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SAR TEST REPORT

Equipment Under Test	Tablet(Pad) Computer				
Model	ThinkPad Tablet				
Canadian Model number	TP00028AS				
Company Name	Compal Electronics, Inc.				
Company Address	No.581,Ruiguang.,Neihu District, Taipei City 11492, Taiwan(R.O.C)				
FCC KDB inquiry tracking number	523040				
Date of Receipt	2011.08.09				
Date of Test(s)	2011.08.17~2011.09.05				
Date of Issue	2011.11.25				

Standards:

FCC OET 65 supplement C, IEEE /ANSI C95.1, C95.3, IEEE 1528, **RSS-102**

In the configuration tested, the EUT complied with the standards specified above. Remarks:

This report details the results of the testing carried out on one sample, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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	Ricky Huang	Vicky M	vana			
Tested by	:	a tot 8.	X	Date		2011.11.25
	Asst. Supervisor		•			
	Nick Hsu	Wick) fru			
Approved by	:	June	11000	Date	:	2011.11.25
•	Supervisor			•		

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Version

Version No.	Date	Description
1.0	Aug. 23, 2011	Initial issue of report
1.1	Aug. 29, 2011	1 st modification
1.2	Sep. 13, 2011	2 nd modification
1.3	Sep. 14, 2011	3 rd modification
1.4	Sep. 16, 2011	4 th modification
1.5	Oct. 04, 2011	5 th modification
1.6	Oct. 20, 2011	6 th modification
1.7	Oct. 25, 2011	7 th modification
1.8	Nov. 03, 2011	8 th modification
1.9	Nov. 25, 2011	9 th modification

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SGS Taiwan Ltd.

No.134, Wu Kung Road, Wuku Industrial Zone, Taipei County, Taiwan /台北縣五股工業區五工路 134 號 t (886-2) 2299-3279



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1. General Information

1.1 Testing Laboratory

SGS Taiwan Ltd. Electronics & Communication Laboratory							
134, Wu Kung Roa	134, Wu Kung Road, Wuku industrial zone						
Taipei county, Taiv	van, R.O.C.						
Telephone	+886-2-2299-3279						
Fax	+886-2-2298-0488						
Internet	http://www.tw.sgs.com						

1.2 Details of Applicant

Name	Compal Electronics, Inc.
Address	No.581, Ruiguang., Neihu District, Taipei City 11492,
	Taiwan(R.O.C)
Contact Person	Evelyn_Yang

1.3 Description of EUT

EUT Name	Tablet(Pad) Computer
Model No. of Modular	MC8355
Brand name. of Modular	Sierra Wireless Inc
FCC ID. of Modular	N7NMC8355-L
Model	ThinkPad Tablet
Canadian Model number	TP00028AS
Brand Name	Lenovo
Marketing Name	Tablet Computer

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	FCC ID		GKR-TP00028AS								
	IC ID		2533B-TP00028AS								
	IMEI code		355569040132883								
	Definition			Pro	oduction	unit					
	Mode of Operation	GPRS'	\EGPRS\	WCDMA\	.HSDPA\F	HSUF	PA\CI	DMA20	00)\EVD	0
		GI	PRS	E	EGPRS		WC	CDMA		CDM	Α
	D 1 0 1			multi-slo							
	Duty Cycle		· · ·	nulti-class				1		1	
		(GPRS		station(M		3)					
		GPRS	GPRS	WCDMA	WCDMA	WCI	AMC	Callula		US P	200
	TX Frequency	850	1900	Band II	Band IV	Ban	d V	Cellula	11	U3 P	CS
	range	824.2	1850.20	1852.40	1712.4	826	.40	824.7	7	1851	.25
	(MHz)	-	-	-	-	-	-	-		-	
		848.8	1909.8		1752.6			848.3	1	1908	.75
(Channel Number	GPRS	GPRS		WCDMA			Cellula		US P	CS
	(ARFCN)	850	1900		Band IV						
		128-	512-	9262-				1013	-	25	
		251	810	9538	1513	42	33	777		117	5
		GPRS 850 0.975									
		At GPRS 850_ CH251_ Lap-held mode _(2 multi-slot) (proximity sensor is activated)_ test distance is 0mm)									
		GPRS1900									
		0.961									
		At GPRS 1900_ CH810_ Secondary Landscape mode									
	Max. SAR			_(2	2 multi-sl	ot)					
	Measured	(proxim	ity sensc	r is not a				stance	is	10mr	m)
	(1g) mW/g	WCDMA Band II									
•					1.24						
				d II_ CH	_		,		•		
		(prox	diffilly ser	nsor is ac	itivated)_ DMA Ban			lance is	s U	лит)	
				VVCL	1.19	iu i \					
		At WCDMA Band IV_ CH1513_ Secondary Landscape mode									
			(proximity sensor is activated)_ test distance is 0mm)								, 40
									_		

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WCDMA Band V
0.411
At WCDMA Band V_ CH4182_ Lap-held mode
(proximity sensor is activated)_ test distance is 0mm)
CDMA_ Cellular
0.498
At CDMA_ Cellular_ CH384_ Lap-held mode
(proximity sensor is activated)_ test distance is 0mm)
CDMA_US PCS
1.22
At CDMA_US PCS_ CH600_ Secondary Landscape mode
(proximity sensor is not activated)_ test distance is 10mm)
Second solution(change wahyu antenna)
In addition to the Original sample shown in these test results,
model ThinkPad Tablet also has an option for a wahyu
antenna; SAR values were checked on these options using
the spot check method. We found results were same or lower
than Original for GPRS850/GPRS1900/WCDMA Band II/
WCDMA Band IV/WCDMA Band V/Cellular/US PCS Band, but
still within 20% of highest measured SAR.

Integrated	Band Name: Sierra Wireless Inc						
WWAN Module:	Model Name: MC8355						
Antenna Type:	Fixed Integrated antenna PIFA type (Main) ACON P/M: DC33000W300 (Aux) ACON P/M: DC33000W310 (Main) WahYu P/N: DC33000XZ00 (Aux) WahYu P/N: DC33000XZ10						

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Conducted power table:

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Maximum GSM Power

Burst Average Power							
C			GPRS/ (GN	/EDGE ISK)	EDGE	(8PSK)	
Band	Frequency Range (MHz)	Channel	GPRS (dBm) 1 uplink Slot	GPRS (dBm) 2 uplink Slot	EDGE (dBm) 1 uplink Slot	EDGE (dBm) 2 uplink Slot	
850	824.2 - 848.8	128 189	32.4 32.4	29.5 29.5	26.7 26.78	26.7 26.78	
030	024.2 - 040.0	250	32.3	29.6	26.82	26.92	
		512	29.7	27.4	25.81	25.81	
1900	1850.2 - 1909.8	661	29.5	27.8	25.88	25.88	
(P		810	29.6	27.9	25.62	25.62	

Calculated Source-Based Time Average Power							
				GPRS/EDGE (GMSK)		(8PSK)	
	Band Frequency Range (MHz)	7 P	GPRS	GPRS	EDGE	EDGE	
Pand		Channol	(dBm)	(dBm)	(dBm)	(dBm)	
Dariu		Channel	1 uplink	2 uplink	1 uplink	2 uplink	
			Slot	Slot	Slot	Slot	
	824.2 - 848.8	128	23.37	23.48	17.67	20.68	
850		189	23.37	23.48	17.75	20.76	
		250	23.27	23.58	17.79	20.90	
	1850.2 - 1909.8	512	20.67	21.38	16.78	19.79	
1900		661	20.47	21.78	16.85	19.86	
		810	20.57	21.88	16.59	19.60	

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GSM Powers with Reduction

		Burst Average Power							
			GPRS/EDO	GE (GMSK)	EDGE (8PSK)				
			GPRS	GPRS	EDGE	EDGE			
Pand	Band Frequency Range (MHz)	Channel	(dBm)	(dBm)	(dBm)	(dBm)			
Danu		Channel	1 uplink	2 uplink	1 uplink	2 uplink			
			Slot	Slot	Slot	Slot			
		128	28.41	25.52	26.64	26.65			
850	824.2 - 848.8	189	28.45	25.65	26.64	26.74			
		250	28.16	25.84	26.78	26.8			
		512	25.35	22.15	25.46	22.49			
1900	1850.2 - 1909.8	661	25.34	22.11	25.53	22.43			
		810	25.42	22.15	23.65	22.45			

1		Calcul	ated Sourc	e-Based Ti	me Averag	e Power	
			GPRS/EDO	GE (GMSK)	EDGE (8PSK)		
	Fraguency Dange		GPRS	GPRS	EDGE	EDGE	
Band	Frequency Range (MHz)	Channel	(dBm) 1	(dBm) 2	(dBm) 1	(dBm) 2	
			uplink Slot	uplink Slot	uplink Slot	uplink Slot	
		128	19.38	19.50	17.61	20.63	
850	824.2 - 848.8	189	19.42	19.63	17.61	20.72	
		250	19.13	19.82	17.75	20.78	
		512	16.32	16.13	16.43	16.47	
1900	1850.2 - 1909.8	661	16.31	16.09	16.50	16.41	
187		810	16.39	16.13	14.62	16.43	

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Slot Factor

Frame Average Factor (Source Based Time Average Factor)						
1Tx (1 slot of uplink Transmission)	2Tx (2 slots of uplink Transmission)					
-9.03	-6.02					

Note1: Source-Based Average power has been determined by the addition with the measured burst-average power. The GPRS/EDGE mode with GMSK modulation scheme while state of "full power" is restored, and EDGE with GMSK and 8PSK modulation scheme while state of "power back-off" is on as boldlize in red as table of data above are chosen to perform SAR testing in accordance with KDB 941225 D-03 in which highest output power in sourced-based time average mode shall be used to perform the corresponding SAR test.

Note2: The given device is pure Data-Only device at which GSM function is disabled, and since CS and PS are not co-existed while operation, DTM is not applicable to this given DUT of the application.

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			WCDI	MA Bar	nd II (Not po	wer b	ack-of	f)				
Ги a a			R99										
Freq. Band	Frequency	СН	Avg.	HSDP	A mode	e Avg. I	Power	HS	HSUPA mode Avg. Power				
Бапа			Power										
	(MHz)		(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-	
WCDMA	1852.4	9262	23.02	23.19	22.9	22.71	22.78	22.94	20.99	22	21.12	22.83	
Band II	1880.0	9400	23.04	22.93	22.9	22.48	22.49	23.02	21.09	22.04	21.14	22.88	
Dariu II	1907.6	9538	23.17	23.03	23.02	22.5	22.62	23.11	21.15	22.19	21.19	23.02	
			WC	DMA B	and II	(pow	er bac	k-off)					
Eroa			R99										
Freq. Band	Frequency	СН	Avg.	HSDP	A mode	e Avg. I	Power	HS	SUPA m	ode Av	/g. Pow	/er	
Danu			Power										
	(MHz)		(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-	
WCDMA	1852.4	9262	19.08	19.25	18.96	18.77	18.84	19	17.05	18.06	17.18	18.89	
Band II	1880.0	9400	19.20	19.09	19.09 19.06 18.64 18.65 1			19.18	17.25	18.2	17.3	19.04	
Darid II	1907.6	9538	19.10	18.96	18.95	18.43	18.55	19.04	17.08	18.12	17.12	18.95	
			WCDN	//A Bar	nd IV (Not po	wer b	ack-of	f)				
			R99					-					
Freq.	Frequency	СН	Avg.	HSDP	A mode	e Avg. I	Power	HS	SUPA m	node Avg. Power			
Band			Power								•		
	(MHz)		(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-	
WCDMA	1712.4	1312	23.92	23.63	23.80	23.15	23.22	23.84	21.89	22.90	22.02	23.73	
WCDMA	1732.4	1412	23.90	24.00	23.76	23.55	23.56	23.88	21.95	22.90	22.00	23.74	
Band IV	1752.6	1513	23.76	23.60	23.61	23.07	23.19	23.70	21.74	22.78	21.78	23.61	
700			WCI	DMA B	and IN	/ (pow	er bac	k-off)	6	5			
			R99										
Freq.	Frequency	СН	Avg.	HSDP	A mode	e Avg. I	Power	HS	SUPA m	ode Av	g. Pow	/er	
Band			Power										
	(MHz)		(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-	
WCDMA	1712.4	1312	19.72	19.43	19.60	18.95	19.02	19.64	17.69	18.70	17.82	19.53	
WCDMA Band IV	1732.4	1412	19.68	19.78	19.54	19.33	19.34	19.66	17.73	18.68	17.78	19.52	
	1752.6	1513	19.70	19.54	19.55	19.01	19.13	19.64	17.68	18.72	17.72	19.55	

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	WCDMA Band V (Not power back-off)											
F			R99									
Freq.	Frequency	СН	Avg.		HSDPA mode				HS	UPA m	ode	
Band			Power									
	(MHz)		(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5
MCDMA	826.4	4132	22.86	22.65	22.79	22.19	22.24	22.82	20.88	21.86	20.93	22.68
WCDMA	836.4	4182	22.94	22.8	22.83	22.32	22.36	22.87	20.95	21.93	21.01	22.7
Band V	846.6	4233	22.62	22.74	22.49	22.25	22.31	22.54	20.58	21.62	20.66	22.43
			WC	DMA E	Band V	(pow	er back	c-off)				
F			R99									
Freq.	Frequency	СН	Avg.		HSDP#	mode			HSUPA mode			
Band			Power									
	(MHz)		(dBm)	SUB-1	SUB-2	SUB-3	SUB-4	SUB-1	SUB-2	SUB-3	SUB-4	SUB-5
	826.4	4132	19.91	19.7	19.84	19.24	19.29	19.87	17.93	18.91	17.98	19.73
WCDMA	836.4	4182	19.84	19.7	19.73	19.22	19.26	19.77	17.85	18.83	17.91	19.6
Band V	846.6	4233	19.66	19.78	19.53	19.29	19.35	19.58	17.62	18.66	17.7	19.47

CDMA 850/ 1900(Not power back-off)

Band	C	DMA 850)	CDMA 1900			
Channel	1013	384	777	25	600	1175	
Frequency	826.4	836.4	846.4	1852.4	1880	1907.6	
RMC	22.12	22.04	22.27	23.86	23.94	23.12	
12.2K	22.12	22.04	22.21	23.00	23.94	23.12	
EVDO	22.15	22.01	22.13	23.91	23.98	23.17	

CDMA850/ 1900 (Power back-off)

Band	C	DMA 850)	CDMA 1900					
Channel	1013	384	777	25	600	1175			
Frequency	826.4	836.4	846.4	1852.4	1880	1907.6			
RMC	16.12	16.20	16.10	20.01	20.14	20.46			
12.2K	10.12	10.20	10.10	20.01	20.14	20.40			
EVDO	16.13	16.19	16.13	20.10	20.12	20.51			

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The Deficit of Power

	4 12 13 14 1		GPRS/	'EDGE	ED	GE
			(GM	ISK)	(8P	SK)
			GPRS	GPRS	EDGE	EDGE
Pand	Fraguancy Dango (MUz)	Channel	(dBm)	(dBm)	(dBm)	(dBm)
Band	Frequency Range (MHz)	Charine	1uplink	2uplink	1uplink	2uplink
			Slot	Slot	Slot	Slot
		128	3.99	2.8	0.06	0.05
850	824.2 - 848.8	189	3.95	2.71	0.14	0.04
		250	4.14	2.21	0.04	0.02
	6	512	4.35	4.75	0.35	3.32
1900	1850.2 - 1909.8	661	4.16	5.19	0.35	3.45
		810	4.18	5.25	1.97	3.17

Band	Freq.	R99 Avg. Power	HSDPA mode / Avg. Power				HSUPA mode / Avg. Power				
			Sub-1	Sub-2	Sub-3	Sub-4	Sub-1	Sub-2	Sub-3	Sub-4	Sub-5
MCDMA	1852.4	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
WCDMA	1880	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84	3.84
BII	1907.6	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07	4.07
MCDMA	1712.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
WCDMA	1732.4	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22
DIV	1752.6	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06	4.06
MCDMA	826.4	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95
WCDMA	836.4	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
BV	846.6	2.96	2.96	2.96	2.96	2.96	2.96	2.96	2.96	2.96	2.96

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	CDMA 2000					
Fraguency Dongs (MUZ)	Channel	RMC	ראסס			
Frequency Range (MHz)	Channel	12.2K	EVDO			
	1013	6	6.02			
824.7~848.31	384	5.84	5.82			
	777	6.17	6			
	25	3.85	3.81			
1851.25~1908.75	600	3.8	3.86			
	1175	2.66	2.66			

Note: The table as presented above records the result of power difference in burst mode between full power when sensor is de-activated and power reduction when sensor is activated. The data as boldlize in red highlights the largest difference at each transmission mode.

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1.4 Test Environment

Ambient Temperature: 22±2° C Tissue Simulating Liquid: 22±2° C

1.5 Operation description

Device description:

INDIGO support GPRS/EGPRS/WCDMA/HSDPA/HSUPA/CDMA2000, technology. The conducted power of EGPRS850, EGPRS1900 will not reduced even proximity sensor actives.

The others are shown as below:

Mode(s) of operation	GPRS/ EGPRS 850 MSC 1-4 (GMSK)	EGPRS 850 MSC 5-9 (8-PSK)	GPRS/ EGPRS 1900 MSC 1-4 (GMSK)	EGPRS 1900 MSC 5-9 (8-PSK)
Max. output power	32.4±	26.7±	29.7±	25.8±
setting	1dBm	1dBm	1dBm	1dBm
Reduced Max. output power setting	28.6± 1dBm	N/A	25.6± 1dBm	N/A
Transmitting frequency range(s)	9 824 – 849 MHz 1850 – 1910			

Mode(s) of operation	WCDMA B2	WCDMA B4	WCDMA B5
Max. output power	22.9± 1dBm	23.2± 1dBm	23.04±
setting	22.9± 1Ubili	23.2± IUDIII	1dBm
Reduced Max. output	19.2± 1dBm	19.5± 1dBm	19.3±
power setting	19.2± 10bm	19.5± 10bm	1dBm
Transmitting frequency	1850 – 1910	1710-1755MHz	824 – 849
range(s)	MHz	1710-1755WHZ	MHz

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Mode(s) of operation	CDMA 850	CDMA 1900
Max. output power setting	21.96± 1dBm	23.14± 1dBm
Reduced Max. output power setting	16.91± 1dBm	20.2± 1dBm
Transmitting frequency range(s)	1850 – 1910 MHz	824 – 849 MHz

Due to proximity sensing antennas in INDIGO are placed next to GPRS/WCDMA main antenna and detect distance are limited by sensing antennas. That's why Primary landscape, secondary landscape and primary portrait mode of conduct power reduction will not active during SAR measurements due to out of detect range. But, proximity sensor itself is "always available" independent of display orientation.

In real case, when end user operates in landscape mode for example. Proximity sensor will be triggered while human's hand approaches GPRS/WCDMA main antenna and vice versa. Moreover, proximity sensor's functionality will not be impacted even A/C adapter is plugged. More detail information about proximity sensor will be described in next section.

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Proximity Sensor description:

There exists a capacitance between any reference points relative to ground, as long as electrical isolation exists between them. If this reference point is a sensing plate (or sense antenna), it helps to think of it as a capacitor. The positive plate of the capacitor is the sensing plate, and the negative plate is formed by the surrounding area.

For example, a human hand will increase the sense plate capacitance as it approaches the sense plate. Touching the plate will increase the capacitance significantly.

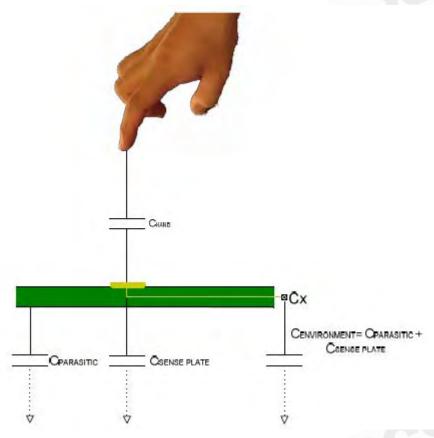


Illustration of environmental capacitance

The sense plate (or sense antenna) can be any electrically conductive object. This includes glass or plexiglass plates with a conductive surface, or the base of a metal desk lamp. In this project, we use two sensing plates (or sense antennas) in INDIGO. One is at the right side of GSM/WCDMA/CDMA main antenna and the other is at the left side of GSM/WCDMA/CDMA main antenna. The sense plate is connected to the CX Pin of all modules. The capacitance of the CX plate is referred to as CX.

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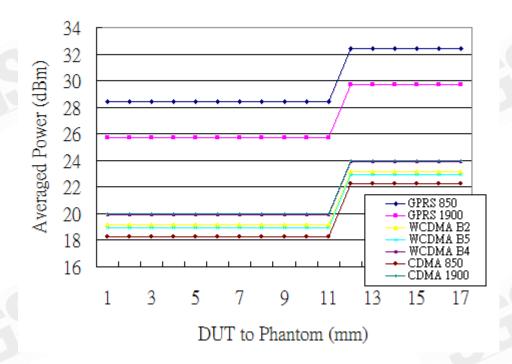


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The following graphs are proximity sensor activation vs. output power of each module. Briefly speaking, the detect distance of INDIGO from phantom body to Bottom side is 11mm at least and the detect distance from phantom body to INDIGO edge side is 10mm at least. And we will test bottom/edge SAR when d=11mm at bottom side & d=10mm at edge side. Consider 45 degree tilt usage with respect to proximity sensor at screen side, the detect distance of INDIGO from phantom body to Device Under Test is 10mm at least also.

Proximity Sensor Activation (Sierra MC8355) Max. Output Power vs. Distance from the body phantom

Power back-off (Bottom SAR)



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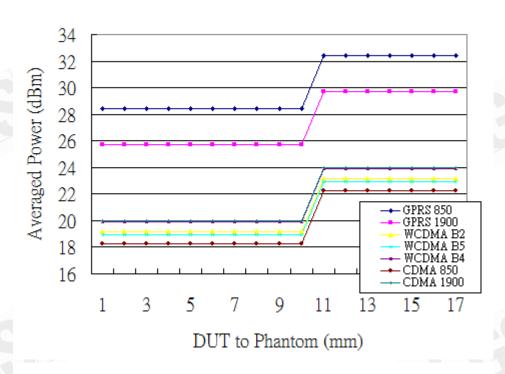
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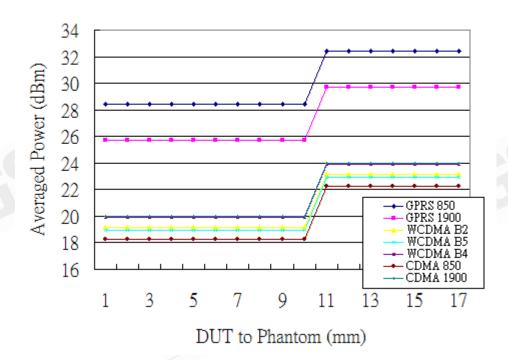


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Power back-off (Edge SAR)



Power back-off (tilt 45 degrees at screen side)



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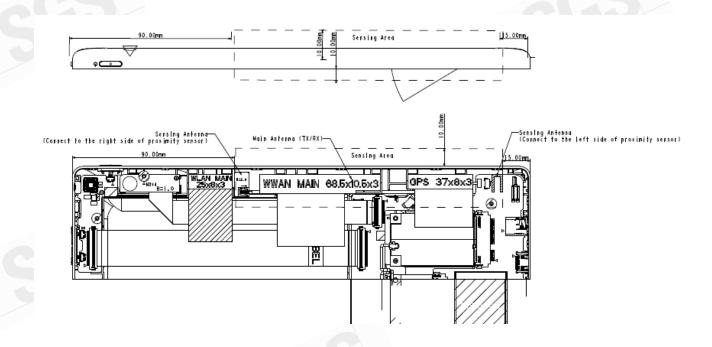
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Figure C is the proximity sensor and power limit activation flow chart in INDIGO. One is placed at the right side of GSM/WCDMA/CDMA main antenna and the other is at the left side of GSM/WCDMA/CDMA main antenna. While human body approach the sensing antenna of proximity sensor near the right side of GSM/WCDMA/CDMA main antenna, right proximity sensor will info. Nvidia T20 then reduces power by AT command.



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While human body approach the sensing antenna of proximity sensor near the left side of GSM/WCDMA/CDMA main antenna, left proximity sensor will info. Nvidia T20 then reduces power by AT command also. Both right and left proximity sensors use the same GPIO pin of Nvidia T20, this means power reduction will be triggered either one of the proximity sensor works.

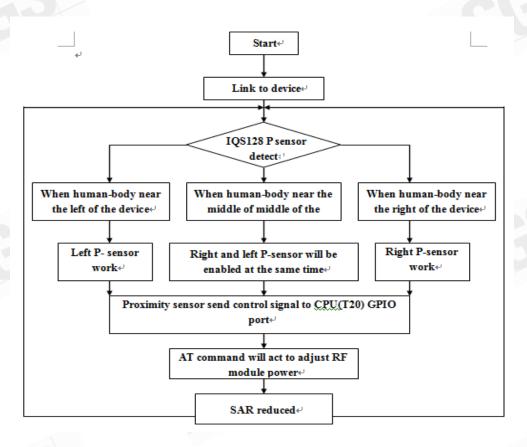


Figure C Control flow chart of human body sensing

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Proposed SAR test plan

The EUT WWAN is controlled by using a Radio Communication Tester, and the communication between the EUT and the tester is established by air link. Measurements are performed respectively on the lowest, middle and highest channels of the operating band(s). The EUT is set to maximum power level during all tests, and at the beginning of each test the battery is fully charged.

Since the overall device diagonal size is larger than 200mm, according to KDB447498, Lab should test this device in highest power with 3 configurations below (highlighted with bold)

- **Configuration 1: Lap-held mode.** (back side of device is parallel to human body, proximity sensor is activated)
- Configuration 2: Primary Portrait mode. (Not tested, since distance of WWAN antenna to edge is 85.22mm, which is larger than 5cm)
- Configuration 3: Secondary Portrait mode. (Not tested, since distance of WWAN antenna to edge is 106.68mm, which is larger than 5cm)
- Configuration 4: Primary Landscape mode. (Not tested, since distance of WWAN antenna to edge is 166.4 mm, which is larger than 5cm)
- **Configuration 5: Secondary Landscape mode.** (proximity sensor is activated)
- Configuration 6: Front side mode. (proximity sensor is not activated)

Full Power Test configuration:

- **Configuration 7 : Lap-held mode.** (back side of device is parallel to human body, proximity sensor is not activated)_test distance is 10 mm.
- Configuration 8: Secondary Landscape mode. (proximity sensor is not activated)_test distance is 10mm.
- #. If the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.
- #. When the maximum transmitter and antenna output power are \leq 60/f(GHz) (mW) SAR evaluation is not required for FCC or TCB approval.

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#. Per KDB941225 FCC 3G procedures, HSDPA and HSUPA have been omitted since the maximum transmit power results are NOT 1/4dB larger than the WCDMA R99 test result.

#. The highest 1-g SAR for WLAN is 0.271 W/kg_ Secondary Landscape mode (Refer to SGS Report No.EN/2011/60009-02) and the highest 1-g SAR for WWAN is 1.24 W/kg_ Secondary Landscape mode. The sum of 1-g for simultaneous transmitting WLAN and WWAN antenna pair is 0.271+1.24 = 1.511 W/kg < 1.6 W/kg. According to KDB648474/ KDB447498 /KDB248227 Simultaneous SAR evaluation is not required.</p>

	Σα		
Configuration	Lap-held Mode	Secondary Landscape	Note
GPRS/EDGE 850 +	0.494+ 0.459	0.383+ 0.271	Full Power
WLAN802.11 b	=0.953 W/kg	=0.654W/kg	
GPRS/EDGE 1900	0.373+ 0.459	0.961+ 0.271	Full Power
+ WLAN802.11 b	=0.832 W/kg	=1.232 W/kg	
WCDMA BII +	0.374+ 0.459	1.2+ 0.271	Full Power
WLAN802.11 b	=0.833 W/kg	=1.471 W/kg	
WCDMA BIV +	0.441+ 0.459	0.998+ 0.271	Full Power
WLAN802.11 b	=0.9 W/kg	=1.269 W/kg	
WCDMA BV +	0.302+ 0.459	0.215+ 0.271	Full Power
WLAN802.11 b	=0.761 W/kg	=0.486 W/kg	
Cellular+	0.346+ 0.459	0.193+ 0.271	Full Power
WLAN802.11 b	=0.805W/kg	=0.464 W/kg	
US PCS+	0.434+ 0.459	1.22+ 0.271	Full Power
WLAN802.11 b	=0.893W/kg	=1.491 W/kg	
GPRS/EDGE 850 +	0.975+ 0.459	0.331+ 0.271	Power Reduction
WLAN802.11 b	=1.434 W/kg	=0.602 W/kg	
GPRS/EDGE 1900	0.505+ 0.459	0.661+ 0.271	Power Reduction
+ WLAN802.11 b	=0.964 W/kg	=0.932 W/kg	

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A		rage. 20 or i
0.857+ 0.459 =1.316 W/kg	1.24+ 0.271 = 1.511 W/kg	Power Reduction
0.534+ 0.459 =0.993 W/kg	1.19+ 0.271 =1.461 W/kg	Power Reduction
0.411+ 0.459 =0.87 W/kg	0.158+ 0.271 =0.429 W/kg	Power Reduction
0.498+ 0.459 =0.957 W/kg	0.156+ 0.271 =0.615 W/kg	Power Reduction
0.758+ 0.459 =1.217 W/kg	1.14+ 0.271 =1.411 W/kg	Power Reduction
	=1.316 W/kg 0.534+ 0.459 =0.993 W/kg 0.411+ 0.459 =0.87 W/kg 0.498+ 0.459 =0.957 W/kg 0.758+ 0.459	=1.316 W/kg =1.511 W/kg 0.534+ 0.459

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The brief of SAR result

GPRS/FGPRS 850 SAR Result

					Measuremer	nt Results						
Frequ	Ch.	Mode	Reduction –Frame Average Power (dBm)	Source-based	Power Reduction –Frame Average Power (dBm)		Drift	Power Reduction (dB)	Spacing	Number of GPRS Slot	Test Config.	SAR (1g) (W/kg)
824.2	128	GPRS 850	32.4	23.37	28.41	19.38	0.107	0	10mm	1 slot	Front side	0.202
824.2	128	GPRS 850	29.5	23.48	25.52	19.5	0.026	2.8	0mm	2 slot	Lap-held	0.805
836.4	189	GPRS 850	29.5	23.48	25.65	19.63	-0.097	2.71	0mm	2 slot	Lap-held	0.855
848.8	251	GPRS 850	29.6	23.58	25.84	19.82	-0.043	2.21	0mm	2 slot	Lap-held	0.975
836.4	189	GPRS 850	29.5	23.48	25.65	19.63	-0.104	2.71	0mm	2 slot	Secondary landscape	0.331
836.4	189	EGPRS 850	26.78	20.76	26.74	20.72	-0.082	2.71	0mm	2 slot	Lap-held	0.681
836.4	189	EGPRS 850	26.78	20.76	26.74	20.72	-0.131	0.04	0mm	2 slot	Secondary landscape	250
836.4	189	EGPRS 850	26.78	17.75	26.64	17.61	0.092	0	10mm	1 slot	Front side	0.163
836.4	189	GPRS 850	32.4	23.37	28.45	19.42	0.002	0	10mm	1 slot	Lap-held	0.249
836.4	189	GPRS 850	32.4	23.37	28.45	19.42	-0.188	0	10mm	1 slot	Secondary landscape	0.179
836.4	189	GPRS 850	29.5	23.48	25.65	19.63	0.133	0	10mm	2 slot	Lap-held	0.494
836.4	189	GPRS 850	29.5	23.48	25.65	19.63	0.126	0	10mm	2 slot	Secondary landscape	0.383

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GPRS/EGPRS1900 SAR Result

					Measurement I	Results						
Frequen	псу		Not Power	Not Power Reduction –	Power	Power Reduction –	Power Drift	Power Reduction		Number		SAR (1g)
MHz (Ch.	Mode	Reduction –Frame Average Power	Source-based					Spacing	GPRS	Test Config.	(W/kg
			(dBm)	Average Power (dBm)	(dBm)	Average Power (dBm)					3	
1880 6	561	GPRS1900	29.5	20.47	25.34	16.31	0.067	4.16	0mm	1 slot	Lap-held	0.505
1880 6	561	GPRS1900	29.5	20.47	25.34	16.31	-0.166	4.16	0mm	1 slot	Secondary landscape	0.661
1850.2	512	GPRS1900	27.4	21.38	22.15	16.13	-0.055	0	10mm	2 slot	Front side	0.775
1880	661	GPRS1900	27.8	21.78	22.11	16.09	-0.112	0	10mm	2 slot	Front side	0.916
1909.8	310	GPRS1900	27.9	21.88	22.15	16.13	0.022	0	10mm	2 slot	Front side	0.942
1880	661	EGPRS1900	25.88	16.85	25.53	16.5	0.125	0.35	0mm	1 slot	Lap-held	0.261
1880 6	561	EGPRS1900	25.88	16.85	25.53	16.5	-0.191	0.35	0mm	1 slot	Secondary landscape	0.32
1880	661	EGPRS1900	25.88	19.86	22.43	16.41	-0.003	0	10mm	2 slot	Front side	0.37
1880 6	661	GPRS1900	27.8	21.78	22.11	16.09	0.031	0	10mm	2 slot	Lap-held	0.373
1850.2 5	512	GPRS1900	27.4	21.38	22.15	16.13	0.199	0	10mm	2 slot	Secondary landscape	0.884
1880 6	561	GPRS1900	27.8	21.78	22.11	16.09	0.124	0	10mm	2 slot	Secondary landscape	0.909
1909.8	310	GPRS1900	27.9	21.88	22.15	16.13	0.145	0	10mm	2 slot	Secondary landscape	0.961

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WCDMA Band II SAR Result

				Mea	surement Re	esults				
Frequ MHz	uency Ch.	Mada		Power - Reduction –	Power Drift (dBm)	Reduction	Consider	Number of GPRS Slot	Test	SAR (1g) (W/kg)
		Mode	Average Power (dBm)	Average Power (dBm)		(dB)	Spacing		Config.	
1852.4	9262	R99	23.02	19.08	0.113	3.94	0mm	NA	Lap-held	0.771
1880	9400	R99	23.04	19.2	-0.039	3.84	0mm	NA	Lap-held	0.801
1907.6	9538	R99	23.17	19.1	0.023	4.07	0mm	NA	Lap-held	0.857
1852.4	9262	R99	23.02	19.08	0.051	3.94	0mm	NA	Secondary landscape	1.24
1880	9400	R99	23.04	19.2	0.128	3.84	0mm	NA	Secondary landscape	1.18
1907.6	9538	R99	23.17	19.1	0.066	4.07	0mm	NA	Secondary landscape	1.21
1880	9400	R99	23.04	19.2	0.132	0	10mm	NA	Front side	0.78
1880	9400	R99	23.04	19.2	0.032	0	10mm	NA	Lap-held	0.374
1852.4	9262	R99	23.02	19.08	0.069	0	10mm	NA	Secondary landscape	1.2
1880	9400	R99	23.04	19.2	0.16	0	10mm	NA	Secondary landscape	1.03
1907.6	9538	R99	23.17	19.1	0.118	0	10mm	NA	Secondary landscape	0.98

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WCDMA Band IV SAR Result

				Mea	surement Re	sults				
Frequ	uency		Not Power	Power	Power Drift	Power		Number of		SAR (1g)
MHz	Ch.	Mode	Reduction - Average Power (dBm)	Reduction – Average Power (dBm)	(dBm)	Reduction (dB)	Spacing	GPRS Slot	Test Config.	(W/kg)
1732.4	1412	R99	23.9	19.68	0.05	4.22	0mm	NA	Lap-held	0.534
1712.4	1312	R99	23.92	19.72	-0.036	4.2	0mm	NA	Secondary landscape	1.13
1732.4	1412	R99	23.9	19.68	0.157	4.22	0mm	NA	Secondary landscape	1.11
1752.6	1513	R99	23.76	19.7	0.043	4.06	0mm	NA	Secondary landscape	1.19
1712.4	1312	R99	23.92	19.72	0.074	0	10mm	NA	Front side	1.01
1732.4	1412	R99	23.9	19.68	-0.053	0	10mm	NA	Front side	1.03
1752.6	1513	R99	23.76	19.7	-0.023	0	10mm	NA	Front side	1.09
1732.4	1412	R99	23.92	19.68	-0.113	0	10mm	NA	Lap-held	0.441
1712.4	1312	R99	23.92	19.72	0.101	0	10mm	NA	Secondary landscape	0.926
1732.4	1412	R99	23.9	19.68	0.113	0	10mm	NA	Secondary landscape	0.961
1752.6	1513	R99	23.76	19.7	0.119	0	10mm	NA	Secondary landscape	0.998

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WCDMA Band V SAR Result

				Measi	urement Res	ults				
Frequ MHz	Ch.	Mode	Not Power Reduction – Average Power (dBm)	Power Reduction – Average Power (dBm)	Power Drift (dBm)	Power Reduction (dB)	Spacing	Number of GPRS Slot	Test Config.	SAR (1g) (W/kg)
836.4	4182	R99	22.94	19.84	-0.116	3.1	0mm	NA	Lap-held	0.411
836.4	4182	R99	22.94	19.84	0.113	3.1	0mm	NA	Secondary landscape	0.158
836.4	4182	R99	22.94	19.84	0.023	0	10mm	NA	Front side	0.299
836.4	4182	R99	22.94	19.84	0.029	0	10mm	NA	Lap-held	0.302
836.4	4182	R99	22.94	19.84	-0.016	0	10mm	NA	Secondary landscape	0.215

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Cellular SAR Result

				Mea	surement Re	sults				
Frequ MHz	Ch.	Mode	Reduction – Average Power	Reduction – Average Power	Power Drift (dBm)	Power Reduction (dB)	Spacing	Number of GPRS Slot	Test Config.	SAR (1g) (W/kg)
836.52	384	CDMA	(dBm) 22.04	(dBm) 16.2	-0.048	5.84	0mm	NA	Lap-held Secondary	0.498
836.52	384	CDMA	22.04	16.2	0.003	5.84	0mm	NA	landscape	0.156
836.52	384	CDAMA	22.04	16.2	-0.176	0	10mm	NA	Front side	0.312
836.52	384	CDMA	22.04	16.2	-0.044	0	10mm	NA	Lap-held	0.346
836.52	384	CDMA	22.04	16.2	0.105	0	10mm	NA	Secondary landscape	0.193

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HS PCS SAR Result

					CS SAR					
				Measi	urement Res	ults		1		1
Frequ MHz	Ch.	Mode	Not Power Reduction – Average Power (dBm)	Power Reduction – Average Power (dBm)	Power Drift (dBm)	Power Reduction (dB)	Spacing	Number of GPRS Slot	Test Config.	SAR (1g) (W/kg)
1880	600	CDMA	23.94	20.14	-0.17	3.8	0mm	NA	Lap-held	0.758
1851.25	25	CDMA	23.86	20.01	-0.009	3.85	0mm	NA	Secondary landscape	1.14
1880	600	CDMA	23.94	20.14	0.068	3.8	0mm	NA	Secondary landscape	1.04
1908.75	1175	CDMA	23.12	20.46	0.142	2.66	0mm	NA	Secondary landscape	1.04
1880	600	CDMA	23.94	20.14	-0.004	0	10mm	NA	Front side	0.724
1880	600	CDMA	23.94	20.14	-0.173	0	10mm	NA	Lap-held	0.434
1851.25	25	CDMA	23.86	20.01	-0.014	0	10mm	NA	Secondary landscape	1.22
1880	600	CDMA	23.94	20.14	-0.094	0	10mm	NA	Secondary landscape	0.965
1908.75	1175	CDMA	23.12	20.46	0.145	0	10mm	NA	Secondary landscape	0.97

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1.6 The SAR Measurement System

A photograph of the SAR measurement System is given in Fig. a. This SAR Measurement System uses a Computer-controlled 3-D stepper motor system (SPEAG DASY 4 professional system). A Model ES3DV3/EX3DV4 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ (|E||²)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant.

The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Staubli RX family) with controller, teach pendant and software. An arm extension is for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc.

The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

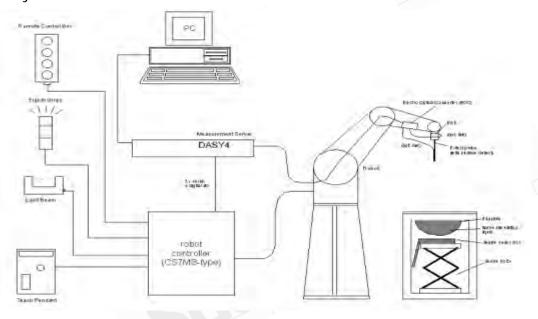


Fig.a The block diagram of SAR system

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• The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection. The EOC is connected to the measurement server.

- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
 - A computer operating Windows 2000 or Windows XP.
 - · DASY4 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
 - The SAM twin phantom enabling testing left-hand and right-hand usage.
 - The device holder for handheld mobile phones.
 - Tissue simulating liquid mixed according to the given recipes.
 - Validation dipole kits allowing to validate the proper functioning of the system.

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1.7 System Components

ES3DV3/EX3DV4 E-Field Probe

	V4 L-1 leid i 1 Obe						
Construction	Symmetrical design with triangular core						
	Built-in shielding against static charges						
	PEEK enclosure material (resistant to						
	organic solvents, e.g., DGBE)						
Calibration	Basic Broad Band Calibration in air						
	Conversion Factors (CF) for						
	HSL835/1750/1900 MHz Additional CF for						
	other liquids and frequencies upon request						
Frequency	10 MHz to > 6 GHz, Linearity: ± 0.2 dB (30 MHz to 6 GHz)						
Directivity	± 0.3 dB in HSL (rotation around probe axis)						
	± 0.5 dB in tissue material (rotation normal to probe axis)						
Dynamic Range	10 μ W/g to > 100 mW/g						
	Linearity: ± 0.2 dB (noise: typically < 1 μW/g)						
Dimensions	Overall length: 330 mm (Tip: 20 mm)						
	Tip diameter: 2.5 mm (Body: 12 mm)						
	Typical distance from probe tip to dipole centers: 1 mm						
Application	High precision dosimetric measurements in any exposure scenario						
	g., very strong gradient fields). Only probe which enables						
	compliance testing for frequencies up to 6 GHz with precision of better						
	30%.						

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SAM PHANTOM V4.0C

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Construction	The shell corresponds to the specifications of the Specific				
	Anthropomorphic Mannequin (SAM) phantom defined in IEEE				
	1528-200X, CENELEC 50361 and IEC 62209.				
	It enables the dosimetric evaluation of left and right hand phone				
	usage as well as body mounted usage at the flat phantom region. A				
	cover prevents evaporation of the liquid. Reference markings on the				
	phantom allow the complete setup of all predefined phantom				
	positions and measurement grids by manually teaching three points				
	with the robot.				
Shell Thickness	2 ± 0.2 mm				
Filling Volume	Approx. 25 liters	(WU			
Dimensions	Height: 251 mm;				
	Length: 1000 mm;	T T			
	Width: 500 mm	7			

DEVICE HOLDER

Construction	The device holder (Supporter) for	
	Notebook is made by POM	
	(polyoxymethylene resin), which is	
	non-metal and non-conductive. The	
	height can be adjusted to fit varies	
G	kind of notebooks.	
		Device Holder

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1.8 SAR System Verification

The microwave circuit arrangement for system verification is sketched in Fig. b. The daily system accuracy verification occurs within the flat section of the SAM phantom. A SAR measurement was performed to see if the measured SAR was within +/- 5% from the target SAR values. These tests were done at 835/1750/1900 MHz. The tests were conducted on the same days as the measurement of the DUT. The obtained results from the system accuracy verification are displayed in the table 1 (SAR values are normalized to 1W forward power delivered to the dipole). During the tests, the ambient temperature of the laboratory was in the range 22.1°C, the relative humidity was in the range 62% and the liquid depth above the ear reference points was above 15 cm in all the cases. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values.

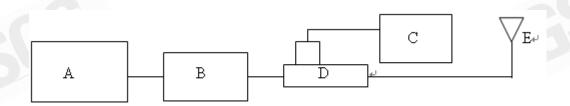


Fig.b The block diagram of system verification

- A. Agilent Model 8648D Signal Generator
- B. Mini circuits Model ZHL-42 Amplifier
- C. Agilent ModelU2001B Power sensor
- D. Agilent Model 778D Dual directional coupling
- E. Reference dipole antenna



Photograph of the dipole Antenna

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Validation Kit	Frequency Hz	Target SAR (1g) (Pin=250mW)	Measured SAR (1g)	Measured Date
D835V2 S/N:4d063	850 MHz (Body)	2.43mW/g	2.44mW/g	2011-08-17
D1900V2 S/N:5d027	1900MHz (Body)	9.93mW/g	9.96 mW/g	2011-08-18
D835V2 S/N:4d063	850 MHz (Body)	2.43mW/g	2.45mW/g	2011-08-24
D1900V2 S/N:5d027	1900MHz (Body)	9.93mW/g	9.87mW/g	2011-08-24
D1750V2 S/N:1008	1750MHz (Body)	9.04mW/g	9.24mW/g	2011-09-01
D835V2 S/N:4d063	850 MHz (Body)	2.43mW/g	2.51mW/g	2011-09-05
D1750V2 S/N:1008	1750MHz (Body)	9.04mW/g	9.16mW/g	2011-09-05
D1900V2 S/N:5d027	1900MHz (Body)	9.93mW/g	9.77mW/g	2011-09-05

Table 2. Results of system validation

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1.9 Tissue Simulant Fluid for the Frequency Band

The dielectric properties for this body-simulant fluid were measured by using the Agilent Model 85070D Dielectric Probe (rates frequency band 200 MHz to 20 GHz) in conjunction with HP 8753D Network Analyzer (30 KHz-6000 MHz).

All dielectric parameters of tissue simulates were measured within 24 hours of SAR measurements. The depth of the tissue simulant in the flat section of the phantom was 15cm±5mm during all tests. (Fig .2)

Frequency	Tissue type	Measurement date/	Die	lectric Para	ameters
(MHz)		Limits	ρ	σ (S/m)	Simulated Tissue
					Temperature(° C)
	Pody	Measured, 2011.08.17	55.4	1.02	21.7
850	Body	Recommended Limits	51.21-56.60	0.95-1.05	20-24
1900	Dody	Measured, 2011.08.18	51.5	1.59	21.7
1900	Body	Recommended Limits	48.55-53.66	1.44-1.6	20-24
	Pody	Measured, 2011.08.24	55.4	1.02	21.7
850	Body	Recommended Limits	51.21-56.60	0.95-1.05	20-24
1900	Pody	Measured, 2011.08.24	51.4	1.59	21.7
1900	Body	Recommended Limits	48.55-53.66	1.44-1.6	20-24
1750	Dody	Measured, 2011.09.01	52	1.42	21.7
1750	Body	Recommended Limits	48.55-53.66	1.44-1.6	20-24
	Pody	Measured, 2011.09.05	54.3	0.998	21.7
850	Body	Recommended Limits	51.21-56.60	0.95-1.05	20-24
1750	Pody	Measured, 2011.09.05	51.7	1.4	21.7
1750	Body	Recommended Limits	48.55-53.66	1.44-1.6	20-24
1000	Pody	Measured, 2011.09.05	51.2	1.57	21.7
1900	Body	Recommended Limits	48.55-53.66	1.44-1.6	20-24

Table 3. Dielectric Parameters of Tissue Simulant Fluid

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The composition of the body tissue simulating liquid is:

	er are beerg		<u> </u>
Ingredient	850MHz (Body)	1750MHz (Body)	1900MHz (Body)
DGMBE	X	300.67g	300.67g
Water	631.68 g	716.56 g	716.56 g
Salt	11.72 g	4.0 g	4.0 g
Preventol D-7	1.2 g	Χ	X
Cellulose	Х	Х	Χ
Sugar	600 g	Х	X
Total amount	1 L (1.0kg)	1 L (1.0kg)	1 L (1.0kg)

Table 3. Recipes for tissue simulating liquid

1.10 EVALUATION PROCEDURES

The entire evaluation of the spatial peak values is performed within the Post-processing engine (SEMCAD). The system always gives the maximum values for the 1 g and 10 g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- 1. The extraction of the measured data (grid and values) from the Zoom Scan.
- 2. The calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- 3. The generation of a high-resolution mesh within the measured volume
- 4. The interpolation of all measured values from the measurement grid to the high-resolution grid
- 5. The extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- 6. The calculation of the averaged SAR within masses of 1g and 10g. The probe is calibrated at the center of the dipole sensors that is located 1 to 2.7mm away from the probe tip. During measurements, the probe stops shortly above the phantom surface, depending on the probe and the surface detecting system. Both distances are included as parameters in the probe configuration file. The software always knows exactly how far away the measured point is from the surface. As the probe cannot directly measure at the surface, the values between the deepest measured point and the surface must be extrapolated. The angle between the probe axis and the surface normal line is less than 30 degree.

In the Area Scan, the gradient of the interpolation function is evaluated to find all the extreme of the SAR distribution. The uncertainty on the locations of the extreme is less than 1/20 of the grid size. Only local maximum within -2 dB of the global maximum are searched and passed for the Cube Scan measurement. In the Cube Scan, the

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interpolation function is used to extrapolate the Peak SAR from the lowest measurement points to the inner phantom surface (the extrapolation distance). The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5mm.

The maximum search is automatically performed after each area scan measurement. It is based on splines in two or three dimensions. The procedure can find the maximum for most SAR distributions even with relatively large grid spacing. After the area scanning measurement, the probe is automatically moved to a position at the interpolated maximum. The following scan can directly use this position for reference, e.g., for a finer resolution grid or the cube evaluations. The 1g and 10g peak evaluations are only available for the predefined cube 7x7x7 scans. The routines are verified and optimized for the grid dimensions used in these cube measurements. The measured volume of 30x30x30mm contains about 30g of tissue. The first procedure is an extrapolation (incl. Boundary correction) to get the points between the lowest measured plane and the surface. The next step uses 3D interpolation to get all points within the measured volume. In the last step, a 1g cube is placed numerically into the volume and its averaged SAR is calculated. This cube is the moved around until the highest averaged SAR is found. If the highest SAR is found at the edge of the measured volume, the system will issue a warning: higher SAR values might be found outside of the measured volume. In that case the cube measurement can be repeated, using the new interpolated maximum as the center.

1.11 Test Standards and Limits

According to FCC 47CFR §2.1093(d) The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814.

SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and

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shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in § 1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

- (1) Limits for Occupational/Controlled exposure: 0.4 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 8 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 20 W/kg, as averaged over an 10 grams of tissue (defined as a tissue volume in the shape of a cube).
- (2) Occupational/Controlled limits apply when persons are exposed as a consequence of their employment provided these persons are fully aware of and exercise control over their exposure. Awareness of exposure can be accomplished by use of warning labels or by specific training or education through appropriate means, such as an RF safety program in a work environment.
- (3) Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section. (Table .4)

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Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR (Brain)	1.60 m W/g	8.00 m W/g
Spatial Average SAR (Whole Body)	0.08 m W/g	0.40 m W/g
Spatial Peak SAR (Hands/Feet/Ankle/Wrist)	4.00 m W/g	20.00 m W/g

Table .4 RF exposure limits

Notes:

- 1. Uncontrolled environments are defined as locations where there is potential exposure of individuals who have no knowledge or control of their potential exposure.
- 2. Controlled environments are defined as locations where there is potential exposure of individuals who have knowledge of their potential exposure and can exercise control over their exposure.

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2. Summary of Results

Acon antenna

GPRS 850

Front side n	Front side mode: (proximity sensor is not activated)_10 mm						
(1 multi-slo	t_1UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	128	824.20	0.202	22.1	21.7		
Lap-held mo	ode: (prox	cimity s	ensor is activated)_0 mm				
(2 multi-slo	t_2UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
	128	824.20	0.805	22.1	21.7		
850MHz	189	836.40	0.855	22.1	21.7		
	251	848.80	0.975	22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is activated)_0	mm			
(2 multi-slo	t_2UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.331	22.1	21.7		

^{#.} According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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EGPRS 850

Lan hold me	Lap-held mode: (proximity sensor is activated)_0 mm						
-	(2 multi-slot_2UP_1Dn)						
(2 multi-Sio	L_20P_1L	(ווע		1	I		
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.681	22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is activated)_0	mm			
(2 multi-slo	t_2UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.250	22.1	21.7		
Front side n	node: (pro	oximity	sensor is not activated)_10 mm				
(2 multi-slo	t_2UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.163	22.1	21.7		

#. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

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GPRS 850(Full power test)

Lap-held mo	Lap-held mode: (proximity sensor is not activated)_10 mm						
(1 multi-slot_1UP_1Dn)							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.249	22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is not activated))_10 mm			
(1 multi-slo	t_1UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.179	22.1	21.7		
Lap-held mo	ode: (prox	cimity s	ensor is not activated)_10 mm				
(2 multi-slo	t_2UP_1[On)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.494	22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is not activated))_10 mm			
(2 multi-slo	(2 multi-slot_2UP_1Dn)						
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	189	836.40	0.383	22.1	21.7		

^{#.} According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

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Lap-held m	ode: (pro	ximity s	ensor is activated)_0 mm		
(1 multi-slo	t_1UP_1	Dn)			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid
			1g	Temp[°C]	Temp[°C]
1900MHz	661	1880.00	0.505	22.1	21.7
Secondary I	andscape	mode:	(proximity sensor is activated)_0	mm	
(1 multi-slo	t_1UP_1	Dn)			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid
			1g	Temp[°C]	Temp[°C]
1900MHz	661	1880.00	0.661	22.1	21.7
Front side r	node: (pr	oximity	sensor is not activated)_10 mm		
(2 multi-slo	t_2UP_1	Dn)			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid
			1g	Temp[°C]	Temp[°C]
(512	1850.20	0.775	22.1	21.7
1900MHz	661	1880.00	0.916	22.1	21.7
	810	1909.80	0.942	22.1	21.7

#. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

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l an-hold me	Lap-held mode: (proximity sensor is activated)_0 mm						
_	(1 multi-slot_1UP_1Dn)						
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
quie	0.10.11.01		1g		Temp[°C]		
1900MHz	661	1880.00		22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is activated)_0	mm			
(1 multi-slo	t_1UP_1	Dn)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
1900MHz	661	1880.00	0.320	22.1	21.7		
Front side n	node: (pr	oximity	sensor is not activated)_10 mm				
(2 multi-slo	t_2UP_1	Dn)					
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
1900MHz	661	1880.00	0.370	22.1	21.7		

#. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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GPRS 1900(Full power test)

		<u>-</u>			
Lap-held m	ode: (pro	ximity s	ensor is not activated)_10 mm		
(2 multi-slo	t_2UP_1	Dn)			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid
			1g	Temp[°C]	Temp[°C]
1900MHz	661	1880.00	0.373	22.1	21.7
Secondary I	andscape	mode:	(proximity sensor is not activated)	_10 mm	
(2 multi-slo	t_2UP_1	Dn)			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid
			1g	Temp[°C]	Temp[°C]
1900MHz	512	1850.20	0.884	22.1	21.7
	661	1880.00	0.909	22.1	21.7
	810	1909.80	0.961	22.1	21.7

^{#.} According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

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WCDMA Band II

ode: (pro	ximity s	ensor is activated) _0mm			
Channel	MHz	Measured(W/kg)	Amb.	Liquid	
		1g	Temp[°C]	Temp[°C]	
9262	1852.40	0.771	22.1	21.7	
9400	1880.00	0.801	22.1	21.7	
9538	1907.60	0.857	22.1	21.7	
andscape	mode:	(proximity sensor is activated) _0	mm		
Channel	MHz	Measured(W/kg)	Amb.	Liquid	
		1g	Temp[°C]	Temp[°C]	
9262	1852.40	1.24	22.1	21.7	
9400	1880.00	1.18	22.1	21.7	
9538	1907.60	1.21	22.1	21.7	
Front side mode: (proximity sensor is not activated) _10mm					
Channel	MHz	Measured(W/kg)	Amb.	Liquid	
		1g	Temp[°C]	Temp[°C]	
9400	1880.00	0.780	22.1	21.7	
	Channel 9262 9400 9538 andscape Channel 9262 9400 9538 node: (pro	Channel MHz 9262 1852.40 9400 1880.00 9538 1907.60 andscape mode: MHz Channel MHz 9262 1852.40 9400 1880.00 9538 1907.60 node: (proximity Channel MHz	1g	Channel MHz Measured(W/kg) Amb. Temp[°C] 9262 1852.40 0.771 22.1 9400 1880.00 0.801 22.1 9538 1907.60 0.857 22.1 andscape mode: (proximity sensor is activated)Omm Channel MHz Measured(W/kg) Amb. Temp[°C] 9262 1852.40 1.24 22.1 9400 1880.00 1.18 22.1 9538 1907.60 1.21 22.1 node: (proximity sensor is not activated)10mm Channel MHz Measured(W/kg) Amb. Temp[°C] Channel MHz Measured(W/kg) Amb. Temp[°C]	

- #. Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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WCDMA Band II (Full power test)

Lap-held mo	Lap-held mode: (proximity sensor is not activated) _10mm						
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
1900MHz	9400	1880.00	0.374	22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is not activated)	_10mm	0		
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
	9262	1852.40	1.2	22.1	21.7		
1900MHz	9400	1880.00	1.03	22.1	21.7		
	9538	1907.60	0.980	22.1	21.7		

- #. Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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WCDMA Band IV

Lap-held mo	Lap-held mode: (proximity sensor is activated) _0mm						
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
1700MHz	1412	1732.4	0.534	22.1	21.7		
Secondary I	andscape	mode:	(proximity sensor is activated) _0	mm			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
	1312	1712.4	1.13	22.1	21.7		
1700MHz	1412	1732.4	1.11	22.1	21.7		
	1513	1752.6	1.19	22.1	21.7		
Front side n	node: (pro	oximity	sensor is not activated) _10mm				
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
FPO	1312	1712.4	1.01	22.1	21.7		
1700MHz	1412	1732.4	1.03	22.1	21.7		
	1513	1752.6	1.09	22.1	21.7		

- #. Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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WCDMA Band IV(Full power test)

Lap-held me	Lap-held mode: (proximity sensor is not activated) _10mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
1700MHz	1412	1732.4	0.441	22.1	21.7			
Secondary landscape mode: (proximity sensor is not activated) _10mm								
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
	1312	1712.4	0.926	22.1	21.7			
1700MHz	1412	1732.4	0.961	22.1	21.7			
	1513	1752.6	0.998	22.1	21.7			

- #. Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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WCDMA Band V

Lap-held mo	Lap-held mode: (proximity sensor is activated) _0mm						
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	4182	836.40	0.411	22.1	21.7		
Secondary landscape mode: (proximity sensor is activated) _0 mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	4182	836.40	0.158	22.1	21.7		
Front side n	Front side mode: (proximity sensor is not activated) _10mm						
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
850MHz	4182	836.40	0.299	22.1	21.7		

- #. Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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WCDMA Band V(Full power test)

Lap-held me	Lap-held mode: (proximity sensor is not activated) _10mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
850MHz	4182	836.40	0.302	22.1	21.7			
Secondary landscape mode: (proximity sensor is not activated) _10 mm								
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
850MHz	4182	836.40	0.215	22.1	21.7			

- #. Using KDB941225 D01 to exclude SAR test requirements for HSPA modes due to the maximum average output power of HSPA active is less than 1/4 dB higher than that measured without HSPA using 12.2kbps RMC
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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CDMA_Cellular

Lap-held mode: (proximity sensor is activated) _0mm							
Frequency	Channel	MHz	Measured(W/kg)	Measured(W/kg) Amb. L			
			1g	Temp[°C]	Temp[°C]		
800MHz	384	836.52	0.498	22.1	21.7		
Secondary landscape mode: (proximity sensor is activated) _0 mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
800MHz	384	836.52	0.156	22.1	21.7		
Front side mode: (proximity sensor is not activated) _10mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid		
			1g	Temp[°C]	Temp[°C]		
800MHz	384	836.52	0.312	22.1	21.7		

- #. According to KDB941225 D01 the Ev-Do capabilities, when the maximum average output of each channel in Rev.0 is less 1/4 dB higher than that measured in RC3(1xRTT), body SAR for Ev-D0 is not reuired.
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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CDMA_Cellular(Full power test)

Lap-held me	Lap-held mode: (proximity sensor is not activated) _10mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
800MHz	384	836.52	0.346	22.1	21.7			
Secondary I	Secondary landscape mode: (proximity sensor is not activated) _10 mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
800MHz	384	836.52	0.193	22.1	21.7			

- #. According to KDB941225 D01 the Ev-Do capabilities, when the maximum average output of each channel in Rev.0 is less 1/4 dB higher than that measured in RC3(1xRTT), body SAR for Ev-D0 is not reuired.
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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Frequency

1900MHz

CDMA_US PCS

Channel

600

MHz

1880

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Lap-held mode: (proximity sensor is activated) _0mm Measured(W/kg) Amb. Liquid Temp[°C]|Temp[°C]

22.1

21.7

		2		
Secondary	I landscane mode:	(provimity	sensor is activated)	$0 \mathrm{mm}$
Secondar v	i laliuscape illoue.	UDI UNIIIILY	sensoi is activateu)	

			1 2			
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
			1g	Temp[°C]	Temp[°C]	
1900MHz	25	1851.25	1.14	22.1	21.7	
	600	1880	1.04	22.1	21.7	
	1175	1908.75	1.04	22.1	21.7	

1g

0.758

Front side mode: (proximity sensor is not activated) _10mm

Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid
			1g	Temp[°C]	Temp[°C]
1900MHz	600	1880	0.724	22.1	21.7

#. According to KDB941225 D01 the Ev-Do capabilities, when the maximum average output of each channel in Rev.0 is less 1/4 dB higher than that measured in RC3(1xRTT), body SAR for Ev-D0 is not reuired.

#. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

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CDMA_US PCS(Full power test)

Lap-held me	Lap-held mode: (proximity sensor is not activated) _10mm							
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
1900MHz	600	1880	0.434	22.1	21.7			
Secondary landscape mode: (proximity sensor is not activated) _10 mm								
Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid			
			1g	Temp[°C]	Temp[°C]			
1900MHz	25	1851.25	1.22	22.1	21.7			
	600	1880	0.965	22.1	21.7			
	1175	1908.75	0.970	22.1	21.7			

- #. According to KDB941225 D01 the Ev-Do capabilities, when the maximum average output of each channel in Rev.0 is less 1/4 dB higher than that measured in RC3(1xRTT), body SAR for Ev-D0 is not reuired.
- #. According to KDB447498 the 1-g SAR for the highest output channel is less than 0.8 W/kg, where the transmission band corresponding to all channels is \leq 100 MHz, testing for the other channels is not required.

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Whayu antenna

Secondary Seco							
Secondary Seco	Lap-held me	ode: (pro	ximity s	ensor is activated)_0 mm			
Requency	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
Front side mode: (proximity sensor is Not activated) _10mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 1900MHz 810 1909.80 0.707 22.1 2 Secondary landscape mode: (proximity sensor is activated) _0 mm MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 1900MHz 9262 1852.40 0.615 22.1 2 Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 1900MHz 1513 1752.6 0.836 22.1 2 Lap-held mode: (proximity sensor is activated) _0mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 850MHz 4182 836.40 0.346 22.1 2 Lap-held mode: (proximity sensor is activated) _0mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 850MHz 384 836.52 0.335 22.1 2 Secondary landscape mode: (proximity sensor is activated) _0 mm <td></td> <td></td> <td></td> <td>1g</td> <td>Temp[°C]</td> <td>Temp[°C]</td>				1g	Temp[°C]	Temp[°C]	
Frequency Channel MHz Measured(W/kg) Amb. Temp[*C] Lic Temp[*C] 1900MHz 810 1909.80 0.707 22.1 2° Secondary landscape mode: (proximity sensor is activated)O mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 1900MHz 9262 1852.40 0.615 22.1 2° Secondary landscape mode: (proximity sensor is activated)O mm Amb. Lic Temp[*C] Tem 1900MHz 1513 1752.6 0.836 22.1 2° Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 850MHz 4182 836.40 0.346 22.1 2° Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[*C] Tem 850MHz 384 836.52 0.335 22.1 2° Secondary landscape mode:	850MHz	251	848.80	0.418	22.1	21.7	
1g	Front side n	node: (pr	oximity	sensor is Not activated) _10mm			
1900MHz	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic				1g	Temp[°C]	Temp[°C]	
Frequency Channel MHz Measured(W/kg) Amb. Temp[°C] Tem Lic Temp[°C] Tem 1900MHz 9262 1852.40 0.615 22.1 2° Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[°C] Tem 1900MHz 1513 1752.6 0.836 22.1 2° Lap-held mode: (proximity sensor is activated) _0mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 2° Lap-held mode: (proximity sensor is activated) _0mm Measured(W/kg) Amb. Lic Temp[°C] Tem Secondary landscape mode: (proximity sensor is activated) _0 mm Amb. Lic Temp[°C] Tem Secondary landscape mode: (proximity sensor is activated) _0 mm Amb. Lic Measured(W/kg) Amb. Lic Measured(W/kg) Amb. Lic Measured(W/kg) Amb. Lic Measured(W/kg) Amb. Amb. Lic Measured(W/kg) Amb. Amb. Lic Measured(W/kg) Amb. Amb. Lic Measured(W/kg) Amb. Amb. Amb. Amb. Amb. Amb. A	1900MHz	810	1909.80	0.707	22.1	21.7	
1g	Secondary I	andscape	mode:	(proximity sensor is activated) _0	mm		
1900MHz 9262 1852.40 0.615 22.1 22 Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic 1900MHz 1513 1752.6 0.836 22.1 22 Lap-held mode: (proximity sensor is activated) _0mm Amb. Lic Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 22 Lap-held mode: (proximity sensor is activated) _0mm Frequency Channel MHz Measured(W/kg) Amb. Lic Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 22 Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic Measured(W/kg) Amb. Lic Amb. Lic Amb. Lic Secondary landscape Mode: (proximity sensor is activated) _0 mm Amb. Lic	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
Secondary landscape mode: (proximity sensor is activated) _0 mmFrequencyChannelMHzMeasured(W/kg)Amb. Lic Temp[°C] Tem1900MHz15131752.60.83622.12°Lap-held mode: (proximity sensor is activated) _0mmFrequencyChannelMHzMeasured(W/kg)Amb. Lic Temp[°C] Tem850MHz4182836.400.34622.12°Lap-held mode: (proximity sensor is activated) _0mmFrequencyChannelMHzMeasured(W/kg)Amb. Lic Temp[°C] Tem850MHz384836.520.33522.12°Secondary landscape mode: (proximity sensor is activated) _0 mmFrequencyChannelMHzMeasured(W/kg)Amb. LicFrequencyChannelMHzMeasured(W/kg)Amb. Lic				1g	Temp[°C]	Temp[°C]	
Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 1900MHz 1513 1752.6 0.836 22.1 20 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 20 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 1g Temp[°C] Tem 1g Temp[°C] Tem 250MHz 384 836.52 0.335 22.1 20 Secondary landscape mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Amb. Amb. Lic	1900MHz	9262	1852.40	0.615	22.1	21.7	
1g Temp[°C] Tem 1900MHz 1513 1752.6 0.836 22.1 2 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) AmbLic 850MHz 4182 836.40 0.346 22.1 2 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) AmbLic 1g Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 2 Secondary landscape mode: (proximity sensor is activated)O mm Frequency Channel MHz Measured(W/kg) Amb. Lic Frequency Channel MHz Measured(W/kg) Amb. Lic	Secondary landscape mode: (proximity sensor is activated) _0 mm						
1900MHz 1513 1752.6 0.836 22.1 22 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 22 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 850MHz 384 836.52 0.335 22.1 22 Secondary landscape mode: (proximity sensor is activated)O mm Frequency Channel MHz Measured(W/kg) Amb. Lic Measured(W/kg) Amb. Lic	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
Lap-held mode: (proximity sensor is activated) _Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 2° Lap-held mode: (proximity sensor is activated) _Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 2° Secondary landscape mode: (proximity sensor is activated) _O mm Frequency Channel MHz Measured(W/kg) Amb. Lic Secondary landscape mode: (proximity sensor is activated) _O mm				1g	Temp[°C]	Temp[°C]	
Frequency Channel MHz Measured(W/kg) Amb. Lice 1g Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 20 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lice 1g Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 20 Secondary landscape mode: (proximity sensor is activated)O mm Frequency Channel MHz Measured(W/kg) Amb. Lice 2g Amb. L	1900MHz	1513	1752.6	0.836	22.1	21.7	
1g Temp[°C] Tem 850MHz 4182 836.40 0.346 22.1 2 Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 2 Secondary landscape mode: (proximity sensor is activated)O mm Frequency Channel MHz Measured(W/kg) Amb. Lic	Lap-held me	ode: (pro	ximity s	ensor is activated) _0mm			
850MHz 4182 836.40 0.346 22.1 2 Lap-held mode: (proximity sensor is activated)0mm Frequency Channel MHz Measured(W/kg) Amb. Lic 1g Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 2 Secondary landscape mode: (proximity sensor is activated)0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
Lap-held mode: (proximity sensor is activated)Omm Frequency Channel MHz Measured(W/kg) Amb. Lioundary Temp[°C] Temp				1g	Temp[°C]	Temp[°C]	
Frequency Channel MHz Measured(W/kg) Amb. Lice 1g Temp[°C] Tem 850MHz 384 836.52 0.335 22.1 20 Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lice	850MHz	4182	836.40	0.346	22.1	21.7	
850MHz 384 836.52 0.335 22.1 2 Secondary landscape mode: (proximity sensor is activated)0 mm Frequency Channel MHz Measured(W/kg) Amb. Lice	Lap-held me	ode: (pro	ximity s	ensor is activated) _0mm			
850MHz 384 836.52 0.335 22.1 2 Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lice	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
Secondary landscape mode: (proximity sensor is activated) _0 mm Frequency Channel MHz Measured(W/kg) Amb. Lic				1g	Temp[°C]	Temp[°C]	
Frequency Channel MHz Measured(W/kg) Amb. Lic	850MHz	384	836.52	0.335	22.1	21.7	
	Secondary landscape mode: (proximity sensor is activated) _0 mm						
	Frequency	Channel	MHz	Measured(W/kg)	Amb.	Liquid	
1g Temp[°C] Tem				1g	Temp[°C]	Temp[°C]	
1900MHz 600 1880 0.592 22.1 2	1900MHz	600	1880	0.592	22.1	21.7	

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3. Instruments List

		i	
Device	Туре	Serial number	Date of last calibration
Dosimetric E-Field	ES3DV3	3071	Jun.22.2011
Probe	EX3DV4	3661	Jan.24.2011
850/1900 MHz	D835V2	4d063	May.25.2010
System Validation	D1750V2	1008	May.24.2011
Dipole	D1900V2	5d027	Apr.19.2011
Data acquisition Electronics	DAE4	679	Jun.24.2011
Software	DASY 4 V4.7 Build 80	N/A	Calibration not required
Phantom	SAM	N/A	Calibration not required
Network Analyzer	8753D	3410A05547	Mar.16.2011
Dielectric Probe Kit	85070D	US01440168	Calibration not required
Dual-directional	7700	50313	Aug.25.2010
coupler	/ / ØD	MY48220468	Mar.29.2011
RF Signal Generator	8648D	3847M00432	Jun.04.2010
Power Sensor	U2001B	MY48100169	Apr.28.2011
Radio Communication Test	CMU200	113505	May.31.2011
	Dosimetric E-Field Probe 850/1900 MHz System Validation Dipole Data acquisition Electronics Software Phantom Network Analyzer Dielectric Probe Kit Dual-directional coupler RF Signal Generator Power Sensor Radio	Dosimetric E-Field Probe EX3DV3 EX3DV4 850/1900 MHz System Validation D1750V2 Dipole D1900V2 Data acquisition Electronics DASY 4 V4.7 Build 80 Phantom SAM Network Analyzer 8753D Dielectric Probe Kit 85070D Dual-directional coupler RF Signal Generator 8648D Power Sensor U2001B Radio CMU200	Dosimetric E-Field ES3DV3 3071 EX3DV4 3661 366

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4. Measurements

Date: 2011/8/17

Front side_GPRS850_CH128_multi-class 8_Acon antenna

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 824.2 MHz; $\sigma = 1.01$

mho/m; $\varepsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679: Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.214 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

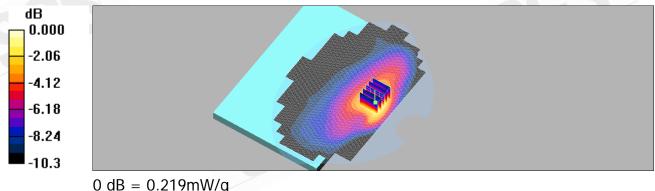
dz=5mm

Reference Value = 9.38 V/m; Power Drift = 0.107 dB

Peak SAR (extrapolated) = 0.311 W/kg

SAR(1 g) = 0.202 mW/g; SAR(10 g) = 0.131 mW/g

Maximum value of SAR (measured) = 0.219 mW/g



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Date: 2011/8/17

Lap-held_GPRS850_CH128_multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 824.2 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 824.2 MHz; $\sigma = 1.01$

mho/m; $\varepsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.849 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

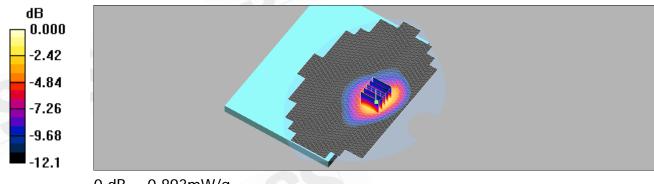
dz=5mm

Reference Value = 19.7 V/m: Power Drift = 0.026 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.805 mW/g; SAR(10 g) = 0.466 mW/g

Maximum value of SAR (measured) = 0.893 mW/g



0 dB = 0.893 mW/q

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Date: 2011/8/17

Lap-held_GPRS850_CH189_ multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\epsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.929 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

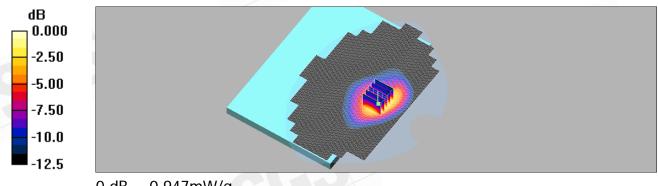
dz=5mm

Reference Value = 20.4 V/m: Power Drift = -0.097 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.855 mW/g; SAR(10 g) = 0.492 mW/g

Maximum value of SAR (measured) = 0.947 mW/g



0 dB = 0.947 mW/g

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Date: 2011/8/17

Lap-held_GPRS850_CH251_multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz; $\sigma = 1.04$ mho/m; $\epsilon_r =$

55.2; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.06 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

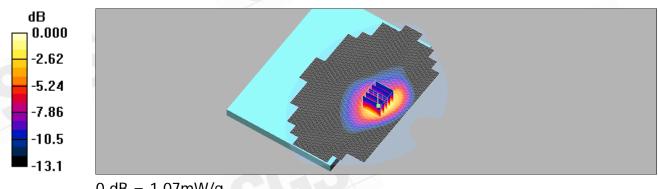
dz=5mm

Reference Value = 21.1 V/m; Power Drift = -0.043 dB

Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.975 mW/g; SAR(10 g) = 0.548 mW/g

Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07 mW/g

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Date: 2011/8/17

Secondary Landscape_GPRS850_CH189_multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 836.4 MHz; $\sigma = 1.02$

mho/m; $\varepsilon_r = 55.4$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.393 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

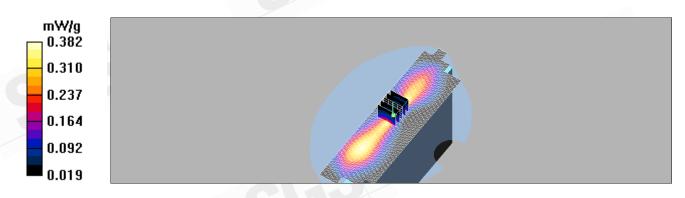
dz=5mm

Reference Value = 17.3 V/m: Power Drift = -0.104 dB

Peak SAR (extrapolated) = 0.673 W/kg

SAR(1 g) = 0.331 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.382 mW/g



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Date: 2011/8/17

Lap-held_EGPRS850_CH189_multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 836.4 MHz; $\sigma = 1.02$

mho/m; $\varepsilon_r = 55.4$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.727 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

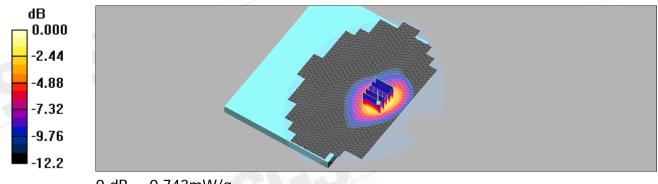
dz=5mm

Reference Value = 16.3 V/m; Power Drift = -0.082 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.681 mW/g; SAR(10 g) = 0.392 mW/g

Maximum value of SAR (measured) = 0.743 mW/g



0 dB = 0.743 mW/g

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Date: 2011/8/17

Secondary Landscape_EGPRS850_CH189_multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 836.4 MHz; $\sigma = 1.02$

mho/m; $\varepsilon_r = 55.4$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.293 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

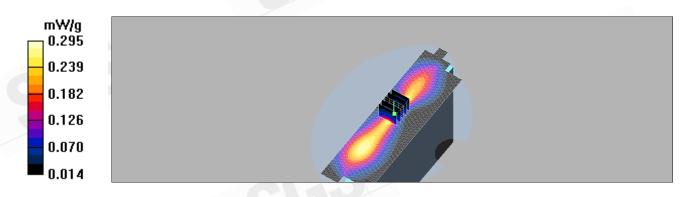
dz=5mm

Reference Value = 13.6 V/m: Power Drift = -0.131 dB

Peak SAR (extrapolated) = 0.501 W/kg

SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.295 mW/g



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Date: 2011/8/17

Front side_EGPRS850_CH189_multi-class 10_Acon antenna

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used (interpolated): f = 836.4 MHz; $\sigma = 1.02$

mho/m; $\varepsilon_r = 55.4$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.179 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

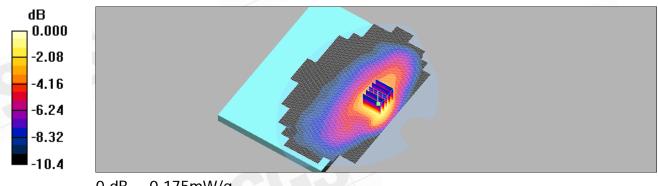
dz=5mm

Reference Value = 8.89 V/m: Power Drift = 0.092 dB

Peak SAR (extrapolated) = 0.250 W/kg

SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.106 mW/g

Maximum value of SAR (measured) = 0.175 mW/g



0 dB = 0.175 mW/g

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Date: 2011/9/5

Lap-held_GPRS850_CH189_multi-class 8_Acon antenna

10mm

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.273 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

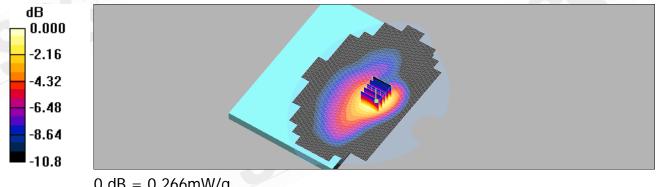
dz=5mm

Reference Value = 15.0 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 0.373 W/kg

SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.266 mW/g



0 dB = 0.266 mW/g

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Date: 2011/9/5

Secondary Landscape_GPRS850_CH189_multi-class 8_Acon antenna _10mm

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.188 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

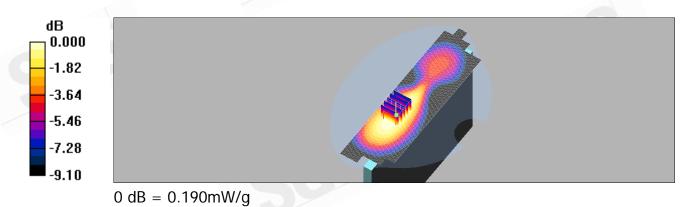
dz=5mm

Reference Value = 12.4 V/m; Power Drift = -0.188 dB

Peak SAR (extrapolated) = 0.240 W/kg

SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.129 mW/g

Maximum value of SAR (measured) = 0.190 mW/g



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Date: 2011/9/5

Lap-held_GPRS850_CH189__multi-class 10_Acon antenna 10mm

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.546 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

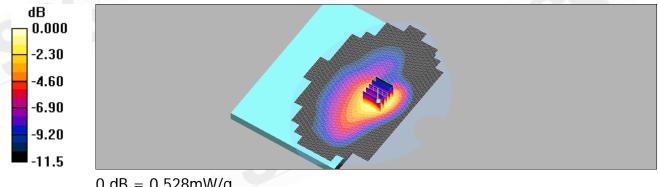
dz=5mm

Reference Value = 20.8 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.734 W/kg

SAR(1 g) = 0.494 mW/g; SAR(10 g) = 0.323 mW/g

Maximum value of SAR (measured) = 0.528 mW/g



0 dB = 0.528 mW/g

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Date: 2011/9/5

Secondary Landscape_GPRS850_CH189_multi-class 10_Acon antenna 10mm

Communication System: GSM 850; Frequency: 836.4 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\epsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.408 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

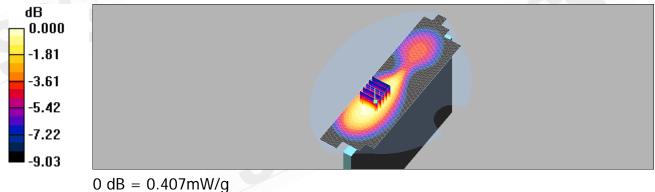
dz=5mm

Reference Value = 17.5 V/m; Power Drift = 0.126 dB

Peak SAR (extrapolated) = 0.512 W/kg

SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.277 mW/g

Maximum value of SAR (measured) = 0.407 mW/g



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Lap-held_GPRS1900_CH661_multi-class 8_Acon antenna

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.592 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

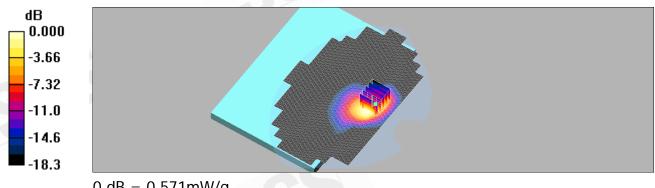
dz=5mm

Reference Value = 7.88 V/m: Power Drift = 0.067 dB

Peak SAR (extrapolated) = 0.972 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.261 mW/g

Maximum value of SAR (measured) = 0.571 mW/g



0 dB = 0.571 mW/q

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Secondary Landscape_GPRS1900_CH661_multi-class 8_Acon antenna

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.777 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

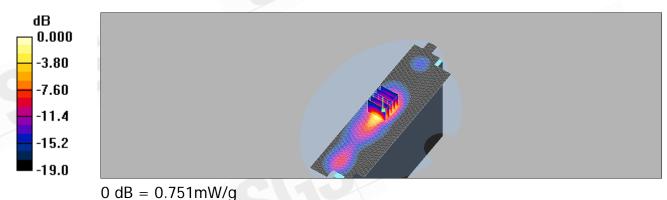
dz=5mm

Reference Value = 19.4 V/m; Power Drift = -0.166 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.661 mW/g; SAR(10 g) = 0.317 mW/g

Maximum value of SAR (measured) = 0.751 mW/g



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Front side_GPRS1900_CH512_multi-class 10_Acon antenna

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.53$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm IMaximum value of SAR (interpolated) = 0.875 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

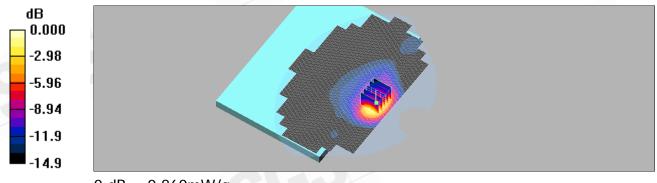
dz=5mm

Reference Value = 6.49 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.775 mW/g; SAR(10 g) = 0.427 mW/g

Maximum value of SAR (measured) = 0.860 mW/g



0 dB = 0.860 mW/g

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Front side_GPRS1900_CH661_multi-class 10_Acon antenna

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.02 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

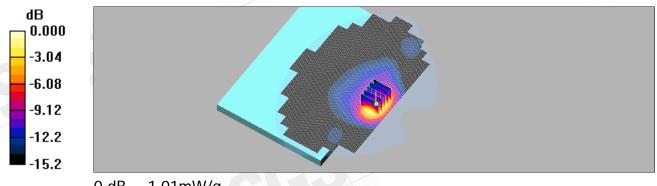
dz=5mm

Reference Value = 7.43 V/m; Power Drift = -0.112 dB

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.500 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01 mW/g

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Front side_GPRS1900_CH810_multi-class 10_Acon antenna

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1910 MHz; $\sigma = 1.62$ mho/m; $\varepsilon_r = 51.4$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.04 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

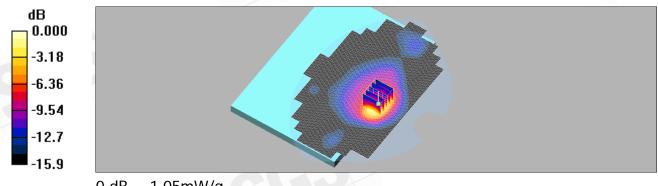
dz=5mm

Reference Value = 13.9 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 0.942 mW/g; SAR(10 g) = 0.516 mW/g

Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.05 mW/g

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Date: 2011/8/18

Lap-held_EGPRS1900_CH661_multi-class 8_Acon antenna

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.332 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

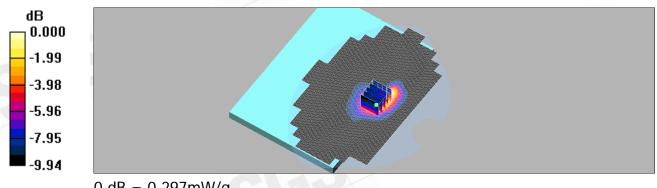
dz=5mm

Reference Value = 10.8 V/m: Power Drift = 0.125 dB

Peak SAR (extrapolated) = 0.481 W/kg

SAR(1 g) = 0.261 mW/g; SAR(10 g) = 0.155 mW/g

Maximum value of SAR (measured) = 0.297 mW/g



0 dB = 0.297 mW/g

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Secondary Landscape_EGPRS1900_CH661_multi-class 8_Acon antenna

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.377 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

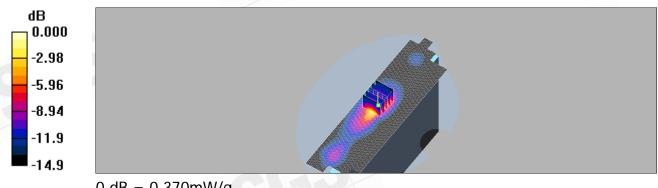
dz=5mm

Reference Value = 12.1 V/m: Power Drift = -0.191 dB

Peak SAR (extrapolated) = 0.646 W/kg

SAR(1 g) = 0.320 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.370 mW/g



0 dB = 0.370 mW/g

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Front side_EGPRS1900_CH661_multi-class 10_Acon antenna

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.406 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

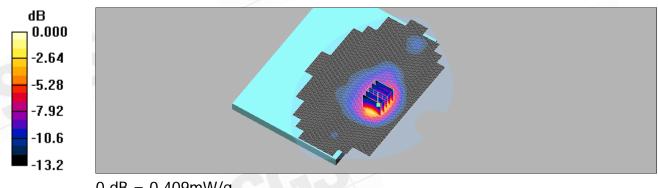
dz=5mm

Reference Value = 8.41 V/m: Power Drift = -0.003 dB

Peak SAR (extrapolated) = 0.625 W/kg

SAR(1 g) = 0.370 mW/g; SAR(10 g) = 0.207 mW/g

Maximum value of SAR (measured) = 0.409 mW/g



0 dB = 0.409 mW/g

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Lap-held_GPRS1900_CH661_multi-class 10_Acon antenna 10mm

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.54$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.378 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

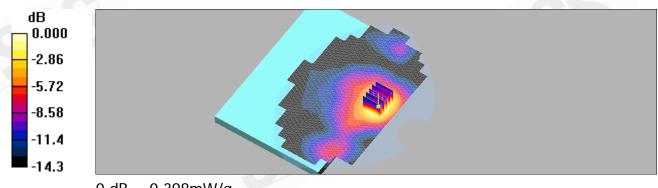
dz=5mm

Reference Value = 8.91 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 0.589 W/kg

SAR(1 g) = 0.373 mW/g; SAR(10 g) = 0.229 mW/g

Maximum value of SAR (measured) = 0.398 mW/g



0 dB = 0.398 mW/g

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Secondary Landscape_GPRS1900_CH512_multi-class 10_Acon antenna 10mm

Communication System: GSM1900; Frequency: 1850.2 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1850.2 MHz; $\sigma = 1.52$

mho/m; ε_r = 51.3; ρ = 1000 kg/m³ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.00 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

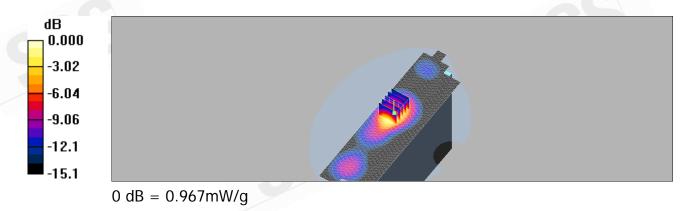
dz=5mm

Reference Value = 18.9 V/m; Power Drift = 0.199 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.884 mW/g; SAR(10 g) = 0.505 mW/g

Maximum value of SAR (measured) = 0.967 mW/g



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Secondary Landscape_GPRS1900_CH661_multi-class 10_Acon antenna 10mm

Communication System: GSM1900; Frequency: 1880 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.54$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.04 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

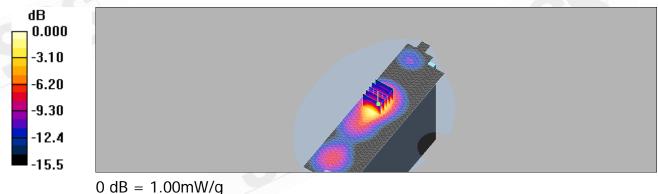
dz=5mm

Reference Value = 18.6 V/m; Power Drift = 0.124 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.909 mW/g; SAR(10 g) = 0.519 mW/g

Maximum value of SAR (measured) = 1.00 mW/g



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Secondary Landscape_GPRS1900_CH810_multi-class 10_Acon antenna 10mm

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1910 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.08 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

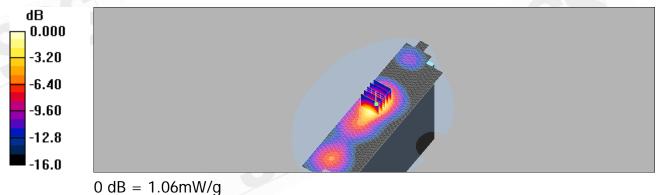
dz=5mm

Reference Value = 20.1 V/m; Power Drift = 0.145 dB

Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.961 mW/g; SAR(10 g) = 0.544 mW/g

Maximum value of SAR (measured) = 1.06 mW/g



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Lap-held_WCDMA Band II_CH9262_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1852.4 MHz; $\sigma = 1.54$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.883 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

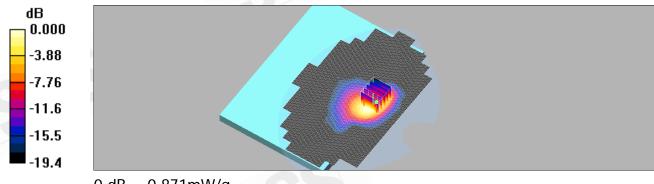
dz=5mm

Reference Value = 16.8 V/m: Power Drift = 0.113 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.771 mW/g; SAR(10 g) = 0.404 mW/g

Maximum value of SAR (measured) = 0.871 mW/g



0 dB = 0.871 mW/q

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Lap-held_WCDMA Band II_CH9400_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.960 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

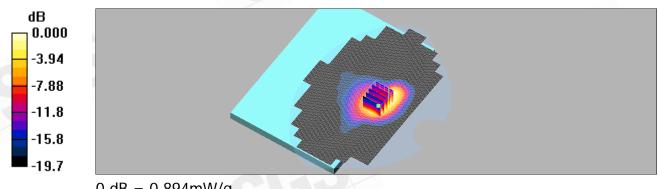
dz=5mm

Reference Value = 18.5 V/m: Power Drift = -0.039 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.801 mW/g; SAR(10 g) = 0.440 mW/g

Maximum value of SAR (measured) = 0.894 mW/g



0 dB = 0.894 mW/g

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Lap-held_WCDMA Band II_CH9538_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used: f = 1908 MHz; $\sigma = 1.60$ mho/m; $\varepsilon_r = 51.4$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.02 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

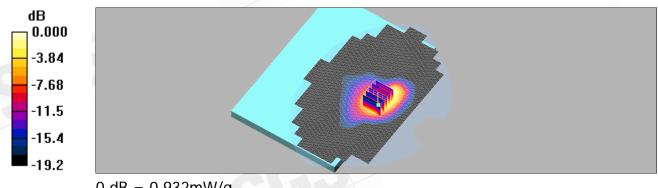
dz=5mm

Reference Value = 19.6 V/m: Power Drift = 0.023 dB

Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.465 mW/g

Maximum value of SAR (measured) = 0.932 mW/g



0 dB = 0.932 mW/g

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Secondary Landscape_WCDMA Band II_CH9262_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1852.4 MHz; $\sigma = 1.54$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.45 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

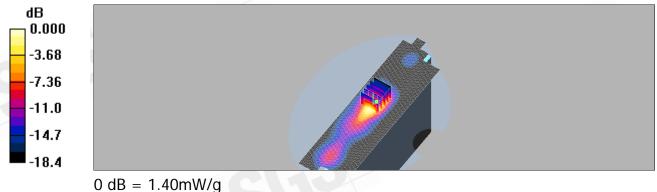
dz=5mm

Reference Value = 26.7 V/m: Power Drift = 0.051 dB

Peak SAR (extrapolated) = 2.46 W/kg

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.594 mW/g

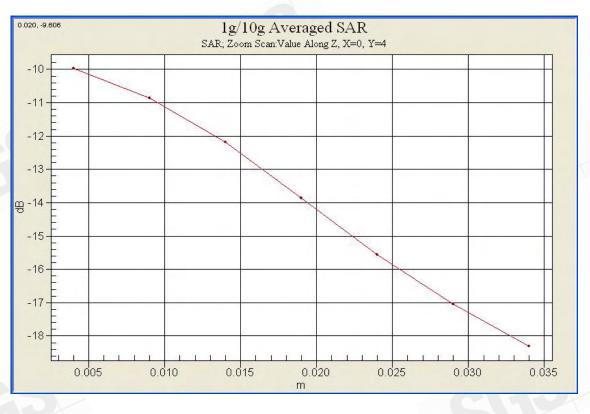
Maximum value of SAR (measured) = 1.40 mW/g



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Secondary Landscape_WCDMA Band II_CH9400_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.36 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

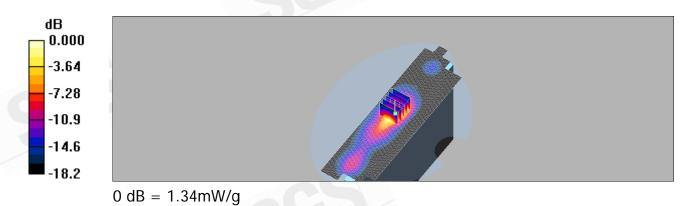
dz=5mm

Reference Value = 25.6 V/m: Power Drift = 0.128 dB

Peak SAR (extrapolated) = 2.35 W/kg

SAR(1 g) = 1.18 mW/g; SAR(10 g) = 0.570 mW/g

Maximum value of SAR (measured) = 1.34 mW/g



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Secondary Landscape_WCDMA Band II_CH9538_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used: f = 1908 MHz; $\sigma = 1.62$ mho/m; $\varepsilon_r = 51.4$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.41 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

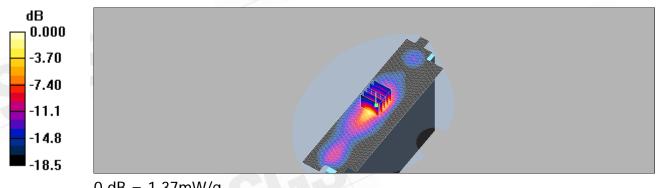
dz=5mm

Reference Value = 26.1 V/m: Power Drift = 0.066 dB

Peak SAR (extrapolated) = 2.42 W/kg

SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.578 mW/g

Maximum value of SAR (measured) = 1.37 mW/g



0 dB = 1.37 mW/g

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Front side_WCDMA Band II_CH9400_Acon antenna

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

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.900 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

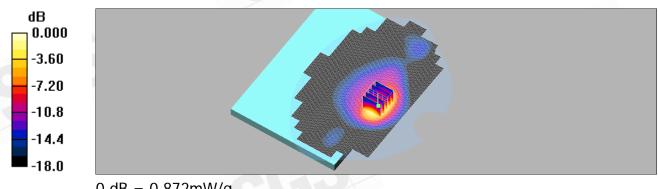
dz=5mm

Reference Value = 10.1 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.417 mW/g

Maximum value of SAR (measured) = 0.872 mW/g



0 dB = 0.872 mW/g

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Lap-held_WCDMAB2_CH9400_Acon antenna_10mm

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.54$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.400 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

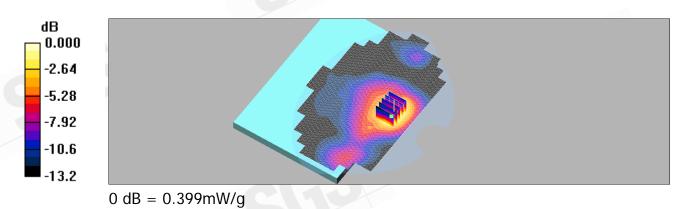
dz=5mm

Reference Value = 9.79 V/m: Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.586 W/kg

SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.231 mW/g

Maximum value of SAR (measured) = 0.399 mW/g



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Secondary Landscape_WCDMAB2_CH9262_ Acon antenna_10mm

Communication System: WCDMA BAND2; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1852.4 MHz; $\sigma = 1.52$

mho/m; $\varepsilon_r = 51.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.39 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

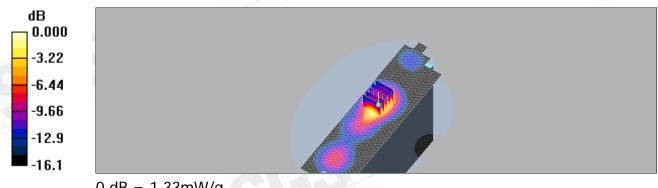
dz=5mm

Reference Value = 22.2 V/m: Power Drift = 0.069 dB

Peak SAR (extrapolated) = 2.02 W/kg

SAR(1 g) = 1.2 mW/g; SAR(10 g) = 0.674 mW/g

Maximum value of SAR (measured) = 1.33 mW/g



0 dB = 1.33 mW/g

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Secondary Landscape_WCDMAB2_CH9400_ Acon antenna_10mm

Communication System: WCDMA BAND2; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.54$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.23 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

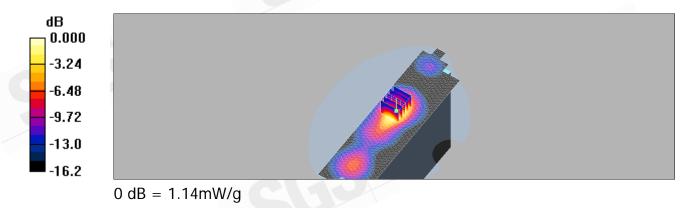
dz=5mm

Reference Value = 21.5 V/m; Power Drift = -0.160 dB

Peak SAR (extrapolated) = 1.74 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.575 mW/g

Maximum value of SAR (measured) = 1.14 mW/g



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Secondary Landscape_WCDMAB2_CH9538_ Acon antenna_10mm

Communication System: WCDMA BAND2; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1908 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.12 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

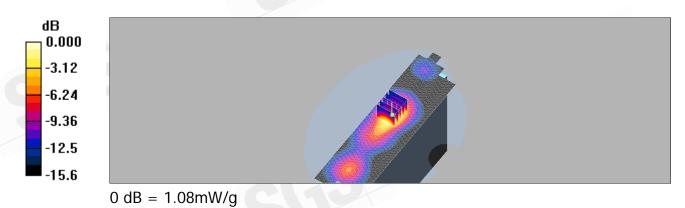
dz=5mm

Reference Value = 20.0 V/m: Power Drift = 0.118 dB

Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 0.980 mW/g; SAR(10 g) = 0.545 mW/g

Maximum value of SAR (measured) = 1.08 mW/g



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Lap-held_WCDMA Band IV_CH1412_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.614 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

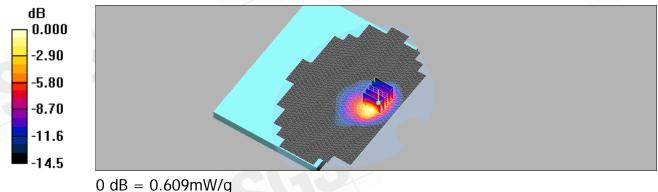
dz=5mm

Reference Value = 8.74 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 0.930 W/kg

SAR(1 g) = 0.534 mW/g; SAR(10 g) = 0.296 mW/g

Maximum value of SAR (measured) = 0.609 mW/g



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Secondary Landscape_WCDMA Band IV_CH1312_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 52.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.41 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

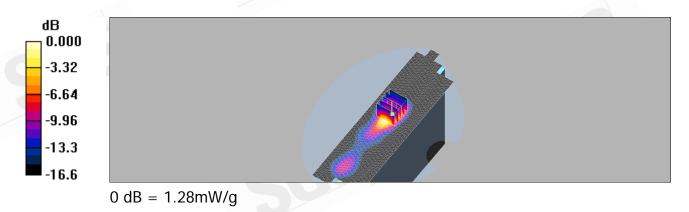
dz=5mm

Reference Value = 25.9 V/m; Power Drift = -0.036 dB

Peak SAR (extrapolated) = 2.10 W/kg

SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.571 mW/g

Maximum value of SAR (measured) = 1.28 mW/g



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Secondary Landscape_WCDMA Band IV_CH1412_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.33 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

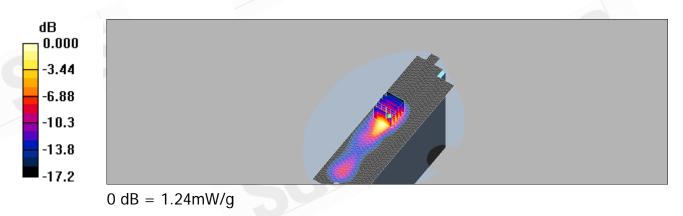
dz=5mm

Reference Value = 21.5 V/m; Power Drift = 0.157 dB

Peak SAR (extrapolated) = 2.10 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.557 mW/g

Maximum value of SAR (measured) = 1.24 mW/g



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Secondary Landscape_WCDMA Band IV_CH1513_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1753 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 52$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.50 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

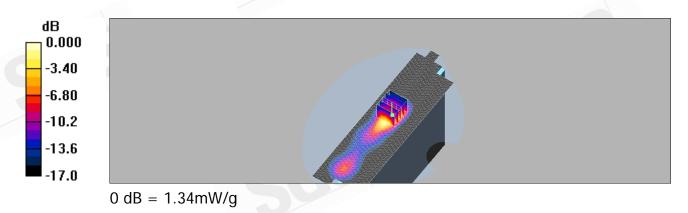
dz=5mm

Reference Value = 26.5 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.599 mW/g

Maximum value of SAR (measured) = 1.34 mW/g



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Front side_WCDMA Band IV_CH11312_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 52.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.14 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

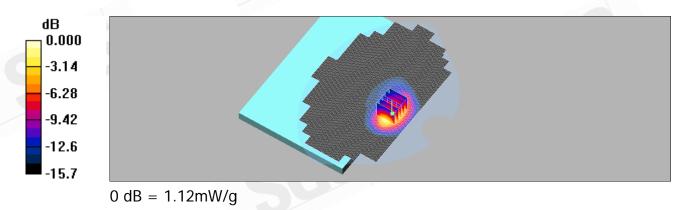
dz=5mm

Reference Value = 6.64 V/m; Power Drift = 0.074 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.566 mW/g

Maximum value of SAR (measured) = 1.12 mW/g



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Front side_WCDMA Band IV_CH1412_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 52.2$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.17 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

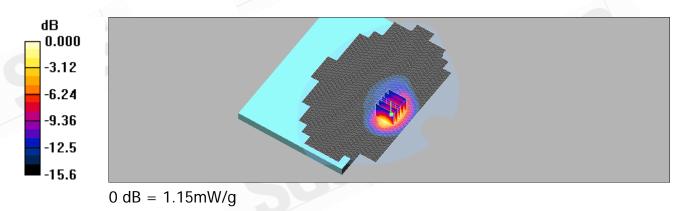
dz=5mm

Reference Value = 7.06 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 1.70 W/kg

SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.582 mW/g

Maximum value of SAR (measured) = 1.15 mW/g



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Front side_WCDMA Band IV_CH1513_Acon antenna

Communication System: WCDMA Band IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1753 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 52$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.21 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

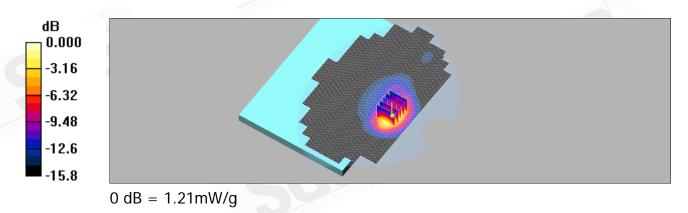
dz=5mm

Reference Value = 7.82 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.610 mW/g

Maximum value of SAR (measured) = 1.21 mW/g



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Lap-held_WCDMAB4_CH1412_ Acon antenna_10mm

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.506 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

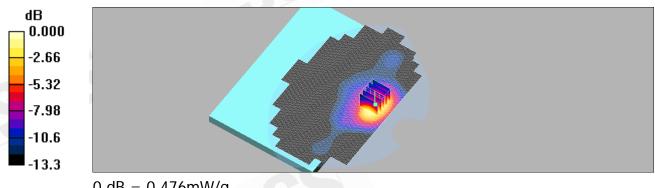
dz=5mm

Reference Value = 6.49 V/m: Power Drift = -0.113 dB

Peak SAR (extrapolated) = 0.681 W/kg

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.267 mW/g

Maximum value of SAR (measured) = 0.476 mW/g



0 dB = 0.476 mW/q

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Secondary Landscape_WCDMAB4_CH1312_ Acon antenna_10mm

Communication System: WCDMA BAND4; Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1712.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 51.8$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.04 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

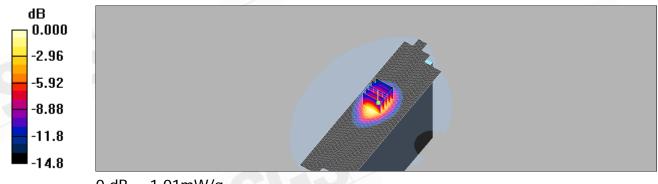
dz=5mm

Reference Value = 22.1 V/m: Power Drift = 0.101 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.926 mW/g; SAR(10 g) = 0.536 mW/g

Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01 mW/g

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Secondary Landscape_WCDMAB4_CH1412_ Acon antenna_10mm

Communication System: WCDMA BAND4; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1732.4 MHz; $\sigma = 1.42$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.09 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

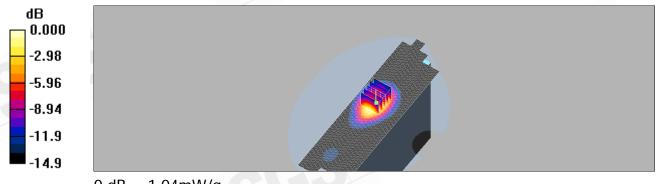
dz=5mm

Reference Value = 22.2 V/m: Power Drift = 0.113 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 0.961 mW/g; SAR(10 g) = 0.556 mW/g

Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.04 mW/g

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Secondary Landscape_WCDMAB4_CH1513_ Acon antenna_10mm

Communication System: WCDMA BAND4; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1753 MHz; $\sigma = 1.43$ mho/m; $\varepsilon_r = 51.7$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.14 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

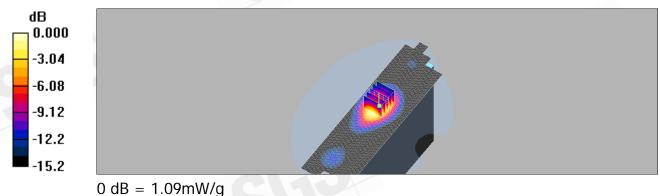
dz=5mm

Reference Value = 23.0 V/m: Power Drift = 0.119 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.998 mW/g; SAR(10 g) = 0.574 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



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Lap-held_WCDMA Band V_CH4182_Acon antenna

Communication System: WCDMA Band V; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\varepsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.443 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

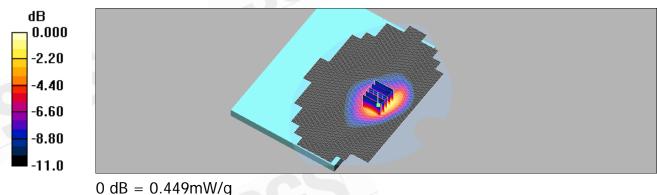
dz=5mm

Reference Value = 16.5 V/m: Power Drift = -0.116 dB

Peak SAR (extrapolated) = 0.724 W/kg

SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.449 mW/g



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Secondary Landscape_WCDMA Band V_CH4182_Acon antenna

Communication System: WCDMA Band V; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\epsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.182 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

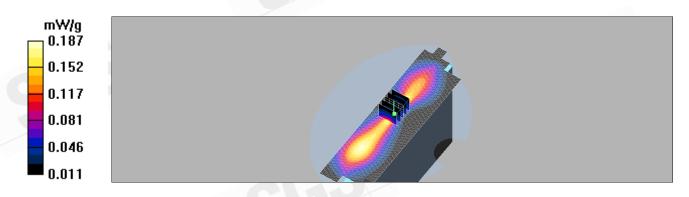
dz=5mm

Reference Value = 11.0 V/m: Power Drift = 0.113 dB

Peak SAR (extrapolated) = 0.318 W/kg

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.187 mW/g



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Front side_WCDMA Band V_CH4182_Acon antenna

Communication System: WCDMA Band V; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\epsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.323 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

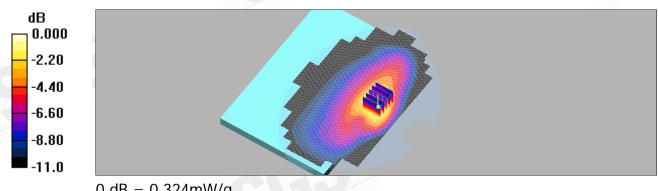
dz=5mm

Reference Value = 13.6 V/m: Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.453 W/kg

SAR(1 g) = 0.299 mW/g; SAR(10 g) = 0.194 mW/g

Maximum value of SAR (measured) = 0.324 mW/g



0 dB = 0.324 mW/g

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Lap-held_WCDMAB5_CH4182_ Acon antenna_10mm

Communication System: WCDMA BAND5; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.332 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

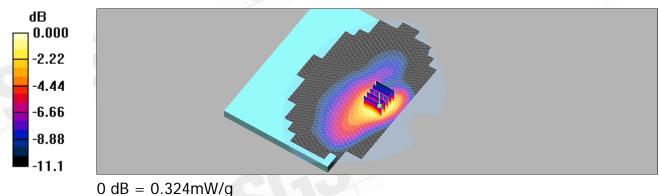
dz=5mm

Reference Value = 12.3 V/m: Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.453 W/kg

SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 0.324 mW/g



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Secondary Landscape_WCDMAB5_CH4182_ Acon antenna_10mm

Communication System: WCDMA BAND5; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.229 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

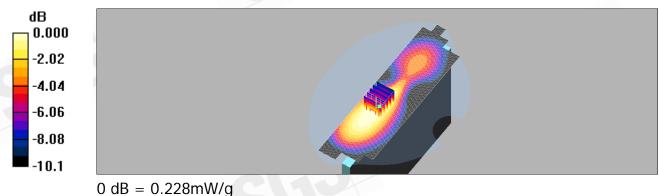
dz=5mm

Reference Value = 13.5 V/m: Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.290 W/kg

SAR(1 g) = 0.215 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.228 mW/g



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Date: 2011/8/17

Lap-held_Cellular_CH384_Acon antenna

Communication System: CDMA_850; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\varepsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.511 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

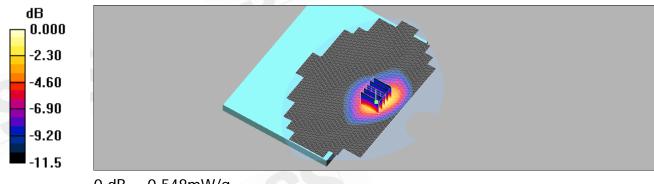
dz=5mm

Reference Value = 13.3 V/m: Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.925 W/kg

SAR(1 g) = 0.498 mW/g; SAR(10 g) = 0.285 mW/g

Maximum value of SAR (measured) = 0.548 mW/g



0 dB = 0.548 mW/q

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Secondary Landscape_Cellular_CH384_Acon antenna

Communication System: CDMA_850; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\epsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.169 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

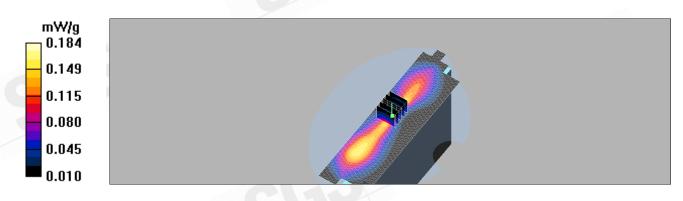
dz=5mm

Reference Value = 10.3 V/m: Power Drift = 0.003 dB

Peak SAR (extrapolated) = 0.347 W/kg

SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.079 mW/g

Maximum value of SAR (measured) = 0.184 mW/g



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Front side_Cellular_CH384_Acon antenna

Communication System: CDMA_850; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\epsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.334 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

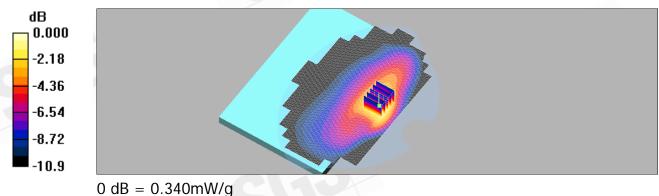
dz=5mm

Reference Value = 12.7 V/m: Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.487 W/kg

SAR(1 g) = 0.312 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.340 mW/g



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Date: 2011/9/5

Lap-held_Cellular_CH384_ Acon antenna_10mm

Communication System: CDMA_850; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.375 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

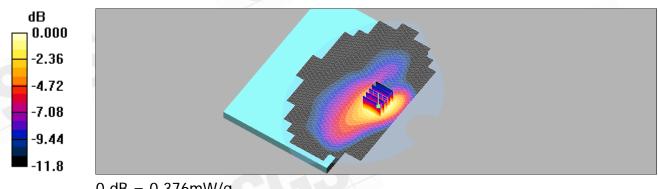
dz=5mm

Reference Value = 13.2 V/m: Power Drift = -0.044 dB

Peak SAR (extrapolated) = 0.532 W/kg

SAR(1 g) = 0.346 mW/g; SAR(10 g) = 0.224 mW/g

Maximum value of SAR (measured) = 0.376 mW/g



0 dB = 0.376 mW/g

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Secondary Landscape_Cellular_CH384_ Acon antenna_10mm

Communication System: CDMA_850; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1$ mho/m; $\varepsilon_r = 54.3$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.203 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

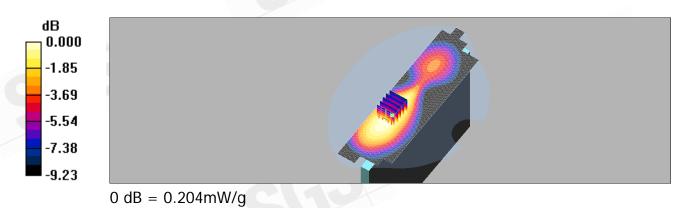
dz=5mm

Reference Value = 11.5 V/m: Power Drift = 0.105 dB

Peak SAR (extrapolated) = 0.262 W/kg

SAR(1 g) = 0.193 mW/g; SAR(10 g) = 0.140 mW/g

Maximum value of SAR (measured) = 0.204 mW/g



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Lap-held_PCS_CH600_Acon antenna

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.974 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

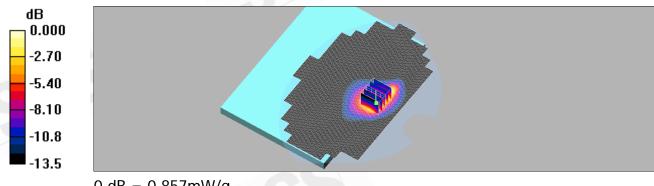
dz=5mm

Reference Value = 13.3 V/m: Power Drift = -0.170 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.758 mW/g; SAR(10 g) = 0.423 mW/g

Maximum value of SAR (measured) = 0.857 mW/g



0 dB = 0.857 mW/q

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Date: 2011/8/18

Secondary Landscape_PCS_CH25_Acon antenna

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1851.25 MHz; $\sigma = 1.53$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.31 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

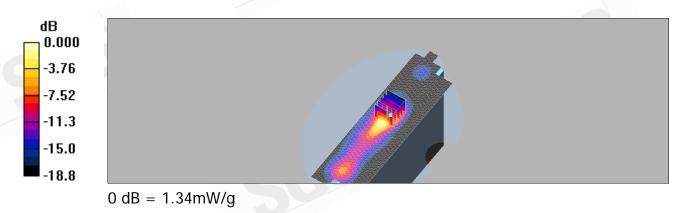
dz=5mm

Reference Value = 26.2 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.566 mW/g

Maximum value of SAR (measured) = 1.34 mW/g



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Secondary Landscape_PCS_CH600_Acon antenna

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.20 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

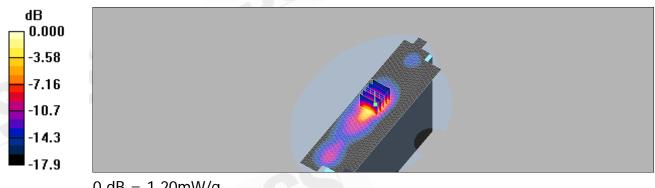
dz=5mm

Reference Value = 24.5 V/m: Power Drift = 0.068 dB

Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.499 mW/g

Maximum value of SAR (measured) = 1.20 mW/g



0 dB = 1.20 mW/q

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Secondary Landscape_PCS_CH1175_Acon antenna

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1909 MHz; $\sigma = 1.59$ mho/m; $\varepsilon_r = 51.4$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.15 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

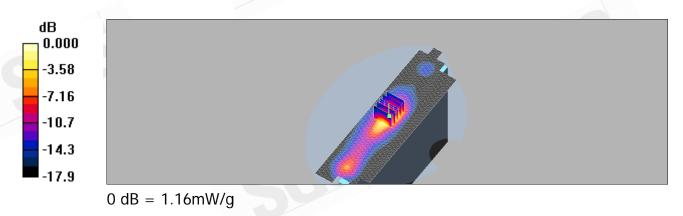
dz=5mm

Reference Value = 24.6 V/m; Power Drift = 0.142 dB

Peak SAR (extrapolated) = 2.08 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.511 mW/g

Maximum value of SAR (measured) = 1.16 mW/g



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Front side_PCS_CH600_Acon antenna

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.809 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

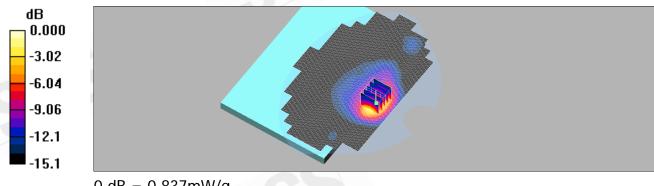
dz=5mm

Reference Value = 7.43 V/m: Power Drift = -0.004 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.724 mW/g; SAR(10 g) = 0.387 mW/g

Maximum value of SAR (measured) = 0.837 mW/g



0 dB = 0.837 mW/q

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Lap-held_US PCS_CH600_ Acon antenna_10mm

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.54$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.487 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

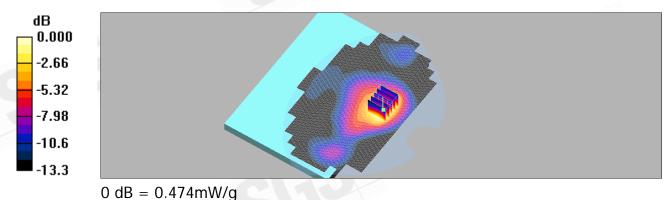
dz=5mm

Reference Value = 12.5 V/m; Power Drift = -0.173 dB

Peak SAR (extrapolated) = 0.705 W/kg

SAR(1 g) = 0.434 mW/g; SAR(10 g) = 0.266 mW/g

Maximum value of SAR (measured) = 0.474 mW/g



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Date: 2011/9/5

Secondary Landscape_US PCS_CH25_ Acon antenna_10mm

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1851.25 MHz; $\sigma = 1.52$

mho/m; $\varepsilon_r = 51.3$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.43 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

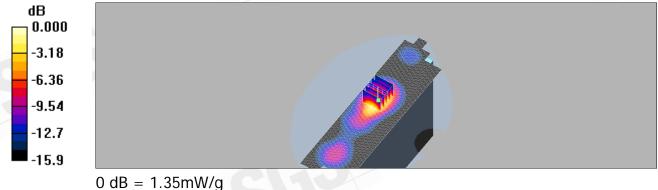
dz=5mm

Reference Value = 23.0 V/m: Power Drift = -0.014 dB

Peak SAR (extrapolated) = 2.07 W/kg

SAR(1 g) = 1.22 mW/g; SAR(10 g) = 0.675 mW/g

Maximum value of SAR (measured) = 1.35 mW/g



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Secondary Landscape_US PCS_CH600_ Acon antenna_10mm

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.54$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.15 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

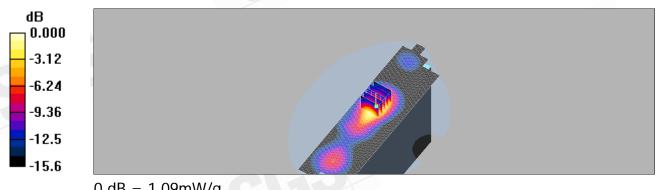
dz=5mm

Reference Value = 20.9 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.965 mW/g; SAR(10 g) = 0.534 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.09 mW/g

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Date: 2011/9/5

Secondary Landscape_US PCS_CH1175_ Acon antenna_10mm

Communication System: CDMA2000; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1909 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 1.13 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

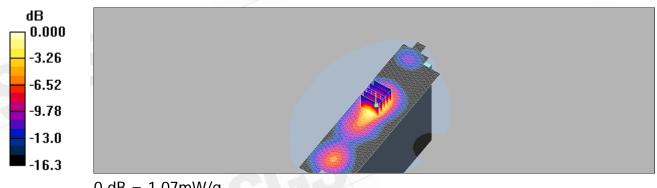
dz=5mm

Reference Value = 20.3 V/m: Power Drift = 0.145 dB

Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 0.970 mW/g; SAR(10 g) = 0.538 mW/g

Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07 mW/g

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Lap-held_GPRS850_CH251__multi-class 10_wahyu antenna

Communication System: GSM 850; Frequency: 848.8 MHz; Duty Cycle: 1:4.1

Medium: Muscle 900 MHz Medium parameters used: f = 849 MHz; $\sigma = 1.04$ mho/m; $\varepsilon_r =$

55.3; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.447 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

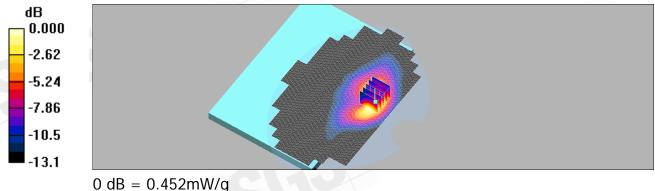
dz=5mm

Reference Value = 7.80 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.773 W/kg

SAR(1 g) = 0.418 mW/g; SAR(10 g) = 0.237 mW/g

Maximum value of SAR (measured) = 0.452 mW/g



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Front side_GPRS1900_CH810__multi-class 10_wahyu antenna

Communication System: GSM1900; Frequency: 1909.8 MHz; Duty Cycle: 1:4.1

Medium: M1800 & 1900 Medium parameters used: f = 1910 MHz; $\sigma = 1.58$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.879 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

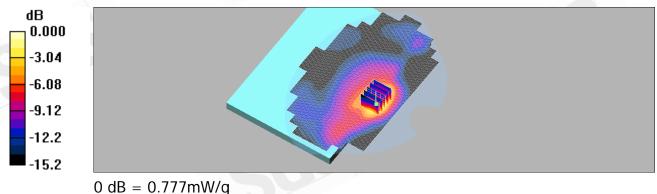
dz=5mm

Reference Value = 10.8 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.707 mW/g; SAR(10 g) = 0.385 mW/g

Maximum value of SAR (measured) = 0.777 mW/g



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Secondary Landscape_WCDMA Band II_CH9262_wahyu antenna

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

Medium: M1800 & 1900 Medium parameters used (interpolated): f = 1852.4 MHz; $\sigma = 1.53$

mho/m; $\varepsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.912 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

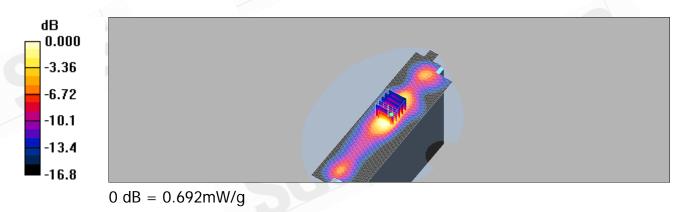
dz=5mm

Reference Value = 22.7 V/m; Power Drift = -0.179 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.615 mW/g; SAR(10 g) = 0.325 mW/g

Maximum value of SAR (measured) = 0.692 mW/g



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Date: 2011/9/1

Secondary Landscape_WCDMA Band IV_CH1513_wahyu antenna

Communication System: WCDMA Band IV; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1753 MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 52$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.973 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

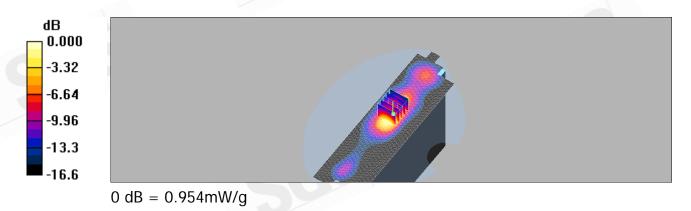
dz=5mm

Reference Value = 21.7 V/m; Power Drift = 0.088 dB

Peak SAR (extrapolated) = 1.49 W/kg

SAR(1 g) = 0.836 mW/g; SAR(10 g) = 0.442 mW/g

Maximum value of SAR (measured) = 0.954 mW/g



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Date: 2011/8/24

Lap-held_WCDMA Band V_CH4182_wahyu antenna

Communication System: WCDMA Band V; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\varepsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.354 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

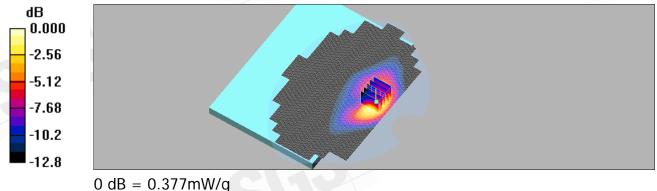
dz=5mm

Reference Value = 6.81 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.642 W/kg

SAR(1 g) = 0.346 mW/g; SAR(10 g) = 0.196 mW/g

Maximum value of SAR (measured) = 0.377 mW/g



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Date: 2011/8/24

Lap-held_Cellular_CH384_wahyu antenna

Communication System: CDMA_850; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 837 MHz; $\sigma = 1.02$ mho/m; $\epsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (111x181x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.350 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

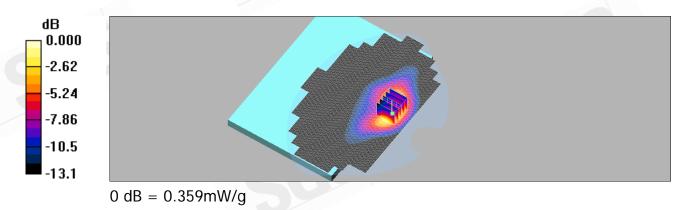
dz=5mm

Reference Value = 6.50 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 0.675 W/kg

SAR(1 g) = 0.335 mW/g; SAR(10 g) = 0.185 mW/g

Maximum value of SAR (measured) = 0.359 mW/g



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Date: 2011/8/24

Secondary Landscape_PCS_CH600_wahyu antenna

Communication System: CDMA2000; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1880 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.6$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

body/Area Scan (51x191x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.657 mW/g

body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm,

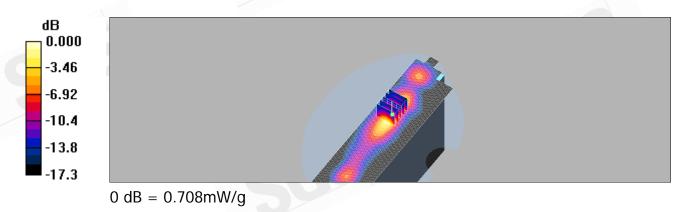
dz=5mm

Reference Value = 14.3 V/m; Power Drift = -0.171 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 0.708 mW/g



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5. SAR System Performance Verification

Date: 2011/8/17

DUT: Dipole 835 MHz;

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 835 MHz; $\sigma = 1.02$ mho/m; $\varepsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.67 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

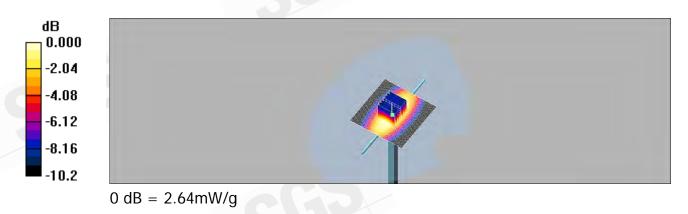
dy=5mm, dz=5mm

Reference Value = 50.9 V/m; Power Drift = -0.080 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.64 mW/g



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Date: 2011/8/18

DUT: Dipole 1900 MHz;

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1900 MHz; $\sigma = 1.59$ mho/m; $\varepsilon_r = 51.5$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 12.9 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

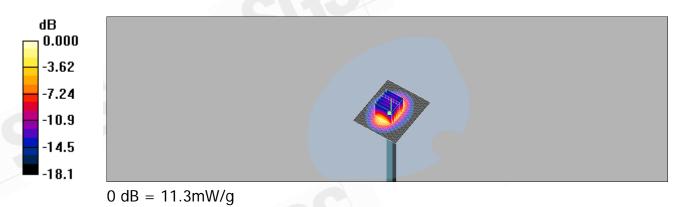
dy=5mm, dz=5mm

Reference Value = 83.2 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 9.96 mW/g; SAR(10 g) = 5.12 mW/g

Maximum value of SAR (measured) = 11.3 mW/g



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Date: 2011/8/24

DUT: Dipole 835 MHz;

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 835 MHz; $\sigma = 1.02$ mho/m; $\varepsilon_r =$

55.4; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(5.68, 5.68, 5.68); Calibrated: 2011/6/22

• Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.64 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

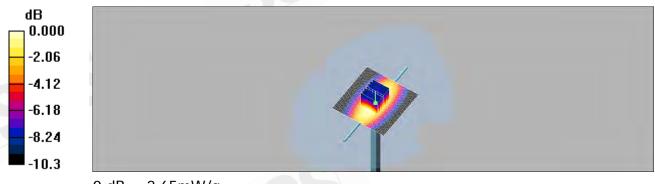
dy=5mm, dz=5mm

Reference Value = 51.4 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.65 mW/g



0 dB = 2.65 mW/q

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Date: 2011/8/24

DUT: Dipole 1900 MHz;

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1900 MHz; $\sigma = 1.59$ mho/m; $\varepsilon_r = 51.4$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: ES3DV3 - SN3071; ConvF(4.32, 4.32, 4.32); Calibrated: 2011/6/22

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 13.0 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

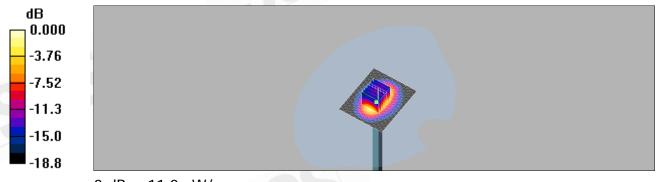
dy=5mm, dz=5mm

Reference Value = 84.5 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 9.87 mW/g; SAR(10 g) = 4.99 mW/g

Maximum value of SAR (measured) = 11.0 mW/g



0 dB = 11.0 mW/q

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Date: 2011/9/1

DUT: Dipole1750 MHz;

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1750 MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 52$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 10.7 mW/g

Pin=250mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

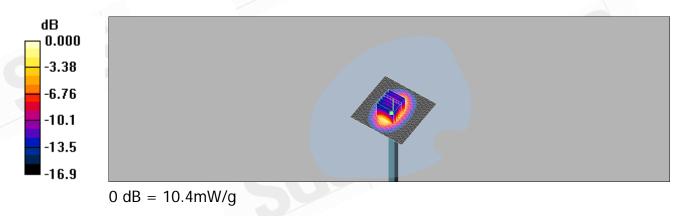
dy=5mm, dz=5mm

Reference Value = 87.6 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 9.24 mW/g; SAR(10 g) = 4.95 mW/g

Maximum value of SAR (measured) = 10.4 mW/g



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Date: 2011/9/5

DUT: Dipole 835 MHz;

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Muscle 900 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.998$ mho/m; $\epsilon_r =$

54.3; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(9.58, 9.58, 9.58); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 2.95 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

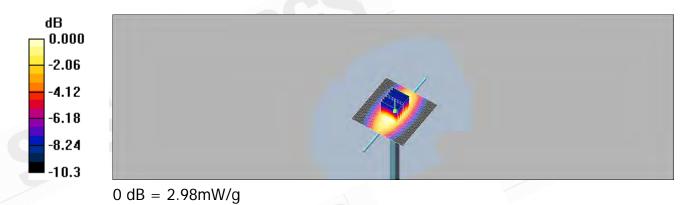
dy=5mm, dz=5mm

Reference Value = 55.0 V/m: Power Drift = 0.068 dB

Peak SAR (extrapolated) = 4.06 W/kg

SAR(1 g) = 2.51 mW/g; SAR(10 g) = 1.71 mW/g

Maximum value of SAR (measured) = 2.98 mW/g



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Date: 2011/9/5

DUT: Dipole 1750 MHz;

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1750 MHz; $\sigma = 1.4$ mho/m; $\varepsilon_r = 51.7$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.95, 7.95, 7.95); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW /Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 10.6 mW/g

Pin=250mW /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

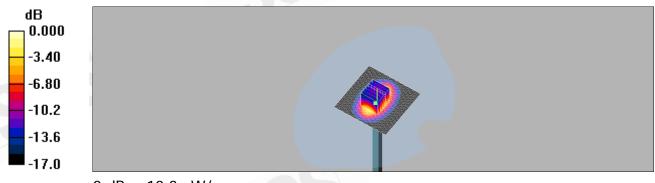
dy=5mm, dz=5mm

Reference Value = 87.7 V/m; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 16.2 W/kg

SAR(1 g) = 9.16 mW/g; SAR(10 g) = 4.88 mW/g

Maximum value of SAR (measured) = 10.3 mW/g



0 dB = 10.3 mW/q

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Date: 2011/9/5

DUT: Dipole 1900 MHz;

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: M1800 & 1900 Medium parameters used: f = 1900 MHz; $\sigma = 1.57$ mho/m; $\varepsilon_r = 51.2$;

 $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3661; ConvF(7.72, 7.72, 7.72); Calibrated: 2011/1/24

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn679; Calibrated: 2011/6/24

Phantom: SAM1; Type: SAM 4.0; Serial: TP:1419

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Pin=250mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 13.4 mW/g

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

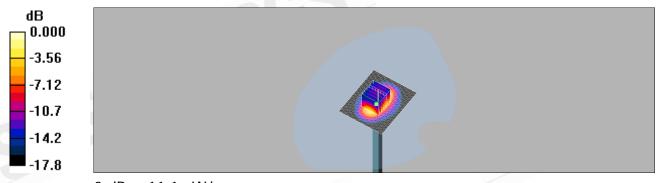
dy=5mm, dz=5mm

Reference Value = 86.8 V/m: Power Drift = -0.234 dB

Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 9.77 mW/g; SAR(10 g) = 5.07 mW/g

Maximum value of SAR (measured) = 11.1 mW/g



0 dB = 11.1 mW/g

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6. DAE & Probe Calibration certificate

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





Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates Accreditation No.: SCS 108

Certificate No: DAE4-679_Jun11

Object	DAE4 - SD 000 D04 BJ - SN; 679			
Calibration procedure(s)	QA CAL-06.v23 Calibration procedure for the data acquisition electronics (DAE)			
Calibration date:	June 24, 2011			
The measurements and the unce	ertainties with confidence pr	nal standards, which realize the physica obability are given on the following page	s and are part of the certificate.	
Calibration Equipment used (M&		, , , , , , , , , , , , , , , , , , ,	-,	
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration	
Keithley Multimeter Type 2001	SN: 0810278	28-Sep-10 (No:10376)	Sep-11	
Sanamalama Chandanda	ID#	Check Date (in house)	Scheduled Check	
	SE UMS 006 AB 1004	08-Jun-11 (in house check)	in house check: Jun-12	
Secondary Standards Zalibrator Box V1.1				
Calibrator Box V1.1	SE UMS 006 AB 1004 Name Dominique Steffen	08-Jun-11 (in house check) Function Technician	In house check: Jun-12 Signature	
	Name	Function		

Certificate No: DAE4-679_Jun11

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Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerlan





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Certificate No: ES3=3071_Jun11

Accreditation No.: SCS 108

CALIBRATION CERTIFICATE

Object

Calibration procedure(s)

Calibration date:

June 22, 201/15

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-10 (No. ES3-3013_Dec10)	Dec-11
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

Signature Name Function Calibrated by: Approved by: Issued: June 23, 2011

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

Certificate No: ES3-3071 Jun11

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Calibration Laboratory of Schmid & Partner

Engineering AG aughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura

Swiss Calibration Service

Accreditation No.: SCS 108

Accredited by the Swiss Accreditation Service (SAS)

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Glossary:

CF A, B, C

TSL NORMx,y,z tissue simulating liquid ConvF DCP

sensitivity in free space sensitivity in TSL / NORMx,y,z diode compression point

crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters

Polarization φ φ rotation around probe axis

Polarization 9 9 rotation around an axis that is in the plane normal to probe axis (at measurement center),

i.e., 9 = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:
a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close

proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

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

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ES3DV3 - SN:3071

June 22, 2011



Probe ES3DV3

SN:3071



December 14, 2004







Certificate No: ES3-3071_Jun11

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