



CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 1 of 4

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Date/s Tested: 3/30/2016 - 5/21/2016
Manufacturer: Motorola Solutions Inc.
DUT Description: Handheld Portable – APX6000 and APX6000XE refresh 7/800MHz 764-870 MHz

Test TX mode(s): CW (PTT), Bluetooth, and WLAN 802.11b/g/n
Max. Power output: 2.95 W (764-805 MHz), 3.6 W (806-824 MHz), 10 mW (Bluetooth), 1.98 mW (Bluetooth LE), 63.1 mW (802.11b), 25.1 mW (802.11g), 15.5 mW (802.11n)
Nominal Power: 2.35 W (764-805 MHz), 3.0 W (806-824 MHz), 8 mW (Bluetooth), 1.5 mW (Bluetooth LE), 31.6 mW (802.11b), 12.5 mW (802.11g), 12.5 mW (802.11n)
Tx Frequency Bands: LMR 764-805 MHz, 806-870 MHz ; Bluetooth 2402-2480 MHz; WLAN 2412-2462 MHz
Signaling type: FM, TDMA, FHSS (Bluetooth), 802.11b/g/n (WLAN)
Model(s) Tested: H98UCD9PW5BN (PMUF1877A)
Model(s) Certified: H98UCD9PW5BN (PMUF1865A), H98UCD9PW5BN (PMUF1877A), H98UCH9PW7BN (PMUF1867A), H98UCH9PW7BN (PMUF1879A)
Serial Number(s): 756TSD0541, 756TSD0544
Classification: Occupational/Controlled
FCC ID: AZ489FT7086; LMR 764-775 MHz, 794-824 MHz, 851-869 MHz, Bluetooth 2.402-2.480 GHz, WLAN 802.11 b/g/n 2.412-2.462 GHz
 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC: 109U-89FT7086; This report contains results that are immaterial for IC equipment approval, which are clearly identified.

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of OET Bulletin 65. The 10 grams result is 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 10 W/kg averaged over 10grams of contiguous tissue.

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 4.0 of this report. This report shall not be reproduced without written approval from an officially designated representative of the Motorola Solutions Inc 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.

Tiong
Tiong Nguk Ing
Deputy Technical Manager
Approval Date: 06/14/2016

Certification Date: 5/27/2016
Certification No.: L1160578P

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Report Revision History

Date	Revision	Comments
05/16/2016	A	Initial release
06/01/2016	B	Removed PSM face measurements
06/14/2016	C	Correct typo on tissue target at 835 MHz

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 Motorola Solutions Inc. EME Test Laboratory for handheld portable model number H98UCD9PW5BN (PMUF1877A). This device is classified as Occupational/Controlled.

2.0 FCC SAR Summary

Table 1

Equipment Class	Frequency band (MHz)	Max Calc at Body (W/kg)		Max Calc at Face (W/kg)	
		1g-SAR	10g-SAR	1g-SAR	10g-SAR
TNF	764-775 MHz	6.05	3.94	1.65	1.23
	794-824 MHz	7.70	5.20	1.88	1.31
	851-869 MHz	5.98	3.88	2.47	1.78
*DSS	2402-2480 MHz (Bluetooth & Bluetooth LE)	NA	NA	NA	NA
DTS	2412-2462 MHz (WLAN 802.11 b/g/n)	0.035	0.016	0.186	0.106
Simultaneous Results		7.74	5.22	2.66	1.89

*Results not required per KDB (refer to sections 13.11 and 14.0)

3.0 Abbreviations / Definitions

BT: Bluetooth
 BT LE: Bluetooth Low Energy
 CNR: Calibration Not Required
 CW: Continuous Wave
 DSSS: Direct Sequence Spread Spectrum
 DTS: Digital Transmission System
 DUT: Device Under Test
 EME: Electromagnetic Energy
 FHSS: Frequency Hopping Spread Spectrum
 FM: Frequency Modulation
 Li-Ion: Lithium-Ion
 LMR: Land Mobile Radio
 NA: Not Applicable
 NiMH: Nickel Metal Hydride
 OFDM: Orthogonal Frequency Division Multiplexing
 PTT: Push to Talk

RF: Radio Frequency
SAR: Specific Absorption Rate

PSM: Public Safety Microphone
DSP: Digital Signal Processor
DSS: Direct Spread Spectrum
GPS: Global Positioning System
MIC: Microphone
RSM: Remote Speaker Microphone
TDMA: Time Division Multiple Access
TNF: Licensed Non-Broadcast Transmitter Held to Face
WLAN: Wireless Local Area Network

Audio accessories: These accessories allow communication while the DUT is worn on the body.

Body worn accessories: These accessories allow the DUT to be worn on the body of the user.

Maximum Power: Defined as the upper limit of the production line final test station.

4.0 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)
- Federal Communications Commission, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields”, OET Bulletin 65, FCC, Washington, D.C.: 1997.
- IEEE 1528 (2013), 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 (2015), Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz
- RSS-102 (Issue 5) – Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

- Australian Communications Authority Radio communications (Electromagnetic Radiation - Human Exposure) Standard (2014)
- 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 9 kHz and 300 GHz." and "Attachment to resolution # 303 from July 2, 2002"
- IEC62209-2 Edition 1.0 2010-03, 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).
- FCC KDB – 643646 D01 SAR Test for PTT Radios v01r03
- FCC KDB – 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB – 865664 D02 RF Exposure Reporting v01r02
- FCC KDB – 447498 D01 General RF Exposure Guidance v06
- FCC KDB – 248227 D01 802.11 Wi-Fi SAR v02r02

5.0 SAR Limits

Table 2

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

6.0 Description of Device Under Test (DUT)

This portable device operate in the LMR bands using frequency modulation (FM) and TDMA signals incorporating traditional simplex two-way radio transmission protocol. This device also contain WLAN technology for data capabilities over 802.11 b/g/n wireless networks and Bluetooth technology for short range wireless devices.

Time Division Multiple Access (TDMA) is used to allocate portions of the RF signal by dividing time into two slots. Time allocation enables each unit to transmit its voice information without interference from other transmitting units. Transmission from a unit or base station is accommodated during two time-slot lengths of 15 milliseconds with frame length of 60 milliseconds. The TDMA technique requires sophisticated algorithms and a

digital signal processor (DSP) to perform voice compressions/decompressions and RF modulation/demodulation. The maximum duty cycle for TDMA 1:2 is 50%.

The LMR bands in this device operate in a half duplex system. A half duplex system only allows the user to transmit or receive. These devices cannot transmit and receive simultaneously. The user must stop transmitting in order to receive a signal or listen for a response, regardless of PTT button or use of voice activated audio accessories. This type of operation, along with the RF safety booklet, which instructs the user to transmit no more than 50% of the time, justifies the use of 50% duty factor for this device.

This devices also incorporate Class 1 Bluetooth Low energy (LE) device which is a Frequency Hopping Spread Spectrum (FHSS) technology and LE intended to reduce power consumption. The Bluetooth radio modem is used to wireless link audio accessories. The maximum actual transmission duty cycle is imposing by Bluetooth standard. Packet types varying duty cycles: 1-slot, 3-slots and 5-slots packets. A 5-slot packet type receives on 1-slot and transmits on 5-slots, and thus maximum duty cycle = 76.1%.

WLAN 802.11 b/g/n operate using Direct Sequence Spread Spectrum (DSSS) and Orthogonal Frequency-Division Multiplexing (OFDM) accordance with the IEEE 802.11 b/g/n. With WiFi access, the radio can receive new code plug, firmware and software feature while allow users keep talking without interruption.

Table 3 below summarizes the technologies, bands, maximum duty cycles and maximum output powers. Maximum output powers are defined as upper limit of the production line final test station.

Table 3

Radio Type	Band (MHz)	Transmission	Duty Cycle (%)	Max Power (W)
LMR	764-775	FM	*50 / *25	2.95
LMR	793-805	FM	*50 / *25	2.95
LMR	806-824	FM	*50 / *25	3.60
LMR	851-870	FM	*50 / *25	3.60
BT	2402-2480	FHSS	76.1	0.0100
BT LE	2402-2480	DSSS	76.1	0.00198
WLAN	2412-2462	802.11b	100	0.0631
WLAN	2412-2462	802.11g	100	0.0251
WLAN	2412-2462	802.11n	100	0.0155

Note - * includes 50% PTT operation

The intended operating positions are “at the face” with the DUT at least 2.5 cm from the mouth, and “at the body” by means of the offered body worn accessories. Body worn audio and PTT operation is accomplished by means of optional remote accessories that are connected to the radio. Operation at the body without an audio accessory attached is possible by means of BT accessories.

7.0 Optional Accessories and Test Criteria

This device is offered with optional accessories. All accessories were individually evaluated during the test plan creation to determine if testing was required per the guidelines outlined in “SAR Test Reduction Considerations for Occupational PTT Radios” FCC KDB 643646 to assess compliance of this device. The following sections identify the test criteria and details for each accessory category. Refer to Exhibit 7B for antenna separation distances.

7.1 Antenna

There are optional removable antennas, PSM antennas, and an internal BT/WLAN antenna offered for this model. The Table below lists the antennas and its descriptions.

Table 4

Antenna Models	Description	Selected for test	Tested
84009370002	Internal BT/WLAN; 2.4 - 2.483.5 GHz; ¼ wave; 2.58 dBi gain	Yes	Yes; only for WLAN
NAF5085A	7-800/GPS Ant; 760-870 MHz, 1575 MHz; ¼ wave ; -2 dBd gain (Radio)	Yes	Yes
NAR6595A	7-800 Stubby Ant; 764-870 MHz; ¼ wave ; -2 dBd gain (Radio & PSM)	Yes	Yes
PMAF4002A	700/800MHz Ant; 764-870 MHz; ¼ wave ; -2 dBd gain (PSM)	Yes	Yes
NAG4000A	APX GPS Stubby Ant. 1575 MHz, ¼ Wave, -2dBd gain	No	No; for GPS received only

7.2 Battery

There are optional batteries offered for these products. These batteries categorized to long batteries and short batteries. The Table below lists their descriptions.

Table 5

Battery Models	Description	Selected for test	Tested	Comments
Long Batteries				
PMNN4494A	IMPRES Standard Delta-T Rugged Li-Ion 5000T (5100mAh)	Yes	Yes	Default battery for Face
NNTN7034B	Delta T Battery 4200 mAh	Yes	Yes	
PMNN4487A	APX GEN 2 IMPRES High Capacity Delta-T (-30 Temperature, 4400 mAh)	Yes	Yes	
NNTN7573A	Impress standard NiMH 2100 mAh min and 2300 mAh typical	Yes	Yes	Default long battery for Body
NNTN7037A	IMPRES Standard IP67 NiMH 2100 mAh min and 2300 mAh typical	Yes	Yes	
PMNN4439A	APX Clamshell Battery Pack	No	No	Low power, only up to 2W.

Table 5 Continued

Battery Models	Description	Selected for test	Tested	Comments
Short Batteries				
PMNN4403B	Standard IP67 Li-Ion 2050 mAh Black	Yes	Yes	Default short battery for Body
NNTN7038B	IMPRES Standard IP67 Li-Ion 2900 mAh min and 3100 mAh typical	Yes	Yes	
PMNN4485A	APX GEN 2 IMPRES Slim Delta-T (2400 mAh)	Yes	Yes	
PMNN4486A	APX GEN 2 IMPRES Standard Delta T (3400 mAh)	Yes	Yes	
NNTN8182B	Battery Impress standard IP67 Li-ion 2900 mAh Min and 3100 mAh Typical	No	No	By similarity to NNTN7038B, only color different

7.3 Body worn Accessories

All body worn accessories were considered. The Table below lists the body worn accessories, and body worn accessory descriptions.

Table 6

Body worn Models	Description	Selected for test	Tested	Comments
HLN6875A	3" Belt clip	Yes	Yes	
NTN8266B	2.5" Belt clip	Yes	Yes	
#PMLN5875A	Leather Carry case with D-Ring and 2.75" Swivel Belt Loop	Yes	Yes	Tested with RLN6487A & RLN6488A, AY000223A01, and NTN5243A without belt loop.
#PMLN5876A	Leather Carry case with 3" Fixed Belt Loop	Yes	Yes	Tested with RLN6487A & RLN6488A.
**PMLN5877A	Leather carry case with D-Ring and 2.75" Swivel Belt Loop	Yes	Yes	Tested with RLN6487A & RLN6488A without belt loop.
**PMLN5879A	Leather Carry Case with 3" Fixed Belt Loop	Yes	Yes	Tested with RLN6487A & RLN6488A.
PMLN6802A	Molded Nylon Carry Case with quick disconnect swivel	Yes	Yes	
NTN5243A	Adjustable Nylon Carry Strap	Yes	Yes	Tested with PMLN5875A
AY000223A01	Boston leather fireman's radio strap with button back holder	Yes	Yes	Tested with PMLN5875A
RLN6487A	Boston Leather Fireman's radio strap -XL	Yes	Yes	Tested with PMLN5875A, PMLN5876A, PMLN5879A, PMLN5877A
RLN6488A	Boston leather anti-strap for Boston leather fireman's radio strap	Yes	Yes	Tested with PMLN5875A, PMLN5876A, PMLN5879A, PMLN5877A

Table 6 Continued

Body worn Models	Description	Selected for test	Tested	Comments
4200865599	Belt	No	No	Already cover with worst case configuration “carry case & strap”
AY000229A01	Boston leather fireman’s radio strap with button back holder -XL	No	No	By similarity to AY000223A01
NNTN8749A	Carry accessory -Belt clip stud (pack of 5)	No	No	Secure access to RSM
#PMLN5657B	Leather Carry case with D-Ring and 2.75” Swivel Belt Loop	No	No	By similarity to PMLN5875B
#PMLN5658B	Leather Carry case with 3” Fixed Belt Loop	No	No	By similarity to PMLN5876A
**PMLN5659B	Leather carry case with D-Ring and 2.75” swivel Belt Loop	No	No	By similarity to PMLN5877A
**PMLN5660B	Leather Carry Case with 3" Fixed Belt Loop	No	No	By similarity to PMLN5879A
PMLN5709A	Basic carry holder	No	No	This holder must used together with HLN6875A and NTN8266B belt clip. Already cover with worst case configuration belt clip alone.
PMLN6712A	Carry Case for APX radio with Clamshell battery	No	No	Only compatible for PMNN4439A battery which transmit low power.
RLN6486A	Boston Leather Fireman’s radio strap	No	No	By similarity to RLN6487A

Note: ** Body worn compatible for long batteries only.
 # Body worn compatible for short batteries only.

7.4 Audio Accessories

All audio accessories were considered. The Table below lists the offered audio accessories and their descriptions. Exhibit 7B illustrates photos of the tested audio accessories.

Table 7

Audio Acc. Models	Description	Selected for test	Tested	Comments
NNTN8203A	Impress XE remote speaker microphone	Yes	Yes	Default audio
HMN4104B	Impress display remote speaker	Yes	Yes	Tested with RMN5116A
NMN6274A	Impress XP RSM for APX with dual microphone noise suppression, 3.5mm threaded jack	Yes	Yes	
PMMN4062A	Impress remote speaker microphone, noise cancelling	Yes	Yes	
RMN5116A	Receive and transmit boomless temple transducer	Yes	Yes	Tested with HMN4104B
PMMN4084A	Impress RSM with 3.5mm threaded and non-threaded audio jack	Yes	Yes	
PMLN5653A	Impress ear microphone with bone conduction and programmable button	Yes	Yes	
PMLN5101A	Impress temple transducer	Yes	Yes	
RMN5137A	Peltor MT series over-the-head headset, direct radio connect	Yes	Yes	
PMLN5275C	Heavy duty headset	Yes	Yes	

Table 7 Continued

Audio Acc. Models	Description	Selected for test	Tested	Comments
RLN6484A	Integrated ear microphone/ receiver system with body PTT (include Adapter BDN6783B)	Yes	Yes	Tested with NTN8819B
NTN8819B	Integrated ear microphone / receiver	Yes	Yes	Tested with RLN6484A
PMLN6088A	Peltor MT series over-the-head headset with Nexus connector	Yes	Yes	Tested with PMLN6095A
PMLN6095A	Peltor PTT Nexus adaptor	Yes	Yes	Tested with PMLN6088A
PMLN6129A	Impress 2 Wire surveillance kit with translucent tube, black	Yes	Yes	
RLN5312B	2-wire surveillance kit with translucent tube	Yes	Yes	Tested with BDN6783B
BDN6783B	3.5mm Threaded Audio Adapter	Yes	Yes	Tested with RLN5312B
NNTN7869A	Surveillance key loader accessory adaptor	Yes	Yes	Tested with ZMN6038A and ZMN6031A
ZMN6038A	2-wire surveillance kit, black, Hirose connector	Yes	Yes	Tested with NNTN7869A
ZMN6031A	3-wire surveillance kit, beige, Hirose connector	Yes	Yes	Tested with NNTN7869A
PMLN6123A	Impress 3 wire surveillance kit with translucent tube, black	Yes	Yes	
PMLN6766A	Tactical boomless temple transducer	Yes	Yes	Tested with PMLN6827A
PMLN6827A	Tactical PTT only interface module	Yes	Yes	Tested with PMLN6766A
PMMN4059B	Audio PSM (18 inch cable)	Yes	Yes	
PMMN4060B	Audio PSM (24 inch cable)	Yes	Yes	
PMMN4061B	Audio PSM (30 inch cable)	Yes	Yes	
HMN4101B	Impress RSM no display with audio jack	No	No	By similarity to HMN4104B
HMN4103B	Impress RSM display with audio jack	No	No	By similarity to HMN4104B
NMN6271A	Impress XP RSM with dual microphone noise suppression	No	No	By similarity to NMN6274A
NNTN8203ABLK	Impress XE remote speaker microphone (black color)	No	No	By similarity to NNTN8203A
NNTN8203AYLW	Impress XE remote speaker microphone (yellow color)	No	No	By similarity to NNTN8203A
NNTN8575A	XE RSM with Xstream temperature cable high impact	No	No	By similarity to NNTN8203A
NNTN8575ABLK	XE RSM with Xstream temperature cable high impact (black color)	No	No	By similarity to NNTN8203A
NNTN8575AYLW	XE RSM with Xstream temperature cable high impact (yellow color)	No	No	By similarity to NNTN8203A
PMLN6124A	Impress 3 wire surveillance kit with translucent tube, beige	No	No	By similarity to PMLN6123A
PMLN6127A	Impress 2 wire surveillance kit, black	No	No	By similarity to PMLN6129A
PMLN6128A	Impress 2 wire surveillance kit, beige	No	No	By similarity to PMLN6129A
PMLN6130A	Impress 2 Wire surveillance kit with translucent tube, beige	No	No	By similarity to PMLN6129A
PMLN6767A	Tactical remote body PTT	No	No	By similarity to PMLN6766A
PMLN6829A	Tactical ear microphone	No	No	By similarity to PMLN6766A
PMLN6830A	Tactical remote ring PTT	No	No	By similarity to PMLN6766A
PMMN4065A	Impress RSM, IP57	No	No	By similarity to PMNN4062A
PMMN4069A	Impress RSM, 3.5 mm jack, IP55	No	No	By similarity to PMNN4062A
PMMN4083A	Impress RSM Delta-T	No	No	By similarity to PMNN4062A
PMMN4099A	Remote speaker microphone	No	No	By similarity to PMNN4062A

Table 7 Continued

Audio Acc. Models	Description	Selected for test	Tested	Comments
RLN6477A	Peltor MT series Neckband headset with Nexus connector	No	No	By similarity to PMLN6088A
RLN6480A	Integrated ear microphone/ receiver system with Palm PTT (include Adapter BDN6783B)	No	No	By similarity to RLN6484A
RLN6481A	Integrated ear microphone/ receiver system with PTT on adaptor (include Adapter BDN6783B)	No	No	By similarity to RLN6484A
RLN6482A	Integrated ear microphone/ receiver system with ring PTT (include Adapter BDN6783B)	No	No	By similarity to RLN6484A
RLN6483A	Integrated ear microphone/ receiver system with snap-on-side PTT (include Adapter BDN6783B)	No	No	By similarity to RLN6484A
RMN4051B	Peltor MT series hard hat attached with Nexus connector	No	No	By similarity to PMLN6088A
RMN4052B	Peltor TacticalPro series Over-The-Head Headset with Nexus connector	No	No	By similarity to PMLN6088A
RMN4053B	Peltor TacticalPro series hard hat attached with Nexus connector	No	No	By similarity to PMLN6088A
RMN5058A	Lightweight headset	No	No	By similarity to PMLN5101A
RMN5135A	Peltor TacticalPro series Neckband headset with Nexus connector	No	No	By similarity to PMLN6088A
RMN5138A	Peltor MT series neckband headset, direct radio connect	No	No	By similarity to RMLN5137A
RMN5139A	Peltor MT series hard hat attached headset, direct radio connect	No	No	By similarity to RMLN5137A
ZMN6032A	2-wire surveillance kit, beige, Hirose connector	No	No	By similarity to ZMN6038A
ZMN6039A	3-wire surveillance kit, with extra loud earpiece, beige, Hirose connector	No	No	By similarity to ZMN6031A

8.0 Description of Test System



8.1 Descriptions of Robotics/Probes/Readout Electronics

Table 8

Dosimetric System type	System version	DAE type	Probe Type
Schmid & Partner Engineering AG SPEAG DASY 5	52.8.8.1222	DAE4	ES3DV3 (E-Field) & EX3DV4 (E-Field)

The DASY5™ system is operated per the instructions in the DASY5™ Users Manual. The complete manual is available directly from SPEAG™. All measurement equipment used to assess 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)

Table 9

Phantom Type	Phantom(s) Used	Material Parameters	Phantom Dimensions LxWxD (mm)	Material Thickness (mm)	Support Structure Material	Loss Tangent (wood)
Triple Flat	NA	200MHz -6GHz; Er = 3-5, Loss Tangent = ≤0.05	280x175x175	2mm +/- 0.2mm	Wood	< 0.05
SAM	NA	300MHz -6GHz; Er = < 5, Loss Tangent = ≤0.05	Human Model			
Oval Flat	√	300MHz -6GHz; Er = 4+/- 1, Loss Tangent = ≤0.05	600x400x190			

8.3 Description of Simulated Tissue

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.

The simulated tissue mixture was mixed based on the Simulated Tissue Composition indicated in Table 10. During the daily testing of this product, the applicable mixture was used to measure the Di-electric parameters at each of the tested frequencies to verify that the Di-electric parameters were within the tolerance of the tissue specifications.

Simulated Tissue Composition (percent by mass)

Table 10

Ingredients	835MHz		2450MHz	
	Head	Body	Head	Body
Sugar	57.0	44.9	0	0
Diacetin	0	0	51.00	34.50
De ionized – Water	40.45	53.06	48.75	65.20
Salt	1.45	0.94	0.15	0.20
HEC	1	1	0	0
Bact.	0.1	0.1	0.1	0.1

9.0 Additional Test Equipment

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

Table 11

Equipment Type	Model Number	Serial Number	Calibration Date	Calibration Due Date
Speag Probe	EX3DV4	7364	6/23/2015	6/23/2016
Speag Probe	ES3DV3	3122	6/19/2015	6/19/2016
Speag Probe	EX3DV4	3735	7/16/2015	7/16/2016
Speag Probe	ES3DV3	3196	11/17/2015	11/17/2016
Speag DAE	DAE4	1483	6/16/2015	6/16/2016
Speag DAE	DAE4	1488	7/14/2015	7/14/2016
Speag DAE	DAE4	850	8/24/2015	8/24/2016
Speag DAE	DAE4	1294	1/6/2016	1/6/2017
Signal Generator (Vector ESG 250KHz-6GHz)	E4438C	MY45091270	7/9/2014	7/9/2016
Signal Generator (Vector ESG 250KHz-6GHz)	E4438C	MY47272101	8/12/2014	8/12/2016
Bi-directional Coupler	3020A	41931	7/6/2015	7/6/2016
Amplifier	10W1000C	312858	CNR	CNR
Amplifier	5S1G4	312988	CNR	CNR
Power Meter	E4418B	MY45100911	5/29/2015	5/29/2017
Power Meter	E4418B	MY45101014	11/4/2015	11/4/2017
Power Sensor	8481B	SG41090258	6/3/2015	6/3/2016
Power Sensor	8482B	3318A07546	6/3/2015	6/3/2016
Power Meter	E4418B	MY45100532	11/4/2015	11/4/2017
Power Sensor	8481B	SG41090248	12/14/2015	12/14/2016
Power Meter	E4419B	MY40330364	5/29/2015	5/29/2017
Power Sensor	8482B	3318A07392	6/3/2015	6/3/2016
Broadband Power Sensor	NRP-Z11	120907	2/11/2015	2/11/2017
Temperature Probe	80PK-22	8766	8/21/2015	8/21/2016
Thermometer	DTM3000	2964A	8/28/2015	8/28/2016
Dickson Temperature Recorder	TM320	06153216	7/20/2015	7/20/2016
*Dielectric Assessment Kit	DAK-12	1069	5/12/2015	5/12/2016
#Dielectric Assessment Kit	DAK-12	1051	3/8/2016	3/8/2017
Network Analyzer	E5071B	MY42403218	8/4/2015	8/4/2016
Speag Dipole	D835V2	4d029	3/20/2015	3/20/2017
Speag Dipole	D2450V2	781	3/20/2015	3/20/2017

* Equipment used for test dates prior to equipment calibration due date.

Equipment used to replace equipment out for calibration.

10.0 SAR Measurement System Validation and Verification

DASY output files of the probe/dipole calibration certificates and system verification test results are included in appendices B, C & D respectively.

10.1 System Validation

The SAR measurement system was validated according to procedures in KDB 865664. The validation status summary Table is below.

Table 12

Dates	Probe Calibration Point		Probe SN	Measured Tissue Parameters		Validation		
				σ	ϵ_r	Sensitivity	Linearity	Isotropy
CW								
12/20/2015	Body	835	3122	0.99	53.2	Pass	Pass	Pass
12/01/2015	Head			0.92	41.1	Pass	Pass	Pass
7/27/2015	Body	835	7364	1.02	53.2	Pass	Pass	Pass
7/28/2015	Head			0.94	39.9	Pass	Pass	Pass
CW								
1/13/2016	Body	2450	3196	2.01	47.6	Pass	Pass	Pass
1/12/2016	Head			1.86	35.8	Pass	Pass	Pass
9/2/2015	Body	2450	3735	1.98	54.3	Pass	Pass	Pass
9/2/2015	Head			1.74	40.4	Pass	Pass	Pass

10.2 System Verification

System verification checks were conducted each day during the SAR assessment. The results are normalized to 1W. Appendix D 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 13

Probe Serial #	Tissue Type	Dipole Kit / Serial #	Ref SAR @ 1W (W/kg)	System Check Results Measured (W/kg)	System Check Test Results when normalized to 1W (W/kg)	Tested Date
7364	FCC Body	SPEAG D835V2 / 4d029	9.15 +/- 10%	2.40	9.60	3/30/2016
				2.15	8.60	3/31/2016
				2.42	9.68	4/1/2016
				2.41	9.64	4/4/2016
				2.39	9.56	4/5/2016
				2.42	9.68	4/6/2016
				2.41	9.64	4/7/2016
				2.44	9.76	4/8/2016*
				2.41	9.64	4/11/2016*
				2.43	9.72	4/12/2016*
3122	FCC Body	SPEAG D835V2 / 4d029	9.15 +/- 10%	2.37	9.48	4/13/2016*
				2.36	9.44	4/14/2016*
				2.38	9.52	4/15/2016*
				2.38	9.52	4/18/2016*
				2.30	9.20	4/19/2016*
				2.18	8.72	4/20/2016
				2.24	8.96	4/21/2016
				2.23	8.92	4/22/2016
				2.22	8.88	4/23/2016
				2.22	8.88	4/24/2016

Table 13 Continued

Probe Serial #	Tissue Type	Dipole Kit / Serial #	Ref SAR @ 1W (W/kg)	System Check Results Measured (W/kg)	System Check Test Results when normalized to 1W (W/kg)	Tested Date
3122	FCC Body	SPEAG D835V2 / 4d029	9.15 +/- 10%	2.20	8.80	4/25/2016*
				2.24	8.96	4/26/2016*
				2.23	8.92	4/27/2016*
	IEEE/IEC Head		9.28 +/- 10%	2.14	8.56	4/27/2016*
				2.13	8.52	4/28/2016*
				2.18	8.72	4/29/2016
				2.20	8.80	4/30/2016*
3735	FCC Body	SPEAG D2450V2 / 781	51.90 +/- 10%	12.4	49.60	4/28/2016
			12.2	48.80	4/29/2016	
3735	IEEE/IEC Head		52.30 +/- 10%	12.4	49.60	4/29/2016
				12.7	50.80	4/30/2016
3196	IEEE/IEC Head	SPEAG D2450V2 / 781	52.30 +/- 10%	13.1	52.40	5/21/2016

Note: * System performance check cover next testing day (within 24 hours)

10.3 Equivalent Tissue Test Results

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

Table 14

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
764	FCC Body	0.96 (0.92-1.01)	55.50 (52.70-58.30)	0.93	53.6	3/31/2016
				0.93	53.4	4/21/2016
				0.92	54.6	4/25/2016*
				0.92	54.6	4/26/2016
770	FCC Body	0.96 (0.92-1.01)	55.50 (52.70-58.20)	0.94	53.5	3/31/2016
				0.93	53.4	4/21/2016
				0.94	53.4	4/24/2016
				0.93	54.5	4/25/2016
775	FCC Body	0.97 (0.92-1.01)	55.40 (52.70-58.20)	0.93	53.8	3/30/2016
				0.94	53.3	4/21/2016
				0.93	53.2	4/22/2016
				0.94	53.1	4/23/2016
				0.94	53.4	4/24/2016
				0.93	54.5	4/25/2016
				0.93	54.4	4/26/2016
	IEEE/ IEC Head	0.89 (0.85-0.94)	41.8 (39.7-43.9)	0.86	42.0	4/27/2016*
0.86	41.2	4/28/2016				
794	FCC Body	0.97 (0.92-1.02)	55.40 (52.60-58.10)	0.96	53.3	4/1/2016
				0.96	53.0	4/12/2016
				0.96	53.0	4/13/2016
				0.93	53.3	4/15/2016*
				0.96	53.1	4/18/2016*
				0.96	53.1	4/19/2016*
				0.94	53.6	4/20/2016
				0.95	54.1	4/26/2016
809	FCC Body	0.97 (0.92-1.02)	55.30 (52.50-58.10)	0.97	53.5	3/30/2016
				0.97	53.1	4/1/2016
				0.96	53.0	4/12/2016*
				0.98	52.8	4/13/2016
				0.97	52.9	4/18/2016*
				0.97	52.9	4/19/2016*
				0.96	53.4	4/20/2016
824	FCC Body	0.97 (0.92-1.02)	55.20 (52.50-58.00)	0.99	53.0	4/1/2016
				0.98	52.8	4/11/2016*
				0.98	52.8	4/12/2016*
				0.99	52.6	4/13/2016*
				0.98	52.9	4/14/2016*
				0.98	52.7	4/15/2016*

Note: * This tissue date covered for next test day (within 24 hours)

Table 14 Continued

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date			
824	FCC Body	0.97 (0.92-1.02)	55.20 (52.50-58.00)	0.99	52.7	4/18/2016			
				0.99	52.7	4/19/2016			
				0.97	53.2	4/20/2016			
				0.98	53.8	4/26/2016*			
				0.98	53.8	4/27/2016*			
	IEEE/ IEC Head	0.90 (0.85-0.94)	41.6 (39.5-43.6)	0.91	40.5	4/28/2016*			
				0.91	40.5	4/29/2016			
835	FCC Body	0.97 (0.92-1.02)	55.2 (52.4-58.0)	0.99	53.2	3/30/2016			
				1.01	52.8	3/31/2016			
				1.00	52.8	4/1/2016			
				1.00	53.1	4/4/2016			
				1.00	53.2	4/5/2016			
				1.02	52.9	4/6/2016			
				1.01	52.8	4/7/2016			
				1.01	52.7	4/8/2016*			
				0.99	52.7	4/11/2016*			
				1.00	52.5	4/12/2016*			
				1.00	52.8	4/13/2016*			
				0.99	52.6	4/14/2016*			
				0.97	52.8	4/15/2016*			
				1.00	52.6	4/18/2016*			
				0.99	53.1	4/19/2016*			
				0.99	53.2	4/20/2016			
				1.01	52.6	4/21/2016			
				1.00	52.5	4/22/2016			
				1.01	52.5	4/23/2016			
				1.01	52.7	4/24/2016			
				1.00	53.8	4/25/2016*			
				1.00	53.7	4/26/2016*			
				1.00	53.3	4/27/2016*			
				IEEE/ IEC Head	0.90 (0.86-0.95)	41.5 (39.4-43.6)	0.92	41.1	4/27/2016*
							0.92	40.3	4/28/2016*
				0.92	40.1	4/29/2016			
			0.92	41.8	4/30/2016*				

Note: * This tissue date covered for next test day (within 24 hours)

Table 14 Continued

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
851	FCC Body	0.99 (0.94-1.04)	55.2 (52.4-57.9)	1.01	52.9	4/4/2016
				1.02	53.1	4/5/2016
				1.03	52.5	4/8/2016*
				1.01	52.6	4/11/2016
				1.01	53.5	4/27/2016
	IEEE/ IEC Head	0.92 (0.87-0.96)	41.5 (39.4-43.6)	0.93	41.7	4/30/2016*
861	FCC Body	1.00 (0.95-1.05)	55.1 (52.4-57.9)	1.03	52.8	4/4/2016
				1.03	53.0	4/5/2016
				1.05	52.5	4/6/2016
				1.04	52.5	4/7/2016
				1.04	52.5	4/8/2016*
				1.03	52.5	4/13/2016
				1.03	52.5	4/14/2016
869	FCC Body	1.01 (0.96-1.06)	55.1 (52.3-57.9)	1.03	52.7	4/4/2016
2412	FCC Body	1.91 (1.82-2.01)	52.8 (47.5-58.0)	1.93	47.6	4/28/2016
				1.95	47.7	4/29/2016
	IEEE/ IEC Head	1.77 (1.68-1.86)	39.3 (35.3-43.2)	1.84	35.7	4/29/2016
				1.83	35.9	4/30/2016
				1.81	35.6	5/20/2016*
2450	FCC Body	1.95 (1.85-2.05)	52.7 (47.4-58.0)	1.99	47.5	4/28/2016
				2.00	47.6	4/29/2016
	IEEE/ IEC Head	1.80 (1.71-1.89)	39.2 (35.3-43.1)	1.88	35.5	4/29/2016
				1.88	35.8	4/30/2016
				1.84	35.4	5/21/2016

Note: * This tissue date covered for next test day (within 24 hours)

11.0 Environmental Test Conditions

The EME Laboratory’s 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:

Table 15

	Target	Measured
Ambient Temperature	18 – 25 °C	Range: 18.4 – 24.9°C Avg. 21.6 °C
Tissue Temperature	NA	Range: 18.8 – 22.9°C Avg. 20.85°C

Relative humidity target range is a recommended target

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 Setup and Methodology

12.1 Measurements

SAR measurements were performed using the DASY system described in section 8.0 using zoom scans. Oval flat phantoms filled with applicable simulated tissue were used for body and face testing.

The Table below includes the step sizes and resolution of area and zoom scans per KDB 865664 requirements.

Table 16

Description		≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface		5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location		30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: ΔxArea, ΔyArea		≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
		When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: ΔxZoom, ΔyZoom		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: ΔzZoom(n)	≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.			

12.2 DUT Configuration(s)

The DUT is a portable device operational at the body and face as described in section 6.0 while using the applicable accessories listed in section 7.0. All accessories listed in section 7.0 of this report were considered when implementing the guidelines specified in KDB 643646.

12.3 DUT Positioning Procedures

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

12.3.1 Body

The DUT was positioned in normal use configuration against the phantom with the offered body worn accessory as well as with and without the offered audio accessories as applicable.

12.3.2 Head

Not applicable.

12.3.3 Face

The DUT was positioned with its' front and back sides separated 2.5cm from the phantom.

12.4 DUT Test Channels

The number of test channels was determined by using the following IEEE 1528 equation. The use of this equation produces the same or more test channels compared to the FCC KDB 447498 number of test channels formula.

$$N_c = 2 * \text{roundup}[10 * (f_{\text{high}} - f_{\text{low}}) / f_c] + 1$$

Where

N_c = Number of channels

F_{high} = Upper channel

F_{low} = Lower channel

F_c = Center channel

12.5 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 drift. Appendix F includes a shortened scan to justify SAR scaling for drift. For this device the “Max Calc. 1g-SAR” and “Max Calc.10g-SAR” are scaled using the following formula:

$$\text{Max_Calc} = \text{SAR_meas} \cdot 10^{\frac{-\text{Drift}}{10}} \cdot \frac{P_{\text{max}}}{P_{\text{int}}} \cdot \text{DC}$$

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 $P_{\text{int}} > P_{\text{max}}$, then $P_{\text{max}}/P_{\text{int}} = 1$.

Drift = 1 for positive drift

Additional SAR scaling was applied using the methodologies outlined in FCC KDB 865664 using tissue sensitivity values. SAR was scaled for conditions where the tissue permittivity was measured above the nominal target and for tissue conductivity that was measured below the nominal target. Negative or reduced SAR scaling is not permitted.

12.6 DUT Test Plan

The guidelines and requirements outlined in section 4.0 were used to assess compliance of this device. All modes of operation identified in section 6.0 were considered during the development of the test plan. All tests were performed in CW and 50% duty cycle was applied to PTT configurations in the final results.

Standalone and simultaneous BT testing were assessed in sections 13.6 and 14.0 per the guidelines of KDB 447498.

WLAN tests were performed in 802.11b mode using a duty cycle of 99.87% with results scaled to 100% as per guidelines of KDB 248227.

13.0 DUT Test Data

13.1 LMR assessments at the Body for 764-775MHz band

Battery PMNN4403B was selected as the default battery for assessments at the Body because it is the thinnest battery (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (764-775MHz) which are listed in Table 17. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 17

Test Freq (MHz)	Power (W)
764.0125	2.88
770.0000	2.88
774.9875	2.90

Assessments at the Body with Body worn NTN8266B

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 18

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	NTN8266B	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.91	0.43	5.80	4.20	2.94	2.13	MO-AB-160330-14
NAR6595A	PMNN4403B	NTN8266B	NNTN8203A	764.0125	2.90	0.51	11.40	8.19	5.80	4.17	AZ-AB-160331-03
				770.0000	2.91	0.40	10.50	7.69	5.32	3.90	AZ-AB-160331-02
				774.9875	2.91	0.01	9.61	6.78	4.87	3.44	MO-AB-160330-15
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	NTN8266B	NNTN8203A	764.0125	2.93	0.47	11.00	7.81	5.54	3.93	AZ-AB-160331-04
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	NNTN8203A	764.0125	2.94	0.80	11.80	8.11	5.92	4.07	MO-AB-160331-08
				770.0000							
				774.9875							
NAR6595A	PMNN4486A	NTN8266B	NNTN8203A	764.0125	2.94	0.81	11.40	7.73	5.72	3.88	MO-AB-160331-09
				770.0000							
				774.9875							
NAR6595A	NNTN7573A	NTN8266B	NNTN8203A	764.0125	2.89	-0.92	5.94	3.69	3.75	2.33	MO-AB-160331-11
				770.0000							
				774.9875							
NAR6595A	NNTN7034B	NTN8266B	NNTN8203A	764.0125	2.95	-0.06	7.14	4.54	3.62	2.30	MO-AB-160331-12
				770.0000							
				774.9875							
NAR6595A	PMNN4487A	NTN8266B	NNTN8203A	764.0125	2.95	-0.46	5.82	4.01	3.24	2.23	AZ-AB-160421-02
				770.0000							
				774.9875							
NAR6595A	PMNN4494A	NTN8266B	NNTN8203A	764.0125	2.95	-0.35	6.12	4.28	3.32	2.32	AZ-AB-160421-03
				770.0000							
				774.9875							
NAR6595A	NNTN7037A	NTN8266B	NNTN8203A	764.0125	2.95	-1.07	5.79	3.75	3.70	2.40	AZ-AB-160421-05
				770.0000							
				774.9875							

Assessments at the Body with Body worn HLN6875A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 19

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.88	3.67	2.74	1.84	1.37	AZ-AB-160421-06
NAR6595A	PMNN4403B	HLN6875A	NNTN8203A	764.0125	2.95	-0.04	7.24	5.41	3.65	2.73	FIE-AB-160421-12
				770.0000	2.94	1.09	10.30	7.66	5.17	3.84	AZ-AB-160421-08
				774.9875	2.95	1.03	10.40	7.76	5.20	3.88	AZ-AB-160421-07
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.95	9.05	6.25	4.53	3.13	FIE-AB-160421-13
NAR6595A	PMNN4485A	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.75	9.56	7.10	4.78	3.55	FIE-AB-160421-14
NAR6595A	PMNN4486A	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	1.00	8.90	6.60	4.45	3.30	FIE-AB-160421-15
NAR6595A	NNTN7573A	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.16	4.07	2.90	2.11	1.50	FIE-AB-160421-18
NAR6595A	NNTN7034B	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.41	2.61	2.00	1.31	1.00	FIE-AB-160421-19
NAR6595A	PMNN4487A	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.04	3.84	2.83	1.92	1.42	FIE-AB-160421-20
NAR6595A	PMNN4494A	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.35	3.93	2.85	1.97	1.43	FIE-AB-160421-21
NAR6595A	NNTN7037A	HLN6875A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.92	3.39	2.27	2.09	1.40	FIE-AB-160421-22

Assessments at the Body with Body worn PMLN5875A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 20

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.98	2.94	1.88	1.47	0.94	AZ-AB-160421-23
NAR6595A	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.89	4.84	2.83	2.97	1.74	AZ-AB-160421-24
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-1.08	5.88	3.70	3.77	2.37	AZ-AB-160421-25
NAR6595A	PMNN4485A	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.48	10.40	5.01	5.20	2.51	AZ-AB-160422-02
NAR6595A	PMNN4486A	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.12	5.21	3.60	2.61	1.80	AZ-AB-160422-03

Assessments at the Body with Body worn PMLN5876A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 21

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.38	1.54	1.14	0.77	0.57	AZ-AB-160422-04
NAR6595A	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.76	3.04	2.26	1.81	1.35	AZ-AB-160422-05
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.42	3.61	2.65	1.99	1.46	AZ-AB-160422-06
NAR6595A	PMNN4485A	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.98	2.03	1.50	1.27	0.94	AZ-AB-160422-07
NAR6595A	PMNN4486A	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.08	2.10	1.56	1.05	0.78	AZ-AB-160422-09

Assessments at the Body with Body worn PMLN5877A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for long batteries. Optional long batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 22

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.32	1.66	0.93	0.89	0.50	FIE-AB-160422-10
NAR6595A	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-1.07	2.78	1.99	1.78	1.27	FIE-AB-160422-12
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.36	3.85	1.91	1.93	0.96	FIE-AB-160422-14
NAR6595A	PMNN4487A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.45	3.68	1.79	2.04	0.99	FIE-AB-160422-15
NAR6595A	PMNN4494A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.06	3.87	1.64	1.94	0.82	FIE-AB-160422-16
NAR6595A	NNTN7037A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.59	2.95	2.14	1.69	1.23	AZ-AB-160422-18

Assessments at the Body with Body worn PMLN5879A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for long batteries. Optional long batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 23

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	NNTN7573A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.05	0.90	0.66	0.45	0.33	AZ-AB-160422-19
NAR6595A	NNTN7573A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.94	2.03	1.47	1.26	0.91	AZ-AB-160422-21
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.03	1.70	1.29	0.85	0.65	AZ-AB-160423-02
NAR6595A	PMNN4487A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.20	2.04	1.51	1.07	0.79	AZ-AB-160423-03
NAR6595A	PMNN4494A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.08	2.15	1.56	1.08	0.78	AZ-AB-160423-04
NAR6595A	NNTN7037A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.75	1.80	1.31	1.07	0.78	AZ-AB-160423-05

Assessments at the Body with Body worn PMLN6802A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 24

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.84	2.31	1.72	1.16	0.86	AZ-AB-160423-06
NAR6595A	PMNN4403B	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	1.10	6.44	4.73	3.22	2.37	AZ-AB-160423-07
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.22	4.72	3.56	2.48	1.87	AZ-AB-160423-09
NAR6595A	PMNN4485A	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.31	4.43	3.33	2.38	1.79	AZ-AB-160423-10
NAR6595A	PMNN4486A	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.21	3.90	2.93	2.05	1.54	AZ-AB-160424-02
NAR6595A	NNTN7573A	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.91	1.75	1.30	1.08	0.80	AZ-AB-160424-03
NAR6595A	NNTN7034B	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.75	1.77	1.34	0.89	0.67	AZ-AB-160424-04
NAR6595A	PMNN4487A	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.23	2.30	1.72	1.15	0.86	AZ-AB-160424-05
NAR6595A	PMNN4494A	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.13	2.30	1.71	1.15	0.86	AZ-AB-160424-06
NAR6595A	NNTN7037A	PMLN6802A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.76	1.74	1.29	1.04	0.77	AZ-AB-160424-07

Assessments at the Body with Body worn PMLN5875A with AY00023A01
 DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 25

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ AY00023A01	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.26	5.37	3.11	2.69	1.56	AZ-AB-160424-08
NAR6595A	PMNN4403B	PMLN5875A w/ AY00023A01	NNTN8203A	764.0125	2.95	-0.22	6.21	4.64	3.27	2.44	AZ-AB-160425-02
				770.0000	2.95	-0.65	5.30	3.72	3.08	2.16	AZ-AB-160424-10
				774.9875	2.95	-0.15	9.35	5.65	4.84	2.92	AZ-AB-160424-09
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ AY00023A01	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.40	5.96	4.47	3.27	2.45	AZ-AB-160425-03
NAR6595A	PMNN4485A	PMLN5875A w/ AY00023A01	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.28	8.01	5.32	4.27	2.84	AZ-AB-160425-04
NAR6595A	PMNN4486A	PMLN5875A w/ AY00023A01	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.21	5.75	4.25	3.02	2.23	AZ-AB-160425-05

Assessments at the Body with Body worn PMLN5875A with NTN5243A
 DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 17 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E

Table 26

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403 B	PMLN5875A w/ NTN5243A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.92	4.19	2.87	2.10	1.44	AZ-AB-160425-06
NAR6595A	PMNN4403 B	PMLN5875A w/ NTN5243A	NNTN8203A	764.0125	2.95	0.56	8.44	6.32	4.22	3.16	AZ-AB-160425-09
				770.0000	2.95	0.24	8.09	6.04	4.05	3.02	AZ-AB-160425-08
				774.9875	2.95	-0.38	7.79	5.80	4.25	3.17	AZ-AB-160425-07
Assessment of Additional Batteries											
NAR6595A	NNTN7038 B	PMLN5875A w/ NTN5243A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.22	7.95	5.94	3.98	2.97	AZ-AB-160425-10
NAR6595A	PMNN4485 A	PMLN5875A w/ NTN5243A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	-0.28	6.01	4.50	3.21	2.40	AZ-AB-160425-11
NAR6595A	PMNN4486 A	PMLN5875A w/ NTN5243A	NNTN8203A	764.0125							
				770.0000							
				774.9875	2.95	0.47	7.53	5.30	3.77	2.65	AZ-AB-160425-12

Assessment at the Body with other audio accessories

Assessment for additional audio accessories as per “KDB 643646 Body SAR Test Consideration for Audio Accessories without Built-in Antenna; Sec 1, A”. SAR plots of the highest result per Table (bolded) are presented in Appendix E

Table 27

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4485A	NTN8266B	HMN4104B w/ RMN5116A	764.0125	2.95	0.77	11.50	7.81	5.75	3.91	AZ-AB-160425-13
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	NMN6274A	764.0125	2.95	0.68	12.10	7.88	6.05	3.94	MO-AB-160425-14
				770.0000	2.95	0.01	10.70	7.00	5.35	3.50	MO-AB-160425-15
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMMN4062A	764.0125	2.95	0.04	10.90	7.24	5.45	3.62	MO-AB-160425-16
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMMN4084A	764.0125	2.95	-0.17	10.60	7.13	5.51	3.71	MO-AB-160425-17
				770.0000							
				774.9875							

Table 27 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4485A	NTN8266B	PMLN5653A	764.0125	2.95	-0.03	10.50	6.87	5.29	3.46	MO-AB-160425-18
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMLN5101A	764.0125	2.95	0.04	10.80	7.10	5.40	3.55	MO-AB-160426-01
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	RMN5137A	764.0125	2.95	0.49	11.20	7.31	5.60	3.66	MO-AB-160426-02
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMLN5275C	764.0125	2.95	-0.27	10.40	6.76	5.53	3.60	MO-AB-160426-03
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	RLN6484A w/ NTN8819B	764.0125	2.95	0.33	11.10	7.33	5.55	3.67	MO-AB-160426-04
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMLN6088A w/ PMLN6095A	764.0125	2.95	0.48	11.50	7.43	5.75	3.72	MO-AB-160426-05
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMLN6129A	764.0125	2.95	0.33	10.90	7.16	5.45	3.58	MO-AB-160426-06
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	RLN5312B w/ BDN6783B	764.0125	2.95	0.39	11.60	7.59	5.80	3.80	MO-AB-160426-07
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	NNTN7869A w/ ZMN6038A	764.0125	2.95	0.56	11.00	7.26	5.50	3.63	MO-AB-160426-08
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	NNTN7869A w/ ZMN6031A	764.0125	2.95	0.71	11.50	7.44	5.75	3.72	MO-AB-160426-09
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMLN6123A	764.0125	2.95	-0.02	10.50	6.99	5.27	3.51	MO-AB-160426-10
				770.0000							
				774.9875							
NAR6595A	PMNN4485A	NTN8266B	PMLN6766A w/ PMLN6827A	764.0125	2.95	0.57	10.70	7.06	5.35	3.53	AZ-AB-160426-12
				770.0000							
				774.9875							

Assessment of wireless BT configuration

Assessment using the overall highest SAR configuration at the body from above without an audio accessory attached. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 28

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4485A	NTN8266B	NONE	764.0125	2.95	0.55	10.40	7.71	5.20	3.86	AZ-AB-160426-13
				770.0000							
				774.9875							

Assessment of PSM configuration

Battery PMNN4494A was selected as the default battery for assessments at the Body with Public Safety Microphone (PSM) because it has the highest capacity (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (764-775 MHz) which are listed in Table 29. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 29

Test Freq (MHz)	Power (W)
764.0125	2.28
770.0000	2.29
774.9875	2.32

Assessment of offered PSM audio accessories per KDB 643646. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 30

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
PMAF4002A	PMNN4494A	PSM @ body	PMMN4059B	764.0125							
				770.0000							
				774.9875	2.95	-0.04	5.86	4.02	2.96	2.03	AZ-AB-160426-16
NAR6595A	PMNN4494A	PSM @ body	PMMN4059B	764.0125							
				770.0000							
				774.9875	2.95	-0.11	3.06	2.06	1.57	1.06	AZ-AB-160426-17
PMAF4002A	PMNN4494A	PSM @ body	PMMN4060B	764.0125							
				770.0000							
				774.9875	2.95	0.67	4.73	3.07	2.37	1.54	AZ-AB-160426-18
NAR6595A	PMNN4494A	PSM @ body	PMMN4060B	764.0125							
				770.0000							
				774.9875	2.95	-0.20	2.13	1.42	1.12	0.74	AZ-AB-160426-19
PMAF4002A	PMNN4494A	PSM @ body	PMMN4061B	764.0125							
				770.0000							
				774.9875	2.95	-0.04	3.99	2.68	2.01	1.35	AZ-AB-160426-20
NAR6595A	PMNN4494A	PSM @ body	PMMN4061B	764.0125							
				770.0000							
				774.9875	2.95	-0.81	1.88	1.30	1.13	0.78	AZ-AB-160426-21

13.2 LMR assessments at the Body for 794-824MHz band

Battery PMNN4403B was selected as the default battery for assessments at the Body because it is the thinnest battery (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (794-824MHz) which are listed in Table 31. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 31

Test Freq (MHz)	Power (W)
794.0125	2.91
808.5000	3.47
823.9875	3.50

Assessments at the Body with Body worn NTN8266B

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 32

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.56	-0.09	4.86	3.54	2.51	1.83	AZ-AB-160401-02
NAR6595A	PMNN4403B	NTN8266B	NNTN8203A	794.0125	2.95	-0.04	8.98	6.19	4.53	3.12	MO-AB-160401-07
				808.5000	3.54	-0.63	8.80	6.30	5.17	3.70	AZ-AB-160401-04
				823.9875	3.55	-0.03	10.20	6.69	5.21	3.42	AZ-AB-160401-03
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.59	0.41	11.20	7.76	5.62	3.89	MO-AB-160411-12
NAR6595A	PMNN4485A	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.48	11.70	7.50	5.85	3.75	MO-AB-160411-13
NAR6595A	PMNN4486A	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.68	11.90	7.84	5.95	3.92	MO-AB-160412-01
NAR6595A	NNTN7573A	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.11	9.15	6.13	4.69	3.14	MO-AB-160412-03
NAR6595A	NNTN7034B	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.86	11.70	7.68	5.85	3.84	MO-AB-160412-04
NAR6595A	PMNN4487A	NTN8266B	NNTN8203A	794.0125							
				808.5000	3.60	0.18	9.02	6.40	4.51	3.20	MO-AB-160412-06
				823.9875	3.60	1.03	12.30	8.65	6.15	4.33	MO-AB-160412-05
NAR6595A	PMNN4494A	NTN8266B	NNTN8203A	794.0125							
				808.5000	3.58	0.50	10.70	7.49	5.38	3.77	AZ-AB-160412-14
				823.9875	3.60	1.32	13.10	8.99	6.55	4.50	MO-AB-160412-08
NAR6595A	NNTN7037A	NTN8266B	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.04	9.01	6.13	4.55	3.09	AZ-AB-160412-15

Assessments at the Body with Body worn HLN6875A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 33

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.16	1.88	1.39	0.98	0.72	AZ-AB-160412-16
NAR6595A	PMNN4403B	HLN6875A	NNTN8203A	794.0125	2.95	0.42	8.34	6.21	4.17	3.11	AZ-AB-160412-19
				808.5000	3.58	-0.62	7.87	5.83	4.56	3.38	AZ-AB-160412-18
				823.9875	3.60	-0.00	9.33	6.81	4.67	3.41	AZ-AB-160412-17
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.10	8.95	6.59	4.48	3.30	AZ-AB-160412-20
NAR6595A	PMNN4485A	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.32	8.81	6.47	4.41	3.24	AZ-AB-160412-21
NAR6595A	PMNN4486A	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.58	0.65	9.52	6.93	4.79	3.48	AZ-AB-160412-22
NAR6595A	NNTN7573A	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.82	5.46	3.83	3.30	2.31	MO-AB-160412-24
NAR6595A	NNTN7034B	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.66	4.19	3.09	2.10	1.55	MO-AB-160412-25
NAR6595A	PMNN4487A	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.67	5.43	3.76	2.72	1.88	MO-AB-160412-26
NAR6595A	PMNN4494A	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	1.02	6.72	2.89	3.36	1.45	MO-AB-160412-27
NAR6595A	NNTN7037A	HLN6875A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.38	6.89	4.64	3.76	2.53	MO-AB-160412-28

Assessments at the Body with Body worn PMLN5875A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 34

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.49	2.15	1.27	1.20	0.71	MO-AB-160413-02
NAR6595A	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125	2.95	-0.38	4.27	2.99	2.33	1.63	MO-AB-160413-06
				808.5000	3.60	-0.28	5.08	3.74	2.71	1.99	MO-AB-160413-05
				823.9875	3.60	-0.79	8.47	6.18	5.08	3.71	MO-AB-160413-03
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.48	6.28	4.41	3.14	2.21	MO-AB-160413-07
NAR6595A	PMNN4485A	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.59	5.71	3.89	2.86	1.95	MO-AB-160413-08
NAR6595A	PMNN4486A	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.79	5.82	4.00	2.91	2.00	MO-AB-160413-09

Assessments at the Body with Body worn PMLN5876A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 35

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.61	1.12	0.80	0.64	0.46	MO-AB-160414-10
NAR6595A	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.20	3.70	2.69	1.85	1.35	AZ-AB-160414-13
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.33	3.87	2.81	1.94	1.41	AZ-AB-160414-14
NAR6595A	PMNN4485A	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.39	3.44	2.51	1.72	1.26	AZ-AB-160414-15
NAR6595A	PMNN4486A	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.82	3.96	2.91	1.98	1.46	AZ-AB-160414-16

Assessments at the Body with Body worn PMLN5877A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for long batteries. Optional long batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E

Table 36

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.14	0.72	0.52	0.37	0.27	AZ-AB-160414-18
NAR6595A	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.03	3.96	2.81	1.98	1.41	AZ-AB-160414-19
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.70	3.94	2.88	1.97	1.44	AZ-AB-160414-20
NAR6595A	PMNN4487A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.01	3.52	2.55	1.76	1.28	AZ-AB-160414-23
NAR6595A	PMNN4494A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.20	2.83	2.02	1.42	1.01	MO-AB-160414-25
NAR6595A	NNTN7037A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.54	0.43	5.44	2.12	2.77	1.08	MO-AB-160414-26

Assessments at the Body with Body worn PMLN5879A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for long batteries. Optional long batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E

Table 37

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	NNTN7573A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.37	1.08	0.78	0.59	0.43	MO-AB-160414-27
NAR6595A	NNTN7573A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.12	2.25	1.67	1.16	0.86	MO-AB-160415-01
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.87	3.85	2.75	1.93	1.38	MO-AB-160415-02
NAR6595A	PMNN4487A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.93	4.09	3.09	2.05	1.55	MO-AB-160415-03
NAR6595A	PMNN4494A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	1.31	3.89	2.78	1.95	1.39	MO-AB-160415-06
NAR6595A	NNTN7037A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.09	2.34	1.76	1.19	0.90	MO-AB-160415-07

Assessments at the Body with Body worn PMLN6802A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 38

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.08	0.85	0.63	0.43	0.32	MO-AB-160415-09
NAR6595A	PMNN4403B	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.46	4.45	3.31	2.47	1.84	AZ-AB-160415-11
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.19	4.90	3.64	2.56	1.90	AZ-AB-160415-12
NAR6595A	PMNN4485A	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.06	4.56	3.38	2.31	1.71	AZ-AB-160415-13
NAR6595A	PMNN4486A	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.26	4.90	3.65	2.45	1.83	AZ-AB-160415-14
NAR6595A	NNTN7573A	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.21	2.32	1.70	1.22	0.89	AZ-AB-160415-16
NAR6595A	NNTN7034B	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.72	2.39	1.78	1.20	0.89	AZ-AB-160415-17
NAR6595A	PMNN4487A	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	1.04	2.84	2.09	1.42	1.05	AZ-AB-160415-18
NAR6595A	PMNN4494A	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.94	2.63	1.93	1.32	0.97	AZ-AB-160415-19
NAR6595A	NNTN7037A	PMLN6802A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.10	2.70	1.97	1.35	0.99	AZ-AB-160415-20

Assessments at the Body with Body worn PMLN5875A with AY00023A01
 DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries . Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 39

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ AY00023A01	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.59	-0.42	3.82	1.99	2.11	1.10	MO-AB-160415-21
NAR6595A	PMNN4403B	PMLN5875A w/ AY00023A01	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.59	-0.00	5.43	4.08	2.72	2.05	MO-AB-160415-22
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ AY00023A01	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.20	9.90	5.67	4.95	2.84	MO-AB-160415-23
NAR6595A	PMNN4485A	PMLN5875A w/ AY00023A01	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.95	7.27	5.31	3.64	2.66	MO-AB-160415-24
NAR6595A	PMNN4486A	PMLN5875A w/ AY00023A01	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.65	7.87	5.87	3.94	2.94	MO-AB-160415-25

Assessments at the Body with Body worn PMLN5875A with NTN5243A
 DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 31 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 40

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403 B	PMLN5875A w/ NTN5243A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	-0.11	3.48	2.47	1.78	1.27	MO-AB-160416-03
NAR6595A	PMNN4403 B	PMLN5875A w/ NTN5243A	NNTN8203A	794.0125	2.95	-0.85	5.19	3.87	3.16	2.35	MO-AB-160416-05
				808.5000							
				823.9875	3.60	-0.26	7.14	5.29	3.79	2.81	MO-AB-160416-04
Assessment of Additional Batteries											
NAR6595A	NNTN7038 B	PMLN5875A w/ NTN5243A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.04	7.43	5.54	3.72	2.77	MO-AB-160416-06
NAR6595A	PMNN4485 A	PMLN5875A w/ NTN5243A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.35	7.02	5.21	3.51	2.61	MO-AB-160416-07
NAR6595A	PMNN4486 A	PMLN5875A w/ NTN5243A	NNTN8203A	794.0125							
				808.5000							
				823.9875	3.60	0.10	7.70	5.64	3.85	2.82	MO-AB-160416-08

Assessment at the Body with other audio accessories

Assessment for additional audio accessories as per “KDB 643646 Body SAR Test Consideration for Audio Accessories without Built-in Antenna; Sec 1, A”. SAR plots of the highest result per Table (bolded) are presented in Appendix E

Table 41

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4494A	NTN8266B	HMN4104B w/ RMN5116A	794.0125	2.95	0.17	7.75	5.51	3.88	2.76	MO-AB-160418-02
				808.5000	3.60	0.41	10.50	7.31	5.25	3.66	MO-AB-160418-03
				823.9875	3.60	1.05	13.90	9.64	6.95	4.82	MO-AB-160418-04
NAR6595A	PMNN4494A	NTN8266B	NMN6274A	794.0125	2.95	0.11	7.72	5.32	3.86	2.66	MO-AB-160418-05
				808.5000	3.60	0.26	9.92	6.87	4.96	3.44	MO-AB-160418-06
				823.9875	3.60	1.04	13.50	9.23	6.75	4.62	MO-AB-160418-07
NAR6595A	PMNN4494A	NTN8266B	PMMN4062A	794.0125	2.95	0.07	7.97	5.63	3.99	2.82	MO-AB-160418-08
				808.5000	3.60	0.22	11.20	7.68	5.60	3.84	MO-AB-160418-09
				823.9875	3.60	1.20	14.90	10.20	7.45	5.10	AZ-AB-160418-10
NAR6595A	PMNN4494A	NTN8266B	PMMN4084A	794.0125	2.95	-0.00	7.97	5.63	3.99	2.82	AZ-AB-160418-13
				808.5000	3.60	0.10	10.80	7.53	5.40	3.77	AZ-AB-160419-01
				823.9875	3.60	1.10	14.00	9.74	7.00	4.87	AZ-AB-160419-02

Table 41 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	NTN8266B	PMLN5653A	794.0125	2.95	0.08	8.09	5.62	4.05	2.81	AZ-AB-160419-03
				808.5000	3.60	0.13	10.70	7.49	5.35	3.75	AZ-AB-160419-04
				823.9875	3.60	1.23	14.40	9.88	7.20	4.94	AZ-AB-160419-05
NAR6595A	PMNN4494A	NTN8266B	PMLN5101A	794.0125	2.95	-0.01	8.15	5.68	4.08	2.85	AZ-AB-160419-06
				808.5000	3.60	0.22	10.70	7.54	5.35	3.77	AZ-AB-160419-07
				823.9875	3.60	1.19	14.40	9.99	7.20	5.00	AZ-AB-160419-08
NAR6595A	PMNN4494A	NTN8266B	RMN5137A	794.0125	2.95	-0.15	7.74	5.25	4.01	2.72	AZ-AB-160419-09
				808.5000	3.60	-0.06	9.75	6.75	4.94	3.42	AZ-AB-160419-10
				823.9875	3.60	1.05	12.90	8.80	6.45	4.40	MO-AB-160419-12
NAR6595A	PMNN4494A	NTN8266B	PMLN5275C	794.0125	2.95	-0.00	7.97	5.51	3.99	2.76	MO-AB-160419-13
				808.5000	3.60	0.22	10.30	7.22	5.15	3.61	MO-AB-160419-14
				823.9875	3.60	1.22	14.20	9.71	7.10	4.86	MO-AB-160419-15
NAR6595A	PMNN4494A	NTN8266B	RLN6484A w/ NTN8819B	794.0125	2.95	0.09	8.14	5.59	4.07	2.80	MO-AB-160419-16
				808.5000	3.60	0.18	11.50	7.76	5.75	3.88	MO-AB-160419-17
				823.9875	3.60	1.14	14.00	9.51	7.00	4.76	MO-AB-160419-18
NAR6595A	PMNN4494A	NTN8266B	PMLN6088A w/ PMLN6095A	794.0125	2.95	0.13	8.29	5.69	4.15	2.85	MO-AB-160419-19
				808.5000	3.59	0.09	10.10	7.06	5.06	3.54	AZ-AB-160419-20
				823.9875	3.60	1.15	13.60	9.24	6.80	4.62	AZ-AB-160419-21
NAR6595A	PMNN4494A	NTN8266B	PMLN6129A	794.0125	2.95	0.22	8.21	5.68	4.11	2.84	AZ-AB-160419-22
				808.5000	3.60	0.24	10.50	7.38	5.25	3.69	AZ-AB-160419-23
				823.9875	3.60	1.21	13.30	9.15	6.65	4.58	AZ-AB-160419-24
NAR6595A	PMNN4494A	NTN8266B	RLN5312B w/ BDN6783B	794.0125	2.95	-0.01	7.99	5.49	4.00	2.75	AZ-AB-160420-01
				808.5000	3.60	0.03	10.20	7.02	5.10	3.51	AZ-AB-160420-02
				823.9875	3.60	1.11	13.80	9.26	6.90	4.63	AZ-AB-160420-03
NAR6595A	PMNN4494A	NTN8266B	NNTN7869A w/ ZMN6038A	794.0125	2.95	0.15	7.96	5.48	3.98	2.74	AZ-AB-160420-04
				808.5000	3.60	-0.03	9.25	6.36	4.66	3.20	AZ-AB-160420-05
				823.9875	3.60	0.98	12.70	8.66	6.35	4.33	AZ-AB-160420-06
NAR6595A	PMNN4494A	NTN8266B	NNTN7869A w/ ZMN6031A	794.0125	2.95	0.24	8.02	5.39	4.01	2.70	AZ-AB-160420-07
				808.5000	3.60	0.16	9.61	6.64	4.81	3.32	AZ-AB-160420-08
				823.9875	3.60	1.25	13.60	9.32	6.80	4.66	AZ-AB-160420-09
NAR6595A	PMNN4494A	NTN8266B	PMLN6123A	794.0125	2.95	-0.06	7.73	5.35	3.92	2.71	AZ-AB-160420-10
				808.5000	3.60	0.31	10.40	7.10	5.20	3.55	FIE-AB-160420-12
				823.9875	3.60	1.03	13.40	9.07	6.70	4.54	FIE-AB-160420-18
NAR6595A	PMNN4494A	NTN8266B	PMLN6766A w/ PMLN6827A	794.0125	2.95	0.13	8.12	5.59	4.06	2.80	FIE-AB-160420-19
				808.5000	3.60	0.23	10.70	7.34	5.35	3.67	FIE-AB-160420-20
				823.9875	3.60	1.17	15.40	10.40	7.70	5.20	AZ-AB-160420-21

Assessment of wireless BT configuration

Assessment using the overall highest SAR configuration at the body from above without an audio accessory attached. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 42

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4494A	NTN8266B	NONE	794.0125	2.95	-0.11	7.12	5.03	3.65	2.58	AZ-AB-160420-22
				808.5000	3.60	0.12	10.00	6.98	5.00	3.49	AZ-AB-160420-23
				823.9875	3.60	1.16	13.20	9.08	6.60	4.54	AZ-AB-160420-24

Assessment of PSM configuration

Battery PMNN4494A was selected as the default battery for assessments at the Body with Public Safety Microphone (PSM) because it has the highest capacity (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (794-824 MHz) which are listed in Table 43. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 43

Test Freq (MHz)	Power (W)
794.0125	2.38
808.5000	2.86
823.9875	2.91

Assessment of offered PSM audio accessories per KDB 643646. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 44

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
PMAF4002A	PMNN4494A	PSM @ body	PMMN4059B	794.0125							
				808.5000							
				823.9875	3.60	-0.58	3.49	2.26	1.99	1.29	AZ-AB-160426-22
NAR6595A	PMNN4494A	PSM @ body	PMMN4059B	794.0125							
				808.5000							
				823.9875	3.60	-0.30	2.54	1.66	1.36	0.89	AZ-AB-160426-23
PMAF4002A	PMNN4494A	PSM @ body	PMMN4060B	794.0125							
				808.5000							
				823.9875	3.60	0.26	3.12	2.10	1.56	1.05	MO-AB-160426-24
NAR6595A	PMNN4494A	PSM @ body	PMMN4060B	794.0125							
				808.5000							
				823.9875	3.60	0.34	3.33	2.20	1.67	1.10	MO-AB-160426-25
PMAF4002A	PMNN4494A	PSM @ body	PMMN4061B	794.0125	2.95	-0.80	2.49	1.70	1.50	1.02	MO-AB-160426-27
				808.5000							
				823.9875	3.60	0.92	7.14	4.72	3.57	2.36	MO-AB-160426-26
NAR6595A	PMNN4494A	PSM @ body	PMMN4061B	794.0125							
				808.5000							
				823.9875	3.60	1.13	5.60	3.70	2.80	1.85	MO-AB-160426-28

13.3 LMR assessments at the Body for 851-869MHz band

Battery PMNN4403B was selected as the default battery for assessments at the Body because it is the thinnest battery (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (851-869MHz) which are listed in Table 45. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 45

Test Freq (MHz)	Power (W)
851.0125	3.49
860.5000	3.50
868.9875	3.50

Assessments at the Body with Body worn NTN8266B

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 46

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	NTN8266B	NNTN8203A	851.0125							
				860.5000	3.57	-0.68	4.22	3.05	2.49	1.80	AZ-AB-160404-02
				868.9875							
NAR6595A	PMNN4403B	NTN8266B	NNTN8203A	851.0125	3.56	0.26	9.49	6.69	4.80	3.38	AZ-AB-160404-04
				860.5000	3.56	-0.29	7.82	4.74	4.23	2.56	AZ-AB-160404-03
				868.9875	3.57	-0.14	9.15	5.44	4.76	2.83	MO-AB-160404-08
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	NTN8266B	NNTN8203A	851.0125	3.57	-0.10	9.46	5.59	4.88	2.88	MO-AB-160404-09
				860.5000							
				868.9875							
NAR6595A	PMNN4485A	NTN8266B	NNTN8203A	851.0125	3.58	-0.06	8.34	5.69	4.25	2.90	MO-AB-160404-11
				860.5000							
				868.9875							
NAR6595A	PMNN4486A	NTN8266B	NNTN8203A	851.0125	3.59	-0.13	8.39	5.08	4.33	2.62	MO-AB-160404-12
				860.5000							
				868.9875							
NAR6595A	NNTN7573A	NTN8266B	NNTN8203A	851.0125	3.59	-0.19	8.42	5.72	4.41	3.00	MO-AB-160404-14
				860.5000							
				868.9875							
NAR6595A	NNTN7034B	NTN8266B	NNTN8203A	851.0125	3.59	0.58	9.01	6.33	4.52	3.17	MO-AB-160404-15
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	NNTN8203A	851.0125	3.60	0.80	11.30	7.42	5.65	3.71	MO-AB-160404-16
				860.5000							
				868.9875							
NAR6595A	PMNN4494A	NTN8266B	NNTN8203A	851.0125	3.58	-0.12	9.97	6.69	5.15	3.46	AZ-AB-160405-02
				860.5000							
				868.9875							
NAR6595A	NNTN7037A	NTN8266B	NNTN8203A	851.0125	3.57	-0.18	8.42	5.69	4.43	2.99	AZ-AB-160405-04
				860.5000							
				868.9875							

Assessments at the Body with Body worn HLN6875A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 47

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.58	-0.36	1.70	1.23	0.93	0.67	AZ-AB-160405-05
				868.9875							
NAR6595A	PMNN4403B	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.60	-0.32	7.04	5.10	3.79	2.74	AZ-AB-160405-07
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.56	-0.10	6.65	4.84	3.44	2.50	AZ-AB-160405-08
				868.9875							
NAR6595A	PMNN4485A	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.60	-0.25	6.52	4.71	3.45	2.49	AZ-AB-160405-09
				868.9875							
NAR6595A	PMNN4486A	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.59	-0.11	6.16	4.46	3.17	2.29	MO-AB-160405-10
				868.9875							
NAR6595A	NNTN7573A	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.60	-1.03	5.50	3.63	3.49	2.30	MO-AB-160405-14
				868.9875							
NAR6595A	NNTN7034B	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.58	-0.13	3.68	1.83	1.91	0.95	MO-AB-160405-16
				868.9875							
NAR6595A	PMNN4487A	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.60	0.19	3.32	2.39	1.66	1.20	MO-AB-160405-17
				868.9875							
NAR6595A	PMNN4494A	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.60	-0.24	2.90	2.05	1.53	1.08	MO-AB-160405-18
				868.9875							
NAR6595A	NNTN7037A	HLN6875A	NNTN8203A	851.0125							
				860.5000	3.58	-0.16	5.66	3.98	2.95	2.08	AZ-AB-160406-03
				868.9875							

Assessments at the Body with Body worn PMLN5875A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 48

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.58	-0.74	2.11	1.03	1.26	0.61	AZ-AB-160406-04
				868.9875							
NAR6595A	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.57	-0.22	6.90	3.42	3.66	1.81	AZ-AB-160406-06
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.56	-0.21	3.59	2.33	1.91	1.24	MO-AB-160406-07
				868.9875							
NAR6595A	PMNN4485A	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.59	0.43	3.35	2.45	1.68	1.23	MO-AB-160406-08
				868.9875							
NAR6595A	PMNN4486A	PMLN5875A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.60	-0.20	7.00	3.43	3.66	1.80	MO-AB-160406-09
				868.9875							

Assessments at the Body with Body worn PMLN5876A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 49

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.58	-0.44	1.27	0.88	0.71	0.49	MO-AB-160406-15
				868.9875							
NAR6595A	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.56	0.48	2.37	1.71	1.20	0.86	AZ-AB-160407-02
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.59	-0.28	3.02	2.12	1.62	1.13	AZ-AB-160407-03
				868.9875							
NAR6595A	PMNN4485A	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.60	-0.50	2.54	1.78	1.42	1.00	AZ-AB-160407-04
				868.9875							
NAR6595A	PMNN4486A	PMLN5876A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.59	-0.18	2.40	1.71	1.25	0.89	AZ-AB-160407-05
				868.9875							

Assessments at the Body with Body worn PMLN5877A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for long batteries Optional long batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 50

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.57	-0.17	1.52	1.08	0.80	0.57	AZ-AB-160407-09
				868.9875							
NAR6595A	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.60	-1.07	4.39	1.90	2.81	1.22	AZ-AB-160407-10
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.60	-0.10	3.69	1.74	1.89	0.89	AZ-AB-160407-12
				868.9875							
NAR6595A	PMNN4487A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.58	-0.02	3.64	2.59	1.84	1.31	AZ-AB-160407-13
				868.9875							
NAR6595A	PMNN4494A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.60	0.81	3.18	2.19	1.59	1.10	MO-AB-160407-14
				868.9875							
NAR6595A	NNTN7037A	PMLN5877A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.57	-0.78	4.44	1.93	2.68	1.16	MO-AB-160407-15
				868.9875							

Assessments at the Body with Body worn PMLN5879A with RLN6487A & RLN6488A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for long batteries. Optional long batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 51

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	NNTN7573A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.57	-0.20	1.18	0.88	0.62	0.46	MO-AB-160408-04
				868.9875							
NAR6595A	NNTN7573A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.58	-0.43	2.22	1.61	1.23	0.89	MO-AB-160408-06
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.58	-0.35	2.80	2.00	1.53	1.09	MO-AB-160408-07
				868.9875							
NAR6595A	PMNN4487A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.57	0.43	3.45	2.52	1.74	1.27	AZ-AB-160408-09
				868.9875							
NAR6595A	PMNN4494A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.60	0.07	2.80	2.02	1.40	1.01	AZ-AB-160408-10
				868.9875							
NAR6595A	NNTN7037A	PMLN5879A w/ RLN6487A & RLN6488A	NNTN8203A	851.0125							
				860.5000	3.59	-0.65	2.37	1.72	1.38	1.00	AZ-AB-160408-12
				868.9875							

Assessments at the Body with Body worn PMLN6802A

DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 52

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.58	-0.60	0.86	0.64	0.49	0.37	AZ-AB-160408-13
				868.9875							
NAR6595A	PMNN4403B	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.59	-0.16	4.07	3.01	2.12	1.57	AZ-AB-160408-14
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.58	-0.20	4.07	3.00	2.14	1.58	AZ-AB-160408-15
				868.9875							
NAR6595A	PMNN4485A	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.60	-0.10	3.74	2.76	1.91	1.41	AZ-AB-160408-16
				868.9875							
NAR6595A	PMNN4486A	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.60	-0.04	3.98	2.94	2.01	1.48	AZ-AB-160408-17
				868.9875							
NAR6595A	NNTN7573A	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.59	-1.05	2.15	1.54	1.37	0.98	AZ-AB-160408-19
				868.9875							
NAR6595A	NNTN7034B	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.58	-0.13	1.89	1.35	0.98	0.70	AZ-AB-160408-20
				868.9875							
NAR6595A	PMNN4487A	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.58	-0.14	1.61	1.18	0.84	0.61	MO-AB-160408-21
				868.9875							
NAR6595A	PMNN4494A	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.59	0.26	2.05	1.47	1.03	0.74	MO-AB-160408-22
				868.9875							
NAR6595A	NNTN7037A	PMLN6802A	NNTN8203A	851.0125							
				860.5000	3.57	-0.69	2.15	1.56	1.27	0.92	MO-AB-160409-01
				868.9875							

Assessments at the Body with Body worn PMLN5875A with AY00023A01
 DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 53

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ AY00023A01	NNTN8203A	851.0125							
				860.5000	3.60	-0.73	2.02	0.95	1.19	0.56	AZ-AB-160413-11
				868.9875							
NAR6595A	PMNN4403B	PMLN5875A w/ AY00023A01	NNTN8203A	851.0125							
				860.5000	3.59	-0.71	6.76	4.11	3.99	2.43	AZ-AB-160413-13
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ AY00023A01	NNTN8203A	851.0125							
				860.5000	3.60	-0.40	8.51	4.19	4.67	2.30	AZ-AB-160413-14
				868.9875							
NAR6595A	PMNN4485A	PMLN5875A w/ AY00023A01	NNTN8203A	851.0125							
				860.5000	3.60	-0.34	6.82	3.65	3.69	1.97	AZ-AB-160413-16
				868.9875							
NAR6595A	PMNN4486A	PMLN5875A w/ AY00023A01	NNTN8203A	851.0125							
				860.5000	3.60	-0.20	7.06	4.45	3.70	2.33	AZ-AB-160413-18
				868.9875							

Assessments at the Body with Body worn PMLN5875A with NTN5243A
 DUT assessment with offered antennas, default battery and, default body worn accessory per KDB 643646. This body worn only compatible for short batteries. Optional short batteries were tested per the requirements of KDB 643646. Refer to Table 45 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 54

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4403B	PMLN5875A w/ NTN5243A	NNTN8203A	851.0125							
				860.5000	3.60	-0.54	6.60	4.78	3.74	2.71	MO-AB-160413-20
				868.9875							
NAR6595A	PMNN4403B	PMLN5875A w/ NTN5243A	NNTN8203A	851.0125							
				860.5000	3.60	-0.58	3.37	2.05	1.93	1.17	MO-AB-160414-02
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7038B	PMLN5875A w/ NTN5243A	NNTN8203A	851.0125							
				860.5000	3.60	-0.47	7.32	5.11	4.08	2.85	MO-AB-160414-03
				868.9875							
NAR6595A	PMNN4485A	PMLN5875A w/ NTN5243A	NNTN8203A	851.0125							
				860.5000	3.60	-0.50	6.39	4.48	3.58	2.51	MO-AB-160414-04
				868.9875							
NAR6595A	PMNN4486A	PMLN5875A w/ NTN5243A	NNTN8203A	851.0125							
				860.5000	3.60	-0.49	7.09	4.81	3.97	2.69	MO-AB-160414-05
				868.9875							

Assessment at the Body with other audio accessories

Assessment for additional audio accessories as per “KDB 643646 Body SAR Test Consideration for Audio Accessories without Built-in Antenna; Sec 1, A”. SAR plots of the highest result per Table (bolded) are presented in Appendix E

Table 55

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4487A	NTN8266B	HMN4104B w/ RMN5116A	851.0125	3.57	-0.07	10.20	6.92	5.23	3.55	MO-AB-160409-03
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	NMN6274A	851.0125	3.58	0.97	11.90	7.71	5.98	3.88	MO-AB-160409-04
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMMN4062A	851.0125	3.57	-0.07	10.80	7.34	5.53	3.76	MO-AB-160409-05
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMMN4084A	851.0125	3.58	-0.16	10.00	6.89	5.22	3.59	MO-AB-160409-06
				860.5000							
				868.9875							

Table 55 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4487A	NTN8266B	PMLN5653A	851.0125	3.57	1.05	10.60	7.17	5.34	3.62	MO-AB-160409-07
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMLN5101A	851.0125	3.57	-0.10	11.10	7.50	5.73	3.87	MO-AB-160409-09
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	RMN5137A	851.0125	3.57	-0.06	10.20	6.98	5.21	3.57	MO-AB-160409-11
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMLN5275C	851.0125	3.58	-0.12	10.90	7.39	5.63	3.82	MO-AB-160409-12
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	RLN6484A w/ NTN8819B	851.0125	3.58	-0.19	9.87	6.67	5.18	3.50	AZ-AB-160411-02
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMLN6088A w/ PMLN6095A	851.0125	3.57	-0.14	9.85	6.67	5.13	3.47	AZ-AB-160411-03
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMLN6129A	851.0125	3.58	-0.19	10.30	6.95	5.41	3.65	AZ-AB-160411-04
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	RLN5312B w/ BDN6783B	851.0125	3.58	-0.20	9.09	6.36	4.79	3.35	AZ-AB-160411-05
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	NNTN7869A w/ ZMN6038A	851.0125	3.58	0.77	10.30	7.13	5.18	3.58	AZ-AB-160411-06
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	NNTN7869A w/ ZMN6031A	851.0125	3.58	0.77	10.50	7.49	5.28	3.77	AZ-AB-160411-08
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMLN6123A	851.0125	3.60	-0.16	10.30	6.98	5.34	3.62	AZ-AB-160411-09
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	NTN8266B	PMLN6766A w/ PMLN6827A	851.0125	3.59	-0.20	11.10	7.44	5.83	3.91	AZ-AB-160411-10
				860.5000							
				868.9875							

Assessment of wireless BT configuration

Assessment using the overall highest SAR configuration at the body from above without an audio accessory attached. SAR plot of the highest results per Table (bolded) are presented in Appendix E.

Table 56

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4487A	NTN8266B	NONE	851.0125	3.57	-0.17	9.56	6.59	5.01	3.46	MO-AB-160411-11
				860.5000							
				868.9875							

Assessment of PSM configuration

Battery PMNN4494A was selected as the default battery for assessments at the Body with Public Safety Microphone (PSM) because it has the highest capacity (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (794-824 MHz) which are listed in Table 57. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 57

Test Freq (MHz)	Power (W)
851.0125	2.80
860.5000	2.78
868.9875	2.80

Assessment of offered PSM audio accessories per KDB 643646. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 58

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
PMAF4002A	PMNN4494A	PSM @ body	PMMN4059B	851.0125	3.60	0.89	5.01	3.28	2.51	1.64	MO-AB-160427-04
				860.5000							
				868.9875							
NAR6595A	PMNN4494A	PSM @ body	PMMN4059B	851.0125	3.60	0.72	4.59	2.95	2.30	1.48	MO-AB-160427-05
				860.5000							
				868.9875							
PMAF4002A	PMNN4494A	PSM @ body	PMMN4060B	851.0125	3.60	-0.25	1.74	1.18	0.92	0.62	MO-AB-160427-06
				860.5000							
				868.9875							
NAR6595A	PMNN4494A	PSM @ body	PMMN4060B	851.0125	3.60	1.14	1.98	1.30	0.99	0.65	MO-AB-160427-07
				860.5000							
				868.9875							
PMAF4002A	PMNN4494A	PSM @ body	PMMN4061B	851.0125	3.60	0.95	5.56	3.51	2.78	1.76	MO-AB-160427-08
				860.5000							
				868.9875							
NAR6595A	PMNN4494A	PSM @ body	PMMN4061B	851.0125	3.60	0.72	3.86	2.54	1.93	1.27	MO-AB-160427-09
				860.5000							
				868.9875							

13.4 WLAN assessment at the Body for 802.11 b/g/n

The tables below represent the output power measurements for WLAN 2.4 GHz 802.11b/g/n for assessments at the Body using battery PMNN4403B because it is the thinnest battery (refer to Exhibit 7B for battery illustration). These power measurements were used to determine the necessary modes for SAR testing according to KDB 248227 D01 SAR Measurement Procedures for 802.11a/b/g/Transmitters.

The battery was used during conducted power measurements for all test channels within FCC allocated frequency range (2.412-2.462 GHz) which are listed in Table 59. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

SAR is not required for 802.11 g/n when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is $\leq 1.2W/kg$.

Table 59

Mode	Channel #	Channel Frequency	Modulation	Battery: PMNN4403B	Antenna Max Power [mW]
				Antenna port[mW]	
802.11b (1Mbps)	1	2412	DSSS	59.4	63.1
	6	2437		53.6	
	11	2462		54.9	
802.11g (6Mbps)	1	2412	OFDM	24.2	25.1
	6	2437		23.3	
	11	2462		23.0	
802.11n (MCS0)	1	2412	OFDM	13.0	15.5
	6	2437		12.0	
	11	2462		11.6	

802.11b was chosen over 802.11 g & n for testing because it has the highest max power

Assessments at the Body with all offered Body worn

DUT assessment with WLAN internal antenna, all offered batteries without any cable accessory attachment against phantom with all offered body worn. Refer to Table 59 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 60

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
84009370002 WiFi Ant	PMNN4403B	NTN8266B	None	2412.000	0.0594	-0.25	0.002	0.001	0.002	0.001	FD-AB-160428-11
84009370002 WiFi Ant	PMNN4403B	HLN6875A	None	2412.000	0.0594	0.25	0.023	0.010	0.024	0.011	FD-AB-160429-01
84009370002 WiFi Ant	PMNN4403B	PMLN5875A w/ RLN6487A & RLN6488A	None	2412.000	0.0594	0.40	0.013	0.005	0.014	0.005	FD-AB-160429-02
84009370002 WiFi Ant	PMNN4403B	PMLN5876A w/ RLN6487A & RLN6488A	None	2412.000	0.0594	0.28	0.020	0.008	0.021	0.009	FD-AB-160429-03
84009370002 WiFi Ant	PMNN4403B	PMLN6802A	None	2412.000	0.0594	0.55	0.008	0.003	0.008	0.003	FD-AB-160429-04
84009370002 WiFi Ant	PMNN4403B	PMLN5875A w/ AY000223A01	None	2412.000	0.0594	0.47	0.023	0.010	0.024	0.011	KBK-AB-160429-08
84009370002 WiFi Ant	PMNN4403B	PMLN5875A w/ NTN5243A	None	2412.000	0.0594	0.57	0.021	0.011	0.022	0.012	KBK-AB-160429-09
84009370002 WiFi Ant	NNTN7573A	PMLN5877A w/ RLN6487A & RLN6488A	None	2412.000	0.0554	1.07	0.005	0.002	0.006	0.002	FD-AB-160429-05
84009370002 WiFi Ant	NNTN7573A	PMLN5879Aw/ RLN6487A & RLN6488A	None	2412.000	0.0554	-0.30	0.012	0.005	0.015	0.006	KBK-AB-160429-07

Table 60 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
Assessment of additional Batteries											
84009370002 WiFi Ant	NNTN7038B	PMLN5875A w/ AY000223A01	None	2412.000	0.0548	0.13	0.030	0.014	0.035	0.016	KBK-AB-160429-10
84009370002 WiFi Ant	PMNN4485A	PMLN5875A w/ AY000223A01	None	2412.000	0.0551	-0.42	0.022	0.008	0.028	0.010	KBK-AB-160429-11
84009370002 WiFi Ant	PMNN4486A	PMLN5875A w/ AY000223A01	None	2412.000	0.0555	-0.32	0.003	0.002	0.004	0.002	FD-AB-160429-12

13.5 LMR assessments at the Face for 764-775MHz band

Battery PMNN4494A was selected as the default battery for assessments at the Face because it has the highest capacity (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (764-775MHz) which are listed in Table 61. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 61

Test Freq (MHz)	Power (W)
764.0125	2.88
770.0000	2.89
774.9875	2.91

Assessments with front of radio facing the Face

DUT assessment with offered antennas, default battery with front of DUT positioned 2.5cm facing phantom per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 61 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 62

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	0.54	2.17	1.61	1.09	0.81	MO-FACE-160427-21
NAR6595A	PMNN4494A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	-0.54	1.95	1.42	1.10	0.80	MO-FACE-160427-22
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	0.05	1.67	1.22	0.84	0.61	MO-FACE-160427-23
NAR6595A	PMNN4487A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	-0.70	1.78	1.30	1.05	0.76	MO-FACE-160427-24
NAR6595A	NNTN7573A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	-0.59	1.93	1.41	1.11	0.81	MO-FACE-160428-03
NAR6595A	NNTN7037A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	-0.50	1.87	1.35	1.05	0.76	MO-FACE-160428-06
NAR6595A	PMNN4403B	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	0.01	2.69	2.01	1.35	1.01	MO-FACE-160428-07
NAR6595A	NNTN7038B	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	-0.03	2.80	2.09	1.41	1.05	MO-FACE-160428-08
NAR6595A	PMNN4485A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	0.01	2.70	2.02	1.35	1.01	MO-FACE-160428-09
NAR6595A	PMNN4486A	DUT @ Front	None	764.0125							
				770.0000							
				774.9875	2.95	0.01	3.29	2.46	1.65	1.23	AZ-FACE-160428-10

Assessments with back of radio facing the Face

DUT assessment with offered antennas, default battery with back of DUT positioned 2.5cm facing phantom per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 61 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 63

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	0.44	2.02	1.50	1.01	0.75	AZ-FACE-160428-11
NAR6595A	PMNN4494A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	-0.32	1.88	1.37	1.01	0.74	AZ-FACE-160428-12
Assessment of Additional Batteries											
NAF5085A	NNTN7034B	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	-0.73	1.75	1.30	1.04	0.77	AZ-FACE-160428-13
NAF5085A	PMNN4487A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	0.52	2.12	1.57	1.06	0.79	AZ-FACE-160428-14
NAF5085A	NNTN7573A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	-0.26	1.62	1.20	0.86	0.64	AZ-FACE-160428-15
NAF5085A	NNTN7037A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	-0.39	1.62	1.20	0.89	0.66	AZ-FACE-160428-16
NAF5085A	PMNN4403B	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	1.22	1.68	1.24	0.84	0.62	AZ-FACE-160428-18
NAF5085A	NNTN7038B	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	1.16	2.49	1.85	1.25	0.93	AZ-FACE-160428-20
NAF5085A	PMNN4485A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	1.20	1.63	1.21	0.82	0.61	AZ-FACE-160428-21
NAF5085A	PMNN4486A	DUT @ Back	None	764.0125							
				770.0000							
				774.9875	2.95	1.35	1.68	1.25	0.84	0.63	AZ-FACE-160428-22

13.6 LMR assessments at the Face for 794-824MHz band

Battery PMNN4494A was selected as the default battery for assessments at the Face because it has the highest capacity (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (794-824MHz) which are listed in Table 64. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 64

Test Freq (MHz)	Power (W)
794.0125	2.91
808.5000	3.49
823.9875	3.50

Assessments with front of radio facing the Face

DUT assessment with offered antennas, default battery with front of DUT positioned 2.5cm facing phantom per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 64 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 65

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	1.70	3.41	2.31	1.71	1.16	MO-FACE-160428-29
NAR6595A	PMNN4494A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	0.89	3.56	2.59	1.78	1.30	MO-FACE-160429-01
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	0.52	2.90	2.11	1.45	1.06	MO-FACE-160429-02
NAR6595A	PMNN4487A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	0.77	3.57	2.59	1.79	1.30	MO-FACE-160429-03
NAR6595A	NNTN7573A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	-0.32	2.84	2.07	1.53	1.11	MO-FACE-160429-04

Table 65 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	NNTN7037A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	-0.08	2.85	2.08	1.45	1.06	MO-FACE-160429-05
NAR6595A	PMNN4403B	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	-0.20	2.75	2.04	1.44	1.07	MO-FACE-160429-06
NAR6595A	NNTN7038B	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	0.09	3.08	2.29	1.54	1.15	MO-FACE-160429-07
NAR6595A	PMNN4485A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	0.17	2.89	2.15	1.45	1.08	MO-FACE-160429-08
NAR6595A	PMNN4486A	DUT @ Front	None	794.0125							
				808.5000							
				823.9875	3.60	0.46	3.41	2.52	1.71	1.26	MO-FACE-160429-09

Assessments with back of radio facing the Face

DUT assessment with offered antennas, default battery with back of DUT positioned 2.5cm facing phantom per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 64 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 66

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	1.79	3.75	2.61	1.88	1.31	AZ-FACE-160429-10
NAR6595A	PMNN4494A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	0.98	3.03	2.22	1.52	1.11	AZ-FACE-160429-11

Table 66 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
Assessment of Additional Batteries											
NAF5085A	NNTN7034B	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	1.48	3.23	2.14	1.62	1.07	AZ-FACE-160429-12
NAF5085A	PMNN4487A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.12	2.20	1.62	1.13	0.83	AZ-FACE-160429-14
NAF5085A	NNTN7573A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.08	2.24	1.65	1.14	0.84	AZ-FACE-160429-15
NAF5085A	NNTN7037A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.14	2.26	1.66	1.17	0.86	AZ-FACE-160429-16
NAF5085A	PMNN4403B	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.14	2.21	1.63	1.14	0.84	AZ-FACE-160429-17
NAF5085A	NNTN7038B	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.18	2.01	1.48	1.05	0.77	AZ-FACE-160429-18
NAF5085A	PMNN4485A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.07	2.22	1.63	1.13	0.83	AZ-FACE-160429-19
NAF5085A	PMNN4486A	DUT @ Back	None	794.0125							
				808.5000							
				823.9875	3.60	-0.15	2.15	1.58	1.11	0.82	AZ-FACE-160429-20

13.7 LMR assessments at the Face for 851-869MHz band

Battery PMNN4494A was selected as the default battery for assessments at the Face because it has the highest capacity (refer to Exhibit 7B for battery illustration). The default battery was used during conducted power measurements for all test channels within FCC allocated frequency range (851-869MHz) which are listed in Table 67. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

Table 67

Test Freq (MHz)	Power (W)
851.0125	3.50
860.5000	3.50
868.9875	3.50

Assessments with front of radio facing the Face

DUT assessment with offered antennas, default battery with front of DUT positioned 2.5cm facing phantom per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 67 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 68

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	DUT @ Front	None	851.0125	3.60	-0.17	2.55	1.86	1.33	0.97	MO-FACE-160430-03
				860.5000							
				868.9875							
NAR6595A	PMNN4494A	DUT @ Front	None	851.0125	3.60	-0.19	2.43	1.76	1.27	0.92	MO-FACE-160430-04
				860.5000							
				868.9875							
Assessment of Additional Batteries											
NAF5085A	NNTN7034B	DUT @ Front	None	851.0125	3.60	-0.14	2.63	1.92	1.36	0.99	MO-FACE-160430-05
				860.5000							
				868.9875							
NAF5085A	PMNN4487A	DUT @ Front	None	851.0125	3.60	-0.10	2.64	1.92	1.35	0.98	MO-FACE-160430-06
				860.5000							
				868.9875							
NAF5085A	NNTN7573A	DUT @ Front	None	851.0125	3.60	-0.63	2.59	1.87	1.50	1.08	MO-FACE-160430-07
				860.5000							
				868.9875							
NAF5085A	NNTN7037A	DUT @ Front	None	851.0125	3.60	-0.47	2.48	1.81	1.38	1.01	MO-FACE-160430-08
				860.5000							
				868.9875							
NAF5085A	PMNN4403B	DUT @ Front	None	851.0125	3.60	-0.28	2.17	1.58	1.16	0.84	MO-FACE-160430-09
				860.5000							
				868.9875							
NAF5085A	NNTN7038B	DUT @ Front	None	851.0125	3.60	-0.08	2.47	1.80	1.26	0.92	ZWS-FACE-160430-10
				860.5000							
				868.9875							

Table 68 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4485A	DUT @ Front	None	851.0125	3.60	-0.07	2.29	1.67	1.16	0.85	ZWS-FACE-160430-11
				860.5000							
				868.9875							
NAF5085A	PMNN4486A	DUT @ Front	None	851.0125	3.60	-0.03	2.44	1.77	1.23	0.89	ZWS-FACE-160430-12
				860.5000							
				868.9875							

Assessments with back of radio facing the Face

DUT assessment with offered antennas, default battery with back of DUT positioned 2.5cm facing phantom per KDB 643646. Optional batteries were tested per the requirements of KDB 643646. Refer to Table 67 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 69

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAF5085A	PMNN4494A	DUT @ Back	None	851.0125	3.60	-0.22	2.21	1.61	1.16	0.85	ZWS-FACE-160430-13
				860.5000							
				868.9875							
NAR6595A	PMNN4494A	DUT @ Back	None	851.0125	3.60	-0.17	2.30	1.68	1.20	0.87	ZWS-FACE-160430-14
				860.5000							
				868.9875							
Assessment of Additional Batteries											
NAR6595A	NNTN7034B	DUT @ Back	None	851.0125	3.60	-0.08	2.24	1.63	1.14	0.83	ZWS-FACE-160430-16
				860.5000							
				868.9875							
NAR6595A	PMNN4487A	DUT @ Back	None	851.0125	3.60	-0.23	2.56	1.86	1.35	0.98	ZWS-FACE-160430-17
				860.5000							
				868.9875							

Table 69 Continued

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	NNTN7573A	DUT @ Back	None	851.0125	3.60	-0.27	2.37	1.71	1.26	0.91	ZWS-FACE-160430-18
				860.5000							
				868.9875							
NAR6595A	NNTN7037A	DUT @ Back	None	851.0125	3.60	-0.22	2.29	1.67	1.20	0.88	ZWS-FACE-160430-19
				860.5000							
				868.9875							
NAR6595A	PMNN4403B	DUT @ Back	None	851.0125	3.60	0.98	4.15	2.97	2.08	1.49	MO-FACE-160430-21
				860.5000							
				868.9875							
NAR6595A	NNTN7038B	DUT @ Back	None	851.0125	3.60	1.15	4.81	3.36	2.41	1.68	MO-FACE-160430-22
				860.5000							
				868.9875							
NAR6595A	PMNN4485A	DUT @ Back	None	851.0125	3.60	1.32	4.23	3.11	2.12	1.56	MO-FACE-160430-24
				860.5000							
				868.9875							
NAR6595A	PMNN4486A	DUT @ Back	None	851.0125	3.60	1.50	4.93	3.56	2.47	1.78	MO-FACE-160430-25
				860.5000							
				868.9875							

13.8 WLAN assessments at the Face for 802.11b/g/n (2.412 – 2.462 GHz)

The tables below represent the output power measurements for WLAN 2.4 GHz 802.11b/g/n for assessments at the Face using battery PMNN4494A because it has the highest capacity (refer to Exhibit 7B for battery illustration). These power measurements were used to determine the necessary modes for SAR testing according to KDB 248227 D01 SAR Measurement Procedures for 802.11a/b/g Transmitters.

The battery was used during conducted power measurements for all test channels within FCC allocated frequency range (2.412-2.462GHz) which are listed in Table 76. The channel with the highest conducted power will be identified as the default channel per KDB 643646 (SAR Test for PTT Radios).

SAR is not required for 802.11 g/n when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is $\leq 1.2\text{W/kg}$.

Table 70

Mode	Channel #	Channel Frequency	Modulation	Battery: PMNN4494A	Antenna Max Power [mW]
				Antenna port[mW]	
802.11b (1Mbps)	1	2412	DSSS	54.5	63.1
	6	2437		52.0	
	11	2462		52.4	
802.11g (6Mbps)	1	2412	OFDM	24.6	25.1
	6	2437		23.6	
	11	2462		22.2	
802.11n (MCS0)	1	2412	OFDM	12.2	15.5
	6	2437		11.6	
	11	2462		10.2	

DUT assessment with WLAN internal antenna with front and back of the DUT 2.5 cm from phantom with all offered batteries. Refer to Table 70 for highest output power channel. SAR plots of the highest results per Table (bolded) are presented in Appendix E.

Table 71

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
84009370002 WiFi Ant	PMNN4494A	2.5cm @ Front	None	2412.000	0.0544	-0.05	0.158	0.090	0.186	0.106	FD-FACE-160429-14
84009370002 WiFi Ant	PMNN4494A	2.5cm @ Back	None	2412.000	0.0544	-0.87	0.003	0.001	0.005	0.001	FD-FACE-160429-15
Assessment of Additional Batteries											
84009370002 WiFi Ant	NNTN7038B	2.5cm @ Front	None	2412.000	0.0548	-0.02	0.135	0.077	0.156	0.089	FD-FACE-160429-17
84009370002 WiFi Ant	PMNN4485A	2.5cm @ Front	None	2412.000	0.0551	-0.01	0.147	0.083	0.169	0.095	FD-FACE-160430-01
84009370002 WiFi Ant	PMNN4486A	2.5cm @ Front	None	2412.000	0.0555	-0.02	0.140	0.080	0.160	0.091	FD-FACE-160430-02
84009370002 WiFi Ant	NNTN7034B	2.5cm @ Front	None	2412.000	0.0546	-0.03	0.152	0.086	0.177	0.100	FD-FACE-160430-03
84009370002 WiFi Ant	PMNN4487A	2.5cm @ Front	None	2412.000	0.0554	-0.01	0.151	0.086	0.173	0.098	FD-FACE-160430-04
84009370002 WiFi Ant	NNTN7037A	2.5cm @ Front	None	2412.000	0.0550	-0.03	0.144	0.082	0.167	0.095	FD-FACE-160430-05
84009370002 WiFi Ant	PMNN4403B	2.5cm @ Front	None	2412.000	0.0594	-0.13	0.150	0.088	0.164	0.096	FD-FACE-160521-02
84009370002 WiFi Ant	NNTN7573A	2.5cm @ Front	None	2412.000	0.0554	-0.06	0.153	0.088	0.177	0.102	FD-FACE-160521-03

13.9 Assessment at outside FCC Part 90

Not applicable.

13.10 Assessment for Industry Canada

Additional tests were not required for Industry Canada frequency range as testing performed is in compliance with Industry Canada frequency range.

13.11 Assessment at the Bluetooth band

13.11.1 FCC Requirement

Per guidelines in KDB 447498, the following formula was used to determine the test exclusion for standalone Bluetooth transmitter;

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{F(\text{GHz})}] = 2.4 \text{ W/kg}$, which is $\leq 3 \text{ W/kg}$ (1g)

Where:

Max. Power = 7.61mW (10mW*76.1% duty cycle)

Min. test separation distance = 5mm for actual test separation < 5mm

F(GHz) = 2.48 GHz

Per the result from the calculation above, the standalone SAR assessment was not required for Bluetooth band. Therefore, SAR results for Bluetooth are not reported herein.

13.11.2 Industry Canada Requirement

Based on RSS-102 Issue 5, exemption limits for SAR evaluation for controlled devices at Bluetooth frequency band with separation distance $\leq 5\text{mm}$ was 20 mW.

Standalone Bluetooth transmitter operates at

Maximum conducted power:

= 10 mW * 76.1%

= 7.61 mW or 8.81 dBm

Equivalent isotropically radiated power (EIRP):

= Maximum conducted power, dBm + Antenna gain, dBi

= 8.81 dBm + 2.58 dBi

= 11.39 dBm or 13.77 mW

Higher output power level, EIRP 13.77 mW was below the threshold power level 20 mW. Hence SAR test was not required for Bluetooth band.

13.12 Shortened Scan Assessment

A “shortened” scan using the highest SAR configuration overall from above was performed to validate the SAR drift of the full DASY5™ coarse and 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 zoom scan only was performed. The results of the shortened cube scan presented in Appendix D demonstrate that the scaling methodology used to determine the calculated SAR results presented herein are valid. The SAR result from the Table below is provided in Appendix F.

Table 72

Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (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)	Run#
NAR6595A	PMNN4494A	NTN8266B	PMLN6766A w/ PMLN6827A	823.9875	3.60	1.51	13.40	9.21	6.70	4.61	MO-AB-160427-10

14.0 Simultaneous Transmission Exclusion for BT

Per guidelines in KDB 447498, the following formula was used to determine the test exclusion to an antenna that transmits simultaneously with other antennas for test distances ≤ 50mm:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{F(\text{GHz})} / X] = 0.32 \text{ W/kg, which is } \leq 0.4 \text{ W/kg (1g)}$$

Where:

- X = 7.5 for 1g-SAR; 18.75 for 10g
- Max. Power = 7.61mW (10mW*76.1% duty cycle)
- Min. test separation distance = 5mm for actual test separation < 5mm
- F(GHz) = 2.48 GHz

Per the result from the calculation above, simultaneous exclusion is applied and therefore SAR results are not reported herein.

15.0 Simultaneous Transmission between LMR, WLAN and BT

These devices use a single transmitter module and antenna for both WLAN and BT. WLAN and BT cannot transmit simultaneously. Simultaneous transmission for BT had been excluded as mentioned in section 14.0. The maximum sourced-based-time-averaged output power for 802.11 b is 63.1mW while BT is 7.61mW. Therefore the measured SAR from 802.11b is used in conjunction with LMR for simultaneous results.

The Table below summarizes the simultaneous transmissions between LMR and WLAN bands.

Table 73

		LMR Bands
		700/800 MHz
WLAN Band	2412 - 2462	√

16.0 Results Summary

Based on the test guidelines from section 4.0 and satisfying frequencies within FCC bands and Industry Canada Frequency bands, the highest Operational Maximum Calculated 1-gram and 10-gram average SAR values found for this filing:

Table 74

Technologies	Frequency band (MHz)	Max Calc at Body (W/kg)		Max Calc at Face (W/kg)	
		1g-SAR	10g-SAR	1g-SAR	10g-SAR
FCC					
LMR	764-775	6.05	3.94	1.65	1.23
LMR	794-824	7.70	5.20	1.88	1.31
LMR	851-869	5.98	3.88	2.47	1.78
WLAN	2412-2462	0.035	0.016	0.186	0.106
Industry Canada					
LMR	768-776	6.05	3.94	1.65	1.23
LMR	798-824	7.70	5.20	1.88	1.31
LMR	851-869	5.98	3.88	2.47	1.78
WLAN	2412-2462	0.035	0.016	0.186	0.106
Overall					
LMR	764-775	6.05	3.94	1.65	1.23
LMR	793-824	7.70	5.20	1.88	1.31
LMR	851-870	5.98	3.88	2.47	1.78
WLAN	2412-2462	0.035	0.016	0.186	0.106

All results are scaled to the maximum output power.

The highest combined 1g-SAR results for simultaneous is indicated in the following Table:

Table 75

Designator	Frequency bands	Combined 1g-SAR (W/kg)	Combined 10g-SAR (W/kg)
Body			
FCC	LMR (764-775 MHz) and WLAN band	6.09	3.96
	LMR (794-824 MHz) and WLAN band	7.74	5.22
	LMR (851-869 MHz) and WLAN band	6.02	3.90
Industry Canada	LMR (768-776 MHz) and WLAN band	6.09	3.96
	LMR (798-824 MHz) and WLAN band	7.74	5.22
	LMR (851-869 MHz) and WLAN band	6.02	3.90
Overall	LMR (764-775 MHz) and WLAN band	6.09	3.96
	LMR (793-824 MHz) and WLAN band	7.74	5.22
	LMR (851-870 MHz) and WLAN band	6.02	3.90
Face			
FCC	LMR (764-775 MHz) and WLAN band	1.84	1.34
	LMR (794-824 MHz) and WLAN band	2.07	1.42
	LMR (851-869 MHz) and WLAN band	2.66	1.89
Industry Canada	LMR (768-776 MHz) and WLAN band	1.84	1.34
	LMR (798-824 MHz) and WLAN band	2.07	1.42
	LMR (851-869 MHz) and WLAN band	2.66	1.89
Overall	LMR (764-775 MHz) and WLAN band	1.84	1.34
	LMR (793-824 MHz) and WLAN band	2.07	1.42
	LMR (851-870 MHz) and WLAN band	2.66	1.89

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of OET Bulletin 65. The 10 grams result is not applicable to FCC filing.

17.0 Variability Assessment

Per the guidelines in KDB 865664 SAR variability assessments are required because SAR results are above 4.0 W/kg (Occupational).

The Table below includes test results of the original measurement(s), the repeated measurement(s), and the ratio (SAR_{high}/SAR_{low}) for the applicable test configuration(s).

Table 76

Run#	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq. (MHz)	Adj Calc. 1g-SAR (W/kg)	Ratio	Comments
AZ-AB-160420-21	NAR6595A	PMNN4494A	NTN8266B	PMLN6766A w/PMLN6827A	823.9875	7.70	1.15	No additional repeated scans is required due to the Ratio (SAR_{high}/SAR_{low}) < 1.20.
MO-AB-160427-10						6.70		
AZ-AB-160427-16						6.70		

18.0 System Uncertainty

Per the guidelines of ISO 17025 a reported system uncertainty is required and therefore measurement uncertainty budget is included in Appendix A.

Appendix A

Measurement Uncertainty Budget

TABLE A.1: Uncertainty Budget for Device Under Test, for 750 MHz to 2600 MHz

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e = f(d,k)</i>	<i>f</i>	<i>g</i>	<i>h = c x f / e</i>	<i>i = c x g / e</i>	<i>k</i>
Uncertainty Component	IEEE 1528 section	Tol. (± %)	Prob Dist	Div.	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)	<i>v_i</i>
Measurement System									
Probe Calibration	E.2.1	6.0	N	1.00	1	1	6.0	6.0	∞
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							11.1	10.9	419
Expanded Uncertainty (95% CONFIDENCE LEVEL)							22	22	

FCD-0558 Uncertainty Budget Rev8.1

Notes for uncertainty budget Tables:

- 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) *c_i* - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) *u_i* – SAR uncertainty
- h) *v_i* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

TABLE A.2: Uncertainty Budget for System Validation (dipole & flat phantom) for 750 MHz to 2600 MHz

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e = f(d,k)</i>	<i>f</i>	<i>g</i>	<i>h = c x f / e</i>	<i>i = c x g / e</i>	<i>k</i>
Uncertainty Component	IEEE 1528 section	Tol. (± %)	Prob Dist	Div.	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>U_i</i> (±%)	10 g <i>U_i</i> (±%)	<i>v_i</i>
Measurement System									
Probe Calibration	E.2.1	6.0	N	1.00	1	1	6.0	6.0	∞
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)			<i>k</i> =2				18	17	

Notes for uncertainty budget Tables:

- 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) *c_i* - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- g) *u_i* – SAR uncertainty
- h) *v_i* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty