Intermec Technologies Corporation

Name: CN70 RFID

Model 1000CP01F9

SAR Evaluation Report #: ITRM0333.1

Evaluated to the following SAR Specifications:

FCC 2.1093:2012

Report Prepared By Northwest EMC Inc.

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

California – Minnesota – Oregon – New York – Washington

CERTIFICATE OF EVALUATION

Last Date of Test: January 07, 2013
Intermec Technologies Corporation
Name: CN70 RFID
Model:1000CP01F9

Applicable Standard

Test Description	Specification	Test Method	Pass/Fail
SAR Evaluation	FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001	Pass
		IEEE Std 1528:2003	
		FCC KDB 447498 D01 v05	
		FCC KDB 248227 D01 v01r02	
		FCC KDB 648474 D04 V01	
		FCC KDB 865664 D01 and D02	

Highest SAR Values

Frequency Bands (GHz)	Head 1g (W/kg)	Body 1g (W/kg)	Limit 1g (W/kg)	Exposure Environment
900 MHz	0.374	0.615	**1.6**	**General Population Uncontrolled**
2.4	0.162	0.553		
5.2, 5.3, 5.6, 5.8	0.061	0.335		

Deviations From Test Standards

None

Approved By:

Don Facteau, IS Manager

NVLAP Lab Code: 200630-0

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

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

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test

pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

REVISION HISTORY

REV 2012.08.02

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.

NORTHWEST EMC

REV 2012.05.24

ACCREDITATIONS AND AUTHORIZATIONS

United States

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

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

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

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

European Union

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

Australia/New Zealand

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

Korea

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

Japan

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

Taiwan

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

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

Singapore

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

Hong Kong

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

Vietnam

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

Russia

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

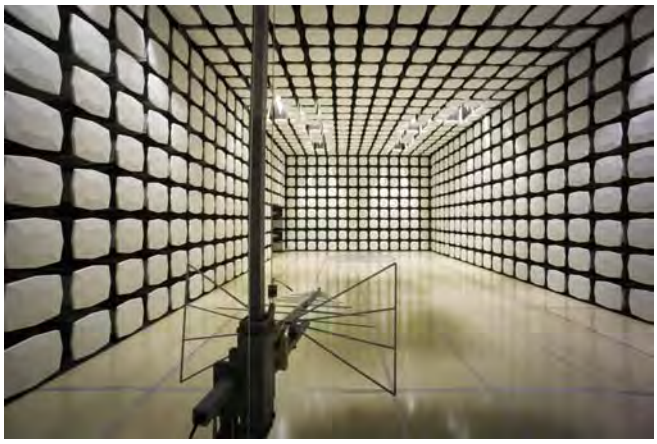
SCOPE

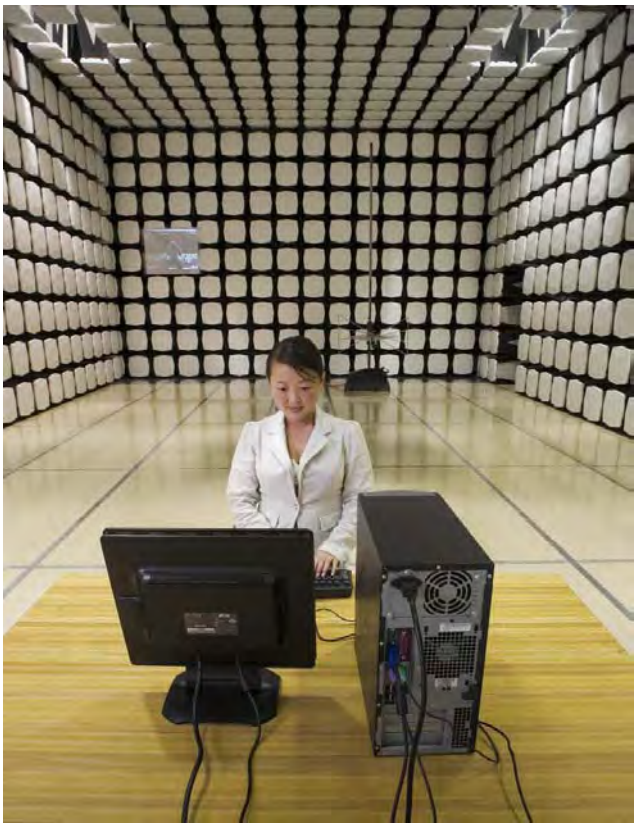
For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/

LOCATIONS

REV 2013.01.07

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





PRODUCT DESCRIPTION

WTD 12.5.23

Client and Equipment Under Test (EUT) Information

Company Name:	Intermec Technologies Corporation
Address:	550 Second St. SE
City, State, Zip:	Cedar Rapids, IA 52401-2023
Test Requested By:	Dave Fry
Model:	1000CP01F9
First Date of Test:	December 07, 2012
Last Date of Test:	January 07, 2013
Receipt Date of Samples:	December 07, 2012
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):

The EUT is the Model 1000CP01F9 handheld computer containing two radio modules, the Intermec Models RC12 and IM11, each with their own integral antenna.

The Intermec Model RC12 radio module is an 802.11a/b/g/n – Bluetooth radio. It is not capable of 40 MHz channel operation. The 802.11a/b/g/n and Bluetooth radios share the same antenna, but cannot transmit simultaneously. The frequency range of the 802.11a/b/g/n radio:

- 2412 – 2462 MHz
- 5180 – 5320 MHz
- 5500 – 5700 MHz
- 5745 – 5825 MHz

The frequency range of the Bluetooth radio:

- 2402 – 2480 MHz

The Intermec IM11 radio module is a RFID reader supporting only EPC Gen 2 (PR-ASK) operation. Dave Fry, Sr. EMC Engineer at Intermec, attests that the maximum duty cycle is 50%:

"The IM11 module firmware always establishes a maximum 50% on/off transmitter duty cycle."

The IM11 has two antenna ports, but only one is connected for use in the Model 1000CP01F9. Its frequency range:

- 902.75 – 927.25 MHz

The closest spacing between the RFID antenna and the 802.11a/b/g/n antenna is 3.7cm. The 802.11a/b/g/n antenna is on the right side of the handheld computer and the RFID antenna is on the left side.

In normal operation, the EUT can be held in the hand, or next to the head like a cellular handset, or worn on the body. The only Intermec approved accessory for body worn operation is a holster that contains metal. The EUT can only fit in the holster with the top end of the unit pointing down. The holster cup can be attached to the holster belt with either the keypad facing the user, or the side facing the user. In no case can the back of the EUT face the user.

An optional snap-on audio accessory is available. It connects to the bottom end of the unit and provides a standard audio jack for connection of a VR10 headset.

PRODUCT DESCRIPTION

The EUT is powered by a lithium-ion battery, Model 1000AB01.

Testing Objective:

To demonstrate compliance with the SAR requirements of FCC 2.1093.

Scope

Regarding the 802.11a/b/g/n-Bluetooth radio, KDB 447498 D01 v05, Appendix A contains the SAR test exclusion thresholds for 100 MHz – 6 GHz. For the most conservative test separation of 5mm, the power threshold at 2450 MHz is 10mW. Since the output power of Bluetooth is 7mW, the Bluetooth radio does not require SAR evaluation.

However the output power of the 802.11a/b/g/n radio is greater than the SAR test exclusion thresholds for all bands, so it does require stand-alone SAR evaluation. This is true for the RFID radio as well.

The stand-alone SAR evaluation documented in this report is for the 802.11a/b/g/n and RFID portions of the EUT.

SAR Evaluation for simultaneous transmission was not required because the sum of the 1-g SAR was less than the SAR limit of 1.6 W/kg:

Model	Phantom	Highest of		Sum 1 g (W/kg)
		RFID 1 g (W/kg)	Wi-Fi 1 g (W/kg)	
1000CP01F9	Head	0.374	0.162	0.536
	Body	0.615	0.553	1.168

Per KDB 447498, Section 4.3.2:

> "When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration"

CONFIGURATIONS

Configuration ITRM0333- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
CN70 RFID Computer	Intermec Technologies Corporation	1000CP01F9	8721242648
Battery	Intermec Technologies Corporation	1000AB01	16961001575

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Holster	Intermec Technologies Corporation	None	None
Headset	Intermec Technologies Corporation	VR10	None
Standard Audio Snap-On	Intermec Technologies Corporation	1000AA02	22011146662

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Headset	No	1.2m	No	Handheld Computer	Headset
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Configuration ITRM0333- 2

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
CN70 RFID Computer	Intermec Technologies Corporation	1000CP01F9	8721242648
Battery	Intermec Technologies Corporation	1000AB01	16961001575

Configuration ITRM0333- 7

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
CN70 RFID Computer	Intermec Technologies Corporation	1000CP01F9	8721242641
Battery	Intermec Technologies Corporation	1000AB01	16961001575

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Holster	Intermec Technologies Corporation	None	None
Headset	Intermec Technologies Corporation	VR10	None
Standard Audio Snap-On	Intermec Technologies Corporation	1000AA02	22011146662

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Headset	No	1.2m	No	Handheld Computer	Headset
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATIONS

Configuration ITRM0333- 8

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
CN70 RFID Computer	Intermec Technologies Corporation	1000CP01F9	8721242641
Battery	Intermec Technologies Corporation	1000AB01	16961001575

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	12/7/2012	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	12/18/2012	SAR Evaluation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	1/7/2013	SAR Evaluation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.

OUTPUT POWER

2.4 AND 5 GHz Bands

Per FCC KDB 248227, the conducted output power was measured at the “default test channels” and at the “required test channels” in each band. Measurements were made while the EUT transmitted at the lowest, middle and the highest data rates for each channel. Test software insured that the EUT transmitted at 100% duty cycle.

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

Output power measurements are on the following pages. The model 1001CP01F9 was used for conducted output power measurements because it’s conducted RF characteristics are identical to the model 1000CP01F9. Both models contain identical system boards, radio modules, displays, and antennas. The difference in keyboard size is the primary differentiator.

NORTHWEST

EMC

Output Power

XMit 2011.01.18

EUT:	1001CP01F9			**Work Order:**	ITRM0333
Serial Number:	8721242648			**Date:**	12/07/12
Customer:	Intermec Technologies Corporation			**Temperature:**	21°C
Attendees:	None			**Humidity:**	40%
Project:				**Barometric Pres.:**	1021 mbar
Tested by:	Brandon Hobbs, Rod Peloquin	**EUT Power**	Battery	**Job Site:**	EV08

TEST SPECIFICATIONS	Test Method
FCC 2.1093:2012	FCC OET 65C:2001

COMMENTS

Conducted output power

DEVIATIONS FROM TEST STANDARD

None

Configuration #	12	Signature

Channel	Frequency (MHz)	Data Rate (Mbps)	Modulation	Conducted Power (Average) dBm	W
1	2412	1	BPSK	16.4	0.044
		11	CCK	16.2	0.042
		6	OFDM	13.0	0.020
		36	OFDM	12.8	0.019
		54	OFDM	12.7	0.019
		7.2 (MCS0)	OFDM	13.0	0.020
		72.2 (MCS7)	OFDM	12.3	0.017
6	2437	1	BPSK	16.7	0.046
		11	CCK	16.6	0.045
		6	OFDM	13.1	0.021
		36	OFDM	13.0	0.020
		54	OFDM	12.9	0.020
		7.2 (MCS0)	OFDM	13.2	0.021
		72.2 (MCS7)	OFDM	12.5	0.018
11	2462	1	BPSK	16.9	0.049
		11	CCK	16.7	0.047
		6	OFDM	13.4	0.022
		36	OFDM	13.2	0.021
		54	OFDM	13.2	0.021
		7.2 (MCS0)	OFDM	13.4	0.022
		72.2 (MCS7)	OFDM	12.8	0.019

NORTHWEST EMC

Output Power

XMit 2011.01.18

EUT:	1001CP01F9			**Work Order:**	ITRM0333
Serial Number:	08721244013			**Date:**	12/07/12
Customer:	Intermec Technologies Corporation			**Temperature:**	21°C
Attendees:	None			**Humidity:**	40%
Project:				**Barometric Pres.:**	1021 mbar
Tested by:	Brandon Hobbs, Rod Peloquin	**EUT Power**	Battery	**Job Site:**	EV08

TEST SPECIFICATIONS	Test Method
FCC 2.1093:2012	FCC OET 65C:2001

COMMENTS

Conducted output power

DEVIATIONS FROM TEST STANDARD

None

Configuration #	12	Signature

Channel	Frequency (MHz)	Data Rate (Mbps)	Modulation	Conducted Power (Average) dBm	W
36	5180	6	OFDM	12.3	0.017
		54	OFDM	11.6	0.014
		7.2 (MCS0)	OFDM	12.3	0.017
		72.2 (MCS7)	OFDM	10.1	0.010
40	5200	6	OFDM	12.3	0.017
		54	OFDM	11.5	0.014
		7.2 (MCS0)	OFDM	12.3	0.017
		72.2 (MCS7)	OFDM	10.0	0.010
44	5220	6	OFDM	12.2	0.017
		54	OFDM	11.5	0.014
		7.2 (MCS0)	OFDM	12.2	0.017
		72.2 (MCS7)	OFDM	10.0	0.010
48	5240	6	OFDM	12.2	0.017
		54	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	12.2	0.017
		72.2 (MCS7)	OFDM	10.0	0.010
52	5260	6	OFDM	12.2	0.017
		54	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	12.1	0.016
		72.2 (MCS7)	OFDM	9.9	0.010
56	5280	6	OFDM	12.1	0.016
		54	OFDM	11.2	0.013
		7.2 (MCS0)	OFDM	12.1	0.016
		72.2 (MCS7)	OFDM	9.9	0.010
60	5300	6	OFDM	11.9	0.015
		54	OFDM	11.2	0.013
		7.2 (MCS0)	OFDM	11.9	0.015
		72.2 (MCS7)	OFDM	9.8	0.010
64	5320	6	OFDM	11.9	0.015
		54	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	11.9	0.015
		72.2 (MCS7)	OFDM	9.7	0.009
100	5500	6	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	11.1	0.013
104	5520	6	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	11.1	0.013
108	5540	6	OFDM	11.0	0.013
		7.2 (MCS0)	OFDM	11.1	0.013
112	5560	6	OFDM	11.2	0.013
		7.2 (MCS0)	OFDM	11.0	0.013
116	5580	6	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	10.9	0.012
120	5600	6	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	11.2	0.013
124	5620	6	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	11.3	0.013
128	5640	6	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	11.2	0.013
132	5660	6	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	11.3	0.013
136	5680	6	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	11.3	0.013
140	5700	6	OFDM	11.3	0.013
		7.2 (MCS0)	OFDM	11.3	0.013
149	5745	6	OFDM	11.2	0.013
		7.2 (MCS0)	OFDM	11.2	0.013
153	5765	6	OFDM	11.2	0.013
		7.2 (MCS0)	OFDM	11.2	0.013
157	5785	6	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	11.1	0.013
161	5805	6	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	11.1	0.013
165	5825	6	OFDM	11.1	0.013
		7.2 (MCS0)	OFDM	11.1	0.013

NORTHWEST EMC

Output Power

XMit 2011.01.18

EUT:	1001CP01F9			**Work Order:**	ITRM0333
Serial Number:	08721244017			**Date:**	12/07/12
Customer:	Intermec Technologies Corporation			**Temperature:**	21°C
Attendees:	None			**Humidity:**	40%
Project:				**Barometric Pres.:**	1021 mbar
Tested by:	Brandon Hobbs, Rod Peloquin	**EUT Power**	Battery	**Job Site:**	EV08

TEST SPECIFICATIONS	Test Method
FCC 2.1093:2012	FCC OET 65C:2001

COMMENTS

Conducted output power

DEVIATIONS FROM TEST STANDARD

None

Configuration #	6	Signature

Channel	Frequency (MHz)	Data Rate (Kbps)	Modulation	Conducted Power (Average) Port 1 dBm	Port 1 W	Port 2 dBm	Port 2 W
5	902.75	340	PRASK	27.3	0.532	N/A	N/A
30	915.25	340	PRASK	27.2	0.524	N/A	N/A
54	927.25	340	PRASK	27.3	0.540	N/A	N/A

TISSUE – EQUIVALENT LIQUID

Characterization of tissue-equivalent liquid dielectric properties

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

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

Target values of dielectric parameters

Per FCC OET 65C, Appendix C:

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

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

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

TISSUE – EQUIVALENT LIQUID

Composition of Ingredients for Liquid Tissue Phantoms

Northwest EMC uses tissue-equivalent liquids prepared by SPEAG and confirmed by them to be within +/- 5% from the target values. Their recipes are based upon the following formulations as found in FCC OET 65C, Appendix C:

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

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

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

TISSUE – EQUIVALENT LIQUID

WSTE.12.07.12

Tissue:	Body	Work Order:	ITRM0333
Serial Number:	SAT	Date:	12-20-2012
Customer:	Intermec Technologies Corporation	Temperature:	22.9°C
Customer Project:	None	Liquid Temperature:	22.5°C
Tested By:	Ethan Schoonover	Relative Humidity:	34.4
Job Site:	EV08	Bar. Pressure:	1007

TEST SPECIFICATIONS

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
900	52.8	1.065	55	1.05	4	-1.43

Frequency (MHz)	Relative Permittivity	Conductivity
700	54.9	0.866
715	54.7	0.881
735	54.5	0.9
750	54.3	0.914
770	54.1	0.933
790	53.8	0.953
810	53.6	0.974
825	53.5	0.99
845	53.3	1.01
865	53.1	1.03
880	52.9	1.046
900	52.8	1.065
915	52.6	1.08
935	52.4	1.1
955	52.2	1.12
970	52	1.136
990	51.8	1.157
1010	51.7	1.177
1025	51.5	1.193
1045	51.3	1.214
1065	51.2	1.234
1085	51	1.256
1100	50.9	1.272
1120	50.7	1.293
1140	50.5	1.314
1155	50.3	1.33
1175	50.2	1.352
1195	50	1.372
1200	50	1.377

TISSUE – EQUIVALENT LIQUID

Tissue:	Head	Work Order:	ITRM0333
Serial Number:	SAS	Date:	12-17-2012
Customer:	Intermec Technologies Corporation	Temperature:	21.9°C
Customer Project:	None	Liquid Temperature:	22.5°C
Tested By:	Ethan Schoonover	Relative Humidity:	37.0
Job Site:	EV08	Bar. Pressure:	1010

TEST SPECIFICATIONS

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
900	39.6	0.929	41.5	0.97	4.58	4.23

Frequency (MHz)	Relative Permittivity	Conductivity
700	42.1	0.747
715	41.9	0.76
735	41.7	0.778
750	41.5	0.792
770	41.2	0.81
790	40.9	0.828
810	40.6	0.847
825	40.5	0.861
845	40.2	0.879
865	40	0.898
880	39.8	0.911
900	39.6	0.929
915	39.4	0.943
935	39.2	0.96
955	39	0.978
970	38.8	0.992
990	38.6	1.01
1010	38.4	1.028
1025	38.2	1.042
1045	38	1.059
1065	37.8	1.077
1085	37.6	1.096
1100	37.5	1.109
1120	37.3	1.127
1140	37.1	1.144
1155	36.9	1.157
1175	36.7	1.175
1195	36.6	1.192
1200	36.5	1.197

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	ITRM0333
Serial Number:	SAM	Date:	12-21-2012
Customer:	Intermec Technologies Corporation	Temperature:	23.4°C
Customer Project:	None	Liquid Temperature:	22.2°C
Tested By:	Ethan Schoonover	Relative Humidity:	34.4
Job Site:	EV08	Bar. Pressure:	1011

TEST SPECIFICATIONS

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
2450	51.3	2.005	52.7	1.95	2.66	-2.82

Frequency (MHz)	Relative Permittivity	Conductivity
1900	53.1	5.129
1925	56.8	1.075
1950	56.9	0.971
1975	56.8	0.972
2000	56.6	1.011
2025	56.3	1.072
2050	56.2	1.125
2100	55.7	1.234
2125	55.3	1.3
2150	55	1.362
2175	54.8	1.422
2200	54.5	1.476
2225	54.1	1.537
2250	53.8	1.589
2300	53.2	1.701
2325	52.9	1.75
2350	52.5	1.797
2375	52.1	1.846
2400	51.9	1.898
2425	51.6	1.954
2450	51.3	2.005
2500	50.6	2.1
2525	50.2	2.143
2550	49.9	2.186
2575	49.6	2.23
2600	49.3	2.272
2625	49	2.314
2675	48.3	2.387
2700	48	2.421

TISSUE – EQUIVALENT LIQUID

Tissue:	Head	Work Order:	ITRM0333
Serial Number:	SAL	Date:	12-26-2012
Customer:	Intermec Technologies Corporation	Temperature:	22.5°C
Customer Project:	None	Liquid Temperature:	21.1°C
Tested By:	Ethan Schoonover	Relative Humidity:	37.0
Job Site:	EV08	Bar. Pressure:	1011

TEST SPECIFICATIONS

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
2450	38.9	1.881	39.2	1.8	0.77	-4.5

Frequency (MHz)	Relative Permittivity	Conductivity
1900	43.6	3.055
1925	46.4	0.819
1950	46.3	0.806
1975	46.1	0.851
2000	45.9	0.912
2025	45.6	0.979
2050	45.2	1.048
2100	44.5	1.185
2125	44.1	1.253
2150	43.7	1.313
2175	43.3	1.373
2200	42.9	1.429
2225	42.4	1.488
2250	42	1.537
2300	41.2	1.637
2325	40.7	1.682
2350	40.3	1.72
2375	39.9	1.758
2400	39.6	1.795
2425	39.3	1.838
2450	38.9	1.881
2500	38.2	1.954
2525	37.8	1.986
2550	37.5	2.019
2575	37.1	2.054
2600	36.8	2.089
2625	36.4	2.119
2675	35.8	2.172
2700	35.4	2.196

TISSUE – EQUIVALENT LIQUID

Tissue:	Body	Work Order:	ITRM0333
Serial Number:	SAV	Date:	12-27-2012
Customer:	Intermec Technologies Corporation	Temperature:	23.1°C
Customer Project:	None	Liquid Temperature:	22.6°C
Tested By:	Ethan Schoonover	Relative Humidity:	34.3
Job Site:	EV08	Bar. Pressure:	1019

TEST SPECIFICATIONS

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
5800	46.2	6.166	48.2	6	4.15	-2.77

Frequency (MHz)	Relative Permittivity	Conductivity
3400	50.1	3.246
3500	50	3.35
3600	49.9	3.456
3700	49.8	3.569
3900	49.5	3.779
4000	49.4	3.889
4100	49.1	3.997
4300	48.8	4.241
4400	48.8	4.365
4500	48.6	4.49
4600	48.4	4.622
4800	48.1	4.883
4850	48	4.938
4900	47.9	5
5000	47.7	5.128
5050	47.6	5.194
5100	47.4	5.257
5200	47.3	5.383
5250	47.2	5.439
5300	47.1	5.502
5350	47	5.572
5450	46.8	5.705
5500	46.8	5.771
5550	46.7	5.836
5650	46.5	5.963
5700	46.4	6.026
5750	46.3	6.083
5800	46.2	6.166
5850	46.1	6.243
5900	46.1	6.321

TISSUE – EQUIVALENT LIQUID

Tissue:	Head	Work Order:	ITRM0333
Serial Number:	SAU	Date:	1-2-2012
Customer:	Intermec Technologies Corporation	Temperature:	23.8°C
Customer Project:	None	Liquid Temperature:	21.0°C
Tested By:	Ethan Schoonover	Relative Humidity:	23.0
Job Site:	EV08	Bar. Pressure:	1027

TEST SPECIFICATIONS

RESULTS

	Actual Values		Target Values		Deviation (%)	
Frequency (MHz)	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity	Relative Permittivity	Conductivity
5800	35.3	5.261	35.3	5.27	0	0.17

Frequency (MHz)	Relative Permittivity	Conductivity
3400	38.6	2.831
3450	38.6	2.874
3550	38.5	2.956
3650	38.3	3.038
3750	38.2	3.122
3850	38.2	3.207
3900	38.1	3.25
4000	38	3.342
4100	37.9	3.438
4200	37.8	3.539
4300	37.7	3.639
4350	37.6	3.691
4450	37.5	3.796
4550	37.3	3.9
4650	37.2	4.004
4750	37	4.111
4850	36.9	4.224
4900	36.8	4.277
5000	36.6	4.389
5100	36.5	4.499
5200	36.3	4.604
5300	36.1	4.711
5350	36.1	4.763
5450	35.9	4.872
5550	35.7	4.984
5650	35.6	5.097
5750	35.4	5.207
5800	35.3	5.261
5850	35.2	5.32
5900	35.2	5.376

REQUIREMENT

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

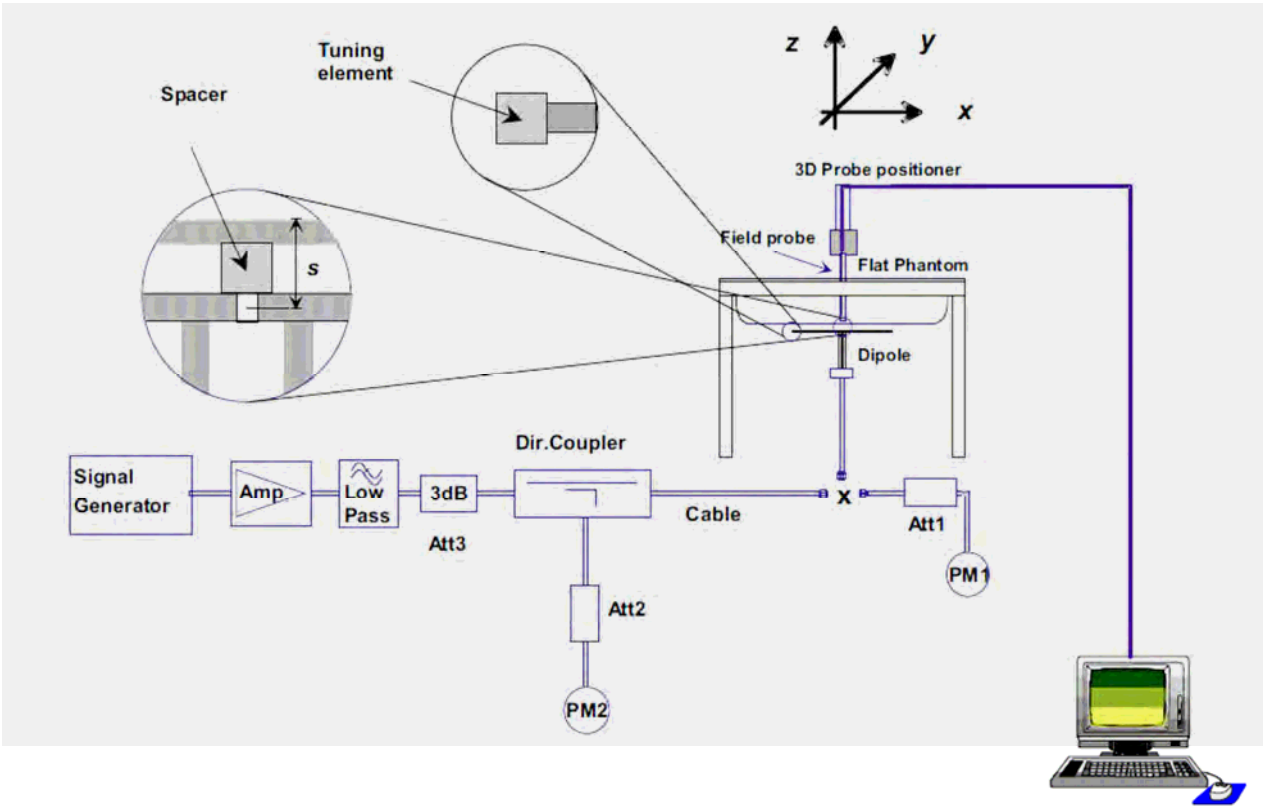
TEST DESCRIPTION

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

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

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

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



SAR SYSTEM VERIFICATION

EUT:	1001CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Date	Liquid part number and frequency	Conducted Power into the Dipole (dBm)	Correction Factor	Measured		Normalized to 1W		Target (Normalized to 1W) Get from Dipole Calibration Certificate		% Difference	
				1g	10g	1g	10g	1g	10g	1g	10g
12/18/2012	HSL 900	19.98	10.05	1.08	0.698	10.85	7.01	10.7	6.97	1.4	0.57
12/21/2012	MSL 900	20.00	10.00	1.12	0.718	11.2	7.18	10.9	7.04	2.75	1.99
12/21/2012	MSL 2450	19.95	10.12	4.71	2.17	47.67	21.96	50.4	23.7	-5.42	-7.34
12/26/2012	MSL 2450	13.75	42.17	1.18	0.542	49.76	22.86	50.4	23.7	-1.27	-3.54
12/26/2012	HSL 2450	20.00	10.00	5.31	2.44	53.1	24.4	53.9	25.3	-1.48	-3.56
12/28/2012	MSL 501	19.98	10.05	7.84	2.23	78.79	22.41	76.5	21.6	2.99	3.75
12/28/2012	MSL 501	20.00	10.00	8.37	2.35	83.7	23.5	83.3	23.4	0.48	0.43
12/28/2012	MSL 501	19.98	10.05	7.11	2	71.46	20.1	78	21.9	-8.38	-8.22
1/2/2013	HSL 501	19.9	10.23	7.75	2.24	79.28	22.92	85.3	24.1	-7.06	-4.9
1/8/2013	HSL 501	19.96	10.09	7.81	2.27	78.8	22.9	76.5	21.6	3.01	6.02
1/8/2013	HSL 501	20.01	9.98	8.7	2.5	86.83	24.95	83.3	23.4	4.24	6.62
1/8/2013	HSL 501	19.97	10.07	8.61	2.47	86.7	24.87	81.3	23.2	6.64	7.2
1/8/2013	HSL 900	20.00	10.00	1.05	0.681	10.5	6.81	10.7	6.97	-1.87	-2.3

SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	20.8°C
Date:	12/18/2012	Liquid Temperature (°C):	20.6°C
Serial Number:	ADP	Humidity (%RH):	38%
Configuration:	N/A	Bar. Pressure (mb):	1017 mb
Comments:	None		

HSL900 System Check_900MHz 12-18-12
DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:ADP
Communication System: CW; Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 900 MHz; σ = 0.929 mho/m; ε_r = 39.591; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

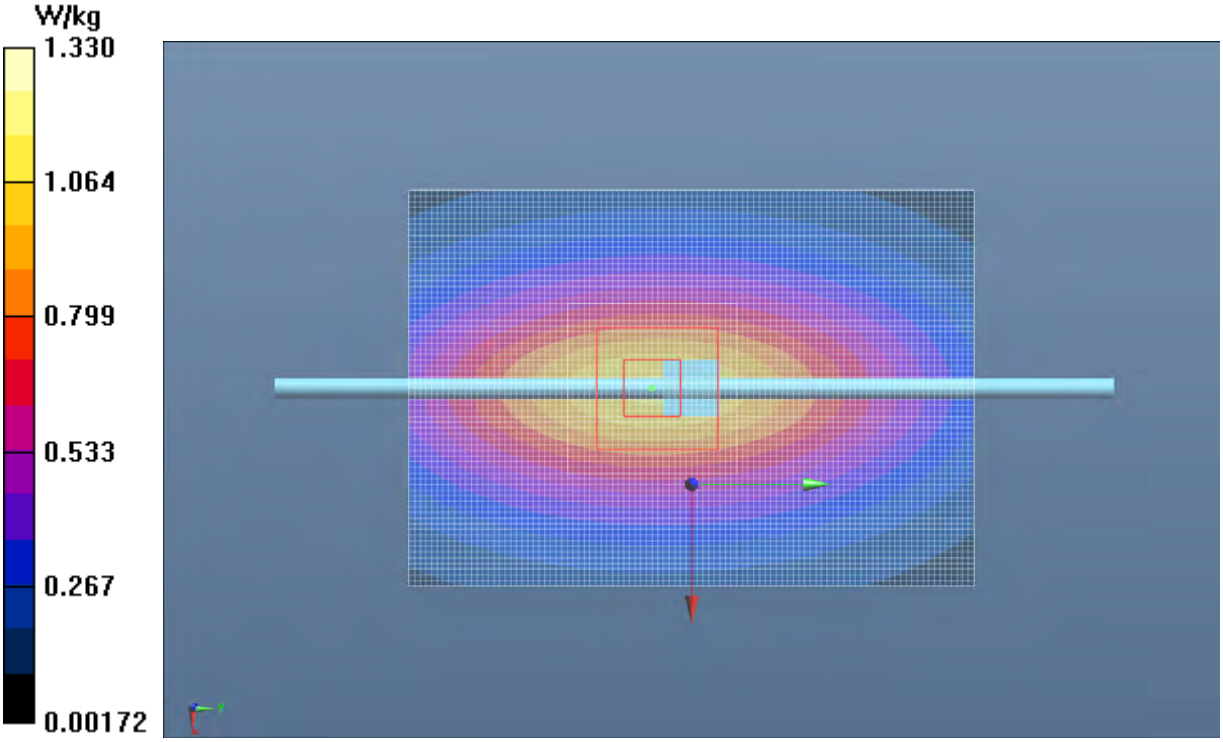
System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.453 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.698 W/kg
Maximum value of SAR (measured) = 1.08 W/kg

System Check/System Check/Area Scan (71x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 37.88 V/m
Maximum value of SAR (measured) = 1.33 W/kg

Approved By

HSL900 System Check_900MHz 12-18-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8°C
Date:	12/21/2012	Liquid Temperature (°C):	21.3°C
Serial Number:	ADP	Humidity (%RH):	38%
Configuration:	N/A	Bar. Pressure (mb):	1007 mb
Comments:	None		

MSL900 System Check_900MHz 12-21-12
DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:ADP
Communication System: CW; Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used: f = 900 MHz; σ = 1.065 mho/m; ε_r = 52.757; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

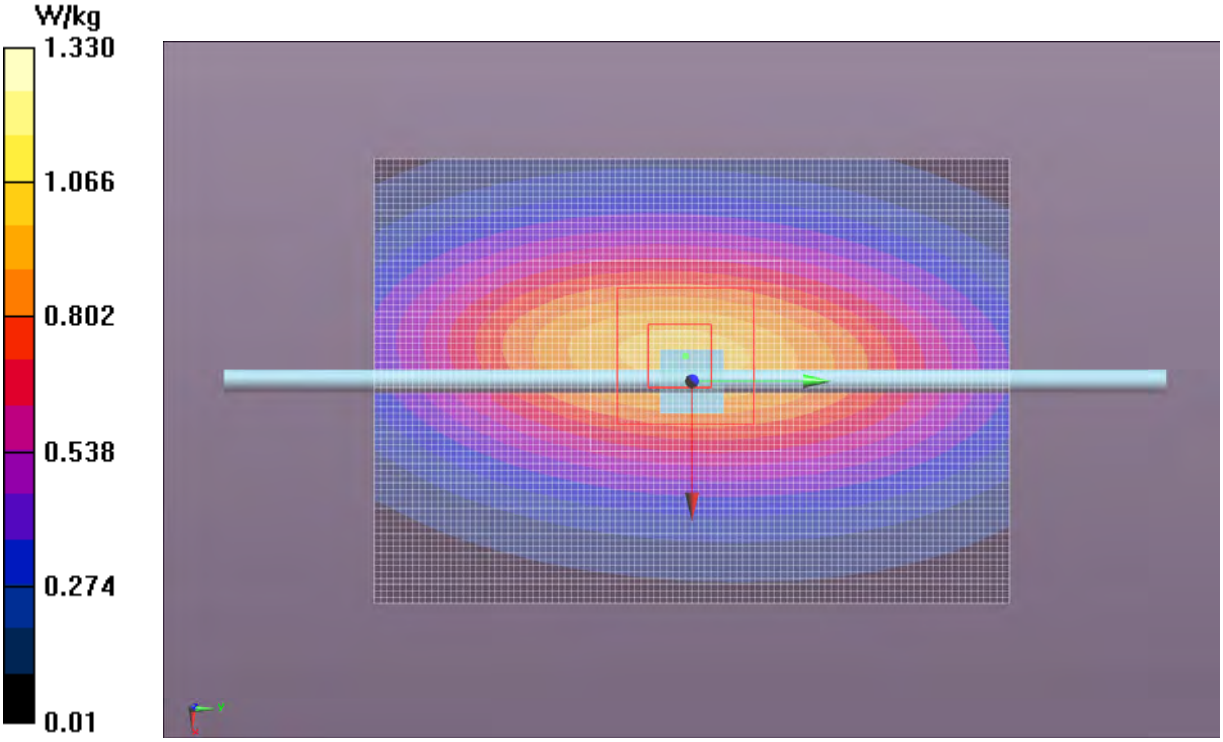
System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 33.41 V/m

System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.674 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.69 W/kg
SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.718 W/kg
Maximum value of SAR (measured) = 1.12 W/kg

System Check/System Check/Area Scan (71x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.12 W/kg
Maximum value of SAR (measured) = 1.19 W/kg

Approved By

MSL900 System Check_900MHz 12-21-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23°C
Date:	12/21/2012	Liquid Temperature (°C):	21.8°C
Serial Number:	ADL	Humidity (%RH):	35%
Configuration:	N/A	Bar. Pressure (mb):	1007 mb
Comments:	None		

MSL2450 2450 12-21-12
DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:ADL
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2450 MHz; σ = 1.957 mho/m; ε_r = 50.358; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

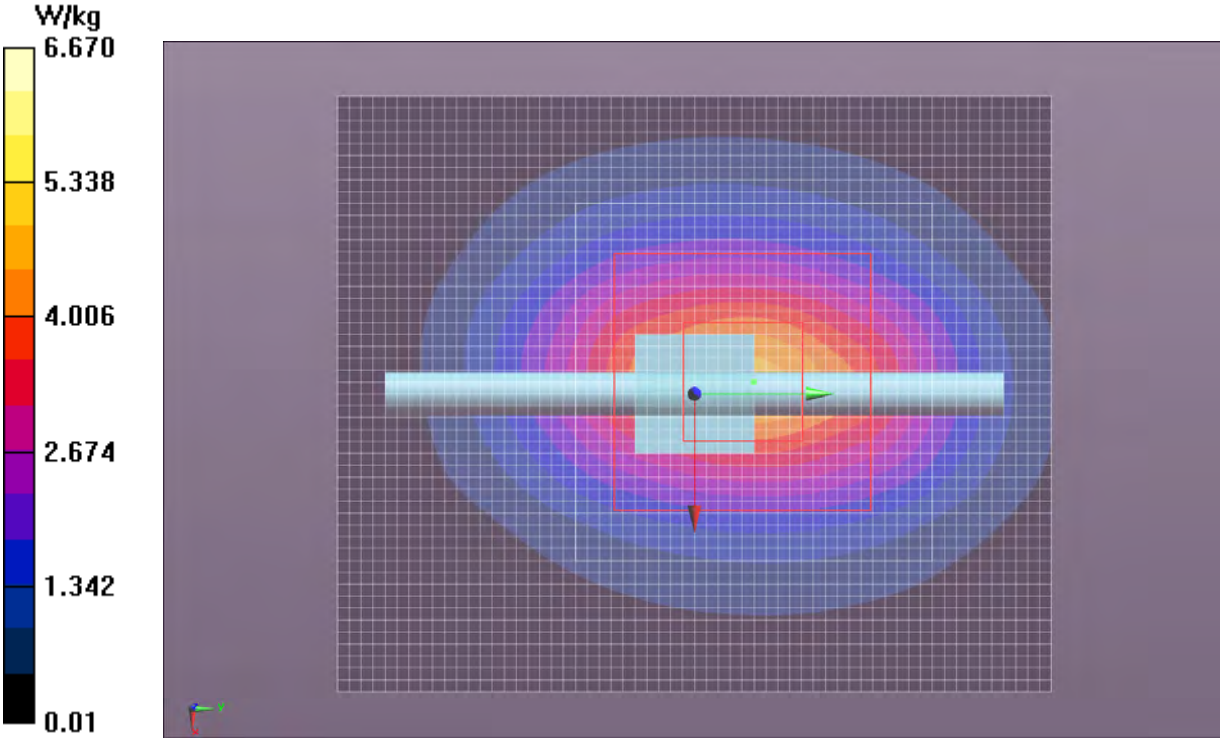
System Check/System Check/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.08 W/kg

System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 58.39 V/m

System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 47.898 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 9.63 W/kg
SAR(1 g) = 4.71 W/kg; SAR(10 g) = 2.17 W/kg
Maximum value of SAR (measured) = 4.72 W/kg
Maximum value of SAR (measured) = 6.67 W/kg

Approved By

MSL2450 2450 12-21-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.2°C
Date:	12/26/2012	Liquid Temperature (°C):	22.5°C
Serial Number:	ADL	Humidity (%RH):	41.4%
Configuration:	N/A	Bar. Pressure (mb):	1011 mb
Comments:	None		

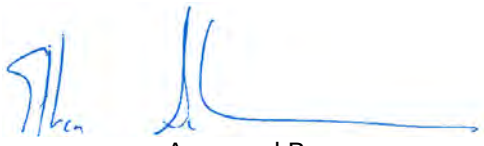
HSL2450 2450 12-26-12
DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: SN:ADL
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2450 MHz; σ = 1.884 mho/m; ε_r = 38.543; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

System Check/System Check/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.29 W/kg

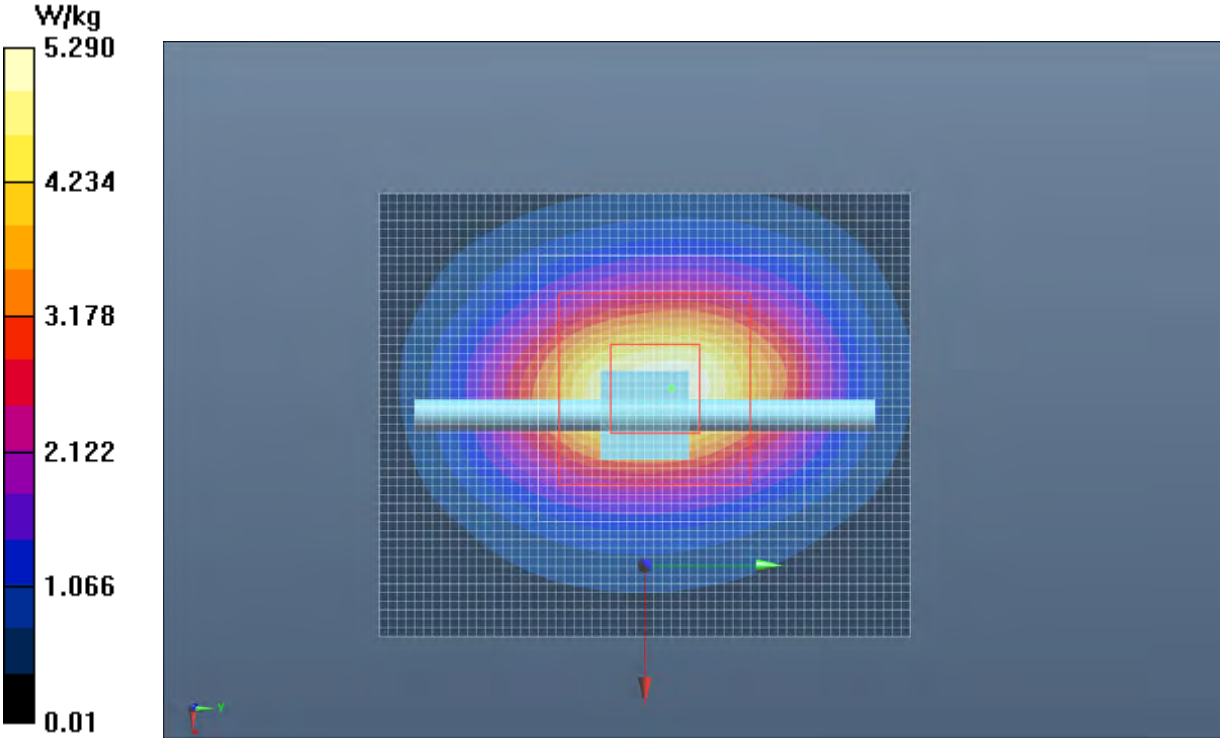
System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 73.78 V/m

System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.845 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 11.4 W/kg
SAR(1 g) = 5.31 W/kg; SAR(10 g) = 2.44 W/kg
Maximum value of SAR (measured) = 5.16 W/kg



Approved By

HSL2450 2450 12-26-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23°C
Date:	12/26/2012	Liquid Temperature (°C):	22.1°C
Serial Number:	ADL	Humidity (%RH):	39.6%
Configuration:	N/A	Bar. Pressure (mb):	1011 mb
Comments:	None		

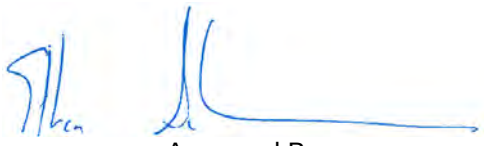
MSL2450 2450 12-26-12
DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:ADL
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 2450 MHz; σ = 1.957 mho/m; ε_r = 50.358; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

System Check/System Check/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.19 W/kg

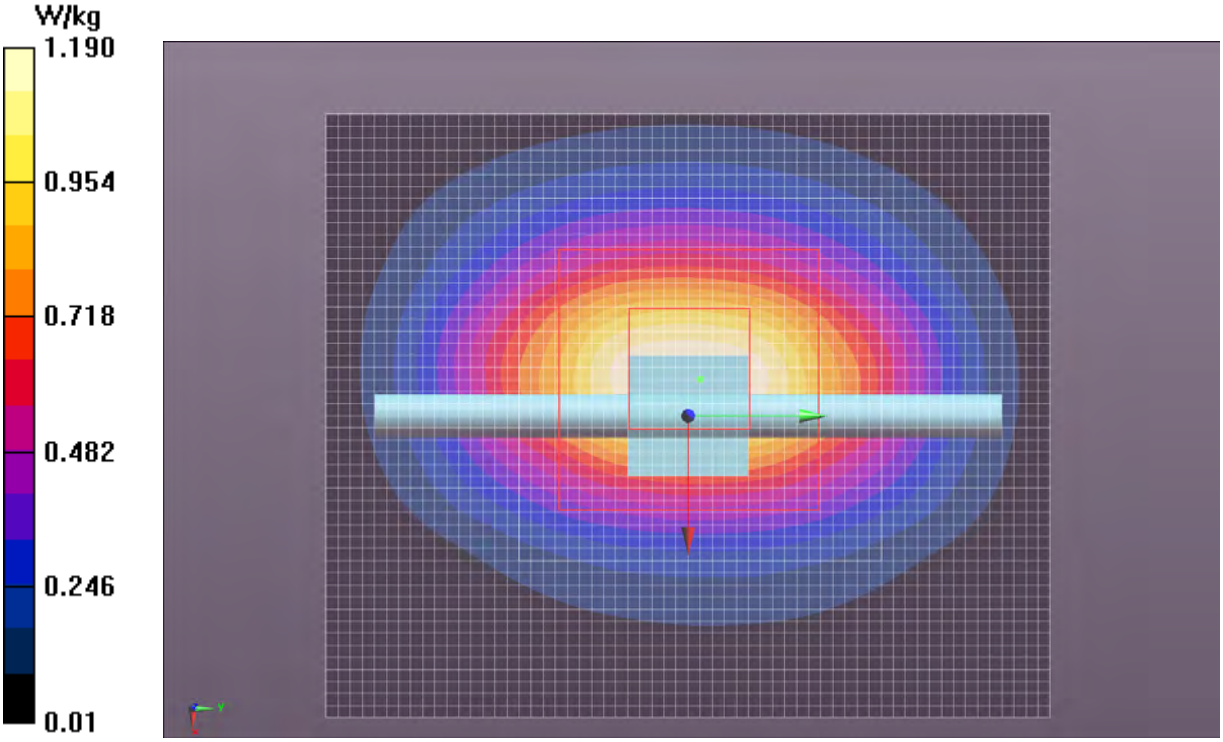
System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 34.00 V/m

System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.775 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.43 W/kg
SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.542 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



Approved By

MSL2450 2450 12-26-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.2°C
Date:	12/28/2012	Liquid Temperature (°C):	22.7°C
Serial Number:	ADM	Humidity (%RH):	32%
Configuration:	N/A	Bar. Pressure (mb):	1021 mb
Comments:	None		

MSL501 5200 12-28-12
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:ADM
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 5.383 mho/m; ε_r = 47.336; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

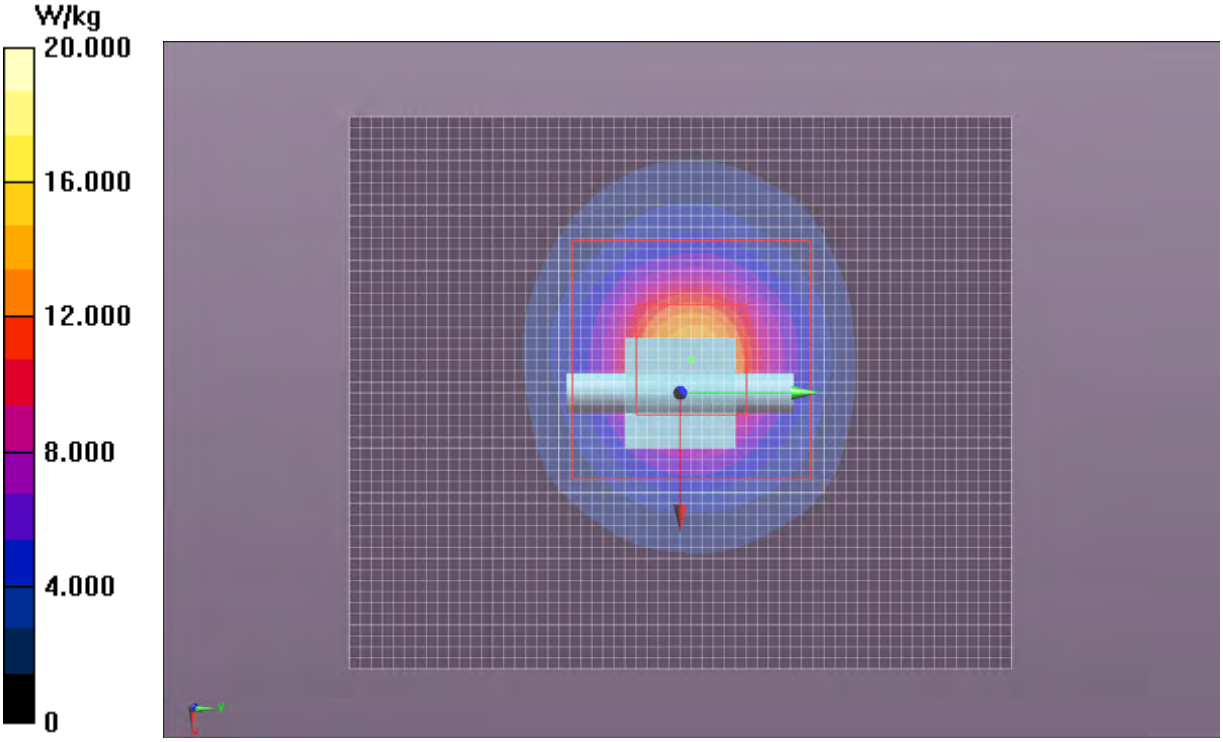
System Check/System Check - Low Channel/Zoom Scan (7x9x7) (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 55.546 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 30.7 W/kg
SAR(1 g) = 7.84 W/kg; SAR(10 g) = 2.23 W/kg
Maximum value of SAR (measured) = 16.4 W/kg

System Check/System Check - Low Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.5 W/kg

System Check/System Check - Low Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 24.97 V/m
Maximum value of SAR (measured) = 3.36 W/kg

Approved By

MSL501 5200 12-28-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.2°C
Date:	12/28/2012	Liquid Temperature (°C):	22.7°C
Serial Number:	ADM	Humidity (%RH):	32%
Configuration:	N/A	Bar. Pressure (mb):	1021 mb
Comments:	None		

MSL501 5500 12-28-12
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:ADM
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5500 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5500 MHz; σ = 5.771 mho/m; ε_r = 46.799; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

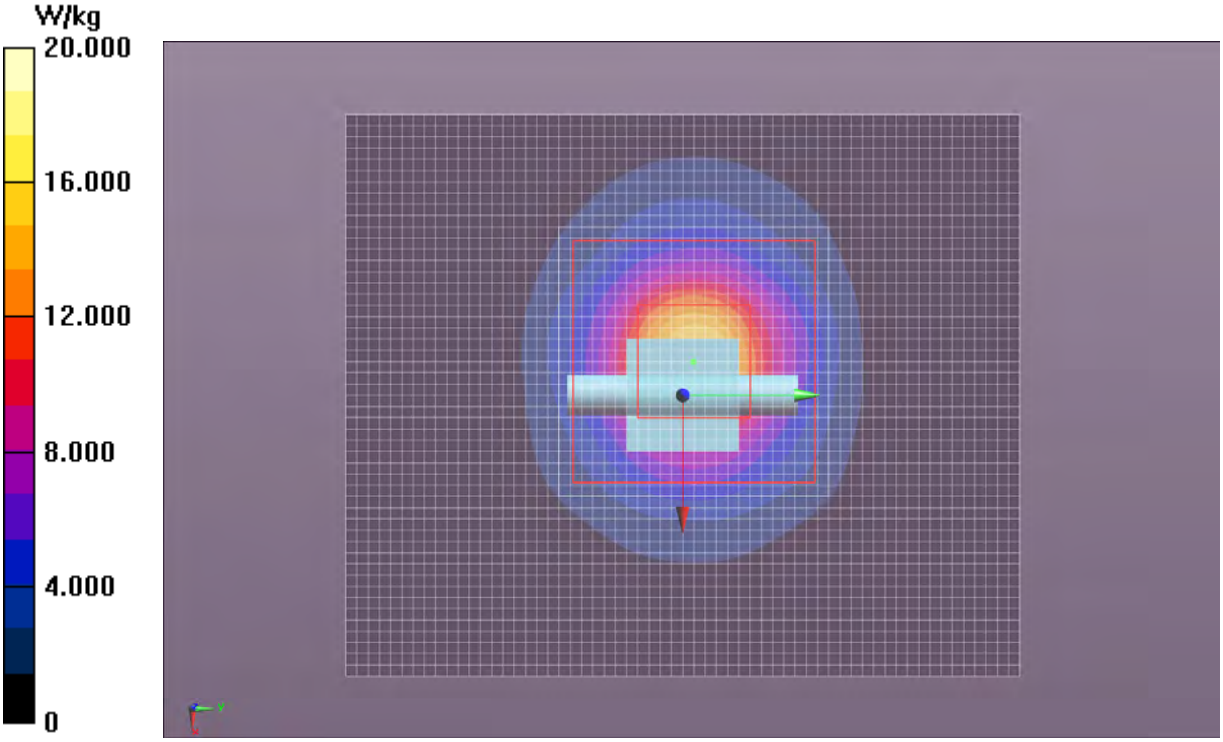
System Check/System Check - Mid Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.2 W/kg

System Check/System Check - Mid Channel/Zoom Scan (7x9x7) (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 56.912 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 34.1 W/kg
SAR(1 g) = 8.37 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 17.9 W/kg

System Check/System Check - Mid Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 24.26 V/m
Maximum value of SAR (measured) = 3.40 W/kg

Approved By

MSL501 5500 12-28-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.2°C
Date:	12/28/2012	Liquid Temperature (°C):	22.7°C
Serial Number:	ADM	Humidity (%RH):	32%
Configuration:	N/A	Bar. Pressure (mb):	1021 mb
Comments:	None		

MSL501 5800 12-28-12
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:ADM
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5800 MHz; σ = 6.166 mho/m; ε_r = 46.183; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

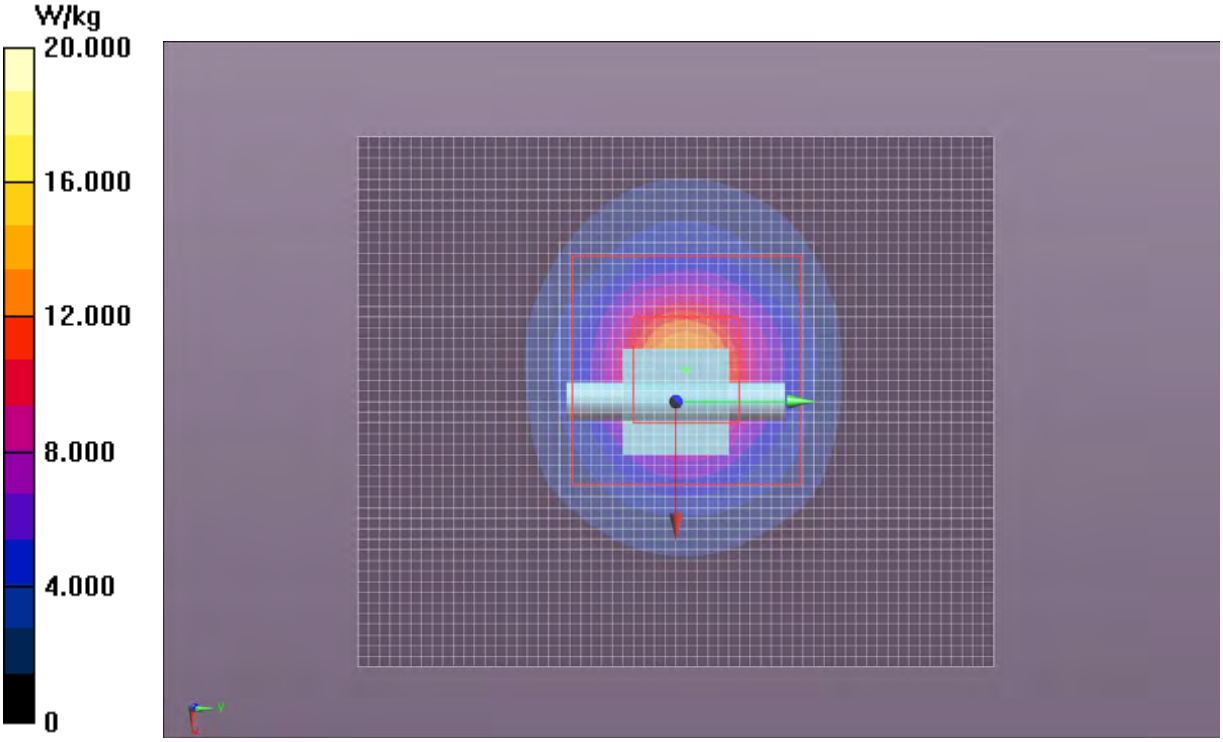
System Check/System Check - High Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.4 W/kg

System Check/System Check - High Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 41.81 V/m

System Check/System Check - High Channel/Zoom Scan (7x9x7) (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 41.369 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 7.11 W/kg; SAR(10 g) = 2 W/kg
Maximum value of SAR (measured) = 15.6 W/kg
Maximum value of SAR (measured) = 10.8 W/kg

Approved By

MSL501 5800 12-28-12



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.8°C
Date:	1/2/2013	Liquid Temperature (°C):	21°C
Serial Number:	ADM	Humidity (%RH):	23%
Configuration:	N/A	Bar. Pressure (mb):	1027 mb
Comments:	None		

HSL501 5200 1-2-13
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:ADM
Communication System: CW; Communication System Band: ITD5500 (5000.0 - 5900.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used: f = 5200 MHz; σ = 4.603 mho/m; ε_r = 36.308; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

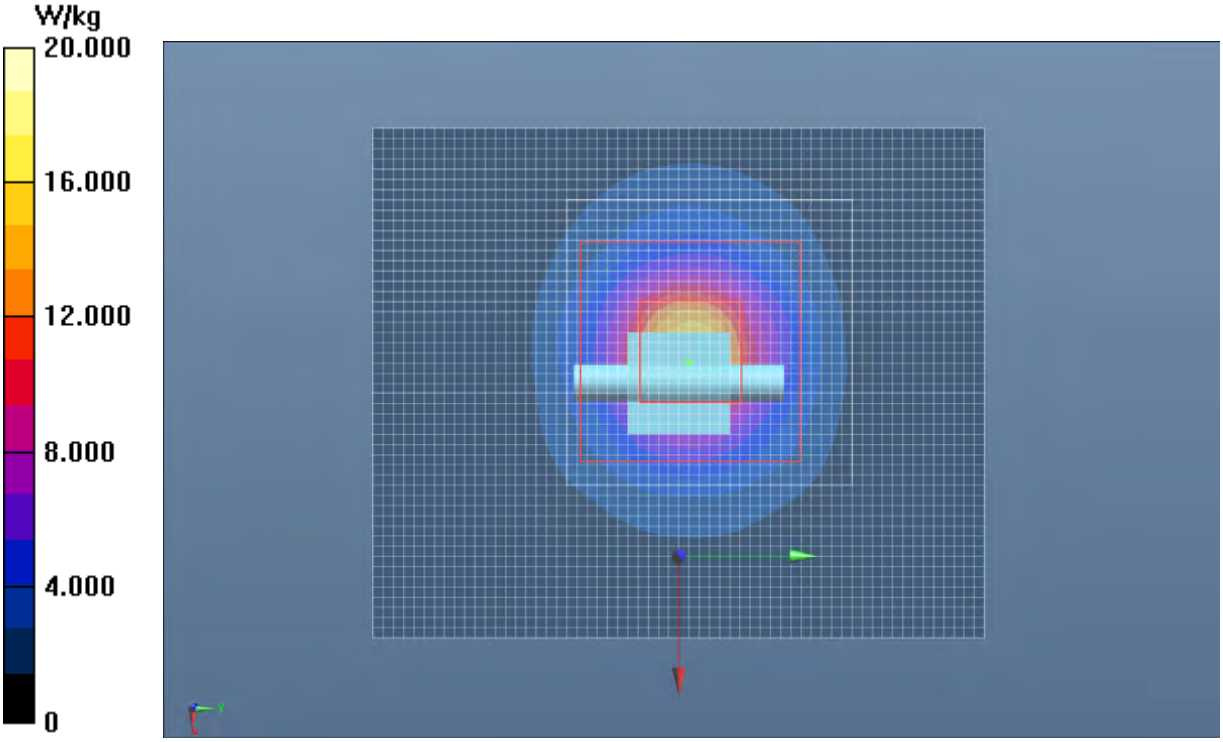
System Check/System Check - Low Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 63.98 V/m

System Check/System Check - Low Channel/Zoom Scan (8x8x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 60.083 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 30.8 W/kg
SAR(1 g) = 7.75 W/kg; SAR(10 g) = 2.24 W/kg
Maximum value of SAR (measured) = 16.0 W/kg

System Check/System Check - Low Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.6 W/kg

Approved By

HSL501 5200 1-2-13



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8°C
Date:	1/8/2013	Liquid Temperature (°C):	21.2°C
Serial Number:	ADM	Humidity (%RH):	41%
Configuration:	N/A	Bar. Pressure (mb):	1017 mb
Comments:	None		

HSL501 5200 1-8-13
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx
Communication System: CW; Communication System Band: ITD5500 (5000.0 - 5900.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used: f = 5200 MHz; σ = 4.603 mho/m; ε_r = 36.308; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

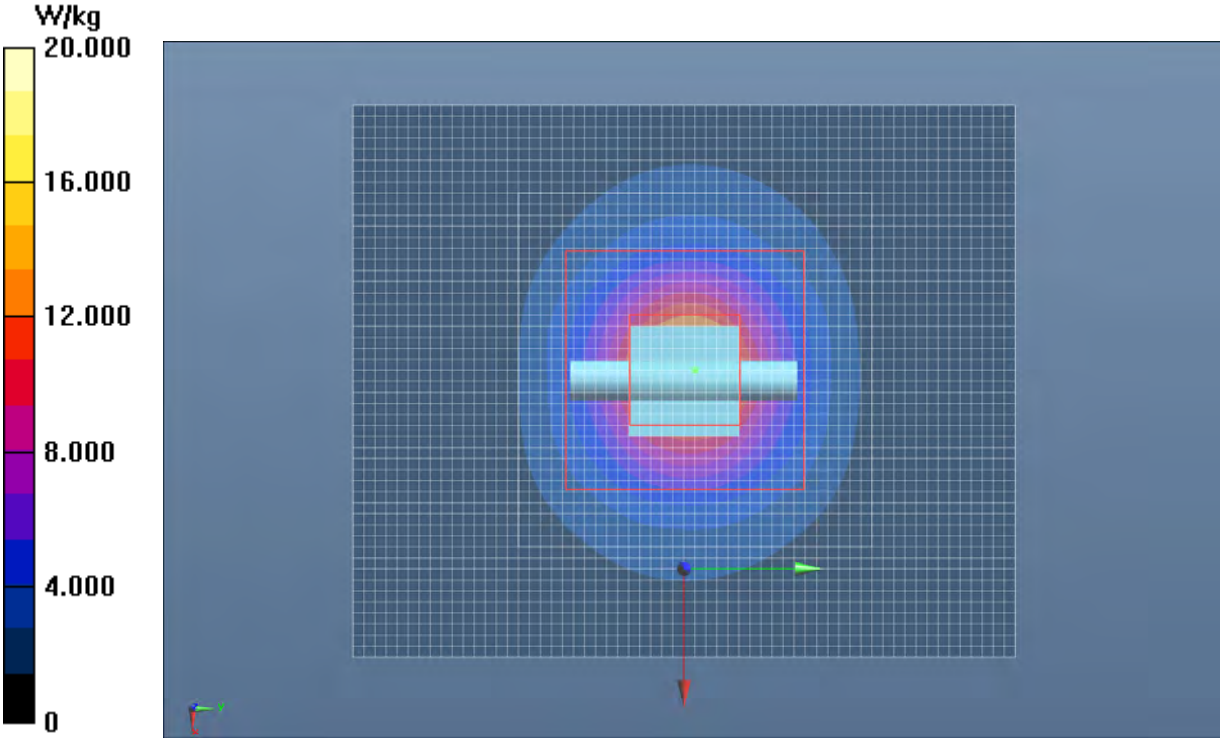
System Check/System Check - Low Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 64.38 V/m

System Check/System Check - Low Channel/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 63.316 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.27 W/kg
Maximum value of SAR (measured) = 16.3 W/kg

System Check/System Check - Low Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.8 W/kg
Maximum value of SAR (measured) = 19.1 W/kg

Approved By

HSL501 5200 1-8-13



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8°C
Date:	1/8/2013	Liquid Temperature (°C):	21.2°C
Serial Number:	ADM	Humidity (%RH):	41%
Configuration:	N/A	Bar. Pressure (mb):	1017 mb
Comments:	None		

HSL501 5500 1-8-13
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx
Communication System: CW; Communication System Band: ITD5500 (5000.0 - 5900.0 MHz); Frequency: 5500 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5500 MHz; σ = 4.929 mho/m; ε_r = 35.817; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

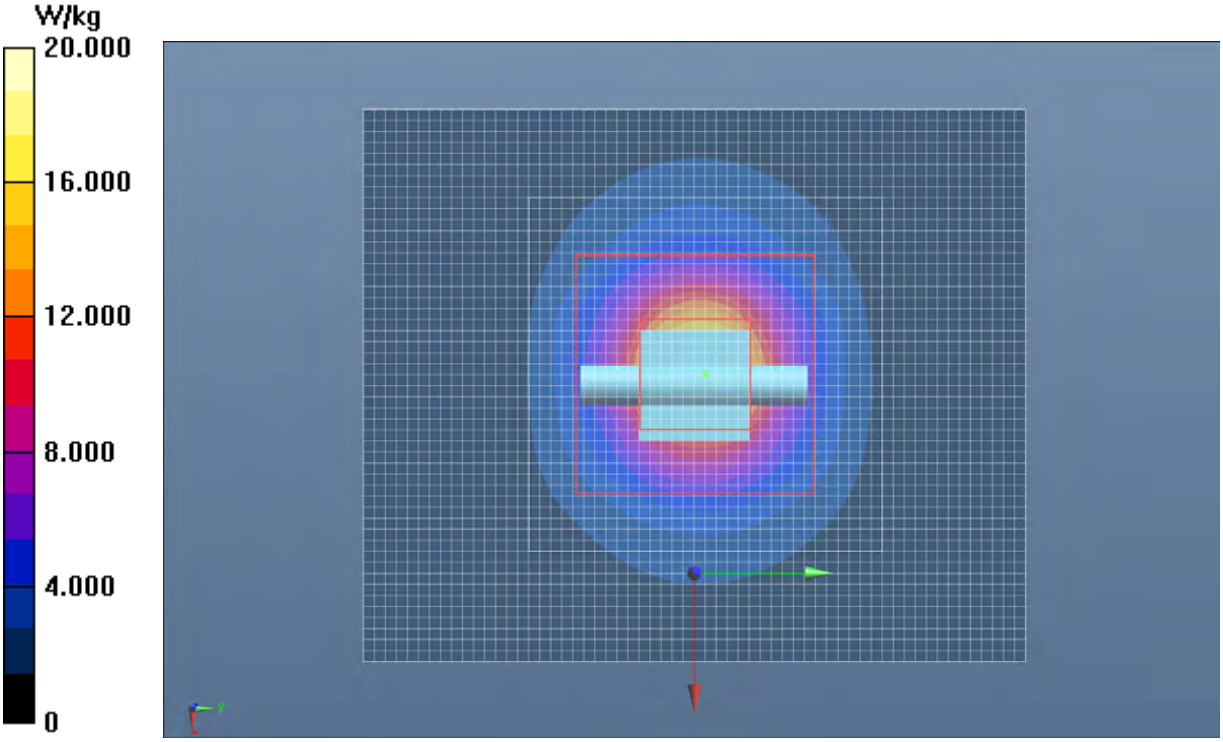
System Check/System Check - Mid Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.5 W/kg

System Check/System Check - Mid Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 62.30 V/m

System Check/System Check - Mid Channel/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 65.562 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 37.4 W/kg
SAR(1 g) = 8.7 W/kg; SAR(10 g) = 2.5 W/kg
Maximum value of SAR (measured) = 18.4 W/kg

Approved By

HSL501 5500 1-8-13



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8°C
Date:	1/8/2013	Liquid Temperature (°C):	20.7°C
Serial Number:	ADM	Humidity (%RH):	44%
Configuration:	N/A	Bar. Pressure (mb):	1017 mb
Comments:	None		

HSL501 5800 1-8-13, 2
DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx
Communication System: CW; Communication System Band: ITD5500 (5000.0 - 5900.0 MHz); Frequency: 5800 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used: f = 5800 MHz; σ = 5.261 mho/m; ε_r = 35.318; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

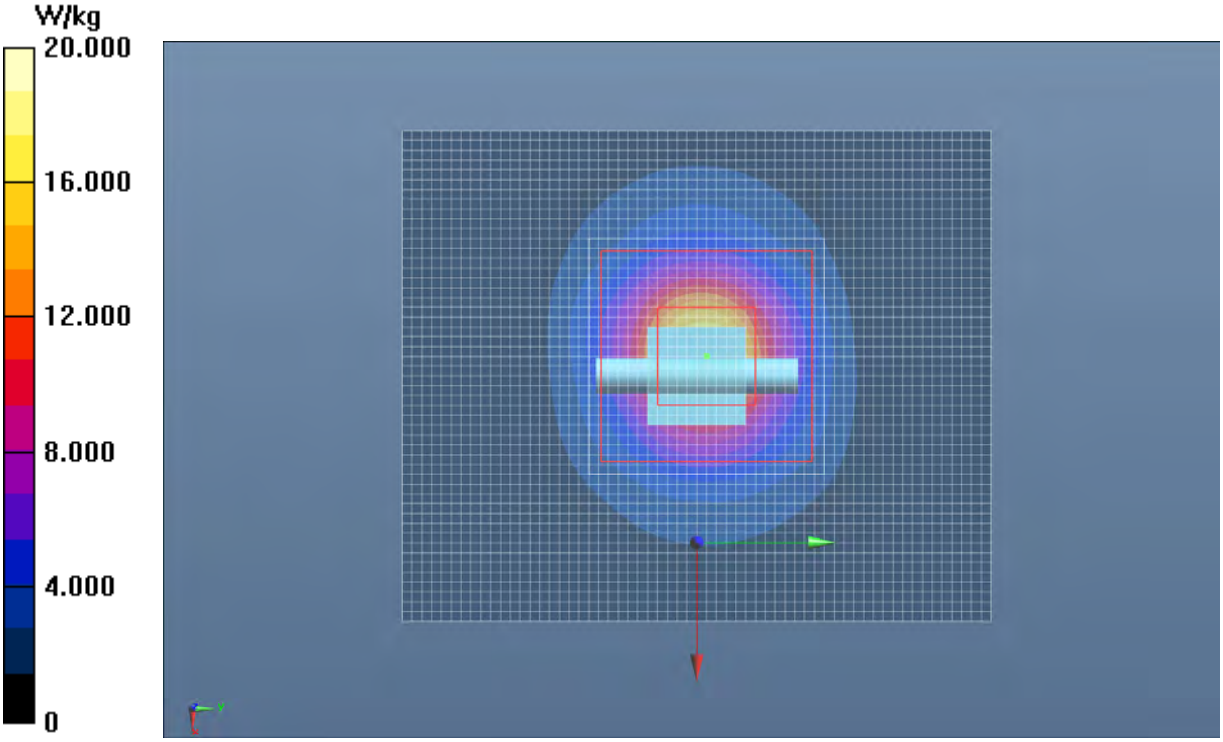
System Check/System Check - High Channel/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 67.47 V/m

System Check/System Check - High Channel/Area Scan (51x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.7 W/kg

System Check/System Check - High Channel/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 61.621 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 38.5 W/kg
SAR(1 g) = 8.61 W/kg; SAR(10 g) = 2.47 W/kg
Maximum value of SAR (measured) = 18.6 W/kg

Approved By

HSL501 5800 1-8-13, 2



SAR SYSTEM VERIFICATION

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.1°C
Date:	1/8/2013	Liquid Temperature (°C):	21.5°C
Serial Number:	ADM	Humidity (%RH):	44%
Configuration:	N/A	Bar. Pressure (mb):	1017 mb
Comments:	None		

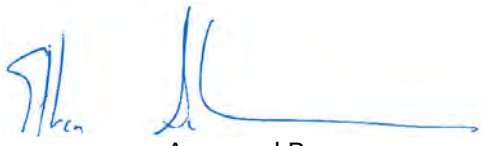
HSL900 System Check_900MHz 1-8-13
DUT: Dipole 900 MHz D900V2; Type: D900V2; Serial: D900V2 - SN:xxx
Communication System: CW; Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 900 MHz; σ = 0.929 mho/m; ε_r = 39.591; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

System Check/System Check/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.813 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.681 W/kg
Maximum value of SAR (measured) = 1.05 W/kg

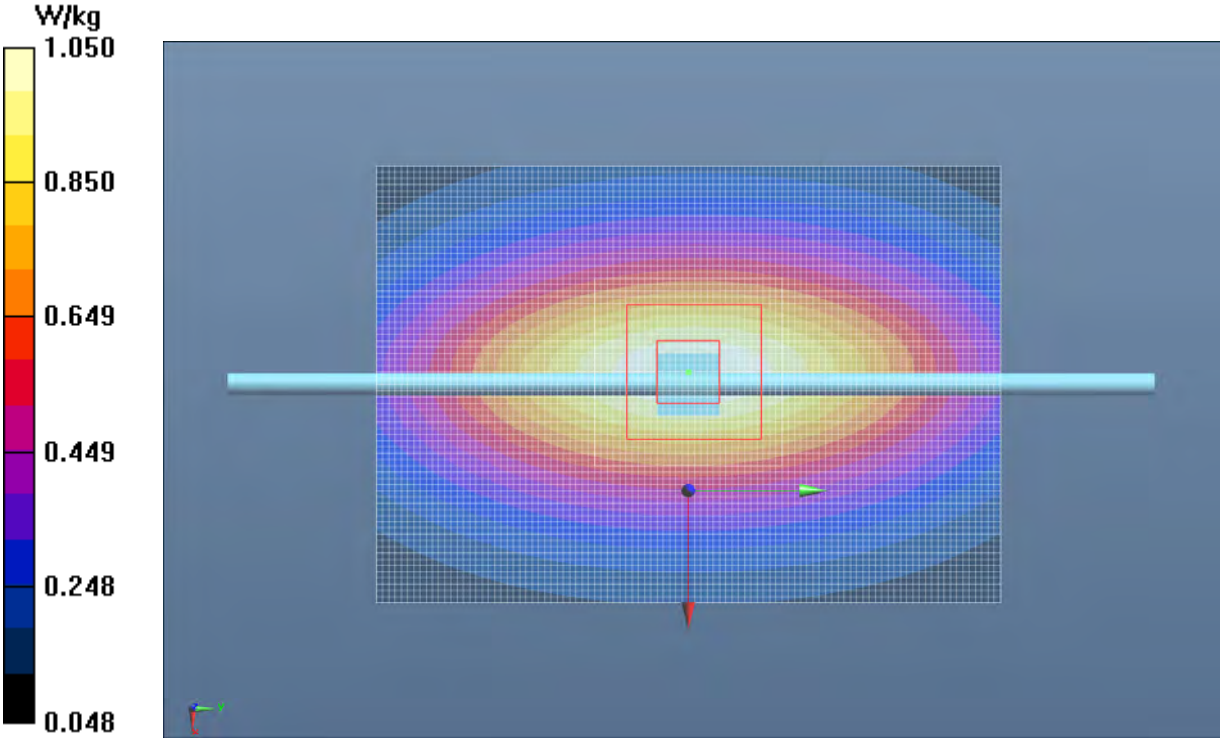
System Check/System Check/Area Scan (71x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

System Check/System Check/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 37.40 V/m



Approved By

HSL900 System Check_900MHz 1-8-13



Test Configurations

In normal operation, the EUT can be held in the hand, or next to the head like a cellular handset, or worn on the body. The only Intermec approved accessory for body worn operation is a holster that contains metal. The EUT can only fit in the holster with the top end of the unit pointing down. The holster cup can be attached to the holster belt with either the keypad facing the user, or the side facing the user. In no case can the back of the EUT face the user.

The 802.11a/b/g/n antenna is on the right side of the handheld computer and the RFID antenna is on the left side. The holster provides a minimum spacing of 1.2 cm from any side of the EUT to the flat phantom

An optional snap-on audio accessory is available. It connects to the bottom end of the unit and provides a standard audio jack for connection of a VR10 headset. Measurements were made with the headset.

The EUT is powered by a lithium-ion battery, Model 1000AB01. It was fully charged before each SAR evaluation.

Per KDB 248227, among the channels required for normal testing, SAR must be measured on the highest conducted output channel in each band (see highlighted values in the Output Power section of this report). Where the measured SAR on the highest output channel is > 0.8 W/kg, SAR evaluation for the other channels was performed (reference also KDB 447498 Section 4.3.3).

Duty Factor

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

In normal operation, the Intermec IM11 radio module is a RFID reader supporting only EPC Gen 2 (PR-ASK) operation. Dave Fry, Sr. EMC Engineer at Intermec, attests that the maximum duty cycle is 50%:

"The IM11 module firmware always establishes a maximum 50% on/off transmitter duty cycle."

Per KDB 447498, Section 6.3, duty factor scaling was applied to the RFID data only. SAR was measured at 100% duty factor, then a scaling factor of 0.5 was applied to the measured SAR values.

Summary

The following tables summarize the measured SAR values.

SAR TEST DATA

EUT:	1000CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001 IEEE Std 1528:2003 FCC KDB 447498 D01 v05 FCC KDB 248227 D01 V01r02 FCC KDB 648474 D04 V01 FCC 865664 D01 and D02

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	Side of Head	EUT Position	Headset	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Modulation	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Test #
Head	Left	Touch	No	2.4	2462	11	1	BPSK	0	0.162	7
Head	Left	Tilt	No	2.4	2462	11	1	BPSK	0.13	0.136	8
Head	Right	Touch	No	2.4	2462	11	1	BPSK	0.11	0.118	9
Head	Right	Tilt	No	2.4	2462	11	1	BPSK	0.03	0.137	10

SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.5
Date:	12/26/2012	Liquid Temperature (°C):	21.1
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	2	Bar. Pressure (mb):	1011
Comments:	None		

Test 7
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used (interpolated): f = 2462 MHz; σ = 1.908 mho/m; ε_r = 37.862; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 7.164 V/m

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

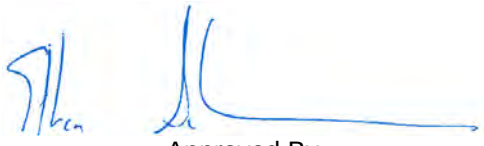
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.179 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.197 W/kg

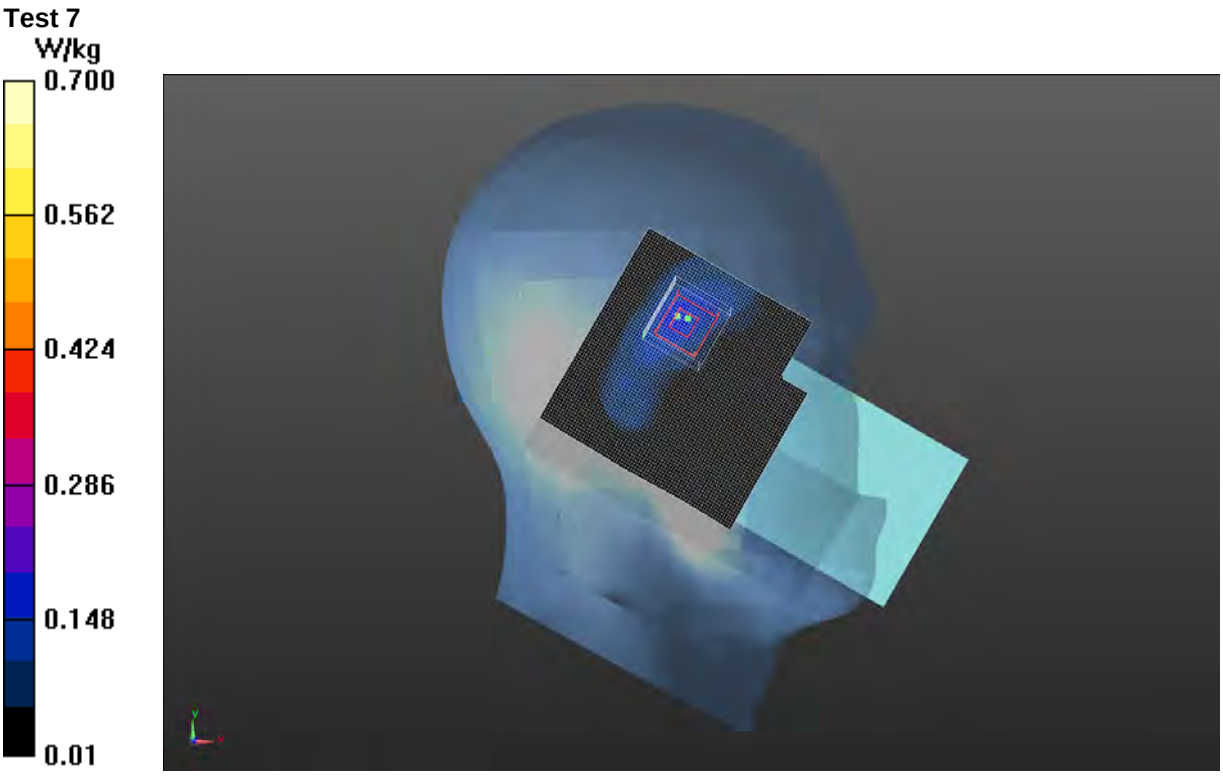
Head/Cheek - Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.757 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.315 W/kg
SAR(1 g) = 0.162 W/kg; SAR(10 g) = 0.082 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.203 W/kg
Maximum value of SAR (measured) = 0.0979 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.4
Date:	12/26/2012	Liquid Temperature (°C):	21
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	2	Bar. Pressure (mb):	1011
Comments:	None		

Test 8
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.908 mho/m; ε_r = 37.862; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.150 W/kg

Head/Tilt - Mid/Zoom Scan 2 (13x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.026 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.258 W/kg
SAR(1 g) = 0.135 W/kg; SAR(10 g) = 0.070 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.168 W/kg

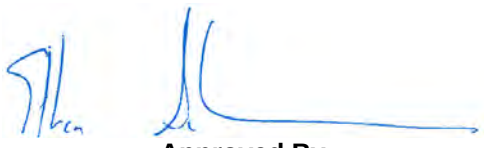
Head/Tilt - Mid/Zoom Scan (9x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.026 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.259 W/kg
SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.069 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.173 W/kg

Head/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

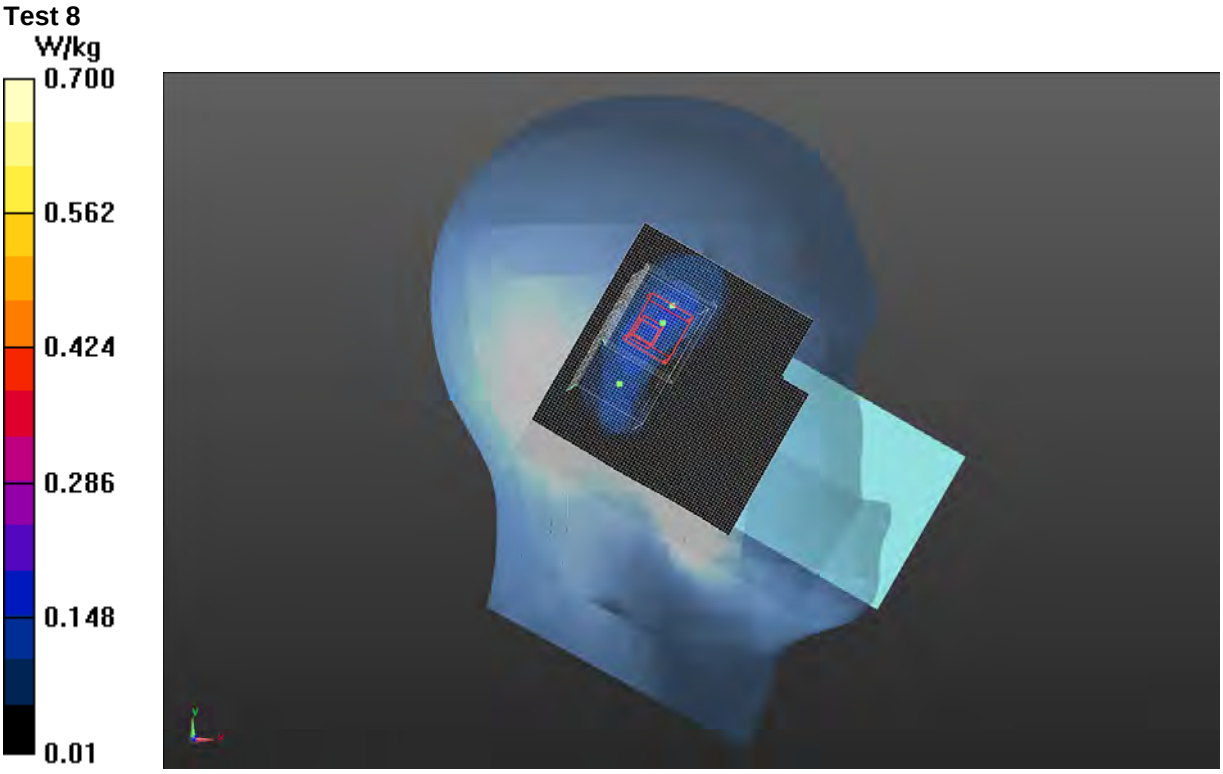
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 6.441 V/m

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.160 W/kg
Maximum value of SAR (measured) = 0.0792 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.5
Date:	12/26/2012	Liquid Temperature (°C):	20.6
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	2	Bar. Pressure (mb):	1011
Comments:	None		

Test 9
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used (interpolated): f = 2462 MHz; σ = 1.908 mho/m; ε_r = 37.862; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 6.298 V/m

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

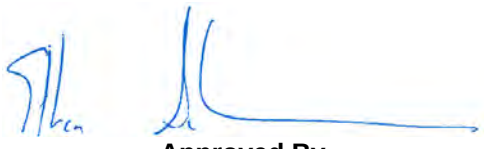
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.151 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.147 W/kg

Head/Cheek - Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.851 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.208 W/kg
SAR(1 g) = 0.118 W/kg; SAR(10 g) = 0.064 W/kg

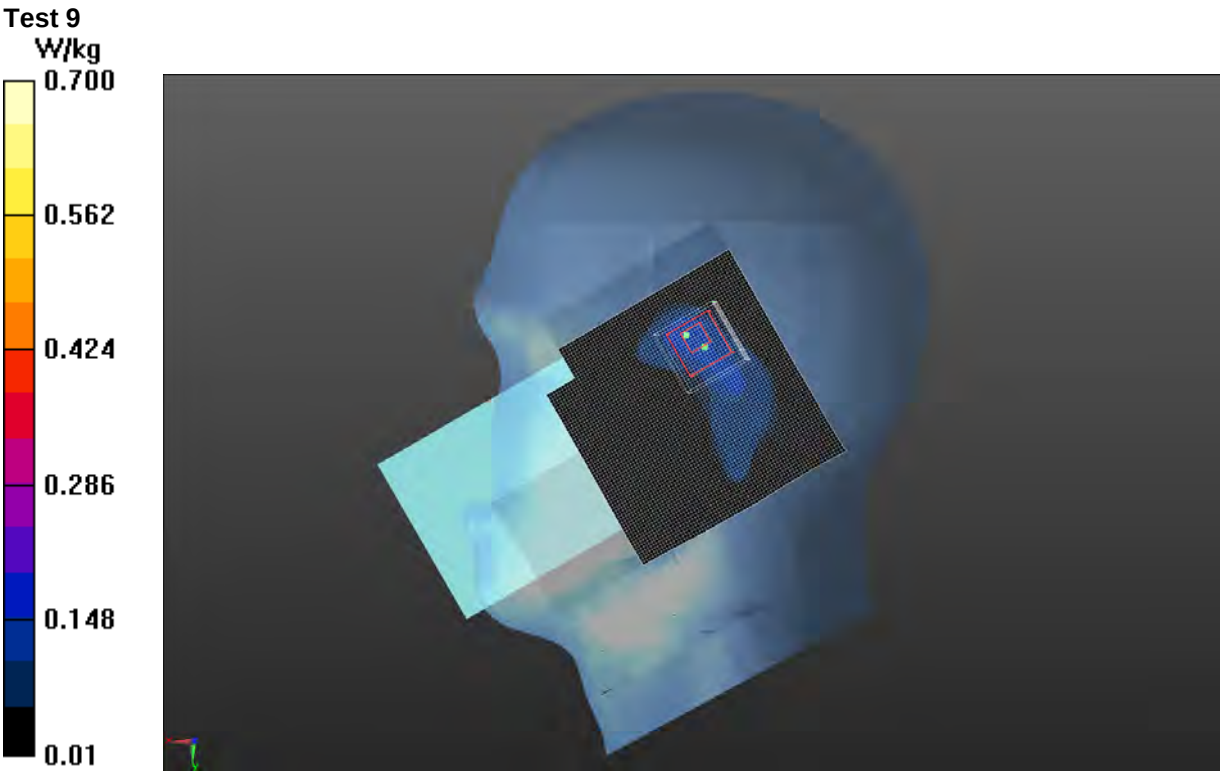
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.146 W/kg
Maximum value of SAR (measured) = 0.0757 W/kg



Approved By

SAR TEST DATA

Test 9



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.4
Date:	12/26/2012	Liquid Temperature (°C):	20.7
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	2	Bar. Pressure (mb):	1011
Comments:	None		

Test 10
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.908 mho/m; ε_r = 37.862; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.144 W/kg

Head/Tilt - Mid/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.556 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.255 W/kg
SAR(1 g) = 0.137 W/kg; SAR(10 g) = 0.071 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.171 W/kg

Head/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

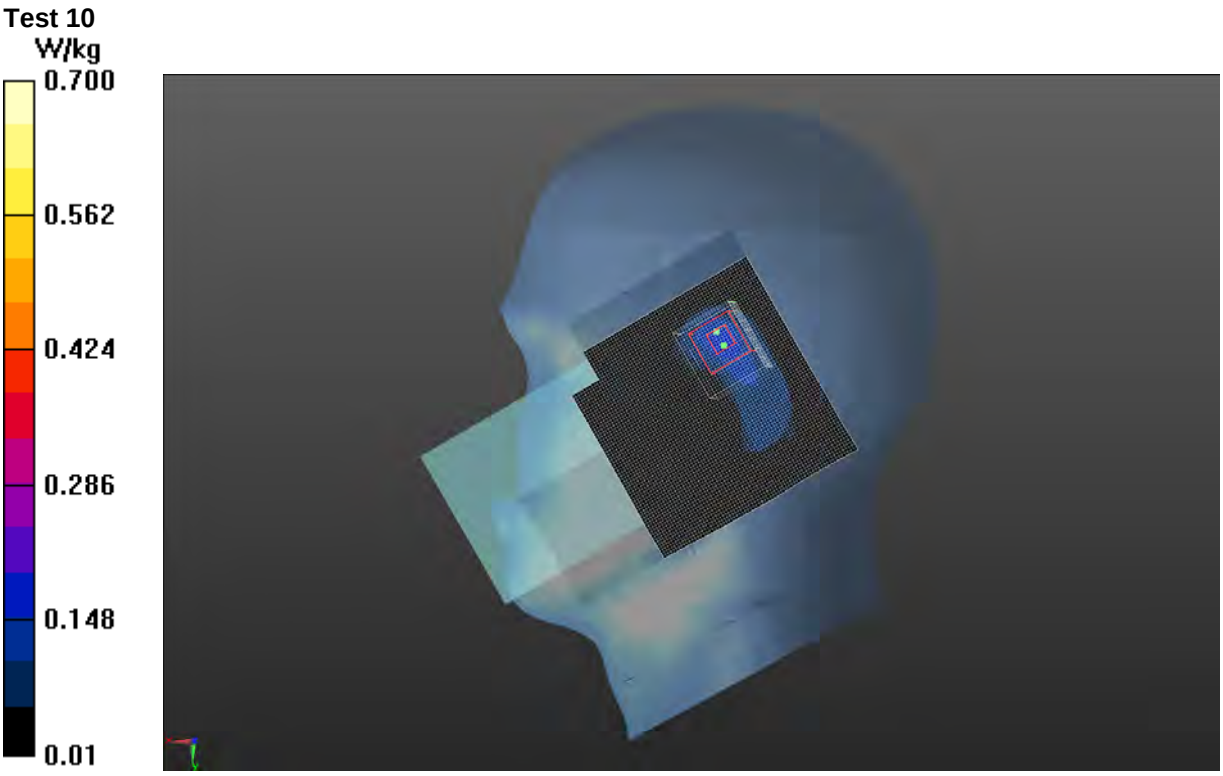
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 6.924 V/m

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

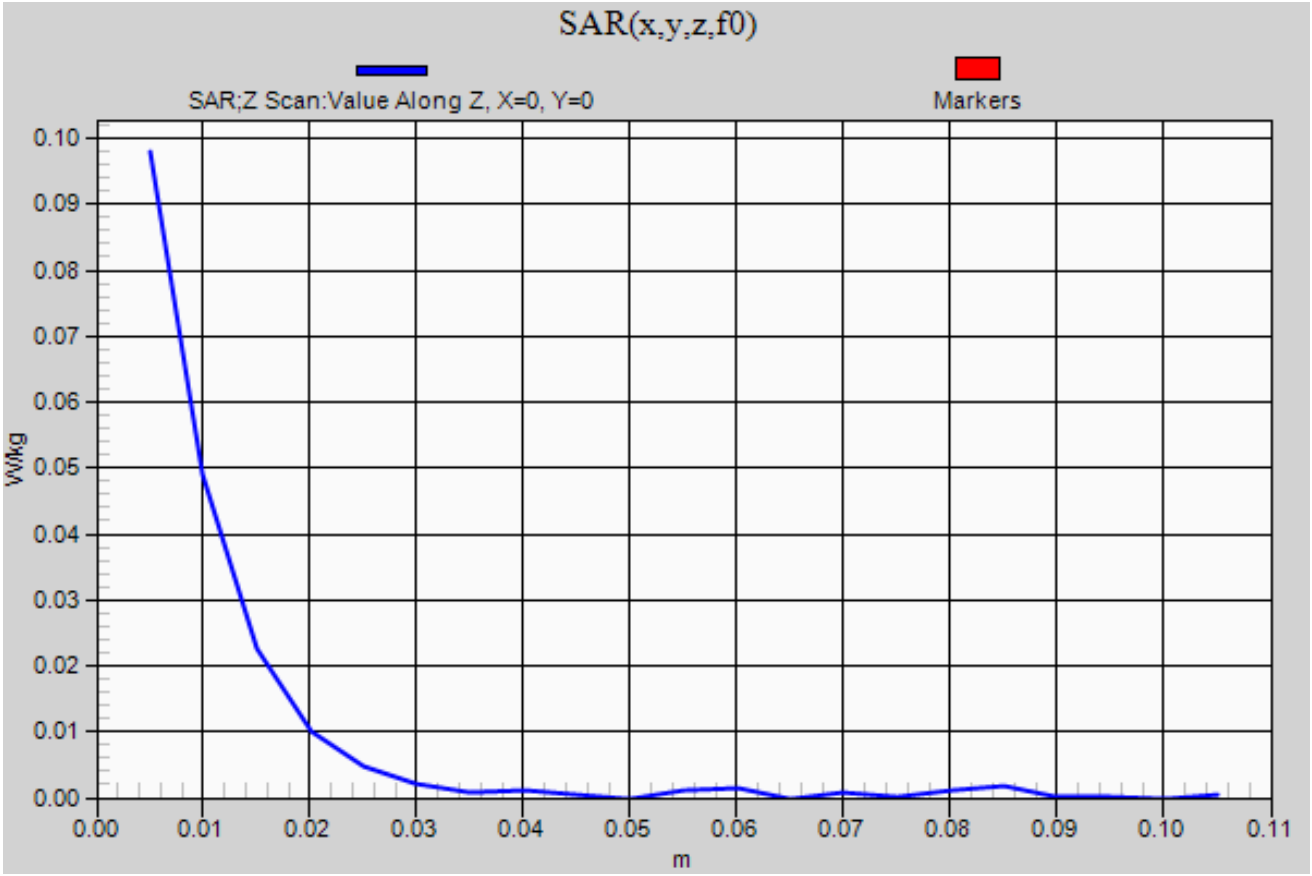
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.175 W/kg

Approved By

SAR TEST DATA



Test 7


SAR(x,y,z,f0)
SAR;Z Scan:Value Along Z, X=0, Y=0
Markers
W/kg
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
m

SAR TEST DATA

EUT:	1000CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001 IEEE Std 1528:2003 FCC KDB 447498 D01 v05 FCC KDB 248227 D01 V01r02 FCC KDB 648474 D04 V01 FCC 865664 D01 and D02

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	EUT Position	Body Worn Accessory	Headset	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Modulation	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Test #
Body	Right	Holster	Yes	2.4	2462	11	1	BPSK	-0.02	0.553	1
Body	Front	Holster	Yes	2.4	2462	11	1	BPSK	0.56	0.00687	2

SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.1
Date:	12/21/2012	Liquid Temperature (°C):	21.4
Serial Number:	8721242648	Humidity (%RH):	36
Configuration:	1	Bar. Pressure (mb):	1007
Comments:	None		

Test 1
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 2.002 mho/m; ε_r = 51.642; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Reference scan (41x101x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.401 W/kg

Body/Body/Area scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.675 W/kg

Body/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.003 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.553 W/kg; SAR(10 g) = 0.273 W/kg

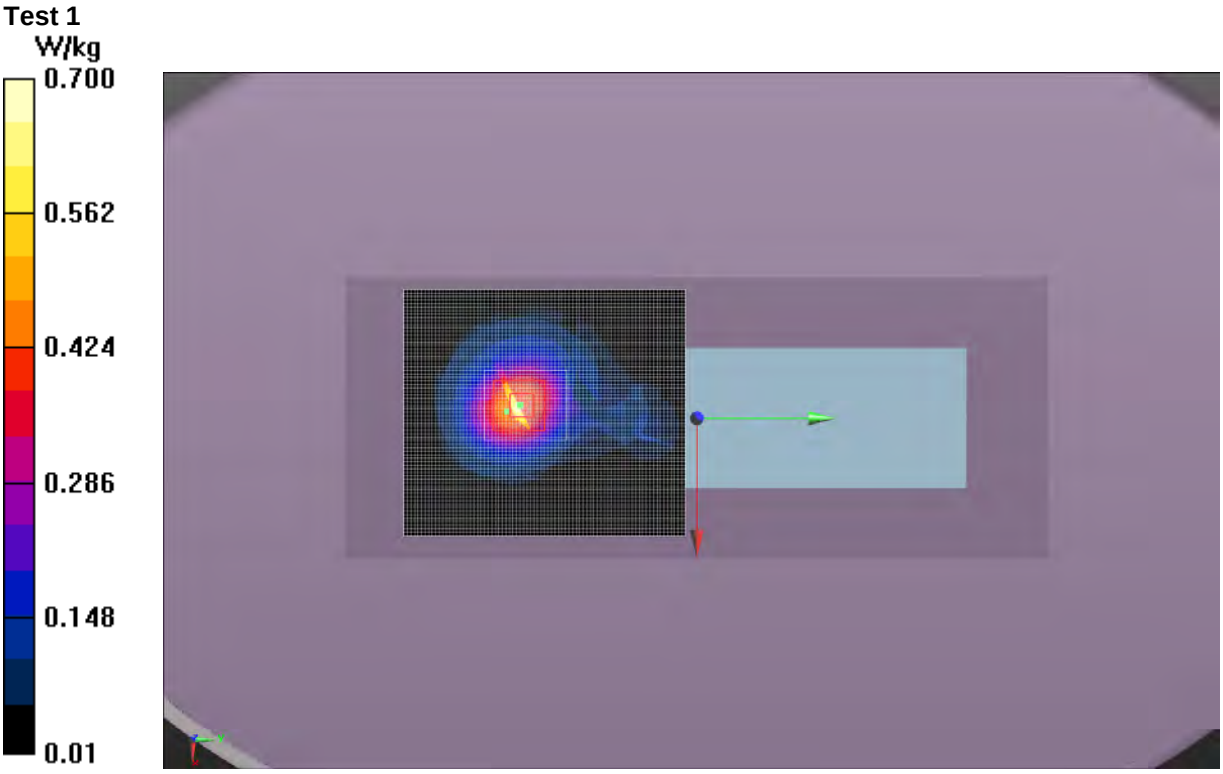
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.709 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 13.63 V/m
Maximum value of SAR (measured) = 0.372 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.8
Date:	12/21/2012	Liquid Temperature (°C):	21.2
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	1	Bar. Pressure (mb):	1007
Comments:	None		

Test 2
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2462 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 2462 MHz; σ = 2.002 mho/m; ε_r = 51.642; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Reference scan (51x101x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0501 W/kg

Body/Body/Area scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0505 W/kg

Body/Body/Zoom Scan (9x10x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.667 V/m; Power Drift = 0.56 dB
Peak SAR (extrapolated) = 0.0460 W/kg
SAR(1 g) = 0.00687 W/kg; SAR(10 g) = 0.00162 W/kg

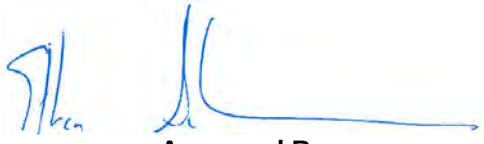
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0370 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 2.862 V/m

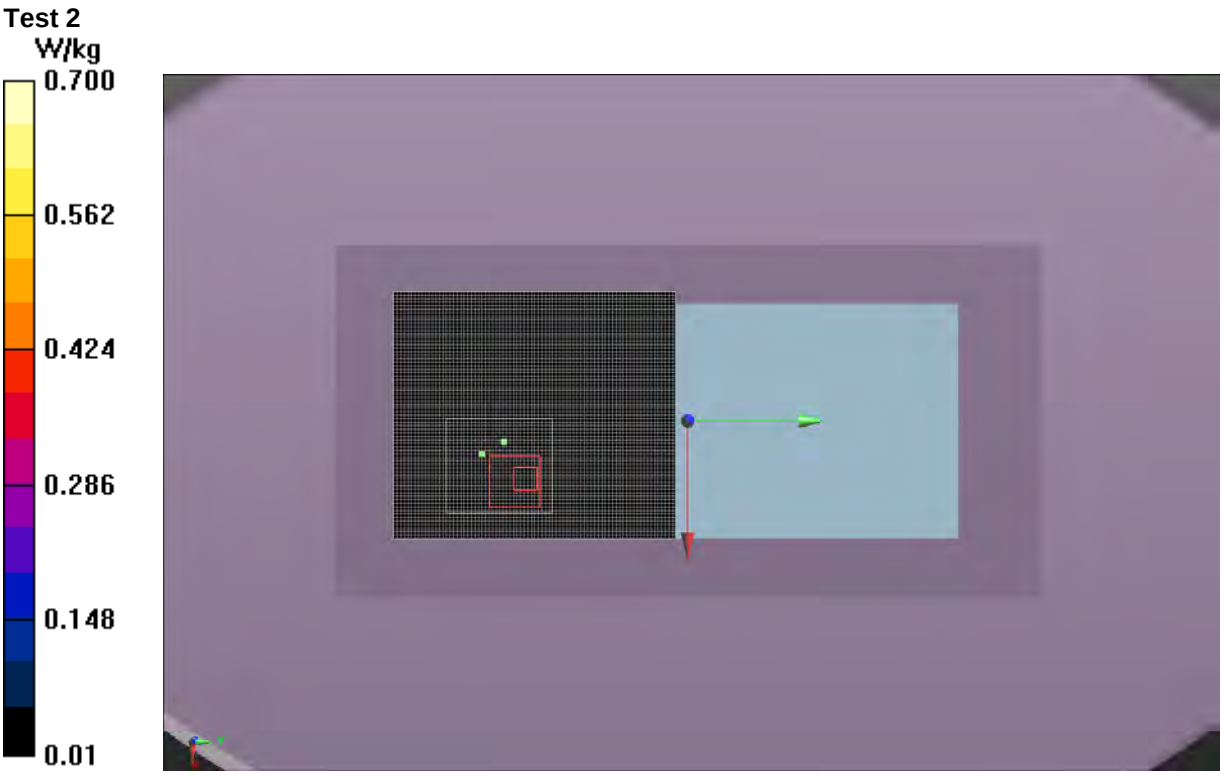
Body/Body/Zoom Scan (9x10x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.667 V/m; Power Drift = 0.56 dB

Info: Interpolated medium parameters used for SAR evaluation.

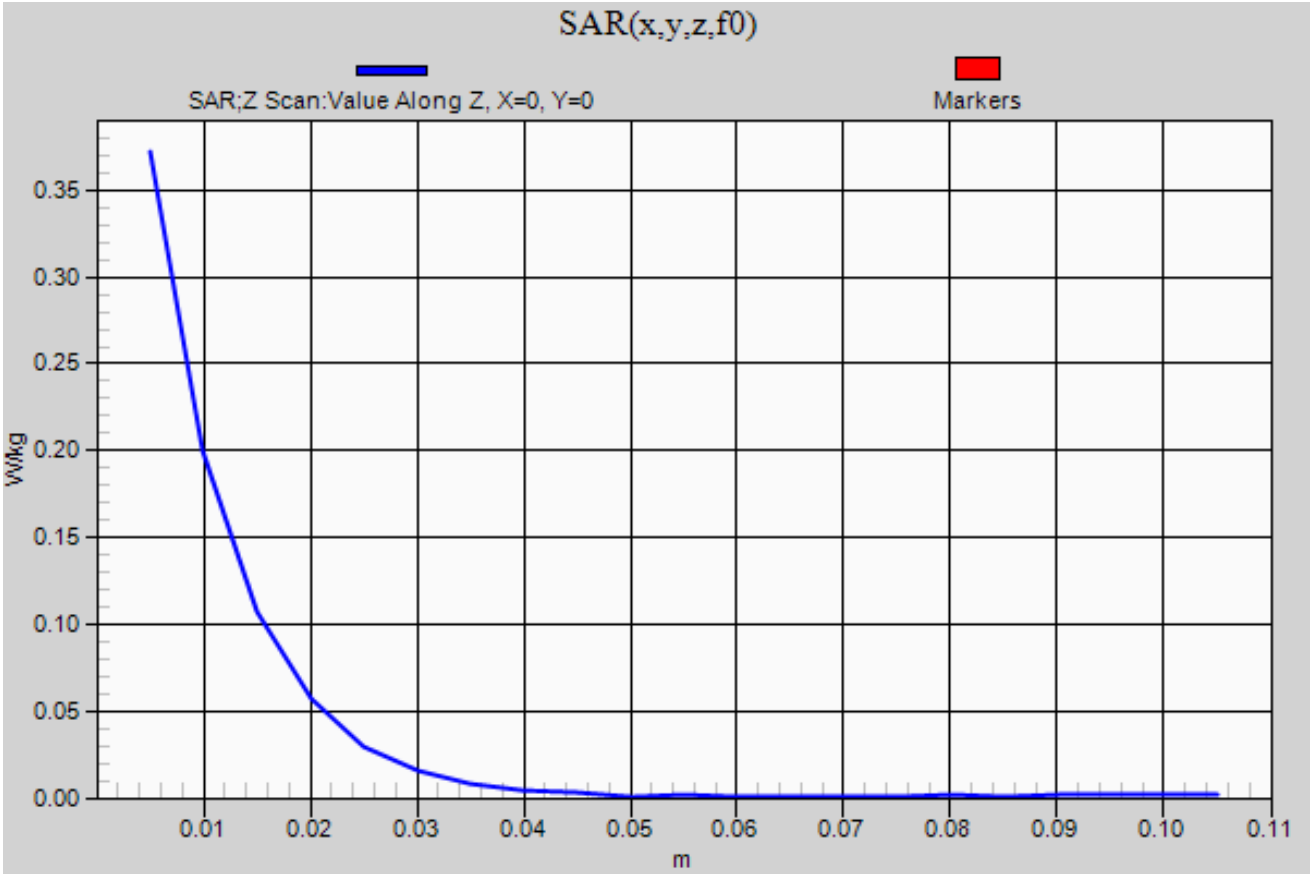


Approved By

SAR TEST DATA



Test 1


SAR(x,y,z,f0)
SAR;Z Scan:Value Along Z, X=0, Y=0
Markers
W/kg
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
m

SAR TEST DATA

EUT:	1000CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001 IEEE Std 1528:2003 FCC KDB 447498 D01 v05 FCC KDB 248227 D01 V01r02 FCC KDB 648474 D04 V01 FCC 865664 D01 and D02

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	Side of Head	EUT Position	Headset	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Modulation	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Test #
Head	Left	Touch	No	5.2	5200	40	6	OFDM	0.01	0.061	43
Head	Left	Tilt	No	5.2	5200	40	6	OFDM	0.13	0.00152	44
Head	Right	Touch	No	5.2	5200	40	6	OFDM	Note 2	Note 1	45
Head	Right	Tilt	No	5.2	5200	40	6	OFDM	Note 2	Note 1	46
Head	Left	Touch	No	5.3	5260	52	6	OFDM	Note 2	Note 1	47
Head	Left	Tilt	No	5.3	5260	52	6	OFDM	Note 2	Note 1	48
Head	Right	Touch	No	5.3	5260	52	6	OFDM	Note 2	Note 1	49
Head	Right	Tilt	No	5.3	5260	52	6	OFDM	0.49	0.000403	50
Head	Left	Touch	No	5.6	5680	136	6	OFDM	-0.79	0.042	51
Head	Left	Tilt	No	5.6	5680	136	6	OFDM	Note 2	Note 1	52
Head	Right	Touch	No	5.6	5680	136	6	OFDM	Note 2	Note 1	53
Head	Right	Tilt	No	5.6	5680	136	6	OFDM	Note 2	Note 1	54
Head	Left	Touch	No	5.8	5745	149	6	OFDM	-0.03	0.039	55
Head	Left	Tilt	No	5.8	5745	149	6	OFDM	Note 2	Note 1	56
Head	Right	Touch	No	5.8	5745	149	6	OFDM	Note 2	Note 1	57
Head	Right	Tilt	No	5.8	5745	149	6	OFDM	Note 2	Note 1	58

Note 1: Zoom scan measurement was not performed because the area scan results were less than 0.1 mW/g
Note 2: Power drift measurement was not performed because the area scan results were less than 0.1 mW/g

SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.2
Date:	1/2/2013	Liquid Temperature (°C):	21
Serial Number:	8721242648	Humidity (%RH):	23
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 43
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used: f = 5200 MHz; σ = 4.603 mho/m; ε_r = 36.308; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 1.747 V/m

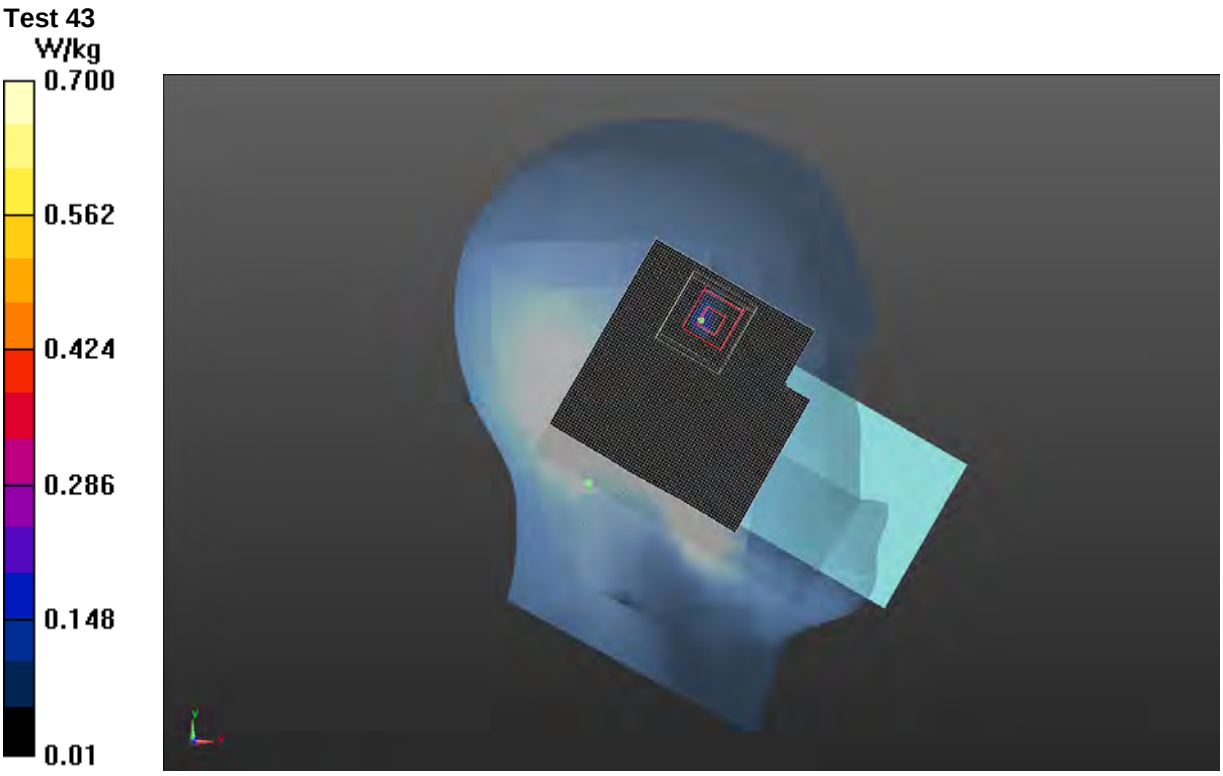
Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm
Maximum value of SAR (interpolated) = 0.0411 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.228 W/kg

Head/Cheek - Mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.525 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.229 W/kg
SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.028 W/kg
Maximum value of SAR (measured) = 0.0818 W/kg
Maximum value of SAR (measured) = 0.0140 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.8
Date:	1/2/2013	Liquid Temperature (°C):	20.4
Serial Number:	8721242648	Humidity (%RH):	26
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 44
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 4.603 mho/m; ε_r = 36.308; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm
Maximum value of SAR (interpolated) = 0.0360 W/kg

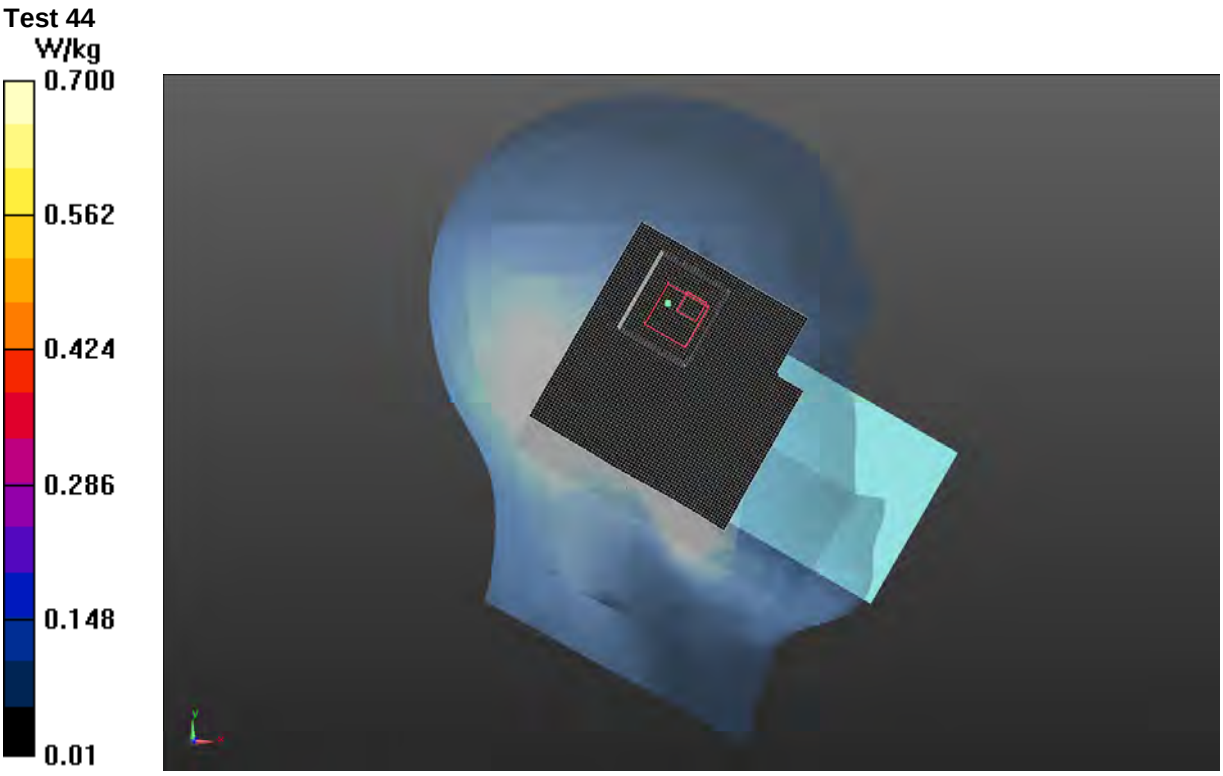
Head/Tilt - Mid/Zoom Scan (9x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.044 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.0950 W/kg
SAR(1 g) = 0.00152 W/kg; SAR(10 g) = 0.000168 W/kg
Maximum value of SAR (measured) = 0.0368 W/kg

Head/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 1.183 V/m

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0261 W/kg
Maximum value of SAR (measured) = 0.00644 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.5
Date:	1/2/2013	Liquid Temperature (°C):	20
Serial Number:	8721242648	Humidity (%RH):	27
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 45
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 4.603 mho/m; ε_r = 36.308; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

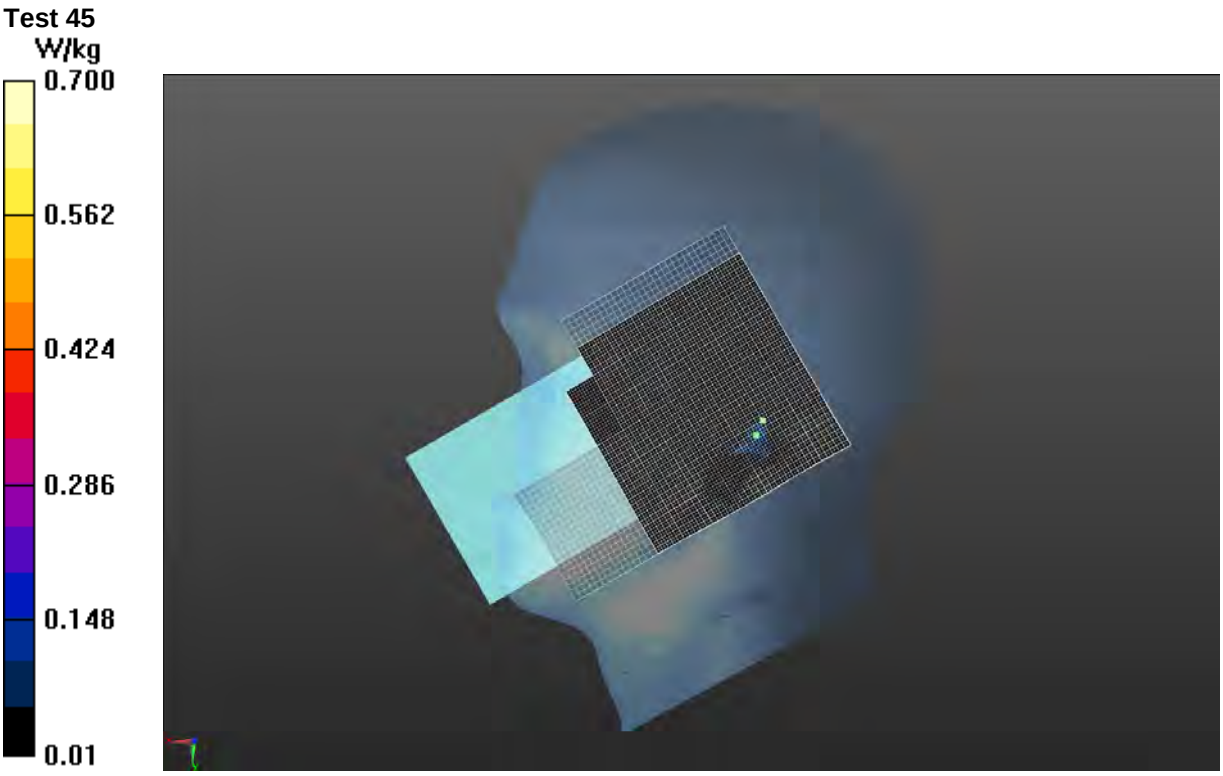
Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm
Maximum value of SAR (interpolated) = 0.0334 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.115 W/kg

Head/Cheek - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0385 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.8
Date:	1/2/2013	Liquid Temperature (°C):	20.1
Serial Number:	8721242648	Humidity (%RH):	26
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 46
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 4.603 mho/m; ε_r = 36.308; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

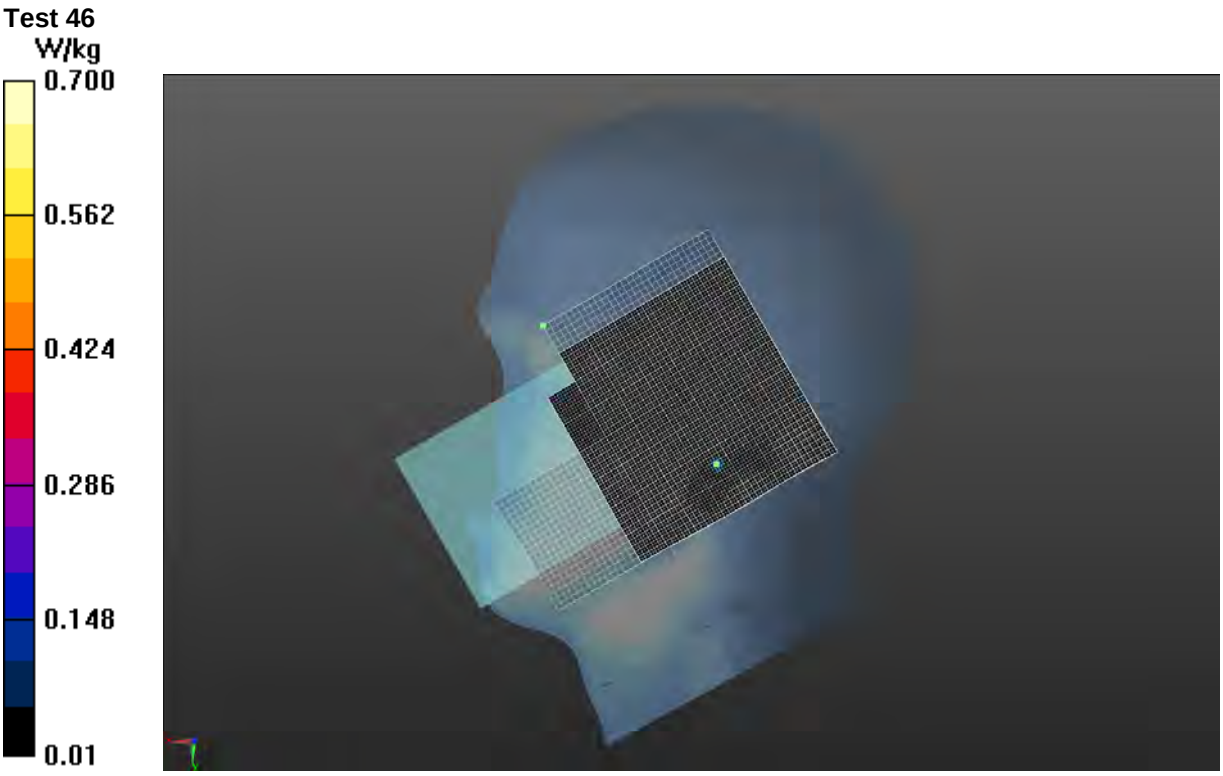
Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm
Maximum value of SAR (interpolated) = 0.00894 W/kg

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0734 W/kg

Head/Tilt - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0306 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.6
Date:	1/2/2013	Liquid Temperature (°C):	20.1
Serial Number:	8721242648	Humidity (%RH):	25
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 47
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5260 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5260 MHz; σ = 4.668 mho/m; ε_r = 36.215; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0323 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

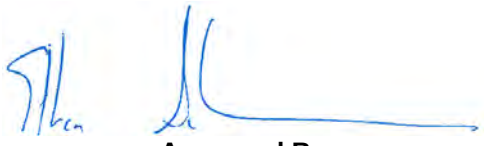
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0784 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.0348 W/kg

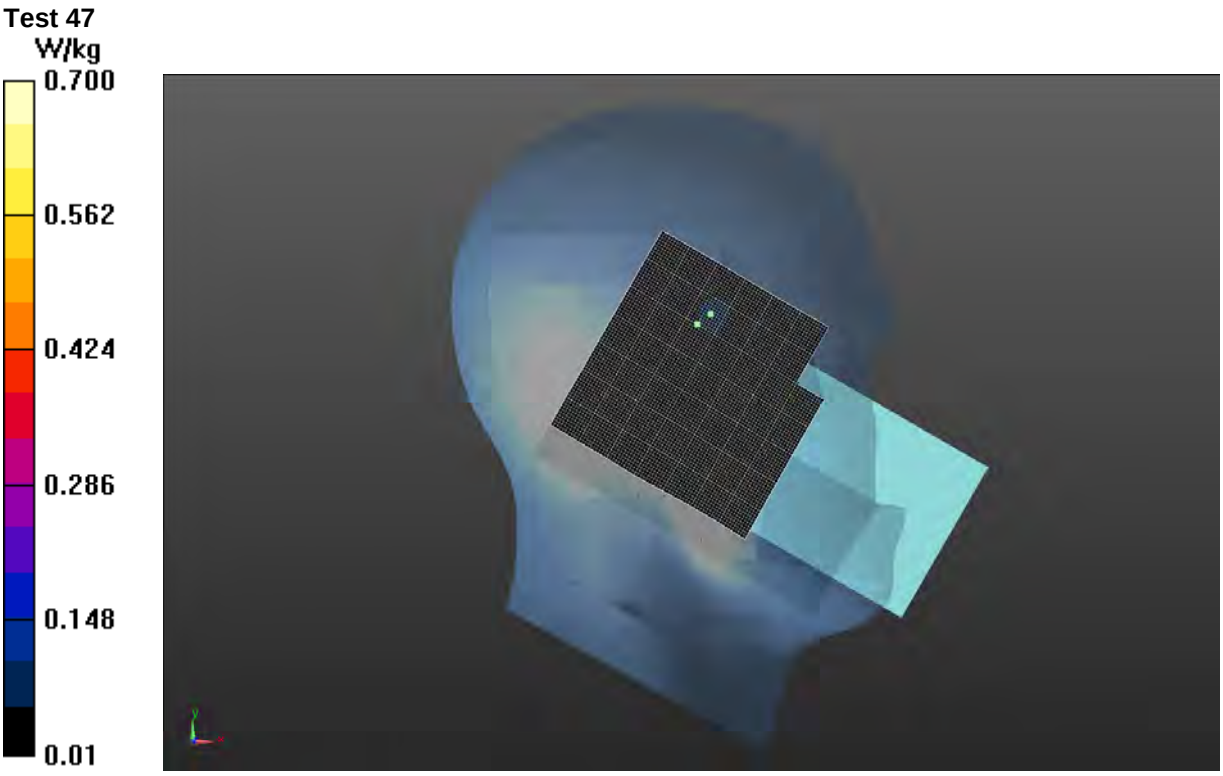
Head/Cheek - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0570 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	22.8
Date:	1/2/2013	Liquid Temperature (°C):	20.4
Serial Number:	8721242648	Humidity (%RH):	27
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 48
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5260 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5260 MHz; σ = 4.668 mho/m; ε_r = 36.215; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0331 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0172 W/kg

Head/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

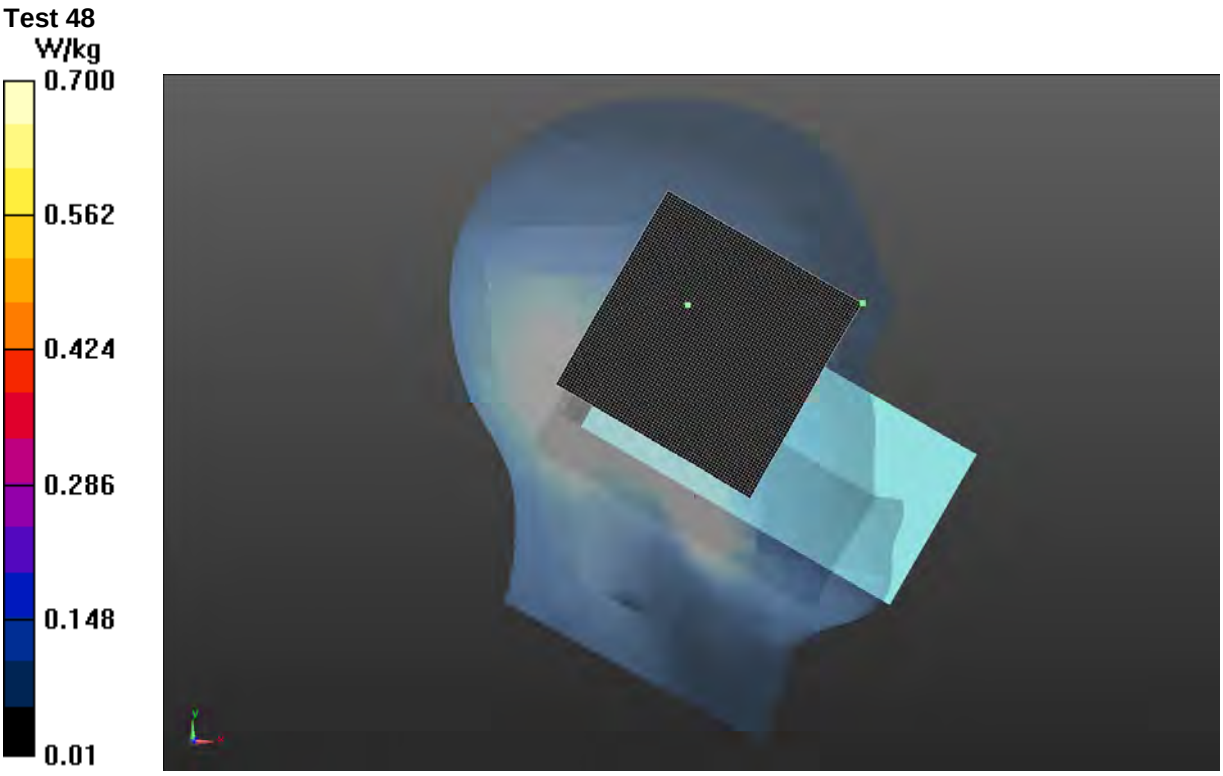
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 4.813 V/m

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0278 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.7
Date:	1/2/2013	Liquid Temperature (°C):	20.1
Serial Number:	8721242648	Humidity (%RH):	26
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 49
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5260 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5260 MHz; σ = 4.668 mho/m; ε_r = 36.215; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0459 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0429 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0206 W/kg

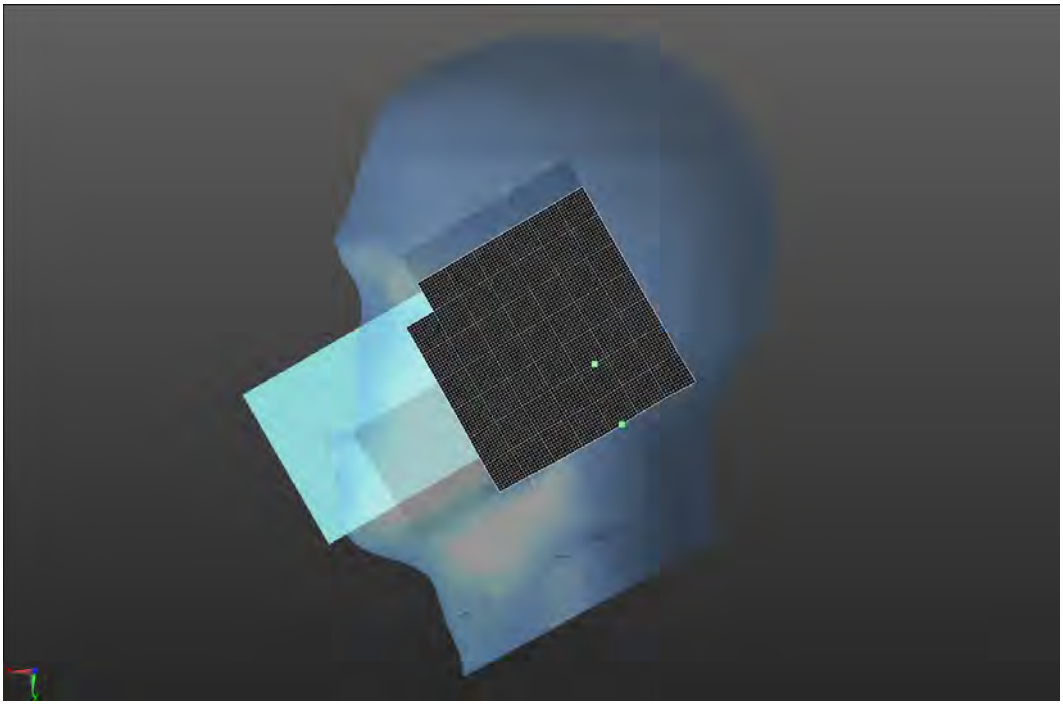
Head/Cheek - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0269 W/kg

Approved By

SAR TEST DATA

Test 49
W/kg
0.700
0.562
0.424
0.286
0.148
0.01



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.8
Date:	1/2/2013	Liquid Temperature (°C):	20.1
Serial Number:	8721242648	Humidity (%RH):	25
Configuration:	2	Bar. Pressure (mb):	1027
Comments:	None		

Test 50
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5260 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5260 MHz; σ = 4.668 mho/m; ε_r = 36.215; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0176 W/kg

Head/Tilt - Mid/Zoom Scan (11x12x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.748 V/m; Power Drift = 0.49 dB
Peak SAR (extrapolated) = 0.0200 W/kg
SAR(1 g) = 0.000403 W/kg; SAR(10 g) = 4.04e-005 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0151 W/kg

Head/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

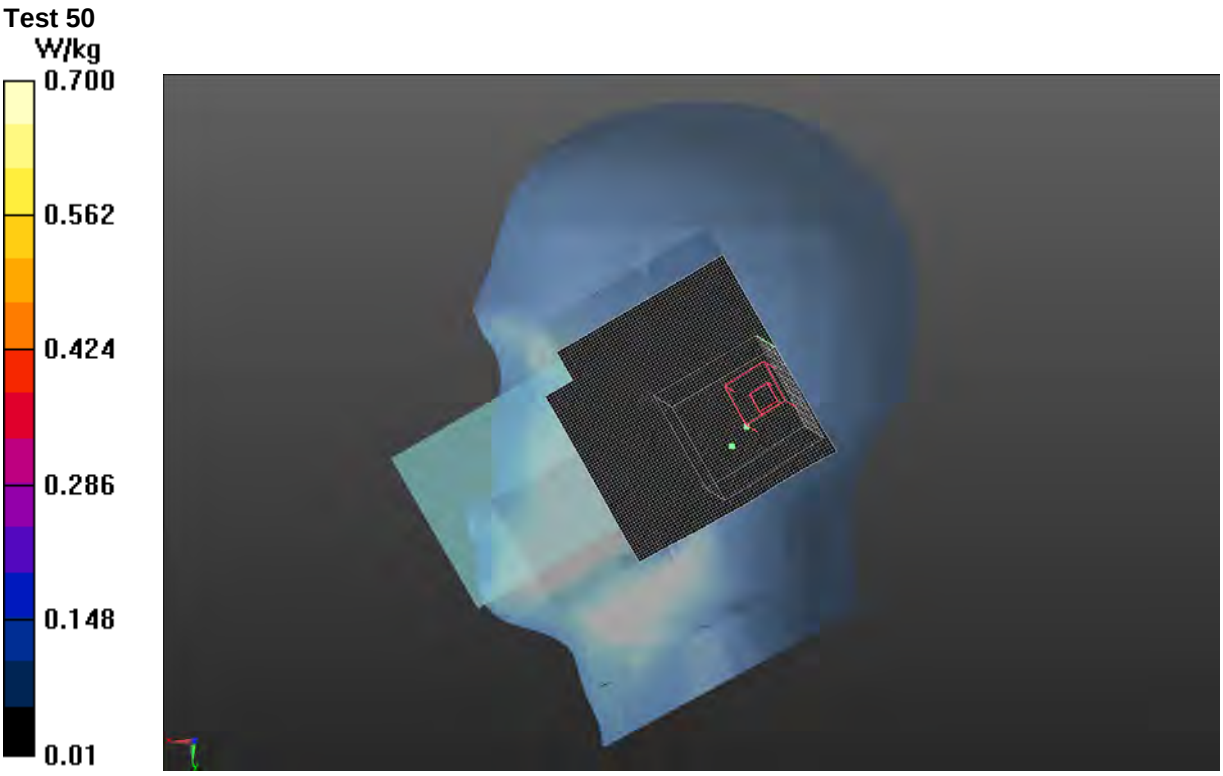
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 1.060 V/m

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0627 W/kg
Maximum value of SAR (measured) = 0.00524 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.3
Date:	1/7/2013	Liquid Temperature (°C):	21.1
Serial Number:	8721242648	Humidity (%RH):	37.3
Configuration:	2	Bar. Pressure (mb):	1016
Comments:	None		

Test 51
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5680 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used (interpolated): f = 5680 MHz; σ = 5.13 mho/m; ε_r = 35.522; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 1.254 V/m

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

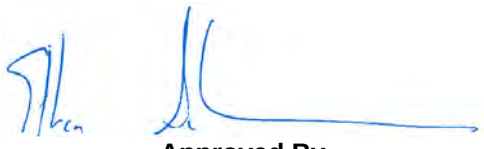
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0196 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0889 W/kg

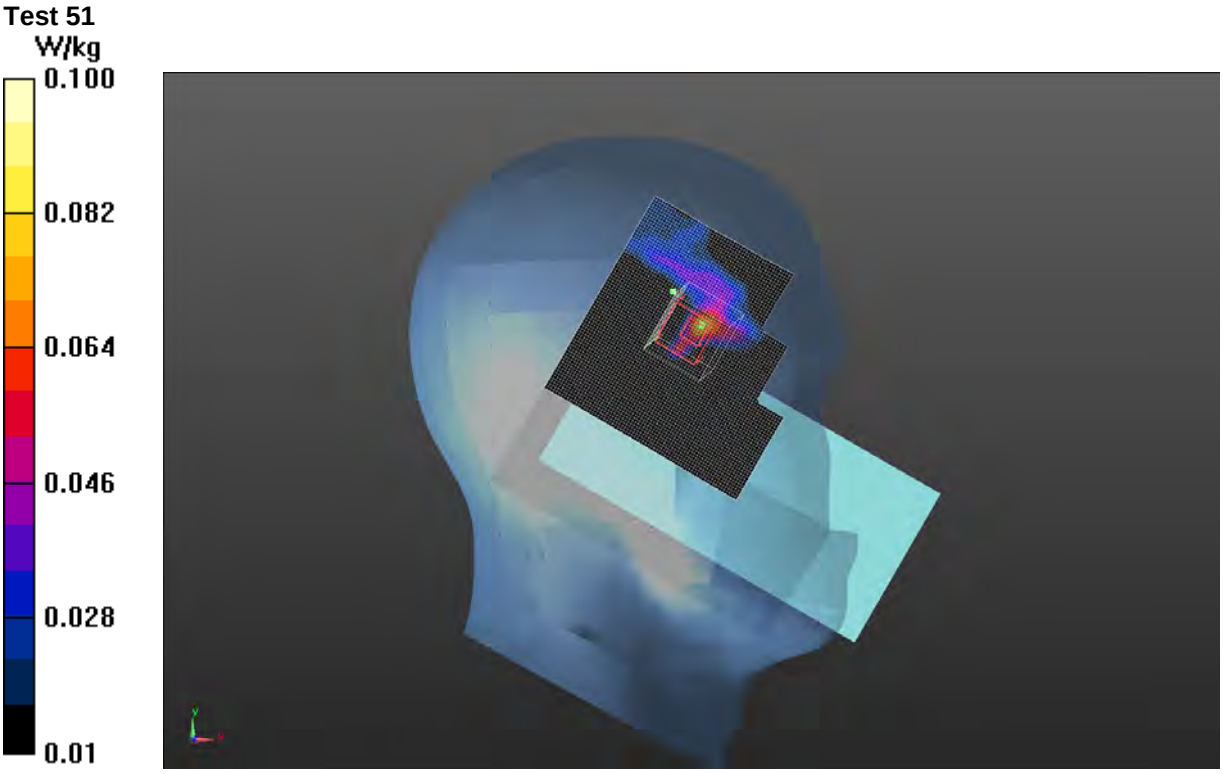
Head/Cheek - Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.062 V/m; Power Drift = -0.79 dB
Peak SAR (extrapolated) = 0.183 W/kg
SAR(1 g) = 0.042 W/kg; SAR(10 g) = 0.018 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0625 W/kg
Maximum value of SAR (measured) = 0.00807 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.7
Date:	1/7/2013	Liquid Temperature (°C):	21.2
Serial Number:	8721242648	Humidity (%RH):	37.5
Configuration:	2	Bar. Pressure (mb):	1016
Comments:	None		

Test 52
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5680 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5680 MHz; σ = 5.13 mho/m; ε_r = 35.522; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0302 W/kg

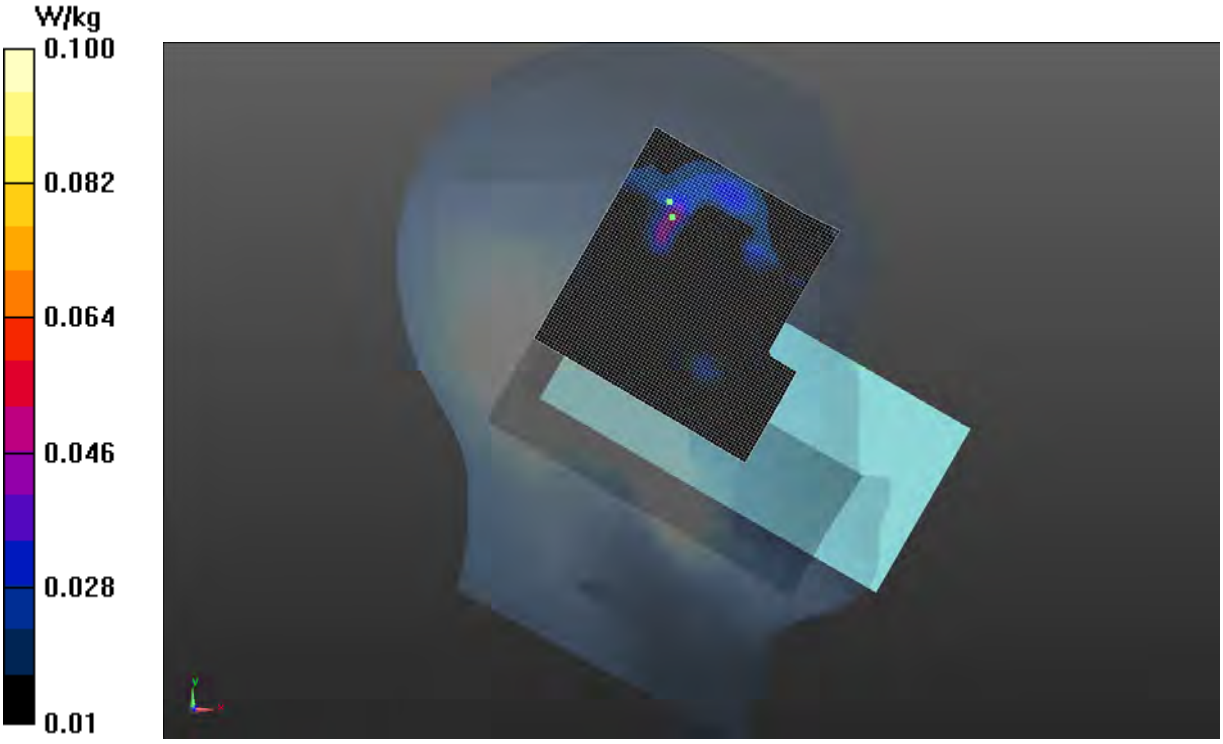
Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0480 W/kg

Approved By

SAR TEST DATA

Test 52



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.6
Date:	1/7/2013	Liquid Temperature (°C):	21.3
Serial Number:	8721242648	Humidity (%RH):	40
Configuration:	2	Bar. Pressure (mb):	1019
Comments:	None		

Test 53
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5680 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5680 MHz; σ = 5.13 mho/m; ε_r = 35.522; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0526 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0566 W/kg

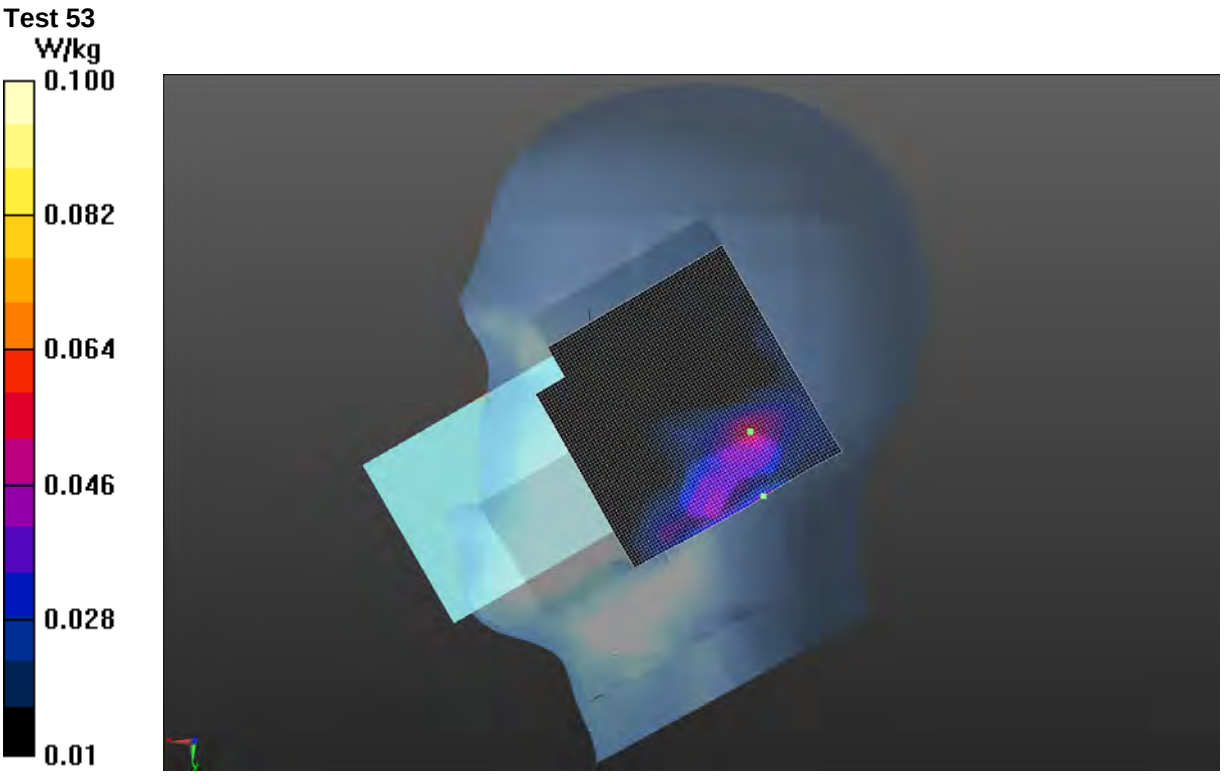
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0177 W/kg

Head/Cheek - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0525 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.7
Date:	1/7/2013	Liquid Temperature (°C):	21.3
Serial Number:	8721242648	Humidity (%RH):	40
Configuration:	2	Bar. Pressure (mb):	1019
Comments:	None		

Test 54
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5680 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5680 MHz; σ = 5.13 mho/m; ε_r = 35.522; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0299 W/kg

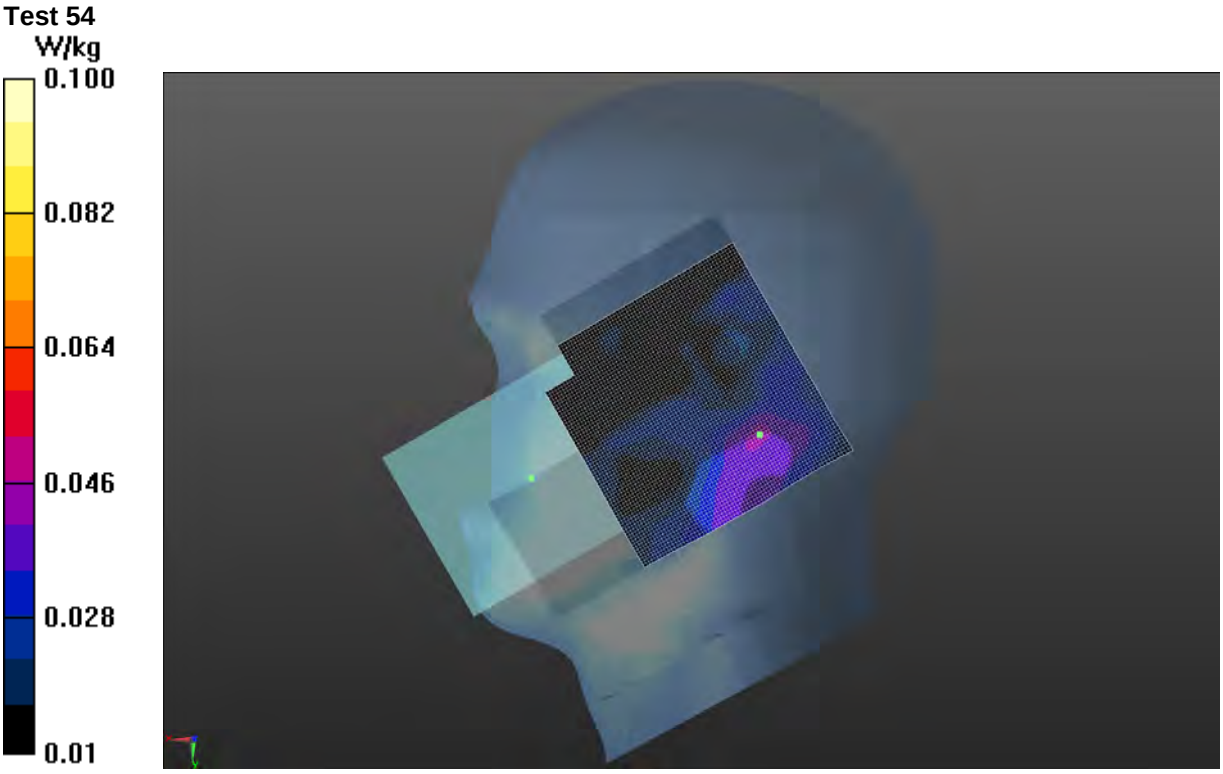
Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0419 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0167 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.6
Date:	1/7/2013	Liquid Temperature (°C):	21.3
Serial Number:	8721242648	Humidity (%RH):	40
Configuration:	2	Bar. Pressure (mb):	1019
Comments:	None		

Test 55
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5745 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used (interpolated): f = 5745 MHz; σ = 5.201 mho/m; ε_r = 35.422; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 1.527 V/m

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

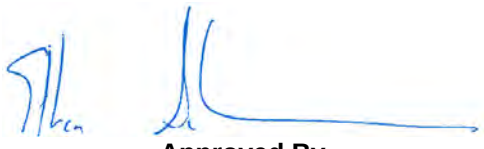
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0356 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.113 W/kg

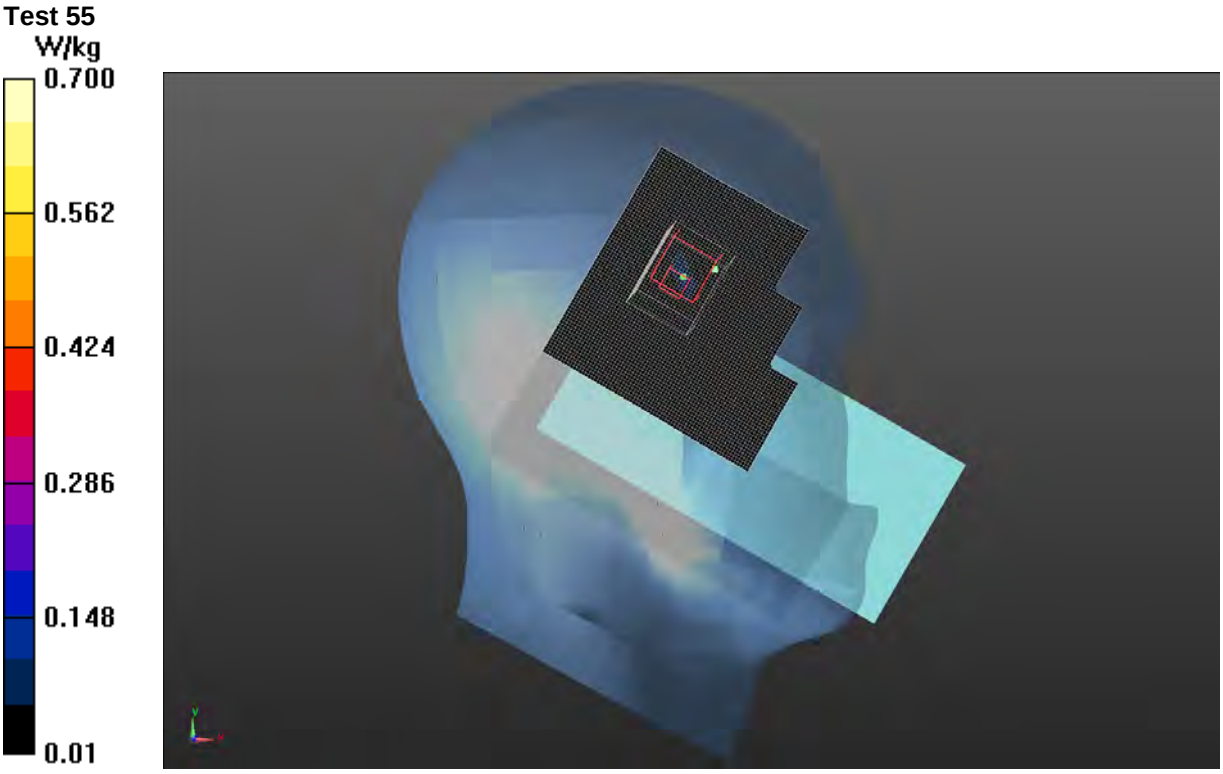
Head/Cheek - Mid/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.305 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.0930 W/kg
SAR(1 g) = 0.039 W/kg; SAR(10 g) = 0.023 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0569 W/kg
Maximum value of SAR (measured) = 0.0121 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.6
Date:	1/7/2013	Liquid Temperature (°C):	21.2
Serial Number:	8721242648	Humidity (%RH):	39
Configuration:	2	Bar. Pressure (mb):	1019
Comments:	None		

Test 56
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5745 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5745 MHz; σ = 5.201 mho/m; ε_r = 35.422; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0 W/kg

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

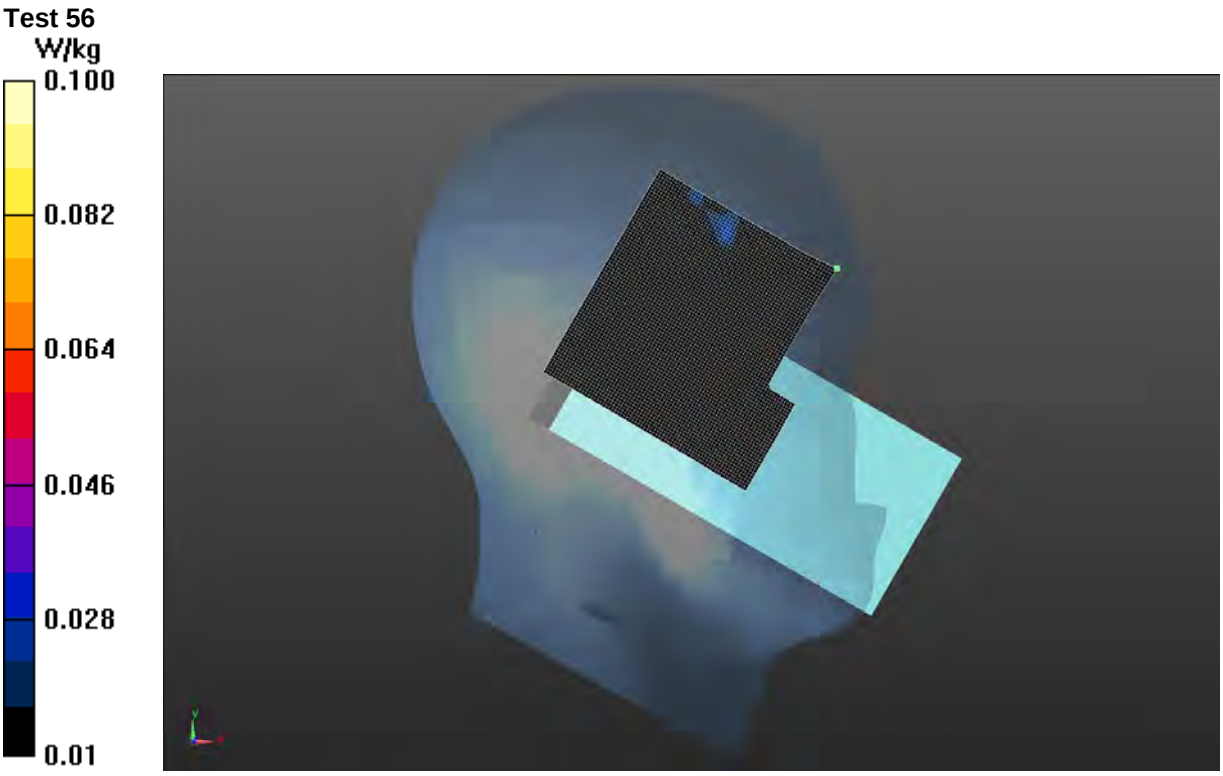
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0265 W/kg

Head/Tilt - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0265 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.8
Date:	1/7/2013	Liquid Temperature (°C):	21.3
Serial Number:	8721242648	Humidity (%RH):	39
Configuration:	2	Bar. Pressure (mb):	1019
Comments:	None		

Test 57
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5745 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5745 MHz; σ = 5.201 mho/m; ε_r = 35.422; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

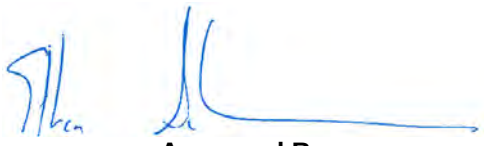
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0480 W/kg

Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0376 W/kg

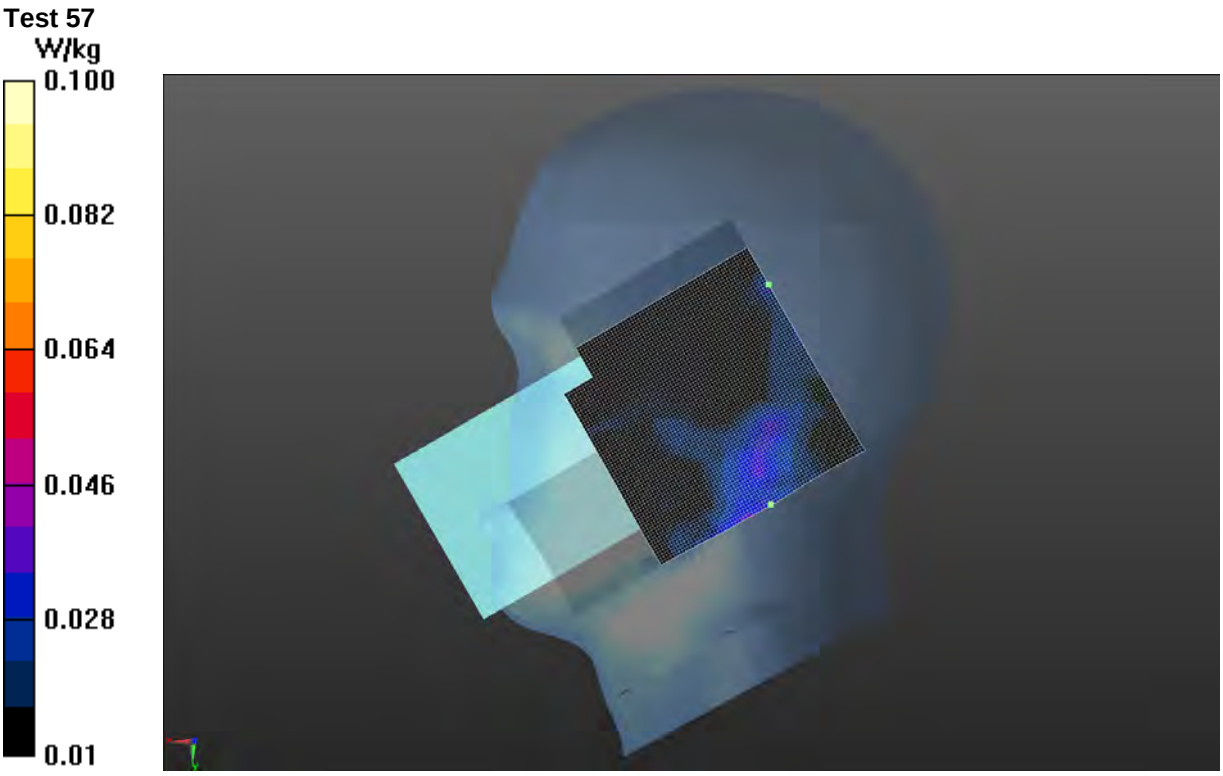
Head/Cheek - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0361 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.7
Date:	1/7/2013	Liquid Temperature (°C):	21.3
Serial Number:	8721242648	Humidity (%RH):	39
Configuration:	2	Bar. Pressure (mb):	1019
Comments:	None		

Test 58
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5745 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5745 MHz; σ = 5.201 mho/m; ε_r = 35.422; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

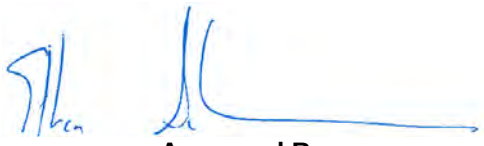
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0400 W/kg

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0422 W/kg

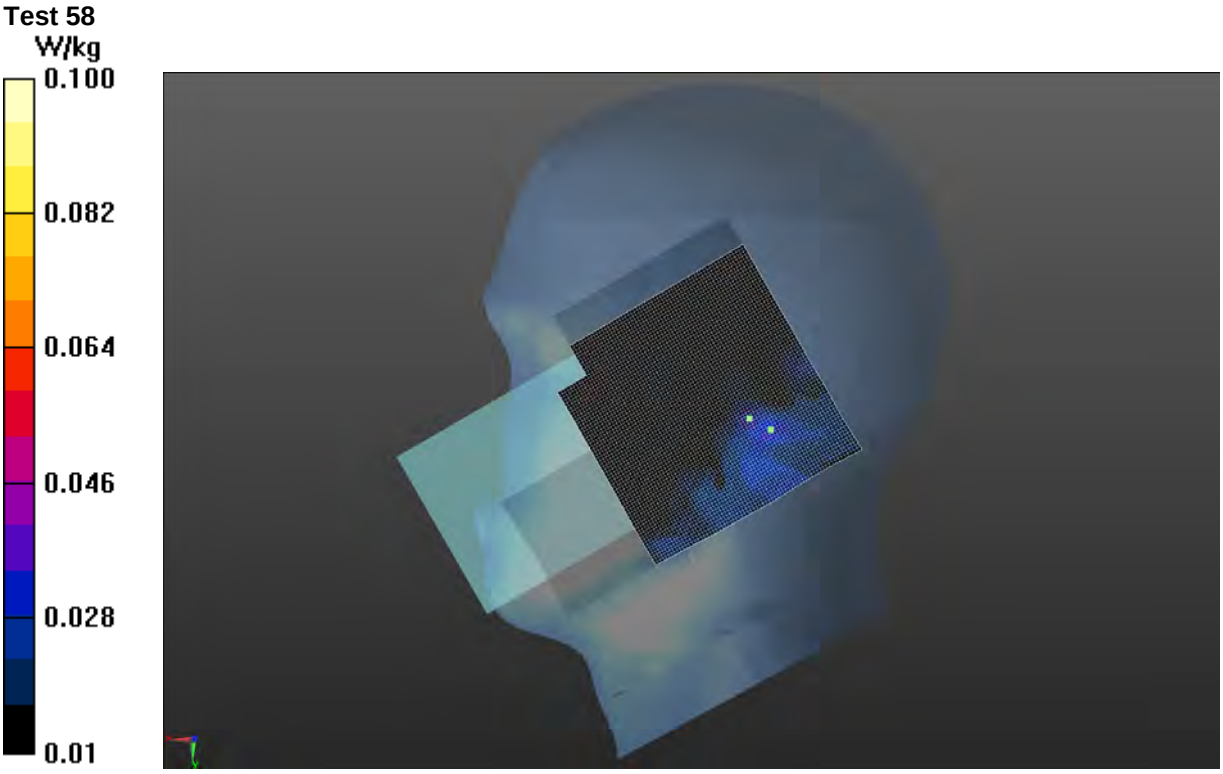
Head/Tilt - Mid/Area scan (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0311 W/kg

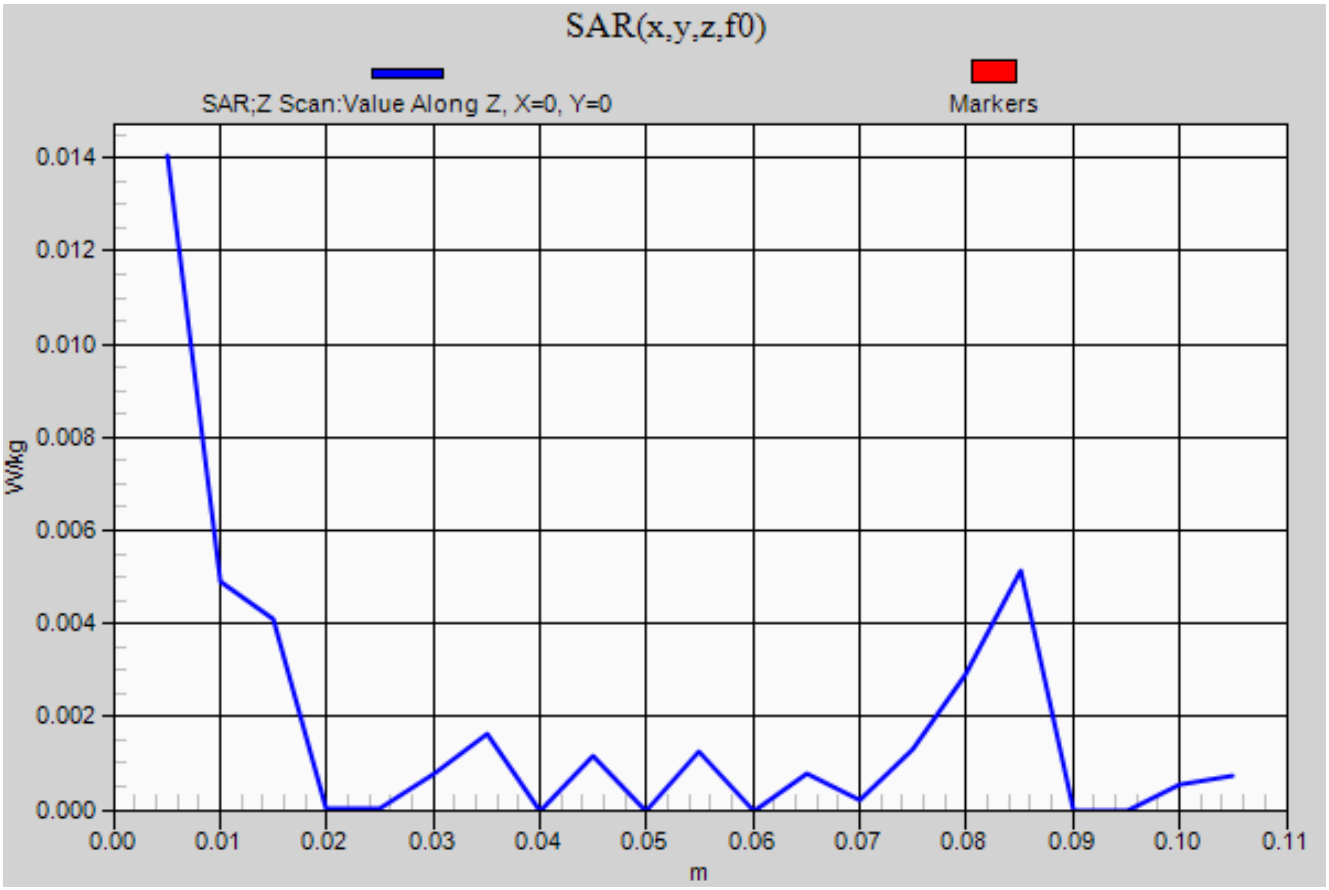


Approved By

SAR TEST DATA



Test 43


SAR(x,y,z,f0)
SAR;Z Scan:Value Along Z, X=0, Y=0
Markers
W/kg
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
m

SAR TEST DATA

EUT:	1000CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001 IEEE Std 1528:2003 FCC KDB 447498 D01 v05 FCC KDB 248227 D01 V01r02 FCC KDB 648474 D04 V01 FCC 865664 D01 and D02

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	EUT Position	Body Worn Accessory	Headset	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Modulation	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Test #
Body	Right	Holster	Yes	5.2	5200	40	6	OFDM	0.02	0.302	19
Body	Front	Holster	Yes	5.2	5200	40	6	OFDM	Note 2	Note 1	20
Body	Right	Holster	Yes	5.3	5260	52	6	OFDM	0.1	0.287	21
Body	Front	Holster	Yes	5.3	5260	52	6	OFDM	Note 2	Note 1	22
Body	Right	Holster	Yes	5.6	5680	136	6	OFDM	0.01	0.335	23
Body	Front	Holster	Yes	5.6	5680	136	6	OFDM	Note 2	Note 1	24
Body	Right	Holster	Yes	5.8	5745	149	6	OFDM	-0.12	0.225	25
Body	Front	Holster	Yes	5.8	5745	149	6	OFDM	Note 2	Note 1	26

Note 1: Zoom scan measurement was not performed because the area scan results were less than 0.1 mW/g
Note 2: Power drift measurement was not performed because the area scan results were less than 0.1 mW/g

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.1
Date:	12/27/2012	Liquid Temperature (°C):	22.6
Serial Number:	8721242648	Humidity (%RH):	34.3
Configuration:	1	Bar. Pressure (mb):	1019
Comments:	None		

Test 19
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 5.383 mho/m; ε_r = 47.336; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan (8x8x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 11.181 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.924 W/kg
SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.121 W/kg
Maximum value of SAR (measured) = 0.542 W/kg

Body/Body/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of Total (measured) = 4.947 V/m

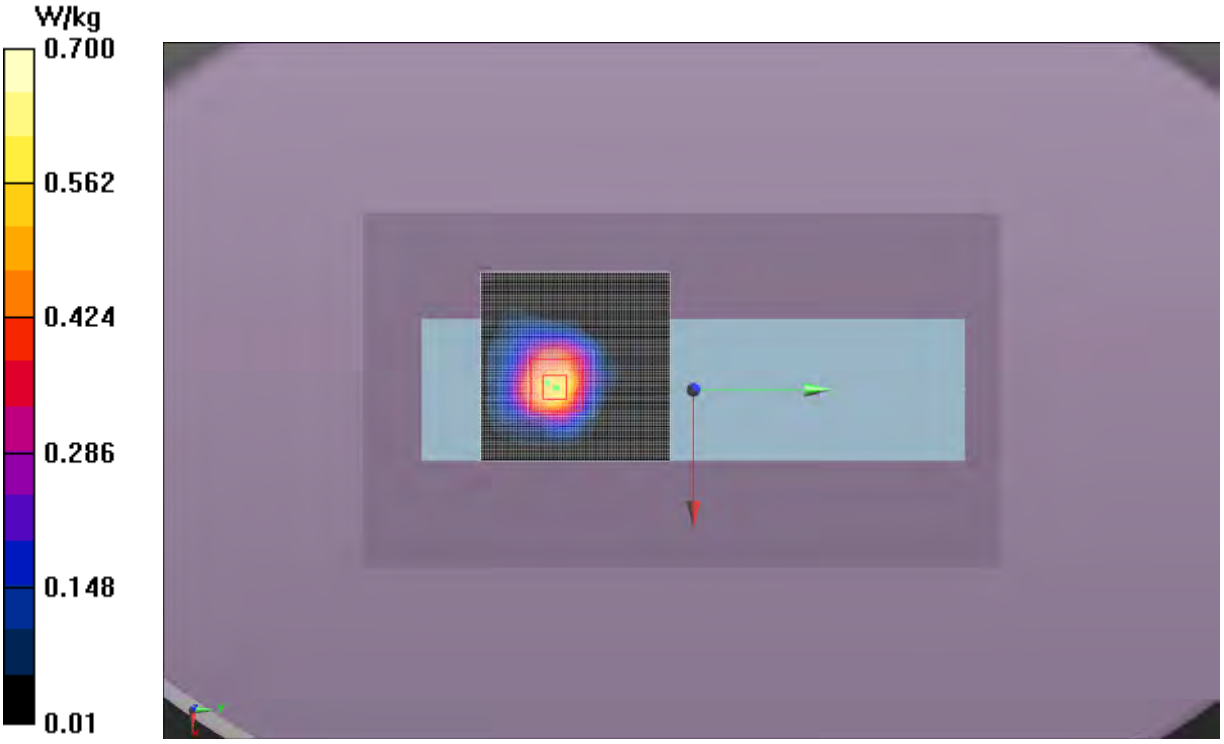
Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

Body/Body/Area scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.562 W/kg
Maximum value of SAR (measured) = 0.132 W/kg

Approved By

SAR TEST DATA

Test 19



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.1
Date:	12/27/2012	Liquid Temperature (°C):	22.6
Serial Number:	8721242648	Humidity (%RH):	34.3
Configuration:	1	Bar. Pressure (mb):	1019
Comments:	None		

Test 20
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: f = 5200 MHz; σ = 5.383 mho/m; ε_r = 47.336; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

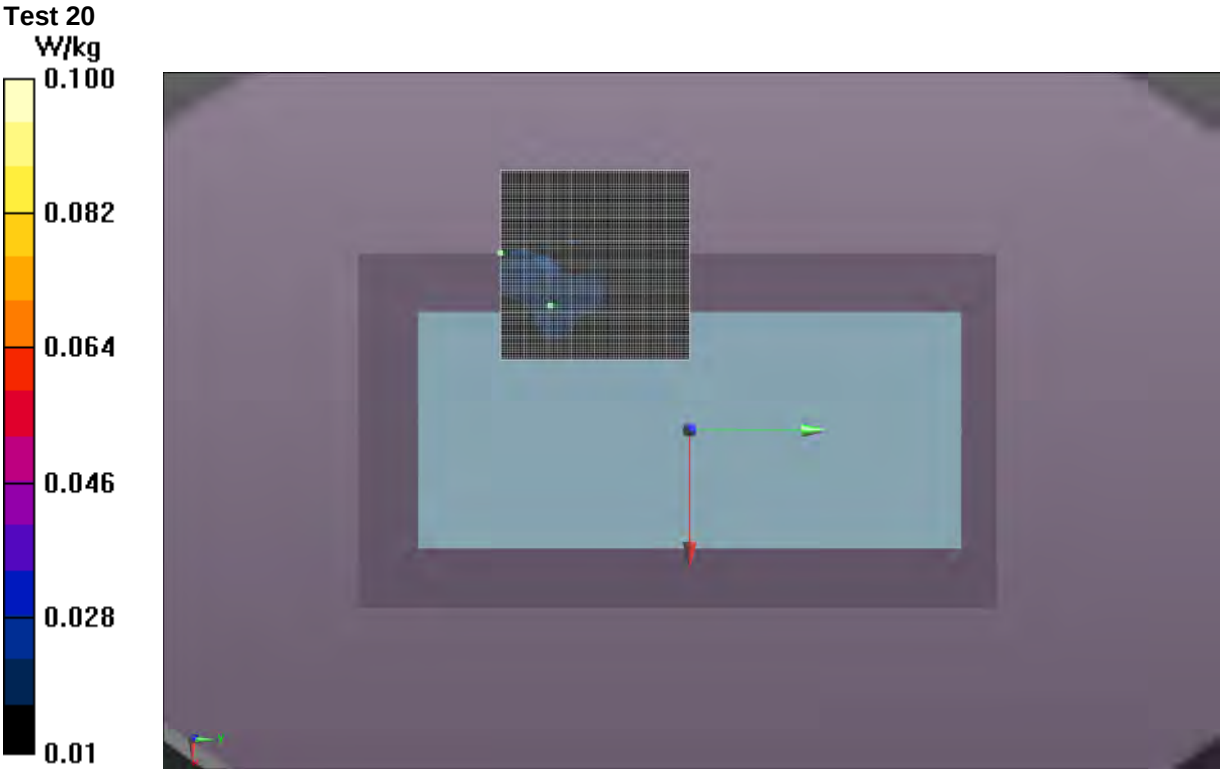
Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm
Maximum value of SAR (interpolated) = 0.0107 W/kg

Body/Body/Area scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.0343 W/kg

Body/Body/Area scan (9x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0239 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.1
Date:	12/27/2012	Liquid Temperature (°C):	22.8
Serial Number:	8721242648	Humidity (%RH):	34
Configuration:	1	Bar. Pressure (mb):	1022
Comments:	None		

Test 21
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5260 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5260 MHz; σ = 5.451 mho/m; ε_r = 47.209; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 10.595 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.845 W/kg
SAR(1 g) = 0.287 W/kg; SAR(10 g) = 0.119 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.503 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 4.748 V/m

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.470 W/kg

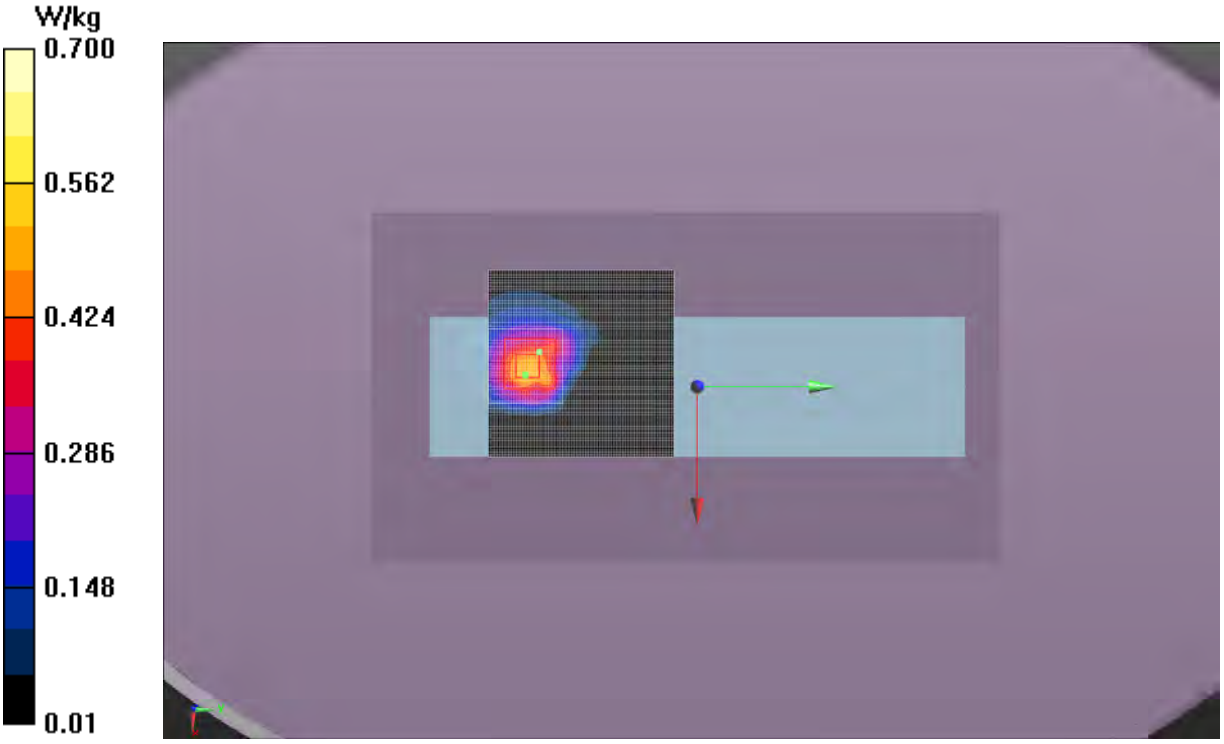
Body/Body/Area scan (81x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.516 W/kg
Maximum value of SAR (measured) = 0.123 W/kg

Approved By

SAR TEST DATA

Test 21



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	21.8
Date:	12/27/2012	Liquid Temperature (°C):	22.7
Serial Number:	8721242648	Humidity (%RH):	36
Configuration:	1	Bar. Pressure (mb):	1022
Comments:	None		

Test 22
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5260 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5260 MHz; σ = 5.451 mho/m; ε_r = 47.209; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.000373 W/kg

Body/Body/Area scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0354 W/kg

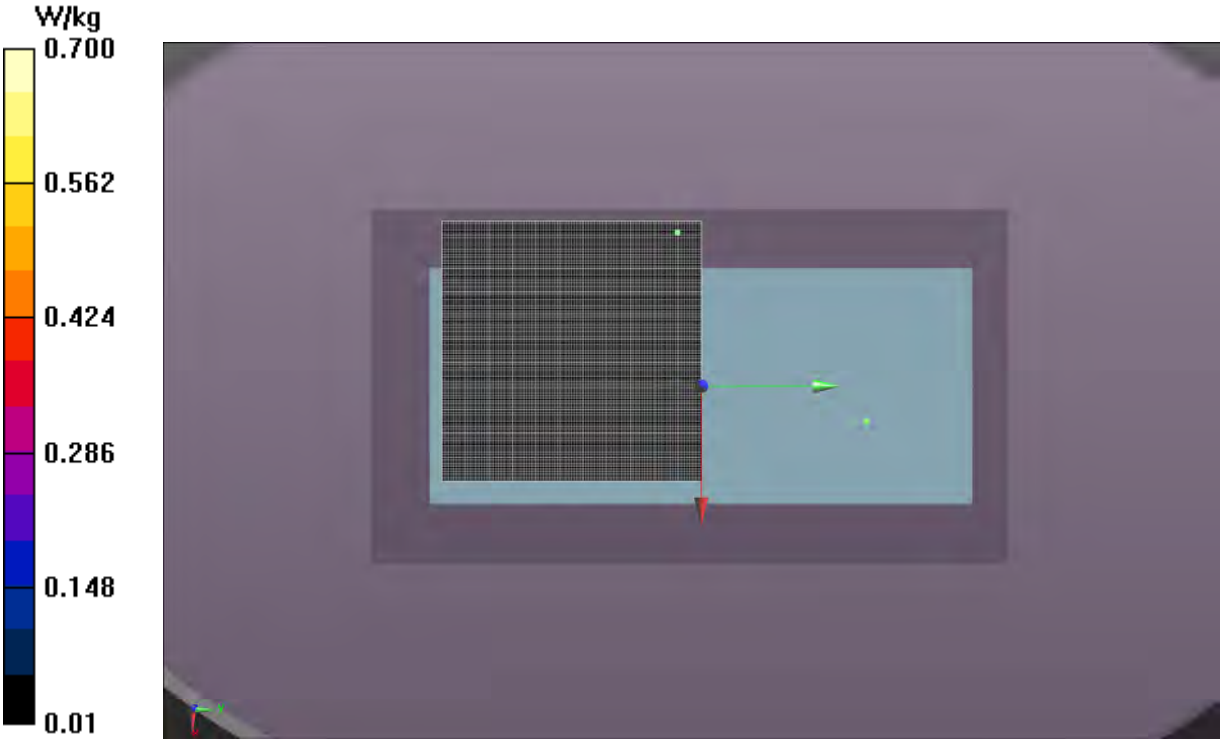
Body/Body/Area scan (12x12x1): Measurement grid: dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0278 W/kg

Approved By

SAR TEST DATA

Test 22



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.8
Date:	12/28/2012	Liquid Temperature (°C):	22.7
Serial Number:	8721242648	Humidity (%RH):	31.1
Configuration:	1	Bar. Pressure (mb):	1020
Comments:	None		

Test 23
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5680 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5680 MHz; σ = 6.001 mho/m; ε_r = 46.454; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 10.778 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.335 W/kg; SAR(10 g) = 0.135 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.597 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 4.552 V/m

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

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

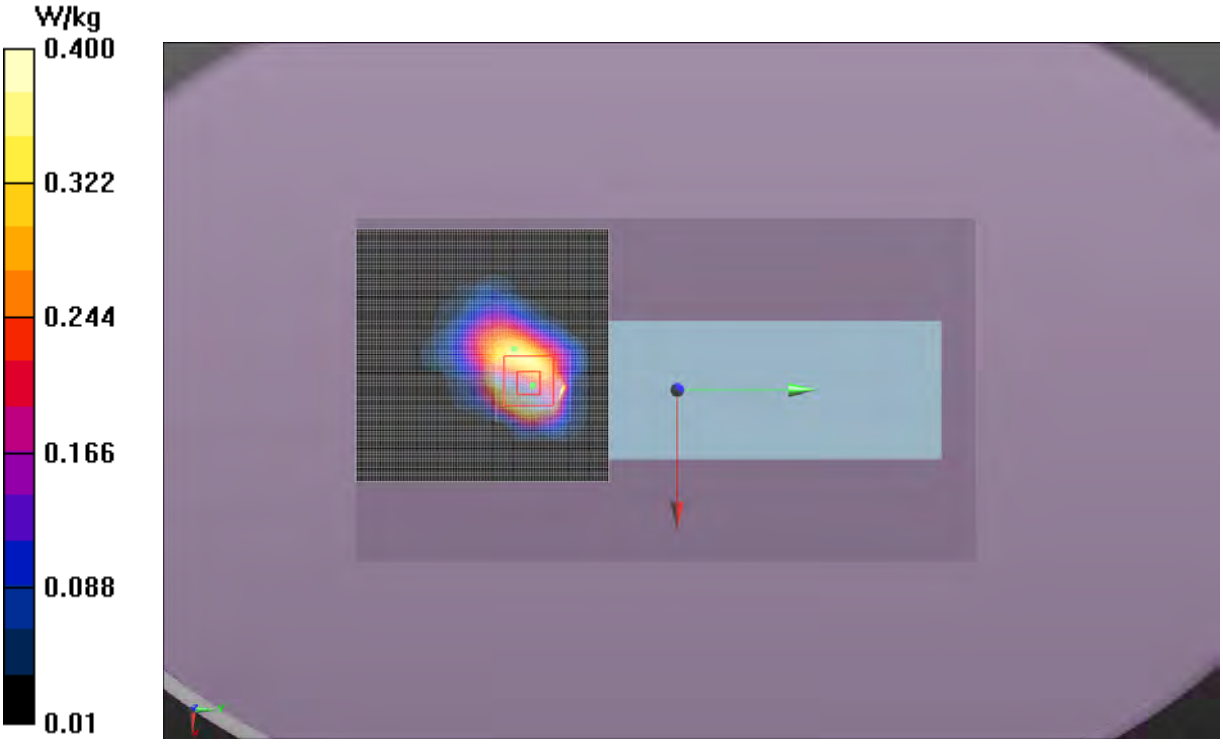
Body/Body/Area scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.645 W/kg
Maximum value of SAR (measured) = 0.124 W/kg

Approved By

SAR TEST DATA

Test 23



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	23.8
Date:	12/28/2012	Liquid Temperature (°C):	22.7
Serial Number:	8721242648	Humidity (%RH):	31.1
Configuration:	1	Bar. Pressure (mb):	1020
Comments:	None		

Test 24
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5680 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5680 MHz; σ = 6.001 mho/m; ε_r = 46.454; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

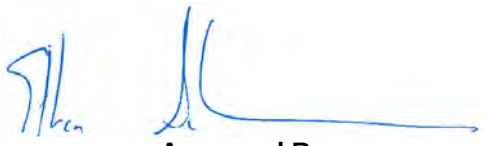
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.0107 W/kg

Body/Body/Area scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0 W/kg

Body/Body/Area scan (12x12x1): Measurement grid: dx=10mm, dy=10mm

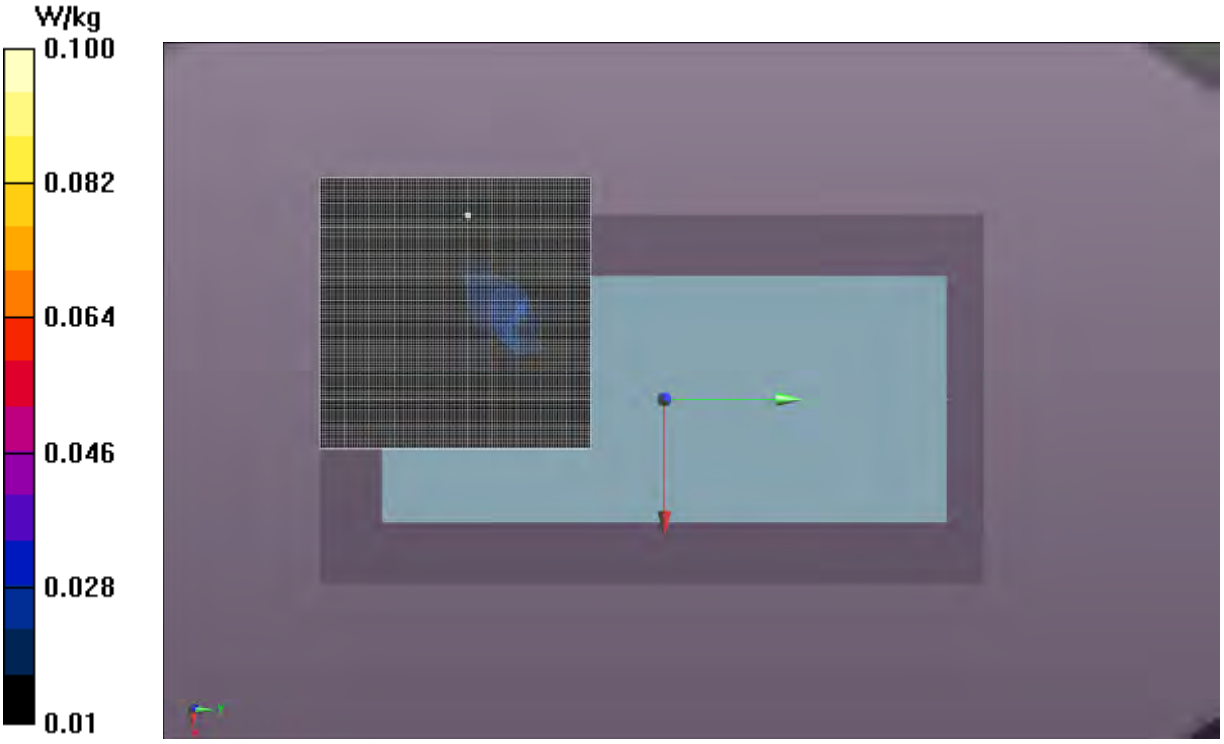
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.0278 W/kg



Approved By

SAR TEST DATA

Test 24



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.2
Date:	12/28/2012	Liquid Temperature (°C):	22.6
Serial Number:	8721242648	Humidity (%RH):	33
Configuration:	1	Bar. Pressure (mb):	1020
Comments:	None		

Test 25
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5745 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5745 MHz; σ = 6.077 mho/m; ε_r = 46.324; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 9.932 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.088 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.466 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 3.882 V/m

Body/Body/Reference scan (41x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

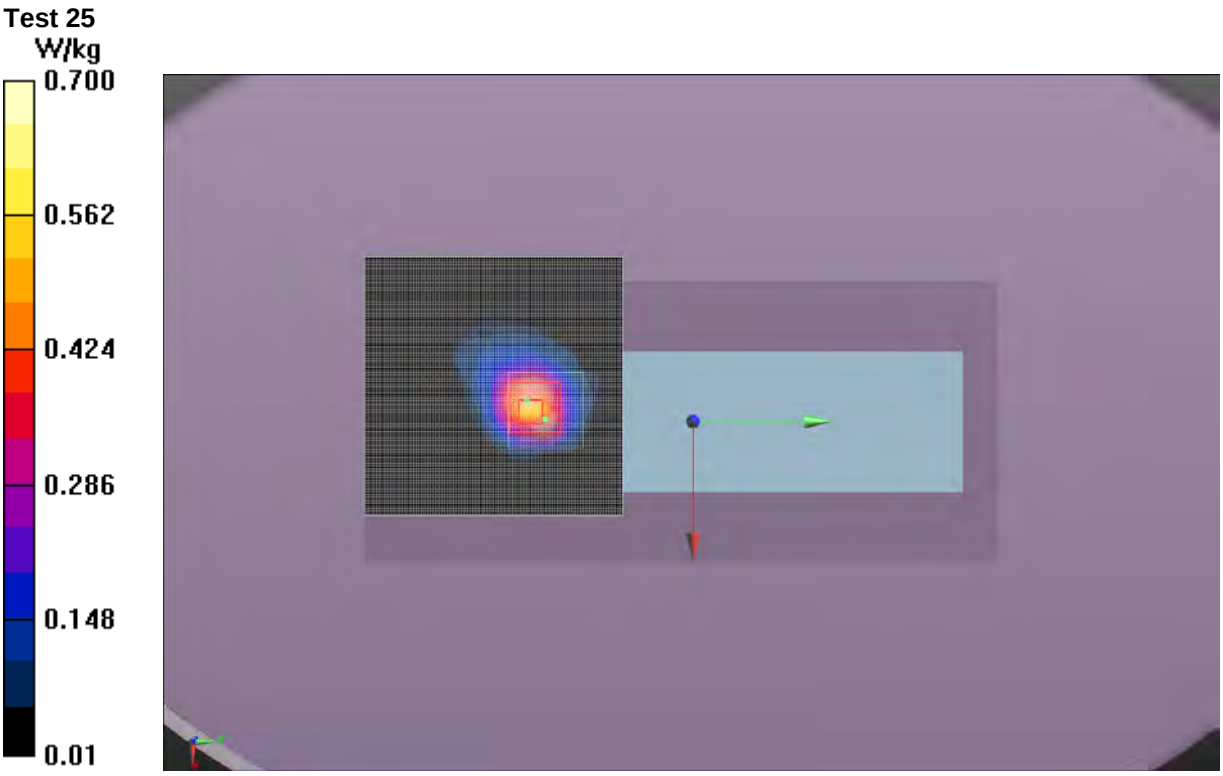
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.725 W/kg

Body/Body/Area scan (111x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.574 W/kg
Maximum value of SAR (measured) = 0.0916 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Carl Engholm	Room Temperature (°C):	23.1
Date:	12/28/2012	Liquid Temperature (°C):	22.6
Serial Number:	8721242648	Humidity (%RH):	33
Configuration:	1	Bar. Pressure (mb):	1020
Comments:	None		

Test 26
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5745 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 5745 MHz; σ = 6.077 mho/m; ε_r = 46.324; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0 W/kg

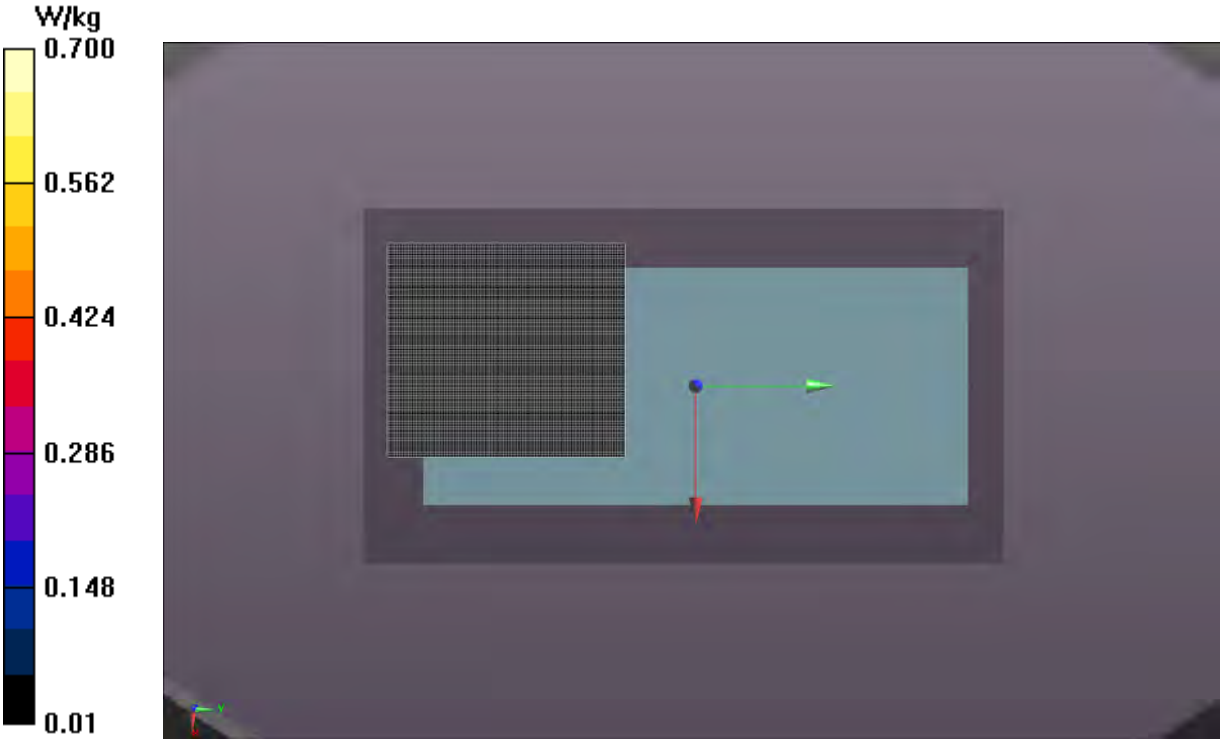
Body/Body/Area scan (91x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

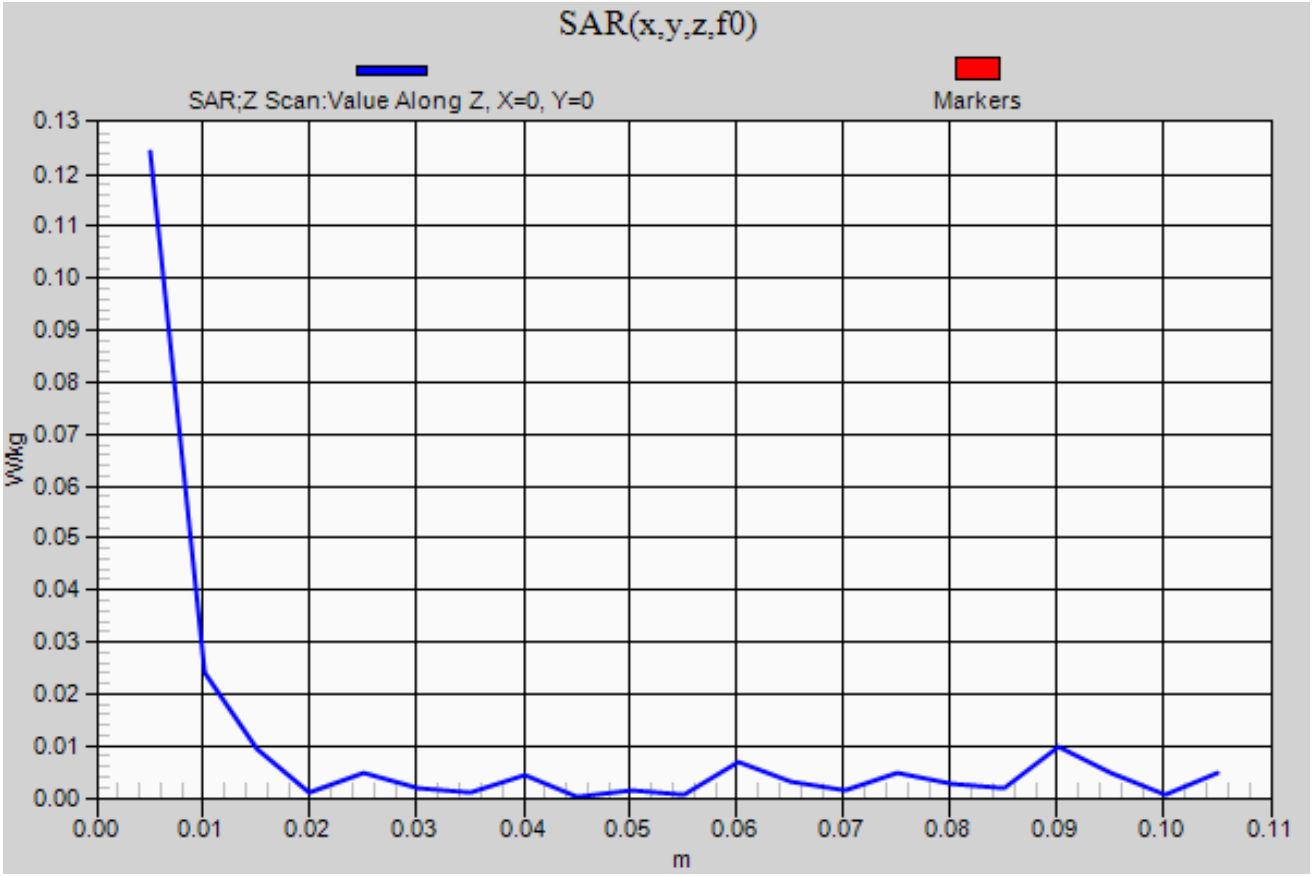
Approved By

SAR TEST DATA

Test 26



Test 23


SAR(x,y,z,f0)
SAR;Z Scan:Value Along Z, X=0, Y=0
Markers
W/kg
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
m

SAR TEST DATA

EUT:	1000CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001 IEEE Std 1528:2003 FCC KDB 447498 D01 v05 FCC KDB 248227 D01 V01r02 FCC KDB 648474 D04 V01 FCC 865664 D01 and D02

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	Side of Head	EUT Position	Headset	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (Mbps)	Modulation	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Scaled to 50% Duty Cycle[1] (mW/g	Test #
Head	Left	Touch	No	915	927.25	54	340	PRASK	0.08	0.748	0.374	97
Head	Left	Tilt	No	915	927.25	54	340	PRASK	-0.06	0.627	0.314	98
Head	Right	Touch	No	915	927.25	54	340	PRASK	-0.04	0.729	0.365	99
Head	Right	Tilt	No	915	927.25	54	340	PRASK	0.14	0.679	0.340	100

Note 1: Measured SAR after it has been scaled for a 50% duty cycle

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	21.9
Date:	12/17/2012	Liquid Temperature (°C):	23.5
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	2	Bar. Pressure (mb):	1010
Comments:	None		

Test 97
DUT: CK70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 927.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used (interpolated): f = 927.25 MHz; σ = 0.953 mho/m; ε_r = 39.273; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head - Right/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 26.11 V/m

Head - Right/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.890 W/kg

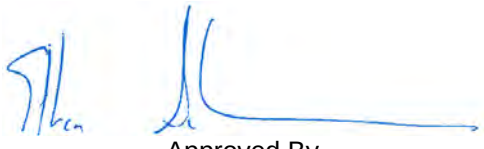
Head - Right/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.855 W/kg

Head - Right/Cheek - Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.628 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.979 W/kg
SAR(1 g) = 0.748 W/kg; SAR(10 g) = 0.534 W/kg (SAR corrected for target medium)

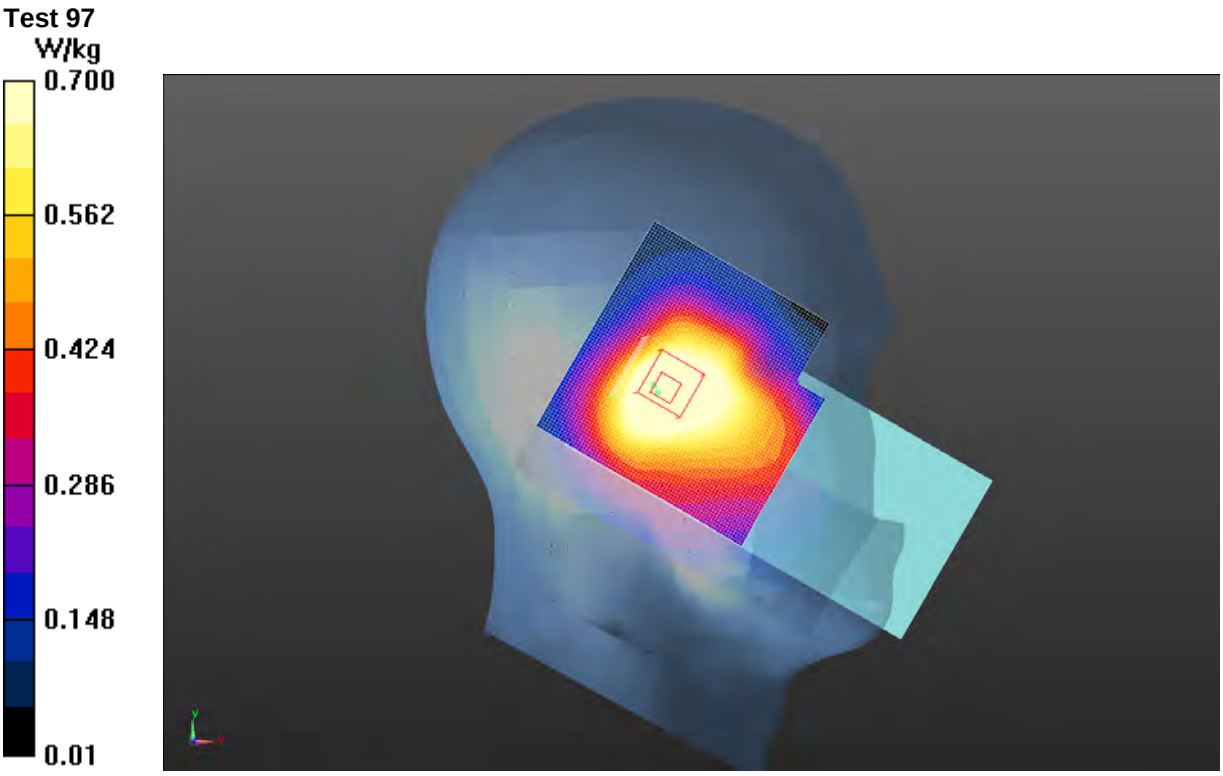
Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.829 W/kg
Maximum value of SAR (measured) = 0.650 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	21.1
Date:	12/17/2012	Liquid Temperature (°C):	22
Serial Number:	8721242648	Humidity (%RH):	38.5
Configuration:	2	Bar. Pressure (mb):	1010
Comments:	None		

Test 98
DUT: CK70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 927.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 927.25 MHz; σ = 0.953 mho/m; ε_r = 39.273; ρ = 1000 kg/m^3 ,
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head - Right/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.751 W/kg

Head - Right/Tilt - Mid/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.766 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.726 W/kg
SAR(1 g) = 0.499 W/kg; SAR(10 g) = 0.311 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.

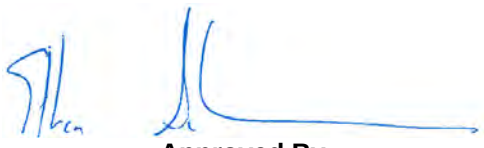
Maximum value of SAR (measured) = 0.626 W/kg

Head - Right/Tilt - Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.766 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.855 W/kg
SAR(1 g) = 0.627 W/kg; SAR(10 g) = 0.423 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.711 W/kg

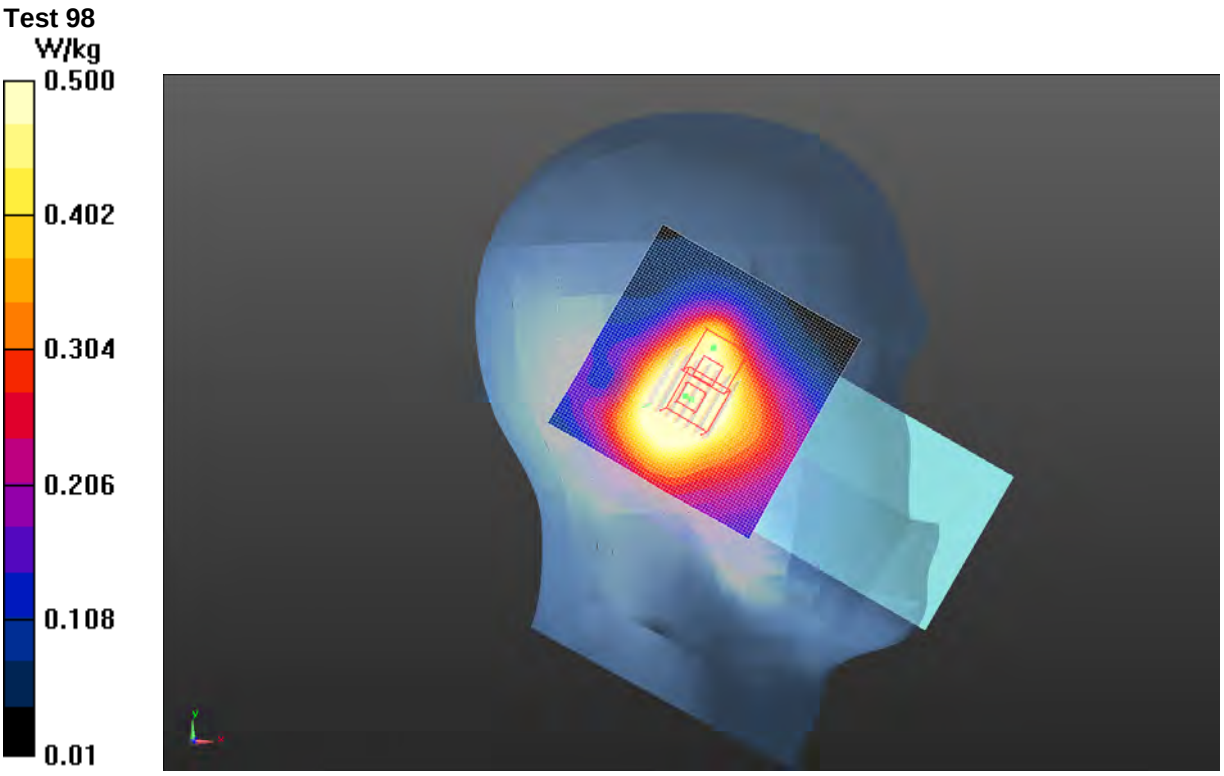
Head - Right/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 23.23 V/m

Head - Right/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.721 W/kg
Maximum value of SAR (measured) = 0.514 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	20.6
Date:	12/17/2012	Liquid Temperature (°C):	21.1
Serial Number:	8721242648	Humidity (%RH):	38.6
Configuration:	2	Bar. Pressure (mb):	1010
Comments:	None		

Test 99
DUT: CK70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 927.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3 , Medium parameters used (interpolated): f = 927.25 MHz; σ = 0.953 mho/m; ε_r = 39.273; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Cheek - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 24.09 V/m

Head/Cheek - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.950 W/kg

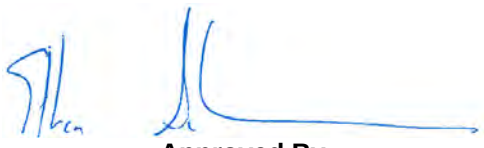
Head/Cheek - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.894 W/kg

Head/Cheek - Mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.052 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.729 W/kg; SAR(10 g) = 0.482 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.871 W/kg

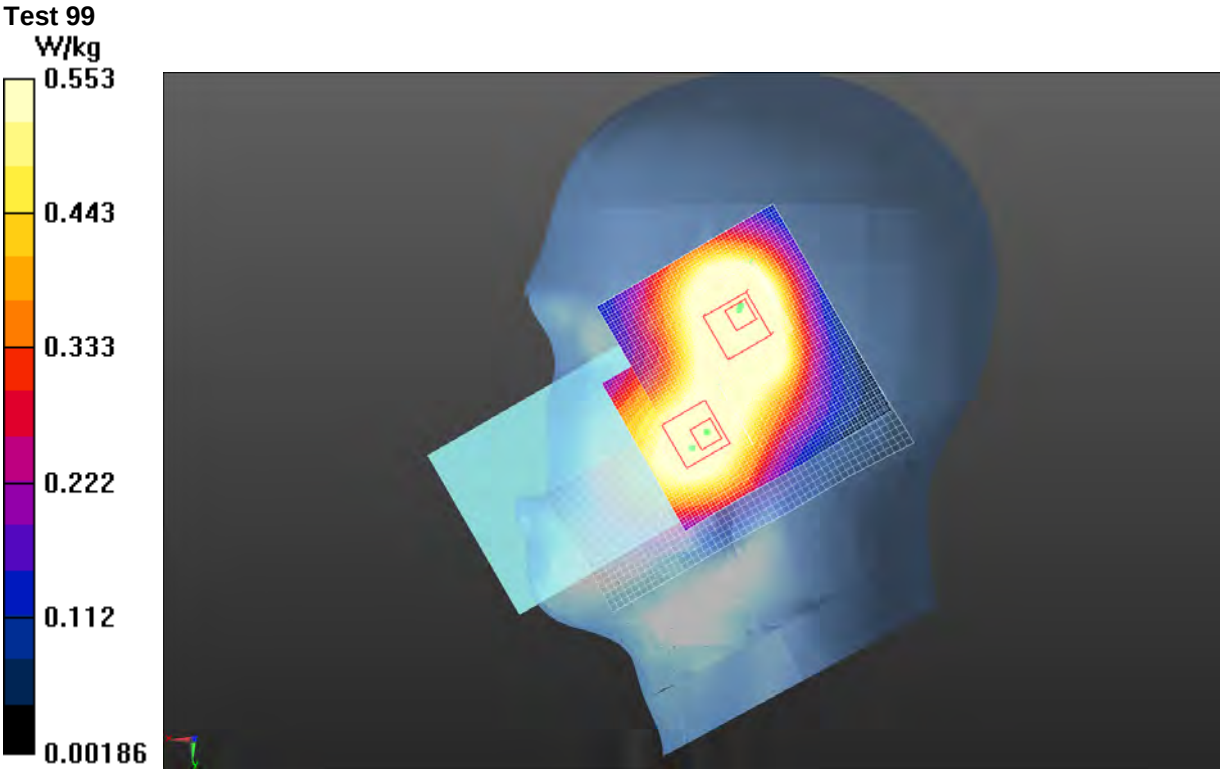
Head/Cheek - Mid/Zoom Scan 2 (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.052 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.831 W/kg
SAR(1 g) = 0.551 W/kg; SAR(10 g) = 0.418 W/kg (SAR corrected for target medium)

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.607 W/kg
Maximum value of SAR (measured) = 0.553 W/kg



Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.3
Date:	12/17/2012	Liquid Temperature (°C):	21.1
Serial Number:	8721242648	Humidity (%RH):	40.7
Configuration:	2	Bar. Pressure (mb):	1010
Comments:	None		

Test 100
DUT: CK70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 927.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 927.25 MHz; σ = 0.953 mho/m; ε_r = 39.273; ρ = 1000 kg/m^3 ,
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Head/Tilt - Mid/Reference scan (41x71x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.854 W/kg

Head/Tilt - Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.037 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.997 W/kg
SAR(1 g) = 0.679 W/kg; SAR(10 g) = 0.455 W/kg (SAR corrected for target medium)

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

Head/Tilt - Mid/Z Scan (1x1x21): Measurement grid: dx=20mm, dy=20mm, dz=5mm

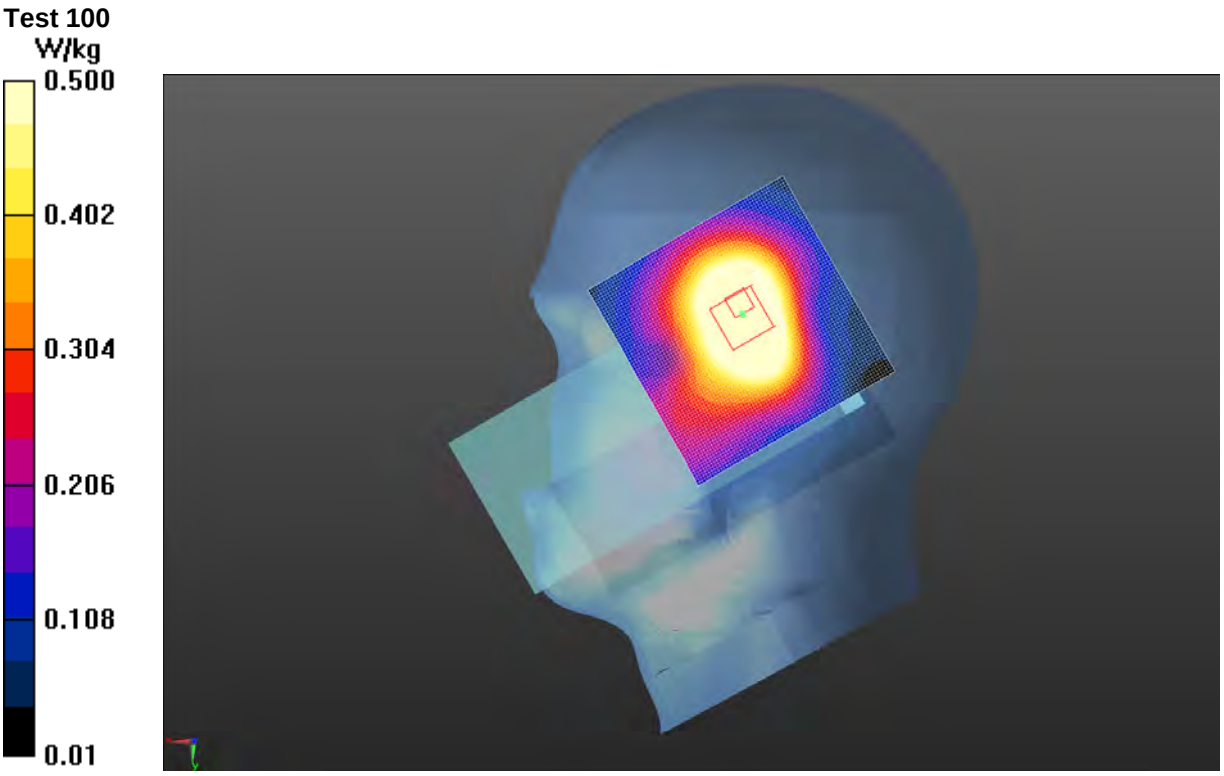
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 23.84 V/m

Head/Tilt - Mid/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

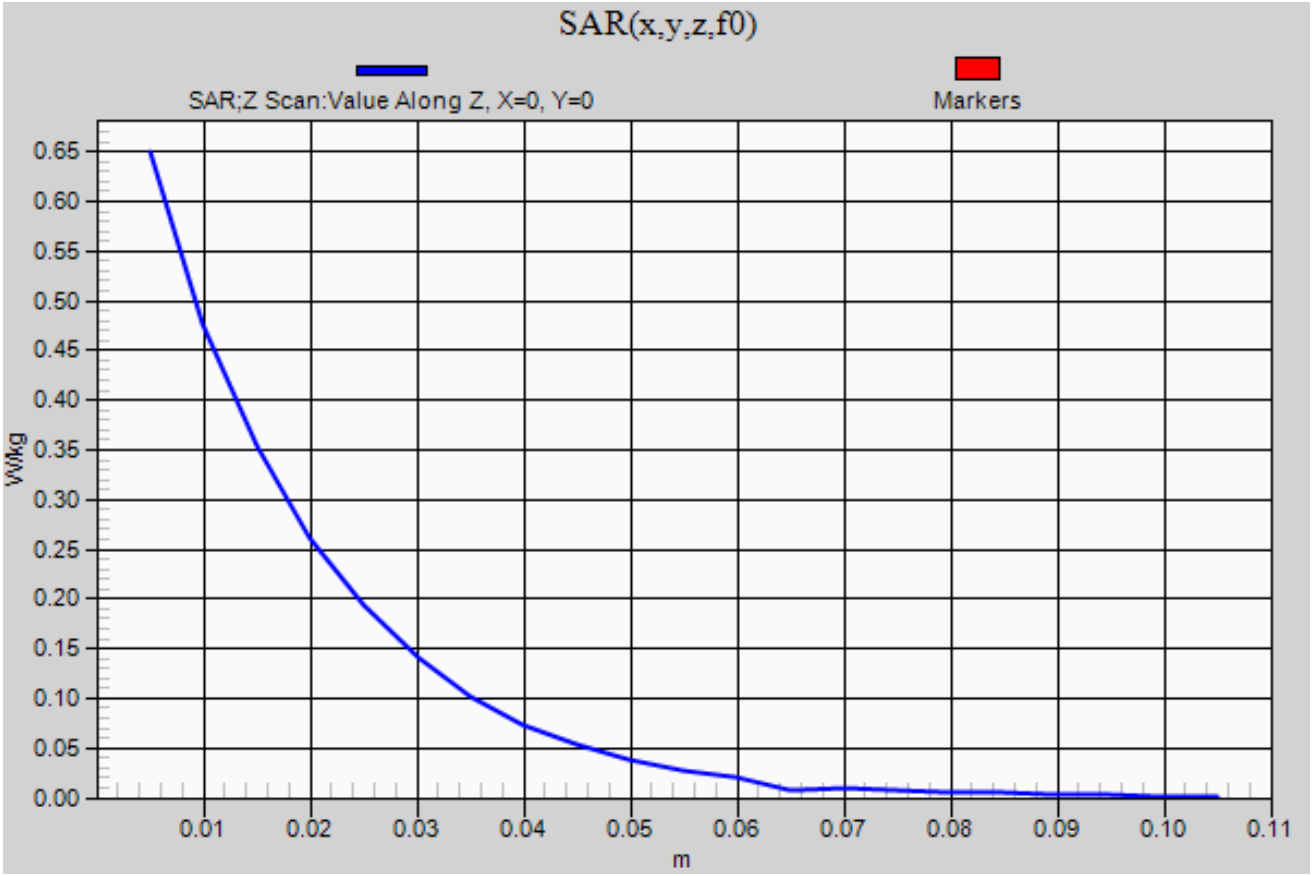
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.800 W/kg
Maximum value of SAR (measured) = 0.542 W/kg

Approved By

SAR TEST DATA



Test 97


SAR(x,y,z,f0)
SAR;Z Scan:Value Along Z, X=0, Y=0
Markers
W/kg
0.65
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
m

SAR TEST DATA

EUT:	1000CP01F9	Work Order:	ITRM0333
Customer:	Intermec Technologies Corporation	Job Site:	EV08
Attendees:	None	Customer Project:	None

TEST SPECIFICATIONS

Specification:	Method:
FCC 2.1093:2013 FCC 15.247:2013 FCC 15.407:2013	FCC OET 65C:2001 IEEE Std 1528:2003 FCC KDB 447498 D01 v05 FCC KDB 248227 D01 V01r02 FCC KDB 648474 D04 V01 FCC 865664 D01 and D02

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

RESULTS

Test Configuration	EUT Position	Body Worn Accessory	Headset	Frequency Band	Transmit Frequency (MHz)	Transmit Channel	Data Rate (kbps)	Modulation	Power Drift During Test (dB)	Measured 1g SAR Level (mW/g)	Scaled to 50% Duty Cycle[1] (mW/g)	Test #
Body	Left	Holster	Yes	915	927.25	54	340	PRASK	0.02	1.2	0.6	92
Body	Left	Holster	Yes	915	902.75	5	340	PRASK	-0.09	1.23	0.615	92a
Body	Left	Holster	Yes	915	915.25	30	340	PRASK	0	1.17	0.585	92b
Body	Front	Holster	Yes	915	927.25	54	340	PRASK	-0.09	0.283	0.142	91

Note 1: Measured SAR after it has been scaled for a 50% duty cycle

SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.9
Date:	12/20/2012	Liquid Temperature (°C):	22.5
Serial Number:	8721242648	Humidity (%RH):	34.2
Configuration:	1	Bar. Pressure (mb):	1007
Comments:	None		

Test 92
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 927.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 927.25 MHz; σ = 1.092 mho/m; ε_r = 52.478; ρ = 1000 kg/m^3 ,
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.213 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.717 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.21 W/kg

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.63 W/kg

Body/Body/Area scan 2 (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.48 W/kg

Body/Body/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.43 W/kg

Body/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 35.213 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.777 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.41 W/kg

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

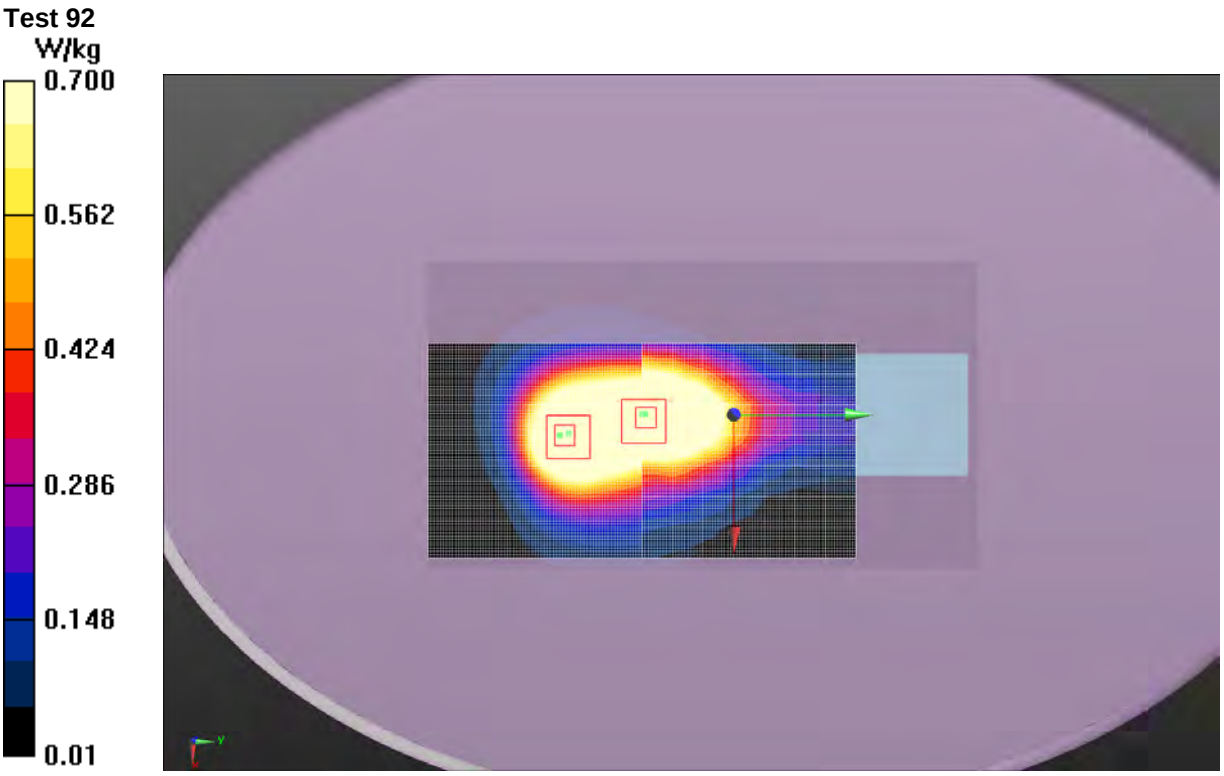
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 29.22 V/m

Body/Body/Area scan 2 (8x8x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.9
Date:	12/20/2012	Liquid Temperature (°C):	22.5
Serial Number:	8721242648	Humidity (%RH):	35.2
Configuration:	1	Bar. Pressure (mb):	1007
Comments:	None		

Test 92a
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 902.75 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 902.75 MHz; σ = 1.068 mho/m; ε_r = 52.725; ρ = 1000 kg/m^3 ,
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan 2 (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.092 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.66 W/kg
SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.708 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.12 W/kg

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.75 W/kg

Body/Body/Area scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.42 W/kg

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.092 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.819 W/kg

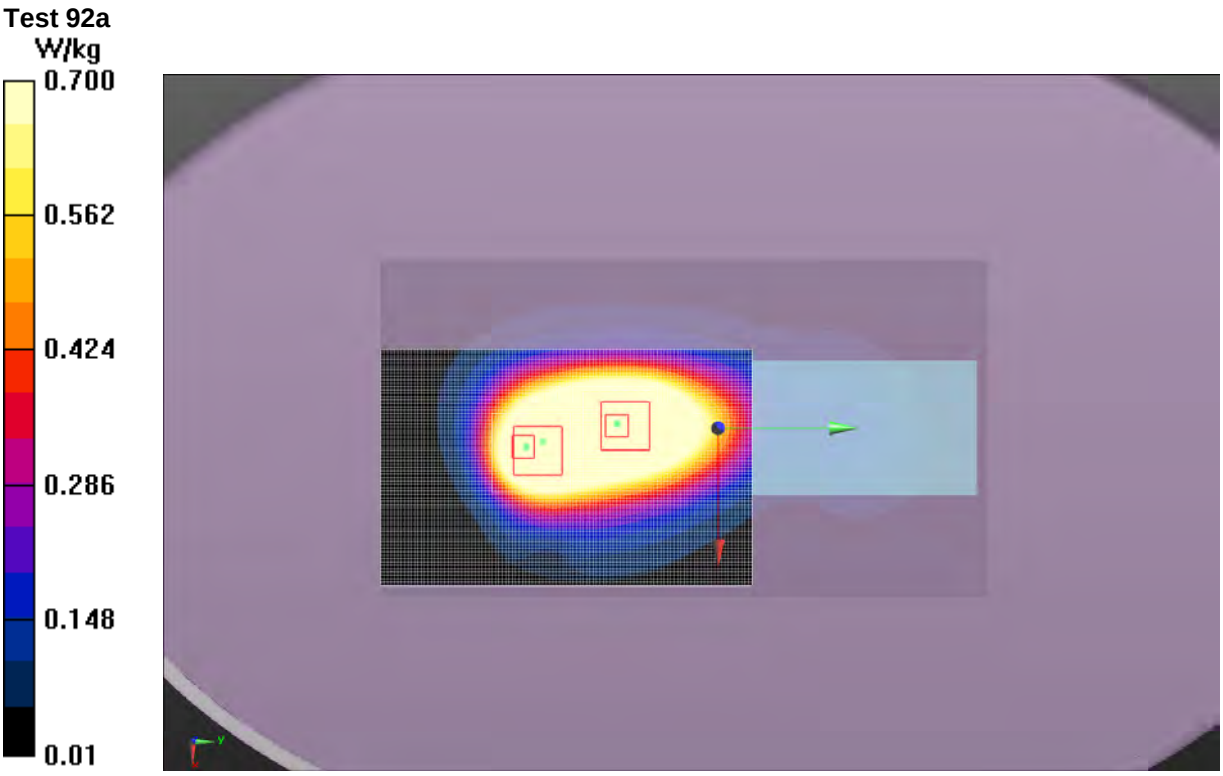
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.40 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 29.97 V/m
Maximum value of SAR (measured) = 0.959 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.7
Date:	12/20/2012	Liquid Temperature (°C):	22.1
Serial Number:	8721242648	Humidity (%RH):	36.9
Configuration:	1	Bar. Pressure (mb):	1007
Comments:	None		

Test 92b
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 915.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 915.25 MHz; σ = 1.08 mho/m; ε_r = 52.602; ρ = 1000 kg/m^3 , Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.014 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 2.17 W/kg
SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.770 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.31 W/kg

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.77 W/kg

Body/Body/Area scan (71x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.42 W/kg

Body/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.014 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 1.77 W/kg
SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.747 W/kg

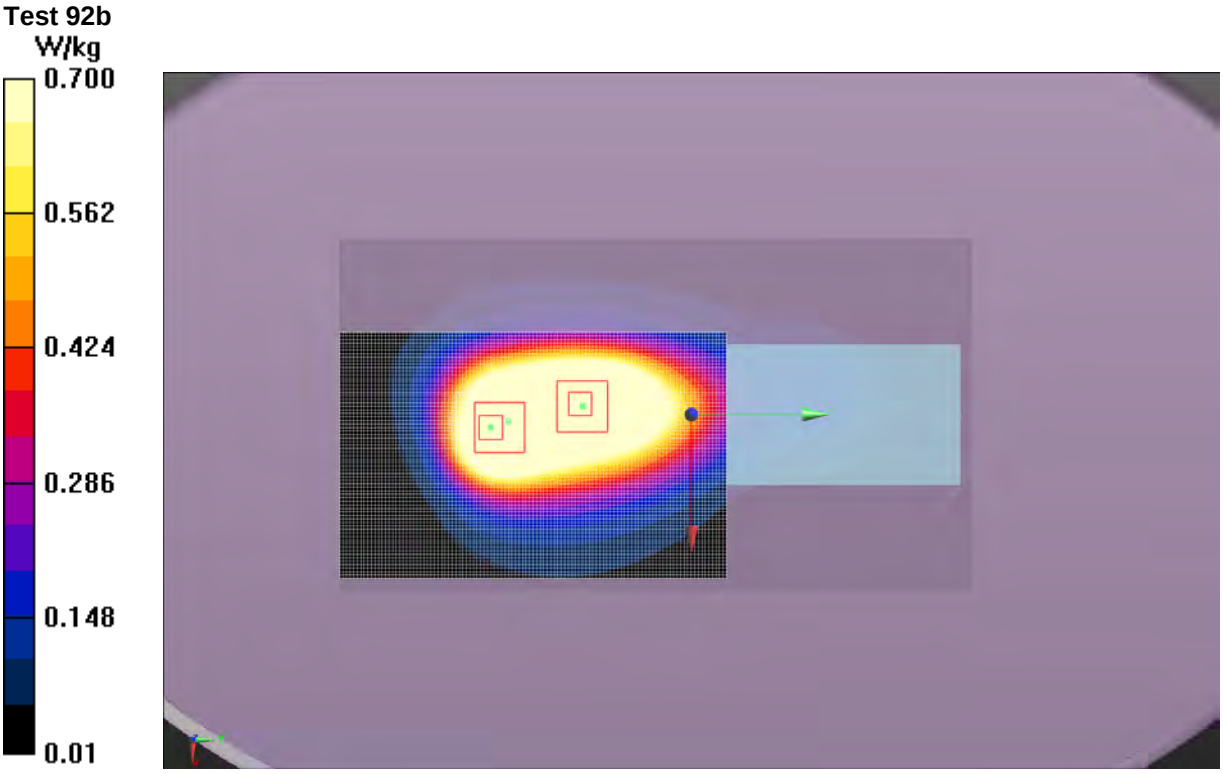
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.38 W/kg

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

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 28.96 V/m
Maximum value of SAR (measured) = 0.906 W/kg

Approved By

SAR TEST DATA



SAR TEST DATA

Tested By:	Ethan Schoonover	Room Temperature (°C):	22.8
Date:	12/20/2012	Liquid Temperature (°C):	22
Serial Number:	8721242648	Humidity (%RH):	37
Configuration:	1	Bar. Pressure (mb):	1007
Comments:	None		

Test 91
DUT: CN70; Type: 1000CP01F9; Serial: 8721242648
Communication System: CW; Communication System Band: D915 (915.0 MHz); Frequency: 927.25 MHz;Communication System PAR: 0 dB; PMF: 1
Medium parameters used (interpolated): f = 927.25 MHz; σ = 1.092 mho/m; ε_r = 52.478; ρ = 1000 kg/m^3 ,
Medium parameters used: σ = 0 mho/m, ε_r = 1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:

- DASY52 52.8.3(988); SEMCAD X 14.6.7(6848)

Body/Body/Zoom Scan 2 (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.852 V/m; Power Drift = -0.27 dB
Peak SAR (extrapolated) = 0.511 W/kg
SAR(1 g) = 0.261 W/kg; SAR(10 g) = 0.177 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.312 W/kg

Body/Body/Reference scan (51x91x1): Interpolated grid: dx=3.000 mm, dy=3.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.306 W/kg

Body/Body/Area scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.354 W/kg

Body/Body/Zoom Scan (7x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.852 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.409 W/kg
SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.188 W/kg

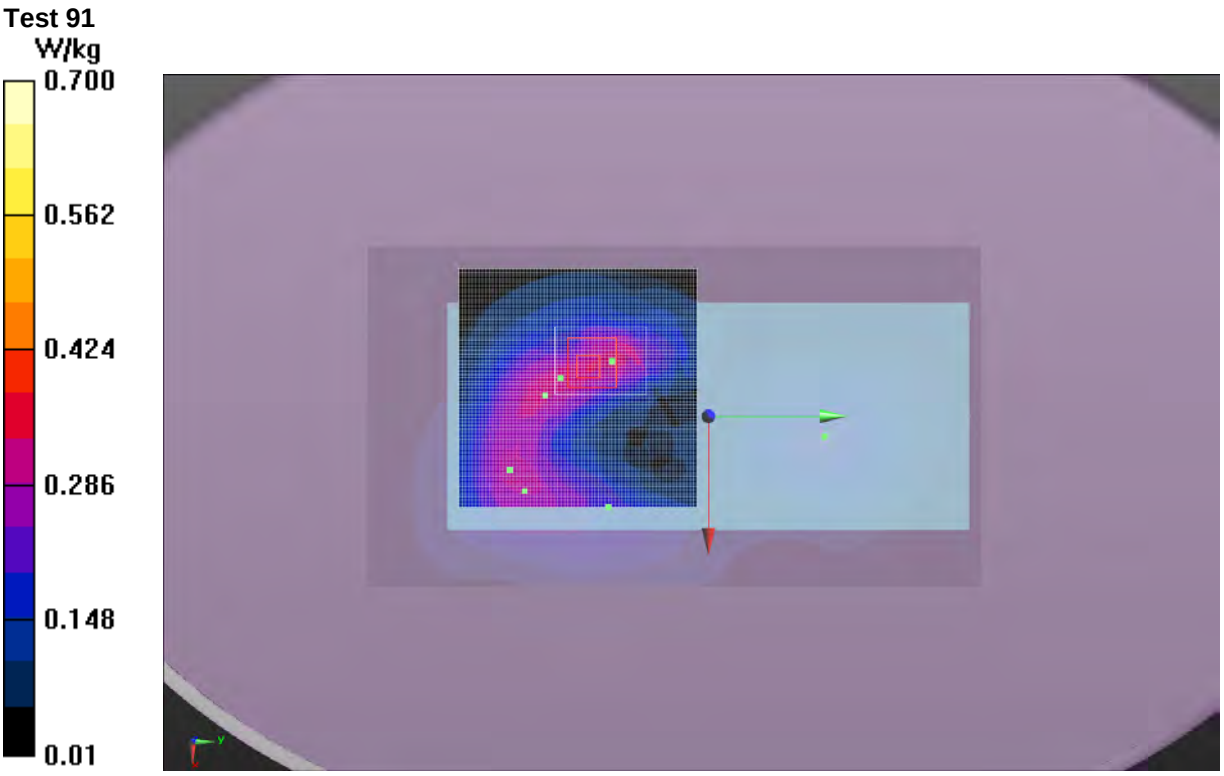
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.327 W/kg

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

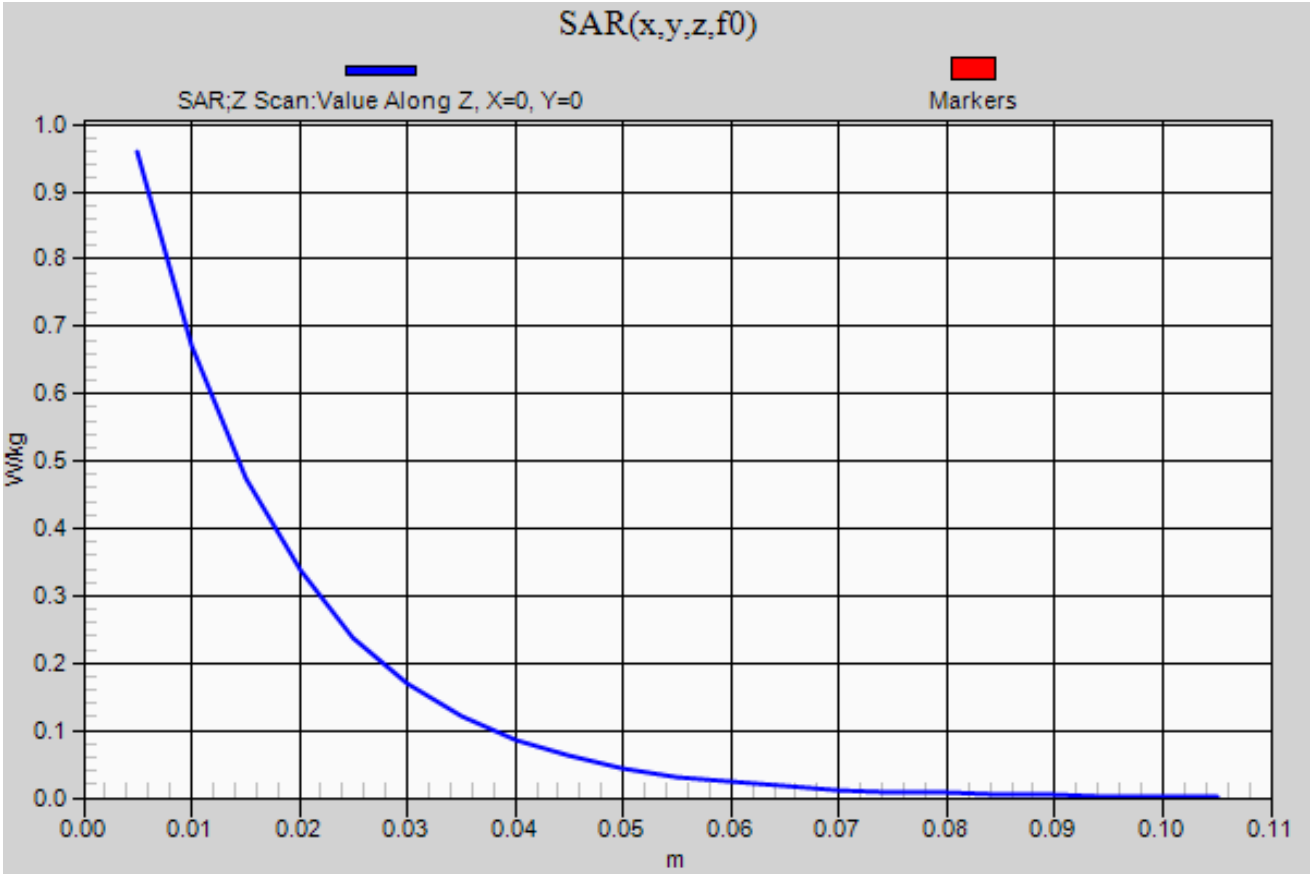
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of Total (measured) = 13.96 V/m
Maximum value of SAR (measured) = 0.213 W/kg

Approved By

SAR TEST DATA



Test 92a


SAR(x,y,z,f0)
SAR;Z Scan:Value Along Z, X=0, Y=0
Markers
W/kg
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
0.11
m