

VARIANT FCC TEST REPORT

(Part 15, Subpart E)

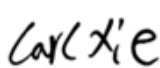
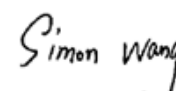
Applicant:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States

Manufacturer or Supplier:	Honeywell International Inc
Address:	9680 Old Bailes Road, Fort Mill, SC 29707 United States
Product:	Mobile Computer
Brand Name:	Honeywell
Model Name:	CT45-L1N-G
FCC ID:	HD5-CT45L1NG
Date of tests:	Dec, 25, 2025 ~ Apr. 01, 2026

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart E, Section 15.407**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Carl Xie Engineer / Mobile Department	Approved by Simon Wang Manager / Mobile Department
	
Date: Apr. 01, 2026	Date: Apr. 01, 2026

Boomwave Test (Shenzhen) Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of Boomwave Test (Shenzhen) Co., Ltd., the test report shall not be reproduced except in full.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
W7L-P21080006RF14	Original release	Sep. 01, 2021
W7L-P21040030RF14	Based on the original report W7L-P21080006RF14 Changed LCM to screen HD(1280*720), removing a 2nd BLE and Supercap, Increase the RTC battery, Detail refer to Product Equality Declaration	Sep. 26, 2021
RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)	Based on the report W7L-P21040030RF14 (FCC ID: HD5-CT45L1NG). The new product add alternate parts, the electrical specs of the alternate part is equivalent to the current part. This report update the SW version, verify power, CE and RSE worst case. The verify results of conducted power are similar or lower. So this report updates CE and the low frequency data and the high frequency data (802.11n(HT20)_CH36 & 802.11n(HT20)_CH52 & 802.11a_CH140 & 802.11n(HT20)_CH149) of RSE, other data please refer to the report W7L-P21040030RF14.	Apr. 01, 2026



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1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
15.407(b)(9)	AC Power Conducted Emission	Compliance
15.407(b) (1/2/3/4/5)	Radiated Emission & Band Edge Measurement	Compliance
15.407(a/1/2/3)	Maximum conducted output Power	See note
15.407(a/1/2/3)	Peak Power Spectral Density	See note
15.407(a)(2)(12)	26 dB Bandwidth	See note
15.407(e)	6 dB Bandwidth	See note
15.203	Antenna Requirement	See note

NOTE: Please refer to report W7L-P21040030RF14 (FCC ID: HD5-CT45L1NG).

*Test Lab Information Reference

Lab A:

Boomwave Test (Shenzhen) Co., Ltd.

Lab Address:

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan 4th Rd, Chiwan Comm, Zhaoshang St, Nanshan Dist, Shenzhen, Guangdong, Shenzhen, China

Accredited Test Lab Cert 7607.01

The FCC Site Registration No. is 646781; The Designation No. is CN1429.

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

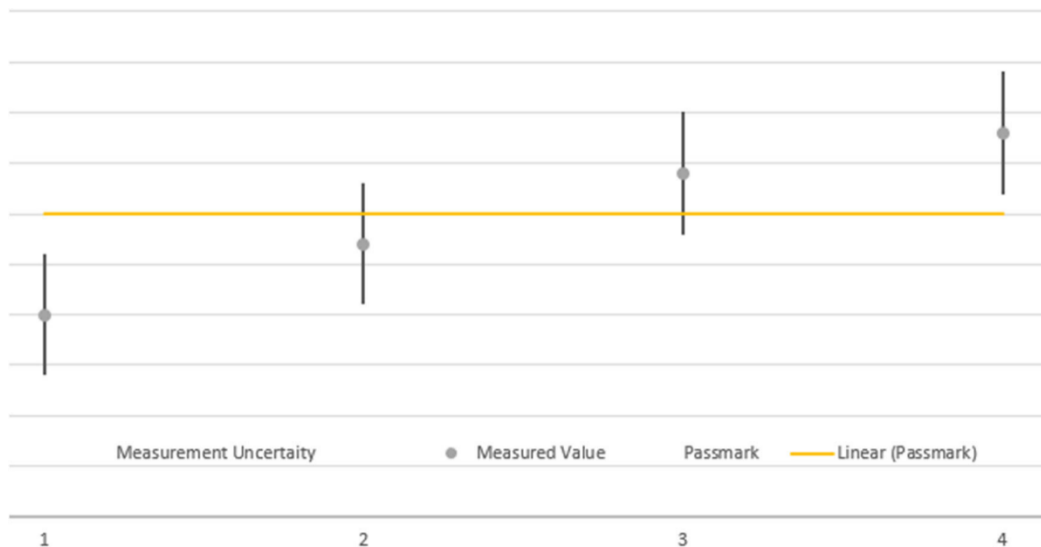
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Power Spectral Density	$\pm 0.85\text{ dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Mobile Computer	
BRAND NAME	Honeywell	
MODEL NAME	CT45P-L1N-2	
NOMINAL VOLTAGE	5Vdc (adapter) 3.85Vdc (Lithium-ion cell, battery)	
MODULATION	OFDM	
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps	
	802.11n: up to MCS7	
	802.11ac: up to 390.0Mbps	
OPERATING FREQUENCY	5180~5240MHz, 5260~5320MHz	
	5500~5720MHz, 5745~5825MHz	
NUMBER OF CHANNEL	5180~5240MHz	4 for 802.11a,802.11n/ac (20MHz)
		2 for 802.11n/ac (40MHz)
		1 for 802.11ac (80MHz)
	5260~5320MHz	4 for 802.11a,802.11n/ac(20MHz)
		2 for 802.11n/ac(40MHz)
		1 for 802.11ac(80MHz)
	5500~5720MHz	12 for 802.11a, 802.11n/ac (20MHz)
		6 for 802.11n/ac (40MHz)
		3 for 802.11ac(80MHz)
	5745~5825MHz	5 for 802.11a, 802.11n/ac (20MHz)
		2 for 802.11n/ac (40MHz)
		1 for 802.11ac (80MHz)
MAX. OUTPUT POWER	40.18mW for 5180 ~ 5240MHz	
	39.99mW for 5260 ~ 5320MHz	

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	48.98mW for 5500 ~ 5720MHz	
	56.49mW for 5745 ~ 5825MHz	
ANTENNA TYPE	PIFA Antenna	
ANTENNA GAIN	☒ Provided by client	
	5180 ~ 5240MHz	0.72 dBi
	5260 ~ 5320MHz	0.62 dBi
	5500 ~ 5720MHz	0.52 dBi
	5745 ~ 5825MHz	0.78 dBi
HW VERSION	V1.0	
SW VERSION	OS.11.003-HON.11.003	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	USB cable: shielded without ferrite, 1.25 meter Earphone cable: unshielded without ferrite, 1.27 meter	

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
802.11a	1TX/1RX
802.11n/802.11ac (20MHz)	1TX/1RX
802.11n/802.11ac (40MHz)	1TX/1RX
802.11ac (80MHz)	1TX/1RX

- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
- Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.

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5. This product includes the following six SKU which hardware is exactly same, the difference is described as following, Sample 1 was full test, sample 2 verify the worst case, check worst case Radiated emission:

SAMPLE	EUT CONFIGURATION INFORMATION
1	SKU ID:CT45-L1N-27D120G ,Assembled Scanner Imager: 7-S0703
2	SKU ID:CT45-L1N-28D120G ,Assembled Scanner Imager: 8 - N6803/S0803
3	SKU ID: CT45-L1N-28D120T, Assembled with Scanner: 8 - N6803/S0803 for Turkey Only
4	SKU ID: CT45-L1N-27D120T, Assembled with Scanner: 7-S0703 for Turkey Only
5	SKU ID:CT45-L1N-28D220C, Assembled with Scanner: 8 - N6803/S0803 for China Only with Android non-GMS
6	SKU ID:CT45-L1N-27D220C, Assembled with Scanner: 7-S0703 for China Only with Android non-GMS

6. List of Accessory:

ACCESSORIES	BRAND	MODEL	SPECIFICATION
Battery	Honeywell	CT50-BTSC	Capacity: 3.85vdc 4020mAh
AC Adapter	HONOR	ADS-12B-06 05010E	I/P:100-240Vac, 0.3A O/P: 5Vdc, 2A
USB Cable	Honeywell	CT40-SN	Shielded, 1.25meter
Earphone	VIVO	N/A	Shielded, 1.27meter
LCD Panel	TZD	TS5099	5.0" HD(1280*720)

2.2 DESCRIPTION OF TEST MODES

FOR 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n, 802.11ac(40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac(80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
42	5210 MHz		

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n, 802.11ac(20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac(80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
58	5290 MHz		

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FOR 5500 ~ 5700MHz

12 channels are provided for 802.11a, 802.11n, 802.11ac(20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	124	5620MHz
104	5520 MHz	128	5640MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

6 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	126	5630MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
106	5530 MHz	122	5610 MHz
138	5690 MHz		

FOR 5745 ~ 5825MHz

5 channels are provided for 802.11a, 802.11n, 802.11ac (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

2 channels are provided for 802.11n, 802.11ac (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
142	5710 MHz	159	5795 MHz
151	5755 MHz		

1 channel is provided for 802.11ac (80MHz):

CHANNEL	FREQUENCY
155	5775 MHz

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2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE<1G	PLC	APCM	
A	√	√	√	-	Powered by Adapter with wifi(5G) link
B	-	-	-	√	Powered by Battery with wifi(5G) link
C	-	-	-	-	Powered by USB with wifi(5G) link

Where

RE $\geq$ 1G: Radiated Emission above 1GHz

RE<1G: Radiated Emission below 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE:

The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

NOTE: "-" means no effect

RADIATED EMISSION TEST (BELOW 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5500-5720	100 to 144	140	OFDM	6.0

RADIATED EMISSION TEST (ABOVE 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11n (20MHz)	5180-5240	36 to 48	36	OFDM	MCS0
A	802.11n (20MHz)	5260-5320	52 to 64	52	OFDM	MCS0
A	802.11a	5500-5720	100 to 144	140	OFDM	6.0
A	802.11n (20MHz)	5745-5825	149 to 165	149	OFDM	MCS0



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POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
A	802.11a	5500-5720	100 to 144	140	OFDM	MCS0

TEST CONDITION			
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	23deg. C, 70%RH	DC 5.0V By Adapter	Carl Xie
RE≥1G	23deg. C, 70%RH	DC 5.0V By Adapter	Carl Xie
PLC	25deg. C, 52%RH	DC 5.0V By Adapter	Carl Xie



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2.3 DUTY CYCLE OF TEST SIGNAL

Please refer to report W7L-P21040030RF14 (FCC ID: HD5-CT45L1NG).

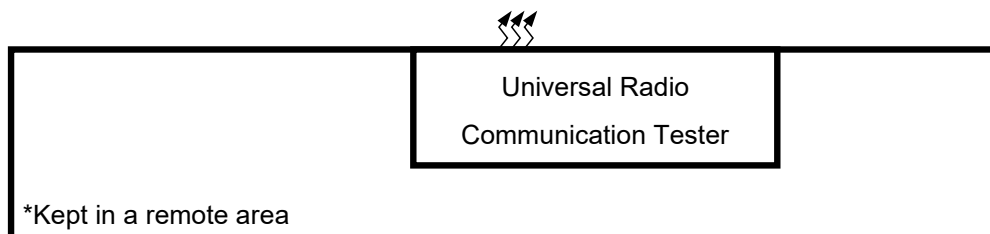
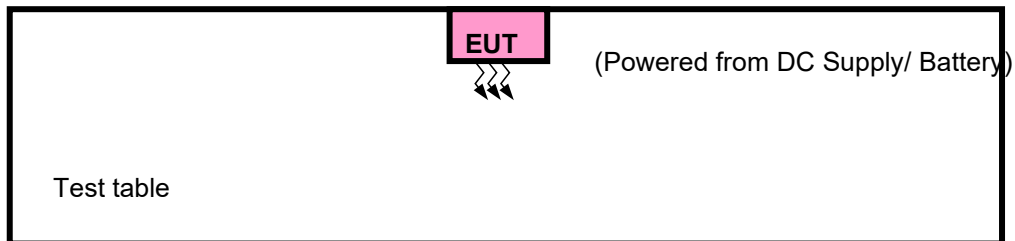
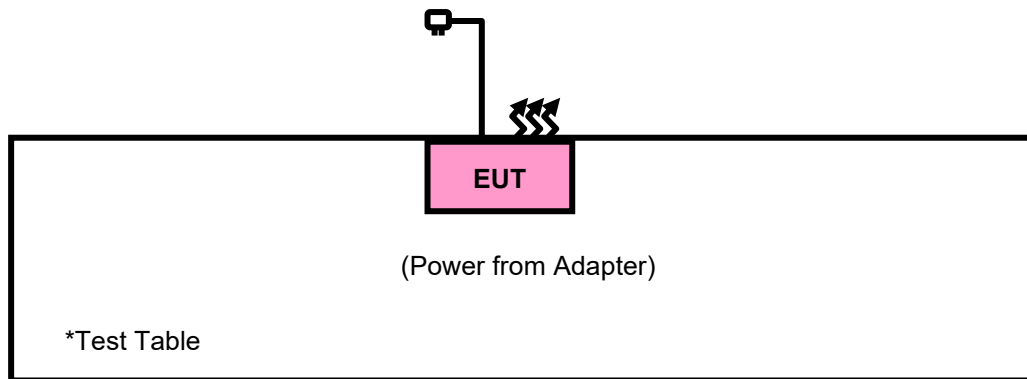
2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	Thinkpad E14	SL10W47313	N/A
2	PC Adapter	Lenovo	ADLX65YCC3D	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 1.25m;
2	PC USB Line: Unshielded, Detachable, 1.0m;

2.4.1 CONFIGURATION OF SYSTEM UNDER TEST





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2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General U-NII Test Procedures New Rules v02r01

ANSI C63.10-2020

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.

3 TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

3.1.2 LIMITS OF UNWANTED EMISSION

RESTRICTED BANDS	APPLICABLE TO	LIMIT	
	789033 D02 General UNII Test Procedures New Rules v02r01	FIELD STRENGTH AT 3m (dBμV/m)	
		PK : 74	AV : 54
OUT OF THE RESTRICTED BANDS	APPLICABLE TO	EIRP LIMIT (dBm/MHz)	EQUIVALENT FIELD STRENGTH AT 3m (dBμV/m)
	15.407(b)(1)	PK : -27	PK : 68.2
	15.407(b)(2)		
	15.407(b)(3)		
	15.407(b)(4)		
See note 2 (FCC 16-24)			

NOTE:

- The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$
- All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

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3.1.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	2025/7/3	2026/7/2
BiConiLog Antenna	ETS-LINDGREN	3143B	161965	2025/7/17	2026/7/16
Horn Antenna	SCHWARZBECK	BBHA9120D	3297	2025/9/27	2026/9/26
Horn Antenna	STEATITE	QWH-SL-18-40-K-SG QMS-00361	15433	2025/7/19	2026/7/18
Preamplifier	Tonscend	TPA184045	AP24L8060388	2025/7/3	2026/7/2
MXE EMI Receiver	keysight	N9038B	MY50018017	2025/7/1	2026/6/30
MXG Vector Signal Generator	Keysight	N5183B	MY59100137	2025/6/30	2026/6/29
Preamplifier	Tonscend	TPA001330	806JSAPO40804251015	2025/6/30	2026/6/29
Preamplifier	Tonscend	TPA011845	AP24L8060392	2025/6/30	2026/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927166	2025/6/30	2026/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927165	2025/6/30	2026/6/29
Active Receive Loop Antenna	SCHWARZBECK	FMZB 1519 B	00173	2025/6/30	2026/6/29
Temp. & Humi. Recorder	Kejian	HTC-01	157246	2025/7/2	2026/7/1
HIGH pass FILTER_1-18	EWT	EWT-57-0222	EWT-57-0222	2025/6/30	2026/6/29
HIGH pass FILTER_7-18	EWT	EWT-57-0223	EWT-57-0223	2025/6/30	2026/6/29
HIGH pass FILTER_3-18	EWT	EWT-57-0221	EWT-57-0221	2025/6/30	2026/6/29
DC~1GHz Lowpass Filter	EWT	EWT-56-0649	EWT-56-0649	2025/7/3	2026/7/2
Cable 1	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 2	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 3	N/A	N/A	N/A	2025/9/28	2026/9/27

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.
3. The FCC Site Registration No. is 646781; The Designation No. is CN1429.

3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3-meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise, the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE:

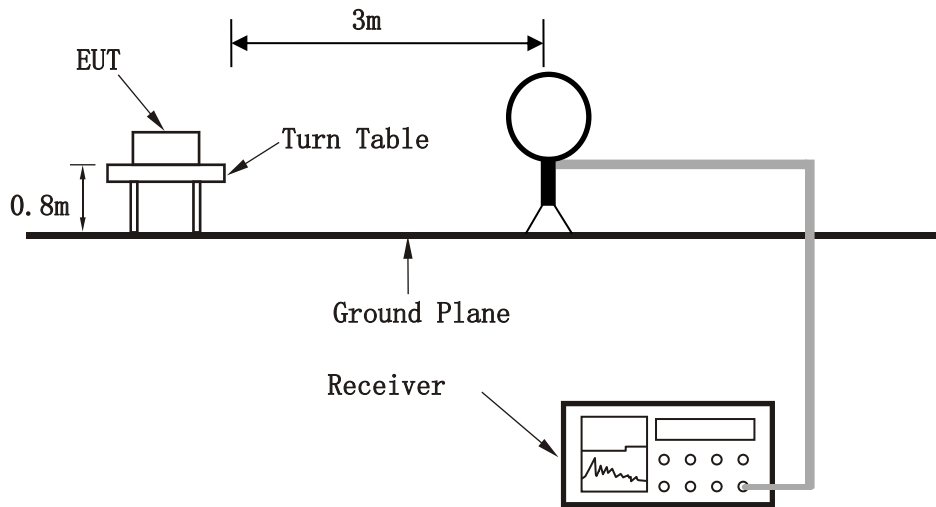
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated, and the worst-case emissions are reported.

3.1.5 DEVIATION FROM TEST STANDARD

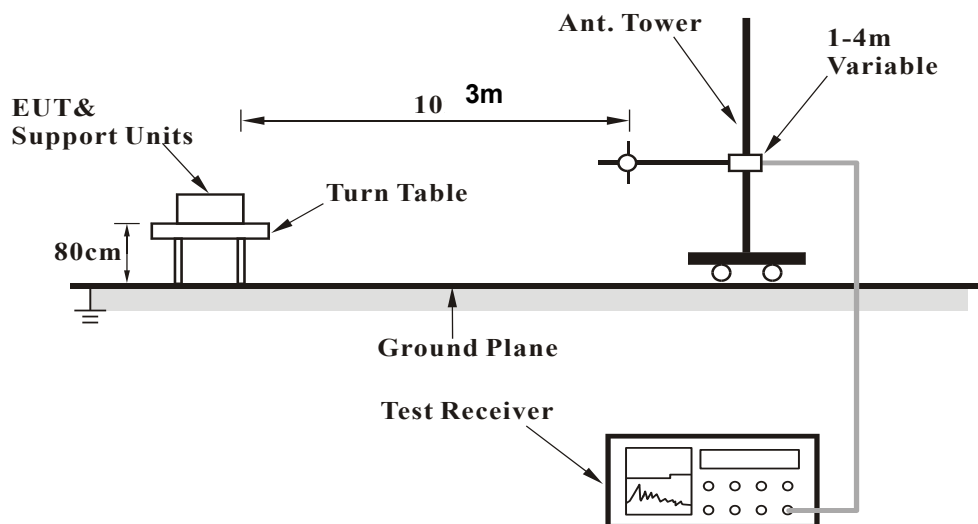
No deviation.

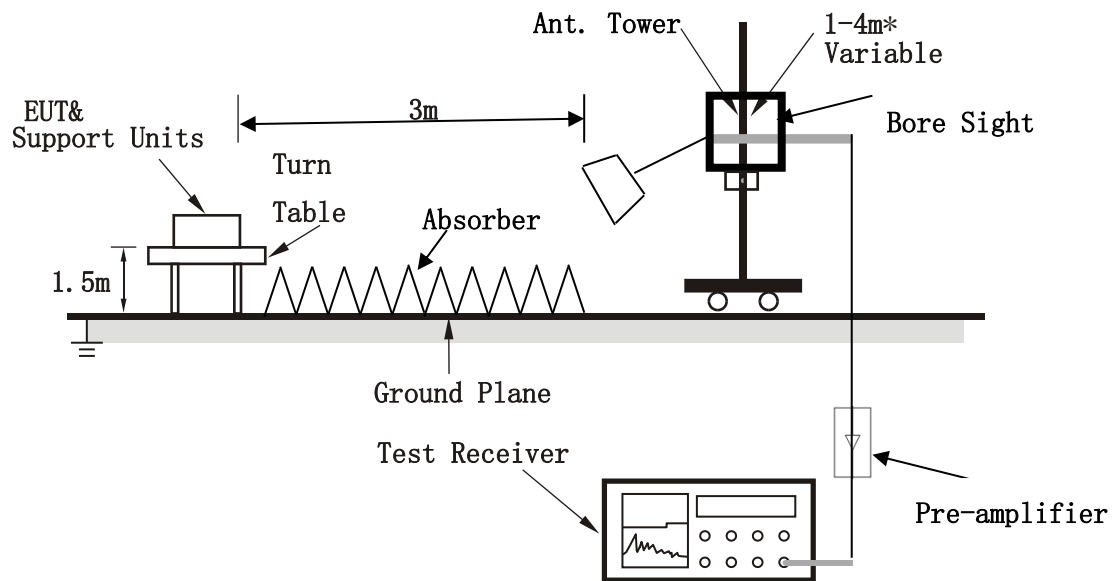
Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)
3.1.6 TEST SETUP

<Frequency Range 9KHz~30MHz >



< Frequency Range 30MHz~1GHz >





Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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

3.1.7 EUT OPERATING CONDITION

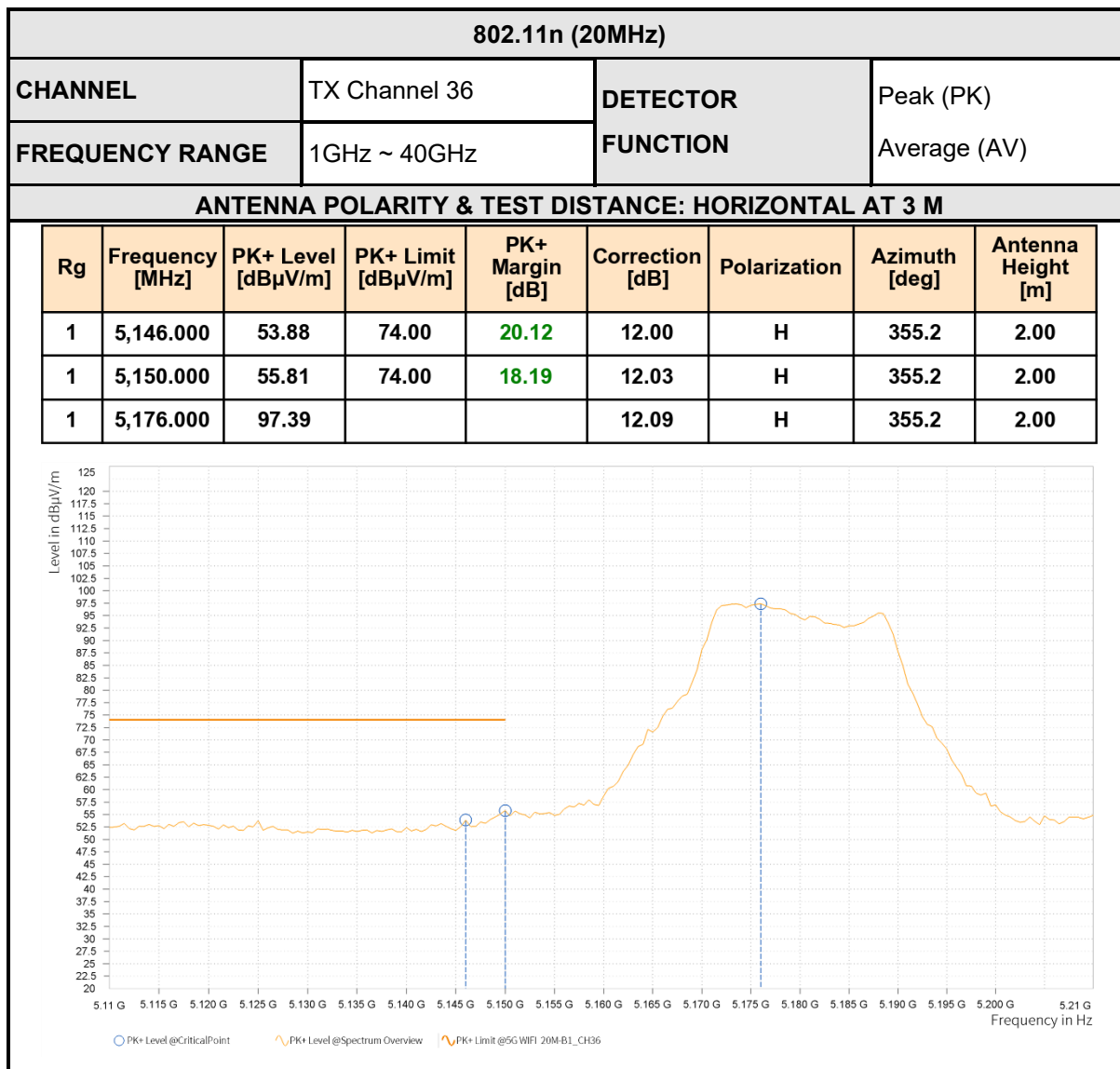
- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.

Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

3.1.8 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BAND EDGE MEASUREMENT BADN 1

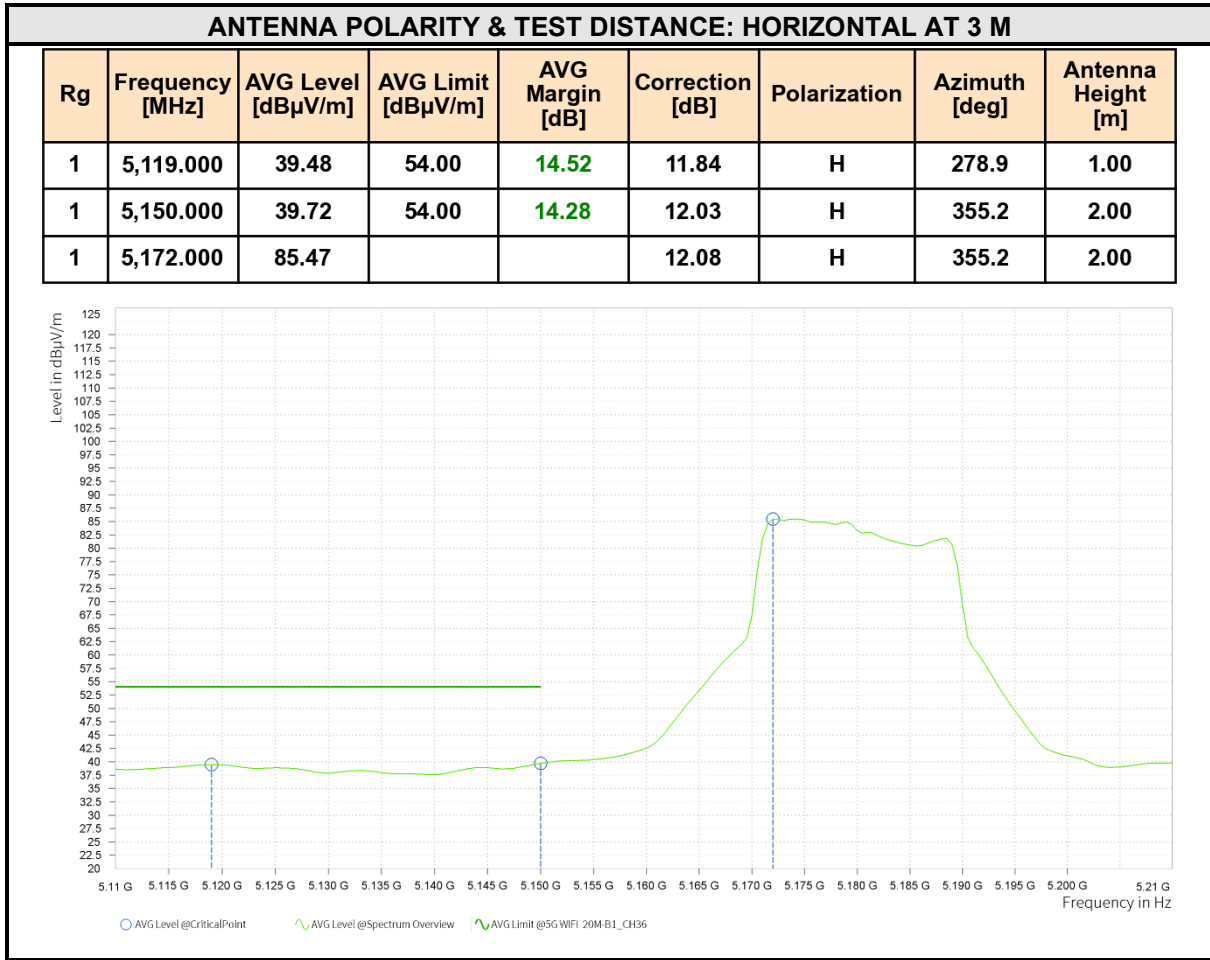


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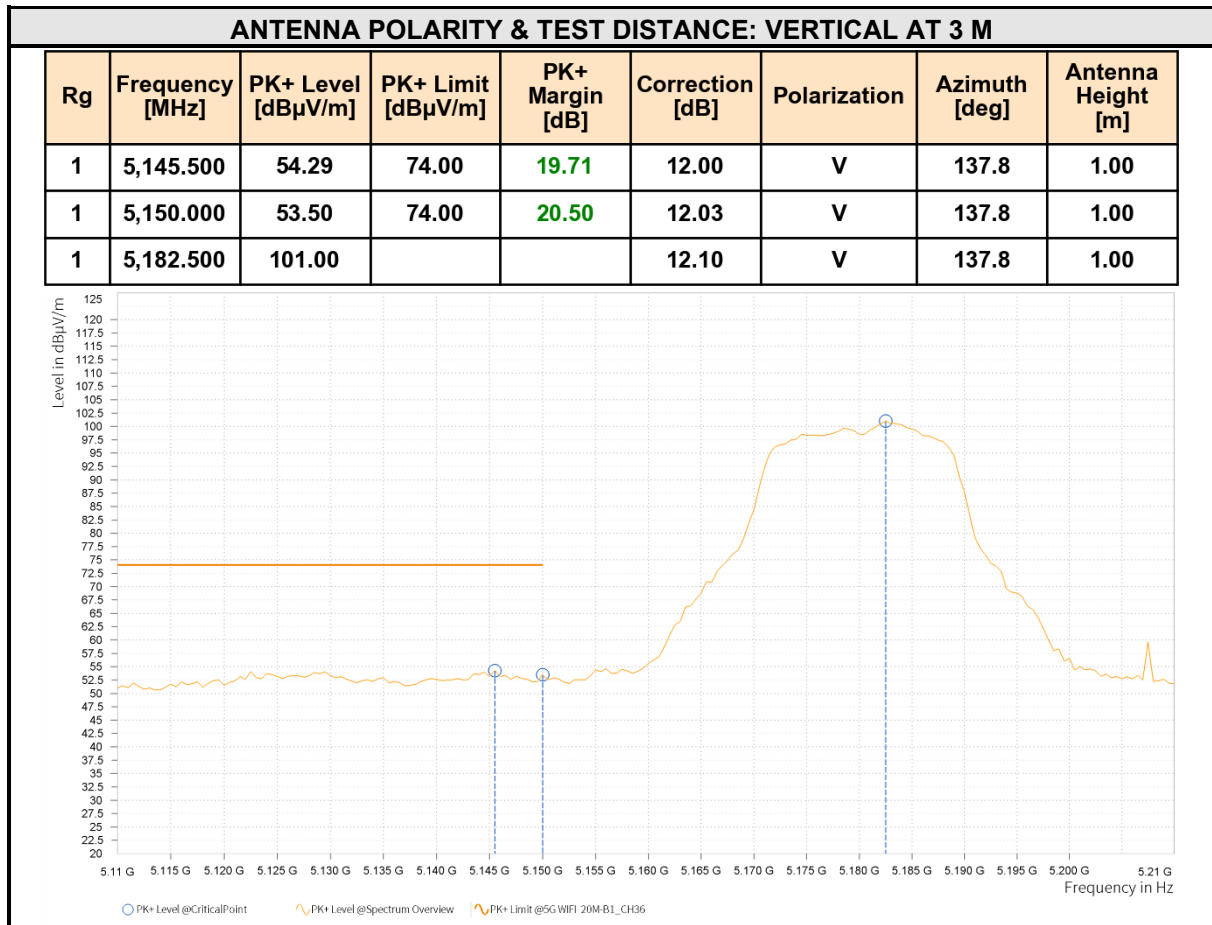
Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

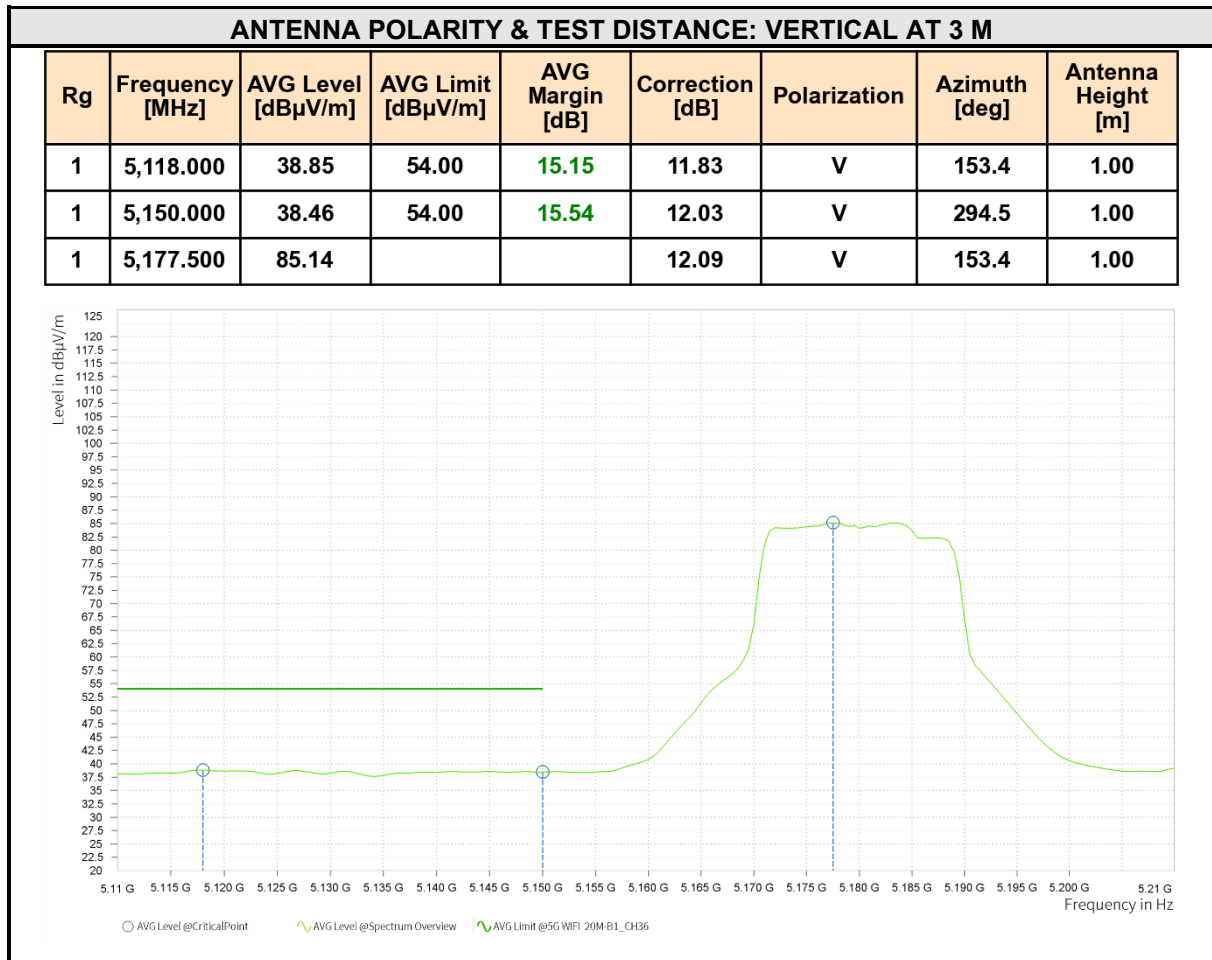


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REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5180MHz: Fundamental frequency.

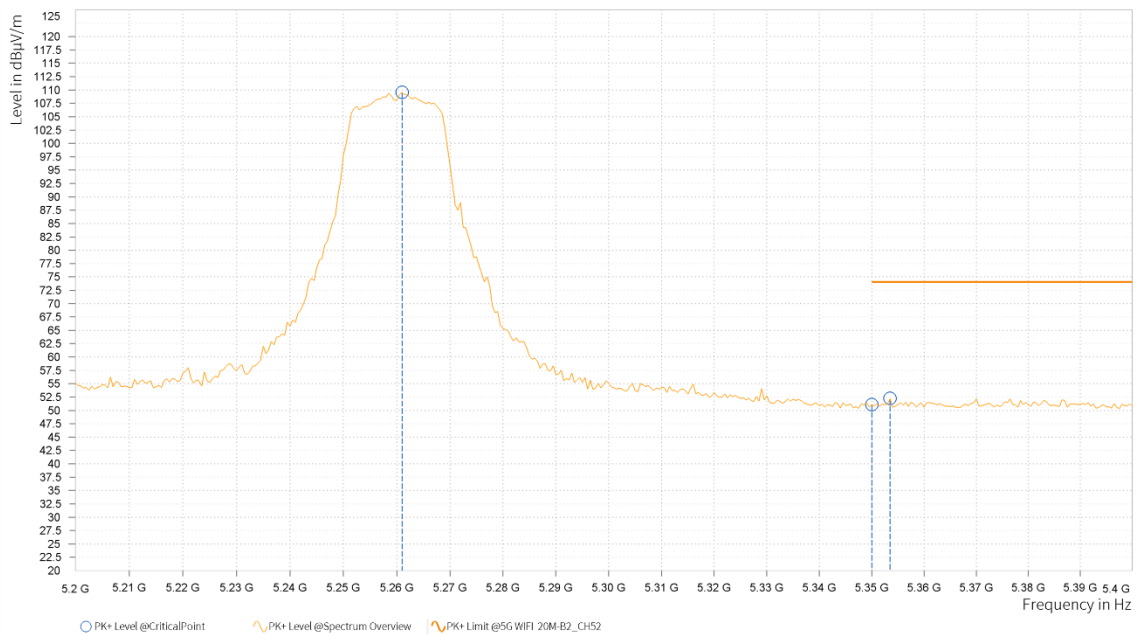
Band 2

802.11n (20MHz)

CHANNEL	TX Channel 52	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

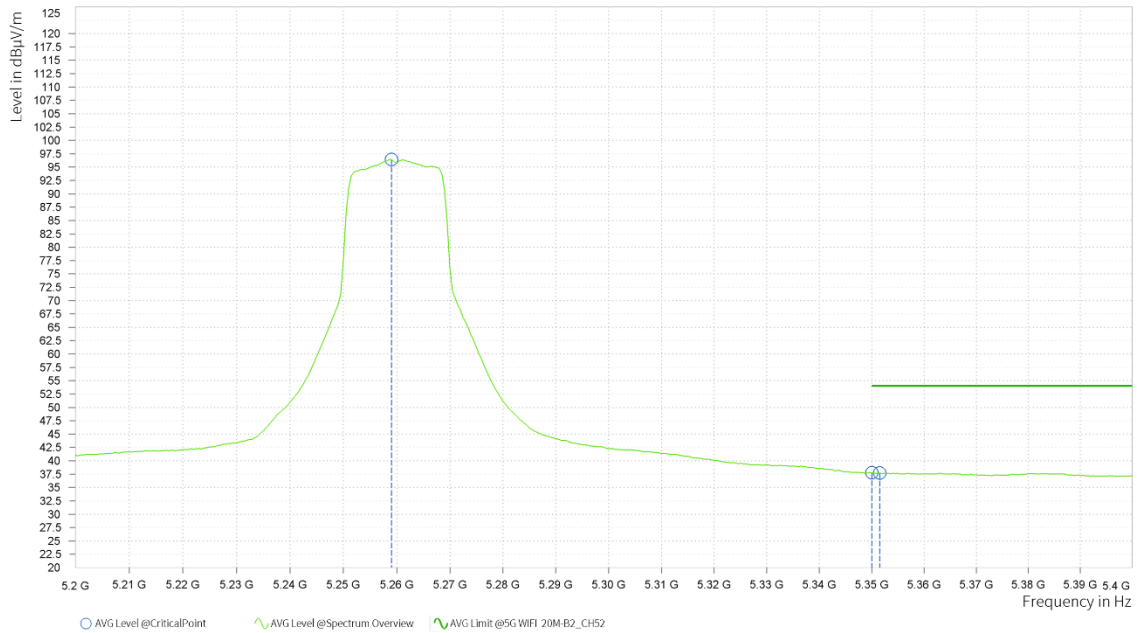
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,261.000	109.56			12.17	H	277.8	1.00
4	5,350.000	51.09	74.00	22.91	12.06	H	28.4	2.00
4	5,353.500	52.24	74.00	21.76	12.08	H	277.8	1.00



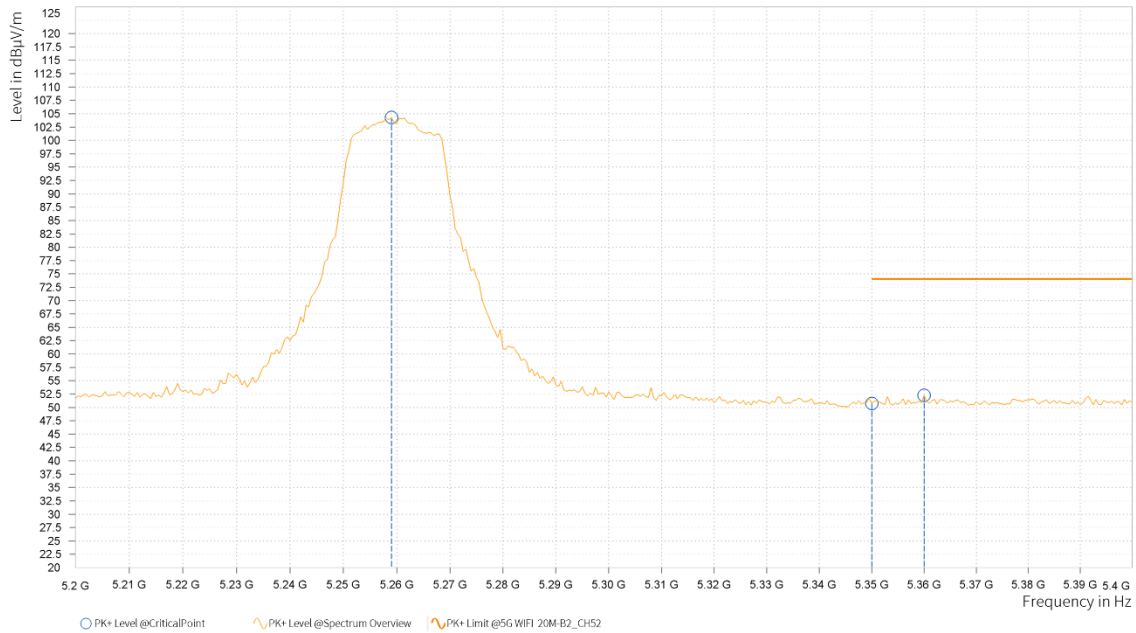
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

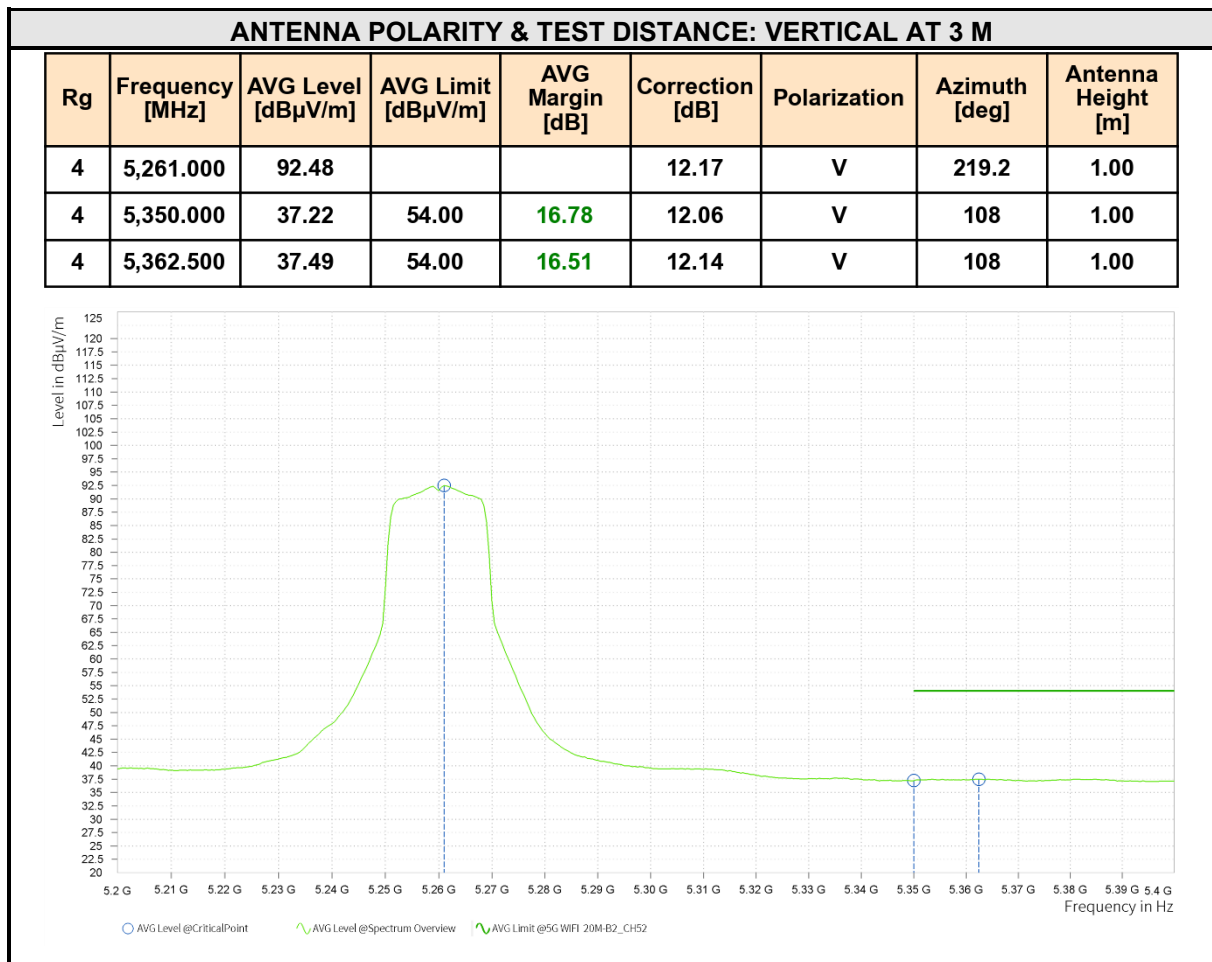
Rg	Frequency [MHz]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
4	5,259.000	96.44			12.18	H	274.2	1.00
4	5,350.000	37.77	54.00	16.23	12.06	H	274.2	1.00
4	5,351.500	37.70	54.00	16.30	12.07	H	274.2	1.00



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]
4	5,259.000	104.31			12.18	V	221.6	1.00
4	5,350.000	50.73	74.00	23.27	12.06	V	359	2.00
4	5,360.000	52.24	74.00	21.76	12.13	V	4.9	1.00





REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5260MHz: Fundamental frequency.

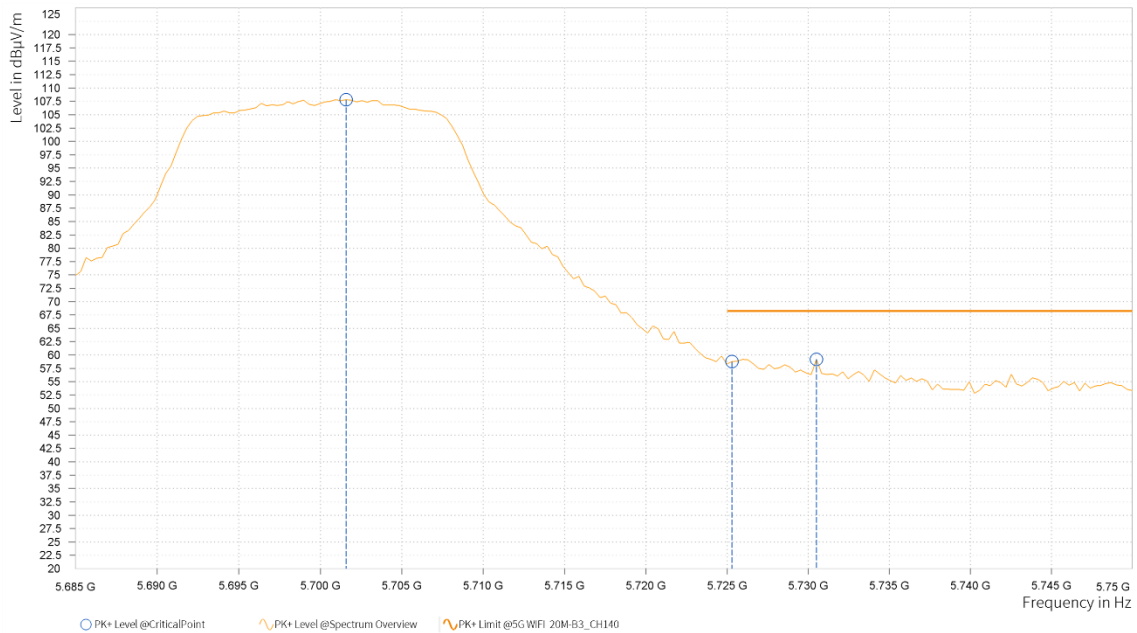
Band 3

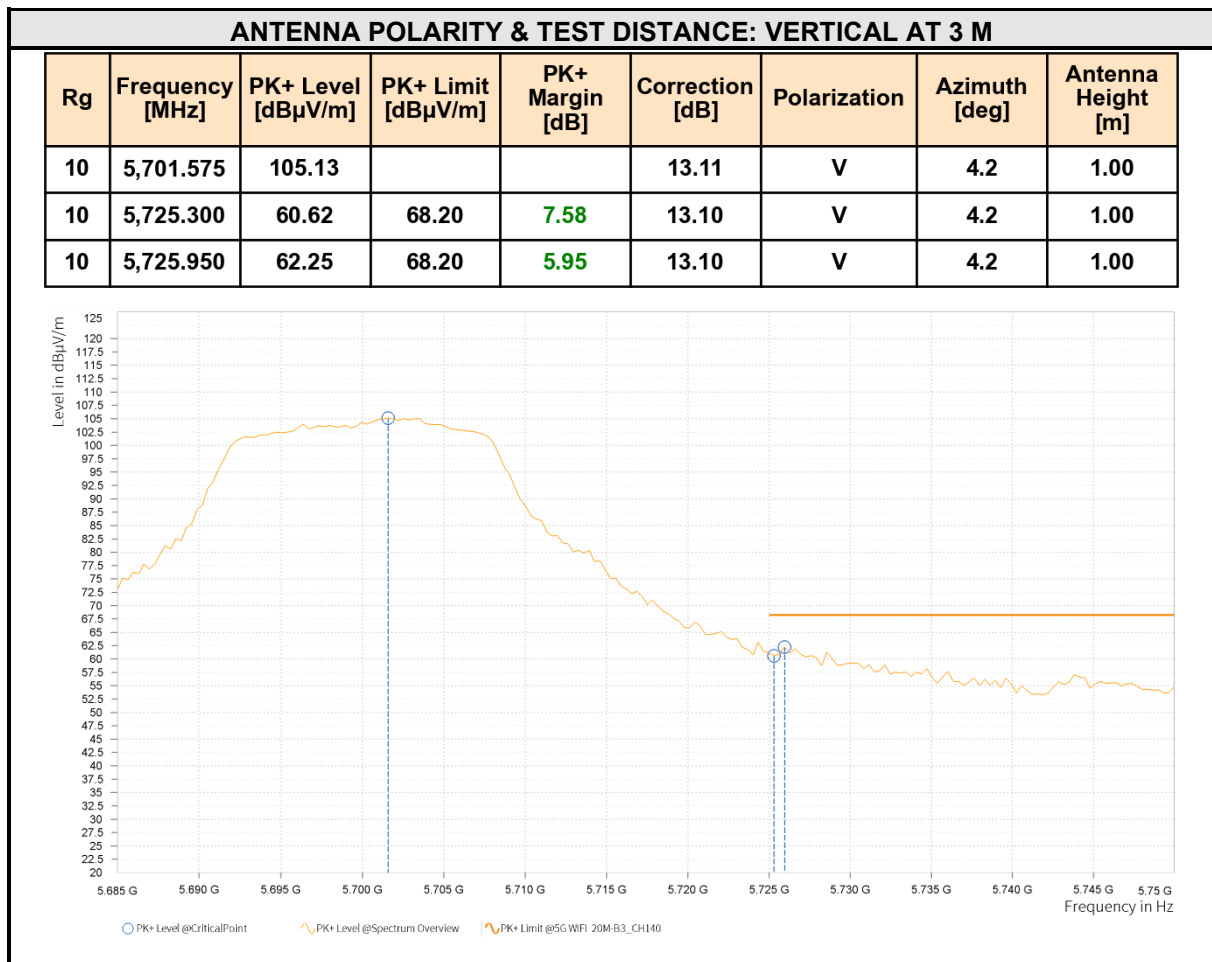
802.11a

CHANNEL	TX Channel 140	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5,701.575	107.81			13.11	H	305.7	2.00
10	5,725.300	58.77	68.20	9.43	13.10	H	355.1	2.00
10	5,730.500	59.20	68.20	9.00	13.09	H	355.1	2.00





REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
2. Margin value = Limit value- Emission level.
3. 5700MHz: Fundamental frequency.
4. #: Out of restricted band.

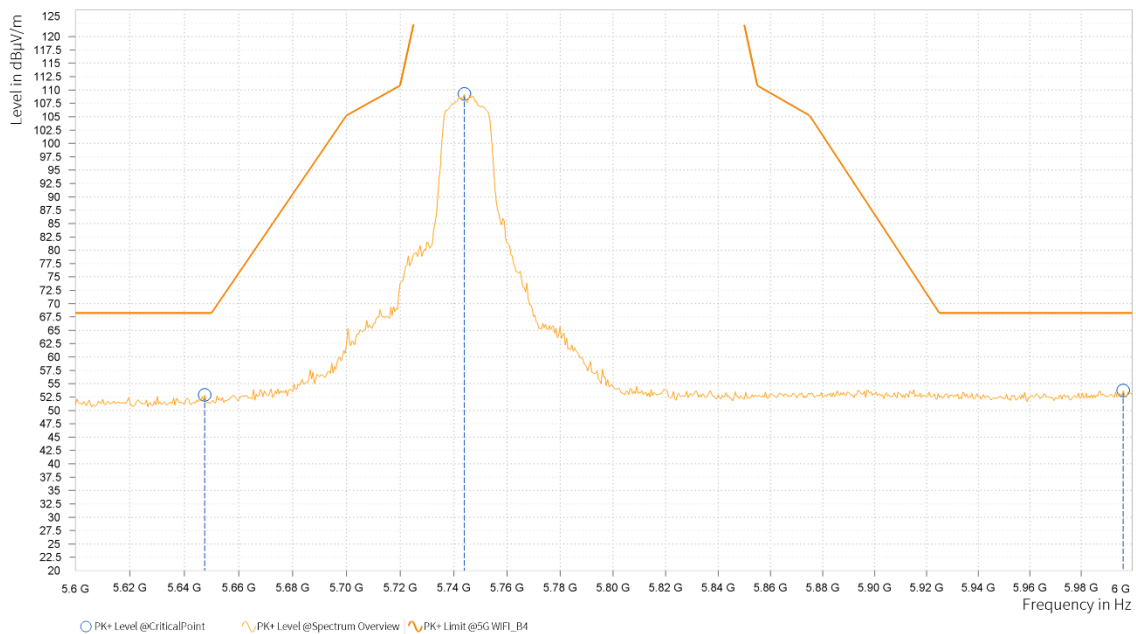
BAND 4

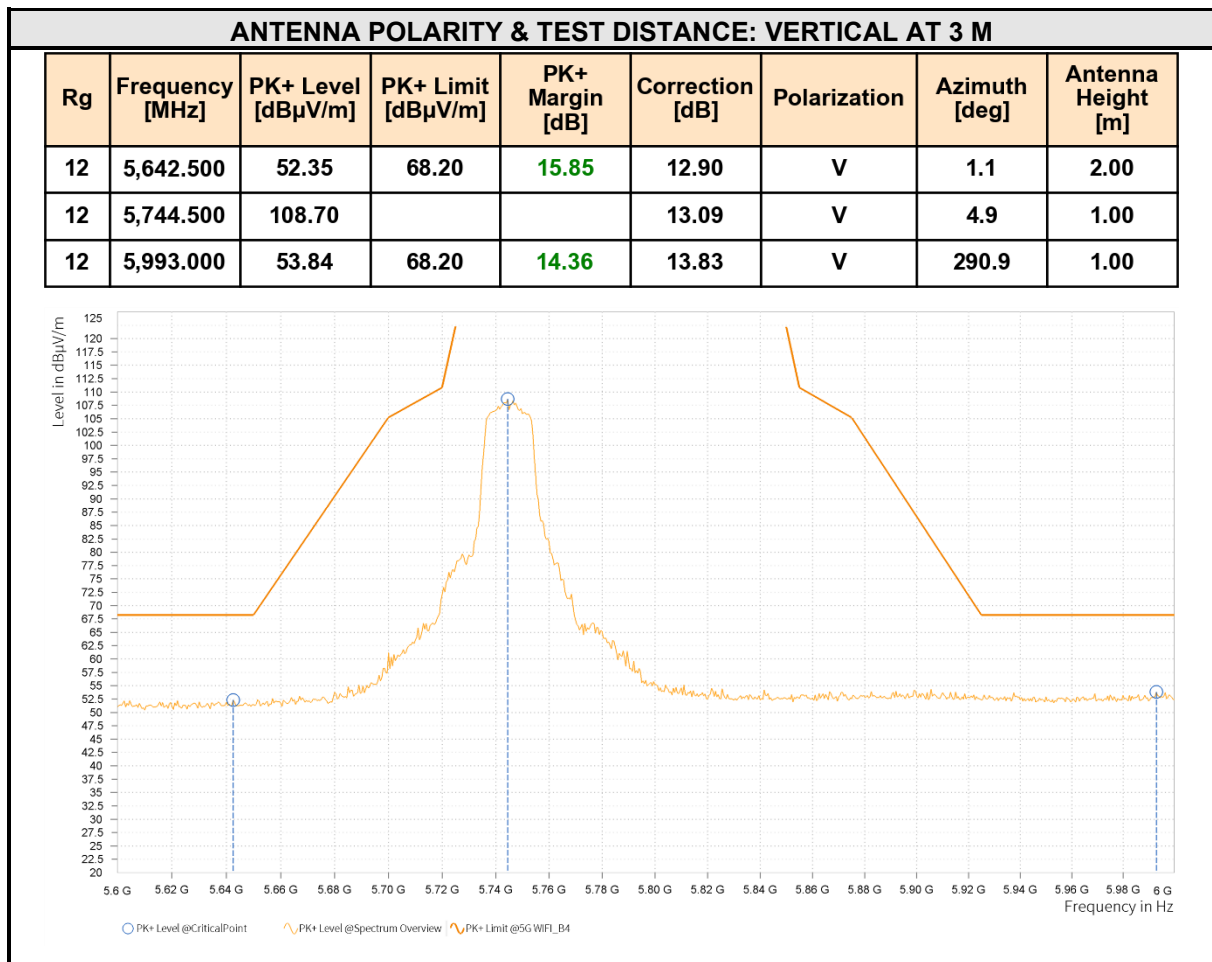
802.11n (20MHz)

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]
12	5,647.500	52.89	68.20	15.31	12.92	H	305.7	2.00
12	5,744.000	109.26			13.09	H	291	1.00
12	5,996.500	53.71	68.20	14.49	13.84	H	359	1.00

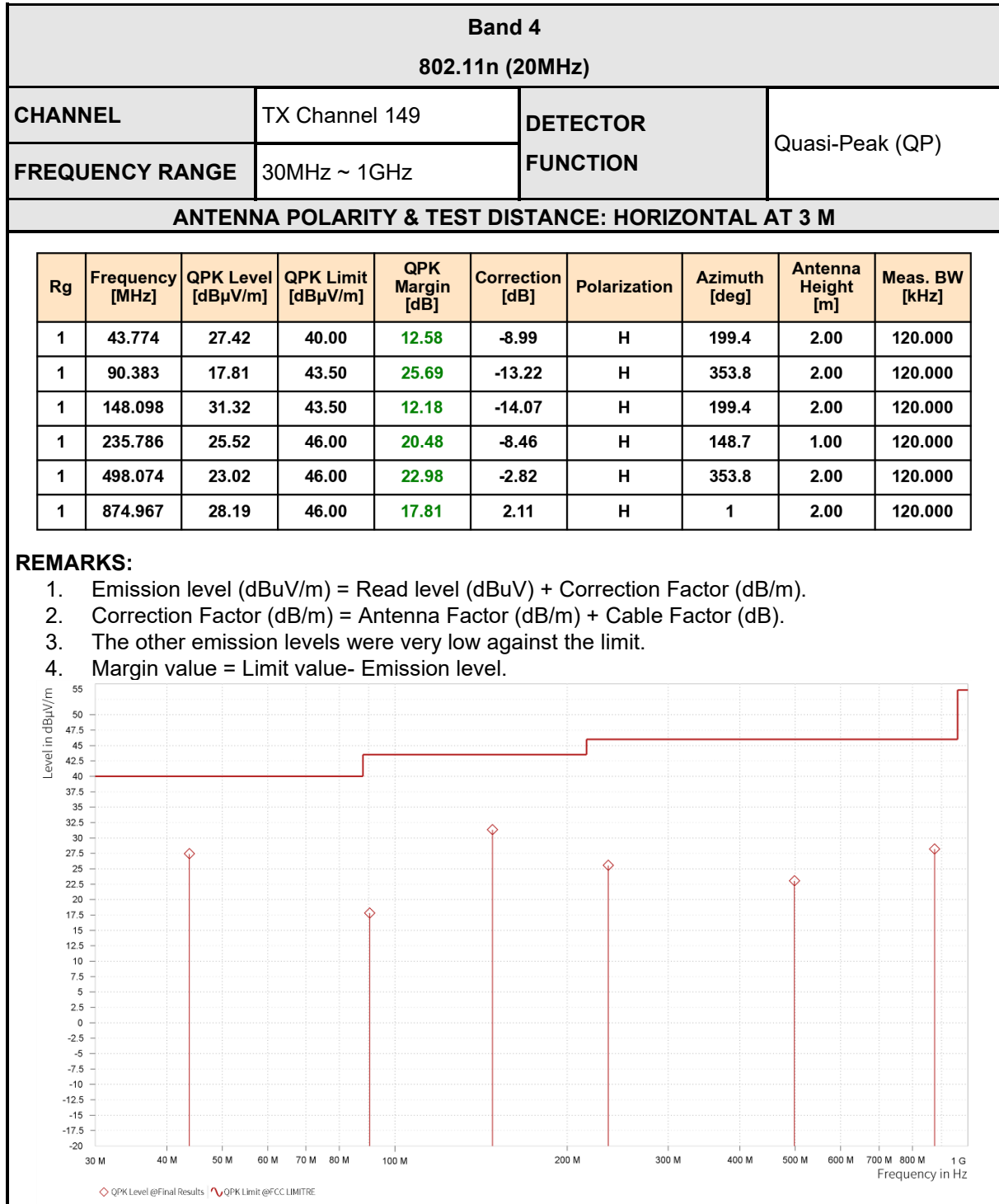




REMARKS:

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

RADIATED EMISSION
BELOW 1GHz WORST-CASE DATA



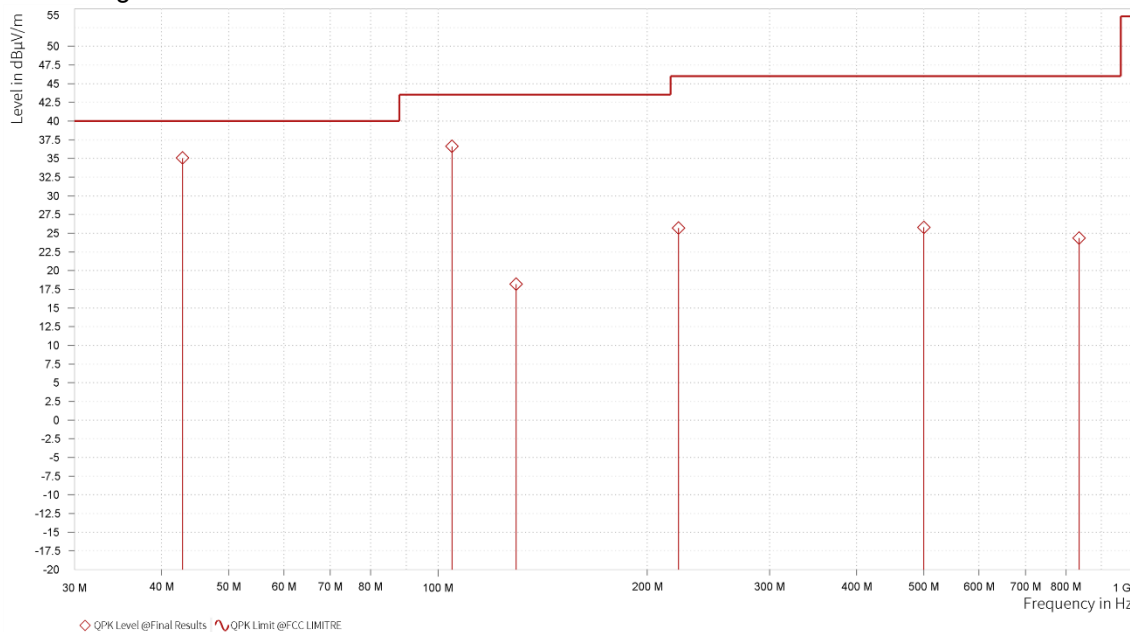
CHANNEL	Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	42.901	35.05	40.00	4.95	-10.61	V	148.6	1.00	120.000
1	104.739	36.59	43.50	6.91	-10.81	V	148.6	1.00	120.000
1	129.571	18.18	43.50	25.32	-12.91	V	355	2.00	120.000
1	221.818	25.69	46.00	20.31	-9.94	V	211.3	2.00	120.000
1	499.965	25.77	46.00	20.23	-3.11	V	148.6	1.00	120.000
1	836.022	24.35	46.00	21.65	0.91	V	1	2.00	120.000

REMARKS:

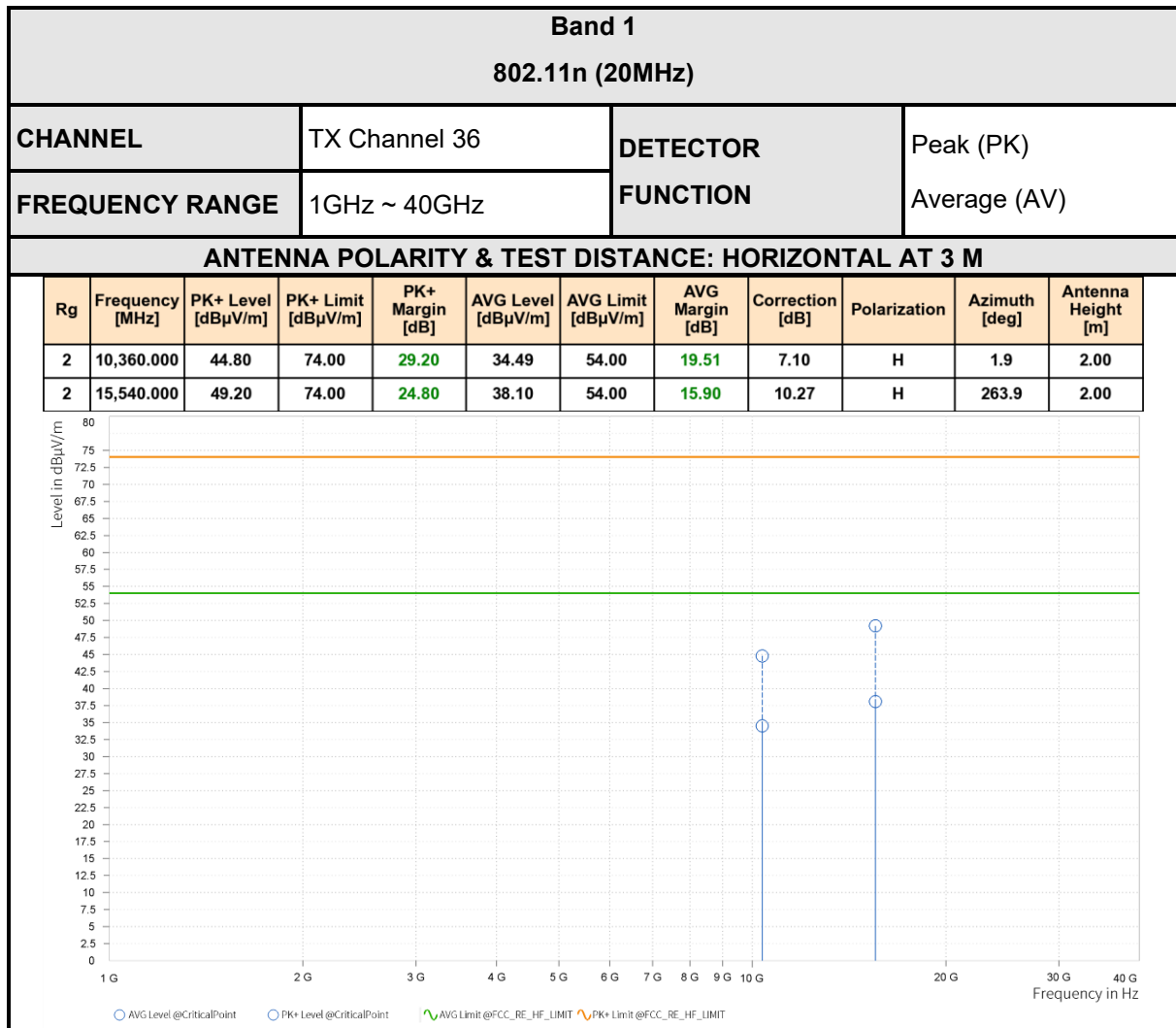
1. Emission level (dBuV/m) = Read level (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Limit value- Emission level.

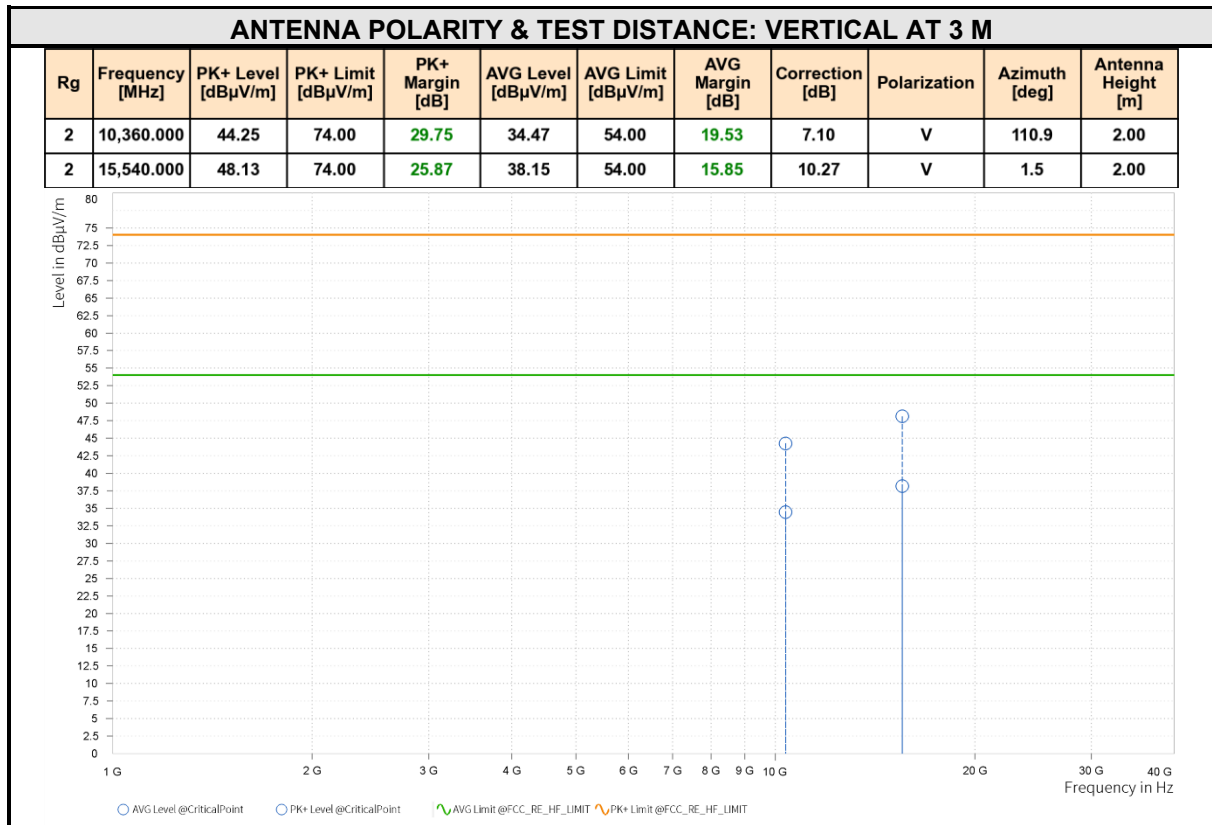


ABOVE 1GHz WORST-CASE DATA

Note: 1. For higher frequency, the emission is too low to be detected.

2. For radiated emission testing, all supported channels, bandwidths and modes have been tested, the report only shown the worst-case data of each sub-band.

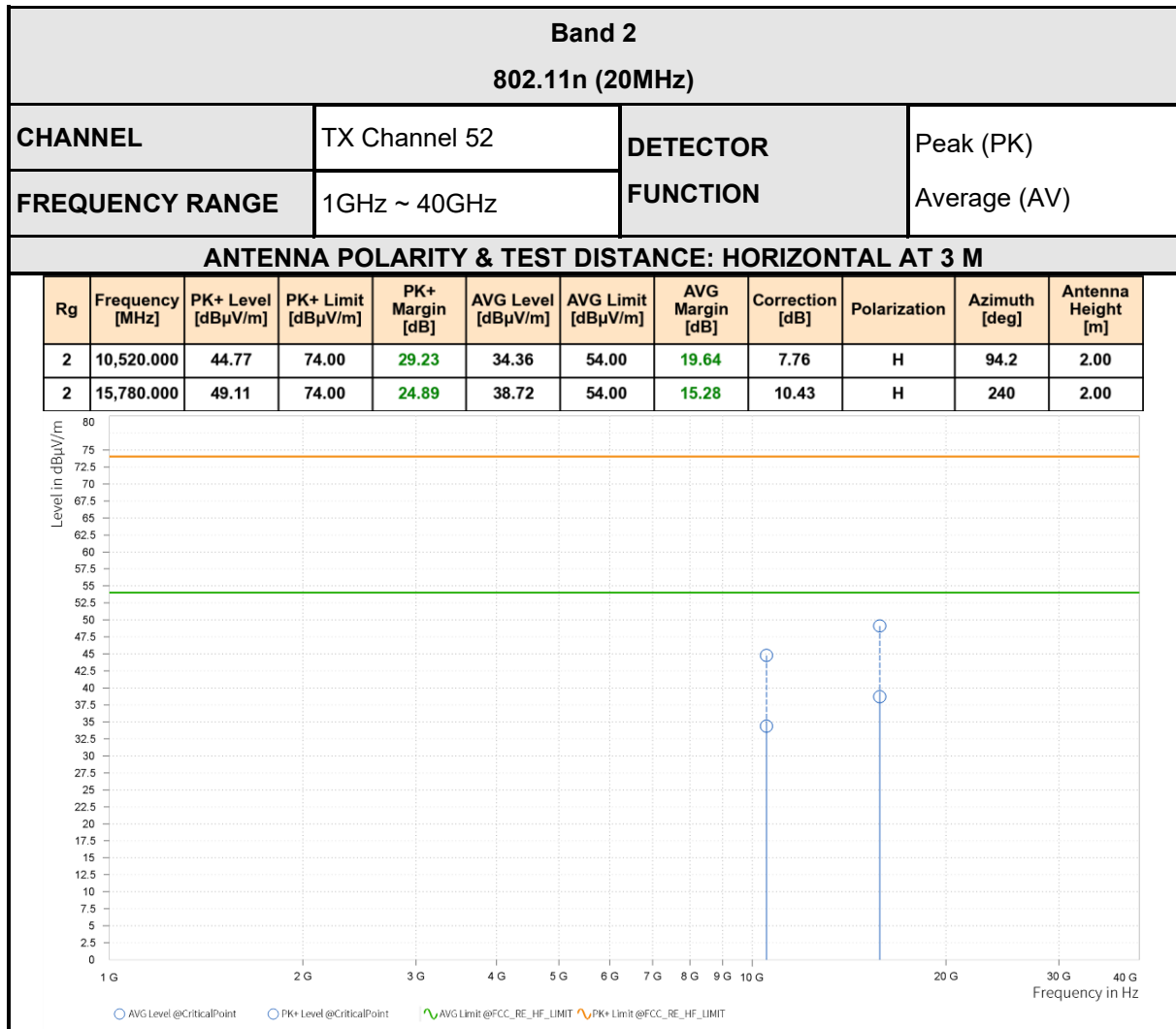




REMARKS:

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

Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

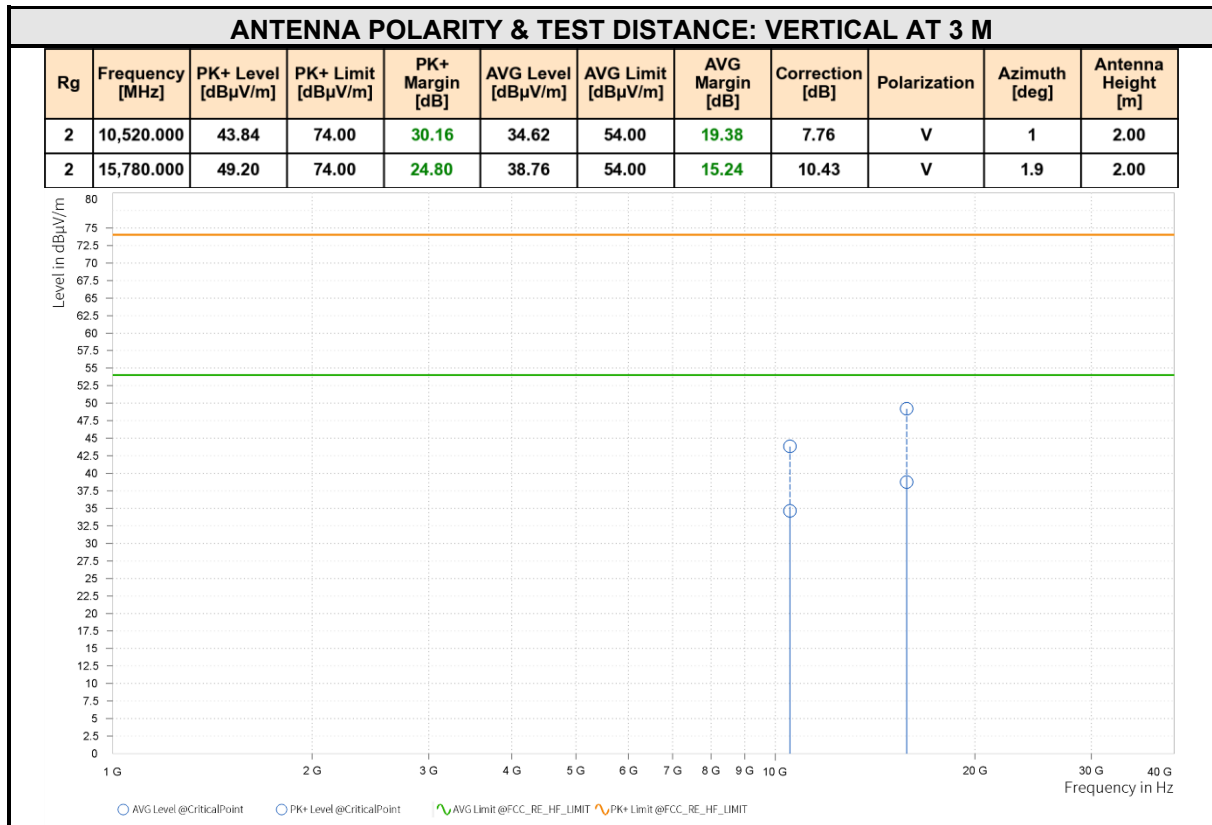


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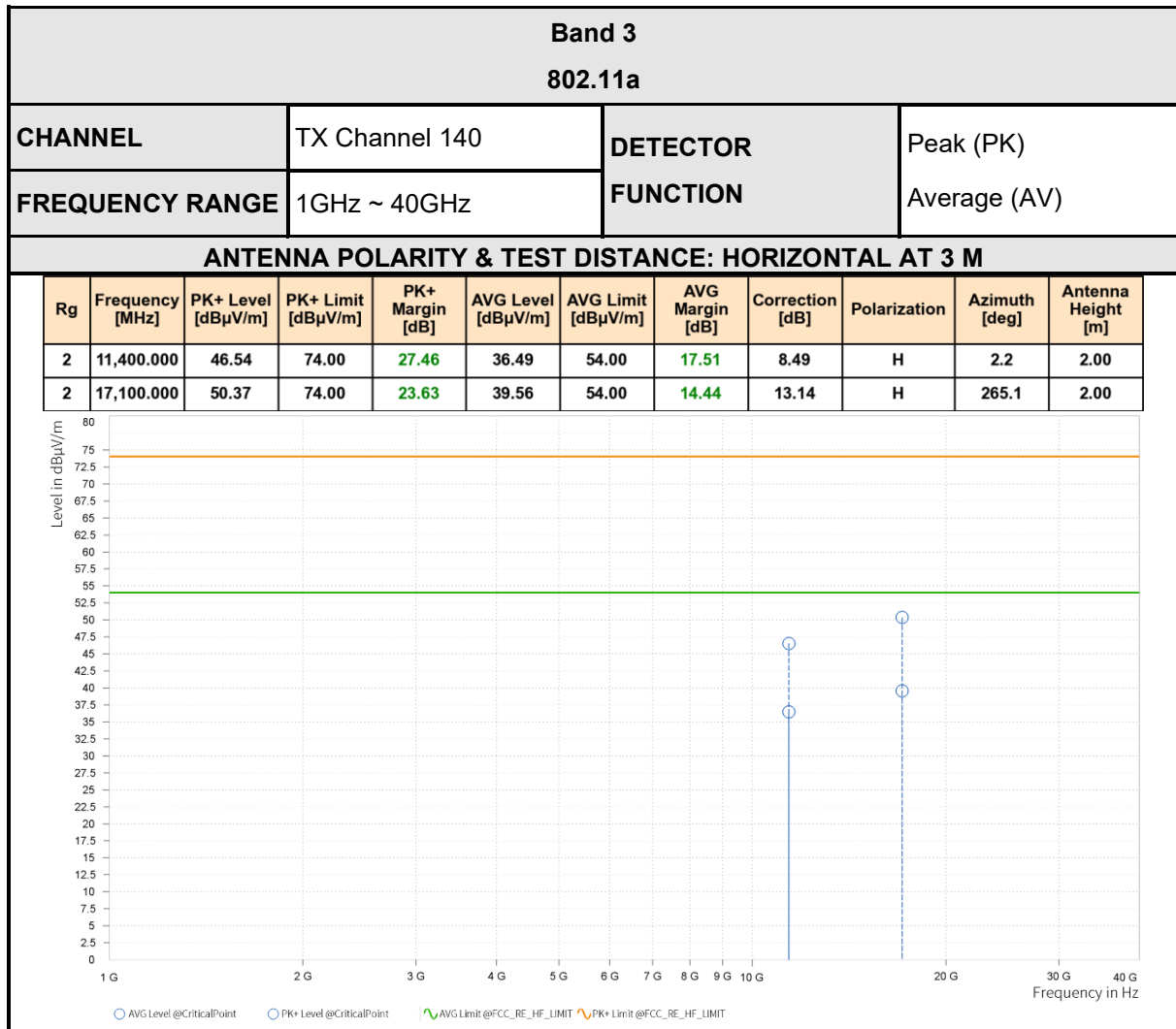
Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)



REMARKS:

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

Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

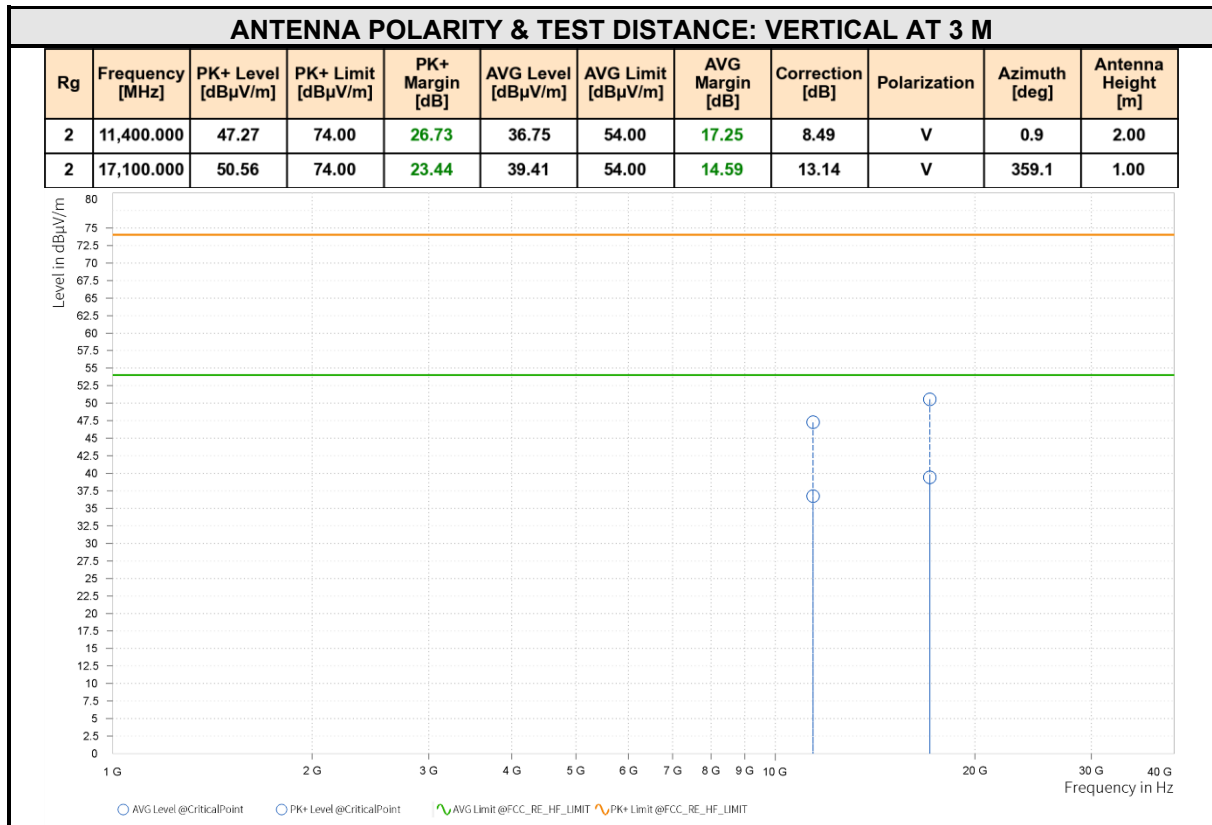


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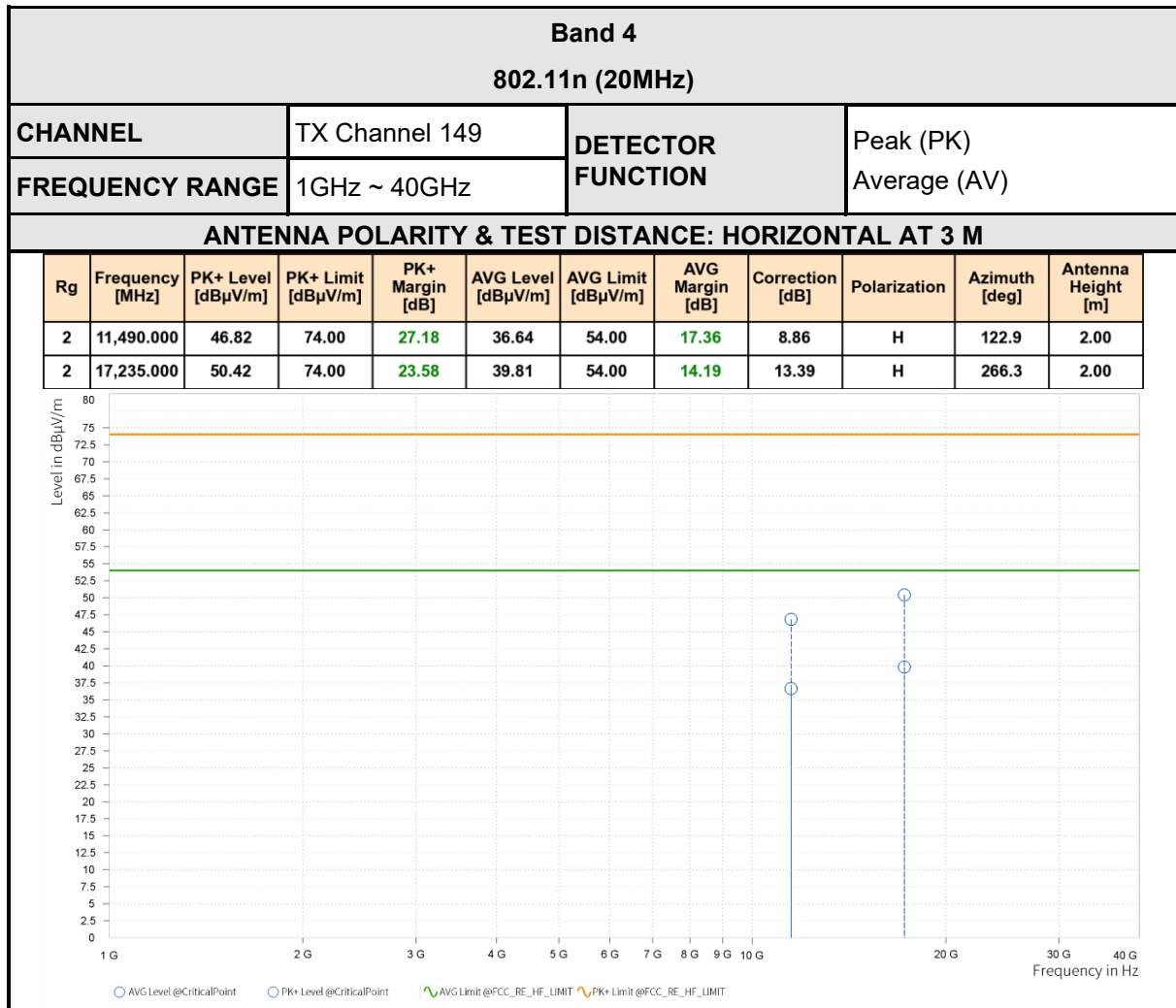
Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)



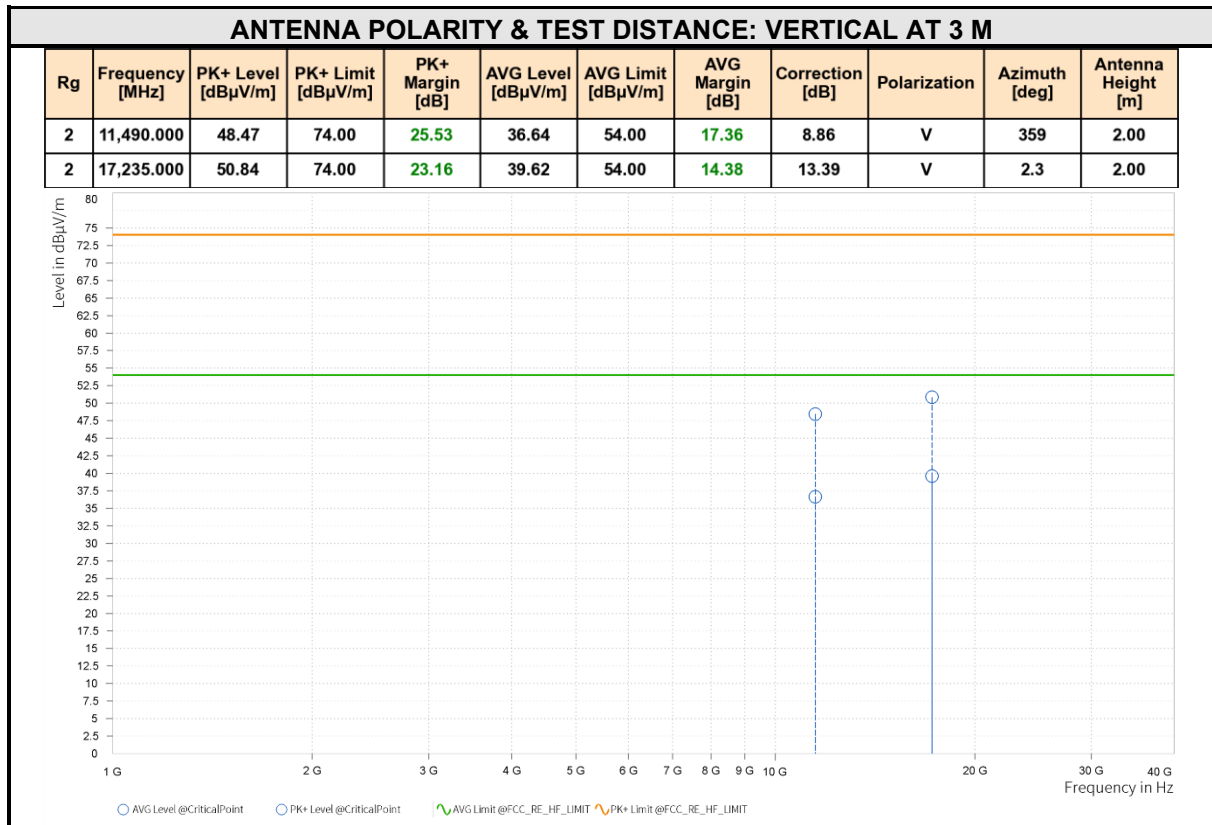
REMARKS:

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.

Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)



Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)



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.
Pulse limiter	SCHWARZBECK	VTSD 9561F	01579	2025/7/22	2026/7/21
ESR.EMI TEST RECEIVER	Rohde&SCHWARZ	ESR	101405	2025/6/30	2026/6/29
LISN	SCHWARZBECK	NSLK 8127	01216	2025/8/27	2026/8/26
Cable	Tonscend	/	/	2025/7/22	2026/7/21

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

3.2.3 TEST PROCEDURES

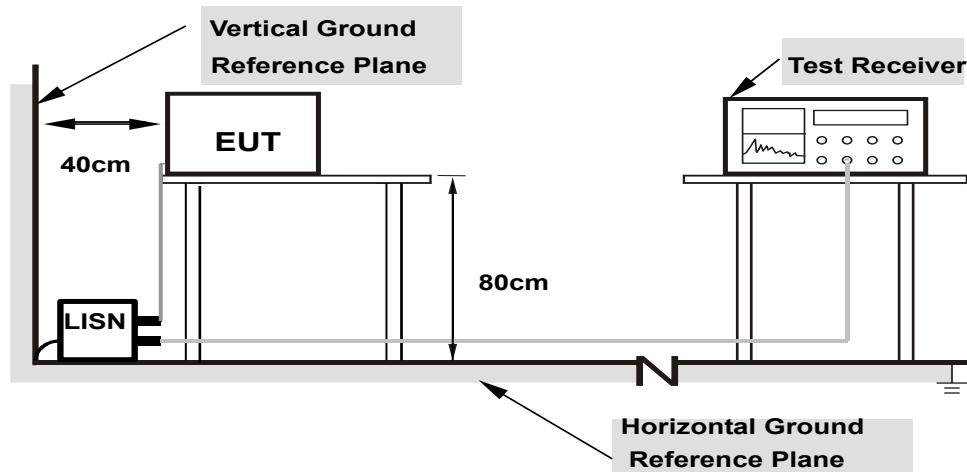
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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.

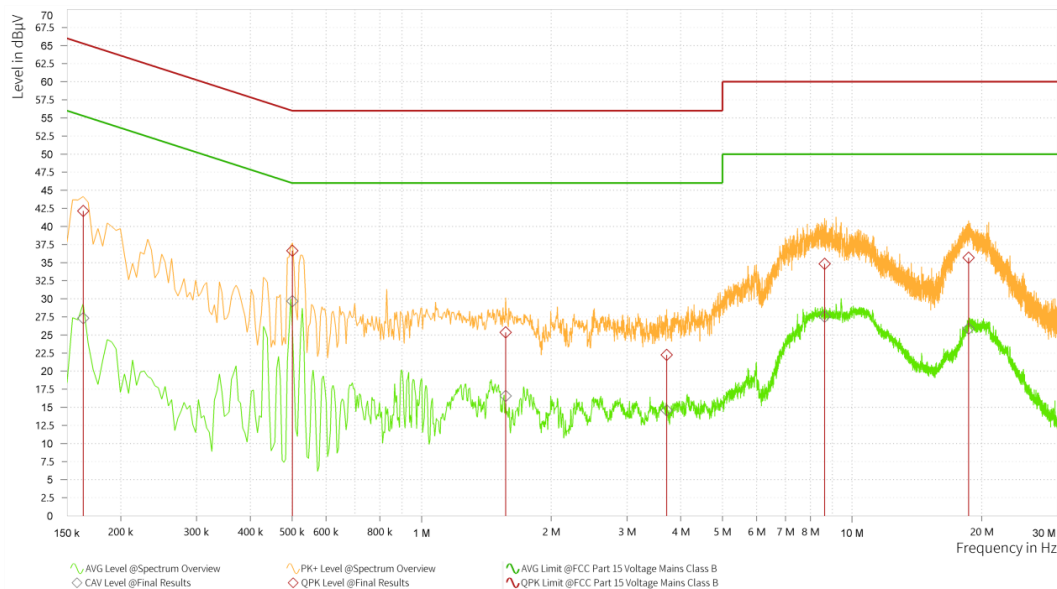
3.2.7 TEST RESULTS

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	Carl Xie		

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	0.164	42.13	65.28	23.15	27.30	55.28	27.98	9.79	L1	9.000
1	0.501	36.66	56.00	19.34	29.66	46.00	16.34	9.75	L1	9.000
1	1.568	25.36	56.00	30.64	16.58	46.00	29.42	9.79	L1	9.000
1	3.710	22.26	56.00	33.74	14.59	46.00	31.41	10.02	L1	9.000
1	8.633	34.82	60.00	25.18	27.52	50.00	22.48	10.74	L1	9.000
1	18.663	35.67	60.00	24.33	25.88	50.00	24.12	13.20	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
3. measurement with the average detector is unnecessary.
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Limit value - Emission level
6. Correction factor = Insertion loss + Cable loss
7. Emission Level = Correction Factor + Reading Value.



Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

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	Carl Xie		

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	0.150	41.41	66.00	24.59	26.74	56.00	29.26	9.80	N	9.000
1	0.501	30.19	56.00	25.81	23.65	46.00	22.35	9.75	N	9.000
1	1.460	23.47	56.00	32.53	13.52	46.00	32.48	9.79	N	9.000
1	3.345	20.02	56.00	35.98	9.30	46.00	36.70	9.98	N	9.000
1	7.913	37.85	60.00	22.15	27.92	50.00	22.08	10.61	N	9.000
1	22.142	31.54	60.00	28.46	24.95	50.00	25.05	13.63	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.



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Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

4. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



Test Report No.: RF20251225B001-FCC 15.407 Report(11ac80)(B1,2,3,4)

5. MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.