MOTOROLA SOLUTIONS

MS ISO/IEC 17025 TESTING

SAMM No.0826 CERTIFICATE 2518.05

# DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 3 of 4

**Motorola Solutions Inc.**
**EME Test Laboratory**
Motorola Solutions Malaysia Sdn Bhd (Innoplex)
Plot 2A, Medan Bayan Lepas,
Mukim 12 SWD 11900 Bayan Lepas Penang, Malaysia.

**Date of Report:** 11/15/2019
**Report Revision:** B

| | |
|---|---|
| **Responsible Engineer:** | Saw Sun Hock (EME Engineer) |
| **Report Author:** | Saw Sun Hock (EME Engineer) |
| **Test Personnel:** | Zarul, Azrii, Firdaus, Loh, Ammar, Naim, Zakwan, Bala |
| **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<br>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<br>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 Nguk Ing
Digitally signed by Tiong Nguk Ing
Date: 2019.11.15 01:42:52 +08'00'

**Tiong Nguk Ing**
**Deputy Technical Manager (Approved Signatory)**
**Approval Date:** 11/15/2019

**Part 3 of 4**

## 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 | | Probe SN | Measured Tissue Parameters | | Validation | | |
|---|---|---|---|---|---|---|---|---|
| | | | | σ | $\epsilon_r$ | 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 (1 RB) | 7519 | 0.93 | 54.10 | Pass | Pass | Pass |
| 11/27/2018 | Head | | | 0.87 | 41.80 | Pass | Pass | Pass |
| 11/26/2018 | Body | 750 (50% RB) | | 0.93 | 54.10 | Pass | Pass | Pass |
| 11/27/2018 | Head | | | 0.87 | 41.80 | Pass | Pass | Pass |
| 11/27/2018 | Body | 750 (100 % RB) | | 0.93 | 54.10 | Pass | Pass | Pass |
| 11/27/2018 | Head | | | 0.87 | 41.80 | Pass | Pass | Pass |
| 1/25/2019 | Body | 835 (1 RB) | | 1.00 | 52.60 | Pass | Pass | Pass |
| 11/27/2018 | Head | | | 0.94 | 40.70 | Pass | Pass | Pass |
| 11/27/2018 | Body | 835 (50% RB) | | 1.00 | 52.60 | Pass | Pass | Pass |
| 11/27/2018 | Head | | | 0.94 | 40.70 | Pass | Pass | Pass |
| 11/27/2018 | Body | 835 (100 % RB) | | 1.00 | 52.60 | Pass | Pass | Pass |
| 11/27/2018 | Head | | | 0.94 | 40.70 | Pass | Pass | Pass |
| 11/29/2018 | Body | 1800 (1 RB) | | 1.51 | 51.20 | Pass | Pass | Pass |
| 11/29/2018 | Head | | | 1.38 | 40.20 | Pass | Pass | Pass |
| 11/29/2018 | Body | 1800 (50% RB) | | 1.51 | 51.20 | Pass | Pass | Pass |
| 11/29/2018 | Head | | | 1.38 | 40.20 | Pass | Pass | Pass |
| 11/29/2018 | Body | 1800 (100 % RB) | | 1.51 | 51.20 | Pass | Pass | Pass |
| 11/29/2018 | Head | | | 1.38 | 40.20 | Pass | Pass | Pass |
| 11/28/2018 | Body | 1900 (1 RB) | | 1.47 | 52.70 | Pass | Pass | Pass |
| 11/28/2018 | Head | | | 1.35 | 38.20 | Pass | Pass | Pass |
| 11/28/2018 | Body | 1900 (50% RB) | | 1.47 | 52.70 | Pass | Pass | Pass |
| 11/28/2018 | Head | | | 1.35 | 38.20 | Pass | Pass | Pass |
| 11/28/2018 | Body | 1900 (100 % RB) | | 1.47 | 52.70 | Pass | Pass | Pass |
| 11/29/2018 | Head | | | 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 | 40.80 | 2/1/2019 |
| | | | | 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.