



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 [dB μ V/m]	PK+ Limit [dB μ V/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			

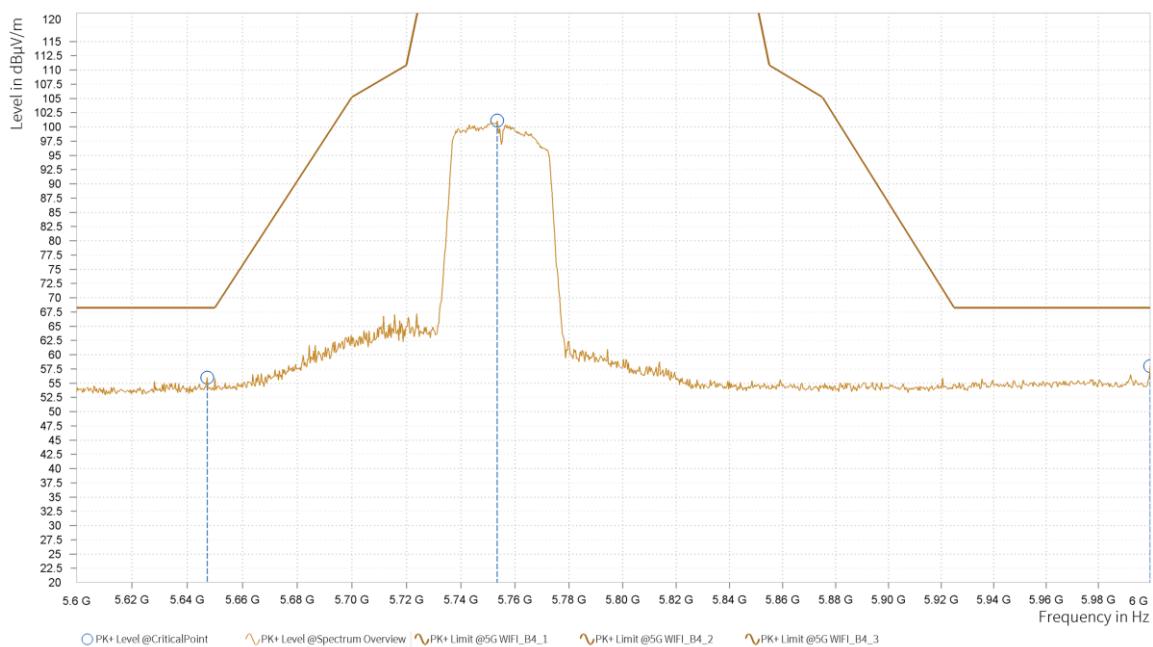


BUREAU
VERITAS

Test Report No.: PSU-NQN2412090210RF03

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]
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

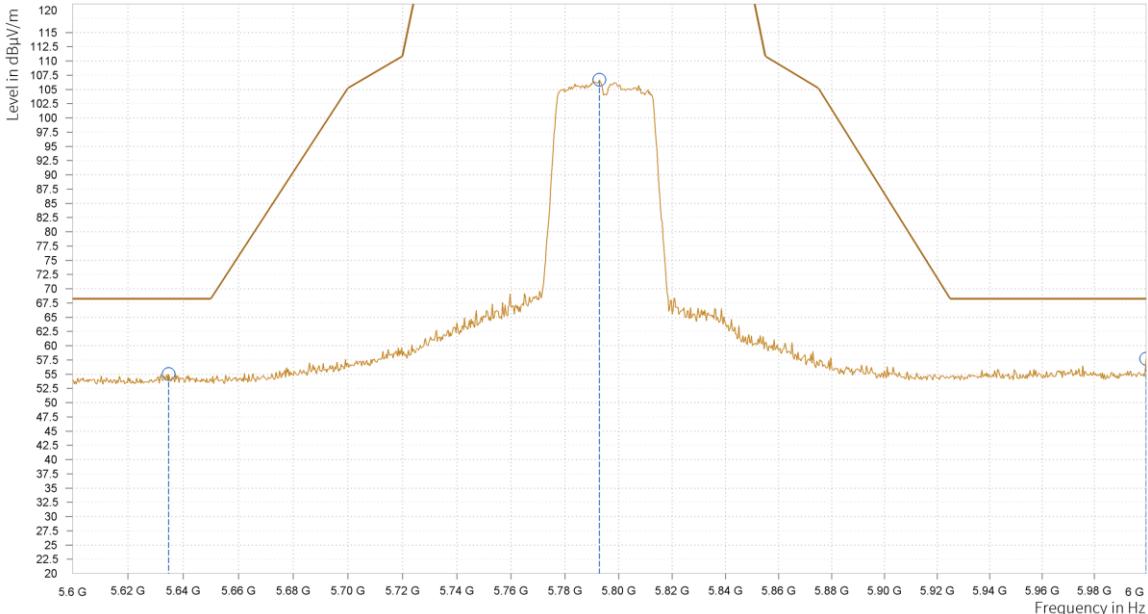


REMARKS:

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



CHANNEL		TX Channel 159		DETECTOR FUNCTION		Peak (PK) Average (AV)		
FREQUENCY RANGE		1GHz ~ 40GHz						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL 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]
10	5,634.688	55.01	68.20	13.19	18.07	H	5.7	2.00
11	5,792.810	106.70			18.53	H	359.1	1.00
12	6,000.000	57.72	68.20	10.48	19.20	H	94.1	1.00



Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi_B4_1 PK+ Limit @5G WiFi_B4_2 PK+ Limit @5G WiFi_B4_3



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]
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

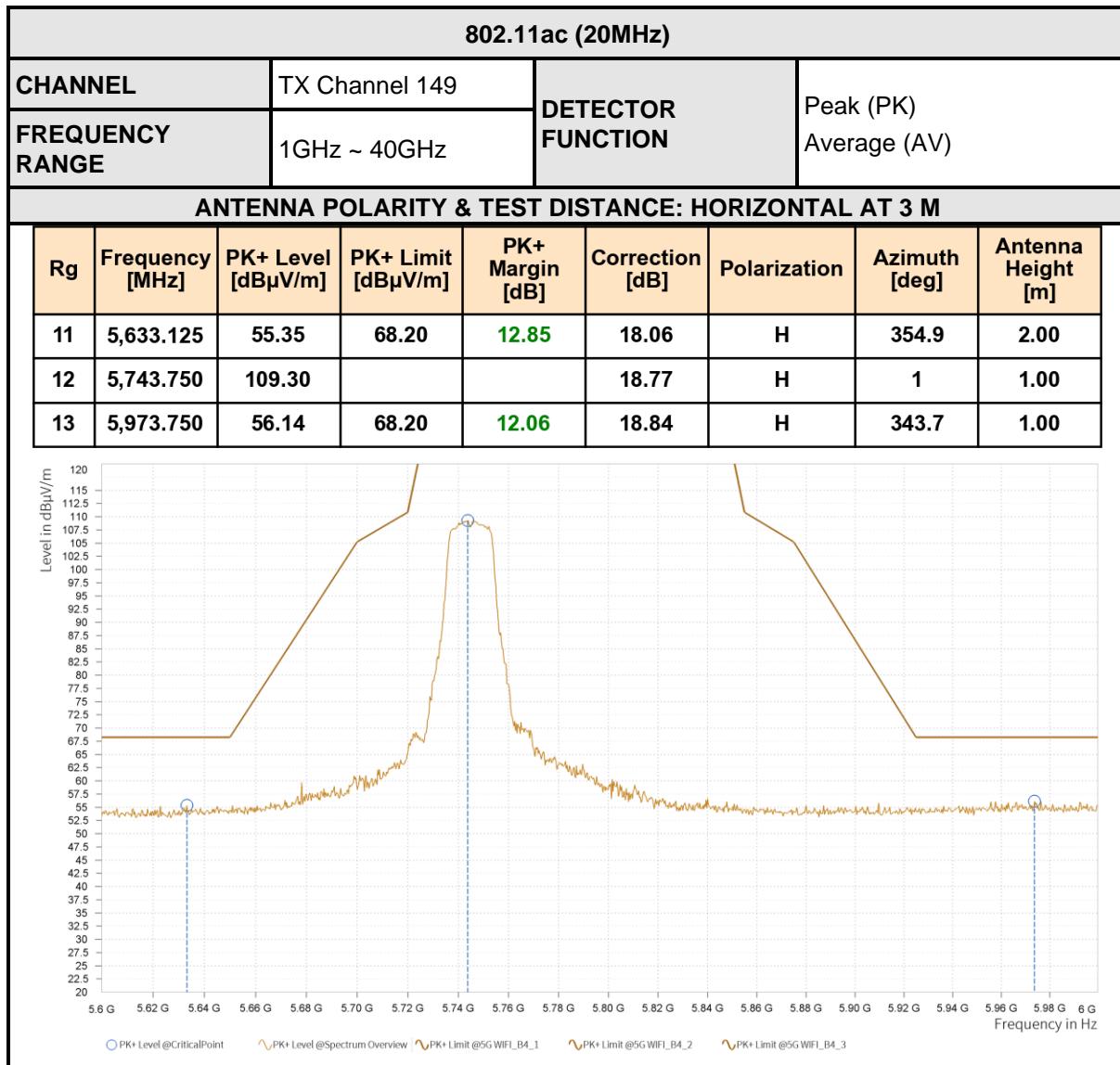
Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi_B4_1 PK+ Limit @5G WiFi_B4_2 PK+ Limit @5G WiFi_B4_3

REMARKS:

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





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]
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.



CHANNEL		TX Channel 157		DETECTOR FUNCTION		Peak (PK) Average (AV)		
FREQUENCY RANGE		1GHz ~ 40GHz						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL 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]
11	5,644.688	55.24	68.20	12.96	18.16	H	1	1.00
12	5,786.250	109.79			18.56	H	359.1	1.00
13	6,000.000	57.63	68.20	10.57	19.20	H	141.8	2.00

Level in dB μ V/m

Frequency in Hz

Legend:

- PK+ Level @CriticalPoint
- PK+ Level @Spectrum Overview
- PK+ Limit @5G WiFi_B4_1
- PK+ Limit @5G WiFi_B4_2
- PK+ Limit @5G WiFi_B4_3



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]
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

Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi_B4_1 PK+ Limit @5G WiFi_B4_2 PK+ Limit @5G WiFi_B4_3

REMARKS:

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

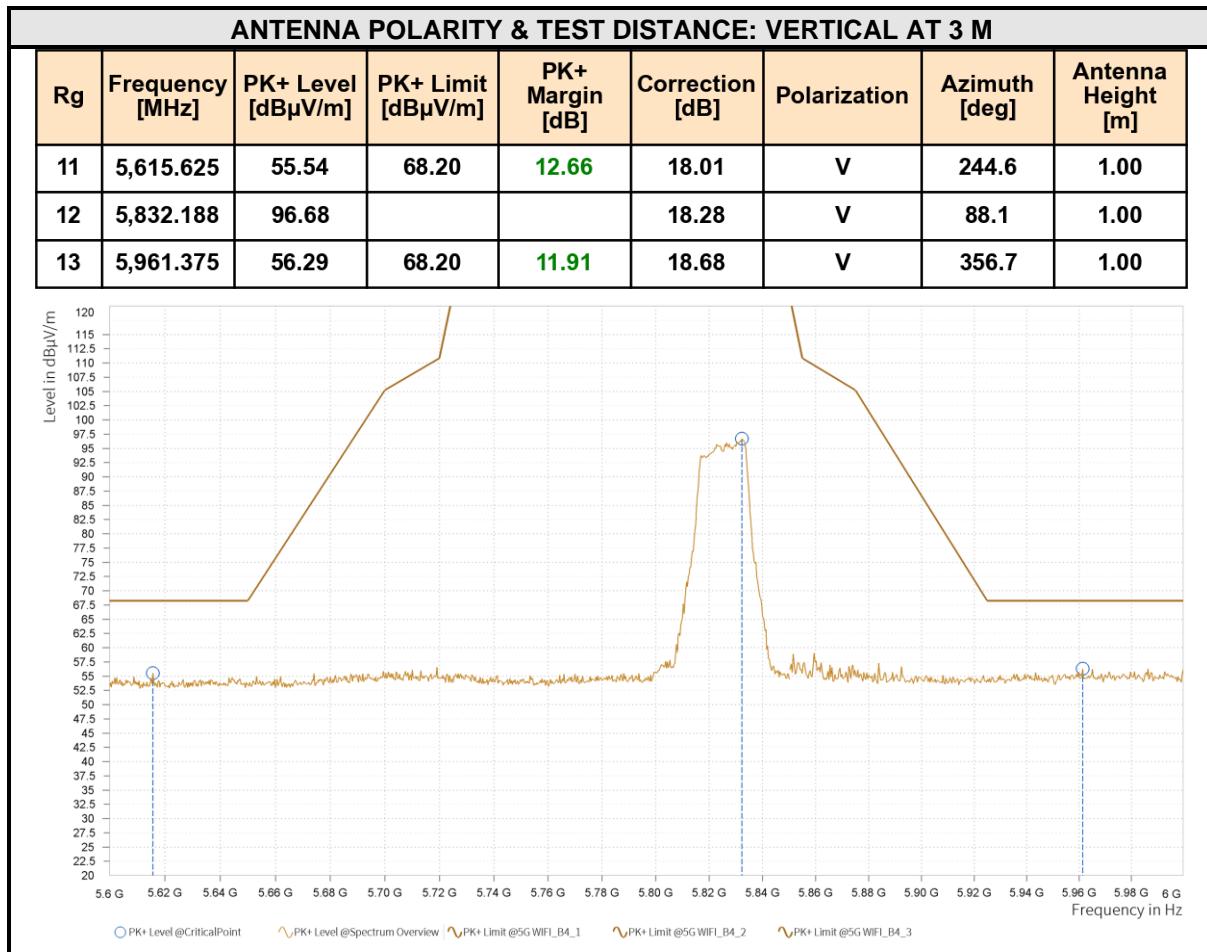


CHANNEL		TX Channel 165		DETECTOR FUNCTION		Peak (PK) Average (AV)		
FREQUENCY RANGE		1GHz ~ 40GHz						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
11	5,619.063	55.04	68.20	13.16	17.96	H	359	2.00
12	5,823.750	108.02			18.33	H	359	1.00
13	5,972.250	56.35	68.20	11.85	18.82	H	178.8	1.00

Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi_B4_1 PK+ Limit @5G WiFi_B4_2 PK+ Limit @5G WiFi_B4_3



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) Average (AV)		
FREQUENCY RANGE 1GHz ~ 40GHz								
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	5,699.433	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

Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi 40M-B3_CH142

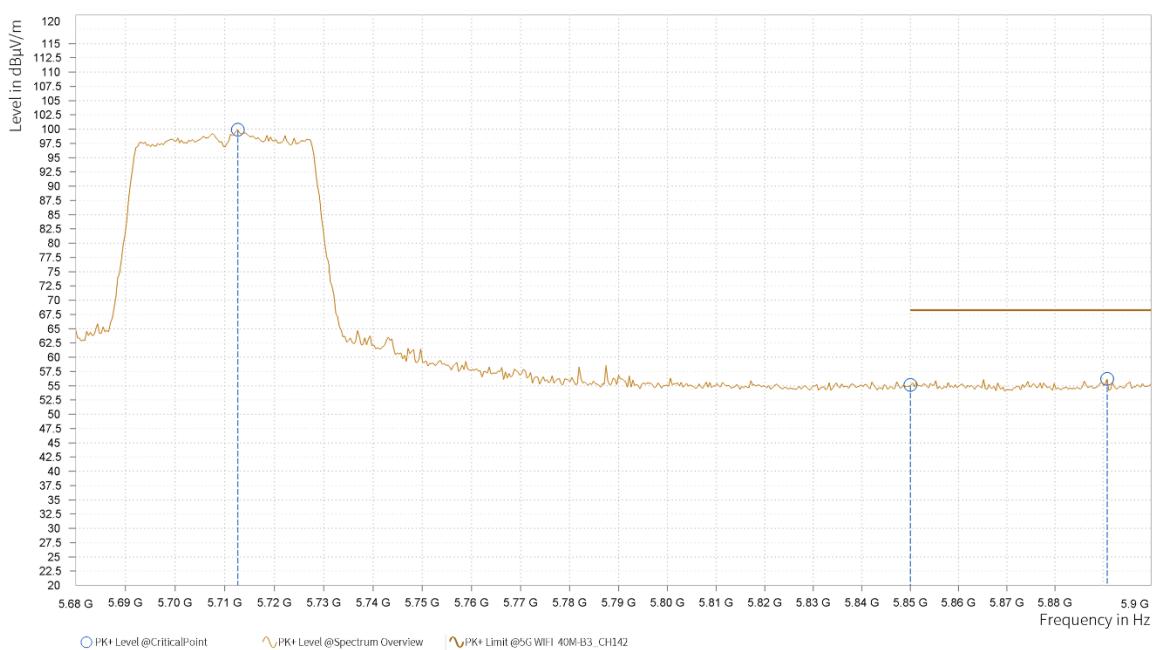


BUREAU
VERITAS

Test Report No.: PSU-NQN2412090210RF03

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





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 [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,644.688	56.06	68.20	12.14	18.16	H	359.1	1.00
11	5,758.438	106.49			18.69	H	359	2.00
12	6,000.000	58.14	68.20	10.06	19.20	H	117.4	2.00

Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi_B4_1 PK+ Limit @5G WiFi_B4_2 PK+ Limit @5G WiFi_B4_3



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]
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

Level in dB μ V/m

Frequency in Hz

PK+ Level @CriticalPoint PK+ Level @Spectrum Overview PK+ Limit @5G WiFi_B4_1 PK+ Limit @5G WiFi_B4_2 PK+ Limit @5G WiFi_B4_3

REMARKS:

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



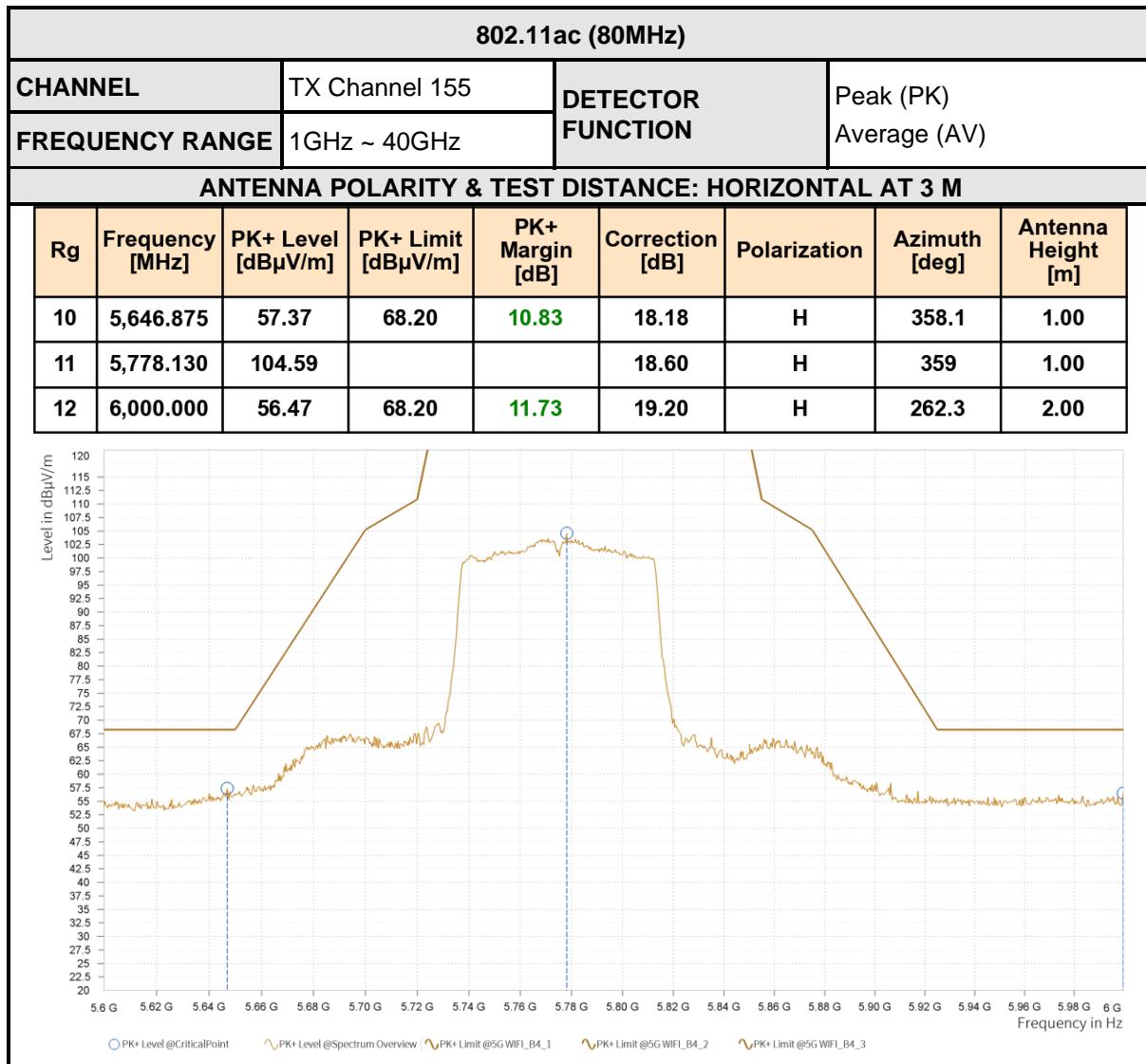
CHANNEL		TX Channel 159		DETECTOR FUNCTION		Peak (PK) Average (AV)		
FREQUENCY RANGE		1GHz ~ 40GHz						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
10	5,612.188	55.52	68.20	12.68	18.06	H	359	2.00
11	5,792.813	105.90			18.53	H	359	2.00
12	6,000.000	58.93	68.20	9.27	19.20	H	116.2	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]
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.





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]
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.



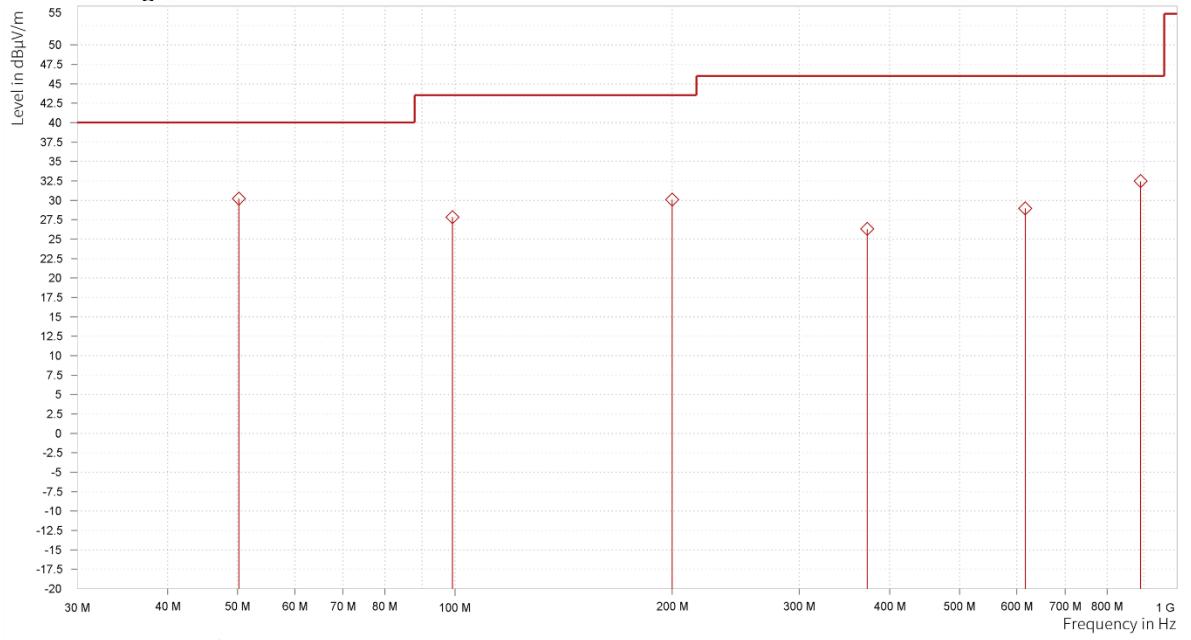
RADIATED EMISSION

BELOW 1GHz WORST-CASE DATA

Band 802.11a (MHz)											
CHANNEL		TX Channel 64		DETECTOR FUNCTION		Quasi-Peak (QP)					
FREQUENCY RANGE		30MHz ~ 1GHz									
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M											
Rg	Frequency [MHz]	QPK Level [dB μ V/m]	QPK Limit [dB μ V/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 (dB μ V/m) = Read level (dB μ V) + 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.



Level in dB μ V/m

Frequency in Hz

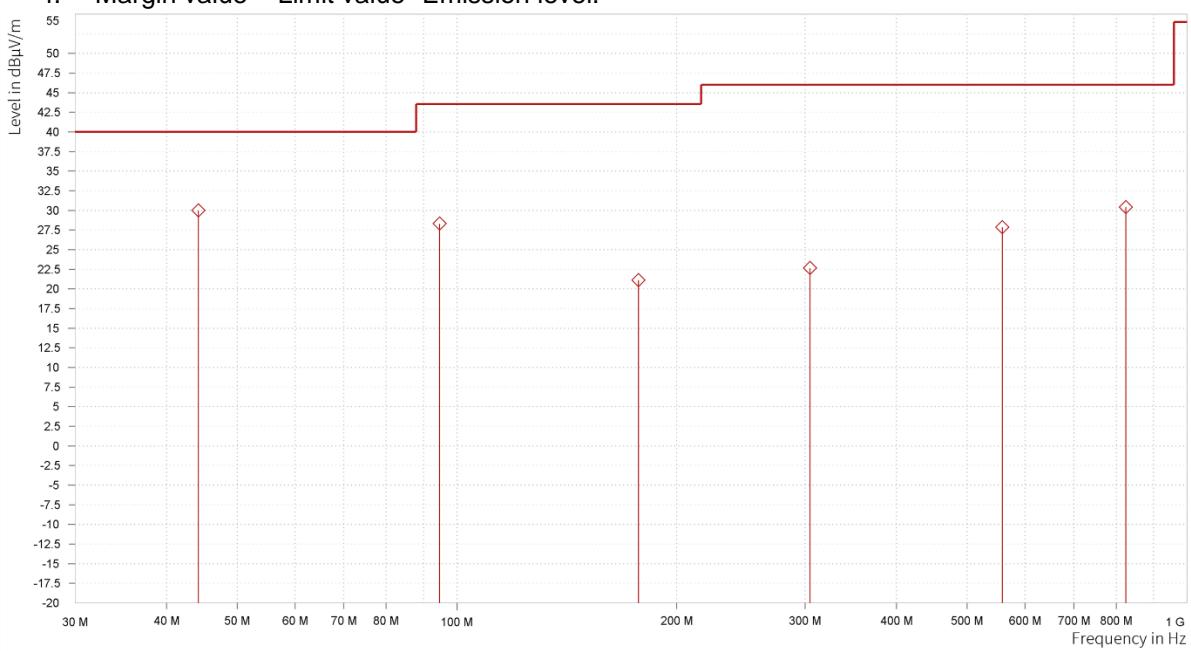
Legend: ◇ QPK Level @Final Results, ▲ QPK Limit @FCC LIMIT



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 [dB μ V/m]	QPK Limit [dB μ V/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:

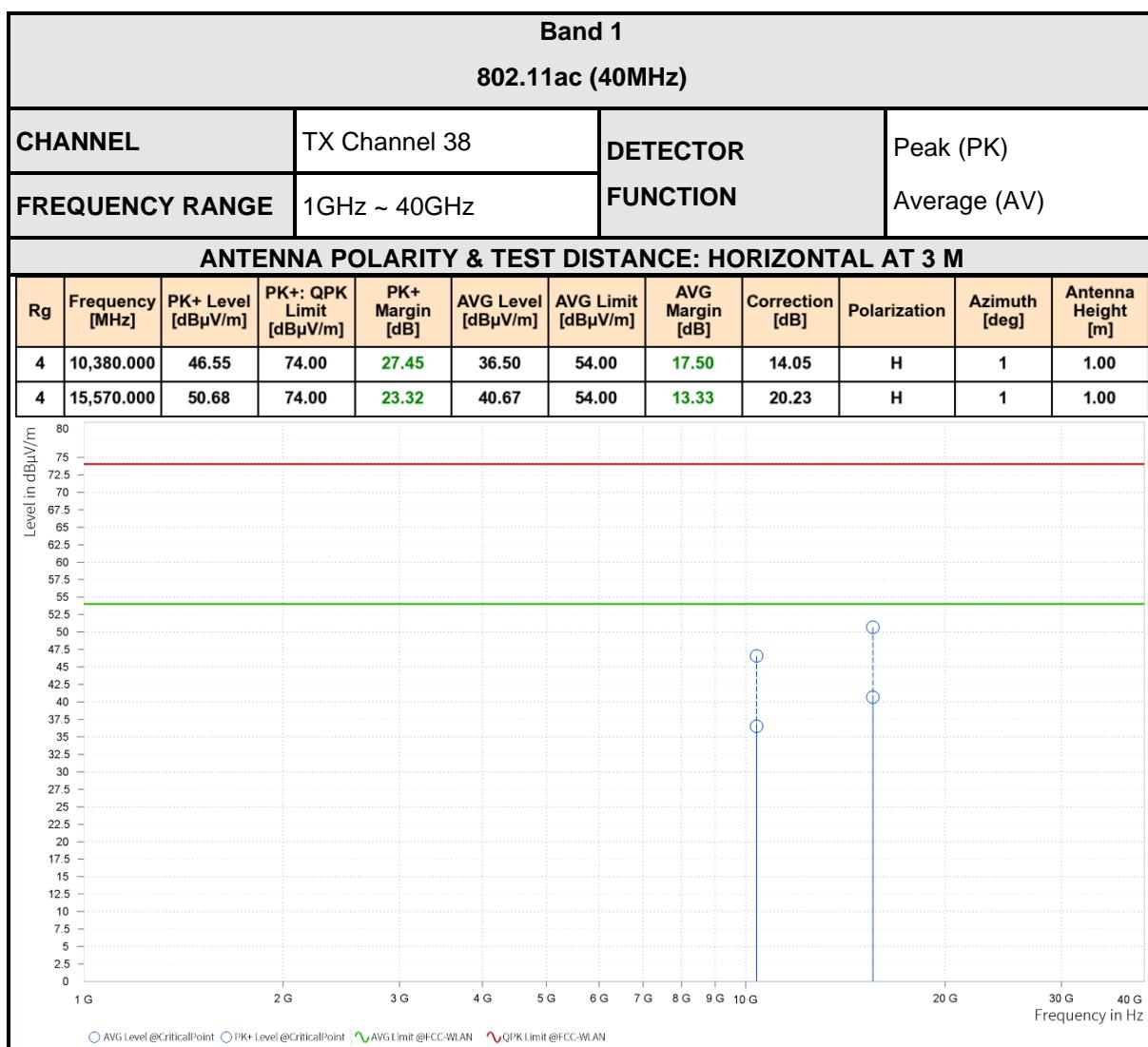
1. Emission level (dB μ V/m) = Read level (dB μ V) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.

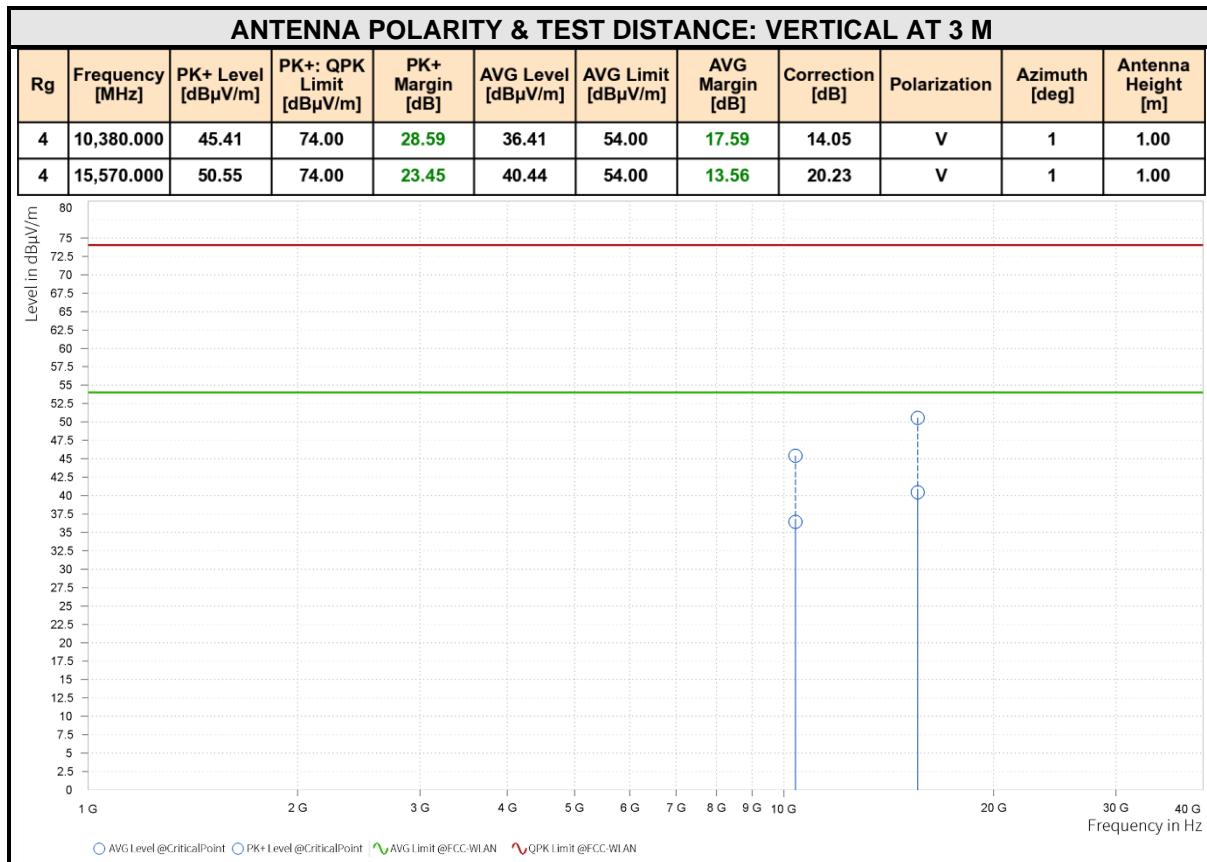




ABOVE 1GHz WORST-CASE DATA

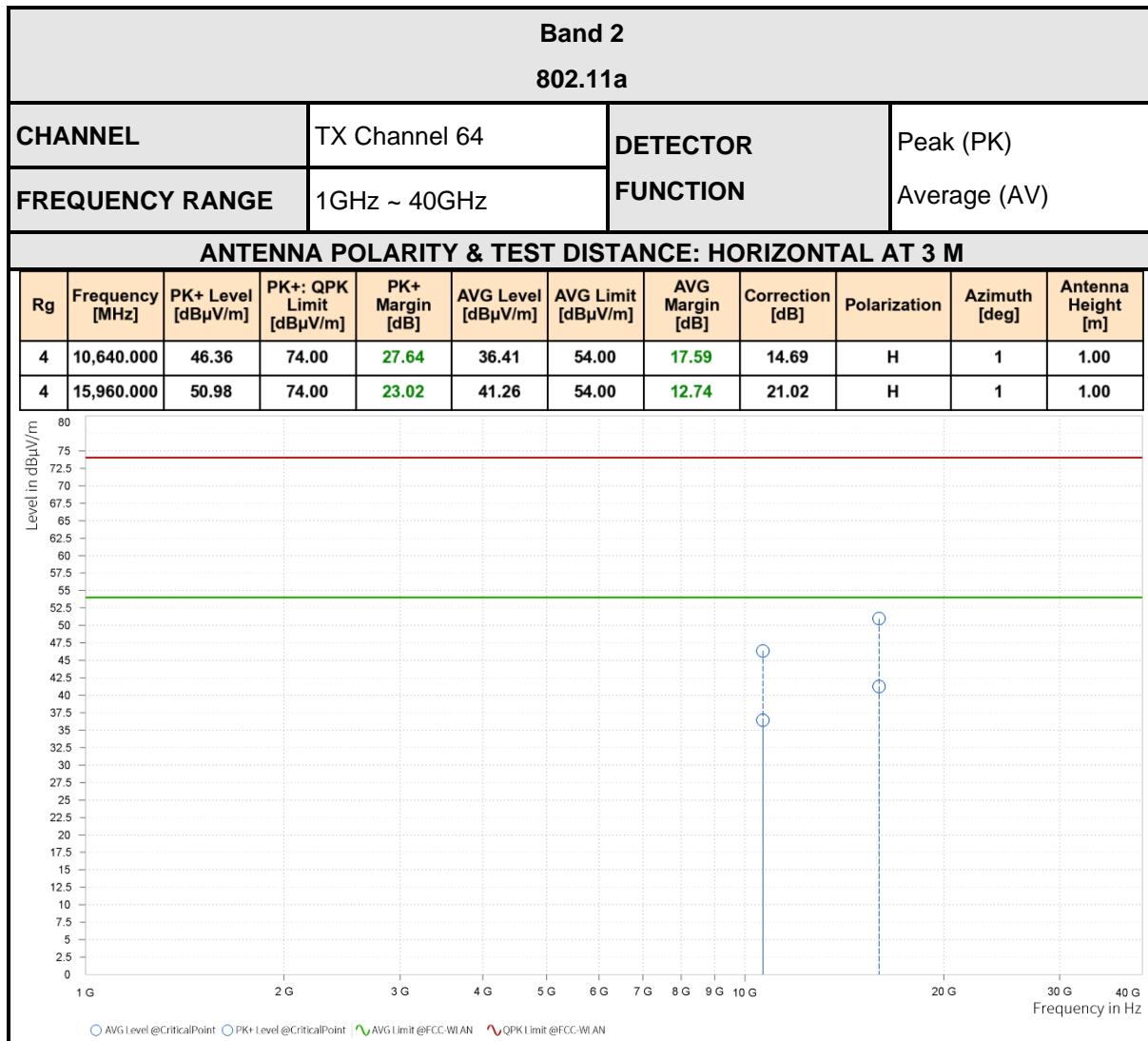
Note: For higher frequency, the emission is too low to be detected.

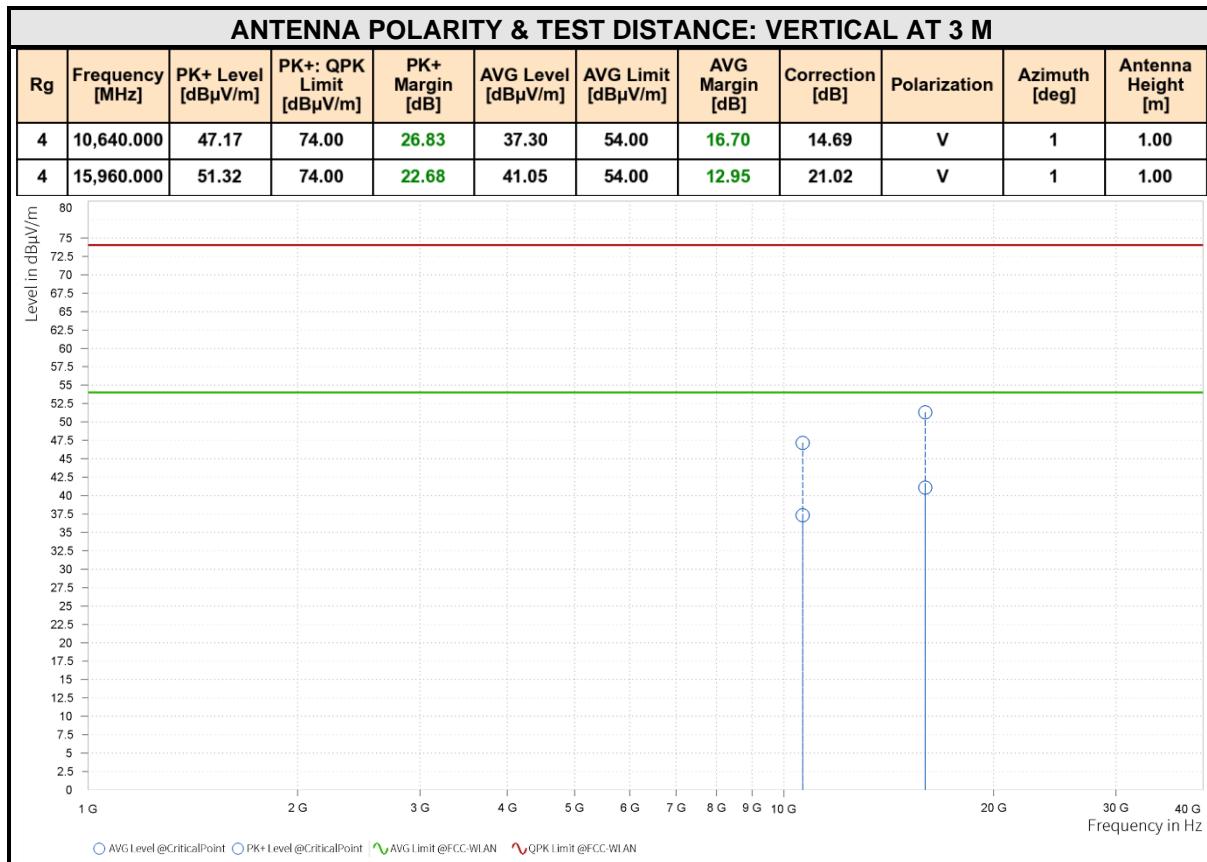




REMARKS:

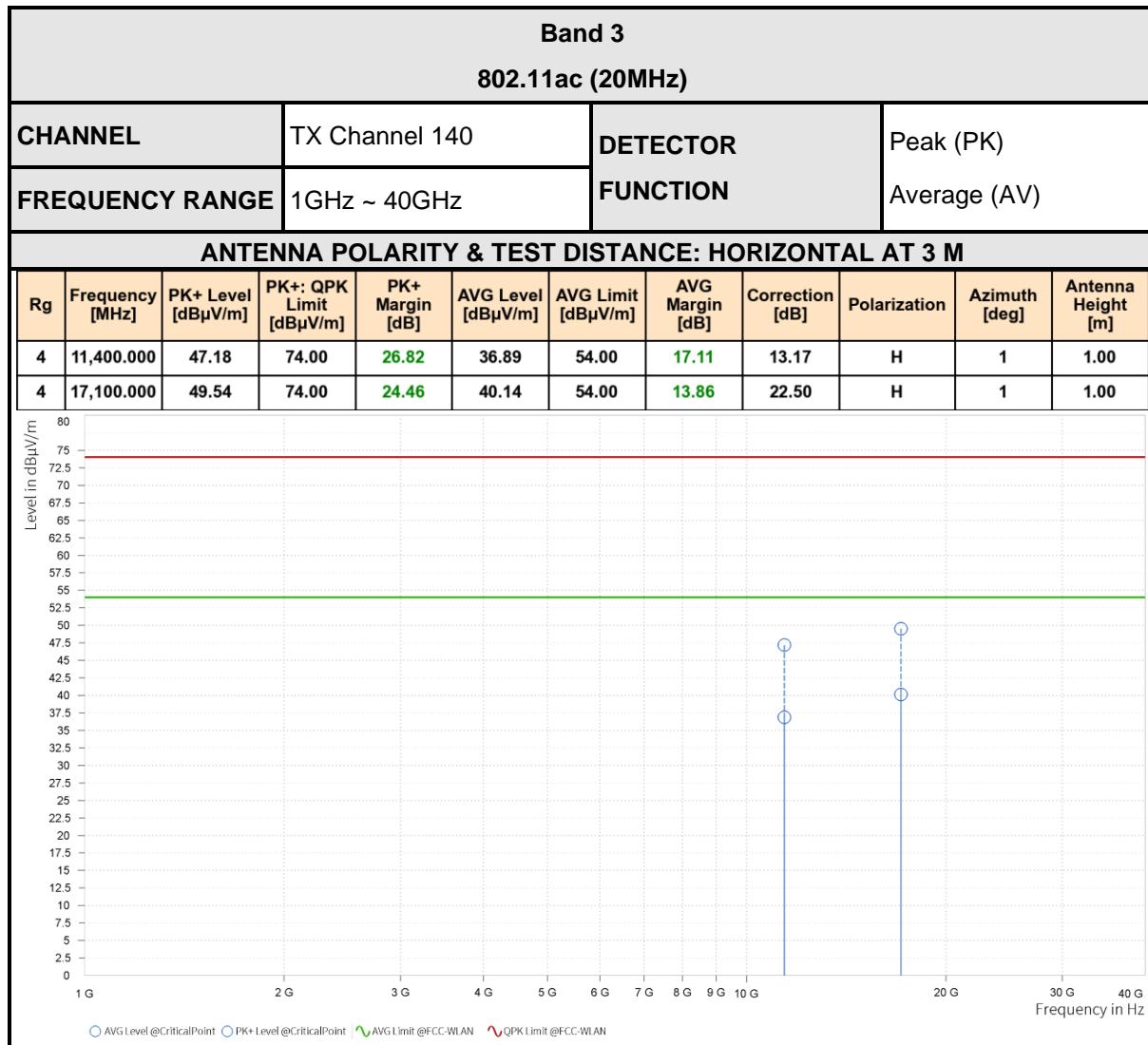
1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5210MHz: Fundamental frequency.



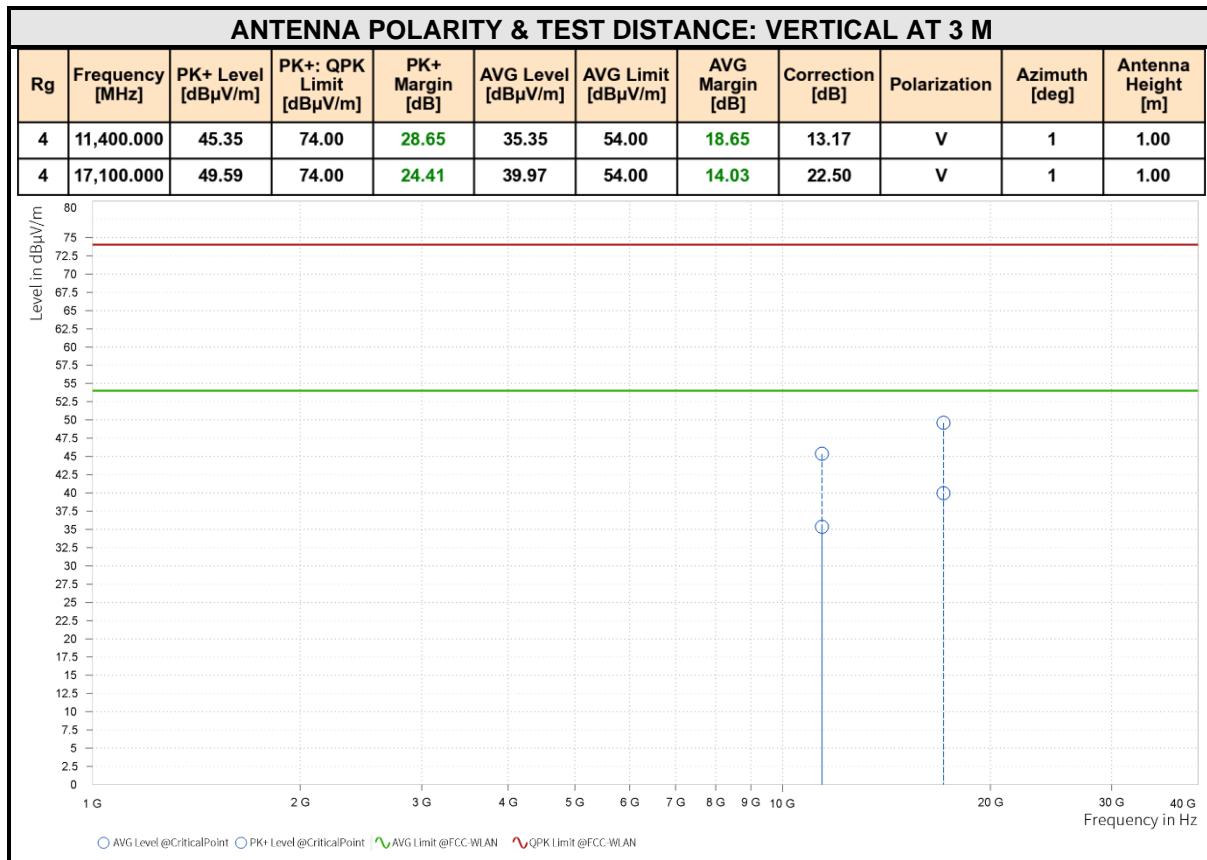


REMARKS:

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

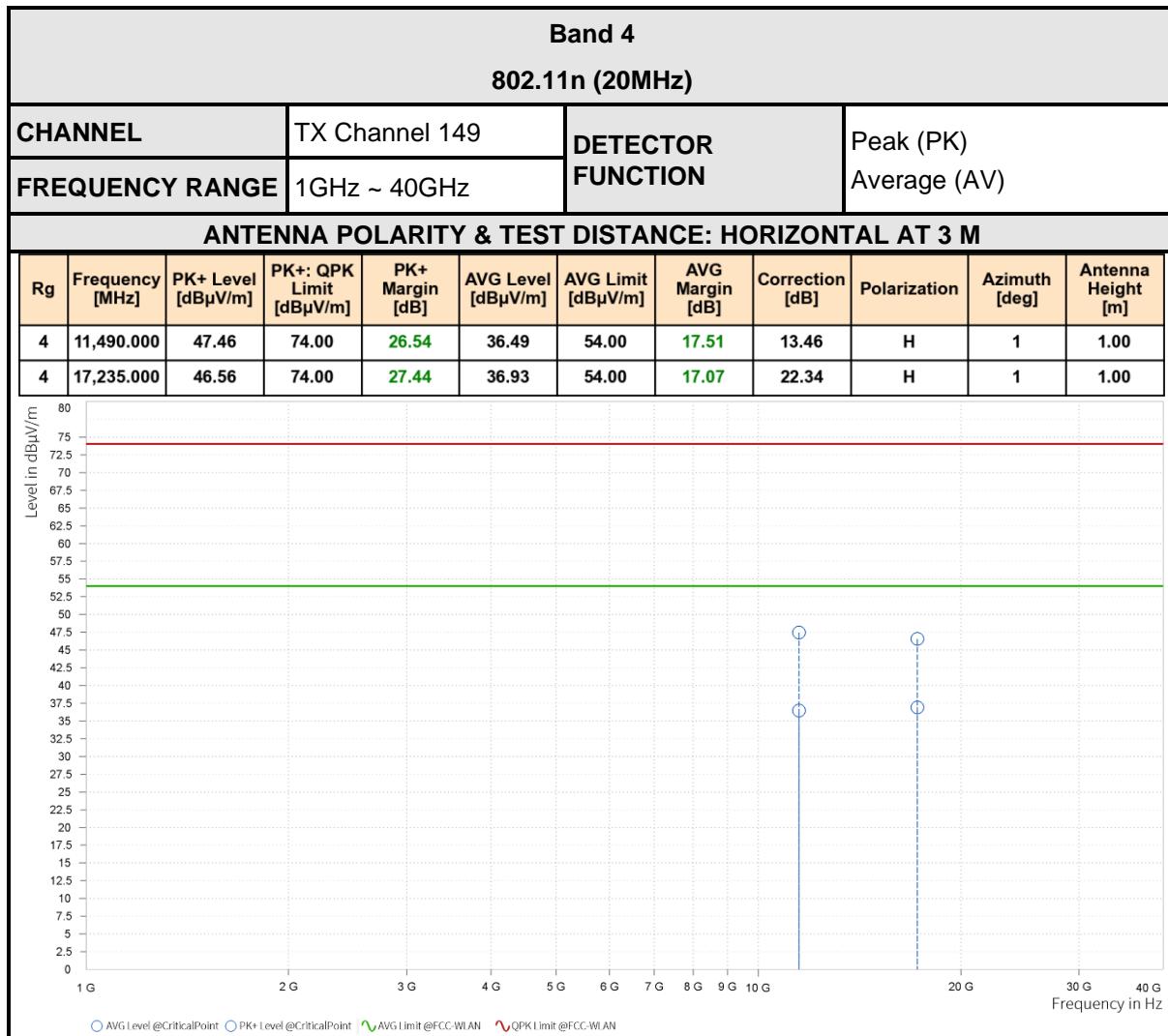


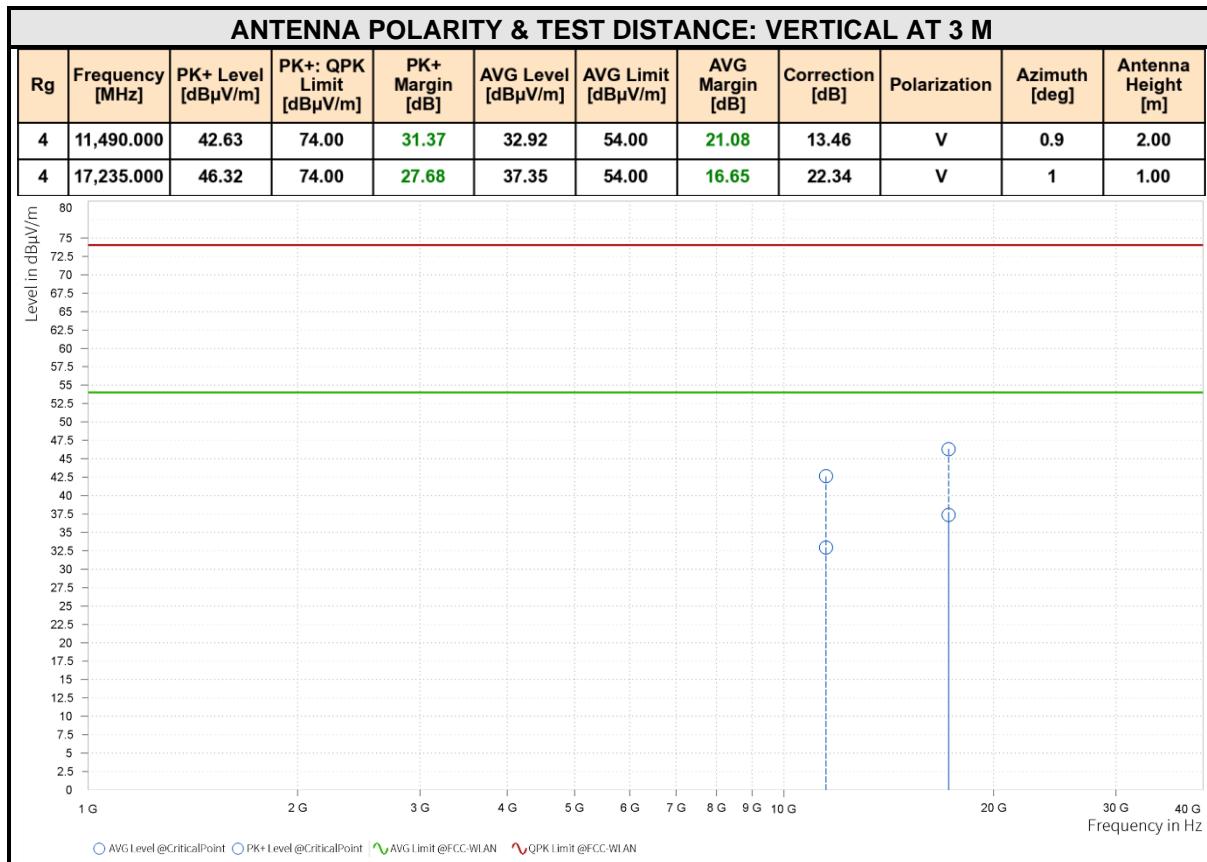
○ AVG Level @CriticalPoint ○ PK+ Level @CriticalPoint ▲ AVG Limit @FCC-WLAN ▼ QPK Limit @FCC-WLAN



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.





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, GRR/T/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.

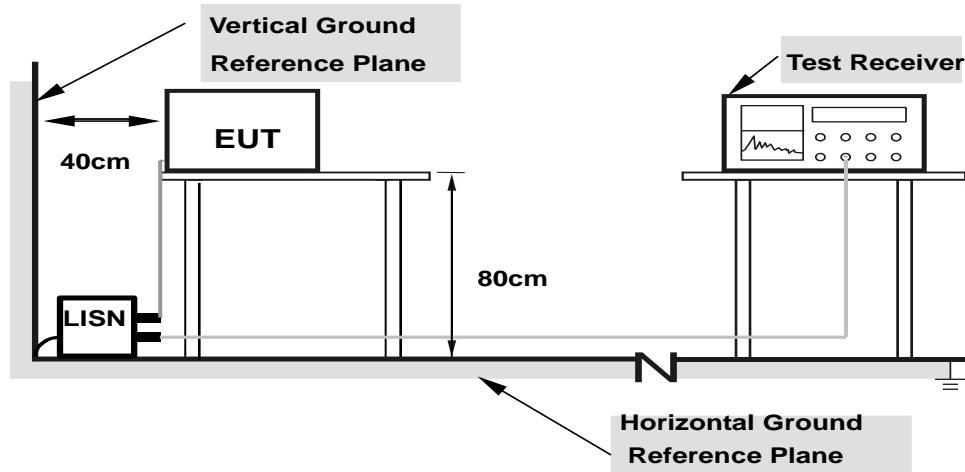
NOTE: All modes of operation were investigated and the worst-case emissions are reported.



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 cm 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.



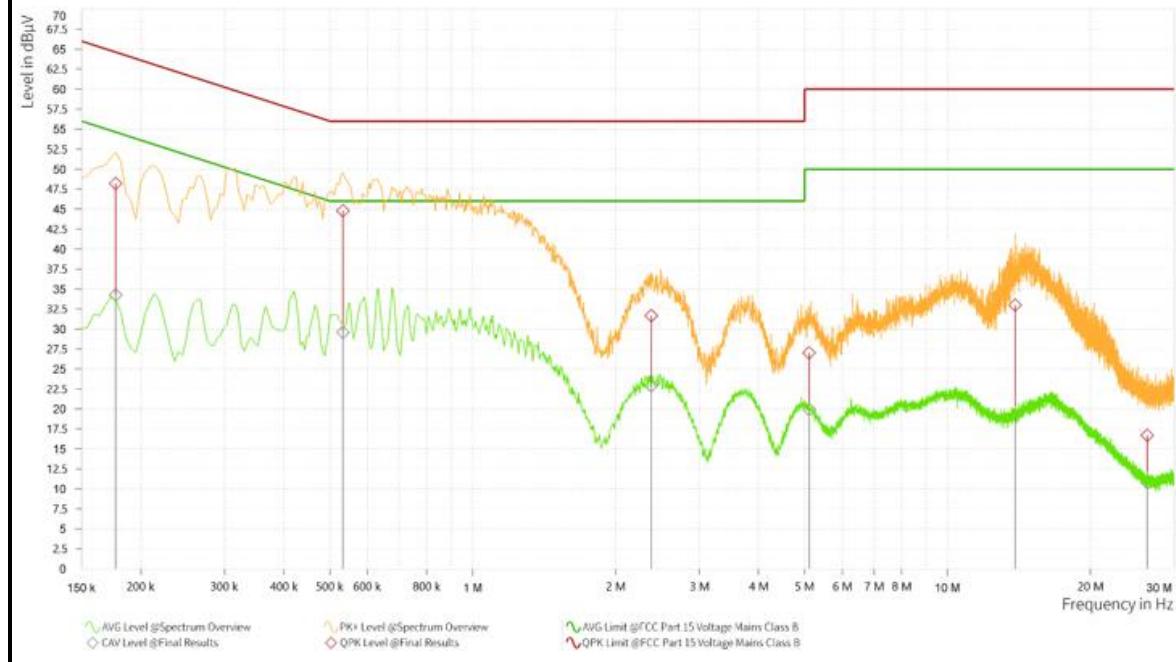
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA									
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 [dB μ V]	QPK Limit [dB μ V]	QPK Margin [dB]	CAV Level [dB μ V]	CAV AVG Limit [dB μ V]	CAV Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]
1	0.177	48.20	64.63	16.43	34.25	54.63	20.38	12.26	L1	9.000
1	0.533	44.80	56.00	11.20	29.58	46.00	16.42	11.75	L1	9.000
1	2.378	31.65	56.00	24.35	22.90	46.00	23.10	11.76	L1	9.000
1	5.114	27.02	60.00	32.98	19.94	50.00	30.06	11.79	L1	9.000
1	13.893	32.99	60.00	27.01	19.25	50.00	30.75	11.84	L1	9.000
1	26.358	16.70	60.00	43.30	10.78	50.00	39.22	11.90	L1	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.





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 [dB μ V]	QPK Limit [dB μ V]	QPK Margin [dB]	CAV Level [dB μ V]	CAV: AVG Limit [dB μ V]	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.

