



SAMM No.0826

CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 3 of 4

Motorola Solutions Inc.

EME Test Laboratory

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Date of Report: 11/15/2019

Report Revision: B

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Date/s Tested:	12/25/2018-12/31/2018, 1/2/2019-1/4/2019, 1/6/2019-2/8/2019, 2/10/2019-2/13/2019, 2/27/2019-2/28/2019, 3/4/2019, 3/6/2019, 3/13/2019-3/15/2019, 3/18/2019-3/19/2019
Manufacturer:	Motorola Solutions Inc.
DUT Description:	Handheld Portable – APX NEXT All-band Model 4.5
Test TX mode(s):	FM; LTE; WLAN
Max. Power output:	Refer to Part 1 Table 3
Nominal Power:	Refer to Part 1 Table 3
Tx Frequency Bands:	Refer to Part 1 Table 3
Signaling type:	FM, TDMA, SC-FDMA, FHSS, DSSS, OFDM and NFC
Model(s) Tested:	H55TGT9PW8AN (PNUW1100A)
Model(s) Certified:	H55TGT9PW8AN (PNUW1100A), H45KGT9PW8AN, H45UCT9PW8AN and H45XDT9PW8AN
Serial Number(s):	437TUX0100, 437P1C0117, 437P1C0120, 437TUX0109, 437TUX0103, 437TUX0096, 437P1C0122
Classification:	Occupational/Controlled
FCC ID:	AZ489FT7119; LMR 150.8-173.4 MHz, 406.125-512 MHz, 769-775 MHz, 799-824 MHz, 851-869 MHz; LTE; WLAN 2.4 GH; WLAN 5GHz, Bluetooth, NFC This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC:	109U-89FT7119; LMR 138-173.4 MHz, 406.125-430 MHz, 450-470 MHz, 769-775 MHz, 799-824 MHz, 851-869 MHz; LTE; WLAN 2.4 GH; WLAN 5GHz, Bluetooth, NFC This report contains results that are immaterial for IC equipment approval, which are identified.
ISED Test Site registration:	109AK
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
Tiong Nguk Ing

Deputy Technical Manager (Approved Signatory)

Approval Date: 11/15/2019

Tiong
Nguk Ing

Digitally signed
by Tiong Nguk
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1.0 System Validation for LTE

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

Table 1

Dates	Probe Calibration Point		Prob e SN	Measured Tissue Parameters		Validation		
				σ	ϵ_r	Sensitivity	Linearity	Isotropy
CW								
11/19/2018	Body	750	7519	0.93	56.50	Pass	Pass	Pass
11/20/2018	Head			0.85	42.30	Pass	Pass	Pass
11/19/2018	Body	835		1.02	52.70	Pass	Pass	Pass
11/20/2018	Head			0.94	41.10	Pass	Pass	Pass
11/23/2018	Body	1800		1.47	51.50	Pass	Pass	Pass
11/23/2018	Head			1.35	41.00	Pass	Pass	Pass
11/23/2018	Body	1900		1.57	51.20	Pass	Pass	Pass
11/23/2018	Head			1.45	40.50	Pass	Pass	Pass
LTE								
11/26/2018	Body	750	7519	0.93	54.10	Pass	Pass	Pass
11/27/2018	Head	(1 RB)		0.87	41.80	Pass	Pass	Pass
11/26/2018	Body	750		0.93	54.10	Pass	Pass	Pass
11/27/2018	Head	(50% RB)		0.87	41.80	Pass	Pass	Pass
11/27/2018	Body	750		0.93	54.10	Pass	Pass	Pass
11/27/2018	Head	(100 % RB)		0.87	41.80	Pass	Pass	Pass
1/25/2019	Body	835		1.00	52.60	Pass	Pass	Pass
11/27/2018	Head	(1 RB)		0.94	40.70	Pass	Pass	Pass
11/27/2018	Body	835		1.00	52.60	Pass	Pass	Pass
11/27/2018	Head	(50% RB)		0.94	40.70	Pass	Pass	Pass
11/27/2018	Body	835		1.00	52.60	Pass	Pass	Pass
11/27/2018	Head	(100 % RB)		0.94	40.70	Pass	Pass	Pass
11/29/2018	Body	1800		1.51	51.20	Pass	Pass	Pass
11/29/2018	Head	(1 RB)		1.38	40.20	Pass	Pass	Pass
11/29/2018	Body	1800		1.51	51.20	Pass	Pass	Pass
11/29/2018	Head	(50% RB)		1.38	40.20	Pass	Pass	Pass
11/29/2018	Body	1800		1.51	51.20	Pass	Pass	Pass
11/29/2018	Head	(100 % RB)		1.38	40.20	Pass	Pass	Pass
11/28/2018	Body	1900		1.47	52.70	Pass	Pass	Pass
11/28/2018	Head	(1 RB)		1.35	38.20	Pass	Pass	Pass
11/28/2018	Body	1900		1.47	52.70	Pass	Pass	Pass
11/28/2018	Head	(50% RB)		1.35	38.20	Pass	Pass	Pass
11/28/2018	Body	1900		1.47	52.70	Pass	Pass	Pass
11/29/2018	Head	(100 % RB)		1.35	38.20	Pass	Pass	Pass

2.0 System Verification for LTE

System verification checks were conducted each day during the SAR assessment. The results are normalized to 1W. Appendix 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 2

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	FCC Body	SPEAG 750V3/ 1142	8.51+/-10%	2.32	9.28	1/8/2019#
				2.25	9.00	1/9/2019#
				2.24	8.96	1/10/2019#
				2.20	8.80	1/11/2009#
				2.16	8.64	1/13/2019
				2.20	8.80	1/14/2019#
				2.21	8.84	1/15/2019#
				2.27	9.08	1/16/2019#
				2.01	8.04	1/18/2019#
				2.17	8.68	1/20/2019#
				2.18	8.72	1/21/2019
				2.21	8.84	1/30/2019#
				2.15	8.60	2/13/2019
	IEEE/IEC Head	8.32+/-10%	2.16	8.64	1/27/2019#	
			2.14	8.56	1/28/2019	
			2.17	8.68	1/31/2019	
			2.17	8.68	2/10/2019	
			2.11	8.44	2/12/2019	
	FCC Body	SPEAG 835V2/ 4d029	9.67+/-10%	2.49	9.96	1/16/2019#
				2.48	9.92	1/17/2019#
				2.40	9.60	1/21/2019
				2.42	9.68	2/1/2019
				2.48	9.92	2/10/2019
	IEEE/IEC Head	9.60+/-10%	2.45	9.80	1/28/2019	
			2.41	9.64	1/31/2019	
			2.42	9.68	2/10/2019	
	FCC Body	SPEAG D1800V2/ 2d119	37.30 +/-10%	9.76	39.04	1/21/2019#
				9.62	38.48	1/22/2019#
				9.89	39.56	1/23/2019#
				9.74	38.96	1/25/2019#
				9.72	38.88	1/31/2019#
				9.96	39.84	2/11/2019
				10.00	40.00	2/12/2019
				8.76	35.04	2/17/2019#
	IEEE/IEC Head		38.70 +/-10%	9.49	37.96	1/29/2019
				9.52	38.08	2/1/2019
FCC Body				SPEAG D1900V2/ 5d064	39.40+/-10%	10.2
	9.83	39.32	2/11/2019			
IEEE/IEC Head	40.50 +/-10%	9.9	39.60	1/30/2019		
		9.8	39.2	2/12/2019		

Note: “#” system performance checks covered for next testing day (within 24 hours)

3.0 Equivalent Tissue Test Results for LTE

Simulated tissue prepared for SAR measurements are measured daily and within 24 hours of SAR testing to verify that the tissue is within +/- 5% of target parameters for each tested channel. The table below summarizes the measured tissue parameters used for the SAR assessment.

Table 3

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
704	FCC Body	0.96 (0.91-1.01)	55.7 (52.9-58.5)	0.91	54.8	1/8/2019#
				0.92	54.7	1/9/2019#
				0.92	55.0	1/10/2019#
				0.95	55.6	1/16/2019#
	IEEE/IEC Head	0.89 (0.84-0.93)	42.1 (40.0-44.3)	0.85	42.7	1/27/2019
				0.84	44.2	2/10/2019
				0.85	44.2	2/12/2019
708	FCC Body	0.96 (0.91-1.01)	55.7 (52.9-58.5)	0.92	54.1	1/30/2019
	IEEE/IEC Head	0.89 (0.84-0.93)	42.1 (40.0-44.2)	0.85	43.2	1/31/2019
709	FCC Body	0.96 (0.91-1.01)	55.7 (52.9-58.5)	0.92	54.0	1/30/2019#
	IEEE/IEC Head	0.89 (0.84-0.93)	42.1 (40.0-44.2)	0.86	43.2	1/31/2019
710	FCC Body	0.96 (0.91-1.01)	55.7 (52.9-58.5)	0.92	54.0	1/30/2019#
	IEEE/IEC Head	0.89 (0.84-0.93)	42.1 (40.0-44.2)	0.86	43.1	1/31/2019
711	FCC Body	0.96 (0.91-1.01)	55.7 (52.9-58.5)	0.95	54.7	1/18/2019#
				0.93	53.6	1/20/2019#
				0.92	53.2	1/21/2019
				0.92	54.0	1/30/2019#
	IEEE/IEC Head	0.89 (0.84-0.93)	42.1 (40.0-44.2)	0.85	42.7	1/27/2019
				0.84	41.9	1/28/2019
				0.86	43.1	1/31/2019

Note: “#” Tissue date covered for next testing day (within 24 hours)

Table 3 Continued

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
750	FCC Body	0.96 (0.92-1.01)	55.5 (52.8-58.3)	0.96	54.4	1/8/2019#
				0.96	54.2	1/9/2019#
				0.96	54.6	1/10/2019#
				0.96	53.7	1/11/2009#
				0.96	53.7	1/13/2019
				0.95	54.1	1/14/2019#
				0.96	53.8	1/15/2019#
				1.00	55.1	1/16/2019#
				1.00	54.3	1/18/2019#
				0.97	53.2	1/20/2019#
				0.96	52.8	1/21/2019
				0.96	53.6	1/30/2019#
				0.92	55.6	2/12/2019#
	IEEE/IEC Head	0.89 (0.85-0.93)	41.9 (39.8-44.0)	0.88	41.3	1/27/2019#
				0.89	42.0	1/28/2019
				0.90	42.6	1/31/2019
				0.89	43.6	2/10/2019
				0.89	43.6	2/12/2019
782	FCC Body	0.97 (0.92-1.01)	55.4 (52.6-58.2)	0.99	53.4	1/11/2009#
				0.99	53.4	1/13/2019
				0.99	53.8	1/14/2019
				0.99	53.5	1/15/2019
				0.95	54.6	2/10/2019
				0.95	55.3	2/12/2019#
	IEEE/IEC Head	0.89 (0.85-0.94)	41.7 (39.7-43.8)	0.93	41.6	1/27/2019
793	FCC Body	0.97 (0.92-1.02)	55.4 (52.6-58.1)	1.00	53.7	1/14/2019#
				1.00	53.4	1/15/2019#
	IEEE/IEC Head			0.94	41.4	1/27/2019#
				0.92	40.7	1/28/2019
829	FCC Body	0.97 (0.92-1.02)	55.2 (52.5-58.0)	1.01	53.1	2/1/2019
	IEEE/IEC Head	0.90 (0.85-0.91)	41.5 (39.5-43.6)	0.93	40.9	1/31/2019
835	FCC Body	0.97 (0.92-1.02)	55.2 (52.4-58.0)	1.01	53.0	1/16/2019#
				1.02	57.3	1/17/2019#
				1.00	52.6	1/21/2019
				1.01	53	2/1/2019
				1.01	54.1	2/10/2019
	IEEE/IEC Head	0.91 (0.86-0.96)	41.5 (39.4-43.6)	0.94	41.6	1/28/2019
				0.93	40.8	1/31/2019
				0.91	41	2/10/2019

Note: “#” Tissue date covered for next testing day (within 24 hours)

Table 3 Continued

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
837	FCC Body	0.97 (0.92-1.02)	55.2 (52.4-58.0)	1.01	52.9	1/16/2019#
				1.01	53.0	2/1/2019
	IEEE/IEC Head	0.91 (0.86-0.96)	41.5 (39.4-43.6)	0.94	41.5	1/28/2019
				0.91	41.0	2/10/2019
844	FCC Body	0.98 (0.93-1.03)	55.2 (52.4-57.9)	1.03	57.3	1/17/2019#
				1.01	52.5	1/21/2019
				1.02	54.0	2/10/2019
	IEEE/IEC Head	0.91 (0.86-0.96)	41.5 (39.4-43.6)	0.95	41.4	1/28/2019
				0.94	40.7	1/31/2019
1720	FCC Body	1.47 (1.40-1.54)	53.5 (50.8-56.2)	1.44	51.1	2/17/2019#
	IEEE/IEC Head	1.35 (1.29-1.42)	40.1 (38.1-42.1)	1.37	38.9	2/1/2019
1733	FCC Body	1.48 (1.40-1.55)	53.5 (50.8-56.2)	1.46	51.0	2/17/2019#
	IEEE/IEC Head	1.36 (1.29-1.43)	40.1 (38.1-42.1)	1.39	38.8	2/1/2019
1745	FCC Body	1.49 (1.41-1.56)	53.4 (50.8-56.1)	1.44	52.0	1/22/2019#
				1.49	51.6	1/23/2019#
				1.44	51.1	1/25/2019#
				1.50	50.9	2/11/2019
				1.50	51.3	2/12/2019
	IEEE/IEC Head	1.37 (1.30-1.44)	40.1 (38.1-42.1)	1.39	39.4	1/29/2019
1800	FCC Body	1.52 (1.44-1.60)	53.3 (50.6-56.0)	1.47	51.7	1/21/2019#
				1.5	51.8	1/22/2019#
				1.55	51.3	1/23/2019#
				1.50	50.9	1/25/2019#
				1.51	51.0	1/31/2019#
				1.56	50.7	2/11/2019
				1.57	51.0	2/12/2019
				1.53	50.8	2/17/2019#
	IEEE/IEC Head	1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.44	39.1	1/29/2019
				1.45	38.4	2/1/2019
1860	FCC Body	1.52 (1.44-1.60)	53.3 (50.6-56.0)	1.57	50.7	1/31/2019#
	IEEE/IEC Head	1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.36	40.9	1/30/2019

Note: “#” Tissue date covered for next testing day (within 24 hours)

Table 3 Continued

Frequency (MHz)	Tissue Type	Conductivity Target (S/m)	Dielectric Constant Target	Conductivity Meas. (S/m)	Dielectric Constant Meas.	Tested Date
1880	FCC Body	1.52 (1.44-1.60)	53.3 (50.6-56.0)	1.55	51.4	1/21/2019#
				1.59	51.4	1/22/2019#
				1.46	52.5	2/11/2019
	IEEE/IEC Head	1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.38	40.9	1/30/2019
				1.35	40.2	2/12/2019
1900	FCC Body	1.52 (1.44-1.60)	53.3 (50.6-56.0)	1.46	53.3	2/1/2019
				1.48	52.5	2/11/2019
	IEEE/IEC Head	1.40 (1.33-1.47)	40.0 (38.0-42.0)	1.39	40.8	1/30/2019
				1.37	40.1	2/12/2019

Note: “#” Tissue date covered for next testing day (within 24 hours)

4.0 DUT Test Data for LTE

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

- a. 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.
- b. 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.
- c. 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.
- d. 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.

4.1 SAR 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 4

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 2	20 MHz 100 Blocks	1 Block QPSK	1	lower	Low	700	18700	1860.0	23.04
			1	middle	Low	700	18700	1860.0	22.85
			1	upper	Low	700	18700	1860.0	23.10
			1	lower	Mid	900	18900	1880.0	23.21
			1	middle	Mid	900	18900	1880.0	22.84
			1	upper	Mid	900	18900	1880.0	23.07
			1	lower	High	1100	19100	1900.0	22.92
			1	middle	High	1100	19100	1900.0	22.76
			1	upper	High	1100	19100	1900.0	22.91
		50 Block QPSK	50%	lower	Low	700	18700	1860.0	21.89
			50%	middle	Low	700	18700	1860.0	21.90
			50%	upper	Low	700	18700	1860.0	21.93
			50%	lower	Mid	900	18900	1880.0	21.97
			50%	middle	Mid	900	18900	1880.0	21.94
			50%	upper	Mid	900	18900	1880.0	21.87
			50%	lower	High	1100	19100	1900.0	21.89
			50%	middle	High	1100	19100	1900.0	21.92
			50%	upper	High	1100	19100	1900.0	21.88
		100 Blocks QPSK	100%	lower	Low	700	18700	1860.0	21.91
			100%	lower	Mid	900	18900	1880.0	21.87
			100%	lower	High	1100	19100	1900.0	21.88
		1 Block 16 QAM	1	lower	Low	700	18700	1860.0	22.44
			1	middle	Low	700	18700	1860.0	22.23
			1	upper	Low	700	18700	1860.0	22.54
			1	lower	Mid	900	18900	1880.0	22.78
			1	middle	Mid	900	18900	1880.0	22.46
			1	upper	Mid	900	18900	1880.0	22.65
			1	lower	High	1100	19100	1900.0	22.37
			1	middle	High	1100	19100	1900.0	22.29
			1	upper	High	1100	19100	1900.0	22.41
		50 Block 16 QAM	50%	lower	Low	700	18700	1860.0	20.92
			50%	middle	Low	700	18700	1860.0	20.93
			50%	upper	Low	700	18700	1860.0	20.92
			50%	lower	Mid	900	18900	1880.0	21.05
			50%	middle	Mid	900	18900	1880.0	20.98
			50%	upper	Mid	900	18900	1880.0	21.00
			50%	lower	High	1100	19100	1900.0	21.02
			50%	middle	High	1100	19100	1900.0	20.96
			50%	upper	High	1100	19100	1900.0	20.93
		100 Blocks 16 QAM	100%	lower	Low	700	18700	1860.0	21.00
			100%	lower	Mid	900	18900	1880.0	21.02
			100%	lower	High	1100	19100	1900.0	20.92

Table 4 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 2	15 MHz 75 Blocks	1 Block QPSK	1	lower	Low	675	18675	1857.5	22.86
			1	middle	Low	675	18675	1857.5	22.80
			1	upper	Low	675	18675	1857.5	22.95
			1	lower	Mid	900	18900	1880.0	22.95
			1	middle	Mid	900	18900	1880.0	22.81
			1	upper	Mid	900	18900	1880.0	22.85
			1	lower	High	1125	19125	1902.5	23.02
			1	middle	High	1125	19125	1902.5	22.91
			1	upper	High	1125	19125	1902.5	23.03
		36 Block QPSK	50%	lower	Low	675	18675	1857.5	21.84
			50%	middle	Low	675	18675	1857.5	21.82
			50%	upper	Low	675	18675	1857.5	21.86
			50%	lower	Mid	900	18900	1880.0	21.87
			50%	middle	Mid	900	18900	1880.0	21.86
			50%	upper	Mid	900	18900	1880.0	21.83
			50%	lower	High	1125	19125	1902.5	21.94
			50%	middle	High	1125	19125	1902.5	21.96
			50%	upper	High	1125	19125	1902.5	21.96
		75 Blocks QPSK	100%	lower	Low	675	18675	1857.5	21.81
			100%	lower	Mid	900	18900	1880.0	21.88
			100%	lower	High	1125	19125	1902.5	21.99
		1 Block 16 QAM	1	lower	Low	675	18675	1857.5	22.39
			1	middle	Low	675	18675	1857.5	22.21
			1	upper	Low	675	18675	1857.5	22.32
			1	lower	Mid	900	18900	1880.0	21.98
			1	middle	Mid	900	18900	1880.0	21.79
			1	upper	Mid	900	18900	1880.0	21.81
			1	lower	High	1125	19125	1902.5	22.44
			1	middle	High	1125	19125	1902.5	22.35
			1	upper	High	1125	19125	1902.5	22.37
		36 Block 16 QAM	50%	lower	Low	675	18675	1857.5	20.90
			50%	middle	Low	675	18675	1857.5	20.90
			50%	upper	Low	675	18675	1857.5	20.92
			50%	lower	Mid	900	18900	1880.0	20.98
			50%	middle	Mid	900	18900	1880.0	20.96
			50%	upper	Mid	900	18900	1880.0	20.93
			50%	lower	High	1125	19125	1902.5	21.10
			50%	middle	High	1125	19125	1902.5	21.12
			50%	upper	High	1125	19125	1902.5	21.12
		75 Blocks 16 QAM	100%	lower	Low	675	18675	1857.5	20.91
			100%	lower	Mid	900	18900	1880.0	20.99
			100%	lower	High	1125	19125	1902.5	21.03

Table 4 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 2	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	650	18650	1855.0	22.94
			1	middle	Low	650	18650	1855.0	22.70
			1	upper	Low	650	18650	1855.0	22.93
			1	lower	Mid	900	18900	1880.0	23.18
			1	middle	Mid	900	18900	1880.0	22.83
			1	upper	Mid	900	18900	1880.0	23.04
			1	lower	High	1150	19150	1905.0	22.89
			1	middle	High	1150	19150	1905.0	22.85
			1	upper	High	1150	19150	1905.0	22.99
		25 Block QPSK	50%	lower	Low	650	18650	1855.0	21.68
			50%	middle	Low	650	18650	1855.0	21.77
			50%	upper	Low	650	18650	1855.0	21.80
			50%	lower	Mid	900	18900	1880.0	21.86
			50%	middle	Mid	900	18900	1880.0	21.85
			50%	upper	Mid	900	18900	1880.0	21.83
			50%	lower	High	1150	19150	1905.0	21.91
			50%	middle	High	1150	19150	1905.0	21.98
			50%	upper	High	1150	19150	1905.0	21.96
		50 Blocks QPSK	100%	lower	Low	650	18650	1855.0	21.71
			100%	lower	Mid	900	18900	1880.0	21.86
			100%	lower	High	1150	19150	1905.0	21.97
		1 Block 16 QAM	1	lower	Low	650	18650	1855.0	22.02
			1	middle	Low	650	18650	1855.0	21.70
			1	upper	Low	650	18650	1855.0	21.94
			1	lower	Mid	900	18900	1880.0	22.49
			1	middle	Mid	900	18900	1880.0	22.22
			1	upper	Mid	900	18900	1880.0	22.38
			1	lower	High	1150	19150	1905.0	22.06
			1	middle	High	1150	19150	1905.0	21.94
			1	upper	High	1150	19150	1905.0	22.07
		25 Block 16 QAM	50%	lower	Low	650	18650	1855.0	20.84
			50%	middle	Low	650	18650	1855.0	20.90
			50%	upper	Low	650	18650	1855.0	20.84
			50%	lower	Mid	900	18900	1880.0	20.96
			50%	middle	Mid	900	18900	1880.0	20.99
			50%	upper	Mid	900	18900	1880.0	20.92
			50%	lower	High	1150	19150	1905.0	21.11
			50%	middle	High	1150	19150	1905.0	21.08
			50%	upper	High	1150	19150	1905.0	21.09
		50 Blocks 16 QAM	100%	lower	Low	650	18650	1855.0	20.85
			100%	lower	Mid	900	18900	1880.0	20.95
			100%	lower	High	1150	19150	1905.0	21.03

Table 4 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 2	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	625	18625	1852.5	22.73
			1	middle	Low	625	18625	1852.5	22.80
			1	upper	Low	625	18625	1852.5	22.82
			1	lower	Mid	900	18900	1880.0	22.99
			1	middle	Mid	900	18900	1880.0	22.93
			1	upper	Mid	900	18900	1880.0	22.93
			1	lower	High	1175	19175	1907.5	22.95
			1	middle	High	1175	19175	1907.5	22.92
			1	upper	High	1175	19175	1907.5	23.00
		12 Block QPSK	50%	lower	Low	625	18625	1852.5	21.73
			50%	middle	Low	625	18625	1852.5	21.65
			50%	upper	Low	625	18625	1852.5	21.70
			50%	lower	Mid	900	18900	1880.0	21.83
			50%	middle	Mid	900	18900	1880.0	21.79
			50%	upper	Mid	900	18900	1880.0	21.80
			50%	lower	High	1175	19175	1907.5	21.98
			50%	middle	High	1175	19175	1907.5	21.97
			50%	upper	High	1175	19175	1907.5	21.95
		25 Blocks QPSK	100%	lower	Low	625	18625	1852.5	21.72
			100%	lower	Mid	900	18900	1880.0	21.81
			100%	lower	High	1175	19175	1907.5	22.02
		1 Block 16 QAM	1	lower	Low	625	18625	1852.5	21.82
			1	middle	Low	625	18625	1852.5	21.79
			1	upper	Low	625	18625	1857.5	21.89
			1	lower	Mid	900	18900	1880.0	22.10
			1	middle	Mid	900	18900	1880.0	22.05
			1	upper	Mid	900	18900	1880.0	22.07
			1	lower	High	1175	19175	1907.5	22.46
			1	middle	High	1175	19175	1907.5	22.52
			1	upper	High	1175	19175	1907.5	22.53
		12 Block 16 QAM	50%	lower	Low	625	18625	1852.5	20.78
			50%	middle	Low	625	18625	1852.5	20.82
			50%	upper	Low	625	18625	1857.5	20.85
			50%	lower	Mid	900	18900	1880.0	20.97
			50%	middle	Mid	900	18900	1880.0	20.97
			50%	upper	Mid	900	18900	1880.0	20.98
			50%	lower	High	1175	19175	1907.5	21.15
			50%	middle	High	1175	19175	1907.5	21.14
			50%	upper	High	1175	19175	1907.5	21.13
		25 Blocks 16 QAM	100%	lower	Low	625	18625	1852.5	20.69
			100%	lower	Mid	900	18900	1880.0	20.91
			100%	lower	High	1175	19175	1907.5	21.11

Table 4 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 2	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	615	18615	1851.5	22.61
			1	middle	Low	615	18615	1851.5	22.78
			1	upper	Low	615	18615	1851.5	22.67
			1	lower	Mid	900	18900	1880.0	22.83
			1	middle	Mid	900	18900	1880.0	22.92
			1	upper	Mid	900	18900	1880.0	22.82
			1	lower	High	1185	19185	1908.5	22.94
			1	middle	High	1185	19185	1908.5	22.97
			1	upper	High	1185	19185	1908.5	22.88
		8 Block QPSK	50%	lower	Low	615	18615	1851.5	21.62
			50%	middle	Low	615	18615	1851.5	21.67
			50%	upper	Low	615	18615	1851.5	21.65
			50%	lower	Mid	900	18900	1880.0	21.83
			50%	middle	Mid	900	18900	1880.0	21.83
			50%	upper	Mid	900	18900	1880.0	21.81
			50%	lower	High	1185	19185	1908.5	21.92
			50%	middle	High	1185	19185	1908.5	21.96
			50%	upper	High	1185	19185	1908.5	21.94
		15 Blocks QPSK	100%	lower	Low	615	18615	1851.5	21.69
			100%	lower	Mid	900	18900	1880.0	21.77
			100%	lower	High	1185	19185	1908.5	21.98
		1 Block 16 QAM	1	lower	Low	615	18615	1851.5	21.55
			1	middle	Low	615	18615	1851.5	21.65
			1	upper	Low	615	18615	1851.5	21.61
			1	lower	Mid	900	18900	1880.0	22.21
			1	middle	Mid	900	18900	1880.0	22.32
			1	upper	Mid	900	18900	1880.0	22.24
			1	lower	High	1185	19185	1908.5	22.08
			1	middle	High	1185	19185	1908.5	22.09
			1	upper	High	1185	19185	1908.5	22.00
		8 Block 16 QAM	50%	lower	Low	615	18615	1851.5	20.81
			50%	middle	Low	615	18615	1851.5	20.86
			50%	upper	Low	615	18615	1851.5	20.85
			50%	lower	Mid	900	18900	1880.0	20.91
			50%	middle	Mid	900	18900	1880.0	20.95
			50%	upper	Mid	900	18900	1880.0	20.94
			50%	lower	High	1185	19185	1908.5	21.03
			50%	middle	High	1185	19185	1908.5	21.11
			50%	upper	High	1185	19185	1908.5	21.04
		15 Blocks 16 QAM	100%	lower	Low	615	18615	1851.5	20.72
			100%	lower	Mid	900	18900	1880.0	20.92
			100%	lower	High	1185	19185	1908.5	20.94

Table 4 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 2	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	607	18607	1850.7	22.54
			1	middle	Low	607	18607	1850.7	22.61
			1	upper	Low	607	18607	1850.7	22.66
			1	lower	Mid	900	18900	1880.0	22.81
			1	middle	Mid	900	18900	1880.0	22.84
			1	upper	Mid	900	18900	1880.0	22.84
			1	lower	High	1193	19193	1909.3	22.82
			1	middle	High	1193	19193	1909.3	22.91
			1	upper	High	1193	19193	1909.3	22.90
		3 Block QPSK	50%	lower	Low	607	18607	1850.7	22.58
			50%	middle	Low	607	18607	1850.7	22.64
			50%	upper	Low	607	18607	1850.7	22.57
			50%	lower	Mid	900	18900	1880.0	22.73
			50%	middle	Mid	900	18900	1880.0	22.78
			50%	upper	Mid	900	18900	1880.0	22.71
			50%	lower	High	1193	19193	1909.3	22.85
			50%	middle	High	1193	19193	1909.3	22.93
			50%	upper	High	1193	19193	1909.3	22.84
		6 Blocks QPSK	100%	lower	Low	607	18607	1850.7	21.54
			100%	lower	Mid	900	18900	1880.0	21.68
			100%	lower	High	1193	19193	1909.3	21.86
		1 Block 16 QAM	1	lower	Low	607	18607	1850.7	21.72
			1	middle	Low	607	18607	1850.7	21.75
			1	upper	Low	607	18607	1850.7	21.79
			1	lower	Mid	900	18900	1880.0	21.96
			1	middle	Mid	900	18900	1880.0	22.00
			1	upper	Mid	900	18900	1880.0	22.00
			1	lower	High	1193	19193	1909.3	22.23
			1	middle	High	1193	19193	1909.3	22.27
			1	upper	High	1193	19193	1909.3	22.27
		3 Block 16 QAM	50%	lower	Low	607	18607	1850.7	21.84
			50%	middle	Low	607	18607	1850.7	21.87
			50%	upper	Low	607	18607	1850.7	21.80
			50%	lower	Mid	900	18900	1880.0	21.83
			50%	middle	Mid	900	18900	1880.0	21.87
			50%	upper	Mid	900	18900	1880.0	21.84
			50%	lower	High	1193	19193	1909.3	22.07
			50%	middle	High	1193	19193	1909.3	22.15
			50%	upper	High	1193	19193	1909.3	22.03
		6 Blocks 16 QAM	100%	lower	Low	607	18607	1850.7	20.78
			100%	lower	Mid	900	18900	1880.0	20.93
			100%	lower	High	1193	19193	1909.3	20.88

Assessments at the Body

Table below presents the data of the body 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#
1 RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	1880.0000	0.209	0.05	0.009	0.010	AM-AB-190211-08
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1880.0000	0.209	0.29	0.012	0.014	LOH-AB-190122-04#
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	1880.0000	0.209	-0.31	0.006	0.008	LOH-AB-190122-05#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	1880.0000	0.209	0.05	0.009	0.011	LOH-AB-190122-06#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	1880.0000	0.209	-0.29	0.004	0.005	LOH-AB-190122-07#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	1880.0000	0.209	-0.29	0.002	0.003	AM-AB-190122-08#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	1880.0000	0.209	-0.09	0.002	0.003	AM-AB-190122-09#
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	1880.0000	0.209	0.41	0.003	0.004	AM-AB-190122-10#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1880.0000	0.209	0.13	0.002	0.003	AM-AB-190122-11#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	1880.0000	0.209	0.45	0.002	0.002	AM-AB-190122-12#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	1880.0000	0.209	-0.02	0.001	0.002	AM-AB-190122-13#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	1880.0000	0.209	-0.37	0.004	0.005	AM-AB-190122-14#
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	1880.0000	0.157	-0.31	0.003	0.004	AM-AB-190122-15#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1880.0000	0.157	-0.09	0.006	0.011	LOH-AB-190122-17#
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	1880.0000	0.157	0.32	0.003	0.005	LOH-AB-190122-20
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	1880.0000	0.157	-0.15	0.005	0.008	LOH-AB-190122-21
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	1880.0000	0.157	0.28	0.003	0.004	LOH-AB-190123-01#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	1880.0000	0.157	0.19	0.002	0.003	LOH-AB-190123-02#

Table 5 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	1880.0000	0.157	-0.27	0.004	0.006	LOH-AB-190123-03#
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	1880.0000	0.157	-0.28	0.004	0.006	LOH-AB-190123-04#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1880.0000	0.157	-0.09	0.002	0.003	AM-AB-190123-06#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	1880.0000	0.157	0.28	0.002	0.003	AM-AB-190123-07#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	1880.0000	0.157	-0.37	0.001	0.002	AM-AB-190123-08#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	1880.0000	0.157	0.34	0.003	0.005	AM-AB-190123-09#
Assessment of Additional Battery									
AN000304A01	NNTN9089A	PMLN7947A w/ PMLN7965A	None	1880.0000	0.209	0.19	0.011	0.013	AM-AB-190123-10#

Assessments at the Face

Table below presents the data of the face assessment.

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#
1 RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1880.0000	0.21	-0.21	0.251	0.316	AM-FACE-190130-02
AN000304A01	NNTN9087A	Display side against the phantom	None	1880.0000	0.21	-0.11	0.004	0.005	AM-FACE-190130-04
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1880.0000	0.16	-0.14	0.193	0.319	AM-FACE-190130-05
AN000304A01	NNTN9087A	Display side against the phantom	None	1880.0000	0.16	-0.42	0.002	0.004	LOH-FACE-190130-07
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	1880.0000	0.16	-0.20	0.237	0.397	AM-FACE-190212-02

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 7

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#
LTE Band 2 (Body)									
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1860.0000	0.204	0.10	0.006	0.008	AM-AB-190201-06#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1880.0000	0.209	0.29	0.012	0.014	LOH-AB-190122-04#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1900.0000	0.196	-0.37	0.006	0.008	LOH-AB-190201-12
LTE Band 2 (Face)									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	1860.0000	0.156	-0.04	0.256	0.416	LOH-FACE-190130-11
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	1880.0000	0.16	-0.20	0.237	0.397	AM-FACE-190212-02
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	1900.0000	0.156	-0.15	0.242	0.403	LOH-FACE-190130-12

4.2 SAR 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 8

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 4	20 MHz 100 Blocks	1 Block QPSK	1	lower	Low	2050	20050	1720.0	22.75
			1	middle	Low	2050	20050	1720.0	22.71
			1	upper	Low	2050	20050	1720.0	22.80
			1	lower	Mid	2175	20175	1732.5	22.82
			1	middle	Mid	2175	20175	1732.5	22.74
			1	upper	Mid	2175	20175	1732.5	22.83
			1	lower	High	2300	20300	1745.0	22.89
			1	middle	High	2300	20300	1745.0	22.68
			1	upper	High	2300	20300	1745.0	22.74
		36 Block QPSK	50%	lower	Low	2050	20050	1720.0	21.75
			50%	middle	Low	2050	20050	1720.0	21.73
			50%	upper	Low	2050	20050	1720.0	21.79
			50%	lower	Mid	2175	20175	1732.5	21.83
			50%	middle	Mid	2175	20175	1732.5	21.81
			50%	upper	Mid	2175	20175	1732.5	21.80
			50%	lower	High	2300	20300	1745.0	21.86
			50%	middle	High	2300	20300	1745.0	21.87
			50%	upper	High	2300	20300	1745.0	21.78
		75 Blocks QPSK	100%	lower	Low	2050	20050	1720.0	21.73
			100%	lower	Mid	2175	20175	1732.5	21.86
			100%	lower	High	2300	20300	1745.0	21.90
		1 Block 16 QAM	1	lower	Low	2050	20050	1720.0	22.36
			1	middle	Low	2050	20050	1720.0	22.26
			1	upper	Low	2050	20050	1720.0	22.38
			1	lower	Mid	2175	20175	1732.5	22.24
			1	middle	Mid	2175	20175	1732.5	22.17
			1	upper	Mid	2175	20175	1732.5	22.35
			1	lower	High	2300	20300	1745.0	22.25
			1	middle	High	2300	20300	1745.0	22.17
			1	upper	High	2300	20300	1745.0	22.19
		36 Block 16 QAM	50%	lower	Low	2050	20050	1720.0	20.85
			50%	middle	Low	2050	20050	1720.0	20.83
			50%	upper	Low	2050	20050	1720.0	20.89
			50%	lower	Mid	2175	20175	1732.5	20.97
			50%	middle	Mid	2175	20175	1732.5	20.97
			50%	upper	Mid	2175	20175	1732.5	20.98
			50%	lower	High	2300	20300	1745.0	20.97
			50%	middle	High	2300	20300	1745.0	20.92
			50%	upper	High	2300	20300	1745.0	20.86
		75 Blocks 16 QAM	100%	lower	Low	2050	20050	1720.0	20.92
			100%	lower	Mid	2175	20175	1732.5	20.96
			100%	lower	High	2300	20300	1745.0	20.96

Table 8 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 4	15 MHz 75 Blocks	1 Block QPSK	1	lower	Low	2025	20025	1717.5	22.85
			1	middle	Low	2025	20025	1717.5	22.81
			1	upper	Low	2025	20025	1717.5	22.80
			1	lower	Mid	2175	20175	1732.5	22.87
			1	middle	Mid	2175	20175	1732.5	22.72
			1	upper	Mid	2175	20175	1732.5	22.79
			1	lower	High	2325	20325	1747.5	22.94
			1	middle	High	2325	20325	1747.5	22.73
			1	upper	High	2325	20325	1747.5	22.75
		36 Block QPSK	50%	lower	Low	2025	20025	1717.5	21.73
			50%	middle	Low	2025	20025	1717.5	21.74
			50%	upper	Low	2025	20025	1717.5	21.71
			50%	lower	Mid	2175	20175	1732.5	21.80
			50%	middle	Mid	2175	20175	1732.5	21.75
			50%	upper	Mid	2175	20175	1732.5	21.81
			50%	lower	High	2325	20325	1747.5	21.90
			50%	middle	High	2325	20325	1747.5	21.72
			50%	upper	High	2325	20325	1747.5	21.67
		75 Blocks QPSK	100%	lower	Low	2025	20025	1717.5	21.72
			100%	lower	Mid	2175	20175	1732.5	21.81
			100%	lower	High	2325	20325	1747.5	21.84
		1 Block 16 QAM	1	lower	Low	2025	20025	1717.5	22.29
			1	middle	Low	2025	20025	1717.5	22.21
			1	upper	Low	2025	20025	1717.5	22.22
			1	lower	Mid	2175	20175	1732.5	21.80
			1	middle	Mid	2175	20175	1732.5	21.67
			1	upper	Mid	2175	20175	1732.5	21.82
			1	lower	High	2325	20325	1747.5	22.29
			1	middle	High	2325	20325	1747.5	22.12
			1	upper	High	2325	20325	1747.5	22.16
		36 Block 16 QAM	50%	lower	Low	2025	20025	1717.5	20.82
			50%	middle	Low	2025	20025	1717.5	20.82
			50%	upper	Low	2025	20025	1717.5	20.80
			50%	lower	Mid	2175	20175	1732.5	20.89
			50%	middle	Mid	2175	20175	1732.5	20.88
			50%	upper	Mid	2175	20175	1732.5	20.88
			50%	lower	High	2325	20325	1747.5	21.02
			50%	middle	High	2325	20325	1747.5	20.84
			50%	upper	High	2325	20325	1747.5	20.83
		75 Blocks 16 QAM	100%	lower	Low	2025	20025	1717.5	20.84
			100%	lower	Mid	2175	20175	1732.5	20.93
			100%	lower	High	2325	20325	1747.5	20.97

Table 8 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 4	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	2000	20000	1715.0	22.69
			1	middle	Low	2000	20000	1715.0	22.73
			1	upper	Low	2000	20000	1715.0	22.74
			1	lower	Mid	2175	20175	1732.5	22.76
			1	middle	Mid	2175	20175	1732.5	22.78
			1	upper	Mid	2175	20175	1732.5	22.81
			1	lower	High	2350	20350	1750.0	22.72
			1	middle	High	2350	20350	1750.0	22.66
			1	upper	High	2350	20350	1750.0	22.76
		25 Block QPSK	50%	lower	Low	2000	20000	1715.0	21.76
			50%	middle	Low	2000	20000	1715.0	21.71
			50%	upper	Low	2000	20000	1715.0	21.72
			50%	lower	Mid	2175	20175	1732.5	21.81
			50%	middle	Mid	2175	20175	1732.5	21.76
			50%	upper	Mid	2175	20175	1732.5	21.81
			50%	lower	High	2350	20350	1750.0	21.72
			50%	middle	High	2350	20350	1750.0	21.76
			50%	upper	High	2350	20350	1750.0	21.73
		50 Blocks QPSK	100%	lower	Low	2000	20000	1715.0	21.77
			100%	lower	Mid	2175	20175	1732.5	21.81
			100%	lower	High	2350	20350	1750.0	21.77
		1 Block 16 QAM	1	lower	Low	2000	20000	1715.0	21.82
			1	middle	Low	2000	20000	1715.0	21.79
			1	upper	Low	2000	20000	1715.0	21.86
			1	lower	Mid	2175	20175	1732.5	21.74
			1	middle	Mid	2175	20175	1732.5	21.68
			1	upper	Mid	2175	20175	1732.5	21.79
			1	lower	High	2350	20350	1750.0	22.14
			1	middle	High	2350	20350	1750.0	22.04
			1	upper	High	2350	20350	1750.0	22.09
		25 Block 16 QAM	50%	lower	Low	2000	20000	1715.0	20.90
			50%	middle	Low	2000	20000	1715.0	20.89
			50%	upper	Low	2000	20000	1715.0	20.84
			50%	lower	Mid	2175	20175	1732.5	20.87
			50%	middle	Mid	2175	20175	1732.5	20.87
			50%	upper	Mid	2175	20175	1732.5	20.92
			50%	lower	High	2350	20350	1750.0	20.91
			50%	middle	High	2350	20350	1750.0	20.85
			50%	upper	High	2350	20350	1750.0	20.84
		50 Blocks 16 QAM	100%	lower	Low	2000	20000	1715.0	20.84
			100%	lower	Mid	2175	20175	1732.5	20.89
			100%	lower	High	2350	20350	1750.0	20.84

Table 8 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 4	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	1975	19975	1712.5	22.74
			1	middle	Low	1975	19975	1712.5	22.78
			1	upper	Low	1975	19975	1712.5	22.81
			1	lower	Mid	2175	20175	1732.5	22.90
			1	middle	Mid	2175	20175	1732.5	22.85
			1	upper	Mid	2175	20175	1732.5	22.93
			1	lower	High	2375	20375	1752.5	22.77
			1	middle	High	2375	20375	1752.5	22.69
			1	upper	High	2375	20375	1752.5	22.70
		12 Block QPSK	50%	lower	Low	1975	19975	1712.5	21.68
			50%	middle	Low	1975	19975	1712.5	21.73
			50%	upper	Low	1975	19975	1712.5	21.70
			50%	lower	Mid	2175	20175	1732.5	21.75
			50%	middle	Mid	2175	20175	1732.5	21.75
			50%	upper	Mid	2175	20175	1732.5	21.78
			50%	lower	High	2375	20375	1752.5	21.78
			50%	middle	High	2375	20375	1752.5	21.75
			50%	upper	High	2375	20375	1752.5	21.70
		25 Blocks QPSK	100%	lower	Low	1975	19975	1712.5	21.67
			100%	lower	Mid	2175	20175	1732.5	21.83
			100%	lower	High	2375	20375	1752.5	21.76
		1 Block 16 QAM	1	lower	Low	1975	19975	1712.5	21.89
			1	middle	Low	1975	19975	1712.5	21.85
			1	upper	Low	1975	19975	1712.5	21.94
			1	lower	Mid	2175	20175	1732.5	22.00
			1	middle	Mid	2175	20175	1732.5	21.96
			1	upper	Mid	2175	20175	1732.5	21.98
			1	lower	High	2375	20375	1752.5	22.29
			1	middle	High	2375	20375	1752.5	22.28
			1	upper	High	2375	20375	1752.5	22.28
		12 Block 16 QAM	50%	lower	Low	1975	19975	1712.5	20.82
			50%	middle	Low	1975	19975	1712.5	20.85
			50%	upper	Low	1975	19975	1712.5	20.76
			50%	lower	Mid	2175	20175	1732.5	20.93
			50%	middle	Mid	2175	20175	1732.5	20.96
			50%	upper	Mid	2175	20175	1732.5	20.90
			50%	lower	High	2375	20375	1752.5	20.92
			50%	middle	High	2375	20375	1752.5	20.97
			50%	upper	High	2375	20375	1752.5	20.95
		25 Blocks 16 QAM	100%	lower	Low	1975	19975	1712.5	20.70
			100%	lower	Mid	2175	20175	1732.5	20.89
			100%	lower	High	2375	20375	1752.5	20.90

Table 8 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 4	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	1965	19965	1711.5	22.69
			1	middle	Low	1965	19965	1711.5	22.75
			1	upper	Low	1965	19965	1711.5	22.68
			1	lower	Mid	2175	20175	1732.5	22.70
			1	middle	Mid	2175	20175	1732.5	22.83
			1	upper	Mid	2175	20175	1732.5	22.75
			1	lower	High	2385	20385	1753.5	22.72
			1	middle	High	2385	20385	1753.5	22.80
			1	upper	High	2385	20385	1753.5	22.69
		8 Block QPSK	50%	lower	Low	1965	19965	1711.5	21.69
			50%	middle	Low	1965	19965	1711.5	21.72
			50%	upper	Low	1965	19965	1711.5	21.64
			50%	lower	Mid	2175	20175	1732.5	21.72
			50%	middle	Mid	2175	20175	1732.5	21.75
			50%	upper	Mid	2175	20175	1732.5	21.73
			50%	lower	High	2385	20385	1753.5	21.66
			50%	middle	High	2385	20385	1753.5	21.72
			50%	upper	High	2385	20385	1753.5	21.69
		15 Blocks QPSK	100%	lower	Low	1965	19965	1711.5	21.64
			100%	lower	Mid	2175	20175	1732.5	21.77
			100%	lower	High	2385	20385	1753.5	21.71
		1 Block 16 QAM	1	lower	Low	1965	19965	1711.5	21.76
			1	middle	Low	1965	19965	1711.5	21.82
			1	upper	Low	1965	19965	1711.5	21.75
			1	lower	Mid	2175	20175	1732.5	21.68
			1	middle	Mid	2175	20175	1732.5	21.77
			1	upper	Mid	2175	20175	1732.5	21.65
			1	lower	High	2385	20385	1753.5	22.08
			1	middle	High	2385	20385	1753.5	22.14
			1	upper	High	2385	20385	1753.5	22.08
		8 Block 16 QAM	50%	lower	Low	1965	19965	1711.5	20.75
			50%	middle	Low	1965	19965	1711.5	20.79
			50%	upper	Low	1965	19965	1711.5	20.79
			50%	lower	Mid	2175	20175	1732.5	20.95
			50%	middle	Mid	2175	20175	1732.5	20.95
			50%	upper	Mid	2175	20175	1732.5	20.94
			50%	lower	High	2385	20385	1753.5	20.80
			50%	middle	High	2385	20385	1753.5	20.87
			50%	upper	High	2385	20385	1753.5	20.81
		15 Blocks 16 QAM	100%	lower	Low	1965	19965	1711.5	20.76
			100%	lower	Mid	2175	20175	1732.5	20.85
			100%	lower	High	2385	20385	1753.5	20.78

Table 8 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 4	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	1957	19957	1710.7	22.61
			1	middle	Low	1957	19957	1710.7	22.65
			1	upper	Low	1957	19957	1710.7	22.62
			1	lower	Mid	2175	20175	1732.5	22.76
			1	middle	Mid	2175	20175	1732.5	22.79
			1	upper	Mid	2175	20175	1732.5	22.81
			1	lower	High	2393	20393	1754.3	22.58
			1	middle	High	2393	20393	1754.3	22.70
			1	upper	High	2393	20393	1754.3	22.70
		3 Block QPSK	50%	lower	Low	1957	19957	1710.7	22.54
			50%	middle	Low	1957	19957	1710.7	22.65
			50%	upper	Low	1957	19957	1710.7	22.58
			50%	lower	Mid	2175	20175	1732.5	22.61
			50%	middle	Mid	2175	20175	1732.5	22.71
			50%	upper	Mid	2175	20175	1732.5	22.69
			50%	lower	High	2393	20393	1754.3	22.66
			50%	middle	High	2393	20393	1754.3	22.71
			50%	upper	High	2393	20393	1754.3	22.63
		6 Blocks QPSK	100%	lower	Low	1957	19957	1710.7	21.57
			100%	lower	Mid	2175	20175	1732.5	21.69
			100%	lower	High	2393	20393	1754.3	21.63
		1 Block 16 QAM	1	lower	Low	1957	19957	1710.7	21.68
			1	middle	Low	1957	19957	1710.7	21.76
			1	upper	Low	1957	19957	1710.7	21.70
			1	lower	Mid	2175	20175	1732.5	21.81
			1	middle	Mid	2175	20175	1732.5	21.90
			1	upper	Mid	2175	20175	1732.5	21.89
			1	lower	High	2393	20393	1754.3	22.02
			1	middle	High	2393	20393	1754.3	22.10
			1	upper	High	2393	20393	1754.3	22.10
		3 Block 16 QAM	50%	lower	Low	1957	19957	1710.7	21.74
			50%	middle	Low	1957	19957	1710.7	21.85
			50%	upper	Low	1957	19957	1710.7	21.78
			50%	lower	Mid	2175	20175	1732.5	21.74
			50%	middle	Mid	2175	20175	1732.5	21.79
			50%	upper	Mid	2175	20175	1732.5	21.76
			50%	lower	High	2393	20393	1754.3	21.87
			50%	middle	High	2393	20393	1754.3	21.92
			50%	upper	High	2393	20393	1754.3	21.79
		6 Blocks 16 QAM	100%	lower	Low	1957	19957	1710.7	20.87
			100%	lower	Mid	2175	20175	1732.5	20.86
			100%	lower	High	2393	20393	1754.3	20.69

Assessments at the Body

Table below presents the data of the body 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#
1 RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	1745.0000	0.195	0.08	0.021	0.027	LOH-AB-190123-13#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1745.0000	0.195	-0.32	0.018	0.025	LOH-AB-190123-14#
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	1745.0000	0.195	-0.19	0.010	0.013	LOH-AB-190211-02
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	1745.0000	0.195	0.39	0.013	0.017	LOH-AB-190124-01#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	1745.0000	0.195	0.04	0.006	0.008	LOH-AB-190124-02#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	1745.0000	0.195	0.06	0.007	0.010	LOH-AB-190124-03#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	1745.0000	0.195	0.04	0.006	0.007	LOH-AB-190124-04#
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	1745.0000	0.195	0.21	0.013	0.017	LOH-AB-190124-05#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1745.0000	0.195	0.34	0.026	0.033	LOH-AB-190124-06#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	1745.0000	0.195	0.18	0.017	0.022	AM-AB-190212-10
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	1745.0000	0.195	-0.07	0.019	0.025	LOH-AB-190212-09
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	1745.0000	0.195	0.23	0.024	0.031	LOH-AB-190212-08
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	1745.0000	0.154	0.23	0.018	0.029	AM-AB-190124-10#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	1745.0000	0.154	0.15	0.014	0.023	AM-AB-190124-11#
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	1745.0000	0.154	0.19	0.008	0.013	AM-AB-190124-12#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	1745.0000	0.154	0.05	0.010	0.016	AM-AB-190124-13#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	1745.0000	0.154	-0.13	0.008	0.013	LOH-AB-190124-15#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	1745.0000	0.154	0.28	0.007	0.011	LOH-AB-190124-16#

Table 9 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	1745.0000	0.154	0.24	0.007	0.012	LOH-AB-190125-08
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	1745.0000	0.154	-0.36	0.007	0.012	LOH-AB-190125-09
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1745.0000	0.154	-0.20	0.014	0.024	LOH-AB-190211-05
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	1745.0000	0.154	-0.03	0.009	0.015	LOH-AB-190126-02#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	1745.0000	0.154	-0.37	0.011	0.020	LOH-AB-190211-04
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	1745.0000	0.154	1.40	0.016	0.026	LOH-AB-190212-07
Assessment of Additional Battery									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	1745.0000	0.154	-0.34	0.006	0.011	LOH-AB-190126-05#

Note: Assessment of additional battery only applicable for carry case “PMLN7947A w/ NTN8266B” and “PMLN7947A w/ PMLN7965A”. Refer to Part 1 of the report, section 7.3 for the compatibility of body worn and battery.

Assessments at the Face

Table below presents the data of the face 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#
1 RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1745.0000	0.20	-0.15	0.244	0.325	LOH-FACE-190129-02
AN000304A01	NNTN9087A	Display side against the phantom	None	1745.0000	0.20	0.43	0.004	0.005	LOH-FACE-190129-04
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1745.0000	0.15	-0.21	0.181	0.310	LOH-FACE-190129-05
AN000304A01	NNTN9087A	Display side against the phantom	None	1745.0000	0.15	-0.26	0.003	0.006	LOH-FACE-190129-07
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	1745.0000	0.20	-0.33	0.194	0.269	LOH-FACE-190129-08

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 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#
LTE Band 4 (Body)									
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1720.0000	0.191	-0.16	0.023	0.031	LOH-AB-190218-02#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1732.5000	0.192	0.14	0.017	0.022	LOH-AB-190218-04#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	1745.0000	0.195	0.34	0.026	0.033	LOH-AB-190124-06#
LTE Band 4 (Face)									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1720.0000	0.191	-0.34	0.168	0.239	LOH-FACE-190201-08
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1732.5000	0.192	-0.35	0.161	0.228	LOH-FACE-190201-09
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	1745.0000	0.20	-0.15	0.244	0.325	LOH-FACE-190129-02

4.3 SAR 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 12

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 5	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	2450	20450	829.0	22.88
			1	middle	Low	2450	20450	829.0	22.81
			1	upper	Low	2450	20450	829.0	22.86
			1	lower	Mid	2525	20525	836.5	22.90
			1	middle	Mid	2525	20525	836.5	22.92
			1	upper	Mid	2525	20525	836.5	23.00
			1	lower	High	2600	20600	844.0	22.97
			1	middle	High	2600	20600	844.0	23.00
			1	upper	High	2600	20600	844.0	22.83
		12 Block QPSK	50%	lower	Low	2450	20450	829.0	21.85
			50%	middle	Low	2450	20450	829.0	21.86
			50%	upper	Low	2450	20450	829.0	21.85
			50%	lower	Mid	2525	20525	836.5	21.90
			50%	middle	Mid	2525	20525	836.5	21.97
			50%	upper	Mid	2525	20525	836.5	21.98
			50%	lower	High	2600	20600	844.0	21.95
			50%	middle	High	2600	20600	844.0	22.04
			50%	upper	High	2600	20600	844.0	21.88
		25 Blocks QPSK	100%	lower	Low	2450	20450	829.0	21.85
			100%	lower	Mid	2525	20525	836.5	21.96
			100%	lower	High	2600	20600	844.0	21.92
		1 Block 16 QAM	1	lower	Low	2450	20450	829.0	22.03
			1	middle	Low	2450	20450	829.0	21.93
			1	upper	Low	2450	20450	829.0	22.01
			1	lower	Mid	2525	20525	836.5	21.98
			1	middle	Mid	2525	20525	836.5	21.92
			1	upper	Mid	2525	20525	836.5	22.03
			1	lower	High	2600	20600	844.0	22.39
			1	middle	High	2600	20600	844.0	22.41
			1	upper	High	2600	20600	844.0	22.22
		12 Block 16 QAM	50%	lower	Low	2450	20450	829.0	20.98
			50%	middle	Low	2450	20450	829.0	21.04
			50%	upper	Low	2450	20450	829.0	20.97
			50%	lower	Mid	2525	20525	836.5	21.01
			50%	middle	Mid	2525	20525	836.5	21.08
			50%	upper	Mid	2525	20525	836.5	21.10
			50%	lower	High	2600	20600	844.0	21.11
			50%	middle	High	2600	20600	844.0	21.17
			50%	upper	High	2600	20600	844.0	21.06
		25 Blocks 16 QAM	100%	lower	Low	2450	20450	829.0	20.98
			100%	lower	Mid	2525	20525	836.5	21.00
			100%	lower	High	2600	20600	844.0	21.05

Table 12 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 5	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	2425	20425	826.5	23.00
			1	middle	Low	2425	20425	826.5	23.00
			1	upper	Low	2425	20425	826.5	22.95
			1	lower	Mid	2525	20525	836.5	22.86
			1	middle	Mid	2525	20525	836.5	22.89
			1	upper	Mid	2525	20525	836.5	23.02
			1	lower	High	2625	20625	846.5	23.05
			1	middle	High	2625	20625	846.5	22.93
			1	upper	High	2625	20625	846.5	22.87
		12 Block QPSK	50%	lower	Low	2425	20425	826.5	21.92
			50%	middle	Low	2425	20425	826.5	21.81
			50%	upper	Low	2425	20425	826.5	21.77
			50%	lower	Mid	2525	20525	836.5	21.95
			50%	middle	Mid	2525	20525	836.5	21.96
			50%	upper	Mid	2525	20525	836.5	21.93
			50%	lower	High	2625	20625	846.5	21.90
			50%	middle	High	2625	20625	846.5	21.91
			50%	upper	High	2625	20625	846.5	21.89
		25 Blocks QPSK	100%	lower	Low	2425	20425	826.5	21.84
			100%	lower	Mid	2525	20525	836.5	21.99
			100%	lower	High	2625	20625	846.5	21.91
		1 Block 16 QAM	1	lower	Low	2425	20425	826.5	22.11
			1	middle	Low	2425	20425	826.5	22.12
			1	upper	Low	2425	20425	826.5	22.05
			1	lower	Mid	2525	20525	836.5	22.50
			1	middle	Mid	2525	20525	836.5	22.53
			1	upper	Mid	2525	20525	836.5	22.55
			1	lower	High	2625	20625	846.5	22.23
			1	middle	High	2625	20625	846.5	22.06
			1	upper	High	2625	20625	846.5	21.96
		12 Block 16 QAM	50%	lower	Low	2425	20425	826.5	21.05
			50%	middle	Low	2425	20425	826.5	20.92
			50%	upper	Low	2425	20425	826.5	20.95
			50%	lower	Mid	2525	20525	836.5	21.16
			50%	middle	Mid	2525	20525	836.5	21.23
			50%	upper	Mid	2525	20525	836.5	21.19
			50%	lower	High	2625	20625	846.5	21.10
			50%	middle	High	2625	20625	846.5	21.06
			50%	upper	High	2625	20625	846.5	20.95
		25 Blocks 16 QAM	100%	lower	Low	2425	20425	826.5	20.88
			100%	lower	Mid	2525	20525	836.5	21.11
			100%	lower	High	2625	20625	846.5	20.95

Table 12 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 5	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	2415	20415	825.5	22.92
			1	middle	Low	2415	20415	825.5	23.04
			1	upper	Low	2415	20415	825.5	22.88
			1	lower	Mid	2525	20525	836.5	22.89
			1	middle	Mid	2525	20525	836.5	23.01
			1	upper	Mid	2525	20525	836.5	22.92
			1	lower	High	2635	20635	847.5	22.88
			1	middle	High	2635	20635	847.5	22.87
			1	upper	High	2635	20635	847.5	22.77
		8 Block QPSK	50%	lower	Low	2415	20415	825.5	21.87
			50%	middle	Low	2415	20415	825.5	21.89
			50%	upper	Low	2415	20415	825.5	21.85
			50%	lower	Mid	2525	20525	836.5	21.94
			50%	middle	Mid	2525	20525	836.5	21.98
			50%	upper	Mid	2525	20525	836.5	21.95
			50%	lower	High	2635	20635	847.5	21.82
			50%	middle	High	2635	20635	847.5	21.86
			50%	upper	High	2635	20635	847.5	21.80
		15 Blocks QPSK	100%	lower	Low	2415	20415	825.5	21.91
			100%	lower	Mid	2525	20525	836.5	21.95
			100%	lower	High	2635	20635	847.5	21.85
		1 Block 16 QAM	1	lower	Low	2415	20415	825.5	22.03
			1	middle	Low	2415	20415	825.5	22.07
			1	upper	Low	2415	20415	825.5	22.04
			1	lower	Mid	2525	20525	836.5	21.93
			1	middle	Mid	2525	20525	836.5	22.04
			1	upper	Mid	2525	20525	836.5	21.92
			1	lower	High	2635	20635	847.5	22.33
			1	middle	High	2635	20635	847.5	22.35
			1	upper	High	2635	20635	847.5	22.19
		8 Block 16 QAM	50%	lower	Low	2415	20415	825.5	21.02
			50%	middle	Low	2415	20415	825.5	21.04
			50%	upper	Low	2415	20415	825.5	20.98
			50%	lower	Mid	2525	20525	836.5	21.10
			50%	middle	Mid	2525	20525	836.5	21.13
			50%	upper	Mid	2525	20525	836.5	21.16
			50%	lower	High	2635	20635	847.5	20.98
			50%	middle	High	2635	20635	847.5	20.98
			50%	upper	High	2635	20635	847.5	20.92
		15 Blocks 16 QAM	100%	lower	Low	2415	20415	825.5	20.92
			100%	lower	Mid	2525	20525	836.5	21.04
			100%	lower	High	2635	20635	847.5	20.96

Table 12 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 5	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	2407	20407	824.7	22.79
			1	middle	Low	2407	20407	824.7	22.87
			1	upper	Low	2407	20407	824.7	22.84
			1	lower	Mid	2525	20525	836.5	22.93
			1	middle	Mid	2525	20525	836.5	23.00
			1	upper	Mid	2525	20525	836.5	22.93
			1	lower	High	2643	20643	848.3	22.76
			1	middle	High	2643	20643	848.3	22.77
			1	upper	High	2643	20643	848.3	22.79
		3 Block QPSK	50%	lower	Low	2407	20407	824.7	22.78
			50%	middle	Low	2407	20407	824.7	22.82
			50%	upper	Low	2407	20407	824.7	22.83
			50%	lower	Mid	2525	20525	836.5	22.89
			50%	middle	Mid	2525	20525	836.5	22.93
			50%	upper	Mid	2525	20525	836.5	22.87
			50%	lower	High	2643	20643	848.3	22.73
			50%	middle	High	2643	20643	848.3	22.78
			50%	upper	High	2643	20643	848.3	22.69
		6 Blocks QPSK	100%	lower	Low	2407	20407	824.7	21.78
			100%	lower	Mid	2525	20525	836.5	21.85
			100%	lower	High	2643	20643	848.3	21.69
		1 Block 16 QAM	1	lower	Low	2407	20407	824.7	21.89
			1	middle	Low	2407	20407	824.7	21.96
			1	upper	Low	2407	20407	824.7	21.96
			1	lower	Mid	2525	20525	836.5	22.11
			1	middle	Mid	2525	20525	836.5	22.15
			1	upper	Mid	2525	20525	836.5	22.16
			1	lower	High	2643	20643	848.3	22.16
			1	middle	High	2643	20643	848.3	22.19
			1	upper	High	2643	20643	848.3	22.15
		3 Block 16 QAM	50%	lower	Low	2407	20407	824.7	22.01
			50%	middle	Low	2407	20407	824.7	22.11
			50%	upper	Low	2407	20407	824.7	22.03
			50%	lower	Mid	2525	20525	836.5	21.98
			50%	middle	Mid	2525	20525	836.5	22.08
			50%	upper	Mid	2525	20525	836.5	21.98
			50%	lower	High	2643	20643	848.3	22.02
			50%	middle	High	2643	20643	848.3	22.07
			50%	upper	High	2643	20643	848.3	21.94
		6 Blocks 16 QAM	100%	lower	Low	2407	20407	824.7	21.04
			100%	lower	Mid	2525	20525	836.5	21.06
			100%	lower	High	2643	20643	848.3	20.71

Assessments at the Body

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#
1 RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	836.5000	0.200	-0.25	0.049	0.065	LOH-AB-190116-12
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	836.5000	0.200	-0.27	0.050	0.067	AM-AB-190116-13
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	836.5000	0.200	-0.42	0.048	0.066	AM-AB-190116-14
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	836.5000	0.200	-0.36	0.048	0.065	AM-AB-190116-15
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	836.5000	0.200	-0.15	0.027	0.035	AM-AB-190116-16
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	836.5000	0.200	-0.56	0.026	0.037	AM-AB-190116-17
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	836.5000	0.200	-0.43	0.027	0.037	AM-AB-190116-18
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	836.5000	0.200	-0.36	0.032	0.044	AM-AB-190117-01#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	836.5000	0.200	-0.37	0.033	0.045	AM-AB-190117-02#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	836.5000	0.200	-0.36	0.017	0.023	LOH-AB-190117-06#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	836.5000	0.200	0.05	0.017	0.021	LOH-AB-190117-07#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	836.5000	0.200	-0.28	0.018	0.024	LOH-AB-190117-08#
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	844.0000	0.160	-0.38	0.039	0.067	AM-AB-190117-13
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	844.0000	0.160	-0.09	0.040	0.064	AM-AB-190117-14
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	844.0000	0.160	-0.41	0.039	0.067	AM-AB-190117-15
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	844.0000	0.160	-0.18	0.039	0.064	AM-AB-190118-01#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	844.0000	0.160	-0.44	0.025	0.043	AM-AB-190118-02#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	844.0000	0.160	-0.42	0.024	0.041	AM-AB-190118-05#

Table 13 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	844.0000	0.160	-0.16	0.025	0.041	LOH-AB-190118-06#
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	844.0000	0.160	-0.31	0.020	0.034	LOH-AB-190118-07#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	844.0000	0.160	-0.34	0.021	0.036	LOH-AB-190118-09#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	844.0000	0.160	-0.05	0.012	0.019	LOH-AB-190118-10#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	844.0000	0.160	-0.41	0.014	0.024	LOH-AB-190121-16
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	844.0000	0.160	-0.13	0.014	0.023	LOH-AB-190118-14#
Assessment of Additional Battery									
AN000304A01	NNTN9089A	PMLN7947A w/ NTN8266B	None	844.0000	0.160	-0.01	0.030	0.047	AM-AB-190210-03

Assessments at the Face

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#
1 RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	836.5000	0.200	-0.15	0.126	0.164	AM-FACE-190210-05
AN000304A01	NNTN9087A	Display side against the phantom	None	836.5000	0.200	-0.13	0.042	0.054	LOH-FACE-190128-13
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	844.0000	0.16	-0.13	0.100	0.162	AM-FACE-190128-14
AN000304A01	NNTN9087A	Display side against the phantom	None	844.0000	0.16	-0.19	0.030	0.049	AM-FACE-190128-15
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	836.5000	0.20	-0.21	0.058	0.076	AM-FACE-190128-16

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#
LTE Band 5 (Body)									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	829.0000	0.154	0.17	0.032	0.052	AM-AB-190201-15
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	836.5000	0.158	0.12	0.042	0.067	AM-AB-190201-16
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	844.0000	0.160	-0.38	0.039	0.067	AM-AB-190117-13
LTE Band 5 (Face)									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	829.0000	0.194	-0.16	0.106	0.142	LOH-FACE-190131-11
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	836.5000	0.200	-0.15	0.126	0.164	AM-FACE-190210-05
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	844.0000	0.200	-0.22	0.113	0.149	LOH-FACE-190131-12

4.4 SAR 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 16

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 12	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	5060	23060	704.0	22.79
			1	middle	Low	5060	23060	704.0	22.70
			1	upper	Low	5060	23060	704.0	22.76
			1	lower	Mid	5095	23095	707.5	22.77
			1	middle	Mid	5095	23095	707.5	22.70
			1	upper	Mid	5095	23095	707.5	22.74
			1	lower	High	5130	23130	711.0	22.75
			1	middle	High	5130	23130	711.0	22.62
			1	upper	High	5130	23130	711.0	22.62
		12 Block QPSK	50%	lower	Low	5060	23060	704.0	21.87
			50%	middle	Low	5060	23060	704.0	21.84
			50%	upper	Low	5060	23060	704.0	21.80
			50%	lower	Mid	5095	23095	707.5	21.80
			50%	middle	Mid	5095	23095	707.5	21.81
			50%	upper	Mid	5095	23095	707.5	21.76
			50%	lower	High	5130	23130	711.0	21.76
			50%	middle	High	5130	23130	711.0	21.80
			50%	upper	High	5130	23130	711.0	21.66
		25 Blocks QPSK	100%	lower	Low	5060	23060	704.0	21.80
			100%	lower	Mid	5095	23095	707.5	21.80
			100%	lower	High	5130	23130	711.0	21.73
		1 Block 16 QAM	1	lower	Low	5060	23060	704.0	21.86
			1	middle	Low	5060	23060	704.0	21.75
			1	upper	Low	5060	23060	704.0	21.78
			1	lower	Mid	5095	23095	707.5	22.18
			1	middle	Mid	5095	23095	707.5	22.17
			1	upper	Mid	5095	23095	707.5	22.13
			1	lower	High	5130	23130	711.0	21.82
			1	middle	High	5130	23130	711.0	21.77
			1	upper	High	5130	23130	711.0	21.79
		12 Block 16 QAM	50%	lower	Low	5060	23060	704.0	20.90
			50%	middle	Low	5060	23060	704.0	20.91
			50%	upper	Low	5060	23060	704.0	20.89
			50%	lower	Mid	5095	23095	707.5	20.90
			50%	middle	Mid	5095	23095	707.5	20.92
			50%	upper	Mid	5095	23095	707.5	20.86
			50%	lower	High	5130	23130	711.0	20.92
			50%	middle	High	5130	23130	711.0	20.92
			50%	upper	High	5130	23130	711.0	20.86
		25 Blocks 16 QAM	100%	lower	Low	5060	23060	704.0	20.92
			100%	lower	Mid	5095	23095	707.5	20.90
			100%	lower	High	5130	23130	711.0	20.84

Table 16 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 12	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	5035	23035	701.5	22.85
			1	middle	Low	5035	23035	701.5	22.76
			1	upper	Low	5035	23035	701.5	22.84
			1	lower	Mid	5095	23095	707.5	22.87
			1	middle	Mid	5095	23095	707.5	22.81
			1	upper	Mid	5095	23095	707.5	22.81
			1	lower	High	5155	23155	713.5	22.59
			1	middle	High	5155	23155	713.5	22.63
			1	upper	High	5155	23155	713.5	22.64
		12 Block QPSK	50%	lower	Low	5035	23035	701.5	21.80
			50%	middle	Low	5035	23035	701.5	21.83
			50%	upper	Low	5035	23035	701.5	21.83
			50%	lower	Mid	5095	23095	707.5	21.76
			50%	middle	Mid	5095	23095	707.5	21.73
			50%	upper	Mid	5095	23095	707.5	21.76
			50%	lower	High	5155	23155	713.5	21.71
			50%	middle	High	5155	23155	713.5	21.70
			50%	upper	High	5155	23155	713.5	21.61
		25 Blocks QPSK	100%	lower	Low	5035	23035	701.5	21.82
			100%	lower	Mid	5095	23095	707.5	21.78
			100%	lower	High	5155	23155	713.5	21.69
		1 Block 16 QAM	1	lower	Low	5035	23035	701.5	22.01
			1	middle	Low	5035	23035	701.5	21.97
			1	upper	Low	5035	23035	701.5	21.97
			1	lower	Mid	5095	23095	707.5	22.01
			1	middle	Mid	5095	23095	707.5	21.92
			1	upper	Mid	5095	23095	707.5	21.96
			1	lower	High	5155	23155	713.5	22.23
			1	middle	High	5155	23155	713.5	22.19
			1	upper	High	5155	23155	713.5	22.22
		12 Block 16 QAM	50%	lower	Low	5035	23035	701.5	21.03
			50%	middle	Low	5035	23035	701.5	20.95
			50%	upper	Low	5035	23035	701.5	20.92
			50%	lower	Mid	5095	23095	707.5	20.92
			50%	middle	Mid	5095	23095	707.5	20.93
			50%	upper	Mid	5095	23095	707.5	20.88
			50%	lower	High	5155	23155	713.5	20.91
			50%	middle	High	5155	23155	713.5	20.88
			50%	upper	High	5155	23155	713.5	20.86
		25 Blocks 16 QAM	100%	lower	Low	5035	23035	701.5	20.86
			100%	lower	Mid	5095	23095	707.5	20.87
			100%	lower	High	5155	23155	713.5	20.82

Table 16 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 12	3 MHz 15 Blocks	1 Block QPSK	1	lower	Low	5025	23025	700.5	22.80
			1	middle	Low	5025	23025	700.5	22.84
			1	upper	Low	5025	23025	700.5	22.74
			1	lower	Mid	5095	23095	707.5	22.66
			1	middle	Mid	5095	23095	707.5	22.69
			1	upper	Mid	5095	23095	707.5	22.72
			1	lower	High	5165	23165	714.5	22.62
			1	middle	High	5165	23165	714.5	22.68
			1	upper	High	5165	23165	714.5	22.59
		8 Block QPSK	50%	lower	Low	5025	23025	700.5	21.76
			50%	middle	Low	5025	23025	700.5	21.82
			50%	upper	Low	5025	23025	700.5	21.77
			50%	lower	Mid	5095	23095	707.5	21.72
			50%	middle	Mid	5095	23095	707.5	21.72
			50%	upper	Mid	5095	23095	707.5	21.64
			50%	lower	High	5165	23165	714.5	21.63
			50%	middle	High	5165	23165	714.5	21.61
			50%	upper	High	5165	23165	714.5	21.57
		15 Blocks QPSK	100%	lower	Low	5025	23025	700.5	21.79
			100%	lower	Mid	5095	23095	707.5	21.75
			100%	lower	High	5165	23165	714.5	21.60
		1 Block 16 QAM	1	lower	Low	5025	23025	700.5	21.92
			1	middle	Low	5025	23025	700.5	22.00
			1	upper	Low	5025	23025	700.5	21.90
			1	lower	Mid	5095	23095	707.5	21.73
			1	middle	Mid	5095	23095	707.5	21.77
			1	upper	Mid	5095	23095	707.5	21.70
			1	lower	High	5165	23165	714.5	22.03
			1	middle	High	5165	23165	714.5	22.13
			1	upper	High	5165	23165	714.5	22.02
		8 Block 16 QAM	50%	lower	Low	5025	23025	700.5	20.90
			50%	middle	Low	5025	23025	700.5	20.93
			50%	upper	Low	5025	23025	700.5	20.91
			50%	lower	Mid	5095	23095	707.5	20.91
			50%	middle	Mid	5095	23095	707.5	20.85
			50%	upper	Mid	5095	23095	707.5	20.86
			50%	lower	High	5165	23165	714.5	20.70
			50%	middle	High	5165	23165	714.5	20.75
			50%	upper	High	5165	23165	714.5	20.70
		15 Blocks 16 QAM	100%	lower	Low	5025	23025	700.5	20.84
			100%	lower	Mid	5095	23095	707.5	20.85
			100%	lower	High	5165	23165	714.5	20.77

Table 16 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 12	1.4 MHz 6 Blocks	1 Block QPSK	1	lower	Low	5017	23017	699.7	22.65
			1	middle	Low	5017	23017	699.7	22.73
			1	upper	Low	5017	23017	699.7	22.76
			1	lower	Mid	5095	23095	707.5	22.72
			1	middle	Mid	5095	23095	707.5	22.74
			1	upper	Mid	5095	23095	707.5	22.72
			1	lower	High	5173	23173	715.3	22.53
			1	middle	High	5173	23173	715.3	22.61
			1	upper	High	5173	23173	715.3	22.52
		3 Block QPSK	50%	lower	Low	5017	23017	699.7	22.69
			50%	middle	Low	5017	23017	699.7	22.76
			50%	upper	Low	5017	23017	699.7	22.76
			50%	lower	Mid	5095	23095	707.5	22.63
			50%	middle	Mid	5095	23095	707.5	22.67
			50%	upper	Mid	5095	23095	707.5	22.64
			50%	lower	High	5173	23173	715.3	22.53
			50%	middle	High	5173	23173	715.3	22.59
			50%	upper	High	5173	23173	715.3	22.53
		6 Blocks QPSK	100%	lower	Low	5017	23017	699.7	21.76
			100%	lower	Mid	5095	23095	707.5	21.67
			100%	lower	High	5173	23173	715.3	21.50
		1 Block 16 QAM	1	lower	Low	5017	23017	699.7	21.83
			1	middle	Low	5017	23017	699.7	21.85
			1	upper	Low	5017	23017	699.7	21.92
			1	lower	Mid	5095	23095	707.5	21.87
			1	middle	Mid	5095	23095	707.5	21.88
			1	upper	Mid	5095	23095	707.5	21.91
			1	lower	High	5173	23173	715.3	21.91
			1	middle	High	5173	23173	715.3	21.97
			1	upper	High	5173	23173	715.3	22.00
		3 Block 16 QAM	50%	lower	Low	5017	23017	699.7	21.94
			50%	middle	Low	5017	23017	699.7	22.01
			50%	upper	Low	5017	23017	699.7	21.93
			50%	lower	Mid	5095	23095	707.5	21.78
			50%	middle	Mid	5095	23095	707.5	21.82
			50%	upper	Mid	5095	23095	707.5	21.74
			50%	lower	High	5173	23173	715.3	21.81
			50%	middle	High	5173	23173	715.3	21.90
			50%	upper	High	5173	23173	715.3	21.79
		6 Blocks 16 QAM	100%	lower	Low	5017	23017	699.7	21.04
			100%	lower	Mid	5095	23095	707.5	20.86
			100%	lower	High	5173	23173	715.3	20.50

Assessments at the Body

Table below presents the data of the body assessment.

Table 17

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									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	704.0000	0.190	-0.13	0.025	0.034	AM-AB-190109-01#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	704.0000	0.190	-0.22	0.020	0.028	AM-AB-190109-03#
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	704.0000	0.190	-0.03	0.010	0.013	AM-AB-190109-04#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	704.0000	0.190	-0.07	0.010	0.013	AM-AB-190109-05#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	704.0000	0.190	-0.42	0.005	0.007	AM-AB-190110-12
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	704.0000	0.190	0.18	0.004	0.006	AM-AB-190109-08#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	704.0000	0.190	-0.16	0.003	0.004	AM-AB-190109-09#
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	704.0000	0.190	-0.05	0.013	0.017	AM-AB-190109-11
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	704.0000	0.190	-0.35	0.011	0.016	LOH-AB-190110-16
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	704.0000	0.190	-0.01	0.003	0.004	LOH-AB-190109-14
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	704.0000	0.190	-0.24	0.003	0.004	LOH-AB-190110-14
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	704.0000	0.190	0.25	0.004	0.006	LOH-AB-190110-01#
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	704.0000	0.154	0.08	0.017	0.028	LOH-AB-190110-02#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	704.0000	0.154	0.15	0.015	0.024	LOH-AB-190110-03#
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	704.0000	0.154	-0.34	0.007	0.012	LOH-AB-190110-04#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	704.0000	0.154	-0.34	0.005	0.009	AM-AB-190110-08#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	704.0000	0.154	0.14	0.004	0.006	AM-AB-190110-07#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	704.0000	0.154	0.01	0.003	0.004	LOH-AB-190116-08

Table 17 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	704.0000	0.154	0.03	0.003	0.004	LOH-AB-190116-07
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	704.0000	0.154	-0.28	0.007	0.012	LOH-AB-190111-02#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	704.0000	0.154	-0.05	0.006	0.010	LOH-AB-190111-03#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	704.0000	0.154	-0.01	0.001	0.002	LOH-AB-190111-05#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	704.0000	0.154	0.09	0.002	0.004	AM-AB-190111-07#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	704.0000	0.154	0.37	0.002	0.003	LOH-AB-190116-09
Assessment of Additional Battery									
AN000304A01	NNTN9089A	PMLN7947A w/ NTN8266B	None	704.0000	0.190	0.09	0.024	0.032	LOH-AB-190117-05#

Assessments at the Face

Table below presents the data of the face assessment.

Table 18

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									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	704.0000	0.190	-0.08	0.114	0.153	LOH-FACE-190127-02
AN000304A01	NNTN9087A	Display side against the phantom	None	704.0000	0.190	-0.13	0.020	0.027	LOH-FACE-190127-03
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	704.0000	0.154	0.04	0.098	0.160	AM-FACE-190210-07
AN000304A01	NNTN9087A	Display side against the phantom	None	704.0000	0.154	0.08	0.022	0.036	LOH-FACE-190127-04
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	704.0000	0.154	-0.26	0.090	0.156	AM-FACE-190212-04

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 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#
LTE Band 12 (Body)									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	704.0000	0.190	-0.13	0.025	0.034	AM-AB-190109-01#
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	707.5000	0.189	-0.27	0.019	0.027	AM-AB-190130-20
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	711.0000	0.188	-0.13	0.015	0.021	AM-AB-190131-01#
LTE Band 12 (Face)									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	704.0000	0.154	0.04	0.098	0.160	AM-FACE-190210-07
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	707.5000	0.152	-0.03	0.090	0.150	LOH-FACE-190131-06
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	711.0000	0.151	-0.21	0.077	0.134	LOH-FACE-190131-07

4.5 SAR 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 20

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 13	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	5230	23230	782.0	22.82
			1	middle	Mid	5230	23230	782.0	22.71
			1	upper	Mid	5230	23230	782.0	22.81
		25 Block QPSK	50%	lower	Mid	5230	23230	782.0	21.76
			50%	middle	Mid	5230	23230	782.0	21.74
			50%	upper	Mid	5230	23230	782.0	21.73
		50 Block QPSK	100%	lower	Mid				
						5230	23230	782.0	21.72
		1 Block 16 QAM	1	lower	Mid	5230	23230	782.0	21.86
			1	middle	Mid	5230	23230	782.0	21.85
			1	upper	Mid	5230	23230	782.0	21.87
		25 Block 16 QAM	50%	lower	Mid	5230	23230	782.0	20.92
			50%	middle	Mid	5230	23230	782.0	20.95
			50%	upper	Mid	5230	23230	782.0	20.91
		50 Block 16 QAM	100%	lower	Mid	5230	23230	782.0	20.88

Table 20 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	Low	5205	23205	779.5	22.71
			1	middle	Low	5205	23205	779.5	22.78
			1	upper	Low	5205	23205	779.5	22.82
			1	lower	Mid	5230	23230	782.0	22.87
			1	middle	Mid	5230	23230	782.0	22.80
			1	upper	Mid	5230	23230	782.0	22.85
			1	lower	High	5255	23255	784.5	22.70
			1	middle	High	5255	23255	784.5	22.79
			1	upper	High	5255	23255	784.5	22.75
		12 Block QPSK	50%	lower	Low	5205	23205	779.5	21.75
			50%	middle	Low	5205	23205	779.5	21.82
			50%	upper	Low	5205	23205	779.5	21.79
			50%	lower	Mid	5230	23230	782.0	21.78
			50%	middle	Mid	5230	23230	782.0	21.77
			50%	upper	Mid	5230	23230	782.0	21.76
			50%	lower	High	5255	23255	784.5	21.73
			50%	middle	High	5255	23255	784.5	21.74
			50%	upper	High	5255	23255	784.5	21.87
		25 Blocks QPSK	100%	lower	Low	5205	23205	779.5	21.81
			100%	lower	Mid	5230	23230	782.0	21.75
			100%	lower	High	5255	23255	784.5	21.78
		1 Block 16 QAM	1	lower	Low	5205	23205	779.5	21.88
			1	middle	Low	5205	23205	779.5	21.89
			1	upper	Low	5205	23205	779.5	21.95
			1	lower	Mid	5230	23230	782.0	21.98
			1	middle	Mid	5230	23230	782.0	21.92
			1	upper	Mid	5230	23230	782.0	21.92
			1	lower	High	5255	23255	784.5	22.36
			1	middle	High	5255	23255	784.5	22.38
			1	upper	High	5255	23255	784.5	22.40
		12 Block 16 QAM	50%	lower	Low	5205	23205	779.5	20.88
			50%	middle	Low	5205	23205	779.5	20.91
			50%	upper	Low	5205	23205	779.5	20.92
			50%	lower	Mid	5230	23230	782.0	20.93
			50%	middle	Mid	5230	23230	782.0	20.97
			50%	upper	Mid	5230	23230	782.0	20.88
			50%	lower	High	5255	23255	784.5	20.95
			50%	middle	High	5255	23255	784.5	20.97
			50%	upper	High	5255	23255	784.5	21.03
		25 Blocks 16 QAM	100%	lower	Low	5205	23205	779.5	20.80
			100%	lower	Mid	5230	23230	782.0	20.89
			100%	lower	High	5255	23255	784.5	20.88

Assessments at the Body

Table below presents the data of the body assessment. 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#
1 RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	782.0000	0.191	0.02	0.059	0.078	LOH-AB-190111-14
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	782.0000	0.191	-0.34	0.055	0.078	AM-AB-190210-02
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	782.0000	0.191	-0.02	0.038	0.050	LOH-AB-190111-16
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	782.0000	0.191	0.03	0.037	0.049	LOH-AB-190111-17
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	782.0000	0.191	0.09	0.023	0.030	LOH-AB-190112-01#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	782.0000	0.191	-0.11	0.023	0.031	LOH-AB-190112-02#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	782.0000	0.191	0.23	0.023	0.030	LOH-AB-190112-03#
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	782.0000	0.191	0.04	0.031	0.041	LOH-AB-190112-04#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	782.0000	0.191	0.18	0.024	0.032	LOH-AB-190112-05#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	782.0000	0.191	0.17	0.015	0.020	LOH-AB-190112-06#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	782.0000	0.191	-0.22	0.019	0.026	LOH-AB-190115-12
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	782.0000	0.191	0.04	0.016	0.021	LOH-AB-190113-03
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	782.0000	0.150	0.02	0.047	0.079	LOH-AB-190113-04
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	782.0000	0.150	0.02	0.045	0.075	LOH-AB-190113-05
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	782.0000	0.150	0.00	0.029	0.049	LOH-AB-190113-06
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	782.0000	0.150	-0.19	0.027	0.047	LOH-AB-190113-07
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	782.0000	0.150	0.20	0.019	0.032	LOH-AB-190113-08
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	782.0000	0.150	-0.04	0.022	0.037	LOH-AB-190113-09

Table 21 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	782.0000	0.150	0.01	0.023	0.038	LOH-AB-190113-10
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	782.0000	0.150	0.00	0.023	0.038	LOH-AB-190114-08
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	782.0000	0.150	0.31	0.023	0.038	AM-AB-190113-12
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	782.0000	0.150	-0.36	0.013	0.024	AM-AB-190113-13
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	782.0000	0.150	0.20	0.016	0.027	AM-AB-190113-14
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	782.0000	0.150	0.44	0.013	0.022	AM-AB-190113-15
Assessment of Additional Battery									
AN000304A01	NNTN9089A	PMLN7947A w/ NTN8266B	None	782.0000	0.150	0	0.028	0.049	LOH-AB-190213-06#

Assessments at the Face

Table below presents the data of the face assessment. SAR plot is included in Appendix for the highest configuration

Table 22

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									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	782.0000	0.191	0.04	0.116	0.152	AM-FACE-190127-12
AN000304A01	NNTN9087A	Display side against the phantom	None	782.0000	0.191	0.21	0.038	0.050	AM-FACE-190127-13
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	782.0000	0.150	0.09	0.094	0.157	AM-FACE-190127-14
AN000304A01	NNTN9087A	Display side against the phantom	None	782.0000	0.150	0.04	0.029	0.049	AM-FACE-190127-15
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	782.0000	0.150	-0.06	0.082	0.139	AM-FACE-190127-16

Additional Assessments for ISED Canada

Not applicable as only one channel for LTE Band 13 with bandwidth 10 MHz

4.6 SAR 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 23

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 14	10 MHz 50 Blocks	1 Block QPSK	1	lower	Mid	5330	23330	793.0	22.83
			1	middle	Mid	5330	23330	793.0	22.76
			1	upper	Mid	5330	23330	793.0	22.78
		25 Block QPSK	50%	lower	Mid	5330	23330	793.0	21.89
			50%	middle	Mid	5330	23330	793.0	21.88
			50%	upper	Mid	5330	23330	793.0	21.83
		50 Block QPSK	100%	lower	Mid	5330	23330	793.0	21.81
		1 Block 16QAM	1	lower	Mid	5330	23330	793.0	21.84
			1	middle	Mid	5330	23330	793.0	21.78
			1	upper	Mid	5330	23330	793.0	21.76
		25 Block 16QAM	50%	lower	Mid	5330	23330	793.0	20.89
			50%	middle	Mid	5330	23330	793.0	20.90
			50%	upper	Mid	5330	23330	793.0	20.89
		50 Block 16QAM	100%	lower	Mid	5330	23330	793.0	20.90

Table 23 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 14	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	5305	23305	790.5	22.89
			1	middle	Low	5305	23305	790.5	22.87
			1	upper	Low	5305	23305	790.5	22.87
			1	lower	Mid	5330	23330	793.0	22.95
			1	middle	Mid	5330	23330	793.0	22.85
			1	upper	Mid	5330	23330	793.0	22.86
			1	lower	High	5355	23355	795.5	22.82
			1	middle	High	5355	23355	795.5	22.75
			1	upper	High	5355	23355	795.5	22.77
		12 Block QPSK	50%	lower	Low	5305	23305	790.5	21.85
			50%	middle	Low	5305	23305	790.5	21.89
			50%	upper	Low	5305	23305	790.5	21.85
			50%	lower	Mid	5330	23330	793.0	21.83
			50%	middle	Mid	5330	23330	793.0	21.83
			50%	upper	Mid	5330	23330	793.0	21.79
			50%	lower	High	5355	23355	795.5	21.82
			50%	middle	High	5355	23355	795.5	21.83
			50%	upper	High	5355	23355	795.5	21.76
		25 Blocks QPSK	100%	lower	Low	5305	23305	790.5	21.84
			100%	lower	Mid	5330	23330	793.0	21.78
			100%	lower	High	5355	23355	795.5	21.77
		1 Block 16 QAM	1	lower	Low	5305	23305	790.5	22.07
			1	middle	Low	5305	23305	790.5	21.98
			1	upper	Low	5305	23305	790.5	22.03
			1	lower	Mid	5330	23330	793.0	22.03
			1	middle	Mid	5330	23330	793.0	21.98
			1	upper	Mid	5330	23330	793.0	22.01
			1	lower	High	5355	23355	795.5	22.41
			1	middle	High	5355	23355	795.5	22.34
			1	upper	High	5355	23355	795.5	22.33
		12 Block 16 QAM	50%	lower	Low	5305	23305	790.5	20.99
			50%	middle	Low	5305	23305	790.5	21.02
			50%	upper	Low	5305	23305	790.5	20.99
			50%	lower	Mid	5330	23330	793.0	20.96
			50%	middle	Mid	5330	23330	793.0	20.99
			50%	upper	Mid	5330	23330	793.0	20.96
			50%	lower	High	5355	23355	795.5	20.99
			50%	middle	High	5355	23355	795.5	20.99
			50%	upper	High	5355	23355	795.5	20.96
		25 Blocks 16 QAM	100%	lower	Low	5305	23305	790.5	20.88
			100%	lower	Mid	5330	23330	793.0	20.89
			100%	lower	High	5355	23355	795.5	20.91

Assessments at the Body

Table below presents the data of the body assessment. SAR plot is included in Appendix for the highest configuration

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									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	793.0000	0.192	-0.01	0.073	0.096	LOH-AB-190114-14
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	793.0000	0.192	-0.07	0.074	0.098	LOH-AB-190114-15
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	793.0000	0.192	-0.05	0.052	0.069	LOH-AB-190114-16
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	793.0000	0.192	-0.06	0.047	0.062	LOH-AB-190114-17
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	793.0000	0.192	-0.19	0.033	0.045	AM-AB-190114-18
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	793.0000	0.192	0.20	0.032	0.042	AM-AB-190114-19
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	793.0000	0.192	0.15	0.032	0.042	AM-AB-190114-20
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	793.0000	0.192	0.07	0.034	0.044	AM-AB-190114-21
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	793.0000	0.192	-0.15	0.031	0.042	AM-AB-190114-22
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	793.0000	0.192	-0.40	0.019	0.027	AM-AB-190115-02#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	793.0000	0.192	0.06	0.020	0.026	AM-AB-190115-03#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	793.0000	0.192	0.07	0.020	0.026	AM-AB-190115-04#
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	793.0000	0.155	0.01	0.059	0.096	AM-AB-190115-05#
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	793.0000	0.155	-0.05	0.058	0.095	LOH-AB-190115-07
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	793.0000	0.155	-0.05	0.037	0.061	LOH-AB-190115-09
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	793.0000	0.155	-0.26	0.038	0.065	LOH-AB-190115-10
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	793.0000	0.155	0.24	0.025	0.040	LOH-AB-190115-11

Table 24 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	793.0000	0.155	0.19	0.024	0.039	AM-AB-190115-13
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	793.0000	0.155	-0.20	0.026	0.044	AM-AB-190115-15
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	793.0000	0.155	0.35	0.027	0.044	AM-AB-190115-16
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	793.0000	0.155	-0.36	0.024	0.042	AM-AB-190115-17
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	793.0000	0.155	0.33	0.016	0.026	AM-AB-190115-18
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	793.0000	0.155	0.45	0.013	0.021	AM-AB-190116-01#
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	793.0000	0.155	0.37	0.014	0.023	AM-AB-190116-03#
Assessment of Additional Battery									
AN000304A01	NNTN9089A	PMLN7947A w/ PMLN7965A	None	793.0000	0.192	-0.03	0.049	0.065	LOH-AB-190116-04#

Assessments at the Face

Table below presents the data of the face assessment. SAR plot is included in Appendix for the highest configuration

Table 25

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									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	793.0000	0.192	-0.17	0.137	0.186	LOH-FACE-190128-07
AN000304A01	NNTN9087A	Display side against the phantom	None	793.0000	0.192	0.17	0.048	0.063	AM-FACE-190128-02#
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	793.0000	0.155	-0.02	0.106	0.172	LOH-FACE-190128-04
AN000304A01	NNTN9087A	Display side against the phantom	None	793.0000	0.155	0.09	0.037	0.060	LOH-FACE-190128-05

Table 25 Continued

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#
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	793.0000	0.192	-0.12	0.085	0.114	LOH-FACE-190128-06

Additional Assessments for ISED Canada

Not applicable as only one channel for LTE Band 14 with bandwidth 10 MHz

4.7 SAR assessment for LTE Band 17 (704-716 MHz)**Output Power Data**

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

Table 26

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 17	10 MHz 50 Blocks	1 Block QPSK	1	lower	Low	5110	23780	709.0	22.73
			1	middle	Low	5110	23780	709.0	22.69
			1	upper	Low	5110	23780	709.0	22.67
			1	lower	Mid	5790	23790	710.0	22.73
			1	middle	Mid	5790	23790	710.0	22.66
			1	upper	Mid	5790	23790	710.0	22.64
			1	lower	High	5800	23800	711.0	22.75
			1	middle	High	5800	23800	711.0	22.65
			1	upper	High	5800	23800	711.0	22.69
		25 Block QPSK	50%	lower	Low	5110	23780	709.0	21.80
			50%	middle	Low	5110	23780	709.0	21.80
			50%	upper	Low	5110	23780	709.0	21.72
			50%	lower	Mid	5790	23790	710.0	21.75
			50%	middle	Mid	5790	23790	710.0	21.77
			50%	upper	Mid	5790	23790	710.0	21.68
			50%	lower	High	5800	23800	711.0	21.79
			50%	middle	High	5800	23800	711.0	21.82
			50%	upper	High	5800	23800	711.0	21.74
		50 Blocks QPSK	100%	lower	Low	5110	23780	709.0	21.75
			100%	lower	Mid	5790	23790	710.0	21.78
			100%	lower	High	5800	23800	711.0	21.78
		1 Block 16 QAM	1	lower	Low	5110	23780	709.0	21.94
			1	middle	Low	5110	23780	709.0	21.80
			1	upper	Low	5110	23780	709.0	21.80
			1	lower	Mid	5790	23790	710.0	21.79
			1	middle	Mid	5790	23790	710.0	21.67
			1	upper	Mid	5790	23790	710.0	21.71
			1	lower	High	5800	23800	711.0	22.18
			1	middle	High	5800	23800	711.0	22.08
			1	upper	High	5800	23800	711.0	22.06
		25 Block 16 QAM	50%	lower	Low	5110	23780	709.0	20.94
			50%	middle	Low	5110	23780	709.0	20.95
			50%	upper	Low	5110	23780	709.0	20.92
			50%	lower	Mid	5790	23790	710.0	20.90
			50%	middle	Mid	5790	23790	710.0	20.89
			50%	upper	Mid	5790	23790	710.0	20.81
			50%	lower	High	5800	23800	711.0	20.92
			50%	middle	High	5800	23800	711.0	20.91
			50%	upper	High	5800	23800	711.0	20.87
		50 Blocks 16 QAM	100%	lower	Low	5110	23780	709.0	20.84
			100%	lower	Mid	5790	23790	710.0	20.87
			100%	lower	High	5800	23800	711.0	20.88

Table 26 Continued

Band	Bandwidth	Modulation	RB Size	RB Offset	Channel L-M-H	Downlink Channel	Uplink Channel	Frequency (MHz)	Power (dBm)
Band 17	5 MHz 25 Blocks	1 Block QPSK	1	lower	Low	5755	23755	706.5	22.86
			1	middle	Low	5755	23755	706.5	22.76
			1	upper	Low	5755	23755	706.5	22.75
			1	lower	Mid	5790	23790	710.0	22.87
			1	middle	Mid	5790	23790	710.0	22.76
			1	upper	Mid	5790	23790	710.0	22.73
			1	lower	High	5825	23825	713.5	22.69
			1	middle	High	5825	23825	713.5	22.64
			1	upper	High	5825	23825	713.5	22.62
		12 Block QPSK	50%	lower	Low	5755	23755	706.5	21.80
			50%	middle	Low	5755	23755	706.5	21.83
			50%	upper	Low	5755	23755	706.5	21.77
			50%	lower	Mid	5790	23790	710.0	21.73
			50%	middle	Mid	5790	23790	710.0	21.74
			50%	upper	Mid	5790	23790	710.0	21.72
			50%	lower	High	5825	23825	713.5	21.72
			50%	middle	High	5825	23825	713.5	21.70
			50%	upper	High	5825	23825	713.5	21.67
		25 Blocks QPSK	100%	lower	Low	5755	23755	706.5	21.81
			100%	lower	Mid	5790	23790	710.0	21.77
			100%	lower	High	5825	23825	713.5	21.70
		1 Block 16 QAM	1	lower	Low	5755	23755	706.5	21.95
			1	middle	Low	5755	23755	706.5	21.91
			1	upper	Low	5755	23755	706.5	21.98
			1	lower	Mid	5790	23790	710.0	21.96
			1	middle	Mid	5790	23790	710.0	21.92
			1	upper	Mid	5790	23790	710.0	21.91
			1	lower	High	5825	23825	713.5	22.33
			1	middle	High	5825	23825	713.5	22.26
			1	upper	High	5825	23825	713.5	22.23
		12 Block 16 QAM	50%	lower	Low	5755	23755	706.5	20.94
			50%	middle	Low	5755	23755	706.5	20.92
			50%	upper	Low	5755	23755	706.5	20.92
			50%	lower	Mid	5790	23790	710.0	20.93
			50%	middle	Mid	5790	23790	710.0	20.92
			50%	upper	Mid	5790	23790	710.0	20.86
			50%	lower	High	5825	23825	713.5	20.95
			50%	middle	High	5825	23825	713.5	20.88
			50%	upper	High	5825	23825	713.5	20.90
		25 Blocks 16 QAM	100%	lower	Low	5755	23755	706.5	20.83
			100%	lower	Mid	5790	23790	710.0	20.84
			100%	lower	High	5825	23825	713.5	20.84

Assessments at the Body

Table below presents the data of the body 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									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	711.0000	0.188	-0.31	0.014	0.020	AM-AB-190118-17
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	711.0000	0.188	-0.27	0.012	0.017	AM-AB-190118-19
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	711.0000	0.188	0.03	0.006	0.007	AM-AB-190119-01#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	711.0000	0.188	0.04	0.004	0.006	AM-AB-190119-03#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	711.0000	0.188	-0.23	0.003	0.004	AM-AB-190119-04#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	711.0000	0.188	-0.45	0.004	0.006	AM-AB-190120-03
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	711.0000	0.188	0.21	0.004	0.005	AM-AB-190120-04
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	711.0000	0.188	-0.44	0.008	0.012	AM-AB-190120-05
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	711.0000	0.188	-0.29	0.006	0.009	AM-AB-190120-06
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	711.0000	0.188	-0.15	0.005	0.007	AM-AB-190120-07
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	711.0000	0.188	0.19	0.005	0.006	AM-AB-190120-08
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	711.0000	0.188	-0.23	0.002	0.003	LOH-AB-190120-10
50 % RB									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	711.0000	0.152	0.14	0.008	0.013	LOH-AB-190120-11
AN000304A01	NNTN9087A	PMLN7947A w/ PMLN7965A	None	711.0000	0.152	-0.09	0.008	0.013	LOH-AB-190120-12
AN000304A01	NNTN9087A	PMLN7948A w/ NTN8266B	None	711.0000	0.152	-0.35	0.002	0.004	LOH-AB-190120-14
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN7965A	None	711.0000	0.152	-0.11	0.002	0.003	LOH-AB-190121-01#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5407A	None	711.0000	0.152	0.22	0.001	0.002	LOH-AB-190121-03#
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5408A	None	711.0000	0.152	0.02	0.001	0.002	LOH-AB-190121-04#

Table 27 Continued

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#
50% RB									
AN000304A01	NNTN9087A	PMLN7948A w/ PMLN5409A	None	711.0000	0.152	-0.18	0.002	0.004	AM-AB-190121-07
AN000304A01	NNTN9089A	PMLN7964A w/ NTN8266B	None	711.0000	0.152	-0.40	0.003	0.006	AM-AB-190121-08
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN7965A	None	711.0000	0.152	-0.43	0.004	0.007	AM-AB-190121-09
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5407A	None	711.0000	0.152	-0.17	0.001	0.002	AM-AB-190121-11
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5408A	None	711.0000	0.152	-0.40	0.002	0.003	AM-AB-190121-12
AN000304A01	NNTN9089A	PMLN7964A w/ PMLN5409A	None	711.0000	0.152	0.21	0.002	0.004	AM-AB-190121-13
Assessment of Additional Battery									
AN000304A01	NNTN9089A	PMLN7947A w/ NTN8266B	None	711.0000	0.188	-0.32	0.010	0.014	LOH-AB-190121-14

Assessments at the Face

Table below presents the data of the face assessment.

Table 28

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									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	711.0000	0.188	-0.16	0.113	0.157	LOH-FACE-190128-09
AN000304A01	NNTN9087A	Display side against the phantom	None	711.0000	0.188	0.21	0.0130	0.017	LOH-FACE-190127-08
50% RB									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	711.0000	0.152	-0.05	0.074	0.124	AM-FACE-190127-09
AN000304A01	NNTN9087A	Display side against the phantom	None	711.0000	0.152	0.08	0.009	0.014	AM-FACE-190127-10
Assessment of Additional Battery									
AN000304A01	NNTN9089A	Non-Display side against the phantom	None	711.0000	0.188	-0.03	0.095	0.128	AM-FACE-190127-11

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 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#
LTE Band 17 (Body)									
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	709.0000	0.187	-0.36	0.018	0.026	AM-AB-190131-02#
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	710.0000	0.187	-0.40	0.014	0.021	AM-AB-190131-03#
AN000304A01	NNTN9087A	PMLN7947A w/ NTN8266B	None	711.0000	0.188	-0.31	0.014	0.020	AM-AB-190118-17
LTE Band 17 (Face)									
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	709.0000	0.187	-0.16	0.115	0.160	LOH-FACE-190131-08
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	710.0000	0.187	-0.07	0.111	0.151	LOH-FACE-190131-09
AN000304A01	NNTN9087A	Non-Display side against the phantom	None	711.0000	0.188	-0.16	0.113	0.157	LOH-FACE-190128-09

5.0 Variability Assessment

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