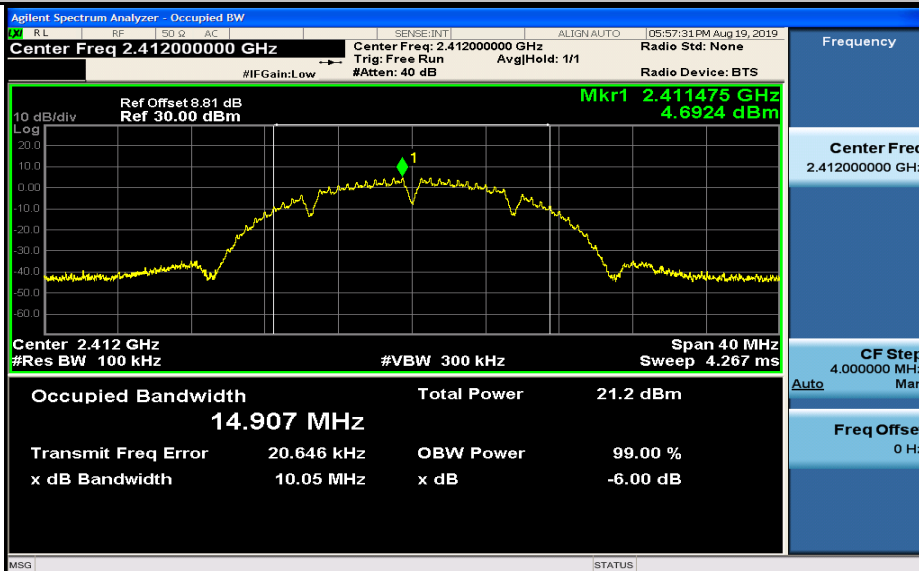


Appendix A for SHEM190701520301

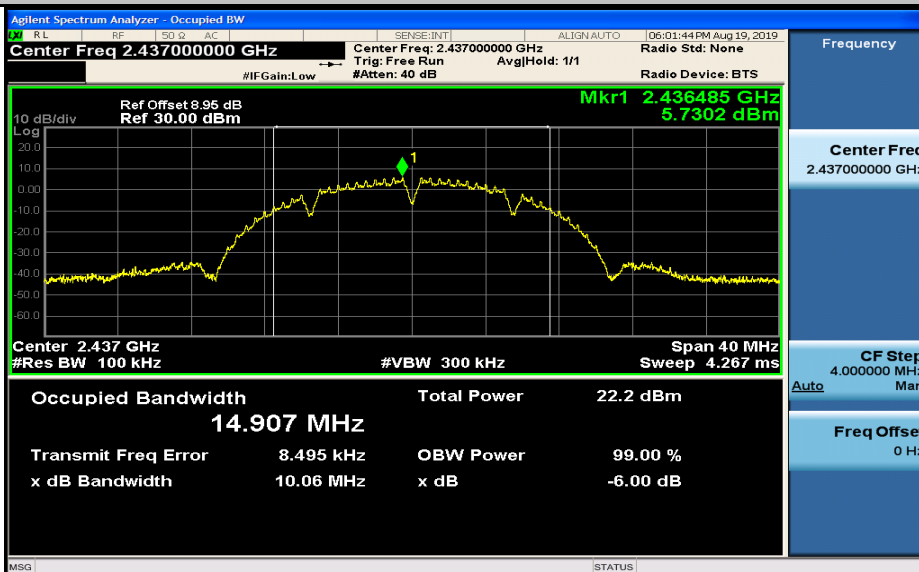
1.6dB Bandwidth

| Test Mode | Test Channel | Ant  | EBW[MHz] | Limit | Verdict |
|-----------|--------------|------|----------|-------|---------|
| 11B       | 2412         | Ant1 | 10.05    | 0.5   | PASS    |
| 11B       | 2437         | Ant1 | 10.06    | 0.5   | PASS    |
| 11B       | 2462         | Ant1 | 10.06    | 0.5   | PASS    |
| 11G       | 2412         | Ant1 | 16.57    | 0.5   | PASS    |
| 11G       | 2437         | Ant1 | 16.56    | 0.5   | PASS    |
| 11G       | 2462         | Ant1 | 16.55    | 0.5   | PASS    |
| 11N20SISO | 2412         | Ant1 | 17.80    | 0.5   | PASS    |
| 11N20SISO | 2437         | Ant1 | 17.79    | 0.5   | PASS    |
| 11N20SISO | 2462         | Ant1 | 17.77    | 0.5   | PASS    |
| 11N40SISO | 2422         | Ant1 | 36.35    | 0.5   | PASS    |
| 11N40SISO | 2437         | Ant1 | 36.32    | 0.5   | PASS    |
| 11N40SISO | 2452         | Ant1 | 36.33    | 0.5   | PASS    |

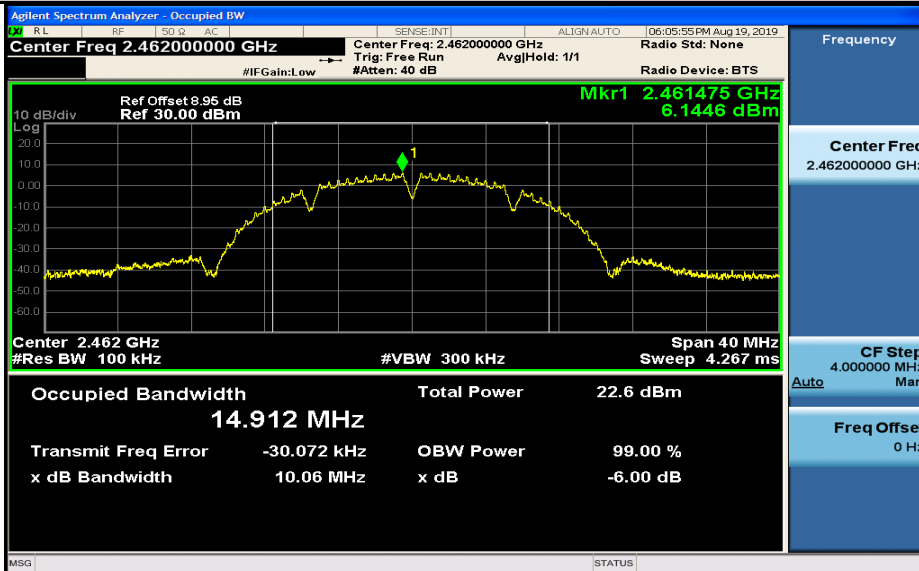
6dB Bandwidth\_11B\_2412\_Ant1



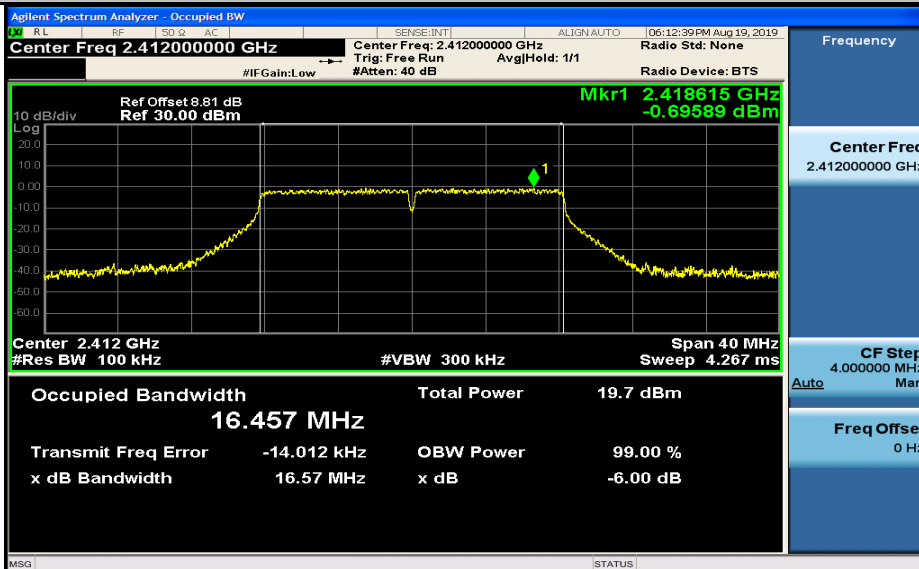
6dB Bandwidth\_11B\_2437\_Ant1



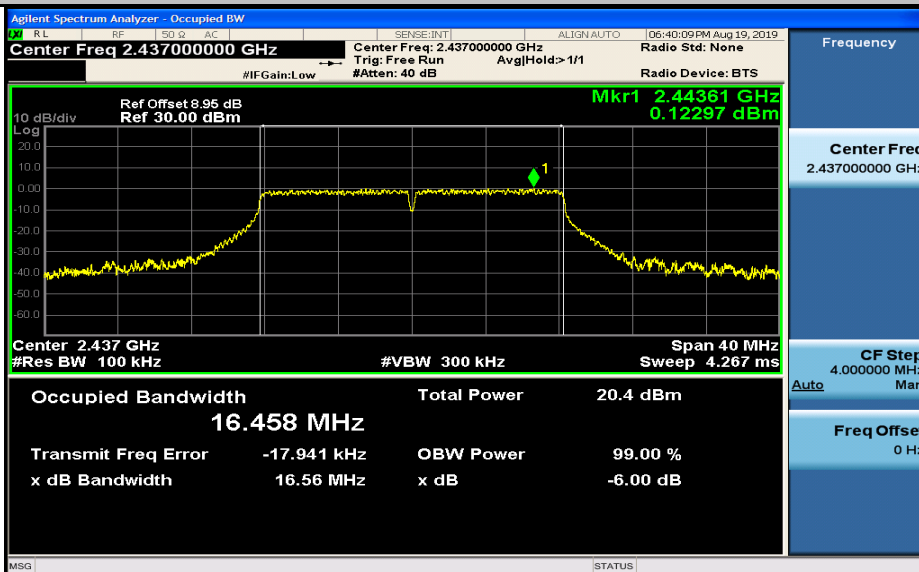
6dB Bandwidth\_11B\_2462\_Ant1



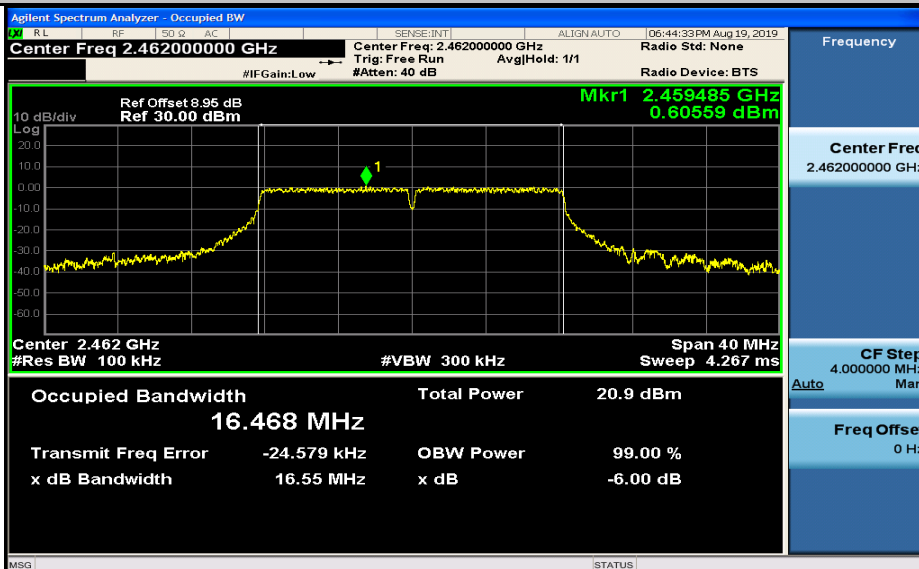
6dB Bandwidth\_11G\_2412\_Ant1



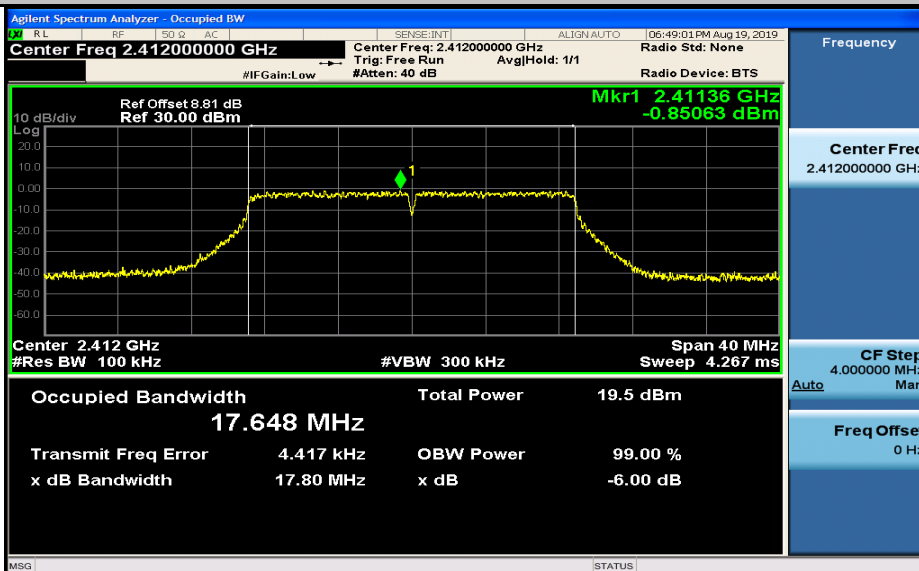
6dB Bandwidth\_11G\_2437\_Ant1



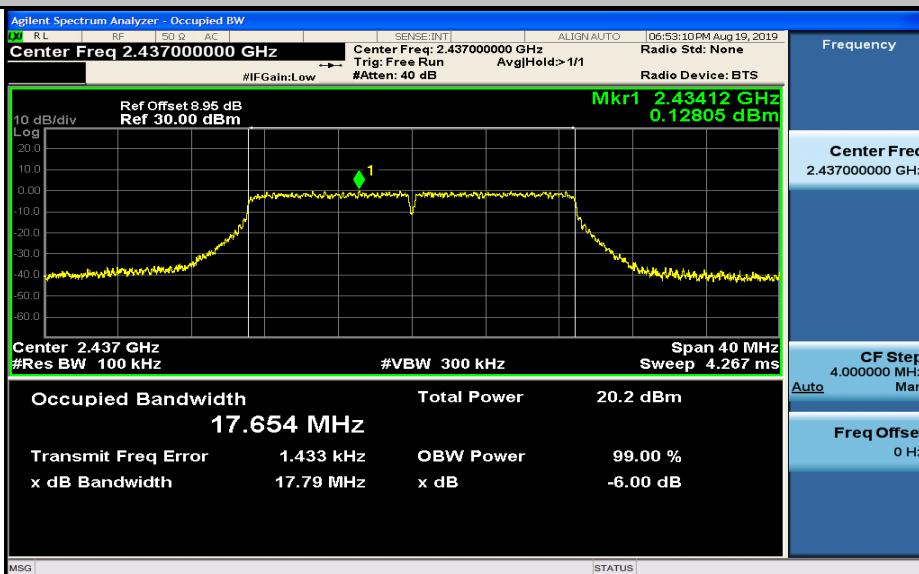
6dB Bandwidth\_11G\_2462\_Ant1



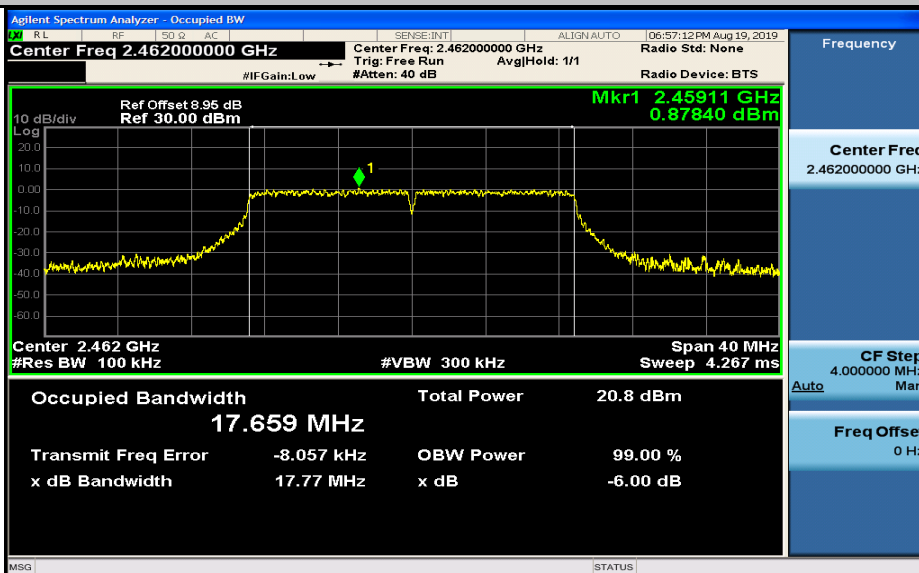
6dB Bandwidth\_11N20SISO\_2412\_Ant1



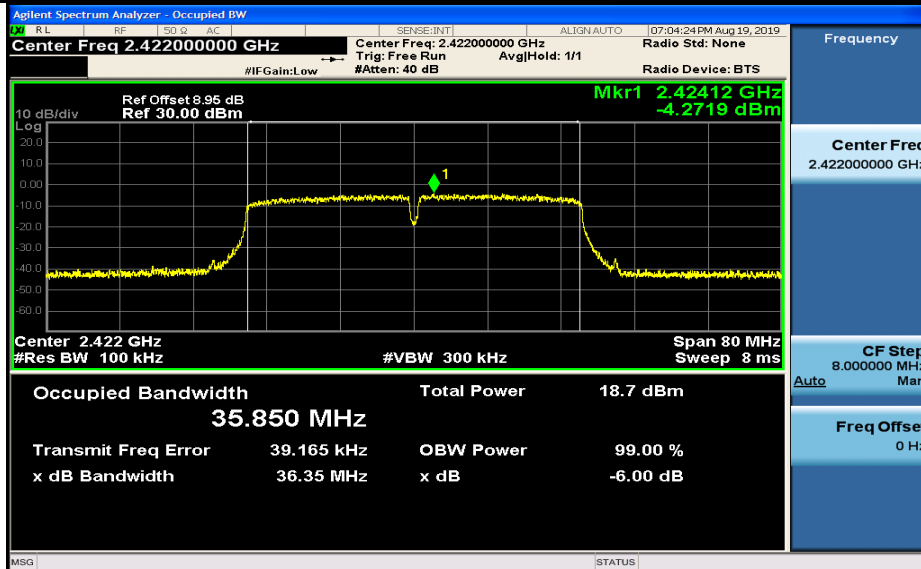
6dB Bandwidth\_11N20SISO\_2437\_Ant1



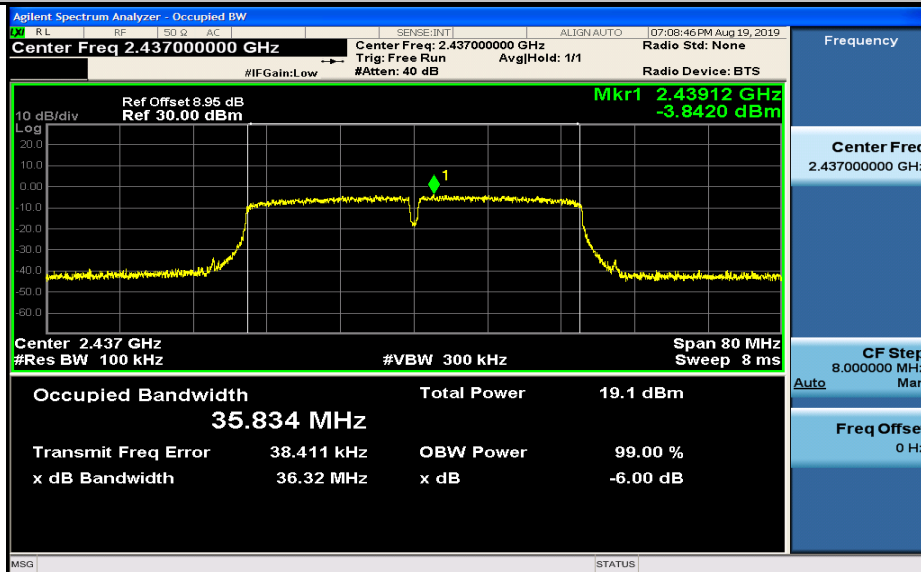
6dB Bandwidth\_11N20SISO\_2462\_Ant1



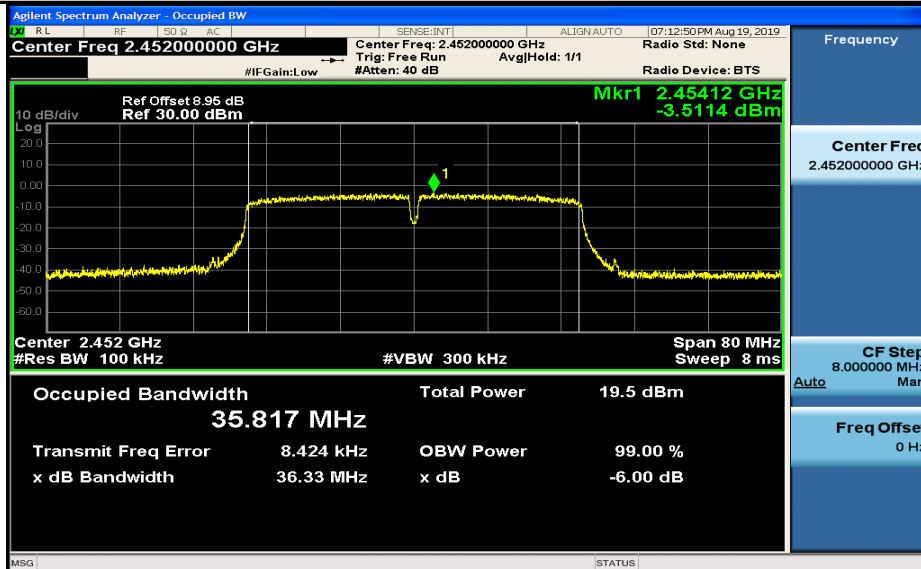
6dB Bandwidth\_11N40SISO\_2422\_Ant1



6dB Bandwidth\_11N40SISO\_2437\_Ant1



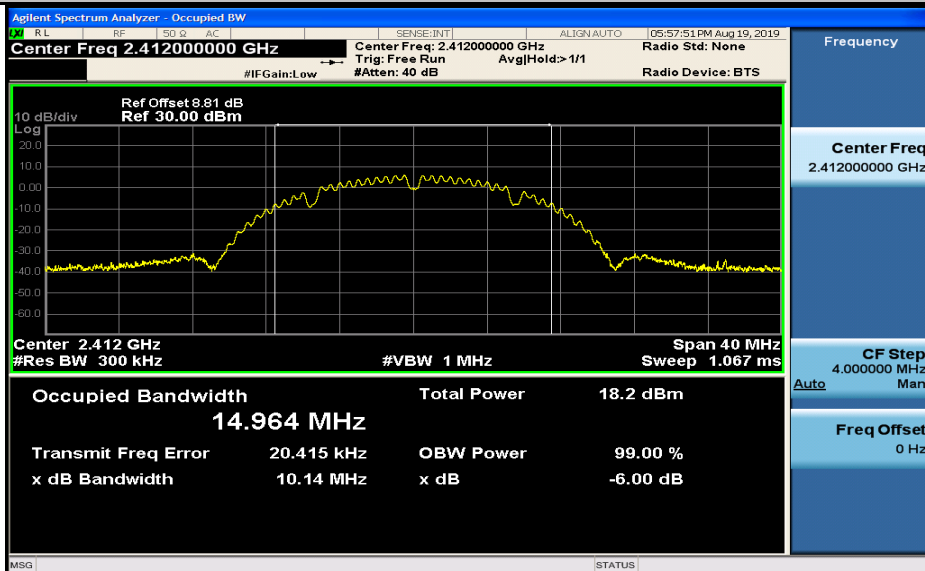
6dB Bandwidth\_11N40SISO\_2452\_Ant1



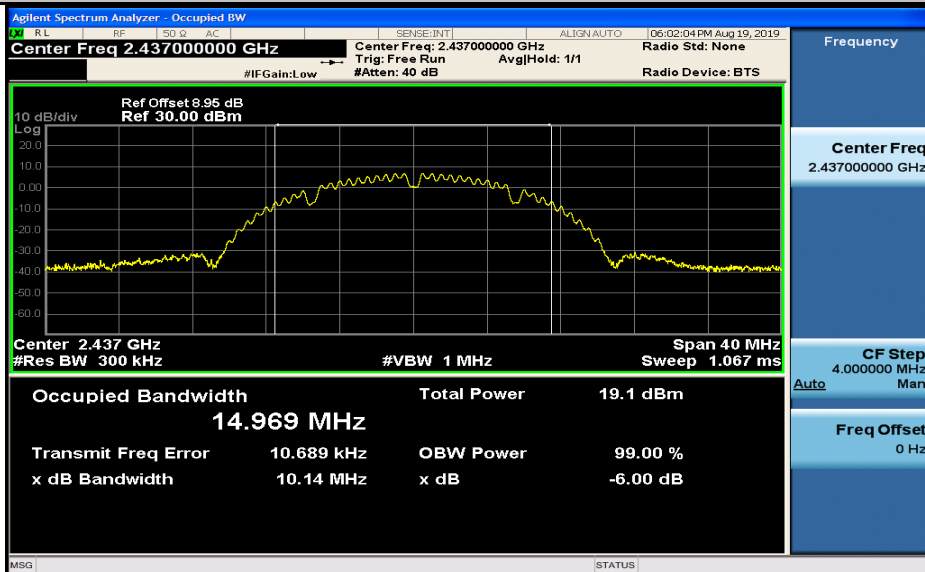
2.Occupied Bandwidth

| Test Mode | Test | Ant  | OBW[MHz] | 2*BW(MHz) | Span using in PSD(MHz) | Limit[MHz] | Verdict |
|-----------|------|------|----------|-----------|------------------------|------------|---------|
| 11B       | 2412 | Ant1 | 14.96    | 29.92     | 29.92                  | ---        | PASS    |
| 11B       | 2437 | Ant1 | 14.97    | 29.94     | 29.94                  | ---        | PASS    |
| 11B       | 2462 | Ant1 | 14.97    | 29.94     | 29.94                  | ---        | PASS    |
| 11G       | 2412 | Ant1 | 16.77    | 33.54     | 33.54                  | ---        | PASS    |
| 11G       | 2437 | Ant1 | 16.76    | 33.52     | 33.52                  | ---        | PASS    |
| 11G       | 2462 | Ant1 | 16.79    | 33.58     | 33.58                  | ---        | PASS    |
| 11N20SISO | 2412 | Ant1 | 17.82    | 35.64     | 35.64                  | ---        | PASS    |
| 11N20SISO | 2437 | Ant1 | 17.83    | 35.66     | 35.66                  | ---        | PASS    |
| 11N20SISO | 2462 | Ant1 | 17.86    | 35.72     | 35.72                  | ---        | PASS    |
| 11N40SISO | 2422 | Ant1 | 36.12    | 72.24     | 72.24                  | ---        | PASS    |
| 11N40SISO | 2437 | Ant1 | 36.10    | 72.20     | 72.20                  | ---        | PASS    |
| 11N40SISO | 2452 | Ant1 | 36.08    | 72.16     | 72.16                  | ---        | PASS    |

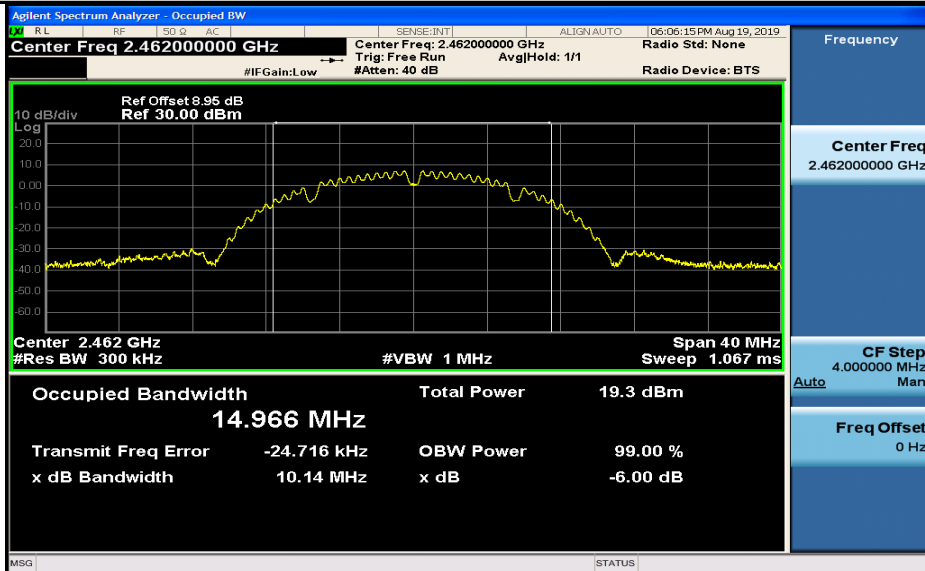
Occupied Bandwidth\_11B\_2412



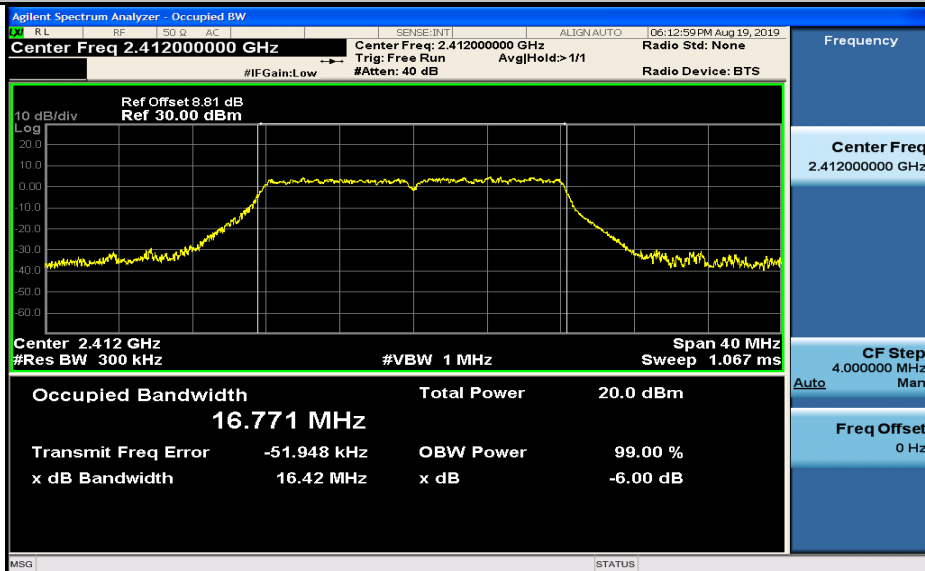
Occupied Bandwidth\_11B\_2437



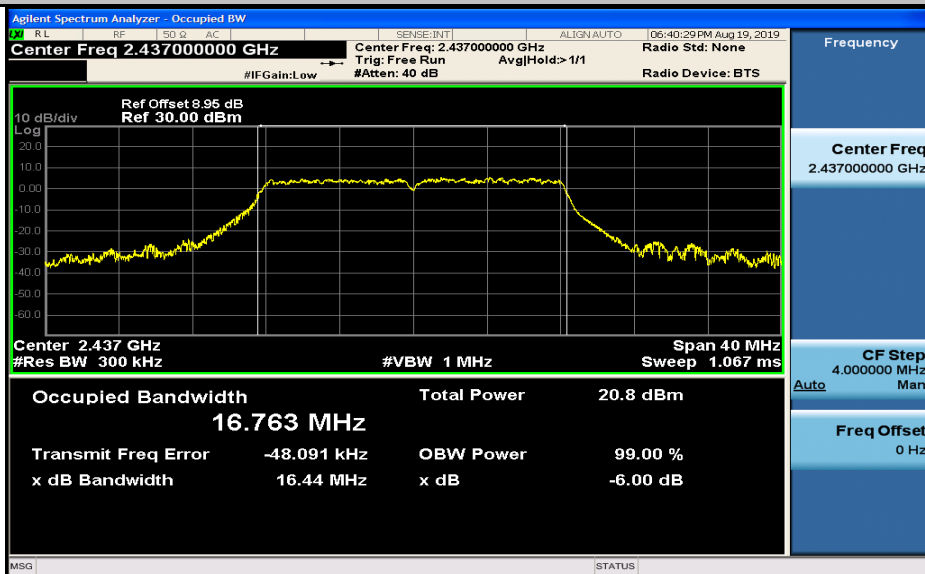
Occupied Bandwidth\_11B\_2462



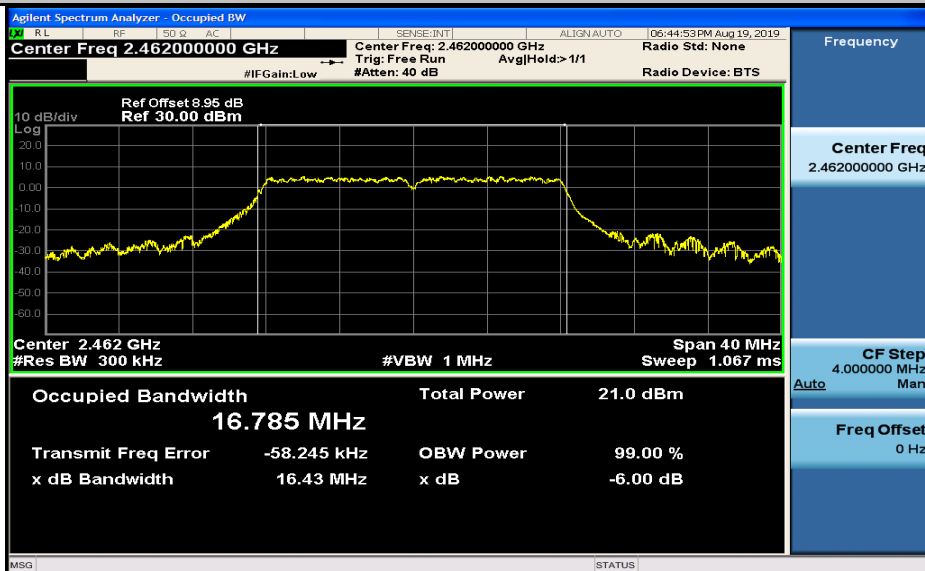
Occupied Bandwidth\_11G\_2412



Occupied Bandwidth\_11G\_2437

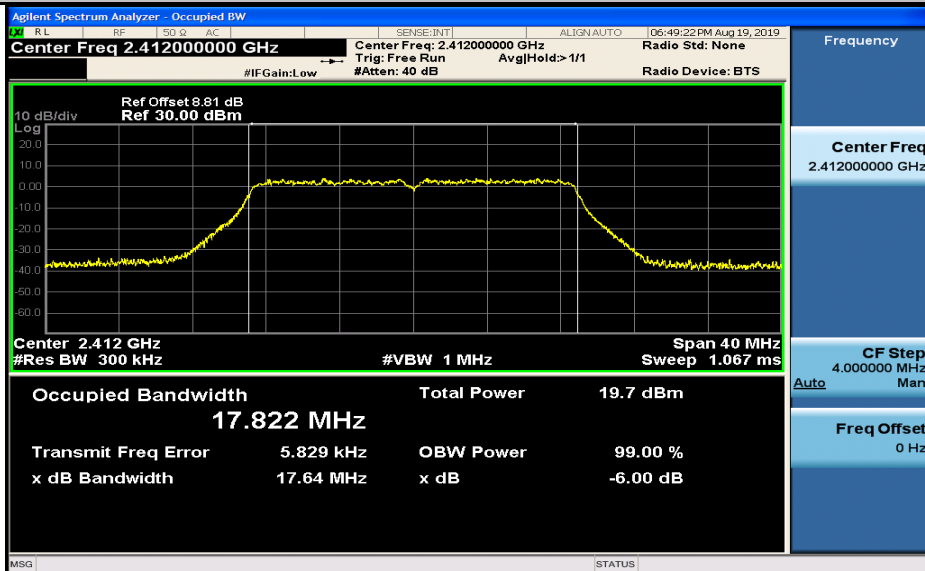


Occupied Bandwidth\_11G\_2462

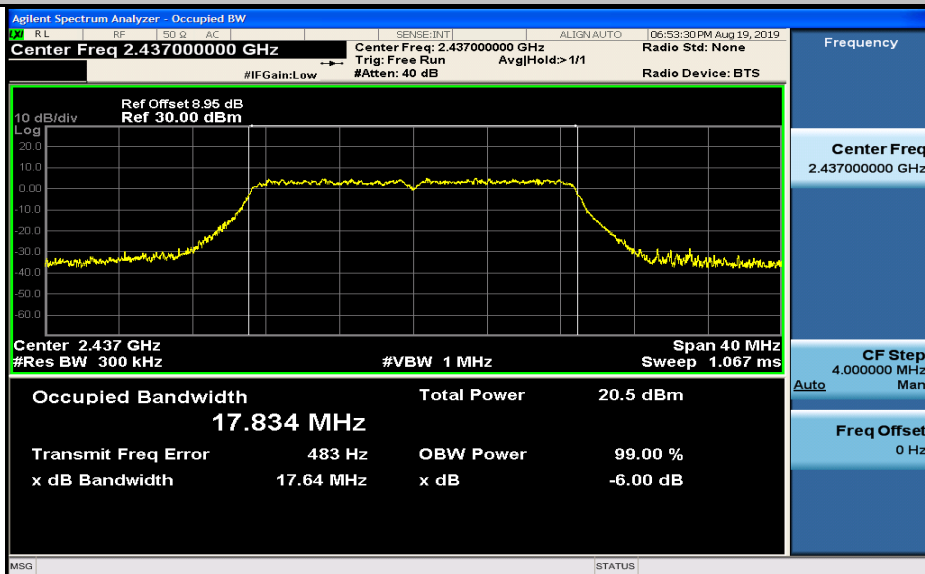




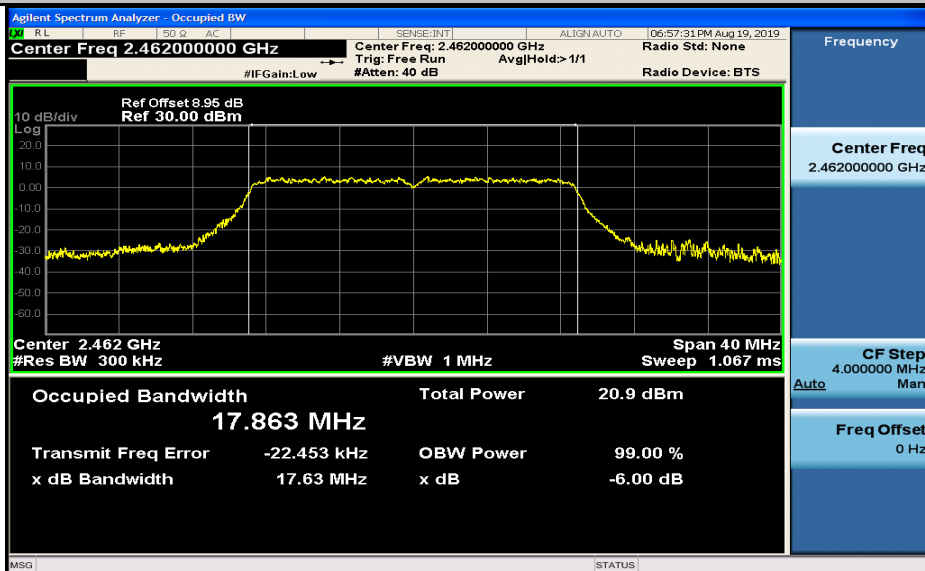
Occupied Bandwidth\_11N20SISO\_2412



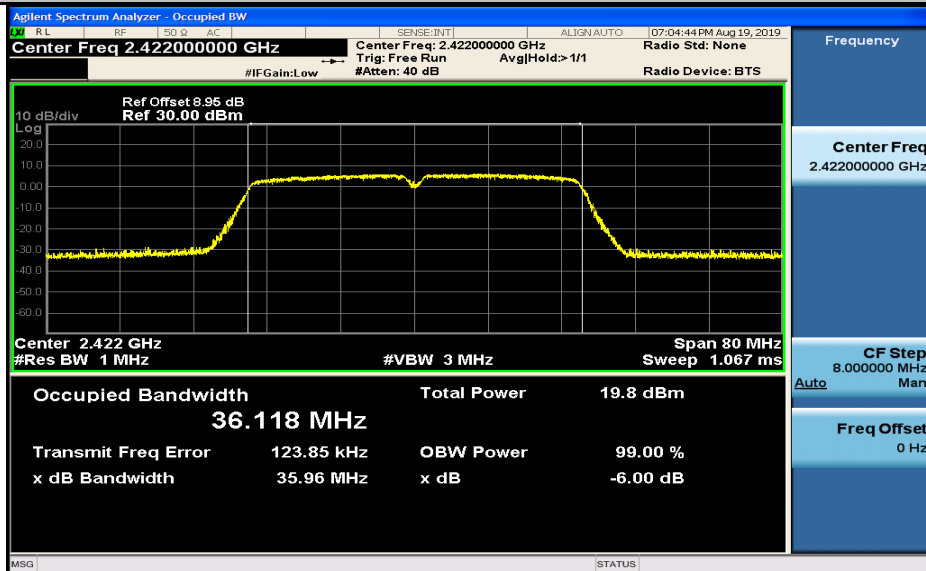
Occupied Bandwidth\_11N20SISO\_2437



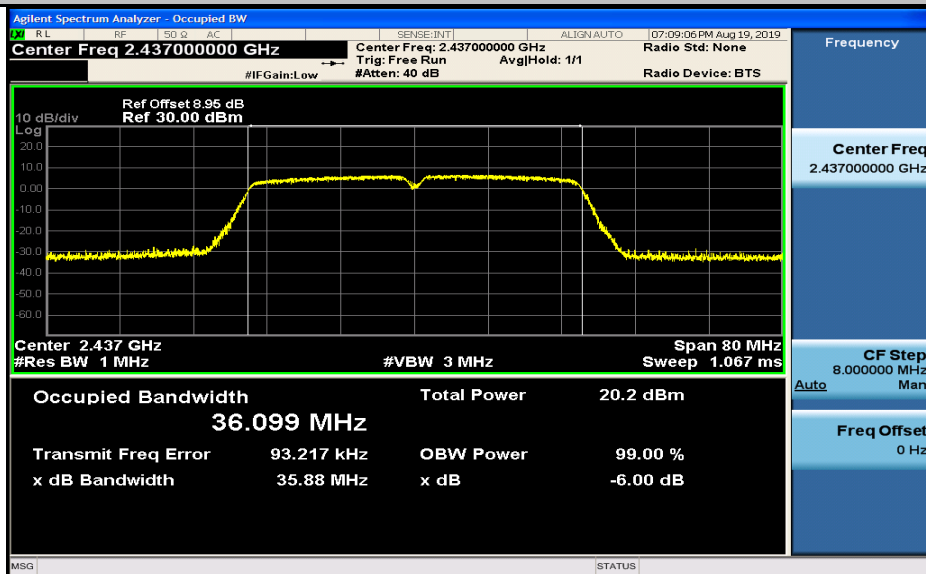
Occupied Bandwidth\_11N20SISO\_2462



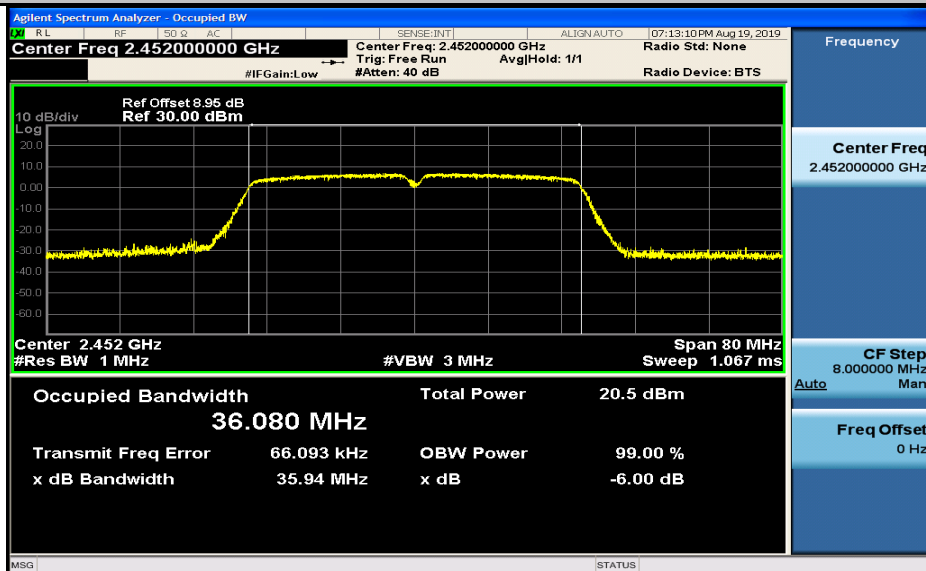
Occupied Bandwidth\_11N40SISO\_2422



Occupied Bandwidth\_11N40SISO\_2437



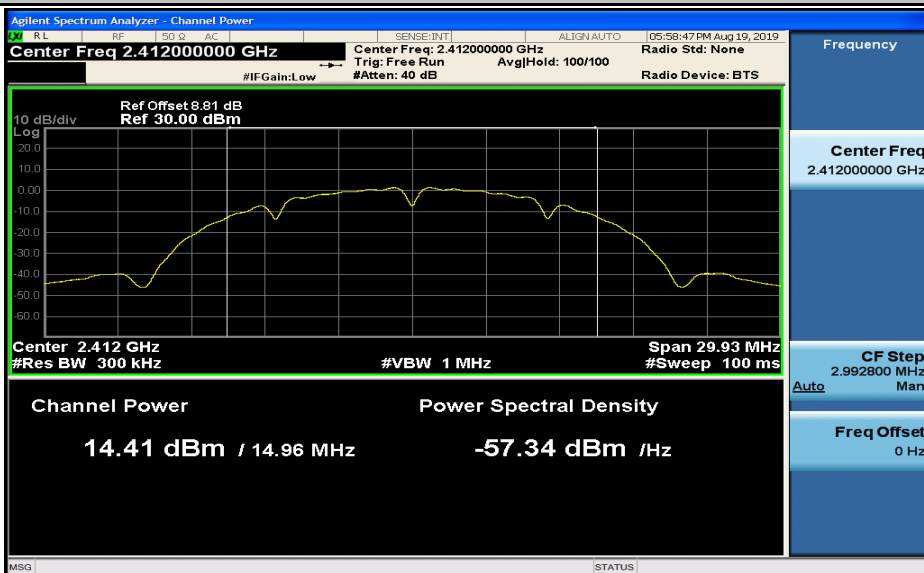
Occupied Bandwidth\_11N40SISO\_2452



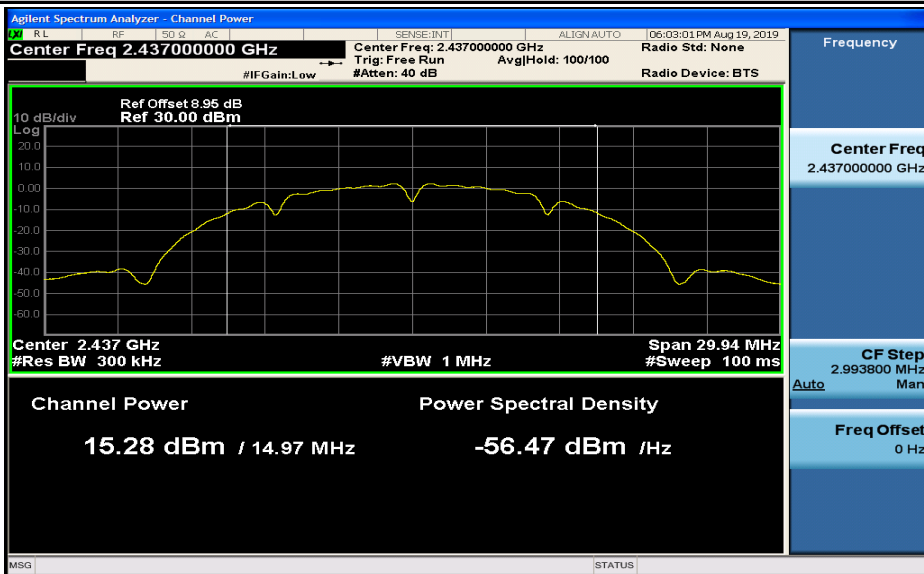
**3.Maximum conducted (average) output power**

| Test Mode | Test Channel | Ant  | Level [dBm] | 10log(1/x) Factor[dB] | Power [dBm] | Limit [dBm] | Verdict |
|-----------|--------------|------|-------------|-----------------------|-------------|-------------|---------|
| 11B       | 2412         | Ant1 | 14.41       | 0.00                  | 14.41       | 30          | PASS    |
| 11B       | 2437         | Ant1 | 15.28       | 0.00                  | 15.28       | 30          | PASS    |
| 11B       | 2462         | Ant1 | 15.49       | 0.00                  | 15.49       | 30          | PASS    |
| 11G       | 2412         | Ant1 | 13.58       | 0.00                  | 13.58       | 30          | PASS    |
| 11G       | 2437         | Ant1 | 14.42       | 0.00                  | 14.42       | 30          | PASS    |
| 11G       | 2462         | Ant1 | 14.61       | 0.00                  | 14.61       | 30          | PASS    |
| 11N20SISO | 2412         | Ant1 | 13.41       | 0.00                  | 13.41       | 30          | PASS    |
| 11N20SISO | 2437         | Ant1 | 14.29       | 0.00                  | 14.29       | 30          | PASS    |
| 11N20SISO | 2462         | Ant1 | 14.56       | 0.00                  | 14.56       | 30          | PASS    |
| 11N40SISO | 2422         | Ant1 | 12.47       | 0.00                  | 12.47       | 30          | PASS    |
| 11N40SISO | 2437         | Ant1 | 12.94       | 0.00                  | 12.94       | 30          | PASS    |
| 11N40SISO | 2452         | Ant1 | 13.21       | 0.00                  | 13.21       | 30          | PASS    |

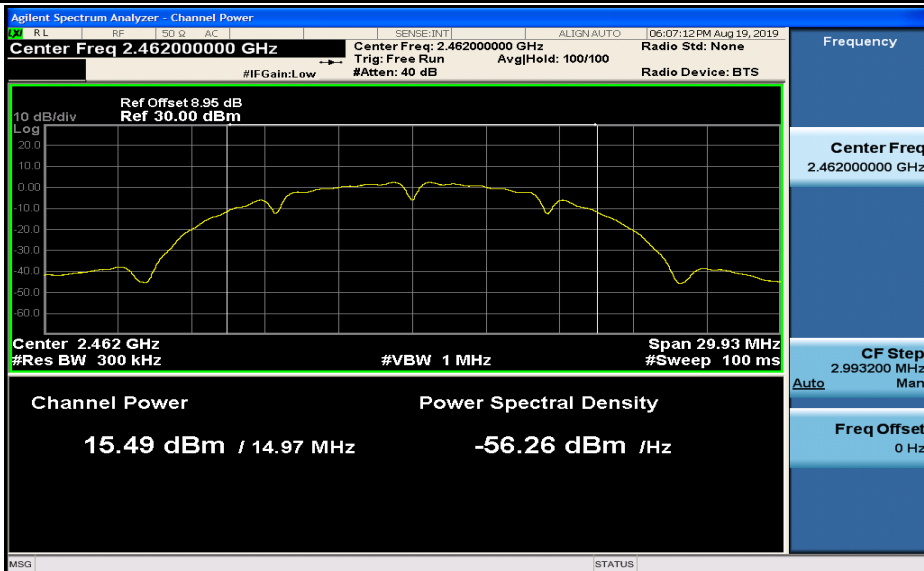
Maximum conducted (average) output power\_11B\_2412\_Ant1



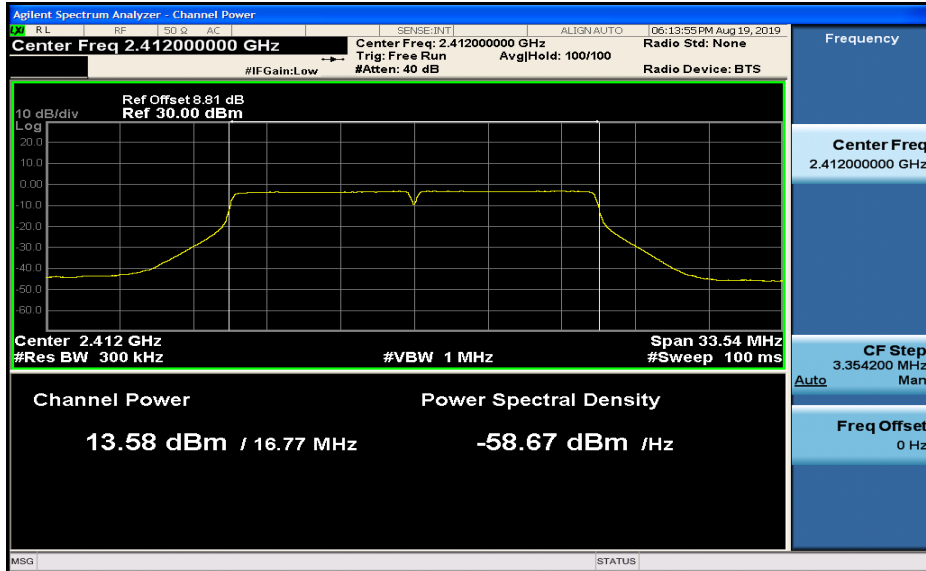
Maximum conducted (average) output power\_11B\_2437\_Ant1



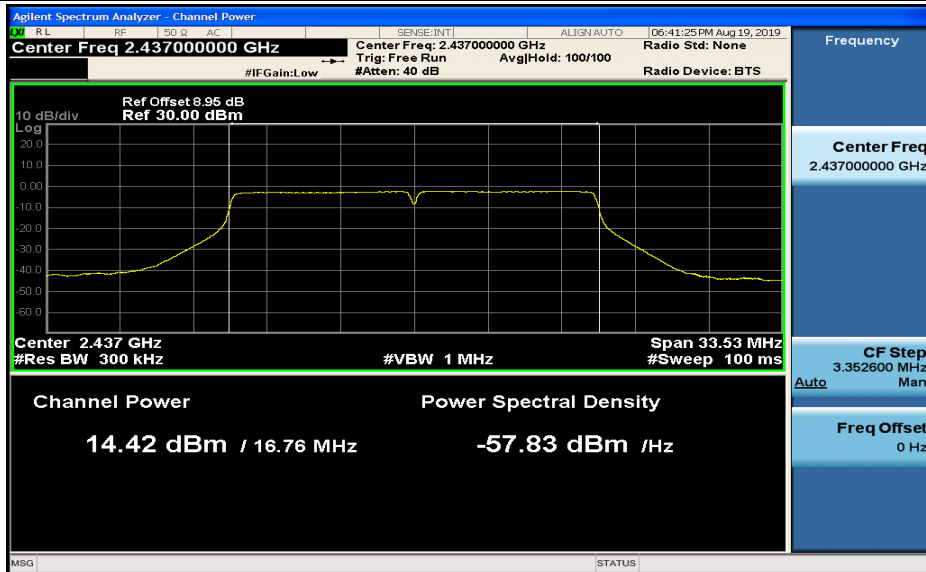
Maximum conducted (average) output power\_11B\_2462\_Ant1



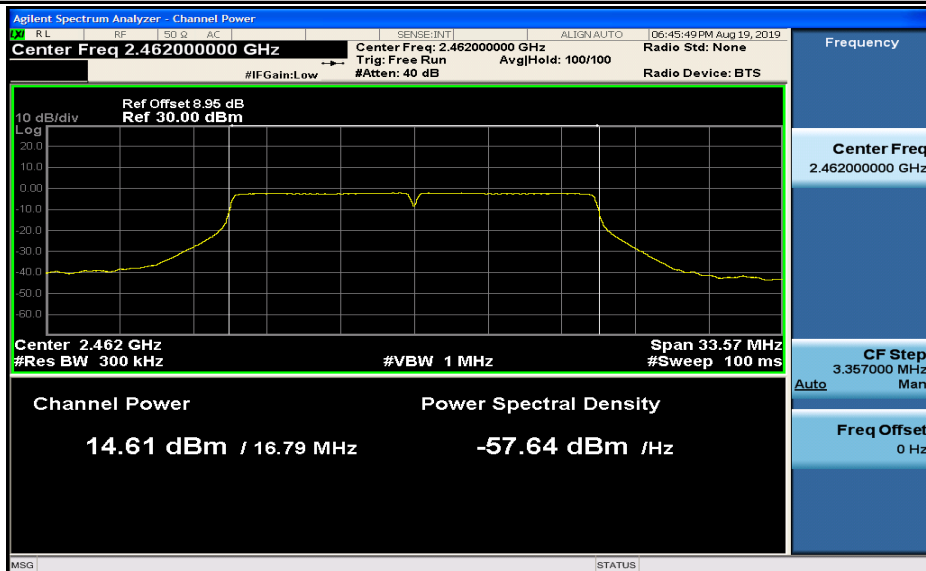
Maximum conducted (average) output power\_11G\_2412\_Ant1



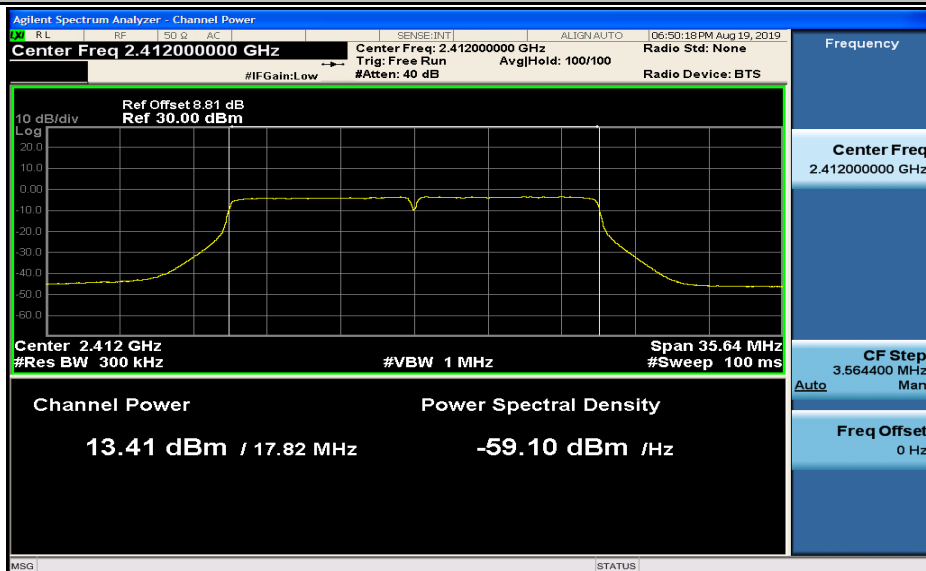
Maximum conducted (average) output power\_11G\_2437\_Ant1



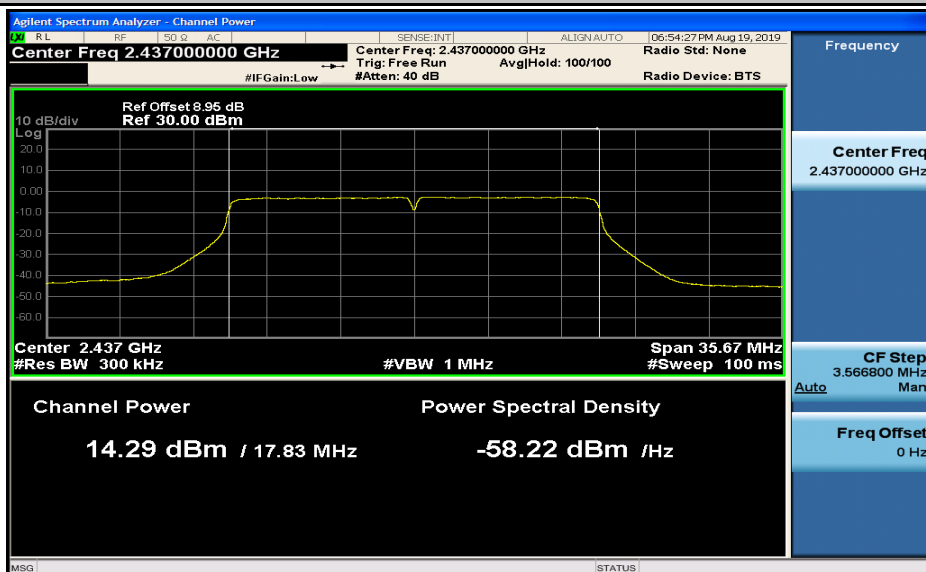
Maximum conducted (average) output power\_11G\_2462\_Ant1



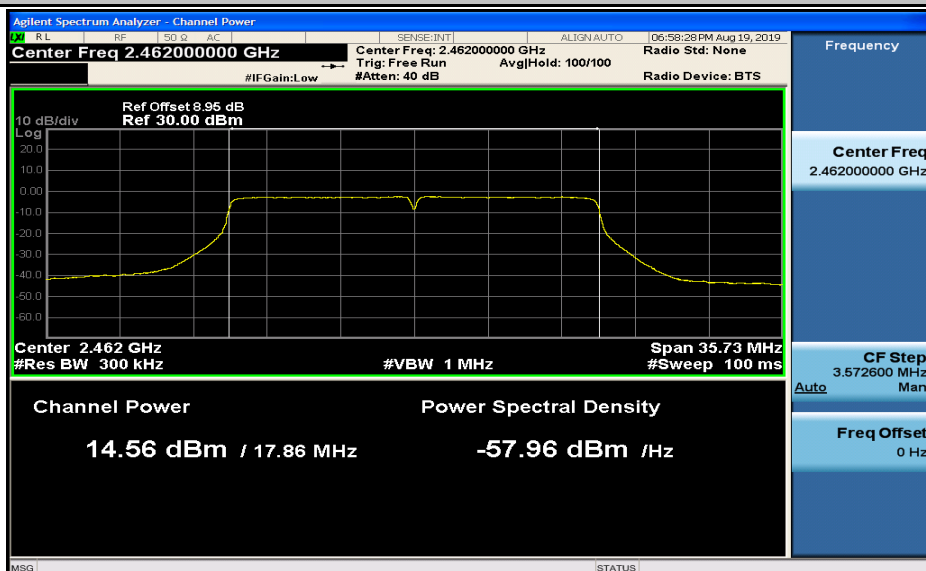
Maximum conducted (average) output power\_11N20SISO\_2412\_Ant1



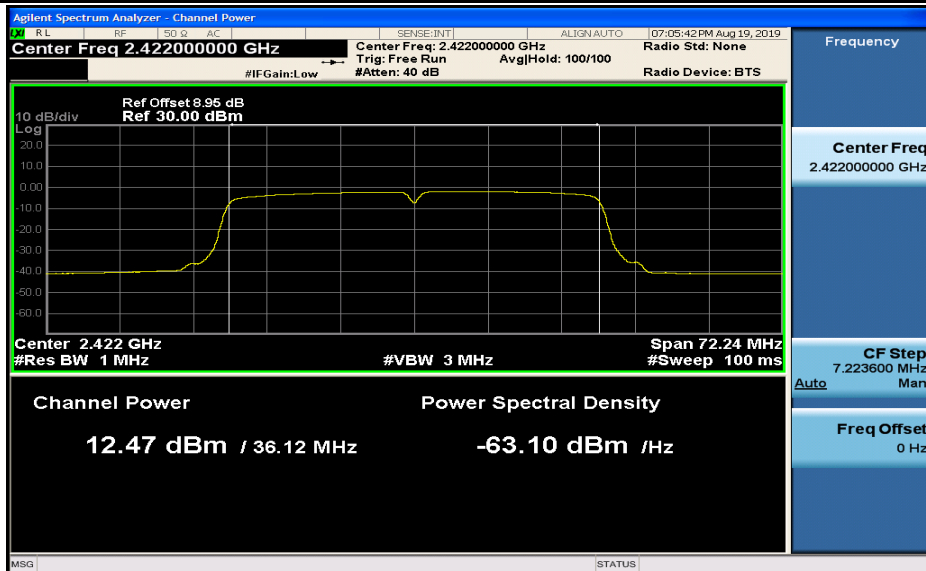
Maximum conducted (average) output power\_11N20SISO\_2437\_Ant1



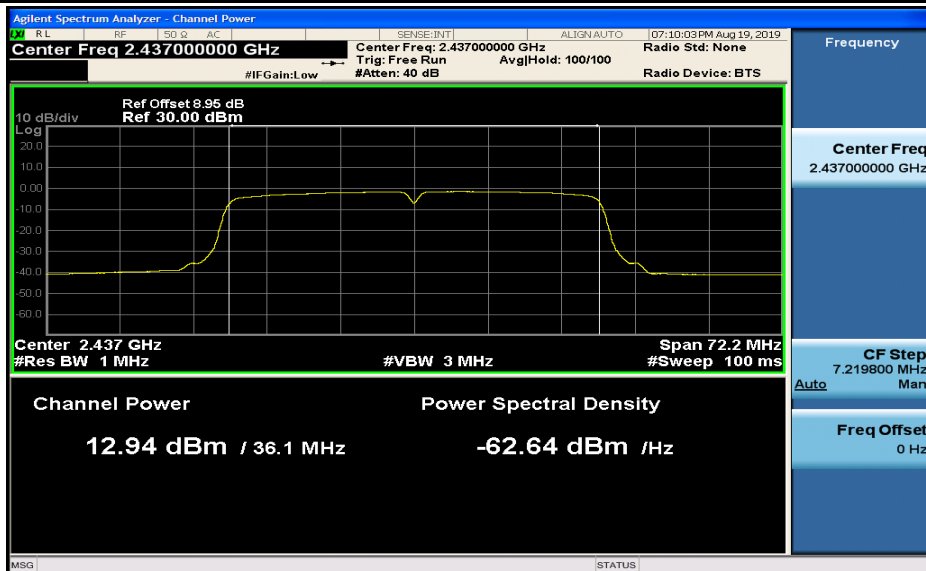
Maximum conducted (average) output power\_11N20SISO\_2462\_Ant1



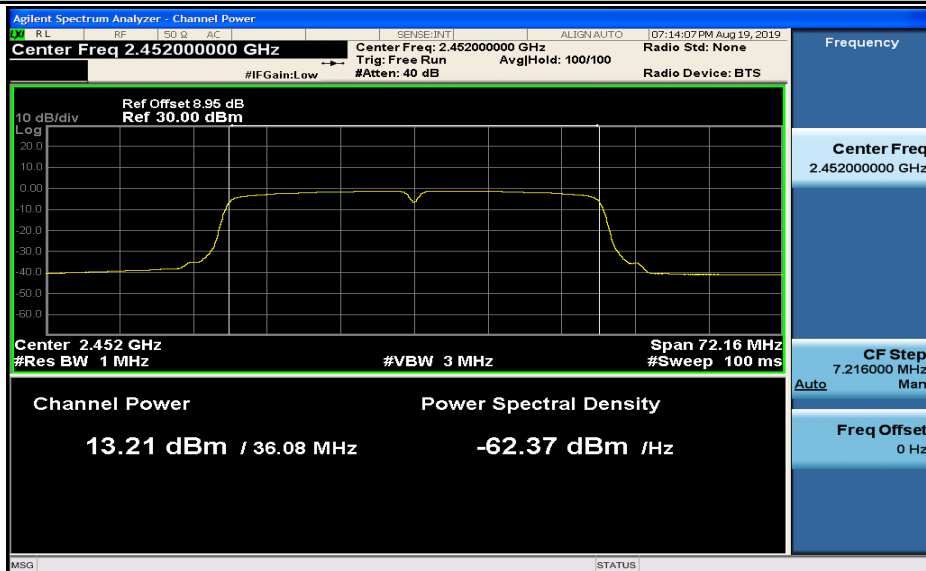
Maximum conducted (average) output power\_11N40SISO\_2422\_Ant1



Maximum conducted (average) output power\_11N40SISO\_2437\_Ant1



Maximum conducted (average) output power\_11N40SISO\_2452\_Ant1



**4.Maximum(average) power spectral density**

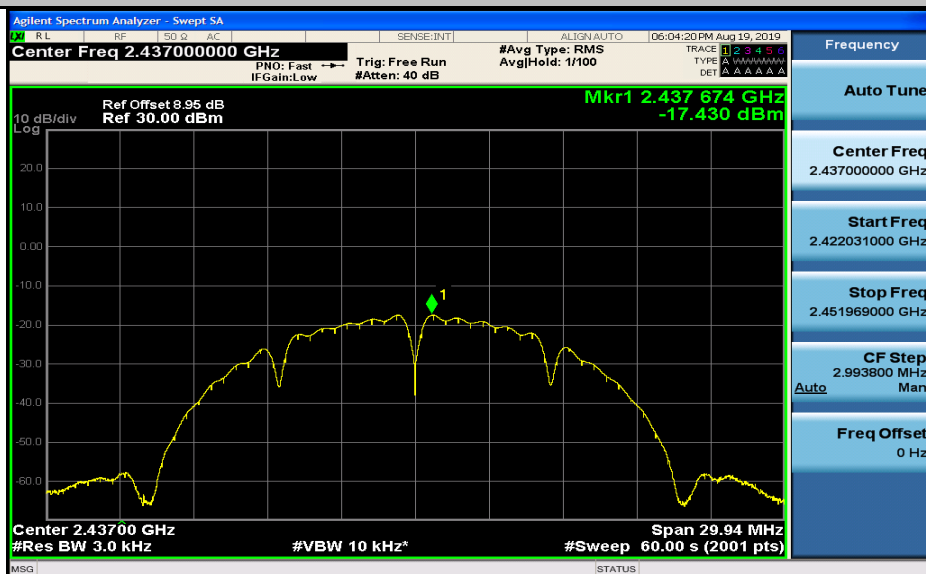
| Test Mode | Test Channel | Ant  | Level [dBm/3kHz] | 10log(1/x) Factor[dB] | PSD[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|--------------|------|------------------|-----------------------|---------------|-----------------|---------|
| 11B       | 2412         | Ant1 | -18.31           | 0.00                  | -18.31        | 8.00            | PASS    |
| 11B       | 2437         | Ant1 | -17.43           | 0.00                  | -17.43        | 8.00            | PASS    |
| 11B       | 2462         | Ant1 | -17.22           | 0.00                  | -17.22        | 8.00            | PASS    |
| 11G       | 2412         | Ant1 | -20.97           | 0.00                  | -20.97        | 8.00            | PASS    |
| 11G       | 2437         | Ant1 | -20.20           | 0.00                  | -20.20        | 8.00            | PASS    |
| 11G       | 2462         | Ant1 | -19.91           | 0.00                  | -19.91        | 8.00            | PASS    |
| 11N20SISO | 2412         | Ant1 | -21.60           | 0.00                  | -21.60        | 8.00            | PASS    |
| 11N20SISO | 2437         | Ant1 | -20.63           | 0.00                  | -20.63        | 8.00            | PASS    |
| 11N20SISO | 2462         | Ant1 | -20.24           | 0.00                  | -20.24        | 8.00            | PASS    |
| 11N40SISO | 2422         | Ant1 | -25.53           | 0.00                  | -25.53        | 8.00            | PASS    |
| 11N40SISO | 2437         | Ant1 | -24.86           | 0.00                  | -24.86        | 8.00            | PASS    |
| 11N40SISO | 2452         | Ant1 | -24.62           | 0.00                  | -24.62        | 8.00            | PASS    |



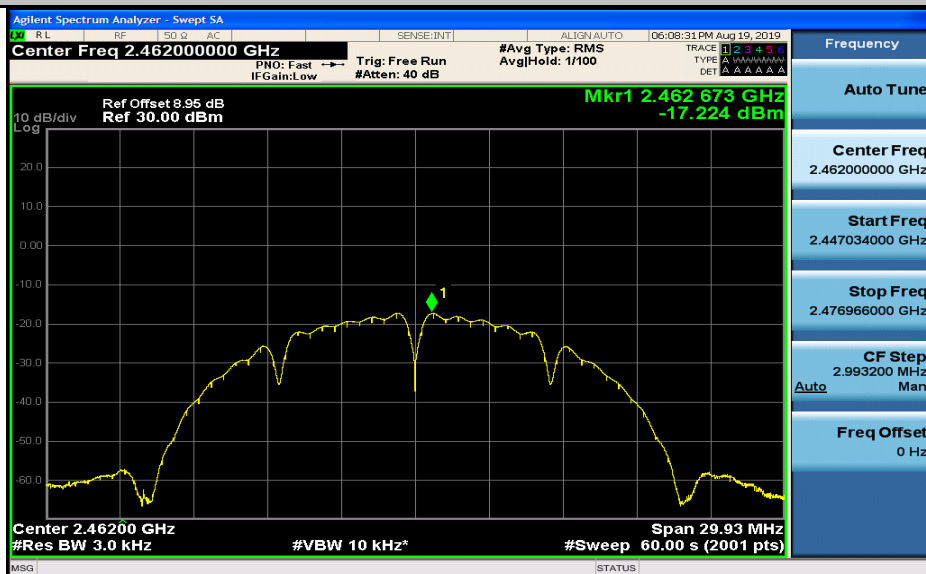
Maximum(average) power spectral density\_11B\_2412\_Ant1



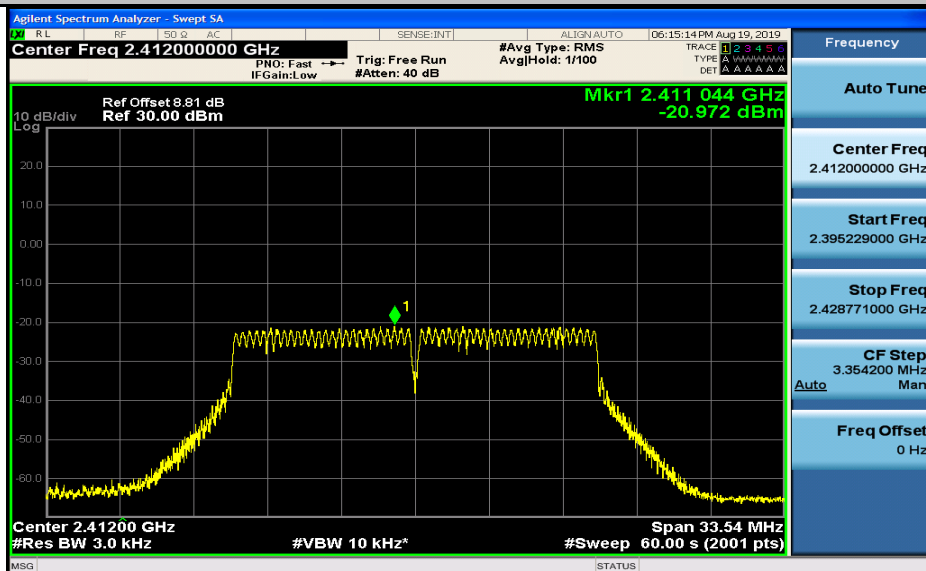
Maximum(average) power spectral density\_11B\_2437\_Ant1



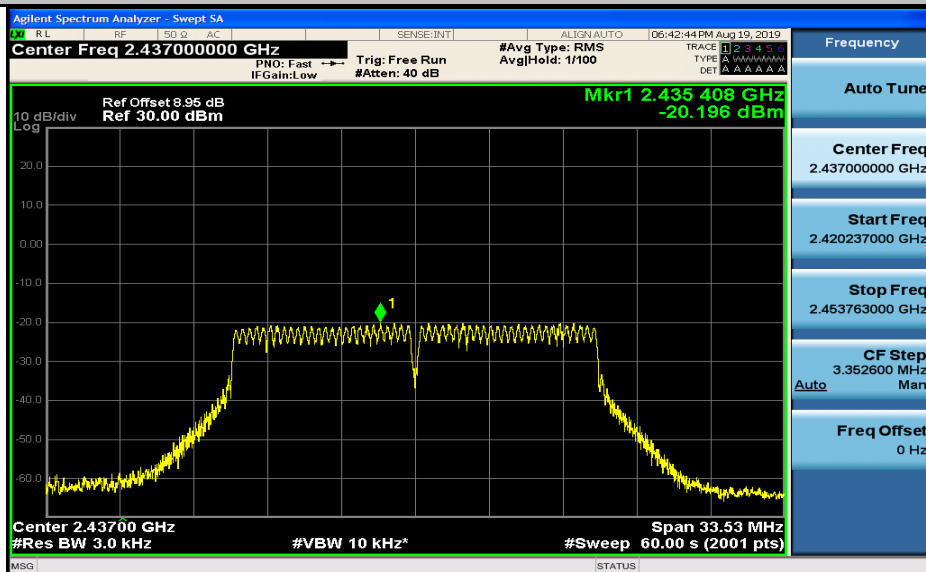
Maximum(average) power spectral density\_11B\_2462\_Ant1



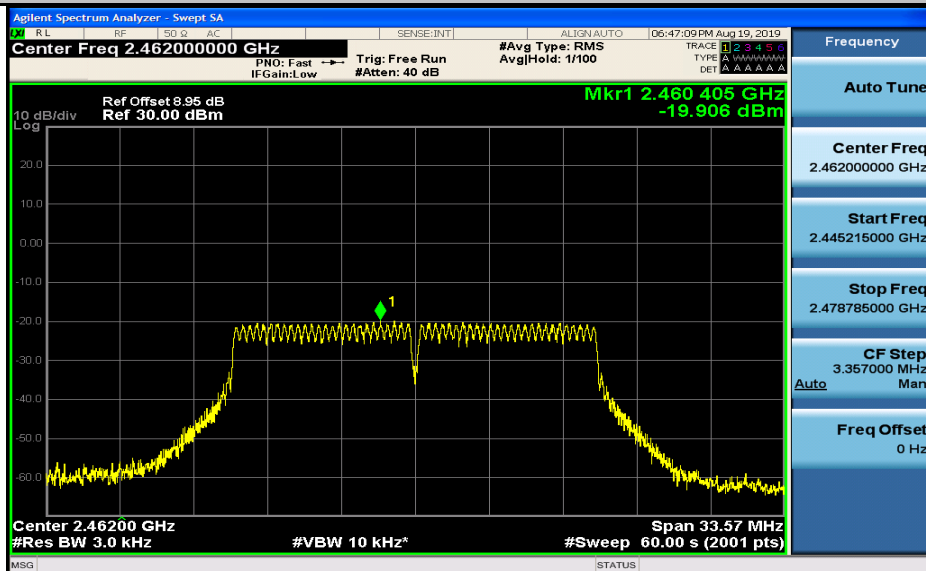
Maximum(average) power spectral density\_11G\_2412\_Ant1



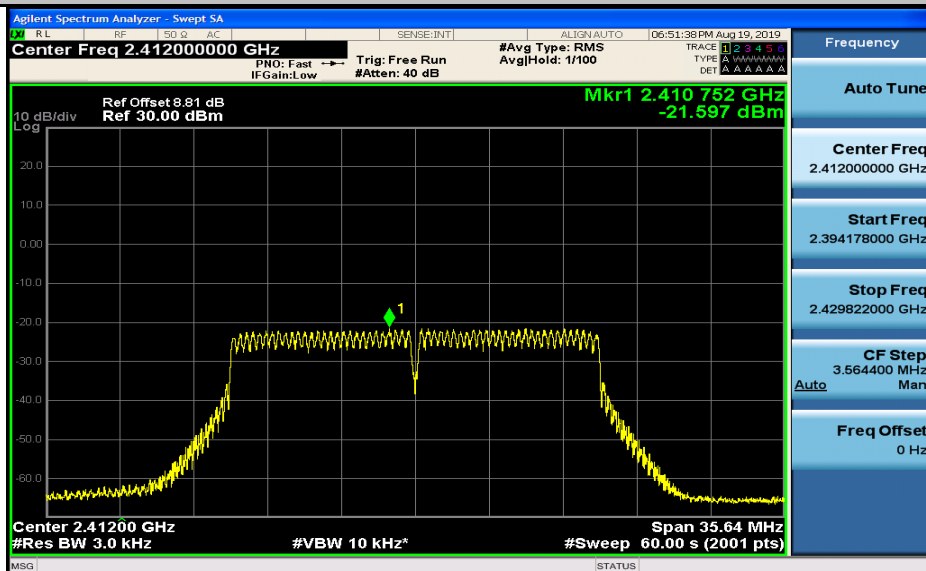
Maximum(average) power spectral density\_11G\_2437\_Ant1



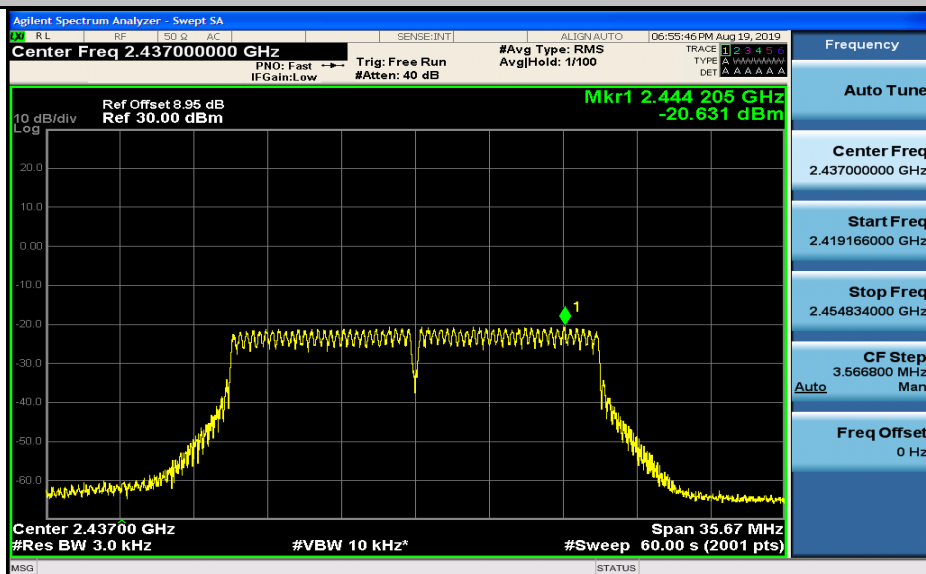
Maximum(average) power spectral density\_11G\_2462\_Ant1



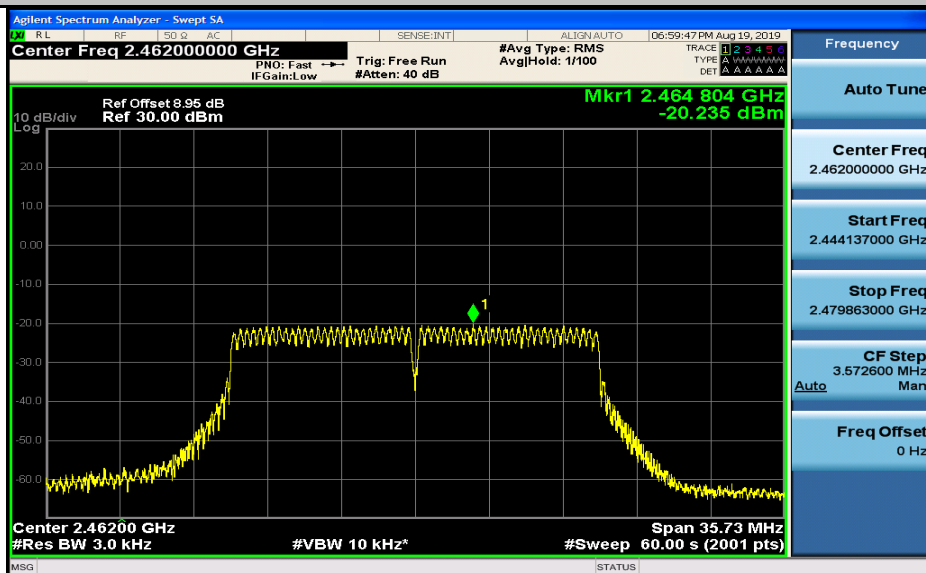
Maximum(average) power spectral density\_11N20SISO\_2412\_Ant1



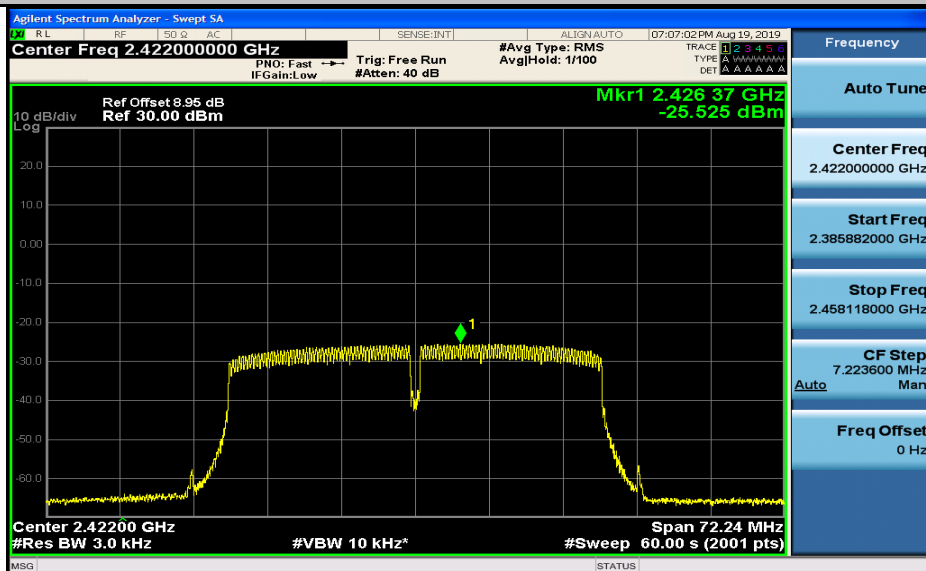
Maximum(average) power spectral density\_11N20SISO\_2437\_Ant1



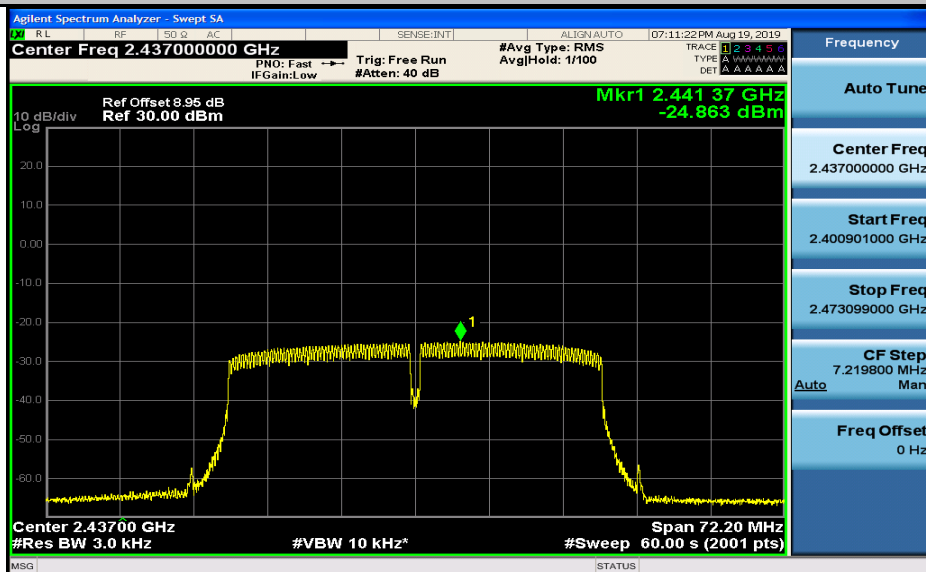
Maximum(average) power spectral density\_11N20SISO\_2462\_Ant1



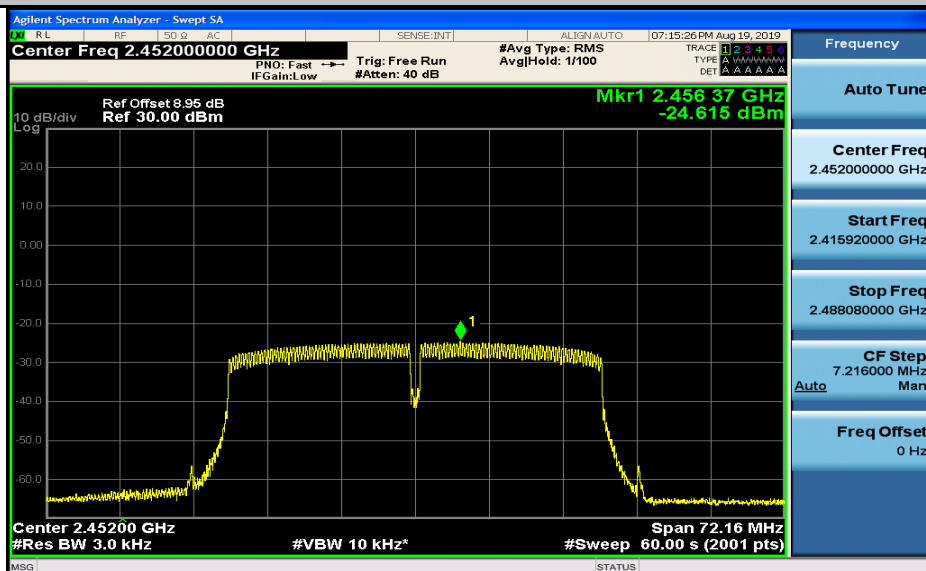
Maximum(average) power spectral density\_11N40SISO\_2422\_Ant1



Maximum(average) power spectral density\_11N40SISO\_2437\_Ant1



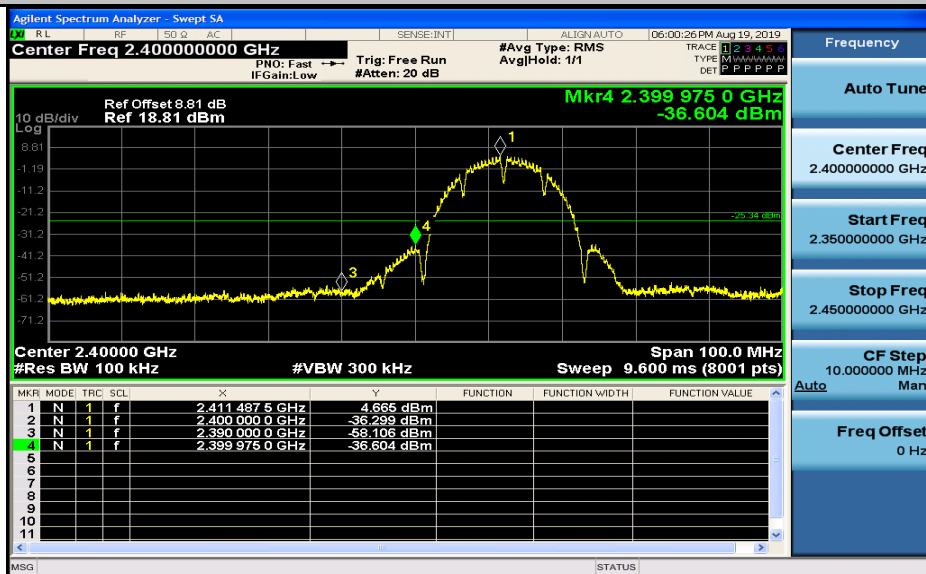
Maximum(average) power spectral density\_11N40SISO\_2452\_Ant1



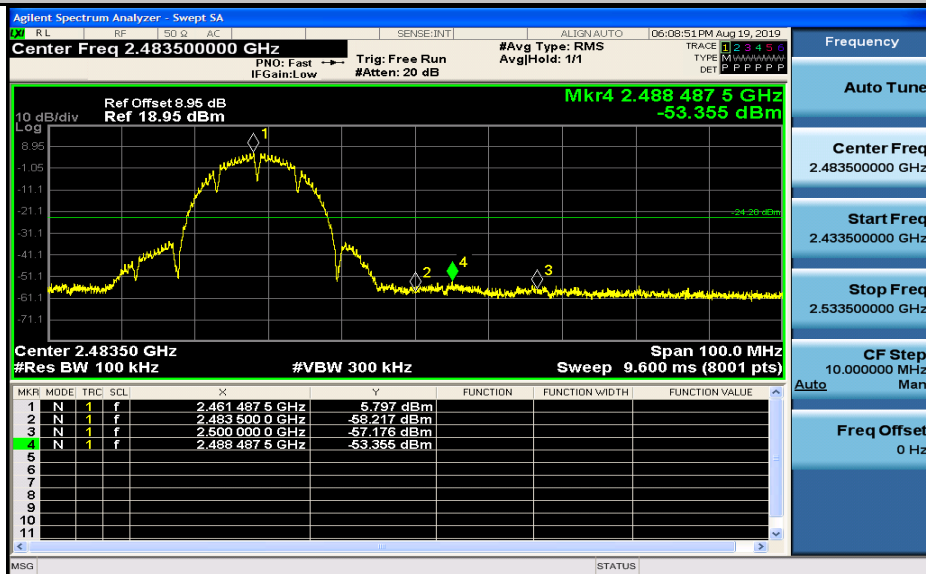
**5.Band-edge for RF Conducted Emissions**

| Test Mode | Test Channel | Ant  | Carrier Power[dBm] | Max. Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|--------------|------|--------------------|---------------------------|-------------|---------|
| 11B       | 2412         | Ant1 | 4.67               | -36.30                    | -25.34      | PASS    |
| 11B       | 2462         | Ant1 | 5.80               | -53.36                    | -24.20      | PASS    |
| 11G       | 2412         | Ant1 | -0.75              | -37.20                    | -30.75      | PASS    |
| 11G       | 2462         | Ant1 | 0.31               | -39.63                    | -29.69      | PASS    |
| 11N20SISO | 2412         | Ant1 | -0.72              | -37.53                    | -30.72      | PASS    |
| 11N20SISO | 2462         | Ant1 | 0.61               | -40.17                    | -29.39      | PASS    |
| 11N40SISO | 2422         | Ant1 | -4.48              | -41.25                    | -34.48      | PASS    |
| 11N40SISO | 2452         | Ant1 | -3.64              | -45.59                    | -33.64      | PASS    |

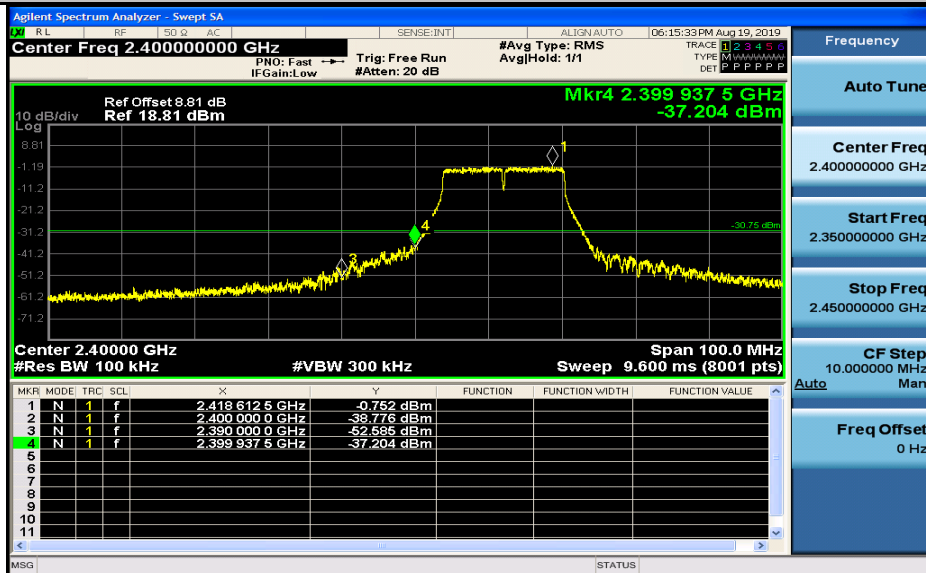
Band-edge for RF Conducted Emissions\_11B\_2412\_Ant1



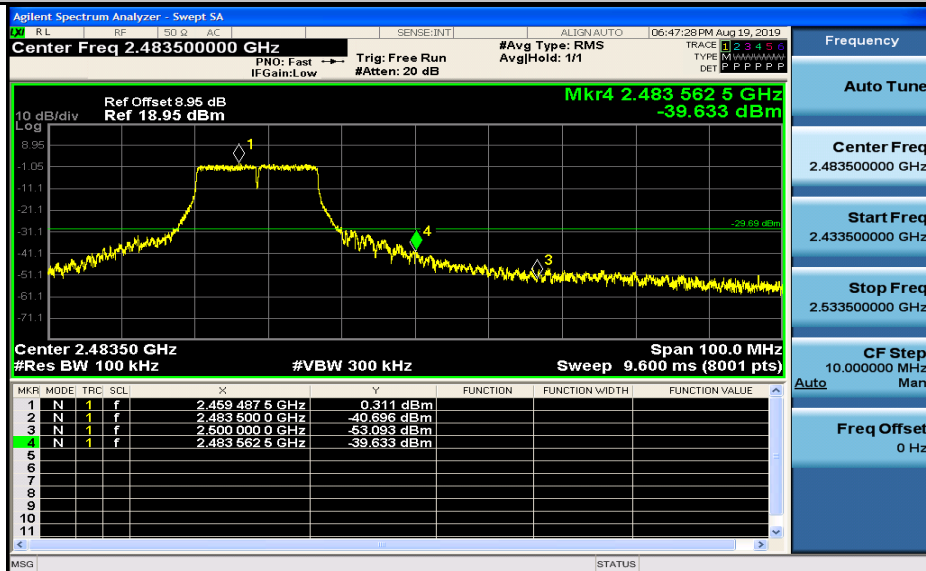
Band-edge for RF Conducted Emissions\_11B\_2462\_Ant1



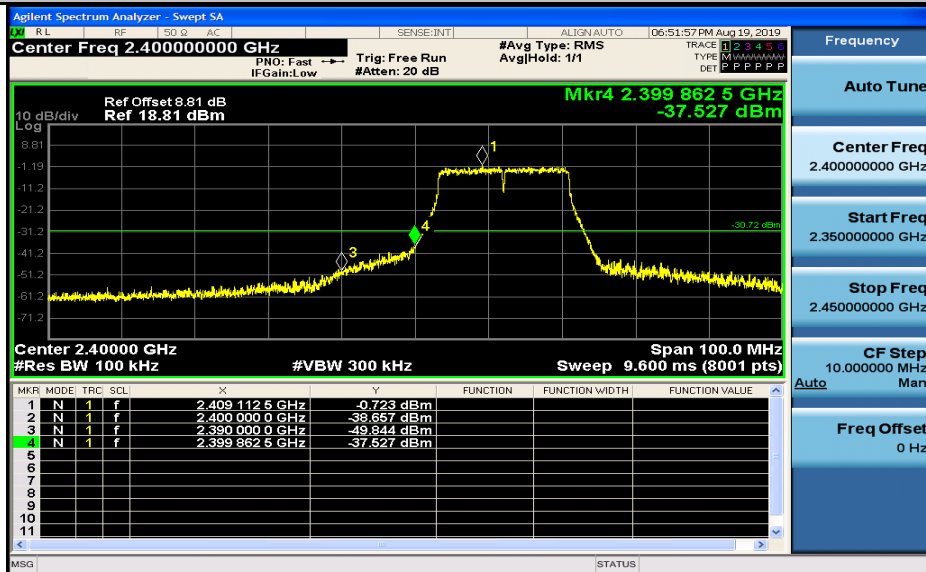
Band-edge for RF Conducted Emissions\_11G\_2412\_Ant1



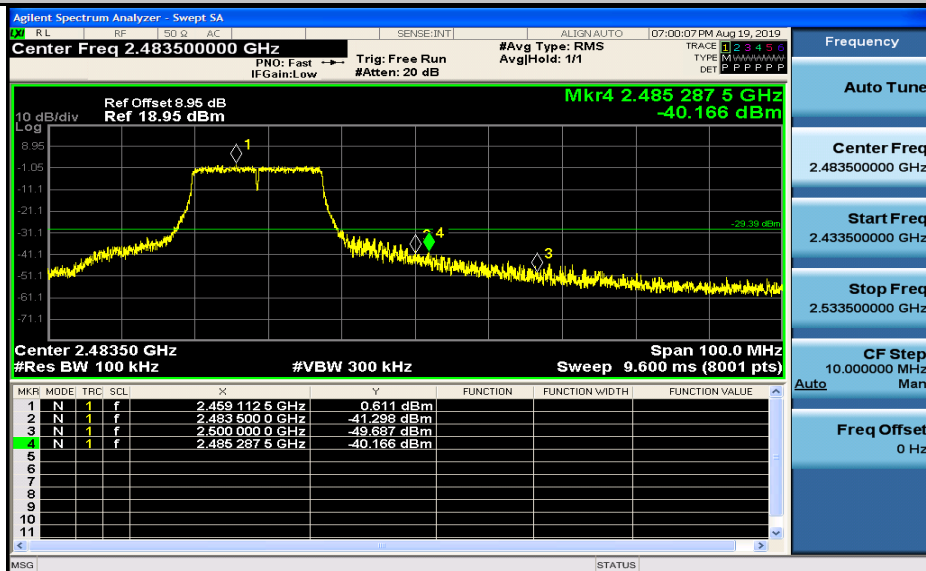
Band-edge for RF Conducted Emissions\_11G\_2462\_Ant1



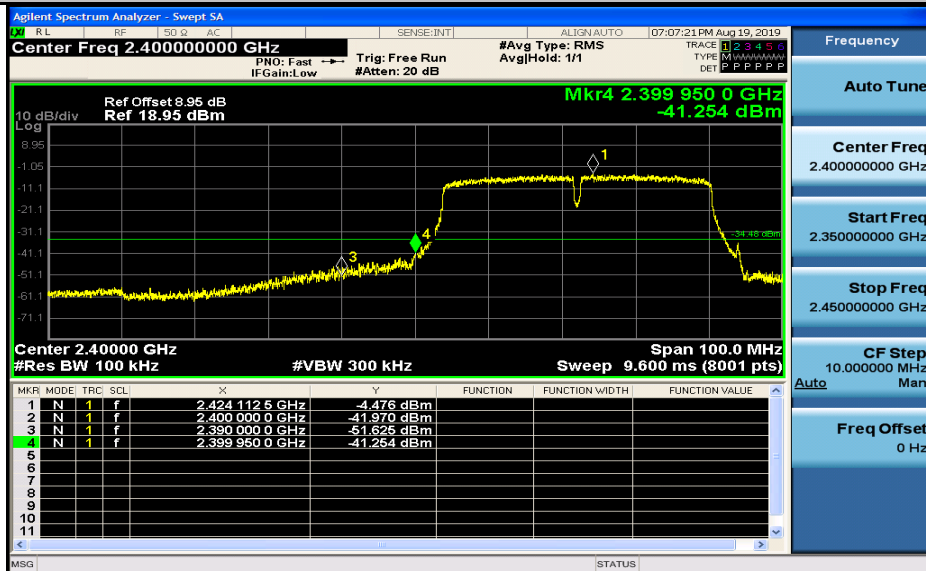
Band-edge for RF Conducted Emissions\_11N20SISO\_2412\_Ant1



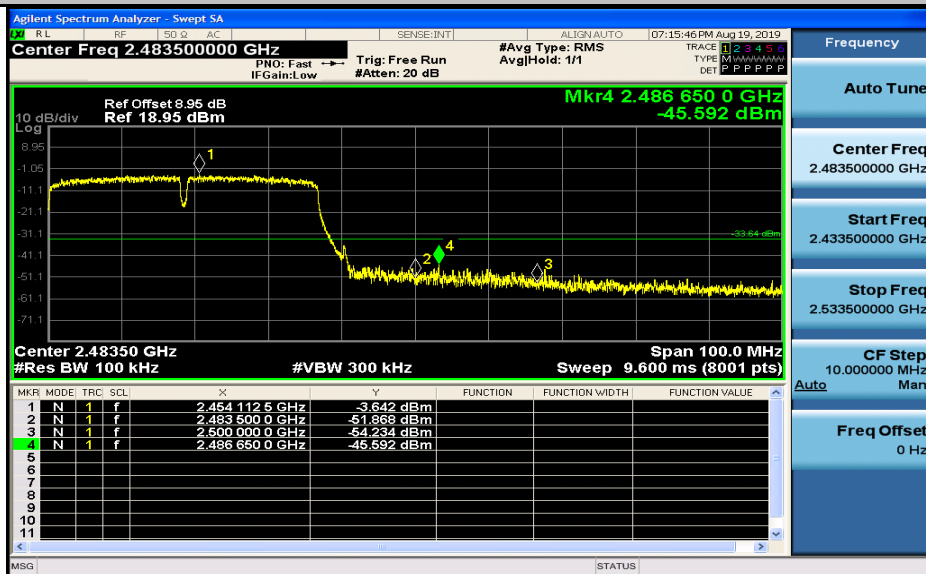
Band-edge for RF Conducted Emissions\_11N20SISO\_2462\_Ant1



Band-edge for RF Conducted Emissions\_11N40SISO\_2422\_Ant1



Band-edge for RF Conducted Emissions\_11N40SISO\_2452\_Ant1



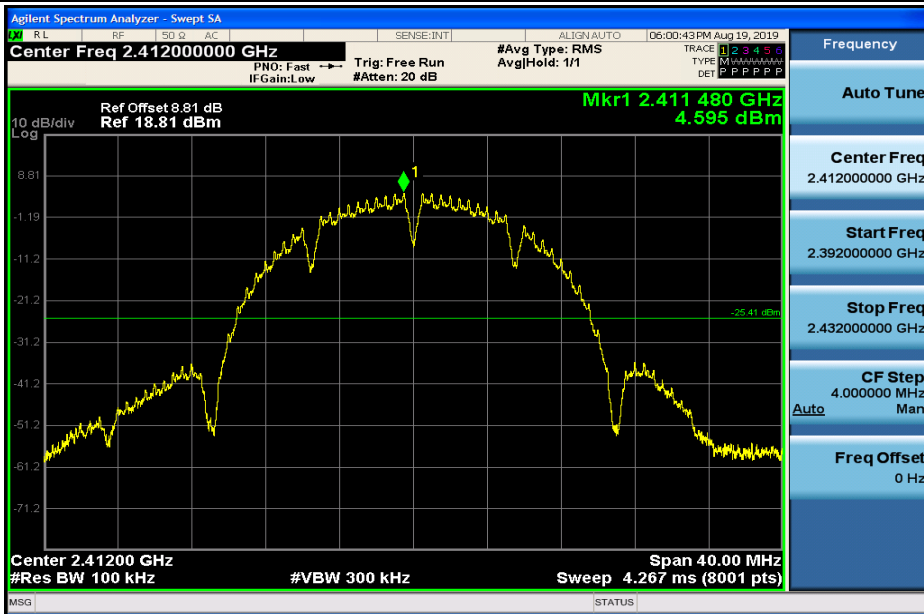


**6.RF Conducted Spurious Emissions**

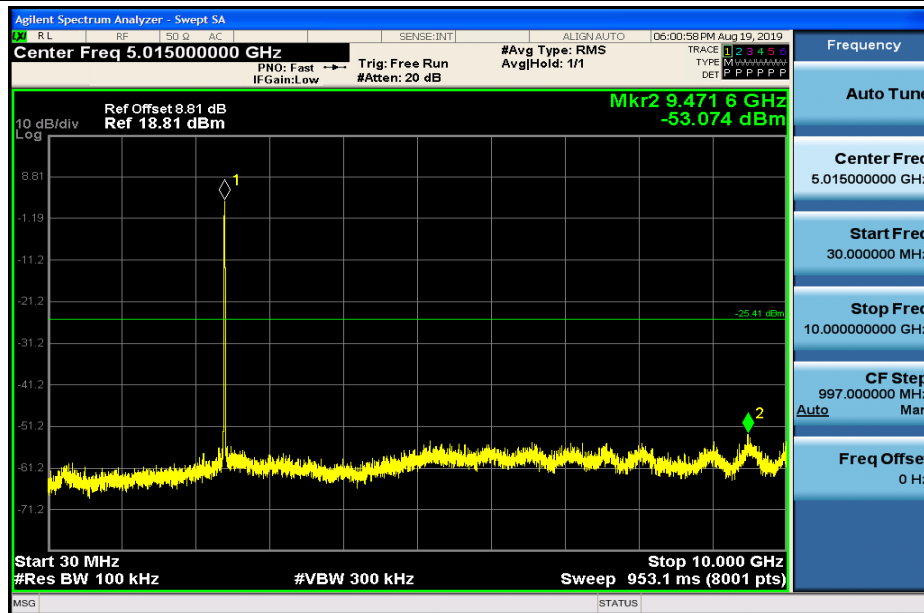
| Test Mode | Test Channel | Ant  | StartFre [MHz] | StopFre [MHz] | RBW [kHz] | VBW [kHz] | Pref[dBm] | Max. Level [dBm] | Limit [dBm]  | Verdict |
|-----------|--------------|------|----------------|---------------|-----------|-----------|-----------|------------------|--------------|---------|
| 11B       | 2412         | Ant1 | 30             | 10000         | 100       | 300       | 4.60      | -53.07           | <-<br>25.41  | PASS    |
| 11B       | 2412         | Ant1 | 10000          | 26000         | 100       | 300       | 4.595     | -44.001          | <-<br>25.405 | PASS    |
| 11B       | 2437         | Ant1 | 30             | 10000         | 100       | 300       | 5.51      | -53.86           | <-<br>24.49  | PASS    |
| 11B       | 2437         | Ant1 | 10000          | 26000         | 100       | 300       | 5.508     | -43.518          | <-<br>24.492 | PASS    |
| 11B       | 2462         | Ant1 | 30             | 10000         | 100       | 300       | 5.67      | -53.64           | <-<br>24.33  | PASS    |
| 11B       | 2462         | Ant1 | 10000          | 26000         | 100       | 300       | 5.673     | -43.542          | <-<br>24.327 | PASS    |
| 11G       | 2412         | Ant1 | 30             | 10000         | 100       | 300       | -0.83     | -54.00           | <-<br>30.83  | PASS    |
| 11G       | 2412         | Ant1 | 10000          | 26000         | 100       | 300       | -0.834    | -43.796          | <-<br>30.834 | PASS    |
| 11G       | 2437         | Ant1 | 30             | 10000         | 100       | 300       | 0.04      | -54.36           | <-<br>29.96  | PASS    |
| 11G       | 2437         | Ant1 | 10000          | 26000         | 100       | 300       | 0.044     | -44.725          | <-<br>29.956 | PASS    |
| 11G       | 2462         | Ant1 | 30             | 10000         | 100       | 300       | 0.23      | -53.20           | <-<br>29.77  | PASS    |
| 11G       | 2462         | Ant1 | 10000          | 26000         | 100       | 300       | 0.231     | -43.508          | <-<br>29.769 | PASS    |
| 11N20SISO | 2412         | Ant1 | 30             | 10000         | 100       | 300       | -0.74     | -53.85           | <-<br>30.74  | PASS    |
| 11N20SISO | 2412         | Ant1 | 10000          | 26000         | 100       | 300       | -0.744    | -43.998          | <-<br>30.744 | PASS    |
| 11N20SISO | 2437         | Ant1 | 30             | 10000         | 100       | 300       | 0.25      | -53.22           | <-<br>29.75  | PASS    |
| 11N20SISO | 2437         | Ant1 | 10000          | 26000         | 100       | 300       | 0.25      | -43.734          | <-<br>29.75  | PASS    |
| 11N20SISO | 2462         | Ant1 | 30             | 10000         | 100       | 300       | 0.30      | -53.14           | <-<br>29.70  | PASS    |
| 11N20SISO | 2462         | Ant1 | 10000          | 26000         | 100       | 300       | 0.304     | -44.182          | <-<br>29.696 | PASS    |
| 11N40SISO | 2422         | Ant1 | 30             | 10000         | 100       | 300       | -4.55     | -53.91           | <-<br>34.55  | PASS    |
| 11N40SISO | 2422         | Ant1 | 10000          | 26000         | 100       | 300       | -4.548    | -44.021          | <-<br>34.548 | PASS    |
| 11N40SISO | 2437         | Ant1 | 30             | 10000         | 100       | 300       | -3.99     | -53.46           | <-<br>33.99  | PASS    |
| 11N40SISO | 2437         | Ant1 | 10000          | 26000         | 100       | 300       | -3.994    | -43.577          | <-<br>33.994 | PASS    |
| 11N40SISO | 2452         | Ant1 | 30             | 10000         | 100       | 300       | -3.68     | -52.85           | <-<br>33.68  | PASS    |

|           |      |      |       |       |     |     |        |         |              |      |
|-----------|------|------|-------|-------|-----|-----|--------|---------|--------------|------|
| 11N40SISO | 2452 | Ant1 | 10000 | 26000 | 100 | 300 | -3.681 | -43.359 | <-<br>33.681 | PASS |
|-----------|------|------|-------|-------|-----|-----|--------|---------|--------------|------|

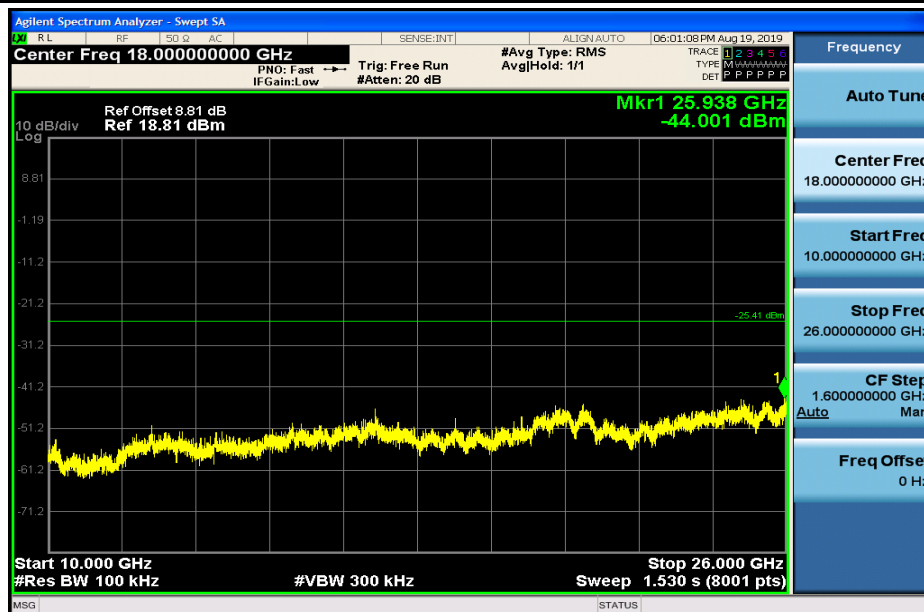
RF Conducted Spurious Emissions\_11B\_2412



|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.41200000 GHz       |
| Start Freq<br>2.39200000 GHz        |
| Stop Freq<br>2.43200000 GHz         |
| CF Step<br>4.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

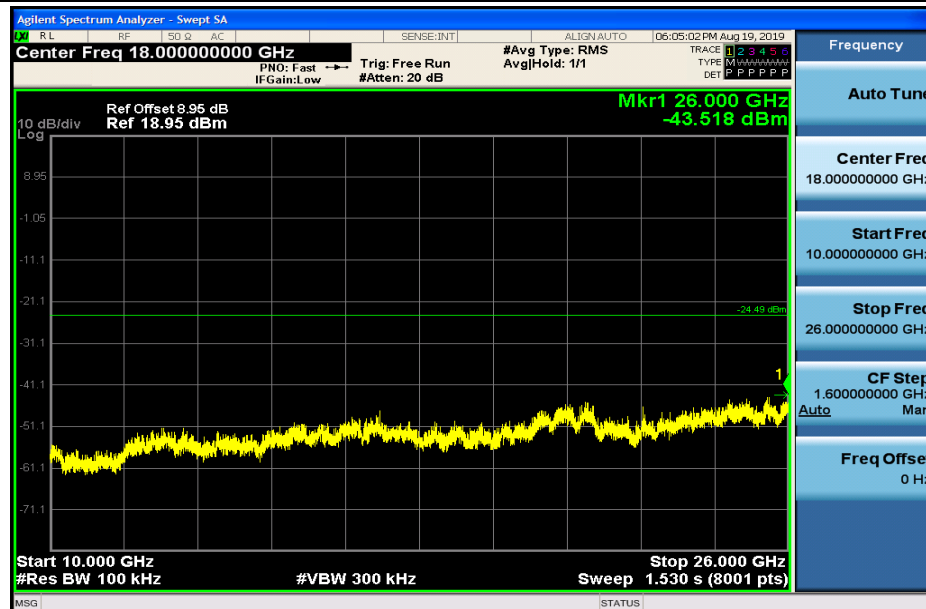
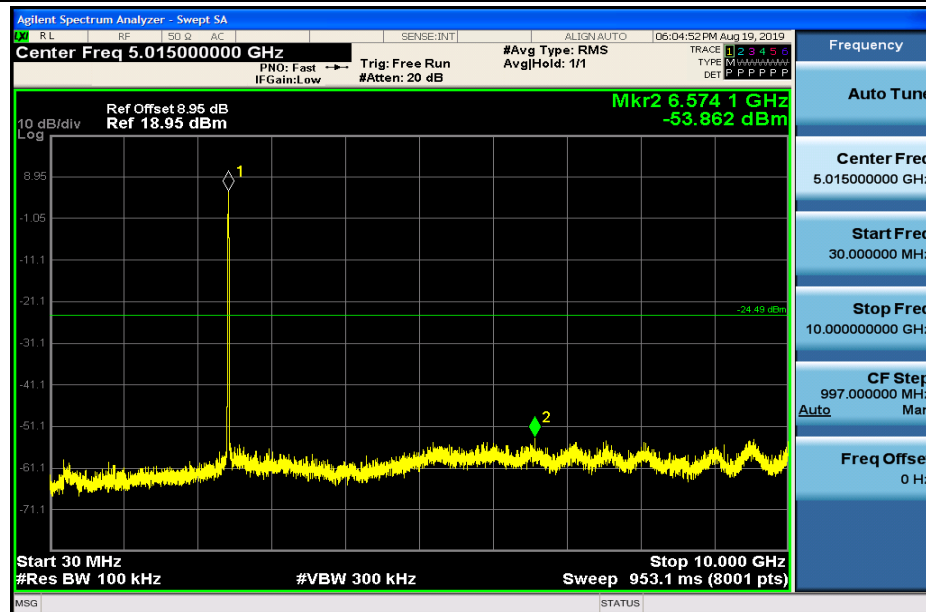
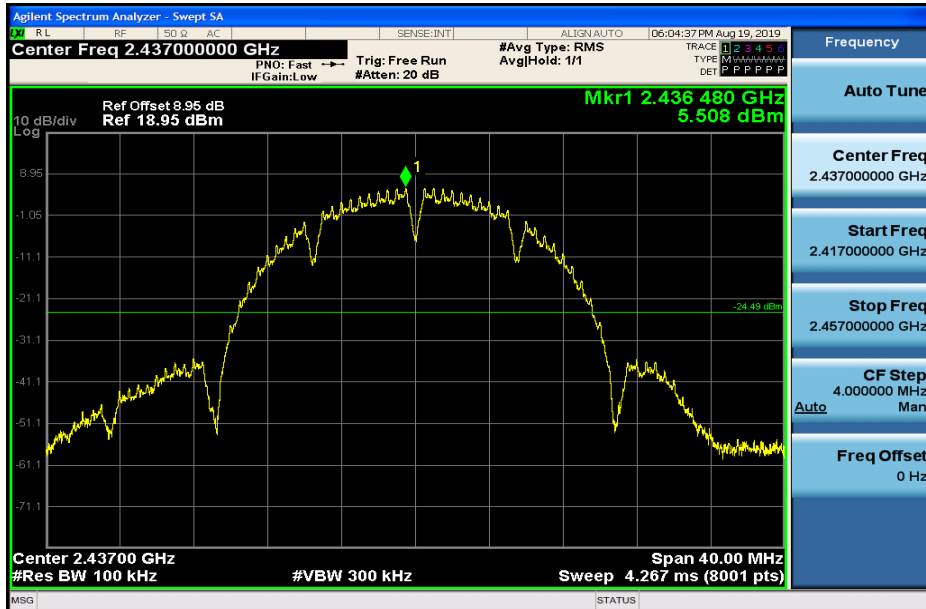


|                                       |
|---------------------------------------|
| Frequency                             |
| Auto Tune                             |
| Center Freq<br>5.01500000 GHz         |
| Start Freq<br>30.000000 MHz           |
| Stop Freq<br>10.00000000 GHz          |
| CF Step<br>997.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                   |

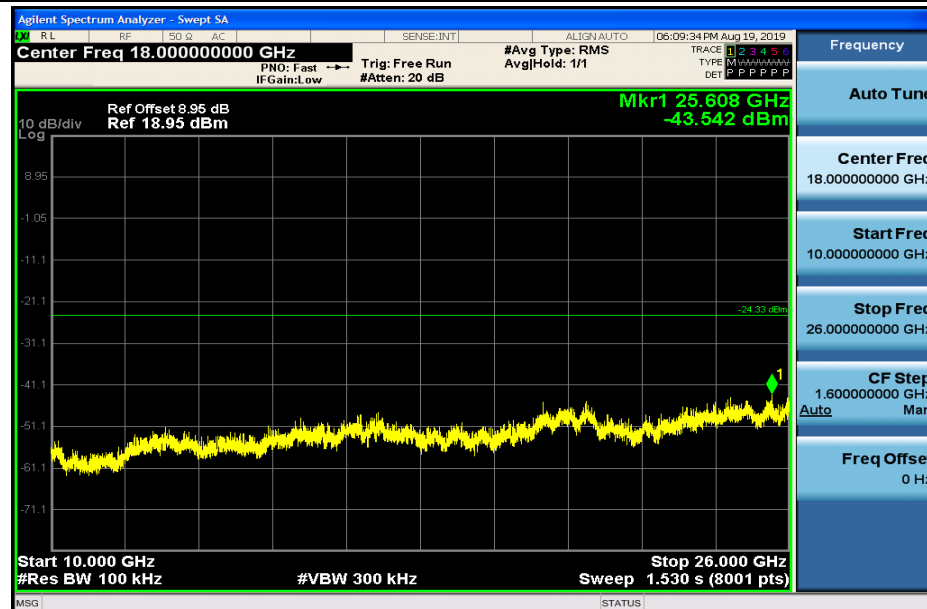
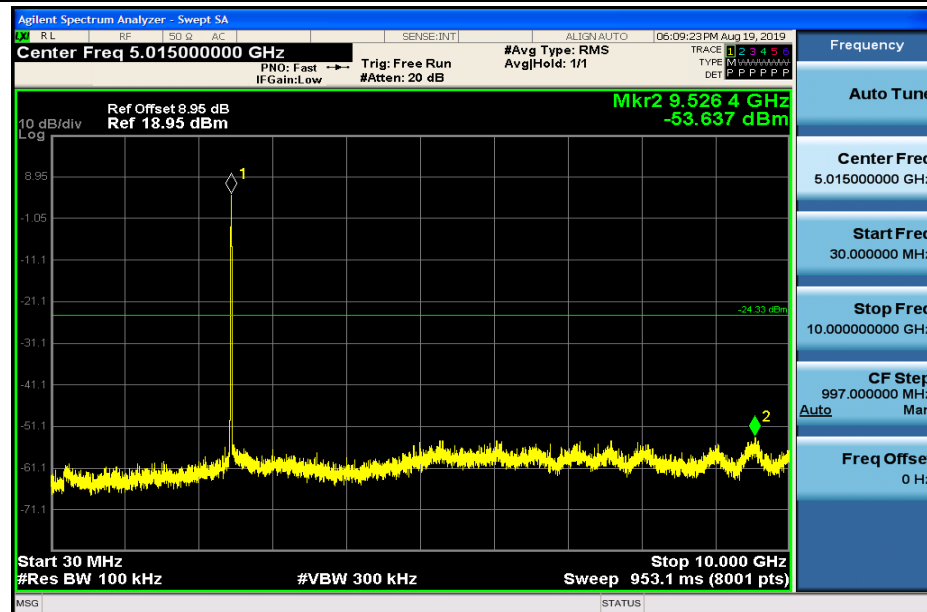


|                                       |
|---------------------------------------|
| Frequency                             |
| Auto Tune                             |
| Center Freq<br>18.00000000 GHz        |
| Start Freq<br>10.00000000 GHz         |
| Stop Freq<br>26.00000000 GHz          |
| CF Step<br>1.60000000 GHz<br>Auto Man |
| Freq Offset<br>0 Hz                   |

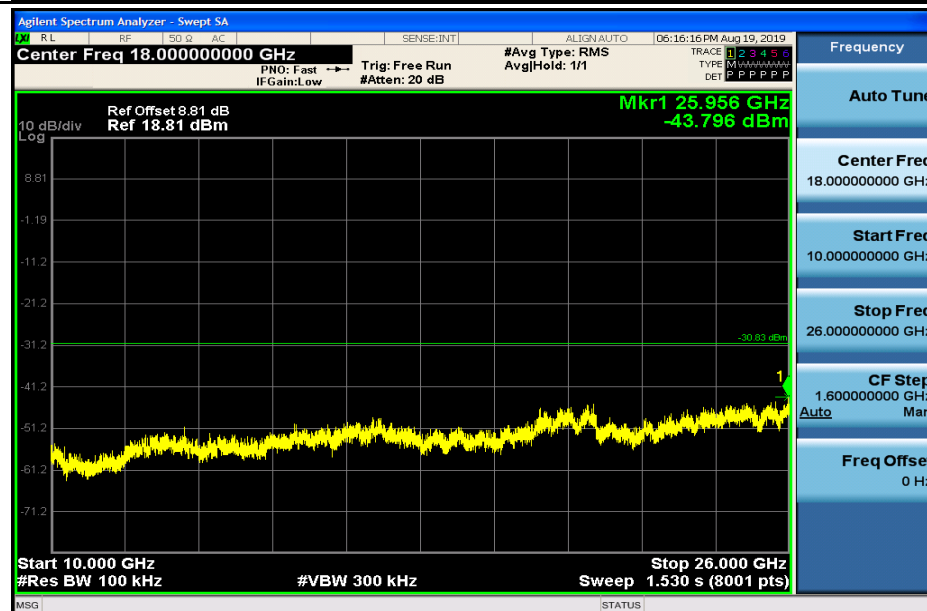
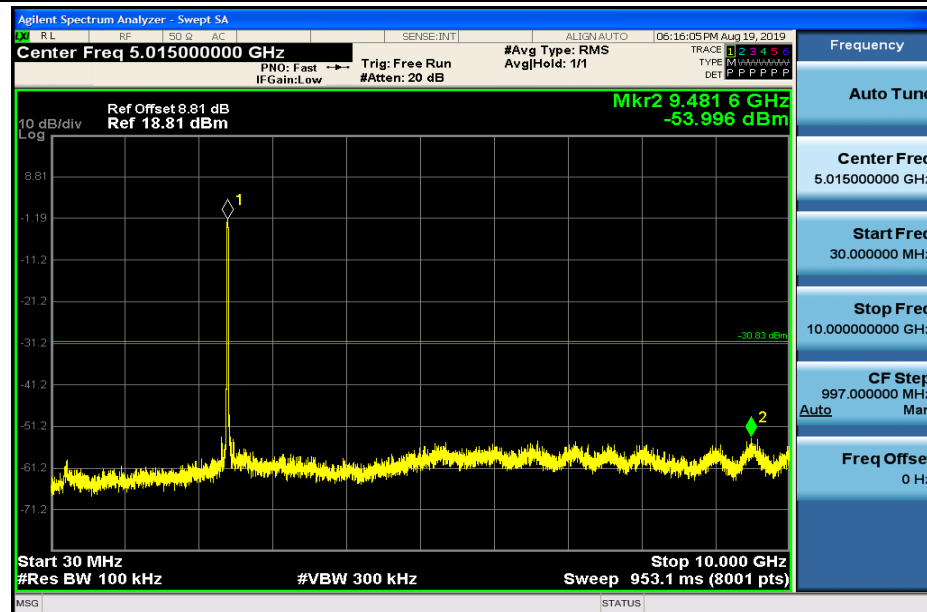
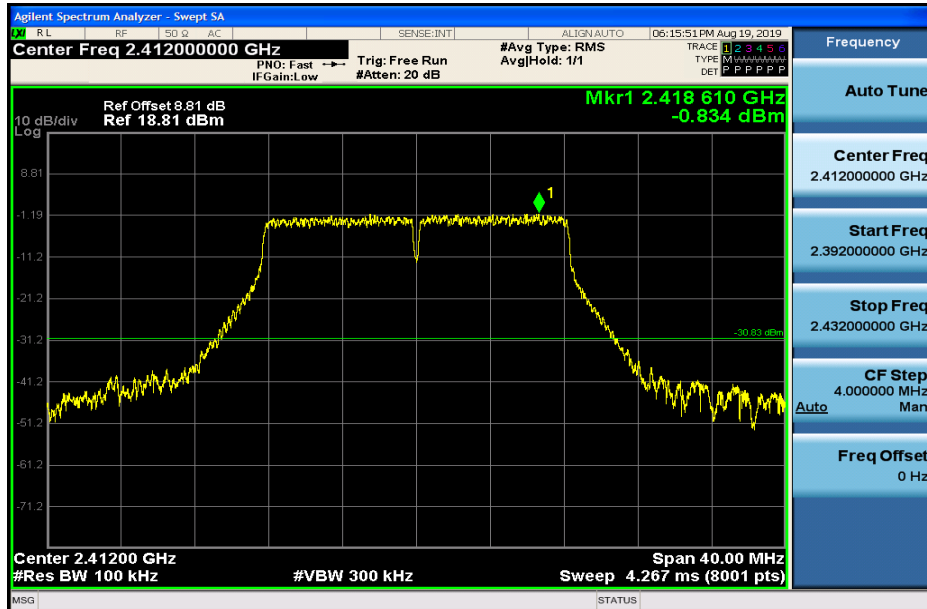
RF Conducted Spurious Emissions\_11B\_2437



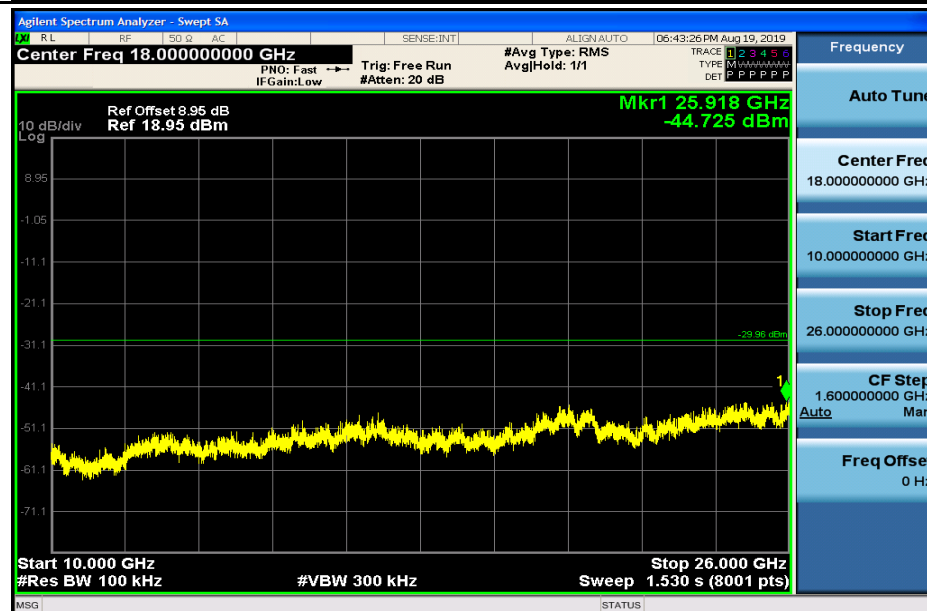
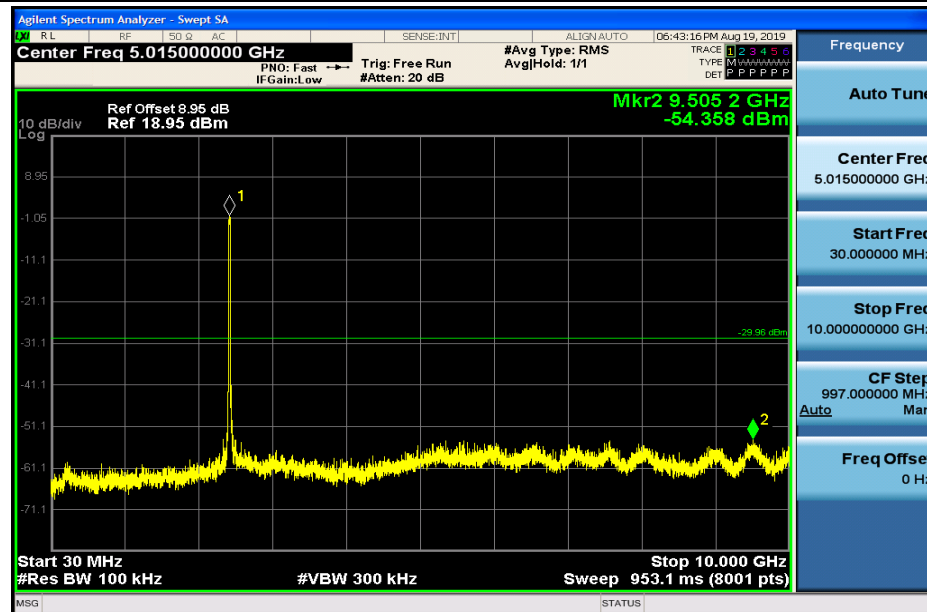
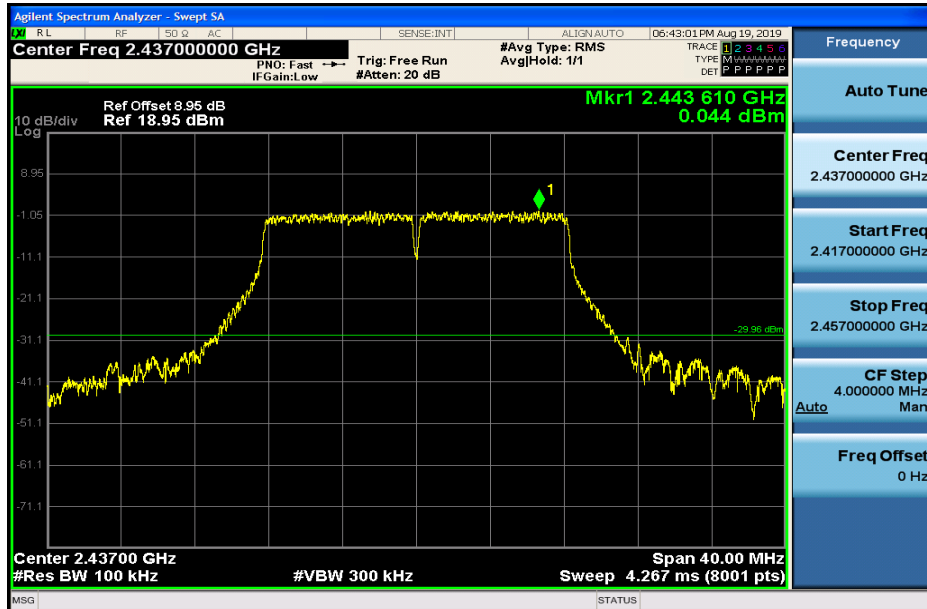
RF Conducted Spurious Emissions\_11B\_2462



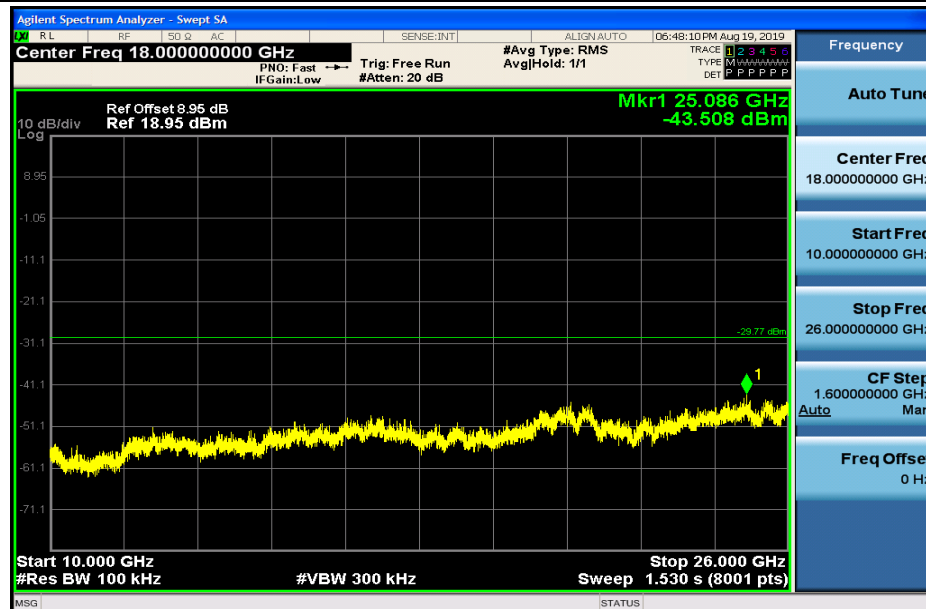
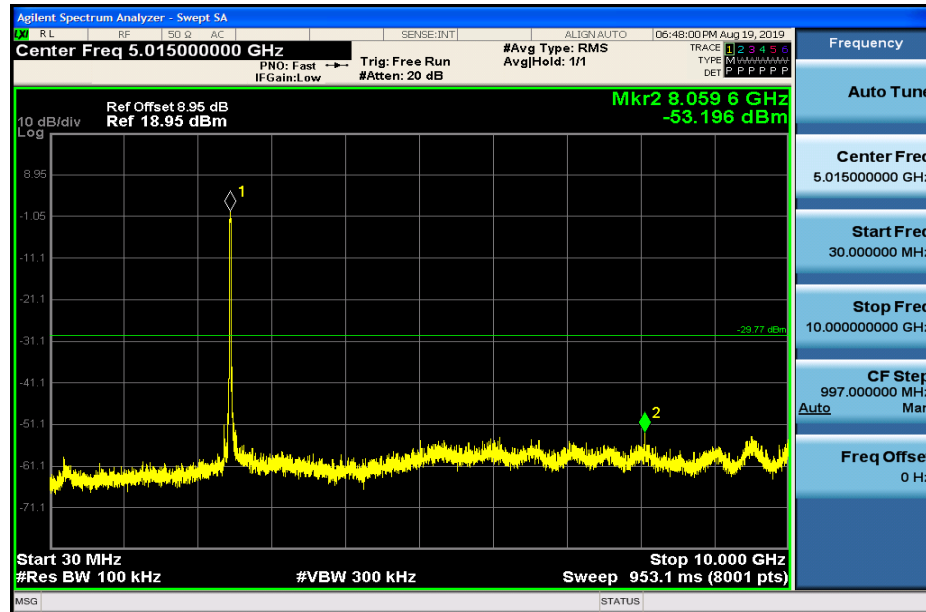
RF Conducted Spurious Emissions\_11G\_2412



RF Conducted Spurious Emissions\_11G\_2437

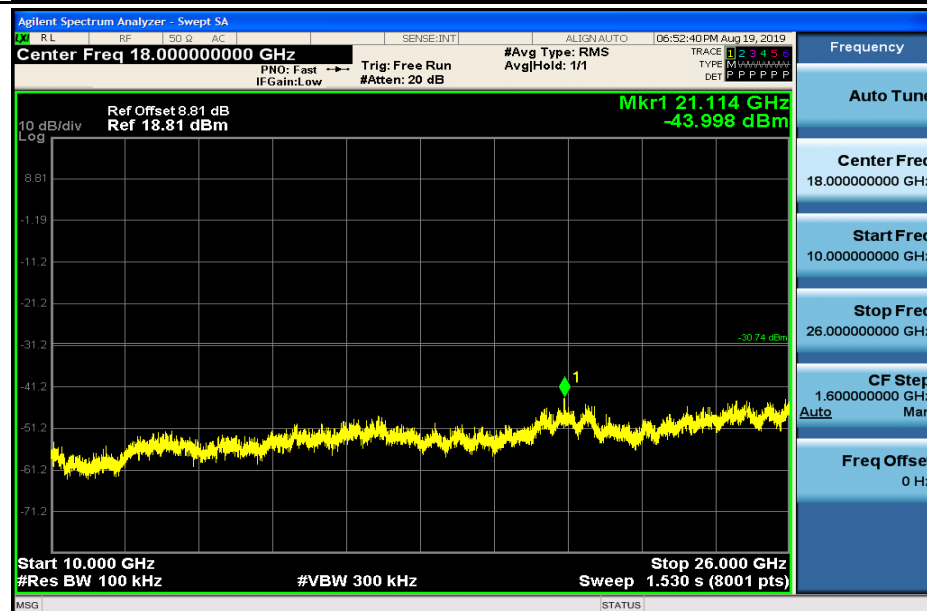
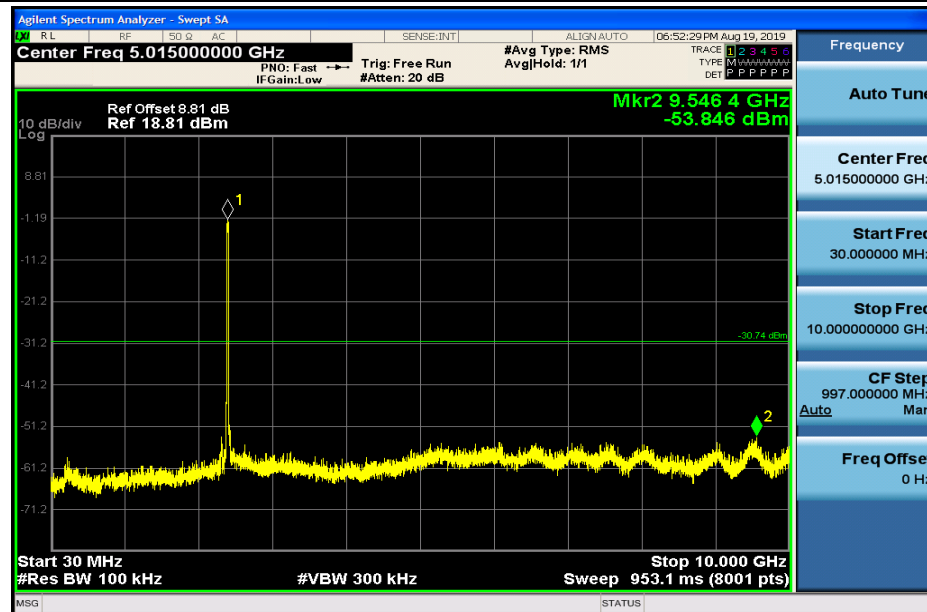
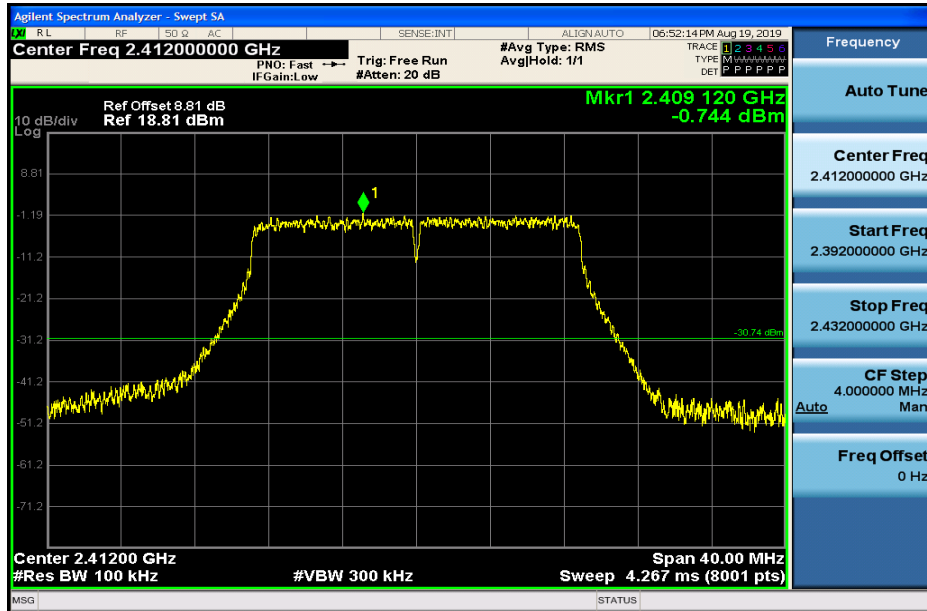


RF Conducted Spurious Emissions\_11G\_2462

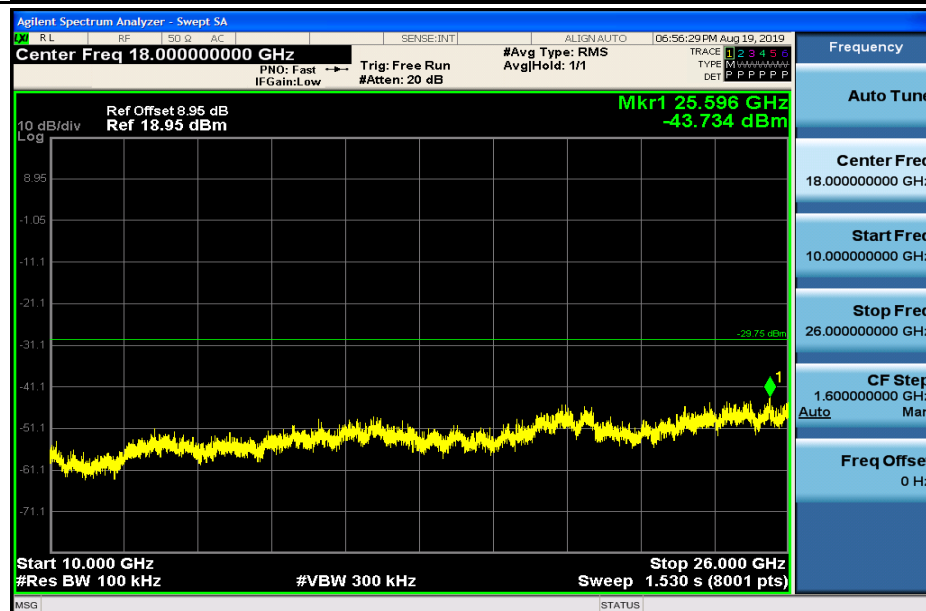
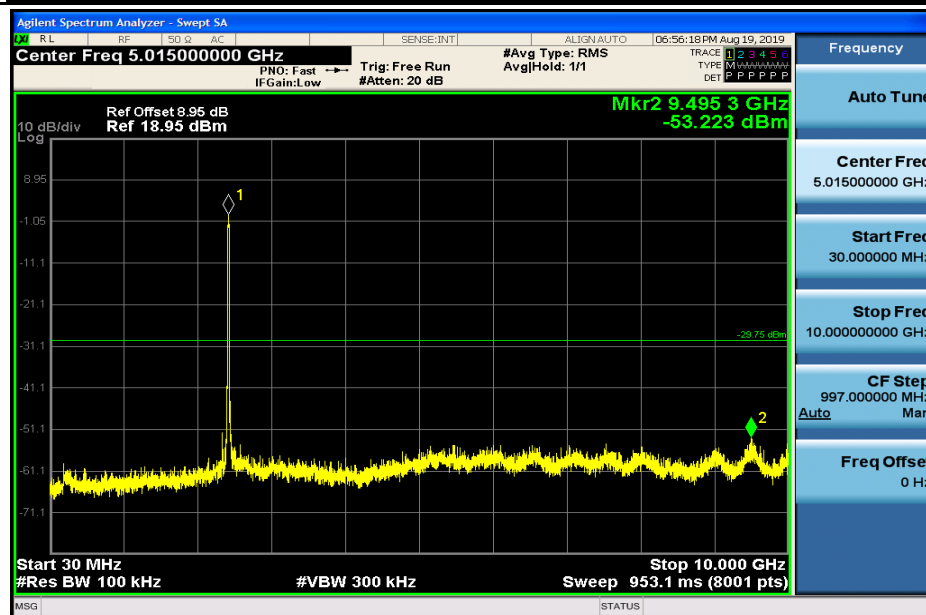
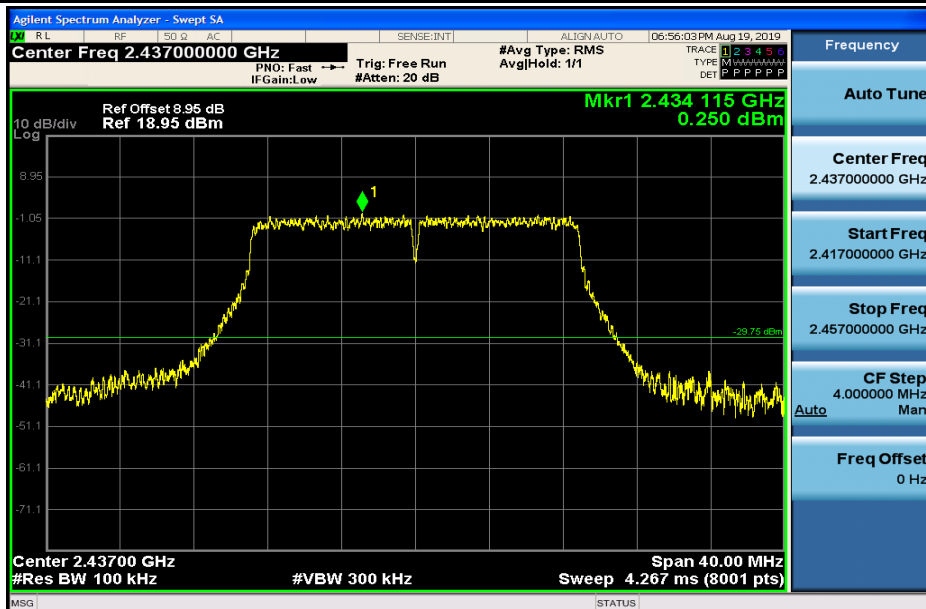




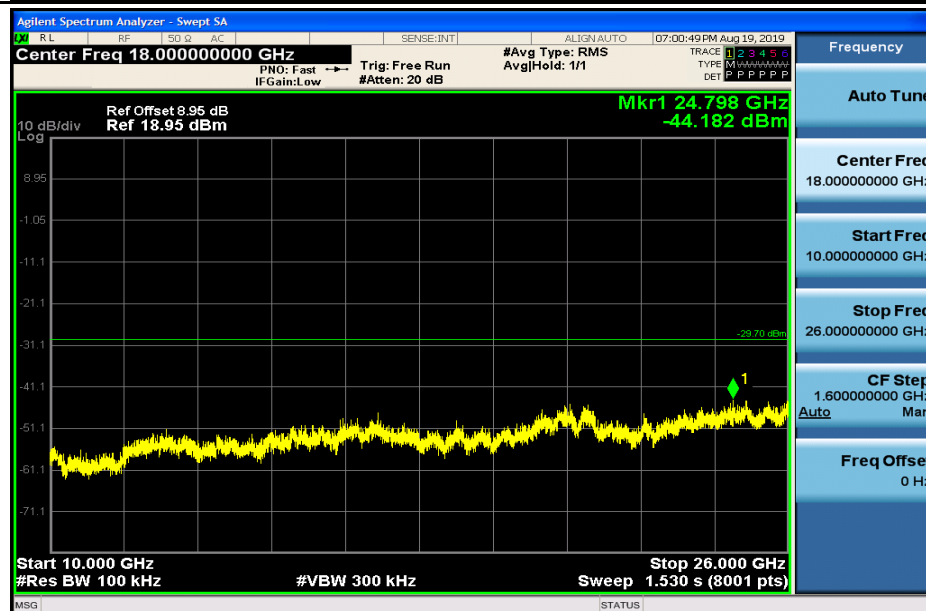
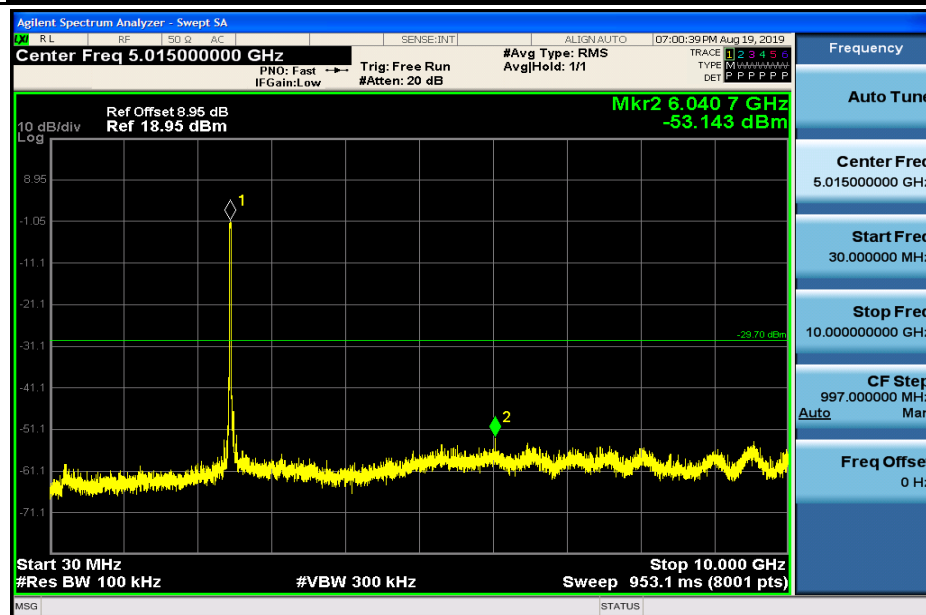
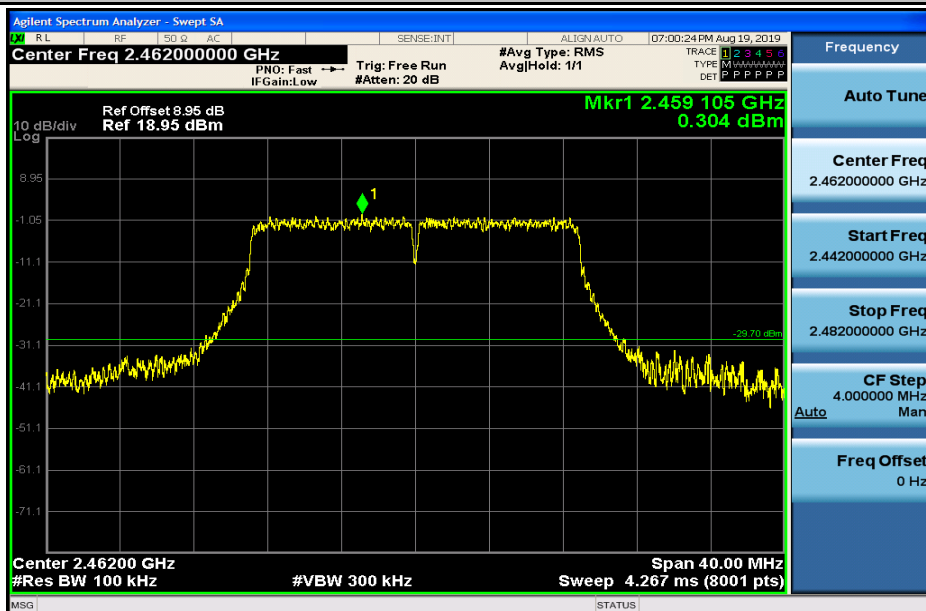
RF Conducted Spurious Emissions\_11N20SISO\_2412



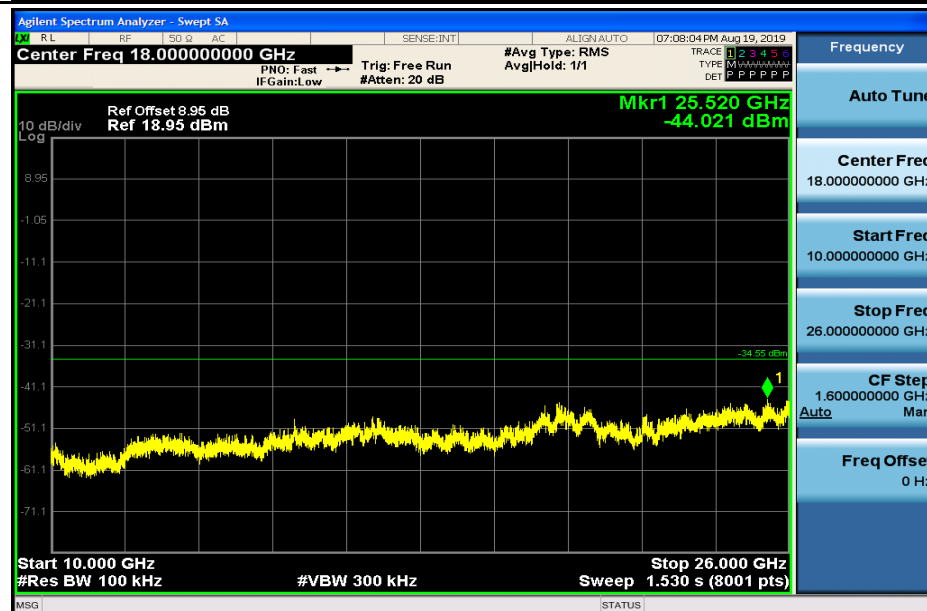
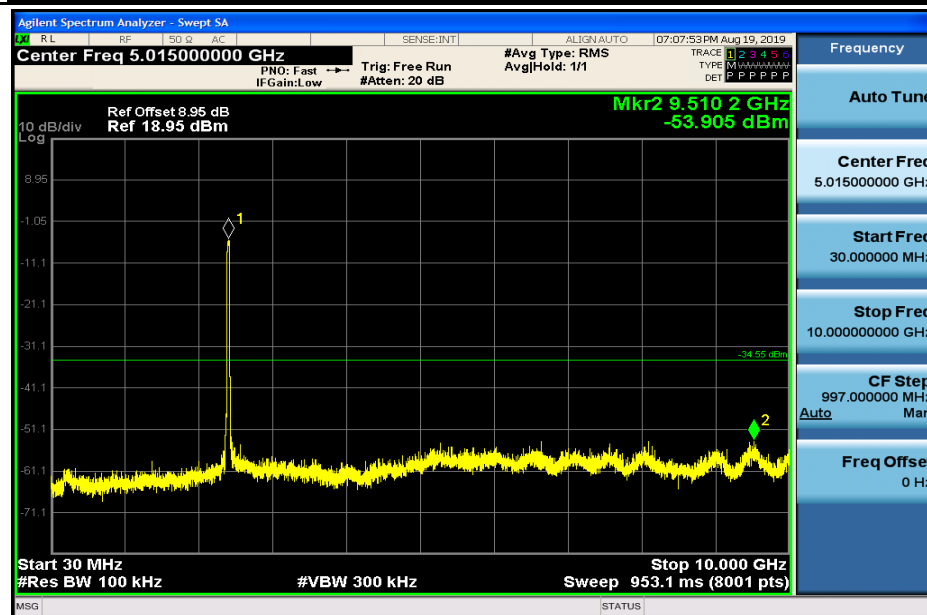
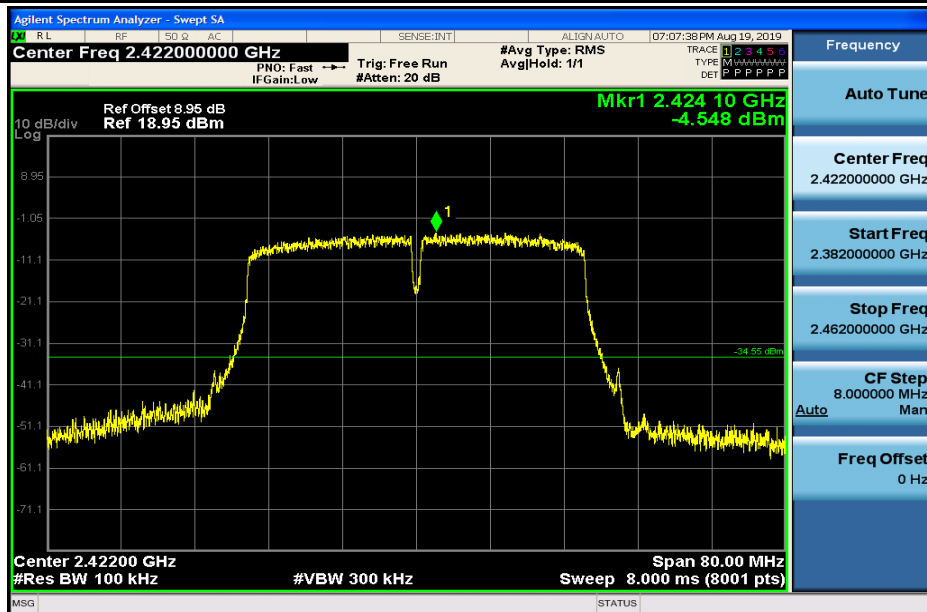
RF Conducted Spurious Emissions\_11N20SISO\_2437



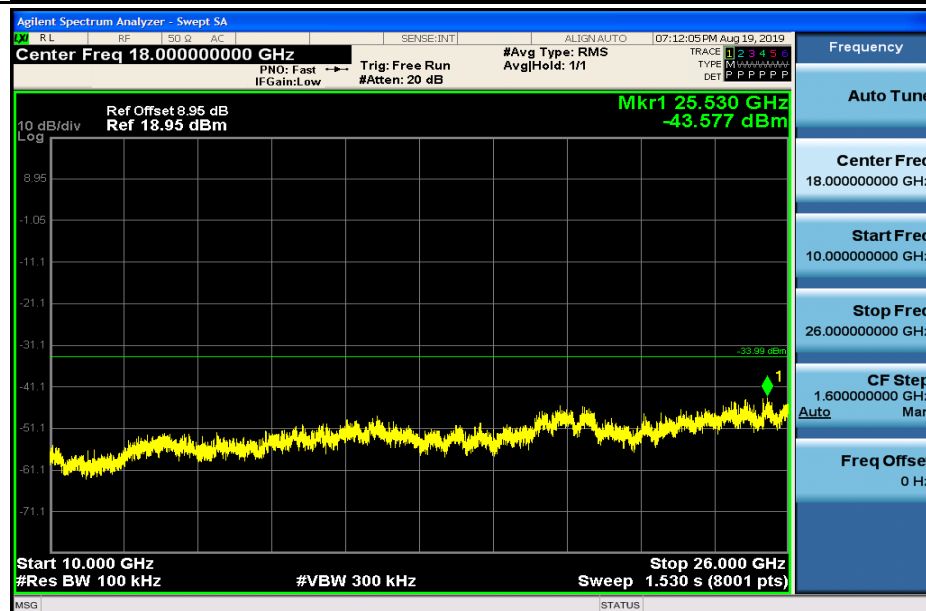
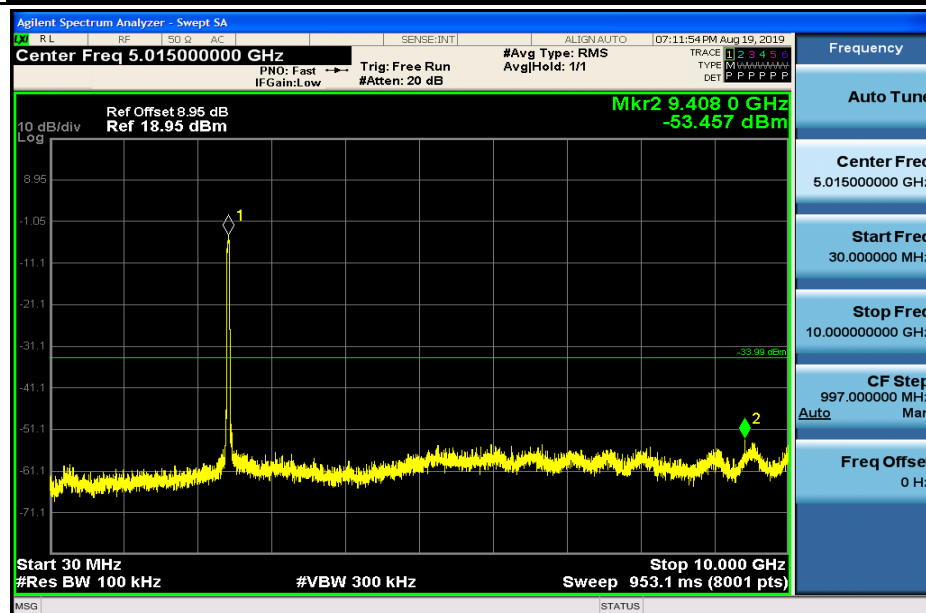
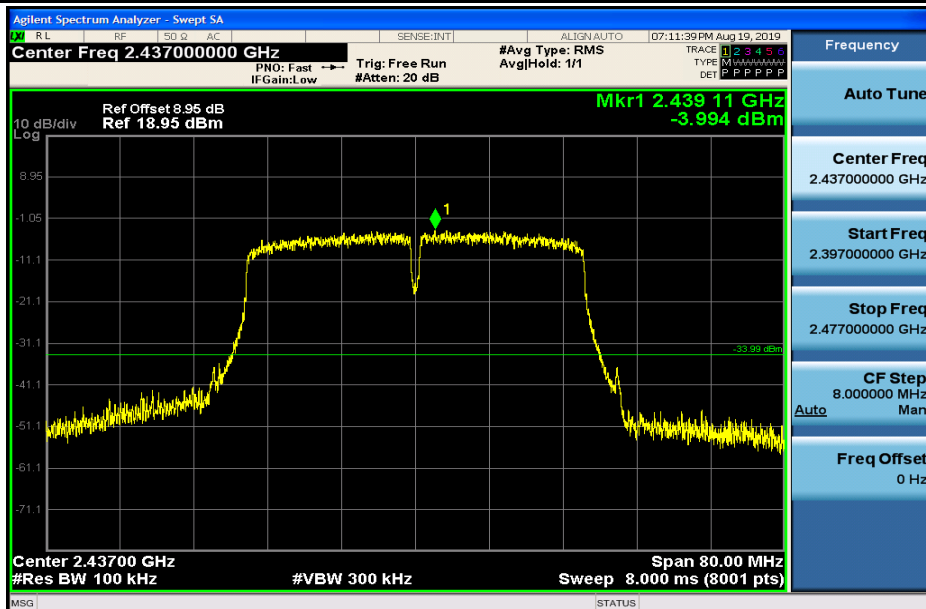
RF Conducted Spurious Emissions\_11N20SISO\_2462



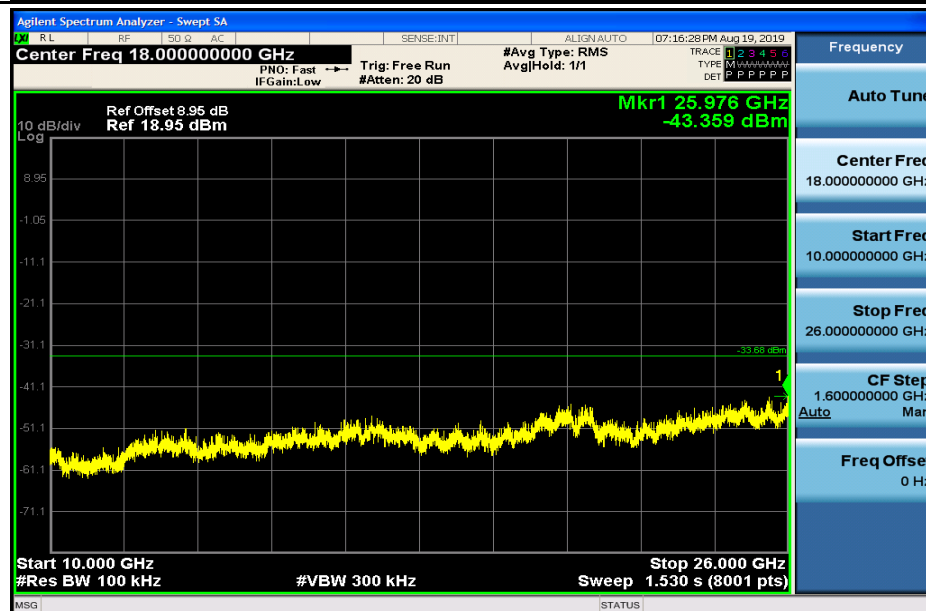
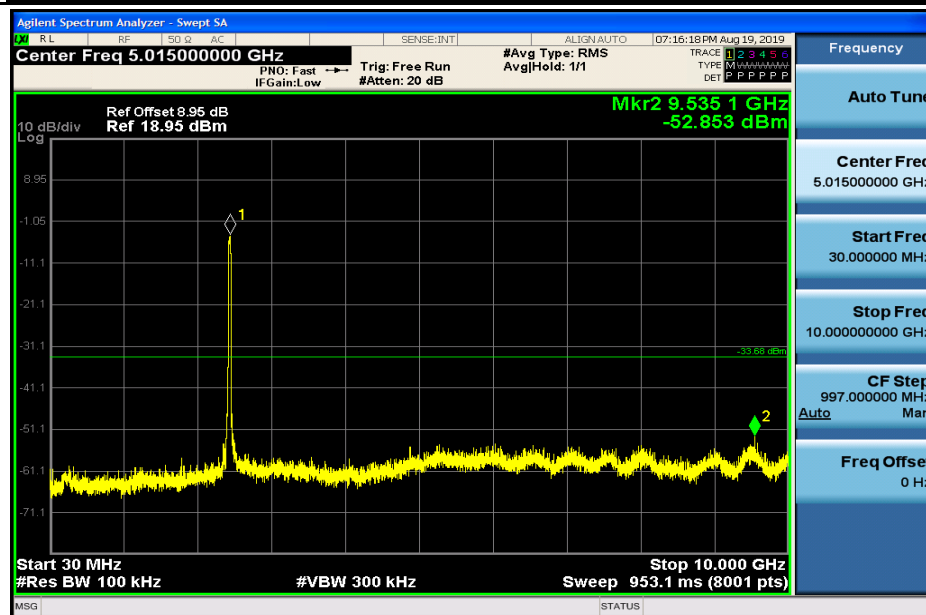
RF Conducted Spurious Emissions\_11N40SISO\_2422



RF Conducted Spurious Emissions\_11N40SISO\_2437



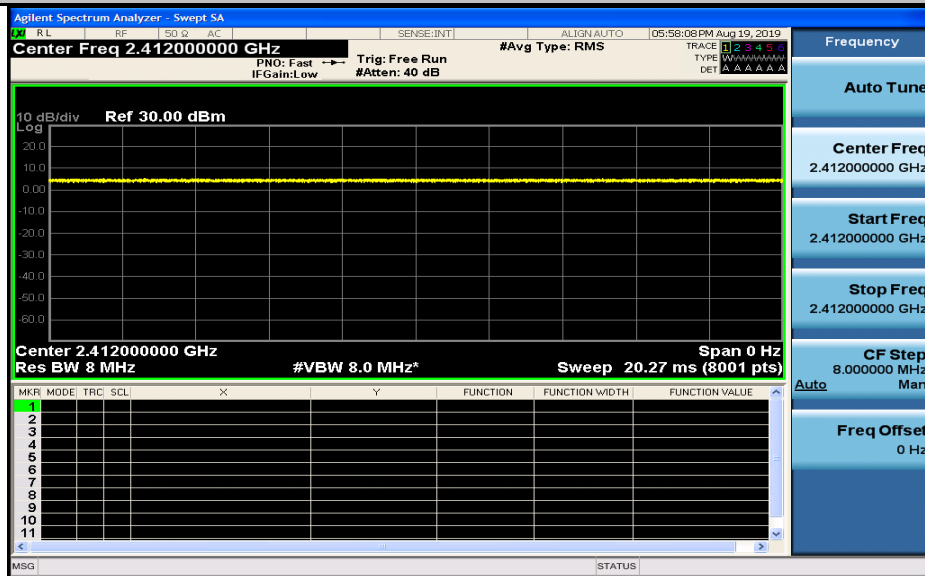
RF Conducted Spurious Emissions\_11N40SISO\_2452



**7.Duty Cycle**

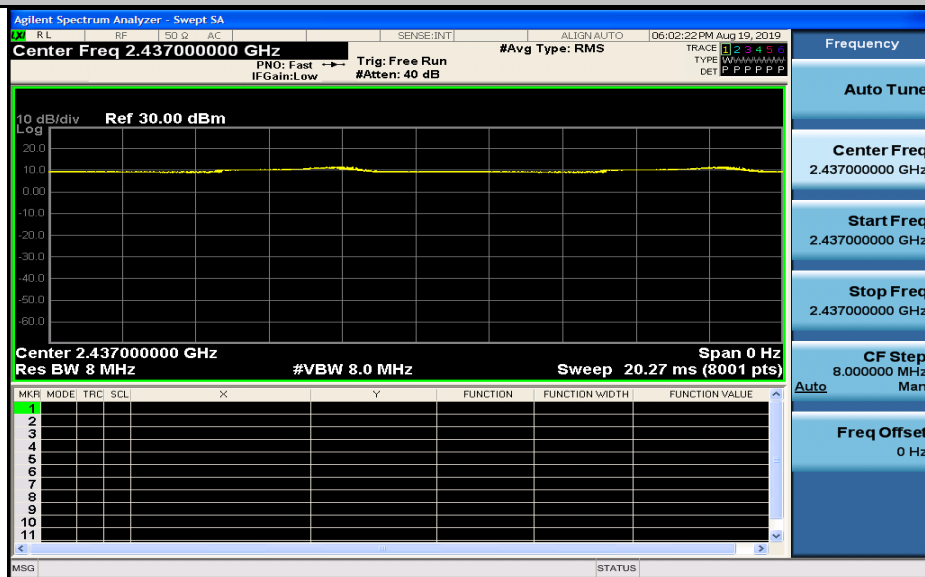
| Test Mode | Test Channel | Ant  | Duty Cycle[%] | 10log(1/x) Factor[dB] |
|-----------|--------------|------|---------------|-----------------------|
| 11B       | 2412         | Ant1 | 100.00        | 0.00                  |
| 11B       | 2437         | Ant1 | 100.00        | 0.00                  |
| 11B       | 2462         | Ant1 | 100.00        | 0.00                  |
| 11G       | 2412         | Ant1 | 100.00        | 0.00                  |
| 11G       | 2437         | Ant1 | 100.00        | 0.00                  |
| 11G       | 2462         | Ant1 | 100.00        | 0.00                  |
| 11N20SISO | 2412         | Ant1 | 100.00        | 0.00                  |
| 11N20SISO | 2437         | Ant1 | 100.00        | 0.00                  |
| 11N20SISO | 2462         | Ant1 | 100.00        | 0.00                  |
| 11N40SISO | 2422         | Ant1 | 100.00        | 0.00                  |
| 11N40SISO | 2437         | Ant1 | 100.00        | 0.00                  |
| 11N40SISO | 2452         | Ant1 | 100.00        | 0.00                  |

Duty Cycle\_11B\_2412\_Ant1



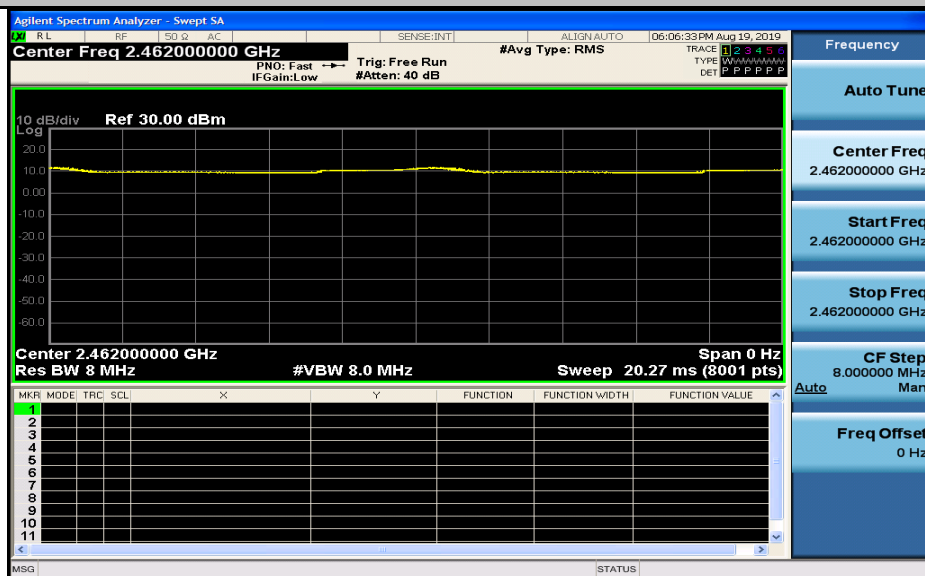
|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.412000000 GHz      |
| Start Freq<br>2.412000000 GHz       |
| Stop Freq<br>2.412000000 GHz        |
| CF Step<br>8.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

Duty Cycle\_11B\_2437\_Ant1



|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.437000000 GHz      |
| Start Freq<br>2.437000000 GHz       |
| Stop Freq<br>2.437000000 GHz        |
| CF Step<br>8.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

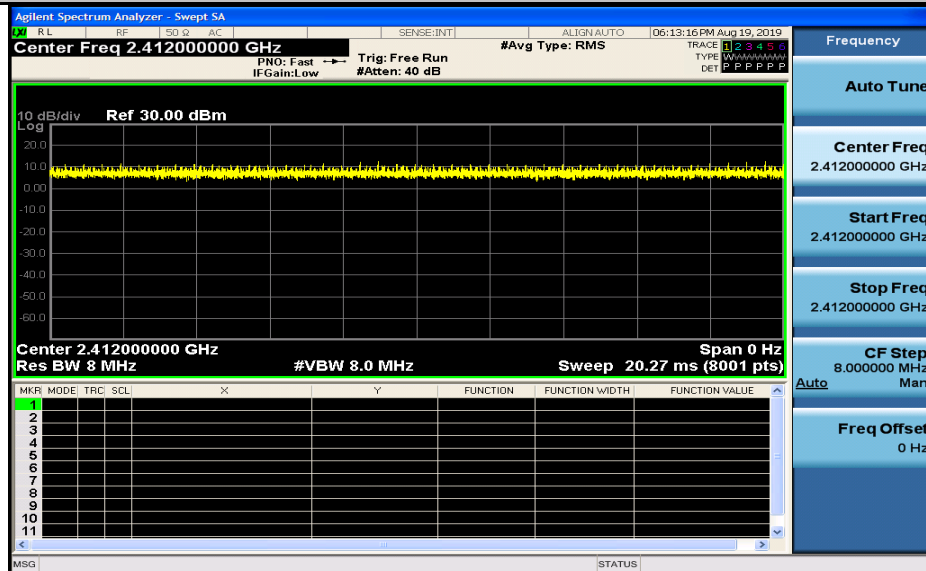
Duty Cycle\_11B\_2462\_Ant1



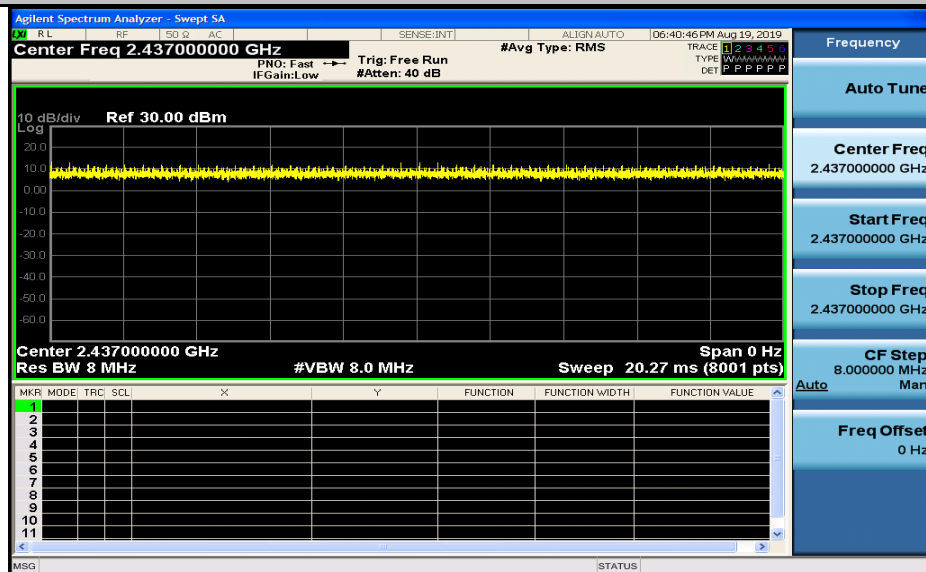
|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.462000000 GHz      |
| Start Freq<br>2.462000000 GHz       |
| Stop Freq<br>2.462000000 GHz        |
| CF Step<br>8.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |



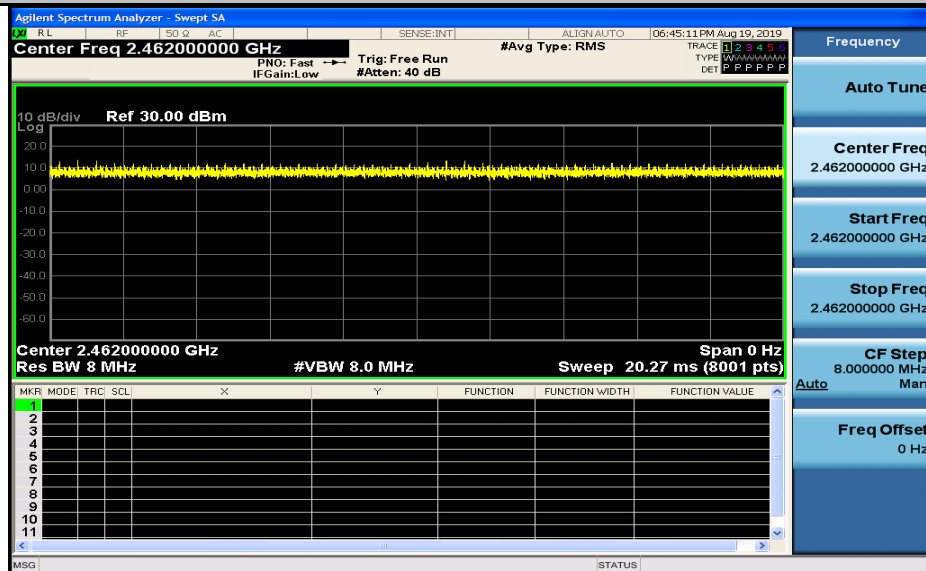
Duty Cycle\_11G\_2412\_Ant1



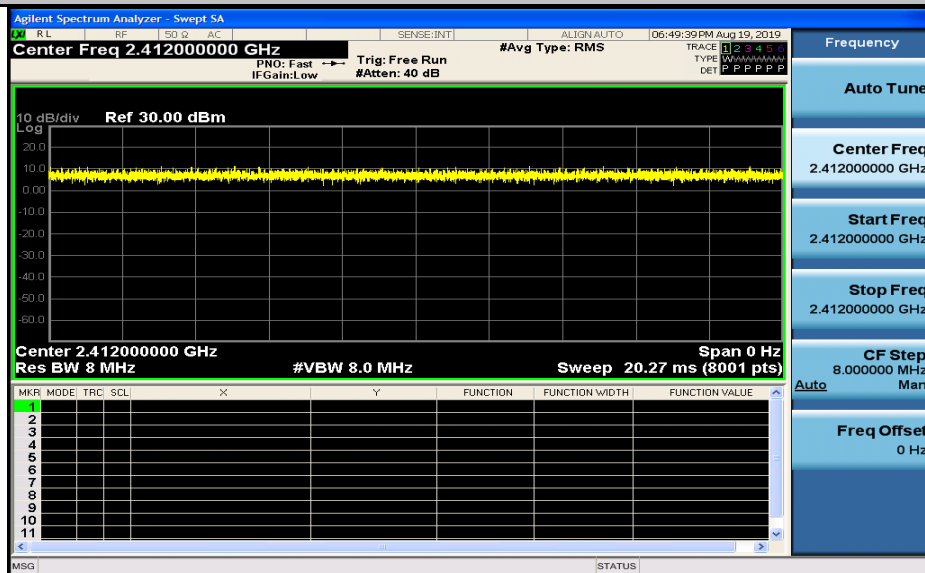
Duty Cycle\_11G\_2437\_Ant1



Duty Cycle\_11G\_2462\_Ant1

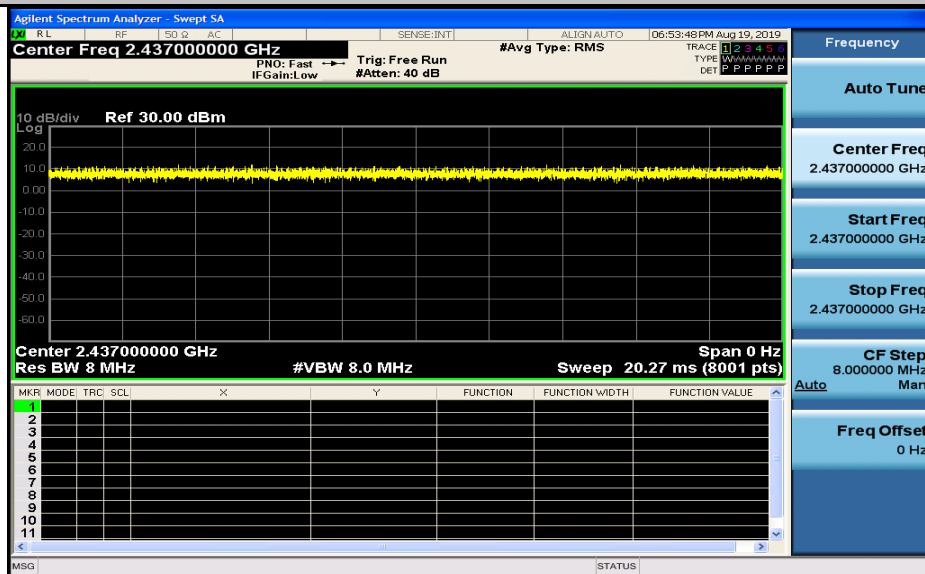


Duty Cycle\_11N20SISO\_2412\_Ant1



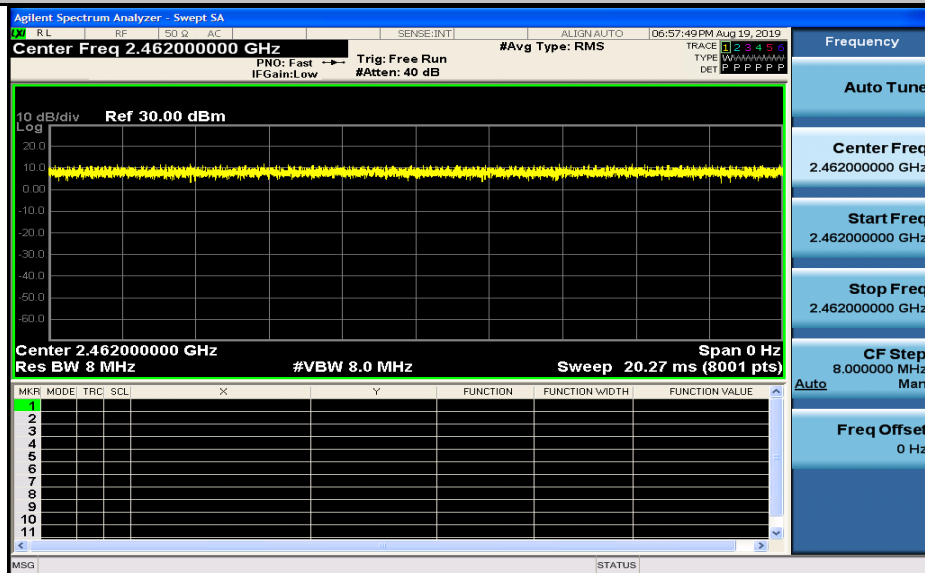
|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.412000000 GHz      |
| Start Freq<br>2.412000000 GHz       |
| Stop Freq<br>2.412000000 GHz        |
| CF Step<br>8.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

Duty Cycle\_11N20SISO\_2437\_Ant1



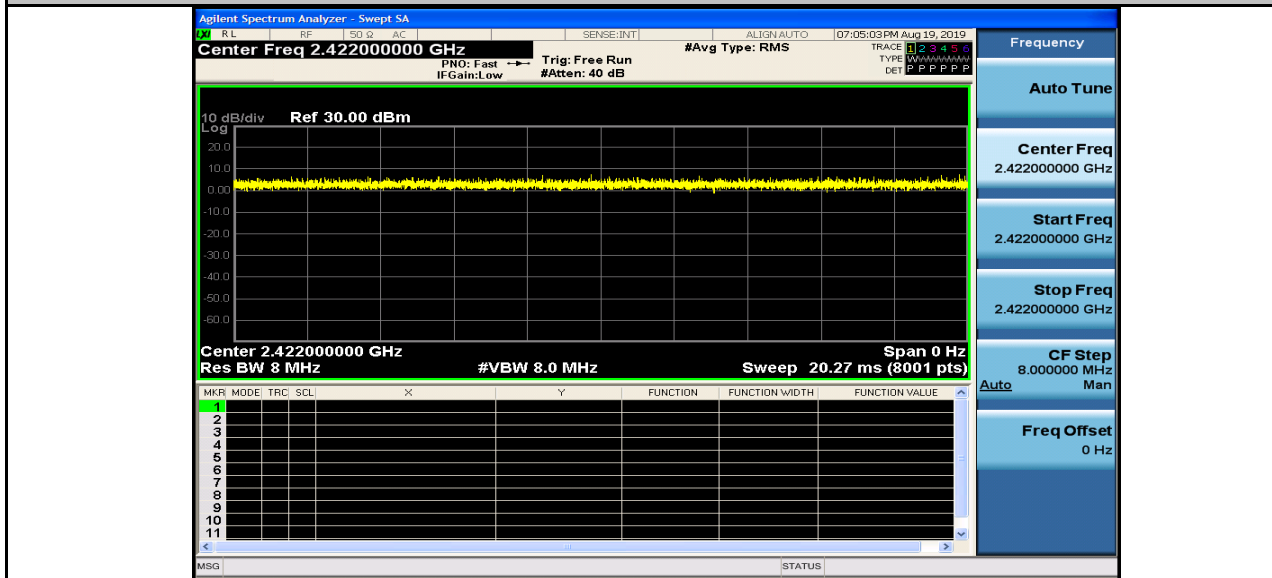
|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.437000000 GHz      |
| Start Freq<br>2.437000000 GHz       |
| Stop Freq<br>2.437000000 GHz        |
| CF Step<br>8.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

Duty Cycle\_11N20SISO\_2462\_Ant1

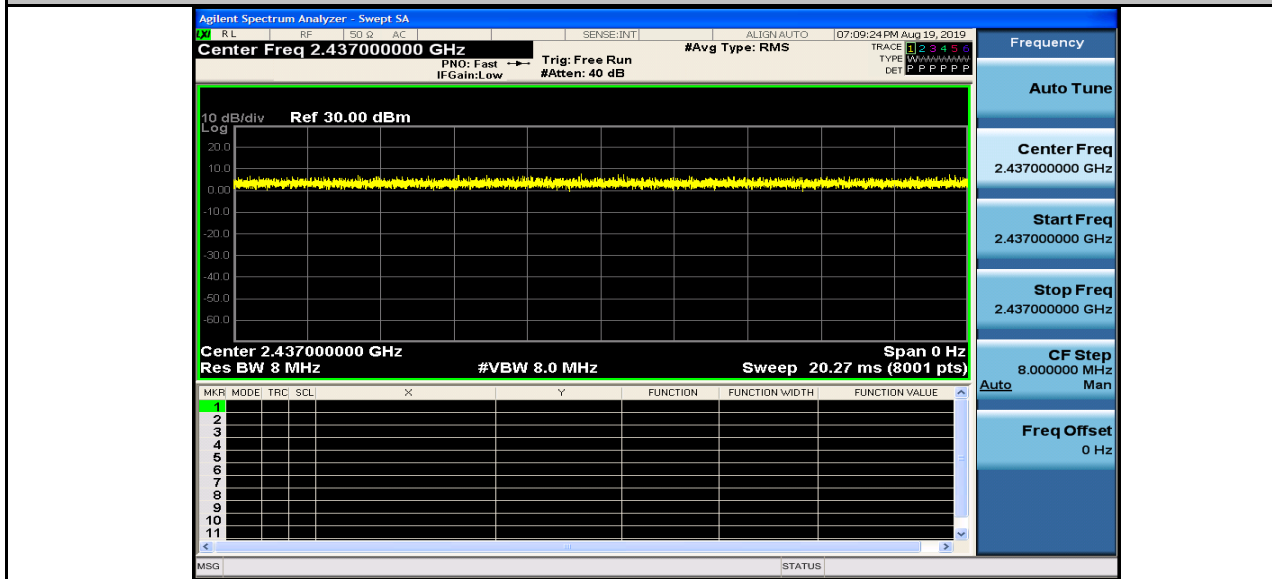


|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.462000000 GHz      |
| Start Freq<br>2.462000000 GHz       |
| Stop Freq<br>2.462000000 GHz        |
| CF Step<br>8.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

Duty Cycle\_11N40SISO\_2422\_Ant1



Duty Cycle\_11N40SISO\_2437\_Ant1



Duty Cycle\_11N40SISO\_2452\_Ant1

