REPORT No.: SZ24070300W05

TEST REPORT

APPLICANT	:	Linkplay Technology Inc.
PRODUCT NAME	:	WiiM CI MOD A80 Stereo Streaming Amplifier
MODEL NAME	:	AMP011
BRAND NAME	:	WiiM
FCC ID	:	2BABF-AMP011
STANDARD(S)	:	47 CFR Part 15 Subpart E
RECEIPT DATE	:	2024-07-31
TEST DATE	:	2024-08-16 to 2024-09-05
ISSUE DATE	:	2024-09-23

Edited by: Zeng Xiaoying (Rapporteur)

Approved by: Shen Junsheng (Supervisor)

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MORLAB
Shenzhen Morlab Communications Technology Co., Ltd.
FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China
Tel: 86-755-36698555 Fax: 86-755-36698525
Http://www.morlab.cn E-mail: service@morlab.cn

DIRECTORY

Change History		
Version	**Date**	**Reason for change**
1.0	2024-09-23	First edition

1. Summary of Test Results

No.	Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
1	15.203	Antenna Requirement	N/A	N/A	N/A$_{Note1}$	N/A
2	ANSI C63.10	Duty Cycle of the Test Signal	N/A	N/A	N/A$_{Note1}$	N/A
3	15.407(a)	Conducted Output Power and E.I.R.P.	N/A	N/A	N/A$_{Note1}$	N/A
4	15.407(a)	Occupied Bandwidth and Emission Bandwidth	N/A	N/A	N/A$_{Note1}$	N/A
5	15.407(a)	Power Spectral Density	N/A	N/A	N/A$_{Note1}$	N/A
6	15.407(b)	Emission Mask	N/A	N/A	N/A$_{Note1}$	N/A
7	15.407(d)	Contention Based Protocol	N/A	N/A	N/A$_{Note1}$	N/A
8	15.407(g)	Frequency Stability	N/A	N/A	N/A$_{Note1}$	N/A
9	15.207	Conducted Emission	Aug. 16, 2024	Fan Shengquan	PASS	No deviation
10	15.407(b)	Restricted Frequency Bands	Sep. 09, 2024	Gao Jianrou	PASS	No deviation
11	15.407(b)	Radiated Emission	Sep. 05, 2024	Gao Jianrou	PASS	No deviation

Note 1: The test results of all conducted test items please refer to the module IC test report (Report No.: SZ24040154W05), which issued on Jul. 26, 2024.

Note 2: Additions to, deviation, or exclusions from the method shall be judged in the “method determination” column of add, deviate or exclude from the specific method shall be explained in the “Remark” of the above table.

Note 3: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.

1.1. Testing Applied Standards and Methods

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

No.	Standards or Methods	Description
1	47 CFR Part 15 Subpart E	FCC Technical Requirements
2	ANSI C63.10	Procedures for Compliance Testing of Unlicensed Wireless Devices
3	KDB 789033 D02	Guidelines for compliance testing of U-NII devices
4	KDB 987594 D01	General guideline for U-NII 5,6,7,8 bands under Part 15 Subpart E
5	KDB 987594 D02	Guidelines for compliance testing of U-NII 6GHz devices
6	KDB 987594 D03	Questions and Answers for U-NII 5,6,7,8 bands under Part 15 Subpart E
7	KDB 662911 D01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band

1.2. Test Equipment and Software List

1.2.1. List of Software

Name	Manufacturer	Software Version
Morlab EMCR	Morlab	V1.2
TS+ -[JS32-CE]	Tonscend	V2.5.0.0

1.2.2. Conducted Emission Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2024.01.25	2025.01.24
LISN	8127449	NSLK 8127	Schwarzbeck	2024.02.02	2025.02.01
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2024.05.30	2025.05.29
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	2024.07.02	2025.07.01

1.2.3. Radiated Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2024.05.30	2025.05.29
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2024.06.03	2025.06.02
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2024.06.22	2025.06.21
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2024.06.22	2025.06.21
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2024.05.30	2025.05.29
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2024.05.30	2025.05.29
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2024.07.03	2025.07.02
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2024.07.03	2025.07.02
Anechoic Chamber	N/A	9m*6m*6m	CRT	2022.05.10	2025.05.09

1.3. Measurement Uncertainty

Test Items	Uncertainty	Remark
Restricted Frequency Bands	±5%	Confidence levels of 95%
Radiated Emission	±2.95dB	Confidence levels of 95%
Conducted Emission	±2.44dB	Confidence levels of 95%

1.4. Testing Laboratory

Laboratory Name	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone	+86 755 36698555
Facsimile	+86 755 36698525
FCC Designation Number	CN1192
FCC Test Firm Registration Number	226174

2. General Description

2.1. Information of Applicant and Manufacturer

Applicant	Linkplay Technology Inc.
Applicant Address	8000 Jarvis Avenue Suite #130, Newark, CA 94560
Manufacturer	Linkplay Technology Inc.
Manufacturer Address	8000 Jarvis Avenue Suite #130, Newark, CA 94560

2.2. Information of EUT

Product Name	WiiM CI MOD A80 Stereo Streaming Amplifier	
Sample No.	1#	
Hardware Version	A98D V02+Main Board V03	
Software Version	Linkplay.5.2.623957	
Modulation Technology	OFDMA	
Modulation Mode	802.11ax (HEW20), 802.11ax (HEW40), 802.11ax (HEW80)	
U-NII Band	☒U-NII 5 (5925-6425MHz), ☒U-NII 6 (6425-6525MHz), ☒U-NII 7 (6525-6875MHz), ☒U-NII 8 (6875-7125MHz).	
Operating Frequency Range	U-NII 5 (5955-6415MHz), U-NII 6 (6435-6515MHz), U-NII 7 (6535-6855MHz), U-NII 8 (6875-7115MHz).	
Equipment Class	☒Low Power Device	☐6ID ☐6PP ☒6XD ☐6CD
	☐Standard Power Device	☐6SD ☐6FX ☐6FC
Antenna Type	PIFA Antenna	
Antenna Gain (dBi)	ANT1: 3.51dBi; ANT2: 3.51dBi	

Note 1: The test results of all conducted test items please refer to the module FCC test report (Report No.: SZ24040154W05), which issued on Jul. 26, 2024. We only recorded the radiated test result in this report.

Note 2: The EUT has two antennas that cannot transmit simultaneously. Both of the two antennas were evaluated separately, only the worst test result (ANT2) were recorded in the test report.

Note 3: The dedicated software was used to control the EUT continuous transmission.

Note 4: For more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.3. Channel Center Frequency of EUT

2.3.1. Channel center frequency of different bandwidths

Channel Center Frequency = 5950MHz + 5 x n_{ch}; 1 ≤ n_{ch} ≤ 233	
Bandwidth	**Value of n_{ch}**
20MHz	1 + 4(n-1); 1 ≤ n ≤ 59
40MHz	3 + 8(n-1); 1 ≤ n ≤ 29
80MHz	7 + 16(n-1); 1 ≤ n ≤ 14
160MHz	15 + 32(n-1); 1 ≤ n ≤ 7

2.3.2. Center Frequency of Low Middle and High Channel in each U-NII band

Bandwidth	LCH/MCH/HCH	n/n_{ch}/Frequency@MHz			
		U-NII 5	U-NII 6	U-NII 7	U-NII 8
20MHz	LCH	1/1/5955	25/97/6435	30/117/6535	47/185/6875
	MCH	12/45/6175	27/105/6475	38/149/6695	53/209/6995
	HCH	24/93/6415	29/113/6515	46/181/6855	59/233/7115
40MHz	LCH	1/3/5965	13/99/6445	16/123/6565	24/187/6885
	MCH	7/51/6205	-/-/-	19/147/6685	26/203/6965
	HCH	12/91/6405	14/107/6485	23/179/6845	29/227/7085
80MHz	LCH	1/7/5985	-/-/-	9/135/6625	13/199/6945
	MCH	4/55/6225	7/103/6465	10/151/6705	-/-/-
	HCH	6/87/6385	-/-/-	11/167/6785	14/215/7025

2.4. Test Configuration of EUT

2.4.1. Modulation Type and Data Rate of EUT

Mode	Bandwidth (MHz)	Modulation Technology	Modulation Type	Data Rate
802.11ax	20/40/80 (HEW20/40/80)	OFDMA	**BPSK**	**MSC0**~MCS11
			QPSK	
			16QAM	
			64QAM	
			256QAM	
			1024QAM	

2.4.2. Evaluation of The Worst Case

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode
Conducted Emission	Normal Use
Restricted Frequency Bands	ax80 in U-NII 5&8
Radiated Emission	ax20

Note 1: The worst-case mode in all data rates has been determined during the pre-scan, only the test data of the worst-case were recorded in this report.

2.4.3. Operation and Transmitter Power Level Setting

The EUT was tested while in a continues transmitter/receiver mode under the control of tool which is provided by manufacturer, all the items of transmitter were tested under the power setting as below:

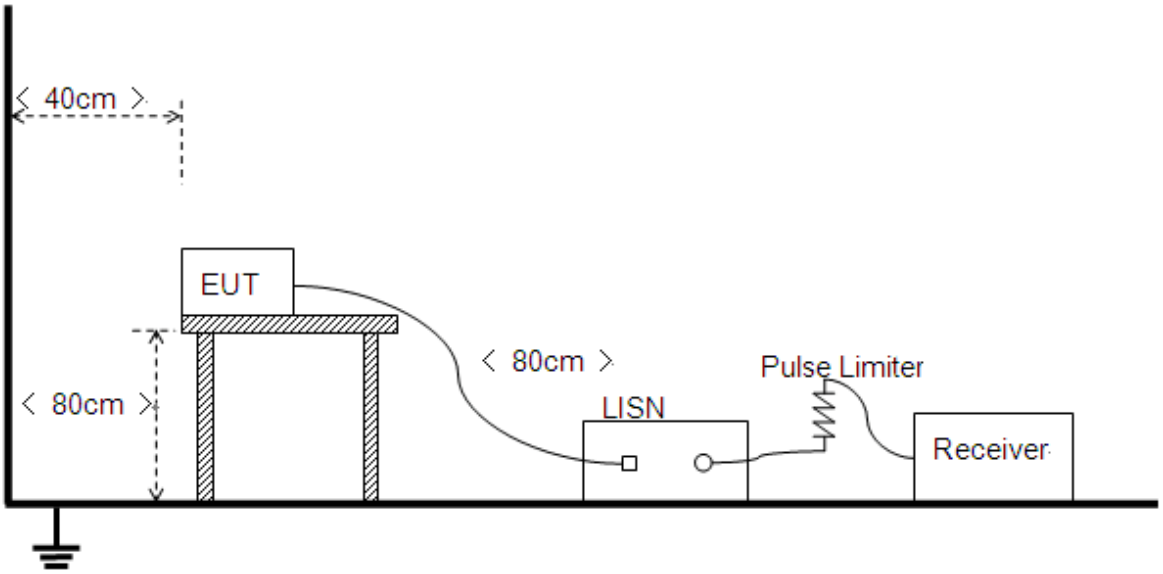
Modulation Technology	Power Setting (U-NII 5/6/7/8)	
	ANT 1	ANT 2
OFDMA (802.11ax (HE20))	9/9/8/6	8/8/8/5
OFDMA (802.11ax (HE40))	10/10/10/6	9/9/9/7
OFDMA (802.11ax (HE80))	13/13/13/12	13/13/13/12

2.5. Test Conditions

Temperature (°C)	15-35
Relative Humidity (%)	30-60
Atmospheric Pressure (kPa)	86-106

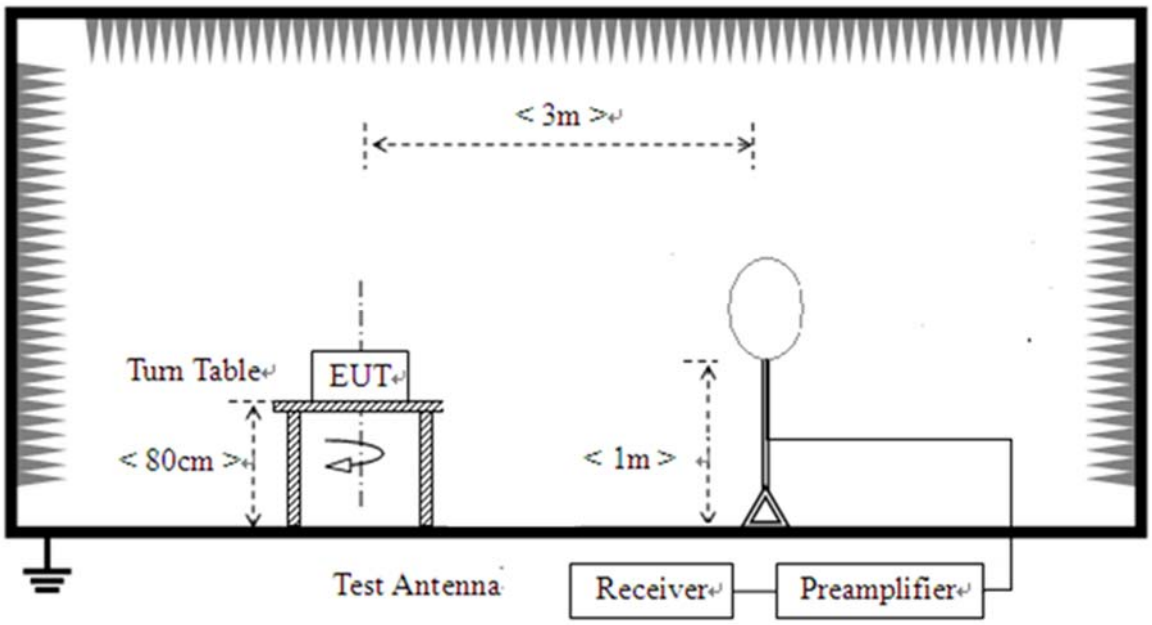
2.6. Test Setup Layout Diagram

2.6.1. Conducted Emission Measurement

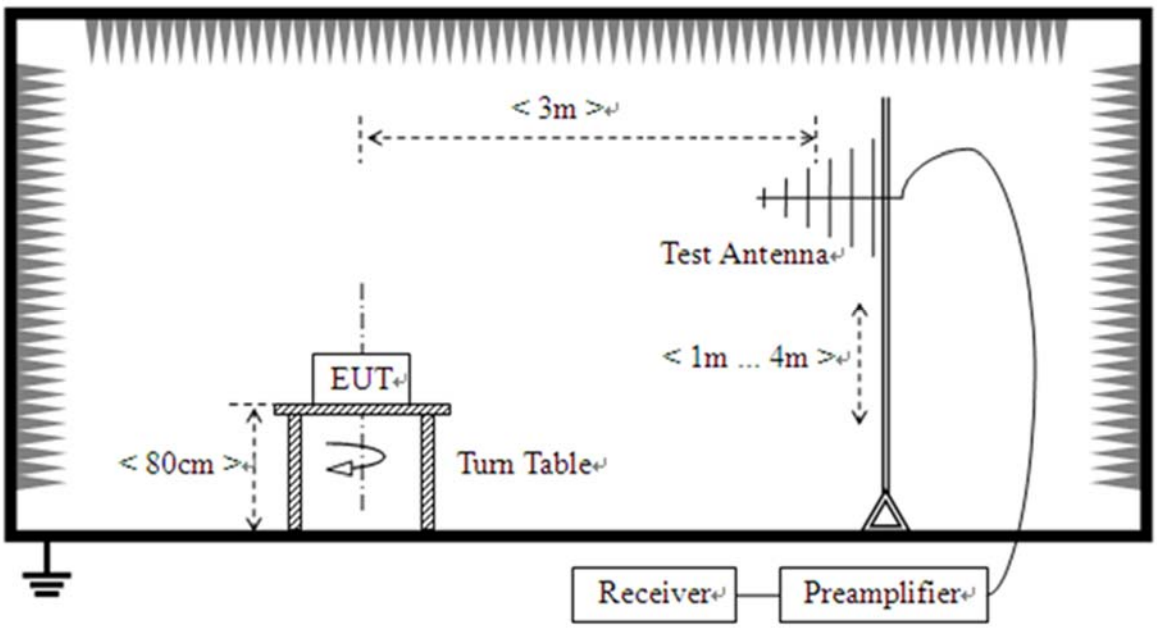


2.6.2. Radiation Measurement

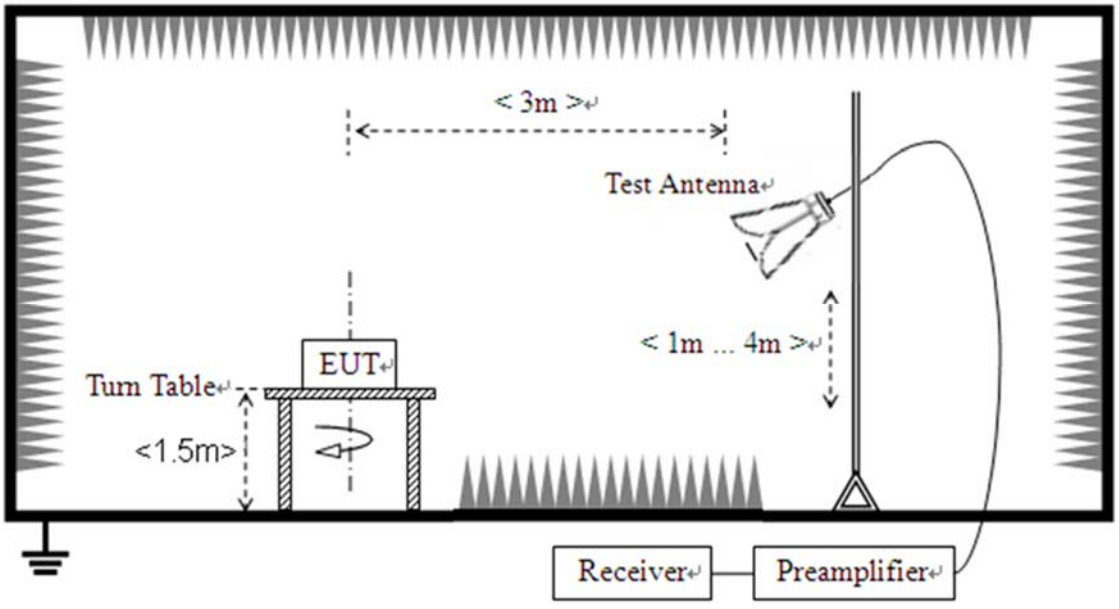
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



3. Description of Test Items and Results

3.1. Conducted Emission

3.1.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

Note:

(a) The lower limit shall apply at the band edges.

(b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

3.1.2. Test Procedures

The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10.

3.1.3. Test Setup Layout

Refer to chapter 2.6.2 in this report.

3.1.4. Test Result

Refer to Annex A.1 in this report.

3.2. Restricted Frequency Bands

3.2.1. Requirement

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), should comply with the radiated emission limits specified in Section 15.209(a) (below table).

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m):

$$E = 1000000 \times \sqrt{30P} / 3 \ \mu V/m$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the above table.

For Above 1000MHz, the emission limit in above is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

3.2.2. Test Procedures

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

KDB 789033 Section H) 3)5)6(d)) was used in order to prove compliance

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

3.2.3. Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.2.4. Test Result

Refer to Annex A.2 in this report.

3.3. Radiated Emission

3.3.1. Requirement

For transmitters operating within the 5.925–7.125 GHz band: Any emissions outside of the 5.925–7.125 GHz band must not exceed an e.i.r.p. of −27 dBm/MHz.

The following formula is used to convert the equipment isotropic radiated power(e.i.r.p.) to field strength (dBμV/m);

$$E = 1000000 \times \sqrt{30P} / 3 \ \mu V/m$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209. According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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

For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

3.3.2. Test Procedures

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz.The antenna to EUT

distance is 3meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 30MHz, the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9kHz-90 kHz, 110kHz-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements or 120kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1GHz the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements and as applicable for average measurements.

The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions. For measurements above 1 GHz, keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.

3.3.3. Test Setup Layout

Refer to chapter 2.6.3 in this report.

3.3.4. Test Result

Refer to Annex A.3 in this report.

Annex A Test Data and Result

A.1. Conducted Emission

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Set RBW=9kHz, VBW=30kHz. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A. Test Setup:

Test Mode: EUT + PC +PC Adapter + WIFI TX

Test voltage: AC 120V/60Hz

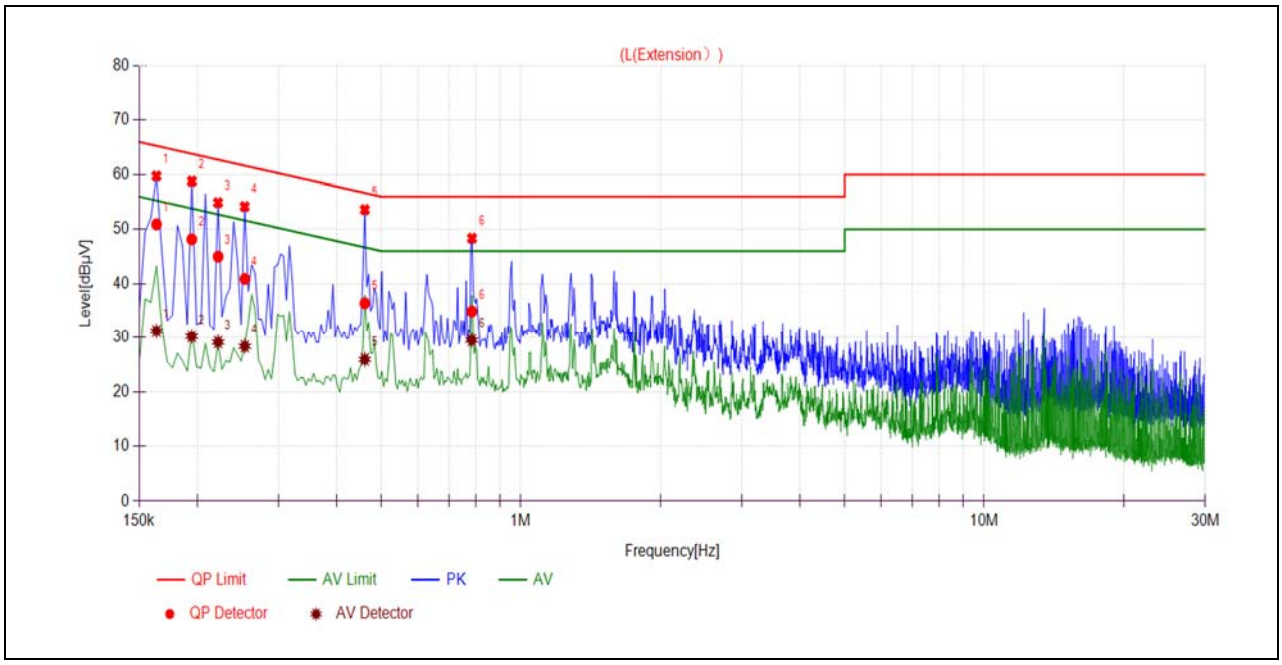
The measurement results are obtained as below:

$E\ [dB\mu V] = U_R + L_{Cable\ loss}\ [dB] + A_{Factor}$

U_R: Receiver Reading

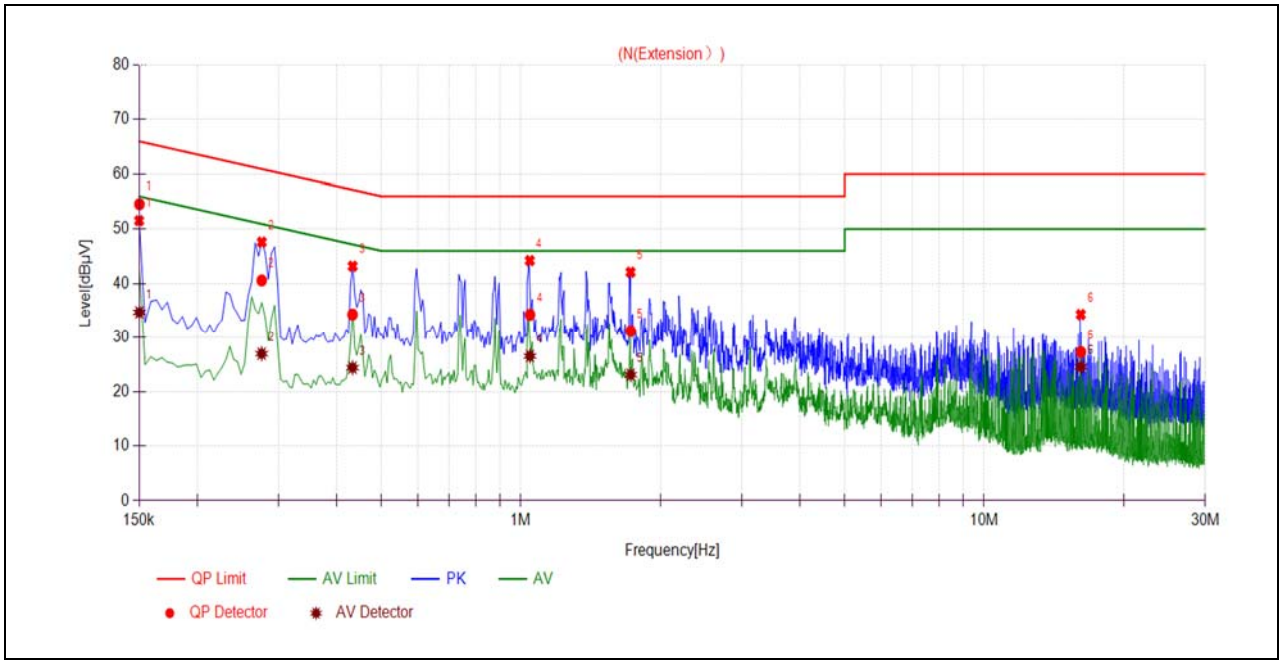
A_{Factor}: Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1635	50.92	31.22	65.28	55.28	Line	PASS
2	0.1948	48.18	30.21	63.83	53.83		PASS
3	0.2221	44.99	29.12	62.74	52.74		PASS
4	0.2536	40.89	28.35	61.64	51.64		PASS
5	0.4604	36.40	25.93	56.68	46.68		PASS
6	0.7838	34.88	29.48	56.00	46.00		PASS



(N Phase)

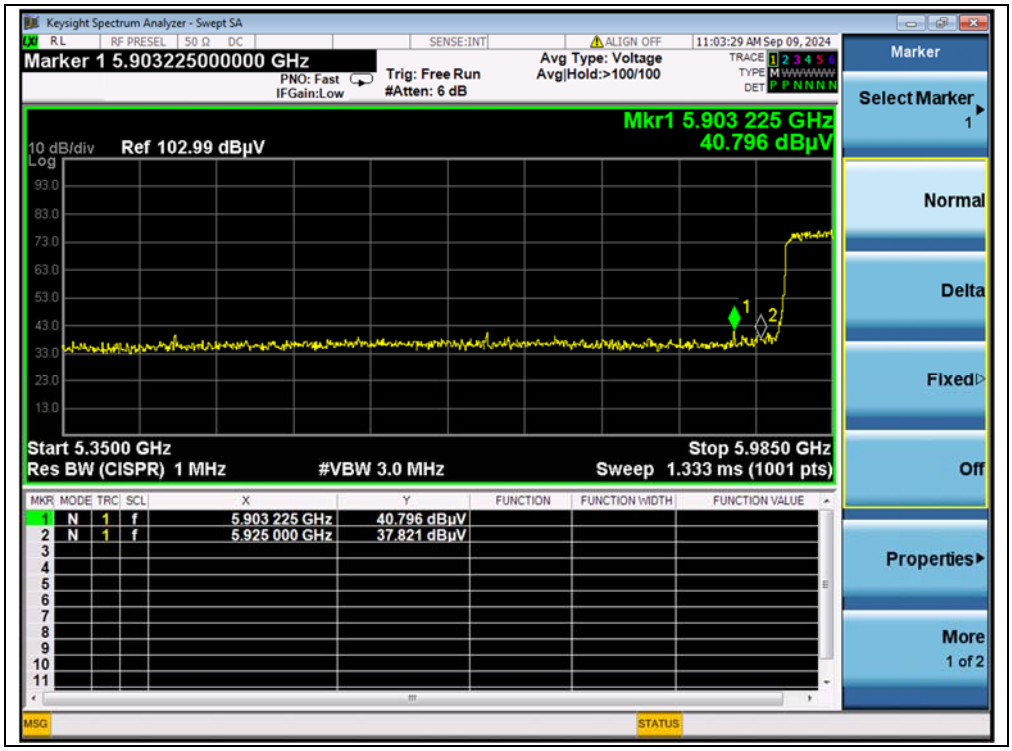
No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1502	54.57	34.71	65.99	55.99	Neutral	PASS
2	0.2758	40.58	26.97	60.94	50.94		PASS
3	0.4332	34.32	24.38	57.19	47.19		PASS
4	1.0463	34.27	26.54	56.00	46.00		PASS
5	1.7261	31.22	23.07	56.00	46.00		PASS
6	16.1701	27.28	24.54	60.00	50.00		PASS

A.2. Restricted Frequency Bands

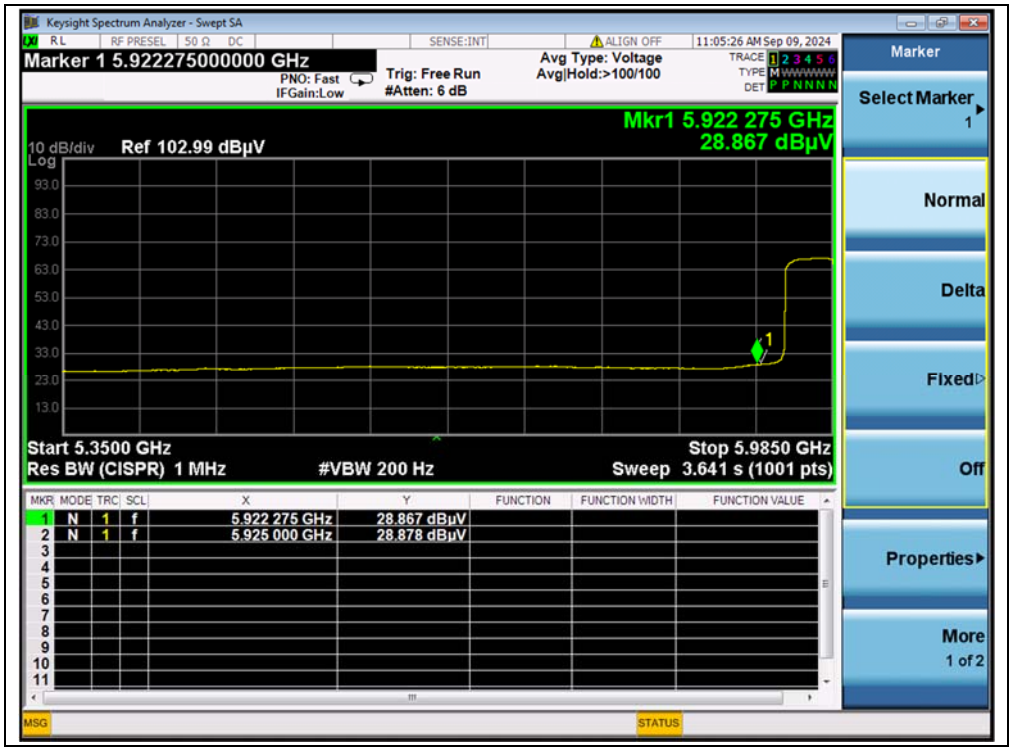
The lowest and highest channels are tested to verify the Restricted Frequency Bands.
The measurement results are obtained as below:
E [dBμV/m] =U_R + A_T + A_{Factor} [dB]; A_T =$L_{Cable\ loss}$ [dB]-G_{preamp} [dB]
A_T: Total correction Factor except Antenna
U_R: Receiver Reading
G_{preamp}: Preamplifier Gain
A_{Factor}: Antenna Factor at 3m
Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (horizontal) was recorded in this test report.
Note 2: Restricted Frequency Bands were performed in X, Y, Z axis direction, and only the worst axis (X axis) test condition was recorded in this test report.
Note 3: All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded.

802.11ax80 Mode

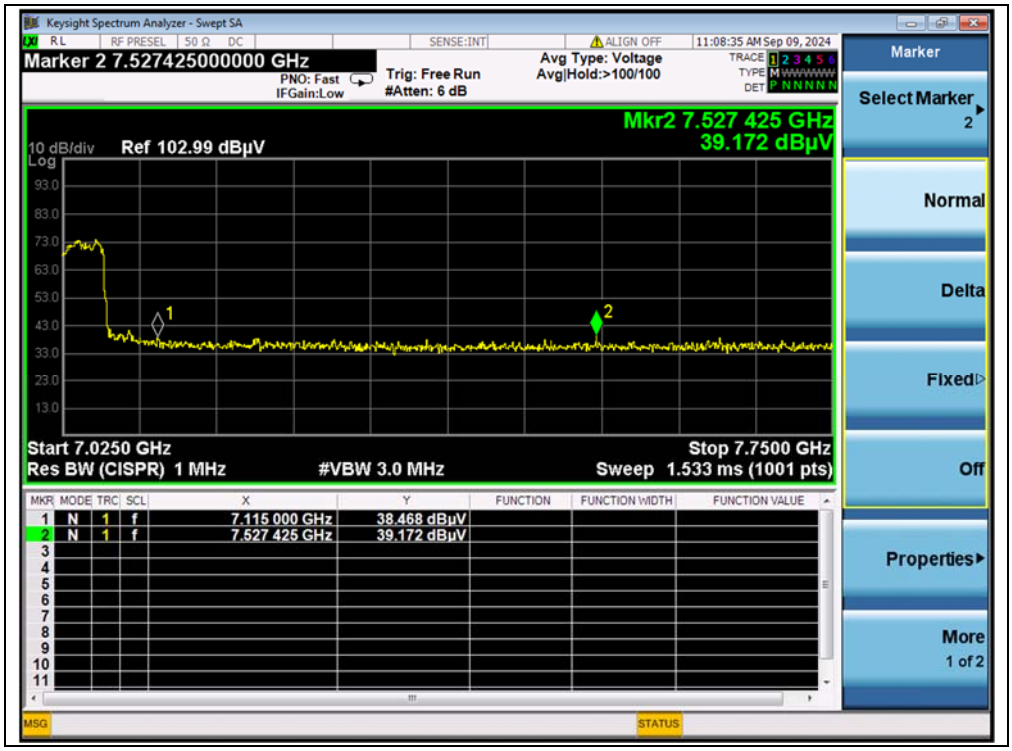
Ch.	Frequency (MHz)	Detector	Receiver Reading U_R (dBμV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
7	5903.23	PK	40.80	-12.88	32.20	60.12	88.63	PASS
7	5925.00	AV	28.88	-12.88	32.20	48.20	68.26	PASS
215	7527.43	PK	39.17	-11.43	32.20	59.94	88.63	PASS
215	7115.00	AV	27.47	-11.43	32.20	48.24	68.26	PASS



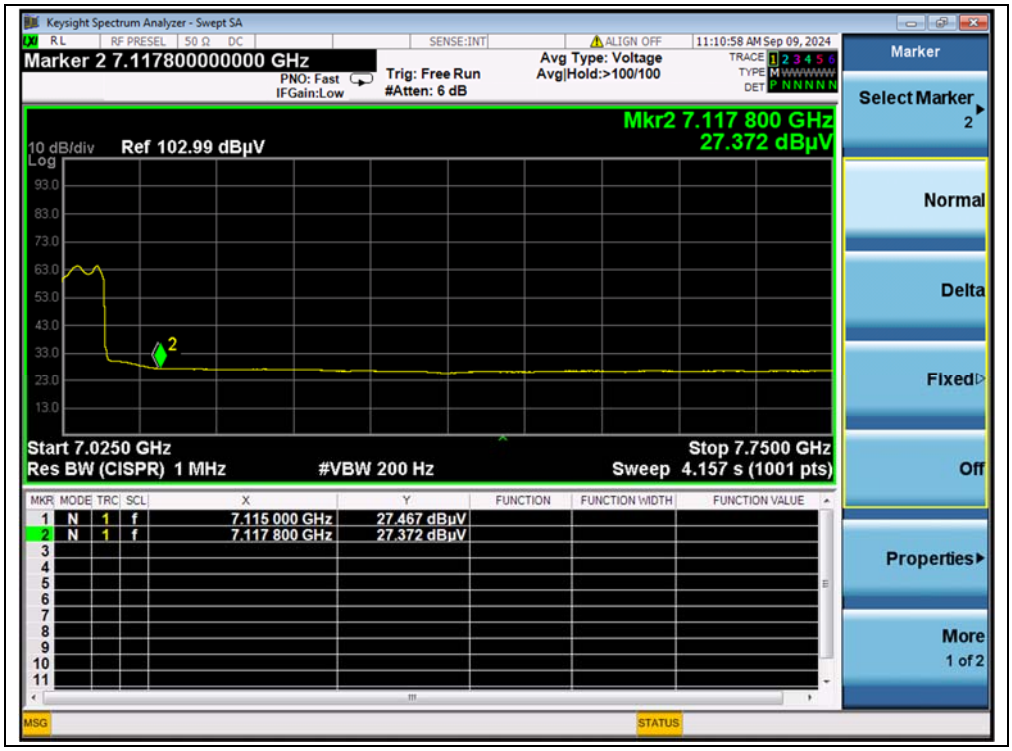
(PEAK, Channel 7, 802.11ax80)



(AVERAGE, Channel 7, 802.11ax80)



(PEAK, Channel 215, 802.11ax160)



(AVERAGE, Channel 215, 802.11ax80)

A.3. Radiated Emission

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak (or average) limit, it is unnecessary to perform a quasi-peak measurement (or average).

The measurement results are obtained as below:

$E\ [dB\mu V/m] = U_R + A_T + A_{Factor}\ [dB]$; $A_T = L_{Cable\ loss}\ [dB] - G_{preamp}\ [dB]$

A_T: Total correction Factor except Antenna

U_R: Receiver Reading

G_{preamp}: Preamplifier Gain

A_{Factor}: Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

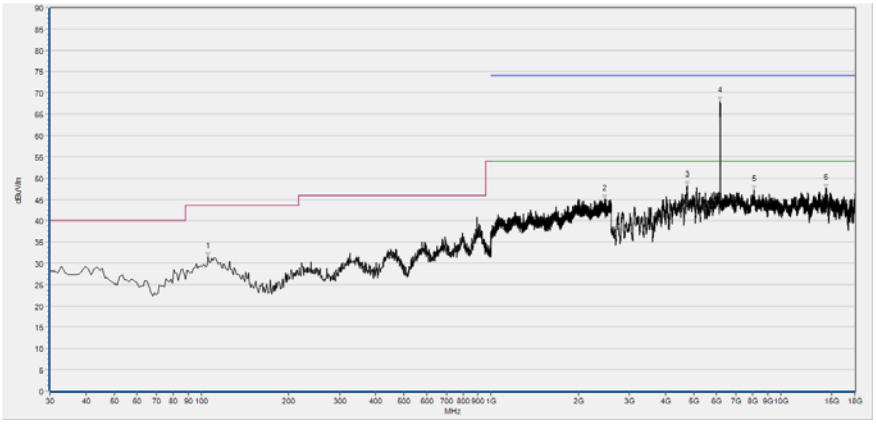
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note3: For the frequency, which started from 18GHz to 40GHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

Note 4: All test modes, bandwidth and channel were considered and evaluated respectively by performing full test, only the worst data were recorded.

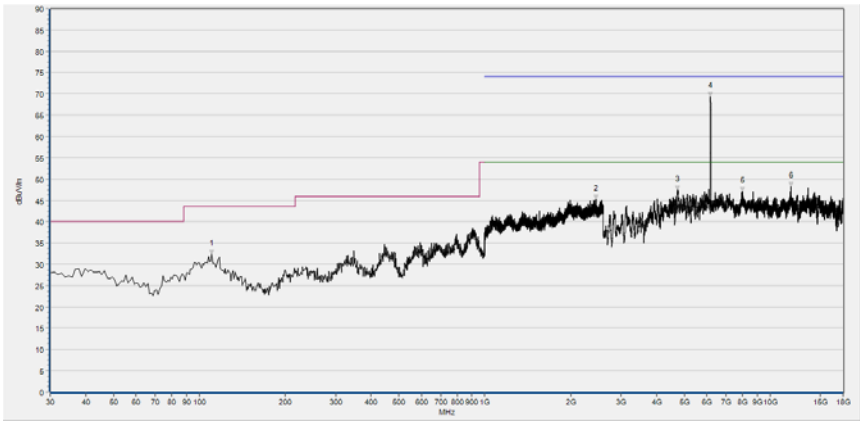
802.11ax20 Mode

Plot for Channel 45



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
105.660	31.58	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2459.733	45.09	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
4749.840	48.20	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
6172.800	68.06	N/A	N/A	N/A	N/A	N/A	Horizontal	N/A
8063.920	47.19	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
14270.120	47.62	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS

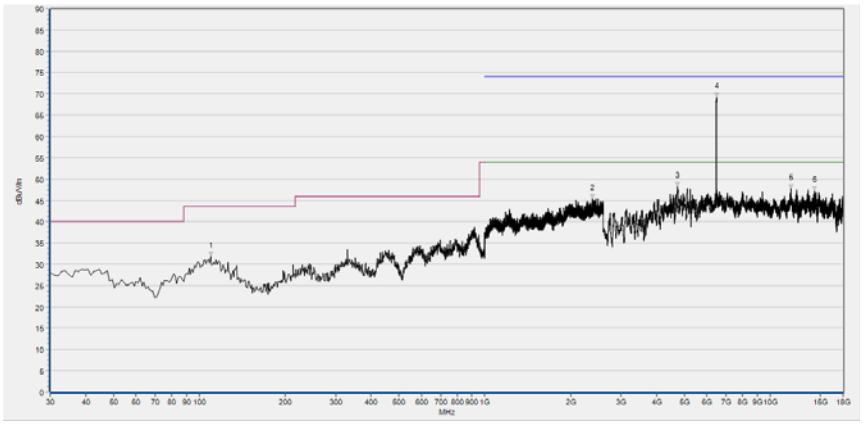
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
110.510	32.31	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2445.867	45.27	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
4737.520	47.45	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
6169.720	69.46	N/A	N/A	N/A	N/A	N/A	Vertical	N/A
7986.920	47.05	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
11790.720	48.22	N/A	N/A	88.23	N/A	68.23	Vertical	PASS

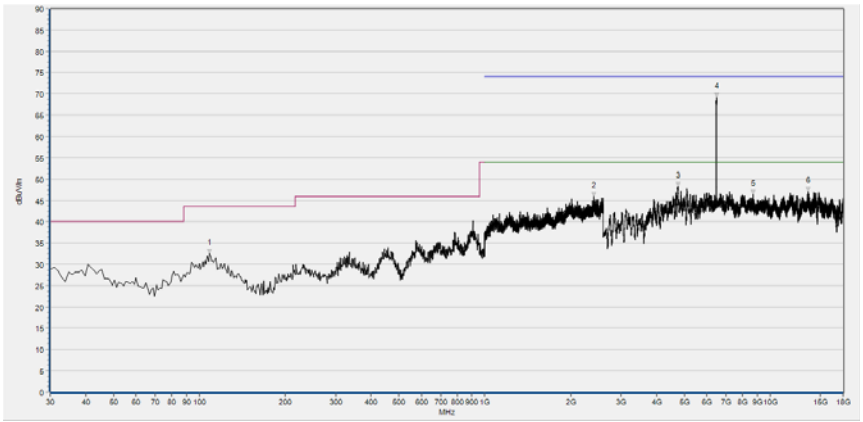
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 105



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
109.540	31.83	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2382.400	45.34	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
4740.600	48.35	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
6480.800	69.23	N/A	N/A	N/A	N/A	N/A	Horizontal	N/A
11793.800	47.69	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
14260.880	47.30	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS

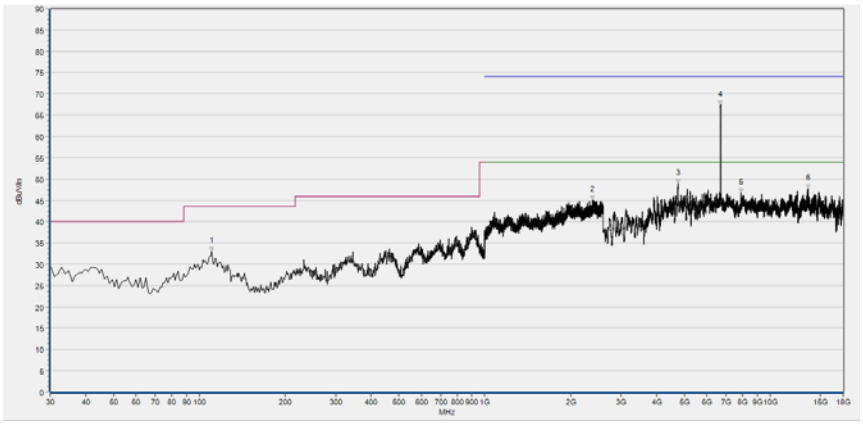
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
108.570	32.58	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2413.333	45.86	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
4749.840	48.19	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
6483.880	69.17	N/A	N/A	N/A	N/A	N/A	Vertical	N/A
8701.480	46.41	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
13577.120	47.16	N/A	N/A	88.23	N/A	68.23	Vertical	PASS

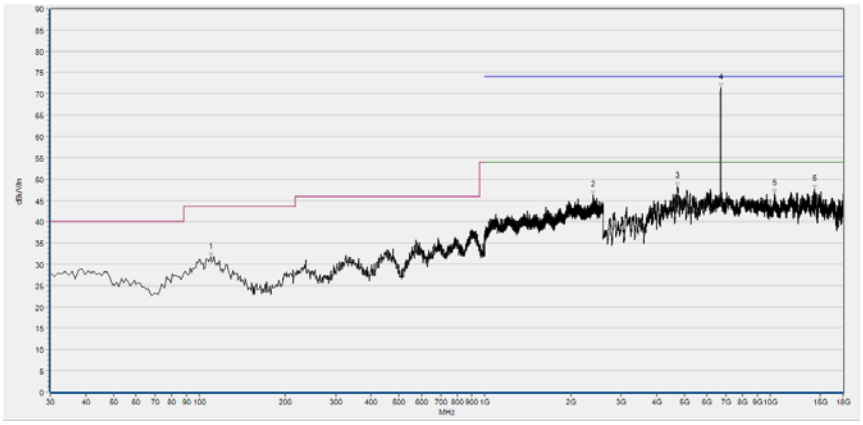
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 149



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
110.510	32.99	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2386.667	45.12	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
4743.680	48.99	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
6696.400	67.45	N/A	N/A	N/A	N/A	N/A	Horizontal	N/A
7906.840	46.82	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
13570.960	47.68	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS

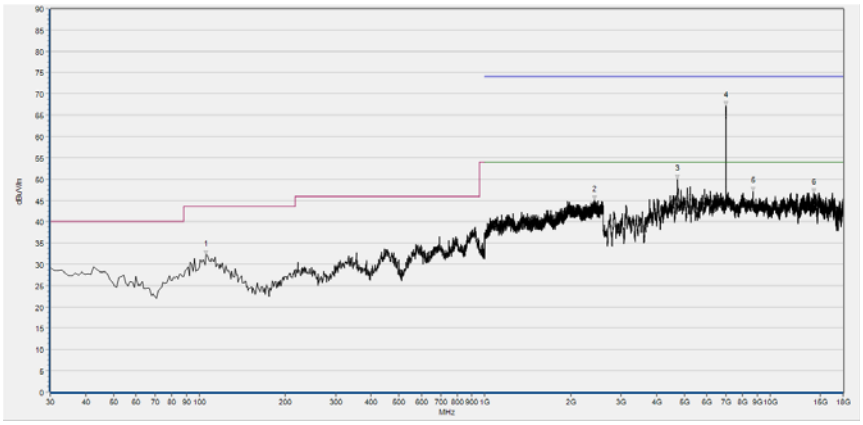
(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
109.540	31.61	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2401.067	46.18	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
4737.520	48.27	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
6699.480	71.40	N/A	N/A	N/A	N/A	N/A	Vertical	N/A
10377.000	46.58	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
14267.040	47.65	N/A	N/A	88.23	N/A	68.23	Vertical	PASS

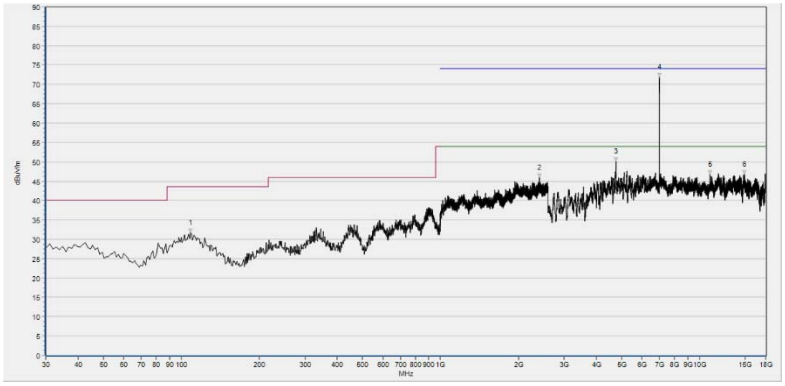
(Antenna Vertical, 30MHz to 18GHz)

Plot for Channel 209



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
105.660	32.13	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
2417.600	45.05	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
4740.600	49.90	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
6992.080	67.14	N/A	N/A	N/A	N/A	N/A	Horizontal	N/A
8683.000	47.12	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS
14186.960	46.76	N/A	N/A	88.23	N/A	68.23	Horizontal	PASS

(Antenna Horizontal, 30MHz to 18GHz)



Fre. (MHz)	PK (dBμV/m)	QP (dBμV/m)	AV (dBμV/m)	Limit-PK (dBμV/m)	Limit-QP (dBμV/m)	Limit-AV (dBμV/m)	Antenna	Verdict
108.570	31.60	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
2407.467	45.91	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
4746.760	50.17	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
6985.920	71.94	N/A	N/A	N/A	N/A	N/A	Vertical	N/A
10993.000	46.71	N/A	N/A	88.23	N/A	68.23	Vertical	PASS
14852.240	46.71	N/A	N/A	88.23	N/A	68.23	Vertical	PASS

(Antenna Vertical, 30MHz to 18GHz)

END OF REPORT