## Appendix A SHEM190201114501

### 1.6dB Bandwidth

| Test Mode | Test Channel | Ant | EBW[MHz] | Limit | Verdict |
|---|---|---|---|---|---|
| 11B | 2412 | Ant1 | 8.08 | 0.5 | PASS |
| 11B | 2437 | Ant1 | 8.06 | 0.5 | PASS |
| 11B | 2462 | Ant1 | 8.05 | 0.5 | PASS |
| 11G | 2412 | Ant1 | 15.34 | 0.5 | PASS |
| 11G | 2437 | Ant1 | 15.08 | 0.5 | PASS |
| 11G | 2462 | Ant1 | 13.89 | 0.5 | PASS |
| 11N20SISO | 2412 | Ant1 | 15.45 | 0.5 | PASS |
| 11N20SISO | 2437 | Ant1 | 14.96 | 0.5 | PASS |
| 11N20SISO | 2462 | Ant1 | 15.13 | 0.5 | PASS |
| 11N40SISO | 2422 | Ant1 | 35.03 | 0.5 | PASS |
| 11N40SISO | 2437 | Ant1 | 33.82 | 0.5 | PASS |
| 11N40SISO | 2452 | Ant1 | 35.15 | 0.5 | PASS |

6dB Bandwidth_11B_2412_Ant1

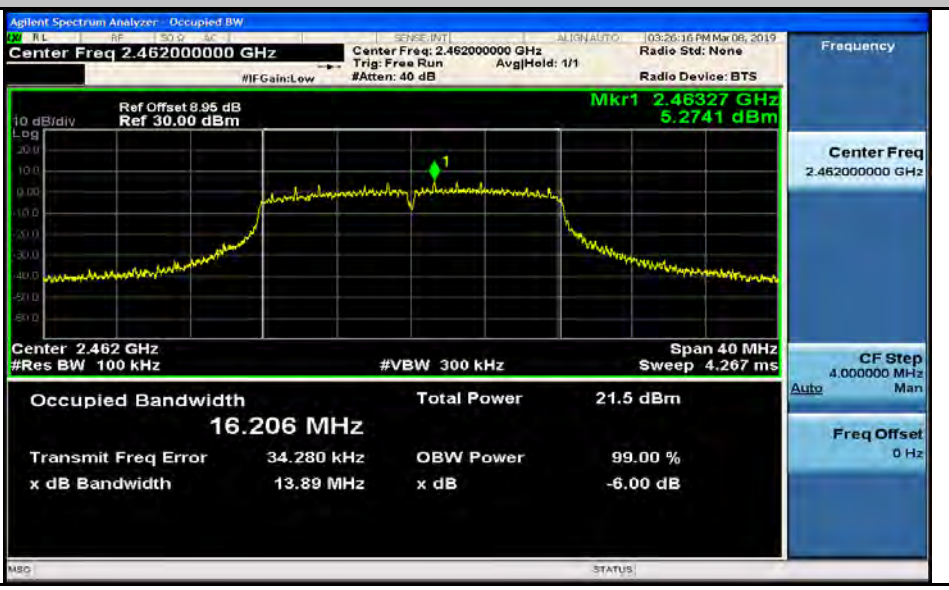
6dB Bandwidth_11B_2437_Ant1

6dB Bandwidth_11B_2462_Ant1

6dB Bandwidth_11G_2412_Ant1

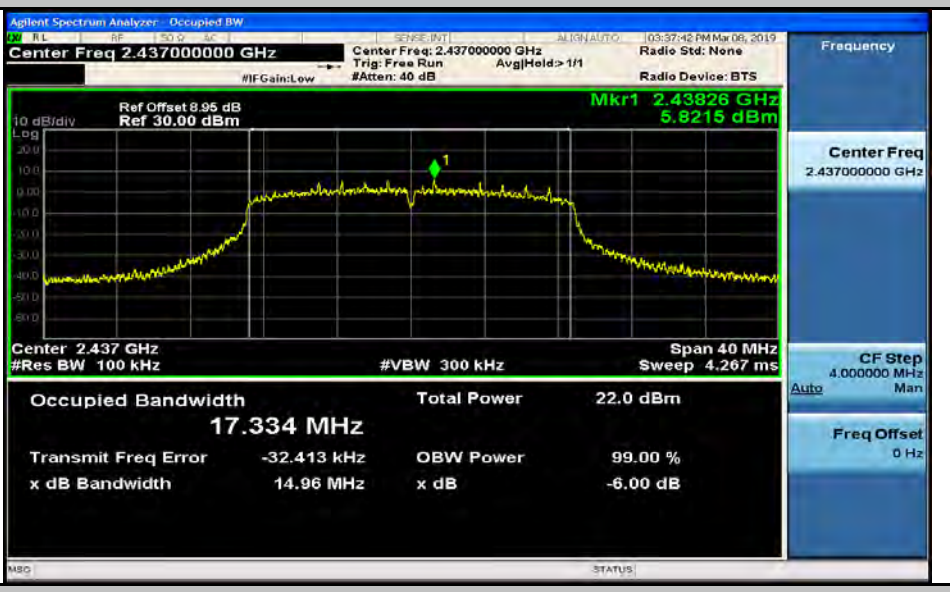
6dB Bandwidth_11G_2437_Ant1

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 Channel | Ant | OBW[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|
| 11B | 2412 | Ant1 | 13.58 | --- | PASS |
| 11B | 2437 | Ant1 | 13.02 | --- | PASS |
| 11B | 2462 | Ant1 | 13.09 | --- | PASS |
| 11G | 2412 | Ant1 | 16.37 | --- | PASS |
| 11G | 2437 | Ant1 | 16.21 | --- | PASS |
| 11G | 2462 | Ant1 | 16.22 | --- | PASS |
| 11N20SISO | 2412 | Ant1 | 17.49 | --- | PASS |
| 11N20SISO | 2437 | Ant1 | 17.33 | --- | PASS |
| 11N20SISO | 2462 | Ant1 | 17.32 | --- | PASS |
| 11N40SISO | 2422 | Ant1 | 36.14 | --- | PASS |
| 11N40SISO | 2437 | Ant1 | 35.71 | --- | PASS |
| 11N40SISO | 2452 | Ant1 | 36.25 | --- | PASS |

Occupied Bandwidth_11B_2412

Occupied Bandwidth_11B_2437

Occupied Bandwidth_11B_2462

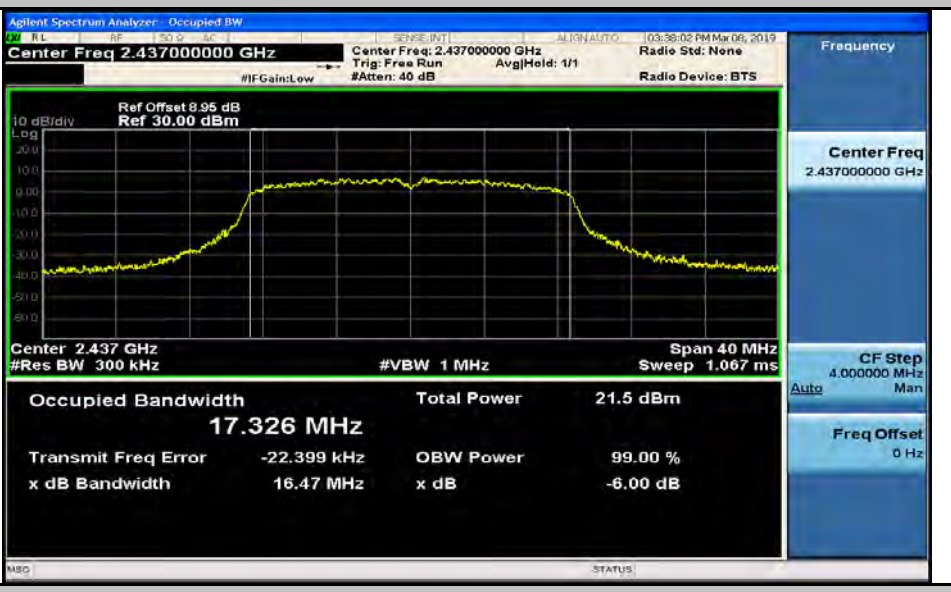
Occupied Bandwidth_11G_2412

Occupied Bandwidth_11G_2437

Occupied Bandwidth_11G_2462

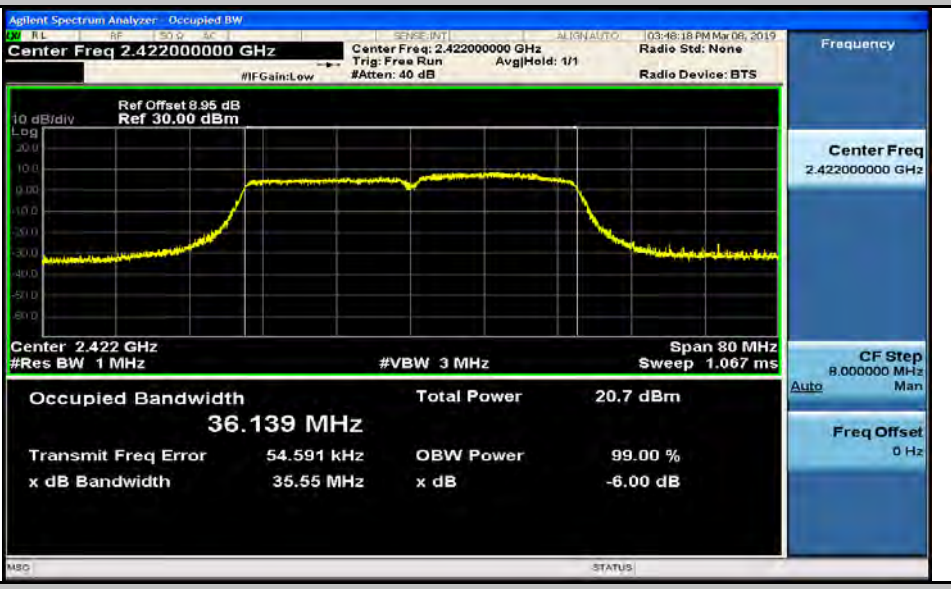
Occupied Bandwidth_11N20SISO_2412

Occupied Bandwidth_11N20SISO_2437




Occupied Bandwidth_11N20SISO_2462

Occupied Bandwidth_11N40SISO_2422




Occupied Bandwidth_11N40SISO_2437

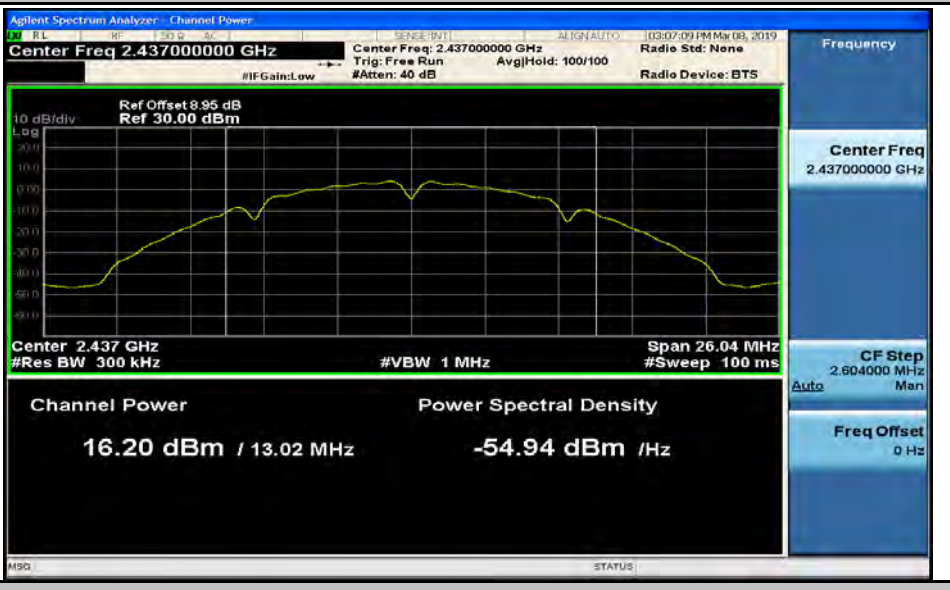
Occupied Bandwidth_11N40SISO_2452

**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 | 15.32 | 0.03 | 15.35 | 30 | PASS |
| 11B | 2437 | Ant1 | 16.2 | 0.03 | 16.23 | 30 | PASS |
| 11B | 2462 | Ant1 | 15.47 | 0.03 | 15.50 | 30 | PASS |
| 11G | 2412 | Ant1 | 14.02 | 0.20 | 14.23 | 30 | PASS |
| 11G | 2437 | Ant1 | 15.01 | 0.21 | 15.22 | 30 | PASS |
| 11G | 2462 | Ant1 | 14.33 | 0.21 | 14.55 | 30 | PASS |
| 11N20SISO | 2412 | Ant1 | 13.79 | 0.21 | 14.00 | 30 | PASS |
| 11N20SISO | 2437 | Ant1 | 14.72 | 0.21 | 14.94 | 30 | PASS |
| 11N20SISO | 2462 | Ant1 | 14.05 | 0.23 | 14.28 | 30 | PASS |
| 11N40SISO | 2422 | Ant1 | 13.03 | 0.42 | 13.46 | 30 | PASS |
| 11N40SISO | 2437 | Ant1 | 13.6 | 0.42 | 14.02 | 30 | PASS |
| 11N40SISO | 2452 | Ant1 | 13.64 | 0.43 | 14.07 | 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 | -16.25 | 0.03 | -16.22 | 8.00 | PASS |
| 11B | 2437 | Ant1 | -14.89 | 0.03 | -14.86 | 8.00 | PASS |
| 11B | 2462 | Ant1 | -15.60 | 0.03 | -15.57 | 8.00 | PASS |
| 11G | 2412 | Ant1 | -19.93 | 0.20 | -19.73 | 8.00 | PASS |
| 11G | 2437 | Ant1 | -18.26 | 0.21 | -18.05 | 8.00 | PASS |
| 11G | 2462 | Ant1 | -19.40 | 0.21 | -19.19 | 8.00 | PASS |
| 11N20SISO | 2412 | Ant1 | -20.11 | 0.21 | -19.90 | 8.00 | PASS |
| 11N20SISO | 2437 | Ant1 | -19.22 | 0.21 | -19.01 | 8.00 | PASS |
| 11N20SISO | 2462 | Ant1 | -19.43 | 0.23 | -19.20 | 8.00 | PASS |
| 11N40SISO | 2422 | Ant1 | -23.43 | 0.42 | -23.01 | 8.00 | PASS |
| 11N40SISO | 2437 | Ant1 | -23.04 | 0.42 | -22.62 | 8.00 | PASS |
| 11N40SISO | 2452 | Ant1 | -23.68 | 0.43 | -23.25 | 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

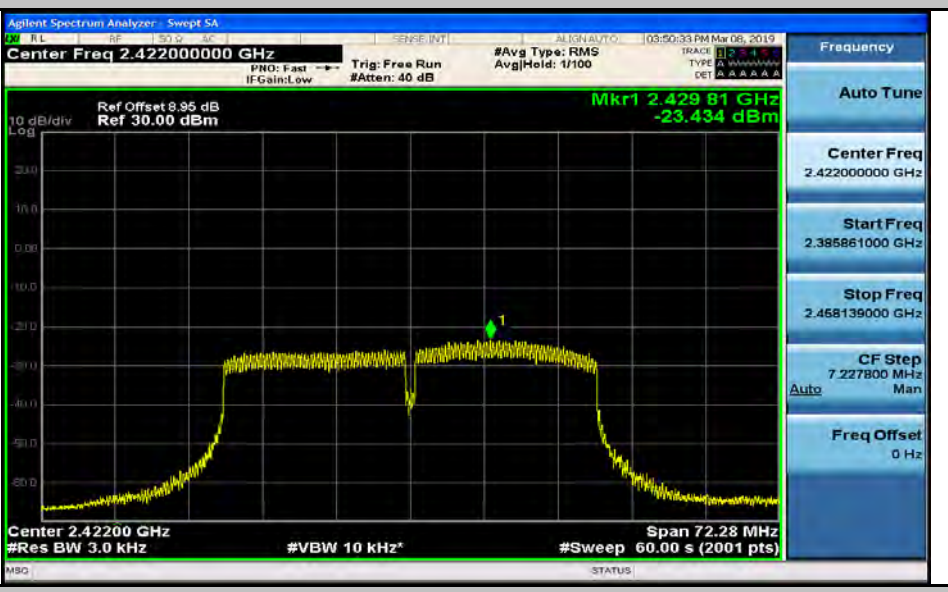
Maximum(average) power spectral density_11G_2462_Ant1

Maximum(average) power spectral density_11N20SISO_2412_Ant1

Maximum(average) power spectral density_11N20SISO_2437_Ant1

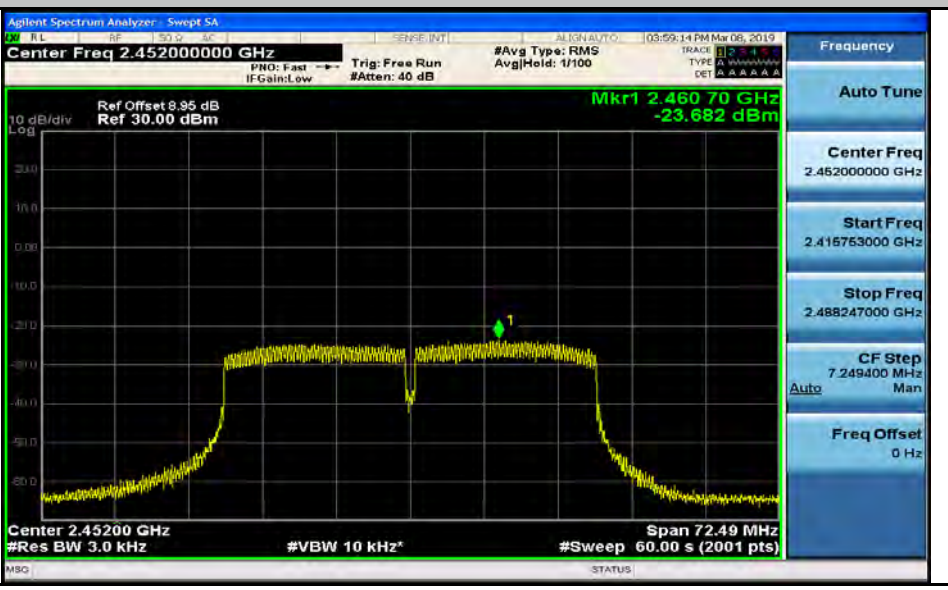
Maximum(average) power spectral density_11N20SISO_2462_Ant1

Maximum(average) power spectral density_11N40SISO_2422_Ant1




Maximum(average) power spectral density_11N40SISO_2437_Ant1

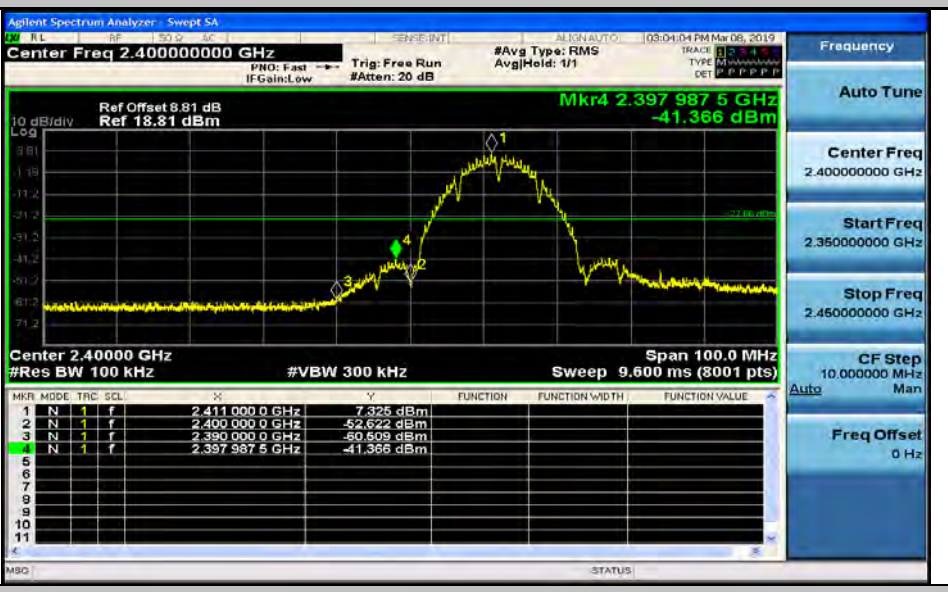
Maximum(average) power spectral density_11N40SISO_2452_Ant1



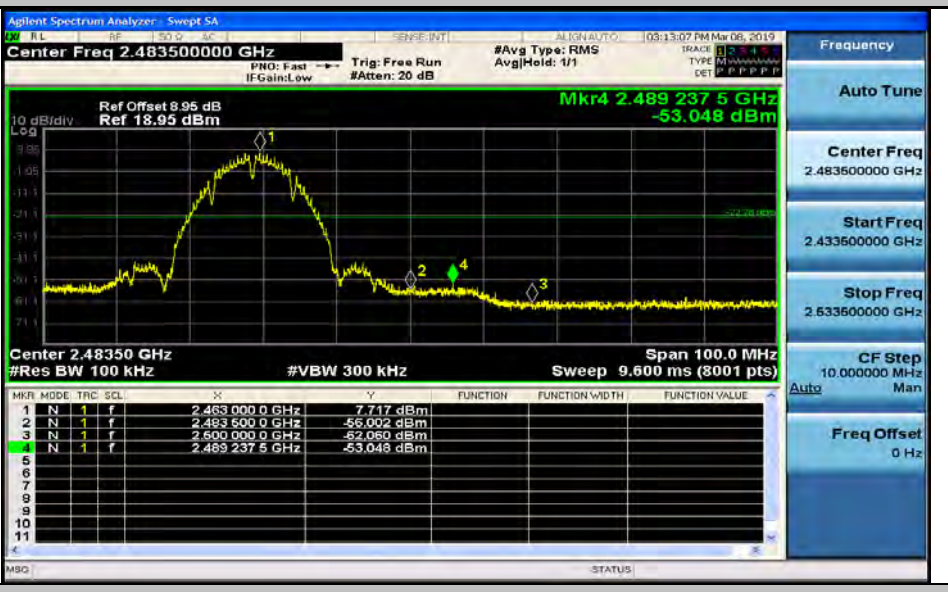
**5.Band-edge for RF Conducted Emissions**

| Test Mode | Test Channel | Ant | Carrier Power[dBm] | Max. Spurious Level [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|
| 11B | 2412 | Ant1 | 7.33 | -41.37 | -22.68 | PASS |
| 11B | 2462 | Ant1 | 7.72 | -53.05 | -22.28 | PASS |
| 11G | 2412 | Ant1 | 4.13 | -31.97 | -25.87 | PASS |
| 11G | 2462 | Ant1 | 4.45 | -48.87 | -25.55 | PASS |
| 11N20SISO | 2412 | Ant1 | 3.07 | -32.46 | -26.93 | PASS |
| 11N20SISO | 2462 | Ant1 | 4.70 | -47.53 | -25.30 | PASS |
| 11N40SISO | 2422 | Ant1 | 0.98 | -32.82 | -29.02 | PASS |
| 11N40SISO | 2452 | Ant1 | 0.88 | -39.91 | -29.12 | PASS |

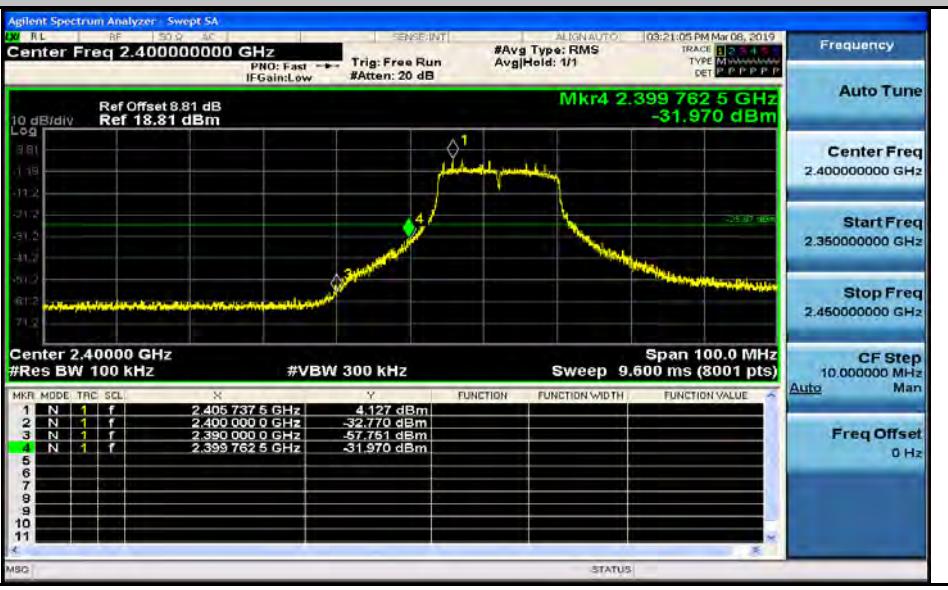
Band-edge for RF Conducted Emissions_11B_2412_Ant1




Band-edge for RF Conducted Emissions_11B_2462_Ant1

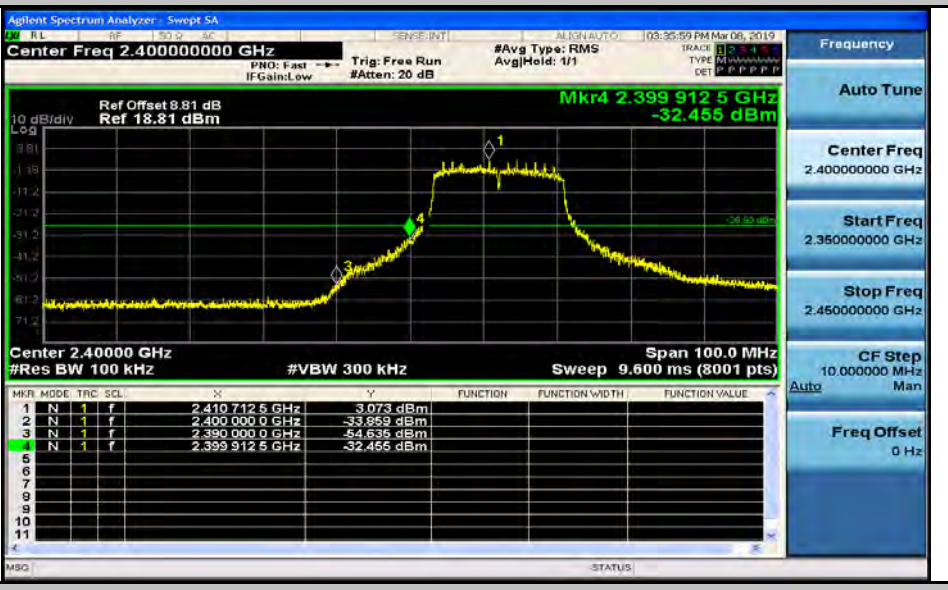



Band-edge for RF Conducted Emissions_11G_2412_Ant1



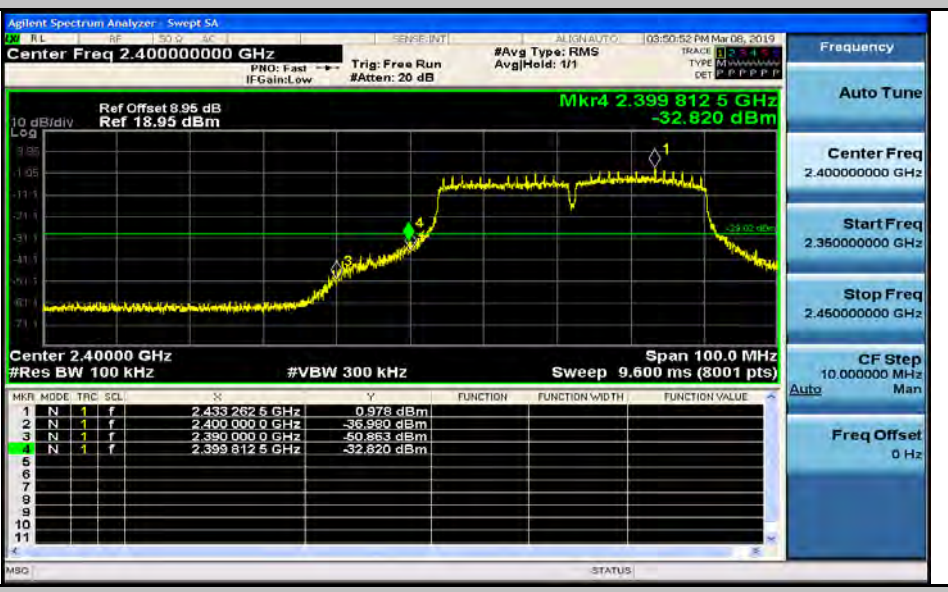
Band-edge for RF Conducted Emissions_11G_2462_Ant1

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

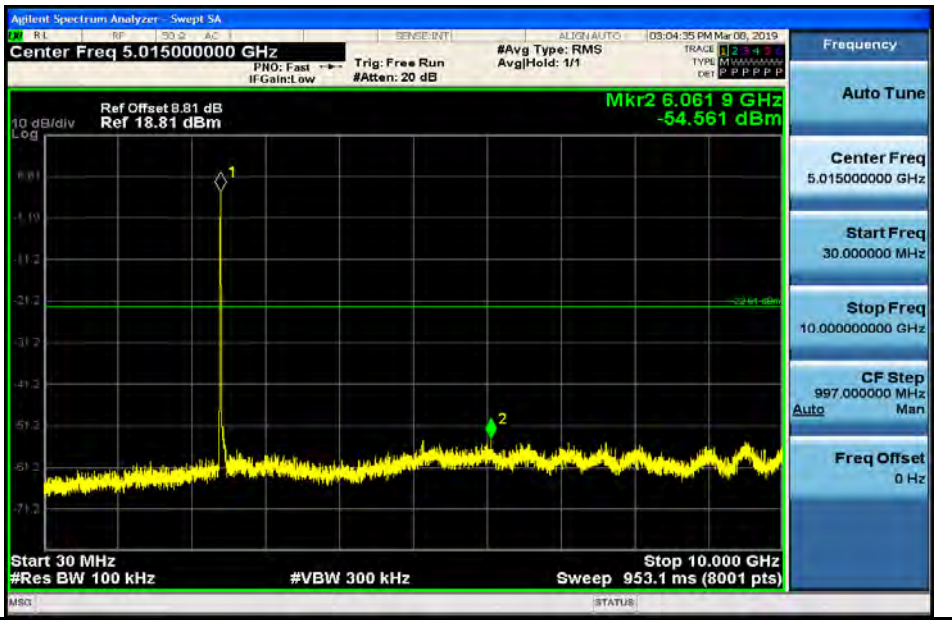



Band-edge for RF Conducted Emissions_11N40SISO_2452_Ant1

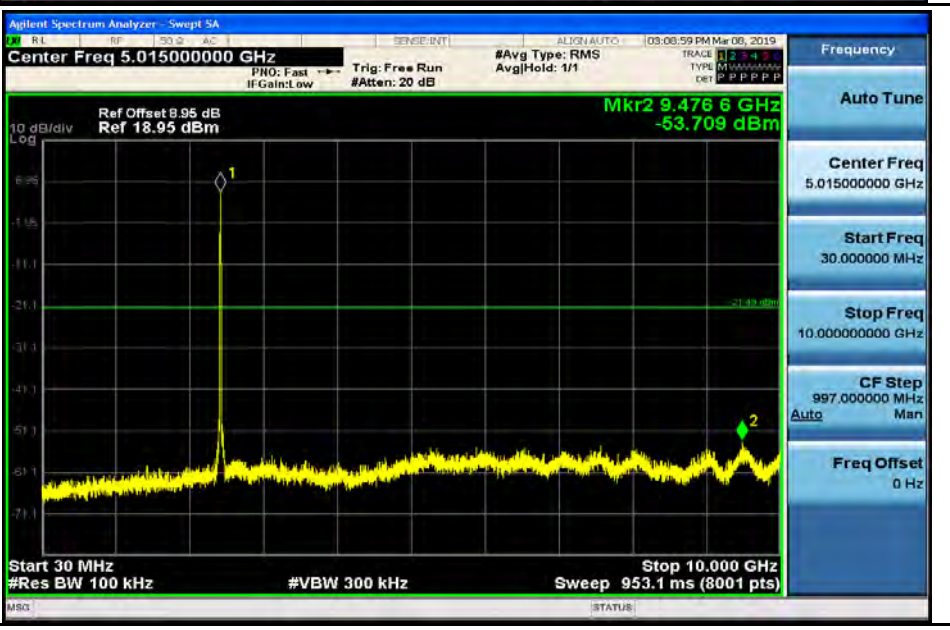
**6.RF Conducted Spurious Emissions**

| 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 | 7.39 | -54.56 | <-22.61 | PASS |
| 11B | 2412 | Ant1 | 10000 | 26000 | 100 | 300 | 7.394 | -44.842 | <-22.606 | PASS |
| 11B | 2437 | Ant1 | 30 | 10000 | 100 | 300 | 8.52 | -53.71 | <-21.48 | PASS |
| 11B | 2437 | Ant1 | 10000 | 26000 | 100 | 300 | 8.523 | -43.947 | <-21.477 | PASS |
| 11B | 2462 | Ant1 | 30 | 10000 | 100 | 300 | 7.60 | -53.76 | <-22.40 | PASS |
| 11B | 2462 | Ant1 | 10000 | 26000 | 100 | 300 | 7.599 | -43.997 | <-22.401 | PASS |
| 11G | 2412 | Ant1 | 30 | 10000 | 100 | 300 | 4.00 | -54.36 | <-26.00 | PASS |
| 11G | 2412 | Ant1 | 10000 | 26000 | 100 | 300 | 3.999 | -44.460 | <-26.001 | PASS |
| 11G | 2437 | Ant1 | 30 | 10000 | 100 | 300 | 5.38 | -53.80 | <-24.62 | PASS |
| 11G | 2437 | Ant1 | 10000 | 26000 | 100 | 300 | 5.384 | -44.360 | <-24.616 | PASS |
| 11G | 2462 | Ant1 | 30 | 10000 | 100 | 300 | 4.55 | -53.91 | <-25.45 | PASS |
| 11G | 2462 | Ant1 | 10000 | 26000 | 100 | 300 | 4.552 | -43.737 | <-25.448 | PASS |
| 11N20SISO | 2412 | Ant1 | 30 | 10000 | 100 | 300 | 3.82 | -54.37 | <-26.19 | PASS |
| 11N20SISO | 2412 | Ant1 | 10000 | 26000 | 100 | 300 | 3.815 | -43.887 | <-26.185 | PASS |
| 11N20SISO | 2437 | Ant1 | 30 | 10000 | 100 | 300 | 4.81 | -54.27 | <-25.19 | PASS |
| 11N20SISO | 2437 | Ant1 | 10000 | 26000 | 100 | 300 | 4.811 | -43.860 | <-25.189 | PASS |
| 11N20SISO | 2462 | Ant1 | 30 | 10000 | 100 | 300 | 4.71 | -53.89 | <-25.29 | PASS |
| 11N20SISO | 2462 | Ant1 | 10000 | 26000 | 100 | 300 | 4.713 | -43.998 | <-25.287 | PASS |
| 11N40SISO | 2422 | Ant1 | 30 | 10000 | 100 | 300 | 0.92 | -54.69 | <-29.08 | PASS |
| 11N40SISO | 2422 | Ant1 | 10000 | 26000 | 100 | 300 | 0.917 | -44.210 | <-29.083 | PASS |
| 11N40SISO | 2437 | Ant1 | 30 | 10000 | 100 | 300 | 1.51 | -54.60 | <-28.49 | PASS |
| 11N40SISO | 2437 | Ant1 | 10000 | 26000 | 100 | 300 | 1.511 | -44.214 | <-28.489 | PASS |

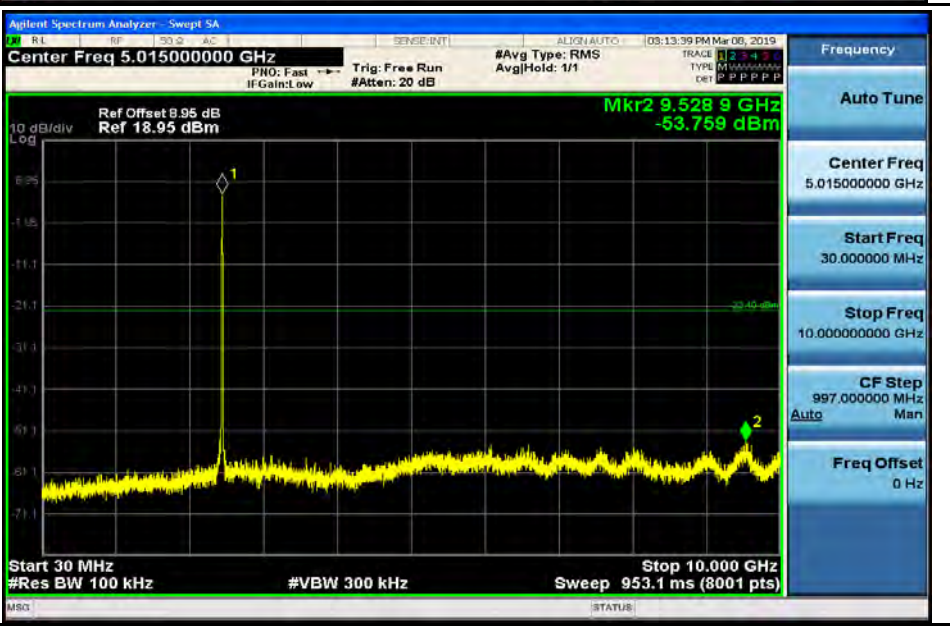
RF Conducted Spurious Emissions_11B_2412



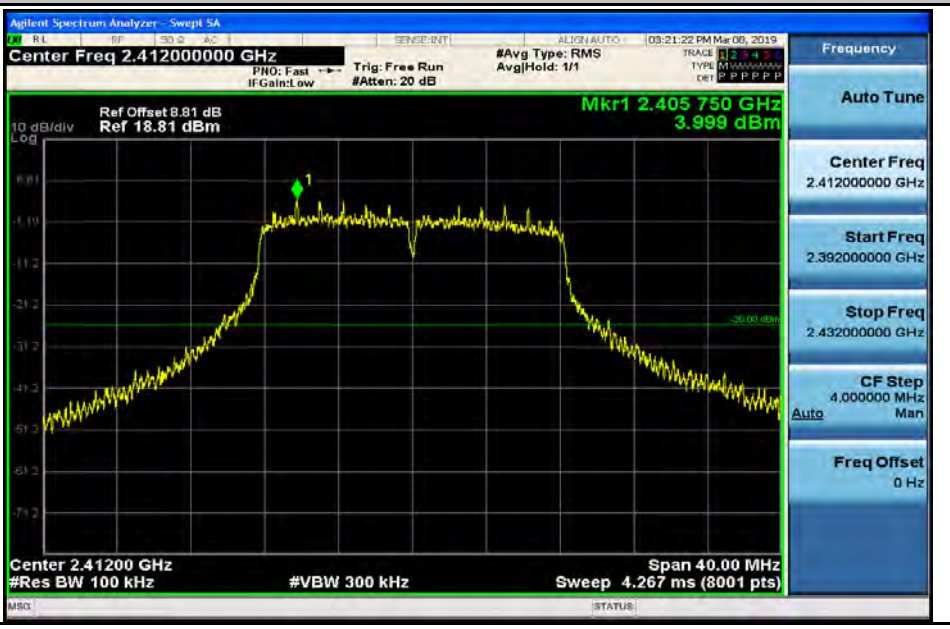
RF Conducted Spurious Emissions_11B_2437

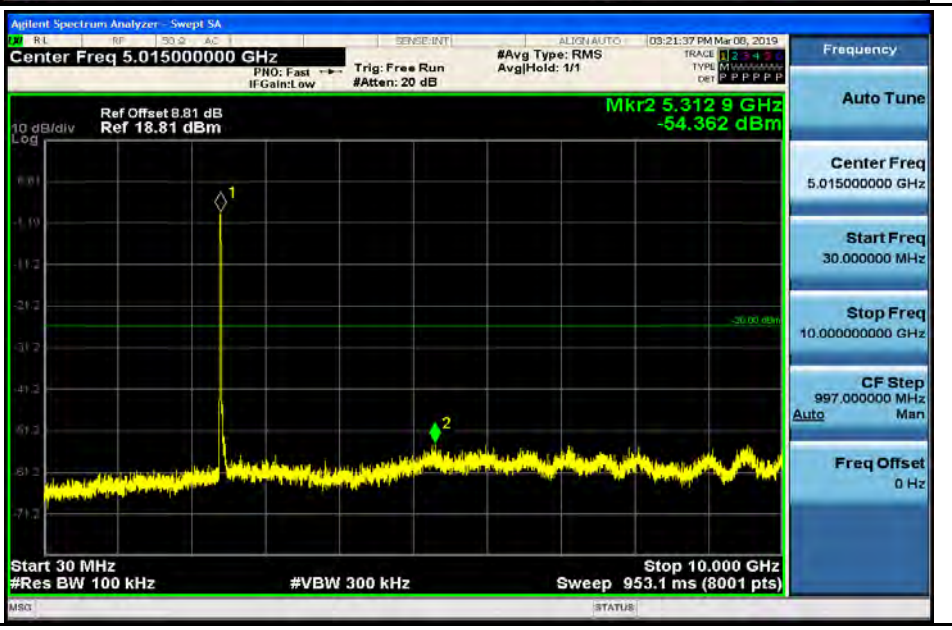


RF Conducted Spurious Emissions_11B_2462

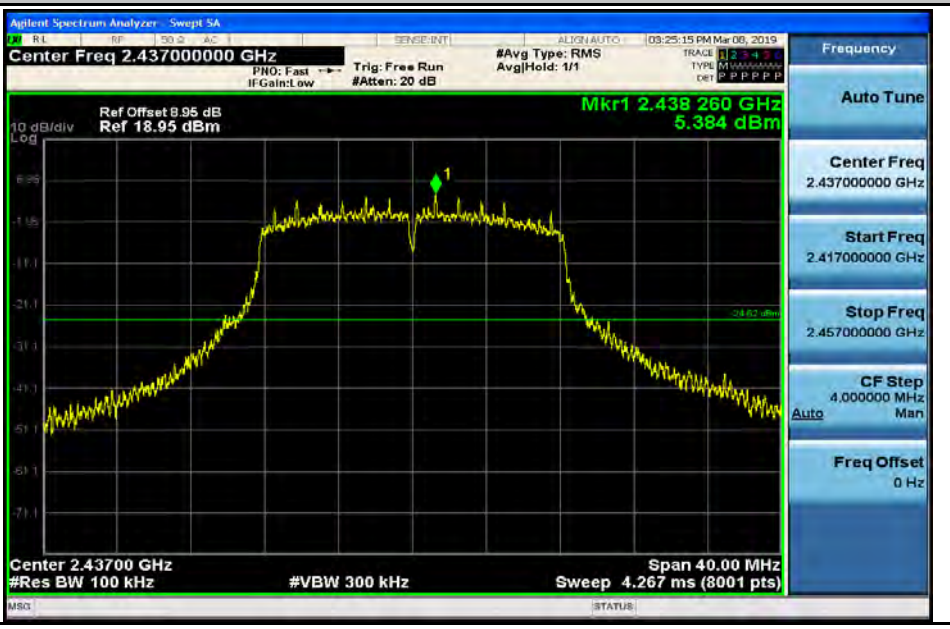


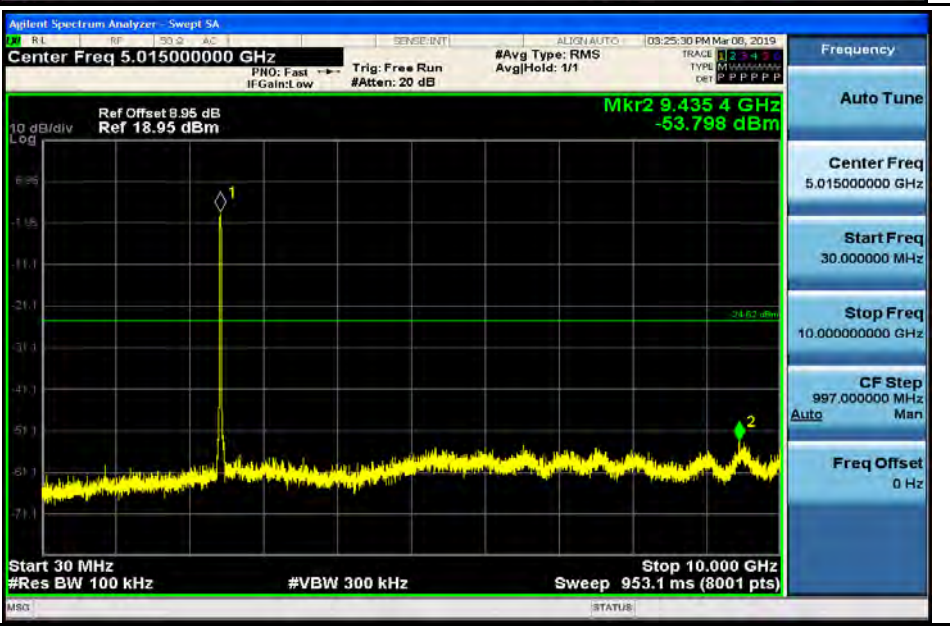
RF Conducted Spurious Emissions_11G_2412



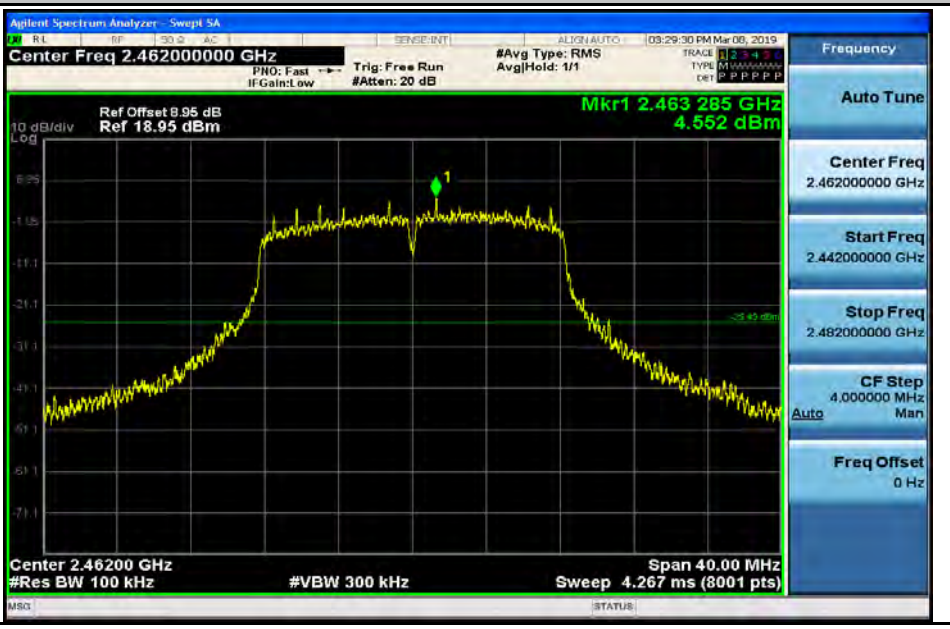



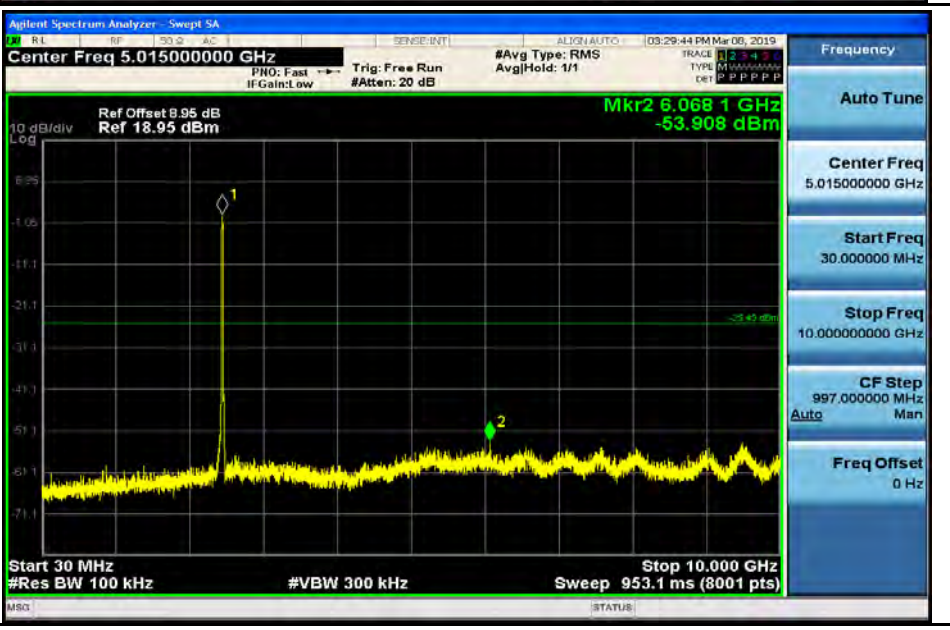
RF Conducted Spurious Emissions_11G_2437



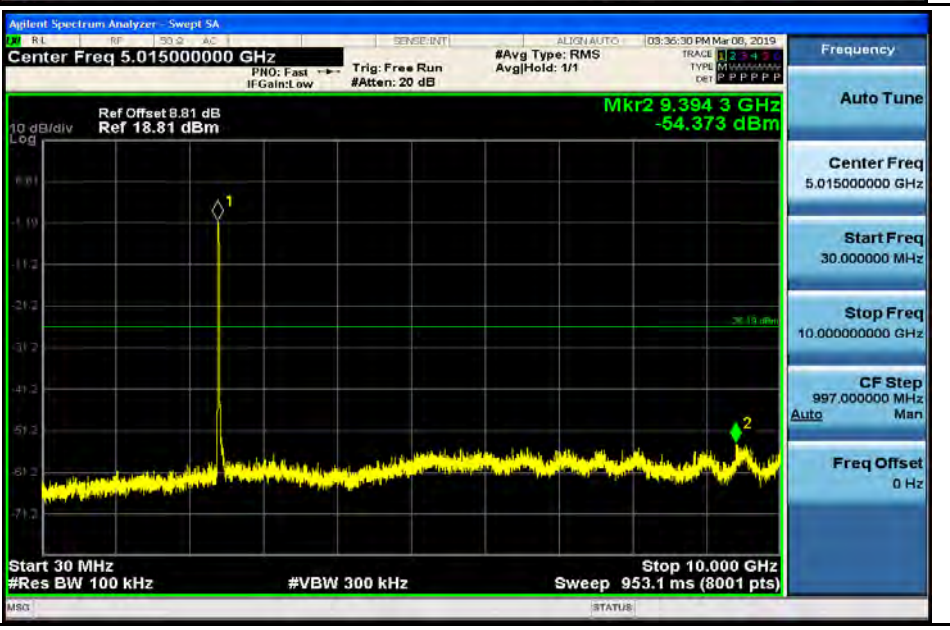



RF Conducted Spurious Emissions_11G_2462

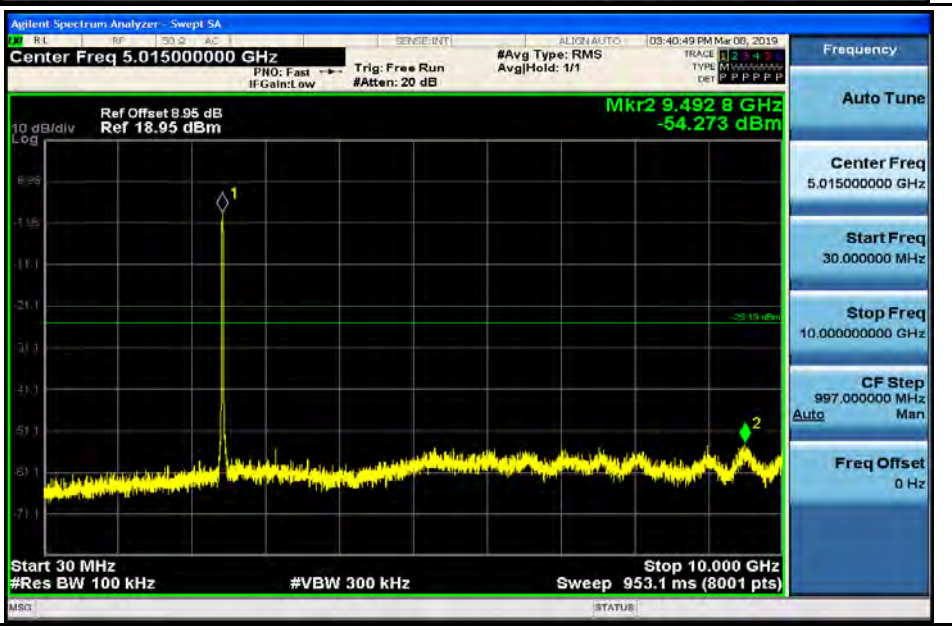


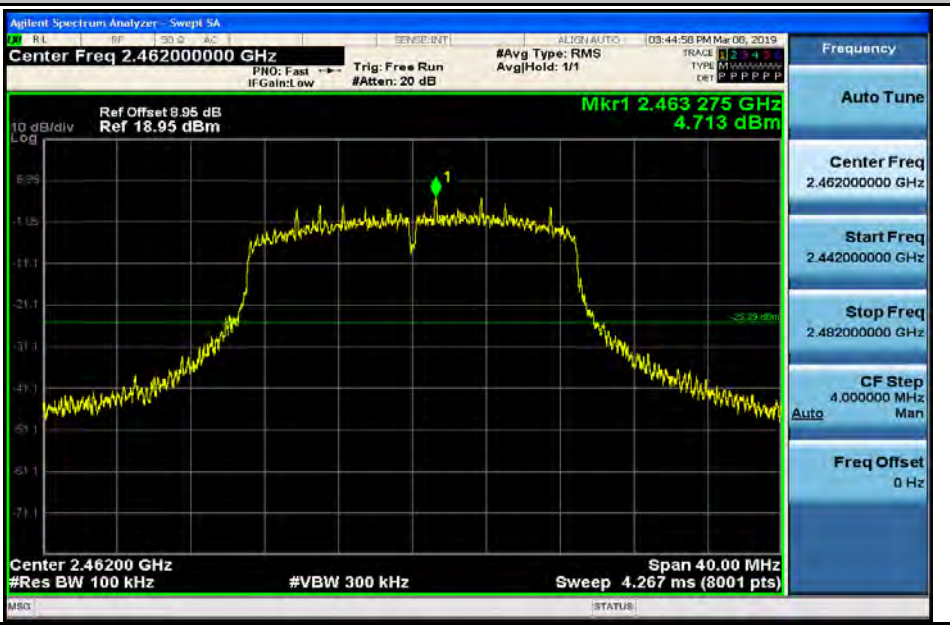
RF Conducted Spurious Emissions_11N20SISO_2412

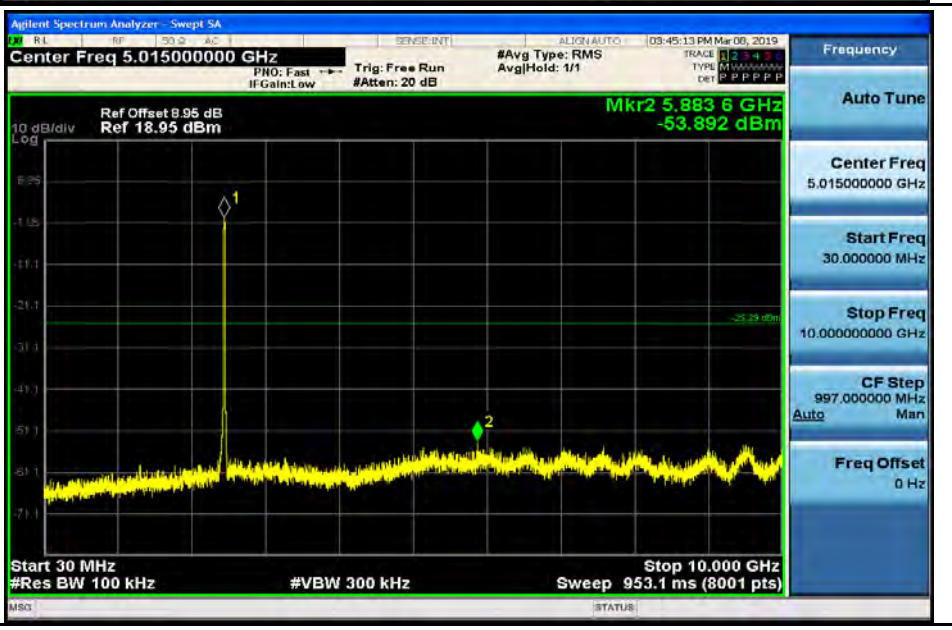


RF Conducted Spurious Emissions_11N20SISO_2437

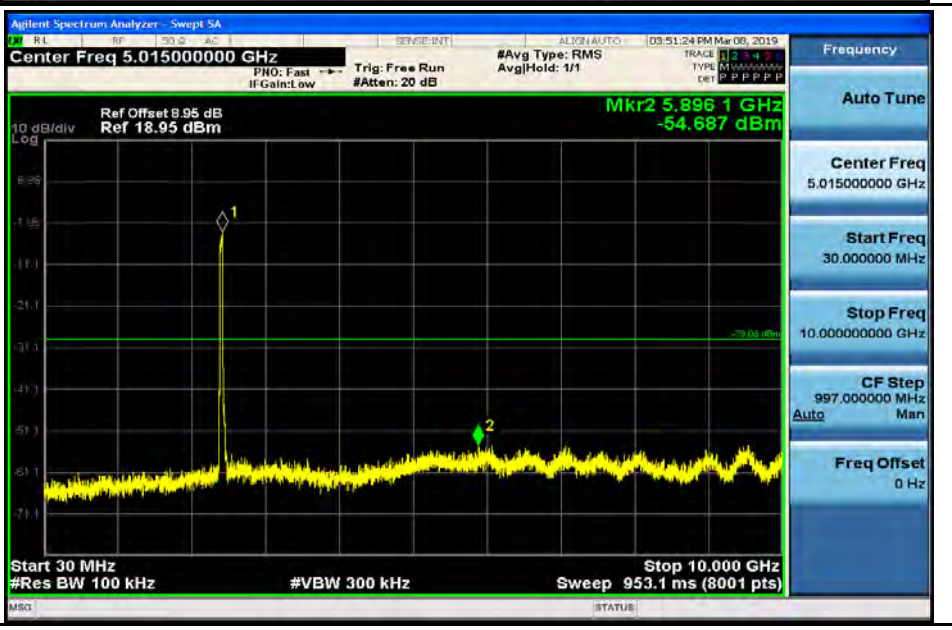


RF Conducted Spurious Emissions_11N20SISO_2462

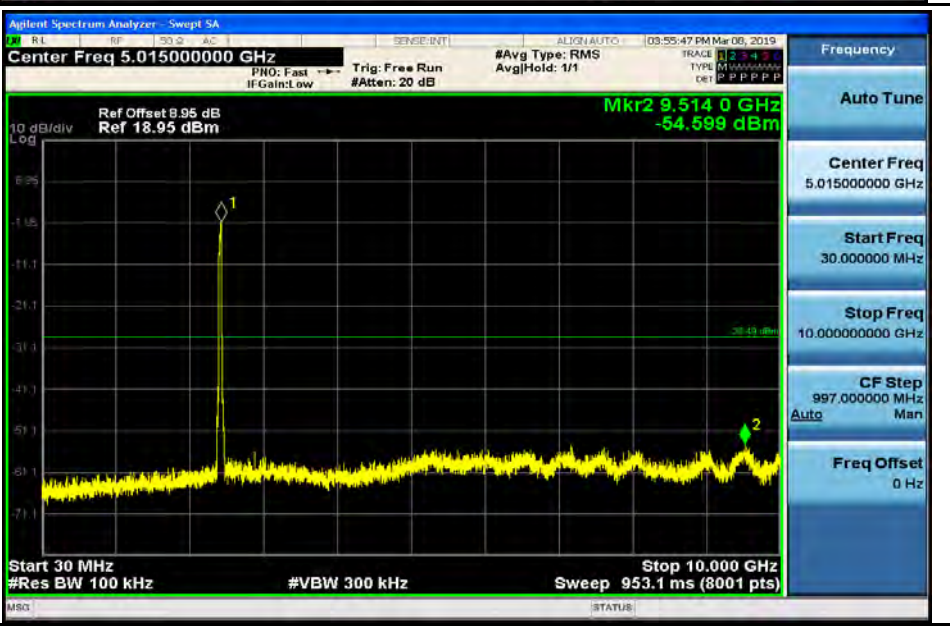


RF Conducted Spurious Emissions_11N40SISO_2422



RF Conducted Spurious Emissions_11N40SISO_2437



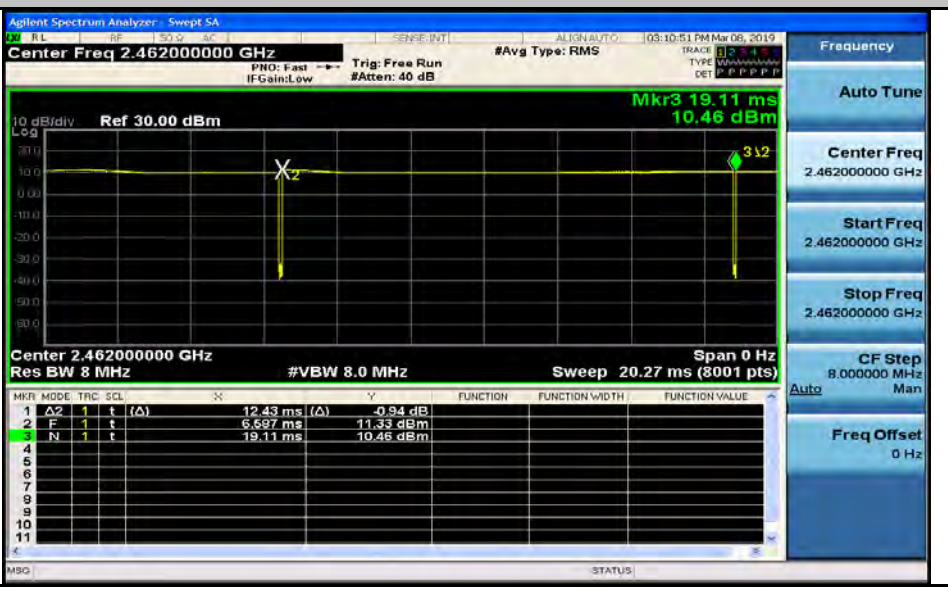
**7.Duty Cycle**

| Test Mode | Test Channel | Ant | Duty Cycle[%] | 10log(1/x) Factor[dB] |
|---|---|---|---|---|
| 11B | 2412 | Ant1 | 99.23 | 0.03 |
| 11B | 2437 | Ant1 | 99.25 | 0.03 |
| 11B | 2462 | Ant1 | 99.23 | 0.03 |
| 11G | 2412 | Ant1 | 95.42 | 0.20 |
| 11G | 2437 | Ant1 | 95.31 | 0.21 |
| 11G | 2462 | Ant1 | 95.19 | 0.21 |
| 11N20SISO | 2412 | Ant1 | 95.23 | 0.21 |
| 11N20SISO | 2437 | Ant1 | 95.23 | 0.21 |
| 11N20SISO | 2462 | Ant1 | 94.86 | 0.23 |
| 11N40SISO | 2422 | Ant1 | 90.73 | 0.42 |
| 11N40SISO | 2437 | Ant1 | 90.75 | 0.42 |
| 11N40SISO | 2452 | Ant1 | 90.51 | 0.43 |

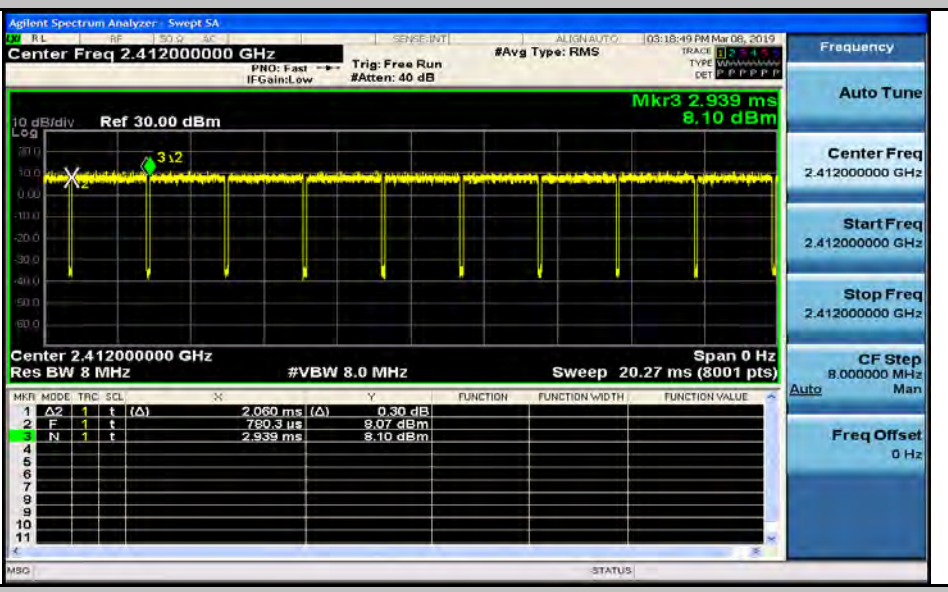
Duty Cycle_11B_2412_Ant1

Duty Cycle_11B_2437_Ant1

Duty Cycle_11B_2462_Ant1



Duty Cycle_11G_2412_Ant1

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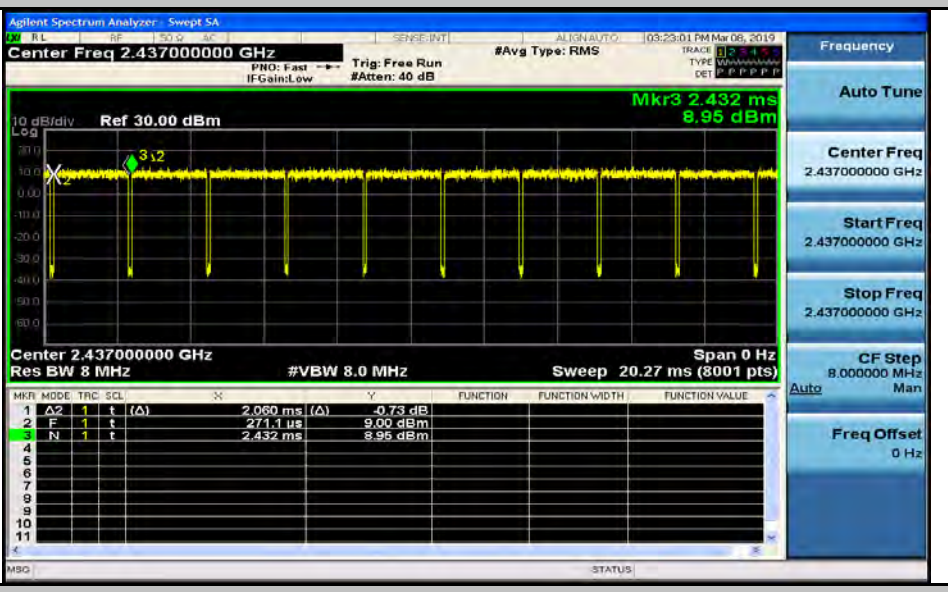


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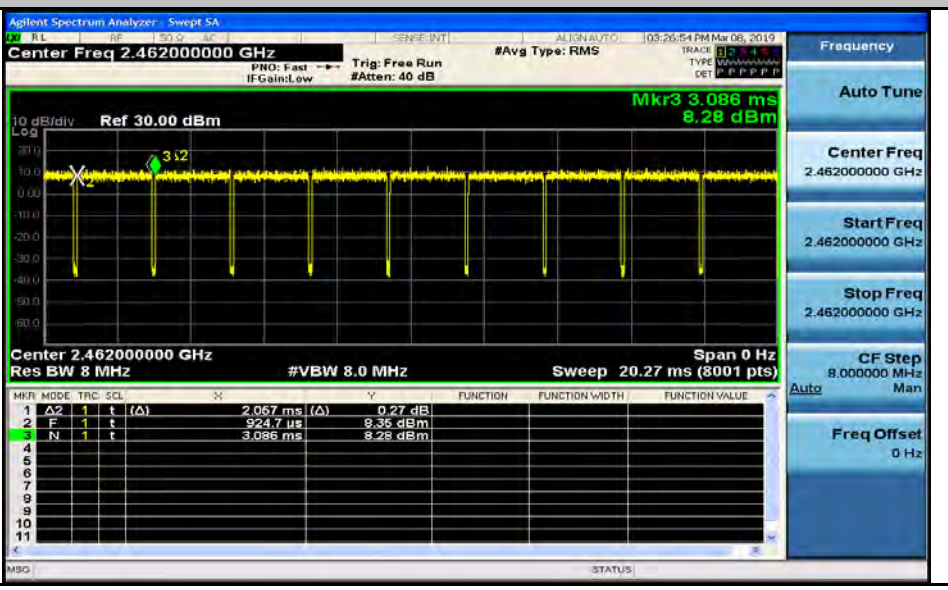
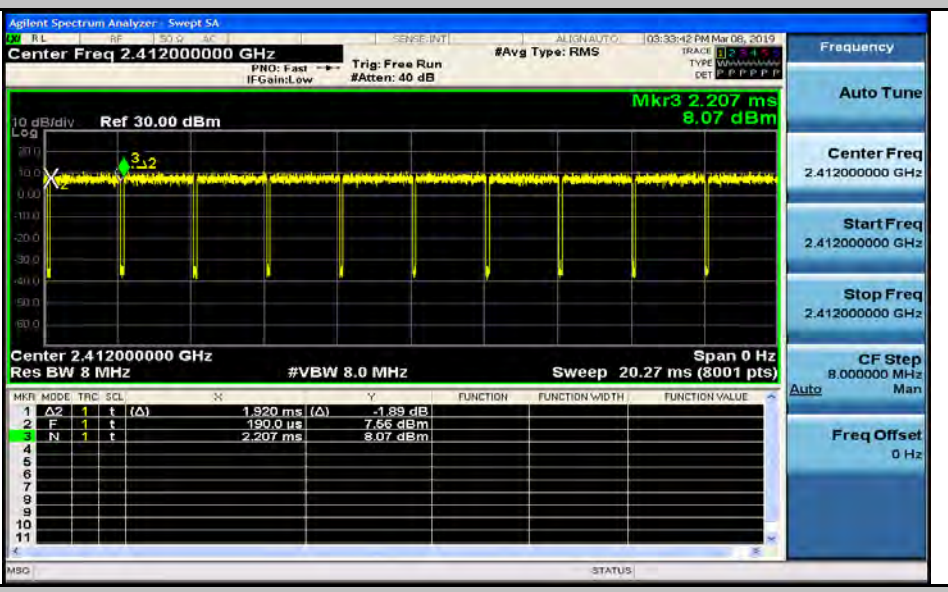


Duty Cycle_11N20SISO_2412_Ant1

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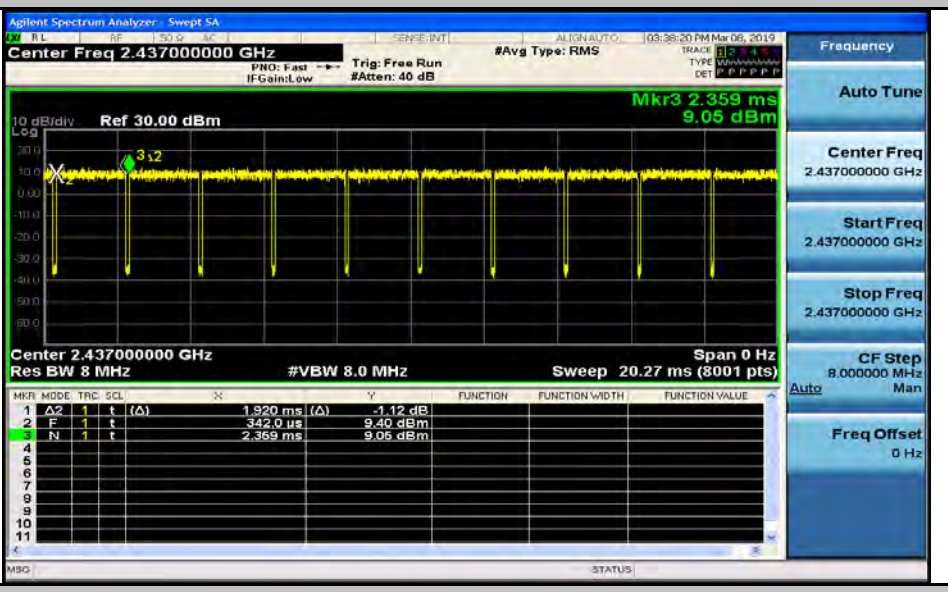


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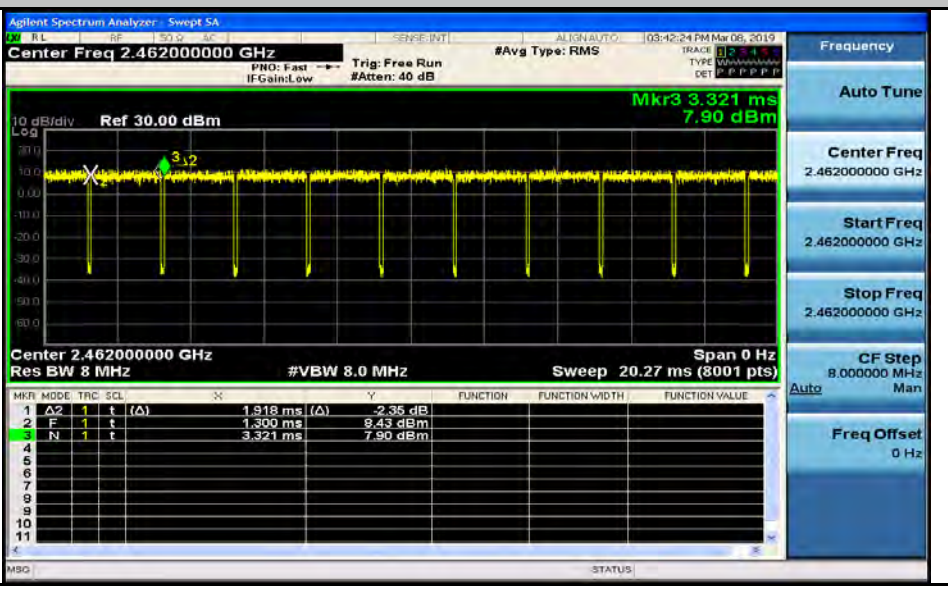
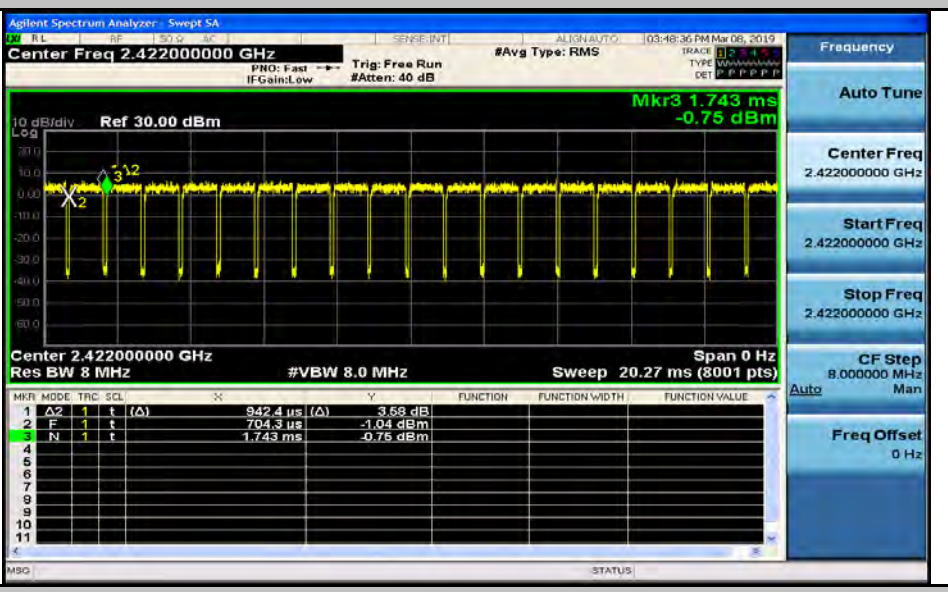
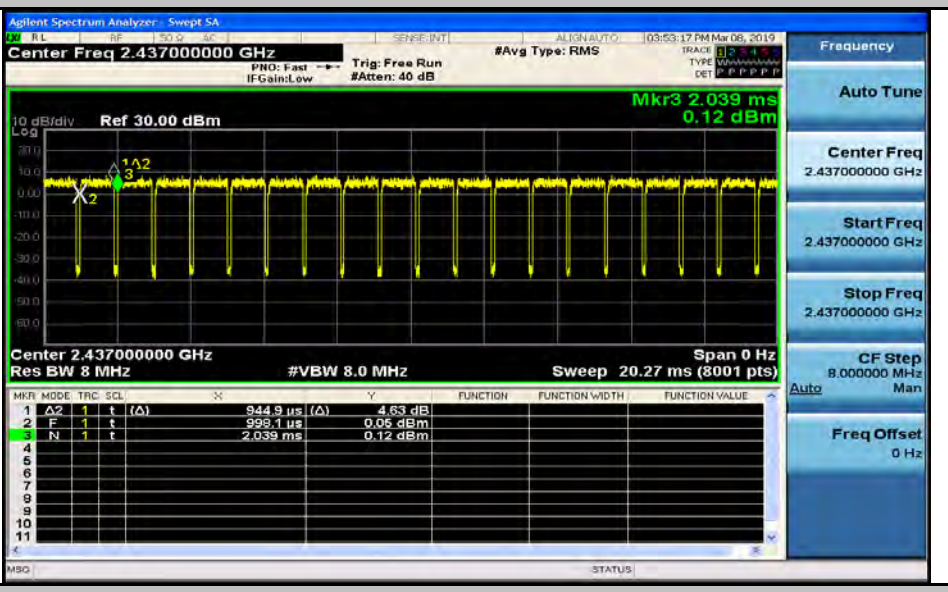


Duty Cycle_11N40SISO_2422_Ant1




Duty Cycle_11N40SISO_2437_Ant1




Duty Cycle_11N40SISO_2452_Ant1