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SAR TEST REPORT

Equipment Under TestGI0653Model NumberGI0653Company NameOption NVCompany AddressGaston Geenslaan 14,3001 Leuven, BelgiumDate of Receipt2010.09.15Date of Test(s)2010.10.11 ~ 10.12,2010.11.13Date of Issue2010.11.15

Standards:

FCC OET Bulletin 65 supplement C, ANSI/IEEE C95.1, C95.3, IEEE 1528

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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Version

Version No.	Date	Description	
1.0	Oct. 14, 2010	Initial issue of report	
1.1	Oct. 18, 2010	Modify 1 st report	
1.2	Oct. 26, 2010	Modify 2 nd report	
1.3	Oct. 28, 2010	Modify IMEI code to 004400013070006	
1.4	Nov. 15, 2010	Increase WCDMA B2 HSUPA mode	



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1. General Information

1.1 Testing Laboratory

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1.2 Details of Applicant

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E-mail	p.vandeneede@option.com
Website	www.option.com

1.3 Description of EUT

EUT Name	GI0653	
Brand Name	Option	
Marketing Name	mlDentity 3G	
Model Number	GI0653	
IMEI Code	004400013070006	
Mode of Operation	GPRS/EDGE/WCDMA/HSDPA/HSUPA	
Modulation Mode	GMSK/8PSK/16QAM/QPSK	

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FCC ID	NCMOGI0653				
Duty Cycle	GPRS/EDGE (2multi-slot)		WCDMA		
	1/2		1		
Maximum RF	aximum RF GPRS 850 GPRS 1900		WCDMA B2		
Conducted Power (Average)	25.6 dBm	22.0 dBm		20.09 dBm	
TX Frequency range	GPRS 850	GPRS 19	900	WCDMA B2	
(MHz)	824.2-848.8	1850.2-19	909.8	1852.4-1907.6	
Channel Number	GPRS 850	GPRS 19	900	WCDMA B2	
(ARFCN)	128-251	512-810		9262-9538	
Antenna Type	Internal Antenna			3	
Definition	Production unit				
	GSM850				
	0.45 mW/g (At GPRS 850 Configuration 2_ 251 channel)				
Max. SAR	GSM1900				
Measured (1 g)	0.672 mW/g (At GPRS 1900 Configuration 1_ 512 channel)				
	WCDMA B2				
	1.06 mW/g (At WCDMA B2 Configuration 1_ 9400 channel)				

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GPRS 12

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#. Conducted power table:							
	GSM 850 (Average)			GSM 1	erage)		
Mode\ARFCN	128	190	251	512	661	810	
EGPRS 12	23.1	23.2	23.2	21.8	21.7	21.4	

25.5

22.0

21.6

21.9

25.6

25.5

		WCDMA Band II Channe			
Mode	Subtest	9262	9400	9538	
Rel99	R99	19.76	19.77	19.82	
	1	20.05	20.03	20.09	
Rel6 HSDPA	2	19.64	19.63	19.67	
	3	19.57	19.58	19.56	
	4	19.64	19.59	19.68	
	1	19.78	19.72	19.74	
Rel6 HSUPA	2	17.88	17.89	17.82	
	3	18.89	18.81	18.85	
	4	18.92	18.87	18.85	
	5	19.49	19.45	19.47	

1.4 Test Environment

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



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1.5 Operation description

- The EUT is a USB Data Modem. When we use it, it will be defined as a portable device since the Notebook will place on the thigh, so SAR measurement is mandatory. The EUT is controlled by chip-specific software installed in notebook, 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.
- 2. By using the program subordinated in the computer, and change into the written channel, and then test of set in highest power.
- 3. SAR is not required for HSDPA/UPA when output power with HSDPA/UPA is less than 1/4 dB higher than R99 output power. (KDB 941225D01)
- 4. And the dongle we use 5mm on all positions. When we test Body SAR, We will test it with 5 configurations , according to (KDB447498 D02)

Configuration 1: Horizontal-Up. (Appendix-Fig.3) Configuration 2: Horizontal-Down. (Appendix-Fig.4) Configuration 3: Vertical-Front. (Appendix-Fig.5) Configuration 4: Vertical-Back. (Appendix-Fig.6) Configuration 5: Tip side. (Appendix-Fig.7)

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 5 professional system). A Model ES3DV3 field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR= σ ($|Ei|^2$)/ ρ where σ and ρ are the conductivity and mass density of the tissue-simulant.

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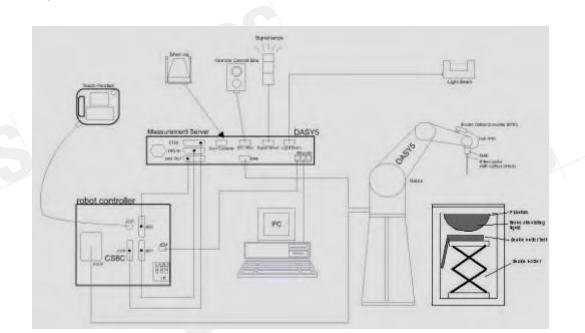


Fig.a The block diagram of SAR system.

The DASY5 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.
- 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.

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- 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.
 - DASY5 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.

1.7 System Components

FS3DV3 F-Field Probe

L33DV3 L-Heit				
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 HSL850 & 1900			
	MHZ Additional CF for other liquids and			
	frequencies upon request			
Frequency	10 MHz to > 4 GHz; Linearity: ± 0.6 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 μW/g to > 100 mW/g;			
	Linearity: ± 0.6 dB (noise: typically < 1 µW/g)			

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Dimensions	Overall length: 337 mm (Tip: 10 mm)
	Tip diameter: 4 mm (Body: 10 mm)
	Typical distance from probe tip to dipole centers: 2 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

SAM PHANTOM V4.0C

Construction	The shell corresponds to the specifi	cations 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 li	5 I 5		
	phantom allow the complete setup			
	positions and measurement grids by manually teaching three points			
	with the robot.			
Shell Thickness	2 ± 0.2 mm			
Filling Volume	Approx. 25 liters	(WINNING)		
Dimensions	Height: 850 mm;			
	Length: 1000 mm;			
	Width: 500 mm			
		- m2 - 1		

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DEVICE HOLD	DER	
Construction	The device holder (Supporter) for	
	Notebook is made by POM	Part and a second se
	(polyoxymethylene resin), which is	
	non-metal and non-conductive. The	
	height can be adjusted to fit varies	
	kind of notebooks.	AA
		Device Holder

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 850 &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 22.2°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.

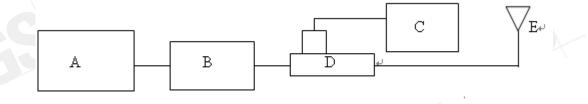
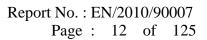


Fig.b The block diagram for SAR system verification

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- A. Agilent Model 8648D Signal Generator
- B. Mini circuits Model ZHL-42 Amplifier
- C. Agilent Model U2001B Power Sensor
- D. Agilent Model 778D Dual directional coupling
- E. Reference dipole antenna.



Photograph of the dipole Antenna

Validation Kit	Frequency (MHz)	Target SAR (1g) (Pin=250mW)	Measured SAR (1g)	Measured Date
D835V2 S/N: 4d063	835 MHz (Body)	2.53 mW/g	2.52 mW/g	2010/10/11
D1900V2 S/N: 5d027	1900 MHz (Body)	10.1 mW/g	10.5 mW/g	2010/10/12
D1900V2 S/N: 5d027	1900 MHz (Body)	10.1 mW/g	10.4 mW/g	2010/11/13

Table 1. Results system validation

1.9 Tissue Simulant Fluid for the Frequency Band

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

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

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Fraguancy	Fraguanav	Measurement date/	Dielectric Parameters					
Frequency (MHz)	Tissue type	Limits	0	σ (S/m)	Simulated Tissue			
		LIITIIIIS	ρ	0 (3/11)	Temperature(°C)			
850	Pody	Measured, 2010-10-11	53.3	1	21.7			
850 Body	БОЦУ	Recommended Limits	51.49-56.91	0.93-1.03	20-24			
1900	Body	Measured, 2010-10-12	52.8	1.55	21.7			
1900	Bouy	Recommended Limits	52.06-57.54	1.45-1.61	20-24			
1000	1900 Body	Measured, 2010-11-15	52.9	1.55	21.7			
1900		Recommended Limits	52.06-57.54	1.45-1.61	20-24			
ı	Tab	la 2 Dialactria Daramat	and of Tioning					

Table 2. Dielectric Parameters of Tissue Simulant Fluid

The composition of the brain tissue simulating liquid is:



Ingredient	850MHz (Body)	1900MHz (Body)
DGMBE	Х	300.67g
Water	631.68 g	716.56 g
Salt	11.72 g	4.0 g
Preventol D-7	1.2 g	х
Cellulose	Х	Х
Sugar	600 g	X
Total	1 L	1 L
amount	(1.0kg)	(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:

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- 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 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.

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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.

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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 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

GPRS 850(Class 12)

Configuration	Configuration 1: Horizontal- UP.						
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid	
			Power (Average)	1g	Temp[°C]	Temp[°C]	
850 MHz	128	824.2	25.5 dBm	0.388	22.1	21.7	
	190	836.6	25.6 dBm	0.422	22.1	21.7	
	251	848.8	25.5 dBm	0.414	22.1	21.7	
Configuration	on 2: Horiz	ontal- D	own.		_	-	
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid	
			Power (Average)	1g	Temp[°C]	Temp[°C]	
850 MHz	128	824.2	25.5 dBm	0.444	22.1	21.7	
	190	836.6	25.6 dBm	0.436	22.1	21.7	
	251	848.8	25.5 dBm	0.45	22.1	21.7	
Configuration	on 3: Verti	cal-Fron	t.				
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid	
			Power (Average)	1g	Temp[°C]	Temp[°C]	
850 MHz	128	824.2	25.5 dBm	0.17	22.1	21.7	
	190	836.6	25.6 dBm	0.174	22.1	21.7	
	251	848.8	25.5 dBm	0.187	22.1	21.7	
Configuration	on 4: Verti	cal-Back		-			
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid	
			Power (Average)	1g	Temp[°C]	Temp[°C]	
850 MHz	128	824.2	25.5 dBm	0.244	22.1	21.7	
	190	836.6	25.6 dBm	0.263	22.1	21.7	
	251	848.8	25.5 dBm	0.291	22.1	21.7	

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Configuration 5: Tip side								
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
850 MHz	128	824.2	25.5 dBm	0.14	22.1	21.7		
	190	836.6	25.6 dBm	0.134	22.1	21.7		
	251	848.8	25.5 dBm	0.079	22.1	21.7		

GPRS 1900(Class 12)

1: Horiz	ontal- U	n						
	Configuration 1: Horizontal- Up.							
Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
		Power (Average)	1g	Temp[°C]	Temp[°C]			
512	1850.2	22.0 dBm	0.672	22.1	21.7			
661	1880	21.6 dBm	0.615	22.1	21.7			
810	1909.8	21.9 dBm	0.579	22.1	21.7			
2: .Horiz	zontal-D	own.	C	465				
Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
		Power (Average)	1g	Temp[°C]	Temp[°C]			
512	1850.2	22.0 dBm	0.633	22.1	21.7			
661	1880	21.6 dBm	0.582	22.1	21.7			
810	1909.8	21.9 dBm	0.56	22.1	21.7			
3: Vertic	cal-Front							
Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
		Power (Average)	1g	Temp[°C]	Temp[°C]			
512	1850.2	22.0 dBm	0.41	22.1	21.7			
661	1880	21.6 dBm	0.398	22.1	21.7			
810	1909.8	21.9 dBm	0.415	22.1	21.7			
	512 661 810 2: .Horiz hannel 512 661 810 3: Vertic hannel 512 661	512 1850.2 661 1880 810 1909.8 2: .Horizontal-D hannel MHz 512 1850.2 661 1880 810 1909.8 512 1850.2 661 1880 810 1909.8 3: Vertical-Front hannel MHz 512 1850.2 661 1880	Power (Average) 512 1850.2 22.0 dBm 661 1880 21.6 dBm 810 1909.8 21.9 dBm 2: .Horizontal-Down. 2 channel MHz Conducted Output Power (Average) 512 1850.2 22.0 dBm 661 1880 21.6 dBm 810 1909.8 21.9 dBm 512 1850.2 22.0 dBm 661 1880 21.6 dBm 810 1909.8 21.9 dBm 310 1909.8 21.9 dBm 512 1850.2 22.0 dBm 661 1880 21.6 dBm	Power (Average) 1g 512 1850.2 22.0 dBm 0.672 661 1880 21.6 dBm 0.615 810 1909.8 21.9 dBm 0.579 2: .Horizontal-Down. 0.615 0.615 810 1909.8 21.9 dBm 0.579 2: .Horizontal-Down. MHz Conducted Output Power (Average) Measured(W/kg) 512 1850.2 22.0 dBm 0.633 661 1880 21.6 dBm 0.582 810 1909.8 21.9 dBm 0.56 3: Vertical-Front. State Conducted Output Power (Average) Measured(W/kg) Fhannel MHz Conducted Output Power (Average) Measured(W/kg) 512 1850.2 22.0 dBm 0.56 3: Vertical-Front. Ig 1g 512 1850.2 22.0 dBm 0.41 661 1880 21.6 dBm 0.398	Power (Average) 1g Temp[°C] 512 1850.2 22.0 dBm 0.672 22.1 661 1880 21.6 dBm 0.615 22.1 810 1909.8 21.9 dBm 0.579 22.1 2: .Hor:			

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Configuratio	Configuration 4: Vertical-Back.							
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
1900 MHz	512	1850.2	22.0 dBm	0.333	22.1	21.7		
	661	1880	21.6 dBm	0.313	22.1	21.7		
	810	1909.8	21.9 dBm	0.317	22.1	21.7		
Configuratio	on <mark>5:</mark> Tip s	ide.						
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
1900 MHz	512	1850.2	22.0 dBm	0.064	22.1	21.7		
	661	1880	21.6 dBm	0.062	22.1	21.7		
	810	1909.8	21.9 dBm	0.070	22.1	21.7		

WCDMA B2(R99)

Configuration 1: Horizontal- Up.								
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
WCDMA B2	9262	1852.4	19.76 dBm	0.965	22.1	21.7		
	9400	1880	19.77 dBm	1.06	22.1	21.7		
	9538	1907.6	19.82 dBm	0.843	22.1	21.7		
Configuratio	on 2: .Hori	zontal-D	own.					
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
WCDMA B2	9262	1852.4	19.76 dBm	0.914	22.1	21.7		
	9400	1880	19.77 dBm	0.937	22.1	21.7		
	9538	1907.6	19.82 dBm	0.687	22.1	21.7		

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Configuration 3: Vertical-Front.								
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
WCDMA B2	9262	1852.4	19.76 dBm	0.776	22.1	21.7		
	9400	1880	19.77 dBm	0.882	22.1	21.7		
	9538	1907.6	19.82 dBm	0.96	22.1	21.7		
Configuratio	on 4: Verti	cal-Back						
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
WCDMA B2	9262	1852.4	19.76 dBm	0.712	22.1	21.7		
	9400	1880	19.77 dBm	0.79	22.1	21.7		
	9538	1907.6	19.82 dBm	0.601	22.1	21.7		
Configuratio	on 5: Tip s	ide.						
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
WCDMA B2	9262	1852.4	19.76 dBm	0.086	22.1	21.7		
	9400	1880	19.77 dBm	0.098	22.1	21.7		
	9538	1907.6	19.82 dBm	0.091	22.1	21.7		

WCDMA B2_HSUPA

Configuration 1: Horizontal- Up.								
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid		
			Power (Average)	1g	Temp[°C]	Temp[°C]		
WCDMA B2	9262	1852.4	19.49dBm	0.945	22.1	21.7		
	9400	1880	19.45dBm	1.01	22.1	21.7		
	9538	1907.6	19.47dBm	0.841	22.1	21.7		

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Configuratio	on 2: .Hori	zontal-D	own.						
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
			Power (Average)	1g	Temp[°C]	Temp[°C]			
WCDMA B2	9262 1852.4		19.49dBm	0.870	22.1	21.7			
	9400	1880	19.45dBm	0.927	22.1	21.7			
	9538	88 1907.6 19.47dBm 0.876		0.876	22.1	21.7			
Configuration 3: Vertical-Front.									
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
			Power (Average)	1g	Temp[°C]	Temp[°C]			
WCDMA B2	9262	1852.4	19.49dBm	0.707 22.1		21.7			
	9400	1880	19.45dBm	0.789	22.1	21.7			
	9538	1907.6	19.47dBm	0.690	22.1	21.7			
Configuratio	on 4: Verti	cal-Back							
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
C			Power (Average)	1g	Temp[°C]	Temp[°C]			
WCDMA B2	9262	1852.4	19.49dBm	0.564	22.1	21.7			
	9400	1880	19.45dBm	0.631	22.1	21.7			
	9538	1907.6	19.47dBm	0.605	22.1	21.7			
Configuration 5: Tip side.									
Frequency	Channel	MHz	Conducted Output	Measured(W/kg)	Amb.	Liquid			
			Power (Average)	1g	Temp[°C]	Temp[°C]			
WCDMA B2	9262	1852.4	19.49dBm	0.078	22.1	21.7			
	9400	1880	19.45dBm	0.095	22.1	21.7			
	9538	1907.6	19.47dBm	0.096	22.1	21.7			

Note: SAR measurement results for the data card at maximum output power.

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3. Instruments List

	Manufacturer	Device	Туре	Serial number	Date of last calibration
	Schmid & Partner Engineering AG	Dosimetric E-FieldProbe	ES3DV3	3172	May.21.2010
	Schmid & Partner Engineering	850 & 1900MHz System Validation Dipole	D835V2	4d063	May.21.2010
~	AG		D1900V2	5d027	Apr.28.2010
	Schmid & Partner Engineering AG	Data acquisition Electronics	DAE4	856	May.20.2010
	Schmid & Partner Engineering	Software	DASY 5	N/A	Calibration
	AG		V5.0		isn't
			Build125		necessary
	Schmid & Partner Engineering	Phantom	SAM	N/A	Calibration
<	AG				isn't
					necessary
	Agilent	Network Analyzer	8753D	3410A05662	Mar.30.2010
	Agilent	Dielectric Probe Kit	~ 85070D	US01440168	Calibration isn't necessary
	Agilent	Dual-directional coupler	778D	50313	Aug.25.2010
	Agilent	RF Signal Generator	8648D	3847M00432	Jun.04.2010
	Agilent	Power Sensor	U2001B	MY48100169	Apr.30.2010
	Agilent	Radio Communication Test	E5515c	GB44051912	Jul.27 .2010

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4. Measurements

Date: 2010/10/11

Configuration 1_CH128

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.992 mho/m; ϵ_r = 53.4; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

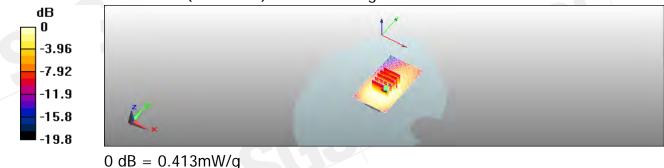
Maximum value of SAR (interpolated) = 0.404 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17 V/m; Power Drift = -0.152 dB Peak SAR (extrapolated) = 0.611 W/kg

SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.241 mW/g

Maximum value of SAR (measured) = 0.413 mW/g



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Date: 2010/10/11

Configuration 1_CH190

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 836.6 MHz; Medium parameters used: f = 837 MHz; σ = 1.01 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

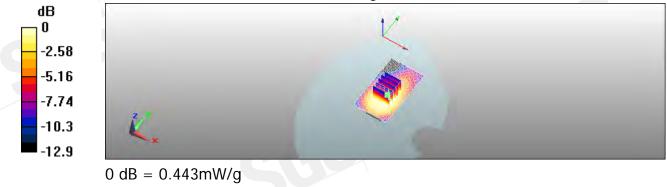
dy=15mm Maximum value of SAR (interpolated) = 0.430 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 16.8 V/m; Power Drift = 0.061 dB Peak SAR (extrapolated) = 0.670 W/kg

SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.264 mW/g

Maximum value of SAR (measured) = 0.443 mW/g



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Date: 2010/10/11

Configuration 1_CH251

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 848.8 MHz; Medium parameters used: f = 849 MHz; σ = 1.02 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

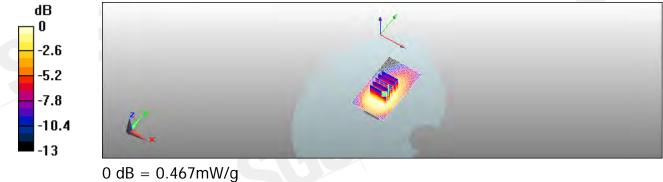
dy=15mm Maximum value of SAR (interpolated) = 0.462 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 16.9 V/m; Power Drift = 0.070 dB Peak SAR (extrapolated) = 0.588 W/kg

SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.262 mW/g

Maximum value of SAR (measured) = 0.467 mW/g



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Date: 2010/10/11

Configuration 2_CH128

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.992 mho/m; ϵ_r = 53.4; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

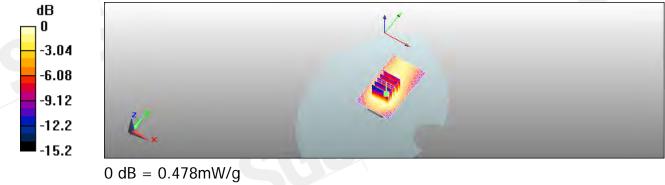
dy=15mm Maximum value of SAR (interpolated) = 0.458 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 14.8 V/m; Power Drift = -0.169 dB Peak SAR (extrapolated) = 0.687 W/kg

SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.281 mW/g

Maximum value of SAR (measured) = 0.478 mW/g



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Date: 2010/10/11

Configuration 2_CH190

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 836.6 MHz; Medium parameters used: f = 837 MHz; σ = 1.01 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

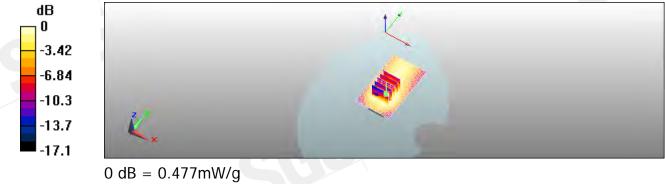
dy=15mm Maximum value of SAR (interpolated) = 0.457 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 14.7 V/m; Power Drift = -0.118 dB Peak SAR (extrapolated) = 0.658 W/kg

SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.477 mW/g



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Date: 2010/10/11

Configuration 2_CH251

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 848.8 MHz; Medium parameters used: f = 849 MHz; σ = 1.02 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

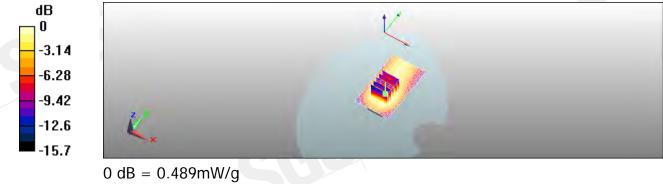
dy=15mm Maximum value of SAR (interpolated) = 0.485 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 14.6 V/m; Power Drift = -0.111 dB Peak SAR (extrapolated) = 0.701 W/kg

SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 0.489 mW/g



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Date: 2010/10/11

Configuration 3_CH128

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.992 mho/m; ϵ_r = 53.4; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

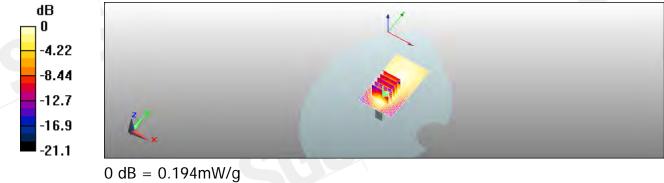
dy=15mm Maximum value of SAR (interpolated) = 0.202 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 10.1 V/m; Power Drift = -0.161 dB Peak SAR (extrapolated) = 0.335 W/kg

SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.091 mW/g

Maximum value of SAR (measured) = 0.194 mW/g



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Date: 2010/10/11

Configuration 3_CH190

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 836.6 MHz; Medium parameters used: f = 837 MHz; σ = 1.01 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

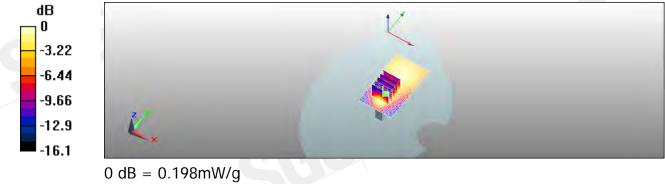
dy=15mm Maximum value of SAR (interpolated) = 0.194 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 9.44 V/m; Power Drift = 0.034 dB Peak SAR (extrapolated) = 0.336 W/kg

SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.093 mW/g

Maximum value of SAR (measured) = 0.198 mW/g



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Date: 2010/10/11

Configuration 3_CH251

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 848.8 MHz; Medium parameters used: f = 849 MHz; σ = 1.02 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

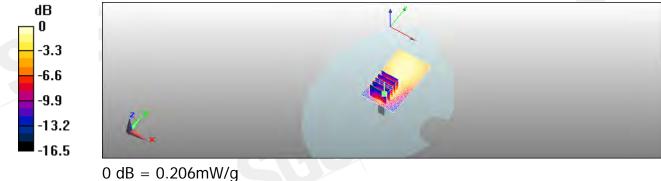
dy=15mm Maximum value of SAR (interpolated) = 0.205 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 9.76 V/m; Power Drift = 0.00507 dB Peak SAR (extrapolated) = 0.364 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.099 mW/g

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



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Date: 2010/10/11

Configuration 4_CH128

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.992 mho/m; ϵ_r = 53.4; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

dy=15mm Maximum value of SAR (interpolated) = 0.264 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.46 V/m; Power Drift = -0.146 dB Peak SAR (extrapolated) = 0.358 W/kg

SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.157 mW/g

Maximum value of SAR (measured) = 0.264 mW/g



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Date: 2010/10/11

Configuration 4_CH190

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 836.6 MHz; Medium parameters used: f = 837 MHz; σ = 1.01 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

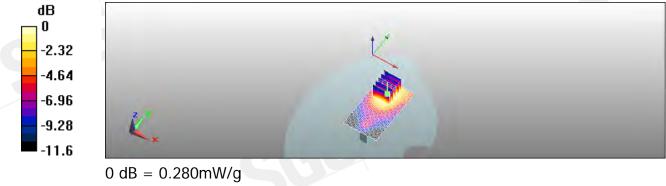
dy=15mm Maximum value of SAR (interpolated) = 0.297 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.82 V/m; Power Drift = -0.126 dB Peak SAR (extrapolated) = 0.397 W/kg

SAR(1 g) = 0.263 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.280 mW/g



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Date: 2010/10/11

Configuration 4_CH251

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 848.8 MHz; Medium parameters used: f = 849 MHz; σ = 1.02 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

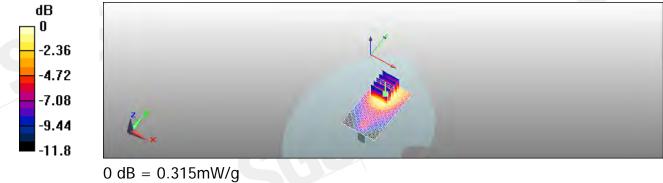
dy=15mm Maximum value of SAR (interpolated) = 0.331 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 8.89 V/m; Power Drift = -0.165 dB Peak SAR (extrapolated) = 0.420 W/kg

SAR(1 g) = 0.291 mW/g; SAR(10 g) = 0.187 mW/g

Maximum value of SAR (measured) = 0.315 mW/g



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Configuration 5_CH128

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 824.2 MHz; Medium parameters used: f = 824.2 MHz; σ = 0.992 mho/m; ϵ_r = 53.4; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) **DASY5** Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

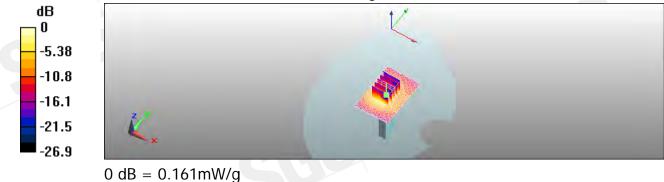
dy=15mmMaximum value of SAR (interpolated) = 0.162 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mmReference Value = 9.19 V/m; Power Drift = -0.067 dBPeak SAR (extrapolated) = 0.375 W/kg

SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.161 mW/g



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Date: 2010/10/11

Configuration 5_CH190

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 836.6 MHz; Medium parameters used: f = 837 MHz; σ = 1.01 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

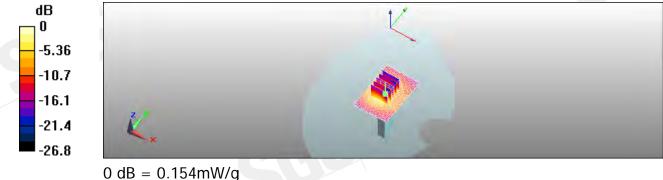
dy=15mm Maximum value of SAR (interpolated) = 0.153 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 8.82 V/m; Power Drift = 0.136 dB Peak SAR (extrapolated) = 0.361 W/kg

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.055 mW/g

Maximum value of SAR (measured) = 0.154 mW/g



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Configuration 5_CH251

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 848.8 MHz; Medium parameters used: f = 849 MHz; σ = 1.02 mho/m; ϵ_r = 53.1; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

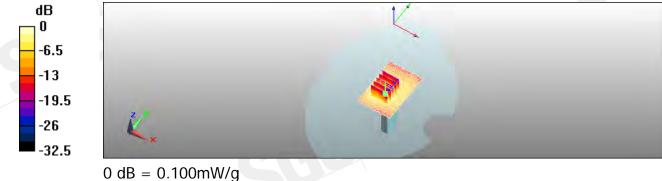
dy=15mm Maximum value of SAR (interpolated) = 0.092 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 8.86 V/m; Power Drift = 0.204 dB Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.035 mW/g

Maximum value of SAR (measured) = 0.100 mW/g



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Configuration 1_CH512

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (JEEE/JEC/ANSL C62 19 2007)

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.777 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.62 V/m; Power Drift = -0.203 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.672 mW/g; SAR(10 g) = 0.400 mW/g

Maximum value of SAR (measured) = 0.718 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

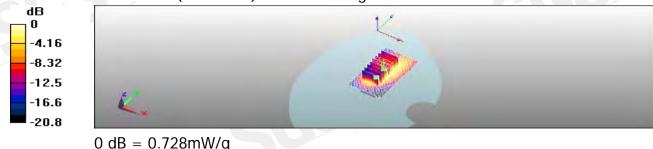
dy=8mm, dz=5mm

Reference Value = 6.62 V/m; Power Drift = -0.203 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.336 mW/g

Maximum value of SAR (measured) = 0.728 mW/g



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Configuration 1_CH661

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; $\sigma = 1.54 \text{ mho/m}$; $\epsilon_r = 52.7$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.664 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.27 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.973 W/kg

SAR(1 g) = 0.615 mW/g; SAR(10 g) = 0.362 mW/g

Maximum value of SAR (measured) = 0.674 mW/g

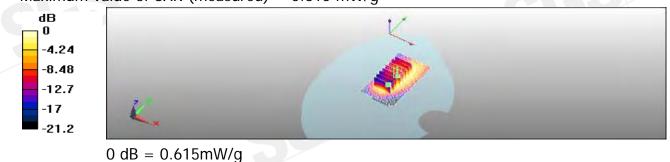
Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 6.27 V/m; Power Drift = 0.026 dB Peak SAR (extrapolated) = 0.878 W/kg

SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.295 mW/g

Maximum value of SAR (measured) = 0.615 mW/g



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Configuration 1_CH810

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1909.8 MHz; Medium parameters used: f = 1910 MHz; $\sigma = 1.56 \text{ mho/m}$; $\epsilon_r = 52.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.619 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.45 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 0.917 W/kg

SAR(1 g) = 0.579 mW/g; SAR(10 g) = 0.339 mW/g

Maximum value of SAR (measured) = 0.635 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

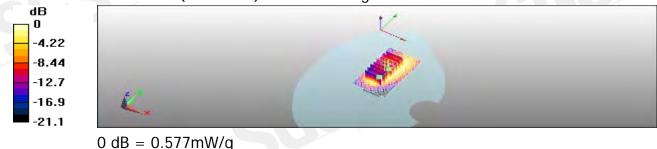
dy=8mm, dz=5mm

Reference Value = 6.45 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 0.868 W/kg

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SAR(1 g) = 0.503 mW/g; SAR(10 g) = 0.289 mW/g
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Maximum value of SAR (measured) = 0.577 mW/g
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Configuration 2_CH512

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (JEEE/JEC/ANSL C62 19 2007)

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.682 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.44 V/m; Power Drift = -0.162 dB

Peak SAR (extrapolated) = 0.995 W/kg

SAR(1 g) = 0.633 mW/g; SAR(10 g) = 0.377 mW/g

Maximum value of SAR (measured) = 0.683 mW/g

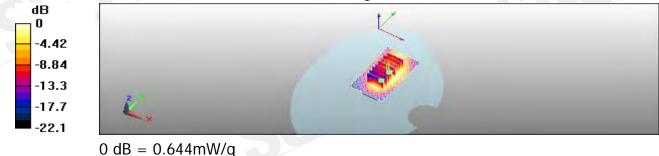
Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 7.44 V/m; Power Drift = -0.162 dBPeak SAR (extrapolated) = 0.914 W/kg

 $\sum_{n=1}^{\infty} \sum_{n=1}^{\infty} \sum_{n$

$$SAR(Ig) = 0.553 \text{ mW/g}; SAR(IUg) = 0.308 \text{ mW/g}$$



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Configuration 2_CH661

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

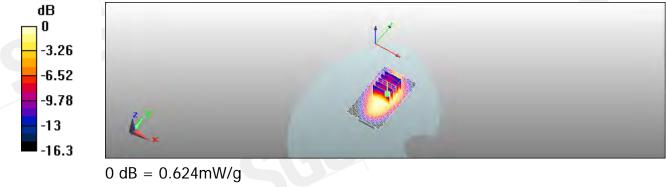
dy=15mm Maximum value of SAR (interpolated) = 0.624 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.28 V/m; Power Drift = -0.096 dB Peak SAR (extrapolated) = 0.925 W/kg

SAR(1 g) = 0.582 mW/g; SAR(10 g) = 0.344 mW/g

Maximum value of SAR (measured) = 0.624 mW/g



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Configuration 2_CH810

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1909.8 MHz; Medium parameters used: f = 1910 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

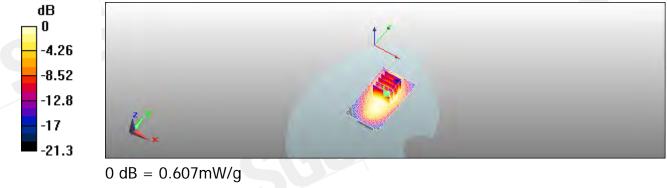
dy=15mm Maximum value of SAR (interpolated) = 0.603 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.55 V/m; Power Drift = -0.088 dB Peak SAR (extrapolated) = 0.887 W/kg

SAR(1 g) = 0.560 mW/g; SAR(10 g) = 0.330 mW/g

Maximum value of SAR (measured) = 0.607 mW/g



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Date: 2010/10/12

Configuration 3_CH512

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

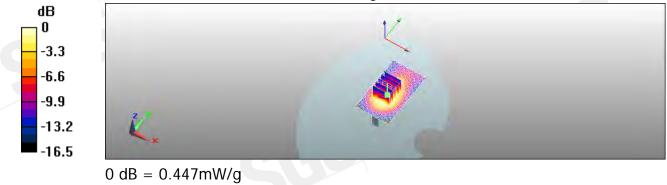
dy=15mm Maximum value of SAR (interpolated) = 0.467 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.58 V/m; Power Drift = -0.00301 dB Peak SAR (extrapolated) = 0.645 W/kg

SAR(1 g) = 0.410 mW/g; SAR(10 g) = 0.237 mW/g

Maximum value of SAR (measured) = 0.447 mW/g



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Date: 2010/10/12

Configuration 3_CH661

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

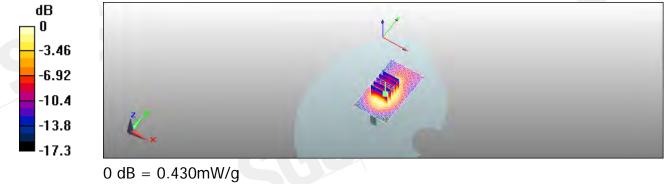
dy=15mm Maximum value of SAR (interpolated) = 0.453 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.25 V/m; Power Drift = -0.092 dB Peak SAR (extrapolated) = 0.659 W/kg

SAR(1 g) = 0.398 mW/g; SAR(10 g) = 0.226 mW/g

Maximum value of SAR (measured) = 0.430 mW/g



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Date: 2010/10/12

Configuration 3_CH810

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1909.8 MHz; Medium parameters used: f = 1910 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

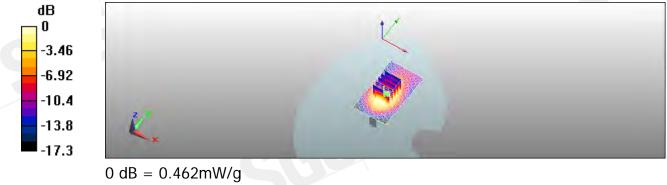
dy=15mm Maximum value of SAR (interpolated) = 0.480 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 5.91 V/m; Power Drift = 0.175 dB Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.235 mW/g

Maximum value of SAR (measured) = 0.462 mW/g



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Date: 2010/10/12

Configuration 4_CH512

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

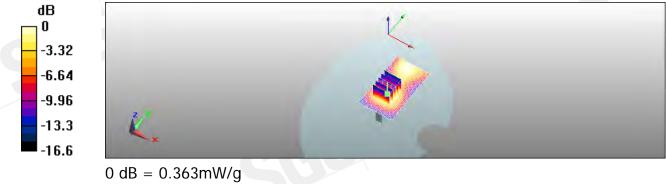
dy=15mm Maximum value of SAR (interpolated) = 0.408 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.26 V/m; Power Drift = -0.204 dB Peak SAR (extrapolated) = 0.553 W/kg

SAR(1 g) = 0.333 mW/g; SAR(10 g) = 0.190 mW/g

Maximum value of SAR (measured) = 0.363 mW/g



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Configuration 4_CH661

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

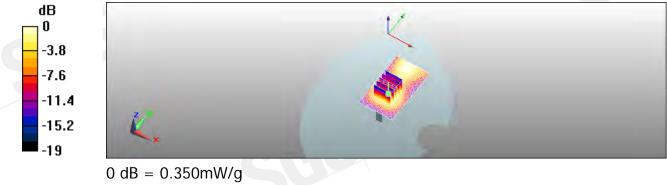
dy=15mm Maximum value of SAR (interpolated) = 0.373 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 5.58 V/m; Power Drift = -0.198 dB Peak SAR (extrapolated) = 0.483 W/kg

SAR(1 g) = 0.313 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.350 mW/g



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Date: 2010/10/12

Configuration 4_CH810

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1909.8 MHz; Medium parameters used: f = 1910 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x71x1): Measurement grid: dx=15mm,

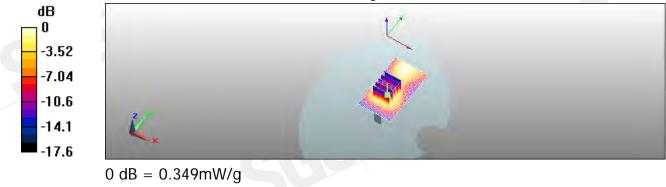
dy=15mm Maximum value of SAR (interpolated) = 0.357 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 5.05 V/m; Power Drift = -0.00725 dB Peak SAR (extrapolated) = 0.533 W/kg

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.349 mW/g



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Date: 2010/10/12

Configuration 5_CH512

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1850.2 MHz; Medium parameters used: f = 1850.2 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

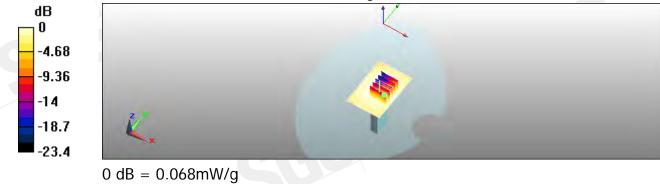
dy=15mm Maximum value of SAR (interpolated) = 0.067 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.41 V/m; Power Drift = -0.067 dB Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.064 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.068 mW/g



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Date: 2010/10/12

Configuration 5_CH661

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

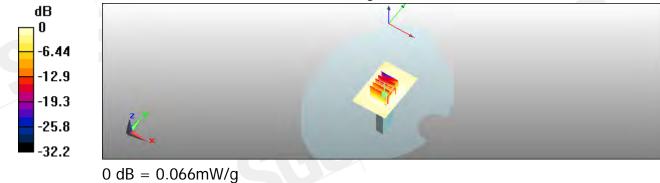
dy=15mm Maximum value of SAR (interpolated) = 0.065 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.25 V/m; Power Drift = -0.037 dB Peak SAR (extrapolated) = 0.106 W/kg

SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.066 mW/g



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Date: 2010/10/12

Configuration 5_CH810

DUT: GI0653

Communication System: GPRS(Class 12); Frequency: 1909.8 MHz; Medium parameters used: f = 1910 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

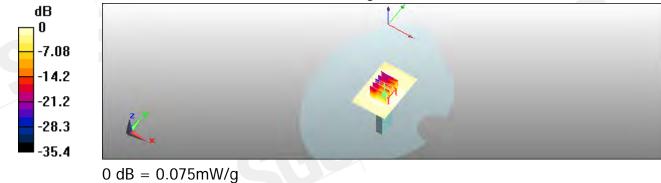
dy=15mm Maximum value of SAR (interpolated) = 0.074 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.59 V/m; Power Drift = -0.103 dB Peak SAR (extrapolated) = 0.119 W/kg

SAR(1 g) = 0.070 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.075 mW/g



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Date: 2010/10/12

Configuration 1_CH9262

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used: f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

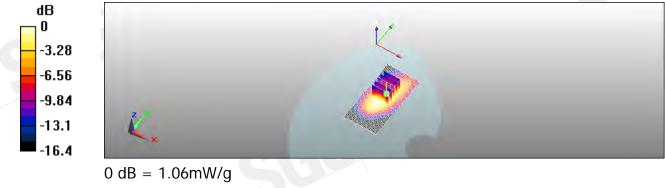
dy=15mm Maximum value of SAR (interpolated) = 1.07 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.98 V/m; Power Drift = 0.190 dB Peak SAR (extrapolated) = 1.5 W/kg

SAR(1 g) = 0.965 mW/g; SAR(10 g) = 0.572 mW/g

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



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Date: 2010/10/12

Configuration 1_CH9400

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

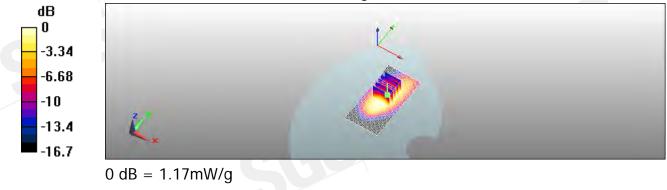
dy=15mm Maximum value of SAR (interpolated) = 1.2 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.88 V/m; Power Drift = -0.080 dB Peak SAR (extrapolated) = 1.66 W/kg

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.625 mW/g

Maximum value of SAR (measured) = 1.17 mW/g



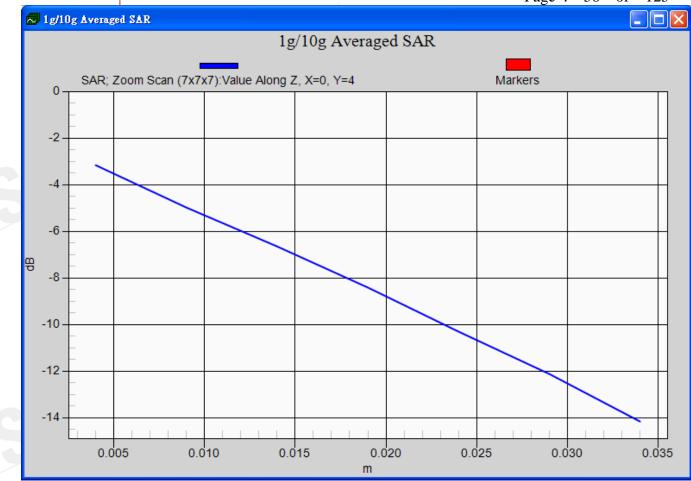
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Configuration 1_CH9538

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

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

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.64 V/m; Power Drift = -0.164 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.843 mW/g; SAR(10 g) = 0.498 mW/g

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

Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

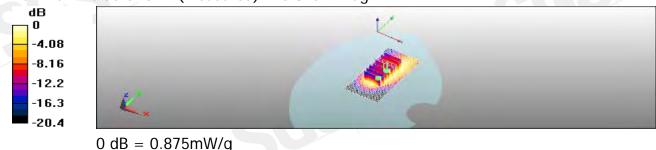
dy=8mm, dz=5mm

Reference Value = 7.64 V/m; Power Drift = -0.164 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.776 mW/g; SAR(10 g) = 0.452 mW/g

Maximum value of SAR (measured) = 0.875 mW/g



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Configuration 2_CH9262

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used: f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

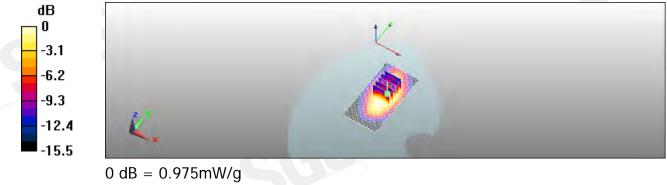
dy=15mm Maximum value of SAR (interpolated) = 0.982 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 10.7 V/m; Power Drift = -0.182 dB Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.914 mW/g; SAR(10 g) = 0.548 mW/g

Maximum value of SAR (measured) = 0.975 mW/g



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Date: 2010/10/12

Configuration 2_CH9400

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

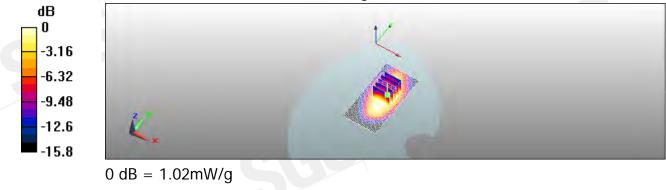
dy=15mm Maximum value of SAR (interpolated) = 1.01 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 11.4 V/m; Power Drift = -0.067 dB Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.937 mW/g; SAR(10 g) = 0.562 mW/g

Maximum value of SAR (measured) = 1.02 mW/g



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Date: 2010/10/12

Configuration 2_CH9538

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

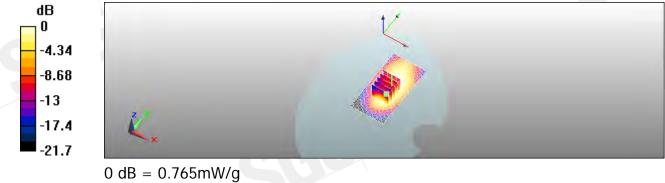
dy=15mm Maximum value of SAR (interpolated) = 0.826 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 10.5 V/m; Power Drift = -0.136 dB Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.687 mW/g; SAR(10 g) = 0.402 mW/g

Maximum value of SAR (measured) = 0.765 mW/g



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Configuration 3_CH9262

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used: f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

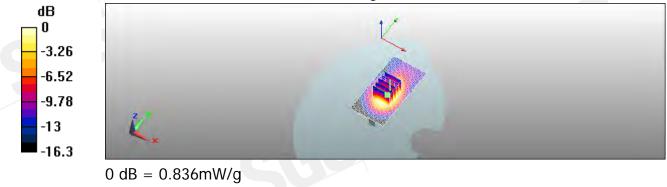
dy=15mm Maximum value of SAR (interpolated) = 0.912 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.53 V/m; Power Drift = 0.057 dB Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.776 mW/g; SAR(10 g) = 0.447 mW/g

Maximum value of SAR (measured) = 0.836 mW/g



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Configuration 3_CH9400

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

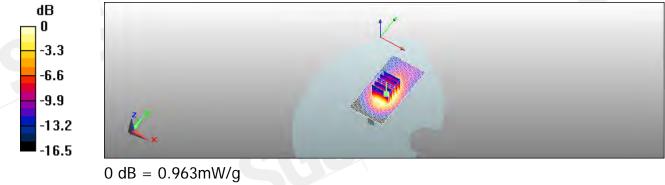
dy=15mm Maximum value of SAR (interpolated) = 1.02 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.88 V/m; Power Drift = -0.061 dB Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.502 mW/g

Maximum value of SAR (measured) = 0.963 mW/g



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Date: 2010/10/12

Configuration 3_CH9538

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

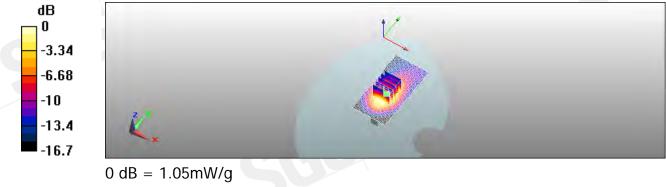
dy=15mm Maximum value of SAR (interpolated) = 1.06 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 10 V/m; Power Drift = 0.158 dB Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.960 mW/g; SAR(10 g) = 0.540 mW/g

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



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Date: 2010/10/12

Configuration 4_CH9262

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used: f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

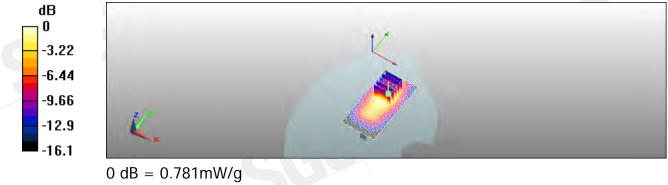
dy=15mm Maximum value of SAR (interpolated) = 0.802 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 5.85 V/m; Power Drift = 0.110 dB Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.712 mW/g; SAR(10 g) = 0.406 mW/g

Maximum value of SAR (measured) = 0.781 mW/g



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Configuration 4_CH9400

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

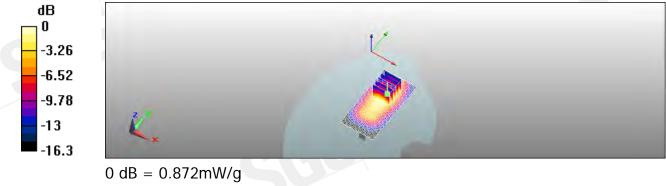
dy=15mm Maximum value of SAR (interpolated) = 0.902 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.24 V/m; Power Drift = -0.125 dB Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.790 mW/g; SAR(10 g) = 0.447 mW/g

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



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Date: 2010/10/12

Configuration 4_CH9538

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

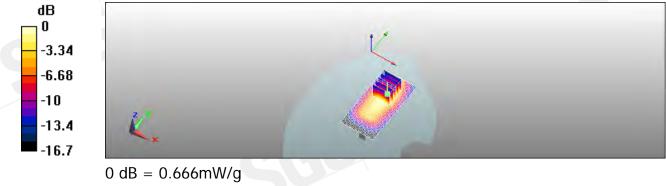
dy=15mm Maximum value of SAR (interpolated) = 0.720 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 5.42 V/m; Power Drift = -0.122 dB Peak SAR (extrapolated) = 1 W/kg

SAR(1 g) = 0.601 mW/g; SAR(10 g) = 0.338 mW/g

Maximum value of SAR (measured) = 0.666 mW/g



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Date: 2010/10/12

Configuration 5_CH9262

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used: f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

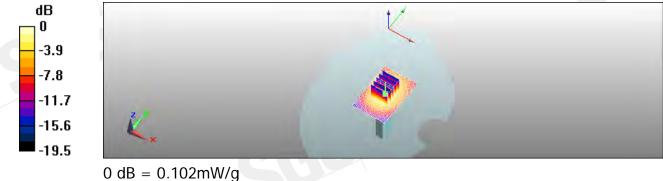
dy=15mm Maximum value of SAR (interpolated) = 0.104 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 5.88 V/m; Power Drift = -0.015 dB Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.086 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.102 mW/g



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Configuration 5_CH9400

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

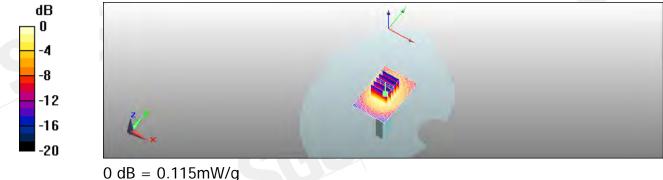
dy=15mm Maximum value of SAR (interpolated) = 0.118 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.45 V/m; Power Drift = -0.126 dB Peak SAR (extrapolated) = 0.194 W/kg

SAR(1 g) = 0.098 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.115 mW/g



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Configuration 5_CH9538

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.56 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

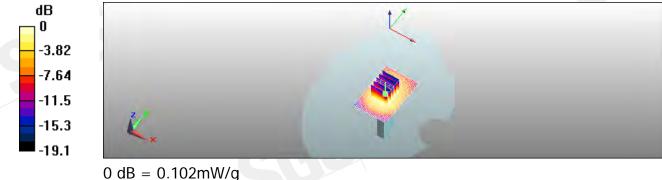
dy=15mm Maximum value of SAR (interpolated) = 0.106 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 6.57 V/m; Power Drift = 0.023 dB Peak SAR (extrapolated) = 0.172 W/kg

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.102 mW/g



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Configuration 1_CH9262_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

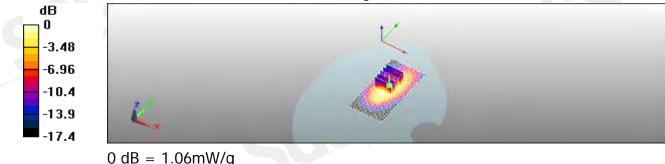
Maximum value of SAR (interpolated) = 1.18 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 8.68 V/m; Power Drift = 0.115 dB Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 0.945 mW/g; SAR(10 g) = 0.552 mW/g

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



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Configuration 1_CH9400_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

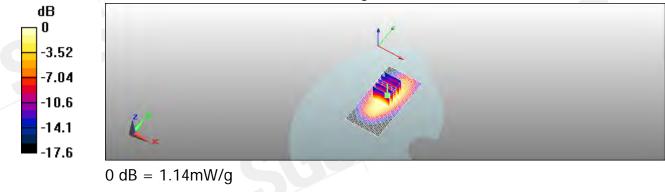
dy=15mm Maximum value of SAR (interpolated) = 1.21 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 9.38 V/m; Power Drift = -0.168 dB Peak SAR (extrapolated) = 2.03 W/kg

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.495 mW/g

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



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Configuration 1_CH9538_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.55 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

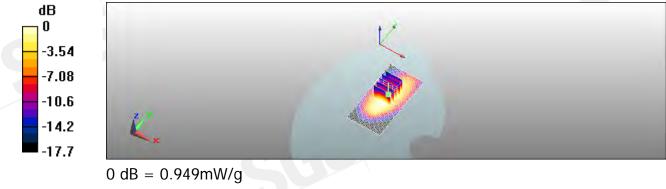
dy=15mm Maximum value of SAR (interpolated) = 0.967 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 8.52 V/m; Power Drift = -0.036 dB Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.841 mW/g; SAR(10 g) = 0.502 mW/g

Maximum value of SAR (measured) = 0.949 mW/g



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Configuration 2_CH9262_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

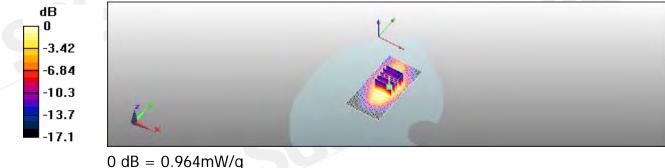
Maximum value of SAR (interpolated) = 0.946 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 9.77 V/m; Power Drift = -0.180 dB Peak SAR (extrapolated) = 1.46 W/kg

SAR(1 g) = 0.870 mW/g; SAR(10 g) = 0.494 mW/g

Maximum value of SAR (measured) = 0.964 mW/g



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SGS Taiwan Ltd. 台灣檢驗科技股份有限公司



Configuration 2_CH9400_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

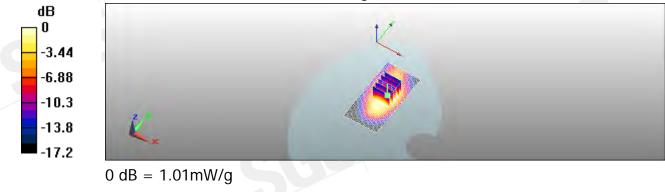
dy=15mm Maximum value of SAR (interpolated) = 0.948 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 10.2 V/m; Power Drift = -0.194 dB Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.522 mW/g

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



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Configuration 2_CH9538_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.55 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) **DASY5** Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

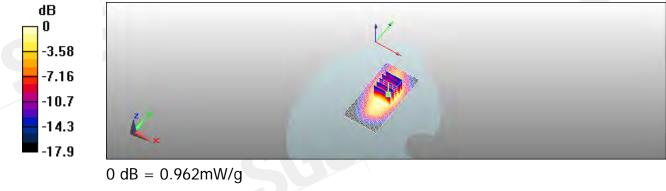
dy=15mmMaximum value of SAR (interpolated) = 0.967 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mmReference Value = 9.86 V/m; Power Drift = -0.104 dBPeak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.492 mW/g

Maximum value of SAR (measured) = 0.962 mW/g



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Configuration 3_CH9262_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

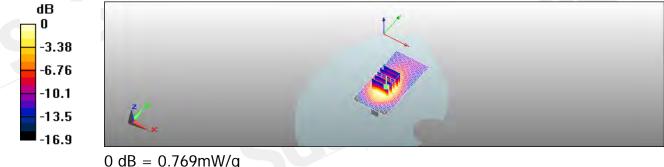
Maximum value of SAR (interpolated) = 0.799 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 9.62 V/m; Power Drift = 0.125 dB Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.707 mW/g; SAR(10 g) = 0.399 mW/g

Maximum value of SAR (measured) = 0.769 mW/g



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Configuration 3_CH9400_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

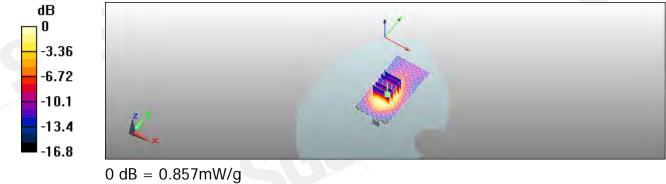
dy=15mm Maximum value of SAR (interpolated) = 0.909 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 10.2 V/m; Power Drift = 0.034 dB Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.789 mW/g; SAR(10 g) = 0.444 mW/g

Maximum value of SAR (measured) = 0.857 mW/g



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Configuration 3_CH9538_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.55 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

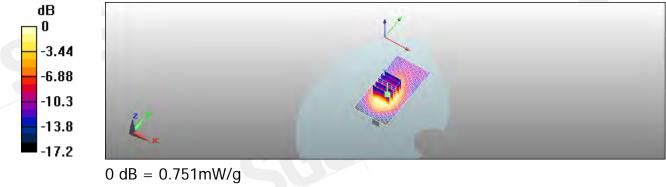
dy=15mm Maximum value of SAR (interpolated) = 0.823 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 9.94 V/m; Power Drift = -0.195 dB Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.690 mW/g; SAR(10 g) = 0.388 mW/g

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



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Configuration 4_CH9262_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz;

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.5 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m^3

Phantom section: Flat Section

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

dy=15mm Maximum value of SAR (interpolated) = 0.621 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 7.85 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.965 W/kg

SAR(1 g) = 0.564 mW/g; SAR(10 g) = 0.315 mW/g

Maximum value of SAR (measured) = 0.619 mW/g

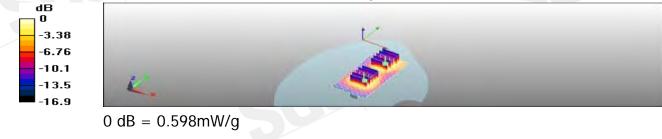
Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 7.85 V/m; Power Drift = -0.042 dB Peak SAR (extrapolated) = 0.928 W/kg

SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.295 mW/g

Maximum value of SAR (measured) = 0.598 mW/g



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Configuration 4_CH9400_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz;

Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm,

dy=15mm Maximum value of SAR (interpolated) = 0.693 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.57 V/m; Power Drift = 0.071 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.631 mW/g; SAR(10 g) = 0.350 mW/g

Maximum value of SAR (measured) = 0.690 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

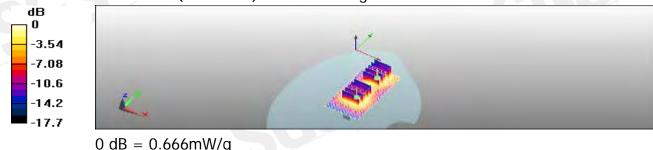
dy=8mm, dz=5mm

Reference Value = 7.57 V/m; Power Drift = 0.071 dB

Peak SAR (extrapolated) = 1.04 W/kg

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SAR(1 g) = 0.596 \text{ mW/g}; SAR(10 g) = 0.323 \text{ mW/g}
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Maximum value of SAR (measured) = 0.666 mW/g



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Configuration 4_CH9538_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.55 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section

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

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.736 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.84 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.605 mW/g; SAR(10 g) = 0.334 mW/g

Maximum value of SAR (measured) = 0.656 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=8mm,

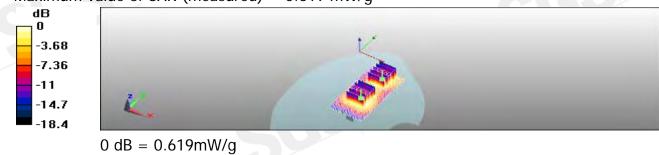
dy=8mm, dz=5mm

Reference Value = 6.84 V/m; Power Drift = -0.123 dB

Peak SAR (extrapolated) = 0.980 W/kg

SAR(1 g) = 0.561 mW/g; SAR(10 g) = 0.302 mW/g

Maximum value of SAR (measured) = 0.619 mW/g



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Configuration 5_CH9262_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1852.4 MHz; Medium parameters used (interpolated): $f = 1852.4 \text{ MHz}; \sigma = 1.5 \text{ mho/m}; \epsilon_r = 52.9; \rho =$ 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

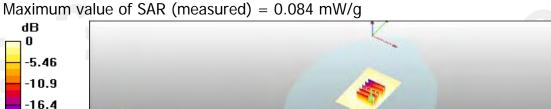
Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

dy=15mmMaximum value of SAR (interpolated) = 0.081 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mmReference Value = 7.31 V/m; Power Drift = -0.058 dB Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 q) = 0.078 mW/q; SAR(10 q) = 0.047 mW/q



 $0 \, dB = 0.084 \, mW/g$

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-21.8 -27.3

> No.134, Wu Kung Road, Wuku Industrial Zone, Taipei County, Taiwan /台北縣五股工業區五工路 134 號 f (886-2) 2298-0488



Configuration 5_CH9400_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1880 MHz; Medium parameters used: f = 1880 MHz; σ = 1.54 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

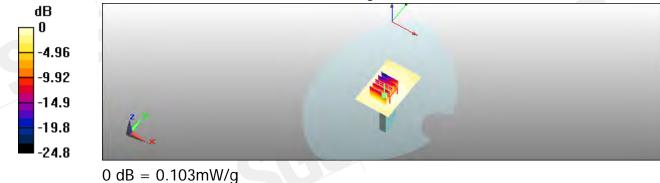
dy=15mm Maximum value of SAR (interpolated) = 0.100 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 7.95 V/m; Power Drift = 0.139 dB Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.103 mW/g



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Configuration 5_CH9538_repeated with HSUPA mode

DUT: GI0653

Communication System: WCDMA; Frequency: 1907.6 MHz; Medium parameters used: f = 1908 MHz; σ = 1.55 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/Body/Area Scan (41x61x1): Measurement grid: dx=15mm,

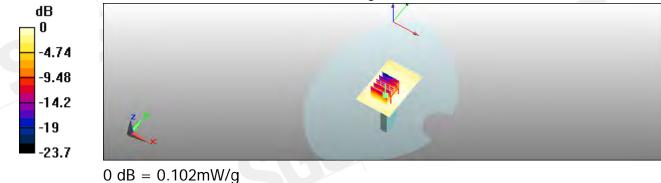
dy=15mm Maximum value of SAR (interpolated) = 0.100 mW/g

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm Reference Value = 8.12 V/m; Power Drift = -0.043 dB Peak SAR (extrapolated) = 0.163 W/kg

SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.102 mW/g



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5. SAR System Performance Verification

Date: 2010/10/11

DUT: Dipole 835 MHz

Communication System: CW; Frequency: 835 MHz; Medium parameters used: f = 835 MHz; σ = 1 mho/m; ϵ_r = 53.3; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(5.84, 5.84, 5.84); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

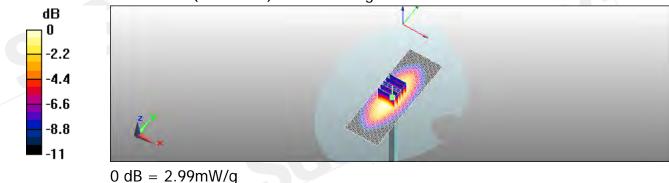
Configuration/d=15mm, Pin=250mW, dist=4mm: Measurement grid: dx=15mm, dy=15mmMaximum value of SAR (interpolated) = 2.98 mW/g

Configuration/d=15mm, Pin=250mW, dist=4mm: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 56.1 V/m; Power Drift = -0.00087 dB Peak SAR (extrapolated) = 3.87 W/kg

SAR(1 g) = 2.52 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.99 mW/g



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Date: 2010/10/12

DUT: Dipole 1900 MHz

Communication System: CW; Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ = 1.55 mho/m; ϵ_r = 52.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007) DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:

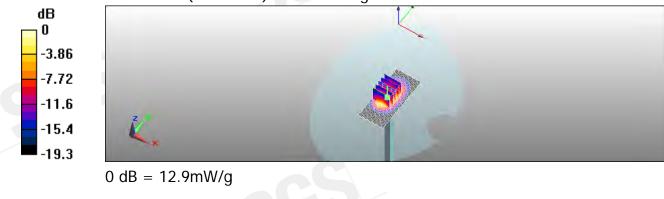
dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 13 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:

dx=8mm, dy=8mm, dz=5mm Reference Value = 94.4 V/m; Power Drift = 0.039 dB Peak SAR (extrapolated) = 20.5 W/kg

SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.06 mW/g

Maximum value of SAR (measured) = 12.9 mW/g



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Date: 2010/11/13

DUT: Dipole 1900 MHz

Communication System: CW; Frequency: 1900 MHz; Medium parameters used: f = 1900 MHz; σ = 1.55 mho/m; ϵ_r = 52.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 SN3172; ConvF(4.45, 4.45, 4.45); Calibrated: 2010/5/21
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn856; Calibrated: 2010/5/20
- Phantom: SAM2; Type: SAM;
- Measurement SW: DASY5, V5.2 Build 157; SEMCAD X Version 14.0 Build 57

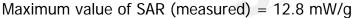
Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:

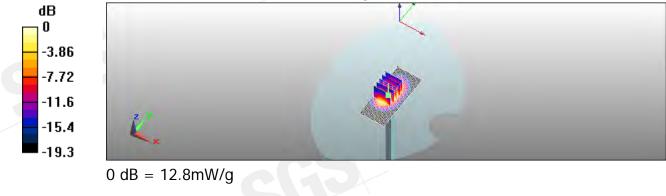
dx=15mm, dy=15mmMaximum value of SAR (interpolated) = 13 mW/g

Configuration/d=10mm, Pin=250mW, dist=4mm: Measurement grid:

dx=8mm, dy=8mm, dz=5mmReference Value = 94.1 V/m; Power Drift = 0.022 dB Peak SAR (extrapolated) = 20.4 W/kg

SAR(1 q) = 10.4 mW/q; SAR(10 q) = 5.03 mW/q





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6. DAE & Probe Calibration certificate

eughausstrasse 43, 8004 Zurio	Real Real	BRAT	S s	ervizio svizzero di taratura wiss Calibration Service	
the Swiss Accreditation Service	e is one of the signatories		Accredita	IDON NO	5.: 505 108
Aultilateral Agreement for the r	and a second metallicity	certificates.	Cartificat	a No: D	0AE4-856_May10
In the second se					mer ooo_may to
CALIBRATION C	ERTIFICATE		_	_	
Dbject	DAE4 - SD 000 D	04 BJ - SN: 856			
Calibration procedure(s)	QA CAL-06.v21 Calibration process	dure for the data a	cauisition e	lectro	mics (DAE)
	and the second sec		a succession of the		and a const
Calibration date:	May 20, 2010				
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This calibration certificate docum The measurements and the unce All calibrations have been conduc Galibration Equipment used (M&)	rtainties with confidence produced in the closed laboratory	obability are given on the y facility: environment tem	tollowing page	s and a	re part of the certificate. ad humidity < 70%.
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Report No. : EN/2010/90007 Page : 89 of 125

Calibration Laborato Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zuri		SHISS C. C. C. C. S. C. V. S. S. S. S. S. S. S. S. S. S	Service suisse d'étalonnage Servizio svizzero di taratura
Accredited by the Swiss Accredit The Swiss Accreditation Servio Multilateral Agreement for the	ce is one of the signatori	es to the EA	No.: SCS 108
Client SGS-TW (Aud	en)	Certificate No	o: ES3-3172_May10
CALIBRATION	CERTIFICAT	E	
Object	ES3DV3 - SN:3	172	
Calibration procedure(s)		QA CAL-14.v3, QA CAL-23.v3 and edure for dosimetric E-field probes	
Calibration date:	May 21, 2010		
The measurements and the unc	ertainties with confidence	tional standards, which realize the physical uni probability are given on the following pages an ory facility: environment temperature (22 ± 3)°C	d are part of the certificate.
The measurements and the unc All calibrations have been cond Calibration Equipment used (Ma	ertainties with confidence ucted in the closed laborat &TE critical for calibration)	probability are given on the following pages an ory facility: environment temperature $(22 \pm 3)^{\circ}$ C	d are part of the certificate. C and humidity < 70%.
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The measurements and the unc All calibrations have been conde Calibration Equipment used (MA Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator	ertainties with confidence ucted in the closed laborate TE critical for calibration) ID # GB41293874 MY41495087 SN: S5054 (3c) SN: S5056 (20b)	probability are given on the following pages an ory facility: environment temperature (22 ± 3)*C Cal Date (Certificate No.) 1-Apr-10 (No. 217-01136) 1-Apr-10 (No. 217-01136) 30-Mar-10 (No. 217-01159) 30-Mar-10 (No. 217-01159)	d are part of the certificate. C and humidity < 70%. Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11 Mar-11
The measurements and the unc All calibrations have been conde Calibration Equipment used (MA Primary Standards Power meter E4419B Power sensor E4412A Power sensor E4412A Reference 3 dB Attenuator Reference 20 dB Attenuator	ertainties with confidence ucted in the closed laborat 3TE critical for calibration) ID # GB41293874 MY41495277 MY41498087 SN: S5054 (3c)	probability are given on the following pages an ory facility: environment temperature (22 ± 3)°C Cal Date (Certificate No.) 1-Apr-10 (No. 217-01136) 1-Apr-10 (No. 217-01136) 30-Mar-10 (No. 217-01159) 30-Mar-10 (No. 217-01161) 30-Mar-10 (No. 217-01161)	d are part of the certificate. C and humidity < 70%. Scheduled Calibration Apr-11 Apr-11 Apr-11 Mar-11
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Calibration Laboratory of Schmid & Partner Engineering AG eighausstrasse 43, 8004 Zurich, Switzerland



SNISS S C s

Schweizerischer Kalibrierdienst Service suisse d'étale Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 108

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

Glossary: NORMx.y

ConvF DCP CE A, B, C Polarizatio Polarizatio

	tissue simulating liquid
y.Z	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
on o	o rotation around probe axis
on a	3 rotation around an axis that is in the plane normal to probe axis (at measurement center).
	i.e., 3 = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific (f) b) IEEE Sta 1525-2003, IEEE Recommended Practice for Determining here Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
 b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization 9 = 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 effect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x, y, z = NORMx, y, z * frequency, response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is includedin 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-
- 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 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
- 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.

Certificate No: ES3-3172_May10

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ES3DV3 SN:3172

May 21, 2010

Probe ES3DV3

SN:3172

Manufactured: Last calibrated: **Recalibrated:**

January 23, 2008 May 27, 2009 May 21, 2010

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

Certificate No: ES3-3172 Mav10

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ES3DV3 SN:3172

May 21, 2010

DASY/EASY - Parameters of Probe: ES3DV3 SN:3172

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (μV/(V/m) ²) ^A	1.37	1.19	0.97	± 10.1%
DCP (mV) ^B	93.9	92.5	93.2	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	С	VR mV	Unc ^E (k=2)
10000	CW	0.00	Х	0.00	0.00	1.00	300.0	± 1.5%
			Y	0.00	0.00	1.00	300.0	
_			Z	0.00	0.00	1.00	300.0	

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

The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6).

Numerical linearization parameter: uncertainty not required.

E Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value

Certificate No: ES3-3172 May10

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ES3DV3 SN:3172

May 21, 2010

DASY/EASY - Parameters of Probe: ES3DV3 SN:3172

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz] ^C	Permittivity	Conductivity	ConvF X C	onvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	5.85	5.85	5.85	0.76	1.14 ± 11.0%
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	5.75	5.75	5.75	0.87	1.08 ± 11.0%
1750	± 50 / ± 100	40.1 ± 5%	1.37 ± 5%	5.04	5.04	5.04	0.31	1.82 ± 11.0%
1900	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.89	4.89	4.89	0.50	1.46 ± 11.0%
2000	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.73	4.73	4.73	0.49	1.44 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.32	4.32	4.32	0.42	1.70 ± 11.0%

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

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ES3DV3 SN:3172

May 21, 2010

DASY/EASY - Parameters of Probe: ES3DV3 SN:3172

Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz] ^C	Permittivity	Conductivity	ConvF X Co	nvFY Co	onvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.84	5.84	5.84	0.81	1.19 ± 11.0%
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	5.75	5.75	5.75	0.73	1.24 ± 11.0%
1750	± 50 / ± 100	53.4 ± 5%	1.49 ± 5%	4.63	4.63	4.63	0.39	1.75 ± 11.0%
1900	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.45	4.45	4.45	0.32	2.36 ± 11.0%
2000	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.47	4.47	4.47	0.32	2.44 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.11	4.11	4.11	0.82	1.17 ± 11.0%
2600	± 50 / ± 100	52.5 ± 5%	2.16 ± 5%	3.99	3.99	3.99	0.95	1.09 ± 11.0%
3500	± 50 / ± 100	51.3 ± 5%	3.31 ± 5%	3.28	3.28	3.28	1.00	1.28 ± 13.1%

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

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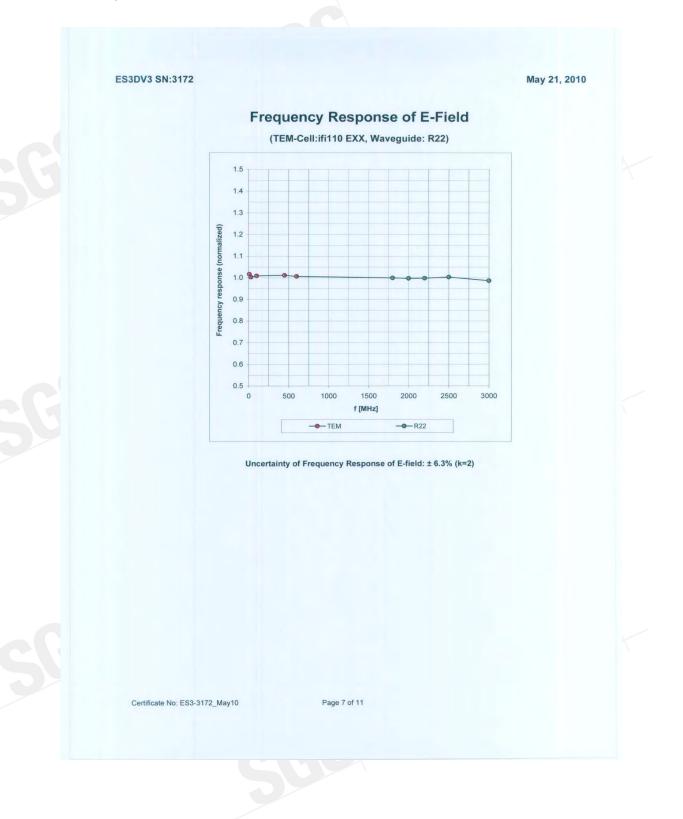
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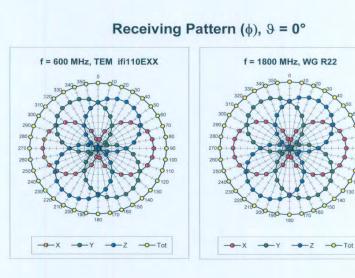
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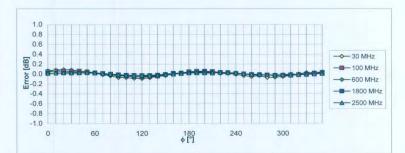


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ES3DV3 SN:3172

May 21, 2010





Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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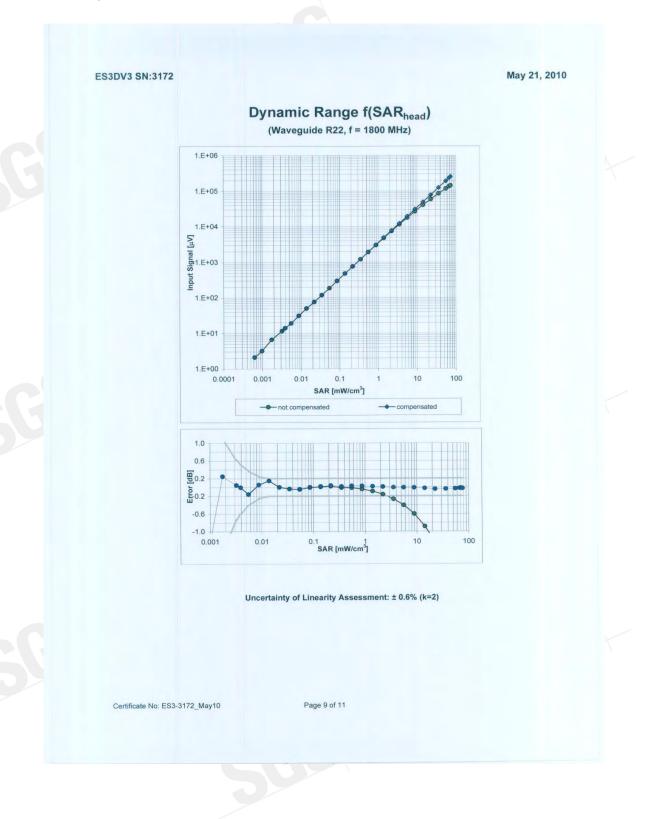
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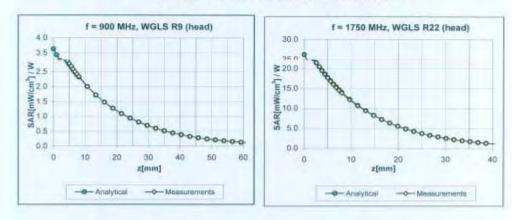
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ES3DV3 SN:3172

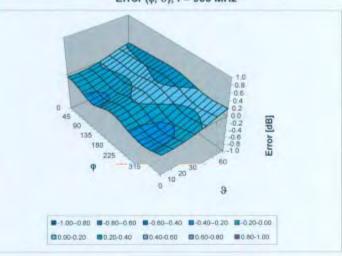
SGS

May 21, 2010



Conversion Factor Assessment

- 1101 Error (\$, 9), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Certificate No: E53-3172_May10

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ES3DV3 SN:3172

May 21, 2010

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4.0 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

Certificate No: ES3-3172 May10

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7. Uncertainty Analysis

DASY5 Uncertainty Budget								
According to IEEE 1528 [1]								
	Uncertainty	Prob.	Div.	(c_i)	(c_i)	Std. Unc.	Std. Unc.	(v_i)
Error Description	value	Dist.		1g	10g	(1g)	(10g)	Veff
Measurement System								
Probe Calibration	$\pm 5.9\%$	N	1	1	1	$\pm 5.9\%$	$\pm 5.9\%$	∞
Axial Isotropy	$\pm 4.7 \%$	R	$\sqrt{3}$	0.7	0.7	$\pm 1.9 \%$	$\pm 1.9\%$	∞
Hemispherical Isotropy	$\pm 9.6 \%$	R	$\sqrt{3}$	0.7	0.7	± 3.9 %	$\pm 3.9\%$	∞
Boundary Effects	$\pm 1.0\%$	R	$\sqrt{3}$	1	1	$\pm 0.6 \%$	±0.6%	∞
Linearity	$\pm 4.7\%$	R	$\sqrt{3}$	1	1	± 2.7 %	±2.7%	∞
System Detection Limits	±1.0%	R	$\sqrt{3}$	1	1	±0.6 %	±0.6%	∞
Readout Electronics	$\pm 0.3\%$	N	1	1	1	$\pm 0.3 \%$	±0.3%	∞
Response Time	$\pm 0.8\%$	R	$\sqrt{3}$	1	1	$\pm 0.5 \%$	±0.5%	∞
Integration Time	$\pm 2.6\%$	R	$\sqrt{3}$	1	1	$\pm 1.5 \%$	$\pm 1.5\%$	∞
RF Ambient Noise	$\pm 3.0\%$	R	$\sqrt{3}$	1	1	$\pm 1.7 \%$	±1.7%	∞
RF Ambient Reflections	$\pm 3.0\%$	R	$\sqrt{3}$	1	1	± 1.7 %	±1.7%	∞
Probe Positioner	$\pm 0.4\%$	R	$\sqrt{3}$	1	1	$\pm 0.2 \%$	$\pm 0.2\%$	∞
Probe Positioning	$\pm 2.9\%$	R	$\sqrt{3}$	1	1	$\pm 1.7 \%$	±1.7%	∞
Max. SAR Eval.	±1.0%	R	$\sqrt{3}$	1	1	$\pm 0.6\%$	±0.6%	∞
Test Sample Related								
Device Positioning	$\pm 2.9\%$	N	1	1	1	$\pm 2.9 \%$	$\pm 2.9\%$	145
Device Holder	$\pm 3.6\%$	N	1	1	1	$\pm 3.6 \%$	$\pm 3.6\%$	5
Power Drift	$\pm 5.0\%$	R	$\sqrt{3}$	1	1	$\pm 2.9 \%$	±2.9%	∞
Phantom and Setup								
Phantom Uncertainty	$\pm 4.0\%$	R	$\sqrt{3}$	1	1	$\pm 2.3 \%$	±2.3%	∞
Liquid Conductivity (target)	$\pm 5.0\%$	R	$\sqrt{3}$	0.64	0.43	$\pm 1.8 \%$	$\pm 1.2\%$	∞
Liquid Conductivity (meas.)	$\pm 2.5 \%$	N	1	0.64	0.43	$\pm 1.6 \%$	$\pm 1.1\%$	∞
Liquid Permittivity (target)	$\pm 5.0\%$	R	$\sqrt{3}$	0.6	0.49	$\pm 1.7 \%$	$\pm 1.4\%$	∞
Liquid Permittivity (meas.)	$\pm 2.5 \%$	Ν	1	0.6	0.49	$\pm 1.5 \%$	$\pm 1.2\%$	∞
Combined Std. Uncertainty						$\pm 10.9\%$	± 10.7 %	387
Expanded STD Uncertain	ty					$\pm 21.9\%$	$\pm 21.4\%$	

Table 19.6: Worst-Case uncertainty budget for DASY5 assessed according to IEEE 1528 [1]. The budget is valid for the frequency range 300 MHz - 3 GHz and represents a worst-case analysis. For specific tests and configurations, the uncertainty could be considerable smaller.

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8. Phantom Description

Schmid & Partner Engineering AG

Zeughausstresse 43, 8004 Zurich, Switzerlan Phone +41 1 245 9700, Fox +41 1 245 9779 info@speag.com, http://www.speag.com

Certificate of Conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 C
Series No	TP-1150 and higher
Manufacturer	SPEAG Zeughausstrasse 43 CH-8004 Zürich Switzerland

Tests

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

Test	Requirement	Details	Units tested
Dimensions	Compliant with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness of shell	Compliant with the requirements according to the standards	2mm +/- 0.2mm in flat and specific areas of head section	First article, Samples, TP-1314 ff.
Material thickness at ERP	Compliant with the requirements according to the standards	8mm +/- 0.2mm at ERP	First article, All items
Material parameters	Dielectric parameters for required frequencies	300 MHz – 6 GHz: Relative permittivity < 5. Loss tangent < 0.05	Material samples
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards if handled and cleaned according to the instructions. Observe technical Note for material compatibility.	DEGMBE based simulating liquids	Pre-series, First article, Material samples
Sagging	Compliant with the requirements according to the standards. Sagging of the flat section when filled with tissue simulating liquid.	< 1% typical < 0.8% if filed with 155mm of HSL900 and without DUT below	Prototypes, Sample testing

Standards [1] CENELEC EN 50361 [2] IEEE Std 1528-2003

[1] [2] [3] [4] (*) IEC 62:09 Part I EC 62:09 Part I FCC OET Bulletin 65, Supplement C, Edition 01-01 The IT1S CAD file is derived from [2] and is also within the tolerance requirements of the shapes of the other documents.

Conformity Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standards [1] to [4].

Date	07.07.2005
Classifium / Channe	

D ier Engineering A0 as 43, 8004 Zurief, Switzeri 5 9700 Fize 46 17 245 2779 d & Person apeag.com

Doo No 881 - 00 000 P40 C - F

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9. System Validation from Original equipment supplier

Client SGS-TW (A		s to the EA certificates	n No.: SCS 108
		Certificate N	o: D835V2-4d063_May1
CALIBRATION	I CERTIFICATE		
Object	D835V2 - SN: 4d	063	
Calibration procedure(s)	QA CAL-05.v7 Calibration proce	dure for dipole validation kits	
Calibration date:	May 21, 2010		
The measurements and the All calibrations have been co	uncertainties with confidence p	ional standards, which realize the physical ur robability are given on the following pages arry facility: environment temperature $(22 \pm 3)^{\circ}$	nd are part of the certificate.
The measurements and the All calibrations have been co	uncertainties with confidence p inducted in the closed laborato	probability are given on the following pages an	nd are part of the certificate.
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A	uncertainties with confidence p inducted in the closed laborato (M&TE critical for calibration) ID # GB37480704 US37292783	robability are given on the following pages as ry facility: environment temperature (22 ± 3)° Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator	ID # GB37480704 US37292783 SN: 5086 (20g)	robability are given on the following pages an ry facility: environment temperature (22 ± 3)° Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A	ID # GB37480704 US37292783 SN: 5086 (20g)	robability are given on the following pages as ry facility: environment temperature (22 ± 3)° Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Apr-11
The measurements and the All calibrations have been co Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combinati	ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327	robability are given on the following pages as ry facility: environment temperature (22 ± 3)° Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combinati Reference Probe ES3DV3 DAE4 Secondary Standards	ID # CB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205 SN: 601 ID #	robability are given on the following pages at ry facility: environment temperature (22 ± 3)* Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 30-Apr-10 (No. ES3-3205_Apr10) 02-Mar-10 (No. DAE4-601_Mar10) Check Date (in house)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Apr-11 Mar-11 Scheduled Check
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combinati Reference Probe ES3DV3 DAE4 Secondary Standards Power sensor HP 8481A	uncertainties with confidence p inducted in the closed laborato (M&TE critical for calibration) ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205 SN: 301 ID # MY41092317	cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 30-Arar-10 (No. 217-01162) 30-Arar-10 (No. 217-01162) 30-Arar-10 (No. 217-01162) 30-Arar-10 (No. DAE4-601_Mar10) Check Date (in house) 18-Oct-02 (in house check Oct-09)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Mar-11 Mar-11 Scheduled Check In house check: Oct-11
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combinati Reference Probe ES3DV3 DAE4 Secondary Standards	uncertainties with confidence p inducted in the closed laborato (M&TE critical for calibration) ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205 SN: 601 ID # MY41092317 100005	robability are given on the following pages at ry facility: environment temperature (22 ± 3)* Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 30-Apr-10 (No. ES3-3205_Apr10) 02-Mar-10 (No. DAE4-601_Mar10) Check Date (in house)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Apr-11 Mar-11 Scheduled Check
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combinatis Reference Probe ES3DV3 DAE4 Secondary Standards Power sensor HP 8481A RF generator R&S SMT-06	uncertainties with confidence p inducted in the closed laborato (M&TE critical for calibration) ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205 SN: 601 ID # MY41092317 100005	robability are given on the following pages as ry facility: environment temperature (22 ± 3)* Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01152) 30-Apr-10 (No. 217-01162) 30-Apr-10 (No. 217-01162) 30-Ap	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Mar-11 Scheduled Check In house check: Oct-11 In house check: Oct-11
The measurements and the All calibrations have been or Calibration Equipment used Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combinatis Reference Probe ES3DV3 DAE4 Secondary Standards Power sensor HP 8481A RF generator R&S SMT-06	uncertainties with confidence p inducted in the closed laborato (M&TE critical for calibration)	Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 00-Oct-09 (No. 217-01086) 00-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 30-Arar-10 (No. 217-01162) 30-Arar-10 (No. 217-01162) 30-Arar-10 (No. 217-01162) 30-Arar-10 (No. DAE4-601_Mar10) Check Date (in house) 18-Oct-02 (in house check Oct-09) 4-Aug-99 (in house check Oct-09) 18-Oct-01 (in house check Oct-09)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Mar-11 Scheduled Check In house check: Oct-11 In house check: Oct-10

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



- NISS BRA
- Schweizerischer Kalibrierdienst s Service suisse d'étalonnage C Servizio svizzero di taratura S Swiss Calibration Service

Accreditation No.: SCS 108

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

Glossary: TSL

N/A

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

Calibration is Performed According to the Following Standards:

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

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

Certificate No: D835V2-4d063 May10

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No.134, Wu Kung Road, Wuku Industrial Zone, Taipei County, Taiwan /台北縣五股工業區五工路 134 號 f (886-2) 2298-0488



Measurement Conditions

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

DASY5	V5.2
Advanced Extrapolation	
Modular Flat Phantom V4.9	
15 mm	with Spacer
dx, dy, dz = 5 mm	
835 MHz ± 1 MHz	
	Advanced Extrapolation Modular Flat Phantom V4.9 15 mm dx, dy, dz = 5 mm

Head TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.7 ± 6 %	0.91 mho/m ± 6 %
Head TSL temperature during test	(22.5 ± 0.2) °C	_	

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.42 mW / g
SAR normalized	normalized to 1W	9.68 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	9.62 mW /g ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
	condition 250 mW input power	1.58 mW / g
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured SAR normalized		1.58 mW / g 6:32 mW / g

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.2 ± 6 %	0.98 mbo/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.53 mW / g
SAR normalized	normalized to 1W	10.1 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	10.0 mW / g ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.66 mW / g
SAR normalized	normalized to 1W	6.64 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	6.59 mW / g ± 16.5 % (k=2)



Certificate No: D835V2-4d063 May10

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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.6 Ω - 0.6 jΩ	
Return Loss	- 31.7 dB	

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47,9 Ω - 2.8 jΩ
Return Loss	- 28.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.392 ns

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

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 27, 2006

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Member of SGS Group



DASY5 Validation Report for Head TSL

Date/Time: 21.05.2010 11:22:13

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063

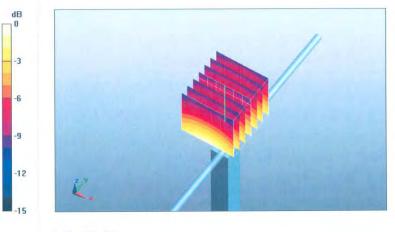
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1 Medium: HSL900 Medium parameters used: f = 835 MHz; $\sigma = 0.91$ mho/m; $\varepsilon_r = 41.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 SN3205; ConvF(6.03, 6.03, 6.03); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001 .
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 61

Pin=250 mW /d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 57.5 V/m; Power Drift = 0.00219 dB Peak SAR (extrapolated) = 3.61 W/kg SAR(1 g) = 2.42 mW/g; SAR(10 g) = 1.58 mW/g Maximum value of SAR (measured) = 2.83 mW/g



 $0 \, dB = 2.83 \, mW/g$

Certificate No: D835V2-4d063_May10

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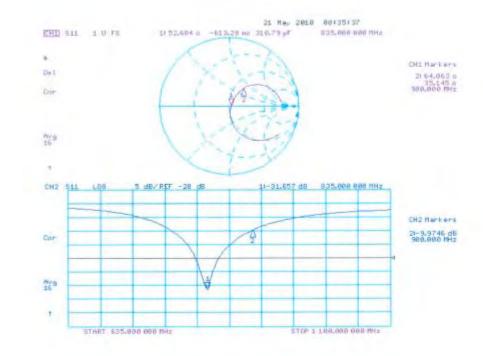
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Impedance Measurement Plot for Head TSL



Certificate No: D835V2-4d063_May10

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DASY5 Validation Report for Body

Date/Time: 20.05.2010 10:45:06

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d063

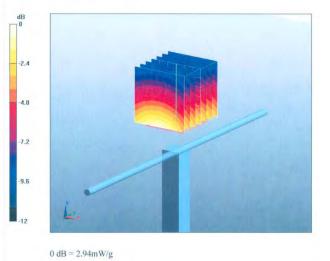
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1 Medium: MSL900 Medium parameters used: f = 835 MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 SN3205; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 61

Pin250 mW/d=15mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.5 V/m; Power Drift = 0.013 dB Peak SAR (extrapolated) = 3.71 W/kg SAR(1 g) = 2.53 mW/g; SAR(10 g) = 1.66 mW/g Maximum value of SAR (measured) = 2.94 mW/g



Certificate No: D835V2-4d063_May10

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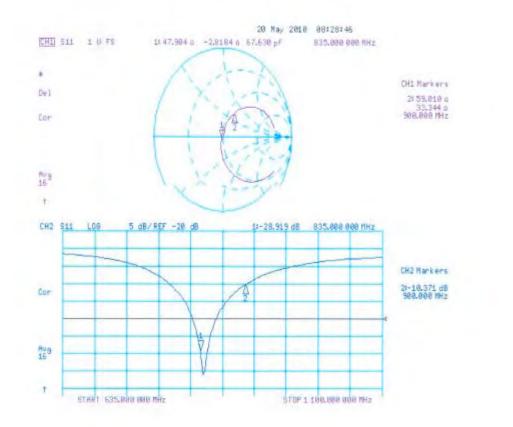
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Schmid & Partner Engineering AG leughausstrasse 43, 8004 Zuricl	y of h, Switzerland	Hac MRA	Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service
Accredited by the Swiss Accredita The Swiss Accreditation Service			n No.: SCS 108
Multilateral Agreement for the re			D10001/0 5-1007 4
Client SGS-TW (Aude			o: D1900V2-5d027_Apr10
CALIBRATION C	ERTIFICATE		
Object	D1900V2 - SN: 5	5d027	
Calibration procedure(s)	QA CAL-05.v7 Calibration proce	dure for dipole validation kits	
Calibration date:	April 28, 2010		
The measurements and the unce	ertainties with confidence p	ional standards, which realize the physical up robability are given on the following pages a ry facility: environment temperature (22 ± 3) ²	nd are part of the certificate.
The measurements and the unce All calibrations have been conduc Calibration Equipment used (M&T Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator	ertainties with confidence p	Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158)	nd are part of the certificate.
The measurements and the unce All calibrations have been conduc Calibration Equipment used (M&T Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3	rtainties with confidence p cted in the closed laborator TE critical for calibration) ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205	Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 03-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 26-Jun-09 (No. ES3-3205_Jun09)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Jun-10
The measurements and the unce All calibrations have been conduc Calibration Equipment used (M&T Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3	rtainties with confidence p cted in the closed laborato TE critical for calibration) ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327	Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162)	nd are part of the certificate. 'C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11
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The measurements and the unce All calibrations have been conduc Calibration Equipment used (M&T Primary Standards Power meter EPM-442A Power sensor HP 8481A	ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205 SN: 601 ID # MY41092317 100005 US37390585 S4206 SA206 SA2	Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 26-Jun-09 (No. 217-01162) 26-Jun-09 (No. 217-01162) 26-Jun-09 (No. E33-3205_Jun09) 02-Mar-10 (No. DAE4-601_Mar10) Check Date (in house) 18-Oct-02 (in house check Oct-09) 4-Aug-99 (in house check Oct-09) 18-Oct-01 (in house check Oct-09)	nd are part of the certificate. C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Jun-10 Mar-11 Scheduled Check In house check: Oct-11 In house check: Oct-10 Signature
The measurements and the unce All calibrations have been conduc Calibration Equipment used (M&T Primary Standards Power meter EPM-442A Power sensor HP 8481A Reference 20 dB Attenuator Type-N mismatch combination Reference Probe ES3DV3 DAE4 Secondary Standards Power sensor HP 8481A RF generator R&S SMT-06 Network Analyzer HP 8753E	rtainties with confidence p cted in the closed laborator TE critical for calibration) ID # GB37480704 US37292783 SN: 5086 (20g) SN: 5047.2 / 06327 SN: 3205 SN: 601 ID # MY41092317 100005 US37390585 S4206 Name	Cal Date (Certificate No.) 06-Oct-09 (No. 217-01086) 30-Mar-10 (No. 217-01158) 30-Mar-10 (No. 217-01162) 26-Jun-09 (No. ES3-3205_Jun09) 02-Mar-10 (No. DAE4-601_Mar10) Check Date (in house) 18-Oct-02 (in house check Oct-09) 4-Aug-99 (in house check Oct-09) 18-Oct-01 (in house check Oct-09) Function	nd are part of the certificate. 'C and humidity < 70%. Scheduled Calibration Oct-10 Oct-10 Mar-11 Mar-11 Jun-10 Mar-11 Scheduled Check In house check: Oct-11 In house check: Oct-11 In house check: Oct-10

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Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland

ac-MR



Schweizerischer Kalibrierdienst Service suisse d'étalonnage С Servizio svizzero di taratura

Swiss Calibration Service

Accreditation No.: SCS 108

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Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

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

Calibration is Performed According to the Following Standards:

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

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

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

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Measurement Conditions

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

DASY Version	DASY5	V5.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.5 ± 6 %	1.41 mho/m ± 6 %
Head TSL temperature during test	(21.5 ± 0.2) °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.91 mW / g
SAR normalized	normalized to 1W	39.6 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	39.6 mW /g ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.17 mW / g
SAR measured SAR normalized	250 mW input power normalized to 1W	5.17 mW / g 20.7 mW / g

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Body TSL parameters

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.8 ± 6 %	1.53 mho/m ± 6 %
Body TSL temperature during test	(21.5 ± 0.2) °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	10.1 mW / g
SAR normalized	normalized to 1W	40.4 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	40.5 mW / g ± 17.0 % (k=2)

SAR measured	250 mW input power	5.36 mW / g
SAR normalized	normalized to 1W	21.4 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	21.5 mW / g ± 16.5 % (k=2)



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prosecuted to the fullest extent of the law.



Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.5 Ω + 5.0 jΩ	
Return Loss	- 26.0 dB	

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.8 Ω + 6.7 jΩ	
Return Loss	- 22.3 dB	

General Antenna Parameters and Design

Electrical Delay (one direction)	1.196 ns
----------------------------------	----------

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

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG	
Manufactured on	December 17, 2002	

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DASY5 Validation Report for Head TSL

Date/Time: 22.04.2010 15:17:55

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

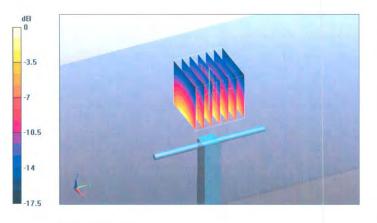
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1 Medium: HSL U11 BB Medium parameters used: f = 1900 MHz; $\sigma = 1.41 \text{ mho/m}$; $\varepsilon_r = 40.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 SN3205; ConvF(5.09, 5.09, 5.09); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection) .
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010 .
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 57

Pin=250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement

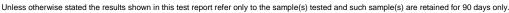
grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 96.9 V/m; Power Drift = 0.047 dB Peak SAR (extrapolated) = 18.1 W/kg SAR(1 g) = 9.91 mW/g; SAR(10 g) = 5.17 mW/gMaximum value of SAR (measured) = 12.4 mW/g



 $0 \, dB = 12.4 \, mW/g$

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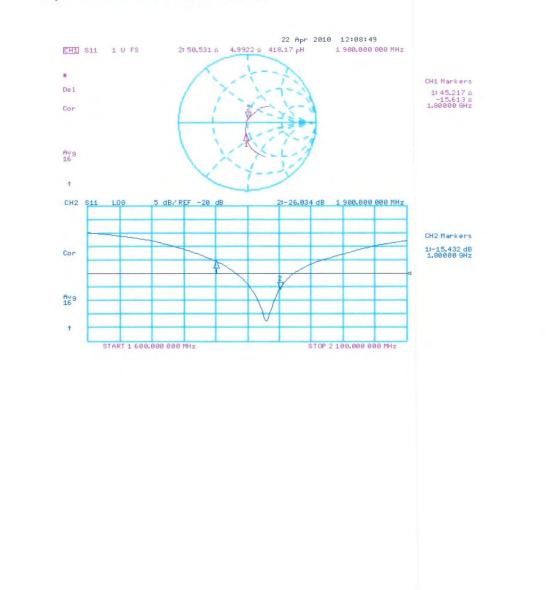
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Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body

Date/Time: 28.04.2010 15:11:22

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d027

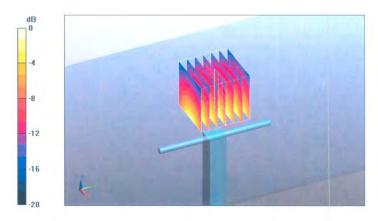
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1 Medium: MSL U11 BB Medium parameters used: f = 1900 MHz; $\sigma = 1.53 \text{ mho/m}$; $\varepsilon_r = 54.9$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 SN3205; ConvF(4.59, 4.59, 4.59); Calibrated: 26.06.2009
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.03.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY5, V5.2 Build 162; SEMCAD X Version 14.0 Build 57

Pin250 mW /d=10mm, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) /Cube 0: Measurement

grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 96.2 V/m; Power Drift = -0.014 dB Peak SAR (extrapolated) = 17.1 W/kg SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.36 mW/gMaximum value of SAR (measured) = 12.7 mW/g



 $0 \, dB = 12.7 \, mW/g$

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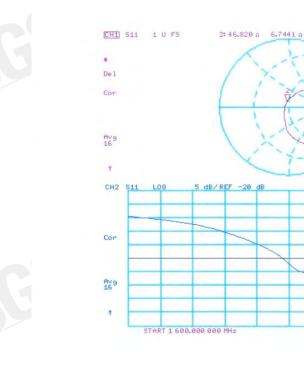


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Impedance Measurement Plot for Body TSL

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28 Apr 2010 09:42:26

564.93 pH

2:-22.289 dB

1 900.000 000 MHz

1 900.000 000 MHz

STOP 2 1 00.000 000 MH:

End of 1st part of report

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