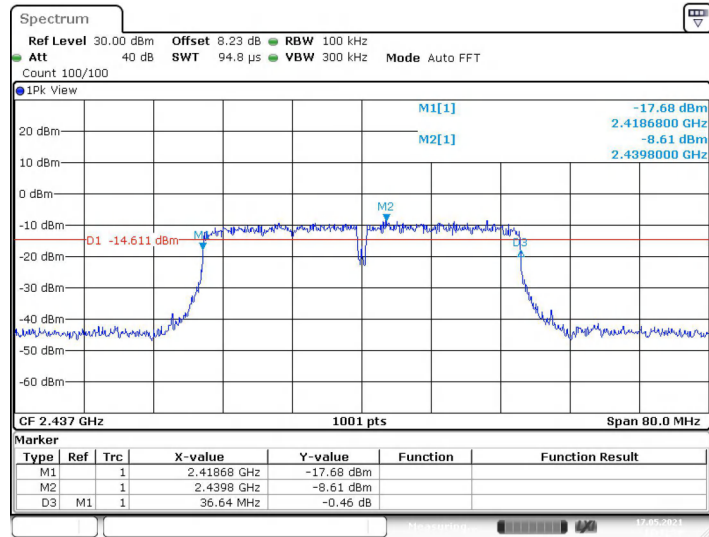
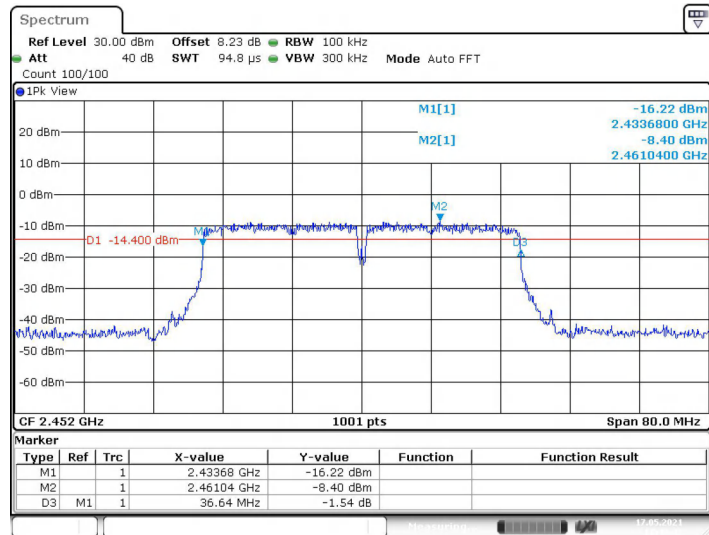


2437 MHz



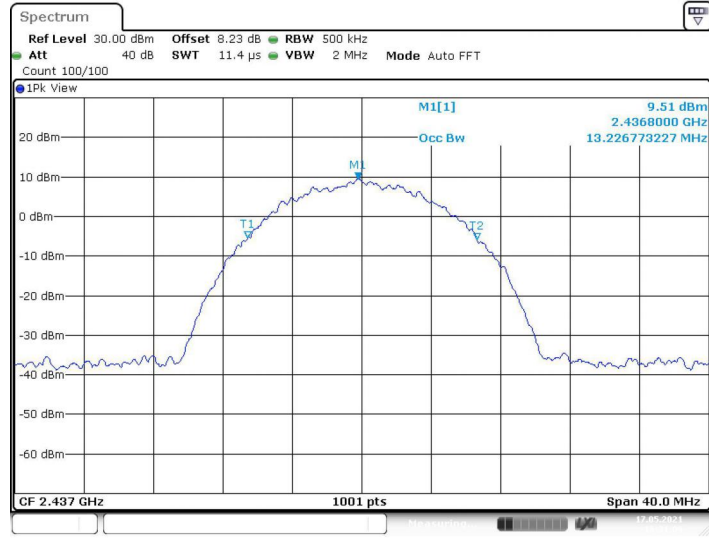
Date: 17.MAY.2021 17:41:35

2452 MHz

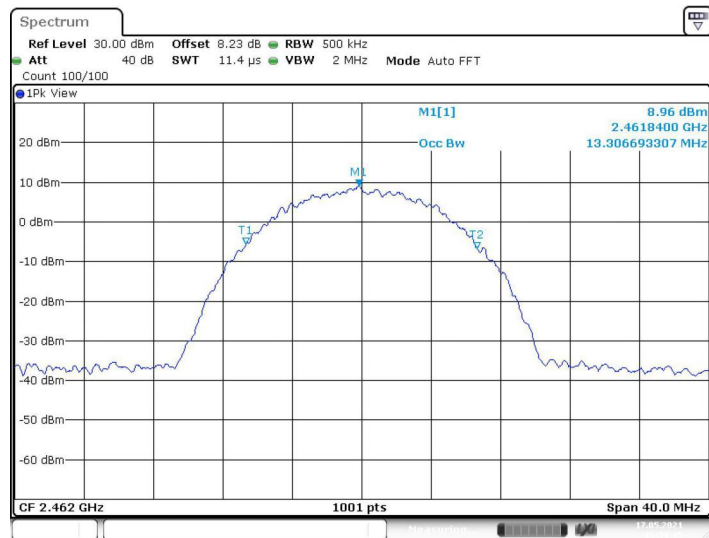


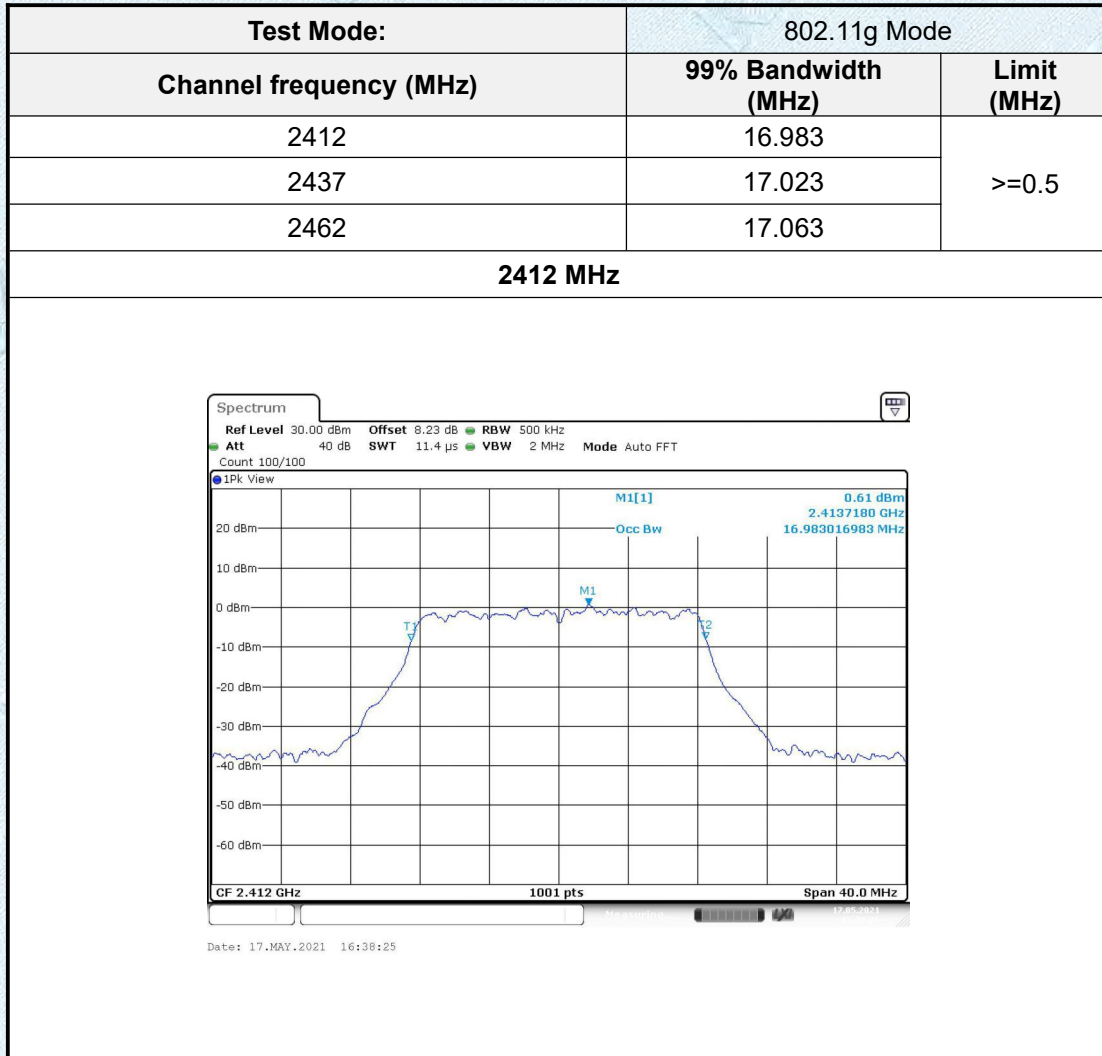
Date: 17.MAY.2021 17:43:42

2437 MHz

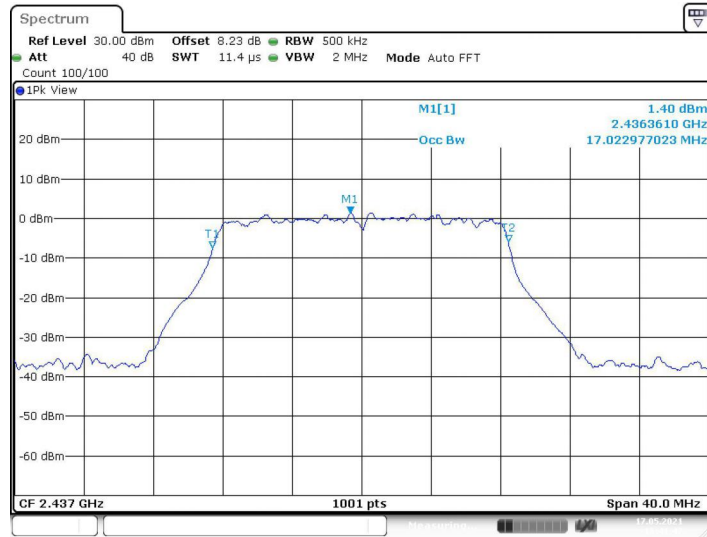


2462 MHz



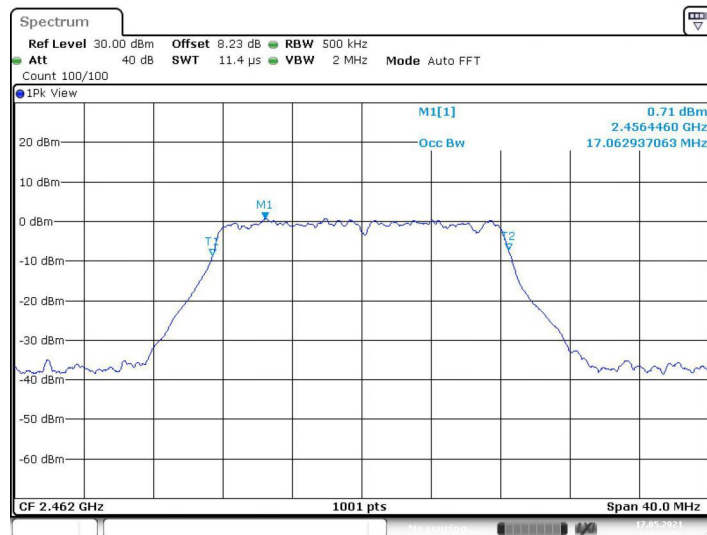


2437 MHz



Date: 17.MAY.2021 16:41:47

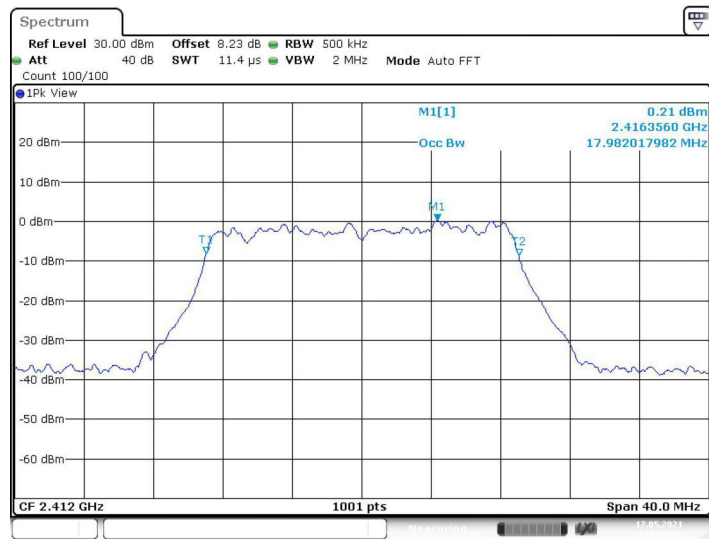
2462 MHz



Date: 17.MAY.2021 16:44:52

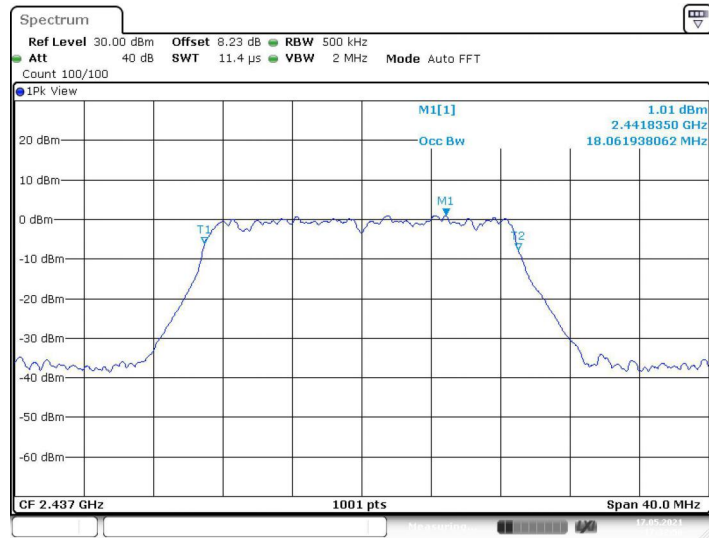
Test Mode:	802.11n(HT20) Mode	
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	17.982	>=0.5
2437	18.062	
2462	17.982	

2412 MHz

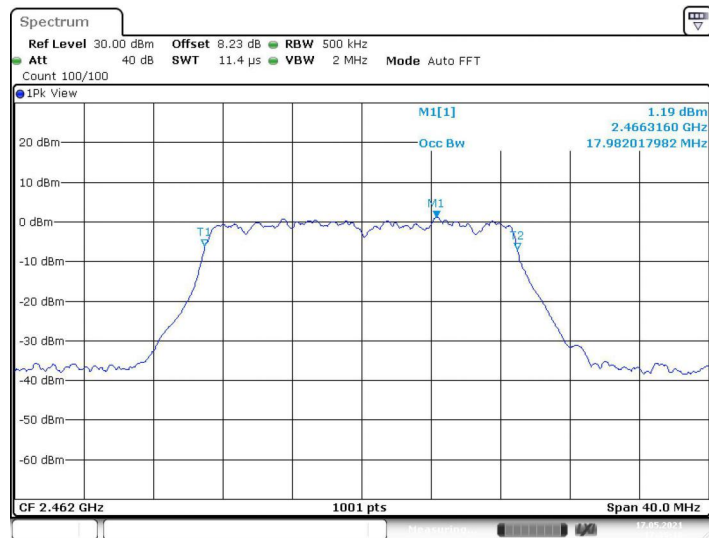


Date: 17.MAY.2021 16:49:15

2437 MHz

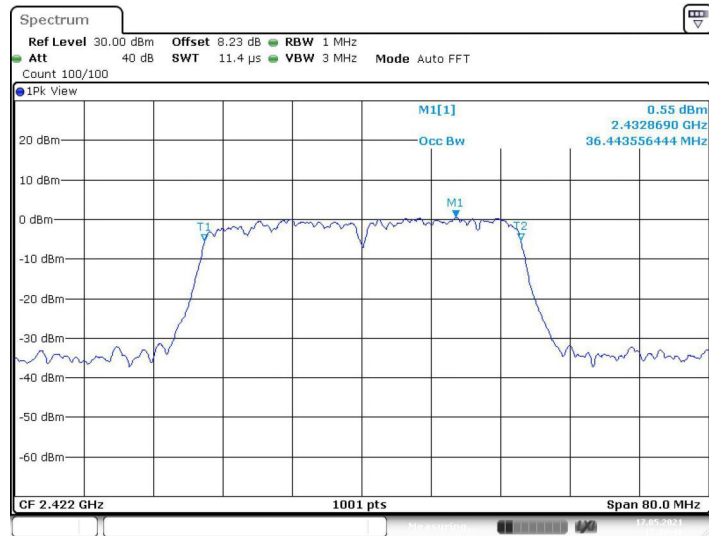


2462 MHz



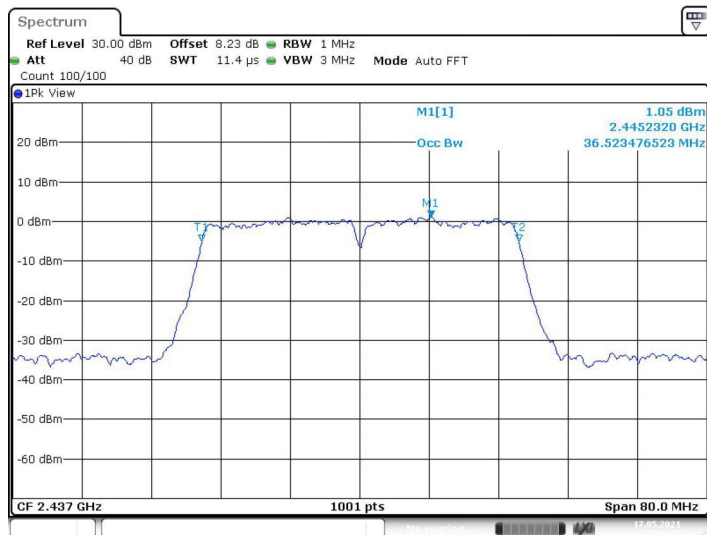
Test Mode:	802.11n(HT40) Mode	
Channel frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2422	36.444	>=0.5
2437	36.523	
2452	36.444	

2422 MHz



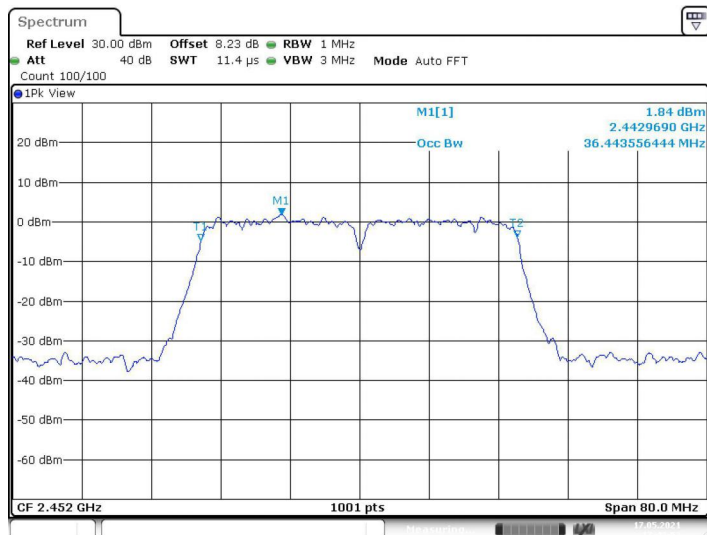
Date: 17.MAY.2021 17:38:40

2437 MHz



Date: 17.MAY.2021 17:41:46

2452 MHz



Date: 17.MAY.2021 17:43:53

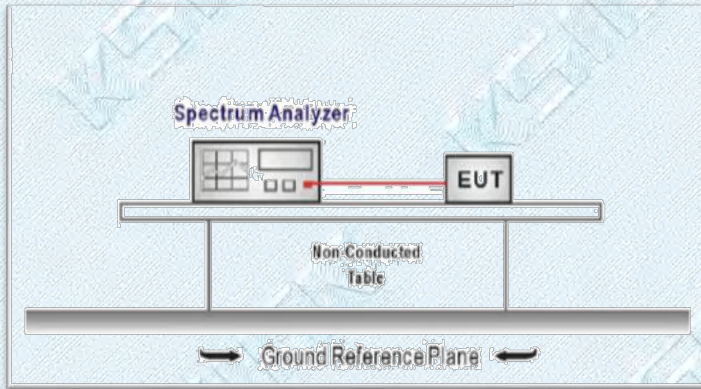
3.5. Band edge and Spurious Emission (conducted)

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

Test Configuration



Test Procedure

1. Connect EUT RF Output port to the Spectrum Analyzer through an RF attenuator.
2. Spectrum Setting:
 - RBW=100KHz
 - VBW=300KHz.
 - Detector function: Peak.
 - Trace: Max hold.
 - Sweep = Auto couple.

Allow the trace to stabilize.

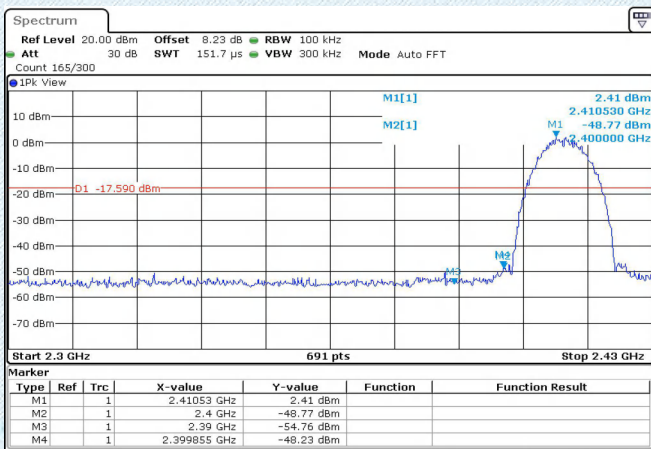
Test Mode

Please refer to the clause 2.2.

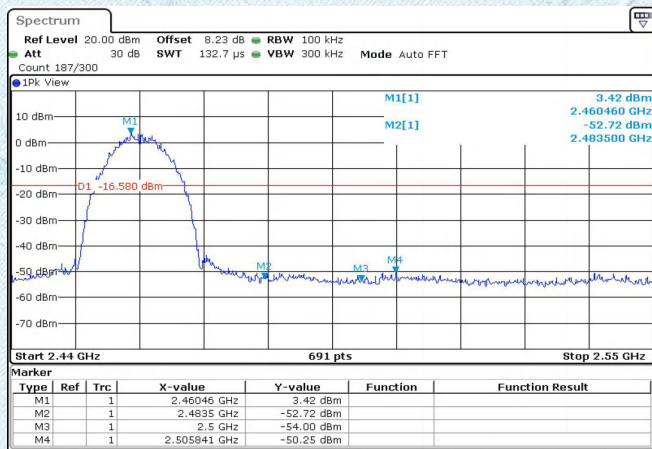
Test Results

802.11b

CH01-Bandedge

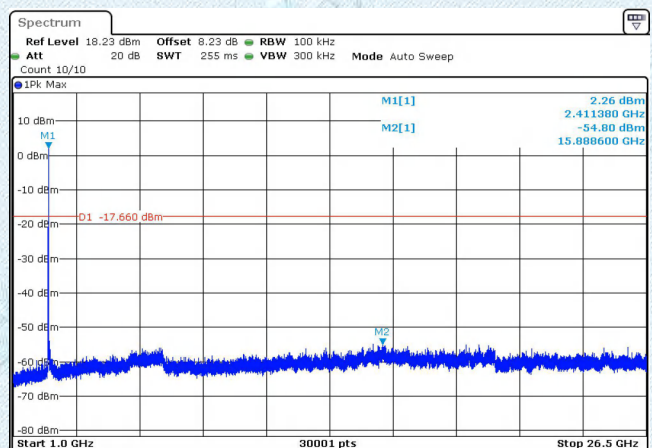
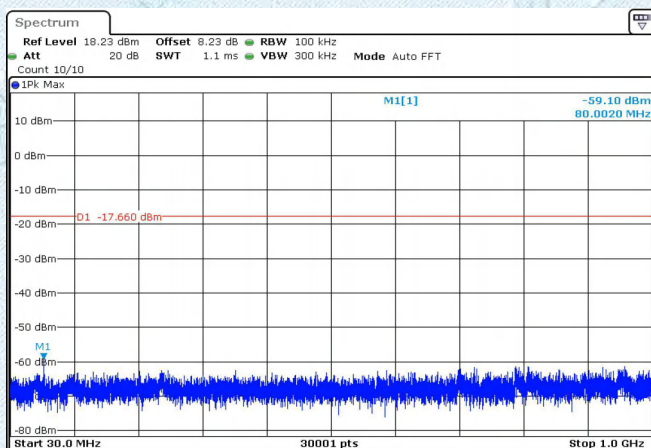


CH11-Bandedge

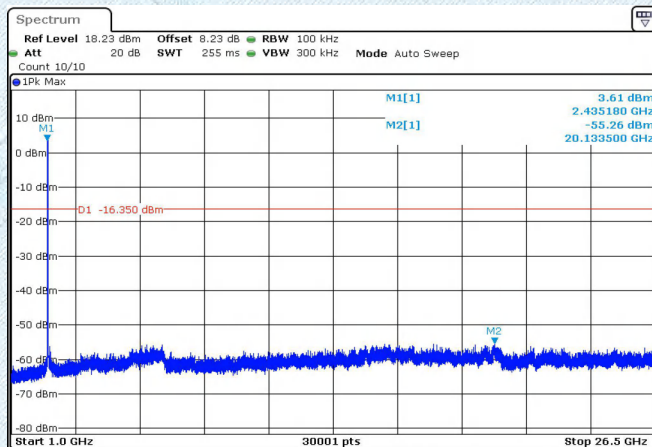
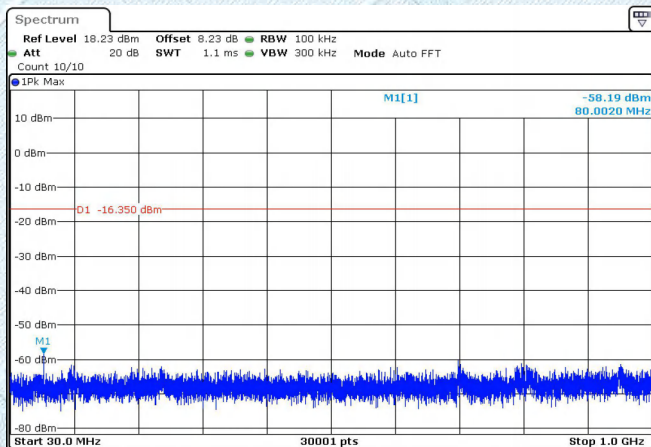


802.11b

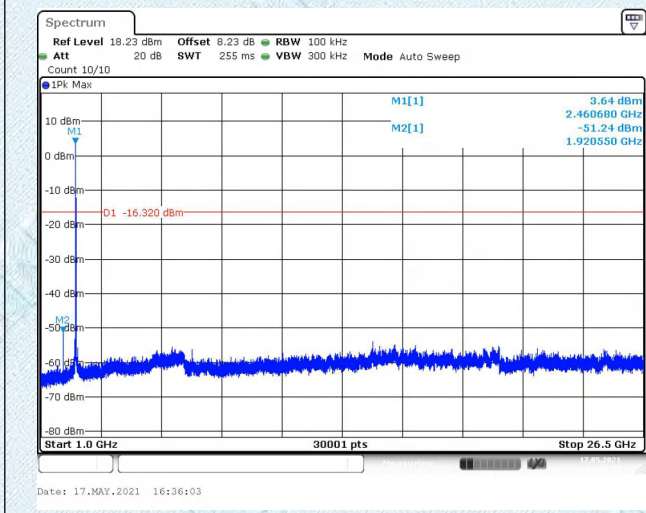
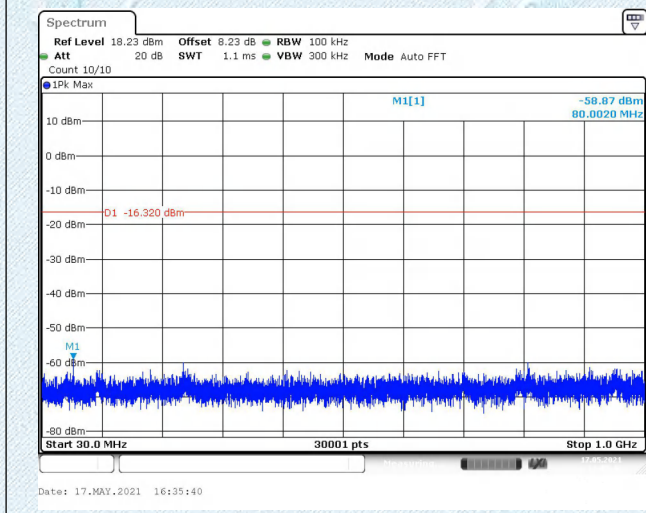
CH01-SE



CH06-SE

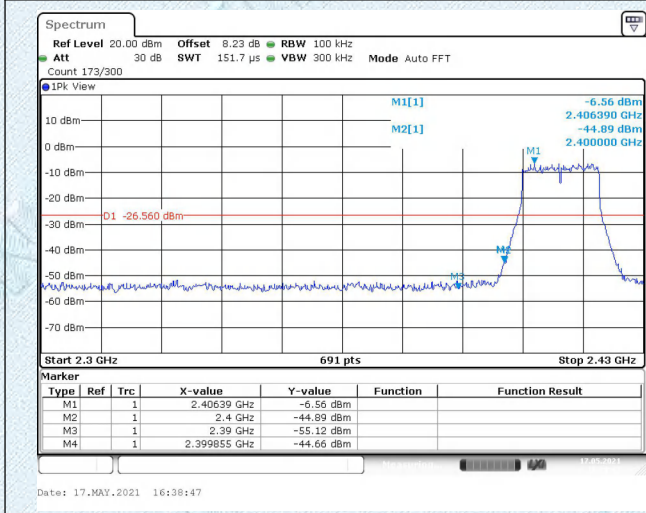


CH11-SE



802.11g

CH01-Bandedge

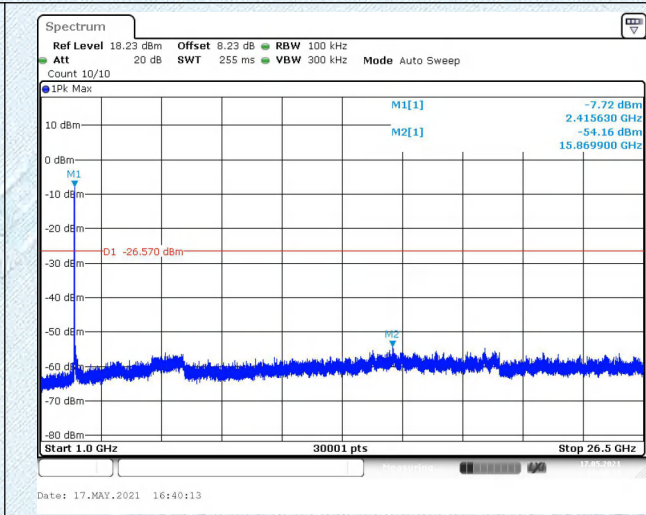
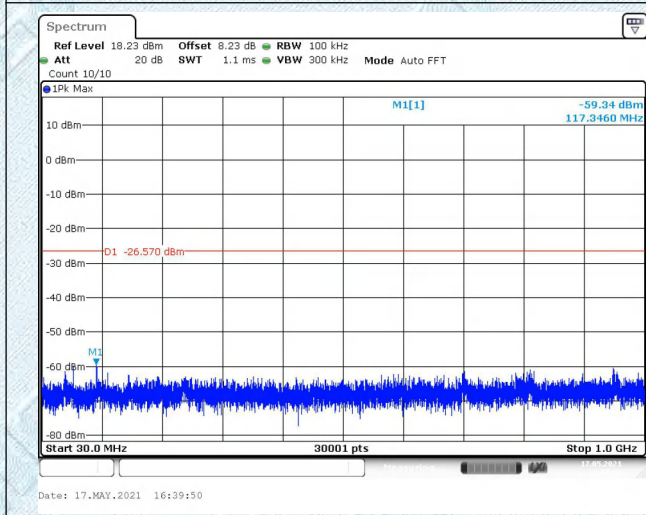


CH11-Bandedge

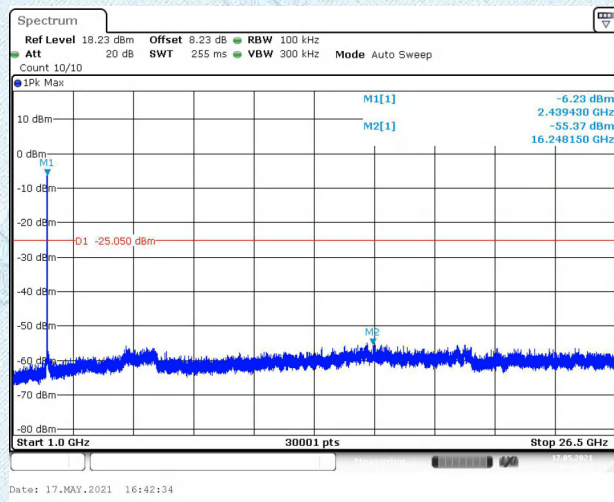
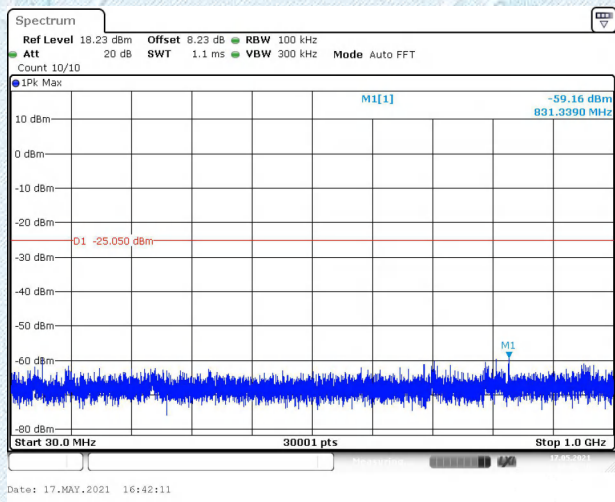


802.11g

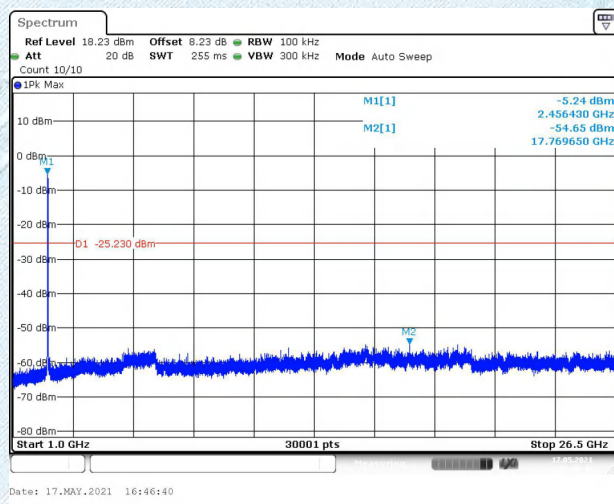
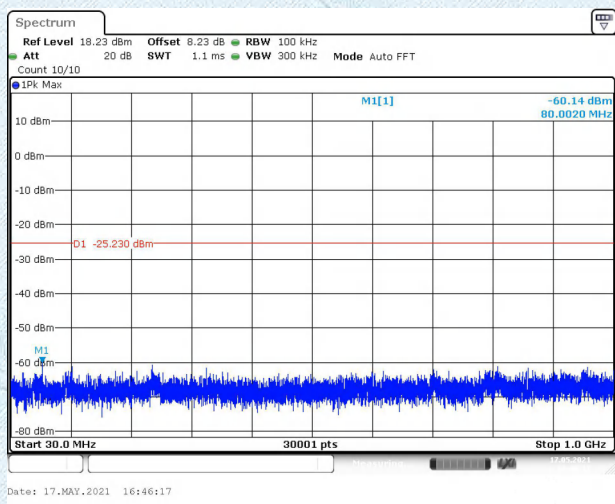
CH01-SE



CH06-SE

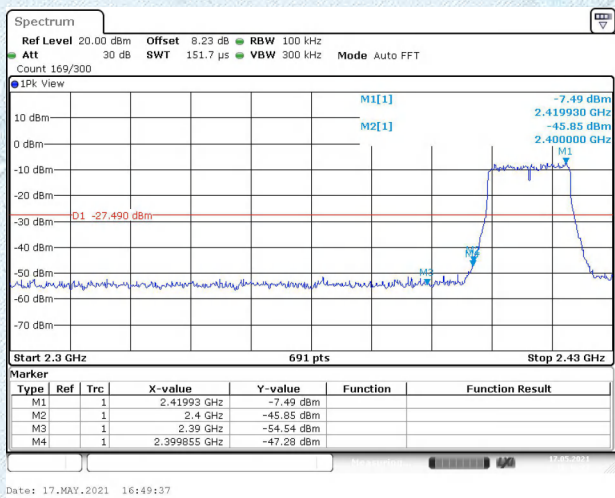


CH11-SE

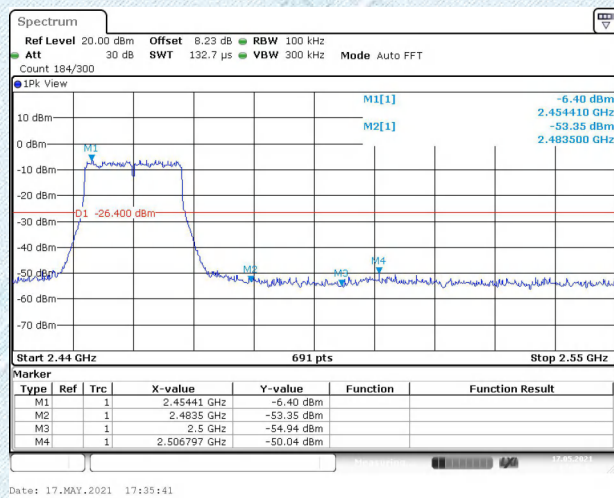


802.11n(HT20)

CH01-Bandedge

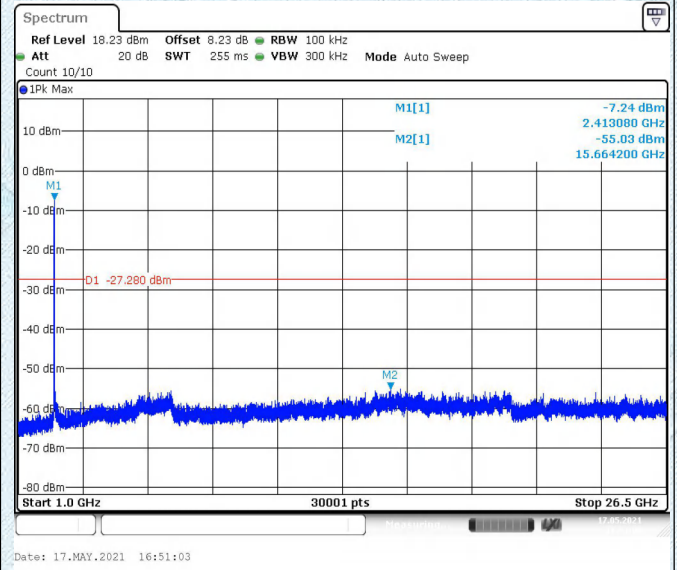
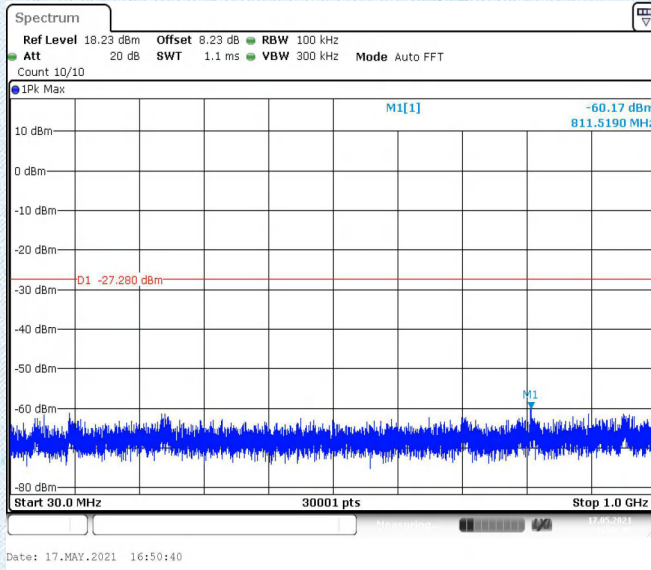


CH11-Bandedge

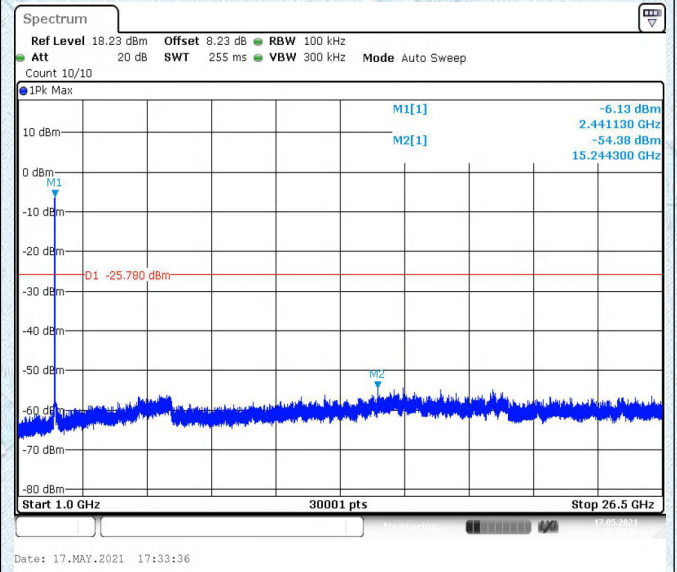
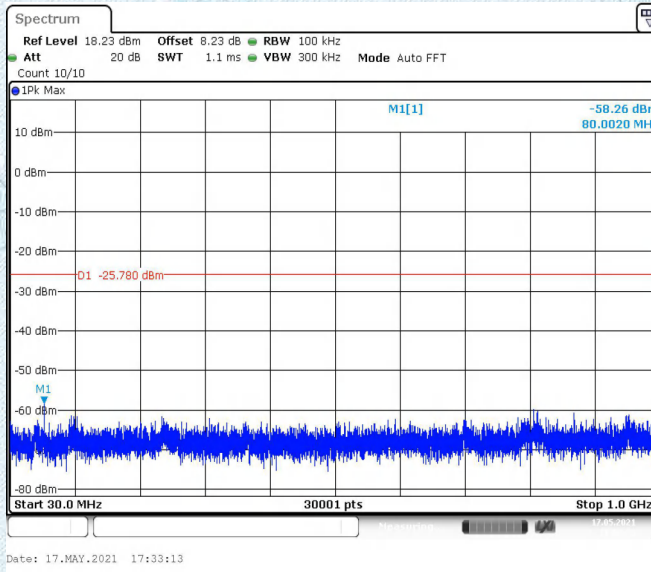


802.11n(HT20)

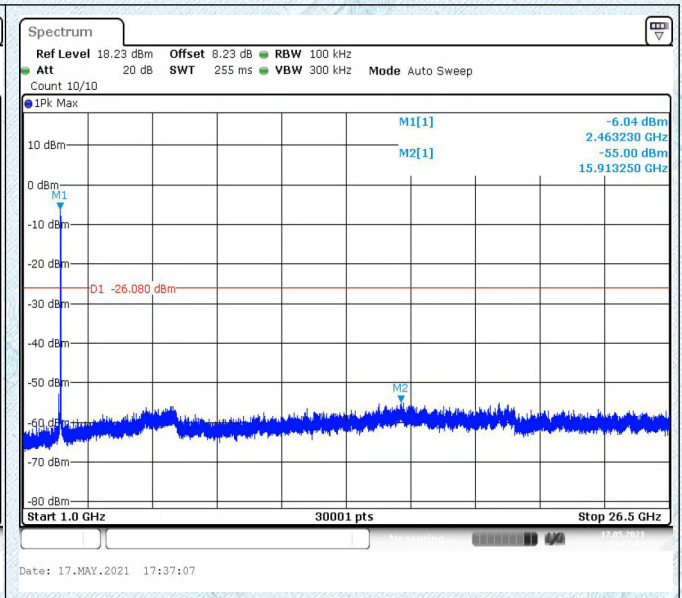
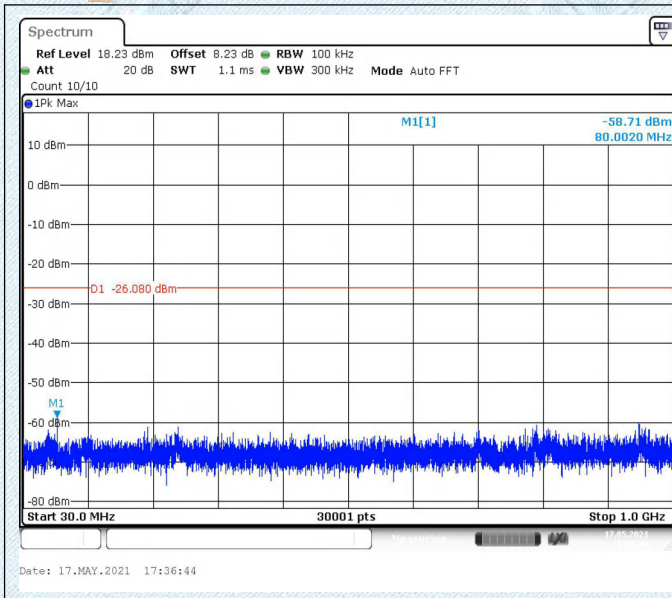
CH01-SE



CH06-SE

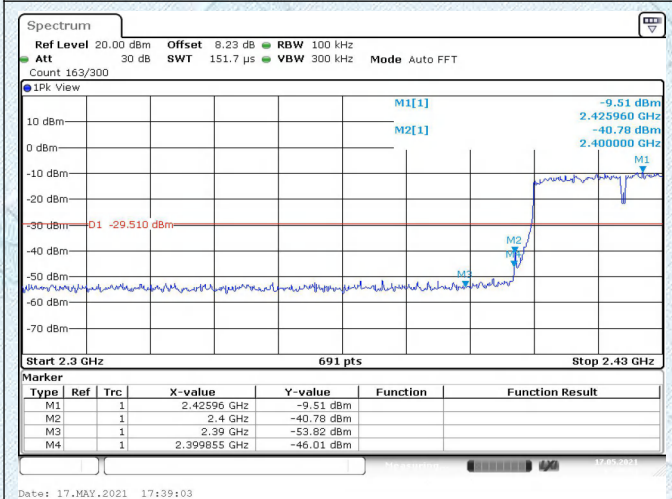


CH11-SE



802.11n(HT40)

CH03-Bandedge

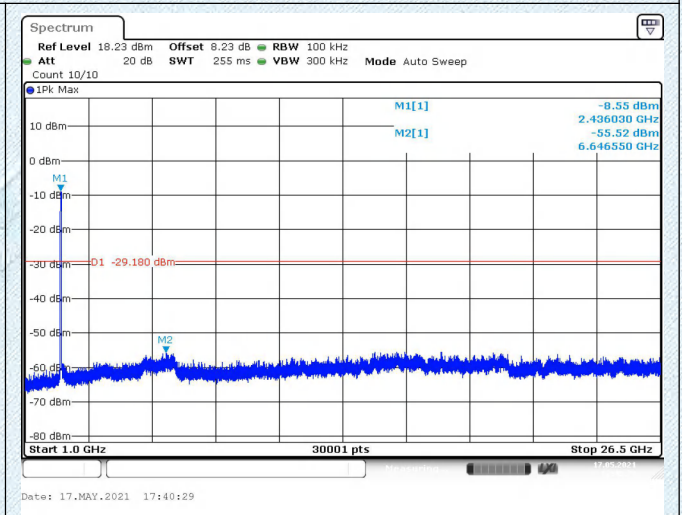
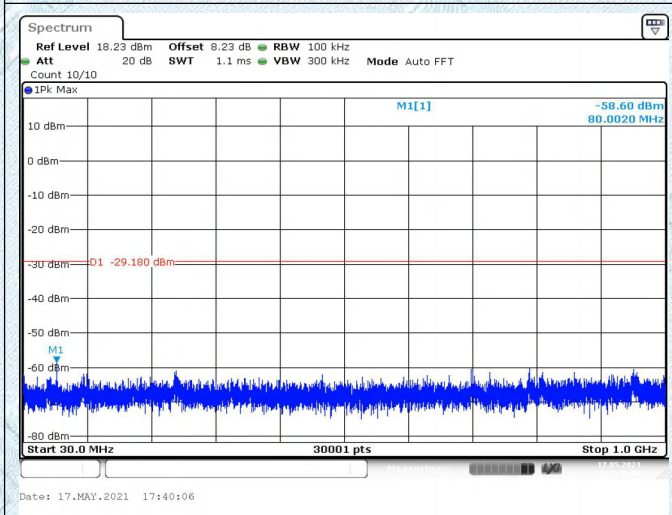


CH09-Bandedge

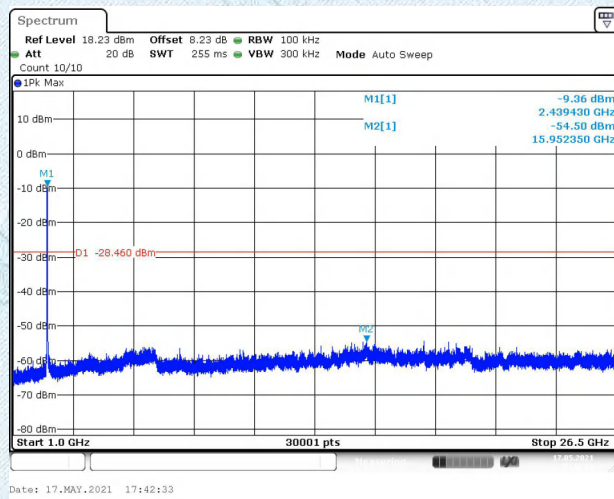
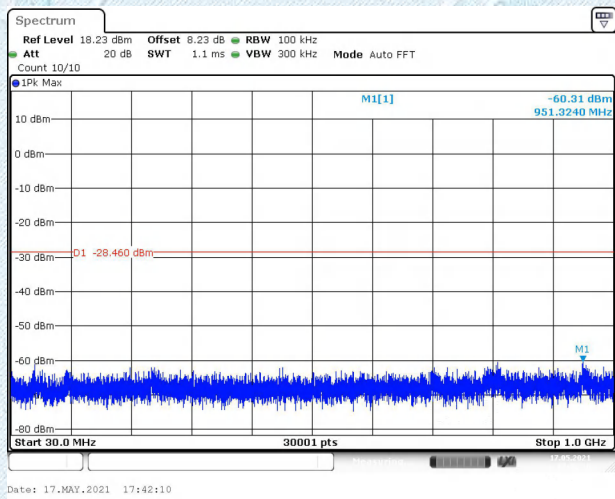


802.11n(HT40)

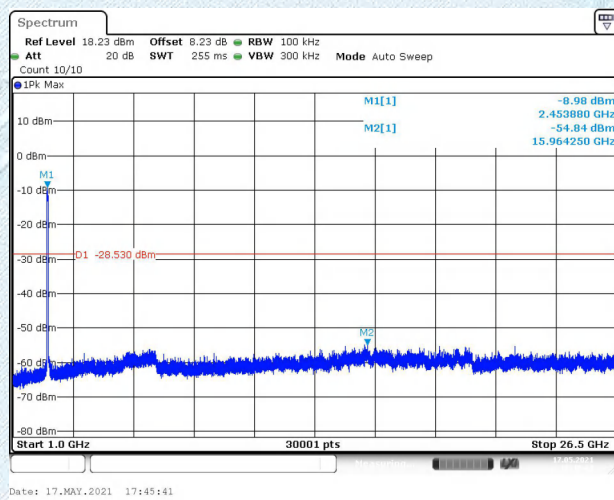
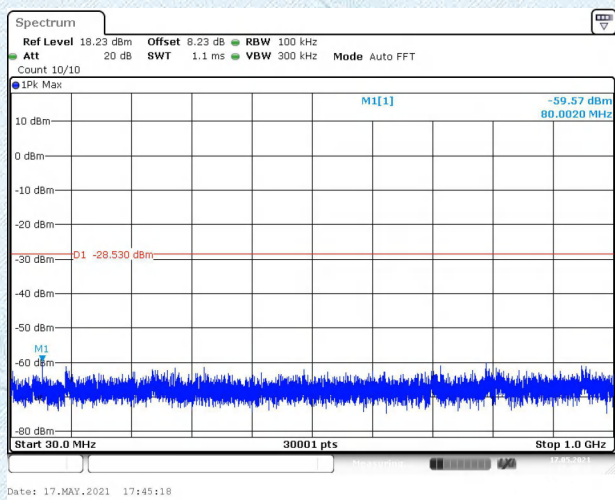
CH03-SE



CH06-SE



CH09-SE



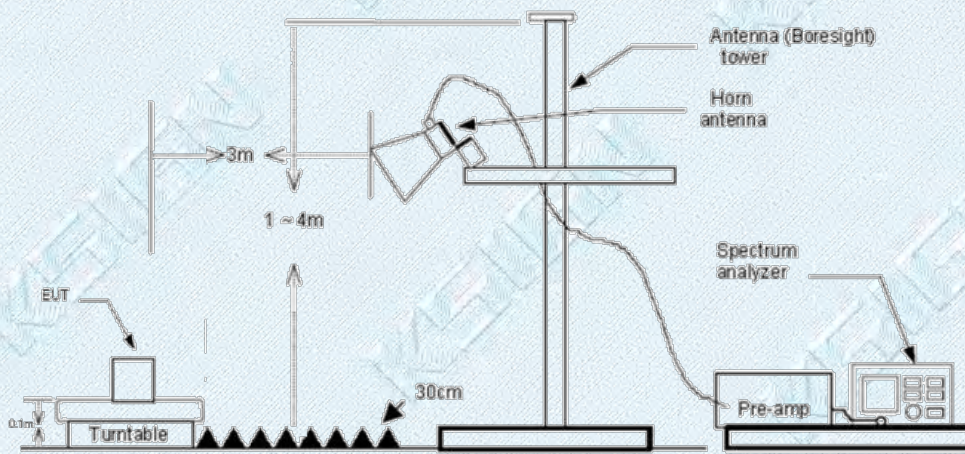
3.6. Band Edge Emissions(Radiated)

Limit

Restricted Frequency Band (MHz)	(dBuV/m)(at 3m)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

Note: All restriction bands have been tested, only the worst case is reported.

Test Configuration



Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013 requirements.
2. The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5. The receiver set as follow:
 RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
 RBW=1MHz, VBW=10Hz with PEAK detector for Average Value.

Test Mode

Please refer to the clause 2.2.

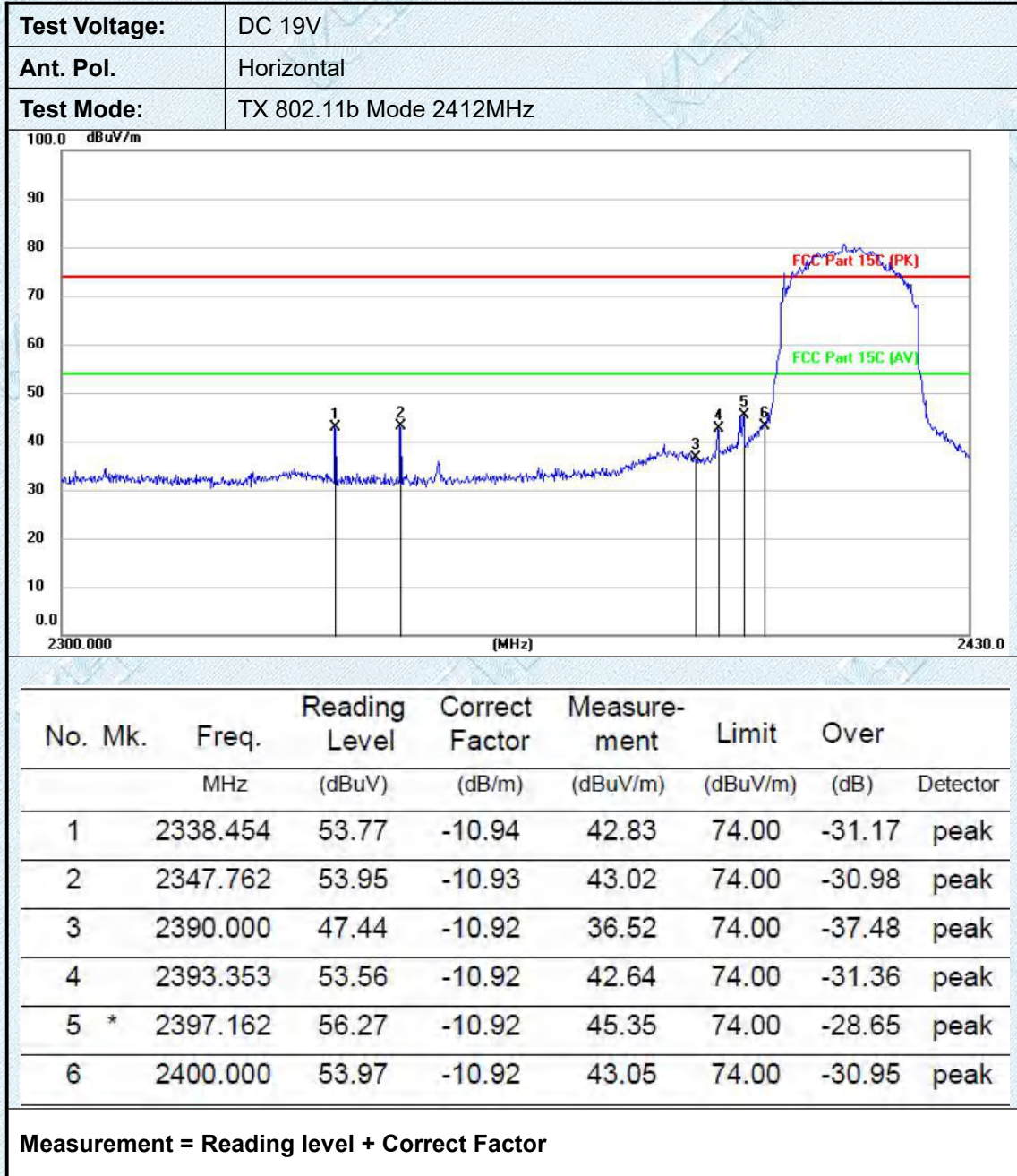
Test Results

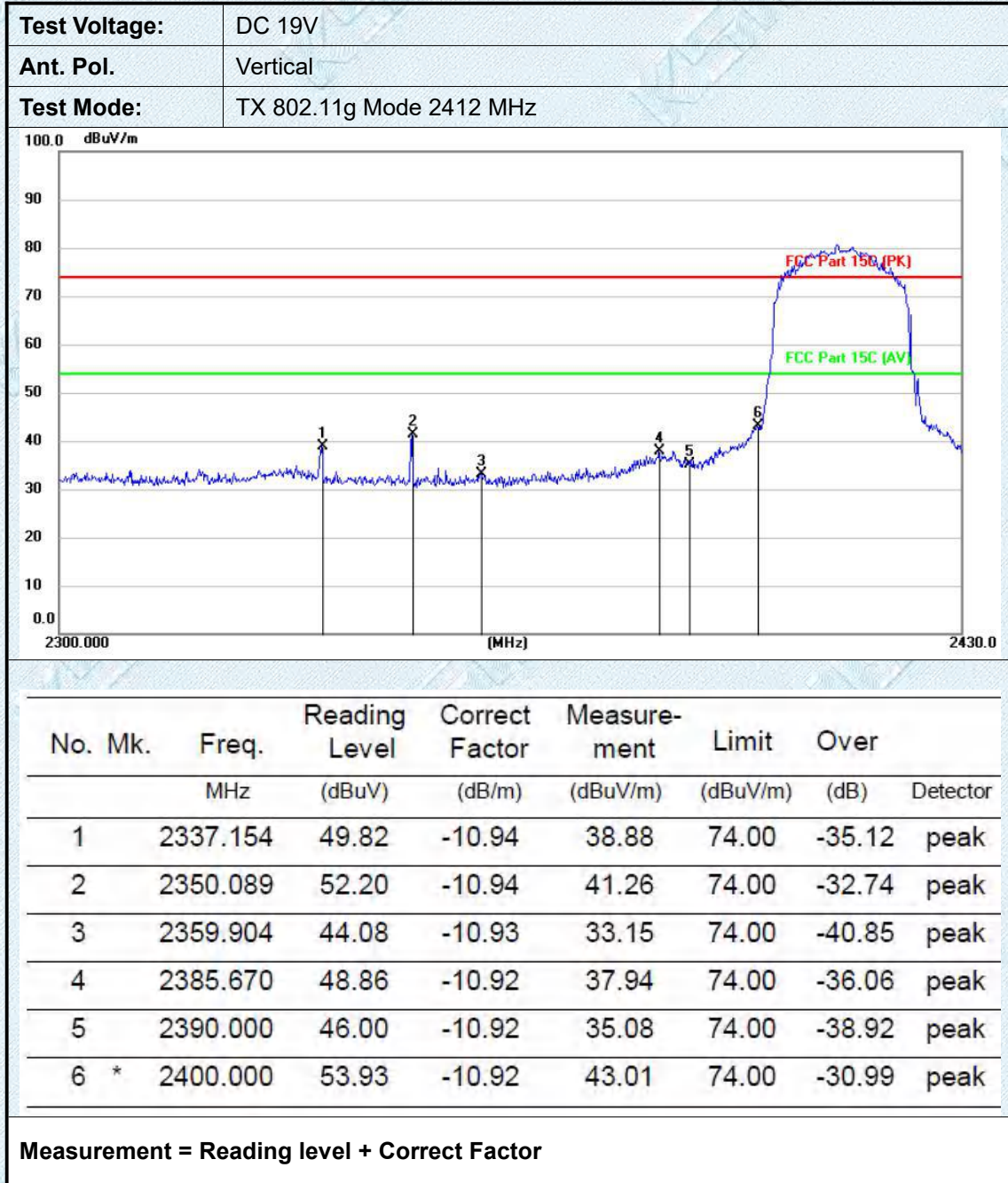
Note:

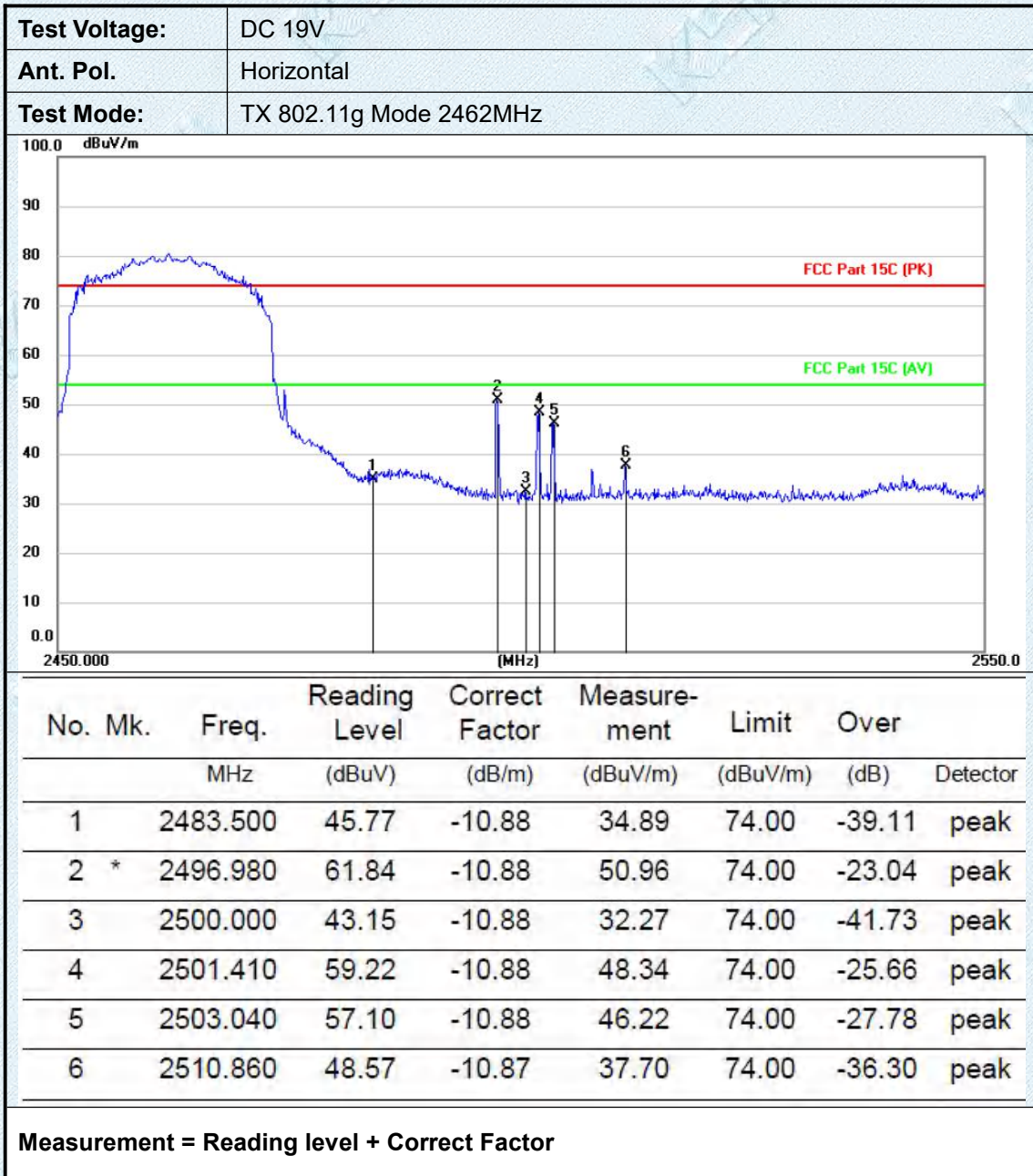
1.Measurement = Reading level + Correct Factor

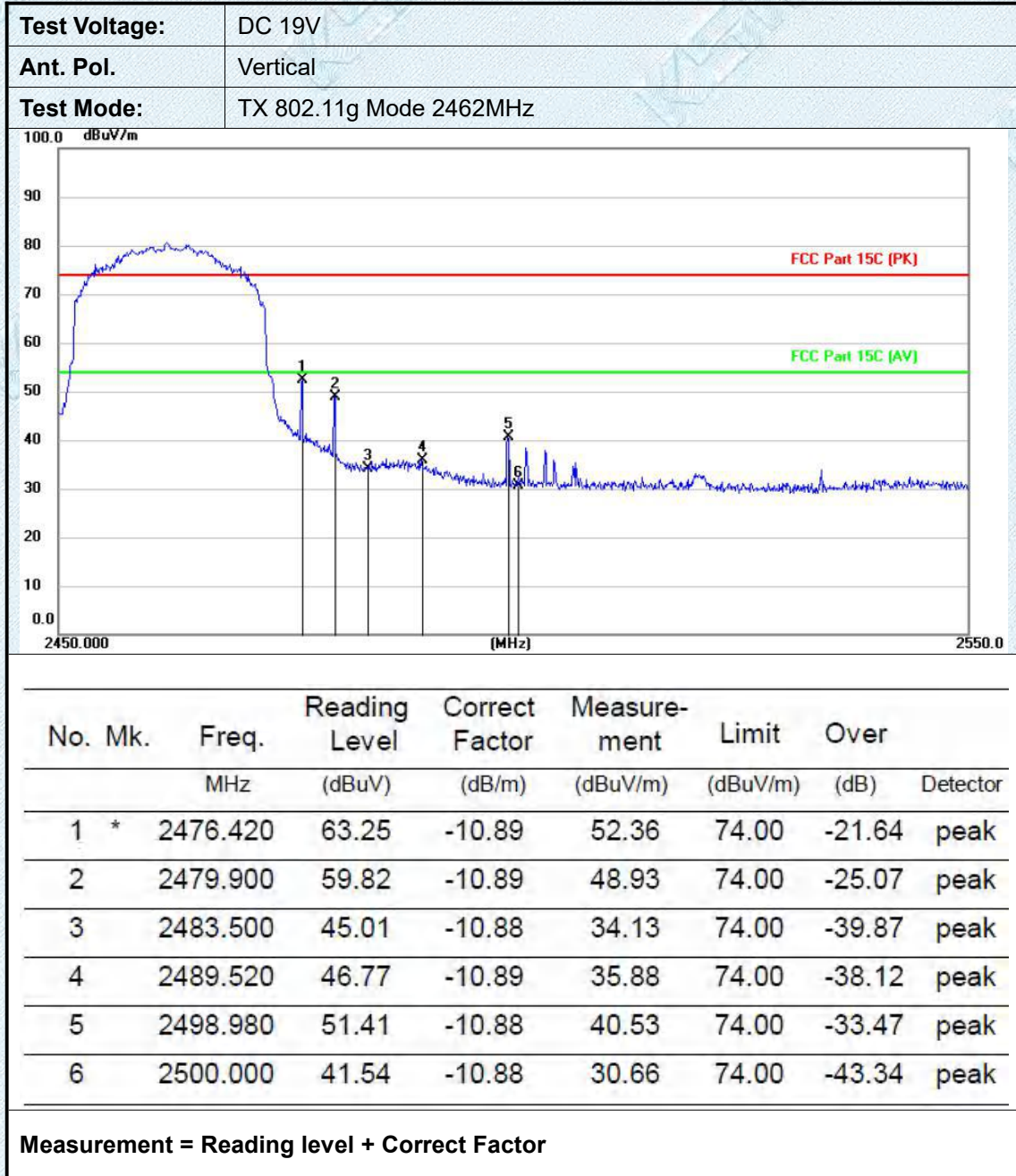
Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor

2.Pre-scan 802.11b, 802.11g, 802.11n(HT20) and 802.11n(HT40) mode, and found the 802.11b mode which it is worse case, so only show the test data for worse case.









3.7. Spurious Emission (Radiated)

Limit

Radiated Emission Limits (9 kHz~1000 MHz)

Frequency (MHz)	Field Strength (microvolt/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

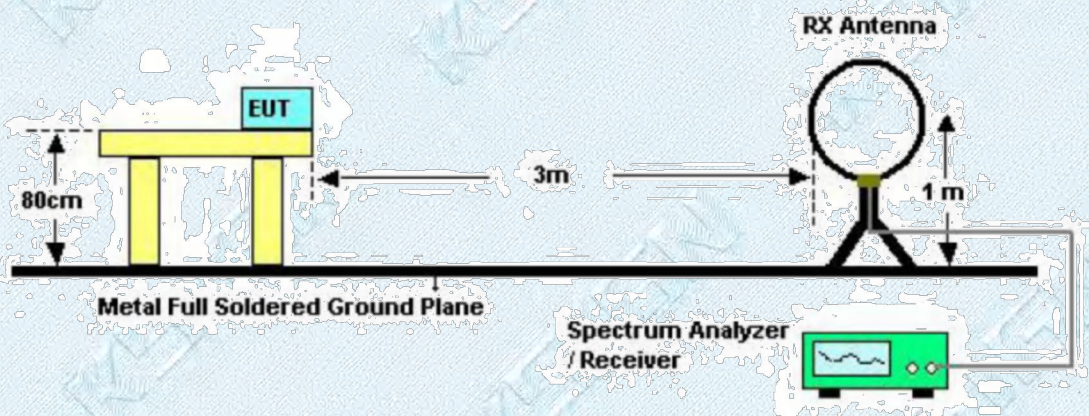
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Distance Meters(at 3m)	
	Peak	Average
Above 1000	74	54

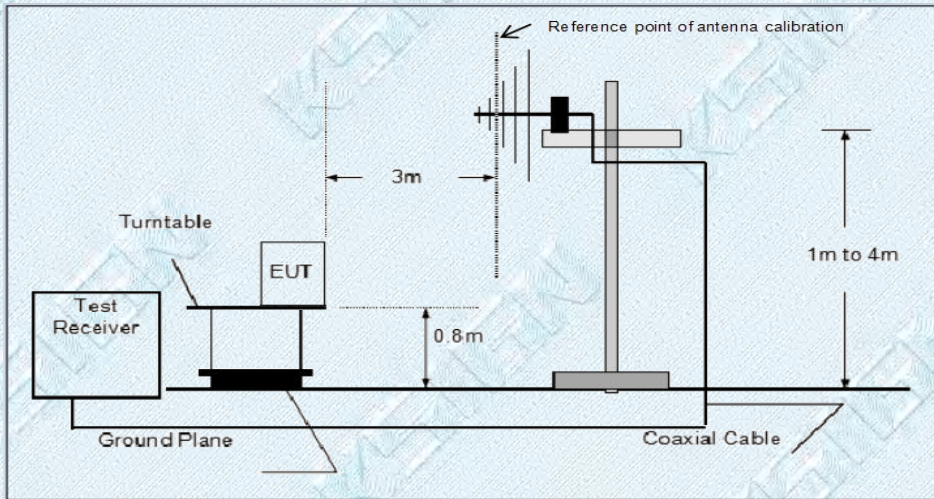
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level (dBuV/m)=20log Emission Level (uV/m).

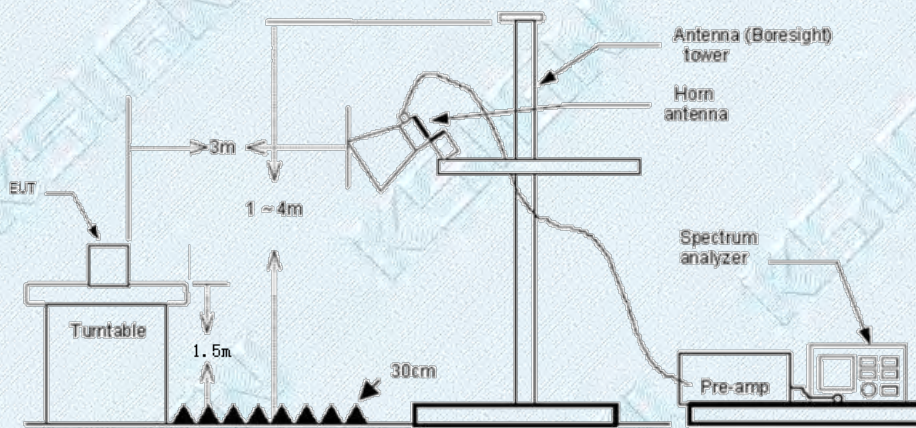
Test Configuration



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

Test Procedure

1. The EUT was setup and tested according to ANSI C63.10:2013
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Below 1 GHz:
 RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
 If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
 - (3) From 1 GHz to 10th harmonic:
 RBW=1MHz, VBW=1MHz Peak detector for Peak value.
 RBW=1MHz, VBW=10Hz Peak detector for Average value.

Test Mode

Please refer to the clause 2.2

Test Result**9 KHz~30 MHz and 18GHz~25GHz**

From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

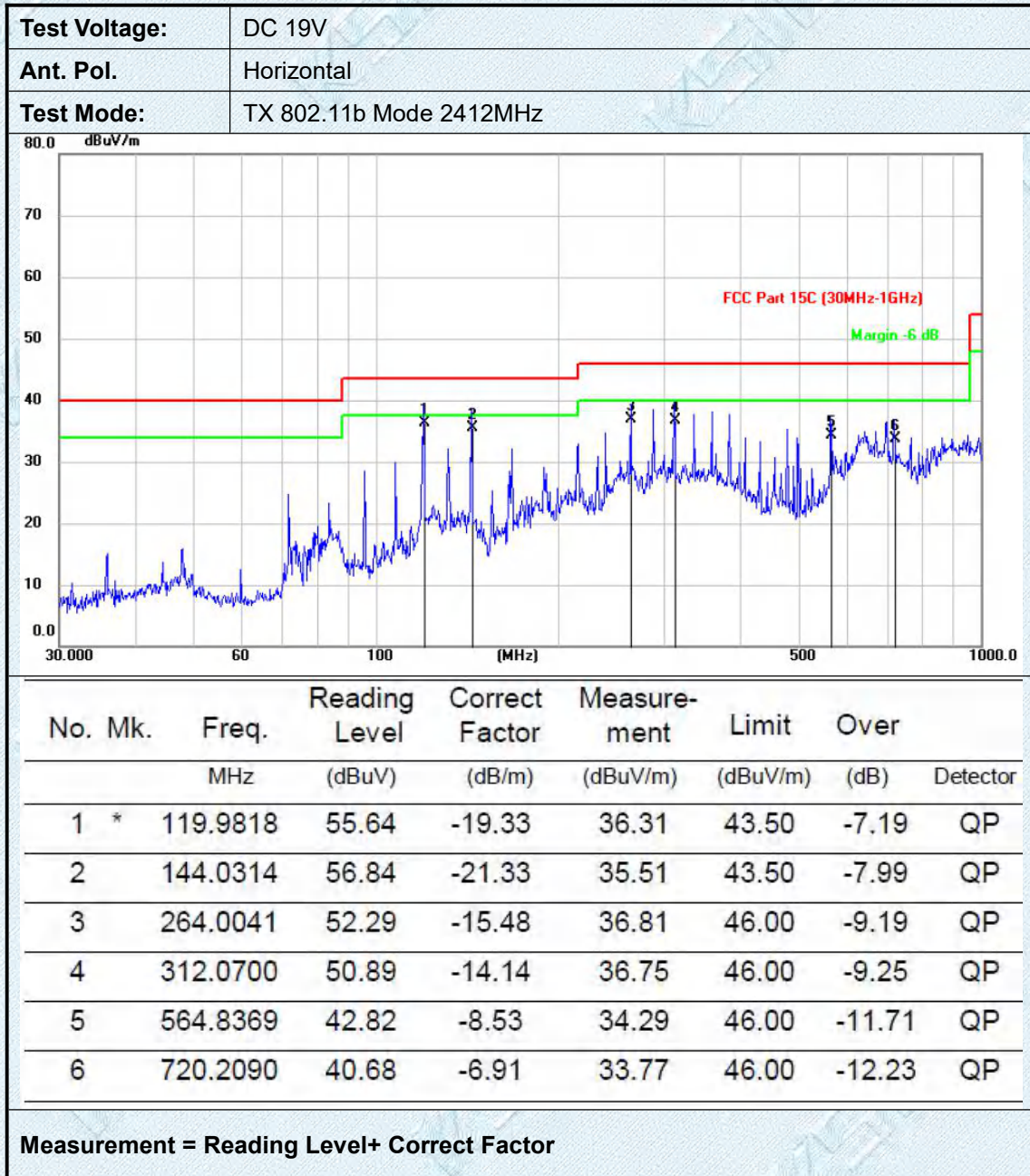
Note:

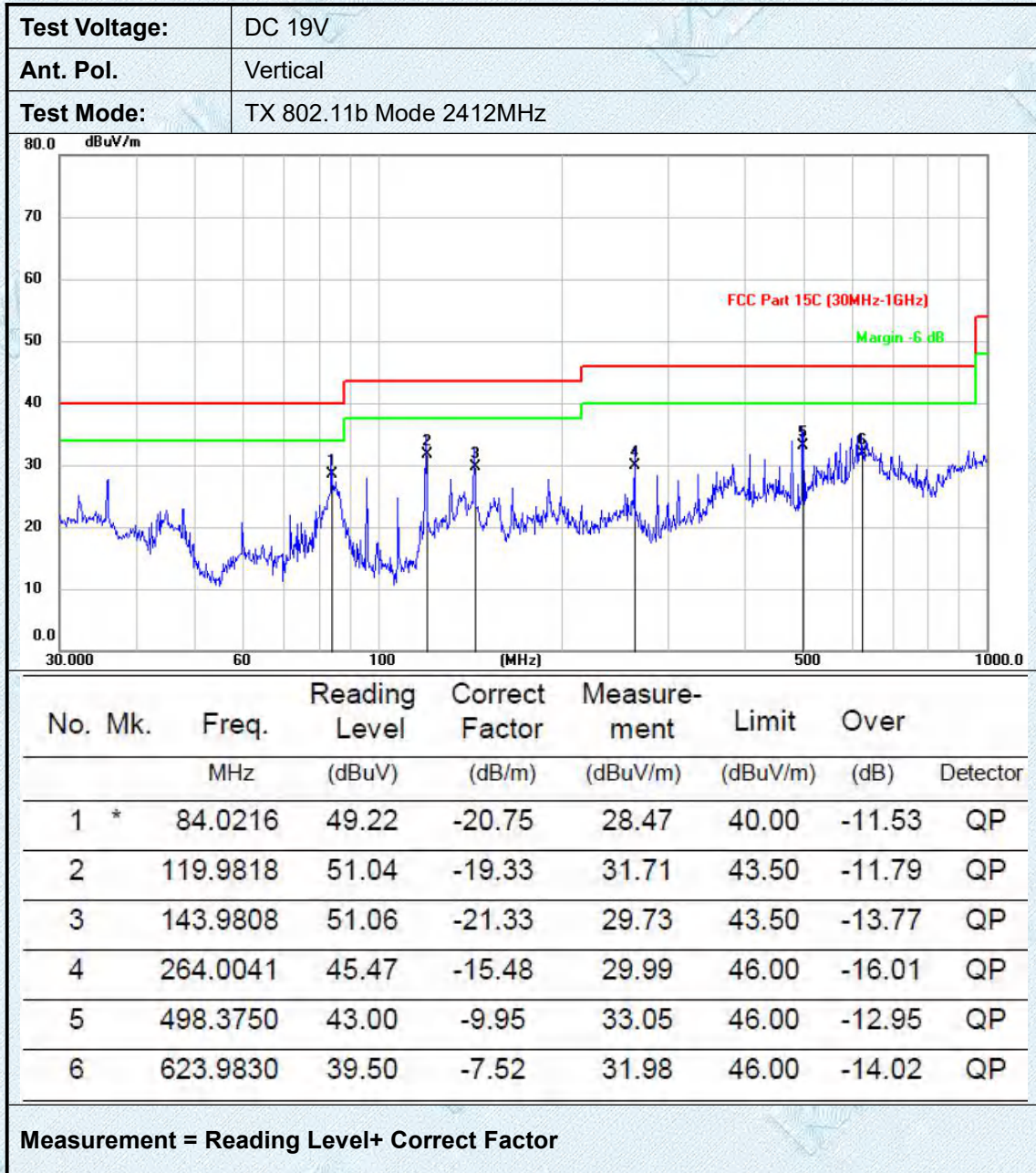
- 1) Measurement = Reading level + Correct Factor
Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- 2) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
- 3) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 4) The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
- 5) Pre-scan 802.11b/g/n(HT20/HT40) modulation, found 802.11b_2412MHz which it is worse case for 30MHz-1GHz , the 802.11g modulation which it is worse case for above 1GHz, so only show the test data for worse case.

BELOW 30MHZ

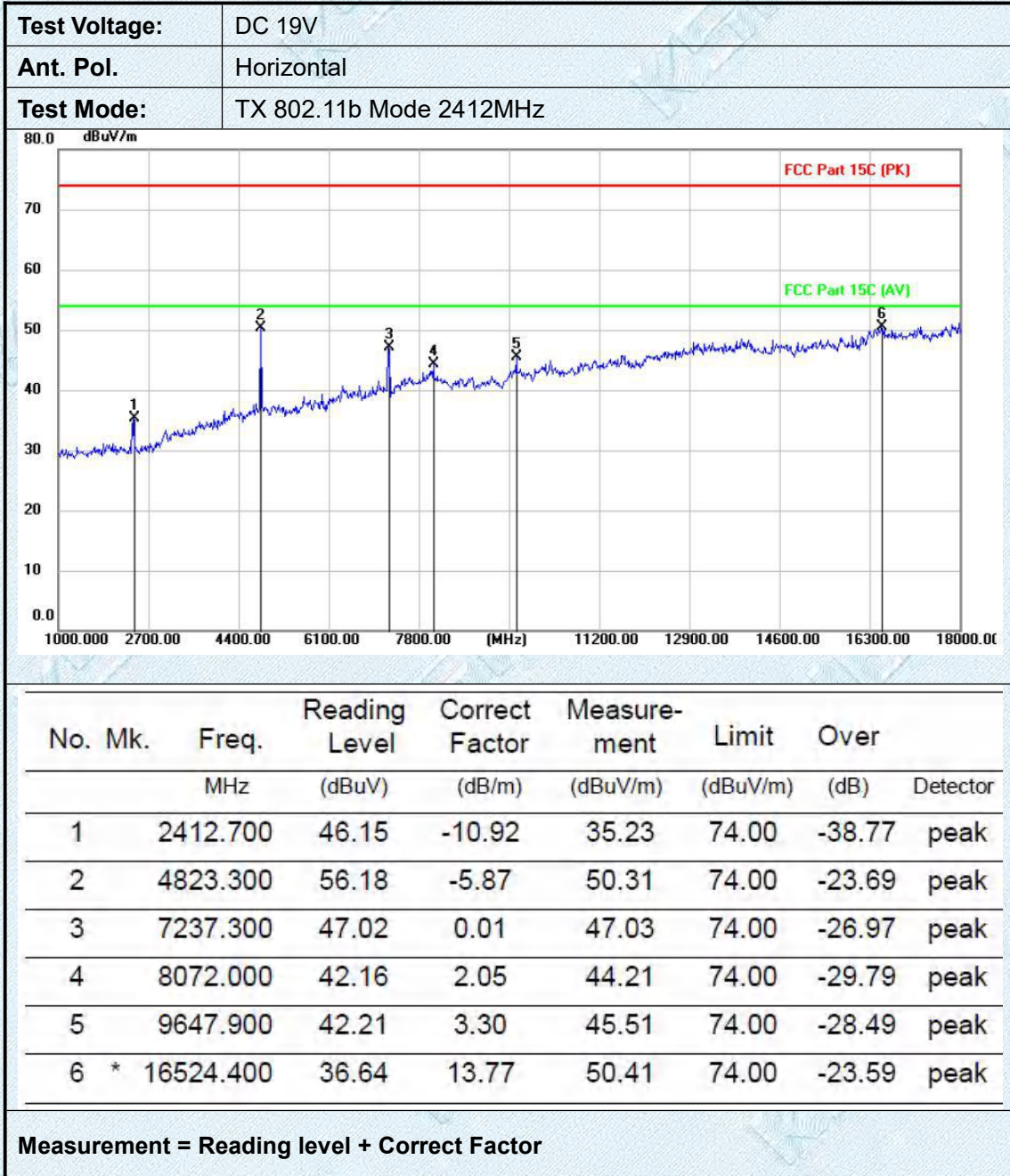
No emission found between lowest internal used/generated frequencies to 30MHz.

30MHz-1GHz

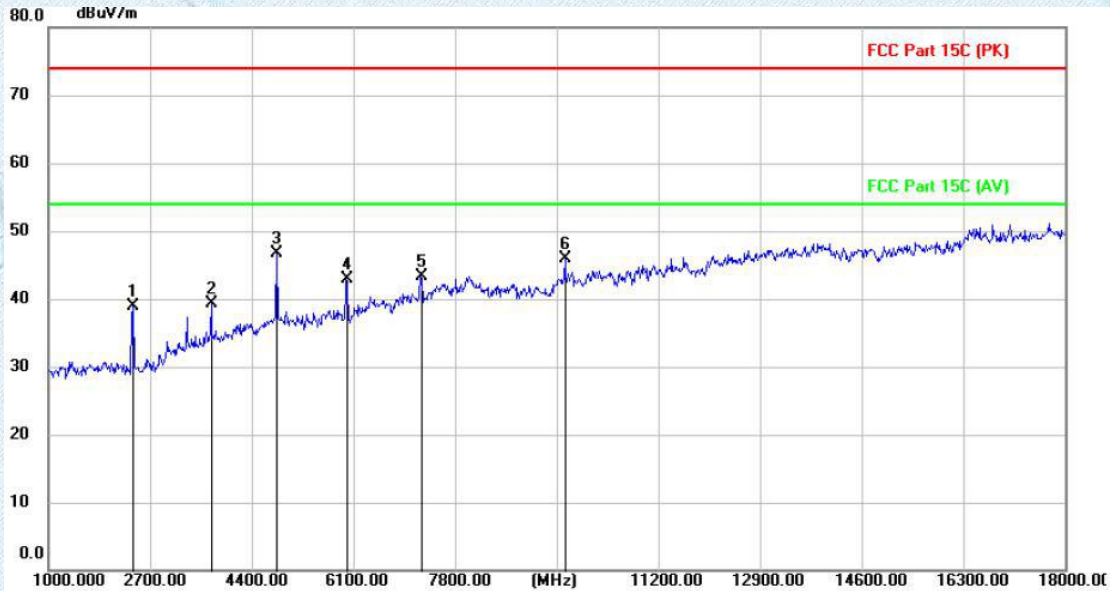




Adobe 1GHz



Test Voltage:	DC 19V
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2412MHz



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		2411.000	49.87	-10.91	38.96	74.00	-35.04	peak
2		3731.900	48.43	-9.09	39.34	74.00	-34.66	peak
3	*	4823.300	52.63	-5.87	46.76	74.00	-27.24	peak
4		5994.600	46.71	-3.81	42.90	74.00	-31.10	peak
5		7235.600	43.34	0.01	43.35	74.00	-30.65	peak
6		9647.900	42.62	3.30	45.92	74.00	-28.08	peak

Measurement = Reading level + Correct Factor



