

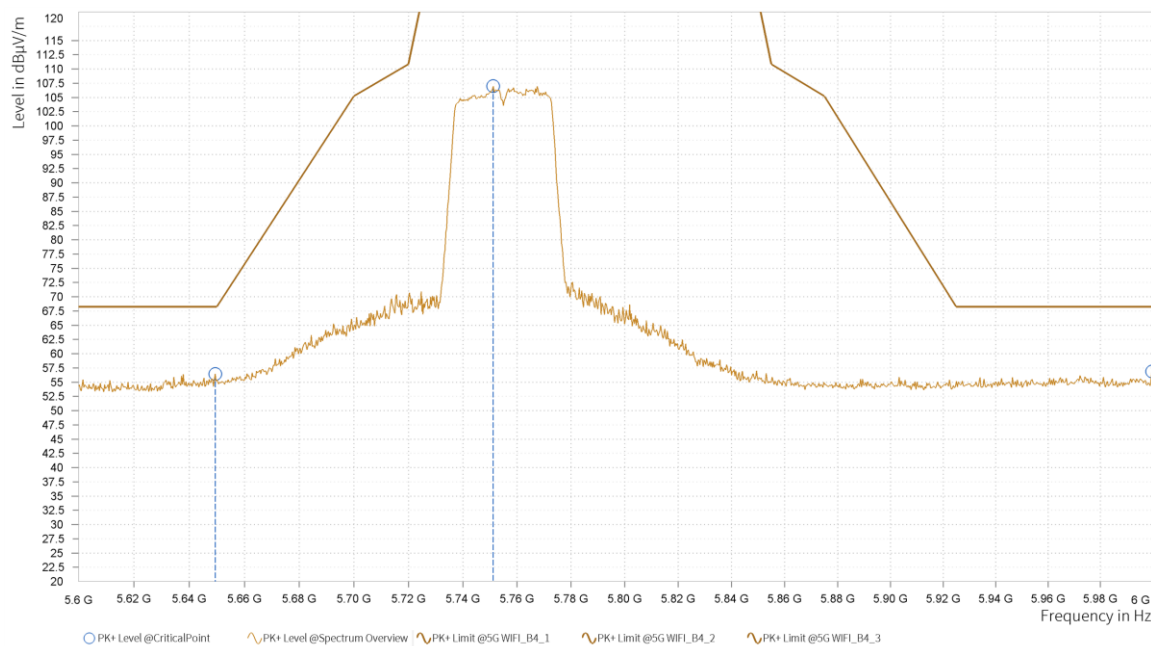


BUREAU VERITAS Test Report No.: PSU-NQN2412090210RF03

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

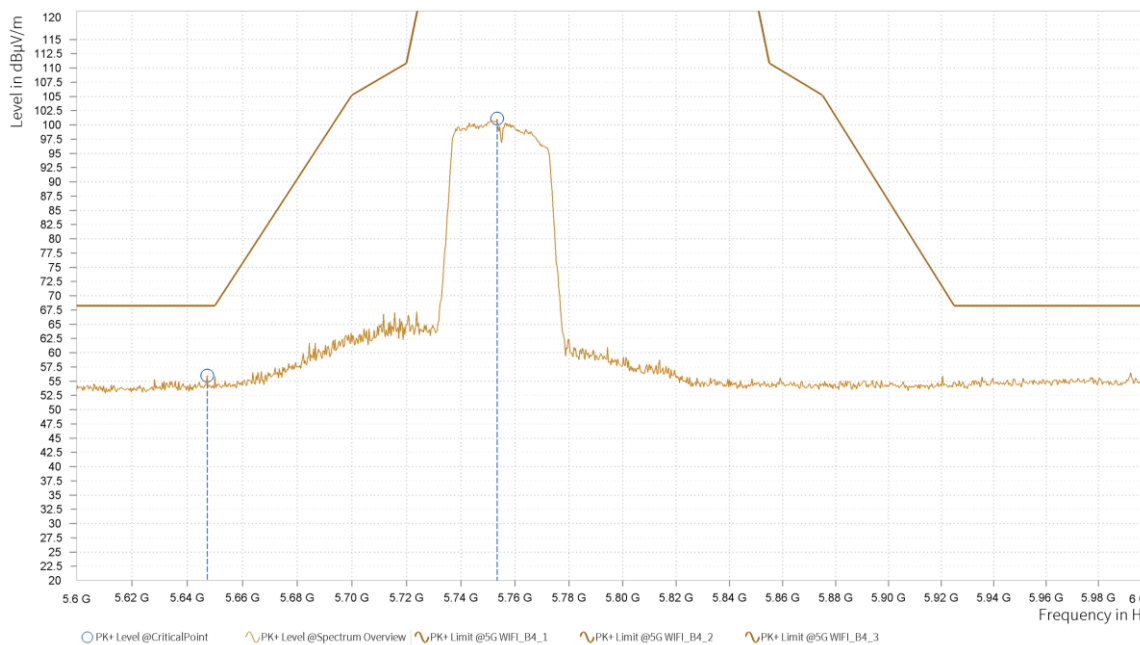
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,649.375	56.44	68.20	11.76	18.20	H	359.1	1.00
11	5,751.250	106.98			18.73	H	340.1	1.00
12	6,000.000	56.87	68.20	11.33	19.20	H	109.6	2.00





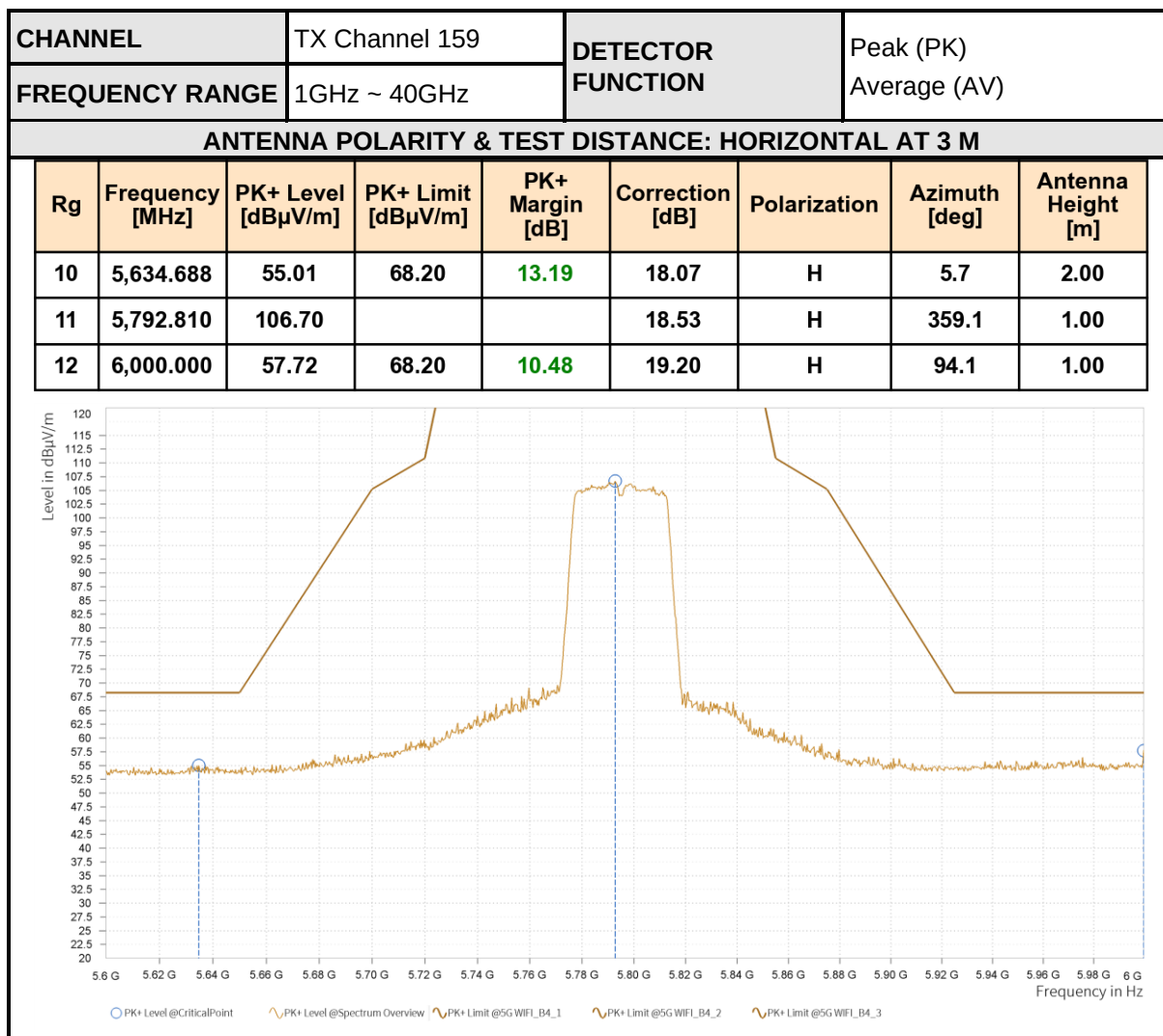
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,647.188	55.98	68.20	12.22	18.18	V	205	1.00
11	5,753.438	101.11			18.72	V	233.2	1.00
12	6,000.000	57.97	68.20	10.23	19.20	V	260.6	1.00



REMARKS:

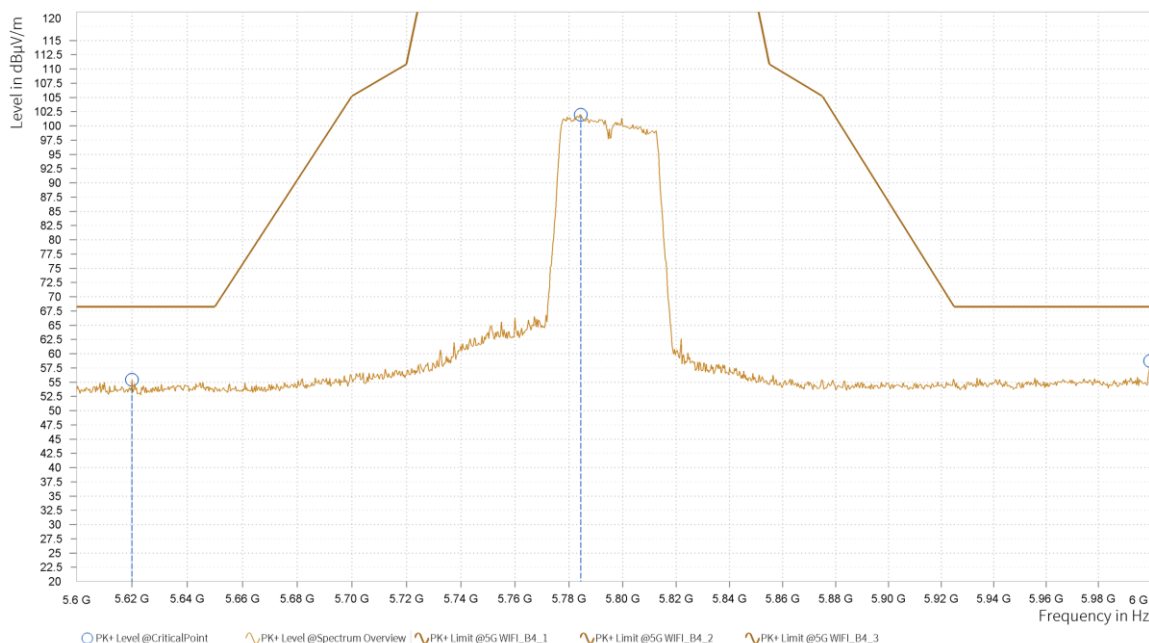
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5755MHz: Fundamental frequency.





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,620.000	55.41	68.20	12.79	17.94	V	354.9	2.00
11	5,784.380	101.96			18.57	V	226.1	1.00
12	6,000.000	58.73	68.20	9.47	19.20	V	265.3	2.00



REMARKS:

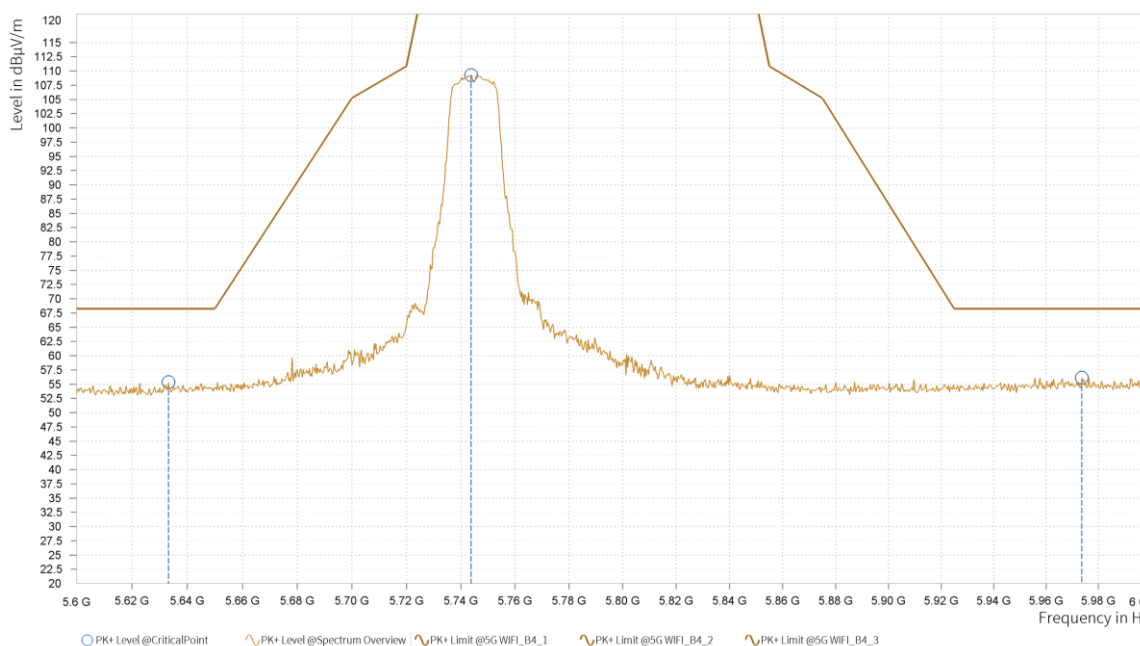
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5795MHz: Fundamental frequency.

**802.11ac (20MHz)**

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

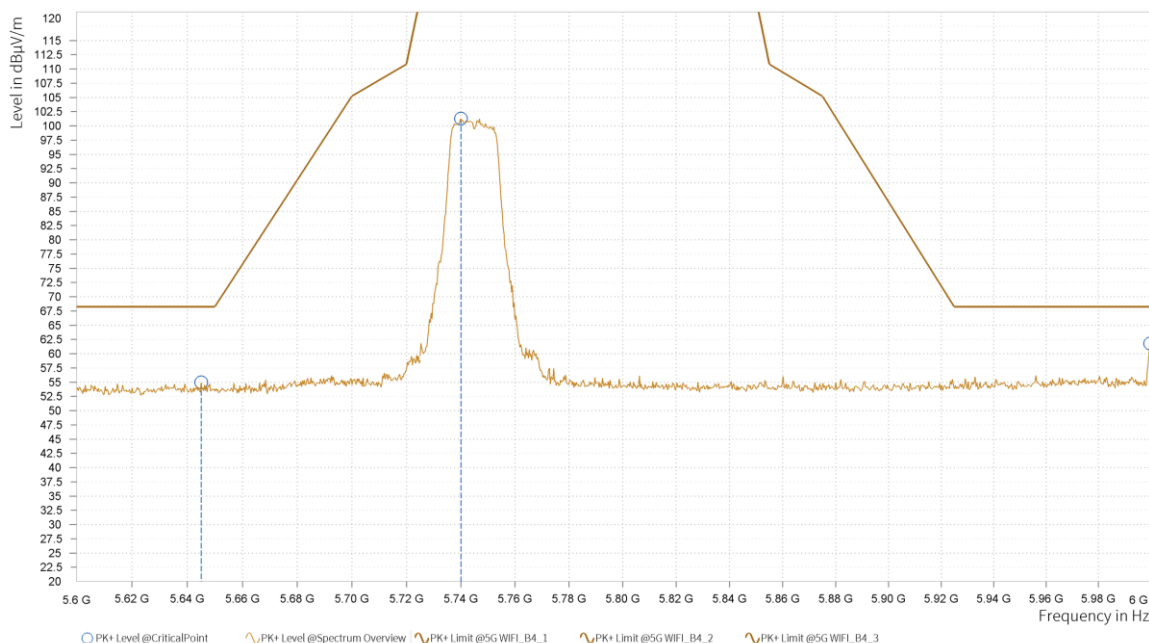
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
11	5,633.125	55.35	68.20	12.85	18.06	H	354.9	2.00
12	5,743.750	109.30			18.77	H	1	1.00
13	5,973.750	56.14	68.20	12.06	18.84	H	343.7	1.00





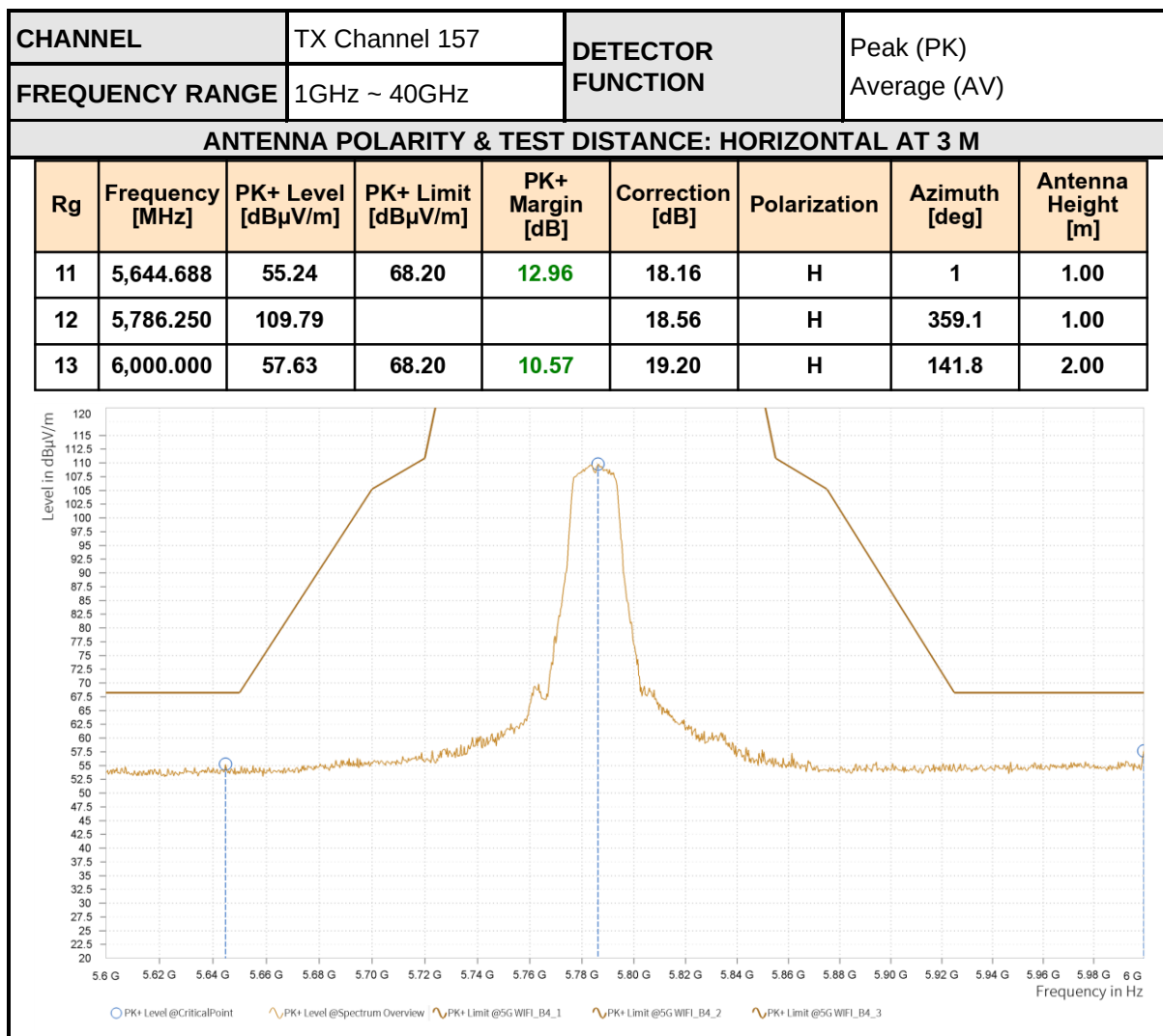
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
11	5,645.000	54.96	68.20	13.24	18.16	V	1.3	2.00
12	5,740.000	101.29			18.80	V	70	2.00
13	6,000.000	61.81	68.20	6.39	19.20	V	174.1	2.00



REMARKS:

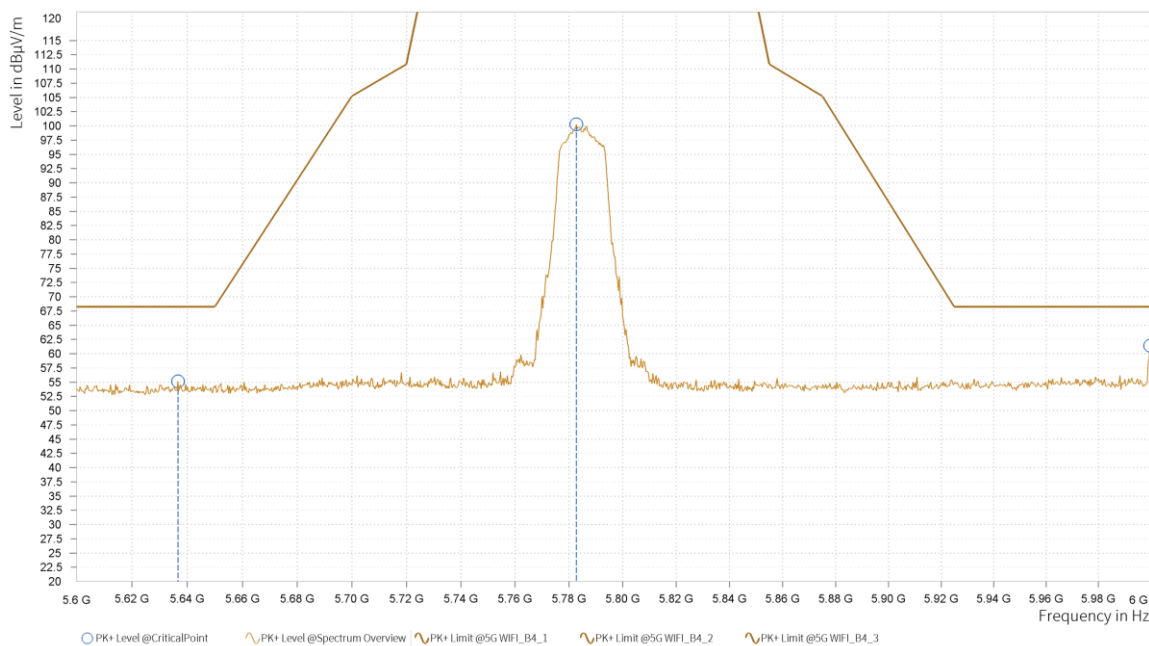
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5745MHz: Fundamental frequency.





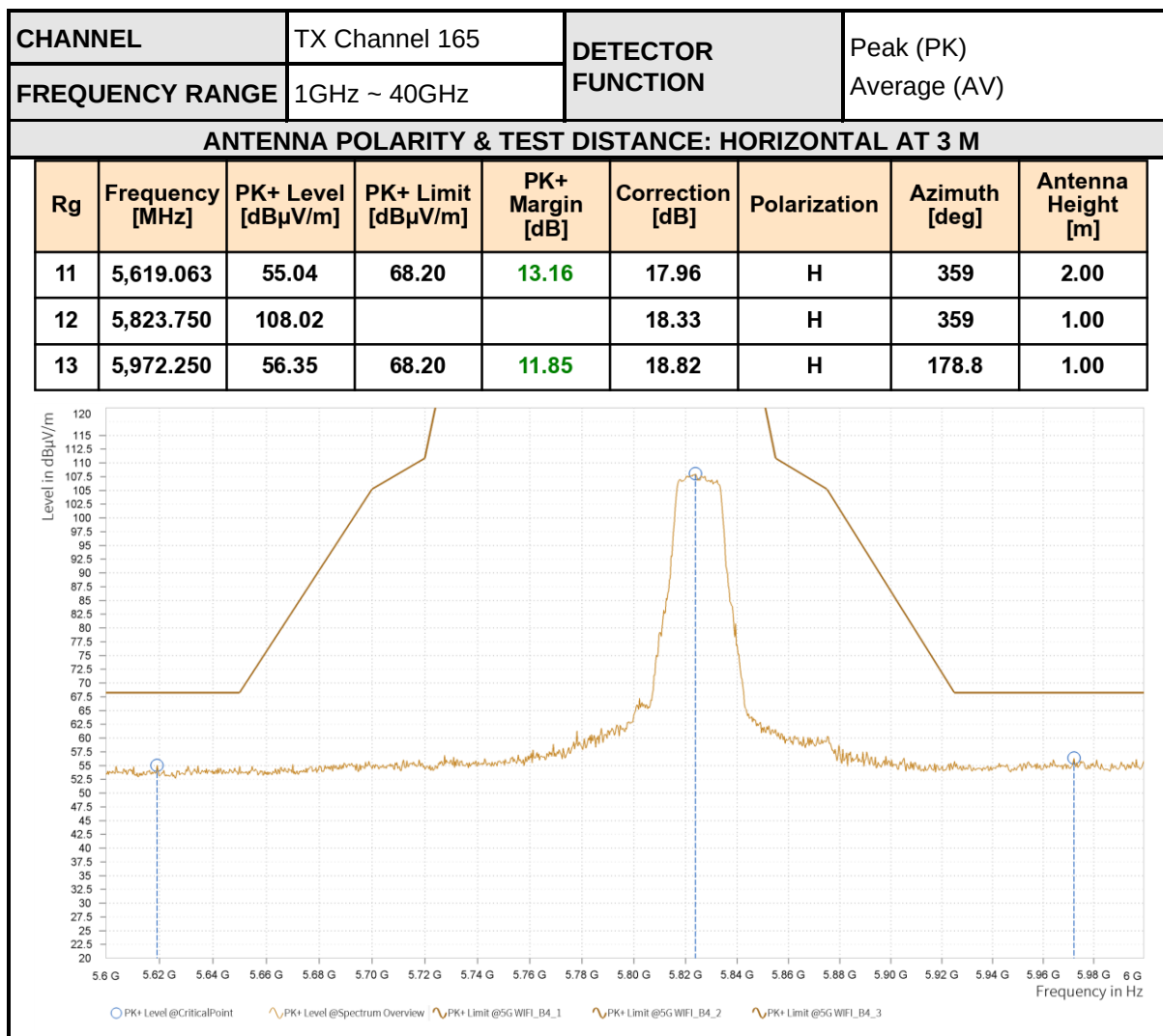
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
11	5,636.563	55.14	68.20	13.06	18.09	V	358.3	1.00
12	5,782.810	100.27			18.57	V	73.6	2.00
13	6,000.000	61.41	68.20	6.79	19.20	V	175.3	2.00



REMARKS:

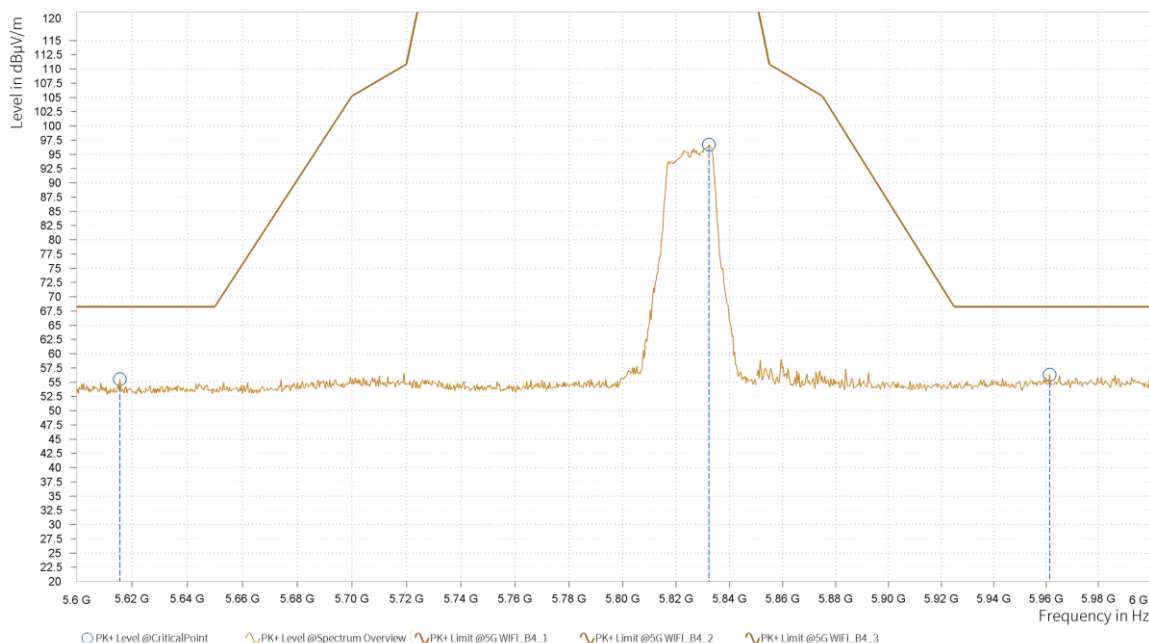
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5785MHz: Fundamental frequency.





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
11	5,615.625	55.54	68.20	12.66	18.01	V	244.6	1.00
12	5,832.188	96.68			18.28	V	88.1	1.00
13	5,961.375	56.29	68.20	11.91	18.68	V	356.7	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5825MHz: Fundamental frequency.

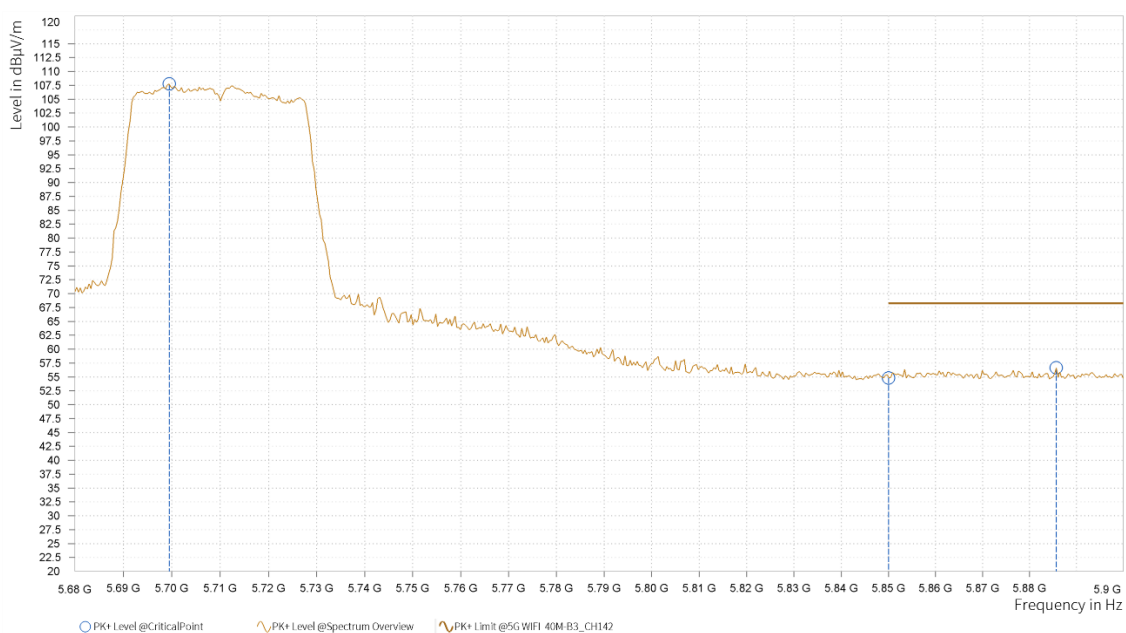


802.11ac (40MHz)

CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

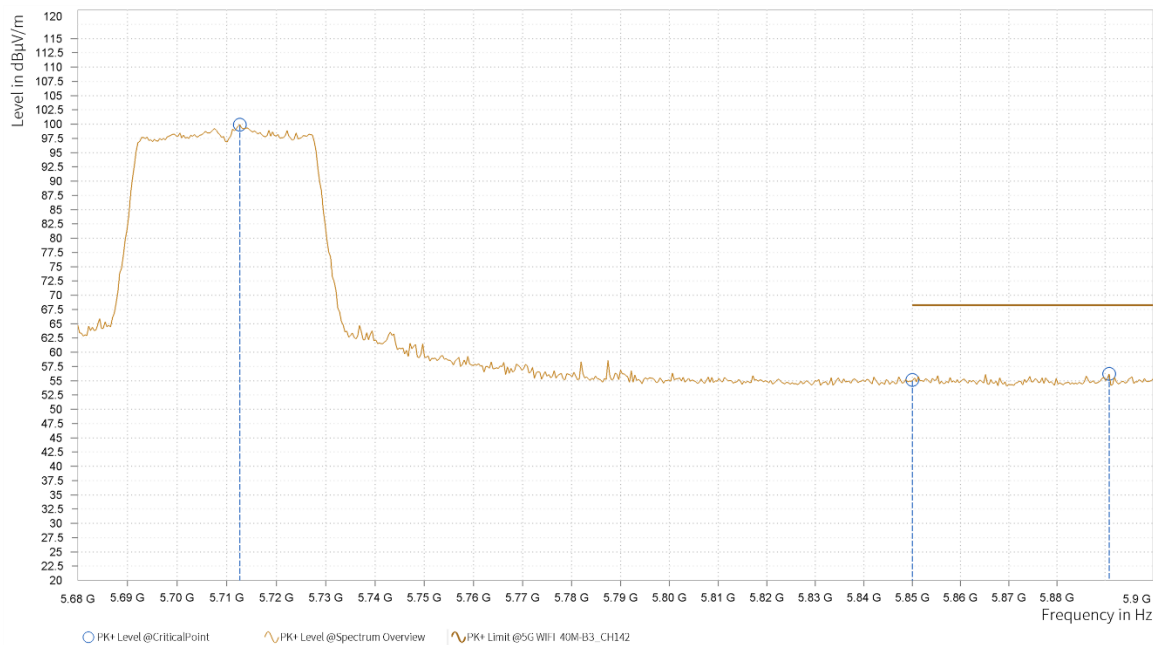
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
9	5,699.433	107.75			18.64	H	1	1.00
9	5,850.000	54.82	68.20	13.38	18.20	H	105.9	2.00
9	5,885.700	56.63	68.20	11.57	18.38	H	0.8	2.00

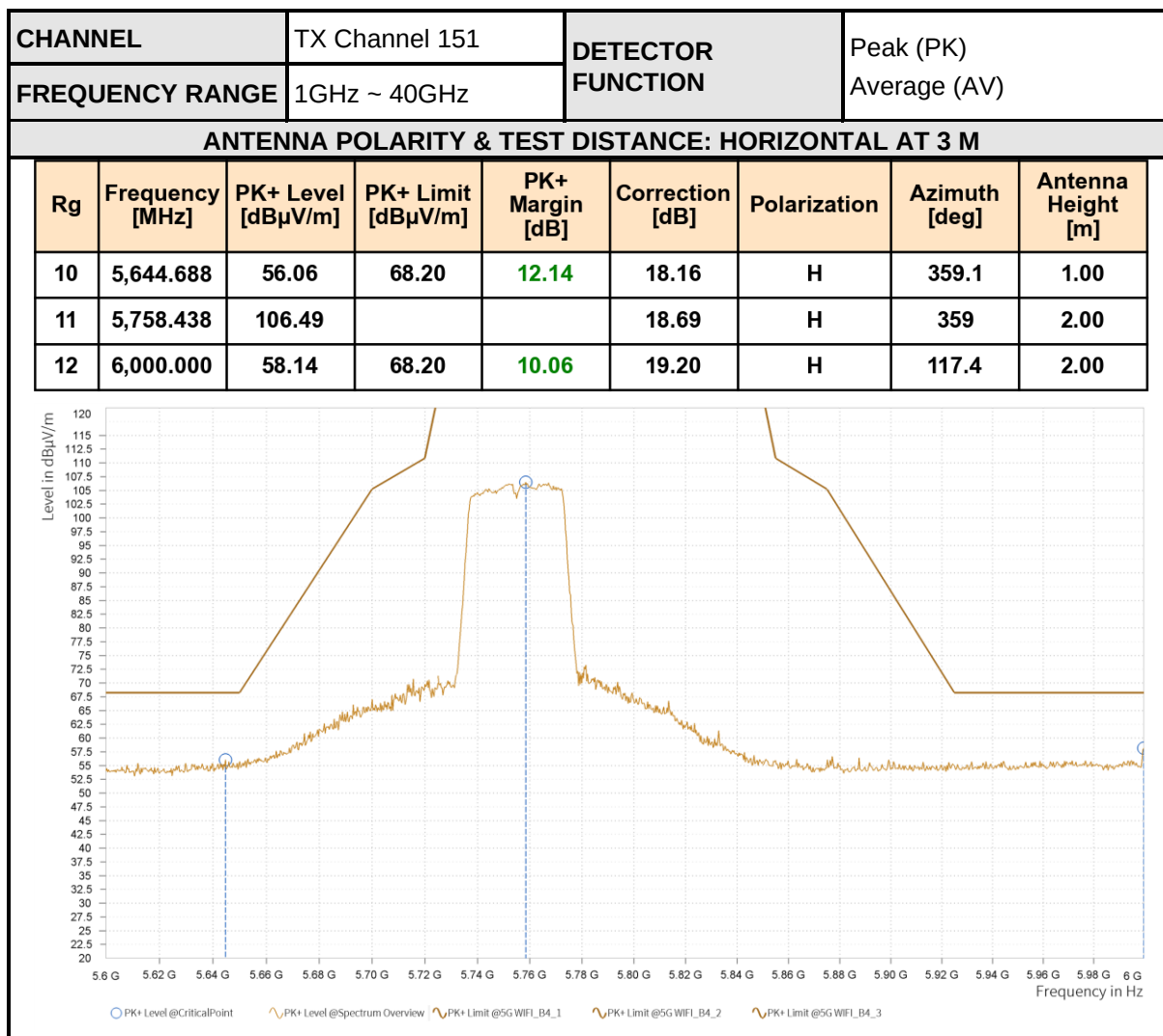




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

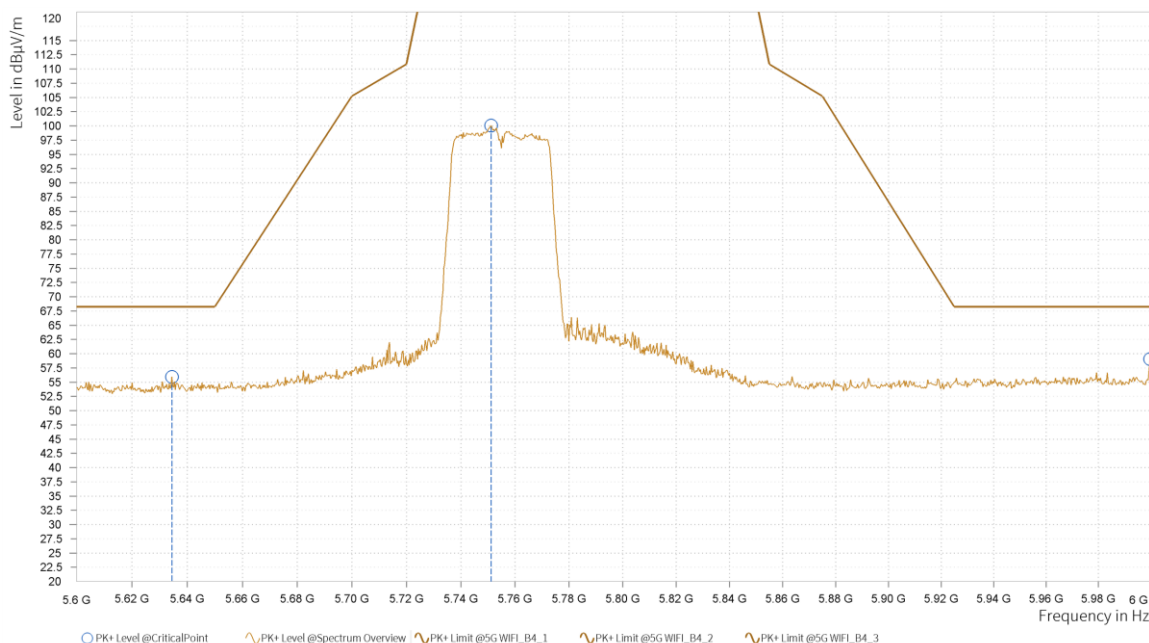
Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
9	5,712.633	99.89			18.73	V	222.3	2.00
9	5,850.000	55.14	68.20	13.06	18.20	V	326.9	1.00
9	5,890.833	56.20	68.20	12.00	18.41	V	5	1.00



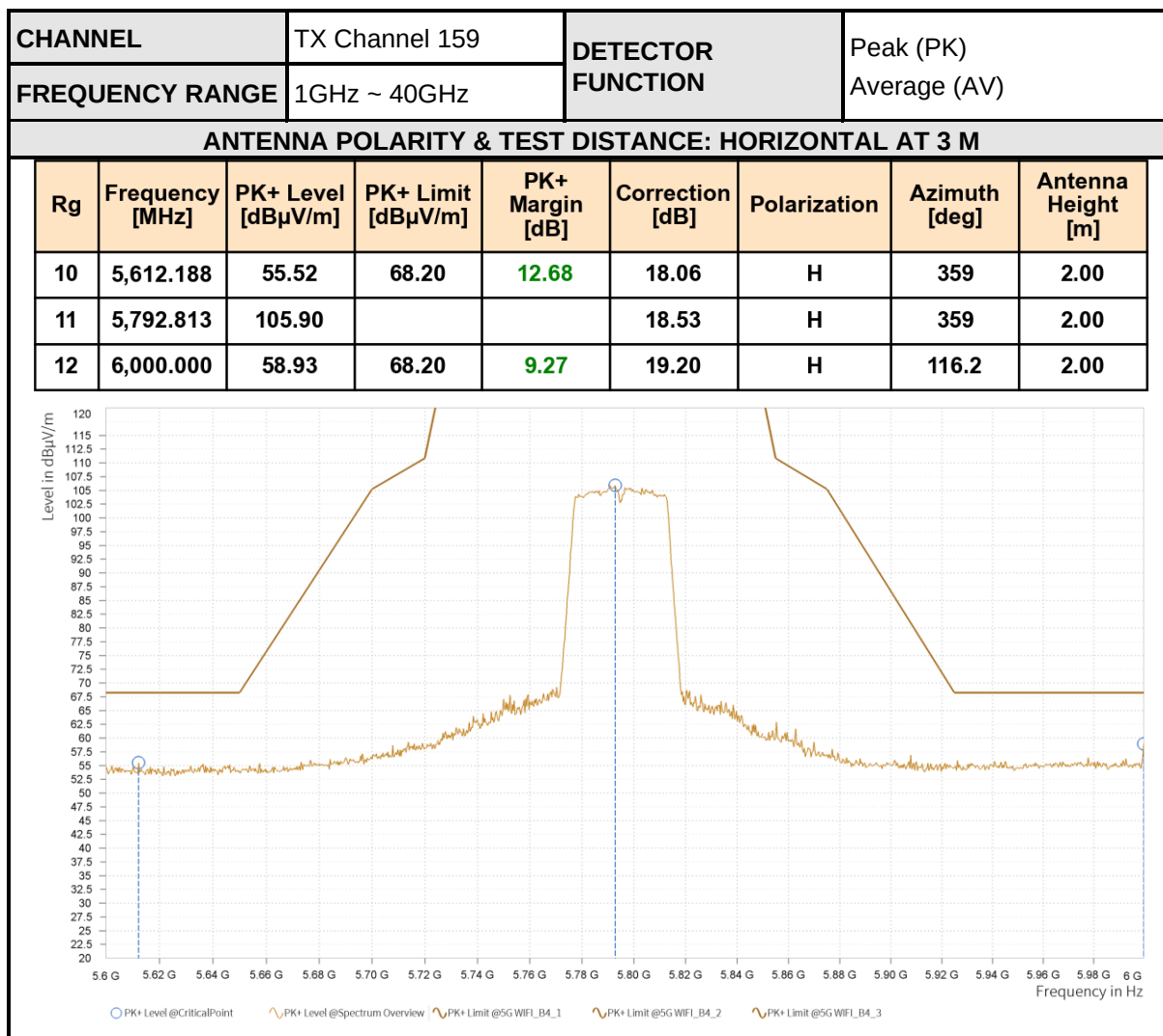


**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,634.375	55.93	68.20	12.27	18.07	V	232.7	1.00
11	5,751.250	100.04			18.73	V	217.6	2.00
12	6,000.000	59.03	68.20	9.17	19.20	V	267.1	2.00

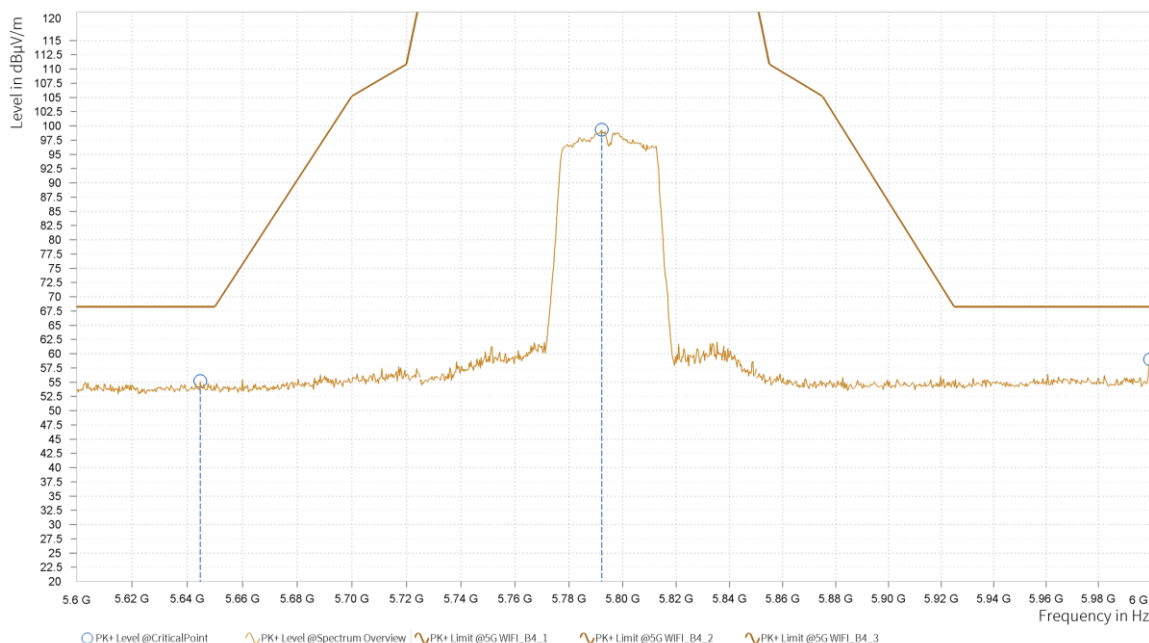
**REMARKS:**

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5755MHz: Fundamental frequency.



**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,644.688	55.17	68.20	13.03	18.16	V	1	2.00
11	5,792.188	99.31			18.53	V	219.9	2.00
12	6,000.000	58.97	68.20	9.23	19.20	V	268.3	2.00

**REMARKS:**

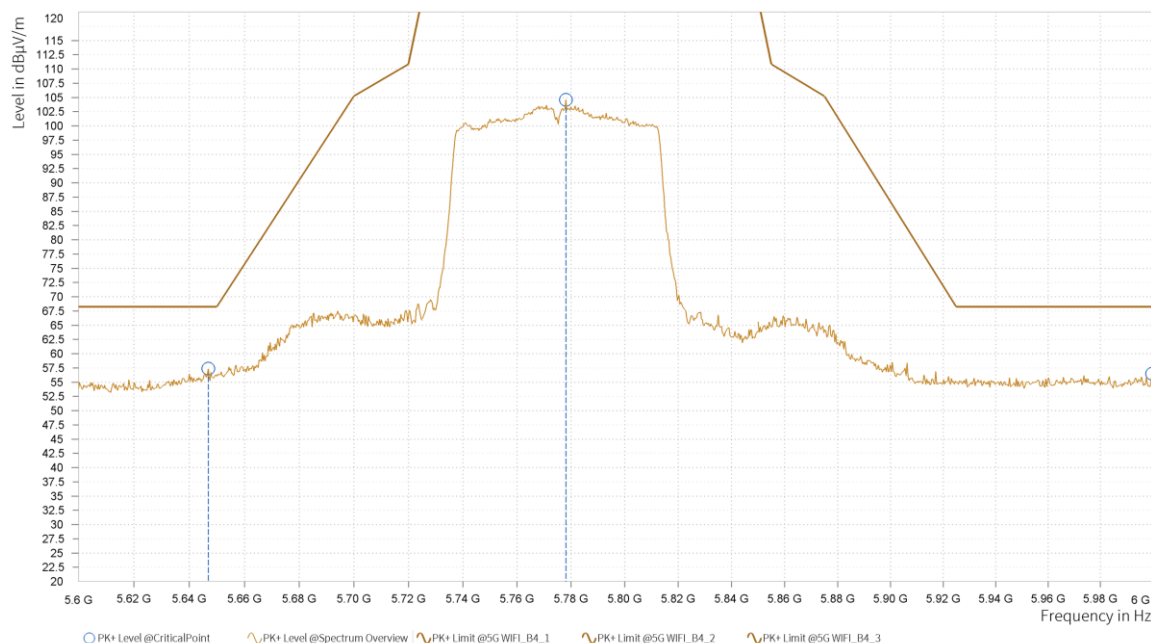
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5795MHz: Fundamental frequency.

**802.11ac (80MHz)**

CHANNEL	TX Channel 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

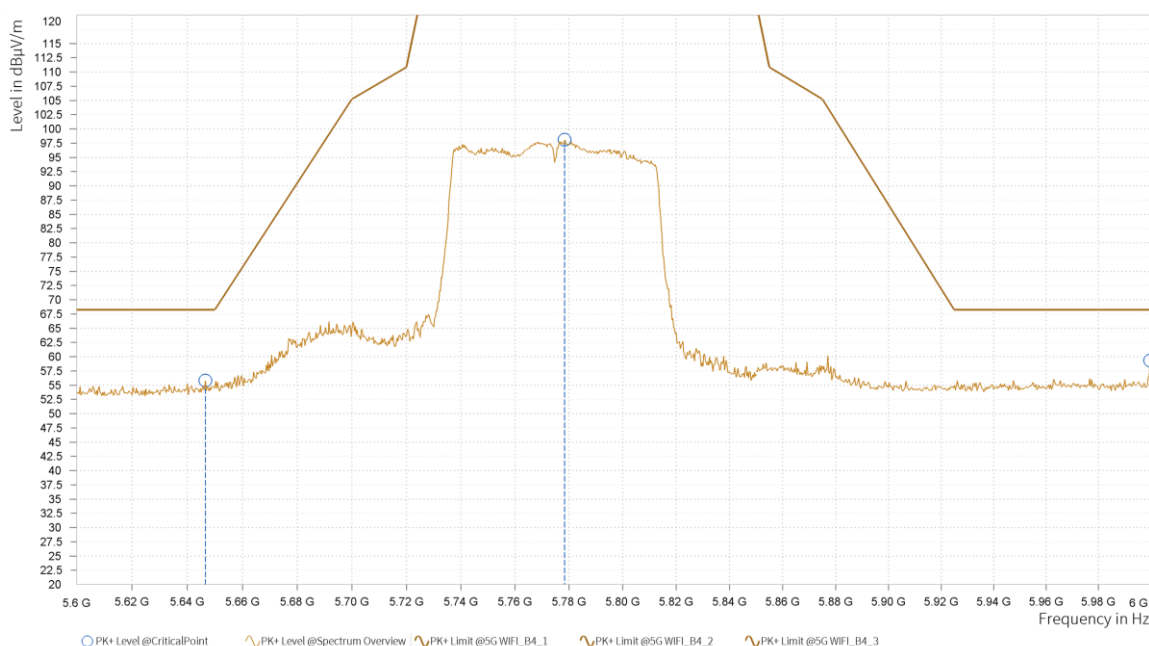
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,646.875	57.37	68.20	10.83	18.18	H	358.1	1.00
11	5,778.130	104.59			18.60	H	359	1.00
12	6,000.000	56.47	68.20	11.73	19.20	H	262.3	2.00





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,646.563	55.80	68.20	12.40	18.18	V	355	2.00
11	5,778.438	98.10			18.60	V	230.8	1.00
12	6,000.000	59.32	68.20	8.88	19.20	V	103	2.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5775MHz: Fundamental frequency.



RADIATED EMISSION

BELOW 1GHz WORST-CASE DATA

Band

802.11a (MHz)

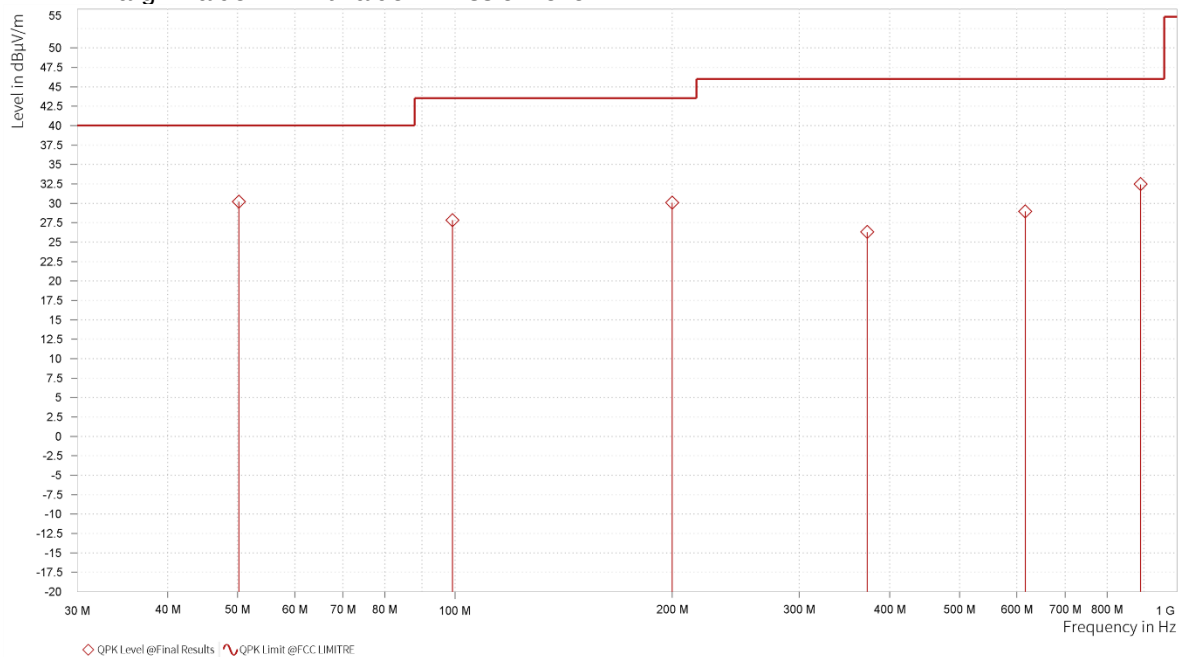
CHANNEL	TX Channel 64	DETECTOR	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz	FUNCTION	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	50.225	30.22	40.00	9.78	-2.84	H	6.3	1.00	120.000
1	99.258	27.82	43.50	15.68	-5.27	H	0.9	2.00	120.000
1	199.847	30.09	43.50	13.41	-4.15	H	82.1	2.00	120.000
1	372.556	26.30	46.00	19.70	2.39	H	6.3	1.00	120.000
1	616.559	28.94	46.00	17.06	4.11	H	359	1.00	120.000
1	890.196	32.45	46.00	13.55	8.31	H	82.1	2.00	120.000

REMARKS:

1. Emission level (dBμV/m) = Read level (dBμV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.





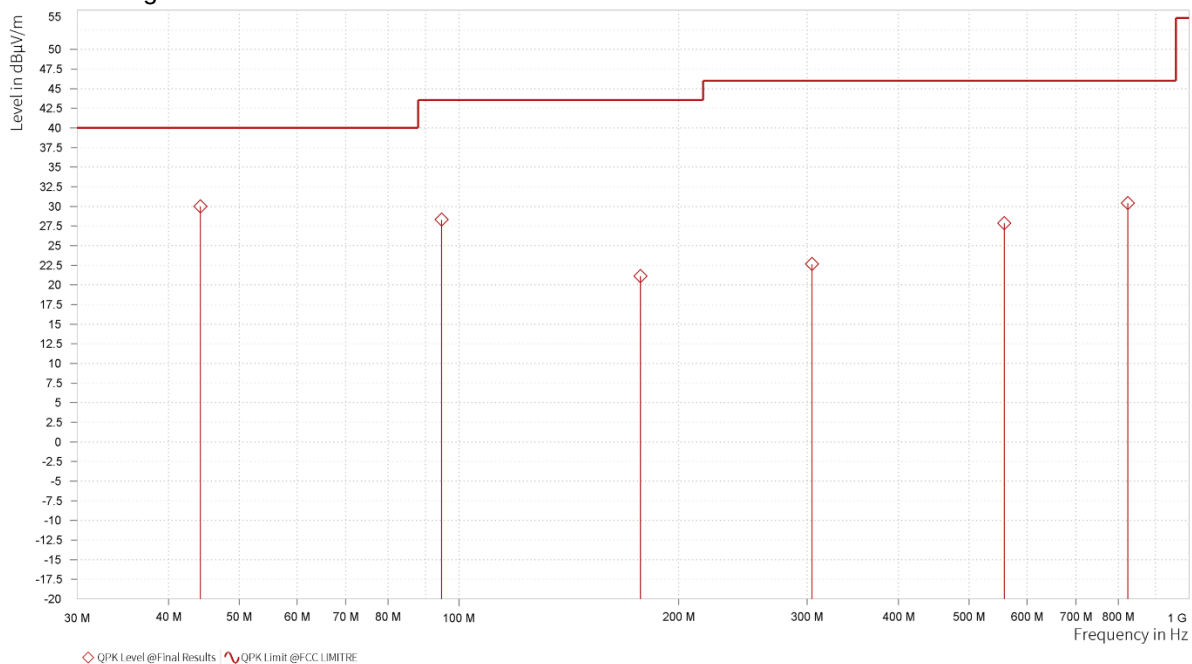
CHANNEL	Channel 64	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	QPK Level [dBμV/m]	QPK Limit [dBμV/m]	QPK Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]	Meas. BW [kHz]
1	44.259	29.99	40.00	10.01	-4.29	V	1	1.00	120.000
1	94.748	28.30	43.50	15.20	-6.03	V	274.2	1.00	120.000
1	177.295	21.12	43.50	22.38	-6.36	V	1	2.00	120.000
1	304.607	22.65	46.00	23.35	-0.19	V	135.4	1.00	120.000
1	558.359	27.87	46.00	18.13	3.09	V	274.2	1.00	120.000
1	824.915	30.42	46.00	15.58	6.59	V	359	2.00	120.000

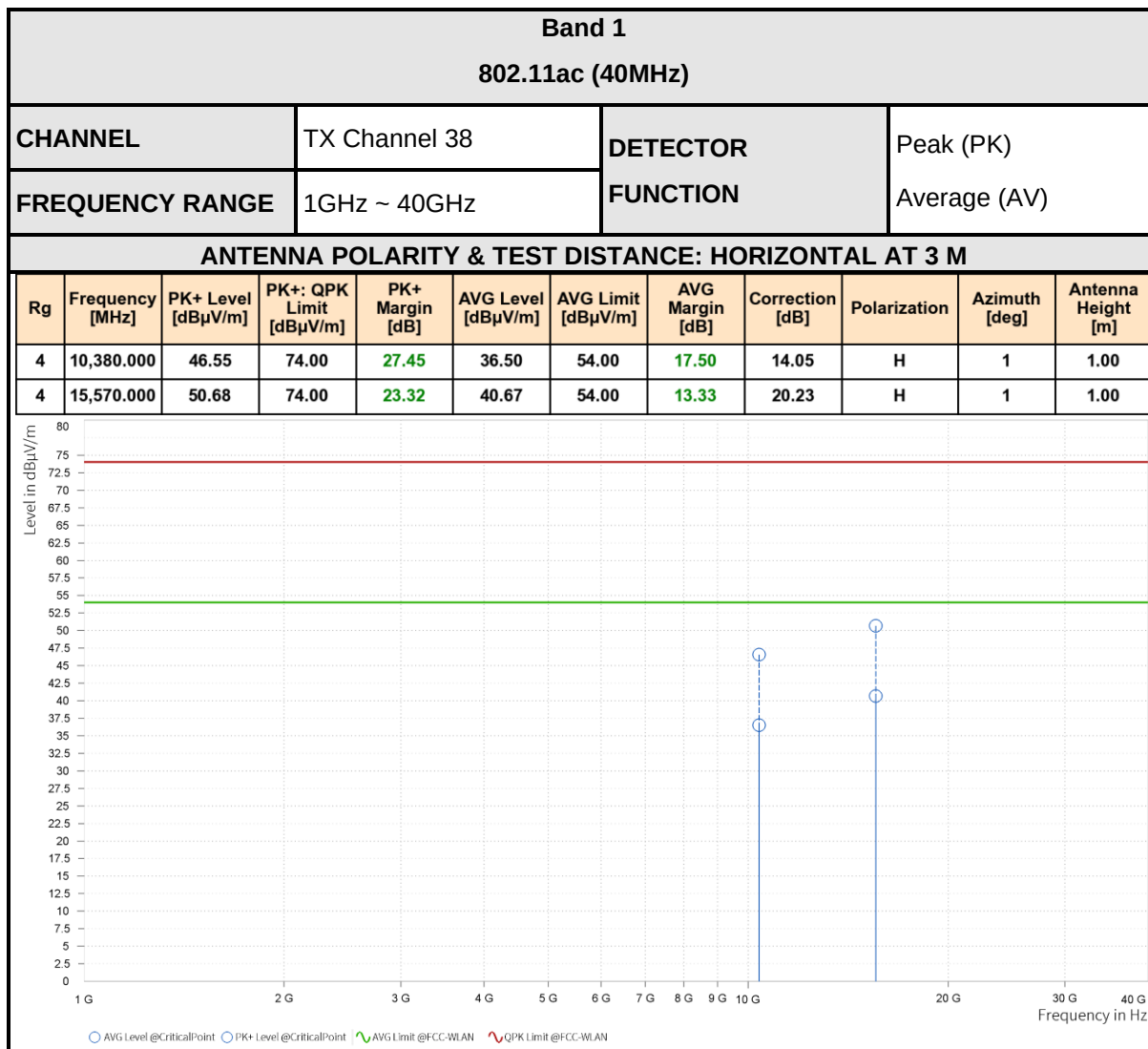
REMARKS:

1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.



**ABOVE 1GHz WORST-CASE DATA**

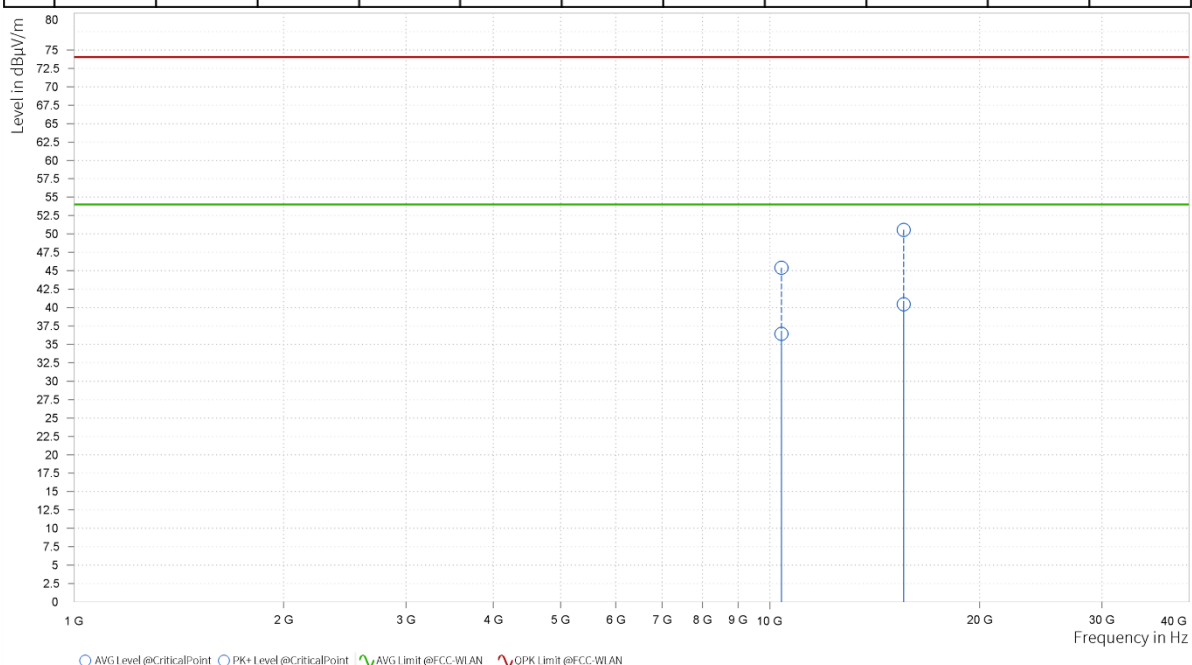
Note: For higher frequency, the emission is too low to be detected.





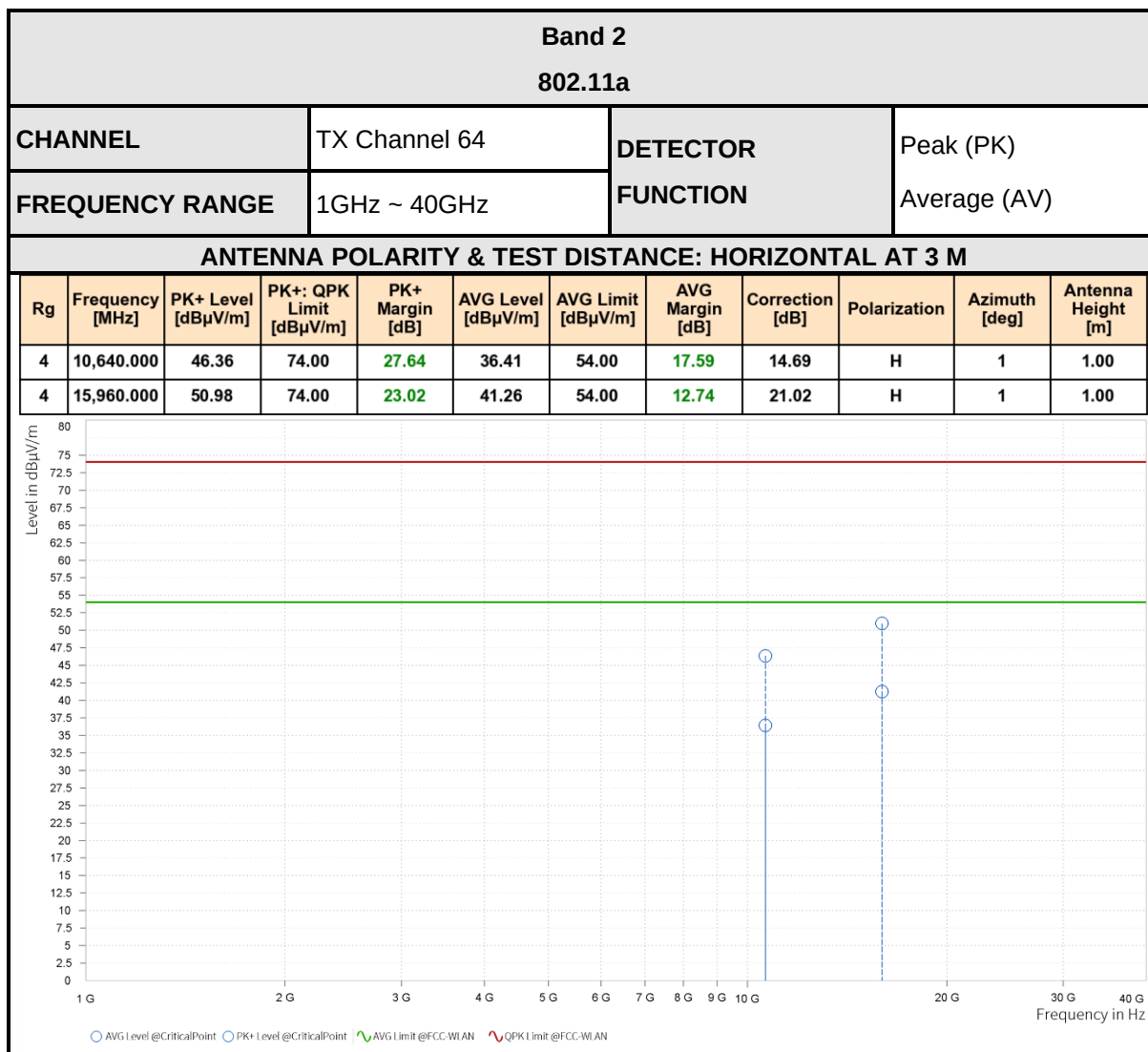
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	10,380.000	45.41	74.00	28.59	36.41	54.00	17.59	14.05	V	1	1.00
4	15,570.000	50.55	74.00	23.45	40.44	54.00	13.56	20.23	V	1	1.00



REMARKS:

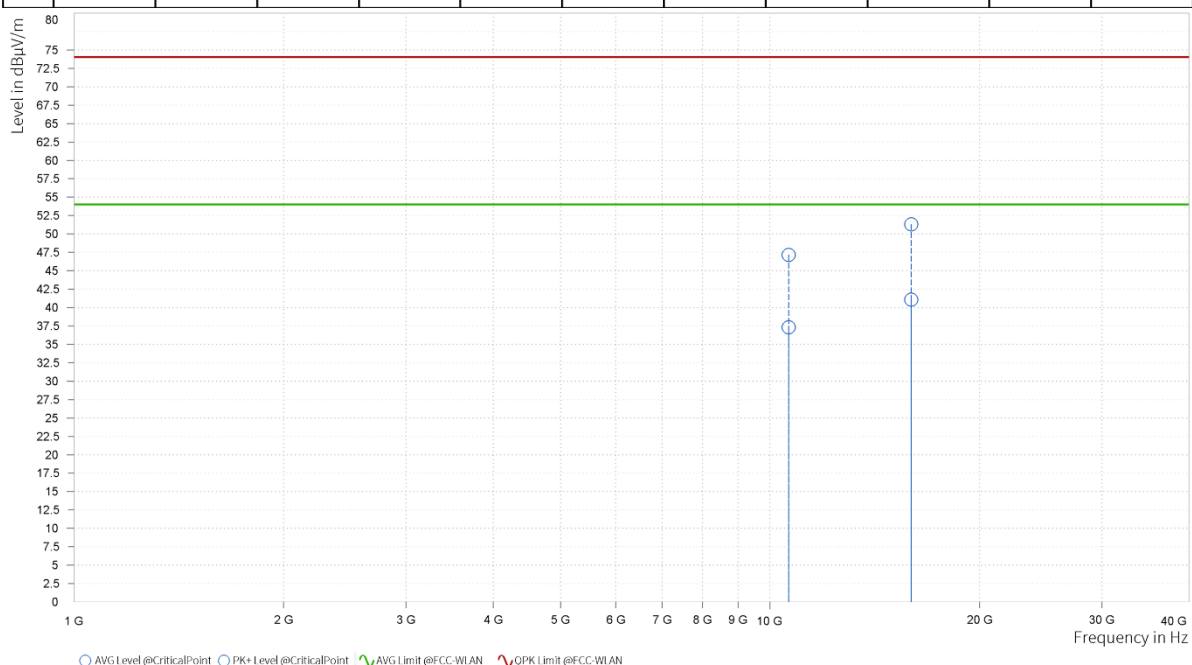
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5210MHz: Fundamental frequency.





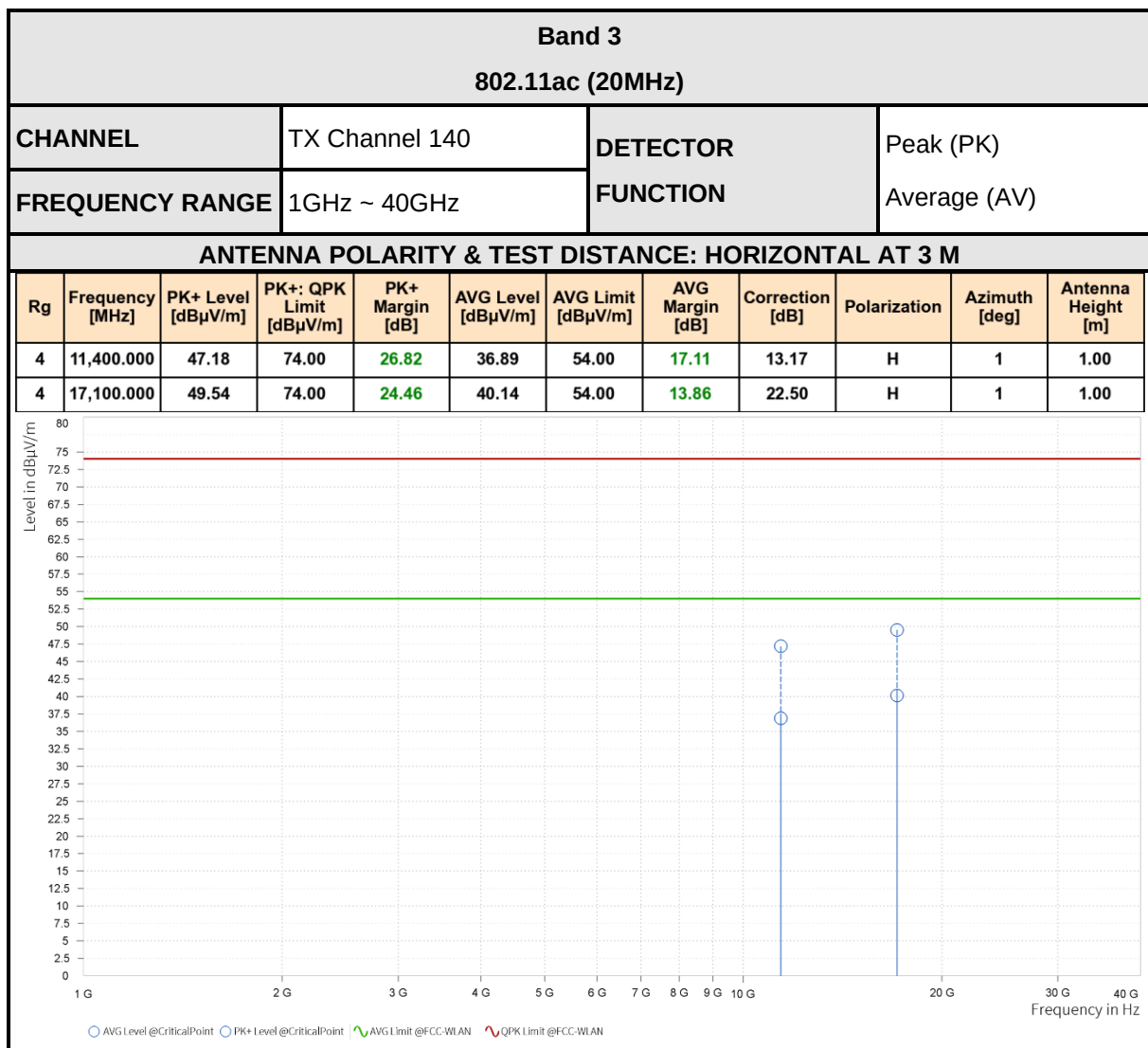
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	10,640.000	47.17	74.00	26.83	37.30	54.00	16.70	14.69	V	1	1.00
4	15,960.000	51.32	74.00	22.68	41.05	54.00	12.95	21.02	V	1	1.00



REMARKS:

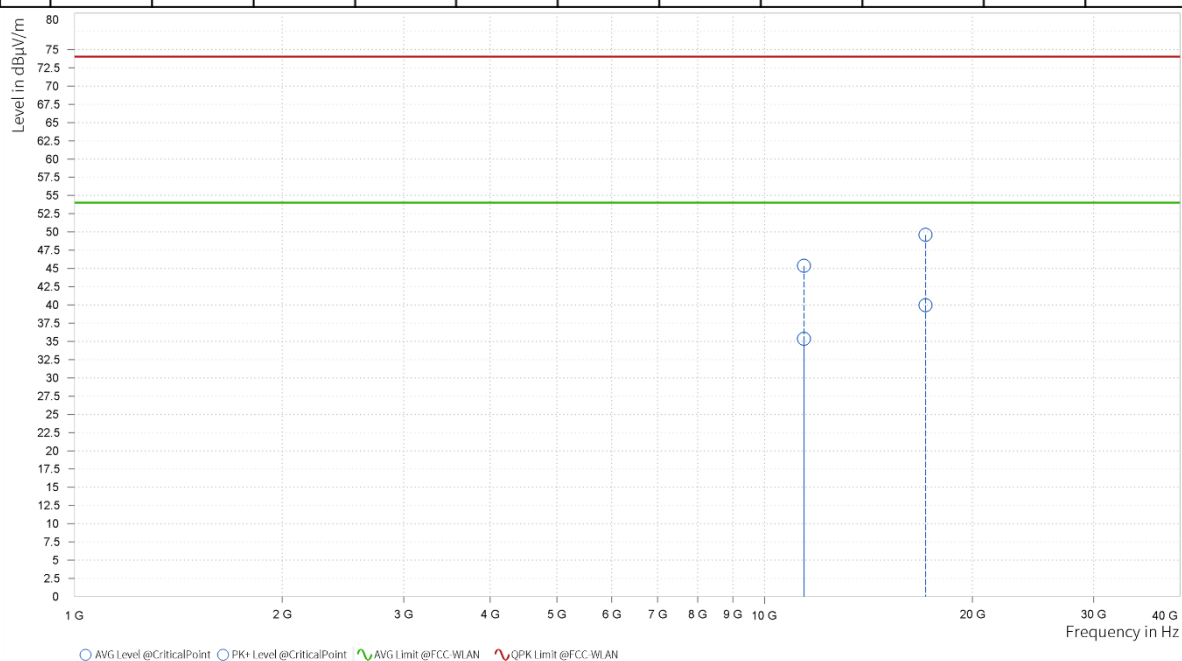
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5290MHz: Fundamental frequency.





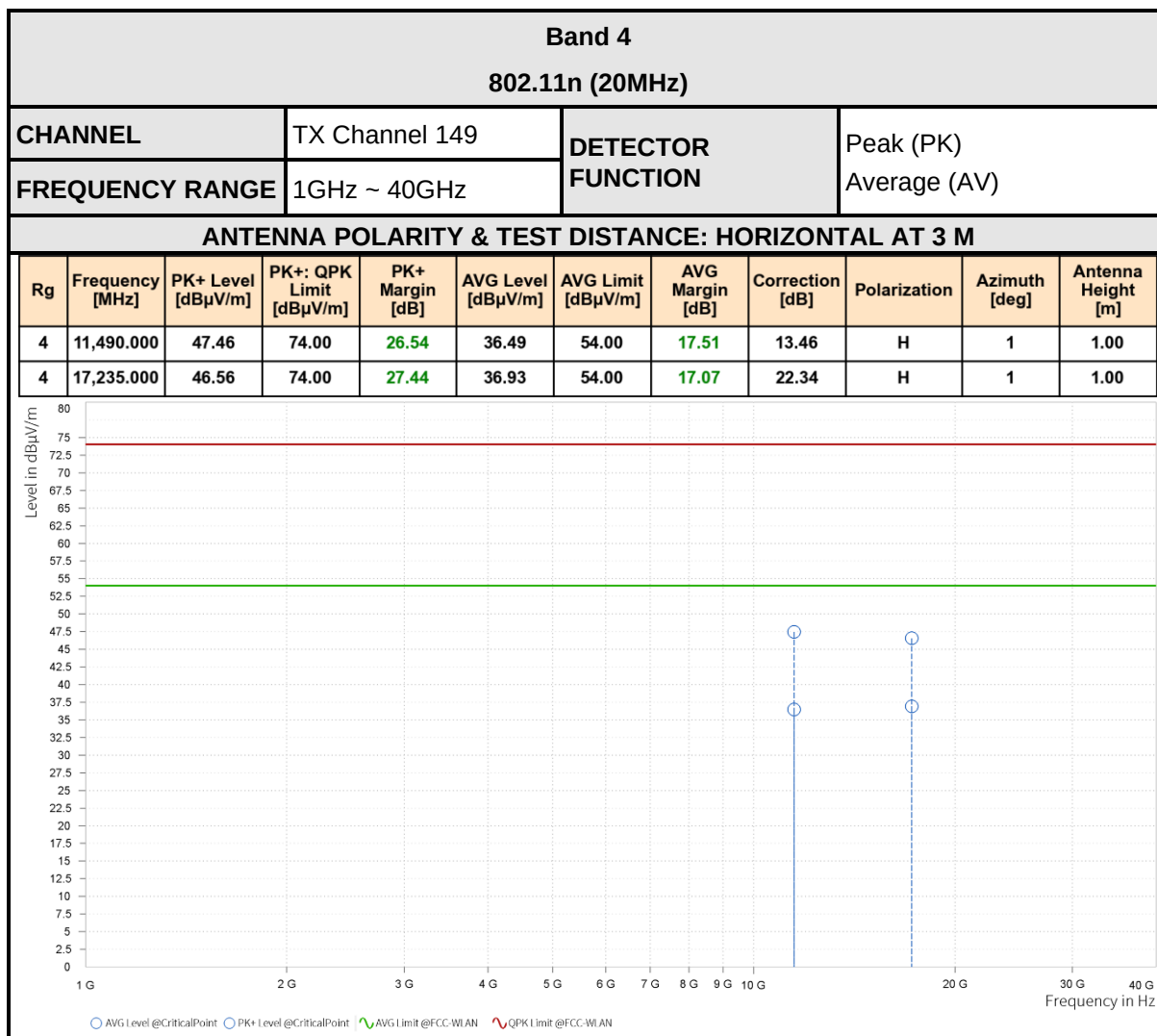
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	11,400.000	45.35	74.00	28.65	35.35	54.00	18.65	13.17	V	1	1.00
4	17,100.000	49.59	74.00	24.41	39.97	54.00	14.03	22.50	V	1	1.00



REMARKS:

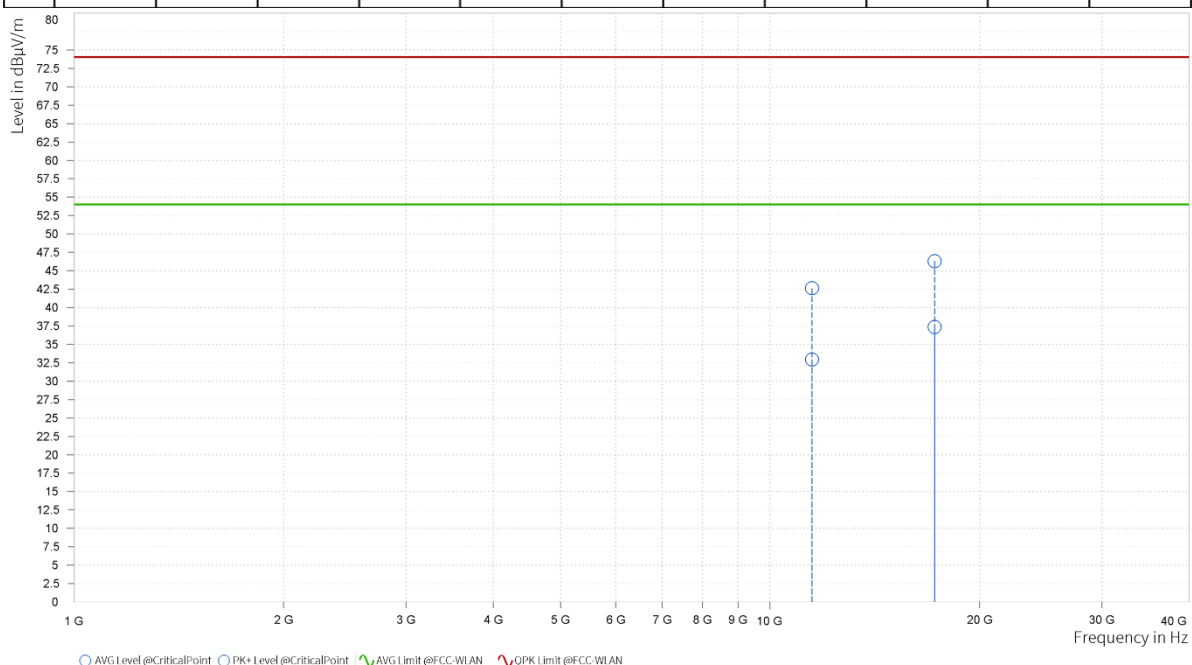
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5530MHz: Fundamental frequency.
4. #: Out of restricted band.





ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+: QPK Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	11,490.000	42.63	74.00	31.37	32.92	54.00	21.08	13.46	V	0.9	2.00
4	17,235.000	46.32	74.00	27.68	37.35	54.00	16.65	22.34	V	1	1.00



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5785MHz: Fundamental frequency.

**3.2 CONDUCTED EMISSION MEASUREMENT****3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT**

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE:

- 1 The lower limit shall apply at the transition frequencies.
- 2 The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
- 3 All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	102749	Feb.24,24	Feb.23,26
ELEKTRA test software	Rohde&Schwarz	ELEKTRA	NA	N/A	N/A
LISN network	Rohde&Schwarz	ENV216	102640	Feb.16,24	Feb.15,26
CABLE	Rohde&Schwarz	W61.01	N/A	Apr.27,24	Apr.26,26
CABLE	Rohde&Schwarz	W601	N/A	Apr.27,24	Apr.26,26

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.



3.2.3 TEST PROCEDURES

- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

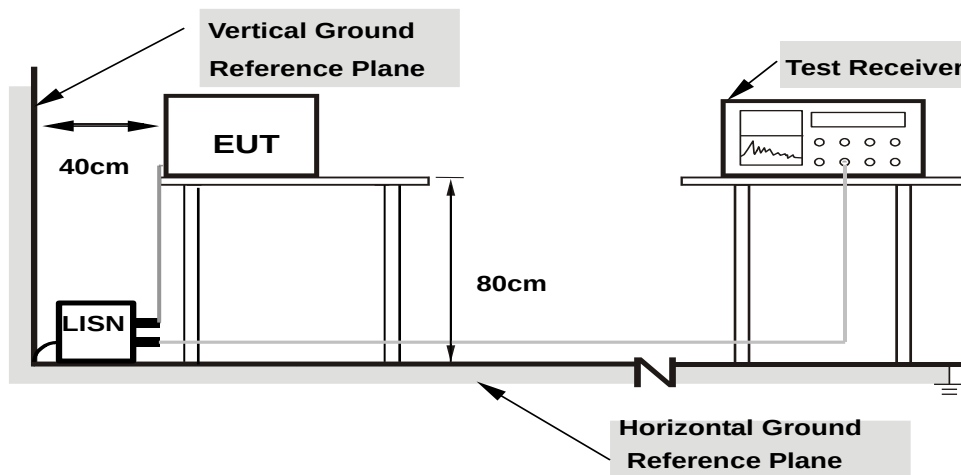
NOTE: All modes of operation were investigated and the worst-case emissions are reported.



3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

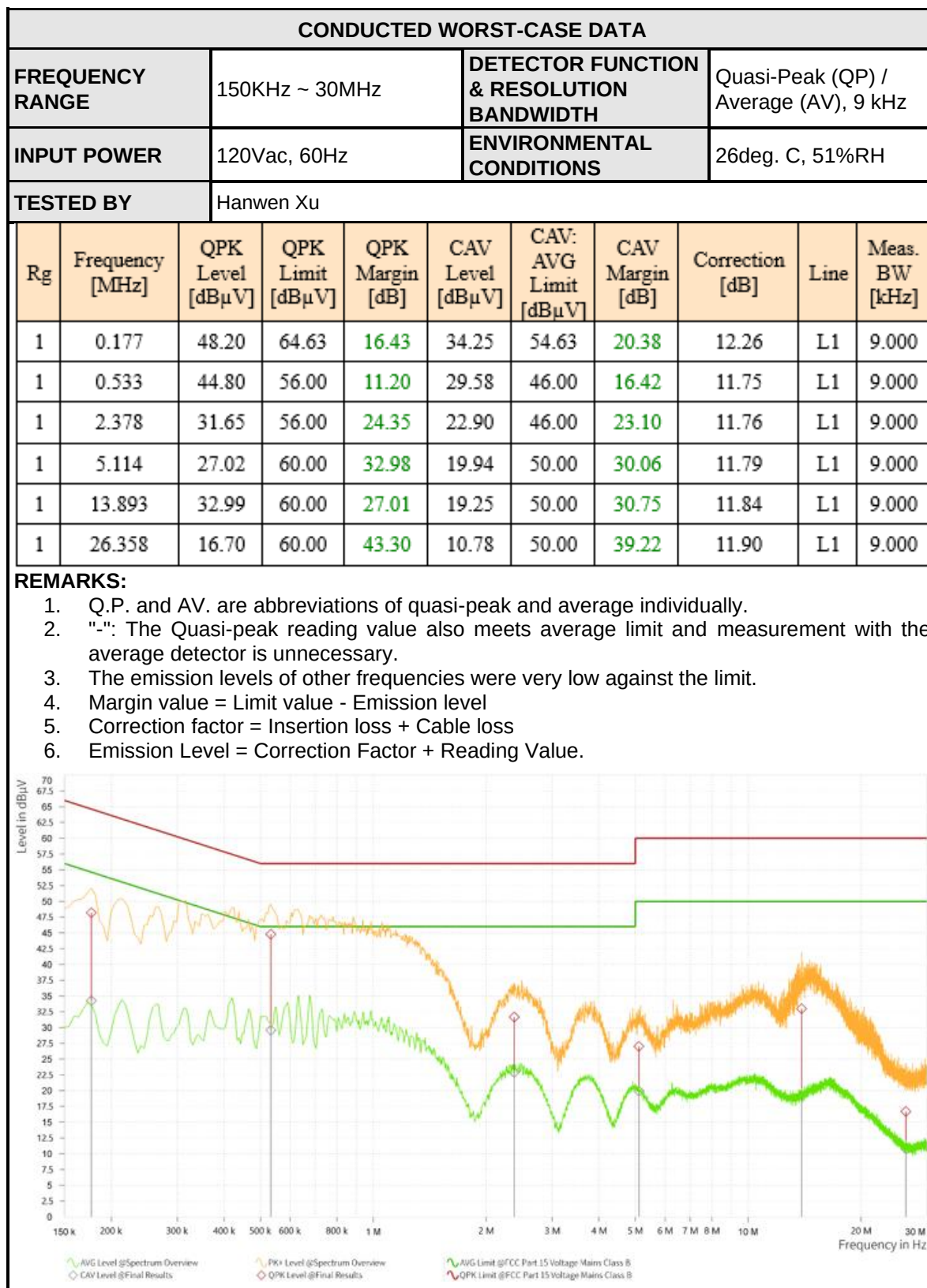
For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.7.



3.2.7 TEST RESULTS





FREQUENCY RANGE	150KHz ~ 30MHz	DETECTOR FUNCTION & RESOLUTION BANDWIDTH	Quasi-Peak (QP) / Average (AV), 9 kHz
INPUT POWER	120Vac, 60Hz	ENVIRONMENTAL CONDITIONS	26deg. C, 51%RH
TESTED BY	Hanwen Xu		

Rg	Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	CAV Level [dBμV]	CAV: AVG Limit [dBμV]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.213	48.25	63.09	14.84	34.78	53.09	18.31	12.36	N	9.000
1	0.618	45.46	56.00	10.54	27.79	46.00	18.21	12.75	N	9.000
1	2.166	26.13	56.00	29.87	15.35	46.00	30.65	12.74	N	9.000
1	4.974	17.46	56.00	38.54	11.09	46.00	34.91	12.76	N	9.000
1	15.977	40.99	60.00	19.01	26.16	50.00	23.84	12.83	N	9.000
1	28.865	14.18	60.00	45.82	7.01	50.00	42.99	12.89	N	9.000

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Limit value - Emission level
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

