

Plot 7-127. Antenna C EIRP Density Plot ( 50 MHz 1CC + 100 MHz 4CC BW QPSK Mid Channel)


Plot 7-128. Antenna C EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 2 C C ~ + ~} 100 \mathrm{MHz}$ 4CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | snmsunf | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 87 of 319 |



Plot 7-129. Antenna C EIRP Density Plot ( 50 MHz 1CC + $100 \mathrm{MHz} 5 \mathrm{5CC}$ BW QPSK Mid Channel)


Plot 7-130. Antenna C EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 2 C C ~ + ~} 100 \mathrm{MHz} 5 \mathrm{5CC}$ BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsung | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
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Plot 7-131. Antenna C EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 1 C C ~ + ~} 100 \mathrm{MHz}$ 6CC BW QPSK Mid Channel)


Plot 7-132. Antenna C EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 2 C C ~ + ~} 100 \mathrm{MHz}$ 6CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNA | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 89 of 319 |

### 7.3.4 Antenna D EIRP Density

| Antenna | Bandwidth | Configuration | Chan. | Frequency | Modulation | Horn Angle | Analyzer Level | Average e.i.r.p. PSD | Scaling factor | Average e.i.r.p. PSD | PSD Limit | Margin |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  | [GHz] |  | [degrees] | [dBm] | [dBm] | [dB] | [dBm/100MHz] | [dBm/100MHz] | [dB/100MHz] |
| D | 50 | 1 CC | Low | 27.550 | QPSK | 45.0 | -14.05 | 45.35 | 3.01 | 48.36 | 75.00 | -29.65 |
|  | 50 |  | Low | 27.550 | 16QAM | 45.0 | -14.07 | 45.34 | 3.01 | 48.35 | 75.00 | -29.66 |
|  | 50 |  | Low | 27.550 | 64QAM | 45.0 | -14.08 | 45.32 | 3.01 | 48.33 | 75.00 | -29.68 |
|  | 50 | 2CC | Low | 27.550 | QPSK | 45.0 | -13.85 | 45.55 | 3.01 | 48.56 | 75.00 | -29.45 |
|  | 50 |  | Low | 27.550 | 16QAM | 45.0 | -13.88 | 45.52 | 3.01 | 48.53 | 75.00 | -29.48 |
|  | 50 |  | Low | 27.550 | 64QAM | 45.0 | -13.93 | 45.47 | 3.01 | 48.48 | 75.00 | -29.53 |
|  | 50 | 1 CC | Mid | 27.925 | QPSK | 45.0 | -14.25 | 45.24 | 3.01 | 48.25 | 75.00 | -29.76 |
|  | 50 |  | Mid | 27.925 | 16QAM | 45.0 | -14.33 | 45.16 | 3.01 | 48.17 | 75.00 | -29.84 |
|  | 50 |  | Mid | 27.925 | 64QAM | 45.0 | -14.36 | 45.12 | 3.01 | 48.13 | 75.00 | -29.88 |
|  | 50 | 2CC | Mid | 27.925 | QPSK | 45.0 | -14.21 | 45.27 | 3.01 | 48.28 | 75.00 | -29.73 |
|  | 50 |  | Mid | 27.925 | 16QAM | 45.0 | -14.24 | 45.24 | 3.01 | 48.25 | 75.00 | -29.76 |
|  | 50 |  | Mid | 27.925 | 64QAM | 45.0 | -14.30 | 45.18 | 3.01 | 48.19 | 75.00 | -29.82 |
|  | 50 | 1 CC | High | 28.300 | QPSK | 45.0 | -14.15 | 45.66 | 3.01 | 48.67 | 75.00 | -29.34 |
|  | 50 |  | High | 28.300 | 16QAM | 45.0 | -14.21 | 45.60 | 3.01 | 48.61 | 75.00 | -29.40 |
|  | 50 |  | High | 28.300 | 64QAM | 45.0 | -14.17 | 45.64 | 3.01 | 48.65 | 75.00 | -29.36 |
|  | 50 | 2CC | High | 28.300 | QPSK | 45.0 | -13.99 | 45.83 | 3.01 | 48.84 | 75.00 | -29.17 |
|  | 50 |  | High | 28.300 | 16QAM | 45.0 | -13.99 | 45.83 | 3.01 | 48.84 | 75.00 | -29.17 |
|  | 50 |  | High | 28.300 | 64QAM | 45.0 | -13.98 | 45.83 | 3.01 | 48.84 | 75.00 | -29.17 |
|  | 100 | 2NC | Mid | 27.925 | QPSK | 45.0 | -10.90 | 48.58 | 0.00 | 48.58 | 75.00 | -26.42 |
|  | 100 | 3NC | Mid | 27.925 | QPSK | 45.0 | -11.04 | 48.44 | 0.00 | 48.44 | 75.00 | -26.56 |
|  | 100 | 4NC | Mid | 27.925 | QPSK | 45.0 | -10.50 | 48.98 | 0.00 | 48.98 | 75.00 | -26.02 |
|  | 100 | 5NC | Mid | 27.925 | QPSK | 45.0 | -11.35 | 48.13 | 0.00 | 48.13 | 75.00 | -26.87 |
|  | 100 | 6NC | Mid | 27.925 | QPSK | 45.0 | -12.24 | 47.24 | 0.00 | 47.24 | 75.00 | -27.76 |
|  | 100 | 7NC | Mid | 27.925 | QPSK | 45.0 | -13.03 | 46.46 | 0.00 | 46.46 | 75.00 | -28.54 |
|  | 50 | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x} 1$ | Mid | 27.925 | QPSK | 45.0 | -14.54 | 44.94 | 3.01 | 47.95 | 75.00 | -30.06 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 1$ | Mid | 27.925 | QPSK | 45.0 | -11.15 | 48.34 | 0.00 | 48.34 | 75.00 | -26.66 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x2}$ | Mid | 27.925 | QPSK | 45.0 | -10.88 | 48.60 | 0.00 | 48.60 | 75.00 | -26.40 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 45.0 | -10.69 | 48.79 | 0.00 | 48.79 | 75.00 | -26.21 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 45.0 | -10.68 | 48.80 | 0.00 | 48.80 | 75.00 | -26.20 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 45.0 | -10.55 | 48.94 | 0.00 | 48.94 | 75.00 | -26.06 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 4$ | Mid | 27.925 | QPSK | 45.0 | -11.06 | 48.42 | 0.00 | 48.42 | 75.00 | -26.58 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \mathrm{x4}$ | Mid | 27.925 | QPSK | 45.0 | -11.28 | 48.20 | 0.00 | 48.20 | 75.00 | -26.80 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 45.0 | -11.87 | 47.61 | 0.00 | 47.61 | 75.00 | -27.39 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 45.0 | -12.23 | 47.26 | 0.00 | 47.26 | 75.00 | -27.74 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 45.0 | -12.53 | 46.96 | 0.00 | 46.96 | 75.00 | -28.04 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 45.0 | -15.88 | 43.60 | 3.01 | 46.61 | 75.00 | -31.40 |

Table 7-10. Antenna D EIRP Density Summary Data

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsune | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: <br> 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 90 of 319 |



Plot 7-133. Antenna D EIRP Density Plot ( 50 MHz 1CC BW QPSK Low Channel)


Plot 7-134. Antenna D EIRP Density Plot (50 MHz 1CC BW 16QAM Low Channel)

| FCC ID: A3LAT1K01-A00 | 旆 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsune | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 91 of 319 |



Plot 7-135. Antenna D EIRP Density Plot (50 MHz 1CC BW 64QAM Low Channel)


Plot 7-136. Antenna D EIRP Density Plot (50 MHz 2CC BW QPSK Low Channel)

| FCC ID: A3LAT1K01-A00 | 芹 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsunf | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 92 of 319 |



Plot 7-137. Antenna D EIRP Density Plot (50 MHz 2CC BW 16QAM Low Channel)


Plot 7-138. Antenna D EIRP Density Plot (50 MHz 2CC BW 64QAM Low Channel)

| FCC ID: A3LAT1K01-A00 | 隹 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | snmsuna | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 93 of 319 |



Plot 7-139. Antenna D EIRP Density Plot (50 MHz 1CC BW QPSK Mid Channel)


Plot 7-140. Antenna D EIRP Density Plot (50 MHz 1CC BW 16QAM Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | shmsune | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 94 of 319 |



Plot 7-141. Antenna D EIRP Density Plot (50 MHz 1CC BW 64QAM Mid Channel)


Plot 7-142. Antenna D EIRP Density Plot (50 MHz 2CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | snmsung | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 95 of 319 |



Plot 7-143. Antenna D EIRP Density Plot (50 MHz 2CC BW 16QAM Mid Channel)


Plot 7-144. Antenna D EIRP Density Plot (50 MHz 2CC BW 64QAM Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsune | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 96 of 319 |



Plot 7-145. Antenna D EIRP Density Plot (50 MHz 1CC BW QPSK High Channel)


Plot 7-146. Antenna D EIRP Density Plot (50 MHz 1CC BW 16QAM High Channel)

| FCC ID: A3LAT1K01-A00 | 甭 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | snmsung | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 97 of 319 |



Plot 7-147. Antenna D EIRP Density Plot (50 MHz 1CC BW 64QAM High Channel)


Plot 7-148. Antenna D EIRP Density Plot (50 MHz 2CC BW QPSK High Channel)

| FCC ID: A3LAT1K01-A00 | 甭 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | snmsung | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 98 of 319 |



Plot 7-149. Antenna D EIRP Density Plot (50 MHz 2CC BW 16QAM High Channel)


Plot 7-150. Antenna D EIRP Density Plot (50 MHz 2CC BW 64QAM High Channel)

| FCC ID: A3LAT1K01-A00 | 甭 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | snmsung | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 99 of 319 |



Plot 7-151. Antenna D EIRP Density Plot (100 MHz 2NC BW QPSK Mid Channel)


Plot 7-152. Antenna D EIRP Density Plot (100 MHz 3NC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsung | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 100 of 319 |

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Plot 7-153. Antenna D EIRP Density Plot (100 MHz 4NC BW QPSK Mid Channel)


Plot 7-154. Antenna D EIRP Density Plot (100 MHz 5NC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsung | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 101 of 319 |

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Plot 7-155. Antenna D EIRP Density Plot (100 MHz 6NC BW QPSK Mid Channel)


Plot 7-156. Antenna D EIRP Density Plot (100 MHz 7NC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsung | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 102 of 319 |

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Plot 7-157. Antenna D EIRP Density Plot ( 50 MHz 1CC + 100 MHz 1CC BW QPSK Mid Channel)


Plot 7-158. Antenna D EIRP Density Plot (50 MHz 2CC + 100 MHz 1CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 103 of 319 |



Plot 7-159. Antenna D EIRP Density Plot ( 50 MHz 1CC + 100 MHz 2CC BW QPSK Mid Channel)


Plot 7-160. Antenna D EIRP Density Plot (50 MHz 2CC + 100 MHz 2CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 104 of 319 |



Plot 7-161. Antenna D EIRP Density Plot ( 50 MHz 1CC + 100 MHz 3CC BW QPSK Mid Channel)


Plot 7-162. Antenna D EIRP Density Plot (50 MHz 2CC + 100 MHz 3CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsung | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 105 of 319 |



Plot 7-163. Antenna D EIRP Density Plot ( 50 MHz 1CC + 100 MHz 4CC BW QPSK Mid Channel)


Plot 7-164. Antenna D EIRP Density Plot (50 MHz 2CC + 100 MHz 4CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 106 of 319 |



Plot 7-165. Antenna D EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 1 C C ~ + ~} 100 \mathrm{MHz} 5 \mathrm{5CC}$ BW QPSK Mid Channel)


Plot 7-166. Antenna D EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 2 C C ~ + ~} 100 \mathrm{MHz} 5 \mathrm{5CC}$ BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 | 旆 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsunf | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 107 of 319 |



Plot 7-167. Antenna D EIRP Density Plot ( $\mathbf{5 0} \mathbf{~ M H z ~ 1 C C ~ + ~} 100 \mathrm{MHz}$ 6CC BW QPSK Mid Channel)


Plot 7-168. Antenna D EIRP Density Plot ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 108 of 319 |

### 7.3.5 MIMO EIRP Density

| Antenna | Bandwidth | Configuration | Chan. | Frequency | Modulation | Average e.i.r.p. PSD | PSD Limit | Margin |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  | [GHz] |  | [dBm/100MHz] | [dBm/100MHz] | [dB/100MHz] |
| $A+C$ | 50 | 1CC | Low | 27.550 | QPSK | 51.97 | 75.00 | -23.03 |
|  | 50 |  | Low | 27.550 | 16QAM | 51.92 | 75.00 | -23.08 |
|  | 50 |  | Low | 27.550 | 64QAM | 51.93 | 75.00 | -23.07 |
|  | 50 | 2CC | Low | 27.550 | QPSK | 52.16 | 75.00 | -22.84 |
|  | 50 |  | Low | 27.550 | 16QAM | 52.26 | 75.00 | -22.74 |
|  | 50 |  | Low | 27.550 | 64QAM | 52.30 | 75.00 | -22.70 |
|  | 50 | 1CC | Mid | 27.925 | QPSK | 51.82 | 75.00 | -23.18 |
|  | 50 |  | Mid | 27.925 | 16QAM | 51.76 | 75.00 | -23.24 |
|  | 50 |  | Mid | 27.925 | 64QAM | 51.55 | 75.00 | -23.45 |
|  | 50 | 2CC | Mid | 27.925 | QPSK | 51.64 | 75.00 | -23.36 |
|  | 50 |  | Mid | 27.925 | 16QAM | 51.61 | 75.00 | -23.39 |
|  | 50 |  | Mid | 27.925 | 64QAM | 51.51 | 75.00 | -23.49 |
|  | 50 | 1CC | High | 28.300 | QPSK | 52.22 | 75.00 | -22.78 |
|  | 50 |  | High | 28.300 | 16QAM | 52.09 | 75.00 | -22.91 |
|  | 50 |  | High | 28.300 | 64QAM | 52.16 | 75.00 | -22.84 |
|  | 50 | 2CC | High | 28.300 | QPSK | 52.31 | 75.00 | -22.69 |
|  | 50 |  | High | 28.300 | 16QAM | 52.24 | 75.00 | -22.76 |
|  | 50 |  | High | 28.300 | 64QAM | 52.12 | 75.00 | -22.88 |
|  | 100 | 2NC | Mid | 27.925 | QPSK | 52.13 | 75.00 | -22.87 |
|  | 100 | 3NC | Mid | 27.925 | QPSK | 51.56 | 75.00 | -23.44 |
|  | 100 | 4NC | Mid | 27.925 | QPSK | 52.39 | 75.00 | -22.61 |
|  | 100 | 5NC | Mid | 27.925 | QPSK | 51.83 | 75.00 | -23.17 |
|  | 100 | 6NC | Mid | 27.925 | QPSK | 50.58 | 75.00 | -24.42 |
|  | 100 | 7NC | Mid | 27.925 | QPSK | 49.97 | 75.00 | -25.03 |
|  | 50 | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 1$ | Mid | 27.925 | QPSK | 51.41 | 75.00 | -23.59 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 1$ | Mid | 27.925 | QPSK | 51.36 | 75.00 | -23.64 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 52.05 | 75.00 | -22.95 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 52.30 | 75.00 | -22.70 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 52.37 | 75.00 | -22.63 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 52.47 | 75.00 | -22.53 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 4$ | Mid | 27.925 | QPSK | 52.00 | 75.00 | -23.00 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 4$ | Mid | 27.925 | QPSK | 51.44 | 75.00 | -23.56 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 50.96 | 75.00 | -24.04 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 50.70 | 75.00 | -24.30 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 50.54 | 75.00 | -24.46 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 50.08 | 75.00 | -24.92 |

Table 7-11. MIMO EIRP Density Summary Data (Antenna A + C)

| FCC ID: A3LAT1K01-A00 | FCTEST | MEASUREMENT REPORT <br> (Class II Permissive Change) | Approved by: |
| :--- | :--- | :--- | :--- | :--- |
| Quality Manager |  |  |  |


| Antenna | Bandwidth | Configuration | Chan. | Frequency | Modulation | Average e.i.r.p. PSD | PSD Limit | Margin |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  | [GHz] |  | [dBm/100MHz] | [dBm/100MHz] | [dB/100MHz] |
| $B+D$ | 50 | 1CC | Low | 27.550 | QPSK | 51.50 | 75.00 | -23.50 |
|  | 50 |  | Low | 27.550 | 16QAM | 51.51 | 75.00 | -23.49 |
|  | 50 |  | Low | 27.550 | 64QAM | 51.52 | 75.00 | -23.48 |
|  | 50 | 2CC | Low | 27.550 | QPSK | 51.60 | 75.00 | -23.40 |
|  | 50 |  | Low | 27.550 | 16QAM | 51.68 | 75.00 | -23.32 |
|  | 50 |  | Low | 27.550 | 64QAM | 51.69 | 75.00 | -23.31 |
|  | 50 | 1CC | Mid | 27.925 | QPSK | 51.27 | 75.00 | -23.73 |
|  | 50 |  | Mid | 27.925 | 16QAM | 51.31 | 75.00 | -23.69 |
|  | 50 |  | Mid | 27.925 | 64QAM | 51.31 | 75.00 | -23.69 |
|  | 50 | 2CC | Mid | 27.925 | QPSK | 51.19 | 75.00 | -23.81 |
|  | 50 |  | Mid | 27.925 | 16QAM | 51.30 | 75.00 | -23.70 |
|  | 50 |  | Mid | 27.925 | 64QAM | 51.26 | 75.00 | -23.74 |
|  | 50 | 1CC | High | 28.300 | QPSK | 51.75 | 75.00 | -23.25 |
|  | 50 |  | High | 28.300 | 16QAM | 51.73 | 75.00 | -23.27 |
|  | 50 |  | High | 28.300 | 64QAM | 51.77 | 75.00 | -23.23 |
|  | 50 | 2CC | High | 28.300 | QPSK | 51.78 | 75.00 | -23.22 |
|  | 50 |  | High | 28.300 | 16QAM | 51.83 | 75.00 | -23.17 |
|  | 50 |  | High | 28.300 | 64QAM | 51.87 | 75.00 | -23.13 |
|  | 100 | 2NC | Mid | 27.925 | QPSK | 51.68 | 75.00 | -23.32 |
|  | 100 | 3NC | Mid | 27.925 | QPSK | 51.43 | 75.00 | -23.57 |
|  | 100 | 4NC | Mid | 27.925 | QPSK | 52.02 | 75.00 | -22.98 |
|  | 100 | 5NC | Mid | 27.925 | QPSK | 51.11 | 75.00 | -23.89 |
|  | 100 | 6NC | Mid | 27.925 | QPSK | 50.21 | 75.00 | -24.79 |
|  | 100 | 7NC | Mid | 27.925 | QPSK | 49.47 | 75.00 | -25.53 |
|  | 50 | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 1$ | Mid | 27.925 | QPSK | 50.97 | 75.00 | -24.03 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \times 1$ | Mid | 27.925 | QPSK | 51.40 | 75.00 | -23.60 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 51.59 | 75.00 | -23.41 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 51.79 | 75.00 | -23.21 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 51.87 | 75.00 | -23.13 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 52.00 | 75.00 | -23.00 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x4}$ | Mid | 27.925 | QPSK | 51.45 | 75.00 | -23.55 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 4$ | Mid | 27.925 | QPSK | 51.14 | 75.00 | -23.86 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 50.62 | 75.00 | -24.38 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 50.26 | 75.00 | -24.74 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 49.97 | 75.00 | -25.03 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 49.61 | 75.00 | -25.39 |

Table 7-12. MIMO EIRP Density Summary Data (Antenna B + D)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | $\begin{aligned} & \text { Test Dates: } \\ & 10 / 27 / 2020-11 / 13 / 2020 \end{aligned}$ | EUT Type: <br> AU(AT1K01) |  | Page 110 of 319 |


| Antenna | Bandwidth | Configuration | Chan. | Frequency | Modulation | Average e.i.r.p. PSD | PSD Limit | Margin |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  | [GHz] |  | [dBm/100MHz] | [dBm/100MHz] | [dB/100MHz] |
| $A+B+C+D$ | 50 | 1CC | Low | 27.550 | QPSK | 54.75 | 75.00 | -20.25 |
|  | 50 |  | Low | 27.550 | 16QAM | 54.73 | 75.00 | -20.27 |
|  | 50 |  | Low | 27.550 | 64QAM | 54.74 | 75.00 | -20.26 |
|  | 50 | 2CC | Low | 27.550 | QPSK | 54.90 | 75.00 | -20.10 |
|  | 50 |  | Low | 27.550 | 16QAM | 54.99 | 75.00 | -20.01 |
|  | 50 |  | Low | 27.550 | 64QAM | 55.01 | 75.00 | -19.99 |
|  | 50 | 1CC | Mid | 27.925 | QPSK | 54.57 | 75.00 | -20.43 |
|  | 50 |  | Mid | 27.925 | 16QAM | 54.55 | 75.00 | -20.45 |
|  | 50 |  | Mid | 27.925 | 64QAM | 54.44 | 75.00 | -20.56 |
|  | 50 | 2CC | Mid | 27.925 | QPSK | 54.43 | 75.00 | -20.57 |
|  | 50 |  | Mid | 27.925 | 16QAM | 54.47 | 75.00 | -20.53 |
|  | 50 |  | Mid | 27.925 | 64QAM | 54.39 | 75.00 | -20.61 |
|  | 50 | 1CC | High | 28.300 | QPSK | 55.00 | 75.00 | -20.00 |
|  | 50 |  | High | 28.300 | 16QAM | 54.93 | 75.00 | -20.07 |
|  | 50 |  | High | 28.300 | 64QAM | 54.98 | 75.00 | -20.02 |
|  | 50 | 2CC | High | 28.300 | QPSK | 55.06 | 75.00 | -19.94 |
|  | 50 |  | High | 28.300 | 16QAM | 55.05 | 75.00 | -19.95 |
|  | 50 |  | High | 28.300 | 64QAM | 55.01 | 75.00 | -19.99 |
|  | 100 | 2NC | Mid | 27.925 | QPSK | 54.92 | 75.00 | -20.08 |
|  | 100 | 3NC | Mid | 27.925 | QPSK | 54.50 | 75.00 | -20.50 |
|  | 100 | 4NC | Mid | 27.925 | QPSK | 55.22 | 75.00 | -19.78 |
|  | 100 | 5NC | Mid | 27.925 | QPSK | 54.49 | 75.00 | -20.51 |
|  | 100 | 6NC | Mid | 27.925 | QPSK | 53.41 | 75.00 | -21.59 |
|  | 100 | 7NC | Mid | 27.925 | QPSK | 52.73 | 75.00 | -22.27 |
|  | 50 | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x1}$ | Mid | 27.925 | QPSK | 54.20 | 75.00 | -20.80 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 1$ | Mid | 27.925 | QPSK | 54.39 | 75.00 | -20.61 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 54.84 | 75.00 | -20.16 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | 27.925 | QPSK | 55.06 | 75.00 | -19.94 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | 27.925 | QPSK | 55.14 | 75.00 | -19.86 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \mathrm{x} 3$ | Mid | 27.925 | QPSK | 55.25 | 75.00 | -19.75 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x4}$ | Mid | 27.925 | QPSK | 54.75 | 75.00 | -20.25 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \mathrm{x4}$ | Mid | 27.925 | QPSK | 54.30 | 75.00 | -20.70 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 53.81 | 75.00 | -21.19 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 5$ | Mid | 27.925 | QPSK | 53.50 | 75.00 | -21.50 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 53.28 | 75.00 | -21.72 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \times 6$ | Mid | 27.925 | QPSK | 52.87 | 75.00 | -22.13 |

Table 7-13. MIMO EIRP Density Summary Data (Antenna A + B + C + D)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | $\begin{aligned} & \text { Test Dates: } \\ & 10 / 27 / 2020-11 / 13 / 2020 \end{aligned}$ | EUT Type: <br> AU(AT1K01) |  | Page 111 of 319 |

### 7.4 RF Conducted Output Power <br> $\$ 2.1046$

## Test Overview

RF conducted output power measurements are performed using broadband horn antennas. The conducted power is determined by maximizing the full spectrum EIRP for all component carrier configurations and then subtracting the known antenna gain from the EIRP. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

## Test Procedures Used

ANSI C63.26-2015 Section 5.2.4.4.1
ANSI C63.26-2015 Section 6.4

## Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW $=1-5 \%$ of the expected OBW
3. $V B W \geq 3 \times R B W$
4. Span $=2 x$ to $3 x$ the OBW
5. No. of sweep points $\geq 2 x$ span / RBW
6. Detector $=$ RMS
7. The integration bandwidth was roughly set equal to the measured RF Conducted Output Power of the signal for signals with continuous operation. For signals with burst transmission, the "gating" function was enabled to ensure that measurements are performed during times in which the transmitter is operating at its maximum power
8. Trace mode $=$ trace averaging (RMS) over 100 sweeps
9. The trace was allowed to stabilize

| FCC ID: A3LAT1K01-A00 | FPCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 112 of 319 |

Test Notes

1) The EUT was tested while positioned upright and mounted on a mast at 1.5 m height. The worst case emissions are reported with the EUT in this fixed position and with the modulations and active component carriers shown in the tables below.
2) Elements within the same antenna array are correlated to produce beamforming array gain.
3) Measurements were taken in the far field of the mmWave signal based on the formula: $R \geq$ 2D^2/wavelength.
4) The test case with 1 CC active, "CC0" representing the component carrier with the lowest frequency, was selected for the worst case emission testing as it created the highest EIRP within 50 MHz and 100 MHz bandwidth.
5) The average EIRP reported below is calculated per formula specific in d) of ANSI C63.26-2015 Section 5.2.7:
$\operatorname{EIRP}(\mathrm{dBm})=\mathrm{E}(\mathrm{dB} \mu \mathrm{V} / \mathrm{m})+20 \log (\mathrm{D})-104.8$; where D is the measurement distance (in the far field region) in $m$.
For this section, all EIRP density measurements were performed at a distance of 3.20 m , so the effective correction is:
$\operatorname{EIRP}(\mathrm{dBm})=\mathrm{E}(\mathrm{dBuV} / \mathrm{m})-94.72 \mathrm{~dB}$

$$
\begin{aligned}
& =\text { Analyzer Level }(\mathrm{dBm})+\text { AFCL }(\mathrm{dB} / \mathrm{m})+107 \mathrm{~dB}-94.72 \mathrm{~dB} \\
& =\text { Analyzer Level }(\mathrm{dBm})+\text { AFCL }(\mathrm{dB} / \mathrm{m})+12.28 \mathrm{~dB}
\end{aligned}
$$

6) The conducted average power over the full channel BW is calculated as follows:

Conducted Average Power (dBm) = Average EIRP (dBm) - Antenna Gain (dBi)

* Summed Across All Antennas are calculated based on dBm/100MHz. Thus, 50 MHz bandwidth component carrier is adopted with 3.01 dB scaling factor.

7) Per ANSI C63.26-2015 Section 6.4, individual EIRPs are also summed before compared to the limit.
8) The angle of the horn antenna was rotated to maximize and find the worst case emissions. Worst case EIRP is reported below.
9) 7.3 Equivalent Isotropic Radiated Power (EIRP) Density plots cover for 7.4 Conducted Output Power plot.

| FCC ID: A3LAT1K01-A00 | FPCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 113 of 319 |

### 7.4.1 Antenna A Conducted Power

| Antenna | Bandwidth | Configuration | Chan. | Modulation | Analyzer Level | AFCL | EUT Antenna Gain | Average e.i.r.p. | Conducted Average Power |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  |  | [dBm] | [dB/m] | [dBi] | [dBm] | [dBm] |
| A | 50 | 1CC | Low | QPSK | -13.34 | 59.40 | 28.12 | 33.76 | 17.94 |
|  | 50 |  | Low | 16QAM | -13.40 | 59.40 | 28.12 | 33.70 | 17.88 |
|  | 50 |  | Low | 64QAM | -13.32 | 59.40 | 28.12 | 33.78 | 17.96 |
|  | 50 | 2CC | Low | QPSK | -13.01 | 59.40 | 28.12 | 34.09 | 18.27 |
|  | 50 |  | Low | 16QAM | -13.00 | 59.40 | 28.12 | 34.10 | 18.28 |
|  | 50 |  | Low | 64QAM | -12.93 | 59.40 | 28.12 | 34.17 | 18.35 |
|  | 50 | 1CC | Mid | QPSK | -13.66 | 59.48 | 28.20 | 33.52 | 17.63 |
|  | 50 |  | Mid | 16QAM | -13.71 | 59.48 | 28.20 | 33.47 | 17.57 |
|  | 50 |  | Mid | 64QAM | -14.06 | 59.48 | 28.20 | 33.12 | 17.22 |
|  | 50 | 2CC | Mid | QPSK | -13.73 | 59.48 | 28.20 | 33.45 | 17.55 |
|  | 50 |  | Mid | 16QAM | -13.76 | 59.48 | 28.20 | 33.42 | 17.52 |
|  | 50 |  | Mid | 64QAM | -13.75 | 59.48 | 28.20 | 33.43 | 17.54 |
|  | 50 | 1CC | High | QPSK | -13.52 | 59.81 | 28.33 | 33.99 | 17.97 |
|  | 50 |  | High | 16QAM | -13.50 | 59.81 | 28.33 | 34.01 | 17.99 |
|  | 50 |  | High | 64QAM | -13.46 | 59.81 | 28.33 | 34.05 | 18.03 |
|  | 50 | 2CC | High | QPSK | -13.43 | 59.81 | 28.33 | 34.08 | 18.05 |
|  | 50 |  | High | 16QAM | -13.48 | 59.81 | 28.33 | 34.03 | 18.00 |
|  | 50 |  | High | 64QAM | -13.44 | 59.81 | 28.33 | 34.07 | 18.05 |
|  | 100 | 2NC | Mid | QPSK | -10.17 | 59.48 | 28.20 | 37.01 | 21.12 |
|  | 100 | 3NC | Mid | QPSK | -10.79 | 59.48 | 28.20 | 36.39 | 20.50 |
|  | 100 | 4NC | Mid | QPSK | -9.79 | 59.48 | 28.20 | 37.39 | 21.50 |
|  | 100 | 5NC | Mid | QPSK | -10.42 | 59.48 | 28.20 | 36.76 | 20.87 |
|  | 100 | 6NC | Mid | QPSK | -11.70 | 59.48 | 28.20 | 35.48 | 19.58 |
|  | 100 | 7NC | Mid | QPSK | -12.34 | 59.48 | 28.20 | 34.84 | 18.94 |
|  | $50+100$ | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 1$ | Mid | QPSK | -13.89 | 59.48 | 28.20 | 33.29 | 17.40 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 1$ | Mid | QPSK | -11.03 | 59.48 | 28.20 | 36.15 | 20.25 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.25 | 59.48 | 28.20 | 36.93 | 21.03 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.03 | 59.48 | 28.20 | 37.15 | 21.25 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | QPSK | -12.89 | 59.48 | 28.20 | 34.29 | 18.40 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 3$ | Mid | QPSK | -12.77 | 59.48 | 28.20 | 34.41 | 18.51 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x4}$ | Mid | QPSK | -10.16 | 59.48 | 28.20 | 37.02 | 21.12 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 4$ | Mid | QPSK | -10.88 | 59.48 | 28.20 | 36.30 | 20.41 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 5$ | Mid | QPSK | -11.23 | 59.48 | 28.20 | 35.95 | 20.05 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 5$ | Mid | QPSK | -11.64 | 59.48 | 28.20 | 35.54 | 19.64 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 6$ | Mid | QPSK | -11.73 | 59.48 | 28.20 | 35.45 | 19.55 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 6$ | Mid | QPSK | -15.43 | 59.48 | 28.20 | 31.75 | 15.85 |

Table 7-14. Antenna A Conducted Power Summary Data

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 114 of 319 |

### 7.4.2 Antenna B Conducted Power

| Antenna | Bandwidth | Configuration | Chan. | Modulation | Analyzer Level | AFCL | EUT <br> Antenna Gain | Average e.i.r.p. | Conducted Average Power |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  |  | [dBm] | [dB/m] | [dBi] | [dBm] | [dBm] |
| B | 50 | 1CC | Low | QPSK | -13.80 | 59.40 | 28.12 | 33.30 | 17.48 |
|  | 50 |  | Low | 16QAM | -13.77 | 59.40 | 28.12 | 33.33 | 17.51 |
|  | 50 |  | Low | 64QAM | -13.72 | 59.40 | 28.12 | 33.38 | 17.56 |
|  | 50 | 2CC | Low | QPSK | -13.80 | 59.40 | 28.12 | 33.30 | 17.48 |
|  | 50 |  | Low | 16QAM | -13.60 | 59.40 | 28.12 | 33.50 | 17.68 |
|  | 50 |  | Low | 64QAM | -13.55 | 59.40 | 28.12 | 33.55 | 17.73 |
|  | 50 | 1CC | Mid | QPSK | -14.22 | 59.48 | 28.20 | 32.96 | 17.06 |
|  | 50 |  | Mid | 16QAM | -14.07 | 59.48 | 28.20 | 33.11 | 17.21 |
|  | 50 |  | Mid | 64QAM | -14.03 | 59.48 | 28.20 | 33.15 | 17.25 |
|  | 50 | 2CC | Mid | QPSK | -14.41 | 59.48 | 28.20 | 32.77 | 16.87 |
|  | 50 |  | Mid | 16QAM | -14.17 | 59.48 | 28.20 | 33.01 | 17.11 |
|  | 50 |  | Mid | 64QAM | -14.19 | 59.48 | 28.20 | 32.99 | 17.09 |
|  | 50 | 1CC | High | QPSK | -14.01 | 59.81 | 28.33 | 33.50 | 17.48 |
|  | 50 |  | High | 16QAM | -14.00 | 59.81 | 28.33 | 33.51 | 17.49 |
|  | 50 |  | High | 64QAM | -13.96 | 59.81 | 28.33 | 33.55 | 17.52 |
|  | 50 | 2CC | High | QPSK | -14.12 | 59.81 | 28.33 | 33.39 | 17.36 |
|  | 50 |  | High | 16QAM | -14.02 | 59.81 | 28.33 | 33.49 | 17.47 |
|  | 50 |  | High | 64QAM | -13.94 | 59.81 | 28.33 | 33.57 | 17.54 |
|  | 100 | 2NC | Mid | QPSK | -10.72 | 59.48 | 28.20 | 36.46 | 20.57 |
|  | 100 | 3NC | Mid | QPSK | -11.08 | 59.48 | 28.20 | 36.10 | 20.20 |
|  | 100 | 4NC | Mid | QPSK | -10.45 | 59.48 | 28.20 | 36.73 | 20.84 |
|  | 100 | 5NC | Mid | QPSK | -11.42 | 59.48 | 28.20 | 35.76 | 19.86 |
|  | 100 | 6NC | Mid | QPSK | -12.33 | 59.48 | 28.20 | 34.85 | 18.96 |
|  | 100 | 7NC | Mid | QPSK | -13.03 | 59.48 | 28.20 | 34.15 | 18.26 |
|  | 50 | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 1$ | Mid | QPSK | -14.53 | 59.48 | 28.20 | 32.65 | 16.75 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 1$ | Mid | QPSK | -11.05 | 59.48 | 28.20 | 36.13 | 20.24 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.93 | 59.48 | 28.20 | 36.25 | 20.36 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.72 | 59.48 | 28.20 | 36.46 | 20.56 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 3$ | Mid | QPSK | -13.57 | 59.48 | 28.20 | 33.61 | 17.71 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 3$ | Mid | QPSK | -13.46 | 59.48 | 28.20 | 33.72 | 17.83 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 4$ | Mid | QPSK | -11.02 | 59.48 | 28.20 | 36.16 | 20.26 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 4$ | Mid | QPSK | -11.43 | 59.48 | 28.20 | 35.75 | 19.86 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 5$ | Mid | QPSK | -11.87 | 59.48 | 28.20 | 35.31 | 19.41 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \times 5$ | Mid | QPSK | -12.24 | 59.48 | 28.20 | 34.94 | 19.04 |
|  |  | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 6$ | Mid | QPSK | -12.51 | 59.48 | 28.20 | 34.67 | 18.77 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 6$ | Mid | QPSK | -15.90 | 59.48 | 28.20 | 31.28 | 15.38 |

Table 7-15. Antenna B Conducted Power Summary Data

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | snmsuna | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: <br> 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 115 of 319 |

### 7.4.3 Antenna C Conducted Power

| Antenna | Bandwidth | Configuration | Chan. | Modulation | Analyzer Level | AFCL | EUT <br> Antenna <br> Gain | Average e.i.r.p. | Conducted Average Power |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  |  | [dBm] | [dB/m] | [dBi] | [dBm] | [dBm] |
| C | 50 | 1CC | Low | QPSK | -13.57 | 59.40 | 28.12 | 33.53 | 17.71 |
|  | 50 |  | Low | 16QAM | -13.60 | 59.40 | 28.12 | 33.50 | 17.68 |
|  | 50 |  | Low | 64QAM | -13.68 | 59.40 | 28.12 | 33.42 | 17.60 |
|  | 50 | 2CC | Low | QPSK | -13.52 | 59.40 | 28.12 | 33.58 | 17.76 |
|  | 50 |  | Low | 16QAM | -13.33 | 59.40 | 28.12 | 33.77 | 17.96 |
|  | 50 |  | Low | 64QAM | -13.33 | 59.40 | 28.12 | 33.77 | 17.96 |
|  | 50 | 1CC | Mid | QPSK | -13.70 | 59.48 | 28.20 | 33.48 | 17.58 |
|  | 50 |  | Mid | 16QAM | -13.77 | 59.48 | 28.20 | 33.41 | 17.52 |
|  | 50 |  | Mid | 64QAM | -13.85 | 59.48 | 28.20 | 33.33 | 17.43 |
|  | 50 | 2CC | Mid | QPSK | -14.00 | 59.48 | 28.20 | 33.18 | 17.29 |
|  | 50 |  | Mid | 16QAM | -14.04 | 59.48 | 28.20 | 33.14 | 17.25 |
|  | 50 |  | Mid | 64QAM | -14.26 | 59.48 | 28.20 | 32.92 | 17.02 |
|  | 50 | 1CC | High | QPSK | -13.71 | 59.81 | 28.33 | 33.80 | 17.77 |
|  | 50 |  | High | 16QAM | -14.00 | 59.81 | 28.33 | 33.51 | 17.49 |
|  | 50 |  | High | 64QAM | -13.90 | 59.81 | 28.33 | 33.61 | 17.58 |
|  | 50 | 2CC | High | QPSK | -13.62 | 59.81 | 28.33 | 33.89 | 17.86 |
|  | 50 |  | High | 16QAM | -13.71 | 59.81 | 28.33 | 33.80 | 17.78 |
|  | 50 |  | High | 64QAM | -14.01 | 59.81 | 28.33 | 33.50 | 17.47 |
|  | 100 | 2NC | Mid | QPSK | -10.58 | 59.48 | 28.20 | 36.60 | 20.71 |
|  | 100 | 3NC | Mid | QPSK | -11.09 | 59.48 | 28.20 | 36.09 | 20.19 |
|  | 100 | 4NC | Mid | QPSK | -10.45 | 59.48 | 28.20 | 36.73 | 20.83 |
|  | 100 | 5NC | Mid | QPSK | -10.93 | 59.48 | 28.20 | 36.25 | 20.36 |
|  | 100 | 6NC | Mid | QPSK | -12.15 | 59.48 | 28.20 | 35.03 | 19.13 |
|  | 100 | 7NC | Mid | QPSK | -12.72 | 59.48 | 28.20 | 34.46 | 18.56 |
|  | 50 | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 1$ | Mid | QPSK | -14.32 | 59.48 | 28.20 | 32.86 | 16.97 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 1$ | Mid | QPSK | -11.25 | 59.48 | 28.20 | 35.93 | 20.03 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.64 | 59.48 | 28.20 | 36.54 | 20.64 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.37 | 59.48 | 28.20 | 36.81 | 20.91 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | QPSK | -10.38 | 59.48 | 28.20 | 36.80 | 20.90 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 3$ | Mid | QPSK | -10.31 | 59.48 | 28.20 | 36.87 | 20.98 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 4$ | Mid | QPSK | -10.85 | 59.48 | 28.20 | 36.33 | 20.43 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 4$ | Mid | QPSK | -11.23 | 59.48 | 28.20 | 35.95 | 20.05 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 5$ | Mid | QPSK | -11.85 | 59.48 | 28.20 | 35.33 | 19.43 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \times 5$ | Mid | QPSK | -11.95 | 59.48 | 28.20 | 35.23 | 19.34 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 6$ | Mid | QPSK | -12.20 | 59.48 | 28.20 | 34.98 | 19.09 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 6$ | Mid | QPSK | -12.40 | 59.48 | 28.20 | 34.78 | 18.89 |

Table 7-16. Antenna C Conducted Power Summary Data

| FCC ID: A3LAT1K01-A00 | FPCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 116 of 319 |

$\qquad$ (AT1K01)

### 7.4.4 Antenna D Conducted Power

| Antenna | Bandwidth | Configuration | Chan. | Modulation | Analyzer Level | AFCL | EUT <br> Antenna Gain | Average e.i.r.p. | Conducted Average Power |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | [MHz] |  |  |  | [dBm] | [dB/m] | [dBi] | [dBm] | [dBm] |
| D | 50 | 1CC | Low | QPSK | -14.05 | 59.40 | 28.12 | 33.05 | 17.23 |
|  | 50 |  | Low | 16QAM | -14.07 | 59.40 | 28.12 | 33.03 | 17.22 |
|  | 50 |  | Low | 64QAM | -14.08 | 59.40 | 28.12 | 33.02 | 17.20 |
|  | 50 | 2CC | Low | QPSK | -13.85 | 59.40 | 28.12 | 33.25 | 17.43 |
|  | 50 |  | Low | 16QAM | -13.88 | 59.40 | 28.12 | 33.22 | 17.40 |
|  | 50 |  | Low | 64QAM | -13.93 | 59.40 | 28.12 | 33.17 | 17.35 |
|  | 50 | 1CC | Mid | QPSK | -14.25 | 59.48 | 28.20 | 32.93 | 17.04 |
|  | 50 |  | Mid | 16QAM | -14.33 | 59.48 | 28.20 | 32.85 | 16.96 |
|  | 50 |  | Mid | 64QAM | -14.36 | 59.48 | 28.20 | 32.82 | 16.92 |
|  | 50 | 2CC | Mid | QPSK | -14.21 | 59.48 | 28.20 | 32.97 | 17.07 |
|  | 50 |  | Mid | 16QAM | -14.24 | 59.48 | 28.20 | 32.94 | 17.04 |
|  | 50 |  | Mid | 64QAM | -14.30 | 59.48 | 28.20 | 32.88 | 16.98 |
|  | 50 | 1CC | High | QPSK | -14.15 | 59.81 | 28.33 | 33.36 | 17.33 |
|  | 50 |  | High | 16QAM | -14.21 | 59.81 | 28.33 | 33.30 | 17.28 |
|  | 50 |  | High | 64QAM | -14.17 | 59.81 | 28.33 | 33.34 | 17.32 |
|  | 50 | 2CC | High | QPSK | -13.99 | 59.81 | 28.33 | 33.52 | 17.50 |
|  | 50 |  | High | 16QAM | -13.99 | 59.81 | 28.33 | 33.52 | 17.50 |
|  | 50 |  | High | 64QAM | -13.98 | 59.81 | 28.33 | 33.53 | 17.50 |
|  | 100 | 2NC | Mid | QPSK | -10.90 | 59.48 | 28.20 | 36.28 | 20.38 |
|  | 100 | 3NC | Mid | QPSK | -11.04 | 59.48 | 28.20 | 36.14 | 20.24 |
|  | 100 | 4NC | Mid | QPSK | -10.50 | 59.48 | 28.20 | 36.68 | 20.78 |
|  | 100 | 5NC | Mid | QPSK | -11.35 | 59.48 | 28.20 | 35.83 | 19.93 |
|  | 100 | 6NC | Mid | QPSK | -12.24 | 59.48 | 28.20 | 34.94 | 19.04 |
|  | 100 | 7NC | Mid | QPSK | -13.03 | 59.48 | 28.20 | 34.15 | 18.26 |
|  | 50 | $50 \mathrm{M} \times 1+100 \mathrm{M} \times 1$ | Mid | QPSK | -14.54 | 59.48 | 28.20 | 32.64 | 16.74 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \mathrm{x1}$ | Mid | QPSK | -11.15 | 59.48 | 28.20 | 36.03 | 20.14 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.88 | 59.48 | 28.20 | 36.30 | 20.40 |
|  |  | $50 \mathrm{M} \mathrm{x2}+100 \mathrm{M} \times 2$ | Mid | QPSK | -10.69 | 59.48 | 28.20 | 36.49 | 20.59 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 3$ | Mid | QPSK | -10.68 | 59.48 | 28.20 | 36.50 | 20.60 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 3$ | Mid | QPSK | -10.55 | 59.48 | 28.20 | 36.63 | 20.74 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \mathrm{x} 4$ | Mid | QPSK | -11.06 | 59.48 | 28.20 | 36.12 | 20.22 |
|  |  | $50 \mathrm{M} \mathrm{x} 2+100 \mathrm{M} \times 4$ | Mid | QPSK | -11.28 | 59.48 | 28.20 | 35.90 | 20.00 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 5$ | Mid | QPSK | -11.87 | 59.48 | 28.20 | 35.31 | 19.41 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 5$ | Mid | QPSK | -12.23 | 59.48 | 28.20 | 34.95 | 19.06 |
|  |  | $50 \mathrm{M} \mathrm{x1}+100 \mathrm{M} \times 6$ | Mid | QPSK | -12.53 | 59.48 | 28.20 | 34.65 | 18.76 |
|  |  | $50 \mathrm{M} \times 2+100 \mathrm{M} \times 6$ | Mid | QPSK | -15.88 | 59.48 | 28.20 | 31.30 | 15.40 |

Table 7-17. Antenna D Conducted Power Summary Data

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | snmsuna | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: <br> 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 117 of 319 |

### 7.5 Radiated Spurious and Harmonic Emissions

$\$ 2.1051 \$ 30.203$

## Test Overview

The spectrum is scanned from 30 MHz to 100 GHz for n261. All out of band emissions are measured in a radiated setup while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All modulations were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

## The conductive power or total radiated power of any emissions outside a licensee's frequency block shall be -13 dBm / 1 MHz.

## Test Procedure Used

ANSI C63.26-2015 Section 5.7.4
ANSI C63.26-2015 Section 6.4
KDB 842590 D01 v01r01 Section 4.4.2 and Section 4.4.3

## Test Settings

1. Start frequency was set to 30 MHz and stop frequency was set to 100 GHz for n 261 . Several plots are used to show investigations in this entire span.
2. Detector $=$ RMS
3. Trace mode = trace average
4. Sweep time $=$ auto couple
5. Number of sweep points $\geq 2 \times$ Span/RBW
6. The trace was allowed to stabilize
7. $\mathrm{RBW}=1 \mathrm{MHz}, \mathrm{VBW}=3 \mathrm{MHz}$

## Test Notes

1) The EUT was tested while positioned upright and mounted on a mast 1.5 m height. The worst case emissions are reported with the EUT in this fixed position and with the modulations and active component carriers shown in the tables below.
2) All radiated spurious emissions were measured as EIRP to compare with the $\S 30.203$ TRP limits.
3) Emissions below 18 GHz were measured at a 3 meter test distance, while emissions above 18 GHz were measured at the appropriate far field distance. The far field of the mmWave signal is based on formula; $R$ $>2 D^{\wedge} 2 /$ wavelength, where D is the larger between the dimension of the measurement antenna and the transmitting antenna of the EUT. In this case, D is the largest dimension of the measurement antenna.
4) Out-band Emission of $10 \%$ channel bandwidth are exempted on Radiated Spurious and Harmonic Emissions test case.
5) The plots from $18-100 \mathrm{GHz}$ show corrected average EIRP levels. The average EIRP reported below is calculated per section 5.2.7 of ANSI C63.26-2015 which states: EIRP $(\mathrm{dBm})=\mathrm{E}(\mathrm{dB} \mu \mathrm{V} / \mathrm{m})+20 \mathrm{log}(\mathrm{D})-$ 104.8; where $D$ is the measurement distance (in the far field region) in $m$. The field strength $E$ is calculated $\mathrm{E}(\mathrm{dB} \mu \mathrm{V} / \mathrm{m})=$ Spectrum Analyzer Level $(\mathrm{dBm})+$ Antenna Factor $(\mathrm{dB} / \mathrm{m})+$ Cable Loss $(\mathrm{dB})+$ Duty Cycle (dB)+ Harmonic Mixer Conversion Loss (dB) + 107. All appropriate Antenna Factor and Cable Loss have been applied in the spectrum analyzer for each measurement. For measurements $>40 \mathrm{GHz}$, Harmonic Mixer Conversion Loss was also applied to the spectrum analyzer.

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUN: | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 118 of 319 |


| Frequency Range $[\mathrm{GHz}]$ | $\frac{\text { Wavelength }[\mathrm{cm}]}{}$ | Far Field Distance $[\mathrm{m}]$ | Measurements Distance $[\mathrm{m}]$ |
| :---: | :---: | :---: | :---: |
| 18 to 40 | 0.749 | 3.19 | 3.20 |
| 40 to 60 | 0.500 | 1.39 | 1.50 |
| 60 to 90 | 0.333 | 0.91 | 1.50 |
| 90 to 100 | 0.214 | 0.58 | 1.50 |

Table 7-18. Far-field Distance \& Measurement Distance per Frequency Rage

| Frequency Range [GHz] | $\frac{\text { Calculated Measurement }}{\mathbf{D}^{*} \mathbf{E}[\mathrm{~dB}]}$ | Duty Cycle [dB] | Reference offset [dB] |
| :---: | :---: | :---: | :---: |
| 18 to 40 | 12.30 | 1.37 | 13.67 |
| 40 to 100 | 5.73 | 1.37 | 7.10 |

## Table 7-19. Far-field Distance \& Measurement Distance per Frequency Rage

6) Emissions $>40 \mathrm{GHz}$ were measured using a harmonic mixer with the spectrum analyzer.
7) The "-" shown in the following RSE tables are used to denote a noise floor measurement.
8) Spurious emissions were measured with all EUT antennas transmitting simultaneously.
9) Some testing configurations exceed the limit which requires to investigate of TRP method according to 4.4 Unwanted Emission Measurements of KDB 842590 D01.

## TRP Measurement Procedure

If the recorded EIRP value was close or above the TRP limit, a Two Cut TRP measurement was done according to KDB 842590 D01 v01 Section 4.4.3.3.2

1) Align the EUT with a chosen $x y$-plane and the $x z$-plane of the antenna measurement coordinate system. NOTE 1 For harmonics and spurious emission frequencies which are beamforming as identified in exploratory scan, it may be required to align the orthogonal cuts to include the peak based on exploratory scans.
2) Measure the EUT dimensions, i.e., depth (d), width (w), and height (h); see Figure A. 1 in Appendix A.
3) Calculate the spherical and cylindrical diameters (D and Dcyl) using Equations (A.1) and (A.2) (see Appendix
4) For the highest frequency (smallest wavelength) of the frequency band measured, calculate the reference angular steps $\Delta \theta \theta$ ref and $\Delta \phi \phi$ ref using Equations (A.3) and (A.4).
5) Set the grid spatial sampling step $\Delta \theta \theta \leq \Delta \theta \theta$ ref for the vertical angle and $\Delta \phi \phi \leq \Delta \phi \phi$ ref for the horizontal cut.
6) For each emission frequency, measure the EIRP (as a sum of two orthogonal polarizations) at each spatial sampling step on the selected grid.
7) For each emission frequency, calculate the average EIRP for both the cuts separately, and then take the average of these two average values.
8) Add 2 dB as a correction factor to the averaged value computed in step g).

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SMMSUNA | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 119 of 319 |

### 7.5.1 Radiated Spurious Emissions Plots (30 MHz to 1 GHz )



Plot 7-169. Radiated Spurious Plot $30 \mathrm{MHz}-1 \mathrm{GHz}$ ( 100 MHz 4CC NC BW QPSK Mid Channel)


Plot 7-170. Radiated Spurious Plot $30 \mathrm{MHz}-1 \mathrm{GHz}$ ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 120 of 319 |



## Plot 7-171. Radiated Spurious Plot $30 \mathrm{MHz}-1 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK Mid Channel)



Plot 7-172. Radiated Spurious Plot $30 \mathrm{MHz}-1 \mathrm{GHz}$ ( 50 MHz 2CC + 100 MHz 6CC BW QPSK Mid Channel)


Plot 7-173. Radiated Spurious Plot $30 \mathrm{MHz}-1 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 6 \mathrm{CC}$ NC BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 121 of 319 |

## Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in $\mathrm{dB} \mu \mathrm{V} / \mathrm{m}$. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meters.

RSE EIRP $(\mathbf{d B m})=$ Analyzer Level $(d B m)+A F C L(d B / m)+107+20 \log \left(D_{m}\right)-104.8$
$\left.\begin{array}{|c|c|c|c|c|c|c|c|c|}\hline \begin{array}{c}\text { Frequency } \\ \text { [MHz] }\end{array} & \text { Channel } & \begin{array}{c}\text { Bandwidth } \\ \text { [MHz] }\end{array} & \text { CC Active } & \begin{array}{c}\text { Antenna } \\ \text { Polarization } \\ {[H / V]}\end{array} & \text { Modulation } & \begin{array}{c}\text { Antenna } \\ \text { Height } \\ \text { [cm] }\end{array} & \begin{array}{c}\text { Turntable } \\ \text { Azimuth } \\ \text { [degree] }\end{array} & \begin{array}{c}\text { Spurious Emission } \\ \text { Level }[\mathbf{d B m}]\end{array} \\ \hline \mathbf{M a r g i n} \\ \text { [dB] }\end{array}\right]$

Table 7-20. Spurious Emissions (30 MHz-1GHz)

## Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | IMMSUN | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 122 of 319 |

### 7.5.2 Radiated Spurious Emissions Plots (1 GHz to 18 GHz )



Plot 7-174. Radiated Spurious Plot 1 GHz - 18 GHz ( 100 MHz 4CC NC BW QPSK Mid Channel)


Plot 7-175. Radiated Spurious Plot 1 GHz - 18 GHz ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK Mid Channel)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SIMSUN: | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: <br> 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 123 of 319 |



Plot 7-176. Radiated Spurious Plot $1 \mathrm{GHz}-18 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK Mid Channel)


Plot 7-177. Radiated Spurious Plot 1 GHz - 18 GHz ( 50 MHz 2CC + 100 MHz 6CC BW QPSK Mid Channel)


Plot 7-178. Radiated Spurious Plot $1 \mathrm{GHz}-18 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 6 \mathrm{CC}$ NC BW QPSK Mid

| FCC ID: A3LAT1K01-A00 | TrACTEST | MEASUREMENT REPORT <br> (Class II Permissive Change) | Approved by: |
| :--- | :--- | :--- | :--- | :--- |
| Quality Manager |  |  |  |

## Spurious Emissions EIRP Sample Calculation (n261)

The raw radiated spurious level is converted to field strength in $\mathrm{dB} \mu \mathrm{V} / \mathrm{m}$. Then, the RSE EIRP level is calculated by applying the additional factors shown below for a test distance of 3 meters.

RSE EIRP $(\mathrm{dBm})=$ Analyzer Level $(\mathrm{dBm})+$ AFCL $(\mathrm{dB} / \mathrm{m})+107+20 \log \left(\mathrm{D}_{\mathrm{m}}\right)-104.8$

| Frequency [MHz] | Channel | Bandwidth [MHz] | CC Active | Antenna Polarization [H/V] | Modulation | Antenna Height [cm] | Turntable Azimuth [degree] | Spurious Emission Level [dBm] | Margin [dB] |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1474.62 | Low | 100 | 4NC | H | QPSK | 250 | 0 | -55.01 | -42.0 |
| 1472.62 | Low | 100 | 4NC | V | QPSK | 250 | 0 | -51.12 | -38.1 |
| 1465.61 | Mid | 100 | 4NC | H | QPSK | 253 | 0 | -53.09 | -40.1 |
| 4396.83 | Mid | 100 | 4NC | V | QPSK | 235 | 6 | -49.23 | -36.2 |
| 1474.57 | High | 100 | 4NC | H | QPSK | 279 | 25 | -47.44 | -34.4 |
| 1474.57 | High | 100 | 4NC | V | QPSK | 264 | 29 | -55.54 | -42.5 |
| 1474.57 | Low | $50+100$ | 2CC + 3CC | H | QPSK | 282 | 28 | -45.73 | -32.7 |
| 1474.57 | Low | $50+100$ | 2CC + 3CC | V | QPSK | 250 | 27 | -49.47 | -36.5 |
| 1474.57 | Mid | $50+100$ | 2CC + 3CC | H | QPSK | 280 | 27 | -48.55 | -35.5 |
| 1474.57 | Mid | $50+100$ | $2 \mathrm{CC}+3 \mathrm{CC}$ | V | QPSK | 265 | 12 | -61.36 | -48.4 |
| 1474.57 | High | $50+100$ | 2CC + 3CC | H | QPSK | 237 | 15 | -51.22 | -38.2 |
| 4396.77 | High | $50+100$ | 2CC + 3CC | V | QPSK | 250 | 359 | -45.78 | -32.8 |
| 1474.57 | Low | $50+100$ | $2 N C+3 N C$ | V | QPSK | 203 | 11 | -53.85 | -40.8 |
| 1474.57 | Low | $50+100$ | $2 N C+3 N C$ | H | QPSK | 220 | 355 | -56.54 | -43.5 |
| 1474.57 | Mid | $50+100$ | $2 \mathrm{NC}+3 \mathrm{NC}$ | H | QPSK | 221 | 28 | -48.02 | -35.0 |
| 1474.57 | Mid | $50+100$ | $2 N C+3 N C$ | V | QPSK | 236 | 13 | -57.57 | -44.6 |
| 1474.57 | High | $50+100$ | $2 N C+3 N C$ | H | QPSK | 242 | 16 | -52.01 | -39.0 |
| 1474.57 | High | $50+100$ | $2 N C+3 N C$ | V | QPSK | 232 | 1 | -59.39 | -46.4 |
| 1474.57 | Low | $50+100$ | $2 \mathrm{CC}+6 \mathrm{CC}$ | V | QPSK | 238 | 14 | -57.05 | -44.0 |
| 1474.57 | Low | $50+100$ | $2 \mathrm{CC}+6 \mathrm{CC}$ | H | QPSK | 222 | 20 | -47.48 | -34.5 |
| 1474.57 | Mid | $50+100$ | $2 \mathrm{CC}+6 \mathrm{CC}$ | H | QPSK | 235 | 352 | -52.58 | -39.6 |
| 1474.57 | Mid | $50+100$ | $2 C C+6 C C$ | V | QPSK | 242 | 357 | -49.40 | -36.4 |
| 1474.57 | High | $50+100$ | 2CC + 6CC | H | QPSK | 236 | 17 | -56.41 | -43.4 |
| 1474.57 | High | $50+100$ | $2 \mathrm{CC}+6 \mathrm{CC}$ | V | QPSK | 240 | 359 | -50.65 | -37.6 |
| 1474.57 | Low | $50+100$ | $2 \mathrm{NC}+6 \mathrm{NC}$ | H | QPSK | 228 | 22 | -52.53 | -39.5 |
| 1474.57 | Low | $50+100$ | $2 N C+6 N C$ | V | QPSK | 232 | 25 | -54.78 | -41.8 |
| 1474.57 | Mid | $50+100$ | $2 \mathrm{NC}+6 \mathrm{NC}$ | H | QPSK | 219 | 10 | -47.31 | -34.3 |
| 1474.57 | Mid | $50+100$ | $2 N C+6 N C$ | V | QPSK | 235 | 15 | -56.95 | -43.9 |
| 1474.56 | High | $50+100$ | $2 N C+6 N C$ | H | QPSK | 249 | 21 | -47.06 | -34.1 |
| 1474.46 | High | $50+100$ | 2NC + 6NC | V | QPSK | 236 | 13 | -56.54 | -43.5 |

Table 7-21. Spurious Emissions ( 1 GHz to 18 GHz )

## Notes

The RSE EIRP level is taken directly from the spectrum analyzer which includes the appropriate antenna factors, and cable losses. Measurements were performed at a distance of 3 meter.

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### 7.5.3 Radiated Spurious Emissions Plots (18 GHz to 27.5 GHz)



Plot 7-179. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Low Channel Pol. H)


Plot 7-180. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Low Channel Pol. H) Fin

| FCC ID: A3LAT1K01-A00 | FCTEST | MEASUREMENT REPORT <br> (Class II Permissive Change) | Approved by: |
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Plot 7-181. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Low Channel Pol. V)


Plot 7-182. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Low Channel Pol. V) Fin

| FCC ID: A3LAT1K01-A00 | 芹 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsunf | Approved by: Quality Manager |
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1st Marker Frequency: 27.010 GHz Margin: 4.24 dB


Plot 7-183. Radiated Spurious Plot 26 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Low TRP)


Plot 7-184. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Mid Channel Pol. H)

| FCC ID: A3LAT1K01-A00 | 旆 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsune | Approved by: Quality Manager |
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Plot 7-185. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Mid Channel Pol. H) Fin


Plot 7-186. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Mid Channel Pol. V)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsung | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 129 of 319 |

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Plot 7-187. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK Mid Channel Pol. V) Fin


Plot 7-188. Radiated Spurious Plot 26 GHz - 27.46 GHz ( 100 MHz 4 CC NC BW QPSK Mid TRP)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | shmsunf | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 130 of 319 |

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Plot 7-189. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK High Channel Pol. H)


Plot 7-190. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK High Channel Pol. H) Fin

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | SAMSUNG | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 131 of 319 |

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Plot 7-191. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK High Channel Pol. V)


Plot 7-192. Radiated Spurious Plot 18 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK High Channel Pol. V) Fin

| FCC ID: A3LAT1K01-A00 | 芹 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsunf | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: <br> 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 132 of 319 |

1st Marker Frequency: $26.731 \mathrm{GHz} \quad$ Margin: 11.37 dB


Plot 7-193. Radiated Spurious Plot 26 GHz - 27.46 GHz (100 MHz 4CC NC BW QPSK High TRP)


Plot 7-194. Radiated Spurious Plot $18 \mathrm{GHz}-27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK Low Channel Pol. H)

| FCC ID: A3LAT1K01-A00 | FCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SMMSUN: | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 133 of 319 |

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Plot 7-195. Radiated Spurious Plot $18 \mathrm{GHz} \mathbf{- 2 7 . 4 6 \mathrm { GHz } ( 5 0 \mathrm { MHz } 2 \mathrm { CC } + 1 0 0 \mathrm { MHz } 3 \mathrm { CC } \text { BW QPSK Low }}$ Channel Pol. H) Fin


Plot 7-196. Radiated Spurious Plot $18 \mathrm{GHz}-27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK Low Channel Pol. V)

| FCC ID: A3LAT1K01-A00 | FCTEST | MEASUREMENT REPORT <br> (Class II Permissive Change) | Approved by: |
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Plot 7-197. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC BW QPSK Low Channel Pol. V) Fin


Plot 7-198. Radiated Spurious Plot 25.92 GHz - $25.95 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK Low TRP)

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Plot 7-199. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC BW QPSK Mid Channel Pol. H)


Plot 7-200. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC BW QPSK Mid Channel Pol. H) Fin

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Plot 7-201. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3 CC BW QPSK Mid Channel Pol. V)


Plot 7-202. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3 CC BW QPSK Mid Channel Pol. V) Fin

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1st Marker Frequency: 26.159 GHz Margin: 9.51 dB


Plot 7-203. Radiated Spurious Plot 26.14 GHz - 26.17 GHz (50 MHz 2CC + 100 MHz 3CC BW QPSK Mid TRP)


Plot 7-204. Radiated Spurious Plot $18 \mathrm{GHz}-27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK High Channel Pol. H)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
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Plot 7-205. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC BW QPSK High Channel Pol. H) Fin


Plot 7-206. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3 CC BW QPSK High Channel Pol. V)

| FCC ID: A3LAT1K01-A00 | 芹 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | Snmsunf | Approved by: Quality Manager |
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## (f)PCTEST



Plot 7-207. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3 CC BW QPSK High Channel Pol. V) Fin


Plot 7-208. Radiated Spurious Plot $26.37 \mathrm{GHz} \mathbf{- 2 6 . 4 0} \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ BW QPSK High TRP)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
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Plot 7-209. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC NC BW QPSK Low Channel Pol. H)


Plot 7-210. Radiated Spurious Plot $18 \mathrm{GHz}-27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 3CC NC BW QPSK Low Channel Pol. H) Fin

| FCC ID: A3LAT1K01-A00 | FPCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SAMSUNE | Approved by: <br> Quality Manager |
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Plot 7-211. Radiated Spurious Plot $18 \mathrm{GHz}-27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 3CC NC BW QPSK Low Channel Pol. V)


Plot 7-212. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC NC BW QPSK Low Channel Pol. V) Fin

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1st Marker Frequency: 27.446 GHz Margin: 6.98 dB


Plot 7-213. Radiated Spurious Plot $25 \mathrm{GHz} \mathbf{- 2 7 . 4 6 \mathrm { GHz } ( 5 0 \mathrm { MHz } 2 C C + 1 0 0 \mathrm { MHz } 3 C C \text { NC BW QPSK Low }}$ TRP)


Plot 7-214. Radiated Spurious Plot 18 GHz - $27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK Mid Channel Pol. H)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
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Plot 7-215. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC NC BW QPSK Mid Channel Pol. H) Fin


Plot 7-216. Radiated Spurious Plot 18 GHz - $27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK Mid Channel Pol. V)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | snmsunf | Approved by: <br> Quality Manager |
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## (f)PCTEST



Plot 7-217. Radiated Spurious Plot 18 GHz - 27.46 GHz ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK Mid Channel Pol. V) Fin

1st Marker Frequency: 25.996 GHz Margin: 11.01 dB


Plot 7-218. Radiated Spurious Plot $25.98 \mathrm{GHz} \mathbf{- 2 6 . 1 0 ~ G H z ~ ( 5 0 ~ M H z ~ 2 C C ~ + ~} 100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK Mid TRP)

| FCC ID: A3LAT1K01-A00 | 旆 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | snmsuna | Approved by: Quality Manager |
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Plot 7-219. Radiated Spurious Plot $18 \mathrm{GHz} \mathbf{- 2 7 . 4 6 \mathrm { GHz } ( 5 0 \mathrm { MHz } 2 \mathrm { CC } + 1 0 0 \mathrm { MHz } \text { 3CC NC BW QPSK High }}$ Channel Pol. H)


Plot 7-220. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC NC BW QPSK High Channel Pol. H) Fin

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Plot 7-221. Radiated Spurious Plot $18 \mathrm{GHz} \mathbf{- 2 7 . 4 6 \mathrm { GHz } ( 5 0 \mathrm { MHz } 2 \mathrm { CC } + 1 0 0 \mathrm { MHz } \text { 3CC NC BW QPSK High }}$ Channel Pol. V)


Plot 7-222. Radiated Spurious Plot 18 GHz - 27.46 GHz (50 MHz 2CC + 100 MHz 3CC NC BW QPSK High Channel Pol. V) Fin

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1st Marker Frequency: $26.022 \mathrm{GHz} \quad$ Margin: 10.18 dB


Plot 7-223. Radiated Spurious Plot $26 \mathrm{GHz} \mathbf{- 2 6 . 0 4} \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz} 3 \mathrm{CC}$ NC BW QPSK High TRP)

 Channel Pol. H)

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Plot 7-225. Radiated Spurious Plot $18 \mathrm{GHz}-27.46 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK Low Channel Pol. H) Fin


Plot 7-226. Radiated Spurious Plot 18 GHz - 27.43 GHz (50 MHz 2CC + 100 MHz 6CC BW QPSK Low Channel Pol. V)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsune | Approved by: <br> Quality Manager |
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Plot 7-227. Radiated Spurious Plot 18 GHz - 27.43 GHz (50 MHz 2CC + 100 MHz 6CC BW QPSK Low Channel Pol. V) Fin

## 1st Marker Frequency: 25.934 GHz Margin: 10.6 dB



Plot 7-228. Radiated Spurious Plot 25.92 GHz - $25.95 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK Low TRP)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsune | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
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## (f)PCTEST



Plot 7-229. Radiated Spurious Plot 18 GHz - 27.43 GHz (50 MHz 2CC + 100 MHz 6CC BW QPSK Mid Channel Pol. H)


Plot 7-230. Radiated Spurious Plot 18 GHz - $27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK Mid Channel Pol. H) Fin

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## (f)PCTEST



Plot 7-231. Radiated Spurious Plot 18 GHz - 27.43 GHz (50 MHz 2CC + 100 MHz 6CC BW QPSK Mid Channel Pol. V)


Plot 7-232. Radiated Spurious Plot 18 GHz - 27.43 GHz ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK Mid Channel Pol. V) Fin

| FCC ID: A3LAT1K01-A00 | 甭 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUN: | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
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1st Marker Frequency: $26.009 \mathrm{GHz} \quad$ Margin: 10.12 dB


Plot 7-233. Radiated Spurious Plot 25.90 GHz - 26.02 GHz (50 MHz 2CC + 100 MHz 6 CC BW QPSK Mid TRP)


Plot 7-234. Radiated Spurious Plot $18 \mathrm{GHz}-27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK High Channel Pol. H)

| FCC ID: A3LAT1K01-A00 | FCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SMMSUN: | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 153 of 319 |

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Plot 7-235. Radiated Spurious Plot 18 GHz - 27.43 GHz (50 MHz 2CC + 100 MHz 6CC BW QPSK High Channel Pol. H) Fin


Plot 7-236. Radiated Spurious Plot 18 GHz - 27.43 GHz ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK High Channel Pol. V)

| FCC ID: A3LAT1K01-A00 | 旆 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | snmsuna | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 154 of 319 |

## (f)PCTEST



Plot 7-237. Radiated Spurious Plot 18 GHz - 27.43 GHz (50 MHz 2CC + 100 MHz 6CC BW QPSK High Channel Pol. V) Fin


Plot 7-238. Radiated Spurious Plot $26.07 \mathrm{GHz} \mathbf{- 2 6 . 1 0 ~ G H z}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC BW QPSK High TRP)

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | Snmsuna | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 155 of 319 |

## TPCTEST



Plot 7-239. Radiated Spurious Plot 18 GHz - 27.43 GHz ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Low Channel Pol. H)


Plot 7-240. Radiated Spurious Plot $18 \mathrm{GHz}-27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Low Channel Pol. H) Fin

| FCC ID: A3LAT1K01-A00 | FPCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SAMSUNE | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 156 of 319 |

## (f)PCTEST



Plot 7-241. Radiated Spurious Plot 18 GHz - 27.43 GHz ( $50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Low Channel Pol. V)


Plot 7-242. Radiated Spurious Plot $18 \mathrm{GHz}-27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Low Channel Pol. V) Fin

| FCC ID: A3LAT1K01-A00 |  | MEASUREMENT REPORT (Class II Permissive Change) | snmsunf | Approved by: Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 157 of 319 |

## 1st Marker Frequency: 25.923 GHz Margin: 9 dB



Plot 7-243. Radiated Spurious Plot 25.91 GHz - 25.94 GHz (50 MHz 2CC + 100 MHz 6CC NC BW QPSK Low TRP)


Plot 7-244. Radiated Spurious Plot 18 GHz - $27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Mid Channel Pol. H)

| FCC ID: A3LAT1K01-A00 | (r)PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUNE | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: AU(AT1K01) |  | Page 158 of 319 |

## (f)PCTEST



Plot 7-245. Radiated Spurious Plot 18 GHz - $27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Mid Channel Pol. H) Fin


Plot 7-246. Radiated Spurious Plot 18 GHz - $27.43 \mathrm{GHz}(50 \mathrm{MHz} 2 \mathrm{CC}+100 \mathrm{MHz}$ 6CC NC BW QPSK Mid Channel Pol. V)

| FCC ID: A3LAT1K01-A00 | 甭 PCTEST | MEASUREMENT REPORT (Class II Permissive Change) | SnMSUN: | Approved by: <br> Quality Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K20092801-R2.A3L | Test Dates: 10/27/2020-11/13/2020 | EUT Type: <br> AU(AT1K01) |  | Page 159 of 319 |

