

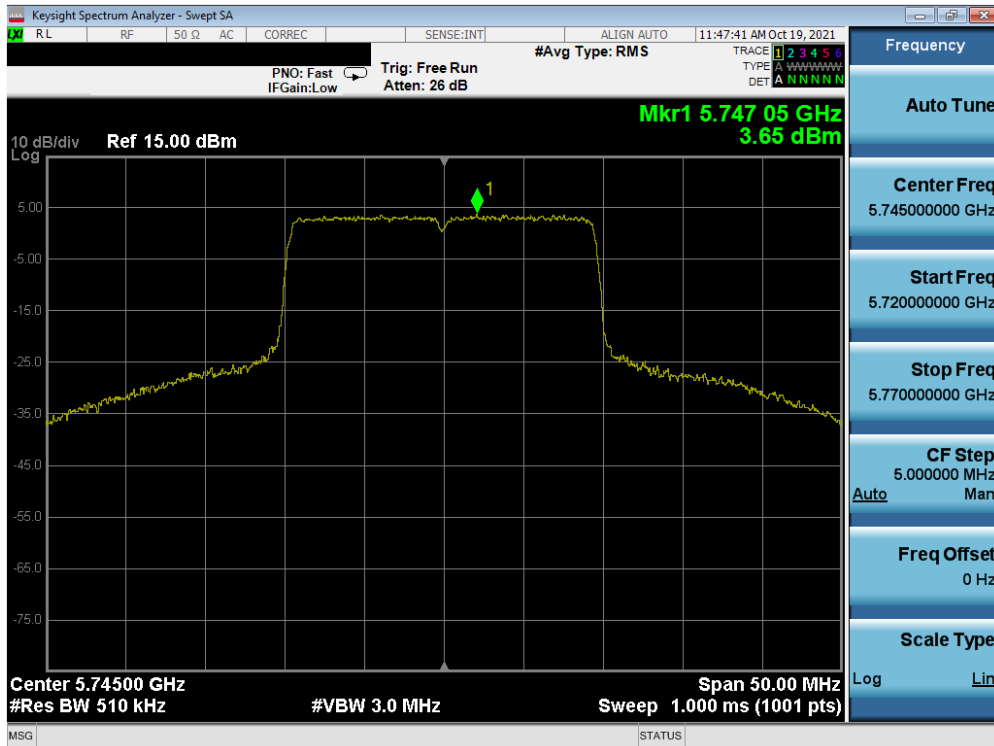
Plot 7-252. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 2C) – Ch. 138)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 191 of 309 |

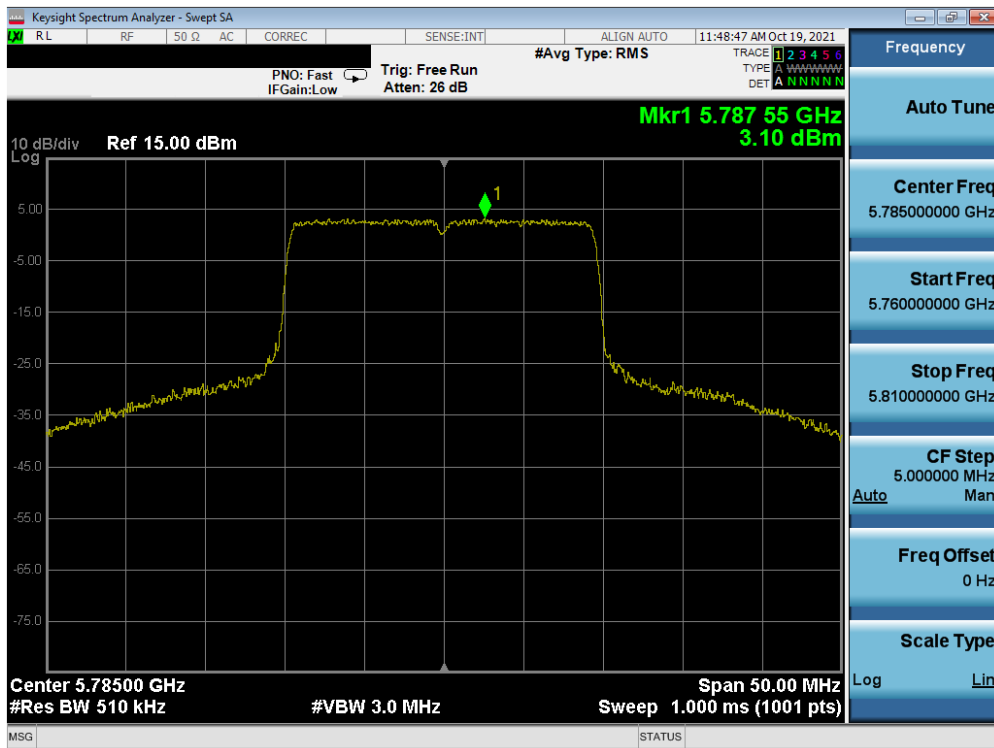
| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Measured Power Density [dBm] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] |
|---------------|-----------------|-------------|-------------|-------|------------------|------------------------------|--|-------------|
| Band 3 | 5745 | 149 | ax (20MHz) | 242T | MCS0 | 3.65 | 30.00 | -26.35 |
| | 5785 | 157 | ax (20MHz) | 242T | MCS0 | 3.10 | 30.00 | -26.90 |
| | 5825 | 165 | ax (20MHz) | 242T | MCS0 | 3.61 | 30.00 | -26.39 |
| | 5755 | 151 | ax (40MHz) | 484T | MCS0 | 0.30 | 30.00 | -29.70 |
| | 5795 | 159 | ax (40MHz) | 484T | MCS0 | 0.24 | 30.00 | -29.76 |
| | 5775 | 155 | ax (80MHz) | 996T | MCS0 | -3.24 | 30.00 | -33.24 |

Table 7-72. Band 3 Conducted Power Spectral Density Measurements SISO ANT2 (Full Tones)

| | | | | |
|--|--|---|---|--|
| FCC ID: A3LSMS901U |  PCTEST Proud to be part of  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 192 of 309 |

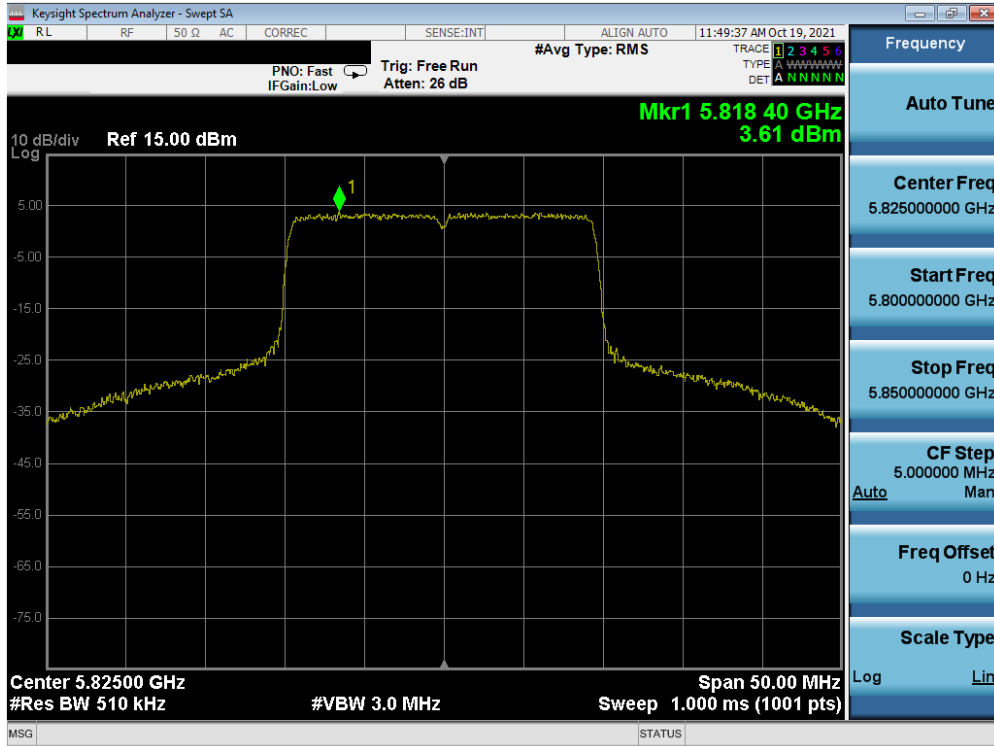


Plot 7-253. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 149)

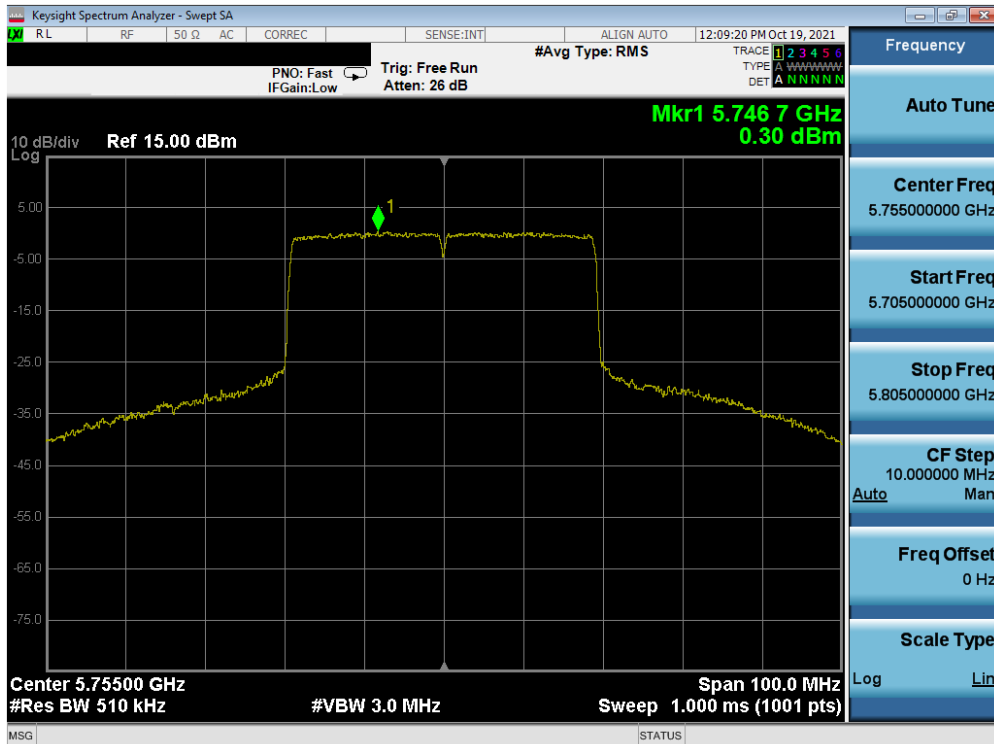


Plot 7-254. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 157)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 193 of 309 |

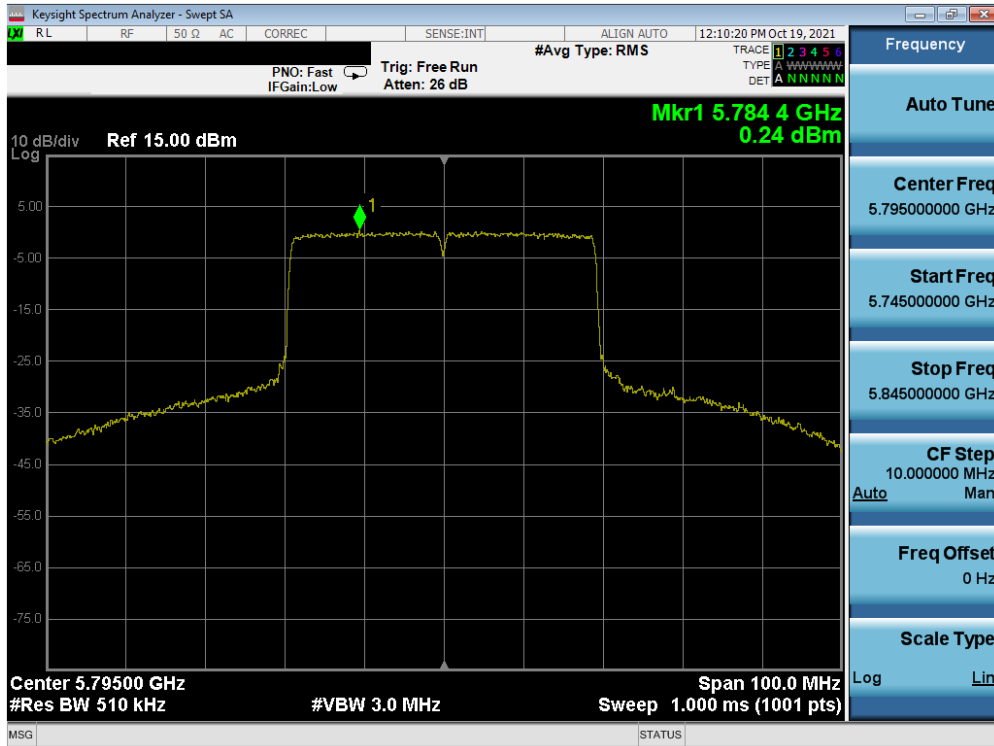


Plot 7-255. Power Spectral Density Plot SISO ANT2 (20 MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 165)

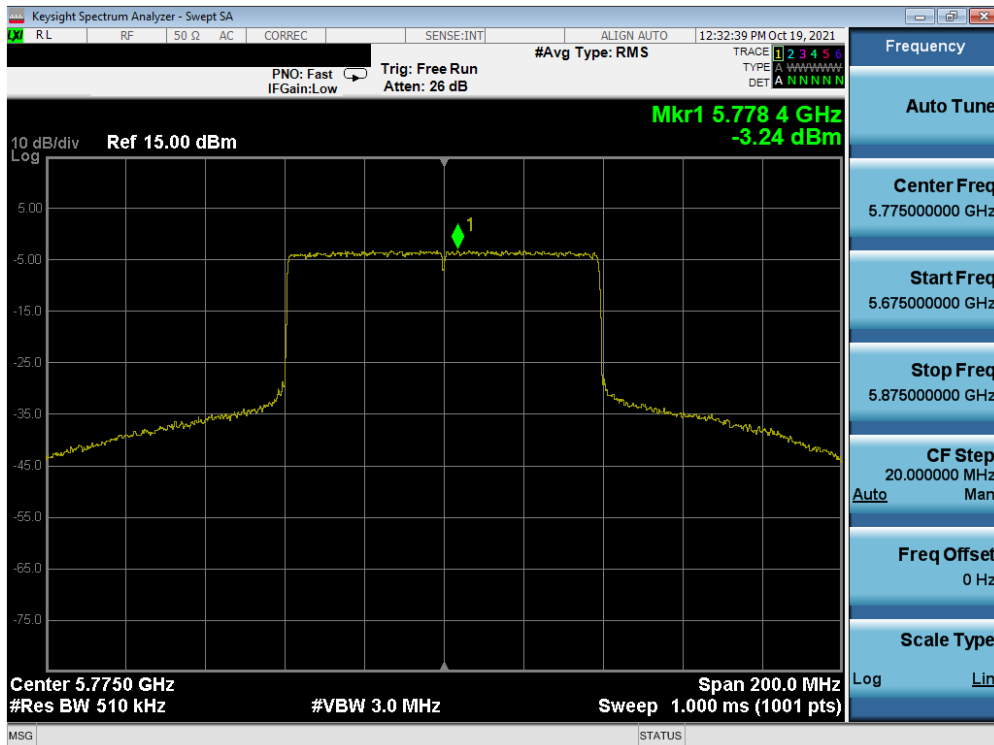


Plot 7-256. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 151)

| | | | | |
|---|--|---------------------------------------|--|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 194 of 309 |



Plot 7-257. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 159)



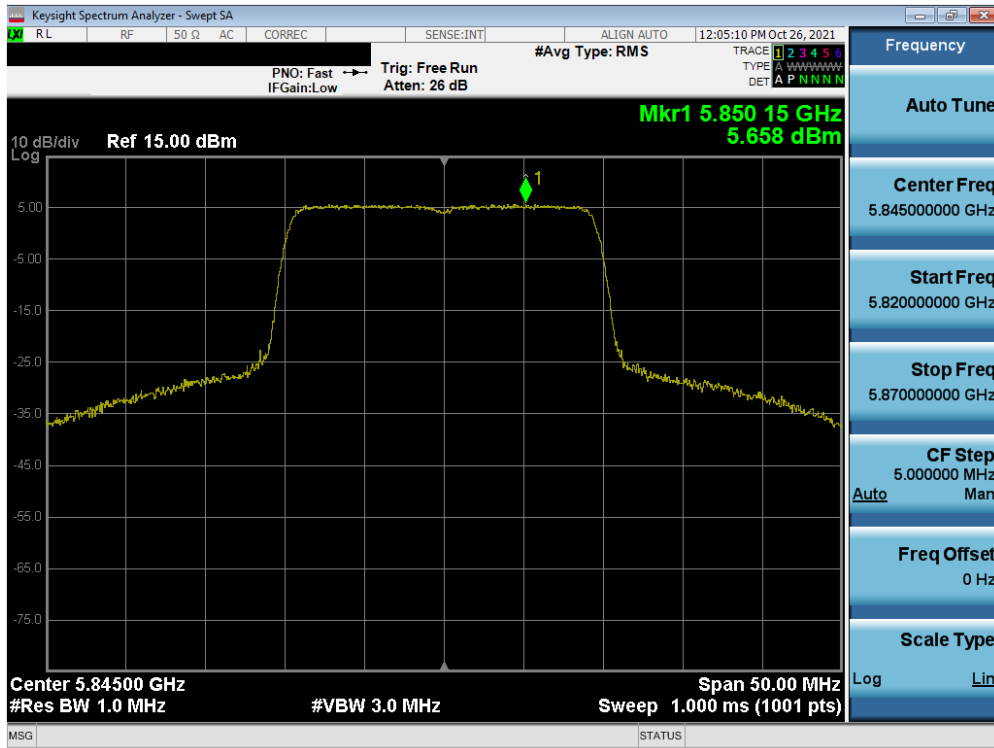
Plot 7-258. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 3) – Ch. 155)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 195 of 309 |

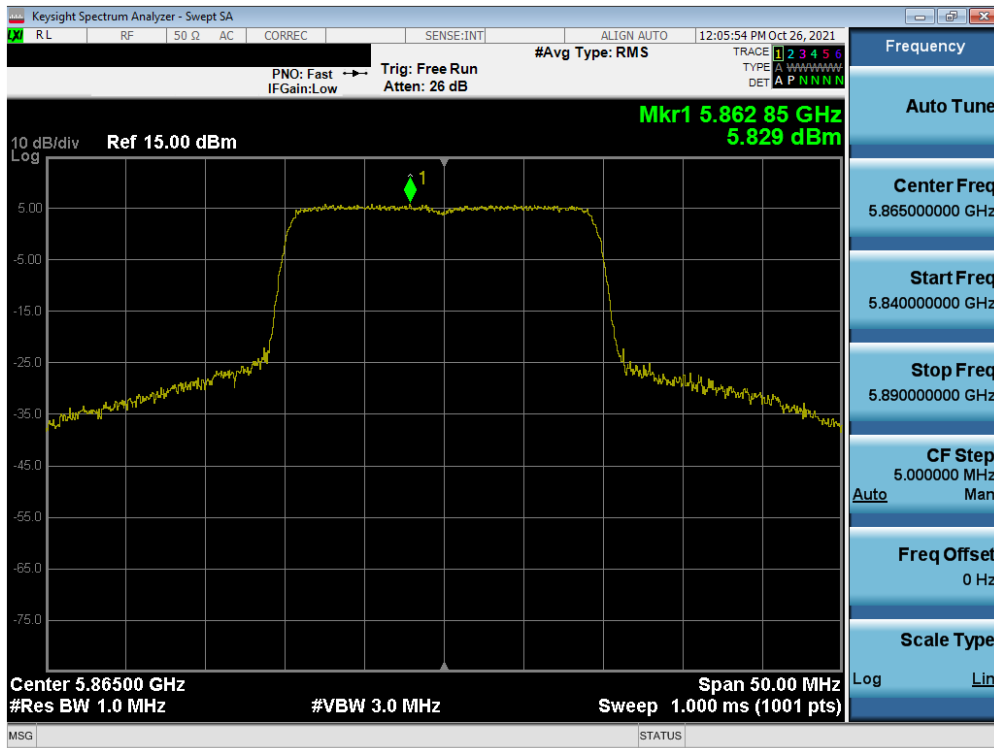
| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Measured Power Density [dBm/MHz] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] | Antenna Gain [dBi] | EIRP Power Density [dBm/MHz] | Max EIRP Power Density [dBm/MHz] | Margin [dB] |
|----------|-----------------|-------------|-------------|-------|------------------|----------------------------------|--|-------------|--------------------|------------------------------|----------------------------------|-------------|
| Band 3/4 | 5845 | 169 | ax (20MHz) | 242T | MCS0 | 5.66 | 30.00 | -24.34 | -7.80 | -2.14 | 14.00 | -16.14 |
| Band 4 | 5865 | 173 | ax (20MHz) | 242T | MCS0 | 5.83 | | | -7.80 | -1.97 | 14.00 | -15.97 |
| | 5885 | 177 | ax (20MHz) | 242T | MCS0 | 5.99 | | | -7.80 | -1.81 | 14.00 | -15.81 |
| Band 3/4 | 5835 | 167 | ax (40MHz) | 484T | MCS0 | 2.78 | 30.00 | -27.23 | -7.80 | -5.03 | 14.00 | -19.03 |
| Band 4 | 5875 | 175 | ax (40MHz) | 484T | MCS0 | 3.01 | | | -7.80 | -4.79 | 14.00 | -18.79 |
| Band 3/4 | 5855 | 171 | ax (80MHz) | 996T | MCS0 | -0.36 | 30.00 | -30.36 | -7.80 | -8.16 | 14.00 | -22.16 |

Table 7-73. Band 4 Conducted Power Spectral Density Measurements SISO ANT2 (Full Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 196 of 309 |

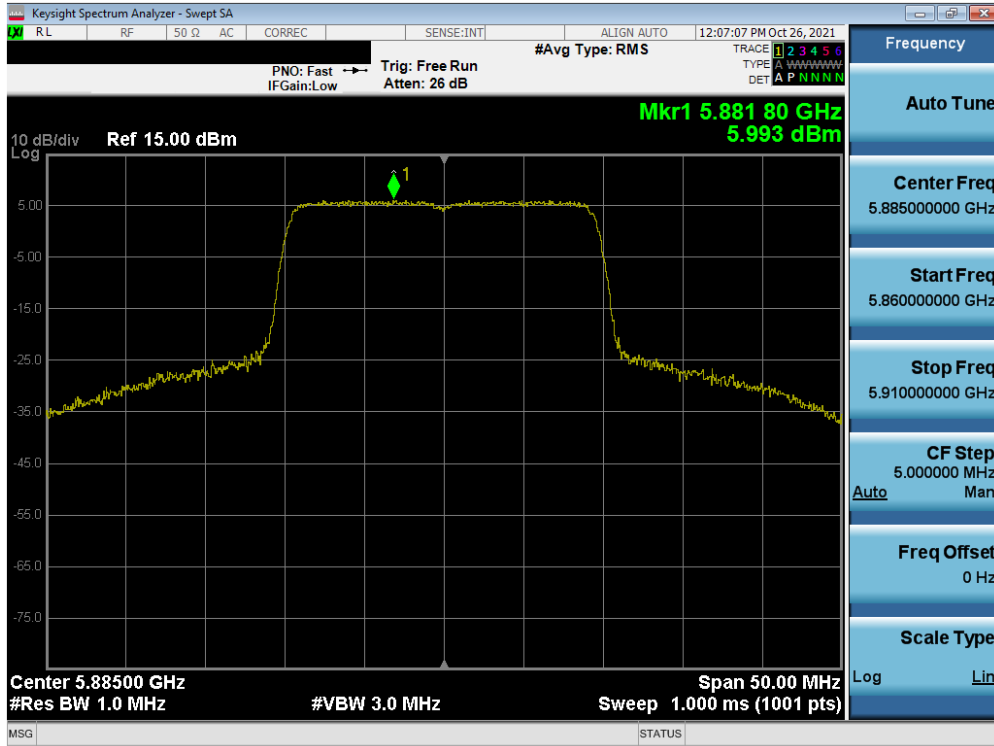


Plot 7-259. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 3/4) – Ch. 169)

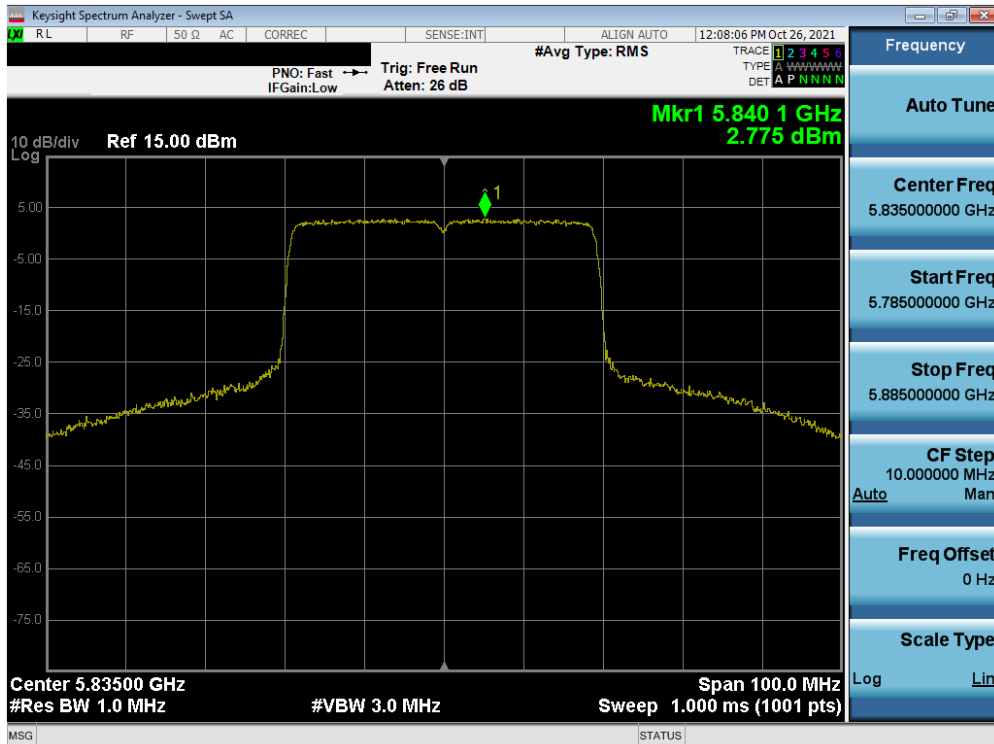


Plot 7-260. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 4) – Ch. 173)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 197 of 309 |

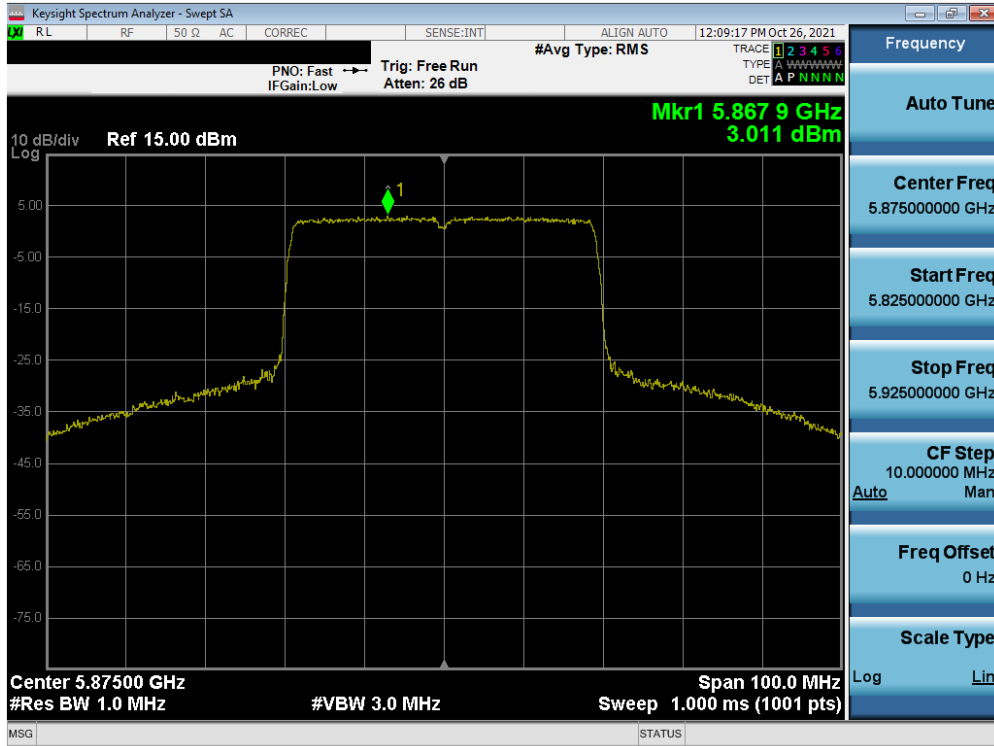


Plot 7-261. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax – Full Tones (UNII Band 4) – Ch. 177)

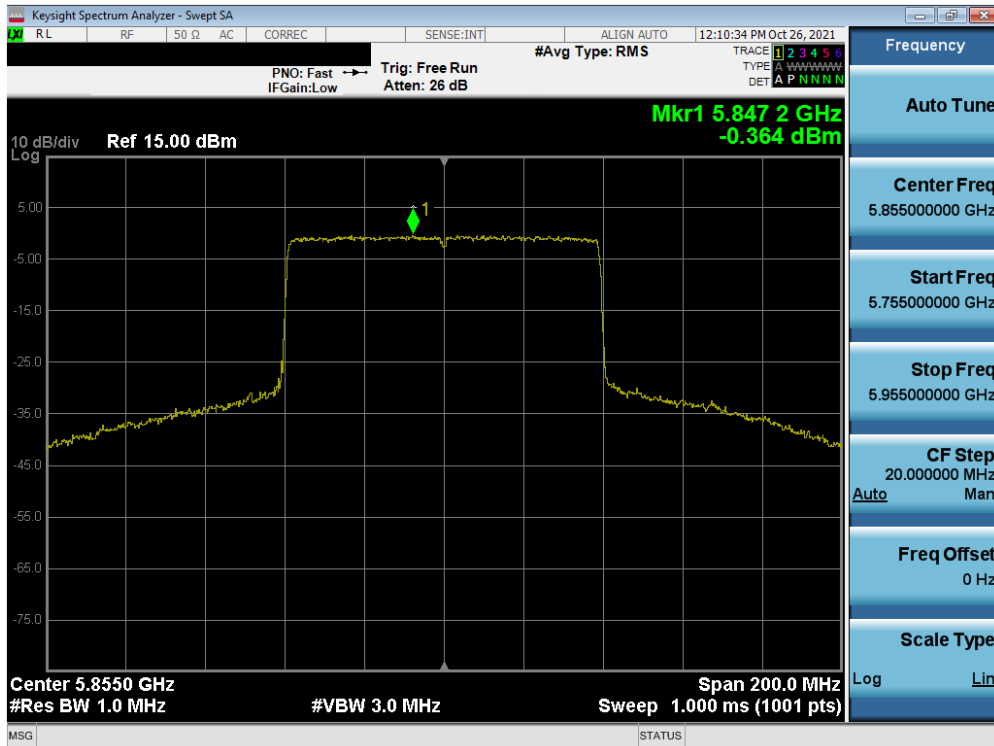


Plot 7-262. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 3/4) – Ch. 167)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 198 of 309 |



Plot 7-263. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax – Full Tones (UNII Band 4) – Ch. 175)



Plot 7-264. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax – Full Tones (UNII Band 3/4) – Ch. 171)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 199 of 309 |

Summed MIMO Power Spectral Density Measurements (26 Tones)

| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Antenna-1 Power Density [dBm] | Antenna-2 Power Density [dBm] | Summed MIMO Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|---------|-----------------|-------------|-------------|-------|------------------|-------------------------------|-------------------------------|---------------------------------|-----------------------------|-------------|
| Band 1 | 5180 | 36 | ax (20MHz) | 26T | MCS0 | 7.79 | 7.31 | 10.57 | 11.00 | -0.43 |
| | 5200 | 40 | ax (20MHz) | 26T | MCS0 | 7.95 | 7.30 | 10.64 | 11.00 | -0.36 |
| | 5240 | 48 | ax (20MHz) | 26T | MCS0 | 7.81 | 7.80 | 10.81 | 11.00 | -0.19 |
| | 5190 | 38 | ax (40MHz) | 26T | MCS0 | 7.97 | 7.44 | 10.72 | 11.00 | -0.28 |
| | 5230 | 46 | ax (40MHz) | 26T | MCS0 | 7.81 | 7.74 | 10.79 | 11.00 | -0.21 |
| | 5210 | 42 | ax (80MHz) | 26T | MCS0 | 7.94 | 7.41 | 10.69 | 11.00 | -0.31 |
| Band 2A | 5260 | 52 | ax (20MHz) | 26T | MCS0 | 8.00 | 7.91 | 10.97 | 11.00 | -0.03 |
| | 5280 | 56 | ax (20MHz) | 26T | MCS0 | 7.89 | 8.02 | 10.96 | 11.00 | -0.04 |
| | 5320 | 64 | ax (20MHz) | 26T | MCS0 | 7.97 | 7.82 | 10.90 | 11.00 | -0.10 |
| | 5270 | 54 | ax (40MHz) | 26T | MCS0 | 7.84 | 7.62 | 10.75 | 11.00 | -0.25 |
| | 5310 | 62 | ax (40MHz) | 26T | MCS0 | 7.97 | 7.72 | 10.86 | 11.00 | -0.14 |
| | 5290 | 58 | ax (80MHz) | 26T | MCS0 | 7.85 | 7.86 | 10.87 | 11.00 | -0.13 |
| Band 2C | 5500 | 100 | ax (20MHz) | 26T | MCS0 | 7.88 | 7.86 | 10.88 | 11.00 | -0.12 |
| | 5600 | 120 | ax (20MHz) | 26T | MCS0 | 7.98 | 7.77 | 10.89 | 11.00 | -0.11 |
| | 5720 | 144 | ax (20MHz) | 26T | MCS0 | 7.81 | 8.06 | 10.95 | 11.00 | -0.05 |
| | 5510 | 102 | ax (40MHz) | 26T | MCS0 | 7.84 | 8.08 | 10.97 | 11.00 | -0.03 |
| | 5590 | 118 | ax (40MHz) | 26T | MCS0 | 7.91 | 7.80 | 10.87 | 11.00 | -0.13 |
| | 5710 | 142 | ax (40MHz) | 26T | MCS0 | 7.86 | 7.79 | 10.84 | 11.00 | -0.16 |
| | 5530 | 106 | ax (80MHz) | 26T | MCS0 | 7.81 | 7.83 | 10.83 | 11.00 | -0.17 |
| | 5610 | 122 | ax (80MHz) | 26T | MCS0 | 7.93 | 7.67 | 10.81 | 11.00 | -0.19 |
| 5690 | 138 | ax (80MHz) | 26T | MCS0 | 7.93 | 7.52 | 10.74 | 11.00 | -0.26 | |

Table 7-74. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Antenna-1 Power Density [dBm] | Antenna-2 Power Density [dBm] | Summed MIMO Power Density [dBm] | Max Permissible Power Density | Margin [dB] |
|--------|-----------------|-------------|-------------|-------|------------------|-------------------------------|-------------------------------|---------------------------------|-------------------------------|-------------|
| Band 3 | 5745 | 149 | ax (20MHz) | 26T | MCS0 | 5.17 | 7.29 | 9.37 | 30.00 | -20.63 |
| | 5785 | 157 | ax (20MHz) | 26T | MCS0 | 5.05 | 6.98 | 9.13 | 30.00 | -20.87 |
| | 5825 | 165 | ax (20MHz) | 26T | MCS0 | 4.82 | 7.08 | 9.10 | 30.00 | -20.90 |
| | 5755 | 151 | ax (40MHz) | 26T | MCS0 | 5.37 | 7.02 | 9.28 | 30.00 | -20.72 |
| | 5795 | 159 | ax (40MHz) | 26T | MCS0 | 5.09 | 6.73 | 9.00 | 30.00 | -21.00 |
| | 5775 | 155 | ax (80MHz) | 26T | MCS0 | 6.61 | 7.13 | 9.89 | 30.00 | -20.11 |

Table 7-75. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Antenna-1 Power Density [dBm/MHz] | Antenna-2 Power Density [dBm/MHz] | MIMO Summed Power Density [dBm/MHz] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] | Directional Antenna Gain [dBi] | EIRP Power Density [dBm/MHz] | Max EIRP Power Density [dBm/MHz] | Margin [dB] |
|----------|-----------------|-------------|-------------|-------|------------------|-----------------------------------|-----------------------------------|-------------------------------------|--|-------------|--------------------------------|------------------------------|----------------------------------|-------------|
| Band 3/4 | 5845 | 169 | ax (20MHz) | 26T | MCS0 | 7.36 | 8.63 | 11.05 | 30.00 | -18.95 | -3.95 | 7.10 | 14.00 | -6.90 |
| Band 4 | 5865 | 173 | ax (20MHz) | 26T | MCS0 | 8.78 | 7.72 | 11.29 | | | -3.95 | 7.34 | 14.00 | -6.66 |
| | 5885 | 177 | ax (20MHz) | 26T | MCS0 | 6.08 | 7.41 | 9.80 | | | -3.95 | 5.85 | 14.00 | -8.15 |
| Band 3/4 | 5835 | 167 | ax (40MHz) | 26T | MCS0 | 8.75 | 8.52 | 11.65 | 30.00 | -18.35 | -3.95 | 7.70 | 14.00 | -6.30 |
| Band 4 | 5875 | 175 | ax (40MHz) | 26T | MCS0 | 8.40 | 8.39 | 11.40 | | | -3.95 | 7.45 | 14.00 | -6.55 |
| Band 3/4 | 5855 | 171 | ax (80MHz) | 26T | MCS0 | 13.43 | 8.31 | 14.59 | 30.00 | -15.41 | -3.95 | 10.64 | 14.00 | -3.36 |

Table 7-76. Band 4 MIMO Conducted Power Spectral Density Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 200 of 309 |

| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Antenna-1 Power Density [dBm] | Antenna-2 Power Density [dBm] | Summed MIMO Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|---------|-----------------|-------------|-------------|-------|------------------|-------------------------------|-------------------------------|---------------------------------|-----------------------------|-------------|
| Band 1 | 5180 | 36 | ax (20MHz) | 242T | MCS0 | 4.77 | 7.01 | 9.04 | 11.00 | -1.96 |
| | 5200 | 40 | ax (20MHz) | 242T | MCS0 | 4.83 | 7.09 | 9.12 | 11.00 | -1.88 |
| | 5240 | 48 | ax (20MHz) | 242T | MCS0 | 4.87 | 7.10 | 9.14 | 11.00 | -1.86 |
| | 5190 | 38 | ax (40MHz) | 484T | MCS0 | 3.91 | 3.80 | 6.87 | 11.00 | -4.13 |
| | 5230 | 46 | ax (40MHz) | 484T | MCS0 | 4.16 | 3.76 | 6.98 | 11.00 | -4.02 |
| | 5210 | 42 | ax (80MHz) | 996T | MCS0 | 0.76 | 0.18 | 3.49 | 11.00 | -7.51 |
| Band 2A | 5260 | 52 | ax (20MHz) | 242T | MCS0 | 4.98 | 6.87 | 9.04 | 11.00 | -1.96 |
| | 5280 | 56 | ax (20MHz) | 242T | MCS0 | 4.84 | 6.77 | 8.92 | 11.00 | -2.08 |
| | 5320 | 64 | ax (20MHz) | 242T | MCS0 | 4.76 | 6.26 | 8.58 | 11.00 | -2.42 |
| | 5270 | 54 | ax (40MHz) | 484T | MCS0 | 3.98 | 3.49 | 6.75 | 11.00 | -4.25 |
| | 5310 | 62 | ax (40MHz) | 484T | MCS0 | 3.84 | 3.13 | 6.51 | 11.00 | -4.49 |
| | 5290 | 58 | ax (80MHz) | 996T | MCS0 | 0.57 | -0.09 | 3.26 | 11.00 | -7.74 |
| Band 2C | 5500 | 100 | ax (20MHz) | 242T | MCS0 | 4.27 | 6.17 | 8.33 | 11.00 | -2.67 |
| | 5600 | 120 | ax (20MHz) | 242T | MCS0 | 5.19 | 6.54 | 8.93 | 11.00 | -2.07 |
| | 5720 | 144 | ax (20MHz) | 242T | MCS0 | 4.34 | 6.47 | 8.54 | 11.00 | -2.46 |
| | 5510 | 102 | ax (40MHz) | 484T | MCS0 | 3.50 | 2.95 | 6.25 | 11.00 | -4.75 |
| | 5590 | 118 | ax (40MHz) | 484T | MCS0 | 3.41 | 3.60 | 6.52 | 11.00 | -4.48 |
| | 5710 | 142 | ax (40MHz) | 484T | MCS0 | 3.14 | 3.29 | 6.23 | 11.00 | -4.77 |
| | 5530 | 106 | ax (80MHz) | 996T | MCS0 | 0.52 | 0.17 | 3.36 | 11.00 | -7.64 |
| | 5610 | 122 | ax (80MHz) | 996T | MCS0 | 0.20 | -0.01 | 3.11 | 11.00 | -7.89 |
| 5690 | 138 | ax (80MHz) | 996T | MCS0 | 0.13 | 0.11 | 3.13 | 11.00 | -7.87 | |

Table 7-77. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)

| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Antenna-1 Power Density [dBm] | Antenna-2 Power Density [dBm] | Summed MIMO Power Density [dBm] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] |
|--------|-----------------|-------------|-------------|-------|------------------|-------------------------------|-------------------------------|---------------------------------|--|-------------|
| Band 3 | 5745 | 149 | ax (20MHz) | 242T | MCS0 | 2.89 | 3.65 | 6.30 | 30.00 | -23.70 |
| | 5785 | 157 | ax (20MHz) | 242T | MCS0 | 2.75 | 3.10 | 5.94 | 30.00 | -24.06 |
| | 5825 | 165 | ax (20MHz) | 242T | MCS0 | 2.76 | 3.61 | 6.22 | 30.00 | -23.78 |
| | 5755 | 151 | ax (40MHz) | 484T | MCS0 | 0.56 | 0.30 | 3.44 | 30.00 | -26.56 |
| | 5795 | 159 | ax (40MHz) | 484T | MCS0 | 0.49 | 0.24 | 3.38 | 30.00 | -26.62 |
| | 5775 | 155 | ax (80MHz) | 996T | MCS0 | -2.92 | -3.24 | -0.06 | 30.00 | -30.06 |

Table 7-78. Band 3 MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)

| | Frequency [MHz] | Channel No. | 802.11 Mode | Tones | Data Rate [Mbps] | Antenna-1 Power Density [dBm/MHz] | Antenna-2 Power Density [dBm/MHz] | MIMO Summed Power Density [dBm/MHz] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] | Directional Antenna Gain [dBi] | EIRP Power Density [dBm/MHz] | Max EIRP Power Density [dBm/MHz] | Margin [dB] |
|----------|-----------------|-------------|-------------|-------|------------------|-----------------------------------|-----------------------------------|-------------------------------------|--|-------------|--------------------------------|------------------------------|----------------------------------|-------------|
| Band 3/4 | 5845 | 169 | ax (20MHz) | 242T | MCS0 | 6.43 | 5.66 | 9.07 | 30.00 | -20.93 | -3.95 | 5.12 | 14.00 | -8.88 |
| Band 4 | 5865 | 173 | ax (20MHz) | 242T | MCS0 | 6.33 | 5.83 | 9.10 | | | -3.95 | 5.14 | 14.00 | -8.86 |
| | 5885 | 177 | ax (20MHz) | 242T | MCS0 | 6.15 | 5.99 | 9.08 | | | -3.95 | 5.13 | 14.00 | -8.87 |
| Band 3/4 | 5835 | 167 | ax (40MHz) | 484T | MCS0 | 2.53 | 2.78 | 5.66 | 30.00 | -24.34 | -3.95 | 1.71 | 14.00 | -12.29 |
| Band 4 | 5875 | 175 | ax (40MHz) | 484T | MCS0 | 2.79 | 3.01 | 5.91 | | | -3.95 | 1.96 | 14.00 | -12.04 |
| Band 3/4 | 5855 | 171 | ax (80MHz) | 996T | MCS0 | 0.31 | -0.36 | 3.00 | 30.00 | -27.00 | -3.95 | -0.95 | 14.00 | -14.95 |

Table 7-79. Band 4 MIMO Conducted Power Spectral Density Measurements MIMO (Full Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 201 of 309 |

Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna-1 and Antenna-2 were first measured separately with reduced Antenna-1 and Antenna-2 powers per manufacture’s tune-up document. The measured values were then summed in linear power units then converted back to dBm.

Sample Directional Gain Calculation:

Assuming the antenna gain is -6.20 dBi for Antenna-1 and -7.80 dBi for Antenna-2.

$$\begin{aligned} \text{Directional gain} &= 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{\text{ANT}}] \text{ dBi} \\ &= 10 \log[(10^{-8.61/20} + 10^{-7.68/20} / 2] \text{ dBi} \\ &= (-3.95) \text{ dBi} \end{aligned}$$

Sample MIMO Calculation:

Assuming the average conducted power spectral density was measured to be 5.88 dBm for Antenna-1 and 6.27 dBm for Antenna-2.

$$\begin{aligned} \text{Antenna-1} + \text{Antenna-2} &= \text{MIMO} \\ (5.88 \text{ dBm} + 6.27 \text{ dBm}) &= (3.87 \text{ mW} + 4.24 \text{ mW}) = 8.11 \text{ mW} = 9.09 \text{ dBm} \end{aligned}$$

Sample e.i.r.p Power Spectral Density Calculation:

Assuming the average MIMO power density was calculated to be 9.09 dBm with directional gain of -3.95 dBi.

$$\begin{aligned} \text{e.i.r.p. Power Spectral Density(dBm)} &= \text{Power Spectral Density (dBm)} + \text{directional gain (dBi)} \\ 9.09 \text{ dBm} + (-3.95) \text{ dBi} &= 5.14 \text{ dBm} \end{aligned}$$

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 202 of 309 | |

7.6 Radiated Spurious Emission Measurements – Above 1GHz

§15.407(b) §15.205 §15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 26 Tones, 52 Tones, 106 Tones, 242 Tones, 484 Tones and 996 Tones), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

For transmitters operating in the 5.850 – 5.895 GHz band: all emissions at or above 5.895GHz shall not exceed an e.i.r.p. of -5dBm/MHz and shall decrease linearly up to an e.i.r.p. of -27dBm/MHz at or above 5.925GHz, and all emissions below 5.725 GHz shall not exceed an e.i.r.p. of -27dBm/MHz at 5.65 GHz increasing linearly to 10dBm/MHz at 5.7GHz and from 5.7GHz increasing linearly to a level of 15.6dBm/MHz at 5.72GHz, and from 5.72GHz increasing linearly to a level of 27dBm/MHz at 5.725GHz.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-80 per Section 15.209 and RSS-Gen (8.9).

| Frequency | Field Strength [μ V/m] | Measured Distance [Meters] |
|-----------------|--------------------------------|-------------------------------|
| Above 960.0 MHz | 500 | 3 |

Table 7-80. Radiated Limits

Test Procedures Used

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5
KDB 789033 D02 v02r01 – Section G

Test Settings

Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 203 of 309 |

5. Number of measurement points = 1001 (Number of points must be $\geq 2 \times \text{span/RBW}$)
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

Peak Measurements above 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = 120kHz
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

| | | | |
|--|--|---|---|
| FCC ID: A3LSMS901U |  Proud to be part of  | MEASUREMENT REPORT (CERTIFICATION) |  Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 204 of 309 |

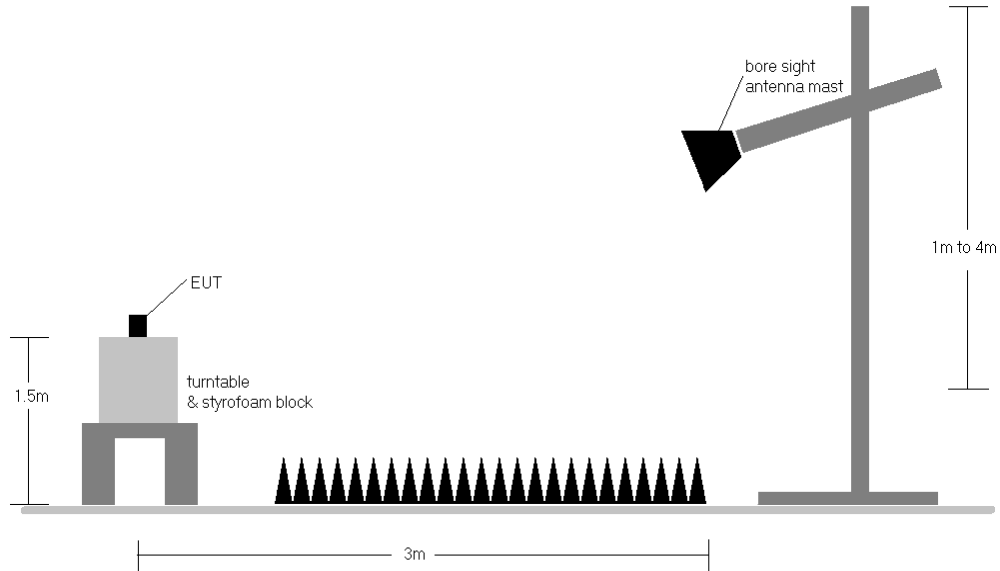



Figure 7-5. Test Instrument & Measurement Setup

| | | | |
|--|---|---|--|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 205 of 309 |

Test Notes

1. All emissions that lie in the restricted bands (denoted by a * next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-73.
2. All UNII Band 1 – 3 that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. For UNII Band 4, the -27dBm/MHz limit is measured with an RMS detector. At a distance of 3 meters, the field strength limit in dB μ V/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dB μ V/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
8. The "-" shown in the following RSE tables are used to denote a noise floor measurement.
9. For radiated measurements, emissions were investigated for the fully-loaded RU configuration and for all of the partially-loaded RU configurations. Among all of the available partially-loaded RU configurations, only the configuration with the worst case emissions is reported.

Sample Calculations

Determining Spurious Emissions Levels

- Field Strength Level [dB μ V/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- Margin [dB] = Field Strength Level [dB μ V/m] – Limit [dB μ V/m]

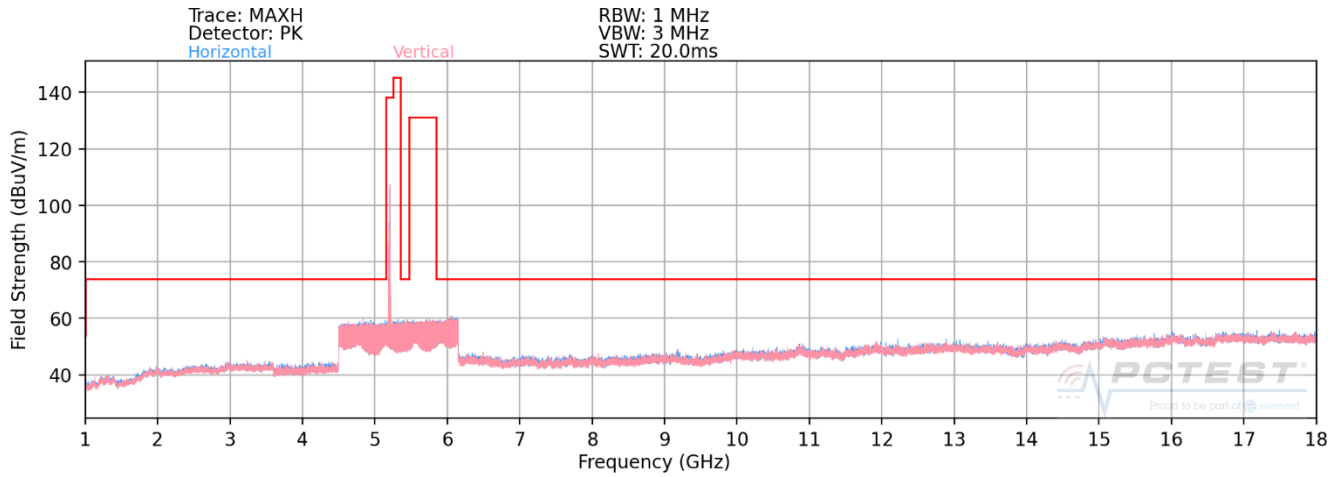
Radiated Band Edge Measurement Offset

- The amplitude offset shown in the radiated restricted band edge plots in Section Radiated Spurious Emission Measurements – Above 1GHz was calculated using the formula:
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Pre-amplifier Gain

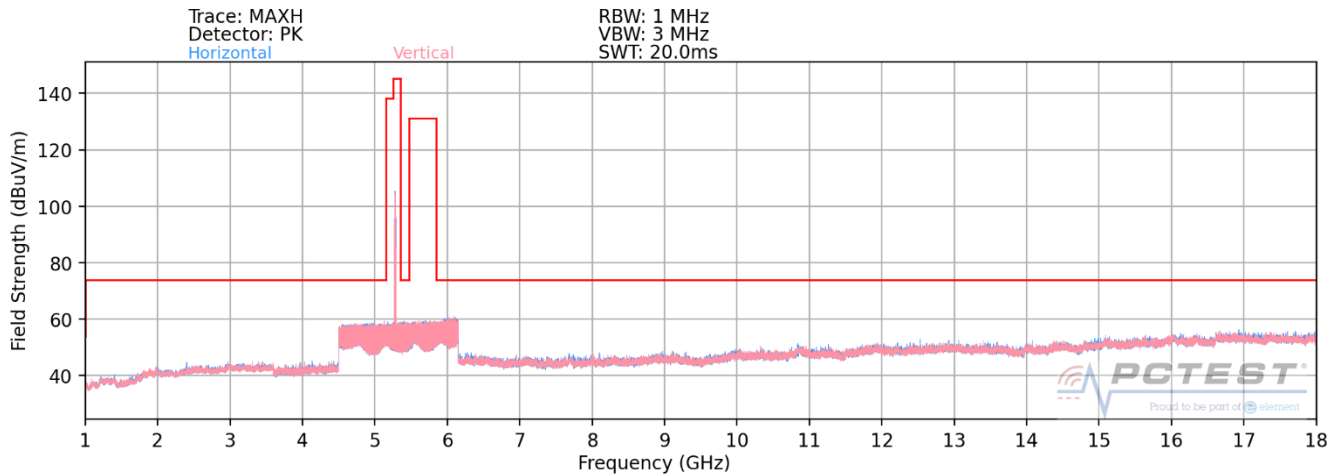
| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 206 of 309 |

7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements

26 Tones

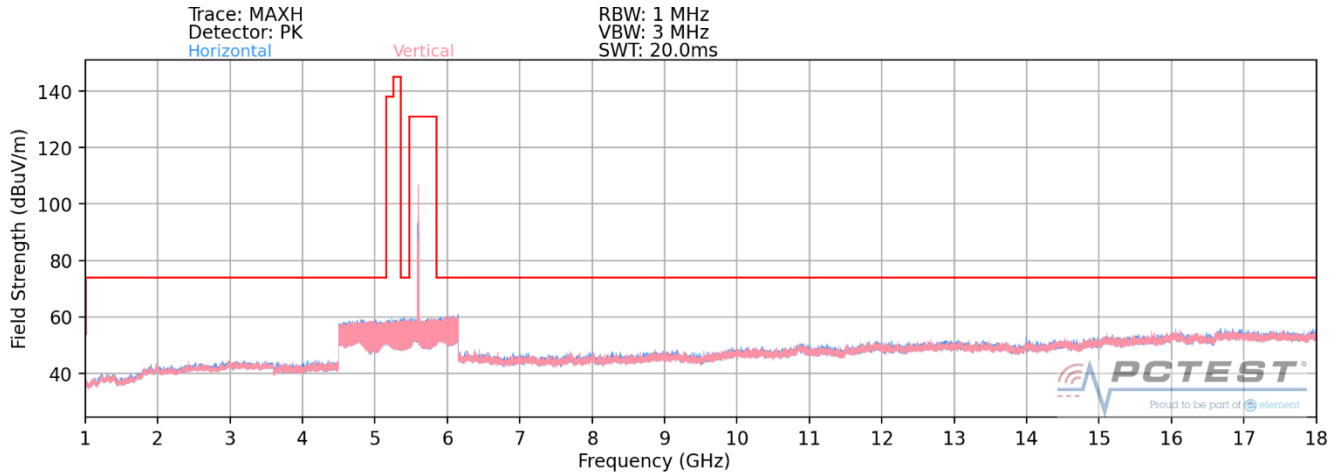


Plot 7-265. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U1 Ch. 40 – 26 Tones)

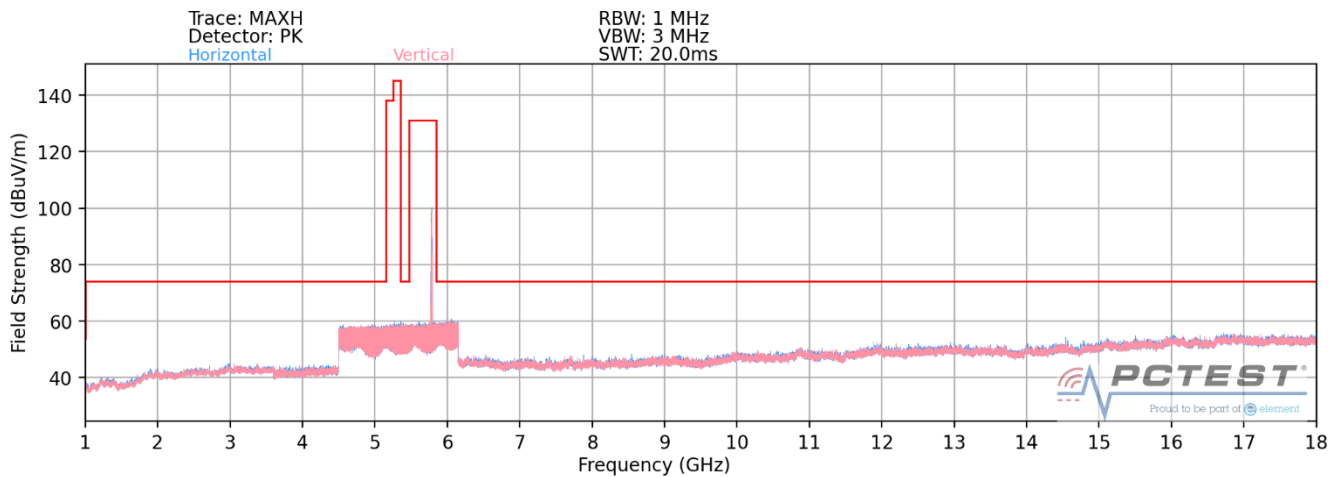


Plot 7-266. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2A Ch. 56 – 26 Tones)

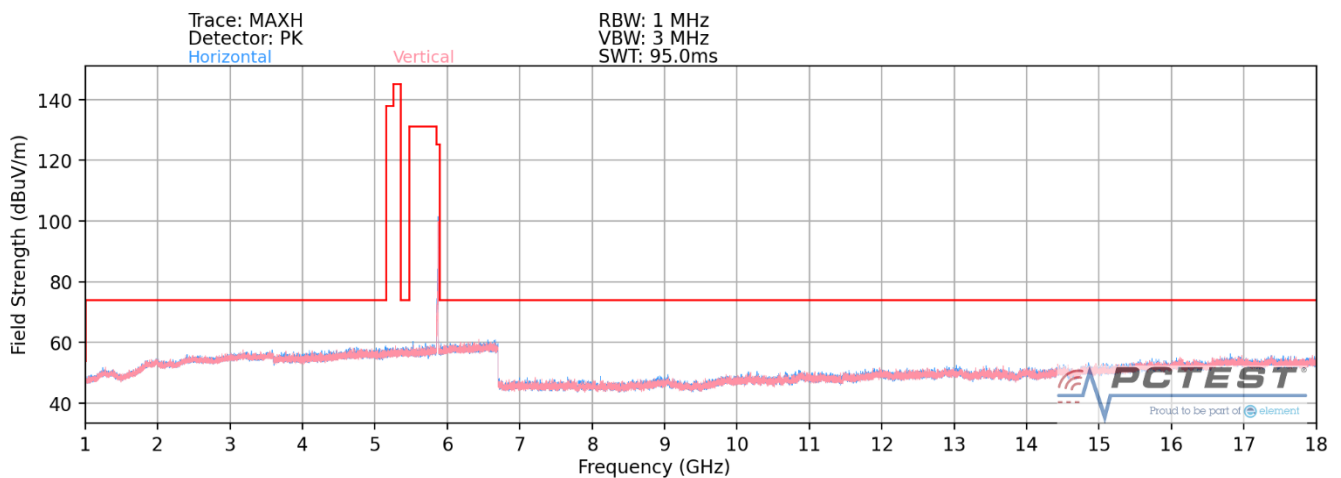
| | | | | |
|---|--|---|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 207 of 309 |



Plot 7-267. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2C Ch. 120 – 26 Tones)



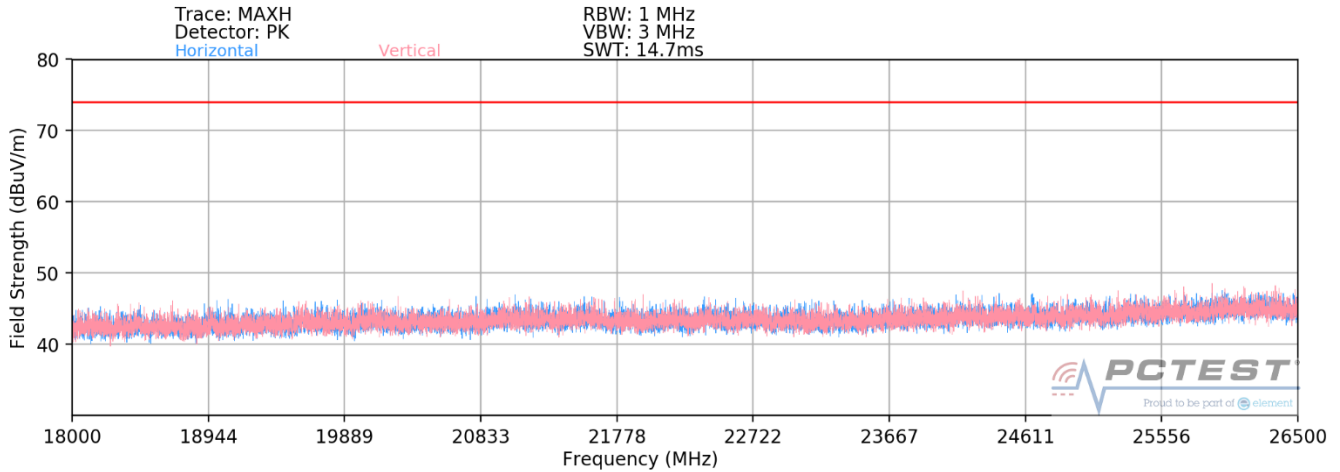
Plot 7-268. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U3 Ch. 157 – 26 Tones)



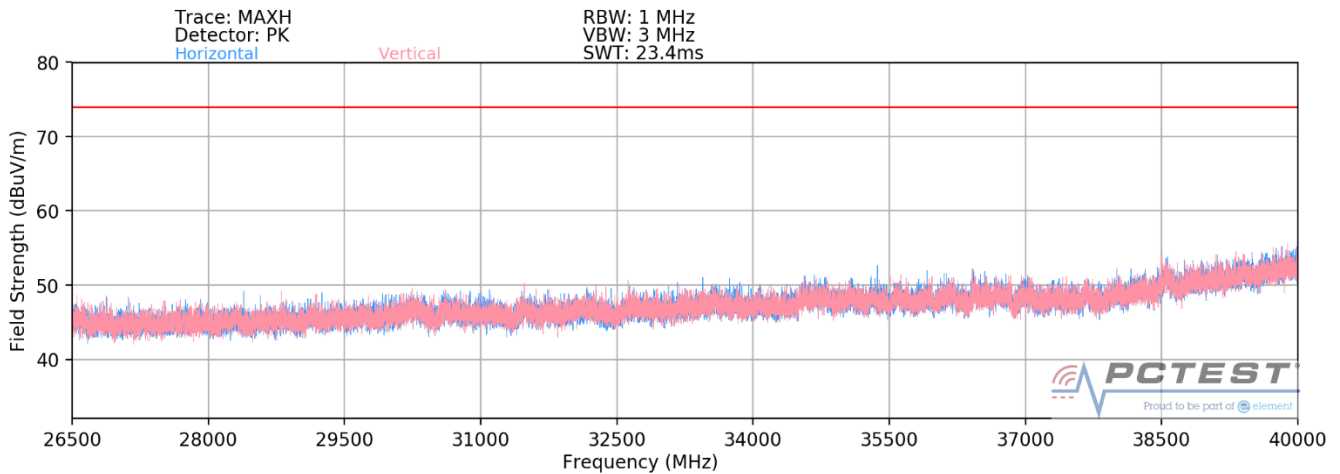
Plot 7-269. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U4 Ch. 173 – 26 Tones)

| | | | | |
|---|--|---|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 208 of 309 |

SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-270. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11ax – 26 Tones)



Plot 7-271. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11ax – 26 Tones)

| | | | | |
|---|--|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  PCTEST Proud to be part of  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 209 of 309 |

SISO Antenna-1 Radiated Spurious Emission Measurements (26 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 0
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00 | Peak | H | - | - | -68.85 | 12.16 | 0.00 | 50.31 | 68.20 | -17.89 |
| * 15540.00 | Average | H | - | - | -81.96 | 16.69 | 0.00 | 41.73 | 53.98 | -12.25 |
| * 15540.00 | Peak | H | - | - | -70.08 | 16.69 | 0.00 | 53.61 | 73.98 | -20.37 |
| * 20720.00 | Average | H | 150 | 294 | -67.44 | 4.37 | -9.54 | 34.40 | 53.98 | -19.58 |
| * 20720.00 | Peak | H | 150 | 294 | -56.73 | 4.37 | -9.54 | 45.11 | 73.98 | -28.87 |
| 25900.00 | Peak | H | - | - | -56.28 | 5.87 | -9.54 | 47.04 | 68.20 | -21.16 |

Table 7-81. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00 | Peak | H | 115 | 293 | -65.51 | 11.75 | 0.00 | 53.24 | 68.20 | -14.96 |
| * 15600.00 | Average | H | - | - | -82.36 | 17.47 | 0.00 | 42.11 | 53.98 | -11.87 |
| * 15600.00 | Peak | H | - | - | -70.49 | 17.47 | 0.00 | 53.98 | 73.98 | -20.00 |
| * 20800.00 | Average | H | 150 | 311 | -65.75 | 4.47 | -9.54 | 36.18 | 53.98 | -17.80 |
| * 20800.00 | Peak | H | 150 | 311 | -56.16 | 4.47 | -9.54 | 45.76 | 73.98 | -28.22 |
| 26000.00 | Peak | H | - | - | -56.57 | 6.04 | -9.54 | 46.93 | 68.20 | -21.27 |

Table 7-82. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 210 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00 | Peak | H | 148 | 285 | -69.27 | 12.40 | 0.00 | 50.13 | 68.20 | -18.07 |
| * 15720.00 | Average | H | - | - | -82.76 | 17.59 | 0.00 | 41.83 | 53.98 | -12.15 |
| * 15720.00 | Peak | H | - | - | -70.17 | 17.59 | 0.00 | 54.42 | 73.98 | -19.56 |
| * 20960.00 | Average | H | 150 | 310 | -66.98 | 4.65 | -9.54 | 35.13 | 53.98 | -18.85 |
| * 20960.00 | Peak | H | 150 | 310 | -58.00 | 4.65 | -9.54 | 44.11 | 73.98 | -29.86 |
| 26200.00 | Peak | H | - | - | -56.71 | 5.76 | -9.54 | 46.51 | 68.20 | -21.69 |

Table 7-83. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00 | Peak | H | 121 | 298 | -67.88 | 12.54 | 0.00 | 51.66 | 68.20 | -16.54 |
| * 15780.00 | Average | H | - | - | -82.71 | 17.26 | 0.00 | 41.55 | 53.98 | -12.43 |
| * 15780.00 | Peak | H | - | - | -70.45 | 17.26 | 0.00 | 53.81 | 73.98 | -20.17 |
| * 21040.00 | Average | H | 150 | 320 | -66.70 | 4.68 | -9.54 | 35.44 | 53.98 | -18.54 |
| * 21040.00 | Peak | H | 150 | 320 | -56.82 | 4.68 | -9.54 | 45.32 | 73.98 | -28.66 |
| 26300.00 | Peak | H | - | - | -57.83 | 5.68 | -9.54 | 45.31 | 68.20 | -22.89 |

Table 7-84. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 211 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56


| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00 | Peak | H | 128 | 295 | -67.58 | 12.54 | 0.00 | 51.96 | 68.20 | -16.24 |
| * 15840.00 | Average | H | - | - | -82.83 | 17.42 | 0.00 | 41.59 | 53.98 | -12.38 |
| * 15840.00 | Peak | H | - | - | -70.53 | 17.42 | 0.00 | 53.89 | 73.98 | -20.08 |
| * 21120.00 | Average | H | 150 | 308 | -66.43 | 4.78 | -9.54 | 35.80 | 53.98 | -18.18 |
| * 21120.00 | Peak | H | 150 | 308 | -57.06 | 4.78 | -9.54 | 45.17 | 73.98 | -28.81 |
| 26400.00 | Peak | H | - | - | -57.67 | 5.75 | -9.54 | 45.54 | 68.20 | -22.66 |

Table 7-85. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00 | Average | H | 261 | 294 | -81.26 | 12.65 | 0.00 | 38.39 | 53.98 | -15.59 |
| * 10640.00 | Peak | H | 261 | 294 | -69.25 | 12.65 | 0.00 | 50.40 | 73.98 | -23.58 |
| * 15960.00 | Average | H | - | - | -83.18 | 18.41 | 0.00 | 42.23 | 53.98 | -11.75 |
| * 15960.00 | Peak | H | - | - | -71.42 | 18.41 | 0.00 | 53.99 | 73.98 | -19.99 |
| * 21280.00 | Average | H | 150 | 310 | -66.96 | 4.92 | -9.54 | 35.42 | 53.98 | -18.56 |
| * 21280.00 | Peak | H | 150 | 310 | -57.76 | 4.92 | -9.54 | 44.62 | 73.98 | -29.36 |
| 26600.00 | Peak | H | - | - | -58.90 | 5.78 | -9.54 | 44.34 | 68.20 | -23.86 |

Table 7-86. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 212 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00 | Average | H | 131 | 334 | -78.02 | 12.80 | 0.00 | 41.78 | 53.98 | -12.20 |
| * 11000.00 | Peak | H | 131 | 334 | -63.87 | 12.80 | 0.00 | 55.93 | 73.98 | -18.05 |
| 16500.00 | Peak | H | - | - | -70.10 | 18.36 | 0.00 | 55.26 | 68.20 | -12.94 |
| 22000.00 | Peak | H | 150 | 334 | -57.91 | 4.80 | -9.54 | 44.34 | 68.20 | -23.86 |
| 27500.00 | Peak | H | - | - | -57.07 | 5.93 | -9.54 | 46.31 | 68.20 | -21.89 |

Table 7-87. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00 | Average | H | 157 | 328 | -78.29 | 12.90 | 0.00 | 41.61 | 53.98 | -12.37 |
| * 11200.00 | Peak | H | 157 | 328 | -64.13 | 12.90 | 0.00 | 55.77 | 73.98 | -18.21 |
| 16800.00 | Peak | H | - | - | -70.12 | 18.52 | 0.00 | 55.40 | 68.20 | -12.80 |
| * 22400.00 | Average | H | 150 | 335 | -65.93 | 4.84 | -9.54 | 36.36 | 53.98 | -17.62 |
| * 22400.00 | Peak | H | 150 | 335 | -56.70 | 4.84 | -9.54 | 45.59 | 73.98 | -28.39 |
| 28000.00 | Peak | H | - | - | -56.08 | 6.12 | -9.54 | 47.49 | 68.20 | -20.71 |

Table 7-88. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 213 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00 | Average | H | 175 | 323 | -79.27 | 12.86 | 0.00 | 40.59 | 53.98 | -13.39 |
| * 11440.00 | Peak | H | 175 | 323 | -65.55 | 12.86 | 0.00 | 54.31 | 73.98 | -19.67 |
| 17160.00 | Peak | H | - | - | -70.04 | 18.02 | 0.00 | 54.98 | 68.20 | -13.22 |
| * 22880.00 | Average | H | 150 | 333 | -67.10 | 4.77 | -9.54 | 35.13 | 53.98 | -18.85 |
| * 22880.00 | Peak | H | 150 | 333 | -57.18 | 4.77 | -9.54 | 45.05 | 73.98 | -28.93 |
| 28600.00 | Peak | H | - | - | -57.16 | 6.32 | -9.54 | 46.61 | 68.20 | -21.59 |

Table 7-89. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00 | Average | H | 117 | 295 | -80.34 | 13.58 | 0.00 | 40.24 | 53.98 | -13.74 |
| * 11490.00 | Peak | H | 117 | 295 | -67.50 | 13.58 | 0.00 | 53.08 | 73.98 | -20.90 |
| 17235.00 | Peak | H | - | - | -70.10 | 17.76 | 0.00 | 54.66 | 68.20 | -13.54 |
| * 22980.00 | Average | H | - | - | -68.16 | 4.67 | -9.54 | 33.97 | 53.98 | -20.01 |
| * 22980.00 | Peak | H | - | - | -57.79 | 4.67 | -9.54 | 44.34 | 73.98 | -29.64 |
| 28725.00 | Peak | H | - | - | -57.92 | 6.42 | -9.54 | 45.96 | 68.20 | -22.24 |

Table 7-90. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 214 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00 | Average | H | 166 | 323 | -80.18 | 13.03 | 0.00 | 39.85 | 53.98 | -14.13 |
| * 11570.00 | Peak | H | 166 | 323 | -67.16 | 13.03 | 0.00 | 52.87 | 73.98 | -21.11 |
| 17355.00 | Peak | H | - | - | -70.75 | 18.72 | 0.00 | 54.97 | 68.20 | -13.23 |
| 23140.00 | Peak | H | - | - | -57.55 | 4.61 | -9.54 | 44.51 | 68.20 | -23.69 |
| 28925.00 | Peak | H | - | - | -58.13 | 6.50 | -9.54 | 45.83 | 68.20 | -22.37 |

Table 7-91. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00 | Average | H | 249 | 335 | -81.35 | 13.65 | 0.00 | 39.30 | 53.98 | -14.68 |
| * 11650.00 | Peak | H | 249 | 335 | -67.73 | 13.65 | 0.00 | 52.92 | 73.98 | -21.06 |
| 17475.00 | Peak | H | - | - | -69.76 | 17.76 | 0.00 | 55.00 | 68.20 | -13.20 |
| 23300.00 | Peak | H | - | - | -57.28 | 4.72 | -9.54 | 44.91 | 68.20 | -23.29 |
| 29125.00 | Peak | H | - | - | -57.97 | 6.86 | -9.54 | 46.35 | 68.20 | -21.85 |

Table 7-92. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 215 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5845MHz
 Channel: 169

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11690.00 | Average | H | - | - | -82.71 | 14.34 | 0.00 | 38.63 | 53.98 | -15.34 |
| * 11690.00 | Peak | H | - | - | -70.51 | 14.34 | 0.00 | 50.83 | 73.98 | -23.14 |
| 17535.00 | Peak | H | - | - | -70.15 | 18.43 | 0.00 | 55.28 | 68.20 | -12.92 |
| 23380.00 | Peak | H | - | - | -55.87 | 4.67 | -9.54 | 46.25 | 68.20 | -21.95 |
| 29225.00 | Peak | H | - | - | -55.81 | 6.67 | -9.54 | 48.32 | 68.20 | -19.88 |
| 35070.00 | Peak | H | - | - | -55.25 | 8.56 | -9.54 | 50.76 | 68.20 | -17.44 |

Table 7-93. Radiated Measurements SISO ANT1 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5865MHz
 Channel: 173

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11730.00 | Average | H | 166 | 335 | -81.45 | 13.97 | 0.00 | 39.52 | 53.98 | -14.46 |
| * 11730.00 | Peak | H | 166 | 335 | -68.85 | 13.97 | 0.00 | 52.12 | 73.98 | -21.86 |
| 17595.00 | Peak | H | - | - | -70.44 | 18.25 | 0.00 | 54.81 | 68.20 | -13.39 |
| 23460.00 | Peak | H | - | - | -56.26 | 4.62 | -9.54 | 45.82 | 68.20 | -22.38 |
| 29325.00 | Peak | H | - | - | -55.31 | 6.99 | -9.54 | 49.13 | 68.20 | -19.07 |
| 35190.00 | Peak | H | - | - | -54.99 | 8.73 | -9.54 | 51.20 | 68.20 | -17.00 |

Table 7-94. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 216 of 309 |

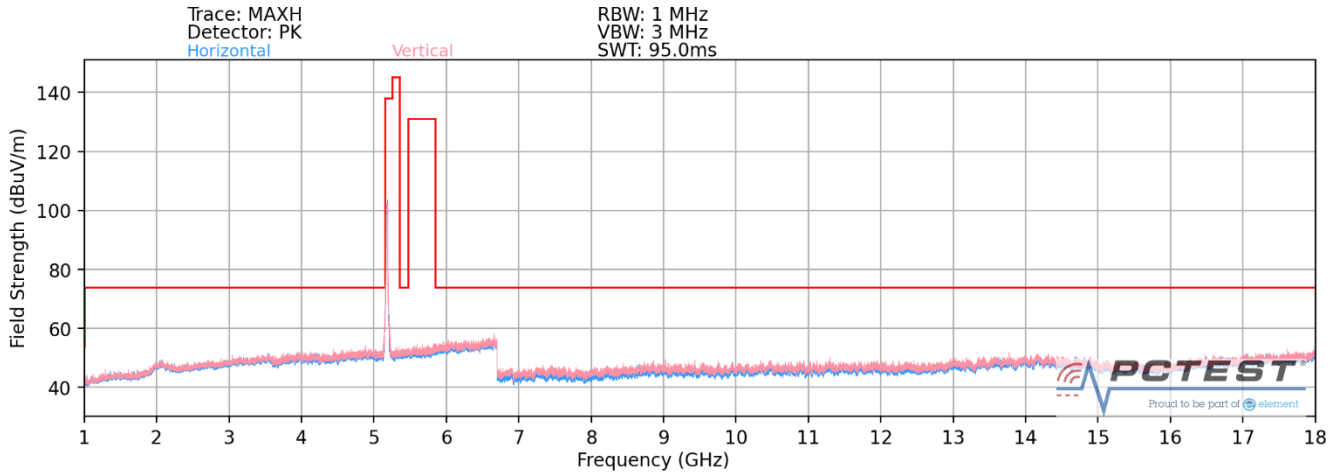
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5885MHz
 Channel: 177

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11770.00 | Average | H | 156 | 55 | -81.34 | 14.09 | 0.00 | 39.75 | 53.98 | -14.23 |
| * 11770.00 | Peak | H | 156 | 55 | -69.09 | 14.09 | 0.00 | 52.00 | 73.98 | -21.98 |
| 17655.00 | Peak | H | - | - | -70.50 | 18.05 | 0.00 | 54.55 | 68.20 | -13.65 |
| 23540.00 | Peak | H | - | - | -55.68 | 4.71 | -9.54 | 46.49 | 68.20 | -21.71 |
| 29425.00 | Peak | H | - | - | -56.14 | 7.01 | -9.54 | 48.33 | 68.20 | -19.87 |
| 35310.00 | Peak | H | - | - | -54.61 | 8.79 | -9.54 | 51.64 | 68.20 | -16.56 |

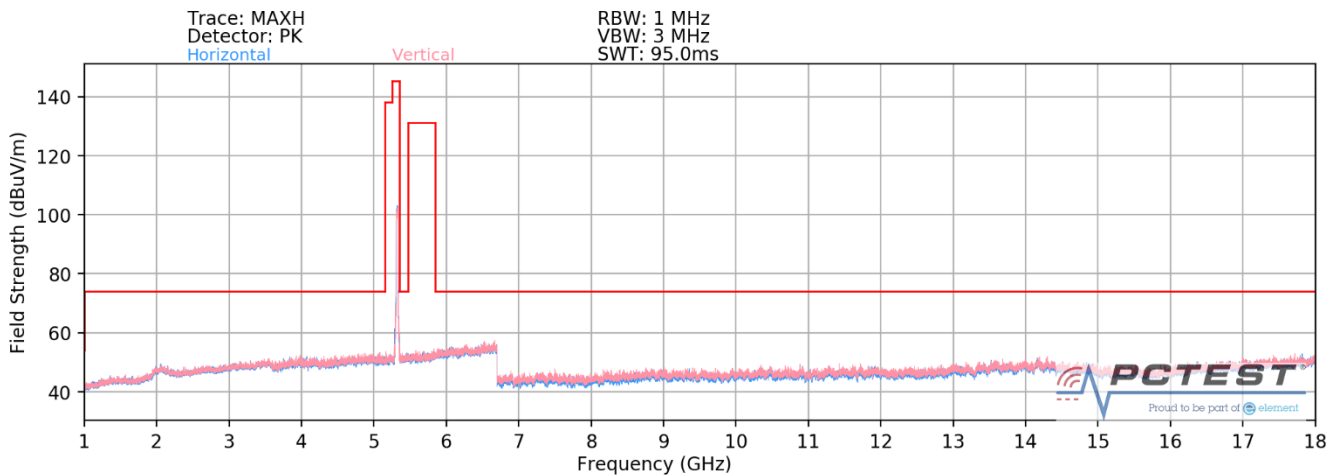
Table 7-95. Radiated Measurements SISO ANT1 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 217 of 309 |

242 Tones

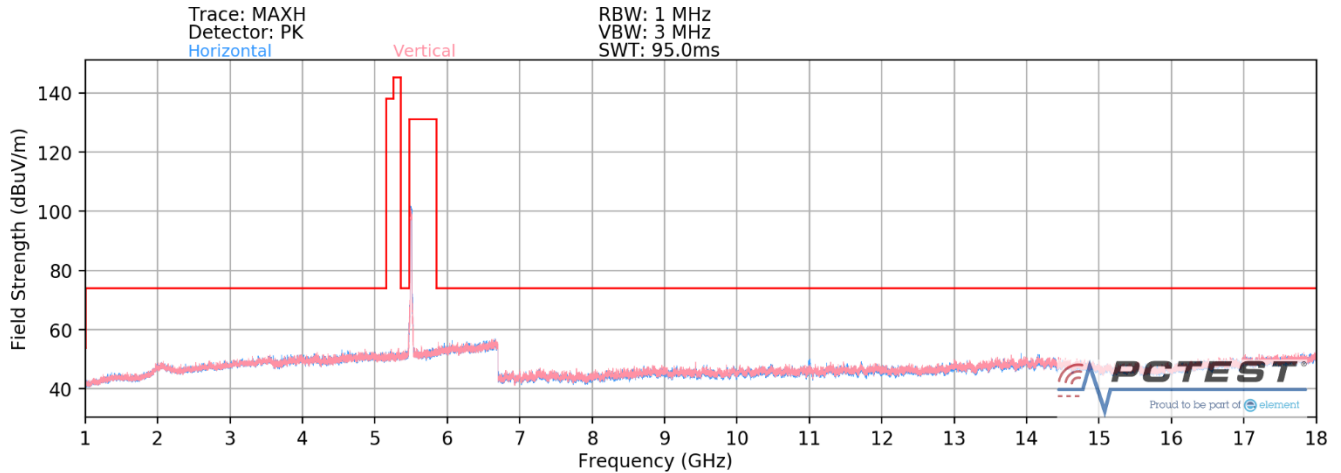


Plot 7-272. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U1 Ch. 40 – 242 Tones)

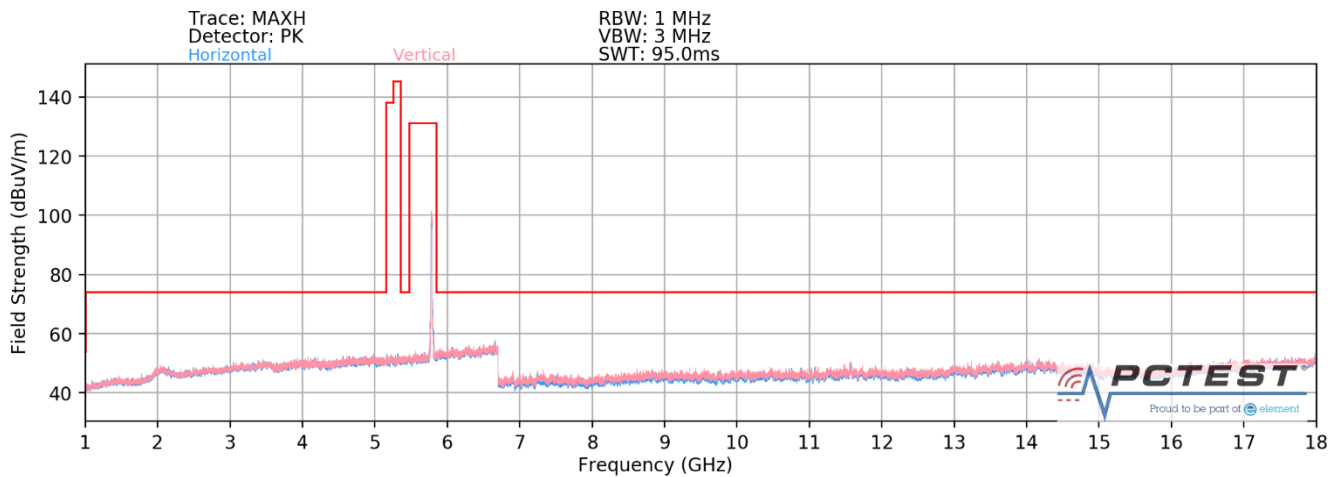


Plot 7-273. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2A Ch. 56 – 242 Tones)

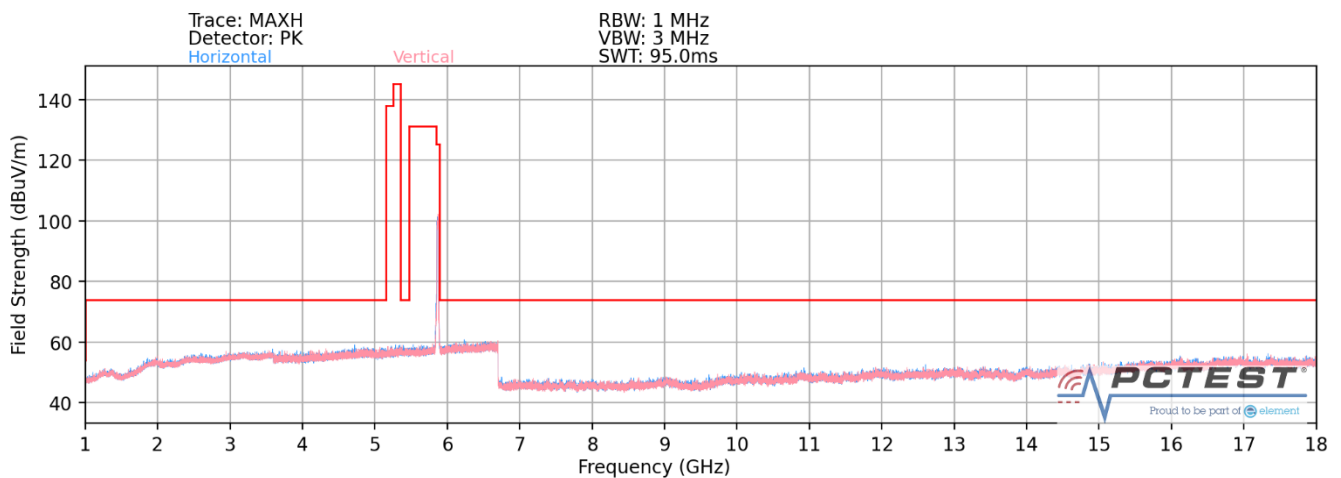
| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 218 of 309 |



Plot 7-274. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U2C Ch. 120 – 242 Tones)



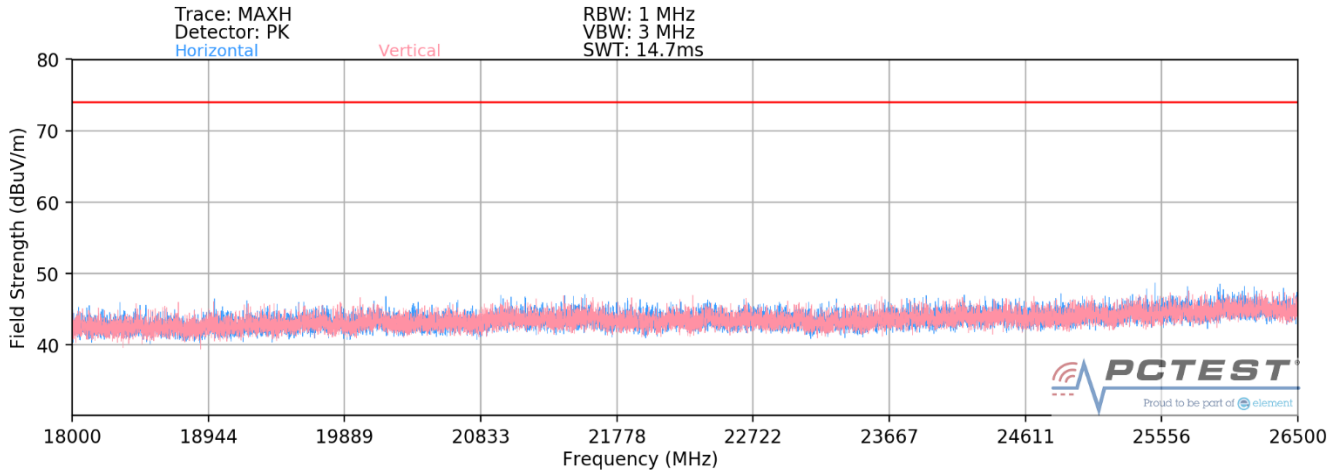
Plot 7-275. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U3 Ch. 157 – 242 Tones)



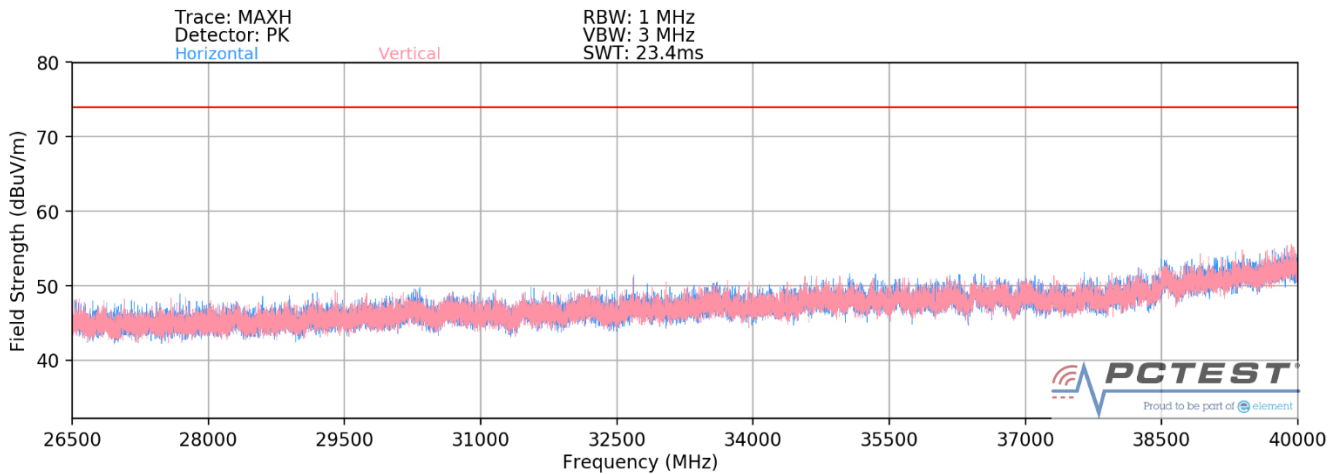
Plot 7-276. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11ax – U4 Ch. 173 – 242 Tones)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 219 of 309 |

SISO Antenna-1 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-277. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11ax – 242 Tones)



Plot 7-278. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11ax – 242 Tones)

| | | | | |
|---|--|---|---|-----------------------------------|
| FCC ID: A3LSMS901U |  PCTEST Proud to be part of  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 220 of 309 |

SISO Antenna-1 Radiated Spurious Emission Measurements (242 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00 | Peak | H | 381 | 321 | -62.91 | 9.41 | 0.00 | 53.50 | 68.20 | -14.70 |
| * 15540.00 | Average | H | - | - | -79.60 | 10.44 | 0.00 | 37.84 | 53.98 | -16.14 |
| * 15540.00 | Peak | H | - | - | -67.64 | 10.44 | 0.00 | 49.80 | 73.98 | -24.18 |
| * 20720.00 | Average | H | 150 | 316 | -66.98 | 4.37 | -9.54 | 34.86 | 53.98 | -19.12 |
| * 20720.00 | Peak | H | 150 | 316 | -57.37 | 4.37 | -9.54 | 44.47 | 73.98 | -29.51 |
| 25900.00 | Peak | H | - | - | -57.57 | 5.87 | -9.54 | 45.75 | 68.20 | -22.45 |

Table 7-96. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00 | Peak | H | 370 | 324 | -64.69 | 9.68 | 0.00 | 51.99 | 68.20 | -16.21 |
| * 15600.00 | Average | H | - | - | -80.36 | 10.26 | 0.00 | 36.90 | 53.98 | -17.07 |
| * 15600.00 | Peak | H | - | - | -67.52 | 10.26 | 0.00 | 49.74 | 73.98 | -24.23 |
| * 20800.00 | Average | H | 150 | 309 | -66.18 | 4.47 | -9.54 | 35.75 | 53.98 | -18.23 |
| * 20800.00 | Peak | H | 150 | 309 | -56.94 | 4.47 | -9.54 | 44.99 | 73.98 | -28.99 |
| 26000.00 | Peak | H | - | - | -57.85 | 6.04 | -9.54 | 45.65 | 68.20 | -22.55 |

Table 7-97. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 221 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00 | Peak | H | 355 | 346 | -63.42 | 10.32 | 0.00 | 53.90 | 68.20 | -14.30 |
| * 15720.00 | Average | H | - | - | -81.11 | 9.93 | 0.00 | 35.82 | 53.98 | -18.16 |
| * 15720.00 | Peak | H | - | - | -69.35 | 9.93 | 0.00 | 47.58 | 73.98 | -26.40 |
| * 20960.00 | Average | H | 150 | 313 | -67.28 | 4.65 | -9.54 | 34.83 | 53.98 | -19.15 |
| * 20960.00 | Peak | H | 150 | 313 | -58.03 | 4.65 | -9.54 | 44.08 | 73.98 | -29.90 |
| 26200.00 | Peak | H | - | - | -57.71 | 5.76 | -9.54 | 45.51 | 68.20 | -22.69 |

Table 7-98. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00 | Peak | H | 327 | 316 | -65.22 | 9.45 | 0.00 | 51.23 | 68.20 | -16.97 |
| * 15780.00 | Average | H | - | - | -79.44 | 10.55 | 0.00 | 38.11 | 53.98 | -15.86 |
| * 15780.00 | Peak | H | - | - | -67.03 | 10.55 | 0.00 | 50.52 | 73.98 | -23.45 |
| * 21040.00 | Average | H | 150 | 318 | -66.89 | 4.68 | -9.54 | 35.25 | 53.98 | -18.73 |
| * 21040.00 | Peak | H | 150 | 318 | -57.98 | 4.68 | -9.54 | 44.16 | 73.98 | -29.82 |
| 26300.00 | Peak | H | - | - | -57.29 | 5.68 | -9.54 | 45.85 | 68.20 | -22.35 |

Table 7-99. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 222 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00 | Peak | H | 354 | 68 | -64.34 | 9.74 | 0.00 | 52.40 | 68.20 | -15.80 |
| * 15840.00 | Average | H | - | - | -79.82 | 9.71 | 0.00 | 36.89 | 53.98 | -17.09 |
| * 15840.00 | Peak | H | - | - | -66.69 | 9.71 | 0.00 | 50.02 | 73.98 | -23.96 |
| * 21120.00 | Average | H | 150 | 315 | -66.58 | 4.78 | -9.54 | 35.65 | 53.98 | -18.33 |
| * 21120.00 | Peak | H | 150 | 315 | -56.08 | 4.78 | -9.54 | 46.15 | 73.98 | -27.83 |
| 26400.00 | Peak | H | - | - | -57.39 | 5.75 | -9.54 | 45.81 | 68.20 | -22.39 |

Table 7-100. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00 | Average | H | 342 | 20 | -75.65 | 9.98 | 0.00 | 41.33 | 53.98 | -12.65 |
| * 10640.00 | Peak | H | 342 | 20 | -62.42 | 9.98 | 0.00 | 54.56 | 73.98 | -19.42 |
| * 15960.00 | Average | H | - | - | -79.53 | 9.52 | 0.00 | 36.99 | 53.98 | -16.99 |
| * 15960.00 | Peak | H | - | - | -67.77 | 9.52 | 0.00 | 48.75 | 73.98 | -25.23 |
| * 21280.00 | Average | H | 150 | 310 | -66.84 | 4.92 | -9.54 | 35.54 | 53.98 | -18.43 |
| * 21280.00 | Peak | H | 150 | 310 | -57.14 | 4.92 | -9.54 | 45.24 | 73.98 | -28.74 |
| 26600.00 | Peak | H | - | - | -58.40 | 5.78 | -9.54 | 44.84 | 68.20 | -23.36 |

Table 7-101. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 223 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00 | Average | H | 316 | 19 | -72.83 | 9.56 | 0.00 | 43.73 | 53.98 | -10.25 |
| * 11000.00 | Peak | H | 316 | 19 | -61.54 | 9.56 | 0.00 | 55.02 | 73.98 | -18.96 |
| 16500.00 | Peak | H | - | - | -67.61 | 11.37 | 0.00 | 50.76 | 68.20 | -17.44 |
| 22000.00 | Peak | H | 150 | 333 | -58.08 | 4.80 | -9.54 | 44.17 | 68.20 | -24.03 |
| 27500.00 | Peak | H | - | - | -57.50 | 5.93 | -9.54 | 45.88 | 68.20 | -22.32 |

Table 7-102. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00 | Average | H | 156 | 356 | -75.52 | 8.96 | 0.00 | 40.44 | 53.98 | -13.54 |
| * 11200.00 | Peak | H | 156 | 356 | -63.35 | 8.96 | 0.00 | 52.61 | 73.98 | -21.37 |
| 16800.00 | Peak | H | - | - | -67.81 | 11.21 | 0.00 | 50.40 | 68.20 | -17.80 |
| * 22400.00 | Average | H | 150 | 331 | -65.94 | 4.84 | -9.54 | 36.35 | 53.98 | -17.63 |
| * 22400.00 | Peak | H | 150 | 331 | -57.13 | 4.84 | -9.54 | 45.16 | 73.98 | -28.82 |
| 28000.00 | Peak | H | - | - | -57.68 | 6.12 | -9.54 | 45.89 | 68.20 | -22.31 |

Table 7-103. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 224 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00 | Average | H | 101 | 327 | -75.49 | 10.30 | 0.00 | 41.81 | 53.98 | -12.17 |
| * 11440.00 | Peak | H | 101 | 327 | -63.47 | 10.30 | 0.00 | 53.83 | 73.98 | -20.15 |
| 17160.00 | Peak | H | - | - | -67.27 | 12.28 | 0.00 | 52.01 | 68.20 | -16.19 |
| * 22880.00 | Average | H | - | - | -67.35 | 4.77 | -9.54 | 34.88 | 53.98 | -19.10 |
| * 22880.00 | Peak | H | - | - | -57.39 | 4.77 | -9.54 | 44.84 | 73.98 | -29.14 |
| 28600.00 | Peak | H | - | - | -57.88 | 6.32 | -9.54 | 45.89 | 68.20 | -22.31 |

Table 7-104. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00 | Average | H | 161 | 2 | -74.76 | 10.51 | 0.00 | 42.75 | 53.98 | -11.23 |
| * 11490.00 | Peak | H | 161 | 2 | -61.92 | 10.51 | 0.00 | 55.59 | 73.98 | -18.39 |
| 17235.00 | Peak | H | - | - | -68.02 | 12.59 | 0.00 | 51.57 | 68.20 | -16.63 |
| * 22980.00 | Average | H | - | - | -68.03 | 4.67 | -9.54 | 34.10 | 53.98 | -19.88 |
| * 22980.00 | Peak | H | - | - | -57.79 | 4.67 | -9.54 | 44.34 | 73.98 | -29.64 |
| 28725.00 | Peak | H | - | - | -58.10 | 6.42 | -9.54 | 45.77 | 68.20 | -22.43 |

Table 7-105. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 225 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00 | Average | H | 148 | 3 | -76.02 | 9.98 | 0.00 | 40.96 | 53.98 | -13.02 |
| * 11570.00 | Peak | H | 148 | 3 | -64.17 | 9.98 | 0.00 | 52.81 | 73.98 | -21.17 |
| 17355.00 | Peak | H | - | - | -66.48 | 12.30 | 0.00 | 52.82 | 68.20 | -15.38 |
| 23140.00 | Peak | H | - | - | -56.97 | 4.61 | -9.54 | 45.10 | 68.20 | -23.10 |
| 28925.00 | Peak | H | - | - | -58.20 | 6.50 | -9.54 | 45.75 | 68.20 | -22.45 |

Table 7-106. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00 | Average | H | 123 | 360 | -77.08 | 10.06 | 0.00 | 39.98 | 53.98 | -14.00 |
| * 11650.00 | Peak | H | 123 | 360 | -65.40 | 10.06 | 0.00 | 51.66 | 73.98 | -22.32 |
| 17475.00 | Peak | H | - | - | -66.84 | 12.01 | 0.00 | 52.17 | 68.20 | -16.03 |
| 23300.00 | Peak | H | - | - | -57.84 | 4.72 | -9.54 | 44.35 | 68.20 | -23.85 |
| 29125.00 | Peak | H | - | - | -57.94 | 6.86 | -9.54 | 46.38 | 68.20 | -21.82 |

Table 7-107. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 226 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5845MHz
 Channel: 169

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11690.00 | Average | H | 238 | 331 | -79.74 | 14.34 | 0.00 | 41.60 | 53.98 | -12.37 |
| * 11690.00 | Peak | H | 238 | 331 | -67.57 | 14.34 | 0.00 | 53.77 | 73.98 | -20.20 |
| 17535.00 | Peak | H | - | - | -69.98 | 18.43 | 0.00 | 55.45 | 68.20 | -12.75 |
| 23380.00 | Peak | H | - | - | -55.73 | 4.67 | -9.54 | 46.39 | 68.20 | -21.81 |
| 29225.00 | Peak | H | - | - | -56.40 | 6.67 | -9.54 | 47.73 | 68.20 | -20.47 |
| 35070.00 | Peak | H | - | - | -55.59 | 8.56 | -9.54 | 50.42 | 68.20 | -17.78 |

Table 7-108. Radiated Measurements SISO ANT1 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5865MHz
 Channel: 173

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11730.00 | Average | H | 181 | 331 | -79.21 | 13.97 | 0.00 | 41.76 | 53.98 | -12.22 |
| * 11730.00 | Peak | H | 181 | 331 | -67.06 | 13.97 | 0.00 | 53.91 | 73.98 | -20.07 |
| 17595.00 | Peak | H | - | - | -70.27 | 18.25 | 0.00 | 54.98 | 68.20 | -13.22 |
| 23460.00 | Peak | H | - | - | -56.96 | 4.62 | -9.54 | 45.12 | 68.20 | -23.08 |
| 29325.00 | Peak | H | - | - | -55.93 | 6.99 | -9.54 | 48.52 | 68.20 | -19.68 |
| 35190.00 | Peak | H | - | - | -55.65 | 8.73 | -9.54 | 50.54 | 68.20 | -17.66 |

Table 7-109. Radiated Measurements SISO ANT1 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 227 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5885MHz
 Channel: 177

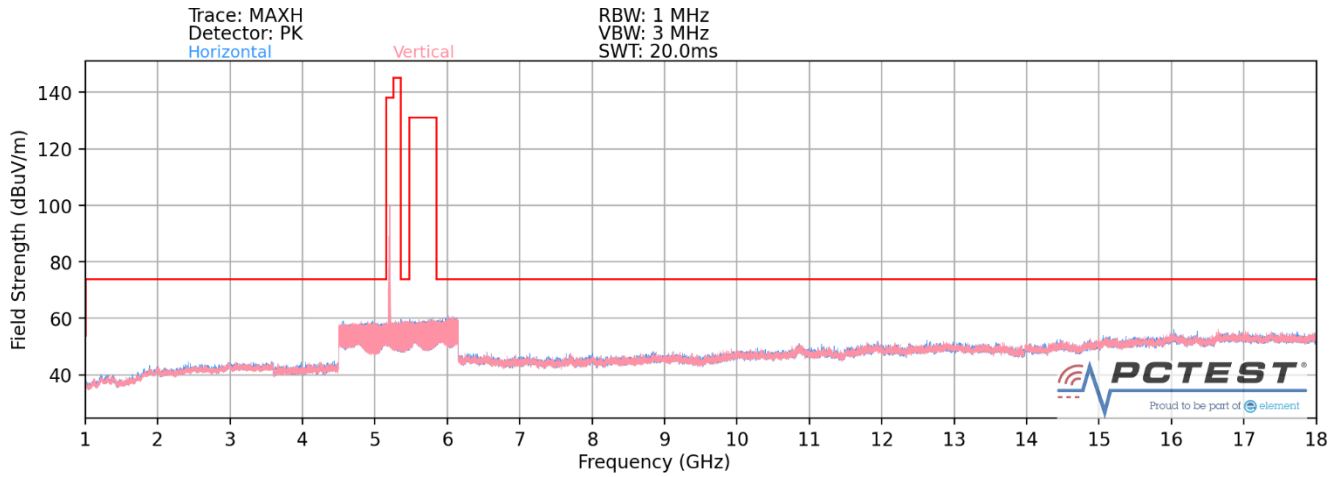
| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11770.00 | Average | H | 233 | 42 | -79.58 | 14.09 | 0.00 | 41.51 | 53.98 | -12.47 |
| * 11770.00 | Peak | H | 233 | 42 | -67.43 | 14.09 | 0.00 | 53.66 | 73.98 | -20.32 |
| 17655.00 | Peak | H | - | - | -70.44 | 18.05 | 0.00 | 54.61 | 68.20 | -13.59 |
| 23540.00 | Peak | H | - | - | -58.40 | 4.71 | -9.54 | 43.76 | 68.20 | -24.44 |
| 29425.00 | Peak | H | - | - | -57.38 | 7.01 | -9.54 | 47.09 | 68.20 | -21.11 |
| 35310.00 | Peak | H | - | - | -55.21 | 8.79 | -9.54 | 51.04 | 68.20 | -17.16 |

Table 7-110. Radiated Measurements SISO ANT1 (242 Tones)

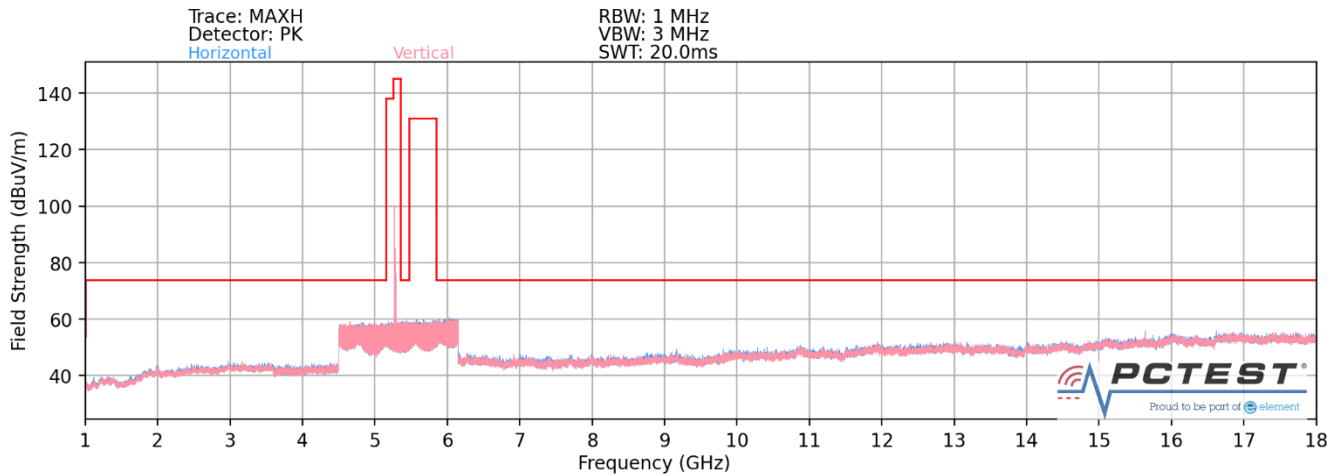
| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 228 of 309 |

7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements

26 Tones

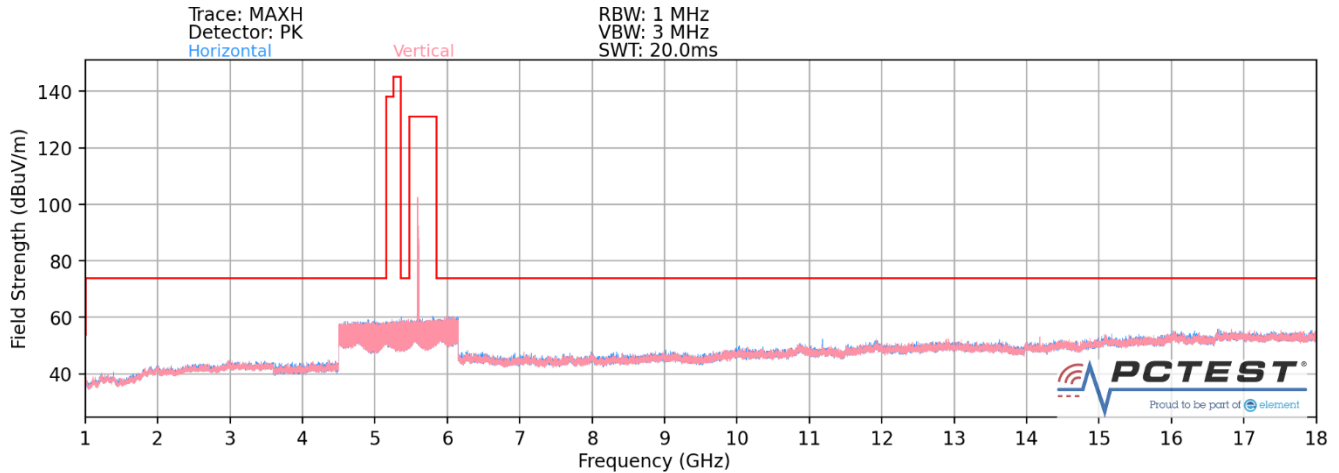


Plot 7-279. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U1 Ch. 40 – 26 Tones)

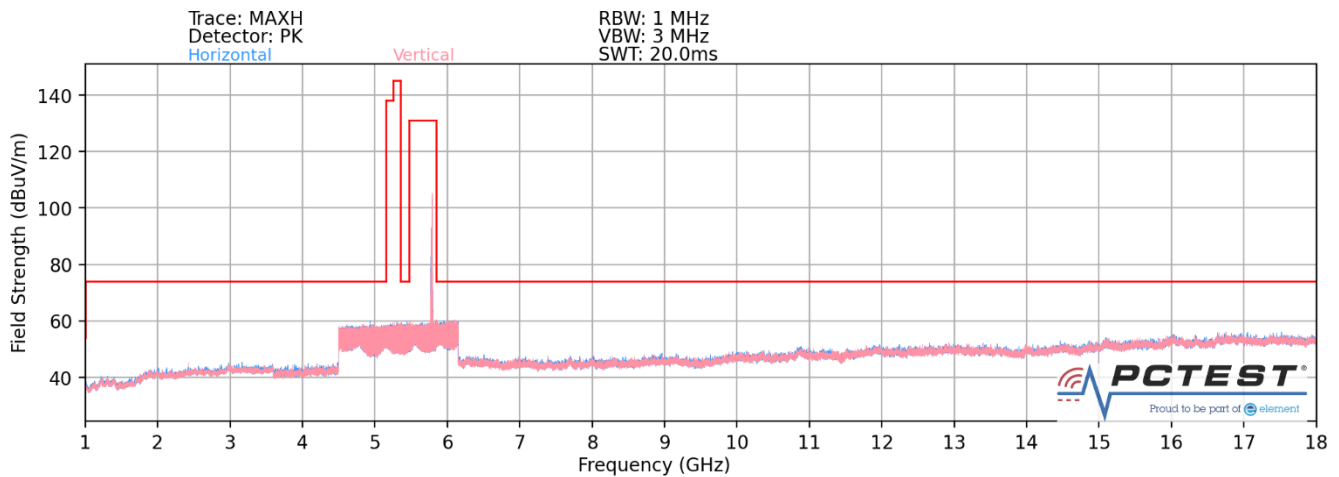


Plot 7-280. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 26 Tones)

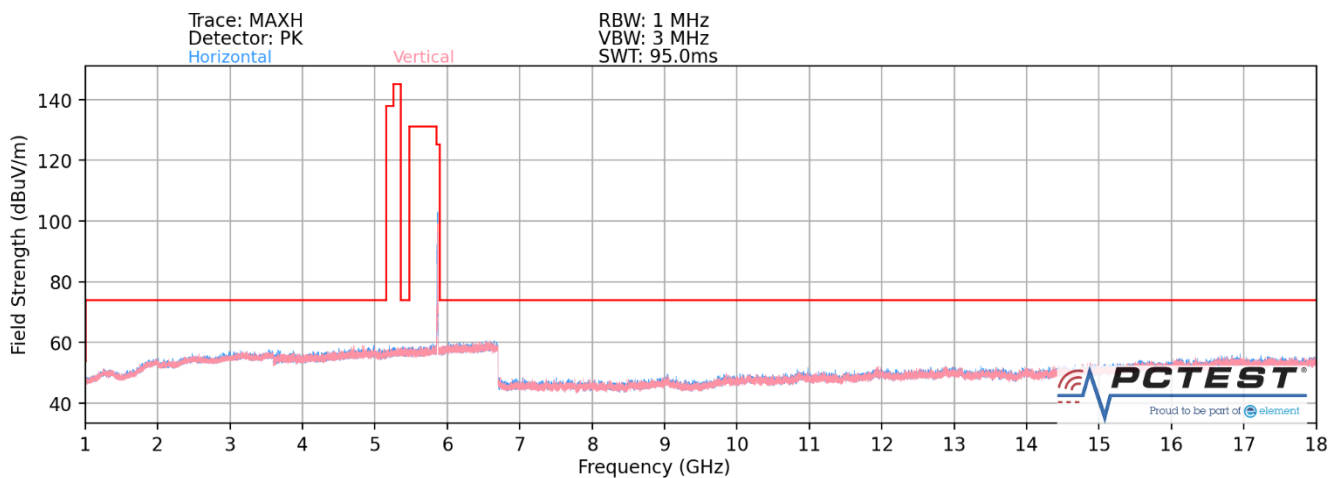
| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 229 of 309 |



Plot 7-281. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2C Ch. 120 – 26 Tones)



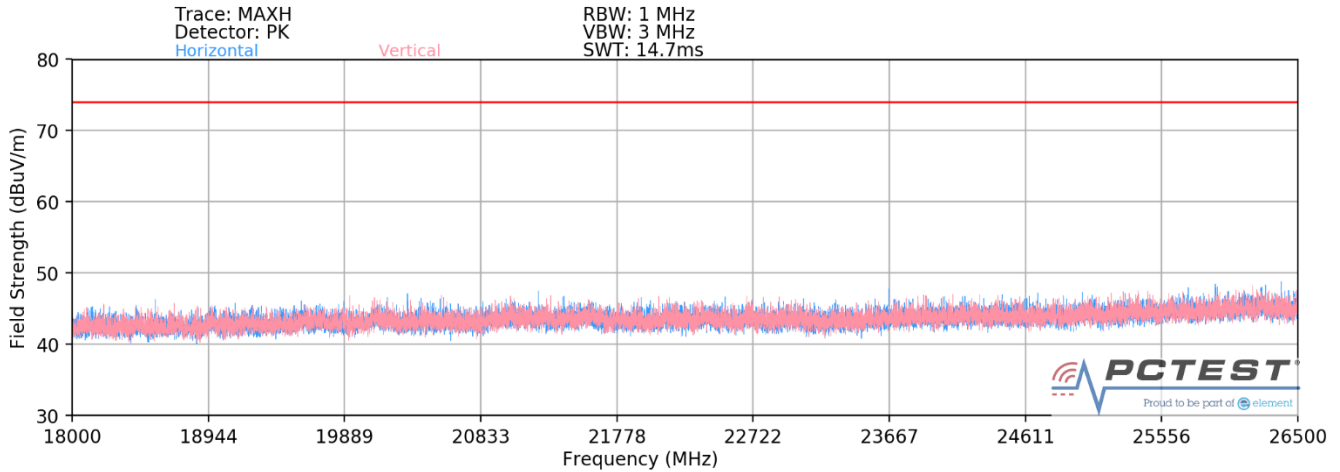
Plot 7-282. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 26 Tones)



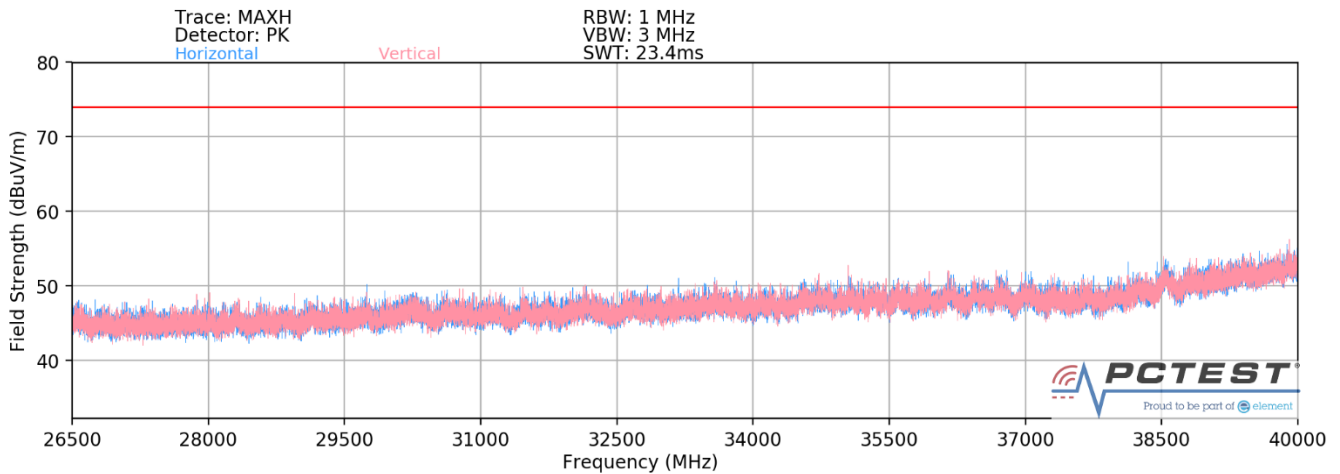
Plot 7-283. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U4 Ch. 173 – 26 Tones)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 230 of 309 |

SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-284. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT2 (802.11ax – 26 Tones)



Plot 7-285. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11ax – 26 Tones)

| | | | |
|---|---|---------------------------------------|--|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 231 of 309 |

SISO Antenna-2 Radiated Spurious Emission Measurements

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00 | Peak | H | - | - | -69.41 | 12.16 | 0.00 | 49.75 | 68.20 | -18.45 |
| * 15540.00 | Average | H | - | - | -82.23 | 16.69 | 0.00 | 41.46 | 53.98 | -12.52 |
| * 15540.00 | Peak | H | - | - | -70.28 | 16.69 | 0.00 | 53.41 | 73.98 | -20.57 |
| * 20720.00 | Average | H | - | - | -65.90 | 4.37 | -9.54 | 35.93 | 53.98 | -18.05 |
| * 20720.00 | Peak | H | - | - | -58.37 | 4.37 | -9.54 | 43.46 | 73.98 | -30.52 |
| 25900.00 | Peak | H | - | - | -58.86 | 5.87 | -9.54 | 44.46 | 68.20 | -23.74 |

Table 7-111. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00 | Peak | H | 300 | 331 | -68.20 | 11.75 | 0.00 | 50.55 | 68.20 | -17.65 |
| * 15600.00 | Average | H | - | - | -82.34 | 17.47 | 0.00 | 42.13 | 53.98 | -11.85 |
| * 15600.00 | Peak | H | - | - | -70.45 | 17.47 | 0.00 | 54.02 | 73.98 | -19.96 |
| * 20800.00 | Average | H | - | - | -66.75 | 4.47 | -9.54 | 35.17 | 53.98 | -18.81 |
| * 20800.00 | Peak | H | - | - | -59.01 | 4.47 | -9.54 | 42.92 | 73.98 | -31.06 |
| 26000.00 | Peak | H | - | - | -58.41 | 6.04 | -9.54 | 45.09 | 68.20 | -23.11 |

Table 7-112. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 232 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00 | Peak | H | 391 | 256 | -63.82 | 12.40 | 0.00 | 55.58 | 68.20 | -12.62 |
| * 15720.00 | Average | H | - | - | -82.94 | 17.59 | 0.00 | 41.65 | 53.98 | -12.33 |
| * 15720.00 | Peak | H | - | - | -71.06 | 17.59 | 0.00 | 53.53 | 73.98 | -20.45 |
| * 20960.00 | Average | H | - | - | -66.97 | 4.65 | -9.54 | 35.14 | 53.98 | -18.84 |
| * 20960.00 | Peak | H | - | - | -57.74 | 4.65 | -9.54 | 44.37 | 73.98 | -29.61 |
| 26200.00 | Peak | H | - | - | -57.87 | 5.76 | -9.54 | 45.35 | 68.20 | -22.85 |

Table 7-113. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 0
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00 | Peak | H | - | - | -69.88 | 12.54 | 0.00 | 49.66 | 68.20 | -18.54 |
| * 15780.00 | Average | H | - | - | -82.81 | 17.26 | 0.00 | 41.45 | 53.98 | -12.53 |
| * 15780.00 | Peak | H | - | - | -70.51 | 17.26 | 0.00 | 53.75 | 73.98 | -20.23 |
| * 21040.00 | Average | H | - | - | -66.59 | 4.68 | -9.54 | 35.55 | 53.98 | -18.43 |
| * 21040.00 | Peak | H | - | - | -59.07 | 4.68 | -9.54 | 43.07 | 73.98 | -30.91 |
| 26300.00 | Peak | H | - | - | -59.47 | 5.68 | -9.54 | 43.67 | 68.20 | -24.53 |

Table 7-114. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 233 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 0
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00 | Peak | H | 383 | 289 | -64.02 | 12.54 | 0.00 | 55.52 | 68.20 | -12.68 |
| * 15840.00 | Average | H | - | - | -82.91 | 17.42 | 0.00 | 41.51 | 53.98 | -12.46 |
| * 15840.00 | Peak | H | - | - | -71.12 | 17.42 | 0.00 | 53.30 | 73.98 | -20.67 |
| * 21120.00 | Average | H | - | - | -66.58 | 4.78 | -9.54 | 35.65 | 53.98 | -18.32 |
| * 21120.00 | Peak | H | - | - | -58.70 | 4.78 | -9.54 | 43.53 | 73.98 | -30.45 |
| 26400.00 | Peak | H | - | - | -58.95 | 5.75 | -9.54 | 44.26 | 68.20 | -23.94 |

Table 7-115. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 0
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00 | Average | H | 376 | 289 | -76.23 | 12.65 | 0.00 | 43.42 | 53.98 | -10.56 |
| * 10640.00 | Peak | H | 376 | 289 | -60.50 | 12.65 | 0.00 | 59.15 | 73.98 | -14.83 |
| * 15960.00 | Average | H | - | - | -83.26 | 18.41 | 0.00 | 42.15 | 53.98 | -11.83 |
| * 15960.00 | Peak | H | - | - | -71.50 | 18.41 | 0.00 | 53.91 | 73.98 | -20.07 |
| * 21280.00 | Average | H | - | - | -66.71 | 4.92 | -9.54 | 35.67 | 53.98 | -18.30 |
| * 21280.00 | Peak | H | - | - | -59.62 | 4.92 | -9.54 | 42.77 | 73.98 | -31.21 |
| 26600.00 | Peak | H | - | - | -59.31 | 5.78 | -9.54 | 43.93 | 68.20 | -24.27 |

Table 7-116. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 234 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 0
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00 | Average | H | 272 | 350 | -75.71 | 12.80 | 0.00 | 44.09 | 53.98 | -9.89 |
| * 11000.00 | Peak | H | 272 | 350 | -60.96 | 12.80 | 0.00 | 58.84 | 73.98 | -15.14 |
| 16500.00 | Peak | H | - | - | -70.39 | 18.36 | 0.00 | 54.97 | 68.20 | -13.23 |
| 22000.00 | Peak | H | - | - | -59.32 | 4.80 | -9.54 | 42.94 | 68.20 | -25.26 |
| 27500.00 | Peak | H | - | - | -57.41 | 5.93 | -9.54 | 45.98 | 68.20 | -22.22 |

Table 7-117. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 0
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00 | Average | H | 397 | 326 | -79.30 | 12.90 | 0.00 | 40.60 | 53.98 | -13.38 |
| * 11200.00 | Peak | H | 397 | 326 | -65.47 | 12.90 | 0.00 | 54.43 | 73.98 | -19.55 |
| 16800.00 | Peak | H | - | - | -70.12 | 18.52 | 0.00 | 55.40 | 68.20 | -12.80 |
| * 22400.00 | Average | H | - | - | -66.12 | 4.84 | -9.54 | 36.18 | 53.98 | -17.80 |
| * 22400.00 | Peak | H | - | - | -56.78 | 4.84 | -9.54 | 45.51 | 73.98 | -28.47 |
| 28000.00 | Peak | H | - | - | -59.02 | 6.12 | -9.54 | 44.56 | 68.20 | -23.64 |

Table 7-118. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 235 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00 | Average | H | 392 | 336 | -81.29 | 12.86 | 0.00 | 38.57 | 53.98 | -15.41 |
| * 11440.00 | Peak | H | 392 | 336 | -69.26 | 12.86 | 0.00 | 50.60 | 73.98 | -23.38 |
| 17160.00 | Peak | H | - | - | -70.09 | 18.02 | 0.00 | 54.93 | 68.20 | -13.27 |
| * 22880.00 | Average | H | - | - | -66.94 | 4.77 | -9.54 | 35.29 | 53.98 | -18.69 |
| * 22880.00 | Peak | H | - | - | -57.63 | 4.77 | -9.54 | 44.60 | 73.98 | -29.38 |
| 28600.00 | Peak | H | - | - | -59.40 | 6.32 | -9.54 | 44.37 | 68.20 | -23.83 |

Table 7-119. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00 | Average | H | - | - | -82.03 | 13.58 | 0.00 | 38.55 | 53.98 | -15.43 |
| * 11490.00 | Peak | H | - | - | -70.34 | 13.58 | 0.00 | 50.24 | 73.98 | -23.74 |
| 17235.00 | Peak | H | - | - | -70.51 | 17.76 | 0.00 | 54.25 | 68.20 | -13.95 |
| * 22980.00 | Average | H | - | - | -67.10 | 4.67 | -9.54 | 35.03 | 53.98 | -18.95 |
| * 22980.00 | Peak | H | - | - | -58.73 | 4.67 | -9.54 | 43.40 | 73.98 | -30.58 |
| 28725.00 | Peak | H | - | - | -60.31 | 6.42 | -9.54 | 43.57 | 68.20 | -24.63 |

Table 7-120. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 236 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00 | Average | H | - | - | -81.60 | 13.03 | 0.00 | 38.43 | 53.98 | -15.55 |
| * 11570.00 | Peak | H | - | - | -70.43 | 13.03 | 0.00 | 49.60 | 73.98 | -24.38 |
| 17355.00 | Peak | H | - | - | -70.35 | 18.72 | 0.00 | 55.37 | 68.20 | -12.83 |
| 23140.00 | Peak | H | - | - | -59.35 | 4.61 | -9.54 | 42.72 | 68.20 | -25.48 |
| 28925.00 | Peak | H | - | - | -57.86 | 6.50 | -9.54 | 46.09 | 68.20 | -22.11 |

Table 7-121. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00 | Average | H | - | - | -82.18 | 13.65 | 0.00 | 38.47 | 53.98 | -15.51 |
| * 11650.00 | Peak | H | - | - | -70.42 | 13.65 | 0.00 | 50.23 | 73.98 | -23.75 |
| 17475.00 | Peak | H | - | - | -70.23 | 17.76 | 0.00 | 54.53 | 68.20 | -13.67 |
| 23300.00 | Peak | H | - | - | -59.03 | 4.72 | -9.54 | 43.15 | 68.20 | -25.05 |
| 29125.00 | Peak | H | - | - | -58.06 | 6.86 | -9.54 | 46.26 | 68.20 | -21.94 |

Table 7-122. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 237 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5845MHz
 Channel: 169

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11690.00 | Average | H | - | - | -82.67 | 14.34 | 0.00 | 38.67 | 53.98 | -15.30 |
| * 11690.00 | Peak | H | - | - | -71.02 | 14.34 | 0.00 | 50.32 | 73.98 | -23.65 |
| 17535.00 | Peak | H | - | - | -70.32 | 18.43 | 0.00 | 55.11 | 68.20 | -13.09 |
| 23380.00 | Peak | H | - | - | -56.04 | 4.67 | -9.54 | 46.09 | 68.20 | -22.11 |
| 29225.00 | Peak | H | - | - | -55.60 | 6.67 | -9.54 | 48.52 | 68.20 | -19.68 |
| 35070.00 | Peak | H | - | - | -54.92 | 8.56 | -9.54 | 51.10 | 68.20 | -17.10 |

Table 7-123. Radiated Measurements SISO ANT2 (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5865MHz
 Channel: 173

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11730.00 | Average | H | - | - | -82.13 | 13.97 | 0.00 | 38.84 | 53.98 | -15.14 |
| * 11730.00 | Peak | H | - | - | -70.18 | 13.97 | 0.00 | 50.79 | 73.98 | -23.19 |
| 17595.00 | Peak | H | - | - | -70.09 | 18.25 | 0.00 | 55.16 | 68.20 | -13.04 |
| 23460.00 | Peak | H | - | - | -55.84 | 4.62 | -9.54 | 46.24 | 68.20 | -21.96 |
| 29325.00 | Peak | H | - | - | -56.30 | 6.99 | -9.54 | 48.15 | 68.20 | -20.05 |
| 35190.00 | Peak | H | - | - | -55.42 | 8.73 | -9.54 | 50.77 | 68.20 | -17.43 |

Table 7-124. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 238 of 309 |

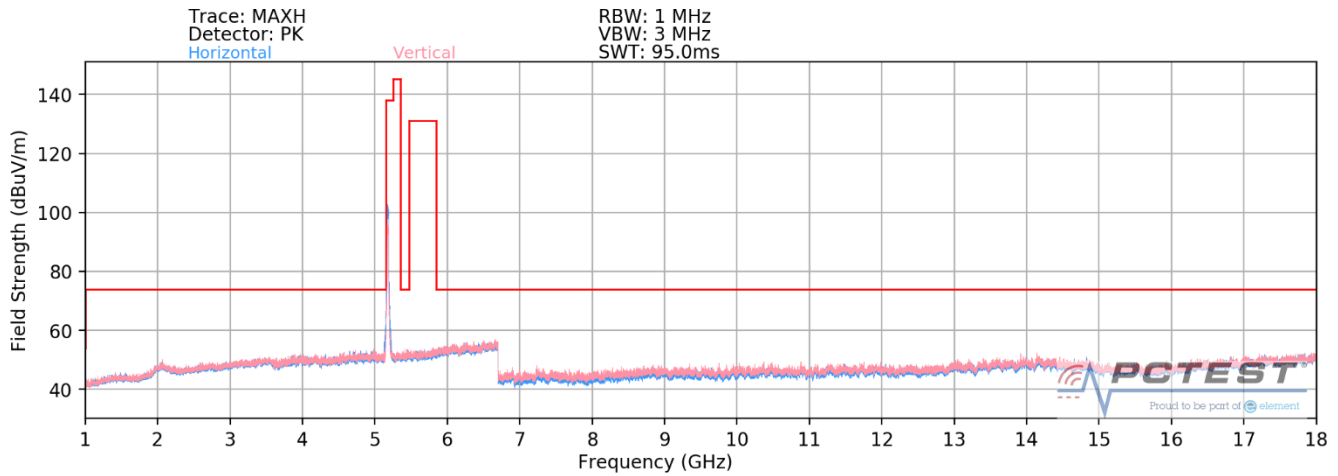
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5885MHz
 Channel: 177

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11770.00 | Average | H | - | - | -82.21 | 14.09 | 0.00 | 38.88 | 53.98 | -15.10 |
| * 11770.00 | Peak | H | - | - | -70.32 | 14.09 | 0.00 | 50.77 | 73.98 | -23.21 |
| 17655.00 | Peak | H | - | - | -70.10 | 18.05 | 0.00 | 54.95 | 68.20 | -13.25 |
| 23540.00 | Peak | H | - | - | -54.78 | 4.71 | -9.54 | 47.39 | 68.20 | -20.81 |
| 29425.00 | Peak | H | - | - | -55.59 | 7.01 | -9.54 | 48.88 | 68.20 | -19.32 |
| 35310.00 | Peak | H | - | - | -55.21 | 8.79 | -9.54 | 51.04 | 68.20 | -17.16 |

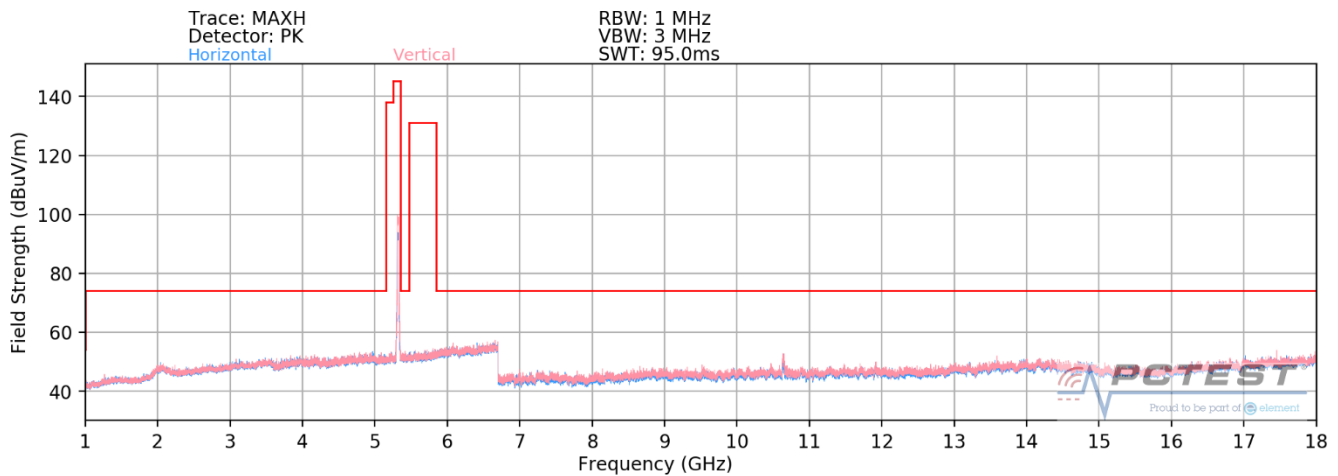
Table 7-125. Radiated Measurements SISO ANT2 (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 239 of 309 |

242 Tones

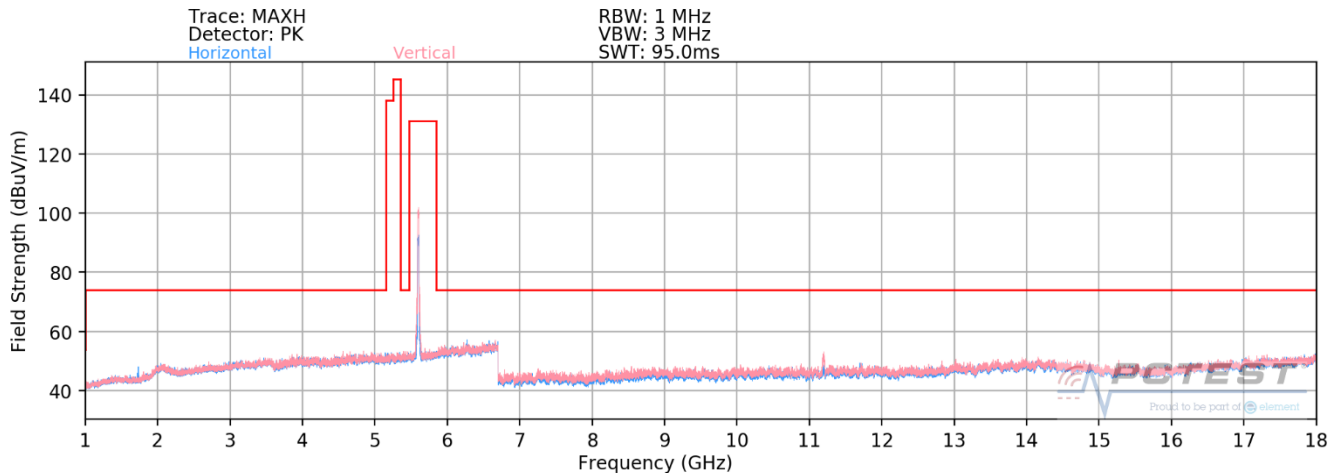


Plot 7-286. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U1 Ch. 40 – 242 Tones)

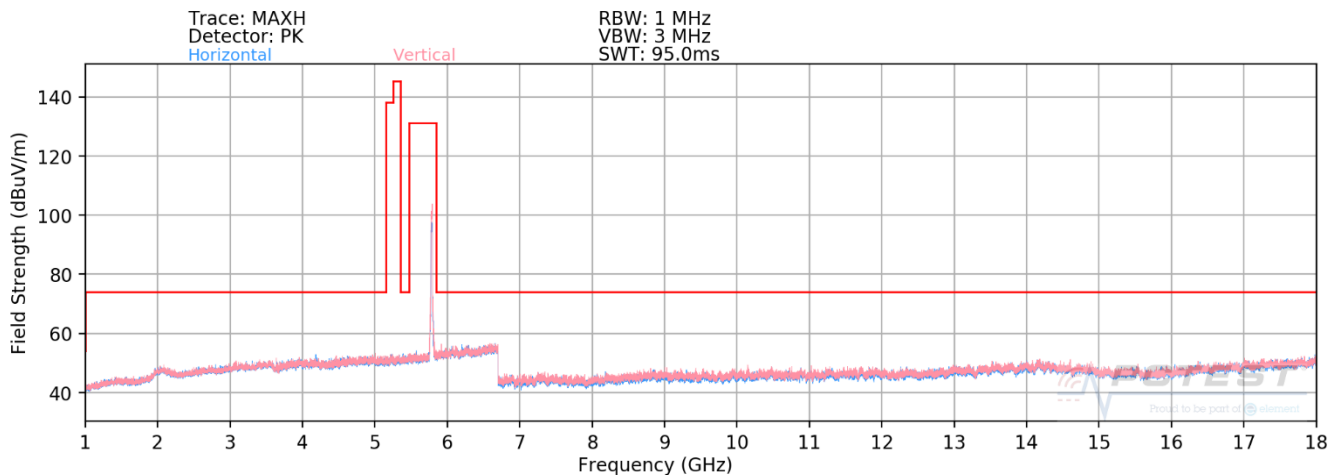


Plot 7-287. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2A Ch. 56 – 242 Tones)

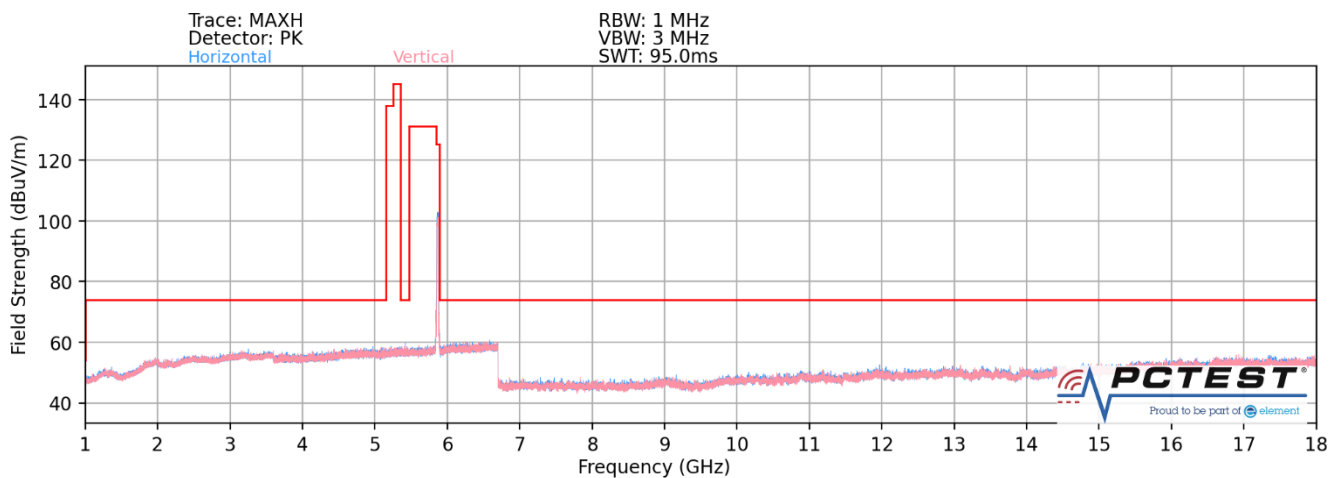
| | | | | |
|---|--|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  PCTEST Proud to be part of  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 240 of 309 |



Plot 7-288. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U2C Ch. 120 – 242 Tones)



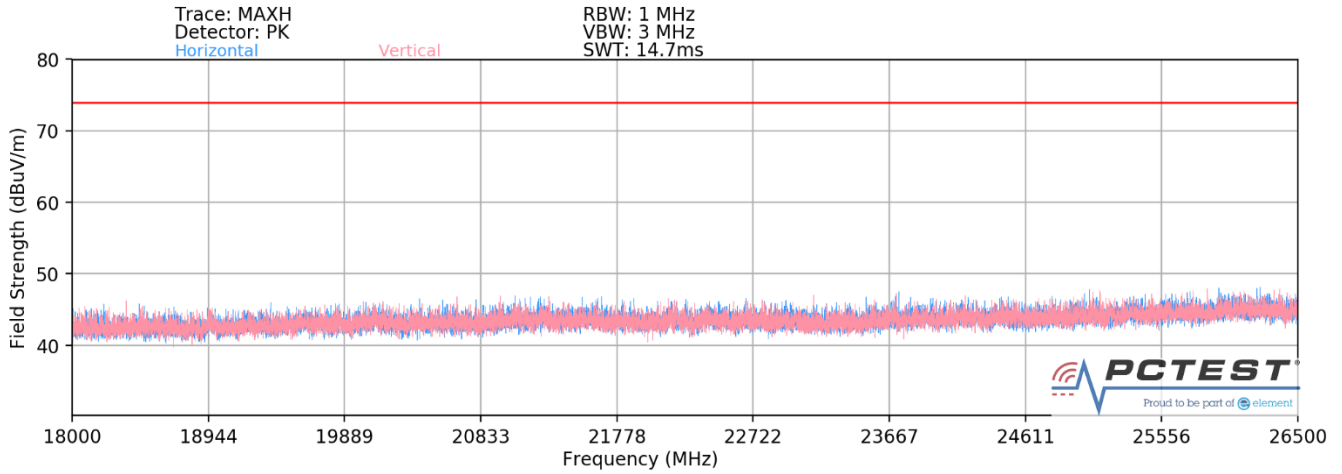
Plot 7-289. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U3 Ch. 157 – 242 Tones)



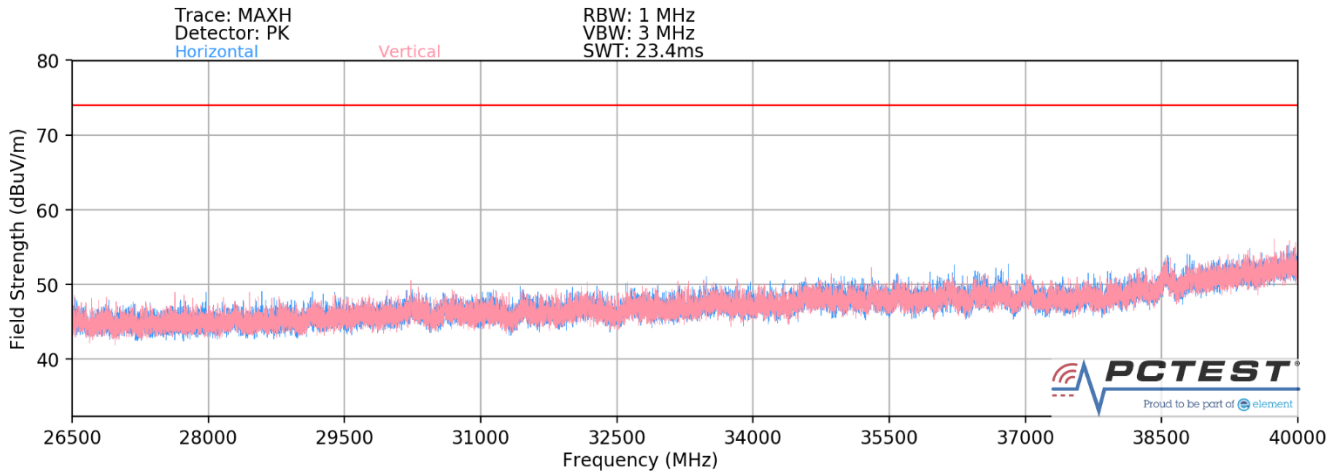
Plot 7-290. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11ax – U4 Ch. 173 – 242 Tones)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 241 of 309 |

SISO Antenna-2 Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-291. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT2 (802.11ax - 242 Tones)



Plot 7-292. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11ax - 242 Tones)

| | | | | |
|---|--|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  PCTEST® Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 242 of 309 |

SISO Antenna-2 Radiated Spurious Emission Measurements

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00 | Peak | H | 343 | 354 | -64.60 | 9.41 | 0.00 | 51.81 | 68.20 | -16.39 |
| * 15540.00 | Average | H | - | - | -79.78 | 10.44 | 0.00 | 37.66 | 53.98 | -16.32 |
| * 15540.00 | Peak | H | - | - | -67.56 | 10.44 | 0.00 | 49.88 | 73.98 | -24.10 |
| * 20720.00 | Average | H | - | - | -67.76 | 4.37 | -9.54 | 34.07 | 53.98 | -19.91 |
| * 20720.00 | Peak | H | - | - | -57.20 | 4.37 | -9.54 | 44.63 | 73.98 | -29.35 |
| 25900.00 | Peak | H | - | - | -57.75 | 5.87 | -9.54 | 45.58 | 68.20 | -22.62 |

Table 7-126. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00 | Peak | H | 340 | 354 | -68.15 | 9.68 | 0.00 | 48.53 | 68.20 | -19.67 |
| * 15600.00 | Average | H | - | - | -79.30 | 10.26 | 0.00 | 37.96 | 53.98 | -16.01 |
| * 15600.00 | Peak | H | - | - | -67.01 | 10.26 | 0.00 | 50.25 | 73.98 | -23.72 |
| * 20800.00 | Average | H | - | - | -67.19 | 4.47 | -9.54 | 34.74 | 53.98 | -19.24 |
| * 20800.00 | Peak | H | - | - | -56.54 | 4.47 | -9.54 | 45.39 | 73.98 | -28.59 |
| 26000.00 | Peak | H | - | - | -57.61 | 6.04 | -9.54 | 45.89 | 68.20 | -22.31 |

Table 7-127. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 243 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00 | Peak | H | 398 | 129 | -62.83 | 10.66 | 0.00 | 54.83 | 68.20 | -13.37 |
| * 15720.00 | Average | H | - | - | -79.97 | 10.01 | 0.00 | 37.04 | 53.98 | -16.94 |
| * 15720.00 | Peak | H | - | - | -68.19 | 10.01 | 0.00 | 48.82 | 73.98 | -25.16 |
| * 20960.00 | Average | H | - | - | -68.21 | 4.65 | -9.54 | 33.90 | 53.98 | -20.08 |
| * 20960.00 | Peak | H | - | - | -58.22 | 4.65 | -9.54 | 43.89 | 73.98 | -30.09 |
| 26200.00 | Peak | H | - | - | -57.20 | 5.76 | -9.54 | 46.02 | 68.20 | -22.18 |

Table 7-128. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00 | Peak | H | 276 | 347 | -63.15 | 9.45 | 0.00 | 53.30 | 68.20 | -14.90 |
| * 15780.00 | Average | H | - | - | -80.03 | 10.10 | 0.00 | 37.07 | 53.98 | -16.91 |
| * 15780.00 | Peak | H | - | - | -67.60 | 10.10 | 0.00 | 49.50 | 73.98 | -24.48 |
| * 21040.00 | Average | H | - | - | -68.02 | 4.68 | -9.54 | 34.12 | 53.98 | -19.86 |
| * 21040.00 | Peak | H | - | - | -57.03 | 4.68 | -9.54 | 45.11 | 73.98 | -28.87 |
| 26300.00 | Peak | H | - | - | -57.99 | 5.68 | -9.54 | 45.15 | 68.20 | -23.05 |

Table 7-129. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 244 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00 | Peak | H | 350 | 343 | -62.33 | 9.52 | 0.00 | 54.19 | 68.20 | -14.01 |
| * 15840.00 | Average | H | - | - | -79.79 | 9.45 | 0.00 | 36.66 | 53.98 | -17.32 |
| * 15840.00 | Peak | H | - | - | -67.56 | 9.45 | 0.00 | 48.89 | 73.98 | -25.09 |
| * 21120.00 | Average | H | - | - | -67.88 | 4.78 | -9.54 | 34.35 | 53.98 | -19.63 |
| * 21120.00 | Peak | H | - | - | -57.62 | 4.78 | -9.54 | 44.62 | 73.98 | -29.36 |
| 26400.00 | Peak | H | - | - | -57.41 | 5.75 | -9.54 | 45.80 | 68.20 | -22.40 |

Table 7-130. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00 | Average | H | 316 | 8 | -76.52 | 9.65 | 0.00 | 40.13 | 53.98 | -13.85 |
| * 10640.00 | Peak | H | 316 | 8 | -64.41 | 9.65 | 0.00 | 52.24 | 73.98 | -21.74 |
| * 15960.00 | Average | H | - | - | -79.82 | 9.91 | 0.00 | 37.09 | 53.98 | -16.89 |
| * 15960.00 | Peak | H | - | - | -68.02 | 9.91 | 0.00 | 48.89 | 73.98 | -25.09 |
| * 21280.00 | Average | H | - | - | -68.91 | 4.92 | -9.54 | 33.47 | 53.98 | -20.51 |
| * 21280.00 | Peak | H | - | - | -57.88 | 4.92 | -9.54 | 44.50 | 73.98 | -29.48 |
| 26600.00 | Peak | H | - | - | -57.25 | 5.78 | -9.54 | 45.99 | 68.20 | -22.21 |

Table 7-131. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 245 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00 | Average | H | 337 | 17 | -73.46 | 9.42 | 0.00 | 42.96 | 53.98 | -11.01 |
| * 11000.00 | Peak | H | - | - | -61.47 | 9.42 | 0.00 | 54.95 | 73.98 | -19.02 |
| 16500.00 | Peak | H | - | - | -68.49 | 11.76 | 0.00 | 50.27 | 68.20 | -17.93 |
| 22000.00 | Peak | H | - | - | -56.23 | 4.80 | -9.54 | 46.02 | 68.20 | -22.18 |
| 27500.00 | Peak | H | - | - | -57.04 | 5.93 | -9.54 | 46.34 | 68.20 | -21.86 |

Table 7-132. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00 | Average | H | 395 | 33 | -75.26 | 9.00 | 0.00 | 40.74 | 53.98 | -13.24 |
| * 11200.00 | Peak | H | - | - | -62.90 | 9.00 | 0.00 | 53.10 | 73.98 | -20.88 |
| 16800.00 | Peak | H | - | - | -66.77 | 11.38 | 0.00 | 51.61 | 68.20 | -16.59 |
| * 22400.00 | Average | H | - | - | -66.54 | 4.84 | -9.54 | 35.75 | 53.98 | -18.23 |
| * 22400.00 | Peak | H | - | - | -58.33 | 4.84 | -9.54 | 43.97 | 73.98 | -30.01 |
| 28000.00 | Peak | H | - | - | -59.08 | 6.12 | -9.54 | 44.49 | 68.20 | -23.71 |

Table 7-133. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 246 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 61
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5720MHz
Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dB μ V/m] | Limit [dB μ V/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------------|----------------------|-------------|
| * 11440.00 | Average | H | 103 | 94 | -80.55 | 10.20 | 0.00 | 36.65 | 53.98 | -17.33 |
| * 11440.00 | Peak | H | - | - | -68.53 | 10.20 | 0.00 | 48.67 | 73.98 | -25.31 |
| 17160.00 | Peak | H | - | - | -67.27 | 11.97 | 0.00 | 51.70 | 68.20 | -16.50 |
| * 22880.00 | Average | H | - | - | -66.68 | 4.77 | -9.54 | 35.55 | 53.98 | -18.43 |
| * 22880.00 | Peak | H | - | - | -59.06 | 4.77 | -9.54 | 43.17 | 73.98 | -30.81 |
| 28600.00 | Peak | H | - | - | -57.37 | 6.32 | -9.54 | 46.41 | 68.20 | -21.79 |

Table 7-134. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
Worst Case Transfer Rate: MCS0
RU Index: 61
Distance of Measurements: 1 & 3 Meters
Operating Frequency: 5745MHz
Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [HV] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dB μ V/m] | Limit [dB μ V/m] | Margin [dB] |
|-----------------|----------|----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------------|----------------------|-------------|
| * 11490.00 | Average | H | 400 | 89 | -78.52 | 10.16 | 0.00 | 38.64 | 53.98 | -15.34 |
| * 11490.00 | Peak | H | - | - | -67.06 | 10.16 | 0.00 | 50.10 | 73.98 | -23.88 |
| 17235.00 | Peak | H | - | - | -65.95 | 12.24 | 0.00 | 53.29 | 68.20 | -14.91 |
| * 22980.00 | Average | H | - | - | -66.67 | 4.67 | -9.54 | 35.46 | 53.98 | -18.52 |
| * 22980.00 | Peak | H | - | - | -59.60 | 4.67 | -9.54 | 42.53 | 73.98 | -31.45 |
| 28725.00 | Peak | H | - | - | -58.91 | 6.42 | -9.54 | 44.96 | 68.20 | -23.24 |

Table 7-135. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 247 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00 | Average | H | 360 | 111 | -79.91 | 9.80 | 0.00 | 36.89 | 53.98 | -17.09 |
| * 11570.00 | Peak | H | - | - | -68.05 | 9.80 | 0.00 | 48.75 | 73.98 | -25.23 |
| 17355.00 | Peak | H | - | - | -67.26 | 12.30 | 0.00 | 52.04 | 68.20 | -16.16 |
| 23140.00 | Peak | H | - | - | -57.93 | 4.61 | -9.54 | 44.13 | 68.20 | -24.07 |
| 28925.00 | Peak | H | - | - | -58.94 | 6.50 | -9.54 | 45.01 | 68.20 | -23.19 |

Table 7-136. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00 | Average | H | 361 | 90 | -79.11 | 9.99 | 0.00 | 37.88 | 53.98 | -16.10 |
| * 11650.00 | Peak | H | - | - | -67.38 | 9.99 | 0.00 | 49.61 | 73.98 | -24.37 |
| 17475.00 | Peak | H | - | - | -66.63 | 12.02 | 0.00 | 52.39 | 68.20 | -15.81 |
| 23300.00 | Peak | H | - | - | -57.91 | 4.72 | -9.54 | 44.27 | 68.20 | -23.93 |
| 29125.00 | Peak | H | - | - | -58.40 | 6.86 | -9.54 | 45.91 | 68.20 | -22.29 |

Table 7-137. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 248 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5845MHz
 Channel: 169

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11690.00 | Average | H | - | - | -82.80 | 14.34 | 0.00 | 38.54 | 53.98 | -15.43 |
| * 11690.00 | Peak | H | - | - | -70.28 | 14.34 | 0.00 | 51.06 | 73.98 | -22.91 |
| 17535.00 | Peak | H | - | - | -70.31 | 18.43 | 0.00 | 55.12 | 68.20 | -13.08 |
| 23380.00 | Peak | H | - | - | -55.44 | 4.67 | -9.54 | 46.69 | 68.20 | -21.51 |
| 29225.00 | Peak | H | - | - | -56.09 | 6.67 | -9.54 | 48.04 | 68.20 | -20.16 |
| 35070.00 | Peak | H | - | - | -54.21 | 8.56 | -9.54 | 51.80 | 68.20 | -16.40 |

Table 7-138. Radiated Measurements SISO ANT2 (242 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5865MHz
 Channel: 173

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11730.00 | Average | H | - | - | -81.96 | 13.97 | 0.00 | 39.01 | 53.98 | -14.97 |
| * 11730.00 | Peak | H | - | - | -69.89 | 13.97 | 0.00 | 51.08 | 73.98 | -22.90 |
| 17595.00 | Peak | H | - | - | -70.05 | 18.25 | 0.00 | 55.20 | 68.20 | -13.00 |
| 23460.00 | Peak | H | - | - | -56.02 | 4.62 | -9.54 | 46.06 | 68.20 | -22.14 |
| 29325.00 | Peak | H | - | - | -56.29 | 6.99 | -9.54 | 48.16 | 68.20 | -20.04 |
| 35190.00 | Peak | H | - | - | -54.60 | 8.73 | -9.54 | 51.58 | 68.20 | -16.62 |

Table 7-139. Radiated Measurements SISO ANT2 (242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 249 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 61
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5885MHz
 Channel: 177

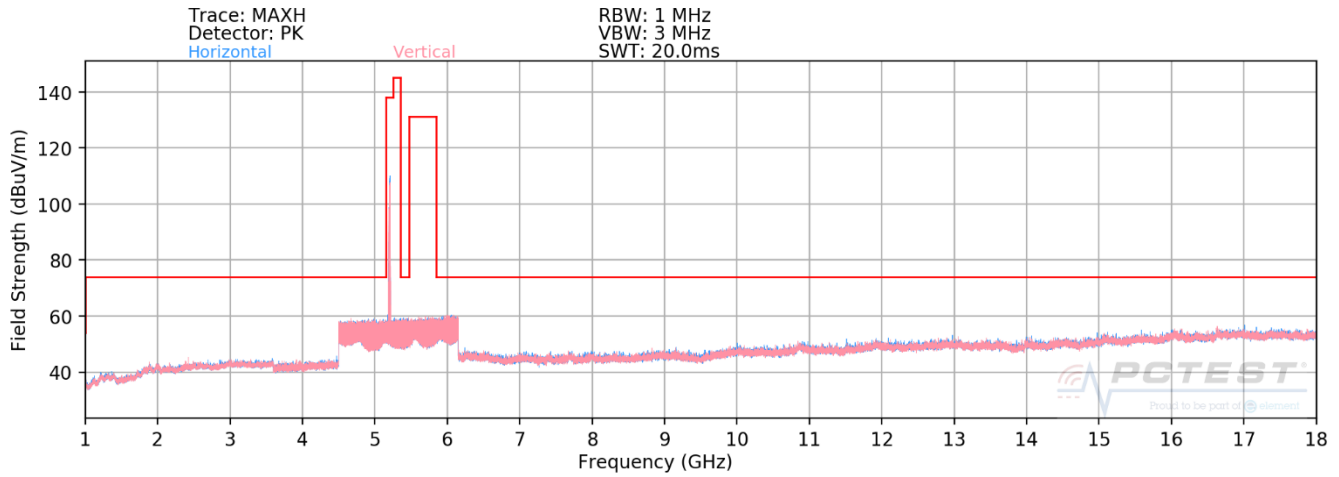
| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11770.00 | Average | H | - | - | -82.06 | 14.09 | 0.00 | 39.03 | 53.98 | -14.95 |
| * 11770.00 | Peak | H | - | - | -69.99 | 14.09 | 0.00 | 51.10 | 73.98 | -22.88 |
| 17655.00 | Peak | H | - | - | -70.27 | 18.05 | 0.00 | 54.78 | 68.20 | -13.42 |
| 23540.00 | Peak | H | - | - | -55.30 | 4.71 | -9.54 | 46.86 | 68.20 | -21.34 |
| 29425.00 | Peak | H | - | - | -56.22 | 7.01 | -9.54 | 48.25 | 68.20 | -19.95 |
| 35310.00 | Peak | H | - | - | -55.42 | 8.79 | -9.54 | 50.83 | 68.20 | -17.37 |

Table 7-140. Radiated Measurements SISO ANT2 (242 Tones)

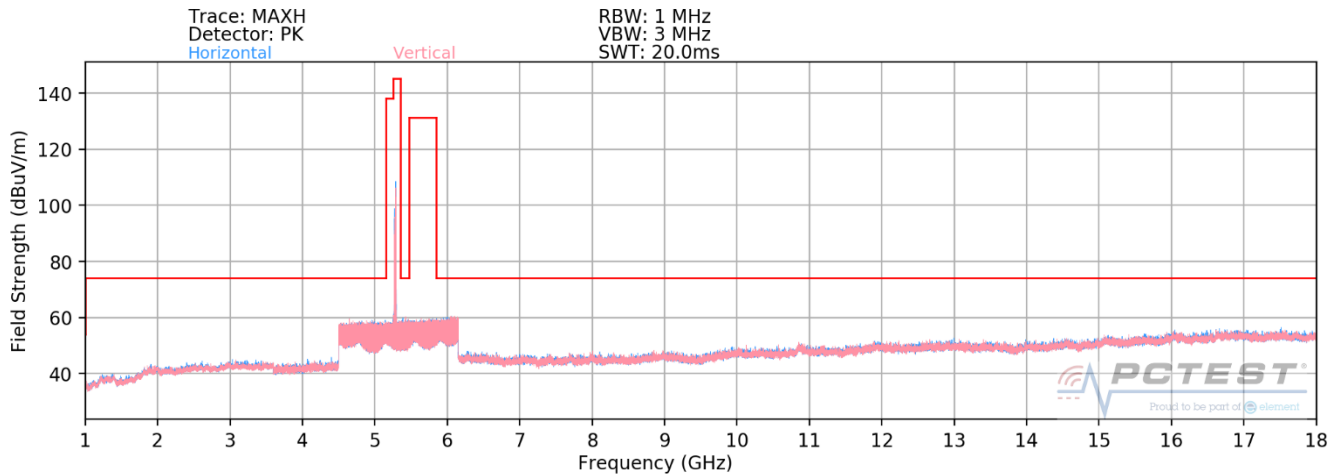
| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 250 of 309 |

7.6.3 MIMO Radiated Spurious Emission Measurements

26 Tones

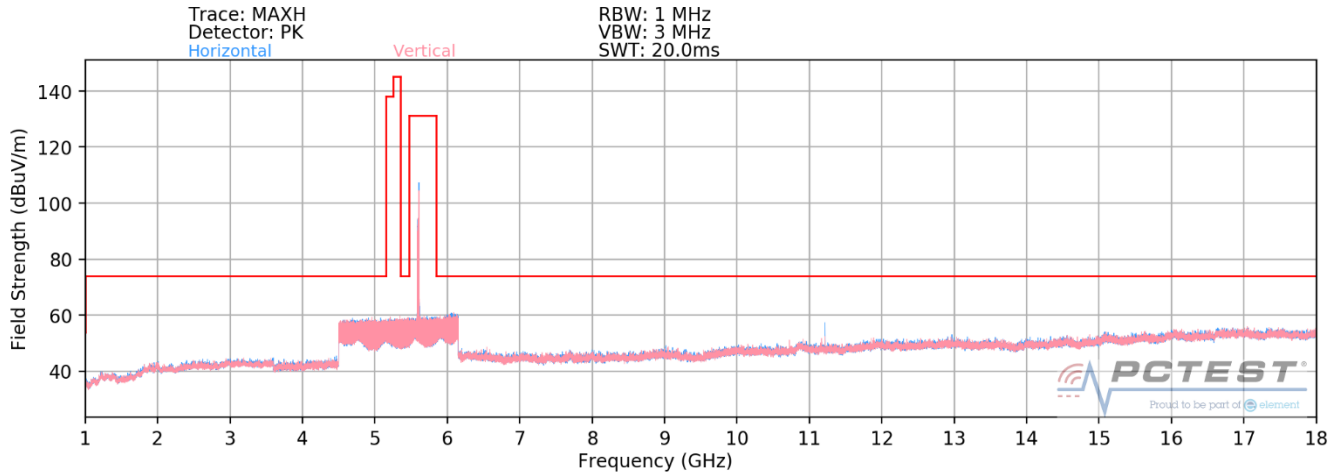


Plot 7-293. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 26 Tones)

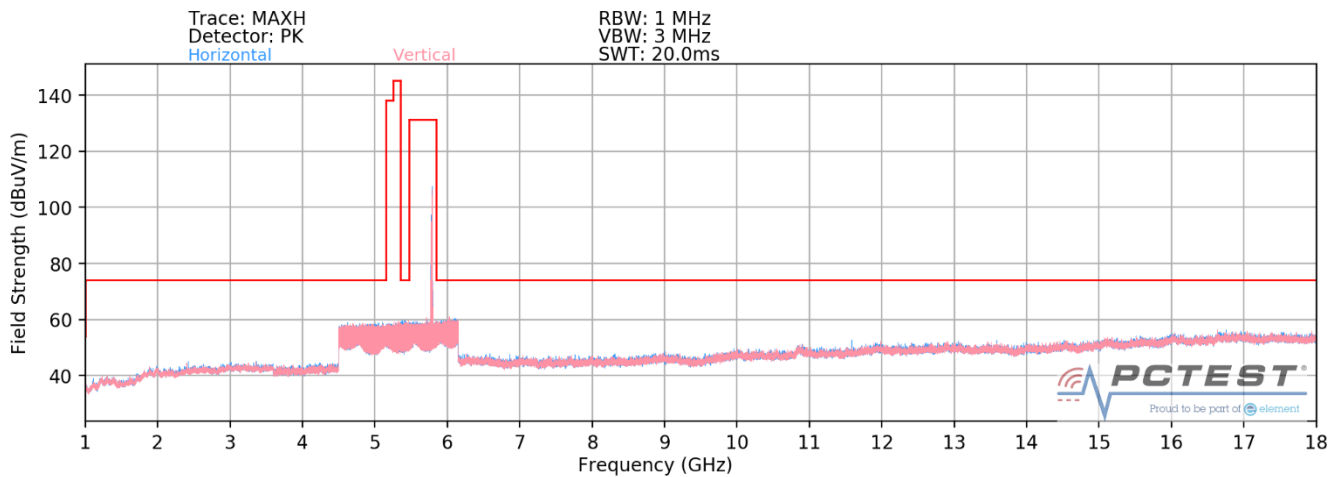


Plot 7-294. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 26 Tones)

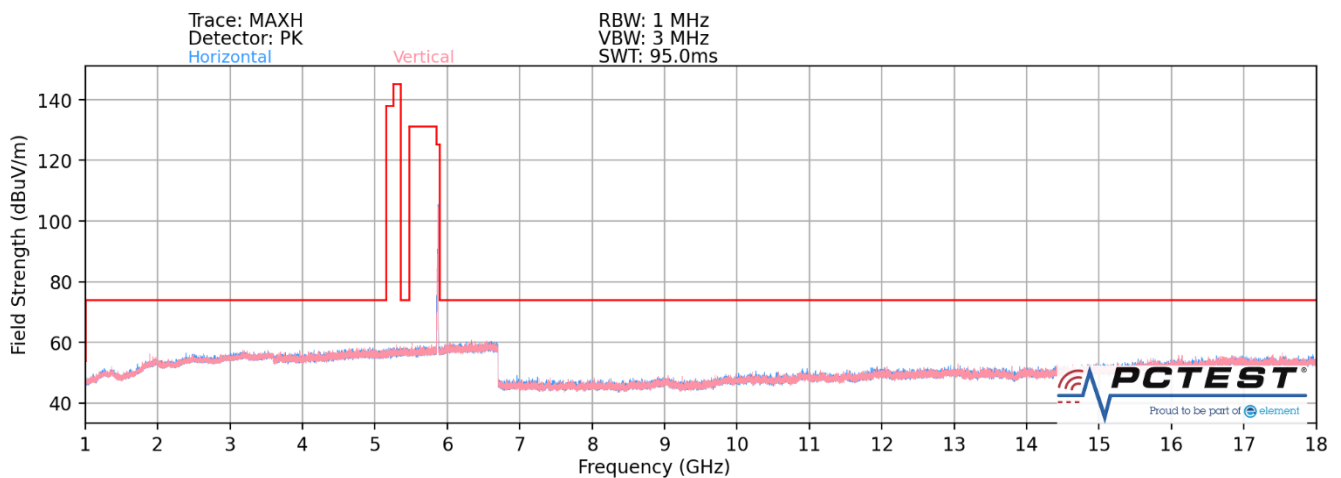
| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 251 of 309 |



Plot 7-295. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 26 Tones)



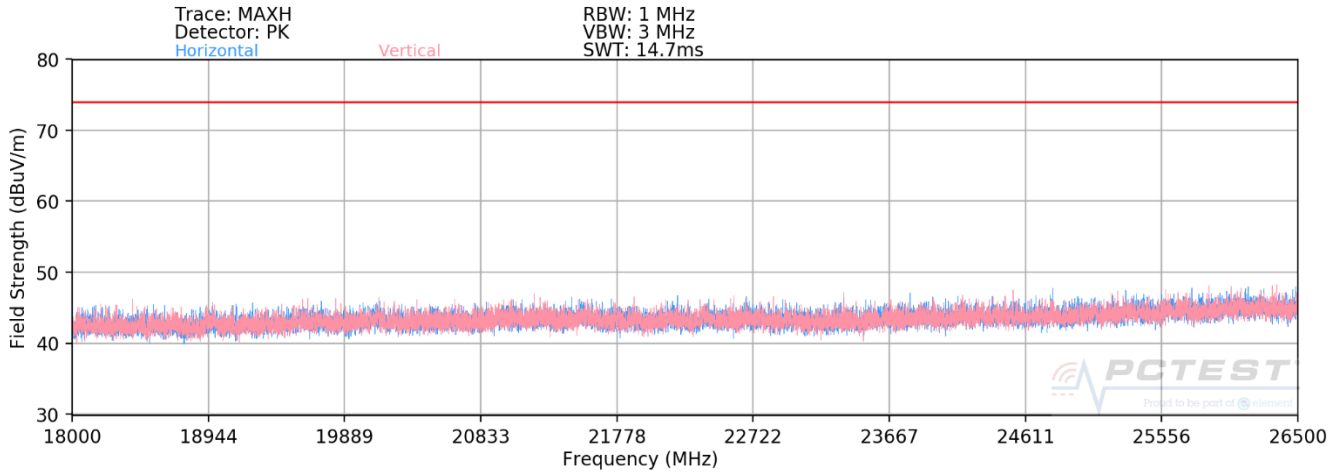
Plot 7-296. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 26 Tones)



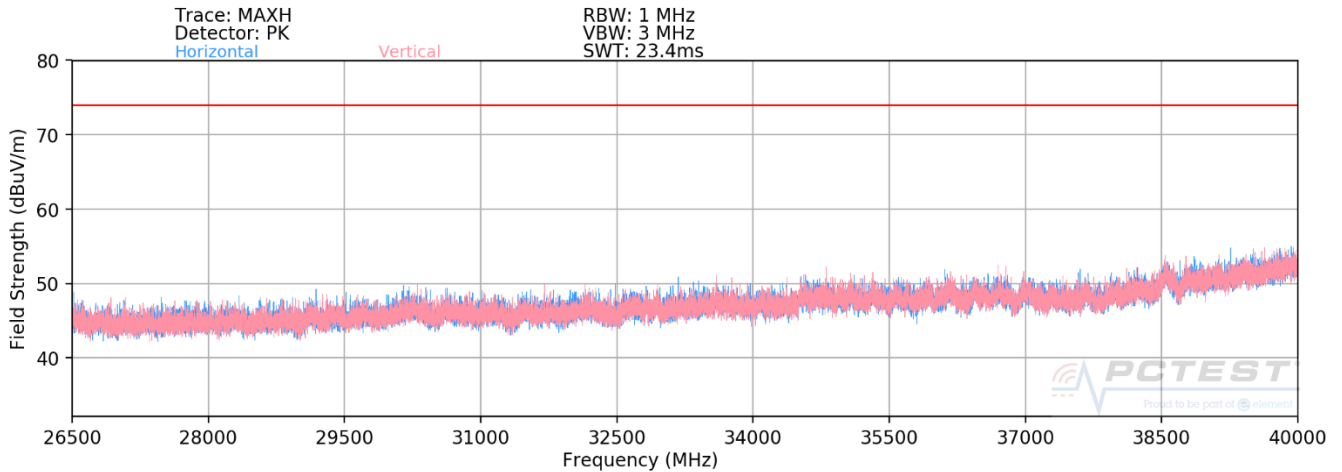
Plot 7-297. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U4 Ch. 173 – 26 Tones)

| | | | | |
|---|--|---------------------------------------|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 252 of 309 |

MIMO Radiated Spurious Emissions Measurements (Above 18GHz)



Plot 7-298. Radiated Spurious Plot 18GHz - 26.5GHz MIMO (802.11ax – 26 Tones)



Plot 7-299. Radiated Spurious Plot 26.5GHz - 40GHz MIMO (802.11ax – 26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 253 of 309 | |

MIMO Radiated Spurious Emission Measurements (26 Tones)

§15.407(b) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5180MHz
 Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00 | Peak | H | 128 | 334 | -65.12 | 12.16 | 0.00 | 54.04 | 68.20 | -14.16 |
| * 15540.00 | Average | H | - | - | -82.02 | 16.69 | 0.00 | 41.67 | 53.98 | -12.31 |
| * 15540.00 | Peak | H | - | - | -70.08 | 16.69 | 0.00 | 53.61 | 73.98 | -20.37 |
| * 20720.00 | Average | H | - | - | -66.26 | 4.37 | -9.54 | 35.57 | 53.98 | -18.41 |
| * 20720.00 | Peak | H | - | - | -56.92 | 4.37 | -9.54 | 44.91 | 73.98 | -29.06 |
| 25900.00 | Peak | H | - | - | -58.85 | 5.87 | -9.54 | 44.48 | 68.20 | -23.72 |

Table 7-141. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5200MHz
 Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00 | Peak | H | 124 | 287 | -64.63 | 11.75 | 0.00 | 54.12 | 68.20 | -14.08 |
| * 15600.00 | Average | H | - | - | -82.62 | 17.47 | 0.00 | 41.85 | 53.98 | -12.13 |
| * 15600.00 | Peak | H | - | - | -70.55 | 17.47 | 0.00 | 53.92 | 73.98 | -20.06 |
| * 20800.00 | Average | H | - | - | -66.33 | 4.47 | -9.54 | 35.59 | 53.98 | -18.39 |
| * 20800.00 | Peak | H | - | - | -57.47 | 4.47 | -9.54 | 44.46 | 73.98 | -29.52 |
| 26000.00 | Peak | H | - | - | -58.49 | 6.04 | -9.54 | 45.01 | 68.20 | -23.19 |

Table 7-142. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 254 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5240MHz
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00 | Peak | H | 164 | 333 | -65.90 | 12.40 | 0.00 | 53.50 | 68.20 | -14.70 |
| * 15720.00 | Average | H | - | - | -82.85 | 17.59 | 0.00 | 41.74 | 53.98 | -12.24 |
| * 15720.00 | Peak | H | - | - | -70.93 | 17.59 | 0.00 | 53.66 | 73.98 | -20.32 |
| * 20960.00 | Average | H | - | - | -66.48 | 4.65 | -9.54 | 35.63 | 53.98 | -18.34 |
| * 20960.00 | Peak | H | - | - | -59.86 | 4.65 | -9.54 | 42.25 | 73.98 | -31.73 |
| 26200.00 | Peak | H | - | - | -59.01 | 5.76 | -9.54 | 44.21 | 68.20 | -23.99 |

Table 7-143. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5260MHz
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00 | Peak | H | 158 | 331 | -64.20 | 12.54 | 0.00 | 55.34 | 68.20 | -12.86 |
| * 15780.00 | Average | H | - | - | -82.89 | 17.26 | 0.00 | 41.37 | 53.98 | -12.61 |
| * 15780.00 | Peak | H | - | - | -70.90 | 17.26 | 0.00 | 53.36 | 73.98 | -20.62 |
| * 21040.00 | Average | H | - | - | -67.00 | 4.68 | -9.54 | 35.14 | 53.98 | -18.84 |
| * 21040.00 | Peak | H | - | - | -59.04 | 4.68 | -9.54 | 43.10 | 73.98 | -30.88 |
| 26300.00 | Peak | H | - | - | -58.78 | 5.68 | -9.54 | 44.36 | 68.20 | -23.84 |

Table 7-144. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 255 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5280MHz
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00 | Peak | H | 141 | 324 | -65.60 | 12.54 | 0.00 | 53.94 | 68.20 | -14.26 |
| * 15840.00 | Average | H | - | - | -70.71 | 17.42 | 0.00 | 53.71 | 53.98 | -0.26 |
| * 15840.00 | Peak | H | - | - | -82.98 | 17.42 | 0.00 | 41.44 | 73.98 | -32.53 |
| * 21120.00 | Average | H | - | - | -66.98 | 4.78 | -9.54 | 35.25 | 53.98 | -18.73 |
| * 21120.00 | Peak | H | - | - | -58.89 | 4.78 | -9.54 | 43.34 | 73.98 | -30.63 |
| 26400.00 | Peak | H | - | - | -58.99 | 5.75 | -9.54 | 44.22 | 68.20 | -23.98 |

Table 7-145. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5320MHz
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00 | Average | H | 176 | 331 | -77.66 | 12.65 | 0.00 | 41.99 | 53.98 | -11.99 |
| * 10640.00 | Peak | H | 176 | 331 | -65.16 | 12.65 | 0.00 | 54.49 | 73.98 | -19.49 |
| * 15960.00 | Average | H | - | - | -83.23 | 18.41 | 0.00 | 42.18 | 53.98 | -11.80 |
| * 15960.00 | Peak | H | - | - | -71.41 | 18.41 | 0.00 | 54.00 | 73.98 | -19.98 |
| * 21280.00 | Average | H | - | - | -66.41 | 4.92 | -9.54 | 35.97 | 53.98 | -18.01 |
| * 21280.00 | Peak | H | - | - | -56.78 | 4.92 | -9.54 | 45.60 | 73.98 | -28.38 |
| 26600.00 | Peak | H | - | - | -57.18 | 5.78 | -9.54 | 46.06 | 68.20 | -22.14 |

Table 7-146. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 256 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5500MHz
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00 | Average | H | 235 | 333 | -76.64 | 12.80 | 0.00 | 43.16 | 53.98 | -10.82 |
| * 11000.00 | Peak | H | 235 | 333 | -64.28 | 12.80 | 0.00 | 55.52 | 73.98 | -18.46 |
| 16500.00 | Peak | H | - | - | -71.59 | 18.36 | 0.00 | 53.77 | 68.20 | -14.43 |
| 22000.00 | Peak | H | - | - | -58.64 | 4.80 | -9.54 | 43.62 | 68.20 | -24.58 |
| 27500.00 | Peak | H | - | - | -59.66 | 5.93 | -9.54 | 43.72 | 68.20 | -24.48 |

Table 7-147. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5600MHz
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00 | Average | H | 232 | 331 | -76.92 | 12.90 | 0.00 | 42.98 | 53.98 | -11.00 |
| * 11200.00 | Peak | H | 232 | 331 | -65.01 | 12.90 | 0.00 | 54.89 | 73.98 | -19.09 |
| 16800.00 | Peak | H | - | - | -71.68 | 18.52 | 0.00 | 53.84 | 68.20 | -14.36 |
| * 22400.00 | Average | H | - | - | -66.10 | 4.84 | -9.54 | 36.19 | 53.98 | -17.79 |
| * 22400.00 | Peak | H | - | - | -58.51 | 4.84 | -9.54 | 43.78 | 73.98 | -30.20 |
| 28000.00 | Peak | H | - | - | -58.91 | 6.12 | -9.54 | 44.66 | 68.20 | -23.54 |

Table 7-148. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | Page 257 of 309 | |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5720MHz
 Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00 | Average | H | 277 | 335 | -75.67 | 12.86 | 0.00 | 44.19 | 53.98 | -9.79 |
| * 11440.00 | Peak | H | 277 | 335 | -63.58 | 12.86 | 0.00 | 56.28 | 73.98 | -17.70 |
| 17160.00 | Peak | H | - | - | -71.11 | 18.02 | 0.00 | 53.91 | 68.20 | -14.29 |
| * 22880.00 | Average | H | - | - | -67.24 | 4.77 | -9.54 | 34.99 | 53.98 | -18.99 |
| * 22880.00 | Peak | H | - | - | -58.76 | 4.77 | -9.54 | 43.47 | 73.98 | -30.51 |
| 28600.00 | Peak | H | - | - | -58.28 | 6.32 | -9.54 | 45.49 | 68.20 | -22.71 |

Table 7-149. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5745MHz
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00 | Average | H | 242 | 330 | -75.60 | 13.58 | 0.00 | 44.98 | 53.98 | -9.00 |
| * 11490.00 | Peak | H | 242 | 330 | -61.80 | 13.58 | 0.00 | 58.78 | 73.98 | -15.20 |
| 17235.00 | Peak | H | - | - | -70.23 | 17.76 | 0.00 | 54.53 | 68.20 | -13.67 |
| * 22980.00 | Average | H | - | - | -66.48 | 4.67 | -9.54 | 35.65 | 53.98 | -18.33 |
| * 22980.00 | Peak | H | - | - | -58.50 | 4.67 | -9.54 | 43.63 | 73.98 | -30.35 |
| 28725.00 | Peak | H | - | - | -58.84 | 6.42 | -9.54 | 45.04 | 68.20 | -23.16 |

Table 7-150. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 258 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5785MHz
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00 | Average | H | 201 | 333 | -76.26 | 13.03 | 0.00 | 43.77 | 53.98 | -10.21 |
| * 11570.00 | Peak | H | 201 | 333 | -63.11 | 13.03 | 0.00 | 56.92 | 73.98 | -17.06 |
| 17355.00 | Peak | H | - | - | -70.53 | 18.72 | 0.00 | 55.19 | 68.20 | -13.01 |
| 23140.00 | Peak | H | - | - | -57.95 | 4.61 | -9.54 | 44.12 | 68.20 | -24.08 |
| 28925.00 | Peak | H | - | - | -59.93 | 6.50 | -9.54 | 44.03 | 68.20 | -24.17 |

Table 7-151. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5825MHz
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00 | Average | H | 204 | 329 | -77.58 | 13.65 | 0.00 | 43.07 | 53.98 | -10.91 |
| * 11650.00 | Peak | H | 204 | 329 | -64.59 | 13.65 | 0.00 | 56.06 | 73.98 | -17.92 |
| 17475.00 | Peak | H | - | - | -69.60 | 17.76 | 0.00 | 55.16 | 68.20 | -13.04 |
| 23300.00 | Peak | H | - | - | -58.47 | 4.72 | -9.54 | 43.71 | 68.20 | -24.49 |
| 29125.00 | Peak | H | - | - | -60.26 | 6.86 | -9.54 | 44.06 | 68.20 | -24.14 |

Table 7-152. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 259 of 309 |

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5845MHz
 Channel: 169

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11690.00 | Average | H | 207 | 331 | -79.30 | 14.34 | 0.00 | 42.04 | 53.98 | -11.93 |
| * 11690.00 | Peak | H | 207 | 331 | -66.83 | 14.34 | 0.00 | 54.51 | 73.98 | -19.46 |
| 17535.00 | Peak | H | - | - | -69.64 | 18.43 | 0.00 | 55.79 | 68.20 | -12.41 |
| 23380.00 | Peak | H | - | - | -55.36 | 4.67 | -9.54 | 46.77 | 68.20 | -21.43 |
| 29225.00 | Peak | H | - | - | -55.58 | 6.67 | -9.54 | 48.54 | 68.20 | -19.66 |
| 35070.00 | Peak | H | - | - | -54.90 | 8.56 | -9.54 | 51.12 | 68.20 | -17.08 |

Table 7-153. Radiated Measurements MIMO (26 Tones)

Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 8
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5865MHz
 Channel: 173

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBµV/m] | Limit [dBµV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11730.00 | Average | H | 160 | 326 | -80.12 | 13.97 | 0.00 | 40.85 | 53.98 | -13.13 |
| * 11730.00 | Peak | H | 160 | 326 | -66.67 | 13.97 | 0.00 | 54.30 | 73.98 | -19.68 |
| 17595.00 | Peak | H | - | - | -70.17 | 18.25 | 0.00 | 55.08 | 68.20 | -13.12 |
| 23460.00 | Peak | H | - | - | -55.77 | 4.62 | -9.54 | 46.31 | 68.20 | -21.89 |
| 29325.00 | Peak | H | - | - | -55.71 | 6.99 | -9.54 | 48.74 | 68.20 | -19.46 |
| 35190.00 | Peak | H | - | - | -55.50 | 8.73 | -9.54 | 50.69 | 68.20 | -17.51 |

Table 7-154. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 260 of 309 |

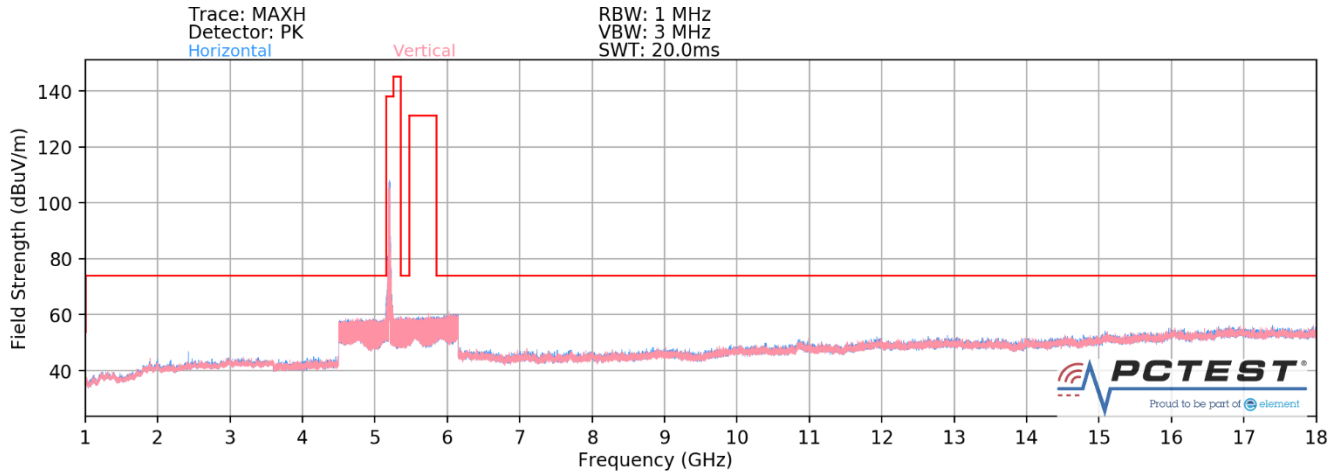
Worst Case Mode: 802.11ax (20MHz BW)
 Worst Case Transfer Rate: MCS0
 RU Index: 4
 Distance of Measurements: 1 & 3 Meters
 Operating Frequency: 5885MHz
 Channel: 177

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11770.00 | Average | H | 137.00 | 56.00 | -81.45 | 14.09 | 0.00 | 39.64 | 53.98 | -14.34 |
| * 11770.00 | Peak | H | 137 | 56 | -69.82 | 14.09 | 0.00 | 51.27 | 73.98 | -22.71 |
| 17655.00 | Peak | H | - | - | -70.05 | 18.05 | 0.00 | 55.00 | 68.20 | -13.20 |
| 23540.00 | Peak | H | - | - | -56.11 | 4.71 | -9.54 | 46.06 | 68.20 | -22.14 |
| 29425.00 | Peak | H | - | - | -56.23 | 7.01 | -9.54 | 48.23 | 68.20 | -19.97 |
| 35310.00 | Peak | H | - | - | -55.52 | 8.79 | -9.54 | 50.73 | 68.20 | -17.47 |

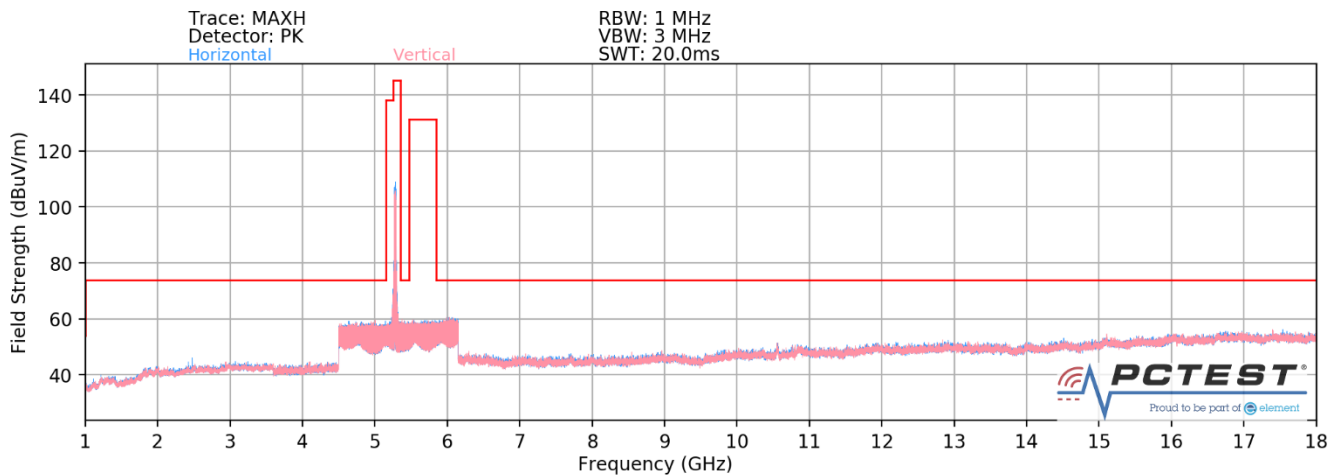
Table 7-155. Radiated Measurements MIMO (26 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 261 of 309 |

242 Tones

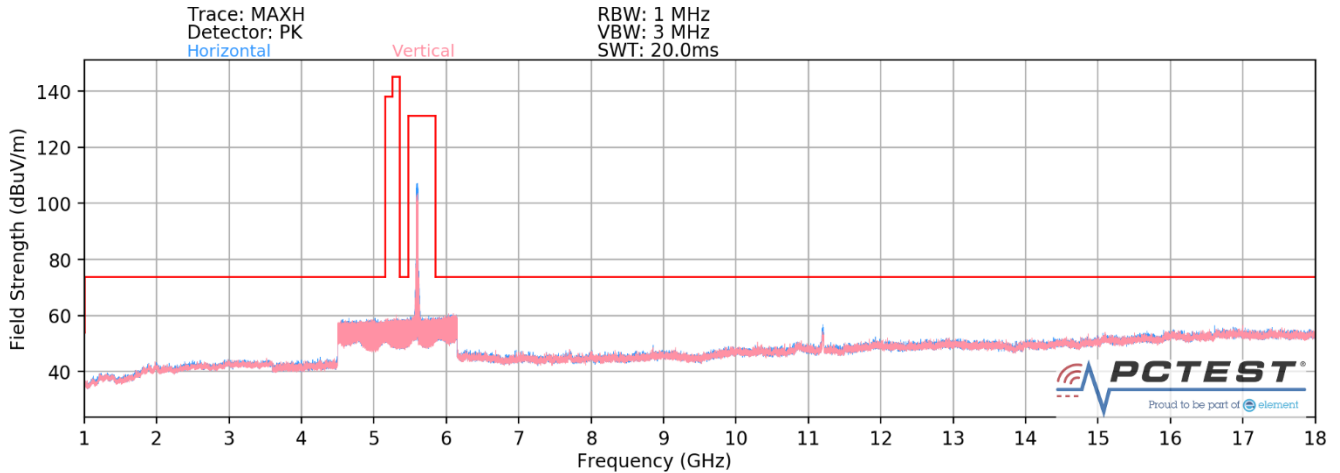


Plot 7-300. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U1 Ch. 40 – 242 Tones)

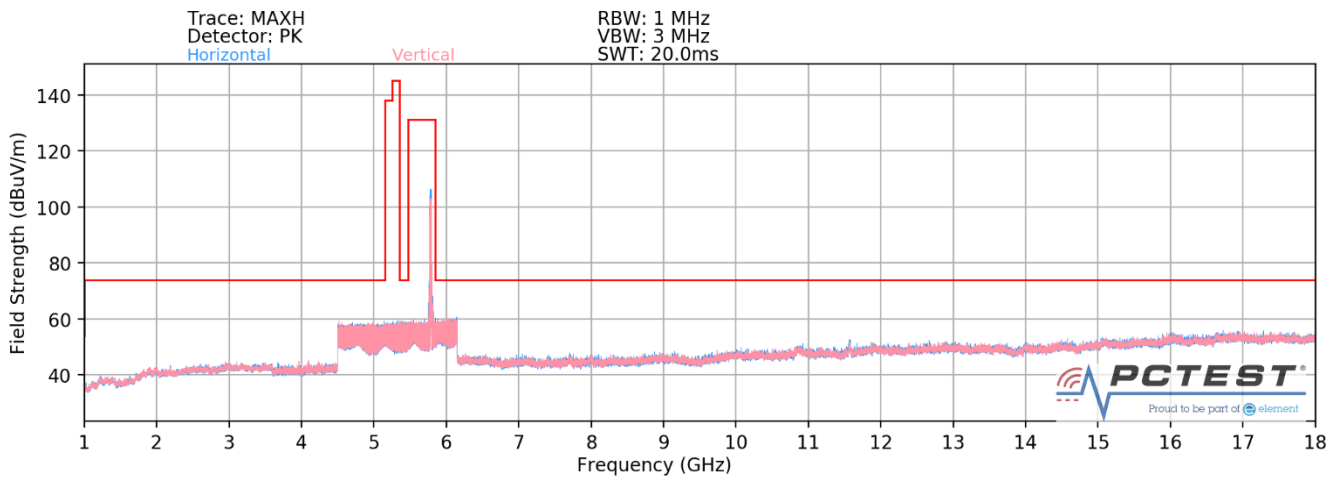


Plot 7-301. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2A Ch. 56 – 242 Tones)

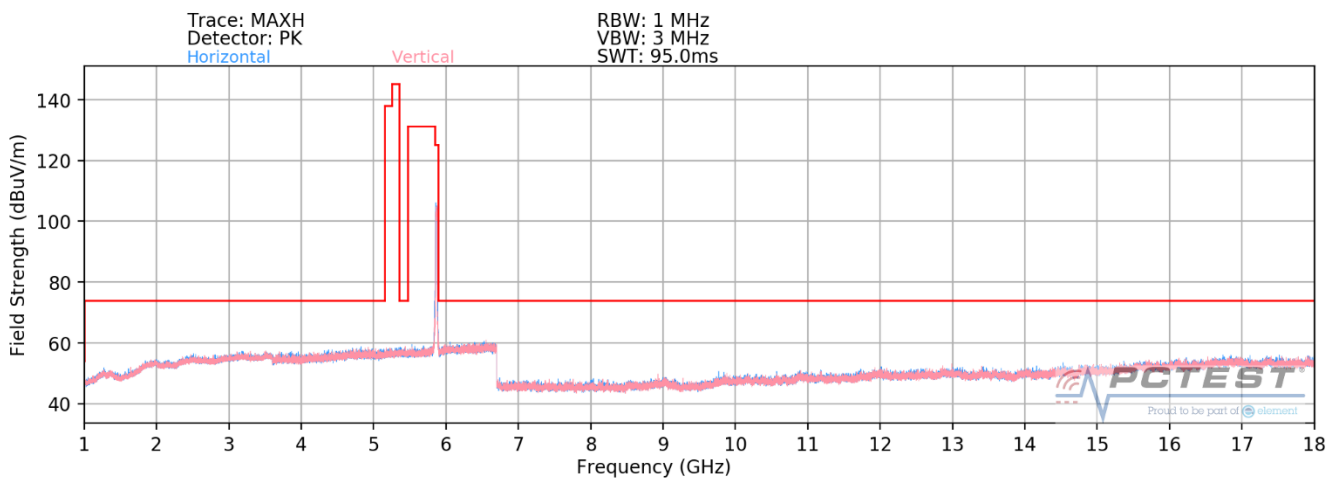
| | | | | |
|---|--|---|----------------|-----------------------------------|
| FCC ID: A3LSMS901U | PCTEST Proud to be part of element | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 262 of 309 |



Plot 7-302. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U2C Ch. 120 – 242 Tones)



Plot 7-303. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U3 Ch. 157 – 242 Tones)



Plot 7-304. Radiated Spurious Plot above 1GHz MIMO (802.11ax – U4 Ch. 173 – 242 Tones)

| | | | | |
|---|---|---------------------------------------|---|-----------------------------------|
| FCC ID: A3LSMS901U |  | MEASUREMENT REPORT (CERTIFICATION) |  | Approved by: Technical Manager |
| Test Report S/N: 1M2109080099-12.A3L | Test Dates: 9/22/2021 - 11/9/2021 | EUT Type: Portable Handset | | Page 263 of 309 |