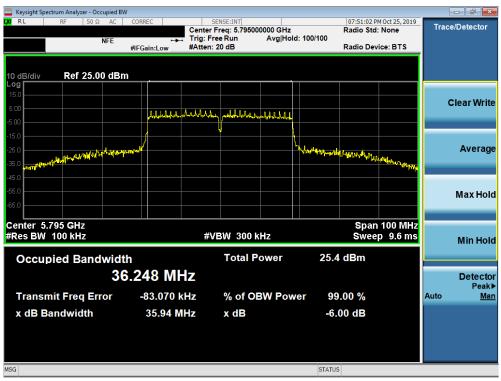


| Keysight Spectrum Analyzer - Occupied B | W | | | | |
|---|--|--|--|---------------------|-------------------|
| LX/RL RF 50Ω AC | CORREC | SENSE:INT r Freg: 5.755000000 GHz | 07:48:19 P Radio Std | M Oct 25, 2019 | Trace/Detector |
| NFE | 🛶 Trig: I | Free Run Avg Hold | : 100/100 | | |
| | #IFGain:Low #Atter | n: 20 dB | Radio Dev | vice: BTS | |
| | | | | | |
| 10 dB/div Ref 25.00 dB | m | | | | |
| 15.0 | | | | | |
| | | | | | Clear Write |
| 5.00 | والبالية والمارية والمارية والمراجعة و | Any month lade to be for the f | | | |
| -5.00 | | | | | |
| -15.0 | | | | | |
| -25.0 | Martial | | With many many many many many many many many | | Average |
| -35.0 | | | | the strates and the | |
| -45.0 | | | | | |
| -55.0 | | | | | Max Hold |
| -65.0 | | | | | |
| | | | | | |
| Center 5.755 GHz #Res BW 100 kHz | # | VBW 300 kHz | | 100 MHz p 9.6 ms | |
| #Res BW 100 KHZ | # | VDVV JUUKHZ | Swee | p a.o ms | Min Hold |
| Occupied Bandwid | th | Total Power | 25.0 dBm | | |
| | | | | | |
| ্ৰ ব | 6.217 MHz | | | | Detector Peak► |
| Transmit Freq Error | -85.553 kHz | % of OBW Powe | er 99.00 % | | Auto <u>Man</u> |
| x dB Bandwidth | 36.26 MHz | x dB | -6.00 dB | | |
| | | | | | |
| | | | | | |
| | | | | | |
| MSG | | | STATUS | | |
| MSG | | | STATUS | | |

Plot 7-127. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



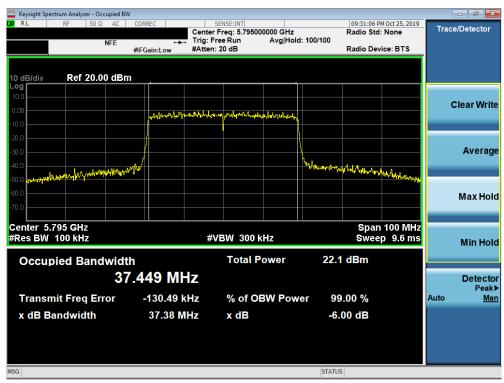
Plot 7-128. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 02 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 83 of 241 |
| © 2020 PCTEST Engineering La | V 9.0 02/01/2019 | | |



| Keysight Spectrum Analyzer - Occo | upied BW | | | | | | | | | - • • |
|-----------------------------------|----------|-------------------------|------------------------|--|---------------|-------------|-------------|---------------|------|---------------------|
| LXI RL RF 50 Ω | AC CORRE | C | SENSE: Center Freq: | | 0000 GHz | | 09:30:44 P | MOct 25, 2019 | Trac | e/Detector |
| | NFE | | Trig: Free Ru | in | | d: 100/100 | | | | |
| | #IFGa | in:Low | #Atten: 20 dE | 3 | | | Radio Dev | ice: BTS | | |
| | | | | | | | | | | |
| 10 dB/div Ref 20.00 |) dBm | | | | | | | | | |
| Log 10.0 | | | | | | | | | | |
| 0.00 | | | | | | | | | | Clear Write |
| -10.0 | î | والمالية المرالي المالي | evilateling and prov | ر ماليوانية (مرارية). مراجع المراجع الم | eshile/whomho | | | | | |
| -20.0 | / | | | | | | | | | |
| -30.0 | | | | | | \ | | | | Average |
| | / | | | | | All an a | | | | Average |
| -40.0 -50.0 -44, | MW IN A | | | | | AND NOT ANY | Mr. Hickory | Witnesseller | | |
| | | | | | | | | | | |
| -60.0 | | | | | | | | | | Max Hold |
| -70.0 | | | | | | | | | | |
| Center 5.755 GHz | | | | | | 1 | Span | 100 MHz | | |
| #Res BW 100 kHz | | | #VBW | 300 k | Hz | | Swee | p 9.6 ms | | Min Hold |
| | | | - | otal P | | 22.6 | dBm | | | |
| Occupied Bandy | | | | | ower | 22.0 | авт | | | |
| | 37.53 | 60 MH | Ζ | | | | | | | Detector |
| Transmit Freq Err | or -1 | 23.71 kl | Hz % | of OE | 3W Pow | ver 99 | .00 % | | Auto | Peak▶ <u>Man</u> |
| x dB Bandwidth | | 37.73 MI | Hz x | dB | | -6. | 00 dB | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| MSG | | | | | | STATUS | | | | |

Plot 7-129. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



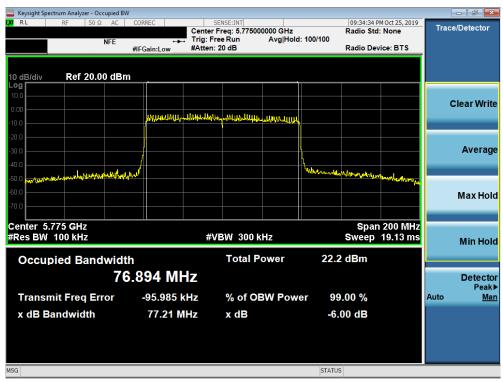
Plot 7-130. 6dB Bandwidth Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 84 of 241 |
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| 🔤 Keysight Spectrum Analyzer - O | ccupied BW | | | | | | | | | |
|---|------------------|----------------|----------------|--|-------------|---------------------|-------------------------|----------------|------|---------------------|
| LXI RL RF 50 S | Ω AC COF | RREC | | ISE:INT eq: 5.77500 | 0000 GHz | | 07:55:13 F Radio Std | M Oct 25, 2019 | Trac | e/Detector |
| | NFE | ÷ | Trig: Free | Run | | d: 100/100 | | | | |
| | #IF | Gain:Low | #Atten: 2 | 0 dB | | | Radio De | vice: BTS | | |
| | | | | | | | | | | |
| 10 dB/div Ref 25.0 | 00 dBm | _ | | | | | | | | |
| Log 15.0 | | | | | | | | | | |
| 5.00 | | | | | | | | | | Clear Write |
| | | Innin Lindli | Mumph | Inter Inter | Line Inco | | | | | |
| -5.00 | | MILLA-MINILMP- | SPORTED IN THE | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ∽√₩₩₩₩₩₩₩₩₩ | | | | | |
| -15.0 | | | | | | | | | | |
| -25.0 | | | | | | ₹ | | | | Average |
| -35.0 | un the while the | | | | | wood from the state | the share and the | Muhan | | _ |
| -45.0 - Add | | | | | | | | | | |
| -55.0 | | | | | | | | | | Max Hold |
| -65.0 | | | | | | | | | | maxmora |
| | | | | | | | | | | |
| Center 5.775 GHz | | | -49 (15 | | | | | 1 200 MHz | | |
| #Res BW 100 kHz | | | #VE | W 300 K | HZ | | sweep | 19.13 ms | | Min Hold |
| Occupied Ban | dwidth | | | Total P | ower | 24.5 | 5 dBm | | | |
| Occupied Ball | | 07 84 | | | | | | | | |
| | / 5.5 | 07 MI | ΠZ | | | | | | | Detector Peak► |
| Transmit Freq E | rror | -170.56 | kHz | % of O | 3W Pow | ver 99 | .00 % | | Auto | Peak⊯ <u>Man</u> |
| x dB Bandwidth | | 75.72 N | IHz | x dB | | -6. | 00 dB | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 100 | | | | | | OTATIK | | | | |
| MSG | | | | | | STATUS | | | | |

Plot 7-131. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-132. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 85 of 241 |
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7.4 UNII Output Power Measurement – 802.11a/n/ac/ax §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

Test Overview and Limits

A transmitter antenna terminal of the EUT is connected to the input of an RF pulse power sensor. Measurement is made using a broadband average power meter 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.

In the 5.15 – 5.25GHz band, the maximum permissible conducted output power is 250mW (23.98dBm). The maximum e.i.r.p. shall not exceed the lesser of 200 mW or 10 + 10 log10B, dBm.

In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(29.58) = 25.71dBm$. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or 11 dBm + $10\log_{10}(26dB BW) = 11 dBm + 10\log_{10}(23.20) = 24.65dBm$. The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or 17 + 10 log10B, dBm.

In the 5.725 – 5.850GHz band, the maximum permissible conducted output power is 1W (30dBm). The maximum e.i.r.p. is 36 dBm.

Test Procedure Used

ANSI C63.10-2013 – Section 12.3.3.2 Method PM-G KDB 789033 D02 v02r01 – Section E)3)b) Method PM-G ANSI C63.10-2013 – Section 14.2 Measure-and-Sum Technique KDB 662911 v02r01 – Section E)1) Measure-and-Sum Technique

Test Settings

Average power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

Test Setup

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



Figure 7-3. Test Instrument & Measurement Setup

Test Notes

Per RSS-247 Section 6.2.3, transmission on channels which overlap the 5600-5650 MHz is prohibited. This device operates under these frequencies only under the control of a certified master device and does not support active scanning on these channels. This device does not transmit any beacons or initiate any transmissions in UNII Bands 2A or 2C.

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 96 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 86 of 241 |
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SISO Antenna-1 Conducted Output Power Measurements

| | Freq [MHz] | Channel | Detector | | IEEE Transn | nission Mode | | Conducted Power Limit | Conducted Power | Ant. Gain [dBi] | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|----------|------------|---------|----------|---------|-------------|--------------|----------|--------------------------|--------------------|--------------------|-----------------------|-----------------------------|-------------------------|
| Ē | | | | 802.11a | 802.11n | 802.11ac | 802.11ax | [dBm] | Margin [dB] | [0.2.] | Land | | |
| width) | 5180 | 36 | AVG | 16.01 | 15.93 | 16.06 | 15.93 | 23.98 | -7.92 | -6.45 | 9.61 | 23.01 | -13.40 |
| Š | 5200 | 40 | AVG | 17.64 | 17.76 | 17.61 | 15.99 | 23.98 | -6.22 | -6.69 | 11.07 | 23.01 | -11.94 |
| and | 5220 | 44 | AVG | 17.72 | 17.71 | 17.56 | 15.92 | 23.98 | -6.26 | -6.45 | 11.27 | 23.01 | -11.74 |
| ar | 5240 | 48 | AVG | 17.67 | 17.66 | 17.51 | 15.97 | 23.98 | -6.31 | -6.45 | 11.22 | 23.01 | -11.79 |
| B | 5260 | 52 | AVG | 17.32 | 17.18 | 17.25 | 15.73 | 23.98 | -6.66 | -6.45 | 10.87 | 30.00 | -19.13 |
| Ŧ | 5280 | 56 | AVG | 17.96 | 17.96 | 17.94 | 15.59 | 23.98 | -6.02 | -6.61 | 11.35 | 30.00 | -18.65 |
| 5 | 5300 | 60 | AVG | 17.84 | 17.77 | 17.77 | 15.34 | 23.98 | -6.14 | -6.55 | 11.29 | 30.00 | -18.71 |
| MO | 5320 | 64 | AVG | 16.14 | 16.12 | 16.16 | 15.97 | 23.98 | -7.82 | -6.55 | 9.61 | 30.00 | -20.39 |
| <u> </u> | 5500 | 100 | AVG | 16.48 | 16.34 | 16.41 | 15.99 | 23.98 | -7.50 | -6.99 | 9.49 | 30.00 | -20.51 |
| 4 | 5600 | 120 | AVG | 17.68 | 17.76 | 17.64 | 15.97 | 23.98 | -6.22 | -6.99 | 10.77 | - | - |
| | 5720 | 144 | AVG | 17.77 | 17.75 | 17.71 | 15.98 | 23.98 | -6.21 | -6.99 | 10.78 | 30.00 | -19.22 |
| 5G | 5745 | 149 | AVG | 17.98 | 17.35 | 17.29 | 15.48 | 30.00 | -12.02 | -6.99 | 10.99 | - | - |
| | 5785 | 157 | AVG | 17.73 | 17.74 | 17.72 | 15.98 | 30.00 | -12.26 | -6.86 | 10.88 | - | - |
| | 5825 | 165 | AVG | 17.74 | 17.84 | 17.77 | 15.97 | 30.00 | -12.16 | -6.95 | 10.89 | - | |

Table 7-6. SISO ANT1 20MHz BW (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | IEEE | Transmission | Mode | Conducted Power Limit | Conducted Power | Ant. Gain [dBi] | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|---------------|------------|---------|----------|---------|--------------|----------|--------------------------|--------------------|--------------------|-----------------------|-----------------------------|-------------------------|
| | | | | 802.11n | 802.11ac | 802.11ax | [dBm] | Margin [dB] | [abi] | [abiii] | Ennie [GBIII] | |
| ₽ ⊂ | 5190 | 38 | AVG | 13.02 | 13.05 | 13.33 | 23.98 | -10.93 | -6.69 | 6.36 | 23.01 | -16.65 |
| 두 단 | 5230 | 46 | AVG | 16.49 | 16.50 | 13.75 | 23.98 | -7.48 | -6.45 | 10.05 | 23.01 | -12.96 |
| (40M width | 5270 | 54 | AVG | 16.97 | 16.99 | 13.53 | 23.98 | -6.99 | -6.61 | 10.38 | 30.00 | -19.62 |
| 4 V | 5310 | 62 | AVG | 12.51 | 13.48 | 13.97 | 23.98 | -10.50 | -6.55 | 6.93 | 30.00 | -23.07 |
| ΡČ | 5510 | 102 | AVG | 14.35 | 14.41 | 13.27 | 23.98 | -9.57 | -6.99 | 7.42 | 30.00 | -22.58 |
| GH Bar | 5590 | 118 | AVG | 16.73 | 16.74 | 13.99 | 23.98 | -7.24 | -6.99 | 9.75 | - | - |
| 50 | 5630 | 126 | AVG | 16.61 | 16.68 | 13.94 | 23.98 | -7.30 | -6.99 | 9.69 | - | - |
| | 5710 | 142 | AVG | 16.83 | 16.83 | 13.29 | 23.98 | -7.15 | -6.86 | 9.97 | 30.00 | -20.03 |
| | 5755 | 151 | AVG | 16.46 | 16.45 | 13.61 | 30.00 | -13.54 | -6.86 | 9.60 | - | - |
| | 5795 | 159 | AVG | 16.65 | 16.64 | 13.86 | 30.00 | -13.35 | -6.95 | 9.70 | - | - |

Table 7-7. SISO ANT1 40MHz BW (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | IEEE Transn | nission Mode | Conducted Power Limit | Conducted Power | Ant. Gain [dBi] | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|--------------|------------|---------|----------|-------------|--------------|--------------------------|--------------------|--------------------|-----------------------|-----------------------------|-------------------------|
| ₽ E | | | | 802.11ac | 802.11ax | [dBm] | Margin [dB] | [abi] | [abiii] | Ennie [GBin] | |
| d <u>t</u> N | 5210 | 42 | AVG | 13.02 | 12.85 | 23.98 | -10.96 | -6.45 | 6.57 | 23.01 | -16.44 |
| <u>≥</u> (% | 5290 | 58 | AVG | 11.61 | 12.22 | 23.98 | -12.37 | -6.55 | 5.06 | 30.00 | -24.94 |
| 5GHz Band | 5530 | 106 | AVG | 12.36 | 12.98 | 23.98 | -11.62 | -6.99 | 5.37 | 30.00 | -24.63 |
| B 2 | 5610 | 122 | AVG | 15.31 | 12.85 | 23.98 | -8.67 | -6.99 | 8.32 | - | - |
| | 5690 | 138 | AVG | 15.36 | 12.92 | 23.98 | -8.62 | -6.86 | 8.50 | 30.00 | -21.50 |
| | 5775 | 155 | AVG | 15.38 | 12.73 | 30.00 | -14.62 | -6.86 | 8.52 | - | - |

Table 7-8. SISO ANT1 80MHz BW (UNII) Maximum Conducted Output Power

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 07 of 044 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 87 of 241 |
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SISO Antenna-2 Conducted Output Power Measurements

| | Freq [MHz] | Channel | Detector | | IEEE Transn | nission Mode | | Conducted Power Limit | Conducted Power | Ant. Gain [dBi] | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|----------|------------|---------|----------|---------|-------------|--------------|----------|--------------------------|--------------------|--------------------|-----------------------|-----------------------------|-------------------------|
| Ē | | | | 802.11a | 802.11n | 802.11ac | 802.11ax | [dBm] | Margin [dB] | [0.2.] | Land | | |
| width) | 5180 | 36 | AVG | 16.20 | 16.16 | 16.13 | 15.55 | 23.98 | -7.78 | -6.45 | 9.75 | 23.01 | -13.26 |
| Š | 5200 | 40 | AVG | 17.25 | 17.21 | 17.36 | 15.54 | 23.98 | -6.62 | -6.69 | 10.67 | 23.01 | -12.34 |
| and | 5220 | 44 | AVG | 17.26 | 17.10 | 17.33 | 15.48 | 23.98 | -6.65 | -6.45 | 10.88 | 23.01 | -12.13 |
| ar | 5240 | 48 | AVG | 17.25 | 17.16 | 17.39 | 15.49 | 23.98 | -6.59 | -6.45 | 10.94 | 23.01 | -12.07 |
| B | 5260 | 52 | AVG | 17.26 | 17.25 | 17.44 | 15.59 | 23.98 | -6.54 | -6.45 | 10.99 | 30.00 | -19.01 |
| Ŧ | 5280 | 56 | AVG | 17.35 | 17.37 | 17.36 | 15.68 | 23.98 | -6.61 | -6.61 | 10.76 | 30.00 | -19.24 |
| ŧ | 5300 | 60 | AVG | 17.34 | 17.49 | 17.58 | 15.70 | 23.98 | -6.40 | -6.55 | 11.03 | 30.00 | -18.97 |
| MO | 5320 | 64 | AVG | 16.31 | 16.24 | 16.24 | 15.69 | 23.98 | -7.67 | -6.55 | 9.76 | 30.00 | -20.24 |
| <u> </u> | 5500 | 100 | AVG | 16.08 | 16.02 | 16.06 | 15.32 | 23.98 | -7.90 | -6.99 | 9.09 | 30.00 | -20.91 |
| 4 | 5600 | 120 | AVG | 17.53 | 17.16 | 17.23 | 15.55 | 23.98 | -6.45 | -6.99 | 10.54 | - | - |
| | 5720 | 144 | AVG | 17.29 | 17.91 | 17.15 | 15.40 | 23.98 | -6.07 | -6.99 | 10.92 | 30.00 | -19.08 |
| 5G | 5745 | 149 | AVG | 17.13 | 17.36 | 17.34 | 15.55 | 30.00 | -12.64 | -6.99 | 10.37 | - | - |
| | 5785 | 157 | AVG | 17.25 | 17.19 | 17.54 | 15.69 | 30.00 | -12.46 | -6.86 | 10.68 | - | - |
| | 5825 | 165 | AVG | 16.98 | 17.96 | 17.21 | 15.42 | 30.00 | -12.04 | -6.95 | 11.01 | - | - |

Table 7-9. SISO ANT2 20MHz BW (UNII) Maximum Conducted Output Power

| | Freq [MHz] Ch | Channel | Detector | IEEE | Transmission | Mode | Conducted Power Limit | Conducted Power | Ant. Gain [dBi] | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|---------------|---------------|---------|----------|---------|--------------|----------|--------------------------|--------------------|--------------------|-----------------------|-----------------------------|-------------------------|
| | | | | 802.11n | 802.11ac | 802.11ax | [dBm] | Margin [dB] | [abi] | [abiii] | Linik [dbin] | mai gin [ab] |
| ₽ ⊂ | 5190 | 38 | AVG | 13.09 | 13.13 | 13.42 | 23.98 | -10.85 | -6.69 | 6.44 | 23.01 | -16.57 |
| 두 푼 | 5230 | 46 | AVG | 16.50 | 16.49 | 13.79 | 23.98 | -7.48 | -6.45 | 10.05 | 23.01 | -12.96 |
| (40M width | 5270 | 54 | AVG | 16.54 | 16.38 | 13.58 | 23.98 | -7.44 | -6.61 | 9.93 | 30.00 | -20.07 |
| 4 V | 5310 | 62 | AVG | 13.03 | 13.09 | 13.41 | 23.98 | -10.89 | -6.55 | 6.54 | 30.00 | -23.46 |
| NĚ | 5510 | 102 | AVG | 14.82 | 14.81 | 13.49 | 23.98 | -9.16 | -6.99 | 7.83 | 30.00 | -22.17 |
| GH Bar | 5590 | 118 | AVG | 16.26 | 16.37 | 13.56 | 23.98 | -7.61 | -6.99 | 9.38 | - | - |
| 50 | 5630 | 126 | AVG | 16.44 | 16.33 | 13.53 | 23.98 | -7.54 | -6.99 | 9.45 | - | - |
| | 5710 | 142 | AVG | 16.19 | 16.98 | 13.39 | 23.98 | -7.00 | -6.86 | 10.12 | 30.00 | -19.88 |
| | 5755 | 151 | AVG | 16.25 | 16.28 | 13.70 | 30.00 | -13.72 | -6.86 | 9.42 | - | - |
| | 5795 | 159 | AVG | 16.98 | 16.97 | 13.31 | 30.00 | -13.02 | -6.95 | 10.03 | - | - |

Table 7-10. SISO ANT2 40MHz BW (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | IEEE Transn | nission Mode | Conducted Power Limit | Conducted Power | Ant. Gain [dBi] | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|------------|------------|---------|----------|-------------|--------------|--------------------------|--------------------|--------------------|-----------------------|-----------------------------|-------------------------|
| F (| | | | 802.11ac | 802.11ax | [dBm] | Margin [dB] | [abi] | [abiii] | Ennie [GB/II] | margin [ab] |
| idth) | 5210 | 42 | AVG | 13.45 | 12.44 | 23.98 | -10.53 | -6.45 | 7.00 | 23.01 | -16.01 |
| 8) 2 | 5290 | 58 | AVG | 11.59 | 12.88 | 23.98 | -12.39 | -6.55 | 5.04 | 30.00 | -24.96 |
| N 🚄 | 5530 | 106 | AVG | 12.28 | 12.98 | 23.98 | -11.70 | -6.99 | 5.29 | 30.00 | -24.71 |
| 5GH Bar | 5610 | 122 | AVG | 15.65 | 12.45 | 23.98 | -8.33 | -6.99 | 8.66 | - | - |
| | 5690 | 138 | AVG | 15.59 | 12.83 | 23.98 | -8.39 | -6.86 | 8.73 | 30.00 | -21.27 |
| | 5775 | 155 | AVG | 15.34 | 12.42 | 30.00 | -14.66 | -6.86 | 8.48 | - | - |

Table 7-11. SISO ANT2 80MHz BW (UNII) Maximum Conducted Output Power

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 89 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 88 of 241 |
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MIMO Maximum Conducted Output Power Measurements

| | Freq [MHz] | Channel | Detector | Conc | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|----------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| Ē. | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | [] | | |
| <u>q</u> | 5180 | 36 | AVG | 16.01 | 16.20 | 19.12 | 23.98 | -4.86 | -3.44 | 15.68 | 23.01 | -7.33 |
| 3 | 5200 | 40 | AVG | 17.64 | 17.25 | 20.46 | 23.98 | -3.52 | -3.68 | 16.78 | 23.01 | -6.23 |
| andwidth | 5220 | 44 | AVG | 17.72 | 17.26 | 20.51 | 23.98 | -3.47 | -3.44 | 17.07 | 23.01 | -5.94 |
| ar | 5240 | 48 | AVG | 17.67 | 17.25 | 20.48 | 23.98 | -3.50 | -3.44 | 17.04 | 23.01 | -5.97 |
| â | 5260 | 52 | AVG | 17.32 | 17.26 | 20.30 | 23.98 | -3.68 | -3.44 | 16.86 | 30.00 | -13.14 |
| Hz | 5280 | 56 | AVG | 17.96 | 17.35 | 20.68 | 23.98 | -3.30 | -3.60 | 17.08 | 30.00 | -12.92 |
| 5 | 5300 | 60 | AVG | 17.84 | 17.34 | 20.61 | 23.98 | -3.37 | -3.54 | 17.07 | 30.00 | -12.93 |
| (20M | 5320 | 64 | AVG | 16.14 | 16.31 | 19.24 | 23.98 | -4.74 | -3.54 | 15.70 | 30.00 | -14.30 |
| <u>9</u> | 5500 | 100 | AVG | 16.48 | 16.08 | 19.29 | 23.98 | -4.69 | -3.98 | 15.31 | 30.00 | -14.69 |
| N | 5600 | 120 | AVG | 17.68 | 17.53 | 20.62 | 23.98 | -3.36 | -3.98 | 16.64 | - | - |
| Т | 5720 | 144 | AVG | 17.77 | 17.29 | 20.55 | 23.98 | -3.43 | -3.98 | 16.57 | 30.00 | -13.43 |
| 5G | 5745 | 149 | AVG | 17.98 | 17.13 | 20.59 | 30.00 | -9.41 | -3.98 | 16.61 | - | - |
| | 5785 | 157 | AVG | 17.73 | 17.25 | 20.51 | 30.00 | -9.49 | -3.85 | 16.66 | - | - |
| | 5825 | 165 | AVG | 17.74 | 16.98 | 20.39 | 30.00 | -9.61 | -3.94 | 16.45 | - | - |

Table 7-12. MIMO 20MHz BW 802.11a (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | Cond | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|----------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| Ē | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | [abiii] | Ennie [GB/II] | margin [ab] |
| <u>e</u> | 5180 | 36 | AVG | 15.93 | 16.16 | 19.06 | 23.98 | -4.92 | -3.44 | 15.62 | 23.01 | -7.39 |
| Š | 5200 | 40 | AVG | 17.76 | 17.21 | 20.50 | 23.98 | -3.48 | -3.68 | 16.82 | 23.01 | -6.19 |
| andwidth | 5220 | 44 | AVG | 17.71 | 17.10 | 20.43 | 23.98 | -3.55 | -3.44 | 16.99 | 23.01 | -6.02 |
| | 5240 | 48 | AVG | 17.66 | 17.16 | 20.43 | 23.98 | -3.55 | -3.44 | 16.99 | 23.01 | -6.02 |
| B | 5260 | 52 | AVG | 17.18 | 17.25 | 20.23 | 23.98 | -3.75 | -3.44 | 16.79 | 30.00 | -13.21 |
| μ | 5280 | 56 | AVG | 17.96 | 17.37 | 20.69 | 23.98 | -3.29 | -3.60 | 17.09 | 30.00 | -12.91 |
| ⇒ | 5300 | 60 | AVG | 17.77 | 17.49 | 20.64 | 23.98 | -3.34 | -3.54 | 17.10 | 30.00 | -12.90 |
| (20M | 5320 | 64 | AVG | 16.12 | 16.24 | 19.19 | 23.98 | -4.79 | -3.54 | 15.65 | 30.00 | -14.35 |
| 2 | 5500 | 100 | AVG | 16.34 | 16.02 | 19.19 | 23.98 | -4.79 | -3.98 | 15.21 | 30.00 | -14.79 |
| N | 5600 | 120 | AVG | 17.76 | 17.16 | 20.48 | 23.98 | -3.50 | -3.98 | 16.50 | - | - |
| В | 5720 | 144 | AVG | 17.75 | 17.91 | 20.84 | 23.98 | -3.14 | -3.98 | 16.86 | 30.00 | -13.14 |
| 50 | 5745 | 149 | AVG | 17.35 | 17.36 | 20.37 | 30.00 | -9.63 | -3.98 | 16.39 | - | - |
| | 5785 | 157 | AVG | 17.74 | 17.19 | 20.48 | 30.00 | -9.52 | -3.85 | 16.63 | - | - |
| | 5825 | 165 | AVG | 17.84 | 17.96 | 20.91 | 30.00 | -9.09 | -3.94 | 16.97 | - | - |

Table 7-13. MIMO 20MHz BW 802.11n (UNII) Maximum Conducted Output Power

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 90 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 89 of 241 |
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| | Freq [MHz] | Channel | Detector | Cond | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|------------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| Ē | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | [] | | |
| <u>d</u> | 5180 | 36 | AVG | 16.06 | 16.13 | 19.11 | 23.98 | -4.87 | -3.44 | 15.67 | 23.01 | -7.34 |
| ž | 5200 | 40 | AVG | 17.61 | 17.36 | 20.50 | 23.98 | -3.48 | -3.68 | 16.82 | 23.01 | -6.19 |
| Bandwidth) | 5220 | 44 | AVG | 17.56 | 17.33 | 20.46 | 23.98 | -3.52 | -3.44 | 17.02 | 23.01 | -5.99 |
| ar | 5240 | 48 | AVG | 17.51 | 17.39 | 20.46 | 23.98 | -3.52 | -3.44 | 17.02 | 23.01 | -5.99 |
| | 5260 | 52 | AVG | 17.25 | 17.44 | 20.36 | 23.98 | -3.62 | -3.44 | 16.92 | 30.00 | -13.08 |
| Hz | 5280 | 56 | AVG | 17.94 | 17.36 | 20.67 | 23.98 | -3.31 | -3.60 | 17.07 | 30.00 | -12.93 |
| ⇒ | 5300 | 60 | AVG | 17.77 | 17.58 | 20.69 | 23.98 | -3.29 | -3.54 | 17.15 | 30.00 | -12.85 |
| 20M | 5320 | 64 | AVG | 16.16 | 16.24 | 19.21 | 23.98 | -4.77 | -3.54 | 15.67 | 30.00 | -14.33 |
| 3 | 5500 | 100 | AVG | 16.41 | 16.06 | 19.25 | 23.98 | -4.73 | -3.98 | 15.27 | 30.00 | -14.73 |
| N | 5600 | 120 | AVG | 17.64 | 17.23 | 20.45 | 23.98 | -3.53 | -3.98 | 16.47 | - | - |
| GHS | 5720 | 144 | AVG | 17.71 | 17.15 | 20.45 | 23.98 | -3.53 | -3.98 | 16.47 | 30.00 | -13.53 |
| 20 | 5745 | 149 | AVG | 17.29 | 17.34 | 20.33 | 30.00 | -9.67 | -3.98 | 16.35 | - | - |
| | 5785 | 157 | AVG | 17.72 | 17.54 | 20.64 | 30.00 | -9.36 | -3.85 | 16.79 | - | - |
| | 5825 | 165 | AVG | 17.77 | 17.21 | 20.51 | 30.00 | -9.49 | -3.94 | 16.57 | - | - |

Table 7-14. MIMO 20MHz BW 802.11ac (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | Conc | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|----------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| Ē | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | [] | | |
| width) | 5180 | 36 | AVG | 11.91 | 12.54 | 15.25 | 23.98 | -8.73 | -3.44 | 11.81 | 23.01 | -11.20 |
| 3 | 5200 | 40 | AVG | 11.94 | 12.56 | 15.27 | 23.98 | -8.71 | -3.68 | 11.59 | 23.01 | -11.42 |
| and | 5220 | 44 | AVG | 11.97 | 12.69 | 15.36 | 23.98 | -8.62 | -3.44 | 11.92 | 23.01 | -11.09 |
| ar | 5240 | 48 | AVG | 12.01 | 12.73 | 15.40 | 23.98 | -8.58 | -3.44 | 11.96 | 23.01 | -11.05 |
| В | 5260 | 52 | AVG | 12.91 | 12.57 | 15.75 | 23.98 | -8.23 | -3.60 | 12.15 | 30.00 | -17.85 |
| μZ | 5280 | 56 | AVG | 13.03 | 12.65 | 15.85 | 23.98 | -8.13 | -3.60 | 12.25 | 30.00 | -17.75 |
| ⇒ | 5300 | 60 | AVG | 12.85 | 12.71 | 15.79 | 23.98 | -8.19 | -3.54 | 12.25 | 30.00 | -17.75 |
| (20M | 5320 | 64 | AVG | 12.81 | 12.70 | 15.77 | 23.98 | -8.21 | -3.54 | 12.23 | 30.00 | -17.77 |
| 5 | 5500 | 100 | AVG | 13.23 | 12.51 | 15.90 | 23.98 | -8.08 | -3.98 | 11.92 | 30.00 | -18.08 |
| <u>N</u> | 5600 | 120 | AVG | 12.87 | 11.61 | 15.30 | 23.98 | -8.68 | -3.98 | 11.32 | - | |
| ЧЭ | 5720 | 144 | AVG | 12.76 | 11.37 | 15.13 | 23.98 | -8.85 | -3.85 | 11.28 | 30.00 | -18.72 |
| 20 | 5745 | 149 | AVG | 12.81 | 12.76 | 15.80 | 30.00 | -14.20 | -3.85 | 11.95 | - | - |
| | 5785 | 157 | AVG | 13.09 | 12.74 | 15.93 | 30.00 | -14.07 | -3.85 | 12.08 | - | - |
| | 5825 | 165 | AVG | 12.34 | 11.78 | 15.08 | 30.00 | -14.92 | -3.94 | 11.14 | - | - |

Table 7-15. MIMO 20MHz BW 802.11ax (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | Conc | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|-------------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | [abiii] | Ennie [GBIII] | margin [ab] |
| P C | 5190 | 38 | AVG | 13.02 | 13.09 | 16.07 | 23.98 | -7.91 | -3.68 | 12.39 | 23.01 | -10.62 |
| oMH | 5230 | 46 | AVG | 16.49 | 16.50 | 19.51 | 23.98 | -4.47 | -3.68 | 15.83 | 23.01 | -7.18 |
| | 5270 | 54 | AVG | 16.97 | 16.54 | 19.77 | 23.98 | -4.21 | -3.68 | 16.09 | 30.00 | -13.91 |
| 4 2 2 | 5310 | 62 | AVG | 12.51 | 13.03 | 15.79 | 23.98 | -8.19 | -3.68 | 12.11 | 30.00 | -17.89 |
| Ρč | 5510 | 102 | AVG | 14.35 | 14.82 | 17.60 | 23.98 | -6.38 | -3.68 | 13.92 | 30.00 | -16.08 |
| ъ В | 5590 | 118 | AVG | 16.73 | 16.26 | 19.51 | 23.98 | -4.47 | -3.68 | 15.83 | - | |
| 50 | 5630 | 126 | AVG | 16.61 | 16.44 | 19.54 | 23.98 | -4.44 | -3.68 | 15.86 | - | |
| | 5710 | 142 | AVG | 16.83 | 16.19 | 19.53 | 23.98 | -4.45 | -3.68 | 15.85 | 30.00 | -14.15 |
| | 5755 | 151 | AVG | 16.46 | 16.25 | 19.37 | 30.00 | -10.63 | -3.68 | 15.69 | - | - |
| | 5795 | 159 | AVG | 16.65 | 16.98 | 19.83 | 30.00 | -10.17 | -3.68 | 16.15 | - | - |

Table 7-16. MIMO 40MHz BW 802.11n (UNII) Maximum Conducted Output Power

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 00 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 90 of 241 |
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| | Freq [MHz] | Channel | Detector | Cond | lucted Power [| [dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|----------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | [abiii] | Ennie [GBIII] | margin [ab] |
| ₽ ⊂ | 5190 | 38 | AVG | 13.05 | 13.13 | 16.10 | 23.98 | -7.88 | -3.68 | 12.42 | 23.01 | -10.59 |
| 북북 | 5230 | 46 | AVG | 16.50 | 16.49 | 19.51 | 23.98 | -4.47 | -3.68 | 15.83 | 23.01 | -7.18 |
| ⊂.≃ | 5270 | 54 | AVG | 16.99 | 16.38 | 19.71 | 23.98 | -4.27 | -3.68 | 16.03 | 30.00 | -13.97 |
| 4 8 | 5310 | 62 | AVG | 13.48 | 13.09 | 16.30 | 23.98 | -7.68 | -3.68 | 12.62 | 30.00 | -17.38 |
| Hz | 5510 | 102 | AVG | 14.41 | 14.81 | 17.62 | 23.98 | -6.36 | -3.68 | 13.94 | 30.00 | -16.06 |
| Ва Ва | 5590 | 118 | AVG | 16.74 | 16.37 | 19.57 | 23.98 | -4.41 | -3.68 | 15.89 | - | |
| 50 | 5630 | 126 | AVG | 16.68 | 16.33 | 19.52 | 23.98 | -4.46 | -3.68 | 15.84 | - | - |
| | 5710 | 142 | AVG | 16.83 | 16.98 | 19.92 | 23.98 | -4.06 | -3.68 | 16.24 | 30.00 | -13.76 |
| | 5755 | 151 | AVG | 16.45 | 16.28 | 19.38 | 30.00 | -10.62 | -3.68 | 15.70 | - | - |
| | 5795 | 159 | AVG | 16.64 | 16.97 | 19.82 | 30.00 | -10.18 | -3.68 | 16.14 | - | - |

Table 7-17. MIMO 40MHz BW 802.11ac (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | Cond | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|------------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | Lapud | Ennie [GB/1] | margin [ab] |
| Ϋ́Ξ | 5190 | 38 | AVG | 10.14 | 10.49 | 13.33 | 23.98 | -10.65 | -3.68 | 9.65 | 23.01 | -13.36 |
| dt N | 5230 | 46 | AVG | 9.75 | 10.60 | 13.21 | 23.98 | -10.77 | -3.68 | 9.53 | 23.01 | -13.48 |
| | 5270 | 54 | AVG | 10.41 | 10.37 | 13.40 | 23.98 | -10.58 | -3.60 | 9.80 | 30.00 | -20.20 |
| 4) dv | 5310 | 62 | AVG | 10.55 | 10.48 | 13.53 | 23.98 | -10.45 | -3.54 | 9.99 | 30.00 | -20.01 |
| ΡĆ | 5510 | 102 | AVG | 11.22 | 10.33 | 13.81 | 23.98 | -10.17 | -3.98 | 9.83 | 30.00 | -20.17 |
| GH Bar | 5590 | 118 | AVG | 11.47 | 10.29 | 13.93 | 23.98 | -10.05 | -3.98 | 9.95 | - | - |
| <u>г</u> 2 | 5630 | 126 | AVG | 11.48 | 10.37 | 13.97 | 23.98 | -10.01 | -3.98 | 9.99 | - | - |
| | 5710 | 142 | AVG | 10.73 | 9.30 | 13.08 | 23.98 | -10.90 | -3.85 | 9.23 | 30.00 | -20.77 |
| | 5755 | 151 | AVG | 10.75 | 11.06 | 13.92 | 30.00 | -16.08 | -3.85 | 10.07 | - | - |
| | 5795 | 159 | AVG | 10.97 | 10.93 | 13.96 | 30.00 | -16.04 | -3.94 | 10.02 | - | - |

Table 7-18. MIMO 40MHz BW 802.11ax (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | Cond | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|------------------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| FT (c | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | Lapud | Ennie [GB/1] | margin [ab] |
| (80MH: width) | 5210 | 42 | AVG | 13.02 | 13.45 | 16.25 | 23.98 | -7.73 | -3.44 | 12.81 | 23.01 | -10.20 |
| <u>∞ ≥</u> | 5290 | 58 | AVG | 11.61 | 11.59 | 14.61 | 23.98 | -9.37 | -3.54 | 11.07 | 30.00 | -18.93 |
| 5GHz Band | 5530 | 106 | AVG | 12.36 | 12.28 | 15.33 | 23.98 | -8.65 | -3.98 | 11.35 | 30.00 | -18.65 |
| B 3G | 5610 | 122 | AVG | 15.31 | 15.65 | 18.49 | 23.98 | -5.49 | -3.98 | 14.51 | - | - |
| | 5690 | 138 | AVG | 15.36 | 15.59 | 18.49 | 23.98 | -5.49 | -3.85 | 14.64 | 30.00 | -15.36 |
| | 5775 | 155 | AVG | 15.38 | 15.34 | 18.37 | 30.00 | -11.63 | -3.85 | 14.52 | - | - |

Table 7-19. MIMO 80MHz BW 802.11ac (UNII) Maximum Conducted Output Power

| | Freq [MHz] | Channel | Detector | Cond | lucted Power [| dBm] | Conducted Power Limit | Conducted Power | Directional Ant. Gain | Max e.i.r.p. [dBm] | Max e.i.r.p. Limit [dBm] | e.i.r.p. Margin [dB] |
|---------------|------------|---------|----------|-------|----------------|-------|--------------------------|--------------------|--------------------------|-----------------------|-----------------------------|-------------------------|
| Ϋ́ Ξ | | | | ANT1 | ANT2 | MIMO | [dBm] | Margin [dB] | [dBi] | Lapud | Ennic [GB/1] | margin [ab] |
| OMH; idth) | 5210 | 42 | AVG | 9.56 | 9.73 | 12.66 | 23.98 | -11.32 | -3.44 | 9.22 | 23.01 | -13.79 |
| <u>×</u> (9 | 5290 | 58 | AVG | 9.71 | 9.34 | 12.54 | 23.98 | -11.44 | -3.54 | 9.00 | 30.00 | -21.00 |
| GHz Banc | 5530 | 106 | AVG | 10.07 | 9.20 | 12.67 | 23.98 | -11.31 | -3.98 | 8.69 | 30.00 | -21.31 |
| 5GI Ba | 5610 | 122 | AVG | 10.32 | 9.30 | 12.85 | 23.98 | -11.13 | -3.98 | 8.87 | - | - |
| | 5690 | 138 | AVG | 10.18 | 9.41 | 12.82 | 23.98 | -11.16 | -3.85 | 8.97 | 30.00 | -21.03 |
| | 5775 | 155 | AVG | 9.92 | 9.41 | 12.68 | 30.00 | -17.32 | -3.85 | 8.83 | - | - |

Table 7-20. MIMO 80MHz BW 802.11ax (UNII) Maximum Conducted Output Power

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Daga 01 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 91 of 241 |
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Note:

Per ANSI C63.10-2013 and KDB 662911 v02r01 Section E)1), the conducted powers at Antenna 1 and Antenna 2 were first measured separately during MIMO transmission as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

Per ANSI C63.10-2013 Section 14.4.3, the directional gain is calculated using the following formula, where G_N is the gain of the nth antenna and N_{ANT} , the total number of antennas used.

Directional gain = $10 \log[(10^{G_{1/20}} + 10^{G_{2/20}} + ... + 10^{G_{N/20}})^2 / N_{ANT}] dBi$

Sample MIMO Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 15.93 dBm for Antenna-1 and 16.16 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

(15.93 dBm + 16.16 dBm) = (39.17 mW + 41.30 mW) = 80.48 mW = 19.06 dBm

Sample e.i.r.p. Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average MIMO conducted power was calculated to be 19.06 dBm with directional gain of -3.44 dBi.

e.i.r.p. (dBm) = Conducted Power (dBm) + Ant gain (dBi)

19.06 dBm + -3.44 dBi = 15.62 dBm

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 92 of 241 |
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7.5 Maximum Power Spectral Density – 802.11a/n/ac/ax §15.407(a.1.iv) §15.407(a.2) §15.407(a.3); RSS-247 [6.2]

Test Overview and Limit

The spectrum analyzer was connected to the antenna terminal while the EUT was 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. Method SA-1, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, was used to measure the power spectral density.

In the 5.15 – 5.25GHz, 5.25 – 5.35GHz, 5.47 – 5.725GHz bands, the maximum permissible power spectral density is 11dBm/MHz.

In the 5.725 – 5.850GHz band, the maximum permissible power spectral density is 30dBm/500kHz.

Test Procedure Used

ANSI C63.10-2013 – Section 12.3.2.2 KDB 789033 D02 v02r01 – Section F ANSI C63.10-2013 – Section 14.3.2.2 Measure-and-Sum Technique KDB 662911 v02r01 – Section E)2) Measure-and-Sum Technique

Test Settings

- 1. Analyzer was set to the center frequency of the UNII channel under investigation
- 2. Span was set to encompass the entire emission bandwidth of the signal
- 3. RBW = 1MHz
- 4. VBW = 3MHz
- 5. Number of sweep points $\geq 2 \times (\text{span/RBW})$
- 6. Sweep time = auto
- 7. Detector = power averaging (RMS)
- 8. Trigger was set to free run for all modes
- 9. Trace was averaged over 100 sweeps
- 10. The peak search function of the spectrum analyzer was used to find the peak of the spectrum.

Test Setup

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



Figure 7-4. Test Instrument & Measurement Setup

Test Notes

None

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
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SISO Antenna-1 Power Spectral Density Measurements

| | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|-------------|--------------------|----------------|-------------|------------------|------------------------------------|-----------------------------------|----------------|
| | 5180 | 36 | а | 6 | 4.84 | 11.0 | -6.16 |
| | 5200 | 40 | а | 6 | 7.15 | 11.0 | -3.85 |
| | 5240 | 48 | а | 6 | 7.49 | 11.0 | -3.51 |
| | 5180 | 36 | n (20MHz) | 6.5/7.2 (MCS0) | 5.57 | 11.0 | -5.43 |
| | 5200 | 40 | n (20MHz) | 6.5/7.2 (MCS0) | 6.88 | 11.0 | -4.12 |
| | 5240 | 48 | n (20MHz) | 6.5/7.2 (MCS0) | 7.16 | 11.0 | -3.84 |
| | 5180 | 36 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.51 | 11.0 | -5.49 |
| Band 1 | 5200 | 40 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.13 | 11.0 | -5.87 |
| ä | 5240 | 48 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.59 | 11.0 | -5.41 |
| | 5190 | 38 | n (40MHz) | 13.5/15 (MCS0) | 4.18 | 11.0 | -6.82 |
| | 5230 | 46 | n (40MHz) | 13.5/15 (MCS0) | 3.29 | 11.0 | -7.71 |
| | 5190 | 38 | ax (40MHz) | 13.5/15 (MCS0) | -0.03 | 11.0 | -11.03 |
| | 5230 | 46 | ax (40MHz) | 13.5/15 (MCS0) | 0.64 | 11.0 | -10.36 |
| | 5210 | 42 | ac (80MHz) | 29.3/32.5 (MCS0) | 0.04 | 11.0 | -10.96 |
| | 5210 | 42 | ax (80MHz) | 29.3/32.5 (MCS0) | -3.73 | 11.0 | -14.73 |
| | 5260 | 52 | a | 6 | 7.37 | 11.0 | -3.63 |
| | 5280 | 56 | a | 6 | 8.16 | 11.0 | -2.84 |
| | 5320 | 64 | a | 6 | 6.09 | 11.0 | -4.91 |
| | 5260 | 52 | n (20MHz) | 6.5/7.2 (MCS0) | 7.08 | 11.0 | -3.92 |
| | 5280 | 56 | n (20MHz) | 6.5/7.2 (MCS0) | 7.81 | 11.0 | -3.19 |
| | 5320 | 64 | n (20MHz) | 6.5/7.2 (MCS0) | 5.67 | 11.0 | -5.33 |
| ∢ | 5260 | 52 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.36 | 11.0 | -5.64 |
| Band 2A | 5280 | 56 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.98 | 11.0 | -6.02 |
| Ban | | | · · · · | . , | 4.90 5.87 | 11.0 | |
| ш | 5320 | 64 54 | ax (20MHz) | 6.5/7.2 (MCS0) | 3.98 | 11.0 | -5.13 -7.02 |
| | 5270 | | n (40MHz) | 13.5/15 (MCS0) | | | |
| | 5310 | 62 | n (40MHz) | 13.5/15 (MCS0) | 4.61 | 11.0 | -6.39 |
| | 5270 | 54 | ax (40MHz) | 13.5/15 (MCS0) | 0.33 | 11.0 | -10.67 |
| | 5310 5300 | 62 | ax (40MHz) | 13.5/15 (MCS0) | 1.12 0.48 | 11.0 11.0 | -9.88 |
| | 5290 | 58 | ac (80MHz) | 29.3/32.5 (MCS0) | | - | -10.52 |
| | 5290 | 58 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.29 | 11.0 | -15.29 |
| | 5500 | 100 | a | 6 | 6.17 | 11.0 | -4.83 |
| | 5600 | 120 | а | 6 | 7.35 | 11.0 | -3.65 |
| | 5720 | 144 | a | 6 | 7.82 | 11.0 | -3.18 |
| | 5500 | 100 | n (20MHz) | 6.5/7.2 (MCS0) | 5.69 | 11.0 | -5.31 |
| | 5600 | 120 | n (20MHz) | 6.5/7.2 (MCS0) | 7.06 | 11.0 | -3.94 |
| | 5720 | 144 | n (20MHz) | 6.5/7.2 (MCS0) | 7.54 | 11.0 | -3.46 |
| | 5500 | 100 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.98 | 11.0 | -6.02 |
| | 5600 | 120 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.08 | 11.0 | -5.92 |
| | 5720 | 144 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.67 | 11.0 | -5.33 |
| | 5510 | 102 | n (40MHz) | 13.5/15 (MCS0) | 4.17 | 11.0 | -6.83 |
| 2C | 5590 | 118 | n (40MHz) | 13.5/15 (MCS0) | 3.20 | 11.0 | -7.80 |
| Band | 5670 | 134 | n (40MHz) | 13.5/15 (MCS0) | 3.20 | 11.0 | -7.80 |
| ä | 5710 | 142 | n (40MHz) | 13.5/15 (MCS0) | 3.70 | 11.0 | -7.30 |
| | 5510 | 102 | ax (40MHz) | 13.5/15 (MCS0) | -0.61 | 11.0 | -11.61 |
| | 5550 | 110 | ax (40MHz) | 13.5/15 (MCS0) | -0.61 | 11.0 | -11.61 |
| | 5590 | 118 | ax (40MHz) | 13.5/15 (MCS0) | 0.75 | 11.0 | -10.25 |
| | 5710 | 142 | ax (40MHz) | 13.5/15 (MCS0) | 0.06 | 11.0 | -10.94 |
| | 5530 | 106 | ac (80MHz) | 29.3/32.5 (MCS0) | -0.47 | 11.0 | -11.47 |
| | 5610 | 122 | ac (80MHz) | 29.3/32.5 (MCS0) | -1.61 | 11.0 | -12.61 |
| | 5690 | 138 | ac (80MHz) | 29.3/32.5 (MCS0) | -3.61 | 11.0 | -14.61 |
| | 5530 | 106 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.26 | 11.0 | -15.26 |
| | 5610 | 122 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.21 | 11.0 | -15.21 |
| | 5690 | 138 | ax (80MHz) | 29.3/32.5 (MCS0) | -6.20 | 11.0 | -17.20 |

Table 7-21. Bands 1, 2A, 2C Conducted Power Spectral Density Measurements SISO ANT1

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
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| | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Antenna Gain [dBi] | e.i.r.p. Power Density [dBm/MHz] | ISED Max e.i.r.p. Power Density [dBm/MHz] | Margin [dB] |
|------|--------------------|----------------|-------------|------------------|------------------------------------|-----------------------|--|---|----------------|
| | 5180 | 36 | а | 6 | 4.84 | -6.45 | -1.61 | 10.0 | -11.61 |
| | 5200 | 40 | а | 6 | 7.15 | -6.69 | 0.46 | 10.0 | -9.54 |
| | 5240 | 48 | а | 6 | 7.49 | -6.45 | 1.04 | 10.0 | -8.96 |
| | 5180 | 36 | n (20MHz) | 6.5/7.2 (MCS0) | 5.57 | -6.45 | -0.88 | 10.0 | -10.88 |
| | 5200 | 40 | n (20MHz) | 6.5/7.2 (MCS0) | 6.88 | -6.69 | 0.19 | 10.0 | -9.81 |
| | 5240 | 48 | n (20MHz) | 6.5/7.2 (MCS0) | 7.16 | -6.45 | 0.71 | 10.0 | -9.29 |
| Ξ | 5180 | 36 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.51 | -6.45 | -0.94 | 10.0 | -10.94 |
| Band | 5200 | 40 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.13 | -6.69 | -1.56 | 10.0 | -11.56 |
| ä | 5240 | 48 | ax (20MHz) | 6.5/7.2 (MCS0) | 5.59 | -6.45 | -0.86 | 10.0 | -10.86 |
| | 5190 | 38 | n (40MHz) | 13.5/15 (MCS0) | 4.18 | -6.45 | -2.27 | 10.0 | -12.27 |
| | 5230 | 46 | n (40MHz) | 13.5/15 (MCS0) | 3.29 | -6.45 | -3.16 | 10.0 | -13.16 |
| | 5190 | 38 | ax (40MHz) | 13.5/15 (MCS0) | -0.03 | -6.45 | -6.48 | 10.0 | -16.48 |
| | 5230 | 46 | ax (40MHz) | 13.5/15 (MCS0) | 0.64 | -6.45 | -5.81 | 10.0 | -15.81 |
| | 5210 | 42 | ac (80MHz) | 29.3/32.5 (MCS0) | 0.04 | -6.45 | -6.41 | 10.0 | -16.41 |
| | 5210 | 42 | ax (80MHz) | 29.3/32.5 (MCS0) | -3.73 | -6.45 | -10.18 | 10.0 | -20.18 |

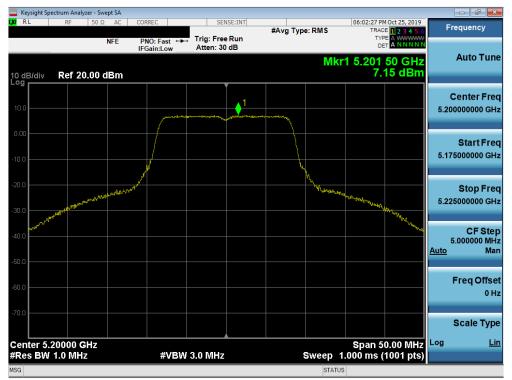
Table 7-22. Band 1 e.i.r.p. Conducted Power Spectral Density Measurements (ISED) SISO ANT1



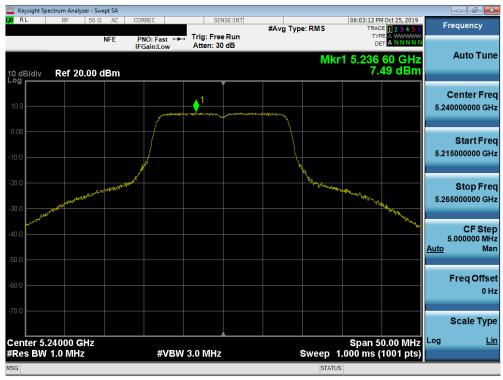
Plot 7-133. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 36)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager | | |
|------------------------------|--|---------------------------------------|---------|---------------------------------|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo OF of 244 | | |
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Plot 7-134. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 40)



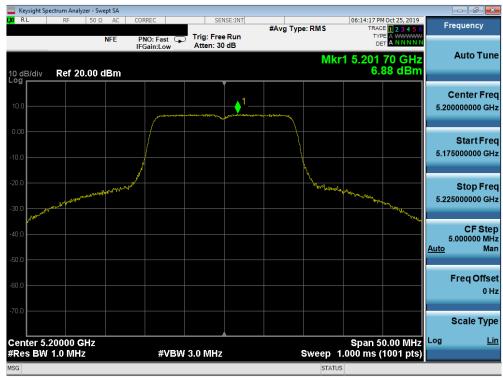
Plot 7-135. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) - Ch. 48)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 06 of 244 | | | |
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Plot 7-136. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)



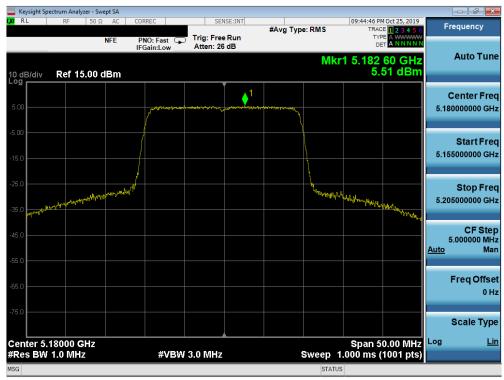
Plot 7-137. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 07 of 044 |
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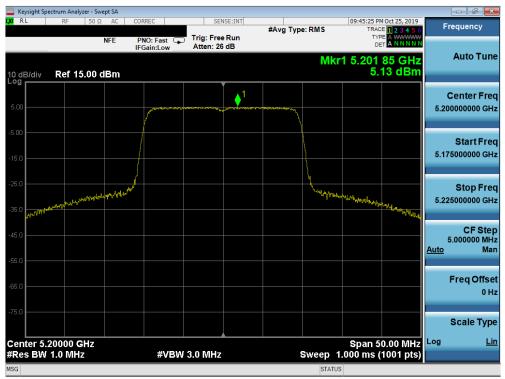
Plot 7-138. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)



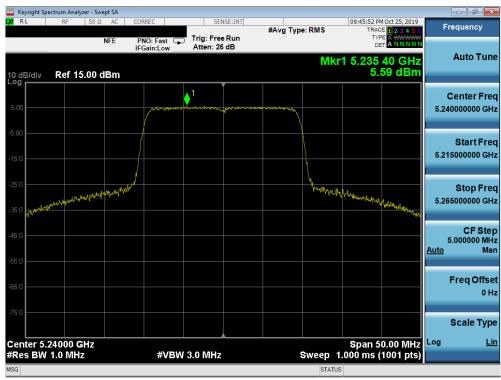
Plot 7-139. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 36)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | |
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Plot 7-140. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 40)



Plot 7-141. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) - Ch. 48)

| FCC ID: A3LSMG986U | MEASUREMENT REPORT (CERTIFICATION) | | Approved by: Quality Manager | | | |
|------------------------------|--|------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 00 of 244 | | | |
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Plot 7-142. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)



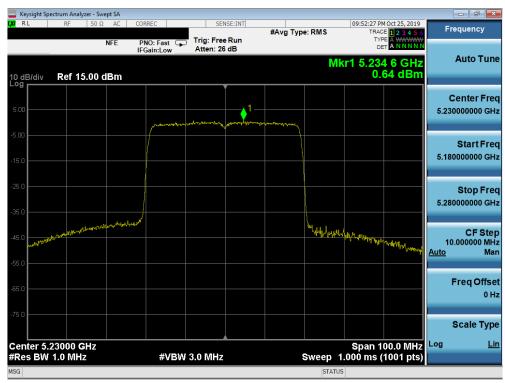
Plot 7-143. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 100 of 244 | | | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 100 of 241 | | | |
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Plot 7-144. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)



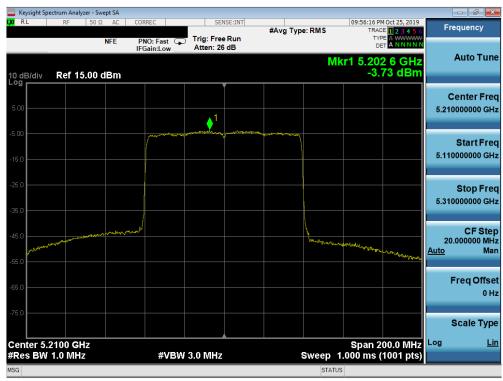
Plot 7-145. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
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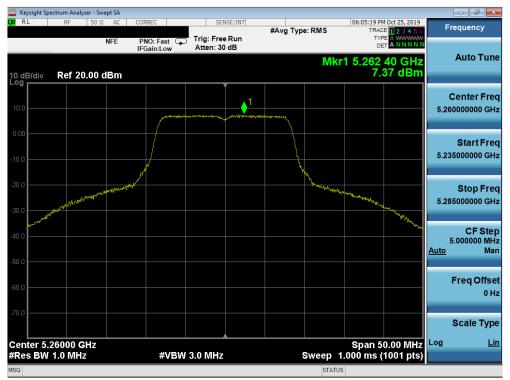
Plot 7-146. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)



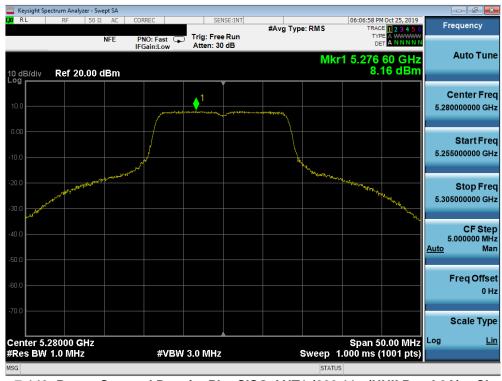
Plot 7-147. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 102 of 244 | | | |
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Plot 7-148. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 52)



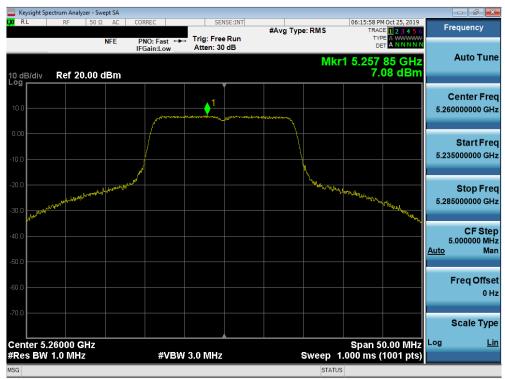
Plot 7-149. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) – Ch. 56)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 102 of 244 |
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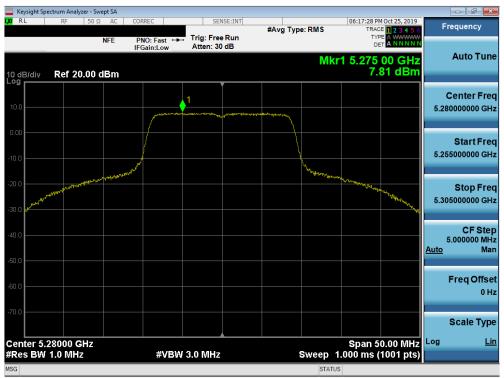
Plot 7-150. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) - Ch. 64)



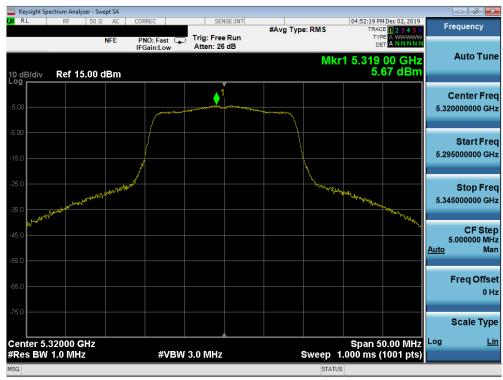
Plot 7-151. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 104 of 244 | | | |
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Plot 7-152. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)



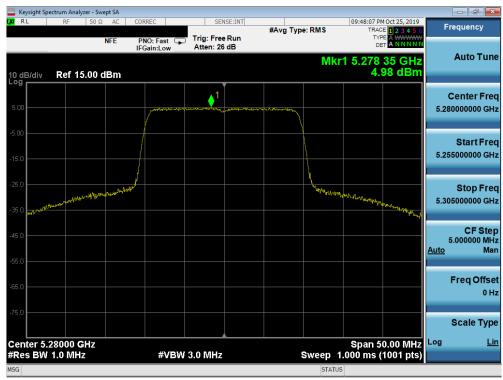
Plot 7-153. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 105 of 211 | | | |
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Plot 7-154. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 2A) - Ch. 52)



Plot 7-155. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 2A) - Ch. 56)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 100 of 244 | | | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 106 of 241 | | | |
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Plot 7-156. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 2A) - Ch. 64)



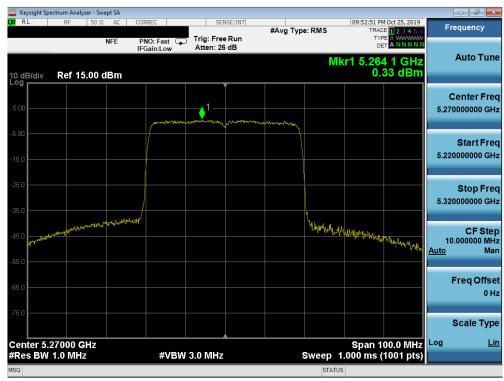
Plot 7-157. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | | | |
|------------------------------|--|---------------------------------------|---------------------------------|--|--|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 107 of 244 | | | |
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Plot 7-158. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)



Plot 7-159. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 100 of 244 |
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Plot 7-160. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)



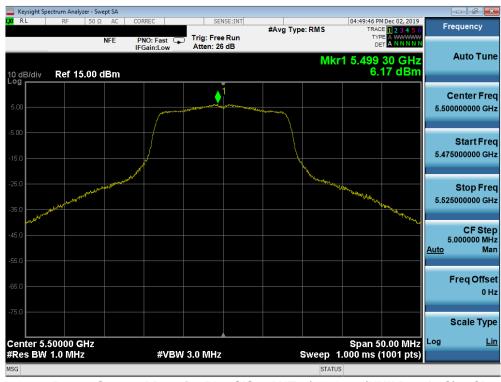
Plot 7-161. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Daga 100 of 244 |
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| | Spectrum Analy | | | | | | | | | | |
|------------------|--------------------|-------------------------|---|-------------------------|--|----------|------------|----------------|-------------------|----------------------|-------------------|
| LXI RL | RF | 50 Ω AC | CORREC | SEI | NSE:INT | #Avg Typ | e: RMS | | M Oct 25, 2019 | Freq | uency |
| | _ | NFE | PNO: Fast C IFGain:Low | Trig: Free Atten: 26 | | | | TYF De | | | |
| 10 dB/div Log | Ref 15 | 5.00 dBm | | | | | Mk | r1 5.27 -4. | 8 2 GHz 29 dBm | A | uto Tune |
| | | | | | Í | | | | | | nter Freq |
| 5.00 | | | | ▲1 | | | | | | 5.2900 | 00000 GHz |
| -5.00 | | | The set of | A | and the second s | mannen | | | | s | tart Freq |
| -15.0 | | | | | | | | | | | 00000 GHz |
| | | | | | | | | | | | |
| -25.0 | | | | | | | | | | | top Freq |
| -35.0 | | | 1 | | | | | | | 5.3900 | 00000 GHz |
| 15.0 | | | 1.110 | | | | | | | | CF Step |
| | Jon for population | August and a second and | | | | | Weenerghad | Hallweight | aller Miller | 20.00 <u>Auto</u> | 00000 MHz Man |
| -55.0 | | | | | | | | | | | |
| -65.0 | | | | | | | | | | Fr | eq Offset 0 Hz |
| 75.0 | | | | | | | | | | | 0 H2 |
| -75.0 | | | | | | | | | | So | ale Type |
| Center 5 | 5.2900 GH | lz | | | | | | Span 2 | 00.0 MHz | Log | <u>Lin</u> |
| #Res BV | V 1.0 MH: | z | #VB | W 3.0 MHz | | | Sweep 1 | .000 ms (| 1001 pts) | | |
| MSG | | | | | | | STATUS | | | | |

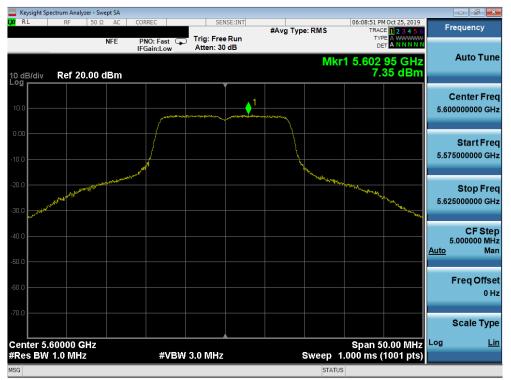
Plot 7-162. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)



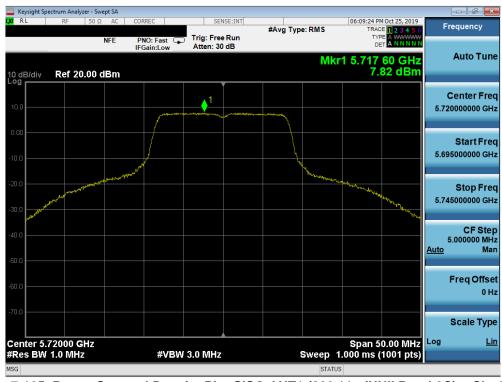
Plot 7-163. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 100)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SUNG | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Daga 110 of 211 |
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Plot 7-164. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 120)



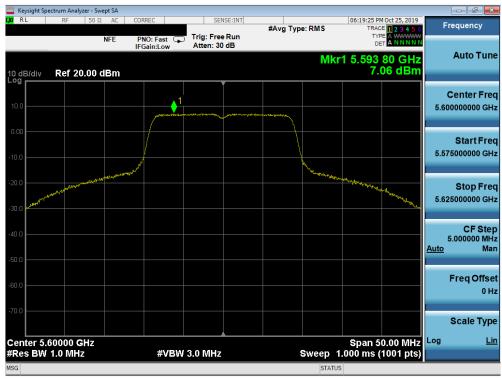
Plot 7-165. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) - Ch. 144)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | ISUNG | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Daga 111 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 111 of 241 |
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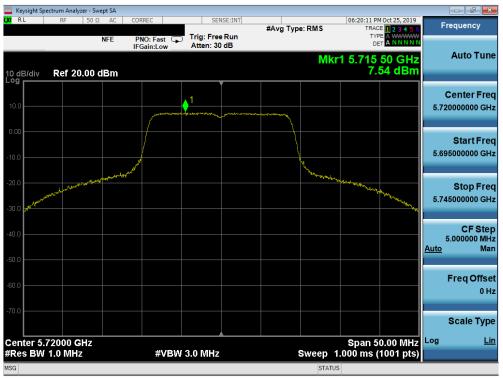
Plot 7-166. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)



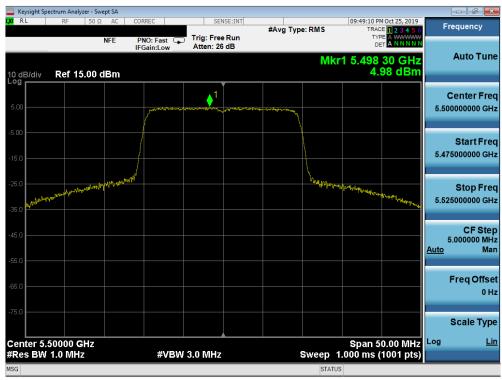
Plot 7-167. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 112 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 112 of 241 |
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Plot 7-168. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)



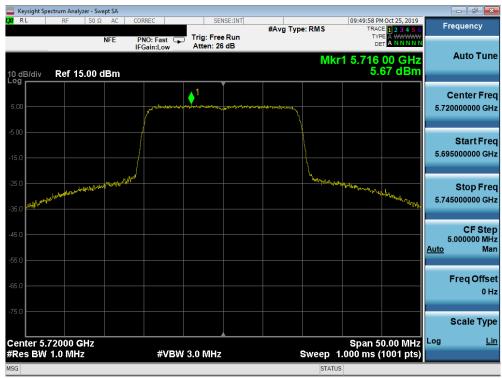
Plot 7-169. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 2C) - Ch. 100)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 112 of 241 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 113 of 241 |
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Plot 7-170. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 2C) - Ch. 120)



Plot 7-171. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 2C) - Ch. 144)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | MSUNG | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 111 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 114 of 241 |
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Plot 7-172. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)



Plot 7-173. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 115 of 241 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 115 of 241 |
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Plot 7-174. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)



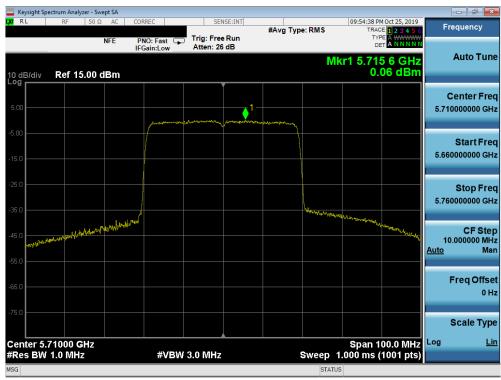
Plot 7-175. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | UNG | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|-----|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 116 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 116 of 241 |
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Plot 7-176. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)



Plot 7-177. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 117 of 011 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 117 of 241 |
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Plot 7-178. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)



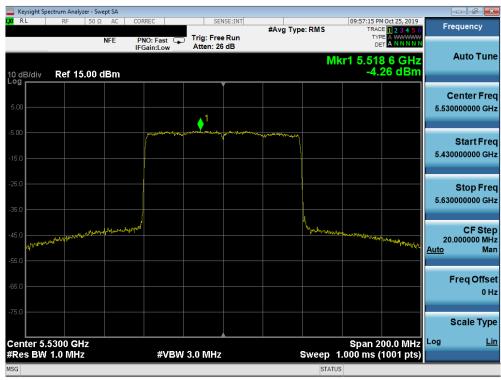
Plot 7-179. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 110 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 118 of 241 |
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Plot 7-180. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)



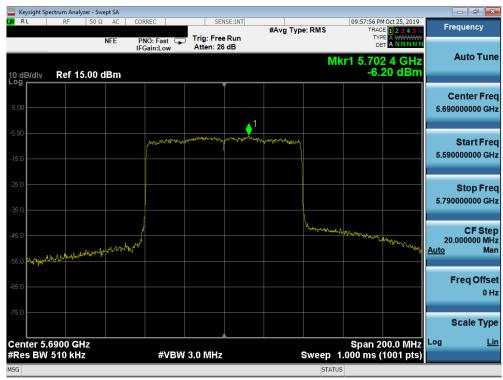
Plot 7-181. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 110 of 211 |
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| | ectrum Analyzer | | | | | | | | | |
|-----------------------|------------------------------|--|-------------------------|--|---------|-----------------------|---------|---------------------------------------|--|----------------------------------|
| L <mark>XI</mark> RL | RF 5 | 50Ω AC | CORREC | SEN | ISE:INT | #Avg Typ | e RMS | | M Oct 25, 2019 DE 1 2 3 4 5 6 | Frequency |
| | | NFE | PNO: Fast IFGain:Low | Trig: Free Atten: 26 | | "B)H | | TYI Di | | Auto Turo |
| 10 dB/div Log | Ref 15.0 | 0 dBm | | | | | Mk | (r1 5.60 -4. | 1 8 GHz 21 dBm | Auto Tune |
| 209 | | | |) j | | | | | | Center Freq |
| 5.00 | | | | 1 | | | | | | 5.610000000 GHz |
| -5.00 | | | water | and a state of the | - | and the second second | | | | |
| -15.0 | | | | | | | | | | Start Freq 5.510000000 GHz |
| | | | | | | | | | | |
| -25.0 | | | | | | | | | | Stop Freq |
| -35.0 | | | | | | | | | | 5.710000000 GHz |
| | | | . / | | | | mound | al and the work of the | | CF Step |
| -45.0 | and a support of the support | ¢Ω _N ¹² Nevder™V | - | | | | | | and the state of t | 20.000000 MHz <u>Auto</u> Man |
| -55.0 | | | | | | | | | | |
| -65.0 | | | | | | | | | | Freq Offset |
| | | | | | | | | | | 0 Hz |
| -75.0 | | | | | | | | | | Scale Type |
| O a m t a m E | | | | | | | | 0 | | Log <u>Lin</u> |
| Center 5.0 #Res BW | | | #VE | 3W 3.0 MHz | | | Sweep 1 | span 2 .000 ms (| 00.0 MHz (1001 pts) | |
| MSG | | | | | | | STATUS | · · · · · · · · · · · · · · · · · · · | | |

Plot 7-182. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)



Plot 7-183. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 120 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 120 of 241 |
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| | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] |
|------|--------------------|----------------|-------------|------------------|------------------------------------|--|----------------|
| | 5745 | 149 | а | 6 | 5.01 | 30.0 | -24.99 |
| | 5785 | 157 | а | 6 | 4.06 | 30.0 | -25.94 |
| | 5825 | 165 | а | 6 | 3.95 | 30.0 | -26.05 |
| | 5745 | 149 | n (20MHz) | 6.5/7.2 (MCS0) | 4.02 | 30.0 | -25.98 |
| | 5785 | 157 | n (20MHz) | 6.5/7.2 (MCS0) | 3.97 | 30.0 | -26.03 |
| | 5825 | 165 | n (20MHz) | 6.5/7.2 (MCS0) | 3.67 | 30.0 | -26.33 |
| e | 5745 | 149 | ax (20MHz) | 6.5/7.2 (MCS0) | 1.90 | 30.0 | -28.10 |
| Band | 5785 | 157 | ax (20MHz) | 6.5/7.2 (MCS0) | 2.00 | 30.0 | -28.00 |
| ä | 5825 | 165 | ax (20MHz) | 6.5/7.2 (MCS0) | 1.92 | 30.0 | -28.08 |
| | 5755 | 151 | n (40MHz) | 13.5/15 (MCS0) | -0.20 | 30.0 | -30.20 |
| | 5795 | 159 | n (40MHz) | 13.5/15 (MCS0) | 0.16 | 30.0 | -29.84 |
| | 5755 | 151 | ax (40MHz) | 13.5/15 (MCS0) | -2.89 | 30.0 | -32.89 |
| | 5795 | 159 | ax (40MHz) | 13.5/15 (MCS0) | -2.87 | 30.0 | -32.87 |
| | 5775 | 155 | ac (80MHz) | 29.3/32.5 (MCS0) | -1.49 | 30.0 | -31.49 |
| | 5775 | 155 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.16 | 30.0 | -34.16 |

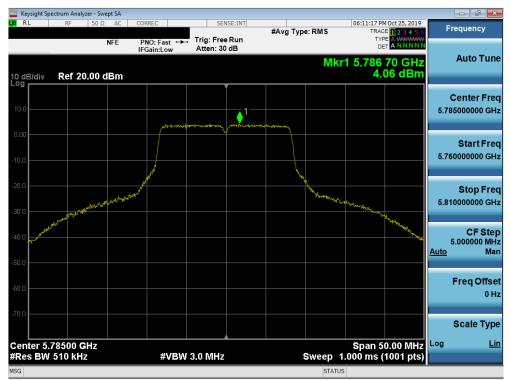
Table 7-23. Band 3 Conducted Power Spectral Density Measurements SISO ANT1



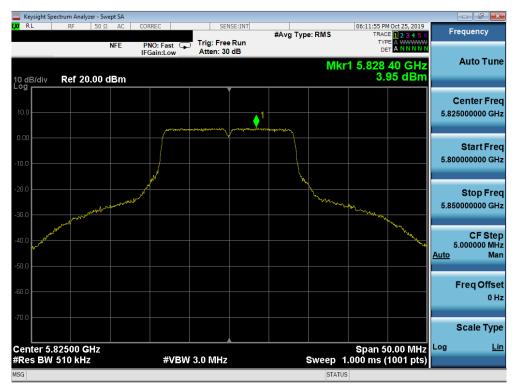
Plot 7-184. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 149)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 101 of 011 |
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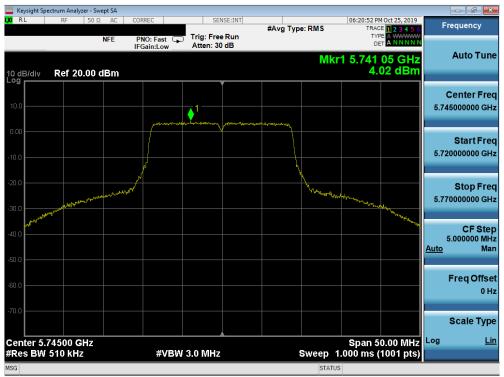
Plot 7-185. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) - Ch. 157)



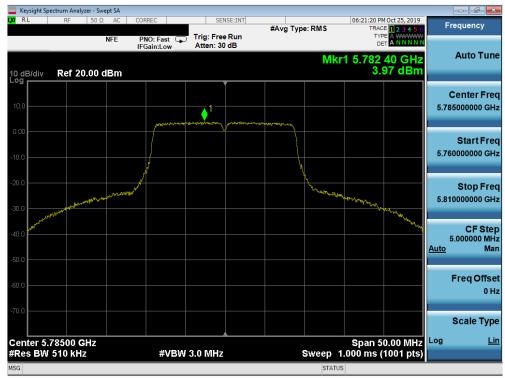
Plot 7-186. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) - Ch. 165)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 100 of 011 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 122 of 241 |
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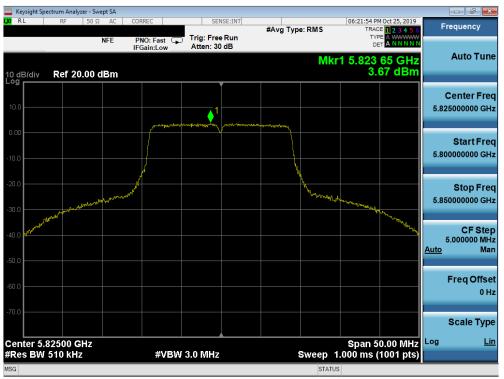
Plot 7-187. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 149)



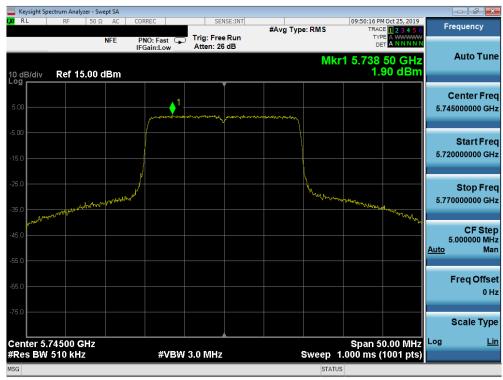
Plot 7-188. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 157)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 102 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 123 of 241 |
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Plot 7-189. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) - Ch. 165)



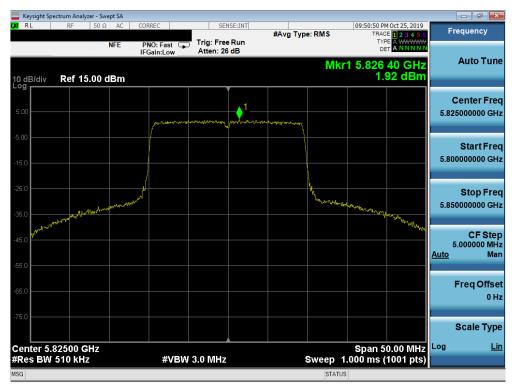
Plot 7-190. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 3) - Ch. 149)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 104 of 044 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 124 of 241 |
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Plot 7-191. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 3) - Ch. 157)



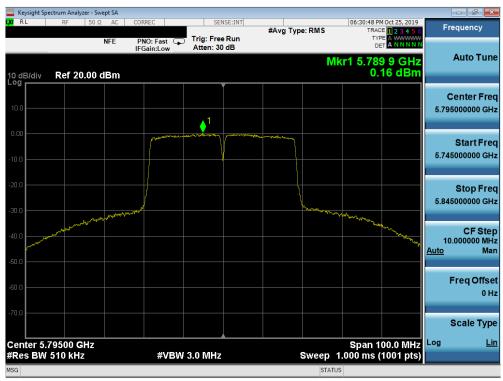
Plot 7-192. Power Spectral Density Plot SISO ANT1 (20MHz 802.11ax (UNII Band 3) - Ch. 165)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | MSUNG | Approved by: Quality Manager |
|--|---------------------|---------------------------------------|-------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 125 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 125 of 241 |
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Plot 7-193. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 151)



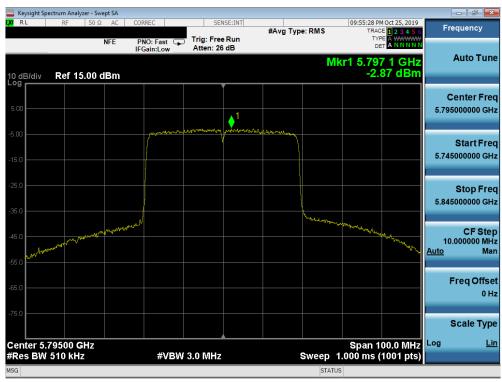
Plot 7-194. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) - Ch. 159)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 126 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 126 of 241 |
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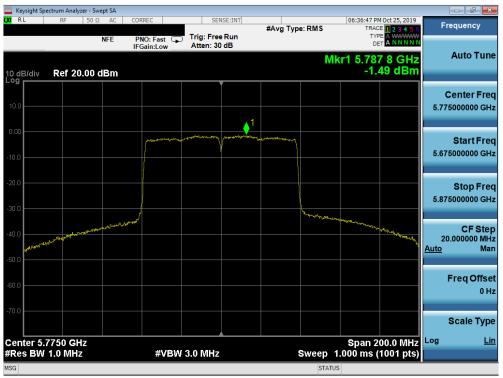
Plot 7-195. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 151)



Plot 7-196. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) - Ch. 159)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
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| Test Report S/N: | Test Dates: | EUT Type: | Dage 107 of 044 |
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Plot 7-197. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) - Ch. 155)



Plot 7-198. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 3) - Ch. 155)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
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SISO Antenna-2 Power Spectral Density Measurements

| Fund 5200 40 a 6 7.12 11.0 -4 5180 36 n (20MHz) 6.57.2 (MCS0) 6.57 11.0 -5 5200 40 n (20MHz) 6.57.2 (MCS0) 6.57 11.0 -4 5200 40 n (20MHz) 6.57.2 (MCS0) 4.63 11.0 -4 5200 40 ax (20MHz) 6.57.2 (MCS0) 4.46 11.0 -6 5200 40 ax (20MHz) 6.57.2 (MCS0) 4.43 11.0 -6 5200 40 ax (20MHz) 13.5715 (MCS0) 2.85 11.0 -7 5230 46 n (40MHz) 13.5715 (MCS0) 0.36 11.0 -1 5210 42 ac (80MHz) 23.32.5 (MCS0) 0.40 11.0 -1 5210 42 ac (80MHz) 23.32.5 (MCS0) 0.40 11.0 -1 5220 52 a 6 6.96 11.0 -4 5280 < | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|--|--------------------|----------------|-------------|------------------|------------------------------------|-----------------------------------|----------------|
| State State <th< th=""><td>5180</td><td>36</td><td>а</td><td>6</td><td>5.66</td><td>11.0</td><td>-5.34</td></th<> | 5180 | 36 | а | 6 | 5.66 | 11.0 | -5.34 |
| FTE 5180 36 n (20MHz) 6.5/7.2 (MCS0) 5.54 11.0 -4 5200 40 n (20MHz) 6.5/7.2 (MCS0) 6.79 11.0 -4 5240 48 n (20MHz) 6.5/7.2 (MCS0) 4.46 11.0 -6 5200 40 ax (20MHz) 6.5/7.2 (MCS0) 4.46 11.0 -6 5200 40 ax (20MHz) 6.5/7.2 (MCS0) 4.73 11.0 -6 5230 46 n (40MHz) 13.5/15 (MCS0) -3.73 11.0 -7 5230 46 n (40MHz) 13.5/15 (MCS0) -0.37 11.0 -1 5210 42 ac (80MHz) 23.3/2.5 (MCS0) 0.40 11.0 -1 5280 56 a 6 6.968 11.0 -4 5280 52 n (20MHz) 6.5/7.2 (MCS0) 6.47 11.0 -4 5280 56 a 6 6.565 11.0 -4 5280 <td>5200</td> <td>40</td> <td>а</td> <td>6</td> <td>6.98</td> <td>11.0</td> <td>-4.02</td> | 5200 | 40 | а | 6 | 6.98 | 11.0 | -4.02 |
| Second 40 n (20MHz) 6.577.2 (MCS0) 6.57 11.0 -4 5240 48 n (20MHz) 6.577.2 (MCS0) 4.46 11.0 -6 5200 40 ax (20MHz) 6.577.2 (MCS0) 4.463 11.0 -6 5200 40 ax (20MHz) 6.577.2 (MCS0) 4.463 11.0 -6 5200 40 ax (20MHz) 6.577.2 (MCS0) 4.73 11.0 -6 5230 46 n (40MHz) 13.5715 (MCS0) 2.85 11.0 -7 5230 46 ax (40MHz) 13.5715 (MCS0) 0.37 11.0 -1 5230 46 ax (80MHz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5240 56 a 6 7.07 11.0 -4 5280 52 a 6 6.066 11.0 -4 5280 56 a 6 7.07 11.0 -4 5280 56 a | 5240 | 48 | а | 6 | 7.12 | 11.0 | -3.88 |
| State State <th< th=""><td>5180</td><td>36</td><td>n (20MHz)</td><td>6.5/7.2 (MCS0)</td><td>5.54</td><td>11.0</td><td>-5.46</td></th<> | 5180 | 36 | n (20MHz) | 6.5/7.2 (MCS0) | 5.54 | 11.0 | -5.46 |
| Tegs 5180 36 ax (20MHz) 6.5/7.2 (MCS0) 4.46 11.0 -C 5200 40 ax (20MHz) 6.5/7.2 (MCS0) 4.63 11.0 -C 5240 48 ax (20MHz) 6.5/7.2 (MCS0) 4.73 11.0 -C 5240 48 ax (20MHz) 13.5/15 (MCS0) 2.85 11.0 -F 5230 46 n (40MHz) 13.5/15 (MCS0) 0.37 11.0 -1 5210 42 ac (80MHz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5210 42 ac (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5220 56 a 6 7.07 11.0 -4 5280 56 a 6 7.07 11.0 -4 5280 56 a 6 7.07 11.0 -4 5280 56 a 6 6.577.2 (MCS0) 6.05 11.0 -4 5280 | 5200 | 40 | n (20MHz) | 6.5/7.2 (MCS0) | 6.57 | 11.0 | -4.43 |
| Sec 5200 40 ax (20M+b2) 6.5/7.2 (MCS0) 4.63 11.0 -6 5240 48 ax (20M+b2) 6.5/7.2 (MCS0) 3.73 11.0 -7 5230 46 n (40M+b2) 13.5/15 (MCS0) 2.85 11.0 -7 5230 46 n (40M+b2) 13.5/15 (MCS0) 0.37 11.0 -1 5230 46 ax (40M+b2) 13.5/15 (MCS0) 0.26 11.0 -1 5210 42 ac (80M+b2) 33.25 (MCS0) 0.40 11.0 -1 5210 42 ax (80M+b2) 29.3/32.5 (MCS0) 0.40 11.0 -4 5220 64 a 6 6.05 11.0 -4 5220 64 a 6 6.05 11.0 -4 5280 56 n (20M+b2) 6.5/7.2 (MCS0) 6.05 11.0 -4 5280 56 ax (20M+b2) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280< | 5240 | 48 | n (20MHz) | 6.5/7.2 (MCS0) | 6.79 | 11.0 | -4.21 |
| Total Total Total Total Total Total 5200 46 n (400Hz) 13.5/15 (MCS0) 2.85 11.0 -5 5230 46 n (400Hz) 13.5/15 (MCS0) 0.373 11.0 -1 5230 46 ax (400Hz) 13.5/15 (MCS0) 0.26 11.0 -1 5210 42 ax (800Hz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5210 42 ax (800Hz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5220 64 a 6 6.665 11.0 -4 5280 56 a 6 6.655 11.0 -4 5280 56 n (200Hz) 6.57.2 (MCS0) 6.76 11.0 -4 5280 56 ax (200Hz) 6.57.2 (MCS0) 6.77 11.0 -6 5280 56 ax (200Hz) 6.57.2 (MCS0) 4.87 11.0 -6 5270 54 ax (400Hz) | ~ 5180 | 36 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.46 | 11.0 | -6.54 |
| Total Total Total Total Total Total 5200 46 n (400Hz) 13.5/15 (MCS0) 2.85 11.0 -5 5230 46 n (400Hz) 13.5/15 (MCS0) 0.373 11.0 -1 5230 46 ax (400Hz) 13.5/15 (MCS0) 0.26 11.0 -1 5210 42 ax (800Hz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5210 42 ax (800Hz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5220 64 a 6 6.665 11.0 -4 5280 56 a 6 6.655 11.0 -4 5280 56 n (200Hz) 6.57.2 (MCS0) 6.76 11.0 -4 5280 56 ax (200Hz) 6.57.2 (MCS0) 6.77 11.0 -6 5280 56 ax (200Hz) 6.57.2 (MCS0) 4.87 11.0 -6 5270 54 ax (400Hz) | 5200 | 40 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.63 | 11.0 | -6.37 |
| 5230 46 n (40MHz) 13.5/15 (MCS0) 2.85 11.0 -5 5190 38 ax (40MHz) 13.5/15 (MCS0) -0.37 11.0 -1 5230 46 ax (40MHz) 13.5/15 (MCS0) -0.26 11.0 -1 5210 42 ac (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -4 5280 56 a 6 7.07 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.05 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5 | ö 5240 | 48 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.73 | 11.0 | -6.27 |
| 5190 38 ax (40MHz) 13.5/15 (MCS0) -0.37 11.0 -1 5230 46 ax (40MHz) 13.5/15 (MCS0) 0.26 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -4 5260 52 a 6 6.96 11.0 -4 5280 56 a 6 7.07 11.0 -3 5320 64 a 6 6.655 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.77 11.0 -4 5320 64 n (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5270 54 n (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MH | 5190 | 38 | n (40MHz) | 13.5/15 (MCS0) | 3.73 | 11.0 | -7.27 |
| 5230 46 ax (40MHz) 13.5/15 (MCS0) 0.26 11.0 -1 5210 42 ac (80MHz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5210 42 ac (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -4 5280 56 a 6 6.56 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.76 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.77 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5270 54 n (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 52 | 5230 | 46 | n (40MHz) | 13.5/15 (MCS0) | 2.85 | 11.0 | -8.15 |
| S210 42 ac (80MHz) 29.3/32.5 (MCS0) 0.40 11.0 -1 5210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1 5260 52 a 6 6.96 11.0 -4 5280 56 a 6 6.655 11.0 -4 5320 64 a 6 6.655 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.05 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5270 54 n (40MHz) 13.5/15 (MCS0) 3.80 11.0 -7 5270 54 ax (40MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ac (8 | 5190 | 38 | ax (40MHz) | 13.5/15 (MCS0) | -0.37 | 11.0 | -11.37 |
| S210 42 ax (80MHz) 29.3/32.5 (MCS0) -4.49 11.0 -1.1 5260 52 a 6 6.96 11.0 -4 5280 56 a 6 7.07 11.0 -2 5320 64 a 6 6.655 11.0 -4 5280 52 n (20MHz) 6.5/7.2 (MCS0) 6.76 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.05 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5320 64 ax (20MHz) 13.5/15 (MCS0) 2.81 11.0 -6 5320 54 n (40MHz) 13.5/15 (MCS0) 0.00 11.0 -7 5310 62 n (40MHz) 13.5/15 (MCS0) 0.27 11.0 -1 5290 58 ac (80MHz) | 5230 | 46 | ax (40MHz) | 13.5/15 (MCS0) | 0.26 | 11.0 | -10.74 |
| S260 52 a 6 6.96 11.0 .4 5280 56 a 6 7.07 11.0 -3 5320 64 a 6 6.655 11.0 -4 5280 56 n (20MHz) 6.577.2 (MCS0) 6.76 11.0 -4 5280 56 n (20MHz) 6.577.2 (MCS0) 6.05 11.0 -4 5320 64 n (20MHz) 6.577.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.577.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.577.2 (MCS0) 4.87 11.0 -6 5270 54 n (40MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5310 62 n (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5280 58 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -4 5290 58 ax (40MHz) | 5210 | 42 | ac (80MHz) | 29.3/32.5 (MCS0) | 0.40 | 11.0 | -10.60 |
| 5280 56 a 6 7.07 11.0 -3 5320 64 a 6 6.665 11.0 -4 5280 52 n (20MHz) 6.5/7.2 (MCS0) 6.76 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.05 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 6.77 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5270 54 n (40MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5270 54 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -7 5270 54 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5290 58 | 5210 | 42 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.49 | 11.0 | -15.49 |
| 5320 64 a 6 6.665 11.0 .4 5260 52 n (20MHz) 6.577.2 (MCS0) 6.76 11.0 .4 5280 56 n (20MHz) 6.577.2 (MCS0) 6.05 11.0 .4 5320 64 n (20MHz) 6.577.2 (MCS0) 6.77 11.0 .4 5280 56 ax (20MHz) 6.577.2 (MCS0) 4.87 11.0 .6 5280 56 ax (20MHz) 6.577.2 (MCS0) 4.87 11.0 .6 5280 64 ax (20MHz) 6.577.2 (MCS0) 4.87 11.0 .6 5280 64 ax (20MHz) 6.577.2 (MCS0) 4.77 11.0 .6 5270 54 n (40MHz) 13.5/15 (MCS0) 0.00 11.0 .7 5310 62 ax (40MHz) 13.5/15 (MCS0) 0.027 11.0 .1 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -0.18 11.0 .1 5200 | 5260 | 52 | а | 6 | 6.96 | 11.0 | -4.04 |
| Signal 5260 52 n (20MHz) 6.5/7.2 (MCS0) 6.76 11.0 -4 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.05 11.0 -4 5320 64 n (20MHz) 6.5/7.2 (MCS0) 6.77 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.98 11.0 -6 5200 64 ax (20MHz) 6.5/7.2 (MCS0) 4.77 11.0 -6 5210 54 n (40MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5210 54 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5310 62 ax (40MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5200 58 ax (60MHz) 29.3/32.5 (MCS0) -0.393 11.0 <td< th=""><td>5280</td><td>56</td><td>а</td><td>6</td><td>7.07</td><td>11.0</td><td>-3.93</td></td<> | 5280 | 56 | а | 6 | 7.07 | 11.0 | -3.93 |
| Signed 5280 56 n (20MHz) 6.5/7.2 (MCS0) 6.05 11.0 -4 5320 64 n (20MHz) 6.5/7.2 (MCS0) 6.77 11.0 -4 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.98 11.0 -6 5320 64 ax (20MHz) 6.5/7.2 (MCS0) 4.77 11.0 -6 5320 64 ax (20MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5310 62 n (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5310 62 ax (40MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -4 5500 100 a 6 5.72 11.0 -4 | 5320 | 64 | а | 6 | 6.65 | 11.0 | -4.35 |
| Signed 5320 64 n (20MHz) 6.5/7.2 (MCS0) 6.77 11.0 -4 5260 52 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.98 11.0 -6 5320 64 ax (20MHz) 6.5/7.2 (MCS0) 4.77 11.0 -6 5320 64 ax (20MHz) 13.5/15 (MCS0) 2.81 11.0 -6 5310 62 n (40MHz) 13.5/15 (MCS0) 3.80 11.0 -7 5310 62 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5270 54 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -4 5500 100 a 6 5.72 11.0 -3 | 5260 | 52 | n (20MHz) | 6.5/7.2 (MCS0) | 6.76 | 11.0 | -4.24 |
| Solution 5260 52 ax (20MHz) 6.5/7.2 (MCS0) 4.87 11.0 -6 5280 56 ax (20MHz) 6.5/7.2 (MCS0) 4.98 11.0 -6 5320 64 ax (20MHz) 6.5/7.2 (MCS0) 4.77 11.0 -6 5320 64 ax (20MHz) 6.5/7.2 (MCS0) 2.81 11.0 -6 5270 54 n (40MHz) 13.5/15 (MCS0) 2.81 11.0 -7 5270 54 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MHz) 13.5/15 (MCS0) -0.18 11.0 -1 5310 62 ax (40MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5500 100 a 6 5.88 11.0 -2 5600 120 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 <td>5280</td> <td>56</td> <td>n (20MHz)</td> <td></td> <td>6.05</td> <td>11.0</td> <td>-4.95</td> | 5280 | 56 | n (20MHz) | | 6.05 | 11.0 | -4.95 |
| State State <th< th=""><td>5320</td><td>64</td><td>n (20MHz)</td><td>6.5/7.2 (MCS0)</td><td>6.77</td><td>11.0</td><td>-4.23</td></th<> | 5320 | 64 | n (20MHz) | 6.5/7.2 (MCS0) | 6.77 | 11.0 | -4.23 |
| Open Open <th< th=""><td>5260</td><td>52</td><td>ax (20MHz)</td><td>6.5/7.2 (MCS0)</td><td>4.87</td><td>11.0</td><td>-6.13</td></th<> | 5260 | 52 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.87 | 11.0 | -6.13 |
| Open Open <th< th=""><td>5280</td><td>56</td><td>ax (20MHz)</td><td>6.5/7.2 (MCS0)</td><td>4.98</td><td>11.0</td><td>-6.02</td></th<> | 5280 | 56 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.98 | 11.0 | -6.02 |
| 5310 62 n (40MHz) 13.5/15 (MCS0) 3.80 11.0 -7 5270 54 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5500 100 a 6 5.88 11.0 -5 5600 120 a 6 6.72 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 <t< th=""><td>5320</td><td>64</td><td>ax (20MHz)</td><td>6.5/7.2 (MCS0)</td><td>4.77</td><td>11.0</td><td>-6.23</td></t<> | 5320 | 64 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.77 | 11.0 | -6.23 |
| S270 54 ax (40MHz) 13.5/15 (MCS0) 0.00 11.0 -1 5310 62 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5500 100 a 6 5.88 11.0 -5 5600 120 a 6 6.72 11.0 -4 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5510 102 < | 5270 | 54 | n (40MHz) | 13.5/15 (MCS0) | 2.81 | 11.0 | -8.19 |
| Single 62 ax (40MHz) 13.5/15 (MCS0) -0.27 11.0 -1 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5500 100 a 6 5.88 11.0 -5 5600 120 a 6 6.72 11.0 -4 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.42 11.0 -6 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.42 11.0 -7 5510 102 | 5310 | 62 | n (40MHz) | 13.5/15 (MCS0) | 3.80 | 11.0 | -7.20 |
| 5290 58 ac (80MHz) 29.3/32.5 (MCS0) -0.18 11.0 -1 5290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1 5500 100 a 6 5.88 11.0 -5 5600 120 a 6 6.72 11.0 -4 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) | 5270 | 54 | ax (40MHz) | 13.5/15 (MCS0) | 0.00 | 11.0 | -11.00 |
| S290 58 ax (80MHz) 29.3/32.5 (MCS0) -3.93 11.0 -1. 5500 100 a 6 5.88 11.0 -5 5600 120 a 6 6.72 11.0 -4 5720 144 a 6 7.22 11.0 -5 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -4 5600 120 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -4 5510 102 ax | 5310 | 62 | ax (40MHz) | 13.5/15 (MCS0) | -0.27 | 11.0 | -11.27 |
| Stop 100 a 6 5.88 11.0 -5 5600 120 a 6 6.72 11.0 -4 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -5 5600 120 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -6 5720 144 n (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -1 5510 102 ax (40M | 5290 | 58 | ac (80MHz) | 29.3/32.5 (MCS0) | -0.18 | 11.0 | -11.18 |
| 5600 120 a 6 6.72 11.0 -4 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -5 5600 120 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -6 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5500 120 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5510 102 | 5290 | 58 | ax (80MHz) | 29.3/32.5 (MCS0) | -3.93 | 11.0 | -14.93 |
| 5720 144 a 6 7.22 11.0 -3 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -5 5600 120 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5720 144 ax (20MHz) 13.5/15 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 551 | 5500 | 100 | а | 6 | 5.88 | 11.0 | -5.12 |
| 5500 100 n (20MHz) 6.5/7.2 (MCS0) 5.53 11.0 -5 5600 120 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -5 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 | 5600 | 120 | а | 6 | 6.72 | 11.0 | -4.28 |
| 5600 120 n (20MHz) 6.5/7.2 (MCS0) 6.95 11.0 -4 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5710 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -6 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 | 5720 | 144 | а | 6 | 7.22 | 11.0 | -3.78 |
| 5720 144 n (20MHz) 6.5/7.2 (MCS0) 7.49 11.0 -3 5500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -6 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 | 5500 | 100 | n (20MHz) | 6.5/7.2 (MCS0) | 5.53 | 11.0 | -5.47 |
| S500 100 ax (20MHz) 6.5/7.2 (MCS0) 4.45 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5600 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5710 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -8 5710 142 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -7 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5510 102 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 | 5600 | 120 | n (20MHz) | 6.5/7.2 (MCS0) | 6.95 | 11.0 | -4.05 |
| Second 120 ax (20MHz) 6.5/7.2 (MCS0) 4.62 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -8 5710 142 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -7 5510 102 ax (40MHz) 13.5/15 (MCS0) 2.69 11.0 -8 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 | 5720 | 144 | n (20MHz) | 6.5/7.2 (MCS0) | 7.49 | 11.0 | -3.51 |
| S720 144 ax (20MHz) 6.5/7.2 (MCS0) 4.92 11.0 -6 5510 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -6 5710 142 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -6 5710 142 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -6 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 | 5500 | 100 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.45 | 11.0 | -6.55 |
| Spin 5510 102 n (40MHz) 13.5/15 (MCS0) 3.86 11.0 -7 5590 118 n (40MHz) 13.5/15 (MCS0) 2.43 11.0 -8 5710 142 n (40MHz) 13.5/15 (MCS0) 2.69 11.0 -8 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5530 116 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 </th <td>5600</td> <td>120</td> <td>ax (20MHz)</td> <td>6.5/7.2 (MCS0)</td> <td>4.62</td> <td>11.0</td> <td>-6.38</td> | 5600 | 120 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.62 | 11.0 | -6.38 |
| 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | 5720 | 144 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.92 | 11.0 | -6.08 |
| 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | X 5510 | 102 | n (40MHz) | 13.5/15 (MCS0) | 3.86 | 11.0 | -7.14 |
| 5510 102 ax (40MHz) 13.5/15 (MCS0) -0.47 11.0 -1 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | 2 5590 | 118 | n (40MHz) | 13.5/15 (MCS0) | 2.43 | 11.0 | -8.57 |
| 5590 118 ax (40MHz) 13.5/15 (MCS0) -0.45 11.0 -1 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | 6 5710 | 142 | n (40MHz) | 13.5/15 (MCS0) | 2.69 | 11.0 | -8.31 |
| 5710 142 ax (40MHz) 13.5/15 (MCS0) 0.08 11.0 -1 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.10 11.0 -1 | 5510 | 102 | ax (40MHz) | 13.5/15 (MCS0) | -0.47 | 11.0 | -11.47 |
| 5530 106 ac (80MHz) 29.3/32.5 (MCS0) 0.77 11.0 -1 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | 5590 | 118 | ax (40MHz) | 13.5/15 (MCS0) | -0.45 | 11.0 | -11.45 |
| 5610 122 ac (80MHz) 29.3/32.5 (MCS0) -0.68 11.0 -1 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | 5710 | 142 | ax (40MHz) | 13.5/15 (MCS0) | 0.08 | 11.0 | -10.92 |
| 5690 138 ac (80MHz) 29.3/32.5 (MCS0) -4.09 11.0 -1.1 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1.1 | 5530 | 106 | ac (80MHz) | 29.3/32.5 (MCS0) | 0.77 | 11.0 | -10.23 |
| 5530 106 ax (80MHz) 29.3/32.5 (MCS0) -4.11 11.0 -1 | 5610 | 122 | ac (80MHz) | 29.3/32.5 (MCS0) | -0.68 | 11.0 | -11.68 |
| | 5690 | 138 | ac (80MHz) | 29.3/32.5 (MCS0) | -4.09 | 11.0 | -15.09 |
| | 5530 | 106 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.11 | 11.0 | -15.11 |
| 5610 122 ax (8010Hz) 29.3/32.5 (MCS0) -4.23 11.0 -15 | 5610 | 122 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.23 | 11.0 | -15.23 |
| | 5690 | 138 | | | -6.97 | 11.0 | -17.97 |

Table 7-24. Conducted Power Spectral Density Measurements SISO ANT2

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 120 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 129 of 241 |
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| | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Antenna Gain [dBi] | e.i.r.p. Power Density [dBm/MHz] | ISED Max e.i.r.p. Power Density [dBm/MHz] | Margin [dB] |
|------|--------------------|----------------|-------------|------------------|------------------------------------|-----------------------|--|---|----------------|
| | 5180 | 36 | а | 6 | 5.66 | -6.45 | -0.79 | 10.0 | -10.79 |
| | 5200 | 40 | а | 6 | 6.98 | -6.69 | 0.29 | 10.0 | -9.71 |
| | 5240 | 48 | а | 6 | 7.12 | -6.45 | 0.67 | 10.0 | -9.33 |
| | 5180 | 36 | n (20MHz) | 6.5/7.2 (MCS0) | 5.54 | -6.45 | -0.91 | 10.0 | -10.91 |
| | 5200 | 40 | n (20MHz) | 6.5/7.2 (MCS0) | 6.57 | -6.69 | -0.12 | 10.0 | -10.12 |
| | 5240 | 48 | n (20MHz) | 6.5/7.2 (MCS0) | 6.79 | -6.45 | 0.34 | 10.0 | -9.66 |
| - | 5180 | 36 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.46 | -6.45 | -1.99 | 10.0 | -11.99 |
| Band | 5200 | 40 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.63 | -6.69 | -2.06 | 10.0 | -12.06 |
| ä | 5240 | 48 | ax (20MHz) | 6.5/7.2 (MCS0) | 4.73 | -6.45 | -1.72 | 10.0 | -11.72 |
| | 5190 | 38 | n (40MHz) | 13.5/15 (MCS0) | 3.73 | -6.45 | -2.72 | 10.0 | -12.72 |
| | 5230 | 46 | n (40MHz) | 13.5/15 (MCS0) | 2.85 | -6.45 | -3.60 | 10.0 | -13.60 |
| | 5190 | 38 | ax (40MHz) | 13.5/15 (MCS0) | -0.37 | -6.45 | -6.82 | 10.0 | -16.82 |
| | 5230 | 46 | ax (40MHz) | 13.5/15 (MCS0) | 0.26 | -6.45 | -6.19 | 10.0 | -16.19 |
| | 5210 | 42 | ac (80MHz) | 29.3/32.5 (MCS0) | 0.40 | -6.45 | -6.05 | 10.0 | -16.05 |
| | 5210 | 42 | ax (80MHz) | 29.3/32.5 (MCS0) | -4.49 | -6.45 | -10.94 | 10.0 | -20.94 |

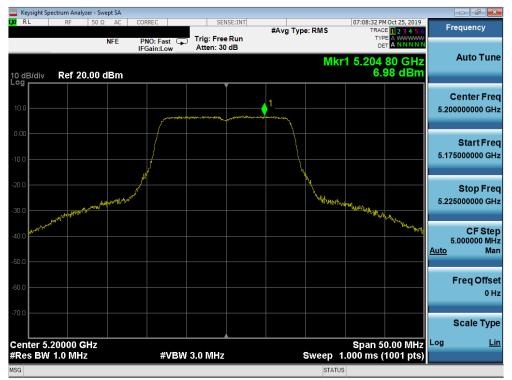
Table 7-25. Band 1 e.i.r.p. Conducted Power Spectral Density Measurements (ISED) SISO ANT2



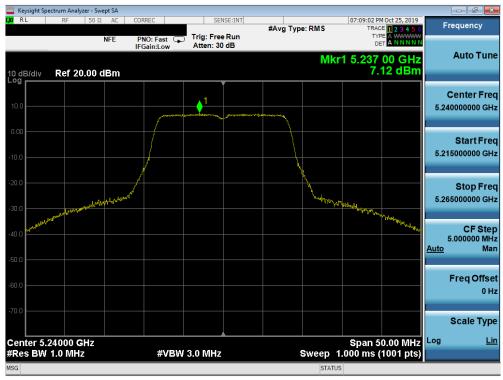
Plot 7-199. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 36)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|--|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dogo 120 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 130 of 241 |
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Plot 7-200. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 40)



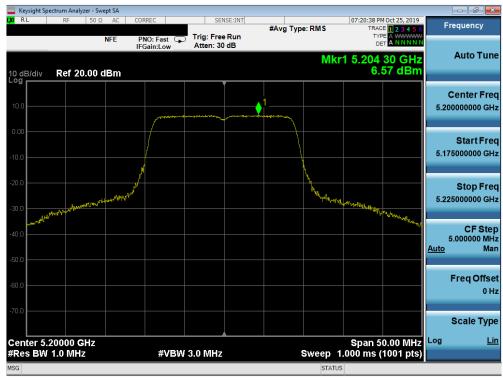
Plot 7-201. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) - Ch. 48)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 121 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 131 of 241 |
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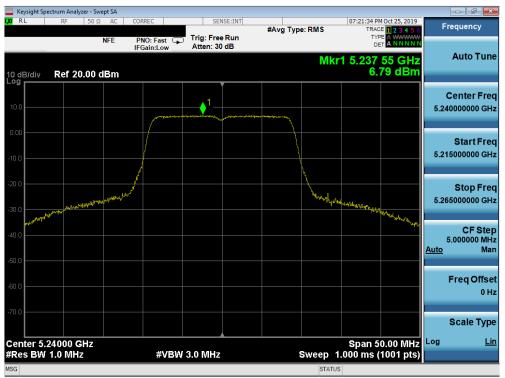
Plot 7-202. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 36)



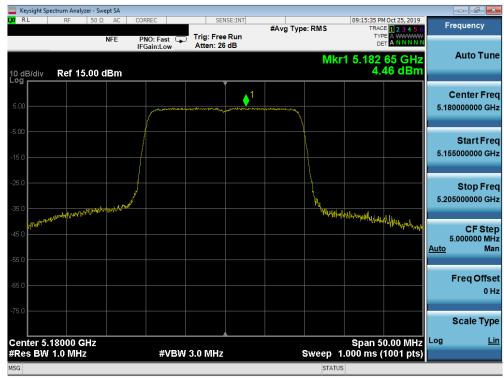
Plot 7-203. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 40)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 122 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 132 of 241 |
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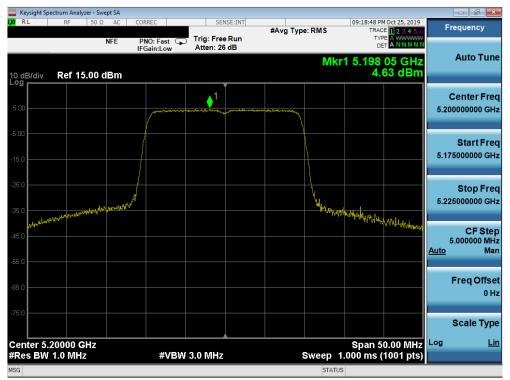
Plot 7-204. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) - Ch. 48)



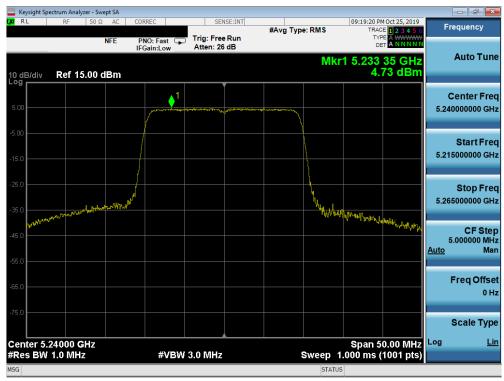
Plot 7-205. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 1) - Ch. 36)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | |
|------------------------------|---------------------|---------------------------------------|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 122 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 133 of 241 | |
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Plot 7-206. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 1) - Ch. 40)



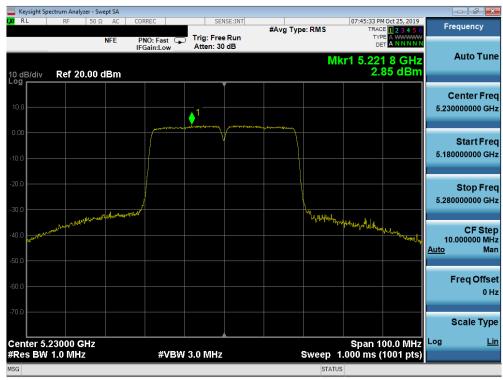
Plot 7-207. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 1) - Ch. 48)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 124 of 244 |
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Plot 7-208. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) - Ch. 38)



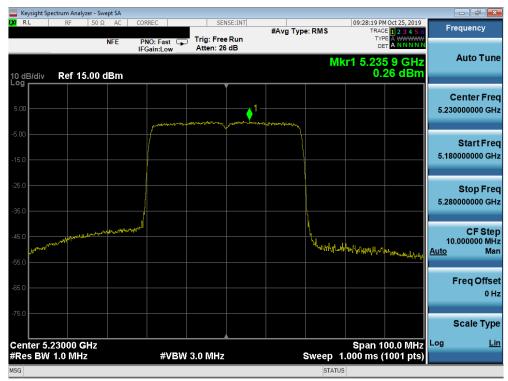
Plot 7-209. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) - Ch. 46)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 125 of 241 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 135 of 241 |
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| | pectrum Analyzer - | | | | | | | | | | |
|------------------|---|------------------|---------------------|------------|----------------|------------------|---------------------|---------------------|---|-------------------|-------------------------------|
| X/RL | RF 50 | Ω AC | CORREC PNO: Fast | Trig: Free | | #Avg Typ | e: RMS | TRAC | E 1 2 3 4 5 6 A WWWWW T A N N N N N | Fr | equency |
| 10 dB/div Log | Ref 15.00 |) dBm | IFGain:Low | Atten: 26 | dB | | Mk | (r1 5.180 | - | | Auto Tune |
| 5.00 | | | | 1- | representation | anglo-manufactor | | | | | Center Freq 0000000 GHz |
| -5.00 | | | | | | | | | | 5.14 | Start Freq 0000000 GHz |
| -25.0 | | | | | | | | | | 5.24 | Stop Freq 0000000 GHz |
| -45.0 | performant for the second second second | ebymp new hythur | two | | | | hy hyberstwy.lph | Vistorytality | Marian ally | 10 <u>Auto</u> | CF Step .000000 MHz Man |
| -65.0 | | | | | | | | | | | Freq Offset 0 Hz |
| -75.0 | | | | | | | | | | | Scale Type |
| | .19000 GHz / 1.0 MHz | | #VB | W 3.0 MHz | | | Sweep_1 | Span 1 .000 ms (| 00.0 MHz 1001 pts) | Log | <u>Lin</u> |
| MSG | | | | | | | STATUS | | | | |

Plot 7-210. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) - Ch. 38)



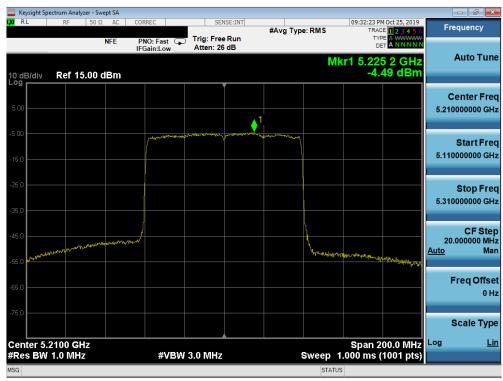
Plot 7-211. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) - Ch. 46)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | |
|------------------------------|---------------------|---------------------------------------|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 126 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 136 of 241 | |
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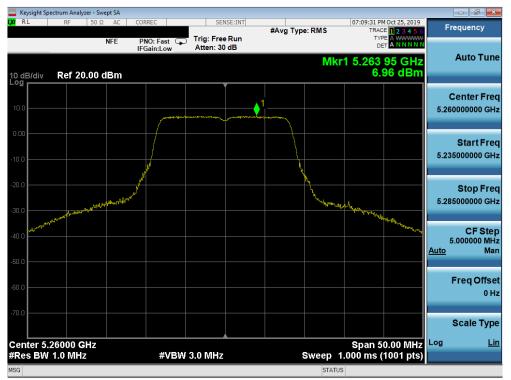
Plot 7-212. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) - Ch. 42)



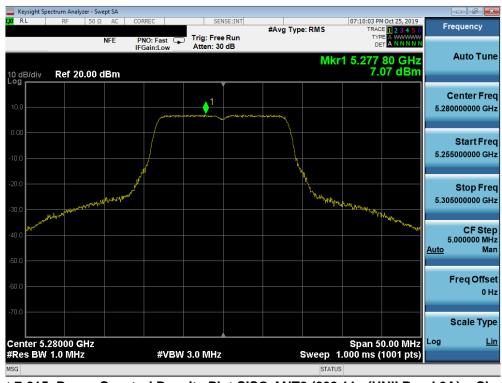
Plot 7-213. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 1) - Ch. 42)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 127 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 137 of 241 |
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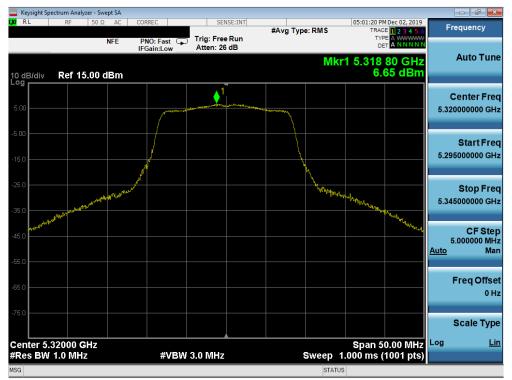
Plot 7-214. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) - Ch. 52)



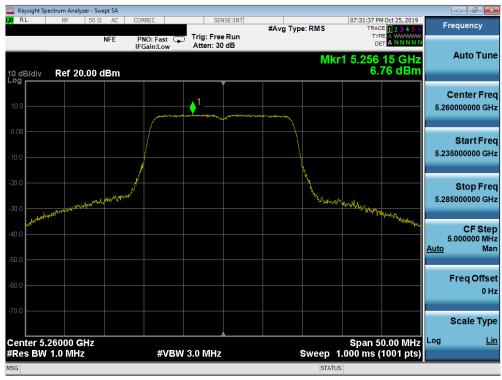
Plot 7-215. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 56)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 129 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 138 of 241 |
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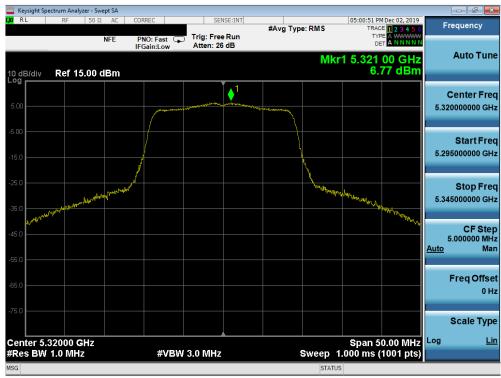
Plot 7-217. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 52)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 120 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 139 of 241 |
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Plot 7-218. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 56)



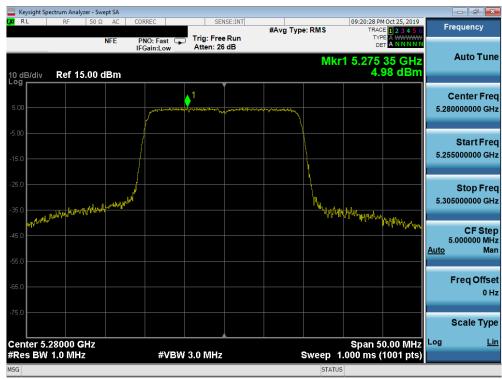
Plot 7-219. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) - Ch. 64)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 140 of 241 |
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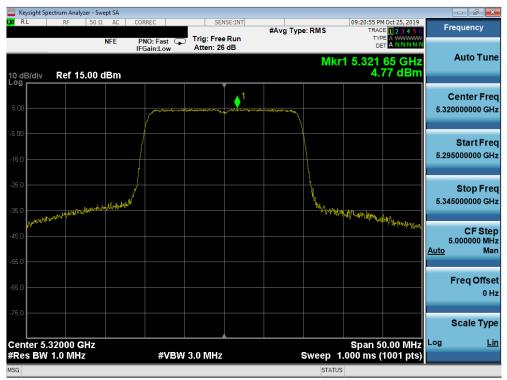
Plot 7-220. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 2A) - Ch. 52)



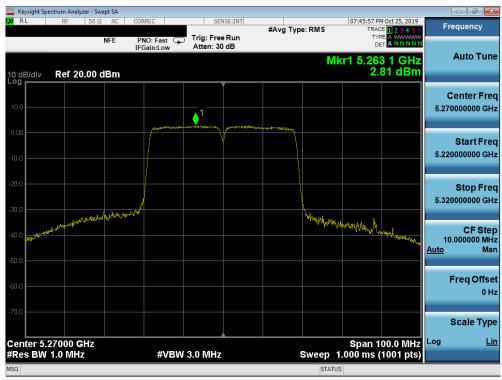
Plot 7-221. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (20MHz UNII Band 2A) - Ch. 56)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 111 of 211 |
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Plot 7-222. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (20MHz UNII Band 2A) - Ch. 64)



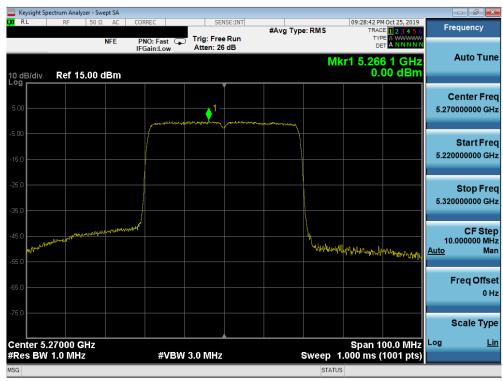
Plot 7-223. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) - Ch. 54)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 112 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 142 of 241 |
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Plot 7-224. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) - Ch. 62)



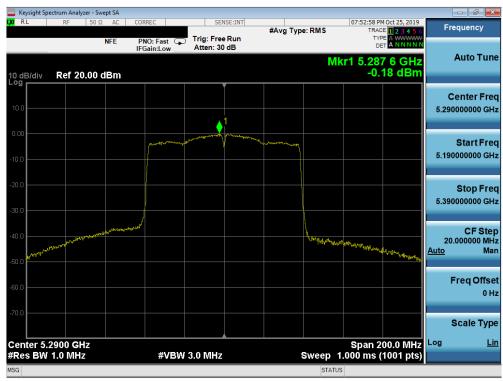
Plot 7-225. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 54)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 112 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 143 of 241 |
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| | ctrum Analyzer | | | | | | | | | | ar 🗙 |
|-----------------------|---|--|---------------------------|---------------------------|------------------|------------|-------------------|-----------------|---------------------------------|-------------------------------|-----------------------|
| LX/RL | RF 5 | OΩ AC | CORREC | SENS | E:INT | #Avg Type | DMS | | 1 Oct 25, 2019 E 1 2 3 4 5 6 | Frequen | icy |
| | | NFE | PNO: Fast ⊂ IFGain:Low | Trig: Free Atten: 26 d | Run | word i Abr | | TYP | | | |
| 10 dB/div Log | Ref 15.0 | 0 dBm | | | | | Mk | r1 5.30 -0.: | 7 4 GHz 27 dBm | Auto | Tune |
| 5.00 | | | | ↓ 1 | | | | | | Cente 5.3100000 | |
| -5.00 | | | | - | - Martin - Labor | | | | | Star 5.2600000 | t Freq |
| -15.0 | | | | | | | | | | | o Freq |
| -35.0 | | | | | | | | | | 5.3600000 | |
| -45.0 | white and a second s | and and a second se | | | | | h hopeallhapph | nuhuhahhuhu | WWWWWWWWWW | CF 10.00000 <u>Auto</u> | Step 00 MHz Man |
| -65.0 | | | | | | | | | | Freq | Offset 0 Hz |
| -75.0 | | | | | | | | | | | е Туре |
| Center 5.3 #Res BW | | z | #VB | W 3.0 MHz | | | Sween_1 | Span 1 | 00.0 MHz 1001 pts) | Log | Lin |
| MSG | | | | | | | STATUS | · · · · | | | |

Plot 7-226. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) - Ch. 62)



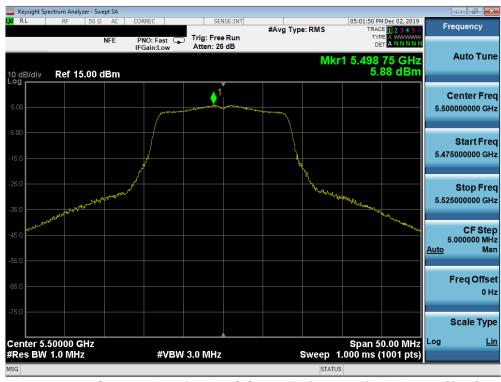
Plot 7-227. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) - Ch. 58)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|--|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dege 111 of 211 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 144 of 241 |
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| | ectrum Analyzer - Sv | | | | | | | | | | d X |
|-----------------------|--|---------------------------|-----------------------------|--|---------|-----------------------|----------------|----------------|-----------------------|------------------|-----------------------|
| L <mark>XI</mark> RL | RF 50 9 | Ω AC | CORREC | SEN | ISE:INT | #Avg Typ | e: RMS | | HOct 25, 2019 | Freque | ncy |
| | | NFE | PNO: Fast IFGain:Low | Trig: Free Atten: 26 | | • | | TYP | | | |
| 10 dB/div Log | Ref 15.00 | dBm | | | | | Mk | r1 5.27 -3. | 7 2 GHz 93 dBm | Aut | o Tune |
| 5.00 | | | | <u>1</u> | | | | | | Cent 5.290000 | er Freq 000 GHz |
| -5.00 | | | /United and an and a second | , and the second se | , | and the second second | | | | Sta 5.190000 | irt Freq 000 GHz |
| -25.0 | | | | | | | | | | Sto 5,390000 | op Freq |
| -35.0 | freeder restance and a series of the | all and and an and and an | <i>"</i> | | | | | | | c | F Step |
| -55.0 | for the second s | | | | | | Monegene | nutraintypan | when the works | <u>Auto</u> | Man |
| -65.0 | | | | | | | | | | Frec | Offset 0 Hz |
| -75.0 | | | | | | | | 0 | | Sca Log | le Type <u>Lin</u> |
| Center 5.2 #Res BW | | | #VBW | 3.0 MHz | | | Sweep 1 | | 00.0 MHz 1001 pts) | | <u> - 11</u> |
| MSG | | | | | | | STATUS | | | | |

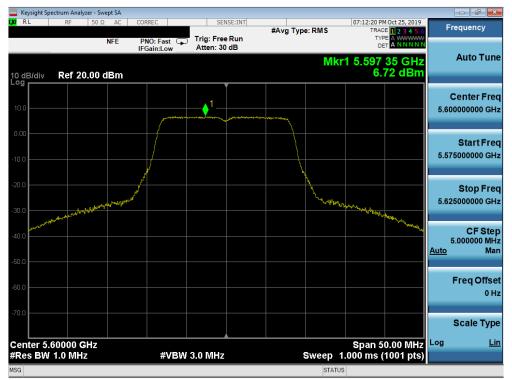
Plot 7-228. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2A) - Ch. 58)



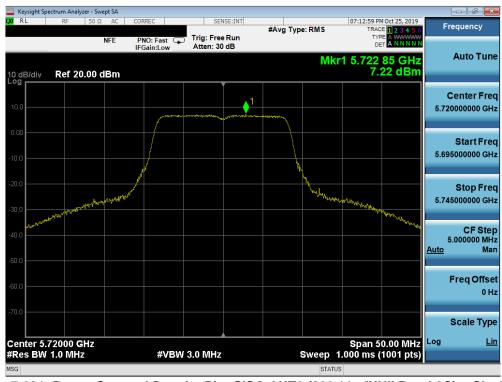
Plot 7-229. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 100)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 145 of 244 |
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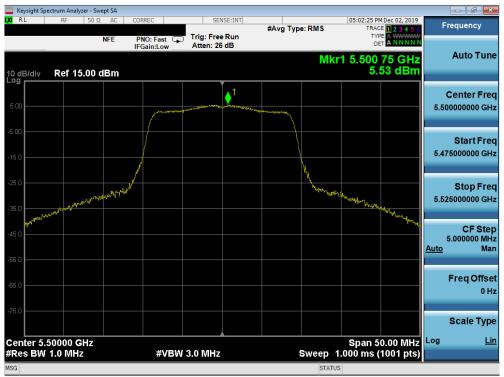
Plot 7-230. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 120)



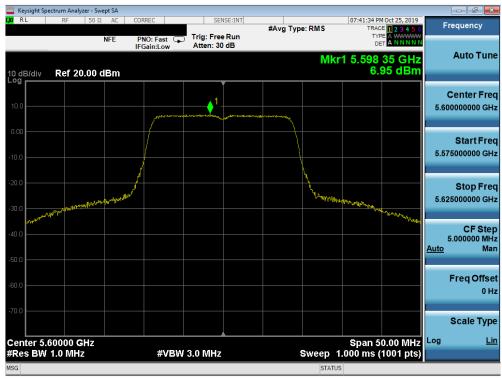
Plot 7-231. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) - Ch. 144)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 146 of 241 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 146 of 241 |
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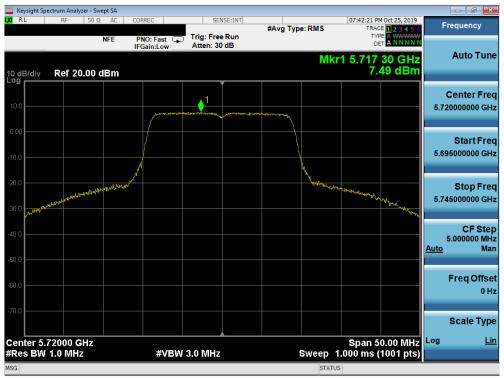
Plot 7-232. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 100)



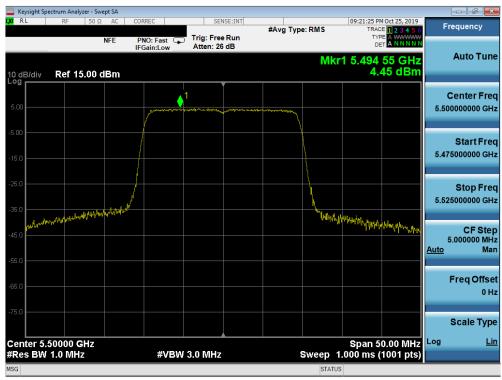
Plot 7-233. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 120)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
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Plot 7-234. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) - Ch. 144)



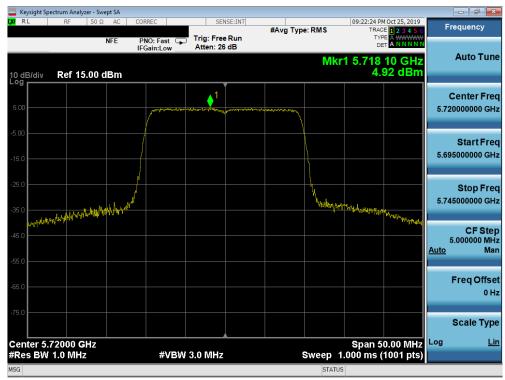
Plot 7-235. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 2C) - Ch. 100)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dogo 149 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 148 of 241 |
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Plot 7-236. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 2C) - Ch. 120)



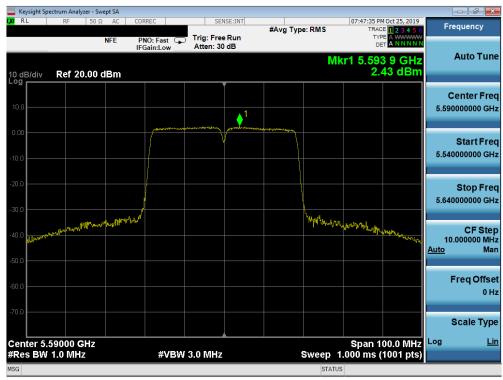
Plot 7-237. Power Spectral Density Plot SISO ANT2 (20MHz 802.11ax (UNII Band 2C) - Ch. 144)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 140 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 149 of 241 |
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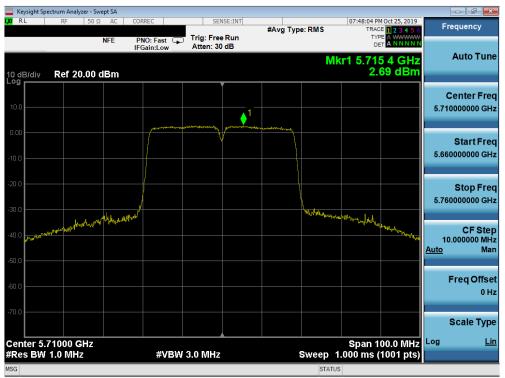
Plot 7-238. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 102)



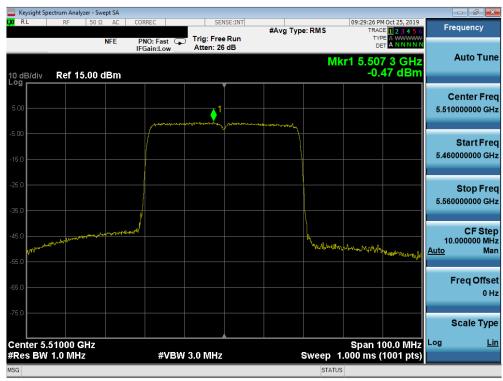
Plot 7-239. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 118)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | | SAMSUNG | | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|--|-----------------|--|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 150 of 244 | | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 150 of 241 | | |
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Plot 7-240. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) - Ch. 142)



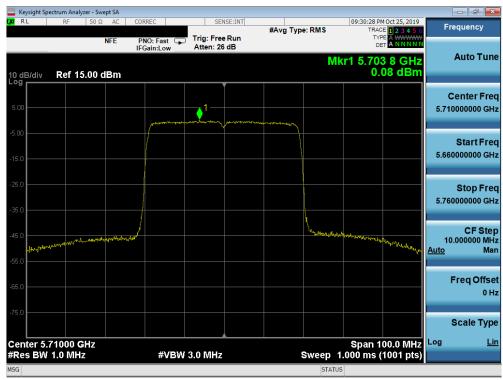
Plot 7-241. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 102)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager |
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| | pectrum Analyz | | | | | | | | | | |
|------------------|------------------------|--|---------------------------|--|--|----------|--------------|-------------------|----------------------|---------------------|------------------------------|
| LXI RL | RF | 50 Ω AC | CORREC | SEN | SE:INT | #Avg Typ | e RMS | | Oct 25, 2019 | Fre | quency |
| | _ | NFE | PNO: Fast 🕞 IFGain:Low | Trig: Free Atten: 26 | | "a)P | | TYP | | | |
| 10 dB/div Log | Ref 15 | .00 dBm | | | | | Mł | (r1 5.58) -0.4 | 3 9 GHz 45 dBm | | Auto Tune |
| 5.00 | | | | 1_ | | | | | | | enter Freq 000000 GHz |
| -5.00 | | | | and a second and a second and a second | and the second | | | | | | |
| -15.0 | | | | | | | | | | | Start Freq 000000 GHz |
| -25.0 | | | | | | | | | | | Stop Freq |
| -35.0 | | | | | | | | | | 5.6400 | 000000 GHz |
| -45.0 | All Hornes Halensteine | and a start of the | للمربط المربع | | | | Awardershipe | (utvten, normani | Varant Jardal (some | 10.0 <u>Auto</u> | CF Step 000000 MHz Man |
| -55.0 | | | | | | | | | | | |
| -65.0 | | | | | | | | | | F | req Offset 0 Hz |
| -75.0 | | | | | | | | | | S | cale Type |
| Center 5 | .59000 G | Hz | | | | | | Span 1 | 00.0 MHz | Log | Lin |
| | 1.0 MHz | | #VBV | V 3.0 MHz | | | Sweep 1 | .000 ms (| 1001 pts) | | |
| MSG | | | | | | | STATUS | 5 | | | |

Plot 7-242. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 118)



Plot 7-243. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) - Ch. 142)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | |
|------------------------------|---------------------|---------------------------------------|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 152 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 152 of 241 | |
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Plot 7-244. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 106)



Plot 7-245. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

| FCC ID: A3LSMG986U | MEASUREMENT REPORT (CERTIFICATION) | | AMSUNG | Approved by: Quality Manager | |
|------------------------------|---------------------------------------|------------------|--------|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | | Daga 152 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 153 of 241 | |
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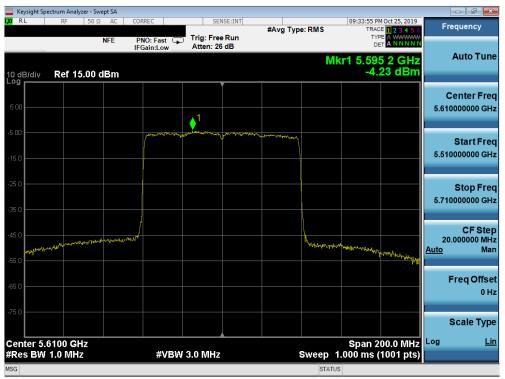
Plot 7-246. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) - Ch. 138)



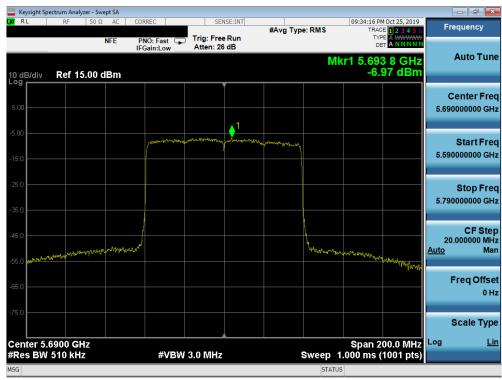
Plot 7-247. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 106)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | | Approved by: Quality Manager | |
|------------------------------|---------------------|---------------------------------------|--|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | | Daga 154 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 154 of 241 | |
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Plot 7-248. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 122)



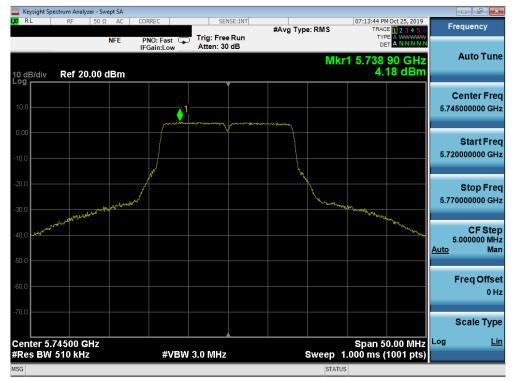
Plot 7-249. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) - Ch. 138)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | Approved by: Quality Manager | |
|------------------------------|---------------------|---------------------------------------|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | Dage 155 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | Page 155 of 241 | |
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| | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] |
|------|--------------------|----------------|-------------|------------------|------------------------------------|--|----------------|
| | 5745 | 149 | а | 6 | 4.18 | 30.0 | -25.82 |
| | 5785 | 157 | а | 6 | 4.01 | 30.0 | -25.99 |
| | 5825 | 165 | а | 6 | 3.87 | 30.0 | -26.13 |
| | 5745 | 149 | n (20MHz) | 6.5/7.2 (MCS0) | 3.96 | 30.0 | -26.04 |
| | 5785 | 157 | n (20MHz) | 6.5/7.2 (MCS0) | 3.67 | 30.0 | -26.33 |
| | 5825 | 165 | n (20MHz) | 6.5/7.2 (MCS0) | 4.37 | 30.0 | -25.63 |
| e | 5745 | 149 | ax (20MHz) | 6.5/7.2 (MCS0) | 2.37 | 30.0 | -27.63 |
| Band | 5785 | 157 | ax (20MHz) | 6.5/7.2 (MCS0) | 1.88 | 30.0 | -28.12 |
| ä | 5825 | 165 | ax (20MHz) | 6.5/7.2 (MCS0) | 1.79 | 30.0 | -28.21 |
| | 5755 | 151 | n (40MHz) | 13.5/15 (MCS0) | 0.21 | 30.0 | -29.79 |
| | 5795 | 159 | n (40MHz) | 13.5/15 (MCS0) | 0.95 | 30.0 | -29.05 |
| | 5755 | 151 | ax (40MHz) | 13.5/15 (MCS0) | -2.34 | 30.0 | -32.34 |
| | 5795 | 159 | ax (40MHz) | 13.5/15 (MCS0) | -2.72 | 30.0 | -32.72 |
| | 5775 | 155 | ac (80MHz) | 29.3/32.5 (MCS0) | -0.88 | 30.0 | -30.88 |
| | 5775 | 155 | ax (80MHz) | 29.3/32.5 (MCS0) | -3.48 | 30.0 | -33.48 |

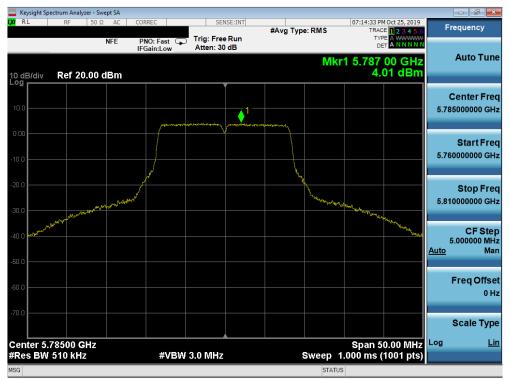
Table 7-26. Band 3 Conducted Power Spectral Density Measurements SISO ANT2



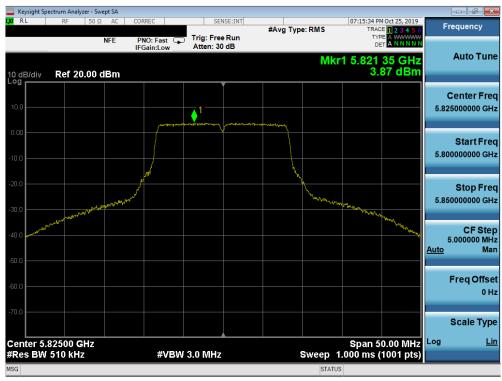
Plot 7-250. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)

| FCC ID: A3LSMG986U | | MEASUREMENT REPORT (CERTIFICATION) | SAMSUNG | Approved by: Quality Manager |
|------------------------------|---------------------|---------------------------------------|---------|---------------------------------|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 156 of 244 |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 156 of 241 |
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Plot 7-251. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 157)



Plot 7-252. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) - Ch. 165)

| FCC ID: A3LSMG986U | INGINEERINE LANDRATORY, INC. | MEASUREMENT REPORT (CERTIFICATION) | | Approved by: Quality Manager | |
|------------------------------|------------------------------|---------------------------------------|--|---------------------------------|--|
| Test Report S/N: | Test Dates: | EUT Type: | | Dage 157 of 244 | |
| 1M1910220166-09.A3L | 10/11/19 - 01/15/20 | Portable Handset | | Page 157 of 241 | |
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