

 MOTOROLA SOLUTIONS	    SMM 826 CERTIFICATE 2518.05																																																
DECLARATION OF COMPLIANCE SAR TEST REPORT																																																	
Motorola Solutions Inc. EME Test Laboratory Motorola Solutions Malaysia Sdn Bhd Plot 2A, Medan Bayan Lepas, Mukim 12 SWD 11900 Bayan Lepas Penang, Malaysia.	Date of Report: 12/19/2025 Report Revision: A																																																
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Responsible Engineer:</td> <td>Alfred Hoe Kean Loon / Yeng Yee Yeong (EME Engineer)</td> </tr> <tr> <td>Report Author:</td> <td>Alfred Hoe Kean Loon / Yeng Yee Yeong (EME Engineer)</td> </tr> <tr> <td>Date/s Tested:</td> <td>06/04/2025–08/11/2025, 10/30/2025 – 12/08/2025</td> </tr> <tr> <td>Test Location:</td> <td>Penang EME Laboratory</td> </tr> <tr> <td>Manufacturer:</td> <td>Motorola Solutions INC. (Plantation)</td> </tr> <tr> <td>Manufacturer Location:</td> <td>8000 West Sunrise Blv d MD 41-128, USA Plantation FL 333222-9947</td> </tr> <tr> <td>DUT Description:</td> <td>Handheld Portable – APX NEXT REFRESH ALL BAND MODEL 4.5 PORTABLE</td> </tr> <tr> <td>Test TX mode(s):</td> <td>CW (PTT), BT/BTLE, WLAN 2.4GHz,5GHz,6/6E, LTE, 5G NR</td> </tr> <tr> <td>Max. Power output:</td> <td>Refer table 5</td> </tr> <tr> <td>Tx Frequency Bands:</td> <td>Refer table 5</td> </tr> <tr> <td>Signaling type:</td> <td>Refer table 5</td> </tr> <tr> <td>Model(s) Tested:</td> <td>H55TGT9PW8BN (ISED Model: NUW4100A); H55TGT9PW8BN (ISED Model: NUW4101A)</td> </tr> <tr> <td>Model(s) Certified: (HVIN/PMN)</td> <td>Refer 1.0 Introduction</td> </tr> <tr> <td>Serial Number(s):</td> <td>837ZBU0223, 837ZBU0224, 837ZBU0211, 837ZBU0213, 437ZBJ2374, 437ZBJ2452, 437ZBJ2419</td> </tr> <tr> <td>Classification:</td> <td>Occupational/Controlled Environment</td> </tr> <tr> <td>Applicant Name:</td> <td>Motorola Solutions Inc.</td> </tr> <tr> <td>Applicant Address:</td> <td>Plot 2A, Medan Bayan Lepas Mukim, 12 SWD, 11900 Bayan Lepas, Penang, Malaysia</td> </tr> <tr> <td>Firmware Version (FVIN):</td> <td>D38.01.26(BP), D38.01.08(AP)</td> </tr> <tr> <td>FCC ID:</td> <td>AZ489FT7184</td> </tr> <tr> <td></td> <td>This report contains results that are immaterial for FCC equipment approval, which are clearly identified.</td> </tr> <tr> <td>FCC Test Firm Registration Number:</td> <td>823256</td> </tr> <tr> <td>IC:</td> <td>109U-89FT7184</td> </tr> <tr> <td></td> <td>This report contains results that are immaterial for IC equipment approval, which are clearly identified.</td> </tr> <tr> <td>ISED Test Site registration:</td> <td>24843</td> </tr> </table> The test results clearly demonstrate compliance with Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of FCC 47 CFR § 2.1093 and RSS-102 (Issue 6) 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 (no deviation from standard methods). 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. The results and statements contained in this report pertain only to the device(s) evaluated.  Saw Sun Hock (Approval Signatory) Approved Date: 12/19/2025		Responsible Engineer:	Alfred Hoe Kean Loon / Yeng Yee Yeong (EME Engineer)	Report Author:	Alfred Hoe Kean Loon / Yeng Yee Yeong (EME Engineer)	Date/s Tested:	06/04/2025–08/11/2025, 10/30/2025 – 12/08/2025	Test Location:	Penang EME Laboratory	Manufacturer:	Motorola Solutions INC. (Plantation)	Manufacturer Location:	8000 West Sunrise Blv d MD 41-128, USA Plantation FL 333222-9947	DUT Description:	Handheld Portable – APX NEXT REFRESH ALL BAND MODEL 4.5 PORTABLE	Test TX mode(s):	CW (PTT), BT/BTLE, WLAN 2.4GHz,5GHz,6/6E, LTE, 5G NR	Max. Power output:	Refer table 5	Tx Frequency Bands:	Refer table 5	Signaling type:	Refer table 5	Model(s) Tested:	H55TGT9PW8BN (ISED Model: NUW4100A); H55TGT9PW8BN (ISED Model: NUW4101A)	Model(s) Certified: (HVIN/PMN)	Refer 1.0 Introduction	Serial Number(s):	837ZBU0223, 837ZBU0224, 837ZBU0211, 837ZBU0213, 437ZBJ2374, 437ZBJ2452, 437ZBJ2419	Classification:	Occupational/Controlled Environment	Applicant Name:	Motorola Solutions Inc.	Applicant Address:	Plot 2A, Medan Bayan Lepas Mukim, 12 SWD, 11900 Bayan Lepas, Penang, Malaysia	Firmware Version (FVIN):	D38.01.26(BP), D38.01.08(AP)	FCC ID:	AZ489FT7184		This report contains results that are immaterial for FCC equipment approval, which are clearly identified.	FCC Test Firm Registration Number:	823256	IC:	109U-89FT7184		This report contains results that are immaterial for IC equipment approval, which are clearly identified.	ISED Test Site registration:	24843
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- E System Verification Check Scans
- F DUT Scans

EX7B

APPENDICES

DUT Test Position Photos
DUT, Body worn and audio accessories Photos

Report Revision History

Date	Revision	Comments
12/19/2025	A	Initial release

1.0 Introduction

This report details the utilization, test setup, test equipment, and test results of the Specific Absorption Rate (SAR) measurements performed at the Motorola Solutions Inc. EME Test Laboratory for handheld portable model number H55TGT9PW8BN. The information herein is to show evidence of Permissive Change compliance for adding model H55TGT9PW8BN (ISED Model: NUW4100A) and H55TGT9PW8BN (ISED Model: NUW4101A) into existing APX Next Refresh family (FCC ID: AZ489FT7184 & IC: 109U-89FT7184). This device is electrically and software identical to APX Next Refresh Standard model except for mechanical difference where the radio has a XE top control. These devices are classify as Occupational/Controlled as below:

Models	Hardware Version ID Number (HVIN)	Product Marketing Name (PMN)	Description
H55TGT9PW8BN	NUW4100A	APX NEXT XE	APX NEXT XE, IMPACT GREEN, REFRESH ALL BAND MODEL 4.5 PORTABLE
H55TGT9PW8BN	NUW4101A	APX NEXT XE	APX NEXT XE, BLACK, REFRESH ALL BAND MODEL 4.5 PORTABLE
H55TGT9PW8BN	H55TGT9PW8BN	APX NEXT	APX NEXT REFRESH ALL BAND MODEL 4.5 PORTABLE

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	1g-SAR
TNF	150.8-173.4	0.97	0.61
	406.125-512	6.80	4.97
	769-775	4.31	2.59
	799-824	5.72	2.79
	851-869	4.94	3.06
PCF	LTE B5	0.242 ⁽¹⁾	0.214
	LTE B12	0.071	0.110
	LTE B13	0.166 ⁽²⁾	0.132
	LTE B14	0.084	0.142
	LTE B25	0.069	0.448
	LTE B66	0.079	0.331
	LTE B71	0.056	0.106
DTS	2412 – 2462 MHz (WLAN 2.4 GHz)	0.043	0.284
NII	5180 – 5825 MHz (WLAN 5 GHz)	0.048	0.370
6CD	5955 – 7115 (WLAN 6/6E)	0.014	0.144
PCF	5G NR N2	0.080	0.392
	5G NR N5	0.242 ⁽³⁾	0.225
	5G NR N25	0.073	0.380
	5G NR N41	0.016	0.097
	5G NR N66	0.074	0.268
	5G NR N71	0.063	0.089
	5G NR N77 Part27Q	0.027	0.061
	5G NR N77 Part27O	0.011	0.052
*DSS	2402-2480MHz (Bluetooth)	NA	NA
**DXX	NFC 13.56MHz	NA	NA
Highest Simultaneous Transmission SAR		6.98	5.02
Equipment Class	Frequency band (MHz)	Reported APD (W/m2)	Reported iPD (W/m2)
6CD	5955 – 7115 (WLAN 6/6E)	NA	2.174

Note:

⁽¹⁾ New highest SAR result for Body is 0.242 W/kg compared with previous on filed SAR result is 0.158 W/kg

⁽²⁾ New highest SAR result for Body is 0.166 W/kg compared with previous on filed SAR result is 0.147 W/kg

⁽³⁾ New highest SAR result for Body is 0.242 W/kg compared with previous on filed SAR result is 0.143 W/kg

3.0 Abbreviations / Definitions

BT:	Bluetooth
CNR:	Calibration Not Required
CW:	Continuous Wave
DSSS:	Direct Sequence Spread Spectrum
DUT:	Device Under Test
DTS:	Digital Transmission System
DXX:	Part 15 Low Power Communication Device Transmitter
EME:	Electromagnetic Energy
FHSS:	Frequency Hopping Spread Spectrum
FM:	Frequency Modulation
GFSK:	Gaussian Frequency-Shift Keying
LMR:	Land Mobile Radio
LTE:	Long Term Evolution
NA:	Not Applicable
OFDM:	Orthogonal Frequency Division Multiplexing
PTT:	Push to Talk
PCF:	PCS Licensed Transmitter Held to Face
Pi2BPSK:	$\pi/2$ Binary Phase-Shift Keying
QPSK:	Quadrature Pulse Shift Key
RB:	Resource Blocks
RSM:	Remote Speaker Microphone
SAR:	Specific Absorption Rate
TNF:	Licensed Non-Broadcast Transmitter Held to Face
16QAM:	16 State Quadrature Amplitude Modulation
NFC:	Near Field Communication
SP:	Standard Power
LPI:	Low Power Indoor

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.

- Federal Communications Commission, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields”, OET Bulletin 65, FCC, Washington, D.C.: 1997.
- Institute of Electrical and Electronics Engineers (IEEE) C95.1-2019
- 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 6)–Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)
- ANATEL, Brazil Regulatory Authority, Resolution No 700 of September 28, 2018 “Approves the Regulation on the Assessment of Human Exposure to Electric, Magnetic and Electromagnetic Fields Associated with the Operation of Radio communication Transmitting Stations.
- IEC/IEEE 62209-1528-2020-Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)
- IEC 62479:2010 Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic field (10 MHz to 300 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 – 941225 D05 SAR for LTE Devices v02r05
- FCC KDB – 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB – 648474 D04 Handset SAR v01r03
- TCB Workshop Notes – November 2017, October 2018, October 2020 & April 2021.

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

Table 3 (ISED-APD)

EXPOSURE LIMITS	APD (W/m2)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Body Surface	20	100

Table 4 (FCC-iPD)

Freq range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm2)	Averaging time (minutes)
(Occupational /Controlled Exposure Environment)				
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-10000	-	-	5	<6
(General Population /Uncontrolled Exposure Environment)				
0.3-3.0	614	1.63	*(100)	<30
3.0-30	824/f	2.19/f	*(180/f ²)	<30
30-300	27.5	0.073	1.0	<30
300-1500	-	-	f/1500	<30
1500-10000	-	-	1.0	<30

f = frequency in MHz, * = Plane-wave equivalent power density
W/cm2 = 10*(mW/cm2)

6.0 Description of Device Under Test (DUT)

This portable device operates in the LMR bands using either frequency modulation (FM) with 100% transmit duty cycle or TDMA signals with maximum of 50% transmit duty cycle. For conservative assessment, FM signal was tested. This device also contains WLAN, LTE and 5G NR technologies for data applications and Bluetooth technology for short range wireless devices.

The LMR bands in this device operate in a half duplex system. A half duplex system only allows the user to transmit or receive. This device 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 device also incorporates GFSK Bluetooth transmission device which is a Frequency Hopping Spread Spectrum (FHSS) technology. The Bluetooth radio modem is used to wireless link audio accessories. The maximum actual transmission duty cycle is imposed by the Bluetooth.

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 5

Technologies	Band (MHz)	Transmission	Duty Cycle (%)	Conducted (Average Detector) Maximum Power (W)
LMR	136-174	FM	*50	6.60
	380-520	FM	*50	5.70
	762-776; 792-806	FM	*50	2.99
	806-825; 851-870	FM	*50	3.60
LTE Band 2	1850-1910	QPSK, 16QAM	100	251.19 mW
LTE Band 4	1710-1755		100	
LTE Band 5	824 - 849		100	
LTE Band 12	699-716		100	
LTE Band 13	777-787		100	
LTE Band 14	788-798		100	
LTE Band 17	704 - 716		100	
LTE Band 25	1850 - 1915		100	
LTE Band 66	1710 - 1780		100	
LTE Band 71	663 - 698		100	
5G NR N2	1850 - 1910	Pi/2BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM	100	251.19 mW
5G NR N5	824 - 849		100	
5G NR N25	1850 - 1915		100	
5G NR N41	2496 - 2690		100	
5G NR N66	1710 - 1780		100	
5G NR N71	663 - 698		100	
5G NR N77	3300 - 4200		100	
5G NR N78	3300 - 3800		100	
NFC	13.56	NFC	10	200 mW
BT 1.5	2402 - 2480	GFSK	77.26	89.2 mW
BT LE 4.0	2402 - 2480	GFSK	62.68	7.94 mW
BT LE 5.0	2402 - 2480	GFSK	33.13	7.94 mW

Note – * includes 50% PTT operation

Table 5 (Continued)

Technologies	Band (MHz)	Transmission	Duty Cycle (%)	Conducted (Average Detector) Maximum Power (W)		
				Ant 0	Ant 1	Ant 0 + 1 (MIMO)
WLAN 802.11 b (22 MHz)	2412-2462	DSSS	99.2	89.13mw	89.13mw	177.83 mW
WLAN 802.11 g (20 MHz)		OFDM	94.9	70.79mW	70.79mW	141.25 mW
WLAN 802.11 n (20 MHz)			94.36	70.79mW	70.79mW	141.25 mW
WLAN 802.11 n (40 MHz)			89.08	70.79mW	70.79mW	141.25 mW
WLAN 802.11 ax (20 MHz)			90	Ch1-70.79mW, Ch6-89.13mw, Ch11-50.12mw	Ch1,6-70.79mW, Ch11-50.12mw	Others - 158.49mW, Ch1-141.25mW, Ch11-100mw
WLAN 802.11 ax (40 MHz)			90	70.79mW	70.79mW	141.25 mW
WLAN 802.11 a (20 MHz)	5180-5825	OFDM	100	Others - 44.67mW, Ch157,165 - 39.81mW Ch52,56,60,64 - 35.48mW, Ch36,40,44,48 - 31.62mW	Others - 44.67mW, Ch36,40,44,48,157,165 - 39.81mW	Others - 89.13mW Ch36,40,44,48 - 70.79mW, Ch52,56,60,64,157,165 - 79.43mw,
WLAN 802.11n (20 MHz)				Others - 39.81mW, Ch36,40,52,56,60,64,165 - 31.62mW, Ch44,48 - 28.18mW	Others - 39.81mW, Ch52,56,60,64,100,120,144,149,157,165 - 31.62mW, Ch44, 48 - 28.18mW	Others - 79.43mw, Ch44,48 - 56.23mW, Ch36,40 - 63.10mW, Ch52,56,60,64,165 - 70.79mW
WLAN 802.11n (40 MHz)				Others - 39.81mW, Ch151,159 - 35.48mW, Ch46,54 - 31.62mW, Ch38 - 22.39mW, Ch102 - 19.95mW, Ch62 - 12.59mW	Others - 39.81mW, Ch151,159 - 35.48mW, Ch46,54 - 31.62mW, Ch38 - 22.39mW, Ch102 - 15.85mW, Ch62 - 12.59mW	Others - 79.43mw, Ch62 - 25.12mW, Ch102 - 35.48mW, Ch38 - 44.67mW, Ch46 - 63.10mW, Ch54,151,159 - 70.79mW
WLAN 802.11ac (20 MHz)				Others - 39.81mW, Ch36,40,52,56,60,64,165 - 31.62mW, Ch44,48 - 28.18mW	Others - 39.81mW, Ch52,56,60,64,100,120,144,149,157,165 - 31.62mW, Ch44, 48 - 28.18mW	Others - 79.43mw, Ch44,48 - 56.23mW, Ch36,40 - 63.10mW, Ch52,56,60,64,165 - 70.79mW
WLAN 802.11ac (40 MHz)				Others - 39.81mW, Ch151,159 - 35.48mW, Ch46,54 - 31.62mW, Ch38 - 22.39mW, Ch102 - 19.95mW, Ch62 - 12.59mW	Others - 39.81mW, Ch151,159 - 35.48mW, Ch46,54 - 31.62mW, Ch38 - 22.39mW, Ch102 - 15.85mW, Ch62 - 12.59mW	Others - 79.43mw, Ch62 - 25.12mW, Ch102 - 35.48mW, Ch38 - 44.67mW, Ch46 - 63.10mW, Ch54,151,159 - 70.79mW
WLAN 802.11ac (80 MHz)				Others - 31.62mW, Ch42 - 19.95mW, Ch106 - 15.85mW, Ch58 - 12.59mW	Others - 31.62mW, Ch42 - 19.95mW, Ch58,106 - 12.59mW	Others - 63.10mW, Ch58 - 25.12mW, Ch106 - 28.18mW, Ch42 - 39.81mW
WLAN 802.11ac (160 MHz)				Ch114 - 25.12mW, Ch50 - 22.39mW	Ch50- 28.18mW, Ch114 - 25.12mW	22.39mW
WLAN 802.11 ax (20 MHz)				Others - 35.48mW, Ch36,40,44,48,52,56,60 - 31.62mW, Ch64 - 19.95mW	Others - 39.81mW, Ch120,144,149,157,165 - 35.48mW, Ch100 - 25.12mW, Ch64 - 19.95mW	Others - 70.79mW, Ch64 - 39.81mW, Ch100 - 56.23mW
WLAN 802.11 ax (40 MHz)				Others - 39.81mW, Ch159 - 31.62mW, Ch46,54 - 28.18mW, Ch38 - 25.12mW, Ch102 - 15.85mW, Ch62 -10mW	Others - 39.81mW, Ch46,54 - 28.18mW, Ch38 - 25.12mW, Ch102 - 15.85mW, Ch62 -10mW	Others - 79.43mW, Ch62 - 19.95mW, Ch102 - 31.62mW, Ch38 - 50.12mW, Ch46,54 - 63.10mW, Ch159 - 70.79mW
WLAN 802.11 ax (80 MHz)				Others - 31.62mW, Ch138 - 28.18mW, Ch42,106 - 25.12mW, Ch58 - 19.95mW	Others - 35.48mW, Ch42,122,155 - 31.62mW, Ch58,106 - 19.95mW	Others - 63.10mW, Ch58 -39.81mW, Ch106 - 44.67mW, Ch42 - 56.23mW
WLAN 802.11 ax (160 MHz)				Others - 11.22mW, Ch114 - 10mW	Others - 11.22mW, Ch114 - 10mW	Others - 22.39mW, Ch114 - 19.95mW

Table 5 (Continued)

Technologies	Band (MHz)	Transmission	Duty Cycle (%)	Conducted (Average Detector) Maximum Power (W)		
				Ant 0	Ant 1	Ant 0 + 1 (MIMO)
WLAN 802.11 a (20 MHz)	5955-7115	OFDMA	100	25.12mW(SP), 2mW(LPI)	25.12mW(SP), 2mW(LPI)	50.12mW (SP) Others - 6.31mW(LPI), Ch113, 233 - 3.98mW (LPI)
WLAN 802.11 ax (20 MHz)				25.12mW(SP), Ch233 - 5.01mW(LPI), Ch113 - 2.24mW(LPI)	25.12mW(SP), Ch233 - 5.01mW(LPI), Ch113 - 2.24mW(LPI)	50.12mW (SP) 5.01mW(LPI)
WLAN 802.11 ax (40 MHz)				25.12mW(SP), Ch107,227 - 3.98mW(LPI),	25.12mW(SP), Ch107 - 5.01mW(LPI), Ch227 - 3.98mW(LPI)	Others - 50.12mW, (SP), Ch171 - 39.81mW (SP), Others - 12.59mW(LPI), Ch107 - 8.91mW(LPI), Ch227 - 7.54mW(LPI)
WLAN 802.11 ax (80 MHz)				Others - 22.39mW(SP), Ch7 - 19.95mW(SP), Ch167 - 12.59mW(SP), Ch215 - 7.94mW(LPI), Ch119 - 6.31mW(LPI),	Others - 28.18mW(SP), Ch7 - 25.12mW(SP), Ch167 - 19.95mW(SP), Ch119 - 10mW(LPI), Ch215 - 7.94mW(LPI),	Others - 50.12mW(SP), Ch7,167 - 39.81mW(SP), Others - 19.95mW(LPI), Ch215 - 15.85mW(LPI)
WLAN 802.11 ax (160 MHz)				15.85mW(SP & LPI)	15.85mW(SP & LPI)	31.62mW(SP), Others - 39.81mW(LPI), Ch113,207 - 31.62mW(LPI)

Note: SP= Standard Power; LPI = Low Power Indoor

The intended operating positions are “at the face” with the DUT at least 2.5cm from the mouth, and “at the body” by means of the offered body worn accessories. Body worn audio and PTT operation is accomplish by means of optional remote accessories that are connect 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 as per the guidelines outlined in section 4.0 to assess compliance of this device. The following sections identify the test criteria and details for each accessory category applicable for this filing only. Detail listing of all approved offered accessories available in the original filing report.

7.1 Antennas

Table 6

Antenna No.	Antenna Models	Description	Selected for test	Tested
1	AN000296A01	7/800 Stubby Antenna, 760 - 870 MHz, ¼ wave, -0.8 dBi gain	Yes	Yes
2	AN000297A01	All Band Whip Antenna, ¼ wave(VHF & UHF) & ½ wave(7/800), -0.6 dBi(UHF) gain	Yes	Yes
3	AN000369B01	UHF Stubby Antenna, ¼ wave, 0.57 dBi gain	Yes	Yes
4	AN000369B02	UHF Stubby Antenna, ¼ wave, 0.86 dBi gain	Yes	Yes
5	AN000476A01	Antenna Main, 617-698 MHz (0.1dBi), 699-746 MHz (0dBi), 746-787MHz (-1.6dBi), 758-798MHz (-1.7dBi), 824-894MHz (-1.7dBi), 1710-2200MHz (-2.7dBi), 1930-1995MHz (0.7dBi), 1850-1995(07dBi), 3300-4200 (-0.6dBi)	Yes	Yes
6	AN000476A03	Antenna WLAN Chain1, n77/78 DIV, 2412-2462MHz (2.7dBi), 5180-5825MHz (2.5dBi), 3300-4200MHz (0dBi), 5935-7115MHz (2.4dBi)	Yes	Yes
7	AN000476A02	Antenna GNSS, WLAN Chain2, 2412-2462MHz (0dBi), 5180-5825MHz (-4.9dBi), 5935-7115MHz (-4dBi)	Yes	Yes
8	AN000477A02	Diversity Mid Band	No	No

7.2 Battery

Table 7

Battery No.	Battery Models	Description	Selected for test	Tested	Comments
1	NNTN9217B	BATTERY PACK,BATTERY PACK,IMPRES GEN2, LIION,IP68, 4400T, UL2054 DIV 2	Yes	Yes	
2	PMNN4895A	BATTERY PACK,BATT IMPRES 2 LIION IP68 5800T	Yes	Yes	
3	NNTN9216B	BATTERY PACK,IMPRES GEN2, LIION,IP68, 4400T	No	No	By similarity to NNTN9217B
4	PMNN4896A	BATTERY PACK,BATT IMPRES 2 LIION IP68 5800T UL2054 DIV 2	No	No	By similarity to PMNN4895A

7.3 Body worn Accessories

Table 8

Body worn No.	Body worn Models	Description	Selected for test	Tested	Comments
1	NTN8266B	2.5 inch Hard Plastic Belt Clip	Yes	Yes	Tested w/ PMLN8936A
2	PMLN7965B	3 inch Hard Plastic Belt Clip	Yes	No*	By similarity to NTN8266B
3	RLN6488A	Boston Leather Anti-Sway Strap for Boston Leather Fireman's Radio Strap	Yes	Yes	Tested w/ PMLN8936A, PMLN8935A & AY000229A01
4	RLN6487A	Boston Leather Fireman's Radio Strap - XL	Yes	No	By similarity to AY000229A01
5	RLN6486A	Boston Leather Fireman's Radio Strap	Yes	No	By similarity to AY000229A01
6	AY000229A01	Boston Leather Fireman's Radio Strap with button back holder - XL	Yes	Yes	Tested w/ PMLN8936A, PMLN8935A & RLN6488A
7	AY000223A01	Boston Leather Fireman's Radio Strap with button back holder	Yes	No	By similarity to AY000229A01
8	PMLN8936A	APX NEXT XE CLASSIC HOLSTER	Yes	Yes	Tested w/ AY000229A01 & RLN6488A
9	PMLN8935A	APX NEXT XE LEATHER CASE	Yes	Yes	Tested w/ AY000229A01 & RLN6488A Only compatible with NNTN9217B Battery

Note - * Per KDB 643646 provision tests not required. For body-worn accessories with similar construction and operating configurations, test only the body-worn accessory within the group that is expected to result in the highest SAR.

7.4 Audio Accessories

Table 9

Audio No.	Audio Acc. Models	Description	Selected for test	Tested	Comments
1	PMMN4135B	XVP850 REMOTE SPEAKER MICROPHONE, WITH CHANNEL KNOB	Yes	Yes	
2	PMLN6129A	IMPRES 2 WIRE W/TRANS TUBE BLK	Yes	Yes	
3	BDN6783B	AUDIO ACCY ADPT 3.5MM W/PTT	Yes	Yes	Test with RLN5312B
4	RLN5312B	CMFRT EARPC W/MIC PTT BLK	Yes	Yes	Test with BDN6783B

8.0 Description of Test System

DASY6™ Test System



DASY8™ Test System



8.1 Descriptions of Robotics/Probes/Readout Electronics

Table 10

Dosimetric System type	System version	DAE type	Probe Type
Schmid & Partner Engineering AG SPEAG DASY 6	V16.4.0.5005	DAE4	EX3DV4 (E-Field)
Schmid & Partner Engineering AG SPEAG DASY 8	V16.4.0.5005	DAE4	EX3DV4 (E-Field)

The DASY6™ and DASY8™ system is operated per the instructions in the DASY6™ and DASY8™ 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.

8.2 Description of Phantom(s)

Table 11

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. 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 12**

Ingredients	150MHz	450MHz	750MHz	835MHz	1800MHz(1)	1900MHz(1)
	Head	Head	Head	Head	Head	Head
Sugar	55.4	56.0	57.0	57.0	NA	NA
Diacetin	0	0	0	NA	NA	NA
De ionized-Water	38.35	39.1	40.12	40.45	NA	NA
Salt	5.15	3.8	1.78	1.45	NA	NA
HEC	1	1.0	1	1	NA	NA
Bact.	0.1	0.1	0.1	0.1	NA	NA

Note: (1) SPEAG provides Motorola proprietary stimulant ingredients

Table 12 (Continued)

Ingredients	2450MHz(1)	2600MHz(1)	3500MHz(1)	3700MHz(1)	3900MHz(1)	5000MHz(1)	6500MHz(1)
	Head	Head	Head	Head	Head	Head	Head
Sugar	NA	NA	NA	NA	NA	NA	NA
Diacetin	NA	NA	NA	NA	NA	NA	NA
De ionized-Water	NA	NA	NA	NA	NA	NA	NA
Salt	NA	NA	NA	NA	NA	NA	NA
HEC	NA	NA	NA	NA	NA	NA	NA
Bact.	NA	NA	NA	NA	NA	NA	NA

Note: (1) SPEAG provides Motorola proprietary stimulant ingredients

9.0 Additional Test Equipment

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

Table 13

Equipment Type	Model Number	Serial Number	Calibration Date	Calibration Due Date
SPEAG PROBE	EX3DV4	7534	05/24/2024	05/24/2027
SPEAG PROBE	EX3DV4	7816	10/06/2023	10/06/2026
SPEAG PROBE	EUmmWV4	9451	04/06/2024	04/06/2027
SPEAG DAE	DAE4	1598	05/13/2024	05/13/2027
POWER AMPLIFIER	50W100D	0357646	CNR	CNR
AMPLIFIER	5S4G11	312663	CNR	CNR
VECTOR SIGNAL GENERATOR	E4438C	MY47272101	04/12/2024	04/12/2025*
BI-DIRECTIONAL COUPLER	3020A	41931	08/27/2025	08/27/2026
BI-DIRECTIONAL COUPLER	3024	61136	08/05/2024	08/05/2025*
BI-DIRECTIONAL COUPLER	3024	61182	07/05/2025	07/05/2026
Dual Directional Coupler 1	QDDC-1000-18000-30-20-S	24375062	09/30/2024	09/30/2025*
POWER METER	E4419B	GB42420608	12/19/2024	12/19/2025
POWER METER	E4416A	MY50001037	04/08/2025	04/08/2026
POWER SENSOR	E4412A	MY61050006	05/23/2025	05/23/2026
POWER SENSOR	E4412A	MY61060015	09/21/2025	09/21/2026
POWER SOURCE	SE UMS 160 CA	4251	01/04/2025	01/04/2026
VECTOR SIGNAL GENERATOR	E4438C	MY42081753	10/27/2025	10/27/2026
VECTOR SIGNAL GENERATOR	SMCV100B	106433	04/23/2024	04/23/2027
SIGNAL GENERATOR	SMP02	830682/015	06/25/2025	06/25/2026
DATA LOGGER	DSB	16326820	08/12/2024	08/12/2025*
DATA LOGGER	DSB	16398050	09/07/2024	09/07/2025*
DATA LOGGER	DSB	16326831	12/08/2024	12/08/2025*
TEMPERATURE PROBE	80PK-22	05032017	08/01/2025	08/01/2026
THERMOMETER	HH202A	35881	08/01/2025	08/01/2026
THERMOMETER	HH806AU	080307	08/10/2024	08/10/2025*
THERMOMETER	1523	3492108	03/26/2025	03/26/2026
DATA LOGGER	DSB	16398306	08/01/2025	08/01/2026
NETWORK ANALYZER	E5071B	MY42403218	09/12/2024	09/12/2025*
DIELECTRIC ASSESSMENT KIT	DAK-12	1069	02/04/2025	02/04/2026
DIELECTRIC ASSESSMENT KIT	DAK-3.5	1156	04/02/2025	04/02/2026
DIGITAL THERMOMETER	1523	3492108	03/26/2025	03/26/2026
TEMPERATURE PROBE	PR-10L-4-100-1/4-6-BX	WNWR037791	03/13/2025	03/13/2026
NETWORK ANALYZER	E5071B	MY42403147	03/07/2025	03/07/2026
UXM 5G WIRELESS TEST PLATFORM	E7515B	MY22214206	12/25/2024	12/25/2025
WIDEBAND RADIO COMMUNICATION TESTER	CMW500	171180	07/16/2025	07/16/2026

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

Table 13 (Continued)

Equipment Type	Model Number	Serial Number	Calibration Date	Calibration Due Date
SPEAG DIPOLE	CLA150	4010	07/16/2024	07/16/2027
SPEAG DIPOLE	D450V3	1077	01/30/2025	01/30/2028
SPEAG DIPOLE	D835V2	4d029	07/16/2024	07/16/2027
SPEAG DIPOLE	D2450V2	782	07/16/2024	07/16/2027
SPEAG DIPOLE	D5GHzV2	1026	07/17/2024	07/17/2027
SPEAG DIPOLE	D5GHzV2	1112	02/22/2024	02/22/2027
SPEAG DIPOLE	D750V3	1098	11/20/2024	11/20/2027
SPEAG DIPOLE	D1800V2	2D120	10/28/2022	10/28/2025*
SPEAG DIPOLE	D1900V2	5D064	10/14/2022	10/14/2025*
SPEAG DIPOLE	D2600V2	1011	04/11/2023	04/11/2026
SPEAG DIPOLE	D3500V2	1015	02/03/2025	02/03/2028
SPEAG DIPOLE	D3900V2	1104	02/26/2024	02/26/2027
SPEAG DIPOLE	D1800V2	278	01/16/2023	01/16/2026
SPEAG DIPOLE	D6.5GHZV2	1112	02/22/2024	02/22/2027
POWER METER	E4416A	GB41293218	04/08/2025	04/08/2026
POWER SENSOR	E9301B	MY50280001	07/18/2025	07/18/2026
POWER METER	E4419B	MY45103725	07/21/2025	07/21/2026

10.0 SAR Measurement System Validation and Verification

Calibration certificates of the probes and dipole are included in Appendix of the report.

10.1 System Validation

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

Table 14a (SAR)

Dates	Probe Calibration Point		Probe SN	Measured Tissue Parameters		Validation		
				σ	ϵ_r	Sensitivity	Linearity	Isotropy
CW								
09/27/2024	Head	5250	7816	4.35	34.73	Pass	Pass	Pass
09/27/2024		5500		4.60	34.30	Pass	Pass	Pass
09/27/2024		5600		4.71	34.11	Pass	Pass	Pass
09/27/2024		5800		4.92	33.74	Pass	Pass	Pass
04/29/2025	Head	150	7534	0.74	49.74	Pass	Pass	Pass
04/19/2025		450		0.86	42.88	Pass	Pass	Pass
04/23/2025		750		0.84	40.37	Pass	Pass	Pass
04/23/2025		835		0.98	38.58	Pass	Pass	Pass
04/21/2025		1800		1.28	41.77	Pass	Pass	Pass
04/21/2025		1900		1.33	41.66	Pass	Pass	Pass
04/20/2025		2450		1.46	41.43	Pass	Pass	Pass
04/20/2025		2600		1.78	38.99	Pass	Pass	Pass
04/20/2025		3500		2.64	40.80	Pass	Pass	Pass
04/19/2025		3900		3.11	40.58	Pass	Pass	Pass
04/24/2025		6500		5.66	34.95	Pass	Pass	Pass

Table 14b (Power Density)

Freq (GHz)	Dates	Probe SN	Dipole SN	Normal psPD (W/m2 over 4cm2)		Deviation (dB)	Total psPD (W/m2 over 4cm2)		Deviation (dB)
				Meas.	Target		Meas.	Target	
10	10/07/2024	9451	1077	57.8	58.5	-0.05	58.2	58.5	-0.02
10	05/22/2025	9451	1077	55.2	58.5	-0.25	55.5	58.5	-0.23

10.2 System Verification

System check results and DASY plots for each day during the SAR assessment are included in Appendix of the report. System verification results are normalized to 1W. Appendix D includes DASY plots with the largest deviation from the qualified source SAR target for each dipole. The Table below summarizes the daily system check results used for the SAR assessment. The Table below summarizes the daily system check results used for the SAR assessment.

Table 14

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	Deviation (%)
7534	IEEE/IEC Head	2450-782e	52.80 +/- 10%	1.56	49.37	7/10/2025@	-6.50%
				1.57	49.05	9/11/2025@	-7.10%
				1.52	48.10	11/11/2025	-8.90%
		5250-1022e	79.10 +/- 10%	7.66	76.60	11/12/2025	-3.20%
		5500-1022e	85.80 +/- 10%	8.56	85.60	11/13/2025	-0.20%
		5800-1022e	79.70 +/- 10%	7.68	76.80	11/12/2025	-3.60%
		6500-1112e	287 +/-10%	29.2	292	9/18/2025	1.70%
				29.7	297	11/13/2025	3.50%
		CLA15-4010	3.59 ± 10%	3.71	3.71	11/06/2025@	3.3%
				3.85	3.85	12/13/2025	7.2%
		D450V3-1077	4.53 ± 10%	1.15	4.60	11/03/2025@	1.5%
				1.10	4.40	11/04/2025	-2.9%
				1.10	4.40	12/12/2025@	-2.9%
		750-1098e	8.52 +/- 10%	0.257	8.13	07/10/2025	-4.50%
				0.271	8.58	07/29/2025@	0.70%
				0.273	8.64	07/31/2025	1.40%
				0.266	8.42	09/12/2025@	-1.20%
				0.257	8.13	07/10/2025	-4.50%
				0.255	8.07	11/07/2025@	-5.30%
				0.267	8.45	11/08/2025	-0.80%
				0.268	8.48	12/04/2025@	-0.50%
				0.266	8.42	07/15/2025	-1.20%
				0.260	8.23	09/14/2025	-3.40%
				0.268	8.48	09/17/2025	-0.50%
				0.272	8.61	09/19/2025	1.00%
				0.257	8.13	10/07/2025	-4.50%
				0.272	8.61	10/08/2025	1.00%
				0.267	8.45	11/08/2025@	-0.80%
				0.271	8.58	11/14/2025	0.70%
				0.268	8.48	12/08/2025	-0.50%

Table 14 (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	Deviation (%)
		835-4d029e	9.79 +/- 10%	0.333	10.54	12/08/2025	7.60%
				0.31	9.68	11/04/2025@	-1.10%
				0.32	10.0	12/13/2025@	2.50%
		1800-278e	37.60 +/- 10%	1.16	36.71	09/13/2025	-2.40%
				1.21	38.29	11/09/2025	1.80%
				1.20	37.97	09/14/2025@	1.00%
				1.14	36.08	09/18/2025@	-4.10%
				1.21	38.29	11/09/2025	1.80%
				1.19	37.66	11/28/2025	0.20%
		1800-2d120e	38.30 +/- 10%	1.16	36.71	08/01/2025@	-4.20%
				1.15	36.39	07/27/2025	-5.00%
		1900-5d065e	39.20 +/- 10%	1.22	38.61	09/13/2025	-1.50%
				1.27	40.19	08/01/2025@	2.50%
			39.50 +/- 10%	1.32	41.77	11/09/2025	5.80%
		2600-1011e	55.80 +/- 10%	1.69	53.48	07/29/2025	-4.20%
				1.63	51.58	09/15/2025	-7.60%
				1.70	53.80	11/10/2025	-3.60%
		3500-1015e	64.80 +/- 10%	2.10	66.46	07/17/2025@	2.60%
			65.00 +/- 10%	2.02	63.92	11/10/2025	-1.70%
		3900-1104e	69.40 +/- 10%	1.98	62.66	07/18/2025@	-9.70%
				2.16	68.35	11/10/2025	-1.50%
7816		5250-1026e	78.70 +/- 10%	7.49	74.90	7/31/2025@	-4.80%
				7.25	72.50	9/12/2025	-7.90%
		5600-1026e	82.20 +/- 10%	7.75	77.50	8/7/2025	-5.70%
		5800-1026e	80.70 +/- 10%	7.77	77.70	8/1/2025@	-3.70%
				7.64	76.40	9/23/2025	-5.30%

10.3 Power Density System verification for WiFi 6/6E

The system was verified to be within +/-0.66dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially(shape) and numerically(level) from the distribution provided by the manufacturer, per November 2017 TCB workshop Notes.

Table 15

Frequency (GHz)	Probe S/N	Dipole S/N	Normal psPD (W/m2 over 4cm2)		Deviation (dB)	Tested Date
			Measured	Target		
10	9451	1077	53.9	58.5	-0.08	11/13/2025

10.4 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 16

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
2437	IEEE/IEC Head	1.79 (1.7-1.88)	39.2 (35.3-43.1)	1.65	36.03	07/10/2025@
				1.70	37.00	07/12/2025@
				1.72	37.91	09/11/2025
				1.61	38.20	11/11/2025
2450		1.8 (1.71-1.89)	39.2 (35.3-43.1)	1.66	36.01	07/10/2025
				1.71	36.96	07/12/2025
				1.73	37.89	09/11/2025@
				1.62	38.18	11/11/2025
5250		4.71 (4.24-5.18)	36 (32.4-39.5)	4.64	39.43	07/31/2025@
				4.60	36.52	09/12/2025@
				4.72	39.29	07/31/2025@
				4.67	36.40	09/12/2025@
				4.32	36.17	11/12/2025
5320		4.78 (4.3-5.26)	35.9 (32.3-39.5)	4.72	39.29	07/31/2025@
				4.67	36.40	09/12/2025@
				4.40	36.05	11/12/2025
5500		4.97 (4.47-5.46)	35.7 (32.1-39.2)	4.61	38.92	08/07/2025
				4.61	39.02	08/08/2025
				4.58	35.76	11/13/2025
5600		4.97 (4.47-5.46)	35.7 (32.1-39.2)	4.73	38.75	08/07/2025
				4.72	38.86	08/08/2025
5745		5.22 (4.69-5.74)	35.4 (31.8-38.9)	5.24	38.51	08/01/2025@
				4.89	38.61	08/08/2025
				4.90	38.52	08/07/2025
				4.79	37.38	09/23/2025
				4.89	35.34	11/12/2025
5800		5.27 (4.74-5.8)	35.3 (31.8-38.8)	4.96	38.52	08/08/2025
				4.97	38.41	08/07/2025
				4.86	37.28	09/23/2025
				4.93	35.29	11/12/2025
5985		5.46 (4.92-6.01)	35.1 (31.6-38.6)	5.59	37.85	11/13/2025
6305		5.84 (5.26-6.42)	34.7 (31.3-38.2)	5.58	33.25	09/18/2025
				5.99	37.25	11/13/2025

Note: '@' indicates that tissue test result covers next test day (within 24 hours)

Table 16 (Continued)

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
6500	IEEE/IEC Head	5.84 (5.46-6.68)	34.7 (31.0-38.0)	5.80	32.94	09/18/2025
				6.23	36.93	11/13/2025
680.5		0.89 (0.84-0.93)	42.3 (40.2-44.4)	0.82	41.29	07/31/2025
				0.80	41.22	11/07/2025@
				0.83	40.88	09/14/2025
				0.80	41.22	11/08/2025@
				0.81	44.10	11/14/2025
707.5		0.89 (0.84-0.93)	42.1 (40-44.2)	0.82	42.35	07/29/2025
				0.83	41.79	09/12/2025@
				0.81	41.15	11/08/2025
750		0.89 (0.85-0.93)	41.9 (39.8-44)	0.83	40.91	07/10/2025
				0.85	41.65	09/12/2025@
				0.83	43.62	12/04/2025
				0.82	41.04	11/07/2025@
				0.82	41.04	11/08/2025
				0.83	43.62	12/04/2025@
				0.83	40.99	07/15/2025
				0.83	43.07	07/16/2025
				0.85	40.68	09/14/2025
				0.83	40.91	10/07/2025
				0.84	41.18	10/08/2025
				0.82	41.04	11/08/2025@
				0.83	43.62	12/04/2025@
782		0.89 (0.85-0.94)	41.7 (39.7-43.8)	0.84	42.12	07/29/2025@
				0.84	40.82	10/07/2025
				0.85	43.51	12/04/2025@
				0.83	40.95	11/07/2025@
				0.83	40.95	11/08/2025
				0.85	43.51	12/04/2025@
793		0.9 (0.85-0.94)	41.7 (39.6-43.8)	0.85	42.10	07/29/2025@
				0.84	40.93	11/07/2025@
				0.84	40.93	11/08/2025
835		0.9 (0.86-0.95)	41.5 (39.4-43.6)	0.85	40.82	11/08/2025
				0.84	45.16	12/08/2025
					0.84	45.16
836.5		0.9 (0.86-0.95)	41.5 (39.4-43.6)	0.86	41.99	07/29/2025@
				0.86	40.67	10/07/2025
				0.86	43.39	12/04/2025
				0.85	40.82	11/07/2025@
				0.85	40.82	11/08/2025
	0.86			43.39	12/04/2025@	
	0.85			45.15	12/08/2025	

Note: '@' indicates that tissue test result covers next test day (within 24 hours)

Table 16 (Continued)

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
836	IEEE/IEC Head	0.9 (0.86-0.95)	41.5 (39.4-43.6)	0.86	40.73	07/15/2025
				0.86	42.82	07/16/2025
				0.87	42.28	09/19/2025
				0.86	40.67	10/07/2025
				0.87	40.95	10/08/2025
				0.85	40.82	11/08/2025@
				0.85	45.15	11/09/2025
				0.86	43.39	12/04/2025@
1765		1.38 (1.31-1.45)	40.1 (38.1-42.1)	1.29	38.45	07/27/2025
				1.33	40.03	09/14/2025@
				1.25	42.34	11/09/2025
				1.30	40.51	11/28/2025
1770		1.38 (1.31-1.45)	40.1 (38.1-42.1)	1.30	38.30	08/01/2025@
				1.30	38.30	08/01/2025@
				1.29	38.41	09/13/2025
1800		1.4 (1.33-1.47)	40 (38-42)	1.32	38.24	08/01/2025
				1.31	38.36	09/13/2025
				1.27	42.28	11/09/2025
				1.31	38.39	07/27/2025
				1.35	39.96	09/14/2025
				1.30	39.36	09/18/2025
				1.27	42.28	11/09/2025
				1.32	40.14	11/28/2025
1860		1.4 (1.33-1.47)	40 (38-42)	1.30	37.33	07/14/2025@
				1.30	42.23	11/09/2025
1880		1.4 (1.33-1.47)	40 (38-42)	1.40	39.82	09/14/2025@
				1.34	39.24	09/18/2025@
				1.31	42.21	11/09/2025
1882.5		1.4 (1.33-1.47)	40 (38-42)	1.36	38.12	08/01/2025
				1.32	42.20	11/09/2025
				1.34	37.86	07/13/2025
				1.40	39.82	09/14/2025@
				1.32	42.20	11/09/2025
1900		1.4 (1.33-1.47)	40 (38-42)	1.33	42.19	11/09/2025
1905		1.4 (1.33-1.47)	40 (38-42)	1.38	38.09	08/01/2025@
				1.22	38.18	09/13/2025
				1.33	42.19	11/09/2025
2546.01		1.9 (1.81-2)	39.1 (35.2-43)	1.85	38.83	07/29/2025
				1.77	36.76	09/15/2025
				1.91	40.58	11/10/2025

Note: '@' indicates that tissue test result covers next test day (within 24 hours)

Table 16 (Continued)

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
2600	IEEE/IEC Head	1.96 (1.86-2.06)	39 (35.1-42.9)	1.90	38.74	07/29/2025
				1.81	36.68	09/15/2025
				1.95	40.48	11/10/2025
3500		2.91 (2.62-3.2)	37.9 (34.1-41.7)	2.72	40.28	07/17/2025
				2.63	37.58	11/10/2025
3500.01		2.91 (2.62-3.2)	37.9 (34.1-41.7)	2.72	40.28	07/17/2025@
				2.63	37.58	11/10/2025
3900		3.33 (2.99-3.66)	37.5 (33.8-41.3)	3.15	39.39	07/18/2025
				3.03	37.65	11/10/2025
3930		3.36 (3.02-3.69)	37.5 (33.7-41.2)	3.18	39.35	07/18/2025@
				3.06	37.61	11/10/2025
138		0.75 (0.71-0.79)	52.9 (50.2-55.5)	0.72	51.1	12/13/2025
				0.74	52.6	11/06/2025@
				0.72	51.1	12/13/2025
173.4		0.78 (0.74-0.82)	51.2 (48.6-53.8)	0.76	50.9	11/06/2025@
				0.75	49.4	12/13/2025
				0.75	49.4	12/13/2025
406.2000		0.87 (0.83-0.91)	44.0 (41.8-46.2)	0.85	44.7	11/03/2025@
				0.84	45.3	12/12/2025@
423.0000		0.87 (0.83-0.91)	43.8 (41.6-46.0)	0.87	44.3	11/04/2025
450.0125		0.87 (0.83-0.91)	43.5 (41.3-45.7)	0.89	43.8	11/04/2025
465.5000		0.87 (0.83-0.91)	43.4 (41.2-45.6)	0.90	43.5	11/03/2025@
				0.89	44.0	12/12/2025@
769.9875		0.89 (0.85-0.94)	41.8 (39.7-43.9)	0.83	41.0	11/04/2025
				0.83	45.7	12/13/2025
811.5000		0.9 (0.81-0.99)	41.6 (37.4-45.8)	0.84	40.9	11/04/2025@
				0.85	45.6	12/13/2025
851.0125		0.92 (0.87-0.96)	41.5 (39.4-43.6)	0.86	40.9	11/04/2025@
				0.86	45.6	12/13/2025@
860.0000		0.93 (0.88-0.97)	41.5 (39.4-43.6)	0.86	40.8	11/04/2025@

Note: '@' indicates that tissue test result covers 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 $\pm 2^{\circ}\text{C}$ 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 17

	Target	Measured
Ambient Temperature	18 – 25 °C	Range: 20.2 – 24.3°C Avg. 22.2 °C
Tissue Temperature	18 – 25 °C	Range: 20.8 - 23.5°C Avg. 22.1°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 18

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		$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}		≤ 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 $\leq$ 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: Δx_{Zoom} , Δy_{Zoom}		≤ 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: $\Delta z_{Zoom}(n)$	≤ 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. KDB 248227 D01 applied to WLAN2.4GHz/5GHz/6/6E test configurations. KDB 941225 was applied to LTE & 5G NR test configurations.

For WLAN 6E Power Density reference to TCB Workshop Notes – November 2017, October 2018, October 2020 & April 2021

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.

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

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 averaged SAR results indicated as “Max Calc. 1g-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 are scaled using the following formula:

$$Max_Calc = SAR_meas \cdot 10^{\frac{-Drift}{10}} \cdot \frac{P_max}{P_int} \cdot DC$$

P_max = Maximum Power (W)

P_int = Initial Power (W)

Drift = DASY drift results (dB)

SAR_meas = Measured 1-g Avg. SAR (W/kg)

DC = Transmission mode duty cycle in % where applicable

50% duty cycle is applied for PTT operation

Note: for conservative results, the following are applied:

If $P_int > P_max$, then $P_max/P_int = 1$.

Drift = 1 for positive drift

Additional SAR scaling was applied using the methodologies outlined in FCC 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 DUT was assessed at the body and face using the highest applicable configuration found during initial compliance assessment on filed with the FCC and ISED. All modes of operation identified in section 6.0 were considered during the development of the test plan.

13.0 DUT Test Data

13.1 SAR Assessment for LMR VHF

13.1.1 Assessment at FCC for 150.8-173.4 MHz

Table 19

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000297A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMMN4135B	173.4000	6.55	-0.21	1.29	0.68
				PMLN8936A w/ AY000229A01 w/ RLN6488A			6.56	-0.17	1.33	0.70
1				PMLN8936A w/ NTN8266B			6.57	-0.18	1.51	0.79
2	Face	AN000297A01	PMNN4895A	@ back	None	173.4000	6.55	-0.06	1.10	0.56

13.1.2 Assessment at ISED for 150.8-173.4 MHz

Table 20

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000297A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMMN4135B	138.0000	6.58	-0.41	2.22	1.22
				PMLN8936A w/ AY000229A01 w/ RLN6488A			6.60	-0.45	2.06	1.14
3				PMLN8936A w/ NTN8266B			6.58	-0.61	2.38	1.37
4	Face	AN000297A01	PMNN4895A	@ back	None	144.4000	6.51	-0.31	1.90	1.03

13.2 SAR Assessment for LMR UHF

13.2.1 Assessment at FCC for 406.125-512 MHz

Table 21

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000369B02	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMLN6129A	465.5000	5.60	-0.18	11.10	5.89
5				PMLN8936A w/ AY000229A01 w/ RLN6488A			5.60	-0.13	12.60	6.61
				PMLN8936A w/ NTN8266B			5.58	-0.21	10.60	5.68
6	Face	AN000369B02	PMNN4895A	@ back	None	450.0125	5.60	-0.13	7.36	3.86

13.2.2 Assessment for ISED at 406.125-430 MHz**Table 22**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000369B01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMMN4135B	406.2000	5.64	-0.25	9.57	5.12
7			PMNN4895A	PMLN8936A w/ AY000229A01 w/ RLN6488A			5.52	-0.18	9.88	5.32
				PMLN8936A w/ NTN8266B			5.70	-0.08	9.20	4.69
8	Face	AN000369B01	NNTN9217B	@ back	None	423.0000	5.59	-0.27	6.95	3.77

13.2.3 Assessment for ISED at 450-470 MHz**Table 23**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000369B02	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMLN6129A	465.5000	5.60	-0.18	11.10	5.89
9				PMLN8936A w/ AY000229A01 w/ RLN6488A			5.60	-0.13	12.60	6.61
				PMLN8936A w/ NTN8266B			5.58	-0.21	10.60	5.68
10	Face	AN000369B02	PMNN4895A	@ back	None	450.0125	5.60	-0.13	7.36	3.86

13.3 SAR Assessment for LMR 7/800

13.3.1 Assessment at FCC for 769-775 MHz

Table 24

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None (BT)	769.9875	2.90	-0.26	4.93	2.70
11				PMLN8936A w/ AY000229A01 w/ RLN6488A			2.93	-0.10	6.90	3.60
				PMLN8936A w/ NTN8266B			2.89	-0.35	5.94	3.33
12	Face	AN000296A01	NNTN9217B	@ back	None	769.9875	2.93	-0.12	3.62	1.90

13.3.2 Assessment at ISED for 768-776 MHz

Table 25

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None (BT)	769.9875	2.90	-0.26	4.93	2.70
13				PMLN8936A w/ AY000229A01 w/ RLN6488A			2.93	-0.10	6.90	3.60
				PMLN8936A w/ NTN8266B			2.89	-0.35	5.94	3.33
14	Face	AN000296A01	NNTN9217B	@ back	None	769.9875	2.93	-0.12	3.62	1.90

13.3.3 Assessment at FCC for 799-824 MHz**Table 26**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
15	Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	BDN6783B w/ RLN5312B	811.5000	3.36	-0.17	8.22	4.58
				PMLN8936A w/ AY000229A01 w/ RLN6488A			3.36	-0.25	6.94	3.94
				PMLN8936A w/ NTN8266B			3.36	-0.23	6.26	3.54
16	Face	AN000296A01	NNTN9217B	@ Back	None	811.5000	3.51	-0.08	3.99	2.08

13.3.4 Assessment at ISED for 798-824 MHz**Table 27**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
17	Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	BDN6783B w/ RLN5312B	811.5000	3.36	-0.17	8.22	4.58
				PMLN8936A w/ AY000229A01 w/ RLN6488A			3.36	-0.25	6.94	3.94
				PMLN8936A w/ NTN8266B			3.36	-0.23	6.26	3.54
18	Face	AN000296A01	NNTN9217B	@ Back	None	811.5000	3.51	-0.08	3.99	2.08

13.3.5 Assessment at FCC for 851-869 MHz**Table 28**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
19	Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMMN4135B	851.0125	3.35	-0.18	8.46	4.74
				PMLN8936A w/ AY000229A01 w/ RLN6488A			3.41	-0.41	7.88	4.57
				PMLN8936A w/ NTN8266B			3.36	-0.39	6.30	3.69
20	Face	AN000296A01	NNTN9217B	@ Back	None	860.0000	3.53	-0.10	3.64	1.90

13.3.6 Assessment at ISED for 851-869 MHz**Table 29**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
21	Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMMN4135B	851.0125	3.35	-0.18	8.46	4.74
				PMLN8936A w/ AY000229A01 w/ RLN6488A			3.41	-0.41	7.88	4.57
				PMLN8936A w/ NTN8266B			3.36	-0.39	6.30	3.69
22	Face	AN000296A01	NNTN9217B	@ Back	None	860.0000	3.53	-0.10	3.64	1.90

13.4 SAR Assessment for WLAN 2.4GHz

The new derivative model was assessed with the previous highest applicable configuration at the Body and Face. SAR plot of the highest result per table(bolded) are presented in Appendix F.

Table 30

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
	Body	AN000476A03 (Chain1)	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	2437.0000	0.08	0.09	0.022	0.025
23				PMLN8936A w/ AY000229A01 w/ RLN6488A		2437.0000	0.09	-0.24	0.039	0.043
				PMLN8936A w/ NTN8266B		2437.0000	0.08	-0.21	0.019	0.023
24	Face	AN000476A03 (Chain1)	PMNN4895A	Radio @ Front 2.5cm	None	2437.0000	0.08	-0.01	0.149	0.152

13.5 SAR Assessment for WLAN 5GHz

The new derivative model was assessed with the previous highest applicable configuration at the Body and Face. SAR plot of the highest result per table (bolded) are presented in Appendix F.

Table 31

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
U-NII-2A - 802.11a (20MHz)										
	Body	AN000476A03 (Chain1)	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	5320.0000	0.03	0.59*	0.001	0.001
				PMLN8936A w/ AY000229A01 w/ RLN6488A		5320.0000	0.03	1.88*	0.001	0.001
25				PMLN8936A w/ NTN8266B		5320.0000	0.03	4.83*	0.001	0.001
26	Face	AN000476A03 (Chain1) + AN000476A02 (Chain2)	PMNN4895A	Radio @ Front 2.5cm	None	5320.0000	0.06	-0.03	0.134	0.168
U-NII-2C - 802.11a (20MHz)										
	Body	AN000476A03 (Chain1) + AN000476A02 (Chain2)	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	5500.0000	0.07	3.19*	0.014	0.017
27				PMLN8936A w/ AY000229A01 w/ RLN6488A		5500.0000	0.08	-0.20	0.020	0.025
				PMLN8936A w/ NTN8266B		5500.0000	0.07	0.87*	0.016	0.020
28	Face	AN000476A03 (Chain1) + AN000476A02 (Chain2)	NNTN9217B	Radio @ Front 2.5cm	None	5500.0000	0.08	-0.14	0.230	0.283

Note: "*" Measured SAR value is low enough where a SAR drift measurement was not practical.

"#" SAR result lower than ambient noise level

Table 31 (Continued)

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
U-NII-3 - 802.11a (20MHz)										
	Body	AN000476A03 (Chain1) + AN000476A02 (Chain2)	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	5745.0000	0.07	3.17*	0.014	0.018
29				PMLN8936A w/ AY000229A01 w/ RLN6488A		5745.0000	0.07	1.49*	0.025	0.033
				PMLN8936A w/ NTN8266B		5745.0000	0.07	3.20*	0.016	0.021
30	Face	AN000476A03 (Chain1) + AN000476A02 (Chain2)	PMNN4895A	Radio @ Front 2.5cm)	None	5745.0000	0.06	0.19	0.122	0.180

Note: * Measured SAR value is low enough where a SAR drift measurement was not practical.

SAR result lower than ambient noise level

13.6 SAR Assessment for WLAN 6/6E

The new derivative model was assessed with the previous highest applicable configuration at the Body and Face. SAR plot of the highest result per table(bolded) are presented in Appendix F.

Table 32

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)	Meas. APD (W/m2)	Max Calc. APD (W/m2)
31	Body	AN000476A03 (Ant0_Chain1) + AN000476A02 (Ant1_Chain2)	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	6305.0000	0.04	1.20*	0.011	0.014	0.106	0.130
				PMLN8936A w/ AY000229A01 w/ RLN6488A		6305.0000	0.04	-0.26	0.010	0.013	0.091	0.119
				PMLN8936A w/ NTN8266B		6305.0000	0.04	0.11	0.008	0.010	0.064	0.079
32	Face	AN000476A03 (Ant0_Chain1) + AN000476A02 (Ant1_Chain2)	NNTN9217B	Radio @ Front 2.5cm)	None	5985.0000	0.03	-0.32	0.082	0.119	0.744	1.084

Note: * Measured SAR value is low enough where a SAR drift measurement was not practical.

SAR result lower than ambient noise level

13.7 Power Density Assessments for WLAN 6E

Table 33

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Gap (mm)	Grid Steps (λ)	Normal psPD (W/m ²)	Max Calc. Normal psPD (W/m ²)	Total psPD (W/m ²)	Max Calc. Total psPD (W/m ²)
33	Face	AN000476A03 (Ant0_Chain1) + AN000476A02 (Ant1_Chain2)	NNTN9217B	Radio @ Front 2.5cm)	None	5985.0000	0.03	0.03	2mm	0.0625	1.170	1.584	1.500	2.030

13.8 SAR Assessment for LTE

The new derivative model was assessed with the previous highest applicable configuration at the Body and Face. SAR plot of the highest result per table(bolded) are presented in Appendix F.

13.8.1 SAR assessments for LTE band 5 (824-849 MHz)

Table 34

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
	Body	AN000477A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	836.5000	0.18	-0.08	0.104	0.149
34		AN000477A01		PMLN8936A w/ AY000229A01 w/ RLN6488A		836.5000	0.18	-0.22	0.162	0.242
		AN000477A01		PMLN8936A w/ NTN8266B		836.5000	0.18	-0.07	0.053	0.076
1 RB										
35	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	836.5000	0.18	-0.09	0.126	0.183

Note: '*' Measured SAR value is low enough where a SAR drift measurement was not practical.

'#' SAR result lower than ambient noise level

13.8.2 SAR assessments for LTE band 12 (699-716 MHz)

Table 35

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	707.5000	0.20	0.07	0.046	0.059
				PMLN8936A w/ AY000229A01 w/ RLN6488A		707.5000	0.20	-0.12	0.045	0.059
36				PMLN8936A w/ NTN8266B		707.5000	0.20	-0.02	0.050	0.064
1 RB										
37	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	707.5000	0.21	-0.07	0.092	0.110

Note: '*' Measured SAR value is low enough where a SAR drift measurement was not practical.

'#' SAR result lower than ambient noise level

13.8.3 SAR assessments for LTE band 13 (777-787 MHz)

Table 36

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
		AN000477A01		PMLN8935A w/ AY000229A01 w/ RLN6488A		782.0000	0.21	-0.07	0.105	0.126
38		AN000477A01		PMLN8936A w/ AY000229A01 w/ RLN6488A		782.0000	0.21	-0.11	0.124	0.166
		AN000477A01		PMLN8936A w/ NTN8266B		782.0000	0.21	-0.05	0.059	0.070
1 RB										
39	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	782.0000	0.20	-0.08	0.086	0.113

13.8.4 SAR assessments for LTE band 14 (788-798 MHz)**Table 37**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
40	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	793.0000	0.19	0.00	0.040	0.052
				PMLN8936A w/ AY000229A01 w/ RLN6488A		793.0000	0.22	0.01	0.042	0.049
				PMLN8936A w/ NTN8266B		793.0000	0.22	0.10	0.031	0.036
1 RB										
41	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	793.0000	0.20	-0.10	0.081	0.105

13.8.5 SAR assessments for LTE band 25 (1850-1915 MHz)**Table 38**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	1905.0000	0.19	-0.01	0.035	0.046
42				PMLN8936A w/ AY000229A01 w/ RLN6488A		1905.0000	0.18	-0.18	0.048	0.069
				PMLN8936A w/ NTN8266B		1905.0000	0.19	-0.07	0.019	0.025
1 RB										
43	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	1882.5000	0.20	-0.13	0.276	0.351

13.8.6 SAR assessments for LTE band 66 (1710-1755 MHz)**Table 39**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	1770.0000	0.19	-0.26	0.027	0.038
				PMLN8936A w/ AY000229A01 w/ RLN6488A		1770.0000	0.19	-0.07	0.052	0.070
44				PMLN8936A w/ NTN8266B		1770.0000	0.19	-0.09	0.058	0.079
1 RB										
45	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	1770.0000	0.18	-0.13	0.233	0.331

13.8.7 SAR assessments for LTE band 71 (663-698 MHz)**Table 40**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
46	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	680.5000	0.18	-0.01	0.039	0.056
				PMLN8936A w/ AY000229A01 w/ RLN6488A		680.5000	0.18	-0.03	0.025	0.036
				PMLN8936A w/ NTN8266B		680.5000	0.18	0.03	0.024	0.034
1 RB										
47	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	680.5000	0.23	0.00	0.073	0.081

13.8.8 Additional Assessments for ISED Canada

Since SAR degradation is observed at the Body for B5 and B13, however both LTE B5 and B13 only have one channel; therefore, no additional tests were required for low, mid, and high frequency channels as per ISED Notice 2016-DRS001.

13.9 SAR Assessment for 5G NR

The new derivative model was assessed with the previous highest applicable configuration at the Body and Face. SAR plot of the highest result per table(bolded) are presented in Appendix F.

13.9.1 SAR assessments for 5G NR n2 (1850-1910 MHz)

Table 41

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
50% RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	1880.0000	0.20	-0.19	0.043	0.057
				PMLN8936A w/ AY000229A01 w/ RLN6488A		1880.0000	0.20	0.07	0.057	0.072
48				PMLN8936A w/ NTN8266B		1880.0000	0.20	-0.34	0.059	0.080
1 RB										
49	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	1860.0000	0.21	-0.32	0.283	0.371

13.9.2 SAR assessments for 5G NR n5 (824-849 MHz)

Table 42

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
50% RB										
	Body	AN000477A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	836.5000	0.18	0.00	0.114	0.163
50			PMNN4895A	PMLN8936A w/ AY000229A01 w/ RLN6488A		836.5000	0.17	-0.33	0.149	0.242
				PMLN8936A w/ NTN8266B		836.5000	0.18	-0.14	0.050	0.074
1 RB										
51	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	836.5000	0.17	-0.39	0.102	0.168

Note: '*' Measured SAR value is low enough where a SAR drift measurement was not practical.

'#' SAR result lower than ambient noise level

13.9.3 SAR assessments for 5G NR n25 (1850-1915 MHz)

Table 43

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
50% RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	1882.5000	0.20	0.03	0.038	0.047
				PMLN8936A w/ AY000229A01 w/ RLN6488A		1882.5000	0.20	-0.18	0.047	0.061
52				PMLN8936A w/ NTN8266B		1882.5000	0.20	-0.18	0.056	0.073
1 RB										
53	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	1865.0000	0.21	-0.06	0.272	0.323

13.9.4 SAR assessments for 5G NR n41 (2496-2690 MHz)

Table 44

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	2546.0100	0.21	-0.10	0.000	0.000
54			PMNN4895A	PMLN8936A w/ AY000229A01 w/ RLN6488A		2546.0100	0.22	8.74*	0.003	0.003
				PMLN8936A w/ NTN8266B		2546.0100	0.21	5.27*	0.000	0.000
50% RB										
55	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	2546.0100	0.22	0.21	0.030	0.034

Note: "*" Measured SAR value is low enough where a SAR drift measurement was not practical.

#' SAR result lower than ambient noise level

13.9.5 SAR assessments for 5G NR n66 (1710-1755 MHz)**Table 45**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
50% RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	1765.0000	0.21	0.27	0.029	0.035
				PMLN8936A w/ AY000229A01 w/ RLN6488A		1765.0000	0.21	0.02	0.052	0.063
56				PMLN8936A w/ NTN8266B		1765.0000	0.20	-0.06	0.059	0.074
50% RB										
57	Face	AN000476A01	NNTN9217B	Radio @ Front 2.5cm)	None	1765.0000	0.20	-0.19	0.207	0.268

13.9.6 SAR assessments for 5G NR n71 (663-698 MHz)**Table 46**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
50% RB										
58	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	680.5000	0.18	-0.03	0.045	0.063
				PMLN8936A w/ AY000229A01 w/ RLN6488A		680.5000	0.18	-0.04	0.030	0.042
				PMLN8936A w/ NTN8266B		680.5000	0.18	-0.11	0.030	0.043
50% RB										
59	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	680.5000	0.23	0.00	0.077	0.084

13.9.7 SAR assessments for 5G NR n77 (Part 27Q: 3450-3550 MHz)**Table 47**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
50% RB										
60	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	3500.0100	0.17	-0.25	0.012	0.019
			PMNN4895A	PMLN8936A w/ AY000229A01 w/ RLN6488A		3500.0100	0.17	1.51*	0.001	0.002
				PMLN8936A w/ NTN8266B		3500.0100	0.17	2.93*	0.000	0.000
1 RB										
61	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	3500.0100	0.18	-0.23	0.041	0.060

Note: '*' Measured SAR value is low enough where a SAR drift measurement was not practical.

#' SAR result lower than ambient noise level

13.9.8 SAR assessments for 5G NR n77 (Part 27O: 3700-3980 MHz)**Table 48**

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
1 RB										
	Body	AN000476A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	None	3930.0000	0.21	0.45	0.000	0.000
62			PMNN4895A	PMLN8936A w/ AY000229A01 w/ RLN6488A		3930.0000	0.21	-0.65*	0.004	0.008
				PMLN8936A w/ NTN8266B		3930.0000	0.21	1.03*	0.000	0.000
1 RB										
63	Face	AN000476A01	PMNN4895A	Radio @ Front 2.5cm)	None	3930.0000	0.21	-0.17	0.030	0.052

Note: '*' Measured SAR value is low enough where a SAR drift measurement was not practical.

#' SAR result lower than ambient noise level

13.9.9 Additional Assessments for ISED Canada

Since SAR degradation is observed at the Body for n5, however 5G NR n5 only have one channel; therefore, no additional tests were required for low, mid, and high frequency channels as per ISED Notice 2016-DRS001.

14.0 Assessment for Standalone BT and NFC

14.1 FCC assessment 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 distance $\leq 50\text{mm}$. The closest separation distance from the Bluetooth Antenna to the phantom is 42mm with PMLN8936A(Holster) w/ AY00229A01(Fireman Strap) w/ RLN6488A(Anti Sway Strap), as indicated in the following picture:



KDB 447498 (4.3.1, b.1) for 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g test exclusion thresholds are determined by following:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation distance, mm}} \right] * [\sqrt{F(\text{GHz})}] = 0.6$$
, which is ≤ 3.0 for 1-g SAR or 7.5 for 10-g extremity

Where:

Max. power = 68.92mW (89.2mW*77.26% duty cycle)

Min test separation distance = 42 mm

f(MHz) = 2450 MHz

Based on above calculation, SAR test exclusion power threshold at 2450 MHz is 77 mW. Maximum power for Bluetooth is 68.92 mW, hence SAR test was not required for Bluetooth.

14.2 ISED assessment for BT

The closest separation distance from the Bluetooth Antenna to the phantom is 42mm with PMLN8936A(Holster) w/ AY00229A01(Fireman Strap) w/ RLN6488A(Anti Sway Strap), as indicated in the following picture:



By referring to RSS-102 (Issue 6) Section 7.1.8 SAR estimation for exempted transmitters

$$SAR_{estimated} = \frac{P_{max}}{P_{max,exemption}} \times 0.25 \times SAR_{limit} \text{ W/kg}$$

Where:

P_{max} = 68.92 mW (89.2 mW*77.26% duty cycle)

$P_{max,exemption}$: 170 mW (refer to Table 11 below)

Distance: 42 mm

Table 11: Power limits for exemption from routine SAR evaluation based on the separation distance

Frequency (MHz)	≤ 5 mm (mW)	10 mm (mW)	15 mm (mW)	20 mm (mW)	25 mm (mW)	30 mm (mW)	35 mm (mW)	40 mm (mW)	45 mm (mW)	> 50 mm (mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

$$SAR_{estimated} = (68.92/170) \times (0.25 \times 1.6) = 0.162 \text{ W/kg}$$

14.3 FCC assessment for NFC

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 distance $\leq 50\text{mm}$. The closest separation distance from the Bluetooth Antenna to the phantom is 42mm with PMLN8936A(Holster) w/ AY00229A01(Fireman Strap) w/ RLN6488A(Anti Sway Strap), as indicated in the following picture:



KDB 447498 4.3.1, c.1) for below 100 MHz and test separation distances $\leq 50\text{ mm}$,

Power threshold the power threshold determined by the equation in c.1) for 50 mm and 100 MHz is multiplied by 1/2

$$= 474\text{ mW} * 1/2$$

$$= 237\text{mW}$$

Where:

Max. power = 20 mW (200 mW*10% duty cycle)

Min. test separation distance = 42 mm

f (MHz) = 13.56 MHz

Based on above calculation, SAR test exclusion power threshold at 13.56 MHz is 237 mW. Maximum power for NFC is 20 mW, hence SAR test was not required for NFC.

14.4 ISED assessment for NFC

The closest separation distance from the NFC coil to the phantom is 42mm (NFC coil are located inside battery) with PMLN8936A(Holster) w/ AY00229A01(Fireman Strap) w/ RLN6488A(Anti Sway Strap), as indicated in the following picture, as indicated in the following picture:



By referring to RSS-102 (Issue 6) Section 7.1.8 SAR estimation for exempted transmitters

$$SAR_{estimated} = \frac{P_{max}}{P_{max,exemption}} \times 0.25 \times SAR_{limit} \text{ W/kg}$$

Where:

P_{max} = 20 mW (200 mW*10% duty cycle)

$P_{max,exemption}$: 362 mW (refer to Table 11 below)

Distance: 42 mm (Based on the NFC coil location against the phantom)

Table 11: Power limits for exemption from routine SAR evaluation based on the separation distance

Frequency (MHz)	≤ 5 mm (mW)	10 mm (mW)	15 mm (mW)	20 mm (mW)	25 mm (mW)	30 mm (mW)	35 mm (mW)	40 mm (mW)	45 mm (mW)	> 50 mm (mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

$$SAR_{estimated} = (20/280) \times (0.25 \times 1.6) = 0.028 \text{ W/kg}$$

15.0 Simultaneous Transmission

The Table below summarizes the simultaneous transmission conditions for this device.

Table 49A

Exposure Conditions	Item	Capable Simultaneous Transmit Configurations
Body-Worn	1	LMR + WLAN 2.4 GHz + WWAN + BT
	2	LMR + WLAN 5 GHz + WWAN + BT
	3*	LMR + WLAN 6/6E + WWAN + BT
Face	1	LMR + WLAN 2.4 GHz + WWAN + BT
	2	LMR + WLAN 5 GHz + WWAN + BT
	3*	LMR + WLAN 6/6E + WWAN + BT

Note: '*' apply Total Exposure Ratio (TER) calculation by combining SAR (W/kg) and Power Density (W/m²) measurement, using the applicable controlled environment SAR and power density limits.

Table 49B

Exposure Conditions	Item	Capable Simultaneous Transmit Configurations
Body-Worn	1	WLAN 2.4 GHz + WWAN + BT
	2	WLAN 5 GHz + WWAN + BT
	3*	WLAN 6/6E + WWAN + BT
Face	1	WLAN 2.4 GHz + WWAN + BT
	2	WLAN 5 GHz + WWAN + BT
	3*	WLAN 6/6E + WWAN + BT

Note: '*' apply Total Exposure Ratio (TER) calculation by combining SAR (W/kg) and Power Density (W/m²) measurement, using the applicable uncontrolled environment SAR and power density limits.

15.1 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 $\leq 50\text{mm}$:

The closest separation distance from the Bluetooth Antenna to the phantom is 42mm with PMLN8936A(Holster) w/ AY00229A01(Fireman Strap) w/ RLN6488A(Anti Sway Strap), as indicated in the picture below.



KDB 447498 4.3.2, b.2) for test separation distances $\leq 50\text{ mm}$,

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})} / X] = 0.3\text{ W/kg, which is } \leq 0.4\text{ W/kg (1g)}$$

Where:

$X = 7.5$ for 1g-SAR

Max. Power = 68.92 mW (89.2 mW*77.26% duty cycle)

Min. test separation distance = 42mm

$f(\text{GHz}) = 2.48\text{ GHz}$

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

15.2 Simultaneous Transmission Exclusion for NFC

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 $\leq 50\text{mm}$:

The closest separation distance from the NFC antenna to the phantom is 42mm with PMLN8936A(Holster) w/ AY00229A01(Fireman Strap) w/ RLN6488A(Anti Sway Strap), as indicated in the picture below.



KDB 447498 4.3.2, b.2) for test separation distances $\leq 50\text{ mm}$,

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})} / X] = 0.1\text{ W/kg, which is } \leq 0.4\text{ W/kg (1g)}$$

Where:

$X = 7.5$ for 1g-SAR

Max. Power = 20mW (200 mW*10% duty cycle)

Min. test separation distance = 42mm

$f(\text{GHz}) = 13.56\text{ MHz}$

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

15.3 Simultaneous Transmission for LMR, WLAN 2.4GHz, WWAN and BT

Table50 (Controlled Environment)

Exposure Condition	Configuration	Standalone SAR (W/kg)						Sum of SAR (W/kg)		
		VHF	UHF	7/800	2.4GHz	WWAN	BT	VHF + 2.4GHz+ WWAN+ BT	UHF + 2.4GHz+ WWAN+ BT	7/800 + 2.4GHz+ WWAN+ BT
FCC										
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	0.68	5.89	4.74	0.025	0.163	N/A	0.87	6.08	4.93
	PMLN8936A w/ AY000229A01 w/ RLN6488A	0.70	6.61	3.60	0.043	0.242	N/A	0.99	6.90	3.89
	PMLN8936A w/ NTN8266B	0.79	5.68	3.69	0.023	0.080	N/A	0.89	5.78	3.79
Face Exposure	N/A	0.56	3.86	2.08	0.152	0.371	N/A	1.08	4.38	2.60
ISED										
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	1.22	5.89	4.74	0.025	0.163	0.162	1.57	6.24	5.09
	PMLN8936A w/ AY000229A01 w/ RLN6488A	1.14	6.61	3.60	0.043	0.242	0.162	1.59	7.06	4.05
	PMLN8936A w/ NTN8266B	1.37	5.68	3.69	0.023	0.080	0.162	1.64	5.95	3.96
Face Exposure	N/A	1.03	3.86	2.08	0.152	0.371	0.162	1.72	4.55	2.77

Note: WWAN value is highest from LTE or 5G NR.

N/A – applied test exclusion as stated in Section 14.1 & 15.1

15.4 Simultaneous Transmission for LMR, WLAN 5GHz, WWAN and BT

Table51 (Controlled Environment)

Exposure Condition	Configuration	Standalone SAR (W/kg)						Sum of SAR (W/kg)		
		VHF	UHF	7/800	5GHz	WWAN	BT	VHF + 5GHz + WWAN+ BT	UHF + 5GHz + WWAN+ BT	7/800 + 5GHz+ WWAN+ BT
FCC										
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	0.68	5.89	4.74	0.018	0.163	N/A	0.86	6.07	4.92
	PMLN8936A w/ AY000229A01 w/ RLN6488A	0.70	6.61	3.60	0.025	0.242	N/A	0.97	6.88	3.87
	PMLN8936A w/ NTN8266B	0.79	5.68	3.69	0.021	0.080	N/A	0.89	5.78	3.79
Face Exposure	N/A	0.56	3.86	2.08	0.283	0.371	N/A	1.21	4.51	2.73
ISED										
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	1.22	5.89	4.74	0.018	0.163	0.162	1.56	6.23	5.08
	PMLN8936A w/ AY000229A01 w/ RLN6488A	1.14	6.61	3.60	0.025	0.242	0.162	1.57	7.04	4.03
	PMLN8936A w/ NTN8266B	1.37	5.68	3.69	0.021	0.080	0.162	1.63	5.94	3.95
Face Exposure	N/A	1.03	3.86	2.08	0.283	0.371	0.162	1.85	4.68	2.90

Note: WWAN value is highest from LTE or 5G NR.

N/A – applied test exclusion as stated in Section 14.1 & 15.1

15.5 Simultaneous Transmission for WLAN 2.4GHz, WWAN and BT

Table52 (Uncontrolled Environment)

Exposure Condition	Configuration	Standalone SAR (W/kg)			Sum of SAR (W/kg)
		2.4GHz	WWAN	BT	2.4GHz + WWAN + BT
FCC					
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	0.025	0.163	N/A	0.188
	PMLN8936A w/ AY000229A01 w/ RLN6488A	0.043	0.242	N/A	0.285
	PMLN8936A w/ NTN8266B	0.023	0.080	N/A	0.103
Face Exposure	N/A	0.152	0.371	N/A	0.523
ISED					
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	0.025	0.163	0.162	0.350
	PMLN8936A w/ AY000229A01 w/ RLN6488A	0.043	0.242	0.162	0.447
	PMLN8936A w/ NTN8266B	0.023	0.080	0.162	0.265
Face Exposure	N/A	0.152	0.371	0.162	0.685

Note: WWAN value is highest from LTE or 5G NR.

N/A – applied test exclusion as stated in Section 14.1 & 15.1

15.6 Simultaneous Transmission for WLAN 5GHz, WWAN and BT

Table53 (Uncontrolled Environment)

Exposure Condition	Configuration	Standalone SAR (W/kg)			Sum of SAR (W/kg)
		5GHz	WWAN	BT	5GHz + WWAN + BT
FCC					
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	0.018	0.163	N/A	0.181
	PMLN8936A w/ AY000229A01 w/ RLN6488A	0.025	0.242	N/A	0.267
	PMLN8936A w/ NTN8266B	0.021	0.080	N/A	0.101
Face Exposure	N/A	0.283	0.371	N/A	0.654
ISED					
Body worn Exposure	PMLN8935A w/ AY000229A01 w/ RLN6488A	0.018	0.163	0.162	0.343
	PMLN8936A w/ AY000229A01 w/ RLN6488A	0.025	0.242	0.162	0.429
	PMLN8936A w/ NTN8266B	0.021	0.080	0.162	0.263
Face Exposure	N/A	0.283	0.371	0.162	0.816

Note: WWAN value is highest from LTE or 5G NR.

N/A – applied test exclusion as stated in Section 14.1 & 15.1

15.7 Total Exposure Ratio

The Total Exposure Ratio (TER) is calculated by combining all SAR measurements and power density measurements after normalizing to their respective limits. The general expression is below.

$$TER = \sum_{a=1}^A \frac{SAR_a}{SAR_{a,limit}} + \sum_{b=1}^B \frac{psPD_b}{psPD_{b,limit}} < 1$$

15.7.1 Total Exposure Ratio Controlled Environment for LMR, WLAN 6/6E and WWAN

Table 54 (FCC & ISED)

Exposure Condition		Exposure Ratio				Applicable Region	Total Exposure Ratio(TER) LMR(1) + WWAN(2) + iPD(4)	Total Exposure Limit	Applicable Region	Total Exposure Ratio(TER) LMR(1) + WWAN(2) + APD(3)	Total Exposure Limit
		LMR(1)	WWAN(2)	APD(3)	iPD(4)						
		Reported Value	3.86	0.371	1.084	2.030					
Face Exposure	Applicable Limit	8	100	50							
	Ratio to Limit	0.48	0.05	0.011	0.041	FCC	0.57	<1	ISED	0.54	<1

Note: Total Exposure Ratio (TER) calculation by combining SAR (W/kg) and Power Density (W/m2) measurement, using the applicable controlled environment SAR and power density limits.

15.7.2 Total Exposure Ratio Uncontrolled Environment for LMR, WLAN 6/6E and WWAN

Table 55 (FCC & ISED)

		Exposure Ratio			Applicable Region	Total Exposure Ratio(TER) WWAN(1) + iPD(3)	Total Exposure Limit	Applicable Region	Total Exposure Ratio(TER) WWAN(1) + APD(2)	Total Exposure Limit
		WWAN(1)	APD(2)	iPD(3)						
Exposure Condition	Reported Value	0.371	1.084	2.030						
	Applicable Limit	1.6	20	10						
Face Exposure	Ratio to Limit	0.23	0.054	0.203	FCC	0.43	<1	ISED	0.29	<1

Note: Total Exposure Ratio (TER) calculation by combining SAR (W/kg) and Power Density (W/m2) measurement, using the applicable uncontrolled environment SAR and power density limits.

16.0 Results Summary

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

Table 56

Equipment Class	Frequency band (MHz)	Max Calc at Body (W/kg)	Max Calc at Face (W/kg)
		1g-SAR	1g-SAR
FCC			
TNF	150.8-173.4	0.79	0.56
	406.125-512	6.61	3.86
	769-775	3.60	1.90
	799-824	4.58	2.08
	851-869	4.74	1.90
PCF	LTE B5	0.242 ⁽¹⁾	0.183
	LTE B12	0.064	0.110
	LTE B13	0.166 ⁽²⁾	0.113
	LTE B14	0.052	0.105
	LTE B25	0.069	0.351
	LTE B66	0.079	0.331
	LTE B71	0.056	0.081
DTS	2412 – 2462 MHz (WLAN 2.4 GHz)	0.043	0.152
NII	5180 – 5825 MHz (WLAN 5 GHz)	0.025	0.283
6CD	5955 – 7115 (WLAN 6/6E)	0.014	0.119
PCF	5G NR N2	0.080	0.371
	5G NR N5	0.242 ⁽²⁾	0.168
	5G NR N25	0.073	0.323
	5G NR N41	0.003	0.034
	5G NR N66	0.074	0.268
	5G NR N71	0.063	0.084
	5G NR N77 Part 27Q	0.019	0.060
	5G NR N77 Part 27O	0.008	0.052
*DSS	2402-2480MHz (Bluetooth)	NA	NA
**DXX	NFC 13.56MHz	NA	NA
Highest Simultaneous Transmission SAR		6.90	4.51
Equipment Class	Frequency band (MHz)	Reported APD (W/m2)	Reported iPD (W/m2)
6CD	5955 – 7115 (WLAN 6/6E)	NA	2.030

Note:

⁽¹⁾ New highest SAR result for Body is 0.242 W/kg compared with previous on filed SAR result is 0.158 W/kg

⁽²⁾ New highest SAR result for Body is 0.166 W/kg compared with previous on filed SAR result is 0.147 W/kg

⁽³⁾ New highest SAR result for Body is 0.242 W/kg compared with previous on filed SAR result is 0.143 W/kg

Table 57

Equipment Class	Frequency band (MHz)	Max Calc at Body (W/kg)	Max Calc at Face (W/kg)
		1g-SAR	1g-SAR
ISED			
TNF	138-174	1.37	1.03
	406.125-430	5.32	3.77
	450-470	6.61	3.86
	769-775	3.60	1.90
	799-824	4.58	2.08
	851-869	4.74	1.90
PCF	LTE B5	0.242	0.183
	LTE B12	0.064	0.110
	LTE B13	0.166	0.113
	LTE B14	0.052	0.105
	LTE B25	0.069	0.351
	LTE B66	0.079	0.331
	LTE B71	0.056	0.081
DTS	2412 – 2462 MHz (WLAN 2.4 GHz)	0.043	0.152
NII	5180 – 5825 MHz (WLAN 5 GHz)	0.025	0.283
6CD	5955 – 7115 (WLAN 6/6E)	0.014	0.119
PCF	5G NR N2	0.080	0.371
	5G NR N5	0.242	0.168
	5G NR N25	0.073	0.323
	5G NR N41	0.003	0.034
	5G NR N66	0.074	0.268
	5G NR N71	0.063	0.084
	5G NR N77 RSS192	0.019	0.060
	5G NR N77 RSS198	0.008	0.052
*DSS	2402-2480MHz (Bluetooth)	0.162	0.162
**DXX	NFC 13.56MHz	0.028	0.028
Highest Simultaneous Transmission SAR		7.06	4.68
Equipment Class	Frequency band (MHz)	Reported APD (W/m2)	Reported iPD (W/m2)
6CD	5955 – 7115 (WLAN 6/6E)	1.084	NA

(1) New highest SAR result for Body is 0.242 W/kg compared with previous on filed SAR result is 0.158 W/kg

(2) New highest SAR result for Body is 0.166 W/kg compared with previous on filed SAR result is 0.147 W/kg

(3) New highest SAR result for Body is 0.242 W/kg compared with previous on filed SAR result is 0.143 W/kg

17.0 Variability Assessment

Per the guidelines in KDB 865664 SAR variability assessment is required for each frequency band with measured SAR results above 4.0 W/kg for occupational exposure condition. The Tables below include test results of the original measurement, the repeated measurement, and the ratio (SAR_{high}/SAR_{low}) for the highest SAR configuration in each of the frequency bands that fulfill the guidelines mentioned above.

Table 58 (UHF1)

Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq. (MHz)	Adj. 1g-SAR (W/kg)	Ratio	Comments
Body	AN000369B02	NNTN9217B	PMLN8936A w/ AY000229A01 w/ RLN6488A	PMLN6129A	465.5000	6.49	1.05	No additional repeated scans is required due to the Ratio (SAR_{high}/SAR_{low}) < 1.20
						6.20		

Table 59 (799-824 MHz)

Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq. (MHz)	Adj. 1g-SAR (W/kg)	Ratio	Comments
Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	BDN6783B w/ RLN5312B	811.5000	4.17	1.02	No additional repeated scans is required due to the Ratio (SAR_{high}/SAR_{low}) < 1.20
						4.27		

Table 60 (851-869 MHz)

Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq. (MHz)	Adj. 1g-SAR (W/kg)	Ratio	Comments
Body	AN000296A01	NNTN9217B	PMLN8935A w/ AY000229A01 w/ RLN6488A	PMMN4135B	851.0125	4.47	1.01	No additional repeated scans is required due to the Ratio (SAR_{high}/SAR_{low}) < 1.20
						4.41		

18.0 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 demonstrate that the scaling methodology used to determine the calculated SAR results presented herein are valid.

Table 61

SAR Plot	Test Position	Antenna	Battery	Carry Accessory	Cable Accessory	Test Freq (MHz)	Init Pwr (W)	SAR Drift (dB)	Meas. 1g-SAR (W/kg)	Max Calc. 1g-SAR (W/kg)
64	Body	AN000369B02	NNTN9217B	PMLN8936A w/ AY000229A01 w/ RLN6488A	PMLN6129A	465.5000	5.64	0.00	12.40	6.27

Shortened scan reflects highest SAR producing configuration and is compare to the full scan as shown in Table below.

Table 62

Scan Description	Referenced Table	Test Time (min.)	SAR 1g (W/kg)
Shorten scan (zoom)	61	16	6.27
Full scan (area & zoom)	22	18	6.61

19.0 Measurement System Uncertainty

A system uncertainty analysis is not required for this report per KDB 865664 because the highest report SAR value Occupational exposure is less than 7.5W/kg.

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

Appendix A

Measurement Uncertainty

Uncertainty Budget for Device Under Test, for 4 MHz to 300 MHz								
Input quantity Xi (source of uncertainty)	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a q_i	c_i (1 g)	c_i (10 g)	1 g u_i (±%)	10 g u_i (±%)
Measurement System								
Probe Calibration	8.4.1.1	13.3	N (k = 2)	2.00	1	1	6.7	6.7
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	0.6	R	1.73	1	1	0.3	0.3
Probe isotropy	8.4.1.5	7.6	R	1.73	1	1	4.4	4.4
Other probe and data acquisition errors	8.4.1.6	0.8	N	1.00	1	1	0.8	0.8
RF ambient and noise	8.4.1.7	1.8	N	1.00	1	1	1.8	1.8
Probe positioning errors	8.4.1.8	0.006 mm	N	1.00	0.04	0.04	0.1	0.1
Data processing errors	8.4.1.9	1.2	N	1.00	1	1	1.2	1.2
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	5.4	R	1.73	0.78	0.71	2.4	2.2
Shell permittivity	8.4.2.3	14	R	1.73	0	0	0.0	0.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	2	N	1.00	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	8.4.2.5	2.8	N	1.00	1	1	2.8	2.8
Device holder effects	8.4.2.6	4.55	N	1.00	1	1	4.6	4.6
Effect of operating mode on probe sensitivity	8.4.2.7	2.4	R	1.73	1	1	1.4	1.4
Time-average SAR	8.4.2.8	1.7	R	1.73	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	8.4.2.9	5	R	1.73	1	1	2.9	2.9
Validation antenna uncertainty (validation measurement only)	8.4.2.10	0	N	1.00	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	8.4.2.11	0	N	1.00	1	1	0.0	0.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ϵ', σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
SAR scaling	8.4.3.2	0	R	1.73	1	1	0.0	0.0
Combined Standard Uncertainty			RSS				12.1	12.0
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k = 2				24.2	24.0

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

Uncertainty Budget for Device Under Test, for 300 MHz to 3000 MHz								
Input quantity Xi (source of uncertainty)	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a q_i	c_i (1 g)	c_i (10 g)	1 g u_i (±%)	10 g u_i (±%)
Measurement System								
Probe Calibration	8.4.1.1	11.0	N (k = 2)	2.00	1	1	5.5	5.5
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	2.8	R	1.73	1	1	1.6	1.6
Probe isotropy	8.4.1.5	7.6	R	1.73	1	1	4.4	4.4
Other probe and data acquisition errors	8.4.1.6	0.7	N	1.00	1	1	0.7	0.7
RF ambient and noise	8.4.1.7	1.8	N	1.00	1	1	1.8	1.8
Probe positioning errors	8.4.1.8	0.006 mm	N	1.00	0.14	0.14	0.1	0.1
Data processing errors	8.4.1.9	1.2	N	1.00	1	1	1.2	1.2
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	3.3	R	1.73	0.78	0.71	1.5	1.4
Shell permittivity	8.4.2.3	14	R	1.73	0	0	0.0	0.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	2	N	1.00	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	8.4.2.5	2.8	N	1.00	1	1	2.8	2.8
Device holder effects	8.4.2.6	4.55	N	1.00	1	1	4.6	4.6
Effect of operating mode on probe sensitivity	8.4.2.7	2.4	R	1.73	1	1	1.4	1.4
Time-average SAR	8.4.2.8	1.7	R	1.73	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	8.4.2.9	5	R	1.73	1	1	2.9	2.9
Validation antenna uncertainty (validation measurement only)	8.4.2.10	0	N	1.00	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	8.4.2.11	0	N	1.00	1	1	0.0	0.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ϵ', σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
SAR scaling	8.4.3.2	0	R	1.73	1	1	0.0	0.0
Combined Standard Uncertainty			RSS				11.4	11.4
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k = 2				22.9	22.7

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

Uncertainty Budget for Device Under Test, for 3 GHz to 6 GHz								
Input quantity Xi (source of uncertainty)	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a q_i	c_i (1 g)	c_i (10 g)	1 g u_i (±%)	10 g u_i (±%)
Measurement System								
Probe Calibration	8.4.1.1	13.1	N (k = 2)	2.00	1	1	6.6	6.6
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	2.6	R	1.73	1	1	1.5	1.5
Probe isotropy	8.4.1.5	7.6	R	1.73	1	1	4.4	4.4
Other probe and data acquisition errors	8.4.1.6	1.2	N	1.00	1	1	1.2	1.2
RF ambient and noise	8.4.1.7	1.8	N	1.00	1	1	1.8	1.8
Probe positioning errors	8.4.1.8	0.006 mm	N	1.00	0.29	0.29	0.2	0.2
Data processing errors	8.4.1.9	2.3	N	1.00	1	1	2.3	2.3
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	3.4	R	1.73	0.78	0.71	1.5	1.4
Shell permittivity	8.4.2.3	14	R	1.73	0.25	0.25	2.0	2.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	2	N	1.00	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	8.4.2.5	2.8	N	1.00	1	1	2.8	2.8
Device holder effects	8.4.2.6	4.55	N	1.00	1	1	4.6	4.6
Effect of operating mode on probe sensitivity	8.4.2.7	2.4	R	1.73	1	1	1.4	1.4
Time-average SAR	8.4.2.8	1.7	R	1.73	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	8.4.2.9	5	R	1.73	1	1	2.9	2.9
Validation antenna uncertainty (validation measurement only)	8.4.2.10	0	N	1.00	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	8.4.2.11	0	N	1.00	1	1	0.0	0.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ϵ', σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
SAR scaling	8.4.3.2	0	R	1.73	1	1	0.0	0.0
Combined Standard Uncertainty			RSS				12.3	12.3
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k = 2				24.7	24.5

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

Uncertainty Budget for Device Under Test, for 6 GHz to 10 GHz								
Input quantity Xi (source of uncertainty)	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a q _i	c _i (1 g)	c _i (10 g)	1 g u _i (±%)	10 g u _i (±%)
Measurement System								
Probe Calibration	8.4.1.1	18.6	N (k = 2)	2.00	1	1	9.3	9.3
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	2.6	R	1.73	1	1	1.5	1.5
Probe isotropy	8.4.1.5	7.6	R	1.73	1	1	4.4	4.4
Other probe and data acquisition errors	8.4.1.6	2.4	N	1.00	1	1	2.4	2.4
RF ambient and noise	8.4.1.7	1.8	N	1.00	1	1	1.8	1.8
Probe positioning errors	8.4.1.8	0.005 mm	N	1.00	0.29	0.29	0.2	0.2
Data processing errors	8.4.1.9	3.5	N	1.00	1	1	3.5	3.5
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	2.4	R	1.73	0.78	0.71	1.1	1.0
Shell permittivity	8.4.2.3	14	R	1.73	0.25	0.25	2.0	2.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	2	N	1.00	2	2	4.0	4.0
Repeatability of positioning the DUT or source against the phantom	8.4.2.5	2.8	N	1.00	1	1	2.8	2.8
Device holder effects	8.4.2.6	4.55	N	1.00	1	1	4.6	4.6
Effect of operating mode on probe sensitivity	8.4.2.7	2.4	R	1.73	1	1	1.4	1.4
Time-average SAR	8.4.2.8	1.7	R	1.73	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	8.4.2.9	5	R	1.73	1	1	2.9	2.9
Validation antenna uncertainty (validation measurement only)	8.4.2.10	0	N	1.00	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	8.4.2.11	0	N	1.00	1	1	0.0	0.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ε',σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
SAR scaling	8.4.3.2	0	R	1.73	1	1	0.0	0.0
Combined Standard Uncertainty			RSS				14.4	14.3
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k =2				28.7	28.6

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

Uncertainty Budget for System Validation (dipole & flat phantom), for 4 MHz to 300 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>
Uncertainty Component	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a q _i	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)
Measurement System								
Probe Calibration	8.4.1.1	13.3	N	2.00	1	1	6.7	6.7
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	0.0	R	1.73	1	1	0.0	0.0
Probe isotropy	8.4.1.5	4.7	R	1.73	1	1	2.7	2.7
Other probe and data acquisition errors	8.4.1.6	0.8	N	1.00	1	1	0.8	0.8
RF ambient and noise	8.4.1.7	0.6	N	1.00	1	1	0.6	0.6
Probe positioning errors	8.4.1.8	0.006 mm	N	1.00	0.04	0.04	0.1	0.1
Data processing errors	8.4.1.9	0.6	N	1.00	1	1	0.6	0.6
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	5.4	R	1.73	0.78	0.71	2.4	2.2
Shell permittivity	8.4.2.3	14	R	1.73	0	0	0.0	0.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	1	N	1.00	2	2	2.0	2.0
Effect of operating mode on probe sensitivity	8.4.2.7	0	R	1.73	1	1	0.0	0.0
Time-average SAR	8.4.2.8	0	R	1.73	1	1	0.0	0.0
Validation antenna uncertainty (validation measurement only)	8.4.2.10	3.2	N	1.00	1	1	3.2	3.2
Uncertainty in accepted power (validation measurement only)	8.4.2.11	2	N	1.00	1	1	2.0	2.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ε',σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
Combined Standard Uncertainty			RSS				9.6	9.5
Expanded Uncertainty (95% CONFIDENCE LEVEL)			k =2				19.3	19.0

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) ν_i - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

Uncertainty Budget for System Validation (dipole & flat phantom), for 300 MHz to 6000 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>
Uncertainty Component	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a _{<i>q_i</i>}	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)
Measurement System								
Probe Calibration	8.4.1.1	11.0	N	2.00	1	1	5.5	5.5
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	0.0	R	1.73	1	1	0.0	0.0
Probe isotropy	8.4.1.5	4.7	R	1.73	1	1	2.7	2.7
Other probe and data acquisition errors	8.4.1.6	1.2	N	1.00	1	1	1.2	1.2
RF ambient and noise	8.4.1.7	0.6	N	1.00	1	1	0.6	0.6
Probe positioning errors	8.4.1.8	0.005 mm	N	1.00	0.29	0.29	0.2	0.2
Data processing errors	8.4.1.9	0.6	N	1.00	1	1	0.6	0.6
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	3.4	R	1.73	0.78	0.71	1.5	1.4
Shell permittivity	8.4.2.3	14	R	1.73	0.25	0.25	2.0	2.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	1.3	N	1.00	2	2	2.6	2.6
Effect of operating mode on probe sensitivity	8.4.2.7	0	R	1.73	1	1	0.0	0.0
Time-average SAR	8.4.2.8	0	R	1.73	1	1	0.0	0.0
Validation antenna uncertainty (validation measurement only)	8.4.2.10	3.2	N	1.00	1	1	3.2	3.2
Uncertainty in accepted power (validation measurement only)	8.4.2.11	2	N	1.00	1	1	2.0	2.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ϵ', σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
Combined Standard Uncertainty			RSS				9.1	9.0
Expanded Uncertainty (95% CONFIDENCE LEVEL)			<i>k</i> = 2				18.2	18.0

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 uncertaintyh) *v_i* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

Uncertainty Budget for System Validation (dipole & flat phantom), for 6 GHz to 10 GHz								
<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>
Uncertainty Component	IEEE 1528 section (2020)	Tol. (± %)	Prob Dist	Div. ^a _{q_i}	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)
Measurement System								
Probe Calibration	8.4.1.1	18.6	N	2.00	1	1	9.3	9.3
Probe Calibration Drift	8.4.1.2	1.7	R	1.73	1	1	1.0	1.0
Probe linearity and detection limit	8.4.1.3	4.7	R	1.73	1	1	2.7	2.7
Broadband signal	8.4.1.4	0.0	R	1.73	1	1	0.0	0.0
Probe isotropy	8.4.1.5	4.7	R	1.73	1	1	2.7	2.7
Other probe and data acquisition errors	8.4.1.6	2.4	N	1.00	1	1	2.4	2.4
RF ambient and noise	8.4.1.7	0.6	N	1.00	1	1	0.6	0.6
Probe positioning errors	8.4.1.8	0.005 mm	N	1.00	0.5	0.5	0.3	0.3
Data processing errors	8.4.1.9	0.6	N	1.00	1	1	0.6	0.6
Phantom and Device								
Measurement of phantom conductivity(σ)	8.4.2.1	2.5	N	1.00	0.78	0.71	2.0	1.8
Temperature effects (medium)	8.4.2.2	2.4	R	1.73	0.78	0.71	1.1	1.0
Shell permittivity	8.4.2.3	14	R	1.73	0.5	0.5	4.0	4.0
Distance between the radiating element of the DUT and the phantom medium	8.4.2.4	2.6	N	1.00	2	2	5.3	5.3
Effect of operating mode on probe sensitivity	8.4.2.7	0	R	1.73	1	1	0.0	0.0
Time-average SAR	8.4.2.8	0	R	1.73	1	1	0.0	0.0
Validation antenna uncertainty (validation measurement only)	8.4.2.10	3.2	N	1.00	1	1	3.2	3.2
Uncertainty in accepted power (validation measurement only)	8.4.2.11	2	N	1.00	1	1	2.0	2.0
Corrections to the SAR result (if applied)								
Phantom deviation from target (ε',σ)	8.4.3.1	1.9	N	1.00	1	0.84	1.9	1.6
Combined Standard Uncertainty			RSS				13.3	13.2
Expanded Uncertainty (95% CONFIDENCE LEVEL)			<i>k</i> = 2				26.5	26.4

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) *ν_i* - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

Uncertainty Budget for Device under test, for iPD					
Uncertainty Component	Uncertainty Value (±dB)	Prob Dist	Div.	c_i	Standard Uncertainty (±dB)
Uncertainty terms dependent on the measurement System					
Probe calibration	0.49	N	1.00	1	0.49
Probe correction	0.00	R	1.73	1	0.00
Frequency response (BW ≤ 1GHz)	0.20	R	1.73	1	0.12
Sensor cross coupling	0.00	R	1.73	1	0.00
Isotropy	0.50	R	1.73	1	0.29
Linearity	0.20	R	1.73	1	0.12
Probe scattering	0.00	R	1.73	1	0.00
Probe positioning offset	0.30	R	1.73	1	0.17
Probe positioning repeatability	0.04	R	1.73	1	0.02
Sensor mechanical offset	0.00	R	1.73	1	0.00
Probe spatial resolution	0.00	R	1.73	1	0.00
Field impedance dependence	0.00	R	1.73	1	0.00
Measurement drift	0.05	R	1.73	1	0.03
Amplitude and phase noise	0.04	R	1.73	1	0.02
Measurement area truncation	0.00	R	1.73	1	0.00
Data acquisition	0.03	N	1.00	1	0.03
Sampling	0.00	R	1.73	1	0.00
Field reconstruction	0.00	R	1.73	1	0.00
Signal-to-Noise Ratio	0.00	R	1.73	1	0.00
Forward transformation	0.00	R	1.73	1	0.00
Spatial averaging	0.10	R	1.73	1	0.06
Uncertainty terms dependent on the DUT and environment factors					
Probe coupling with DUT	0.00	R	1.73	1	0.00
Modulation response	0.40	R	1.73	1	0.23
Integration time	0.00	R	1.73	1	0.00
Response time	0.00	R	1.73	1	0.00
Device holder influence	0.10	R	1.73	1	0.06
DUT alignment	0.00	R	1.73	1	0.00
RF ambient conditions	0.04	R	1.73	1	0.02
Laboratory Temperature	0.05	R	1.73	1	0.03
Laboratory Reflections	0.04	R	1.73	1	0.02
Immunity / secondary reception	0.00	R	1.73	1	0.00
Drift of the DUT	-	R	1.73	1	-
Combined Standard Uncertainty		RSS			0.67
Expanded Uncertainty (95% CONFIDENCE LEVEL)		$k=2$			1.33

Notes for uncertainty budget Tables:

- Column headings $a-k$ are given for reference.
- Tol. - tolerance in influence quantity.
- Prob. Dist. – Probability distribution
- N, R - normal, rectangular probability distributions
- Div. - divisor used to translate tolerance into normally distributed standard uncertainty
- c_i - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- u_i – SAR uncertainty
- ν_i - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

Uncertainty Budget for System Verification (dipole), for iPD

Uncertainty Component	Uncertainty Value (±dB)	Prob Dist	Div.	c_i	Standard Uncertainty (±dB)
Uncertainty terms dependent on the measurement System					
Calibration Repeatability	0.64	N	1.00	1	0.64
Probe correction	0.00	R	1.73	1	0.00
Frequency response ($BW \leq 1\text{GHz}$)	0.20	R	1.73	0	0.00
Sensor cross coupling	0.00	R	1.73	1	0.00
Isotropy	0.30	R	1.73	1	0.17
Linearity	0.20	R	1.73	1	0.12
Probe scattering	0.00	R	1.73	1	0.00
Probe positioning offset	0.11	R	1.73	1	0.06
Probe positioning repeatability	0.04	R	1.73	1	0.02
Sensor mechanical offset	0.00	R	1.73	1	0.00
Probe spatial resolution	0.00	R	1.73	1	0.00
Field impedance dependence	0.00	R	1.73	1	0.00
Measurement drift	0.05	R	1.73	1	0.03
Amplitude and phase noise	0.04	R	1.73	0	0.00
Measurement area truncation	0.00	R	1.73	1	0.00
Data acquisition	0.03	N	1.00	1	0.03
Sampling	0.00	R	1.73	1	0.00
Field reconstruction	0.60	R	1.73	0	0.10
Signal-to-Noise Ratio	0.00	R	1.73	1	0.00
Forward transformation	0.00	R	1.73	1	0.00
Power density scaling	-	R	1.73	1	-
Spatial averaging	0.10	R	1.73	0	0.00
Uncertainty terms dependent on the DUT and environment factors					
Probe coupling with DUT	0.00	R	1.73	1	0.00
Modulation response	0.40	R	1.73	0	0.00
Integration time	0.00	R	1.73	1	0.00
Response time	0.00	R	1.73	1	0.00
Device holder influence	0.10	R	1.73	0	0.00
DUT alignment	0.00	R	1.73	1	0.00
RF ambient conditions	0.04	R	1.73	1	0.02
Laboratory Temperature	0.05	R	1.73	1	0.03
Laboratory Reflections	0.04	R	1.73	1	0.02
Immunity / secondary reception	0.00	R	1.73	0	0.00
Drift of the DUT	0.10	R	1.73	1	0.06
Combined Standard Uncertainty		RSS			0.69
Expanded Uncertainty (95% CONFIDENCE LEVEL)		$k=2$			0.66

Notes for uncertainty budget Tables:

- Column headings $a-k$ are given for reference.
- Tol. - tolerance in influence quantity.
- Prob. Dist. – Probability distribution
- N, R - normal, rectangular probability distributions
- Div. - divisor used to translate tolerance into normally distributed standard uncertainty
- c_i - sensitivity coefficient that should be applied to convert the variability of the uncertainty component into a variability of SAR.
- u_i – SAR uncertainty
- ν_i - degrees of freedom for standard uncertainty and effective degrees of freedom for the expanded uncertainty

Appendix D

SAR Summary Results Table for FCC PAG Review

Table D.1: LMR UHF SAR Summary Results

LMR UHF SAR Summary Results (Freq in MHz)

Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	Max Calc. 1g SAR (W/kg)			
	Head /						F1	F2	F3	F4
	Face						406.2000	423.0000	450.0125	465.5000
21	Body	4	1	3, 6, 9	2	Front				5.89
21	Body	4	1	3, 6, 8	2	Front				6.61
21	Body	4	1	1, 8	2	Front				5.68
21	Face	4	2	@ back	None	Back			3.86	
22	Body	4	1	3, 6, 9	1	Front	5.12			
22	Body	4	2	3, 6, 8	1	Front	5.32			
22	Body	4	2	1, 8	1	Front	4.69			
22	Face	4	1	@ back	None	Back		3.77		
23	Body	4	1	3, 6, 9	2	Front				5.89
23	Body	4	1	3, 6, 8	2	Front				6.61
23	Body	4	1	1, 8	2	Front				5.68
23	Face	4	2	@ back	None	Back			3.86	

Table D.2: LMR VHF SAR Summary Results

LMR VHF SAR Summary Results (Freq in MHz)

Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	Max Calc. 1g SAR (W/kg)		
	Head /						F1	F2	F2
	Face						138.000	144.4000	173.4000
19	Body	2	1	3, 6, 9	1	Front			0.68
19	Body	2	1	3, 6, 8	1	Front			0.70
19	Body	2	1	1, 8	1	Front			0.79
19	Face	2	2	@ back	None	Back			0.56
20	Body	2	1	3, 6, 9	1	Front	1.22		
20	Body	2	1	3, 6, 8	1	Front	1.14		
20	Body	2	1	1, 8	1	Front	1.37		
20	Face	2	2	@ back	None	Back		1.03	

Table D.3: LMR 769-775 MHz SAR Summary Results

LMR 769-775MHz SAR Summary Results (Freq in MHz)							Max Calc. 1g SAR (W/kg)
Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1
	Head /						769.9875
	Face						
24	Body	1	1	3, 6, 9	None	Front	2.70
24	Body	1	1	3, 6, 8	None	Front	3.60
24	Body	1	1	1, 8	None	Front	3.33
24	Face	1	1	@ back	None	Back	1.90

Table D.4: LMR 768-776 MHz SAR Summary Results

LMR 768-776MHz SAR Summary Results (Freq in MHz)							Max Calc. 1g SAR (W/kg)
Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1
	Head /						769.9875
	Face						
25	Body	1	1	3, 6, 9	None	Front	2.70
25	Body	1	1	3, 6, 8	None	Front	3.60
25	Body	1	1	1, 8	None	Front	3.33
25	Face	1	1	@ back	None	Back	1.90

Table D.5: LMR 799-824 MHz SAR Summary Results

LMR 799-824MHz SAR Summary Results (Freq in MHz)							Max Calc. 1g SAR (W/kg)
Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1
	Head /						811.5000
	Face						
26	Body	1	1	3, 6, 9	3, 4	Front	4.58
26	Body	1	1	3, 6, 8	3, 4	Front	3.94
26	Body	1	1	1, 8	3, 4	Front	3.54
26	Face	1	1	@ back	None	Back	2.08

Table D.6: LMR 798-824 MHz SAR Summary Results

LMR 798-824MHz SAR Summary Results (Freq in MHz)

Table #							Max Calc. 1g SAR (W/kg)
	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1
	Head /						
	Face						
27	Body	1	1	3, 6, 9	3, 4	Front	4.58
27	Body	1	1	3, 6, 8	3, 4	Front	3.94
27	Body	1	1	1, 8	3, 4	Front	3.54
27	Face	1	1	@ back	None	Back	2.08

Table D.7: LMR 851-869 MHz SAR Summary Results

LMR 851-869MHz SAR Summary Results (Freq in MHz)

Table #							Max Calc. 1g SAR (W/kg)	
	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1	F2
	Head /							
	Face						851.0125	860.0000
28	Body	1	1	3, 6, 9	1	Front	4.74	
28	Body	1	1	3, 6, 8	1	Front	4.57	
28	Body	1	1	1, 8	1	Front	3.69	
28	Face	1	1	@ back	None	Back		1.90

Table D.8: LMR 851-869 MHz SAR Summary Results

LMR 851-869MHz SAR Summary Results (Freq in MHz)

Table #							Max Calc. 1g SAR (W/kg)	
	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1	F2
	Head /							
	Face						851.0125	860.0000
29	Body	1	1	3, 6, 9	1	Front	4.74	
29	Body	1	1	3, 6, 8	1	Front	4.57	
29	Body	1	1	1, 8	1	Front	3.69	
29	Face	1	1	@ back	None	Back		1.90

Table D.9: WLAN 2.4GHz SAR Summary Results

WLAN 2.4GHz SAR Summary Results (Freq in MHz)

Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	Max Calc. 1g SAR (W/kg)
	Head /						F1
	Face						2437.0000
30	Body	6	1	3, 6, 9	None	Back	0.025
30	Body	6	1	3, 6, 8	None	Back	0.043
30	Body	6	1	1, 8	None	Back	0.023
30	Face	6	2	Radio @ Front 2.5cm	None	Front	0.152

Table D.10: WLAN 5GHz SAR Summary Results

WLAN 2.4GHz SAR Summary Results (Freq in MHz)

Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	Max Calc. 1g SAR (W/kg)		
	Head /						F1	F2	F3
	Face						5320.0000	5500.0000	5745.0000
31	Body	6	1	3, 6, 9	None	Back	0.001		
31	Body	6	1	3, 6, 8	None	Back	0.001		
31	Body	6	1	1, 8	None	Back	0.001		
31	Face	6, 7	2	Radio @ Front 2.5cm	None	Front	0.168		
31	Body	6, 7	1	3, 6, 9	None	Back		0.017	
31	Body	6, 7	1	3, 6, 8	None	Back		0.025	
31	Body	6, 7	1	1, 8	None	Back		0.020	
31	Face	6, 7	1	Radio @ Front 2.5cm	None	Front		0.283	
31	Body	6, 7	1	3, 6, 9	None	Back			0.018
31	Body	6, 7	1	3, 6, 8	None	Back			0.033
31	Body	6, 7	1	1, 8	None	Back			0.021
31	Face	6, 7	2	Radio @ Front 2.5cm	None	Front			0.180

Table D.11: WiFi 6E SAR & APD Summary Results WiFi 6E SAR & APD Summary Results (Freq in MHz)

							Max Calc. 1g SAR (W/kg)		Max Calc. APD (W/m^2)	
Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1	F2	F1	F2
	Head /						5985.0000 (SAR)	6305.0000 (SAR)	5985.0000 (APD)	6305.0000 (APD)
	Face									
32	Body	6, 7	1	3, 6, 9	None	Back		0.014		0.130
32	Body	6, 7	1	3, 6, 8	None	Back		0.013		0.119
32	Body	6, 7	1	1, 8	None	Back		0.010		0.079
32	Face	6, 7	2	Radio @ Front 2.5cm	None	Front	0.119		1.084	

Table D.12: WiFi 6E iPD (psPD) Summary Results

							Max Calc. Total psPD (W/m^2)
Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1
	Head /						5985.0000 (iPD/psPD)
	Face						
33	Face	6, 7	1	Radio @ Front 2.5cm	None	Front	2.030

Table D.13: LTE SAR Summary Results

LTE SAR Summary Results (Freq in MHz)

							Max Calc. 1g SAR (W/kg)						
Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	F1	F2	F3	F4	F5	F6	F7
	Head /												
	Face						836.5000	707.5000	782.0000	793.0000	1905.0000	1770.0000	680.5000
34	Body	5	1	3, 6, 9	None	Back	0.049						
34	Body	8	1	3, 6, 9	None	Back	0.149						
34	Body	5	1	3, 6, 8	None	Back	0.024						
34	Body	8	1	3, 6, 8	None	Back	0.242						
34	Body	5	1	1, 8	None	Back	0.031						
34	Body	8	1	1, 8	None	Back	0.076						
34	Face	5	1	Radio @ Front 2.5cm	None	Front	0.183						
34	Face	8	1	Radio @ Front 2.5cm	None	Front	0.006						
35	Body	5	1	3, 6, 9	None	Back		0.059					
35	Body	5	1	3, 6, 8	None	Back		0.059					
35	Body	5	1	1, 8	None	Back		0.064					
35	Face	5	2	Radio @ Front 2.5cm	None	Front		0.110					
36	Body	5	1	3, 6, 9	None	Back			0.072				
36	Body	8	1	3, 6, 9	None	Back			0.126				
36	Body	5	1	3, 6, 8	None	Back			0.021				
36	Body	8	1	3, 6, 8	None	Back			0.166				
36	Body	5	1	1, 8	None	Back			0.033				
36	Body	8	1	1, 8	None	Back			0.070				
36	Face	5	2	Radio @ Front 2.5cm	None	Front			0.113				
36	Face	8	1	Radio @ Front 2.5cm	None	Front			0.008				

Table D.13(Continued): LTE SAR Summary Results

LTE SAR Summary Results (Freq in MHz)

Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	Max Calc. 1g SAR (W/kg)						
	Head /						F1	F2	F3	F4	F5	F6	F7
	Face						836.5000	707.5000	782.0000	793.0000	1905.0000	1770.0000	680.5000
37	Body	5	1	3, 6, 9	None	Back				0.052			
37	Body	5	1	3, 6, 8	None	Back				0.049			
37	Body	5	1	1, 8	None	Back				0.036			
37	Face	5	2	Radio @ Front 2.5cm	None	Front				0.105			
38	Body	5	1	3, 6, 9	None	Back					0.046		
38	Body	5	1	3, 6, 8	None	Back					0.069		
38	Body	5	1	1, 8	None	Back					0.025		
38	Face	5	1	Radio @ Front 2.5cm	None	Front					0.351		
39	Body	5	1	3, 6, 9	None	Back						0.038	
39	Body	5	1	3, 6, 8	None	Back						0.070	
39	Body	5	1	1, 8	None	Back						0.079	
39	Face	5	1	Radio @ Front 2.5cm	None	Front						0.331	
40	Body	5	1	3, 6, 9	None	Back							0.056
40	Body	5	1	3, 6, 8	None	Back							0.036
40	Body	5	1	1, 8	None	Back							0.034
40	Face	5	1	Radio @ Front 2.5cm	None	Front							0.081

Table D.14: 5G NR SAR Summary Results

LTE SAR Summary Results (Freq in MHz)

Table #	Body /	Antenna No.	Battery No.	Body Worn No.	Audio No.	Front / Back	Max Calc. 1g SAR (W/kg)							
	Head /						F1	F2	F3	F4	F5	F6	F7	F8
	Face						1880.0000	836.5000	1882.5000	2546.0100	1765.0000	680.5000	3500.0100	3930.0000
41	Body	5	1	3, 6, 9	None	Back	0.057							
41	Body	5	1	3, 6, 8	None	Back	0.072							
41	Body	5	1	1, 8	None	Back	0.080							
41	Face	5	1	Radio @ Front 2.5cm	None	Front	0.371							
42	Body	5	1	3, 6, 9	None	Back		0.063						
42	Body	5	1	3, 6, 8	None	Back		0.023						
42	Body	5	1	1, 8	None	Back		0.032						
42	Body	8	1	3, 6, 9	None	Back		0.163						
42	Body	8	2	3, 6, 8	None	Back		0.242						
42	Body	10	2	1, 8	None	Back		0.074						
42	Face	5	2	Radio @ Front 2.5cm	None	Front		0.168						
42	Face	8	1	Radio @ Front 2.5cm	None	Front		0.006						
43	Body	5	1	3, 6, 9	None	Back			0.047					
43	Body	5	1	3, 6, 8	None	Back			0.061					
43	Body	5	1	1, 8	None	Back			0.073					
43	Face	5	2	Radio @ Front 2.5cm	None	Front			0.323					
44	Body	5	1	3, 6, 9	None	Back				0.000				
44	Body	5	2	3, 6, 8	None	Back				0.003				
44	Body	5	2	1, 8	None	Back				0.000				
44	Face	5	2	Radio @ Front 2.5cm	None	Front				0.034				
45	Body	5	1	3, 6, 9	None	Back					0.035			
45	Body	5	1	3, 6, 8	None	Back					0.063			
45	Body	5	1	1, 8	None	Back					0.074			
45	Face	5	1	Radio @ Front 2.5cm	None	Front					0.268			
46	Body	5	1	3, 6, 9	None	Back						0.063		
46	Body	5	1	3, 6, 8	None	Back						0.042		
46	Body	5	1	1, 8	None	Back						0.043		
46	Face	5	2	Radio @ Front 2.5cm	None	Front						0.084		
47	Body	5	1	3, 6, 9	None	Back							0.019	
47	Body	5	2	3, 6, 8	None	Back							0.002	
47	Body	5	2	1, 8	None	Back							0.000	
47	Face	5	2	Radio @ Front 2.5cm	None	Front							0.060	
48	Body	5	1	3, 6, 9	None	Back								0.000
48	Body	5	2	3, 6, 8	None	Back								0.008
48	Body	5	2	1, 8	None	Back								0.000
48	Face	5	2	Radio @ Front 2.5cm	None	Front								0.052