



Appendix A

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: POS Terminal

Trade Mark: 

Test Model: TP50

Environmental Conditions

| | |
|--------------------|-------------|
| Temperature: | 24.2° C |
| Relative Humidity: | 51.2% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Simba Huang |
| Supervised by: | Seal Chen |



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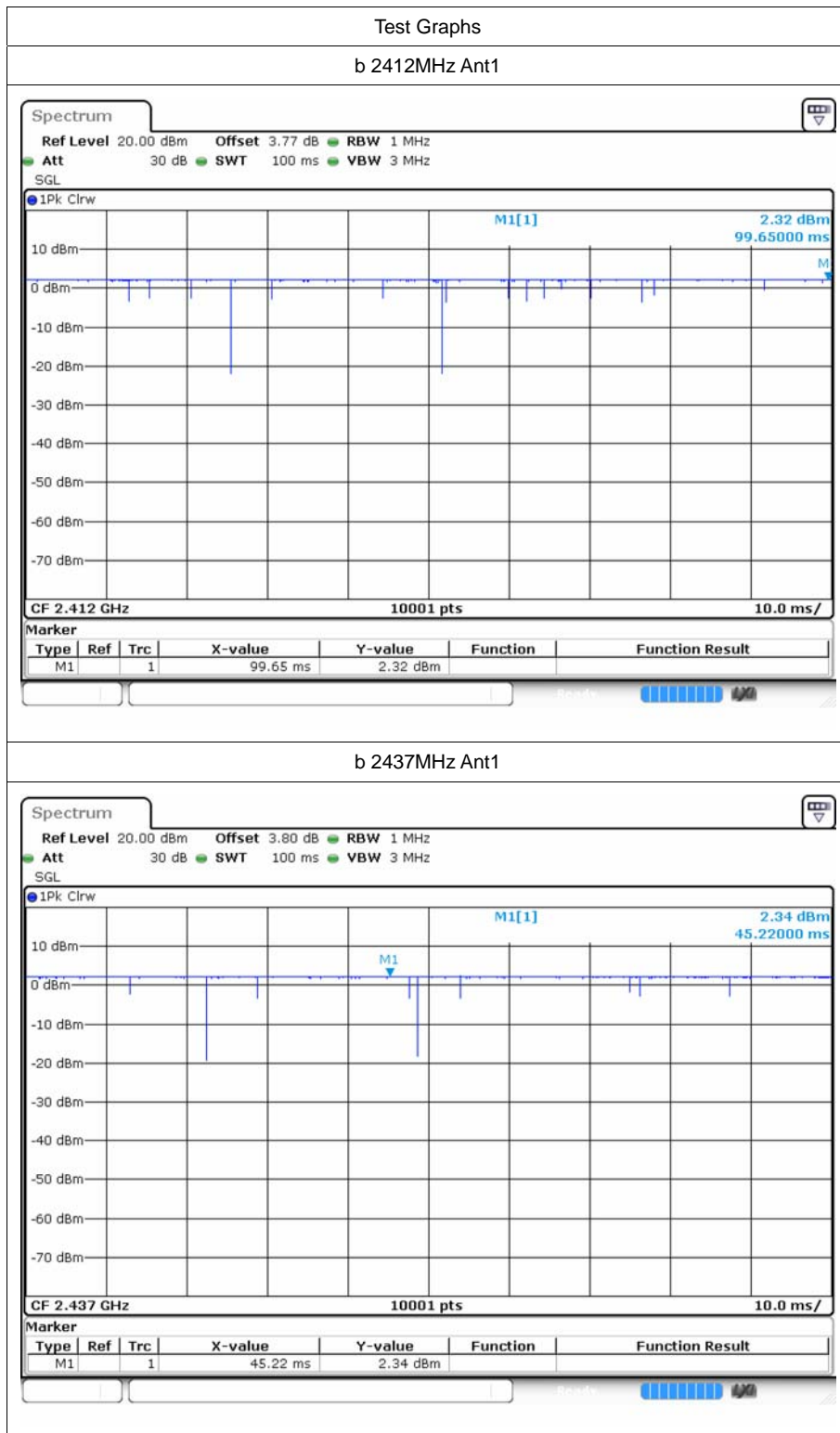
1 Duty Cycle

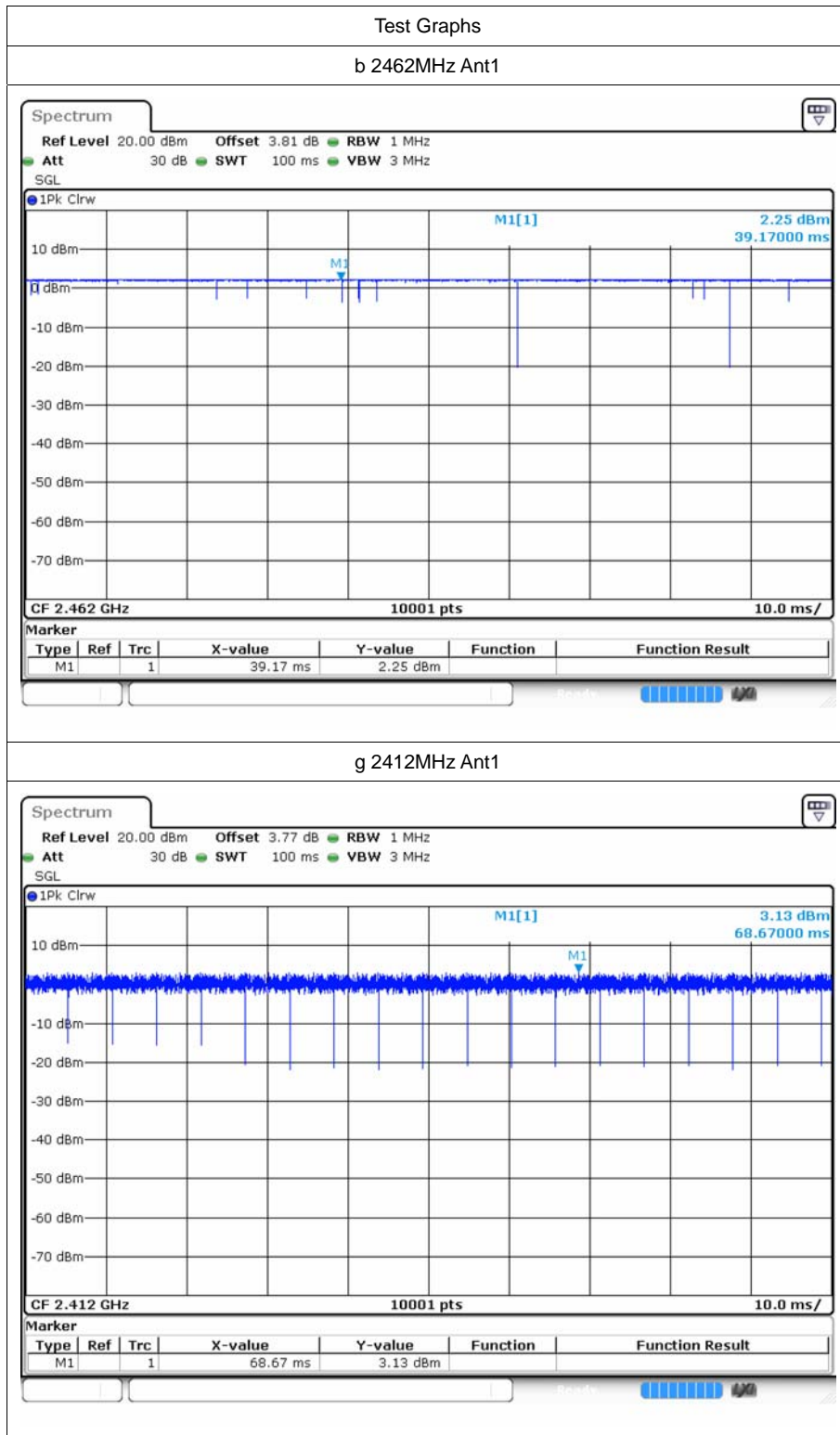
1.1 Test Result

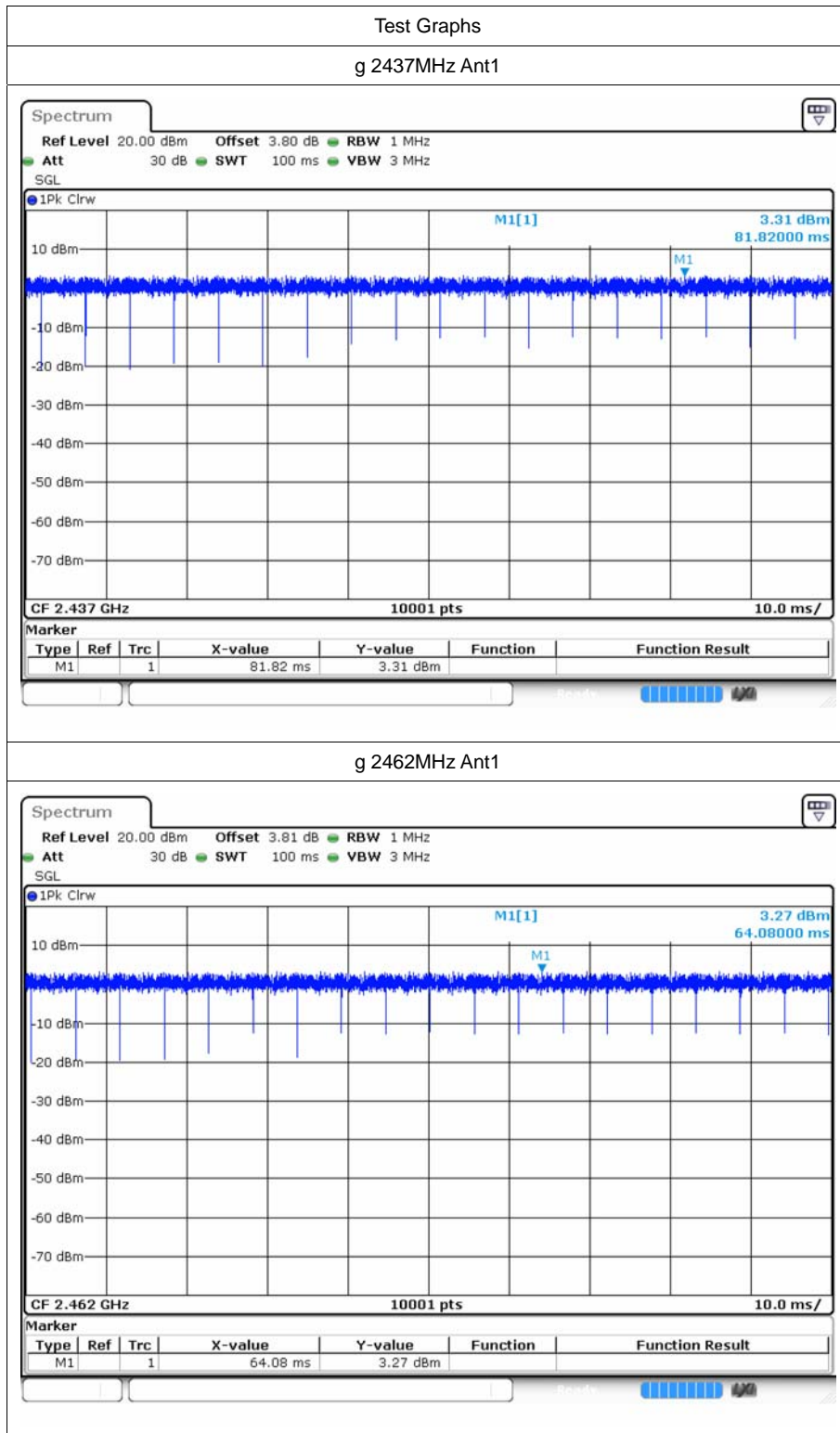
| Mode | Frequency (MHz) | Antenna | Duty Cycle (%) | 1/T (kHz) |
|------|-----------------|---------|----------------|-----------|
| b | 2412 | Ant1 | 100 | 0 |
| b | 2437 | Ant1 | 100 | 0 |
| b | 2462 | Ant1 | 100 | 0 |
| g | 2412 | Ant1 | 100 | 0 |
| g | 2437 | Ant1 | 100 | 0 |
| g | 2462 | Ant1 | 100 | 0 |
| n20 | 2412 | Ant1 | 100 | 0 |
| n20 | 2437 | Ant1 | 100 | 0 |
| n20 | 2462 | Ant1 | 100 | 0 |

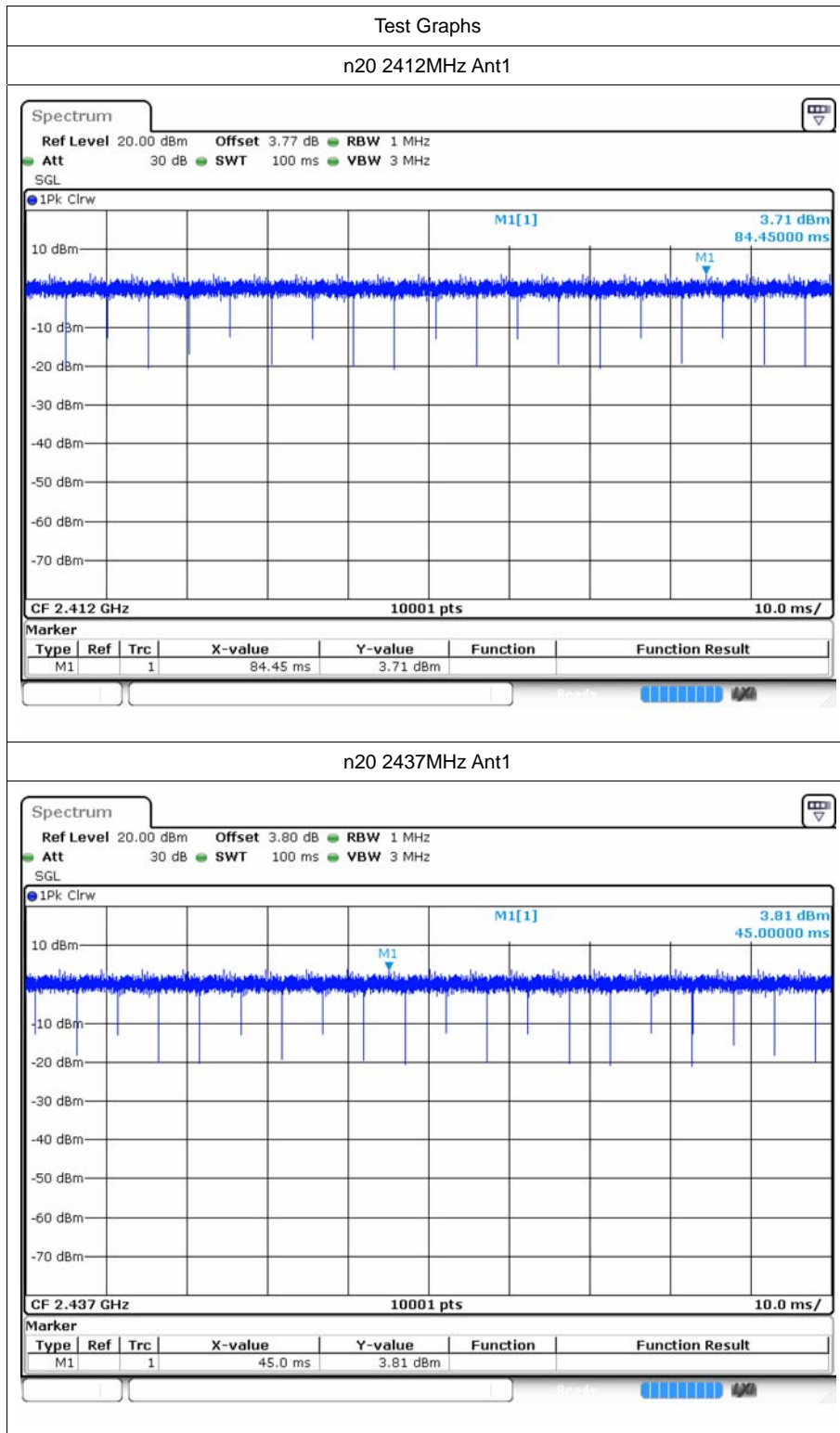


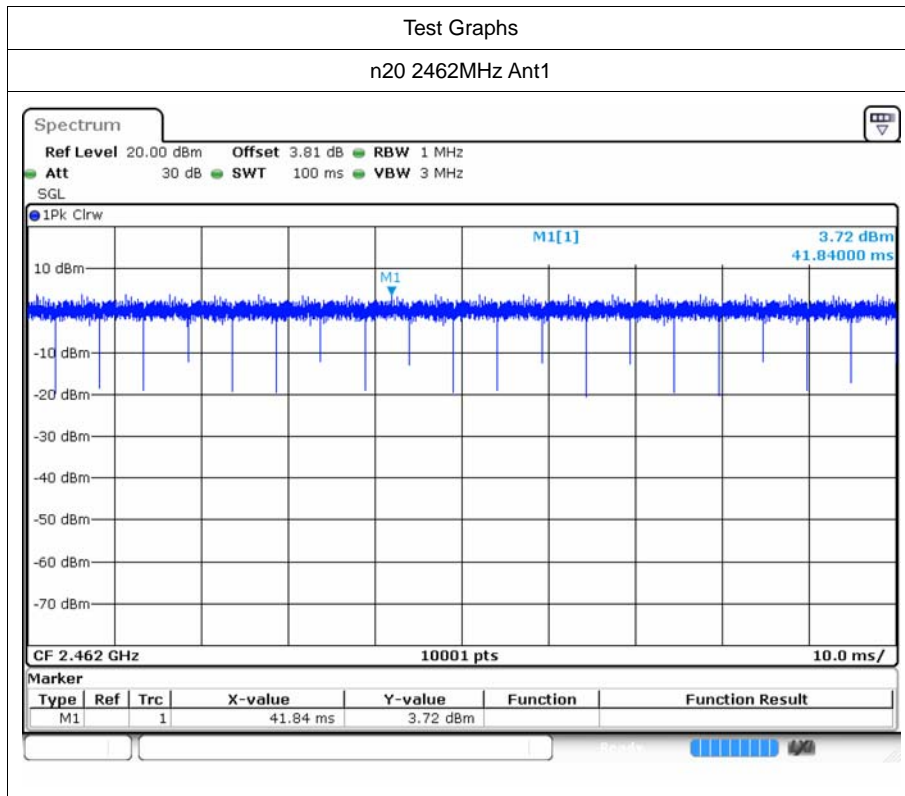
1.2 Test Graphs













2 Maximum Conducted Output Power

2.1 Test Result

| Mode | Frequency (MHz) | Antenna | Conducted Power (dBm) | Limit (dBm) | Verdict |
|------|-----------------|---------|-----------------------|-------------|---------|
| b | 2412 | Ant1 | 11.98 | 30 | Pass |
| b | 2437 | Ant1 | 11.97 | 30 | Pass |
| b | 2462 | Ant1 | 11.9 | 30 | Pass |
| g | 2412 | Ant1 | 13.82 | 30 | Pass |
| g | 2437 | Ant1 | 13.76 | 30 | Pass |
| g | 2462 | Ant1 | 13.85 | 30 | Pass |
| n20 | 2412 | Ant1 | 13.74 | 30 | Pass |
| n20 | 2437 | Ant1 | 13.8 | 30 | Pass |
| n20 | 2462 | Ant1 | 13.73 | 30 | Pass |

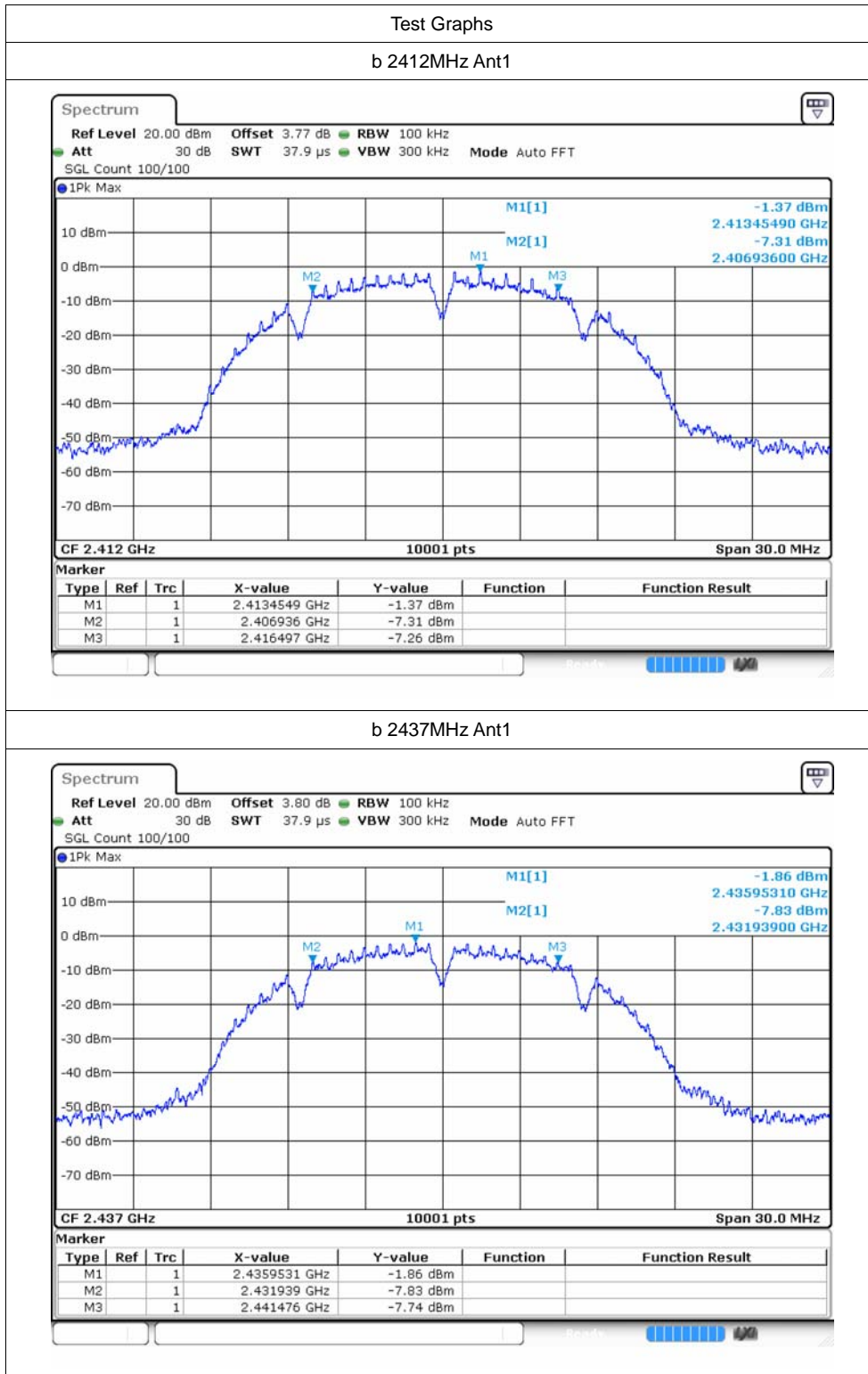


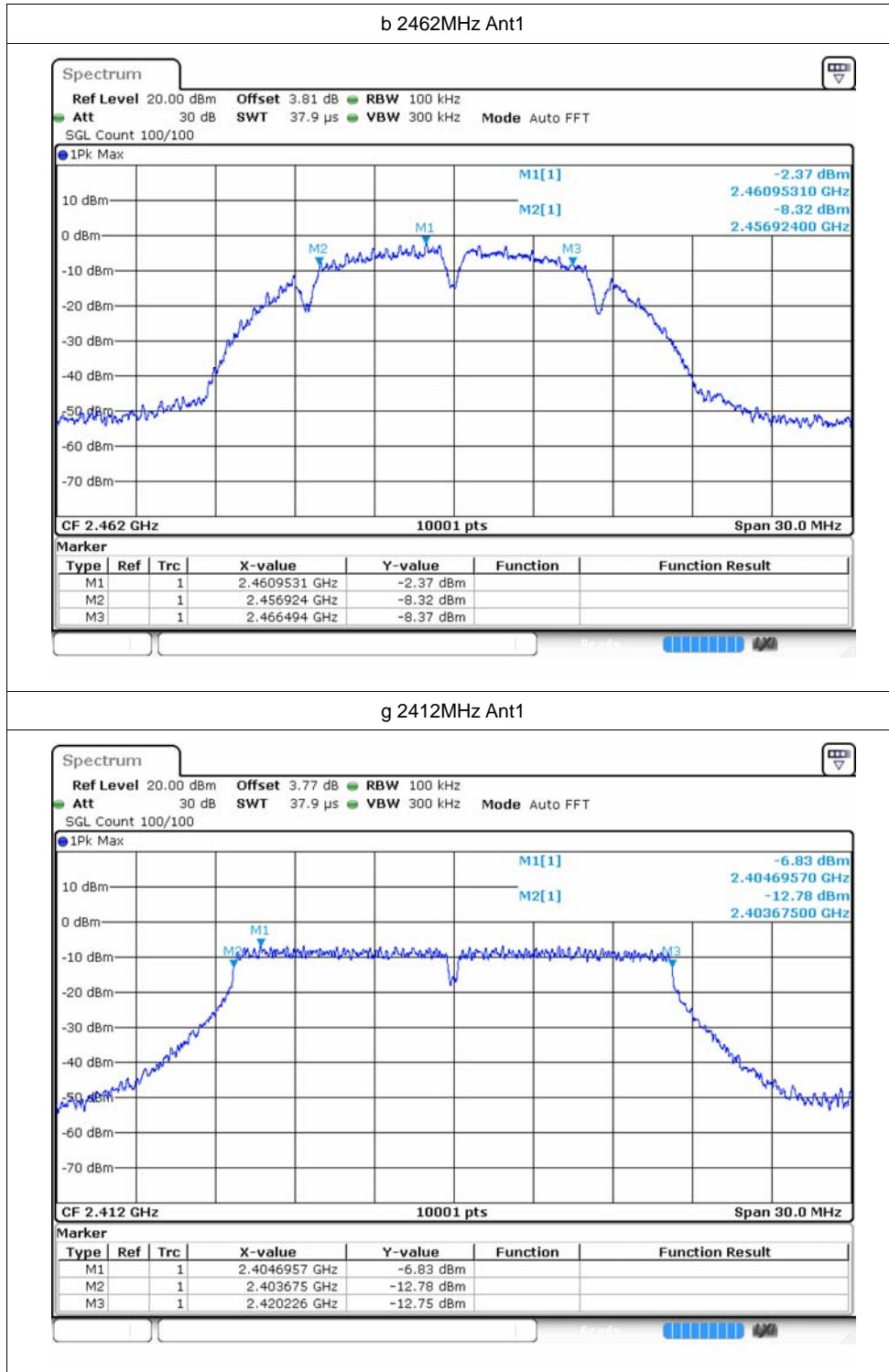
3 -6dB Bandwidth

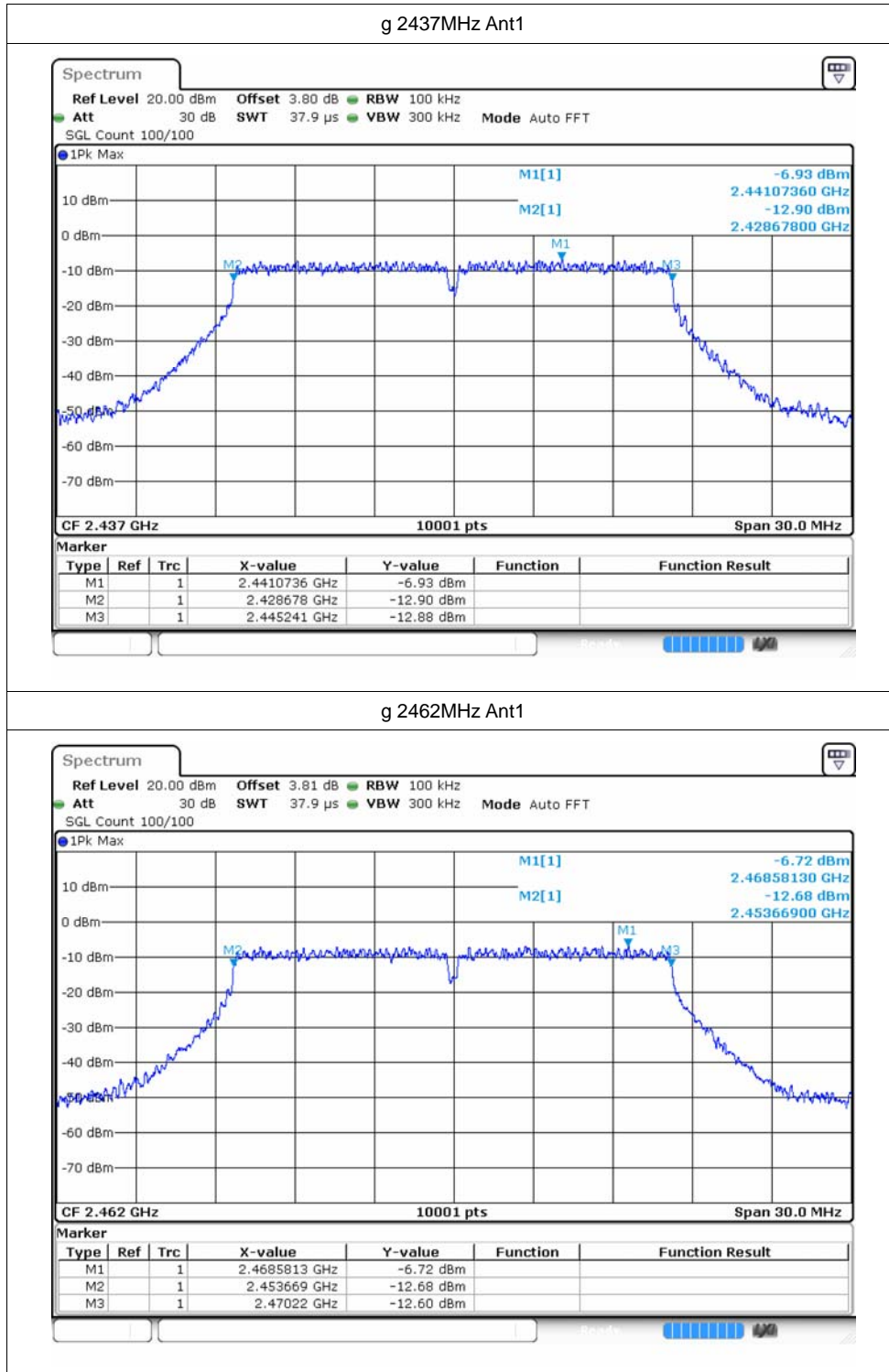
3.1 Test Result

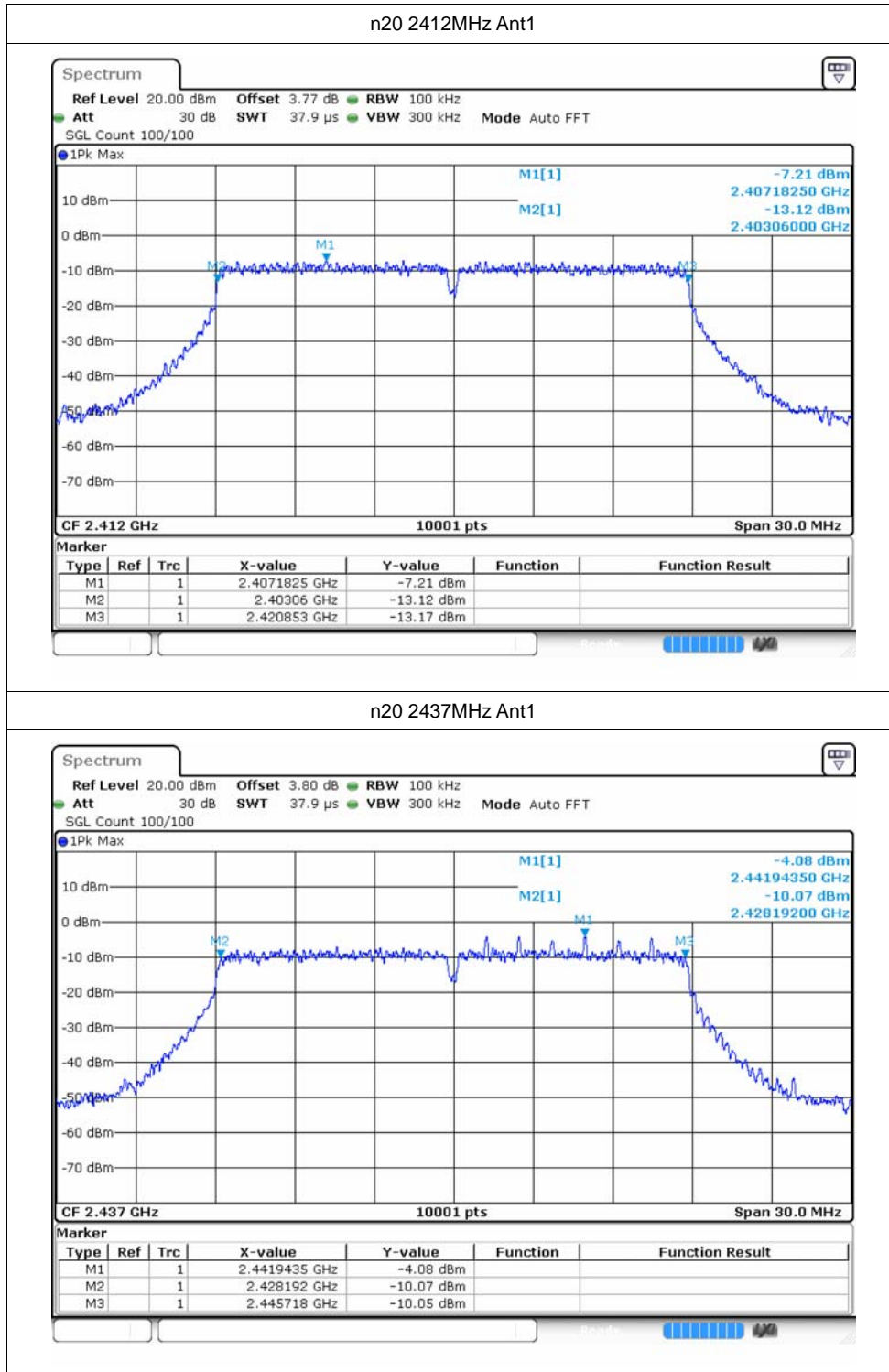
| Mode | Frequency (MHz) | Antenna | -6 dB Bandwidth (MHz) | Limit -6 dB Bandwidth (MHz) | Verdict |
|------|-----------------|---------|-----------------------|-----------------------------|---------|
| b | 2412 | Ant1 | 9.561 | 0.5 | Pass |
| b | 2437 | Ant1 | 9.537 | 0.5 | Pass |
| b | 2462 | Ant1 | 9.57 | 0.5 | Pass |
| g | 2412 | Ant1 | 16.551 | 0.5 | Pass |
| g | 2437 | Ant1 | 16.563 | 0.5 | Pass |
| g | 2462 | Ant1 | 16.551 | 0.5 | Pass |
| n20 | 2412 | Ant1 | 17.793 | 0.5 | Pass |
| n20 | 2437 | Ant1 | 17.526 | 0.5 | Pass |
| n20 | 2462 | Ant1 | 17.562 | 0.5 | Pass |

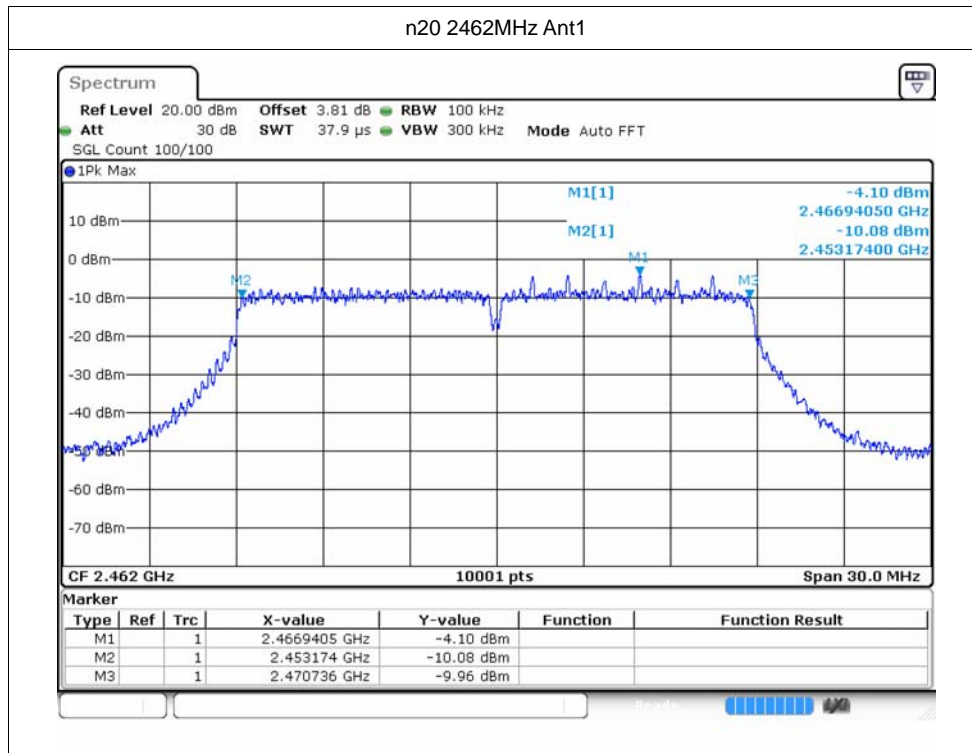
3.2 Test Graphs











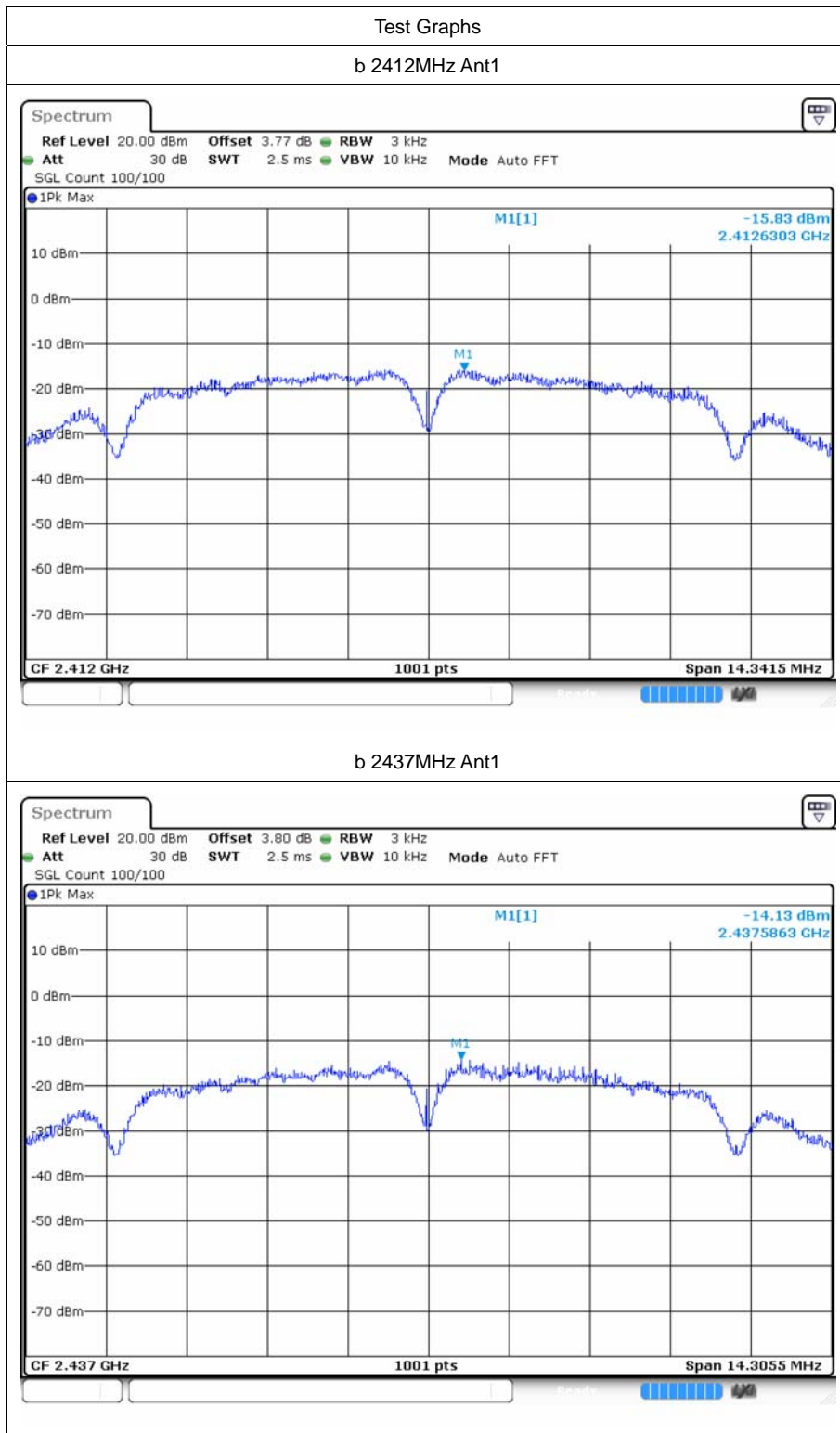


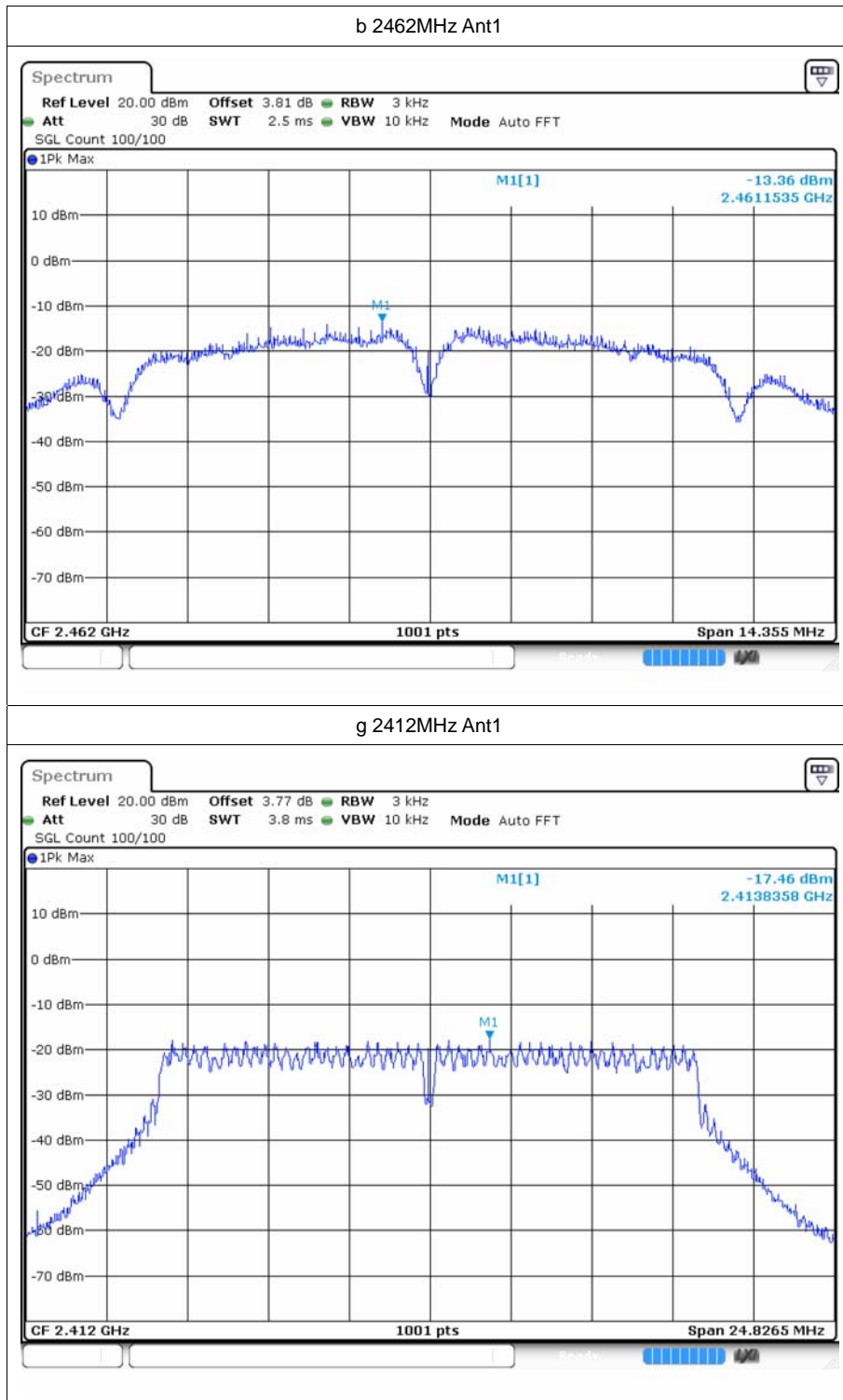
4 Maximum Power Spectral Density Level

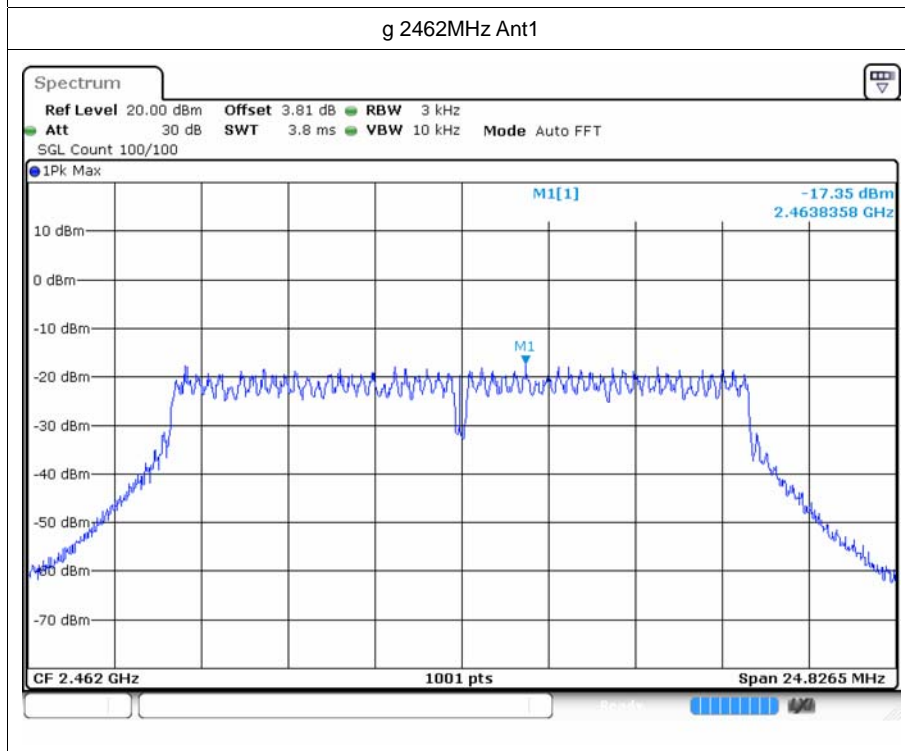
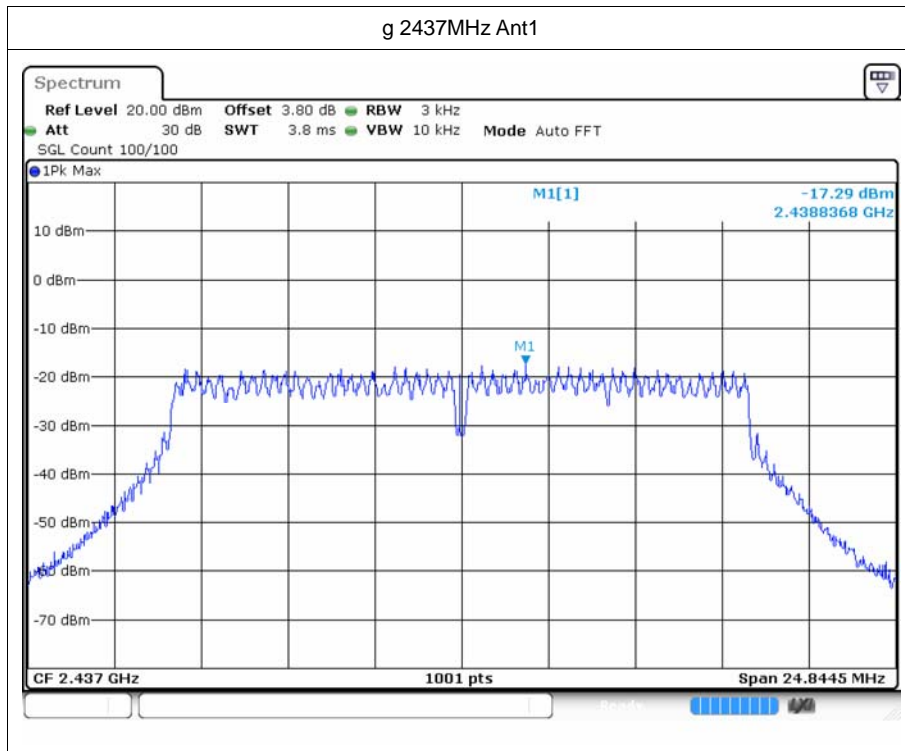
4.1 Test Result

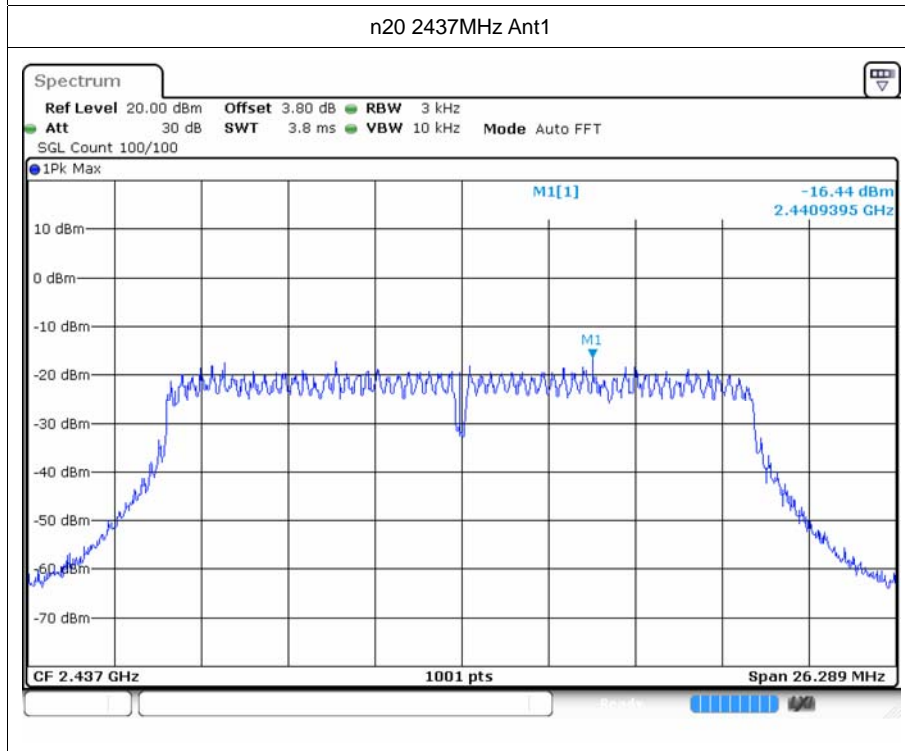
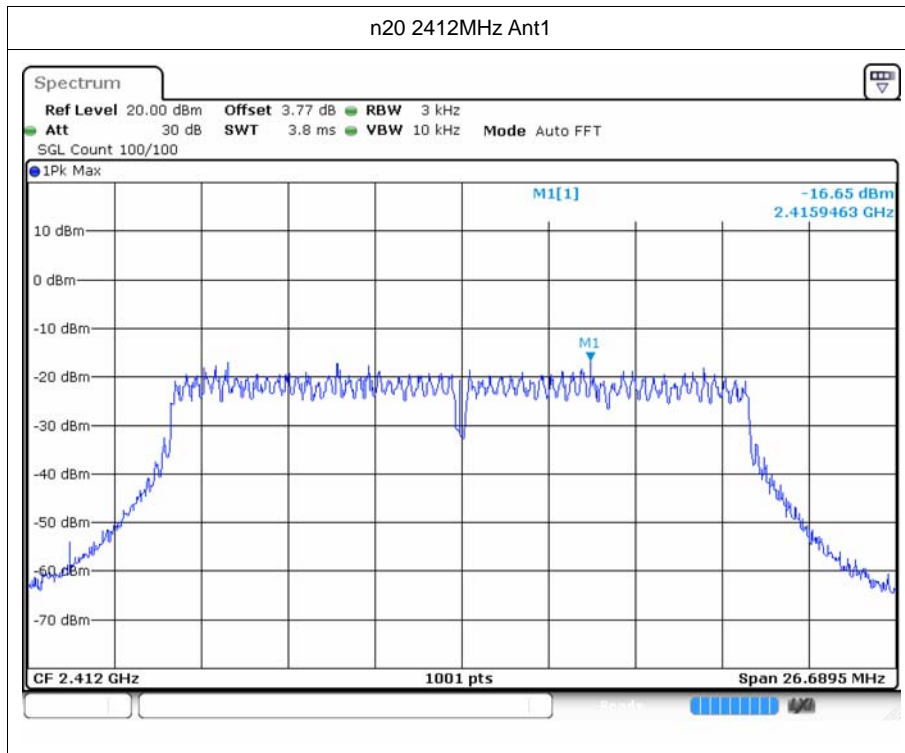
| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm/3-100kHz) | Limit (dBm/3kHz) | Verdict |
|------|-----------------|---------|------------------------------|------------------|---------|
| b | 2412 | Ant1 | -15.83 | ≤8 | Pass |
| b | 2437 | Ant1 | -14.13 | ≤8 | Pass |
| b | 2462 | Ant1 | -13.36 | ≤8 | Pass |
| g | 2412 | Ant1 | -17.46 | ≤8 | Pass |
| g | 2437 | Ant1 | -17.29 | ≤8 | Pass |
| g | 2462 | Ant1 | -17.35 | ≤8 | Pass |
| n20 | 2412 | Ant1 | -16.65 | ≤8 | Pass |
| n20 | 2437 | Ant1 | -16.44 | ≤8 | Pass |
| n20 | 2462 | Ant1 | -16.32 | ≤8 | Pass |

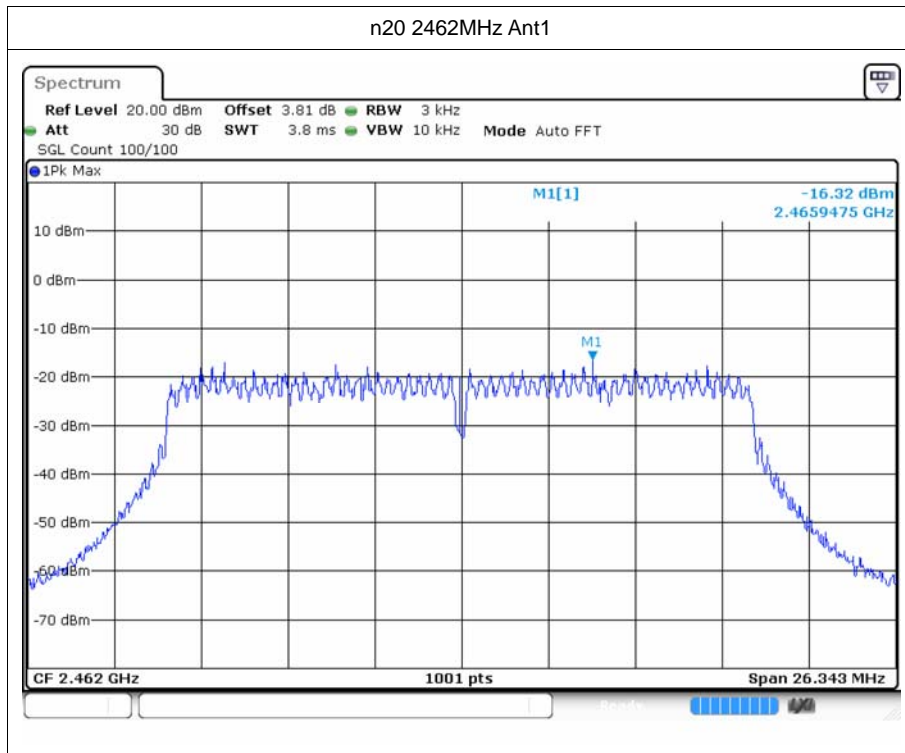
4.2 Test Graphs











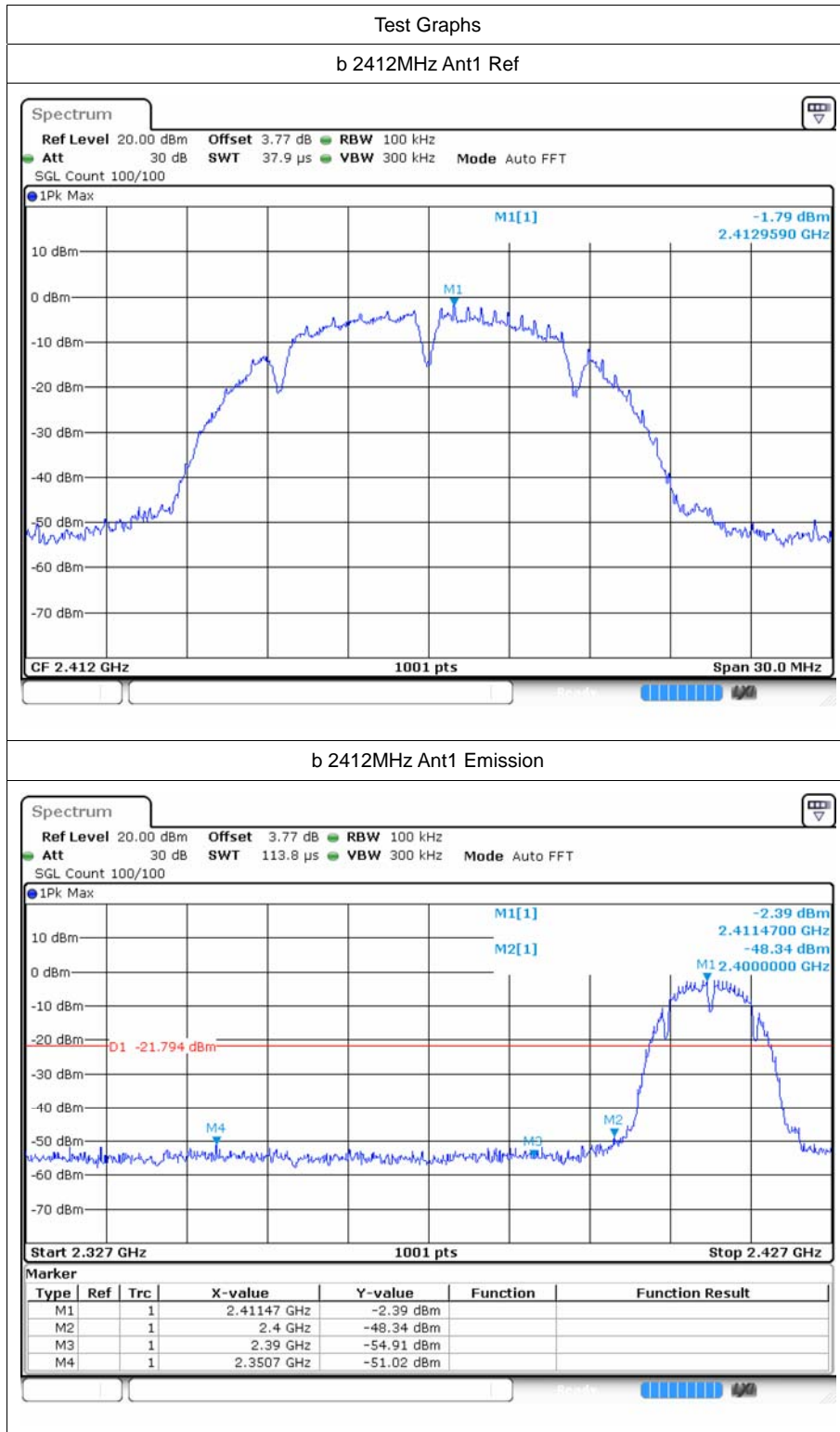


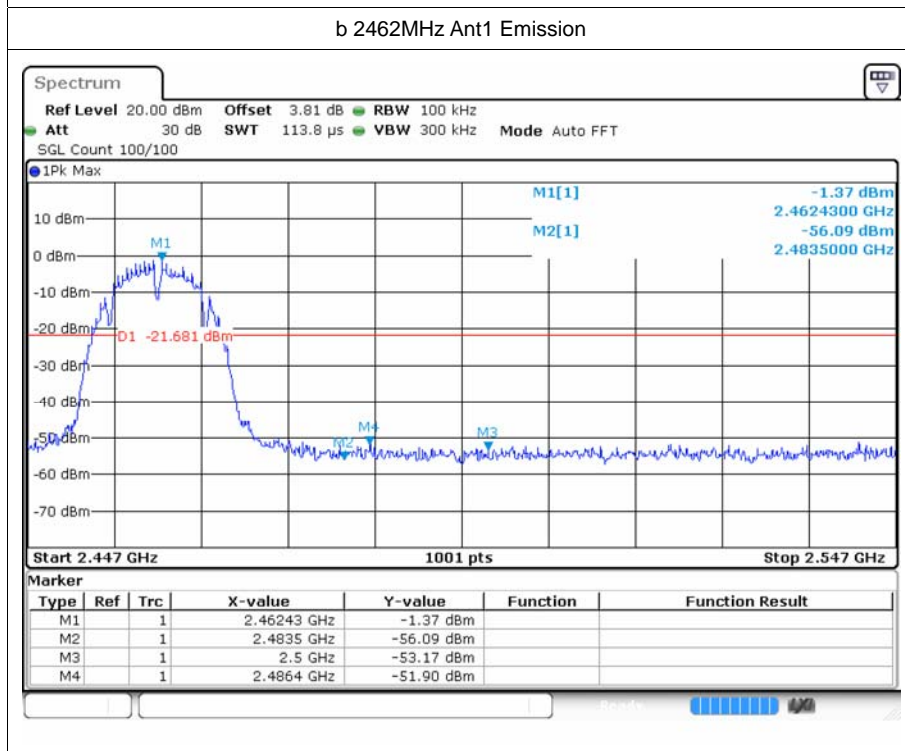
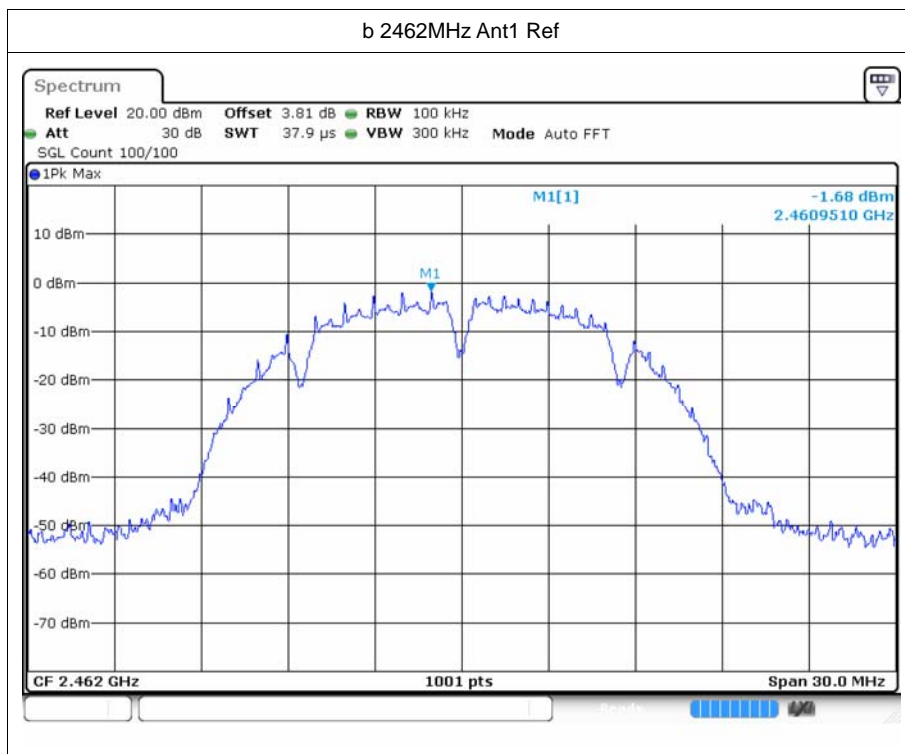
5 Band Edge

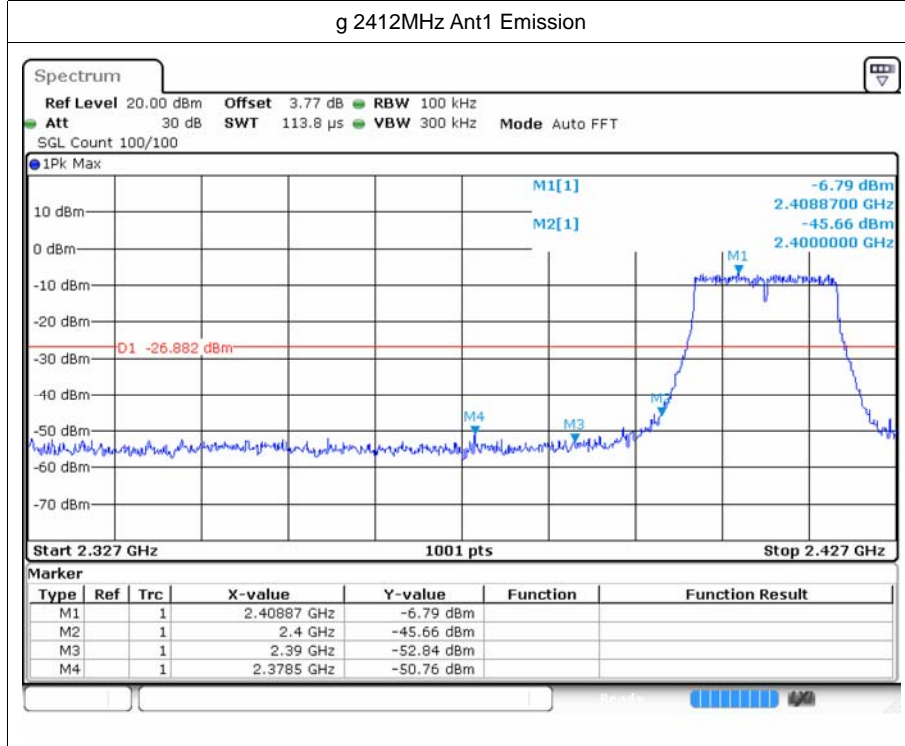
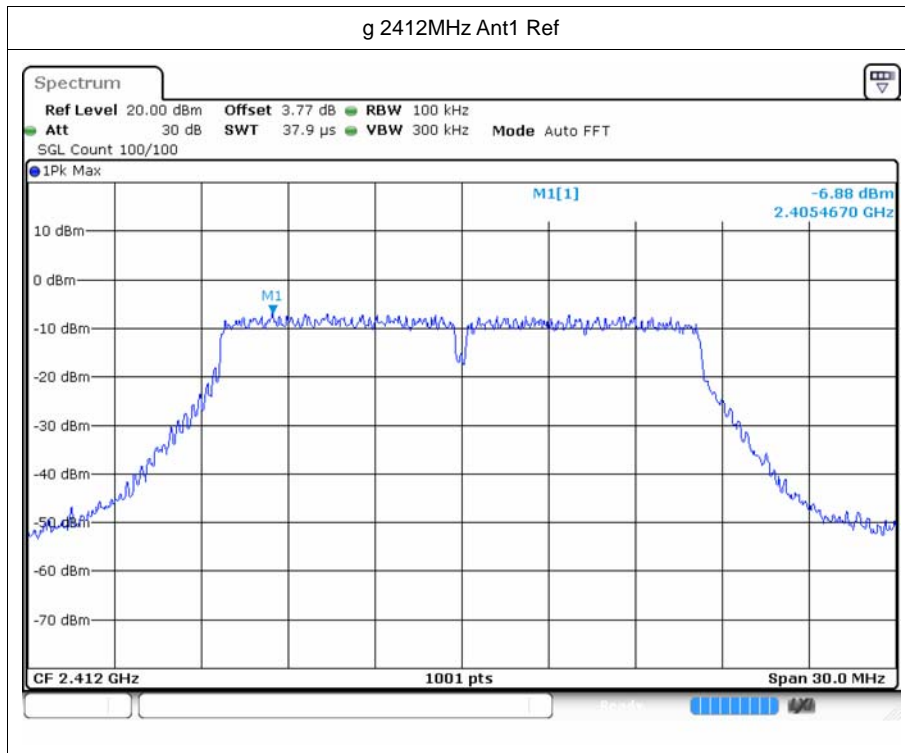
5.1 Test Result

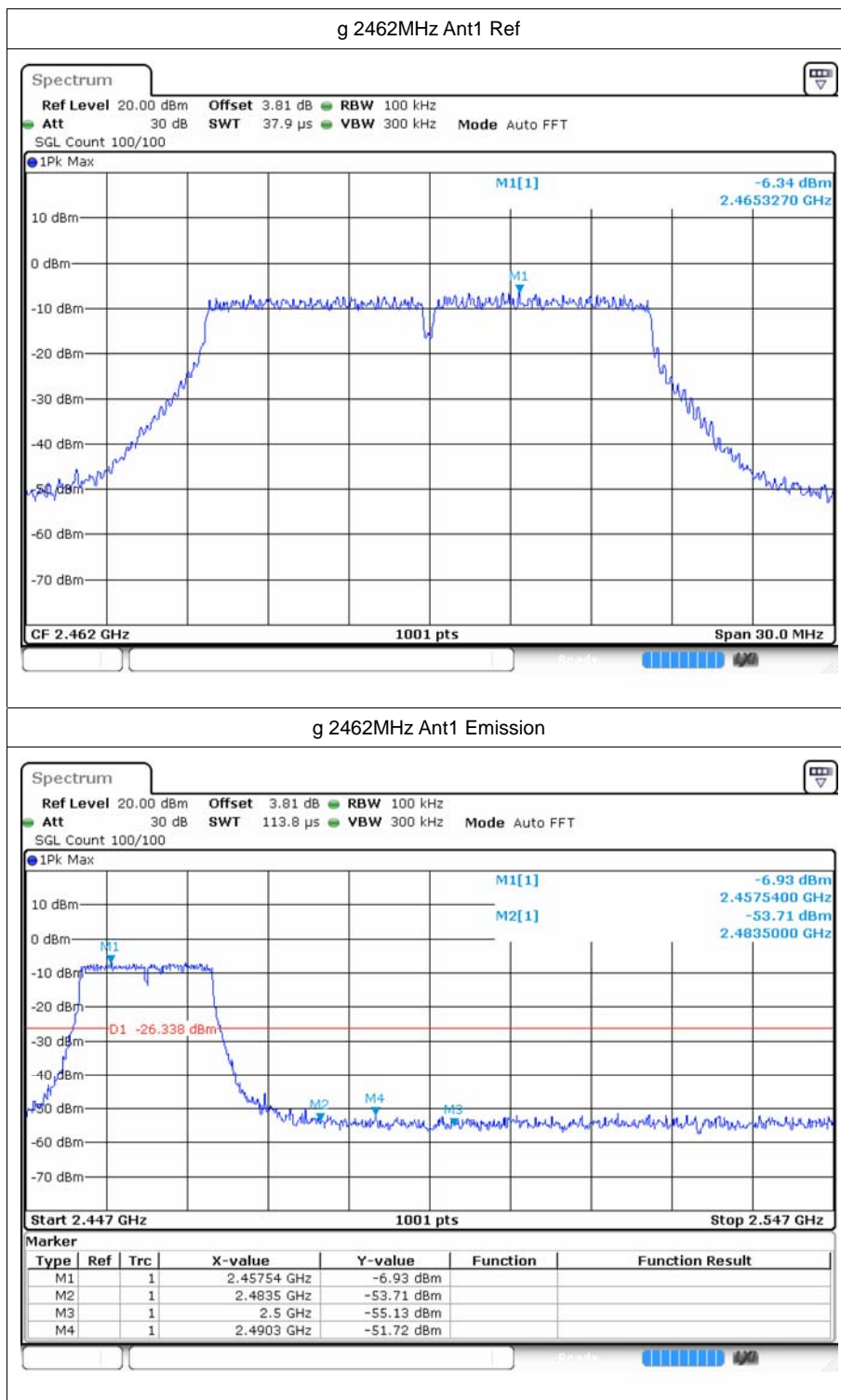
| Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|------|-----------------|---------|-----------------|-------------|---------|
| b | 2412 | Ant1 | -49.23 | -20 | -49.23 |
| b | 2462 | Ant1 | -50.21 | -20 | Pass |
| g | 2412 | Ant1 | -43.88 | -20 | Pass |
| g | 2462 | Ant1 | -45.38 | -20 | Pass |
| n20 | 2412 | Ant1 | -44.02 | -20 | Pass |
| n20 | 2462 | Ant1 | -47.89 | -20 | Pass |

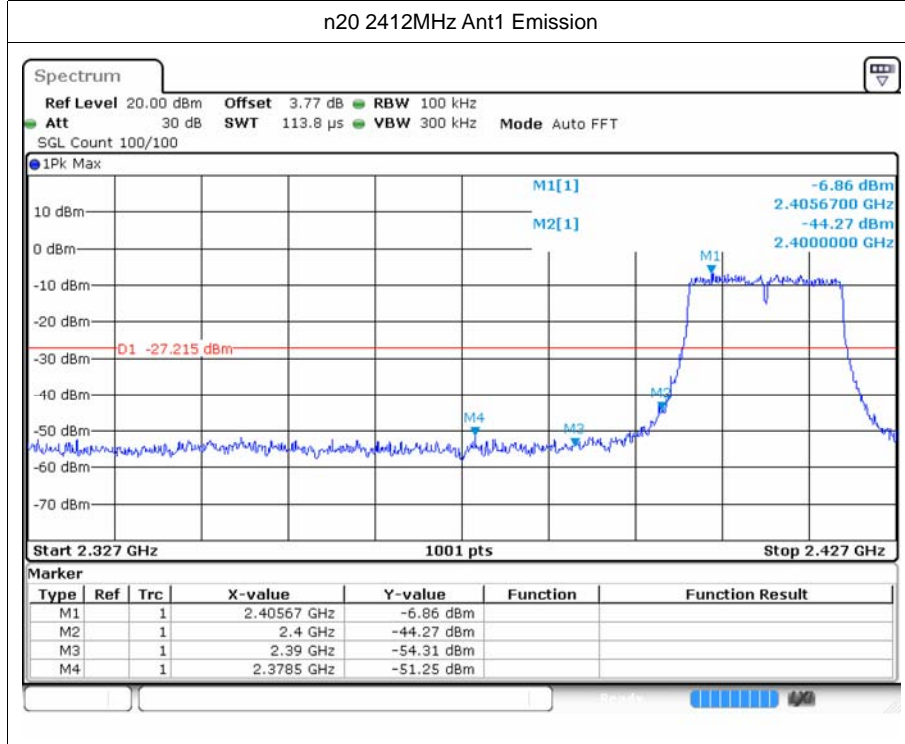
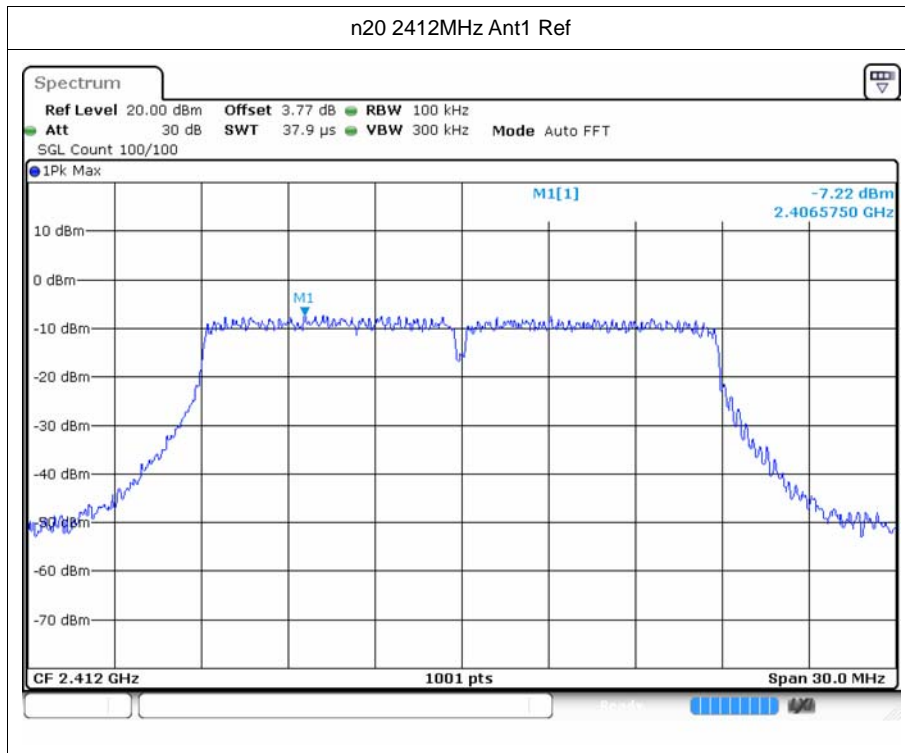
5.2 Test Graphs

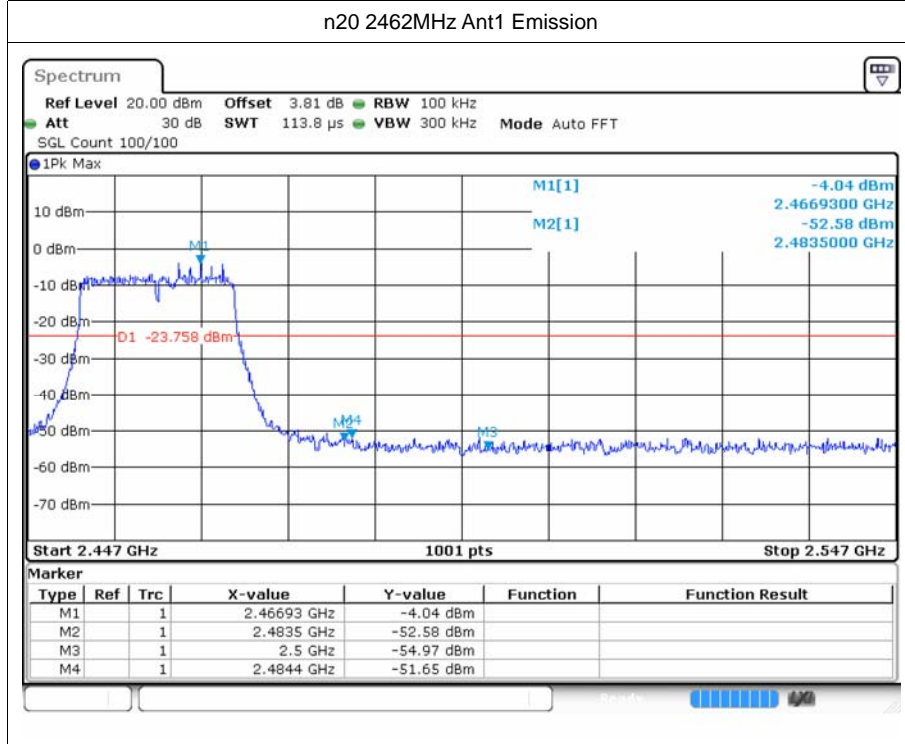
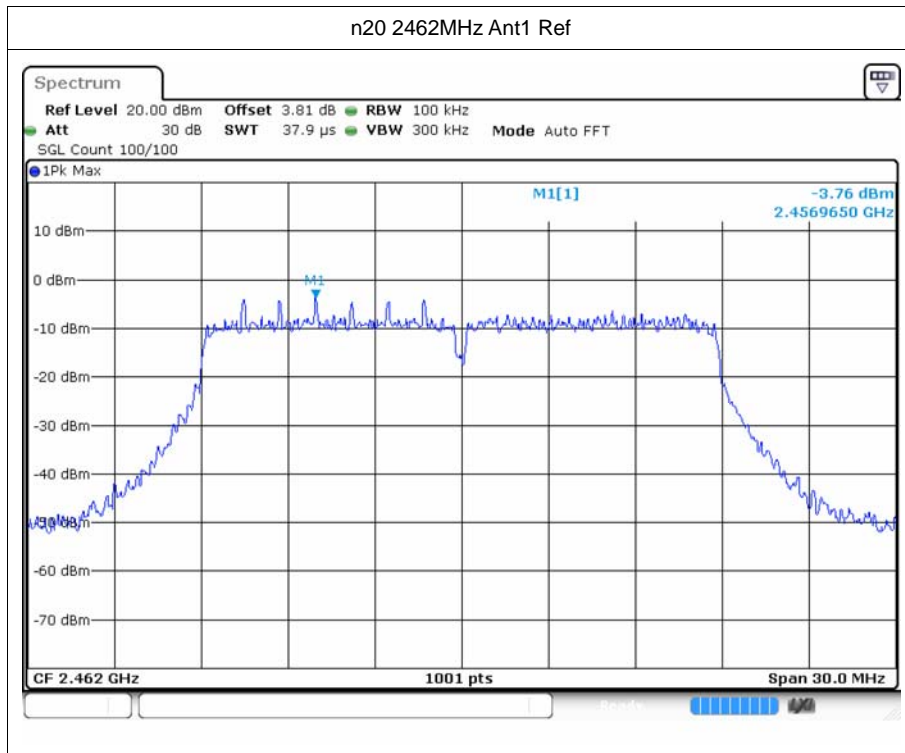












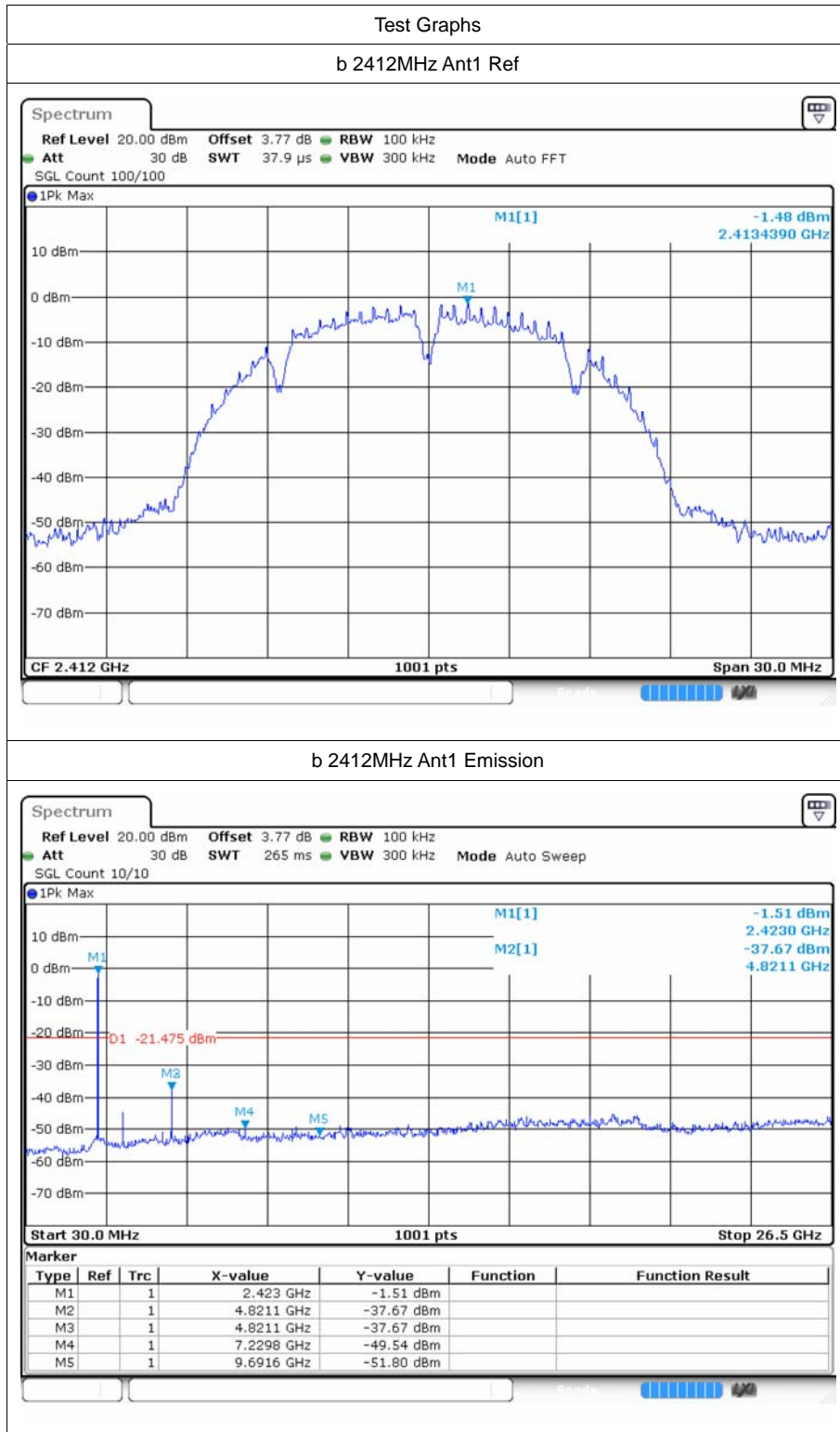


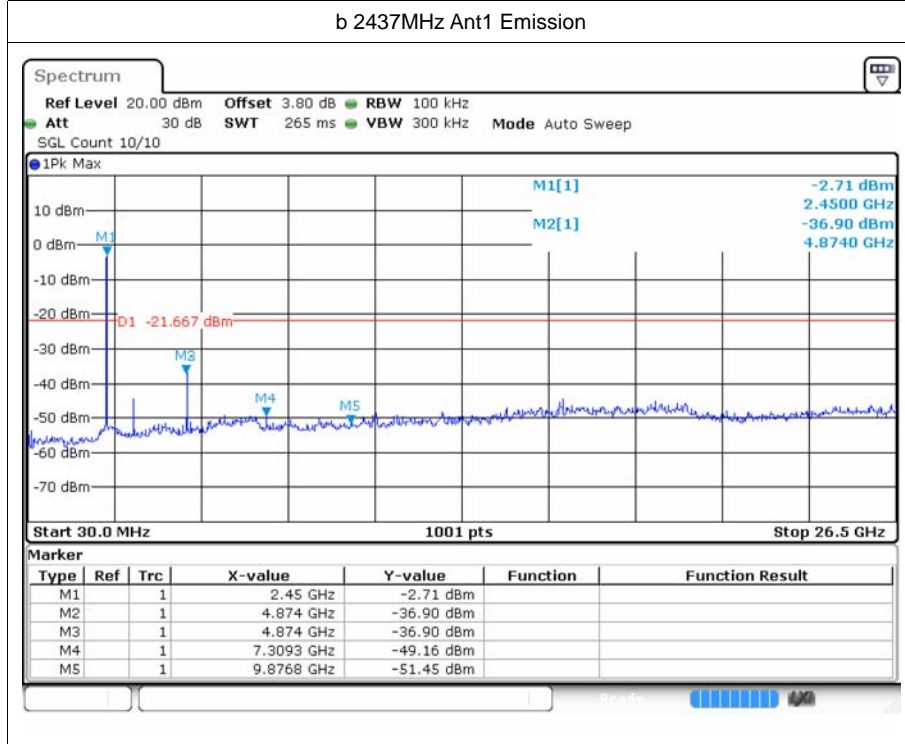
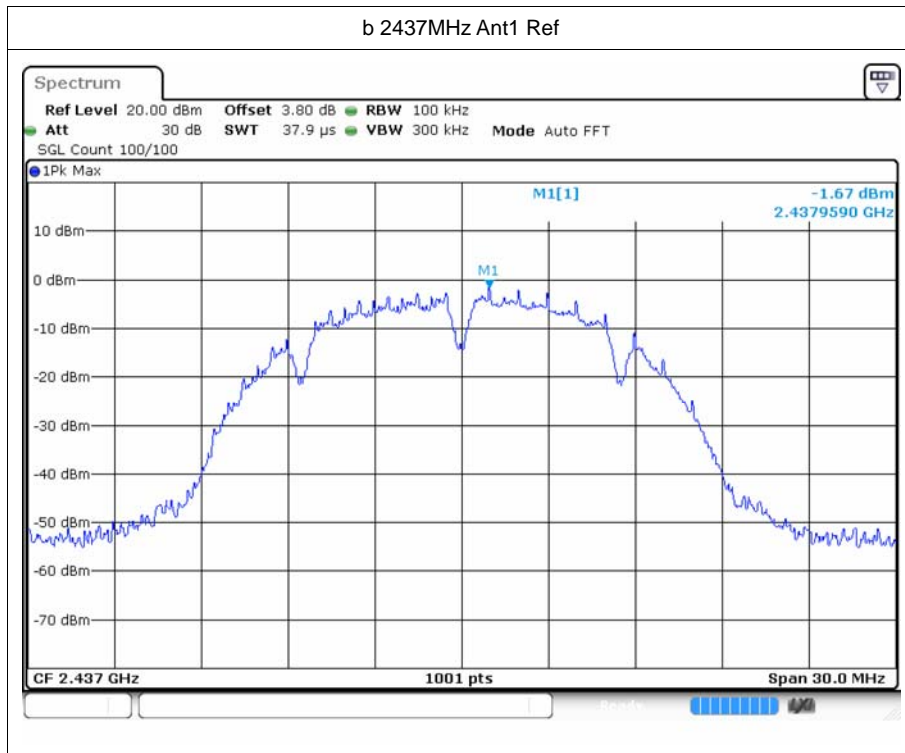
6 Conducted RF Spurious Emission

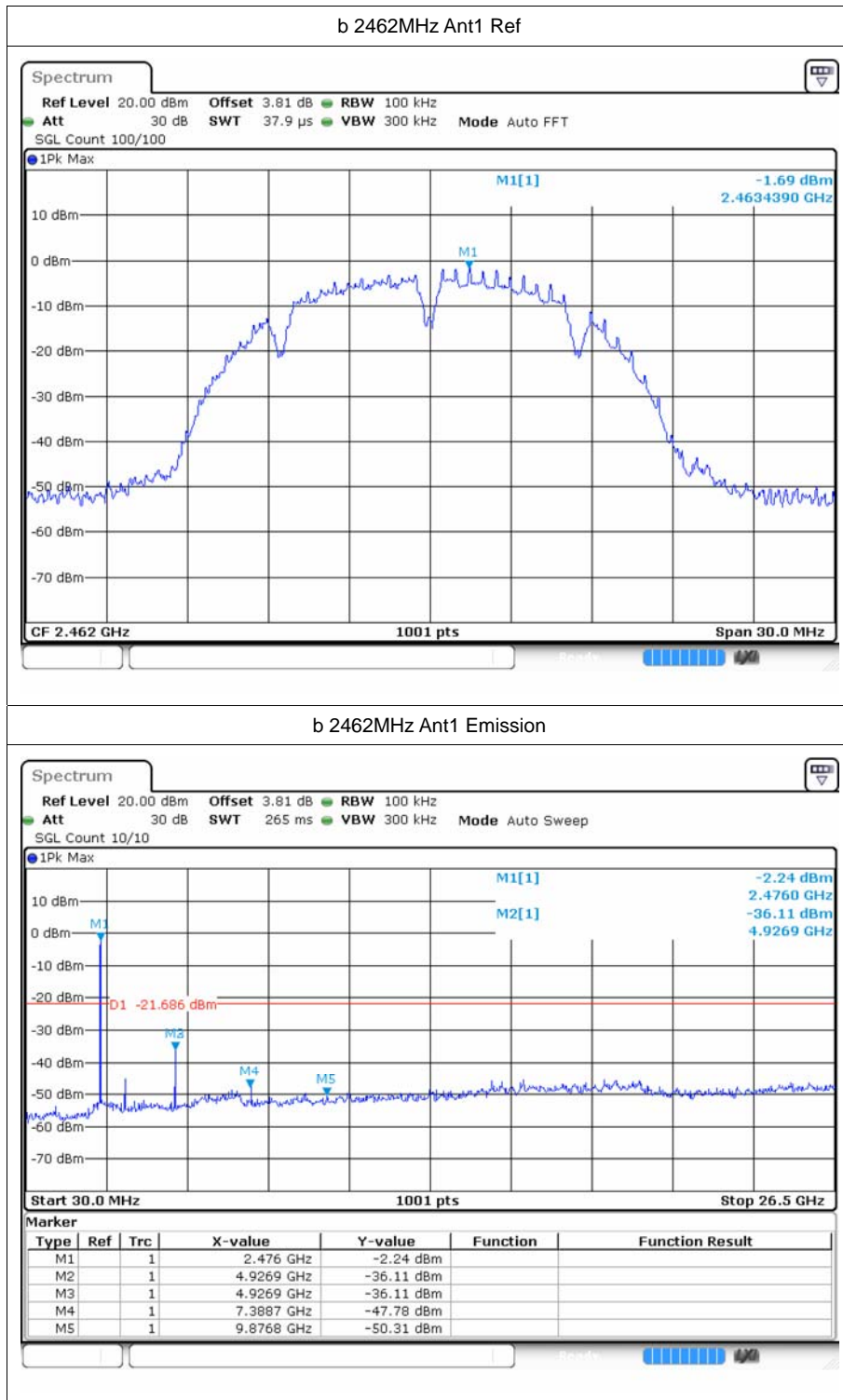
6.1 Test Result

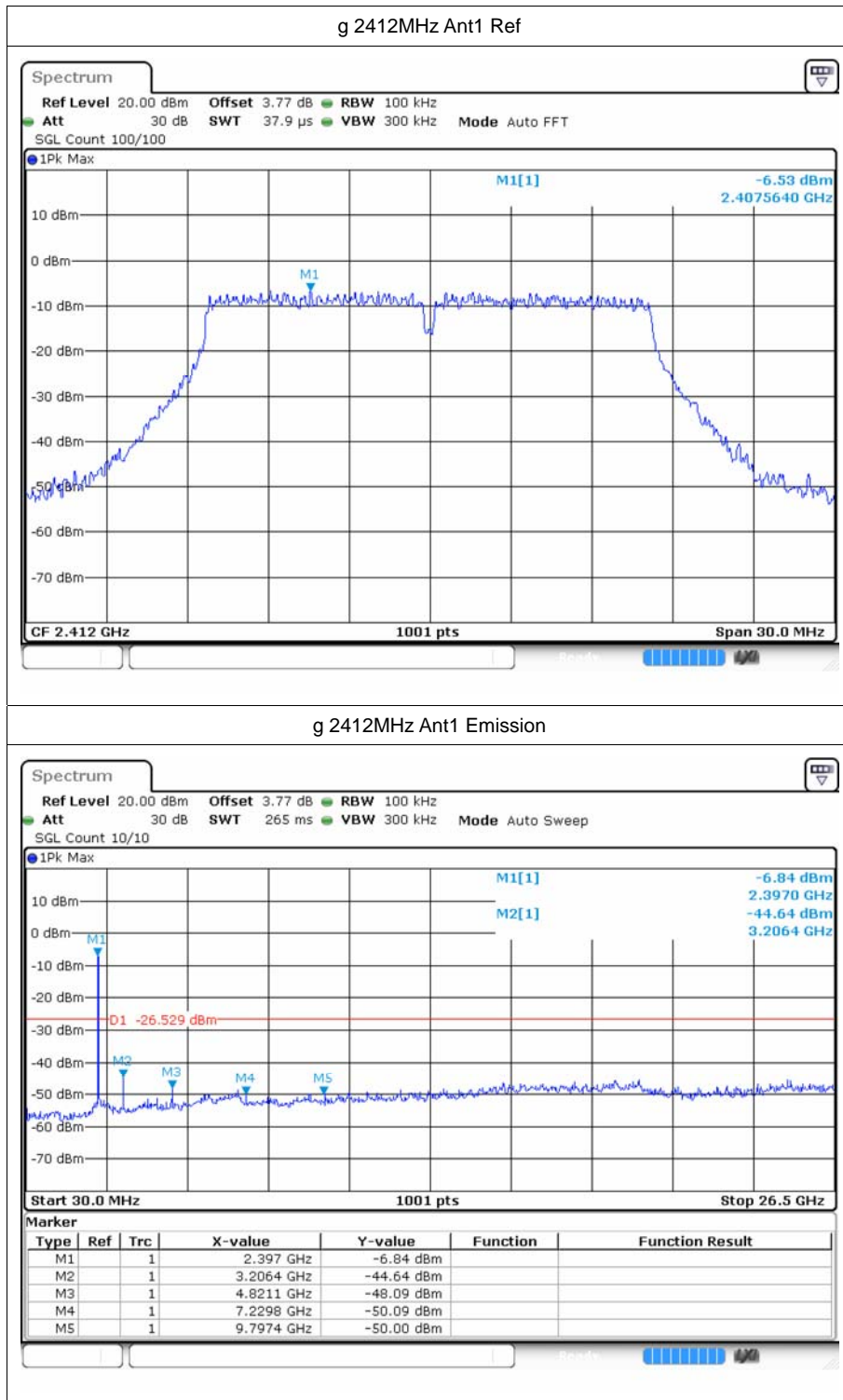
| Mode | Frequency (MHz) | Antenna | Max Value (dBc) | Limit (dBc) | Verdict |
|------|-----------------|---------|-----------------|-------------|---------|
| b | 2412 | Ant1 | -36.19 | -20 | Pass |
| b | 2437 | Ant1 | -35.22 | -20 | Pass |
| b | 2462 | Ant1 | -34.42 | -20 | Pass |
| g | 2412 | Ant1 | -38.11 | -20 | Pass |
| g | 2437 | Ant1 | -38.22 | -20 | Pass |
| g | 2462 | Ant1 | -41.06 | -20 | Pass |
| n20 | 2412 | Ant1 | -38.37 | -20 | Pass |
| n20 | 2437 | Ant1 | -38.43 | -20 | Pass |
| n20 | 2462 | Ant1 | -37.04 | -20 | Pass |

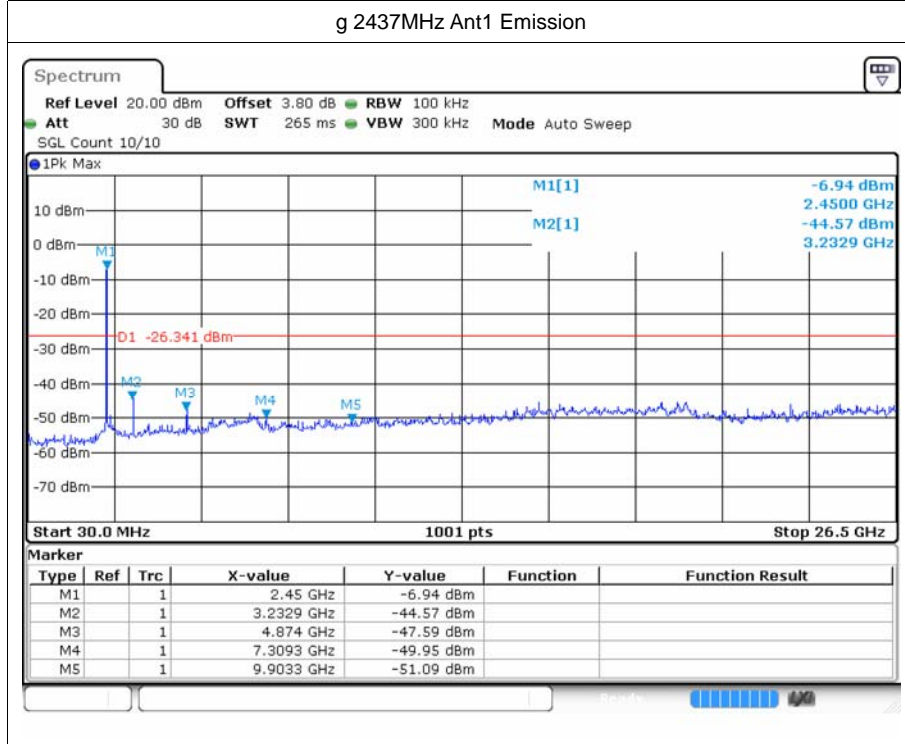
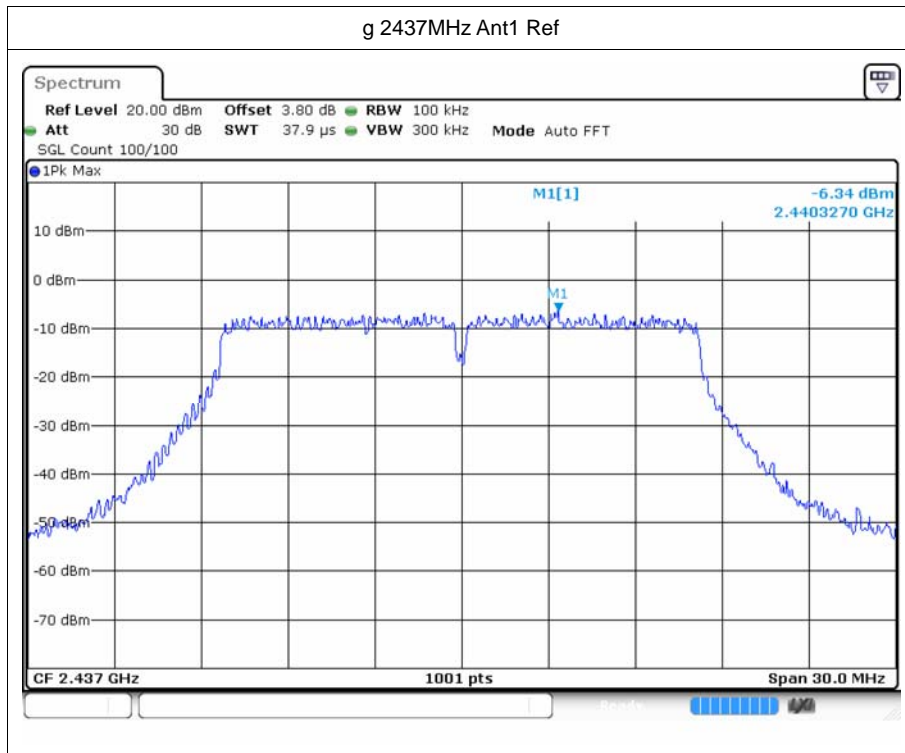
6.2 Test Graphs

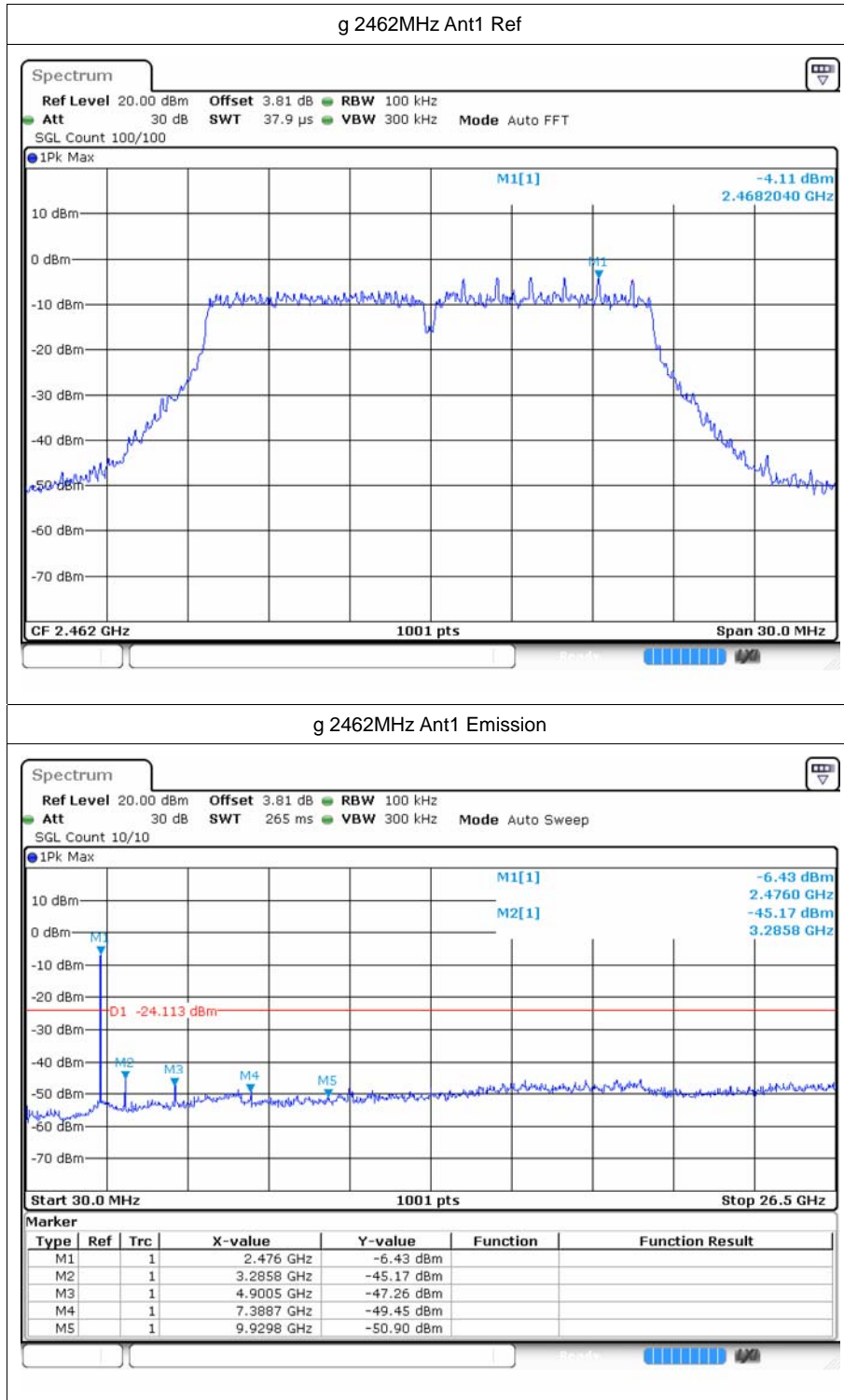


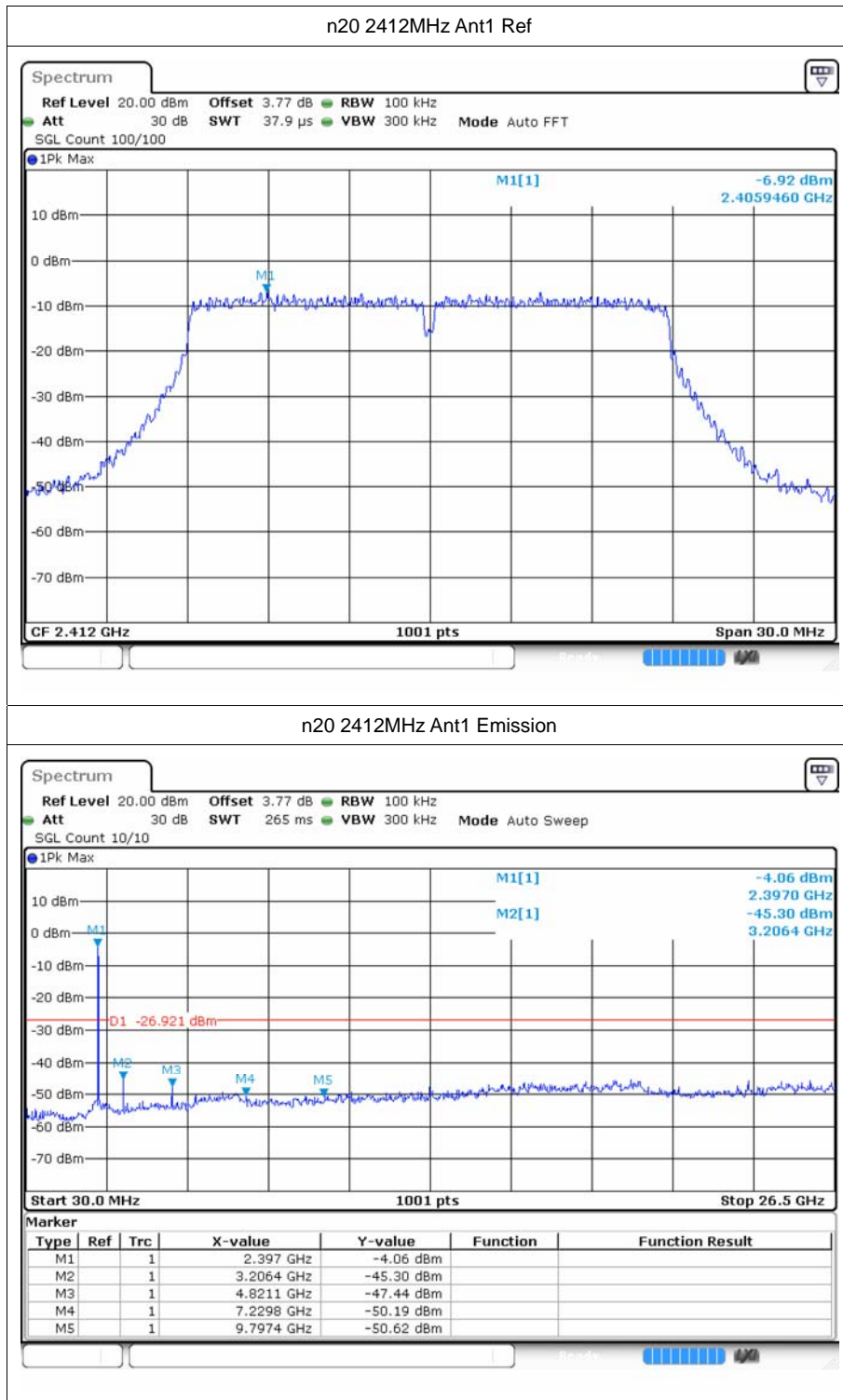


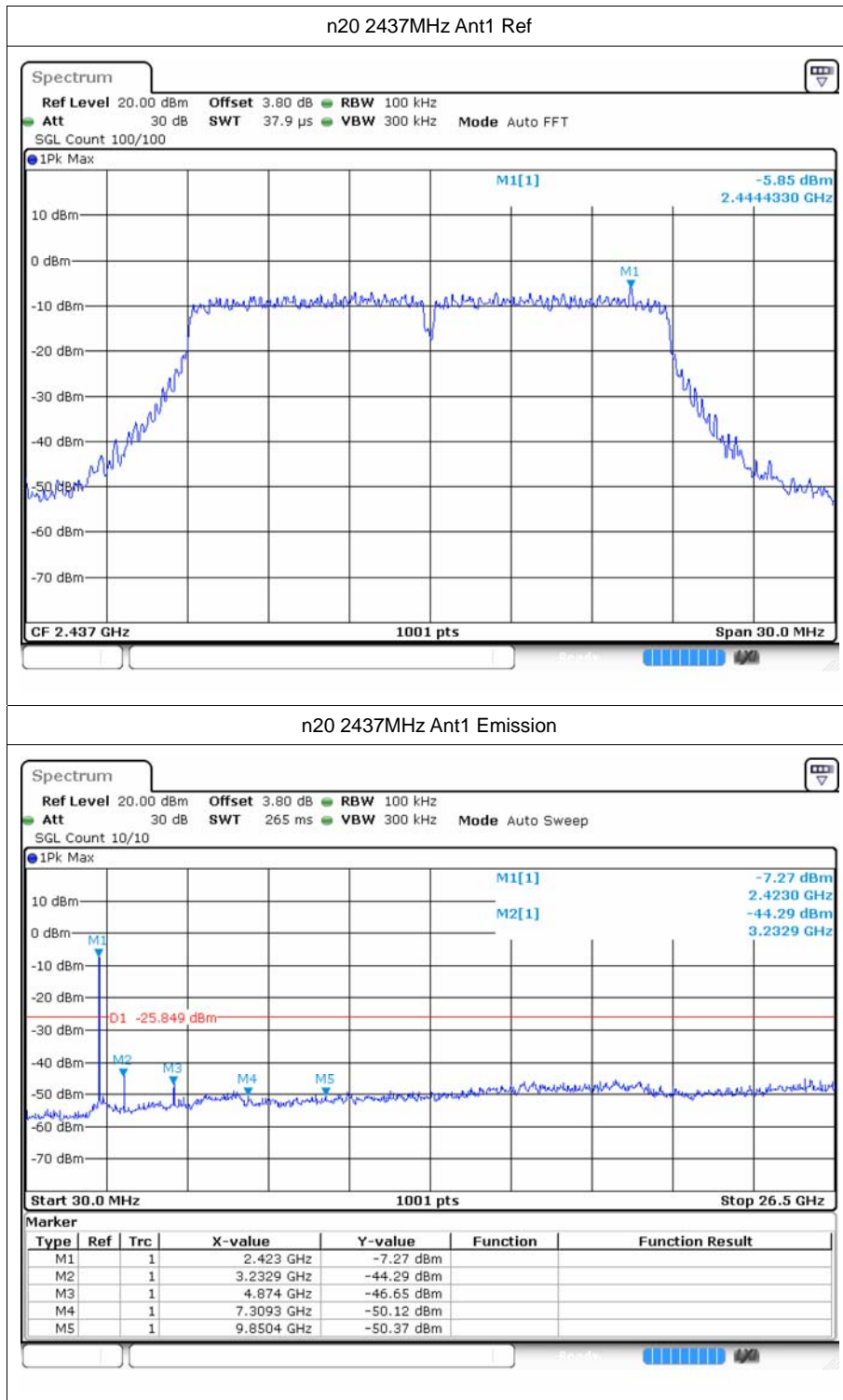


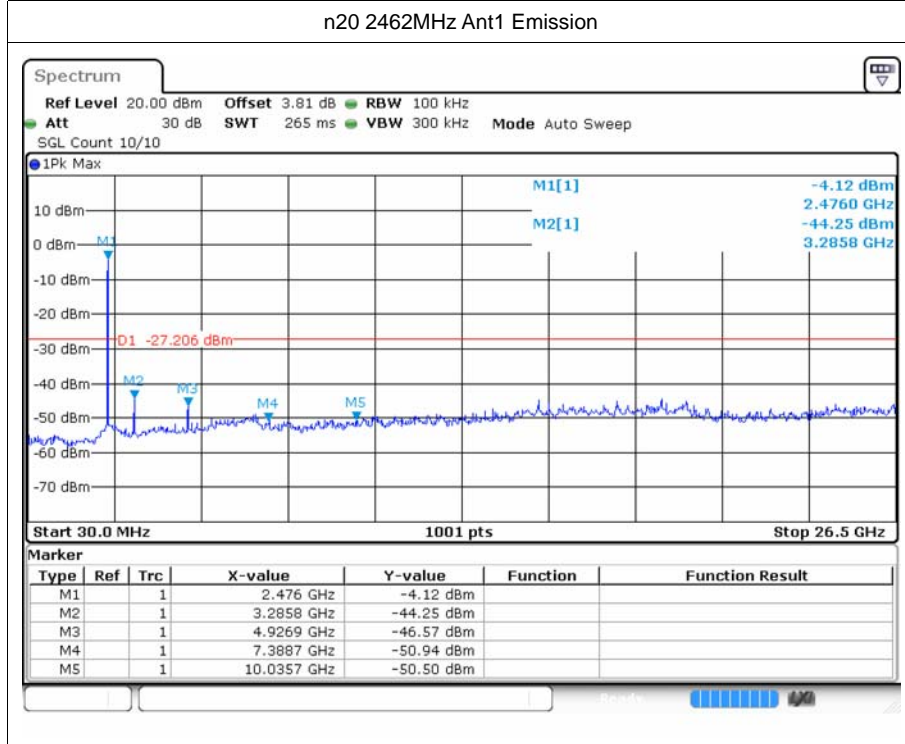
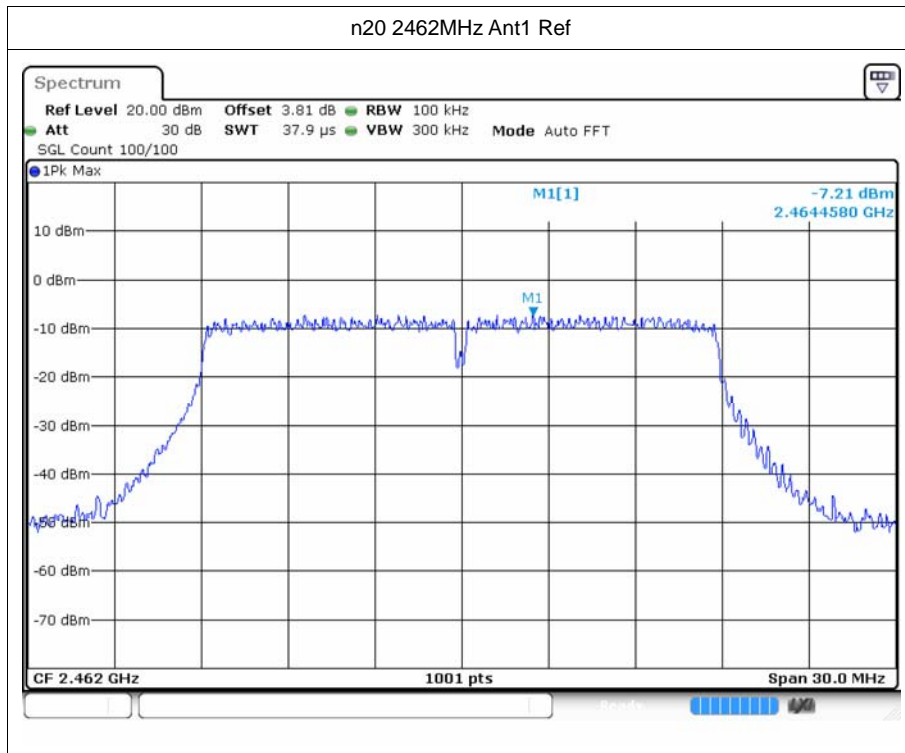














7 Restrict Band

7.1 Test Result

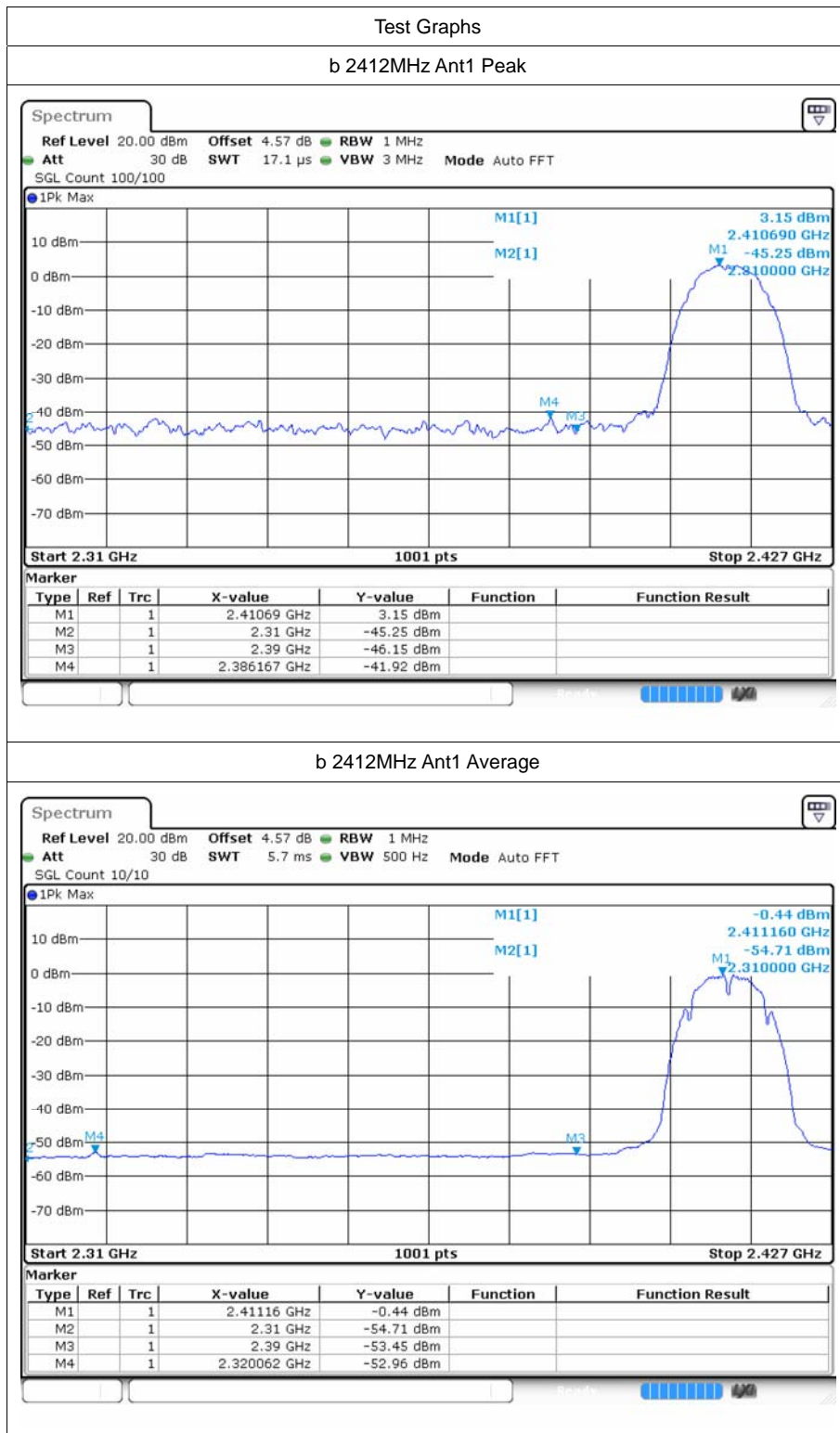
| Mode | Frequency (MHz) | Antenna | Spur Freq (MHz) | Power (dBm) | Gain (dBi) | E (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|------|-----------------|---------|-----------------|-------------|------------|------------|----------|----------------|---------|
| b | 2412 | Ant1 | 2310 | -45.24 | 2 | 52.02 | Peak | 74 | Pass |
| b | 2412 | Ant1 | 2310 | -54.7 | 2 | 42.56 | Average | 54 | Pass |
| b | 2412 | Ant1 | 2386.167 | -41.92 | 2 | 55.34 | Peak | 74 | Pass |
| b | 2412 | Ant1 | 2320.062 | -52.95 | 2 | 44.31 | Average | 54 | Pass |
| b | 2412 | Ant1 | 2390 | -46.15 | 2 | 51.11 | Peak | 74 | Pass |
| b | 2412 | Ant1 | 2390 | -53.44 | 2 | 43.82 | Average | 54 | Pass |
| b | 2462 | Ant1 | 2483.5 | -43.9 | 2 | 53.36 | Peak | 74 | 53.36 |
| b | 2462 | Ant1 | 2483.5 | -53.55 | 2 | 43.71 | Average | 54 | Pass |
| b | 2462 | Ant1 | 2484.471 | -42.8 | 2 | 54.46 | Peak | 74 | Pass |
| b | 2462 | Ant1 | 2484.418 | -53.49 | 2 | 43.77 | Average | 54 | Pass |
| b | 2462 | Ant1 | 2500 | -45.62 | 2 | 51.64 | Peak | 74 | Pass |
| b | 2462 | Ant1 | 2500 | -53.67 | 2 | 43.59 | Average | 54 | Pass |
| g | 2412 | Ant1 | 2310 | -46.28 | 2 | 50.98 | Peak | 74 | Pass |
| g | 2412 | Ant1 | 2310 | -54.12 | 2 | 43.14 | Average | 54 | Pass |
| g | 2412 | Ant1 | 2380.551 | -41.22 | 2 | 56.04 | Peak | 74 | Pass |
| g | 2412 | Ant1 | 2386.401 | -52.29 | 2 | 44.97 | Average | 54 | Pass |
| g | 2412 | Ant1 | 2390 | -43.13 | 2 | 51.11 | Peak | 74 | Pass |
| g | 2412 | Ant1 | 2390 | -52.88 | 2 | 44.38 | Average | 54 | Pass |
| g | 2462 | Ant1 | 2483.5 | -44.54 | 2 | 52.72 | Peak | 74 | Pass |
| g | 2462 | Ant1 | 2483.5 | -51.63 | 2 | 45.63 | Average | 54 | Pass |
| g | 2462 | Ant1 | 2484.471 | -41.43 | 2 | 55.83 | Peak | 74 | Pass |
| g | 2462 | Ant1 | 2483.517 | -51.63 | 2 | 45.63 | Average | 54 | Pass |
| g | 2462 | Ant1 | 2500 | -43.83 | 2 | 51.64 | Peak | 74 | Pass |
| g | 2462 | Ant1 | 2500 | -52.98 | 2 | 44.28 | Average | 54 | Pass |
| n20 | 2412 | Ant1 | 2310 | -45.08 | 2 | 52.18 | Peak | 74 | Pass |
| n20 | 2412 | Ant1 | 2310 | -53.92 | 2 | 43.34 | Average | 54 | Pass |
| n20 | 2412 | Ant1 | 2359.725 | -41.6 | 2 | 55.66 | Peak | 74 | Pass |
| n20 | 2412 | Ant1 | 2336.559 | -51.72 | 2 | 45.54 | Average | 54 | Pass |
| n20 | 2412 | Ant1 | 2390 | -44.2 | 2 | 53.06 | Peak | 74 | Pass |
| n20 | 2412 | Ant1 | 2390 | -52.63 | 2 | 44.63 | Average | 54 | Pass |
| n20 | 2462 | Ant1 | 2483.5 | -44.41 | 2 | 52.85 | Peak | 74 | Pass |
| n20 | 2462 | Ant1 | 2483.5 | -51.82 | 2 | 45.44 | Average | 54 | Pass |
| n20 | 2462 | Ant1 | 2485.478 | -42.27 | 2 | 54.99 | Peak | 74 | Pass |
| n20 | 2462 | Ant1 | 2483.517 | -51.82 | 2 | 45.44 | Average | 54 | Pass |

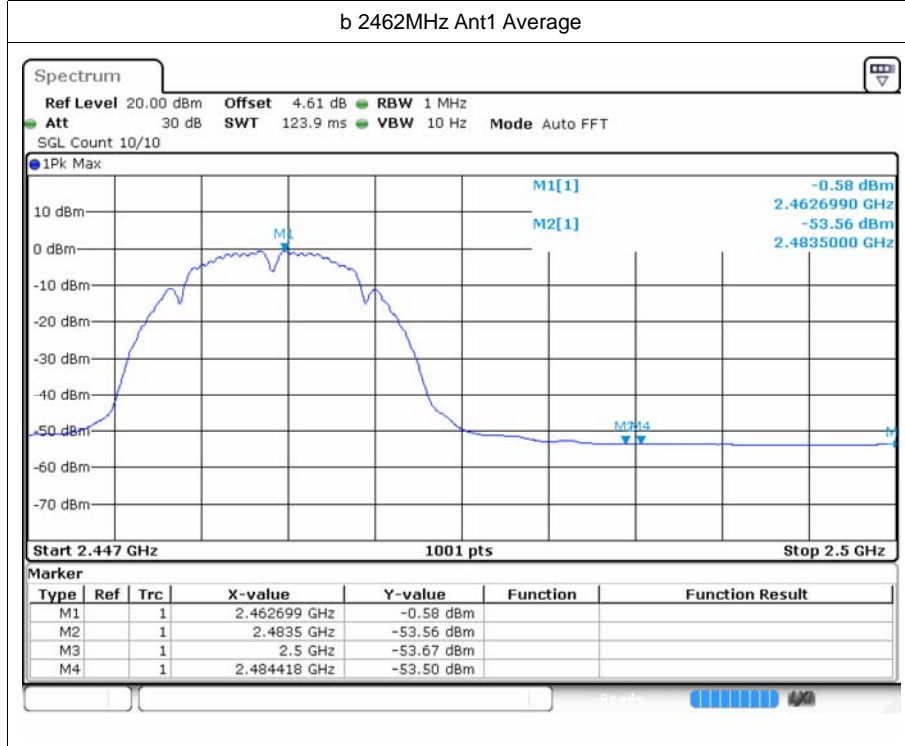
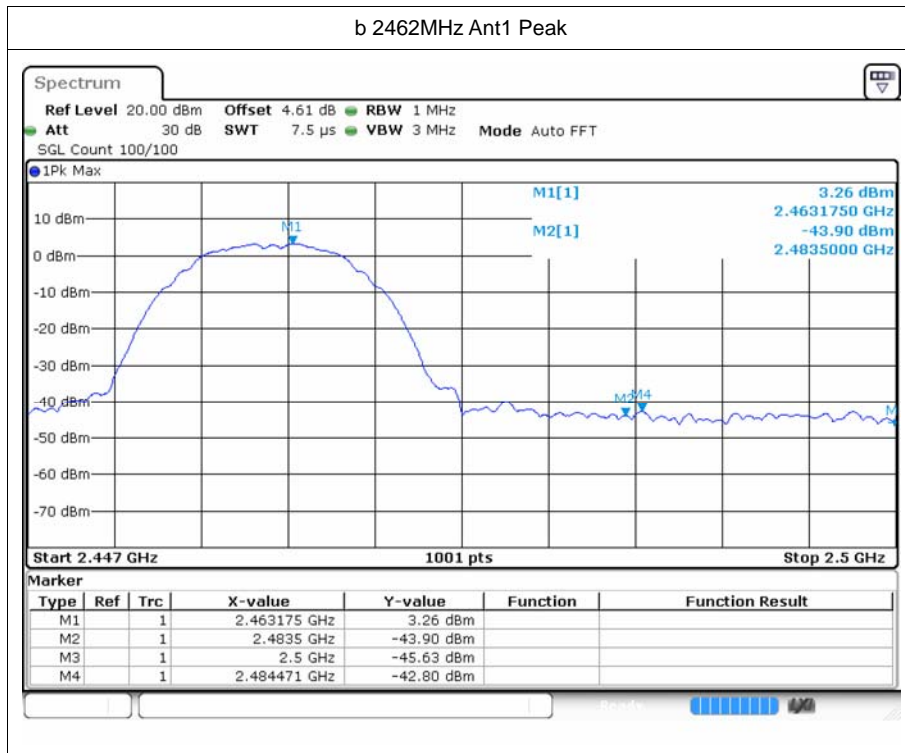


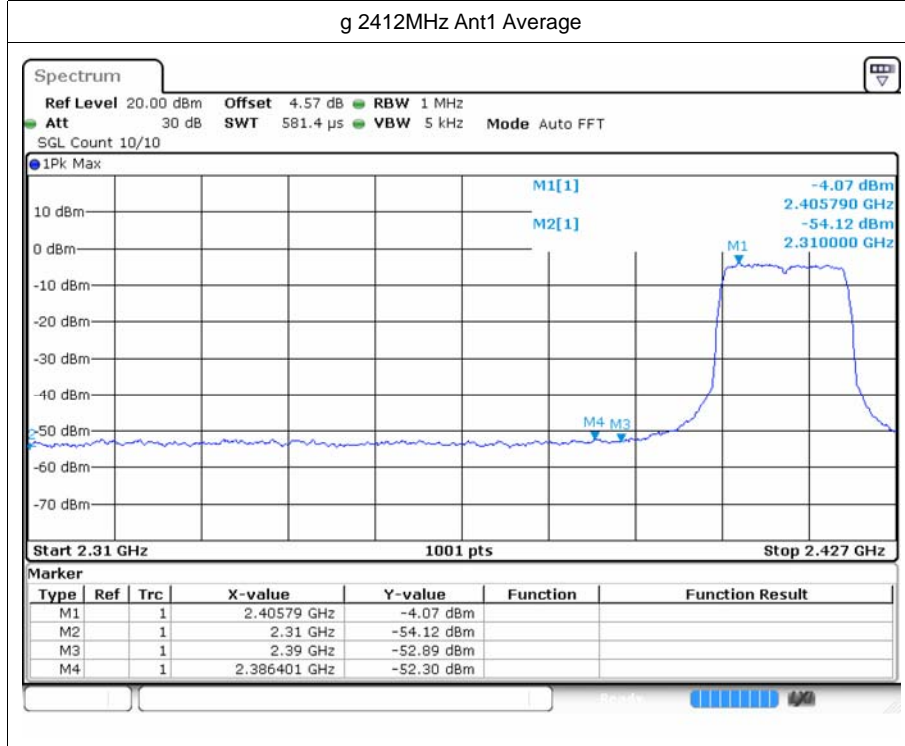
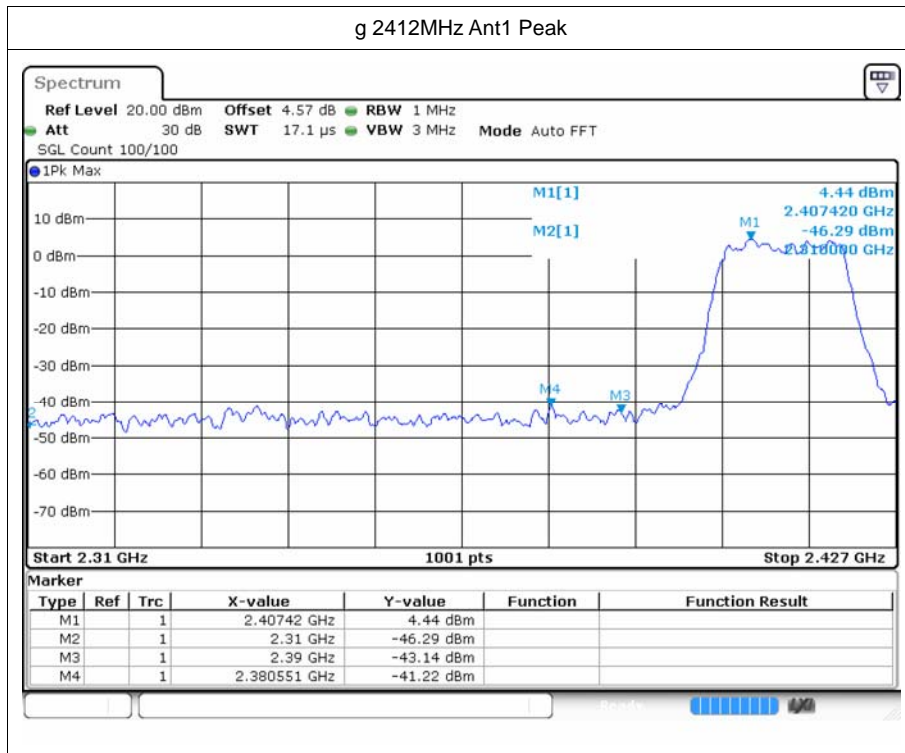
| | | | | | | | | | |
|-----|------|------|------|--------|---|-------|---------|----|------|
| n20 | 2462 | Ant1 | 2500 | -45.23 | 2 | 52.03 | Peak | 74 | Pass |
| n20 | 2462 | Ant1 | 2500 | -53.12 | 2 | 44.14 | Average | 54 | Pass |

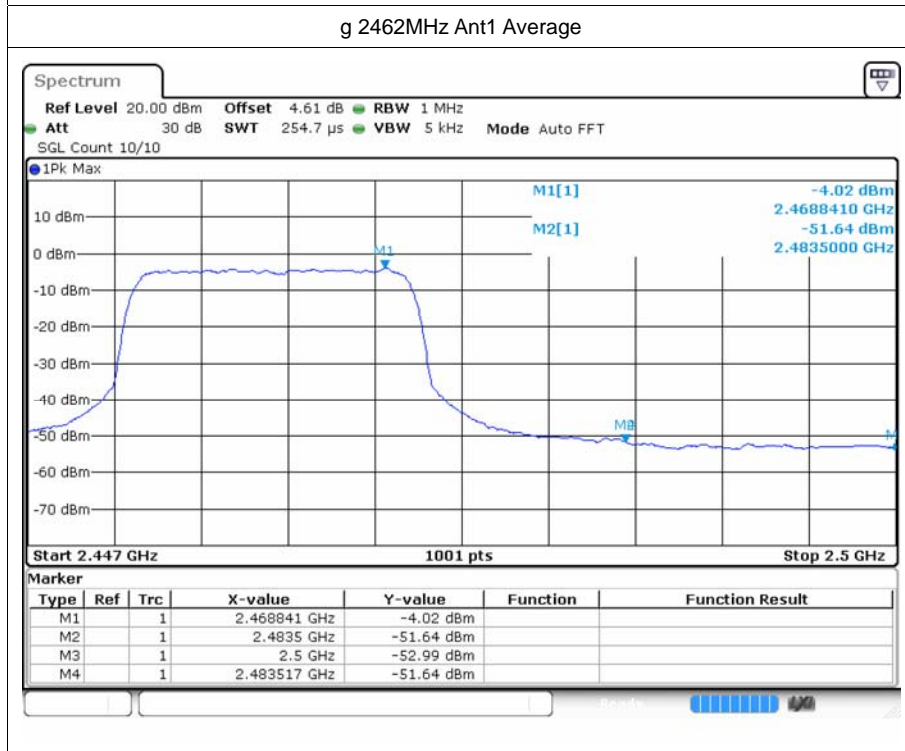
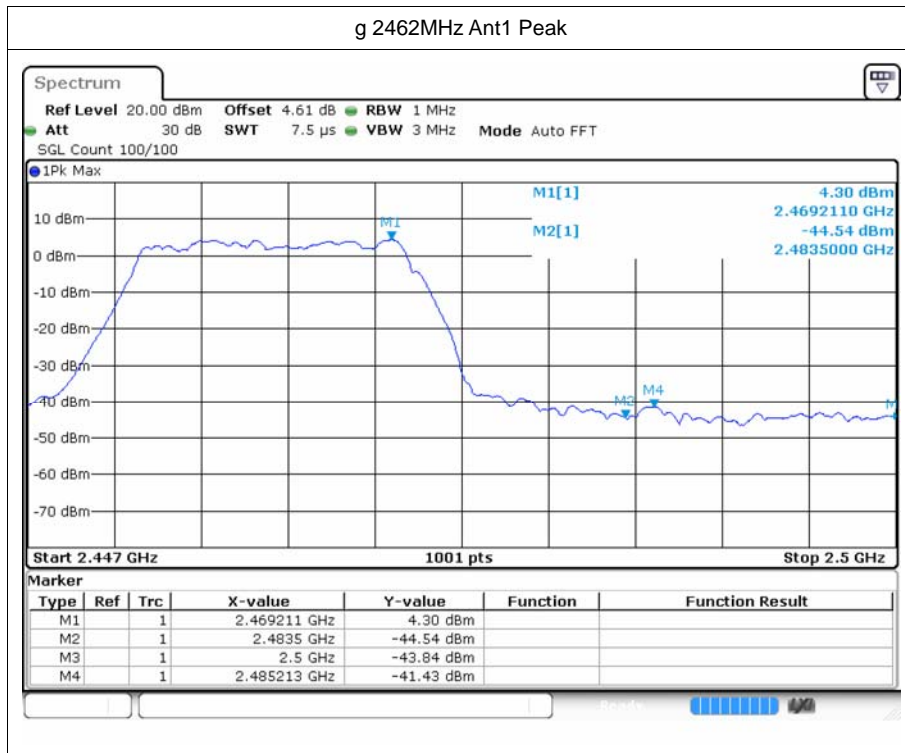


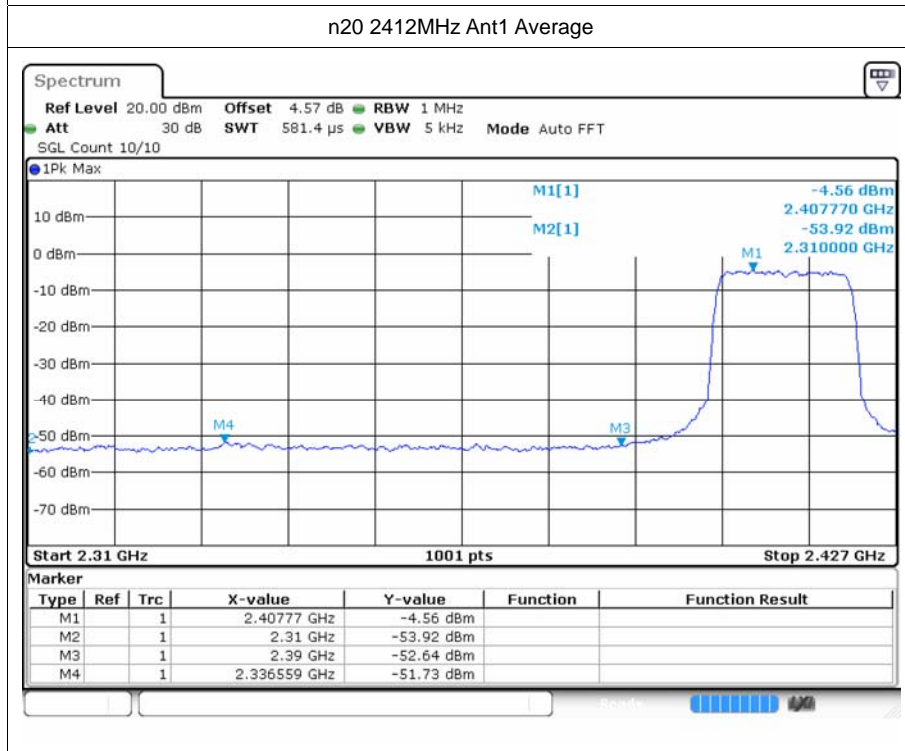
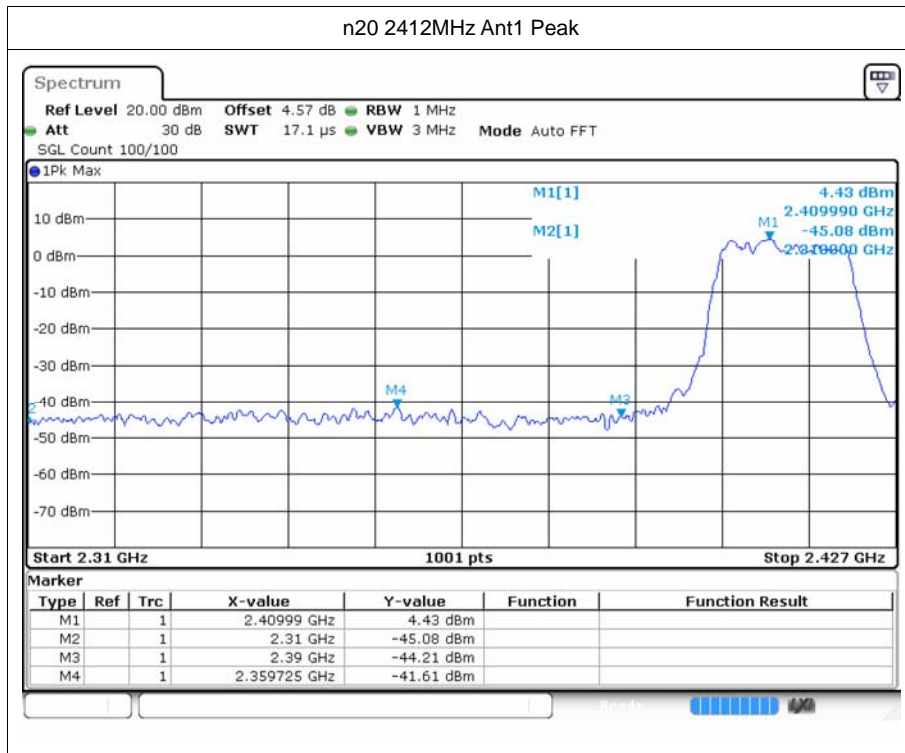
Test Graphs

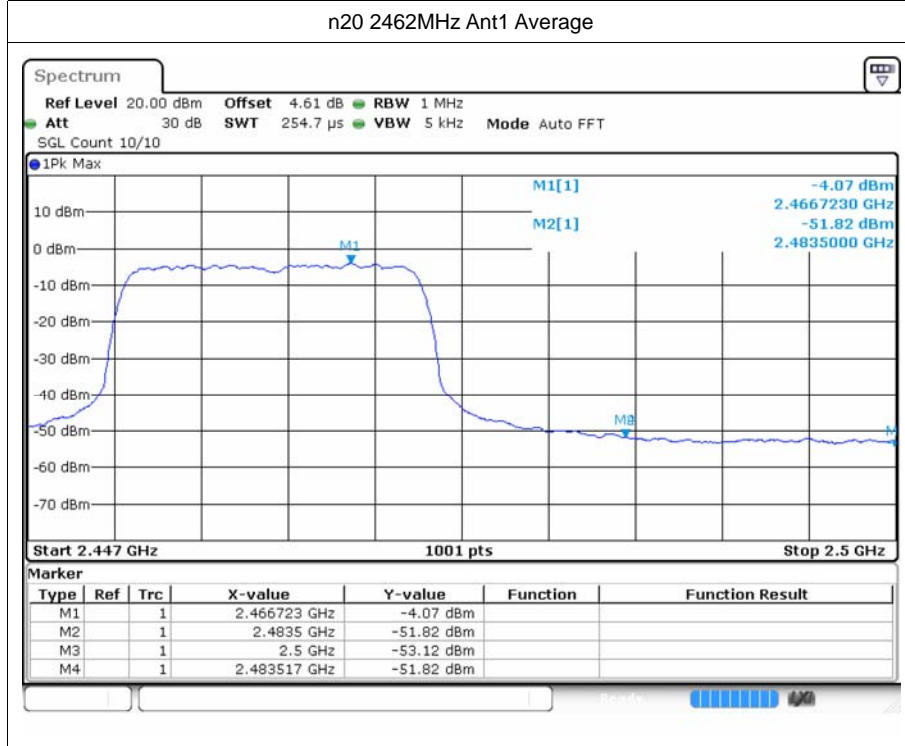
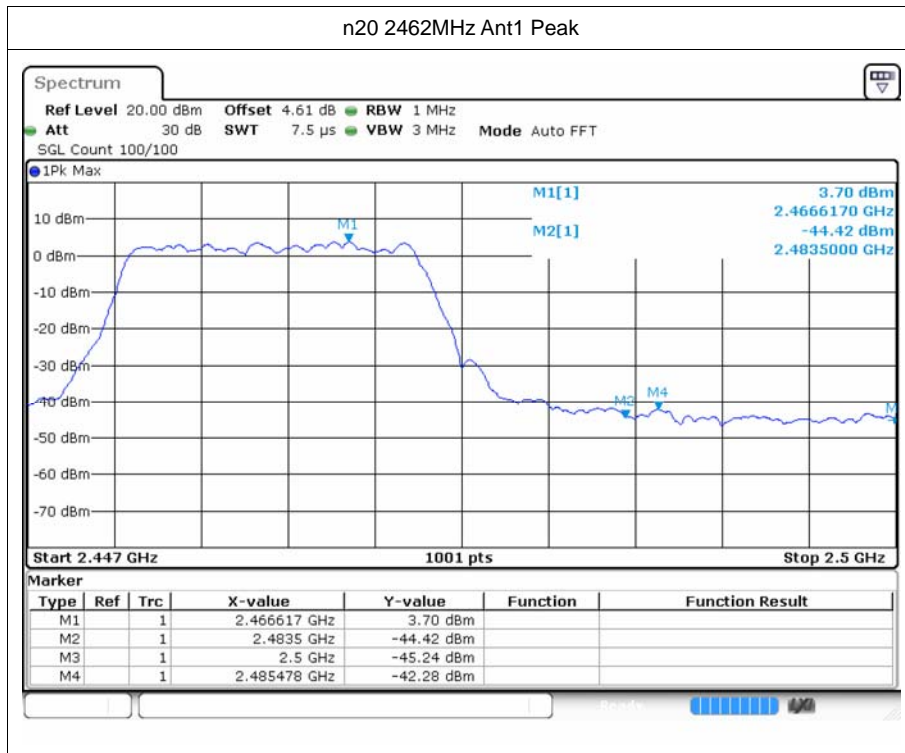












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