



## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: smart creative light panel

Test Model: FWWPCB-33-12

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 21.2° C   |
| Relative Humidity: | 52.4%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |



## A.1 6dB Bandwidth

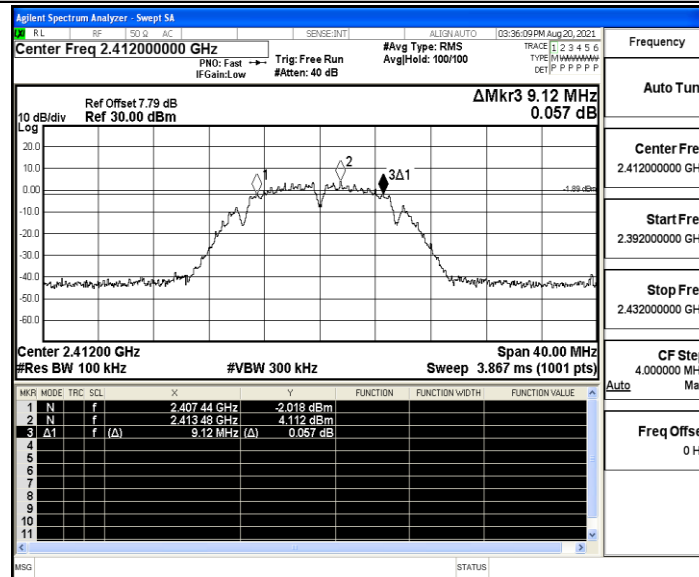
### Test Result

| TestMode  | Antenna | Channel | DTS BW<br>[MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|-----------|---------|---------|-----------------|----------|----------|------------|---------|
| 11B       | Ant1    | 2412    | 9.120           | 2407.440 | 2416.560 | 0.5        | PASS    |
|           |         | 2437    | 8.640           | 2432.920 | 2441.560 | 0.5        | PASS    |
|           |         | 2462    | 9.160           | 2456.920 | 2466.080 | 0.5        | PASS    |
| 11G       | Ant1    | 2412    | 16.400          | 2403.800 | 2420.200 | 0.5        | PASS    |
|           |         | 2437    | 16.480          | 2428.800 | 2445.280 | 0.5        | PASS    |
|           |         | 2462    | 16.200          | 2453.680 | 2469.880 | 0.5        | PASS    |
| 11N20SISO | Ant1    | 2412    | 17.680          | 2403.160 | 2420.840 | 0.5        | PASS    |
|           |         | 2437    | 17.480          | 2428.360 | 2445.840 | 0.5        | PASS    |
|           |         | 2462    | 17.080          | 2453.120 | 2470.200 | 0.5        | PASS    |
| 11N40SISO | Ant1    | 2422    | 35.840          | 2404.400 | 2440.240 | 0.5        | PASS    |
|           |         | 2437    | 34.240          | 2420.680 | 2454.920 | 0.5        | PASS    |
|           |         | 2452    | 35.200          | 2434.400 | 2469.600 | 0.5        | PASS    |

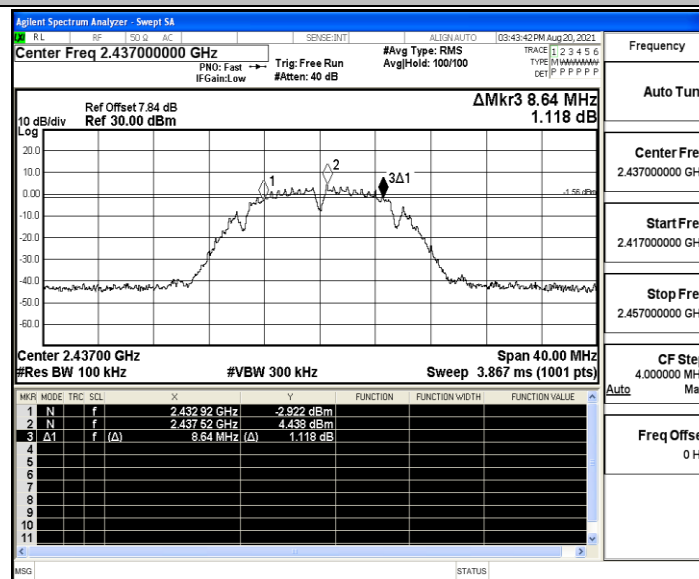


## Test Graphs

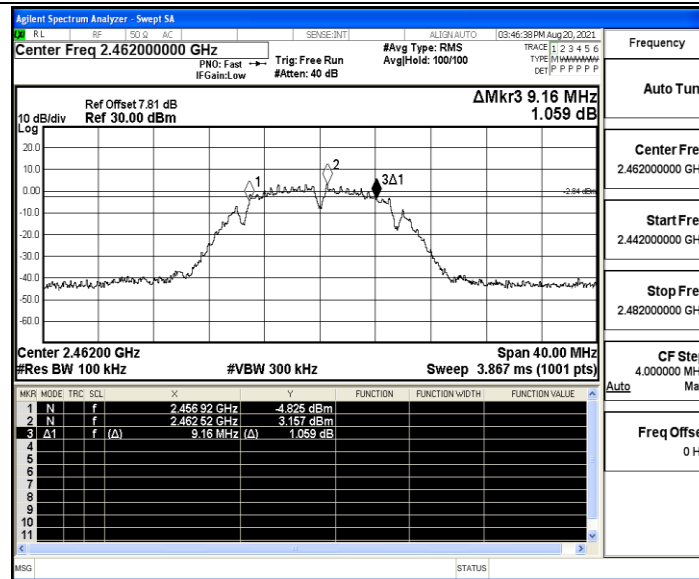
11B\_Ant1\_2412



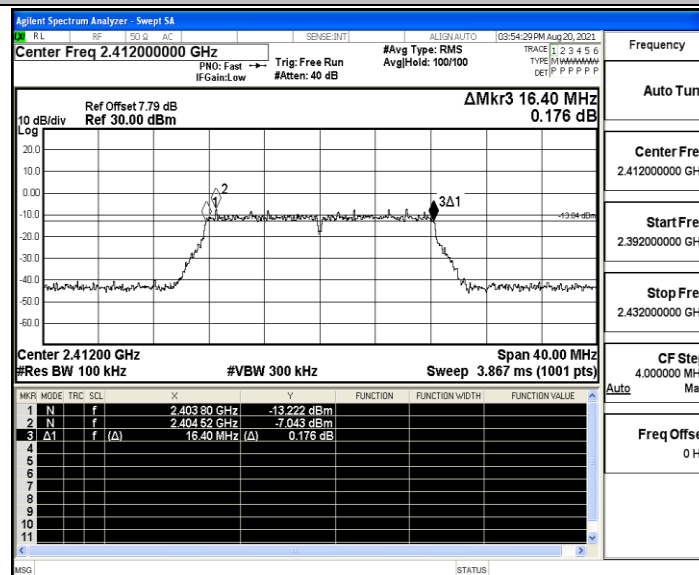
11B\_Ant1\_2437



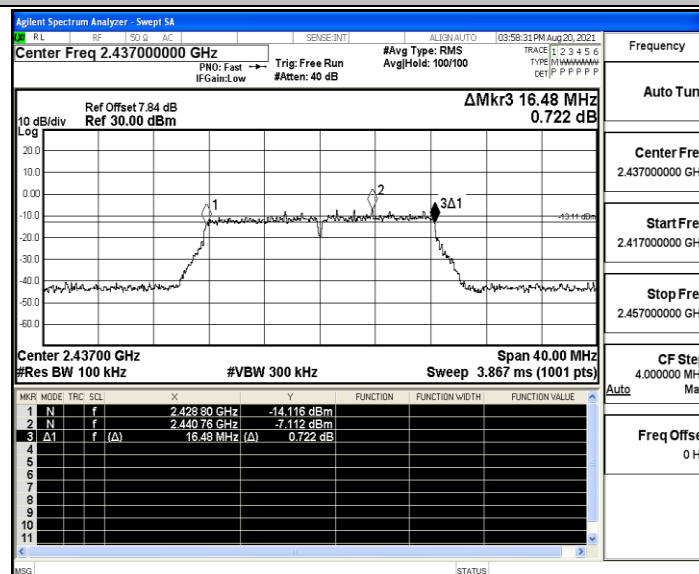
11B\_Ant1\_2462



11G\_Ant1\_2412

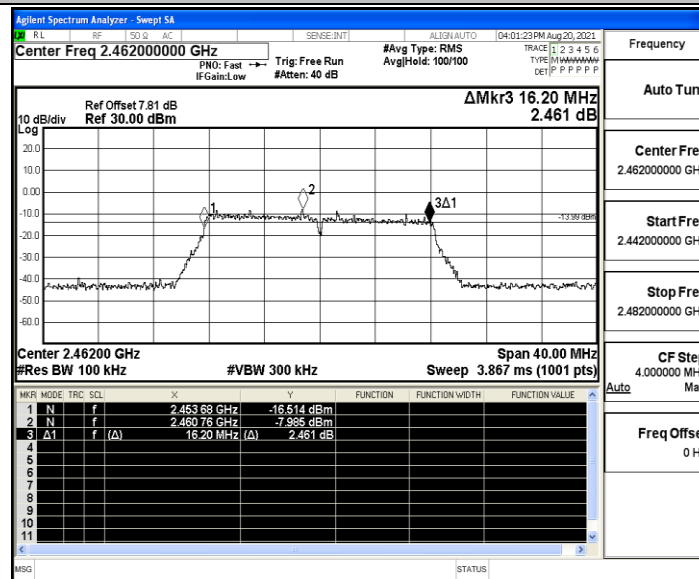


11G\_Ant1\_2437

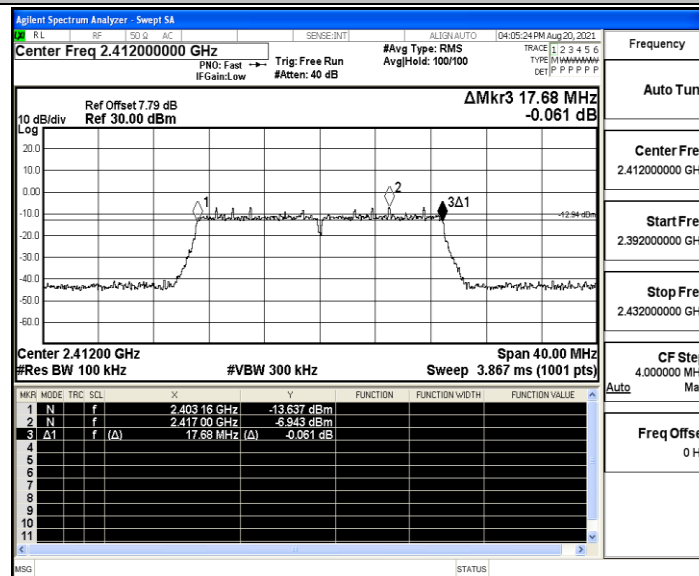




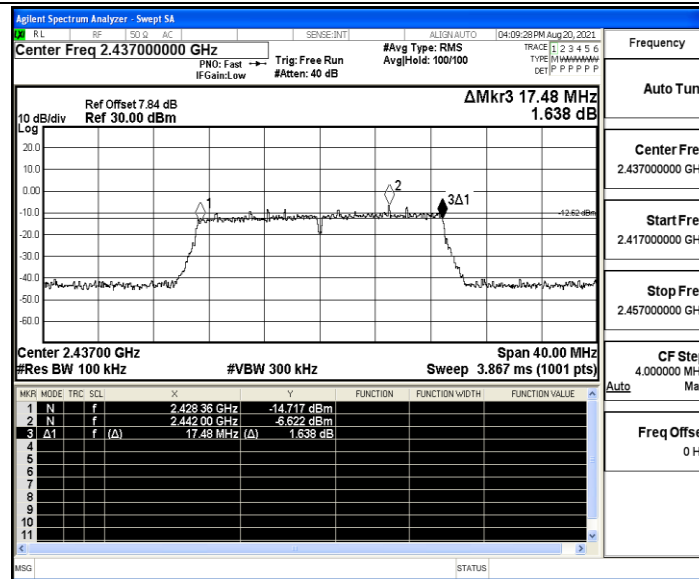
## 11G\_Ant1\_2462



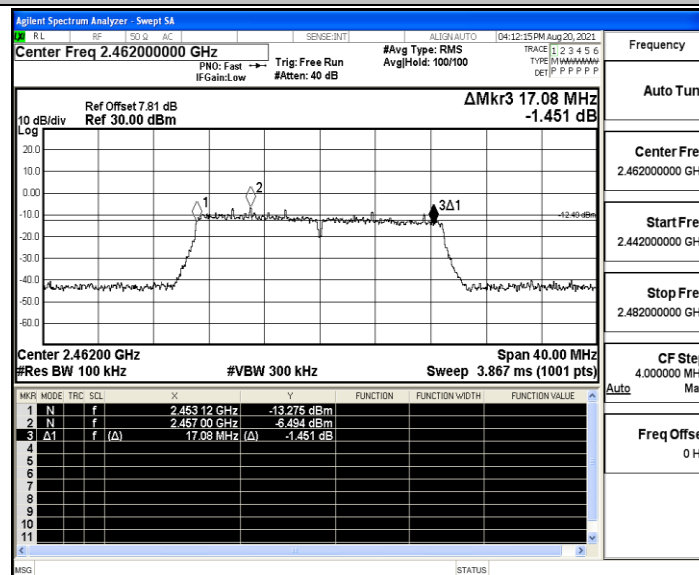
## 11N20SISO\_Ant1\_2412



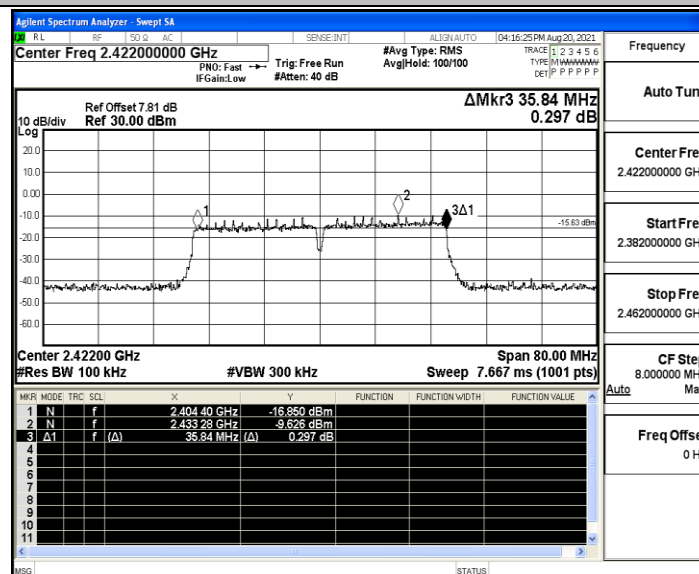
## 11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

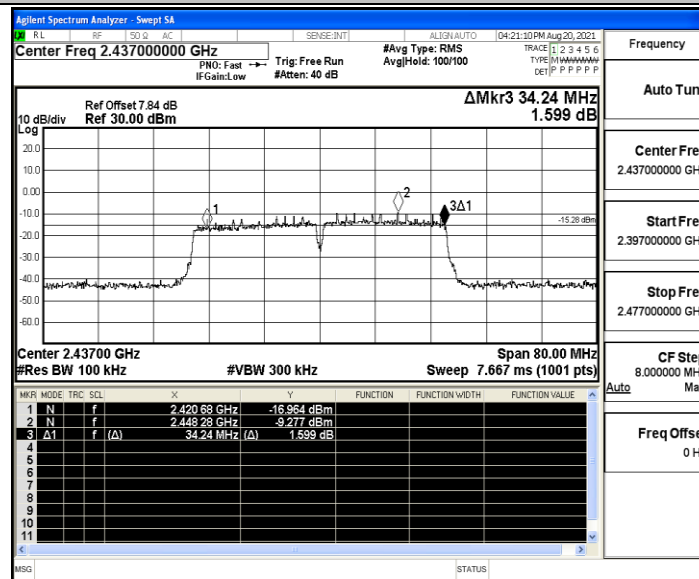


11N40SISO\_Ant1\_2422

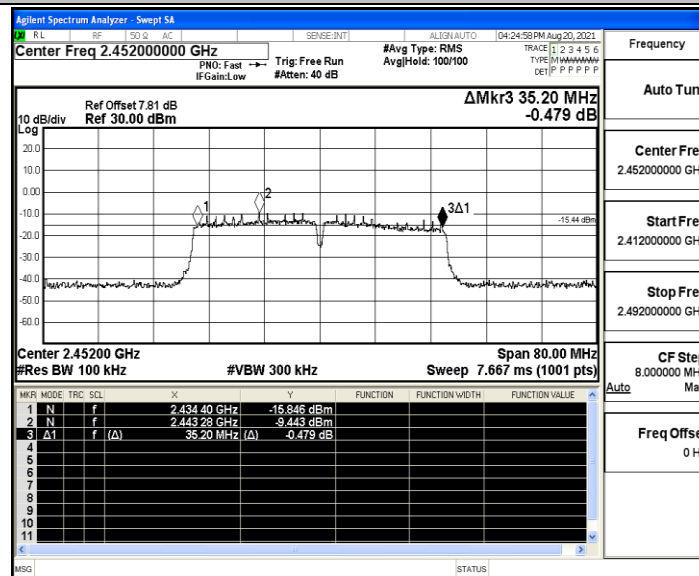




## 11N40SISO\_Ant1\_2437



## 11N40SISO\_Ant1\_2452





## A.2 Maximum conducted output power

### Test Result

| TestMode  | Antenna | Channel | Result[dBm] | Limit[dBm] | Verdict |
|-----------|---------|---------|-------------|------------|---------|
| 11B       | Ant1    | 2412    | 16.08       | ≤30        | PASS    |
|           |         | 2437    | 16.02       | ≤30        | PASS    |
|           |         | 2462    | 15.29       | ≤30        | PASS    |
| 11G       | Ant1    | 2412    | 11.74       | ≤30        | PASS    |
|           |         | 2437    | 11.75       | ≤30        | PASS    |
|           |         | 2462    | 10.79       | ≤30        | PASS    |
| 11N20SISO | Ant1    | 2412    | 11.65       | ≤30        | PASS    |
|           |         | 2437    | 11.60       | ≤30        | PASS    |
|           |         | 2462    | 11.35       | ≤30        | PASS    |
| 11N40SISO | Ant1    | 2422    | 11.31       | ≤30        | PASS    |
|           |         | 2437    | 11.27       | ≤30        | PASS    |
|           |         | 2452    | 11.18       | ≤30        | PASS    |





## A.3 Maximum power spectral density

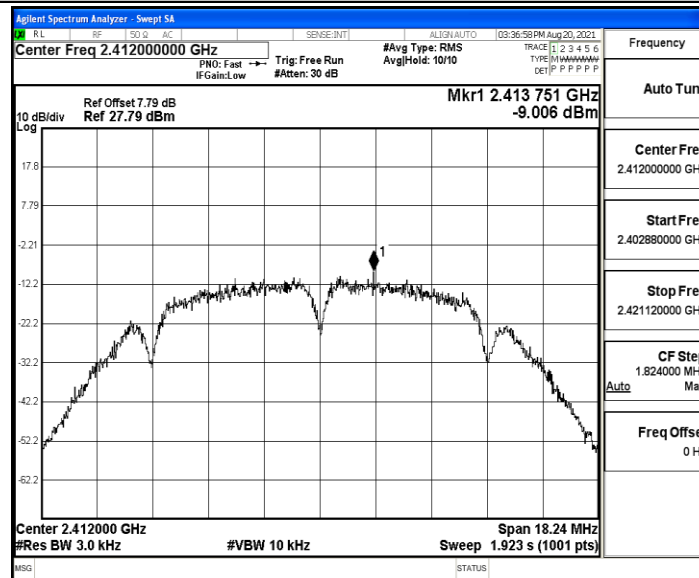
### Test Result

| TestMode  | Antenna | Channel | Result[dBm/3-100kHz] | Limit[dBm/3kHz] | Verdict |
|-----------|---------|---------|----------------------|-----------------|---------|
| 11B       | Ant1    | 2412    | -9.01                | ≤8              | PASS    |
|           |         | 2437    | -7.68                | ≤8              | PASS    |
|           |         | 2462    | -10.68               | ≤8              | PASS    |
| 11G       | Ant1    | 2412    | -20.93               | ≤8              | PASS    |
|           |         | 2437    | -20.5                | ≤8              | PASS    |
|           |         | 2462    | -20.58               | ≤8              | PASS    |
| 11N20SISO | Ant1    | 2412    | -21.18               | ≤8              | PASS    |
|           |         | 2437    | -20.97               | ≤8              | PASS    |
|           |         | 2462    | -20.96               | ≤8              | PASS    |
| 11N40SISO | Ant1    | 2422    | -22.99               | ≤8              | PASS    |
|           |         | 2437    | -24.03               | ≤8              | PASS    |
|           |         | 2452    | -23.13               | ≤8              | PASS    |

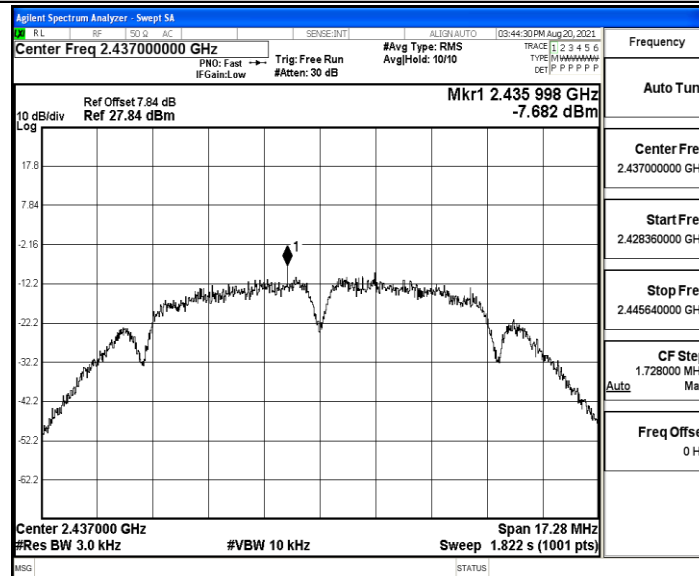


## Test Graphs

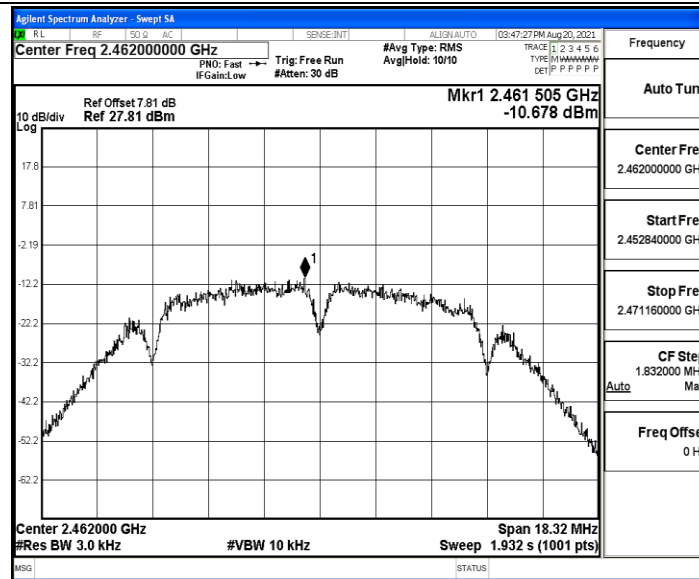
11B\_Ant1\_2412



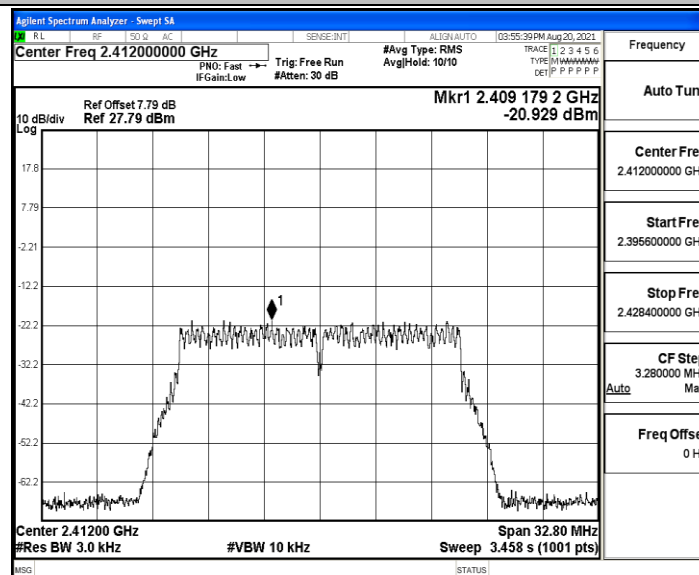
11B\_Ant1\_2437



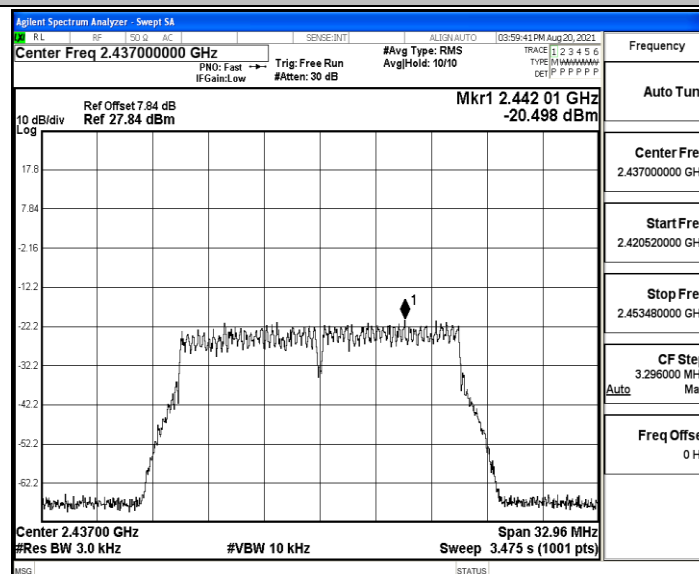
11B\_Ant1\_2462



11G\_Ant1\_2412

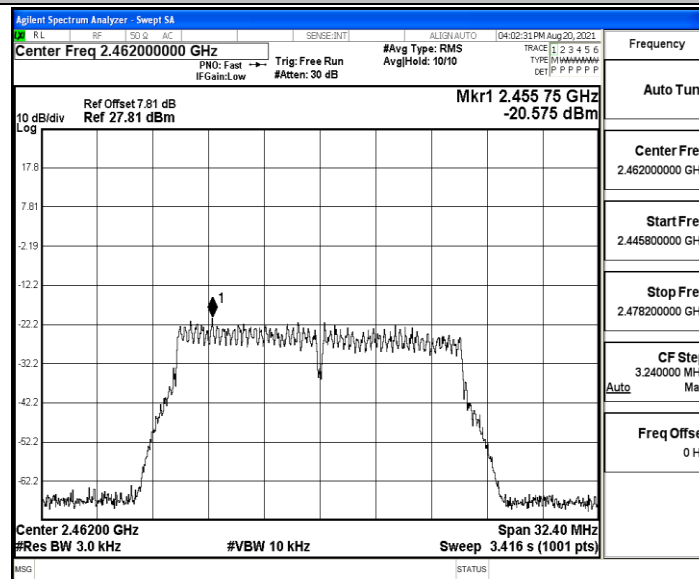


11G\_Ant1\_2437

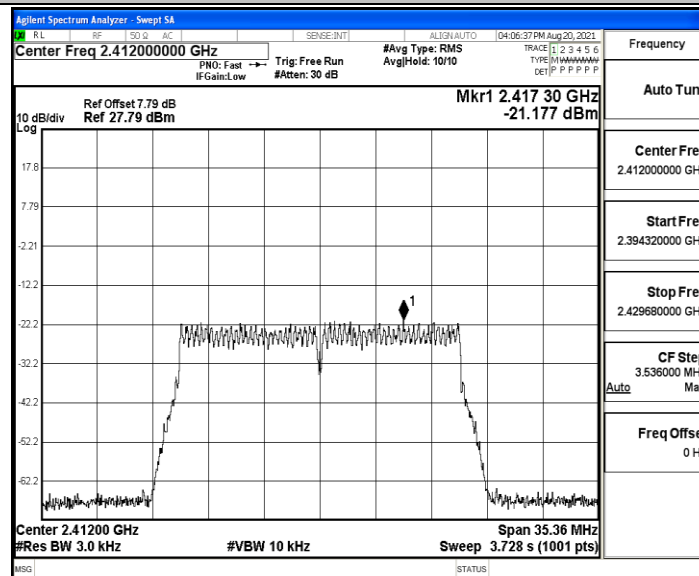




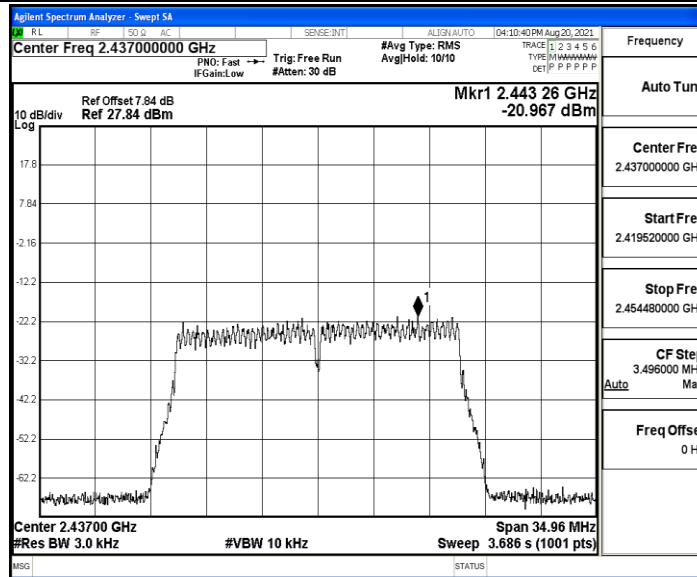
## 11G\_Ant1\_2462



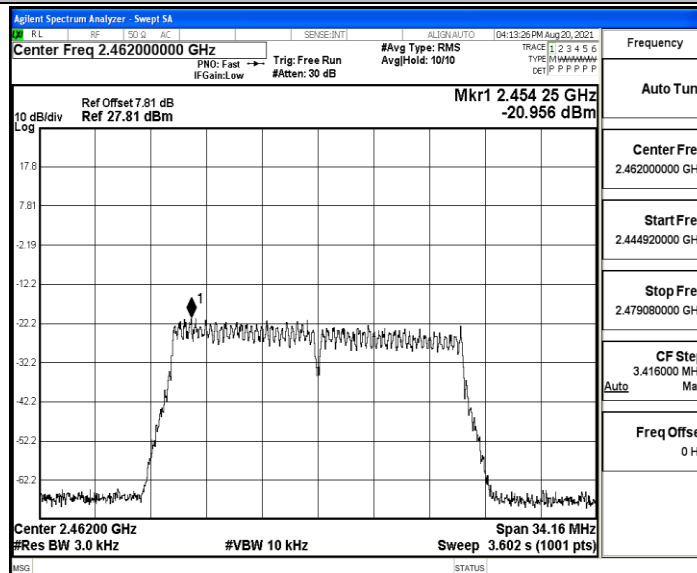
## 11N20SISO\_Ant1\_2412



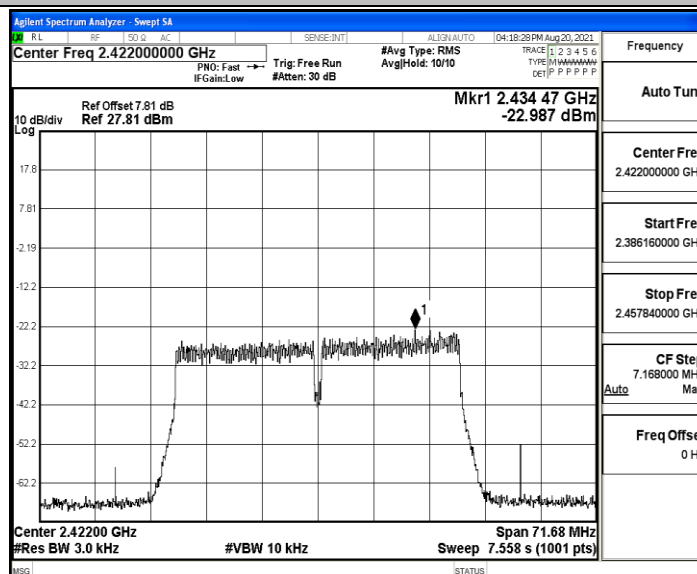
## 11N20SISO\_Ant1\_2437



11N20SISO\_Ant1\_2462

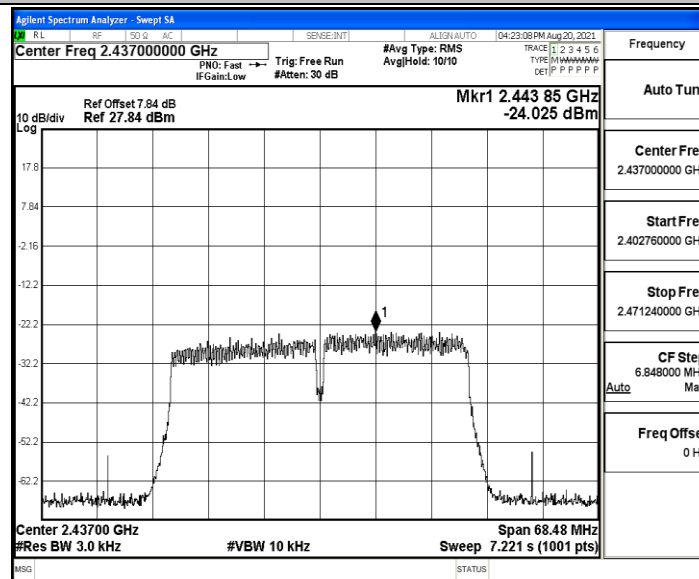


11N40SISO\_Ant1\_2422

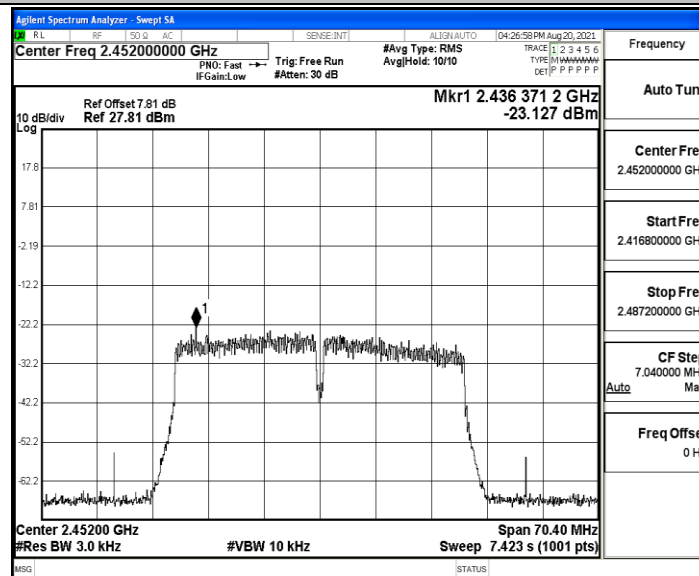




## 11N40SISO\_Ant1\_2437



## 11N40SISO\_Ant1\_2452





## A.4 Band edge measurements

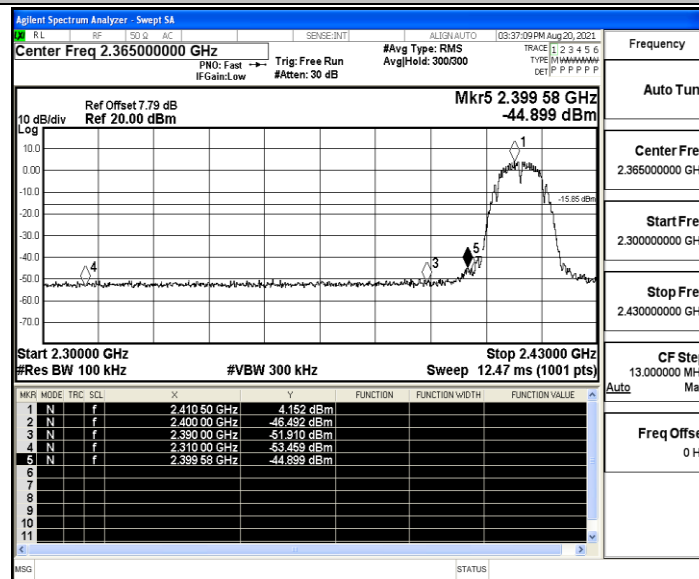
### Test Result

| TestMode  | Antenna | ChName | Channel | RefLevel[dBm] | Result[dBm] | Limit[dBm]    | Verdict |
|-----------|---------|--------|---------|---------------|-------------|---------------|---------|
| 11B       | Ant1    | Low    | 2412    | 4.15          | -44.9       | $\leq -15.85$ | PASS    |
|           |         | High   | 2462    | 3.80          | -48.55      | $\leq -16.2$  | PASS    |
| 11G       | Ant1    | Low    | 2412    | -6.55         | -49.72      | $\leq -26.55$ | PASS    |
|           |         | High   | 2462    | -7.06         | -48.53      | $\leq -27.06$ | PASS    |
| 11N20SISO | Ant1    | Low    | 2412    | -6.65         | -49.6       | $\leq -26.65$ | PASS    |
|           |         | High   | 2462    | -6.26         | -47.72      | $\leq -26.26$ | PASS    |
| 11N40SISO | Ant1    | Low    | 2422    | -10.41        | -49.51      | $\leq -30.41$ | PASS    |
|           |         | High   | 2452    | -9.22         | -48.94      | $\leq -29.22$ | PASS    |

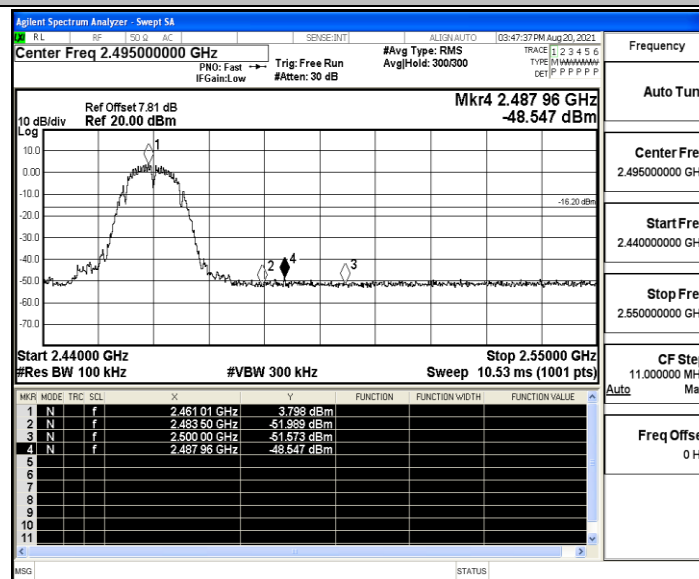


## Test Graphs

11B\_Ant1\_Low\_2412

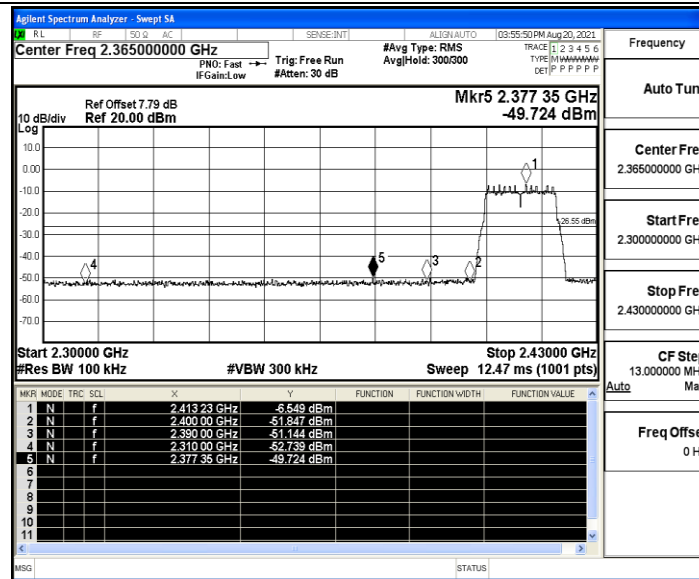


11B\_Ant1\_High\_2462

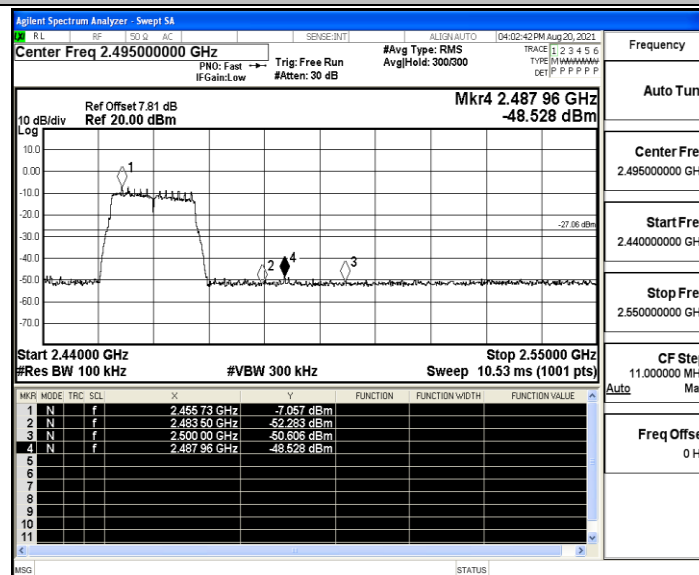


11G\_Ant1\_Low\_2412

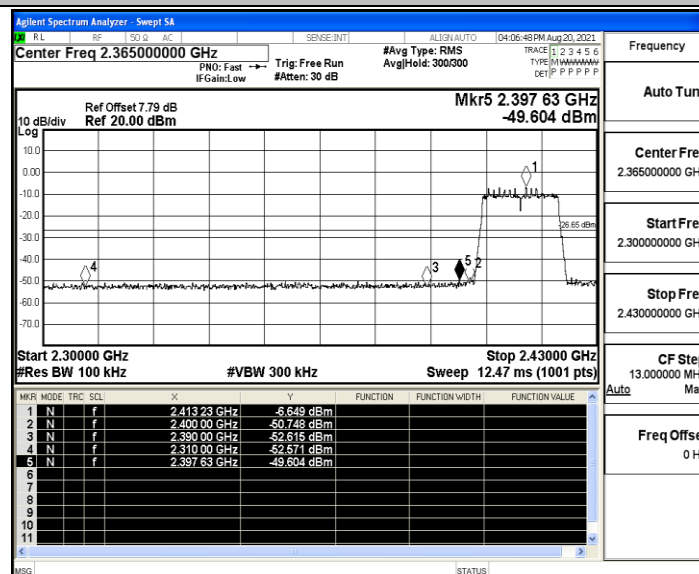




11G\_Ant1\_High\_2462

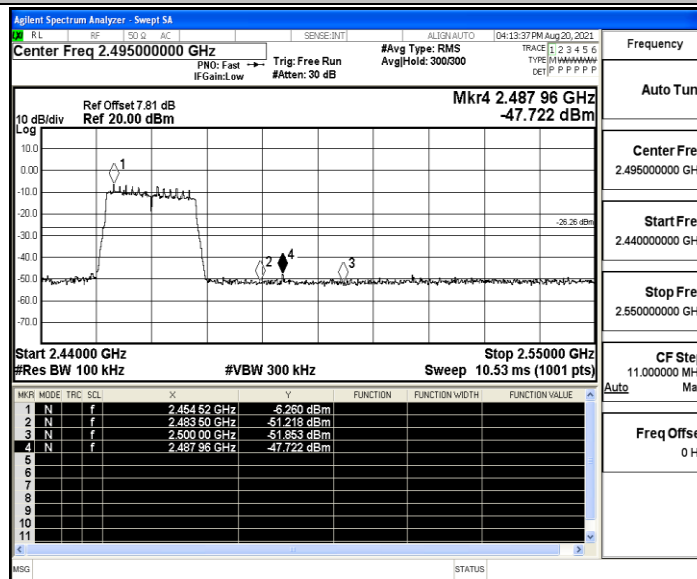


11N20SISO\_Ant1\_Low\_2412

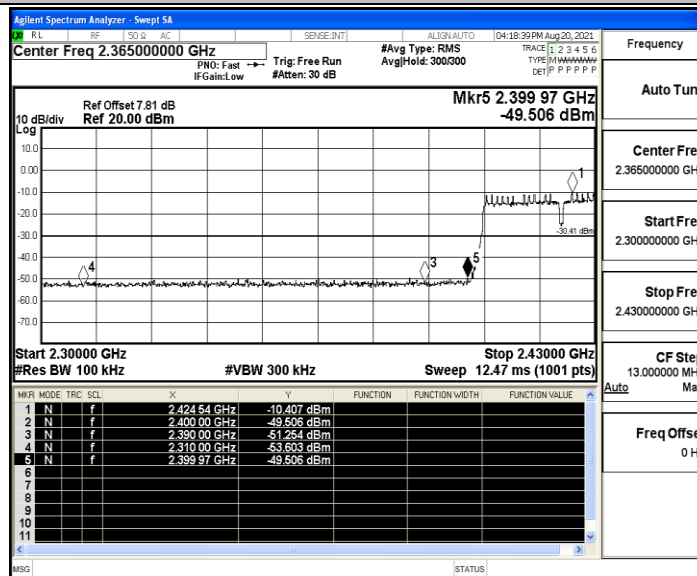




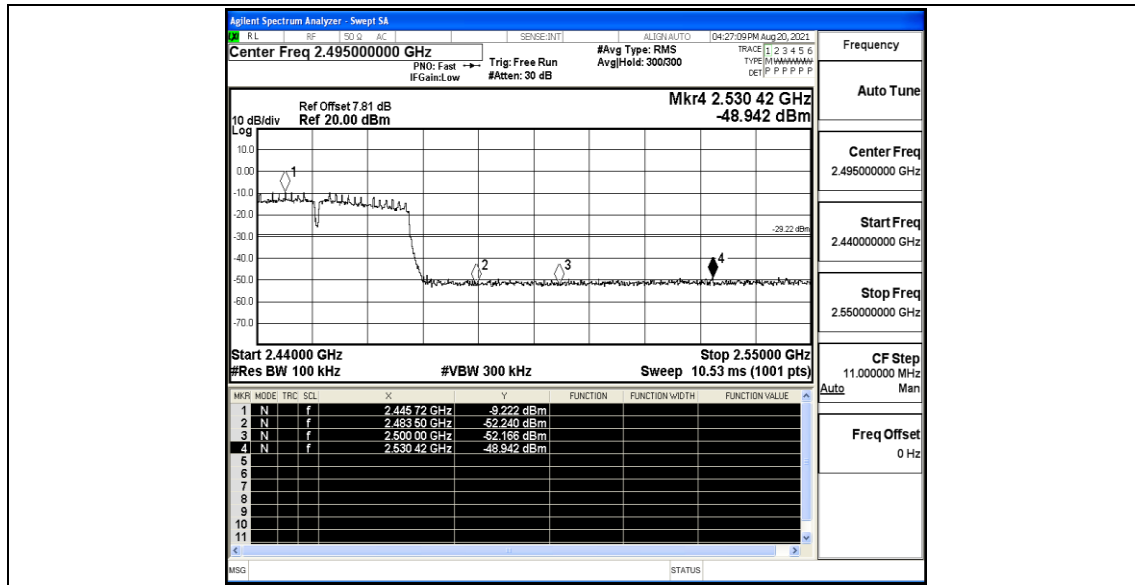
## 11N20SISO\_Ant1\_High\_2462



## 11N40SISO\_Ant1\_Low\_2422



## 11N40SISO\_Ant1\_High\_2452





## A.5 Conducted Spurious Emission

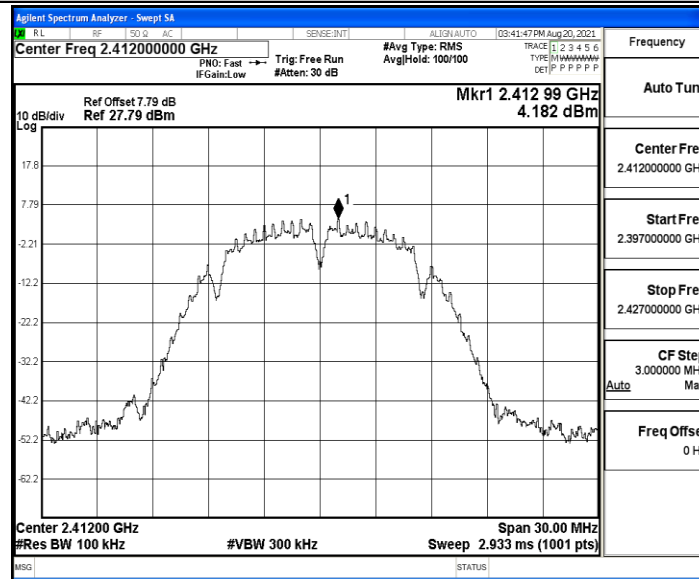
### Test Result

| TestMode  | Antenna | Channel | FreqRange<br>[Mhz] | RefLevel<br>[dBm] | Result<br>[dBm] | Limit<br>[dBm] | Verdict |
|-----------|---------|---------|--------------------|-------------------|-----------------|----------------|---------|
| 11B       | Ant1    | 2412    | Reference          | 4.18              | 4.18            | ---            | PASS    |
|           |         |         | 30~1000            | 4.18              | -61.96          | ≤-15.82        | PASS    |
|           |         |         | 1000~26500         | 4.18              | -47.43          | ≤-15.82        | PASS    |
|           |         | 2437    | Reference          | 3.97              | 3.97            | ---            | PASS    |
|           |         |         | 30~1000            | 3.97              | -61.4           | ≤-16.03        | PASS    |
|           |         |         | 1000~26500         | 3.97              | -47.8           | ≤-16.03        | PASS    |
|           |         | 2462    | Reference          | 3.19              | 3.19            | ---            | PASS    |
|           |         |         | 30~1000            | 3.19              | -60.11          | ≤-16.81        | PASS    |
|           |         |         | 1000~26500         | 3.19              | -48.09          | ≤-16.81        | PASS    |
| 11G       | Ant1    | 2412    | Reference          | -6.83             | -6.83           | ---            | PASS    |
|           |         |         | 30~1000            | -6.83             | -60.18          | ≤-26.83        | PASS    |
|           |         |         | 1000~26500         | -6.83             | -47.28          | ≤-26.83        | PASS    |
|           |         | 2437    | Reference          | -7.56             | -7.56           | ---            | PASS    |
|           |         |         | 30~1000            | -7.56             | -59.65          | ≤-27.56        | PASS    |
|           |         |         | 1000~26500         | -7.56             | -47.1           | ≤-27.56        | PASS    |
|           |         | 2462    | Reference          | -7.12             | -7.12           | ---            | PASS    |
|           |         |         | 30~1000            | -7.12             | -61.2           | ≤-27.12        | PASS    |
|           |         |         | 1000~26500         | -7.12             | -47.18          | ≤-27.12        | PASS    |
| 11N20SISO | Ant1    | 2412    | Reference          | -6.79             | -6.79           | ---            | PASS    |
|           |         |         | 30~1000            | -6.79             | -61.36          | ≤-26.79        | PASS    |
|           |         |         | 1000~26500         | -6.79             | -47.04          | ≤-26.79        | PASS    |
|           |         | 2437    | Reference          | -7.49             | -7.49           | ---            | PASS    |
|           |         |         | 30~1000            | -7.49             | -61.18          | ≤-27.49        | PASS    |
|           |         |         | 1000~26500         | -7.49             | -47.26          | ≤-27.49        | PASS    |
|           |         | 2462    | Reference          | -6.78             | -6.78           | ---            | PASS    |
|           |         |         | 30~1000            | -6.78             | -61.94          | ≤-26.78        | PASS    |
|           |         |         | 1000~26500         | -6.78             | -47.64          | ≤-26.78        | PASS    |
| 11N40SISO | Ant1    | 2422    | Reference          | -9.85             | -9.85           | ---            | PASS    |
|           |         |         | 30~1000            | -9.85             | -60.26          | ≤-29.85        | PASS    |
|           |         |         | 1000~26500         | -9.85             | -47.02          | ≤-29.85        | PASS    |
|           |         | 2437    | Reference          | -9.42             | -9.42           | ---            | PASS    |
|           |         |         | 30~1000            | -9.42             | -60.41          | ≤-29.42        | PASS    |
|           |         |         | 1000~26500         | -9.42             | -47.33          | ≤-29.42        | PASS    |
|           |         | 2452    | Reference          | -9.69             | -9.69           | ---            | PASS    |
|           |         |         | 30~1000            | -9.69             | -61.85          | ≤-29.69        | PASS    |
|           |         |         | 1000~26500         | -9.69             | -46.71          | ≤-29.69        | PASS    |

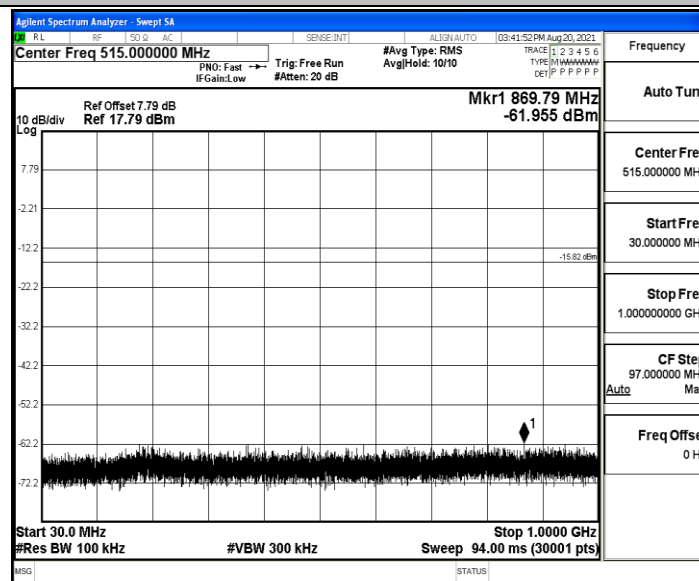


## Test Graphs

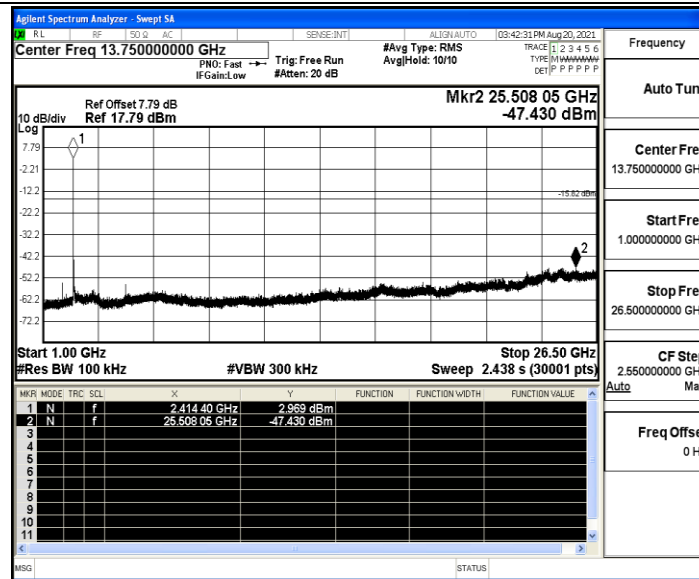
11B\_Ant1\_2412\_0~Reference



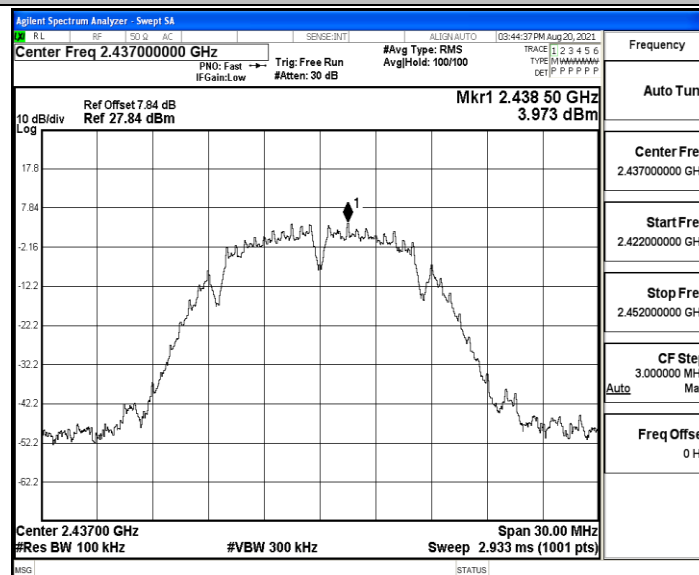
11B\_Ant1\_2412\_30~1000



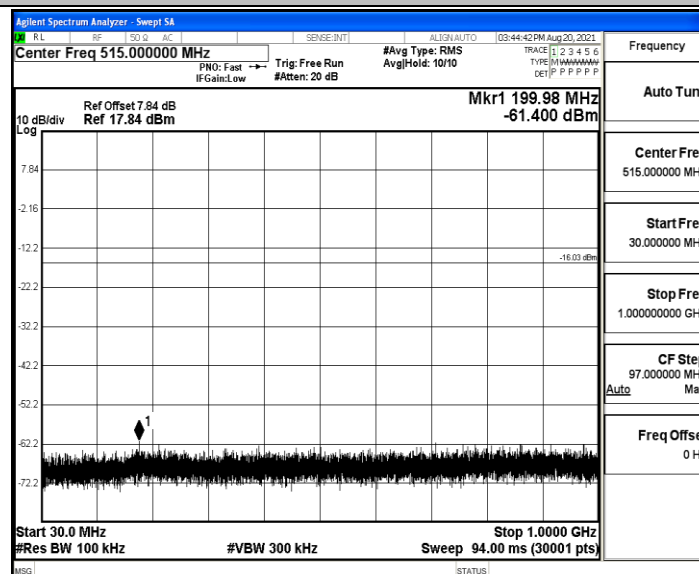
11B\_Ant1\_2412\_1000~26500



11B\_Ant1\_2437\_0~Reference

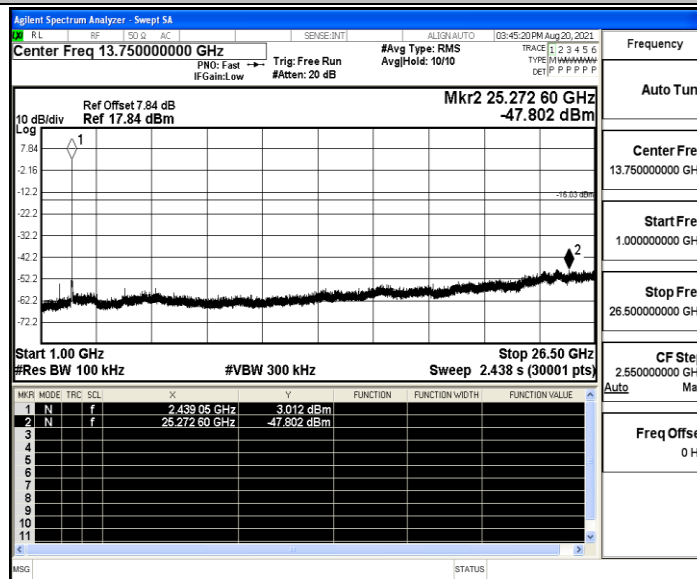


11B\_Ant1\_2437\_30~1000

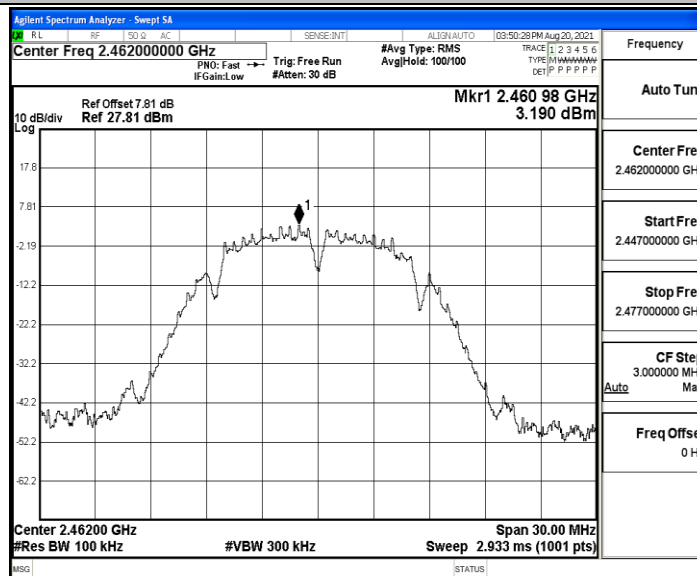




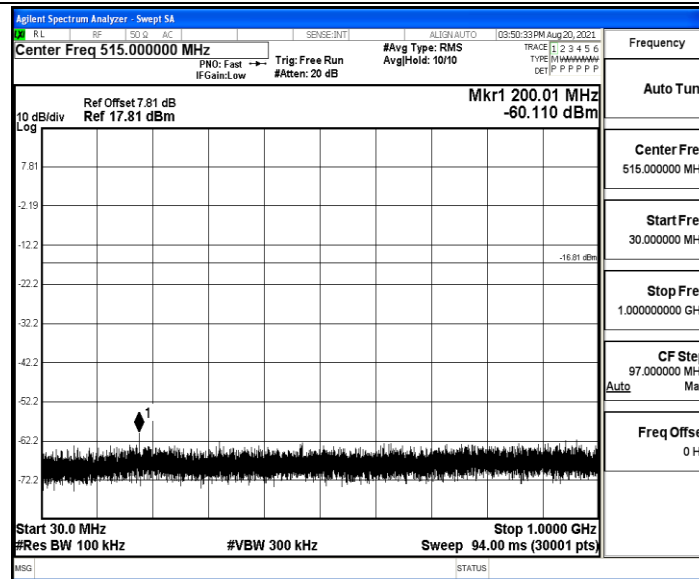
## 11B\_Ant1\_2437\_1000~26500



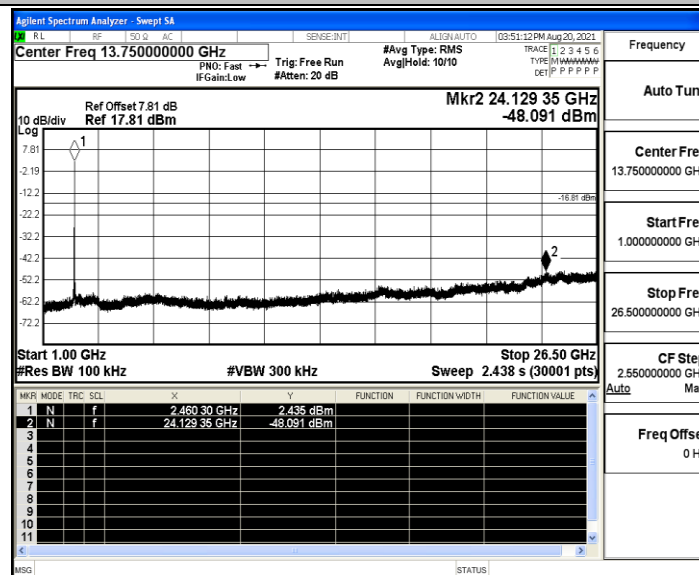
## 11B\_Ant1\_2462\_0~Reference



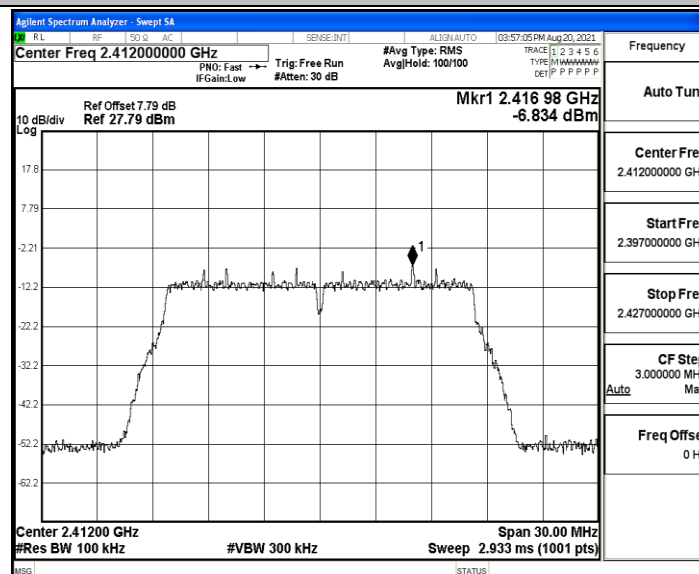
## 11B\_Ant1\_2462\_30~1000



11B\_Ant1\_2462\_1000~26500



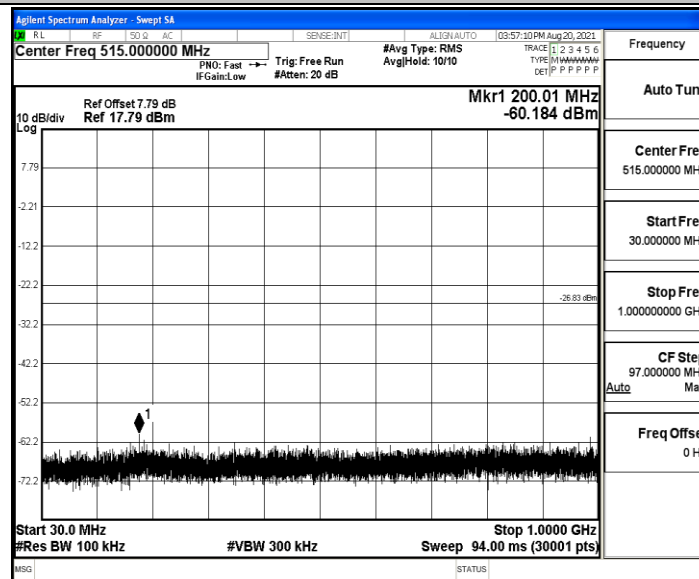
11G\_Ant1\_2412\_0~Reference



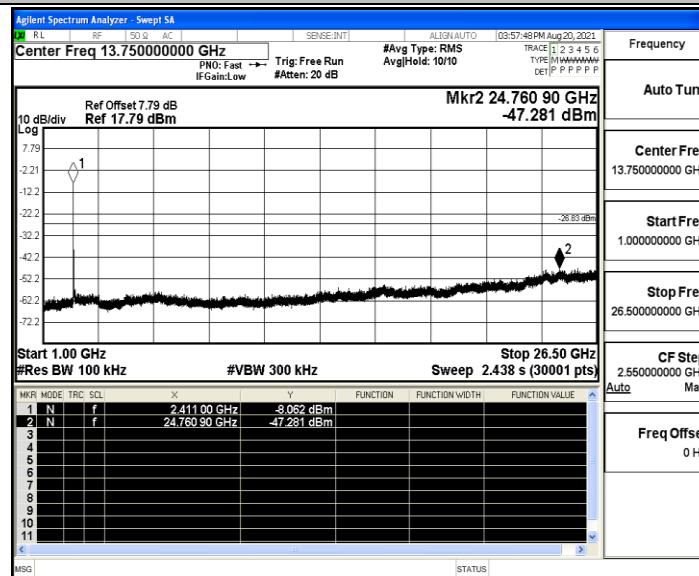




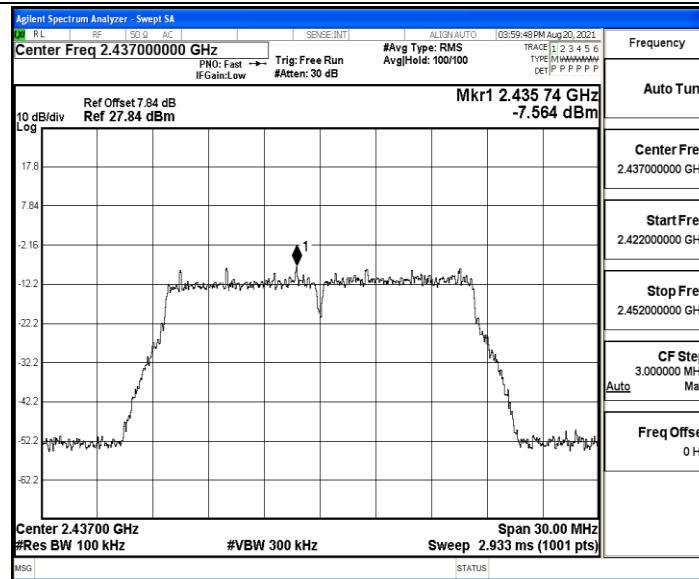
## 11G\_Ant1\_2412\_30~1000



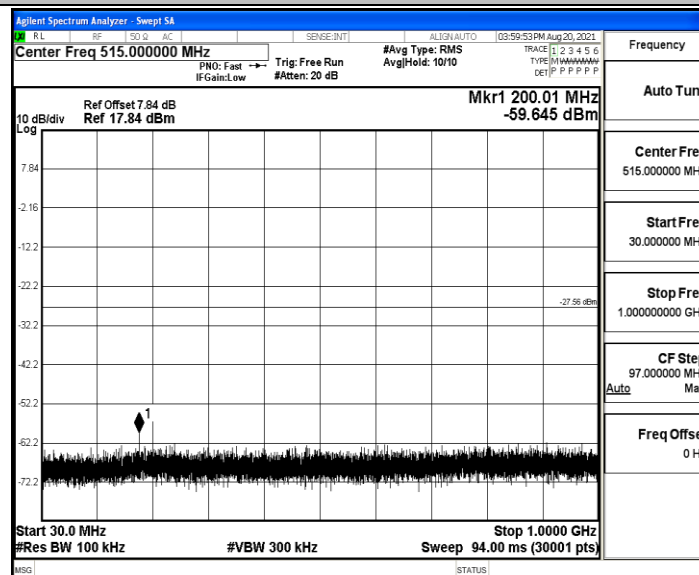
## 11G\_Ant1\_2412\_1000~26500



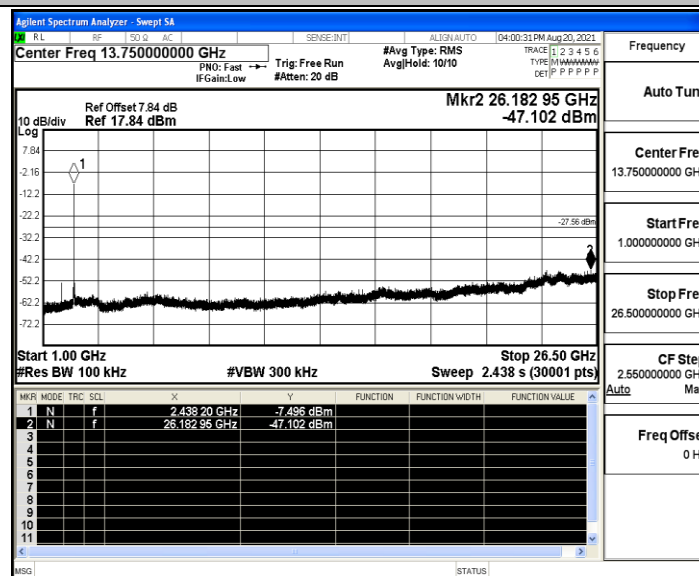
## 11G\_Ant1\_2437\_0~Reference



11G\_Ant1\_2437\_30~1000

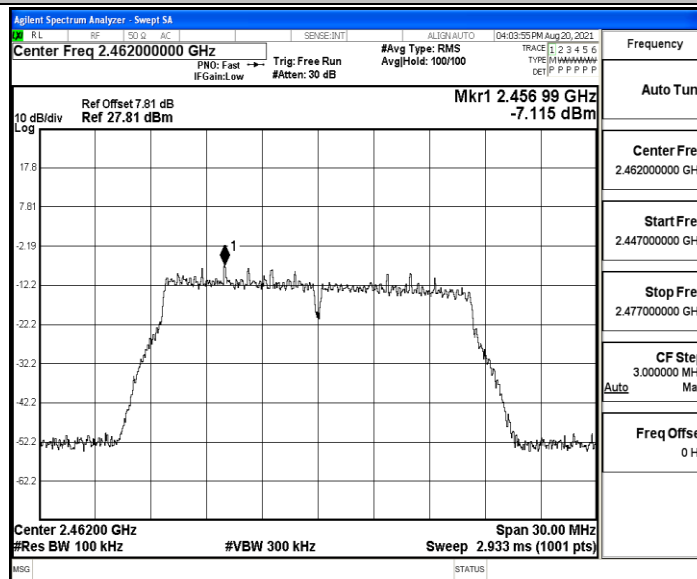


11G\_Ant1\_2437\_1000~26500

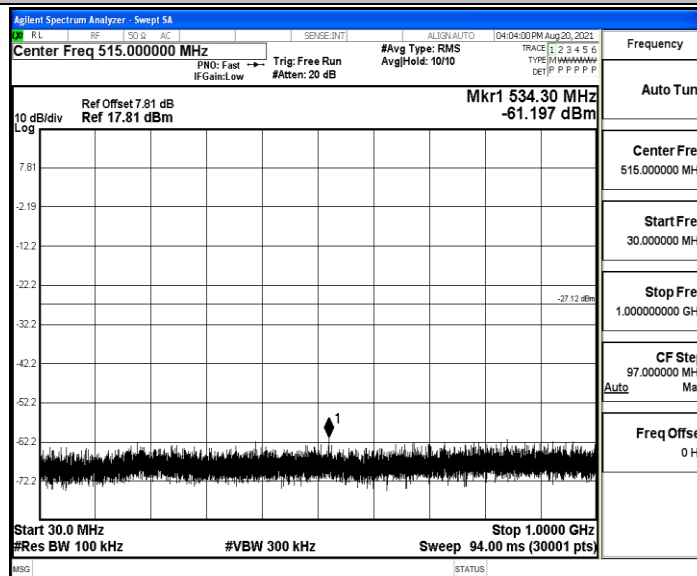




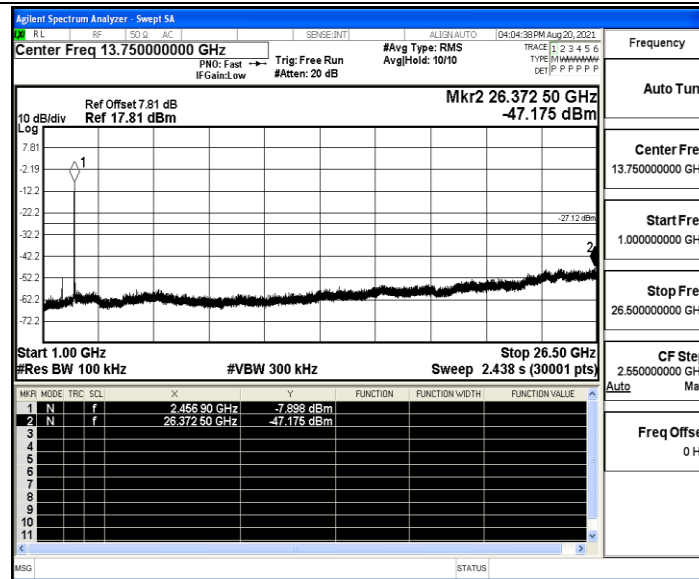
## 11G\_Ant1\_2462\_0~Reference



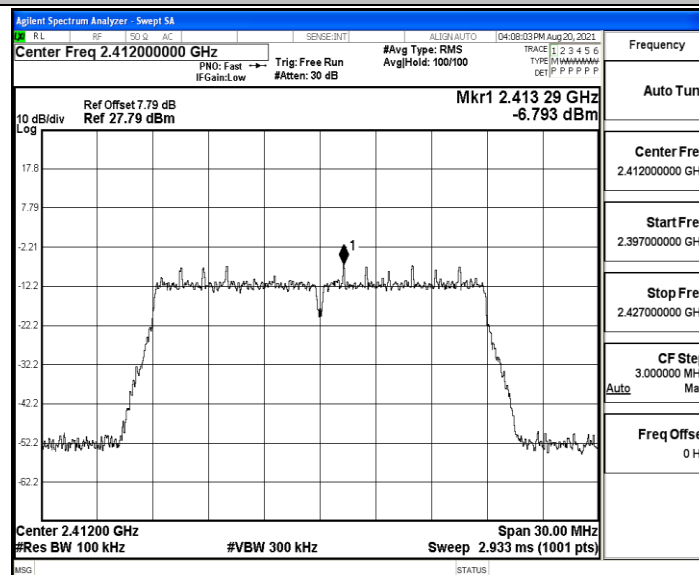
## 11G\_Ant1\_2462\_30~1000



## 11G\_Ant1\_2462\_1000~26500



11N20SISO\_Ant1\_2412\_0~Reference



11N20SISO\_Ant1\_2412\_30~1000

