

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAA | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.63 | 66.06 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.69 | 65.87 | 16.14 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.14 | 16.16 |      | 130.0 |         |
| 10608-AAA | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.81 | 66.46 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.89 | 66.28 | 16.31 |      | 130.0 |         |
|           |                                                   | Z | 4.62 | 66.47 | 16.30 |      | 130.0 |         |
| 10609-AAA | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.70 | 66.31 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.14 | 16.15 |      | 130.0 |         |
|           |                                                   | Z | 4.52 | 66.31 | 16.13 |      | 130.0 |         |
| 10610-AAA | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.75 | 66.46 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.83 | 66.29 | 16.31 |      | 130.0 |         |
|           |                                                   | Z | 4.57 | 66.47 | 16.29 |      | 130.0 |         |
| 10611-AAA | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.67 | 66.27 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.11 | 16.17 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.27 | 16.14 |      | 130.0 |         |
| 10612-AAA | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.68 | 66.43 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.26 | 16.21 |      | 130.0 |         |
|           |                                                   | Z | 4.47 | 66.40 | 16.18 |      | 130.0 |         |
| 10613-AAA | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.68 | 66.30 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.16 | 16.10 |      | 130.0 |         |
|           |                                                   | Z | 4.47 | 66.22 | 16.03 |      | 130.0 |         |
| 10614-AAA | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.62 | 66.47 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.70 | 66.33 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 66.44 | 16.27 |      | 130.0 |         |
| 10615-AAA | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.67 | 66.12 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.75 | 65.95 | 15.95 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.11 | 15.92 |      | 130.0 |         |
| 10616-AAA | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.28 | 66.50 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.35 | 66.40 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.12 | 66.44 | 16.33 |      | 130.0 |         |
| 10617-AAA | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.35 | 66.70 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.55 | 16.40 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.57 | 16.37 |      | 130.0 |         |
| 10618-AAA | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.24 | 66.70 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.30 | 66.57 | 16.42 |      | 130.0 |         |
|           |                                                   | Z | 5.08 | 66.64 | 16.42 |      | 130.0 |         |
| 10619-AAA | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.25 | 66.50 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.33 | 66.41 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 5.09 | 66.45 | 16.26 |      | 130.0 |         |
| 10620-AAA | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.34 | 66.53 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.46 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.45 | 16.31 |      | 130.0 |         |
| 10621-AAA | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.34 | 66.65 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.41 | 66.55 | 16.51 |      | 130.0 |         |
|           |                                                   | Z | 5.17 | 66.56 | 16.48 |      | 130.0 |         |
| 10622-AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.35 | 66.81 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.71 | 16.59 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.65 | 16.52 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.23 | 66.36 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.30 | 66.25 | 16.24 |      | 130.0 |         |
|           |                                                    | Z | 5.05 | 66.22 | 16.17 |      | 130.0 |         |
| 10624-AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.42 | 66.55 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.50 | 66.45 | 16.40 |      | 130.0 |         |
|           |                                                    | Z | 5.25 | 66.47 | 16.36 |      | 130.0 |         |
| 10625-AAA | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.75 | 67.41 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.89 | 67.51 | 16.98 |      | 130.0 |         |
|           |                                                    | Z | 5.34 | 66.63 | 16.50 |      | 130.0 |         |
| 10626-AAA | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.59 | 66.56 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.64 | 66.46 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.45 | 66.47 | 16.28 |      | 130.0 |         |
| 10627-AAA | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.82 | 67.13 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.88 | 67.03 | 16.55 |      | 130.0 |         |
|           |                                                    | Z | 5.67 | 67.05 | 16.54 |      | 130.0 |         |
| 10628-AAA | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.61 | 66.64 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.68 | 66.59 | 16.27 |      | 130.0 |         |
|           |                                                    | Z | 5.44 | 66.46 | 16.18 |      | 130.0 |         |
| 10629-AAA | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.69 | 66.69 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.78 | 66.69 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.54 | 66.62 | 16.26 |      | 130.0 |         |
| 10630-AAA | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 6.09 | 68.10 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.25 | 68.29 | 17.11 |      | 130.0 |         |
|           |                                                    | Z | 5.78 | 67.54 | 16.72 |      | 130.0 |         |
| 10631-AAA | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.99 | 67.90 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.12 | 67.99 | 17.15 |      | 130.0 |         |
|           |                                                    | Z | 5.75 | 67.56 | 16.92 |      | 130.0 |         |
| 10632-AAA | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.79 | 67.18 | 16.78 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.85 | 67.07 | 16.70 |      | 130.0 |         |
|           |                                                    | Z | 5.67 | 67.21 | 16.76 |      | 130.0 |         |
| 10633-AAA | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.68 | 66.80 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.74 | 66.74 | 16.37 |      | 130.0 |         |
|           |                                                    | Z | 5.48 | 66.57 | 16.27 |      | 130.0 |         |
| 10634-AAA | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.66 | 66.82 | 16.49 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.73 | 66.76 | 16.44 |      | 130.0 |         |
|           |                                                    | Z | 5.50 | 66.72 | 16.40 |      | 130.0 |         |
| 10635-AAA | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.54 | 66.19 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.62 | 66.14 | 15.87 |      | 130.0 |         |
|           |                                                    | Z | 5.36 | 66.00 | 15.77 |      | 130.0 |         |
| 10636-AAB | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.00 | 66.92 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.05 | 66.85 | 16.41 |      | 130.0 |         |
|           |                                                    | Z | 5.88 | 66.82 | 16.36 |      | 130.0 |         |
| 10637-AAB | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.16 | 67.31 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.21 | 67.23 | 16.58 |      | 130.0 |         |
|           |                                                    | Z | 6.00 | 67.12 | 16.50 |      | 130.0 |         |
| 10638-AAB | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.16 | 67.28 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.21 | 67.20 | 16.54 |      | 130.0 |         |
|           |                                                    | Z | 6.02 | 67.18 | 16.51 |      | 130.0 |         |

|           |                                                        |   |       |        |       |      |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10639-AAB | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 6.13  | 67.21  | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.20  | 67.17  | 16.57 |      | 130.0 |         |
|           |                                                        | Z | 5.98  | 67.06  | 16.49 |      | 130.0 |         |
| 10640-AAB | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 6.13  | 67.23  | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.21  | 67.21  | 16.53 |      | 130.0 |         |
|           |                                                        | Z | 5.95  | 66.98  | 16.40 |      | 130.0 |         |
| 10641-AAB | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.19  | 67.17  | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.24  | 67.06  | 16.48 |      | 130.0 |         |
|           |                                                        | Z | 6.04  | 67.04  | 16.44 |      | 130.0 |         |
| 10642-AAB | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.22  | 67.37  | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.28  | 67.33  | 16.77 |      | 130.0 |         |
|           |                                                        | Z | 6.06  | 67.23  | 16.70 |      | 130.0 |         |
| 10643-AAB | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 6.06  | 67.09  | 16.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.12  | 67.02  | 16.52 |      | 130.0 |         |
|           |                                                        | Z | 5.91  | 66.93  | 16.45 |      | 130.0 |         |
| 10644-AAB | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 6.20  | 67.52  | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.31  | 67.59  | 16.83 |      | 130.0 |         |
|           |                                                        | Z | 5.97  | 67.13  | 16.57 |      | 130.0 |         |
| 10645-AAB | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.41  | 67.77  | 16.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.76  | 68.49  | 17.23 |      | 130.0 |         |
|           |                                                        | Z | 6.10  | 67.18  | 16.56 |      | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 32.54 | 128.38 | 44.23 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 33.21 | 124.21 | 42.28 |      | 60.0  |         |
|           |                                                        | Z | 8.58  | 97.27  | 34.21 |      | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 24.86 | 122.50 | 42.74 | 9.30 | 60.0  | ± 9.6 % |
|           |                                                        | Y | 27.83 | 120.75 | 41.46 |      | 60.0  |         |
|           |                                                        | Z | 7.33  | 94.04  | 33.20 |      | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.71  | 63.99  | 11.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.72  | 63.38  | 11.01 |      | 150.0 |         |
|           |                                                        | Z | 0.57  | 62.72  | 9.40  |      | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.64  | 67.29  | 16.91 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.79  | 67.25  | 16.93 |      | 80.0  |         |
|           |                                                        | Z | 3.31  | 66.63  | 16.20 |      | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 4.13  | 66.44  | 16.95 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.30  | 66.53  | 16.99 |      | 80.0  |         |
|           |                                                        | Z | 3.84  | 65.89  | 16.44 |      | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 4.11  | 66.04  | 16.93 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.26  | 66.17  | 16.97 |      | 80.0  |         |
|           |                                                        | Z | 3.86  | 65.50  | 16.46 |      | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 4.17  | 66.02  | 16.96 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.32  | 66.18  | 17.01 |      | 80.0  |         |
|           |                                                        | Z | 3.93  | 65.42  | 16.50 |      | 80.0  |         |

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

## APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

- 1) The network analyzer and probe system was configured and calibrated.
- 2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
- 3) The complex admittance with respect to the probe aperture was measured
- 4) The complex relative permittivity  $\epsilon'$  can be calculated from the below equation (Pournaropoulos and Misra):

$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

where  $Y$  is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively,  $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$ ,  $\omega$  is the angular frequency, and  $j = \sqrt{-1}$ .

**Table D-I**  
**Composition of the Tissue Equivalent Matter**

| Frequency (MHz)           | 750          | 750        | 835   | 835   | 1750 | 1750 | 1900  | 1900  | 2450       | 2450 | 5200-5800  | 5200-5800 |
|---------------------------|--------------|------------|-------|-------|------|------|-------|-------|------------|------|------------|-----------|
| Tissue                    | Head         | Body       | Head  | Body  | Head | Body | Head  | Body  | Head       | Body | Head       | Body      |
| Ingredients (% by weight) |              |            |       |       |      |      |       |       |            |      |            |           |
| Bactericide               | See page 2-3 | See page 2 | 0.1   | 0.1   |      |      |       |       | See page 4 |      | See page 5 |           |
| DGBE                      |              |            |       |       | 47   | 31   | 44.92 | 29.44 |            | 26.7 |            |           |
| HEC                       |              |            | 1     | 1     |      |      |       |       |            |      |            |           |
| NaCl                      |              |            | 1.45  | 0.94  | 0.4  | 0.2  | 0.18  | 0.39  |            | 0.1  |            |           |
| Sucrose                   |              |            | 57    | 44.9  |      |      |       |       |            |      |            |           |
| Polysorbate (Tween) 80    |              |            |       |       |      |      |       |       |            |      |            | 20        |
| Water                     |              |            | 40.45 | 53.06 | 52.6 | 68.8 | 54.9  | 70.17 |            | 73.2 |            | 80        |

FCC ID: A3LSMJ337P



SAR EVALUATION REPORT



Approved by:  
Quality Manager

Test Dates:  
03/22/18 - 04/10/18

DUT Type:  
Portable Handset

APPENDIX D:  
Page 1 of 5

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                                                                  |                                                                                                                                                     |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| H <sub>2</sub> O                                                 | Water, 35 – 58%                                                                                                                                     |
| Sucrose                                                          | Sugar, white, refined, 40 – 60%                                                                                                                     |
| NaCl                                                             | Sodium Chloride, 0 – 6%                                                                                                                             |
| Hydroxyethyl-cellulose                                           | Medium Viscosity (CAS# 9004-62-0), <0.3%                                                                                                            |
| Preventol-D7                                                     | Preservative: aqueous preparation, (CAS# 55965-84-9), containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone, 0.1 – 0.7% |
| Relevant for safety; Refer to the respective Safety Data Sheet*. |                                                                                                                                                     |

**Figure D-1**

### Composition of 750 MHz Head and Body Tissue Equivalent Matter

**Note:** 750MHz liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Schmid & Partner Engineering AG

**s p e a g**

Zeughausstrasse 43, 8004 Zurich, Switzerland  
Phone +41 44 245 9700, Fax +41 44 245 9779  
info@speag.com, http://www.speag.com

#### Measurement Certificate / Material Test

|              |                                          |
|--------------|------------------------------------------|
| Item Name    | Body Tissue Simulating Liquid (MSL750V2) |
| Product No.  | SL AAM 075 AA (Batch: 170608-1)          |
| Manufacturer | SPEAG                                    |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

Validation results were within  $\pm 2.5\%$  towards the target values of Methanol.

#### Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

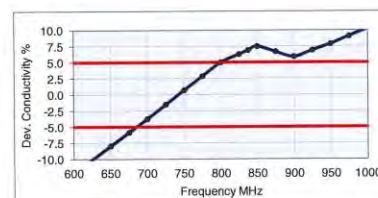
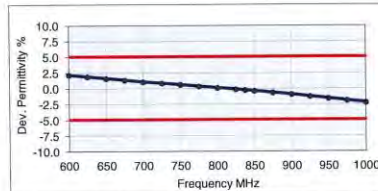
#### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 20-Jun-17                                                   |
| Operator        | CL                                                          |

#### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 1.212 g/cm <sup>3</sup> |
| TSL Heat-capacity | 3.006 kJ/(kg*K)         |

| f [MHz] | Measured |       |       | Target |       | Diff.to Target [%] |         |
|---------|----------|-------|-------|--------|-------|--------------------|---------|
|         | e'       | e''   | sigma | eps    | sigma | Δ-eps              | Δ-sigma |
| 600     | 57.3     | 25.02 | 0.84  | 56.1   | 0.95  | 2.2                | -12.2   |
| 625     | 57.1     | 24.67 | 0.86  | 56.0   | 0.95  | 1.9                | -10.1   |
| 650     | 56.8     | 24.32 | 0.88  | 55.9   | 0.96  | 1.6                | -8.0    |
| 675     | 56.6     | 24.02 | 0.90  | 55.8   | 0.96  | 1.3                | -5.8    |
| 700     | 56.3     | 23.71 | 0.92  | 55.7   | 0.96  | 1.1                | -3.8    |
| 725     | 56.1     | 23.48 | 0.95  | 55.6   | 0.96  | 0.8                | -1.5    |
| 750     | 55.9     | 23.25 | 0.97  | 55.5   | 0.96  | 0.6                | 0.7     |
| 775     | 55.6     | 23.04 | 0.99  | 55.4   | 0.97  | 0.3                | 2.9     |
| 800     | 55.4     | 22.82 | 1.02  | 55.3   | 0.97  | 0.1                | 5.0     |
| 825     | 55.2     | 22.65 | 1.04  | 55.2   | 0.98  | -0.1               | 6.3     |
| 838     | 55.1     | 22.56 | 1.05  | 55.2   | 0.98  | -0.3               | 6.9     |
| 850     | 54.9     | 22.47 | 1.06  | 55.2   | 0.99  | -0.4               | 7.5     |
| 875     | 54.7     | 22.34 | 1.09  | 55.1   | 1.02  | -0.7               | 6.7     |
| 900     | 54.5     | 22.21 | 1.11  | 55.0   | 1.05  | -0.9               | 5.9     |
| 925     | 54.3     | 22.08 | 1.14  | 55.0   | 1.06  | -1.3               | 6.9     |
| 950     | 54.1     | 21.95 | 1.16  | 54.9   | 1.08  | -1.6               | 7.9     |
| 975     | 53.8     | 21.86 | 1.19  | 54.9   | 1.09  | -1.9               | 9.1     |
| 1000    | 53.6     | 21.76 | 1.21  | 54.8   | 1.10  | -2.2               | 10.2    |



**Figure D-2**

### 750MHz Body Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMJ337P                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>03/22/18 - 04/10/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 2 of 5      |

**Measurement Certificate / Material Test**

Item Name **Head Tissue Simulating Liquid (HSL750V2)**  
 Product No. SL AAH 075 AA (Batch: 170612-4)  
 Manufacturer SPEAG

**Measurement Method**

TSL dielectric parameters measured using calibrated DAK probe.

**Setup Validation**

Validation results were within  $\pm 2.5\%$  towards the target values of Methanol.

**Target Parameters**

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

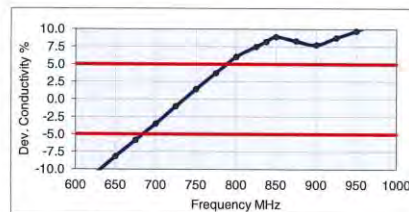
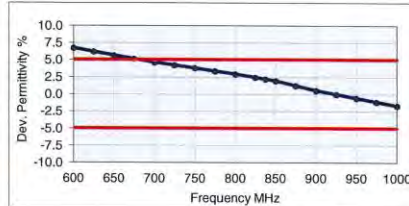
**Test Condition**

Ambient Environment temperatur ( $22 \pm 3^\circ\text{C}$  and humidity  $< 70\%$ .)  
 TSL Temperature  $22^\circ\text{C}$   
 Test Date 20-Jun-17  
 Operator CL

**Additional Information**

TSL Density  $1.284 \text{ g/cm}^3$   
 TSL Heat-capacity  $2.701 \text{ kJ/(kg}^\circ\text{K)}$

|         | Measured |       |       | Target |       | Diff.to Target [%]  |                       |
|---------|----------|-------|-------|--------|-------|---------------------|-----------------------|
| f [MHz] | e'       | e''   | sigma | eps    | sigma | $\Delta\text{-eps}$ | $\Delta\text{-sigma}$ |
| 600     | 45.6     | 22.97 | 0.77  | 42.7   | 0.88  | 6.7                 | -13.1                 |
| 625     | 45.2     | 22.73 | 0.79  | 42.6   | 0.88  | 6.2                 | -10.6                 |
| 650     | 44.9     | 22.49 | 0.81  | 42.5   | 0.89  | 5.6                 | -8.2                  |
| 675     | 44.5     | 22.27 | 0.84  | 42.3   | 0.89  | 5.1                 | -5.8                  |
| 700     | 44.2     | 22.05 | 0.86  | 42.2   | 0.89  | 4.6                 | -3.5                  |
| 725     | 43.8     | 21.88 | 0.88  | 42.1   | 0.89  | 4.2                 | -1.0                  |
| 750     | 43.5     | 21.72 | 0.91  | 41.9   | 0.89  | 3.8                 | 1.4                   |
| 775     | 43.2     | 21.55 | 0.93  | 41.8   | 0.90  | 3.4                 | 3.7                   |
| 800     | 42.9     | 21.38 | 0.95  | 41.7   | 0.90  | 2.9                 | 6.0                   |
| 825     | 42.6     | 21.24 | 0.97  | 41.6   | 0.91  | 2.4                 | 7.5                   |
| 838     | 42.5     | 21.17 | 0.99  | 41.5   | 0.91  | 2.2                 | 8.2                   |
| 850     | 42.3     | 21.09 | 1.00  | 41.5   | 0.92  | 2.0                 | 8.9                   |
| 875     | 42.0     | 20.98 | 1.02  | 41.5   | 0.94  | 1.2                 | 8.3                   |
| 900     | 41.7     | 20.87 | 1.05  | 41.5   | 0.97  | 0.5                 | 7.7                   |
| 925     | 41.5     | 20.76 | 1.07  | 41.5   | 0.98  | 0.0                 | 8.7                   |
| 950     | 41.2     | 20.64 | 1.09  | 41.4   | 0.99  | -0.6                | 9.7                   |
| 975     | 40.9     | 20.55 | 1.11  | 41.4   | 1.00  | -1.1                | 10.9                  |
| 1000    | 40.6     | 20.46 | 1.14  | 41.3   | 1.01  | -1.7                | 12.1                  |



**Figure D-3**  
**750MHz Head Tissue Equivalent Matter**

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMJ337P                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>03/22/18 - 04/10/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 3 of 5      |

### 3 Composition / Information on ingredients

The item is composed of the following ingredients:

|                      |              |                                     |
|----------------------|--------------|-------------------------------------|
| Water                | 50 – 73 %    |                                     |
| Non-ionic detergents | 25 – 50 %    | polyoxyethylenesorbitan monolaurate |
| NaCl                 | 0 – 2 %      |                                     |
| Preservative         | 0.05 – 0.1 % | Preventol-D7                        |

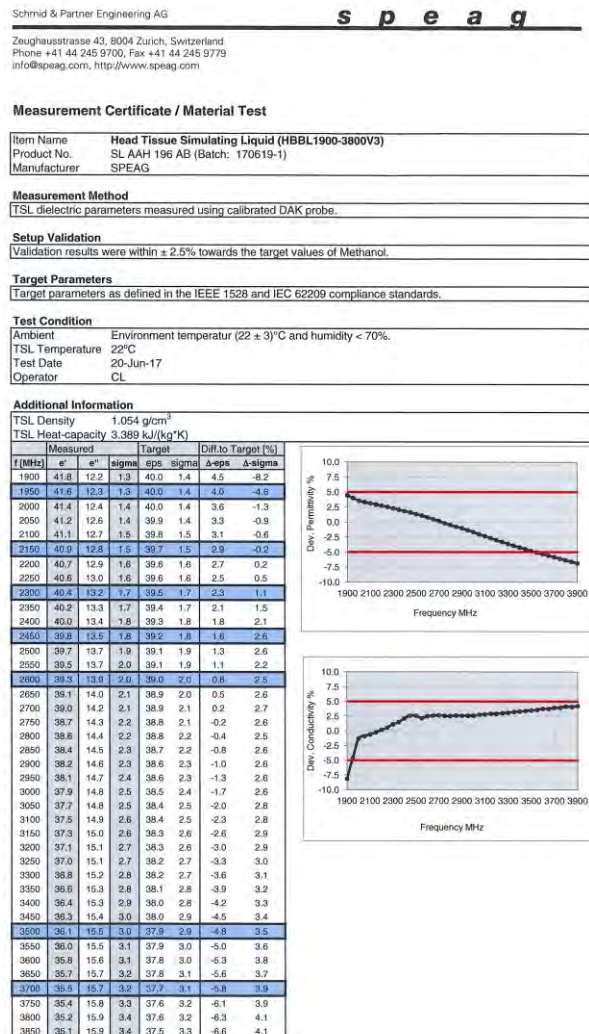
Safety relevant ingredients:

|                    |         |                                                                                                        |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|
| CAS-No. 55965-84-9 | < 0.1 % | aqueous preparation, containing 5-chloro-2-methyl-3(2H)-isothiazolone and 2-methyl-3(2H)-isothiazolone |
| CAS-No. 9005-64-5  | < 50 %  | polyoxyethylenesorbitan monolaurate                                                                    |

According to international guidelines, the product is not a dangerous mixture and therefore not required to be marked by symbols.

**Figure D-4**  
**Composition of 2.4 GHz Head Tissue Equivalent Matter**

**Note:** 2.4 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.



**Figure D-5**  
**2.4 GHz Head Tissue Equivalent Matter**

|                                    |                                                                                                                                   |                       |                                                                                       |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMJ337P                 |  <b>PCTEST</b><br>Engineering Laboratory, Inc. | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>03/22/18 - 04/10/18 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                       | APPENDIX D:<br>Page 4 of 5      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

|             |          |
|-------------|----------|
| Water       | 50 – 65% |
| Mineral oil | 10 – 30% |
| Emulsifiers | 8 – 25%  |
| Sodium salt | 0 – 1.5% |

Figure D-6

### Composition of 5 GHz Head Tissue Equivalent Matter

**Note:** 5GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

Schmid & Partner Engineering AG

**s p e a g**

Zeughausstrasse 43, 8004 Zurich, Switzerland  
Phone +41 44 245 9700, Fax +41 44 245 9779  
info@speg.com, http://www.speg.com

#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Head Tissue Simulating Liquid (HBBL3500-5900V5) |
| Product No.  | SL AAH 502 AG (Batch: 170613-1)                 |
| Manufacturer | SPEAG                                           |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

Validation results were within  $\pm 2.5\%$  towards the target values of Methanol.

#### Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

#### Test Condition

|                 |                                                                            |
|-----------------|----------------------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3^\circ\text{C}$ and humidity $< 70\%$ ). |
| TSL Temperature | $22^\circ\text{C}$                                                         |
| Test Date       | 20-Jun-17                                                                  |
| Operator        | CL                                                                         |

#### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 0.985 g/cm <sup>3</sup> |
| TSL Heat-capacity | 3.383 kJ/(kg*K)         |

| f [MHz] | Measured    |              |                     | Target      |              |                     | Diff to Target [%] |                    |                           |
|---------|-------------|--------------|---------------------|-------------|--------------|---------------------|--------------------|--------------------|---------------------------|
|         | $\epsilon'$ | $\epsilon''$ | $\sigma_{\epsilon}$ | $\epsilon'$ | $\epsilon''$ | $\sigma_{\epsilon}$ | $\Delta\epsilon'$  | $\Delta\epsilon''$ | $\Delta\sigma_{\epsilon}$ |
| 3400    | 38.6        | 15.03        | 2.84                | 38.0        | 2.91         | 1.5                 | 1.1                |                    |                           |
| 3500    | 38.5        | 15.00        | 2.92                | 37.9        | 2.91         | 1.5                 | 0.3                |                    |                           |
| 3600    | 38.3        | 14.98        | 3.00                | 37.8        | 3.02         | 1.5                 | -0.5               |                    |                           |
| 3700    | 38.2        | 14.96        | 3.08                | 37.7        | 3.12         | 1.3                 | -1.2               |                    |                           |
| 3800    | 38.1        | 14.96        | 3.16                | 37.6        | 3.22         | 1.4                 | -1.9               |                    |                           |
| 3900    | 38.0        | 14.95        | 3.24                | 37.5        | 3.32         | 1.4                 | -2.5               |                    |                           |
| 4000    | 37.9        | 14.95        | 3.33                | 37.4        | 3.43         | 1.5                 | -2.8               |                    |                           |
| 4100    | 37.8        | 14.96        | 3.41                | 37.2        | 3.53         | 1.5                 | -3.3               |                    |                           |
| 4200    | 37.6        | 15.00        | 3.50                | 37.1        | 3.63         | 1.3                 | -3.6               |                    |                           |
| 4300    | 37.5        | 15.05        | 3.60                | 37.0        | 3.73         | 1.3                 | -3.5               |                    |                           |
| 4400    | 37.4        | 15.11        | 3.70                | 36.9        | 3.84         | 1.4                 | -3.5               |                    |                           |
| 4500    | 37.2        | 15.18        | 3.80                | 36.8        | 3.94         | 1.1                 | -3.5               |                    |                           |
| 4600    | 37.1        | 15.24        | 3.90                | 36.7        | 4.04         | 1.2                 | -3.5               |                    |                           |
| 4700    | 37.0        | 15.29        | 4.00                | 36.6        | 4.14         | 1.2                 | -3.4               |                    |                           |
| 4800    | 36.8        | 15.35        | 4.10                | 36.4        | 4.25         | 1.0                 | -3.4               |                    |                           |
| 4900    | 36.7        | 15.38        | 4.19                | 36.3        | 4.35         | 1.0                 | -3.6               |                    |                           |
| 5000    | 36.6        | 15.39        | 4.24                | 36.3        | 4.40         | 0.9                 | -3.6               |                    |                           |
| 5100    | 36.5        | 15.43        | 4.34                | 36.2        | 4.50         | 0.9                 | -3.6               |                    |                           |
| 5200    | 36.4        | 15.46        | 4.39                | 36.1        | 4.55         | 0.8                 | -3.6               |                    |                           |
| 5300    | 36.3        | 15.48        | 4.43                | 36.0        | 4.60         | 0.7                 | -3.8               |                    |                           |
| 5400    | 36.2        | 15.50        | 4.48                | 36.0        | 4.66         | 0.6                 | -3.8               |                    |                           |
| 5500    | 36.1        | 15.53        | 4.54                | 35.9        | 4.71         | 0.5                 | -3.5               |                    |                           |
| 5600    | 36.1        | 15.55        | 4.58                | 35.9        | 4.76         | 0.6                 | -3.7               |                    |                           |
| 5700    | 36.0        | 15.56        | 4.63                | 35.8        | 4.81         | 0.5                 | -3.7               |                    |                           |
| 5800    | 35.9        | 15.57        | 4.68                | 35.8        | 4.86         | 0.4                 | -3.7               |                    |                           |
| 5900    | 35.9        | 15.59        | 4.73                | 35.7        | 4.91         | 0.6                 | -3.7               |                    |                           |
| 5900    | 35.8        | 15.61        | 4.78                | 35.6        | 4.96         | 0.4                 | -3.7               |                    |                           |
| 5950    | 35.7        | 15.65        | 4.83                | 35.6        | 5.01         | 0.3                 | -3.7               |                    |                           |
| 5990    | 35.6        | 15.66        | 4.88                | 35.5        | 5.07         | 0.2                 | -3.7               |                    |                           |
| 5995    | 35.6        | 15.70        | 4.93                | 35.5        | 5.12         | 0.4                 | -3.6               |                    |                           |
| 5700    | 35.5        | 15.72        | 4.98                | 35.4        | 5.17         | 0.2                 | -3.6               |                    |                           |
| 5750    | 35.4        | 15.76        | 5.04                | 35.4        | 5.22         | 0.1                 | -3.4               |                    |                           |
| 5800    | 35.4        | 15.78        | 5.09                | 35.3        | 5.27         | 0.3                 | -3.4               |                    |                           |
| 5850    | 35.3        | 15.81        | 5.14                | 35.3        | 5.34         | 0.0                 | -3.7               |                    |                           |
| 5900    | 35.3        | 15.82        | 5.19                | 35.3        | 5.40         | 0.0                 | -3.9               |                    |                           |

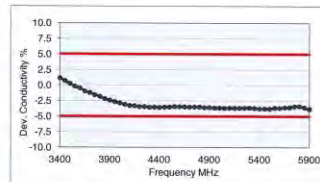
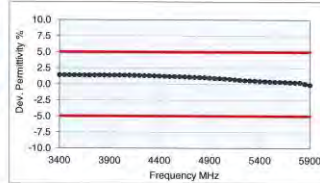


Figure D-7

### 5GHz Head Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMJ337P                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>03/22/18 - 04/10/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 5 of 5      |

## APPENDIX E: SAR SYSTEM VALIDATION

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

**Table E-1**  
**SAR System Validation Summary**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT |      | COND. | PERM.  | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|------|-------|--------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  |      | (σ)   | (εr)   | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| H            | 750         | 8/30/2017  | 7410     | EX3DV4     | 750              | Head | 0.911 | 43.081 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| E            | 835         | 3/5/2018   | 3213     | ES3DV3     | 835              | Head | 0.925 | 43.335 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| H            | 1750        | 8/30/2017  | 7410     | EX3DV4     | 1750             | Head | 1.395 | 38.864 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| G            | 1900        | 8/31/2017  | 3332     | ES3DV3     | 1900             | Head | 1.457 | 40.398 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| H            | 1900        | 9/5/2017   | 7410     | EX3DV4     | 1900             | Head | 1.446 | 40.104 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| G            | 2450        | 10/16/2017 | 3332     | ES3DV3     | 2450             | Head | 1.880 | 38.615 | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| G            | 2600        | 10/16/2017 | 3332     | ES3DV3     | 2600             | Head | 2.051 | 38.039 | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| H            | 5250        | 1/31/2018  | 3589     | EX3DV4     | 5250             | Head | 4.516 | 36.066 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| H            | 5600        | 1/31/2018  | 3589     | EX3DV4     | 5600             | Head | 4.869 | 35.597 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| H            | 5750        | 1/31/2018  | 3589     | EX3DV4     | 5750             | Head | 5.112 | 35.351 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| I            | 750         | 3/6/2018   | 3287     | ES3DV3     | 750              | Body | 0.951 | 56.970 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| E            | 835         | 3/16/2018  | 3213     | ES3DV3     | 835              | Body | 0.968 | 53.713 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| K            | 1750        | 5/1/2017   | 7406     | EX3DV4     | 1750             | Body | 1.514 | 51.685 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| H            | 1750        | 8/30/2017  | 7410     | EX3DV4     | 1750             | Body | 1.532 | 51.024 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| J            | 1900        | 3/9/2018   | 3914     | EX3DV4     | 1900             | Body | 1.533 | 53.731 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| K            | 2450        | 5/3/2017   | 7406     | EX3DV4     | 2450             | Body | 1.995 | 50.521 | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| G            | 2600        | 10/10/2017 | 3332     | ES3DV3     | 2600             | Body | 2.253 | 50.376 | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| K            | 2600        | 5/3/2017   | 7406     | EX3DV4     | 2600             | Body | 2.203 | 49.895 | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| D            | 5250        | 10/24/2017 | 7308     | EX3DV4     | 5250             | Body | 5.405 | 48.529 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5600        | 10/24/2017 | 7308     | EX3DV4     | 5600             | Body | 5.910 | 47.818 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5750        | 10/24/2017 | 7308     | EX3DV4     | 5750             | Body | 6.135 | 47.546 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMJ337P                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>03/22/18 - 04/10/18 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX E:<br>Page 1 of 1      |

## APPENDIX G: POWER REDUCTION VERIFICATION

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

### 1.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

### 1.2 Distance Verification Procedure

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02 and FCC Guidance. Each applicable test position was evaluated. The distances were confirmed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Steps 1 and 2 were repeated for low, mid, and high bands, as appropriate (see note below Table 1-2 for more details).
4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

|                                        |                                                                                                                                                                                                 |                                 |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMJ337P                     |  SAR EVALUATION REPORT  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>03/22/2018 – 04/10/2018 | DUT Type:<br>Portable Handset                                                                                                                                                                   | APPENDIX G:<br>Page 1 of 3      |

## 1.3 Main Antenna Verification Summary

**Table 1-1**  
**Power Measurement Verification for Main Antenna**

| Mechanism(s)                 | Mode/Band      | Conducted Power (dBm) |                        |                        |
|------------------------------|----------------|-----------------------|------------------------|------------------------|
|                              |                | Un-triggered (Max)    | Mechanism #1 (Reduced) | Mechanism #2 (Reduced) |
| Held-to-Ear                  | CDMA/ EVDO BC0 | 24.44                 | 24.15                  |                        |
| Held-to-Ear                  | CDMA/EVDO BC10 | 24.46                 | 24.14                  |                        |
| Held-to-Ear                  | CDMA/EVDO BC1  | 24.41                 | 22.85                  |                        |
| Held-to-Ear                  | GSM/GPRS 1900  | 29.26                 | 27.73                  |                        |
| Held-to-Ear                  | UMTS B2        | 22.75                 | 21.66                  |                        |
| Held-to-Ear                  | LTE B25        | 23.69                 | 23.14                  |                        |
| Held-to-Ear                  | LTE B2         | 23.74                 | 23.25                  |                        |
| Held-to-Ear                  | LTE B4         | 23.41                 | 22.89                  |                        |
| Held-to-Ear                  | LTE B41 PC2    | 26.38                 | 23.34                  |                        |
| Hotspot On                   | CDMA/ EVDO BC0 | 24.45                 | 24.12                  |                        |
| Hotspot On                   | CDMA/EVDO BC10 | 24.47                 | 24.13                  |                        |
| Hotspot On                   | CDMA/EVDO BC1  | 24.42                 | 22.78                  |                        |
| Hotspot On                   | GSM/GPRS 1900  | 29.18                 | 27.68                  |                        |
| Hotspot On                   | UMTS B2        | 22.74                 | 21.67                  |                        |
| Hotspot On                   | LTE B25        | 23.67                 | 23.09                  |                        |
| Hotspot On                   | LTE B2         | 23.74                 | 23.11                  |                        |
| Hotspot On                   | LTE B4         | 23.4                  | 22.9                   |                        |
| Hotspot On                   | LTE B41 PC2    | 26.43                 | 23.37                  |                        |
| Hotspot On, then Held-to-Ear | CDMA/ EVDO BC0 | 24.44                 | 24.1                   | 24.02                  |
| Hotspot On, then Held-to-Ear | CDMA/EVDO BC10 | 24.43                 | 24.09                  | 23.96                  |
| Hotspot On, then Held-to-Ear | CDMA/EVDO BC1  | 24.4                  | 22.79                  | 22.67                  |
| Hotspot On, then Held-to-Ear | GSM/GPRS 1900  | 29.14                 | 27.7                   | 27.69                  |
| Hotspot On, then Held-to-Ear | UMTS B2        | 22.71                 | 21.65                  | 21.63                  |
| Hotspot On, then Held-to-Ear | LTE B25        | 23.7                  | 23.11                  | 23.22                  |
| Hotspot On, then Held-to-Ear | LTE B2         | 23.71                 | 23.24                  | 23.26                  |
| Hotspot On, then Held-to-Ear | LTE B4         | 23.43                 | 22.92                  | 22.83                  |
| Hotspot On, then Held-to-Ear | LTE B41 PC2    | 26.45                 | 23.19                  | 23.24                  |
| Held-to-Ear, then Hotspot On | CDMA/ EVDO BC0 | 24.43                 | 24.16                  | 24.05                  |
| Held-to-Ear, then Hotspot On | CDMA/EVDO BC10 | 24.44                 | 24.21                  | 24.14                  |
| Held-to-Ear, then Hotspot On | CDMA/EVDO BC1  | 24.39                 | 22.53                  | 22.41                  |
| Held-to-Ear, then Hotspot On | GSM/GPRS 1900  | 29.13                 | 27.65                  | 27.68                  |
| Held-to-Ear, then Hotspot On | UMTS B2        | 22.73                 | 21.63                  | 21.62                  |
| Held-to-Ear, then Hotspot On | LTE B25        | 23.68                 | 23.08                  | 23.11                  |
| Held-to-Ear, then Hotspot On | LTE B2         | 23.72                 | 23.27                  | 23.25                  |
| Held-to-Ear, then Hotspot On | LTE B4         | 23.36                 | 22.95                  | 22.91                  |
| Held-to-Ear, then Hotspot On | LTE B41 PC2    | 26.41                 | 23.22                  | 23.27                  |

|                                               |                                                                                                                                                                                                        |                                        |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> A3LSMJ337P                     |  <b>SAR EVALUATION REPORT</b>  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>03/22/2018 – 04/10/2018 | <b>DUT Type:</b><br>Portable Handset                                                                                                                                                                   | <b>APPENDIX G:</b><br>Page 2 of 3      |

**Table 1-2**  
**Distance Measurement Verification for Main Antenna**

| Mechanism(s) | Test Condition     | Band | Distance Measurements (mm) |             | Minimum Distance per Manufacturer (mm) |
|--------------|--------------------|------|----------------------------|-------------|----------------------------------------|
|              |                    |      | Moving Toward              | Moving Away |                                        |
| Held-to-Ear  | Head - Right Cheek | Low  | 50                         | 71          | 50                                     |
| Held-to-Ear  | Head - Right Cheek | Mid  | 50                         | 73          |                                        |
| Held-to-Ear  | Head - Right Cheek | High | 51                         | 73          |                                        |
| Held-to-Ear  | Head - Left Cheek  | Low  | 52                         | 73          | 50                                     |
| Held-to-Ear  | Head - Left Cheek  | Mid  | 51                         | 72          |                                        |
| Held-to-Ear  | Head - Left Cheek  | High | 53                         | 73          |                                        |

\*Note: Low band refers to: CDMA BC0/10. Mid band refers to: CDMA BC1, GSM 1900, UMTS B2, LTE B2/4/25. High Band refers to: 41 PC2.

**Table 1-3**  
**Power Measurement Verification WIFI**

| Mechanism(s) | Mode/Band                | Conducted Power (dBm) |                        |
|--------------|--------------------------|-----------------------|------------------------|
|              |                          | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Held-to-Ear  | 802.11b                  | 18.25                 | 15.29                  |
| Held-to-Ear  | 802.11a                  | 15.28                 | 9.53                   |
| Held-to-Ear  | 802.11n (5GHz, 20MHz BW) | 15.47                 | 10.32                  |
| Held-to-Ear  | 802.11n (5GHz, 40MHz BW) | 14.62                 | 10.56                  |

**Table 1-4**  
**Distance Measurement Verification for WIFI**

| Mechanism(s) | Test Condition     | Band   | Distance Measurements (mm) |             | Minimum Distance per Manufacturer (mm) |
|--------------|--------------------|--------|----------------------------|-------------|----------------------------------------|
|              |                    |        | Moving Toward              | Moving Away |                                        |
| Held-to-Ear  | Head - Right Cheek | 2.4GHz | 50                         | 67          | 50                                     |
| Held-to-Ear  | Head - Right Cheek | 5GHz   | 50                         | 68          |                                        |
| Held-to-Ear  | Head - Left Cheek  | 2.4GHz | 50                         | 66          | 50                                     |
| Held-to-Ear  | Head - Left Cheek  | 5GHz   | 51                         | 68          |                                        |

|                                               |                                                                                                                                                                                                        |                                        |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> A3LSMJ337P                     |  <b>SAR EVALUATION REPORT</b>  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>03/22/2018 – 04/10/2018 | <b>DUT Type:</b><br>Portable Handset                                                                                                                                                                   | <b>APPENDIX G:</b><br>Page 3 of 3      |