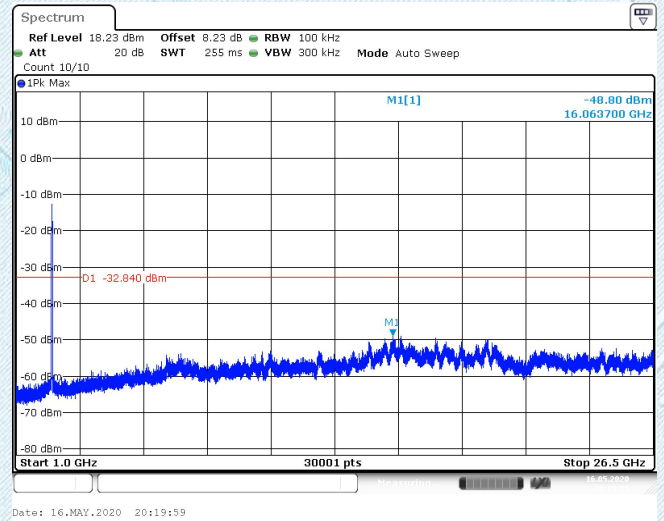
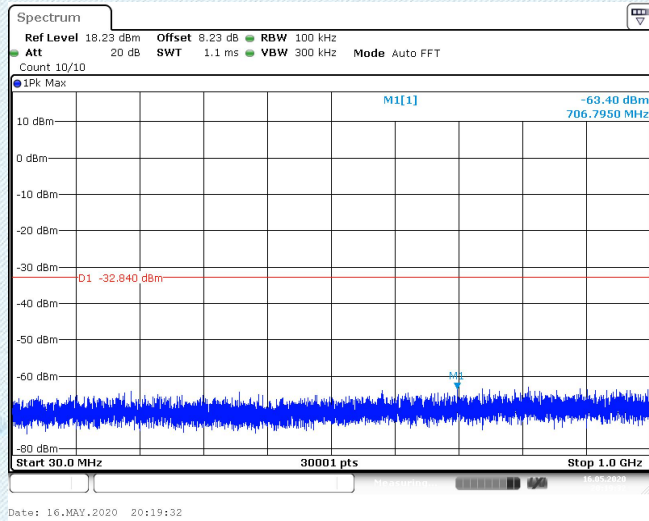
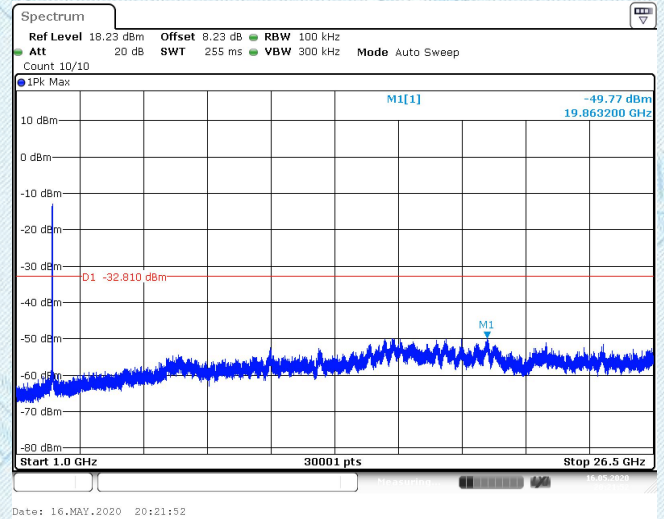
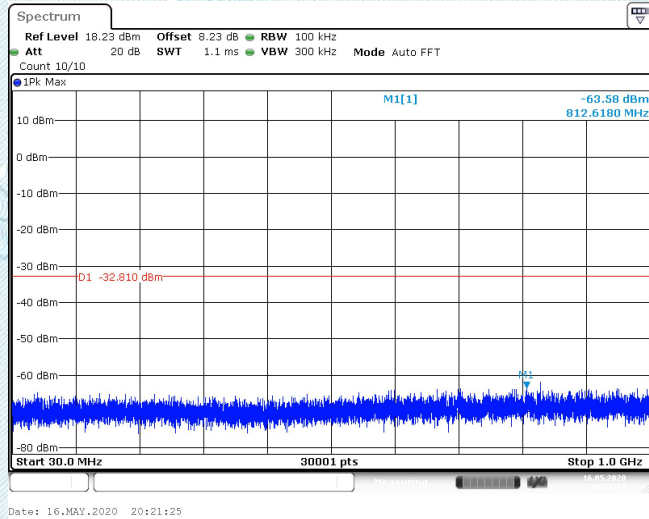


802.11n(HT40)

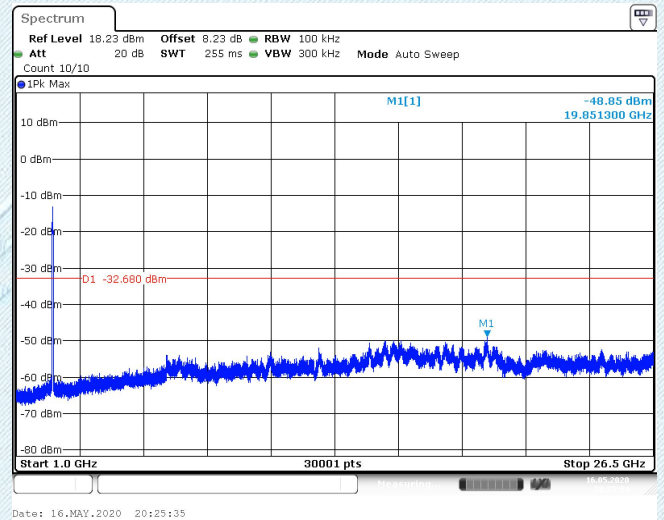
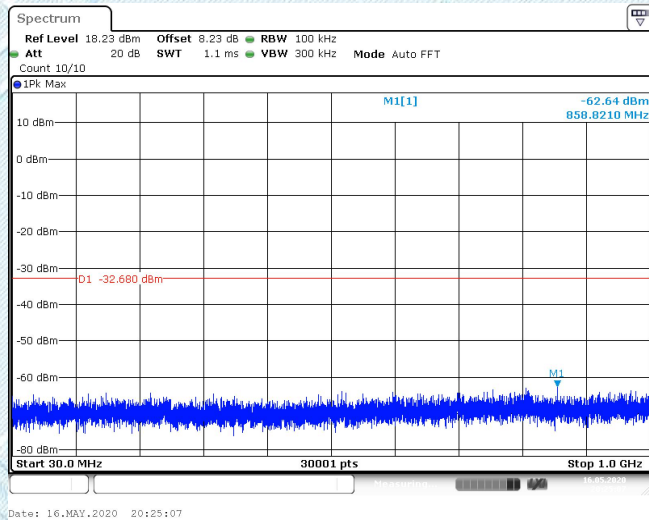
CH03-SE



CH06-SE



CH09-SE

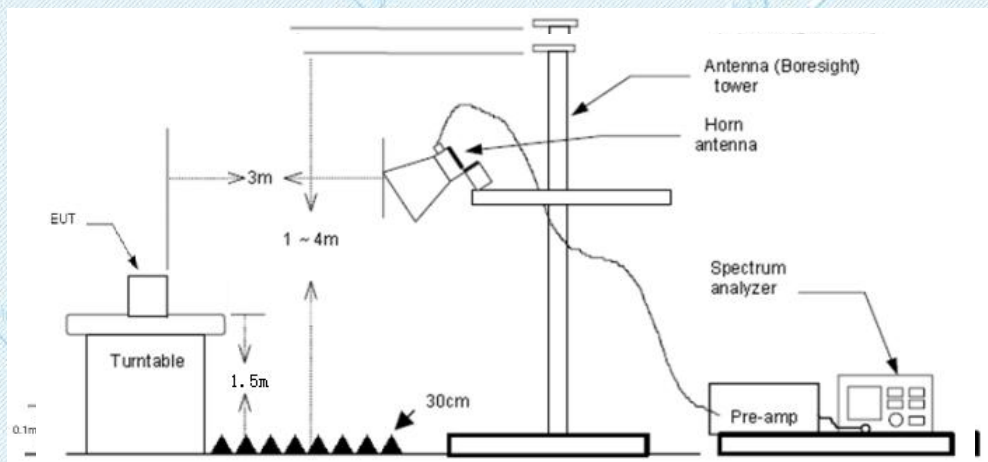


3.7. Band Edge Emissions(Radiated)

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 Average detector for Average Value.

Test Mode

Please refer to the clause 2.3.

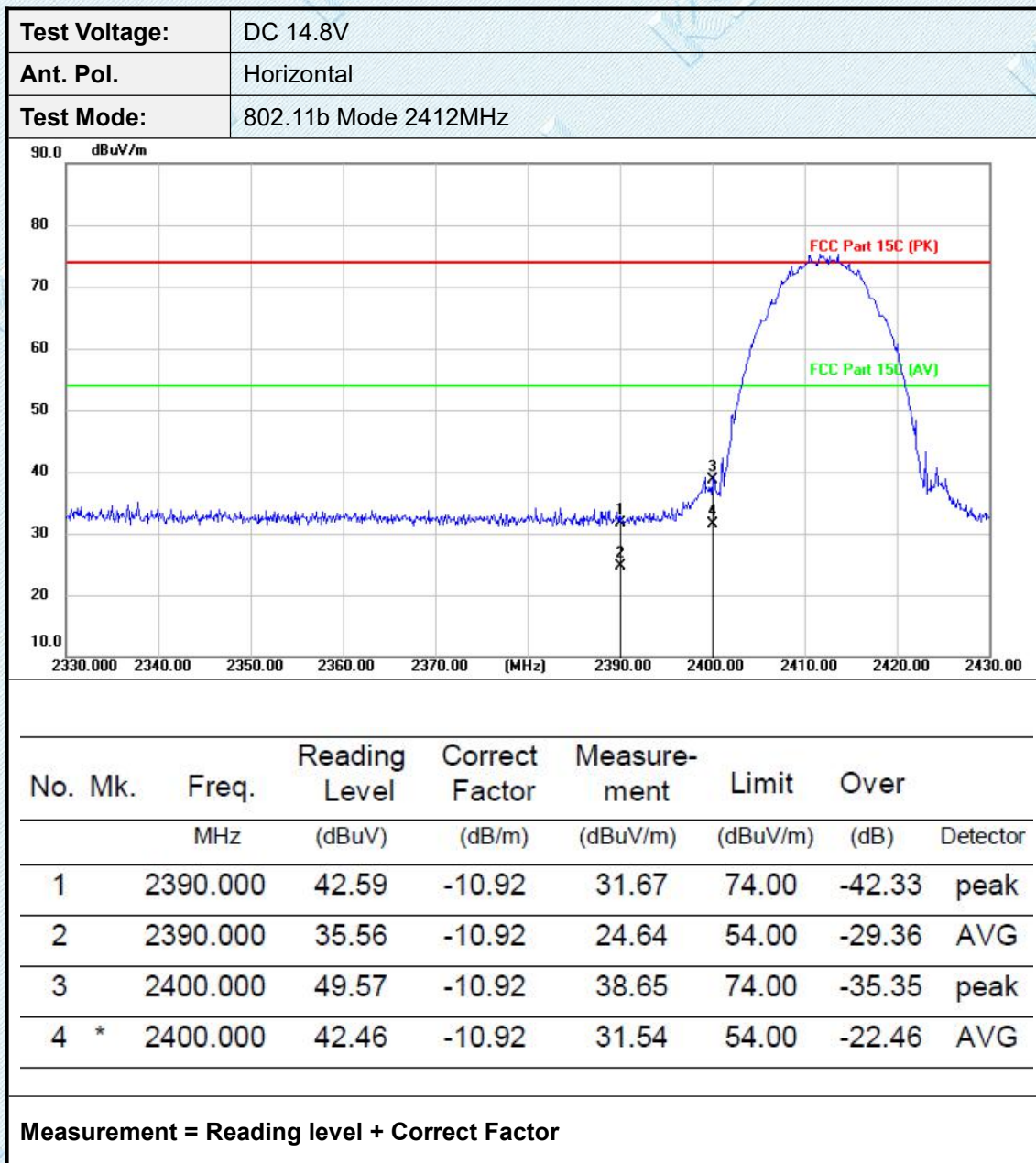
Test Results

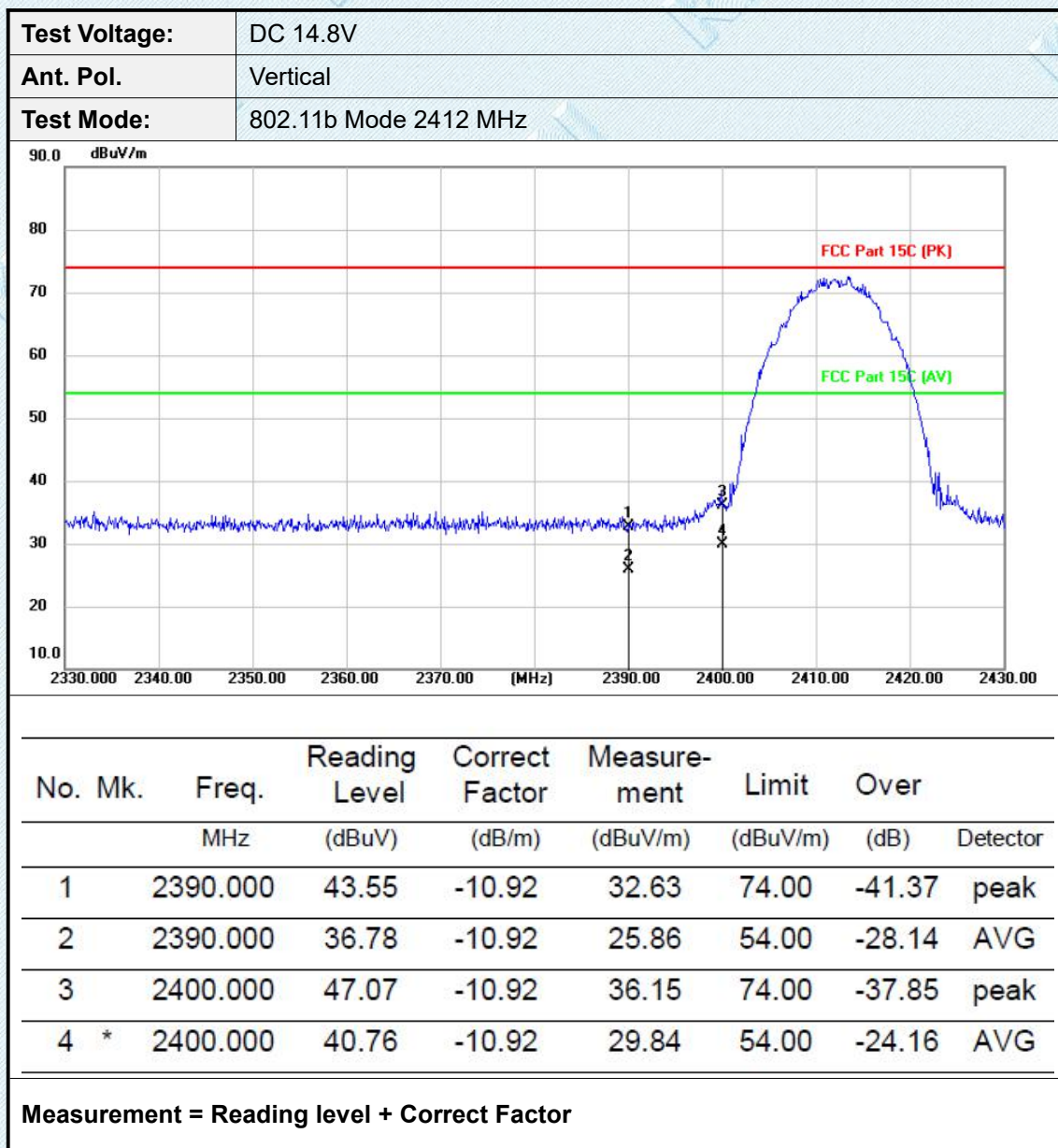
Note:

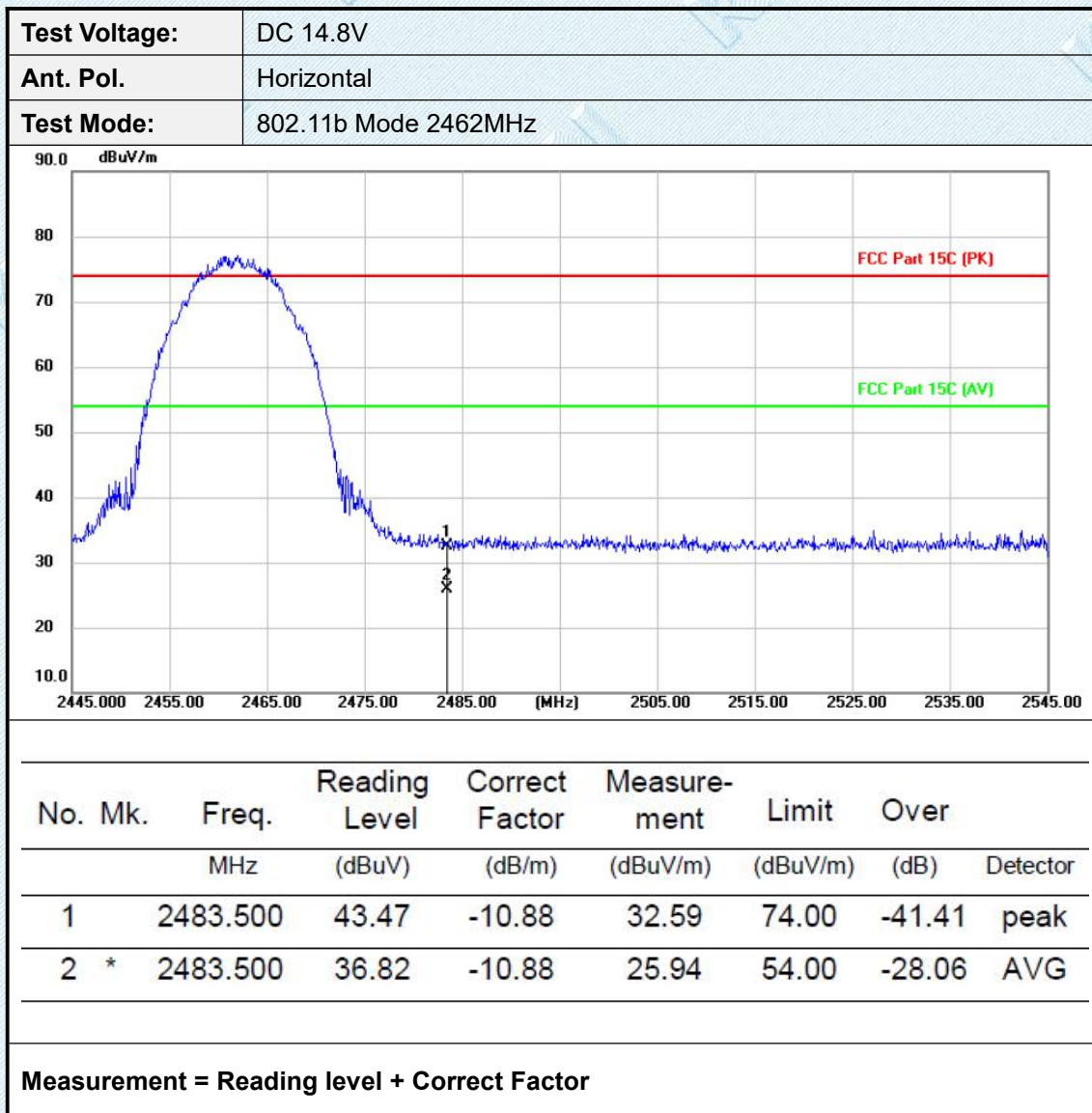
$$1. \text{Measurement} = \text{Reading level} + \text{Correct Factor}$$

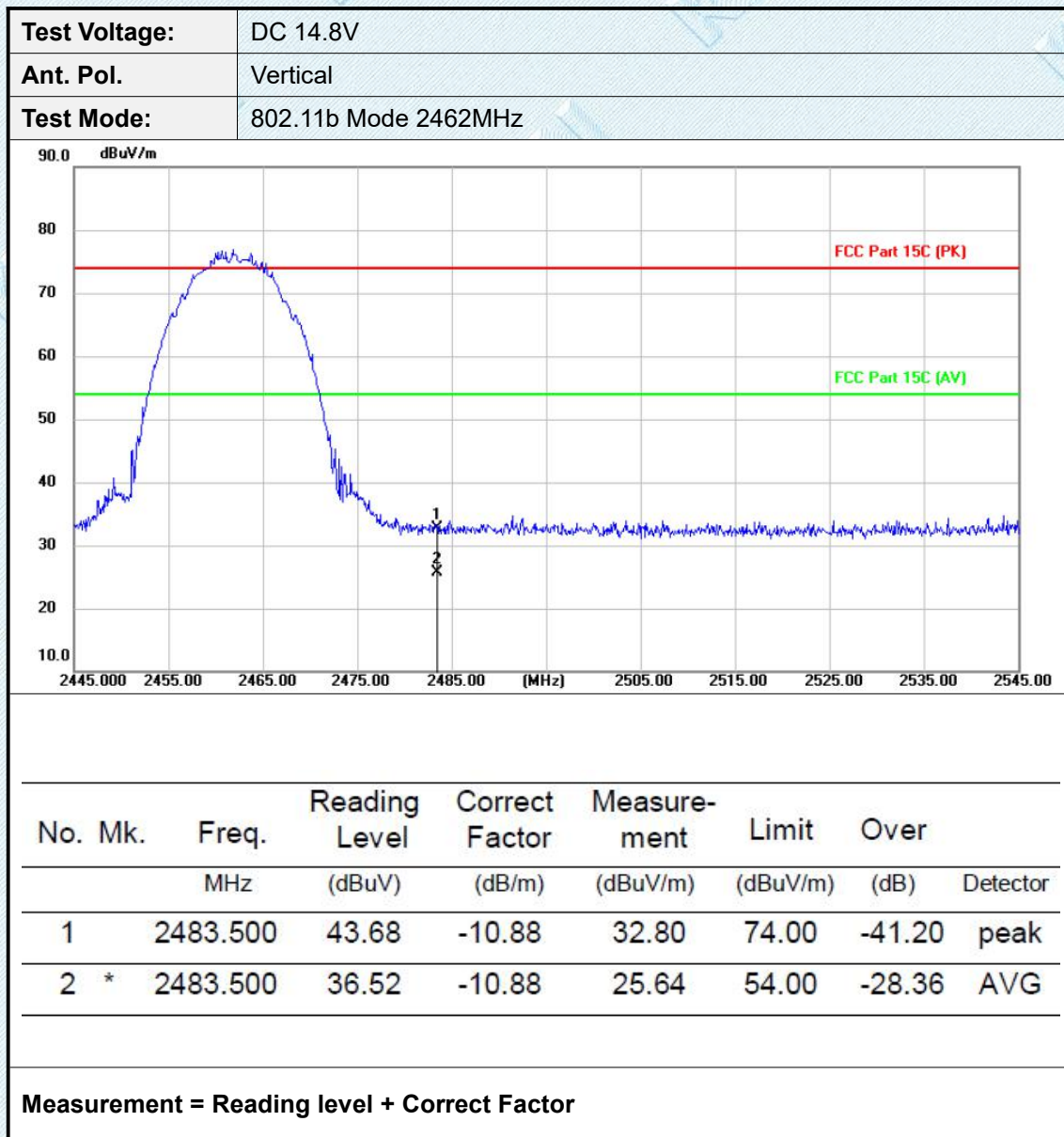
$$\text{Correct Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Preamplifier Factor}$$

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.









3.8. 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

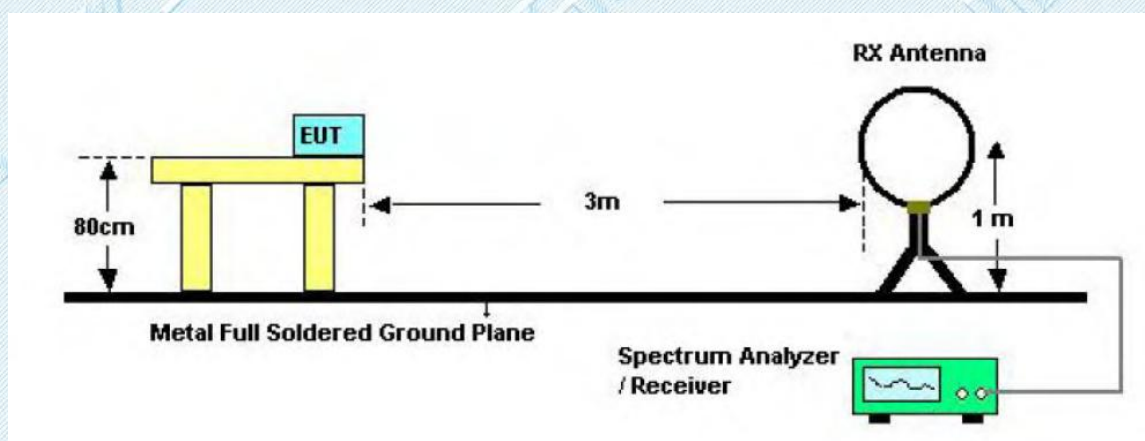
Radiated Emission Limit (Above 1000MHz)

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

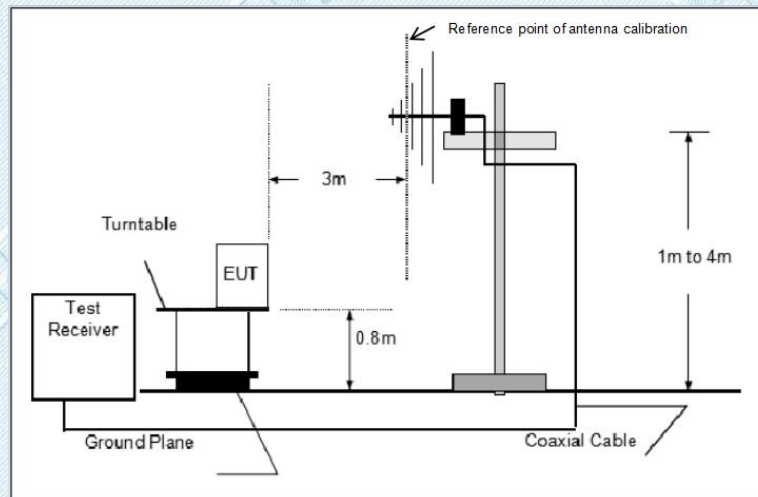
Note:

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

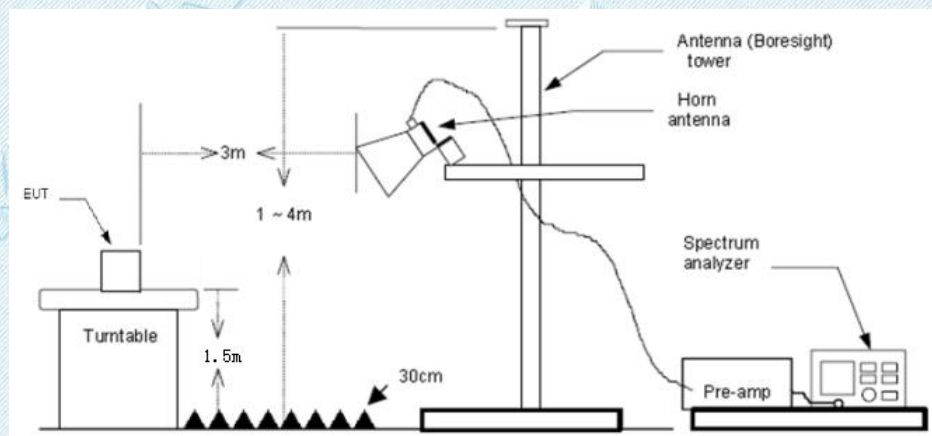
Test Configuration



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 RMS detector for Average value.

Test Mode

Please refer to the clause 2.3.

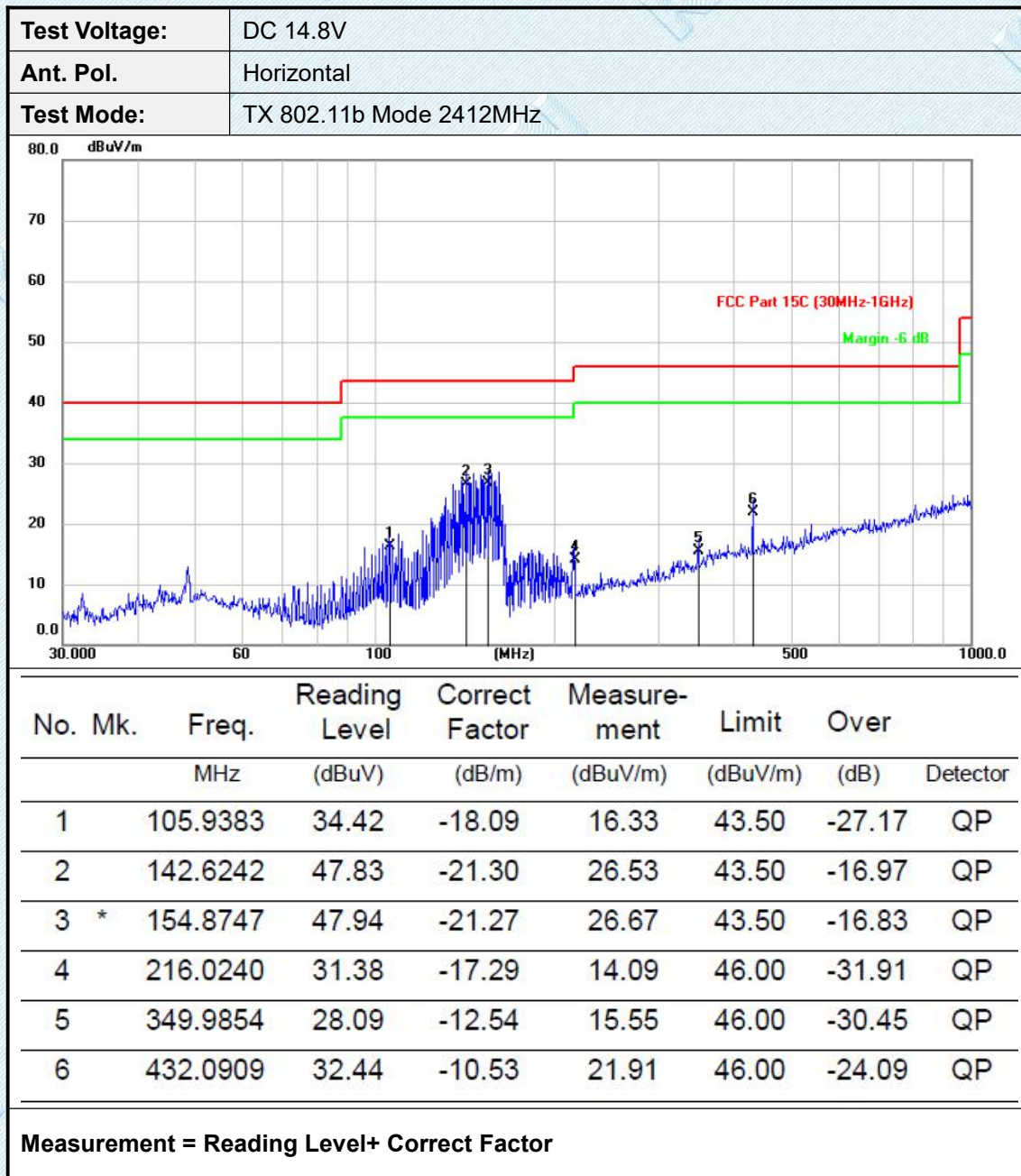
Test Result**9 KHz~30 MHz and 18GHz~25GHz**

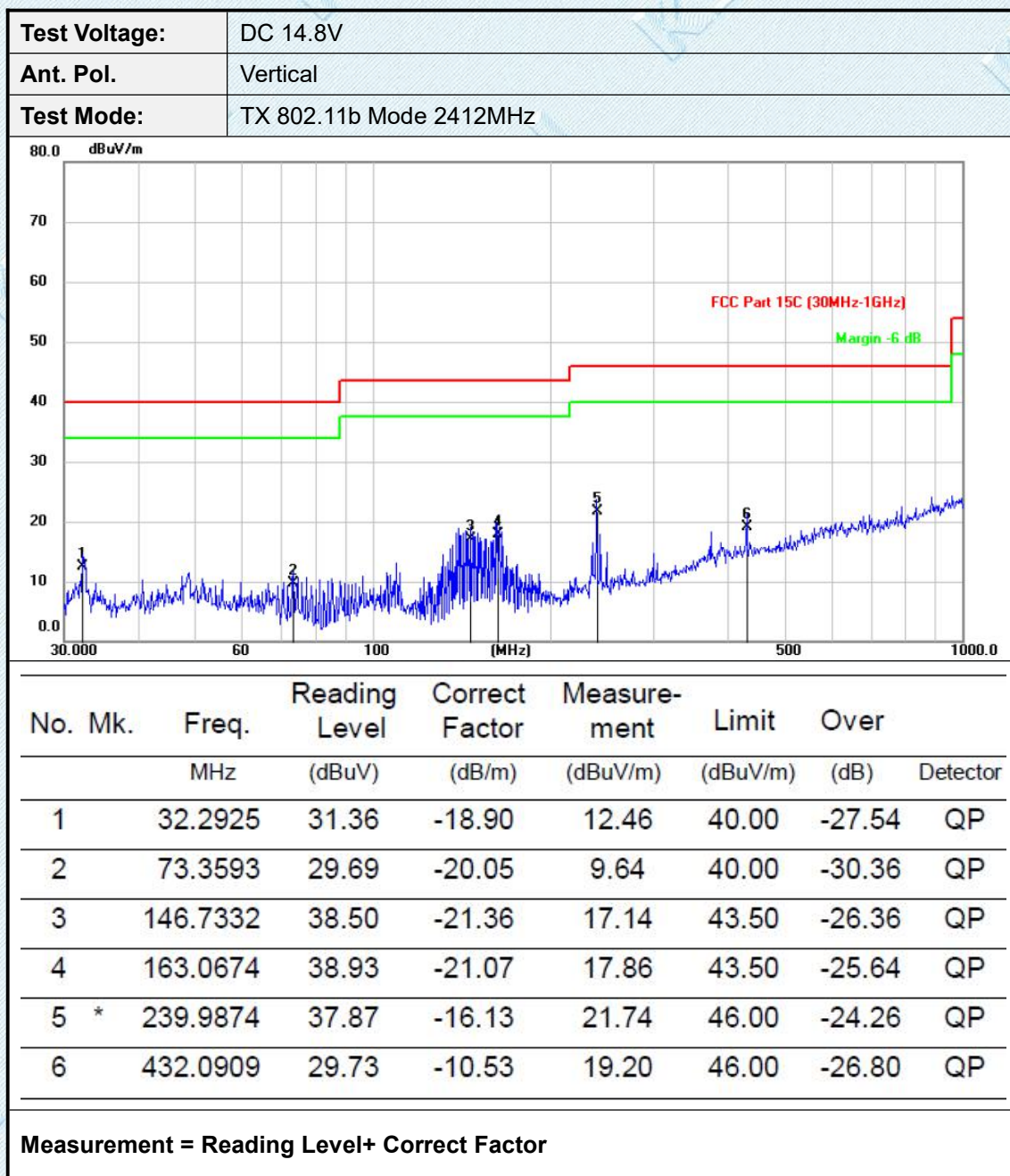
From 9 KHz~30 MHz and 18GHz~25GHz: Conclusion: PASS

Note:

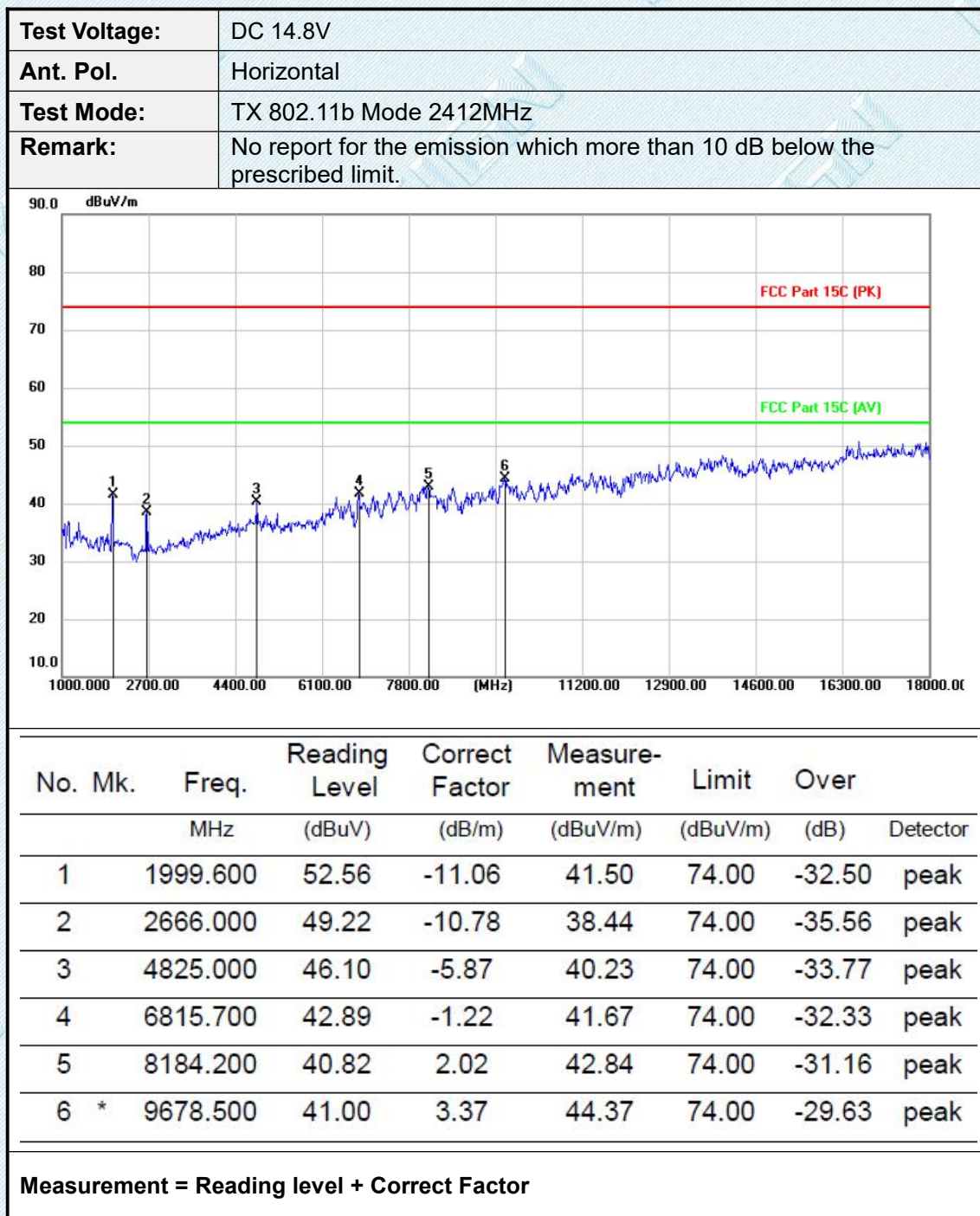
- 1) Measurement = Reading level + Correct Factor
Correct Factor=Antenna Factor + Cable Loss -Preamplifier Factor
- 2) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
- 3) The emission levels of other frequencies are very lower 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, and found the 802.11b modulation 2412MHz which it is worse case for 30MHz-1GHz , so only show the test data for worse case.
- 6) Pre-scan 802.11b/g/n(HT20/HT40) modulation, and found the 802.11b modulation which it is worse case for above 1GHz, so only show the test data for worse case.

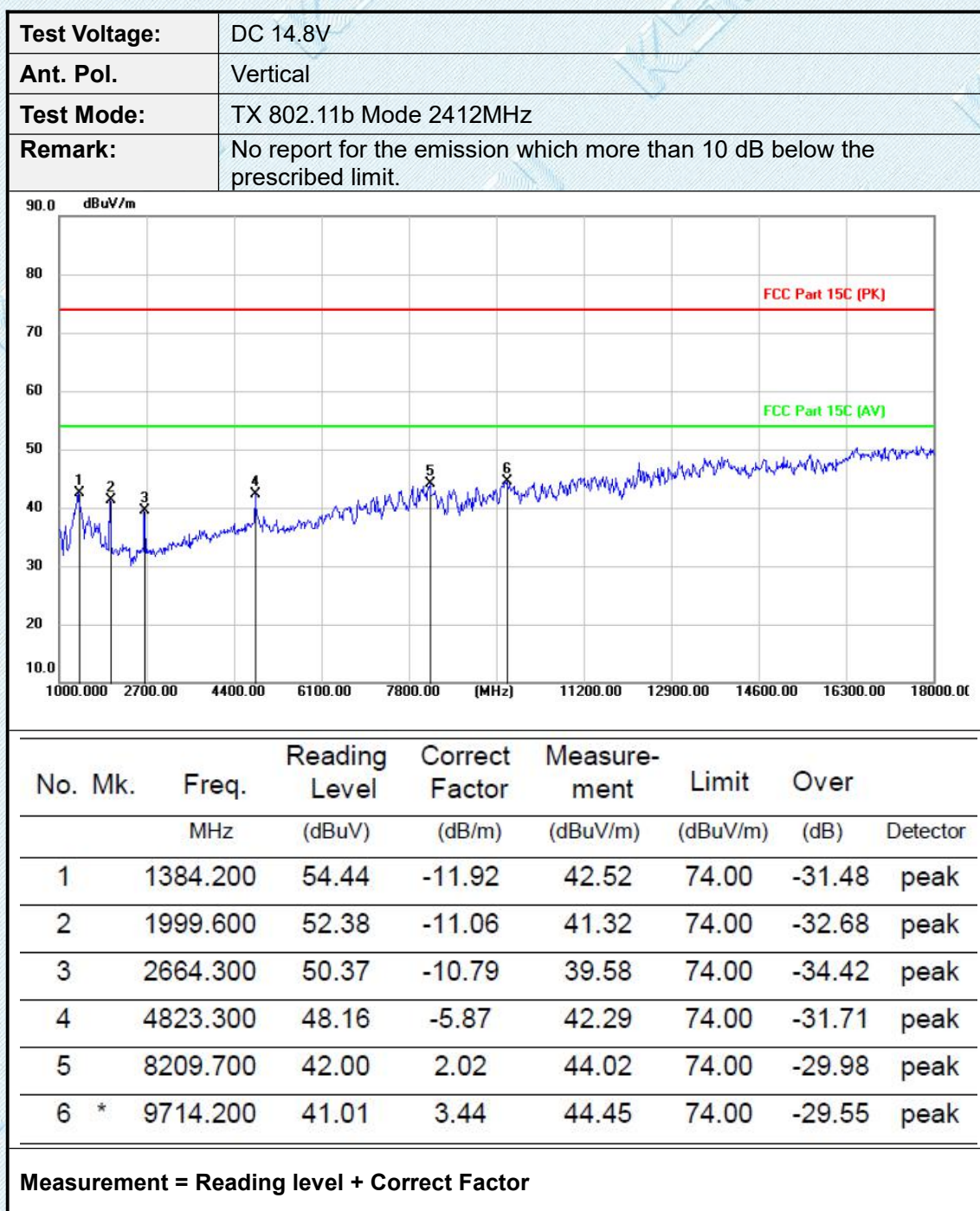
30MHz-1GHz



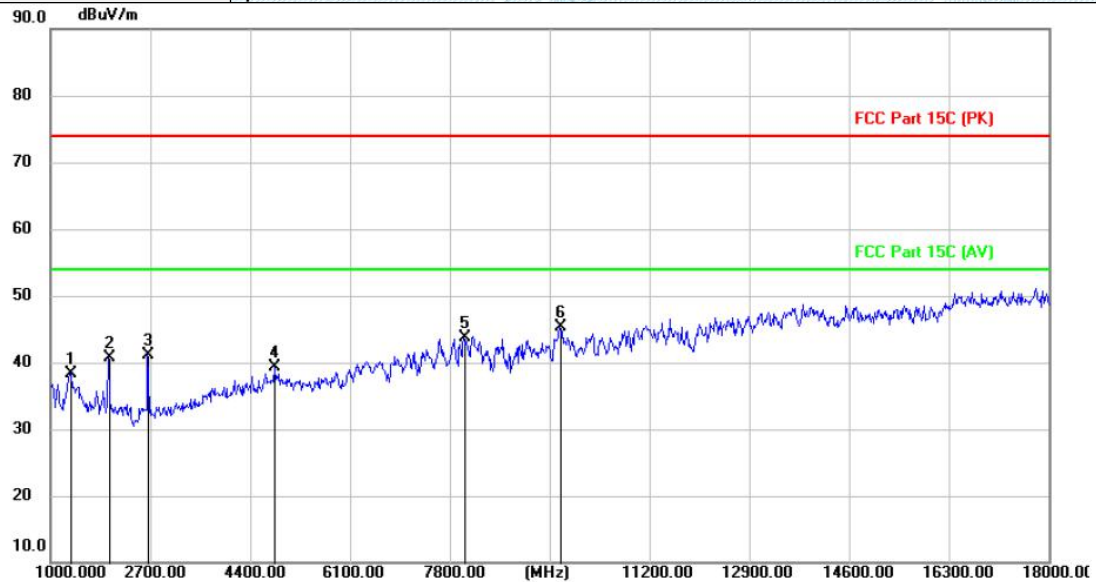


Adobe 1GHz





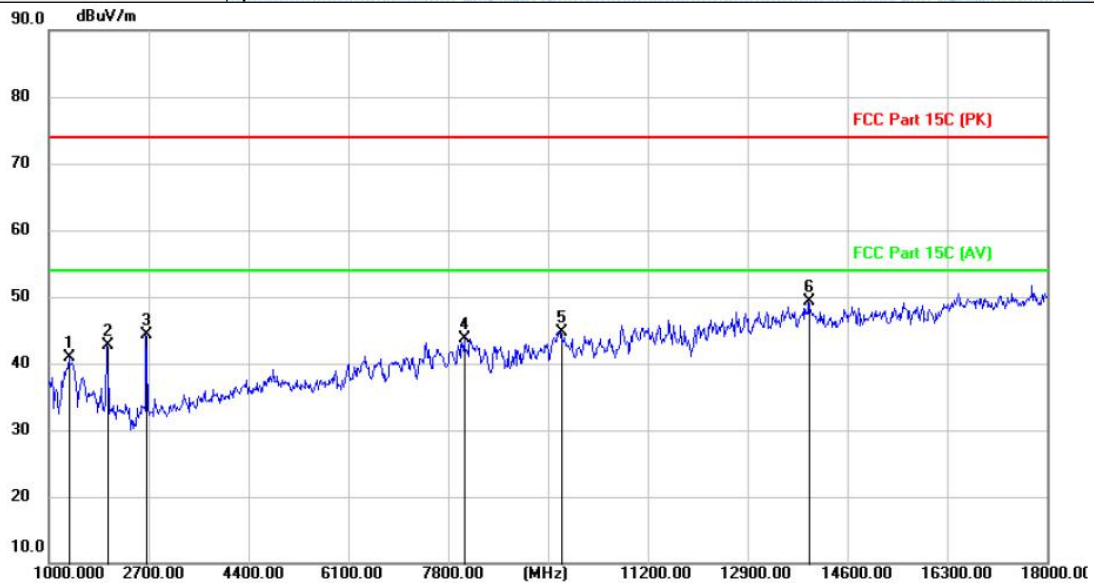
Test Voltage:	DC 14.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		1348.500	50.33	-11.94	38.39	74.00	-35.61	peak
2		1996.200	51.78	-11.06	40.72	74.00	-33.28	peak
3		2660.900	51.92	-10.79	41.13	74.00	-32.87	peak
4		4823.300	45.16	-5.87	39.29	74.00	-34.71	peak
5		8039.700	41.69	2.06	43.75	74.00	-30.25	peak
6	*	9683.600	41.92	3.38	45.30	74.00	-28.70	peak

Measurement = Reading level + Correct Factor

Test Voltage:	DC 14.8V
Ant. Pol.	Vertical
Test Mode:	TX 802.11b Mode 2437MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Mk.	Freq. MHz	Reading Level (dBuV)	Correct Factor (dB/m)	Measure- ment (dBuV/m)	Limit (dBuV/m)	Over (dB)	Detector
1		1343.400	52.80	-11.95	40.85	74.00	-33.15	peak
2		1999.600	53.78	-11.06	42.72	74.00	-31.28	peak
3		2662.600	55.05	-10.79	44.26	74.00	-29.74	peak
4		8083.900	41.75	2.05	43.80	74.00	-30.20	peak
5		9724.400	41.32	3.45	44.77	74.00	-29.23	peak
6	*	13947.200	38.10	11.17	49.27	74.00	-24.73	peak

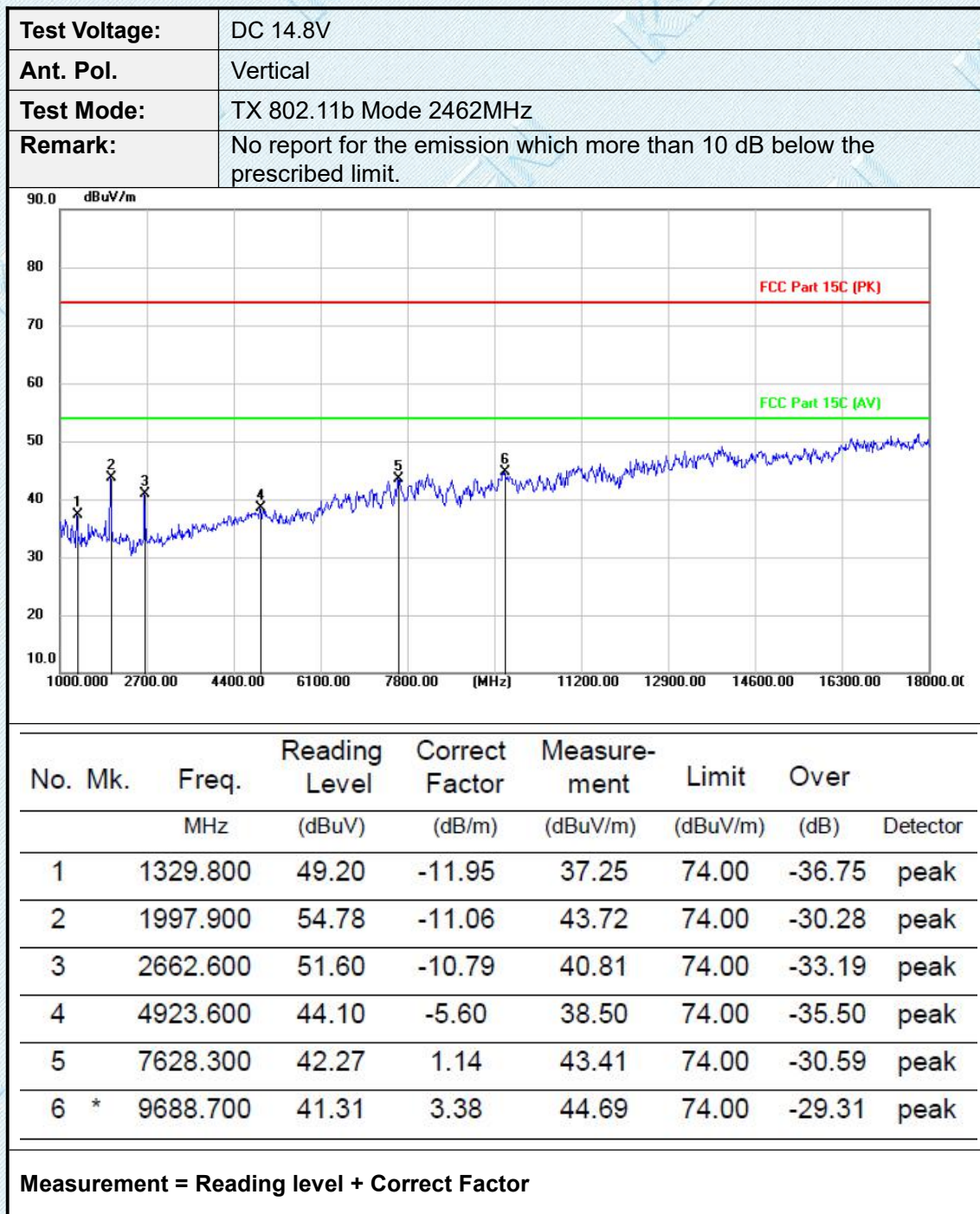
Measurement = Reading level + Correct Factor

Test Voltage:	DC 14.8V
Ant. Pol.	Horizontal
Test Mode:	TX 802.11b Mode 2462MHz
Remark:	No report for the emission which more than 10 dB below the prescribed limit.



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector
1		1343.400	49.98	-11.95	38.03	74.00	-35.97	peak
2		1992.800	49.80	-11.07	38.73	74.00	-35.27	peak
3		2660.900	49.57	-10.79	38.78	74.00	-35.22	peak
4		4923.600	45.25	-5.60	39.65	74.00	-34.35	peak
5		6557.300	44.10	-1.95	42.15	74.00	-31.85	peak
6	*	8189.300	41.92	2.01	43.93	74.00	-30.07	peak

Measurement = Reading level + Correct Factor



4.EUT TEST PHOTOS

Reference to the document No.: Test Photos.

5. PHOTOGRAPHS OF EUT CONSTRUCTIONAL

Reference to the document No.: External Photos and Internal Photos.

*****THE END*****