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TESTING CERT # 2518.01

FCC ID: IHDP56KV1
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 1 of 2

Enterprise Mobility Solutions **EME Test Laboratory** 8000 West Sunrise Blvd Fort Lauderdale, FL. 33322.	**Date of Report:** 02/26/2010 **Report Revision:** O **Report ID:** SAR rpt_H76XAN9JR9AN_Rev O_02262010_SR7833

Responsible Engineer:	Stephen C. Whalen (Principal Staff Eng.)
Report Author:	Stephen C. Whalen (Principal Staff Eng.)
Date/s Tested:	01/07/10 – 01/20/10, 02/01/10, 02/18/10 – 02/23/10
Manufacturer/Location:	China
Sector/Group/Div.:	iDEN Mobile Devices
Date submitted for test:	01/06/10
DUT Description:	TDMA: 81:120, 2:6, 1:12, and 1:6; M64QAM, M16QAM, and QPSK Modulations, 0.6 W Pulse Avg; MOTOtalk: 114:120 8FSK; 0.85 W nominal; WLAN 802.11 b/g; (GPS and Bluetooth Capable).
Test TX mode(s):	iDEN: Phone 1:3, Dispatch 1:6, Data 80:120; MOTOtalk: 114:120; BT: CW and WLAN 802.11 b/g: CW
Max. Power output:	iDEN: 0.64 W pulsed average conducted power; MOTOtalk: 0.891 W; BT: 10mW; WLAN 802.11 b: 80mW; WLAN 802.11 g: 32mW
Nominal Power:	iDEN: 0.600 W pulsed average conducted power; MOTOtalk: 0.850 W; BT: 6.3mW; WLAN 802.11 b: 50mW; WLAN 802.11 g: 20mW
Tx Frequency Bands:	iDEN: 806-825, 896-902 MHz; MOTOtalk: 902-928 MHz; BT: 2.402-2.480 GHz; WLAN 802.11 b/g: 2.412-2.462 GHz
Signaling type:	TDMA: QPSK, M16-QAM, M64-QAM; FHSS: 8FSK (PTT); BT; WLAN 802.11 b/g
Model(s) Tested:	H76XAN9JR9AN
Model(s) Certified:	H76XAN9JR9AN
Serial Number(s):	364VKYLJBH, 364VKYLKND
Classification:	General Population/Uncontrolled
Rule Part(s):	15 & 90

DUT Photo
(Refer to Exhibit 7B)

Max. Calc. : 1-g Avg. SAR: 0.95 W/kg (Body); 10-g Avg. SAR: 0.70 W/kg (Body)
Max. Calc. : 1-g Avg. SAR: 1.30 W/kg (Head); 10-g Avg. SAR: 0.81 W/kg (Head)
Max. Calc. : 1-g Avg. SAR: 0.56 W/kg (Face); 10-g Avg. SAR: 0.40 W/kg (Face)

The test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of 1.6 W/kg averaged over 1 gram per the requirements of 47 CFR 2.1093(d).
The test results clearly demonstrate compliance with ICNIRP (1998) Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz), Health Physics 74, 494-522 RF Exposure limits of 2.0 W/kg averaged over 10grams of contiguous tissue.

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 3.0 of this report. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.
I attest to the accuracy of the data and assume full responsibility for the completeness of these measurements. This reporting format is consistent with the suggested guidelines of the TIA TSB-150 December 2004. The results and statements contained in this report pertain only to the device(s) evaluated.

Signature on file **Deanna Zakharia** **EMS EME Lab Senior Resource Manager, Laboratory Director** **Approval Date:** 02/26/10	**Certification Date**: 02/26/10 **Certification No.**: L1100248P

Part 1 of 2

Part 1 of 2 Continued

APPENDICES

Part 2 of 2

Report Revision History

Date	Revision	Comments
02/26/2010	O	Original Release

1.0 Introduction

This report details the utilization, test setup, test equipment, and test results of the Specific Absorption Rate (SAR) measurements performed at the EMS EME Test Laboratory for model number H76XAN9JR9AN and FCC ID: IHDP56KV1. The results herein reflect prototype test results.

2.0 Abbreviations / Definitions

BT: Bluetooth
CNR: Calibration Not Required
DUT: Device Under Test
FHSS: Frequency Hopping Spread Spectrum
FSK: Frequency Shift Keying
iDEN: Integrated Dispatch Enhanced Network
ISM: Industrial, Scientific and Medical
NA: Not Applicable
PDA: Personal Digital Assitance
PTT: Push to Talk
QPSK: Quadrature Phase-Shift Keying
QAM: Quadrature Amplitude Modulation
SMR: Specialized Mobile Radio
SAR: Specific Absorption Rate
TDMA: Time Division Multiple Access
WLAN: Wireless Local Area Network

Audio accessories: These accessories allow communication while the DUT is worn on the body.
Body worn accessories: These accessories allow the DUT to be worn on the body of the user.
Maximum Power: Defined as the upper limit of the production line final test station.

3.0 Referenced Standards and Guidelines

This product is designed to comply with the following applicable national and international standards and guidelines.

- IEC62209-1*(2005) Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)
- United States Federal Communications Commission, Code of Federal Regulations; Rule Part 47CFR § 2.1093 sub-part J:1999
- Federal Communications Commission, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields”, OET Bulletin 65, Supplement C (Edition 01-01), FCC, Washington, D.C.: June 2001.
- IEEE 1528*(2003), Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
- American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE) C95. 1-1992

- Institute of Electrical and Electronics Engineers (IEEE) C95.1-2005
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6 (1999), Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz
- Australian Communications Authority Radio communications (Electromagnetic Radiation - Human Exposure) Standard (2003)
- ANATEL, Brazil Regulatory Authority, Resolution No. 303 of July 2, 2002 "Regulation of the limitation of exposure to electrical, magnetic, and electromagnetic fields in the radio frequency range between 9kHz and 300 GHz." and "Attachment to resolution # 303 from July 2, 2002"
- Draft of IEC62209-2 Ed.1, Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices – Human models, Instrumentation, and Procedures Part 2: Procedure to determine the specific absorption rate (SAR) for mobile wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz), revised on Oct 3, 2008.

* The IEC62209-1 and IEEE1528 are applicable for hand-held devices used in close proximity to the ear only.

4.0 SAR Limits

TABLE 1

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average - ANSI - (averaged over the whole body)	**0.08**	**0.4**
Spatial Peak - ANSI - (averaged over any 1-g of tissue)	**1.6**	**8.0**
Spatial Peak – ICNIRP/ANSI - (hands/wrists/feet/ankles averaged over 10-g)	**4.0**	**20.0**
Spatial Peak - ICNIRP - (Head and Trunk 10-g)	**2.0**	**10.0**

5.0 SAR Result Scaling Methodology

The calculated 1-gram and 10-gram averaged SAR results indicated as "Max Calc. 1g-SAR" and "Max Calc.10g-SAR" in the data tables is determined by scaling the measured SAR to account for power leveling variations and power slump. A table and graph of output power versus time is provided in APPENDIX G. For this device the "Max Calc. 1g-SAR" and "Max Calc.10g-SAR" are scaled using the following formula:

$$Max\_Calc = SAR\_meas \cdot 10^{\frac{-Drift}{10}} \cdot \frac{P\_\max}{P\_\text{int}} \cdot DC$$

P_max = Maximum Power (W)
P_int = Initial Power (W)
Drift = DASY drift results (dB)
SAR_meas = Measured 1-g or 10-g Avg. SAR (W/kg)
DC = Transmission mode duty cycle in % where applicable
50% duty cycle is applied for PTT operation

Note: for conservative results, the following are applied:
If P_int > P_max, then P_max/P_int = 1.
Drift = 1 for positive drift

Additional SAR scaling was applied using the methodologies outlined in FCC KDB450824 using tissue sensitivity values. SAR was scaled for conditions where the tissue permittivity was measured above the nominal target and for tissue conductivity that was measured below the nominal target.

6.0 Description of Device Under Test (DUT)

FCC ID: IHDP56KV1 model H76XAN9JR9AN is a digital multi-service data capable devices that employs time division multiplexing with duty cycles of 16.67% for Voice (Dispatch), 16.67% (1:6) or 33.33%(1:3) for Interconnect or Circuit Data and 67.5% (81:120) for Packet Data. Possible modulation formats are QPSK, M16-QAM, or M64-QAM. All voice modes employ M16-QAM modulation, and are interleaved as 1:6 (for Dispatch PTT or Interconnect) or 1:3 (maximum for Interconnect). Split 1:3 Interconnect is operated at a 16.67% duty cycle, but because there will be two pulses in each 90-msec frame, the overall interleave is 2:6. Data transmissions employ QPSK, M16-QAM, and M64-QAM modulations, and have a maximum duty cycle of 67.50% (Packet Data). Packet Data operation is possible with-and-without connection to an external data device (via a data cable or Bluetooth link). All iDEN modes (Interconnect, Dispatch, and Data) are available in both the 800 and 900 MHz SMR bands, and are also supported in the Narrowband PCS. This device also possesses MOTOtalk, which is a Part 15 service, employing Frequency Hopping Spread Spectrum technology in the 900 MHz ISM band. MOTOtalk emissions have a duty cycle of 95.0% (114:120), and uses 8FSK modulation. Only dispatch (i.e. PTT) operation is possible when operating in this mode. The unit may be used at the abdomen in this mode (with applicable audio accessories) or held in front of the face. The low-audio earpiece mode has been locked out in software. There is no simultaneous operation within iDEN modes.

This device incorporates a Bluetooth (BT) V2.1 device which is a Frequency Hopping Spread Spectrum (FHSS) technology with a 76.5% maximum duty cycle. Bluetooth is a short range wireless protocol used for communication between users. Users link to each other through an Ad-Hock network of pico-nets. The pico-net is the basic communication cell, which is formed by a "master" and up to 7 "slaves." Bluetooth can transmit simultaneously with iDEN or MOTOtalk.

This device supports WLAN 802.11 b/g to provide high speed wireless connections to computers, PDA's or other wireless devices. WLAN 802.11 b/g can support up to 100% duty cycle. WLAN 802.11 b/g can transmit simultaneously with iDEN (excluding data modes) or MOTOtalk.

This device will be marketed to and used by the general population. This device may be used while held against the head in voice mode, in front of the face in PTT mode, and against the body in phone, dispatch, MOTOtalk, Data, BT and WLAN modes.

FCC ID: IHDP56KV1 is capable of operating in the 806-825 MHz and 896-902MHz bands for iDEN modes, 902-928MHz band for MOTOtalk mode, 2.402-2.480GHz band for BT and 2.412-2.462GHz band for WLAN. The nominal conducted power is 0.600 watts pulsed averaged in 806-825MHz and 896-902MHz bands, 0.850 watts in the MOTOtalk band, 0.0063 watts in the BT band and 0.050 watts in WLAN b and 0.020 watts in WLAN g. The maximum conducted output power is 0.640 watts pulsed average, 0.891 watts, 0.010 watts, 0.080 watts and 0.032 watts respectively as defined by the upper limit of the production line final test station.

7.0 Optional Accessories and Test Criteria

FCC ID: IHDP56KV1 is offered with optional accessories. All accessories were individually evaluated during the test plan creation to determine if testing was required. The following sections identify the test criteria and details for each accessory category.

7.1 Antennas

The table below summarizes the antennas, antenna descriptions, test status and separation distances.

TABLE 2

Antenna Models	Description	Tested	* Separation distances between DUT and phantom surface for given test configurations		
			Body Test Configuration		Face Test Configuration DUT @ 2.5cm
			Tested Carry Accessories	2.5cm Assessment DUT @ 2.5cm	
85009268001	Internal 1/2 wave, 806-825MHz (-0.78dBi), 896-902MHz (-2.03dBi), 902-928MHz (-2.03dBi)	Yes	29, 27, 29mm	25, 25, 25mm	25, 25, 25mm
85009269001	Internal ¼ wave 2.402-2.480GHz (1.36dBi)	**Yes	29, 27, 29mm	25, 25, 25mm	25, 25, 25mm

* The 1st number indicates the minimum separation distance that was measured at the bottom of the DUT, second number reflect the middle of the DUT while the third number reflects the top of the DUT. Refer to Exhibit 7B for illustration of distances.

** WLAN 802.11 b/g testing only since BT testing is not required per FCC KDB648474.

7.2 Batteries

All batteries were tested. The table below lists the batteries, descriptions and test status.

TABLE 3

Battery Models	Description	Tested	Comments
SNN5843A	BP6X Lithium Polymer battery	Yes	Requires battery cover NTN2559XXXA

7.3 Body worn Accessories

The body worn accessory was tested. The table below lists the body worn, description, test status and separation distances. The DUT can be positioned in the pouch either with the display facing the user or away from the user, both conditions were tested.

TABLE 4

Body worn Models	Description	Tested	* Separation distances between DUT and phantom surface. (mm)	Comments
NTN2578A	Leather pouch w/belt clip	Yes	29, 27, 29mm	DUT can be positioned two ways in the pouch (display facing phantom and display facing away from phantom). Kit NTN2578A consists of NNTN7924A pouch and SYN9853A clip.

* The 1st number indicates the minimum separation distance that was measured at the bottom of the DUT, second number reflect the middle of the DUT while the third number reflects the top of the DUT. Refer to Exhibit 7B for illustration of distances.

7.4 Audio/Data Cable Accessories

The audio accessories were tested. The table below lists the audio accessories, descriptions and test status.

TABLE 5

Audio Acc. Models	Description	Tested	Comments
Headsets w/ Microphone and PTT (Applicable for Body testing only)			
SYN1458A	Wired stereo headset (Phone & PTT modes), mUSB connector	Yes	Carry pouch does NOT support use with mUSB connector. Accessory was tested w/out body worn at 2.5cm.
SYN1472A	Wired Mono Headset (Phone & PTT modes), mUSB connector	Yes	Carry pouch does NOT support use with mUSB connector. Accessory was tested w/out body worn at 2.5cm.
NNTN5774C	Stereo Headset (Phone & PTT modes), 2.5mm connector	Yes	
NNTN5330B	Headset PTT, Earbud (Phone & PTT modes), 2.5mm connector	Yes	
Data Cable (Applicable for Body testing only)			
SKN6238A	Long Well USB Data cable, mUSB connector	Yes	Carry pouch does NOT support use with mUSB connector. Accessory was tested w/out body worn at 2.5cm.

8.0 Description of Test System


8.1 Descriptions of Robotics/Probes/Readout Electronics

The laboratory utilizes a Dosimetric Assessment System (DASY4™) SAR measurement system Version 4.7 build 80 manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The test system consists of a Stäubli RX90L robot, DAE4, and ES3DV3 E-field probe. The DASY4™ system is operated per the instructions in the DASY4™ Users Manual. The complete manual is available directly from SPEAG™. All measurement equipment used to assess EME SAR compliance was calibrated according to ISO/IEC 17025 A2LA guidelines. Section 9.0 presents additional test equipment information. Appendices B and C present the applicable calibration certificates. The E-field probe first scans a coarse grid over a large area inside the phantom in order to locate the interpolated maximum SAR distribution. After the coarse scan measurement, the probe is automatically moved to a position at the interpolated maximum. The subsequent scan can directly use this position as reference for the cube evaluations.

8.2 Description of Phantom(s)

8.2.1 Dual Flat Phantom

TABLE 6

Phantom ID (s)	Material Parameters	Material Thickness (mm)	Support Structure Material	Loss Tangent (wood)
DUAL1002	200MHz -6GHz; Er < 5, Loss Tangent = <0.05	2mm +/- 0.2mm	Wood	< 0.05

8.2.2 SAM Phantom

TABLE 7

Phantom ID (s)	Material Parameters	Material Thickness (mm)	Support Structure Material	Loss Tangent (wood)
SAMTP1022	200MHz -3GHz; Er = 5, Loss Tangent = ≤0.05	2mm +/- 0.2mm	Wood	< 0.05

8.2.3 Elliptical Flat Phantom

TABLE 8

Phantom ID (s)	Material Parameters	Phantom Dimensions LxWxD (mm)	Material Thickness (mm)	Support Structure Material	Loss Tangent (wood)
OVAL1019	300MHz -6GHz; Er = 4+/- 1, Loss Tangent = ≤0.05	600x400x190	2mm +/- 0.2mm	Wood	< 0.05

8.3 Description of Simulated Tissue

The simulated tissue used is compliant to that specified in FCC Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01) and IEEE Std 1528 - 2003 "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques". The simulated tissue used is also compliant to that specified in IEC62209-1 (2005) and adopted by CENELEC as EN62209-1 (2006).

The sugar based simulate tissue is produced by placing the correct measured amount of De-ionized water into a large container. Each of the dried ingredients are weighed and added to the water carefully to avoid clumping. If the solution has a high sugar concentration the water is pre-heated to aid in dissolving the ingredients. For Diacetin and similar type simulates, sugar and HEC ingredients are not needed. The solution is mixed thoroughly, covered, and allowed to sit overnight prior to use.

Simulated Tissue Composition (by mass)

TABLE 9

% of listed ingredients	835MHz		900MHz		2450MHz	
	Head	Body	Head	Body	Head	Body
Sugar	57.0	44.9	56.5	44.9	0	0
Diacetin	0	0	0	0	51.0	34.5
De ionized -Water	40.45	53.06	40.95	53.06	48.75	65.2
Salt	1.45	0.94	1.45	0.94	0.15	0.20
HEC	1.0	1.0	1.0	1.0	0	0
Bact.	0.1	0.1	0.1	0.1	0.1	0.1

Reference section 10.1 for target parameters

9.0 Additional Test Equipment

The table below lists additional test equipment used during the SAR assessment.

TABLE 10

Equipment Type	Model	Serial Number	Calibration Due
Power Meter (Agilent)	E4419B	MY45103725	8/24/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495730	4/15/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495733	4/15/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495593	2/12/2011
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495594	2/12/2011
Power Meter (HP)	E4418B	US39251150	4/16/2010
Power Meter (HP)	E4418B	US39251267	2/26/2010
Power Meter (HP)	E4418B	US39251266	2/26/2010
Power Meter(Agilent)	E4418B	GB40206553	4/16/2010
Power Sensor (Agilent)	8482B	3318A07392	3/18/2010
Power Sensor (Agilent)	8482B	3318A06773	5/6/2010
Power Sensor (HP)	8482B	3318A06774	2/27/2010
Power Sensor (HP)	8481B	3318A10894	3/19/2010
Bi-Directional Coupler (NARDA)	3020A	40295	6/9/2010
Bi-Directional Coupler (NARDA)	3020A	40296	2/7/2010*
Bi-Directional Coupler (NARDA)	3022	70181	11/13/2011
Signal Generator (HP)	E4421B	US39270649	8/12/2010
Signal Generator (HP)	E4428C	MY47381119	7/14/2012
Signal Generator (HP)	E4438C	MY42082269	2/13/2010*
AMP (Amplifier Research)	1W1000	16625	CNR
Comtech PST	AR88258-10	M3Y6A00-1007	CNR
Dickson Temperature Recorder	TM125	1195889	2/14/2010*
Dickson Temperature Recorder	TM320	7081356	8/19/2010
Omega Digital Thermometer with J Type TC Probe	HH202A	18801	4/1/2010
Omega Digital Thermometer with J Type TC Probe	HH202A	18800	11/10/2010
Omega Digital Thermometer with J Type TC Probe	HH202A	18812	5/22/2010
Agilent PNA-L Network Analyzer	N5230A	MY45001092	5/22/2010
Dielectric Probe Kit (HP)	85070C	US99360076	CNR
Speag	D900V2	85	8/25/2010
Speag	D2450V2	704	11/18/2010

* Note, equipment was removed from inventory prior to calibration expiration.

10.0 SAR Measurement System Verification

The SAR measurements were conducted with probe model/serial number ES3DV3/SN3185. The system performance check was conducted daily and within 24 hours prior to testing. DASY output files of the probe/dipole calibration certificates and system performance test results are included in appendices B, C, D respectively.

Dipole validation scans using head tissue equivalent medium are provided in APPENDIX D. The EMS EME lab validated the dipole to the applicable IEEE 1528-2003 system performance targets. Within the same day system validation was performed using FCC body tissue parameters to generate the system performance target values for body at the applicable frequency. The results of the EMS EME system performance validation are provided herein.

10.1 Equivalent Tissue Test Results

Simulated tissue prepared for SAR measurements is measured daily and within 24 hours prior to actual SAR testing to verify that the tissue is within +/- 5% of target parameters at the center of the transmit band. This measurement is done using the applicable equipment indicated in section 9.0. The table below summarizes the measured tissue parameters used for the SAR assessment.

TABLE 11

Frequency (MHz)	Tissue Type	Conductivity Target & Range (S/m)	Dielectric Constant Target & Range	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
				0.99	53.3	01/12/10
		0.97	55.3	1.00	54.6	01/13/10
815.5	FCC Body	(0.92-1.01)	(52.5-58.0)	0.97	53.3	02/01/10
				0.89	41.0	01/07/10
	IEEE/ IEC	0.90	41.6	0.91	41.6	01/08/10
815.5	Head	(0.85-0.94)	(39.5-43.6)	0.88	41.0	01/11/10
				1.09	53.8	01/13/10
				1.09	53.1	01/14/10
		1.05	55.0	1.04	52.4	01/19/10
899	FCC Body	(0.99-1.10)	(52.3-57.7)	1.05	52.5	01/20/10
	IEEE/ IEC	0.97	41.5	0.98	40.5	01/08/10
899	Head	(0.92-1.01)	(39.4-43.5)	0.97	40.0	01/11/10
				1.08	52.5	01/12/10
				1.09	53.1	01/14/10
				1.04	52.4	01/19/10
		1.05	55.0	1.05	52.5	01/20/10
900	FCC Body	(0.99-1.10)	(52.3-57.7)	1.05	52.4	02/01/10
				0.97	40.0	01/07/10
				0.98	40.5	01/08/10
	IEEE/ IEC	0.97	41.5	0.97	40.0	01/11/10
900	Head	(0.92-1.01)	(39.4-43.5)	0.97	40.0	01/13/10

TABLE 11 (continued)

Frequency (MHz)	Tissue Type	Conductivity Target & Range (S/m)	Dielectric Constant Target & Range	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
915	FCC Body	1.06 (1.00-1.11)	55.0 (52.3-57.7)	1.10	52.3	01/12/10
				1.11	52.3	01/14/10
915	IEEE/ IEC Head	0.98 (0.93-1.02)	41.5 (39.4-43.5)	0.98	39.9	01/11/10
2438	FCC Body	1.94 (1.84-2.04)	52.7 (50.0-55.3)	1.99	50.3	02/20/10
				1.99	50.8	02/22/10
				2.00	50.8	02/23/10
2438	IEEE/ IEC Head	1.79 (1.70-1.88)	39.2 (37.2-41.1)	1.81	37.5	02/18/10
				1.80	37.3	02/19/10
2450	FCC Body	1.95 (1.85-2.05)	52.7 (50.0-55.3)	2.01	50.7	02/18/10
				2.00	50.4	02/20/10
				2.01	50.7	02/22/10
				2.02	50.7	02/23/10
2450	IEEE/ IEC Head	1.80 (1.71-1.89)	39.2 (37.2-41.2)	1.82	37.3	02/19/10

10.2 System Check Test Results

System performance checks were conducted each day during the SAR assessment. The results are normalized to 1W. APPENDIX D explains how the targets were set and includes DASY plots for each day during the SAR assessment. The table below summarizes the daily system check results used for the SAR assessment.

TABLE 12

Probe Serial #	Tissue Type	Probe Cal Date	Dipole Kit / Serial #	Reference SAR @ 1W (W/kg)	System Check Test Results when normalized to 1W (W/kg)	Tested Date
3185	IEEE/ IEC Head	11/23/2009	SPEAG D900V2 /085	11.07+/- 10%	11.12	01/07/10
					11.16	01/08/10
					11.44	01/11/10
					11.36	01/13/10
3185	FCC Body	11/23/2009	SPEAG D900V2 /085	11.92 +/- 10%	12.04	01/12/10
					12.20	01/14/10
					11.20	01/19/10
					11.56	01/20/10
					12.24	02/01/10

Note: See APPENDIX D for an explanation of the reference SAR targets stated above.

TABLE 12 (continued)

Probe Serial #	Tissue Type	Probe Cal Date	Dipole Kit / Serial #	Reference SAR @ 1W (W/kg)	System Check Test Results when normalized to 1W (W/kg)	Tested Date
3185	FCC Body	11/23/2009	SPEAG D2450V2 /704	55.27 +/- 10%	54.60	02/18/10
					51.00	02/20/10
					56.50	02/22/10
					56.00	02/23/10
3185	IEEE/ IEC Head	11/23/2009	SPEAG D2450V2 /704	57.20 +/- 10%	60.70	02/19/10

Note: See APPENDIX D for an explanation of the reference SAR targets stated above.

11.0 Environmental Test Conditions

The EME Laboratory ambient environment is well controlled resulting in very stable simulated tissue temperature and therefore stable dielectric properties. Simulated tissue temperature is measured prior to each scan to insure it is within +/ - 2^{o}C of the temperature at which the dielectric properties were determined. The liquid depth within the phantom used for measurements was at least 15cm. Additional precautions are routinely taken to ensure the stability of the simulated tissue such as covering the phantoms when scans are not actively in process in order to minimize evaporation. The lab environment is continuously monitored. The table below presents the range and average environmental conditions during the SAR tests reported herein:

TABLE 13

	Target	Measured
Ambient Temperature	18 - 25 ˚C	Range: 20.4-22.4˚C Avg. 21.7˚C
Relative Humidity	30 - 70 %	Range: 21.7-63.7% Avg. 39.7%
Tissue Temperature	NA	Range: 19.0-21.0˚C Avg. 19.9˚C

The EME Lab RF environment uses a Spectrum Analyzer to monitor for extraneous large signal RF contaminants that could possibly affect the test results. If such unwanted signals are discovered the SAR scans are repeated.

12.0 DUT Test Methodology

Per FCC KDB648474 BT testing is not required due to the folloming;

a) BT max power (10mW) < 12mW (Pref @ 2.45GHz)
b) Antenna separation distances is less than 2.5cm. (Refer to Exhibit 7B section 7.0)
c) SAR at the body (0.95 W/kg) is less than 1.2 W/kg.

12.1 Measurements

SAR measurements were performed using the DASY system described in section 8.0 using coarse and 5x5x7 zoom scan. Elliptical flat and SAM phantoms filled with applicable simulated tissue were used for body, head and face testing.

12.2 DUT Configuration(s)

The DUT is a portable device with iDEN (QPSK, M16-QAM, M64-QAM), MOTOtalk, BT and WLAN 802.11 b/g signaling operational at the relevant body, head and face as described in section 6.0 while using the applicable accessories listed in section 7.0.

12.3 DUT Positioning Procedures

The positioning of the device for each body location is described below and illustrated in APPENDIX H.

12.3.1 Body

The DUT was positioned in normal use configurations against the phantom with the offered body worn and audio/data cable accessories.

The DUT was positioned with its' front and back sides separated 2.5cm from the phantom. Testing at 2.5cm is done to satisfy the conditions noted in the safety section of the manual.

12.3.2 Head

The DUT was placed against the right and left ears of the SAM phantom in the check touch and tilt positions.

12.3.3 Face

The DUT was positioned with its' front side separated 2.5cm from the phantom.

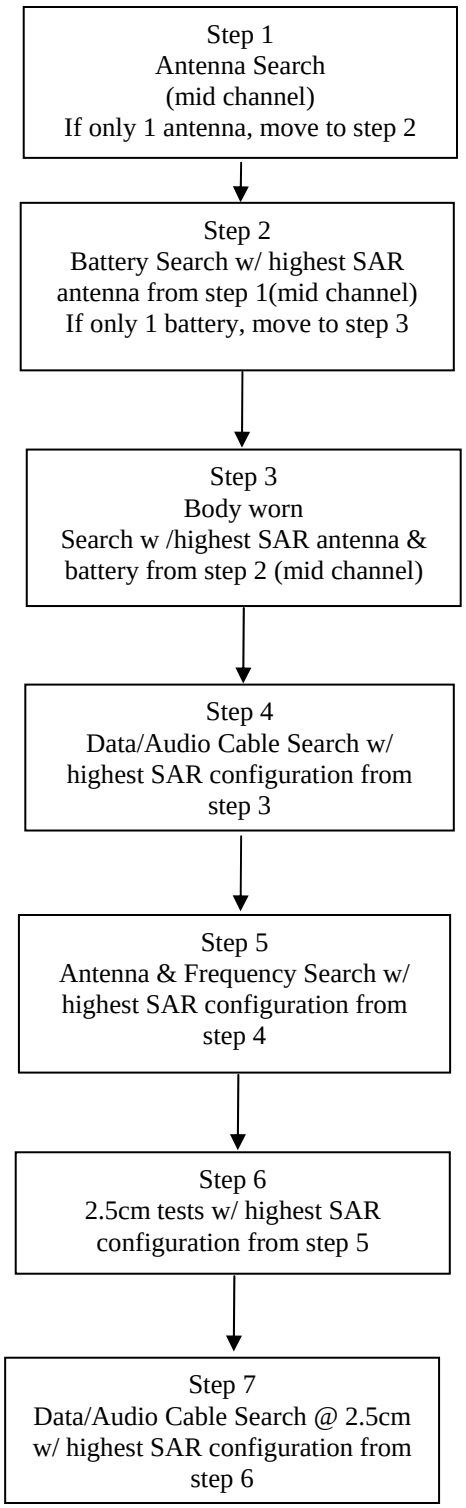
12.4 DUT Test Plan

The modes of operation identified in section 6.0 were used to develop the test plan using the highest duty cycle where applicable. WLAN 802.11 b has higher output power than WLAN 802.11g and therefore only WLAN 802.11 b was tested. All accessories listed in section 7.0 of this report were evaluated and only those identified for testing were used to develop the SAR test plan for this product.

An Expanded One Factor at A Time (OFAT) method was applied to develop the SAR test plan for this product. The following flowcharts identify the general approach to the test sequences for body, head and face positions.

12.4.1 General Test Flowchart

DUT Body Test Methodology
(General flowchart)



Flowchart Objectives
Body

Step 1 - Determine the highest SAR antenna. If only 1 antenna then move to step 2.

Step 2 – Determine if optional batteries cause the SAR values to increase. If only 1 battery then move to step 3.

Step 3 - Determine if optional body worn carry case causes the SAR value to increase. All tests in step 3 use the same pouch from steps 1 & 2 along with antenna (mid channel) and battery. Note that the DUT can be placed in the pouch with w/out the display facing the phantom and therefore both positions were tested.

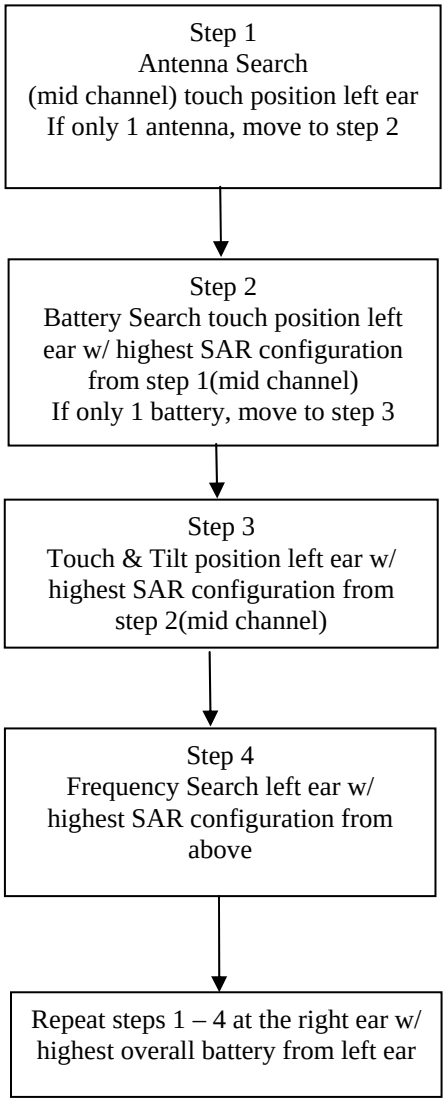
Step 4 – Determine if the optional data/audio accessories causes the SAR value to increase. All tests in step 4 use the overall highest SAR combination from the steps above. Note that the pouch only supports audio cables with 2.5mm connectors therefore mUSB connectors were tested at 2.5cm (refer to step 7)

Step 5 – Determine if the low & mid channels for the antenna cause the SAR values to increase. All tests in step 5 use the overall highest SAR combination from the steps above.

Step 6 – Determine if the DUT positioned at 2.5cm from the body (front and back) causes the SAR value to increase. All tests in step 6 use the overall highest SAR frequency, battery and data/audio from the steps above.

Step 7 – Determine if the optional data/audio accessories (w/ mUSB connectors) cause the SAR values to increase. All tests in step 7 use the highest SAR combination from step 6.

DUT Head Test Methodology
(General flowchart)



Flowchart Objectives
Head

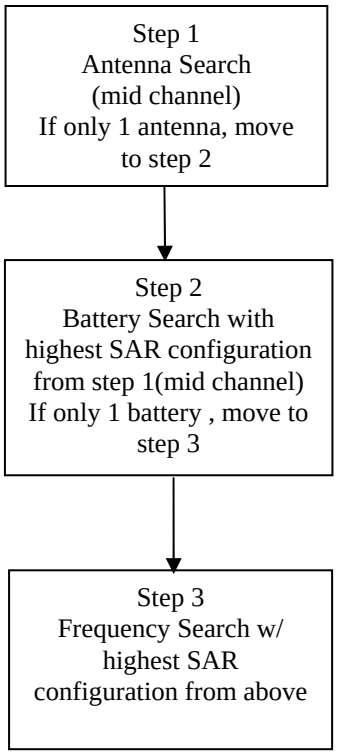
Step 1 – Determine the highest SAR antenna. If only 1 antenna then move to step 2.

Step 2 – Determine if the optional batteries cause the SAR values to change. If only 1 battery then move to step 3

Step 3 – Determine if the touch & tilt positions cause the SAR value to change. All tests in step 3 use the overall highest SAR combination (mid channel) from the steps above.

Step 4 – Determine if the low & high channels cause the SAR value to change. All tests in step 4 use the overall highest SAR combination from the steps above.

DUT Face Test Methodology
(General flowchart)



Flowchart Objectives
Face

Step 1 – Determine the highest SAR antenna. If only 1 antenna then move to step 2.

Step 2 – Determine if the optional batteries accessory cause the SAR value to change. above. If only 1 battery then move to step 3.

Step 3 – Determine if the low, mid & high channels cause the SAR value to change. All tests in step 3 use the overall highest SAR combination from the steps above.

13.0 DUT Test Data

13.1 806-825MHz Test Flowchart Data Summary

806-825MHz band
DUT Body Assessment

Step 1
Antenna Search
Only one antenna (85009268001) was tested
Move to step 2

Step 2
Battery Search
Only one battery (SNN5843A) was tested
Move to step 2

Step 3 (Table 14 pg 23)
Body worn Search
Pouch (NTN2578A) was tested w/ the DUT front/display side and back/camera side against the phantom with antenna (85009268001) and battery (SNN5843A)

The highest SAR from step 3 is 0.89W/kg

Step 4 (Table 15 pg 23)
Audio Search
Optional audio accessories (2.5mm) were tested using the highest SAR configuration from above antenna (85009268001) and battery (SNN5843A)

The highest SAR from steps 3 & 4 is 0.89W/kg

Step 5 (Table 16 pg 24)
Frequency Search
Antenna (85009268001) was tested at the low & high channels with the highest SAR configuration from above

The highest SAR from step 5 is 0.86W/kg

Step 6 (Table 17 pg 24)
2.5cm Testing
2.5cm separation distance was tested using antenna (85009268001) and the highest SAR frequency, battery and data/audio cable accessory from above

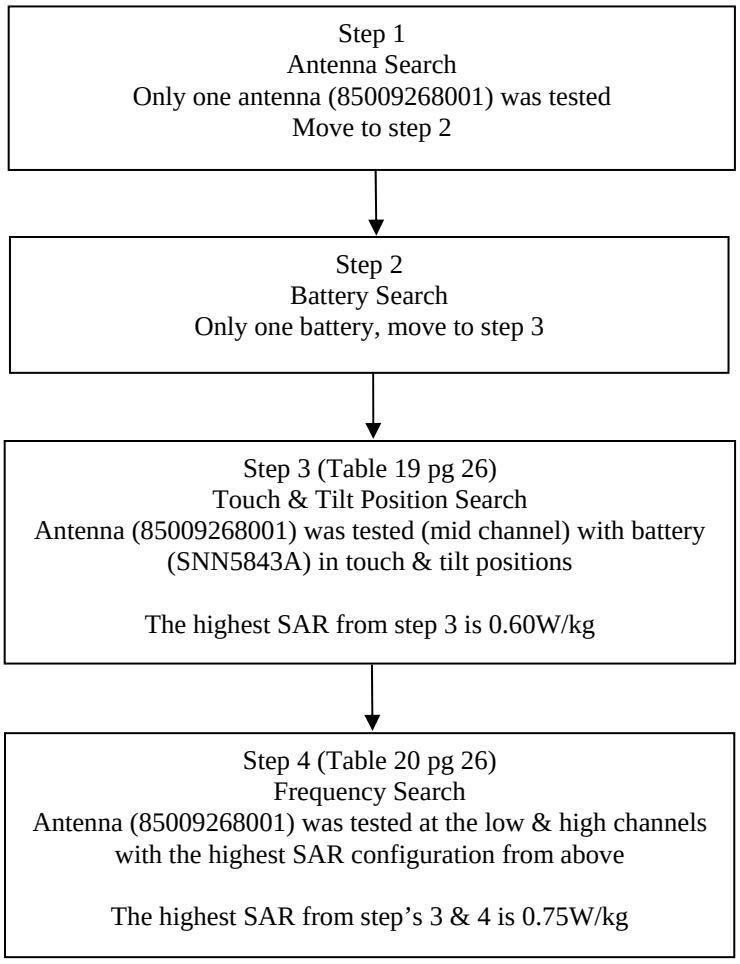
The highest SAR from step 6 is 0.91W/kg

Step 7 (Table 18 pg 25)
Data/Audio Search
Optional data/audio accessories (mUSB) were tested using the highest SAR configuration from step 6 above with antenna (85009268001) and battery (SNN5843A)

The highest SAR from step 7 is 0.89W/kg

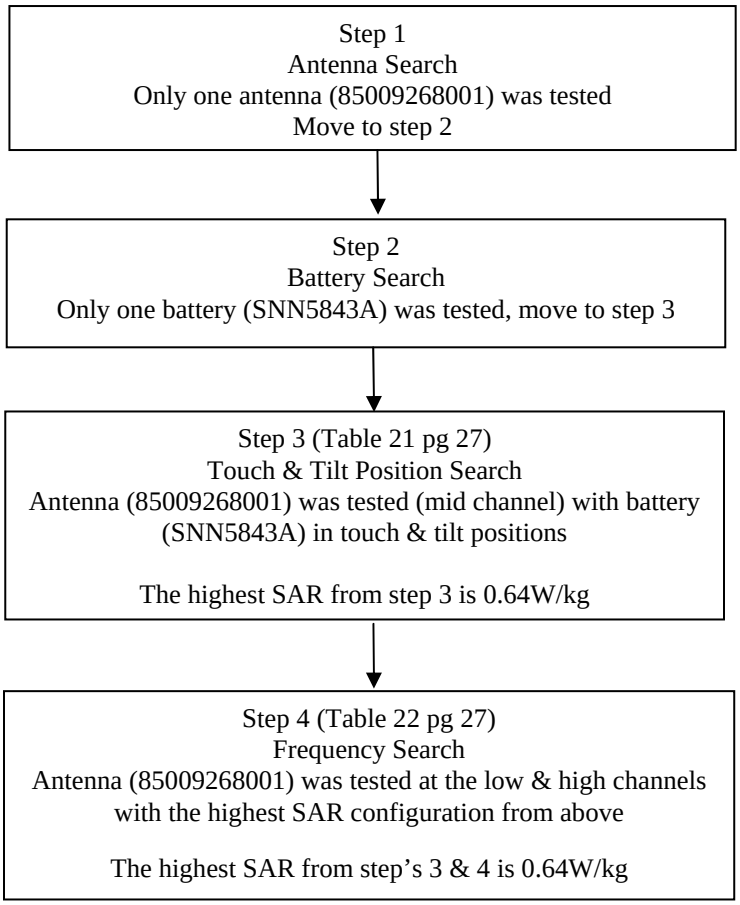
The highest body SAR from above is 0.91W/kg

806-825MHz band
DUT Head Assessment – Left Ear



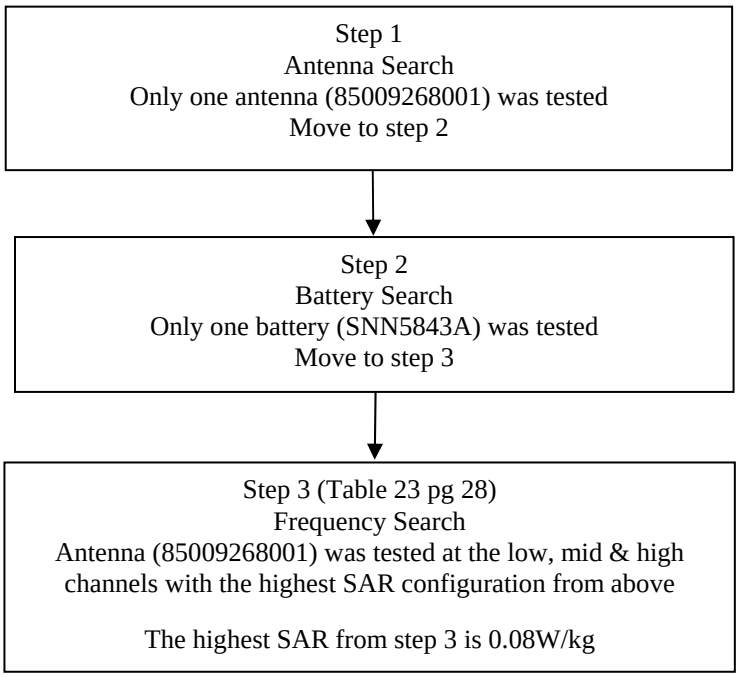
The highest Head SAR – Left Ear from above is 0.75W/kg

806-825MHz band
DUT Head Assessment – Right Ear



The highest Head SAR – Right Ear from above is 0.64W/kg

806-825MHz band
DUT Face Assessment



The highest Face SAR from above is 0.08W/kg

13.2 806-825MHz Test Data

Assessments at the Body (81:120 Data mode, 1:3 Phone mode)

Assessment of the offered antenna (Test Flowchart pg 19 step 1); Antenna search is not required because only one antenna is offered for 806-825MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 19 step 2); Battery search is not required because only one battery is offered for 806-825MHz band. Move to step 3.

Assessment of the offered body worn accessory (Test Flowchart pg 19 step 3); The offered body worn accessory, pouch NTN2578A, was tested. Since the pouch will allow the DUT to be positioned with the display (front) facing the phantom or the camera (back) facing the phantom, both were tested. The highest SAR result from the table below is provided in APPENDIX F Section 1.0 - 806-825MHz Band Assessment of the offered body worn accessory.

TABLE 14

806-825MHz Band Assessments at Body (81:120 data mode) – Assessment of offered body worn												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100112-05 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	None	0.645	-0.743	0.627	0.454	0.75	0.55
HvH-Ab-100112-06 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	None	0.646	-0.732	0.744	0.538	0.89	0.64

Assessment of the offered audio cable accessories(Test Flowchart pg 19 step 4); The optional audio cables were tested in their applicable mode (1:3) at mid channel using highest configuration antenna (85009268001), battery (SNN5843A) with pouch (NTN2578A) and DUT camera (back) facing phantom. The highest SAR result from the table below is provided in APPENDIX F Section 2.0 - 806-825MHz Band Assessment of the offered audio accessories.

TABLE 15

806-825MHz Band Assessments at Body (1:3 phone mode) – Assessment of offered audio accessories												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100112-07 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5330B Headset (2.5mm)	0.655	-0.097	0.224	0.162	0.23	0.17
HvH-Ab-100112-08 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5774C Headset (2.5mm)	0.657	-0.105	0.191	0.137	0.20	0.14

Assessments at the Body (81:120 Data mode)

Assessment of frequency band edges of the offered antenna (Test Flowchart pg 19 step 5); The frequency band edges (low and high) were tested using the configuration antenna (85009268001), battery (SNN5843A) with pouch (NTN2578A) and DUT camera (back) facing phantom without a data cable. The highest SAR result from the table below is provided in APPENDIX F Section 3.0 - 806-825MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 16

806-825MHz Band Assessments at Body (81:120 data mode) - Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100113-03 / 364VKYLJBH	85009268001 (internal)	806.0125	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	None	0.645	-1.050	0.668	0.487	0.86	0.63
HvH-Ab-100113-04 / 364VKYLJBH	85009268001 (internal)	824.9875	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	None	0.658	-0.656	0.539	0.396	0.63	0.47

Assessment without body worn accessory at 2.5cm (Test Flowchart pg 19 step 6); The highest SAR test configuration antenna (85009268001), frequency (815.5125MHz), battery (SNN5843A) and without data cable) was selected to assess this device at 2.5cm with the front and back of the device facing the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 4.0 - 806-825MHz Band Assessment without body worn accessory at 2.5cm.

Note: The 2.5cm assessments included the following configurations:

- Back of the device facing the phantom, positioned at 2.5cm from the phantom surface.
- Front of the device facing the phantom, positioned at 2.5cm from the phantom surface.

TABLE 17

806-825MHz Band Assessments at Body (81:120 data mode) - Assessment at 2.5cm												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100113-05 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	None	0.647	-0.064	0.887	0.661	0.91	0.68
HvH-Ab-100113-06 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT front 2.5cm	None	None	0.652	-0.014	0.670	0.497	0.68	0.50

Assessments at the Body (81:120 Data mode, 1:3 Phone mode)

Assessment of data/audio accessories at 2.5cm (Test Flowchart pg 19 step 7); The highest SAR test configuration antenna (85009268001), frequency (815.5125MHz), battery (SNN5843A) was selected from the 2.5cm testing (refer to table 17) to assess the remaining data/audio accessories that are not applicable with the body worn pouch. The reason they are not applicable for use with the pouch is that these accessories use a mUSB connector which is not available when the DUT is placed in the pouch. The highest SAR result from the table below is provided in APPENDIX F Section 5.0 - 806-825MHz Band Assessment of data/audio accessories at 2.5cm.

TABLE 18

806-825MHz Band Assessments at Body (81:120 data mode) - Assessment at 2.5cm with data accessory												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100113-07 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SKN6238A (mUSB)	0.646	-0.151	0.849	0.630	0.89	0.66
806-825MHz Band Assessments at Body (1:3 phone mode) - Assessment at 2.5cm with audio accessories												
HvH-Ab-100113-08 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1472A Headset (mUSB)	0.662	-0.062	0.383	0.282	0.39	0.29
HvH-Ab-100113-09 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1458A Headset (mUSB)	0.659	-0.101	0.424	0.312	0.43	0.32

Assessments at the Head Left Ear (1:3 Phone mode)

Assessment of the offered antenna (Test Flowchart pg 20 step 1); Antenna search is not required because only one antenna is offered for 806-825MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 20 step 2); Battery search is not required because only one battery is offered for 806-825MHz band. Move to step 3.

Assessment of the touch and tilt Positions (Test Flowchart pg 20 step 3); The touch and tilt position were tested at mid channel using highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 6.0 – 806-825MHz Band Assessment of the touch and tilt positions.

TABLE 19

806-825MHz Band Assessments at LEAR (1:3 phone mode) – Assessment of touch and tilt positions												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-LEAR-100107-09 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.652	-0.237	0.564	0.409	0.60	0.43
HvH-Lear-100108-02 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	15˚ Tilt	None	None	0.654	-0.183	0.399	0.296	0.42	0.31

Assessment of frequency band edges of the offered antenna (Test Flowchart pg 20 step 4); The frequency band edges (low and high) were tested using the highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 7.0 - 806-825MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 20

806-825MHz Band Assessments at LEAR (1:3 phone mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Lear-100108-03 / 364VKYLJBH	85009268001 (internal)	806.0125	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.651	-0.185	0.562	0.414	0.59	0.43
HvH-Lear-100108-04 / 364VKYLJBH	85009268001 (internal)	824.9875	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.657	-0.149	0.727	0.530	0.75	0.55

Assessments at the Head Right Ear (1:3 Phone mode)

Assessment of the offered antenna (Test Flowchart pg 21 step 1); Antenna search is not required because only one antenna is offered for 806-825MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 21 step 2); Battery search is not required because only one battery is offered for 806-825MHz band. Move to step 3.

Assessment of the touch and tilt positions (Test Flowchart pg 21 step 3); The touch and tilt positions were tested using battery (SNN5843A). These tests were conducted at mid channel using antenna (85009268001). The highest SAR result from the table below is provided in APPENDIX F Section 8.0 – 806-825MHz Band Assessment of the touch and tilt positions.

TABLE 21

806-825MHz Band Assessments at REAR (1:3 phone mode) – Assessment of touch and tilt position												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Rear-100108-09 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.664	-0.188	0.617	0.464	0.64	0.48
HvH-Rear-100108-10 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	15˚ Tilt	None	None	0.663	-0.100	0.405	0.301	0.41	0.31

Assessment of frequency band edges of the offered antenna (Test Flowchart pg 21 step 4); The frequency band edges (low and high) were tested using the highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 9.0 - 806-825MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 22

806-825MHz Band Assessments at REAR (1:3 phone mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Rear-100108-11 / 364VKYLJBH	85009268001 (internal)	806.0125	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.625	-0.182	0.379	0.285	0.40	0.30
CM-Rear-100108-12 / 364VKYLJBH	85009268001 (internal)	824.9875	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.656	-0.220	0.538	0.400	0.54	0.40

Assessments at the Face (1:6 Dispatch mode)

Assessment of the offered antenna (Test Flowchart pg 21 step 1); Antenna search is not required because only one antenna is offered for 806-825MHz band. Move to step 2.

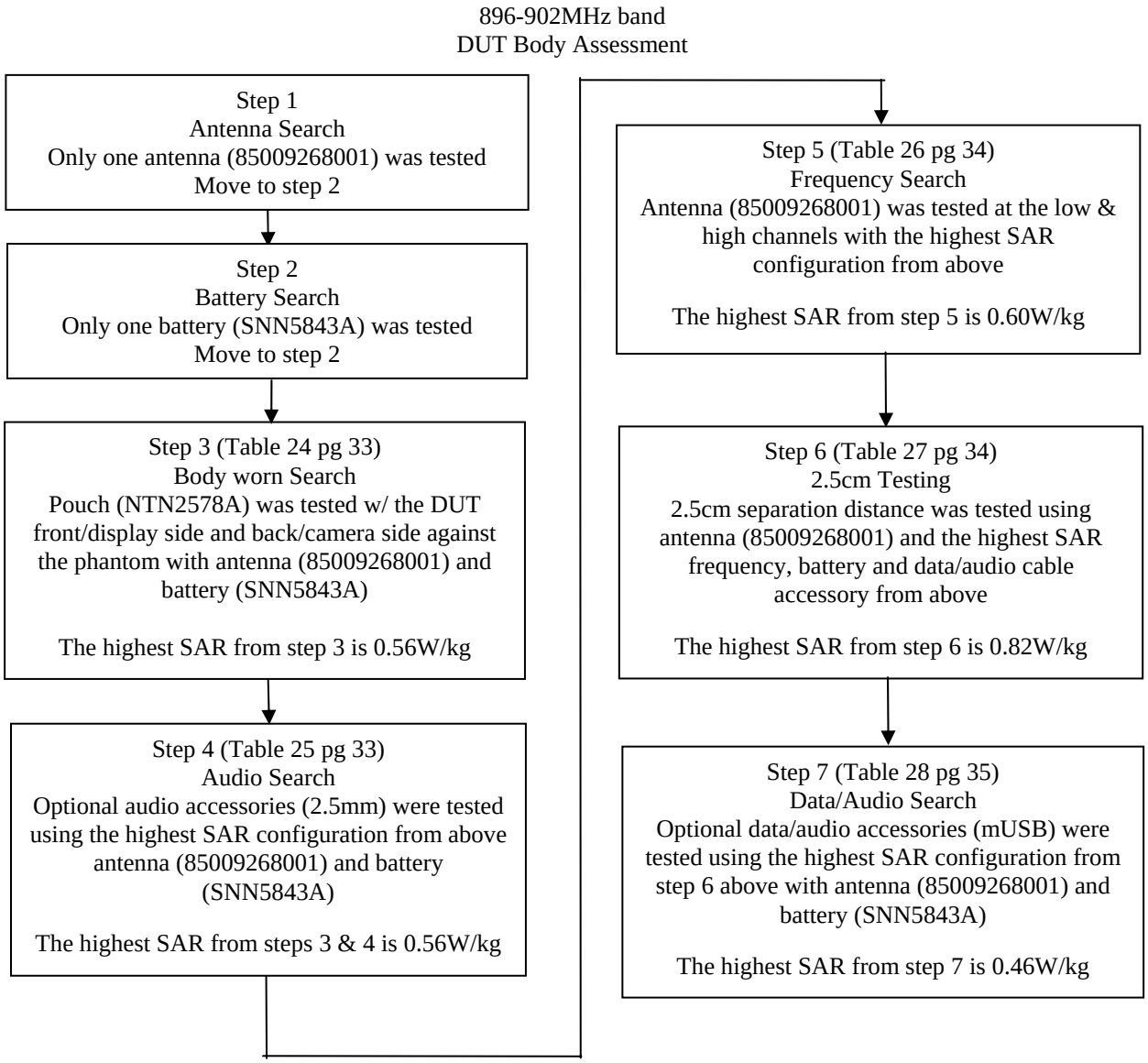
Assessment of the offered batteries (Test Flowchart pg 21 step 2); Battery search is not required because only one battery is offered for 896-902MHz band. Move to step 3.

Assessment of frequency band of the offered antenna (Test Flowchart pg 22 step 3); The frequency band (low, mid and high) was tested using the highest configuration antenna (85009268001) and battery (SNN5843A) and with the DUT positioned at 2.5cm from the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 10.0 - 806-825MHz Band Assessment of frequency band of the offered antenna.

TABLE 23

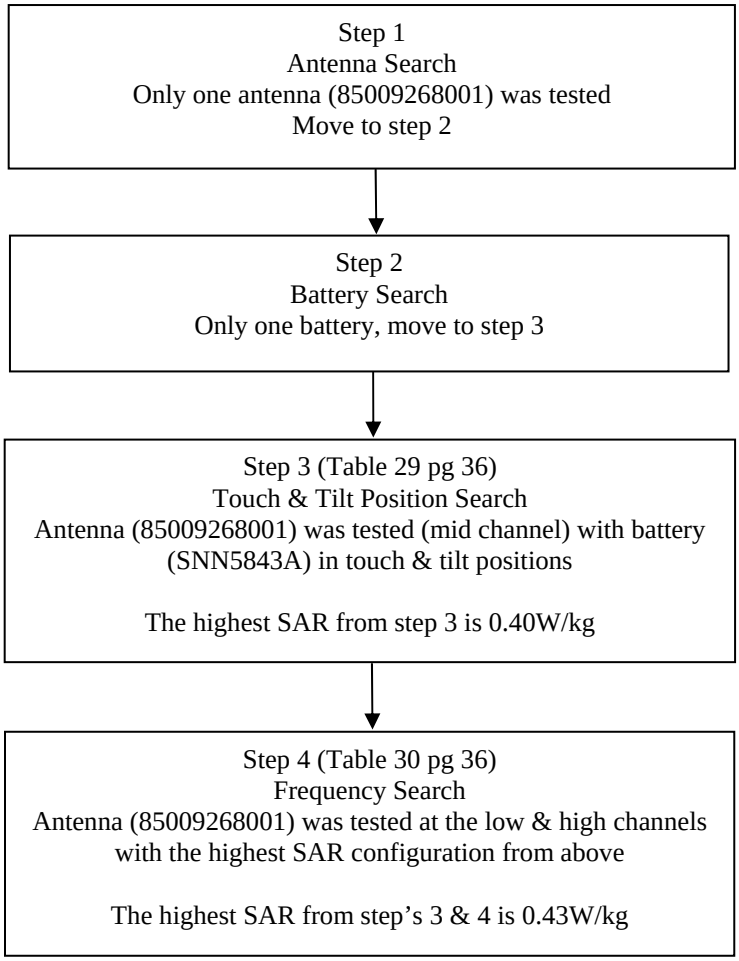
806-825MHz Band Assessments at Face (1:6 dispatch mode) – Assessment of frequency band of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Face-100111-02 / 364VKYLJBH	85009268001 (internal)	806.0125	SNN5843A w/ NTN2559xxxA	Front 2.5cm	None	None	0.648	-0.166	0.141	0.103	0.07	0.05
CM-Face-100111-03 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	Front 2.5cm	None	None	0.652	-0.243	0.145	0.105	0.08	0.06
CM-Face-100111-05 / 364VKYLJBH	85009268001 (internal)	824.9875	SNN5843A w/ NTN2559xxxA	Front 2.5cm	None	None	0.653	0.052	0.167	0.119	0.08	0.06

13.3 896-902MHz Test Flowchart Data Summary



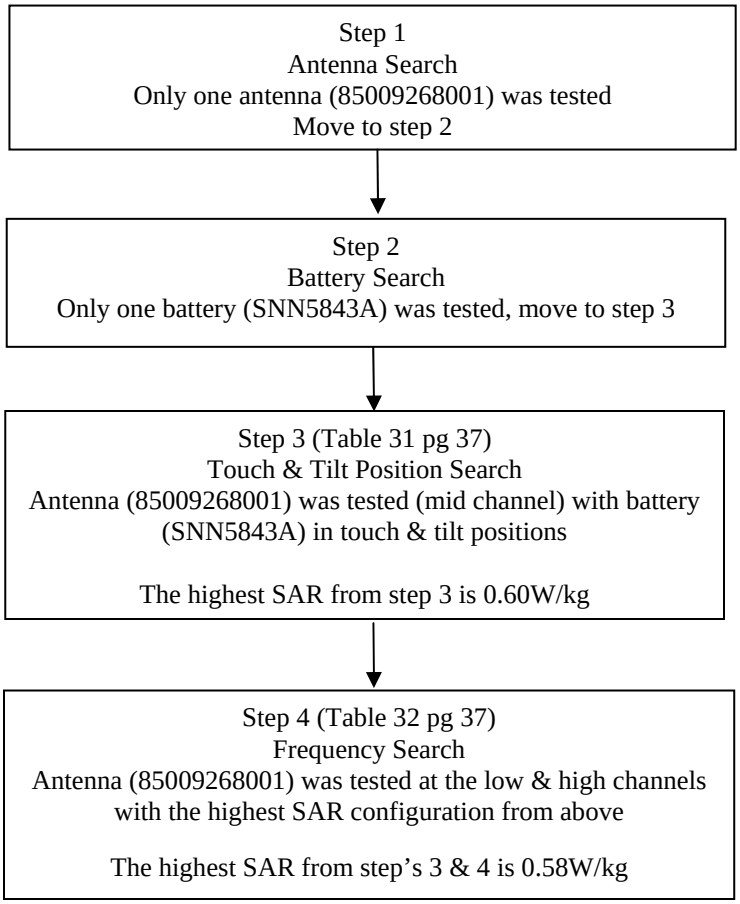
The highest body SAR from above is 0.82W/kg

896-902MHz band
DUT Head Left Ear Assessment



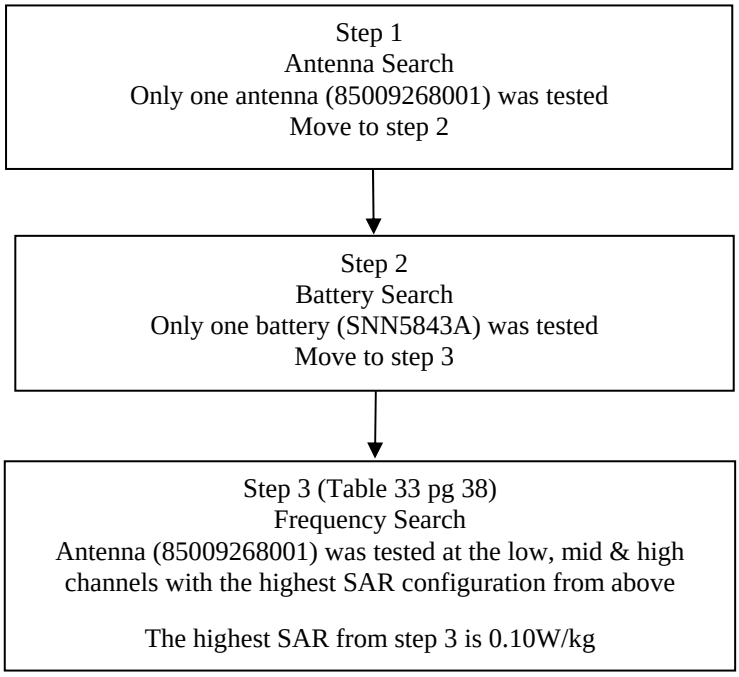
The highest Head SAR – Left Ear from above is 0.43W/kg

896-902MHz band
DUT Head Right Ear Assessment



The highest Head SAR – Right Ear from above is 0.60W/kg

896-902MHz band
DUT Face Assessment



The highest Face SAR from above is 0.10W/kg

13.4 896-902MHz Test Data

Assessments at the Body (81:120 data mode, 1:3 Phone mode)

Assessment of the offered antenna (Test Flowchart pg 29 step 1); Antenna search is not required because only one antenna is offered for 896-902MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 29 step 2); Battery search is not required because only one battery is offered for the 896-902 band. Move to step 3.

Assessment of the offered body worn accessory (Test Flowchart pg 29 step 3); The offered body worn accessory, pouch NTN2578A, was tested. Since the pouch will allow the DUT to be positioned with the display (front) facing the phantom or the camera (back) facing the phantom, both were tested. The highest SAR result from the table below is provided in APPENDIX F Section 11.0 - 896-902MHz Band Assessment of the offered body worn accessory.

TABLE 24

896-902MHz Band Assessments at Body (81:120 data mode) – Assessment of offered body worn												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Ab-100119-11 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	None	0.665	0.039	0.554	0.407	0.56	0.41
CM-Ab-100119-12 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	None	0.664	0.148	0.493	0.362	0.50	0.37

Assessment of the offered audio cable accessories(Test Flowchart pg 29 step 4); The optional audio cable were tested in their applicable mode (1:3) at mid channel using highest configuration antenna (85009268001), battery (SNN5843A) with pouch (NTN2578A) and DUT display (front) facing phantom. The highest SAR result from the table below is provided in APPENDIX F Section 12.0 - 896-902MHz Band Assessment of the offered audio accessories.

TABLE 25

896-902MHz Band Assessments at Body (1:3 phone mode) – Assessment of offered audio accessories												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Ab-100119-13 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	NNTN5330B Headset (2.5mm)	0.664	0.132	0.146	0.106	0.15	0.11
CM-Ab-100120-09 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	NNTN5774C Headset (2.5mm)	0.654	0.097	0.148	0.107	0.15	0.11

Assessments at the Body (81:120 data mode)

Assessment of frequency band edges of the offered antenna (Test Flowchart pg 29 step 5); The frequency band edges (low and high) were tested using the highest configuration antenna (85009268001), battery (SNN5843A) with pouch (NTN2578A) and DUT display (front) facing phantom without a data cable. The highest SAR result from the table below is provided in APPENDIX F Section 13.0 - 896-902MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 26

896-902MHz Band Assessments at Body (81:210 data mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Ab-100120-11 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	None	0.658	0.116	0.592	0.435	0.60	0.44
CM-Ab-100120-12 / 364VKYLJBH	85009268001 (internal)	901.98125	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	None	0.646	0.148	0.401	0.289	0.41	0.29

Assessment without body worn accessory at 2.5cm (Test Flowchart pg 29 step 6); The highest SAR test configuration antenna (85009268001), frequency (896.01875MHz), battery (SNN5843A) and without data cable was selected to assess this device at 2.5cm with the front and back of the device facing the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 14.0 - 896-902MHz Band Assessment without body worn accessory at 2.5cm.

Note: The 2.5cm assessments included the following configurations:

- Back of the device facing the phantom, positioned at 2.5cm from the phantom surface.
- Front of the device facing the phantom, positioned at 2.5cm from the phantom surface.

TABLE 27

896-902MHz Band Assessments at Body (81:120 data mode) - Assessment at 2.5cm												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Ab-100113-15 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	None	0.672	0.056	0.807	0.590	0.82	0.60
CM-Ab-100113-14 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	DUT front 2.5cm	None	None	0.670	0.003	0.672	0.489	0.68	0.49

Assessments at the Body (81:120 Data mode, 1:3 Phone mode)

Assessment of data/audio accessories at 2.5cm (Test Flowchart pg 29 step 7); The highest SAR test configuration antenna (85009268001), frequency (896.01875MHz), (battery SNN5843A) was selected from the 2.5cm testing (refer to table 27) to assess the remaining data/audio accessories that are not applicable with the body worn pouch. The reason they are not applicable for use with the pouch is that these accessories use a mUSB connector which is not available when the DUT is placed in the pouch. The highest SAR result from the table below is provided in APPENDIX F Section 15.0 - 896-902MHz Band Assessment of data/audio accessories at 2.5cm.

TABLE 28

896-902MHz Band Assessments at Body (81:120 data mode) - Assessment at 2.5cm with data accessory												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Ab-100113-16 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SKN6238A (mUSB)	0.672	0.123	0.451	0.328	0.46	0.33
896-902MHz Band Assessments at Body (1:3 phone mode) - Assessment at 2.5cm with audio accessories												
HvH-Ab-100114-02 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1472A Headset (mUSB)	0.670	0.089	0.235	0.172	0.24	0.17
HvH-Ab-100114-03 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1458A Headset (mUSB)	0.670	0.280	0.156	0.111	0.16	0.11

Assessments at the Head Left Ear (1:3 Phone mode)

Assessment of the offered antenna (Test Flowchart pg 30 step 1); Antenna search is not required because only one antenna is offered for 896-902MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 30 step 2); Battery search is not required because only one battery is offered for 806-825MHz band. Move to step 3.

Assessment of the touch and tilt positions (Test Flowchart pg 30 step 3); The touch and tilt position were tested at mid channel using highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 16.0 – 806-825MHz Band Assessment of the touch and tilt positions.

TABLE 29

896-902MHz Band Assessments at LEAR (1:3 phone mode) – Assessment of touch and tilt positions												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Lear-100108-05 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.664	0.071	0.399	0.289	0.40	0.29
HvH-Lear-100108-06 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	15˚ Tilt	None	None	0.664	0.044	0.299	0.217	0.30	0.22

Assessment of frequency band edges of the offered antenna (Test Flowchart pg 30 step 4); The frequency band edges (low and high) were tested using the highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 17.0 - 896-902MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 30

896-902MHz Band Assessments at LEAR (1:3 phone mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Lear-100108-07 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.668	0.001	0.431	0.313	0.43	0.31
HvH-Lear-100108-08 / 364VKYLJBH	85009268001 (internal)	901.98125	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.661	0.107	0.382	0.274	0.38	0.27

Assessments at the Head Right Ear (1:3 Phone mode)

Assessment of the offered antenna (Test Flowchart pg 31 step 1); Antenna search is not required because only one antenna is offered for 896-902MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 31 step 2); Battery search is not required because only one battery is offered for 896-902MHz band. Move to step 3.

Assessment of the touch and tilt positions (Test Flowchart pg 31 step 3); The touch and tilt positions were tested using battery (SNN5843A). These tests were conducted at mid channel using antenna (85009268001). The highest SAR result from the table below is provided in APPENDIX F Section 18.0 – 896-902MHz Band Assessment of the touch and tilt positions.

TABLE 31

896-902MHz Band Assessments at REAR (1:3 phone mode) – Assessment of touch and tilt position												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Rear-100108-13 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.658	0.112	0.598	0.440	0.60	0.44
CM-Rear-100108-14 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	15˚ Tilt	None	None	0.658	0.118	0.458	0.355	0.46	0.36

Assessment of frequency band edges of the offered antenna (Test Flowchart pg 31 step 4); The frequency band edges (low and high) were tested using the highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 19.0 - 896-902MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 32

896-902MHz Band Assessments at REAR (1:3 phone mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Rear-100108-15 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.667	0.055	0.575	0.418	0.58	0.42
CM-Rear-100108-16 / 364VKYLJBH	85009268001 (internal)	901.98125	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.662	0.003	0.375	0.270	0.38	0.27

Assessments at the Face (1:6 Dispatch mode)

Assessment of the offered antenna (Test Flowchart pg 32 step 1); Antenna search is not required because only one antenna is offered for 896-902MHz band. Move to step 2.

Assessment of the offered batteries (Test Flowchart pg 32 step 2); Battery search is not required because only one battery is offered for 896-902MHz band. Move to step 3.

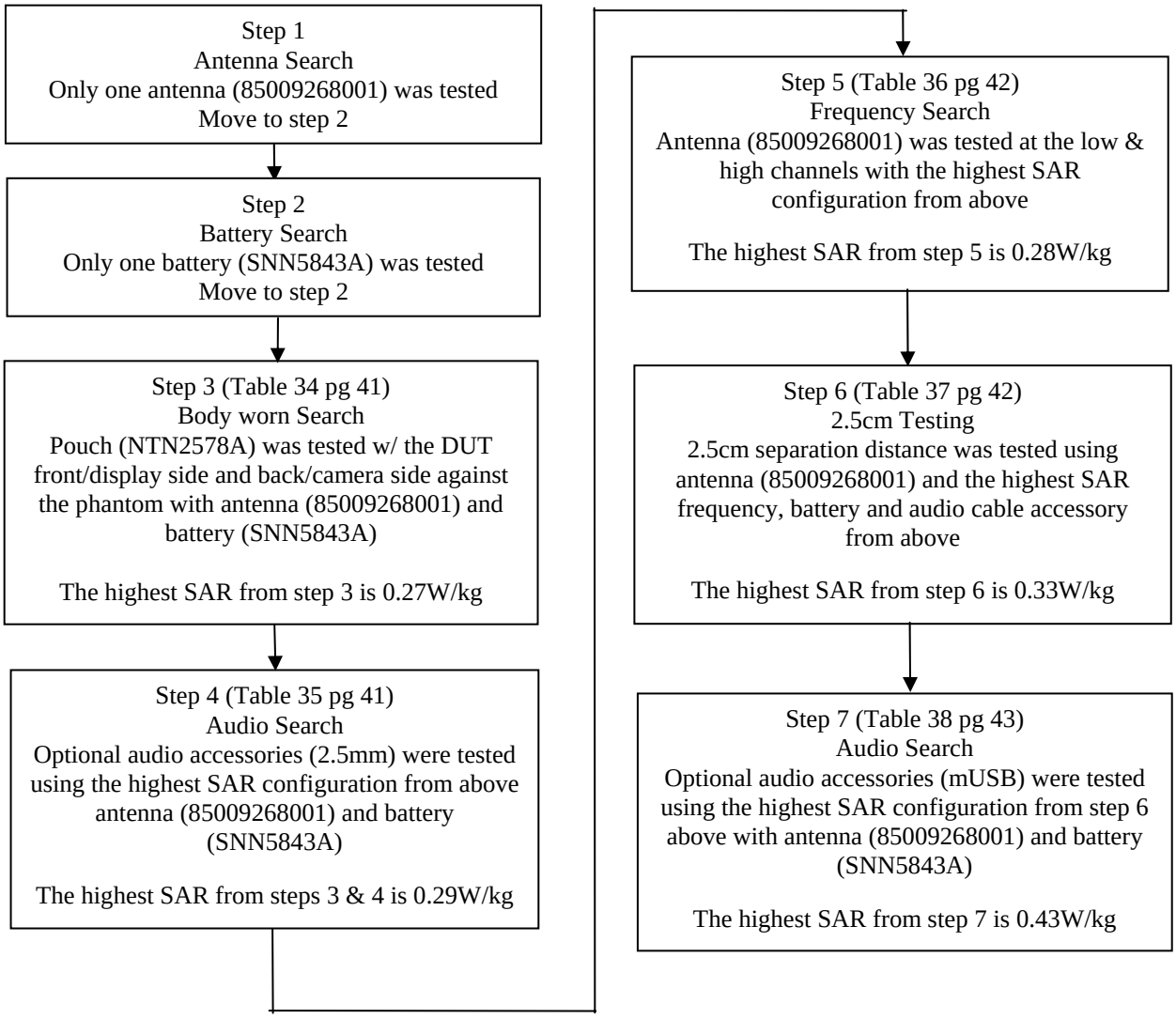
Assessment of frequency band of the offered antenna (Test Flowchart pg 32 step 3); The frequency band edges (low, mid and high) were tested using the highest configuration antenna (85009268001) and battery (SNN5843A) and with the DUT positioned at 2.5cm from the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 20.0 - 896-902MHz Band Assessment of frequency band of the offered antenna.

TABLE 33

896-902MHz Band Assessments at Face (1:6 dispatch mode) – Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Face-100111-06 / 364VKYLJBH	85009268001 (internal)	896.01875	SNN5843A w/ NTN2559xxxA	Front 2.5cm	None	None	0.659	0.008	0.190	0.138	0.10	0.07
CM-Face-100111-07 / 364VKYLJBH	85009268001 (internal)	898.99375	SNN5843A w/ NTN2559xxxA	Front 2.5cm	None	None	0.659	0.067	0.149	0.107	0.07	0.05
CM-Face-100111-08 / 364VKYLJBH	85009268001 (internal)	901.98125	SNN5843A w/ NTN2559xxxA	Front 2.5cm	None	None	0.651	0.048	0.129	0.093	0.06	0.05

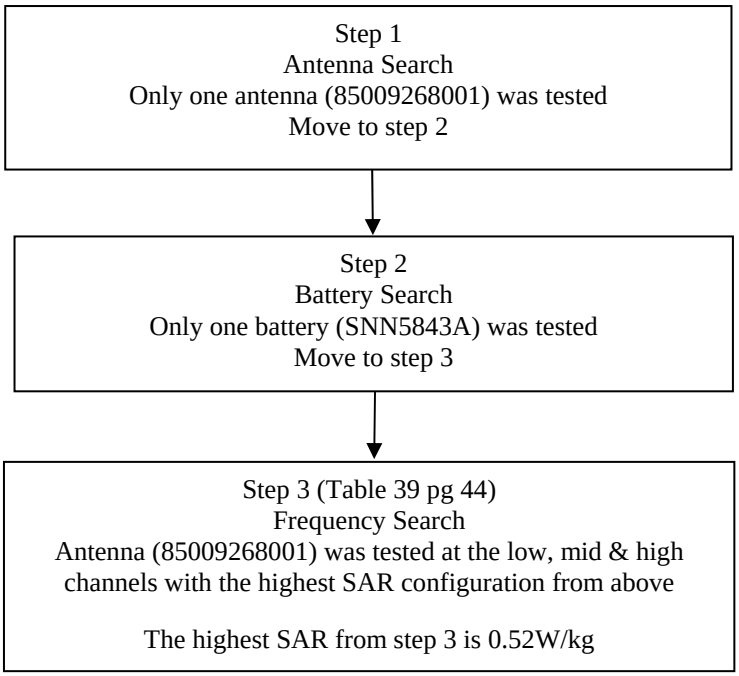
13.5 MOTOtalk Test Flowchart Data Summary 902-928MHz Band

MOTOtalk Band (902-928MHz)
DUT Body Test Methodology



The highest body SAR from above is 0.43W/kg

MOTOtalk Band (902-928MHz)
DUT Face Test Methodology



The highest Face SAR from above is 0.52W/kg

13.6 MOTOtalk Test Data

Assessments at the Body (114:120 mode)

Assessment of the offered antenna (MOTOtalk Test Flowchart pg 39 step 1); Antenna search is not required because only one antenna is offered for 902-928MHz band. Move to step 2.

Assessment of the offered batteries (MOTOtalk Test Flowchart pg 39 step 2); Battery search is not required because only one battery is offered for 902-928MHz band. Move to step 3.

Assessment of the offered body worn accessory (MOTOtalk Test Flowchart pg 39 step 3); The offered body worn accessory, pouch NTN5843A, was tested. Since the pouch will allow the DUT to be positioned with the display (front) facing the phantom or the camera (back) facing the phantom, both were tested. The highest SAR result from the table below is provided in APPENDIX F Section 21.0 - 902-928MHz Band Assessment of the offered body worn accessory.

TABLE 34

902-928MHz Band Assessments at Body (114:120 mode) – Assessment of offered body worn												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100114-05 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	NNTN5330B Headset (2.5mm)	0.910	0.508	0.389	0.279	0.19	0.14
CM-Ab-100112-16 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5330B Headset (2.5mm)	0.907	0.576	0.533	0.380	0.27	0.19

Assessment of the offered audio accessory (MOTOtalk Test Flowchart pg 39 step 4); The optional audio cable accessory was tested at mid channel using the highest configuration antenna (85009268001), battery (SNN5843A) with pouch (NTN2578A) and DUT camera (back) facing phantom. The highest SAR result from the table below is provided in APPENDIX F Section 22.0 - 902-928MHz Band Assessment of the offered audio accessory.

TABLE 35

902-928MHz Band Assessments at Body (114:120 mode) – Assessment of offered audio accessory												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Ab-100112-17 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5774C Headset (2.5mm)	0.905	0.450	0.575	0.410	0.29	0.21

Assessments at the Body (114:120 mode)

Assessment of frequency band edges of the offered antenna (MOTOtalk Test Flowchart pg 39 step 5); The frequency band edges (low and high) were tested using the configuration antenna (85009268001), battery (SNN5843A), DUT camera (back) facing phantom and audio (NNTN5774C). The highest SAR result from the table below is provided in APPENDIX F Section 23.0 - 902-928MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 36

902-928MHz Band Assessments at Body (114:120 mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100114-06 / 364VKYLJBH	85009268001 (internal)	902.525	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5774C Headset (2.5mm)	0.913	0.365	0.562	0.405	0.28	0.20
HvH-Ab-100114-07 / 364VKYLJBH	85009268001 (internal)	927.475	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5774C Headset (2.5mm)	0.921	0.450	0.337	0.243	0.17	0.12

Assessment without body worn accessory at 2.5cm (MOTOtalk Test Flowchart pg 39 step 6); The highest SAR test configuration antenna (85009268001), frequency (915.525MHz), battery (SNN5843A) and audio (NNTN5774C) was selected to assess this device at 2.5cm with the front and back of the device facing the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 24.0 - 902-928MHz Band Assessment without body worn accessory at 2.5cm.

Note: The 2.5cm assessments included the following configurations:

- Back of the device facing the phantom, positioned at 2.5cm from the phantom surface.
- Front of the device facing the phantom, positioned at 2.5cm from the phantom surface.

TABLE 37

902-928MHz Band Assessments at Body (114:120 mode) - Assessment at 2.5cm												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100114-08 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	NNTN5774C Headset (2.5mm)	0.912	0.421	0.664	0.478	0.33	0.24
HvH-Ab-100114-09 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	DUT front 2.5cm	None	NNTN5774C Headset (2.5mm)	0.913	0.541	0.472	0.338	0.24	0.17

Assessments at the Body (114:120 mode)

Assessment of audio accessories at 2.5cm (MOTOtalk Test Flowchart pg 39 step 7); The highest SAR test configuration antenna (85009268001), frequency (915.525MHz), battery (SNN5843A) was selected from the 2.5cm testing (refer to table 37) to assess the remaining audio accessories that are not applicable with the body worn pouch. The reason they are not applicable for use with the pouch is that these accessories use a mUSB connector which is not available when the DUT is placed in the pouch. The highest SAR result from the table below is provided in APPENDIX F Section 25.0 - 902-928MHz Band Assessment of audio accessories at 2.5cm.

TABLE 38

902-928MHz Band Assessments at Body (114:120 mode) - Assessment at 2.5cm with audio accessories												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100114-10 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1472A Headset (mUSB)	0.916	0.318	0.859	0.619	0.43	0.31
HvH-Ab-100114-11 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1458A Headset (mUSB)	0.917	0.423	0.739	0.533	0.37	0.27

Assessments at the Face (114:120 mode)

Assessment of the offered antenna (MOTOtalk Test Flowchart pg 40 step 1); Antenna search is not required because only one antenna is offered for 902-928MHz band. Move to step 2.

Assessment of the offered battery (MOTOtalk Test Flowchart pg 40 step 2); Battery search is not required because only one battery is offered for 902-928MHz band. Move to step 3.

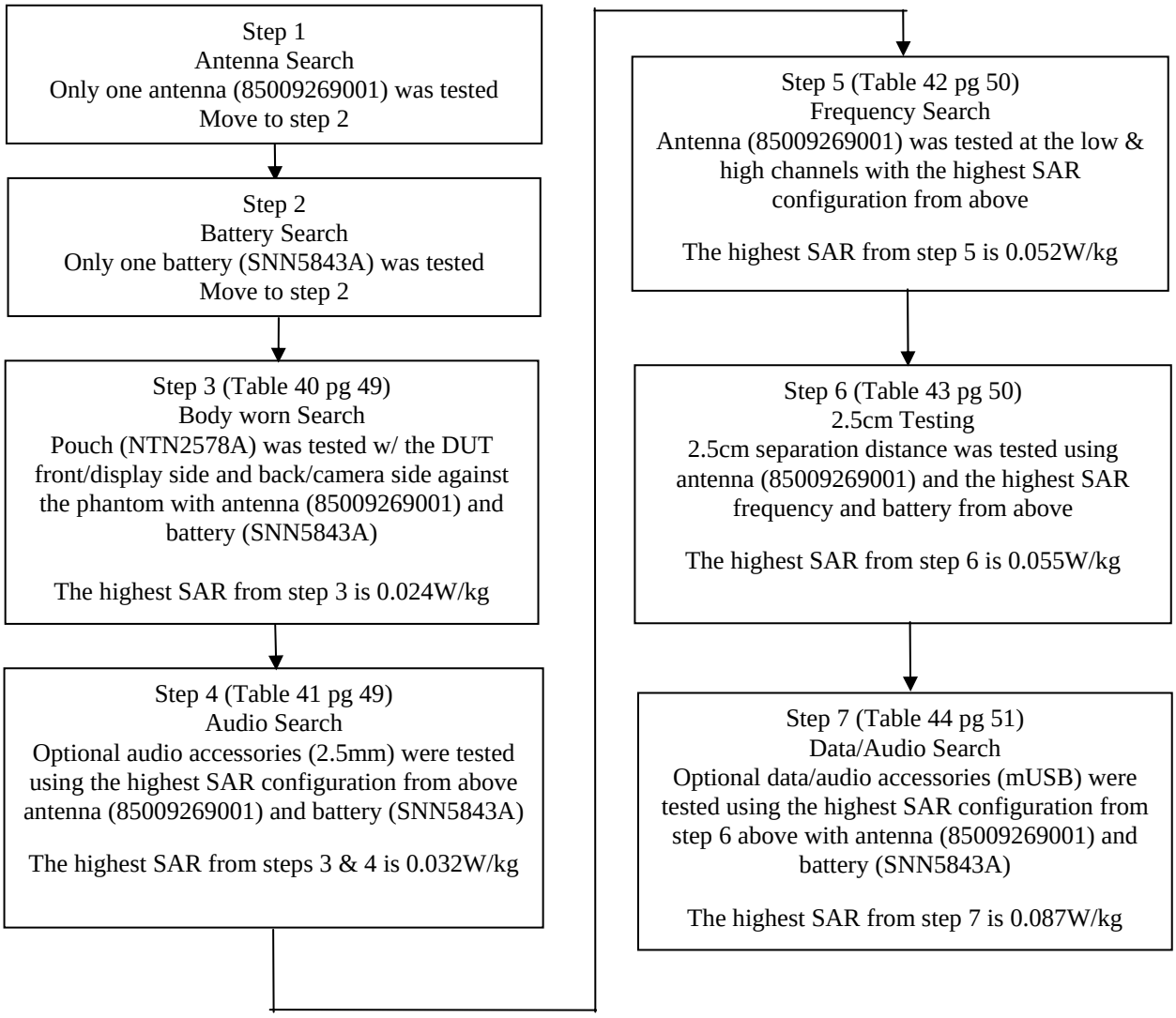
Assessment of frequency band of the offered antenna (MOTOtalk Test Flowchart pg 40 step 3); The frequency band (low, mid and high) was tested using the highest configuration, antenna (85009268001), battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 26.0 - 902-928MHz Band Assessment of frequency band of the offered antenna.

TABLE 39

902-928MHz Band Assessments at Face (114:120 mode) – Assessment of frequency band of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
CM-Face-100111-09 / 364VKYLJBH	85009268001 (internal)	915.525	SNN5843A w/ NTN2559xxx A	Front 2.5cm	None	None	0.896	0.172	0.772	0.553	0.39	0.28
CM-Face-100111-10 / 364VKYLJBH	85009268001 (internal)	902.525	SNN5843A w/ NTN2559xxx A	Front 2.5cm	None	None	0.882	0.247	1.030	0.746	0.52	0.38
CM-Face-100111-11 / 364VKYLJBH	85009268001 (internal)	927.475	SNN5843A w/ NTN2559xxx A	Front 2.5cm	None	None	0.897	0.182	0.748	0.537	0.37	0.27

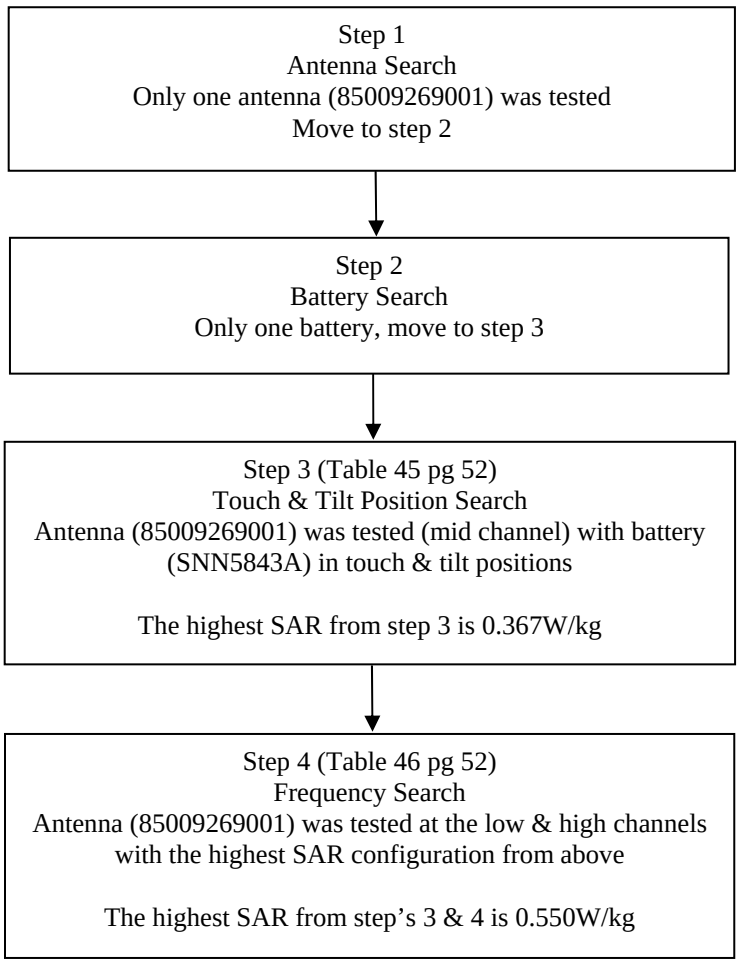
13.7 WLAN 802.11b/g Test Flowchart Data Summary 2412-2462MHz Band

WLAN 802.11b/g Band (2412-2462MHz)
DUT Body Test Methodology



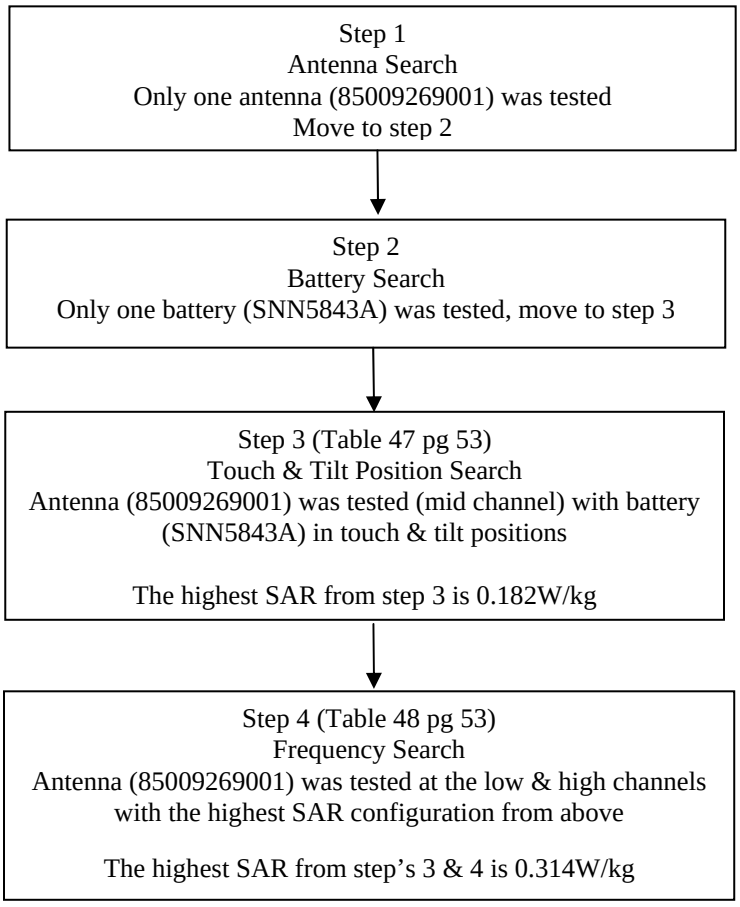
The highest body SAR from above is 0.087W/kg

WLAN 802.11b/g Band (2412-2462MHz)
DUT Head Left Ear Assessment



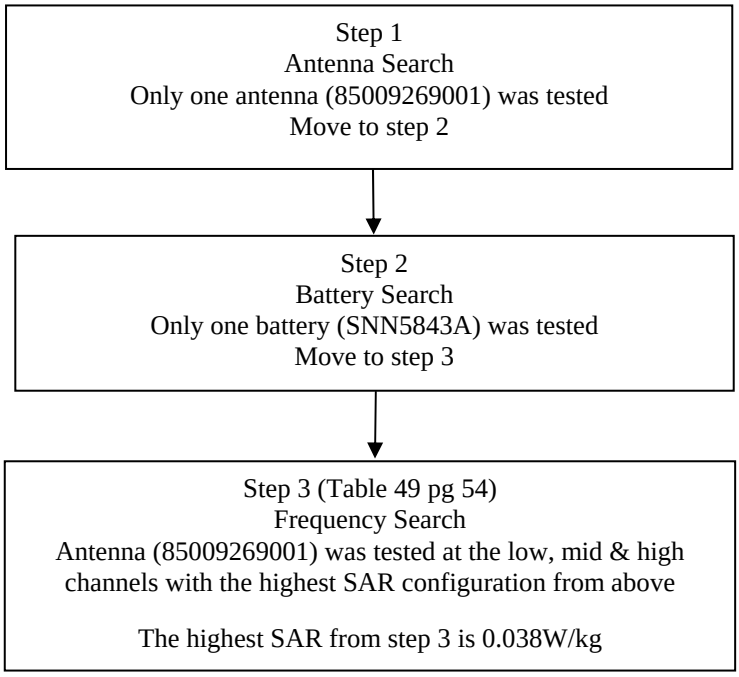
The highest Head SAR – Left Ear from above is 0.550W/kg

WLAN 802.11b/g Band (2412-2462MHz)
DUT Head Right Ear Assessment



The highest Head SAR – Right Ear from above is 0.314W/kg

WLAN 802.11b/g Band (2412-2462MHz)
DUT Face Assessment



The highest Face SAR from above is 0.038W/kg

13.8 WLAN 802.11b/g Test Data

Assessments at the Body (CW mode)

Assessment of the offered antenna (WLAN 802.11b/g Test Flowchart pg 45 step 1); Antenna search is not required because only one antenna is offered for 2412-2462MHz band. Move to step 2.

Assessment of the offered batteries (WLAN 802.11b/g Test Flowchart pg 45 step 2); Battery search is not required because only one battery is offered for 2412-2462MHz band. Move to step 3.

Assessment of the offered body worn accessory (WLAN 802.11b/g Test Flowchart pg 45 step 3); The offered body worn accessory, pouch NTN5843A, was tested. Since the pouch will allow the DUT to be positioned with the display (front) facing the phantom or the camera (back) facing the phantom, both were tested. The highest SAR result from the table below is provided in APPENDIX F Section 27.0 - 2412-2462MHz Band Assessment of the offered body worn accessory.

TABLE 40

2412-2462MHz Band Assessments at Body (CW mode) – Assessment of offered body worn												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100220-03/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Display side facing phantom	None	0.072	-0.020	0.014	0.009	0.016	0.010
HvH-Ab-100220-04/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	None	0.072	-0.393	0.020	0.012	0.024	0.014

Assessment of the offered audio accessory (WLAN 802.11b/g Test Flowchart pg 45 step 4); The optional audio cable accessories were tested at mid channel using the highest configuration antenna (85009269001), battery (SNN5843A) with pouch (NTN2578A) and DUT camera (back) facing phantom. The highest SAR result from the table below is provided in APPENDIX F Section 28.0 - 2412-2462MHz Band Assessment of the offered audio accessory.

TABLE 41

2412-2462MHz Band Assessments at Body (CW mode) – Assessment of offered audio accessories												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100222-02/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5330B Headset (2.5mm)	0.072	-0.557	0.025	0.015	0.032	0.019
HvH-Ab-100222-04/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5774C Headset (2.5mm)	0.072	-0.092	0.020	0.012	0.022	0.013

Assessment of frequency band edges of the offered antenna (WLAN 802.11b/g Test Flowchart pg 45 step 5); The frequency band edges (low and high) were tested using the configuration antenna (85009269001), battery (SNN5843A), DUT camera (back) facing phantom without a data cable. The highest SAR result from the table below is provided in APPENDIX F Section 29.0 - 2412-2462MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 42

2412-2462MHz Band Assessments at Body (CW mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100222-05/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5330B Headset (2.5mm)	0.072	-0.141	0.045	0.027	0.052	0.031
HvH-Ab-100222-06/ 364VKYLKND	85009269001 (internal)	2462	SNN5843A w/ NTN2559xxxA	Against phantom	NTN2578A, Camera side facing phantom	NNTN5330B Headset (2.5mm)	0.048	-0.209	0.017	0.010	0.030	0.018

Assessments at the Body (CW mode)

Assessment without body worn accessory at 2.5cm (WLAN 802.11b/g Test Flowchart pg 45 step 6); The highest SAR test configuration antenna (85009290001), frequency (2412MHz), battery (SNN5843A) and without a data cable was selected to assess this device at 2.5cm with the front and back of the device facing the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 30.0 - 2412-2462MHz Band Assessment without body worn accessory at 2.5cm.

Note: The 2.5cm assessments included the following configurations:

- Back of the device facing the phantom, positioned at 2.5cm from the phantom surface.
- Front of the device facing the phantom, positioned at 2.5cm from the phantom surface.

TABLE 43

2412-2462MHz Band Assessments at Body (CW mode) - Assessment at 2.5cm												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100223-02/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	NNTN5330B Headset (2.5mm)	0.072	-0.094	0.049	0.029	0.055	0.032
HvH-Ab-100223-03/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	DUT front 2.5cm	None	NNTN5330B Headset (2.5mm)	0.072	-0.665	0.031	0.019	0.040	0.025

Assessment of data/audio accessories at 2.5cm (WLAN 802.11b/g Test Flowchart pg 45 step 7); The highest SAR test configuration antenna (85009269001), frequency (2412MHz), battery (SNN5843A) was selected from the 2.5cm testing (refer to table 43) to assess the data/audio accessories that are not applicable with the body worn pouch. The reason they are not applicable for use with the pouch is that these accessories uses a mUSB connector which is not available when the DUT is placed in the pouch. The highest SAR result from the table below is provided in APPENDIX F Section 31.0 - 2412-2462MHz Band Assessment of data/audio accessory at 2.5cm.

TABLE 44

2412-2462MHz Band Assessments at Body (CW mode) - Assessment at 2.5cm with data/audio accessories												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Ab-100222-07/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SKN6238A (mUSB)	0.072	-0.018	0.059	0.036	0.066	0.040
HvH-Ab-100222-08/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1472A Headset (mUSB)	0.072	-0.694	0.067	0.041	0.087	0.053
HvH-Ab-100222-09/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	SYN1458A Headset (mUSB)	0.072	-0.640	0.063	0.038	0.081	0.049

Assessments at the Head Left Ear (CW mode)

Assessment of the offered antenna (WLAN 802.11b/g Test Flowchart pg 46 step 1); Antenna search is not required because only one antenna is offered for 2412-2462MHz band. Move to step 2.

Assessment of the offered batteries (WLAN 802.11b/g Test Flowchart pg 46 step 2); Battery search is not required because only one battery is offered for 2412-2462MHz band. Move to step 3.

Assessment of the touch and tilt positions (WLAN 802.11b/g Test Flowchart pg 46 step 3); The touch and tilt position were tested at mid channel using highest configuration antenna (85009269001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 32.0 – 2412-2462MHz Band Assessment of the touch and tilt positions.

TABLE 45

2412-2462MHz Band Assessments at LEAR (CW mode) – Assessment of touch and tilt positions												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Lear-100218-07/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.072	-0.399	0.303	0.148	0.367	0.179
HvH-Lear-100218-08/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	15˚ Tilt	None	None	0.072	-0.044	0.0336	0.019	0.038	0.021

Assessment of frequency band edges of the offered antenna (WLAN 802.11b/g Test Flowchart pg 46 step 4); The frequency band edges (low and high) were tested using the highest configuration antenna (85009269001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 33.0 - 2412-2462MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 46

2412-2462MHz Band Assessments at LEAR (CW mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Lear-100218-10/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.072	-0.242	0.471	0.228	0.550	0.266
HvH-Lear-100218-09/ 364VKYLKND	85009269001 (internal)	2462	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.048	0.006	0.196	0.094	0.327	0.157

Assessments at the Head Right Ear (CW mode)

Assessment of the offered antenna (WLAN 802.11b/g Test Flowchart pg 47 step 1); Antenna search is not required because only one antenna is offered for 2412-2462MHz band. Move to step 2.

Assessment of the offered batteries (WLAN 802.11b/g Test Flowchart pg 47 step 2); Battery search is not required because only one battery is offered for 2412-2462MHz band. Move to step 3.

Assessment of the touch and tilt positions (WLAN 802.11b/g Test Flowchart pg 47 step 3); The touch and tilt positions were tested using battery (SNN5843A). These tests were conducted at mid channel using antenna (85009268001). The highest SAR result from the table below is provided in APPENDIX F Section 34.0 – 2412-2462MHz Band Assessment of the touch and tilt positions.

TABLE 47

2412-2462MHz Band Assessments at REAR (CW mode) – Assessment of touch and tilt position												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Rear-100218-11/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.0724	-0.296	0.154	0.085	0.182	0.100
HvH-Rear-100219-02/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxxA	15˚ Tilt	None	None	0.0724	-0.243	0.043	0.023	0.050	0.027

Assessment of frequency band edges of the offered antenna (WLAN 802.11b/g Test Flowchart pg 47 step 4); The frequency band edges (low and high) were tested using the highest configuration antenna (85009268001) and battery (SNN5843A). The highest SAR result from the table below is provided in APPENDIX F Section 35.0 - 2412-2462MHz Band Assessment of frequency band edges of the offered antenna.

TABLE 48

2412-2462MHz Band Assessments at REAR (CW mode) -Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Rear-100219-03/ 364VKYLKND	85009269001 (internal)		SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.0724	-0.622	0.246	0.136	0.314	0.173
HvH-Rear-100219-04/ 364VKYLKND	85009269001 (internal)		SNN5843A w/ NTN2559xxxA	Cheek Touch	None	None	0.0479	-0.176	0.114	0.062	0.198	0.107

Assessments at the Face (CW mode)

Assessment of the offered antenna (WLAN 802.11b/g Test Flowchart pg 48 step 1); Antenna search is not required because only one antenna is offered for 2412-2462MHz band. Move to step 2.

Assessment of the offered batteries (WLAN 802.11b/g Test Flowchart pg 48 step 2); Battery search is not required because only one battery is offered for 2412-2462MHz band. Move to step 3.

Assessment of frequency band of the offered antenna (WLAN 802.11b/g Test Flowchart pg 48 step 3); The frequency band edges (low, mid and high) were tested using the highest configuration antenna (85009269001) and battery (SNN5843A) and with the DUT positioned at 2.5cm from the phantom. The highest SAR result from the table below is provided in APPENDIX F Section 36.0 - 2412-2462MHz Band Assessment of frequency band of the offered antenna.

TABLE 49

2412-2462MHz Band Assessments at Face (CW mode) – Assessment of frequency band edges of the offered antenna												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
HvH-Rear-100219-05/ 364VKYLKND	85009269001 (internal)	2412	SNN5843A w/ NTN2559xxx A	Front 2.5cm	None	None	0.0724	-0.674	0.029	0.018	0.038	0.023
HvH-Rear-100219-06/ 364VKYLKND	85009269001 (internal)	2437	SNN5843A w/ NTN2559xxx A	Front 2.5cm	None	None	0.0724	-0.604	0.020	0.012	0.025	0.015
HvH-Rear-100219-07/ 364VKYLKND	85009269001 (internal)	2462	SNN5843A w/ NTN2559xxx A	Front 2.5cm	None	None	0.0479	-0.200	0.014	0.008	0.025	0.015

13.9 Shorten Scan Assessment

Short scan assessment of the overall SAR highest configuration (806-825MHz Band Assessment TABLE 17 pg 24); A "shortened" scan was performed, using the test configuration and unit that produced the highest SAR results overall (in bold with *) below, to validate the SAR drift of the full DASY4™ coarse and 5x5x7 zoom scans. Note that the shortened scan represents the zoom scan performance result; this is obtained by first running a coarse scan to find the peak area and then, using a newly charged battery, a 5x5x7 zoom scan only was performed. The results of the shortened cube scan presented in APPENDIX E demonstrate that the scaling methodology used to determine the calculated SAR results presented herein are valid. The highest SAR result from the table below is provided in APPENDIX E – Shortened Scan Results.

TABLE 50

Shorten Scan Assessment at the Body – 81:120 data mode												
Run Number/ SN	**Antenna**	**Freq. (MHz)**	**Battery**	**Test position**	**Carry Case**	**Additional attachments**	**Initial Power (W)**	**SAR Drift (dB)**	**Meas. 1g-SAR (W/kg)**	**Meas. 10g-SAR (W/kg)**	**Max Calc. 1g-SAR (W/kg)**	**Max Calc. 10g-SAR (W/kg)**
***HvH-Ab-100113-05 / 364VKYLJBH**	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	None	0.647	-0.064	0.887	0.661	0.91	0.68
Shorten scan CM-Ab-100201-03 / 364VKYLJBH	85009268001 (internal)	815.5125	SNN5843A w/ NTN2559xxxA	DUT back 2.5cm	None	None	0.648	-0.067	0.923	0.679	0.95	0.70

14.0 Simultaneous Transmission Exclusion

BT stand alone and simultaneous transmission exclusion

Per FCC KDB648474 (v01r05, section 3) BT testing is not required.

a) BT max power (10mW) < 12mW (Pref @ 2.45GHz)
b) Antenna separation distances are less than 2.5cm. (Refer to Exhibit 7B section 7.0)
c) Highest SAR from other antenna is 0.95 W/kg and is less than 1.2 W/kg.

WLAN 802.11 simultaneous transmission exclusion

Per FCC KDB648474 (v01r05, section 4) WLAN 802.11 simultaneous transmission is not required.

a) The sum of the 1-g SAR measured for all simultaneous transmitting antennas is less than the SAR limit, SAR evaluation for simultaneous transmission is not required for all transmitters and antennas. The sum of the highest applicable SAR per antenna for each body position is summarized.

*Note - iDEN data mode and WLAN can not transmit simultaneously and therefore the highest simultaneous transmission at the body is between MOTOtalk and WLAN.

*Body - MOTOtalk + WLAN
Sum of Max. Calc.: 1-g Avg. SAR 0.430mW/g + 0.087mW/g = 0.52mW/g
Sum of Max. Calc.: 10-g Avg. SAR 0.310mW/g + 0.053mW/g = 0.36mW/g

Face - MOTOtalk + WLAN
Sum of Max. Calc.: 1-g Avg. SAR 0.520mW/g +0.038mW/g = 0.56mW/g
Sum of Max. Calc.: 10-g Avg. SAR 0.377mW/g +0.023mW/g = 0.40mW/g

Head - iDEN + WLAN
Sum of Max. Calc.: 1-g Avg. SAR 0.752mW/g + 0.550mW/g = 1.30mW/g
Sum of Max. Calc.: 10-g Avg. SAR 0.548mW/g + 0.266mW/g = 0.81mW/g

15.0 Conclusion

The highest Operational Maximum Calculated 1-gram and 10-gram average SAR values found for FCC ID: IHDP56KV1 model H76XAN9JR9AN.

Highest stand alone results per body position;
Max. Calc. : 1-g Avg. SAR: 0.95 W/kg (Body); 10-g Avg. SAR: 0.70 W/kg (Body)
Max. Calc. : 1-g Avg. SAR: 0.75 W/kg (Head); 10-g Avg. SAR: 0.55 W/kg (Head)
Max. Calc. : 1-g Avg. SAR: 0.52 W/kg (Face); 10-g Avg. SAR: 0.38 W/kg (Face)

Highest simultaneous results per body position;
***Max. Calc. : 1-g Avg. SAR: 0.52 W/kg (Body); 10-g Avg. SAR: 0.36 W/kg (Body)**
Max. Calc. : 1-g Avg. SAR: 1.30 W/kg (Head); 10-g Avg. SAR: 0.81 W/kg (Head)
Max. Calc. : 1-g Avg. SAR: 0.56 W/kg (Face); 10-g Avg. SAR: 0.40 W/kg (Face)

*Note - iDEN data mode and WLAN can not transmit simultaneously and therefore the highest simultaneous transmission at the body is between MOTOtalk and WLAN.

The test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of **1.6 W/kg** per the requirements of 47 CFR 2.1093(d).

APPENDIX A
Measurement Uncertainty

The Measurement Uncertainty tables indicated in this APPENDIX are applicable to the DUT ranging from 800MHz to 3GHz, and for Dipole test frequency ranging from 800MHz to 3GHz. Therefore, the highest tolerance for the probe calibration uncertainty is indicated.

Table 1A

Uncertainty Budget for Device Under Test, for 800 MHz to 3 GHz

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**IEEE 1528 section**	**Tol. (± %)**	**Prob Dist**	**Div.**	**c_i (1 g)**	**c_i (10 g)**	**1 g u_i (±%)**	**10 g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration	E.2.1	5.9	N	1.00	1	1	5.9	5.9	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8	1.1	R	1.73	1	1	0.6	0.6	∞
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mech. Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Test sample Related									
Test Sample Positioning	E.4.2	3.2	N	1.00	1	1	3.2	3.2	29
Device Holder Uncertainty	E.4.1	4.0	N	1.00	1	1	4.0	4.0	8
SAR drift	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3	3.3	N	1.00	0.64	0.43	2.1	1.4	∞
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.3	1.9	N	1.00	0.6	0.49	1.1	0.9	∞
Combined Standard Uncertainty			RSS				11	11	411
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				22	22	

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Table 2A

Uncertainty Budget for System Validation (dipole & flat phantom) for 800 MHz to 3 GHz

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	IEEE 1528 section	**Tol. (± %)**	**Prob. Dist.**	**Div.**	c_i **(1 g)**	c_i **(10 g)**	**1 g** u_i **(±%)**	**10 g** u_i **(±%)**	v_i
Measurement System									
Probe Calibration	E.2.1	5.9	N	1.00	1	1	5.9	5.9	∞
Axial Isotropy	E.2.2	4.7	R	1.73	1	1	2.7	2.7	∞
Spherical Isotropy	E.2.2	9.6	R	1.73	0	0	0.0	0.0	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8	0.0	R	1.73	1	1	0.0	0.0	∞
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mechanical Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t. Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Dipole									
Dipole Axis to Liquid Distance	8, E.4.2	2.0	R	1.73	1	1	1.2	1.2	∞
Input Power and SAR Drift Measurement	8, 6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3	3.3	R	1.73	0.64	0.43	1.2	0.8	∞
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.3	1.9	R	1.73	0.6	0.49	0.6	0.5	∞
Combined Standard Uncertainty			RSS				9	9	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				18	17	

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Notes for Tables 1, 2, 3 and 4
a) Column headings *a-k* are given for reference.
b) Tol. - tolerance in influence quantity.
c) Prob. Dist. – Probability distribution
d) N, R - normal, rectangular probability distributions
e) Div. - divisor used to translate tolerance into normally distributed standard uncertainty
f) *ci* - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
g) *ui* – SAR uncertainty
h) *vi* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

APPENDIX B
Probe Calibration Certificates

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

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

Accreditation No.: SCS 108

Client **Motorola CGISS** **Certificate No: ES3-3185_Nov09**

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3185

Calibration procedure(s): QA CAL-01.v6, QA CAL-12.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2
Calibration procedure for dosimetric E-field probes

Calibration date: November 23, 2009

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10
Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10
DAE4	SN: 660	29-Sep-09 (No. DAE4-660_Sep09)	Sep-10

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: November 23, 2009

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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) **Accreditation No.: SCS 108**
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z*: *A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe ES3DV3

SN:3185

Manufactured:	March 25, 2008
Last calibrated:	November 18, 2008
Recalibrated:	November 23, 2009

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

ES3DV3 SN:3185 November 23, 2009

DASY - Parameters of Probe: ES3DV3 SN:3185

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.36	1.27	1.11	± 10.1%
DCP (mV)[B]	93.1	92.7	92.9	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300	± 1.5%
			Y	0.00	0.00	1.00	300	
			Z	0.00	0.00	1.00	300	

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

[A] The uncertainties of NormX,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

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

DASY - Parameters of Probe: ES3DV3 SN:3185

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
300	± 50 / ± 100	45.3 ± 5%	0.87 ± 5%	6.68	6.68	6.68	0.24	0.92 ± 13.3%
450	± 50 / ± 100	43.5 ± 5%	0.87 ± 5%	6.08	6.08	6.08	0.22	1.49 ± 13.3%
750	± 50 / ± 100	41.9 ± 5%	0.89 ± 5%	5.96	5.96	5.96	0.92	1.04 ± 11.0%
900	± 50 / ± 100	41.5 ± 5%	0.97 ± 5%	5.63	5.63	5.63	0.64	1.21 ± 11.0%
1810	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.83	4.83	4.83	0.41	1.71 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.65	4.65	4.65	0.55	1.44 ± 11.0%
2300	± 50 / ± 100	39.5 ± 5%	1.67 ± 5%	4.53	4.53	4.53	0.40	1.83 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.22	4.22	4.22	0.41	1.87 ± 11.0%
2600	± 50 / ± 100	39.0 ± 5%	1.96 ± 5%	4.17	4.17	4.17	0.44	1.89 ± 11.0%
3500	± 50 / ± 100	37.9 ± 5%	2.91 ± 5%	3.99	3.99	3.99	0.85	1.21 ± 13.1%
3700	± 50 / ± 101	37.7 ± 5%	3.12 ± 5%	3.64	3.64	3.64	0.85	1.21 ± 13.1%

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

DASY - Parameters of Probe: ES3DV3 SN:3185

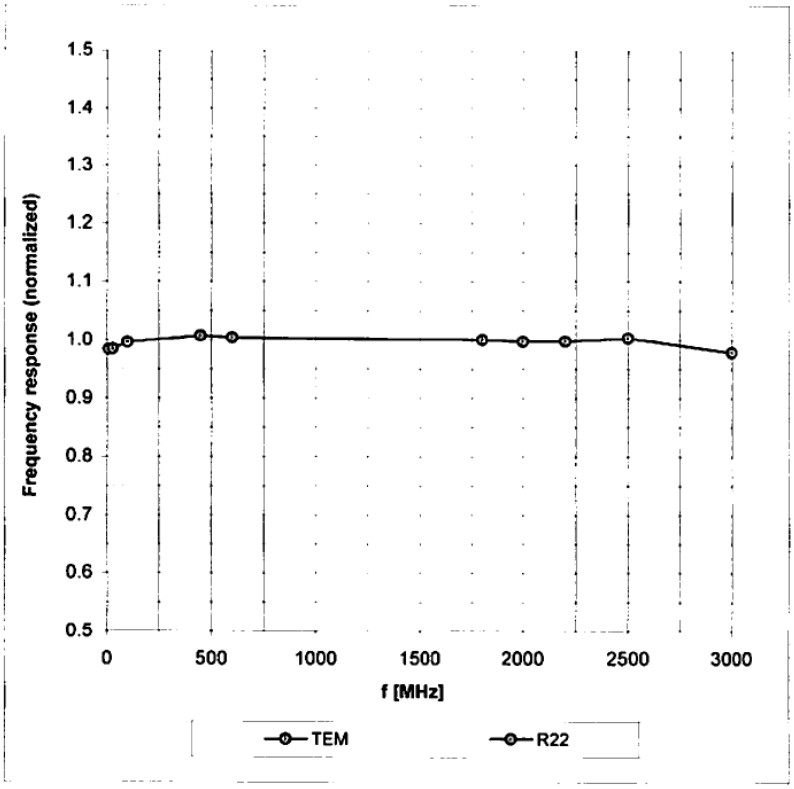
Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
450	± 50 / ± 100	56.7 ± 5%	0.94 ± 5%	6.55	6.55	6.55	0.17	1.00 ± 13.3%
750	± 50 / ± 100	55.5 ± 5%	0.96 ± 5%	5.60	5.60	5.60	0.76	1.15 ± 11.0%
900	± 50 / ± 100	55.0 ± 5%	1.05 ± 5%	5.48	5.48	5.48	0.94	1.10 ± 11.0%
1810	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.57	4.57	4.57	0.29	2.39 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.52	4.52	4.52	0.30	2.70 ± 11.0%
2300	± 50 / ± 100	52.8 ± 5%	1.85 ± 5%	4.21	4.21	4.21	0.46	1.74 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.02	4.02	4.02	0.58	1.44 ± 11.0%
2600	± 50 / ± 100	52.5 ± 5%	2.16 ± 5%	3.92	3.92	3.92	0.82	1.20 ± 11.0%
3500	± 50 / ± 100	51.3 ± 5%	3.31 ± 5%	3.33	3.33	3.33	0.90	1.32 ± 13.1%
3700	± 50 / ± 101	51.0 ± 5%	3.55 ± 5%	3.26	3.26	3.26	0.90	1.46 ± 13.1%

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

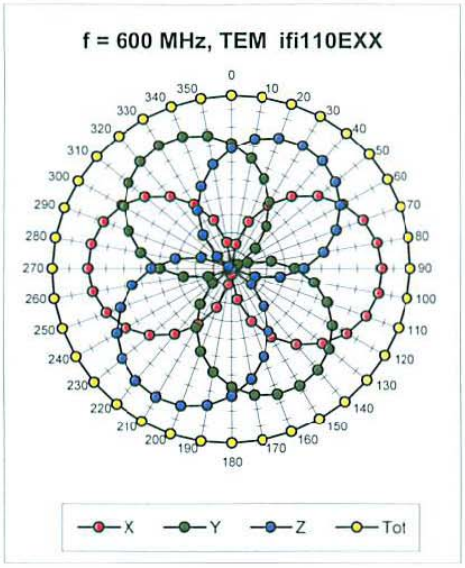
Frequency Response of E-Field

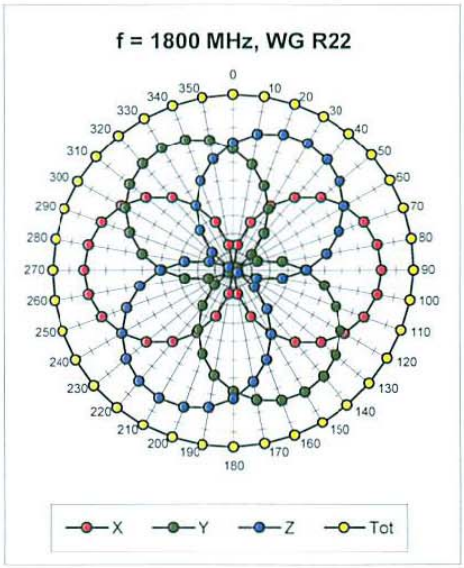
(TEM-Cell:ifi110 EXX, Waveguide: R22)

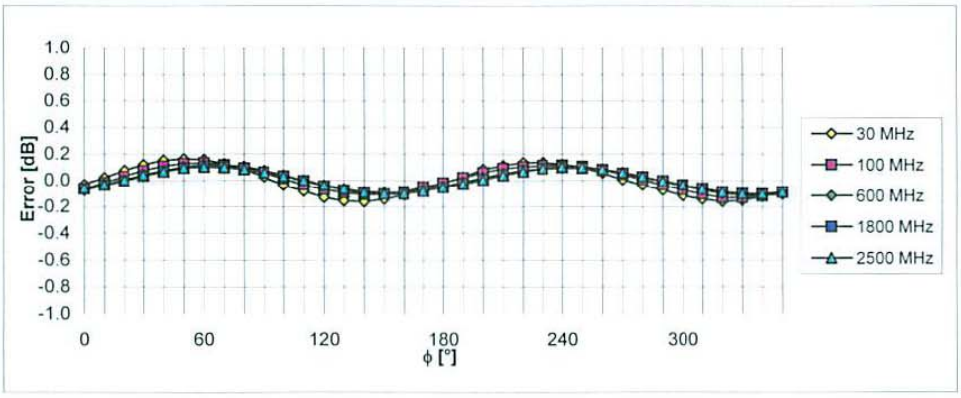


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Receiving Pattern (ϕ), ϑ = 0°



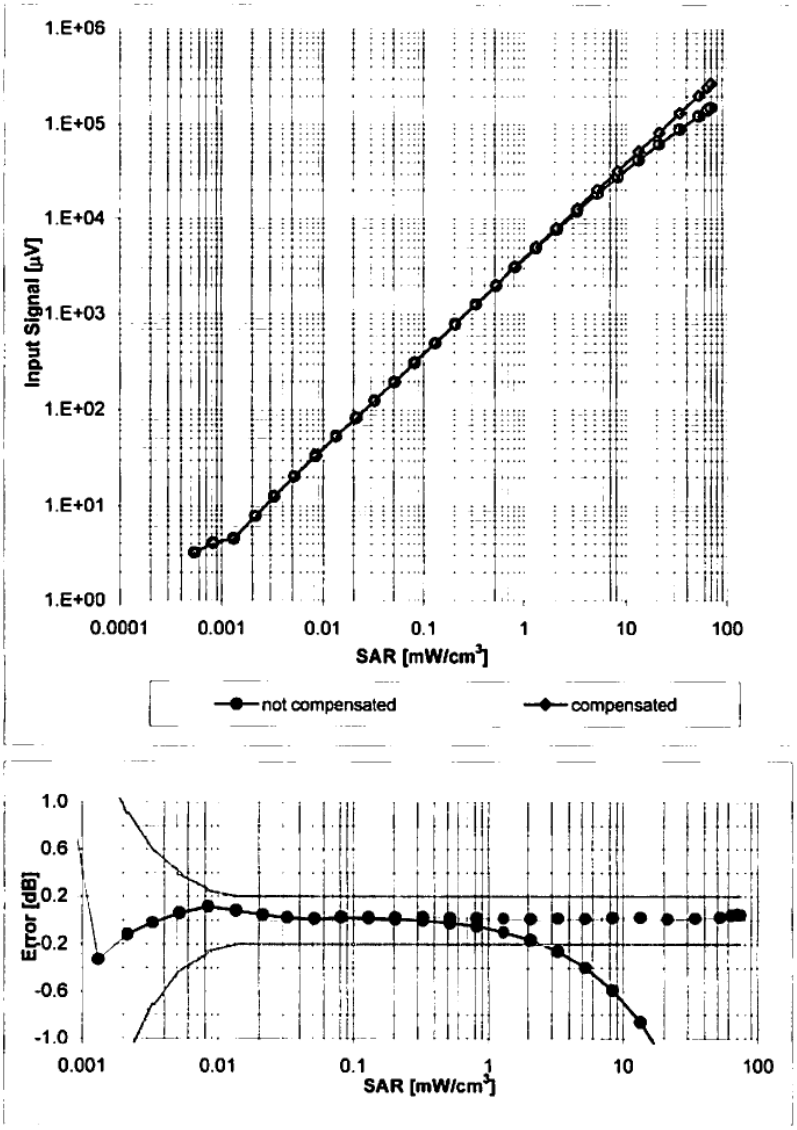




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

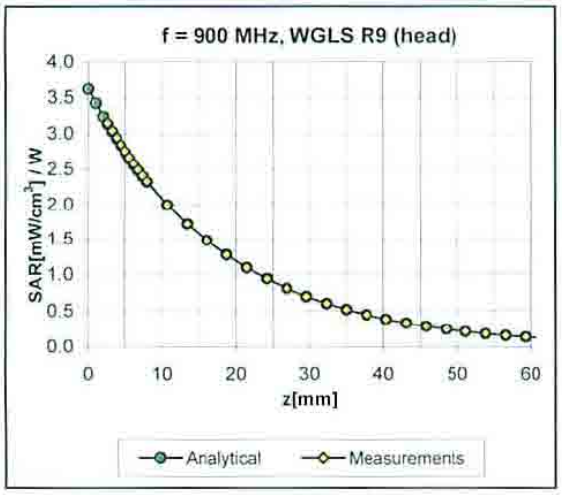
Dynamic Range f(SAR_{head})

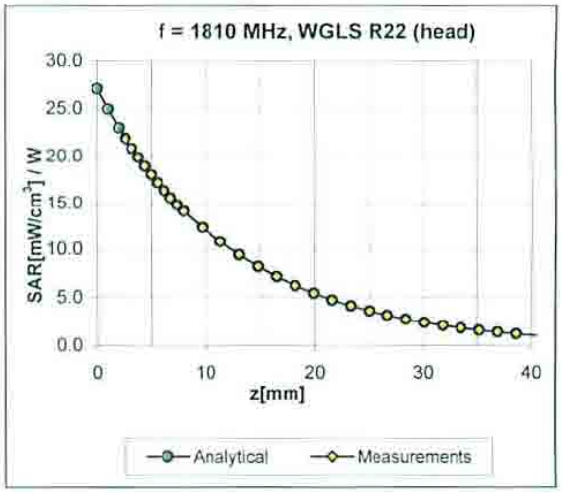
(Waveguide R22, f = 1800 MHz)



Uncertainty of Linearity Assessment: ± 0.6% (k=2)

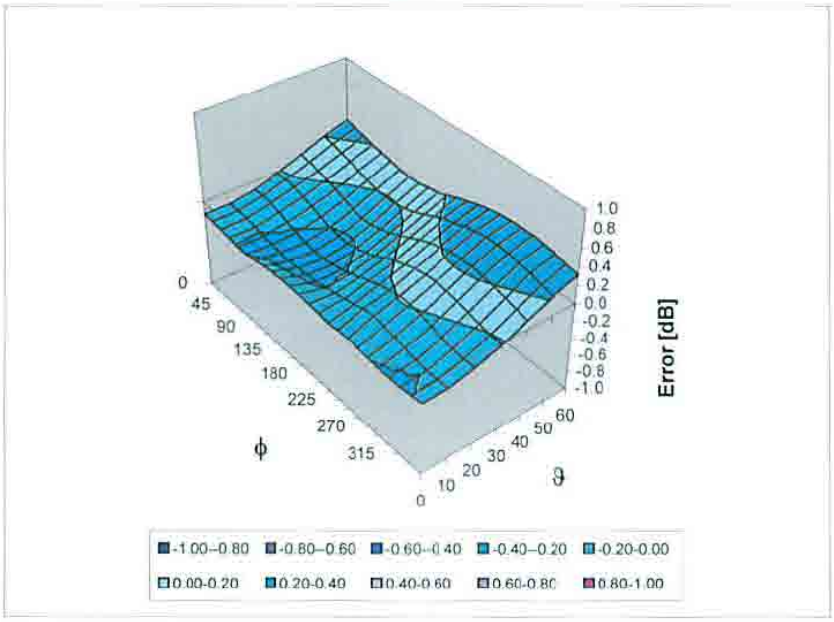
Conversion Factor Assessment





Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



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

Other Probe Parameters

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

Schmid & Partner Engineering AG

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Additional Conversion Factors

for Dosimetric E-Field Probe

Type:	**ES3DV3**
Serial Number:	**3185**
Place of Assessment:	**Zurich**
Date of Assessment:	**November 26, 2009**
Probe Calibration Date:	**November 23, 2009**

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1810 MHz.

Assessed by:

Schmid & Partner Engineering AG

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Dosimetric E-Field Probe ES3DV3 SN:3185

Conversion factor (± standard deviation)

150 MHz	*ConvF*	**7.7 ± 10%**	ε_r = 52.3 σ = 0.76 mho/m (head tissue)
250 MHz	*ConvF*	**7.0 ± 10%**	ε_r = 47.6 σ = 0.83 mho/m (head tissue)
150 MHz	*ConvF*	**7.4 ± 10%**	ε_r = 61.9 σ = 0.80 mho/m (body tissue)
250 MHz	*ConvF*	**7.0 ± 10%**	ε_r = 59.4 σ = 0.88 mho/m (body tissue)
300 MHz	*ConvF*	**6.9 ± 9%**	ε_r = 58.2 σ = 0.92 mho/m (body tissue)

Important Note:

For numerically assessed probe conversion factors, parameters Alpha and Delta in the DASY software must have the following entries: Alpha = 0 and Delta = 1.

Please see also Section 4.7 of the DASY4 Manual.

Note: The standard deviation for each Conversion factor stated in above numerical assessments were taken at k = 1.