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion.

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of exclusion *3
<input checked="" type="checkbox"/>	Left side	848.8 [MHz] (251ch)	23.5 [dBm] 223.9 [mW]	5.0 [mm]	41.3
<input checked="" type="checkbox"/>	Right side	848.8 [MHz] (251ch)	23.5 [dBm] 223.9 [mW]	5.0 [mm]	41.3
<input checked="" type="checkbox"/>	Bottom side	848.8 [MHz] (251ch)	23.5 [dBm] 223.9 [mW]	4.0 [mm]	41.3
<input checked="" type="checkbox"/>	Front side	848.8 [MHz] (251ch)	23.5 [dBm] 223.9 [mW]	3.0 [mm]	41.3
<input checked="" type="checkbox"/>	Rear side	848.8 [MHz] (251ch)	23.5 [dBm] 223.9 [mW]	7.0 [mm]	29.5

2) At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following.

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of threshold*4
<input type="checkbox"/>	Top side	848.8 [MHz] (251ch)	23.5 [dBm] 223.9 [mW]	97.0 [mm]	428.8 [mW]

*1 The upper frequency of the frequency band was used in order to calculate standalone SAR test exclusion considerations.

*2 When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. Refer to Appendix 4.

*3 $[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$
If it is Calculation of exclusion ≤ 3.0 standalone SAR test is excluded.

*4 $[(3 \cdot 50) / (\sqrt{f(\text{GHz})})] + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz}) / 150)$ mW, at 100MHz to 1500 MHz

If it is maximum tune-up tolerance limit $<$ Threshold, standalone SAR test is excluded.

*5 Maximum tune-up tolerance limit is maximum power of GT-S6810E_7_1_1_Tune-up_procedure.

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WWAN PCS1900

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion.

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of exclusion *3
<input checked="" type="checkbox"/>	Left side	1909.8 [MHz] (810ch)	19.8 [dBm] 95.5 [mW]	5.0 [mm]	26.4
<input checked="" type="checkbox"/>	Right side	1909.8 [MHz] (810ch)	19.8 [dBm] 95.5 [mW]	5.0 [mm]	26.4
<input checked="" type="checkbox"/>	Bottom side	1909.8 [MHz] (810ch)	19.8 [dBm] 95.5 [mW]	4.0 [mm]	26.4
<input checked="" type="checkbox"/>	Front side	1909.8 [MHz] (810ch)	19.8 [dBm] 95.5 [mW]	3.0 [mm]	26.4
<input checked="" type="checkbox"/>	Rear side	1909.8 [MHz] (810ch)	19.8 [dBm] 95.5 [mW]	7.0 [mm]	18.9

2) At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following.

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of threshold*4
<input type="checkbox"/>	Top side	1909.8 [MHz] (810ch)	19.8 [dBm] 95.5 [mW]	97.0 [mm]	578.5 [mW]

*1 The upper frequency of the frequency band was used in order to calculate standalone SAR test exclusion considerations.

*2 When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. Refer to Appendix 4.

*3 $[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$
If it is Calculation of exclusion ≤ 3.0 standalone SAR test is excluded.

*4 $[(3 \cdot 50)/(\sqrt{f(\text{GHz})}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10]$ mW at > 1500 MHz and ≤ 6 GHz
If it is maximum tune-up tolerance limit $<$ Threshold, standalone SAR test is excluded.

*5 Maximum tune-up tolerance limit is maximum power of GT-S6810E_7_1_1_Tune-up_procedure.

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WWAN WCDMA II

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion.

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of exclusion *3
<input checked="" type="checkbox"/>	Left side	1907.6 [MHz] (9538ch)	21.9 [dBm] 154.88 [mW]	5.0 [mm]	42.8
<input checked="" type="checkbox"/>	Right side	1907.6 [MHz] (9538ch)	21.9 [dBm] 154.88 [mW]	5.0 [mm]	42.8
<input checked="" type="checkbox"/>	Bottom side	1907.6 [MHz] (9538ch)	21.9 [dBm] 154.88 [mW]	4.0 [mm]	42.8
<input checked="" type="checkbox"/>	Front side	1907.6 [MHz] (9538ch)	21.9 [dBm] 154.88 [mW]	3.0 [mm]	42.8
<input checked="" type="checkbox"/>	Rear side	1907.6 [MHz] (9538ch)	21.9 [dBm] 154.88 [mW]	7.0 [mm]	30.6

2) At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following.

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of threshold*4
<input type="checkbox"/>	Top side	1907.6 [MHz] (9538ch)	21.9 [dBm] 154.88 [mW]	97.0 [mm]	578.6 [mW]

*1 The upper frequency of the frequency band was used in order to calculate standalone SAR test exclusion considerations.

*2 When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. Refer to Appendix 4.

*3 $[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$

If it is Calculation of exclusion ≤ 3.0 standalone SAR test is excluded.

*4 $[(3 \cdot 50)/(\sqrt{f(\text{GHz})}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10]$ mW at > 1500 MHz and ≤ 6 GHz

If it is maximum tune-up tolerance limit $<$ Threshold, standalone SAR test is excluded.

*5 Maximum tune-up tolerance limit is maximum power of GT-S6810E_7_1_1_Tune-up_procedure.

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WLAN

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion.

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of exclusion *3
<input checked="" type="checkbox"/>	Left side	2462 [MHz] (11ch)	14.5 [dBm] 28.18 [mW]	4.0 [mm]	8.9
<input type="checkbox"/>	Top side	2462 [MHz] (11ch)	14.5 [dBm] 28.18 [mW]	17.0 [mm]	2.6
<input checked="" type="checkbox"/>	Front side	2462 [MHz] (11ch)	14.5 [dBm] 28.18 [mW]	2.3 [mm]	8.9
<input checked="" type="checkbox"/>	Rear side	2462 [MHz] (11ch)	14.5 [dBm] 28.18 [mW]	7.7 [mm]	5.7

2) At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following.

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of threshold*4
<input type="checkbox"/>	Right side	2462 [MHz] (11ch)	14.5 [dBm] 28.18 [mW]	57 [mm]	165.6 [mW]
<input type="checkbox"/>	Bottom side	2462 [MHz] (11ch)	14.5 [dBm] 28.18 [mW]	75 [mm]	345.6 [mW]

*1 The upper frequency of the frequency band was used in order to calculate standalone SAR test exclusion considerations.

*2 When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. Refer to Appendix 4.

*3 $[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$

If it is Calculation of exclusion ≤ 3.0 standalone SAR test is excluded.

*4 $[(3 \cdot 50)/(\sqrt{f(\text{GHz})}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10]$ mW at > 1500 MHz and ≤ 6 GHz

If it is maximum tune-up tolerance limit $<$ Threshold, standalone SAR test is excluded.

*5 Maximum tune-up tolerance limit is maximum power of GT-S6810E_7_1._Tune-up_procedure.

Although Top side position and Right side position are excludable, it is measuring in this report.

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Bluetooth

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$

for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion.

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of exclusion *3
<input checked="" type="checkbox"/>	Left side	2480 [MHz] (79ch)	10.5 [dBm] 11.22 [mW]	4.0 [mm]	3.6
<input type="checkbox"/>	Top side	2480 [MHz] (79ch)	10.5 [dBm] 11.22 [mW]	17.0 [mm]	1.0
<input checked="" type="checkbox"/>	Front side	2480 [MHz] (79ch)	10.5 [dBm] 11.22 [mW]	2.3 [mm]	3.6
<input type="checkbox"/>	Rear side	2480 [MHz] (79ch)	10.5 [dBm] 11.22 [mW]	7.7 [mm]	2.3

2) At 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following.

a) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · ($f(\text{MHz})/150$)] mW, at 100 MHz to 1500 MHz

b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

Standalone SAR tested	Position	Upper frequency of band *1	Maximum tune-up tolerance limit *5	Min distance *2	Calculation of threshold *4
<input type="checkbox"/>	Right side	2480 [MHz] (79ch)	10.5 [dBm] 11.22 [mW]	57 [mm]	165.3 [mW]
<input type="checkbox"/>	Bottom side	2480 [MHz] (79ch)	10.5 [dBm] 11.22 [mW]	75 [mm]	345.3 [mW]

*1 The upper frequency of the frequency band was used in order to calculate standalone SAR test exclusion considerations.

*2 When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. Refer to Appendix 4.

*3 $[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$

If it is Calculation of exclusion ≤ 3.0 standalone SAR test is excluded.

*4 $[(3 \cdot 50)/(\sqrt{f(\text{GHz})}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10]$ mW at > 1500 MHz and ≤ 6 GHz

If it is maximum tune-up tolerance limit $<$ Threshold, standalone SAR test is excluded.

*5 Maximum tune-up tolerance limit is maximum power of GT-S6810E_7_1_1_Tune-up_procedure.

Although Top side position, Rear side position and Right side position are excludable, it is measuring in this report.

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SECTION 7 : Description of the Head/Body setup

7.1 Test position for Head setup

i) Procedure for SAR testing

The EUT was tested in accordance with FCC OET Bulletin 65 Supplement C: 2001-01 and IEEE 1528: 2003 for both the “Cheek/Touch” and “Ear/Tilt” positions at the left and right sides of the SAM phantom head region. The FCC KDB 648474 D04 was also incorporated.

ii) Test mode

GSM850/PCS1900	Voice mode (GSM)/ Voip mode (GPRS)
WCDMA II	12.2k RMC
WLAN	Data transmission mode (11b)
Bluetooth	Data transmission mode (DH5)

iii) Test position

No.	Phantom	Position	WWAN		WLAN		Bluetooth	
			Tested	Antenna	Tested	Antenna	Tested	Antenna
1	Left	Cheek	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed
2	Left	Tilt	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed
3	Right	Cheek	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed
4	Right	Tilt	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed	<input checked="" type="checkbox"/>	Fixed

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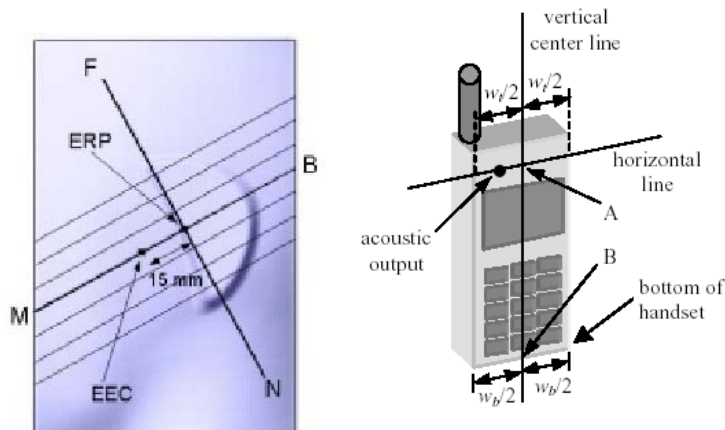
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Initial ear position

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom.

The device should be positioned parallel to the “N-F” line defined along the base of the ear spacer that contains the “ear reference point”. The “test device reference point” is aligned to the “ear reference point” on the head phantom and the “vertical centerline” is aligned to the “phantom reference plane”.

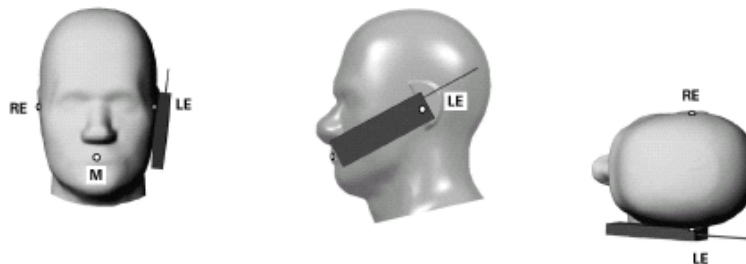


Cheek position

The device is brought toward the mouth of the head phantom by pivoting against the “ear reference point” or along the “N-F” line.

This test position is established:

- i) When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.
- ii) (or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.



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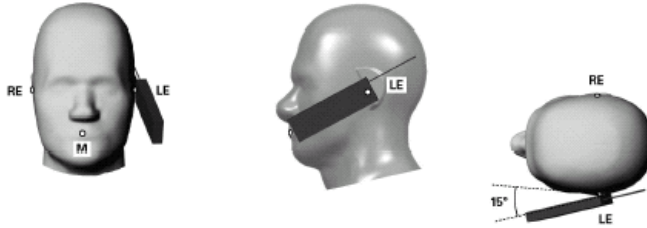
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Tilt position

If the earpiece of the handset is not in full contact with the phantom's ear spacer and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer. Otherwise the handset should be moved away from the cheek perpendicular to the line passes through both "ear reference points" for approximate 2-3 cm. While it is in this position, the handset is tilted away from the mouth with respect to the "test device reference point" by 15°. After the tilt, it is then moved back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously.



<Antenna position>

The antennas use for WWAN and WLAN are both separate in a single fixed position. The antennas are integral part of the device.

7.2 Description of the Body setup

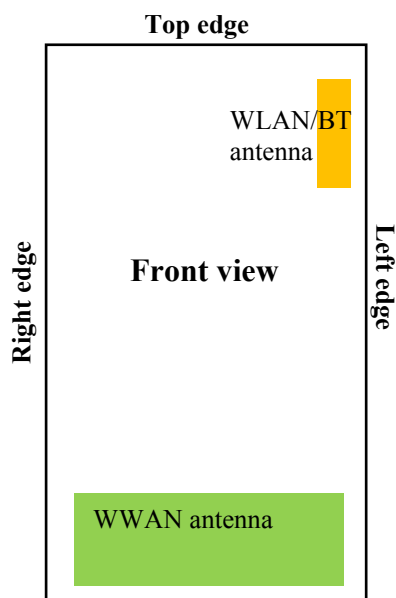
i) Procedure for SAR testing

-The tested procedure was performed according to the KDB941225 D06 (SAR Evaluation Procedures for portable Devices with Wireless Router Capabilities)

ii) Test mode

GSM850/PCS1900	Data transmission mode (GPRS)/ Voice mode (GSM)
WCDMA V/II	Data transmission mode (12.2kRMC)
WLAN	Data transmission mode (11b)
Bluetooth	Data transmission mode (DH5)

iii) Test position



<Test position>

Test position is required to the edge within 2.5cm from antenna, according to the KDB 941225 D06.

Device dimensions (HxWxD):113 x 80 x 11.5

<Antenna position>

The antennas use for WWAN and WLAN/BT are both separate in a single fixed position. The antennas are integral part of the device

No.	Position	Test distance	WWAN			WLAN			Bluetooth		
			Tested	Antenna	Separation from user	Tested	Antenna	Separation from user	Tested	Antenna	Separation from user
1	Front	10mm	<input checked="" type="checkbox"/>	Fixed	<25mm	<input checked="" type="checkbox"/>	Fixed	< 25mm	<input checked="" type="checkbox"/>	Fixed	< 25mm
2	Rear	10mm	<input checked="" type="checkbox"/>	Fixed	<25mm	<input checked="" type="checkbox"/>	Fixed	< 25mm	<input type="checkbox"/>	Fixed	< 25mm
3	Left edge	10mm	<input checked="" type="checkbox"/>	Fixed	<25mm	<input checked="" type="checkbox"/>	Fixed	< 25mm	<input checked="" type="checkbox"/>	Fixed	< 25mm
4	Right edge	10mm	<input checked="" type="checkbox"/>	Fixed	<25mm	<input type="checkbox"/>	Fixed	>25mm	<input type="checkbox"/>	Fixed	>25mm
5	Top edge	10mm	<input type="checkbox"/>	Fixed	>25mm	<input type="checkbox"/>	Fixed	< 25mm	<input type="checkbox"/>	Fixed	< 25mm
6	Bottom edge	10mm	<input checked="" type="checkbox"/>	Fixed	<25mm	<input type="checkbox"/>	Fixed	>25mm	<input type="checkbox"/>	Fixed	>25mm

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SECTION 8 : Test surrounding

8.1 Measurement uncertainty

The uncertainty budget has been determined for the DASY5 measurement system according to the SPEAG documents[2] and is given in the following Table.

<0.3 – 3GHz range>

Error Description	Uncertain value \pm	Probability distribution	divisor	(ci) lg	Standard (lg)	vi or v _{eff}
Measurement System						
Probe calibration	± 6.00	Normal	1	1	± 6.00	∞
Axial isotropy of the probe	± 4.7	Rectangular	$\sqrt{3}$	0.7	± 1.9	∞
Spherical isotropy of the probe	± 9.6	Rectangular	$\sqrt{3}$	0.7	± 3.9	∞
Boundary effects	± 1.0	Rectangular	$\sqrt{3}$	1	± 0.6	∞
Probe linearity	± 4.7	Rectangular	$\sqrt{3}$	1	± 2.7	∞
Detection limit	± 1.0	Rectangular	$\sqrt{3}$	1	± 0.6	∞
Modulation response	± 2.4	Rectangular	$\sqrt{3}$	1	± 1.4	∞
Readout electronics	± 0.3	Normal	1	1	± 0.3	∞
Response time	± 0.8	Rectangular	$\sqrt{3}$	1	± 0.5	∞
Integration time	± 2.6	Rectangular	$\sqrt{3}$	1	± 1.5	∞
RF ambient Noise	± 3.0	Rectangular	$\sqrt{3}$	1	± 1.7	∞
RF ambient Reflections	± 3.0	Rectangular	$\sqrt{3}$	1	± 1.7	∞
Probe Positioner	± 0.4	Rectangular	$\sqrt{3}$	1	± 0.2	∞
Probe positioning	± 2.9	Rectangular	$\sqrt{3}$	1	± 1.7	∞
Max.SAR Eval.	± 1.0	Rectangular	$\sqrt{3}$	1	± 0.6	∞
Test Sample Related						
Device positioning	± 2.9	Normal	1	1	± 2.9	54
Device holder uncertainty	± 3.6	Normal	1	1	± 3.6	9
Power drift	± 5.0	Rectangular	$\sqrt{3}$	1	± 2.9	∞
Power Scaling	+ 0.0	Rectangular	$\sqrt{3}$	1	± 0.0	∞
Phantom and Setup						
Phantom uncertainty	± 4.0	Rectangular	$\sqrt{3}$	1	± 2.3	∞
Liquid conductivity (target)	± 5.0	Rectangular	$\sqrt{3}$	0.64	± 1.8	∞
Liquid conductivity (meas.)	+ 4.3	Rectangular	1	0.64	+ 2.8	∞
Liquid permittivity (target)	± 5.0	Rectangular	$\sqrt{3}$	0.6	± 1.7	∞
Liquid permittivity (meas.)	- 4.7	Rectangular	1	0.6	- 2.8	∞
Liquid conductivity - temp.unc (below 2deg.C.)	± 1.7	Rectangular	$\sqrt{3}$	0.78	± 0.8	∞
Liquid permittivity - temp.unc (below 2deg.C.)	± 0.3	Rectangular	$\sqrt{3}$	0.23	± 0.0	∞
Combined Standard Uncertainty					± 11.495	
Expanded Uncertainty (k=2)					± 23.0	

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SECTION 9 : Measurement results

9.1 GSM 850MHz Head SAR

(1) Method of measurement

- Step1. The searching for the worst position
The test was performed in the middle channel.
- Step2. The changing to the DATA transmitter for VOIP mode (GPRS)
The test was performed at the worst position of Step1.

Note:

- 1) The GPRS 4up mode was maximum time-based average power. The other slots SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured GPRS 4up mode.
- 2) The other channel was not required since middle channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2) Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.
The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
22-Apr	24.0	40	HSL900	23.5	835	ϵ_r	41.5	43.2	4.2	+/-5
						σ [mho/m]	0.90	0.92	2.0	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3) Result of Head SAR

HEAD SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
190	836.6	GSM	32.70	1862.09	33.00	1995.26	Left	Fixed	Cheek	0	0.252	0.254
190	836.6	GSM	32.70	1862.09	33.00	1995.26	Left	Fixed	Tilt	0	0.133	0.134
190	836.6	GSM	32.70	1862.09	33.00	1995.26	Right	Fixed	Cheek	0	0.205	0.207
190	836.6	GSM	32.70	1862.09	33.00	1995.26	Right	Fixed	Tilt	0	0.142	0.143
Step.2 VOIP mode (GPRS)												
190	836.6	GPRS 4slots	27.11	514.04	27.50	562.34	Left	Fixed	Cheek	0	0.248	0.252

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.2 GSM 850MHz Body SAR

(1)Method of measurement

<Body (Hotspot mode)>

Step1. The searching for the worst position
The test was performed in the middle channel.

Step2. The changing to the voice mode (GSM)
The test was performed at the worst condition of Step1.

Note:

- 1) The GPRS 4up mode was maximum time-based average power. The other slots SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured GPRS 4up mode.
- 2) The other channel was not required since middle channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2)Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
22-Apr	24.0	35	MSL 900	23.5	835	ϵ_r	55.2	53.9	-2.3	+/-5
						σ [mho/m]	0.97	0.97	-0.3	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3)Result of Body SAR

BODY SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separa [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
190	836.6	GPRS 4slots	27.11	514.04	27.50	562.34	Flat	Fixed	Front	10	0.276	0.302
190	836.6	GPRS 4slots	27.11	514.04	27.50	562.34	Flat	Fixed	Rear	10	0.496	0.543
190	836.6	GPRS 4slots	27.11	514.04	27.50	562.34	Flat	Fixed	Left edge	10	0.130	0.142
190	836.6	GPRS 4slots	27.11	514.04	27.50	562.34	Flat	Fixed	Right edge	10	0.243	0.266
190	836.6	GPRS 4slots	27.11	514.04	27.50	562.34	Flat	Fixed	Bottom edge	10	0.065	0.071
Step.2 Voice mode (GSM)												
190	836.6	GSM	32.70	1862.09	33.00	1995.26	Flat	Fixed	Rear	10	0.435	0.466

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.3 PCS1900 MHz Head SAR

(1)Method of measurement

- Step1. The searching for the worst position
The test was performed in the middle channel.
- Step2. The changing to the DATA transmitter for VOIP mode (GPRS)
The test was performed at the worst position of Step1.

Note:

- 1) The GPRS 4up mode was maximum time-based average power. The other slots SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured GPRS 4up mode.
- 2) The other channel was not required since middle channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2)Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit. The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
22-Apr	24.5	43	HSL 1800	24.0	1880	εr	40.0	38.1	-4.7	+/-5
						σ [mho/m]	1.40	1.46	4.3	+/-5

εr: Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3)Result of Head SAR

HEAD SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
661	1880.0	GSM	29.05	803.53	30.00	1000.00	Left	Fixed	Cheek	0	0.553	0.688
661	1880.0	GSM	29.05	803.53	30.00	1000.00	Left	Fixed	Tilt	0	0.134	0.167
661	1880.0	GSM	29.05	803.53	30.00	1000.00	Right	Fixed	Cheek	0	0.368	0.458
661	1880.0	GSM	29.05	803.53	30.00	1000.00	Right	Fixed	Tilt	0	0.127	0.158
Step.2 VOIP mode (GPRS)												
661	1880.0	GPRS 4 slots	23.47	222.33	24.50	281.84	Left	Fixed	Cheek	0	0.512	0.649

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.4 PCS1900MHz Body SAR

(1) Method of measurement

<Body (Hotspot mode)>

Step1. The searching for the worst position

The test was performed in the middle channel.

Step2. The changing to the voice mode (GSM)

The test was performed at the worst condition of Step1.

Note:

1) The GPRS 4up mode was maximum time-based average power. The other slots SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured GPRS 4up mode.

2) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2) Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
15-May	24.0	41	MSL 1800	23.5	1880	ϵ_r	53.3	51.0	-4.3	+/-5
						σ [mho/m]	1.52	1.58	3.7	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3) Result of Body SAR

BODY SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum value of multi-peak	Maximum value of multi-peak
Step.1 Position searching												
661	1880.0	GPRS 4slots	23.47	222.33	24.50	281.84	Flat	Fixed	Front	10	0.437	0.554
661	1880.0	GPRS 4slots	23.47	222.33	24.50	281.84	Flat	Fixed	Rear	10	0.416	0.527
661	1880.0	GPRS 4slots	23.47	222.33	24.50	281.84	Flat	Fixed	Left edge	10	0.070	0.089
661	1880.0	GPRS 4slots	23.47	222.33	24.50	281.84	Flat	Fixed	Right edge	10	0.110	0.139
661	1880.0	GPRS 4slots	23.47	222.33	24.50	281.84	Flat	Fixed	Bottom edge	10	0.320	0.406
Step.2 Voice mode (GSM)												
661	1880.0	GSM	29.05	803.53	30.00	1000.00	Flat	Fixed	Front	10	0.387	0.482

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.5 WCDMA Band II Head SAR

(1) Method of measurement

- Step1. The searching for the worst position
The test was performed in the middle channel.
- Step2. The changing to the channels (Low, Mid, High)
The test was performed at the worst condition of from Step1.
- Step3 The repeating for the worst condition.

Note:

- 1) The 12.2k RMC mode was maximum average power. The AMR/HSDPA/HSUPA SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured 12.2k RMC mode.
- 2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

(2) Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit. The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
22-Apr	24.5	43	HSL 1800	24.0	1880	ϵ_r	40.0	38.1	-4.7	+/-5
						σ [mho/m]	1.40	1.46	4.3	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3) Result of Head SAR

HEAD SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separatio [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Left	Fixed	Cheek	0	1.080	1.095
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Left	Fixed	Tilt	0	0.241	0.244
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Right	Fixed	Cheek	0	0.645	0.654
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Right	Fixed	Tilt	0	0.232	0.235
Step.2 Channel change (If SAR level in Step.1 > 0.8 w/kg)												
9262	1852.4	12.2k RMC	21.89	154.53	21.90	154.88	Left	Fixed	Cheek	0	0.952	0.954
9538	1907.6	12.2k RMC	21.76	149.97	21.90	154.88	Left	Fixed	Cheek	0	0.869	0.897
Step.3 Repeated measurement												
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Left	Fixed	Cheek	0	1.020	1.034

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.6 WCDMA Band II Body SAR

(1) Method of measurement

<Body (Hotspot mode)>

Step1. The searching for the worst position

The test was performed in the middle channel.

Note:

- 1) The 12.2k RMC mode was maximum average power. The AMR/HSDPA/HSUPA SAR is not required for other mode because the maximum average output power for other mode is less than 1/4dB higher than that measured 12.2k RMC mode.
- 2) The other channel was not required since middle channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2) Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
23-Apr	24.0	38	MSL 1800	23.5	1880	ϵ_r	53.3	51.0	-4.3	+/-5
						σ [mho/m]	1.52	1.58	3.7	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3) Result of Body SAR

BODY SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Flat	Fixed	Front	10	0.746	0.756
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Flat	Fixed	Rear	10	0.744	0.754
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Flat	Fixed	Left edge	10	0.122	0.124
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Flat	Fixed	Right edge	10	0.226	0.229
9400	1880.0	12.2k RMC	21.84	152.76	21.90	154.88	Flat	Fixed	Bottom edge	10	0.540	0.548

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.7 WLAN 2.4G Head SAR

(1) Method of measurement

Step1. The searching for the worst position

The test was performed in mode of the maximum average output power

Note:

- 1) The BODY SAR is not required for 11g/n mode because the maximum average output power for 11g/n mode is less than 1/4dB higher than that measured 11b mode.
- 2) The other channel was not required since maximum average output power channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2) Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
25-Apr	24.0	43	HSL 2450	23.5	2450	ϵ_r	39.2	38.8	-0.9	+/-5
						σ [mho/m]	1.80	1.85	2.8	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3) Result of Head SAR

HEAD SAR MEASUREMENT RESULTS													
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg] Maximum of multi-peak	Scaled SAR(1g) * [W/kg] Maximum of multi-peak	
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]			
Step.1 Position searching													
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Left	Fixed	Cheek	0	0.401	0.404	
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Left	Fixed	Tilt	0	0.098	0.099	
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Right	Fixed	Cheek	0	0.126	0.127	
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Right	Fixed	Tilt	0	0.099	0.099	

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.8 WLAN 2.4G Body SAR

(1)Method of measurement

<Body (Hotspot mode)>

Step1. The searching for the worst position

The test was performed in mode of the maximum average output power

Note:

- 1)The BODY SAR is not required for 11g/n mode because the maximum average output power for 11g/n mode is less than 1/4dB higher than that measured 11b mode.
- 2)The other channel was not required since maximum average output power channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2)Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
25-Apr	24.0	43	MSL 2450	23.5	2450	ϵ_r	52.7	52.0	-1.2	+/-5
						σ [mho/m]	1.95	2.02	3.7	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3)Result of Body SAR

BODY SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Flat	Fixed	Front	10	0.082	0.082
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Flat	Fixed	Rear	10	0.317	0.319
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Flat	Fixed	Left edge	10	0.226	0.228
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Flat	Fixed	Right edge	10	0.025	0.025
6	2437	11b 1Mbps	14.47	27.99	14.50	28.18	Flat	Fixed	Top edge	10	0.061	0.062

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.9 Bluetooth Head SAR

(1) Method of measurement

Step1. The searching for the worst position

The test was performed in mode of the maximum average output power

Note:

- 1) The BODY SAR is not required for EDR and LE modes because the maximum average output power for EDR and LE modes are less than 1/4dB higher than that measured BDR mode.
- 2) The other channel was not required since maximum average output power channel SAR value is less than 0.8W/kg.
- 3) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg.

(2) Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
24-Apr	24.0	52	HSL 2450	23.5	2450	ϵ_r	39.2	40.1	2.4	+/-5
						σ [mho/m]	1.80	1.85	2.8	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3) Result of Head SAR

HEAD SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Left	Fixed	Cheek	0	0.088	0.114
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Left	Fixed	Tilt	0	0.023	0.030
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Right	Fixed	Cheek	0	0.038	0.049
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Right	Fixed	Tilt	0	0.033	0.043

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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9.10 Bluetooth Body SAR

(1)Method of measurement

<Body (Hotspot mode)>

Step1. The searching for the worst position

The test was performed in mode of the maximum average output power

Note:

1)The BODY SAR is not required for EDR and LE modes because the maximum average output power for EDR and LE modes are less than 1/4dB higher than that measured BDR mode.

2)The other channel was not required since maximum average output power channel SAR value is less than 0.8W/kg.

(2)Simulated Tissue Liquid Parameter confirmation

The dielectric parameters were checked prior to assessment using the HP85070D dielectric probe kit.

The dielectric parameters measurement is reported in each correspondent section.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
24-Apr	24.0	53	MSL 2450	23.5	2450	ϵ_r	52.7	51.8	-1.8	+/-5
						σ [mho/m]	1.95	2.00	2.5	+/-5

ϵ_r : Relative Permittivity / σ : Conductivity

*1 The Target value is a parameter defined in FCC OET65.

(3)Result of Body SAR

BODY SAR MEASUREMENT RESULTS												
Frequency		Modulation	Max power(Meas)		Upper power of spec		Phantom Section	EUT Set-up Conditions			Measured SAR(1g) [W/kg]	Scaled SAR(1g) * [W/kg]
Channel	[MHz]		[dBm]	[mW]	[dBm]	[mW]		Antenna	Position	Separation [mm]	Maximum of multi-peak	Maximum of multi-peak
Step.1 Position searching												
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Flat	Fixed	Front	10	0.00367	0.00477
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Flat	Fixed	Rear	10	0.029	0.038
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Flat	Fixed	Left edge	10	0.023	0.030
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Flat	Fixed	Right edge	10	0.00156	0.00203
1	2402	BDR(DH5)	9.36	8.63	10.50	11.22	Flat	Fixed	Top edge	10	0.00952	0.012

*Scaled SAR= Upper power of spec [mW] / Measured Max power [mW] * Measured SAR [W/kg]

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SECTION 10 : Simultaneous transmission SAR test exclusion considerations**10.1 Result of SUM Σ SAR1g of Head**

SUM Σ SAR1g (GSM850+WLAN(2.4G) or Bluetooth)						
Position	Separation [mm]	Stand alone SAR(1g) [W/kg]			SUM SAR(1g)[W/kg]	SUM SAR(1g)[W/kg]
		GSM850	WLAN 2.4G	Bluetooth	WWAN + WLAN(2.4G)	WWAN + Bluetooth
Left cheek	0	0.254	0.404	0.114	0.658	0.369
Left tilt	0	0.134	0.099	0.030	0.233	0.164
Right cheek	0	0.207	0.127	0.049	0.334	0.256
Right tilt	0	0.143	0.099	0.043	0.242	0.186

: Highest SUM Σ SAR1g Head simultaneous transmission

SUM Σ SAR1g (PCS1900+WLAN(2.4G) or Bluetooth)						
Position	Separation [mm]	Stand alone SAR(1g) [W/kg]			SUM SAR(1g)[W/kg]	SUM SAR(1g)[W/kg]
		PCS1900	WLAN 2.4G	Bluetooth	WWAN + WLAN(2.4G)	WWAN + Bluetooth
Left cheek	0	0.688	0.404	0.114	1.092	0.802
Left tilt	0	0.167	0.099	0.030	0.266	0.197
Right cheek	0	0.458	0.127	0.049	0.585	0.507
Right tilt	0	0.158	0.099	0.043	0.257	0.201

: Highest SUM Σ SAR1g Head simultaneous transmission

SUM Σ SAR1g (WCDMA II+WLAN(2.4G) or Bluetooth)						
Position	Separation [mm]	Stand alone SAR(1g) [W/kg]			SUM SAR(1g)[W/kg]	SUM SAR(1g)[W/kg]
		WCDMA II	WLAN 2.4G	Bluetooth	WWAN + WLAN(2.4G)	WWAN + Bluetooth
Left cheek	0	1.095	0.404	0.114	1.499	1.209
Left tilt	0	0.244	0.099	0.030	0.343	0.274
Right cheek	0	0.654	0.127	0.049	0.781	0.703
Right tilt	0	0.235	0.099	0.043	0.334	0.278

: Highest SUM Σ SAR1g Head simultaneous transmission

10.2 Result of SUM Σ SAR1g of Body

SUM Σ SAR1g (GSM850 +WLAN(2.4G) or Bluetooth)						
Position	Separation [mm]	Stand alone SAR(1g) [W/kg]			SUM SAR(1g)[W/kg]	SUM SAR(1g)[W/kg]
		GSM850	WLAN 2.4G	Bluetooth	WWAN + WLAN(2.4G)	WWAN + Bluetooth
Front	10	0.302	0.082	0.005	0.384	0.307
Rear	10	0.543	0.319	0.038	0.862	0.581
Left edge	10	0.142	0.228	0.030	0.370	0.172
Right edge	10	0.266	0.025	0.002	0.291	0.268
Top edge	10	-	0.062	0.012	-	-
Bottom edge	10	0.065	-	-	-	-

: Highest SUM Σ SAR1g Body simultaneous transmission

SUM Σ SAR1g (PCS1900 +WLAN(2.4G) or Bluetooth)						
Position	Separation [mm]	Stand alone SAR(1g) [W/kg]			SUM SAR(1g)[W/kg]	SUM SAR(1g)[W/kg]
		PCS1900	WLAN 2.4G	Bluetooth	WWAN + WLAN(2.4G)	WWAN + Bluetooth
Front	10	0.554	0.082	0.005	0.636	0.559
Rear	10	0.527	0.319	0.038	0.846	0.565
Left edge	10	0.089	0.228	0.030	0.317	0.119
Right edge	10	0.139	0.025	0.002	0.164	0.141
Top edge	10	-	0.062	0.012	-	-
Bottom edge	10	0.406	-	-	-	-

: Highest SUM Σ SAR1g Body simultaneous transmission

SUM Σ SAR1g (WCDMA II +WLAN(2.4G) or Bluetooth)						
Position	Separation [mm]	Stand alone SAR(1g) [W/kg]			SUM SAR(1g)[W/kg]	SUM SAR(1g)[W/kg]
		WCDMA II	WLAN 2.4G	Bluetooth	WWAN + WLAN(2.4G)	WWAN + Bluetooth
Front	10	0.756	0.082	0.005	0.839	0.761
Rear	10	0.754	0.319	0.038	1.074	0.792
Left edge	10	0.124	0.228	0.030	0.351	0.154
Right edge	10	0.229	0.025	0.002	0.254	0.231
Top edge	10	-	0.062	0.012	-	-
Bottom edge	10	0.548	-	-	-	-

: Highest SUM Σ SAR1g Body simultaneous transmission

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SECTION 11 Test instruments

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-10	Dual Power Meter	Hewlett Packard	E4419A (=EPM-442A)	GB37170359	SAR	2012/07/25 * 12
MPSE-13	Power Sensor	Hewlett Packard	ECP-E18A (=E4412A)	US37181068	SAR	2012/07/25 * 12
MPSE-14	Power Sensor	Hewlett Packard	ECP-E18A (=E4412A)	US37181064	SAR	2012/07/25 * 12
MAT-21	Attenuator(20dB)(above1 GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	SAR	2013/01/23 * 12
MSG-10	Signal Generator	Agilent	N5181A	MY47421098	SAR	2012/10/08 * 12
MRFA-12	RF Power Amplifier	MILMEGA	AS0825-65	1015249	SAR(0.8-2.5GHz)	2012/08/28 * 12
MHDC-11	Dual Directional Coupler	Hewlett Packard	778D	16605	SAR(0.1-2GHz)	Pre Check
MRFA-08	Pre Amplifier	TSJ	TCBP0206	-	SAR(2-6GHz)	2013/03/21 * 12
MHDC-12	Dual Directional Coupler	Hewlett Packard	772D	2839A0016	SAR(2-18GHz)	Pre Check
MNA-01	Network Analyzer	Agilent/HP	E8358A	US41080381	SAR	2012/09/14 * 12
MDPK-01	Dielectric probe kit	Agilent	85070D	702	SAR	2012/08/14 * 12
MNCK-01	Type N Calibration Kit	Agilent	85032F	MY41495257	SAR	2012/09/18 * 12
MPB-07	Dosimetric E-Field Probe	Schmid&Partner Engineering AG	EX3DV4	3825	SAR	2012/12/10 * 12
MDAE-01	Data Acquisition Electronics	Schmid&Partner Engineering AG	DAE4	509	SAR	2012/07/13 * 12
COTS-MSAR-03	Dasy5	Schmid&Partner Engineering AG	DASY5	-	SAR	-
COTS-MSAR-02	S-Parameter Network Analyzer	Agilent	-	-	SAR	-
MDA-05	Dipole Antenna	Schmid&Partner Engineering AG	D900V2	155	SAR	2010/12/06 * 36
MDA-06	Dipole Antenna	Schmid&Partner Engineering AG	D1800V2	2d040	SAR	2010/12/09 * 36
MDA-07	Dipole Antenna	Schmid&Partner Engineering AG	D2450V2	713	SAR	2010/09/06 * 36
MPSAM-02	SAM Phantom	Schmid&Partner Engineering AG	SAM Twin Phantom V4.0	1333	SAR	2012/05/07 * 12
MPF-02	2mmOval Flat Phantom ERI 4.0	Schmid&Partner Engineering AG	QD VA 001B (ERI4.0)	1045	SAR	2012/05/08 * 12
MDH-01	Device holder	Schmid&Partner Engineering AG	Mounting device for transmitter	-	SAR	Pre Check
MOS-26	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q29	SAR	2012/05/14 * 12
MOS-10	Digital thermometer	HANNA	Checktemp-2	MOS-10	SAR	2012/08/06 * 12
MBM-13	Barometer	Sunoh	SBR121	837	SAR	2011/03/14 * 36
HSL900					Daily check	Target value ± 5%
MSL900					Daily check	Target value ± 5%
HSL1800					Daily check	Target value ± 5%
MSL1800					Daily check	Target value ± 5%
HSL2450					Daily check	Target value ± 5%
MSL2450					Daily check	Target value ± 5%
SAR room					Daily check	Ambient Noise<0.012W/kg

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Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-08	Power Meter	Anritsu	ML2495A	6K00003338	Power measurement	2012/10/08 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	011737	Power measurement	2012/10/08 * 12
MCC-66	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28636/2	Power measurement	2013/04/17 * 12
MAT-25	Attenuator(10dB) (above1GHz)	Agilent	8493C	71642	Power measurement	2012/06/27 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	Power measurement	2013/02/26 * 12
MAT-24	Attenuator(10dB)(above1 GHz)	Agilent	8493C	71389	Power measurement	2012/06/27 * 12
MPM-13	Power Meter	Anritsu	ML2495A	0824014	Power measurement	2012/11/26 * 12
MPSE-18	Power sensor	Anritsu	MA2411B	0738174	Power measurement	2012/11/26 * 12
MAT-23	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	Power measurement	2013/03/21 * 12
MURC-02	Wireless Communication Test Set	Agilent	E5515C	GB47050683	Power measurement	2012/12/19 * 12
MCC-137	Microwave cable	HUBER+SUHNER	SUCOFLEX 102	37954/2	Power measurement	2012/10/19 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	Power measurement	2013/02/26 * 12
MDPS-20	REGULATED DC POWER SUPPLY	TEXIO	PW16-5ADP	171116437	Power measurement	Pre Check
MPD-01	PowerDivider DC to 26.5GHz	Agilent	11636B	52258	Power measurement	2013/03/28 * 12
MAT-25	Attenuator(10dB) (above1GHz)	Agilent	8493C	71642	Power measurement	2012/06/27 * 12
MURC-05	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	127576	Power measurement	2012/10/04 * 12

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

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APPENDIX 1 : SAR Measurement data

1. Evaluation procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the E-field at a fixed location above the ear point or central position of flat phantom was used as a reference value for assessing the power drop.

Step 2: The SAR distribution at the exposed side of head or body position was measured at a distance of each device from the inner surface of the shell. The area covered the entire dimension of the antenna of EUT and the horizontal grid spacing was 15 mm x 15 mm, 12 mm x 12 mm or 10mm x 10mm. Based on these data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Around this point found in the Step 2 (area scan), a volume of 30mm x 30mm x 30mm or more was assessed by measuring 7 x 7 x 7 points at least for below 3GHz.

And for any secondary peaks found in the Step2 which are within 2dB of maximum peak and not with this Step3 (Zoom scan) is repeated. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

(1). The data at the surface were extrapolated, since the center of the dipoles is 1mm(EX3DV4) away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm [4]. A polynomial of the fourth order was calculated through the points in z-axes.

This polynomial was then used to evaluate the points between the surface and the probe tip.

(2). The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the "Not a knot"-condition (in x, y and z-directions) [4], [5]. The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

(3). All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the E-field at the same location as in Step 1.

2. Measurement data

i) GSM850 Head

GT-S6810E GSM850 Left cheek 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 43.21$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.5, 9.5, 9.5); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.300 W/kg

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

Reference Value = 5.081 V/m; Power Drift = -0.06 dB

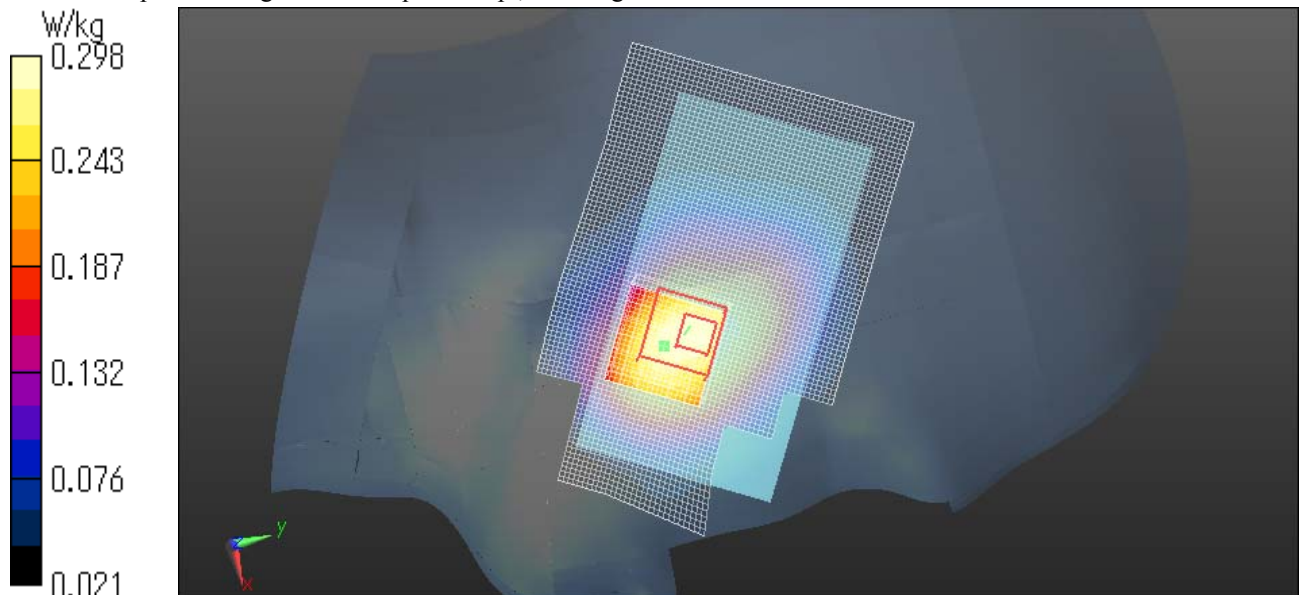
Peak SAR (extrapolated) = 0.338 W/kg

SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.177 W/kg

Maximum value of SAR (measured) = 0.298 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Head SAR position in GSM band

GT-S6810E GSM850 Left cheek 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 43.21$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.5, 9.5, 9.5); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

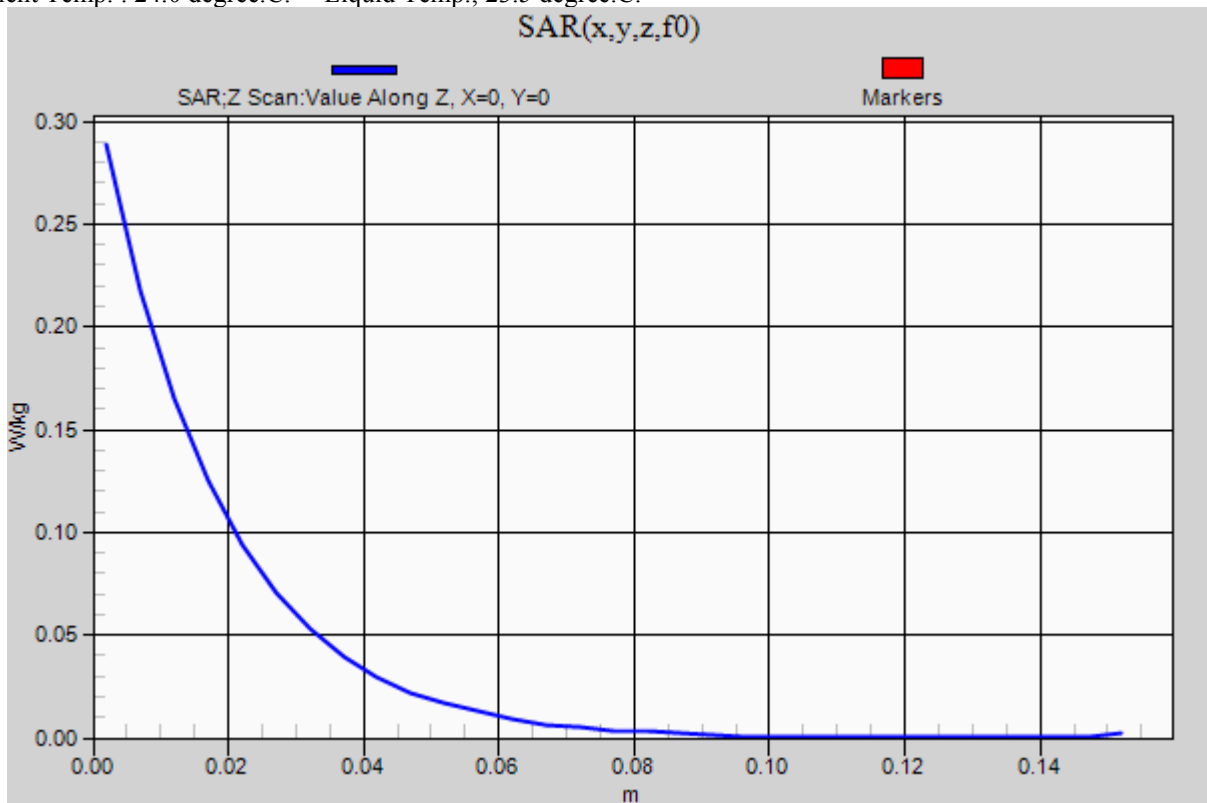
Measurement SW: DASYS2, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.289 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 Left tilt 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 43.21$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.5, 9.5, 9.5); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.152 W/kg

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

Reference Value = 8.604 V/m; Power Drift = 0.09 dB

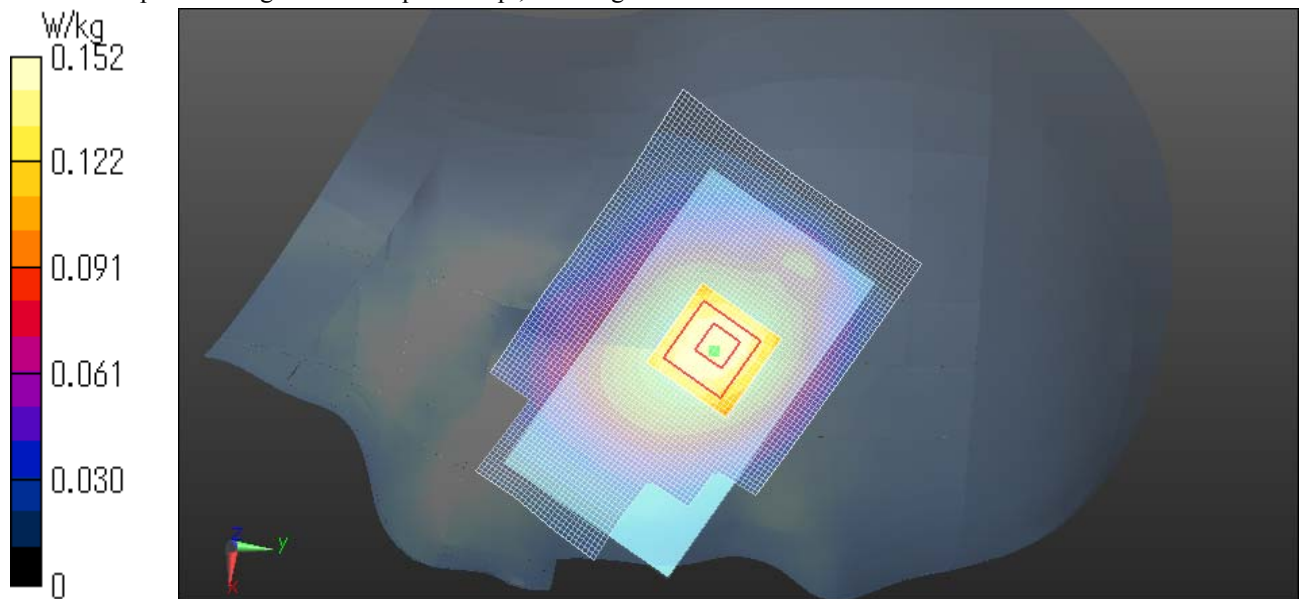
Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.100 W/kg

Maximum value of SAR (measured) = 0.153 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 Right cheek 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 43.21$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.5, 9.5, 9.5); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.246 W/kg

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

Reference Value = 5.275 V/m; Power Drift = -0.18 dB

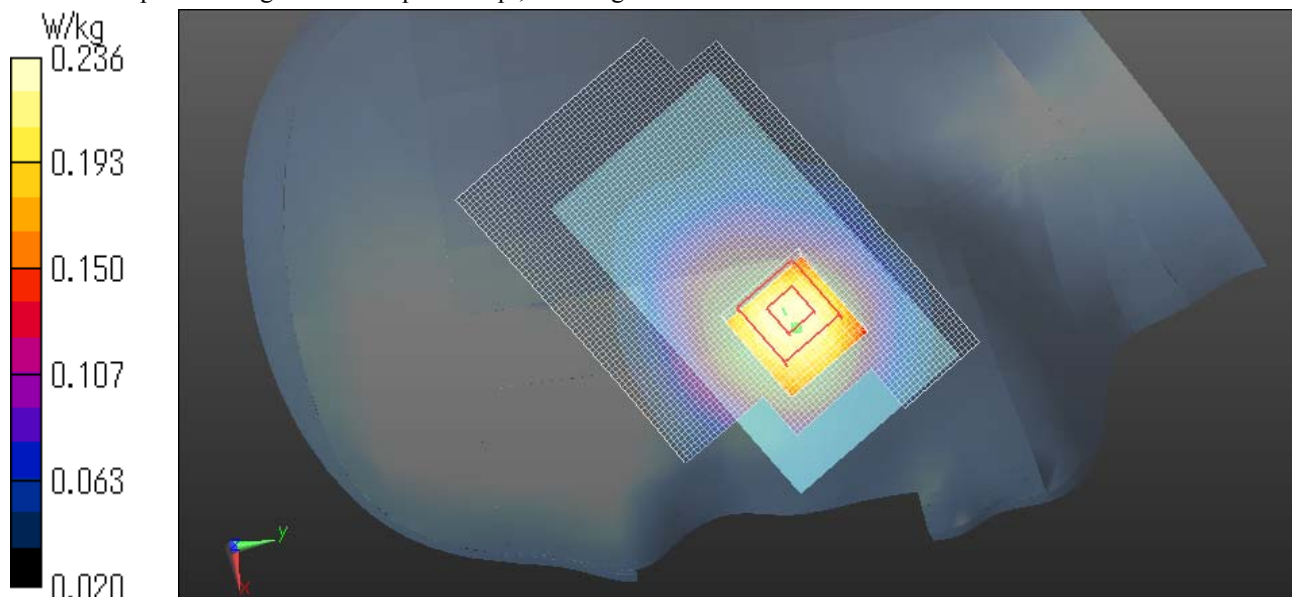
Peak SAR (extrapolated) = 0.258 W/kg

SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.152 W/kg

Maximum value of SAR (measured) = 0.236 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 Right tilt 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 43.21$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.5, 9.5, 9.5); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.166 W/kg

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

Reference Value = 9.993 V/m; Power Drift = -0.06 dB

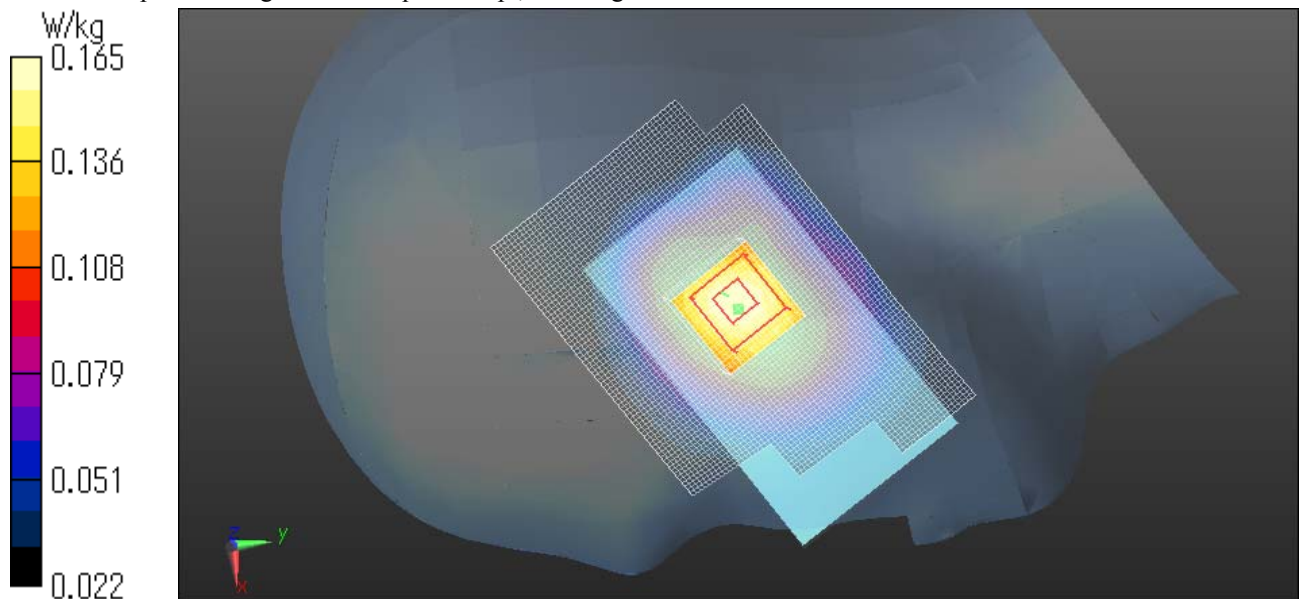
Peak SAR (extrapolated) = 0.183 W/kg

SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.106 W/kg

Maximum value of SAR (measured) = 0.165 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 GPRS 4slots Left side cheek 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:8.30042

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ mho/m; $\epsilon_r = 43.21$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.5, 9.5, 9.5); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.341 W/kg

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

Reference Value = 5.606 V/m; Power Drift = -0.15 dB

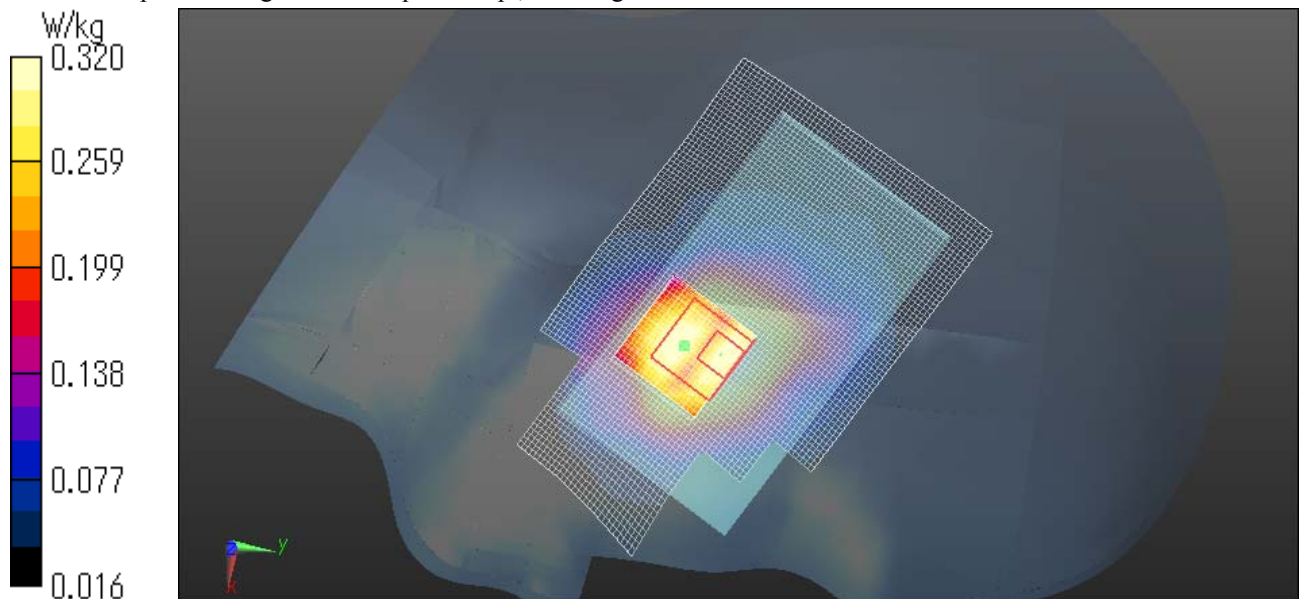
Peak SAR (extrapolated) = 0.479 W/kg

SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.181 W/kg

Maximum value of SAR (measured) = 0.320 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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ii) **GSM850 Body**

GT-S6810E GSM850 GPRS 4slots Front 10mm 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.255 W/kg

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

Reference Value = 2.354 V/m; Power Drift = 0.18 dB

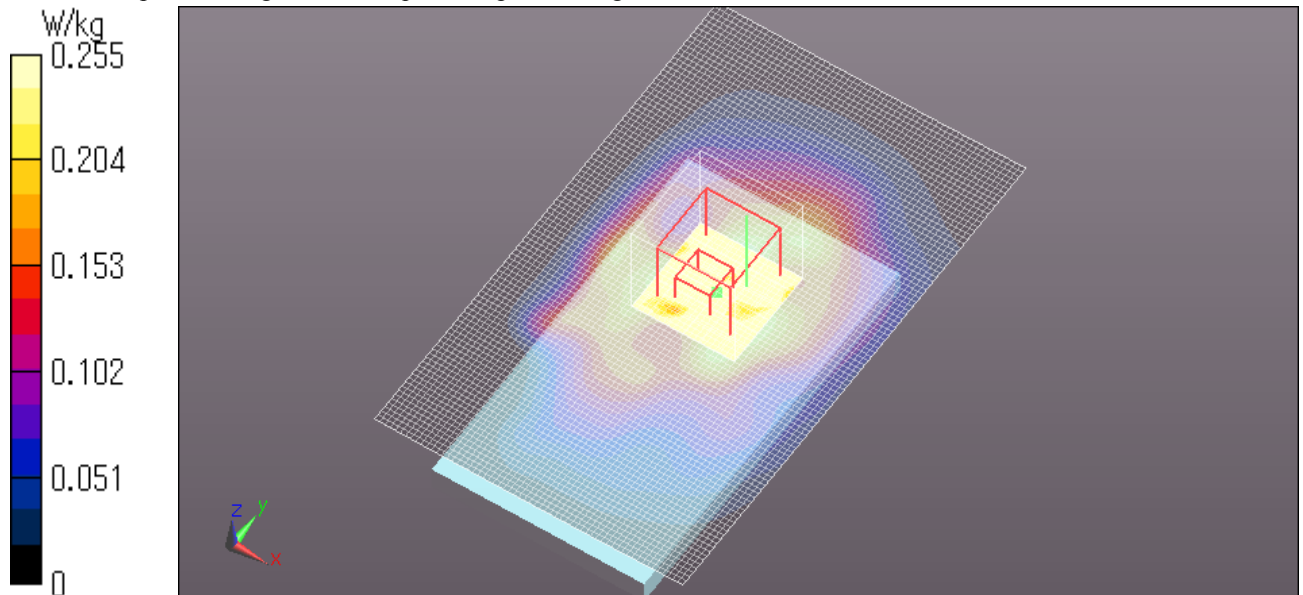
Peak SAR (extrapolated) = 0.404 W/kg

SAR(1 g) = 0.276 W/kg; SAR(10 g) = 0.197 W/kg

Maximum value of SAR (measured) = 0.336 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



GT-S6810E GSM850 GPRS 4slots Rear 10mm 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.652 W/kg

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

Reference Value = 26.904 V/m; Power Drift = -0.14 dB

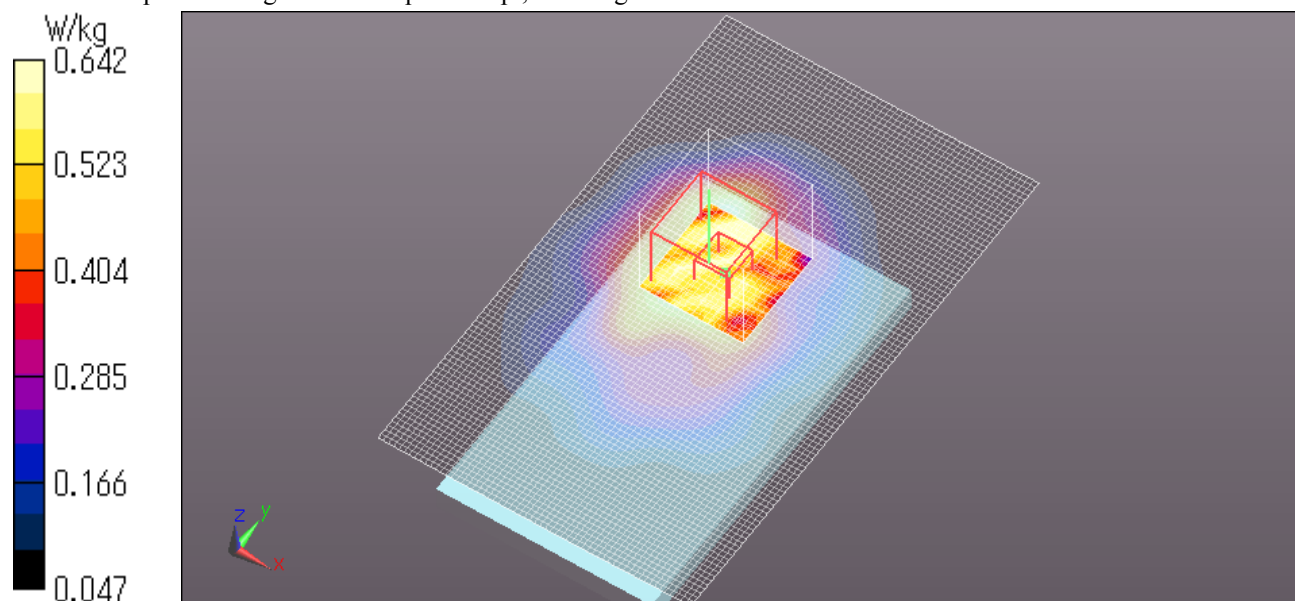
Peak SAR (extrapolated) = 0.861 W/kg

SAR(1 g) = 0.496 W/kg; SAR(10 g) = 0.345 W/kg

Maximum value of SAR (measured) = 0.642 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Body SAR position in GSM band

GT-S6810E GSM850 GPRS 4slot Rear 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

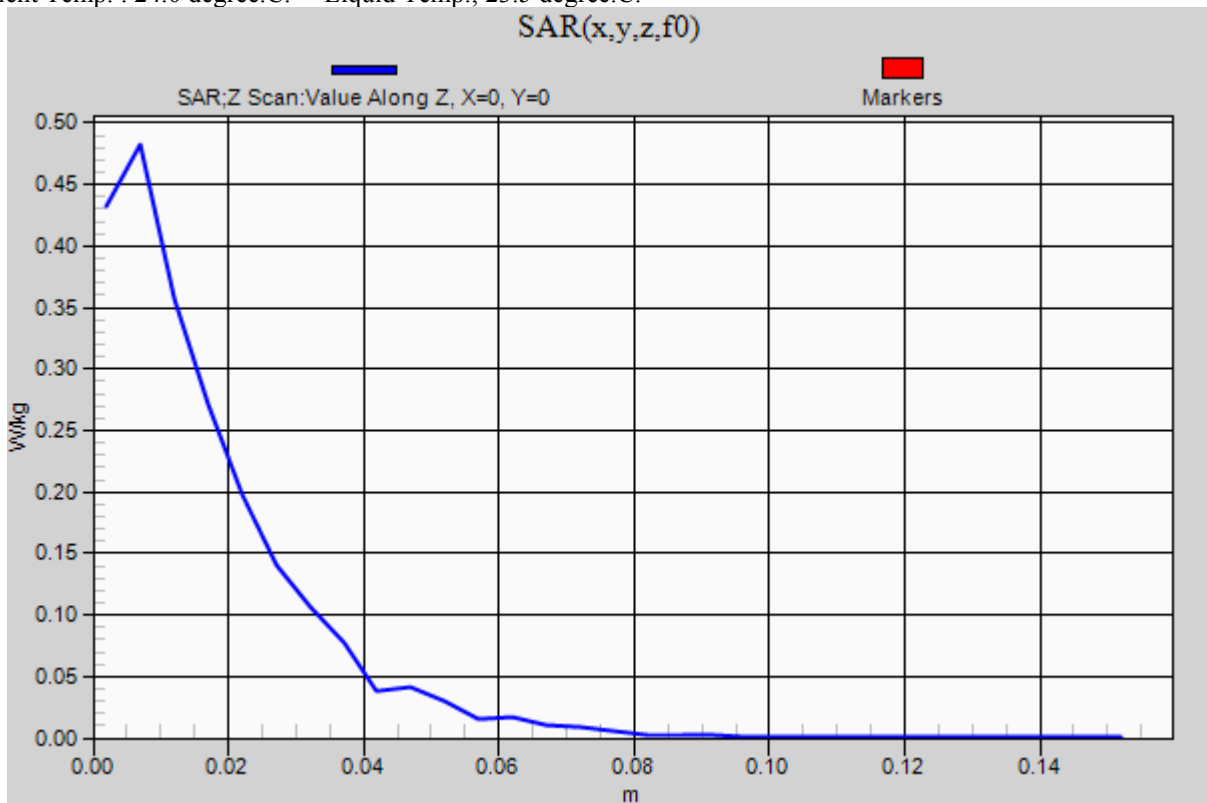
Measurement SW: DASYS2, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.482 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 GPRS 4slots Left edge 10mm 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.175 W/kg

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

Reference Value = 13.348 V/m; Power Drift = -0.08 dB

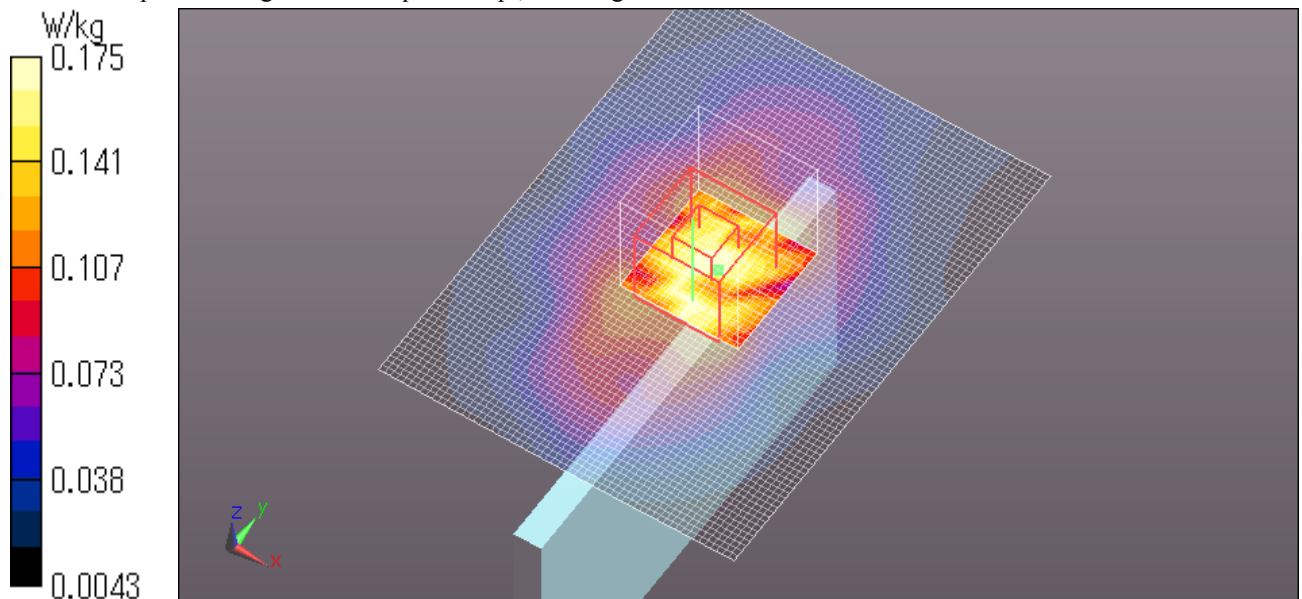
Peak SAR (extrapolated) = 0.238 W/kg

SAR(1 g) = 0.130 W/kg; SAR(10 g) = 0.088 W/kg

Maximum value of SAR (measured) = 0.172 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 GPRS 4slots Right edge 10mm 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.327 W/kg

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

Reference Value = 18.765 V/m; Power Drift = -0.08 dB

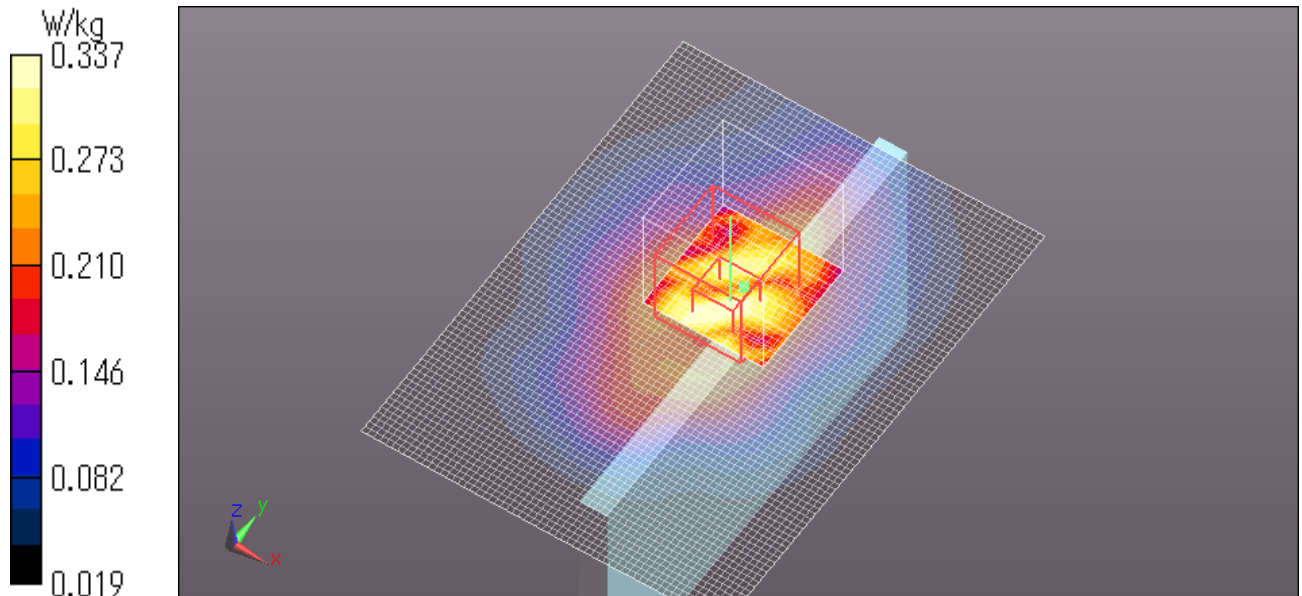
Peak SAR (extrapolated) = 0.412 W/kg

SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.166 W/kg

Maximum value of SAR (measured) = 0.337 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 GPRS 4slot Bottom edge 10mm 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.108 W/kg

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

Reference Value = 7.281 V/m; Power Drift = -0.17 dB

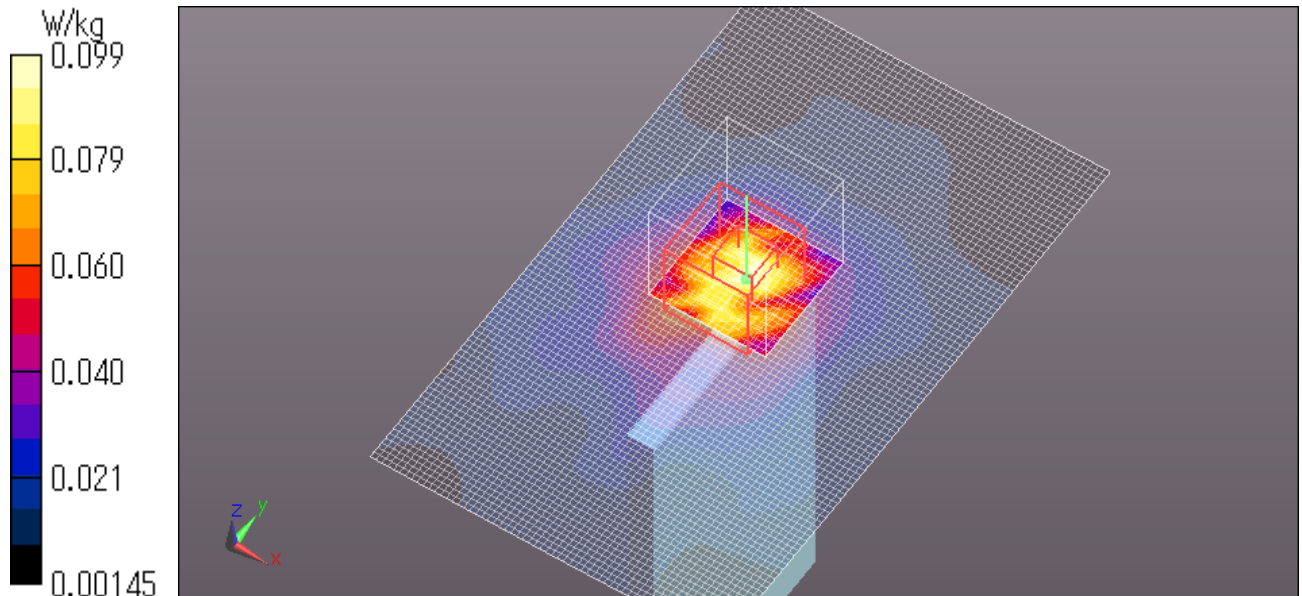
Peak SAR (extrapolated) = 0.154 W/kg

SAR(1 g) = 0.065 W/kg; SAR(10 g) = 0.041 W/kg

Maximum value of SAR (measured) = 0.0988 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E GSM850 Rear 10mm 836.6MHz

Communication System: GSM850; Communication System Band: Exported from older format (data unavailable - please correct).; Frequency: 836.6 MHz; Duty Cycle: 1:2.09991

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.969$ mho/m; $\epsilon_r = 53.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(9.55, 9.55, 9.55); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.530 W/kg

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

Reference Value = 21.840 V/m; Power Drift = -0.11 dB

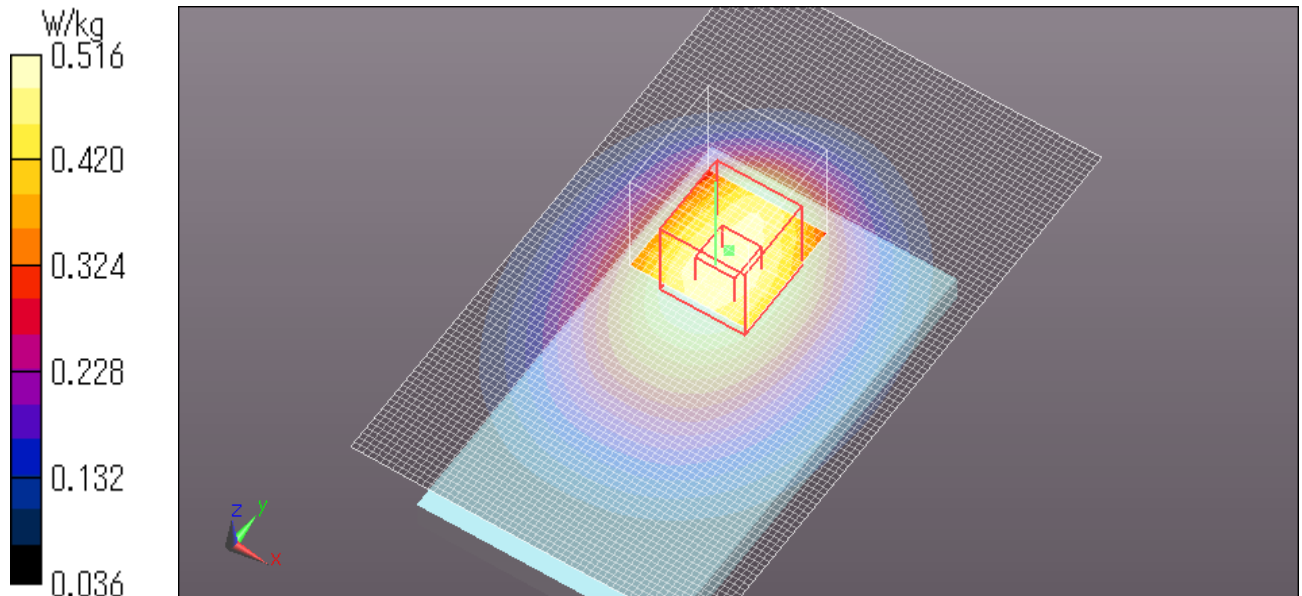
Peak SAR (extrapolated) = 0.588 W/kg

SAR(1 g) = 0.435 W/kg; SAR(10 g) = 0.313 W/kg

Maximum value of SAR (measured) = 0.516 W/kg

Date: 2013/04/22

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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iii) PCS1900 Head

GT-S6810E PCS1900 GSM Left cheek 1880.0MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS52, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.751 W/kg

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

Reference Value = 7.605 V/m; Power Drift = 0.12 dB

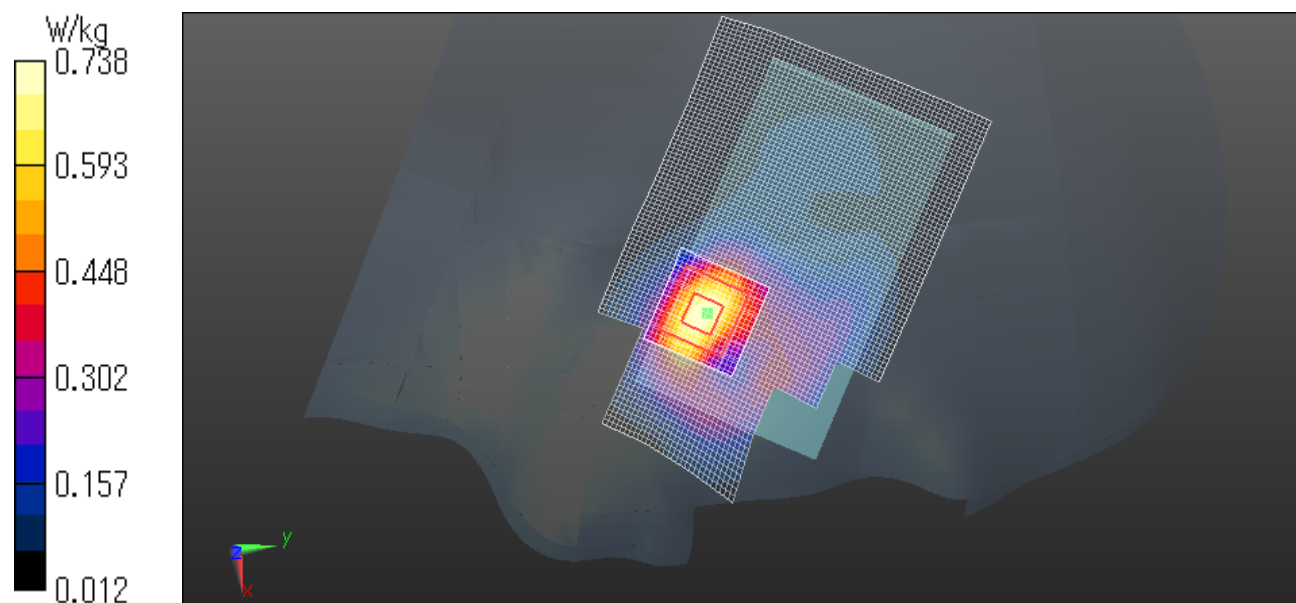
Peak SAR (extrapolated) = 0.933 W/kg

SAR(1 g) = 0.553 W/kg; SAR(10 g) = 0.293 W/kg

Maximum value of SAR (measured) = 0.738 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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Z Scan at Maximum Head SAR position in PCS1900 band

GT-S6810E PCS1900 GSM Left cheek 1880.0MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

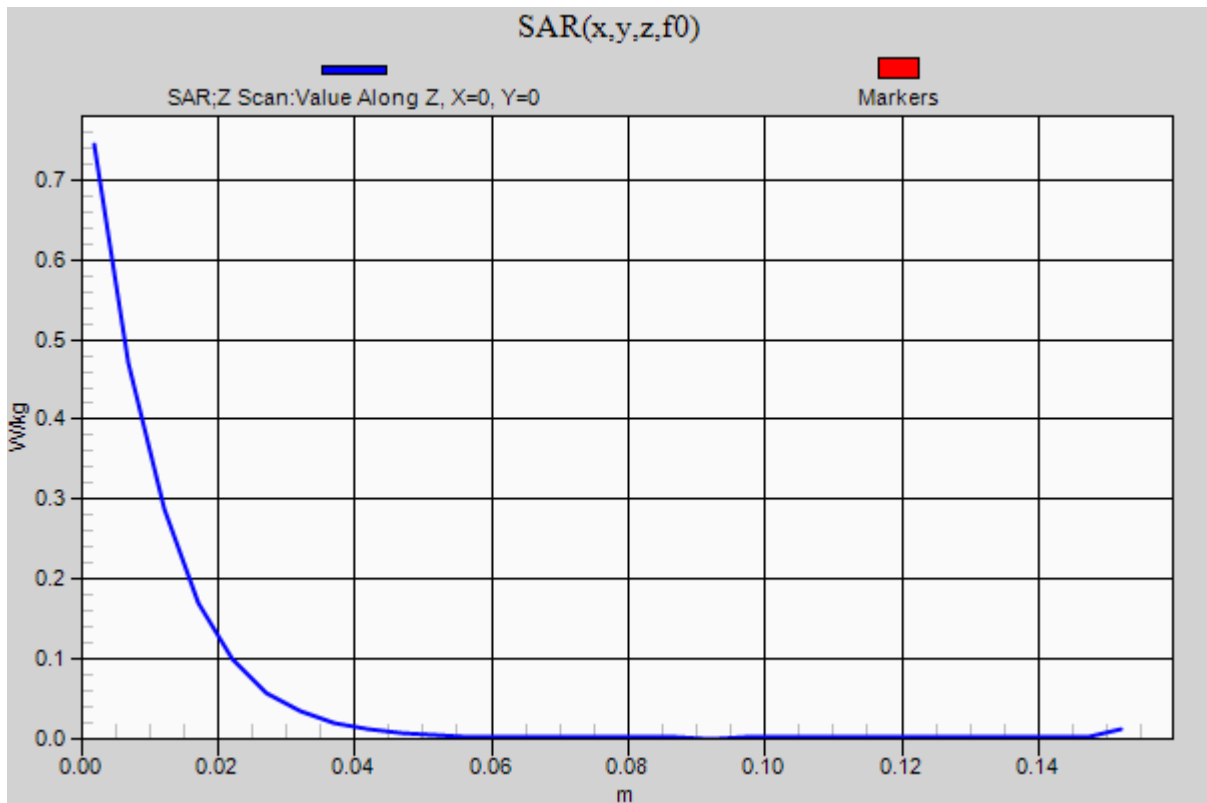
Measurement SW: DASYS2, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.745 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E PCS1900 GSM Left tilt 1880.0MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.179 W/kg

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

Reference Value = 10.536 V/m; Power Drift = 0.15 dB

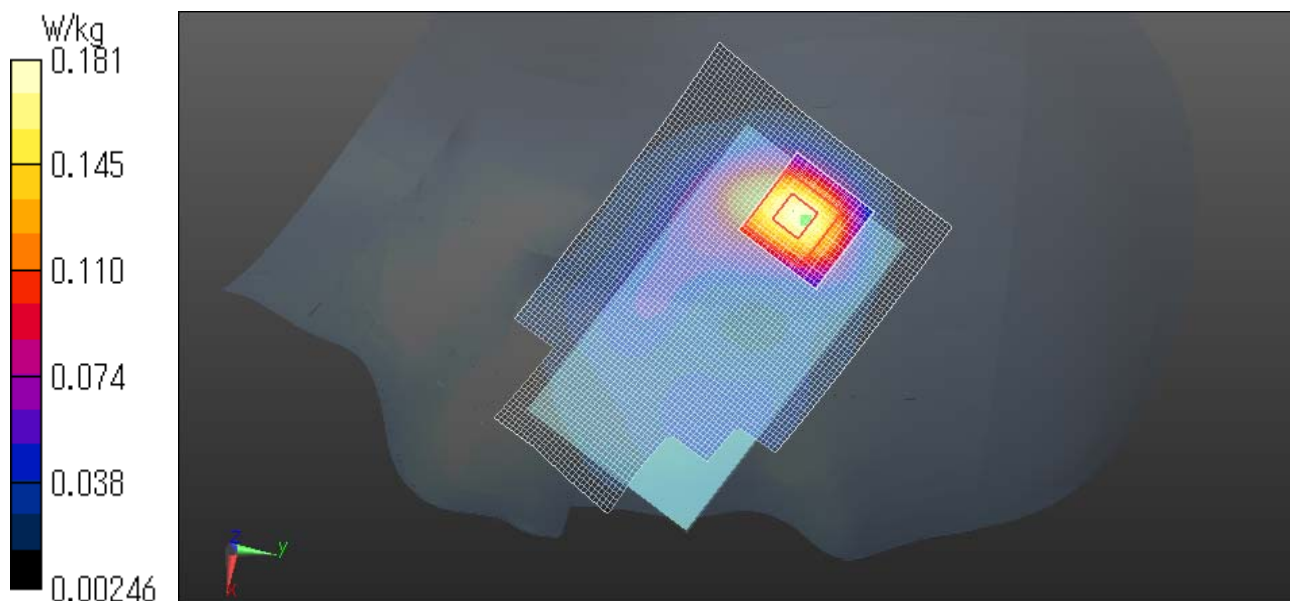
Peak SAR (extrapolated) = 0.226 W/kg

SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.076 W/kg

Maximum value of SAR (measured) = 0.181 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E PCS1900 GSM Right cheek 1880.0MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.463 W/kg

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

Reference Value = 6.727 V/m; Power Drift = 0.06 dB

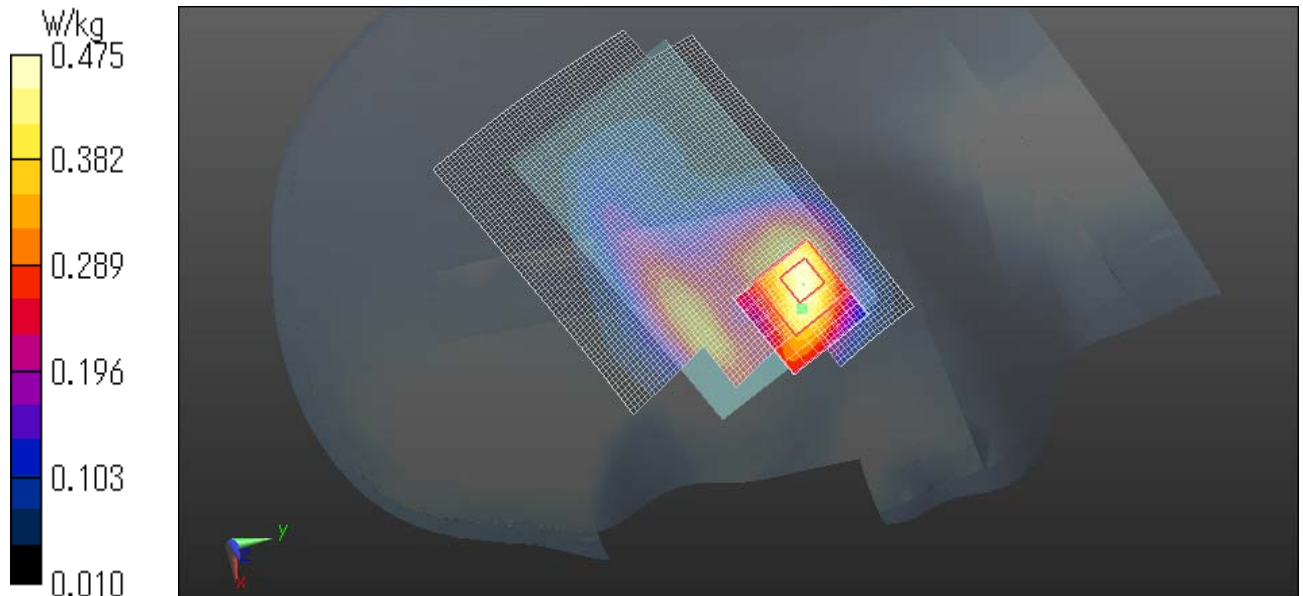
Peak SAR (extrapolated) = 0.554 W/kg

SAR(1 g) = 0.368 W/kg; SAR(10 g) = 0.213 W/kg

Maximum value of SAR (measured) = 0.475 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E PCS1900 GSM Right tilt 1880.0MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.195 W/kg

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

Reference Value = 10.503 V/m; Power Drift = 0.19 dB

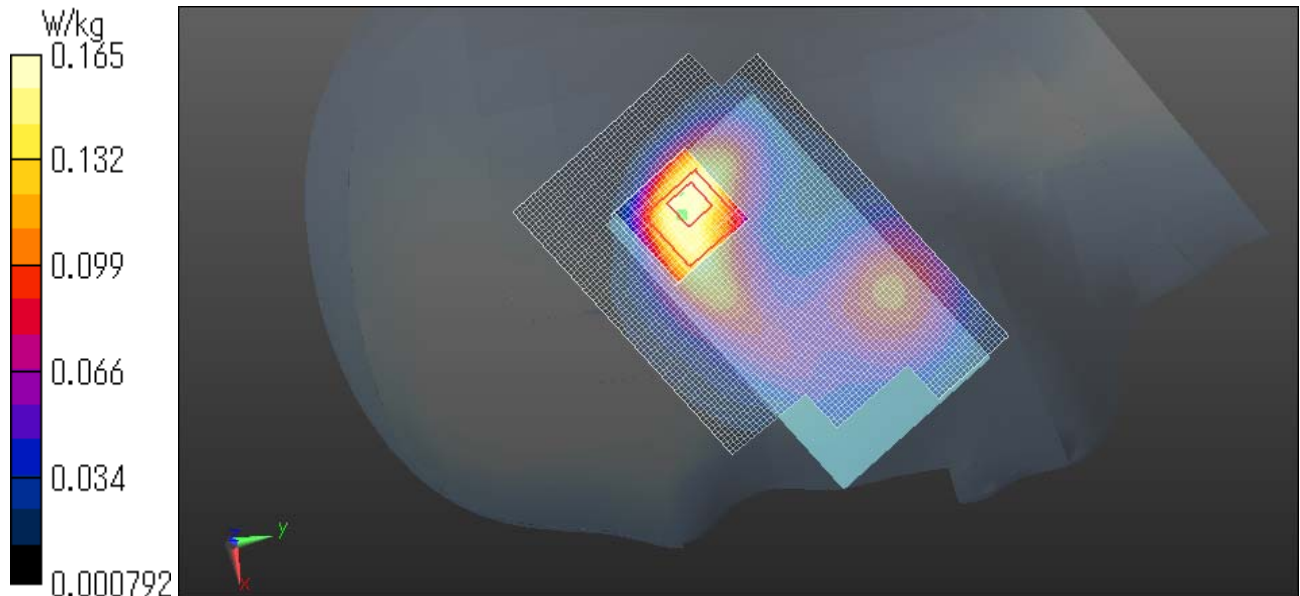
Peak SAR (extrapolated) = 0.203 W/kg

SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.077 W/kg

Maximum value of SAR (measured) = 0.165 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E PCS1900 GPRS 4slot Left cheek 1880.0MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.679 W/kg

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

Reference Value = 7.546 V/m; Power Drift = 0.06 dB

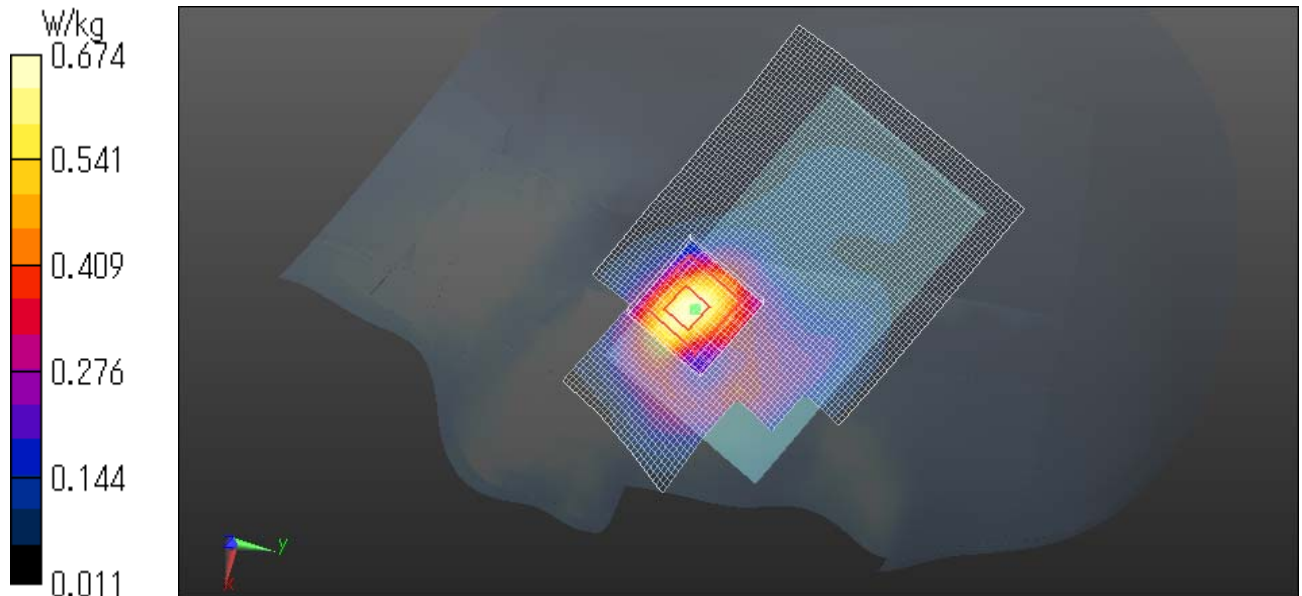
Peak SAR (extrapolated) = 0.840 W/kg

SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.275 W/kg

Maximum value of SAR (measured) = 0.674 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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iv) **PCS1900 Body**

GT-S6810E PCS1900 GPRS 4slot Front 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.595 W/kg

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

Reference Value = 9.247 V/m; Power Drift = 0.17 dB

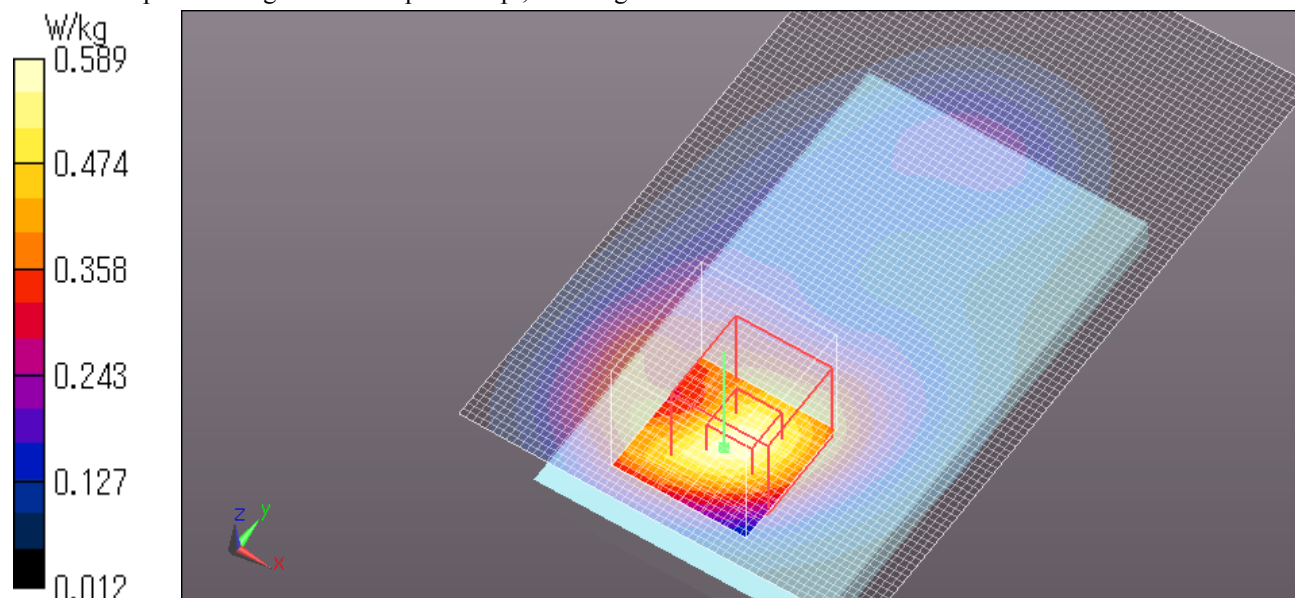
Peak SAR (extrapolated) = 0.727 W/kg

SAR(1 g) = 0.437 W/kg; SAR(10 g) = 0.252 W/kg

Maximum value of SAR (measured) = 0.589 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Body SAR position in PCS1900 band

GT-S6810E PCS1900 GPRS 4slot Front 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

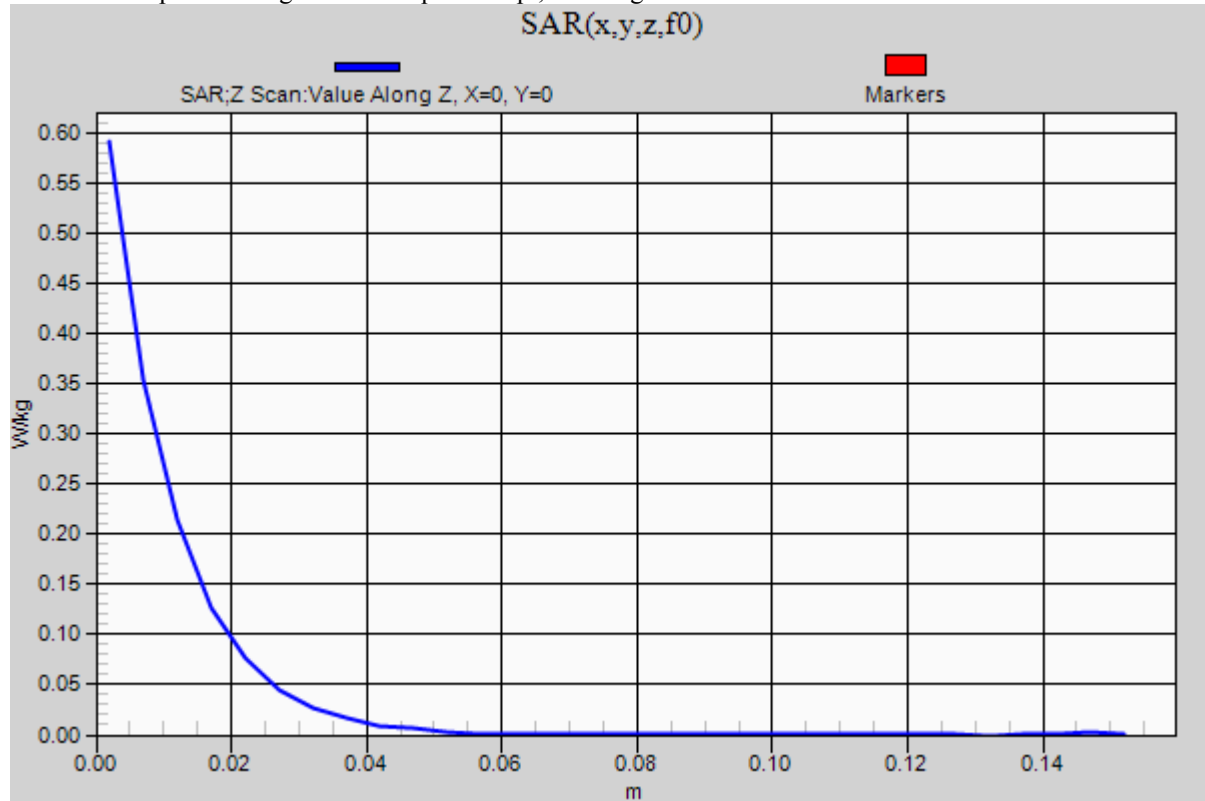
Measurement SW: DASYS2, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.590 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E PCS1900 GPRS 4slot Rear 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.542 W/kg

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

Reference Value = 11.576 V/m; Power Drift = 0.14 dB

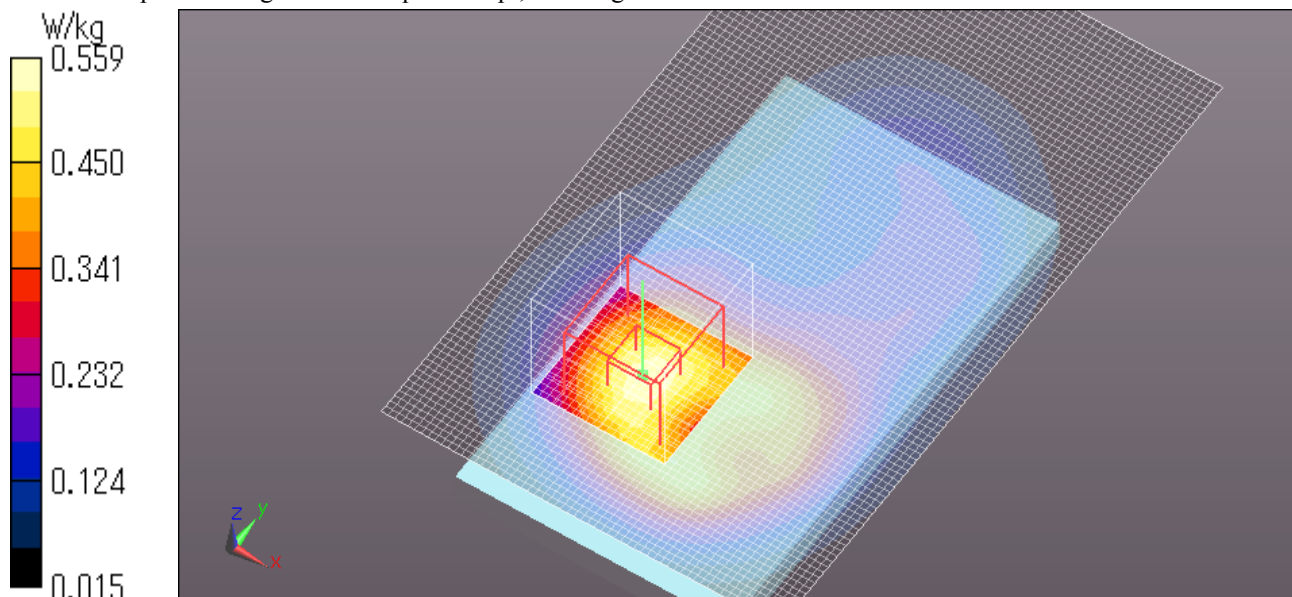
Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.416 W/kg; SAR(10 g) = 0.242 W/kg

Maximum value of SAR (measured) = 0.559 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E PCS1900 GPRS 4slot Left side 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan 2 2 (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0958 W/kg

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

Reference Value = 6.686 V/m; Power Drift = -0.05 dB

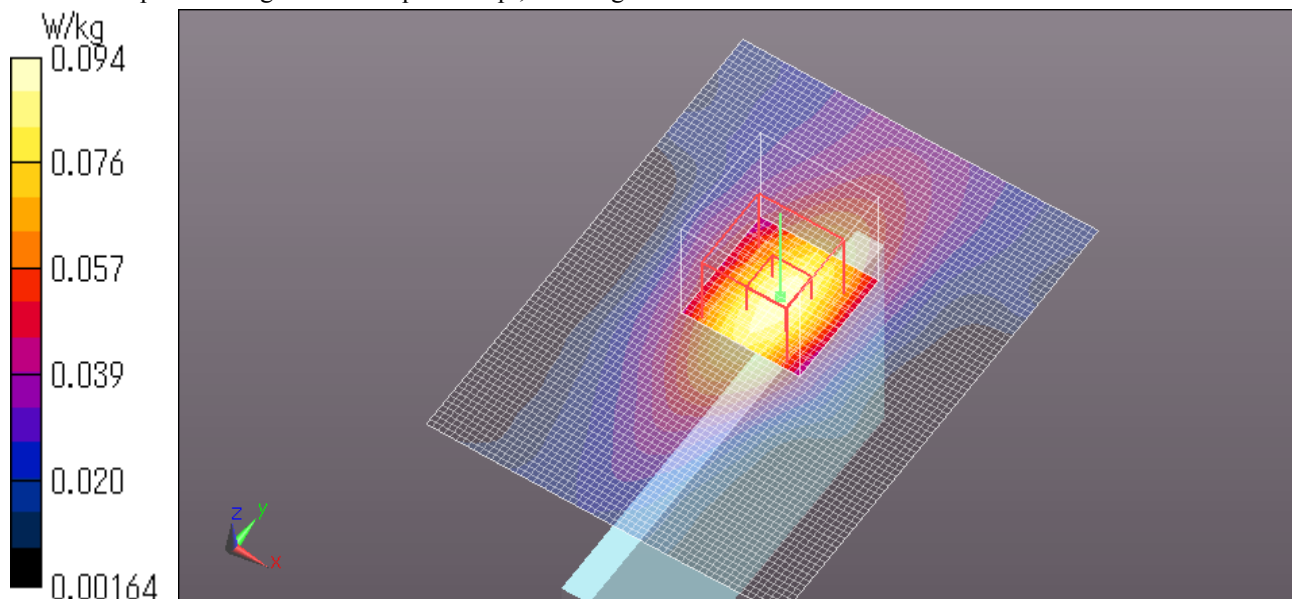
Peak SAR (extrapolated) = 0.116 W/kg

SAR(1 g) = 0.070 W/kg; SAR(10 g) = 0.041 W/kg

Maximum value of SAR (measured) = 0.0943 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E PCS1900 GPRS 4slot Right side 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

Measurement SW: DASY52, Version 52.8 (3);

Area Scan 2 2 (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.149 W/kg

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

Reference Value = 9.431 V/m; Power Drift = -0.18 dB

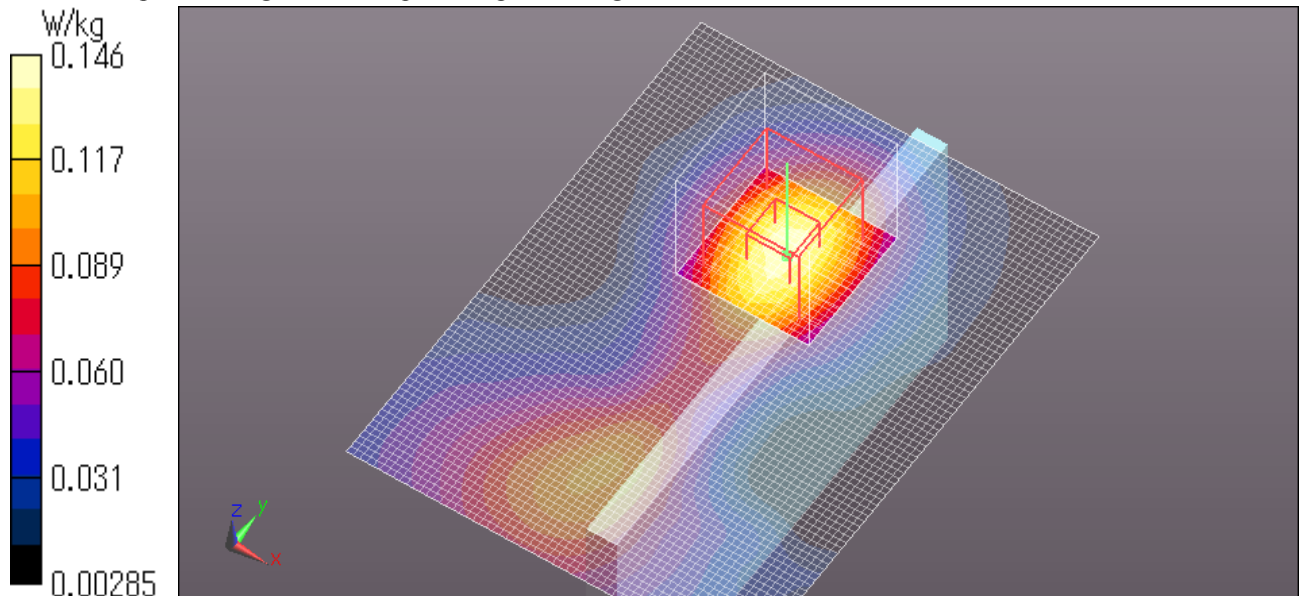
Peak SAR (extrapolated) = 0.178 W/kg

SAR(1 g) = 0.110 W/kg; SAR(10 g) = 0.064 W/kg

Maximum value of SAR (measured) = 0.146 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E PCS1900 GPRS 4slot Bottom 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:2.09991

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan 2 (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.411 W/kg

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

Reference Value = 14.837 V/m; Power Drift = 0.06 dB

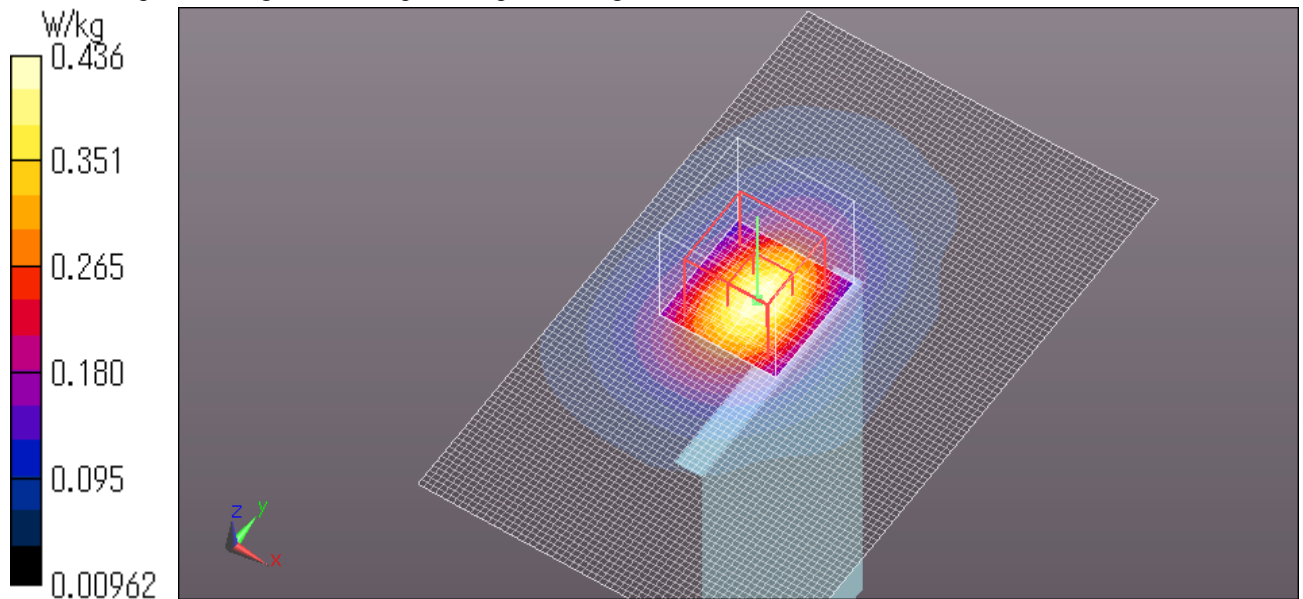
Peak SAR (extrapolated) = 0.536 W/kg

SAR(1 g) = 0.320 W/kg; SAR(10 g) = 0.177 W/kg

Maximum value of SAR (measured) = 0.436 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E PCS1900 GSM Front 1880MHz

Communication System: PCS1900; Communication System Band: PCS1900; Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.576$ mho/m; $\epsilon_r = 51.029$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10; \${Probe: Calibration Date}

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA; Serial: xxxx

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.523 W/kg

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

Reference Value = 8.973 V/m; Power Drift = 0.05 dB

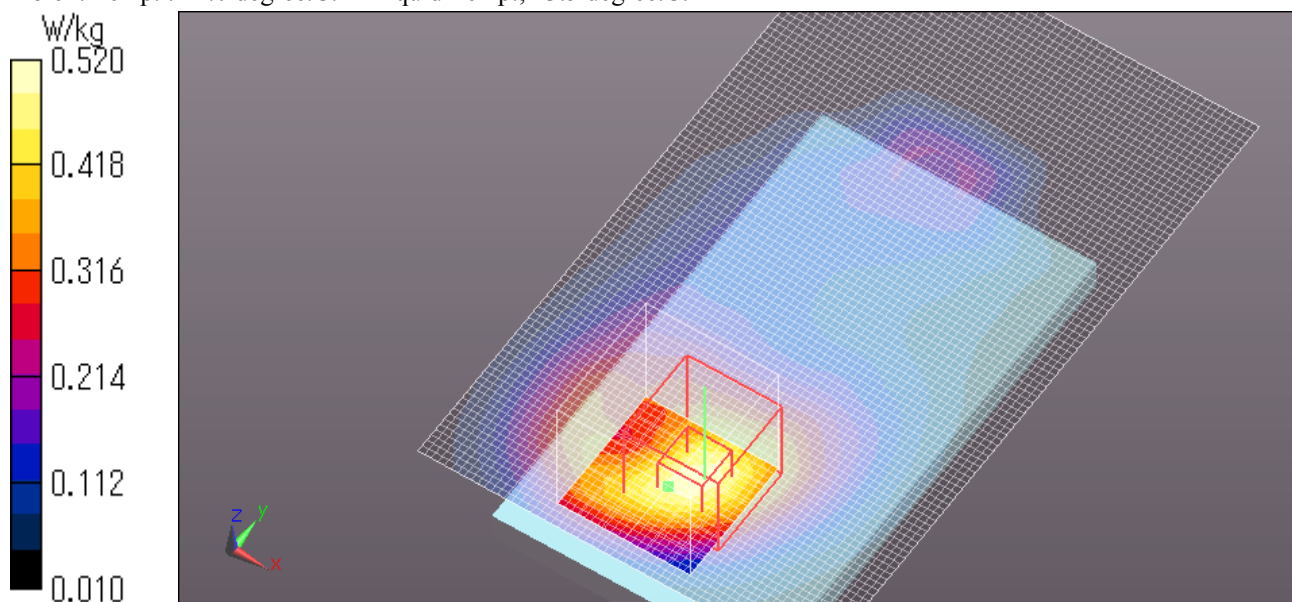
Peak SAR (extrapolated) = 0.634 W/kg

SAR(1 g) = 0.387 W/kg; SAR(10 g) = 0.223 W/kg

Maximum value of SAR (measured) = 0.520 W/kg

Date: 2013/05/15

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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v) WCDMA II Head

GT-S6810E WCDMA Band II RMC 12.2k Left cheek 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.44 W/kg

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

Reference Value = 10.527 V/m; Power Drift = -0.01 dB

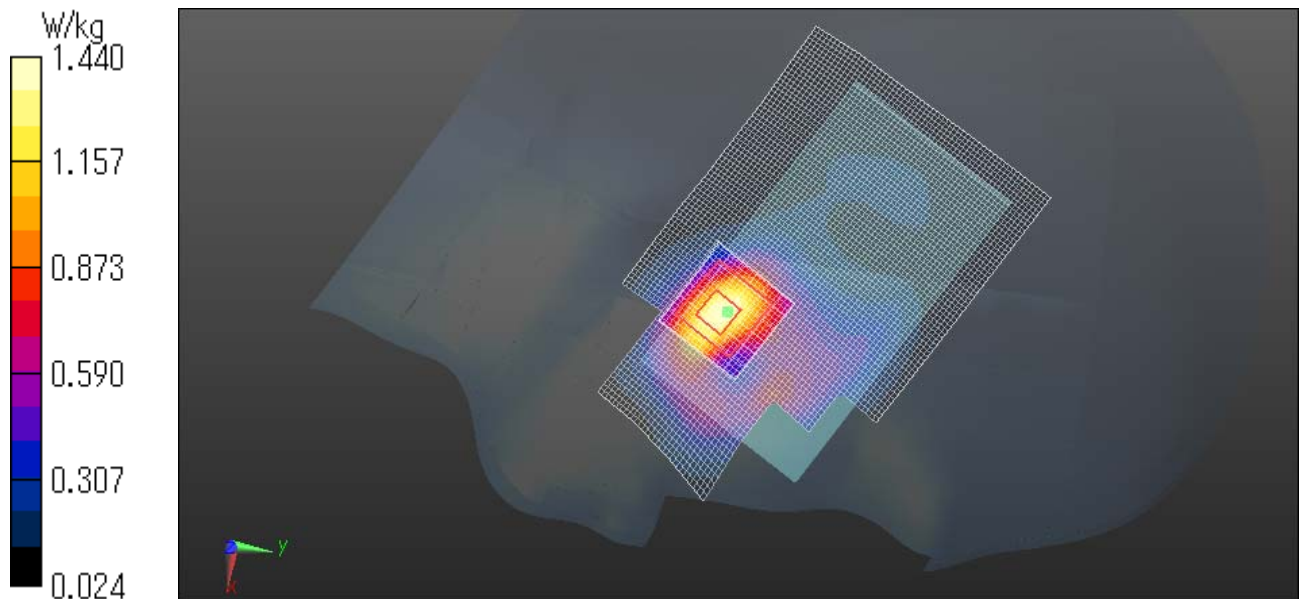
Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.566 W/kg

Maximum value of SAR (measured) = 1.44 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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Z Scan at Maximum Head SAR position in WCDMA II band

GT-S6810E WCDMA Band II RMC 12.2k Left cheek 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

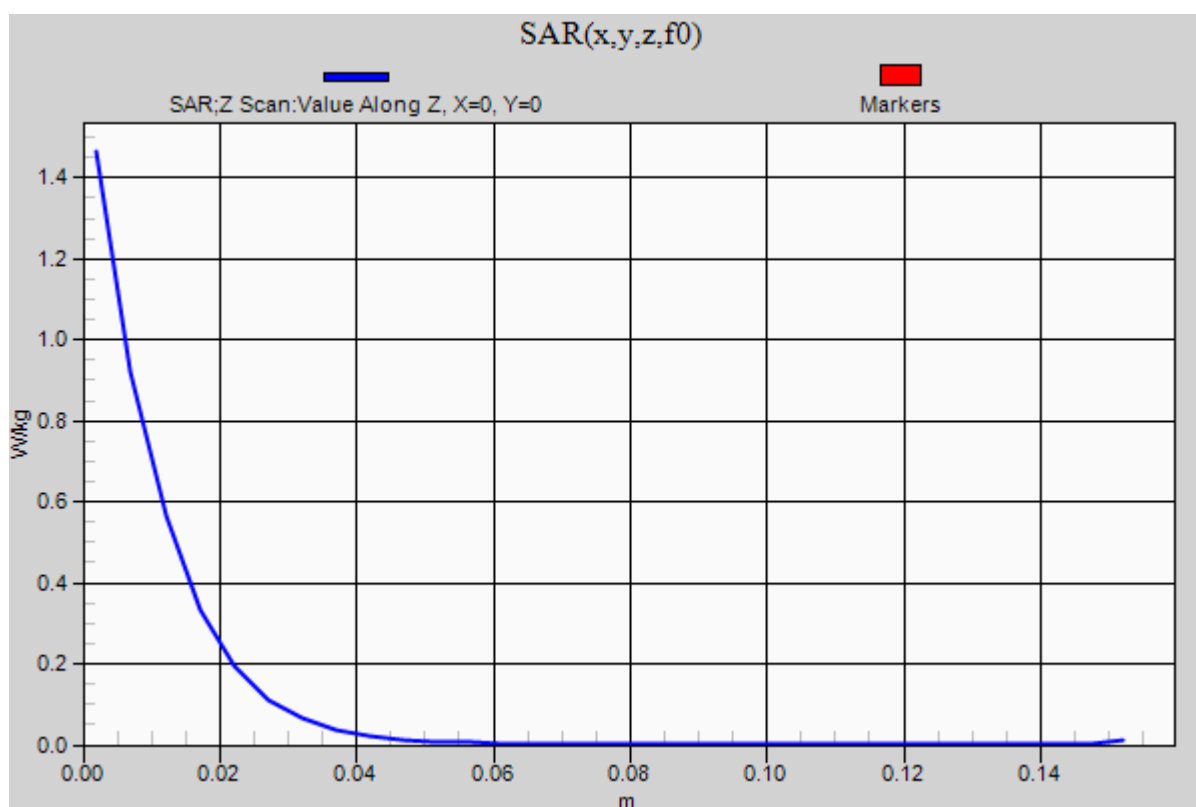
Measurement SW: DASYS2, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 1.46 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Left tilt 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.327 W/kg

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

Reference Value = 15.503 V/m; Power Drift = -0.10 dB

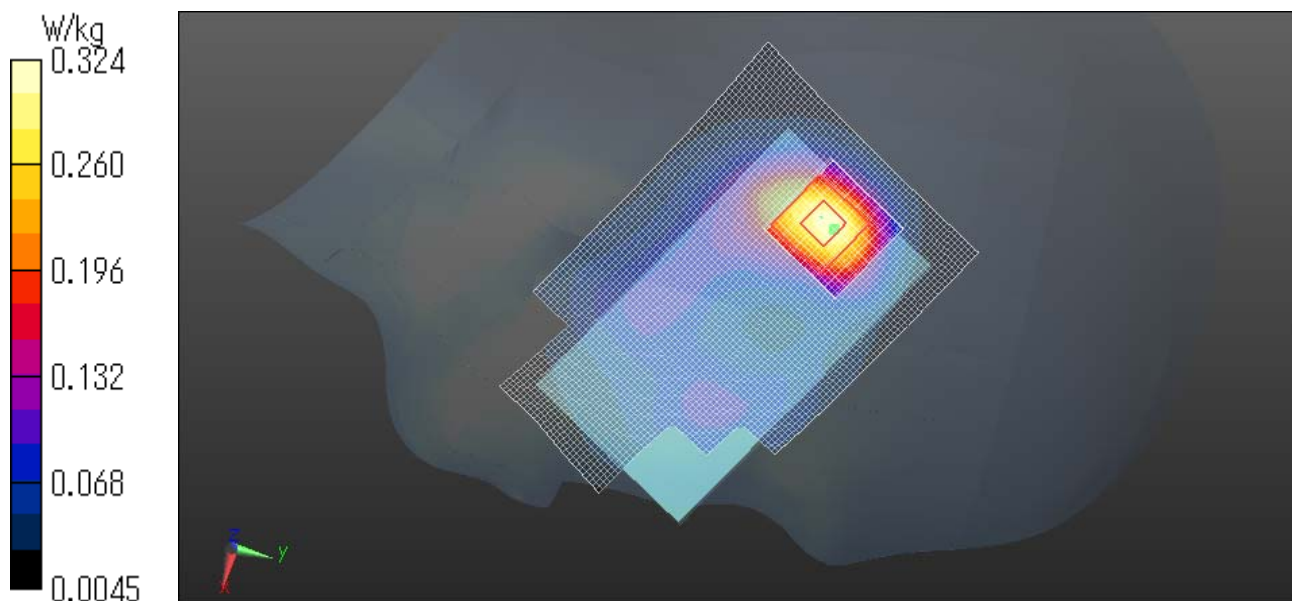
Peak SAR (extrapolated) = 0.401 W/kg

SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.136 W/kg

Maximum value of SAR (measured) = 0.324 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Right cheek 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

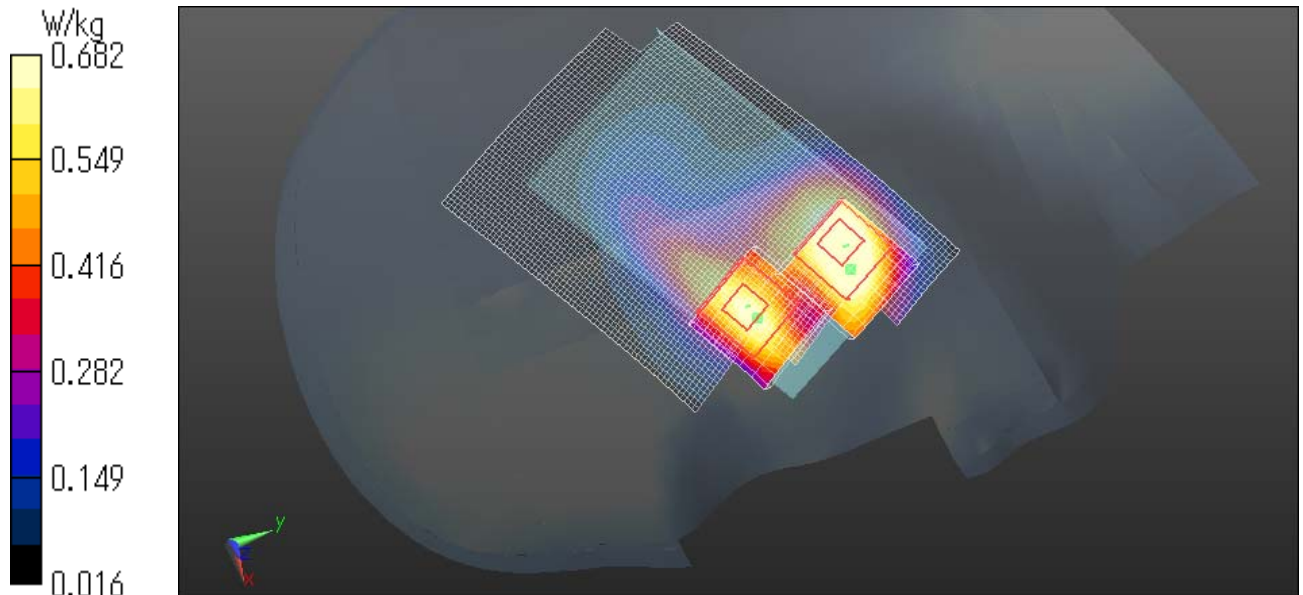
Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.811 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 8.352 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.949 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.379 W/kg
Maximum value of SAR (measured) = 0.817 W/kg

Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 8.352 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.820 W/kg
SAR(1 g) = 0.521 W/kg; SAR(10 g) = 0.299 W/kg
Maximum value of SAR (measured) = 0.682 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Right tilt 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.355 W/kg

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

Reference Value = 14.210 V/m; Power Drift = 0.19 dB

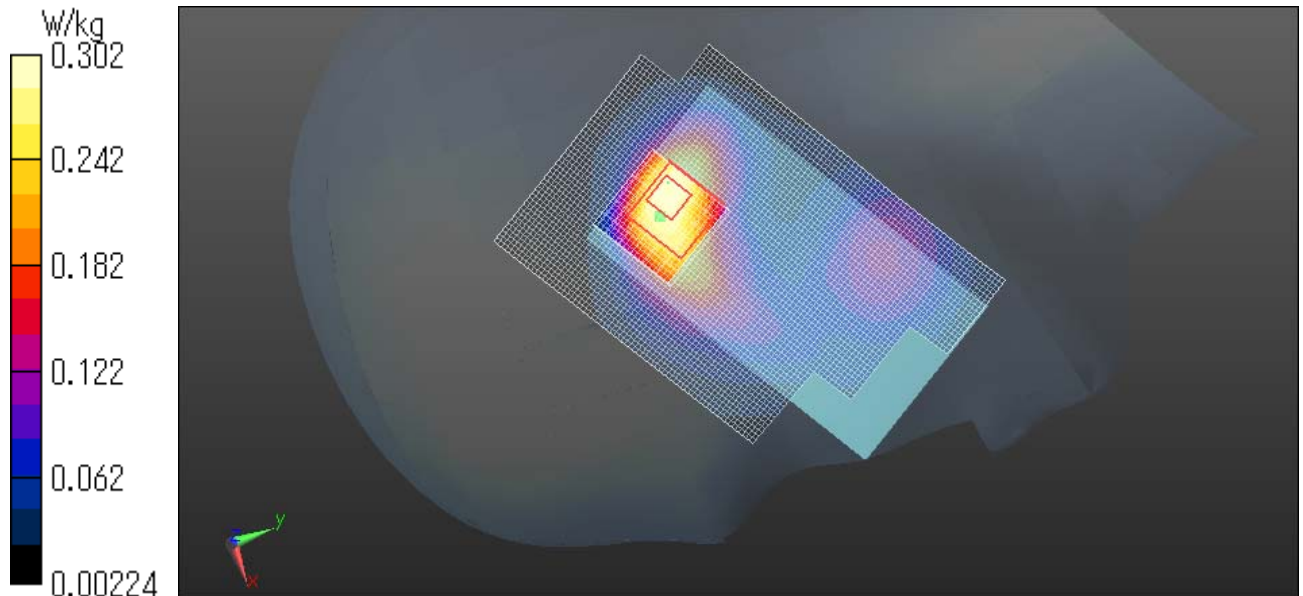
Peak SAR (extrapolated) = 0.374 W/kg

SAR(1 g) = 0.232 W/kg; SAR(10 g) = 0.138 W/kg

Maximum value of SAR (measured) = 0.302 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Left cheek 1852.4MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1852.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.432$ mho/m; $\epsilon_r = 38.258$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.28 W/kg

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

Reference Value = 10.234 V/m; Power Drift = 0.17 dB

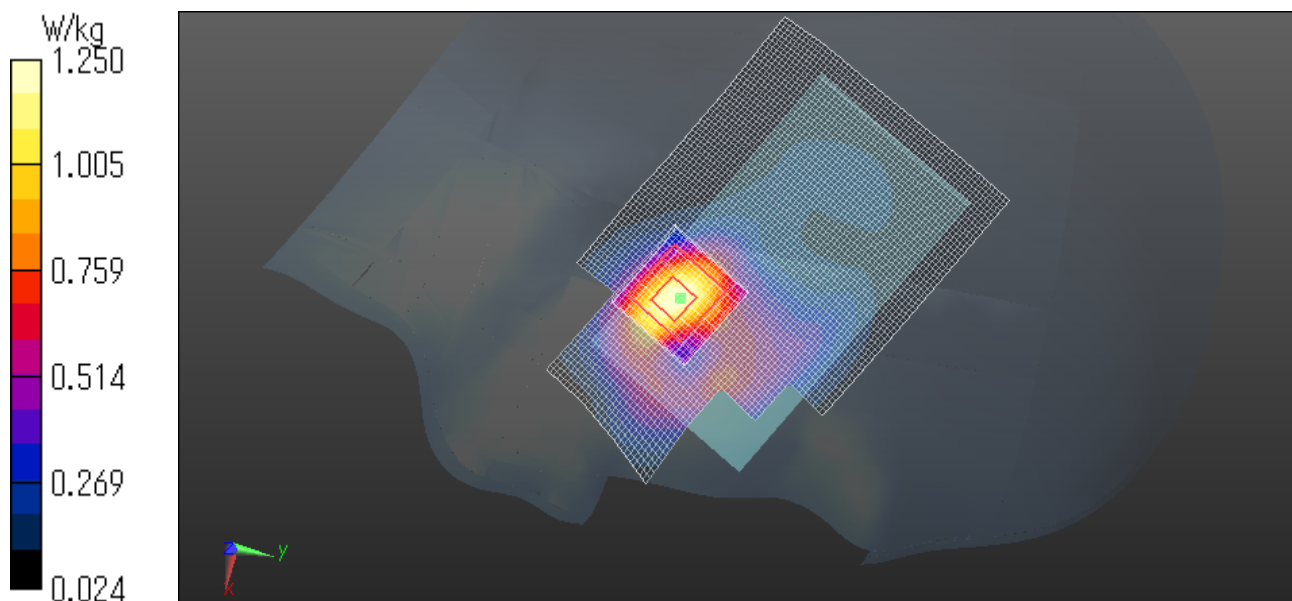
Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.952 W/kg; SAR(10 g) = 0.516 W/kg

Maximum value of SAR (measured) = 1.25 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Left cheek 1907.6MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1907.6 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.487$ mho/m; $\epsilon_r = 38.016$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 1.17 W/kg

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

Reference Value = 10.826 V/m; Power Drift = -0.06 dB

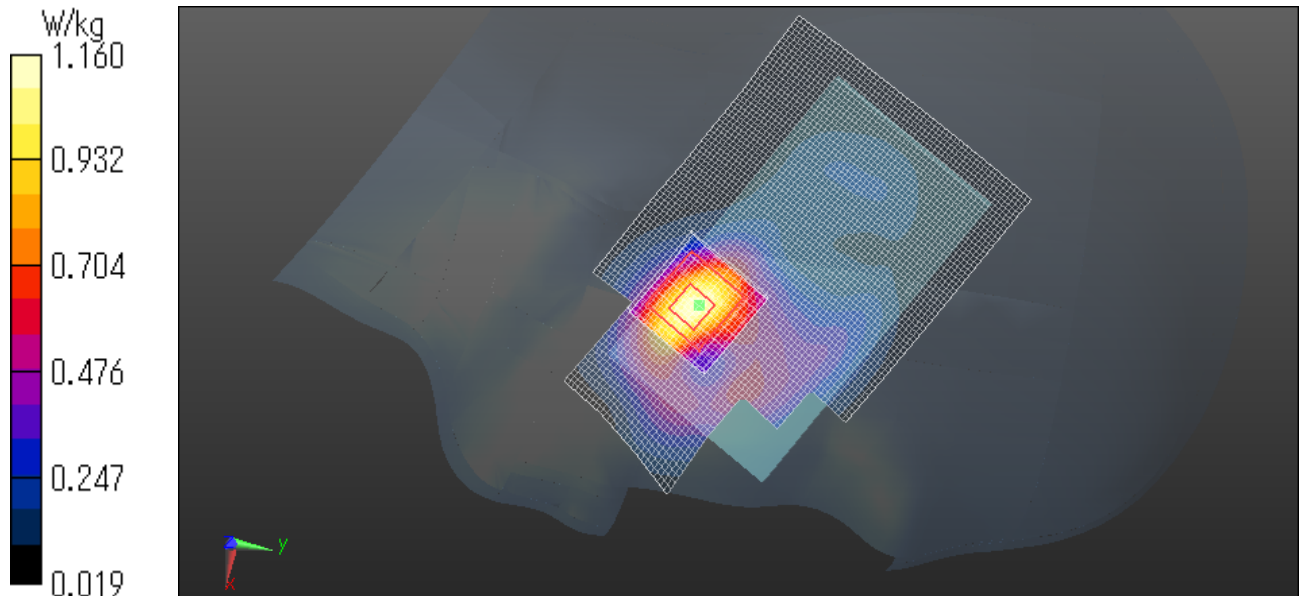
Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.869 W/kg; SAR(10 g) = 0.468 W/kg

Maximum value of SAR (measured) = 1.16 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Left cheek 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.136$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.93, 7.93, 7.93); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.28 W/kg

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

Reference Value = 9.457 V/m; Power Drift = 0.19 dB

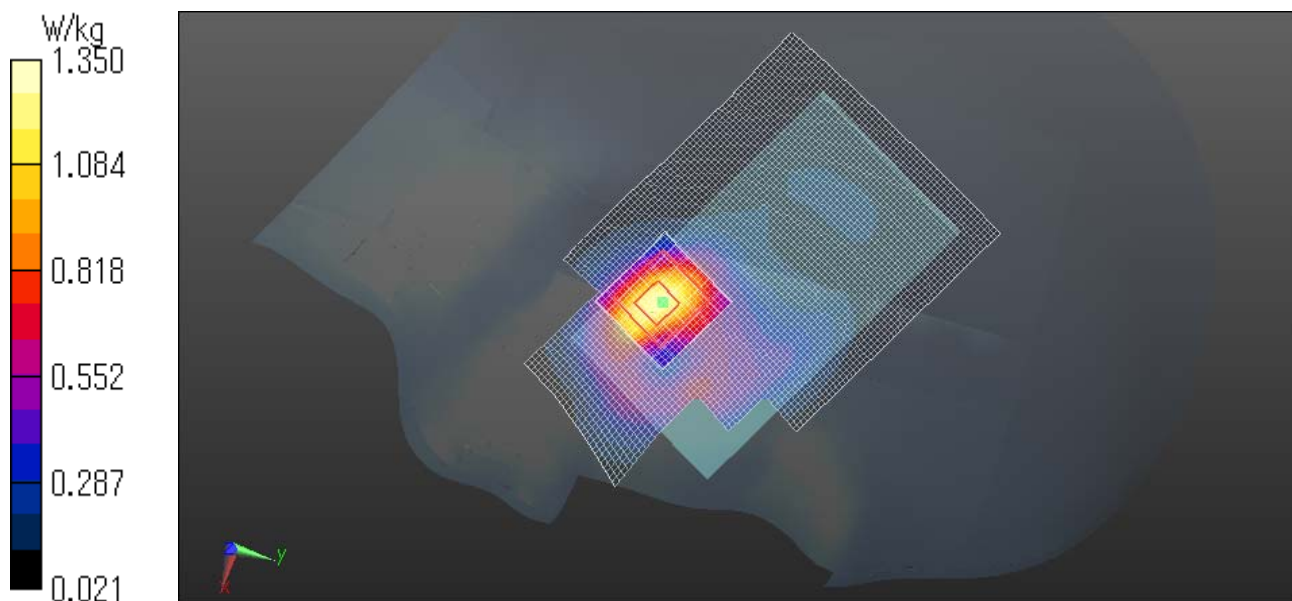
Peak SAR (extrapolated) = 1.72 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.537 W/kg

Maximum value of SAR (measured) = 1.35 W/kg

Date: 2013/04/22

Ambient Temp. : 24.5 degree.C. Liquid Temp.; 24.0 degree.C.



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vi) **WCDMA Band II Body**

GT-S6810E WCDMA Band II RMC 12.2k Front 10mm 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.997$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.993 W/kg

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

Reference Value = 11.568 V/m; Power Drift = 0.13 dB

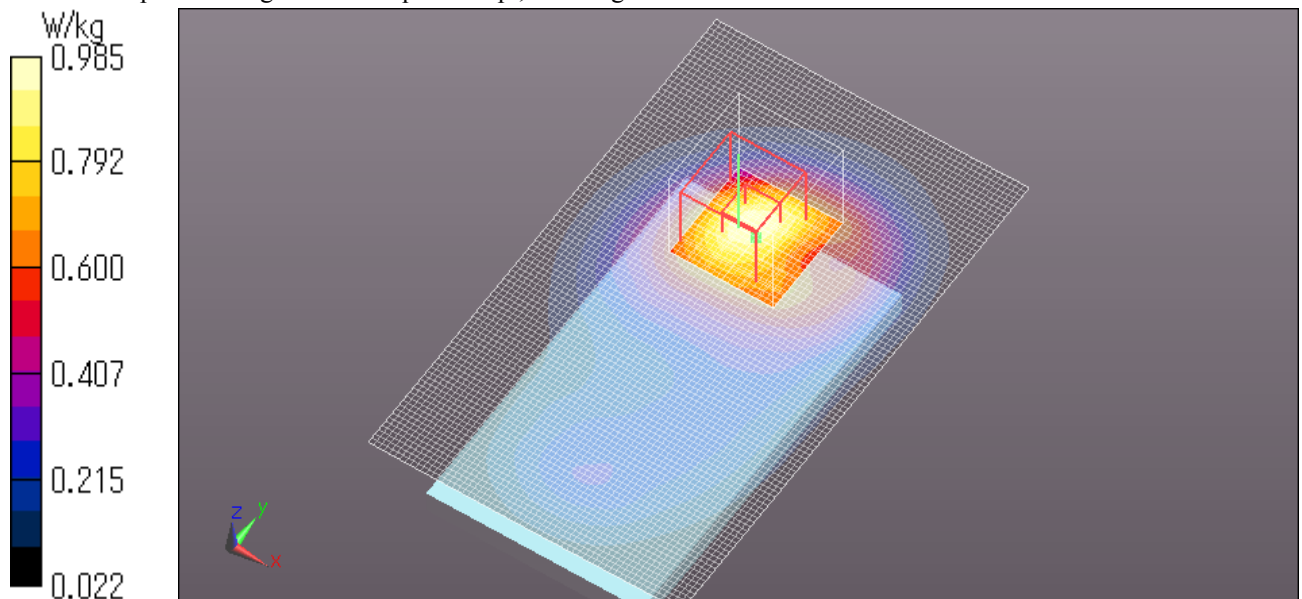
Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.746 W/kg; SAR(10 g) = 0.431 W/kg

Maximum value of SAR (measured) = 0.985 W/kg

Date: 2013/04/23

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Body SAR position in WCDMA II band

GT-S6810E WCDMA Band II RMC 12.2k Front 1880MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.997$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

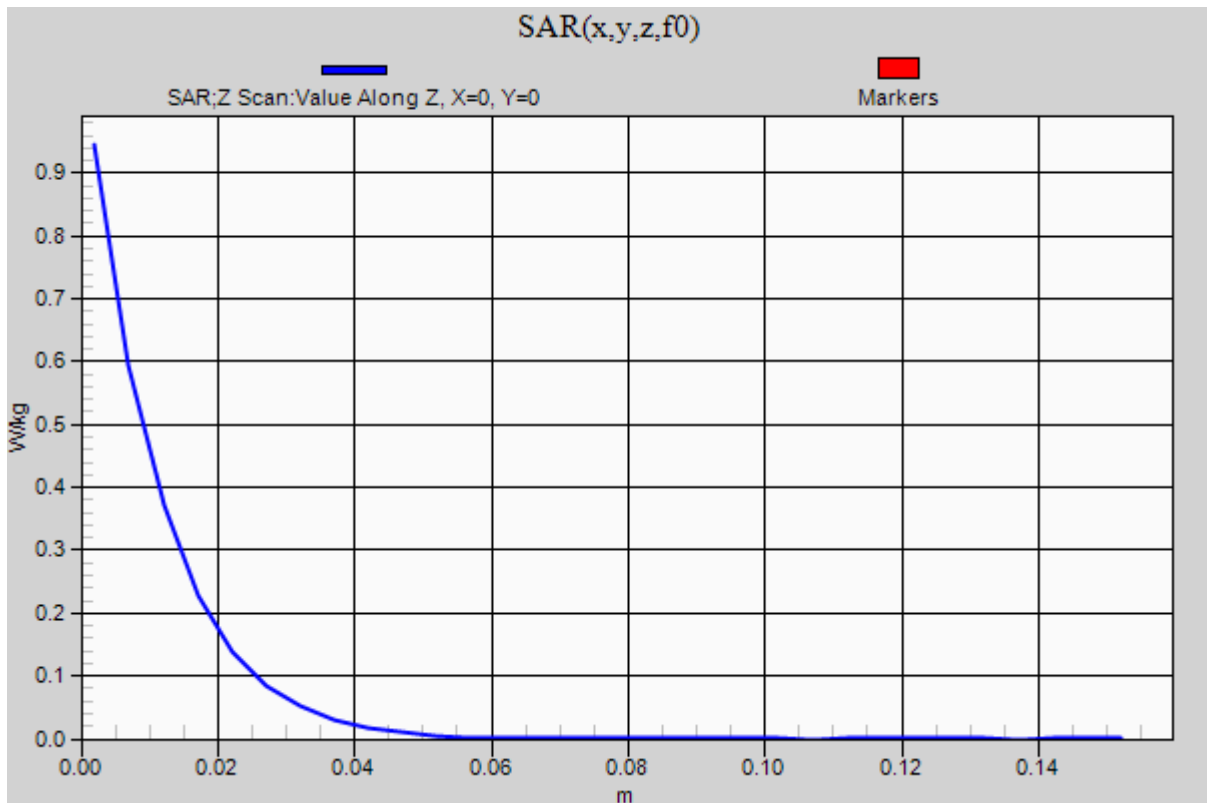
Measurement SW: DASY52, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.945 W/kg

Date: 2013/04/23

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Rear 10mm 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.997$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

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

Reference Value = 13.584 V/m; Power Drift = 0.12 dB

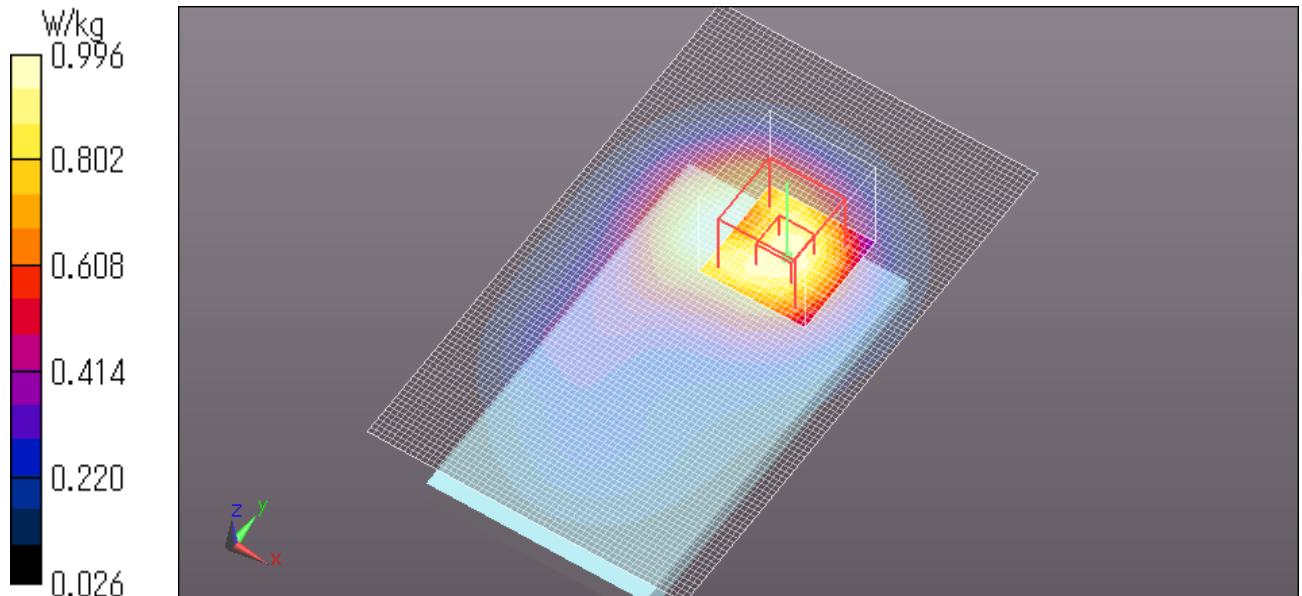
Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.744 W/kg; SAR(10 g) = 0.440 W/kg

Maximum value of SAR (measured) = 0.996 W/kg

Date: 2013/04/23

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Left edge 10mm 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.997$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.164 W/kg

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

Reference Value = 8.205 V/m; Power Drift = 0.18 dB

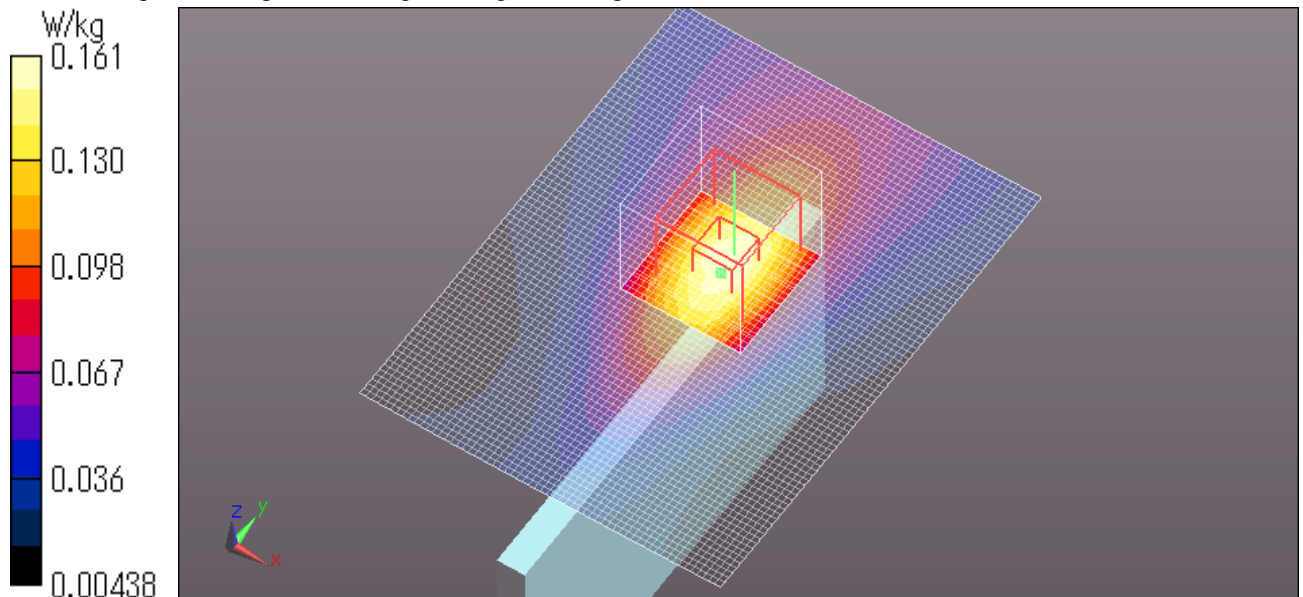
Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.072 W/kg

Maximum value of SAR (measured) = 0.161 W/kg

Date: 2013/04/23

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Right side 1880MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.997$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.309 W/kg

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

Reference Value = 12.489 V/m; Power Drift = -0.08 dB

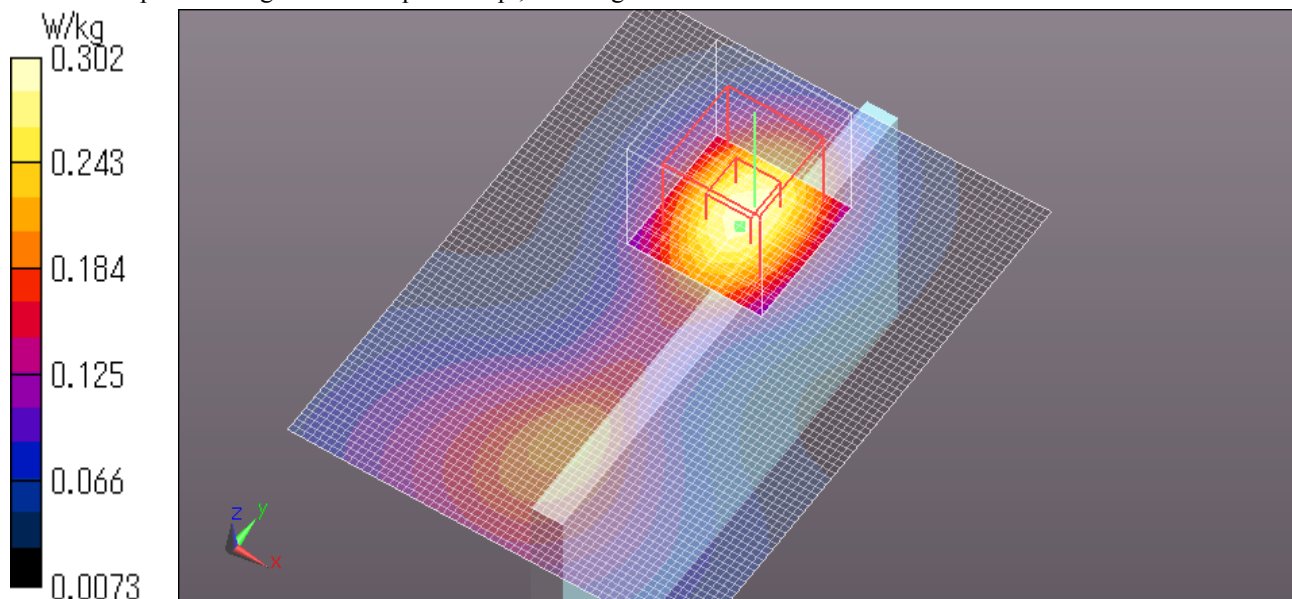
Peak SAR (extrapolated) = 0.370 W/kg

SAR(1 g) = 0.226 W/kg; SAR(10 g) = 0.132 W/kg

Maximum value of SAR (measured) = 0.302 W/kg

Date: 2013/04/23

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WCDMA Band II RMC 12.2k Bottom edge 10mm 1880.0MHz

Communication System: WCDMA Bnad II; Communication System Band: WCDMA II; Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.997$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.59, 7.59, 7.59); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.717 W/kg

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

Reference Value = 20.028 V/m; Power Drift = -0.07 dB

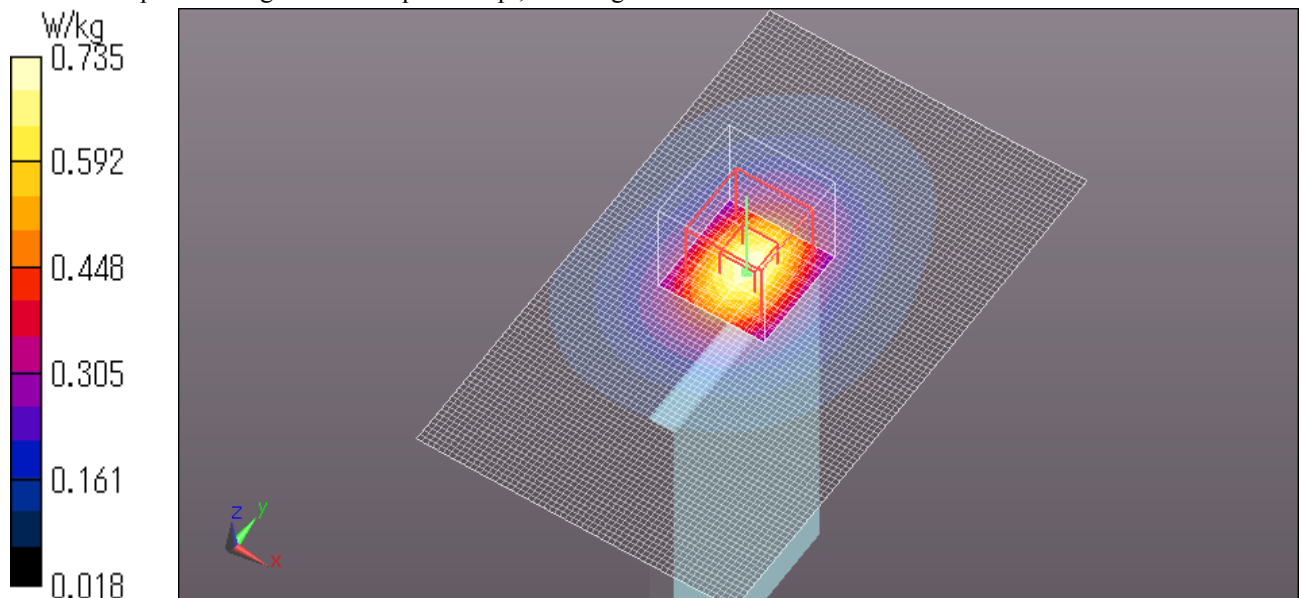
Peak SAR (extrapolated) = 0.908 W/kg

SAR(1 g) = 0.540 W/kg; SAR(10 g) = 0.302 W/kg

Maximum value of SAR (measured) = 0.735 W/kg

Date: 2013/04/23

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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vii) WLAN 2.4GHz Head

GT-S6810E WLAN 11b 1Mbps Left cheek 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.845$ mho/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.676 W/kg

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

Reference Value = 5.332 V/m; Power Drift = 0.04 dB

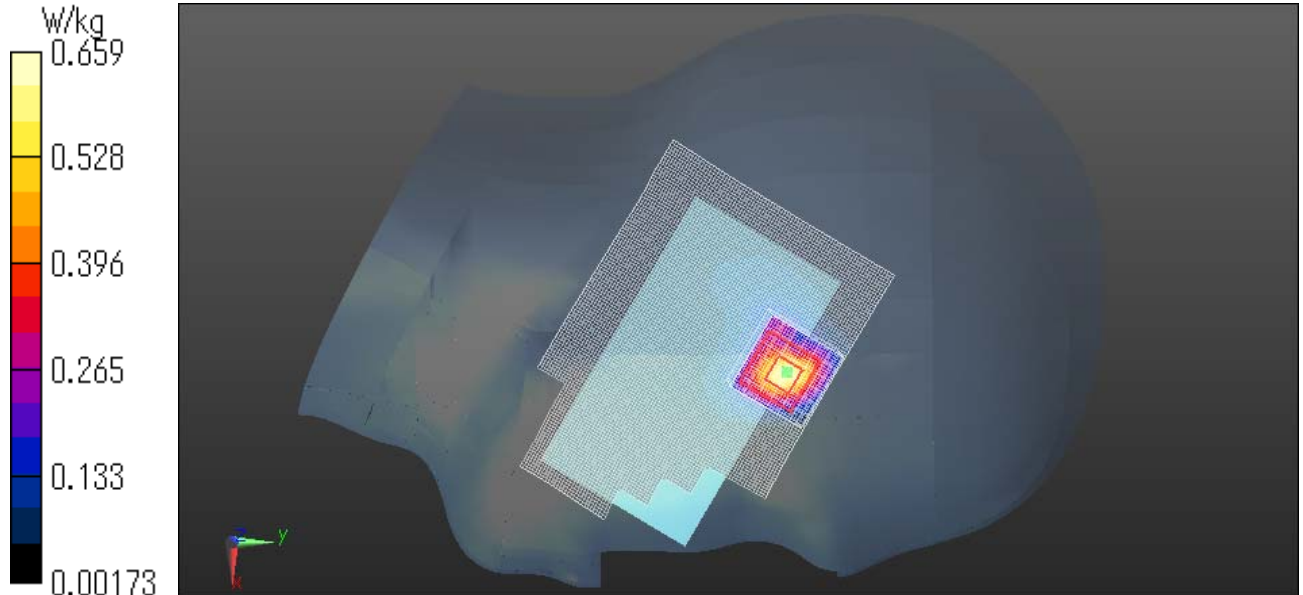
Peak SAR (extrapolated) = 0.997 W/kg

SAR(1 g) = 0.401 W/kg; SAR(10 g) = 0.170 W/kg

Maximum value of SAR (measured) = 0.659 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Head SAR position in WLAN 2.4GHz band

GT-S6810E WLAN 11b 1Mbps Left cheek 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.845$ mho/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

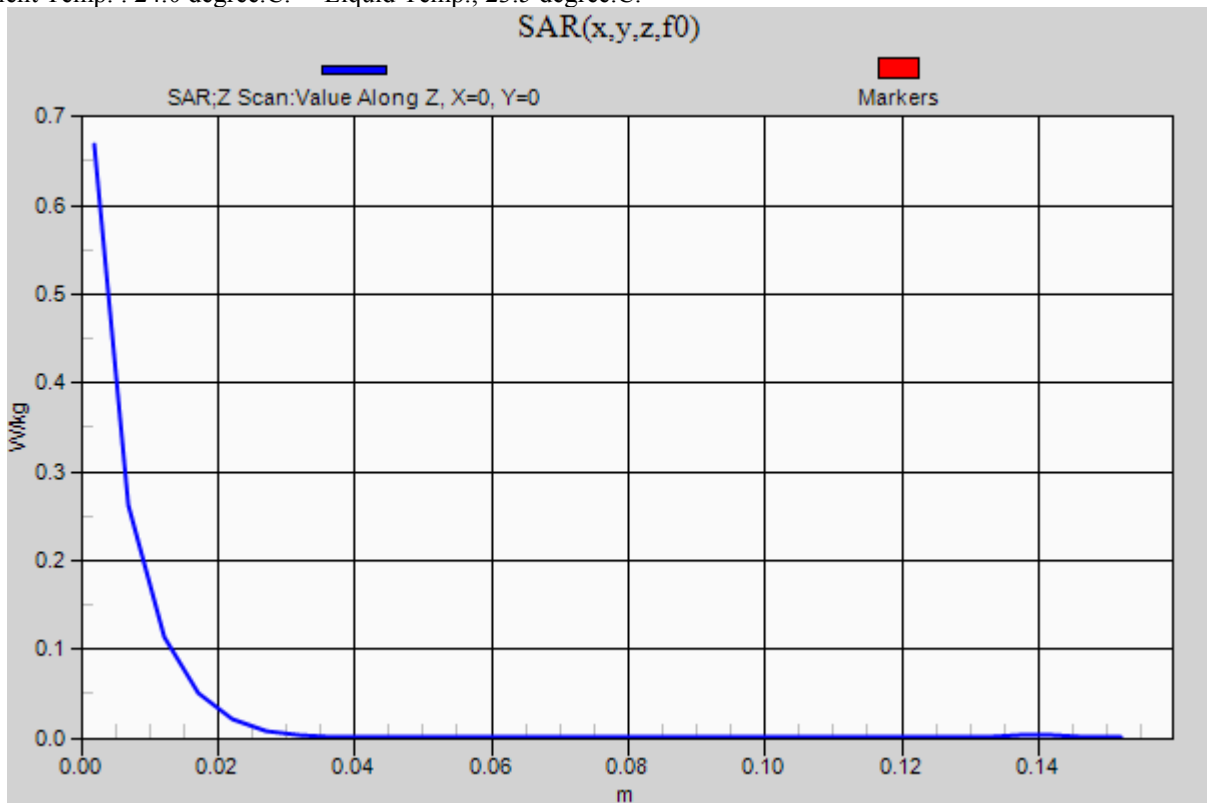
Measurement SW: DASY52, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.668 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Left tilt 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.845$ mho/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.141 W/kg

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

Reference Value = 8.382 V/m; Power Drift = 0.01 dB

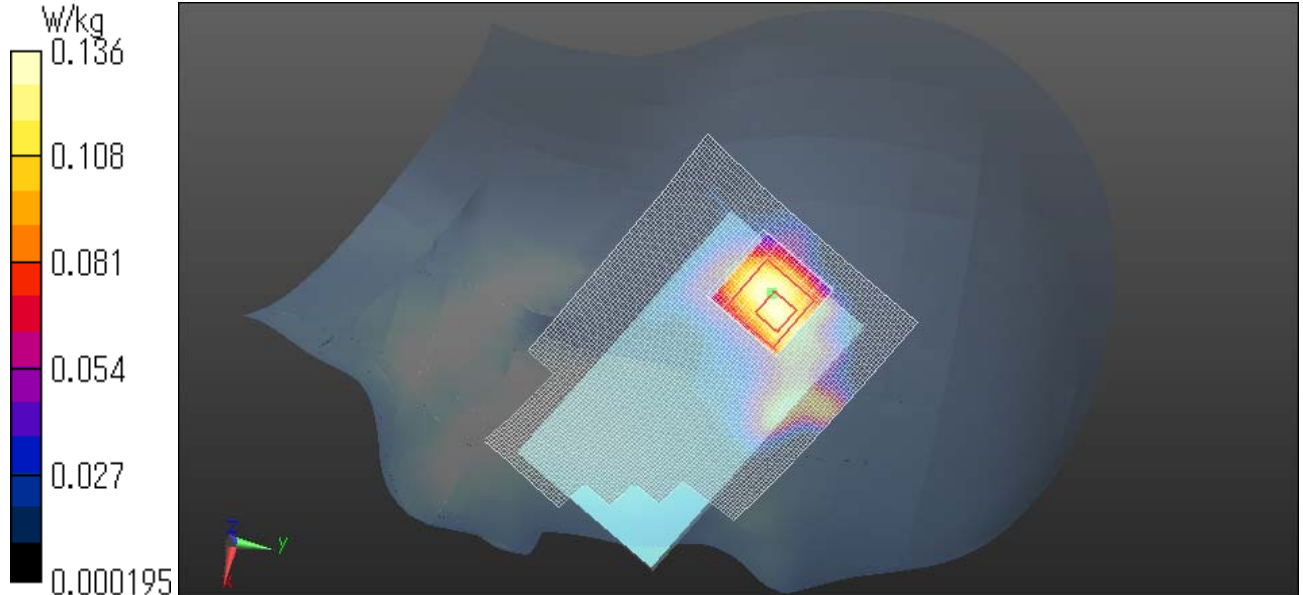
Peak SAR (extrapolated) = 0.178 W/kg

SAR(1 g) = 0.098 W/kg; SAR(10 g) = 0.054 W/kg

Maximum value of SAR (measured) = 0.136 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Right cheek 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.845$ mho/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.178 W/kg

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

Reference Value = 7.622 V/m; Power Drift = -0.06 dB

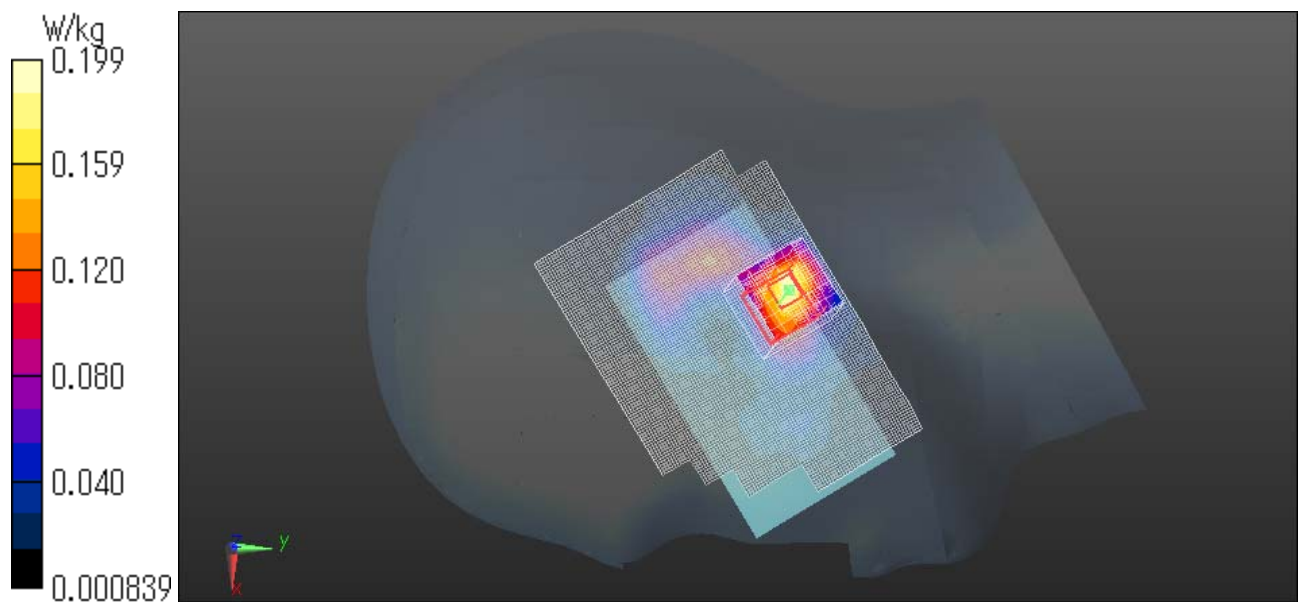
Peak SAR (extrapolated) = 0.284 W/kg

SAR(1 g) = 0.126 W/kg; SAR(10 g) = 0.061 W/kg

Maximum value of SAR (measured) = 0.199 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Right tilt 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.845$ mho/m; $\epsilon_r = 38.907$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.155 W/kg

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

Reference Value = 7.724 V/m; Power Drift = -0.01 dB

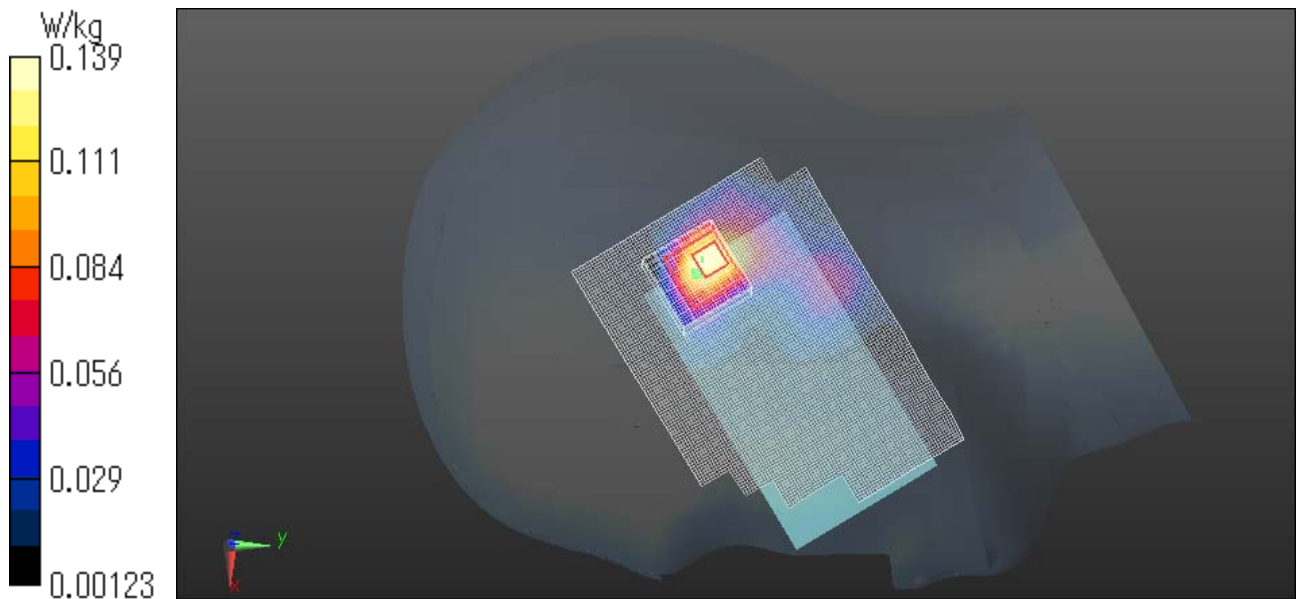
Peak SAR (extrapolated) = 0.184 W/kg

SAR(1 g) = 0.099 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.139 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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viii) WLAN 2.4GHz Body

GT-S6810E WLAN 11b 1Mbps Front 10mm 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 2.007$ mho/m; $\epsilon_r = 52.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (81x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.125 W/kg

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

Reference Value = 7.979 V/m; Power Drift = -0.04 dB

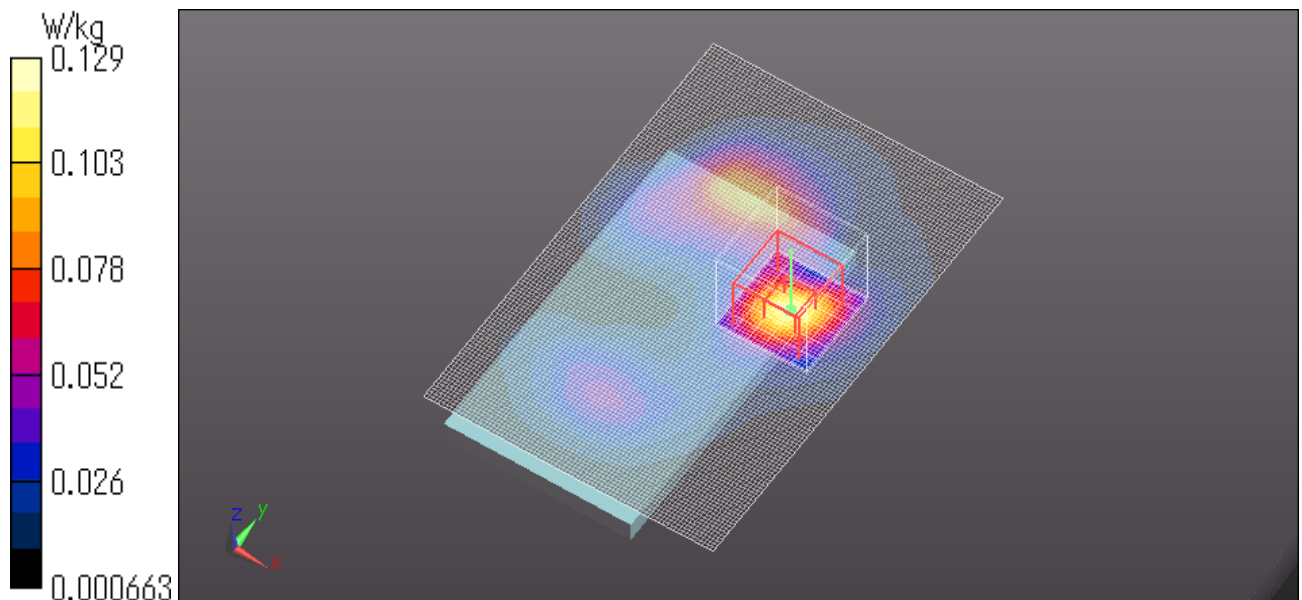
Peak SAR (extrapolated) = 0.184 W/kg

SAR(1 g) = 0.082 W/kg; SAR(10 g) = 0.038 W/kg

Maximum value of SAR (measured) = 0.129 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Rear 10mm 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 2.007$ mho/m; $\epsilon_r = 52.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.480 W/kg

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

Reference Value = 15.758 V/m; Power Drift = -0.07 dB

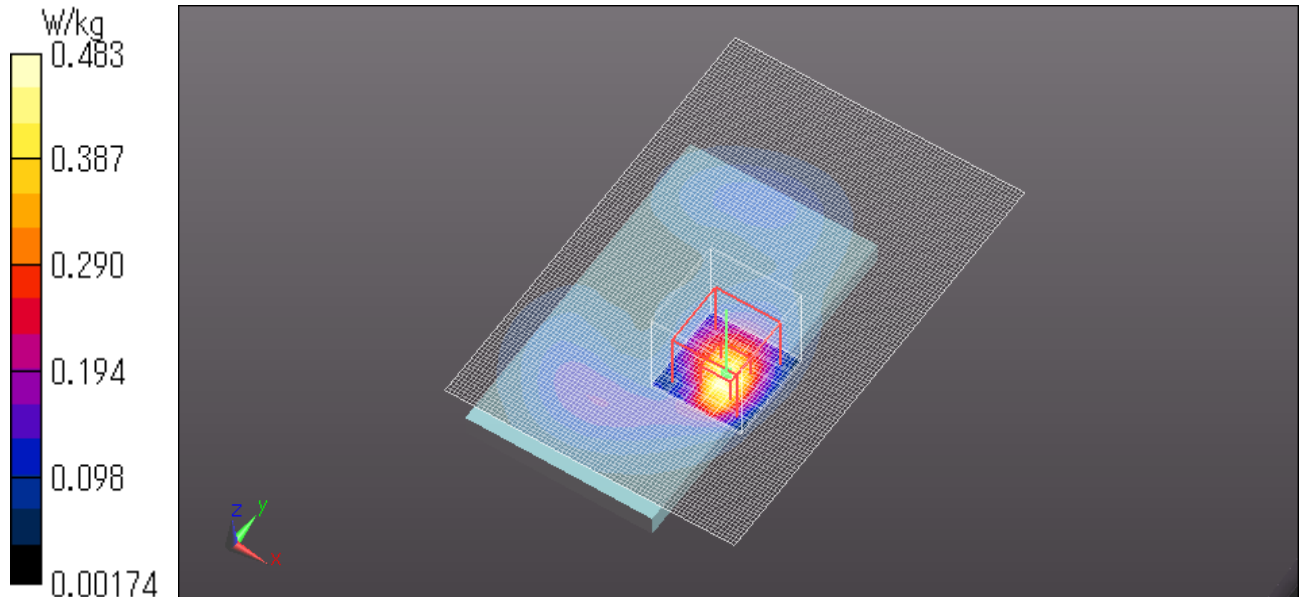
Peak SAR (extrapolated) = 0.711 W/kg

SAR(1 g) = 0.317 W/kg; SAR(10 g) = 0.138 W/kg

Maximum value of SAR (measured) = 0.483 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Body SAR position in WLAN 2.4GHz band

GT-S6810E WLAN 11b 1Mbps 2437MHz Rear 10mm

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 2.007$ mho/m; $\epsilon_r = 52.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

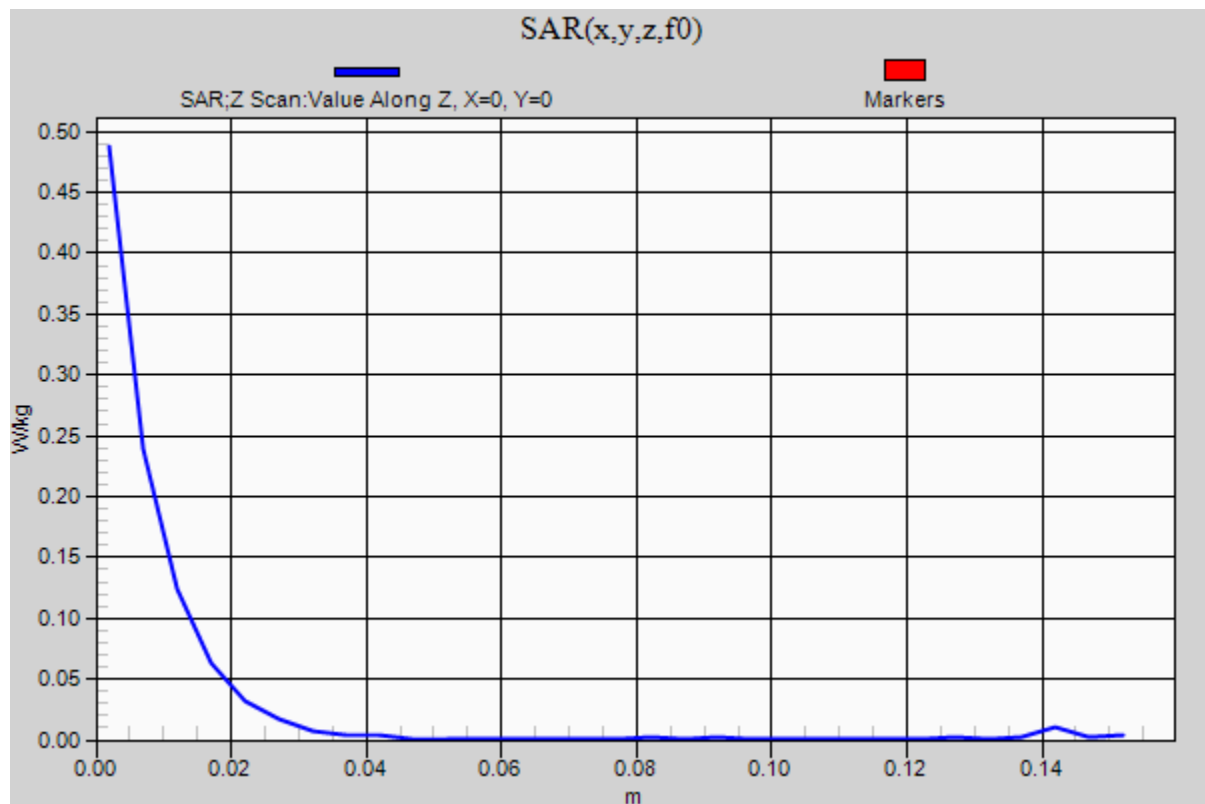
Measurement SW: DASYS2, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.487 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Left Edge 10mm 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 2.007$ mho/m; $\epsilon_r = 52.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (71x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.353 W/kg

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

Reference Value = 13.264 V/m; Power Drift = 0.10 dB

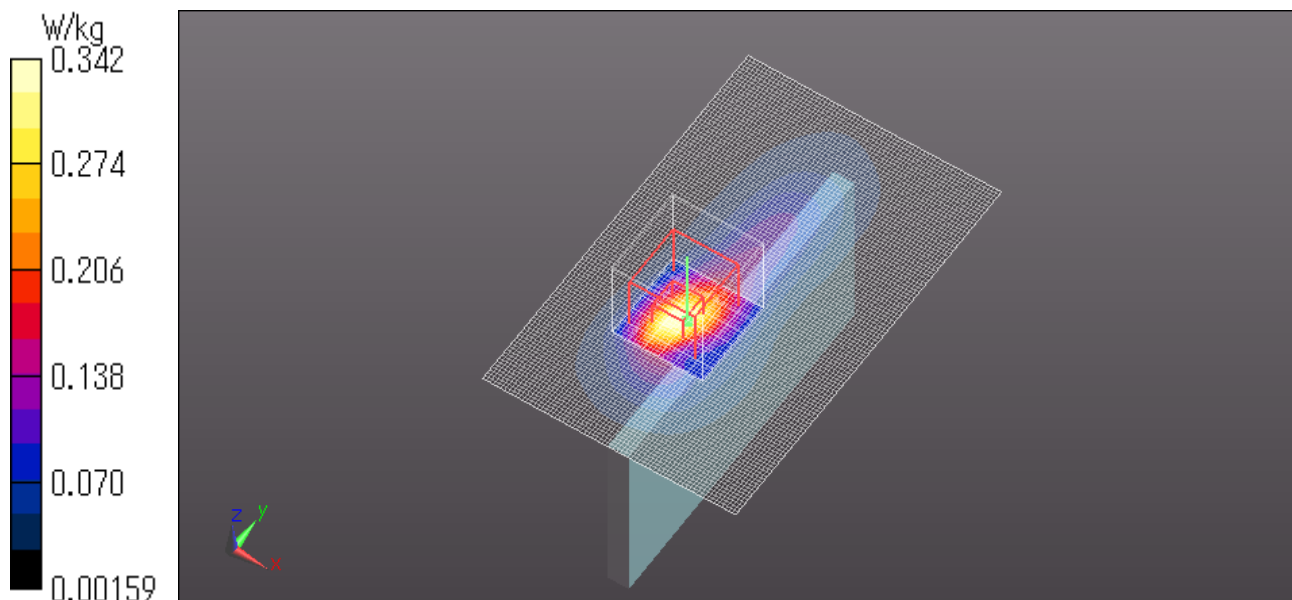
Peak SAR (extrapolated) = 0.506 W/kg

SAR(1 g) = 0.226 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.342 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Right Edge 10mm 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 2.007$ mho/m; $\epsilon_r = 52.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (71x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0368 W/kg

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

Reference Value = 4.360 V/m; Power Drift = 0.19 dB

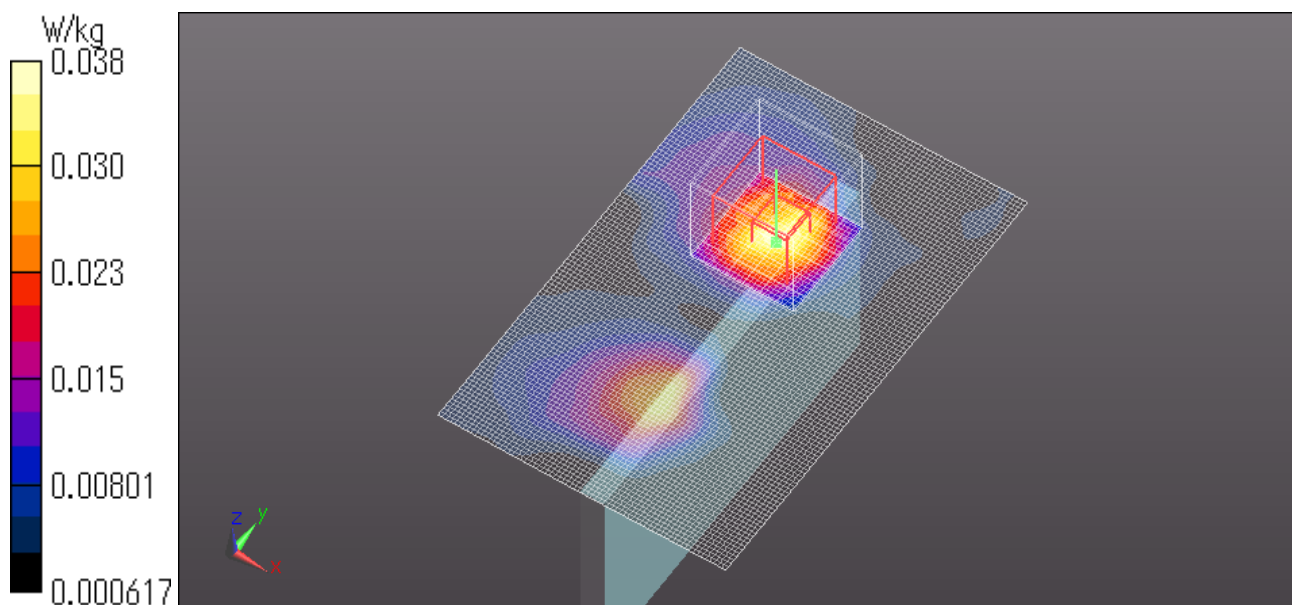
Peak SAR (extrapolated) = 0.0510 W/kg

SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.0376 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E WLAN 11b 1Mbps Top Edge 10mm 2437MHz

Communication System: WLAN 11a/b/g/n ; Communication System Band: WLAN 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 2.007$ mho/m; $\epsilon_r = 52.083$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0888 W/kg

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

Reference Value = 6.674 V/m; Power Drift = -0.16 dB

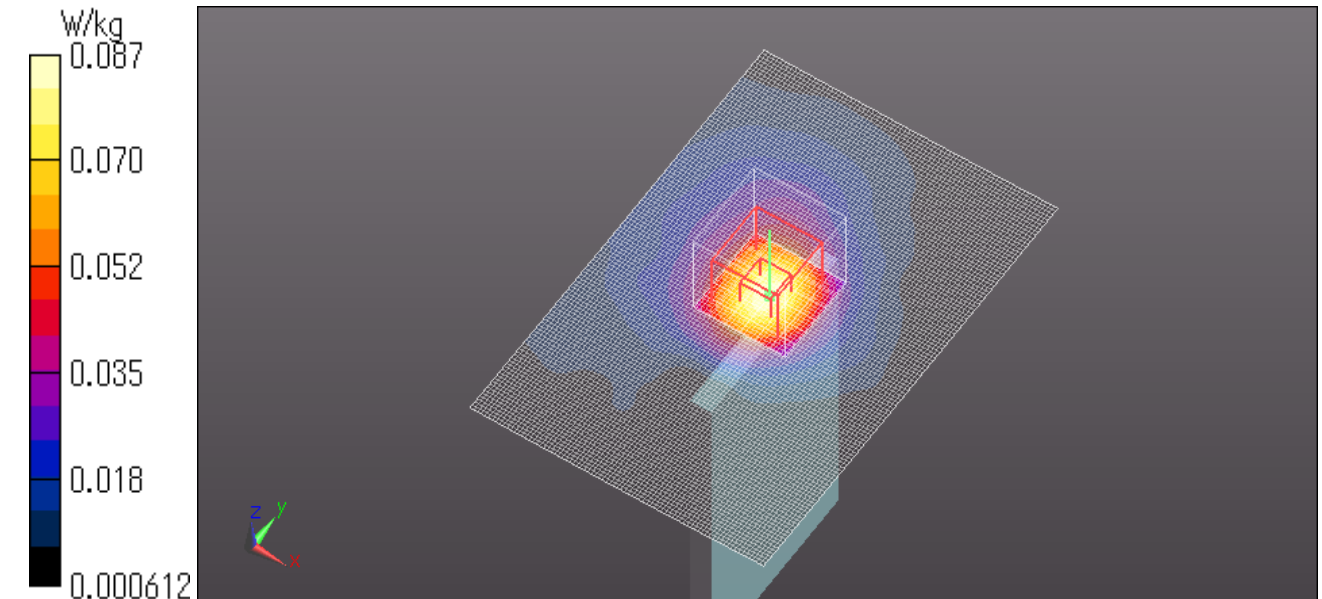
Peak SAR (extrapolated) = 0.115 W/kg

SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.033 W/kg

Maximum value of SAR (measured) = 0.0868 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



ix)

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x) **Bluetooth Head**

GT-S6810E BT BDR(DH5) Left cheek 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.804$ mho/m; $\epsilon_r = 40.297$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.193 W/kg

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

Reference Value = 2.564 V/m; Power Drift = -0.12 dB

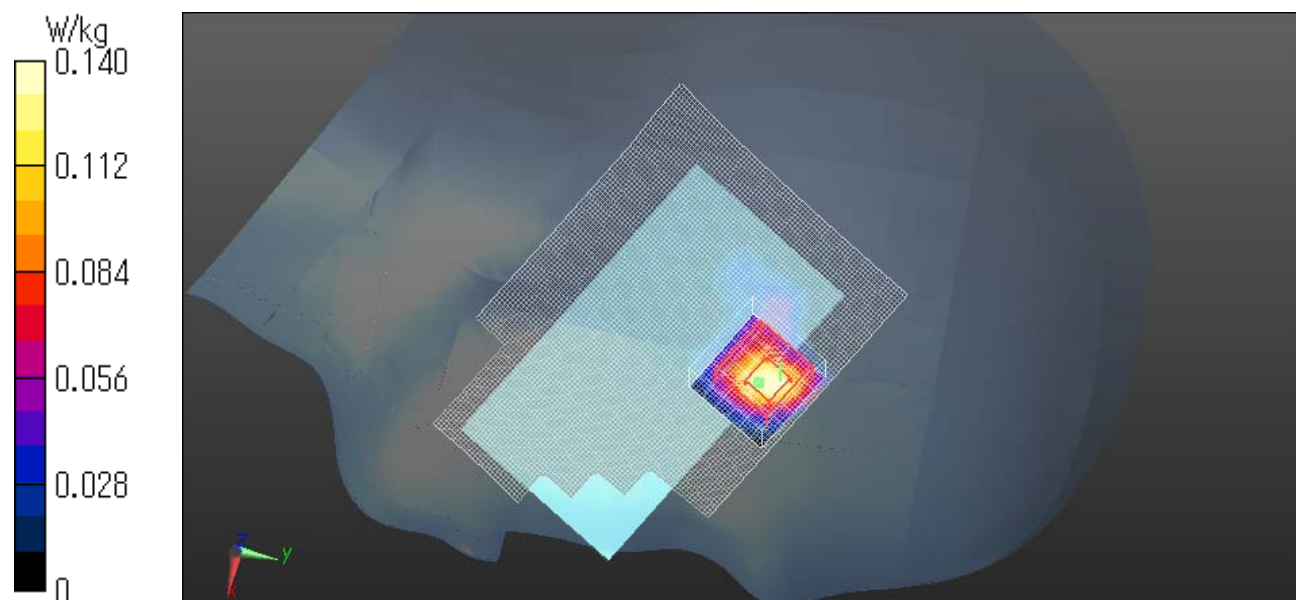
Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.036 W/kg

Maximum value of SAR (measured) = 0.140 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Body SAR position in Bluetooth band

GT-S6810E BT BDR(DH5) Left cheek 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.804$ mho/m; $\epsilon_r = 40.297$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

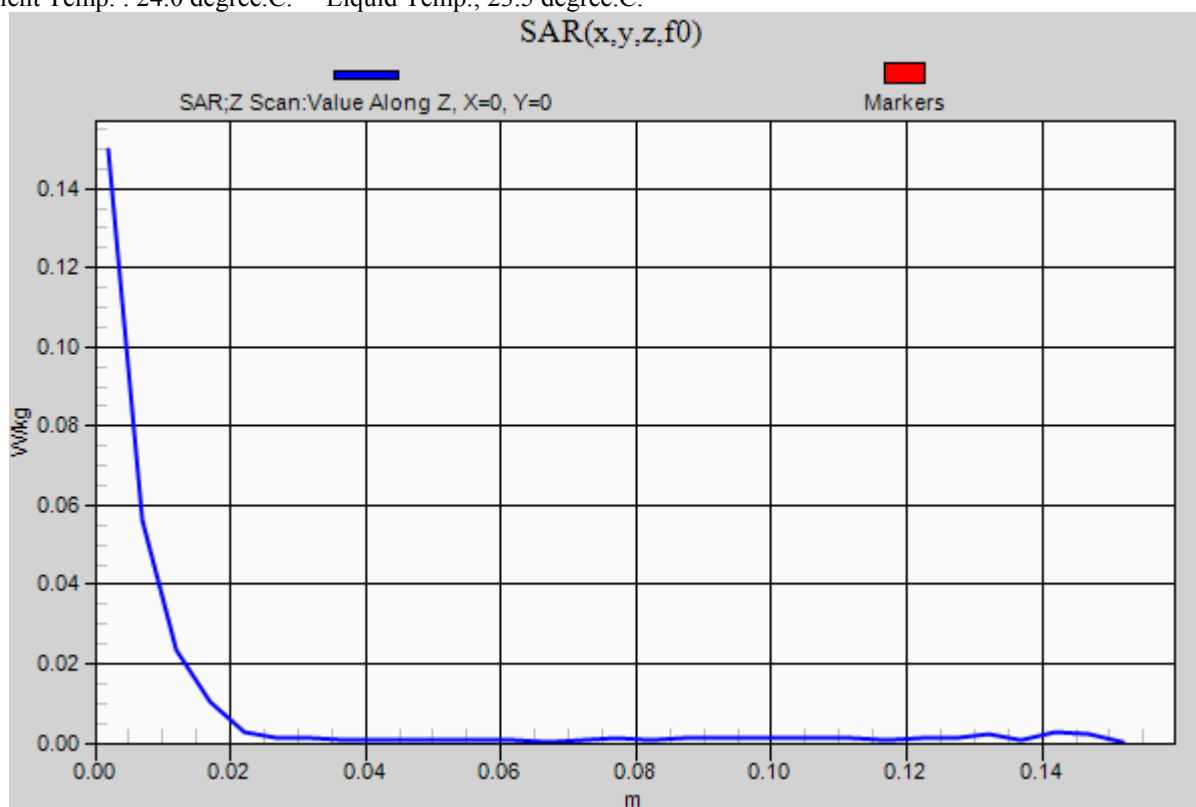
Measurement SW: DASYS52, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.150 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Left tilt 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.804$ mho/m; $\epsilon_r = 40.297$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0659 W/kg

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

Reference Value = 3.973 V/m; Power Drift = 0.01 dB

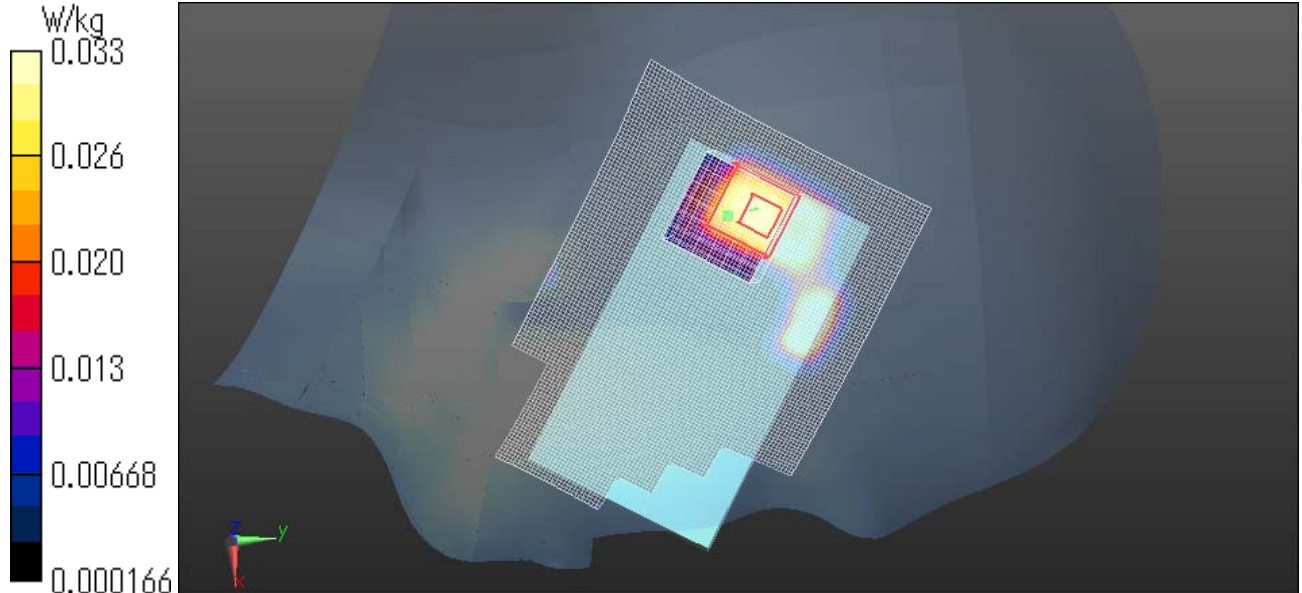
Peak SAR (extrapolated) = 0.0450 W/kg

SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.0327 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Right cheek 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.804$ mho/m; $\epsilon_r = 40.297$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.109 W/kg

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

Reference Value = 3.383 V/m; Power Drift = 0.15 dB

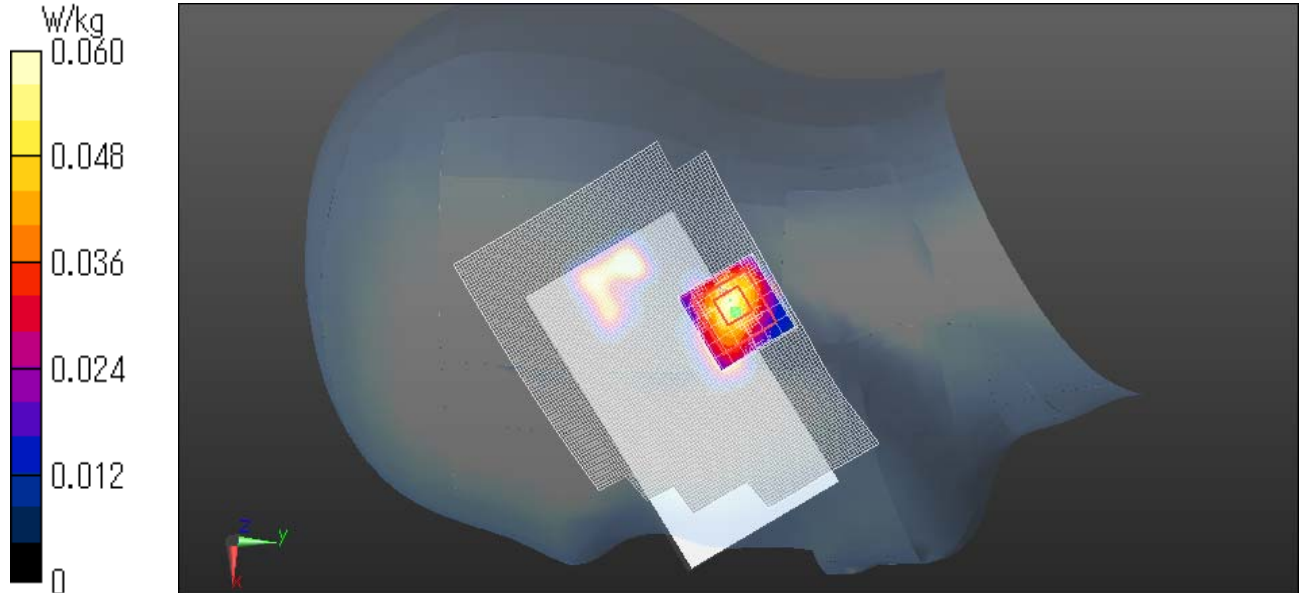
Peak SAR (extrapolated) = 0.0840 W/kg

SAR(1 g) = 0.038 W/kg; SAR(10 g) = 0.018 W/kg

Maximum value of SAR (measured) = 0.0597 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Right tilt 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.804$ mho/m; $\epsilon_r = 40.297$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.21, 7.21, 7.21); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: SAM with CRP; Type: SAM;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.159 W/kg

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

Reference Value = 4.806 V/m; Power Drift = 0.14 dB

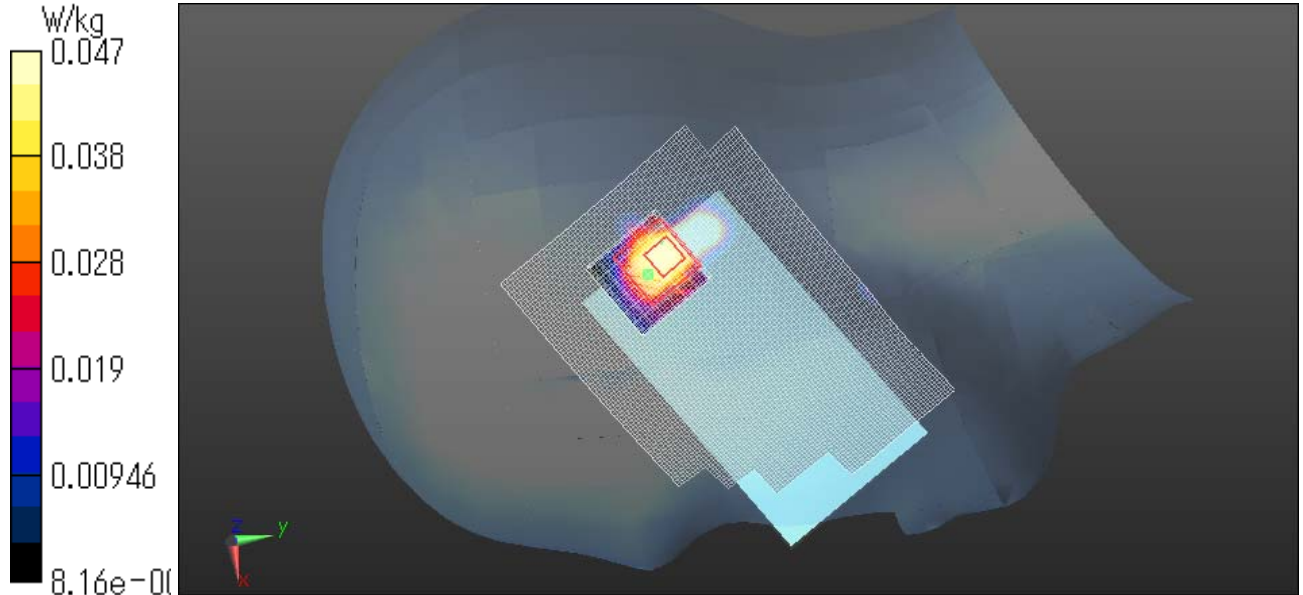
Peak SAR (extrapolated) = 0.0630 W/kg

SAR(1 g) = 0.033 W/kg; SAR(10 g) = 0.016 W/kg

Maximum value of SAR (measured) = 0.0470 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



xi) Bluetooth Body

GT-S6810E BT BDR(DH5) Front 10mm 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.942$ mho/m; $\epsilon_r = 51.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASY52, Version 52.8 (3);

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.00840 W/kg

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

Reference Value = 0.584 V/m; Power Drift = -0.10 dB

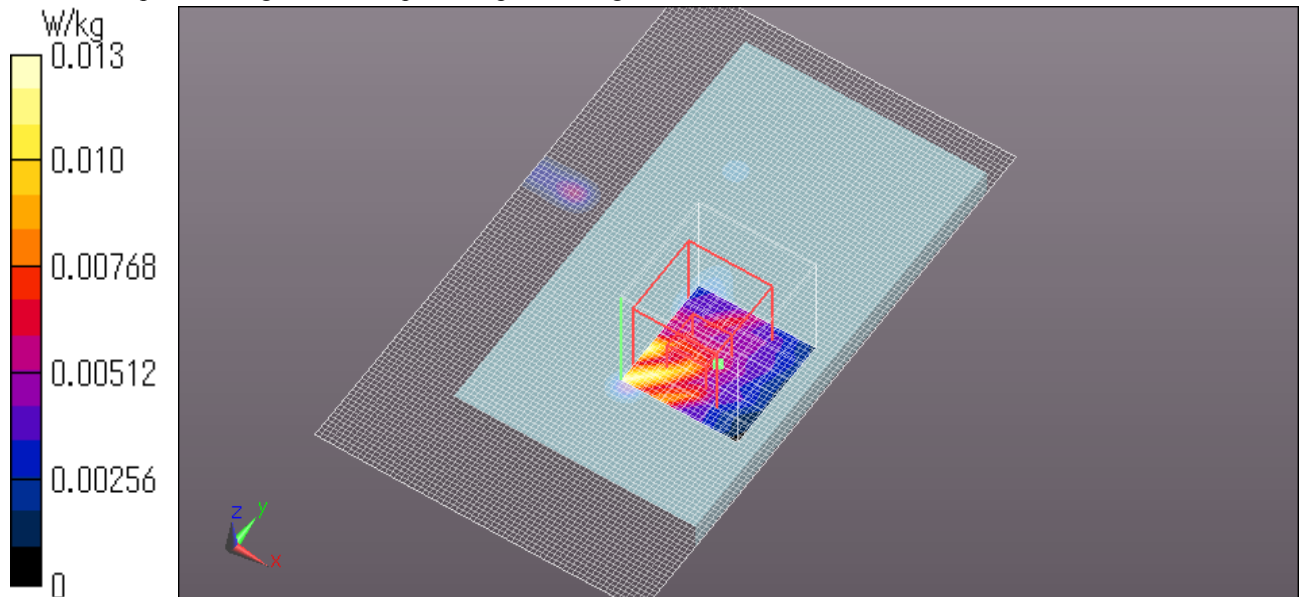
Peak SAR (extrapolated) = 0.0200 W/kg

SAR(1 g) = 0.00367 W/kg; SAR(10 g) = 0.00104 W/kg

Maximum value of SAR (measured) = 0.0128 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Rear 10mm 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.942$ mho/m; $\epsilon_r = 51.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0815 W/kg

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

Reference Value = 1.484 V/m; Power Drift = 0.14 dB

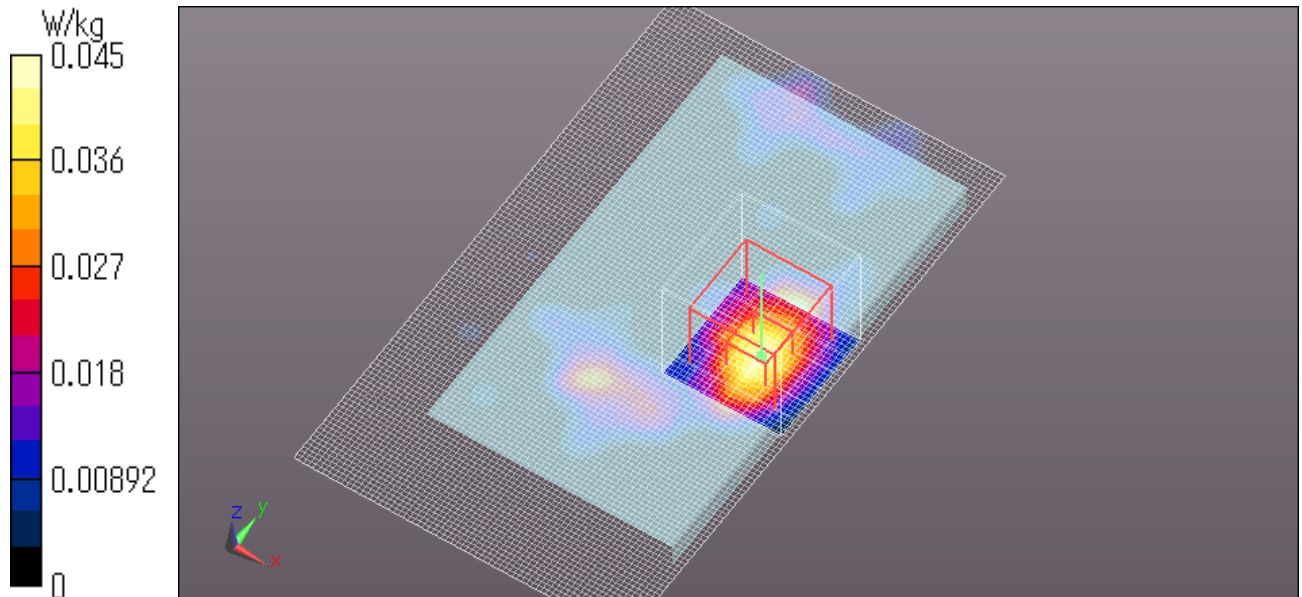
Peak SAR (extrapolated) = 0.0590 W/kg

SAR(1 g) = 0.029 W/kg; SAR(10 g) = 0.013 W/kg

Maximum value of SAR (measured) = 0.0446 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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Z Scan at Maximum Body SAR position in Bluetooth band

GT-S6810E BT BDR(DH5) Rear 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz;Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.942$ mho/m; $\epsilon_r = 51.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

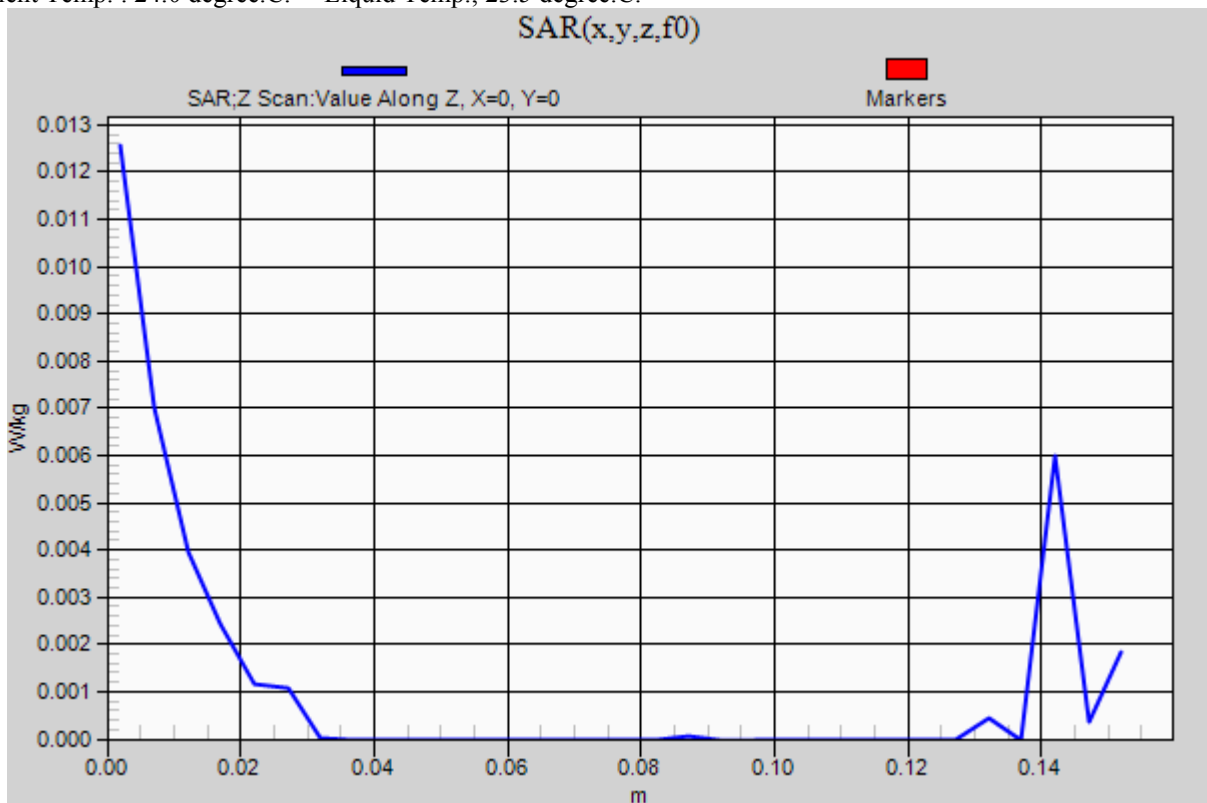
Measurement SW: DASY52, Version 52.8 (3);

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 0.0126 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Left edge 10mm 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.942$ mho/m; $\epsilon_r = 51.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0319 W/kg

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

Reference Value = 3.349 V/m; Power Drift = -0.17 dB

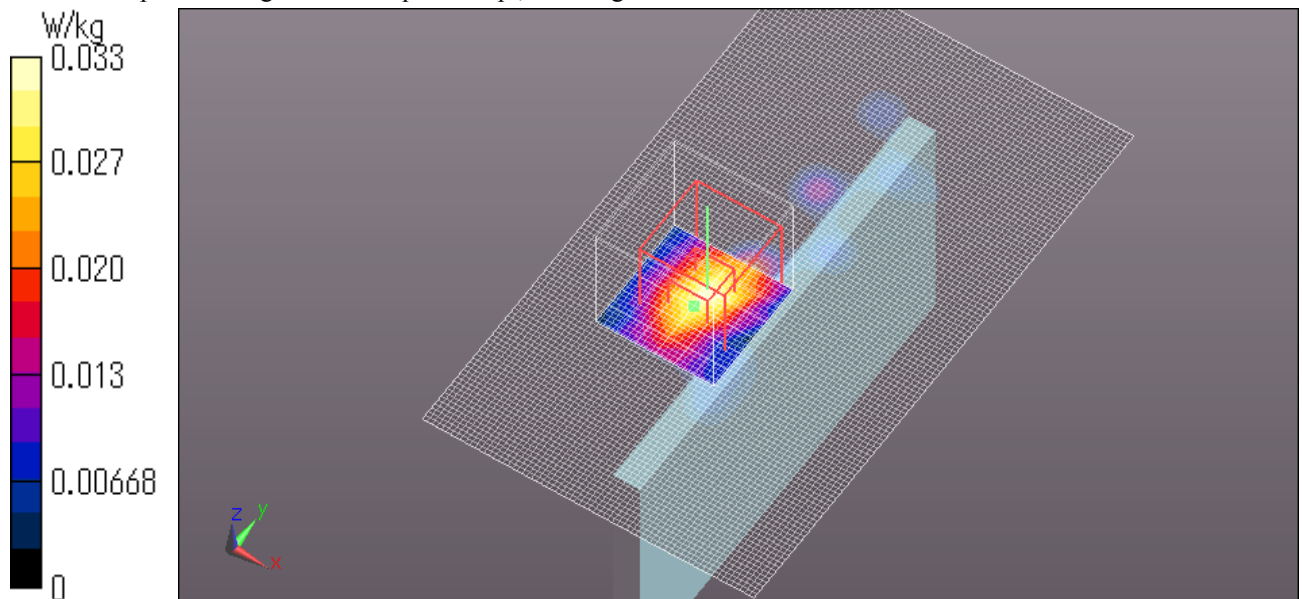
Peak SAR (extrapolated) = 0.0530 W/kg

SAR(1 g) = 0.023 W/kg; SAR(10 g) = 0.00808 W/kg

Maximum value of SAR (measured) = 0.0334 W/kg

Date: 2013/04/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Right edge 10mm 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.942$ mho/m; $\epsilon_r = 51.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.00286 W/kg

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

Reference Value = 0.485 V/m; Power Drift = 0.13 dB

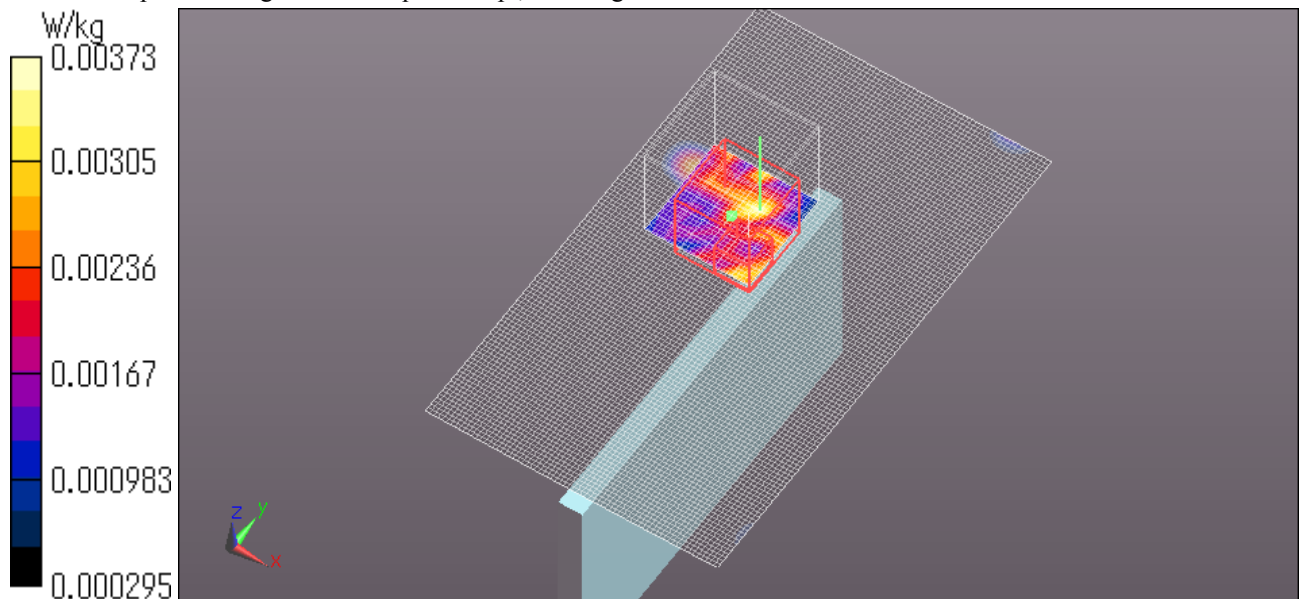
Peak SAR (extrapolated) = 0.00632 W/kg

SAR(1 g) = 0.00156 W/kg; SAR(10 g) = 0.00107 W/kg

Maximum value of SAR (measured) = 0.00373 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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GT-S6810E BT BDR(DH5) Top edge 10mm 2402MHz

Communication System: Bluetooth DH5(reference); Communication System Band: Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.38038

Medium parameters used (interpolated): $f = 2402$ MHz; $\sigma = 1.942$ mho/m; $\epsilon_r = 51.949$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3825; ConvF(7.33, 7.33, 7.33); Calibrated: 2012/12/10;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn509; Calibrated: 2012/07/13

Phantom: ELI 4.0; Type: QDOVA001BA;

Measurement SW: DASYS2, Version 52.8 (3);

Area Scan (81x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0223 W/kg

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

Reference Value = 2.797 V/m; Power Drift = -0.08 dB

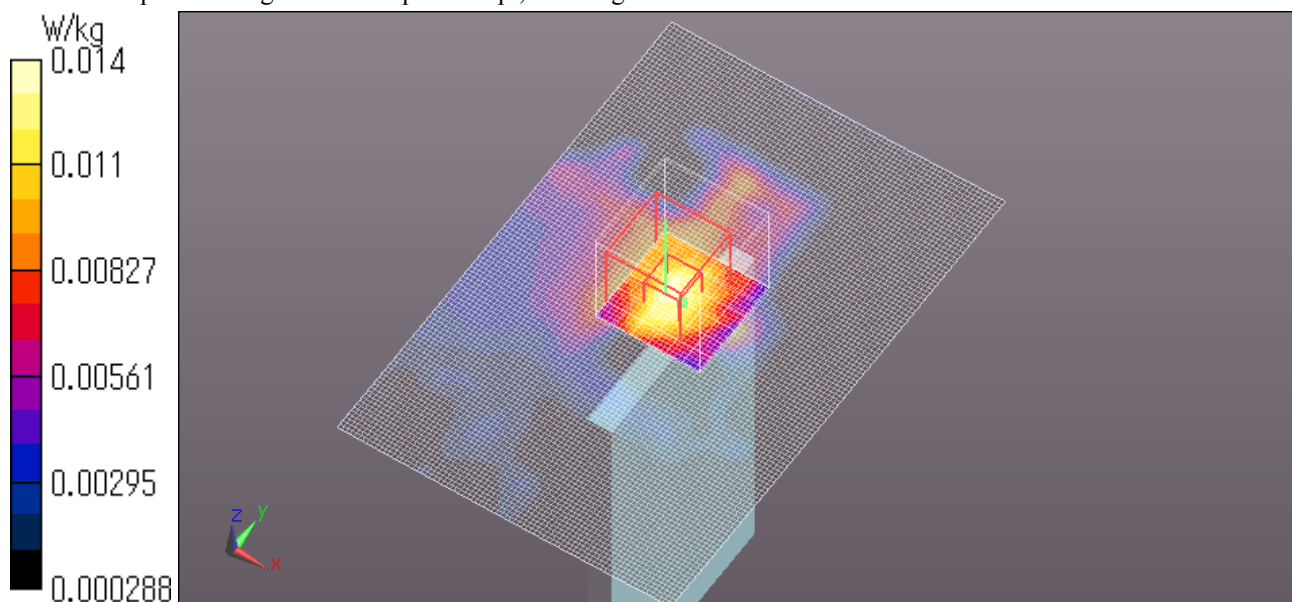
Peak SAR (extrapolated) = 0.0170 W/kg

SAR(1 g) = 0.00952 W/kg; SAR(10 g) = 0.0048 W/kg

Maximum value of SAR (measured) = 0.0136 W/kg

Date: 2013/04/25

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



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