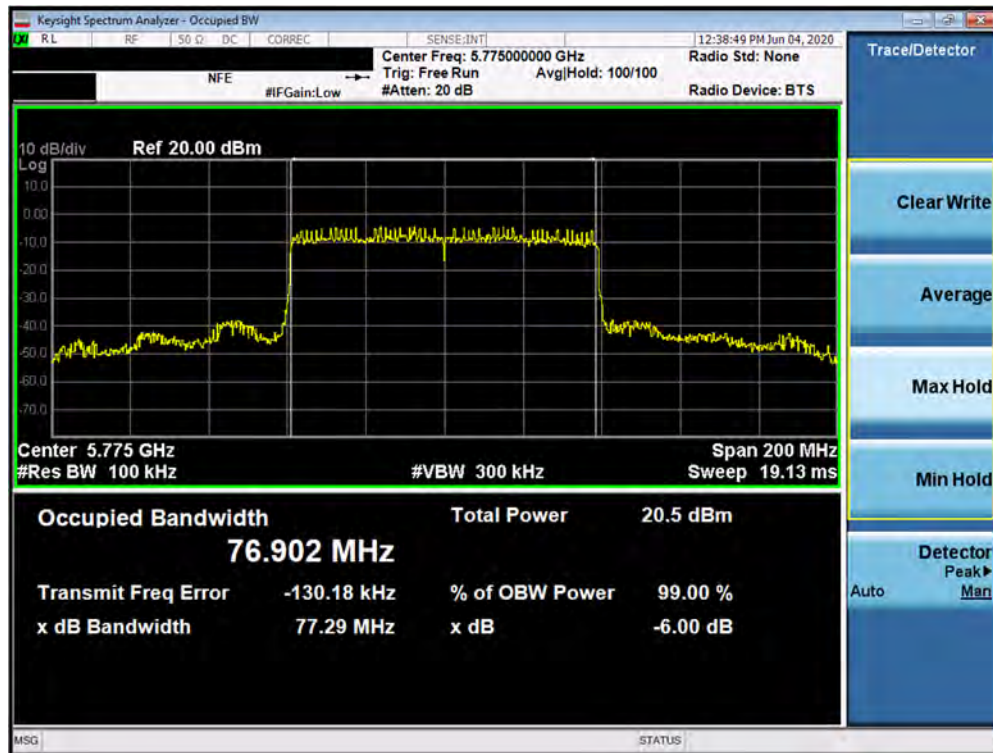




Plot 7-126. 6dB Bandwidth Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 85 of 227                  |

## 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  $10 + 10 \log_{10}B$ , dBm.***

***In the 5.25 – 5.35GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or  $11 \text{ dBm} + 10\log_{10}(26\text{dB BW}) = 11 \text{ dBm} + 10\log_{10}(21.09) = 24.24\text{dBm}$ . The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or  $17 + 10 \log_{10}B$ , dBm.***

***In the 5.47 – 5.725GHz band, the maximum permissible conducted output power is the lesser of 250mW (23.98dBm) or  $11 \text{ dBm} + 10\log_{10}(26\text{dB BW}) = 11 \text{ dBm} + 10\log_{10}(21.18) = 24.26\text{dBm}$ . The maximum e.i.r.p. shall not exceed the lesser of 1.0 W or  $17 + 10 \log_{10}B$ , 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**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 86 of 227                  |

## SISO Antenna-1 Conducted Output Power Measurements

|                               | Freq [MHz] | Channel | Detector | IEEE Transmission Mode |         |          |          | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|-------------------------------|------------|---------|----------|------------------------|---------|----------|----------|-----------------------------|-----------------------------|
|                               |            |         |          | 802.11a                | 802.11n | 802.11ac | 802.11ax |                             |                             |
| <b>5GHz (20MHz Bandwidth)</b> | 5180       | 36      | AVG      | 17.45                  | 17.48   | 17.42    | 15.34    | 23.98                       | -6.50                       |
|                               | 5200       | 40      | AVG      | 17.80                  | 17.95   | 17.96    | 15.28    | 23.98                       | -6.02                       |
|                               | 5220       | 44      | AVG      | 17.86                  | 17.78   | 17.77    | 15.10    | 23.98                       | -6.12                       |
|                               | 5240       | 48      | AVG      | 17.84                  | 17.84   | 17.86    | 15.12    | 23.98                       | -6.12                       |
|                               | 5260       | 52      | AVG      | 17.26                  | 17.32   | 17.39    | 15.94    | 23.98                       | -6.59                       |
|                               | 5280       | 56      | AVG      | 17.20                  | 17.21   | 17.30    | 15.88    | 23.98                       | -6.68                       |
|                               | 5300       | 60      | AVG      | 17.25                  | 17.31   | 17.35    | 15.97    | 23.98                       | -6.63                       |
|                               | 5320       | 64      | AVG      | 16.79                  | 17.72   | 17.96    | 15.80    | 23.98                       | -6.02                       |
|                               | 5500       | 100     | AVG      | 16.60                  | 17.77   | 17.77    | 15.67    | 23.98                       | -6.21                       |
|                               | 5520       | 104     | AVG      | 17.89                  | 17.85   | 17.98    | 15.72    | 23.98                       | -6.00                       |
|                               | 5540       | 108     | AVG      | 17.79                  | 17.80   | 17.86    | 15.56    | 23.98                       | -6.12                       |
|                               | 5560       | 112     | AVG      | 17.62                  | 17.67   | 17.70    | 15.43    | 23.98                       | -6.28                       |
|                               | 5580       | 116     | AVG      | 17.49                  | 17.50   | 17.62    | 15.32    | 23.98                       | -6.36                       |
|                               | 5600       | 120     | AVG      | 17.45                  | 17.53   | 17.50    | 15.21    | 23.98                       | -6.45                       |
|                               | 5620       | 124     | AVG      | 17.42                  | 17.37   | 17.45    | 15.13    | 23.98                       | -6.53                       |
|                               | 5640       | 128     | AVG      | 17.38                  | 17.46   | 17.52    | 15.23    | 23.98                       | -6.46                       |
|                               | 5660       | 132     | AVG      | 17.47                  | 17.54   | 17.57    | 15.28    | 23.98                       | -6.41                       |
|                               | 5680       | 136     | AVG      | 17.64                  | 17.65   | 17.74    | 15.42    | 23.98                       | -6.24                       |
|                               | 5700       | 140     | AVG      | 17.77                  | 17.79   | 17.81    | 15.52    | 23.98                       | -6.17                       |
|                               | 5720       | 144     | AVG      | 17.79                  | 17.77   | 17.90    | 15.56    | 23.98                       | -6.08                       |
|                               | 5745       | 149     | AVG      | 17.80                  | 17.81   | 17.81    | 15.28    | 30.00                       | -12.19                      |
|                               | 5765       | 153     | AVG      | 17.93                  | 17.97   | 17.98    | 15.48    | 30.00                       | -12.02                      |
|                               | 5785       | 157     | AVG      | 17.82                  | 17.90   | 17.93    | 15.40    | 30.00                       | -12.07                      |
|                               | 5805       | 161     | AVG      | 17.69                  | 17.72   | 17.75    | 15.14    | 30.00                       | -12.25                      |
|                               | 5825       | 165     | AVG      | 17.47                  | 17.48   | 17.57    | 15.01    | 30.00                       | -12.43                      |

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

|                                         |                                                                                                                                  |                               |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset |                                                                                       | Page 87 of 227                  |

| 5GHz (40MHz Bandwidth) | Freq [MHz] | Channel | Detector | IEEE Transmission Mode |          |          | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|------------------------|----------|----------|-----------------------------|-----------------------------|
|                        |            |         |          | 802.11n                | 802.11ac | 802.11ax |                             |                             |
|                        | 5190       | 38      | AVG      | 15.84                  | 15.81    | 13.35    | 23.98                       | -8.14                       |
|                        | 5230       | 46      | AVG      | 16.75                  | 16.83    | 13.09    | 23.98                       | -7.15                       |
|                        | 5270       | 54      | AVG      | 16.32                  | 16.39    | 13.79    | 23.98                       | -7.59                       |
|                        | 5310       | 62      | AVG      | 14.61                  | 14.62    | 13.56    | 23.98                       | -9.36                       |
|                        | 5510       | 102     | AVG      | 14.90                  | 14.89    | 13.80    | 23.98                       | -9.08                       |
|                        | 5550       | 110     | AVG      | 16.99                  | 16.99    | 13.56    | 23.98                       | -6.99                       |
|                        | 5590       | 118     | AVG      | 16.82                  | 16.72    | 13.21    | 23.98                       | -7.16                       |
|                        | 5630       | 126     | AVG      | 16.75                  | 16.77    | 13.34    | 23.98                       | -7.21                       |
|                        | 5670       | 134     | AVG      | 16.95                  | 16.93    | 13.35    | 23.98                       | -7.03                       |
|                        | 5710       | 142     | AVG      | 16.01                  | 16.10    | 13.62    | 23.98                       | -7.88                       |
|                        | 5755       | 151     | AVG      | 16.01                  | 16.99    | 13.14    | 30.00                       | -13.01                      |
|                        | 5795       | 159     | AVG      | 16.81                  | 16.84    | 13.94    | 30.00                       | -13.16                      |

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

| 5GHz (80MHz Bandwidth) | Freq [MHz] | Channel | Detector | IEEE Transmission Mode |          | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|------------------------|----------|-----------------------------|-----------------------------|
|                        |            |         |          | 802.11ac               | 802.11ax |                             |                             |
|                        | 5210       | 42      | AVG      | 14.88                  | 12.99    | 23.98                       | -9.10                       |
|                        | 5290       | 58      | AVG      | 13.61                  | 12.54    | 23.98                       | -10.37                      |
|                        | 5530       | 106     | AVG      | 13.86                  | 12.64    | 23.98                       | -10.12                      |
|                        | 5610       | 122     | AVG      | 15.57                  | 12.11    | 23.98                       | -8.41                       |
|                        | 5690       | 138     | AVG      | 15.84                  | 12.42    | 23.98                       | -8.14                       |
|                        | 5775       | 155     | AVG      | 15.77                  | 12.99    | 30.00                       | -14.23                      |

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

|                                         |                                                                                                                                  |                               |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset |                                                                                       | Page 88 of 227                  |

## SISO Antenna-2 Conducted Output Power Measurements

|                               | Freq [MHz] | Channel | Detector | IEEE Transmission Mode |         |          |          | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|-------------------------------|------------|---------|----------|------------------------|---------|----------|----------|-----------------------------|-----------------------------|
|                               |            |         |          | 802.11a                | 802.11n | 802.11ac | 802.11ax |                             |                             |
| <b>5GHz (20MHz Bandwidth)</b> | 5180       | 36      | AVG      | 17.62                  | 17.59   | 17.68    | 15.42    | 23.98                       | -6.30                       |
|                               | 5200       | 40      | AVG      | 17.61                  | 17.69   | 17.81    | 15.58    | 23.98                       | -6.17                       |
|                               | 5220       | 44      | AVG      | 17.58                  | 17.76   | 17.82    | 15.50    | 23.98                       | -6.16                       |
|                               | 5240       | 48      | AVG      | 17.62                  | 17.84   | 17.90    | 15.57    | 23.98                       | -6.08                       |
|                               | 5260       | 52      | AVG      | 17.52                  | 17.68   | 17.75    | 15.35    | 23.98                       | -6.23                       |
|                               | 5280       | 56      | AVG      | 17.58                  | 17.71   | 17.81    | 15.34    | 23.98                       | -6.17                       |
|                               | 5300       | 60      | AVG      | 17.56                  | 17.81   | 17.84    | 15.55    | 23.98                       | -6.14                       |
|                               | 5320       | 64      | AVG      | 16.40                  | 17.65   | 17.75    | 15.40    | 23.98                       | -6.23                       |
|                               | 5500       | 100     | AVG      | 16.54                  | 17.81   | 17.83    | 15.64    | 23.98                       | -6.15                       |
|                               | 5520       | 104     | AVG      | 17.98                  | 17.04   | 17.08    | 15.69    | 23.98                       | -6.00                       |
|                               | 5540       | 108     | AVG      | 17.99                  | 17.10   | 17.06    | 15.73    | 23.98                       | -5.99                       |
|                               | 5560       | 112     | AVG      | 17.01                  | 17.12   | 17.21    | 15.70    | 23.98                       | -6.77                       |
|                               | 5580       | 116     | AVG      | 17.01                  | 17.02   | 17.10    | 15.69    | 23.98                       | -6.88                       |
|                               | 5600       | 120     | AVG      | 17.03                  | 17.16   | 17.17    | 15.75    | 23.98                       | -6.81                       |
|                               | 5620       | 124     | AVG      | 17.03                  | 17.11   | 17.23    | 15.48    | 23.98                       | -6.75                       |
|                               | 5640       | 128     | AVG      | 17.04                  | 17.12   | 17.24    | 15.83    | 23.98                       | -6.74                       |
|                               | 5660       | 132     | AVG      | 17.12                  | 17.18   | 17.23    | 15.94    | 23.98                       | -6.75                       |
|                               | 5680       | 136     | AVG      | 17.26                  | 17.28   | 17.30    | 15.98    | 23.98                       | -6.68                       |
|                               | 5700       | 140     | AVG      | 17.19                  | 17.24   | 17.28    | 15.99    | 23.98                       | -6.70                       |
|                               | 5720       | 144     | AVG      | 17.11                  | 17.31   | 17.34    | 15.98    | 23.98                       | -6.64                       |
|                               | 5745       | 149     | AVG      | 17.32                  | 17.41   | 17.46    | 15.34    | 30.00                       | -12.54                      |
|                               | 5765       | 153     | AVG      | 17.46                  | 17.61   | 17.64    | 15.40    | 30.00                       | -12.36                      |
|                               | 5785       | 157     | AVG      | 17.54                  | 17.64   | 17.62    | 15.47    | 30.00                       | -12.36                      |
|                               | 5805       | 161     | AVG      | 17.60                  | 17.52   | 17.60    | 15.31    | 30.00                       | -12.40                      |
|                               | 5825       | 165     | AVG      | 17.51                  | 17.56   | 17.58    | 15.46    | 30.00                       | -12.42                      |

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

|                                         |                                                                                                                                                                                                                     |                               |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  |                               | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset | Page 89 of 227                  |

| 5GHz (40MHz Bandwidth) | Freq [MHz] | Channel | Detector | IEEE Transmission Mode |          |          | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|------------------------|----------|----------|-----------------------------|-----------------------------|
|                        |            |         |          | 802.11n                | 802.11ac | 802.11ax |                             |                             |
|                        | 5190       | 38      | AVG      | 15.43                  | 15.42    | 13.33    | 23.98                       | -8.55                       |
|                        | 5230       | 46      | AVG      | 16.11                  | 16.14    | 13.44    | 23.98                       | -7.84                       |
|                        | 5270       | 54      | AVG      | 16.99                  | 16.97    | 13.27    | 23.98                       | -6.99                       |
|                        | 5310       | 62      | AVG      | 14.26                  | 14.29    | 13.20    | 23.98                       | -9.69                       |
|                        | 5510       | 102     | AVG      | 14.89                  | 14.97    | 13.79    | 23.98                       | -9.01                       |
|                        | 5550       | 110     | AVG      | 16.27                  | 16.29    | 13.75    | 23.98                       | -7.69                       |
|                        | 5590       | 118     | AVG      | 16.19                  | 16.34    | 13.79    | 23.98                       | -7.64                       |
|                        | 5630       | 126     | AVG      | 16.42                  | 16.40    | 13.89    | 23.98                       | -7.56                       |
|                        | 5670       | 134     | AVG      | 16.43                  | 16.40    | 13.91    | 23.98                       | -7.55                       |
|                        | 5710       | 142     | AVG      | 16.56                  | 16.53    | 13.99    | 23.98                       | -7.42                       |
|                        | 5755       | 151     | AVG      | 16.97                  | 16.98    | 13.57    | 30.00                       | -13.02                      |
|                        | 5795       | 159     | AVG      | 16.84                  | 16.88    | 13.38    | 30.00                       | -13.12                      |

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

| 5GHz (80MHz Bandwidth) | Freq [MHz] | Channel | Detector | IEEE Transmission Mode |          | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|------------------------|----------|-----------------------------|-----------------------------|
|                        |            |         |          | 802.11ac               | 802.11ax |                             |                             |
|                        | 5210       | 42      | AVG      | 14.15                  | 12.25    | 23.98                       | -9.83                       |
|                        | 5290       | 58      | AVG      | 13.78                  | 12.50    | 23.98                       | -10.20                      |
|                        | 5530       | 106     | AVG      | 13.32                  | 12.44    | 23.98                       | -10.66                      |
|                        | 5610       | 122     | AVG      | 15.99                  | 12.45    | 23.98                       | -7.99                       |
|                        | 5690       | 138     | AVG      | 15.25                  | 12.76    | 23.98                       | -8.73                       |
|                        | 5775       | 155     | AVG      | 15.71                  | 12.29    | 30.00                       | -14.29                      |

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

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 90 of 227                  |

## MIMO Maximum Conducted Output Power Measurements

|                        | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
| 5GHz (20MHz Bandwidth) | 5180       | 36      | AVG      | 17.48                 | 17.59 | 20.55 | 23.98                       | -3.43                       |
|                        | 5200       | 40      | AVG      | 17.95                 | 17.69 | 20.83 | 23.98                       | -3.15                       |
|                        | 5220       | 44      | AVG      | 17.78                 | 17.76 | 20.78 | 23.98                       | -3.20                       |
|                        | 5240       | 48      | AVG      | 17.84                 | 17.84 | 20.85 | 23.98                       | -3.13                       |
|                        | 5260       | 52      | AVG      | 17.32                 | 17.68 | 20.51 | 23.98                       | -3.47                       |
|                        | 5280       | 56      | AVG      | 17.21                 | 17.71 | 20.48 | 23.98                       | -3.50                       |
|                        | 5300       | 60      | AVG      | 17.31                 | 17.81 | 20.58 | 23.98                       | -3.40                       |
|                        | 5320       | 64      | AVG      | 17.72                 | 17.65 | 20.70 | 23.98                       | -3.28                       |
|                        | 5500       | 100     | AVG      | 17.77                 | 17.81 | 20.80 | 23.98                       | -3.18                       |
|                        | 5520       | 104     | AVG      | 17.85                 | 17.04 | 20.47 | 23.98                       | -3.51                       |
|                        | 5540       | 108     | AVG      | 17.80                 | 17.10 | 20.47 | 23.98                       | -3.51                       |
|                        | 5560       | 112     | AVG      | 17.67                 | 17.12 | 20.41 | 23.98                       | -3.57                       |
|                        | 5580       | 116     | AVG      | 17.50                 | 17.02 | 20.28 | 23.98                       | -3.70                       |
|                        | 5600       | 120     | AVG      | 17.53                 | 17.16 | 20.36 | 23.98                       | -3.62                       |
|                        | 5620       | 124     | AVG      | 17.37                 | 17.11 | 20.25 | 23.98                       | -3.73                       |
|                        | 5640       | 128     | AVG      | 17.46                 | 17.12 | 20.30 | 23.98                       | -3.68                       |
|                        | 5660       | 132     | AVG      | 17.54                 | 17.18 | 20.37 | 23.98                       | -3.61                       |
|                        | 5680       | 136     | AVG      | 17.65                 | 17.28 | 20.48 | 23.98                       | -3.50                       |
|                        | 5700       | 140     | AVG      | 17.79                 | 17.24 | 20.53 | 23.98                       | -3.45                       |
|                        | 5720       | 144     | AVG      | 17.77                 | 17.31 | 20.56 | 23.98                       | -3.42                       |
|                        | 5745       | 149     | AVG      | 17.81                 | 17.41 | 20.62 | 30.00                       | -9.38                       |
|                        | 5765       | 153     | AVG      | 17.97                 | 17.61 | 20.80 | 30.00                       | -9.20                       |
|                        | 5785       | 157     | AVG      | 17.90                 | 17.64 | 20.78 | 30.00                       | -9.22                       |
|                        | 5805       | 161     | AVG      | 17.72                 | 17.52 | 20.63 | 30.00                       | -9.37                       |
|                        | 5825       | 165     | AVG      | 17.48                 | 17.56 | 20.53 | 30.00                       | -9.47                       |

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

|                                         |                                                                                                                                  |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset                                                         | Page 91 of 227                  |

| 5GHz (20MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5180       | 36      | AVG      | 17.42                 | 17.68 | 20.56 | 23.98                       | -3.42                       |
|                        | 5200       | 40      | AVG      | 17.96                 | 17.81 | 20.90 | 23.98                       | -3.08                       |
|                        | 5220       | 44      | AVG      | 17.77                 | 17.82 | 20.81 | 23.98                       | -3.17                       |
|                        | 5240       | 48      | AVG      | 17.86                 | 17.90 | 20.89 | 23.98                       | -3.09                       |
|                        | 5260       | 52      | AVG      | 17.39                 | 17.75 | 20.58 | 23.98                       | -3.40                       |
|                        | 5280       | 56      | AVG      | 17.30                 | 17.81 | 20.57 | 23.98                       | -3.41                       |
|                        | 5300       | 60      | AVG      | 17.35                 | 17.84 | 20.61 | 23.98                       | -3.37                       |
|                        | 5320       | 64      | AVG      | 17.96                 | 17.75 | 20.87 | 23.98                       | -3.11                       |
|                        | 5500       | 100     | AVG      | 17.77                 | 17.83 | 20.81 | 23.98                       | -3.17                       |
|                        | 5520       | 104     | AVG      | 17.98                 | 17.08 | 20.56 | 23.98                       | -3.42                       |
|                        | 5540       | 108     | AVG      | 17.86                 | 17.06 | 20.49 | 23.98                       | -3.49                       |
|                        | 5560       | 112     | AVG      | 17.70                 | 17.21 | 20.47 | 23.98                       | -3.51                       |
|                        | 5580       | 116     | AVG      | 17.62                 | 17.10 | 20.38 | 23.98                       | -3.60                       |
|                        | 5600       | 120     | AVG      | 17.50                 | 17.17 | 20.35 | 23.98                       | -3.63                       |
|                        | 5620       | 124     | AVG      | 17.45                 | 17.23 | 20.35 | 23.98                       | -3.63                       |
|                        | 5640       | 128     | AVG      | 17.52                 | 17.24 | 20.39 | 23.98                       | -3.59                       |
|                        | 5660       | 132     | AVG      | 17.57                 | 17.23 | 20.41 | 23.98                       | -3.57                       |
|                        | 5680       | 136     | AVG      | 17.74                 | 17.30 | 20.54 | 23.98                       | -3.44                       |
|                        | 5700       | 140     | AVG      | 17.81                 | 17.28 | 20.56 | 23.98                       | -3.42                       |
|                        | 5720       | 144     | AVG      | 17.90                 | 17.34 | 20.64 | 23.98                       | -3.34                       |
|                        | 5745       | 149     | AVG      | 17.81                 | 17.46 | 20.65 | 30.00                       | -9.35                       |
|                        | 5765       | 153     | AVG      | 17.98                 | 17.64 | 20.82 | 30.00                       | -9.18                       |
|                        | 5785       | 157     | AVG      | 17.93                 | 17.62 | 20.79 | 30.00                       | -9.21                       |
|                        | 5805       | 161     | AVG      | 17.75                 | 17.60 | 20.69 | 30.00                       | -9.31                       |
|                        | 5825       | 165     | AVG      | 17.57                 | 17.58 | 20.59 | 30.00                       | -9.41                       |

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

|                                         |                                                                                                                                         |                               |                                                                                       |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br><b>(CERTIFICATION)</b> |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                           | EUT Type:<br>Portable Handset |                                                                                       | Page 92 of 227                  |

| 5GHz (20MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5180       | 36      | AVG      | 17.45                 | 17.62 | 20.55 | 23.98                       | -3.43                       |
|                        | 5200       | 40      | AVG      | 17.80                 | 17.61 | 20.72 | 23.98                       | -3.26                       |
|                        | 5220       | 44      | AVG      | 17.86                 | 17.58 | 20.73 | 23.98                       | -3.25                       |
|                        | 5240       | 48      | AVG      | 17.84                 | 17.62 | 20.74 | 23.98                       | -3.24                       |
|                        | 5260       | 52      | AVG      | 17.26                 | 17.52 | 20.40 | 23.98                       | -3.58                       |
|                        | 5280       | 56      | AVG      | 17.20                 | 17.58 | 20.40 | 23.98                       | -3.58                       |
|                        | 5300       | 60      | AVG      | 17.25                 | 17.56 | 20.42 | 23.98                       | -3.56                       |
|                        | 5320       | 64      | AVG      | 16.79                 | 16.40 | 19.61 | 23.98                       | -4.37                       |
|                        | 5500       | 100     | AVG      | 16.60                 | 16.54 | 19.58 | 23.98                       | -4.40                       |
|                        | 5520       | 104     | AVG      | 17.89                 | 17.98 | 20.95 | 23.98                       | -3.03                       |
|                        | 5540       | 108     | AVG      | 17.79                 | 17.99 | 20.90 | 23.98                       | -3.08                       |
|                        | 5560       | 112     | AVG      | 17.62                 | 17.01 | 20.34 | 23.98                       | -3.64                       |
|                        | 5580       | 116     | AVG      | 17.49                 | 17.01 | 20.27 | 23.98                       | -3.71                       |
|                        | 5600       | 120     | AVG      | 17.45                 | 17.03 | 20.26 | 23.98                       | -3.72                       |
|                        | 5620       | 124     | AVG      | 17.42                 | 17.03 | 20.24 | 23.98                       | -3.74                       |
|                        | 5640       | 128     | AVG      | 17.38                 | 17.04 | 20.22 | 23.98                       | -3.76                       |
|                        | 5660       | 132     | AVG      | 17.47                 | 17.12 | 20.31 | 23.98                       | -3.67                       |
|                        | 5680       | 136     | AVG      | 17.64                 | 17.26 | 20.46 | 23.98                       | -3.52                       |
|                        | 5700       | 140     | AVG      | 17.77                 | 17.19 | 20.50 | 23.98                       | -3.48                       |
|                        | 5720       | 144     | AVG      | 17.79                 | 17.11 | 20.47 | 23.98                       | -3.51                       |
|                        | 5745       | 149     | AVG      | 17.80                 | 17.32 | 20.58 | 30.00                       | -9.42                       |
|                        | 5765       | 153     | AVG      | 17.93                 | 17.46 | 20.71 | 30.00                       | -9.29                       |
|                        | 5785       | 157     | AVG      | 17.82                 | 17.54 | 20.69 | 30.00                       | -9.31                       |
|                        | 5805       | 161     | AVG      | 17.69                 | 17.60 | 20.66 | 30.00                       | -9.34                       |
|                        | 5825       | 165     | AVG      | 17.47                 | 17.51 | 20.50 | 30.00                       | -9.50                       |

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

|                                         |                                                                                                                                         |                               |                                                                                       |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br><b>(CERTIFICATION)</b> |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                           | EUT Type:<br>Portable Handset |                                                                                       | Page 93 of 227                  |

| 5GHz (20MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5180       | 36      | AVG      | 13.10                 | 12.65 | 15.89 | 23.98                       | -8.09                       |
|                        | 5200       | 40      | AVG      | 13.15                 | 12.72 | 15.95 | 23.98                       | -8.03                       |
|                        | 5220       | 44      | AVG      | 13.25                 | 12.70 | 15.99 | 23.98                       | -7.99                       |
|                        | 5240       | 48      | AVG      | 13.20                 | 12.75 | 15.99 | 23.98                       | -7.99                       |
|                        | 5260       | 52      | AVG      | 12.82                 | 12.65 | 15.75 | 23.98                       | -8.23                       |
|                        | 5280       | 56      | AVG      | 12.87                 | 12.65 | 15.77 | 23.98                       | -8.21                       |
|                        | 5300       | 60      | AVG      | 13.00                 | 12.67 | 15.85 | 23.98                       | -8.13                       |
|                        | 5320       | 64      | AVG      | 12.96                 | 12.58 | 15.78 | 23.98                       | -8.20                       |
|                        | 5500       | 100     | AVG      | 12.15                 | 12.00 | 15.09 | 23.98                       | -8.89                       |
|                        | 5520       | 104     | AVG      | 12.10                 | 12.00 | 15.06 | 23.98                       | -8.92                       |
|                        | 5540       | 108     | AVG      | 12.11                 | 12.04 | 15.09 | 23.98                       | -8.89                       |
|                        | 5560       | 112     | AVG      | 12.20                 | 12.09 | 15.16 | 23.98                       | -8.82                       |
|                        | 5580       | 116     | AVG      | 12.15                 | 12.04 | 15.11 | 23.98                       | -8.87                       |
|                        | 5600       | 120     | AVG      | 12.16                 | 12.04 | 15.11 | 23.98                       | -8.87                       |
|                        | 5620       | 124     | AVG      | 12.16                 | 12.05 | 15.12 | 23.98                       | -8.86                       |
|                        | 5640       | 128     | AVG      | 12.26                 | 12.20 | 15.24 | 23.98                       | -8.74                       |
|                        | 5660       | 132     | AVG      | 12.29                 | 12.30 | 15.31 | 23.98                       | -8.67                       |
|                        | 5680       | 136     | AVG      | 12.34                 | 12.38 | 15.37 | 23.98                       | -8.61                       |
|                        | 5700       | 140     | AVG      | 12.34                 | 12.32 | 15.34 | 23.98                       | -8.64                       |
|                        | 5720       | 144     | AVG      | 12.27                 | 12.37 | 15.33 | 23.98                       | -8.65                       |
|                        | 5745       | 149     | AVG      | 12.41                 | 11.92 | 15.18 | 30.00                       | -14.82                      |
|                        | 5765       | 153     | AVG      | 12.60                 | 12.04 | 15.34 | 30.00                       | -14.66                      |
|                        | 5785       | 157     | AVG      | 12.58                 | 12.02 | 15.32 | 30.00                       | -14.68                      |
|                        | 5805       | 161     | AVG      | 12.47                 | 11.92 | 15.21 | 30.00                       | -14.79                      |
|                        | 5825       | 165     | AVG      | 12.40                 | 11.98 | 15.21 | 30.00                       | -14.79                      |

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

|                                         |                                                                                                                                         |                               |                                                                                       |                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br><b>(CERTIFICATION)</b> |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                           | EUT Type:<br>Portable Handset |                                                                                       | Page 94 of 227                  |

| 5GHz (40MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5190       | 38      | AVG      | 15.84                 | 15.43 | 18.65 | 23.98                       | -5.33                       |
|                        | 5230       | 46      | AVG      | 16.75                 | 16.11 | 19.45 | 23.98                       | -4.53                       |
|                        | 5270       | 54      | AVG      | 16.32                 | 16.99 | 19.68 | 23.98                       | -4.30                       |
|                        | 5310       | 62      | AVG      | 14.61                 | 14.26 | 17.45 | 23.98                       | -6.53                       |
|                        | 5510       | 102     | AVG      | 14.90                 | 14.89 | 17.91 | 23.98                       | -6.07                       |
|                        | 5550       | 110     | AVG      | 16.99                 | 16.27 | 19.66 | 23.98                       | -4.32                       |
|                        | 5590       | 118     | AVG      | 16.82                 | 16.19 | 19.53 | 23.98                       | -4.45                       |
|                        | 5630       | 126     | AVG      | 16.75                 | 16.42 | 19.60 | 23.98                       | -4.38                       |
|                        | 5670       | 134     | AVG      | 16.95                 | 16.43 | 19.71 | 23.98                       | -4.27                       |
|                        | 5710       | 142     | AVG      | 16.01                 | 16.56 | 19.30 | 23.98                       | -4.68                       |
|                        | 5755       | 151     | AVG      | 16.01                 | 16.97 | 19.53 | 30.00                       | -10.47                      |
|                        | 5795       | 159     | AVG      | 16.81                 | 16.84 | 19.84 | 30.00                       | -10.16                      |

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

| 5GHz (40MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5190       | 38      | AVG      | 15.81                 | 15.42 | 18.63 | 23.98                       | -5.35                       |
|                        | 5230       | 46      | AVG      | 16.83                 | 16.14 | 19.51 | 23.98                       | -4.47                       |
|                        | 5270       | 54      | AVG      | 16.39                 | 16.97 | 19.70 | 23.98                       | -4.28                       |
|                        | 5310       | 62      | AVG      | 14.62                 | 14.29 | 17.47 | 23.98                       | -6.51                       |
|                        | 5510       | 102     | AVG      | 14.89                 | 14.97 | 17.94 | 23.98                       | -6.04                       |
|                        | 5550       | 110     | AVG      | 16.99                 | 16.29 | 19.66 | 23.98                       | -4.32                       |
|                        | 5590       | 118     | AVG      | 16.72                 | 16.34 | 19.54 | 23.98                       | -4.44                       |
|                        | 5630       | 126     | AVG      | 16.77                 | 16.40 | 19.60 | 23.98                       | -4.38                       |
|                        | 5670       | 134     | AVG      | 16.93                 | 16.40 | 19.68 | 23.98                       | -4.30                       |
|                        | 5710       | 142     | AVG      | 16.10                 | 16.53 | 19.33 | 23.98                       | -4.65                       |
|                        | 5755       | 151     | AVG      | 16.99                 | 16.98 | 20.00 | 30.00                       | -10.00                      |
|                        | 5795       | 159     | AVG      | 16.84                 | 16.88 | 19.87 | 30.00                       | -10.13                      |

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

|                                         |                                                                                                                                  |                               |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset |                                                                                       | Page 95 of 227                  |

| 5GHz (40MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5190       | 38      | AVG      | 9.76                  | 9.72  | 12.75 | 23.98                       | -11.23                      |
|                        | 5230       | 46      | AVG      | 11.04                 | 10.65 | 13.86 | 23.98                       | -10.12                      |
|                        | 5270       | 54      | AVG      | 10.64                 | 10.30 | 13.48 | 23.98                       | -10.50                      |
|                        | 5310       | 62      | AVG      | 10.38                 | 10.35 | 13.38 | 23.98                       | -10.60                      |
|                        | 5510       | 102     | AVG      | 11.11                 | 10.80 | 13.97 | 23.98                       | -10.01                      |
|                        | 5550       | 110     | AVG      | 11.05                 | 10.84 | 13.96 | 23.98                       | -10.02                      |
|                        | 5590       | 118     | AVG      | 10.86                 | 10.84 | 13.86 | 23.98                       | -10.12                      |
|                        | 5630       | 126     | AVG      | 10.99                 | 10.91 | 13.96 | 23.98                       | -10.02                      |
|                        | 5670       | 134     | AVG      | 10.99                 | 10.97 | 13.99 | 23.98                       | -9.99                       |
|                        | 5710       | 142     | AVG      | 10.24                 | 10.11 | 13.19 | 23.98                       | -10.79                      |
|                        | 5755       | 151     | AVG      | 10.28                 | 9.97  | 13.14 | 30.00                       | -16.86                      |
|                        | 5795       | 159     | AVG      | 10.31                 | 10.11 | 13.22 | 30.00                       | -16.78                      |

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

| 5GHz (80MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |       |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|-------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2  | MIMO  |                             |                             |
|                        | 5210       | 42      | AVG      | 14.88                 | 14.15 | 17.54 | 23.98                       | -6.44                       |
|                        | 5290       | 58      | AVG      | 13.61                 | 13.78 | 16.71 | 23.98                       | -7.27                       |
|                        | 5530       | 106     | AVG      | 13.86                 | 13.32 | 16.61 | 23.98                       | -7.37                       |
|                        | 5610       | 122     | AVG      | 15.57                 | 15.99 | 18.80 | 23.98                       | -5.18                       |
|                        | 5690       | 138     | AVG      | 15.84                 | 15.25 | 18.57 | 23.98                       | -5.41                       |
|                        | 5775       | 155     | AVG      | 15.77                 | 15.71 | 18.75 | 30.00                       | -11.25                      |

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

| 5GHz (80MHz Bandwidth) | Freq [MHz] | Channel | Detector | Conducted Power [dBm] |      |       | Conducted Power Limit [dBm] | Conducted Power Margin [dB] |
|------------------------|------------|---------|----------|-----------------------|------|-------|-----------------------------|-----------------------------|
|                        |            |         |          | ANT1                  | ANT2 | MIMO  |                             |                             |
|                        | 5210       | 42      | AVG      | 9.24                  | 9.46 | 12.36 | 23.98                       | -11.62                      |
|                        | 5290       | 58      | AVG      | 10.06                 | 9.75 | 12.92 | 23.98                       | -11.06                      |
|                        | 5530       | 106     | AVG      | 8.97                  | 9.31 | 12.15 | 23.98                       | -11.83                      |
|                        | 5610       | 122     | AVG      | 9.18                  | 9.36 | 12.28 | 23.98                       | -11.70                      |
|                        | 5690       | 138     | AVG      | 8.71                  | 9.44 | 12.10 | 23.98                       | -11.88                      |
|                        | 5775       | 155     | AVG      | 9.30                  | 9.46 | 12.39 | 30.00                       | -17.61                      |

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

|                                         |                                                                                                                                  |                               |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |                               |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset |                                                                                       | Page 96 of 227                  |

**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.

**Sample MIMO Calculation:**

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted output power was measured to be 17.48 dBm for Antenna-1 and 17.59 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

$$(17.48 \text{ dBm} + 17.59 \text{ dBm}) = (55.98 \text{ mW} + 57.41 \text{ mW}) = 113.39 \text{ mW} = 20.55 \text{ dBm}$$

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 97 of 227                  |

## 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  $\geq 2 \times (\text{span}/\text{RBW})$
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: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 98 of 227                  |

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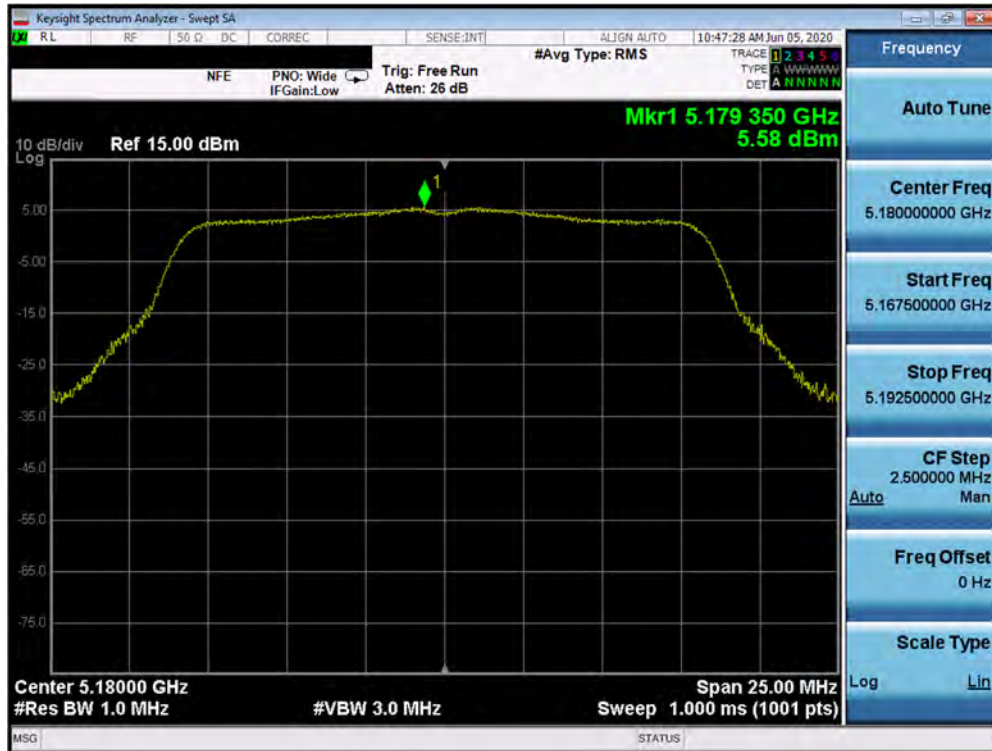
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## SISO Antenna-1 Power Spectral Density Measurements

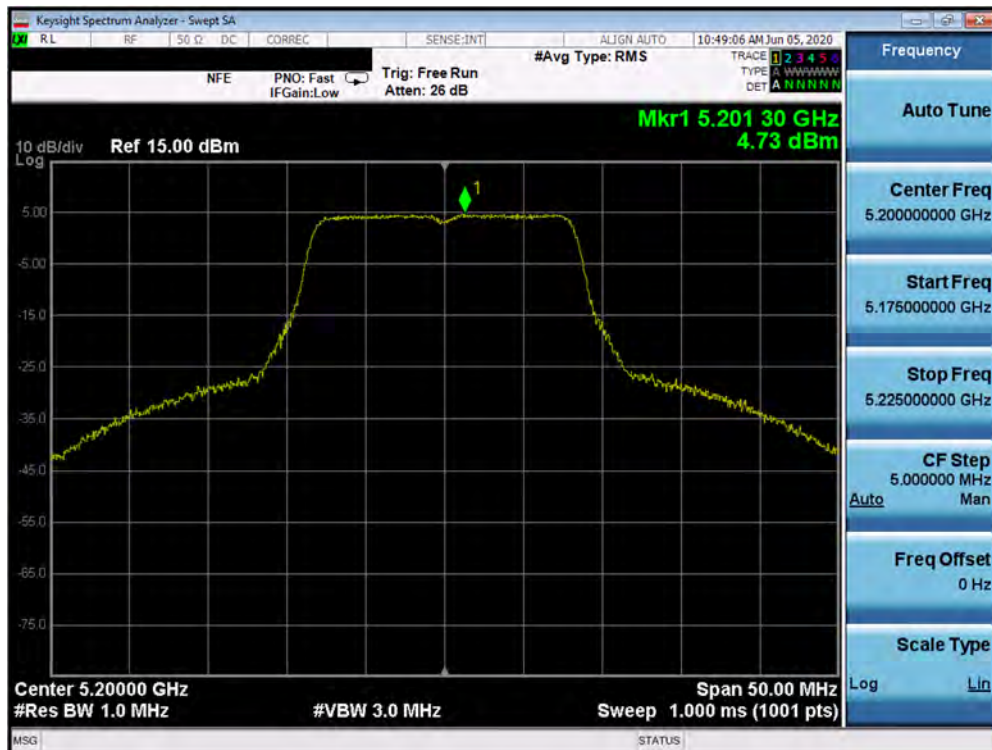
|         | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|---------|-----------------|-------------|-------------|------------------|------------------------------|-----------------------------|-------------|
| Band 1  | 5180            | 36          | a           | 6                | 5.58                         | 11.0                        | -5.42       |
|         | 5200            | 40          | a           | 6                | 4.73                         | 11.0                        | -6.27       |
|         | 5240            | 48          | a           | 6                | 5.32                         | 11.0                        | -5.68       |
|         | 5180            | 36          | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.69                         | 11.0                        | -6.31       |
|         | 5200            | 40          | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.51                         | 11.0                        | -6.49       |
|         | 5240            | 48          | n (20MHz)   | 6.5/7.2 (MCS0)   | 5.18                         | 11.0                        | -5.82       |
|         | 5180            | 36          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.45                         | 11.0                        | -9.55       |
|         | 5200            | 40          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.70                         | 11.0                        | -9.30       |
|         | 5240            | 48          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.18                         | 11.0                        | -8.82       |
|         | 5190            | 38          | n (40MHz)   | 13.5/15 (MCS0)   | 0.93                         | 11.0                        | -10.07      |
|         | 5230            | 46          | n (40MHz)   | 13.5/15 (MCS0)   | 1.24                         | 11.0                        | -9.76       |
|         | 5190            | 38          | ax (40MHz)  | 13.5/15 (MCS0)   | -3.09                        | 11.0                        | -14.09      |
|         | 5230            | 46          | ax (40MHz)  | 13.5/15 (MCS0)   | -2.41                        | 11.0                        | -13.41      |
|         | 5210            | 42          | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.04                        | 11.0                        | -13.04      |
|         | 5210            | 42          | ax (80MHz)  | 29.3/32.5 (MCS0) | -5.32                        | 11.0                        | -16.32      |
| Band 2A | 5260            | 52          | a           | 6                | 5.58                         | 11.0                        | -5.42       |
|         | 5280            | 56          | a           | 6                | 4.73                         | 11.0                        | -6.27       |
|         | 5320            | 64          | a           | 6                | 5.32                         | 11.0                        | -5.68       |
|         | 5260            | 52          | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.74                         | 11.0                        | -7.26       |
|         | 5280            | 56          | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.68                         | 11.0                        | -7.32       |
|         | 5320            | 64          | n (20MHz)   | 6.5/7.2 (MCS0)   | 5.72                         | 11.0                        | -5.28       |
|         | 5260            | 52          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.78                         | 11.0                        | -9.22       |
|         | 5280            | 56          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.17                         | 11.0                        | -8.83       |
|         | 5320            | 64          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.31                         | 11.0                        | -8.69       |
|         | 5270            | 54          | n (40MHz)   | 13.5/15 (MCS0)   | -0.71                        | 11.0                        | -11.71      |
|         | 5310            | 62          | n (40MHz)   | 13.5/15 (MCS0)   | 1.43                         | 11.0                        | -9.57       |
|         | 5270            | 54          | ax (40MHz)  | 13.5/15 (MCS0)   | -3.15                        | 11.0                        | -14.15      |
|         | 5310            | 62          | ax (40MHz)  | 13.5/15 (MCS0)   | -3.32                        | 11.0                        | -14.32      |
|         | 5290            | 58          | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.23                        | 11.0                        | -13.23      |
|         | 5290            | 58          | ax (80MHz)  | 29.3/32.5 (MCS0) | -6.77                        | 11.0                        | -17.77      |
| Band 2C | 5500            | 100         | a           | 6                | 6.33                         | 11.0                        | -4.67       |
|         | 5600            | 120         | a           | 6                | 4.44                         | 11.0                        | -6.56       |
|         | 5720            | 144         | a           | 6                | 5.10                         | 11.0                        | -5.90       |
|         | 5500            | 100         | n (20MHz)   | 6.5/7.2 (MCS0)   | 6.48                         | 11.0                        | -4.52       |
|         | 5600            | 120         | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.15                         | 11.0                        | -6.85       |
|         | 5720            | 144         | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.38                         | 11.0                        | -6.62       |
|         | 5500            | 100         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.92                         | 11.0                        | -9.08       |
|         | 5600            | 120         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.58                         | 11.0                        | -9.42       |
|         | 5720            | 144         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.48                         | 11.0                        | -8.52       |
|         | 5510            | 102         | n (40MHz)   | 13.5/15 (MCS0)   | 2.50                         | 11.0                        | -8.50       |
|         | 5590            | 118         | n (40MHz)   | 13.5/15 (MCS0)   | 0.75                         | 11.0                        | -10.25      |
|         | 5710            | 142         | n (40MHz)   | 13.5/15 (MCS0)   | 0.05                         | 11.0                        | -10.95      |
|         | 5510            | 102         | ax (40MHz)  | 13.5/15 (MCS0)   | -2.76                        | 11.0                        | -13.76      |
|         | 5590            | 118         | ax (40MHz)  | 13.5/15 (MCS0)   | -2.87                        | 11.0                        | -13.87      |
|         | 5710            | 142         | ax (40MHz)  | 13.5/15 (MCS0)   | -2.96                        | 11.0                        | -13.96      |
|         | 5530            | 106         | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.81                        | 11.0                        | -13.81      |
|         | 5610            | 122         | ac (80MHz)  | 29.3/32.5 (MCS0) | -3.86                        | 11.0                        | -14.86      |
|         | 5690            | 138         | ac (80MHz)  | 29.3/32.5 (MCS0) | -6.19                        | 11.0                        | -17.19      |
|         | 5530            | 106         | ax (80MHz)  | 29.3/32.5 (MCS0) | -6.80                        | 11.0                        | -17.80      |
|         | 5610            | 122         | ax (80MHz)  | 29.3/32.5 (MCS0) | -7.43                        | 11.0                        | -18.43      |
|         | 5690            | 138         | ax (80MHz)  | 29.3/32.5 (MCS0) | -9.56                        | 11.0                        | -20.56      |

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

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 99 of 227                  |

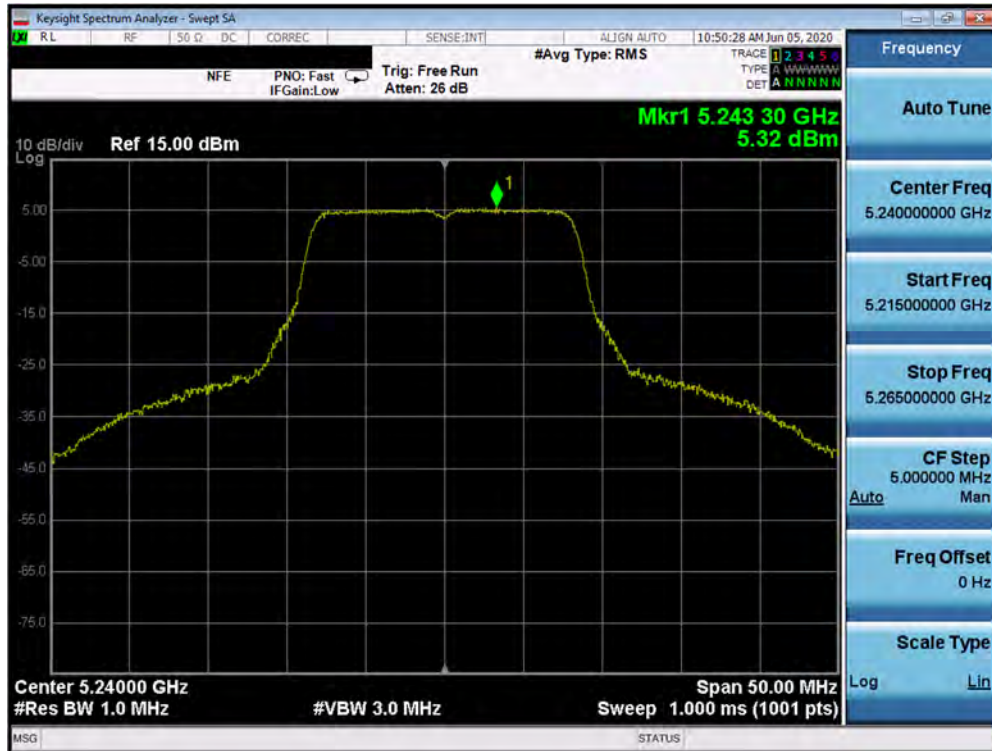


Plot 7-127. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) – Ch. 36)

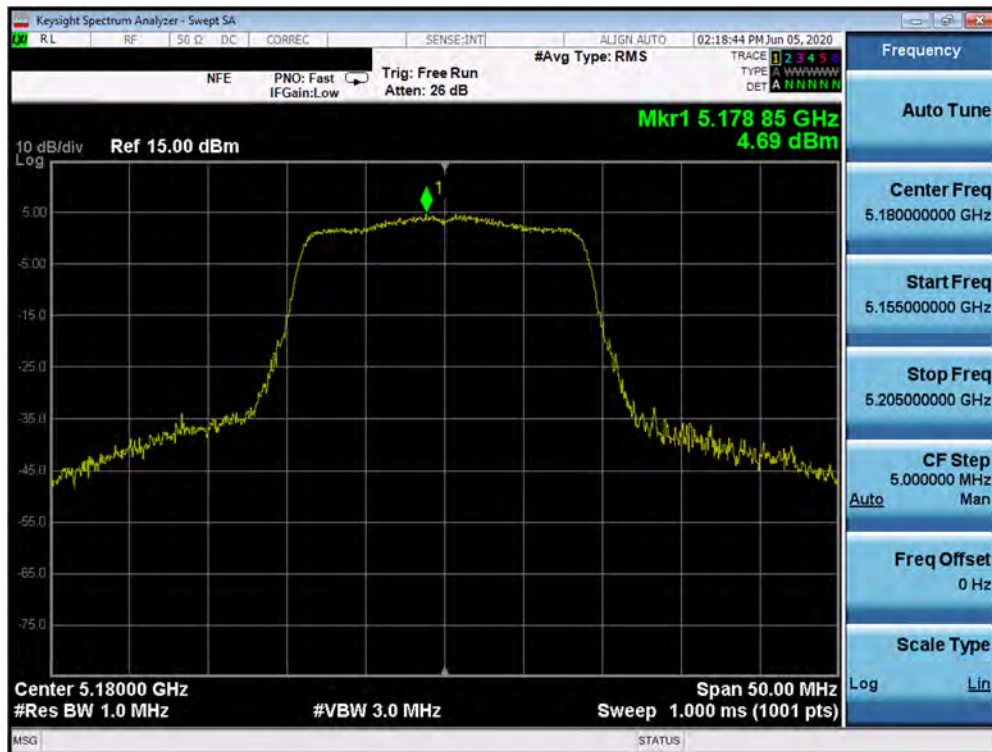


Plot 7-128. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) – Ch. 40)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 100 of 227                 |

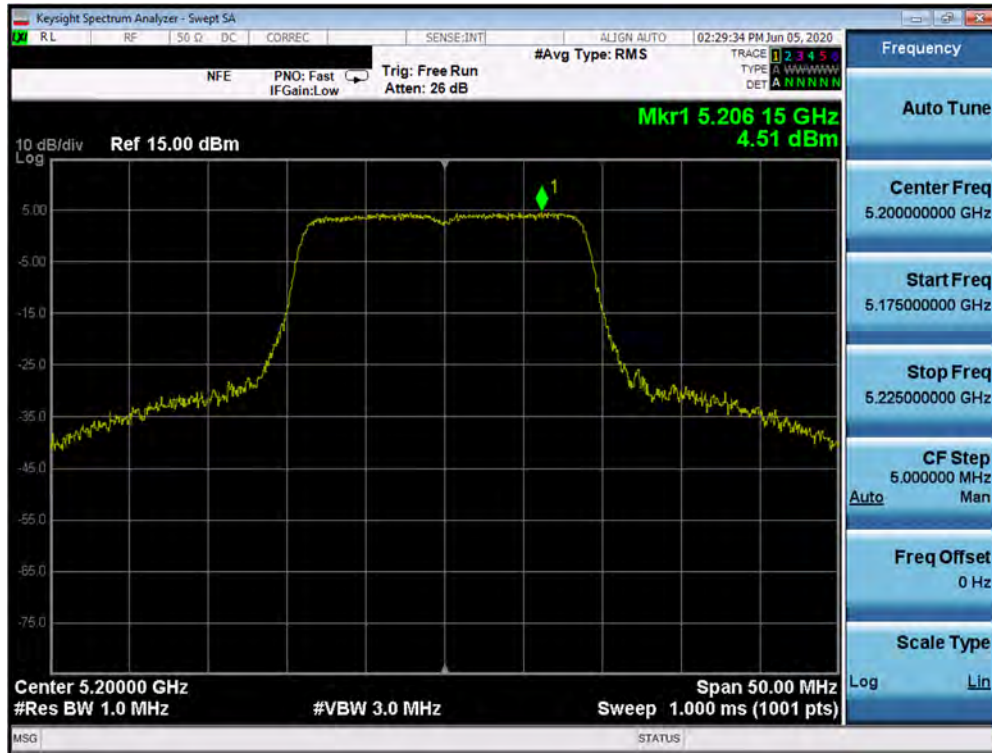


Plot 7-129. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 1) – Ch. 48)

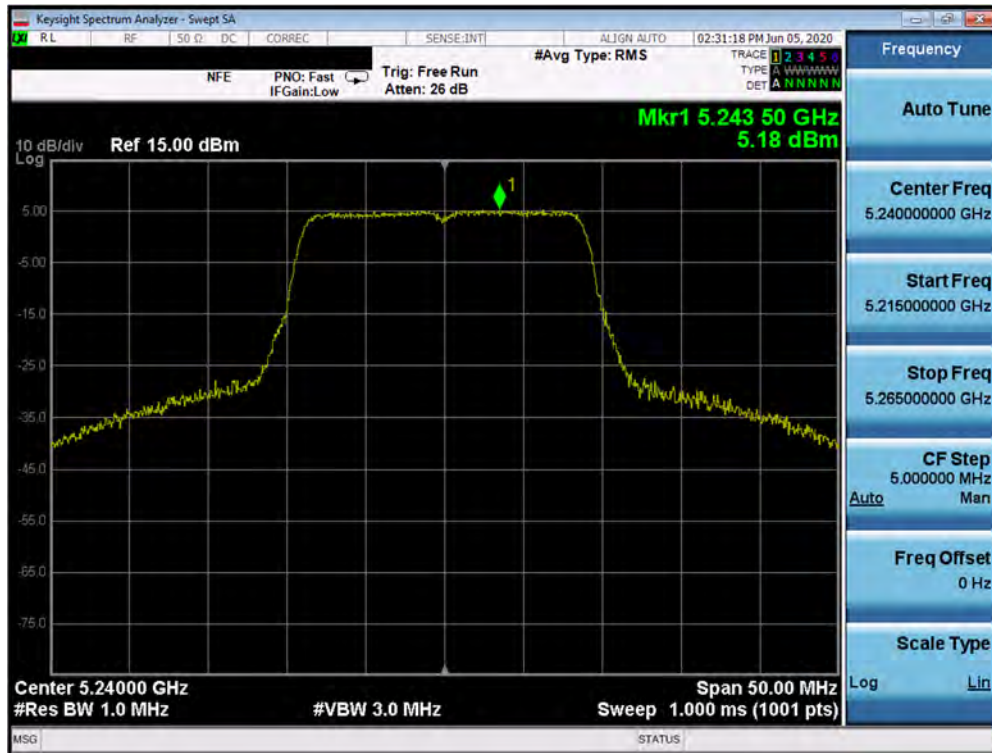


Plot 7-130. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 101 of 227                 |

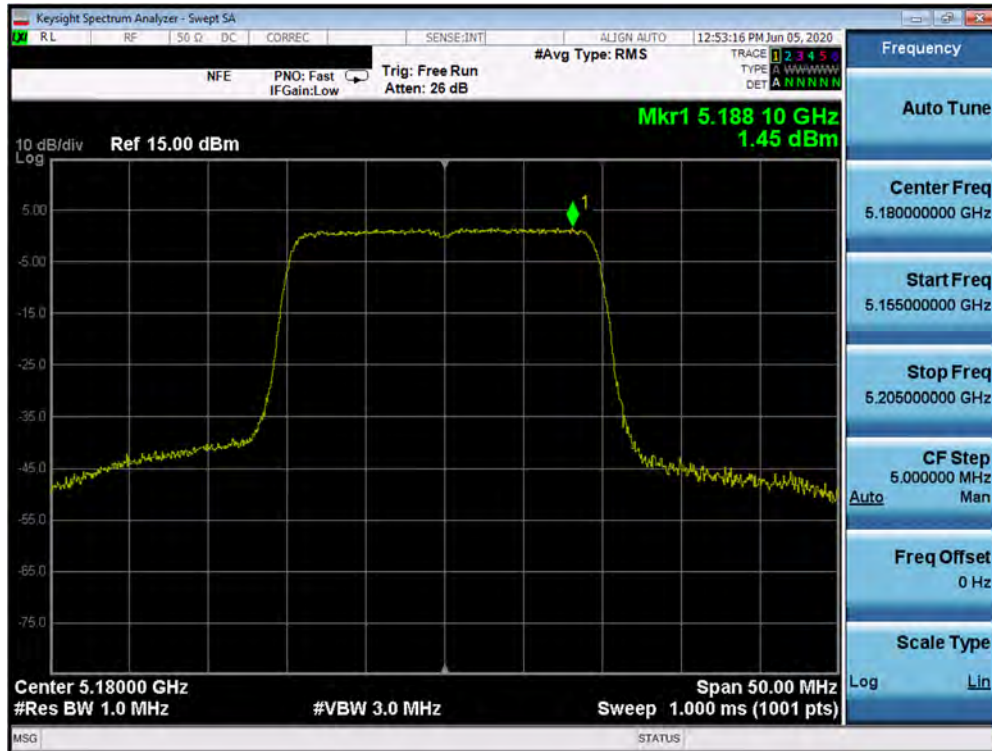


Plot 7-131. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

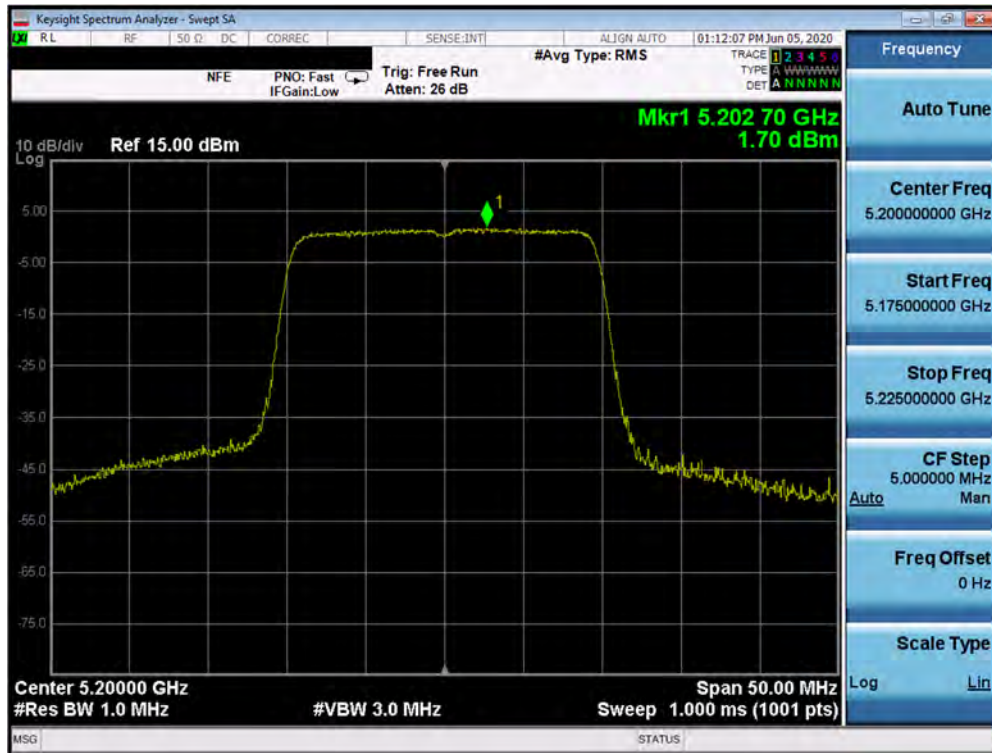


Plot 7-132. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 102 of 227                 |

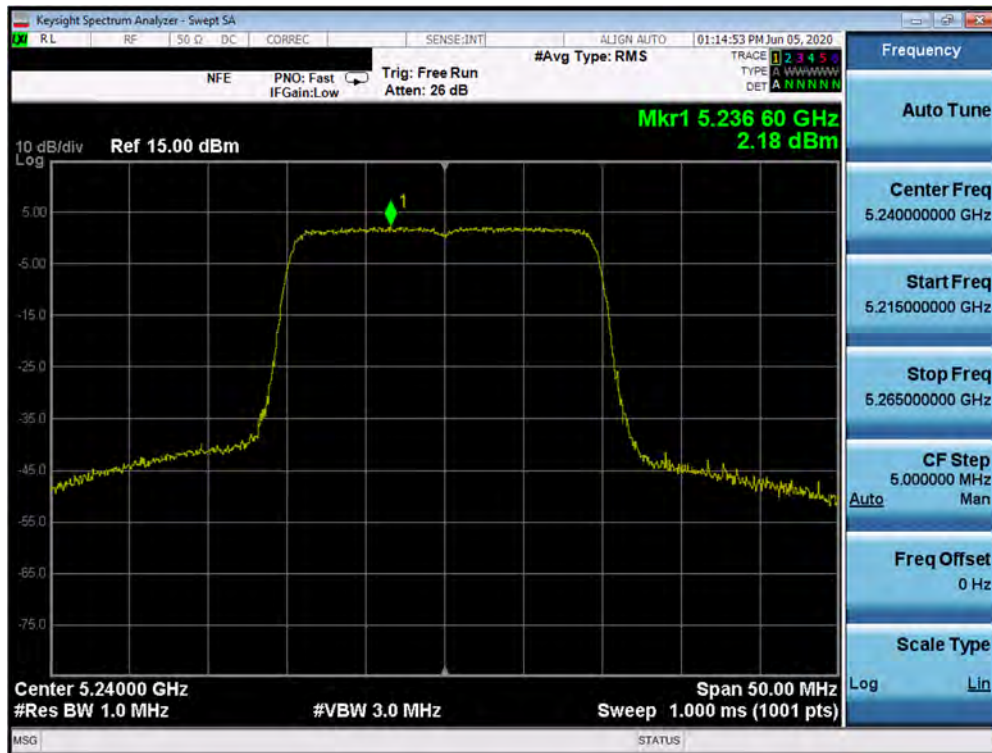


Plot 7-133. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) – Ch. 36)

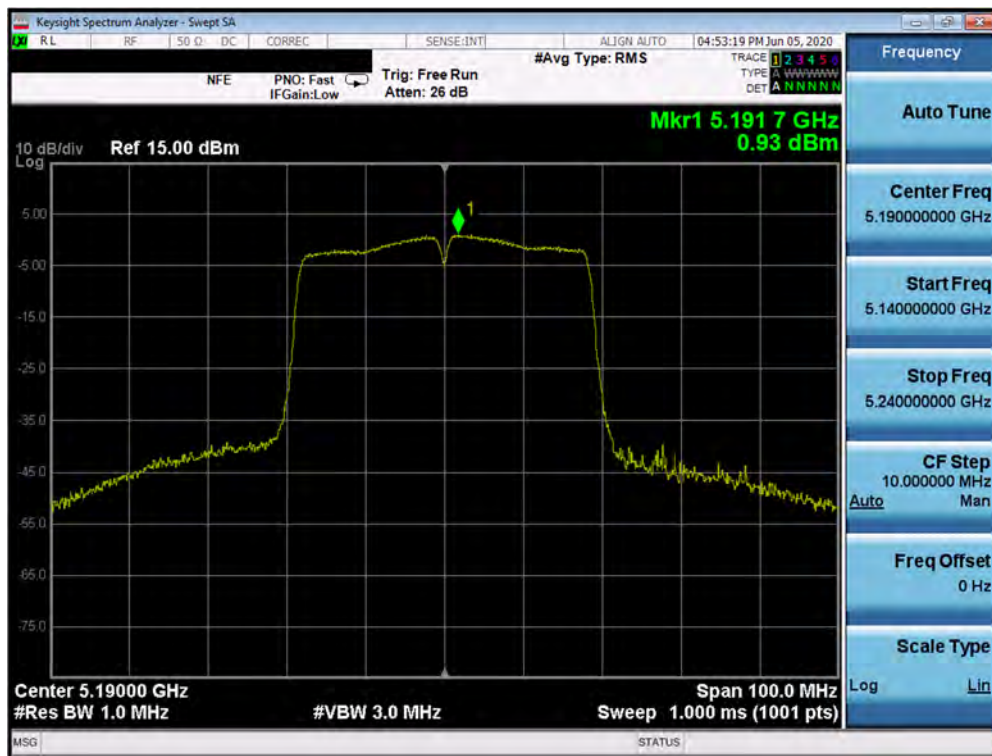


Plot 7-134. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) – Ch. 40)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 103 of 227                 |



Plot 7-135. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 1) – Ch. 48)

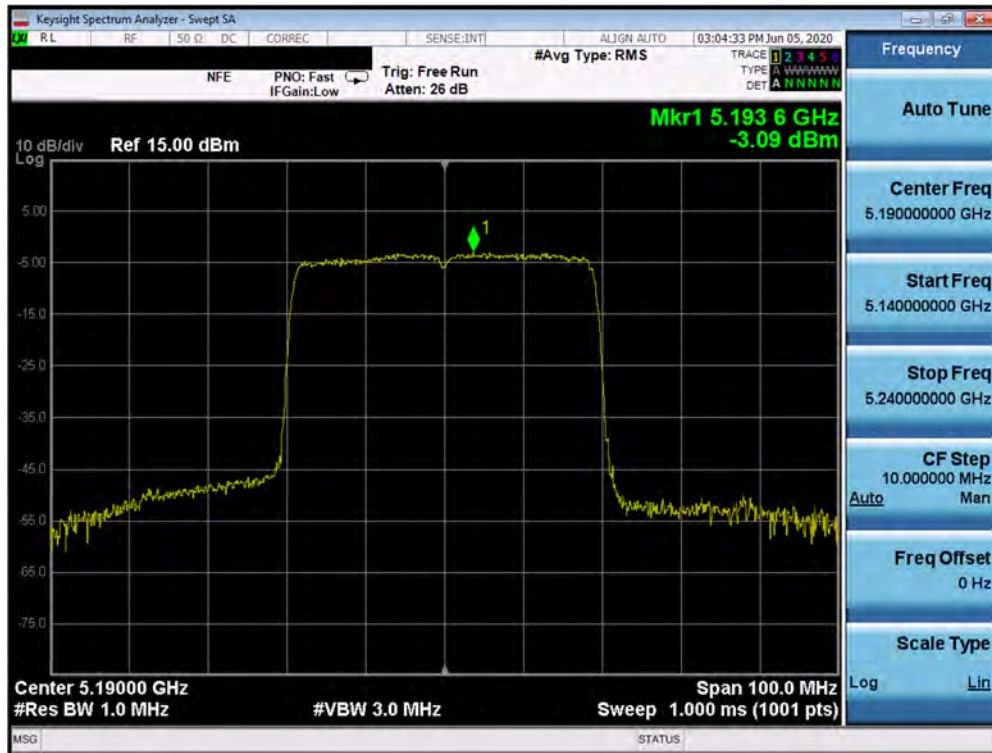


Plot 7-136. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 104 of 227                 |

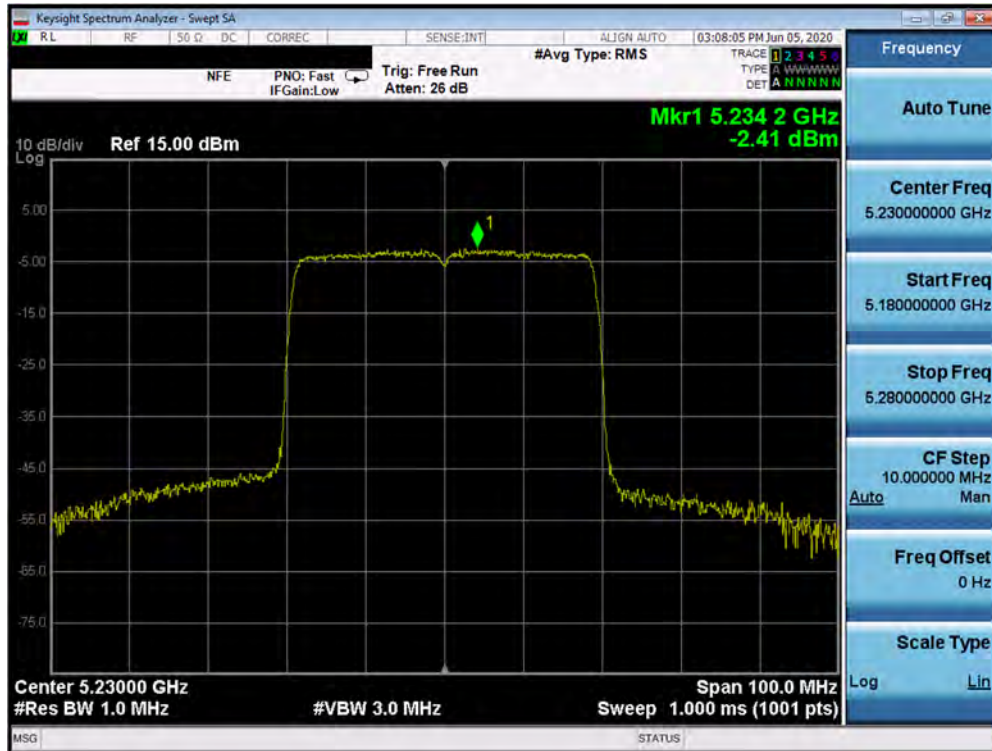


Plot 7-137. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

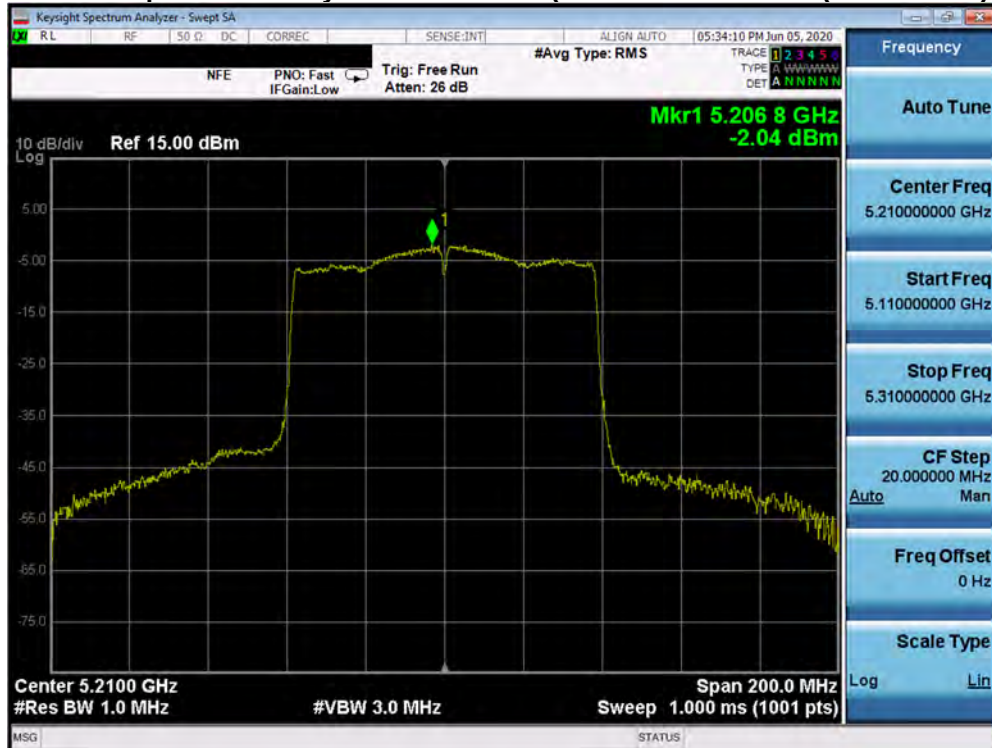


Plot 7-138. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) – Ch. 38)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 105 of 227                 |

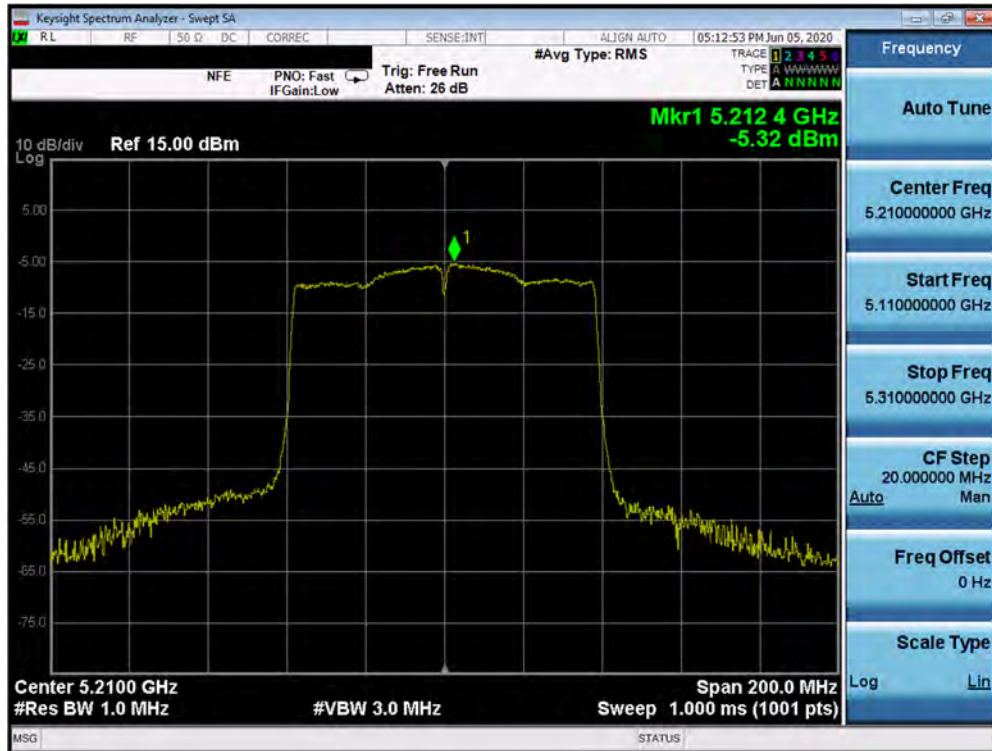


Plot 7-139. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 1) – Ch. 42)

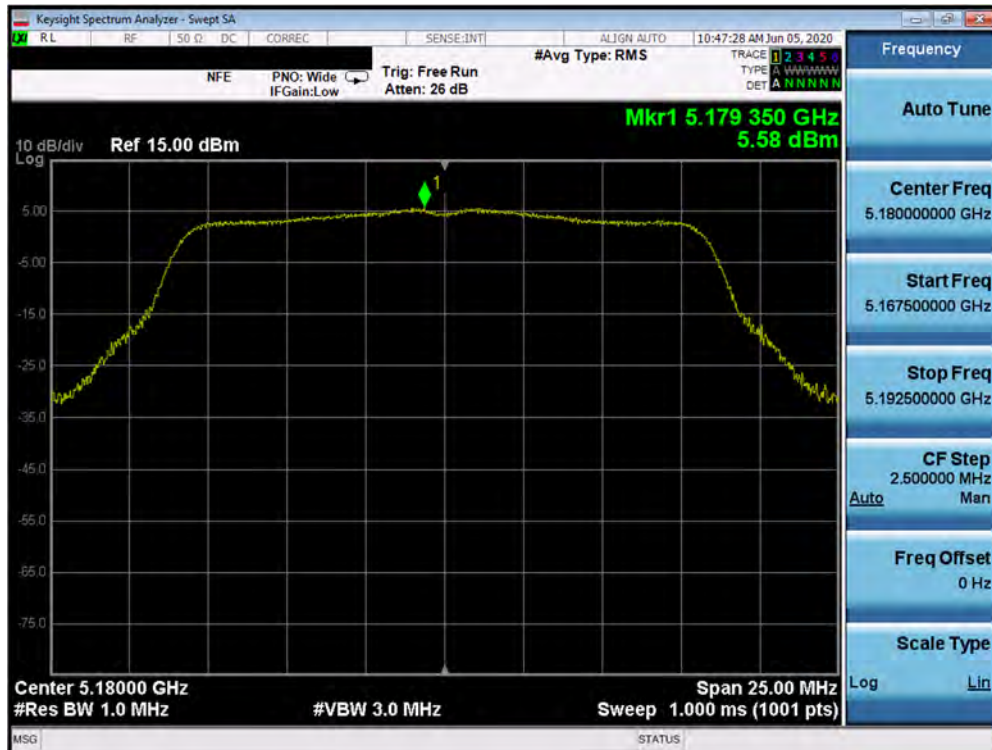


Plot 7-140. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 106 of 227                 |

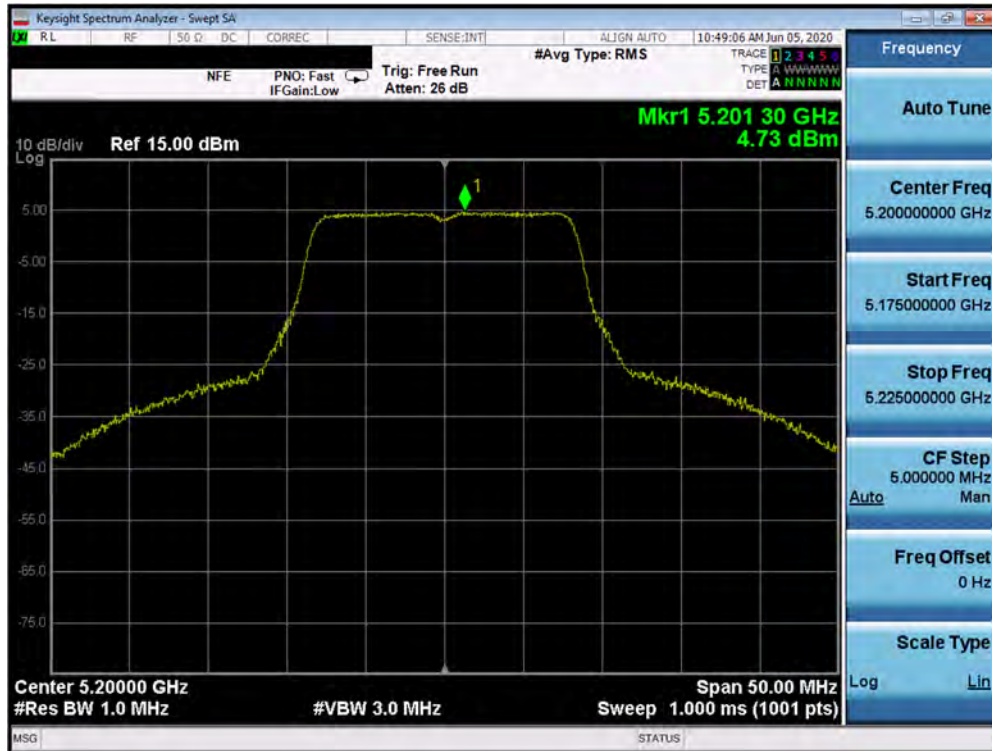


Plot 7-141. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 1) – Ch. 42)

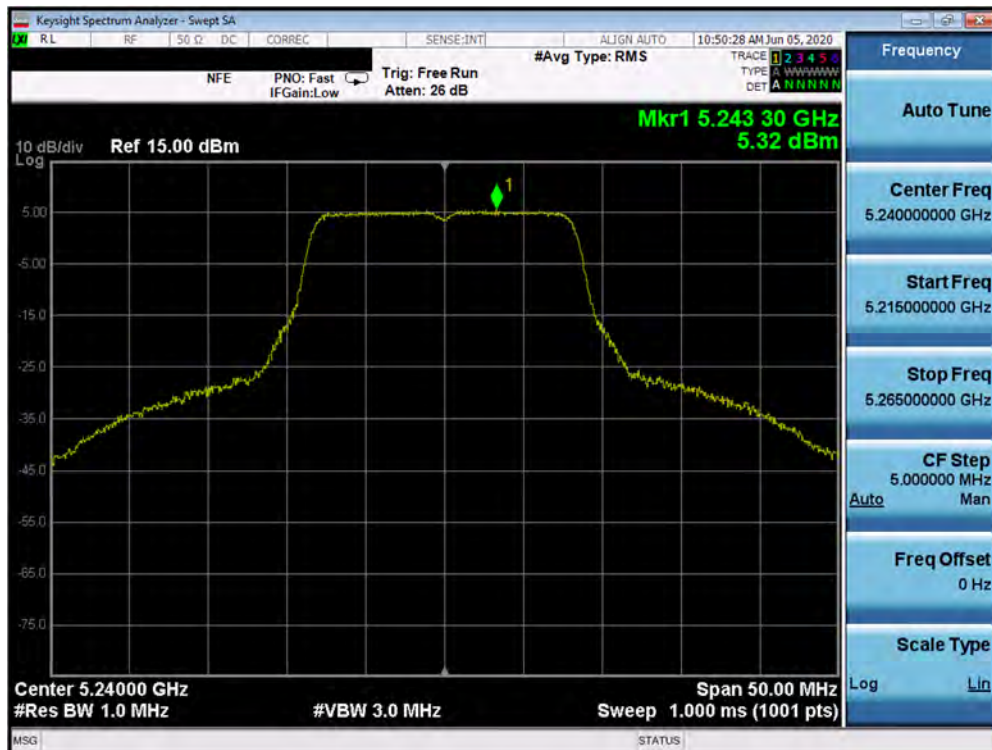


Plot 7-142. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) – Ch. 52)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 107 of 227                 |

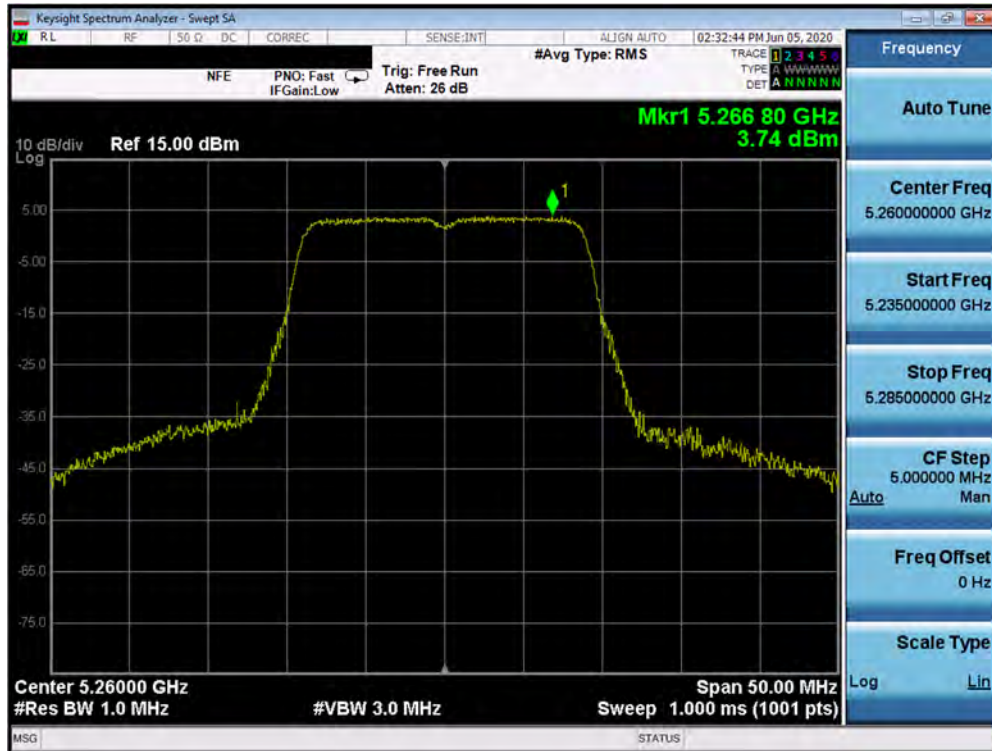


Plot 7-143. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) – Ch. 56)

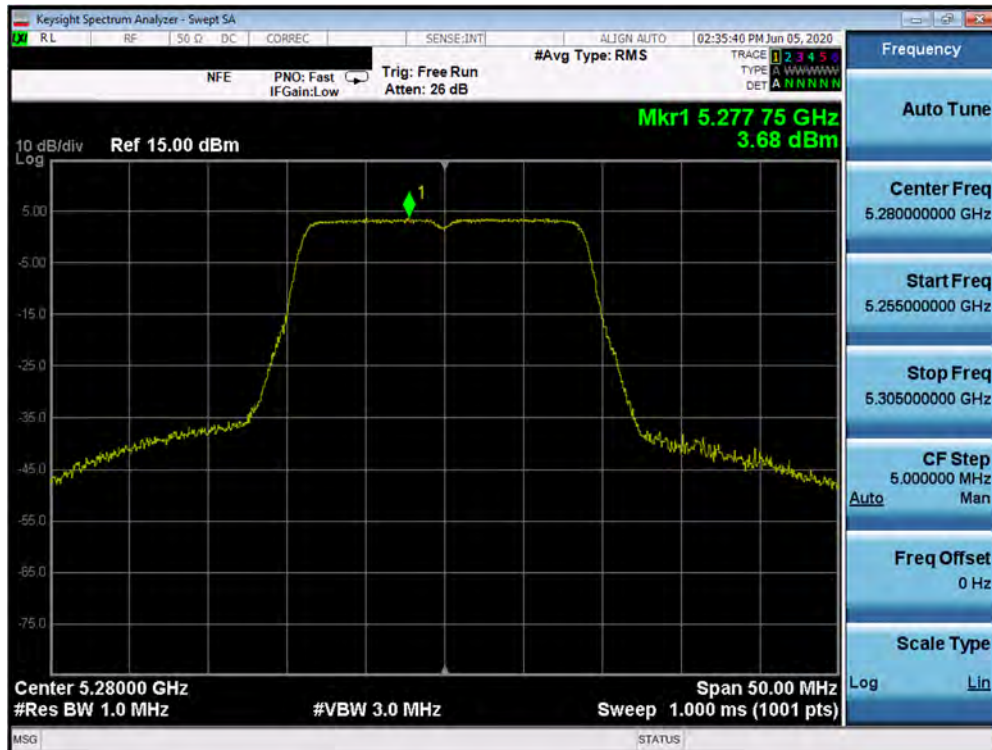


Plot 7-144. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2A) – Ch. 64)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 108 of 227                 |

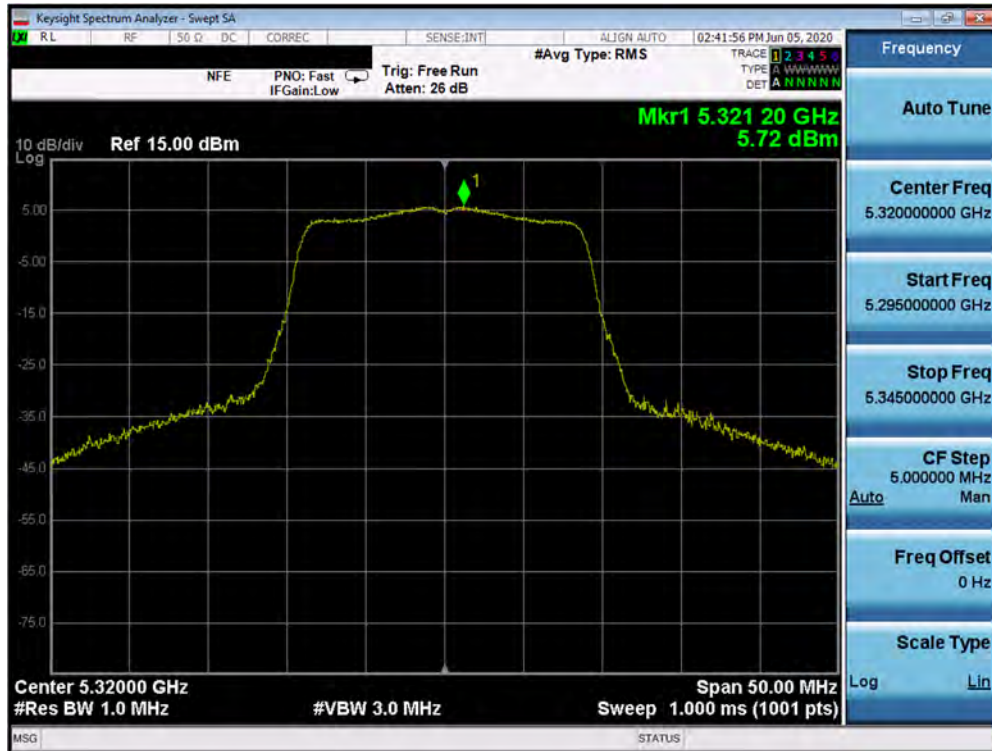


Plot 7-145. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

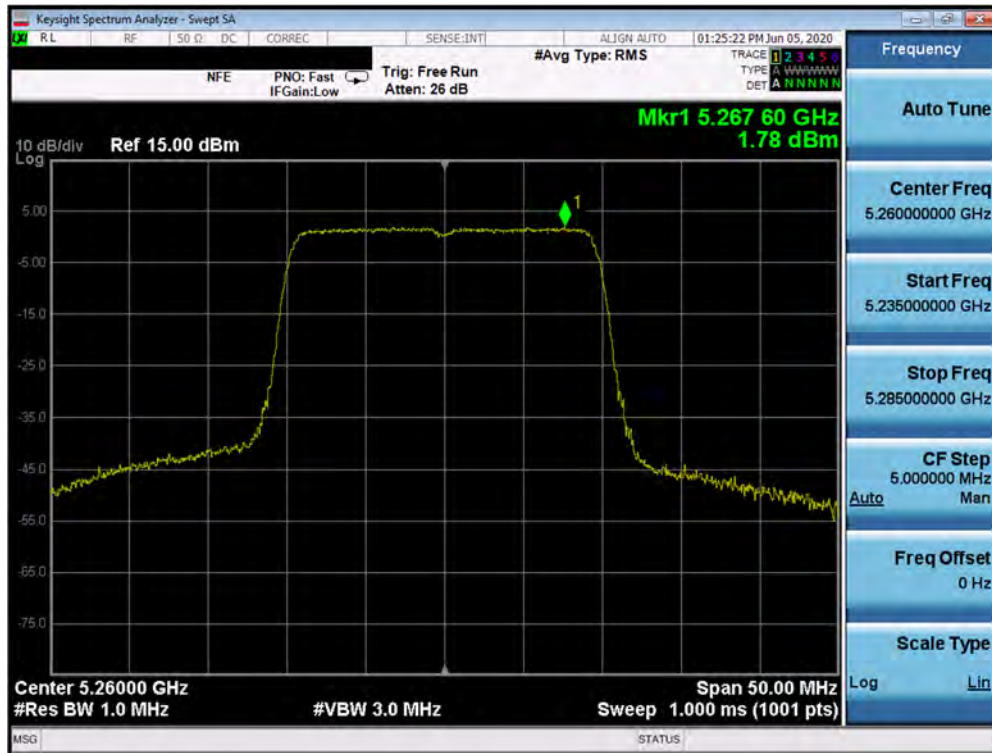


Plot 7-146. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 109 of 227                 |

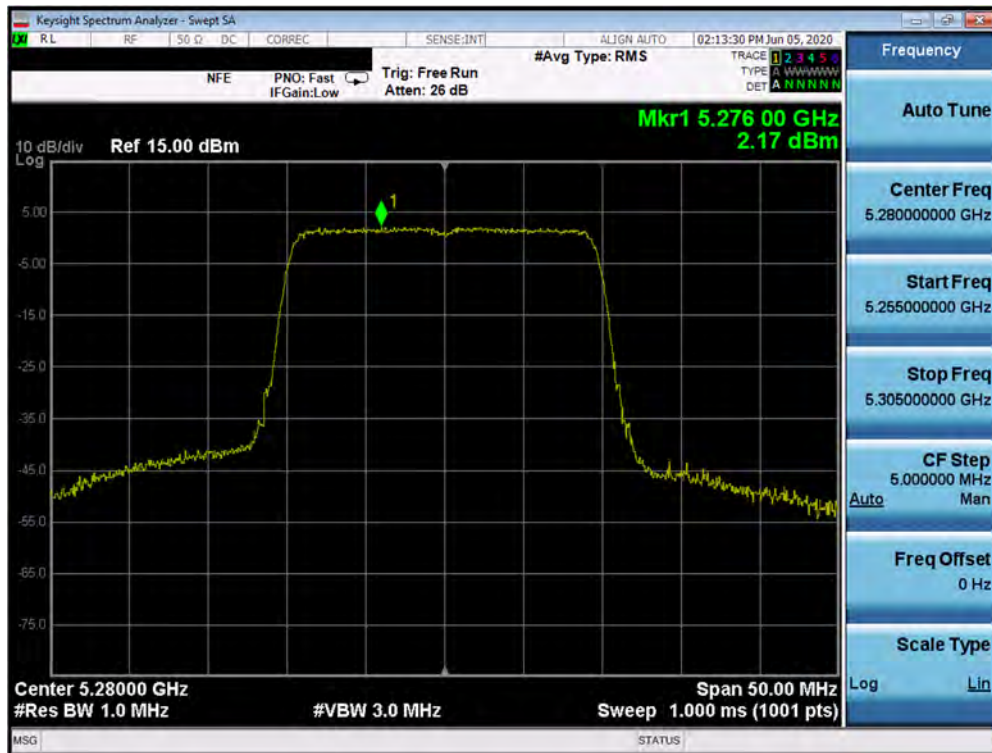


Plot 7-147. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

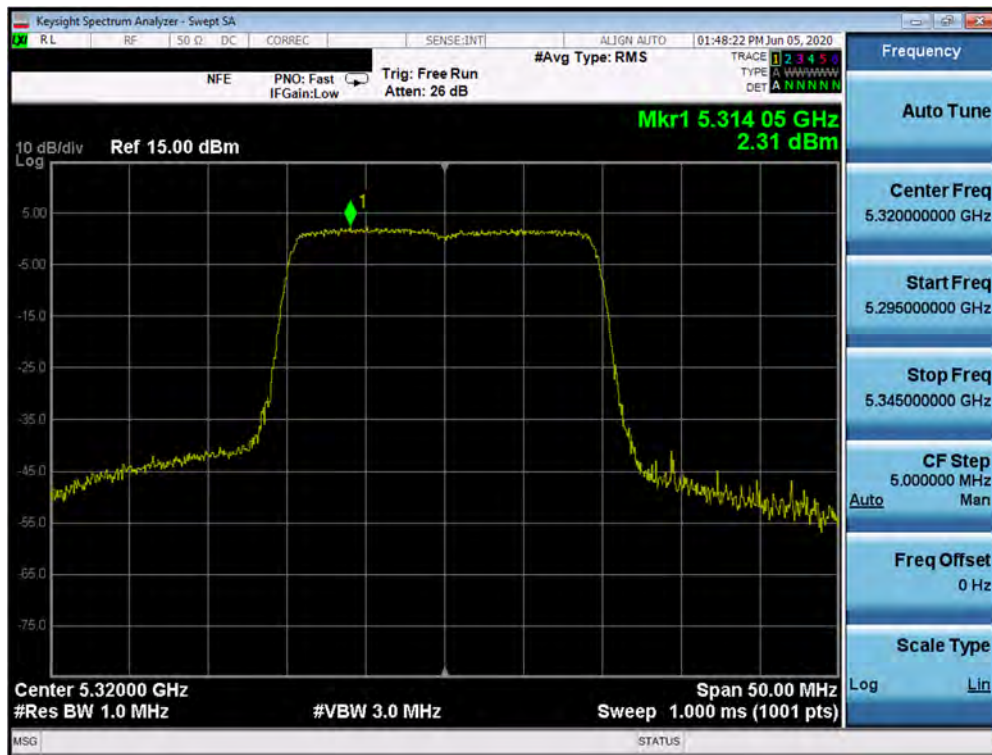


Plot 7-148. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 52)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 110 of 227                 |

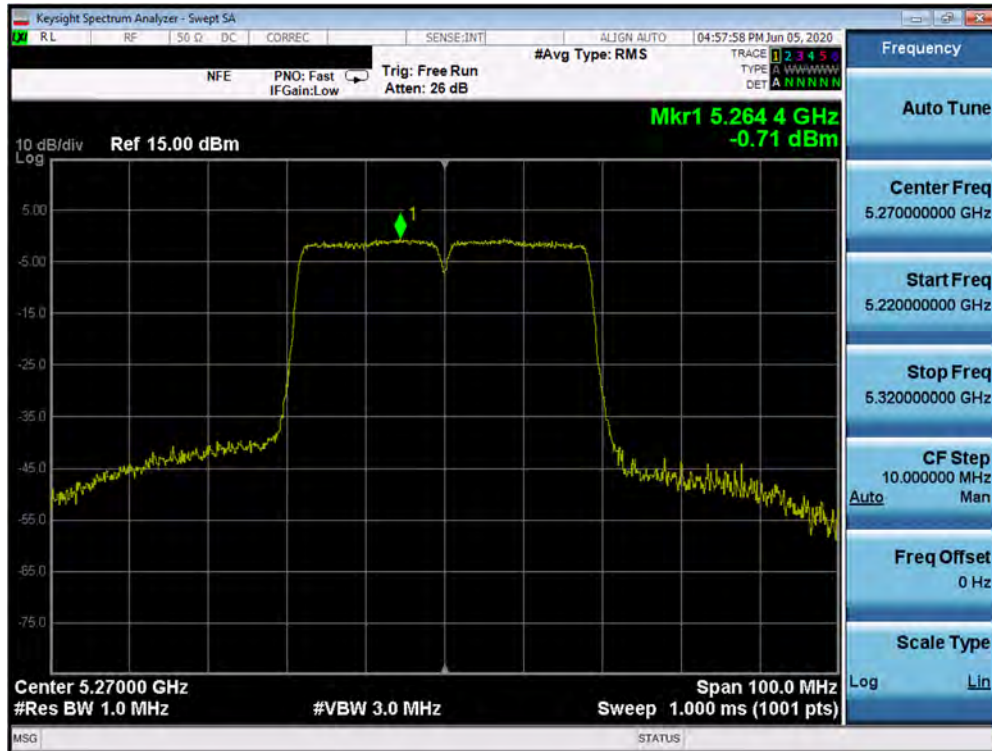


Plot 7-149. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 56)

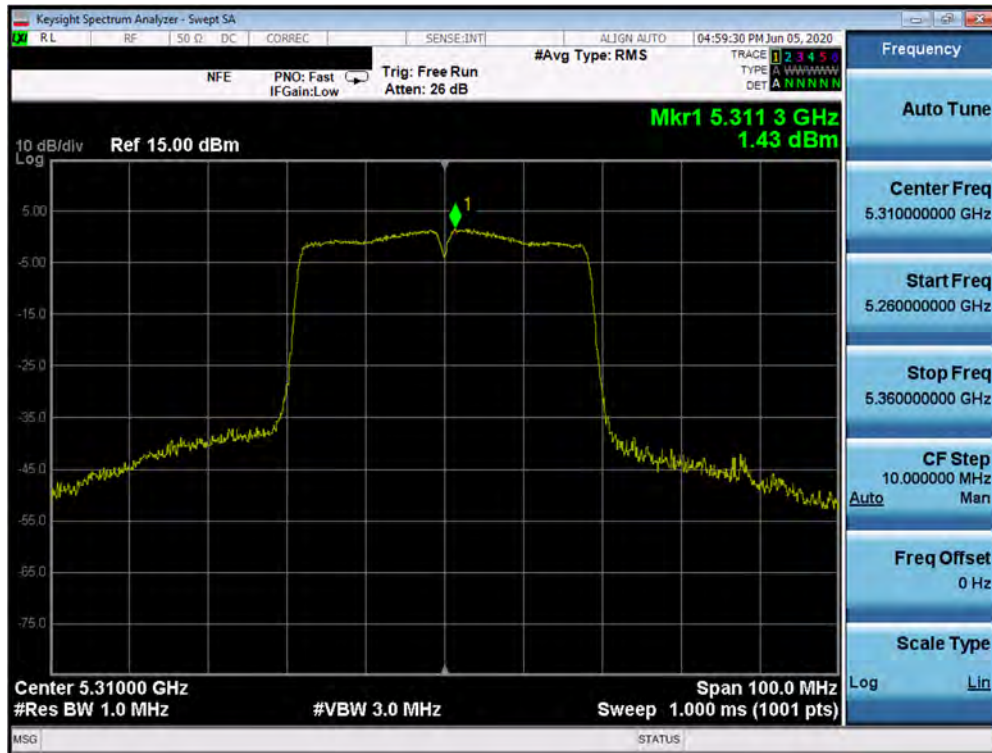


Plot 7-150. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 64)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 111 of 227                 |

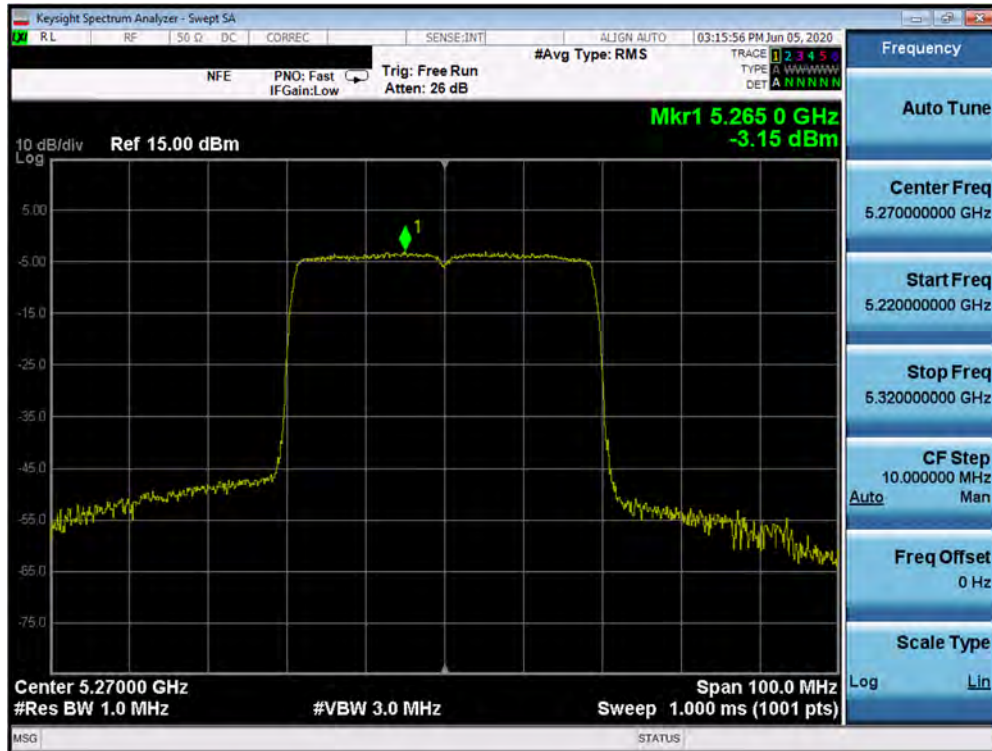


Plot 7-151. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

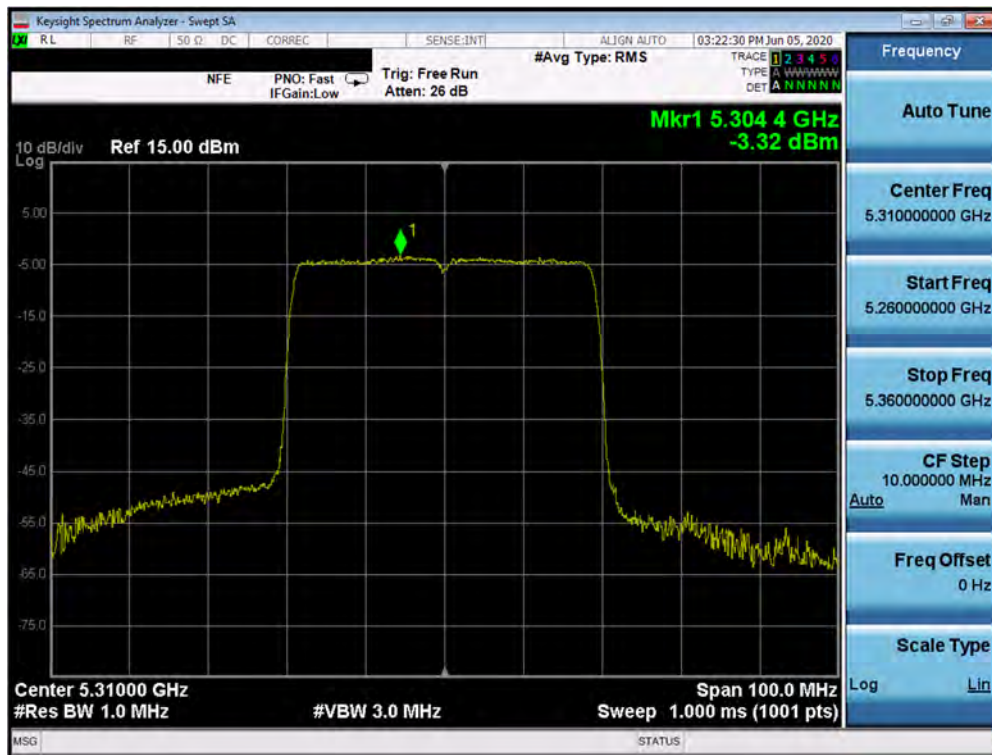


Plot 7-152. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 112 of 227                 |

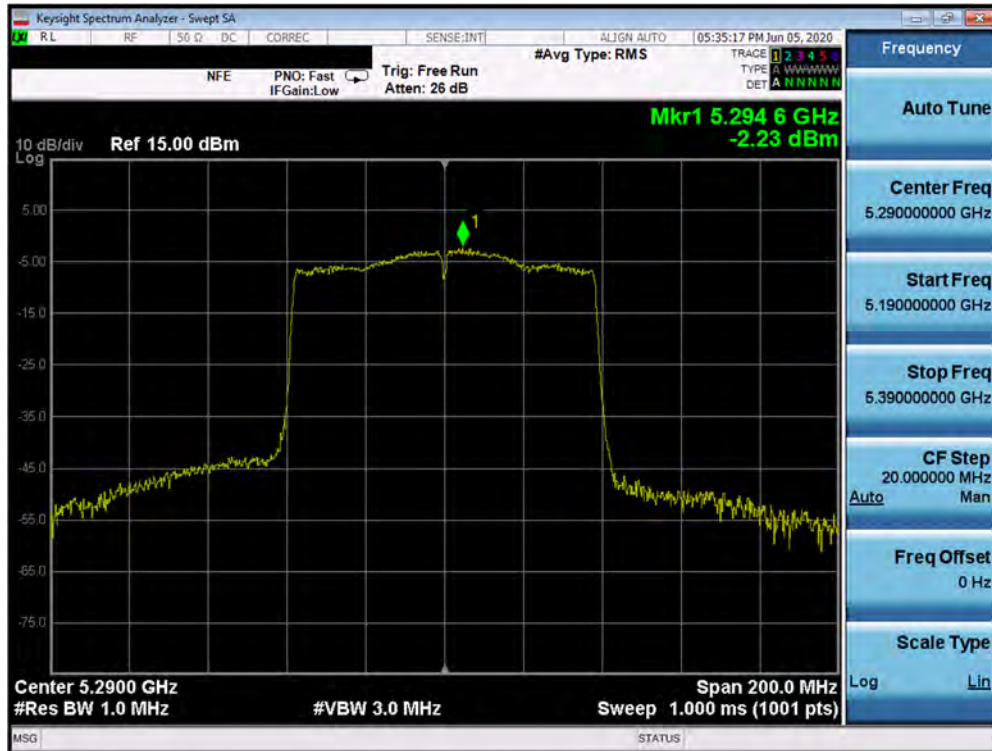


Plot 7-153. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 54)

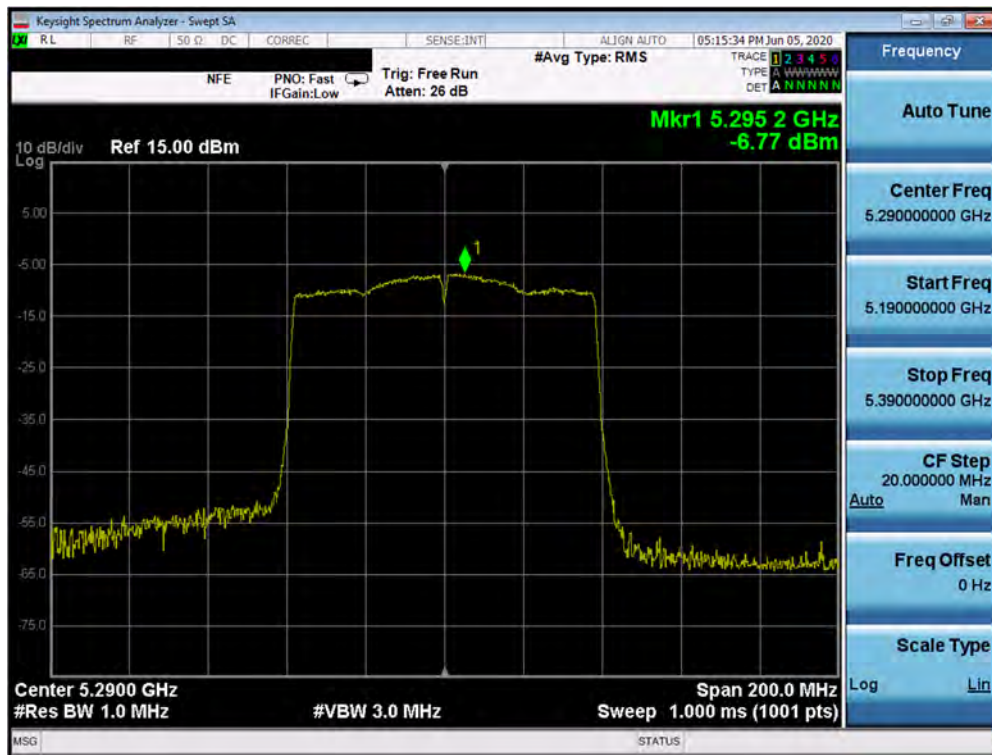


Plot 7-154. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 62)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 113 of 227                 |

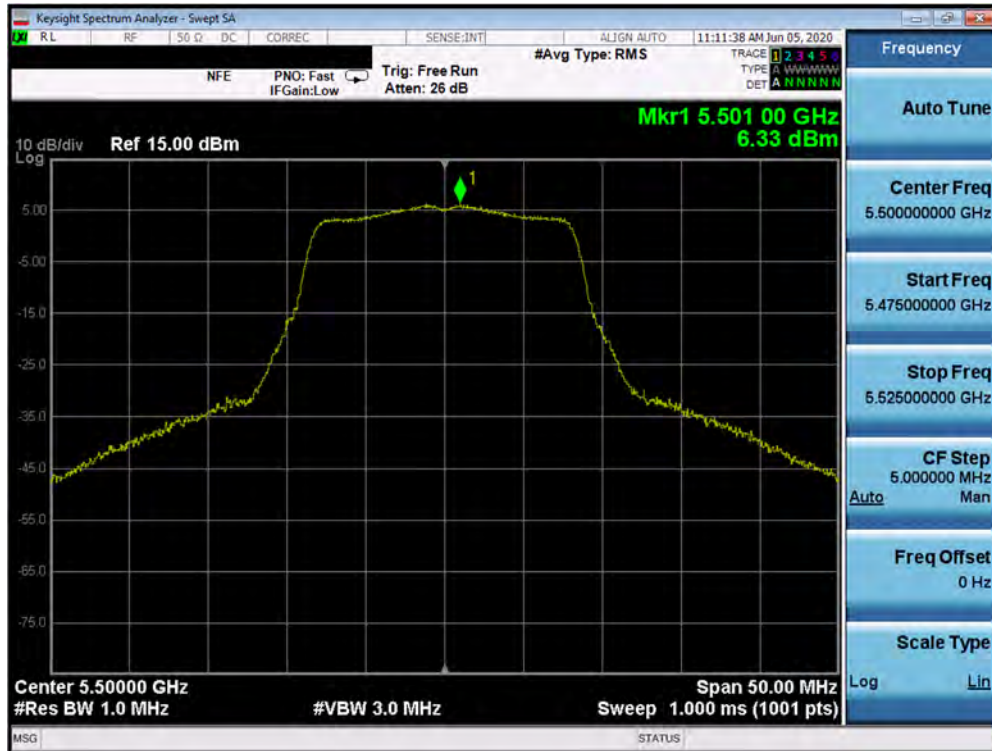


Plot 7-155. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

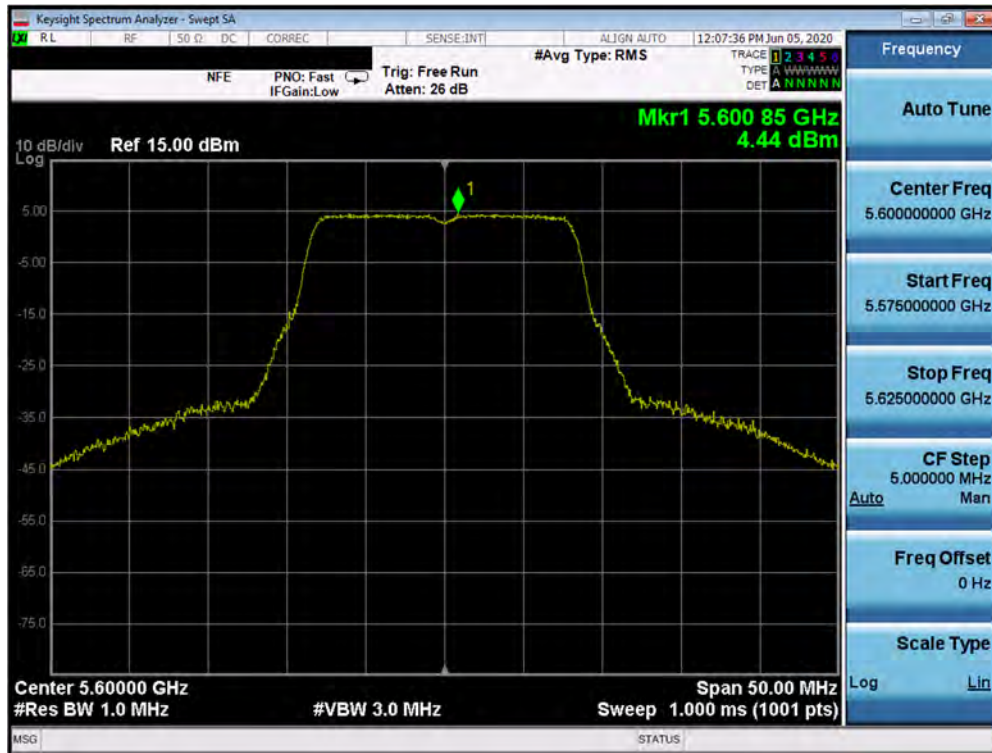


Plot 7-156. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2A) – Ch. 58)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 114 of 227                 |

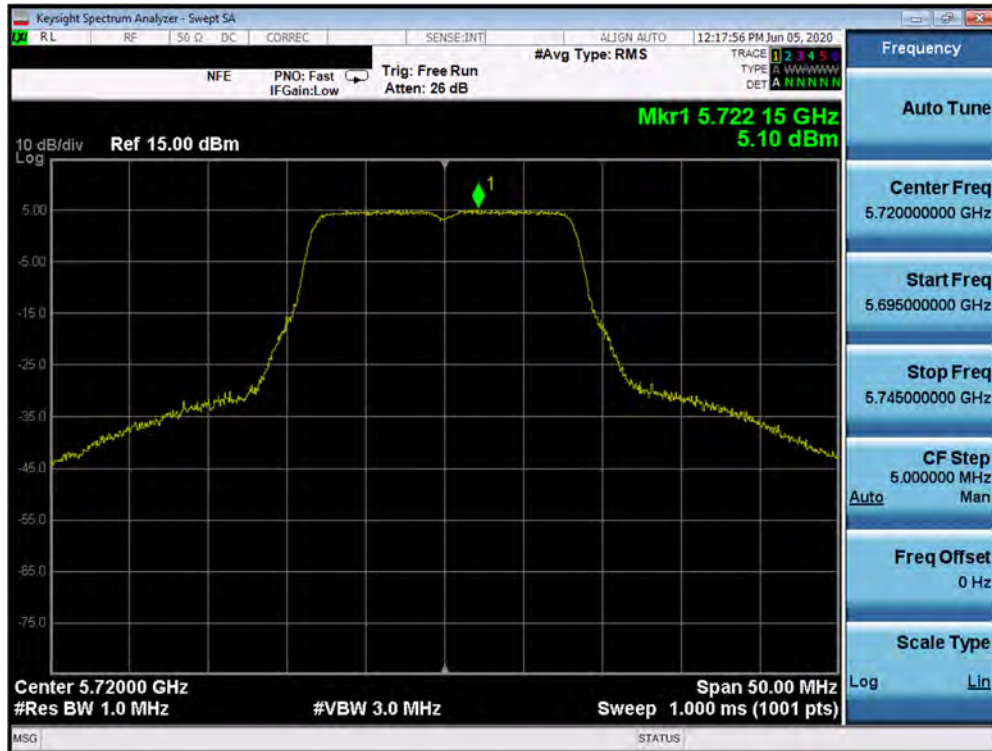


Plot 7-157. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) – Ch. 100)

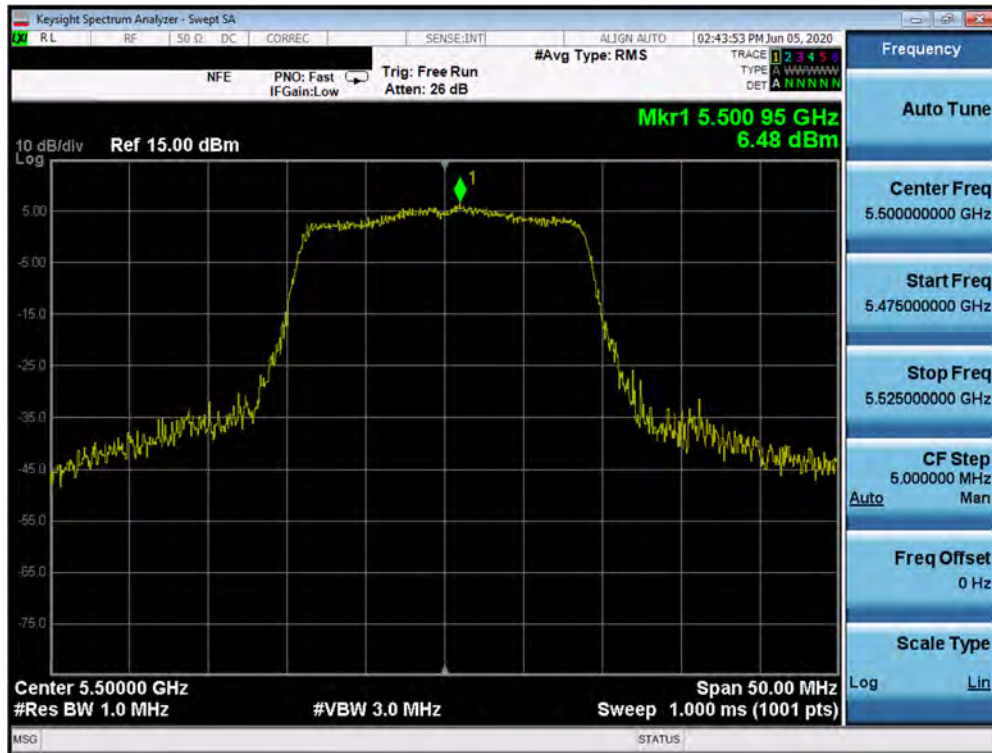


Plot 7-158. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) – Ch. 120)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 115 of 227                 |

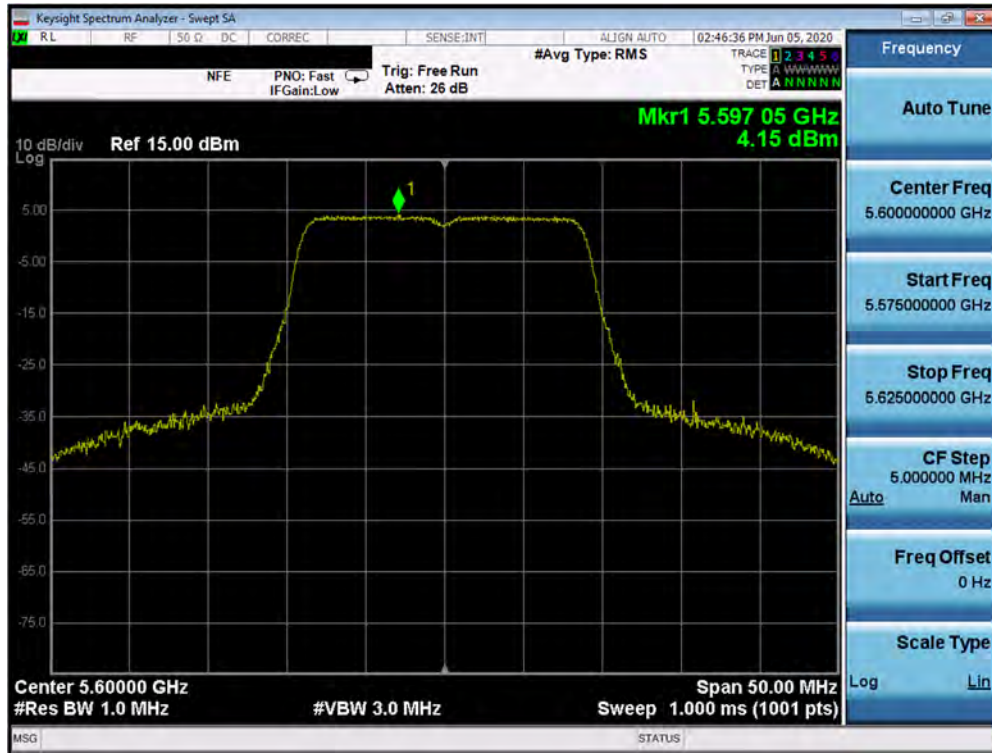


Plot 7-159. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 2C) – Ch. 144)

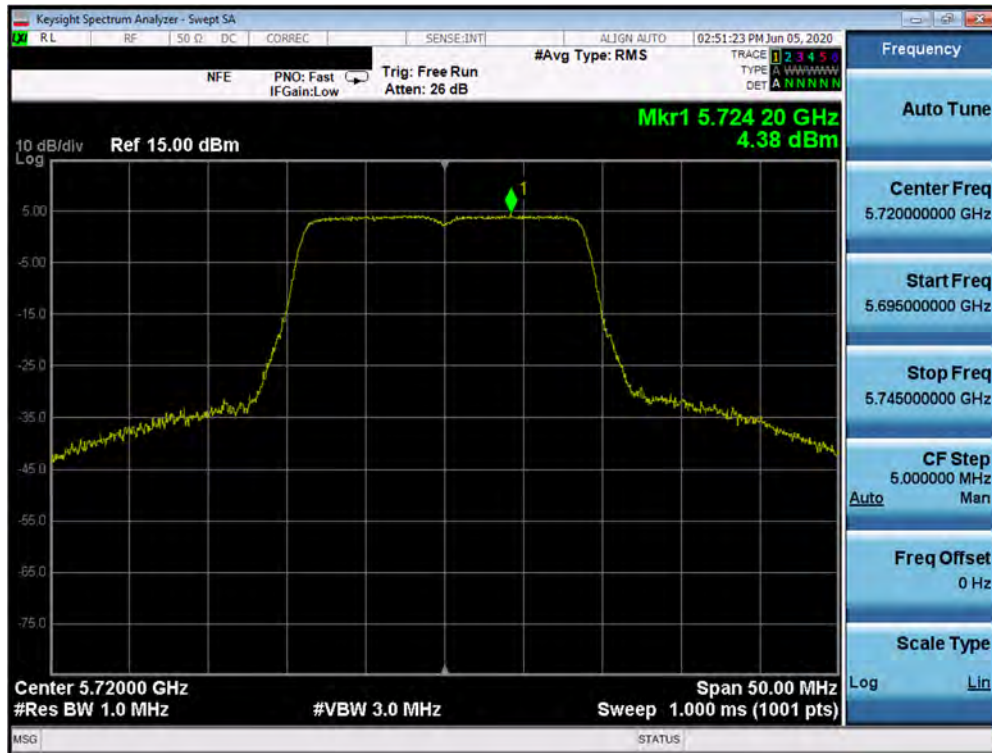


Plot 7-160. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 116 of 227                 |

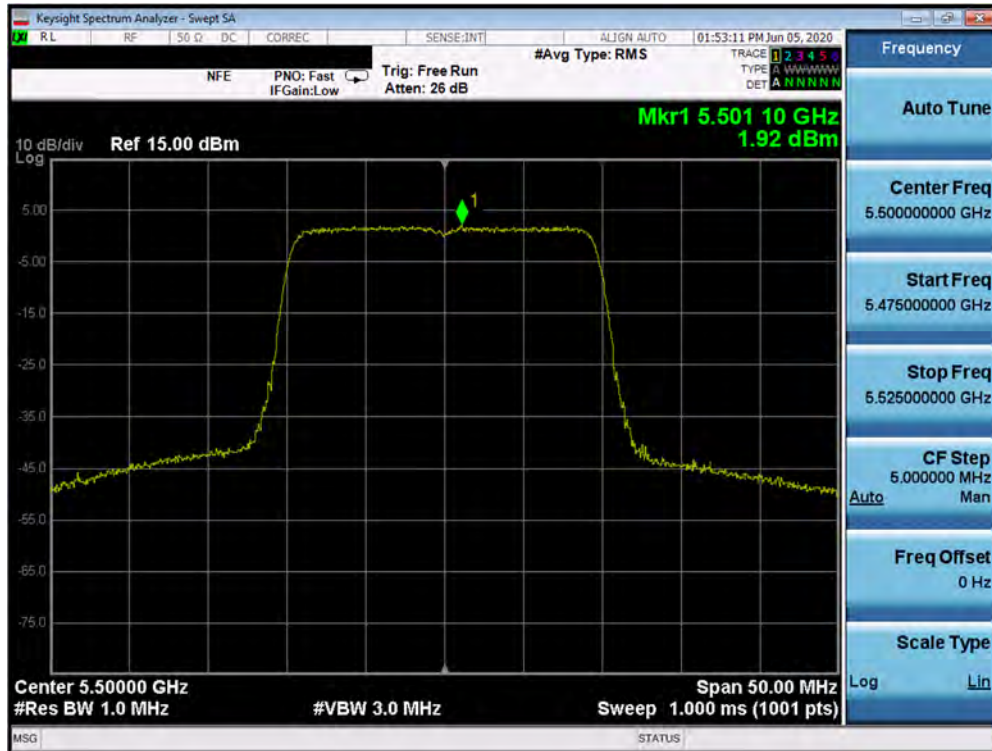


Plot 7-161. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

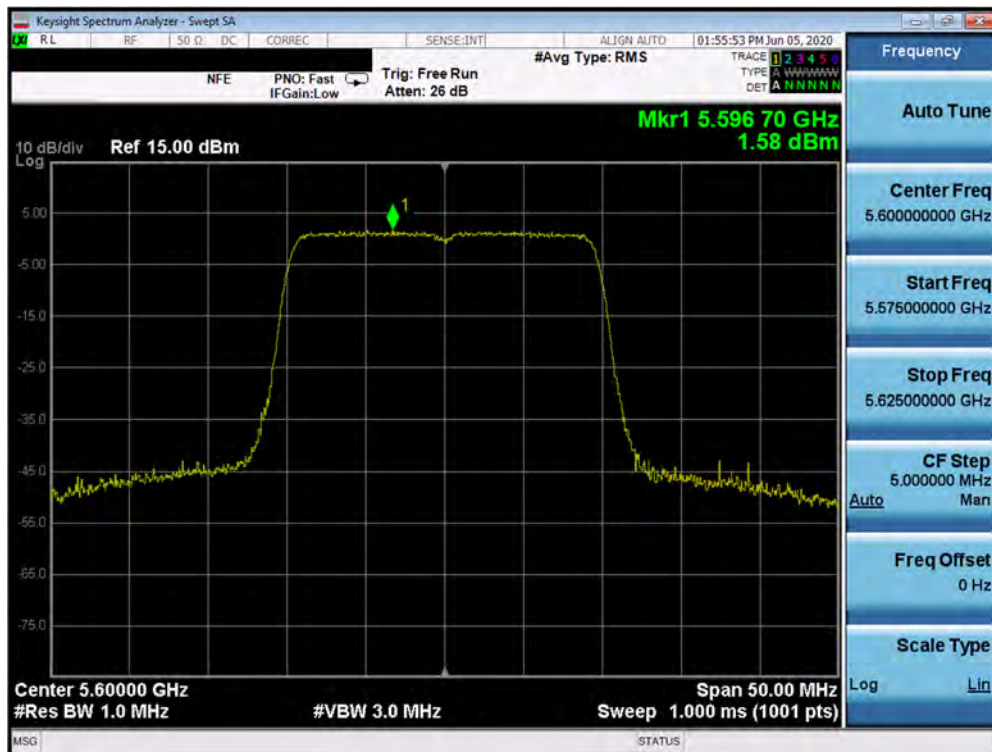


Plot 7-162. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 117 of 227                 |

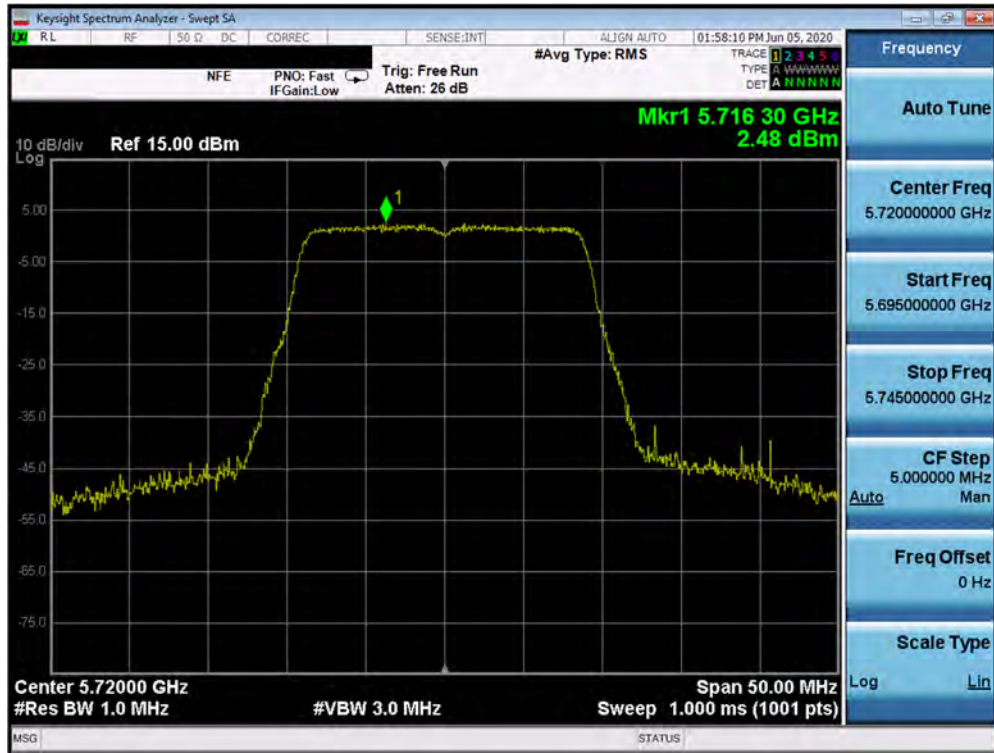


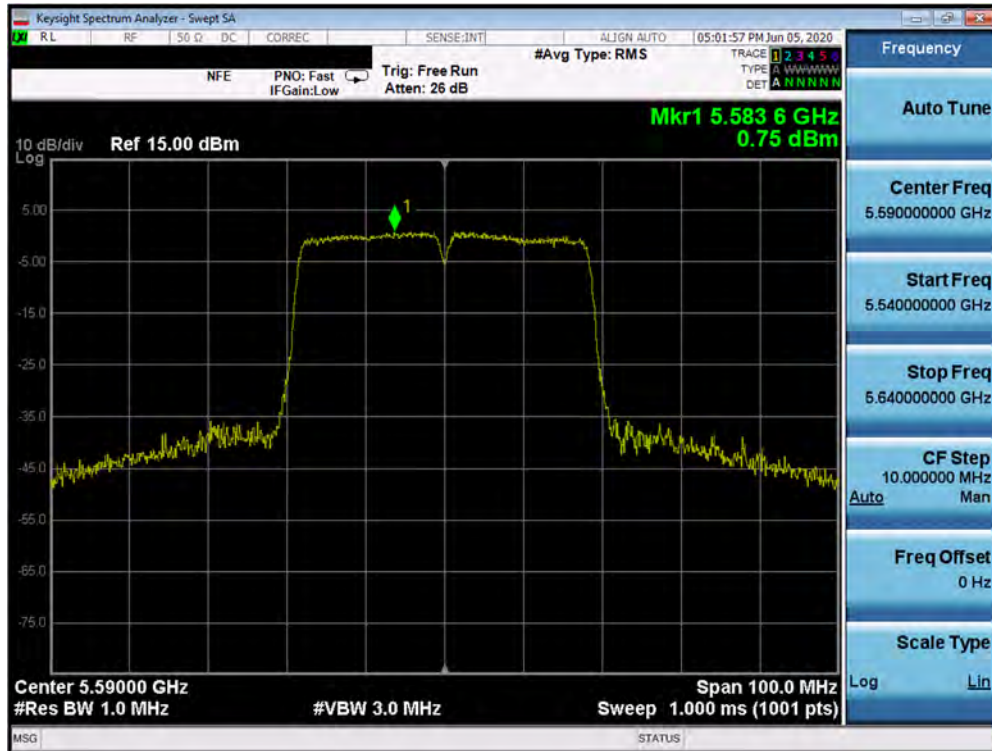
Plot 7-163. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 100)



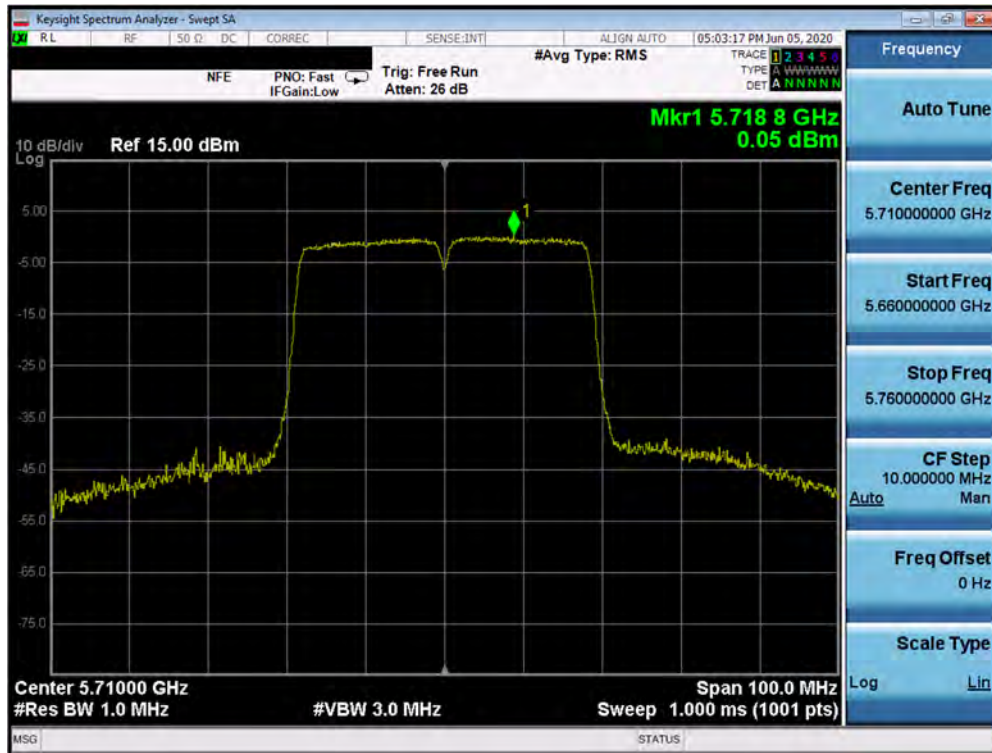
Plot 7-164. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 120)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 118 of 227                 |



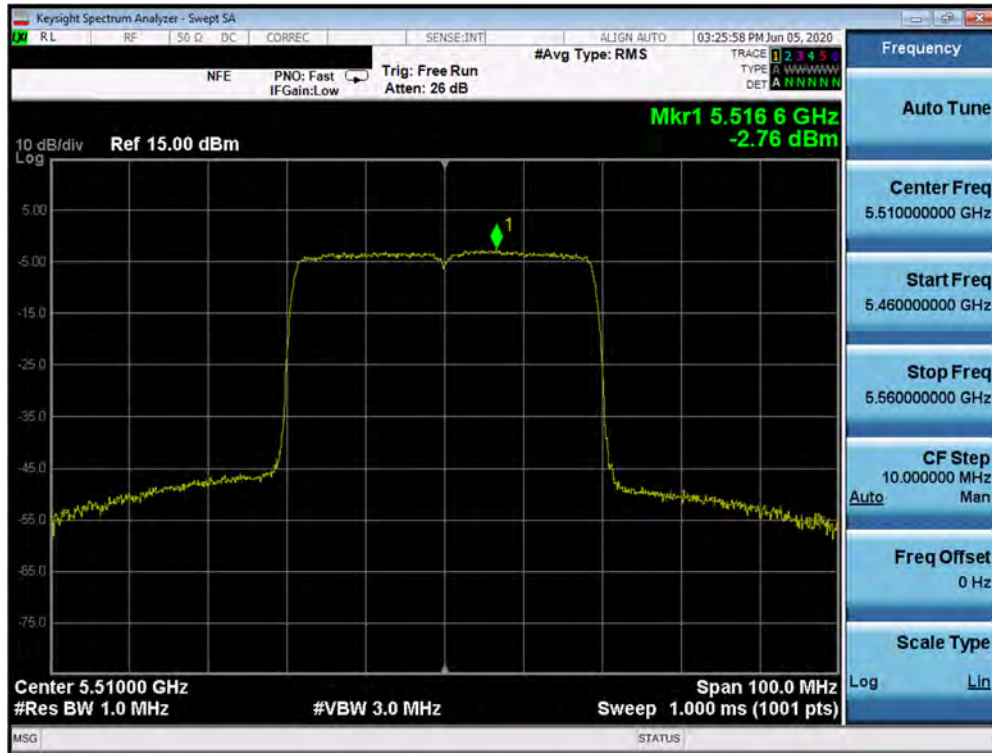


Plot 7-167. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

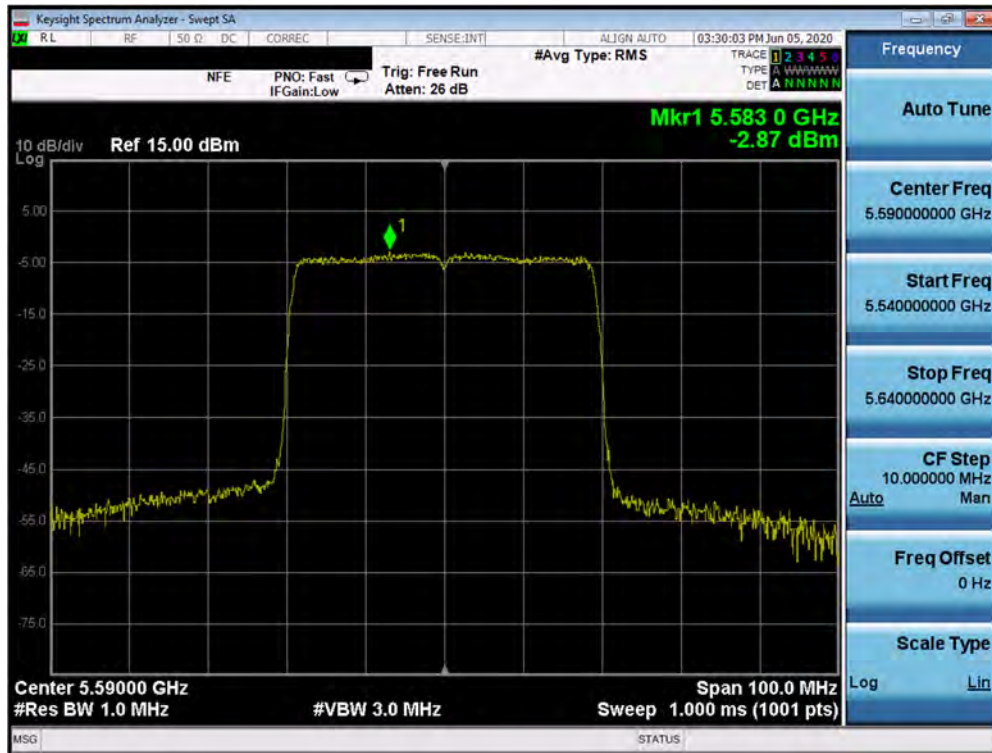


Plot 7-168. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 120 of 227                 |

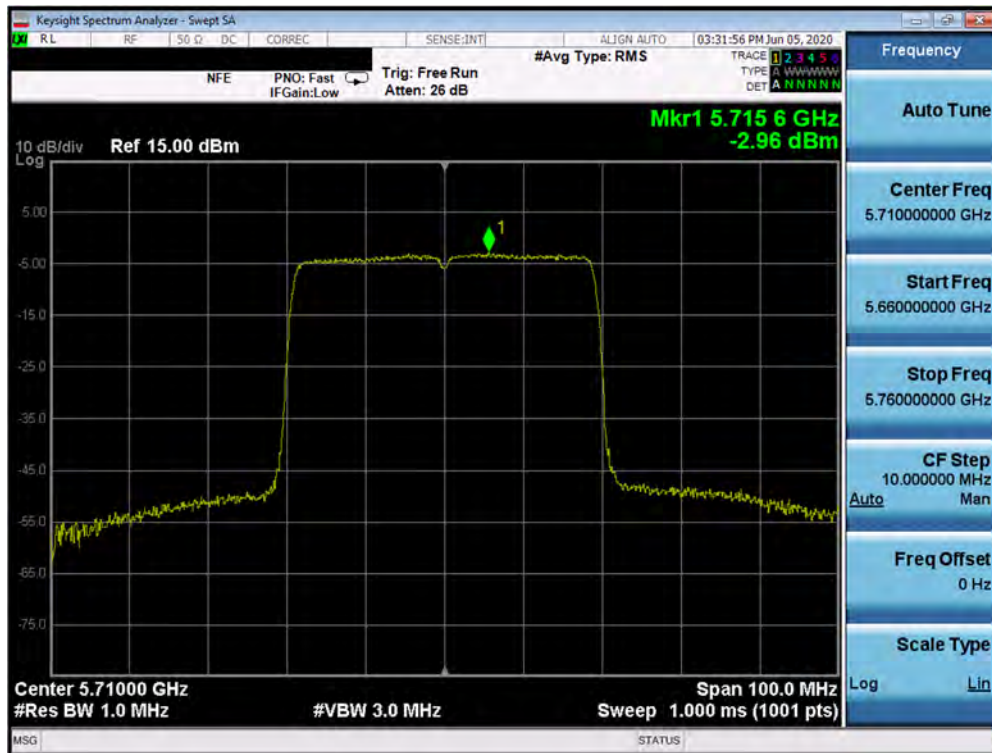


Plot 7-169. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 102)

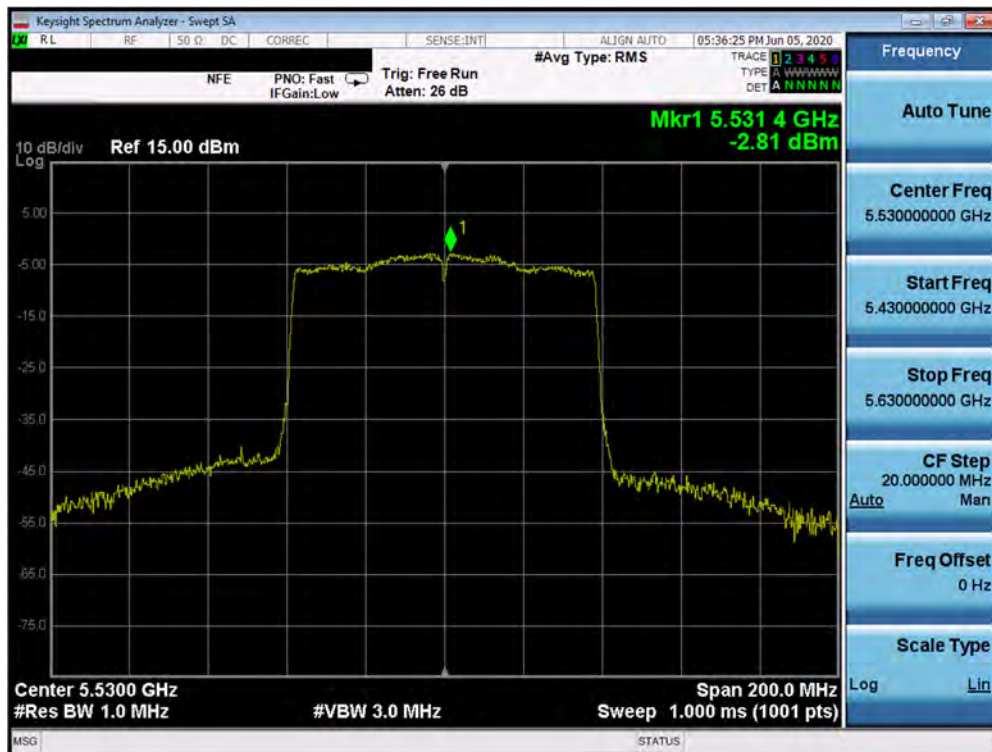


Plot 7-170. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 118)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 121 of 227                 |

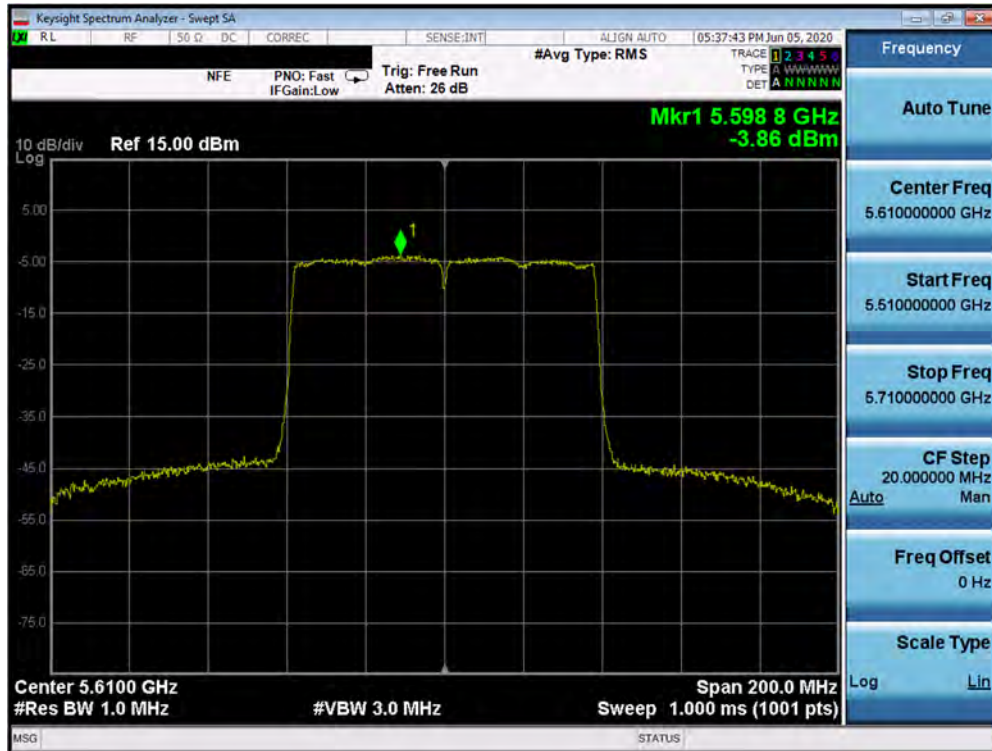


Plot 7-171. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 142)

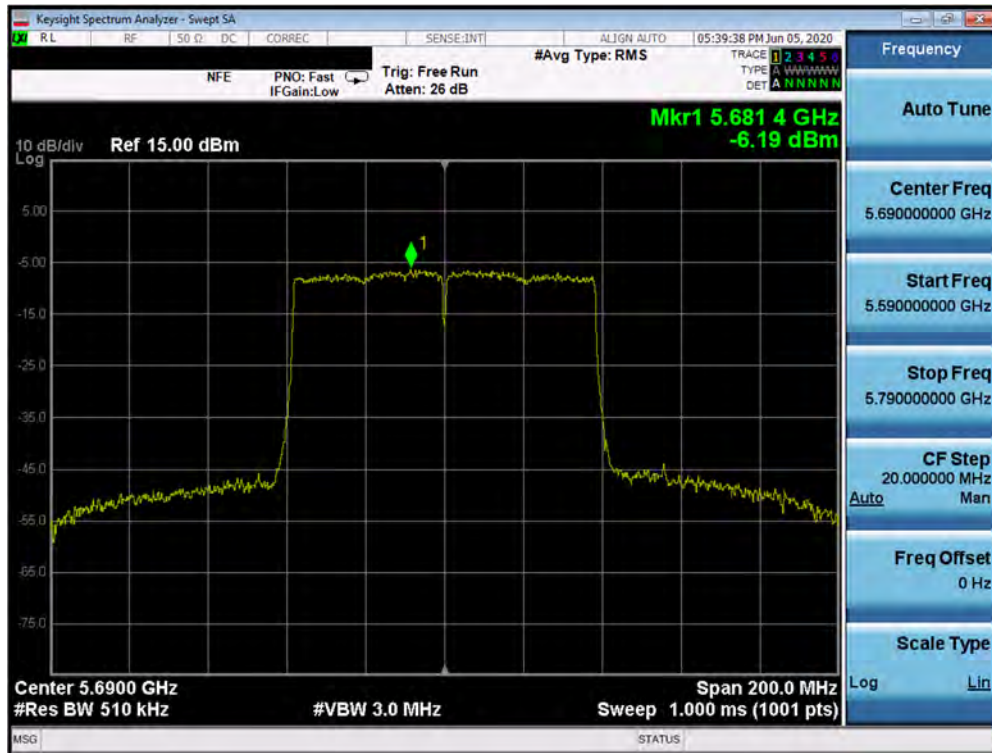


Plot 7-172. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 122 of 227                 |

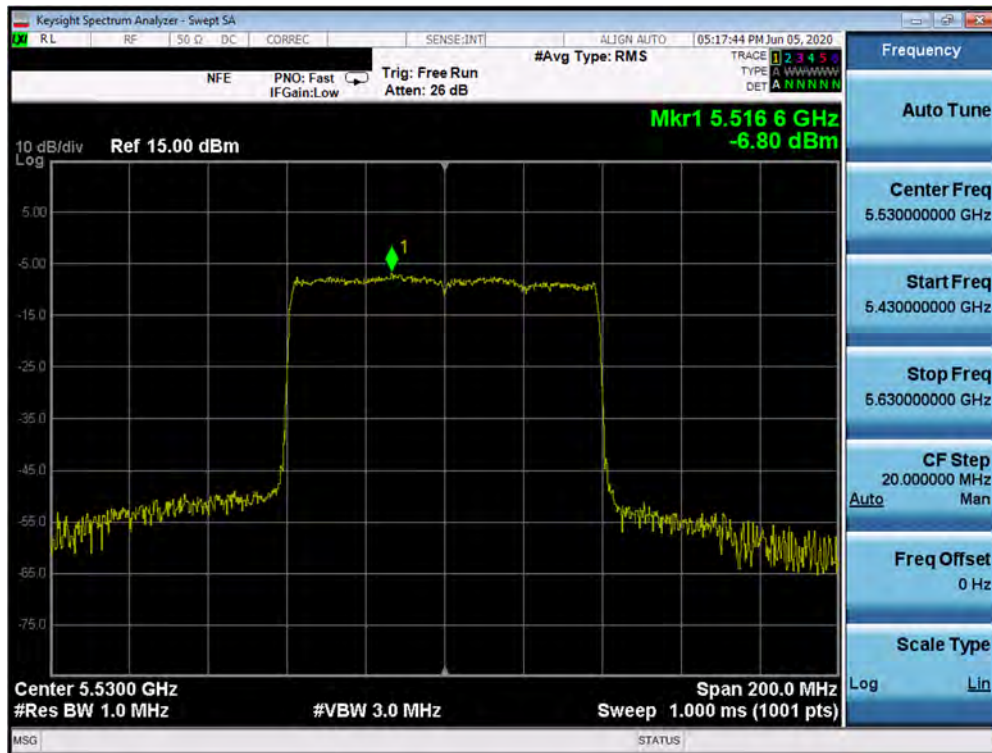


Plot 7-173. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

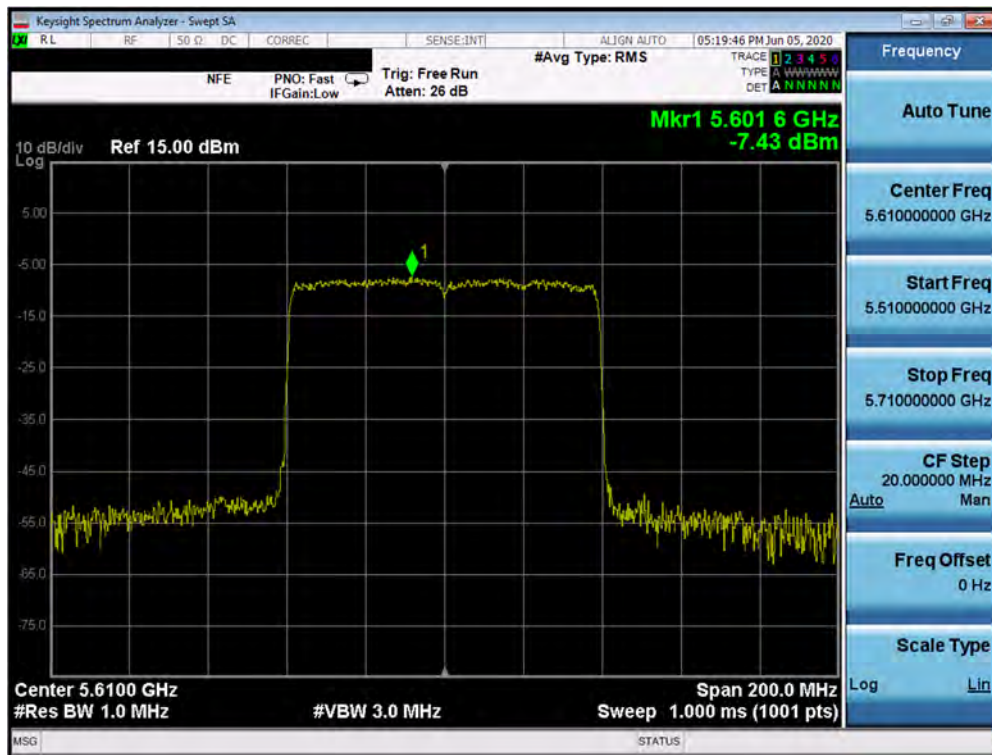


Plot 7-174. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 123 of 227                 |



Plot 7-175. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 106)



Plot 7-176. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 122)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 124 of 227                 |

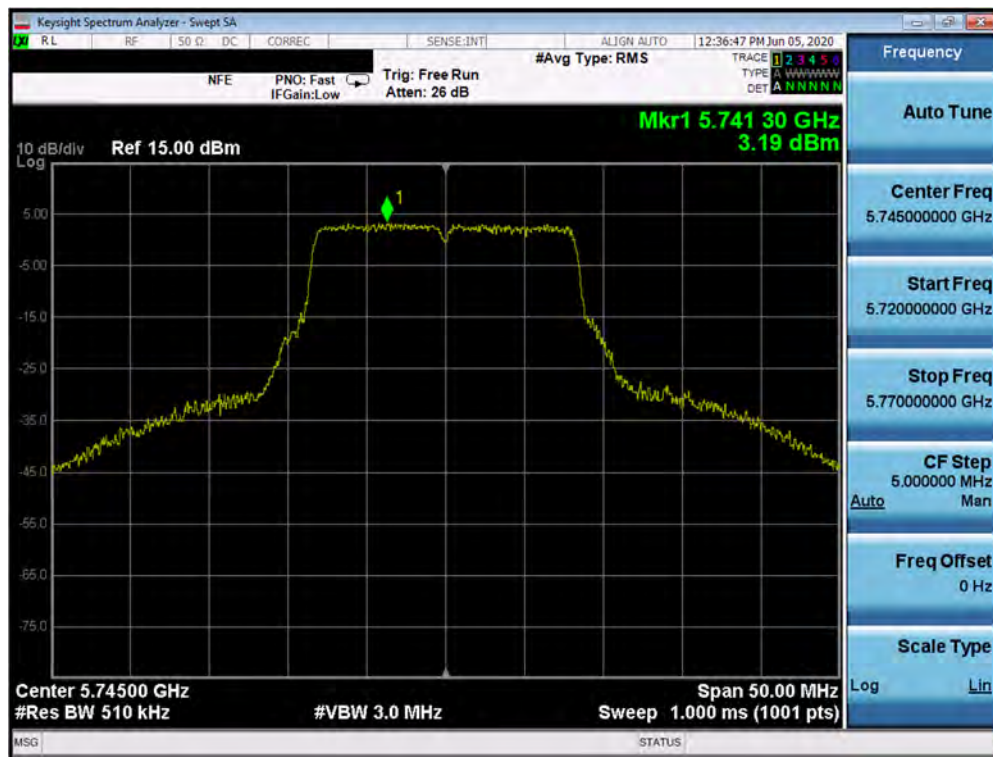


Plot 7-177. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 138)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 125 of 227                 |

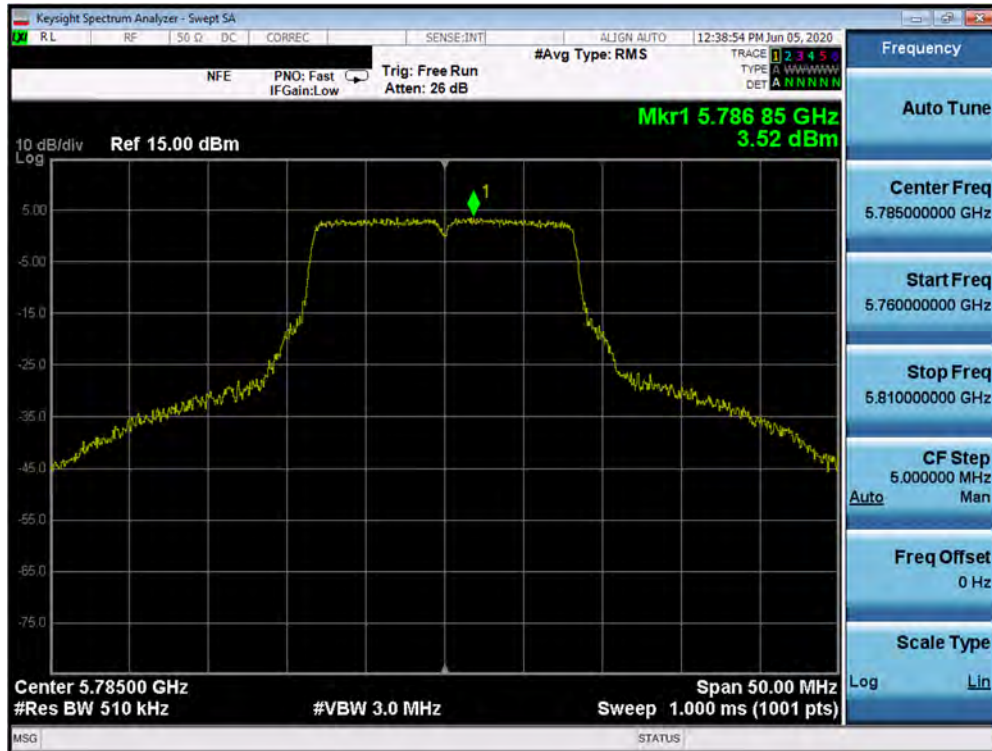
|               | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] |
|---------------|-----------------|-------------|-------------|------------------|------------------------------|--------------------------------------------|-------------|
| <b>Band 3</b> | 5745            | 149         | a           | 6                | 3.19                         | 30.0                                       | -26.81      |
|               | 5785            | 157         | a           | 6                | 3.52                         | 30.0                                       | -26.48      |
|               | 5825            | 165         | a           | 6                | 2.63                         | 30.0                                       | -27.37      |
|               | 5745            | 149         | n (20MHz)   | 6.5/7.2 (MCS0)   | 2.24                         | 30.0                                       | -27.76      |
|               | 5785            | 157         | n (20MHz)   | 6.5/7.2 (MCS0)   | 2.60                         | 30.0                                       | -27.40      |
|               | 5825            | 165         | n (20MHz)   | 6.5/7.2 (MCS0)   | 2.24                         | 30.0                                       | -27.76      |
|               | 5745            | 149         | ax (20MHz)  | 6.5/7.2 (MCS0)   | -0.48                        | 30.0                                       | -30.48      |
|               | 5785            | 157         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 0.21                         | 30.0                                       | -29.79      |
|               | 5825            | 165         | ax (20MHz)  | 6.5/7.2 (MCS0)   | -0.42                        | 30.0                                       | -30.42      |
|               | 5755            | 151         | n (40MHz)   | 13.5/15 (MCS0)   | -2.18                        | 30.0                                       | -32.18      |
|               | 5795            | 159         | n (40MHz)   | 13.5/15 (MCS0)   | -1.59                        | 30.0                                       | -31.59      |
|               | 5755            | 151         | ax (40MHz)  | 13.5/15 (MCS0)   | -5.38                        | 30.0                                       | -35.38      |
|               | 5795            | 159         | ax (40MHz)  | 13.5/15 (MCS0)   | -4.42                        | 30.0                                       | -34.42      |
|               | 5775            | 155         | ac (80MHz)  | 29.3/32.5 (MCS0) | -3.28                        | 30.0                                       | -33.28      |
|               | 5775            | 155         | ax (80MHz)  | 29.3/32.5 (MCS0) | -6.19                        | 30.0                                       | -36.19      |

**Table 7-22. Band 3 Conducted Power Spectral Density Measurements SISO ANT1**

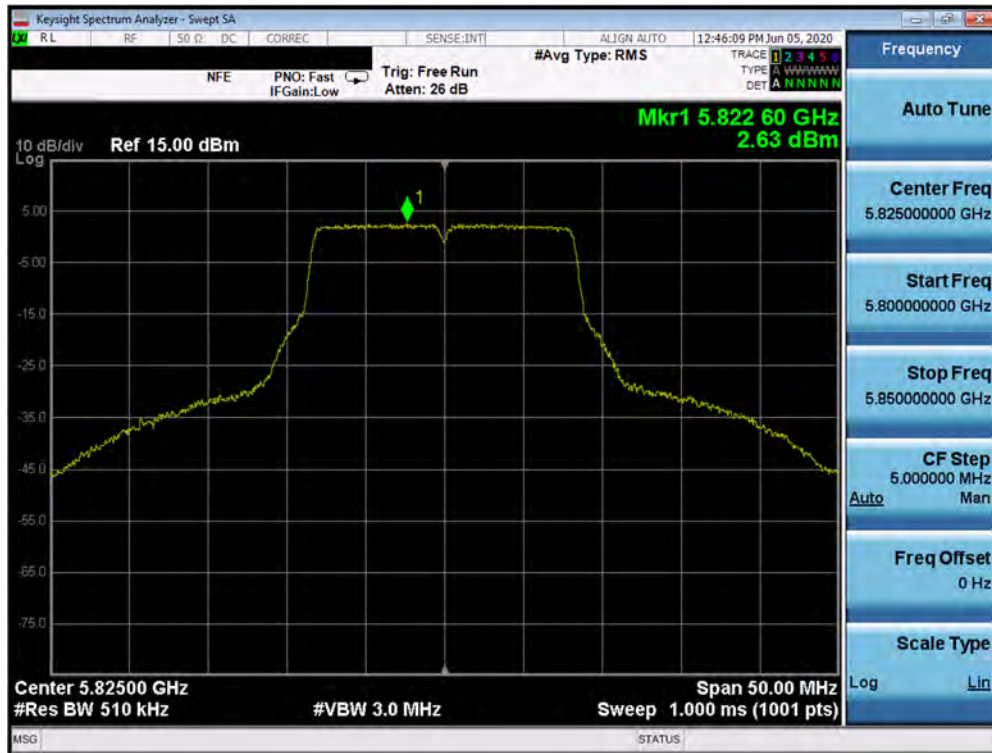


**Plot 7-178. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 149)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 126 of 227                 |

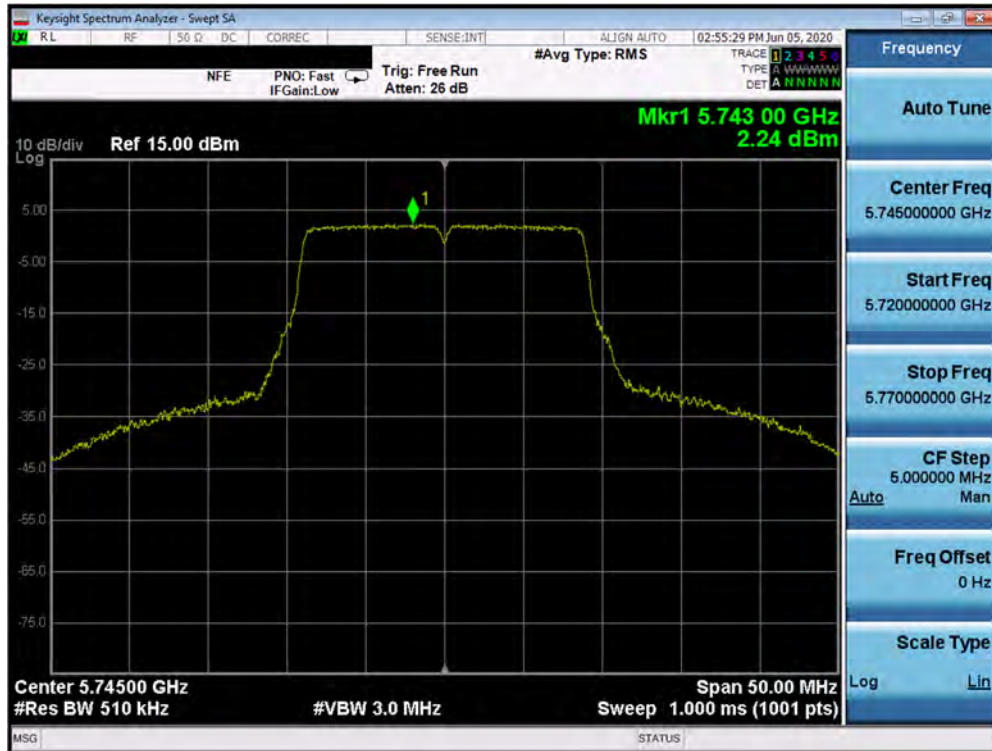


Plot 7-179. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 157)

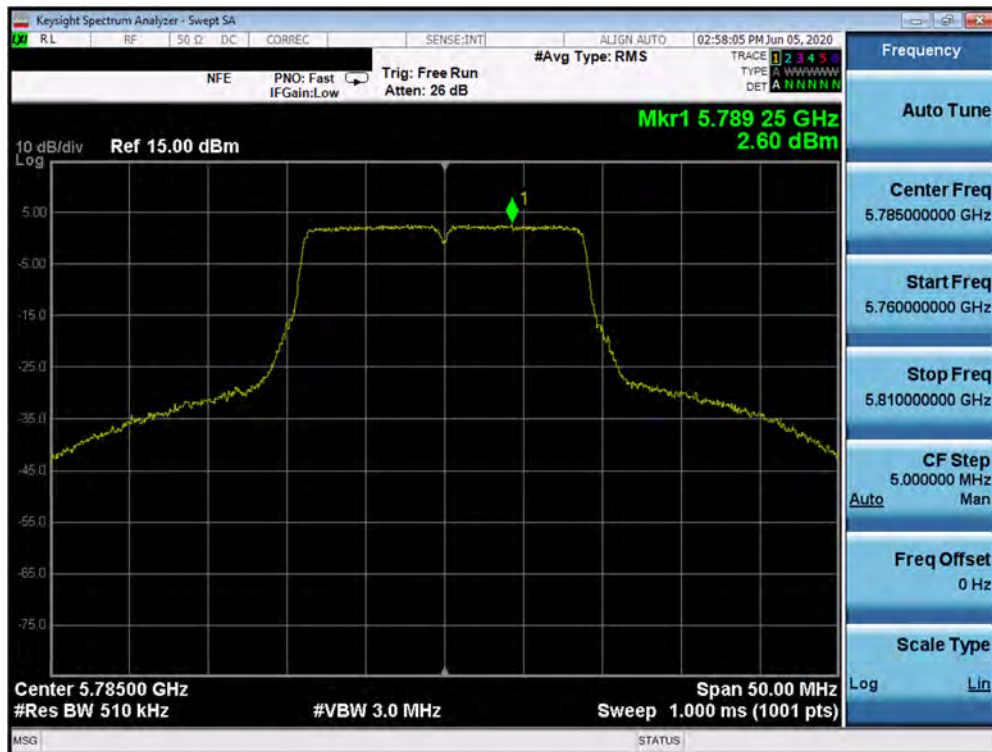


Plot 7-180. Power Spectral Density Plot SISO ANT1 (802.11a (UNII Band 3) – Ch. 165)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 127 of 227                 |

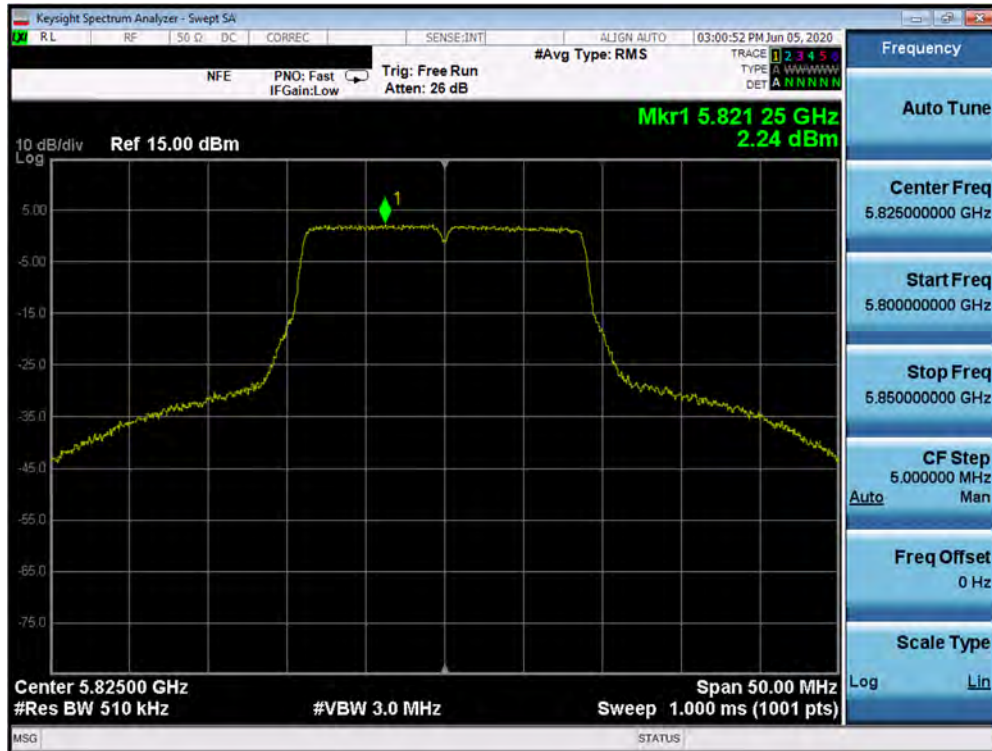


Plot 7-181. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

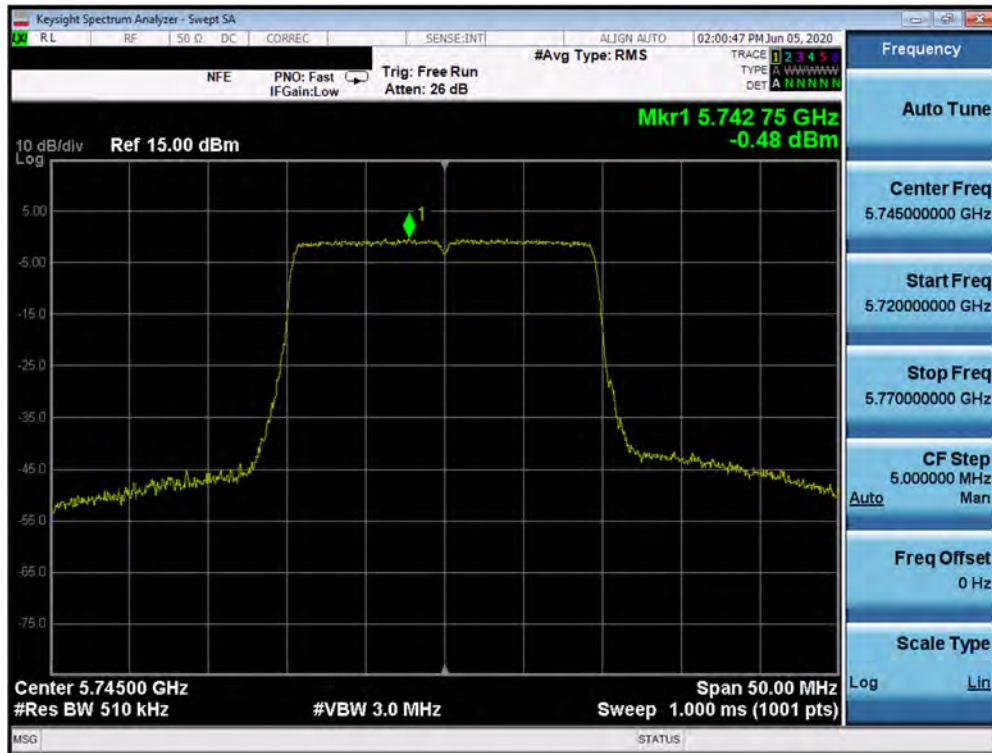


Plot 7-182. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 128 of 227                 |

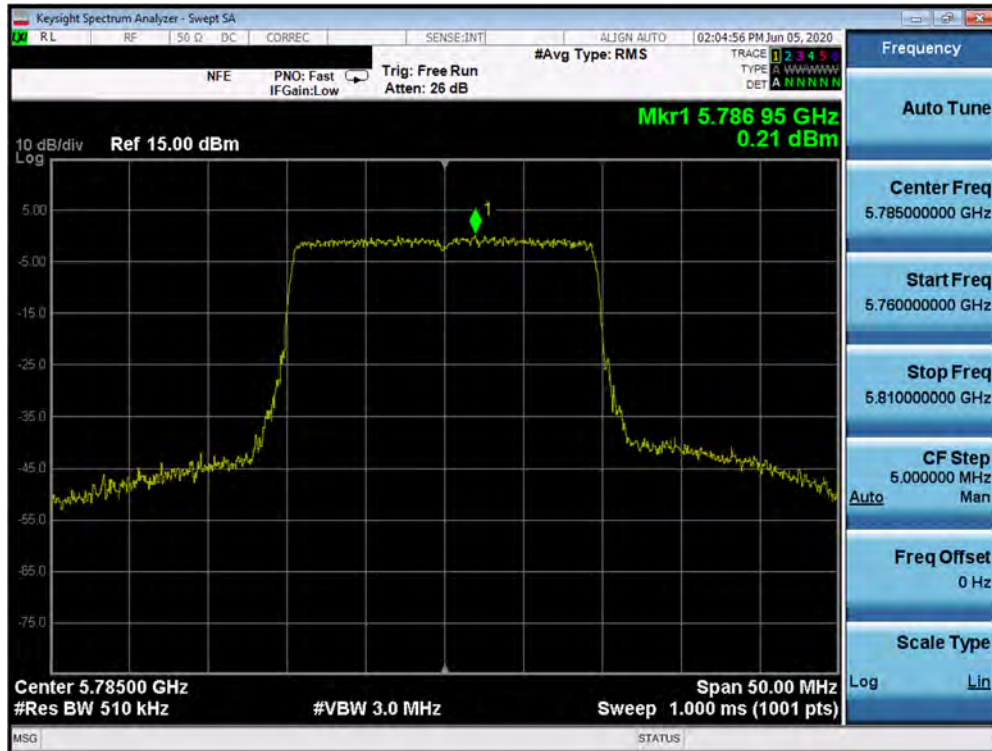


Plot 7-183. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

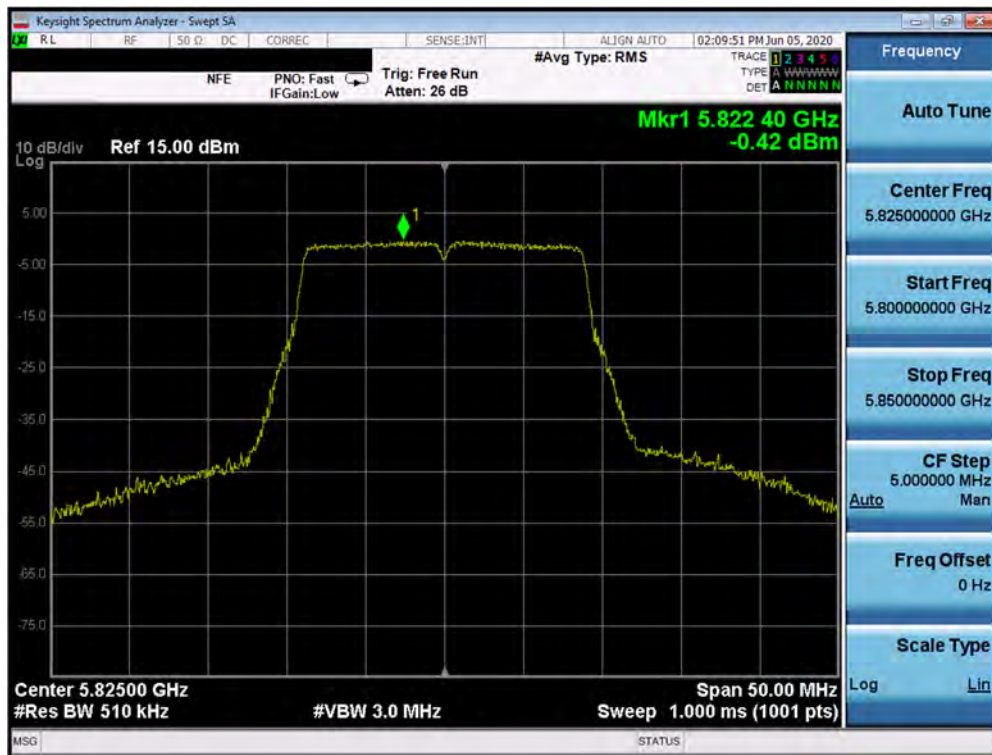


Plot 7-184. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 129 of 227                 |

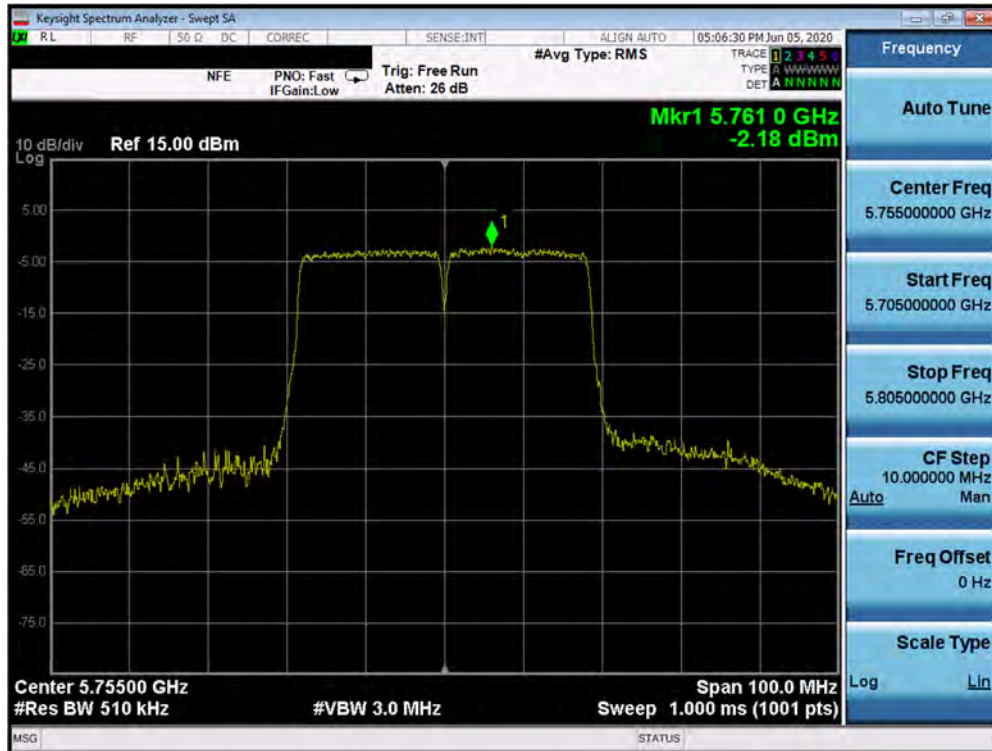


Plot 7-185. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)

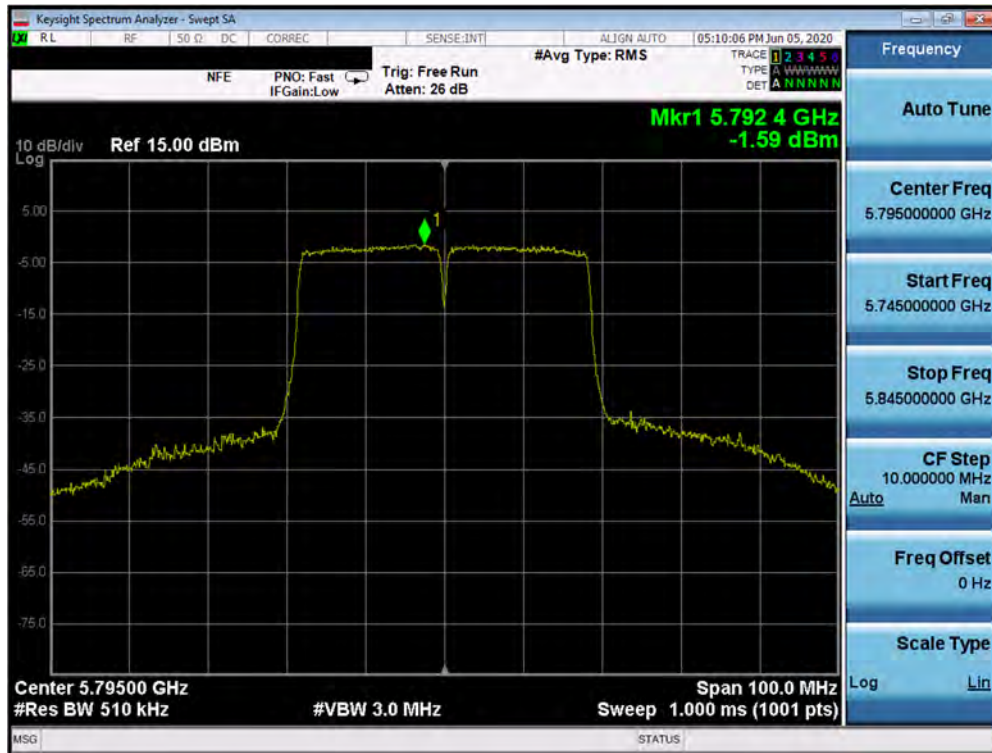


Plot 7-186. Power Spectral Density Plot SISO ANT1 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 130 of 227                 |

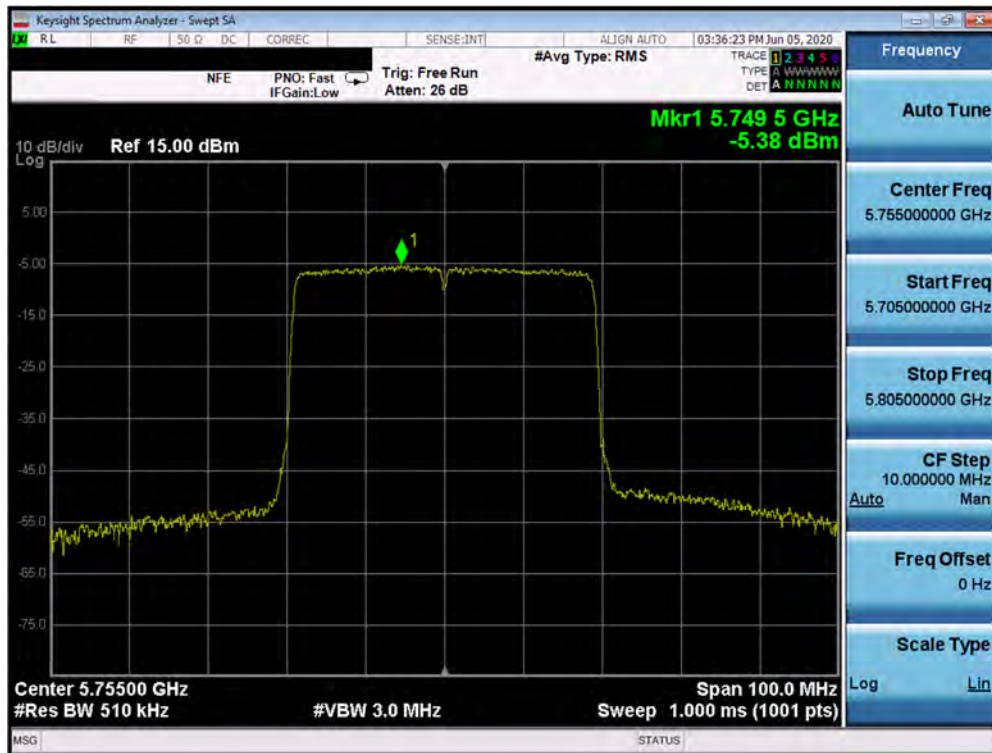


Plot 7-187. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

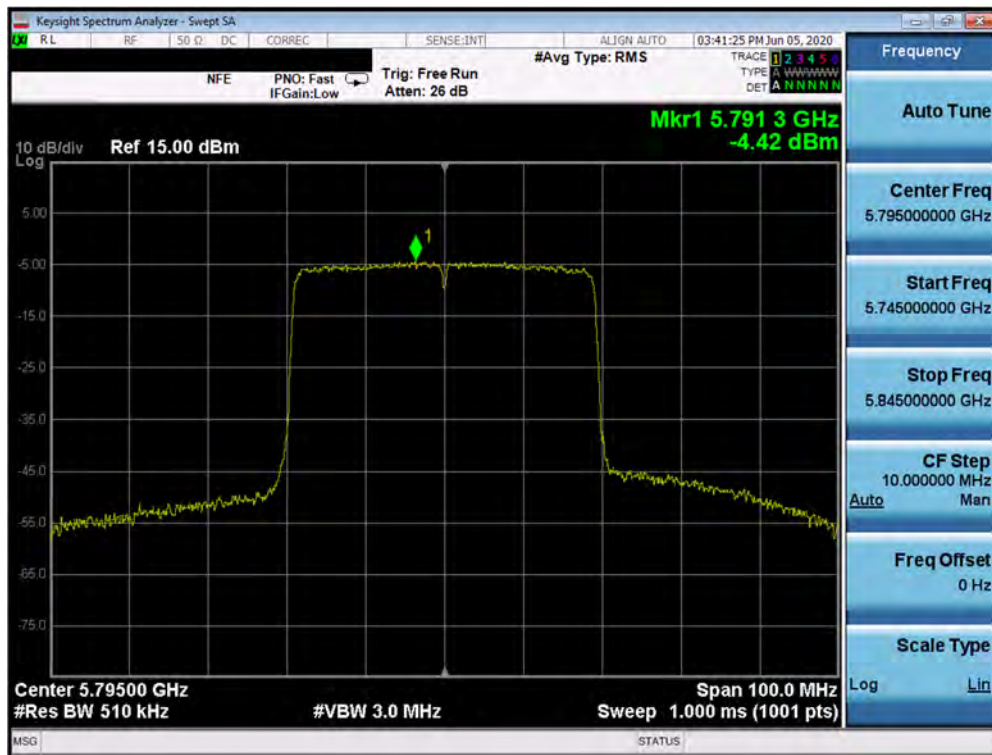


Plot 7-188. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 131 of 227                 |

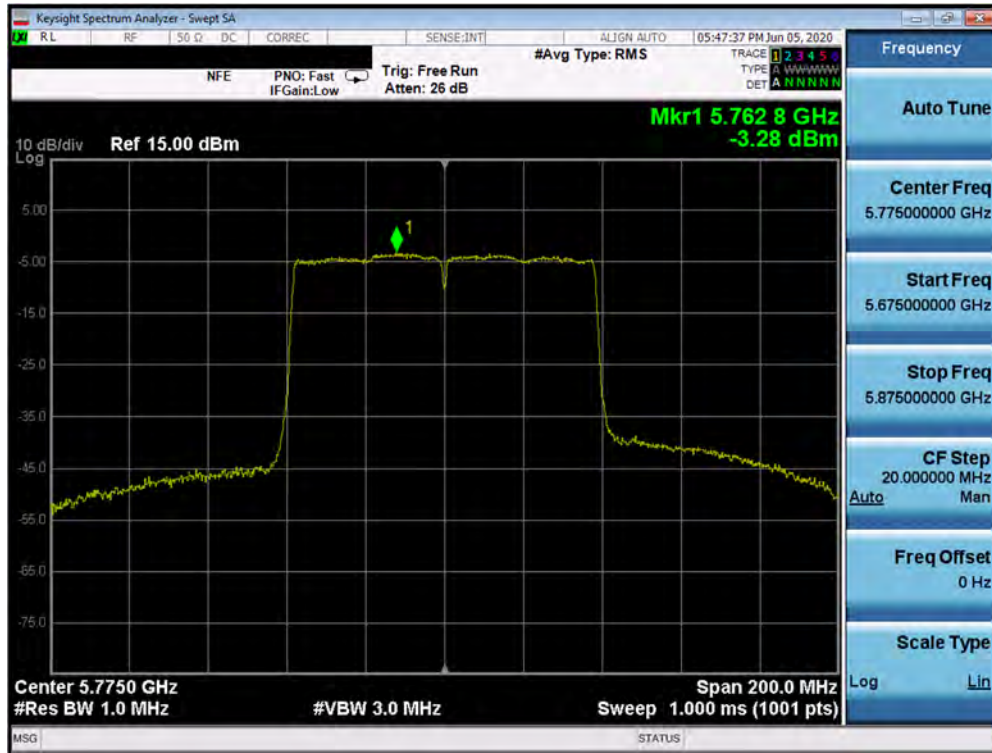


Plot 7-189. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)



Plot 7-190. Power Spectral Density Plot SISO ANT1 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

|                                         |                                        |                                       |  |                                 |
|-----------------------------------------|----------------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN981U                      | PCTEST<br>Proud to be part of  element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020          | EUT Type:<br>Portable Handset         |  | Page 132 of 227                 |



Plot 7-191. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)



Plot 7-192. Power Spectral Density Plot SISO ANT1 (80MHz BW 802.11ax (UNII Band 3) – Ch. 155)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 133 of 227                 |

## SISO Antenna-2 Power Spectral Density Measurements

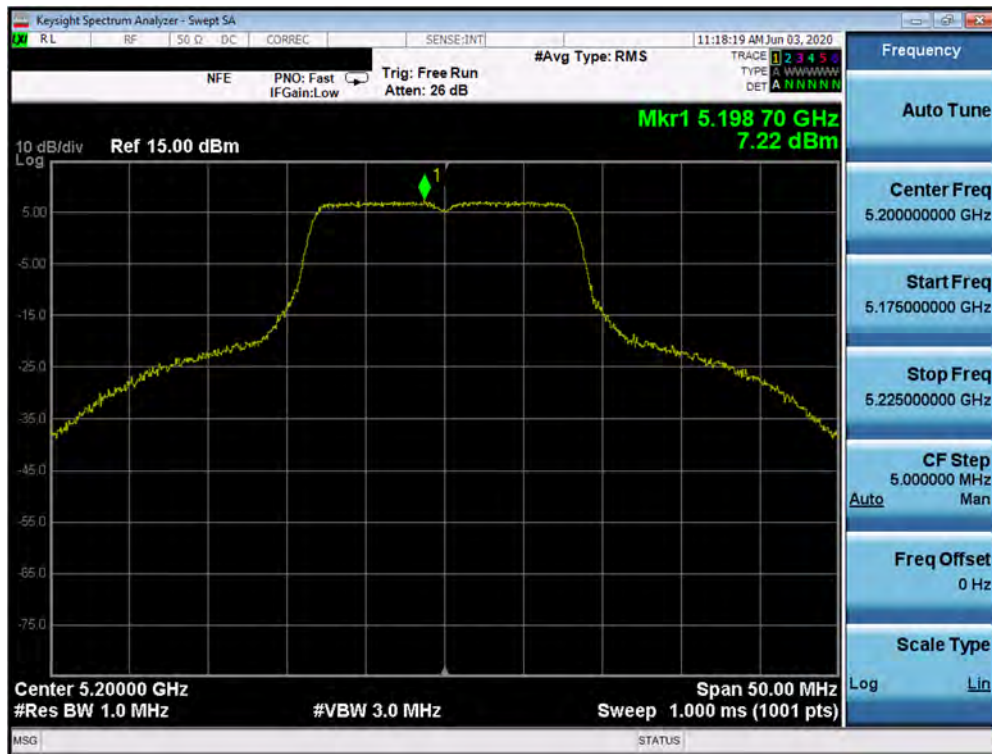
|         | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|---------|-----------------|-------------|-------------|------------------|------------------------------|-----------------------------|-------------|
| Band 1  | 5180            | 36          | a           | 6                | 6.33                         | 11.0                        | -4.67       |
|         | 5200            | 40          | a           | 6                | 7.22                         | 11.0                        | -3.78       |
|         | 5240            | 48          | a           | 6                | 7.41                         | 11.0                        | -3.59       |
|         | 5180            | 36          | n (20MHz)   | 6.5/7.2 (MCS0)   | 7.82                         | 11.0                        | -3.18       |
|         | 5200            | 40          | n (20MHz)   | 6.5/7.2 (MCS0)   | 6.80                         | 11.0                        | -4.20       |
|         | 5240            | 48          | n (20MHz)   | 6.5/7.2 (MCS0)   | 6.57                         | 11.0                        | -4.43       |
|         | 5180            | 36          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 4.48                         | 11.0                        | -6.52       |
|         | 5200            | 40          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 4.27                         | 11.0                        | -6.73       |
|         | 5240            | 48          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 4.30                         | 11.0                        | -6.70       |
|         | 5190            | 38          | n (40MHz)   | 13.5/15 (MCS0)   | 3.71                         | 11.0                        | -7.29       |
|         | 5230            | 46          | n (40MHz)   | 13.5/15 (MCS0)   | 2.52                         | 11.0                        | -8.48       |
|         | 5190            | 38          | ax (40MHz)  | 13.5/15 (MCS0)   | -0.99                        | 11.0                        | -11.99      |
|         | 5230            | 46          | ax (40MHz)  | 13.5/15 (MCS0)   | -1.28                        | 11.0                        | -12.28      |
|         | 5210            | 42          | ac (80MHz)  | 29.3/32.5 (MCS0) | -0.61                        | 11.0                        | -11.61      |
|         | 5210            | 42          | ax (80MHz)  | 29.3/32.5 (MCS0) | -3.87                        | 11.0                        | -14.87      |
| Band 2A | 5260            | 52          | a           | 6                | 6.88                         | 11.0                        | -4.12       |
|         | 5280            | 56          | a           | 6                | 6.70                         | 11.0                        | -4.30       |
|         | 5320            | 64          | a           | 6                | 5.62                         | 11.0                        | -5.38       |
|         | 5260            | 52          | n (20MHz)   | 6.5/7.2 (MCS0)   | 6.38                         | 11.0                        | -4.62       |
|         | 5280            | 56          | n (20MHz)   | 6.5/7.2 (MCS0)   | 6.43                         | 11.0                        | -4.57       |
|         | 5320            | 64          | n (20MHz)   | 6.5/7.2 (MCS0)   | 7.32                         | 11.0                        | -3.68       |
|         | 5260            | 52          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 3.91                         | 11.0                        | -7.09       |
|         | 5280            | 56          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 3.87                         | 11.0                        | -7.13       |
|         | 5320            | 64          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 4.58                         | 11.0                        | -6.42       |
|         | 5270            | 54          | n (40MHz)   | 13.5/15 (MCS0)   | 2.30                         | 11.0                        | -8.70       |
|         | 5310            | 62          | n (40MHz)   | 13.5/15 (MCS0)   | 2.07                         | 11.0                        | -8.93       |
|         | 5270            | 54          | ax (40MHz)  | 13.5/15 (MCS0)   | -1.10                        | 11.0                        | -12.10      |
|         | 5310            | 62          | ax (40MHz)  | 13.5/15 (MCS0)   | -1.76                        | 11.0                        | -12.76      |
|         | 5290            | 58          | ac (80MHz)  | 29.3/32.5 (MCS0) | -1.86                        | 11.0                        | -12.86      |
|         | 5290            | 58          | ax (80MHz)  | 29.3/32.5 (MCS0) | -4.75                        | 11.0                        | -15.75      |
| Band 2C | 5500            | 100         | a           | 6                | 6.56                         | 11.0                        | -4.44       |
|         | 5600            | 120         | a           | 6                | 5.99                         | 11.0                        | -5.01       |
|         | 5720            | 144         | a           | 6                | 6.15                         | 11.0                        | -4.85       |
|         | 5500            | 100         | n (20MHz)   | 6.5/7.2 (MCS0)   | 7.11                         | 11.0                        | -3.89       |
|         | 5600            | 120         | n (20MHz)   | 6.5/7.2 (MCS0)   | 5.45                         | 11.0                        | -5.55       |
|         | 5720            | 144         | n (20MHz)   | 6.5/7.2 (MCS0)   | 5.82                         | 11.0                        | -5.18       |
|         | 5500            | 100         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 4.22                         | 11.0                        | -6.78       |
|         | 5600            | 120         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 3.63                         | 11.0                        | -7.37       |
|         | 5720            | 144         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 4.21                         | 11.0                        | -6.79       |
|         | 5510            | 102         | n (40MHz)   | 13.5/15 (MCS0)   | 3.04                         | 11.0                        | -7.96       |
|         | 5590            | 118         | n (40MHz)   | 13.5/15 (MCS0)   | 1.53                         | 11.0                        | -9.47       |
|         | 5710            | 142         | n (40MHz)   | 13.5/15 (MCS0)   | 1.56                         | 11.0                        | -9.44       |
|         | 5510            | 102         | ax (40MHz)  | 13.5/15 (MCS0)   | -1.11                        | 11.0                        | -12.11      |
|         | 5590            | 118         | ax (40MHz)  | 13.5/15 (MCS0)   | -1.04                        | 11.0                        | -12.04      |
|         | 5710            | 142         | ax (40MHz)  | 13.5/15 (MCS0)   | -1.12                        | 11.0                        | -12.12      |
|         | 5530            | 106         | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.49                        | 11.0                        | -13.49      |
|         | 5610            | 122         | ac (80MHz)  | 29.3/32.5 (MCS0) | -1.50                        | 11.0                        | -12.50      |
|         | 5690            | 138         | ac (80MHz)  | 29.3/32.5 (MCS0) | -5.27                        | 11.0                        | -16.27      |
|         | 5530            | 106         | ax (80MHz)  | 29.3/32.5 (MCS0) | -5.13                        | 11.0                        | -16.13      |
|         | 5610            | 122         | ax (80MHz)  | 29.3/32.5 (MCS0) | -5.43                        | 11.0                        | -16.43      |
|         | 5690            | 138         | ax (80MHz)  | 29.3/32.5 (MCS0) | -7.64                        | 11.0                        | -18.64      |

Table 7-23. Conducted Power Spectral Density Measurements SISO ANT2

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 134 of 227                 |

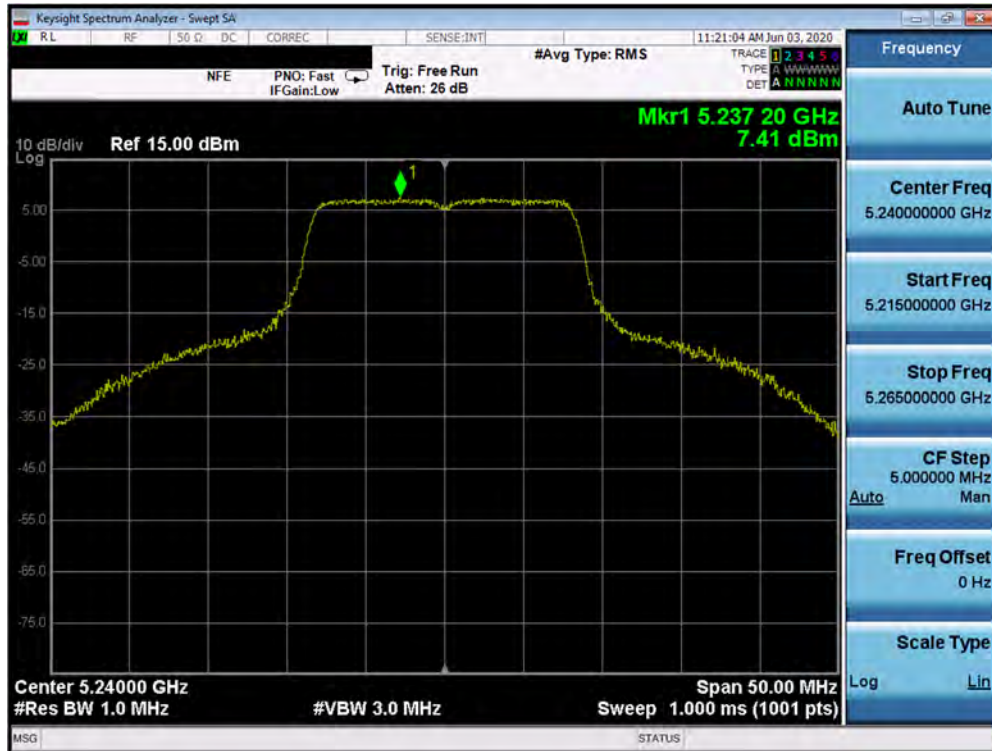


Plot 7-193. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 36)

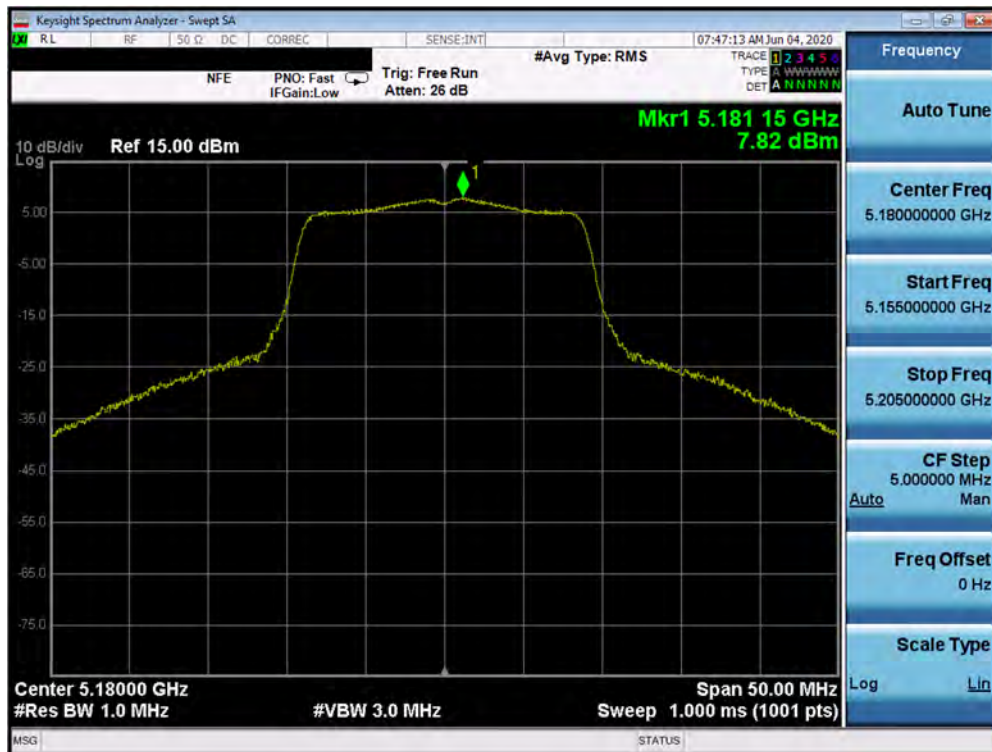


Plot 7-194. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 40)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 135 of 227                 |

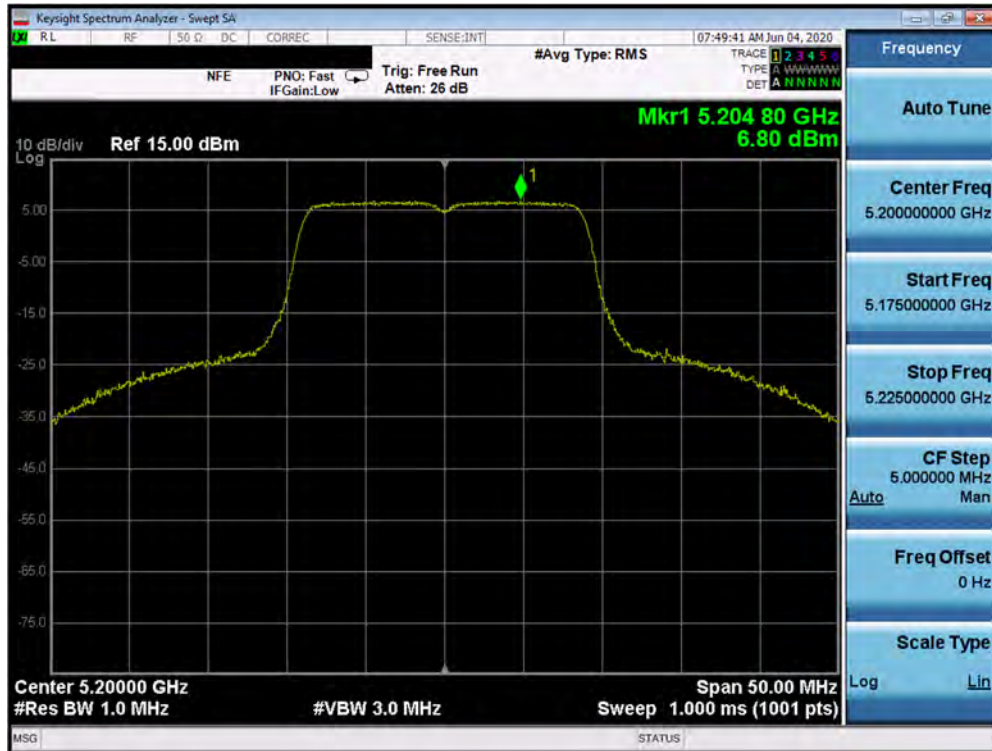


Plot 7-195. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 1) – Ch. 48)

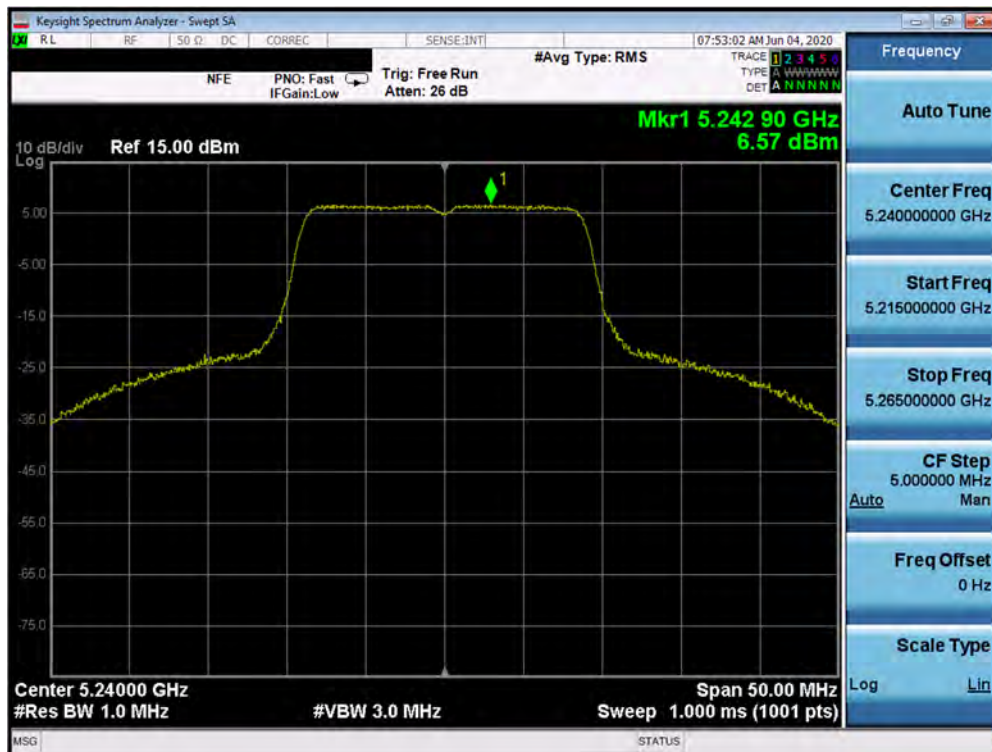


Plot 7-196. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 36)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 136 of 227                 |

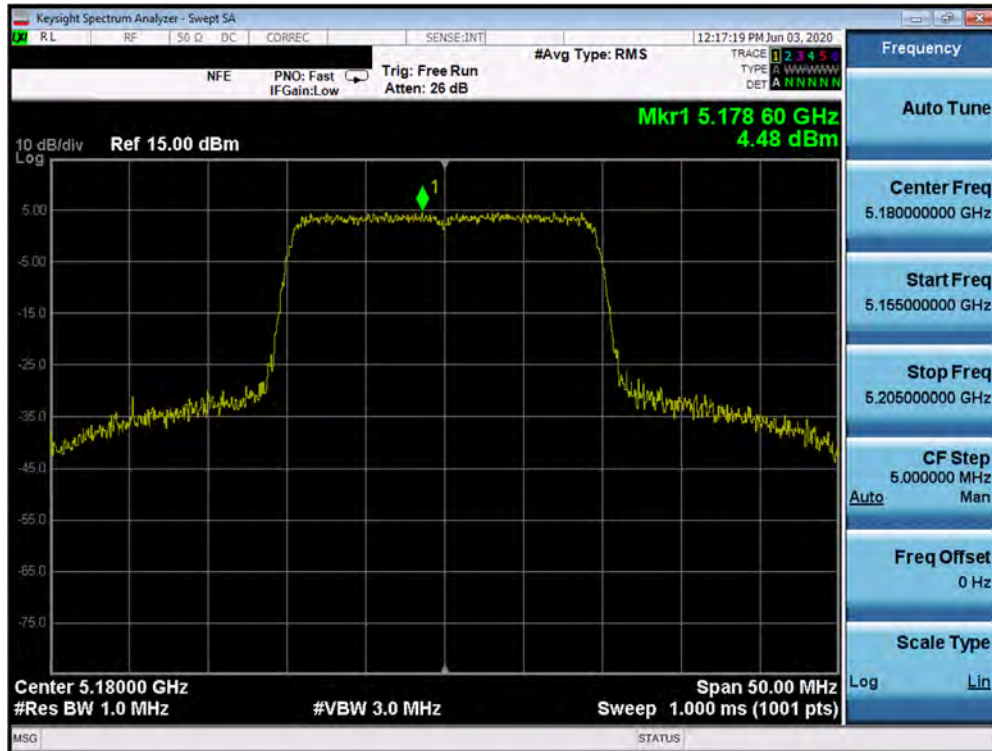


Plot 7-197. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 40)

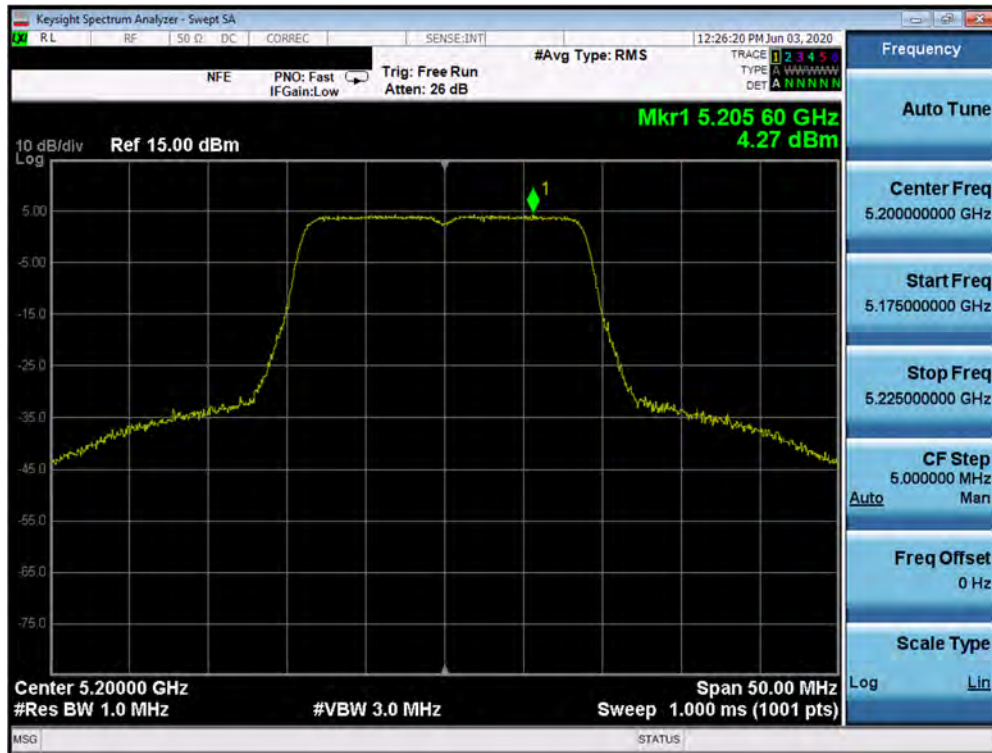


Plot 7-198. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 1) – Ch. 48)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 137 of 227                 |

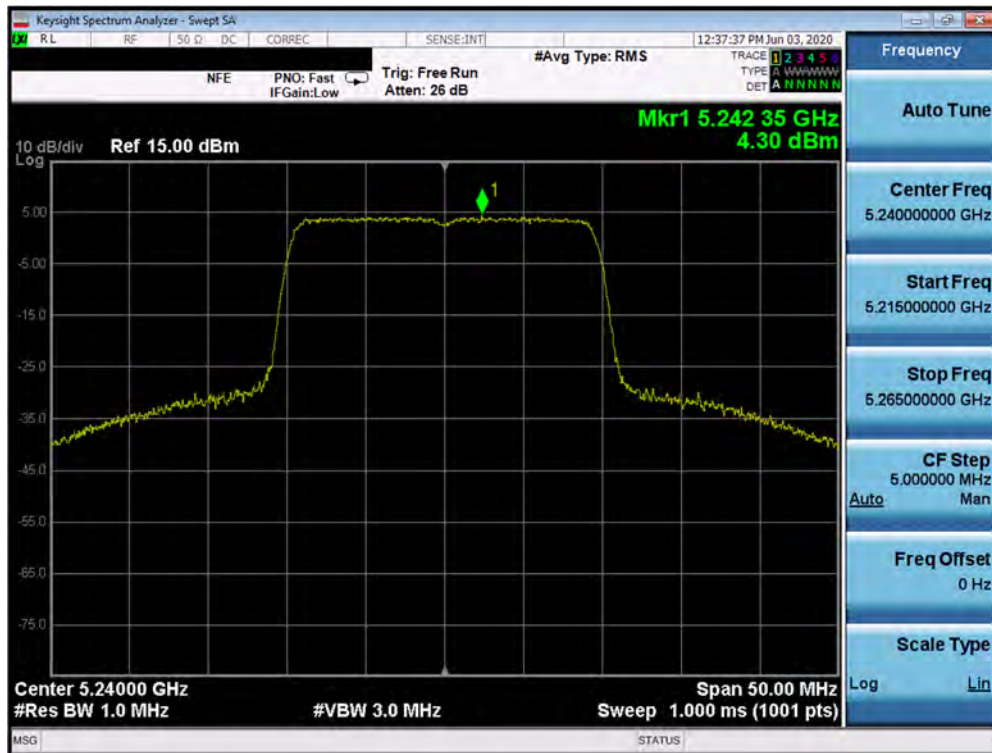


Plot 7-199. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 36)

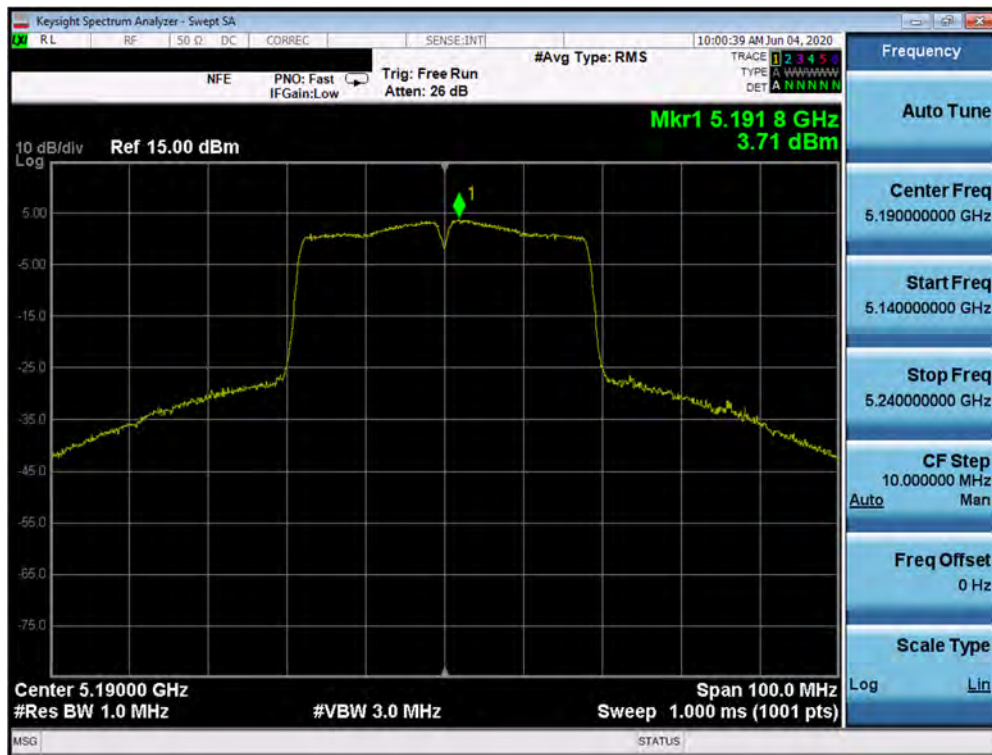


Plot 7-200. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 40)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 138 of 227                 |

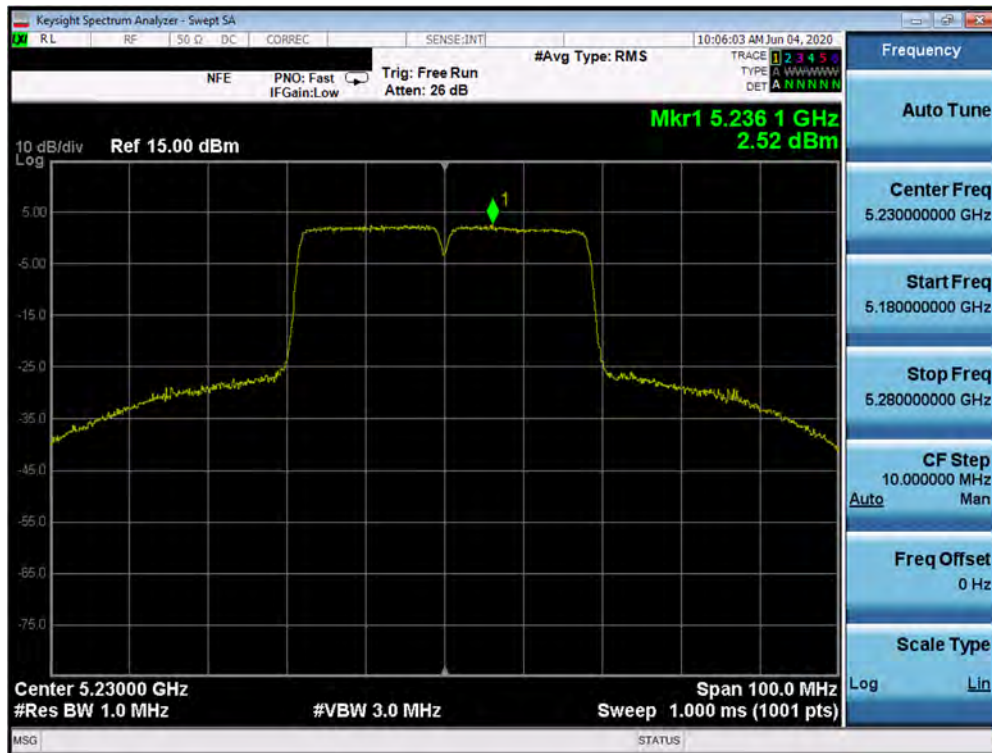


Plot 7-201. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 1) – Ch. 48)

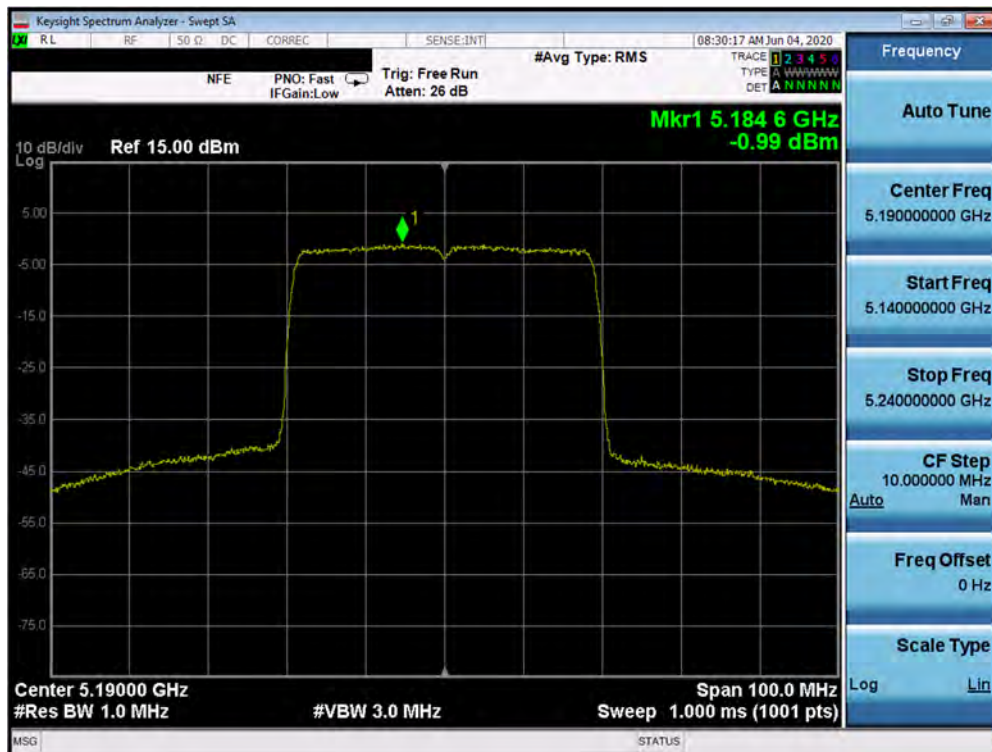


Plot 7-202. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 38)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 139 of 227                 |

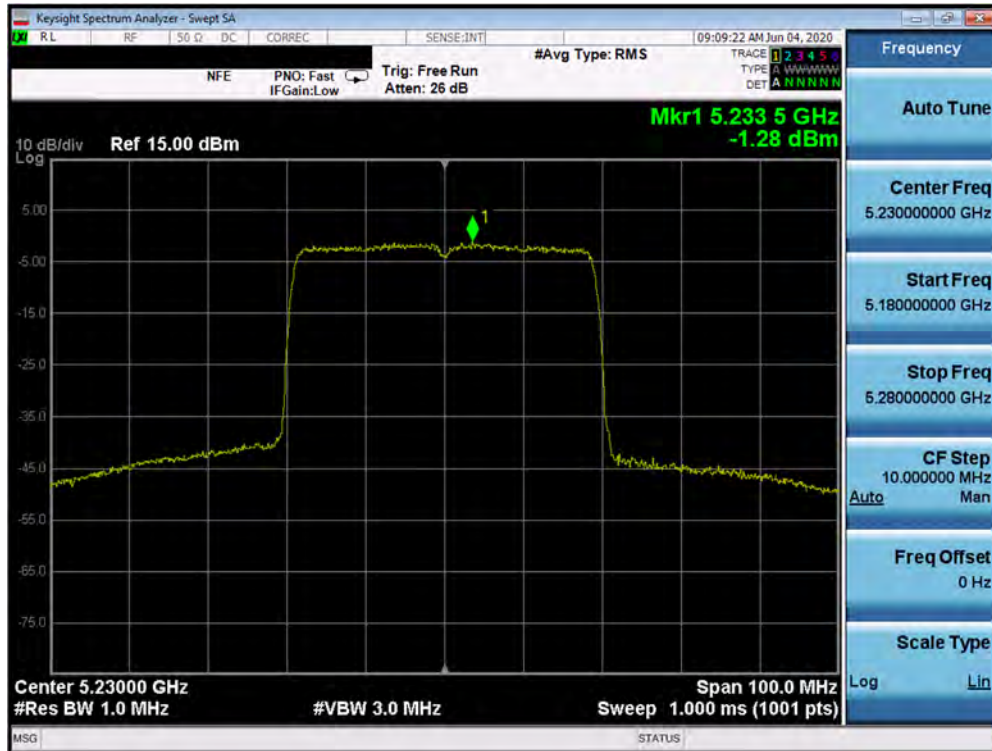


Plot 7-203. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 1) – Ch. 46)

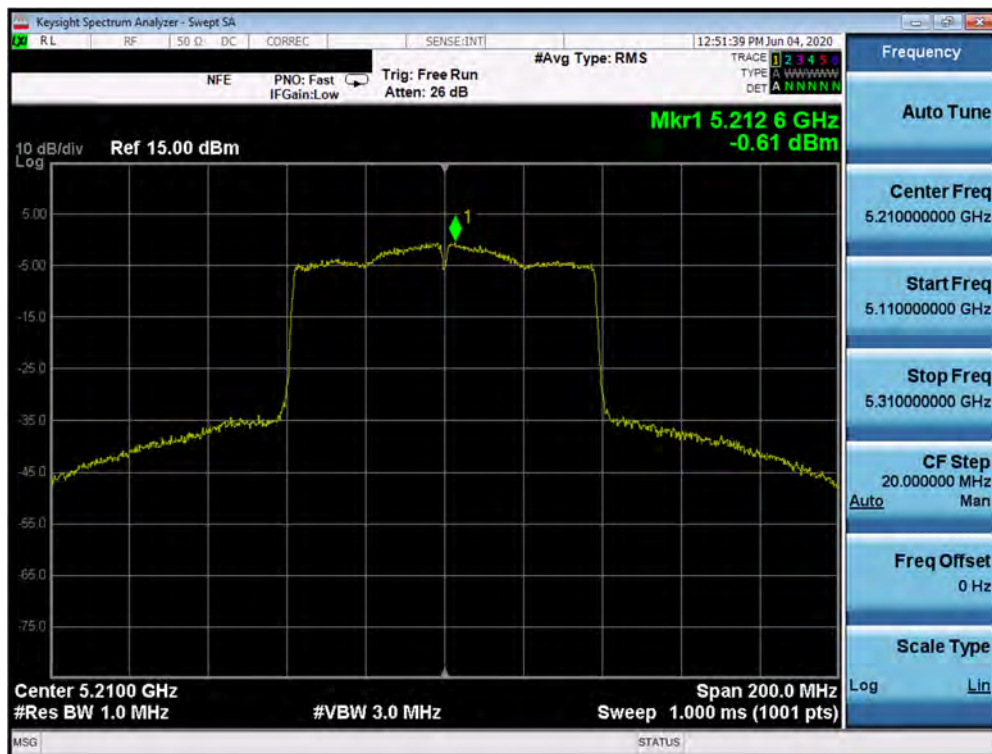


Plot 7-204. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) – Ch. 38)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 140 of 227                 |

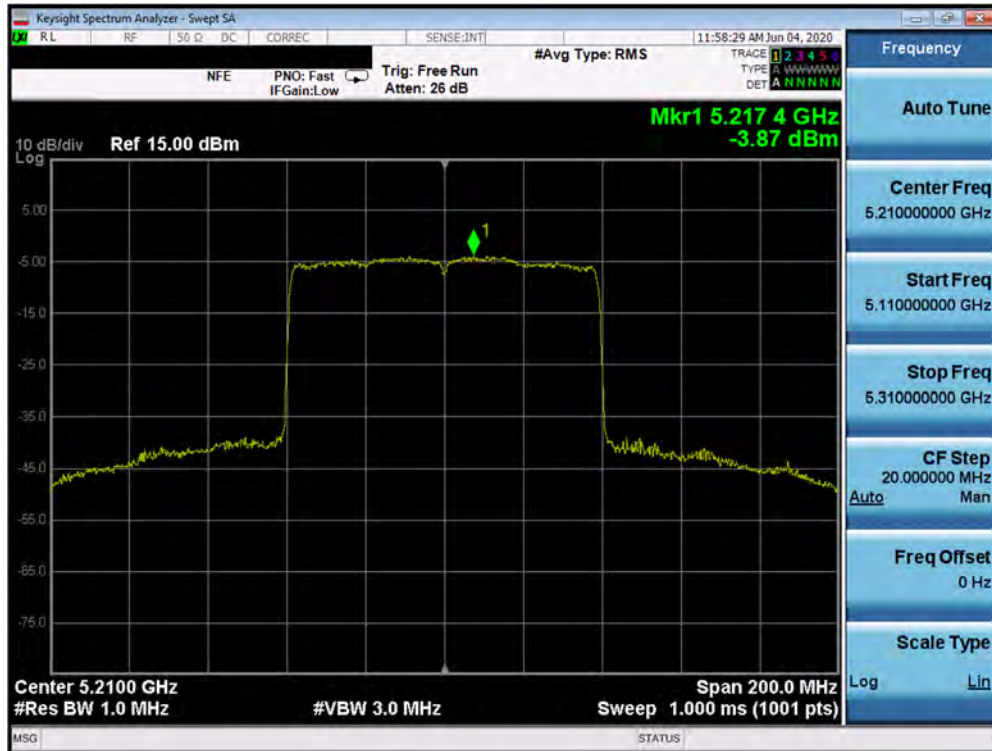


Plot 7-205. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 1) – Ch. 46)

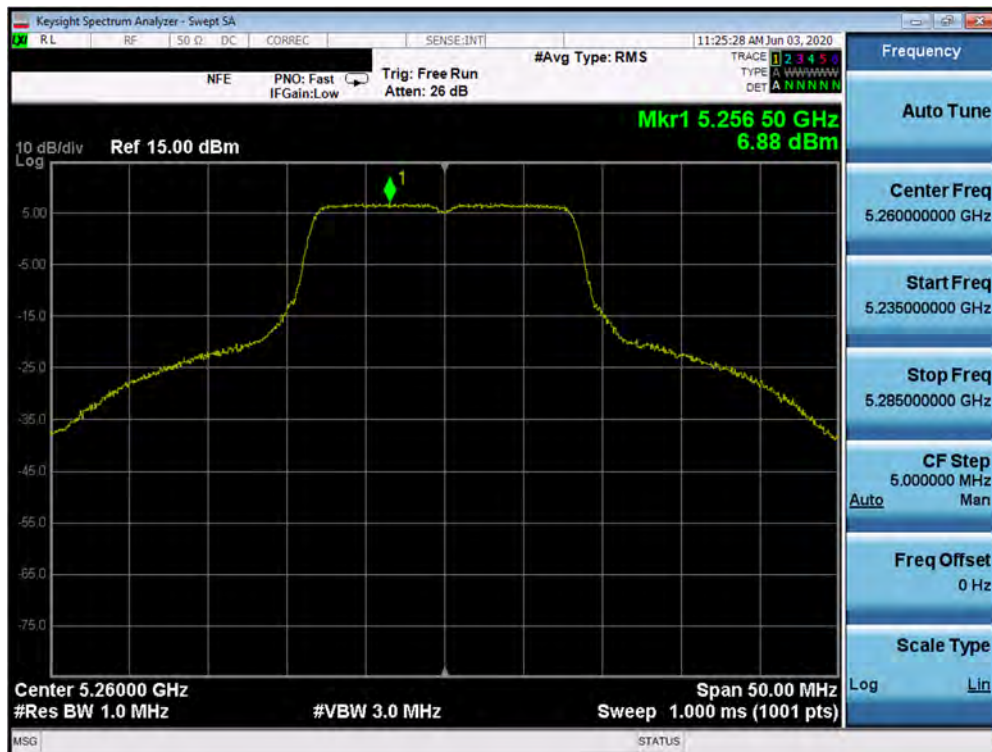


Plot 7-206. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 1) – Ch. 42)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 141 of 227                 |

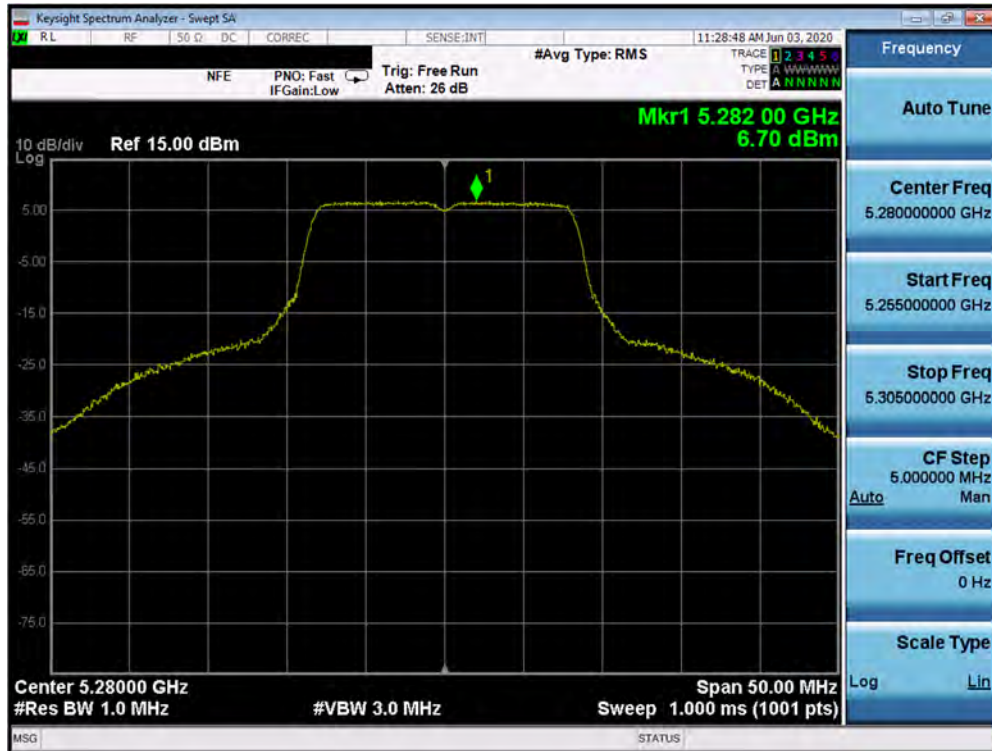


Plot 7-207. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 1) – Ch. 42)

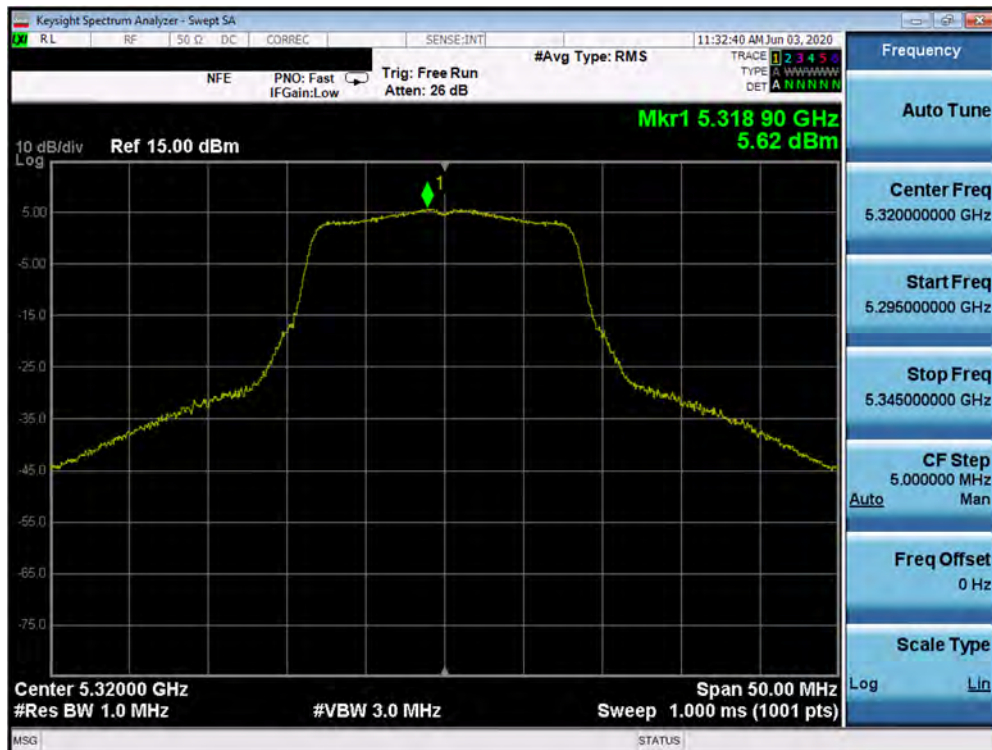


Plot 7-208. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 52)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 142 of 227                 |

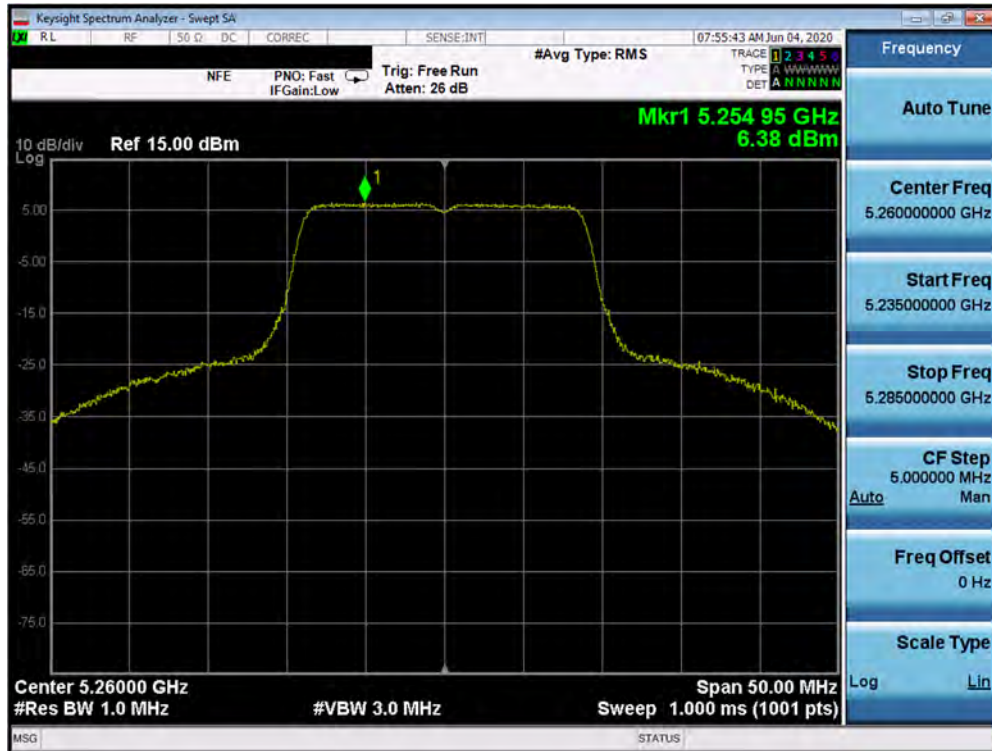


Plot 7-209. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 56)

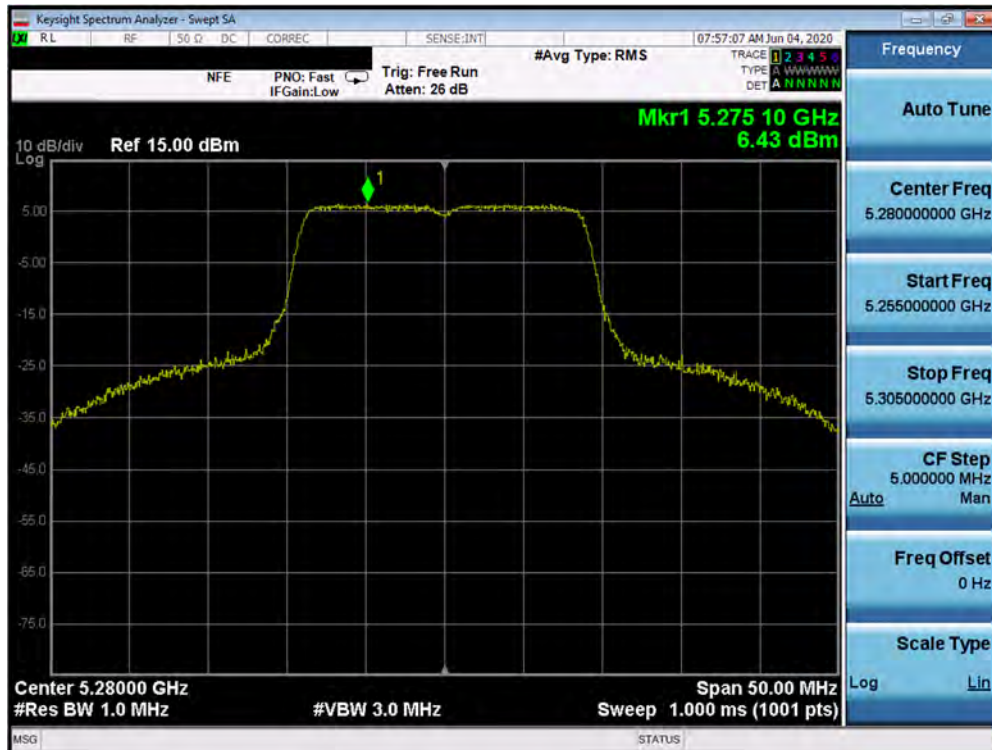


Plot 7-210. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2A) – Ch. 64)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 143 of 227                 |

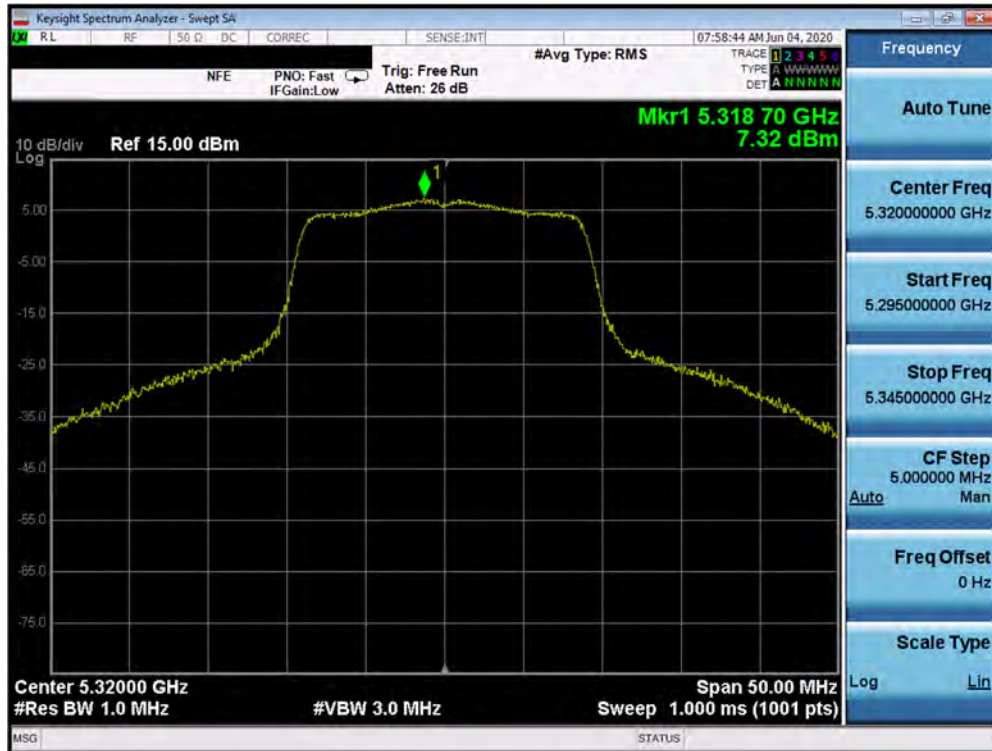


Plot 7-211. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 52)

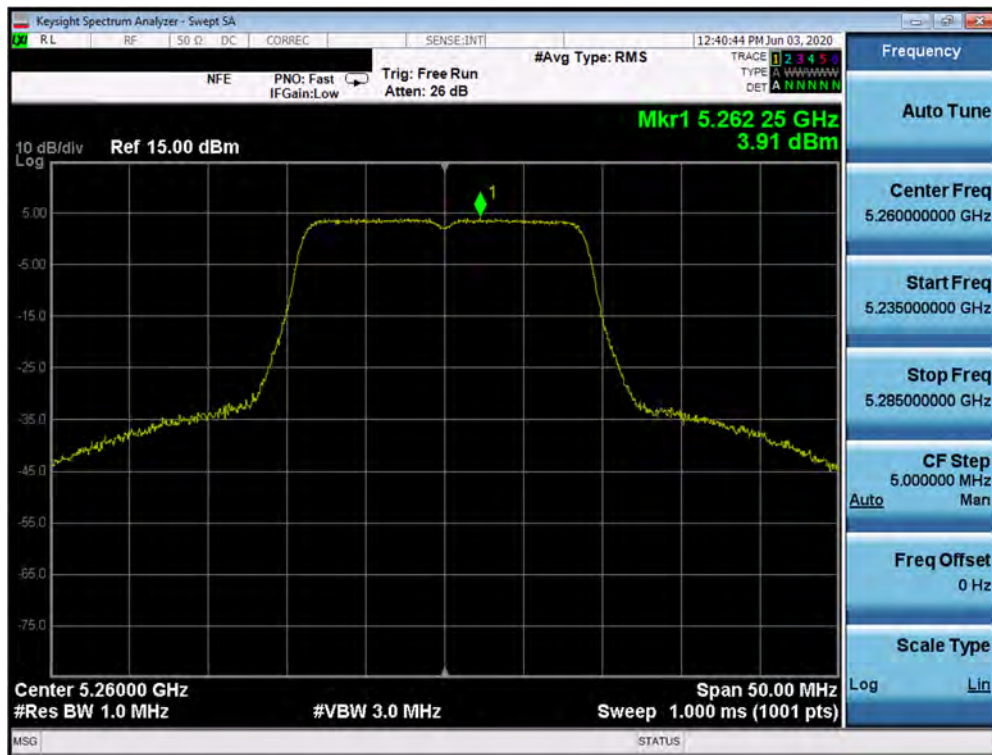


Plot 7-212. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 56)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 144 of 227                 |

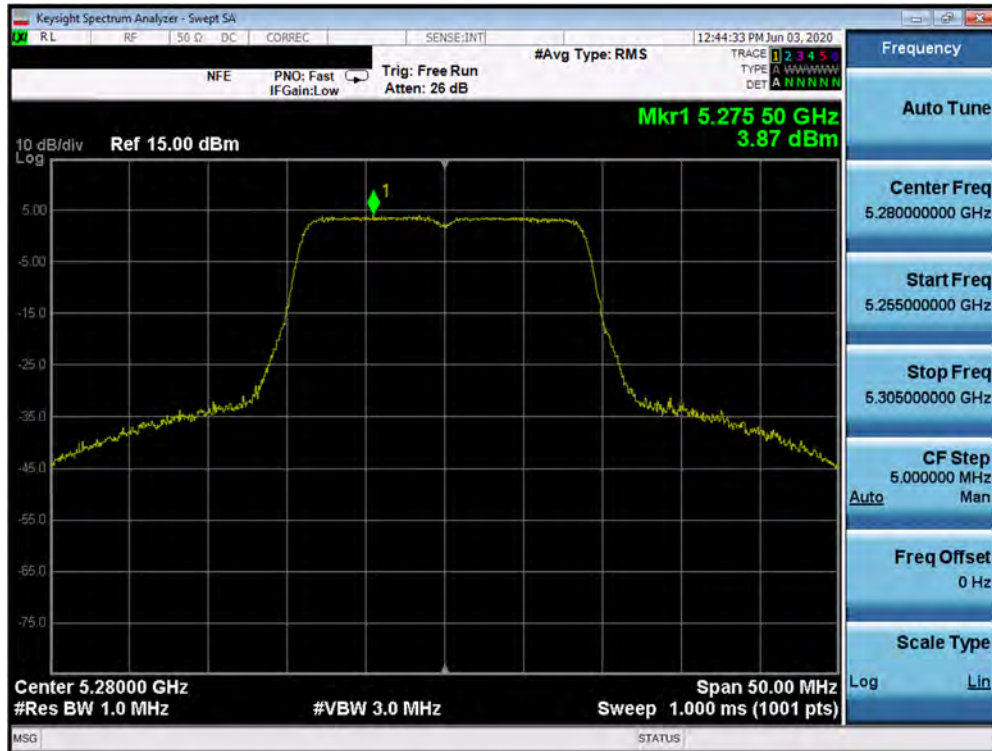


Plot 7-213. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2A) – Ch. 64)

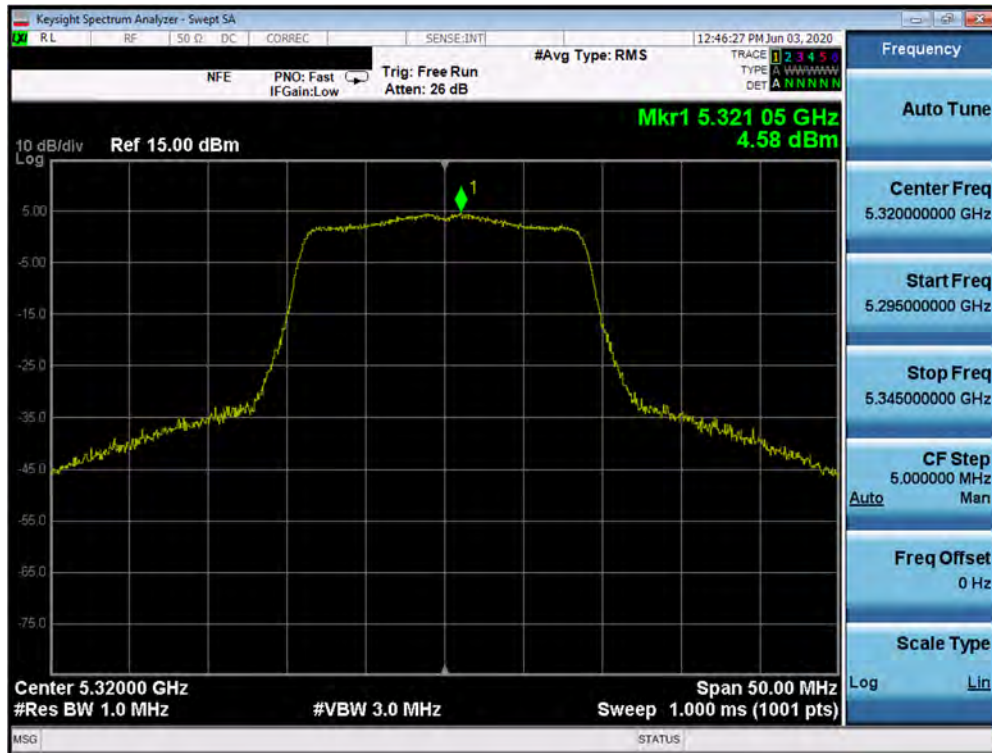


Plot 7-214. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 52)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 145 of 227                 |

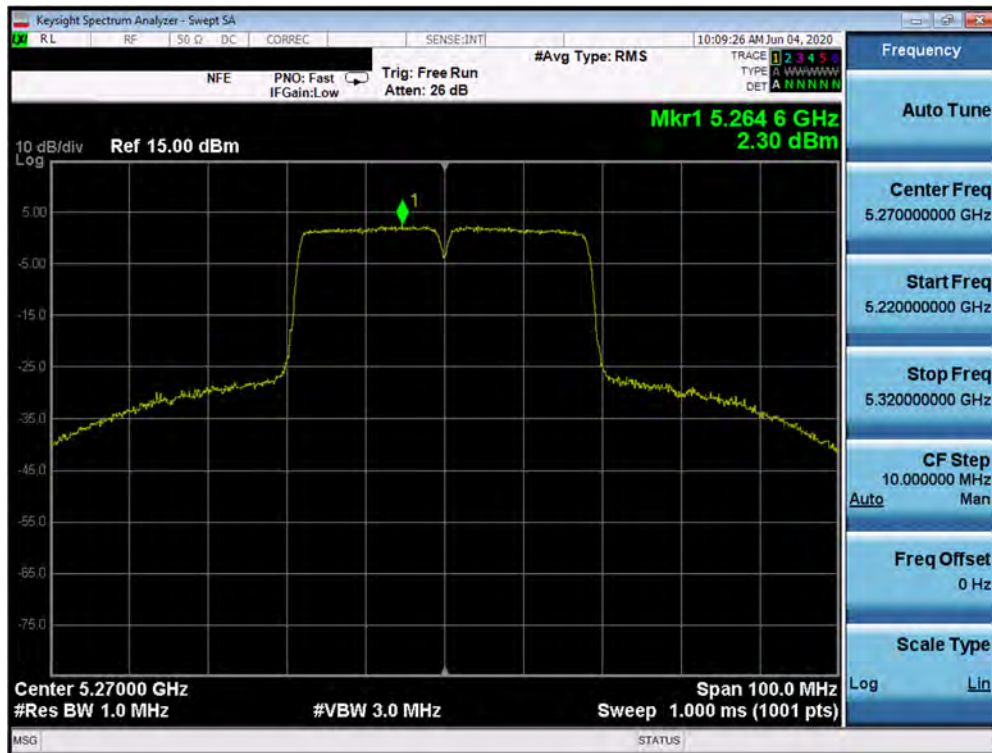


Plot 7-215. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 56)

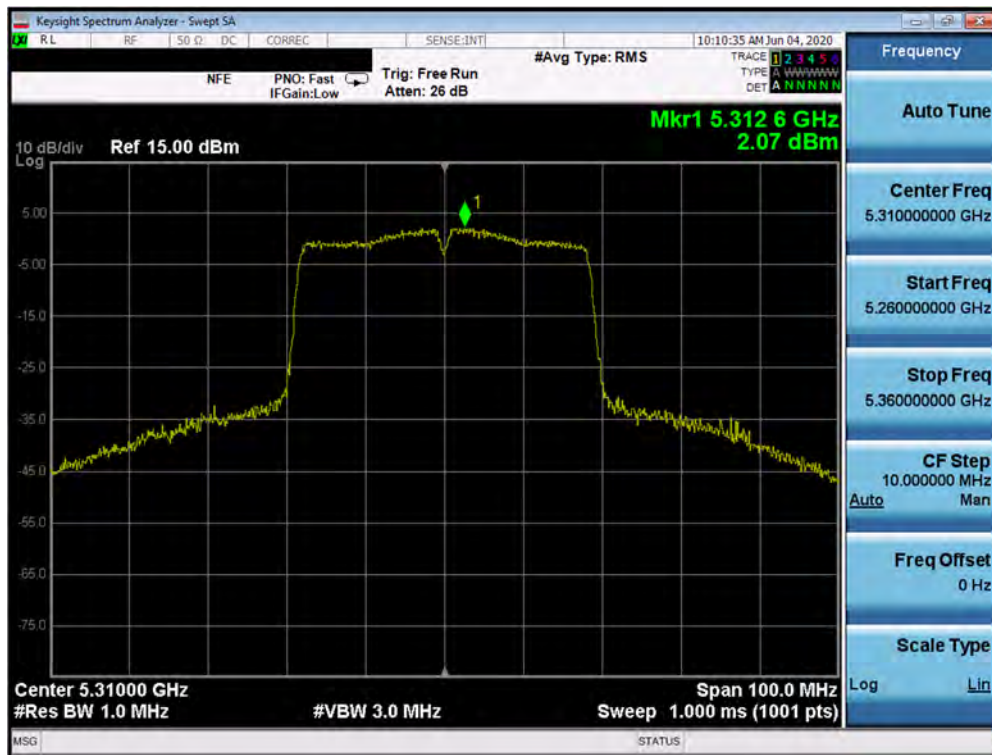


Plot 7-216. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2A) – Ch. 64)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 146 of 227                 |

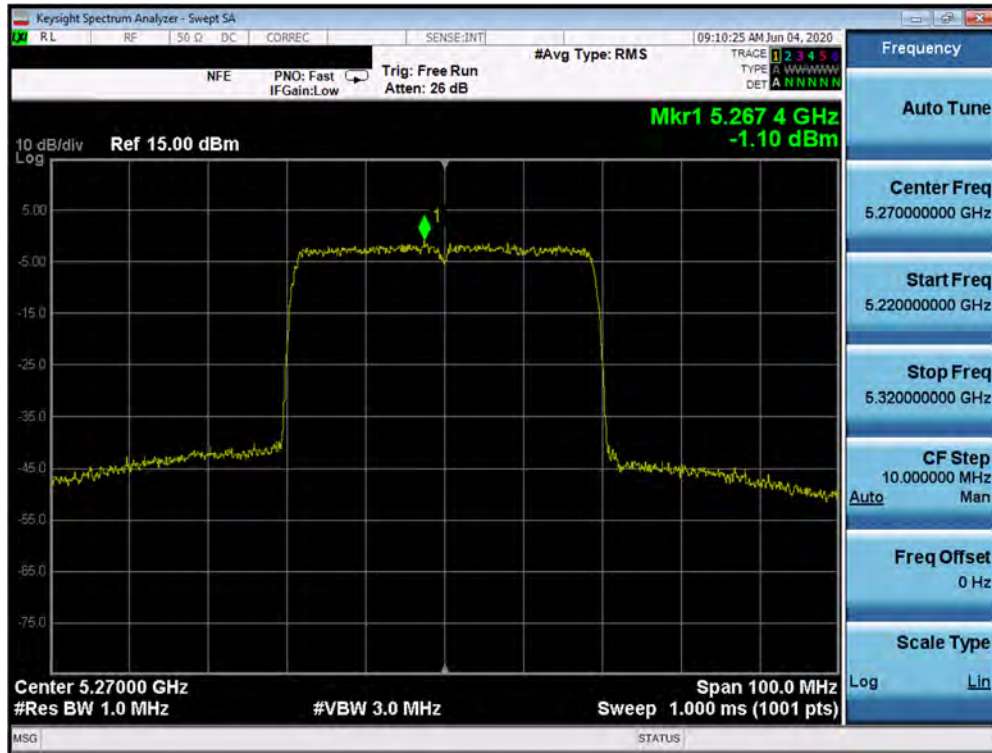


Plot 7-217. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 54)

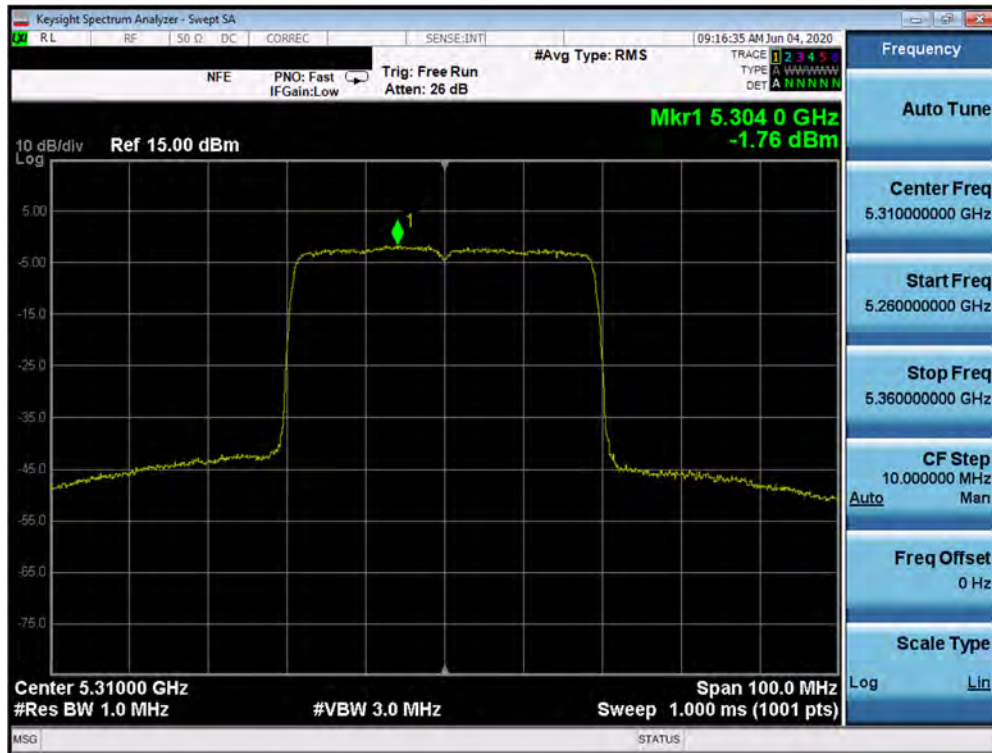


Plot 7-218. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2A) – Ch. 62)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 147 of 227                 |

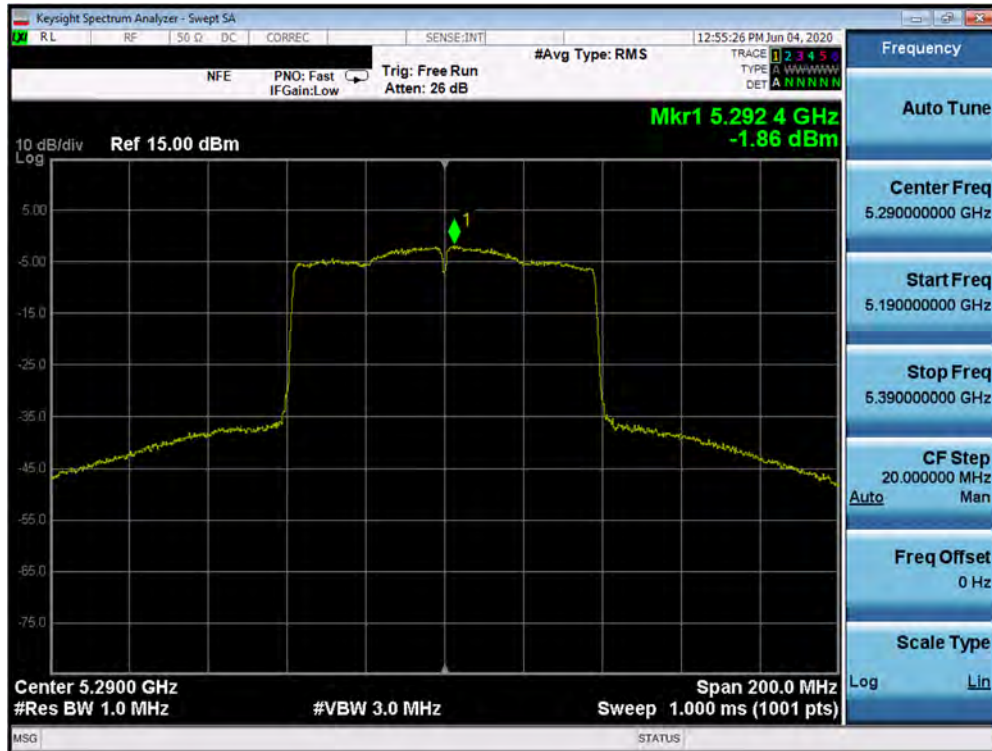


Plot 7-219. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 54)

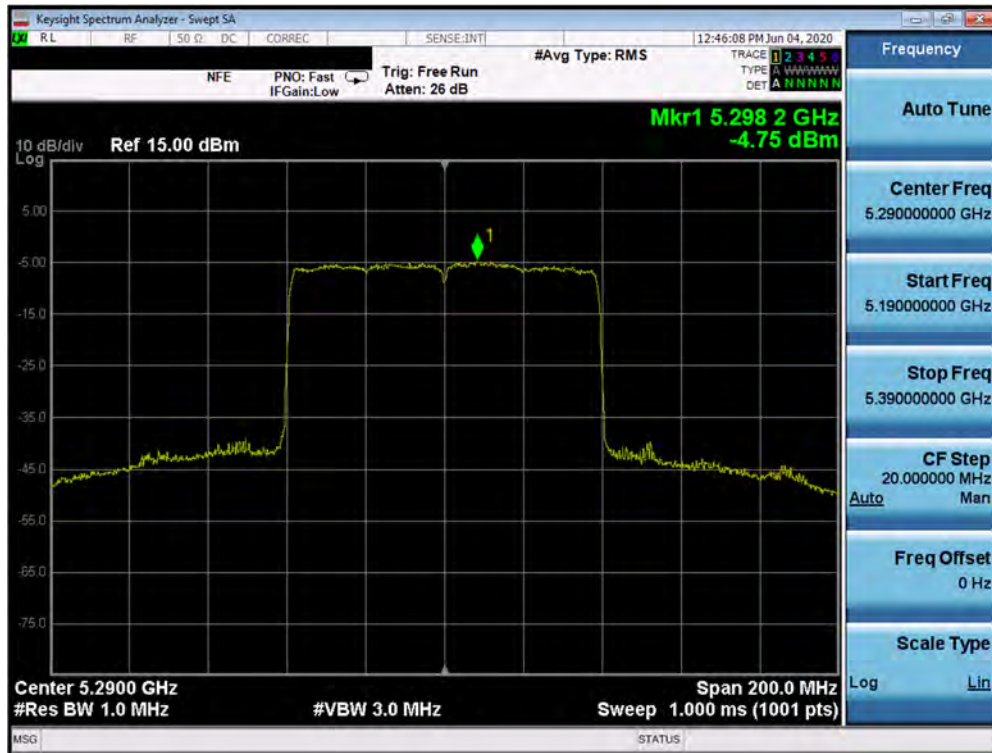


Plot 7-220. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2A) – Ch. 62)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 148 of 227                 |

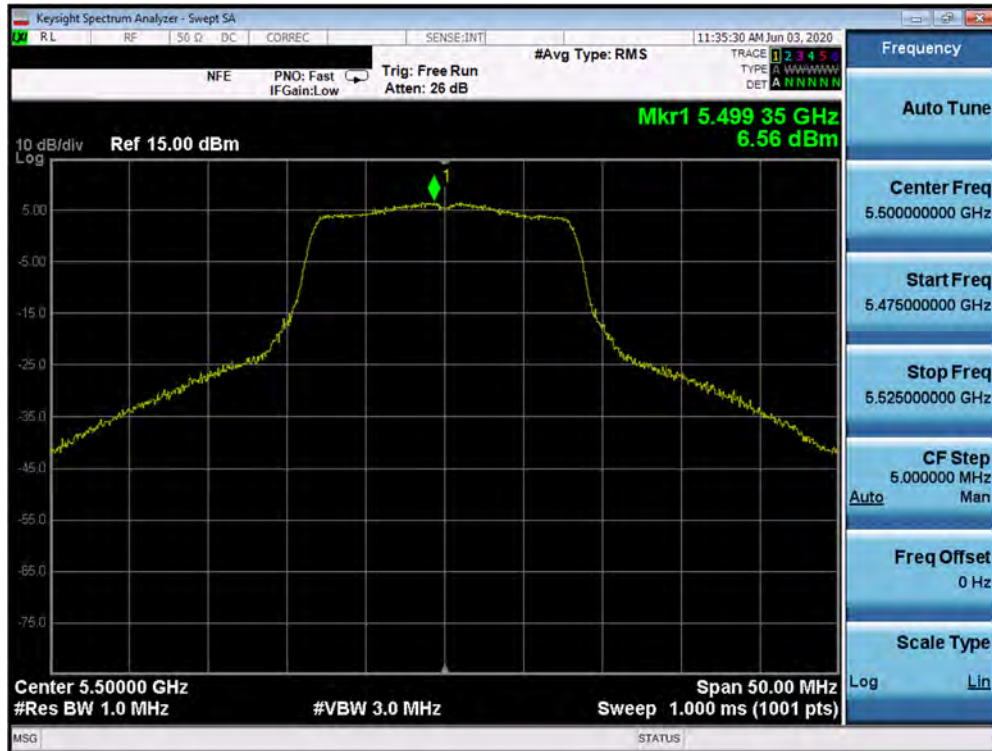


Plot 7-221. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2A) – Ch. 58)

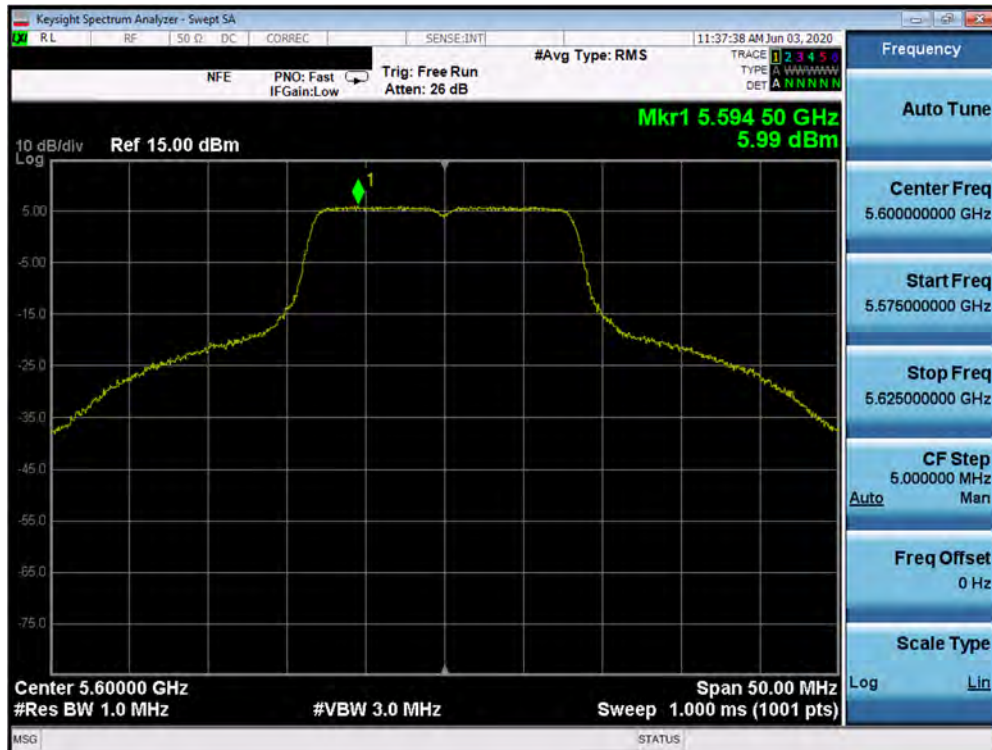


Plot 7-222. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2A) – Ch. 58)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 149 of 227                 |

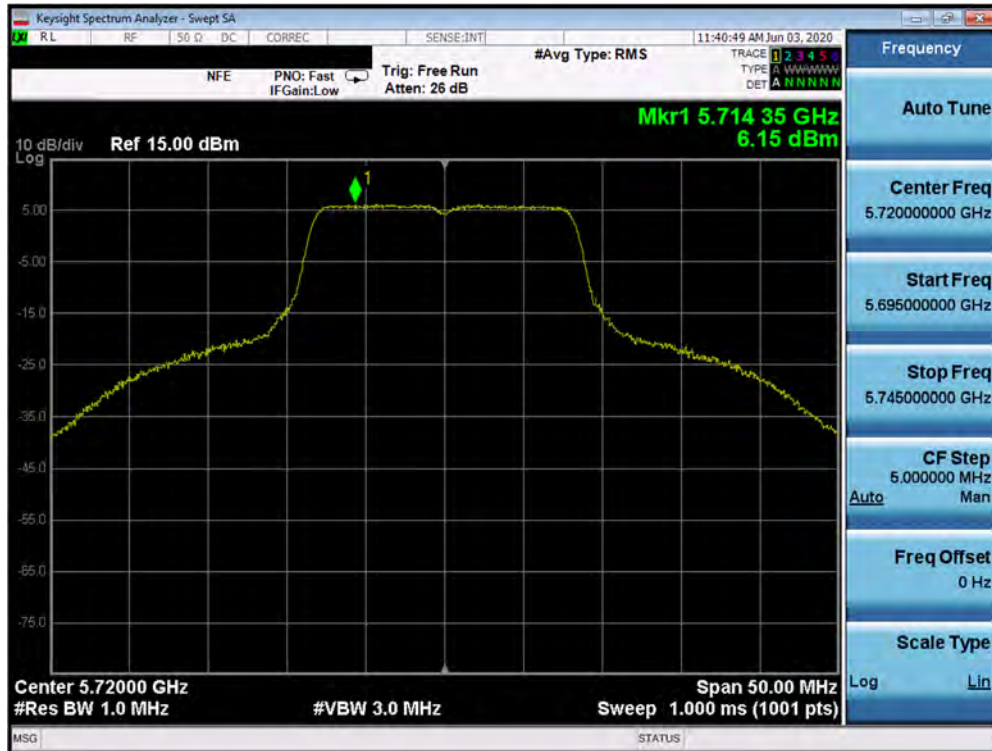


Plot 7-223. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 100)

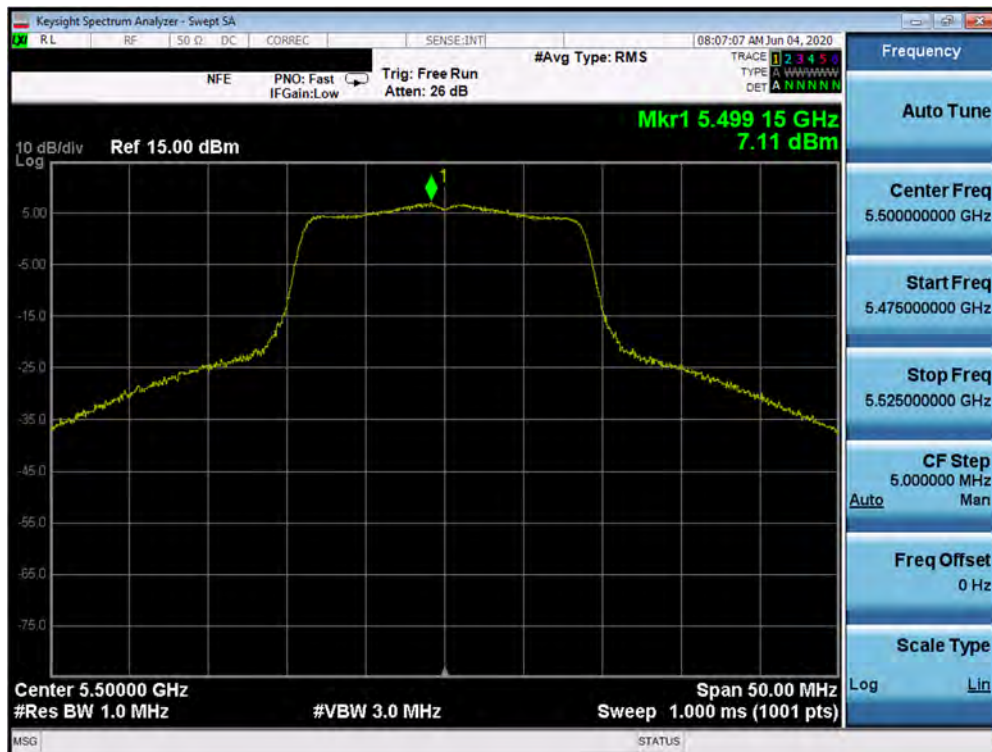


Plot 7-224. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 120)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 150 of 227                 |

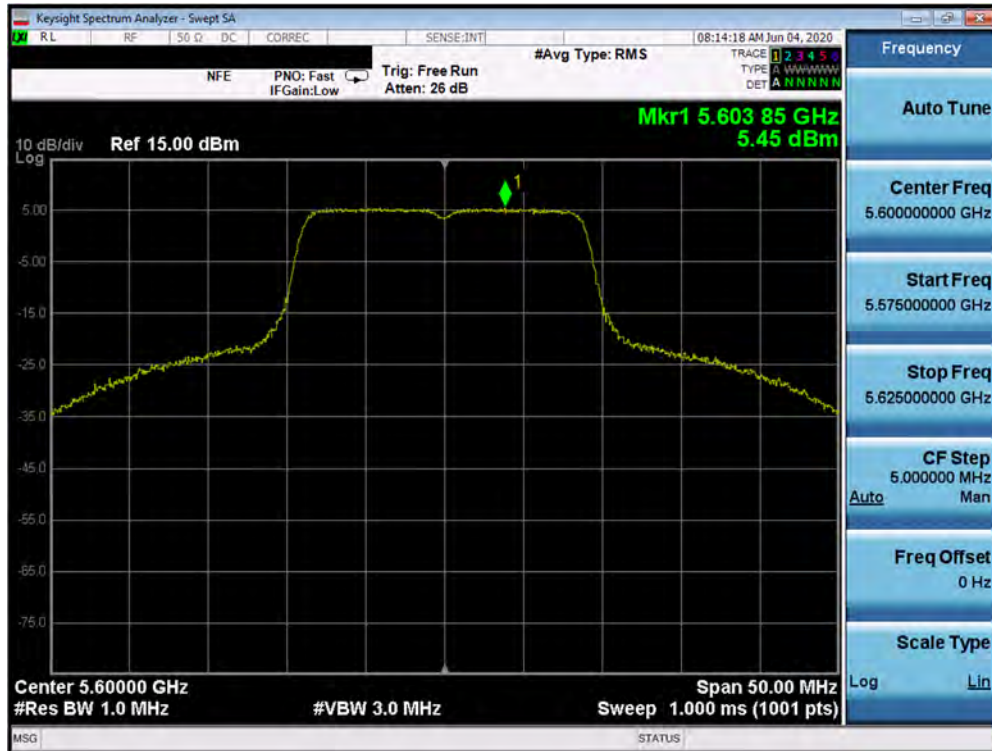


Plot 7-225. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 2C) – Ch. 144)

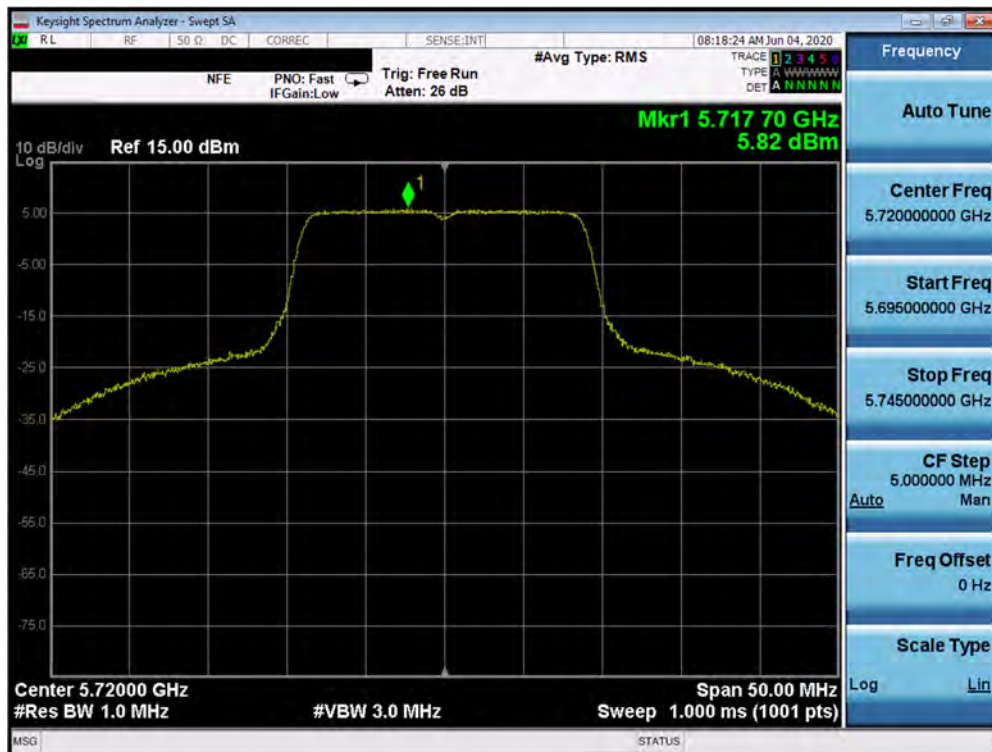


Plot 7-226. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 100)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 151 of 227                 |

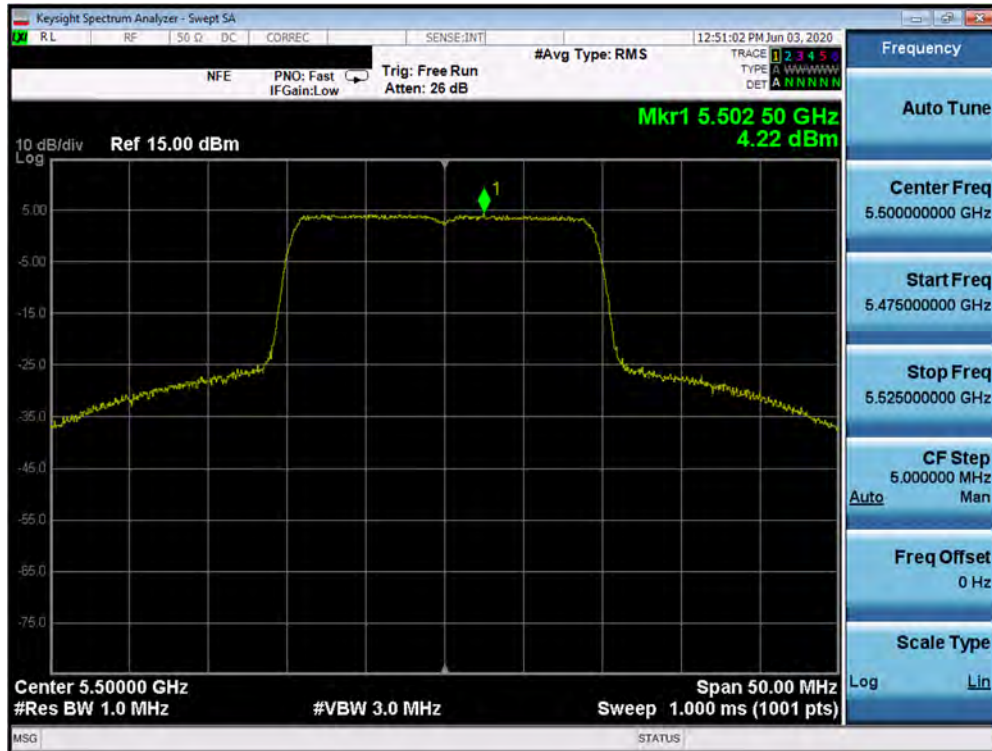


Plot 7-227. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 120)

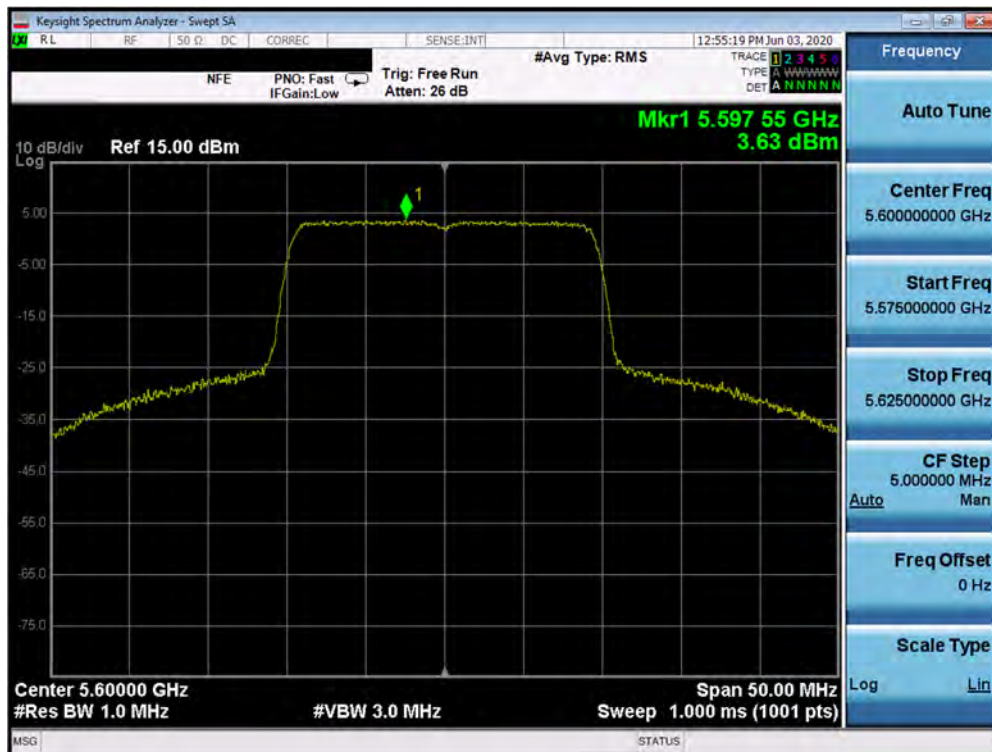


Plot 7-228. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 2C) – Ch. 144)

|                                         |                                                                                                                                                                                                              |                                       |                                                                                       |                                 |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                | EUT Type:<br>Portable Handset         |                                                                                       | Page 152 of 227                 |

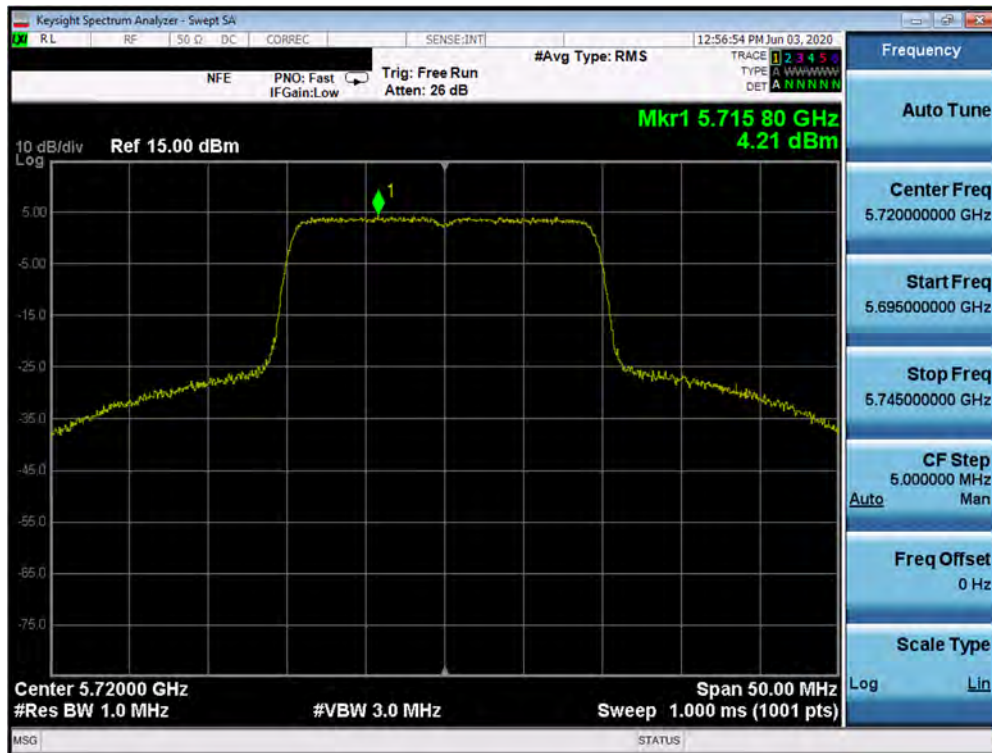


Plot 7-229. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 100)

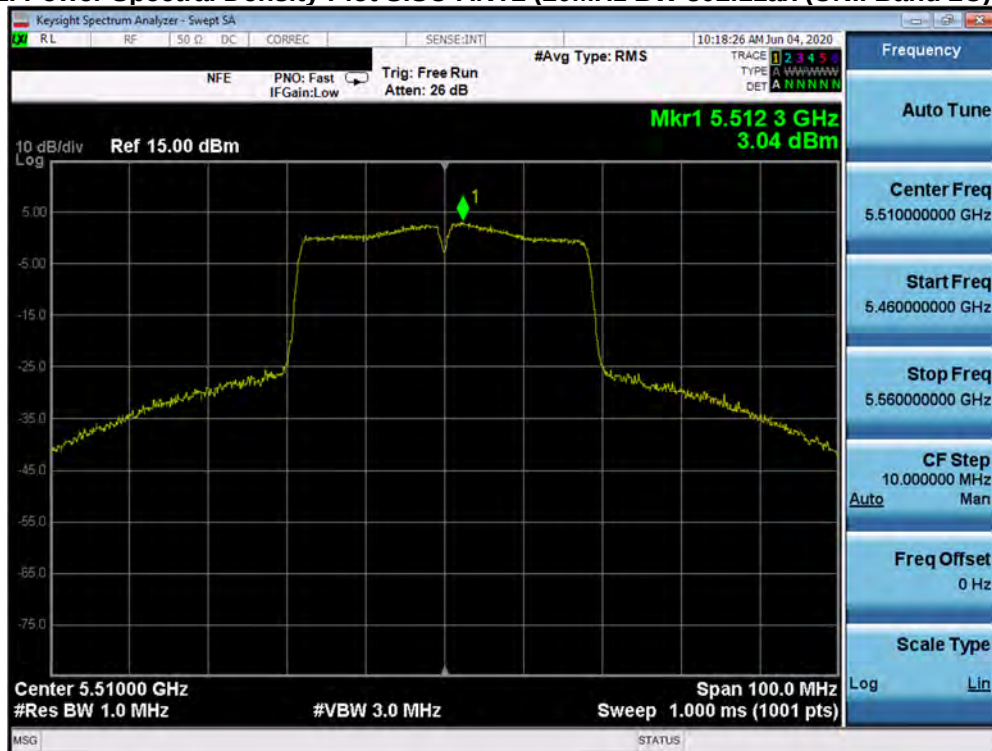


Plot 7-230. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 120)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 153 of 227                 |

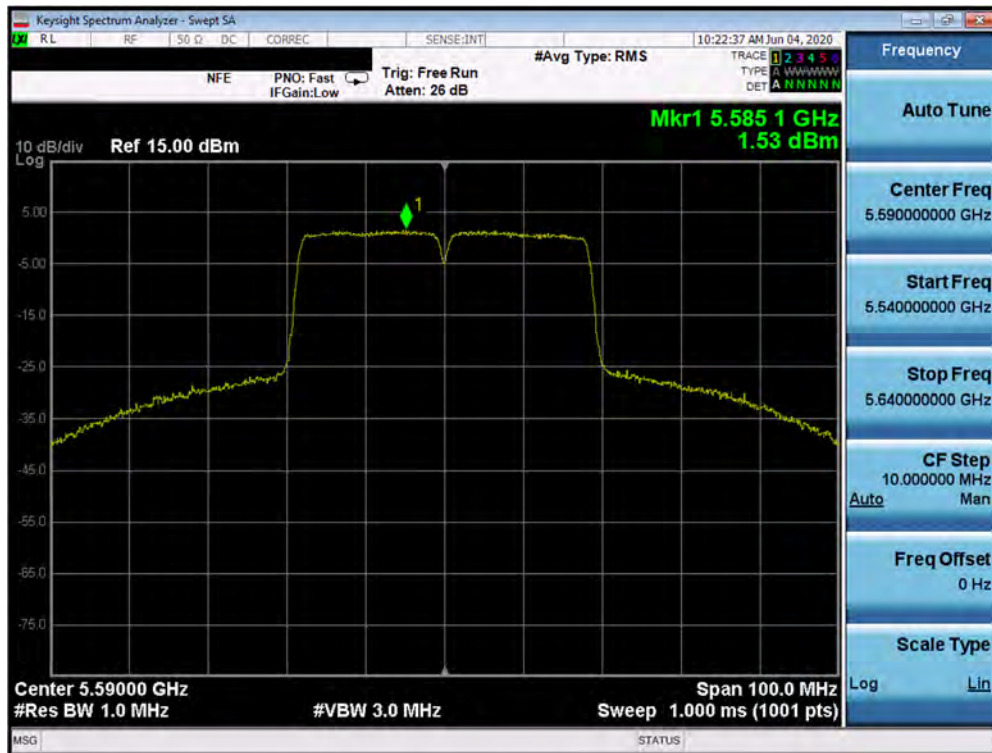


Plot 7-231. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 2C) – Ch. 144)

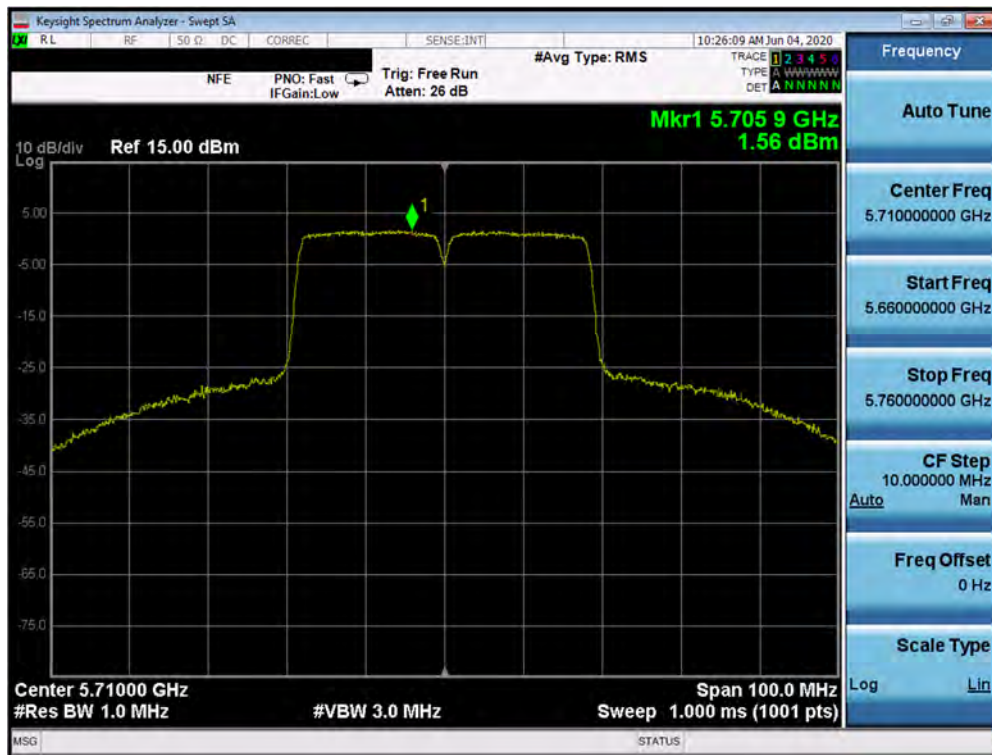


Plot 7-232. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 102)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 154 of 227                 |

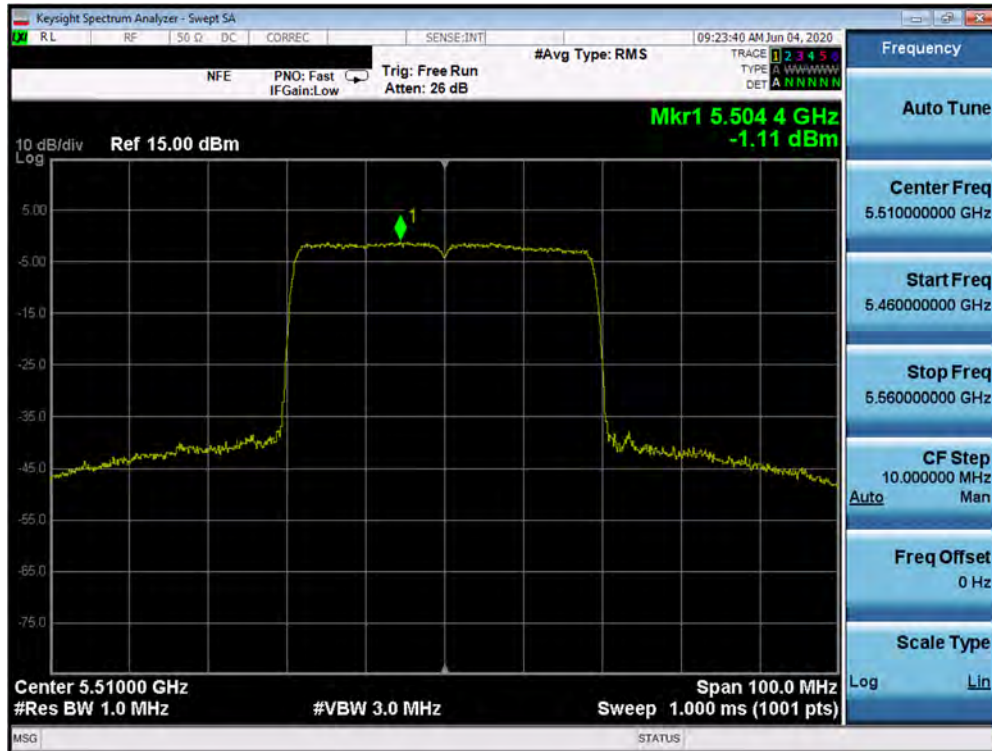


Plot 7-233. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 118)

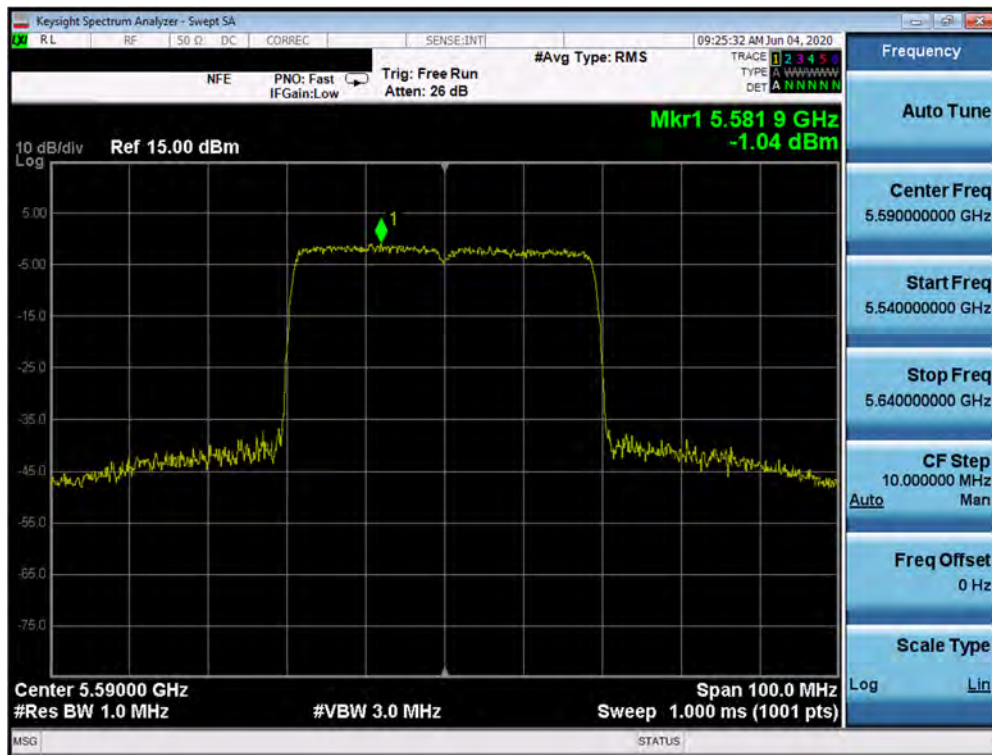


Plot 7-234. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 2C) – Ch. 142)

|                                         |                                               |                                       |  |                                 |
|-----------------------------------------|-----------------------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN981U                      | <b>PCTEST</b><br>Proud to be part of  element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                 | EUT Type:<br>Portable Handset         |  | Page 155 of 227                 |

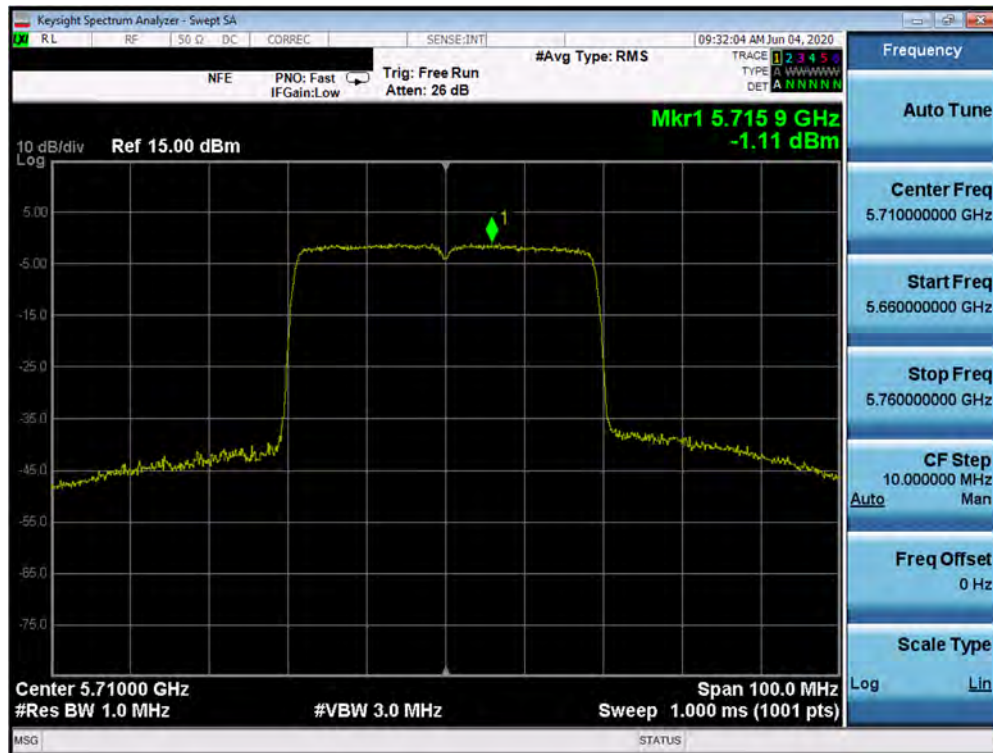


Plot 7-235. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 102)

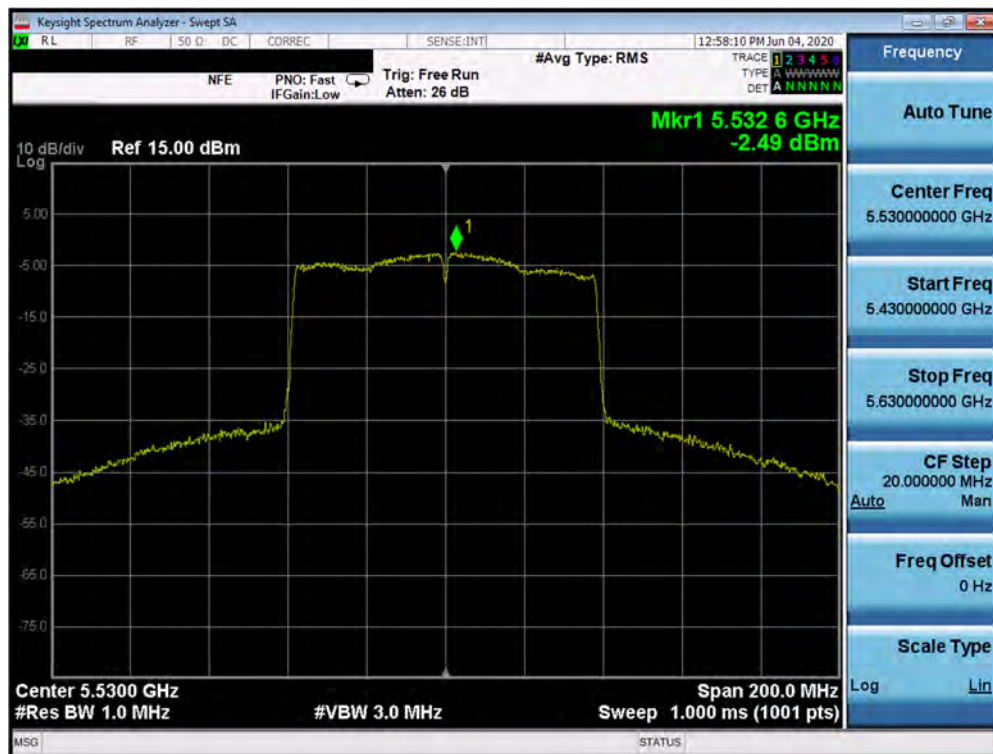


Plot 7-236. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 118)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 156 of 227                 |

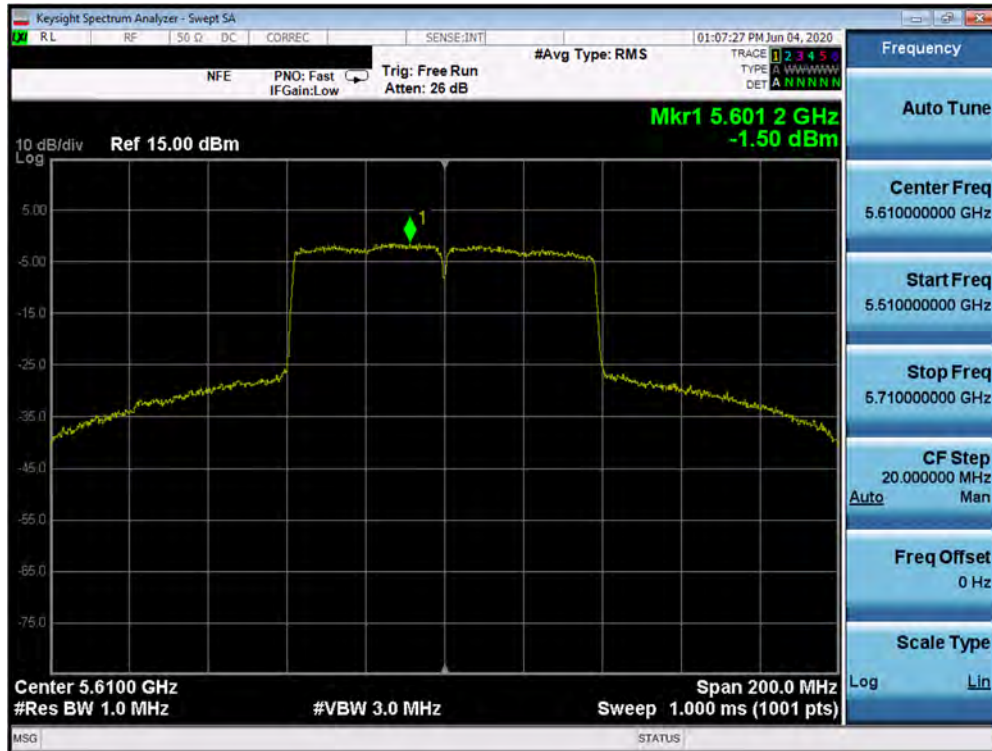


Plot 7-237. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 2C) – Ch. 142)

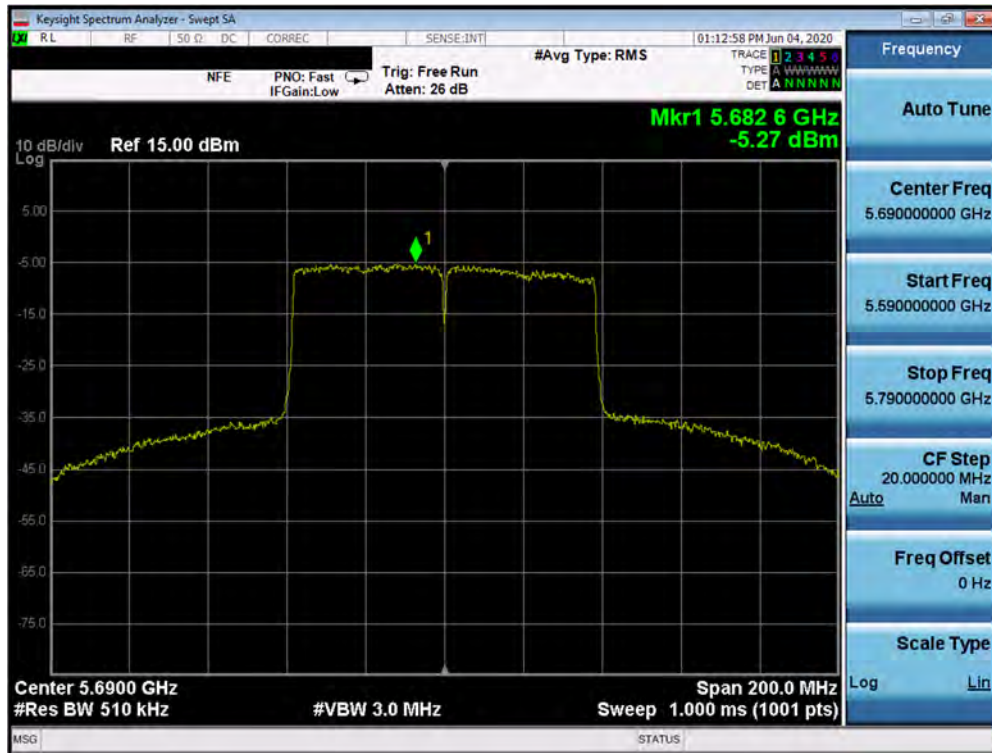


Plot 7-238. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 106)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 157 of 227                 |

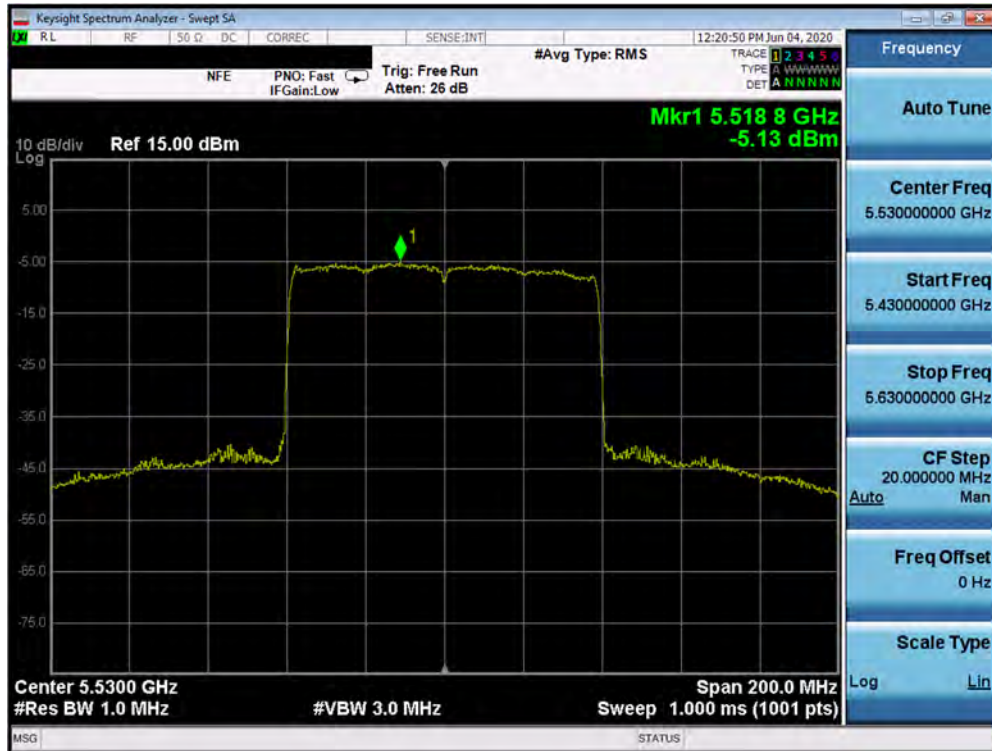


Plot 7-239. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 122)

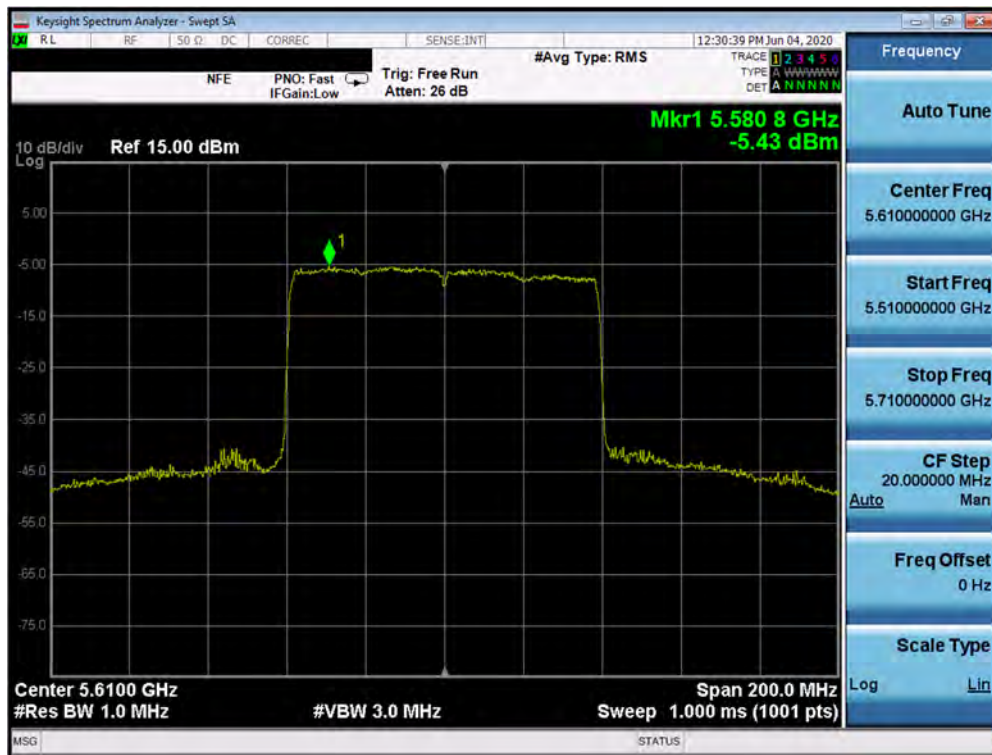


Plot 7-240. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 2C) – Ch. 138)

|                                         |                                               |                                       |  |                                 |
|-----------------------------------------|-----------------------------------------------|---------------------------------------|--|---------------------------------|
| FCC ID: A3LSMN981U                      | <b>PCTEST</b><br>Proud to be part of  element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                 | EUT Type:<br>Portable Handset         |  | Page 158 of 227                 |



Plot 7-241. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 106)



Plot 7-242. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 122)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 159 of 227                 |

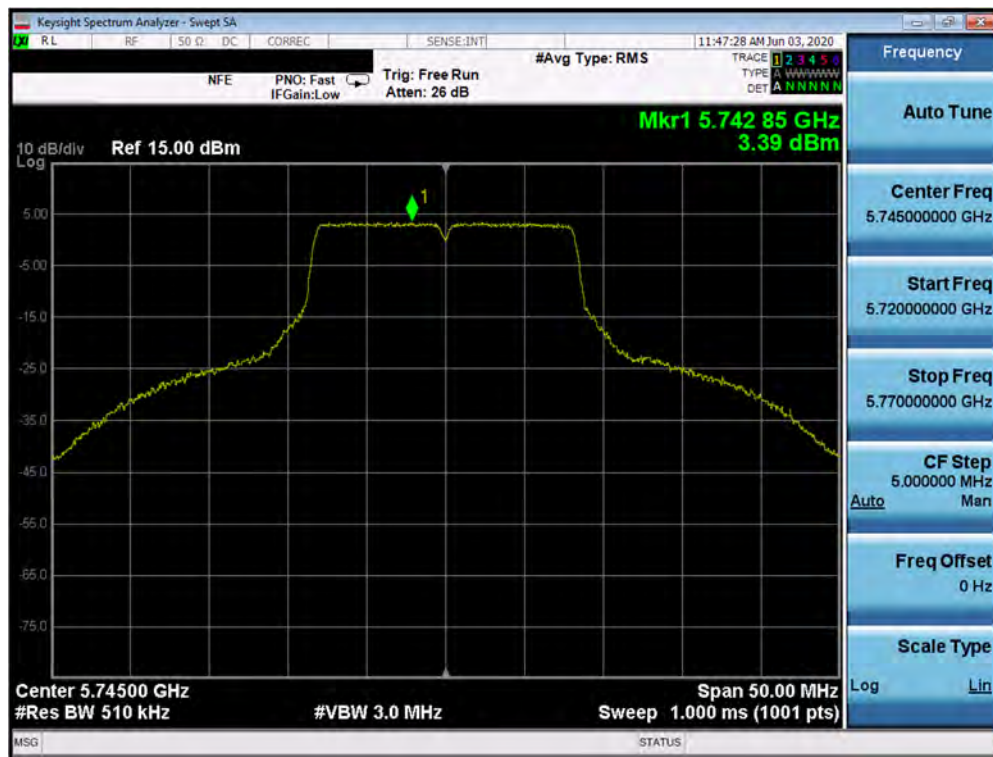


Plot 7-243. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ax (UNII Band 2C) – Ch. 138)

|                                         |                                                                                                                                  |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset                                                         | Page 160 of 227                 |

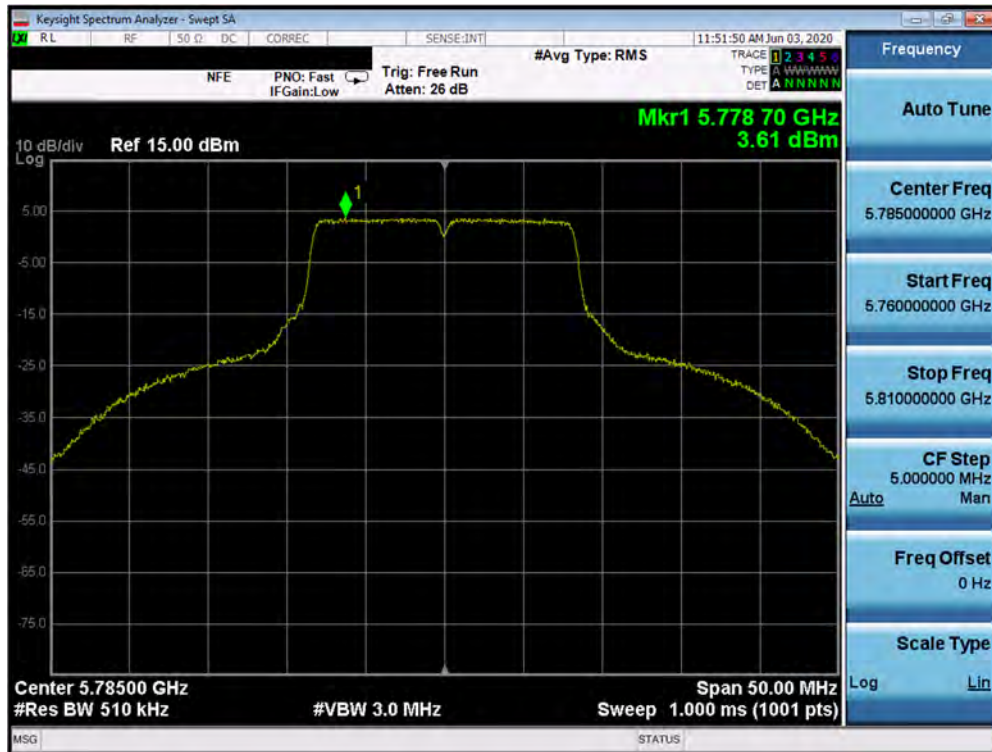
|               | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Measured Power Density [dBm] | Max Permissible Power Density [dBm/500kHz] | Margin [dB] |
|---------------|-----------------|-------------|-------------|------------------|------------------------------|--------------------------------------------|-------------|
| <b>Band 3</b> | 5745            | 149         | a           | 6                | 3.39                         | 30.0                                       | -26.61      |
|               | 5785            | 157         | a           | 6                | 3.61                         | 30.0                                       | -26.39      |
|               | 5825            | 165         | a           | 6                | 3.40                         | 30.0                                       | -26.60      |
|               | 5745            | 149         | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.55                         | 30.0                                       | -26.45      |
|               | 5785            | 157         | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.43                         | 30.0                                       | -26.57      |
|               | 5825            | 165         | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.11                         | 30.0                                       | -26.89      |
|               | 5745            | 149         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 0.45                         | 30.0                                       | -29.55      |
|               | 5785            | 157         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 0.91                         | 30.0                                       | -29.09      |
|               | 5825            | 165         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 0.51                         | 30.0                                       | -29.49      |
|               | 5755            | 151         | n (40MHz)   | 13.5/15 (MCS0)   | -1.56                        | 30.0                                       | -31.56      |
|               | 5795            | 159         | n (40MHz)   | 13.5/15 (MCS0)   | -0.47                        | 30.0                                       | -30.47      |
|               | 5755            | 151         | ax (40MHz)  | 13.5/15 (MCS0)   | -4.14                        | 30.0                                       | -34.14      |
|               | 5795            | 159         | ax (40MHz)  | 13.5/15 (MCS0)   | -4.26                        | 30.0                                       | -34.26      |
|               | 5775            | 155         | ac (80MHz)  | 29.3/32.5 (MCS0) | -1.23                        | 30.0                                       | -31.23      |
|               | 5775            | 155         | ax (80MHz)  | 29.3/32.5 (MCS0) | -5.85                        | 30.0                                       | -35.85      |

**Table 7-24. Band 3 Conducted Power Spectral Density Measurements SISO ANT2**

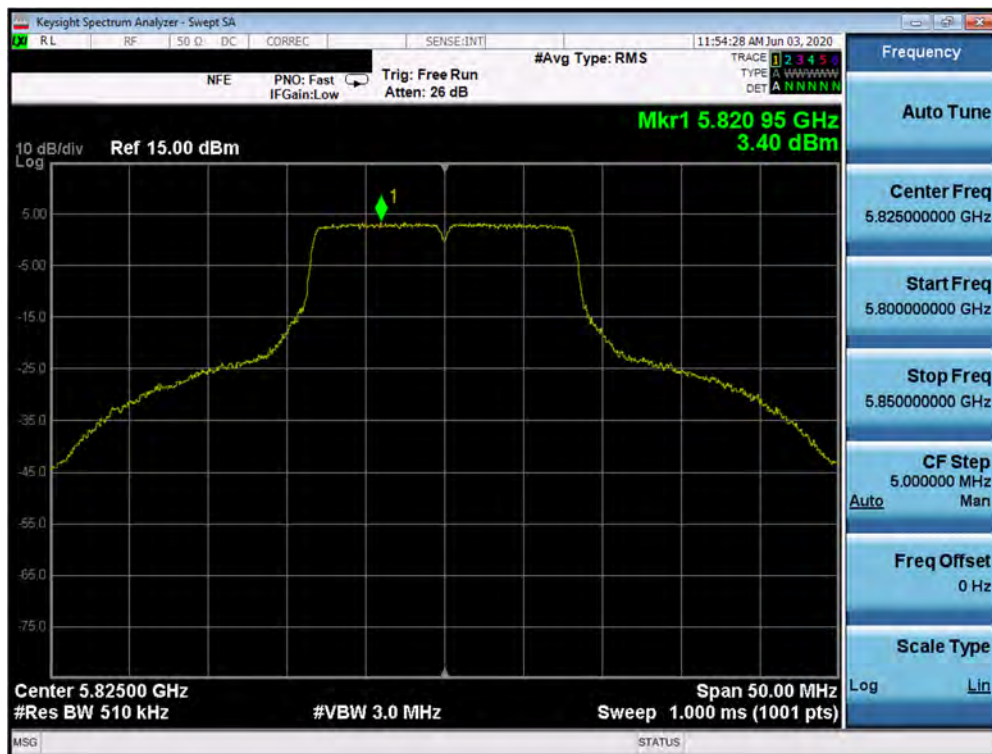


**Plot 7-244. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 149)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 161 of 227                 |

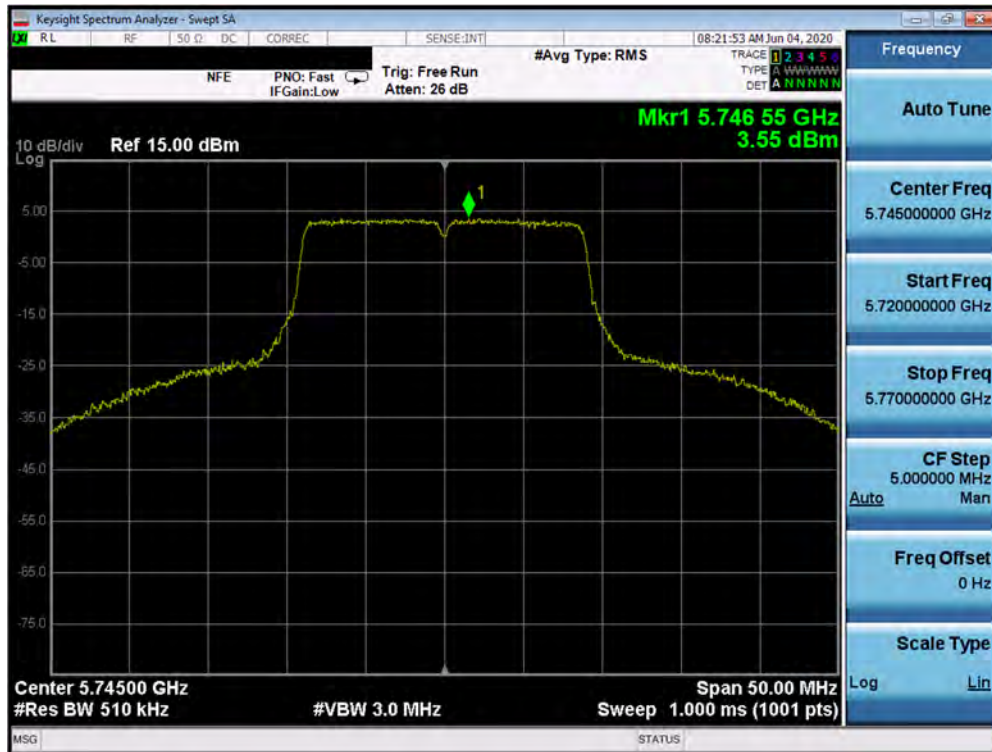


Plot 7-245. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 157)

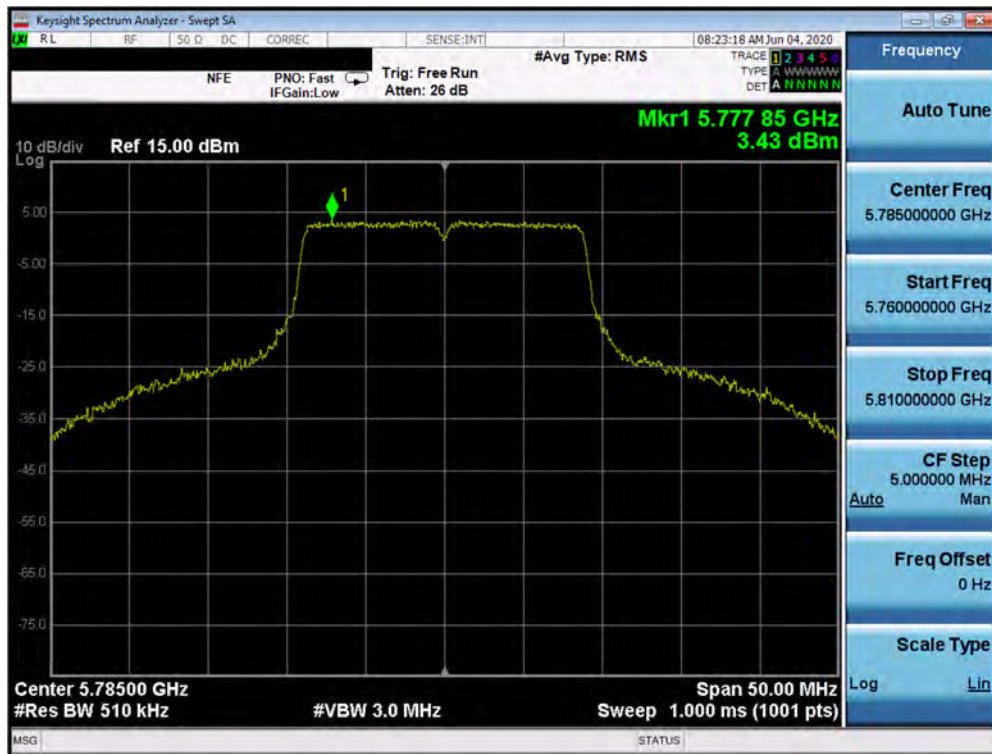


Plot 7-246. Power Spectral Density Plot SISO ANT2 (802.11a (UNII Band 3) – Ch. 165)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 162 of 227                 |

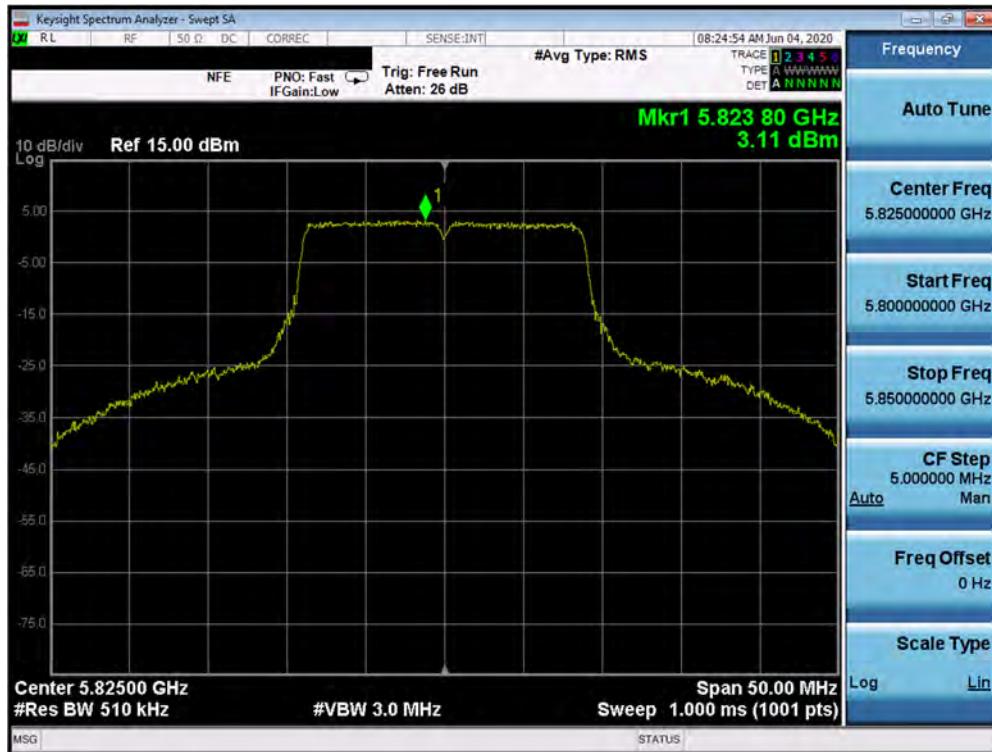


Plot 7-247. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 149)

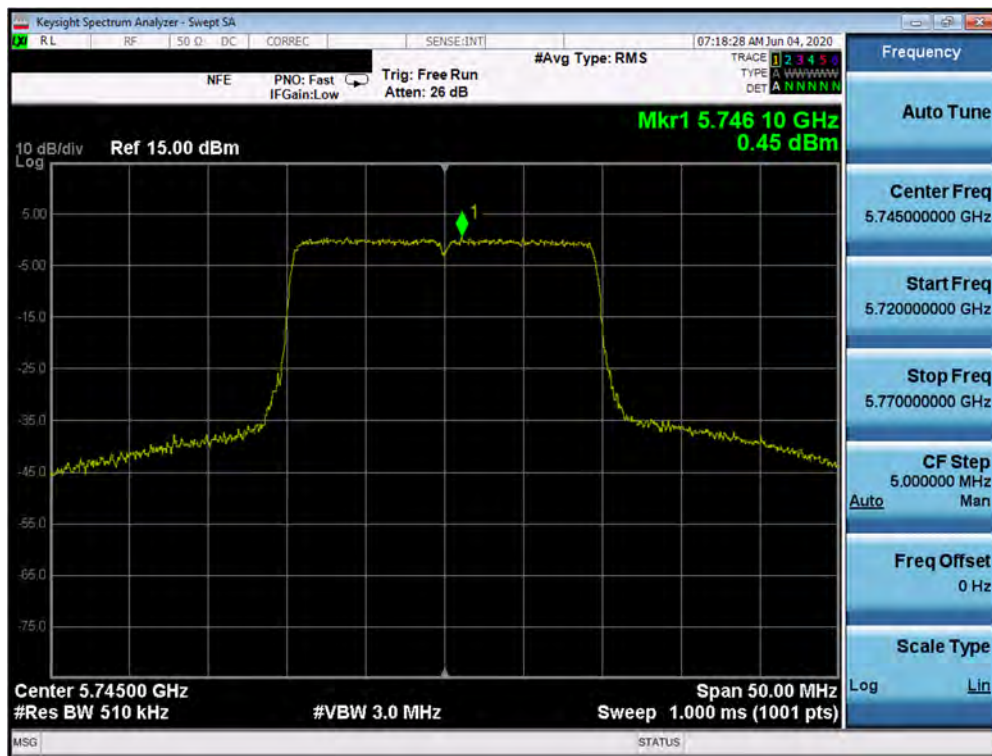


Plot 7-248. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 157)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 163 of 227                 |

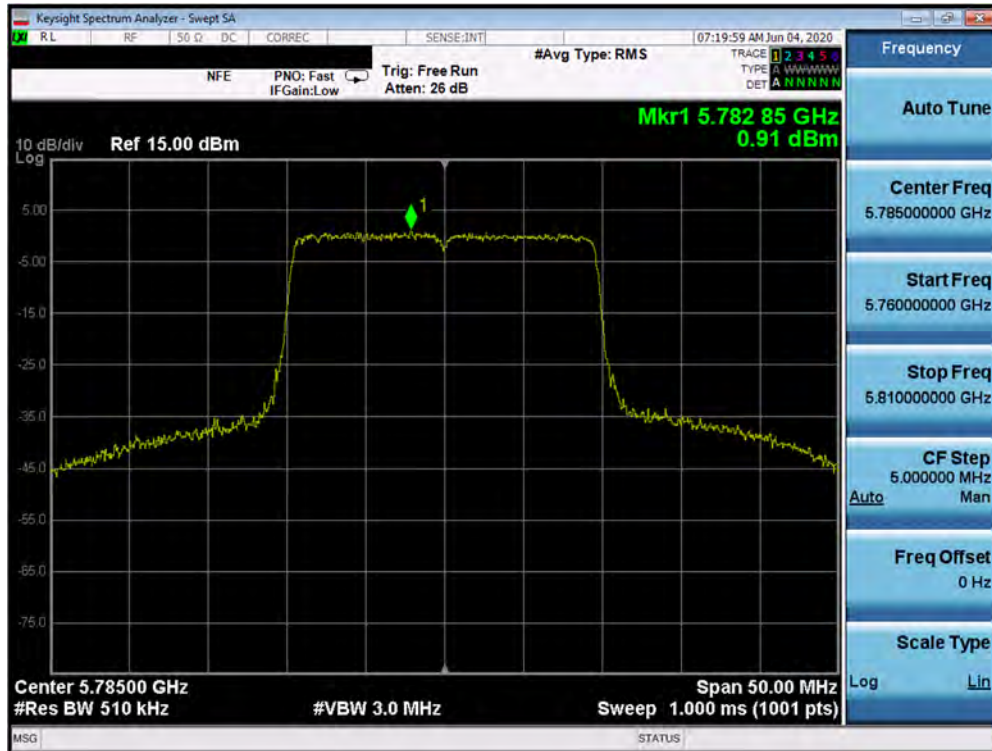


Plot 7-249. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11n (UNII Band 3) – Ch. 165)

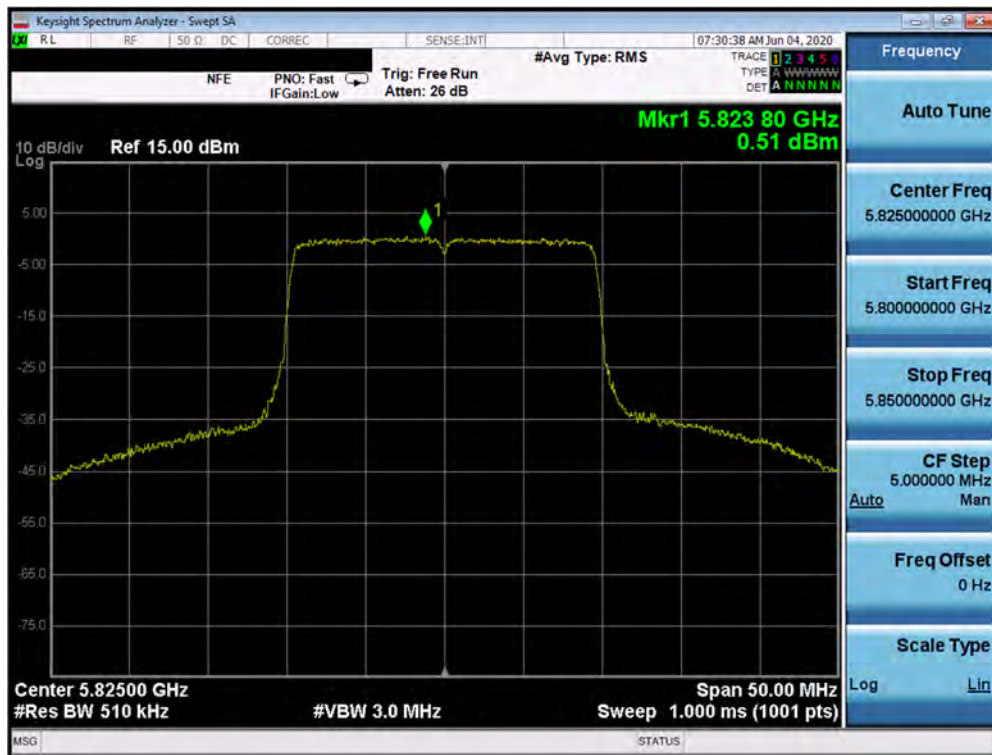


Plot 7-250. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 149)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 164 of 227                 |

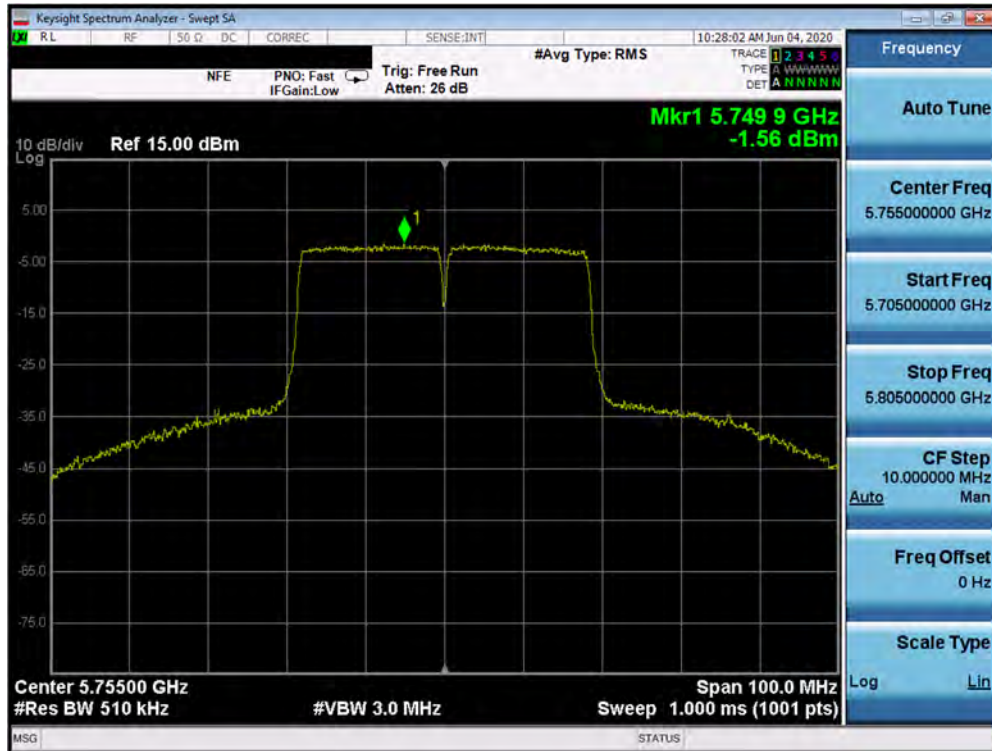


Plot 7-251. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 157)

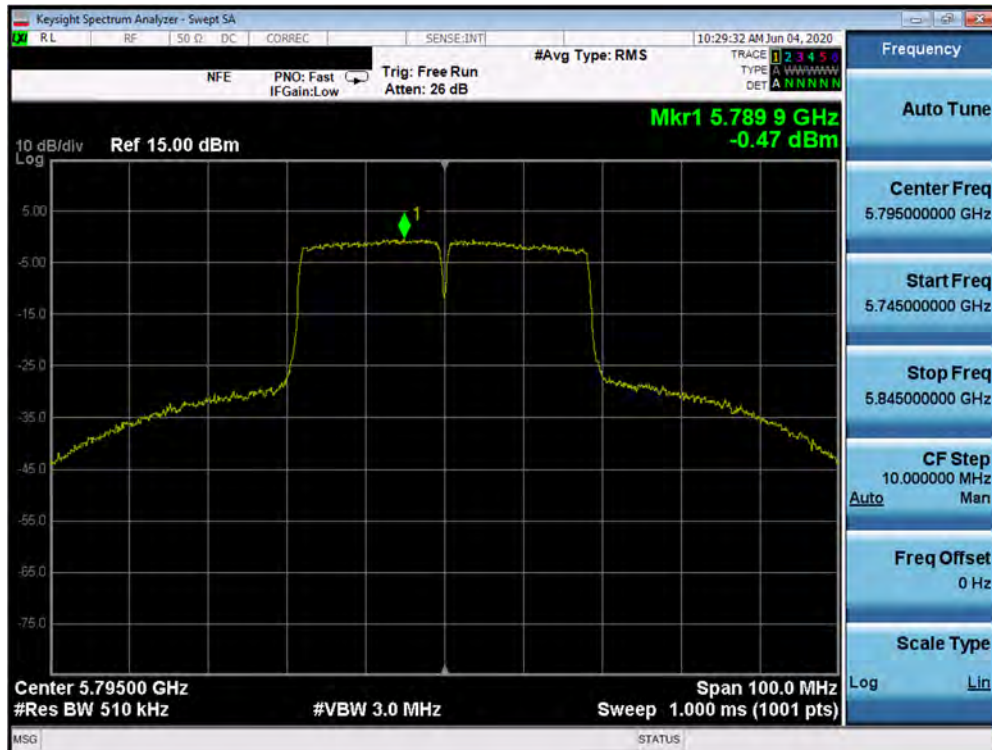


Plot 7-252. Power Spectral Density Plot SISO ANT2 (20MHz BW 802.11ax (UNII Band 3) – Ch. 165)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 165 of 227                 |

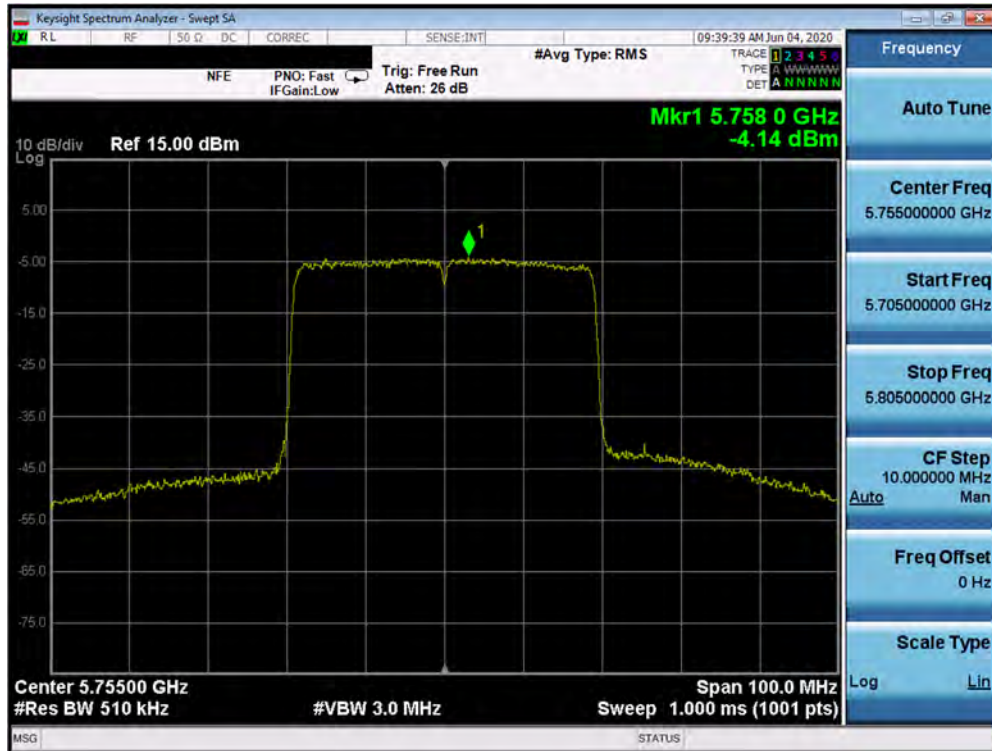


Plot 7-253. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 151)

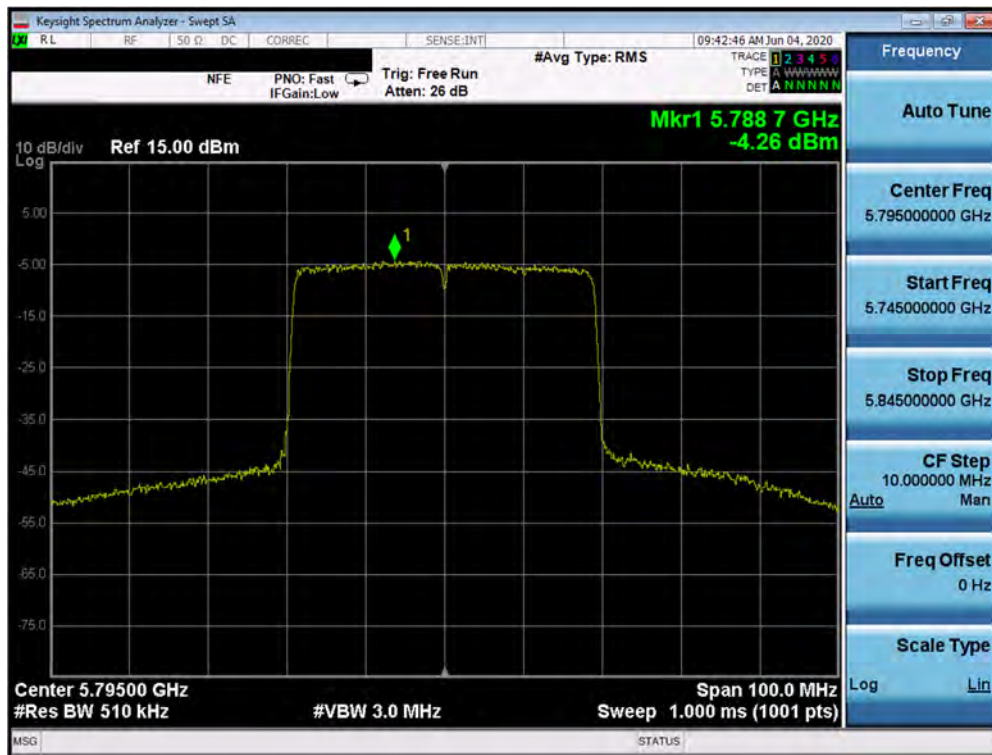


Plot 7-254. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11n (UNII Band 3) – Ch. 159)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 166 of 227                 |



Plot 7-255. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 151)

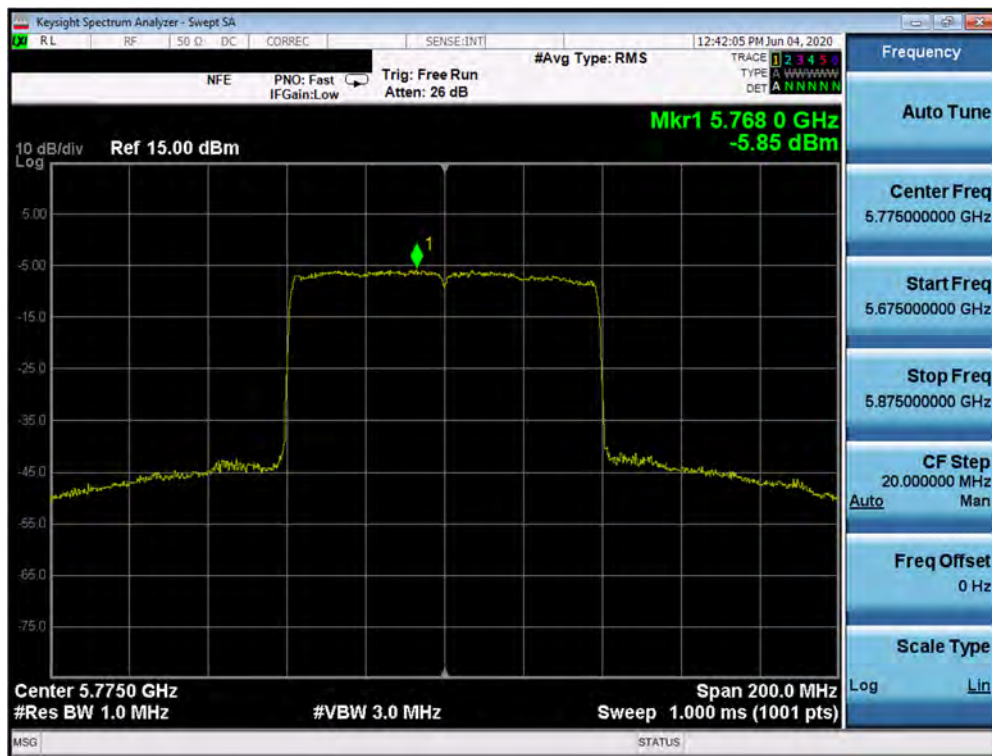


Plot 7-256. Power Spectral Density Plot SISO ANT2 (40MHz BW 802.11ax (UNII Band 3) – Ch. 159)

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 167 of 227                 |



Plot 7-257. Power Spectral Density Plot SISO ANT2 (80MHz BW 802.11ac (UNII Band 3) – Ch. 155)



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

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 168 of 227                 |

## Summed MIMO Power Spectral Density Measurements

|         | Frequency [MHz] | Channel No. | 802.11 Mode | Data Rate [Mbps] | Antenna-1 Power Density [dBm] | Antenna-2 Power Density [dBm] | Summed MIMO Power Density [dBm] | Max Power Density [dBm/MHz] | Margin [dB] |
|---------|-----------------|-------------|-------------|------------------|-------------------------------|-------------------------------|---------------------------------|-----------------------------|-------------|
| Band 1  | 5180            | 36          | a           | 6                | 5.58                          | 6.33                          | 8.98                            | 11.0                        | -2.02       |
|         | 5200            | 40          | a           | 6                | 4.73                          | 7.22                          | 9.16                            | 11.0                        | -1.84       |
|         | 5240            | 48          | a           | 6                | 5.32                          | 7.41                          | 9.50                            | 11.0                        | -1.50       |
|         | 5180            | 36          | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.69                          | 7.82                          | 9.55                            | 11.0                        | -1.45       |
|         | 5200            | 40          | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.51                          | 6.80                          | 8.82                            | 11.0                        | -2.18       |
|         | 5240            | 48          | n (20MHz)   | 6.5/7.2 (MCS0)   | 5.18                          | 6.57                          | 8.94                            | 11.0                        | -2.06       |
|         | 5180            | 36          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.45                          | 4.48                          | 6.23                            | 11.0                        | -4.77       |
|         | 5200            | 40          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.70                          | 4.27                          | 6.18                            | 11.0                        | -4.82       |
|         | 5240            | 48          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.18                          | 4.30                          | 6.38                            | 11.0                        | -4.62       |
|         | 5190            | 38          | n (40MHz)   | 13.5/15 (MCS0)   | 0.93                          | 3.71                          | 5.55                            | 11.0                        | -5.45       |
|         | 5230            | 46          | n (40MHz)   | 13.5/15 (MCS0)   | 1.24                          | 2.52                          | 4.94                            | 11.0                        | -6.06       |
|         | 5190            | 38          | ax (40MHz)  | 13.5/15 (MCS0)   | -3.09                         | -0.99                         | 1.10                            | 11.0                        | -9.90       |
|         | 5230            | 46          | ax (40MHz)  | 13.5/15 (MCS0)   | -2.41                         | -1.28                         | 1.20                            | 11.0                        | -9.80       |
|         | 5210            | 42          | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.04                         | -0.61                         | 1.75                            | 11.0                        | -9.25       |
|         | 5210            | 42          | ax (80MHz)  | 29.3/32.5 (MCS0) | -5.32                         | -3.87                         | -1.53                           | 11.0                        | -12.53      |
| Band 2A | 5260            | 52          | a           | 6                | 5.58                          | 6.88                          | 9.29                            | 11.0                        | -1.71       |
|         | 5280            | 56          | a           | 6                | 4.73                          | 6.70                          | 8.84                            | 11.0                        | -2.16       |
|         | 5320            | 64          | a           | 6                | 5.32                          | 5.62                          | 8.48                            | 11.0                        | -2.52       |
|         | 5260            | 52          | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.74                          | 6.38                          | 8.27                            | 11.0                        | -2.73       |
|         | 5280            | 56          | n (20MHz)   | 6.5/7.2 (MCS0)   | 3.68                          | 6.43                          | 8.28                            | 11.0                        | -2.72       |
|         | 5320            | 64          | n (20MHz)   | 6.5/7.2 (MCS0)   | 5.72                          | 7.32                          | 9.60                            | 11.0                        | -1.40       |
|         | 5260            | 52          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.78                          | 3.91                          | 5.99                            | 11.0                        | -5.01       |
|         | 5280            | 56          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.17                          | 3.87                          | 6.11                            | 11.0                        | -4.89       |
|         | 5320            | 64          | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.31                          | 4.58                          | 6.60                            | 11.0                        | -4.40       |
|         | 5270            | 54          | n (40MHz)   | 13.5/15 (MCS0)   | -0.71                         | 2.30                          | 4.06                            | 11.0                        | -6.94       |
|         | 5310            | 62          | n (40MHz)   | 13.5/15 (MCS0)   | 1.43                          | 2.07                          | 4.77                            | 11.0                        | -6.23       |
|         | 5270            | 54          | ax (40MHz)  | 13.5/15 (MCS0)   | -3.15                         | -1.10                         | 1.01                            | 11.0                        | -9.99       |
|         | 5310            | 62          | ax (40MHz)  | 13.5/15 (MCS0)   | -3.32                         | -1.76                         | 0.54                            | 11.0                        | -10.46      |
|         | 5290            | 58          | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.23                         | -1.86                         | 0.97                            | 11.0                        | -10.03      |
|         | 5290            | 58          | ax (80MHz)  | 29.3/32.5 (MCS0) | -6.77                         | -4.75                         | -2.63                           | 11.0                        | -13.63      |
| Band 2C | 5500            | 100         | a           | 6                | 6.33                          | 6.56                          | 9.46                            | 11.0                        | -1.54       |
|         | 5600            | 120         | a           | 6                | 4.44                          | 5.99                          | 8.29                            | 11.0                        | -2.71       |
|         | 5720            | 144         | a           | 6                | 5.10                          | 6.15                          | 8.67                            | 11.0                        | -2.33       |
|         | 5500            | 100         | n (20MHz)   | 6.5/7.2 (MCS0)   | 6.48                          | 7.11                          | 9.82                            | 11.0                        | -1.18       |
|         | 5600            | 120         | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.15                          | 5.45                          | 7.86                            | 11.0                        | -3.14       |
|         | 5720            | 144         | n (20MHz)   | 6.5/7.2 (MCS0)   | 4.38                          | 5.82                          | 8.17                            | 11.0                        | -2.83       |
|         | 5500            | 100         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.92                          | 4.22                          | 6.23                            | 11.0                        | -4.77       |
|         | 5600            | 120         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 1.58                          | 3.63                          | 5.73                            | 11.0                        | -5.27       |
|         | 5720            | 144         | ax (20MHz)  | 6.5/7.2 (MCS0)   | 2.48                          | 4.21                          | 6.44                            | 11.0                        | -4.56       |
|         | 5510            | 102         | n (40MHz)   | 13.5/15 (MCS0)   | 2.50                          | 3.04                          | 5.79                            | 11.0                        | -5.21       |
|         | 5590            | 118         | n (40MHz)   | 13.5/15 (MCS0)   | 0.75                          | 1.53                          | 4.17                            | 11.0                        | -6.83       |
|         | 5710            | 142         | n (40MHz)   | 13.5/15 (MCS0)   | 0.05                          | 1.56                          | 3.88                            | 11.0                        | -7.12       |
|         | 5510            | 102         | ax (40MHz)  | 13.5/15 (MCS0)   | -2.76                         | -1.11                         | 1.15                            | 11.0                        | -9.85       |
|         | 5590            | 118         | ax (40MHz)  | 13.5/15 (MCS0)   | -2.87                         | -1.04                         | 1.15                            | 11.0                        | -9.85       |
|         | 5710            | 142         | ax (40MHz)  | 13.5/15 (MCS0)   | -2.96                         | -1.11                         | 1.07                            | 11.0                        | -9.93       |
|         | 5530            | 106         | ac (80MHz)  | 29.3/32.5 (MCS0) | -2.81                         | -2.49                         | 0.36                            | 11.0                        | -10.64      |
|         | 5610            | 122         | ac (80MHz)  | 29.3/32.5 (MCS0) | -3.86                         | -1.50                         | 0.49                            | 11.0                        | -10.51      |
|         | 5690            | 138         | ac (80MHz)  | 29.3/32.5 (MCS0) | -6.19                         | -5.27                         | -2.70                           | 11.0                        | -13.70      |
|         | 5530            | 106         | ax (80MHz)  | 29.3/32.5 (MCS0) | -6.80                         | -5.13                         | -2.88                           | 11.0                        | -13.88      |
|         | 5610            | 122         | ax (80MHz)  | 29.3/32.5 (MCS0) | -7.43                         | -5.43                         | -3.31                           | 11.0                        | -14.31      |
|         | 5690            | 138         | ax (80MHz)  | 29.3/32.5 (MCS0) | -9.56                         | -7.64                         | -5.48                           | 11.0                        | -16.48      |

Table 7-25. Bands 1, 2A, 2C MIMO Conducted Power Spectral Density Measurements

|                                         |                                                                                                                                  |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset                                                         | Page 169 of 227                 |

**Note:**

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna 1 and Antenna 2 were first measured separately as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

**Sample MIMO Calculation:**

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 4.69 dBm for Antenna-1 and 7.82 dBm for Antenna-2.

Antenna 1 + Antenna 2 = MIMO

$$(4.69 \text{ dBm} + 7.82 \text{ dBm}) = (2.95 \text{ mW} + 6.06 \text{ mW}) = 9.01 \text{ mW} = 9.55 \text{ dBm}$$

|                                         |                                                                                                                                                                                                                            |                                       |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  PCTEST <sup>®</sup><br>Proud to be part of  element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                              | EUT Type:<br>Portable Handset         |                                                                                       | Page 170 of 227                 |

## 7.6 Radiated Spurious Emission Measurements – Above 1GHz

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

### Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n (20MHz BW), 802.11n (40MHz BW), and 802.11ac (80MHz)), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

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

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

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

***All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-26 per Section 15.209 and RSS-Gen (8.9).***

| Frequency       | Field Strength<br>[μV/m] | Measured Distance<br>[Meters] |
|-----------------|--------------------------|-------------------------------|
| Above 960.0 MHz | 500                      | 3                             |

Table 7-26. Radiated Limits

### Test Procedures Used

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

### Test Settings

#### Average Measurements above 1GHz (Method AD)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be  $\geq 2 \times \text{span/RBW}$ )
6. Averaging type = power (RMS)
7. Sweep time = auto couple
8. Trace was averaged over 100 sweeps

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 171 of 227                 |

### Peak Measurements above 1GHz

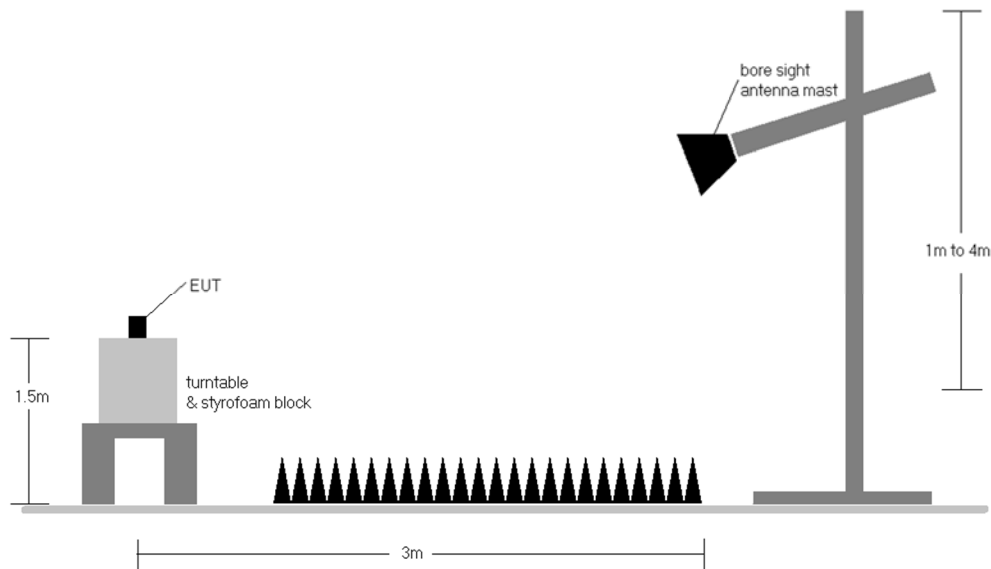
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

### Peak Measurements below 1GHz

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

### Test Setup

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



**Figure 7-5. Test Instrument & Measurement Setup**

|                                         |                                                                                                                                  |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset                                                         | Page 172 of 227                 |

## Test Notes

1. All emissions that lie in the restricted bands (denoted by a \* next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-26.
2. All spurious emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-26. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
4. This unit was tested with its standard battery.
5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
6. Emissions below 18GHz were measured at a 3 meter test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
7. Radiated spurious emissions were investigated while operating in MIMO mode, however, it was determined that single antenna operation produced the worst case emissions. Since the emissions produced from MIMO operation were found to be more than 20dB below the limit, the MIMO emissions are not reported.
8. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
9. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

## Sample Calculations

### Determining Spurious Emissions Levels

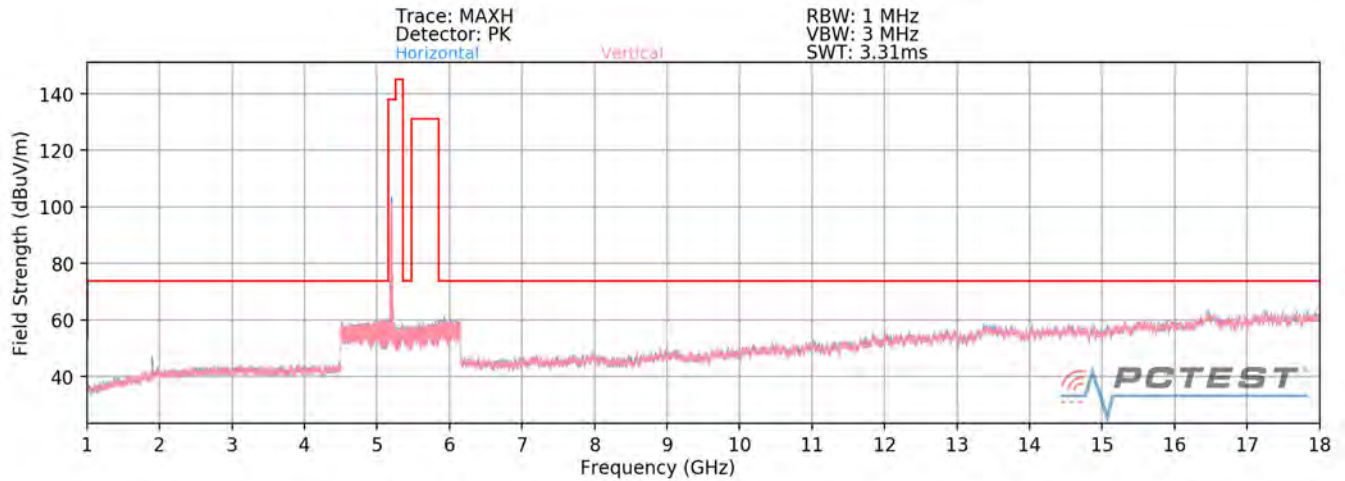
- o Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- o AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB]
- o Margin [dB] = Field Strength Level [dBμV/m] – Limit [dBμV/m]

### Radiated Band Edge Measurement Offset

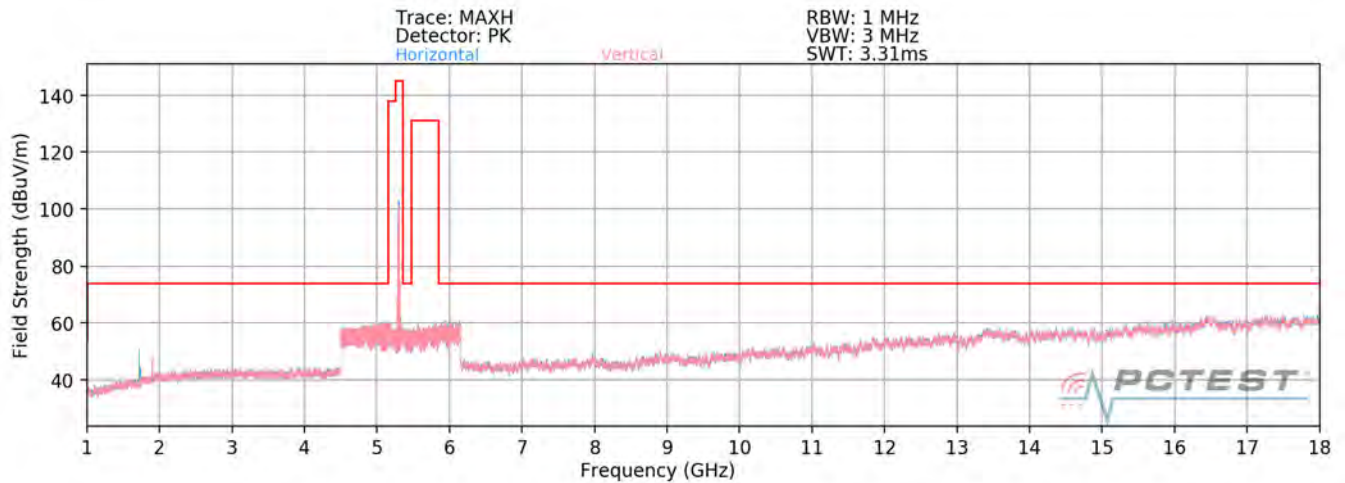
- o The amplitude offset shown in the radiated restricted band edge plots was calculated using the formula:  
Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) – Preamplifier Gain

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 173 of 227                 |

## 7.6.1 SISO Antenna-1 Radiated Spurious Emission Measurements

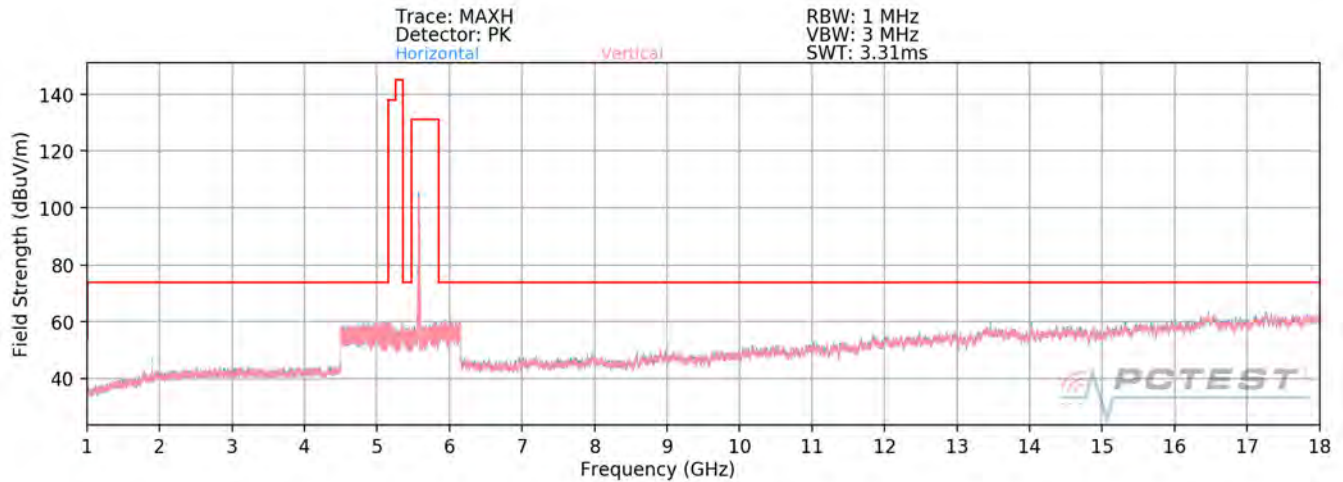


**Plot 7-259. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U1 Ch. 40)**

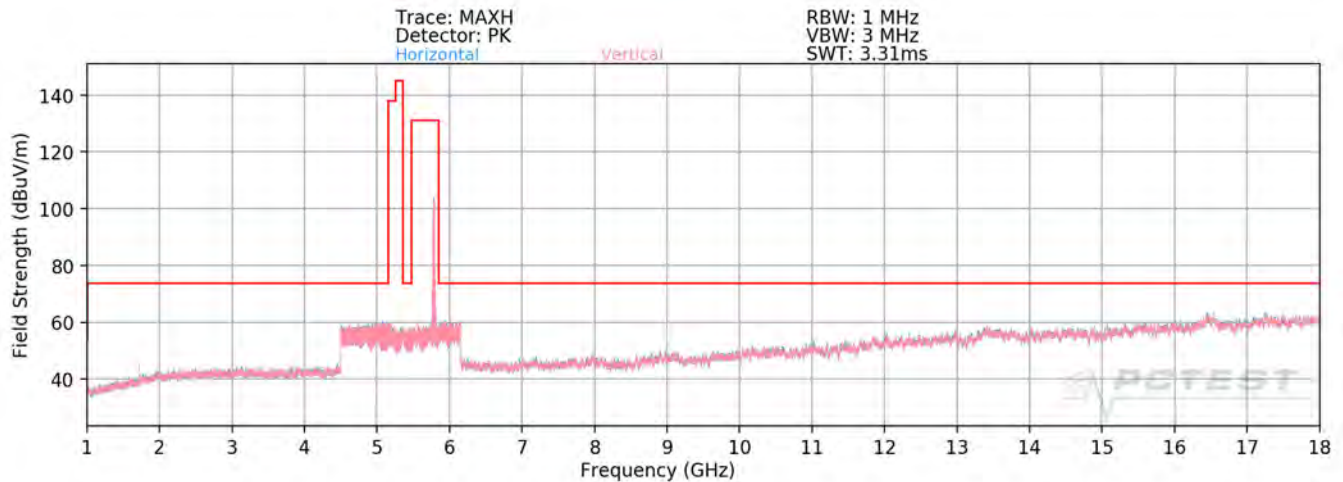


**Plot 7-260. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2A Ch. 56)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 174 of 227                 |



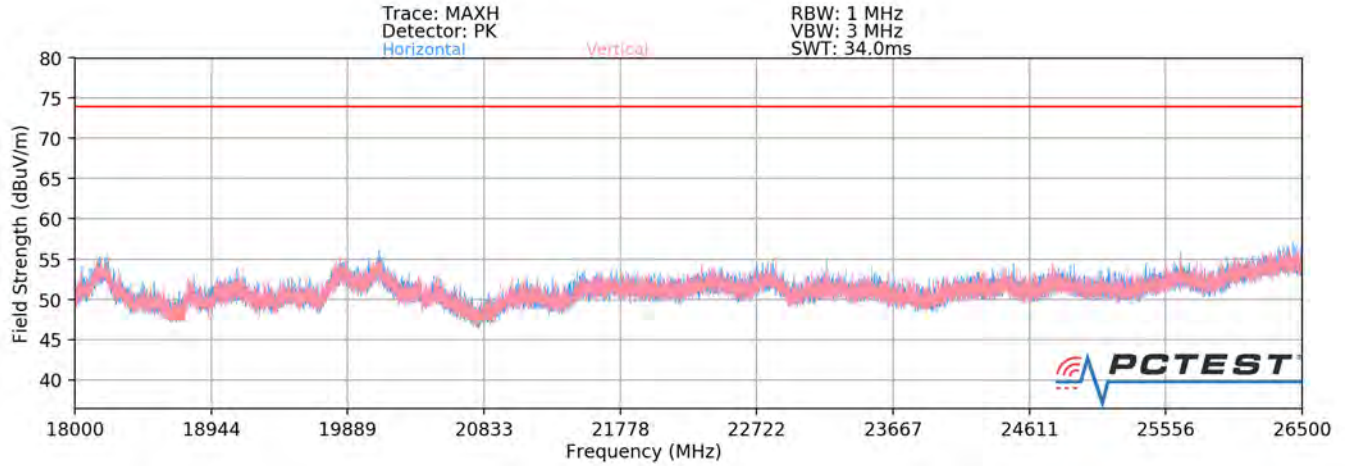
**Plot 7-261. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U2C Ch. 120)**



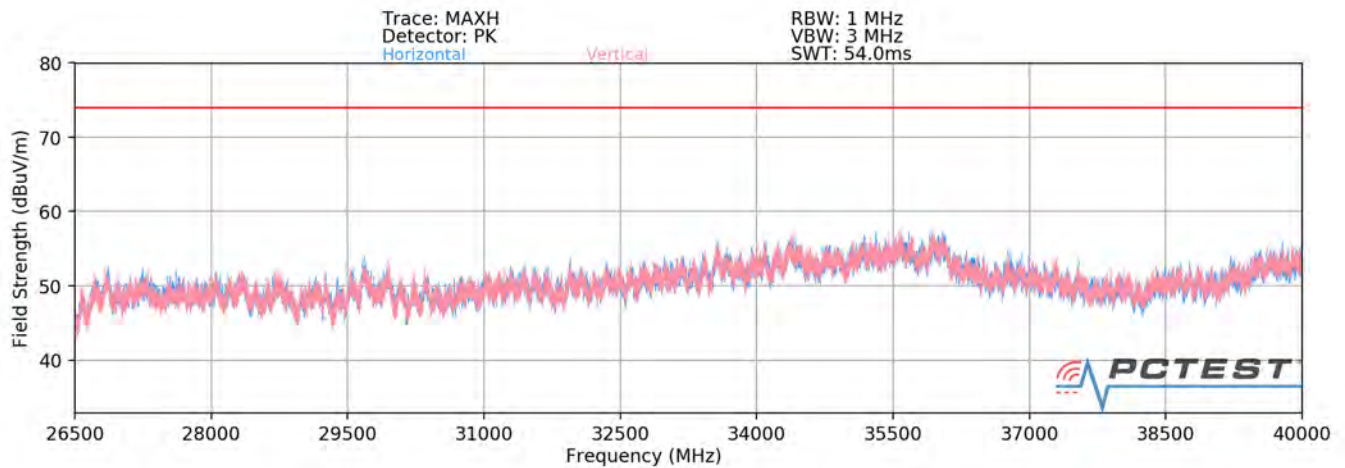
**Plot 7-262. Radiated Spurious Plot above 1GHz SISO ANT1 (802.11a – U3 Ch. 157)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 175 of 227                 |

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



**Plot 7-263. Radiated Spurious Plot 18GHz - 26.5GHz SISO ANT1 (802.11a)**



**Plot 7-264. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT1 (802.11a)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 176 of 227                 |

## SISO Antenna-1 Radiated Spurious Emission Measurements

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

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5180MHz  
 Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00        | Peak     | H               | -                   | -                          | -68.73               | 12.76       | 0.00                            | 51.03                   | 68.20          | -17.17      |
| * 15540.00      | Average  | H               | -                   | -                          | -78.57               | 15.66       | 0.00                            | 44.09                   | 53.98          | -9.88       |
| * 15540.00      | Peak     | H               | -                   | -                          | -67.93               | 15.66       | 0.00                            | 54.73                   | 73.98          | -19.24      |
| * 20720.00      | Average  | H               | -                   | -                          | -80.10               | 17.88       | -9.54                           | 35.24                   | 53.98          | -18.74      |
| * 20720.00      | Peak     | H               | -                   | -                          | -68.74               | 17.88       | -9.54                           | 46.60                   | 73.98          | -27.38      |
| 25900.00        | Peak     | H               | -                   | -                          | -66.56               | 20.40       | -9.54                           | 51.30                   | 68.20          | -16.90      |

**Table 7-27. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5200MHz  
 Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00        | Peak     | H               | -                   | -                          | -67.70               | 12.52       | 0.00                            | 51.82                   | 68.20          | -16.38      |
| * 15600.00      | Average  | H               | -                   | -                          | -78.90               | 16.09       | 0.00                            | 44.19                   | 53.98          | -9.79       |
| * 15600.00      | Peak     | H               | -                   | -                          | -67.31               | 16.09       | 0.00                            | 55.78                   | 73.98          | -18.20      |
| * 20800.00      | Average  | H               | -                   | -                          | -80.33               | 18.08       | -9.54                           | 35.21                   | 53.98          | -18.77      |
| * 20800.00      | Peak     | H               | -                   | -                          | -69.09               | 18.08       | -9.54                           | 46.45                   | 73.98          | -27.53      |
| 26000.00        | Peak     | H               | -                   | -                          | -67.27               | 20.68       | -9.54                           | 50.86                   | 68.20          | -17.34      |

**Table 7-28. Radiated Measurements SISO ANT1**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 177 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5240MHz  
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00        | Peak     | H               | -                   | -                          | -67.36               | 12.52       | 0.00                            | 52.16                   | 68.20          | -16.04      |
| * 15720.00      | Average  | H               | -                   | -                          | -79.67               | 16.17       | 0.00                            | 43.50                   | 53.98          | -10.48      |
| * 15720.00      | Peak     | H               | -                   | -                          | -67.49               | 16.17       | 0.00                            | 55.68                   | 73.98          | -18.30      |
| * 20960.00      | Average  | H               | -                   | -                          | -79.84               | 18.46       | -9.54                           | 36.08                   | 53.98          | -17.90      |
| * 20960.00      | Peak     | H               | -                   | -                          | -68.56               | 18.46       | -9.54                           | 47.36                   | 73.98          | -26.62      |
| 26200.00        | Peak     | H               | -                   | -                          | -66.96               | 20.96       | -9.54                           | 51.46                   | 68.20          | -16.74      |

**Table 7-29. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5260MHz  
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00        | Peak     | H               | 131                 | 68                         | -66.93               | 13.09       | 0.00                            | 53.16                   | 68.20          | -15.04      |
| * 15780.00      | Average  | H               | -                   | -                          | -79.15               | 16.22       | 0.00                            | 44.07                   | 53.98          | -9.91       |
| * 15780.00      | Peak     | H               | -                   | -                          | -67.61               | 16.22       | 0.00                            | 55.61                   | 73.98          | -18.37      |
| * 21040.00      | Average  | H               | -                   | -                          | -78.68               | 18.64       | -9.54                           | 37.41                   | 53.98          | -16.57      |
| * 21040.00      | Peak     | H               | -                   | -                          | -66.90               | 18.64       | -9.54                           | 49.19                   | 73.98          | -24.79      |
| 26300.00        | Peak     | H               | -                   | -                          | -67.29               | 21.23       | -9.54                           | 51.40                   | 68.20          | -16.80      |

**Table 7-30. Radiated Measurements SISO ANT1**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 178 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5280MHz  
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00        | Peak     | H               | 124                 | 57                         | -66.92               | 13.76       | 0.00                            | 53.84                   | 68.20          | -14.36      |
| * 15840.00      | Average  | H               | -                   | -                          | -78.89               | 15.82       | 0.00                            | 43.93                   | 53.98          | -10.05      |
| * 15840.00      | Peak     | H               | -                   | -                          | -67.24               | 15.82       | 0.00                            | 55.58                   | 73.98          | -18.40      |
| * 21120.00      | Average  | H               | -                   | -                          | -80.04               | 18.80       | -9.54                           | 36.22                   | 53.98          | -17.76      |
| * 21120.00      | Peak     | H               | -                   | -                          | -68.54               | 18.80       | -9.54                           | 47.72                   | 73.98          | -26.26      |
| 26400.00        | Peak     | H               | -                   | -                          | -67.09               | 21.49       | -9.54                           | 51.85                   | 68.20          | -16.35      |

**Table 7-31. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00      | Average  | H               | -                   | -                          | -79.08               | 13.66       | 0.00                            | 41.58                   | 53.98          | -12.40      |
| * 10640.00      | Peak     | H               | -                   | -                          | -66.90               | 13.66       | 0.00                            | 53.76                   | 73.98          | -20.22      |
| * 15960.00      | Average  | H               | -                   | -                          | -78.49               | 15.05       | 0.00                            | 43.56                   | 53.98          | -10.41      |
| * 15960.00      | Peak     | H               | -                   | -                          | -66.72               | 15.05       | 0.00                            | 55.33                   | 73.98          | -18.64      |
| * 21280.00      | Average  | H               | -                   | -                          | -80.06               | 18.76       | -9.54                           | 36.16                   | 53.98          | -17.82      |
| * 21280.00      | Peak     | H               | -                   | -                          | -68.48               | 18.76       | -9.54                           | 47.74                   | 73.98          | -26.24      |
| 26600.00        | Peak     | H               | -                   | -                          | -53.39               | 6.35        | -9.54                           | 50.41                   | 68.20          | -17.79      |

**Table 7-32. Radiated Measurements SISO ANT1**

|                                         |                                                                                                                                                                                                                      |                                       |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>PCTEST</b><br>Proud to be part of  element | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                        | EUT Type:<br>Portable Handset         |                                                                                       | Page 179 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00      | Average  | H               | -                   | -                          | -78.52               | 13.62       | 0.00                            | 42.10                   | 53.98          | -11.88      |
| * 11000.00      | Peak     | H               | -                   | -                          | -67.50               | 13.62       | 0.00                            | 53.12                   | 73.98          | -20.86      |
| 16500.00        | Peak     | H               | -                   | -                          | -66.89               | 15.75       | 0.00                            | 55.86                   | 68.20          | -12.34      |
| 22000.00        | Peak     | H               | -                   | -                          | -68.12               | 19.37       | -9.54                           | 48.71                   | 68.20          | -19.49      |
| 27500.00        | Peak     | H               | -                   | -                          | -50.92               | 5.07        | -9.54                           | 51.61                   | 68.20          | -16.59      |

**Table 7-33. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5600MHz  
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00      | Average  | H               | -                   | -                          | -78.52               | 14.26       | 0.00                            | 42.74                   | 53.98          | -11.24      |
| * 11200.00      | Peak     | H               | -                   | -                          | -66.39               | 14.26       | 0.00                            | 54.87                   | 73.98          | -19.11      |
| 16800.00        | Peak     | H               | -                   | -                          | -66.79               | 16.67       | 0.00                            | 56.88                   | 68.20          | -11.32      |
| * 22400.00      | Average  | H               | -                   | -                          | -79.37               | 19.81       | -9.54                           | 37.90                   | 53.98          | -16.08      |
| * 22400.00      | Peak     | H               | -                   | -                          | -67.75               | 19.81       | -9.54                           | 49.52                   | 73.98          | -24.46      |
| 28000.00        | Peak     | H               | -                   | -                          | -51.87               | 5.83        | -9.54                           | 51.41                   | 68.20          | -16.79      |

**Table 7-34. Radiated Measurements SISO ANT1**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 180 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5700z  
 Channel: 140

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00      | Average  | H               | -                   | -                          | -79.12               | 14.25       | 0.00                            | 42.13                   | 53.98          | -11.84      |
| * 11440.00      | Peak     | H               | -                   | -                          | -66.75               | 14.25       | 0.00                            | 54.50                   | 73.98          | -19.47      |
| 17160.00        | Peak     | H               | -                   | -                          | -67.04               | 18.43       | 0.00                            | 58.39                   | 68.20          | -9.81       |
| * 22880.00      | Average  | H               | -                   | -                          | -67.83               | 19.64       | -9.54                           | 49.27                   | 53.98          | -4.71       |
| * 22880.00      | Peak     | H               | -                   | -                          | -79.41               | 19.64       | -9.54                           | 37.69                   | 73.98          | -36.29      |
| 28600.00        | Peak     | H               | -                   | -                          | -51.67               | 5.12        | -9.54                           | 50.90                   | 68.20          | -17.30      |

**Table 7-35. Radiated Measurements SISO ANT1**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5745MHz  
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00      | Average  | H               | -                   | -                          | -79.57               | 14.74       | 0.00                            | 42.17                   | 53.98          | -11.81      |
| * 11490.00      | Peak     | H               | -                   | -                          | -66.77               | 14.74       | 0.00                            | 54.97                   | 73.98          | -19.01      |
| 17235.00        | Peak     | H               | -                   | -                          | -65.67               | 18.65       | 0.00                            | 59.98                   | 68.20          | -8.22       |
| * 22980.00      | Average  | H               | -                   | -                          | -79.75               | 19.39       | -9.54                           | 37.10                   | 53.98          | -16.88      |
| * 22980.00      | Peak     | H               | -                   | -                          | -67.90               | 19.39       | -9.54                           | 48.95                   | 73.98          | -25.03      |
| 28725.00        | Peak     | H               | -                   | -                          | -54.57               | 6.24        | -9.54                           | 49.13                   | 68.20          | -19.07      |

**Table 7-36. Radiated Measurements SISO ANT1**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 181 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5785MHz  
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00      | Average  | H               | -                   | -                          | -78.92               | 14.20       | 0.00                            | 42.28                   | 53.98          | -11.70      |
| * 11570.00      | Peak     | H               | -                   | -                          | -66.81               | 14.20       | 0.00                            | 54.39                   | 73.98          | -19.59      |
| 17355.00        | Peak     | H               | -                   | -                          | -66.40               | 21.29       | 0.00                            | 61.89                   | 68.20          | -6.31       |
| 23140.00        | Peak     | H               | -                   | -                          | -67.99               | 19.78       | -9.54                           | 49.24                   | 68.20          | -18.96      |
| 28925.00        | Peak     | H               | -                   | -                          | -53.86               | 5.18        | -9.54                           | 48.78                   | 68.20          | -19.42      |

**Table 7-37. Radiated Measurements SISO ANT1**

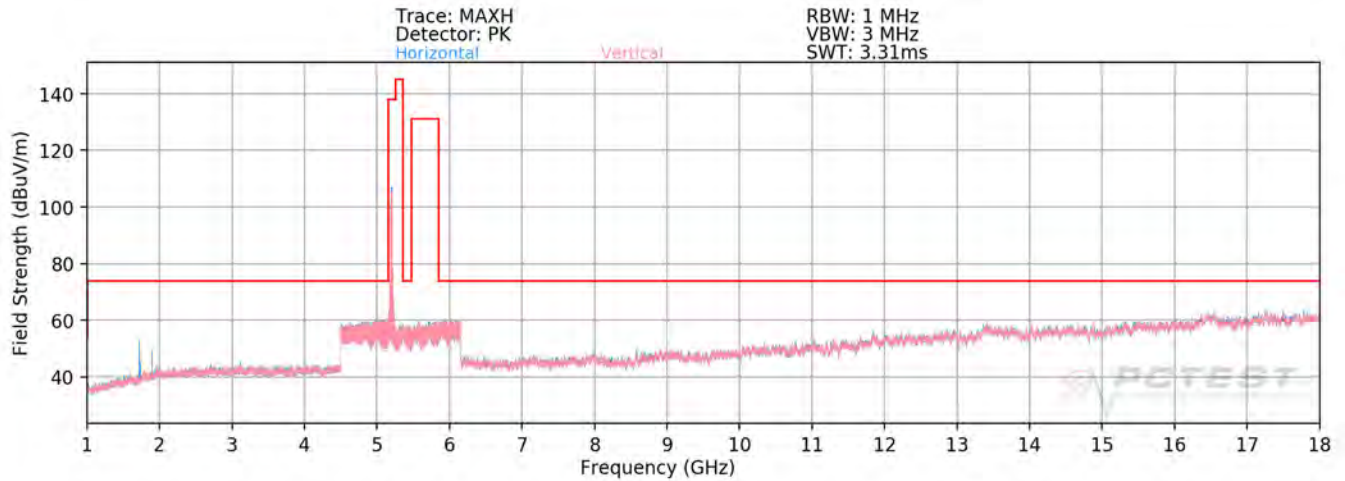
Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00      | Average  | H               | -                   | -                          | -78.61               | 14.27       | 0.00                            | 42.66                   | 53.98          | -11.32      |
| * 11650.00      | Peak     | H               | -                   | -                          | -66.86               | 14.27       | 0.00                            | 54.41                   | 73.98          | -19.57      |
| 17475.00        | Peak     | H               | -                   | -                          | -65.89               | 20.81       | 0.00                            | 61.92                   | 68.20          | -6.28       |
| 23300.00        | Peak     | H               | -                   | -                          | -68.15               | 20.06       | -9.54                           | 49.37                   | 68.20          | -18.83      |
| 29125.00        | Peak     | H               | -                   | -                          | -50.26               | 4.94        | -9.54                           | 52.14                   | 68.20          | -16.06      |

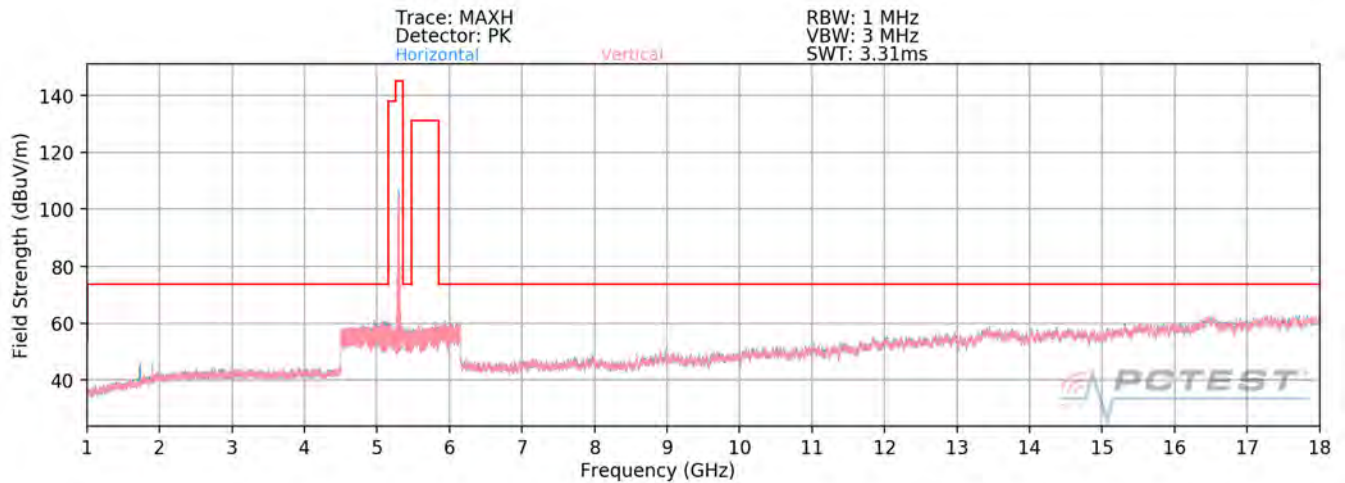
**Table 7-38. Radiated Measurements SISO ANT1**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 182 of 227                 |

## 7.6.2 SISO Antenna-2 Radiated Spurious Emission Measurements

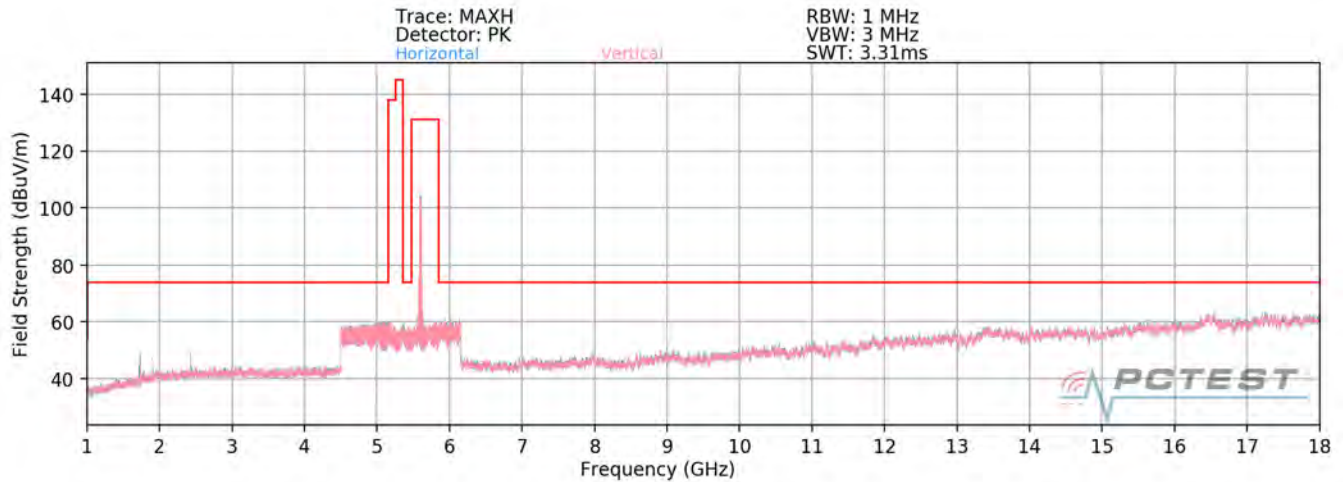


**Plot 7-265. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U1 Ch. 40)**

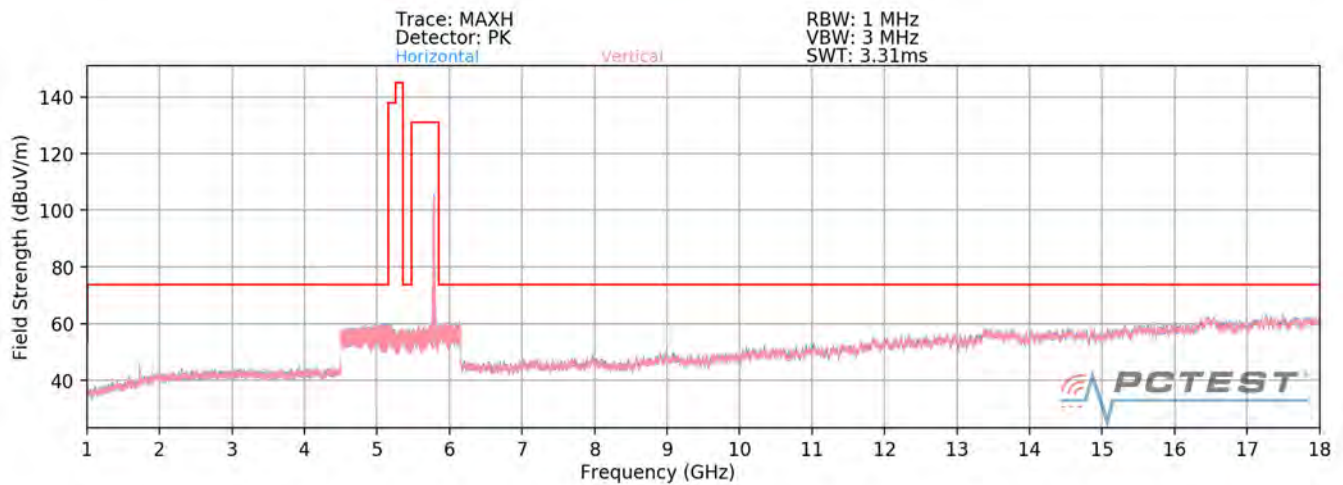


**Plot 7-266. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2A Ch. 56)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 183 of 227                 |



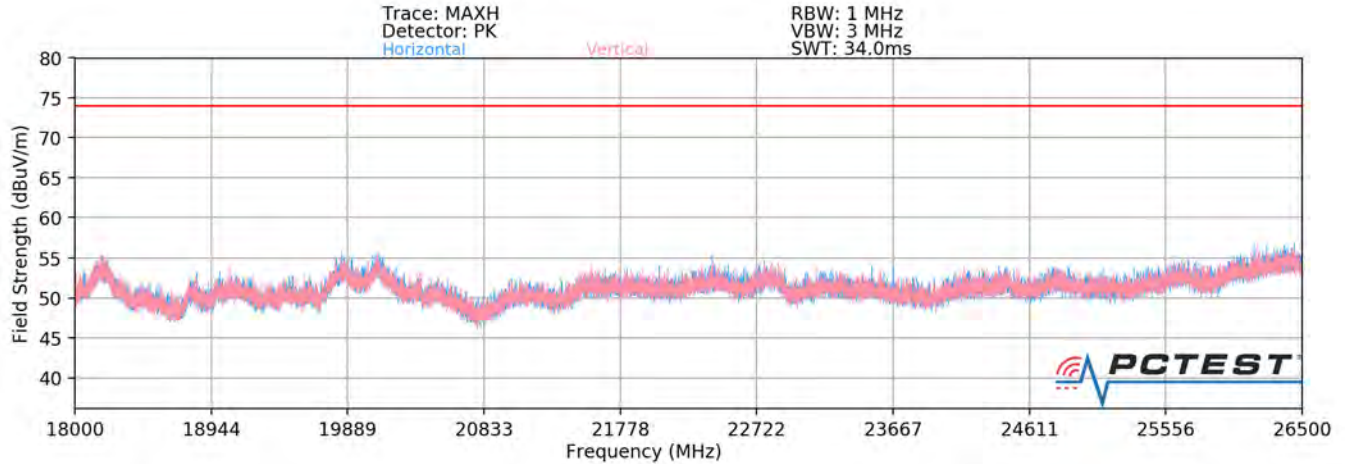
**Plot 7-267. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U2C Ch. 116)**



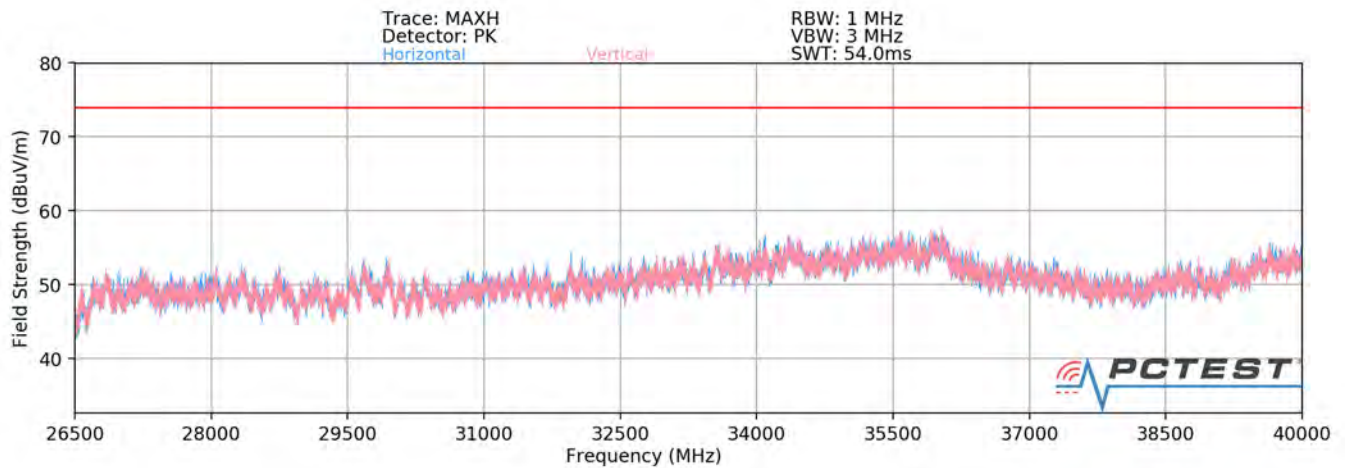
**Plot 7-268. Radiated Spurious Plot above 1GHz SISO ANT2 (802.11a – U3 Ch. 157)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 184 of 227                 |

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



**Plot 7-269. Radiated Spurious Plot above 18GHz - 26.5GHz SISO ANT2 (802.11a)**



**Plot 7-270. Radiated Spurious Plot 26.5GHz - 40GHz SISO ANT2 (802.11a)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 185 of 227                 |

## SISO Antenna-2 Radiated Spurious Emission Measurements

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

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5180MHz  
Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00        | Peak     | H               | -                   | -                          | -67.99               | 12.76       | 0.00                            | 51.77                   | 68.20          | -16.43      |
| * 15540.00      | Average  | H               | -                   | -                          | -78.87               | 15.66       | 0.00                            | 43.79                   | 53.98          | -10.18      |
| * 15540.00      | Peak     | H               | -                   | -                          | -66.34               | 15.66       | 0.00                            | 56.32                   | 73.98          | -17.65      |
| * 20720.00      | Average  | H               | -                   | -                          | -80.09               | 17.88       | -9.54                           | 35.25                   | 53.98          | -18.73      |
| * 20720.00      | Peak     | H               | -                   | -                          | -65.83               | 17.88       | -9.54                           | 49.51                   | 73.98          | -24.47      |
| 25900.00        | Peak     | H               | -                   | -                          | -67.79               | 20.40       | -9.54                           | 50.07                   | 68.20          | -18.13      |

Table 7-39. Radiated Measurements SISO ANT2

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5200MHz  
Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00        | Peak     | H               | -                   | -                          | -67.75               | 12.52       | 0.00                            | 51.77                   | 68.20          | -16.43      |
| * 15600.00      | Average  | H               | -                   | -                          | -77.70               | 16.09       | 0.00                            | 45.39                   | 53.98          | -8.59       |
| * 15600.00      | Peak     | H               | -                   | -                          | -67.67               | 16.09       | 0.00                            | 55.42                   | 73.98          | -18.56      |
| * 20800.00      | Average  | H               | -                   | -                          | -80.31               | 18.08       | -9.54                           | 35.23                   | 53.98          | -18.75      |
| * 20800.00      | Peak     | H               | -                   | -                          | -68.70               | 18.08       | -9.54                           | 46.84                   | 73.98          | -27.14      |
| 26000.00        | Peak     | H               | -                   | -                          | -67.16               | 20.68       | -9.54                           | 50.97                   | 68.20          | -17.23      |

Table 7-40. Radiated Measurements SISO ANT2

|                                         |                                                                                                                        |                                                                                       |                                 |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  MEASUREMENT REPORT (CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                          | EUT Type:<br>Portable Handset                                                         | Page 186 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5240MHz  
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00        | Peak     | H               | -                   | -                          | -66.82               | 12.52       | 0.00                            | 52.70                   | 68.20          | -15.50      |
| * 15720.00      | Average  | H               | -                   | -                          | -77.57               | 16.17       | 0.00                            | 45.60                   | 53.98          | -8.38       |
| * 15720.00      | Peak     | H               | -                   | -                          | -66.71               | 16.17       | 0.00                            | 56.46                   | 73.98          | -17.52      |
| * 20960.00      | Average  | H               | -                   | -                          | -79.78               | 18.46       | -9.54                           | 36.14                   | 53.98          | -17.84      |
| * 20960.00      | Peak     | H               | -                   | -                          | -68.19               | 18.46       | -9.54                           | 47.73                   | 73.98          | -26.25      |
| 26200.00        | Peak     | H               | -                   | -                          | -67.53               | 20.96       | -9.54                           | 50.89                   | 68.20          | -17.31      |

**Table 7-41. Radiated Measurements SISO ANT2**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5260MHz  
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00        | Peak     | H               | -                   | -                          | -65.86               | 13.09       | 0.00                            | 54.23                   | 68.20          | -13.97      |
| * 15780.00      | Average  | H               | -                   | -                          | -77.81               | 16.22       | 0.00                            | 45.41                   | 53.98          | -8.57       |
| * 15780.00      | Peak     | H               | -                   | -                          | -67.14               | 16.22       | 0.00                            | 56.08                   | 73.98          | -17.90      |
| * 21040.00      | Average  | H               | -                   | -                          | -79.64               | 18.64       | -9.54                           | 36.45                   | 53.98          | -17.53      |
| * 21040.00      | Peak     | H               | -                   | -                          | -68.30               | 18.64       | -9.54                           | 47.79                   | 73.98          | -26.19      |
| 26300.00        | Peak     | H               | -                   | -                          | -67.20               | 21.23       | -9.54                           | 51.49                   | 68.20          | -16.71      |

**Table 7-42. Radiated Measurements SISO ANT2**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 187 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5280MHz  
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00        | Peak     | H               | -                   | -                          | -67.07               | 13.76       | 0.00                            | 53.69                   | 68.20          | -14.51      |
| * 15840.00      | Average  | H               | -                   | -                          | -77.72               | 15.82       | 0.00                            | 45.10                   | 53.98          | -8.88       |
| * 15840.00      | Peak     | H               | -                   | -                          | -67.32               | 15.82       | 0.00                            | 55.50                   | 73.98          | -18.48      |
| * 21120.00      | Average  | H               | -                   | -                          | -79.93               | 18.80       | -9.54                           | 36.33                   | 53.98          | -17.65      |
| * 21120.00      | Peak     | H               | -                   | -                          | -68.54               | 18.80       | -9.54                           | 47.72                   | 73.98          | -26.26      |
| 26400.00        | Peak     | H               | -                   | -                          | -67.33               | 21.49       | -9.54                           | 51.61                   | 68.20          | -16.59      |

**Table 7-43. Radiated Measurements SISO ANT2**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00      | Average  | H               | -                   | -                          | -77.71               | 13.66       | 0.00                            | 42.95                   | 53.98          | -11.03      |
| * 10640.00      | Peak     | H               | -                   | -                          | -67.08               | 13.66       | 0.00                            | 53.58                   | 73.98          | -20.40      |
| * 15960.00      | Average  | H               | -                   | -                          | -77.72               | 15.05       | 0.00                            | 44.33                   | 53.98          | -9.64       |
| * 15960.00      | Peak     | H               | -                   | -                          | -65.46               | 15.05       | 0.00                            | 56.59                   | 73.98          | -17.38      |
| * 21280.00      | Average  | H               | -                   | -                          | -79.89               | 18.76       | -9.54                           | 36.33                   | 53.98          | -17.65      |
| * 21280.00      | Peak     | H               | -                   | -                          | -68.17               | 18.76       | -9.54                           | 48.05                   | 73.98          | -25.93      |
| 26600.00        | Peak     | H               | -                   | -                          | -52.56               | 6.35        | -9.54                           | 51.24                   | 68.20          | -16.96      |

**Table 7-44. Radiated Measurements SISO ANT2**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 188 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00      | Average  | H               | -                   | -                          | -77.62               | 13.62       | 0.00                            | 43.00                   | 53.98          | -10.98      |
| * 11000.00      | Peak     | H               | -                   | -                          | -67.30               | 13.62       | 0.00                            | 53.32                   | 73.98          | -20.66      |
| 16500.00        | Peak     | H               | -                   | -                          | -65.81               | 15.75       | 0.00                            | 56.94                   | 68.20          | -11.26      |
| 22000.00        | Peak     | H               | -                   | -                          | -67.70               | 19.37       | -9.54                           | 49.13                   | 68.20          | -19.07      |
| 27500.00        | Peak     | H               | -                   | -                          | -50.58               | 5.07        | -9.54                           | 51.95                   | 68.20          | -16.25      |

**Table 7-45. Radiated Measurements SISO ANT2**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5600MHz  
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00      | Average  | H               | -                   | -                          | -77.75               | 14.26       | 0.00                            | 43.51                   | 53.98          | -10.47      |
| * 11200.00      | Peak     | H               | -                   | -                          | -66.67               | 14.26       | 0.00                            | 54.59                   | 73.98          | -19.39      |
| 16800.00        | Peak     | H               | -                   | -                          | -65.29               | 16.67       | 0.00                            | 58.38                   | 68.20          | -9.82       |
| * 22400.00      | Average  | H               | -                   | -                          | -79.51               | 19.81       | -9.54                           | 37.76                   | 53.98          | -16.22      |
| * 22400.00      | Peak     | H               | -                   | -                          | -68.27               | 19.81       | -9.54                           | 49.00                   | 73.98          | -24.98      |
| 28000.00        | Peak     | H               | -                   | -                          | -51.81               | 5.83        | -9.54                           | 51.47                   | 68.20          | -16.73      |

**Table 7-46. Radiated Measurements SISO ANT2**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 189 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5720MHz  
 Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00      | Average  | H               | -                   | -                          | -76.45               | 14.25       | 0.00                            | 44.80                   | 53.98          | -9.17       |
| * 11440.00      | Peak     | H               | -                   | -                          | -65.55               | 14.25       | 0.00                            | 55.70                   | 73.98          | -18.27      |
| 17160.00        | Peak     | H               | -                   | -                          | -65.36               | 18.43       | 0.00                            | 60.07                   | 68.20          | -8.13       |
| * 22880.00      | Average  | H               | -                   | -                          | -79.35               | 19.64       | -9.54                           | 37.75                   | 53.98          | -16.23      |
| * 22880.00      | Peak     | H               | -                   | -                          | -68.21               | 19.64       | -9.54                           | 48.89                   | 73.98          | -25.09      |
| 28600.00        | Peak     | H               | -                   | -                          | -50.90               | 5.12        | -9.54                           | 51.67                   | 68.20          | -16.53      |

**Table 7-47. Radiated Measurements SISO ANT2**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5745MHz  
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00      | Average  | H               | -                   | -                          | -77.60               | 14.74       | 0.00                            | 44.14                   | 53.98          | -9.84       |
| * 11490.00      | Peak     | H               | -                   | -                          | -65.95               | 14.74       | 0.00                            | 55.79                   | 73.98          | -18.19      |
| 17235.00        | Peak     | H               | -                   | -                          | -65.19               | 18.65       | 0.00                            | 60.46                   | 68.20          | -7.74       |
| * 22980.00      | Average  | H               | -                   | -                          | -79.73               | 19.39       | -9.54                           | 37.12                   | 53.98          | -16.86      |
| * 22980.00      | Peak     | H               | -                   | -                          | -68.71               | 19.39       | -9.54                           | 48.14                   | 73.98          | -25.84      |
| 28725.00        | Peak     | H               | -                   | -                          | -50.32               | 6.24        | -9.54                           | 53.38                   | 68.20          | -14.82      |

**Table 7-48. Radiated Measurements SISO ANT2**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 190 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5785MHz  
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00      | Average  | H               | -                   | -                          | -77.31               | 14.20       | 0.00                            | 43.89                   | 53.98          | -10.09      |
| * 11570.00      | Peak     | H               | -                   | -                          | -66.42               | 14.20       | 0.00                            | 54.78                   | 73.98          | -19.20      |
| 17355.00        | Peak     | H               | -                   | -                          | -65.70               | 21.29       | 0.00                            | 62.59                   | 68.20          | -5.61       |
| 23140.00        | Peak     | H               | -                   | -                          | -67.52               | 19.78       | -9.54                           | 49.71                   | 68.20          | -18.49      |
| 28925.00        | Peak     | H               | -                   | -                          | -53.17               | 5.18        | -9.54                           | 49.47                   | 68.20          | -18.73      |

**Table 7-49. Radiated Measurements SISO ANT2**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5825MHz  
 Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00      | Average  | H               | -                   | -                          | -77.91               | 14.27       | 0.00                            | 43.36                   | 53.98          | -10.62      |
| * 11650.00      | Peak     | H               | -                   | -                          | -65.43               | 14.27       | 0.00                            | 55.84                   | 73.98          | -18.14      |
| 17475.00        | Peak     | H               | -                   | -                          | -65.55               | 20.81       | 0.00                            | 62.26                   | 68.20          | -5.94       |
| 23300.00        | Peak     | H               | -                   | -                          | -68.31               | 20.06       | -9.54                           | 49.21                   | 68.20          | -18.99      |
| 29125.00        | Peak     | H               | -                   | -                          | -49.79               | 4.94        | -9.54                           | 52.61                   | 68.20          | -15.59      |

**Table 7-50. Radiated Measurements SISO ANT2**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 191 of 227                 |

### 7.6.3 MIMO Radiated Spurious Emission Measurements

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

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5180MHz  
Channel: 36

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10360.00        | Peak     | V               | 113                 | 22                         | -67.29               | 12.76       | 0.00                            | 52.47                   | 68.20          | -15.73      |
| * 15540.00      | Average  | V               | -                   | -                          | -77.58               | 15.66       | 0.00                            | 45.08                   | 53.98          | -8.89       |
| * 15540.00      | Peak     | V               | -                   | -                          | -65.51               | 15.66       | 0.00                            | 57.15                   | 73.98          | -16.82      |
| * 20720.00      | Average  | V               | -                   | -                          | -80.03               | 17.88       | -9.54                           | 35.31                   | 53.98          | -18.67      |
| * 20720.00      | Peak     | V               | -                   | -                          | -69.05               | 17.88       | -9.54                           | 46.29                   | 73.98          | -27.69      |
| 25900.00        | Peak     | V               | -                   | -                          | -67.25               | 20.40       | -9.54                           | 50.61                   | 68.20          | -17.59      |

Table 7-51. Radiated Measurements MIMO

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5200MHz  
Channel: 40

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10400.00        | Peak     | V               | 110                 | 28                         | -65.97               | 12.52       | 0.00                            | 53.55                   | 68.20          | -14.65      |
| * 15600.00      | Average  | V               | -                   | -                          | -77.79               | 16.09       | 0.00                            | 45.30                   | 53.98          | -8.68       |
| * 15600.00      | Peak     | V               | -                   | -                          | -65.10               | 16.09       | 0.00                            | 57.99                   | 73.98          | -15.99      |
| * 20800.00      | Average  | V               | -                   | -                          | -80.25               | 18.08       | -9.54                           | 35.29                   | 53.98          | -18.69      |
| * 20800.00      | Peak     | V               | -                   | -                          | -68.86               | 18.08       | -9.54                           | 46.68                   | 73.98          | -27.30      |
| 26000.00        | Peak     | V               | -                   | -                          | -65.57               | 20.68       | -9.54                           | 52.56                   | 68.20          | -15.64      |

Table 7-52. Radiated Measurements MIMO

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 192 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5240MHz  
 Channel: 48

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10480.00        | Peak     | V               | 134                 | 57                         | -65.28               | 12.52       | 0.00                            | 54.24                   | 68.20          | -13.96      |
| * 15720.00      | Average  | V               | -                   | -                          | -77.65               | 16.17       | 0.00                            | 45.52                   | 53.98          | -8.46       |
| * 15720.00      | Peak     | V               | -                   | -                          | -66.63               | 16.17       | 0.00                            | 56.54                   | 73.98          | -17.44      |
| * 20960.00      | Average  | V               | -                   | -                          | -79.82               | 18.46       | -9.54                           | 36.10                   | 53.98          | -17.88      |
| * 20960.00      | Peak     | V               | -                   | -                          | -68.70               | 18.46       | -9.54                           | 47.22                   | 73.98          | -26.76      |
| 26200.00        | Peak     | V               | -                   | -                          | -66.30               | 20.96       | -9.54                           | 52.12                   | 68.20          | -16.08      |

**Table 7-53. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5260MHz  
 Channel: 52

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10520.00        | Peak     | V               | 112                 | 61                         | -67.34               | 13.09       | 0.00                            | 52.75                   | 68.20          | -15.45      |
| * 15780.00      | Average  | V               | -                   | -                          | -77.37               | 16.22       | 0.00                            | 45.85                   | 53.98          | -8.13       |
| * 15780.00      | Peak     | V               | -                   | -                          | -66.74               | 16.22       | 0.00                            | 56.48                   | 73.98          | -17.50      |
| * 21040.00      | Average  | V               | -                   | -                          | -78.78               | 18.64       | -9.54                           | 37.31                   | 53.98          | -16.67      |
| * 21040.00      | Peak     | V               | -                   | -                          | -66.30               | 18.64       | -9.54                           | 49.79                   | 73.98          | -24.19      |
| 26300.00        | Peak     | V               | -                   | -                          | -68.40               | 21.23       | -9.54                           | 50.29                   | 68.20          | -17.91      |

**Table 7-54. Radiated Measurements MIMO**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 193 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5280MHz  
 Channel: 56

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| 10560.00        | Peak     | V               | 142                 | 57                         | -65.93               | 13.76       | 0.00                            | 54.83                   | 68.20          | -13.37      |
| * 15840.00      | Average  | V               | -                   | -                          | -77.52               | 15.82       | 0.00                            | 45.30                   | 53.98          | -8.68       |
| * 15840.00      | Peak     | V               | -                   | -                          | -65.79               | 15.82       | 0.00                            | 57.03                   | 73.98          | -16.95      |
| * 21120.00      | Average  | V               | -                   | -                          | -80.03               | 18.80       | -9.54                           | 36.23                   | 53.98          | -17.75      |
| * 21120.00      | Peak     | V               | -                   | -                          | -68.90               | 18.80       | -9.54                           | 47.36                   | 73.98          | -26.62      |
| 26400.00        | Peak     | V               | -                   | -                          | -66.80               | 21.49       | -9.54                           | 52.14                   | 68.20          | -16.06      |

**Table 7-55. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5320MHz  
 Channel: 64

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 10640.00      | Average  | V               | 127                 | 59                         | -77.72               | 13.66       | 0.00                            | 42.94                   | 53.98          | -11.04      |
| * 10640.00      | Peak     | V               | 127                 | 59                         | -65.82               | 13.66       | 0.00                            | 54.84                   | 73.98          | -19.14      |
| * 15960.00      | Average  | V               | -                   | -                          | -77.79               | 15.05       | 0.00                            | 44.26                   | 53.98          | -9.71       |
| * 15960.00      | Peak     | V               | -                   | -                          | -65.35               | 15.05       | 0.00                            | 56.70                   | 73.98          | -17.27      |
| * 21280.00      | Average  | V               | -                   | -                          | -79.99               | 18.76       | -9.54                           | 36.23                   | 53.98          | -17.75      |
| * 21280.00      | Peak     | V               | -                   | -                          | -68.49               | 18.76       | -9.54                           | 47.73                   | 73.98          | -26.25      |
| 26600.00        | Peak     | V               | -                   | -                          | -52.40               | 6.35        | -9.54                           | 51.40                   | 68.20          | -16.80      |

**Table 7-56. Radiated Measurements MIMO**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 194 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5500MHz  
 Channel: 100

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11000.00      | Average  | V               | -                   | -                          | -77.87               | 12.46       | 0.00                            | 41.59                   | 53.98          | -12.39      |
| * 11000.00      | Peak     | V               | -                   | -                          | -65.51               | 12.46       | 0.00                            | 53.95                   | 73.98          | -20.03      |
| 16500.00        | Peak     | V               | -                   | -                          | -67.71               | 15.05       | 0.00                            | 54.34                   | 68.20          | -13.86      |
| 22000.00        | Peak     | V               | -                   | -                          | -67.86               | 19.37       | -9.54                           | 48.97                   | 68.20          | -19.23      |
| 27500.00        | Peak     | V               | -                   | -                          | -50.38               | 5.07        | -9.54                           | 52.15                   | 68.20          | -16.05      |

**Table 7-57. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5600MHz  
 Channel: 120

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11200.00      | Average  | V               | 286                 | 229                        | -77.01               | 11.98       | 0.00                            | 41.97                   | 53.98          | -12.01      |
| * 11200.00      | Peak     | V               | 286                 | 229                        | -66.01               | 11.98       | 0.00                            | 52.97                   | 73.98          | -21.01      |
| 16800.00        | Peak     | V               | -                   | -                          | -67.40               | 15.81       | 0.00                            | 55.41                   | 68.20          | -12.79      |
| * 22400.00      | Average  | V               | -                   | -                          | -79.57               | 19.81       | -9.54                           | 37.70                   | 53.98          | -16.28      |
| * 22400.00      | Peak     | V               | -                   | -                          | -68.48               | 19.81       | -9.54                           | 48.79                   | 73.98          | -25.19      |
| 28000.00        | Peak     | V               | -                   | -                          | -51.44               | 5.83        | -9.54                           | 51.84                   | 68.20          | -16.36      |

**Table 7-58. Radiated Measurements MIMO**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 195 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5720MHz  
 Channel: 144

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11440.00      | Average  | V               | 268                 | 233                        | -73.77               | 12.60       | 0.00                            | 45.83                   | 53.98          | -8.14       |
| * 11440.00      | Peak     | V               | 268                 | 233                        | -61.76               | 12.60       | 0.00                            | 57.84                   | 73.98          | -16.13      |
| 17160.00        | Peak     | V               | -                   | -                          | -66.90               | 17.34       | 0.00                            | 57.44                   | 68.20          | -10.76      |
| * 22880.00      | Average  | V               | -                   | -                          | -79.30               | 19.64       | -9.54                           | 37.80                   | 53.98          | -16.18      |
| * 22880.00      | Peak     | V               | -                   | -                          | -67.51               | 19.64       | -9.54                           | 49.59                   | 73.98          | -24.39      |
| 28600.00        | Peak     | V               | -                   | -                          | -51.93               | 5.12        | -9.54                           | 50.64                   | 68.20          | -17.56      |

**Table 7-59. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5745MHz  
 Channel: 149

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11490.00      | Average  | V               | 324                 | 35                         | -75.36               | 12.33       | 0.00                            | 43.97                   | 53.98          | -10.01      |
| * 11490.00      | Peak     | V               | 324                 | 35                         | -63.66               | 12.33       | 0.00                            | 55.67                   | 73.98          | -18.31      |
| 17235.00        | Peak     | V               | -                   | -                          | -65.07               | 16.44       | 0.00                            | 58.37                   | 68.20          | -9.83       |
| * 22980.00      | Average  | V               | -                   | -                          | -79.71               | 19.39       | -9.54                           | 37.14                   | 53.98          | -16.84      |
| * 22980.00      | Peak     | V               | -                   | -                          | -68.24               | 19.39       | -9.54                           | 48.61                   | 73.98          | -25.37      |
| 28725.00        | Peak     | V               | -                   | -                          | -50.60               | 6.24        | -9.54                           | 53.10                   | 69.20          | -16.10      |

**Table 7-60. Radiated Measurements MIMO**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 196 of 227                 |

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5785MHz  
Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00      | Average  | V               | 253                 | 216                        | -69.84               | 12.66       | 0.00                            | 49.82                   | 53.98          | -4.16       |
| * 11570.00      | Peak     | V               | 253                 | 216                        | -58.29               | 12.66       | 0.00                            | 61.37                   | 73.98          | -12.61      |
| 17355.00        | Peak     | V               | -                   | -                          | -67.03               | 19.52       | 0.00                            | 59.49                   | 68.20          | -8.71       |
| 23140.00        | Peak     | V               | -                   | -                          | -68.13               | 19.78       | -9.54                           | 49.10                   | 68.20          | -19.10      |
| 28925.00        | Peak     | V               | -                   | -                          | -52.86               | 5.18        | -9.54                           | 49.78                   | 68.20          | -18.42      |

**Table 7-61. Radiated Measurements MIMO**

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 1 & 3 Meters  
Operating Frequency: 5825MHz  
Channel: 165

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11650.00      | Average  | V               | 215                 | 208                        | -69.61               | 13.52       | 0.00                            | 50.91                   | 53.98          | -3.07       |
| * 11650.00      | Peak     | V               | 215                 | 208                        | -57.05               | 13.52       | 0.00                            | 63.47                   | 73.98          | -10.51      |
| 17475.00        | Peak     | V               | -                   | -                          | -69.15               | 19.52       | 0.00                            | 57.37                   | 68.20          | -10.83      |
| 23300.00        | Peak     | V               | -                   | -                          | -68.18               | 20.06       | -9.54                           | 49.34                   | 68.20          | -18.86      |
| 29125.00        | Peak     | V               | -                   | -                          | -50.15               | 4.94        | -9.54                           | 52.25                   | 68.20          | -15.95      |

**Table 7-62. Radiated Measurements MIMO**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 197 of 227                 |

Worst Case Mode: 802.11a  
 Worst Case Transfer Rate: 6Mbps  
 Distance of Measurements: 1 & 3 Meters  
 Operating Frequency: 5785  
 Channel: 157

| Frequency [MHz] | Detector | Ant. Pol. [H/V] | Antenna Height [cm] | Turntable Azimuth [degree] | Analyzer Level [dBm] | AFCL [dB/m] | Distance Correction Factor [dB] | Field Strength [dBμV/m] | Limit [dBμV/m] | Margin [dB] |
|-----------------|----------|-----------------|---------------------|----------------------------|----------------------|-------------|---------------------------------|-------------------------|----------------|-------------|
| * 11570.00      | Average  | H               | 266                 | 302                        | -80.27               | 14.46       | 0.00                            | 41.19                   | 53.98          | -12.79      |
| * 11570.00      | Peak     | H               | 266                 | 302                        | -72.92               | 14.46       | 0.00                            | 48.54                   | 73.98          | -25.44      |
| 17355.00        | Peak     | H               | -                   | -                          | -76.56               | 20.93       | 0.00                            | 51.37                   | 68.20          | -16.83      |
| 23140.00        | Peak     | H               | -                   | -                          | -62.35               | 20.06       | -9.54                           | 55.17                   | 68.20          | -13.03      |
| 28925.00        | Peak     | H               | -                   | -                          | -51.01               | 4.94        | -9.54                           | 51.39                   | 68.20          | -16.81      |

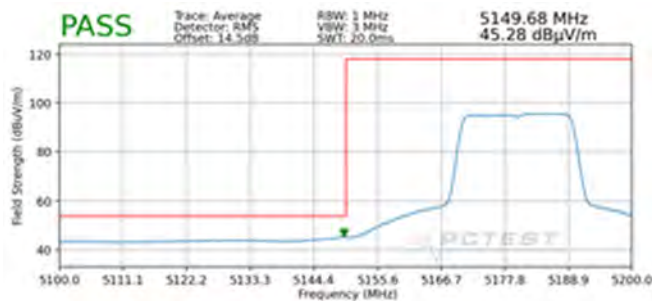
**Table 7-63. Radiated Measurements MIMO with WCP**

|                                         |                                                                                                                                                                                                                     |                                 |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b>  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                                                                                                       | EUT Type:<br>Portable Handset   |
|                                         |                                                                                                                                                                                                                     | Page 198 of 227                 |

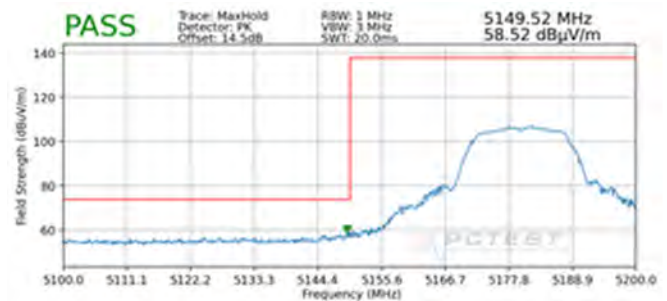
## 7.6.4 SISO Antenna-1 Radiated Band Edge Measurements (20MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]; RSS-Gen [8.9]

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11a  |
| Worst Case Transfer Rate: | 6Mbps    |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5180MHz  |
| Channel:                  | 36       |

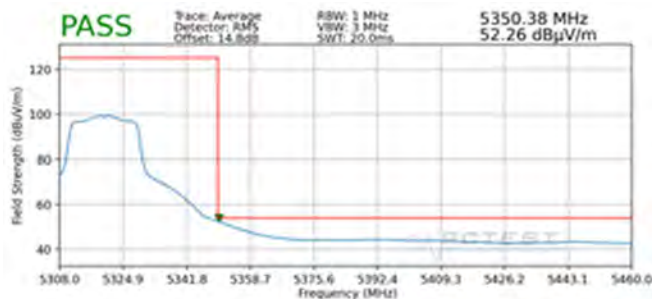


**Plot 7-271. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)**

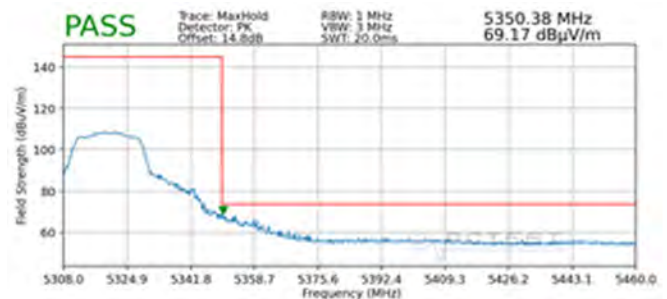


**Plot 7-272. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)**

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11a  |
| Worst Case Transfer Rate: | 6Mbps    |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5320MHz  |
| Channel:                  | 64       |



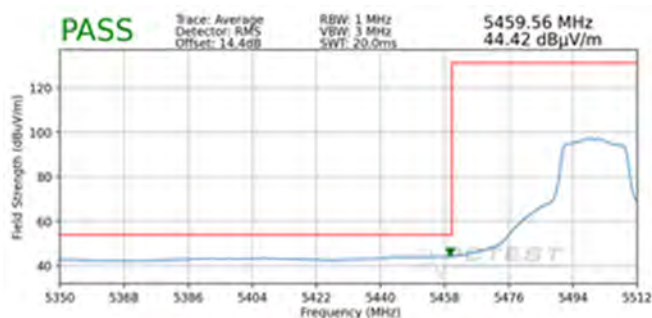
**Plot 7-273. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)**



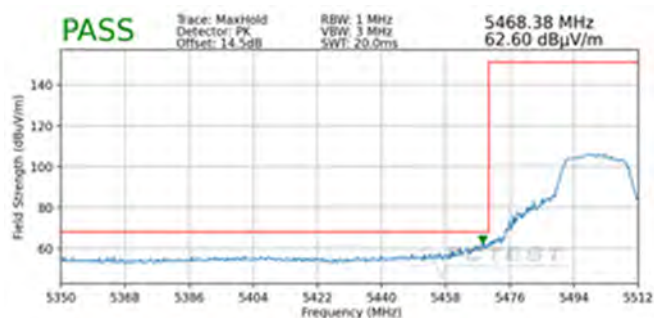
**Plot 7-274. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 199 of 227                 |

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 3 Meters  
Operating Frequency: 5500MHz  
Channel: 100

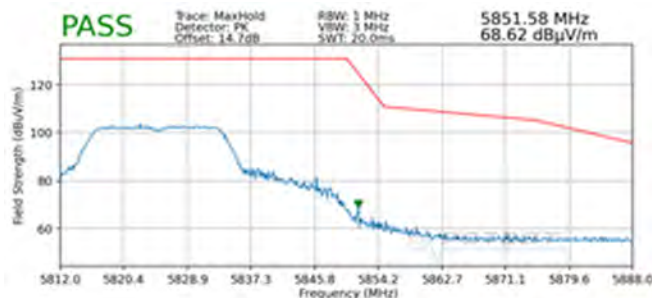


**Plot 7-275. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)**



**Plot 7-276. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)**

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 3 Meters  
Operating Frequency: 5825MHz  
Channel: 165



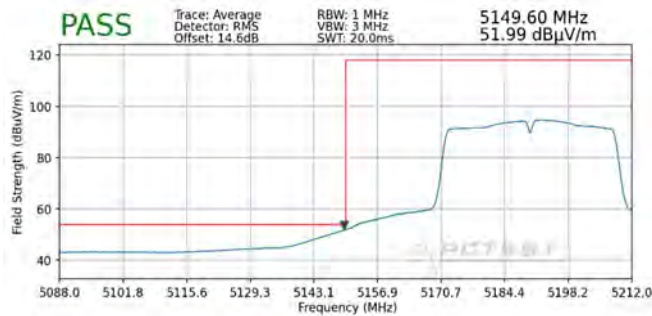
**Plot 7-277. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 200 of 227                 |

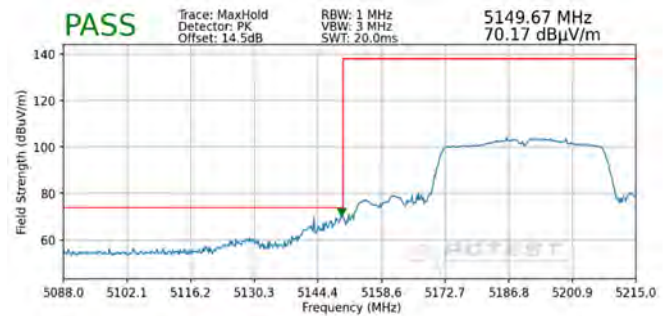
## 7.6.5 SISO Antenna-1 Radiated Band Edge Measurements (40MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11n  |
| Worst Case Transfer Rate: | MCS0     |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5190MHz  |
| Channel:                  | 38       |

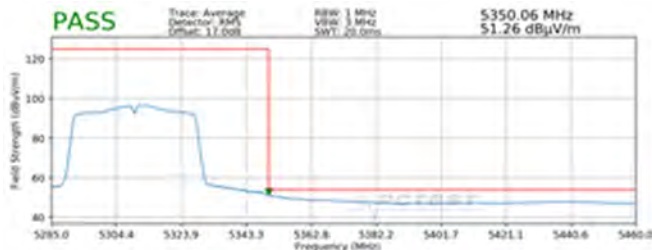


**Plot 7-278. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 1)**

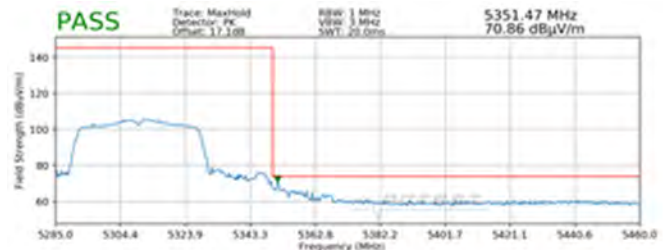


**Plot 7-279. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 1)**

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11n  |
| Worst Case Transfer Rate: | MCS0     |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5310MHz  |
| Channel:                  | 62       |



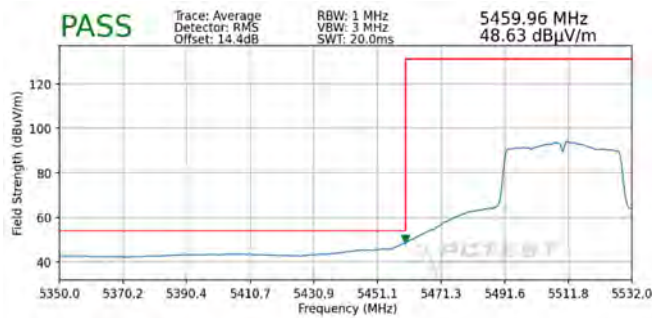
**Plot 7-280. Radiated Upper Band Edge Plot SISO ANT1 (Average – UNII Band 2A)**



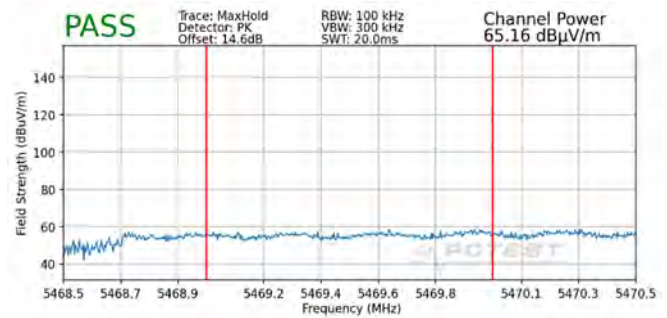
**Plot 7-281. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 2A)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 201 of 227                 |

Worst Case Mode: 802.11n  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5510MHz  
Channel: 102

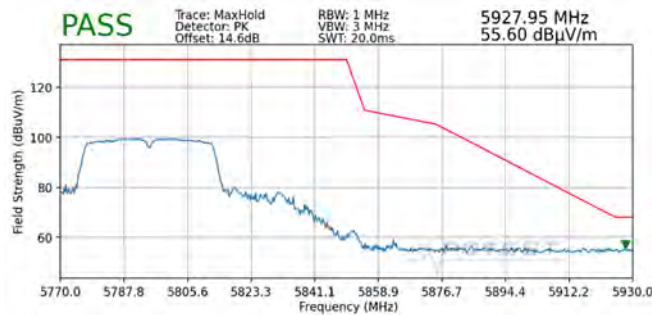


**Plot 7-282. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)**



**Plot 7-283. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)**

Worst Case Mode: 802.11n  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5795MHz  
Channel: 159



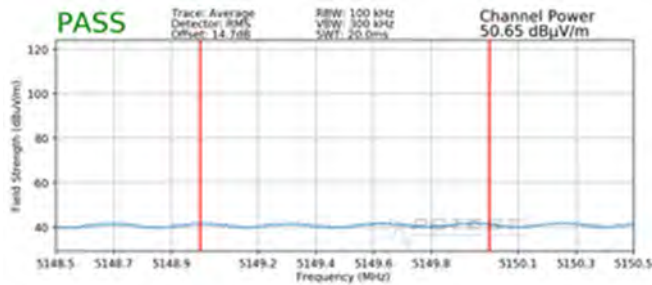
**Plot 7-284. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 202 of 227                 |

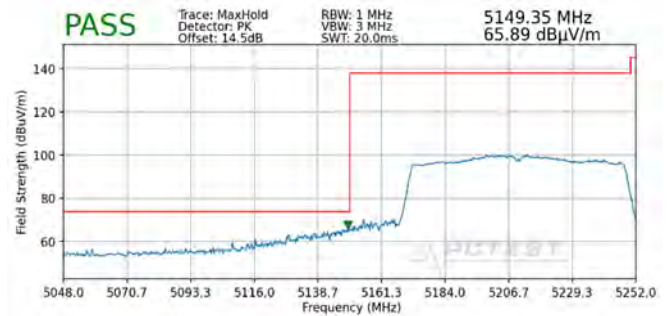
## 7.6.6 SISO Antenna-1 Radiated Band Edge Measurements (80MHz BW)

§15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11ac |
| Worst Case Transfer Rate: | MCS0     |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5210MHz  |
| Channel:                  | 42       |

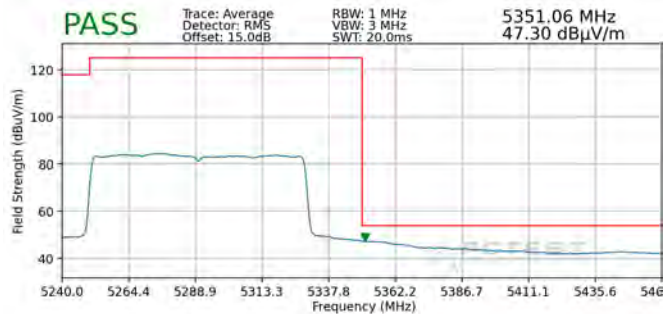


**Plot 7-285. Radiated Lower Band Edge Plot SISO ANT1 (Average - UNII Band 1)**

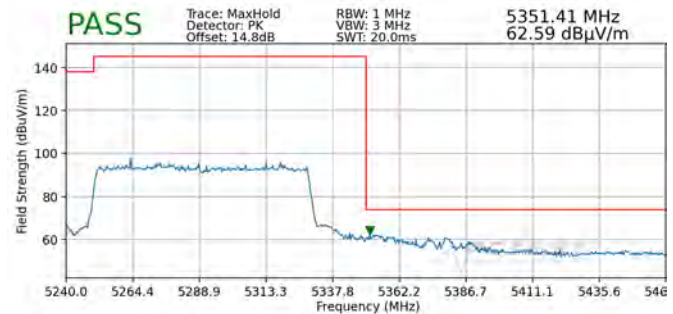


**Plot 7-286. Radiated Lower Band Edge Plot SISO ANT1 (Peak - UNII Band 1)**

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11ac |
| Worst Case Transfer Rate: | MCS0     |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5290MHz  |
| Channel:                  | 58       |



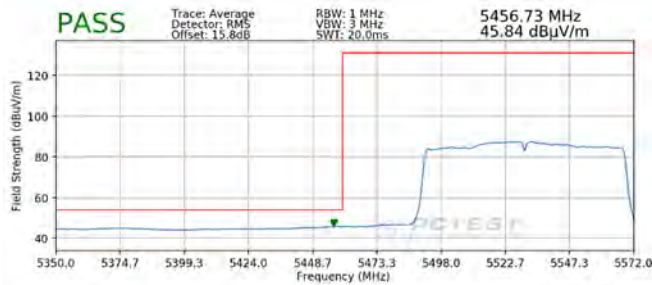
**Plot 7-287. Radiated Upper Band Edge Plot SISO ANT1 (Average - UNII Band 2A)**



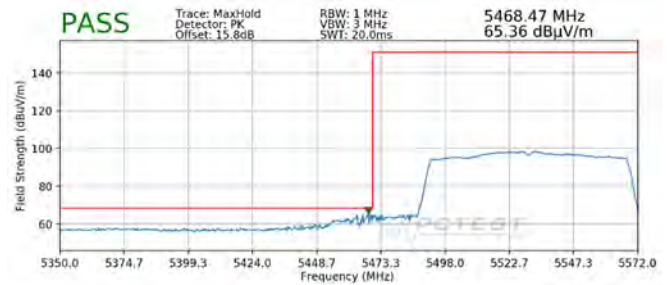
**Plot 7-288. Radiated Upper Band Edge Plot SISO ANT1 (Peak - UNII Band 2A)**

|                                         |                                                                                                                               |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT (CERTIFICATION)</b> |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                 | EUT Type:<br>Portable Handset                                                         | Page 203 of 227                 |

Worst Case Mode: 802.11ac  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5530MHz  
Channel: 106

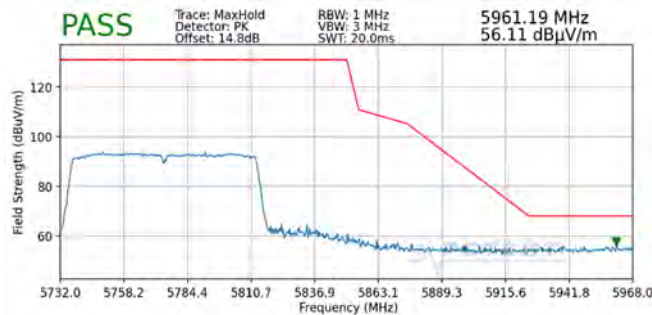


**Plot 7-289. Radiated Lower Band Edge Plot SISO ANT1 (Average – UNII Band 2C)**



**Plot 7-290. Radiated Lower Band Edge Plot SISO ANT1 (Peak – UNII Band 2C)**

Worst Case Mode: 802.11ac  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5775MHz  
Channel: 155

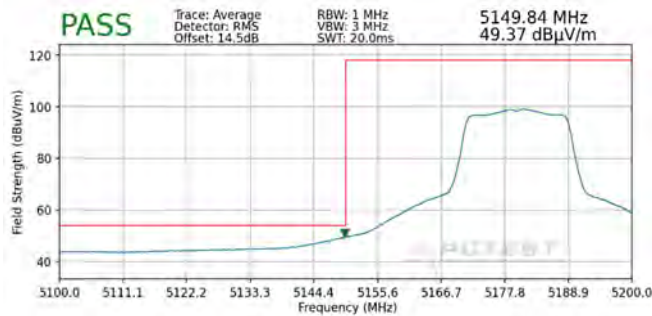


**Plot 7-291. Radiated Upper Band Edge Plot SISO ANT1 (Peak – UNII Band 3)**

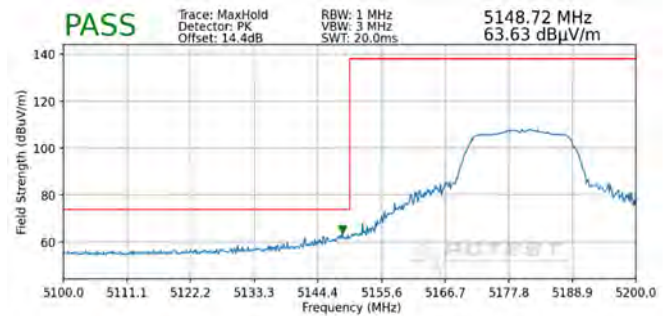
|                                         |                                                                                                                                  |                                                                                       |                                 |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  <b>MEASUREMENT REPORT</b><br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                                                                    | EUT Type:<br>Portable Handset                                                         | Page 204 of 227                 |

## 7.6.7 SISO Antenna-2 Radiated Band Edge Measurements (20MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11a  |
| Worst Case Transfer Rate: | 6Mbps    |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5180MHz  |
| Channel:                  | 36       |

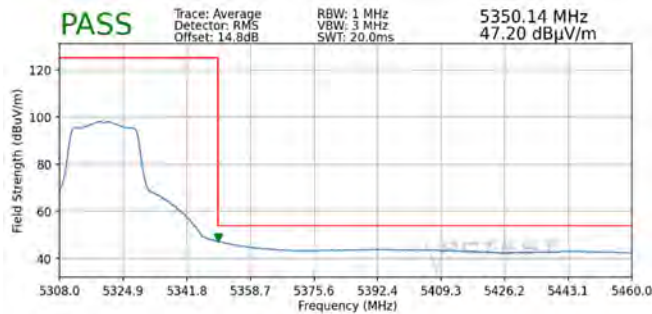


**Plot 7-292. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1)**

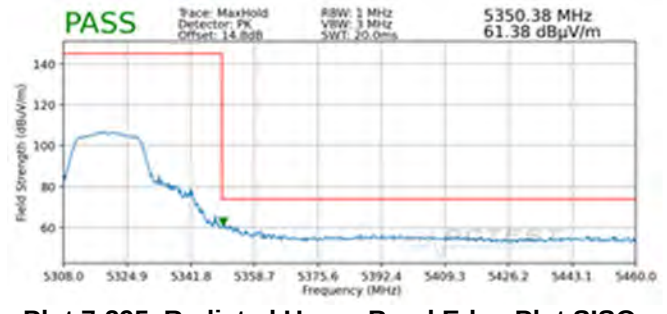


**Plot 7-293. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1)**

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11a  |
| Worst Case Transfer Rate: | 6Mbps    |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5320MHz  |
| Channel:                  | 64       |



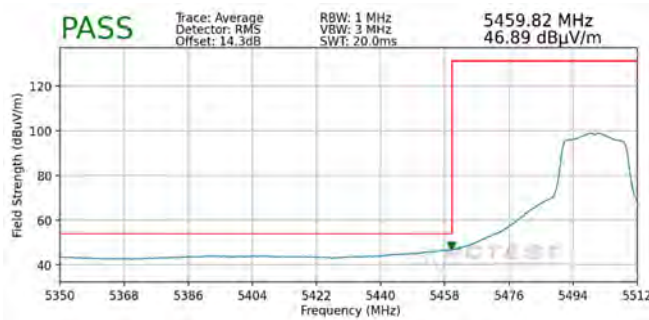
**Plot 7-294. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A)**



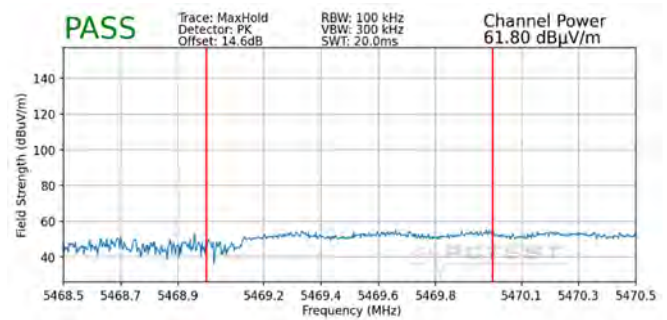
**Plot 7-295. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 205 of 227                 |

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 3 Meters  
Operating Frequency: 5500MHz  
Channel: 100

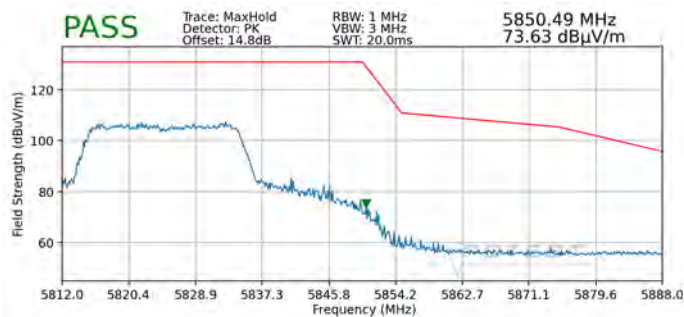


**Plot 7-296. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C)**



**Plot 7-297. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C)**

Worst Case Mode: 802.11a  
Worst Case Transfer Rate: 6Mbps  
Distance of Measurements: 3 Meters  
Operating Frequency: 5825MHz  
Channel: 165

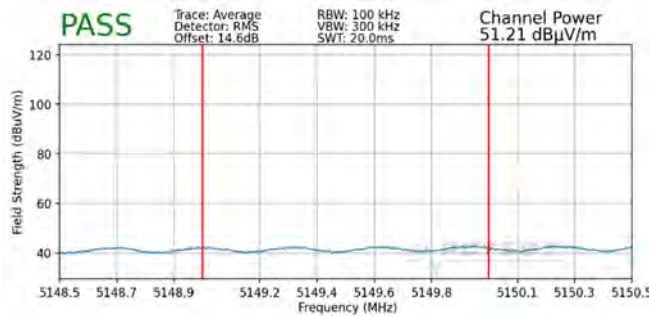


**Plot 7-298. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3)**

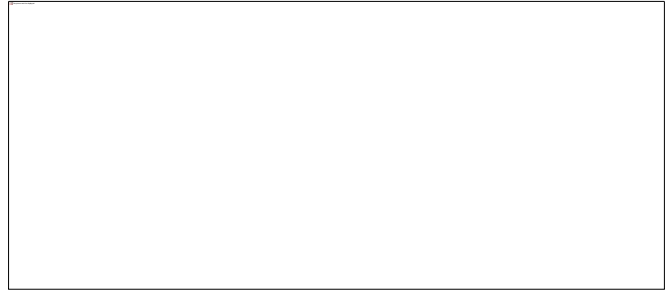
|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 206 of 227                 |

## 7.6.8 SISO Antenna-2 Radiated Band Edge Measurements (40MHz BW) §15.407(b.1)(b.2) §15.205 §15.209; RSS-Gen [8.9]

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11n  |
| Worst Case Transfer Rate: | MCS0     |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5190MHz  |
| Channel:                  | 38       |

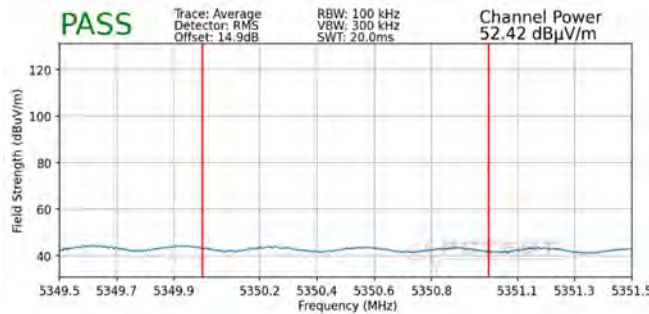


**Plot 7-299. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 1)**



**Plot 7-300. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 1)**

|                           |          |
|---------------------------|----------|
| Worst Case Mode:          | 802.11n  |
| Worst Case Transfer Rate: | MCS0     |
| Distance of Measurements: | 3 Meters |
| Operating Frequency:      | 5310MHz  |
| Channel:                  | 62       |



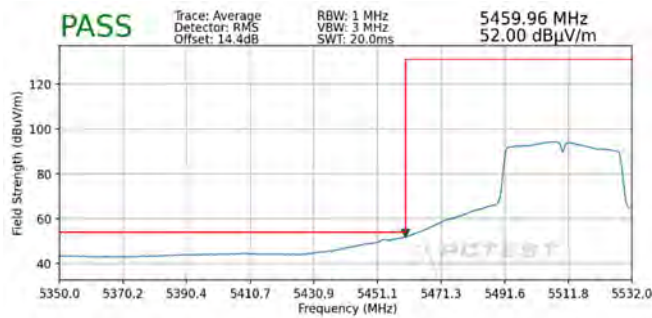
**Plot 7-301. Radiated Upper Band Edge Plot SISO ANT2 (Average – UNII Band 2A)**



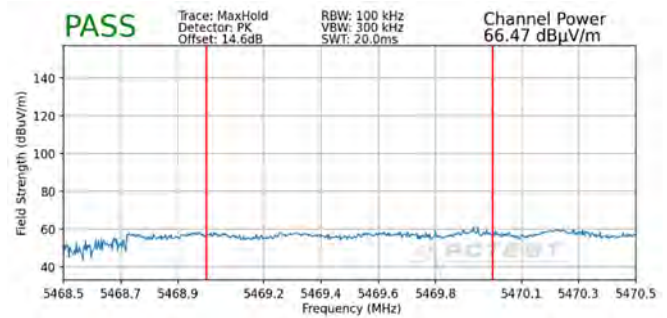
**Plot 7-302. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 2A)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 207 of 227                 |

Worst Case Mode: 802.11n  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5510MHz  
Channel: 102

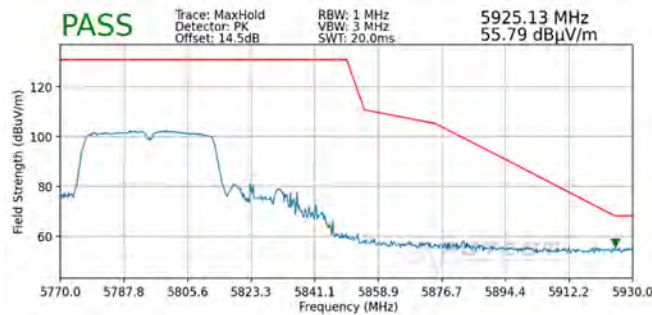


**Plot 7-303. Radiated Lower Band Edge Plot SISO ANT2 (Average – UNII Band 2C)**



**Plot 7-304. Radiated Lower Band Edge Plot SISO ANT2 (Peak – UNII Band 2C)**

Worst Case Mode: 802.11n  
Worst Case Transfer Rate: MCS0  
Distance of Measurements: 3 Meters  
Operating Frequency: 5795MHz  
Channel: 159



**Plot 7-305. Radiated Upper Band Edge Plot SISO ANT2 (Peak – UNII Band 3)**

|                                         |                                                                                     |                                       |                                                                                       |                                 |
|-----------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMN981U                      |  | MEASUREMENT REPORT<br>(CERTIFICATION) |  | Approved by:<br>Quality Manager |
| Test Report S/N:<br>1M2005050081-09.A3L | Test Dates:<br>5/5 - 7/7/2020                                                       | EUT Type:<br>Portable Handset         |                                                                                       | Page 208 of 227                 |