

FCC EMC Test Report

Report No.: JYTSZ-R01-2500184
Applicant: 8devices
Address of Applicant: Antakalnio st. 17, Vilnius, LT-10312, Lithuania

Equipment Under Test (EUT)

Product Name: Pineapple
Model No.: Pineapple 5, Pineapple 5-I, Pineapple 5 Mini PCIe card, Pineapple 5 M.2 A+E card, Pineapple 5-I Mini PCIe card, Pineapple 5-I M.2 A+E card.
Trade Mark: N/A
FCC ID: Z9W-PIN5
Applicable Standards: FCC CFR Title 47 Part 15B
Date of Sample Receipt: 09 Apr., 2025
Date of Test: 10 Apr., to 15 Jul., 2025
Date of report Issued: 15 Jul., 2025
Test Result: PASS

Project by: _____

Date: _____ 15 Jul., 2025

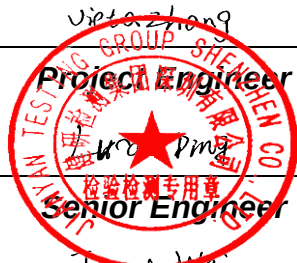
Reviewed by: _____

Date: _____ 15 Jul., 2025

Approved by: _____

Date: _____ 15 Jul., 2025

Manager



This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	15 Jul., 2025	Original

2 Contents

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3 General Information

3.1 Client Information

Applicant:	8devices
Address:	Antakalnio st. 17, Vilnius, LT-10312, Lithuania
Manufacturer/Factory:	8devices
Address:	Zirniu st. 26D, Vilnius, LT-02120, Lithuania

3.2 General Description of E.U.T.

Product Name:	Pineapple
Model No.:	Pineapple 5, Pineapple 5-I, Pineapple 5 Mini PCIe card, Pineapple 5 M.2 A+E card, Pineapple 5-I Mini PCIe card, Pineapple 5-I M.2 A+E card.
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Remark:	The only difference between Pineapple 5 and Pineapple 5-I is that Pineapple 5 use QCN-9074-0 while Pineapple 5-I use QCN-9074-1. Same identical chipset, different temperature working range, -0 means it works from 0°C to 65°C, -1 means it works from -45°C to 85°C. Also, we, 8devices, hereby included two more devices and declare that both of the uses original Pineapple 5 and Pineapple 5-I modules on it, which are not modified or anyhow changed and are complete originals. Both devices are adapter carrier boards to make Pineapple 5 and Pineapple 5-I easy to operate. Adapters Model Numbers are: Pineapple 5 Mini PCIe card; Pineapple 5 M.2 A+E card. These two Model Numbers can be interchanged with Pineapple 5 or Pineapple 5-I and the Model Numbers changes accordingly to: Pineapple 5-I Mini PCIe card; Pineapple 5-I M.2 A+E card.

3.3 Test Mode

Operating Mode	Detail Description
Working mode	Keep the EUT in Working mode(Worst case)
1.The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. 2.For model to test: Pineapple 5 and Pineapple 5-I are single module, Pineapple 5 is included by Pineapple 5 Mini PCIe card and Pineapple 5 M.2 A+E card include,and Pineapple 5-I is included by Pineapple 5-I Mini PCIe card and Pineapple 5-I M.2 A+E card include. So: EUT 1: For Pineapple 5 Mini PCIe card and Pineapple 5-I Mini PCIe card, select Pineapple 5-I Mini PCIe card to test. EUT 2: For Pineapple 5 M.2 A+E card and Pineapple 5-I M.2 A+E card, select Pineapple 5-I M.2 A+E card to test. 3.The emissions worst-case are shown in Test Results of the following pages.	

3.4 Description of Test Auxiliary Equipment

Manufacturer	Description	Model	S/N	FCC ID/DoC
Lenovo	Laptop	ThinkPad T14 Gen 1	SL10Z47277	DoC
MEAN WELL	AC/DC ADAPTER	GST25A24	/	DoC
8devices	Mango DVK	Mango	/	Z9WMAN

3.5 Description of Cable Used

Cable Type	Description	Length	From	To
/	/	/	/	/

3.6 Measurement Uncertainty

Parameter	Expanded Uncertainty (Confidence of 95%(U = 2Uc(y)))
Conducted Emission for LISN (9kHz ~ 150kHz)	±3.0 dB
Conducted Emission for LISN (150kHz ~ 30MHz)	±2.4 dB
Radiated Emission (30MHz ~ 200MHz) (3m SAC)	±4.6 dB
Radiated Emission (200MHz ~ 1000MHz) (3m SAC)	±5.8 dB
Radiated Emission (1GHz ~ 6GHz) (3m SAC)	±4.5 dB
Radiated Emission (6GHz ~ 18GHz) (3m SAC)	4.7 dB

Note: All the measurement uncertainty value were shown with a coverage k=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

3.7 Additions to, Deviations, or Exclusions from the Method

No

3.8 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

3.9 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

3.10 Test Instruments List

Radiated Emission(3m SAC):					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	WXJ001-1	04-14-2021	04-13-2026
BiConiLog Antenna	Schwarzbeck	VULB9163	WXJ002	01-03-2025	01-02-2026
Horn Antenna	Schwarzbeck	BBHA9120D	WXJ002-2	01-03-2025	01-02-2026
Pre-amplifier (30MHz ~ 1GHz)	Schwarzbeck	BBV9743B	WXJ001-2	12-16-2024	12-15-2025
Pre-amplifier (1GHz ~ 18GHz)	SKET	LNPA_0118G-50	WXJ001-3	12-16-2024	12-15-2025
EMI Test Receiver	Rohde & Schwarz	ESRP7	WXJ003-1	12-16-2024	12-15-2025
Spectrum Analyzer	Rohde & Schwarz	FSP 30	WXJ004	12-16-2024	12-15-2025
Coaxial Cable (30MHz ~ 1GHz)	JYTSZ	JYT3M-1G-NN-8M	WXG001-4	01-15-2025	01-14-2026
Coaxial Cable (1GHz ~ 18GHz)	JYTSZ	JYT3M-18G-NN-8M	WXG001-5	01-15-2025	01-14-2026
Band Reject Filter Group	Tonscend	JS0806-F	WXJ089	N/A	
Test Software	Tonscend	TS+	Version: 3.0.0.1		

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Manage No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESR3	WXJ003-2	05-08-2025	05-07-2026
LISN	Schwarzbeck	NSLK 8127	QCJ001-13	12-17-2024	12-16-2025
LISN	Rohde & Schwarz	ESH3-Z5	WXJ005-1	12-17-2024	12-16-2025
LISN Coaxial Cable (9kHz ~ 30MHz)	JYTSZ	JYTCE-1G-NN-2M	WXG003-1	01-15-2025	01-14-2026
RF Switch	TOP PRECISION	RSU0301	WXG003	N/A	
Test Software	AUDIX	E3	Version: 6.110919b		

4 Measurement Setup and Procedure

4.1 Test Setup

1) Conducted emission measurement:

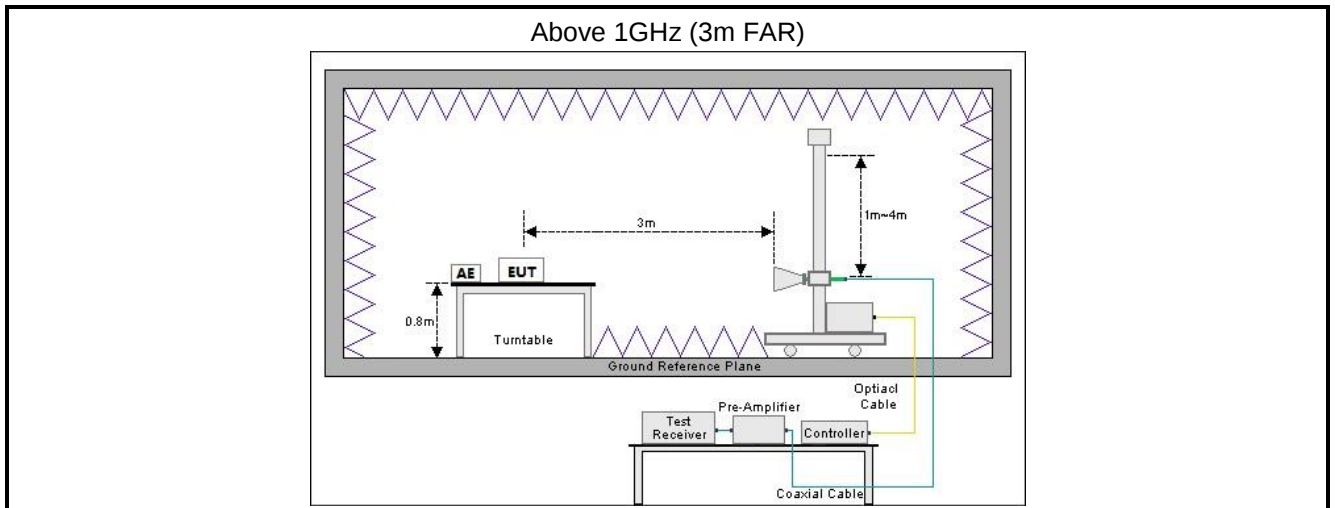


Note: The detailed descriptions please refer to Figure 8 of ANSI C63.4:2014.

2) Radiated emission measurement:

Below 1GHz (3m SAC)





4.2 Test Procedure

Test method	Test step
Conducted emission	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4 on conducted measurement.
Radiated emission	For below 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m semi anechoic chamber. The measurement distance from the EUT to the receiving antenna is 3 m . 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data. For above 1GHz: 1. The EUT was placed on the tabletop of a rotating table 0.8 m the ground at a 3 m fully anechoic room. The measurement distance from the EUT to the receiving antenna is 3 m. 2. EUT works in each mode of operation that needs to be tested, and having the EUT continuously working, respectively on 3 axis (X, Y & Z) and considered typical configuration to obtain worst position. The highest signal levels relative to the limit shall be determined by rotating the EUT from 0° to 360° and with varying the measurement antenna height between 1 m and 4 m in vertical and horizontal polarizations. 3. Open the test software to control the test antenna and test turntable. Perform the test, save the test results, and export the test data.

5 Test Results

5.1 Summary

5.1.1 Clause and data summary

Test items	Standard clause	Test data	Result
Conducted Emission	Part 15.107	See Section 5.2	Pass
Radiated Emission	Part 15.109	See Section 5.3	Pass
Remark: 1. The EUT is a Class B digital device. 2. Pass: The EUT complies with the essential requirements in the standard. 3. N/A: Not Applicable.			
Test Method:	ANSI C63.4:2014		

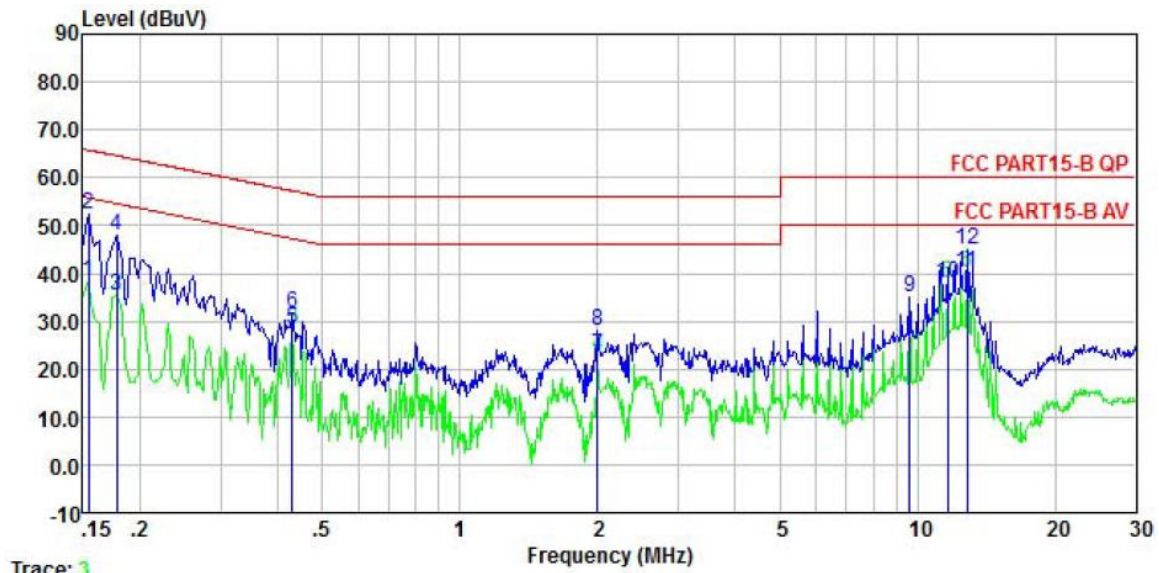
5.1.2 Test Limit

Test items	Limit																																																					
Conducted Emission	<table><tr><th rowspan="2">Frequency (MHz)</th><th colspan="2">Class A Limit (dBμV)</th><th colspan="2">Class B Limit (dBμV)</th></tr><tr><th>Quasi-Peak</th><th>Average</th><th>Quasi-Peak</th><th>Average</th></tr><tr><td>0.15 – 0.5</td><td>79</td><td>66</td><td>66 to 56 Note 1</td><td>56 to 46 Note 1</td></tr><tr><td>0.5 – 5</td><td>73</td><td>60</td><td>56</td><td>46</td></tr><tr><td>5 – 30</td><td>73</td><td>60</td><td>60</td><td>50</td></tr><tr><td colspan="5">Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency.</td></tr><tr><td colspan="5">Note 2: The more stringent limit applies at transition frequencies.</td></tr></table>	Frequency (MHz)	Class A Limit (dBμV)		Class B Limit (dBμV)		Quasi-Peak	Average	Quasi-Peak	Average	0.15 – 0.5	79	66	66 to 56 Note 1	56 to 46 Note 1	0.5 – 5	73	60	56	46	5 – 30	73	60	60	50	Note 1: The limit level in dBμV decreases linearly with the logarithm of frequency.					Note 2: The more stringent limit applies at transition frequencies.																							
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5.2 Conducted Emission

EUT1:

Product name:	Pineapple	Product model:	Pineapple 5-I Mini PCIe card
Test by:	Kiran Zeng	Test mode:	Working mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

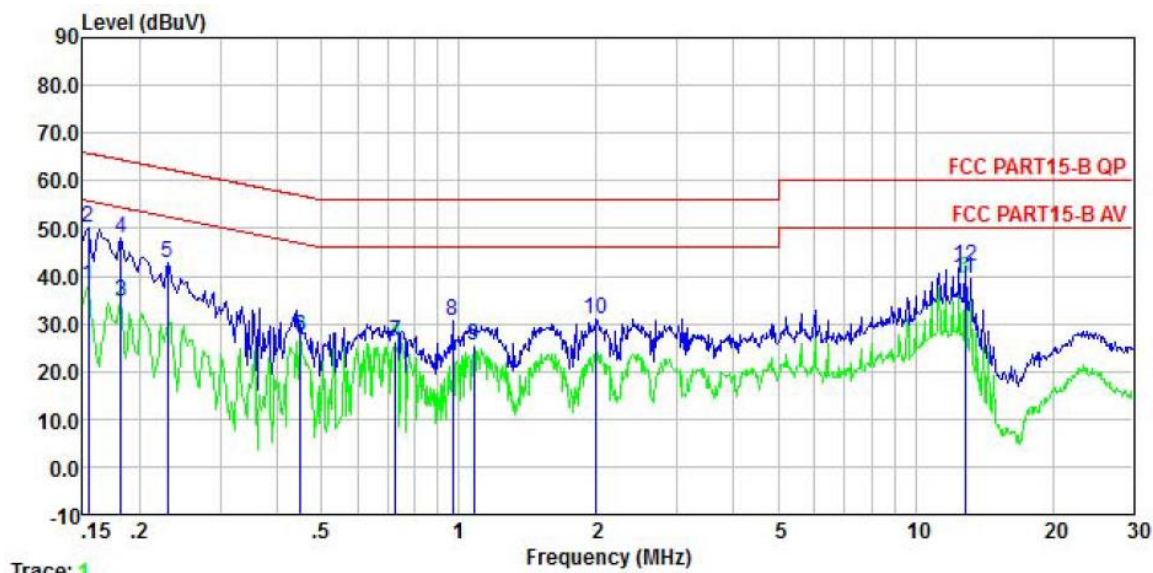


	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	18.29	10.19	0.00	9.88	0.01	38.37	55.78	-17.41	Average
2	0.154	32.22	10.19	0.00	9.88	0.01	52.30	65.78	-13.48	QP
3	0.178	15.44	10.14	0.00	9.88	0.01	35.47	54.59	-19.12	Average
4	0.178	27.92	10.14	0.00	9.88	0.01	47.95	64.59	-16.64	QP
5	0.431	8.50	10.12	0.00	9.88	0.03	28.53	47.24	-18.71	Average
6	0.431	11.81	10.12	0.00	9.88	0.03	31.84	57.24	-25.40	QP
7	2.001	2.47	10.10	0.00	9.88	0.21	22.66	46.00	-23.34	Average
8	2.001	7.66	10.10	0.00	9.88	0.21	27.85	56.00	-28.15	QP
9	9.603	14.54	10.31	0.00	9.91	0.12	34.88	60.00	-25.12	QP
10	11.621	17.31	10.48	0.00	9.92	0.11	37.82	50.00	-12.18	Average
11	12.852	19.60	10.60	0.00	9.92	0.11	40.23	50.00	-9.77	Average
12	12.852	24.48	10.60	0.00	9.92	0.11	45.11	60.00	-14.89	QP

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Pineapple	Product model:	Pineapple 5-I Mini PCIe card
Test by:	Kiran Zeng	Test mode:	Working mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



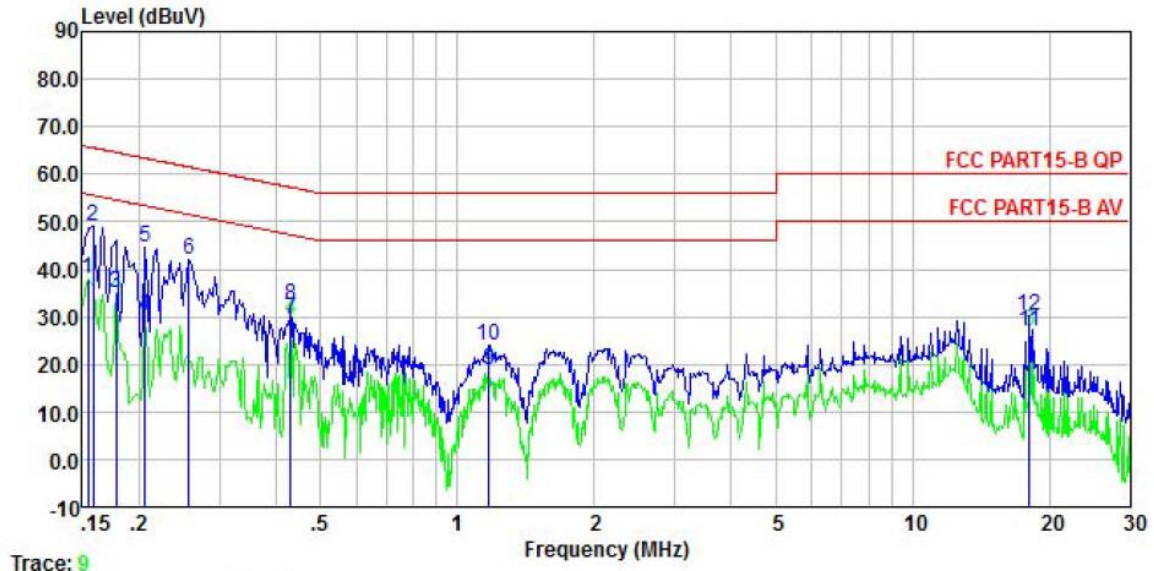
	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	17.90	10.20	0.00	9.88	0.01	37.99	55.78	-17.79	Average
2	0.154	30.09	10.20	0.00	9.88	0.01	50.18	65.78	-15.60	QP
3	0.182	14.47	10.20	0.00	9.88	0.01	34.56	54.42	-19.86	Average
4	0.182	27.75	10.20	0.00	9.88	0.01	47.84	64.42	-16.58	QP
5	0.230	22.76	10.18	0.00	9.88	0.02	42.84	62.44	-19.60	QP
6	0.449	7.08	10.16	0.00	9.88	0.03	27.15	46.89	-19.74	Average
7	0.727	5.89	10.30	0.00	9.88	0.03	26.10	46.00	-19.90	Average
8	0.968	10.45	10.21	0.00	9.88	0.05	30.59	56.00	-25.41	QP
9	1.077	5.23	10.21	0.00	9.88	0.07	25.39	46.00	-20.61	Average
10	2.001	10.73	10.30	0.00	9.88	0.21	31.12	56.00	-24.88	QP
11	12.852	18.79	10.48	0.00	9.92	0.11	39.30	50.00	-10.70	Average
12	12.852	21.34	10.48	0.00	9.92	0.11	41.85	60.00	-18.15	QP

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

EUT2:

Product name:	Pineapple	Product model:	Pineapple 5 M.2 A+E card
Test by:	Kiran Zeng	Test mode:	Working mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz		

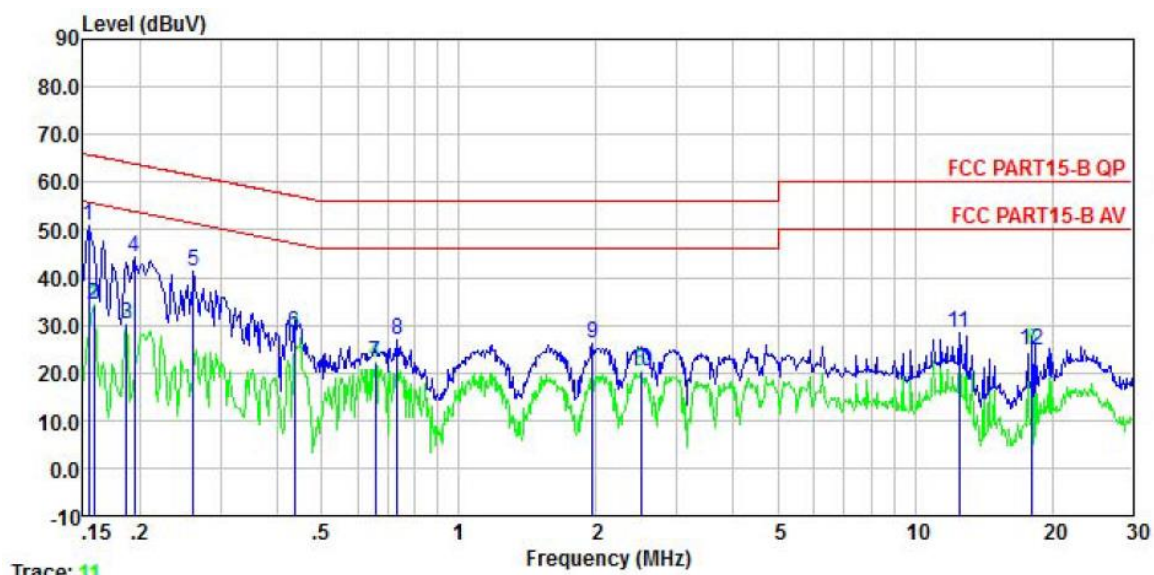


	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	28.22	-0.29	0.00	9.88	0.01	37.82	55.78	-17.96	Average
2	0.158	39.48	-0.28	0.00	9.88	0.01	49.09	65.56	-16.47	QP
3	0.178	25.22	-0.24	0.00	9.88	0.01	34.87	54.59	-19.72	Average
4	0.206	20.46	-0.20	0.00	9.88	0.04	30.18	53.36	-23.18	Average
5	0.206	34.88	-0.20	0.00	9.88	0.04	44.60	63.36	-18.76	QP
6	0.258	32.51	-0.20	0.00	9.88	0.01	42.20	61.51	-19.31	QP
7	0.431	19.62	-0.20	0.00	9.88	0.03	29.33	47.24	-17.91	Average
8	0.431	22.62	-0.20	0.00	9.88	0.03	32.33	57.24	-24.91	QP
9	1.172	9.05	-0.28	0.00	9.88	0.09	18.74	46.00	-27.26	Average
10	1.172	14.41	-0.28	0.00	9.88	0.09	24.10	56.00	-31.90	QP
11	18.039	16.98	-0.36	0.00	9.95	0.15	26.72	50.00	-23.28	Average
12	18.039	20.43	-0.36	0.00	9.95	0.15	30.17	60.00	-29.83	QP

Remark:

1. Level = Read level + LISN Factor + Cable Loss.

Product name:	Pineapple	Product model:	Pineapple 5 M.2 A+E card
Test by:	Kiran Zeng	Test mode:	Working mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz		



	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.154	41.34	-0.20	0.00	9.88	0.01	51.03	65.78	-14.75	QP
2	0.158	24.63	-0.20	0.00	9.88	0.01	34.32	55.56	-21.24	Average
3	0.186	20.53	-0.20	0.00	9.88	0.02	30.23	54.20	-23.97	Average
4	0.194	34.58	-0.20	0.00	9.88	0.03	44.29	63.84	-19.55	QP
5	0.262	31.46	-0.23	0.00	9.88	0.01	41.12	61.38	-20.26	QP
6	0.435	18.75	-0.28	0.00	9.88	0.03	28.38	47.15	-18.77	Average
7	0.654	12.68	-0.30	0.00	9.88	0.03	22.29	46.00	-23.71	Average
8	0.731	17.27	-0.30	0.00	9.88	0.03	26.88	56.00	-29.12	QP
9	1.959	16.31	-0.30	0.00	9.88	0.21	26.10	56.00	-29.90	QP
10	2.500	10.41	-0.33	0.00	9.88	0.13	20.09	46.00	-25.91	Average
11	12.516	18.71	-0.40	0.00	9.92	0.11	28.34	60.00	-31.66	QP
12	18.039	14.99	-0.40	0.00	9.95	0.15	24.69	50.00	-25.31	Average

Remark:

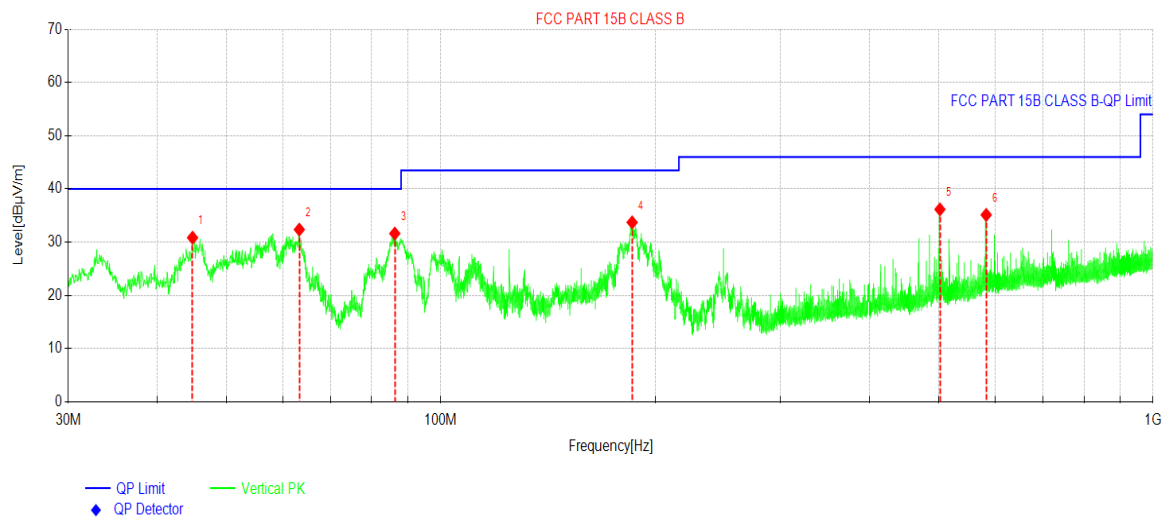
1. Level = Read level + LISN Factor + Cable Loss.

5.3 Radiated Emission

EUT1:

Below 1GHz:

Product Name:	Pineapple	Product Model:	Pineapple 5-I Mini PCIe card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



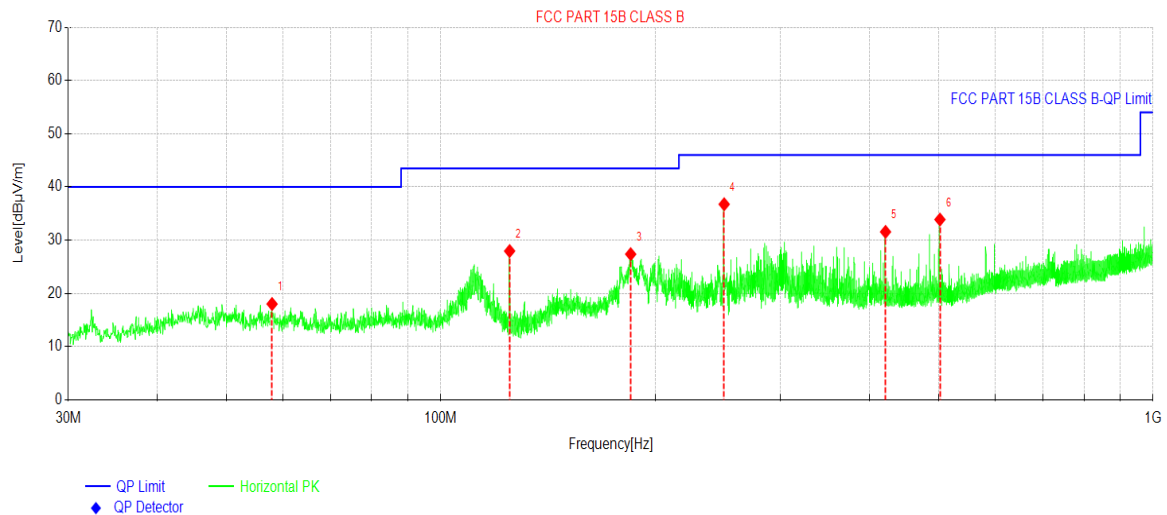
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	44.8417	43.30	-12.45	30.85	40.00	9.15	PK	Vertical
2	63.3212	46.80	-14.43	32.37	40.00	7.63	PK	Vertical
3	86.2143	48.83	-17.20	31.63	40.00	8.37	PK	Vertical
4	185.6928	49.92	-16.20	33.72	43.50	9.78	PK	Vertical
5	502.2196	44.81	-8.64	36.17	46.00	9.83	PK	Vertical
6	583.2187	42.00	-6.87	35.13	46.00	10.87	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Product Name:	Pineapple	Product Model:	Pineapple 5-I Mini PCIe card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



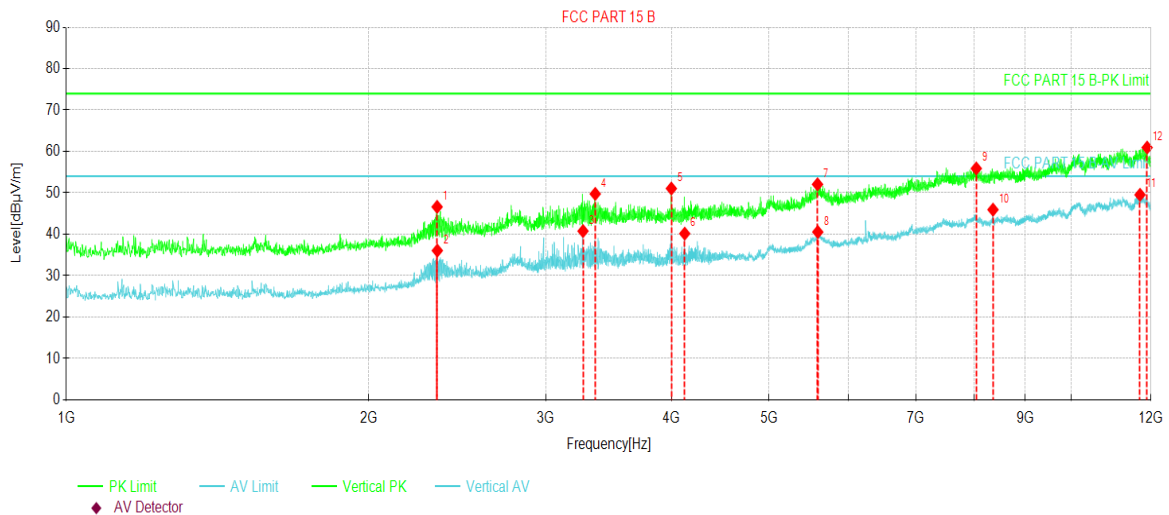
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	57.9859	31.72	-13.71	18.01	40.00	21.99	PK	Horizontal
2	124.9677	45.11	-17.15	27.96	43.50	15.54	PK	Horizontal
3	184.8197	43.65	-16.28	27.37	43.50	16.13	PK	Horizontal
4	250.0070	50.34	-13.59	36.75	46.00	9.25	PK	Horizontal
5	421.2206	41.58	-10.01	31.57	46.00	14.43	PK	Horizontal
6	502.2196	42.52	-8.64	33.88	46.00	12.12	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Pre-amplifier Factor).

Above 1GHz:

Product Name:	Pineapple	Product Model:	Pineapple 5-I Mini PCIe card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	1000 MHz ~ 12000 MHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



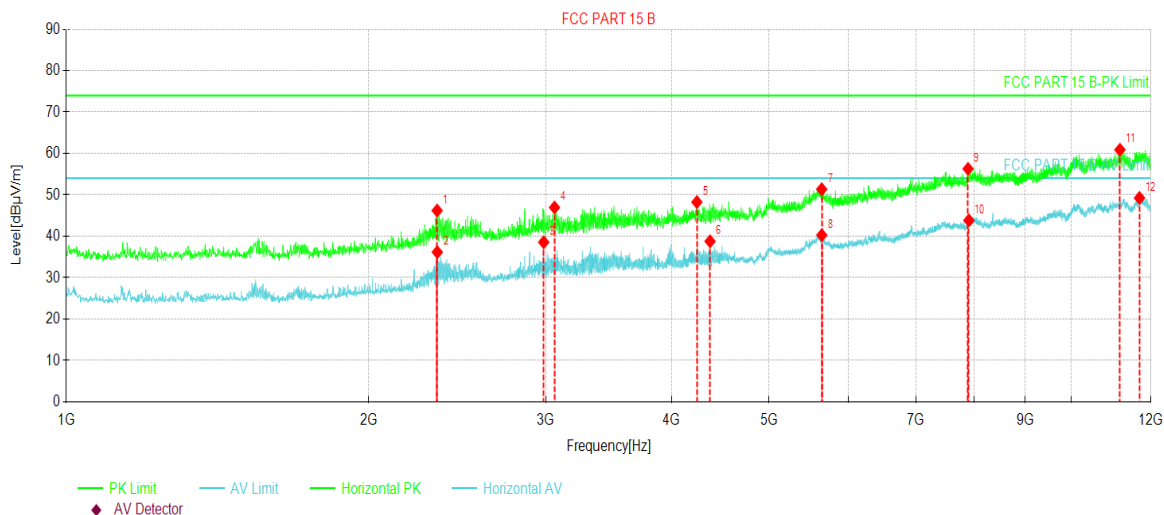
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	2338.7000	65.90	46.62	-19.28	74.00	27.38	PK	Vertical
2	2339.8000	55.34	36.06	-19.28	54.00	17.94	AV	Vertical
3	3267.1000	56.95	40.77	-16.18	54.00	13.23	AV	Vertical
4	3359.5000	65.67	49.75	-15.92	74.00	24.25	PK	Vertical
5	3999.7000	64.70	51.05	-13.65	74.00	22.95	PK	Vertical
6	4124.0000	53.19	40.16	-13.03	54.00	13.84	AV	Vertical
7	5590.3000	56.80	52.06	-4.74	74.00	21.94	PK	Vertical
8	5593.6000	45.23	40.55	-4.68	54.00	13.45	AV	Vertical
9	8042.2000	56.06	55.89	-0.17	74.00	18.11	PK	Vertical
10	8355.7000	45.99	45.94	-0.05	54.00	8.06	AV	Vertical
11	11701.9000	43.91	49.54	5.63	54.00	4.46	AV	Vertical
12	11894.4000	55.12	60.95	5.83	74.00	13.05	PK	Vertical

Remark:

- Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).
- Test Frequency up to 18GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.

Product Name:	Pineapple	Product Model:	Pineapple 5-I Mini PCIe card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	1000 MHz ~ 12000 MHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	2338.7000	65.48	46.20	-19.28	74.00	27.80	PK	Horizontal
2	2339.8000	55.44	36.16	-19.28	54.00	17.84	AV	Horizontal
3	2985.5000	55.53	38.57	-16.96	54.00	15.43	AV	Horizontal
4	3060.3000	63.70	46.95	-16.75	74.00	27.05	PK	Horizontal
5	4240.6000	60.77	48.26	-12.51	74.00	25.74	PK	Horizontal
6	4370.4000	50.84	38.78	-12.06	54.00	15.22	AV	Horizontal
7	5644.2000	56.35	51.36	-4.99	74.00	22.64	PK	Horizontal
8	5645.3000	45.27	40.27	-5.00	54.00	13.73	AV	Horizontal
9	7891.5000	56.59	56.28	-0.31	74.00	17.72	PK	Horizontal
10	7906.9000	44.13	43.85	-0.28	54.00	10.15	AV	Horizontal
11	11176.1000	55.38	60.88	5.50	74.00	13.12	PK	Horizontal
12	11688.7000	43.65	49.25	5.60	54.00	4.75	AV	Horizontal

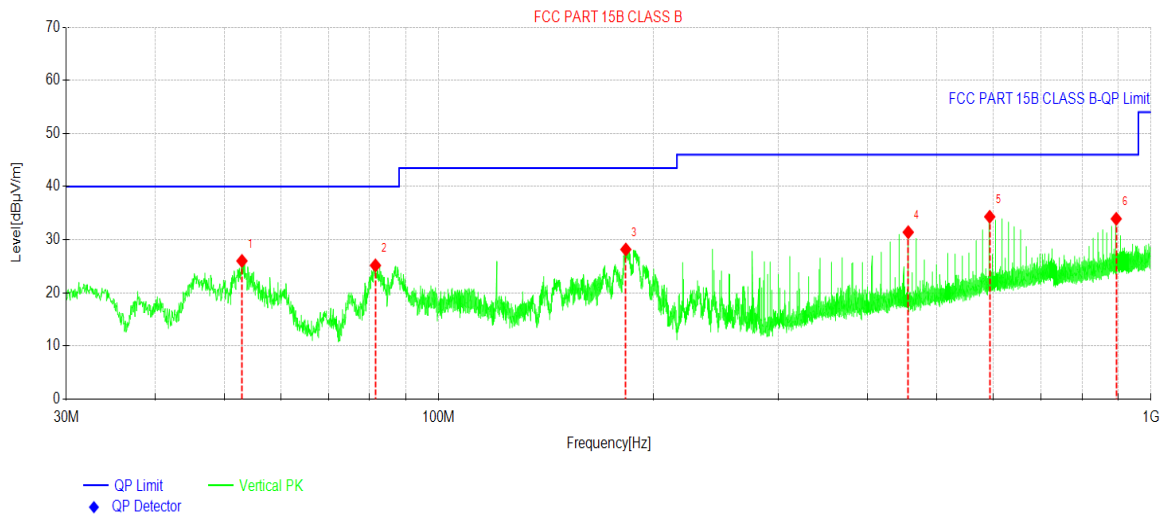
Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).
2. Test Frequency up to 18GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.

EUT2:

Below 1GHz:

Product Name:	Pineapple	Product Model:	Pineapple 5 M.2 A+E card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



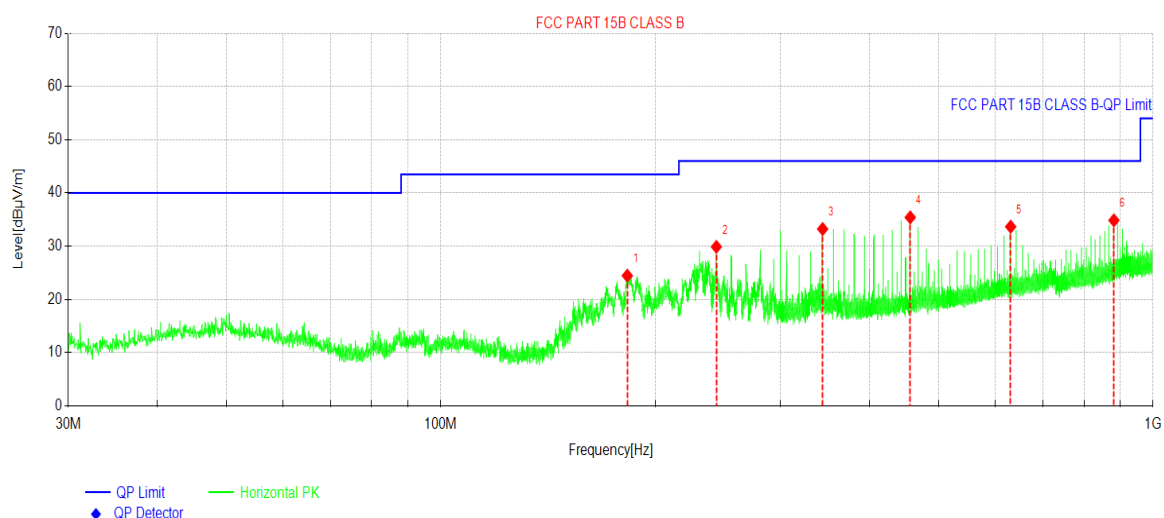
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	52.9416	38.52	-12.51	26.01	40.00	13.99	PK	Vertical
2	81.5096	43.39	-18.23	25.16	40.00	14.84	PK	Vertical
3	183.1222	44.57	-16.40	28.17	43.50	15.33	PK	Vertical
4	456.2393	41.06	-9.65	31.41	46.00	14.59	PK	Vertical
5	593.7437	40.88	-6.56	34.32	46.00	11.68	PK	Vertical
6	893.7797	36.28	-2.34	33.94	46.00	12.06	PK	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Pre-amplifier Factor).

Product Name:	Pineapple	Product Model:	Pineapple 5 M.2 A+E card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Suspected Data List

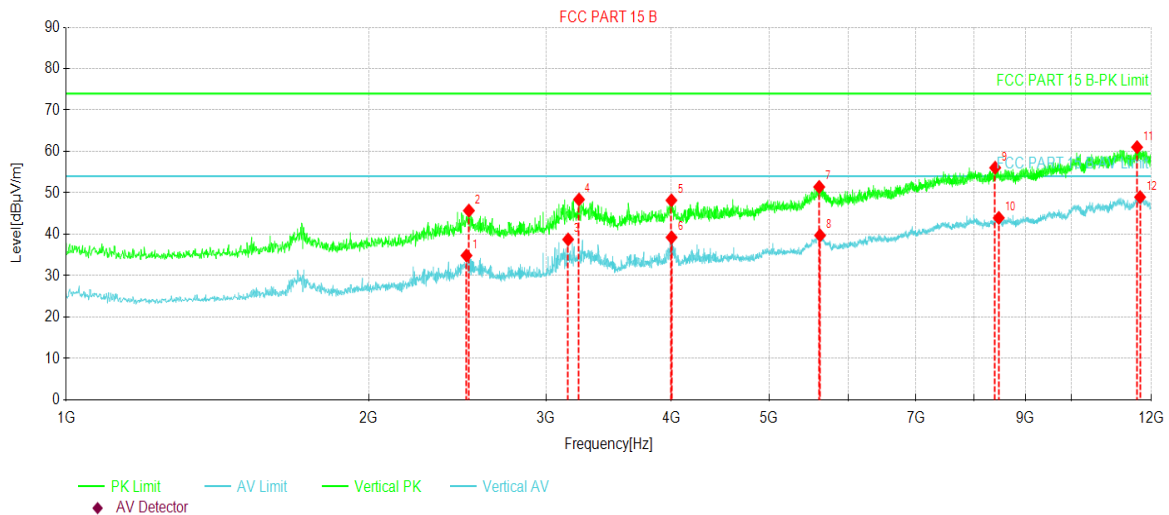
NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	182.7826	40.90	-16.44	24.46	43.50	19.04	PK	Horizontal
2	243.7987	43.64	-13.76	29.88	46.00	16.12	PK	Horizontal
3	343.7622	44.62	-11.40	33.22	46.00	12.78	PK	Horizontal
4	456.2878	45.05	-9.64	35.41	46.00	10.59	PK	Horizontal
5	631.2846	39.71	-6.05	33.66	46.00	12.34	PK	Horizontal
6	881.2661	37.49	-2.63	34.86	46.00	11.14	PK	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).

Above 1GHz:

Product Name:	Pineapple	Product Model:	Pineapple 5 M.2 A+E card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	1000 MHz ~ 12000 MHz	Polarization:	Vertical
Test Voltage:	AC 120V/60Hz		



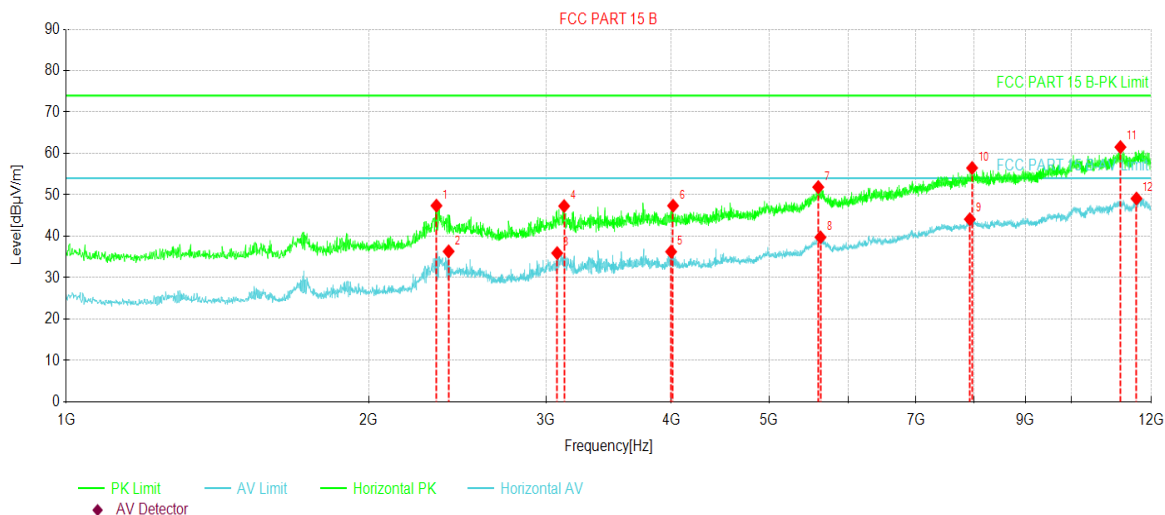
Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	2501.5000	53.34	34.86	-18.48	54.00	19.14	AV	Vertical
2	2515.2500	64.14	45.71	-18.43	74.00	28.29	PK	Vertical
3	3157.3750	55.23	38.75	-16.48	54.00	15.25	AV	Vertical
4	3237.1250	64.65	48.39	-16.26	74.00	25.61	PK	Vertical
5	4000.2500	61.84	48.19	-13.65	74.00	25.81	PK	Vertical
6	4001.6250	52.89	39.25	-13.64	54.00	14.75	AV	Vertical
7	5611.7500	56.10	51.42	-4.68	74.00	22.58	PK	Vertical
8	5622.7500	44.51	39.72	-4.79	54.00	14.28	AV	Vertical
9	8397.5000	56.04	56.06	0.02	74.00	17.94	PK	Vertical
10	8467.6250	43.95	43.95	0.00	54.00	10.05	AV	Vertical
11	11623.2500	55.58	61.03	5.45	74.00	12.97	PK	Vertical
12	11704.3750	43.33	48.97	5.64	54.00	5.03	AV	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).
2. Test Frequency up to 18GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.

Product Name:	Pineapple	Product Model:	Pineapple 5 M.2 A+E card
Test By:	Kiran Zeng	Test mode:	Working mode
Test Frequency:	1000 MHz ~ 12000 MHz	Polarization:	Horizontal
Test Voltage:	AC 120V/60Hz		



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	2335.1250	66.69	47.39	-19.30	74.00	26.61	PK	Horizontal
2	2401.1250	55.27	36.34	-18.93	54.00	17.66	AV	Horizontal
3	3079.0000	52.63	35.93	-16.70	54.00	18.07	AV	Horizontal
4	3128.5000	63.85	47.29	-16.56	74.00	26.71	PK	Horizontal
5	3997.5000	49.93	36.27	-13.66	54.00	17.73	AV	Horizontal
6	4015.3750	60.94	47.37	-13.57	74.00	26.63	PK	Horizontal
7	5599.3750	56.45	51.87	-4.58	74.00	22.13	PK	Horizontal
8	5628.2500	44.59	39.75	-4.84	54.00	14.25	AV	Horizontal
9	7924.5000	44.37	44.12	-0.25	54.00	9.88	AV	Horizontal
10	7965.7500	56.69	56.50	-0.19	74.00	17.50	PK	Horizontal
11	11188.7500	56.07	61.54	5.47	74.00	12.46	PK	Horizontal
12	11608.1250	43.70	49.11	5.41	54.00	4.89	AV	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor).
2. Test Frequency up to 18GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.

-----End of report-----