SAR Test Report

Tests Requested By:	Motorola Mobility, LLC 600 N. US Highway 45 Libertyville, IL 60048
Test Report #:	25714-1
Date of Report:	June 9, 2014
Date of Test:	May 5 – 15, 2014; June 4 – 5, 2014
FCC ID #:	IHDT6QC1
IC ID #:	109O-T6QC1
Test Laboratory:	Motorola Mobility, LLC - ADR Test Service Laboratory 222 W. Merchandise Mart Pl. Chicago, IL 60654
Report Author:	Steven Hauswirth Distinguished Member of the Technical Staff

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Accreditation:

3465.01

This laboratory is accredited to ISO/IEC 17025-2005 to perform the following tests:

Tests:	Procedures:
Electromagnetic Specific Absorption Rate	IEC 62209-1 IEC 62209-2 RSS-102 IEEE 1528 - 2003 Australian Communications Authority Radio Communications (Electromagnetic Radiation – Human Exposure) Standard 2003 CENELEC EN 50360 CENELEC EN 50566:2013 ARIB Std. T-56 (2002)

On the following products or types of products:
Wireless Communications Devices (Examples): Two Way Radios; Portable Phones (including Cellular, Licensed Non-Broadcast and PCS); Low Frequency Readers; and Pagers

Statement of Compliance:

Motorola declares under its sole responsibility that the device model to which this declaration relates, is in conformity with the appropriate General Population/Uncontrolled RF exposure standards, recommendations and guidelines (FCC 47 CFR §2.1093) as well as with CENELEC en50360:2001 and ANSI / IEEE C95.1. It also declares that the product was tested in accordance with IEEE 1528 / CENELEC EN62209-1 (2006), along with other published guidance indicated in the references at the end of this report, as well as other appropriate measurement standards, guidelines and recommended practices. Any deviations from these standards, guidelines and recommended practices are noted below:

(none)

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Revision History

Revision Version	Date	Notes
Rev. 0	May-29-2014	Initial report release
Rev. A	Jun-09-2014	Revisions per TCB inquiry.

1 Introduction

The Motorola Mobility ADR Test Services Laboratory has performed measurements of the maximum potential exposure to the user of the portable Bluetooth / WiFi device covered by this test report. The Specific Absorption Rate (SAR) of this product was measured. The device was tested in accordance with [1], [5], [9], and [11] for wrist-watch SAR evaluation. Also, an inquiry was made to the FCC to ask about specific testing, please refer to Exhibit 12A for details. The SAR values measured for the device are below the maximum recommended levels of 4.0 W/kg in a 10 g average set in [1,2] for devices placed on the wrist / extremities. The final SAR reading for this device is 0.44 W/kg for body-worn use. These measurements were performed using a DASY52™ system manufactured by Schmid & Partner Engineering AG (SPEAG), of Zurich Switzerland.

Transmit Band	Body-Worn Accessory SAR ($^{W}/_{kg,}$ 10g)
Wi-Fi 2.45 GHz	0.44
Bluetooth	0.14

2 Details of the Device Under Test

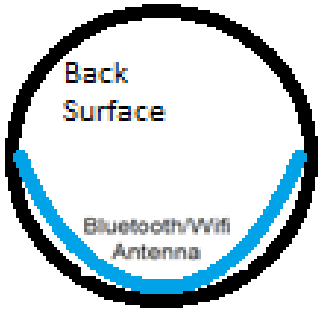
2.1 Sample Information

Serial Number(s) (Functional Use)	LXCX230257
Production Unit or Identical Prototype (47 CFR §2.908)	Identical Prototype
Device Category	Wrist-worn device
RF Exposure Limits	General Population / Uncontrolled

2.2 Antenna Description

Bluetooth/Wi-Fi 2 GHz Antenna

Type	Internal	
Location	Rear of Transceiver	
Dimensions	Width	5 mm
	Length	63mm



2.3 Transmission Band Summary

Mode(s) of Operation	Modulation Mode(s)	Target Output Power Setting	Duty Cycle	Transmitting Frequency Range(s)
Wi-Fi 802.11b/g/n	BPSK	19.5 dBm	1:1	2412.0 - 2462.0 MHz
Bluetooth	GFSK	12.8 dBm	1:1	2402.0 – 2480.0 MHz

2.4 Device Test Setup, Operating Configurations, and Conducted Power Measurements

2.4.1 Wi-Fi 802.11

Technical Description

The device under test contains a Wi-Fi 802.11b/g/n transmitter capable of data transmission in the 2.45 GHz ISM band.

Exposure Conditions and Test Exclusions

Mode	Type	Body-Worn Accessory
802.11b	Data	Tested (1)
802.11g / 802.11n	Data	Excluded (1)

Notes:

(1) Per FCC KDB 248227 D01 and the April 2010 FCC/TCB Meeting Notes, the highest average output power channel for the lowest data rate for 802.11b was selected for SAR evaluation. Other 802.11 modes (including 802.11g and 802.11n) were not investigated when the average output powers over all channels and data rates were not more than ¼ dB higher than the tested channel in the lowest data rate of the 802.11b mode. The **bolded** data rates and channels in the following conducted power tables were used for SAR testing. For cases where alternate channels, higher data rates, or 802.11 modes resulted in output power more than ¼ dB higher than the tested configuration, additional SAR tests were conducted. Alternate configurations selected for additional testing are marked in **highlighted bold**, and were tested in all applicable exposure conditions.

Device Test Setup

For Wi-Fi 802.11 modes, the test sample was operated using manufacturer test mode software per guidance provided in FCC KDB 248227. The test software was set up for the proper channel, transmitter power level and transmit modes of operation on the devices's uplink.

Conducted Power Measurements

Band	Channel	Average Conducted Power (dBm) for 802.11b Mode Data Rates			
		1 Mbps	2 Mbps	5.5 Mbps	11 Mbps
2450 MHz	1	19.38	19.35	19.37	19.39
	6	19.38	19.27	19.45	19.51
	11	**19.48**	19.35	19.42	19.46

Band	Channel	Average Conducted Power (dBm) for 802.11g Mode Data Rates							
		6 Mbps	9 Mbps	12 Mbps	18 Mbps	24 Mbps	36 Mbps	48 Mbps	54 Mbps
2450 MHz	1	16.62	16.61	16.73	16.77	15.54	14.64	13.65	12.75
	6	16.66	16.72	16.88	16.91	15.71	14.88	13.90	12.89
	11	16.89	16.90	16.88	16.99	1.580	1.481	13.81	12.32

Band	Channel	Average Conducted Power (dBm) for 802.11n Mode Data Rates (20 MHz Channel, 800 ns Guard Interval)							
		6.5 Mbps	13 Mbps	19.5 Mbps	26 Mbps	39 Mbps	52 Mbps	58.5 Mbps	65 Mbps
2450 MHz	1	15.77	15.74	15.95	15.94	14.83	13.94	12.94	11.85
	6	15.87	15.87	16.04	16.01	14.95	14.13	13.05	12.07
	11	15.79	15.74	15.86	15.89	14.91	14.14	12.83	12.01

Band	Channel	Average Conducted Power (dBm) for 802.11n Mode Data Rates (20 MHz Channel, 400 ns Guard Interval)							
		7.2 Mbps	14.4 Mbps	21.6 Mbps	28.8 Mbps	43.3 Mbps	57.7 Mbps	65 Mbps	72.2 Mbps
2450 MHz	1	15.81	15.87	15.95	15.82	14.82	13.81	12.85	11.92
	6	15.81	15.82	15.85	16.00	14.80	13.91	12.77	11.89
	11	16.01	16.14	16.25	16.05	14.95	14.05	13.04	12.18

2.4.2 Bluetooth

Technical Description

The device under test contains a Bluetooth transmitter capable of data transmission in the 2.45 GHz ISM band.

Exposure Conditions and Test Exclusions

Mode	Type	Body-Worn Accessory
All Modes	Data	Tested (1)

Notes:

(1) Per FCC KDB 447498 D01, standalone SAR measurements of the Bluetooth transmitter in this device were not required based on the maximum conducted power and the Bluetooth antenna-to-user separation distance. As detailed by the KDB publication, the SAR exclusion threshold for distances < 50 mm is defined by the following equation:

$$\frac{[maximum\ power\ of\ channel, including\ tune-up\ tolerance]_{(mW)}}{[minimum\ test\ separation\ distance]_{(mm)}} \times \sqrt{f_{(GHz)}} \leq 7.5$$

Conducted Power Measurements

Frequency [MHz]	Data Rate [Mbps]	Channel Number	Average Conducted Power [mW]
2402	1.0	0	18.89
2441	1.0	39	19.23
2480	1.0	78	18.34
2402	2.0	0	4.28
2441	2.0	39	3.984
2480	2.0	78	3.789
2402	3.0	0	4.393
2441	3.0	39	4.204
2480	3.0	78	3.854

Frequency [MHz]	Mode	Channel Number	Average Conducted Power [mW]
2402	LE	0	8.063
2441	LE	39	7.707
2480	LE	78	7.219

2.5 Accessories for the Device Under Test

2.5.1 Body-Worn Carry Accessories

There are two Body-Worn Accessories available for this device:
A leather wrist band: Model # 01018060002
A metal wrist band: Model # 01018051003

These accessories were divided into two categories: the ones with metal components and the ones with non-metal components. The inherent design of the metal wrist band prevents opening it to a flat state, which prevents placement of this device against a flat phantom. An inquiry was made to the FCC for guidance, please refer to Exhibit 12A for details.

3 Test Equipment Used

3.1 Dosimetric Measurement System

The Motorola Mobility ADR Test Services Laboratory utilizes a DASY52™ Dosimetric Assessment System manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. All SAR measurements are taken within a shielded enclosure. The overall 10 g RSS uncertainty of the measurement system is ±11% (K=1) with an expanded uncertainty of ±22% (K=2). The overall 1 g RSS uncertainty of the measurement system is ±11% (K=1) with an expanded uncertainty of ±22% (K=2). The measurement uncertainty budget is given in Appendix 3. Per IEEE 1528, this uncertainty budget is applicable to the SAR range of 0.4 W/kg to 10 W/kg.

The list of calibrated equipment used for the measurements is shown in the following table. All equipment was brought into service and used only during its noted calibration period, except where indicated. Equipment without a calibration period was in service for the entirety of the test period.

Description	Serial Number	Cal Date	Cal Due Date	Service Notes
DASY™ DAE V1	378	May-30-2013	May-30-2014	Measurement System 2 (Removed from service May-21-2014)
E-Field Probe ES3DV3	3184	May-28-2013	May-28-2014	Measurement System 2 (Removed from service May-21-2014)
DASY™ DAE V1	387	Nov-15-2013	Nov-15-2014	Measurement System 2 (Placed into service May-21-2014)
E-Field Probe ES3DV3	3037	Nov-26-2013	Nov-26-2014	Measurement System 2 (Placed into service May-21-2014)
Twin SAM Phantom V4.0	TP-1318			Measurement System 2
MFP V5.1 C Triple Modular Flat Phantom	1101			Measurement System 2
Dipole Validation Kit, DV2450V2	740	7-Feb-2012	7-Feb-2013	Calibration extension, see note.

Note: Per FCC KDB 865664 D01 v01r01, Section 3.2.2., evaluation for the extension of the dipole calibration was carried out. Results are provided in Appendix 5 in addition to the original calibration certificate.

3.2 Additional Equipment

Description	Serial Number	Cal Date	Cal Due Date	Service Notes
Signal Generator HP8648C	3847A04843	8-Apr-2013	8-Apr-2015	
Power Meter E4419B	GB39511087	28-Aug-2012	28-Aug-2014	
Power Sensor #1 - E9301A	US39210918	18-Dec-2013	18-Dec -2014	
Power Sensor #2 - E9301A	US39210931	3-Jul-2013	3-Jul-2014	
Signal Generator HP8648C	3847A04844	19-Jul-2013	19-Jul-2015	
Power Meter E4419B	GB39511082	26-Jul-2013	26-Jul-2015	
Power Sensor #1 - E9301A	US39211009	7-Oct-2013	7-Oct-2014	
Power Sensor #2 - E9301A	US39210930	23-Jul-2013	23-Jul-2014	
Signal Generator N5181A	MY50143026	27-Oct-2011	27-Oct-2014	
Power Meter E4416A	GB41293258	4-Sep-2013	4-Sep-2015	
Power Meter E4419B	US39250622	27-Jun-2013	27-Jun-2015	
Power Sensor #1 - E9301A	US39211007	21-Dec-2013	21-Dec -2014	
Power Sensor #2 - E9301A	US39211013	21-Dec-2013	21-Dec -2014	
Power Sensor #3 - E9323A	MY44420341	23-Jul-2013	23-Jul-2014	
Network Analyzer E5071C	US39171846	24-Jul-2013	24-Jul-2014	
Dielectric Probe Kit DAK-3.5	1072			

3.3 Test System Verifications (System Performance Checks)

System accuracy verifications of the DASY52™ were performed using the measurement equipment listed in Section 3.1. The daily system performance check occurs within the flat section of the SAM phantom.

A SAR measurement was performed to verify the measured SAR was within ±10% from the target SAR indicated in Appendix 4. These frequencies are within ±10% of the compliance test mid-band frequency as required in [1] and [5]. The test was conducted within 24 hours prior to the measurement of the device. Recommended limits for permittivity and conductivity, specified in [5], are shown in the table below. The obtained results from the system accuracy verification are also displayed in the table below. SAR values are normalized to 1 W forward power delivered to the dipole. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values. The distributions of SAR compare well with those of the reference measurements (see Appendix 1). For frequencies below 3 GHz, the simulated tissue depth was verified to be 15.0 cm ± 0.5 cm. Z-axis scans showing the SAR penetration are also included in Appendix 1.

DASY52™ Measurement System 2
System Verification Measurements for Body SAR Measurements

f (MHz)	Description	Probe	Dipole	Measured SAR (W/kg), 1 gram	Normalized SAR (W/kg), 1 gram	Dielectric Parameters				Ambient Temp (°C)	Tissue Temp (°C)
						Measured σ (S/m)	Deviation σ (S/m)	Measured ε_r	Deviation ε_r		
2450	**Measured,** May-07-2014	3184	740	4.96	49.6	1.909	-2.1%	49.068	-6.9%	20.1	19.8
	Measured, May-14-2014	3184	740	5.27	52.7	1.901	-2.6%	48.150	-8.7%	20.0	20.1
	Measured, May-15-2014	3184	740	5.06	50.6	1.869	-4.2%	48.685	-7.7%	20.2	19.7
	Recommended Limits	3184	740		49.5	1.95	±10%	52.7	±10%	18-25	18-25

DASY52™ Measurement System 2
System Verification Measurements for Head SAR Measurements

f (MHz)	Description	Probe	Dipole	Measured SAR (W/kg), 1 gram	Normalized SAR (W/kg), 1 gram	Dielectric Parameters				Ambient Temp (°C)	Tissue Temp (°C)
						Measured σ (S/m)	Deviation σ (S/m)	Measured ε_r	Deviation ε_r		
2450	**Measured,** Jun-04-2014	3037	740	5.19	51.90	1.751	-2.7%	38.35	-2.2%	21.7	21.2
	Recommended Limits	3037	740		52.30	1.80	±10%	39.2	±10%	18-25	18-25

3.4 Simulated Tissue Dielectric Properties

Validation, System Performance Check, and device SAR measurements are performed using the DASY52™ system along with liquids specified to simulate head and body tissues subjected to electromagnetic exposure. The list of ingredients and the percent composition of the tissue-simulating liquids used for testing are indicated in the following table.

Ingredient	782 / 835 / 900 MHz Head	782 / 835 / 900 MHz Body	1800 MHz / 1900 MHz Head	1800 MHz / 1900 MHz Body	2450 MHz Head	2450 MHz Body	5 GHz Head	5 GHz Body
Sugar	57.0	44.9	--	--	--	--	--	--
DGBE	--	--	47.0	30.8	6.89	8.0	--	--
Water	40.45	53.06	52.62	68.8	57.95	71.8	65.52	78.66
Salt	1.45	0.94	0.38	0.4	0.15	0.2	--	--
HEC	1.0	1.0	--	--	--	--	--	--
Bact.	0.1	0.1	--	--	--	--	--	--
Triton X-100	--	--	--	--	35.02	20.0	17.24	10.67
Di(ethylene glycol) Hexyl Ether	--	--	--	--	--	--	17.24	10.67

Prior to conducting SAR measurements, the relative permittivity, ε_r, and conductivity, σ, of the tissue-simulating liquids were measured with a SPEAG™ DAK-3.5 Dielectric Assessment Kit across the frequency ranges of interest.

These values, along with recommended targets, percent deviation from the targets, and the temperature of the simulated tissue are shown in the tables below.

For SAR measurements, the dielectric measurements from the DAK-3.5 are imported into the DASY software which performs interpolation to determine the dielectric parameters at the specific frequencies used for device testing. The DASY software also implements SAR error compensation algorithms to automatically correct the measured SAR results for deviations between the measured and target dielectric parameters. This error compensation has been verified by the lab to meet the requirements in FCC KDB 865664 D01. Therefore, where frequencies of test fall within ±50 MHz of a calibration point of the probe used for test, the acceptable range of tissue variation is ±10% per FCC KDB 865664 D01 section 2.4. For test frequencies outside of ±50 MHz of a probe calibration point, the range of tissue variation is reduced per section 2.6 part 2 of the same KDB, to ensure that tissues used in testing are within the required specification regardless of device performance. A mass density of $\rho = 1\ ^{g}/_{cm^3}$ was entered into the system for all cases. It can be seen that the measured parameters are within tolerance of the recommended targets specified in [1] and [5].

Body Simulated-Tissue Dielectric Parameters									
Index	**Date Measured**	***f*** **(MHz)**	**Target σ (S/m)**	**Target ε_r**	**Measured σ (S/m)**	**Deviation σ (%)**	**Measured ε_r**	**Deviation ε_r (%)**	**Temp (°C)**
2450 MHz	May-7-2014	2412.0	1.91 ±10%	52.75 ±10%	1.87	-2.4%	49.1	-6.9%	19.8
		2450.0	1.95 ±10%	52.70 ±10%	1.91	-2.1%	49.1	-6.9%	
		2462.0	1.97 ±10%	52.68 ±10%	1.92	-2.4%	49.0	-7.0%	
	May-14-2014	2412.0	1.91 ±10%	52.75 ±10%	1.87	-2.4%	48.2	-8.7%	20.1
		2450.0	1.95 ±10%	52.70 ±10%	1.90	-2.6%	48.2	-8.7%	
		2462.0	1.97 ±10%	52.68 ±10%	1.91	-2.9%	48.1	-8.7%	
	May-15-2014	2412.0	1.91 ±10%	52.75 ±10%	1.83	-4.5%	48.8	-7.5%	19.7
		2450.0	1.95 ±10%	52.70 ±10%	1.87	-4.2%	48.7	-7.7%	
		2462.0	1.97 ±10%	52.68 ±10%	1.88	-4.5%	48.7	-7.7%	

Head Simulated-Tissue Dielectric Parameters									
Index	**Date Measured**	***f*** **(MHz)**	**Target σ (S/m)**	**Target ε_r**	**Measured σ (S/m)**	**Deviation σ (%)**	**Measured ε_r**	**Deviation ε_r (%)**	**Temp (°C)**
2450 MHz	Jun-04-2014	2412.0	1.91 ±10%	52.75 ±10%	1.72	-2.7%	38.5	-2.0%	21.2
		2450.0	1.95 ±10%	52.70 ±10%	1.75	-2.8%	38.4	-2.2%	
		2462.0	1.97 ±10%	52.68 ±10%	1.75	-3.0%	38.3	-2.3%	

4 Test Setup Information, SAR Measurement Results, and Analysis

4.1 Overview of Test Setup and Results

The device was tested in the exposure configurations stipulated in [1], [5], [9]. The device was positioned into these configurations using the device holder supplied with the DASY52™ SAR measurement system. The default settings for the SAR scans are set in accordance with FCC KDB 865664 D01 for all area scan resolutions, zoom scan resolutions and volumes, and probe positioning. Please refer to the DASY52™ manual for additional information on SAR scanning procedures and algorithms used.

The SAR measurements were performed using the SAM and Flat phantoms listed in section 3.1. The same phantoms and simulated tissues were used for the system performance checks and the device SAR measurements. Consequently the Z-axis scans included in Appendix 1 are applicable for verification of the required simulated tissue depths of 15.0 cm ± 0.5 cm for frequencies less than 3 GHz, or 10.0 cm ± 0.5 cm for frequencies greater than 3 GHz.

The SAR results shown in following tables are maximum SAR values averaged over 1 gram of phantom tissue, to demonstrate compliance to [3] and also over 10 grams of phantom tissue, to demonstrate compliance to [6]. Also shown are the maximum device power, measured device power, temperature of the simulated tissue after the test, the measured drift and the scaled SAR. The exact method of scaling is:

$$Scaled\ SAR = (Measured\ SAR) * 10^{\left(\frac{(Maximum\ Power)-(Measured\ Power)}{10}\right)} * 10^{\left(\frac{-Drift}{10}\right)}$$

The SAR reported at the end of the measurement process by the DASY52™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test. Note that measured SAR is scaled only in the manner which results in a more conservative scaled value, i.e. to a higher SAR value as a consequence of measured power being below the maximum allowed power, or for negative drift values.

Per FCC KDB 447498 D01, area-scan based 1 g SAR estimation was used for initial testing in all combinations of device modes and exposure conditions. The highest SAR measurements for each combination of device mode and exposure condition, and all conditions where the area scan estimation reported values greater than 1.2 $^{W}/_{kg}$, were further evaluated with a zoom scan. When operating conditions for the SAR system verifications did not demonstrate that the verification area scan 1 g SAR estimation resulted in values within 3% of zoom scan 1 g SAR, zoom scans were executed for all SAR tests.

The test conditions that produced the highest SAR values for each combination of DUT mode and exposure condition are indicated as **bold** numbers in the following tables. Plots of these tests are included in Appendix 2.

4.2 Body-Worn Accessory Exposure Results

Body-Worn Accessory Position, Back of Device 0 mm from Phantom									
Mode	Accessory	Channel	*f* (MHz)	DUT Power Measured (dBm)	Temp (°C)	Drift (dB)	10 g SAR value Measured (W/kg)	10 g SAR value Corrected (W/kg)	Plot Page
802.11b, 1 Mbps	01018060002	1	2412	19.38	20.8	-0.12	0.310	0.32	
	01018060002	6	2437	19.38	20.8	-0.29	0.323	0.35	
	01018060002	11	2462	19.48	19.6	-0.33	0.332	0.36	A6
	01018051003	11	2462	19.48	20.0	-0.55	0.385	0.44	A8
	01018051003	11	2462	19.48	20.0	-0.26	0.200	0.21	A9

Table 4-1: SAR measurement results in an extremity-use position against the SAR Limit.

Body-Worn Accessory Position, Back of Device 0 mm from Phantom									
Mode	Accessory	Channel	*f* (MHz)	DUT Power Measured (dBm)	Temp (°C)	Drift (dB)	10 g SAR value Measured (W/kg)	10 g SAR value Corrected (W/kg)	Plot Page
Bluetooth	01018060002	39	2439	12.8	21.1	-0.02	0.144	0.14	A7

Table 4-2: SAR measurement results in an extremity-use position against the SAR Limit.

Note: The measurement of the Bluetooth transmitter is voluntarily submitted, but is otherwise not required per the test exclusion evaluation provided in 2.4.2 above.

Face-Dispatch Position, Front of Device 10 mm from Phantom									
Mode	Accessory	Channel	*f* (MHz)	DUT Power Measured (dBm)	Temp (°C)	Drift (dB)	1 g SAR value Measured (W/kg)	1 g SAR value Corrected (W/kg)	Plot Page
802.11b, 1 Mbps	01018060002	11	2462	19.48	20.8	-0.28	0.132	0.14	A10
802.11b, 1 Mbps	01018051003	11	2462	19.48	20.8	-0.29	0.146	0.16	A11

Table 4-3: SAR measurement results in a face-dispatch position against the SAR Limit.

4.3 Measurement Variability Analysis

Per FCC KDB 865664 D01, SAR measurement variability was assessed for each frequency band as determined by the SAR probe calibration points and tissue-equivalent mediums used for the device measurements. These additional measurements are executed after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for these measurements, to minimize any unexpected variations in the repeated results.

SAR measurement variability was assessed using the following procedures for each frequency band:

1. If the original highest measured SAR is < 2.0 $^{W}/_{kg}$ (10g avg) [< 0.8 $^{W}/_{kg}$ (1g avg)], the following steps do not apply and no repeat measurements were executed.
2. If the original highest measured SAR is ≥ 2.0 $^{W}/_{kg}$ (10g avg) [≥ 0.8 $^{W}/_{kg}$ (1g avg)], that measurement was repeated once.
3. If the ratio of the largest to smallest SAR for the original and first repeated measurement was > 1.2, or if the original or first repeated measurement was ≥ 3.6 $^{W}/_{kg}$ (10g avg) [≥ 1.45 $^{W}/_{kg}$ (1g avg)], the measurement was repeated a second time.
4. If the ratio of the largest to smallest SAR for the original, first repeated, or second repeated measurement was > 1.2, and one of those measurements was ≥ 3.75 $^{W}/_{kg}$ (10g avg) [≥ 1.5 $^{W}/_{kg}$ (1g avg)], the measurement was repeated a third time.

No measured SAR values were found to be ≥ 2.0 $^{W}/_{kg}$ (10g avg) [≥ 0.8 $^{W}/_{kg}$ (1g avg)], therefore no repeat measurements were executed.

5 References to Test Standards and Guidance

[1] CENELEC, EN 62209-1:2006 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures - Part 1: 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)”

[2] CENELEC, EN 50360:2001 “Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3 GHz)”.

[3] ANSI / IEEE, C95.1 1992 Edition “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”

[4] Removed

[5] IEEE 1528 2003 Edition “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”

[6] ICNIRP Guidelines “Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz)”

[7] IC RSS-102 “Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)”

[8] IC Notice 2012-DRS1203 “RE: Applicability of Latest FCC RF Exposure KDB Procedures (Publication Date: October 24, 2012) and Other Procedures”

[9] CENELEC, EN 62209-2:2010 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)”

[10] FCC KDB Publication 248227 D01 v01r02 “SAR Measurement Procedures for 802.11 a/b/g Transmitters”

[11] FCC KDB Publication 447498 D01 v05r01 “Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies”

[12] FCC KDB Publication 648474 D04 v01r01 “SAR Evaluation Considerations for Wireless Handsets”

[13] FCC KDB Publication 865664 D01 v01r01 “SAR Measurement Requirements for 100 MHz to 6 GHz”

[14] FCC KDB Publication 865664 D02 v01r01 “RF Exposure Compliance Reporting and Documentation Considerations”

[15] FCC KDB Publication 941225 D01 v02r02 “SAR Measurement Procedures for 3G Devices”

[16] FCC KDB Publication 941225 D03 v01 “Recommended SAR Test Reduction Procedures for GMS/GPRS/EDGE”

[17] FCC KDB Publication 941225 D05 v02r02 “SAR Evaluation Considerations for LTE Devices”

[18] FCC KDB Publication 941225 D06 v01r01 “SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities”