



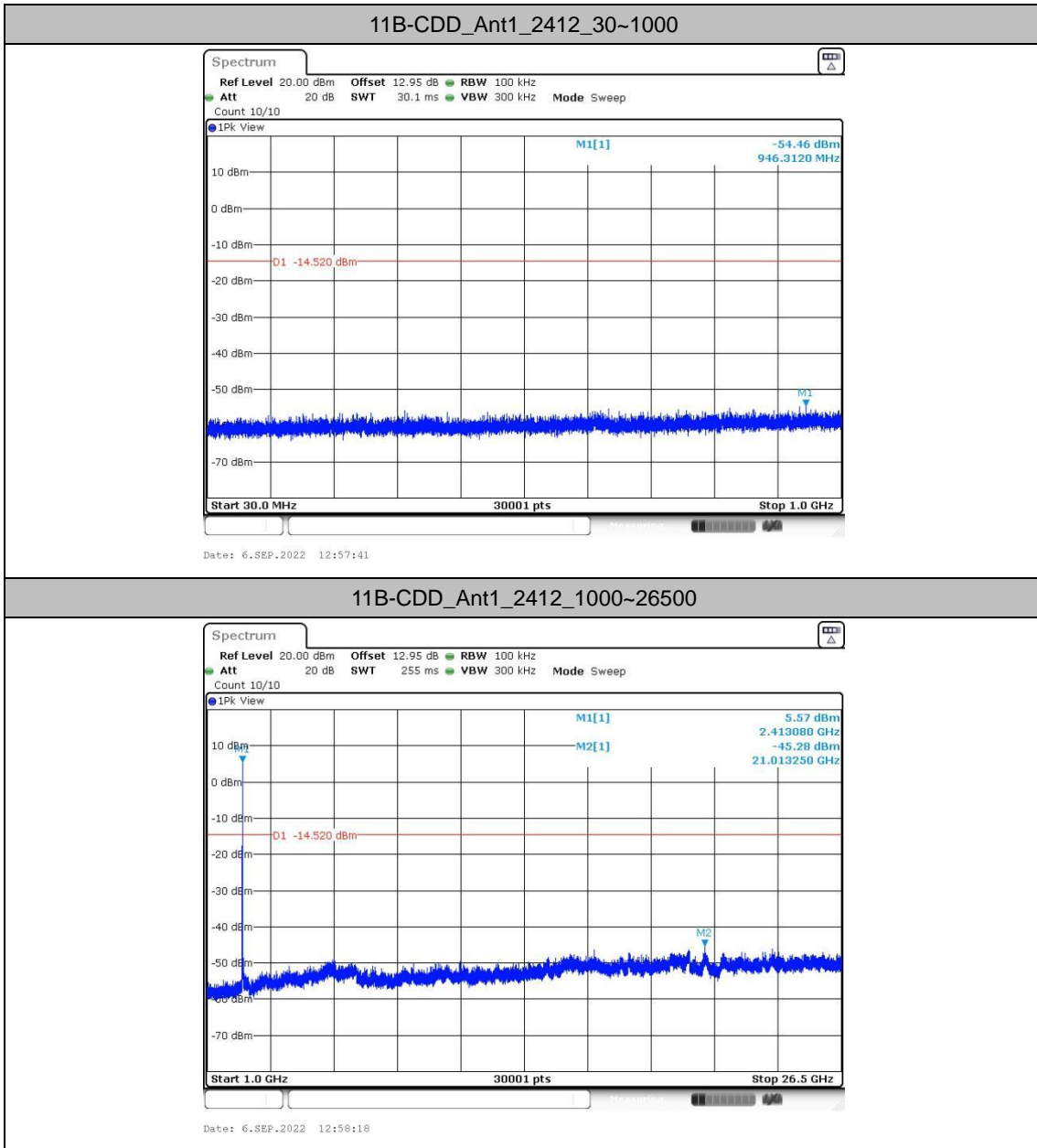
Conducted Spurious Emission

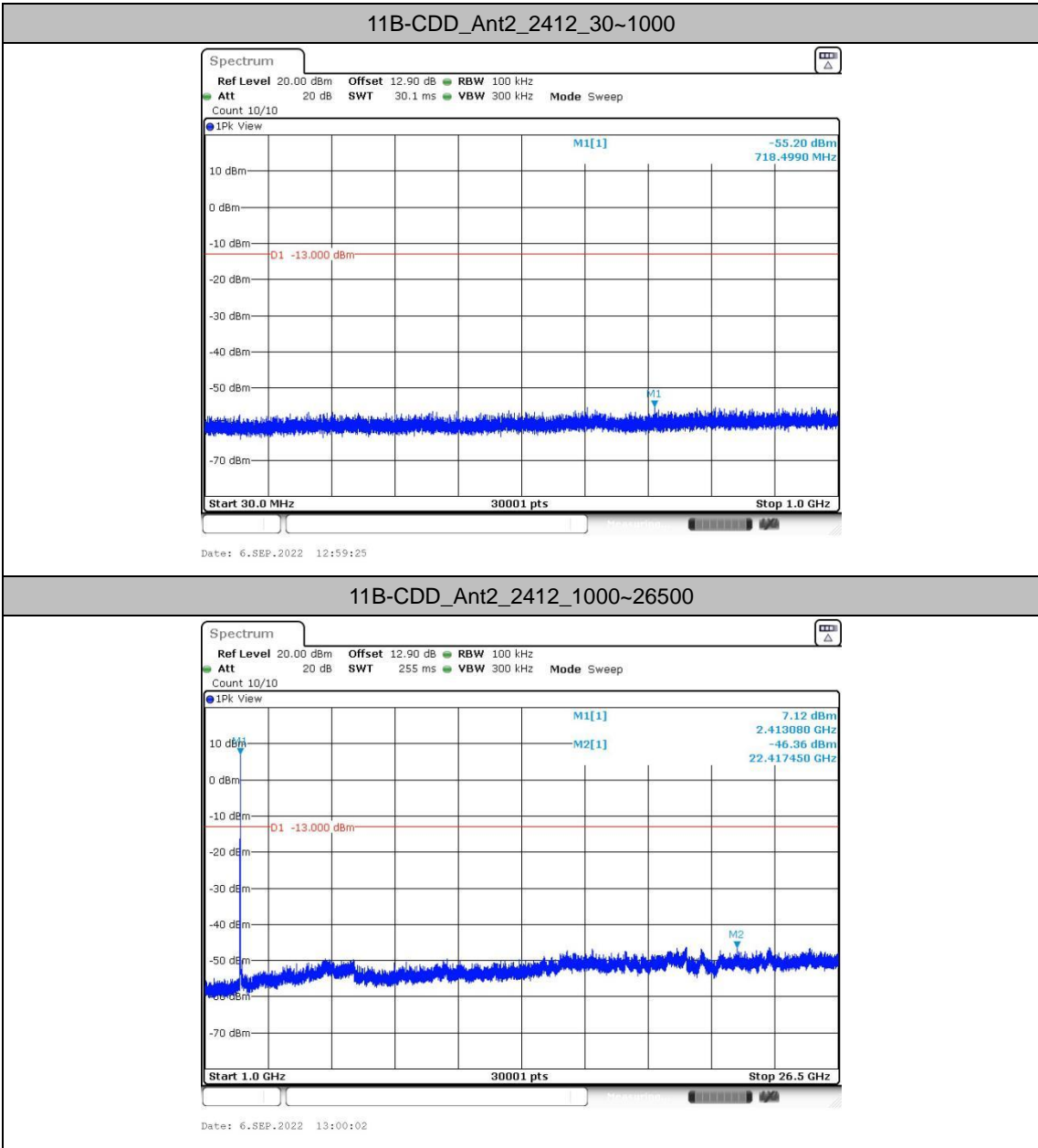
Test Result

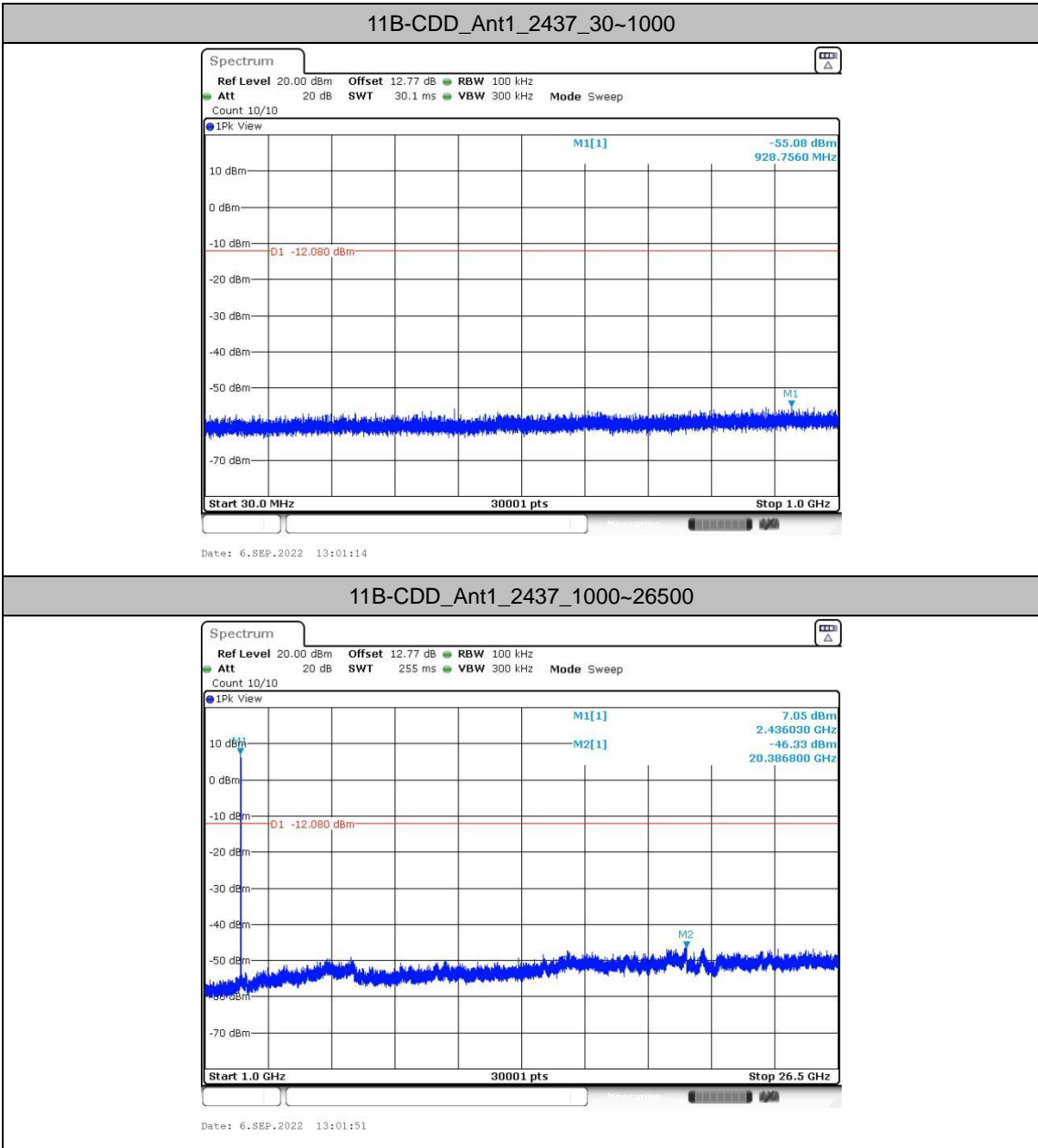
| TestMode | Antenna | Frequency[MHz] | FreqRange [Mhz] | RefLevel [dBm] | Result [dBm] | Limit [dBm] | Verdict |
|-----------|---------|----------------|-----------------|----------------|--------------|-------------|---------|
| 11B-CDD | Ant1 | 2412 | 30~1000 | 5.48 | -54.46 | ≤-14.52 | PASS |
| | | | 1000~26500 | 5.48 | -45.28 | ≤-14.52 | PASS |
| | Ant2 | 2412 | 30~1000 | 7.00 | -55.2 | ≤-13 | PASS |
| | | | 1000~26500 | 7.00 | -46.36 | ≤-13 | PASS |
| | Ant1 | 2437 | 30~1000 | 7.92 | -55.08 | ≤-12.08 | PASS |
| | | | 1000~26500 | 7.92 | -46.33 | ≤-12.08 | PASS |
| | Ant2 | 2437 | 30~1000 | 5.96 | -55.14 | ≤-14.04 | PASS |
| | | | 1000~26500 | 5.96 | -46.46 | ≤-14.04 | PASS |
| | Ant1 | 2462 | 30~1000 | 7.20 | -55.28 | ≤-12.8 | PASS |
| | | | 1000~26500 | 7.20 | -45.99 | ≤-12.8 | PASS |
| | Ant2 | 2462 | 30~1000 | 6.71 | -55.56 | ≤-13.29 | PASS |
| | | | 1000~26500 | 6.71 | -45.79 | ≤-13.29 | PASS |
| 11G-CDD | Ant1 | 2412 | 30~1000 | 0.05 | -54.73 | ≤-19.95 | PASS |
| | | | 1000~26500 | 0.05 | -45.97 | ≤-19.95 | PASS |
| | Ant2 | 2412 | 30~1000 | 1.29 | -54.84 | ≤-18.71 | PASS |
| | | | 1000~26500 | 1.29 | -45.77 | ≤-18.71 | PASS |
| | Ant1 | 2417 | 30~1000 | 2.02 | -55.14 | ≤-17.98 | PASS |
| | | | 1000~26500 | 2.02 | -45.78 | ≤-17.98 | PASS |
| | Ant2 | 2417 | 30~1000 | 2.99 | -54.05 | ≤-17.01 | PASS |
| | | | 1000~26500 | 2.99 | -45.91 | ≤-17.01 | PASS |
| | Ant1 | 2437 | 30~1000 | 4.87 | -54.81 | ≤-15.13 | PASS |
| | | | 1000~26500 | 4.87 | -46.04 | ≤-15.13 | PASS |
| | Ant2 | 2437 | 30~1000 | 4.87 | -55.02 | ≤-15.13 | PASS |
| | | | 1000~26500 | 4.87 | -46.17 | ≤-15.13 | PASS |
| | Ant1 | 2457 | 30~1000 | 0.91 | -54.92 | ≤-19.09 | PASS |
| | | | 1000~26500 | 0.91 | -45.01 | ≤-19.09 | PASS |
| | Ant2 | 2457 | 30~1000 | 2.45 | -54.69 | ≤-17.55 | PASS |
| | | | 1000~26500 | 2.45 | -45.83 | ≤-17.55 | PASS |
| | Ant1 | 2462 | 30~1000 | 0.61 | -54.76 | ≤-19.39 | PASS |
| | | | 1000~26500 | 0.61 | -44.64 | ≤-19.39 | PASS |
| Ant2 | 2462 | 30~1000 | 0.97 | -53.38 | ≤-19.03 | PASS | |
| | | 1000~26500 | 0.97 | -45.49 | ≤-19.03 | PASS | |
| 11N20MIMO | Ant1 | 2412 | 30~1000 | 0.86 | -51.61 | ≤-19.14 | PASS |
| | | | 1000~26500 | 0.86 | -45.64 | ≤-19.14 | PASS |
| | Ant2 | 2412 | 30~1000 | 2.20 | -55.01 | ≤-17.8 | PASS |
| | | | 1000~26500 | 2.20 | -46.45 | ≤-17.8 | PASS |
| | Ant1 | 2417 | 30~1000 | 4.06 | -54.11 | ≤-15.94 | PASS |
| | | | 1000~26500 | 4.06 | -46.08 | ≤-15.94 | PASS |
| | Ant2 | 2417 | 30~1000 | 3.43 | -54.77 | ≤-16.57 | PASS |
| | | | 1000~26500 | 3.43 | -45.81 | ≤-16.57 | PASS |
| | Ant1 | 2437 | 30~1000 | 5.42 | -54.79 | ≤-14.58 | PASS |
| | | | 1000~26500 | 5.42 | -44.85 | ≤-14.58 | PASS |
| | Ant2 | 2437 | 30~1000 | 4.33 | -54.34 | ≤-15.67 | PASS |
| | | | 1000~26500 | 4.33 | -44.71 | ≤-15.67 | PASS |
| | Ant1 | 2452 | 30~1000 | 2.66 | -54.26 | ≤-17.34 | PASS |
| | | | 1000~26500 | 2.66 | -45.81 | ≤-17.34 | PASS |
| | Ant2 | 2452 | 30~1000 | 3.51 | -54.11 | ≤-16.49 | PASS |
| | | | 1000~26500 | 3.51 | -45.16 | ≤-16.49 | PASS |
| | Ant1 | 2457 | 30~1000 | 0.40 | -54.07 | ≤-19.6 | PASS |
| | | | 1000~26500 | 0.40 | -45.52 | ≤-19.6 | PASS |
| Ant2 | 2457 | 30~1000 | 1.71 | -54.67 | ≤-18.29 | PASS | |
| | | 1000~26500 | 1.71 | -45.77 | ≤-18.29 | PASS | |
| Ant1 | 2462 | 30~1000 | 0.12 | -55.04 | ≤-19.88 | PASS | |
| | | 1000~26500 | 0.12 | -46.38 | ≤-19.88 | PASS | |
| Ant2 | 2462 | 30~1000 | 0.22 | -54.68 | ≤-19.78 | PASS | |
| | | 1000~26500 | 0.22 | -45.9 | ≤-19.78 | PASS | |

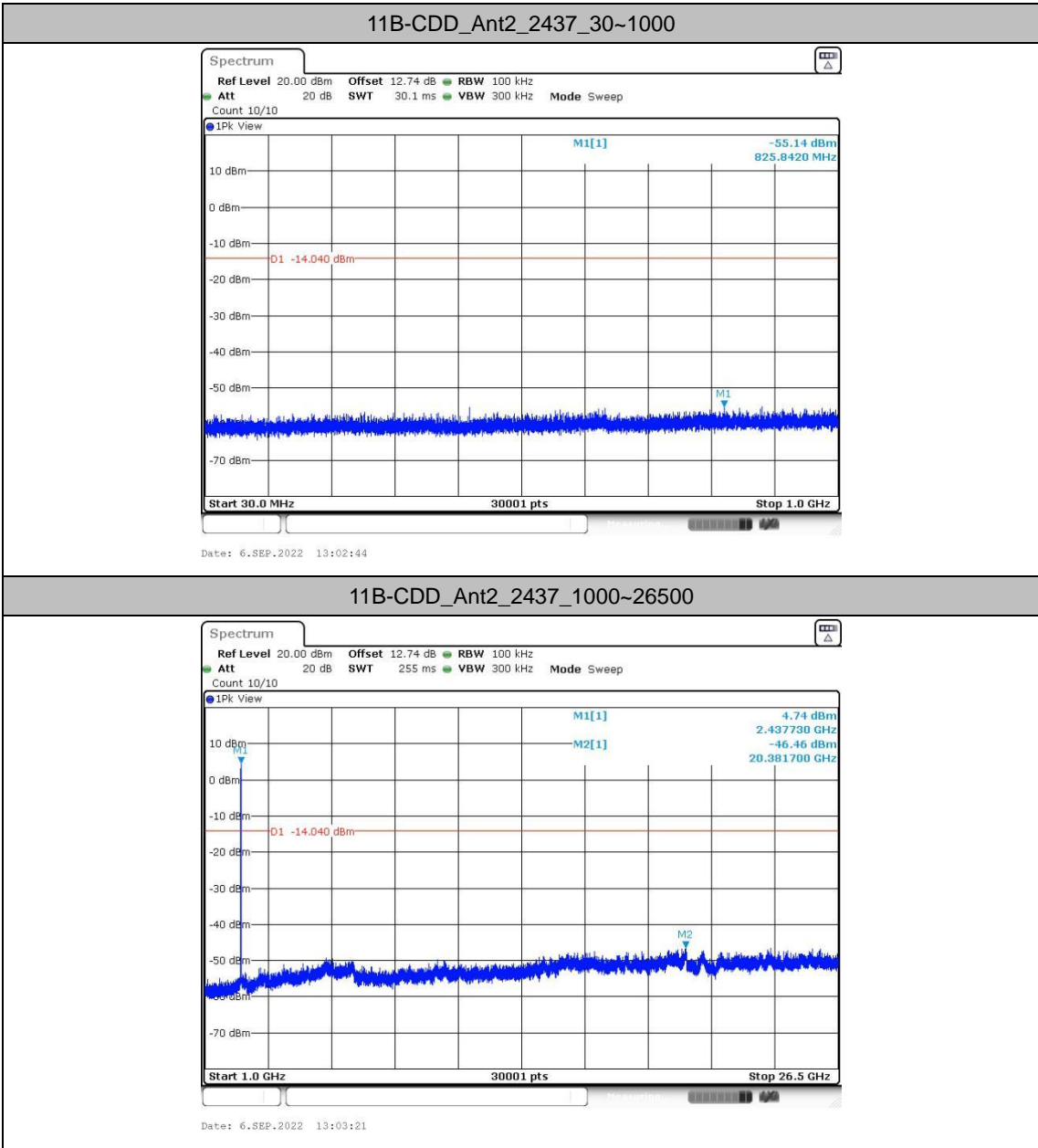


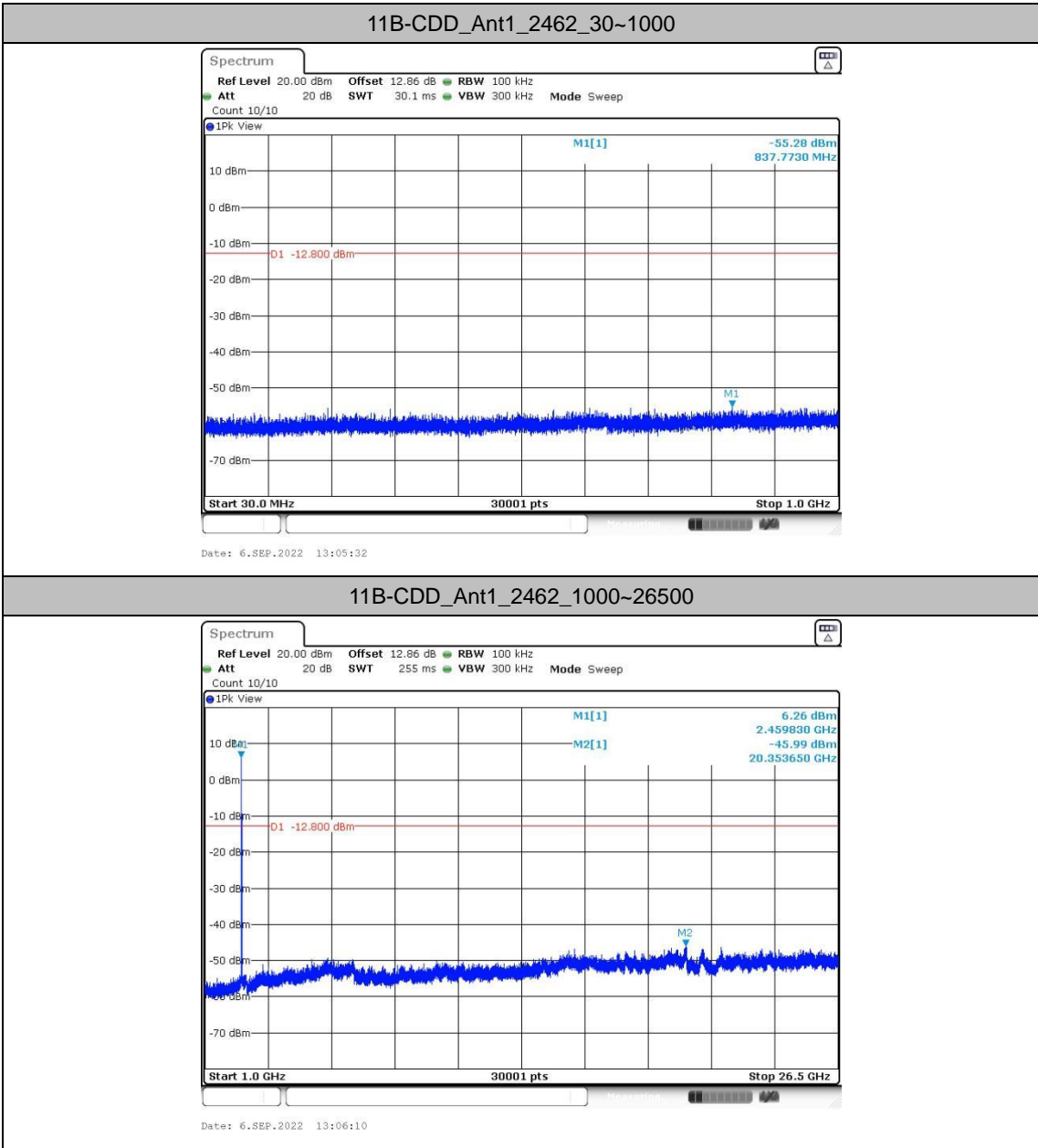
Test Graphs

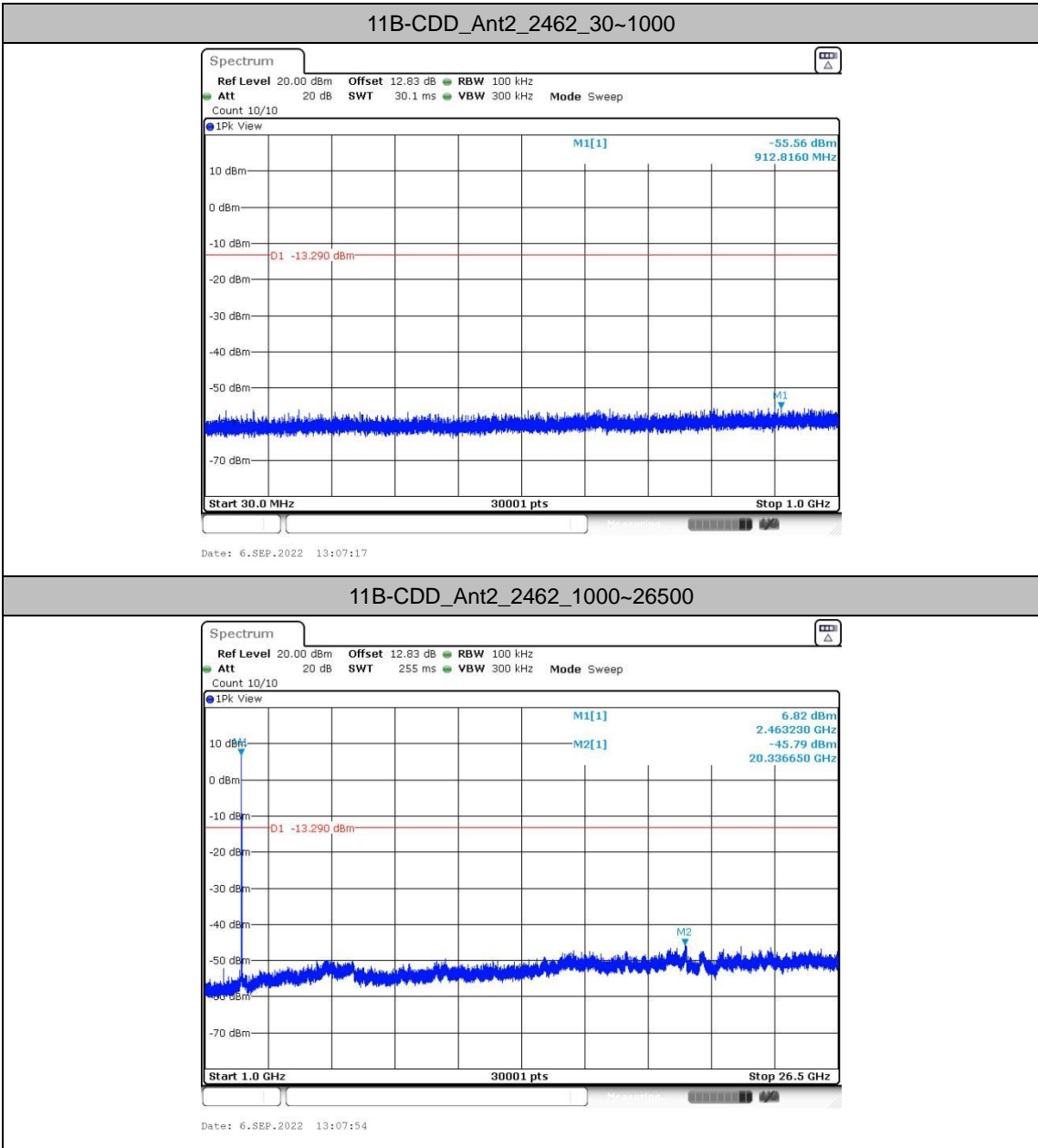


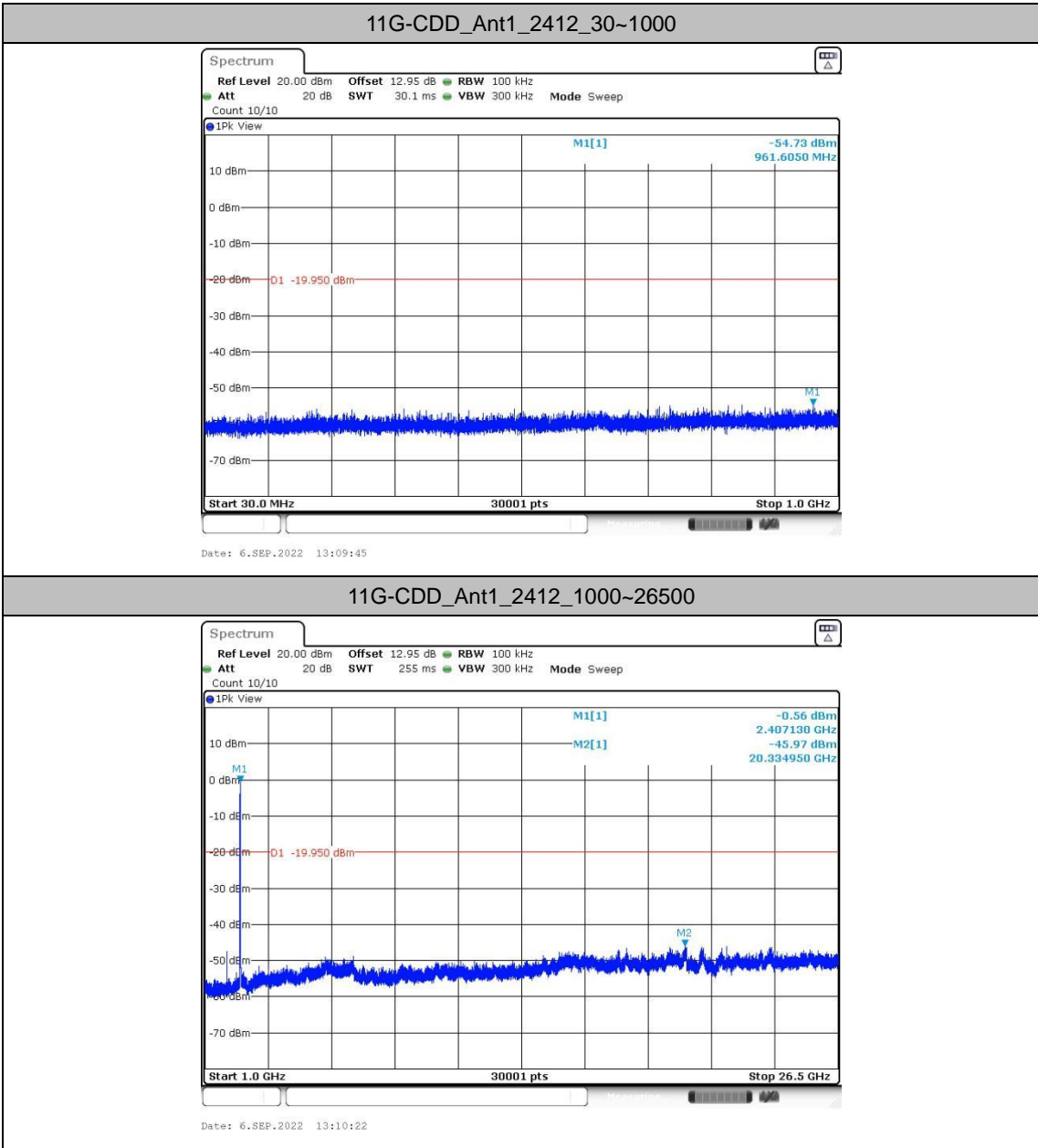






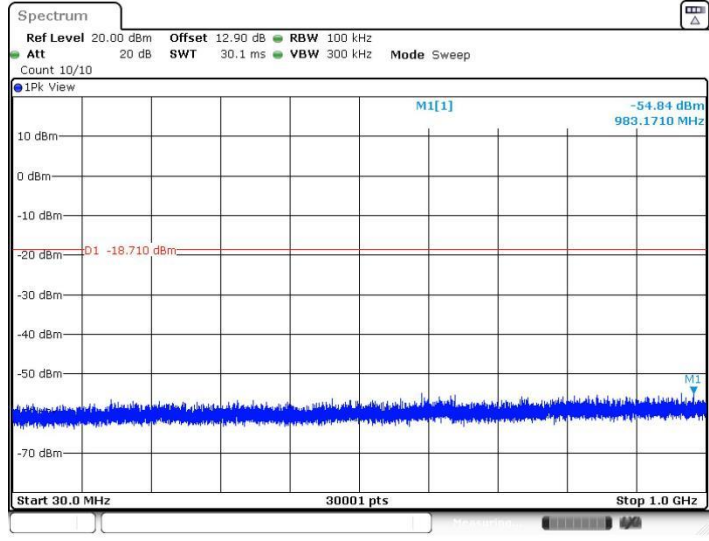






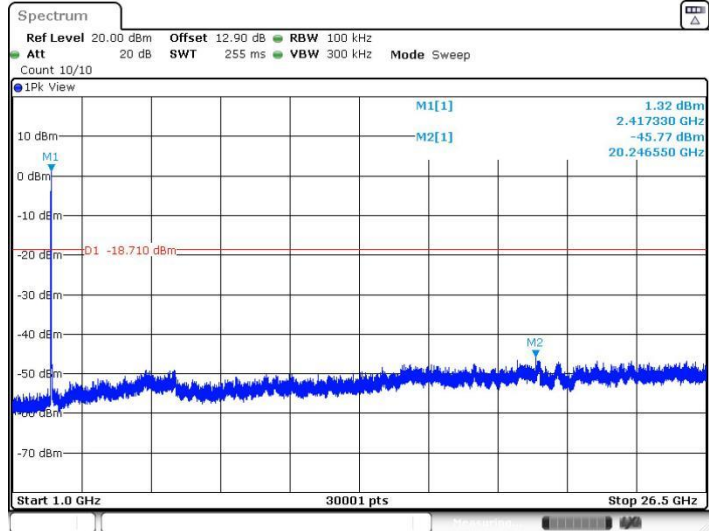


11G-CDD_Ant2_2412_30~1000

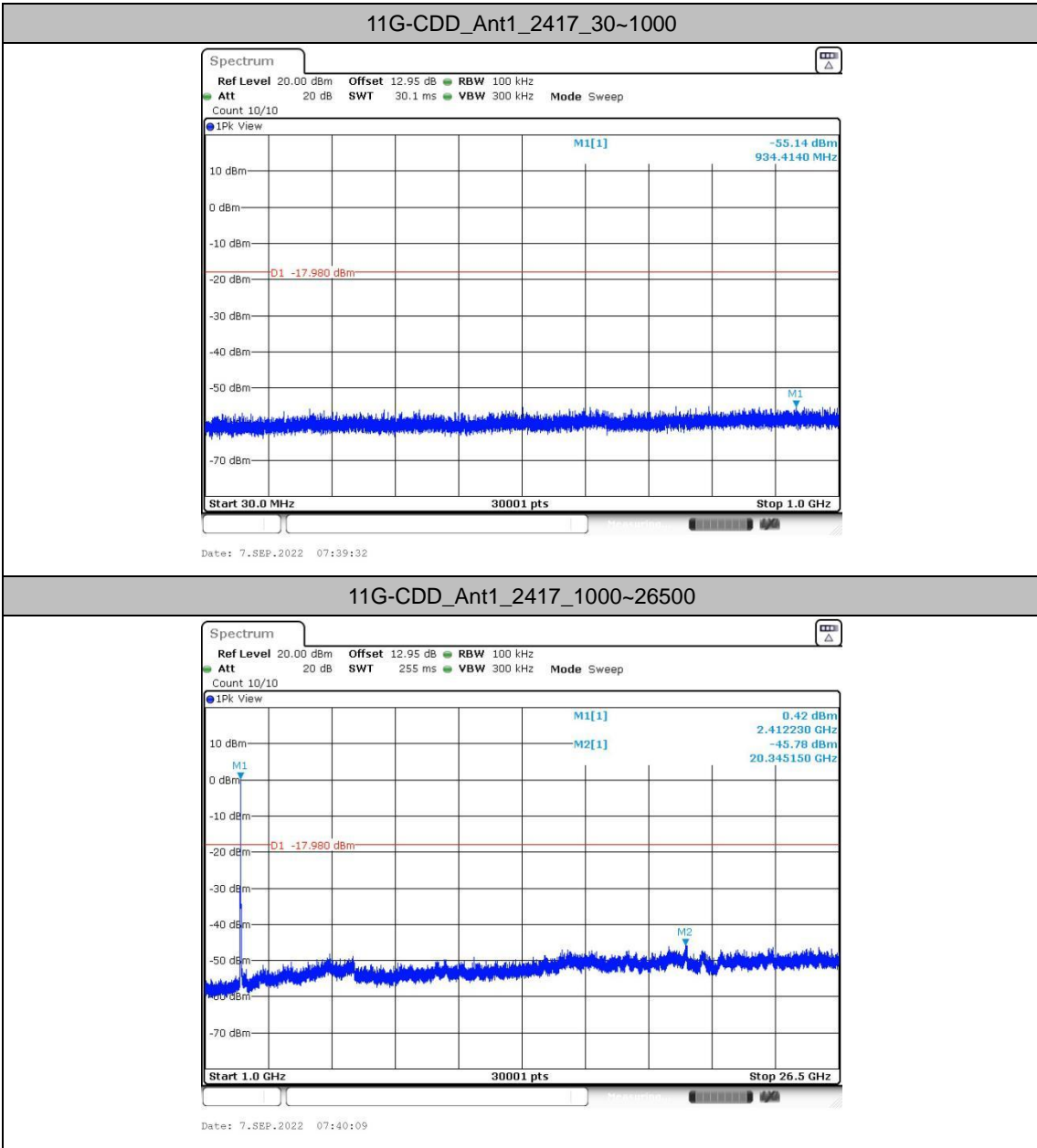


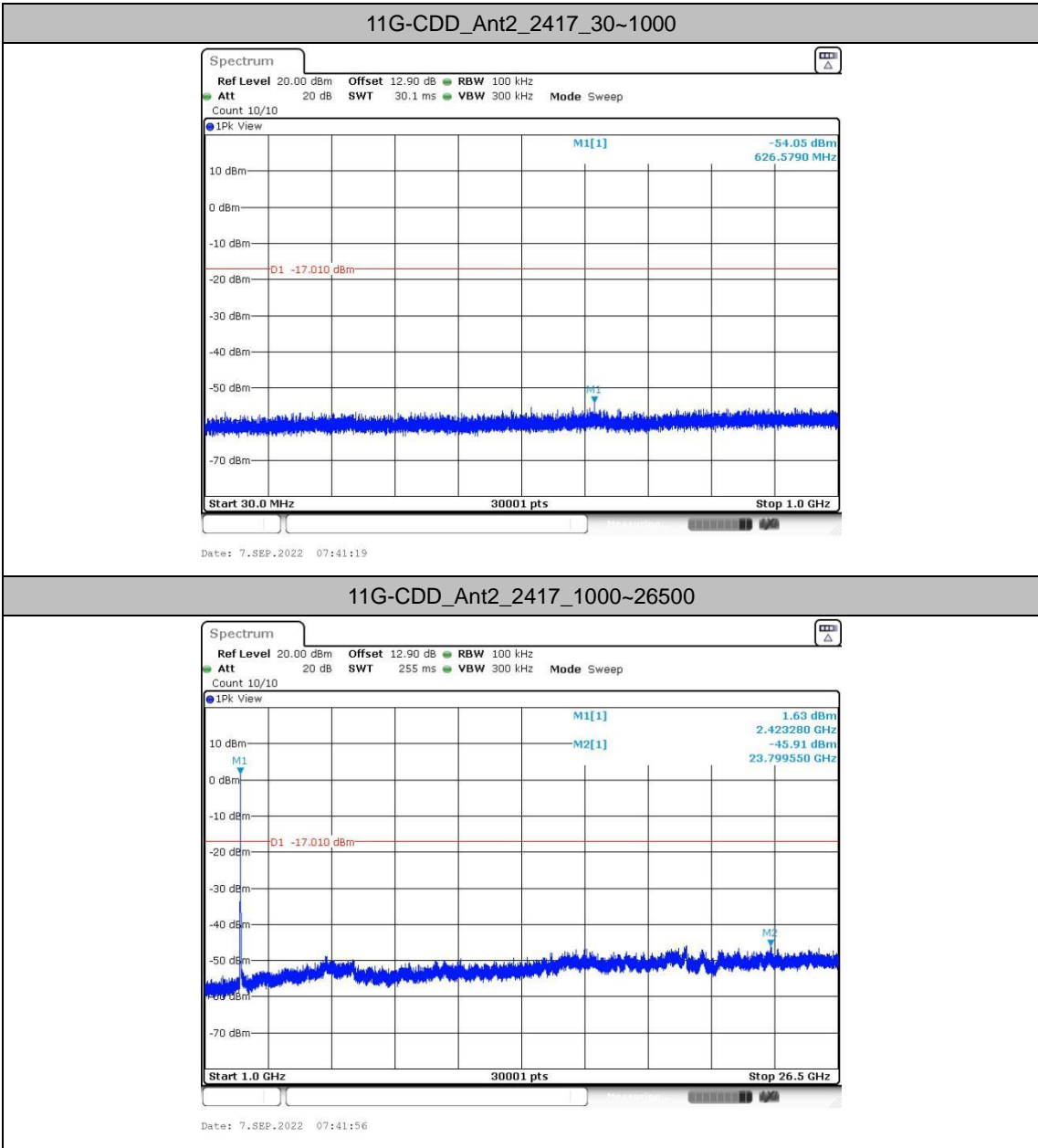
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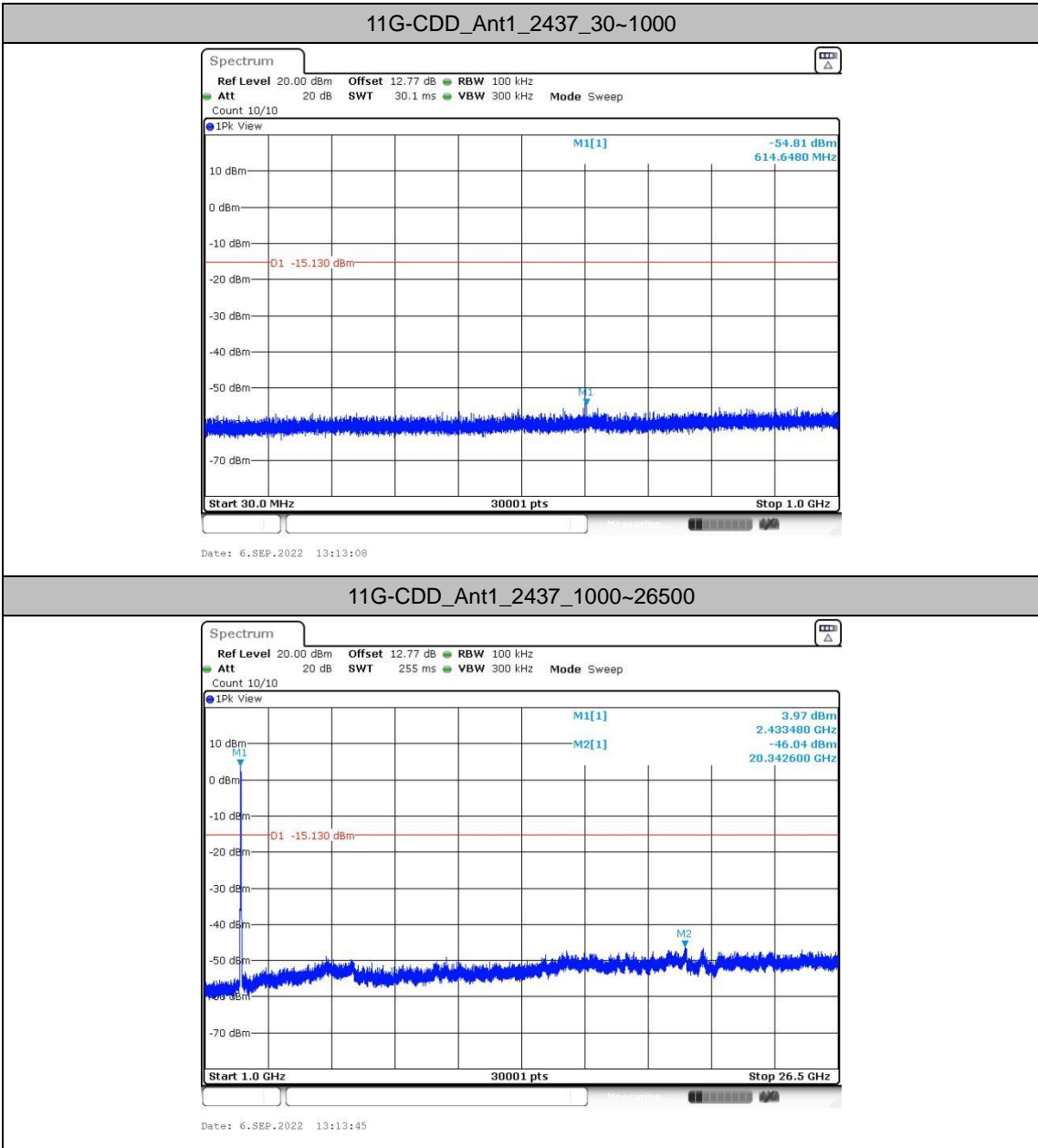
11G-CDD_Ant2_2412_1000~26500

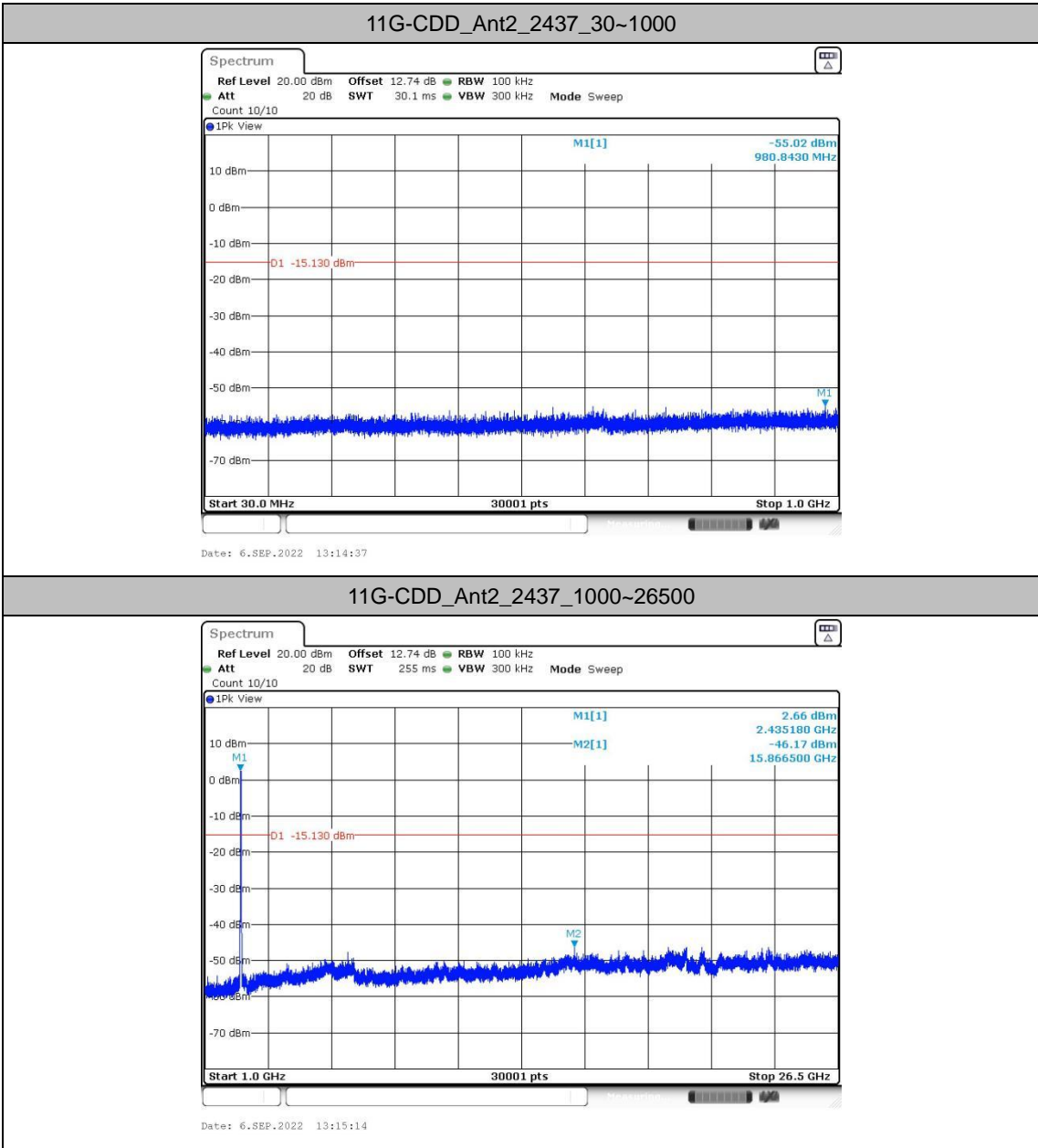


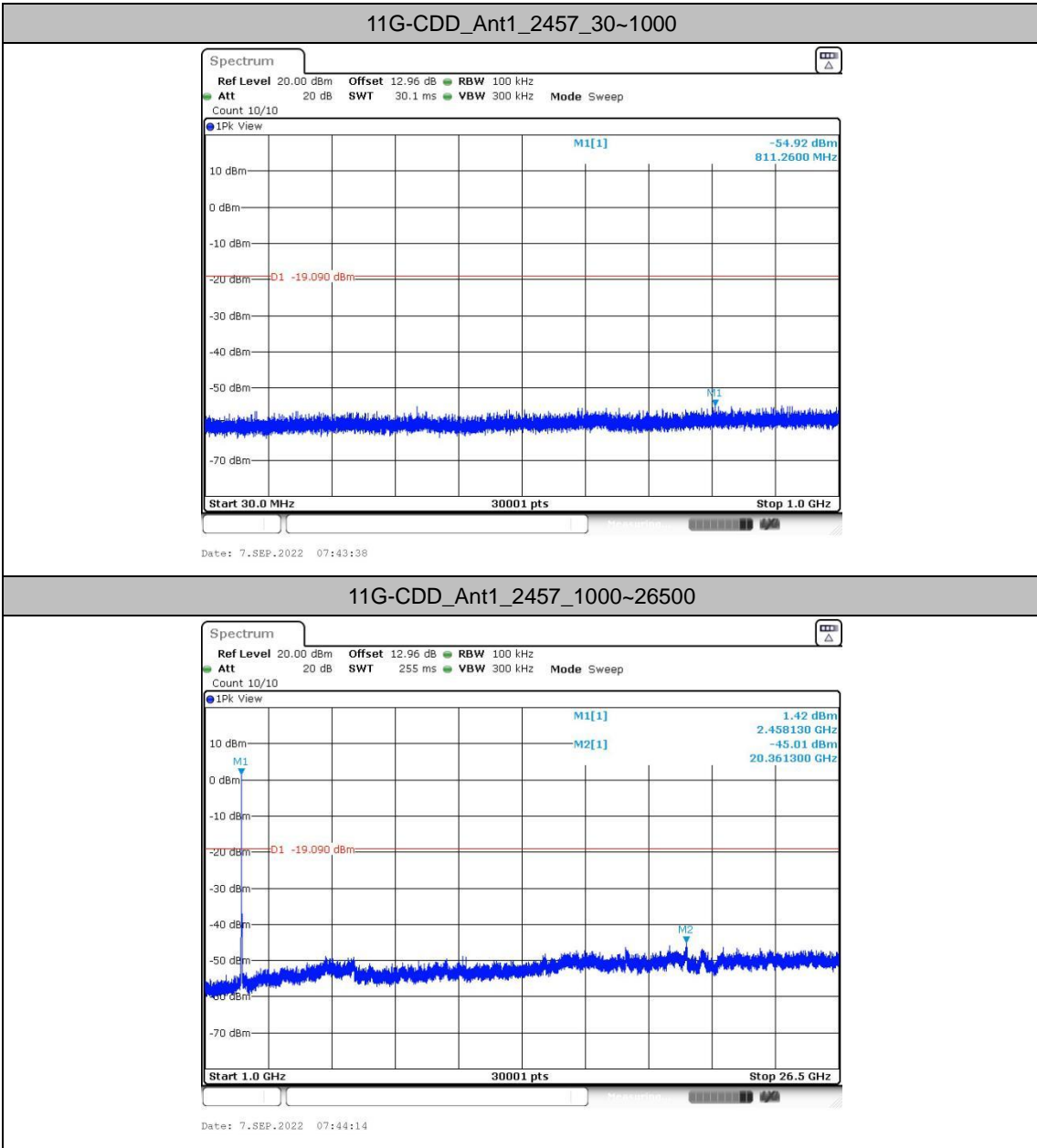
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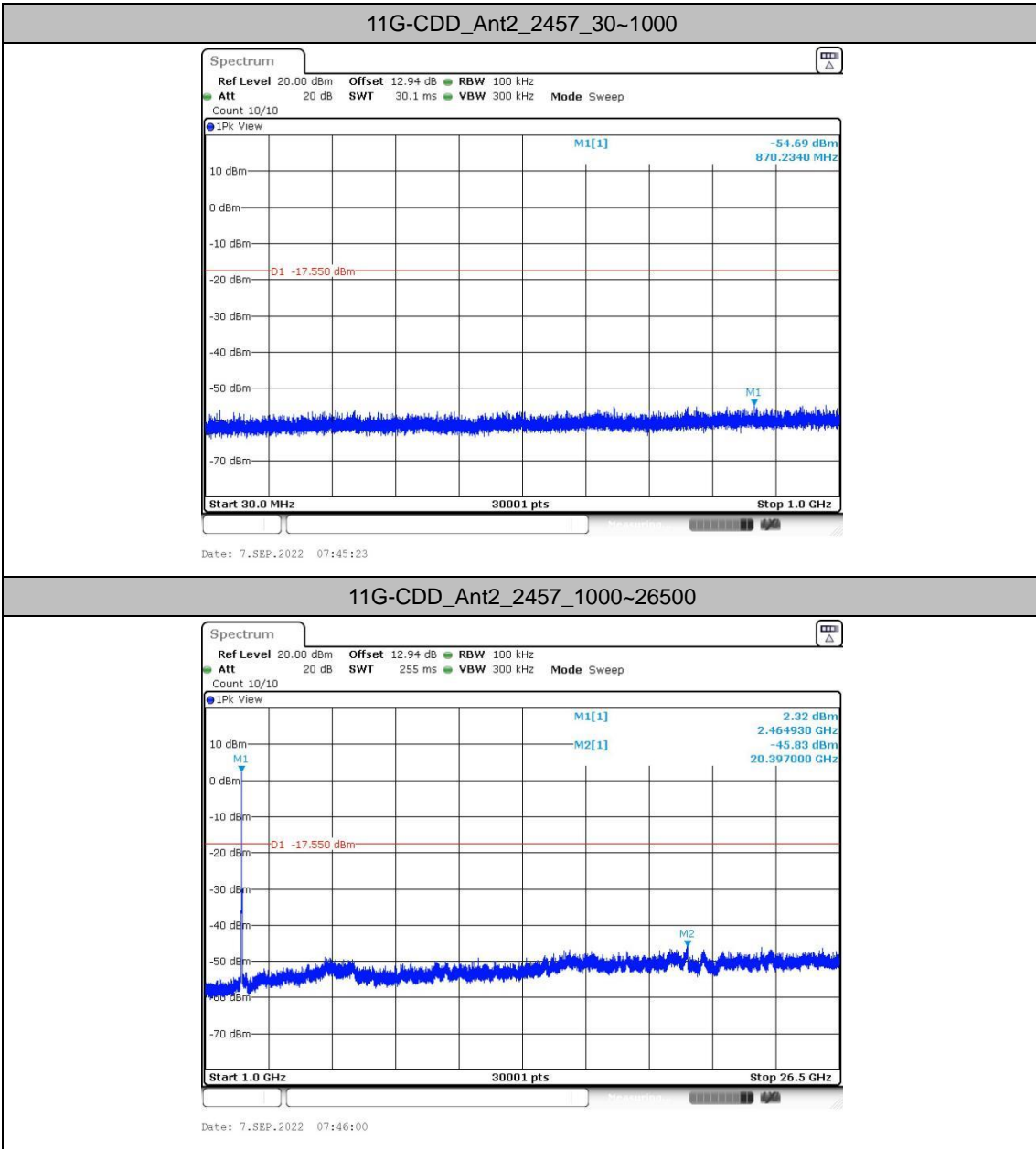


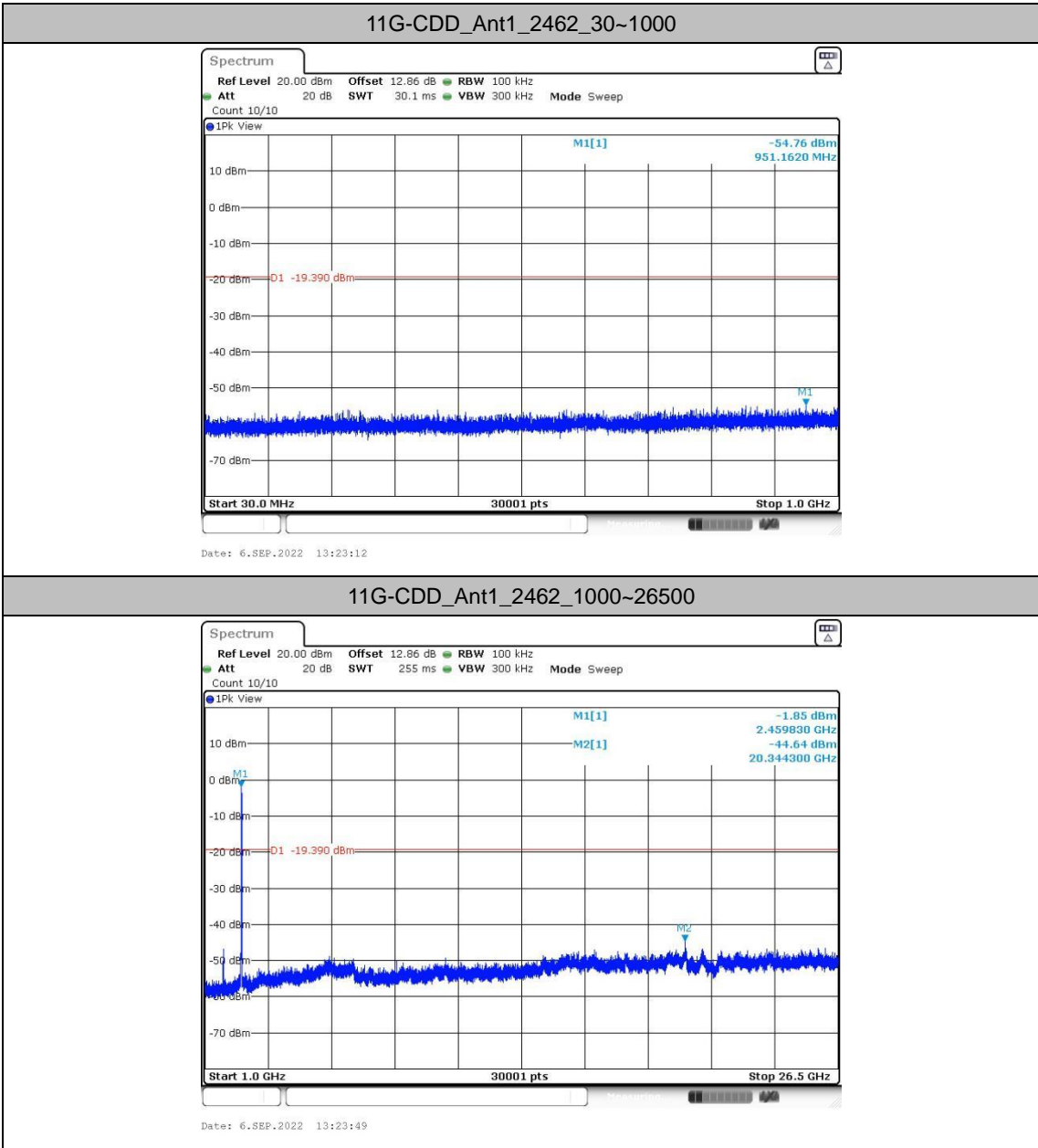


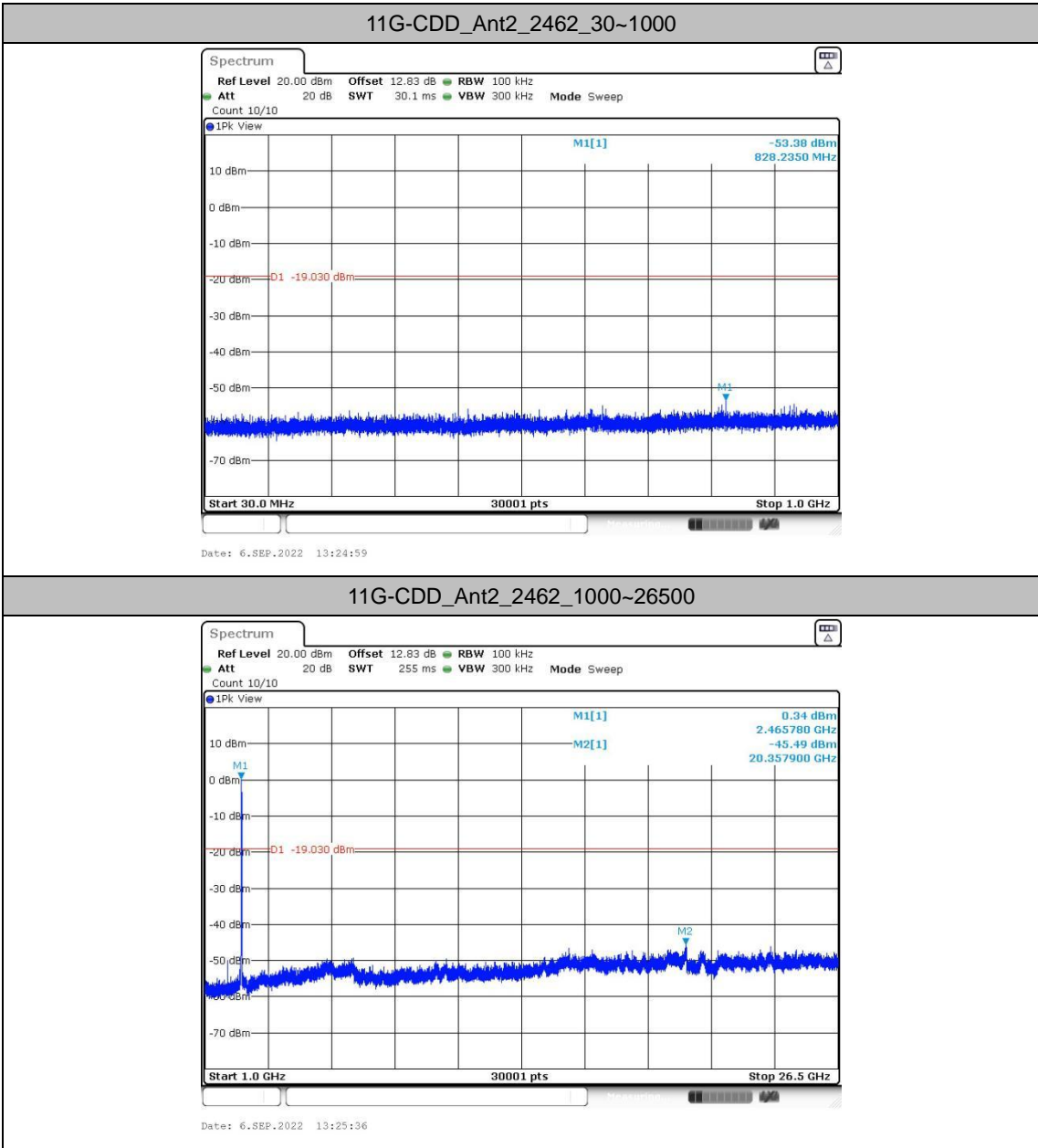


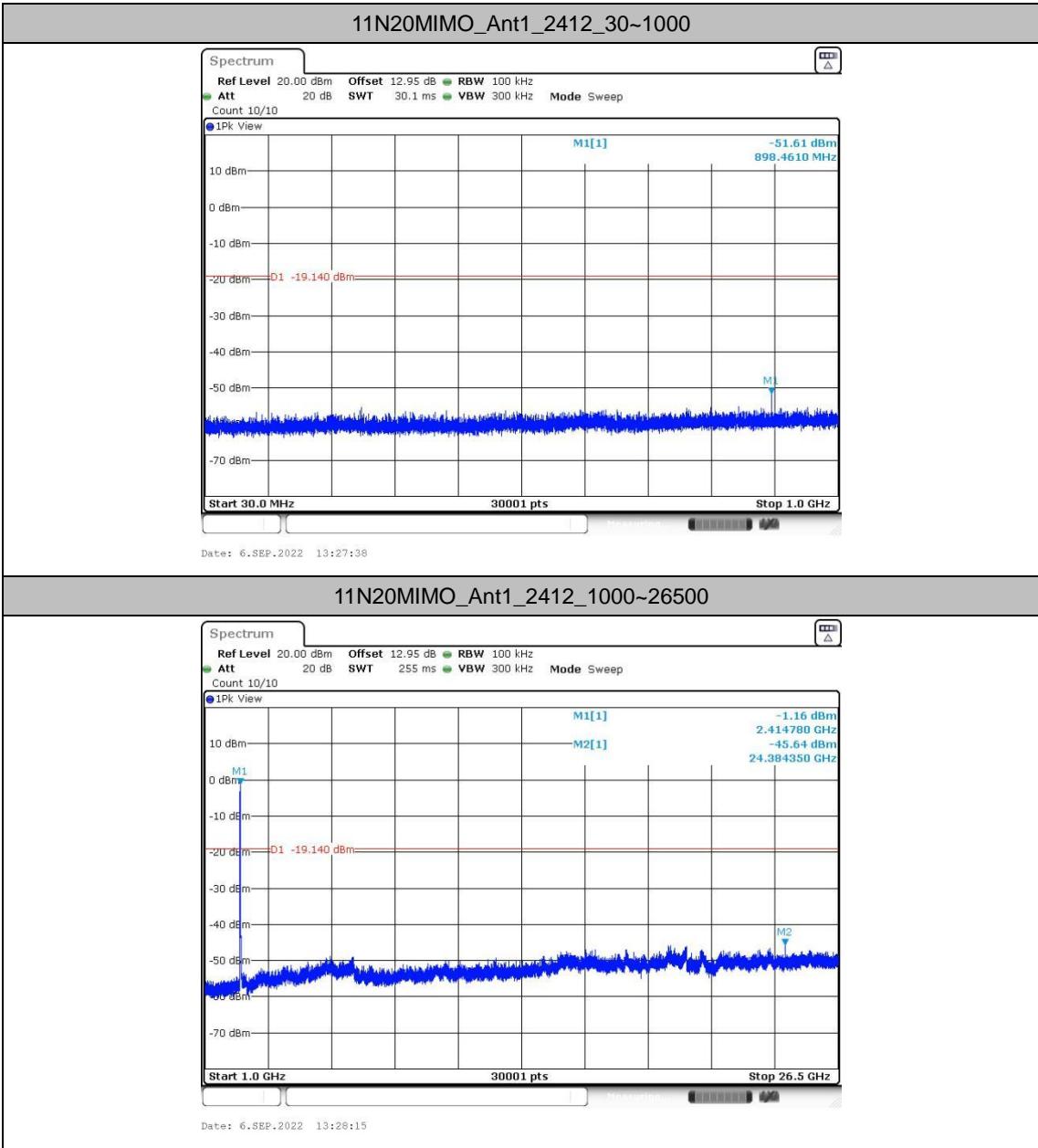


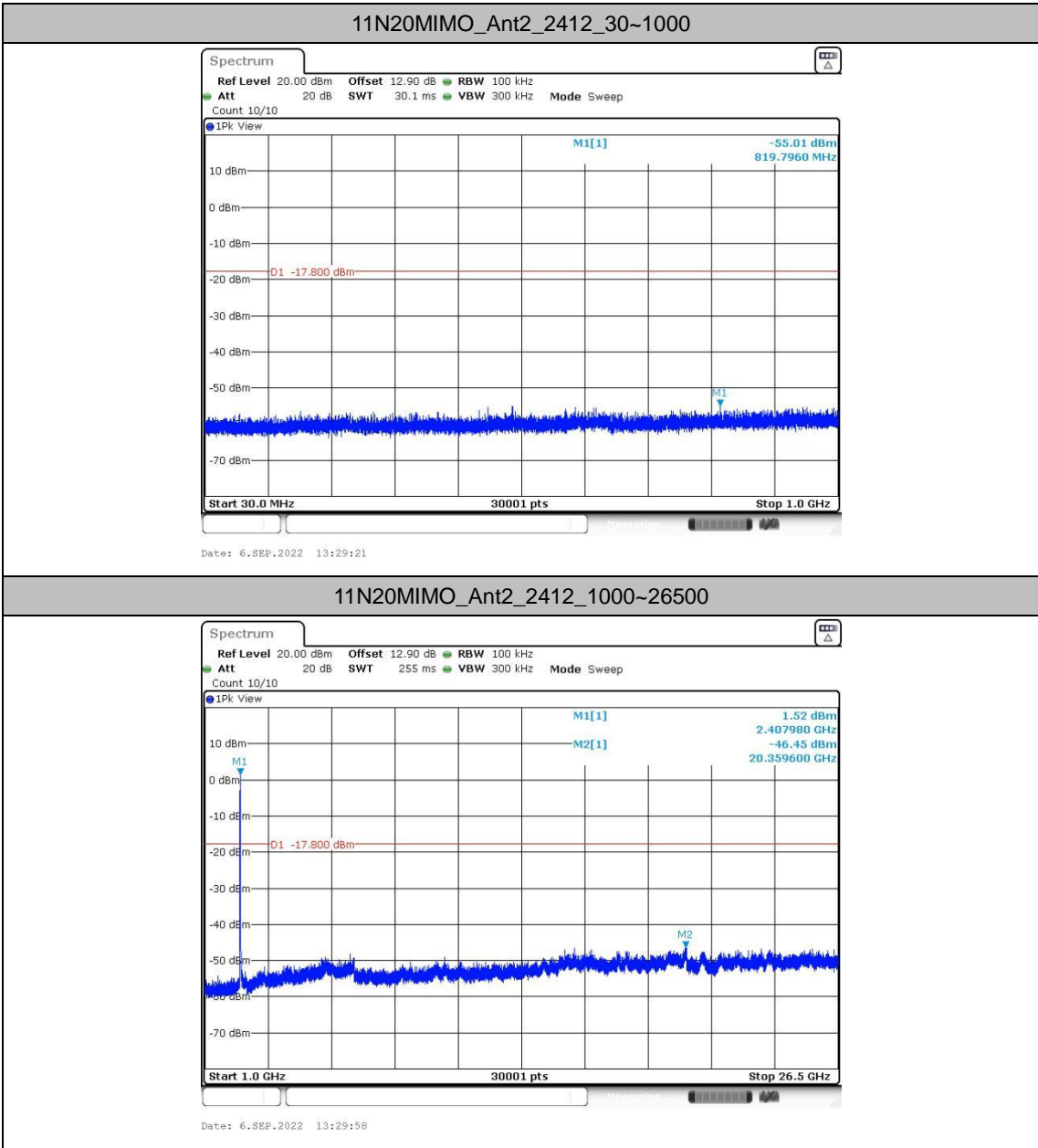


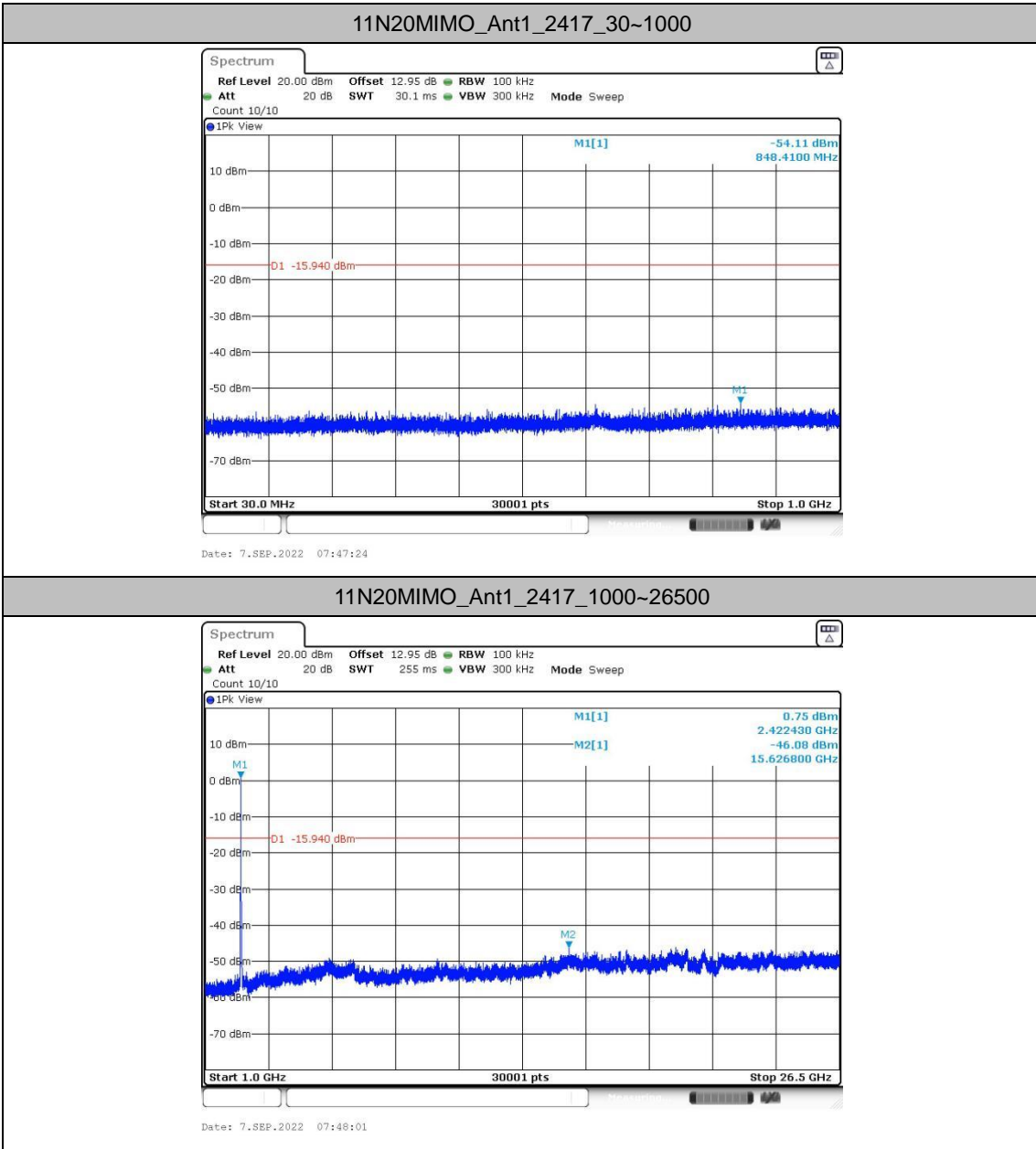


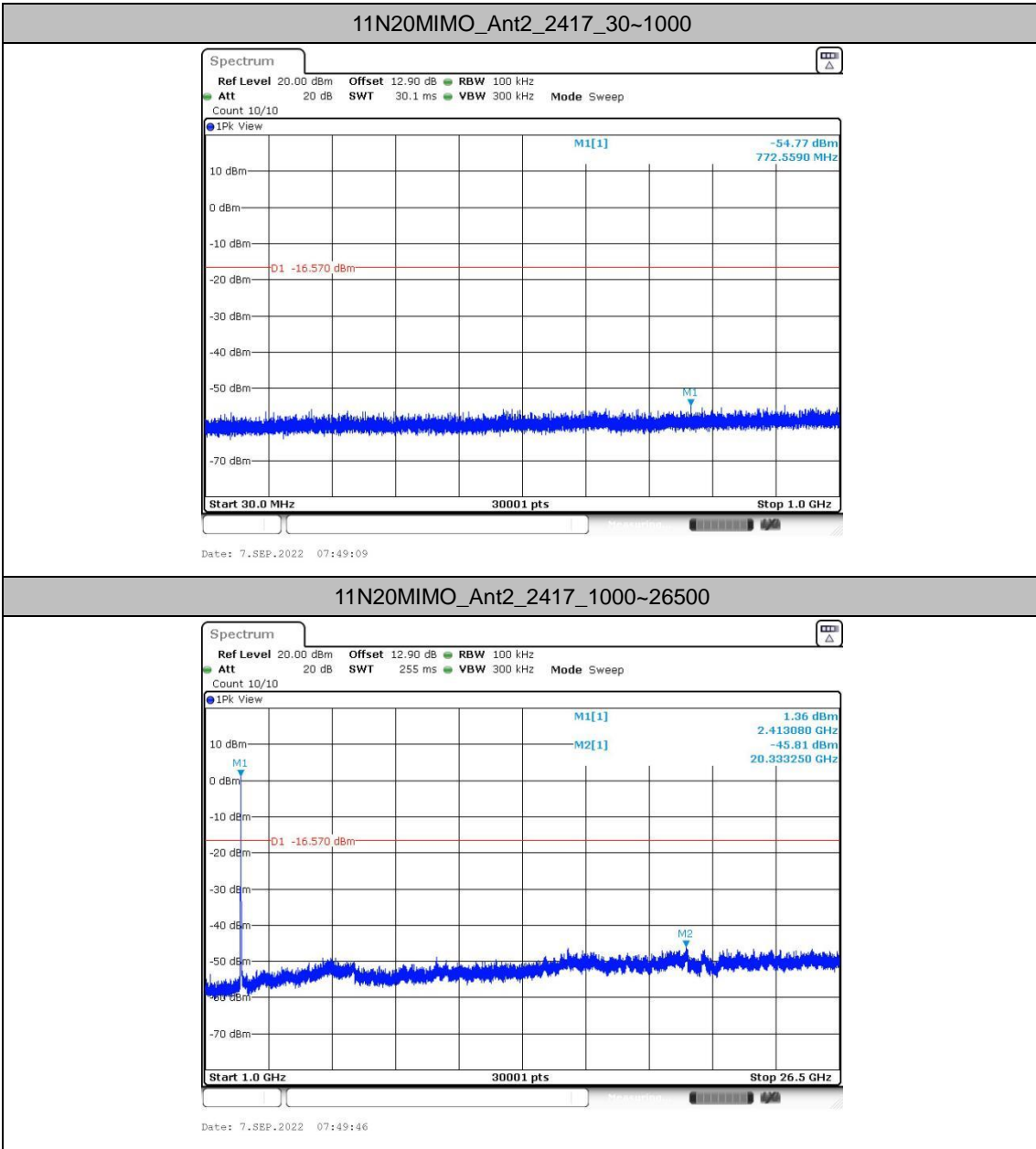


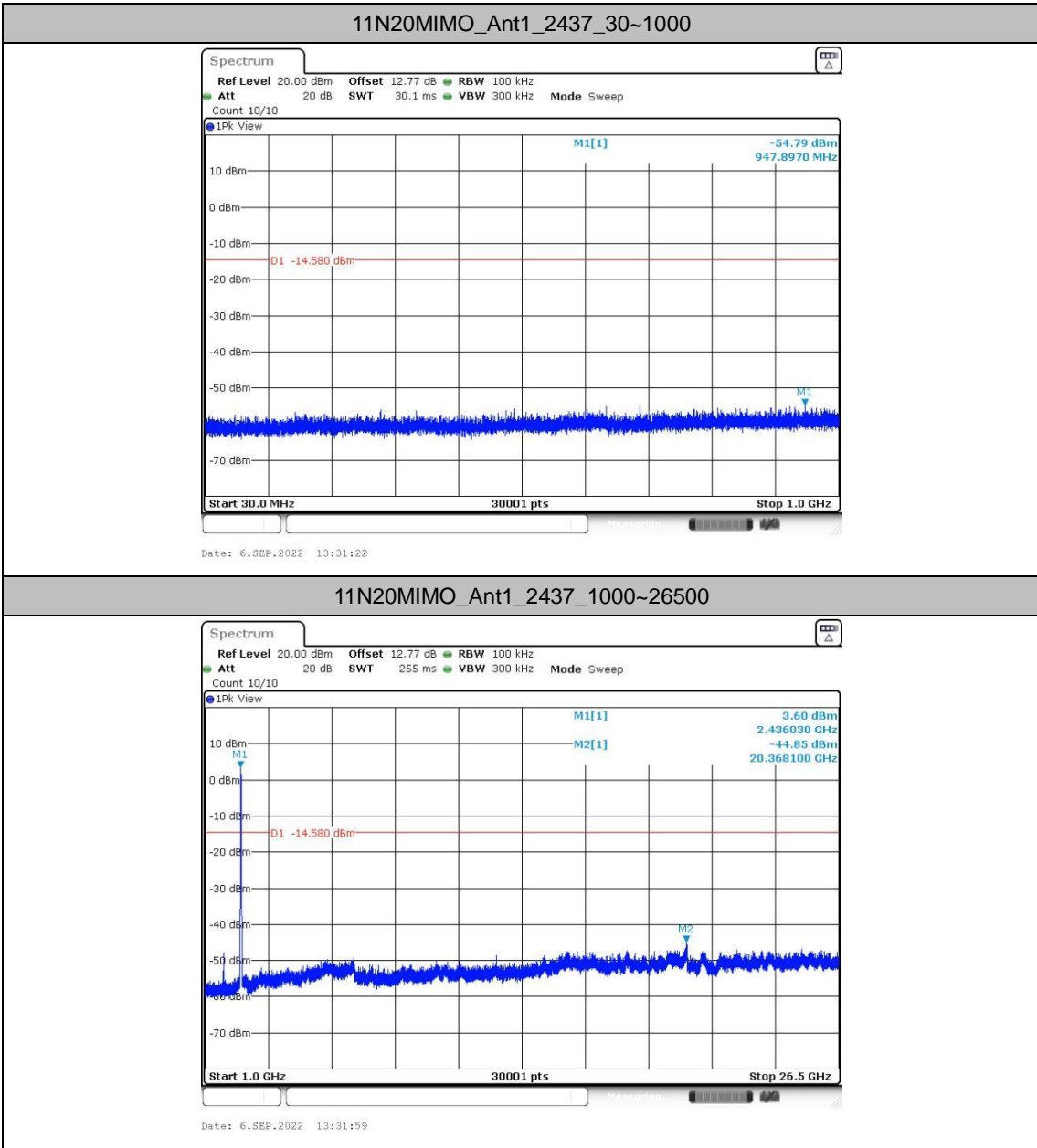


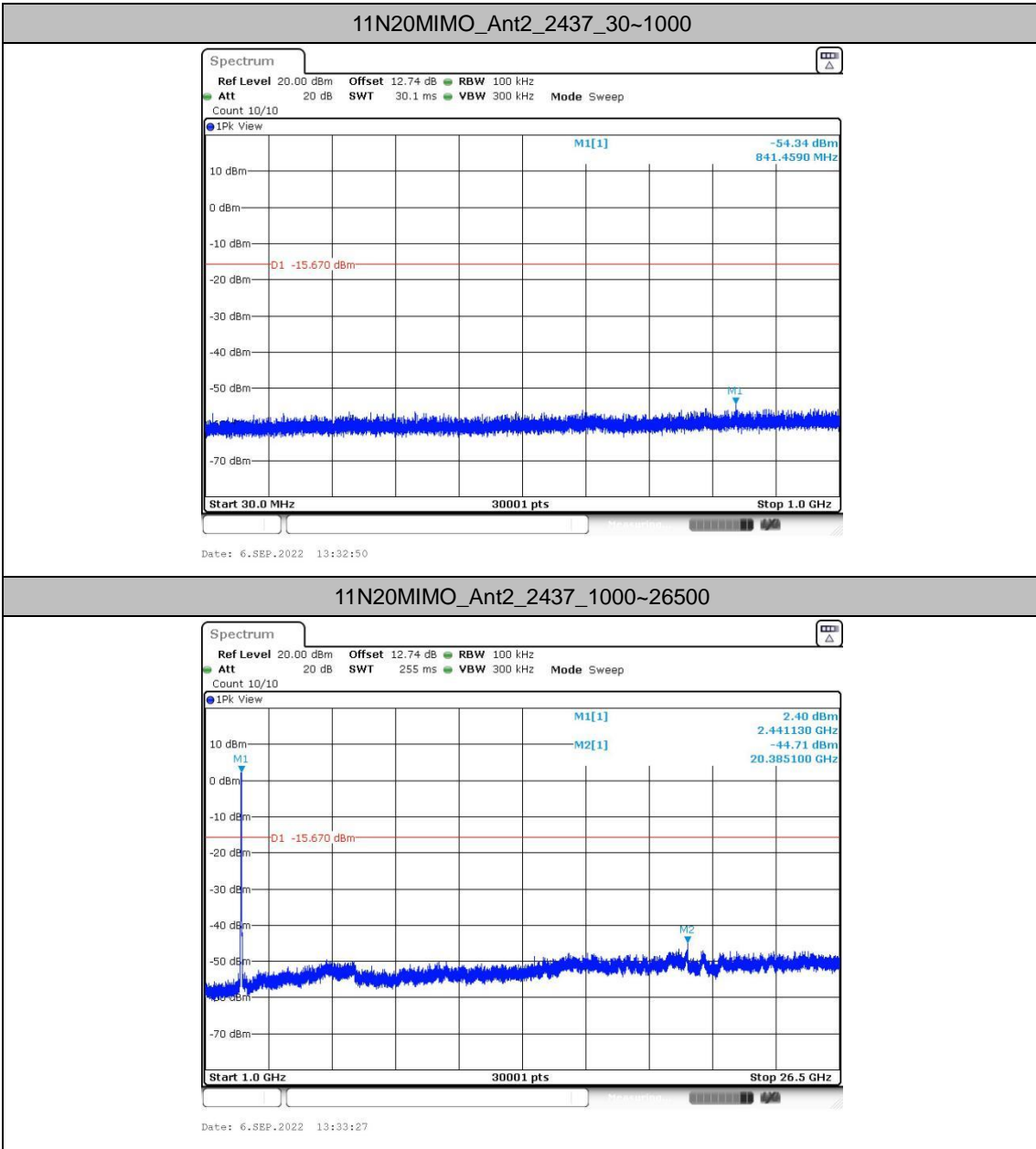


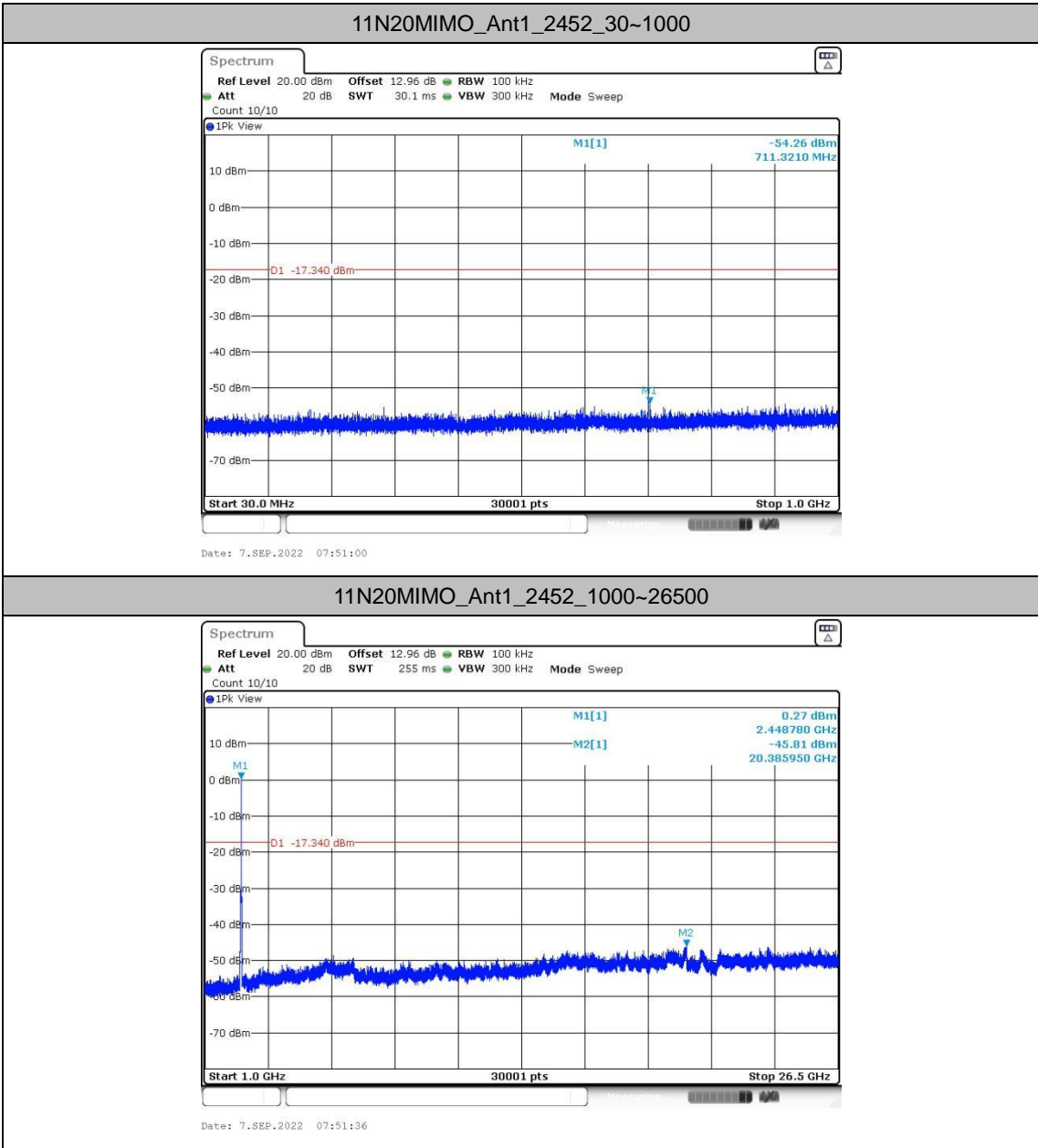


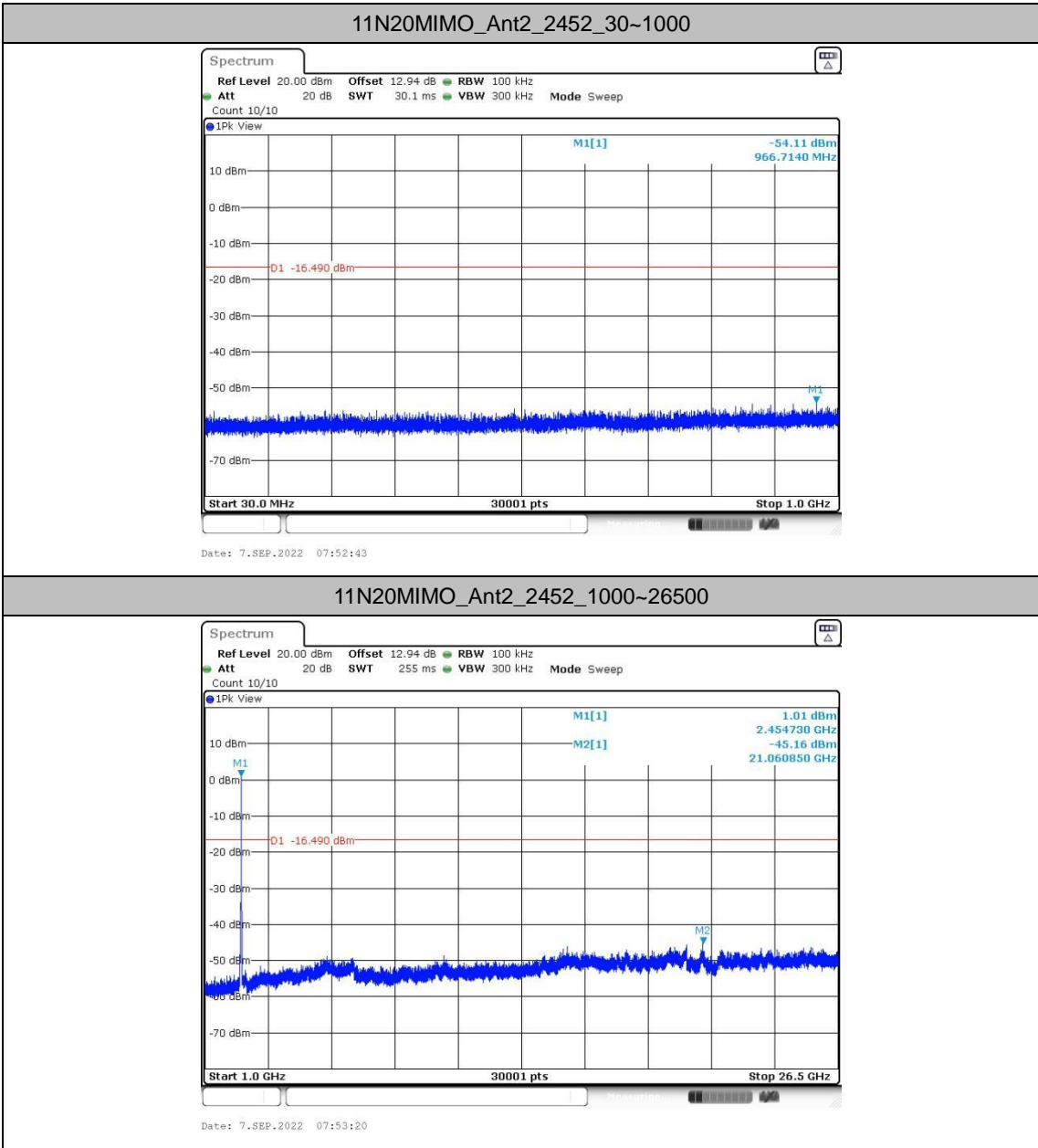


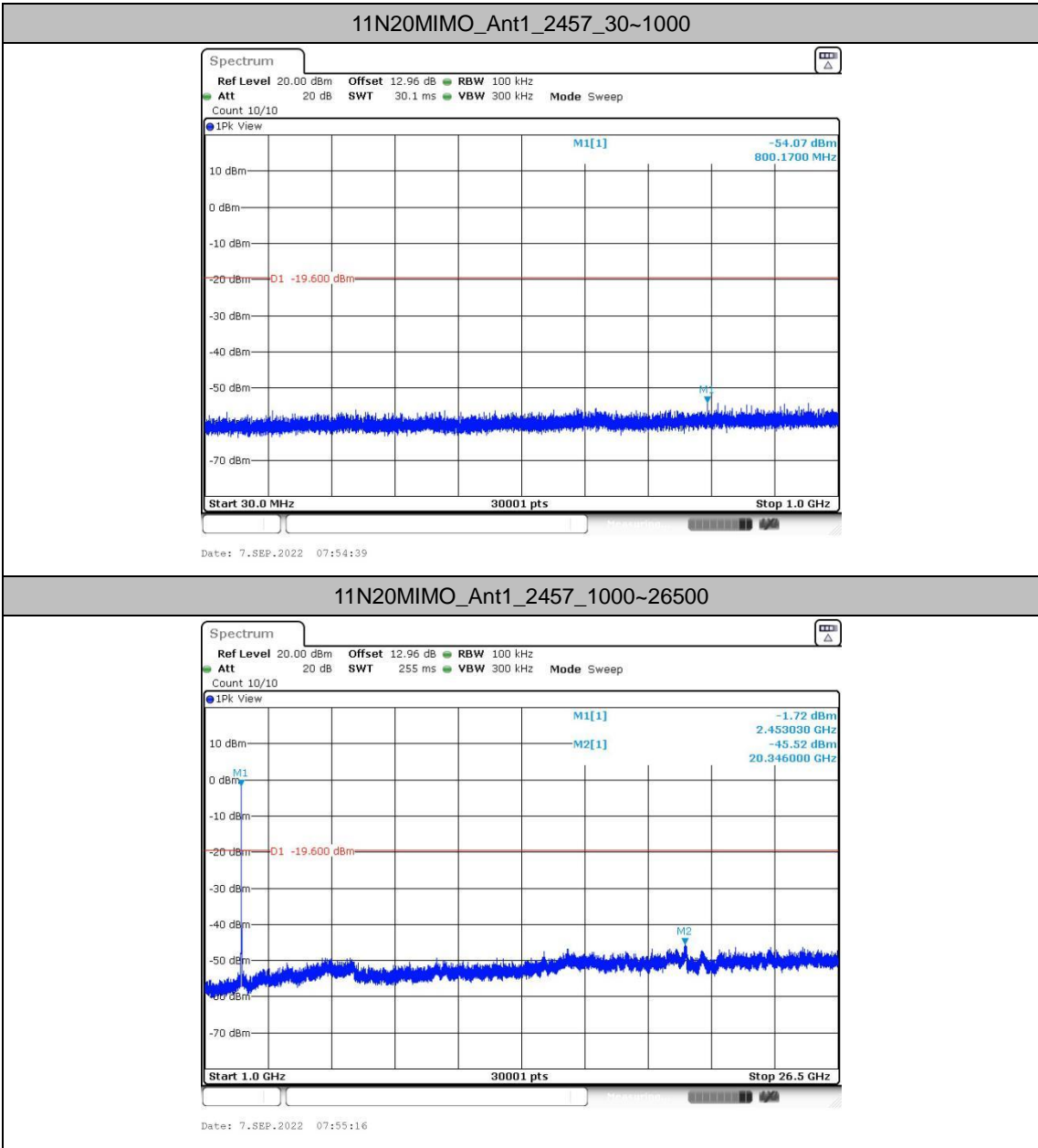


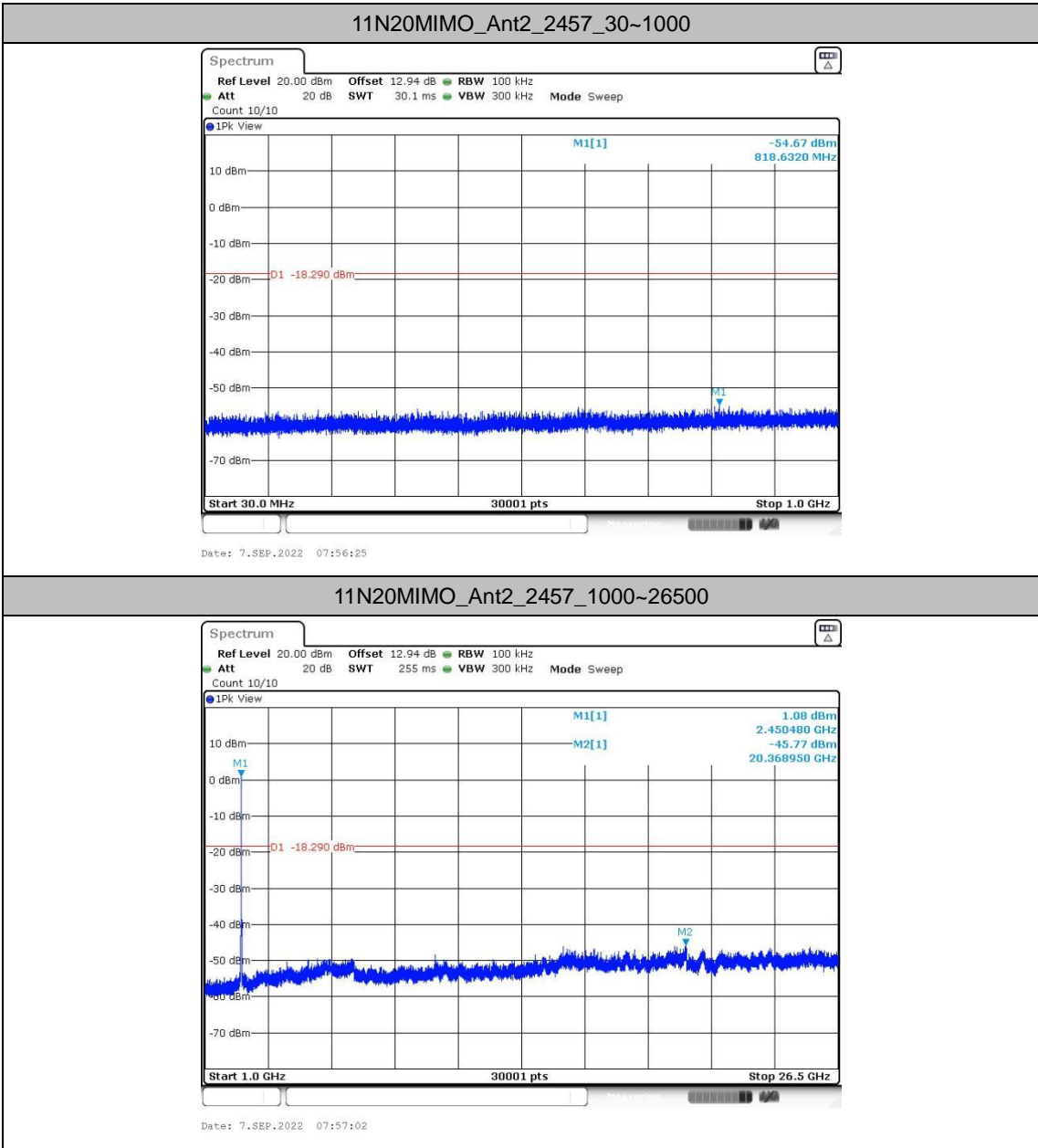


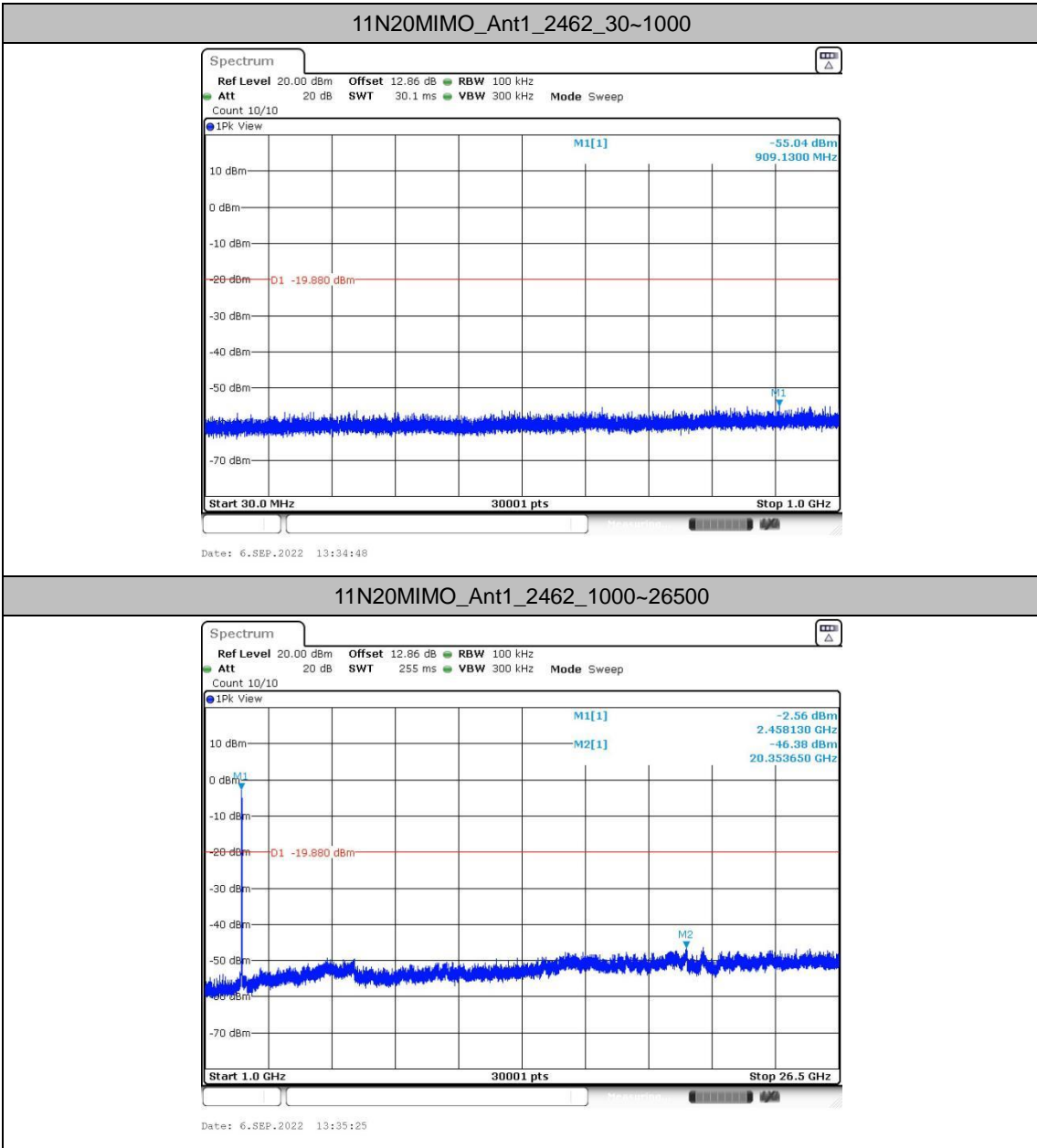


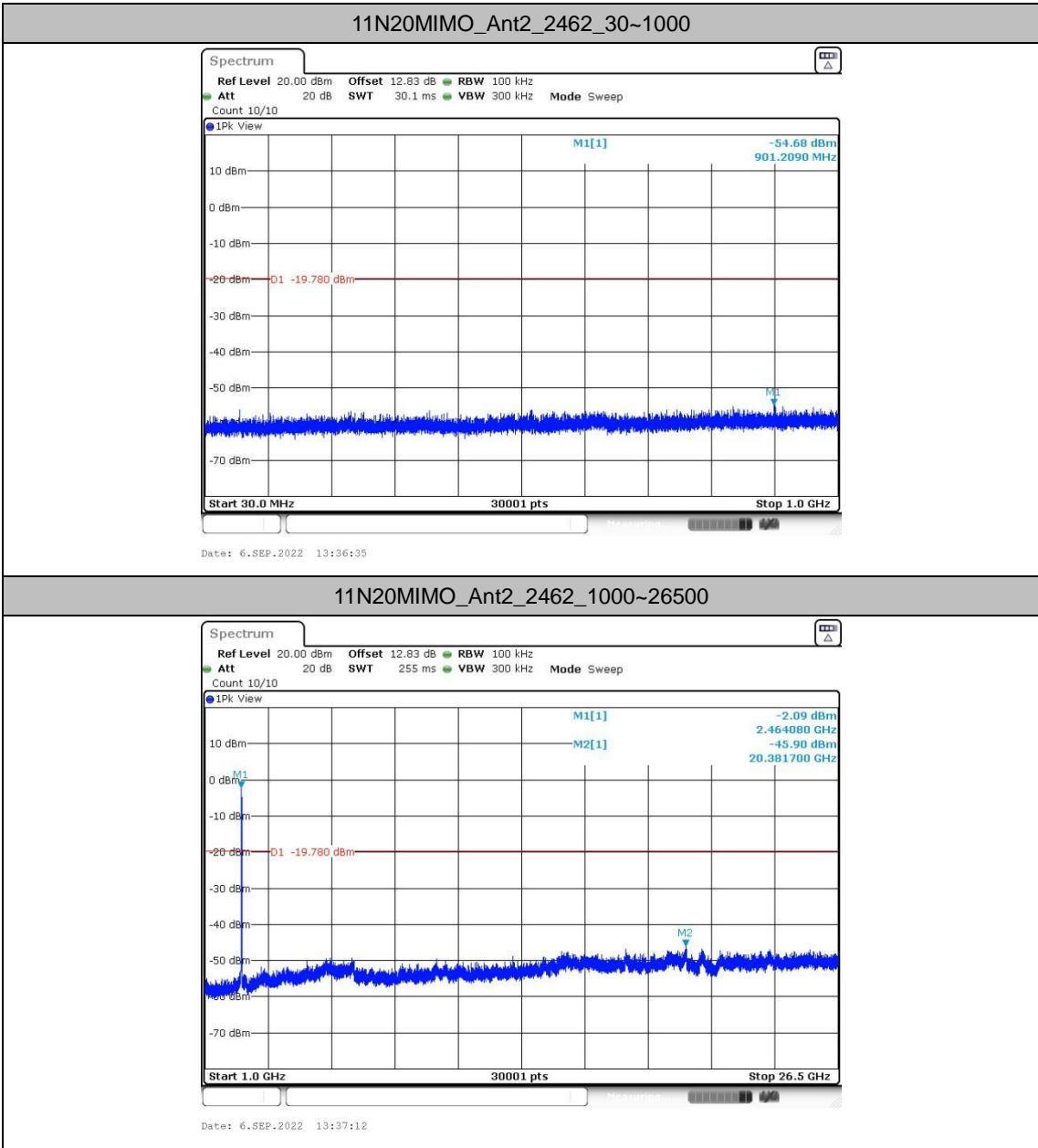








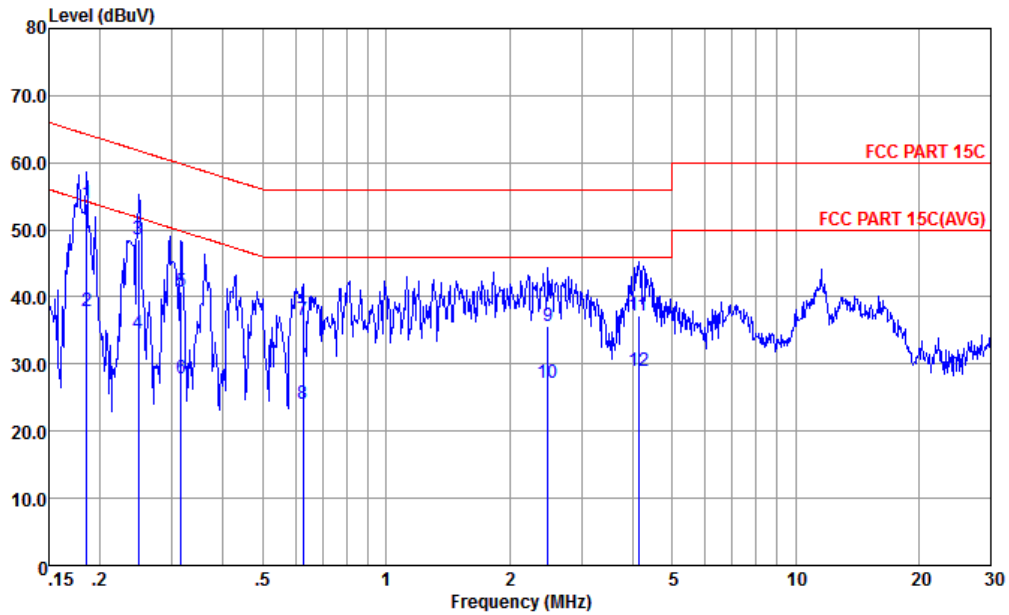






Appendix B. AC Conducted Emission Test Results

| | | | |
|-----------------|---|---------------------|-------------|
| Test Engineer : | Amos | Temperature : | 25.3~26.2°C |
| | | Relative Humidity : | 38~40% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Line |
| Remark : | All emissions not reported here are more than 10 dB below the prescribed limit. | | |

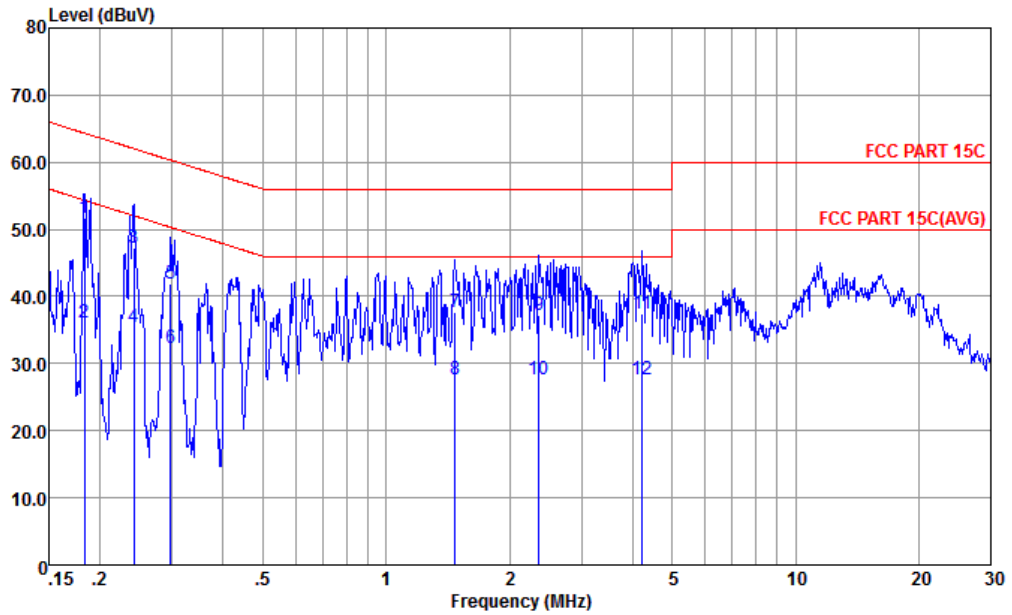


Site : CO01-KS
 Condition : FCC PART 15C LISN-060105-L LINE

| | Freq | Level | Over | Limit | Read | LISN | Cable | Remark |
|-----|-------|-------|--------|-------|-------|--------|-------|---------|
| | MHz | dBuV | Limit | Line | Level | Factor | Loss | |
| | | | dB | dBuV | dBuV | dB | dB | |
| 1 * | 0.185 | 54.03 | -10.21 | 64.24 | 43.61 | 0.03 | 10.39 | QP |
| 2 | 0.185 | 37.93 | -16.31 | 54.24 | 27.51 | 0.03 | 10.39 | Average |
| 3 | 0.248 | 48.59 | -13.23 | 61.82 | 38.20 | 0.06 | 10.33 | QP |
| 4 | 0.248 | 34.49 | -17.33 | 51.82 | 24.10 | 0.06 | 10.33 | Average |
| 5 | 0.315 | 40.87 | -18.97 | 59.84 | 30.50 | 0.07 | 10.30 | QP |
| 6 | 0.315 | 27.87 | -21.97 | 49.84 | 17.50 | 0.07 | 10.30 | Average |
| 7 | 0.627 | 36.54 | -19.46 | 56.00 | 26.19 | 0.11 | 10.24 | QP |
| 8 | 0.627 | 24.14 | -21.86 | 46.00 | 13.79 | 0.11 | 10.24 | Average |
| 9 | 2.487 | 35.58 | -20.42 | 56.00 | 25.20 | 0.15 | 10.23 | QP |
| 10 | 2.487 | 27.28 | -18.72 | 46.00 | 16.90 | 0.15 | 10.23 | Average |
| 11 | 4.136 | 37.22 | -18.78 | 56.00 | 26.80 | 0.17 | 10.25 | QP |
| 12 | 4.136 | 29.02 | -16.98 | 46.00 | 18.60 | 0.17 | 10.25 | Average |



| | | | |
|-----------------|---|---------------------|-------------|
| Test Engineer : | Amos | Temperature : | 25.3~26.2°C |
| | | Relative Humidity : | 38~40% |
| Test Voltage : | 120Vac / 60Hz | Phase : | Neutral |
| Remark : | All emissions not reported here are more than 10 dB below the prescribed limit. | | |



Site : CO01-KS
 Condition : FCC PART 15C LISN-060105-N NEUTRAL

| | Freq | Level | Over | Limit | Read | LISN | Cable | Remark |
|-----|-------|-------|--------|-------|-------|------|-------|---------|
| | MHz | dBuV | dB | dBuV | dBuV | dB | dB | |
| 1 * | 0.183 | 51.70 | -12.63 | 64.33 | 41.20 | 0.10 | 10.40 | QP |
| 2 | 0.183 | 36.10 | -18.23 | 54.33 | 25.60 | 0.10 | 10.40 | Average |
| 3 | 0.242 | 47.34 | -14.70 | 62.04 | 36.90 | 0.10 | 10.34 | QP |
| 4 | 0.242 | 35.54 | -16.50 | 52.04 | 25.10 | 0.10 | 10.34 | Average |
| 5 | 0.297 | 41.91 | -18.41 | 60.32 | 31.50 | 0.10 | 10.31 | QP |
| 6 | 0.297 | 32.31 | -18.01 | 50.32 | 21.90 | 0.10 | 10.31 | Average |
| 7 | 1.472 | 37.56 | -18.44 | 56.00 | 27.20 | 0.13 | 10.23 | QP |
| 8 | 1.472 | 27.66 | -18.34 | 46.00 | 17.30 | 0.13 | 10.23 | Average |
| 9 | 2.358 | 37.28 | -18.72 | 56.00 | 26.91 | 0.14 | 10.23 | QP |
| 10 | 2.358 | 27.58 | -18.42 | 46.00 | 17.21 | 0.14 | 10.23 | Average |
| 11 | 4.224 | 37.53 | -18.47 | 56.00 | 27.10 | 0.17 | 10.26 | QP |
| 12 | 4.224 | 27.63 | -18.37 | 46.00 | 17.20 | 0.17 | 10.26 | Average |

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



Appendix C. Radiated Spurious Emission

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

| WIFI Ant. | Note | Frequency | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Path Loss | Preamp Factor | Ant Pos | Table Pos | Peak Avg. | Pol. |
|-----------------------------|---------|-----------|------------|------------|------------|------------|----------------|-----------|---------------|---------|-----------|-----------|-------|
| 1+2 | | (MHz) | (dBμV/m) | (dB) | (dBμV/m) | (dBμV) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| 802.11b CH 01 2412MHz | | 2388.65 | 58.36 | -15.64 | 74 | 51.19 | 30.94 | 7.13 | 30.9 | 100 | 286 | P | H |
| | | 2387.35 | 52.38 | -1.62 | 54 | 45.21 | 30.94 | 7.13 | 30.9 | 100 | 286 | A | H |
| | * | 2414 | 107.81 | - | - | 100.53 | 31 | 7.16 | 30.88 | 100 | 286 | P | H |
| | * | 2414 | 105.53 | - | - | 98.25 | 31 | 7.16 | 30.88 | 100 | 286 | A | H |
| | | 2387.74 | 57.2 | -16.8 | 74 | 50.03 | 30.94 | 7.13 | 30.9 | 387 | 251 | P | V |
| | | 2387.35 | 49.5 | -4.5 | 54 | 42.33 | 30.94 | 7.13 | 30.9 | 387 | 251 | A | V |
| | * | 2412 | 105.69 | - | - | 98.41 | 31 | 7.16 | 30.88 | 387 | 251 | P | V |
| | * | 2414 | 103.03 | - | - | 95.75 | 31 | 7.16 | 30.88 | 387 | 251 | A | V |
| 802.11b CH 06 2437MHz | | 2311.69 | 53.56 | -20.44 | 74 | 46.86 | 30.65 | 7.01 | 30.96 | 154 | 289 | P | H |
| | | 2389.95 | 42.49 | -11.51 | 54 | 35.3 | 30.94 | 7.13 | 30.88 | 154 | 289 | A | H |
| | * | 2436 | 106.36 | - | - | 98.91 | 31.07 | 7.19 | 30.81 | 154 | 289 | P | H |
| | * | 2436 | 103.87 | - | - | 96.42 | 31.07 | 7.19 | 30.81 | 154 | 289 | A | H |
| | | 2490.04 | 54.53 | -19.47 | 74 | 46.71 | 31.17 | 7.32 | 30.67 | 154 | 289 | P | H |
| | | 2485.48 | 43.22 | -10.78 | 54 | 35.44 | 31.17 | 7.28 | 30.67 | 154 | 289 | A | H |
| | | 2313.64 | 54.27 | -19.73 | 74 | 47.55 | 30.65 | 7.01 | 30.94 | 380 | 243 | P | V |
| | | 2389.95 | 42.47 | -11.53 | 54 | 35.28 | 30.94 | 7.13 | 30.88 | 380 | 243 | A | V |
| | * | 2436 | 103.62 | - | - | 96.17 | 31.07 | 7.19 | 30.81 | 380 | 243 | P | V |
| | * | 2436 | 101.11 | - | - | 93.66 | 31.07 | 7.19 | 30.81 | 380 | 243 | A | V |
| | | 2486.86 | 55.39 | -18.61 | 74 | 47.61 | 31.17 | 7.28 | 30.67 | 380 | 243 | P | V |
| | 2491.06 | 43.08 | -10.92 | 54 | 35.26 | 31.17 | 7.32 | 30.67 | 380 | 243 | A | V | |



| | | | | | | | | | | | | | |
|--|---|---------|--------|--------|----|-------|-------|------|-------|-----|-----|---|---|
| 802.11b CH 11 2462MHz | * | 2462 | 103.18 | - | - | 95.57 | 31.1 | 7.25 | 30.74 | 287 | 360 | P | H |
| | * | 2464 | 100.93 | - | - | 93.32 | 31.1 | 7.25 | 30.74 | 287 | 360 | A | H |
| | | 2492.32 | 54.17 | -19.83 | 74 | 46.28 | 31.17 | 7.32 | 30.6 | 287 | 360 | P | H |
| | | 2486.02 | 43.14 | -10.86 | 54 | 35.36 | 31.17 | 7.28 | 30.67 | 287 | 360 | A | H |
| | * | 2462 | 102.47 | - | - | 94.86 | 31.1 | 7.25 | 30.74 | 371 | 247 | P | V |
| | * | 2464 | 100.17 | - | - | 92.56 | 31.1 | 7.25 | 30.74 | 371 | 247 | A | V |
| | | 2491.12 | 54.06 | -19.94 | 74 | 46.24 | 31.17 | 7.32 | 30.67 | 371 | 247 | P | V |
| | | 2485.24 | 43.07 | -10.93 | 54 | 35.29 | 31.17 | 7.28 | 30.67 | 371 | 247 | A | V |
| Remark | 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1+2, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Path Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include data for 802.11b CH 01 (2412MHz), 802.11b CH 06 (2437MHz), and 802.11b CH 11 (2462MHz).

Remark

- 1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)

Table with 14 columns: WIFI Ant. 1+2, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Path Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include data for 802.11g CH 01 (2412MHz) and CH 02 (2417MHz).



| | | | | | | | | | | | | | |
|-----------------------------|---|---------|--------|--------|----|-------|-------|------|-------|-----|-----|---|---|
| 802.11g CH 06 2437MHz | | 2389.56 | 61.64 | -12.36 | 74 | 54.47 | 30.94 | 7.13 | 30.9 | 151 | 283 | P | H |
| | | 2389.43 | 49.97 | -4.03 | 54 | 42.8 | 30.94 | 7.13 | 30.9 | 151 | 283 | A | H |
| | * | 2430 | 104.44 | - | - | 97.03 | 31.03 | 7.19 | 30.81 | 151 | 283 | P | H |
| | * | 2430 | 97.44 | - | - | 90.03 | 31.03 | 7.19 | 30.81 | 151 | 283 | A | H |
| | | 2483.68 | 58.27 | -15.73 | 74 | 50.53 | 31.13 | 7.28 | 30.67 | 151 | 283 | P | H |
| | | 2483.5 | 46.83 | -7.17 | 54 | 39.09 | 31.13 | 7.28 | 30.67 | 151 | 283 | A | H |
| | | 2389.82 | 57.23 | -16.77 | 74 | 50.04 | 30.94 | 7.13 | 30.88 | 298 | 246 | P | V |
| | | 2389.95 | 46.37 | -7.63 | 54 | 39.18 | 30.94 | 7.13 | 30.88 | 298 | 246 | A | V |
| | * | 2432 | 101.34 | - | - | 93.93 | 31.03 | 7.19 | 30.81 | 298 | 246 | P | V |
| | * | 2432 | 94.36 | - | - | 86.95 | 31.03 | 7.19 | 30.81 | 298 | 246 | A | V |
| | | 2485.24 | 55.95 | -18.05 | 74 | 48.17 | 31.17 | 7.28 | 30.67 | 298 | 246 | P | V |
| | | 2483.5 | 44.16 | -9.84 | 54 | 36.42 | 31.13 | 7.28 | 30.67 | 298 | 246 | A | V |
| 802.11g CH 10 2457MHz | | 2484.82 | 64.18 | -9.82 | 74 | 56.44 | 31.13 | 7.28 | 30.67 | 100 | 151 | P | H |
| | | 2484.4 | 51.98 | -2.02 | 54 | 44.24 | 31.13 | 7.28 | 30.67 | 100 | 151 | A | H |
| | * | 2460 | 103.97 | - | - | 96.36 | 31.1 | 7.25 | 30.74 | 100 | 151 | P | H |
| | * | 2460 | 97.43 | - | - | 89.82 | 31.1 | 7.25 | 30.74 | 100 | 151 | A | H |
| | | 2483.86 | 56.97 | -17.03 | 74 | 49.23 | 31.13 | 7.28 | 30.67 | 236 | 217 | P | V |
| | | 2483.8 | 44.56 | -9.44 | 54 | 36.82 | 31.13 | 7.28 | 30.67 | 236 | 217 | A | V |
| | * | 2454 | 95.29 | - | - | 87.68 | 31.1 | 7.25 | 30.74 | 236 | 217 | P | V |
| | * | 2454 | 88.46 | - | - | 80.85 | 31.1 | 7.25 | 30.74 | 236 | 217 | A | V |



| | | | | | | | | | | | | | |
|-----------------------------|---|---------|--------|-------|----|--------|-------|------|-------|-----|----|---|---|
| 802.11g CH 11 2462MHz | * | 2460 | 109.68 | - | - | 106.33 | 32.96 | 7.22 | 36.83 | 110 | 93 | P | H |
| | * | 2460 | 102.55 | - | - | 99.2 | 32.96 | 7.22 | 36.83 | 110 | 93 | A | H |
| | | 2484.88 | 66.39 | -7.61 | 74 | 62.98 | 32.98 | 7.25 | 36.82 | 110 | 93 | P | H |
| | | 2485.36 | 52.05 | -1.95 | 54 | 48.64 | 32.98 | 7.25 | 36.82 | 110 | 93 | A | H |
| | * | 2460 | 103.58 | - | - | 100.23 | 32.96 | 7.22 | 36.83 | 304 | 73 | P | V |
| | * | 2460 | 96.79 | - | - | 93.44 | 32.96 | 7.22 | 36.83 | 304 | 73 | A | V |
| | | 2486.74 | 62.2 | -11.8 | 74 | 58.79 | 32.98 | 7.25 | 36.82 | 304 | 73 | P | V |
| | | 2486.38 | 47.15 | -6.85 | 54 | 43.74 | 32.98 | 7.25 | 36.82 | 304 | 73 | A | V |
| Remark | <ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz
WIFI 802.11g (Harmonic @ 3m)

Table with 14 columns: WIFI Ant. 1+2, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Path Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include data for CH 01 (2412MHz) and CH 02 (2417MHz).



| | | | | | | | | | | | | | |
|------------------|---|------|-------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| 802.11g | | 4905 | 44.71 | -29.29 | 74 | 64.55 | 34.72 | 10.88 | 65.44 | 100 | 0 | P | H |
| | | 7365 | 47.17 | -26.83 | 74 | 62.4 | 36.57 | 13.48 | 65.28 | 100 | 0 | P | H |
| CH 10 2457MHz | | 4905 | 50.3 | -23.7 | 74 | 70.14 | 34.72 | 10.88 | 65.44 | 300 | 0 | P | V |
| | | 7365 | 52.81 | -21.19 | 74 | 68.04 | 36.57 | 13.48 | 65.28 | 300 | 178 | P | V |
| | | 7365 | 46.41 | -7.59 | 54 | 61.64 | 36.57 | 13.48 | 65.28 | 300 | 178 | A | V |
| 802.11g | | 4920 | 47.08 | -26.92 | 74 | 67.93 | 34.26 | 10.34 | 65.45 | 300 | 0 | P | H |
| | | 7380 | 45.56 | -28.44 | 74 | 63.06 | 35.88 | 12.73 | 66.11 | 300 | 0 | P | H |
| CH 11 2462MHz | | 4920 | 49.99 | -24.01 | 74 | 70.84 | 34.26 | 10.34 | 65.45 | 100 | 0 | P | V |
| | | 7380 | 48.51 | -25.49 | 74 | 66.01 | 35.88 | 12.73 | 66.11 | 100 | 0 | P | V |
| Remark | <ol style="list-style-type: none"> No other spurious found. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

Table with 14 columns: WIFI Ant. 1+2, Note, Frequency (MHz), Level (dBµV/m), Over Limit (dB), Limit Line (dBµV/m), Read Level (dBµV), Antenna Factor (dB/m), Path Loss (dB), Preamp Factor (dB), Ant Pos (cm), Table Pos (deg), Peak Avg. (P/A), Pol. (H/V). Rows include test data for 802.11n HT20 CH 01 and CH 02 at 2412MHz and 2417MHz.



| | | | | | | | | | | | | | |
|---|---|---------|--------|--------|----|-------|-------|------|-------|-----|-----|---|---|
| 802.11n HT20 CH 06 2437MHz | | 2389.95 | 66.15 | -7.85 | 74 | 58.96 | 30.94 | 7.13 | 30.88 | 129 | 342 | P | H |
| | | 2389.95 | 53.21 | -0.79 | 54 | 46.02 | 30.94 | 7.13 | 30.88 | 129 | 342 | A | H |
| | * | 2434 | 106.29 | - | - | 98.84 | 31.07 | 7.19 | 30.81 | 129 | 342 | P | H |
| | * | 2434 | 98.74 | - | - | 91.29 | 31.07 | 7.19 | 30.81 | 129 | 342 | A | H |
| | | 2483.68 | 69.39 | -4.61 | 74 | 61.65 | 31.13 | 7.28 | 30.67 | 129 | 342 | P | H |
| | | 2483.5 | 50.73 | -3.27 | 54 | 42.99 | 31.13 | 7.28 | 30.67 | 129 | 342 | A | H |
| | | 2389.69 | 63.66 | -10.34 | 74 | 56.49 | 30.94 | 7.13 | 30.9 | 379 | 243 | P | V |
| | | 2389.95 | 50.55 | -3.45 | 54 | 43.36 | 30.94 | 7.13 | 30.88 | 379 | 243 | A | V |
| | * | 2430 | 105.18 | - | - | 97.77 | 31.03 | 7.19 | 30.81 | 379 | 243 | P | V |
| | * | 2430 | 98.21 | - | - | 90.8 | 31.03 | 7.19 | 30.81 | 379 | 243 | A | V |
| | | 2484.94 | 58.44 | -15.56 | 74 | 50.7 | 31.13 | 7.28 | 30.67 | 379 | 243 | P | V |
| | | 2483.5 | 44.25 | -9.75 | 54 | 36.51 | 31.13 | 7.28 | 30.67 | 379 | 243 | A | V |
| 802.11n HT20 CH 09 2452MHz | | 2484.1 | 68.7 | -5.3 | 74 | 60.96 | 31.13 | 7.28 | 30.67 | 205 | 92 | P | H |
| | | 2485.72 | 53.07 | -0.93 | 54 | 45.29 | 31.17 | 7.28 | 30.67 | 205 | 92 | A | H |
| | * | 2456 | 107.36 | - | - | 99.75 | 31.1 | 7.25 | 30.74 | 205 | 92 | P | H |
| | * | 2456 | 100.06 | - | - | 92.45 | 31.1 | 7.25 | 30.74 | 205 | 92 | A | H |
| | | 2484.34 | 61.34 | -12.66 | 74 | 53.6 | 31.13 | 7.28 | 30.67 | 332 | 254 | P | V |
| | | 2484.82 | 47.92 | -6.08 | 54 | 40.18 | 31.13 | 7.28 | 30.67 | 332 | 254 | A | V |
| | * | 2456 | 102.31 | - | - | 94.7 | 31.1 | 7.25 | 30.74 | 332 | 254 | P | V |
| | * | 2456 | 95.35 | - | - | 87.74 | 31.1 | 7.25 | 30.74 | 332 | 254 | A | V |



| | | | | | | | | | | | | | |
|---|---|---------|--------|--------|----|--------|-------|------|-------|-----|----|---|---|
| 802.11n HT20 CH 10 2457MHz | * | 2484.4 | 65.2 | -8.8 | 74 | 57.46 | 31.13 | 7.28 | 30.67 | 100 | 91 | P | H |
| | * | 2483.5 | 52.67 | -1.33 | 54 | 44.93 | 31.13 | 7.28 | 30.67 | 100 | 91 | A | H |
| | | 2462 | 106.67 | - | - | 99.06 | 31.1 | 7.25 | 30.74 | 100 | 91 | P | H |
| | | 2462 | 98.86 | - | - | 91.25 | 31.1 | 7.25 | 30.74 | 100 | 91 | A | H |
| | * | 2485.9 | 57.63 | -16.37 | 74 | 49.85 | 31.17 | 7.28 | 30.67 | 366 | 15 | P | V |
| | * | 2486.5 | 45.45 | -8.55 | 54 | 37.67 | 31.17 | 7.28 | 30.67 | 366 | 15 | A | V |
| | | 2458 | 101.42 | - | - | 93.81 | 31.1 | 7.25 | 30.74 | 366 | 15 | P | V |
| | | 2458 | 94.05 | - | - | 86.44 | 31.1 | 7.25 | 30.74 | 366 | 15 | A | V |
| 802.11n HT20 CH 11 2462MHz | * | 2458 | 110.41 | - | - | 107.06 | 32.96 | 7.22 | 36.83 | 107 | 87 | P | H |
| | * | 2458 | 102.55 | - | - | 99.2 | 32.96 | 7.22 | 36.83 | 107 | 87 | A | H |
| | | 2485.3 | 65.19 | -8.81 | 74 | 61.78 | 32.98 | 7.25 | 36.82 | 107 | 87 | P | H |
| | | 2485.48 | 52.79 | -1.21 | 54 | 49.38 | 32.98 | 7.25 | 36.82 | 107 | 87 | A | H |
| | * | 2460 | 102.69 | - | - | 99.34 | 32.96 | 7.22 | 36.83 | 100 | 62 | P | V |
| | * | 2460 | 95.79 | - | - | 92.44 | 32.96 | 7.22 | 36.83 | 100 | 62 | A | V |
| | | 2483.62 | 53.9 | -20.1 | 74 | 50.49 | 32.98 | 7.25 | 36.82 | 100 | 62 | P | V |
| | | 2483.5 | 41.87 | -12.13 | 54 | 38.46 | 32.98 | 7.25 | 36.82 | 100 | 62 | A | V |
| Remark | 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)**

| WIFI Ant. 1+2 | Note | Frequency (MHz) | Level (dBμV/m) | Over Limit (dB) | Limit Line (dBμV/m) | Read Level (dBμV) | Antenna Factor (dB/m) | Path Loss (dB) | Preamp Factor (dB) | Ant Pos (cm) | Table Pos (deg) | Peak Avg. (P/A) | Pol. (H/V) |
|----------------------------|------|-------------------|------------------|-------------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-----------------|------------|
| 802.11n HT20 CH 01 2412MHz | | 4830 | 45.32 | -28.68 | 74 | 66.25 | 34.2 | 10.25 | 65.38 | 300 | 0 | P | H |
| | | 7230 | 48.08 | -28.16 | 76.24 | 65.18 | 35.84 | 12.71 | 65.65 | 300 | 0 | P | H |
| | | 4830 | 54.42 | -19.58 | 74 | 75.35 | 34.2 | 10.25 | 65.38 | 286 | 339 | P | V |
| | | 4830 | 41.38 | -12.62 | 54 | 62.31 | 34.2 | 10.25 | 65.38 | 286 | 339 | A | V |
| | | 7230 | 53.1 | -20.27 | 73.37 | 70.2 | 35.84 | 12.71 | 65.65 | 100 | 0 | P | V |
| 802.11n HT20 CH 02 2417MHz | | 4830 | 48.79 | -25.21 | 74 | 68.8 | 34.57 | 10.85 | 65.43 | 300 | 360 | P | H |
| | | 7260 | 53.59 | -20.41 | 74 | 68.75 | 36.55 | 13.5 | 65.21 | 127 | 258 | P | H |
| | | 7260 | 46.41 | -7.59 | 54 | 61.57 | 36.55 | 13.5 | 65.21 | 127 | 258 | A | H |
| | | 4830 | 56.14 | -17.86 | 74 | 76.15 | 34.57 | 10.85 | 65.43 | 347 | 337 | P | V |
| | | 4830 | 45.46 | -8.54 | 54 | 65.47 | 34.57 | 10.85 | 65.43 | 347 | 337 | A | V |
| | | 7260 | 56.02 | -17.98 | 74 | 71.18 | 36.55 | 13.5 | 65.21 | 341 | 359 | P | V |
| 802.11n HT20 CH 06 2437MHz | | 7260 | 49.39 | -4.61 | 54 | 64.55 | 36.55 | 13.5 | 65.21 | 341 | 359 | A | V |
| | | 4875 | 53.95 | -20.05 | 74 | 73.86 | 34.66 | 10.87 | 65.44 | 145 | 49 | P | H |
| | | 4875 | 45.54 | -8.46 | 54 | 65.45 | 34.66 | 10.87 | 65.44 | 145 | 49 | A | H |
| | | 7305 | 51.97 | -22.03 | 74 | 67.16 | 36.56 | 13.49 | 65.24 | 341 | 45 | P | H |
| | | 7305 | 44.29 | -9.71 | 54 | 59.48 | 36.56 | 13.49 | 65.24 | 341 | 45 | A | H |
| | | 4875 | 58.71 | -15.29 | 74 | 78.62 | 34.66 | 10.87 | 65.44 | 343 | 349 | P | V |
| | | 4875 | 50.62 | -3.38 | 54 | 70.53 | 34.66 | 10.87 | 65.44 | 343 | 349 | A | V |
| | 7320 | 58.94 | -15.06 | 74 | 74.14 | 36.56 | 13.49 | 65.25 | 300 | 147 | P | V | |
| | 7320 | 47.2 | -6.8 | 54 | 62.4 | 36.56 | 13.49 | 65.25 | 300 | 147 | A | V | |



| | | | | | | | | | | | | | |
|---|---|------|-------|--------|----|-------|-------|-------|-------|-----|-----|---|---|
| 802.11n HT20 CH 09 2452MHz | | 4905 | 48.57 | -25.43 | 74 | 68.41 | 34.72 | 10.88 | 65.44 | 100 | 360 | P | H |
| | | 7350 | 50.48 | -23.52 | 74 | 65.71 | 36.57 | 13.48 | 65.28 | 100 | 360 | P | H |
| | | 4905 | 54.51 | -19.49 | 74 | 74.35 | 34.72 | 10.88 | 65.44 | 300 | 57 | P | V |
| | | 4905 | 48.69 | -5.31 | 54 | 68.53 | 34.72 | 10.88 | 65.44 | 300 | 57 | A | V |
| | | 7350 | 54.96 | -19.04 | 74 | 70.19 | 36.57 | 13.48 | 65.28 | 364 | 117 | P | V |
| | | 7350 | 47.04 | -6.96 | 54 | 62.27 | 36.57 | 13.48 | 65.28 | 364 | 117 | A | V |
| 802.11n HT20 CH 10 2457MHz | | 4905 | 45.94 | -28.06 | 74 | 65.78 | 34.72 | 10.88 | 65.44 | 100 | 0 | P | H |
| | | 7365 | 47.39 | -26.61 | 74 | 62.62 | 36.57 | 13.48 | 65.28 | 100 | 0 | P | H |
| | | 4905 | 52.39 | -21.61 | 74 | 72.23 | 34.72 | 10.88 | 65.44 | 326 | 47 | P | V |
| | | 4905 | 46.29 | -7.71 | 54 | 66.13 | 34.72 | 10.88 | 65.44 | 326 | 47 | A | V |
| | | 7365 | 54.62 | -19.38 | 74 | 69.85 | 36.57 | 13.48 | 65.28 | 273 | 217 | P | V |
| | | 7365 | 47.24 | -6.76 | 54 | 62.47 | 36.57 | 13.48 | 65.28 | 273 | 217 | A | V |
| 802.11n HT20 CH 11 2462MHz | | 4920 | 43.63 | -30.37 | 74 | 64.48 | 34.26 | 10.34 | 65.45 | 300 | 0 | P | H |
| | | 7380 | 44.14 | -29.86 | 74 | 61.64 | 35.88 | 12.73 | 66.11 | 300 | 0 | P | H |
| | | 4920 | 47.74 | -26.26 | 74 | 68.59 | 34.26 | 10.34 | 65.45 | 100 | 0 | P | V |
| | | 7380 | 47.72 | -26.28 | 74 | 65.22 | 35.88 | 12.73 | 66.11 | 100 | 0 | P | V |
| Remark | 1. No other spurious found. 2. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

| WIFI Ant. | Note | Frequency | Level | Over Limit | Limit Line | Read Level | Antenna Factor | Path Loss | Preamp Factor | Ant Pos | Table Pos | Peak Avg. | Pol. |
|---------------------------------|--|-----------|------------|------------|------------|------------|----------------|-----------|---------------|---------|-----------|-----------|---------|
| 1+2 | | (MHz) | (dBμV/m) | (dB) | (dBμV/m) | (dBμV) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| 2.4GHz 802.11n HT20 LF | | 101.78 | 33.49 | -10.01 | 43.5 | 48.22 | 16 | 1.47 | 32.2 | | | P | H |
| | | 186.17 | 36.96 | -6.54 | 43.5 | 52.47 | 14.6 | 1.99 | 32.1 | | | P | H |
| | | 223.03 | 38.68 | -7.32 | 46 | 53.21 | 15.44 | 2.18 | 32.15 | | | P | H |
| | | 334.58 | 27.06 | -18.94 | 46 | 36.76 | 19.8 | 2.67 | 32.17 | | | P | H |
| | | 450.01 | 31.6 | -14.4 | 46 | 37.91 | 22.8 | 3.09 | 32.2 | | | P | H |
| | | 494.63 | 31.52 | -14.48 | 46 | 36.96 | 23.7 | 3.24 | 32.38 | | | P | H |
| | | 35.82 | 31.29 | -8.71 | 40 | 41.2 | 21.7 | 0.57 | 32.18 | | | P | V |
| | | 98.87 | 31.53 | -11.97 | 43.5 | 46.78 | 15.5 | 1.45 | 32.2 | | | P | V |
| | | 141.55 | 37 | -6.5 | 43.5 | 50 | 17.4 | 1.72 | 32.12 | | | P | V |
| | | 182.29 | 38.09 | -5.41 | 43.5 | 53.63 | 14.6 | 1.96 | 32.1 | | | P | V |
| | | 219.15 | 39.07 | -6.93 | 46 | 53.93 | 15.12 | 2.16 | 32.14 | | | P | V |
| | 300.63 | 27 | -19 | 46 | 37.36 | 19.2 | 2.54 | 32.1 | | | P | V | |
| Remark | 1. No other spurious found. 2. All results are PASS against limit line. | | | | | | | | | | | | |



Co-location

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20&Part 96 Band48 (Band Edge @ 3m)

| WIFI Ant. 1+2 | Note | Frequency (MHz) | Level (dBμV/m) | Over Limit (dB) | Limit Line (dBμV/m) | Read Level (dBμV) | Antenna Factor (dB/m) | Path Loss (dB) | Preamp Factor (dB) | Ant Pos (cm) | Table Pos (deg) | Peak Avg. (P/A) | Pol. (H/V) |
|----------------------------|---|-------------------|------------------|-------------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-------------------|--------------|
| 802.11n HT20 CH 06 2437MHz | | 2389.95 | 59.89 | -14.11 | 74 | 52.7 | 30.94 | 7.13 | 30.88 | 150 | 326 | P | H |
| | | 2389.95 | 47.85 | -6.15 | 54 | 40.66 | 30.94 | 7.13 | 30.88 | 150 | 326 | A | H |
| | | 2483.98 | 60.43 | -13.57 | 74 | 52.69 | 31.13 | 7.28 | 30.67 | 150 | 326 | P | H |
| | | 2483.5 | 47.78 | -6.22 | 54 | 40.04 | 31.13 | 7.28 | 30.67 | 150 | 326 | A | H |
| | * | 2434 | 106.19 | - | - | 98.74 | 31.07 | 7.19 | 30.81 | 150 | 326 | P | H |
| | * | 2434 | 98.54 | - | - | 91.09 | 31.07 | 7.19 | 30.81 | 150 | 326 | A | H |
| | | 2389.95 | 57.44 | -16.56 | 74 | 50.25 | 30.94 | 7.13 | 30.88 | 381 | 276 | P | V |
| | | 2389.95 | 45.84 | -8.16 | 54 | 38.65 | 30.94 | 7.13 | 30.88 | 381 | 276 | A | V |
| | | 2485 | 54.39 | -19.61 | 74 | 46.65 | 31.13 | 7.28 | 30.67 | 381 | 276 | P | V |
| | | 2483.5 | 43.69 | -10.31 | 54 | 35.95 | 31.13 | 7.28 | 30.67 | 381 | 276 | A | V |
| | * | 2430 | 103.08 | - | - | 95.67 | 31.03 | 7.19 | 30.81 | 381 | 276 | P | V |
| * | 2432 | 95.93 | - | - | 88.52 | 31.03 | 7.19 | 30.81 | 381 | 276 | A | V | |
| Remark | 3. No other spurious found. 4. All results are PASS against Peak and Average limit line. | | | | | | | | | | | | |



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 &Part 96 Band48 (Harmonic @ 3m)

| WIFI Ant. 1+2 | Note | Frequency (MHz) | Level (dBμV/m) | Over Limit (dB) | Limit Line (dBμV/m) | Read Level (dBμV) | Antenna Factor (dB/m) | Path Loss (dB) | Preamp Factor (dB) | Ant Pos (cm) | Table Pos (deg) | Peak Avg. (P/A) | Pol. (H/V) |
|----------------------------|--|-------------------|------------------|-------------------|-----------------------|---------------------|-------------------------|------------------|----------------------|----------------|-------------------|-----------------|------------|
| 802.11n HT20 CH 06 2437MHz | | 4875 | 49.7 | -24.3 | 74 | 69.61 | 34.66 | 10.87 | 65.44 | 300 | 161 | P | H |
| | | 7305 | 48.87 | -25.13 | 74 | 64.06 | 36.56 | 13.49 | 65.24 | 300 | 161 | P | H |
| | | 4875 | 55.5 | -18.5 | 74 | 75.41 | 34.66 | 10.87 | 65.44 | 343 | 327 | P | V |
| | | 4875 | 46.44 | -7.56 | 54 | 66.35 | 34.66 | 10.87 | 65.44 | 343 | 327 | A | V |
| | | 7320 | 54.69 | -19.31 | 74 | 69.89 | 36.56 | 13.49 | 65.25 | 328 | 360 | P | V |
| | | 7320 | 44.48 | -9.52 | 54 | 59.68 | 36.56 | 13.49 | 65.25 | 328 | 360 | A | V |
| Remark | <p>3. No other spurious found.</p> <p>4. All results are PASS against Peak and Average limit line.</p> | | | | | | | | | | | | |



Note symbol

| | |
|-----|--|
| * | Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency. |
| ! | Test result is over limit line. |
| P/A | Peak or Average |
| H/V | Horizontal or Vertical |



A calculation example for radiated spurious emission is shown as below:

| WIFI | Note | Frequency | Level | Over | Limit | Read | Antenna | Path | Preamp | Ant | Table | Peak | Pol. |
|---------|------|-----------|------------|--------|------------|----------|----------|--------|--------|--------|---------|---------|---------|
| Ant. | | | | Limit | Line | Level | Factor | Loss | Factor | Pos | Pos | Avg. | |
| 1 | | (MHz) | (dBμV/m) | (dB) | (dBμV/m) | (dBμV) | (dB/m) | (dB) | (dB) | (cm) | (deg) | (P/A) | (H/V) |
| 802.11b | | 2390 | 55.45 | -18.55 | 74 | 54.51 | 32.22 | 4.58 | 35.86 | 103 | 308 | P | H |
| CH 01 | | | | | | | | | | | | | |
| 2412MHz | | 2390 | 43.54 | -10.46 | 54 | 42.6 | 32.22 | 4.58 | 35.86 | 103 | 308 | A | H |

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =
Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)
= 55.45 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

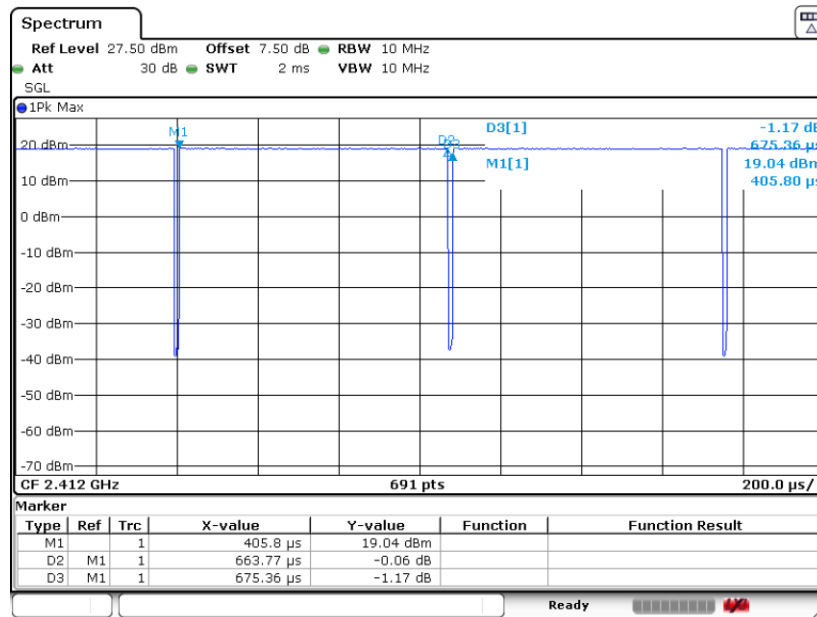
Both peak and average measured complies with the limit line, so test result is “PASS”.



Appendix D. Duty Cycle Plots

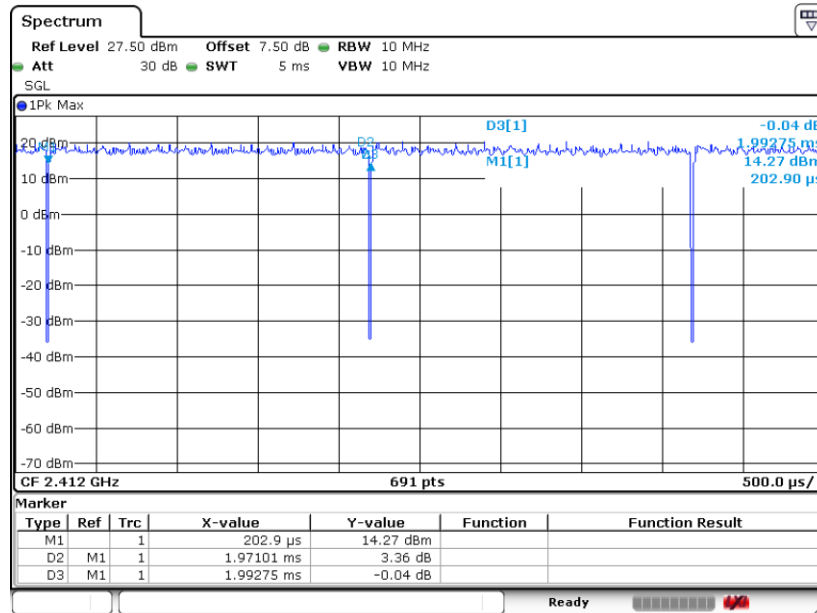
| Band | Duty Cycle(%) | T(ms) | 1/T(kHz) | VBW Setting |
|--------------|---------------|-------|----------|-------------|
| 802.11b | 98.28 | - | - | 10Hz |
| 802.11g | 98.91 | - | - | 10Hz |
| 802.11n HT20 | 100 | - | - | 10Hz |

802.11b





802.11g



802.11n HT20

