



DECLARATION OF COMPLIANCE SAR ASSESSMENT Report Part 2 of 2

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Report Author: Saw Sun Hock (EME Engineer)
Date/s Tested: 09/08/2020-10/05/2020, 10/15/2020-10/16/2020
Manufacturer: Motorola Solutions Inc.
DUT Description: Handheld Portable – MOTOTRBO ION 400-512 MHz 4W LTE CBRS GNSS BT WiFi
Test TX mode(s): FM; LTE; WLAN
Max. Power output: Refer to Table 3
Nominal Power: Refer to Table 3
Tx Frequency Bands: Refer to Table 3
Signaling type: FM, TDMA, FHSS, DSSS and OFDM
Model(s) Tested: AAH90ZDU9RH1AN (PMUE5674A)
Model(s) Certified: AAH90ZDU9RH1AN (PMUE5674A)
Serial Number(s): 734TWP0446, 734TWP0511, 734TWP0574
Classification: Occupational/Controlled
Applicant Name: Motorola Solutions Inc.
Applicant Address: 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322
FCC ID: AZ489FT7133; LMR 406.125-512 MHz; LTE; WLAN 2.4 GHz; WLAN 5GHz, Bluetooth and Bluetooth LE
 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC: 109U-89FT7133;
 This report contains results that are immaterial for ISED equipment approval, which are clearly identified.
ISED Test Site registration: 24843
FCC Test Firm Registration Number: 823256

The test results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits of 8 W/kg averaged over 1 gram per the requirements of FCC 47 CFR § 2.1093 and RSS-102 (Issue 5).

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. This reporting format is consistent with the suggested guidelines of the TIA TSB-150 December 2004. The results and statements contained in this report pertain only to the device(s) evaluated.

Tiong Nguk Ing
Deputy Technical Manager (Approved Signatory)
Approval Date: 10/27/2020

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1.0 System Verification for WLAN

System verification checks were conducted each day during the SAR assessment. The results are normalized to 1W. Appendix C includes DASY plots for each day during the SAR assessment. The Table below summarizes the daily system check results used for the SAR assessment.

Table 1

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
7533	IEEE / IEC Head	SPEAG D2450V2 / 782	54.40 +/- 10%	13.00	52.00	9/15/2020#
				12.60	50.40	9/28/2020
		SPEAG D5GHzV2_5250MHz / 1026	81.00 +/- 10%	7.79	77.90	9/17/2020
				7.86	78.80	9/20/2020
				7.51	75.10	9/21/2020
		SPEAG D5GHzV2_5600MHz / 1026	85.90 +/- 10%	8.19	81.90	9/16/2020
				8.49	84.90	9/18/2020#
				8.47	84.70	9/21/2020#
				8.12	81.20	9/29/2020
		SPEAG D5GHzV2_5600MHz / 1027	83.60 +/- 10%	8.20	82.00	9/22/2020
				8.01	80.10	10/4/2020#
		SPEAG D5GHzV2_5750MHz / 1026	82.00 +/- 10%	7.83	78.30	9/30/2020
		SPEAG D5GHzV2_5750MHz / 1027	79.70 +/- 10%	7.40	74.00	10/4/2020#

Note: '#' indicates that system verification check covers next test day

2.0 Equivalent Tissue Test Results for WLAN

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 2

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
2412	IEEE/ IEC Head	1.77 (1.68-1.86)	39.3 (35.3-43.2)	1.83	35.7	9/15/2020#
2437		1.79 (1.70-1.88)	39.2 (35.3-43.1)	1.84	35.9	9/28/2020
2450		1.80 (1.71-1.89)	39.2 (35.3-43.1)	1.86	35.6	9/15/2020#
2462		1.81 (1.72-1.90)	39.2 (35.3-43.1)	1.85	35.9	9/28/2020
2462				1.86	35.8	9/28/2020
5250		4.71 (4.24-5.18)	36.0 (32.4-39.5)	4.76	37.3	9/17/2020
5250				4.33	32.8	9/20/2020
5250				4.39	33.4	9/21/2020
5290		4.75 (4.28-5.23)	35.9 (32.3-39.5)	4.81	37.2	9/17/2020
5290				4.38	32.7	9/20/2020
5290				4.42	33.3	9/21/2020
5530		5.00 (4.50-5.50)	35.6 (32.0-39.2)	4.53	32.1	9/29/2020
5530				4.61	32.5	10/4/2020#
5600		5.07 (4.56-5.58)	35.5 (32.0-39.1)	4.64	32.7	9/16/2020#
5600				4.73	34.5	9/18/2020#
5600				4.73	32.9	9/21/2020#
5600				4.75	32.7	9/22/2020
5600				4.60	32.0	9/29/2020
5600				4.67	32.4	10/4/2020
5610		5.08 (4.57-5.59)	35.5 (31.9-39.0)	4.65	32.7	9/16/2020#
5610				4.75	34.5	9/18/2020#
5610				4.68	32.4	10/4/2020
5690		5.16 (4.64-5.68)	35.4 (31.9-39.0)	4.82	32.8	9/21/2020#
5690				4.86	32.6	9/22/2020
5750		5.22 (4.70-5.74)	35.4 (31.8-38.9)	4.93	33.2	9/30/2020
5750				4.82	32.2	10/4/2020#
5775		5.25 (4.72-5.77)	35.3 (31.8-38.9)	4.95	33.2	9/30/2020
5775				4.85	32.2	10/4/2020#

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

3.0 DUT Test Data for WLAN

SAR test reduction is applied using the following criteria according to KDB 248227 D01:

- a. For 2.4GHz 802.11 g/n SAR testing is not required when then highest reported SAR for DSSS is adjusted by ratio of OFDM to DSSS specified maximum output power and adjusted SAR is ≤ 1.2 W/kg.
- b. U-NII-1 SAR testing not required when U-NII-2A band highest reported SAR for a test configuration is ≤ 1.2 W/kg.
- c. For all positions/configurations, when reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test positions/configurations are tested.

3.1 Assessment for WLAN 2.4 GHz (802.11 b/g/n)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 248227.

Table 3

Band	802.11	Ch. BW	Ch.	Freq. (MHz)	Measured conducted power (W)
2.4 GHz	b	20	1	2412	0.054
			6	2437	0.050
			11	2462	0.051
	g	20	1	2412	0.055
			6	2437	0.052
			11	2462	0.052
	n	20	1	2412	0.053
			6	2437	0.051
			11	2462	0.051
		40	3	2422	0.055

Assessments at the Body

Table below presents the data of the body assessment.

Table 4

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)	Run#
AN000345A01.	PMNN4803A	PMLN8126A w/ PMLN4651A	None	2412.0000	0.0540	0.35	0.0160	0.0169	ZZ-AB-200915-05
		PMLN8126A w/ PMLN7008A		2412.0000	0.0540	-0.30	0.0230	0.0260	ZZ-AB-200915-06
		PMLN8127A w/ PMLN5407A		2412.0000	0.0540	0.31	0.0066	0.0069	ZZ-AB-200915-07
		PMLN8127A w/ PMLN5409A		2412.0000	0.0540	-0.23	0.0046	0.0051	ZZ-AB-200916-01#
Assessment of Additional Battery									
AN000345A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	2412.0000	0.0541	-0.17	0.0250	0.0273	ZZ-AB-200916-02#

Assessments at the Face

Table below presents the data of the face assessment

Table 5

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)	Run#
AN000345A01	PMNN4804A	None	None	2412.0000	0.0541	-0.33	0.0110	0.0125	ZZ-FACE-200916-05#
Assessment of Additional Battery									
AN000345A01	PMNN4803A	None	None	2412.0000	0.0540	0.30	0.0140	0.0148	ZZ-FACE-200916-06#

Additional Assessments for ISED Canada

As per ISED Notice 2016-DRS001, additional tests were required for the low, mid and high frequency channels for the configuration with the highest SAR value. The SAR results are in Tables below. SAR plot is included in Appendix for the highest configuration.

Table 6

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)	Run#
Body									
AN000345A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	2412.0000	0.0541	-0.17	0.0250	0.0273	ZZ-AB-200916-02#
				2437.0000	0.0506	0.45	0.0410	0.0461	ZZ-AB-200928-02
				2462.0000	0.0513	0.08	0.0410	0.0455	ZZ-AB-200928-03
Face									
AN000345A01	PMNN4803A	None	None	2412.0000	0.0540	0.30	0.0140	0.0148	ZZ-FACE-200916-06#
				2437.0000	0.0506	-0.04	0.0150	0.0170	BL(AMN)-FACE-200928-06
				2462.0000	0.0513	0.07	0.0150	0.0166	BL(AMN)-FACE-200928-05

3.2 Assessment for WLAN 5.0 GHz (802.11 a/n/ac)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 248227.

Table 7

Band	802.11	Ch. BW	Ch.	Freq. (MHz)	Measured conducted power (W)
U-NII-1 (5.15-5.25GHz)	a	20	36	5180	0.032
			40	5200	0.033
			44	5220	0.035
			48	5240	0.033
	n	20	36	5180	0.030
			40	5200	0.032
			44	5220	0.034
			48	5240	0.032
		40	38	5190	0.032
			46	5230	0.035
	ac	20	36	5180	0.031
			40	5200	0.032
			44	5220	0.034
			48	5240	0.032
		40	38	5190	0.032
			46	5230	0.035
		80	42	5210	0.036
U-NII-2A (5.25-5.35GHz)	a	20	52	5260	0.031
			56	5280	0.031
			60	5300	0.032
			64	5320	0.032
	n	20	52	5260	0.030
			56	5280	0.030
			60	5300	0.031
			64	5320	0.031
		40	54	5270	0.032
			62	5310	0.033
	ac	20	52	5260	0.030
			56	5280	0.030
			60	5300	0.031
			64	5320	0.031
		40	54	5270	0.032
			62	5310	0.033
		80	58	5290	0.032

Table 7 (Continued)

Band	802.11	Ch. BW	Ch.	Freq. (MHz)	Measured conducted power (W)
U-NII-2C (5.47-5.65 GHz)	a	20	100	5500	0.048
			112	5560	0.046
			116	5580	0.048
			128	5640	0.046
	n	20	100	5500	0.046
			112	5560	0.044
			116	5580	0.046
			128	5640	0.044
		40	102	5510	0.049
			110	5550	0.048
			118	5590	0.051
			126	5630	0.050
	ac	20	100	5500	0.046
			112	5560	0.045
			116	5580	0.046
			128	5640	0.044
		40	102	5510	0.049
			110	5550	0.048
			118	5590	0.051
			126	5630	0.050
U-NII-3 (5.65-5.85 GHz)	a	20	100	5500	0.046
			112	5560	0.045
			116	5580	0.046
	n	20	100	5500	0.046
			112	5560	0.045
			116	5580	0.046
		40	102	5510	0.049
			110	5550	0.048
			118	5590	0.051
			126	5630	0.050
			122	5610	0.047
	ac	20	100	5500	0.046
			112	5560	0.045
			116	5580	0.046
		40	102	5510	0.049
			110	5550	0.048
			118	5590	0.051
			126	5630	0.050
			122	5610	0.047
		80	106	5530	0.046
			114	5570	0.048
			122	5610	0.047
			130	5650	0.049
			138	5690	0.050
			146	5730	0.048

Assessments at the Body U-NII-2A (5.25-5.35GHz)

Table below presents the data of the body assessment.

Table 8

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)	Run#
AN000345A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	5290.0000	0.0322	0.45	0.0046	0.0061	ZR(AMN)-AB-200917-07
		PMLN8126A w/ PMLN7008A		5290.0000	0.0322	-3.25	0.0017	0.0046	ZZ-AB-200917-08
		PMLN8127A w/ PMLN5407A		5290.0000	0.0322	0.00	0.00019	0.0002	ZZ-AB-200920-04
		PMLN8127A w/ PMLN5409A		5290.0000	0.0322	-0.04	0.0003	0.00043	ZZ-AB-200920-05
Assessment of Additional Battery									
AN000345A01	PMNN4804A	PMLN8126A w/ PMLN4651A	None	5290.0000	0.0320	0.25	0.0021	0.0027	ZZ-AB-200921-03

Assessments at the Face U-NII-2A (5.25-5.35GHz)

Table below presents the data of the face assessment.

Table 9

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)	Run#
AN000345A01	PMNN4804A	None	None	5290.0000	0.0320	0.47	0.0064	0.0085	ZZ-FACE-200921-04
Assessment of Additional Battery									
AN000345A01	PMNN4803A	None	None	5290.0000	0.0322	-0.20	0.0025	0.0034	ZZ-FACE-200921-05

Additional Assessments for ISED Canada

U-NII-2A (5.25-5.35GHz) only has one 80 MHz bandwidth channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

Assessments at the Body U-NII-2C (5.47-5.65 GHz)

Table below presents the data of the body assessment.

Table 10

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)	Run#
AN000345A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	5610.0000	0.0473	-0.21	0.0016	0.0024	ZZ-AB-200917-02#
		PMLN8126A w/ PMLN7008A		5610.0000	0.0473	-0.72	0.0004	0.0007	BL(AMN)-AB-201004-11
		PMLN8127A w/ PMLN5407A		5610.0000	0.0473	0.21	0.0008	0.0012	ZZ-AB-200919-02#
		PMLN8127A w/ PMLN5409A		5610.0000	0.0473	-0.36	0.0001	0.0002	ZZ-AB-200918-06
		Assessment of Additional Battery							
AN000345A01	PMNN4804A	PMLN8126A w/ PMLN4651A	None	5610.0000	0.0473	-0.31	0.0072	0.0111	ZZ-AB-200918-07

Assessments at the Face U-NII-2C (5.47-5.65 GHz)

Table below presents the data of the face assessment.

Table 11

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)	Run#
AN000345A01	PMNN4804A	None	None	5610.0000	0.0473	-3.91	0.0030	0.0106	BL(AMN)-FACE-201004-12
Assessment of Additional Battery									
AN000345A01	PMNN4803A	None	None	5610.0000	0.0473	0.03	0.0068	0.0098	ZZ-FACE-200919-01#

Additional Assessments for ISED Canada

As per ISED Notice 2016-DRS001, additional tests were required for the low, mid and high frequency channels for the configuration with the highest SAR value. The SAR results are in Tables below. SAR plot is included in Appendix for the highest configuration.

Table 12

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)	Run#
Body									
AN000345A01	PMNN4804A	PMLN8126A w/ PMLN4651A	None	5530.0000	0.0456	0.01	0.0094	0.0140	ZZ-AB-200929-07
				5610.0000	0.0473	-0.31	0.0072	0.0111	ZZ-AB-200918-07
Face									
AN000345A01	PMNN4804A	None	None	5530.0000	0.0456	-0.13	0.0069	0.0106	ZZ-FACE-201005-04#
				5610.0000	0.0473	-3.91	0.0030	0.0102	BL(AMN)-FACE-201004-12

Assessments at the Body U-NII-3 (5.65-5.85 GHz)

Table below presents the data of the body assessment.

Table 13

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)	Run#
AN000345A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	5690.0000	0.0500	-2.87	0.0001	0.0003	ZZ-AB-200921-06
		PMLN8126A w/ PMLN7008A		5690.0000	0.0500	-2.48	0.00005	0.00012	BL(AMN)-AB-200921-07
		PMLN8127A w/ PMLN5407A		5690.0000	0.0500	-8.19	0.0002	0.0017	AN(AMN)-AB-200922-01#
		PMLN8127A w/ PMLN5409A		5690.0000	0.0500	0.00	0.0001	0.0002	AN(AMN)-AB-200922-02#
Assessment of Additional Battery									
AN000345A01	PMNN4804A	PMLN8127A w/ PMLN5407A	None	5690.0000	0.0498	0.11	0.0005	0.0007	ZZ-AB-200922-04

Assessments at the Face U-NII-3 (5.65-5.85 GHz)

Table below presents the data of the face assessment.

Table 14

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)	Run#
AN000345A01	PMNN4804A	None	None	5690.0000	0.0498	-0.37	0.0010	0.0014	ZZ-FACE-200922-05
Assessment of Additional Battery									
AN000345A01	PMNN4803A	None	None	5690.0000	0.050	-0.75	0.0006	0.0010	ZZ-FACE-200922-06

Additional Assessments for ISED Canada

As per ISED Notice 2016-DRS001, additional tests were required for the low, mid and high frequency channels for the configuration with the highest SAR value. The SAR results are in Tables below. SAR plot is included in Appendix for the highest configuration.

Table 15

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)	Run#
Body									
AN000345A01	PMNN4804A	PMLN8127A w/ PMLN5407A	None	5690.0000	0.050 0	-8.19	0.0002	0.0017	AN(AMN)-AB- 200922-01#
				5775.0000	0.047 6	0.00	0.0014	0.0020	ZZ-AB-200930-02
Face									
AN000345A01	PMNN4804A	None	None	5690.0000	0.049 8	-0.37	0.0010	0.0014	ZZ-FACE-200922- 05
				5775.0000	0.047 6	0.00	0.0003	0.0004	ZZ-FACE-201005- 02#

4.0 Variability Assessment for WLAN

Per the guidelines in KDB 865664 SAR variability assessment is not required because SAR results are below 0.8W/kg.

5.0 System Verification for LTE

System verification checks were conducted each day during the SAR assessment. The results are normalized to 1W. Appendix C includes DASY plots for each day during the SAR assessment. The Table below summarizes the daily system check results used for the SAR assessment.

Table 16

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
7519	IEEE / IEC Head	SPEAG D750V2 / 1098	8.23 +/- 10%	2.09	8.36	9/17/2020
		SPEAG D750V2 / 1142	8.52 +/- 10%	2.11	8.44	10/16/2020
		SPEAG D835V2 / 4d029	9.70 +/- 10%	2.43	9.72	9/15/2020#
				2.30	9.20	9/16/2020#
		SPEAG D1800V2 / 278	38.70 +/- 10%	10.10	40.40	9/22/2020#
				10.50	42.00	9/28/2020#
				9.38	37.52	10/16/2020
		SPEAG D1900V2 / 5d065	40.50 +/- 10%	9.50	38.00	9/23/2020
		SPEAG D2300V2 / 1007	48.10 +/- 10%	12.40	49.60	9/20/2020
				12.40	49.60	9/21/2020
				11.70	46.80	10/15/2020
		SPEAG D2450V2 / 703	52.90 +/- 10%	13.60	54.40	9/18/2020
				13.00	52.00	9/20/2020
				13.20	52.80	10/14/2020#
		SPEAG D2600V2 / 1002	56.10 +/- 10%	14.80	59.20	9/29/2020#
				14.70	58.80	10/15/2020
		SPEAG D3500V2 / 1008	64.60 +/- 10%	5.99	59.90	9/30/2020
				5.87	58.70	10/15/2020#
		SPEAG D3700V2 / 1028	71.00 +/- 10%	6.84	68.40	9/21/2020#
				6.86	68.60	9/30/2020
				7.46	74.60	10/15/2020

Note: '#' indicates that system verification check covers next test day

6.0 Equivalent Tissue Test Results for LTE

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 17

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
708	IEEE/ IEC Head	0.89 (0.84-0.93)	42.1 (40.0-44.2)	0.84	41.9	9/17/2020
750		0.89 (0.85-0.93)	41.9 (39.8-44.0)	0.89	41.3	9/17/2020
				0.87	40.6	10/16/2020
782		0.89 (0.85-0.94)	41.7 (39.7-43.8)	0.89	41.1	9/15/2020#
				0.87	40.7	9/16/2020
				0.90	40.2	10/16/2020
793		0.90 (0.85-0.94)	41.7 (39.6-43.8)	0.88	40.6	9/16/2020#
				0.91	40.1	10/16/2020
835		0.90 (0.86-0.95)	41.5 (39.4-43.6)	0.94	40.4	9/15/2020#
				0.93	40.1	9/16/2020#
837		0.90 (0.86-0.95)	41.5 (39.4-43.6)	0.93	40.0	9/16/2020#
1733		1.36 (1.29-1.43)	40.1 (38.1-42.1)	1.30	40.7	9/22/2020#
				1.30	41.1	10/16/2020
1800		1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.35	40.5	9/22/2020#
				1.36	40.2	9/28/2020#
				1.36	40.9	10/16/2020
1860		1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.42	40.6	10/16/2020
				1.43	40.1	9/22/2020#
1880		1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.36	39.7	9/23/2020
				1.45	40.1	9/22/2020#
1900		1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.38	39.6	9/23/2020
				1.45	39.8	9/28/2020#
				1.46	40.5	10/16/2020
				1.64	37.7	9/20/2020
2300		1.67 (1.59-1.75)	39.5 (35.6-43.5)	1.75	36.9	9/21/2020
				1.69	35.9	10/15/2020
				1.65	37.7	9/20/2020
2310		1.68 (1.59-1.76)	39.5 (35.5-43.4)	1.76	36.9	9/21/2020
				1.70	35.8	10/15/2020
				1.89	36.1	9/18/2020#
2450		1.80 (1.71-1.89)	39.2 (35.3-43.1)	1.80	37.2	9/20/2020
				1.89	36.9	10/14/2020#

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

Table 17 (Continued)

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
2510	IEEE/ IEC Head	1.86 (1.77-1.96)	39.1 (35.2-43.0)	1.95	35.9	9/18/2020#
				1.88	37.0	9/20/2020
				1.96	36.7	10/14/2020#
2535		1.89 (1.80-1.99)	39.1 (35.2-43.0)	1.95	35.3	9/29/2020
				1.98	36.6	10/14/2020#
2560		1.92 (1.82-2.01)	39.1 (35.1-43.0)	1.97	35.3	9/29/2020
				2.01	36.5	10/14/2020#
2600		1.96 (1.86-2.06)	39.0 (35.1-42.9)	2.01	35.1	9/29/2020
				2.05	36.4	10/14/2020#
3500		2.91 (2.62-32.0)	37.9 (34.1-41.7)	2.72	34.2	9/29/2020#
				2.80	34.4	10/15/2020
3560		2.97 (2.68-32.7)	37.8 (34.1-41.6)	2.77	34.1	9/29/2020#
				2.84	34.4	10/15/2020
3603		3.02 (2.72-3.32)	37.8 (34.0-41.6)	2.83	34.1	9/21/2020#
				2.88	34.3	10/15/2020
3647		3.06 (2.76-3.37)	37.8 (34.0-41.5)	2.82	34.0	9/29/2020#
				2.91	34.3	10/15/2020
3690		3.11 (2.80-3.42)	37.7 (33.9-41.5)	2.85	33.9	9/29/2020#
				2.94	34.2	10/15/2020
3700		3.12 (2.81-3.43)	37.7 (33.9-41.5)	2.90	34.0	9/21/2020#
				2.86	33.9	9/29/2020#
				2.95	34.2	10/15/2020

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

7.0 DUT Test Data for LTE bands

SAR test reduction is applied using the following criteria according to KDB 941225 D05:

- d. Per Section 5.2.1, SAR is required for QPSK 1RB allocation for the largest bandwidth
 - The required channel and RB offset combination with the highest maximum output power is required for SAR.
 - When the reported SAR ≤ 0.8 W/kg, testing of the remaining required test channels are not required. Otherwise, SAR is required for the remaining required test channels using the RB offset configuration with highest output power for that channel.
 - When the reported SAR for a required test channel is > 1.45 W/kg, SAR is required for all RB offset configuration for that channel.
- e. Per Section 5.2.2, SAR is required for QPSK 50% RB allocation using the largest bandwidth following the same procedures outline in Section 5.2.1.
- f. Per Section 5.2.3, QPSK SAR is not required for 100% allocation when the highest maximum output power for the 100% allocation is less than the highest maximum output power of the 1RB and 50%RB allocation and the reported for the 1RB and 50% RB allocation is < 0.8 W/kg.
- g. Per Section 5.2.4, SAR test is required for higher modulation when the highest maximum output power for the configuration in higher order modulation is $> 1/2$ dB higher than same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

7.1 Assessment for LTE Band 2 (1850-1910 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 18

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 2	20 MHz 100 Blocks	1 Block QPSK	1	lower	Low	700	18700	1860.0	0.281
			1	middle	Low	700	18700	1860.0	0.266
			1	upper	Low	700	18700	1860.0	0.288
			1	lower	Mid	900	18900	1880.0	0.298
			1	middle	Mid	900	18900	1880.0	0.281
			1	upper	Mid	900	18900	1880.0	0.292
			1	lower	High	1100	19100	1900.0	0.292
			1	middle	High	1100	19100	1900.0	0.280
			1	upper	High	1100	19100	1900.0	0.270
		50 Block QPSK	50%	lower	Low	700	18700	1860.0	0.219
			50%	middle	Low	700	18700	1860.0	0.217
			50%	upper	Low	700	18700	1860.0	0.224
			50%	lower	Mid	900	18900	1880.0	0.232
			50%	middle	Mid	900	18900	1880.0	0.230
			50%	upper	Mid	900	18900	1880.0	0.232
			50%	lower	High	1100	19100	1900.0	0.234
			50%	middle	High	1100	19100	1900.0	0.226
			50%	upper	High	1100	19100	1900.0	0.225
		100 Blocks QPSK	100%	lower	Low	700	18700	1860.0	0.224
			100%	lower	Mid	900	18900	1880.0	0.229
			100%	lower	High	1100	19100	1900.0	0.227
		1 Block 16 QAM	1	lower	Low	700	18700	1860.0	0.262
			1	middle	Low	700	18700	1860.0	0.246
			1	upper	Low	700	18700	1860.0	0.262
			1	lower	Mid	900	18900	1880.0	0.268
			1	middle	Mid	900	18900	1880.0	0.253
			1	upper	Mid	900	18900	1880.0	0.264
			1	lower	High	1100	19100	1900.0	0.258
			1	middle	High	1100	19100	1900.0	0.245
			1	upper	High	1100	19100	1900.0	0.242
		50 Block 16 QAM	50%	lower	Low	700	18700	1860.0	0.179
			50%	middle	Low	700	18700	1860.0	0.178
			50%	upper	Low	700	18700	1860.0	0.181
			50%	lower	Mid	900	18900	1880.0	0.190
			50%	middle	Mid	900	18900	1880.0	0.187
			50%	upper	Mid	900	18900	1880.0	0.186
			50%	lower	High	1100	19100	1900.0	0.188
			50%	middle	High	1100	19100	1900.0	0.183
			50%	upper	High	1100	19100	1900.0	0.182
		100 Blocks 16 QAM	100%	lower	Low	700	18700	1860.0	0.183
			100%	lower	Mid	900	18900	1880.0	0.186
			100%	lower	High	1100	19100	1900.0	0.183

Table 18 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 2	15 MHz 75 Blocks	1 Block QPSK	1	lower	Low	675	18675	1857.5	0.280
			1	middle	Low	675	18675	1857.5	0.272
			1	upper	Low	675	18675	1857.5	0.274
			1	lower	Mid	900	18900	1880.0	0.289
			1	middle	Mid	900	18900	1880.0	0.288
			1	upper	Mid	900	18900	1880.0	0.286
			1	lower	High	1125	19125	1902.5	0.288
			1	middle	High	1125	19125	1902.5	0.280
			1	upper	High	1125	19125	1902.5	0.275
		36 Block QPSK	50%	lower	Low	675	18675	1857.5	0.222
			50%	middle	Low	675	18675	1857.5	0.219
			50%	upper	Low	675	18675	1857.5	0.222
			50%	lower	Mid	900	18900	1880.0	0.229
			50%	middle	Mid	900	18900	1880.0	0.229
			50%	upper	Mid	900	18900	1880.0	0.225
			50%	lower	High	1125	19125	1902.5	0.224
			50%	middle	High	1125	19125	1902.5	0.223
			50%	upper	High	1125	19125	1902.5	0.225
		75 Blocks QPSK	100%	lower	Low	675	18675	1857.5	0.223
			100%	lower	Mid	900	18900	1880.0	0.227
			100%	lower	High	1125	19125	1902.5	0.222
		1 Block 16 QAM	1	lower	Low	675	18675	1857.5	0.221
			1	middle	Low	675	18675	1857.5	0.217
			1	upper	Low	675	18675	1857.5	0.221
			1	lower	Mid	900	18900	1880.0	0.252
			1	middle	Mid	900	18900	1880.0	0.245
			1	upper	Mid	900	18900	1880.0	0.245
			1	lower	High	1125	19125	1902.5	0.256
			1	middle	High	1125	19125	1902.5	0.248
			1	upper	High	1125	19125	1902.5	0.247
		36 Block 16 QAM	50%	lower	Low	675	18675	1857.5	0.179
			50%	middle	Low	675	18675	1857.5	0.180
			50%	upper	Low	675	18675	1857.5	0.178
			50%	lower	Mid	900	18900	1880.0	0.186
			50%	middle	Mid	900	18900	1880.0	0.189
			50%	upper	Mid	900	18900	1880.0	0.186
			50%	lower	High	1125	19125	1902.5	0.182
			50%	middle	High	1125	19125	1902.5	0.180
			50%	upper	High	1125	19125	1902.5	0.179
		75 Blocks 16 QAM	100%	lower	Low	675	18675	1857.5	0.182
			100%	lower	Mid	900	18900	1880.0	0.187
			100%	lower	High	1125	19125	1902.5	0.180

Table 18 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 2	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	650	18650	1855.0	0.288
			1	middle	Low	650	18650	1855.0	0.272
			1	upper	Low	650	18650	1855.0	0.286
			1	lower	Mid	900	18900	1880.0	0.300
			1	middle	Mid	900	18900	1880.0	0.281
			1	upper	Mid	900	18900	1880.0	0.303
			1	lower	High	1150	19150	1905.0	0.276
			1	middle	High	1150	19150	1905.0	0.265
			1	upper	High	1150	19150	1905.0	0.268
		25 Block QPSK	50%	lower	Low	650	18650	1855.0	0.216
			50%	middle	Low	650	18650	1855.0	0.216
			50%	upper	Low	650	18650	1855.0	0.222
			50%	lower	Mid	900	18900	1880.0	0.229
			50%	middle	Mid	900	18900	1880.0	0.230
			50%	upper	Mid	900	18900	1880.0	0.225
			50%	lower	High	1150	19150	1905.0	0.226
			50%	middle	High	1150	19150	1905.0	0.226
			50%	upper	High	1150	19150	1905.0	0.218
		50 Blocks QPSK	100%	lower	Low	650	18650	1855.0	0.222
			100%	lower	Mid	900	18900	1880.0	0.226
			100%	lower	High	1150	19150	1905.0	0.228
		1 Block 16 QAM	1	lower	Low	650	18650	1855.0	0.259
			1	middle	Low	650	18650	1855.0	0.239
			1	upper	Low	650	18650	1855.0	0.254
			1	lower	Mid	900	18900	1880.0	0.245
			1	middle	Mid	900	18900	1880.0	0.231
			1	upper	Mid	900	18900	1880.0	0.240
			1	lower	High	1150	19150	1905.0	0.224
			1	middle	High	1150	19150	1905.0	0.218
			1	upper	High	1150	19150	1905.0	0.217
		25 Block 16 QAM	50%	lower	Low	650	18650	1855.0	0.179
			50%	middle	Low	650	18650	1855.0	0.179
			50%	upper	Low	650	18650	1855.0	0.179
			50%	lower	Mid	900	18900	1880.0	0.188
			50%	middle	Mid	900	18900	1880.0	0.191
			50%	upper	Mid	900	18900	1880.0	0.188
			50%	lower	High	1150	19150	1905.0	0.186
			50%	middle	High	1150	19150	1905.0	0.185
			50%	upper	High	1150	19150	1905.0	0.178
		50 Blocks 16 QAM	100%	lower	Low	650	18650	1855.0	0.181
			100%	lower	Mid	900	18900	1880.0	0.189
			100%	lower	High	1150	19150	1905.0	0.183

Table 18 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 2	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	625	18625	1852.5	0.278
			1	middle	Low	625	18625	1852.5	0.276
			1	upper	Low	625	18625	1852.5	0.281
			1	lower	Mid	900	18900	1880.0	0.294
			1	middle	Mid	900	18900	1880.0	0.292
			1	upper	Mid	900	18900	1880.0	0.293
			1	lower	High	1175	19175	1907.5	0.274
			1	middle	High	1175	19175	1907.5	0.271
			1	upper	High	1175	19175	1907.5	0.275
		12 Block QPSK	50%	lower	Low	625	18625	1852.5	0.221
			50%	middle	Low	625	18625	1852.5	0.220
			50%	upper	Low	625	18625	1852.5	0.219
			50%	lower	Mid	900	18900	1880.0	0.225
			50%	middle	Mid	900	18900	1880.0	0.225
			50%	upper	Mid	900	18900	1880.0	0.227
			50%	lower	High	1175	19175	1907.5	0.218
			50%	middle	High	1175	19175	1907.5	0.220
			50%	upper	High	1175	19175	1907.5	0.218
		25 Blocks QPSK	100%	lower	Low	625	18625	1852.5	0.220
			100%	lower	Mid	900	18900	1880.0	0.227
			100%	lower	High	1175	19175	1907.5	0.219
		1 Block 16 QAM	1	lower	Low	625	18625	1852.5	0.227
			1	middle	Low	625	18625	1852.5	0.223
			1	upper	Low	625	18625	1857.5	0.228
			1	lower	Mid	900	18900	1880.0	0.237
			1	middle	Mid	900	18900	1880.0	0.237
			1	upper	Mid	900	18900	1880.0	0.237
			1	lower	High	1175	19175	1907.5	0.248
			1	middle	High	1175	19175	1907.5	0.248
			1	upper	High	1175	19175	1907.5	0.249
		12 Block 16 QAM	50%	lower	Low	625	18625	1852.5	0.178
			50%	middle	Low	625	18625	1852.5	0.179
			50%	upper	Low	625	18625	1857.5	0.177
			50%	lower	Mid	900	18900	1880.0	0.185
			50%	middle	Mid	900	18900	1880.0	0.186
			50%	upper	Mid	900	18900	1880.0	0.187
			50%	lower	High	1175	19175	1907.5	0.183
			50%	middle	High	1175	19175	1907.5	0.183
			50%	upper	High	1175	19175	1907.5	0.182
		25 Blocks 16 QAM	100%	lower	Low	625	18625	1852.5	0.174
			100%	lower	Mid	900	18900	1880.0	0.186
			100%	lower	High	1175	19175	1907.5	0.180

Table 18 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 2	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	615	18615	1851.5	0.274
			1	middle	Low	615	18615	1851.5	0.279
			1	upper	Low	615	18615	1851.5	0.274
			1	lower	Mid	900	18900	1880.0	0.281
			1	middle	Mid	900	18900	1880.0	0.294
			1	upper	Mid	900	18900	1880.0	0.282
			1	lower	High	1185	19185	1908.5	0.270
			1	middle	High	1185	19185	1908.5	0.274
			1	upper	High	1185	19185	1908.5	0.270
		8 Block QPSK	50%	lower	Low	615	18615	1851.5	0.218
			50%	middle	Low	615	18615	1851.5	0.218
			50%	upper	Low	615	18615	1851.5	0.219
			50%	lower	Mid	900	18900	1880.0	0.225
			50%	middle	Mid	900	18900	1880.0	0.223
			50%	upper	Mid	900	18900	1880.0	0.223
			50%	lower	High	1185	19185	1908.5	0.217
			50%	middle	High	1185	19185	1908.5	0.218
			50%	upper	High	1185	19185	1908.5	0.214
		15 Blocks QPSK	100%	lower	Low	615	18615	1851.5	0.219
			100%	lower	Mid	900	18900	1880.0	0.223
			100%	lower	High	1185	19185	1908.5	0.217
		1 Block 16 QAM	1	lower	Low	615	18615	1851.5	0.215
			1	middle	Low	615	18615	1851.5	0.217
			1	upper	Low	615	18615	1851.5	0.210
			1	lower	Mid	900	18900	1880.0	0.243
			1	middle	Mid	900	18900	1880.0	0.251
			1	upper	Mid	900	18900	1880.0	0.244
			1	lower	High	1185	19185	1908.5	0.223
			1	middle	High	1185	19185	1908.5	0.219
			1	upper	High	1185	19185	1908.5	0.220
		8 Block 16 QAM	50%	lower	Low	615	18615	1851.5	0.181
			50%	middle	Low	615	18615	1851.5	0.182
			50%	upper	Low	615	18615	1851.5	0.178
			50%	lower	Mid	900	18900	1880.0	0.185
			50%	middle	Mid	900	18900	1880.0	0.184
			50%	upper	Mid	900	18900	1880.0	0.183
			50%	lower	High	1185	19185	1908.5	0.178
			50%	middle	High	1185	19185	1908.5	0.179
			50%	upper	High	1185	19185	1908.5	0.174
		15 Blocks 16 QAM	100%	lower	Low	615	18615	1851.5	0.176
			100%	lower	Mid	900	18900	1880.0	0.185
			100%	lower	High	1185	19185	1908.5	0.172

Table 18 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 2	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	607	18607	1850.7	0.273
			1	middle	Low	607	18607	1850.7	0.274
			1	upper	Low	607	18607	1850.7	0.279
			1	lower	Mid	900	18900	1880.0	0.279
			1	middle	Mid	900	18900	1880.0	0.286
			1	upper	Mid	900	18900	1880.0	0.282
			1	lower	High	1193	19193	1909.3	0.265
			1	middle	High	1193	19193	1909.3	0.270
			1	upper	High	1193	19193	1909.3	0.269
		3 Block QPSK	50%	lower	Low	607	18607	1850.7	0.264
			50%	middle	Low	607	18607	1850.7	0.271
			50%	upper	Low	607	18607	1850.7	0.269
			50%	lower	Mid	900	18900	1880.0	0.281
			50%	middle	Mid	900	18900	1880.0	0.285
			50%	upper	Mid	900	18900	1880.0	0.279
			50%	lower	High	1193	19193	1909.3	0.266
			50%	middle	High	1193	19193	1909.3	0.270
			50%	upper	High	1193	19193	1909.3	0.267
		6 Blocks QPSK	100%	lower	Low	607	18607	1850.7	0.213
			100%	lower	Mid	900	18900	1880.0	0.220
			100%	lower	High	1193	19193	1909.3	0.212
		1 Block 16 QAM	1	lower	Low	607	18607	1850.7	0.225
			1	middle	Low	607	18607	1850.7	0.228
			1	upper	Low	607	18607	1850.7	0.228
			1	lower	Mid	900	18900	1880.0	0.240
			1	middle	Mid	900	18900	1880.0	0.245
			1	upper	Mid	900	18900	1880.0	0.245
			1	lower	High	1193	19193	1909.3	0.216
			1	middle	High	1193	19193	1909.3	0.221
			1	upper	High	1193	19193	1909.3	0.222
		3 Block 16 QAM	50%	lower	Low	607	18607	1850.7	0.221
			50%	middle	Low	607	18607	1850.7	0.222
			50%	upper	Low	607	18607	1850.7	0.217
			50%	lower	Mid	900	18900	1880.0	0.232
			50%	middle	Mid	900	18900	1880.0	0.237
			50%	upper	Mid	900	18900	1880.0	0.232
			50%	lower	High	1193	19193	1909.3	0.224
			50%	middle	High	1193	19193	1909.3	0.228
			50%	upper	High	1193	19193	1909.3	0.223
		6 Blocks 16 QAM	100%	lower	Low	607	18607	1850.7	0.178
			100%	lower	Mid	900	18900	1880.0	0.176
			100%	lower	High	1193	19193	1909.3	0.179

Assessments at the Body

Table below presents the data of the body assessment.

Table 19

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)	Run#
1 RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	1880.0000	0.298	0.00	0.196	0.208	ZR-AB-200923-08#
		PMLN8126A w/ PMLN7008A		1880.0000	0.298	-0.01	0.222	0.237	ZR-AB-200923-09#
		PMLN8127A w/ PMLN5407A		1880.0000	0.298	0.12	0.092	0.098	ZR-AB-200923-10#
		PMLN8127A w/ PMLN5409A		1880.0000	0.298	-0.15	0.135	0.149	ZR-AB-200923-11#
50 % RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	1900.0000	0.234	-0.11	0.112	0.124	ZR-AB-200923-12#
		PMLN8126A w/ PMLN7008A		1900.0000	0.234	-0.15	0.123	0.137	ZR-AB-200923-14
		PMLN8127A w/ PMLN5407A		1900.0000	0.234	0.09	0.039	0.042	ZR-AB-200923-15
		PMLN8127A w/ PMLN5409A		1900.0000	0.234	-0.22	0.059	0.067	ZR-AB-200923-16
Assessment of Additional Battery									
AN000346A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	1880.0000	0.292	0.03	0.218	0.237	ZR-AB-200923-17

Assessments at the Face

Table below presents the data of the face assessment.

Table 20

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)	Run#
1 RB									
AN000346A01	PMNN4804A	None	None	1880.0000	0.292	0.01	0.103	0.112	AN-FACE-200923-04#
50 % RB									
AN000346A01	PMNN4804A	None	None	1900.0000	0.227	-0.01	0.052	0.058	AN-FACE-200923-05#
Assessment of Additional Battery									
AN000346A01	PMNN4803A	None	None	1880.0000	0.298	-0.01	0.110	0.117	ZR-FACE-200923-07#

Additional Assessments for ISED Canada

As per ISED Notice 2016-DRS001, additional tests were required for the low, mid and high frequency channels for the configuration with the highest SAR value. The SAR results are in Tables below. SAR plot is included in Appendix for the highest configuration.

Table 21

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)	Run#
Body									
AN000346A011	PMNN4803A	PMLN8126A w/ PMLN7008A	None	1860.0000	0.288	0.00	0.209	0.230	AN-AB-201016-11
				1880.0000	0.298	-0.01	0.222	0.237	ZR-AB-200923-09#
				1900.0000	0.292	-0.19	0.131	0.149	ZR-AB-200929-06#
Face									
AN000346A01	PMNN4804A	None	None	1860.0000	0.288	0.04	0.096	0.106	FAZ-FACE-201016-09
				1880.0000	0.298	-0.01	0.110	0.117	ZR-FACE-200923-07#
				1900.0000	0.292	-0.35	0.063	0.074	AN-FACE-201016-10

7.2 Assessment for LTE Band 4 (1710 – 1755 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 22

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 4	20 MHz 100 Blocks	1 Block QPSK	1	lower	Mid	2175	20175	1732.5	0.264
			1	middle	Mid	2175	20175	1732.5	0.254
			1	upper	Mid	2175	20175	1732.5	0.254
		50 Block QPSK	50%	lower	Mid	2175	20175	1732.5	0.207
			50%	middle	Mid	2175	20175	1732.5	0.205
			50%	upper	Mid	2175	20175	1732.5	0.207
		100 Blocks QPSK	100%	lower	Mid	2175	20175	1732.5	0.205
		1 Block 16 QAM	1	lower	Mid	2175	20175	1732.5	0.242
			1	middle	Mid	2175	20175	1732.5	0.229
			1	upper	Mid	2175	20175	1732.5	0.231
		50 Block 16 QAM	50%	lower	Mid	2175	20175	1732.5	0.168
			50%	middle	Mid	2175	20175	1732.5	0.169
			50%	upper	Mid	2175	20175	1732.5	0.167
		100 Blocks 16 QAM	100%	lower	Mid	2175	20175	1732.5	0.167

Table 22 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 4	15 MHz 75 Blocks	1 Block QPSK	1	lower	Low	2025	20025	1717.5	0.275
			1	middle	Low	2025	20025	1717.5	0.269
			1	upper	Low	2025	20025	1717.5	0.267
			1	lower	Mid	2175	20175	1732.5	0.267
			1	middle	Mid	2175	20175	1732.5	0.256
			1	upper	Mid	2175	20175	1732.5	0.254
			1	lower	High	2325	20325	1747.5	0.262
			1	middle	High	2325	20325	1747.5	0.256
			1	upper	High	2325	20325	1747.5	0.252
		36 Block QPSK	50%	lower	Low	2025	20025	1717.5	0.211
			50%	middle	Low	2025	20025	1717.5	0.208
			50%	upper	Low	2025	20025	1717.5	0.207
			50%	lower	Mid	2175	20175	1732.5	0.207
			50%	middle	Mid	2175	20175	1732.5	0.205
			50%	upper	Mid	2175	20175	1732.5	0.204
			50%	lower	High	2325	20325	1747.5	0.204
			50%	middle	High	2325	20325	1747.5	0.205
			50%	upper	High	2325	20325	1747.5	0.205
		75 Blocks QPSK	100%	lower	Low	2025	20025	1717.5	0.211
			100%	lower	Mid	2175	20175	1732.5	0.207
			100%	lower	High	2325	20325	1747.5	0.205
		1 Block 16 QAM	1	lower	Low	2025	20025	1717.5	0.240
			1	middle	Low	2025	20025	1717.5	0.233
			1	upper	Low	2025	20025	1717.5	0.230
			1	lower	Mid	2175	20175	1732.5	0.209
			1	middle	Mid	2175	20175	1732.5	0.204
			1	upper	Mid	2175	20175	1732.5	0.202
			1	lower	High	2325	20325	1747.5	0.228
			1	middle	High	2325	20325	1747.5	0.222
			1	upper	High	2325	20325	1747.5	0.223
		36 Block 16 QAM	50%	lower	Low	2025	20025	1717.5	0.171
			50%	middle	Low	2025	20025	1717.5	0.168
			50%	upper	Low	2025	20025	1717.5	0.167
			50%	lower	Mid	2175	20175	1732.5	0.166
			50%	middle	Mid	2175	20175	1732.5	0.166
			50%	upper	Mid	2175	20175	1732.5	0.167
			50%	lower	High	2325	20325	1747.5	0.166
			50%	middle	High	2325	20325	1747.5	0.167
			50%	upper	High	2325	20325	1747.5	0.169
		75 Blocks 16 QAM	100%	lower	Low	2025	20025	1717.5	0.170
			100%	lower	Mid	2175	20175	1732.5	0.168
			100%	lower	High	2325	20325	1747.5	0.169

Table 22 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 4	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	2000	20000	1715.0	0.267
			1	middle	Low	2000	20000	1715.0	0.264
			1	upper	Low	2000	20000	1715.0	0.259
			1	lower	Mid	2175	20175	1732.5	0.259
			1	middle	Mid	2175	20175	1732.5	0.254
			1	upper	Mid	2175	20175	1732.5	0.261
			1	lower	High	2350	20350	1750.0	0.266
			1	middle	High	2350	20350	1750.0	0.253
			1	upper	High	2350	20350	1750.0	0.259
		25 Block QPSK	50%	lower	Low	2000	20000	1715.0	0.215
			50%	middle	Low	2000	20000	1715.0	0.212
			50%	upper	Low	2000	20000	1715.0	0.210
			50%	lower	Mid	2175	20175	1732.5	0.207
			50%	middle	Mid	2175	20175	1732.5	0.206
			50%	upper	Mid	2175	20175	1732.5	0.207
			50%	lower	High	2350	20350	1750.0	0.210
			50%	middle	High	2350	20350	1750.0	0.209
			50%	upper	High	2350	20350	1750.0	0.206
		50 Blocks QPSK	100%	lower	Low	2000	20000	1715.0	0.209
			100%	lower	Mid	2175	20175	1732.5	0.205
			100%	lower	High	2350	20350	1750.0	0.209
		1 Block 16 QAM	1	lower	Low	2000	20000	1715.0	0.219
			1	middle	Low	2000	20000	1715.0	0.213
			1	upper	Low	2000	20000	1715.0	0.210
			1	lower	Mid	2175	20175	1732.5	0.206
			1	middle	Mid	2175	20175	1732.5	0.203
			1	upper	Mid	2175	20175	1732.5	0.204
			1	lower	High	2350	20350	1750.0	0.229
			1	middle	High	2350	20350	1750.0	0.221
			1	upper	High	2350	20350	1750.0	0.225
		25 Block 16 QAM	50%	lower	Low	2000	20000	1715.0	0.175
			50%	middle	Low	2000	20000	1715.0	0.176
			50%	upper	Low	2000	20000	1715.0	0.171
			50%	lower	Mid	2175	20175	1732.5	0.167
			50%	middle	Mid	2175	20175	1732.5	0.168
			50%	upper	Mid	2175	20175	1732.5	0.167
			50%	lower	High	2350	20350	1750.0	0.173
			50%	middle	High	2350	20350	1750.0	0.172
			50%	upper	High	2350	20350	1750.0	0.169
		50 Blocks 16 QAM	100%	lower	Low	2000	20000	1715.0	0.170
			100%	lower	Mid	2175	20175	1732.5	0.168
			100%	lower	High	2350	20350	1750.0	0.171

Table 22 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 4	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	1975	19975	1712.5	0.274
			1	middle	Low	1975	19975	1712.5	0.269
			1	upper	Low	1975	19975	1712.5	0.269
			1	lower	Mid	2175	20175	1732.5	0.269
			1	middle	Mid	2175	20175	1732.5	0.260
			1	upper	Mid	2175	20175	1732.5	0.265
			1	lower	High	2375	20375	1752.5	0.259
			1	middle	High	2375	20375	1752.5	0.256
			1	upper	High	2375	20375	1752.5	0.259
		12 Block QPSK	50%	lower	Low	1975	19975	1712.5	0.216
			50%	middle	Low	1975	19975	1712.5	0.215
			50%	upper	Low	1975	19975	1712.5	0.214
			50%	lower	Mid	2175	20175	1732.5	0.207
			50%	middle	Mid	2175	20175	1732.5	0.206
			50%	upper	Mid	2175	20175	1732.5	0.204
			50%	lower	High	2375	20375	1752.5	0.207
			50%	middle	High	2375	20375	1752.5	0.208
			50%	upper	High	2375	20375	1752.5	0.207
		25 Blocks QPSK	100%	lower	Low	1975	19975	1712.5	0.214
			100%	lower	Mid	2175	20175	1732.5	0.204
			100%	lower	High	2375	20375	1752.5	0.207
		1 Block 16 QAM	1	lower	Low	1975	19975	1712.5	0.221
			1	middle	Low	1975	19975	1712.5	0.219
			1	upper	Low	1975	19975	1712.5	0.219
			1	lower	Mid	2175	20175	1732.5	0.216
			1	middle	Mid	2175	20175	1732.5	0.214
			1	upper	Mid	2175	20175	1732.5	0.217
			1	lower	High	2375	20375	1752.5	0.235
			1	middle	High	2375	20375	1752.5	0.232
			1	upper	High	2375	20375	1752.5	0.237
		12 Block 16 QAM	50%	lower	Low	1975	19975	1712.5	0.176
			50%	middle	Low	1975	19975	1712.5	0.174
			50%	upper	Low	1975	19975	1712.5	0.172
			50%	lower	Mid	2175	20175	1732.5	0.168
			50%	middle	Mid	2175	20175	1732.5	0.169
			50%	upper	Mid	2175	20175	1732.5	0.169
			50%	lower	High	2375	20375	1752.5	0.172
			50%	middle	High	2375	20375	1752.5	0.173
			50%	upper	High	2375	20375	1752.5	0.173
		25 Blocks 16 QAM	100%	lower	Low	1975	19975	1712.5	0.171
			100%	lower	Mid	2175	20175	1732.5	0.165
			100%	lower	High	2375	20375	1752.5	0.171

Table 22 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 4	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	1965	19965	1711.5	0.267
			1	middle	Low	1965	19965	1711.5	0.268
			1	upper	Low	1965	19965	1711.5	0.264
			1	lower	Mid	2175	20175	1732.5	0.255
			1	middle	Mid	2175	20175	1732.5	0.261
			1	upper	Mid	2175	20175	1732.5	0.258
			1	lower	High	2385	20385	1753.5	0.258
			1	middle	High	2385	20385	1753.5	0.265
			1	upper	High	2385	20385	1753.5	0.256
		8 Block QPSK	50%	lower	Low	1965	19965	1711.5	0.210
			50%	middle	Low	1965	19965	1711.5	0.212
			50%	upper	Low	1965	19965	1711.5	0.210
			50%	lower	Mid	2175	20175	1732.5	0.202
			50%	middle	Mid	2175	20175	1732.5	0.203
			50%	upper	Mid	2175	20175	1732.5	0.202
			50%	lower	High	2385	20385	1753.5	0.204
			50%	middle	High	2385	20385	1753.5	0.206
			50%	upper	High	2385	20385	1753.5	0.204
		15 Blocks QPSK	100%	lower	Low	1965	19965	1711.5	0.211
			100%	lower	Mid	2175	20175	1732.5	0.202
			100%	lower	High	2385	20385	1753.5	0.203
		1 Block 16 QAM	1	lower	Low	1965	19965	1711.5	0.217
			1	middle	Low	1965	19965	1711.5	0.218
			1	upper	Low	1965	19965	1711.5	0.214
			1	lower	Mid	2175	20175	1732.5	0.203
			1	middle	Mid	2175	20175	1732.5	0.205
			1	upper	Mid	2175	20175	1732.5	0.202
			1	lower	High	2385	20385	1753.5	0.224
			1	middle	High	2385	20385	1753.5	0.230
			1	upper	High	2385	20385	1753.5	0.224
		8 Block 16 QAM	50%	lower	Low	1965	19965	1711.5	0.172
			50%	middle	Low	1965	19965	1711.5	0.175
			50%	upper	Low	1965	19965	1711.5	0.174
			50%	lower	Mid	2175	20175	1732.5	0.167
			50%	middle	Mid	2175	20175	1732.5	0.169
			50%	upper	Mid	2175	20175	1732.5	0.170
			50%	lower	High	2385	20385	1753.5	0.168
			50%	middle	High	2385	20385	1753.5	0.169
			50%	upper	High	2385	20385	1753.5	0.167
		15 Blocks 16 QAM	100%	lower	Low	1965	19965	1711.5	0.169
			100%	lower	Mid	2175	20175	1732.5	0.164
			100%	lower	High	2385	20385	1753.5	0.163

Table 22 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 4	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	1957	19957	1710.7	0.265
			1	middle	Low	1957	19957	1710.7	0.267
			1	upper	Low	1957	19957	1710.7	0.268
			1	lower	Mid	2175	20175	1732.5	0.254
			1	middle	Mid	2175	20175	1732.5	0.259
			1	upper	Mid	2175	20175	1732.5	0.259
			1	lower	High	2393	20393	1754.3	0.244
			1	middle	High	2393	20393	1754.3	0.249
			1	upper	High	2393	20393	1754.3	0.251
		3 Block QPSK	50%	lower	Low	1957	19957	1710.7	0.261
			50%	middle	Low	1957	19957	1710.7	0.266
			50%	upper	Low	1957	19957	1710.7	0.262
			50%	lower	Mid	2175	20175	1732.5	0.255
			50%	middle	Mid	2175	20175	1732.5	0.261
			50%	upper	Mid	2175	20175	1732.5	0.256
			50%	lower	High	2393	20393	1754.3	0.245
			50%	middle	High	2393	20393	1754.3	0.255
			50%	upper	High	2393	20393	1754.3	0.247
		6 Blocks QPSK	100%	lower	Low	1957	19957	1710.7	0.207
			100%	lower	Mid	2175	20175	1732.5	0.200
			100%	lower	High	2393	20393	1754.3	0.195
		1 Block 16 QAM	1	lower	Low	1957	19957	1710.7	0.217
			1	middle	Low	1957	19957	1710.7	0.220
			1	upper	Low	1957	19957	1710.7	0.219
			1	lower	Mid	2175	20175	1732.5	0.220
			1	middle	Mid	2175	20175	1732.5	0.223
			1	upper	Mid	2175	20175	1732.5	0.224
			1	lower	High	2393	20393	1754.3	0.200
			1	middle	High	2393	20393	1754.3	0.203
			1	upper	High	2393	20393	1754.3	0.205
		3 Block 16 QAM	50%	lower	Low	1957	19957	1710.7	0.210
			50%	middle	Low	1957	19957	1710.7	0.215
			50%	upper	Low	1957	19957	1710.7	0.211
			50%	lower	Mid	2175	20175	1732.5	0.214
			50%	middle	Mid	2175	20175	1732.5	0.217
			50%	upper	Mid	2175	20175	1732.5	0.212
			50%	lower	High	2393	20393	1754.3	0.205
			50%	middle	High	2393	20393	1754.3	0.210
			50%	upper	High	2393	20393	1754.3	0.205
		6 Blocks 16 QAM	100%	lower	Low	1957	19957	1710.7	0.173
			100%	lower	Mid	2175	20175	1732.5	0.161
			100%	lower	High	2393	20393	1754.3	0.166

Assessments at the Body

Table below presents the data of the body assessment.

Table 23

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)	Run#
1 RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	1732.5000	0.264	-0.14	0.236	0.293	AN-AB-200922-14
		PMLN8126A w/ PMLN7008A		1732.5000	0.264	-0.27	0.239	0.305	AN-AB-200922-17
		PMLN8127A w/ PMLN5407A		1732.5000	0.264	-0.08	0.115	0.141	AN-AB-200922-18
		PMLN8127A w/ PMLN5409A		1732.5000	0.264	-0.04	0.135	0.164	AN-AB-200922-21
50 % RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	1732.5000	0.207	-0.03	0.184	0.226	AN-AB-200922-15
		PMLN8126A w/ PMLN7008A		1732.5000	0.207	0.14	0.184	0.224	AN-AB-200922-16
		PMLN8127A w/ PMLN5407A		1732.5000	0.207	-0.13	0.086	0.108	AN-AB-200922-19
		PMLN8127A w/ PMLN5409A		1732.5000	0.207	-0.02	0.102	0.125	AN-AB-200922-20
Assessment of Additional Battery									
AN000346A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	1732.5000	0.258	0.05	0.165	0.203	AN-AB-200923-01#

Assessments at the Face

Table below presents the data of the face assessment.

Table 24

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)	Run#
1 RB									
AN000346A01	PMNN4804A	None	None	1732.5000	0.258	0.06	0.113	0.139	AN-FACE-200923-02#
50 % RB									
AN000346A01	PMNN4804A	None	None	1732.5000	0.203	-0.08	0.088	0.111	AN-FACE-200923-03#
Assessment of Additional Battery									
AN000346A01	PMNN4803A	None	None	1732.5000	0.264	-0.04	0.125	0.151	AN-FACE-201016-12

Additional Assessments for ISED Canada

LTE Band 4 only has one channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

7.3 Assessment for LTE Band 5 (824 – 849 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 25

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 5	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	2525	20525	836.5	0.209
			1	middle	Mid	2525	20525	836.5	0.204
			1	upper	Mid	2525	20525	836.5	0.202
		25 Block QPSK	50%	lower	Mid	2525	20525	836.5	0.164
			50%	middle	Mid	2525	20525	836.5	0.161
			50%	upper	Mid	2525	20525	836.5	0.162
		50 Block QPSK	100%	lower	Mid	2525	20525	836.5	0.162
		1 Block 16 QAM	1	lower	Mid	2525	20525	836.5	0.166
			1	middle	Mid	2525	20525	836.5	0.161
			1	upper	Mid	2525	20525	836.5	0.158
		25 Block 16 QAM	50%	lower	Mid	2525	20525	836.5	0.132
			50%	middle	Mid	2525	20525	836.5	0.133
			50%	upper	Mid	2525	20525	836.5	0.130
		50 Block 16 QAM	100%	lower	Mid	2525	20525	836.5	0.132

Table 25 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 5	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	2425	20425	826.5	0.205
			1	middle	Low	2425	20425	826.5	0.204
			1	upper	Low	2425	20425	826.5	0.203
			1	lower	Mid	2525	20525	836.5	0.208
			1	middle	Mid	2525	20525	836.5	0.209
			1	upper	Mid	2525	20525	836.5	0.205
			1	lower	High	2625	20625	846.5	0.198
			1	middle	High	2625	20625	846.5	0.197
			1	upper	High	2625	20625	846.5	0.195
		12 Block QPSK	50%	lower	Low	2425	20425	826.5	0.161
			50%	middle	Low	2425	20425	826.5	0.163
			50%	upper	Low	2425	20425	826.5	0.162
			50%	lower	Mid	2525	20525	836.5	0.161
			50%	middle	Mid	2525	20525	836.5	0.161
			50%	upper	Mid	2525	20525	836.5	0.158
			50%	lower	High	2625	20625	846.5	0.158
			50%	middle	High	2625	20625	846.5	0.160
			50%	upper	High	2625	20625	846.5	0.157
		25 Blocks QPSK	100%	lower	Low	2425	20425	826.5	0.163
			100%	lower	Mid	2525	20525	836.5	0.163
			100%	lower	High	2625	20625	846.5	0.158
		1 Block 16 QAM	1	lower	Low	2425	20425	826.5	0.169
			1	middle	Low	2425	20425	826.5	0.166
			1	upper	Low	2425	20425	826.5	0.166
			1	lower	Mid	2525	20525	836.5	0.171
			1	middle	Mid	2525	20525	836.5	0.169
			1	upper	Mid	2525	20525	836.5	0.170
			1	lower	High	2625	20625	846.5	0.180
			1	middle	High	2625	20625	846.5	0.181
			1	upper	High	2625	20625	846.5	0.179
		12 Block 16 QAM	50%	lower	Low	2425	20425	826.5	0.132
			50%	middle	Low	2425	20425	826.5	0.132
			50%	upper	Low	2425	20425	826.5	0.131
			50%	lower	Mid	2525	20525	836.5	0.134
			50%	middle	Mid	2525	20525	836.5	0.134
			50%	upper	Mid	2525	20525	836.5	0.132
			50%	lower	High	2625	20625	846.5	0.131
			50%	middle	High	2625	20625	846.5	0.134
			50%	upper	High	2625	20625	846.5	0.131
		25 Blocks 16 QAM	100%	lower	Low	2425	20425	826.5	0.128
			100%	lower	Mid	2525	20525	836.5	0.131
			100%	lower	High	2625	20625	846.5	0.129

Table 25 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 5	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	2415	20415	825.5	0.201
			1	middle	Low	2415	20415	825.5	0.205
			1	upper	Low	2415	20415	825.5	0.200
			1	lower	Mid	2525	20525	836.5	0.201
			1	middle	Mid	2525	20525	836.5	0.206
			1	upper	Mid	2525	20525	836.5	0.201
			1	lower	High	2635	20635	847.5	0.200
			1	middle	High	2635	20635	847.5	0.200
			1	upper	High	2635	20635	847.5	0.197
		8 Block QPSK	50%	lower	Low	2415	20415	825.5	0.162
			50%	middle	Low	2415	20415	825.5	0.162
			50%	upper	Low	2415	20415	825.5	0.160
			50%	lower	Mid	2525	20525	836.5	0.161
			50%	middle	Mid	2525	20525	836.5	0.163
			50%	upper	Mid	2525	20525	836.5	0.160
			50%	lower	High	2635	20635	847.5	0.157
			50%	middle	High	2635	20635	847.5	0.158
			50%	upper	High	2635	20635	847.5	0.156
		15 Blocks QPSK	100%	lower	Low	2415	20415	825.5	0.162
			100%	lower	Mid	2525	20525	836.5	0.161
			100%	lower	High	2635	20635	847.5	0.158
		1 Block 16 QAM	1	lower	Low	2415	20415	825.5	0.168
			1	middle	Low	2415	20415	825.5	0.169
			1	upper	Low	2415	20415	825.5	0.161
			1	lower	Mid	2525	20525	836.5	0.162
			1	middle	Mid	2525	20525	836.5	0.166
			1	upper	Mid	2525	20525	836.5	0.161
			1	lower	High	2635	20635	847.5	0.173
			1	middle	High	2635	20635	847.5	0.175
			1	upper	High	2635	20635	847.5	0.172
		8 Block 16 QAM	50%	lower	Low	2415	20415	825.5	0.132
			50%	middle	Low	2415	20415	825.5	0.133
			50%	upper	Low	2415	20415	825.5	0.131
			50%	lower	Mid	2525	20525	836.5	0.133
			50%	middle	Mid	2525	20525	836.5	0.134
			50%	upper	Mid	2525	20525	836.5	0.133
			50%	lower	High	2635	20635	847.5	0.129
			50%	middle	High	2635	20635	847.5	0.130
			50%	upper	High	2635	20635	847.5	0.128
		15 Blocks 16 QAM	100%	lower	Low	2415	20415	825.5	0.128
			100%	lower	Mid	2525	20525	836.5	0.131
			100%	lower	High	2635	20635	847.5	0.127

Table 25 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 5	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	2407	20407	824.7	0.200
			1	middle	Low	2407	20407	824.7	0.204
			1	upper	Low	2407	20407	824.7	0.203
			1	lower	Mid	2525	20525	836.5	0.204
			1	middle	Mid	2525	20525	836.5	0.204
			1	upper	Mid	2525	20525	836.5	0.203
			1	lower	High	2643	20643	848.3	0.195
			1	middle	High	2643	20643	848.3	0.196
			1	upper	High	2643	20643	848.3	0.197
		3 Block QPSK	50%	lower	Low	2407	20407	824.7	0.197
			50%	middle	Low	2407	20407	824.7	0.202
			50%	upper	Low	2407	20407	824.7	0.199
			50%	lower	Mid	2525	20525	836.5	0.198
			50%	middle	Mid	2525	20525	836.5	0.200
			50%	upper	Mid	2525	20525	836.5	0.200
			50%	lower	High	2643	20643	848.3	0.195
			50%	middle	High	2643	20643	848.3	0.199
			50%	upper	High	2643	20643	848.3	0.195
		6 Blocks QPSK	100%	lower	Low	2407	20407	824.7	0.160
			100%	lower	Mid	2525	20525	836.5	0.159
			100%	lower	High	2643	20643	848.3	0.154
		1 Block 16 QAM	1	lower	Low	2407	20407	824.7	0.164
			1	middle	Low	2407	20407	824.7	0.167
			1	upper	Low	2407	20407	824.7	0.166
			1	lower	Mid	2525	20525	836.5	0.169
			1	middle	Mid	2525	20525	836.5	0.169
			1	upper	Mid	2525	20525	836.5	0.169
			1	lower	High	2643	20643	848.3	0.169
			1	middle	High	2643	20643	848.3	0.170
			1	upper	High	2643	20643	848.3	0.171
		3 Block 16 QAM	50%	lower	Low	2407	20407	824.7	0.166
			50%	middle	Low	2407	20407	824.7	0.169
			50%	upper	Low	2407	20407	824.7	0.166
			50%	lower	Mid	2525	20525	836.5	0.161
			50%	middle	Mid	2525	20525	836.5	0.164
			50%	upper	Mid	2525	20525	836.5	0.161
			50%	lower	High	2643	20643	848.3	0.163
			50%	middle	High	2643	20643	848.3	0.165
			50%	upper	High	2643	20643	848.3	0.163
		6 Blocks 16 QAM	100%	lower	Low	2407	20407	824.7	0.135
			100%	lower	Mid	2525	20525	836.5	0.132
			100%	lower	High	2643	20643	848.3	0.123

Assessments at the Body

Table below presents the data of the body assessment.

Table 26

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)	Run#
1 RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	836.5000	0.209	-0.04	0.115	0.140	AN-AB-200917-02#
		PMLN8126A w/ PMLN7008A		836.5000	0.209	0.01	0.112	0.135	AN-AB-200916-27
		PMLN8127A w/ PMLN5407A		836.5000	0.209	-0.08	0.070	0.086	AN-AB-200916-26
		PMLN8127A w/ PMLN5409A		836.5000	0.209	-0.02	0.063	0.076	AN-AB-200916-23
50 % RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	836.5000	0.164	0.00	0.091	0.111	AN-AB-200917-01#
		PMLN8126A w/ PMLN7008A		836.5000	0.164	0.02	0.088	0.107	AN-AB-200916-28
		PMLN8127A w/ PMLN5407A		836.5000	0.164	-0.09	0.054	0.067	AN-AB-200916-25
		PMLN8127A w/ PMLN5409A		836.5000	0.164	-0.05	0.063	0.078	AN-AB-200916-24
Assessment of Additional Battery									
AN000343A01	PMNN4804A	PMLN8126A w/ PMLN4651A	None	836.5000	0.205	-0.02	0.120	0.148	AN-AB-200917-06#

Assessments at the Face

Table below presents the data of the face assessment.

Table 27

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)	Run#
1 RB									
AN000343A01	PMNN4804A	None	None	836.5000	0.205	-0.04	0.082	0.102	AN-FACE-200917-04#
50 % RB									
AN000343A01	PMNN4804A	None	None	836.5000	0.160	-0.01	0.064	0.080	AN-FACE-200917-05#
Assessment of Additional Battery									
AN000343A01	PMNN4803A	None	None	836.5000	0.209	-0.08	0.086	0.106	AN-FACE-200917-03#

Additional Assessments for ISED Canada

LTE Band 5 only has one channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

7.4 Assessment for LTE Band 12 (699-716 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 28

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 12	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	5095	23095	707.5	0.246
			1	middle	Mid	5095	23095	707.5	0.240
			1	upper	Mid	5095	23095	707.5	0.236
		25 Block QPSK	50%	lower	Mid	5095	23095	707.5	0.191
			50%	middle	Mid	5095	23095	707.5	0.191
			50%	upper	Mid	5095	23095	707.5	0.189
		50 Block QPSK	100%	lower	Mid	5095	23095	707.5	0.192
		1 Block 16 QAM	1	lower	Mid	5095	23095	707.5	0.200
			1	middle	Mid	5095	23095	707.5	0.188
			1	upper	Mid	5095	23095	707.5	0.186
		25 Block 16 QAM	50%	lower	Mid	5095	23095	707.5	0.155
			50%	middle	Mid	5095	23095	707.5	0.156
			50%	upper	Mid	5095	23095	707.5	0.156
		50 Block 16 QAM	100%	lower	Mid	5095	23095	707.5	0.155

Table 28 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 12	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	5035	23035	701.5	0.248
			1	middle	Low	5035	23035	701.5	0.251
			1	upper	Low	5035	23035	701.5	0.248
			1	lower	Mid	5095	23095	707.5	0.245
			1	middle	Mid	5095	23095	707.5	0.238
			1	upper	Mid	5095	23095	707.5	0.236
			1	lower	High	5155	23155	713.5	0.242
			1	middle	High	5155	23155	713.5	0.237
			1	upper	High	5155	23155	713.5	0.238
		12 Block QPSK	50%	lower	Low	5035	23035	701.5	0.193
			50%	middle	Low	5035	23035	701.5	0.196
			50%	upper	Low	5035	23035	701.5	0.195
			50%	lower	Mid	5095	23095	707.5	0.192
			50%	middle	Mid	5095	23095	707.5	0.190
			50%	upper	Mid	5095	23095	707.5	0.189
			50%	lower	High	5155	23155	713.5	0.189
			50%	middle	High	5155	23155	713.5	0.188
			50%	upper	High	5155	23155	713.5	0.188
		25 Block QPSK	100%	lower	Low	5035	23035	701.5	0.199
			100%	lower	Mid	5095	23095	707.5	0.191
			100%	lower	High	5155	23155	713.5	0.188
		1 Block 16 QAM	1	lower	Low	5035	23035	701.5	0.195
			1	middle	Low	5035	23035	701.5	0.207
			1	upper	Low	5035	23035	701.5	0.209
			1	lower	Mid	5095	23095	707.5	0.223
			1	middle	Mid	5095	23095	707.5	0.217
			1	upper	Mid	5095	23095	707.5	0.217
			1	lower	High	5155	23155	713.5	0.197
			1	middle	High	5155	23155	713.5	0.195
			1	upper	High	5155	23155	713.5	0.189
		12 Block 16 QAM	50%	lower	Low	5035	23035	701.5	0.161
			50%	middle	Low	5035	23035	701.5	0.164
			50%	upper	Low	5035	23035	701.5	0.161
			50%	lower	Mid	5095	23095	707.5	0.159
			50%	middle	Mid	5095	23095	707.5	0.158
			50%	upper	Mid	5095	23095	707.5	0.157
			50%	lower	High	5155	23155	713.5	0.154
			50%	middle	High	5155	23155	713.5	0.154
			50%	upper	High	5155	23155	713.5	0.154
		25 Blocks 16 QAM	100%	lower	Low	5035	23035	701.5	0.161
			100%	lower	Mid	5095	23095	707.5	0.158
			100%	lower	High	5155	23155	713.5	0.147

Table 28 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 12	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	5025	23025	700.5	0.235
			1	middle	Low	5025	23025	700.5	0.247
			1	upper	Low	5025	23025	700.5	0.237
			1	lower	Mid	5095	23095	707.5	0.240
			1	middle	Mid	5095	23095	707.5	0.244
			1	upper	Mid	5095	23095	707.5	0.239
			1	lower	High	5165	23165	714.5	0.230
			1	middle	High	5165	23165	714.5	0.238
			1	upper	High	5165	23165	714.5	0.230
		8 Block QPSK	50%	lower	Low	5025	23025	700.5	0.191
			50%	middle	Low	5025	23025	700.5	0.198
			50%	upper	Low	5025	23025	700.5	0.203
			50%	lower	Mid	5095	23095	707.5	0.191
			50%	middle	Mid	5095	23095	707.5	0.190
			50%	upper	Mid	5095	23095	707.5	0.187
			50%	lower	High	5165	23165	714.5	0.182
			50%	middle	High	5165	23165	714.5	0.182
			50%	upper	High	5165	23165	714.5	0.180
		15 Blocks QPSK	100%	lower	Low	5025	23025	700.5	0.204
			100%	lower	Mid	5095	23095	707.5	0.188
			100%	lower	High	5165	23165	714.5	0.182
		1 Block 16 QAM	1	lower	Low	5025	23025	700.5	0.192
			1	middle	Low	5025	23025	700.5	0.207
			1	upper	Low	5025	23025	700.5	0.206
			1	lower	Mid	5095	23095	707.5	0.190
			1	middle	Mid	5095	23095	707.5	0.193
			1	upper	Mid	5095	23095	707.5	0.189
			1	lower	High	5165	23165	714.5	0.202
			1	middle	High	5165	23165	714.5	0.204
			1	upper	High	5165	23165	714.5	0.199
		8 Block 16 QAM	50%	lower	Low	5025	23025	700.5	0.159
			50%	middle	Low	5025	23025	700.5	0.162
			50%	upper	Low	5025	23025	700.5	0.165
			50%	lower	Mid	5095	23095	707.5	0.157
			50%	middle	Mid	5095	23095	707.5	0.156
			50%	upper	Mid	5095	23095	707.5	0.154
			50%	lower	High	5165	23165	714.5	0.149
			50%	middle	High	5165	23165	714.5	0.151
			50%	upper	High	5165	23165	714.5	0.147
		15 Blocks 16 QAM	100%	lower	Low	5025	23025	700.5	0.162
			100%	lower	Mid	5095	23095	707.5	0.154
			100%	lower	High	5165	23165	714.5	0.149

Table 28 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 12	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	5017	23017	699.7	0.235
			1	middle	Low	5017	23017	699.7	0.245
			1	upper	Low	5017	23017	699.7	0.247
			1	lower	Mid	5095	23095	707.5	0.240
			1	middle	Mid	5095	23095	707.5	0.239
			1	upper	Mid	5095	23095	707.5	0.240
			1	lower	High	5173	23173	715.3	0.225
			1	middle	High	5173	23173	715.3	0.228
			1	upper	High	5173	23173	715.3	0.230
		3 Block QPSK	50%	lower	Low	5017	23017	699.7	0.232
			50%	middle	Low	5017	23017	699.7	0.233
			50%	upper	Low	5017	23017	699.7	0.237
			50%	lower	Mid	5095	23095	707.5	0.233
			50%	middle	Mid	5095	23095	707.5	0.236
			50%	upper	Mid	5095	23095	707.5	0.236
			50%	lower	High	5173	23173	715.3	0.225
			50%	middle	High	5173	23173	715.3	0.230
			50%	upper	High	5173	23173	715.3	0.225
		6 Blocks QPSK	100%	lower	Low	5017	23017	699.7	0.185
			100%	lower	Mid	5095	23095	707.5	0.187
			100%	lower	High	5173	23173	715.3	0.179
		1 Block 16 QAM	1	lower	Low	5017	23017	699.7	0.189
			1	middle	Low	5017	23017	699.7	0.207
			1	upper	Low	5017	23017	699.7	0.209
			1	lower	Mid	5095	23095	707.5	0.196
			1	middle	Mid	5095	23095	707.5	0.200
			1	upper	Mid	5095	23095	707.5	0.198
			1	lower	High	5173	23173	715.3	0.197
			1	middle	High	5173	23173	715.3	0.200
			1	upper	High	5173	23173	715.3	0.199
		3 Block 16 QAM	50%	lower	Low	5017	23017	699.7	0.191
			50%	middle	Low	5017	23017	699.7	0.194
			50%	upper	Low	5017	23017	699.7	0.194
			50%	lower	Mid	5095	23095	707.5	0.191
			50%	middle	Mid	5095	23095	707.5	0.192
			50%	upper	Mid	5095	23095	707.5	0.191
			50%	lower	High	5173	23173	715.3	0.192
			50%	middle	High	5173	23173	715.3	0.195
			50%	upper	High	5173	23173	715.3	0.189
		6 Blocks 16 QAM	100%	lower	Low	5017	23017	699.7	0.157
			100%	lower	Mid	5095	23095	707.5	0.156
			100%	lower	High	5173	23173	715.3	0.141

Assessments at the Body

Table below presents the data of the body assessment.

Table 29

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)	Run#
1 RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	707.5000	0.246	-0.12	0.218	0.230	ZR-AB-200917-10
		PMLN8126A w/ PMLN7008A		707.5000	0.246	-0.09	0.214	0.224	ZR-AB-200917-12
		PMLN8127A w/ PMLN5407A		707.5000	0.246	0.00	0.147	0.151	ZR-AB-200917-13
		PMLN8127A w/ PMLN5409A		707.5000	0.246	-0.08	0.145	0.151	ZR-AB-200917-14
50 % RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	707.5000	0.191	-0.12	0.169	0.182	ZR-AB-200917-15
		PMLN8126A w/ PMLN7008A		707.5000	0.191	-0.06	0.167	0.177	ZR-AB-200917-16
		PMLN8127A w/ PMLN5407A		707.5000	0.191	-0.05	0.114	0.121	ZR-AB-200917-17
		PMLN8127A w/ PMLN5409A		707.5000	0.191	-0.04	0.110	0.116	ZR-AB-200917-18
Assessment of Additional Battery									
AN000343A01	PMNN4804A	PMLN8126A w/ PMLN4651A	None	707.5000	0.235	-0.08	0.205	0.224	AN-AB-200917-19

Assessments at the Face

Table below presents the data of the face assessment.

Table 30

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)	Run#
1 RB									
AN000343A01	PMNN4804A	None	None	707.5000	0.235	-0.04	0.209	0.226	AN-FACE-200917-20
50 % RB									
AN000343A01	PMNN4804A	None	None	707.5000	0.187	-0.01	0.159	0.170	AN-FACE-200917-21
Assessment of Additional Battery									
AN000343A01	PMNN4803A	None	None	707.5000	0.246	0.02	0.200	0.205	AN-FACE-200917-22

Additional Assessments for ISED Canada

LTE Band 12 only has one channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

7.5 Assessment for LTE Band 13 (777-787 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 31

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 13	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	5230	23230	782.0	0.213
			1	middle	Mid	5230	23230	782.0	0.210
			1	upper	Mid	5230	23230	782.0	0.210
		25 Block QPSK	50%	lower	Mid	5230	23230	782.0	0.167
			50%	middle	Mid	5230	23230	782.0	0.167
			50%	upper	Mid	5230	23230	782.0	0.166
		50 Block QPSK	100%	lower	Mid	5230	23230	782.0	0.167
		1 Block 16 QAM	1	lower	Mid	5230	23230	782.0	0.179
			1	middle	Mid	5230	23230	782.0	0.180
			1	upper	Mid	5230	23230	782.0	0.189
		25 Block 16 QAM	50%	lower	Mid	5230	23230	782.0	0.137
			50%	middle	Mid	5230	23230	782.0	0.136
			50%	upper	Mid	5230	23230	782.0	0.133
		50 Block 16 QAM	100%	lower	Mid	5230	23230	782.0	0.135

Table 31 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 13	5 MHz 25 Blocks	1 Block QPSK	1	lower	Mid	5230	23230	782.0	0.208
			1	middle	Mid	5230	23230	782.0	0.206
			1	upper	Mid	5230	23230	782.0	0.207
		12 Block QPSK	50%	lower	Mid	5230	23230	782.0	0.166
			50%	middle	Mid	5230	23230	782.0	0.166
			50%	upper	Mid	5230	23230	782.0	0.164
		25 Blocks QPSK	100%	lower	Mid	5230	23230	782.0	0.166
		1 Block 16 QAM	1	lower	Mid	5230	23230	782.0	0.186
			1	middle	Mid	5230	23230	782.0	0.187
			1	upper	Mid	5230	23230	782.0	0.182
		12 Block 16 QAM	50%	lower	Mid	5230	23230	782.0	0.136
			50%	middle	Mid	5230	23230	782.0	0.140
			50%	upper	Mid	5230	23230	782.0	0.137
		25 Blocks 16 QAM	100%	lower	Mid	5230	23230	782.0	0.134

Assessments at the Body

Table below presents the data of the body assessment.

Table 32

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)	Run#
1 RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	782.0000	0.213	-0.17	0.091	0.112	AN-AB-200915-03
		PMLN8126A w/ PMLN7008A		782.0000	0.213	0.09	0.087	0.103	AN-AB-200915-04
		PMLN8127A w/ PMLN5407A		782.0000	0.213	-0.11	0.056	0.068	AN-AB-200915-05
		PMLN8127A w/ PMLN5409A		782.0000	0.213	0.09	0.053	0.063	AN-AB-200916-01#
50 % RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	782.0000	0.167	-0.04	0.075	0.091	AN-AB-200916-05#
		PMLN8126A w/ PMLN7008A		782.0000	0.167	0.02	0.067	0.080	AN-AB-200916-04#
		PMLN8127A w/ PMLN5407A		782.0000	0.167	0.10	0.045	0.054	AN-AB-200916-03#
		PMLN8127A w/ PMLN5409A		782.0000	0.167	-0.04	0.042	0.051	AN-AB-200916-02#
Assessment of Additional Battery									
AN000343A01	PMNN4804A	PMLN8126A w/ PMLN4651A	None	782.0000	0.203	-0.25	0.086	0.113	AN-AB-201016-13

Assessments at the Face

Table below presents the data of the face assessment.

Table 33

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)	Run#
1 RB									
AN000343A01	PMNN4804A	None	None	782.0000	0.213	-0.03	0.072	0.086	AN-FACE-200916-08#
50 % RB									
AN000343A01	PMNN4804A	None	None	782.0000	0.167	0.06	0.053	0.063	AN-FACE-200916-07#
Assessment of Additional Battery									
AN000343A01	PMNN4803A	None	None	782.0000	0.213	0.14	0.061	0.072	AM-FACE-200916-10

Additional Assessments for ISED Canada

LTE Band 13 only has one channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

7.6 Assessment for LTE Band 14 (788-798 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 34

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 14	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	5330	23330	793.0	0.232
			1	middle	Mid	5330	23330	793.0	0.225
			1	upper	Mid	5330	23330	793.0	0.223
		25 Block QPSK	50%	lower	Mid	5330	23330	793.0	0.180
			50%	middle	Mid	5330	23330	793.0	0.180
			50%	upper	Mid	5330	23330	793.0	0.179
		50 Block QPSK	100%	lower	Mid	5330	23330	793.0	0.178
		1 Block 16QAM	1	lower	Mid	5330	23330	793.0	0.188
			1	middle	Mid	5330	23330	793.0	0.190
			1	upper	Mid	5330	23330	793.0	0.198
		25 Block 16QAM	50%	lower	Mid	5330	23330	793.0	0.145
			50%	middle	Mid	5330	23330	793.0	0.146
			50%	upper	Mid	5330	23330	793.0	0.145
		50 Block 16QAM	100%	lower	Mid	5330	23330	793.0	0.143

Table 34 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 14	5 MHz 25 Blocks	1 Block QPSK	1	lower	Mid	5330	23330	793.0	0.225
			1	middle	Mid	5330	23330	793.0	0.226
			1	upper	Mid	5330	23330	793.0	0.225
		12 Block QPSK	50%	lower	Mid	5330	23330	793.0	0.180
			50%	middle	Mid	5330	23330	793.0	0.178
			50%	upper	Mid	5330	23330	793.0	0.176
		25 Block QPSK	100%	lower	Mid	5330	23330	793.0	0.179
		1 Block 16QAM	1	lower	Mid	5330	23330	793.0	0.189
			1	middle	Mid	5330	23330	793.0	0.195
			1	upper	Mid	5330	23330	793.0	0.200
		12 Block 16QAM	50%	lower	Mid	5330	23330	793.0	0.149
			50%	middle	Mid	5330	23330	793.0	0.155
			50%	upper	Mid	5330	23330	793.0	0.144
		25 Block 16QAM	100%	lower	Mid	5330	23330	793.0	0.144

Assessments at the Body

Table below presents the data of the body assessment.

Table 35

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)	Run#
1 RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	793.0000	0.232	-0.04	0.080	0.088	AN-AB-200916-19
		PMLN8126A w/ PMLN7008A		793.0000	0.232	-0.06	0.083	0.091	AM-AB-200916-15
		PMLN8127A w/ PMLN5407A		793.0000	0.232	0.01	0.059	0.064	AM-AB-200916-16
		PMLN8127A w/ PMLN5409A		793.0000	0.232	0.06	0.054	0.059	AM-AB-200916-17
50 % RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	793.0000	0.180	-0.17	0.062	0.072	AN-AB-200916-18
		PMLN8126A w/ PMLN7008A		793.0000	0.180	-0.08	0.060	0.068	AN-AB-200916-20
		PMLN8127A w/ PMLN5407A		793.0000	0.180	0.06	0.040	0.044	AN-AB-200916-21
		PMLN8127A w/ PMLN5409A		793.0000	0.180	-0.07	0.038	0.043	AN-AB-200916-22
Assessment of Additional Battery									
AN000343A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	793.0000	0.227	-0.11	0.079	0.090	AN-AB-200917-07#

Assessments at the Face

Table below presents the data of the face assessment.

Table 36

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)	Run#
1 RB									
AN000343A01	PMNN4804A	None	None	793.0000	0.232	0.02	0.069	0.075	AM-FACE-200916-11
50 % RB									
AN000343A01	PMNN4804A	None	None	793.0000	0.180	0.07	0.057	0.063	AM-FACE-200916-12
Assessment of Additional Battery									
AN000343A01	PMNN4803A	None	None	793.0000	0.232	0.03	0.085	0.092	AN-FACE-201016-14

Additional Assessments for ISED Canada

LTE Band 14 only has one channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

7.7 Assessment for LTE Band 17 (704-716 MHz)

Band 17 is contained within band 12 (699-716 MHz), with same maximum output power (including tune-up tolerance). Thus, band 12 SAR covers band 17.

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 37

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 17	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	5790	23790	710.0	0.238
			1	middle	Mid	5790	23790	710.0	0.232
			1	upper	Mid	5790	23790	710.0	0.231
		25 Block QPSK	50%	lower	Mid	5790	23790	710.0	0.191
			50%	middle	Mid	5790	23790	710.0	0.190
			50%	upper	Mid	5790	23790	710.0	0.187
		50 Block QPSK	100%	lower	Mid	5790	23790	710.0	0.189
		1 Block 16QAM	1	lower	Mid	5790	23790	710.0	0.195
			1	middle	Mid	5790	23790	710.0	0.191
			1	upper	Mid	5790	23790	710.0	0.188
		25 Block 16QAM	50%	lower	Mid	5790	23790	710.0	0.153
			50%	middle	Mid	5790	23790	710.0	0.157
			50%	upper	Mid	5790	23790	710.0	0.154
		50 Block 16QAM	100%	lower	Mid	5790	23790	710.0	0.153

Table 37 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 17	5 MHz 25 Blocks	1 Block QPSK	1	lower	Mid	5790	23790	710.0	0.241
			1	middle	Mid	5790	23790	710.0	0.237
			1	upper	Mid	5790	23790	710.0	0.237
		12 Block QPSK	50%	lower	Mid	5790	23790	710.0	0.190
			50%	middle	Mid	5790	23790	710.0	0.190
			50%	upper	Mid	5790	23790	710.0	0.189
		25 Block QPSK	100%	lower	Mid	5790	23790	710.0	0.191
		1 Block 16QAM	1	lower	Mid	5790	23790	710.0	0.197
			1	middle	Mid	5790	23790	710.0	0.194
			1	upper	Mid	5790	23790	710.0	0.197
		12 Block 16QAM	50%	lower	Mid	5790	23790	710.0	0.155
			50%	middle	Mid	5790	23790	710.0	0.156
			50%	upper	Mid	5790	23790	710.0	0.153
		25 Block 16QAM	100%	lower	Mid	5790	23790	710.0	0.150

7.8 Assessment for LTE Band 7 (2500-2570 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 38

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 7	20 MHz 100 Blocks	1 Block QPSK	1	lower	Low	2850	20850	2510.0	0.195
			1	middle	Low	2850	20850	2510.0	0.192
			1	upper	Low	2850	20850	2510.0	0.182
			1	lower	Mid	3100	21100	2535.0	0.186
			1	middle	Mid	3100	21100	2535.0	0.185
			1	upper	Mid	3100	21100	2535.0	0.173
			1	lower	High	3350	21350	2560.0	0.178
			1	middle	High	3350	21350	2560.0	0.172
			1	upper	High	3350	21350	2560.0	0.163
		50 Block QPSK	50%	lower	Low	2850	20850	2510.0	0.154
			50%	middle	Low	2850	20850	2510.0	0.155
			50%	upper	Low	2850	20850	2510.0	0.149
			50%	lower	Mid	3100	21100	2535.0	0.147
			50%	middle	Mid	3100	21100	2535.0	0.147
			50%	upper	Mid	3100	21100	2535.0	0.143
			50%	lower	High	3350	21350	2560.0	0.139
			50%	middle	High	3350	21350	2560.0	0.141
			50%	upper	High	3350	21350	2560.0	0.138
		100 Blocks QPSK	100%	lower	Low	2850	20850	2510.0	0.152
			100%	lower	Mid	3100	21100	2535.0	0.147
			100%	lower	High	3350	21350	2560.0	0.140
		1 Block 16 QAM	1	lower	Low	2850	20850	2510.0	0.175
			1	middle	Low	2850	20850	2510.0	0.169
			1	upper	Low	2850	20850	2510.0	0.162
			1	lower	Mid	3100	21100	2535.0	0.165
			1	middle	Mid	3100	21100	2535.0	0.161
			1	upper	Mid	3100	21100	2535.0	0.153
			1	lower	High	3350	21350	2560.0	0.161
			1	middle	High	3350	21350	2560.0	0.157
			1	upper	High	3350	21350	2560.0	0.150
		50 Block 16 QAM	50%	lower	Low	2850	20850	2510.0	0.125
			50%	middle	Low	2850	20850	2510.0	0.125
			50%	upper	Low	2850	20850	2510.0	0.120
			50%	lower	Mid	3100	21100	2535.0	0.118
			50%	middle	Mid	3100	21100	2535.0	0.119
			50%	upper	Mid	3100	21100	2535.0	0.114
			50%	lower	High	3350	21350	2560.0	0.115
			50%	middle	High	3350	21350	2560.0	0.115
			50%	upper	High	3350	21350	2560.0	0.111
		100 Blocks 16 QAM	100%	lower	Low	2850	20850	2510.0	0.123
			100%	lower	Mid	3100	21100	2535.0	0.119
			100%	lower	High	3350	21350	2560.0	0.114

Table 38 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 7	15 MHz 75 Blocks	1 Block QPSK	1	lower	Low	2825	20825	2507.5	0.199
			1	middle	Low	2825	20825	2507.5	0.198
			1	upper	Low	2825	20825	2507.5	0.191
			1	lower	Mid	3100	21100	2535.0	0.187
			1	middle	Mid	3100	21100	2535.0	0.185
			1	upper	Mid	3100	21100	2535.0	0.174
			1	lower	High	3375	21375	2562.5	0.173
			1	middle	High	3375	21375	2562.5	0.171
			1	upper	High	3375	21375	2562.5	0.165
		36 Block QPSK	50%	lower	Low	2825	20825	2507.5	0.153
			50%	middle	Low	2825	20825	2507.5	0.152
			50%	upper	Low	2825	20825	2507.5	0.150
			50%	lower	Mid	3100	21100	2535.0	0.146
			50%	middle	Mid	3100	21100	2535.0	0.147
			50%	upper	Mid	3100	21100	2535.0	0.141
			50%	lower	High	3375	21375	2562.5	0.140
			50%	middle	High	3375	21375	2562.5	0.140
			50%	upper	High	3375	21375	2562.5	0.134
		75 Blocks QPSK	100%	lower	Low	2825	20825	2507.5	0.152
			100%	lower	Mid	3100	21100	2535.0	0.145
			100%	lower	High	3375	21375	2562.5	0.138
		1 Block 16 QAM	1	lower	Low	2825	20825	2507.5	0.175
			1	middle	Low	2825	20825	2507.5	0.169
			1	upper	Low	2825	20825	2507.5	0.163
			1	lower	Mid	3100	21100	2535.0	0.149
			1	middle	Mid	3100	21100	2535.0	0.146
			1	upper	Mid	3100	21100	2535.0	0.139
			1	lower	High	3375	21375	2562.5	0.152
			1	middle	High	3375	21375	2562.5	0.148
			1	upper	High	3375	21375	2562.5	0.144
		36 Block 16 QAM	50%	lower	Low	2825	20825	2507.5	0.124
			50%	middle	Low	2825	20825	2507.5	0.124
			50%	upper	Low	2825	20825	2507.5	0.122
			50%	lower	Mid	3100	21100	2535.0	0.119
			50%	middle	Mid	3100	21100	2535.0	0.120
			50%	upper	Mid	3100	21100	2535.0	0.115
			50%	lower	High	3375	21375	2562.5	0.115
			50%	middle	High	3375	21375	2562.5	0.114
			50%	upper	High	3375	21375	2562.5	0.110
		75 Blocks 16 QAM	100%	lower	Low	2825	20825	2507.5	0.123
			100%	lower	Mid	3100	21100	2535.0	0.119
			100%	lower	High	3375	21375	2562.5	0.114

Table 38 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 7	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	2800	20800	2505.0	0.198
			1	middle	Low	2800	20800	2505.0	0.196
			1	upper	Low	2800	20800	2505.0	0.190
			1	lower	Mid	3100	21100	2535.0	0.186
			1	middle	Mid	3100	21100	2535.0	0.185
			1	upper	Mid	3100	21100	2535.0	0.184
			1	lower	High	3400	21400	2565.0	0.179
			1	middle	High	3400	21400	2565.0	0.172
			1	upper	High	3400	21400	2565.0	0.170
		25 Block QPSK	50%	lower	Low	2800	20800	2505.0	0.157
			50%	middle	Low	2800	20800	2505.0	0.154
			50%	upper	Low	2800	20800	2505.0	0.153
			50%	lower	Mid	3100	21100	2535.0	0.147
			50%	middle	Mid	3100	21100	2535.0	0.147
			50%	upper	Mid	3100	21100	2535.0	0.147
			50%	lower	High	3400	21400	2565.0	0.141
			50%	middle	High	3400	21400	2565.0	0.138
			50%	upper	High	3400	21400	2565.0	0.136
		50 Blocks QPSK	100%	lower	Low	2800	20800	2505.0	0.152
			100%	lower	Mid	3100	21100	2535.0	0.147
			100%	lower	High	3400	21400	2565.0	0.141
		1 Block 16 QAM	1	lower	Low	2800	20800	2505.0	0.165
			1	middle	Low	2800	20800	2505.0	0.160
			1	upper	Low	2800	20800	2505.0	0.155
			1	lower	Mid	3100	21100	2535.0	0.149
			1	middle	Mid	3100	21100	2535.0	0.146
			1	upper	Mid	3100	21100	2535.0	0.147
			1	lower	High	3400	21400	2565.0	0.156
			1	middle	High	3400	21400	2565.0	0.147
			1	upper	High	3400	21400	2565.0	0.148
		25 Block 16 QAM	50%	lower	Low	2800	20800	2505.0	0.129
			50%	middle	Low	2800	20800	2505.0	0.128
			50%	upper	Low	2800	20800	2505.0	0.126
			50%	lower	Mid	3100	21100	2535.0	0.119
			50%	middle	Mid	3100	21100	2535.0	0.120
			50%	upper	Mid	3100	21100	2535.0	0.118
			50%	lower	High	3400	21400	2565.0	0.114
			50%	middle	High	3400	21400	2565.0	0.112
			50%	upper	High	3400	21400	2565.0	0.111
		50 Blocks 16 QAM	100%	lower	Low	2800	20800	2505.0	0.124
			100%	lower	Mid	3100	21100	2535.0	0.118
			100%	lower	High	3400	21400	2565.0	0.114

Table 38 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 7	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	2775	20775	2502.5	0.201
			1	middle	Low	2775	20775	2502.5	0.203
			1	upper	Low	2775	20775	2502.5	0.198
			1	lower	Mid	3100	21100	2535.0	0.189
			1	middle	Mid	3100	21100	2535.0	0.190
			1	upper	Mid	3100	21100	2535.0	0.190
			1	lower	High	3425	21425	2567.5	0.169
			1	middle	High	3425	21425	2567.5	0.167
			1	upper	High	3425	21425	2567.5	0.167
		12 Block QPSK	50%	lower	Low	2775	20775	2502.5	0.158
			50%	middle	Low	2775	20775	2502.5	0.157
			50%	upper	Low	2775	20775	2502.5	0.158
			50%	lower	Mid	3100	21100	2535.0	0.147
			50%	middle	Mid	3100	21100	2535.0	0.148
			50%	upper	Mid	3100	21100	2535.0	0.146
			50%	lower	High	3425	21425	2567.5	0.136
			50%	middle	High	3425	21425	2567.5	0.137
			50%	upper	High	3425	21425	2567.5	0.136
		25 Blocks QPSK	100%	lower	Low	2775	20775	2502.5	0.157
			100%	lower	Mid	3100	21100	2535.0	0.148
			100%	lower	High	3425	21425	2567.5	0.136
		1 Block 16 QAM	1	lower	Low	2775	20775	2502.5	0.164
			1	middle	Low	2775	20775	2502.5	0.163
			1	upper	Low	2775	20775	2502.5	0.160
			1	lower	Mid	3100	21100	2535.0	0.155
			1	middle	Mid	3100	21100	2535.0	0.154
			1	upper	Mid	3100	21100	2535.0	0.154
			1	lower	High	3425	21425	2567.5	0.153
			1	middle	High	3425	21425	2567.5	0.153
			1	upper	High	3425	21425	2567.5	0.152
		12 Block 16 QAM	50%	lower	Low	2775	20775	2502.5	0.129
			50%	middle	Low	2775	20775	2502.5	0.129
			50%	upper	Low	2775	20775	2502.5	0.127
			50%	lower	Mid	3100	21100	2535.0	0.121
			50%	middle	Mid	3100	21100	2535.0	0.121
			50%	upper	Mid	3100	21100	2535.0	0.119
			50%	lower	High	3425	21425	2567.5	0.113
			50%	middle	High	3425	21425	2567.5	0.113
			50%	upper	High	3425	21425	2567.5	0.114
		25 Blocks 16 QAM	100%	lower	Low	2775	20775	2502.5	0.126
			100%	lower	Mid	3100	21100	2535.0	0.119
			100%	lower	High	3425	21425	2567.5	0.112

Assessments at the Body

Table below presents the data of the body assessment.

Table 39

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)	Run#
1 RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	2510.0000	0.195	-0.11	0.041	0.054	ZR-AB-200918-05
		PMLN8126A w/ PMLN7008A		2510.0000	0.195	-0.12	0.063	0.084	ZR-AB-200918-06
		PMLN8127A w/ PMLN5407A		2510.0000	0.195	0.37	0.024	0.031	ZR-AB-200918-11
		PMLN8127A w/ PMLN5409A		2510.0000	0.195	-0.37	0.028	0.039	ZR-AB-200918-10
50 % RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	2510.0000	0.155	-0.14	0.033	0.044	ZR-AB-200918-12
		PMLN8126A w/ PMLN7008A		2510.0000	0.155	0.30	0.062	0.080	AN-AB-200918-13
		PMLN8127A w/ PMLN5407A		2510.0000	0.155	-0.01	0.024	0.031	AN-AB-200918-15
		PMLN8127A w/ PMLN5409A		2510.0000	0.155	0.18	0.015	0.019	AN-AB-200919-01#
Assessment of Additional Battery									
AN000346A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	2510.0000	0.200	-0.37	0.043	0.059	AN-AB-201015-01#

Assessments at the Face

Table below presents the data of the face assessment.

Table 40

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)	Run#
1 RB									
AN000346A01	PMNN4804A	None	None	2510.0000	0.200	0.09	0.028	0.035	AN-FACE-200919-04#
50 % RB									
AN000346A01	PMNN4804A	None	None	2510.0000	0.156	0.21	0.017	0.022	AN-FACE-200919-03#
Assessment of Additional Battery									
AN000346A01	PMNN4803A	None	None	2510.0000	0.195	0.00	0.016	0.021	AN-FACE-200920-04

Additional Assessments for ISED Canada

As per ISED Notice 2016-DRS001, additional tests were required for the low, mid and high frequency channels for the configuration with the highest SAR value. The SAR results are in Tables below. SAR plot is included in Appendix for the highest configuration.

Table 41

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)	Run#
Body									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN7008A	None	2510.0000	0.195	-0.12	0.063	0.084	ZR-AB- 200918-06
				2535.0000	0.186	-0.02	0.059	0.080	AN-AB- 201015-02#
				2560.0000	0.178	0.04	0.071	0.101	AN-AB- 201015-04#
Face									
AN000346A01	PMNN4804A	None	None	2510.0000	0.200	0.09	0.028	0.035	AN-FACE- 200919-04#
				2535.0000	0.190	-0.34	0.005	0.008	AN-FACE- 200929-12
				2560.0000	0.182	0.04	0.028	0.039	AN-FACE- 200929-14

7.9 Assessment for LTE Band 30 (2305-2315 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 42

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 30	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	9820	27710	2310.0	0.210
			1	middle	Mid	9820	27710	2310.0	0.199
			1	upper	Mid	9820	27710	2310.0	0.201
		25 Block QPSK	50%	lower	Mid	9820	27710	2310.0	0.165
			50%	middle	Mid	9820	27710	2310.0	0.160
			50%	upper	Mid	9820	27710	2310.0	0.161
		50 Block QPSK	100%	lower	Mid	9820	27710	2310.0	0.163
		1 Block 16QAM	1	lower	Mid	9820	27710	2310.0	0.169
			1	middle	Mid	9820	27710	2310.0	0.158
			1	upper	Mid	9820	27710	2310.0	0.159
		25 Block 16QAM	50%	lower	Mid	9820	27710	2310.0	0.133
			50%	middle	Mid	9820	27710	2310.0	0.130
			50%	upper	Mid	9820	27710	2310.0	0.131
		50 Block 16QAM	100%	lower	Mid	9820	27710	2310.0	0.131

Table 42 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (W)
Band 30	5 MHz 25 Blocks	1 Block QPSK	1	lower	Mid	9820	27710	2310.0	0.211
			1	middle	Mid	9820	27710	2310.0	0.204
			1	upper	Mid	9820	27710	2310.0	0.200
		12 Block QPSK	50%	lower	Mid	9820	27710	2310.0	0.161
			50%	middle	Mid	9820	27710	2310.0	0.160
			50%	upper	Mid	9820	27710	2310.0	0.156
		25 Block QPSK	100%	lower	Mid	9820	27710	2310.0	0.160
		1 Block 16QAM	1	lower	Mid	9820	27710	2310.0	0.174
			1	middle	Mid	9820	27710	2310.0	0.166
			1	upper	Mid	9820	27710	2310.0	0.162
		12 Block 16QAM	50%	lower	Mid	9820	27710	2310.0	0.134
			50%	middle	Mid	9820	27710	2310.0	0.132
			50%	upper	Mid	9820	27710	2310.0	0.129
		25 Block 16QAM	100%	lower	Mid	9820	27710	2310.0	0.130

Assessments at the Body

Table below presents the data of the body assessment.

Table 43

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)	Run#
1 RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	2310.0000	0.210	0.01	0.039	0.047	AN-AB-200920-05
		PMLN8126A w/ PMLN7008A		2310.0000	0.210	0.14	0.055	0.066	AN-AB-200920-08
		PMLN8127A w/ PMLN5407A		2310.0000	0.210	-0.07	0.026	0.032	ZR-AB-200921-02
		PMLN8127A w/ PMLN5409A		2310.0000	0.210	0.31	0.032	0.038	AN-AB-200920-09
50 % RB									
AN000346A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	2310.0000	0.165	0.26	0.033	0.040	AN-AB-200920-06
		PMLN8126A w/ PMLN7008A		2310.0000	0.165	0.22	0.045	0.055	AN-AB-200920-07
		PMLN8127A w/ PMLN5407A		2310.0000	0.165	-0.21	0.016	0.020	ZR-AB-200921-04
		PMLN8127A w/ PMLN5409A		2310.0000	0.165	0.07	0.026	0.032	AN-AB-200920-10
Assessment of Additional Battery									
AN000346A01	PMNN4804A	PMLN8126A w/ PMLN7008A	None	2310.0000	0.210	0.04	0.055	0.066	AR-AB-201015-06

Assessments at the Face

Table below presents the data of the face assessment.

Table 44

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)	Run#
1 RB									
AN000346A01	PMNN4804A	None	None	2310.0000	0.202	-0.10	0.029	0.037	ZR-FACE-200921-06
50 % RB									
AN000346A01	PMNN4804A	None	None	2310.0000	0.161	0.02	0.011	0.014	ZR-FACE-200921-07
Assessment of Additional Battery									
AN000346A01	PMNN4803A	None	None	2310.0000	0.210	-0.18	0.024	0.030	AN-FACE-200921-09

Additional Assessments for ISED Canada

LTE Band 30 only has one channel; no additional tests were required for low, mid and high frequency channels as per ISED Notice 2016-DRS001.

7.10 Assessment for LTE Band 48 (3550-3700 MHz)

Output Power Data

These power measurements were used to determine the necessary modes for SAR testing according to KDB 941225.

Table 45

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	20 MHz 100 Blocks	1 Block QPSK	1	lower	Low	55340	3560.0	0.214
			1	middle	Low	55340	3560.0	0.213
			1	upper	Low	55340	3560.0	0.218
			1	lower	Mid	55773	3603.3	0.220
			1	middle	Mid	55773	3603.3	0.218
			1	upper	Mid	55773	3603.3	0.220
			1	lower	Mid High	56207	3646.7	0.218
			1	middle	Mid High	56207	3646.7	0.216
			1	upper	Mid High	56207	3646.7	0.216
			1	lower	High	56640	3690.0	0.212
			1	middle	High	56640	3690.0	0.207
			1	upper	High	56640	3690.0	0.207
		50 Block QPSK	50%	lower	Low	55340	3560.0	0.169
			50%	middle	Low	55340	3560.0	0.168
			50%	upper	Low	55340	3560.0	0.172
			50%	lower	Mid	55773	3603.3	0.174
			50%	middle	Mid	55773	3603.3	0.175
			50%	upper	Mid	55773	3603.3	0.173
			50%	lower	Mid High	56207	3646.7	0.174
			50%	middle	Mid High	56207	3646.7	0.174
			50%	upper	Mid High	56207	3646.7	0.175
			50%	lower	High	56640	3690.0	0.168
			50%	middle	High	56640	3690.0	0.170
			50%	upper	High	56640	3690.0	0.164
		100 Blocks QPSK	100%	lower	Low	55340	3560.0	0.171
			100%	lower	Mid	55773	3603.3	0.171
			100%	lower	Mid High	56207	3646.7	0.173
			100%	lower	High	56640	3690.0	0.168

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	20 MHz 100 Blocks	1 Block 16QAM	1	lower	Low	39750	2506.0	0.178
			1	middle	Low	39750	2506.0	0.176
			1	upper	Low	39750	2506.0	0.185
			1	lower	Mid	40620	2593.0	0.181
			1	middle	Mid	40620	2593.0	0.179
			1	upper	Mid	40620	2593.0	0.182
			1	lower	Mid High	41005	2631.5	0.199
			1	middle	Mid High	41005	2631.5	0.202
			1	upper	Mid High	41005	2631.5	0.200
			1	lower	High	41490	2680.0	0.182
			1	middle	High	41490	2680.0	0.174
			1	upper	High	41490	2680.0	0.175
		50 Block 16QAM	50%	lower	Low	39750	2506.0	0.136
			50%	middle	Low	39750	2506.0	0.135
			50%	upper	Low	39750	2506.0	0.137
			50%	lower	Mid	40620	2593.0	0.141
			50%	middle	Mid	40620	2593.0	0.144
			50%	upper	Mid	40620	2593.0	0.143
			50%	lower	Mid High	41005	2631.5	0.139
			50%	middle	Mid High	41005	2631.5	0.143
			50%	upper	Mid High	41005	2631.5	0.142
			50%	lower	High	41490	2680.0	0.135
			50%	middle	High	41490	2680.0	0.136
			50%	upper	High	41490	2680.0	0.132
		100 Blocks 16QAM	100%	lower	Low	39750	2506.0	0.137
			100%	lower	Mid	40620	2593.0	0.138
			100%	lower	Mid High	41005	2631.5	0.140
			100%	lower	High	41490	2680.0	0.136

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	15 MHz 75 Blocks	1 Block QPSK	1	lower	Low	55315	3557.5	0.211
			1	middle	Low	55315	3557.5	0.209
			1	upper	Low	55315	3557.5	0.211
			1	lower	Mid	55765	3602.5	0.214
			1	middle	Mid	55765	3602.5	0.214
			1	upper	Mid	55765	3602.5	0.218
			1	lower	Mid High	56215	3647.5	0.213
			1	middle	Mid High	56215	3647.5	0.215
			1	upper	Mid High	56215	3647.5	0.212
			1	lower	High	56665	3692.5	0.209
			1	middle	High	56665	3692.5	0.205
			1	upper	High	56665	3692.5	0.206
		36 Block QPSK	50%	lower	Low	55315	3557.5	0.166
			50%	middle	Low	55315	3557.5	0.166
			50%	upper	Low	55315	3557.5	0.164
			50%	lower	Mid	55765	3602.5	0.169
			50%	middle	Mid	55765	3602.5	0.171
			50%	upper	Mid	55765	3602.5	0.170
			50%	lower	Mid High	56215	3647.5	0.171
			50%	middle	Mid High	56215	3647.5	0.174
			50%	upper	Mid High	56215	3647.5	0.173
			50%	lower	High	56665	3692.5	0.164
			50%	middle	High	56665	3692.5	0.163
			50%	upper	High	56665	3692.5	0.163
		75 Blocks QPSK	100%	lower	Low	55315	3557.5	0.167
			100%	lower	Mid	55765	3602.5	0.171
			100%	lower	Mid High	56215	3647.5	0.174
			100%	lower	High	56665	3692.5	0.165

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	15 MHz 75 Blocks	1 Block 16QAM	1	lower	Low	55315	3557.5	0.181
			1	middle	Low	55315	3557.5	0.180
			1	upper	Low	55315	3557.5	0.181
			1	lower	Mid	55765	3602.5	0.179
			1	middle	Mid	55765	3602.5	0.182
			1	upper	Mid	55765	3602.5	0.184
			1	lower	Mid High	56215	3647.5	0.191
			1	middle	Mid High	56215	3647.5	0.192
			1	upper	Mid High	56215	3647.5	0.194
			1	lower	High	56665	3692.5	0.181
			1	middle	High	56665	3692.5	0.173
			1	upper	High	56665	3692.5	0.179
		36 Block 16QAM	50%	lower	Low	55315	3557.5	0.134
			50%	middle	Low	55315	3557.5	0.136
			50%	upper	Low	55315	3557.5	0.137
			50%	lower	Mid	55765	3602.5	0.138
			50%	middle	Mid	55765	3602.5	0.140
			50%	upper	Mid	55765	3602.5	0.139
			50%	lower	Mid High	56215	3647.5	0.138
			50%	middle	Mid High	56215	3647.5	0.141
			50%	upper	Mid High	56215	3647.5	0.140
			50%	lower	High	56665	3692.5	0.134
			50%	middle	High	56665	3692.5	0.135
			50%	upper	High	56665	3692.5	0.133
		75 Blocks 16QAM	100%	lower	Low	55315	3557.5	0.134
			100%	lower	Mid	55765	3602.5	0.137
			100%	lower	Mid High	56215	3647.5	0.141
			100%	lower	High	56665	3692.5	0.136

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	55290	3555.0	0.209
			1	middle	Low	55290	3555.0	0.209
			1	upper	Low	55290	3555.0	0.210
			1	lower	Mid	55757	3601.7	0.217
			1	middle	Mid	55757	3601.7	0.215
			1	upper	Mid	55757	3601.7	0.214
			1	lower	Mid High	56223	3648.3	0.216
			1	middle	Mid High	56223	3648.3	0.215
			1	upper	Mid High	56223	3648.3	0.213
			1	lower	High	56690	3695.0	0.204
			1	middle	High	56690	3695.0	0.205
			1	upper	High	56690	3695.0	0.206
		25 Block QPSK	50%	lower	Low	55290	3555.0	0.167
			50%	middle	Low	55290	3555.0	0.166
			50%	upper	Low	55290	3555.0	0.167
			50%	lower	Mid	55757	3601.7	0.171
			50%	middle	Mid	55757	3601.7	0.171
			50%	upper	Mid	55757	3601.7	0.172
			50%	lower	Mid High	56223	3648.3	0.173
			50%	middle	Mid High	56223	3648.3	0.174
			50%	upper	Mid High	56223	3648.3	0.172
			50%	lower	High	56690	3695.0	0.164
			50%	middle	High	56690	3695.0	0.163
			50%	upper	High	56690	3695.0	0.161
		50 Blocks QPSK	100%	lower	Low	55290	3555.0	0.166
			100%	lower	Mid	55757	3601.7	0.172
			100%	lower	Mid High	56223	3648.3	0.173
			100%	lower	High	56690	3695.0	0.162

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	10 MHz 50 Blocks	1 Block 16QAM	1	lower	Low	55290	3555.0	0.182
			1	middle	Low	55290	3555.0	0.182
			1	upper	Low	55290	3555.0	0.180
			1	lower	Mid	55757	3601.7	0.182
			1	middle	Mid	55757	3601.7	0.180
			1	upper	Mid	55757	3601.7	0.183
			1	lower	Mid High	56223	3648.3	0.187
			1	middle	Mid High	56223	3648.3	0.187
			1	upper	Mid High	56223	3648.3	0.184
			1	lower	High	56690	3695.0	0.179
			1	middle	High	56690	3695.0	0.176
			1	upper	High	56690	3695.0	0.178
		25 Block 16QAM	50%	lower	Low	55290	3555.0	0.134
			50%	middle	Low	55290	3555.0	0.134
			50%	upper	Low	55290	3555.0	0.135
			50%	lower	Mid	55757	3601.7	0.140
			50%	middle	Mid	55757	3601.7	0.140
			50%	upper	Mid	55757	3601.7	0.139
			50%	lower	Mid High	56223	3648.3	0.140
			50%	middle	Mid High	56223	3648.3	0.140
			50%	upper	Mid High	56223	3648.3	0.141
			50%	lower	High	56690	3695.0	0.133
			50%	middle	High	56690	3695.0	0.133
			50%	upper	High	56690	3695.0	0.132
		50 Blocks 16QAM	100%	lower	Low	55290	3555.0	0.136
			100%	lower	Mid	55757	3601.7	0.138
			100%	lower	Mid High	56223	3648.3	0.140
			100%	lower	High	56690	3695.0	0.131

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	55265	3552.5	0.207
			1	middle	Low	55265	3552.5	0.206
			1	upper	Low	55265	3552.5	0.207
			1	lower	Mid	55748	3600.8	0.216
			1	middle	Mid	55748	3600.8	0.213
			1	upper	Mid	55748	3600.8	0.215
			1	lower	Mid High	56232	3649.2	0.217
			1	middle	Mid High	56232	3649.2	0.215
			1	upper	Mid High	56232	3649.2	0.216
			1	lower	High	56715	3697.5	0.204
			1	middle	High	56715	3697.5	0.200
			1	upper	High	56715	3697.5	0.203
		12 Block QPSK	50%	lower	Low	55265	3552.5	0.166
			50%	middle	Low	55265	3552.5	0.165
			50%	upper	Low	55265	3552.5	0.165
			50%	lower	Mid	55748	3600.8	0.171
			50%	middle	Mid	55748	3600.8	0.172
			50%	upper	Mid	55748	3600.8	0.171
			50%	lower	Mid High	56232	3649.2	0.172
			50%	middle	Mid High	56232	3649.2	0.174
			50%	upper	Mid High	56232	3649.2	0.171
			50%	lower	High	56715	3697.5	0.162
			50%	middle	High	56715	3697.5	0.164
			50%	upper	High	56715	3697.5	0.160
		25 Blocks QPSK	100%	lower	Low	55265	3552.5	0.166
			100%	lower	Mid	55748	3600.8	0.172
			100%	lower	Mid High	56232	3649.2	0.171
			100%	lower	High	56715	3697.5	0.160

Table 45 (Continued)

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Uplink Channel	Frequency (MHz)	Power (W)
Band 48	5 MHz 25 Blocks	1 Block 16QAM	1	lower	Low	55265	3552.5	0.177
			1	middle	Low	55265	3552.5	0.175
			1	upper	Low	55265	3552.5	0.173
			1	lower	Mid	55748	3600.8	0.187
			1	middle	Mid	55748	3600.8	0.186
			1	upper	Mid	55748	3600.8	0.185
			1	lower	Mid High	56232	3649.2	0.203
			1	middle	Mid High	56232	3649.2	0.200
			1	upper	Mid High	56232	3649.2	0.202
			1	lower	High	56715	3697.5	0.173
			1	middle	High	56715	3697.5	0.173
			1	upper	High	56715	3697.5	0.172
		12 Block 16QAM	50%	lower	Low	55265	3552.5	0.135
			50%	middle	Low	55265	3552.5	0.137
			50%	upper	Low	55265	3552.5	0.135
			50%	lower	Mid	55748	3600.8	0.138
			50%	middle	Mid	55748	3600.8	0.140
			50%	upper	Mid	55748	3600.8	0.139
			50%	lower	Mid High	56232	3649.2	0.140
			50%	middle	Mid High	56232	3649.2	0.140
			50%	upper	Mid High	56232	3649.2	0.139
			50%	lower	High	56715	3697.5	0.134
			50%	middle	High	56715	3697.5	0.133
			50%	upper	High	56715	3697.5	0.133
		25 Blocks 16QAM	100%	lower	Low	55265	3552.5	0.135
			100%	lower	Mid	55748	3600.8	0.139
			100%	lower	Mid High	56232	3649.2	0.142
			100%	lower	High	56715	3697.5	0.134

Assessments at the Body

Table below presents the data of the body assessment.

Table 46

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)	Run#
1 RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	3603.3000	0.220	0.19	0.020	0.023	AN-AB-200922-04#
		PMLN8126A w/ PMLN7008A		3603.3000	0.220	-0.30	0.034	0.042	ZR-AB-200922-06#
		PMLN8127A w/ PMLN5407A		3603.3000	0.220	0.45	0.042	0.048	ZR-AB-200922-07#
		PMLN8127A w/ PMLN5409A		3603.3000	0.220	-0.02	0.039	0.045	ZR-AB-200922-08#
50 % RB									
AN000343A01	PMNN4803A	PMLN8126A w/ PMLN4651A	None	3603.3000	0.175	0.01	0.018	0.021	AN-AB-200922-03#
		PMLN8126A w/ PMLN7008A		3603.3000	0.175	-0.11	0.022	0.026	ZR-AB-200922-09#
		PMLN8127A w/ PMLN5407A		3603.3000	0.175	-0.01	0.024	0.027	ZR-AB-200922-10#
		PMLN8127A w/ PMLN5409A		3603.3000	0.175	0.22	0.021	0.024	ZR-AB-200922-11#
Assessment of Additional Battery									
AN000343A01	PMNN4804A	PMLN8127A w/ PMLN5407A	None	3603.3000	0.215	-0.22	0.024	0.030	ZR-AB-200922-12#

Assessments at the Face

Table below presents the data of the face assessment.

Table 47

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)	Run#
1 RB									
AN000343A01	PMNN4804A	None	None	3603.3000	0.215	-0.05	0.025	0.030	AN-FACE-200921-12
50 % RB									
AN000343A01	PMNN4804A	None	None	3603.3000	0.171	-0.32	0.020	0.025	AN-FACE-200922-01#
Assessment of Additional Battery									
AN000343A01	PMNN4803A	None	None	3603.3000	0.220	-0.17	0.035	0.042	AN-FACE-201015-09

Additional Assessments for ISED Canada

As per ISED Notice 2016-DRS001, additional tests were required for the low, mid and high frequency channels for the configuration with the highest SAR value. The SAR results are in Tables below. SAR plot is included in Appendix for the highest configuration.

Table 48

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)	Run#
Body									
AN000343A01	PMNN4803A	PMLN8127A w/ PMLN5407A	None	3560.0000	0.218	-0.24	0.019	0.023	FAZ-AB-201016-05#
				3603.3000	0.220	0.45	0.042	0.048	ZR-AB-200922-07#
				3646.7000	0.218	-0.16	0.043	0.052	ZR-AB-200930-06#
				3690.0000	0.212	-0.15	0.048	0.059	ZR-AB-200930-07#
Face									
AN000343A01	PMNN4804A	None	None	3560.0000	0.218	-0.14	0.030	0.036	AN-FACE-201016-01#
				3603.3000	0.220	-0.17	0.035	0.042	AN-FACE-201015-09
				3646.7000	0.218	-0.14	0.034	0.041	AN-FACE-201016-02#
				3690.0000	0.212	-0.03	0.033	0.039	AN-FACE-201016-03#

8.0 Variability Assessment for LTE Bands

Per the guidelines in KDB 865664 SAR variability assessment is not required because SAR results are below 0.8W/kg.