



REPORT No.: SZ26060426W04

TEST REPORT

APPLICANT : FJ Dynamics Co.,Ltd.

PRODUCT NAME : Scanner

MODEL NAME : FJDC2301

BRAND NAME :  **FJDTrion**

FCC ID : 2A2LL-FJDC1

STANDARD(S) : 47 CFR Part 15 Subpart E

RECEIPT DATE : 2026-07-07

TEST DATE : 2026-07-17 to 2026-09-01

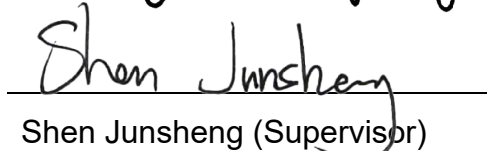
ISSUE DATE : 2026-10-21



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Change History		
Version	Date	Reason for change
1.0	2026-10-21	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	Jul. 20, 2026	Li Hanbin	PASS	/
3	15.407(b)	Radiated Emission	Jul. 20, 2026	Li Hanbin	PASS	/
4	15.207	Conducted Emission	Sep. 01, 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	2026.06.28	2027.06.27
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	2025.09.03	2026.09.02
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2025.09.03	2026.09.02
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2025.09.03	2026.09.02
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2025.09.03	2026.09.02
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2025.09.03	2026.09.02
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2025.09.03	2026.09.02
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
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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.

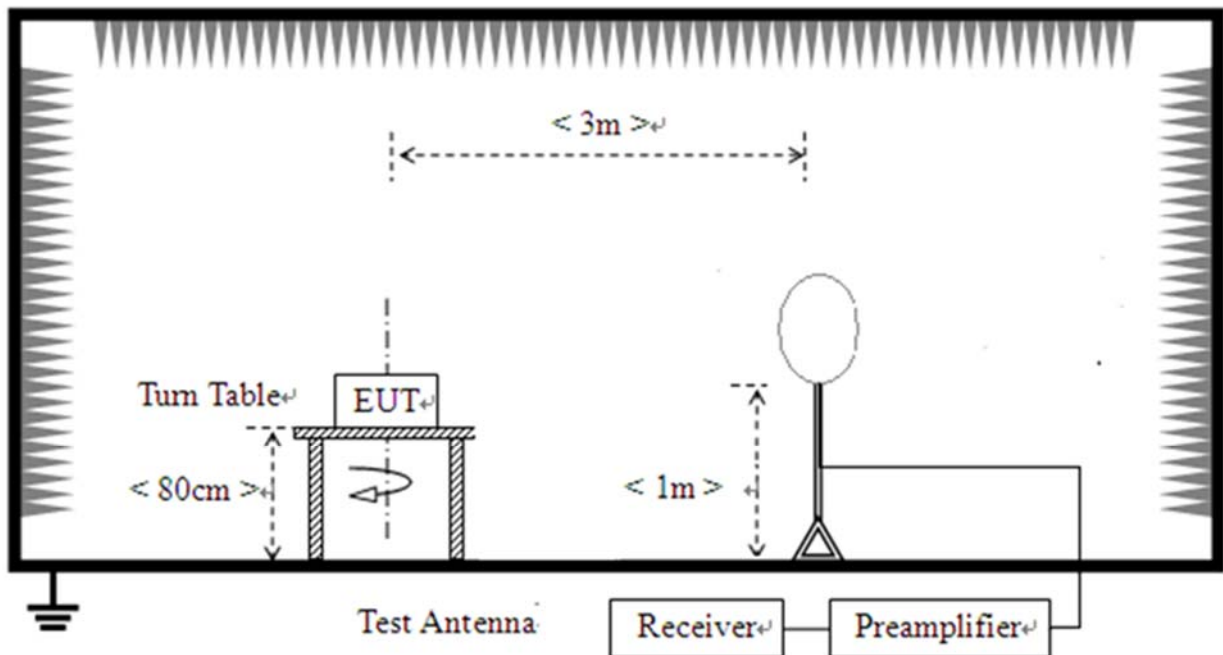
2.5. Test Conditions

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

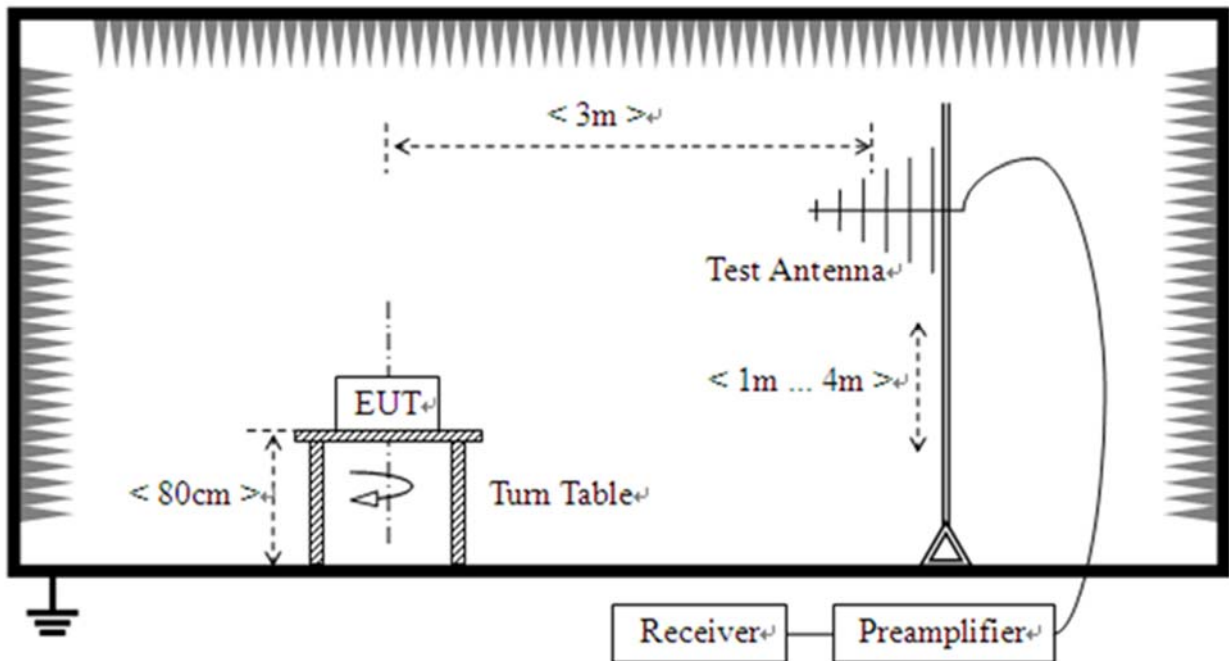
2.6. Test Setup Layout Diagram

2.6.1. Radiation Measurement

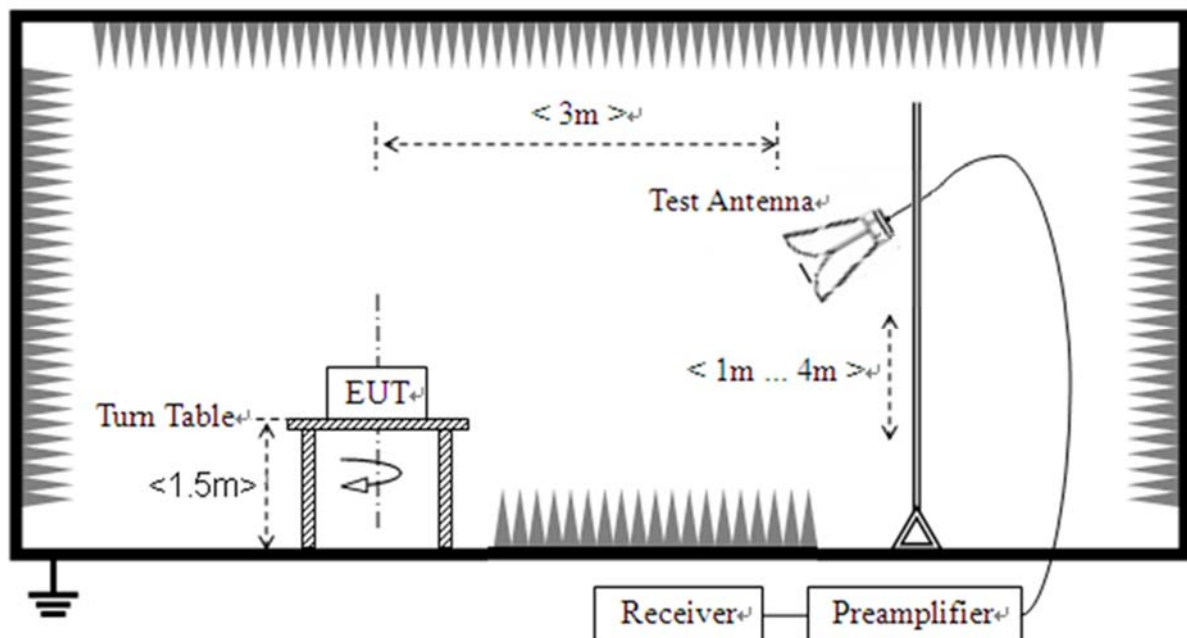
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



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

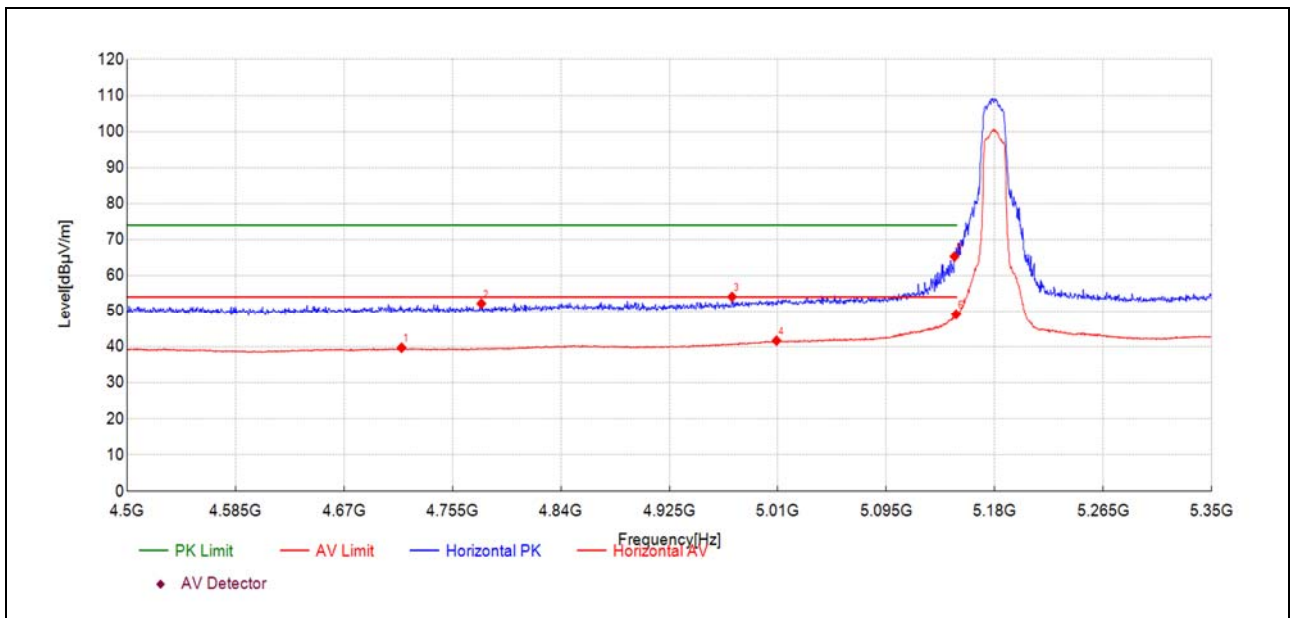
A.1. Restricted Frequency Bands

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.

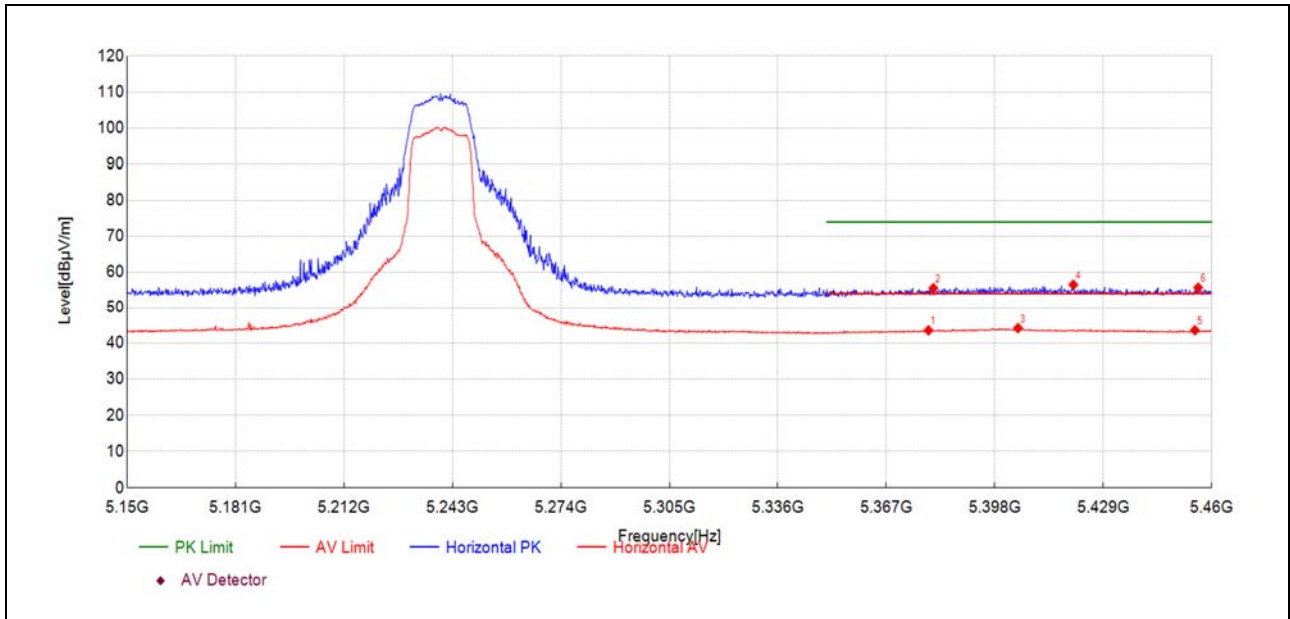
802.11a Mode

Plot for Channel 36



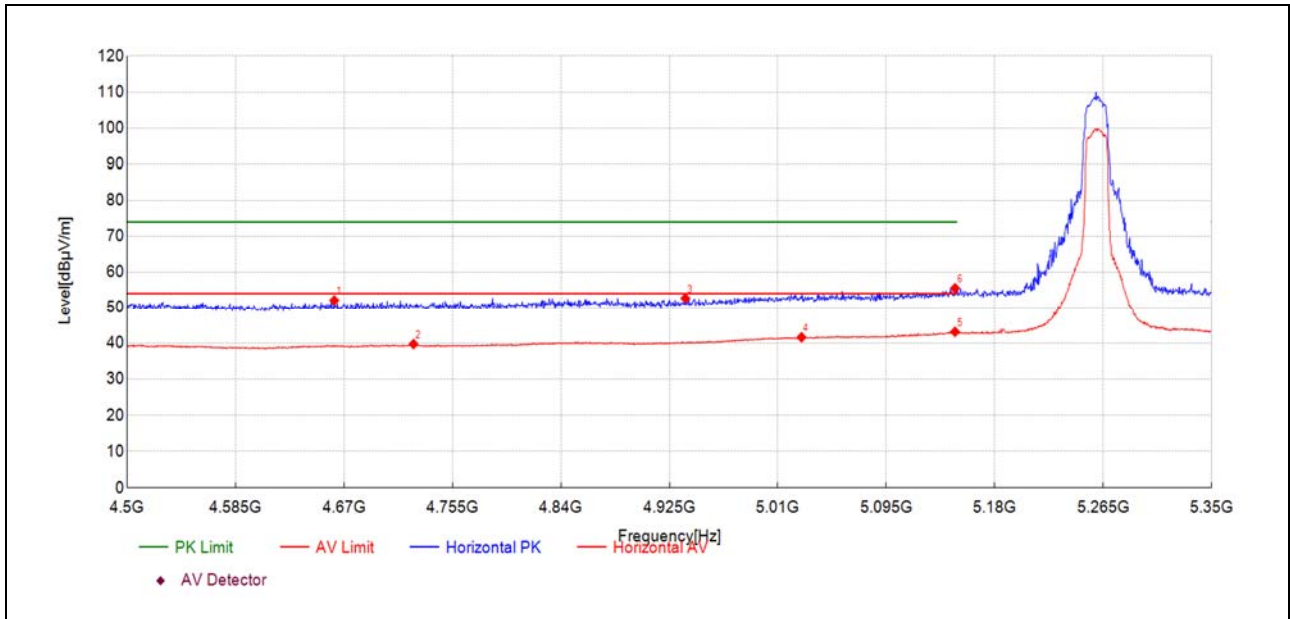
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4715.16	27.7	39.70	12.010	54.00	14.30	142	AV	Horizontal	PASS
4777.66	40.3	52.22	11.960	74.00	21.78	259	PK	Horizontal	PASS
4974.11	41.5	54.11	12.610	74.00	19.89	339	PK	Horizontal	PASS
5008.98	28.6	41.66	13.070	54.00	12.34	137	AV	Horizontal	PASS
5148.45	50.7	65.30	14.560	74.00	8.70	109	PK	Horizontal	PASS
5149.72	34.5	49.10	14.590	54.00	4.90	151	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
5379.05	28.2	43.56	15.390	54.00	10.44	62	AV	Horizontal	PASS
5380.45	40.1	55.55	15.410	74.00	18.45	52	PK	Horizontal	PASS
5404.64	28.6	44.18	15.630	54.00	9.82	66	AV	Horizontal	PASS
5420.46	41.1	56.51	15.430	74.00	17.49	114	PK	Horizontal	PASS
5455.19	28.5	43.59	15.090	54.00	10.41	104	AV	Horizontal	PASS
5456.12	40.6	55.72	15.090	74.00	18.28	3	PK	Horizontal	PASS

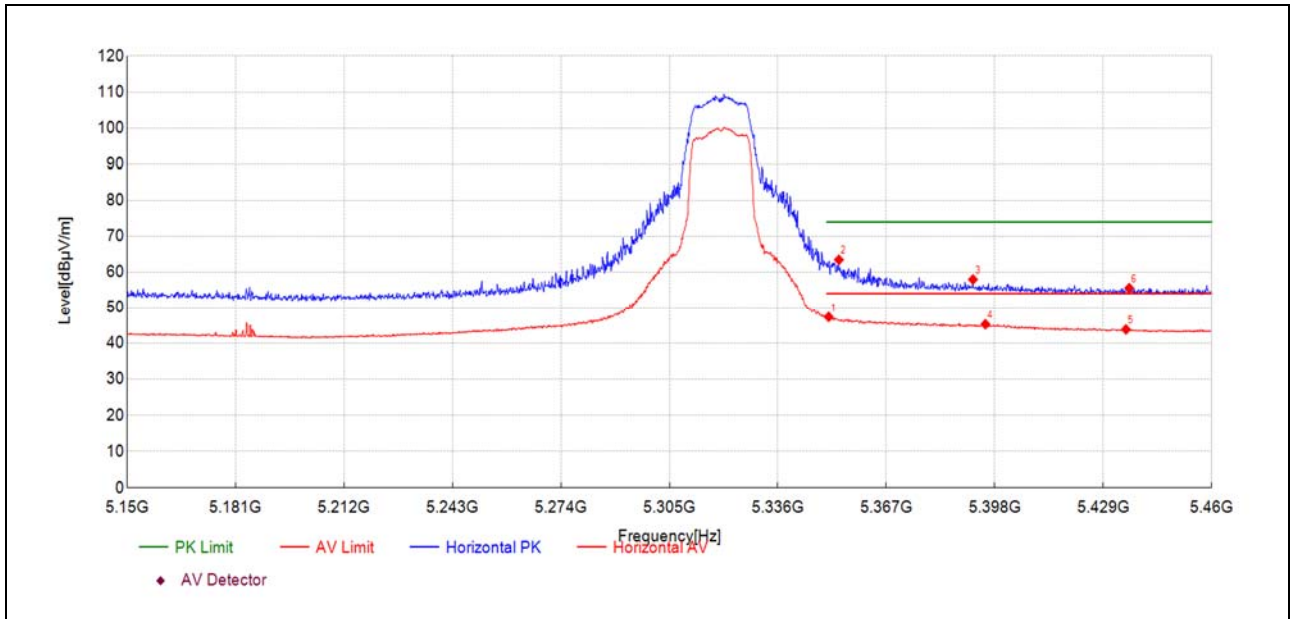
Plot for Channel 52



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4662.43	40.4	52.12	11.680	74.00	21.88	167	PK	Horizontal	PASS
4724.51	27.8	39.75	11.990	54.00	14.25	97	AV	Horizontal	PASS
4937.54	40.5	52.71	12.240	74.00	21.29	298	PK	Horizontal	PASS
5028.54	28.4	41.65	13.240	54.00	12.35	242	AV	Horizontal	PASS
5148.87	28.6	43.17	14.570	54.00	10.83	97	AV	Horizontal	PASS
5148.87	41.0	55.55	14.570	74.00	18.45	172	PK	Horizontal	PASS



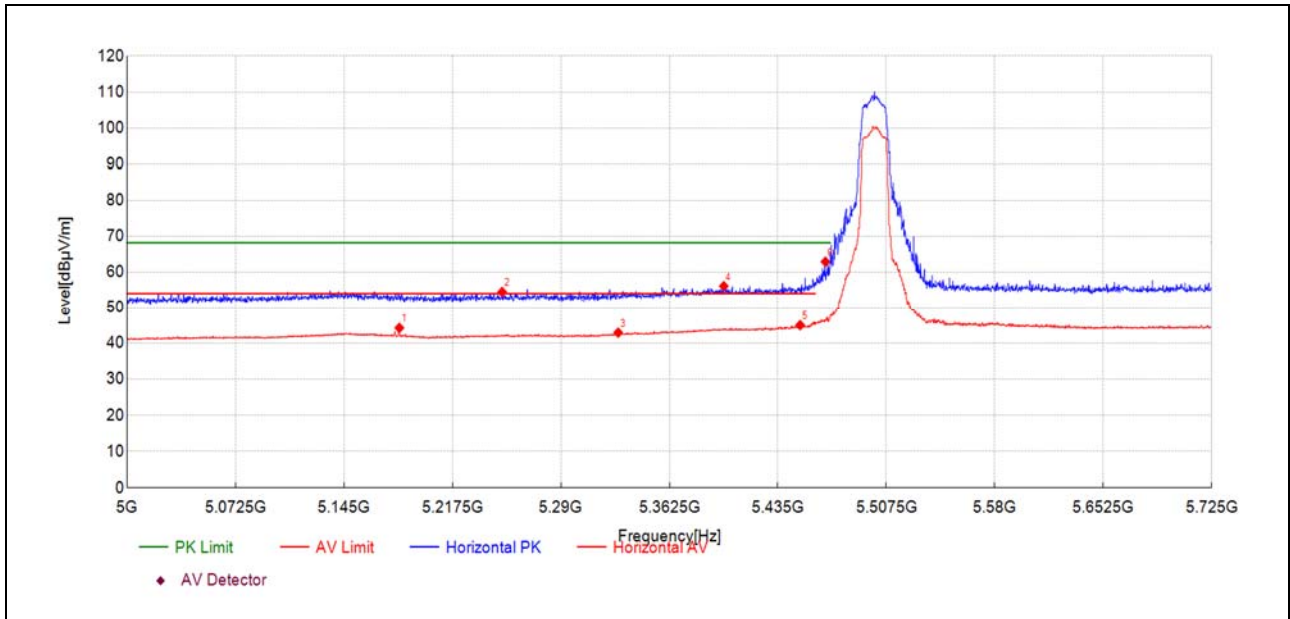
Plot for Channel 64



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5350.52	32.3	47.33	14.990	54.00	6.67	110	AV	Horizontal	PASS
5353.46	48.4	63.46	15.030	74.00	10.54	58	PK	Horizontal	PASS
5391.77	42.4	57.96	15.560	74.00	16.04	119	PK	Horizontal	PASS
5395.33	29.7	45.27	15.610	54.00	8.73	114	AV	Horizontal	PASS
5435.50	28.6	43.82	15.240	54.00	10.18	114	AV	Horizontal	PASS
5436.43	40.3	55.56	15.240	74.00	18.44	133	PK	Horizontal	PASS



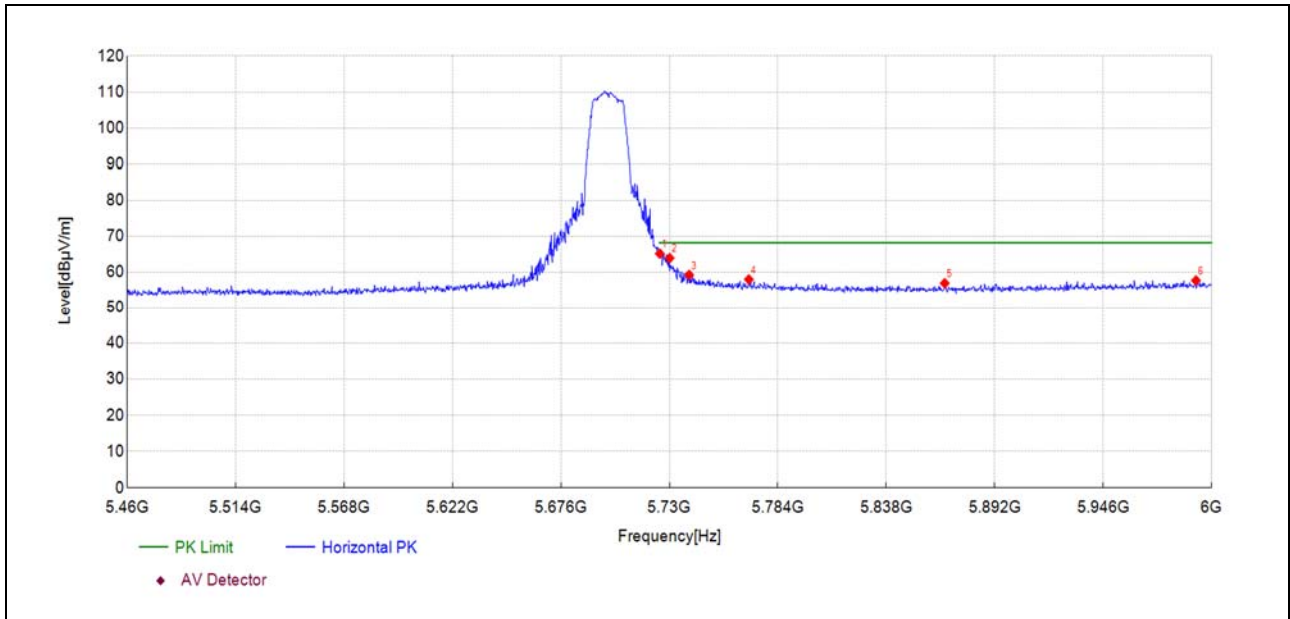
Plot for Channel 100



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5182.04	30.3	44.24	13.960	54.00	9.76	283	AV	Horizontal	PASS
5250.69	40.1	54.48	14.400	68.23	13.75	46	PK	Horizontal	PASS
5328.29	28.2	42.92	14.770	54.00	11.08	121	AV	Horizontal	PASS
5398.88	40.5	56.12	15.660	68.23	12.11	323	PK	Horizontal	PASS
5449.89	29.9	45.01	15.070	54.00	8.99	110	AV	Horizontal	PASS
5466.81	47.8	62.93	15.130	68.23	5.30	106	PK	Horizontal	PASS



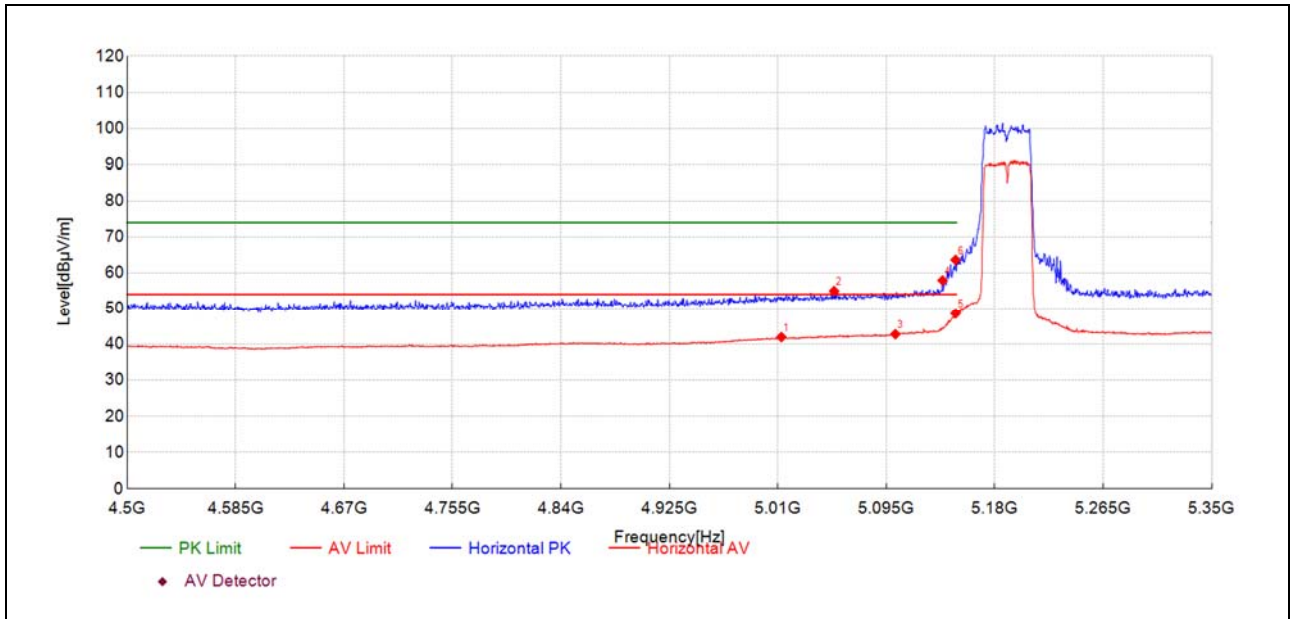
Plot for Channel 140



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5725.27	48.9	65.18	16.250	68.23	3.05	105	PK	Horizontal	PASS
5730.14	47.7	63.93	16.260	68.23	4.30	108	PK	Horizontal	PASS
5739.86	43.0	59.26	16.280	68.23	8.97	114	PK	Horizontal	PASS
5769.57	41.8	57.99	16.170	68.23	10.24	114	PK	Horizontal	PASS
5867.09	40.9	56.93	16.030	68.23	11.30	329	PK	Horizontal	PASS
5992.17	40.7	57.71	17.050	68.23	10.52	335	PK	Horizontal	PASS

**802.11n (HT40) Mode**

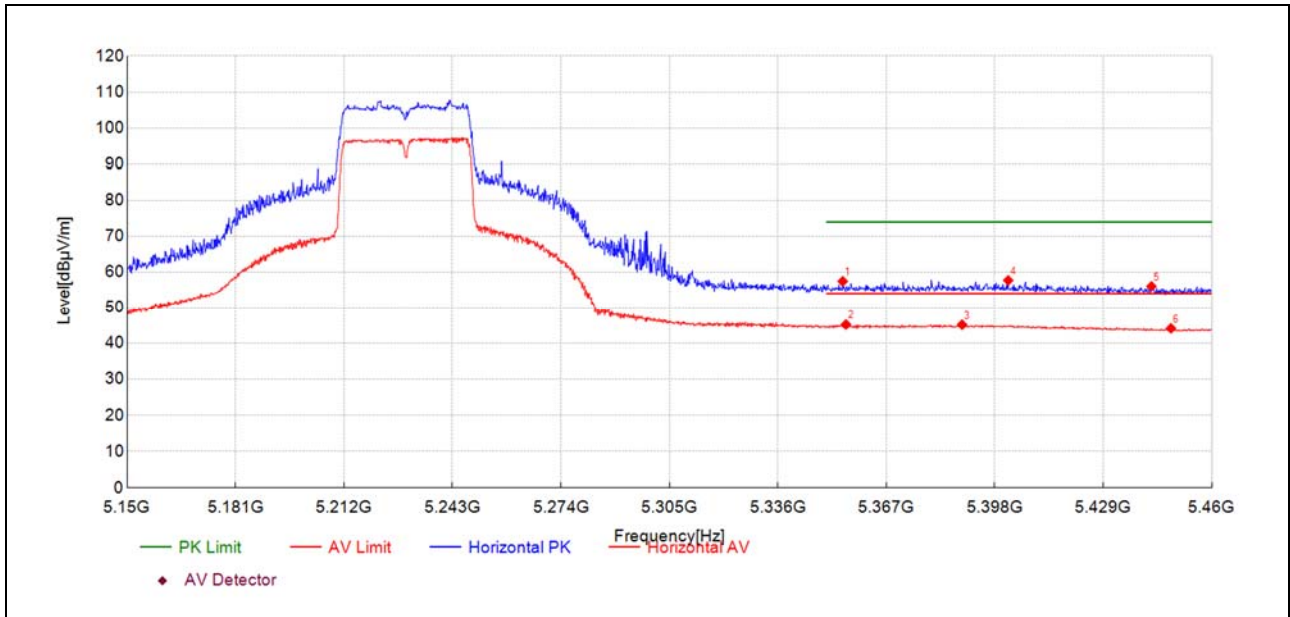
Plot for Channel 38



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5012.81	28.9	41.96	13.110	54.00	12.04	139	AV	Horizontal	PASS
5054.05	41.5	54.96	13.460	74.00	19.04	144	PK	Horizontal	PASS
5102.10	29.1	42.78	13.720	54.00	11.22	100	AV	Horizontal	PASS
5139.09	43.5	57.93	14.390	74.00	16.07	134	PK	Horizontal	PASS
5149.30	34.0	48.60	14.580	54.00	5.40	62	AV	Horizontal	PASS
5149.30	49.1	63.64	14.580	74.00	10.36	139	PK	Horizontal	PASS

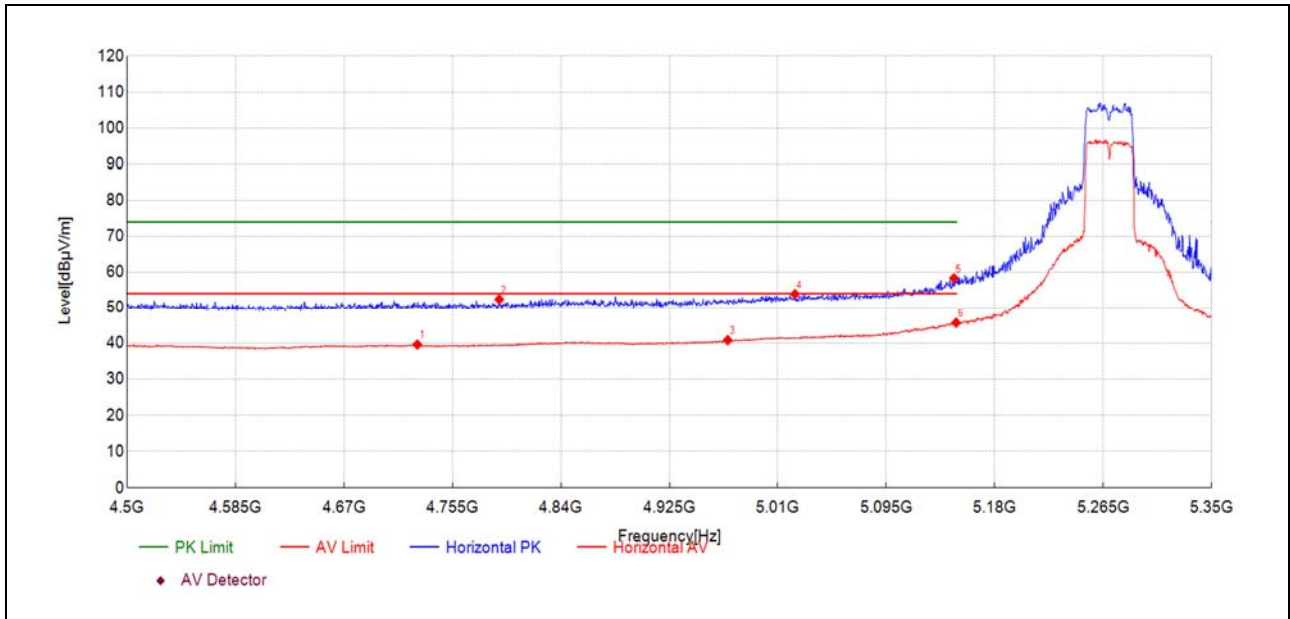


Plot for Channel 46



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5354.55	42.4	57.46	15.040	74.00	16.54	316	PK	Horizontal	PASS
5355.48	30.1	45.20	15.060	54.00	8.80	52	AV	Horizontal	PASS
5388.66	29.6	45.14	15.520	54.00	8.86	57	AV	Horizontal	PASS
5401.85	42.1	57.73	15.660	74.00	16.27	43	PK	Horizontal	PASS
5442.79	40.9	56.06	15.160	74.00	17.94	57	PK	Horizontal	PASS
5448.37	29.0	44.13	15.090	54.00	9.87	38	AV	Horizontal	PASS

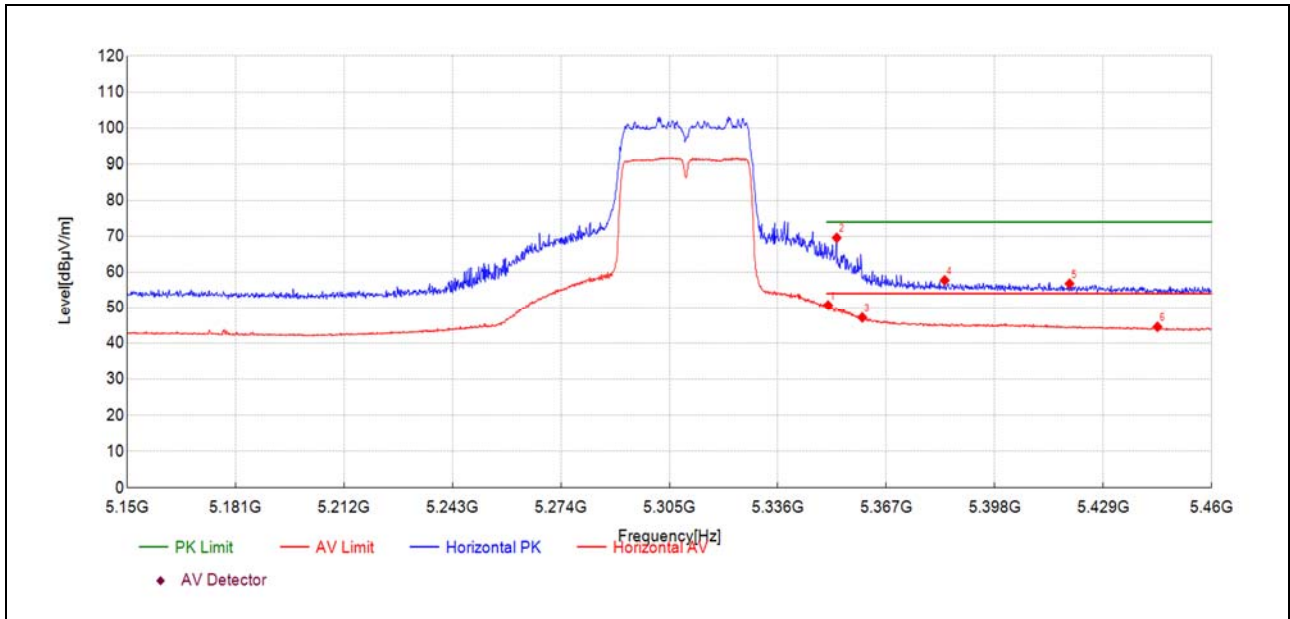
Plot for Channel 54



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
4727.49	27.6	39.62	11.980	54.00	14.38	89	AV	Horizontal	PASS
4791.70	40.5	52.43	11.970	74.00	21.57	210	PK	Horizontal	PASS
4970.71	28.3	40.84	12.560	54.00	13.16	149	AV	Horizontal	PASS
5023.44	40.7	53.90	13.200	74.00	20.10	330	PK	Horizontal	PASS
5148.02	43.8	58.31	14.550	74.00	15.69	107	PK	Horizontal	PASS
5149.72	31.1	45.71	14.590	54.00	8.29	136	AV	Horizontal	PASS



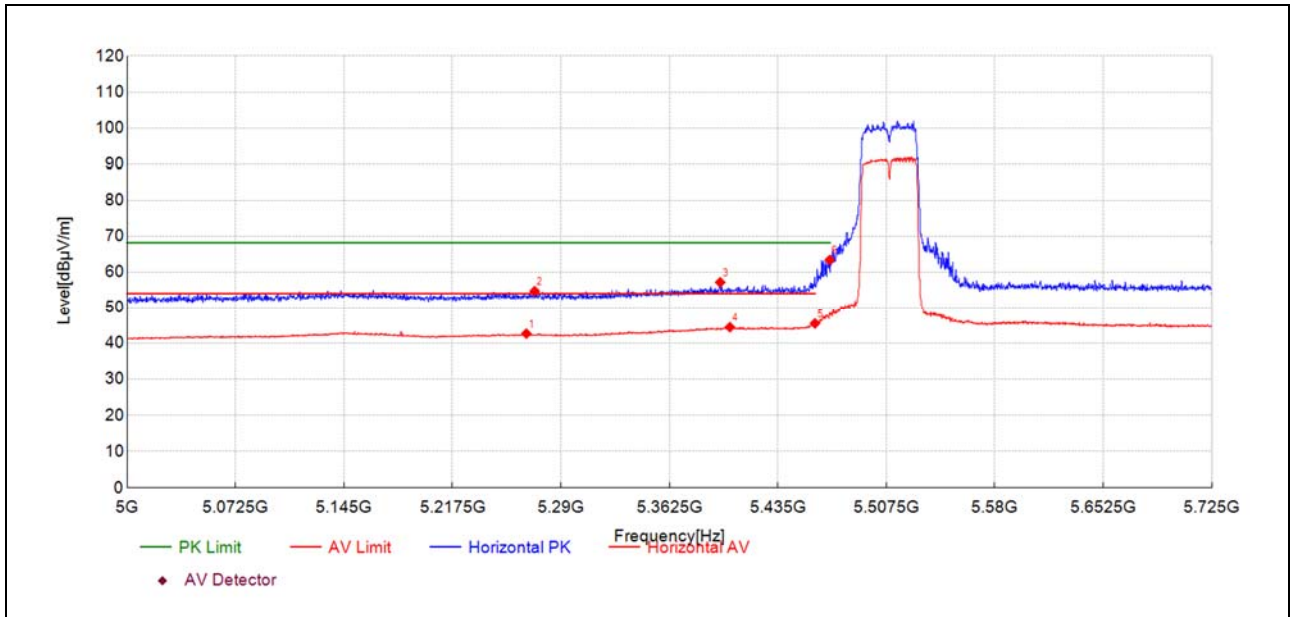
Plot for Channel 62



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5350.36	35.7	50.71	14.990	54.00	3.29	67	AV	Horizontal	PASS
5352.84	54.6	69.59	15.020	74.00	4.41	73	PK	Horizontal	PASS
5360.13	32.1	47.17	15.120	54.00	6.83	70	AV	Horizontal	PASS
5383.70	42.3	57.72	15.450	74.00	16.28	54	PK	Horizontal	PASS
5419.37	41.4	56.79	15.440	74.00	17.21	117	PK	Horizontal	PASS
5444.49	29.4	44.55	15.140	54.00	9.45	60	AV	Horizontal	PASS



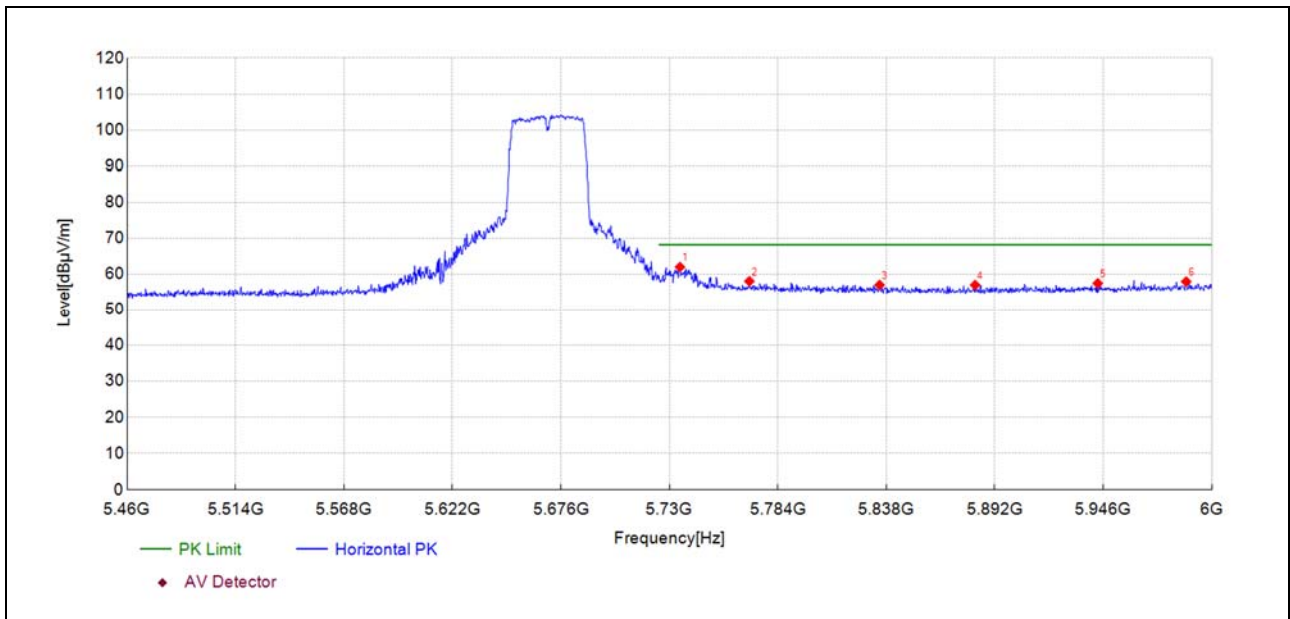
Plot for Channel 102



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5266.89	28.2	42.66	14.430	54.00	11.34	300	AV	Horizontal	PASS
5272.45	40.3	54.73	14.440	68.23	13.50	294	PK	Horizontal	PASS
5396.47	41.6	57.19	15.630	68.23	11.04	151	PK	Horizontal	PASS
5402.99	28.8	44.45	15.640	54.00	9.55	324	AV	Horizontal	PASS
5459.80	30.4	45.50	15.110	54.00	8.50	68	AV	Horizontal	PASS
5469.71	48.3	63.44	15.140	68.23	4.79	97	PK	Horizontal	PASS



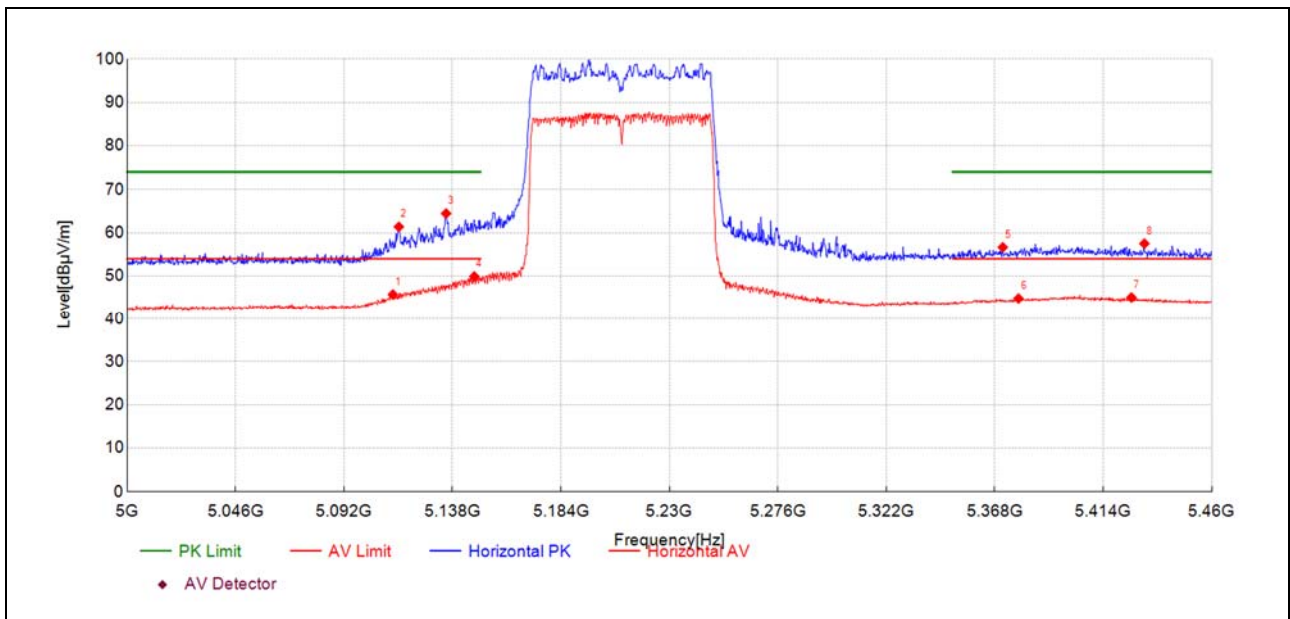
Plot for Channel 134



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5735.27	45.7	62.01	16.270	68.23	6.22	50	PK	Horizontal	PASS
5769.84	41.9	58.04	16.170	68.23	10.19	114	PK	Horizontal	PASS
5834.68	41.0	57.01	15.980	68.23	11.22	59	PK	Horizontal	PASS
5882.22	40.9	56.98	16.090	68.23	11.25	38	PK	Horizontal	PASS
5943.27	41.0	57.46	16.500	68.23	10.77	93	PK	Horizontal	PASS
5987.30	41.0	57.95	16.990	68.23	10.28	105	PK	Horizontal	PASS

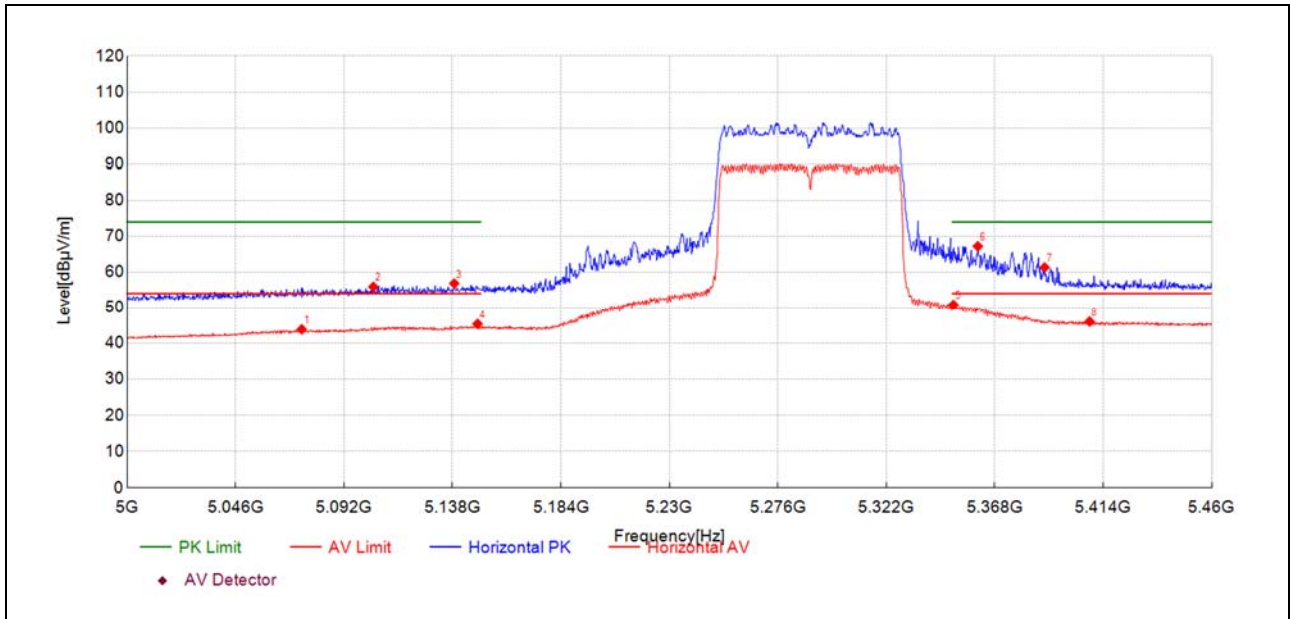
**802.11ac (VHT80) Mode**

Plot for Channel 42



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5112.76	31.8	45.72	13.910	54.00	8.28	133	AV	Horizontal	PASS
5115.29	47.4	61.39	13.960	74.00	12.61	57	PK	Horizontal	PASS
5135.31	50.1	64.47	14.330	74.00	9.53	96	PK	Horizontal	PASS
5147.27	35.4	49.90	14.540	54.00	4.10	57	AV	Horizontal	PASS
5371.41	41.4	56.66	15.280	74.00	17.34	331	PK	Horizontal	PASS
5378.08	29.4	44.79	15.370	54.00	9.21	62	AV	Horizontal	PASS
5425.94	29.7	45.03	15.360	54.00	8.97	52	AV	Horizontal	PASS
5431.47	42.2	57.50	15.300	74.00	16.50	43	PK	Horizontal	PASS

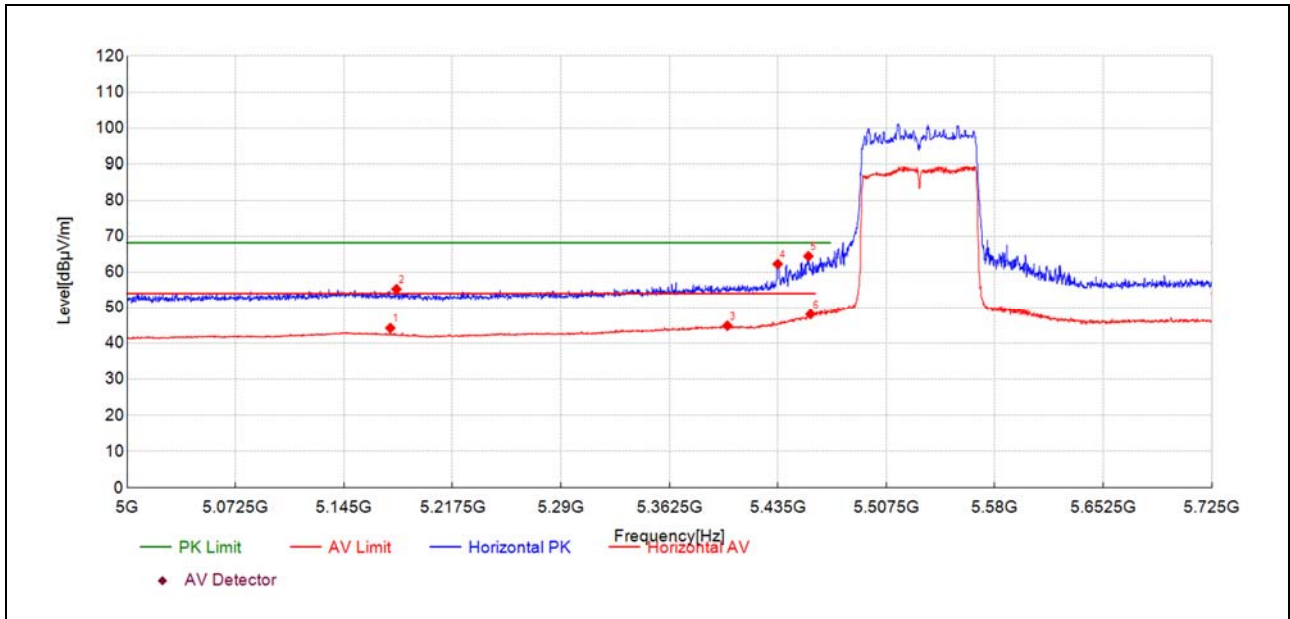
Plot for Channel 58



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5074.10	30.3	43.85	13.550	54.00	10.15	126	AV	Horizontal	PASS
5104.47	42.2	55.92	13.760	74.00	18.08	321	PK	Horizontal	PASS
5138.76	42.5	56.85	14.390	74.00	17.15	55	PK	Horizontal	PASS
5148.65	30.8	45.37	14.570	54.00	8.63	55	AV	Horizontal	PASS
5350.47	35.9	50.85	14.990	54.00	3.15	98	AV	Horizontal	PASS
5360.82	52.1	67.23	15.130	74.00	6.77	51	PK	Horizontal	PASS
5389.12	45.8	61.35	15.530	74.00	12.65	336	PK	Horizontal	PASS
5408.22	30.5	46.03	15.580	54.00	7.97	65	AV	Horizontal	PASS



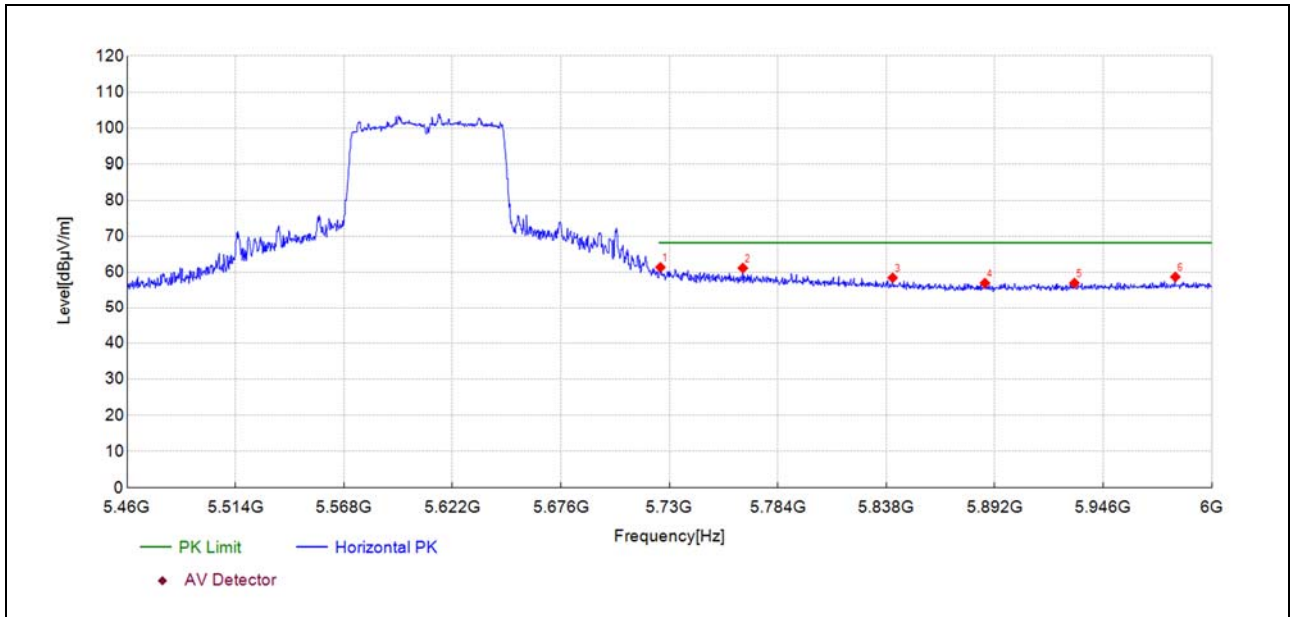
Plot for Channel 106



Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
5175.99	30.1	44.20	14.080	54.00	9.80	274	AV	Horizontal	PASS
5180.10	41.3	55.27	14.000	68.23	12.96	69	PK	Horizontal	PASS
5401.30	29.2	44.85	15.660	54.00	9.15	56	AV	Horizontal	PASS
5434.90	47.0	62.29	15.250	68.23	5.94	52	PK	Horizontal	PASS
5455.45	49.4	64.46	15.090	68.23	3.77	49	PK	Horizontal	PASS
5456.90	33.0	48.11	15.100	54.00	5.89	62	AV	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
5725.54	45.1	61.38	16.250	68.23	6.85	77	PK	Horizontal	PASS
5766.60	45.0	61.16	16.190	68.23	7.07	106	PK	Horizontal	PASS
5841.16	42.5	58.45	15.970	68.23	9.78	64	PK	Horizontal	PASS
5887.08	40.9	56.98	16.110	68.23	11.25	14	PK	Horizontal	PASS
5931.66	40.6	56.98	16.400	68.23	11.25	68	PK	Horizontal	PASS
5981.90	41.8	58.69	16.930	68.23	9.54	106	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.

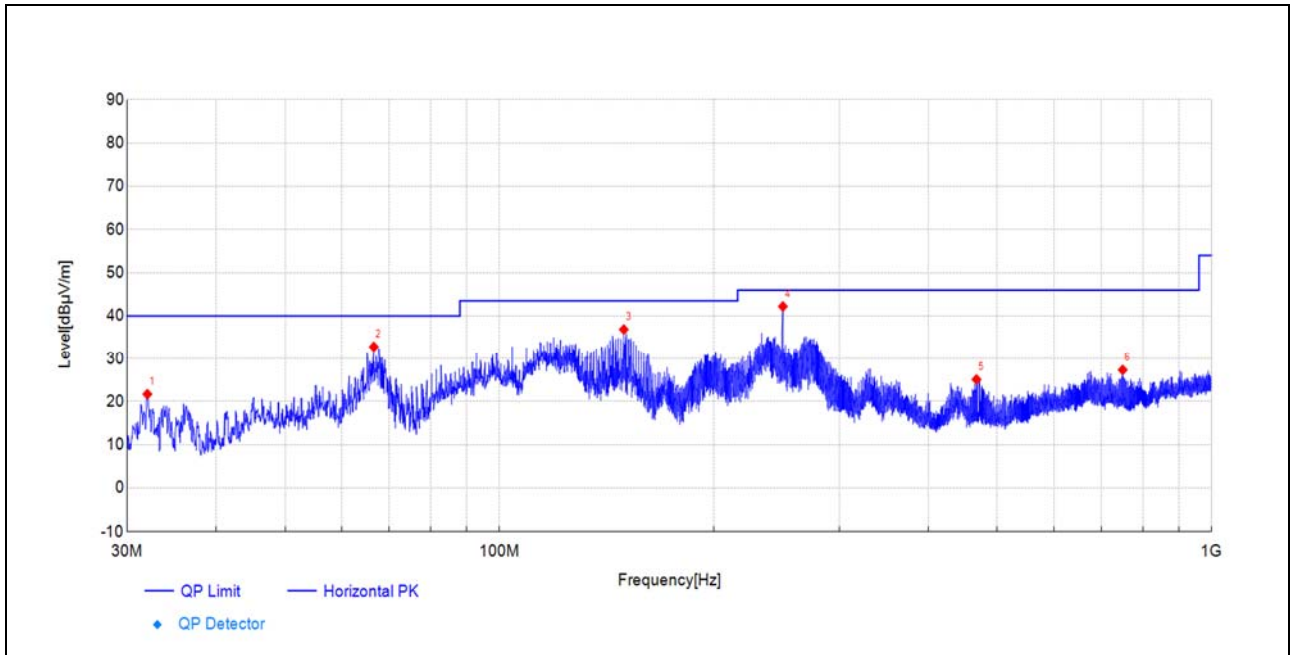
Note2: For the frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

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.

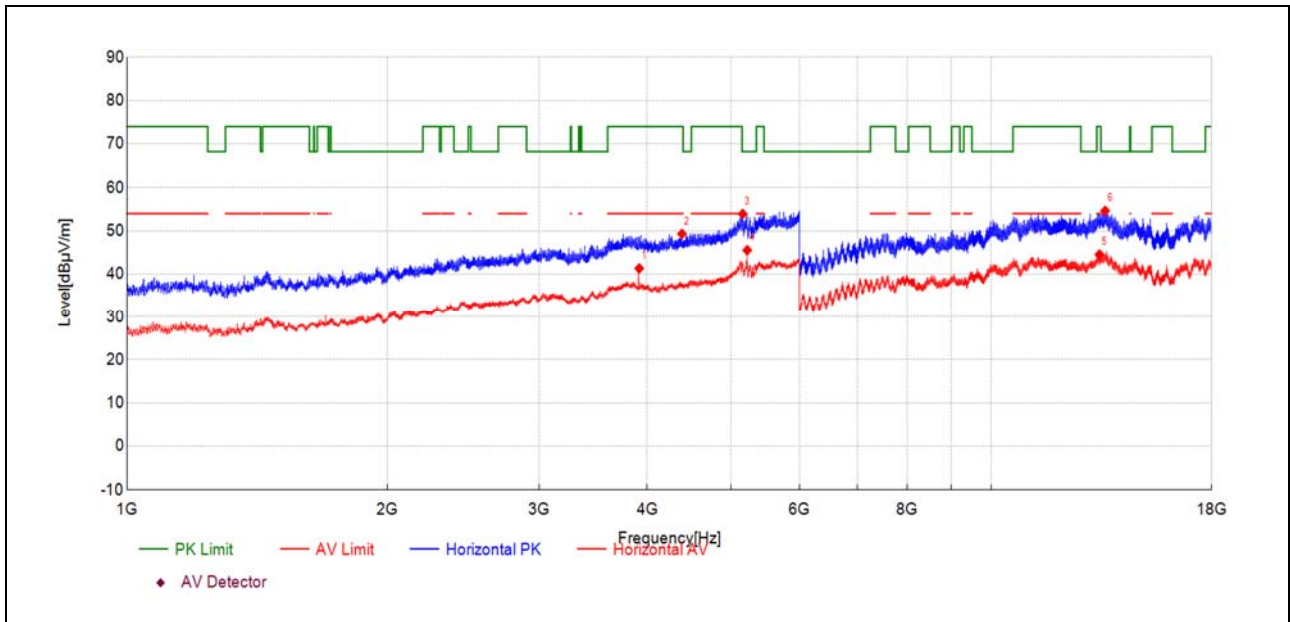
**802.11a Mode**

Plot for Channel 44



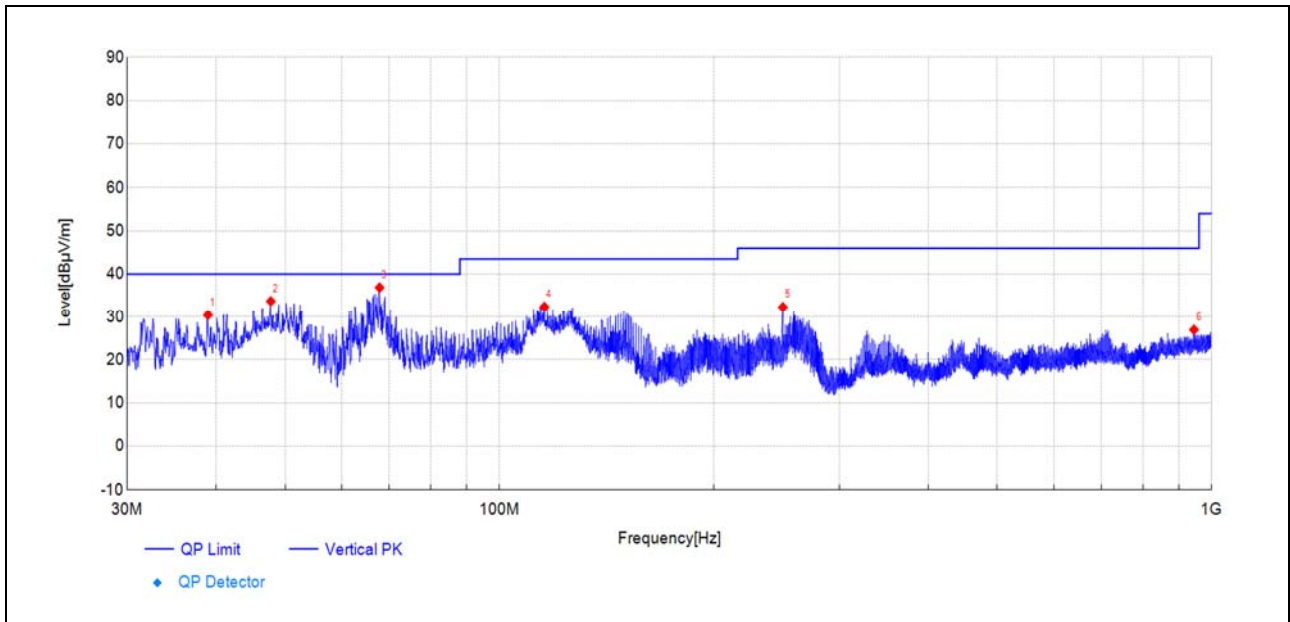
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
32.04	52.2	21.70	-30.480	40.00	18.30	61	PK	Horizontal	PASS
66.62	63.6	32.81	-30.820	40.00	7.19	360	PK	Horizontal	PASS
149.51	68.5	36.86	-31.620	43.50	6.64	77	PK	Horizontal	PASS
250.01	69.7	42.20	-27.490	46.00	3.80	109	PK	Horizontal	PASS
467.49	46.7	25.10	-21.630	46.00	20.90	109	PK	Horizontal	PASS
750.02	42.2	27.32	-14.840	46.00	18.68	250	PK	Horizontal	PASS



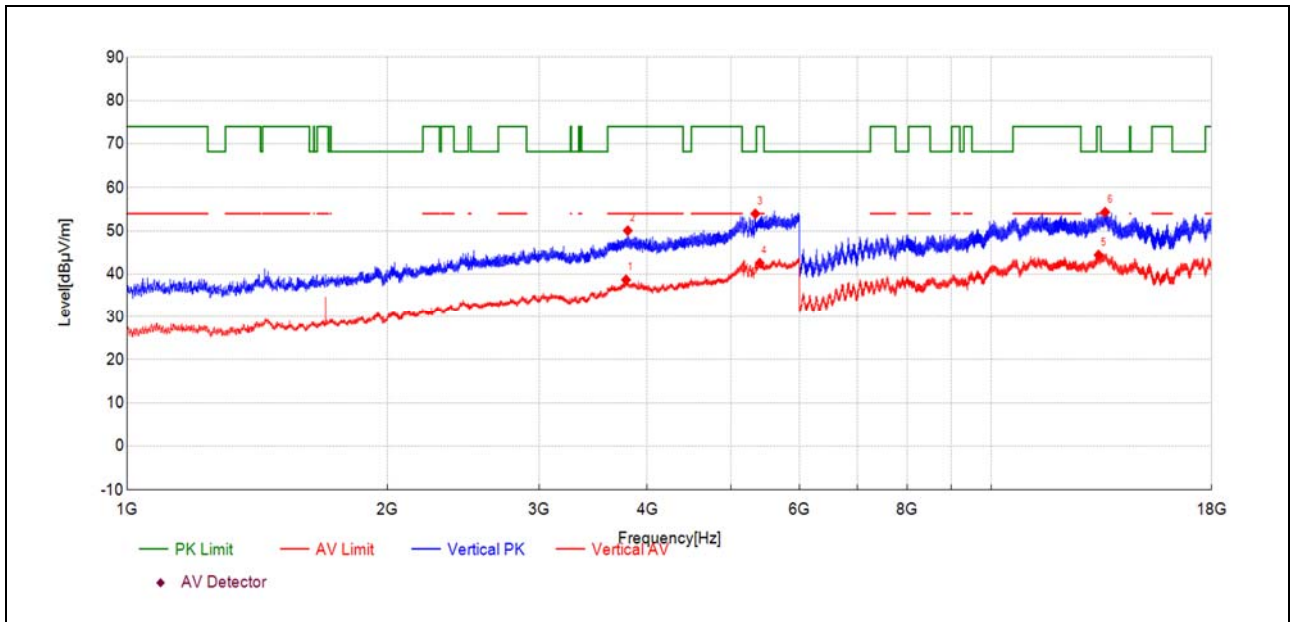
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
3915.27	29.8	41.33	11.550	54.00	12.67	120	AV	Horizontal	PASS
4387.58	37.0	49.31	12.330	74.00	24.69	162	PK	Horizontal	PASS
5158.56	37.0	53.93	16.890	68.23	14.30	44	PK	Horizontal	PASS
5220.84	29.1	45.54	16.420	-	-	66	AV	Horizontal	NA
13348.61	28.1	44.55	16.460	54.00	9.45	285	AV	Horizontal	PASS
13549.26	37.6	54.65	17.090	68.23	13.58	26	PK	Horizontal	PASS



(Antenna Vertical, 30MHz to 1GHz)

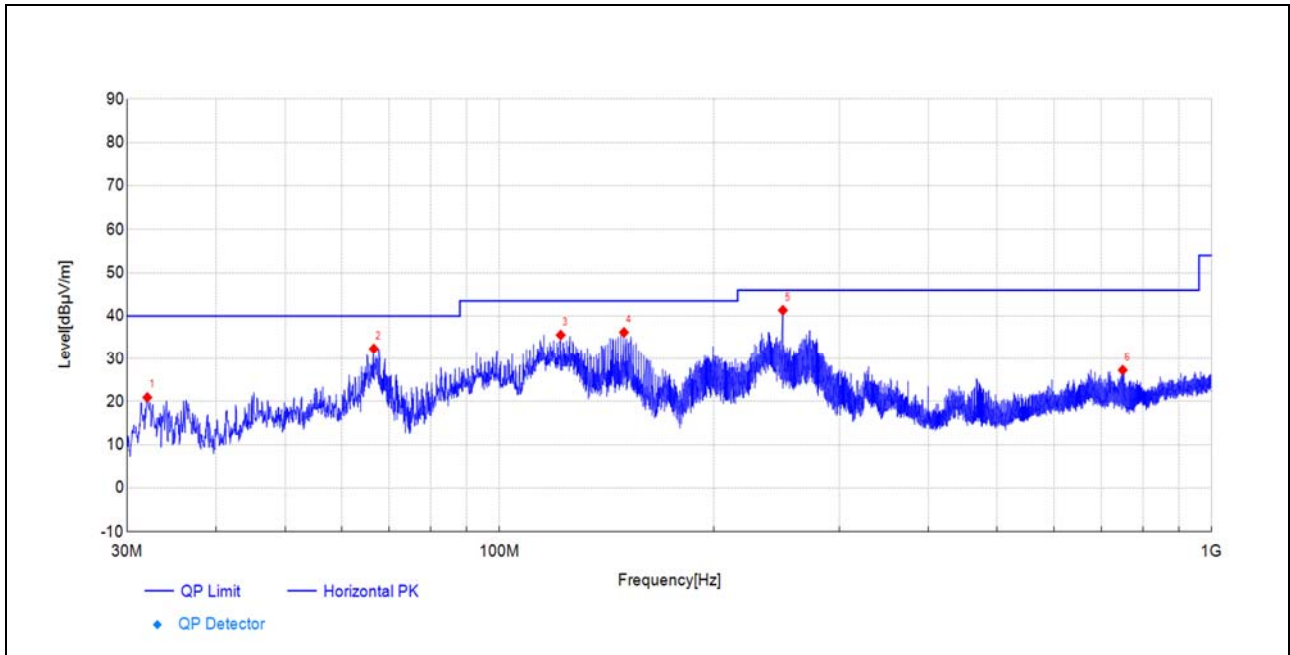
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
38.97	59.7	30.39	-29.340	40.00	9.61	98	PK	Vertical	PASS
47.75	62.2	33.68	-28.480	40.00	6.32	225	PK	Vertical	PASS
67.88	68.0	36.86	-31.090	40.00	3.14	98	PK	Vertical	PASS
115.61	62.5	32.38	-30.100	43.50	11.12	66	PK	Vertical	PASS
250.01	59.8	32.30	-27.490	46.00	13.70	351	PK	Vertical	PASS
944.42	38.2	26.94	-11.210	46.00	19.06	314	PK	Vertical	PASS



(Antenna Vertical, 1GHz to 18GHz)

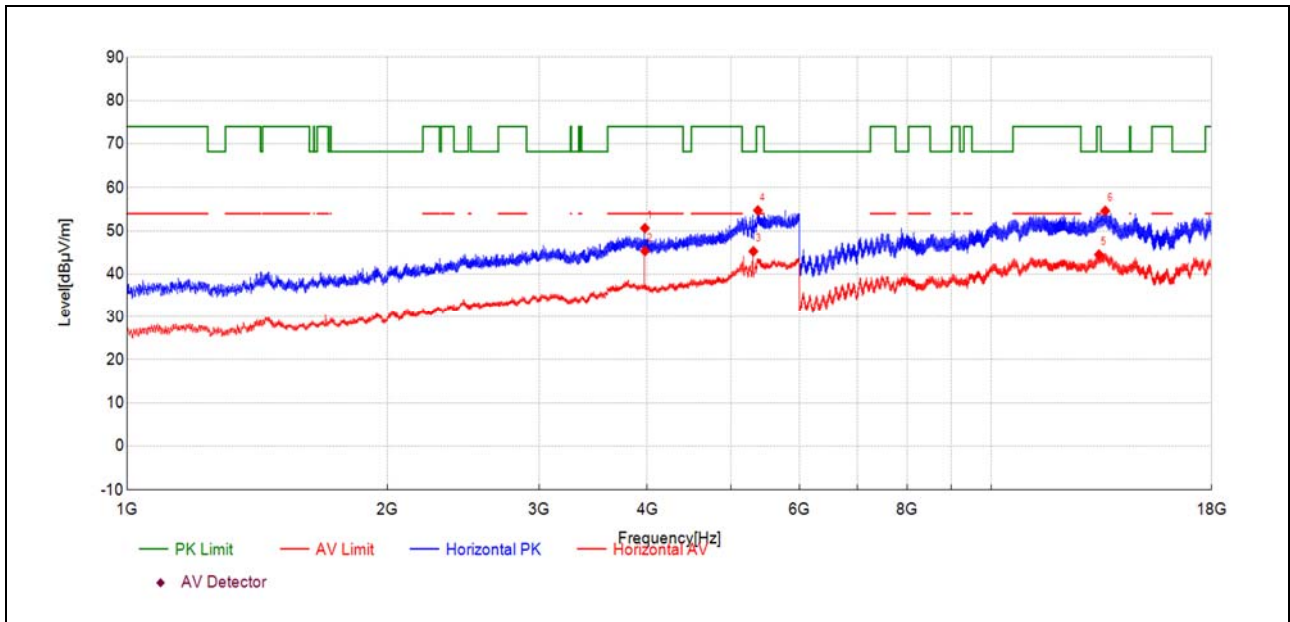
Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
3779.80	27.5	38.70	11.170	54.00	15.30	229	AV	Vertical	PASS
3797.53	38.8	50.07	11.310	74.00	23.93	96	PK	Vertical	PASS
5334.48	36.8	53.97	17.220	68.23	14.26	124	PK	Vertical	PASS
5397.22	24.4	42.58	18.150	54.00	11.42	144	AV	Vertical	PASS
13313.57	27.9	44.43	16.510	54.00	9.57	112	AV	Vertical	PASS
13551.66	37.3	54.34	17.090	68.23	13.89	112	PK	Vertical	PASS

Plot for Channel 60



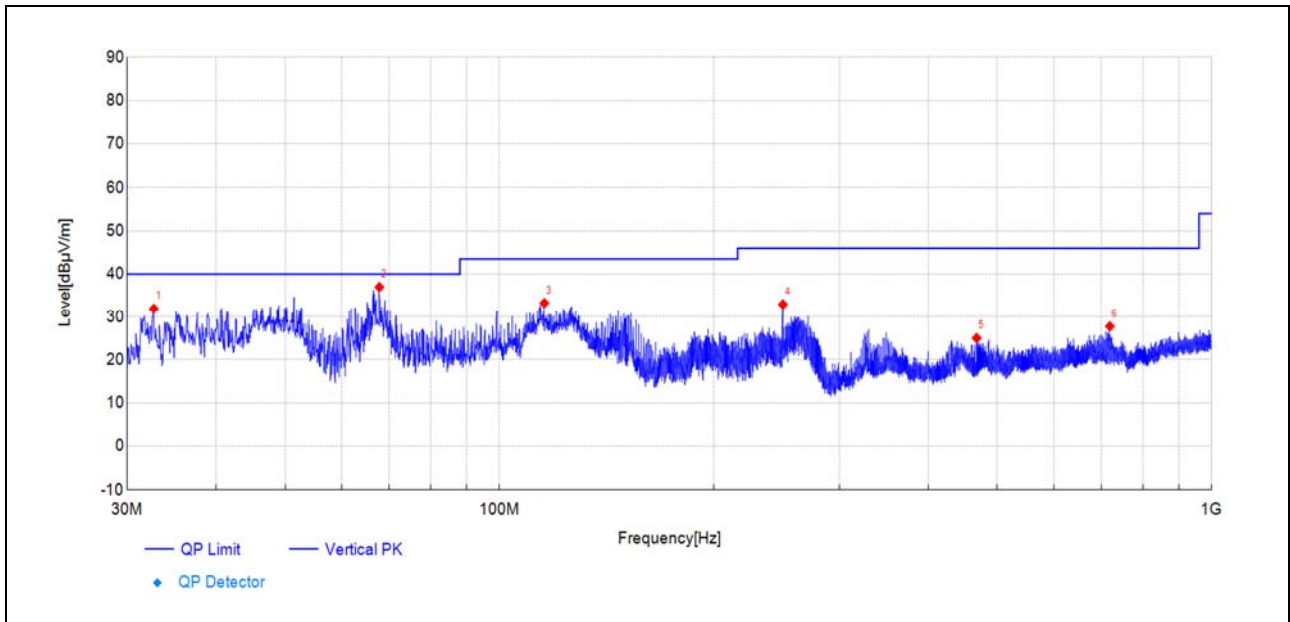
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
32.04	51.4	20.95	-30.480	40.00	19.05	178	PK	Horizontal	PASS
66.62	63.2	32.37	-30.820	40.00	7.63	14	PK	Horizontal	PASS
121.91	66.7	35.59	-31.140	43.50	7.91	94	PK	Horizontal	PASS
149.56	67.8	36.21	-31.600	43.50	7.29	68	PK	Horizontal	PASS
250.01	68.8	41.33	-27.490	46.00	4.67	100	PK	Horizontal	PASS
750.02	42.1	27.29	-14.840	46.00	18.71	247	PK	Horizontal	PASS



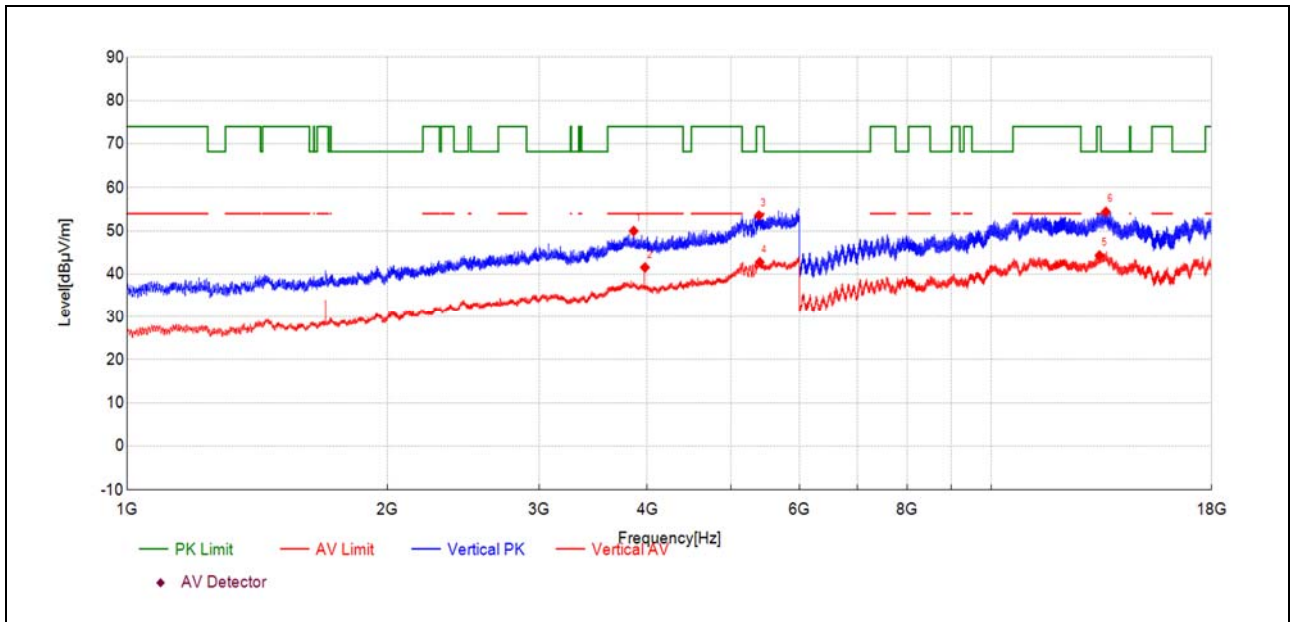
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
3974.82	39.0	50.63	11.630	74.00	23.37	92	PK	Horizontal	PASS
3975.27	33.7	45.36	11.640	54.00	8.64	92	AV	Horizontal	PASS
5307.21	28.4	45.28	16.900	-	-	63	AV	Horizontal	NA
5371.76	37.0	54.74	17.740	74.00	19.26	49	PK	Horizontal	PASS
13328.45	28.1	44.54	16.490	54.00	9.46	74	AV	Horizontal	PASS
13554.54	37.6	54.64	17.090	68.23	13.59	31	PK	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
32.72	62.4	31.92	-30.470	40.00	8.08	59	PK	Vertical	PASS
67.83	68.1	36.98	-31.080	40.00	3.02	70	PK	Vertical	PASS
115.61	63.4	33.25	-30.100	43.50	10.25	112	PK	Vertical	PASS
250.01	60.4	32.94	-27.490	46.00	13.06	330	PK	Vertical	PASS
467.73	46.6	25.01	-21.580	46.00	20.99	49	PK	Vertical	PASS
719.46	43.4	27.73	-15.660	46.00	18.27	117	PK	Vertical	PASS

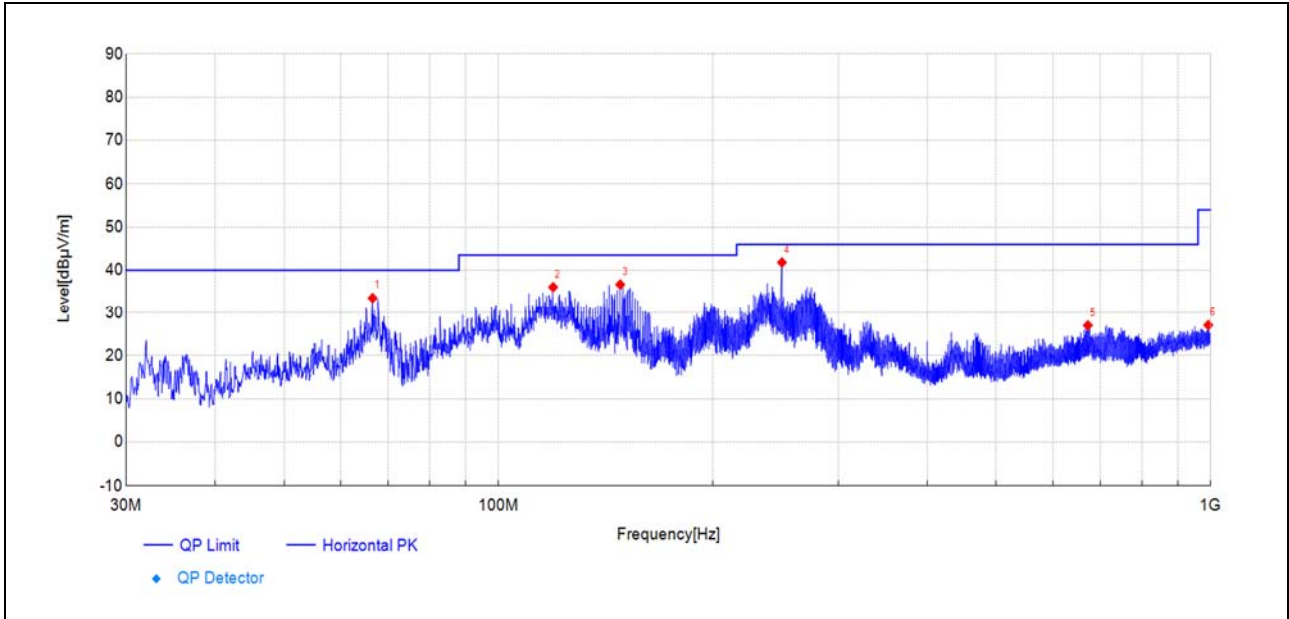


(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
3857.53	38.7	49.97	11.280	74.00	24.03	7	PK	Vertical	PASS
3975.27	29.9	41.55	11.640	54.00	12.45	49	AV	Vertical	PASS
5386.31	35.6	53.55	17.980	74.00	20.45	223	PK	Vertical	PASS
5397.67	24.6	42.75	18.160	54.00	11.25	168	AV	Vertical	PASS
13347.65	27.9	44.34	16.460	54.00	9.66	278	AV	Vertical	PASS
13575.18	37.3	54.42	17.100	68.23	13.81	170	PK	Vertical	PASS

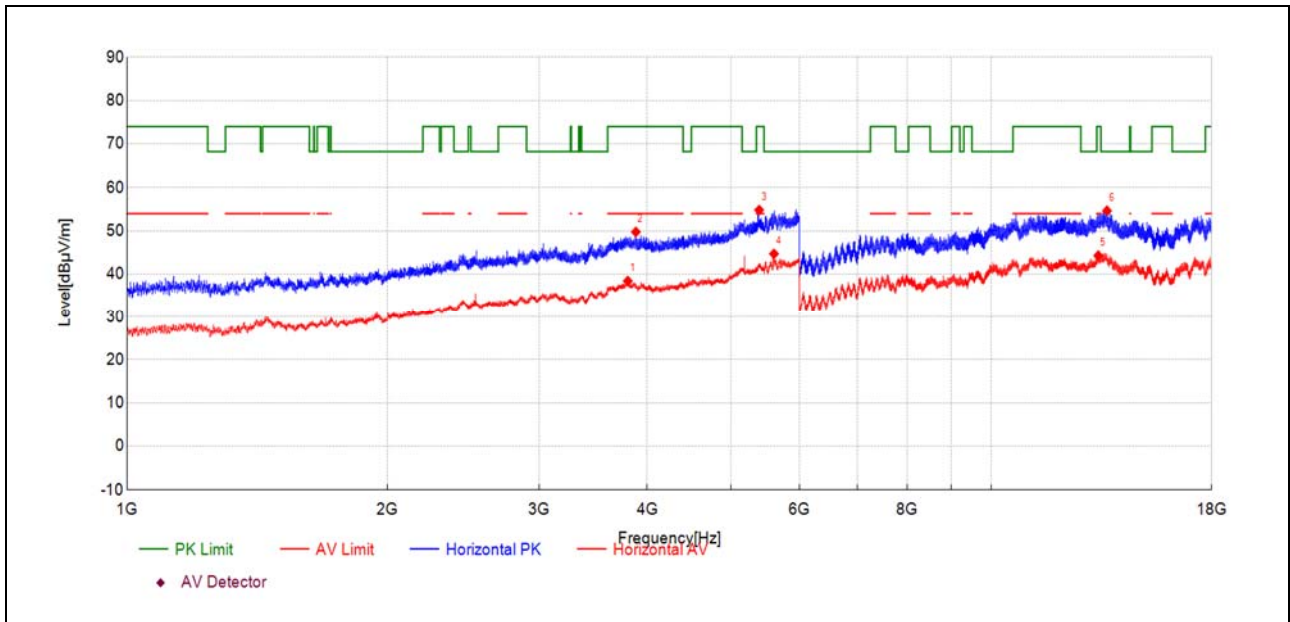


Plot for Channel 120



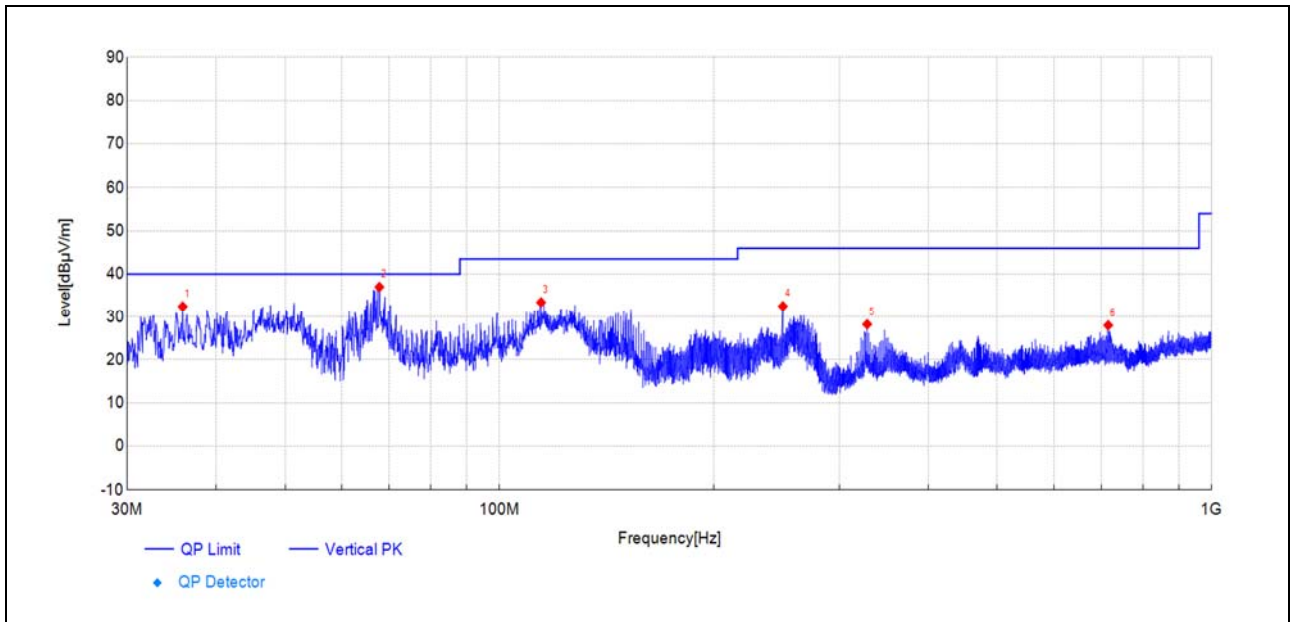
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
66.57	64.3	33.50	-30.800	40.00	6.50	157	PK	Horizontal	PASS
119.34	66.7	36.06	-30.630	43.50	7.44	98	PK	Horizontal	PASS
148.25	68.5	36.67	-31.870	43.50	6.83	83	PK	Horizontal	PASS
250.01	69.3	41.81	-27.490	46.00	4.19	120	PK	Horizontal	PASS
672.22	43.2	26.99	-16.190	46.00	19.01	25	PK	Horizontal	PASS
992.19	37.6	27.07	-10.490	54.00	26.93	277	PK	Horizontal	PASS



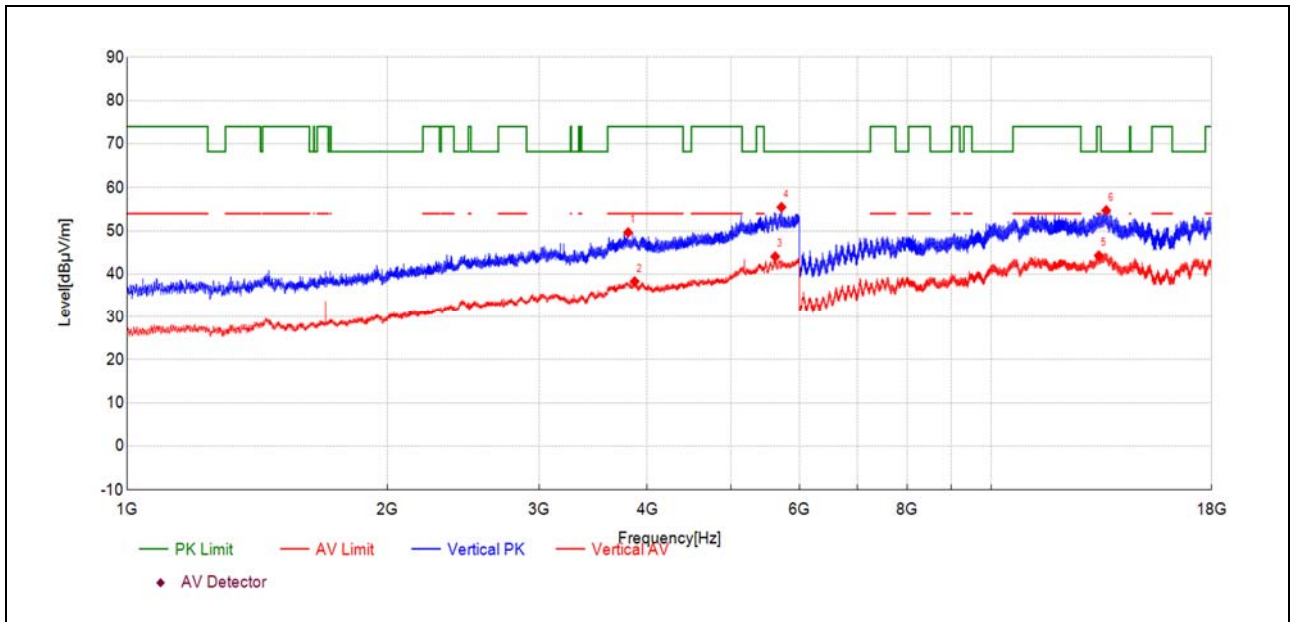
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Polarity	Verdict
3797.98	27.1	38.40	11.300	54.00	15.60	120	AV	Horizontal	PASS
3880.26	38.4	49.77	11.380	74.00	24.23	14	PK	Horizontal	PASS
5389.04	37.2	54.84	17.650	74.00	19.16	92	PK	Horizontal	PASS
5606.33	26.6	44.69	18.130	-	-	106	AV	Horizontal	NA
13304.93	27.8	44.29	16.520	54.00	9.71	226	AV	Horizontal	PASS
13617.42	37.7	54.67	16.940	68.23	13.56	86	PK	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
35.92	62.1	32.45	-29.630	40.00	7.55	46	PK	Vertical	PASS
67.83	68.1	37.00	-31.080	40.00	3.00	99	PK	Vertical	PASS
114.39	63.2	33.43	-29.810	43.50	10.07	131	PK	Vertical	PASS
250.01	60.0	32.52	-27.490	46.00	13.48	351	PK	Vertical	PASS
328.24	52.6	28.22	-24.370	46.00	17.78	57	PK	Vertical	PASS
715.63	43.6	27.98	-15.610	46.00	18.02	114	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
3801.16	38.4	49.66	11.310	74.00	24.34	153	PK	Vertical	PASS
3867.99	27.0	38.31	11.340	54.00	15.69	96	AV	Vertical	PASS
5624.97	25.9	44.06	18.120	-	-	216	AV	Vertical	NA
5719.07	36.9	55.50	18.580	68.23	12.73	351	PK	Vertical	PASS
13322.69	27.8	44.29	16.500	54.00	9.71	161	AV	Vertical	PASS
13588.14	37.6	54.73	17.100	68.23	13.50	260	PK	Vertical	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

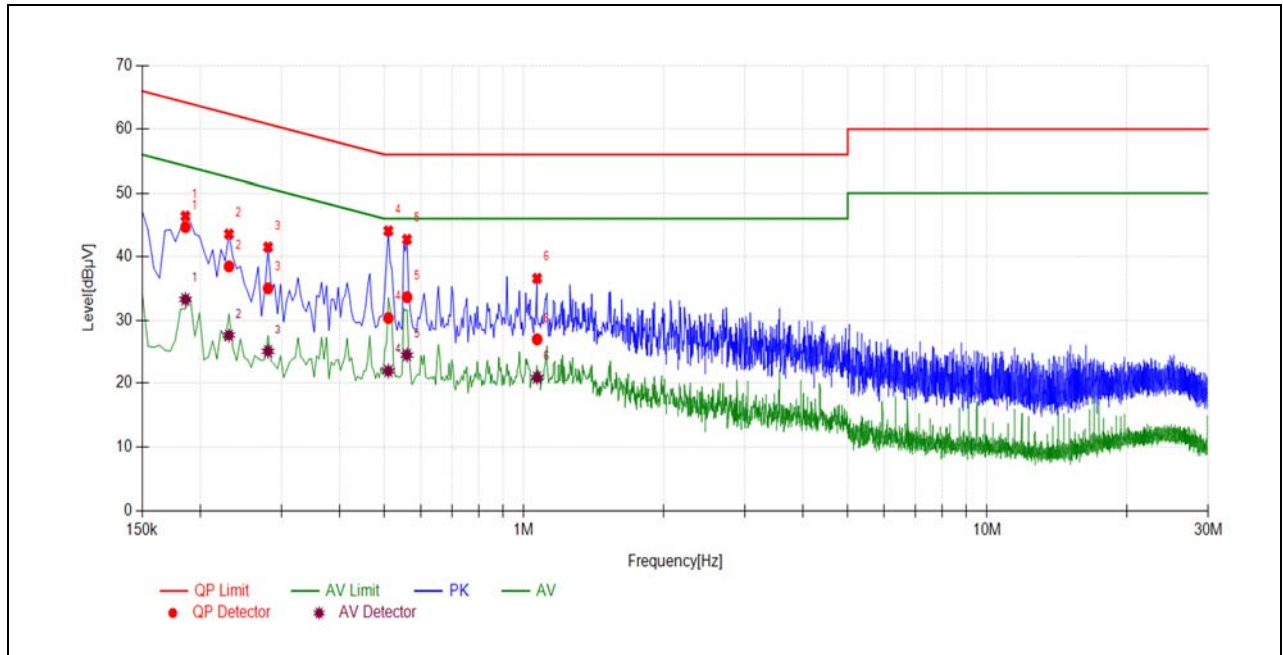
The measurement results are obtained as below:

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

U_R : Receiver Reading

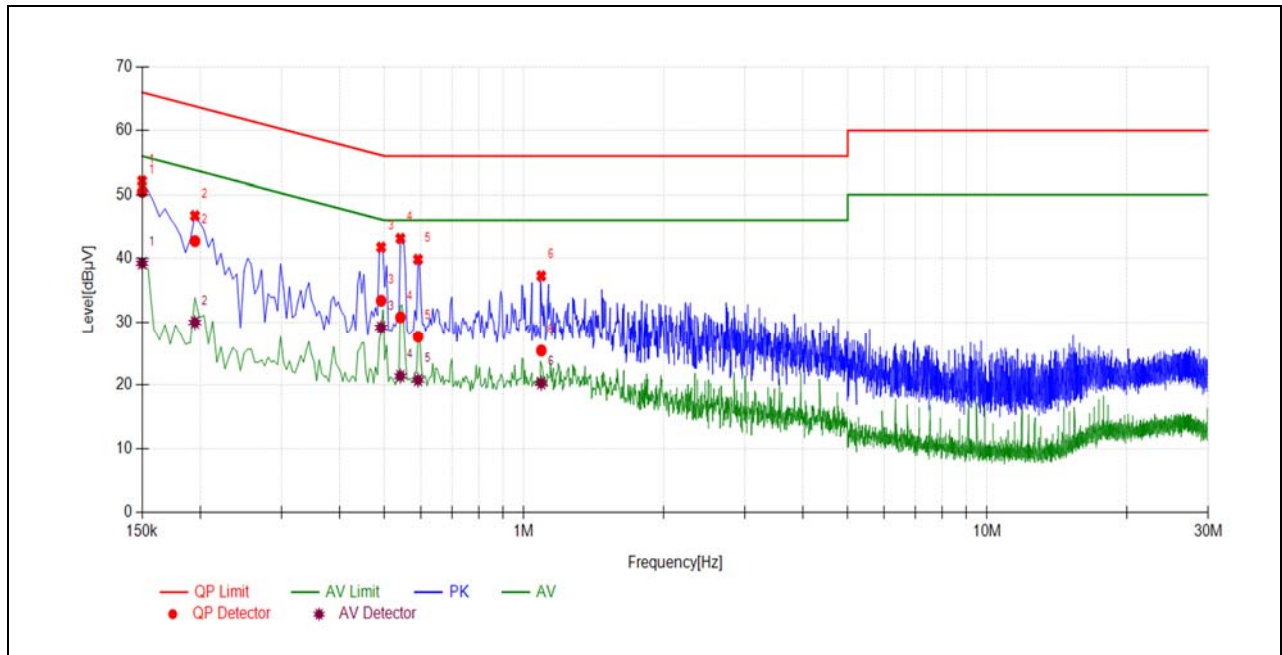
A_{Factor} : Voltage division factor of LISN

B. Test Plot:



(L Phase)

No.	Fre. (MHz)	Emission Level (dBμV)		Limit (dBμV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1860	44.67	33.30	64.21	54.21	Line	PASS
2	0.2310	38.48	27.52	62.41	52.41		PASS
3	0.2805	35.03	24.98	60.80	50.80		PASS
4	0.5100	30.36	21.88	56.00	46.00		PASS
5	0.5595	33.65	24.39	56.00	46.00		PASS
6	1.0679	26.85	20.84	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	0.1500	50.47	39.26	66.00	56.00	Neutral	PASS
2	0.1950	42.75	29.95	63.82	53.82		PASS
3	0.4920	33.38	29.14	56.13	46.13		PASS
4	0.5415	30.76	21.39	56.00	46.00		PASS
5	0.5910	27.65	20.75	56.00	46.00		PASS
6	1.0905	25.43	20.26	56.00	46.00		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 —————