MOTOROLA

ACCREDITED
TESTING CERT # 2518.01

FCC ID: AZ489FT7038
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 1 of 3

Enterprise Mobility Solutions
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Date of Report: 3/05/10
Report Revision: O
Report ID: SAR rpt_EWP3100_Rev O_100305_SR7854

Responsible Engineer:	Michael Sailsman (Sr. Staff EME Engineer)
Report Author:	Michael Sailsman (Sr. Staff EME Engineer)
Date/s Tested:	1/14/10-1/16/10, 1/21/10-1/27/10, 2/4/10-2/17/10 & 2/24/10
Manufacturer/Location:	Motorola Israel South
Sector/Group/Div.:	EMS
Date submitted for test:	12/7/09
DUT Description:	VoWLAN is a VoIP phone based on WLAN a/b/g. It also includes a Bluetooth - transceiver. (including camera)
Test TX mode(s):	50% (802.11a/b/g); 95% (BT)
Max. Power output:	BT(2.51mW); 802.11b (79.3mW); 802.11g (70.8mW); 802.11a mid and upper band (79.3mW); 802.11a low band (39.8mW)
Nominal Power:	BT(1.0mW); 802.11b (63.0mW); 802.11g (17.8mW); 802.11a mid and upper band (56.2mW); 802.11a low band (28.2mW)
Tx Frequency Bands:	BT: 2402-2480MHz; WLAN: b/g: 2412-2462MHz, a: 5.18-5.24 GHz; 5.26-5.32 GHz; 5.50 -5.70 GHz and 5.745-5.805 GHz
Signaling type:	BT(GFSK/FHSS), 802.11a/b/g (DSSS/OFDM)
Model(s) Tested:	EWP3100
Model(s) Certified:	EWP3100
Serial Number(s):	847SKW002L, 847SKW002N
Classification:	General Population/Uncontrolled Environment
Rule Part(s):	15

DUT Photo
(Refer to Exhibit 7B)

Max. Calc. : 1-g Avg. SAR: 0.31 W/kg (Body); 10-g Avg. SAR: 0.14 W/kg (Body)
Max. Calc. : 1-g Avg. SAR: 0.09 W/kg (Face); 10-g Avg. SAR: 0.05 W/kg (Face)
Max. Calc. : 1-g Avg. SAR: 1.00 W/kg (Head); 10-g Avg. SAR: 0.38 W/kg (Head)

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 10 grams results are not applicable to FCC filing.
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 W/kg averaged over 10 grams 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: 3/8/10

Certification Date: 3/8/10

Certification No.: L1100247P

Part 1 of 3

Part 1 of 3 Continued

APPENDICES

Part 2 of 3

Part 3 of 3

Report Revision History

Date	Revision	Comments
3/05/10	O	Initial 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 EWP3100 and FCC ID: AZ489FT7038. The results herein reflect prototype test results.

2.0 Abbreviations / Definitions

CNR: Calibration Not Required
GFSK**:** Gaussian Phase-Shift Keying
BT: Bluetooth
FHSS: Frequency Hopping Spread Spectrum
DSSS: Direct Sequence Spread Spectrum
OFDM: Orthogonal Frequency Division Multiplexing
WLAN: Wireless Local Area Network
VoIP: Voice over Internet Protocol
DC: Duty Cycle
CW: Continues Wave
DUT: Device Under Test
NA: Not Applicable
PTT: Push to Talk
SAR: Specific Absorption Rate

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.
Receive only audio accessory: Audio accessories that do not enable transmission and are for listening only.

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

6.0 Description of Device Under Test (DUT)

FCC ID: AZ489FT7038 is a VoIP phone based on WLANa/b/g (VoWLAN) for phone, dispatch and data application. WLAN supports the following bands; 802.11b/g (2.4 GHz ISM band) Direct Sequence Spread Spectrum (DSSS) and 802.11a (5 GHz UNII bands) Orthogonal Frequency Division Multiplexing (OFDM). The maximum theoretical duty cycle for WLAN a/b/g is 100%. However, the actual duty cycle for WLAN a/b/g is 50 % which is maintained by the VoWLAN device's CPU processing limitations. Bluetooth utilizes Frequency Hopping Spread Spectrum (FHSS) and Gaussian Frequency Shift Keying (GFSK - 1Mbps) with a maximum duty cycle of 95%. The Bluetooth is used for any application in which data/voice is exchanged with an external Bluetooth device.

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, PTT or Data modes.

FCC ID: AZ489FT7038 utilizes internal antennas and is capable of operating in the BT 2400-2483MHz; 802.11a 5.15-5.25GHz; 802.11a 5.25-5.35GHz; 802.11a 5.47-5.725GHz; 802.11a 5.725-5.825GHz; 802.11b/g 2.400-2.497GHz bands.

The rated conducted powers are BT 1mW; 802.11a (5.15-5.25GHz) 28.2mW; 802.11a (5.25-5.35GHz) 56.2mW; 802.11a (5.47-5.725GHz) 56.2mW; 802.11a (5.725-5.825 GHz) 56.2mW; 802.11b (2.400-2.497GHz) 63mW; 802.11g (2.400-2.497GHz) 17.8mW.

The maximum conducted output powers are BT 2.51mW; 802.11a (5.15-5.25GHz) 39.8mW; 802.11a (5.25-5.35GHz) 79.3mW; 802.11a (5.47-5.725GHz) 79.3mW; 802.11a (5.725-5.825 GHz) 79.3mW; 802.11b (2.400-2.497GHz) 79.3mW; 802.11g (2.400-2.497GHz) 70.8mW as defined by the upper limit of the production line final test station.

7.0 Optional Accessories and Test Criteria

FCC ID: AZ489FT7038 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

All antennas were tested. The table below lists the antennas, antenna descriptions and separation distances. Refer to Exhibit 7B section 6.1 for antenna photos and sections 1.0 and 2.0 for photos of device and or antenna separation distances.

TABLE 2

Antenna Kits	Description	Tested	* Separation distances between DUT antenna 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	
0789971V46	PIFA single band 2.4GHz BT**. ¼ wave, 3.3dBi	**No	** NA	** NA	** NA
0789971V37	PIFA dual band WLAN b/g: ¼ wave, gain range: 2.4 - 3.1dBi WLAN a: ¼ wave, 0.7 – 3.2 dBi	Yes	7-26	25-25	25-25

* This device uses internal antennas. The separation distances above reflect distances from the top and bottom edges of the device to the phantom with or without the offered body worn accessories.

** BT testing not required per FCC KDB648474 (v01r05, section 3). Refer to section 14.0

7.2 Batteries

The offered battery was assessed during the test plan generation.

TABLE 3

Battery Kits	Description	Tested	Comments
SNN5793A	1750mAh Li Ion BK10	Yes	

7.3 Body worn Accessories

All offered body worn accessories were evaluated during the test plan generation. Refer to Exhibit 7B sections 1.0 and 2.0 for photos of the body worn test configurations and section 6.3 for individual photos of the body worn accessories with the DUT.

TABLE 4

Body worn Kits	Description	Tested	* Separation distances between DUT antenna and phantom surface. (mm)	Comments
SYN2679A	Horizontal Pouch	Yes	11-11	The DUT is intended to be placed in 4 possible orientations while in the pouch.
SYN2685A	Carry Case	Yes	7-26	
SYN2678A	Lanyard	No		Lanyard is used only to secure the device to the garment while being carried by the offered body worn accessories

* This device uses internal antennas. The separation distances above reflect distances from the top and bottom edges of the device to the phantom with or without the offered body worn accessories.

7.4 Audio Accessories

All offered audio accessories were evaluated during the test plan generation.

TABLE 5

Audio Acc. Kits	Description	Tested	Comments
NNTN5774C	Head set w/ tamper proof	Yes	
NNTN5211B	Surveillance Headset with PTT	Yes	
NNTN5330B	Falcon PTT Headset	Yes	

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, DAE3, and ES3DV3 and EX3DV4 E-field probes. 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	Phantom Material	Phantom Dimensions (mm)	Support structure opening dimensions (mm)	Support structure material	Loss Tangent (wood)
DUAL1002	High Density Polyethylene (HDPE)	414x390	NA	Wood	< 0.05

8.2.2 SAM Phantom

TABLE 7

Phantom ID	Material Parameters	Material Thickness (mm)	Support structure material	Loss Tangent (wood)
SAMTP1208/ 1234	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)
OVAL1020	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	2450MHz		5GHz Band	
	Head	Body	Head	Body
Sugar	NA	NA	NA	NA
Diacetin	NA	30	NA	NA
De ionized -Water	51.0	NA	NA	NA
Salt	48.8	70	NA	NA
HEC	0.1	NA	NA	NA
Bact.	0.1	NA	NA	NA

1) Reference section 10.1 for target parameters
2) SPEAG provides Motorola proprietary simulant ingredient for the 5GHz band.

9.0 Additional Test Equipment

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

TABLE 10

Equipment Type	Model Number	Serial Number	Calibration Due Date
Power Meter (Agilent)	E4419B	MY40330364	7/14/2010
Power Meter (Agilent)	E4419B	MY45103725	8/24/2010
P-Series Power Meter (Agilent)	N1912A	GB45100294	9/15/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495593	*2/18/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495594	*2/18/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495730	4/15/2010
E-Series Avg. Power Sensor (Agilent)	E9301B	MY41495733	4/15/2010
Power Sensor (Agilent)	8482B	3318A07546	6/4/2010
Wideband Power Sensor (Agilent)	N1921A	MY45240136	1/11/2011
Wideband Power Sensor (Agilent)	N1921A	MY45240137	9/24/2010
Bi-Directional Coupler (NARDA)	3022	77115	3/20/2010
Bi-Directional Coupler (NARDA)	3022	70181	11/13/2011

TABLE 10 (Continued)

Equipment Type	Model Number	Serial Number	Calibration Due Date
Bi-Directional Coupler (NARDA)	3024	61136	2/27/2011
Signal Generator (Agilent)	E4438C	MY42082269	6/3/2011
Signal Generator (Agilent)	E4428C	MY47381119	1/14/2012
Temperature recording Equipment			
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	18800	10/10/2010
Omega Digital Thermometer with J Type TC Probe	HH202A	18801	4/1/2010
Omega Digital Thermometer with J Type TC Probe	HH202A	18812	5/22/2010
Tissue Station			
Agilent PNA-L Network Analyzer	N5230A	MY45001092	5/22/2010
Dielectric Probe Kit (HP)	85070C	US99360076	CNR
Dipoles			
Speag Dipole	D5GHzV2	1017	11/13/2011
Speag Dipole	D5GHzV2	1010	4/21/2010
Speag Dipole	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(s)/serial number(s) ES3DV3/SN3163 and EX3DV4/SN3638. 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% or +/- 10% (dependent on specific frequencies and or tissue parameters) of the 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
2450	FCC Body	1.95 (1.85-2.05)	52.7 (47.43-57.97)	2.02	47.9	1/26/10
				2.01	47.8	1/27/10
				2.01	50.4	2/04/10
				2.04	52.70	2/14/10
2450	IEEE/ IEC Head	1.80 (1.71-1.89)	39.2 (35.28-43.12)	1.87	37.9	2/24/10
2437	FCC Body	1.94 (1.84-2.04)	52.7 (47.43-57.97)	2.01	48.1	1/26/10
				1.99	50.5	2/4/10
				2.02	52.70	2/14/10
2437	IEEE/ IEC Head	1.79 (1.70-1.88)	39.2 (35.28-43.12)	1.85	38.3	1/27/10
				1.80	36.20	1/26/10
				1.85	38.00	2/24/10
5200	FCC Body	5.30 (5.04-5.57)	49.0 (44.1-53.9)	5.34	45.70	1/1410
				5.29	45.50	1/15/10
				5.33	45.60	1/16/10
				5.41	45.70	1/23/10
				5.32	45.70	1/25/10
				5.23	46.10	2/5/10
				5.17	45.70	2/6/10
				5.51	46.00	2/11/10
				5.52	46.30	2/12/10
				5.55	46.60	2/16/10
5200	IEEE/ IEC Head	4.65 (4.19-5.12)	36.00 (32.40-39.6)	4.28	37.90	1/21/10
				4.25	37.60	1/22/10
				4.36	38.60	1/24/10
				5.32	45.70	1/25/10
				4.21	38.10	2/17/10
5250	FCC Body	5.36 (4.82-5.90)	49.00 (44.1-53.90)	5.42	45.50	1/14/10
				5.34	45.20	1/15/10
				4.32	37.60	1/21/10
				4.28	37.30	1/22/10
				4.35	38.00	1/23/10
				4.39	38.3	1/24/10
				5.29	46.00	2/5/10
				5.23	45.60	2/6/10
				5.61	46.00	2/11/10
				5.63	46.40	2/12/10
5250	IEEE/IE C Head	4.7 (4.23-5.17)	36.0 (32.4-39.6)	4.32	37.60	1/21/10
				4.28	37.30	1/22/10
				4.35	38.00	1/23/10
				4.39	38.30	1/24/10
				4.27	38.60	2/12/10

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
5650	FCC Body	5.83 (5.25-6.41)	48.40 (43.56-53.24)	5.98	44.3	1/16/10
				5.79	44.70	2/6/10
				6.17	45.6	2/12/10
				6.21	45.8	2/16/10
5650	IEEE/ IEC Head	5.11 (4.60-5.62)	35.5 (31.95-39.05)	4.80	36.8	1/21/10
				4.76	36.5	1/22/10
				4.85	37.10	1/23/10
				4.89	37.30	1/24/10
				5.11	35.50	2/17/10

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
3638	FCC Body	7/16/09	SPEAG D5GHzV2 /1010	70.30 +/- 10%	67.33	1/14/10
					71.33	1/15/10
					72.67	1/16/10
3638	FCC Body	7/16/09	SPEAG D5GHzV2/ 1017	80.20 +/- 10%	84.67	1/23/10
					87.33	1/25/10
					83.33	2/5/10
					83.33	2/6/10
					84.67	2/11/10
					82.60	2/12/10
					82.67	2/16/10
3638	IEEE/ IEC Head	7/16/09	SPEAG D5GHzV2 /1017	90.16 +/- 10%	92.00	1/21/10
					96.67	1/22/10
					88.67	1/24/10
					88.00	2/17/10
3163	FCC Body	4/24/09	SPEAG D2450V2 /704	55.27 +/- 10%	57.67	1/26/10
					58.33	1/27/10
					54.67	2/4/10
					56.33	2/14/10
3163	IEEE/ IEC Head	4/24/09	SPEAG D2450V2 /704	57.20 +/- 10%	59.33	2/24/10

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°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. Note that relative humidity targets are recommended and not required targets.

TABLE 13

	Target	Measured
Ambient Temperature	18 - 25 ˚C	Range: 18.6-22.7˚C Avg. 21.3˚C
Relative Humidity	30 - 70 %	Range: 25.7-66.8% Avg. 50.2%
Tissue Temperature	NA	Range: 19.0-21.1˚C Avg. 20.05˚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 (v01r05, section 3) BT testing is not required.

a) BT max power (2.51mW) < 12mW (Pref @ 2.45GHz)
b) Antenna separation distances are >= 2.5cm. (Refer to Exhibit 7B section 7.0)
c) Highest SAR from other antenna is 1.00 W/kg and 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 or 8x8x12 zoom scans. Elliptical flat phantoms, Dual rectangular flat phantoms and SAM phantoms filled with applicable simulated tissue were used for body, face and head testing.

12.2 DUT Configuration(s)

The DUT is a portable device operational at the body, face and head as described in section 6.0 while using the applicable accessories listed in section 7.0.

12.3 Device 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 intended use configuration against the phantom with the offered body worn accessories with and without the offered data and audio 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 left and right sides of a SAM phantom in both the cheek touch and 15º tilt positions.

12.3.3 Face

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

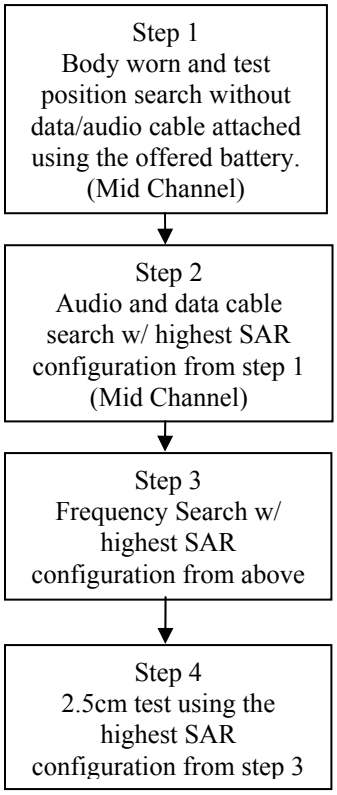
12.4 Test Plan

All modes of operation identified in section 6.0 were considered during the development of the test plan. 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.
A One Factor at A Time (OFAT) method was applied to develop the SAR test plan for this product.

12.4.1 General Test Flowchart

The following flowcharts identify the general approach to the test sequences for body, head and face positions. Note that this device uses internal antennas and only one battery accessory is offered therefore antenna and battery search are not applicable.

DUT Body Test Methodology
(General flowchart)



Flowchart
Objectives Body

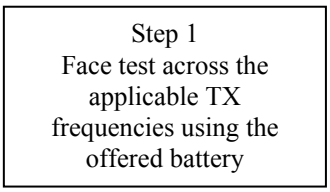
Step 1 - Determine the highest SAR configuration using the offered body worn accessories and applicable test position.

Step 2 – Determine the highest SAR configuration using the highest SAR producing body worn accessory and test position from step 1 with each of the offered audio and data cable accessories

Step 3 - Determine the highest SAR performance using the highest SAR configuration from steps 1 and 2 above at the other applicable frequencies per applicable regulatory guidelines.

Step 4 - Determine the highest SAR performance at 2.5cm separation distance to satisfy the safety manuals guidelines for non approved body worn accessories.

DUT Face Test Methodology
(General flowchart)

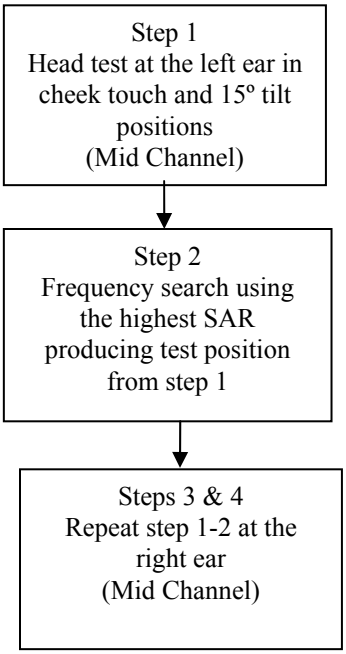


Flowchart Objectives

Face

Step 1 – Determine the frequency that produces the highest SAR performance at the face.

DUT Head Test Methodology
(General flowchart)



Flowchart
Objectives Head

Step 1 - Determine the highest SAR test position at the left ear

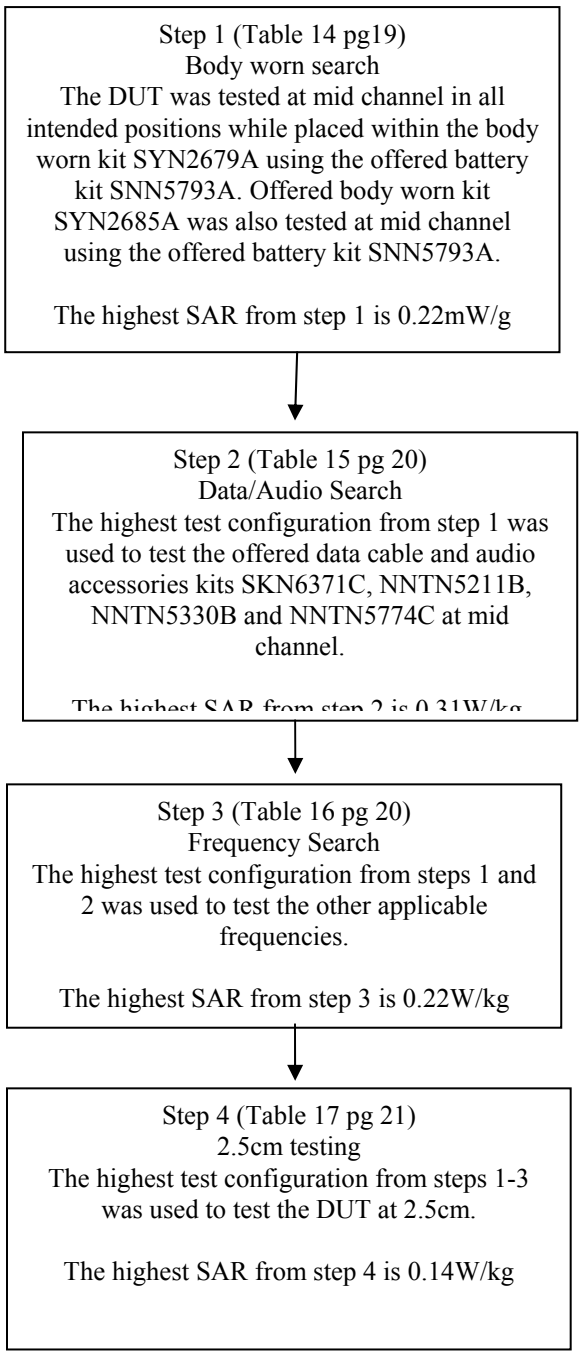
Step 2 – Determine the frequency that produces the highest SAR performance at the left ear.

Steps 3 & 4 - Determine the highest SAR test position at the right ear

13.0 DUT Test Data

13.1 802.11a (5.18-5.32GHz) Test Flowchart Data Summary

DUT Body Test Methodology



The highest SAR from the body tests above is 0.31W/kg

DUT Face Test Methodology

Step 1 (Table 18 pg 21)
Frequency search
The DUT was tested at all applicable frequencies using the offered battery kit SNN5793A

The highest SAR from step 1 is 0.09W/kg

The highest SAR at the face from above is 0.094W/kg

DUT head Test Methodology

Step 1 (Table 19 pg 22)
Left ear test position search
The DUT was tested at mid channel in the cheek touch and 15º tilt positions using the offered battery kit SNN5793A.

The highest SAR from step 1 is 0.67mW/g

Step 2 (Table 19 pg 22)
Frequency Search
The highest test configuration from step 1 was used to test the other applicable frequencies.

The highest SAR from step 2 is 0.52W/kg.

The highest SAR at the head from above is 0.67W/kg

Step 3 (Table 20 pg 22)
Right ear test position search
The DUT was tested at mid channel in the cheek touch and 15º tilt positions using the offered battery kit SNN5793A.

The highest SAR from step 3 is 0.50mW/g

Step 4 (Table 20 pg 22)
Frequency Search
The highest test configuration from step 3 was used to test the other applicable frequencies.

The highest SAR from step 4 is 0.58W/kg.

The highest SAR at the head from above is 0.58W/kg

13.2 802.11a (5.18-5.32GHz) Test Data

Assessments at the Body (50% max duty cycle)

Assessment of the offered body worn (802.11a (5.18-5.32GHz) Test Flowchart pg 17 step 1); The DUT was tested in each of the 4 intended orientations within body worn kit SYN2679A without any data or audio attachments. The 4 orientations are: 1) display facing phantom with audio connector facing up 2) display facing phantom with data port facing up 3) camera facing phantom with audio connector facing up 4) camera facing phantom with PTT button and data port facing up. Tests were performed at mid channel using offered battery kit SNN5793A. The highest SAR result from the table below (bolded) is included in APPENDIX F Section 1.0 – 802.11a (5.18-5.32GHz) assessment of the offered body worn accessories.

TABLE 14

5.18-5.32GHz band assessments at the body (CW) – 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)**
MeC-Ab-100114-13/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	None	0.082	-0.523	0.209	0.092	0.12	0.05
MeC-Ab-100115-03/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	None	0.082	-0.976	0.351	0.155	0.22	0.10
JsT-Ab-100205-12/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A display facing phantom. (Data port up)	None	0.082	-0.868	0.138	0.061	0.08	0.04
JsT-Ab-100206-03/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Data port up)	None	0.082	-0.447	0.148	0.068	0.08	0.04
MeC-Ab-100115-04/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2685A carry case	None	0.082	-0.632	0.112	0.051	0.07	0.03

Assessments at the Body (50% max duty cycle)

Assessment of the offered data and audio accessories (802.11a (5.18-5.32GHz) Test Flowchart pg 17 step 2); The DUT was tested using the highest SAR producing configuration from table 14 that facilitates connection of each of the offered data and audio accessories. The highest SAR result from the table below (bolded) is provided in APPENDIX E - Body Highest SAR Configuration Result.

TABLE 15

5.18-5.32GHz band assessments at the body (CW) – Assessment of offered 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)**
CM-Ab-100211-06/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Data port up)	SKN6371C (data cable)	0.082	-0.604	0.271	0.121	0.16	0.07
CM-Ab-100211-03/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5211B (headset)	0.082	-0.910	0.506	0.223	0.31	0.14
CM-Ab-100211-04/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5330B (headset)	0.082	-0.566	0.489	0.213	0.28	0.12
CM-Ab-100211-05/847SKW002L	0789971V37	5260	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5774C (headset)	0.082	-0.239	0.522	0.230	0.28	0.12

Assessments at the Body (50% max duty cycle)

Assessment of the applicable other frequencies (802.11a (5.18-5.32GHz) Test Flowchart pg 17 step 3); The highest test configuration from tables 14 and 15 was used to test all applicable other frequencies for this band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 2.0 - 802.11a (5.18-5.32GHz) assessment of the other applicable frequencies.

TABLE 16

5.18-5.32GHz band assessments at the body (CW) – Assessment of other applicable frequencies												
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-100211-07/847SKW002L	0789971V37	5180	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5211B (headset)	0.041	-0.241	0.285	0.128	0.15	0.07
CM-Ab-100211-08/847SKW002L	0789971V37	5240	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5211B (headset)	0.041	-0.555	0.244	0.105	0.14	0.06
ErC-Ab-100212-03/847SKW002L	0789971V37	5320	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5211B (headset)	0.076	-0.338	0.389	0.164	0.22	0.09

Assessments at the Body (50% max duty cycle)

Assessment without body worn accessories at 2.5cm (802.11a (5.18-5.32GHz) Test Flowchart pg 17 step 4); The DUT front and back sides were tested with 2.5cm separation distance from the phantom using the highest SAR configuration from tables 14-16. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 3.0 - 802.11a (5.18-5.32GHz) assessment at 2.5cm separation.

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

5.18-5.32GHz band assessments at the body (CW) -Assessment at 2.5cm separation												
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)**
ErC-Ab-100212-04/847SKW002L	0789971V37	5260	SNN5793A	Front 2.5cm	Back of DUT @ 2.5cm	NNTN5211B (headset)	0.082	-0.128	0.274	0.119	0.14	0.06
ErC-Ab-100212-06/847SKW002L	0789971V37	5260	SNN5793A	Front 2.5cm	Front of DUT @ 2.5cm	NNTN5211B (headset)	0.082	-0.123	0.1550	0.060	0.08	0.03

Assessments at the Face (50% max duty cycle)

Assessment of applicable frequencies (802.11a (5.18-5.32GHz) Test Flowchart pg 18 step 1); The DUT was tested using the offered battery kit SNN5793A at each of the applicable frequencies of the band. The highest SAR result from the table below (bolded) is provided in APPENDIX E Section - Face Highest SAR Configuration Result.

TABLE 18

5.18-5.32GHz band assessments at the face (CW) – Assessment of applicable frequencies												
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)**
MeC-Face-100123-12/847SKW002L	0789971V37	5180	SNN5793A	Front 2.5cm	None	None	0.041	-0.679	0.090	0.043	0.05	0.03
MeC-Face-100123-13/847SKW002L	0789971V37	5240	SNN5793A	Front 2.5cm	None	None	0.041	-0.536	0.082	0.039	0.05	0.02
MeC-Face-100123-15/847SKW002L	0789971V37	5260	SNN5793A	Front 2.5cm	None	None	0.082	-0.248	0.177	0.0852	0.09	0.05
MeC-Face-100123-14/847SKW002L	0789971V37	5320	SNN5793A	Front 2.5cm	None	None	0.076	-0.708	0.115	0.055	0.07	0.03

Assessments at the Head (Left Ear) (50% max duty cycle)

Assessment of the left ear test positions and applicable frequencies (802.11a (5.18-5.32GHz) Test Flowchart pg 18 steps 1-2); The DUT was tested at the left ear in both the cheek touch and 15º tilt positions using the offered battery kit SNN5793A at the center frequency of the band. The highest configuration from the position search above was used to test all other applicable frequencies in the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 4.0 - 802.11a (5.18-5.32GHz) assessment at the left head positions and frequency search.

Table 19

5.18-5.32GHz band assessments at the left ear (CW)– Assessment of test positions and applicable frequencies												
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)**
JsT-Lear-100121-06/847SKW002L	0789971V37	5260	SNN5793A	Cheek Touch	None	None	0.082	-0.211	1.09	0.439	0.57	0.23
JsT-Lear-100121-07/847SKW002L	0789971V37	5260	SNN5793A	15º Tilt	None	None	0.082	-0.759	1.12	0.463	0.67	0.28
Frequency Search												
MeC-Lear-100121-08/847SKW002L	0789971V37	5180	SNN5793A	15º Tilt	None	None	0.041	-0.400	0.590	0.234	0.32	0.13
MeC-Lear-100121-09/847SKW002L	0789971V37	5240	SNN5793A	15º Tilt	None	None	0.041	-0.469	0.549	0.227	0.31	0.13
MeC-Lear-100121-10/847SKW002L	0789971V37	5320	SNN5793A	15º Tilt	None	None	0.076	-0.188	0.951	0.391	0.52	0.21

Assessments at the Head (Right Ear) (50% max duty cycle)

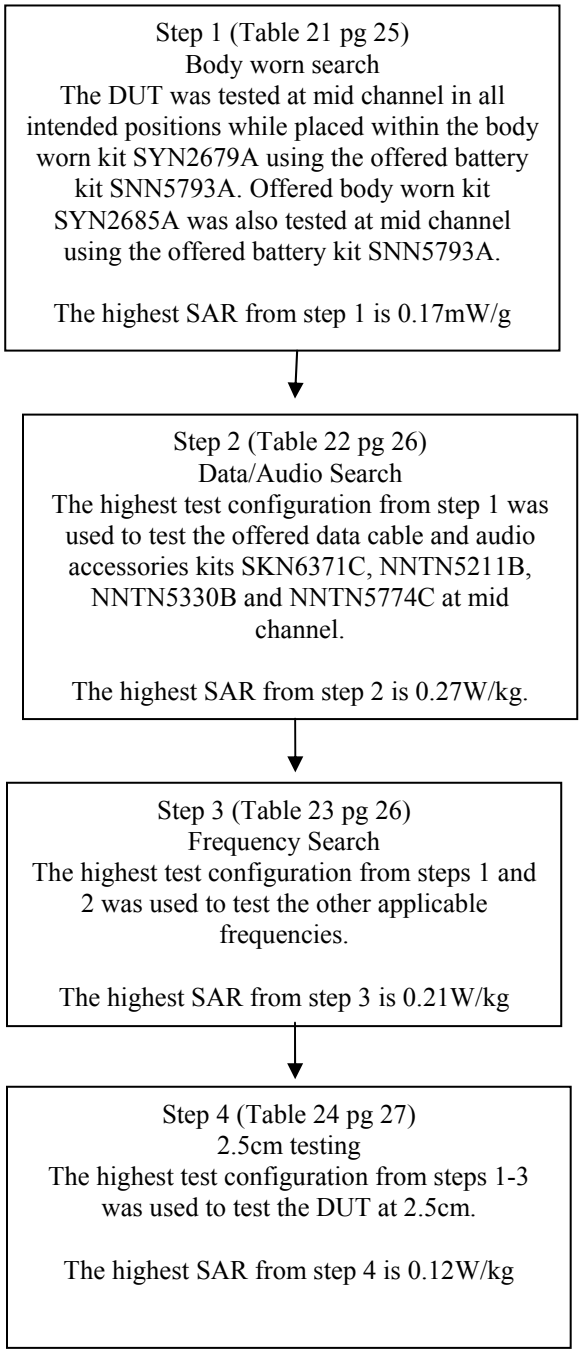
Assessment of the right ear test positions and applicable frequencies (802.11a (5.18-5.32GHz) Test Flowchart pg 18 steps 3-4); The DUT was tested at the right ear in both the cheek touch and 15º tilt positions using the offered battery kit SNN5793A at the center frequency of the band. The highest configuration from the position search above was used to test all other applicable frequencies in the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 5.0 - 802.11a (5.18-5.32GHz) assessment at right head positions and frequency search.

Table 20

5.18-5.32GHz band assessments at the right ear (CW)– Assessment of test positions and applicable frequencies												
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)**
MeC-Rear-100122-15/847SKW002L	0789971V37	5260	SNN5793A	Cheek Touch	None	None	0.082	-0.330	0.917	0.373	0.50	0.20
MeC-Rear-100122-16/847SKW002L	0789971V37	5260	SNN5793A	15º Tilt	None	None	0.082	-0.314	0.804	0.323	0.43	0.17
Frequency Search												
MeC-Rear-100122-17/847SKW002L	0789971V37	5180	SNN5793A	Cheek Touch	None	None	0.041	0.023	0.450	0.183	0.23	0.09
MeC-Rear-100122-18/847SKW002L	0789971V37	5240	SNN5793A	Cheek Touch	None	None	0.041	0.172	0.435	0.175	0.22	0.09
MeC-Rear-100123-08/847SKW002L	0789971V37	5320	SNN5793A	Cheek Touch	None	None	0.076	-0.387	1.020	0.427	0.58	0.24

13.3 802.11a (5.500-5.805GHz) Test Flowchart Data Summary

DUT Body Test Methodology



The highest SAR from the body tests above is 0.27W/kg

DUT Face Test Methodology

Step 1 (Table 25 pg 28)
Frequency search
The DUT was tested at all applicable frequencies using the offered battery kit SNN5793A

The highest SAR from step 1 is 0.07W/kg

The highest SAR at the face from above is 0.07W/kg

DUT head Test Methodology

Step 1 (Table 26 pg 28)
Left ear test position search
The DUT was tested at mid channel in the cheek touch and 15º tilt positions using the offered battery kit SNN5793A.

The highest SAR from step 1 is 0.60mW/g

Step 2 (Table 26 pg 28)
Frequency Search
The highest test configuration from step 1 was used to test the other applicable frequencies.

The highest SAR from step 2 is 1.00W/kg.

The highest SAR at the head from above is 1.00W/kg

Step 3 (Table 27 pg 29)
Right ear test position search
The DUT was tested at mid channel in the cheek touch and 15º tilt positions using the offered battery kit SNN5793A.

The highest SAR from step 3 is 0.74mW/g

Step 4 (Table 27 pg 29)
Frequency Search
The highest test configuration from step 3 was used to test the other applicable frequencies.

The highest SAR from step 4 is 0.78W/kg.

The highest SAR at the head from above is 0.78W/kg

13.4 802.11a (5.500-5.805GHz) Test Data

Assessments at the Body (50% max duty cycle)

Assessment of the offered body worn accessories (802.11a (5.500-5.805GHz) Test Flowchart pg 23 step 1); The DUT was tested in each of the 4 intended orientations within body worn kit SYN2679A without any data or audio attachments. The 4 orientations are: 1) display facing phantom with audio connector facing up 2) display facing phantom with data port facing up 3) camera facing phantom with audio connector facing up 4) camera facing phantom with PTT button and data port facing up. Tests were performed at mid channel using offered battery kit SNN5793A. The highest SAR result from the table below (bolded) is included in APPENDIX F Section 6.0 – 802.11a (5.500-5.805GHz) assessment of the offered body worn accessories.

TABLE 21

5.500-5.805GHz band assessments at the body (CW) – 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)**
MeC-Ab-100116-07/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A display facing phantom (audio port up)	None	0.076	-0.824	0.263	0.116	0.17	0.07
MeC-Ab-100116-08/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A camera facing phantom (audio port up)	None	0.076	-0.202	0.296	0.128	0.16	0.07
JsT-Ab-100206-06/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A display facing phantom (Data port up)	None	0.076	-0.0070	0.120	0.052	0.06	0.03
JsT-Ab-100206-04/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A camera facing phantom (Data port up)	None	0.076	0.0425	0.151	0.067	0.08	0.03
MeC-Ab-100116-09/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2685A	None	0.076	-0.234	0.110	0.048	0.06	0.03

Assessments at the Body (50% max duty cycle)

Assessment of the offered data and audio accessories (802.11a (5.500-5.805GHz) Test Flowchart pg 23 step 2); The DUT was tested using the highest SAR producing configuration from table 21 that facilitates connection of each of the offered data and audio accessories. The highest SAR result from the table below (bolded) are provided in APPENDIX F Section 7.0 – 802.11a (5.500-5.805GHz) assessment of the offered data and audio accessories.

TABLE 22

5.500-5.805GHz band assessments at the body (CW) – Assessment of offered 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)**
ErC-Ab-100212-07/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A display facing phantom (Data port up)	SKN6371C (data cable)	0.076	-0.7460	0.209	0.088	0.13	0.05
ErC-Ab-100212-08/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5211B (headset)	0.076	-1.150	0.399	0.173	0.27	0.12
ErC-Ab-100212-09/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5330B (headset)	0.076	-0.452	0.369	0.162	0.21	0.09
CM-Ab-100212-11/847SKW002L	0789971V37	5640	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5774C (headset)	0.076	-1.05	0.397	0.170	0.26	0.11

Assessments at the Body (50% max duty cycle)

Assessment of the applicable other frequencies (802.11a (5.500-5.805GHz) Test Flowchart pg 23 step 3); The highest test configuration from tables 21 and 22 was used to test all applicable other frequencies for this band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 8.0 - 802.11a (5.500-5.805GHz) assessment of the other applicable frequencies.

TABLE 23

5.500-5.805GHz band assessments at the body (CW) – Assessment of other applicable frequencies												
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-100212-12/847SKW002L	0789971V37	5540	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5211B (headset)	0.080	0.0395	0.329	0.147	0.16	0.07
CM-Ab-100212-13/847SKW002L	0789971V37	5580	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5211B (headset)	0.079	-0.704	0.341	0.147	0.20	0.09
CM-Ab-100212-14/847SKW002L	0789971V37	5680	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5211B (headset)	0.078	-0.842	0.343	0.154	0.21	0.10

TABLE 23 (Continued)

5.500-5.805GHz band assessments at the body (CW) – Assessment of other applicable frequencies												
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-100212-15/847SKW002L	0789971V37	5745	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5211B (headset)	0.080	-1.09	0.326	0.145	0.21	0.09
ErC-Ab-100216-02/847SKW002L	0789971V37	5805	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	NNTN5211B (headset)	0.077	-1.12	0.239	0.104	0.16	0.07

Assessments at the Body (50% max duty cycle)

Assessment without body worn accessories at 2.5cm (802.11a (5.500-5.805GHz) Test Flowchart pg 23 step 4); The DUT front and back sides were tested with 2.5cm separation distance from the phantom using the highest SAR configuration from tables 21-23. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 9.0 - 802.11a (5.500-5.805GHz) assessment without body worn accessories at 2.5cm separation.

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 24

5.500-5.805GHz band assessments at the body (CW) -Assessment at 2.5cm separation												
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-100212-17/847SKW002L	0789971V37	5640	SNN5793A	Back of DUT @ 2.5cm	None	NNTN5211B (headset)	0.076	-0.329	0.218	0.097	0.12	0.05
CM-Ab-100212-18/847SKW002L	0789971V37	5640	SNN5793A	Front of DUT @ 2.5cm	None	NNTN5211B (headset)	0.076	0.753	0.201	0.087	0.10	0.05

Assessments at the Face (50% max duty cycle)

Assessment of applicable frequencies (802.11a (5.500-5.805GHz) Test Flowchart pg 24 step 1); The DUT was tested using the offered battery kit SNN5793A at each of the applicable frequencies of the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 10.0 - 802.11a (5.500-5.805GHz) assessment at the face of applicable frequencies.

TABLE 25

5.500-5.805GHz band assessments at the face (CW) – Assessment of applicable frequencies												
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)**
MeC-Face-100124-02/847SKW002L	0789971V37	5540	SNN5793A	Front 2.5cm	None	None	0.080	-0.037	0.100	0.044	0.05	0.02
MeC-Face-100124-03/847SKW002L	0789971V37	5580	SNN5793A	Front 2.5cm	None	None	0.079	0.140	0.118	0.053	0.06	0.03
MeC-Face-100124-04/847SKW002L	0789971V37	5640	SNN5793A	Front 2.5cm	None	None	0.076	-0.135	0.119	0.053	0.06	0.03
MeC-Face-100124-05/847SKW002L	0789971V37	5680	SNN5793A	Front 2.5cm	None	None	0.078	-0.337	0.121	0.053	0.07	0.03
MeC-Face-100124-06/847SKW002L	0789971V37	5745	SNN5793A	Front 2.5cm	None	None	0.080	-0.474	0.113	0.051	0.06	0.03
MeC-Face-100124-07/847SKW002L	0789971V37	5805	SNN5793A	Front 2.5cm	None	None	0.077	-0.394	0.125	0.056	0.07	0.03

Assessments at the Head (Left Ear) (50% max duty cycle)

Assessment of the left ear test positions and applicable frequencies (802.11a (5.500-5.805GHz) Test Flowchart pg 24 steps 1-2); The DUT was tested at the left ear in both the cheek touch and 15º tilt positions using the offered battery kit SNN5793A at the center frequency of the band. The highest configuration from the position search above was used to test all other applicable frequencies in the band. The highest SAR result from the table below (bolded) is provided in APPENDIX E Section - Head Highest SAR Configuration Result.

Table 26

5.500-5.805GHz band assessments at the left ear (CW) – Assessment of test positions and applicable frequencies												
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)**
MeC-Lear-100121-11/847SKW002L	0789971V37	5640	SNN5793A	Cheek Touch	None	None	0.076	-0.128	0.850	0.312	0.46	0.17
MeC-Lear-100121-12/847SKW002L	0789971V37	5640	SNN5793A	Tilt	None	None	0.076	-0.674	0.979	0.370	0.60	0.23
Frequency search												
JsT-Lear-100122-02/847SKW002L	0789971V37	5540	SNN5793A	Tilt	None	None	0.080	-0.806	1.120	0.442	0.67	0.27
JsT-Lear-100122-03/847SKW002L	0789971V37	5580	SNN5793A	Tilt	None	None	0.079	-0.589	1.170	0.458	0.67	0.26
JsT-Lear-100122-04/847SKW002L	0789971V37	5680	SNN5793A	Tilt	None	None	0.078	-0.903	1.410	0.536	0.88	0.34
MeC-Lear-100123-10/847SKW002N	0789971V37	5680	SNN5793A	Tilt	None	None	0.077	-0.766	1.620	0.619	1.00	0.38
JsT-Lear-100122-05/847SKW002L	0789971V37	5745	SNN5793A	Tilt	None	None	0.080	-0.728	1.400	0.529	0.83	0.31
JsT-Lear-100122-07/847SKW002L	0789971V37	5805	SNN5793A	Tilt	None	None	0.077	-0.284	1.410	0.527	0.78	0.29

Assessments at the Head (Right Ear) (50% max duty cycle)

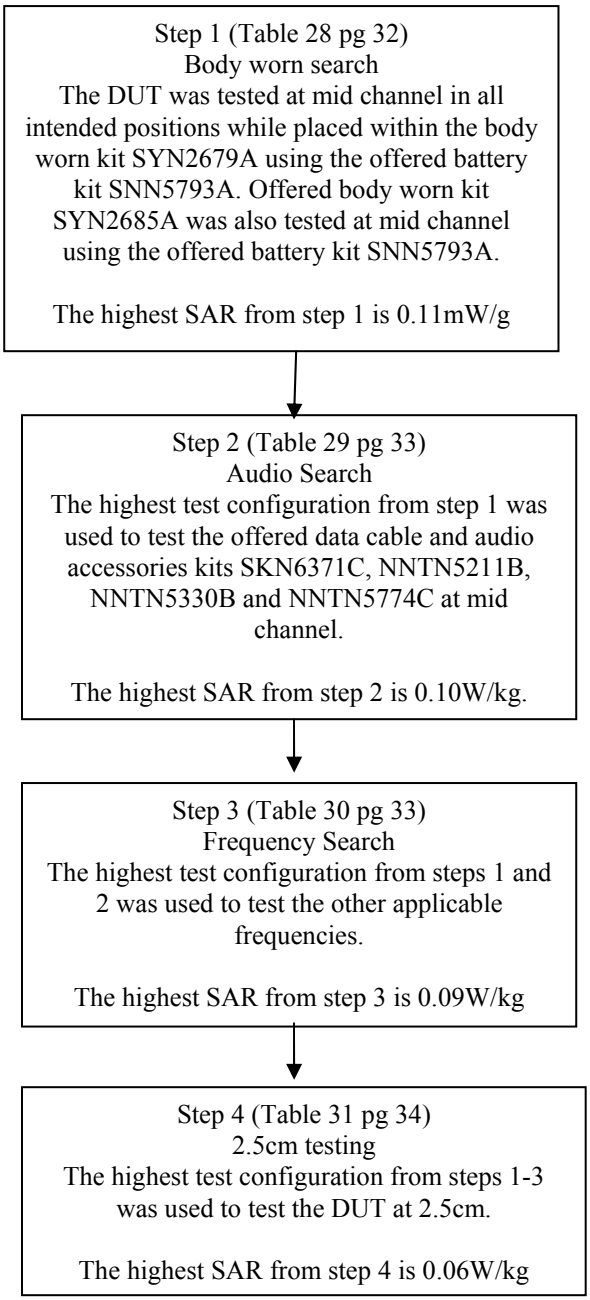
Assessment of the right ear test positions and applicable frequencies (802.11a (5.500-5.805GHz) Test Flowchart pg 24 steps 3-4); The DUT was tested at the right ear in both the cheek touch and 15º tilt positions using the offered battery kit SNN5793A at the center frequency of the band. The highest configuration from the position search above was used to test all other applicable frequencies in the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 11.0 - 802.11a (5.500-5.805GHz) assessment at the right head position and frequency search.

Table 27

5.500-5.805GHz band assessments at the right ear (CW) – Assessment of test positions and applicable frequencies												
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)**
JsT-Rear-100122-08/847SKW002L	0789971V37	5640	SNN5793A	Cheek Touch	None	None	0.077	-0.328	1.330	0.506	0.74	0.28
MeC-Rear-100122-09/847SKW002L	0789971V37	5640	SNN5793A	Tilt	None	None	0.077	-0.156	1.290	0.507	0.69	0.27
Frequency Search												
MeC-Rear-100122-10/847SKW002L	0789971V37	5540	SNN5793A	Cheek Touch	None	None	0.080	-0.214	1.210	0.464	0.64	0.24
MeC-Rear-100122-11/847SKW002L	0789971V37	5580	SNN5793A	Cheek Touch	None	None	0.079	-0.189	1.160	0.455	0.61	0.24
MeC-Rear-100122-12/847SKW002L	0789971V37	5680	SNN5793A	Cheek Touch	None	None	0.078	-0.213	1.460	0.556	0.78	0.30
MeC-Rear-100122-13/847SKW002L	0789971V37	5745	SNN5793A	Cheek Touch	None	None	0.080	-0.433	1.320	0.510	0.73	0.28
MeC-Rear-100122-14/847SKW002L	0789971V37	5805	SNN5793A	Cheek Touch	None	None	0.077	-0.683	1.200	0.458	0.72	0.28

13.5 802.11b (2.412-2.472GHz) Test Flowchart Data Summary

DUT Body Test Methodology



The highest SAR from the body tests above is 0.11W/kg

DUT Face Test Methodology

Step 1 (Table 32 pg 34)
Frequency search
The DUT was tested at all applicable frequencies using the offered battery kit SNN5793A

The highest SAR from step 1 is 0.03W/kg

The highest SAR at the face from above is 0.03W/kg

DUT head Test Methodology

Step 1 (Table 33 pg 35)
Left ear test position search
The DUT was tested at mid channel in the cheek touch and 15º tilt positions using the offered battery kit SNN5793A.

The highest SAR from step 3 is 0.19mW/g

Step 2 (Table 33 pg 35)
Frequency Search
The highest test configuration from step 3 was used to test the other applicable frequencies.

The highest SAR from step 4 is 0.18W/kg.

The highest SAR at the head from above is 0.19W/kg

Step 3 (Table 34 pg 35)
Right ear test position search
The DUT was tested at mid channel in the cheek touch and 15º tilt positions using the offered battery kit SNN5793A.

The highest SAR from step 1 is 0.23mW/g

Step 4 (Table 34 pg 35)
Frequency Search
The highest test configuration from step 1 was used to test the other applicable frequencies.

The highest SAR from step 2 is 0.27W/kg.

The highest SAR at the head from above is 0.27W/kg

13.6 802.11b (2.412-2.472GHz) Test Data

Assessments at the Body (50% max duty cycle)

Assessment of the offered body worn (802.11b Test Flowchart pg 29 step 1); The DUT was tested in each of the 4 intended orientations within body worn kit SYN2679A without any data or audio attachments. The 4 orientations are: 1) display facing phantom with audio connector facing up 2) display facing phantom with data port facing up 3) camera facing phantom with audio connector facing up 4) camera facing phantom with PTT button and data port facing up. Tests were performed at mid channel using offered battery kit SNN5793A. The highest SAR result from the table below (bolded) is included in APPENDIX F Section 12.0 – 802.11b (2.412-2.472GHz) assessment of the offered body worn accessories.

TABLE 28

2.412-2.472GHz band assessments at the body (CW) – 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)**
JsT-Ab-100126-07/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A display facing phantom (Data port up)	None	0.080	-0.253	0.076	0.045	0.04	0.02
JsT-Ab-100126-08/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Data port up)	None	0.080	-0.0197	0.217	0.126	0.109	0.063
JsT-Ab-100204-10/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	None	0.080	-0.116	0.209	0.123	0.107	0.063
JsT-Ab-100204-11/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A display facing phantom. (Audio port up)	None	0.080	-0.217	0.063	0.038	0.03	0.02
JsT-Ab-100126-09/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2685A	None	0.080	0.0239	0.151	0.089	0.08	0.04

Assessments at the Body (50% max duty cycle)

Assessment of the offered data and audio accessories (802.11b Test Flowchart pg 29 step 2); The DUT was tested using the highest SAR producing configuration from table 28 that facilitates connection of each of the offered data and audio accessories. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 13.0 – 802.11b (2.412-2.472GHz) assessment of the offered data and audio accessories.

TABLE 29

2.412-2.472GHz band assessments at the body (CW) – Assessment of offered 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)**
CM-Ab-010214-03/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Data port up)	SKN6371C	0.080	0.179	0.173	0.104	0.087	0.052
CM-Ab-100214-04/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A camera facing phantom (Audio port up)	NNTN5211B	0.080	-0.0356	0.205	0.124	0.103	0.063
CM-Ab-100214-05/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A camera facing phantom (Audio port up)	NNTN5330B	0.080	-0.055	0.194	0.117	0.098	0.059
CM-Ab-100214-06/847SKW002L	0789971V37	2437	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Audio port up)	NNTN5774C	0.080	-0.153	0.195	0.118	0.101	0.061

Assessments at the Body (50% max duty cycle)

Assessment of the other applicable frequencies (802.11b Test Flowchart pg 29 step 3); The highest test configuration from tables 28 and 29 was used to test all applicable other frequencies for this band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 14.0 - 802.11b (2.412-2.472GHz) assessment of the other applicable frequencies.

TABLE 30

2.412-2.472GHz band assessments at the body (CW) – Assessment of other applicable frequencies												
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-100214-07/847SKW002L	0789971V37	2412	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Data port up)	None	0.077	0.0496	0.160	0.097	0.08	0.05
CM-Ab-100214-08/847SKW002L	0789971V37	2462	SNN5793A	Against phantom	SYN2679A camera facing phantom. (Data port up)	None	0.074	0.00935	0.171	0.103	0.09	0.06

Assessments at the Body (50% max duty cycle)

Assessment without body worn accessories at 2.5cm (802.11b Test Flowchart pg 24 step 4); The DUT front and back sides were tested with 2.5cm separation distance from the phantom using the highest SAR configuration from tables 28-30. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 15.0 - 802.11b (2.412-2.472GHz) assessment at 2.5cm separation.

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 31

2.412-2.472GHz band assessments at the body (CW) -Assessment at 2.5cm separation												
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-100214-09/847SKW002L	0789971V37	2437	SNN5793A	DUT Back 2.5cm	None	None	0.080	-0.0642	0.125	0.077	0.06	0.04
CM-Ab-100214-10/847SKW002L	0789971V37	2437	SNN5793A	DUT Front 2.5cm	None	None	0.080	0.110	0.031	0.019	0.02	0.01

Assessments at the Face (50% max duty cycle)

Assessment of applicable frequencies (802.11b Test Flowchart pg 30 step 1); The DUT was tested using the offered battery kit SNN5793A at each of the applicable frequencies of the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 16.0 - 802.11b (2.412-2.472GHz) assessment at the face of applicable frequencies.

TABLE 32

2.412-2.472GHz band assessments at the face (CW) – Assessment of applicable frequencies												
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)**
JsT-Face-100126-10/847SKW002L	0789971V37	2437	SNN5793A	Front 2.5cm	None	None	0.080	0.048	0.051	0.030	0.03	0.01
MeC-Face-100126-11/847SKW002L	0789971V37	2412	SNN5793A	Front 2.5cm	None	None	0.077	-0.066	0.041	0.024	0.02	0.01
MeC-Face-100126-12/847SKW002L	0789971V37	2462	SNN5793A	Front 2.5cm	None	None	0.074	-0.157	0.038	0.022	0.02	0.01

Assessments at the Head (Left Ear) (50% max duty cycle)

Assessment of the left ear test positions and applicable frequencies (802.11b Test Flowchart pg 30 steps 1-2); The DUT was tested at the left ear in both the cheek touch and 15º tilt positions using the offered battery kit SNN5793A at the center frequency of the band. The highest configuration from the position search above was used to test all other applicable frequencies in the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 17.0 - 802.11b (2.412-2.472GHz) assessment at the right head position and frequency search.

Table 33

2.412-2.472GHz band assessments at the left ear (CW) – Assessment of test positions and applicable frequencies												
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)**
JsT-Lear-100127-06/847SKW002L	0789971V37	2437	SNN5793A	Cheek Touch	None	None	0.080	0.252	0.377	0.213	0.19	0.11
JsT-Lear-100127-07/847SKW002L	0789971V37	2437	SNN5793A	Tilt	None	None	0.080	-0.0156	0.315	0.172	0.16	0.09
Frequency Search												
JsT-Lear-100127-08/847SKW002L	0789971V37	2412	SNN5793A	Cheek Touch	None	None	0.077	0.0195	0.345	0.196	0.18	0.10
JsT-Lear-100127-09/847SKW002L	0789971V37	2462	SNN5793A	Cheek Touch	None	None	0.074	0.00724	0.344	0.193	0.18	0.10

Assessments at the Head (Right Ear) (50% max duty cycle)

Assessment of the right ear test positions and applicable frequencies (802.11b Test Flowchart pg 30 steps 3-4); The DUT was tested at the right ear in both the cheek touch and 15º tilt positions using the offered battery kit SNN5793A at the center frequency of the band. The highest configuration from the position search above was used to test all other applicable frequencies in the band. The highest SAR result from the table below (bolded) is provided in APPENDIX F Section 18.0 - 802.11b (2.412-2.472GHz) assessment at left head position and frequency search.

Table 34

2.412-2.472GHz band assessments at the right ear (CW) – Assessment of test positions and applicable frequencies												
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)**
JsT-Rear-100127-02/847SKW002L	0789971V37	2437	SNN5793A	Cheek Touch	None	None	0.080	0.144	0.457	0.241	0.23	0.12
JsT-Rear-100127-03/847SKW002L	0789971V37	2437	SNN5793A	Tilt	None	None	0.080	0.0413	0.336	0.187	0.17	0.09
Frequency Search												
JsT-Rear-100127-04/847SKW002L	0789971V37	2412	SNN5793A	Cheek Touch	None	None	0.077	0.156	0.429	0.226	0.22	0.12
JsT-Rear-100127-05/847SKW002L	0789971V37	2462	SNN5793A	Cheek Touch	None	None	0.074	0.00958	0.497	0.250	0.266	0.13
ErC-Rear-100224-02/847SKW002N	0789971V37	2462	SNN5793A	Cheek Touch	None	None	0.073	0.0789	0.494	0.250	0.268	0.14

13.7 Shorten Scan Assessment

Short scan assessment of the overall highest SAR configuration (802.11a (5.500-5.805GHz) TABLE 26 pg 28) A second unit (SN 847SKW002N) was used to confirm the overall SAR highest configuration. 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 8x8x12 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 8x8x12 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 shortened scan SAR result from the table below is provided in APPENDIX E Section – Shortened scan results.

TABLE 35

Shorten Scan												
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)**
***MeC-Lear-100123-10/847SKW002N**	0789971V37	5680	SNN5793A	Tilt	None	None	0.077	-0.766	1.620	0.619	1.00	0.38
CM-Lear-100217-23/847SKW002N	0789971V37	5680	SNN5793A	Tilt	None	None	0.077	-0.152	1.360	0.534	0.73	0.28

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 (2.51mW) < 12mW (Pref @ 2.45GHz)
b) Antenna separation distances are >= 2.5cm. (Refer to Exhibit 7B section 7.0)
c) Highest SAR from other antenna is 1.00 W/kg and is less than 1.2 W/kg.

15.0 Conclusion

The highest Operational Maximum Calculated 1-gram and 10-gram average SAR values found for FCC ID: AZ489FT7038 model EWP3100

Max. Calc.: 1-g Avg. SAR: 0.31 W/kg (Body); 10-g Avg. SAR: 0.14 W/kg (Body)
Max. Calc.: 1-g Avg. SAR: 0.09 W/kg (Face); 10-g Avg. SAR: 0.05 W/kg (Face)
Max. Calc.: 1-g Avg. SAR: 1.00 W/kg (Head); 10-g Avg. SAR: 0.38 W/kg (Head)

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 3GHz to 6GHz, and for Dipole test frequency ranging from 800MHz to 3GHz and 3GHz to 6GHz. Therefore, the highest tolerance for the probe calibration uncertainty is indicated.

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

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

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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Uncertainty Budget for Device Under Test for 3 to 6 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	8.3	N	1.00	1	1	8.3	8.3	∞
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	2.0	R	1.73	1	1	1.2	1.2	∞
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	1.0	R	1.73	1	1	0.6	0.6	∞
Probe Positioning w.r.t Phantom	E.6.3	4.0	R	1.73	1	1	2.3	2.3	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	2.1	R	1.73	1	1	1.2	1.2	∞
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	∞
Dielectric Parameter Correction	--	1.4	N	1.00	1	0.79	1.4	1.1	∞
Liquid Conductivity (measurement)	E.3.3	3.3	N	1.00	0.64	0.43	2.1	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				12	12	663
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k=2				25	25	

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Uncertainty Budget for System Validation (dipole & flat phantom) for 3 to 6 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	8.3	N	1.00	1	1	8.3	8.3	∞
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	2.0	R	1.73	1	1	1.2	1.2	∞
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	1.0	R	1.73	1	1	0.6	0.6	∞
Probe Positioning w.r.t. Phantom	E.6.3	4.0	R	1.73	1	1	2.3	2.3	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	2.1	R	1.73	1	1	1.2	1.2	∞
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	∞
Dielectric Parameter Correction	--	1.4	N	1.00	1	0.79	1.4	1.1	∞
Liquid Conductivity (measurement)	E.3.3	3.3	R	1.73	0.64	0.43	1.2	0.8	∞
Liquid Permittivity (measurement)	E.3.3	1.9	R	1.73	0.6	0.49	0.6	0.5	∞
Combined Standard Uncertainty			RSS				11	11	99999
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k*=2				21	21	

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Notes:
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