| | |
|---|---|
| **Case No. :** GTS20230105011-1-25 | |
| **Ambient Condition**: 25 ℃, 45 %RH, Atmos100.1Kpa, | |
| **Test Date:** 2023.3.4 | **Test Engineer:** Jenny zeng |

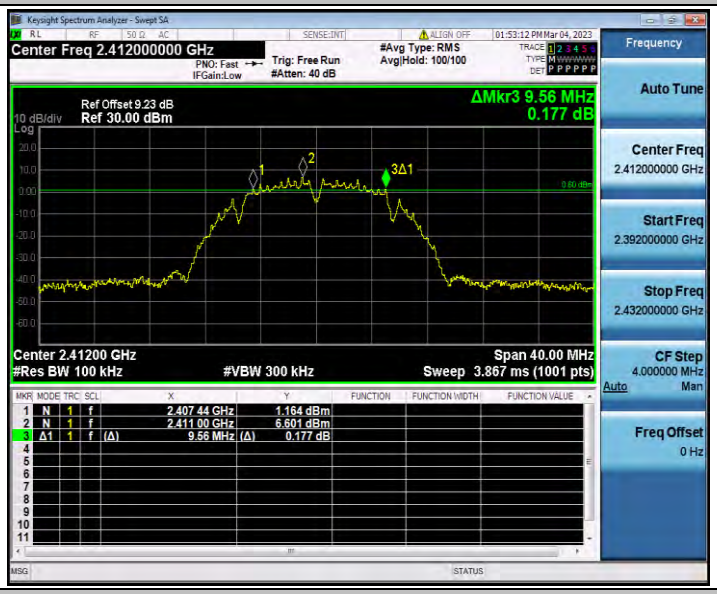
# Appendix C.1: DTS Bandwidth

## Test Result

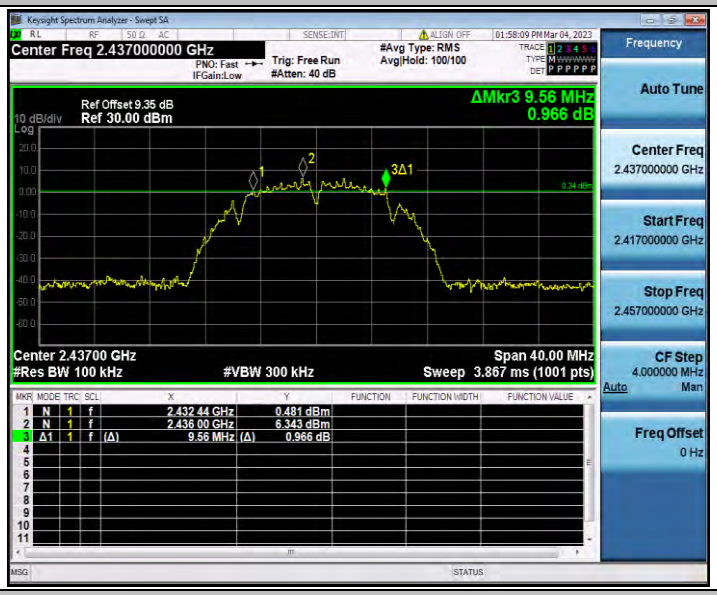
| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 9.560 | 2407.440 | 2417.000 | 0.5 | PASS |
| | | 2437 | 9.560 | 2432.440 | 2442.000 | 0.5 | PASS |
| | | 2462 | 9.560 | 2457.440 | 2467.000 | 0.5 | PASS |
| 11G | Ant1 | 2412 | 13.880 | 2405.680 | 2419.560 | 0.5 | PASS |
| | | 2437 | 15.040 | 2429.480 | 2444.520 | 0.5 | PASS |
| | | 2462 | 15.040 | 2454.480 | 2469.520 | 0.5 | PASS |
| 11N20SISO | Ant1 | 2412 | 15.120 | 2404.600 | 2419.720 | 0.5 | PASS |
| | | 2437 | 13.880 | 2430.680 | 2444.560 | 0.5 | PASS |
| | | 2462 | 13.800 | 2455.680 | 2469.480 | 0.5 | PASS |
| 11N40SISO | Ant1 | 2422 | 33.840 | 2405.680 | 2439.520 | 0.5 | PASS |
| | | 2437 | 32.560 | 2420.760 | 2453.320 | 0.5 | PASS |
| | | 2452 | 33.840 | 2435.680 | 2469.520 | 0.5 | PASS |

## Test Graphs

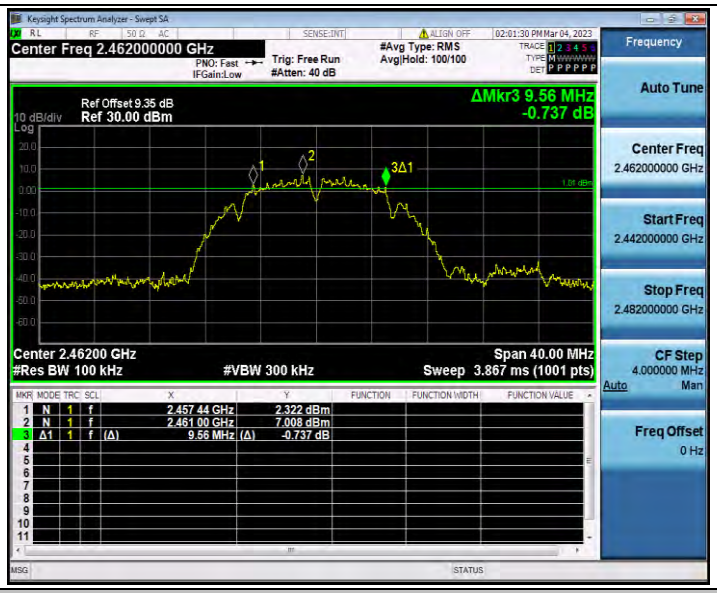
11B_Ant1_2412



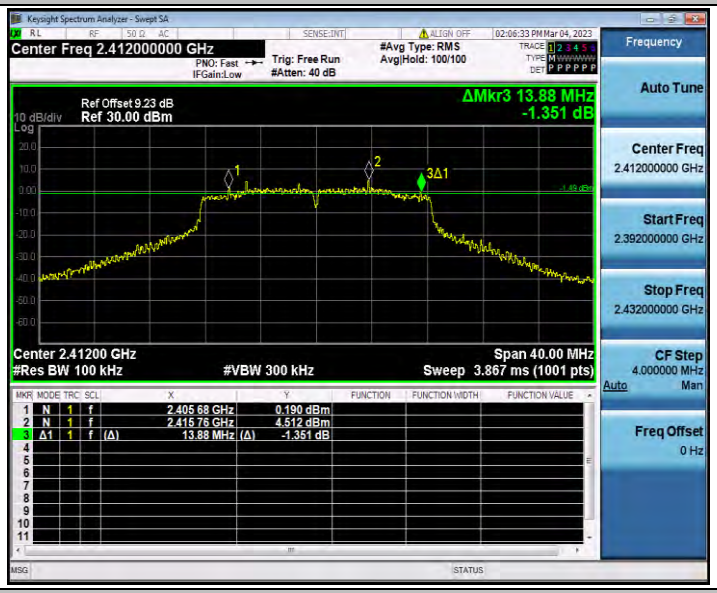

11B_Ant1_2437




11B_Ant1_2462



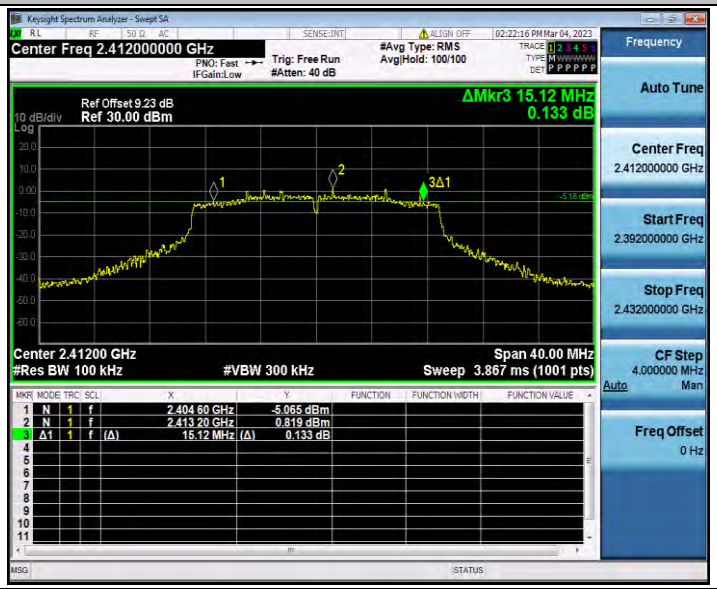

11G_Ant1_2412



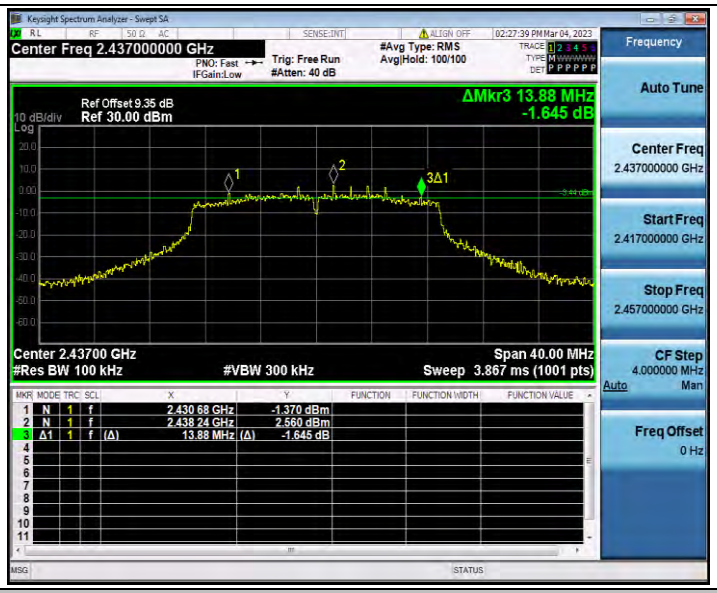

11G_Ant1_2437

11G_Ant1_2462

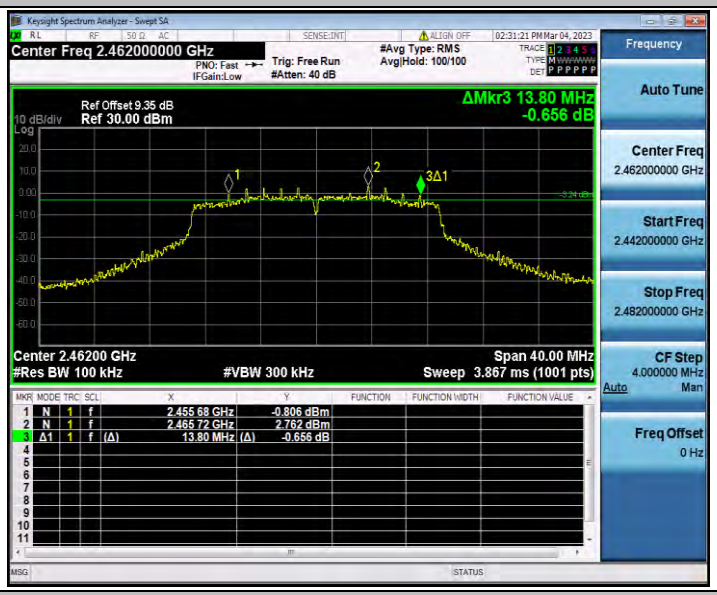
11N20SISO_Ant1_2412



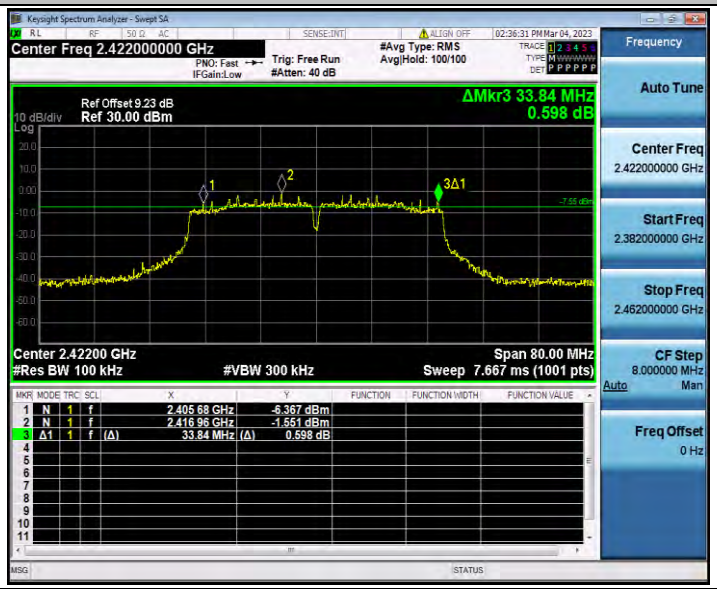

11N20SISO_Ant1_2437



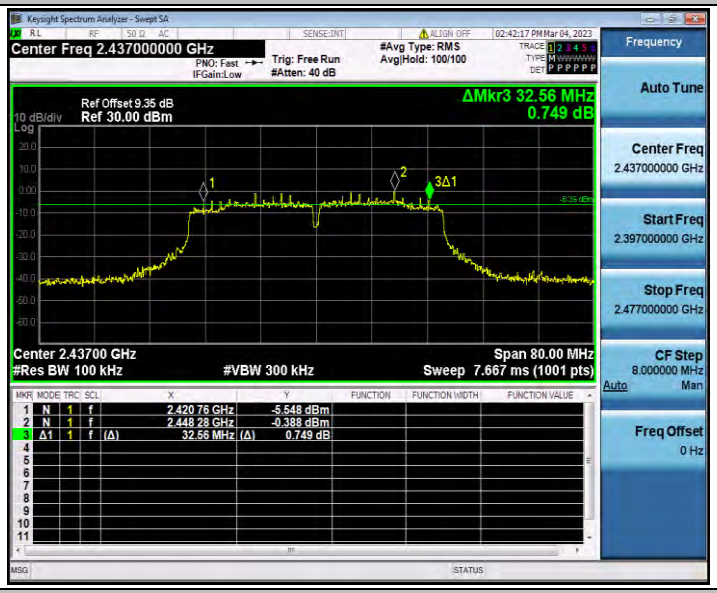

11N20SISO_Ant1_2462



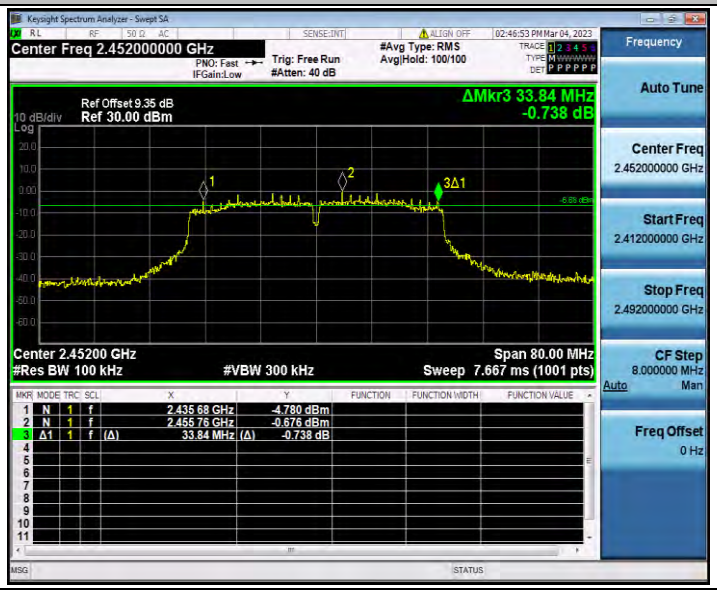

11N40SISO_Ant1_2422



## 11N40SISO_Ant1_2437




## 11N40SISO_Ant1_2452



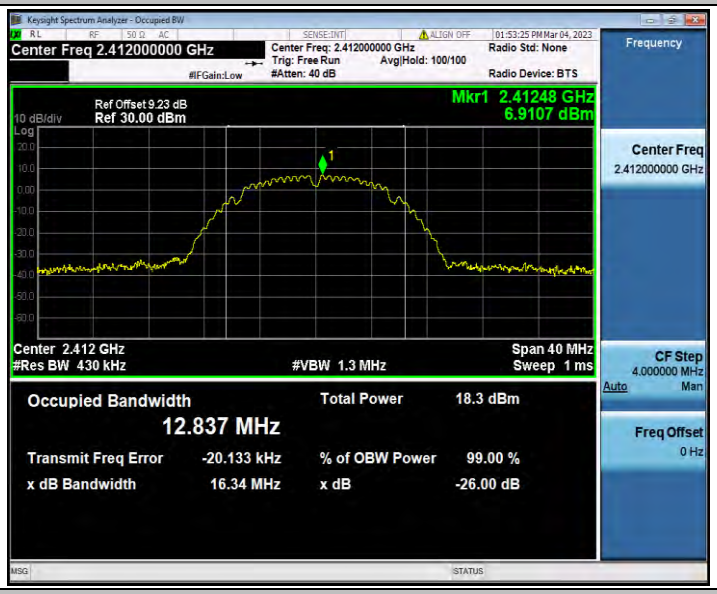
# Appendix C.2: Occupied Channel Bandwidth

## Test Result

| TestMode | Antenna | Channel Frequency[MHz] | OCB [MHz] | FL[MHz] | FH[MHz] | Limit[MHz] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 12.837 | 2405.561 | 2418.398 | --- | --- |
| | | 2437 | 12.757 | 2430.656 | 2443.413 | --- | --- |
| | | 2462 | 12.830 | 2455.626 | 2468.456 | --- | --- |
| 11G | Ant1 | 2412 | 16.837 | 2403.535 | 2420.372 | --- | --- |
| | | 2437 | 16.846 | 2428.603 | 2445.449 | --- | --- |
| | | 2462 | 16.861 | 2453.583 | 2470.444 | --- | --- |
| 11N20SISO | Ant1 | 2412 | 17.878 | 2403.042 | 2420.920 | --- | --- |
| | | 2437 | 17.986 | 2428.029 | 2446.015 | --- | --- |
| | | 2462 | 17.955 | 2453.086 | 2471.041 | --- | --- |
| 11N40SISO | Ant1 | 2422 | 36.253 | 2403.891 | 2440.144 | --- | --- |
| | | 2437 | 36.232 | 2418.964 | 2455.196 | --- | --- |
| | | 2452 | 36.046 | 2434.073 | 2470.119 | --- | --- |

## Test Graphs

11B_Ant1_2412




11B_Ant1_2437

11B_Ant1_2462

11G_Ant1_2412

11G_Ant1_2437

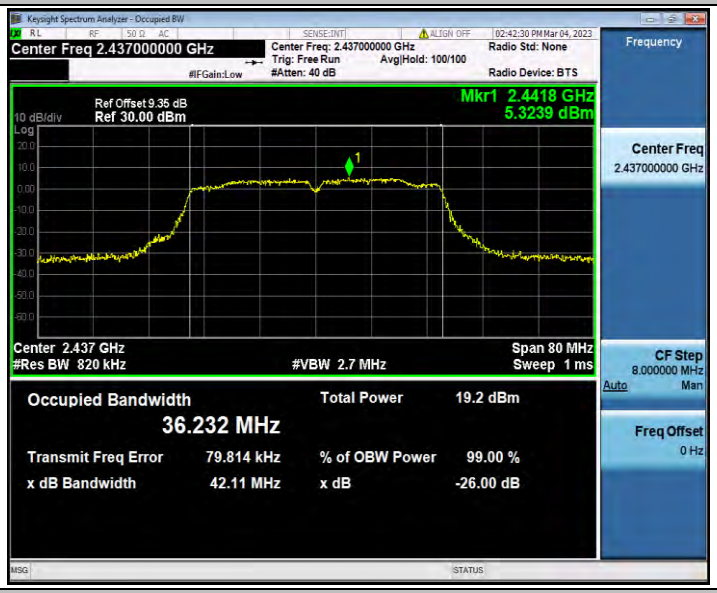
11G_Ant1_2462

11N20SISO_Ant1_2412

11N20SISO_Ant1_2437

11N20SISO_Ant1_2462

11N40SISO_Ant1_2422

| 11N40SISO_Ant1_2437 |
| --- |
|  |



| 11N40SISO_Ant1_2452 |
| --- |
| |

## Appendix C.3: Maximum conducted output power

### Test Result Peak

| TestMode | Antenna | Frequency[MHz] | Peak Powert[dBm] | Conducted Limit[dBm] | Verdict |
|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | 18.28 | ≤30.00 | PASS |
| | | 2437 | 18.10 | ≤30.00 | PASS |
| | | 2462 | 18.70 | ≤30.00 | PASS |
| 11G | Ant1 | 2412 | 22.08 | ≤30.00 | PASS |
| | | 2437 | 21.14 | ≤30.00 | PASS |
| | | 2462 | 21.71 | ≤30.00 | PASS |
| 11N20SISO | Ant1 | 2412 | 19.17 | ≤30.00 | PASS |
| | | 2437 | 19.49 | ≤30.00 | PASS |
| | | 2462 | 20.05 | ≤30.00 | PASS |
| 11N40SISO | Ant1 | 2422 | 18.73 | ≤30.00 | PASS |
| | | 2437 | 19.50 | ≤30.00 | PASS |
| | | 2452 | 19.67 | ≤30.00 | PASS |

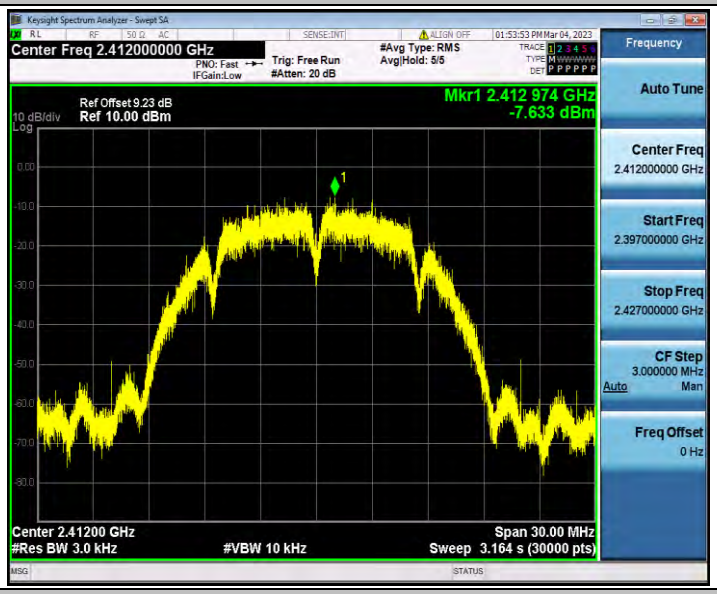
# Appendix C.4: Maximum power spectral density

## Test Result

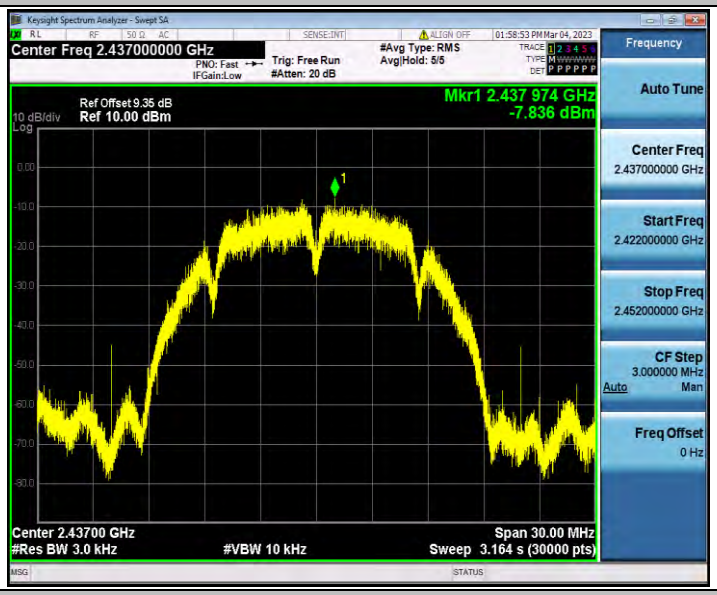
| TestMode | Antenna | Frequency[MHz] | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | -7.63 | ≤8.00 | PASS |
| | | 2437 | -7.84 | ≤8.00 | PASS |
| | | 2462 | -7.93 | ≤8.00 | PASS |
| 11G | Ant1 | 2412 | -9.72 | ≤8.00 | PASS |
| | | 2437 | -10.44 | ≤8.00 | PASS |
| | | 2462 | -9.93 | ≤8.00 | PASS |
| 11N20SISO | Ant1 | 2412 | -13.44 | ≤8.00 | PASS |
| | | 2437 | -12.21 | ≤8.00 | PASS |
| | | 2462 | -11.37 | ≤8.00 | PASS |
| 11N40SISO | Ant1 | 2422 | -16.96 | ≤8.00 | PASS |
| | | 2437 | -15.92 | ≤8.00 | PASS |
| | | 2452 | -15.73 | ≤8.00 | PASS |

## Test Graphs

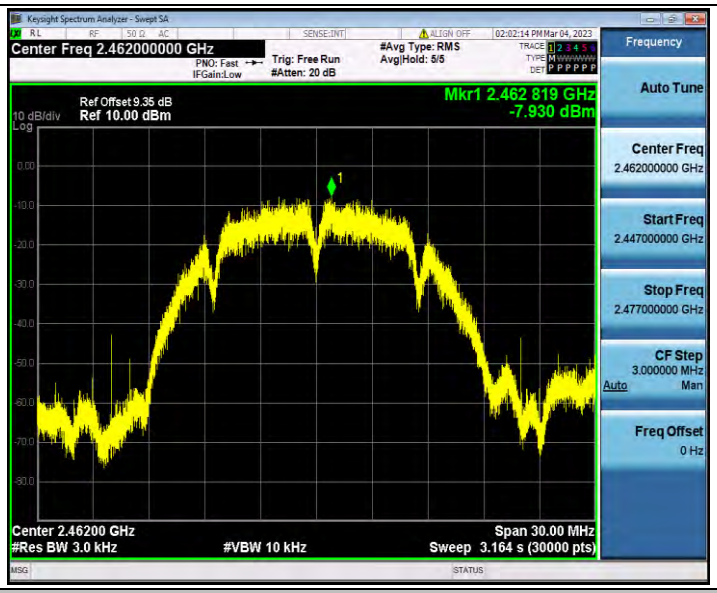
11B_Ant1_2412



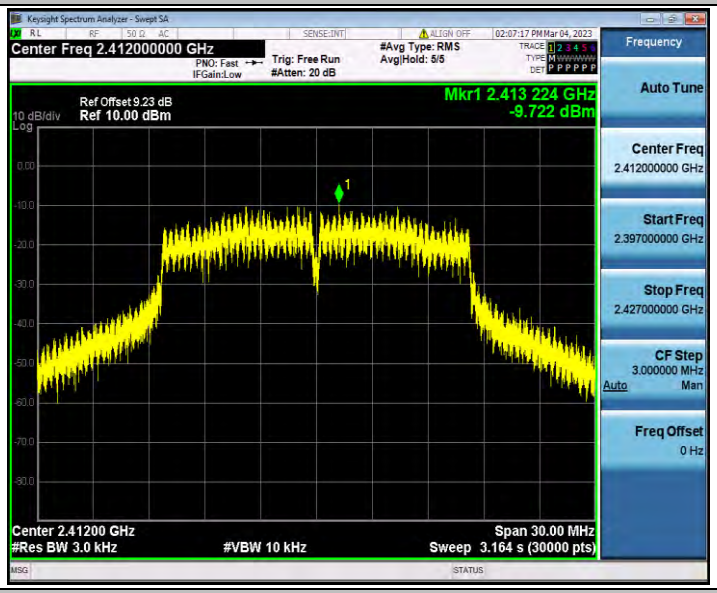

11B_Ant1_2437



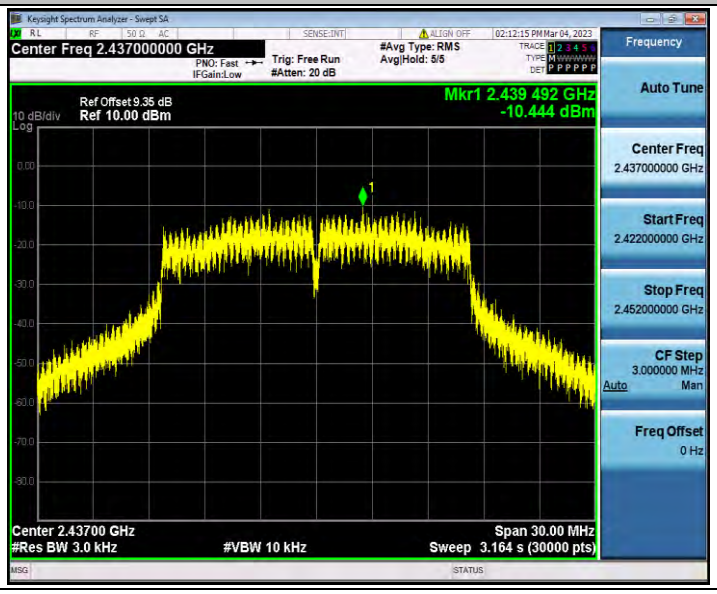

11B_Ant1_2462



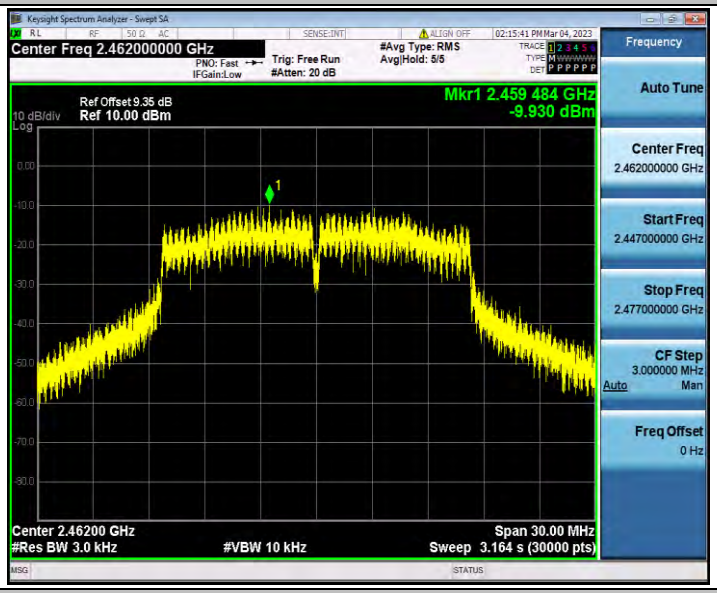

11G_Ant1_2412



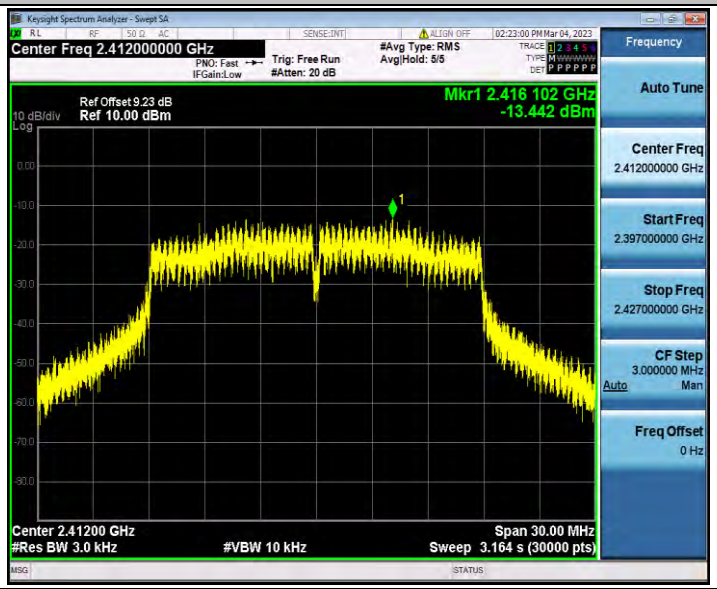

11G_Ant1_2437



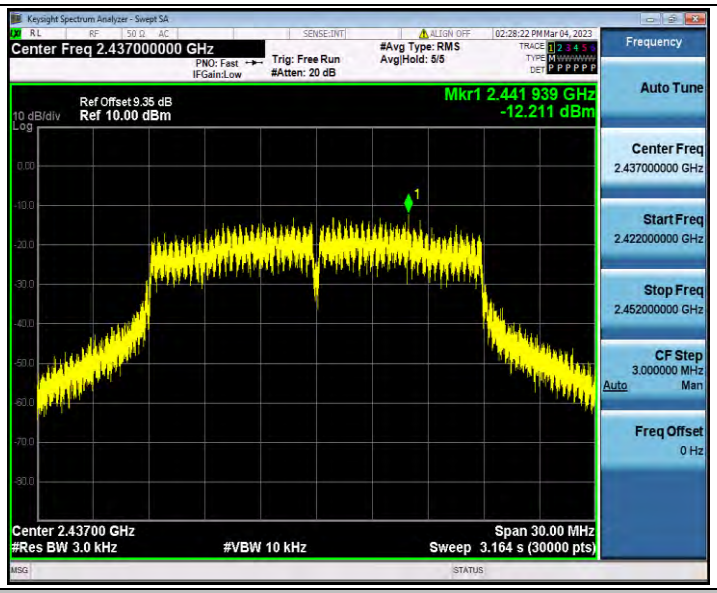
11G_Ant1_2462



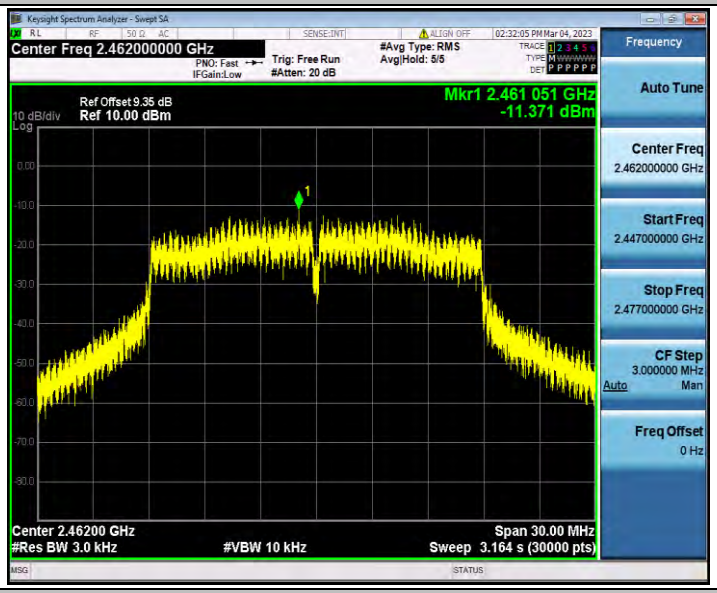

11N20SISO_Ant1_2412



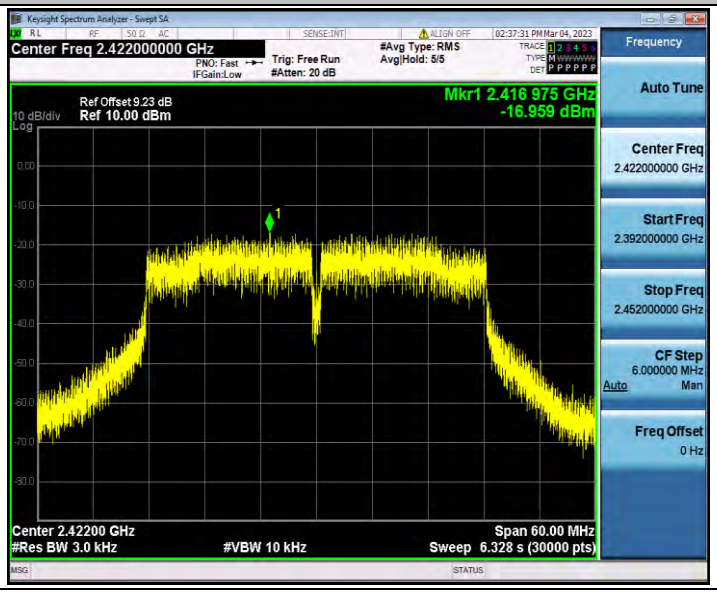

11N20SISO_Ant1_2437

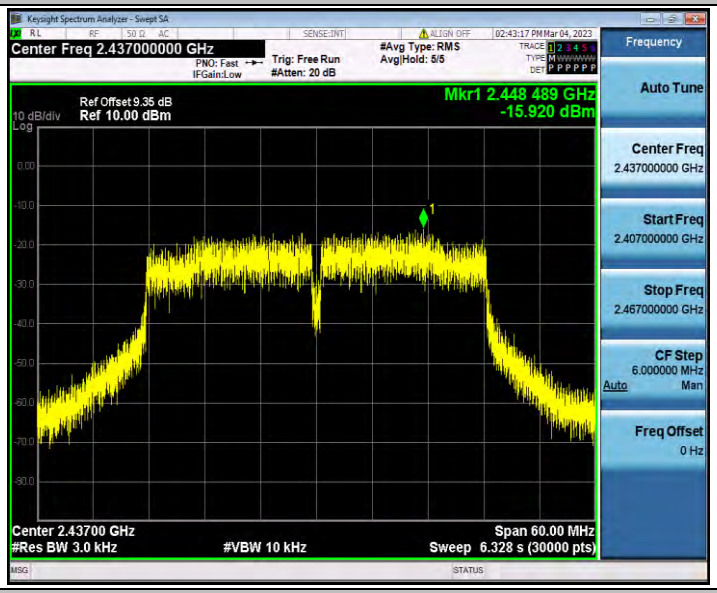



11N20SISO_Ant1_2462

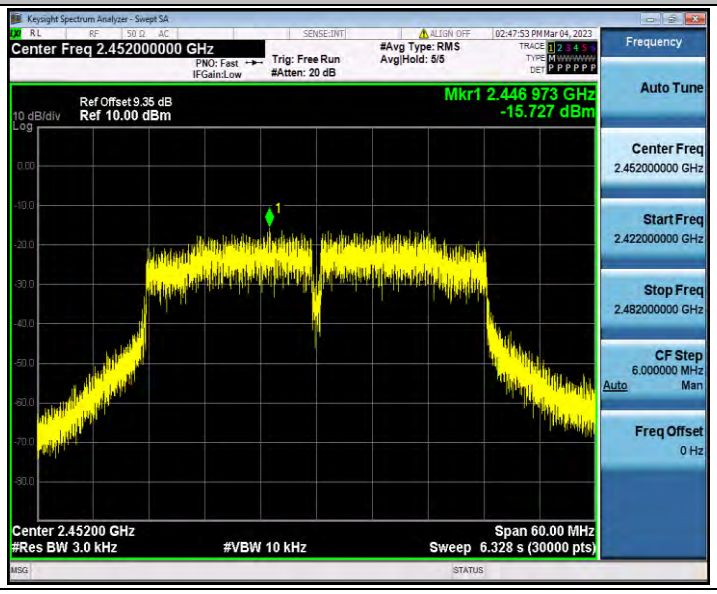



11N40SISO_Ant1_2422



| 11N40SISO_Ant1_2437 |
| --- |
|  |



| 11N40SISO_Ant1_2452 |
| --- |
|  |

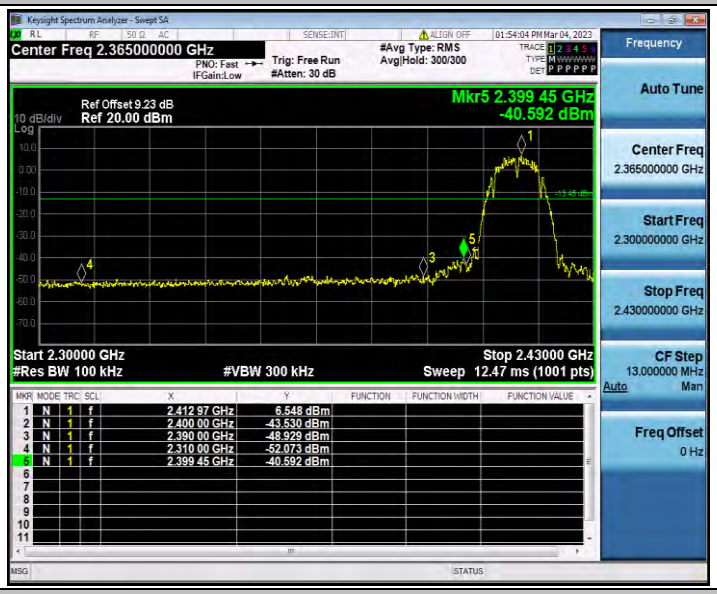
# Appendix C.5: Band edge measurements

## Test Result

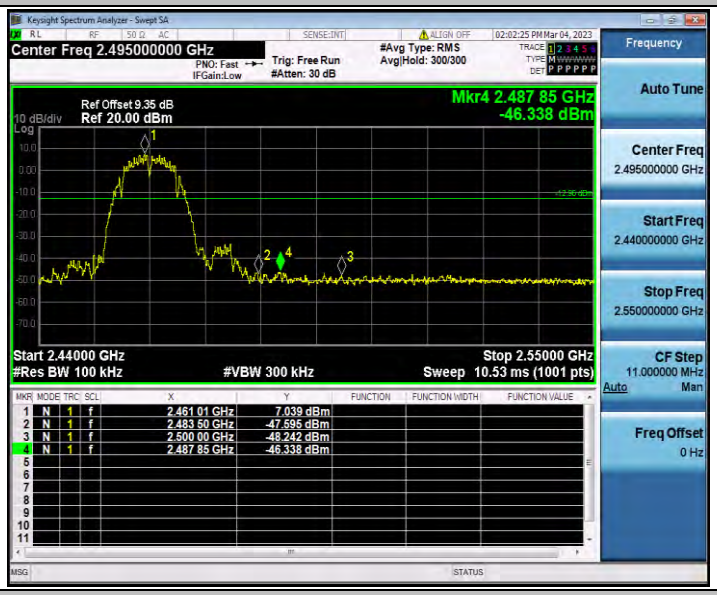
| TestMode | Antenna | ChName | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | Low | 2412 | 6.55 | -40.59 | ≤-13.45 | PASS |
| | | High | 2462 | 7.04 | -46.34 | ≤-12.96 | PASS |
| 11G | Ant1 | Low | 2412 | 4.76 | -24.51 | ≤-15.24 | PASS |
| | | High | 2462 | 4.10 | -40.12 | ≤-15.9 | PASS |
| 11N20SISO | Ant1 | Low | 2412 | 1.61 | -28.32 | ≤-18.39 | PASS |
| | | High | 2462 | 2.60 | -42.6 | ≤-17.4 | PASS |
| 11N40SISO | Ant1 | Low | 2422 | -1.53 | -32.21 | ≤-21.53 | PASS |
| | | High | 2452 | -0.37 | -34.29 | ≤-20.37 | PASS |

## Test Graphs

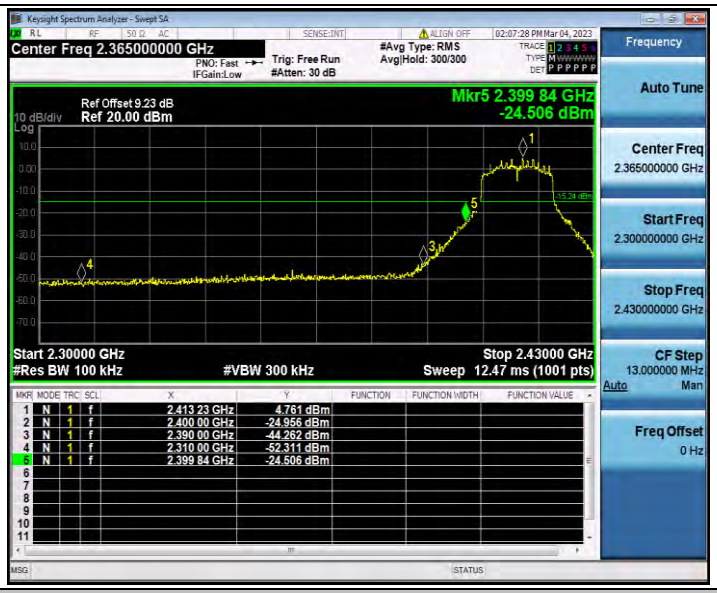
11B_Ant1_Low_2412



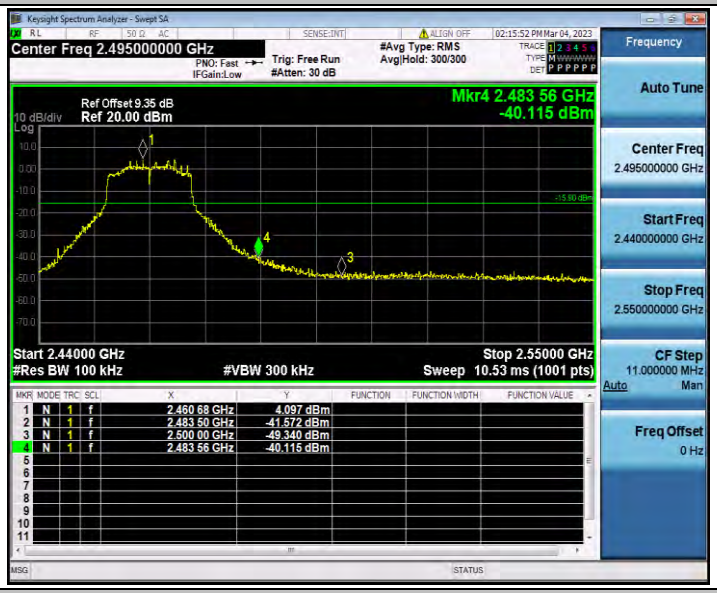

11B_Ant1_High_2462



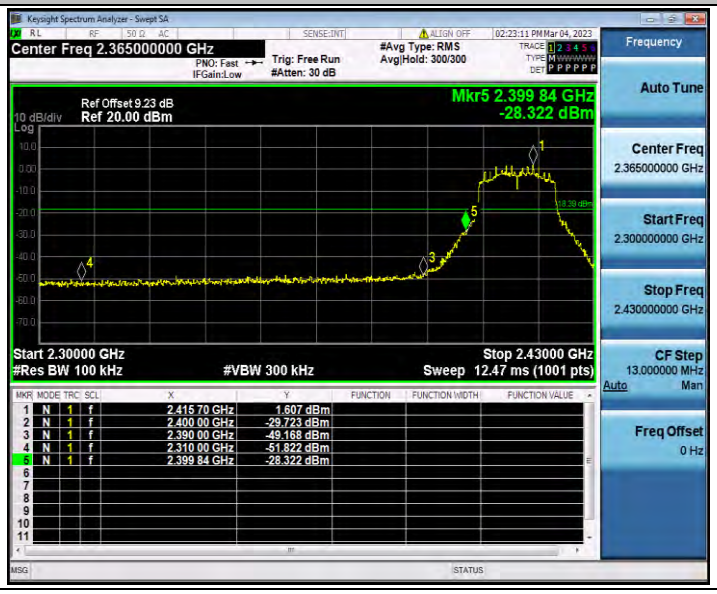

11G_Ant1_Low_2412



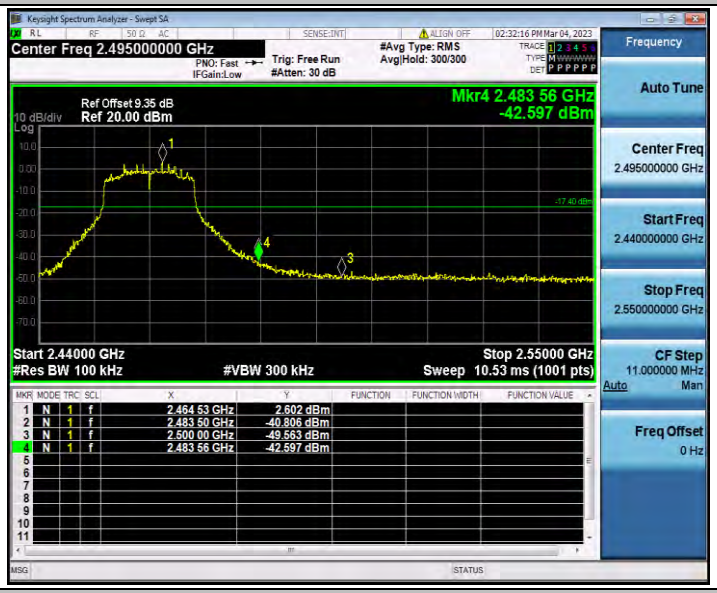

11G_Ant1_High_2462




11N20SISO_Ant1_Low_2412

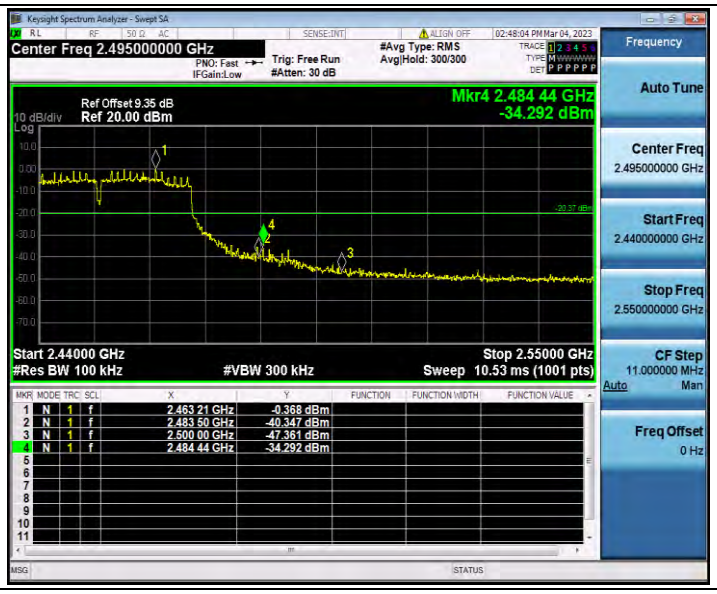


11N20SISO_Ant1_High_2462




11N40SISO_Ant1_Low_2422

11N40SISO_Ant1_High_2452


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.495000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 300/300
02:48:04 PM Mar 04, 2023
Ref Offset 9.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr4 2.484 44 GHz
-34.292 dBm
Start 2.44000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.55000 GHz
Sweep 10.53 ms (1001 pts)
1 N 1 f 2.463 21 GHz -0.368 dBm
2 N 1 f 2.483 50 GHz -40.347 dBm
3 N 1 f 2.500 00 GHz -47.361 dBm
4 N 1 f 2.484 44 GHz -34.292 dBm
Frequency
Auto Tune
Center Freq
2.495000000 GHz
Start Freq
2.440000000 GHz
Stop Freq
2.550000000 GHz
CF Step
11.000000 MHz
Auto
Man
Freq Offset
0 Hz

# Appendix C.6: Conducted Spurious Emission

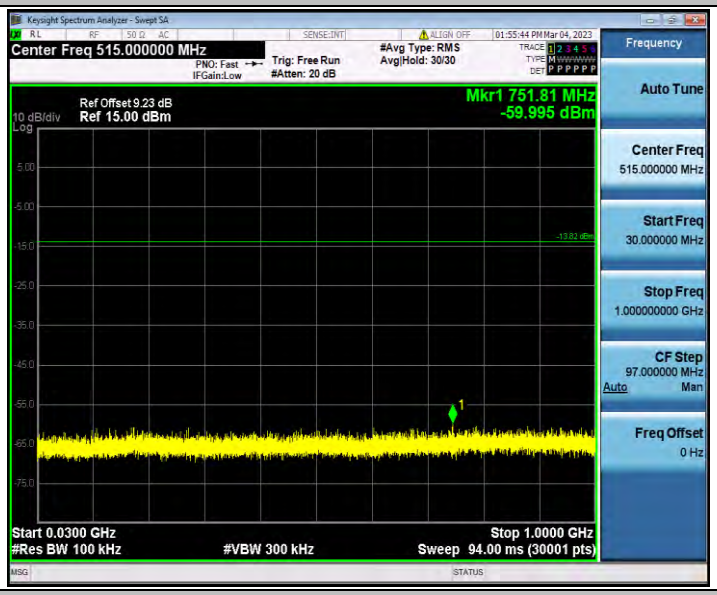
## Test Result

| TestMode | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|---|---|
| 11B | Ant1 | 2412 | Reference | 6.18 | 6.18 | --- | PASS |
| | | | 30~1000 | 6.18 | -60 | ≤-13.82 | PASS |
| | | | 1000~26500 | 6.18 | -47.84 | ≤-13.82 | PASS |
| | | 2437 | Reference | 4.54 | 4.54 | --- | PASS |
| | | | 30~1000 | 4.54 | -59.72 | ≤-15.46 | PASS |
| | | | 1000~26500 | 4.54 | -47.34 | ≤-15.46 | PASS |
| | | 2462 | Reference | 4.99 | 4.99 | --- | PASS |
| | | | 30~1000 | 4.99 | -60.13 | ≤-15.01 | PASS |
| | | | 1000~26500 | 4.99 | -47.8 | ≤-15.01 | PASS |
| 11G | Ant1 | 2412 | Reference | 3.82 | 3.82 | --- | PASS |
| | | | 30~1000 | 3.82 | -59.84 | ≤-16.18 | PASS |
| | | | 1000~26500 | 3.82 | -47.38 | ≤-16.18 | PASS |
| | | 2437 | Reference | 0.06 | 0.06 | --- | PASS |
| | | | 30~1000 | 0.06 | -59.97 | ≤-19.94 | PASS |
| | | | 1000~26500 | 0.06 | -47.28 | ≤-19.94 | PASS |
| | | 2462 | Reference | 2.37 | 2.37 | --- | PASS |
| | | | 30~1000 | 2.37 | -59.75 | ≤-17.63 | PASS |
| | | | 1000~26500 | 2.37 | -47.44 | ≤-17.63 | PASS |
| 11N20SISO | Ant1 | 2412 | Reference | 1.25 | 1.25 | --- | PASS |
| | | | 30~1000 | 1.25 | -60.34 | ≤-18.75 | PASS |
| | | | 1000~26500 | 1.25 | -47.56 | ≤-18.75 | PASS |
| | | 2437 | Reference | -0.72 | -0.72 | --- | PASS |
| | | | 30~1000 | -0.72 | -58.52 | ≤-20.72 | PASS |
| | | | 1000~26500 | -0.72 | -46.32 | ≤-20.72 | PASS |
| | | 2462 | Reference | -0.28 | -0.28 | --- | PASS |
| | | | 30~1000 | -0.28 | -59.19 | ≤-20.28 | PASS |
| | | | 1000~26500 | -0.28 | -47.79 | ≤-20.28 | PASS |
| 11N40SISO | Ant1 | 2422 | Reference | -1.93 | -1.93 | --- | PASS |
| | | | 30~1000 | -1.93 | -59.81 | ≤-21.93 | PASS |
| | | | 1000~26500 | -1.93 | -47.28 | ≤-21.93 | PASS |
| | | 2437 | Reference | -1.25 | -1.25 | --- | PASS |
| | | | 30~1000 | -1.25 | -60.21 | ≤-21.25 | PASS |
| | | | 1000~26500 | -1.25 | -47.13 | ≤-21.25 | PASS |
| | | 2452 | Reference | -3.71 | -3.71 | --- | PASS |
| | | | 30~1000 | -3.71 | -60.44 | ≤-23.71 | PASS |
| | | | 1000~26500 | -3.71 | -47.77 | ≤-23.71 | PASS |

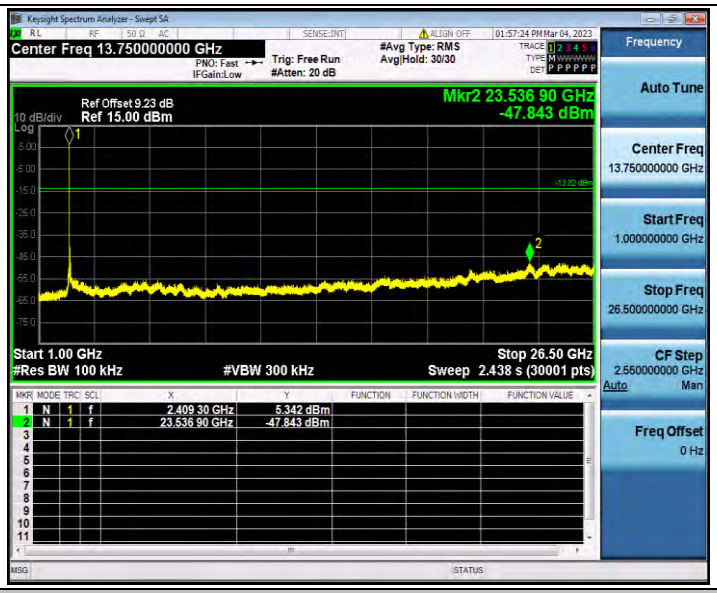
## Test Graphs

11B_Ant1_2412_0~Reference

11B_Ant1_2412_30~1000

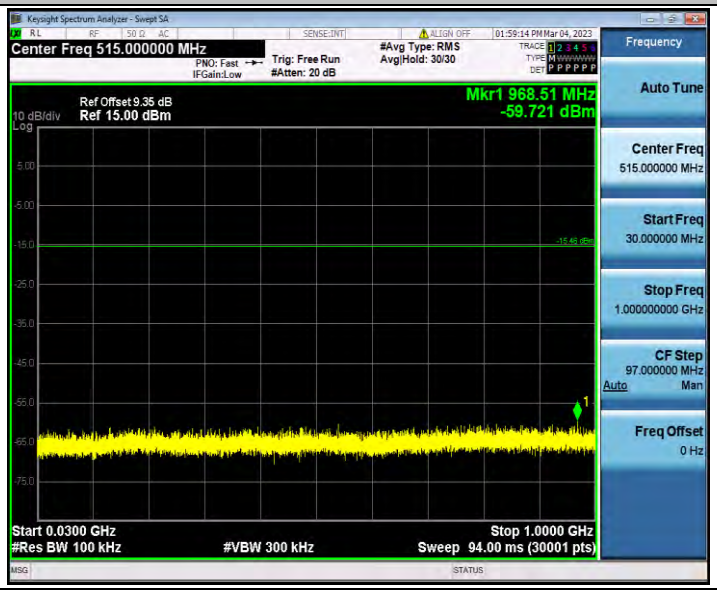



11B_Ant1_2412_1000~26500

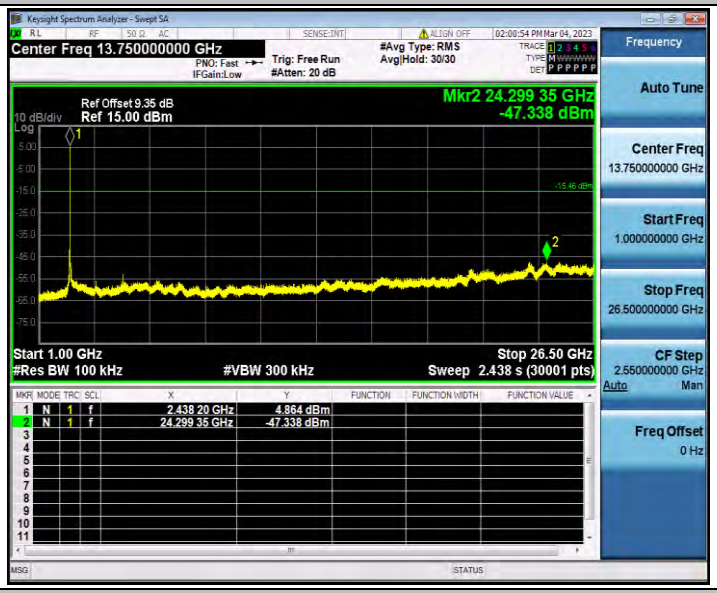



11B_Ant1_2437_0~Reference

11B_Ant1_2437_30~1000



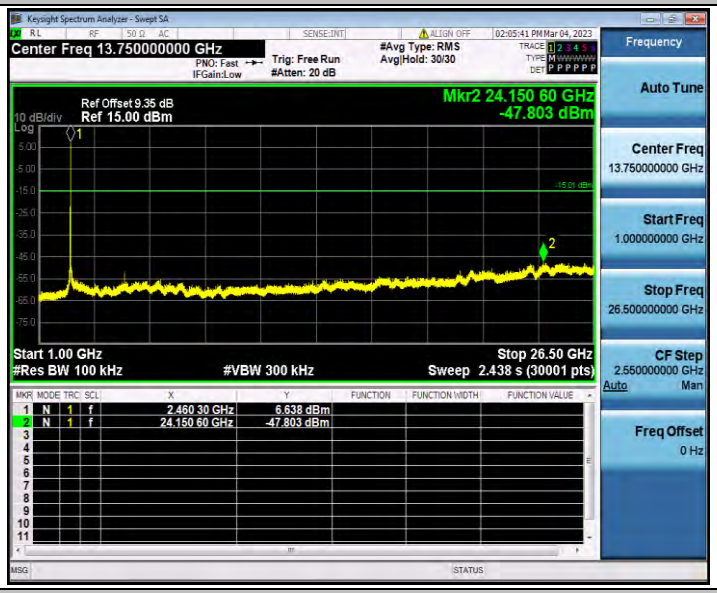
11B_Ant1_2437_1000~26500




11B_Ant1_2462_0~Reference

11B_Ant1_2462_30~1000

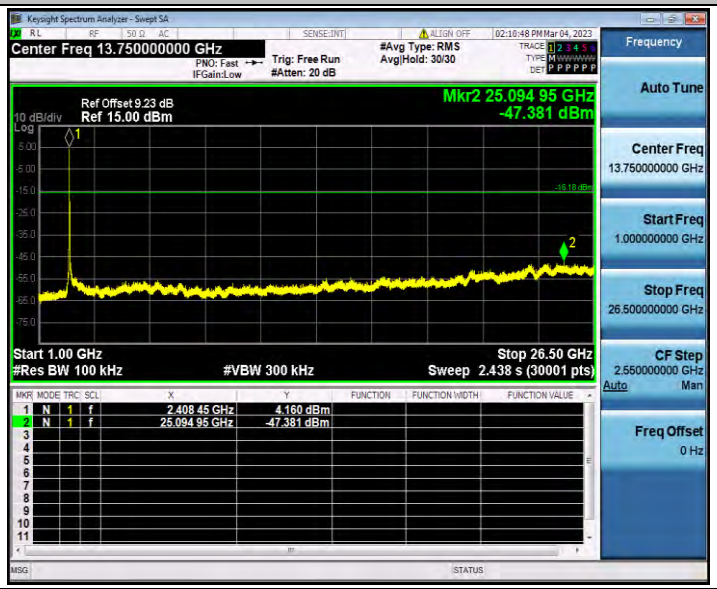
11B_Ant1_2462_1000~26500




11G_Ant1_2412_0~Reference

11G_Ant1_2412_30~1000

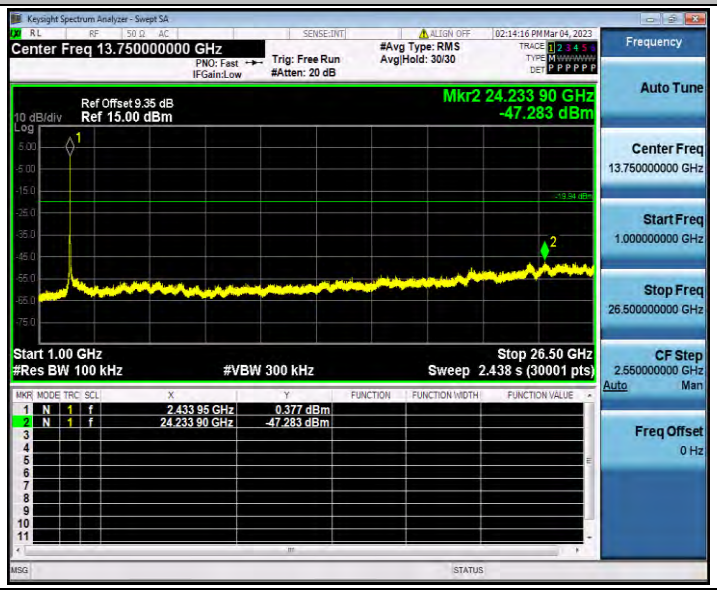
11G_Ant1_2412_1000~26500




11G_Ant1_2437_0~Reference

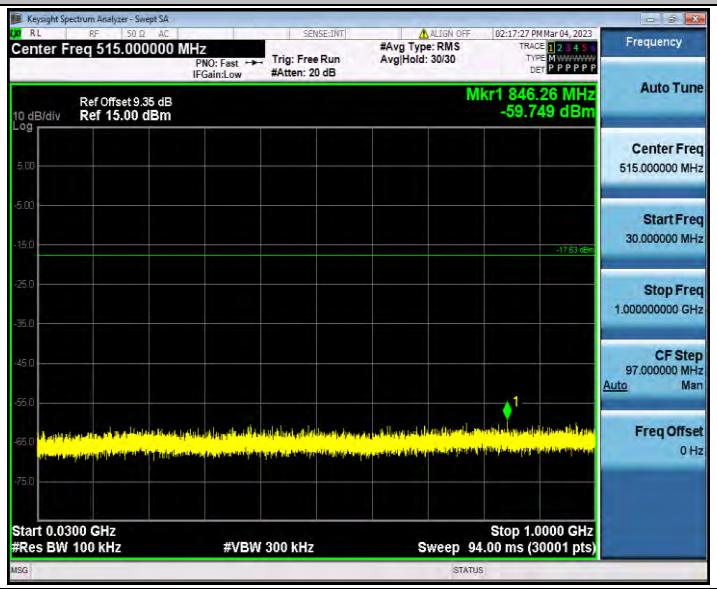
11G_Ant1_2437_30~1000

11G_Ant1_2437_1000~26500

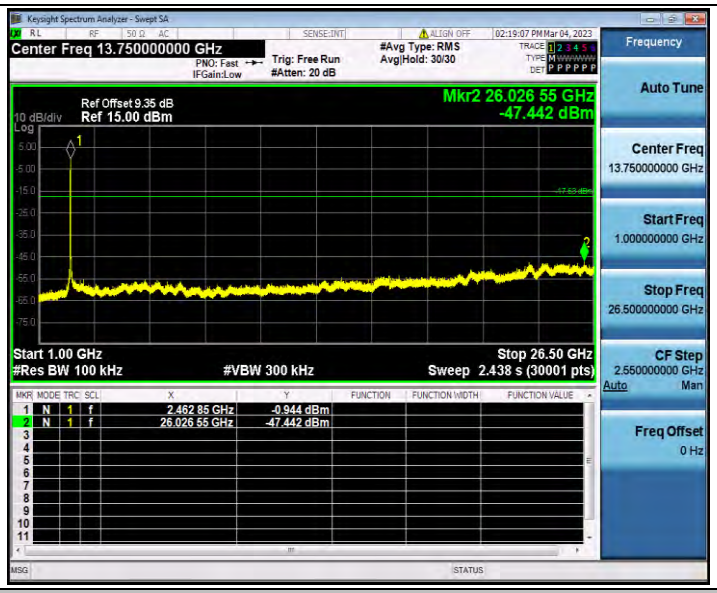


11G_Ant1_2462_0~Reference

11G_Ant1_2462_30~1000

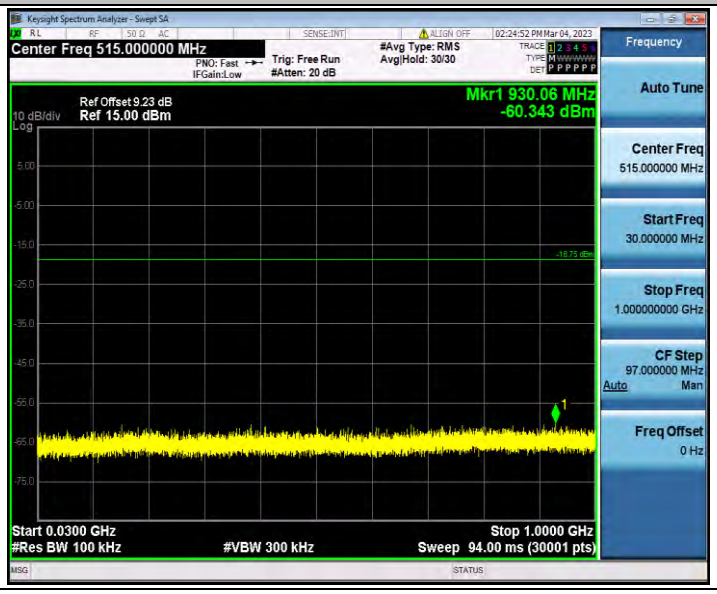



11G_Ant1_2462_1000~26500

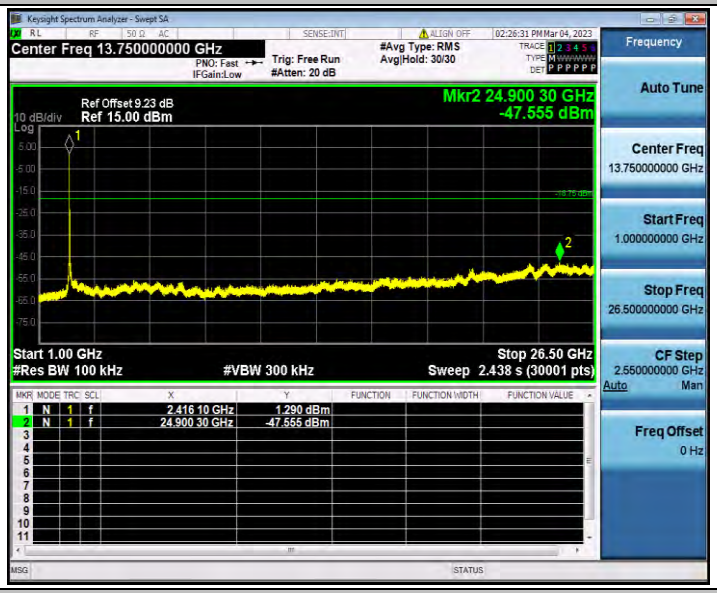



11N20SISO_Ant1_2412_0~Reference

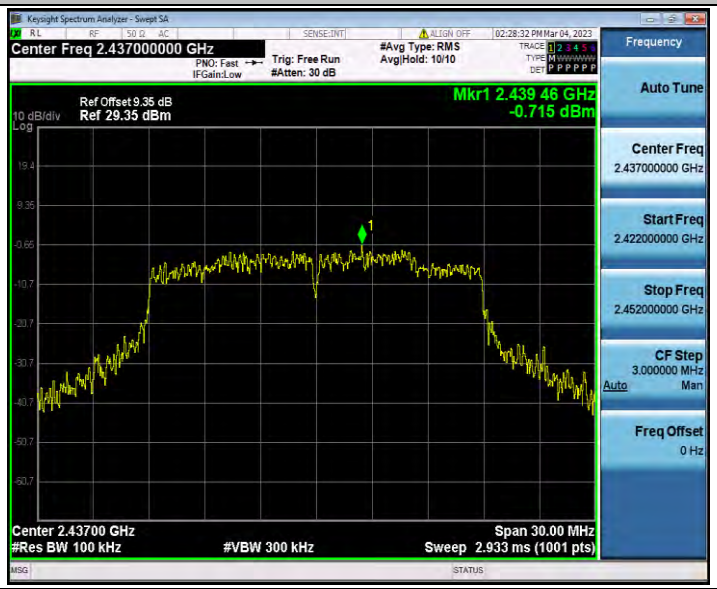
11N20SISO_Ant1_2412_30~1000



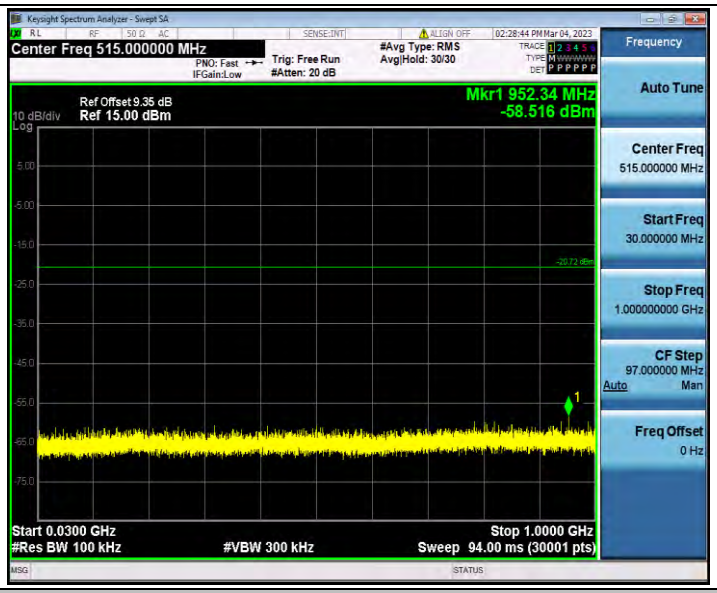
11N20SISO_Ant1_2412_1000~26500



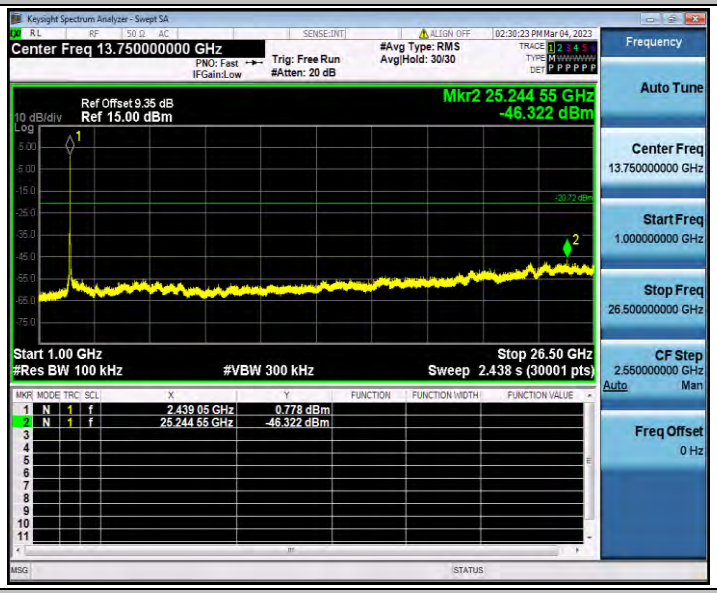

11N20SISO_Ant1_2437_0~Reference




11N20SISO_Ant1_2437_30~1000

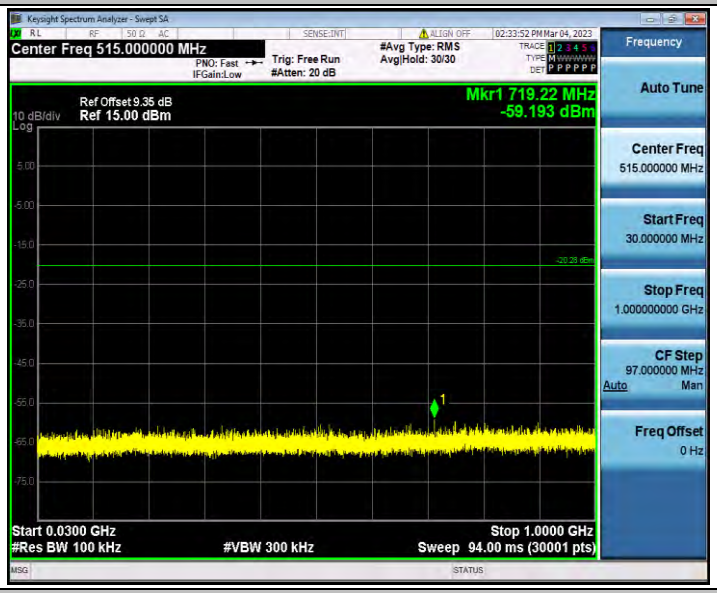



11N20SISO_Ant1_2437_1000~26500

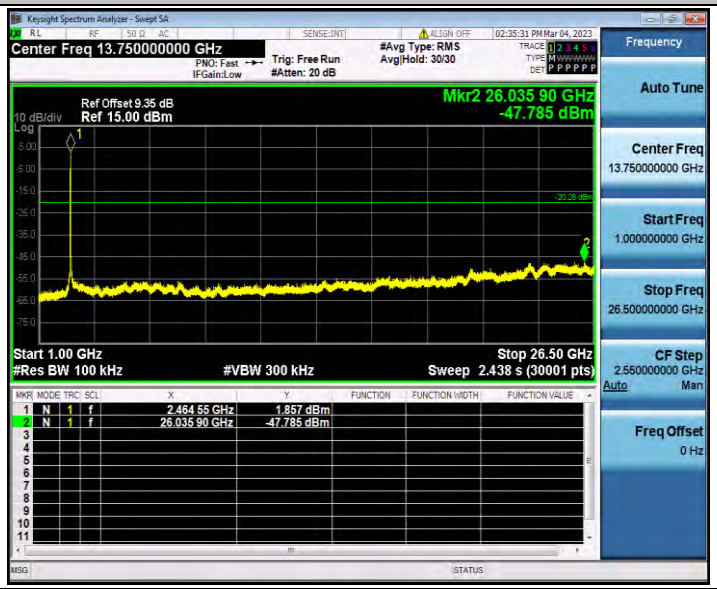



11N20SISO_Ant1_2462_0~Reference

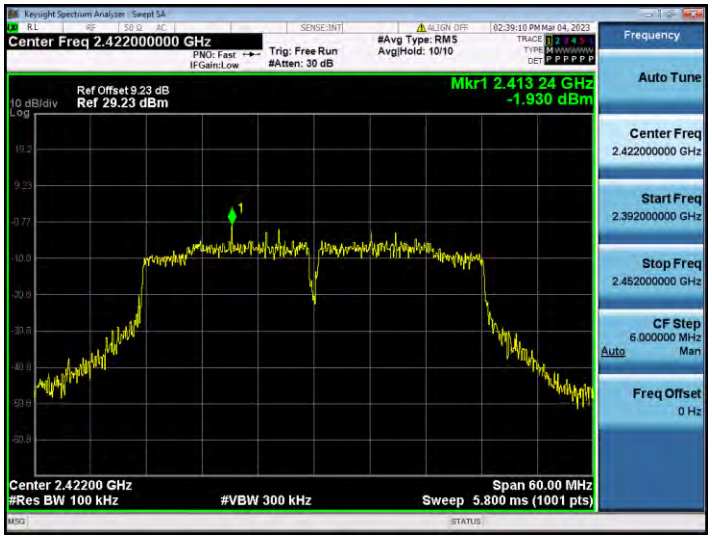
11N20SISO_Ant1_2462_30~1000



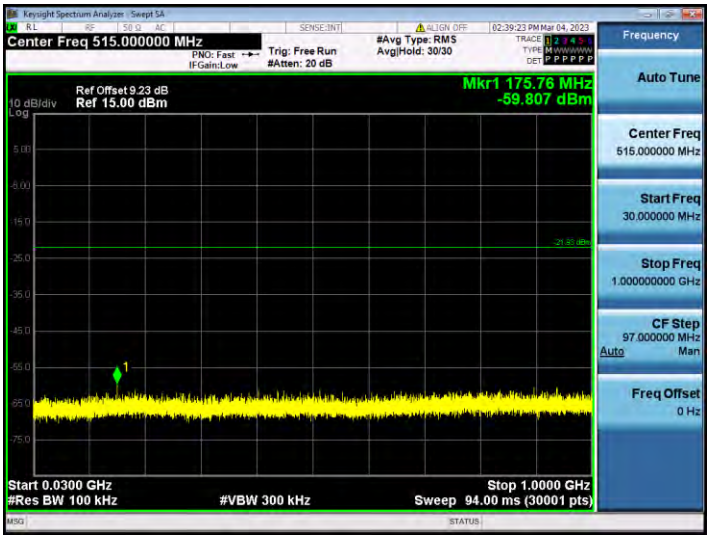

11N20SISO_Ant1_2462_1000~26500



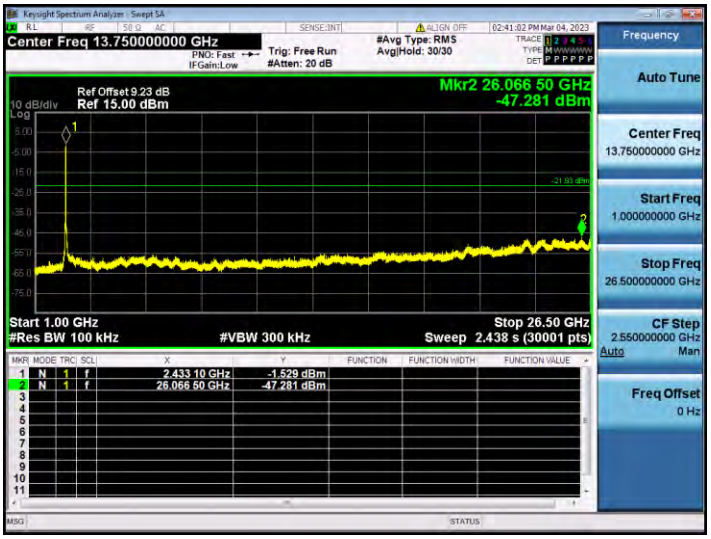

11N40SISO_Ant1_2422_0~Reference



11N40SISO_Ant1_2422_30~1000

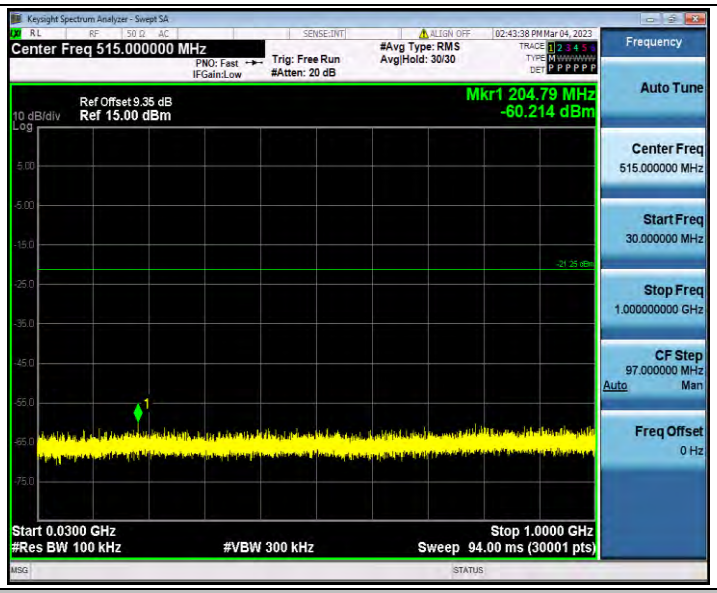



11N40SISO_Ant1_2422_1000~26500

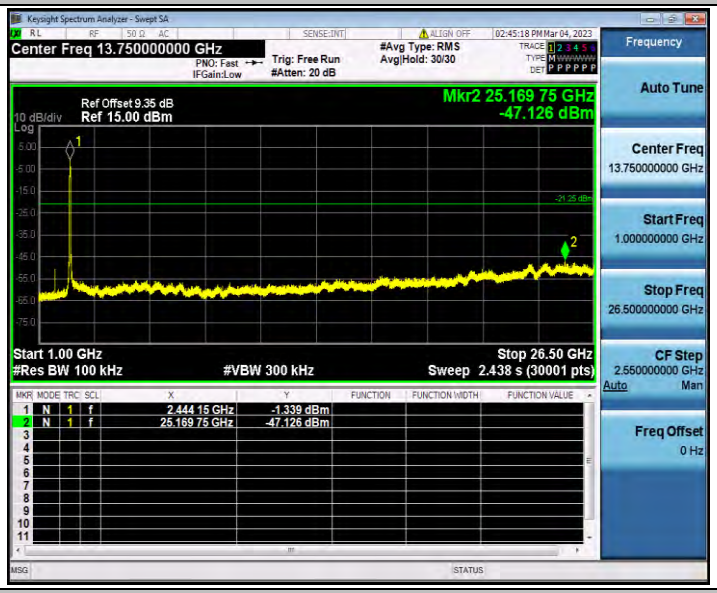



11N40SISO_Ant1_2437_0~Reference

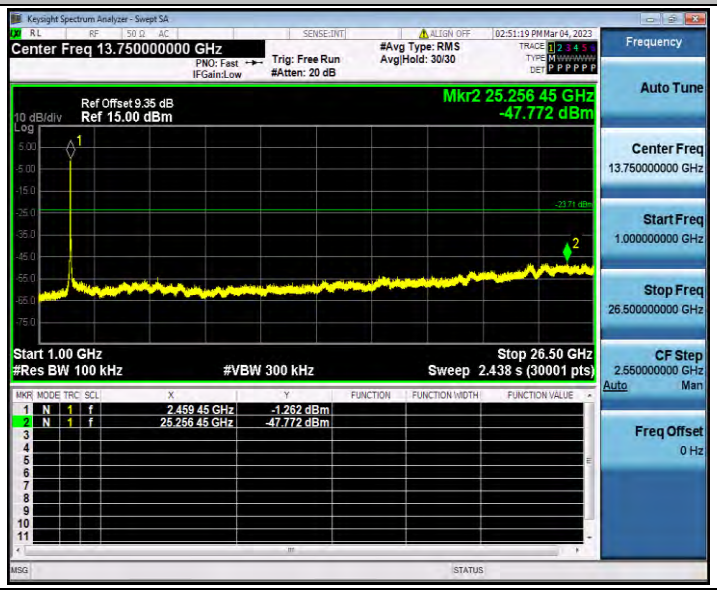
11N40SISO_Ant1_2437_30~1000




11N40SISO_Ant1_2437_1000~26500




11N40SISO_Ant1_2452_0~Reference

11N40SISO_Ant1_2452_30~1000

11N40SISO_Ant1_2452_1000~26500