



REPORT No.: SZ26060446W04

TEST REPORT

APPLICANT : FJ Dynamics Co.,Ltd.

PRODUCT NAME : Scanner

MODEL NAME : FJDX3201

BRAND NAME :  FJDTrion

FCC ID : 2A2LL-FJDX1

STANDARD(S) : 47 CFR Part 15 Subpart E

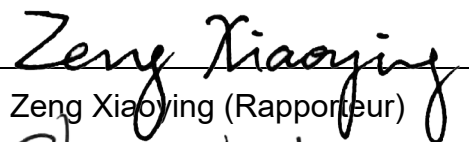
RECEIPT DATE : 2026-07-15

TEST DATE : 2026-08-27 to 2026-09-12

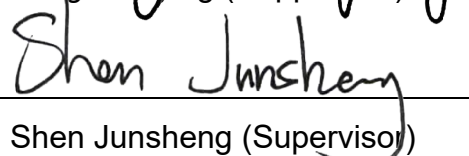
ISSUE DATE : 2026-09-24



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Change History		
Version	Date	Reason for change
1.0	2026-09-24	First edition



1. Summary of Test Result

No.	Section	Description	Test Date	Test Engineer	Result	Remark
1	15.203	Antenna Requirement	N/A	N/A	PASS	/
2	15.407(b)	Restricted Frequency Bands	Sep. 12, 2026	Tian Xin	PASS	/
3	15.407(b)	Radiated Emission	Sep. 12, 2026	Tian Xin	PASS	/
4	15.207	Conducted Emission	Sep. 12, 2026	Wang Yapeng	PASS	/

Note 1: The test results of all conducted test items please refer to the module FCC test report (Report No.: FR412214AB / FR412214), which issued on Sep. 19, 2024 by Sporton International Inc. Hsinchu Laboratory.

Note 1: The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10-2020.

Note 2: These RF tests were performed according to the method of measurements prescribed in KDB 789033 D02 v02r01.

Note 3: These RF tests were performed according to the method of measurements prescribed in KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02.

Note 4: Any additions, deviation, or exclusions from the method shall be noted in the "Remark".

1.1. Testing Applied Standards

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

- 47 CFR Part 15 Subpart E Radio Frequency Devices



1.2. Test Equipment List

1.2.1 List of Software Used

Description	Manufacturer	Software Version
JS32-RE	Tonscend	5.0.0

1.2.2 Radiated Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Signal Analyzer	MY56060145	N9020A	Agilent	2026.04.28	2027.04.27
Test Antenna - Bi-Log	9163-274	VULB 9163	Schwarzbeck	2026.06.27	2027.06.26
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2026.05.09	2027.05.08
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2026.05.30	2027.05.29
Test Antenna – Horn	BBHA9170 #773	BBHA9170	Schwarzbeck	2026.05.30	2027.05.29
Preamplifier (10MHz-6GHz)	46732	S10M100L38 02	LUCIX CORP.	2026.05.07	2027.05.06
Preamplifier (2GHz-18GHz)	61171/61172	S020180L32 03	LUCIX CORP.	2026.05.07	2027.05.06
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2026.05.07	2027.05.06
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2026.08.19	2027.08.18
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2026.08.19	2027.08.18
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2026.08.19	2027.08.18
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2026.08.20	2027.08.19
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2026.08.20	2027.08.19
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2026.08.20	2027.08.19
Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.06.21	2028.06.20



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Anechoic Chamber	N/A	9m*6m*6m	CRT	2025.04.19	2028.04.18
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1.2.3 Conducted Emission Test Equipment

Equipment	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	101052	ESPI	R&S	2026.05.07	2027.05.06
LISN	103131	ENV 216	R&S	2026.03.18	2027.03.17
RF Coaxial Cable (DC-100MHz)	BNC	MRE04	Qualwave	2026.05.06	2027.05.05



1.3. Measurement Uncertainty

Test Items	Uncertainty	Remark
Peak Output Power	$\pm 2.22\text{dB}$	Confidence levels of 95%
Power Spectral Density	$\pm 2.22\text{dB}$	Confidence levels of 95%
Bandwidth	$\pm 5\%$	Confidence levels of 95%
Restricted Frequency Bands	$\pm 5\%$	Confidence levels of 95%
Radiated Emission	$\pm 2.95\text{dB}$	Confidence levels of 95%
Conducted Emission	$\pm 2.44\text{dB}$	Confidence levels of 95%

1.4. Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.1-3, 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:	FJ Dynamics Co.,Ltd.
Applicant Address:	Floor 21, Das Tower, No. 28, 1st South Keji Road, High-tech Zone, Yuehai Subdistrict, Nanshan District, Shenzhen, China
Manufacturer:	FJ Dynamics Co.,Ltd.
Manufacturer Address:	Floor 21, Das Tower, No. 28, 1st South Keji Road, High-tech Zone, Yuehai Subdistrict, Nanshan District, Shenzhen, China

2.2. Information of EUT

Product Name:	Scanner
Sample No.:	1#
Hardware Version:	V1.0
Software Version:	V1.0
Modulation Technology:	OFDM, OFDMA
Modulation Mode:	802.11a, 802.11n (HT20), 802.11n (HT40) 802.11ac (VHT20), 802.11ac (VHT40), 802.11ac (VHT80) 802.11ax (HEW20), 802.11ax (HEW40), 802.11ax (HEW80)
Operating Frequency Range:	5180MHz-5240MHz; 5260MHz-5320MHz; 5500MHz-5720MHz
DFS Function:	☒ Slave without radar detection ☐ Slave with radar detection ☐ Master
TPC Function:	☐ With TPC ☒ Without TPC
Antenna Type:	FPC Antenna
Antenna Gain:	ANT1: 3.59dBi ANT2: 3.59dBi

Note 1: The test results of all conducted test items please refer to the module FCC test report (Report No.: FR412214AB / FR412214), which issued on Sep. 19, 2024 by Sporton International Inc. Hsinchu Laboratory. We only recorded the radiated test result in this report.

Note 2: All radiation test items for 802.11n, 802.11ac and 802.11ax modulation mode operate at MIMO mode during the test. Other modulation modes operate at SISO mode, both of the two antennas were tested separately, we only recorded the worst test result (ANT 1) in this report.

Note 3: The EUT description presented in the report are provided by applicant and/or manufacturer,



and the test laboratory is not responsible for the accuracy of the information. For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.3.Channel List of EUT

(U-NII-1) 5180MHz-5240MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	36	5180	40	5200
	44	5220	48	5240
40MHz	38	5190	46	5230
80MHz	42	5210		
(U-NII-2A) 5260MHz-5320MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	52	5260	56	5280
	60	5300	64	5320
40MHz	54	5270	62	5310
80MHz	58	5290		
(U-NII-2C) 5500MHz-5720MHz				
Bandwidth	Channel	Frequency (MHz)	Channel	Frequency (MHz)
20MHz	100	5500	104	5520
	108	5540	112	5560
	116	5580	120	5600
	124	5620	128	5640
	132	5660	136	5680
	140	5700	144	5720
40MHz	102	5510	110	5550
	118	5590	126	5630
	134	5670	141	5710
80MHz	106	5530	122	5610
	138	5690		

Note 1: The black bold channels were selected for test.

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
802.11a	20	OFDM	BPSK	6/9/12/18/24/36/48/54Mbps
			QPSK	
			16QAM	
			64QAM	
802.11n	20/40 (HT20/40)	OFDM	BPSK	MCS0~MCS7
			QPSK	
			16QAM	
			64QAM	
802.11ac	20/40/80 (VHT20/40/80)	OFDM	BPSK	MCS0~MCS9
			QPSK	
			16QAM	
			64QAM	
			256QAM	
802.11ax	20/40/80 (HEW20/40/80)	OFDM/ OFDMA	BPSK	MCS0~MCS11
			QPSK	
			16QAM	
			64QAM	
			256QAM	
			1024QAM	

Note1: The worst-case mode (bold face) in all data rates has been determined during the pre-scan, only the test data of the worst-case were recorded in this report.

Note2: The RF signal transmission of EUT is controlled by the build-in engineering mode which is provided by the manufacturer. The recorded power setting value is the maximum that the engineering mode has configuration during testing.

Note3: The RU allocation of 802.11ax mode, only full ru is supported.

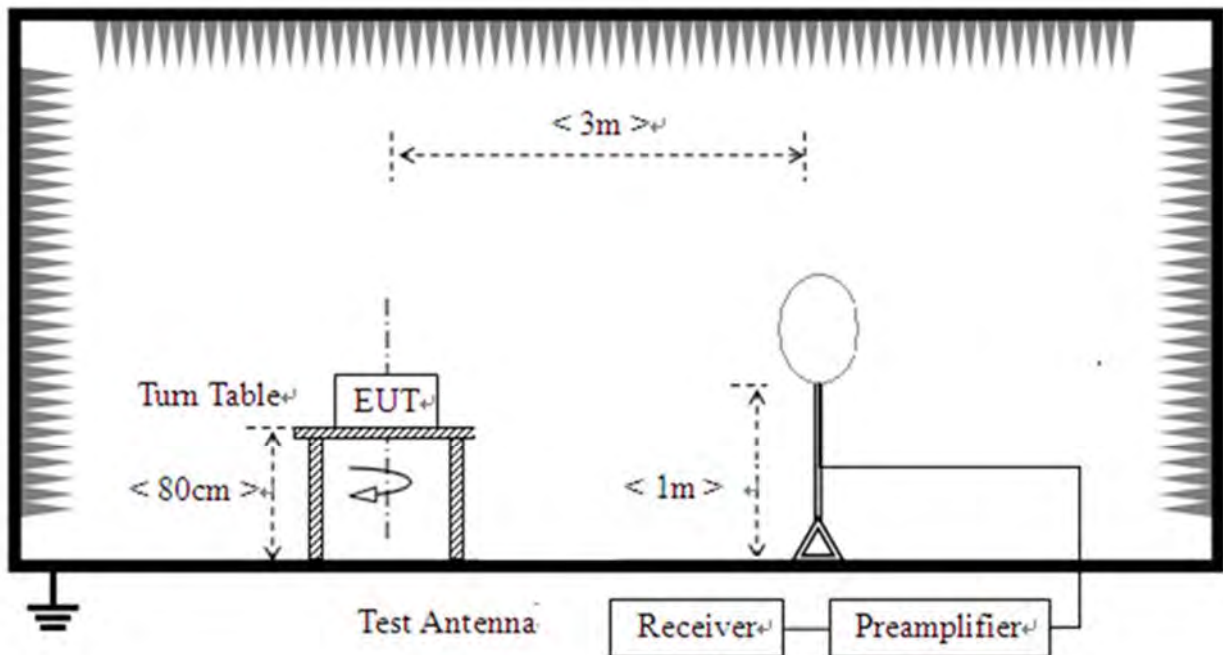
2.5. Test Conditions

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

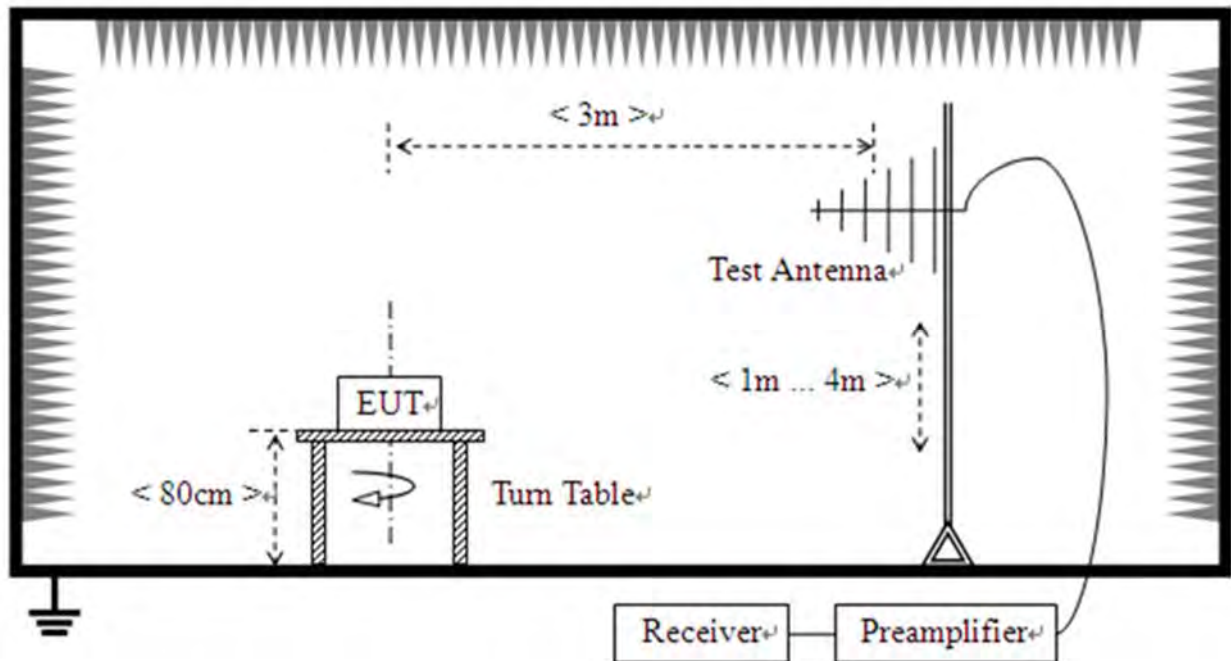
2.6. Test Setup Layout Diagram

2.6.1. Radiation Measurement

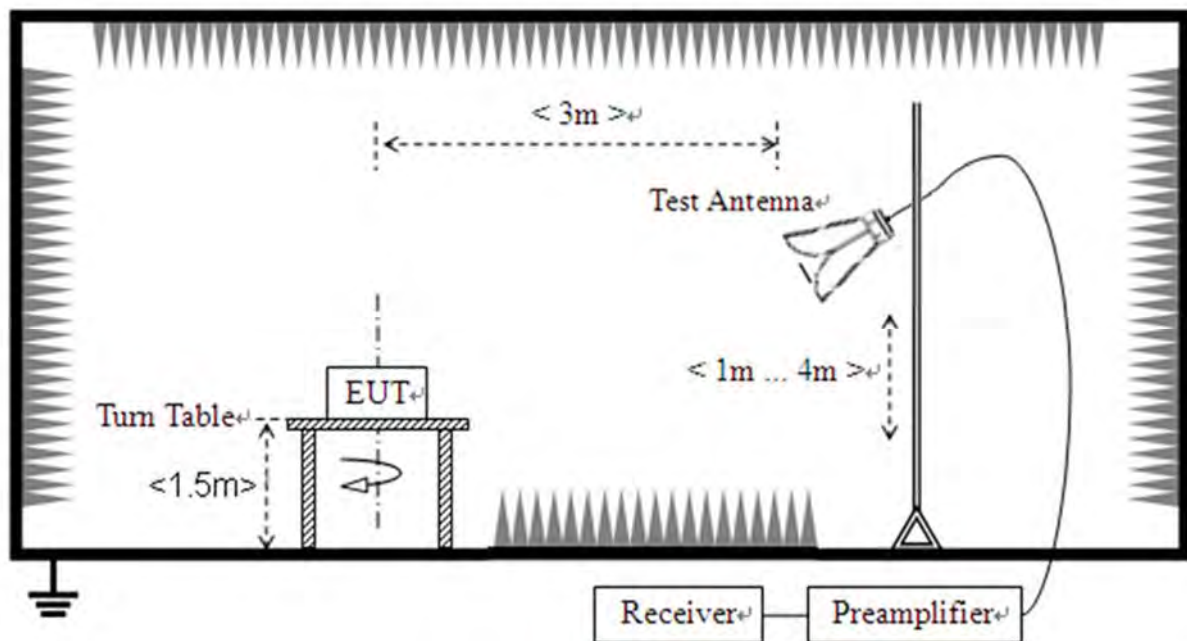
- 1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz





3. Test Results

3.1. Antenna Requirement

3.1.1. Requirement

According to FCC 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.1.2. Test Result

Antenna location	Antenna Type	Coupling Method
☒ Internal ☐ External	☒ FPC Antenna ☐ Spring Antenna ☐ Ceramic Antenna ☐ Integrated Antenna ☐ Dipole Antenna ☐ PCB Antenna ☐ PIFA Antenna ☐ Dipole Antenna	☒ I-PEX Connector ☐ SMA Connector ☐ RP-SMA Connector ☐ Metal Shrapnel ☐ Layout

3.2. Restricted Frequency Bands

3.2.1. Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
 - (i) 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.

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

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

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 ($\mu\text{V/m}$)	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.

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

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.1 in this report.

3.3. Radiated Emission

3.3.1. Requirement

The peak emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15–5.25 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (2) For transmitters operating in the 5.25–5.35 GHz band: all emissions outside of the 5.15–5.35 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (3) For transmitters operating in the 5.47–5.725 GHz band: all emissions outside of the 5.47–5.725 GHz band shall not exceed an EIRP of -27dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall 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);

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

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

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.2 in this report.

3.4. Conducted Emission

3.4.1. 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 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency Range (MHz)	Conducted Limit (dB μ V)	
	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.

3.4.2. 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.

Test Setup Layout

Refer to chapter 2.6.2 in this report.

3.4.3. Test Result

Refer to Annex A.3 in this report.

Annex A Test Data and Result

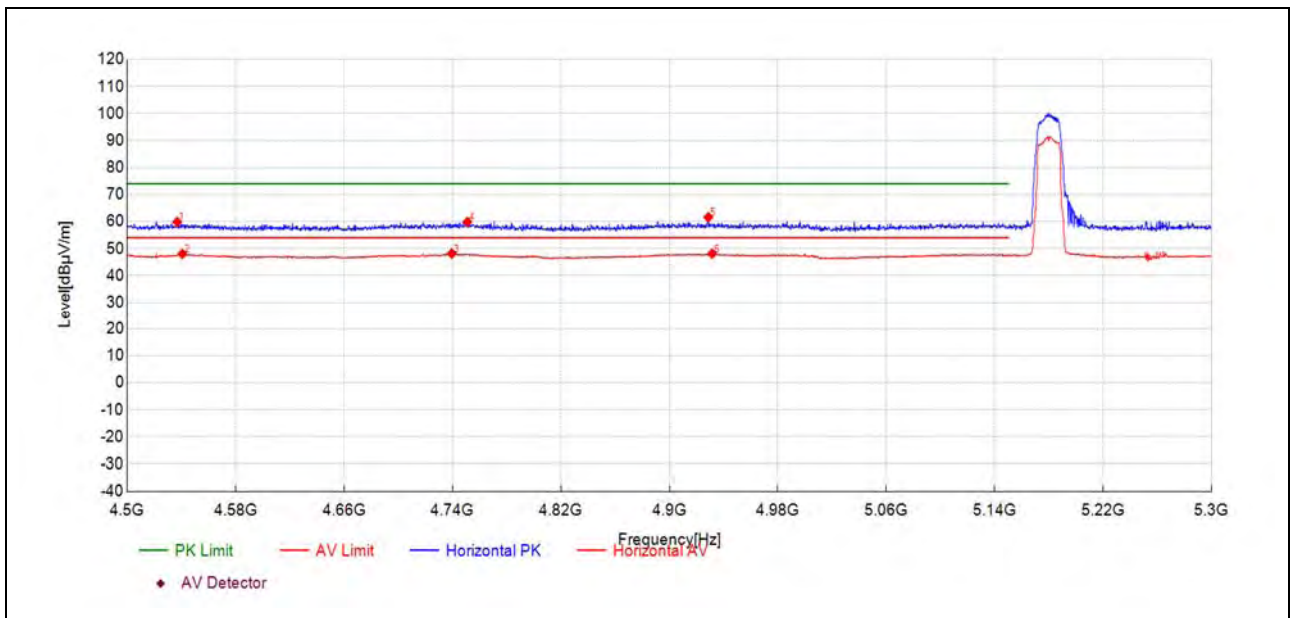
A.1. Restricted Frequency Bands

Note 1: Restricted Frequency Bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition was recorded in this test report.

Note 2 All test modes and bandwidth were considered and evaluated respectively by performing full test, only the worst data were recorded for each bandwidth.

802.11a Mode

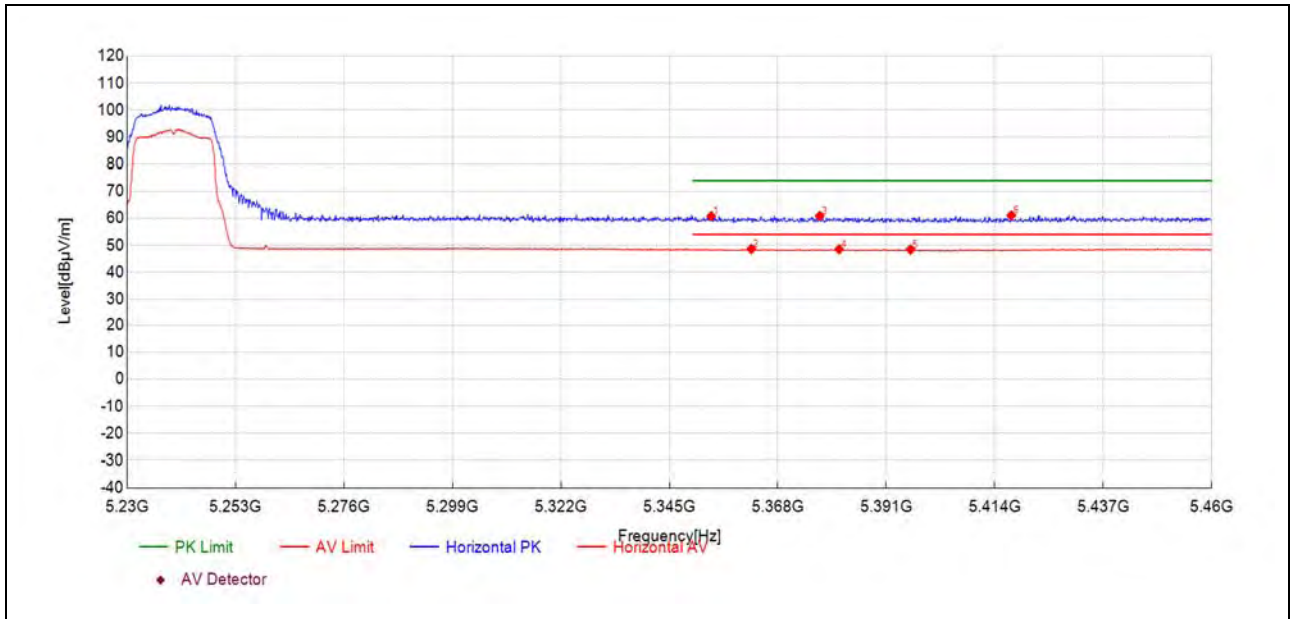
Plot for Channel 36



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4537.00	40.1	59.85	19.780	74.00	14.15	111	PK	Horizontal	PASS
4540.75	28.3	48.03	19.780	54.00	5.97	90	AV	Horizontal	PASS
4739.50	27.8	48.16	20.320	54.00	5.84	24	AV	Horizontal	PASS
4751.00	39.6	59.85	20.300	74.00	14.15	67	PK	Horizontal	PASS
4928.75	41.5	61.55	20.010	74.00	12.45	230	PK	Horizontal	PASS
4931.50	28.1	48.11	19.990	54.00	5.89	0	AV	Horizontal	PASS



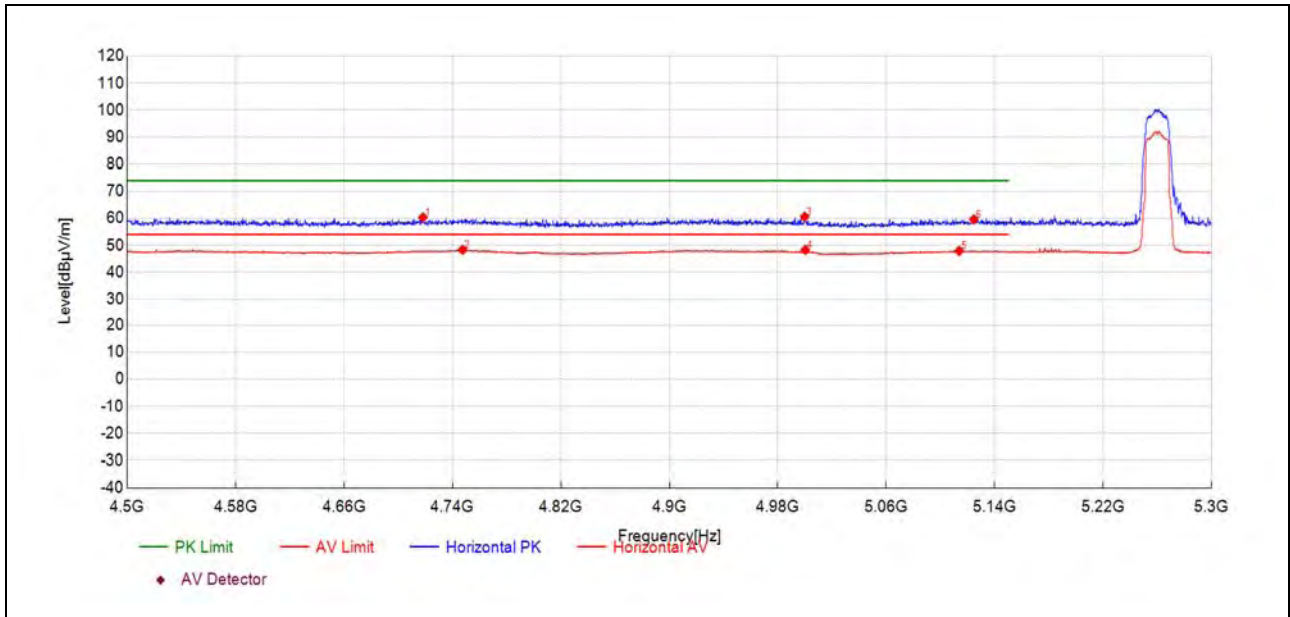
Plot for Channel 48



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5353.88	40.9	60.83	19.930	74.00	13.17	354	PK	Horizontal	PASS
5362.38	28.7	48.63	19.920	54.00	5.37	213	AV	Horizontal	PASS
5376.88	41.0	60.84	19.880	74.00	13.16	360	PK	Horizontal	PASS
5381.00	28.7	48.53	19.870	54.00	5.47	324	AV	Horizontal	PASS
5396.13	28.6	48.39	19.840	54.00	5.61	360	AV	Horizontal	PASS
5417.50	41.0	61.07	20.050	74.00	12.93	41	PK	Horizontal	PASS

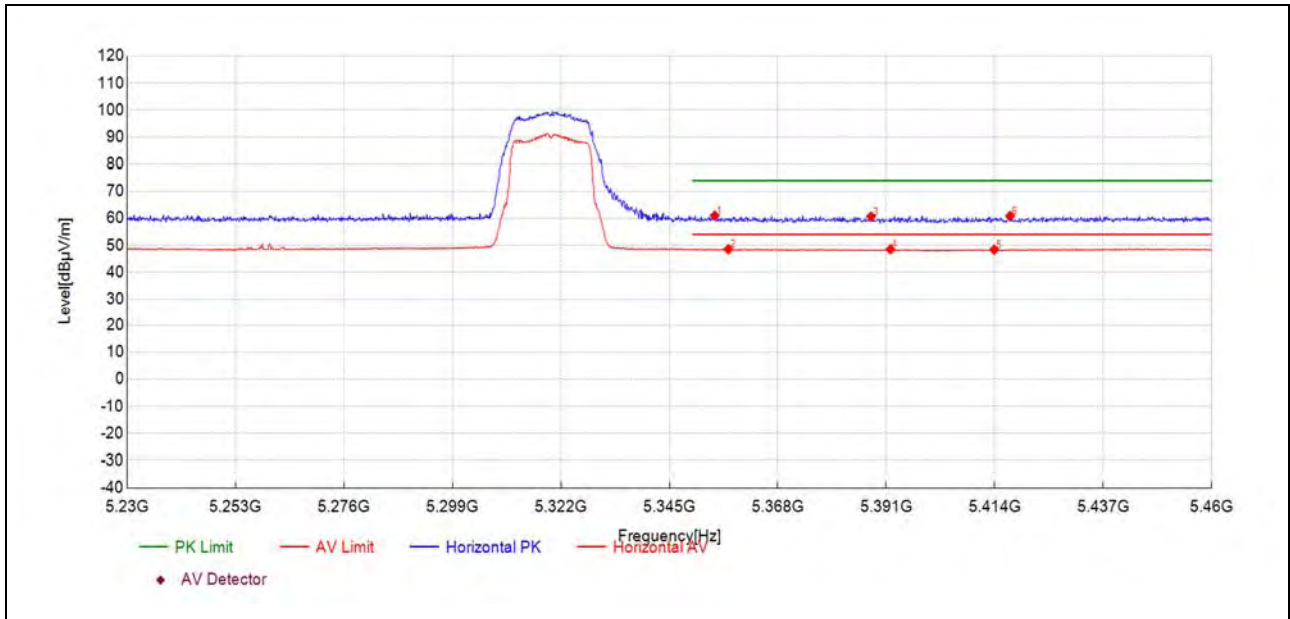


Plot for Channel 52



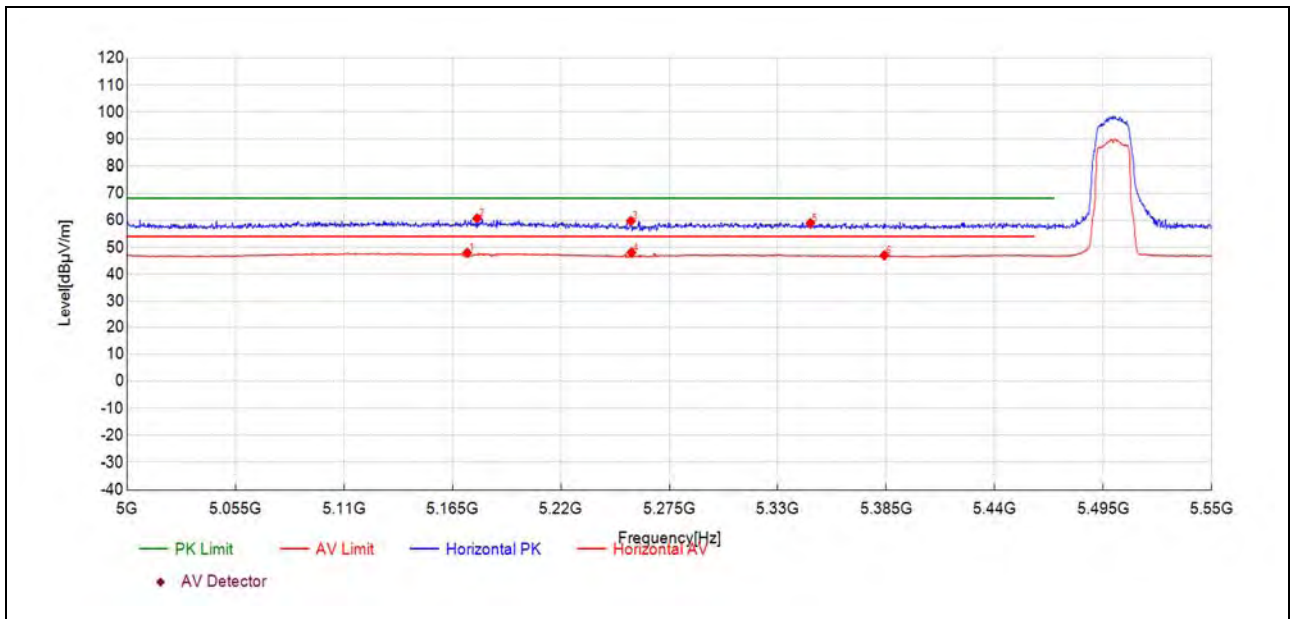
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4718.25	40.1	60.37	20.300	74.00	13.63	10	PK	Horizontal	PASS
4747.50	28.0	48.32	20.320	54.00	5.68	349	AV	Horizontal	PASS
4999.75	40.7	60.61	19.880	74.00	13.39	252	PK	Horizontal	PASS
5000.25	28.5	48.33	19.880	54.00	5.67	356	AV	Horizontal	PASS
5113.75	27.5	47.92	20.460	54.00	6.08	0	AV	Horizontal	PASS
5124.50	39.2	59.58	20.420	74.00	14.42	0	PK	Horizontal	PASS

Plot for Channel 64



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5354.63	41.0	60.97	19.930	74.00	13.03	322	PK	Horizontal	PASS
5357.50	28.6	48.51	19.930	54.00	5.49	351	AV	Horizontal	PASS
5387.75	40.8	60.66	19.850	74.00	13.34	219	PK	Horizontal	PASS
5391.88	28.7	48.51	19.850	54.00	5.49	230	AV	Horizontal	PASS
5413.88	28.3	48.35	20.010	54.00	5.65	280	AV	Horizontal	PASS
5417.25	40.8	60.86	20.050	74.00	13.14	189	PK	Horizontal	PASS

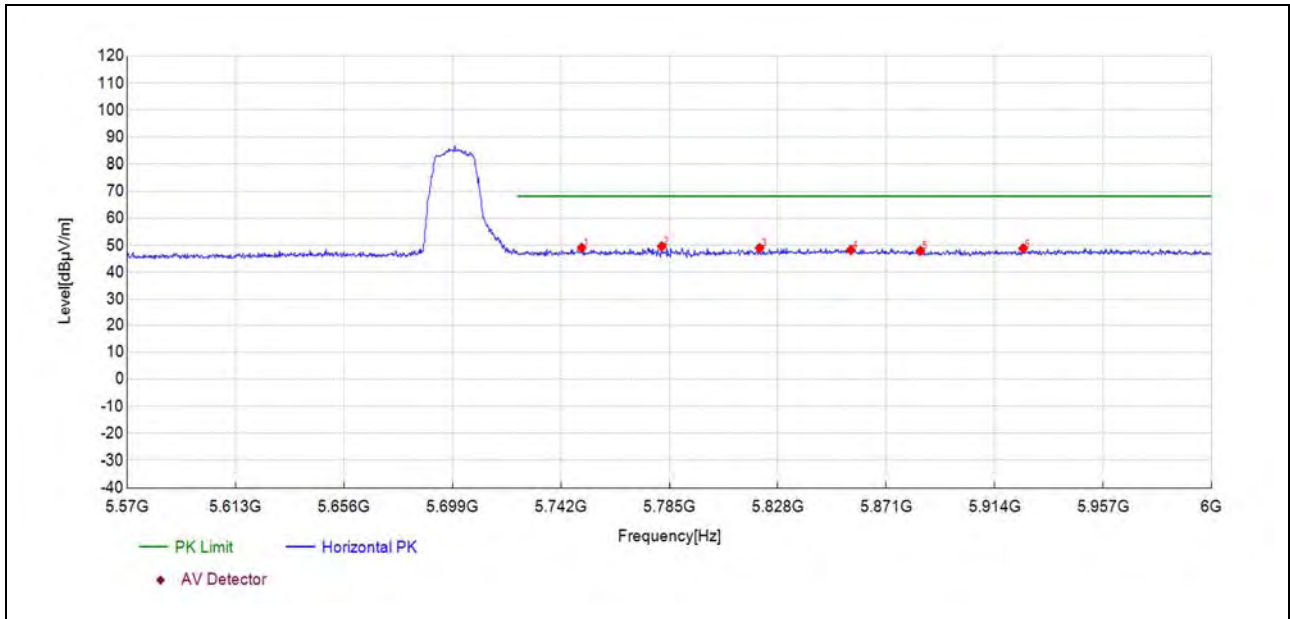
Plot for Channel 100



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5172.50	27.6	47.93	20.360	54.00	6.07	72	AV	Horizontal	PASS
5177.50	40.4	60.74	20.370	68.23	7.49	352	PK	Horizontal	PASS
5255.50	39.9	59.74	19.880	68.23	8.49	124	PK	Horizontal	PASS
5255.75	28.2	48.04	19.890	54.00	5.96	31	AV	Horizontal	PASS
5346.50	39.0	58.93	19.960	68.23	9.30	299	PK	Horizontal	PASS
5384.00	27.1	46.99	19.860	54.00	7.01	331	AV	Horizontal	PASS



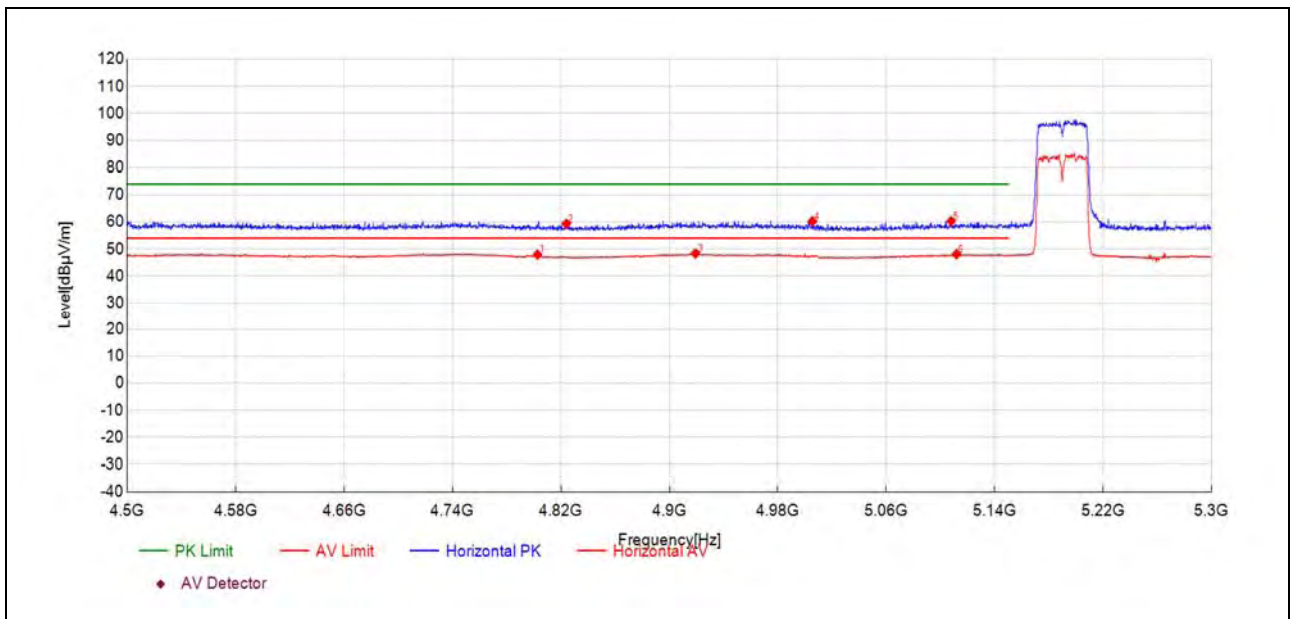
Plot for Channel 140



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5750.25	39.4	49.06	9.640	68.23	19.17	108	PK	Horizontal	PASS
5782.00	39.9	49.55	9.680	68.23	18.68	98	PK	Horizontal	PASS
5820.75	39.0	48.96	10.010	68.23	19.27	248	PK	Horizontal	PASS
5857.00	37.9	48.27	10.350	68.23	19.96	267	PK	Horizontal	PASS
5884.50	38.0	47.97	9.950	68.23	20.26	127	PK	Horizontal	PASS
5925.25	38.9	48.82	9.920	68.23	19.41	1	PK	Horizontal	PASS

**802.11n (HT40) Mode**

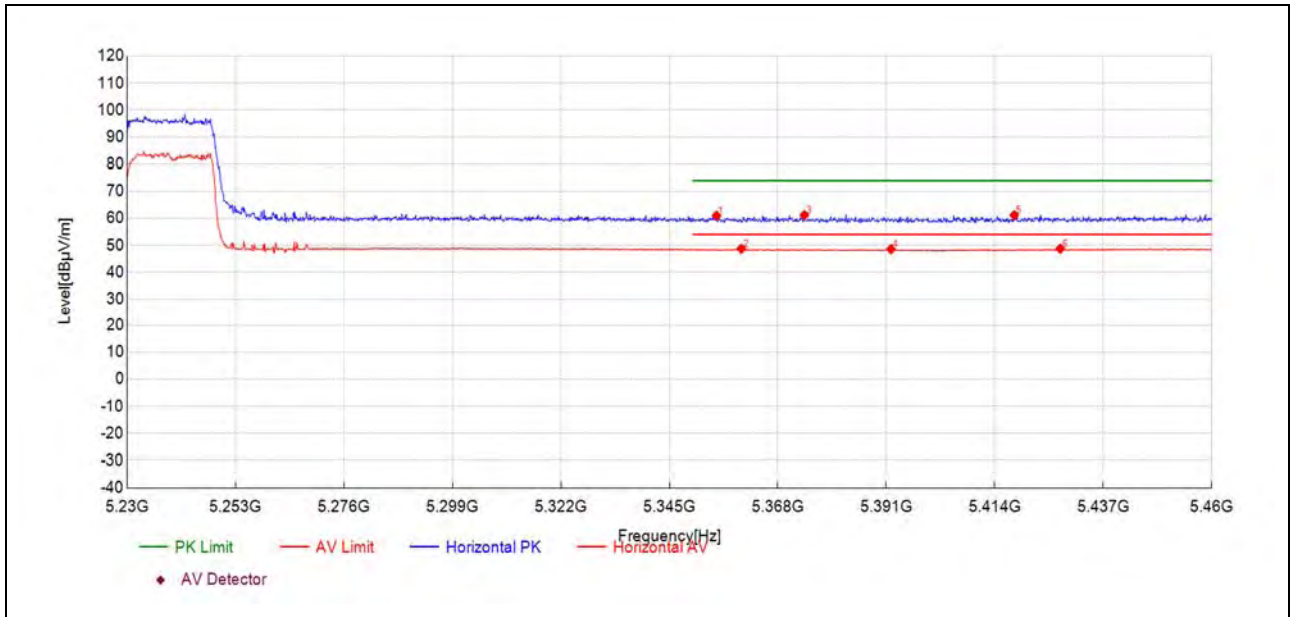
Plot for Channel 38



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4802.75	28.5	47.94	19.470	54.00	6.06	338	AV	Horizontal	PASS
4824.00	39.7	59.34	19.620	74.00	14.66	133	PK	Horizontal	PASS
4919.25	28.2	48.34	20.100	54.00	5.66	123	AV	Horizontal	PASS
5005.50	40.4	60.26	19.910	74.00	13.74	59	PK	Horizontal	PASS
5107.75	39.8	60.27	20.480	74.00	13.73	187	PK	Horizontal	PASS
5111.75	27.6	48.07	20.480	54.00	5.93	349	AV	Horizontal	PASS



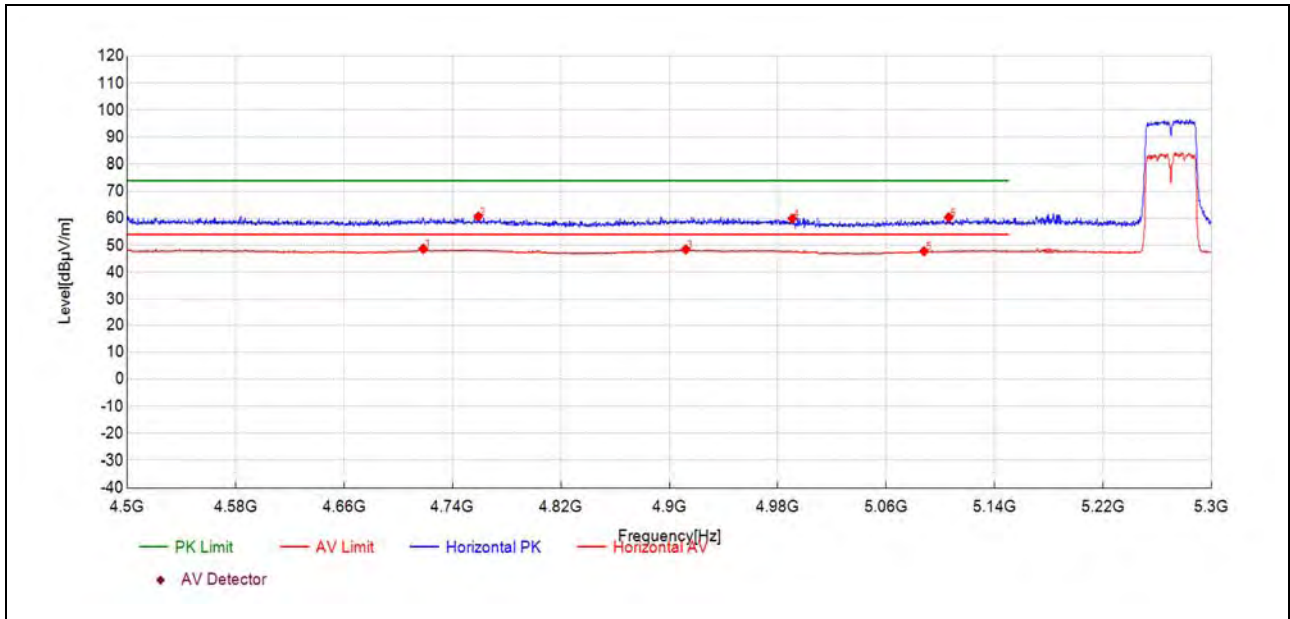
Plot for Channel 46



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5355.00	41.0	60.97	19.930	74.00	13.03	289	PK	Horizontal	PASS
5360.25	28.8	48.71	19.920	54.00	5.29	0	AV	Horizontal	PASS
5373.63	41.3	61.20	19.890	74.00	12.80	269	PK	Horizontal	PASS
5392.00	28.7	48.56	19.850	54.00	5.44	357	AV	Horizontal	PASS
5418.13	41.1	61.17	20.060	74.00	12.83	6	PK	Horizontal	PASS
5427.88	28.6	48.73	20.180	54.00	5.27	320	AV	Horizontal	PASS



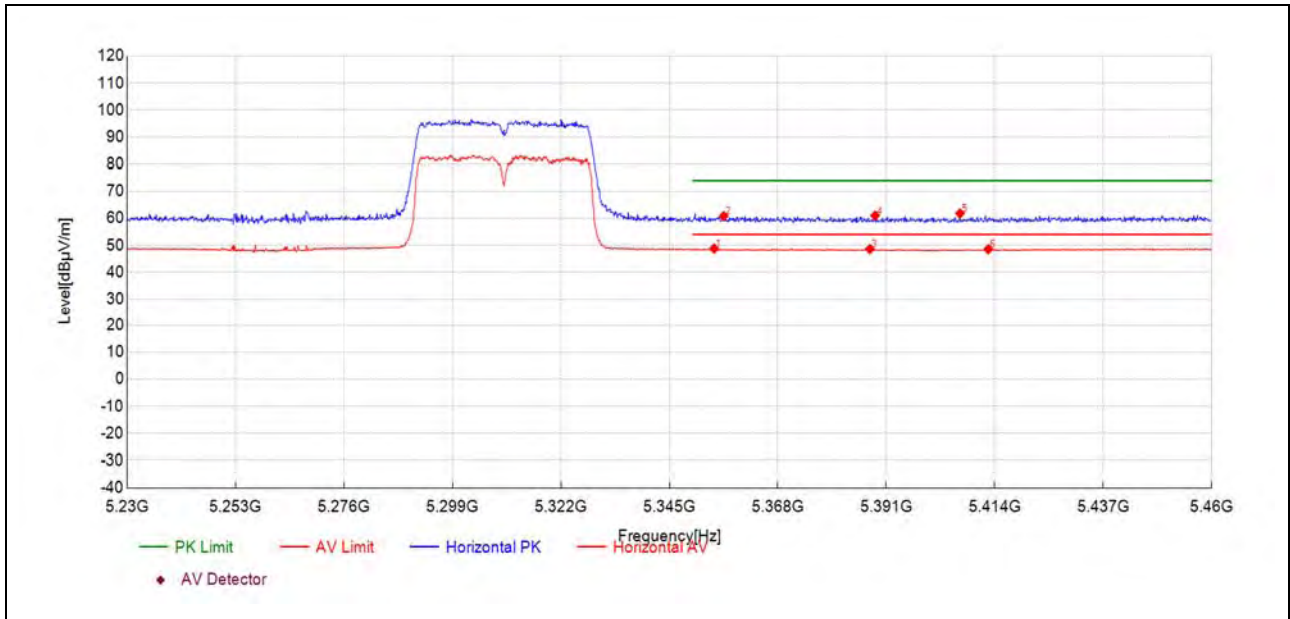
Plot for Channel 54



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4718.50	28.4	48.69	20.300	54.00	5.31	53	AV	Horizontal	PASS
4759.00	40.5	60.63	20.160	74.00	13.37	3	PK	Horizontal	PASS
4912.00	28.3	48.46	20.160	54.00	5.54	324	AV	Horizontal	PASS
4990.75	40.1	59.94	19.870	74.00	14.06	20	PK	Horizontal	PASS
5087.75	27.4	47.79	20.440	54.00	6.21	3	AV	Horizontal	PASS
5106.00	39.9	60.36	20.500	74.00	13.64	171	PK	Horizontal	PASS



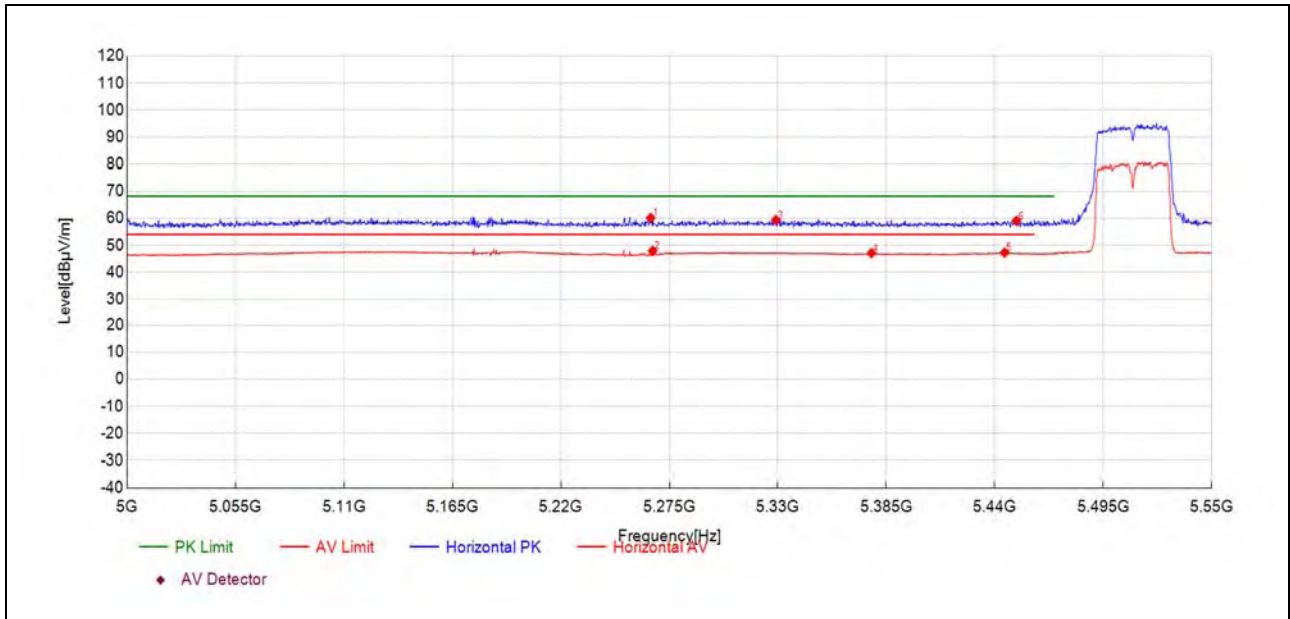
Plot for Channel 62



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5354.50	28.8	48.76	19.930	54.00	5.24	291	AV	Horizontal	PASS
5356.50	40.9	60.81	19.930	74.00	13.19	291	PK	Horizontal	PASS
5387.50	28.7	48.58	19.860	54.00	5.42	25	AV	Horizontal	PASS
5388.63	41.2	61.01	19.850	74.00	12.99	0	PK	Horizontal	PASS
5406.63	41.9	61.82	19.920	74.00	12.18	158	PK	Horizontal	PASS
5412.63	28.6	48.54	19.990	54.00	5.46	219	AV	Horizontal	PASS



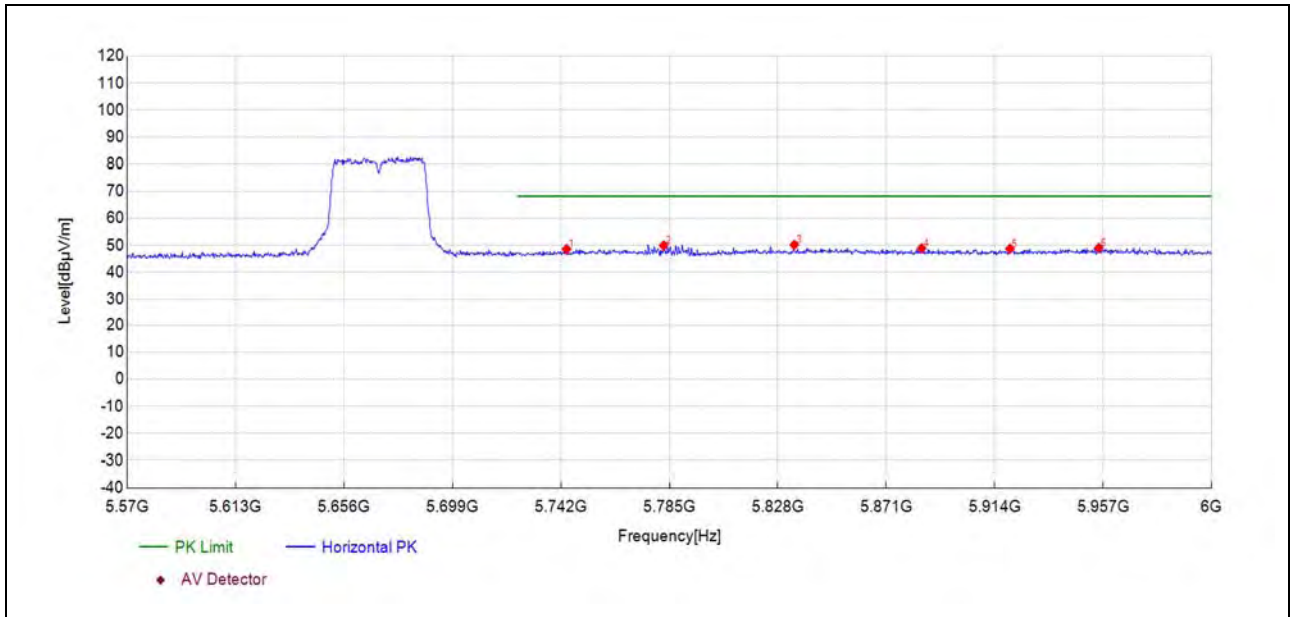
Plot for Channel 102



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5265.50	40.2	60.14	19.960	68.23	8.09	31	PK	Horizontal	PASS
5266.50	28.0	47.94	19.970	54.00	6.06	4	AV	Horizontal	PASS
5329.00	39.3	59.36	20.070	68.23	8.87	329	PK	Horizontal	PASS
5377.50	27.2	47.09	19.880	54.00	6.91	358	AV	Horizontal	PASS
5445.00	26.9	47.28	20.410	54.00	6.72	52	AV	Horizontal	PASS
5451.00	38.6	59.08	20.460	68.23	9.15	4	PK	Horizontal	PASS



Plot for Channel 134

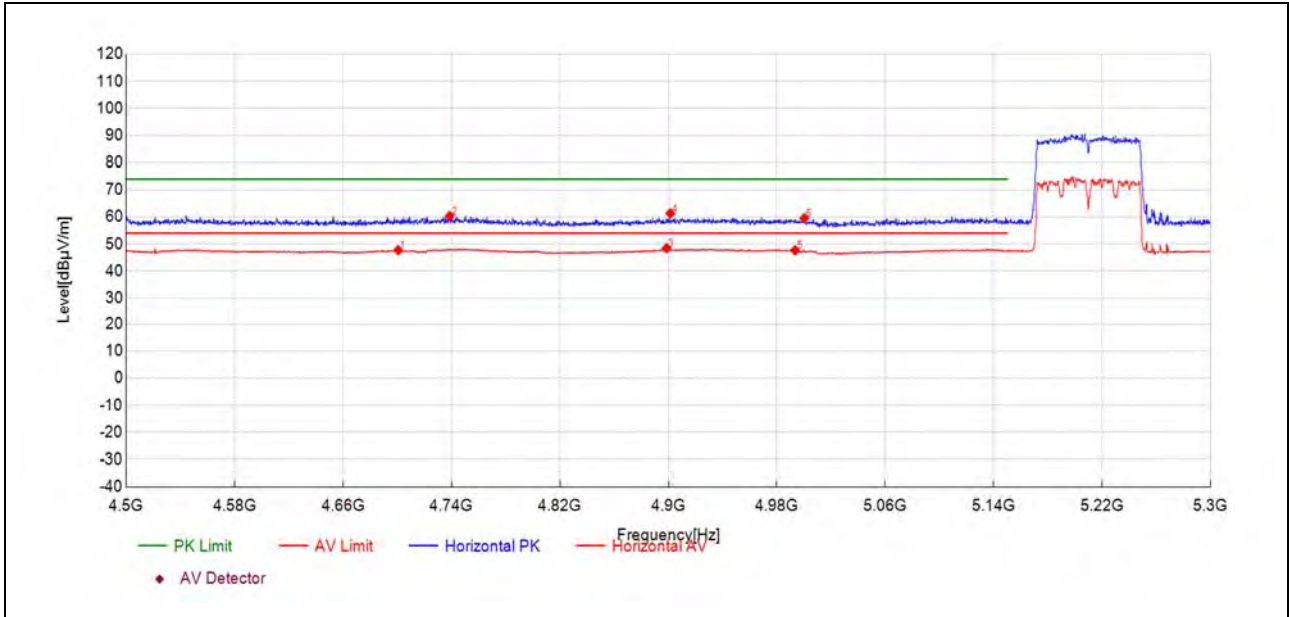


Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5744.25	39.0	48.56	9.550	68.23	19.67	313	PK	Horizontal	PASS
5782.75	40.2	49.91	9.680	68.23	18.32	71	PK	Horizontal	PASS
5834.50	39.9	50.16	10.220	68.23	18.07	305	PK	Horizontal	PASS
5885.00	39.0	48.91	9.940	68.23	19.32	313	PK	Horizontal	PASS
5920.00	38.8	48.67	9.880	68.23	19.56	357	PK	Horizontal	PASS
5955.25	38.9	49.01	10.080	68.23	19.22	164	PK	Horizontal	PASS



802.11ac (VHT80) Mode

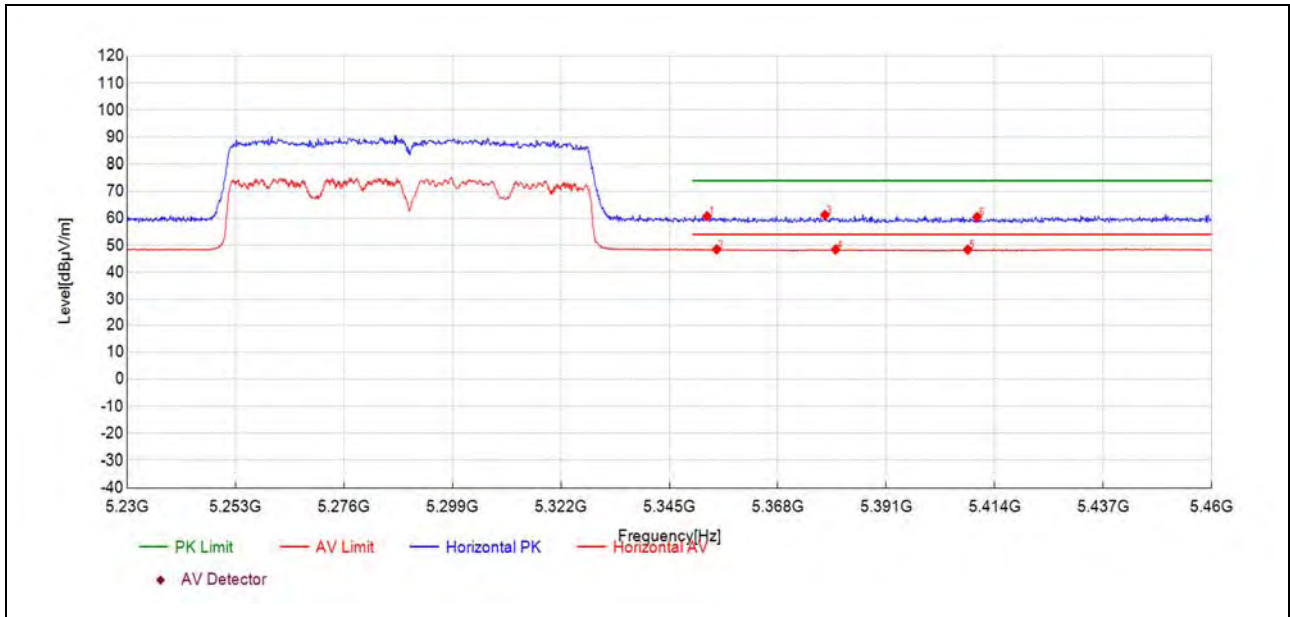
Plot for Channel 42



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4700.75	27.4	47.70	20.290	54.00	6.30	289	AV	Horizontal	PASS
4738.75	40.0	60.32	20.310	74.00	13.68	65	PK	Horizontal	PASS
4898.75	28.2	48.44	20.260	54.00	5.56	359	AV	Horizontal	PASS
4901.50	41.1	61.31	20.260	74.00	12.69	203	PK	Horizontal	PASS
4993.50	27.8	47.65	19.880	54.00	6.35	357	AV	Horizontal	PASS
5000.25	39.6	59.50	19.880	74.00	14.50	360	PK	Horizontal	PASS



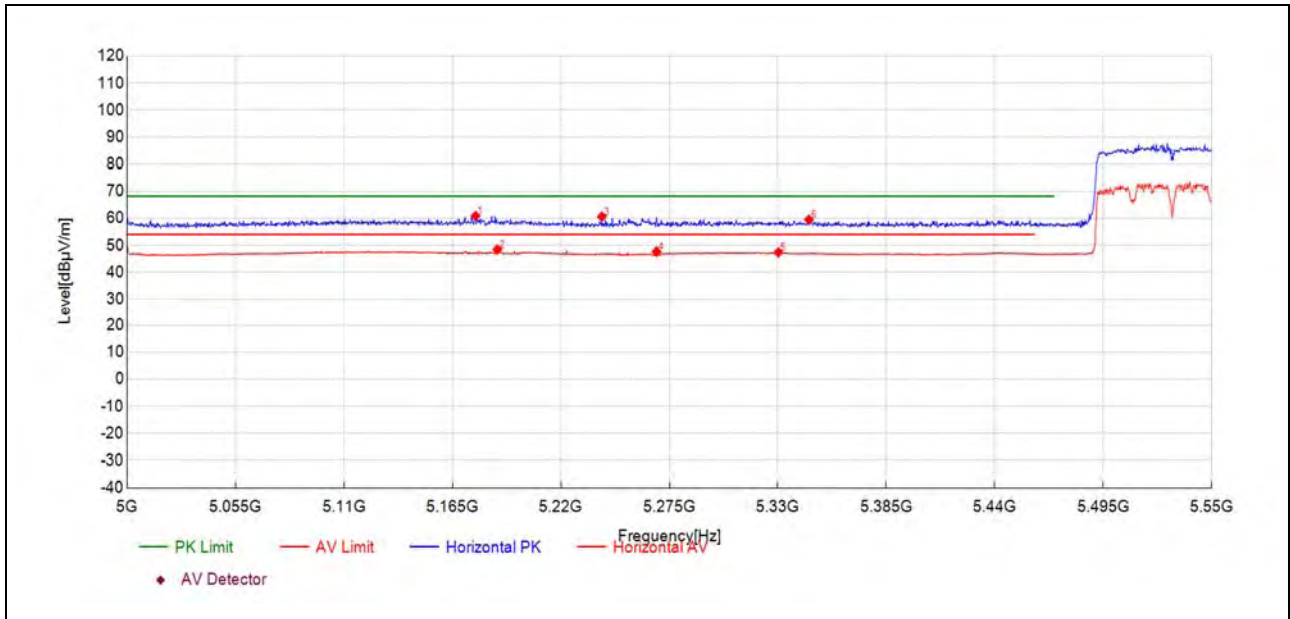
Plot for Channel 58



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5353.00	40.9	60.79	19.930	74.00	13.21	357	PK	Horizontal	PASS
5355.00	28.5	48.43	19.930	54.00	5.57	340	AV	Horizontal	PASS
5378.00	41.4	61.26	19.870	74.00	12.74	85	PK	Horizontal	PASS
5380.25	28.5	48.41	19.870	54.00	5.59	321	AV	Horizontal	PASS
5408.25	28.4	48.37	19.940	54.00	5.63	290	AV	Horizontal	PASS
5410.25	40.5	60.48	19.960	74.00	13.52	1	PK	Horizontal	PASS



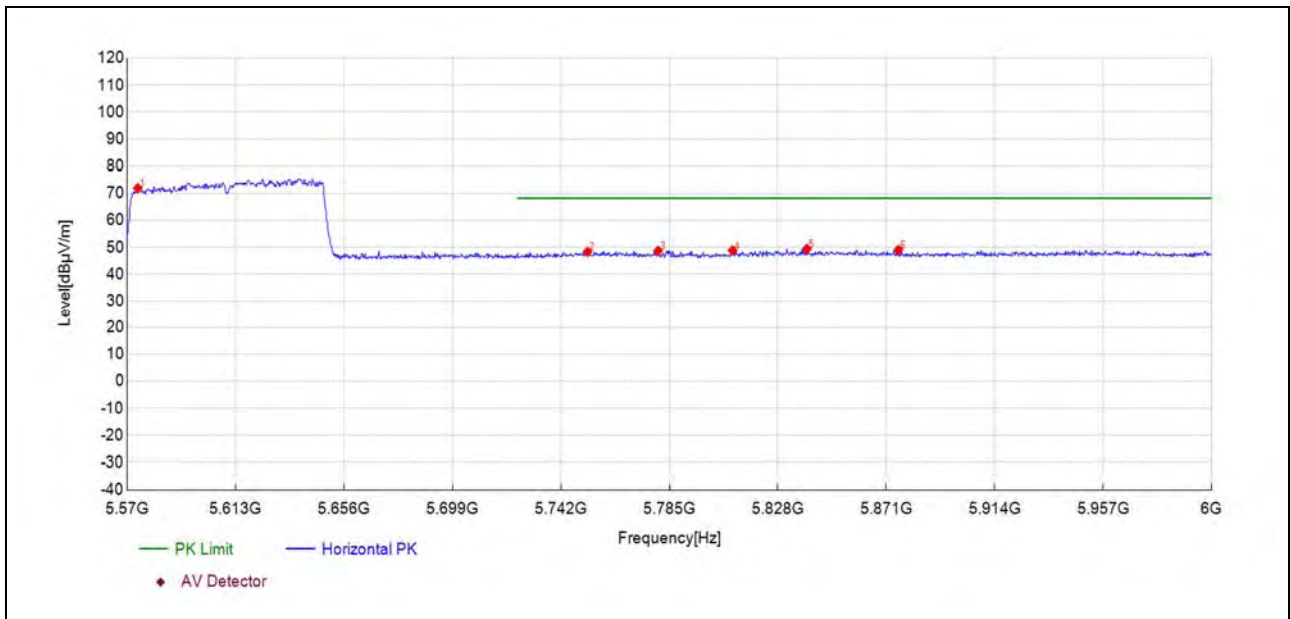
Plot for Channel 106



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5176.75	40.5	60.89	20.380	68.23	7.34	360	PK	Horizontal	PASS
5187.75	28.0	48.42	20.390	54.00	5.58	114	AV	Horizontal	PASS
5240.75	40.7	60.60	19.940	68.23	7.63	258	PK	Horizontal	PASS
5268.50	27.7	47.64	19.990	54.00	6.36	360	AV	Horizontal	PASS
5330.25	27.3	47.35	20.060	54.00	6.65	196	AV	Horizontal	PASS
5345.75	39.5	59.46	19.970	68.23	8.77	310	PK	Horizontal	PASS



Plot for Channel 122



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5574.25	63.7	71.92	8.200	-	-	3	PK	Horizontal	NA
5752.50	38.7	48.31	9.640	68.23	19.92	146	PK	Horizontal	PASS
5780.50	39.0	48.68	9.680	68.23	19.55	3	PK	Horizontal	PASS
5810.00	39.0	48.82	9.850	68.23	19.41	42	PK	Horizontal	PASS
5839.50	39.1	49.35	10.300	68.23	18.88	314	PK	Horizontal	PASS
5875.75	38.9	48.98	10.080	68.23	19.25	165	PK	Horizontal	PASS



A.2. 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 an quasi-peak measurement (or average).

The measurement results are obtained as below:

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

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.

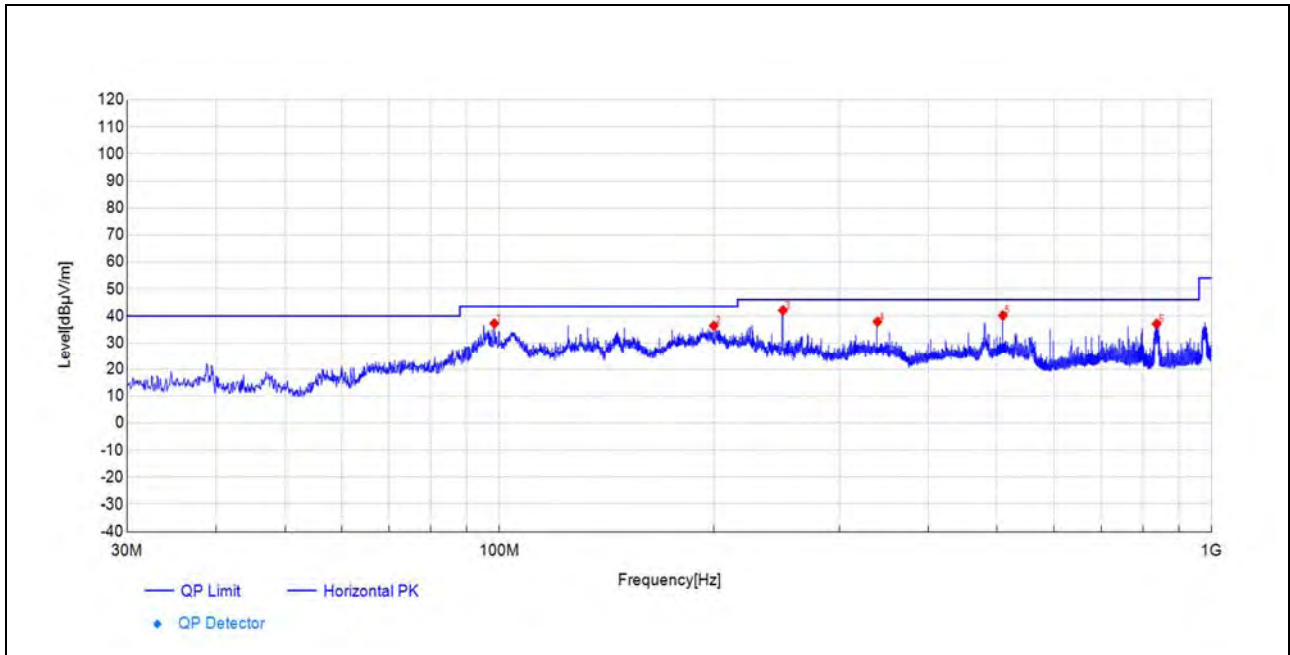
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

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

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

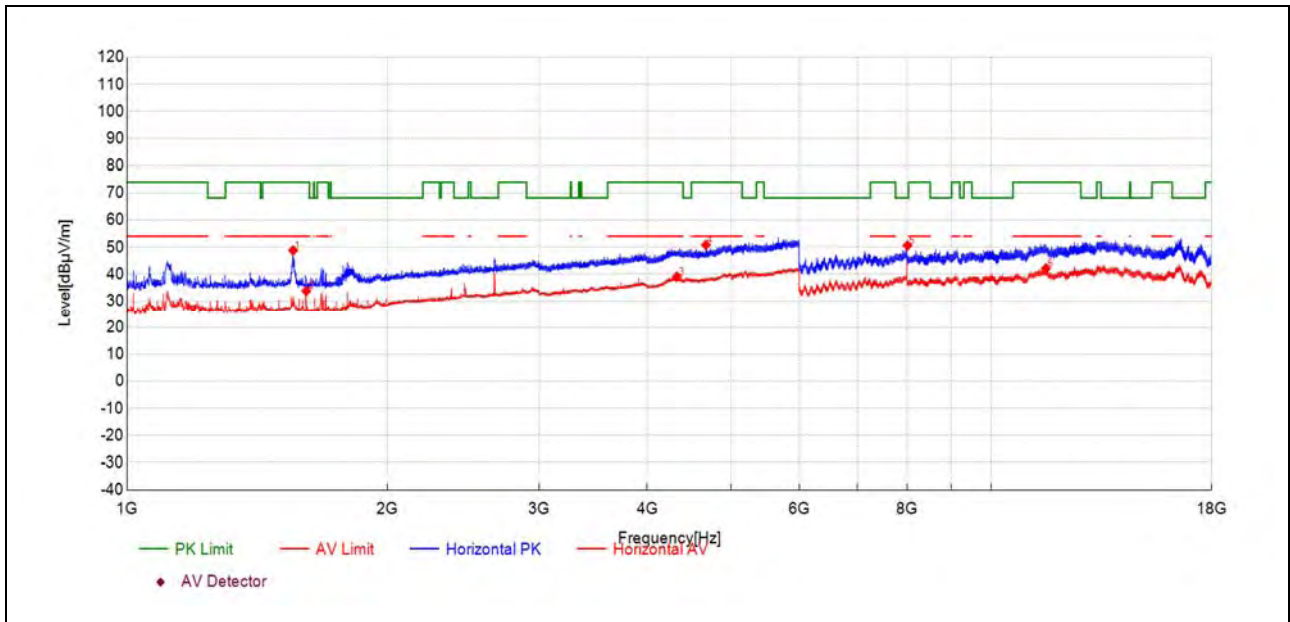
802.11a Mode

Plot for Channel 44



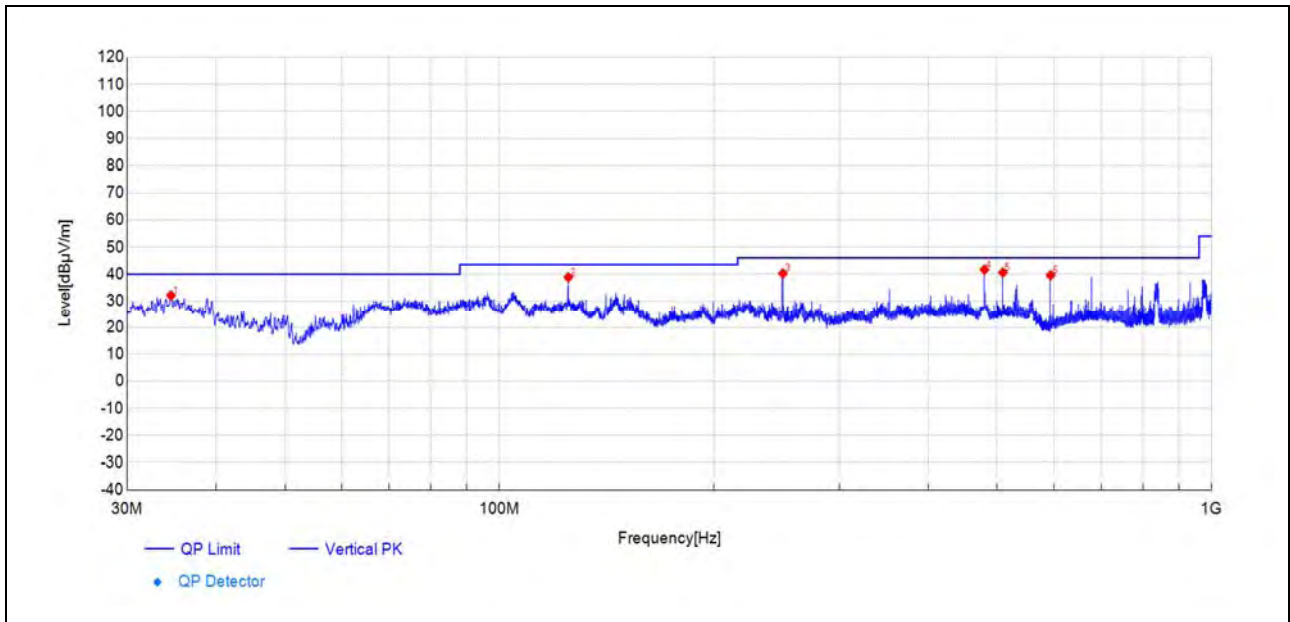
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
98.37	67.6	37.22	-30.330	43.50	6.28	114	PK	Horizontal	PASS
199.97	66.6	36.37	-30.220	43.50	7.13	114	PK	Horizontal	PASS
250.00	70.2	42.07	-28.120	46.00	3.93	86	PK	Horizontal	PASS
339.42	63.0	37.84	-25.130	46.00	8.16	0	PK	Horizontal	PASS
509.15	61.7	40.18	-21.520	46.00	5.82	38	PK	Horizontal	PASS
836.91	53.0	37.08	-15.870	46.00	8.92	48	PK	Horizontal	PASS



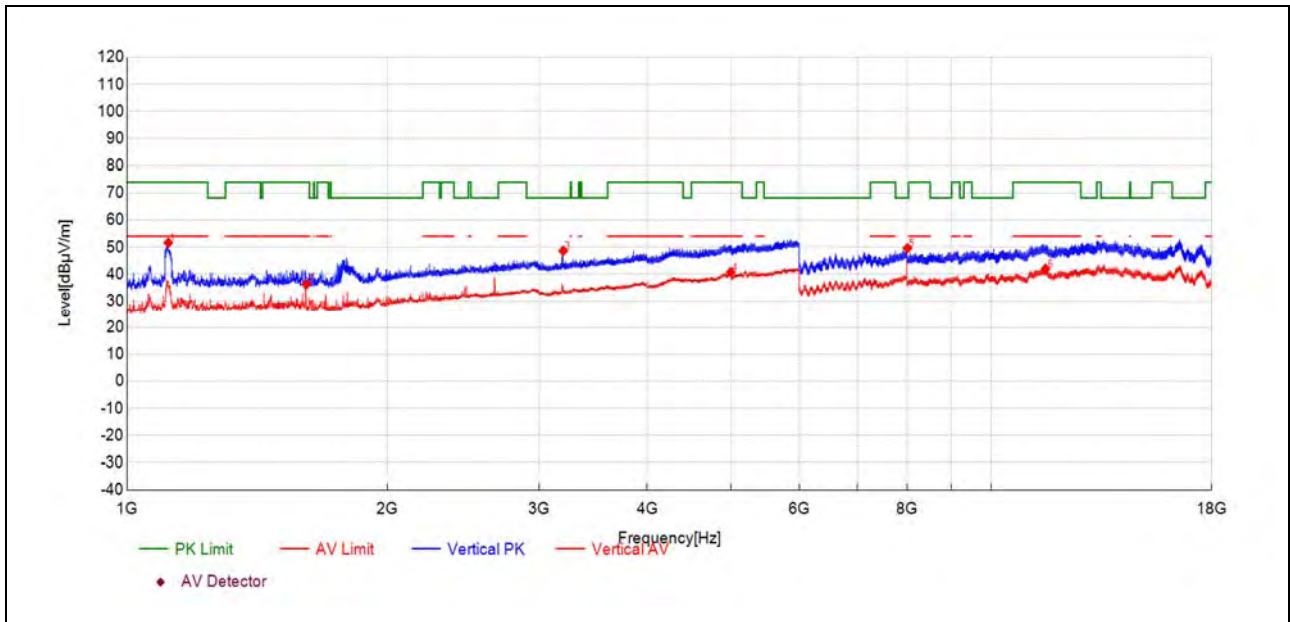
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
1556.71	52.8	48.75	-4.050	74.00	25.25	201	PK	Horizontal	PASS
1612.18	38.1	33.75	-4.380	54.00	20.25	230	AV	Horizontal	PASS
4328.38	31.8	39.04	7.220	54.00	14.96	0	AV	Horizontal	PASS
4677.07	42.5	50.81	8.270	74.00	23.19	5	PK	Horizontal	PASS
8000.08	52.9	50.57	-2.310	68.23	17.66	360	PK	Horizontal	PASS
11574.43	39.1	42.10	2.970	54.00	11.90	108	AV	Horizontal	PASS



(Antenna Vertical, 30MHz to 1GHz)

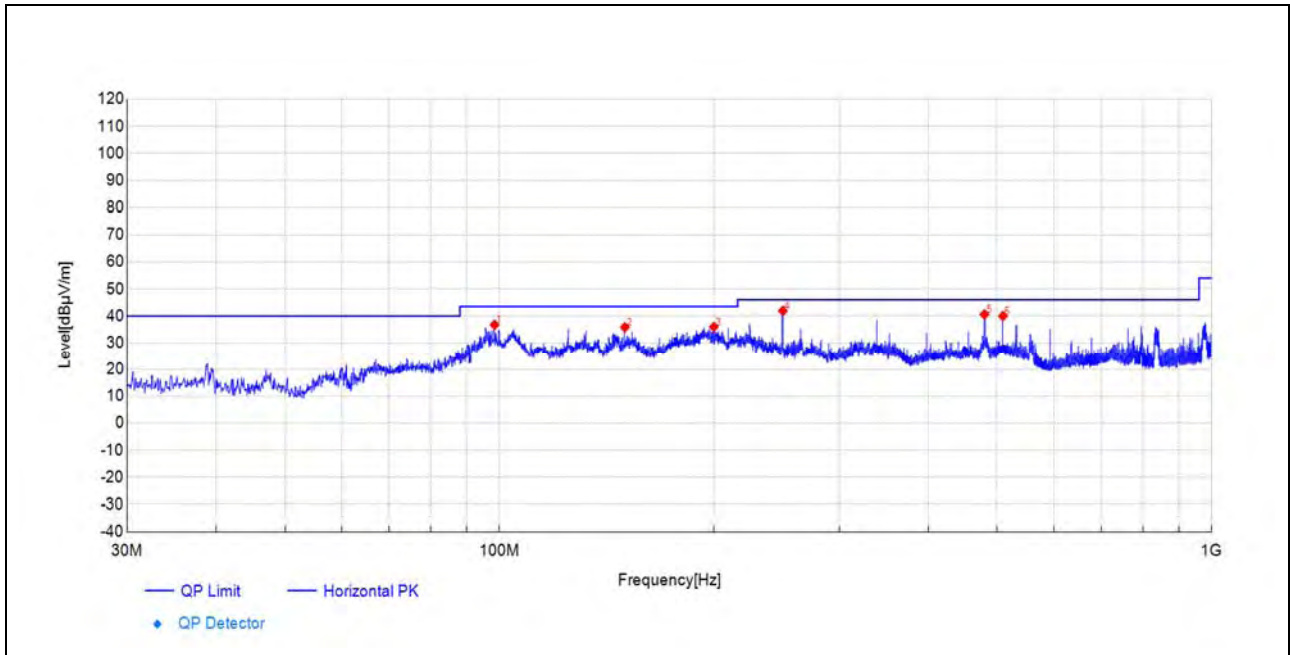
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
34.59	63.4	32.11	-31.250	40.00	7.89	360	PK	Vertical	PASS
124.95	71.8	38.83	-32.920	43.50	4.67	11	PK	Vertical	PASS
250.00	68.4	40.24	-28.120	46.00	5.76	143	PK	Vertical	PASS
479.75	64.0	41.64	-22.330	46.00	4.36	353	PK	Vertical	PASS
509.15	62.1	40.60	-21.520	46.00	5.40	274	PK	Vertical	PASS
593.99	59.5	39.56	-19.940	46.00	6.44	189	PK	Vertical	PASS



(Antenna Vertical, 1GHz to 18GHz)

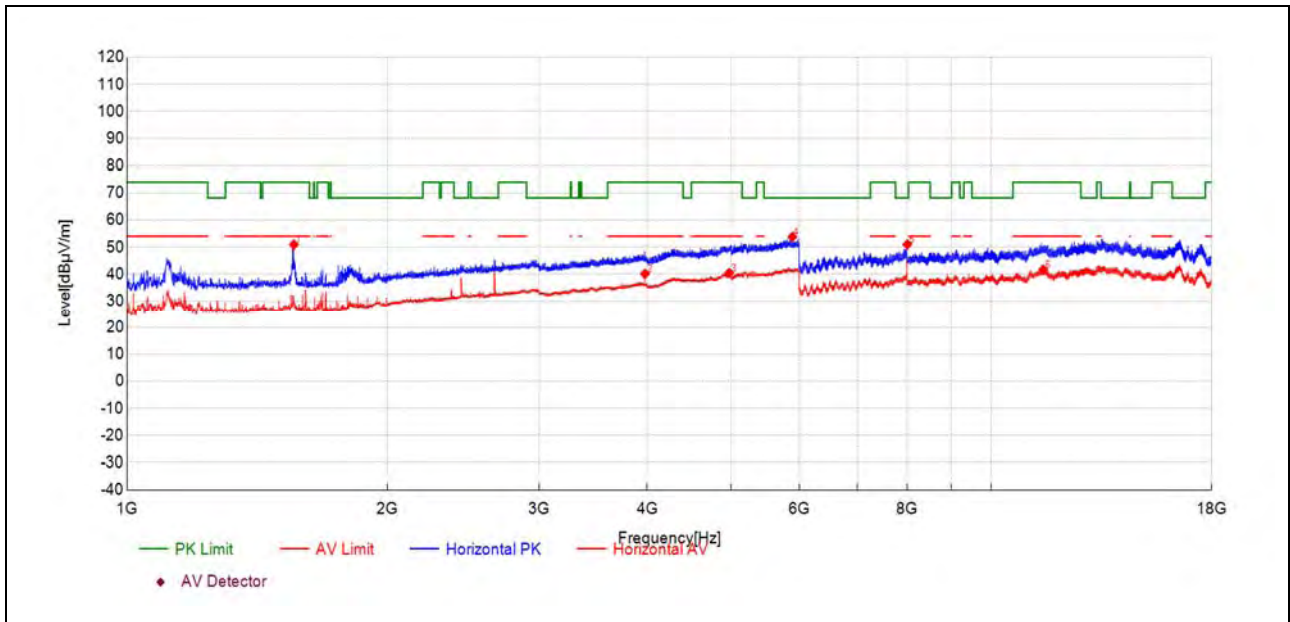
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
1116.39	56.5	51.60	-4.930	74.00	22.40	133	PK	Vertical	PASS
1612.18	40.6	36.17	-4.380	54.00	17.83	106	AV	Vertical	PASS
3197.62	45.3	48.60	3.280	68.23	19.63	273	PK	Vertical	PASS
4998.02	31.5	40.73	9.220	54.00	13.27	218	AV	Vertical	PASS
7999.58	51.9	49.54	-2.310	68.23	18.69	360	PK	Vertical	PASS
11560.99	39.0	41.93	2.950	54.00	12.07	289	AV	Vertical	PASS

Plot for Channel 60



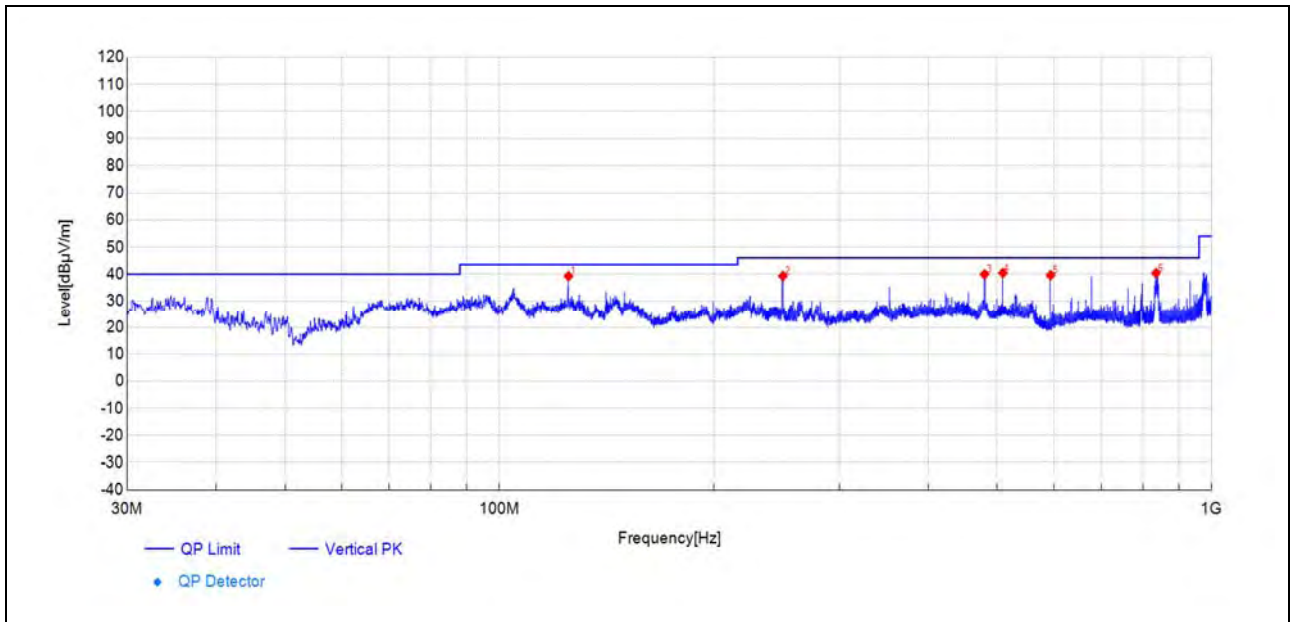
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
98.43	67.1	36.73	-30.330	43.50	6.77	96	PK	Horizontal	PASS
149.99	69.2	35.83	-33.390	43.50	7.67	87	PK	Horizontal	PASS
199.97	66.2	35.96	-30.220	43.50	7.54	125	PK	Horizontal	PASS
250.00	70.0	41.89	-28.120	46.00	4.11	87	PK	Horizontal	PASS
479.70	62.9	40.58	-22.340	46.00	5.42	125	PK	Horizontal	PASS
509.15	61.5	39.95	-21.520	46.00	6.05	50	PK	Horizontal	PASS



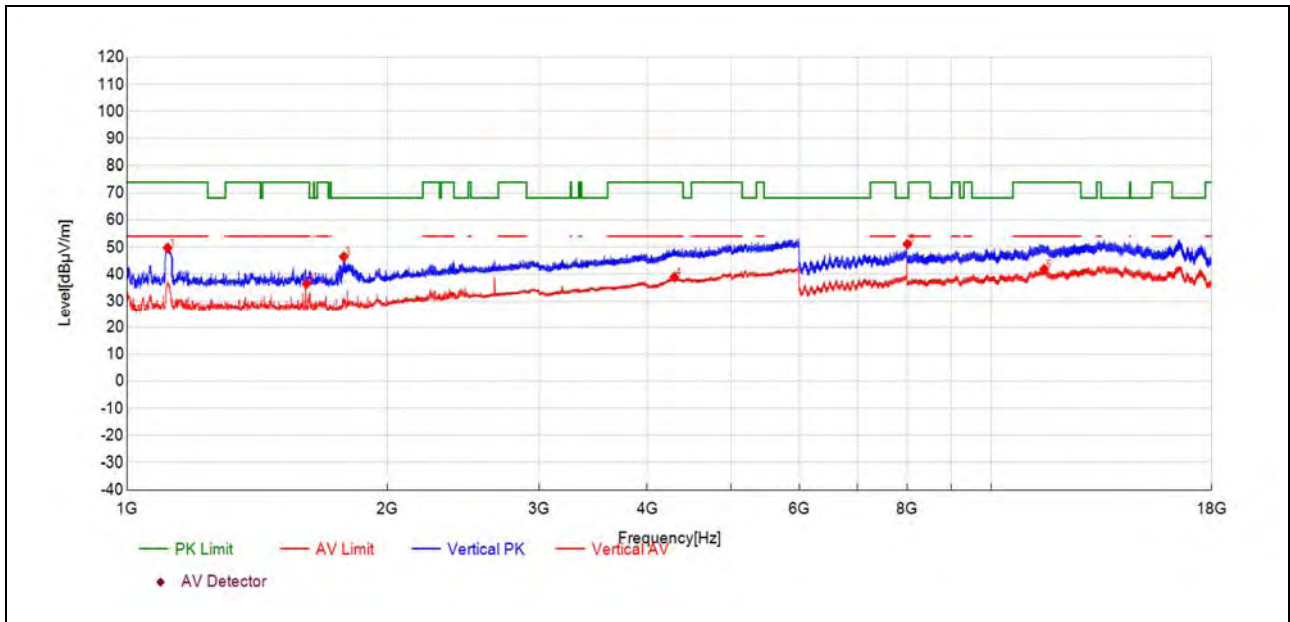
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
1559.68	55.0	50.93	-4.070	74.00	23.07	243	PK	Horizontal	PASS
3975.24	34.1	40.11	5.970	54.00	13.89	353	AV	Horizontal	PASS
4975.24	31.3	40.37	9.110	54.00	13.63	326	AV	Horizontal	PASS
5888.56	41.7	53.78	12.060	68.23	14.45	21	PK	Horizontal	PASS
7999.58	53.3	51.00	-2.310	68.23	17.23	359	PK	Horizontal	PASS
11486.78	38.7	41.62	2.880	54.00	12.38	206	AV	Horizontal	PASS



(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
125.01	72.2	39.23	-32.930	43.50	4.27	20	PK	Vertical	PASS
250.00	67.4	39.31	-28.120	46.00	6.69	39	PK	Vertical	PASS
479.75	62.2	39.91	-22.330	46.00	6.09	359	PK	Vertical	PASS
509.15	61.9	40.42	-21.520	46.00	5.58	274	PK	Vertical	PASS
594.05	59.5	39.57	-19.940	46.00	6.43	320	PK	Vertical	PASS
835.03	56.3	40.37	-15.900	46.00	5.63	188	PK	Vertical	PASS

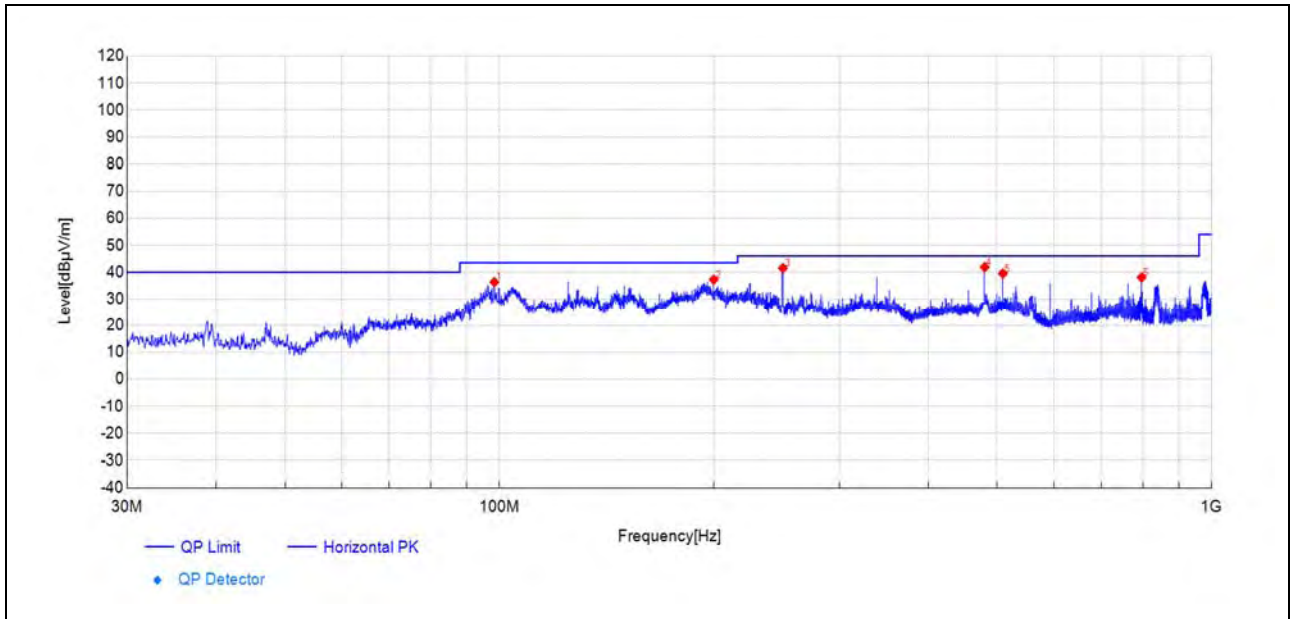


(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
1114.41	54.7	49.72	-4.930	74.00	24.03	218	PK	Vertical	PASS
1612.18	40.8	36.40	-4.380	54.00	12.45	105	AV	Vertical	PASS
1781.58	50.5	46.47	-4.000	68.23	20.45	286	PK	Vertical	PASS
4299.65	31.8	38.90	7.100	54.00	11.25	353	AV	Vertical	PASS
7999.58	53.4	51.10	-2.310	68.23	9.66	6	PK	Vertical	PASS
11514.67	38.9	41.83	2.890	54.00	13.81	86	AV	Vertical	PASS

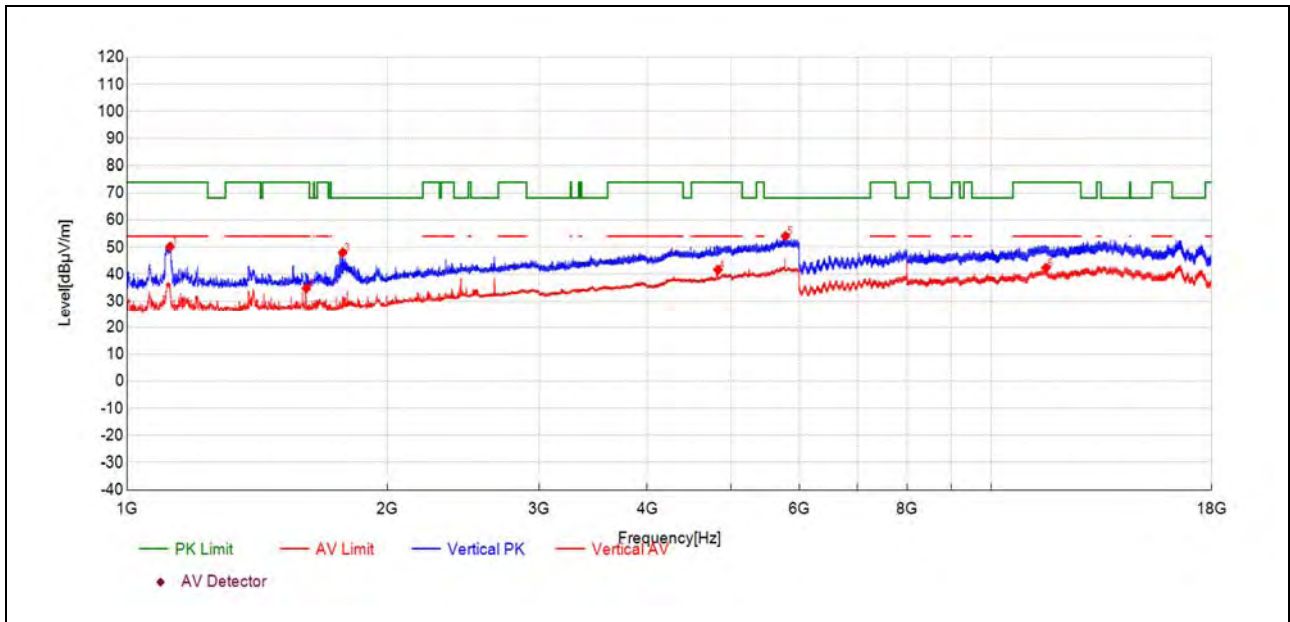


Plot for Channel 120



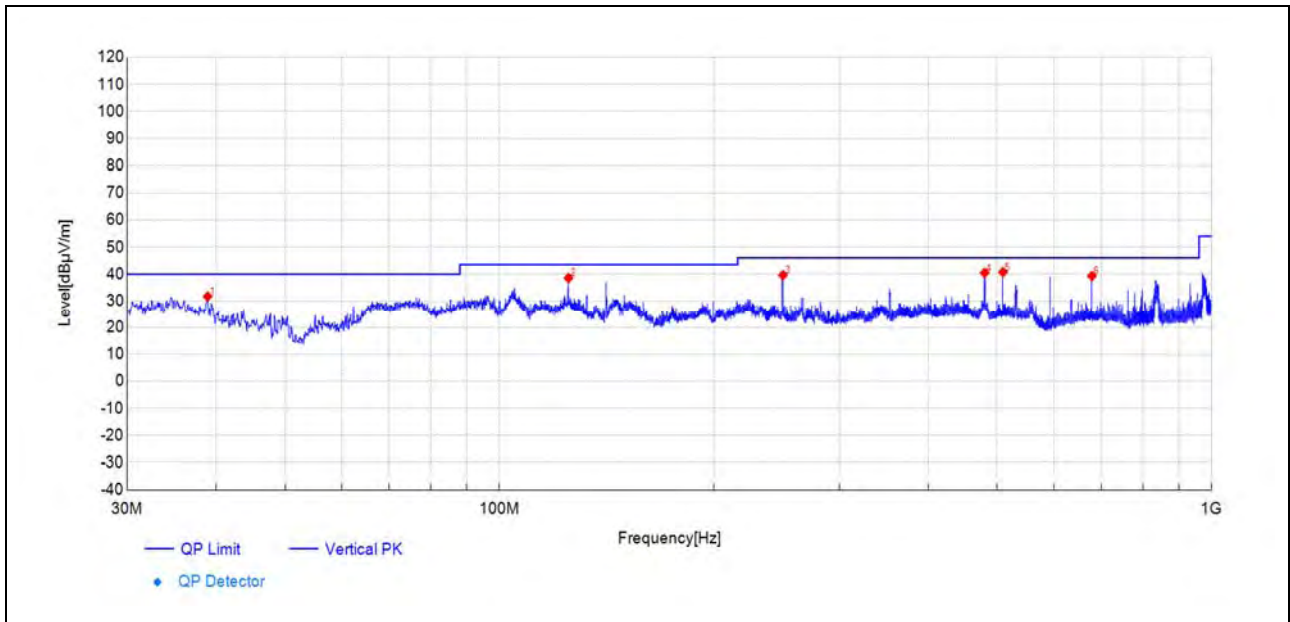
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
98.37	66.7	36.34	-30.330	43.50	7.16	124	PK	Horizontal	PASS
199.91	67.4	37.22	-30.210	43.50	6.28	133	PK	Horizontal	PASS
250.00	69.6	41.50	-28.120	46.00	4.50	104	PK	Horizontal	PASS
480.11	64.2	41.87	-22.330	46.00	4.13	217	PK	Horizontal	PASS
509.15	61.0	39.50	-21.520	46.00	6.50	48	PK	Horizontal	PASS
796.99	54.7	38.07	-16.600	46.00	7.93	124	PK	Horizontal	PASS



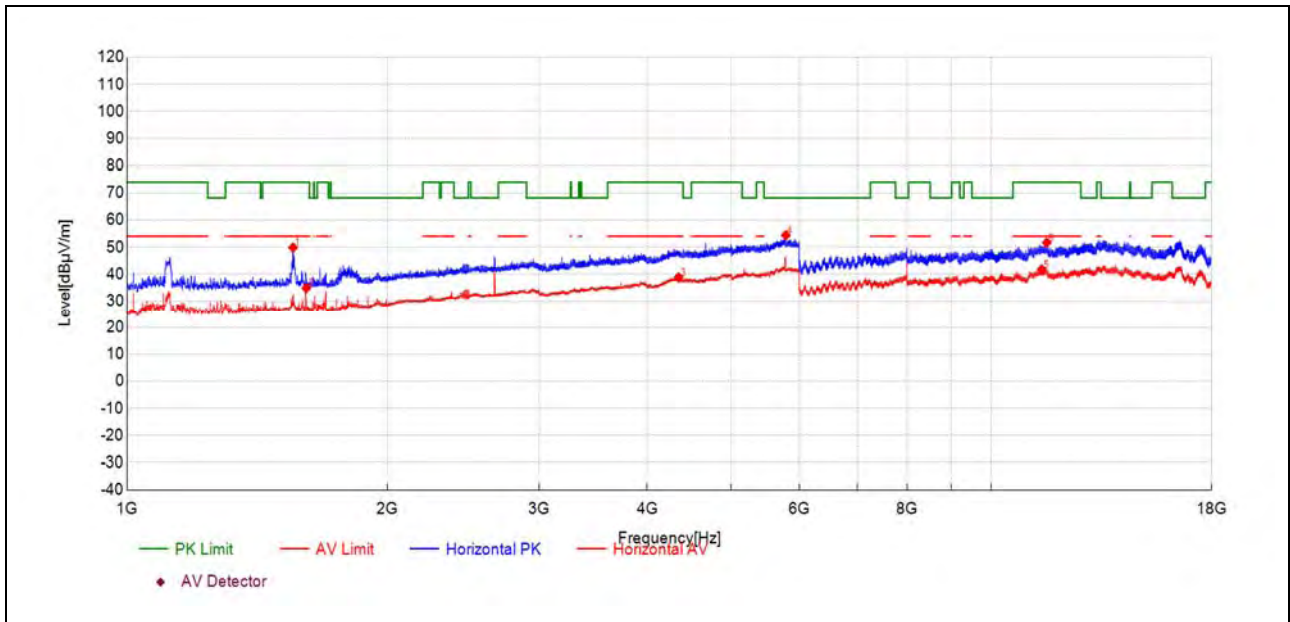
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
1121.35	55.3	50.12	-5.200	74.00	23.88	214	PK	Vertical	PASS
1612.18	39.1	34.74	-4.380	54.00	19.26	103	AV	Vertical	PASS
1776.62	52.0	47.94	-4.030	68.23	20.29	269	PK	Vertical	PASS
4828.63	33.1	41.63	8.540	54.00	12.37	228	AV	Vertical	PASS
5780.58	41.5	54.05	12.530	68.23	14.18	298	PK	Vertical	PASS
11574.93	39.4	42.32	2.970	54.00	11.68	111	AV	Vertical	PASS



(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
38.94	61.1	31.70	-29.430	40.00	8.30	346	PK	Vertical	PASS
125.01	71.5	38.58	-32.930	43.50	4.92	103	PK	Vertical	PASS
250.00	67.7	39.59	-28.120	46.00	6.41	152	PK	Vertical	PASS
479.93	62.8	40.48	-22.330	46.00	5.52	301	PK	Vertical	PASS
509.15	62.3	40.75	-21.520	46.00	5.25	283	PK	Vertical	PASS
678.88	57.8	39.31	-18.530	46.00	6.69	217	PK	Vertical	PASS



(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
1556.71	53.9	49.82	-4.060	74.00	24.18	18	PK	Horizontal	PASS
1612.18	39.2	34.82	-4.380	54.00	19.18	239	AV	Horizontal	PASS
4348.19	31.5	38.78	7.250	54.00	15.22	18	AV	Horizontal	PASS
5786.03	41.9	54.35	12.480	68.23	13.88	7	PK	Horizontal	PASS
11441.46	38.8	41.73	2.920	54.00	12.27	106	AV	Horizontal	PASS
11596.35	48.6	51.62	2.990	74.00	22.38	28	PK	Horizontal	PASS



A.3. 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+Adapter+USB cable1+Notebook+USB cable2+WiFi TX

Test voltage: AC 120V/60Hz

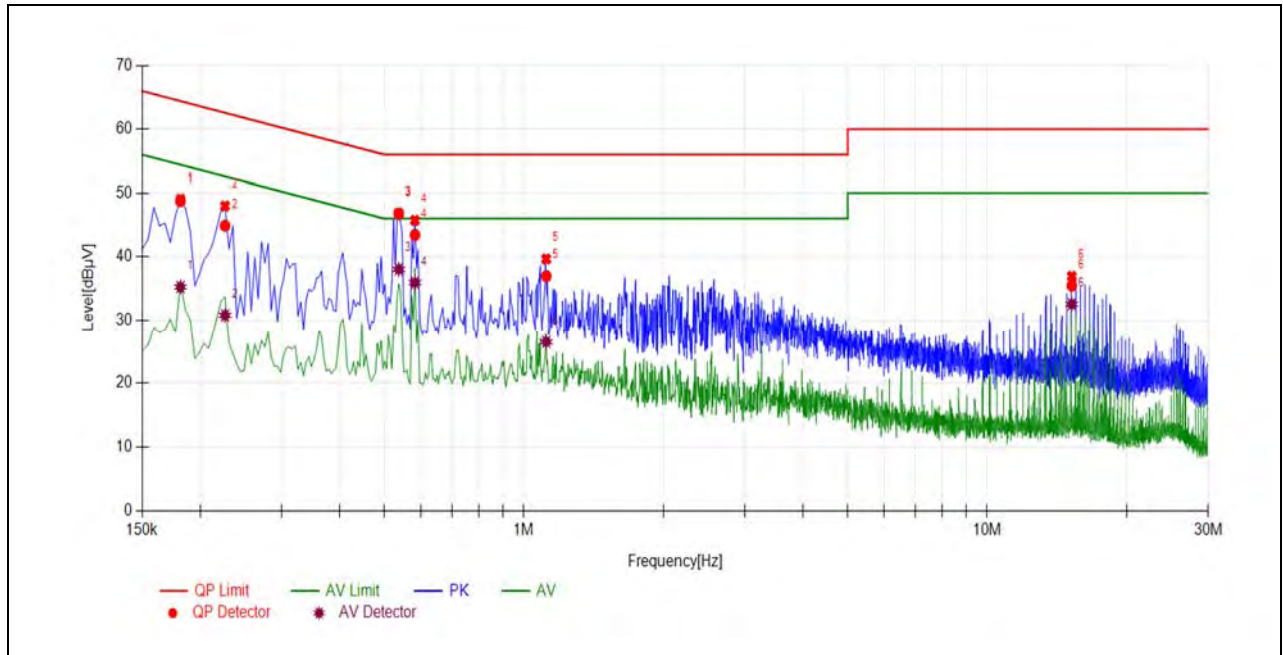
The measurement results are obtained as below:

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

U_R : Receiver Reading

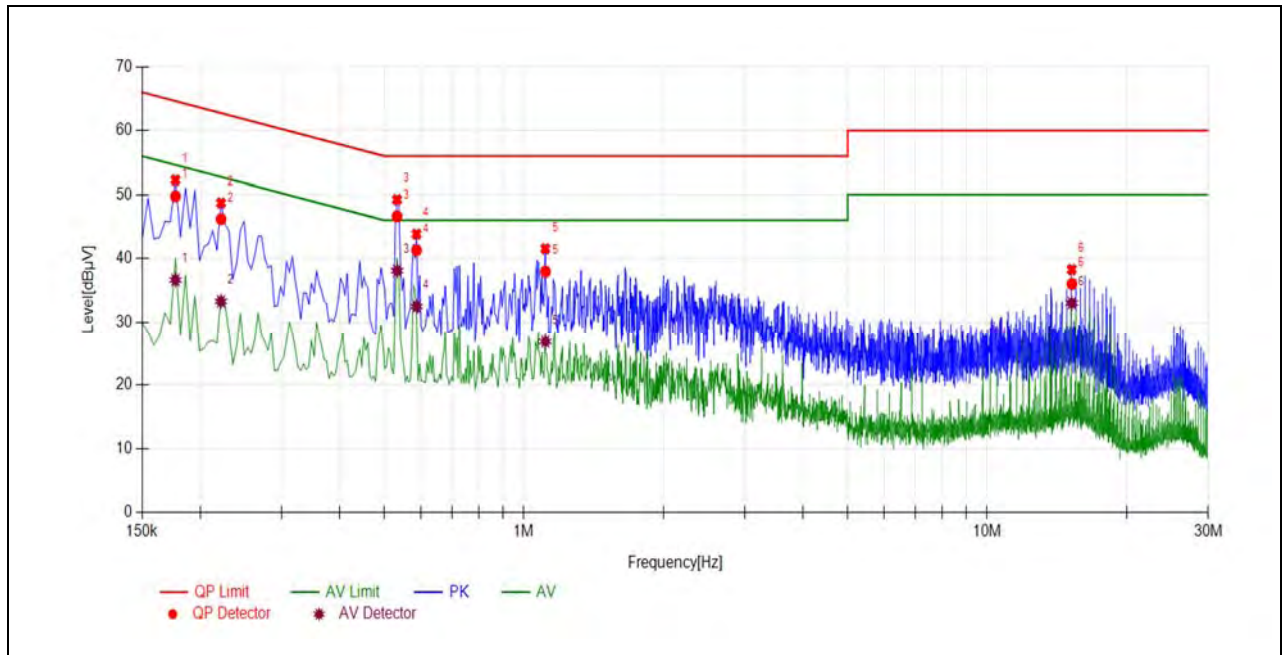
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1815	48.75	35.24	64.42	54.42	Line	PASS
2	0.2265	44.89	30.77	62.58	52.58		PASS
3	0.5370	46.76	38.03	56.00	46.00		PASS
4	0.5820	43.44	35.93	56.00	46.00		PASS
5	1.1176	36.94	26.47	56.00	46.00		PASS
6	15.2297	35.45	32.53	60.00	50.00		PASS



(N Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1770	49.77	36.63	64.62	54.62	Neutral	PASS
2	0.2220	46.19	33.28	62.74	52.74		PASS
3	0.5325	46.64	38.10	56.00	46.00		PASS
4	0.5866	41.32	32.48	56.00	46.00		PASS
5	1.1129	37.96	26.84	56.00	46.00		PASS
6	15.2301	36.01	33.02	60.00	50.00		PASS



Notes

1. The report shall have report stamp or our company stamp.
2. The report shall be invalid without all the signatures of the editor and approver.
3. The report shall not be changed.
4. Any objections must be raised to Morlab within 15 days since the date when the report is received. It will not be taken into consideration beyond this limit.
5. Conformity declaration:
 - ☒ Morlab issues a statement of conformity based on the corresponding standards (default)
 - ☐ Morlab issues a statement of conformity based on the applicant requirement
6. Use of uncertainty of measurement for decisions on conformity (decision rule):

No decision rule is specified by the testing standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule).

————— END OF REPORT —————