



FCC SDoC Test Report

Issued date: Nov. 04, 2020

Project No.: 20Q101603

Product : PCIe M.2 2242

Model : PV220-M242, PX220-M242 (X=A~Z)

Applicant : Apacer Technology Inc.

Address : 1F., No.32, Zhongcheng Rd., Tucheng Dist., New Taipei City 236,
Taiwan (R.O.C)

Report No: WD-EF-R-200320-A0

According to

47 CFR FCC Part 15, Subpart B, Class B
ICES-003: 2016 Issue 6, Class B

ANSI C63.4: 2014

Authorized Signatory :  / Ken Huang



Wendell Industrial Co., Ltd
Wendell EMC & RF Laboratory

Add: 6F/6F-1, No.188, Baoqiao Rd., Xindian Dist., New Taipei City 23145, Taiwan R.O.C.



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History of this test report

Report No.	Issue date	Description
WD-EF-R-200320-A0	Nov. 04, 2020	Initial Issue

Declaration

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us.



History of supplementary report

Report No.	Issue date	Description
WD-EF-R-200320-A0	Nov. 04, 2020	Original report

Declaration

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us.



1 Certification

Product: PCIe M.2 2242

Brand Name: Apacer

Model: PV220-M242, PX220-M242 (X=A~Z)

Applicant: Apacer Technology Inc.

Tested: Oct. 21 ~ Oct. 22, 2020

Standard: 47 CFR FCC Part 15, Subpart B, Class B

ICES-003: 2016 Issue 6, Class B

ANSI C63.4: 2014

The above equipment (Model: PV220-M242) has been tested by **Wendell EMC & RF Laboratory**, and found compliance with the requirement of the above standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Please note that the measurement uncertainty are provided for informational purpose only and are not used in determining the Pass/Fail results.



1.1 Summary of Test Result

The EUT has been tested according to the following specifications:

Emission				
Standard	Test Item	Limit	Result	Remark
47 CFR FCC Part 15, Subpart B	Conducted disturbance at mains terminals	Class B	Pass	Meets the requirements
ICES-003	Radiated disturbance	Class B	Pass	Meets the requirements

Note: Test record contained in the referenced test report relate only to the EUT sample and test item.



2 Test Configuration of Equipment Under Test

2.1 Test Facility

FCC Designation / Registration Number:

W01: TW1117 / 831863

W08: TW1122 / 763672

Conducted disturbance at mains terminals Test

W01: 5F-1, No.188, Baoqiao Rd., Xindian Dist., New Taipei City 23145, Taiwan (R.O.C)

Radiated emission (9*6*6 Chamber) Tests

W08: No.119, Wugong 3rd Rd., Wugu Dist., New Taipei City 248, Taiwan (R.O.C)

ACCREDITATIONS

The laboratories are accredited and approved by the TAF according to ISO/IEC 17025.



2.2 Measurement Uncertainty

The measurement instrumentation uncertainty is evaluated according to CISPR 16-4-2.

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

Wendell EMC & RF Laboratory U_{lab} is less than U_{cispr} , therefore compliance or non-compliance with a disturbance limit shall be determined in the following manner.

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

Please note that the measurement uncertainty (U_{lab}) is provided for informational purpose only and is not used in determining the Pass/Fail results.

2.2.1 Conducted Emission test

Test Site	Measurement Freq. Range	dB (U_{lab})	Note
W01	150 kHz ~ 30 MHz	2.72	N/A

2.2.2 Radiated Emission test

Test Site	Measurement Freq. Range	Ant	dB (U_{lab})	Note
W08	30 MHz ~ 200 MHz	V	3.68	N/A
	30 MHz ~ 200 MHz	H	2.70	N/A
	200 MHz ~ 1000 MHz	V	5.19	N/A
	200 MHz ~ 1000 MHz	H	3.26	N/A
	1 GHz ~ 6 GHz	V	4.98	N/A
	1 GHz ~ 6 GHz	H	5.07	N/A
	6 GHz ~ 18 GHz	V	5.09	N/A
	6 GHz ~ 18 GHz	H	4.99	N/A
	18 GHz ~ 40 GHz	V	4.72	N/A
	18 GHz ~ 40 GHz	H	4.72	N/A



3 General Information

3.1 Description of EUT

Product	PCIe M.2 2242
Brand	Apacer
Model	PV220-M242, PX220-M242 (X=A~Z)
Applicant	Apacer Technology Inc.
Received Date	Oct. 16, 2020
EUT Power Rating	5Vdc (from host equipment)
Model Differences	The models are electrically identical, different models no. are for marketing purpose. This series model information is provided by client.
Operating System	N/A
Data Cable Supplied	N/A
Accessory Device	N/A
I/O Port	Please refer to the User's Manual

Note:

1. The EUT's highest operating frequency is more than 108MHz. Therefore the radiated emission is tested up to 6GHz.

3.2 Description of Test Modes

Test results are presented in the report as below.

Test Mode	Test Condition
Conducted emission test	
-	Normal mode
Radiated emission 30MHz ~ 1GHz test	
-	Normal mode
Radiated emission above 1GHz test	
-	Normal mode

3.3 EUT Operating Condition

- a. Inserted the EUT into PC and placed on test table.
- b. The PC run test program "BurnIN.exe" to enable all functions.
- c. The PC sent "H" message to monitor and displayed on screen.
- d. The microphone sent voice signal to PC.
- e. The PC sent voice signal to earphone.
- f. The PC sent signal to printer.
- g. The EUT read/write data.

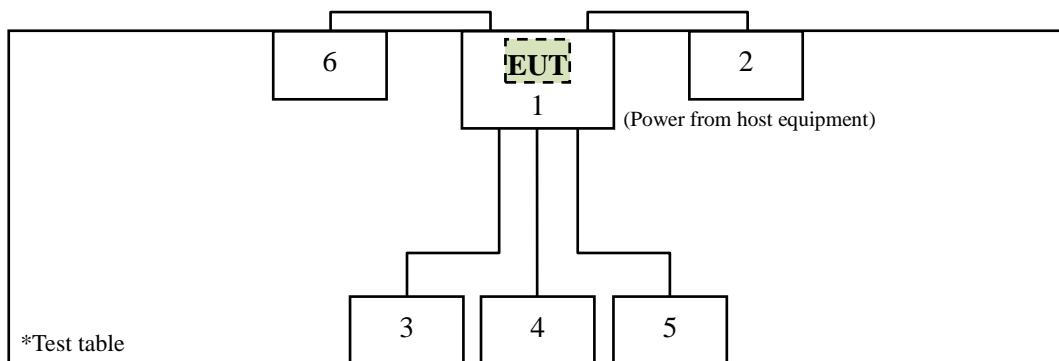
3.4 Description of Support Unit

The EUT has been conducted testing with other necessary accessories or support units.

Item	Equipment	Brand	Model No.	Serial No.	FCC ID	Data Cable	Power Cord	Remark
1	PC	DELL	D24M	N/A	PD93165NG	N/A	1.8m non-shielded cable	-
2	Monitor	DELL	P2317H	N/A	FCC DoC Approved	1.5m shielded HDMI cable	1.8m non-shielded cable	-
3	Keyboard	DELL	KB4021	N/A	FCC DoC Approved	1.5m non-shielded cable	N/A	-
4	Mouse	DELL	MS111-L	N/A	FCC DoC Approved	1.5m non-shielded cable	N/A	-
5	Earphone & Microphone	E-books	E-EPA057	N/A	N/A	1.4m non-shielded cable	N/A	-
6	Printer	HP	SNPRH-1504	CN738282V9	FCC DoC Approved	1.4m shielded cable	AC: 1.7m non-shielded cable	-

Note: 1. The core(s) is(are) originally attached to the cable(s).

3.5 Configuration of System Under Test





4 Emission Test

4.1 Conducted Emission Measurement (Frequency Range 150 KHz-30MHz)

4.1.1 Limit of Conducted Emission Measurement

Frequency (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.5	79	66	66 to 56	56 to 46
0.50 to 5.0	73	60	56	46
5.0 to 30.0	73	60	60	50

- Note:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50 MHz.
 3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
 4. The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correction Factor = Insertion loss of LISN + Cable loss + Transient Limiter (If use)
Margin Level = Measurement Value – Limit Value



4.1.2 Test Instrument

Test Site: W01-CE					
Item	Equipment	Manufacturer	Model	Meter No.	Calibration Date
1	TWO-LINE V-NETWORK	R&S	ENV216	CT-1-025-1	Apr. 29, 2020
2	Pulse limiter	R&S®	ESH3-Z2	CT-2-015	Apr. 27, 2020
3	EMI Test Receiver	R&S	ESCI	CT-1-024	Apr. 29, 2020
4	V-LISN	Schwarzbeck	NSLK8127	CT-1-104-1	Apr. 29, 2020
5	Test Cable	Marvelous Microwave Inc	200200.400LL .500A	CT-10-048-1	Apr. 27, 2020
6	50ohm Termination	N/A	N/A	CT-1-065-1	Apr. 28, 2020
7	Measurement Software	EZ-EMC	Ver: EMC-CON 3A1	CT-3-012	No calibration request

Note: 1. The calibration interval of the above test instruments is 12 months.

4.1.3 Test Procedure

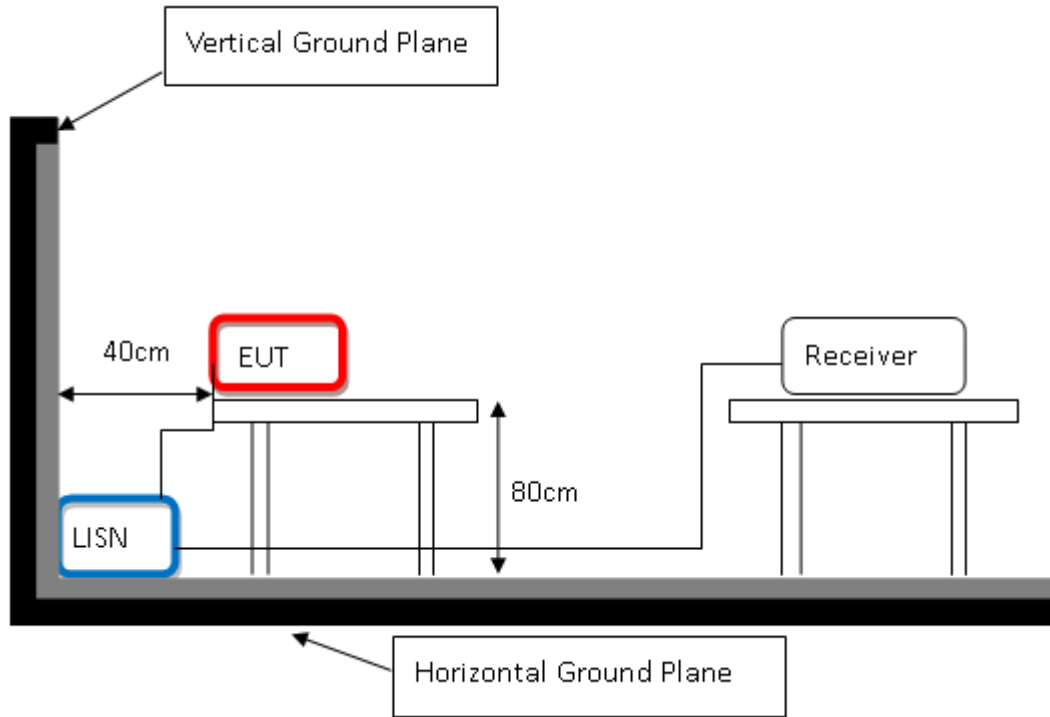
- a. The table-top EUT was placed 0.8 meter height wooden table from the horizontal ground plane with EUT being connected to power source through a line impedance stabilization network (LISN). The LISN at least be 80 cm from nearest chassis of EUT. The floor-standing EUT and all cables shall be insulated from the ground plane by up to 12 mm of insulating material if required.
- b. The line impedance stabilization network (LISN) provides 50 ohm/50uH of coupling impedance for the measuring instrument. All other support equipments powered from additional LISN(s).
- c. Interrelating cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle. All I/O cables were positioned to simulate typical usage.
- d. All I/O cables that are not connected to a peripheral shall be bundle in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- e. The EMI test receiver connected to LISN powering the EUT. The actual test configuration, please refer to EUT test photos.
- f. The receiver scanned from 150kHz to 30MHz for emissions in each of test modes. A scan was taken on both power lines, Line and Neutral, recording at least six highest emissions.
- g. The EUT and cable configuration of the above highest emission levels were recorded. The test data of the worst case was recorded.

4.1.4 Deviation from Test Standard

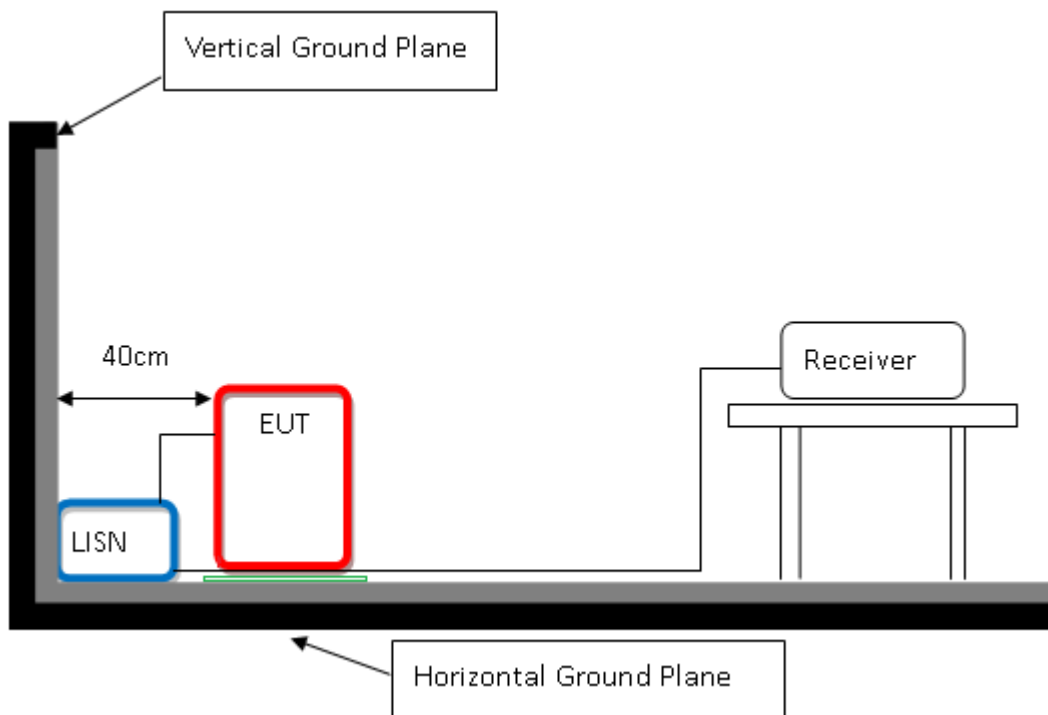
No deviation

4.1.5 Test Setup

< Table-Top equipment >



< Floor-Standing equipment >

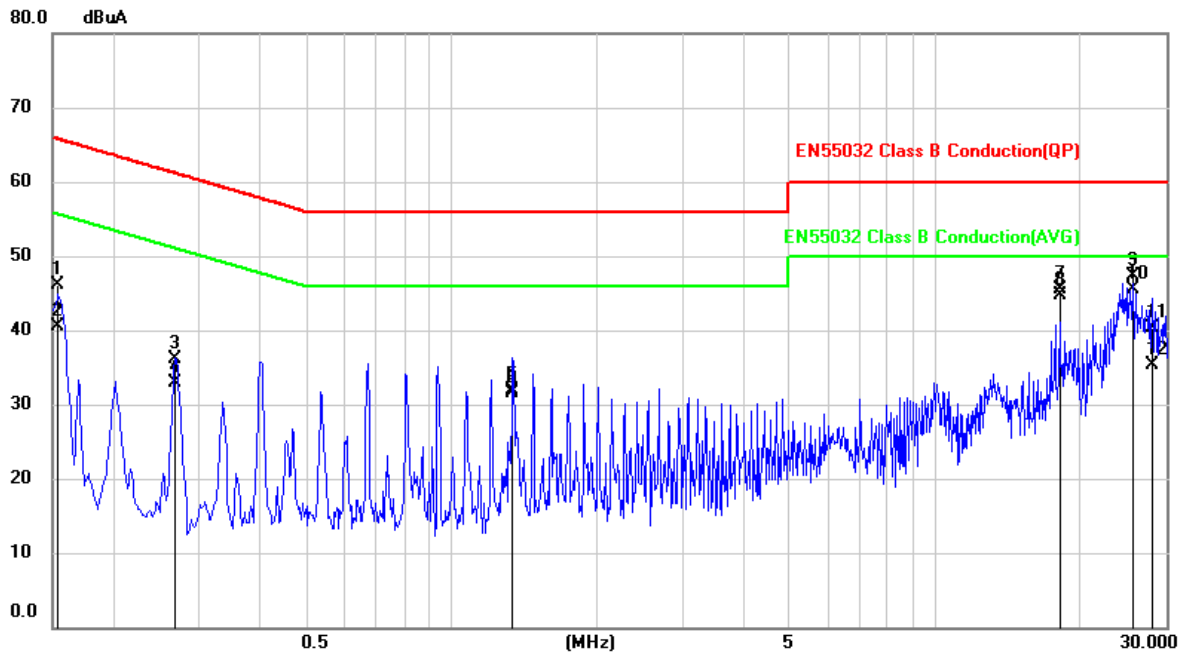


Note: Please refer to 4.1.7 for the actual test configuration.



4.1.6 Test Result

Test Voltage	120Vac, 60Hz	Frequency Range	0.15-30 MHz
Environmental Conditions	24°C, 60% RH	6dB Bandwidth	9 kHz
Test Date	2020/10/21	Phase	L
Tested by	Guanwei Liao	Test Site	W01

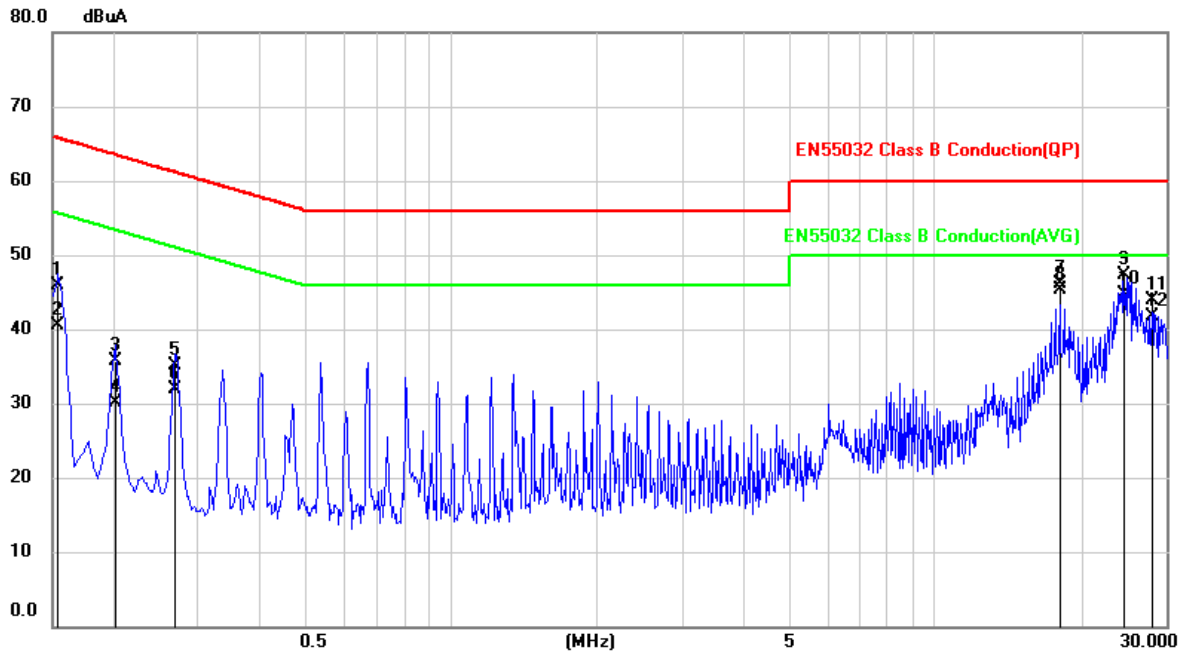


No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1532	36.09	10.02	46.11	65.82	-19.71	QP
2	0.1532	30.41	10.02	40.43	55.82	-15.39	AVG
3	0.2691	26.11	10.02	36.13	61.15	-25.02	QP
4	0.2691	22.98	10.02	33.00	51.15	-18.15	AVG
5	1.3444	21.83	10.07	31.90	56.00	-24.10	QP
6	1.3444	21.48	10.07	31.55	46.00	-14.45	AVG
7	18.0819	34.98	10.49	45.47	60.00	-14.53	QP
8	18.0819	34.27	10.49	44.76	50.00	-5.24	AVG
9	25.5823	36.68	10.62	47.30	60.00	-12.70	QP
10	25.5823	34.97	10.62	45.59	50.00	-4.41	AVG
11	28.0848	29.71	10.68	40.39	60.00	-19.61	QP
12	28.0848	24.60	10.68	35.28	50.00	-14.72	AVG

Remark: 1. QP = Quasi Peak, AVG = Average
 2. Correction Factor = Insertion loss of LISN + Cable loss + Transient Limiter (If use)
 3. Measurement Value = Reading Level + Correct Factor
 4. Margin Level = Measurement Value - Limit Value



Test Voltage	120Vac, 60Hz	Frequency Range	0.15-30 MHz
Environmental Conditions	24°C, 60% RH	6dB Bandwidth	9 kHz
Test Date	2020/10/21	Phase	N
Tested by	Guanwei Liao	Test Site	W01



No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1543	35.98	9.99	45.97	65.77	-19.80	QP
2	0.1543	30.42	9.99	40.41	55.77	-15.36	AVG
3	0.2023	25.68	9.99	35.67	63.52	-27.85	QP
4	0.2023	20.16	9.99	30.15	53.52	-23.37	AVG
5	0.2686	25.06	9.99	35.05	61.16	-26.11	QP
6	0.2686	21.94	9.99	31.93	51.16	-19.23	AVG
7	18.0643	35.93	10.21	46.14	60.00	-13.86	QP
8	18.0643	35.14	10.21	45.35	50.00	-4.65	AVG
9	24.7891	36.96	10.26	47.22	60.00	-12.78	QP
10	24.7891	34.43	10.26	44.69	50.00	-5.31	AVG
11	28.0509	33.56	10.29	43.85	60.00	-16.15	QP
12	28.0509	31.49	10.29	41.78	50.00	-8.22	AVG

Remark: 1. QP = Quasi Peak, AVG = Average
 2. Correction Factor = Insertion loss of LISN + Cable loss + Transient Limiter (If use)
 3. Measurement Value = Reading Level + Correct Factor
 4. Margin Level = Measurement Value - Limit Value

4.1.7 Photographs of Test Configuration





4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

Radiated Frequency range 30 MHz to 1000 MHz

Radiated Emissions Limits at 10 meters		
Frequencies (MHz)	FCC 15B/ ICES-003	
	Class A (dB μ V/m)	Class B (dB μ V/m)
30-88	39.1	29.5
88-216	43.5	33.1
216-230	46.4	35.6
230-960		
960-1000	49.5	43.5

Radiated Emissions Limits at 3 meters		
Frequencies (MHz)	FCC 15B/ ICES-003	
	Class A (dB μ V/m)	Class B (dB μ V/m)
30-88	49.5	40
88-216	54	43.5
216-230	56.9	46
230-960		
960-1000	60	54

Note: 1. The lower limit shall apply at the transition frequency.

2. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average

3. The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correction Factor = Antenna factor + Cable loss (Antenna to preamplifier) - preamplifier Gain
+ Cable loss (preamplifier to receiver)

Margin Level = Measurement Value - Limit Value

**Radiated Frequency range above 1 GHz**

Radiated Emissions Limits at 3meters				
Frequencies (GHz)	FCC 15B/ ICES-003			
	Class A (dB μ V/m)		Class B (dB μ V/m)	
	Peak	Average	Peak	Average
1 to 40	80	60	74	54

- Note:**
1. The lower limit shall apply at the transition frequency.
 2. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
 3. The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correction Factor = Antenna factor + Cable loss (Antenna to preamplifier) - preamplifier Gain
 + Cable loss (preamplifier to receiver)
 Margin Level = Measurement Value - Limit Value

Frequency Range (For unintentional radiators)

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower



4.2.2 Test Instrument

Test Site: W08-966					
Item	Equipment	Manufacturer	Model	Meter No.	Calibration Date
1	Horn Antenna	Schwarzbeck	BBHA 9120D	CT-9-031	Jul. 28, 2020
2	Horn Antenna	Schwarzbeck	BBHA 9170	CT-9-032	Dec. 04, 2019
3	TRILOG Broadband Antenna with 5 dB Attenuator	Schwarzbeck	VULB 9168 & FAT-NM5NF5T3G 2W5	CT-1-002-1	Jul. 29, 2020
4	EXA Signal Analyzer	Keysight	N9010A	CT-1-093	Apr. 21, 2020
5	EMI Test Receiver	Keysight	N9038A	CT-9-007	Jul. 28, 2020
6	Preamplifier	EM	EM 330	CT-9-024	Jul. 30, 2020
7	Preamplifier	JPT	JPA0118-55-303K	CT-1-139	Apr. 21, 2020
8	Preamplifier	EMCI	EMC051845SE	CT-9-012	Sep. 04, 2020
9	Preamplifier	EMCI	EMC184045SE	CT-9-013	Sep. 04, 2020
10	Test Cable	EMCI	EMCCFD400-NM-NM-1000	CT-1-132	Jul. 29, 2020
11	Test Cable	PEWC	CFD400NL-LW-N M-NM-3000	CT-1-141	Jul. 30, 2020
12	Test Cable	EMCI	EMCCFD400-NM-NM-15000	CT-1-133	Jul. 30, 2020
13	Test Cable	EMCI	EMC104-SM-35M-600	CT-1-134	Jul. 30, 2020
14	Test Cable	EMCI	EMC104-SM-35M-15000	CT-1-135	Jul. 30, 2020
15	Test Cable	EMCI	EMC102-KM-KM-600	CT-1-136	Jul. 30, 2020
16	Test Cable	MVE	140140.LL404.700	CT-9-066	Apr. 21, 2020
17	Measurement Software	EZ-EMC	Ver : FA-03A2 RE	CT-3-012	No calibration request

Note: 1. The calibration interval of the above test instruments is 12 months.



4.2.3 Test Procedure

- a. The table-top EUT was placed on the top of a turntable 0.8 meters above the ground at 3 m 966 chamber. The floor-standing EUT and all cables shall be insulated from the ground plane by up to 12 mm of insulating material if required. The table was rotated 360 degrees to determine the position of the high radiation emissions.
- b. The height of the test antenna shall vary between 1 m to 4 m. Both vertical and horizontal polarizations of the antenna were set to make the measurement.
- c. The EUT was set up as per the test configuration to simulate typical usage per the user's manual. All I/O cables were positioned to simulate typical usage. The actual test configuration, please refer to EUT test photos.
- d. The initial step in collecting radiated emission data is a Spectrum Mode scanning the measurement frequency range.

Below 1GHz:

Reading in which marked as QP or Peak means measurements by using Spectrum Mode with detector RBW=120kHz.

If the Spectrum Mode measured peak value compliance with and lower than Quasi Peak Limit, the EUT shall be deemed to meet QP Limits.

Above 1GHz:

Reading in which marked as Peak & AVG means measurements by using Spectrum Mode with setting in RBW=1MHz.

If the Spectrum Mode measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak and AVG Limits.

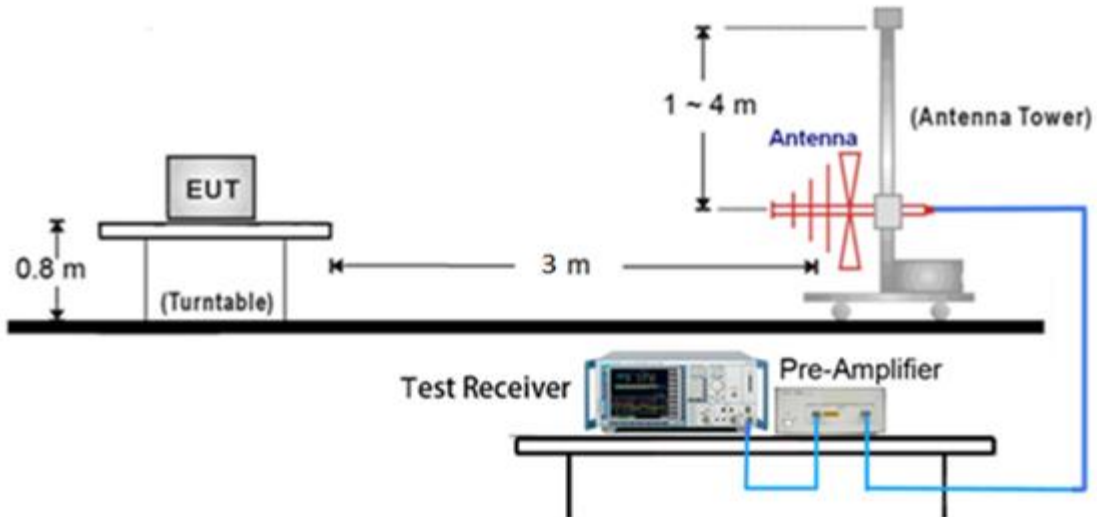
- e. Emission frequency and amplitude were recorded, recording at least six highest emissions. The EUT and cable configuration of the above highest emission levels were recorded. The test data of the worst case was recorded.

4.2.4 Deviation from Test Standard

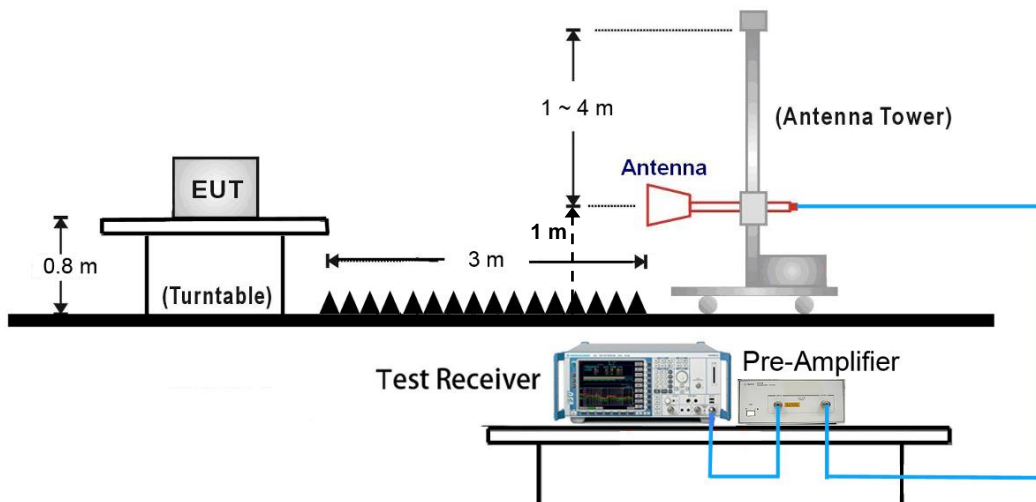
No deviation

4.2.5 Test Setup

< Radiated Emissions Frequency: 30 MHz to 1000 MHz >



< Radiated Emissions Frequency: above 1GHz >



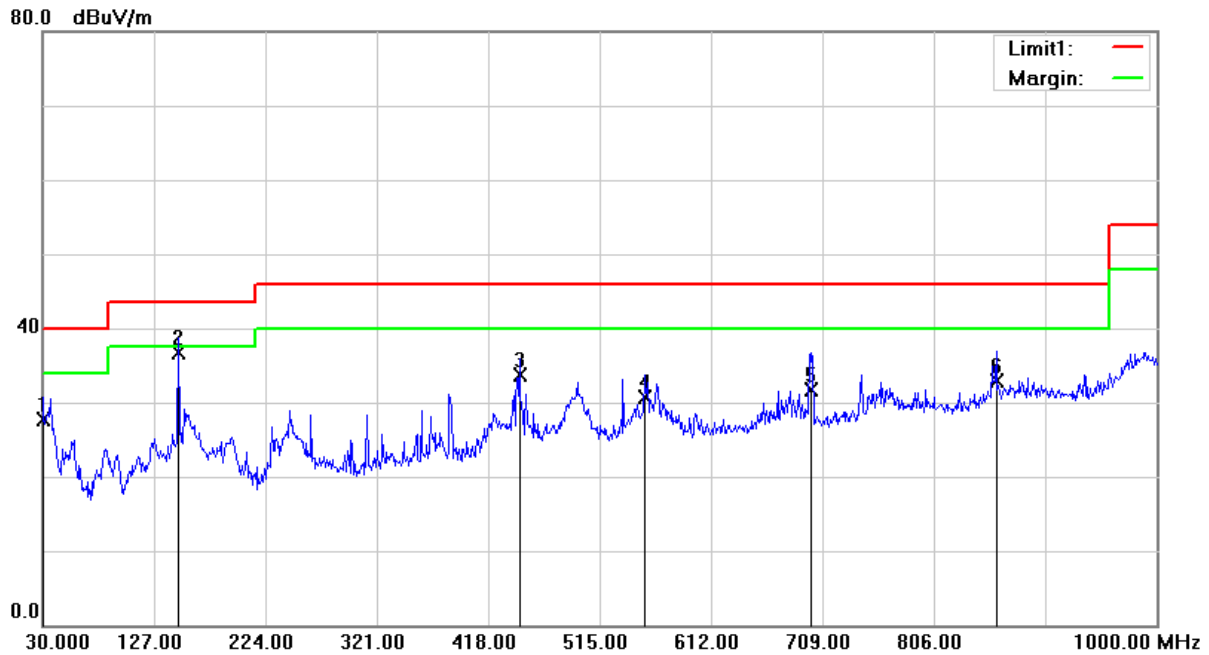
Note:

- (1) Please refer to the 4.2.7 for the actual test configuration.
- (2) The formula of measured value as: $\text{Test Result} = \text{Reading} + \text{Correction Factor}$
- (3) Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- (4) The test result calculated as following:
 $\text{Measurement Value} = \text{Reading Level} + \text{Correct Factor}$
 $\text{Correct Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain (if use)}$
 $\text{Margin Level} = \text{Measurement Value} - \text{Limit Value}$



4.2.6 Test Result

Test Voltage	120Vac, 60Hz	Frequency Range	30 – 1000 MHz
Environmental Conditions	23°C, 58% RH	6dB Bandwidth	120 kHz
Test Date	2020/10/22	Test Distance	3m
Tested by	Karwin Kao	Polarization	Vertical
Test Site	W08		



No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (degree)	Antenna Height (cm)	Detector
1	30.0000	37.81	-10.18	27.63	40.00	-12.37	215	100	QP
2	148.3400	45.95	-9.21	36.74	43.50	-6.76	298	100	QP
3	445.1600	38.68	-4.88	33.80	46.00	-12.20	155	100	QP
4	553.8000	33.54	-2.81	30.73	46.00	-15.27	22	100	QP
5	699.3000	32.04	-0.34	31.70	46.00	-14.30	2	100	QP
6	860.3200	30.32	2.53	32.85	46.00	-13.15	65	100	QP

Remark: 1. QP = Quasi Peak
 2. Correction Factor = Antenna factor + Cable loss (Antenna to preamplifier) - preamplifier Gain + Cable loss (preamplifier to receiver)
 3. Measurement Value = Reading Level + Correct Factor
 4. Margin Level = Measurement Value - Limit Value



Test Voltage	120Vac, 60Hz	Frequency Range	30 – 1000 MHz
Environmental Conditions	23°C, 58% RH	6dB Bandwidth	120 kHz
Test Date	2020/10/22	Test Distance	3m
Tested by	Karwin Kao	Polarization	Horizontal
Test Site	W08		

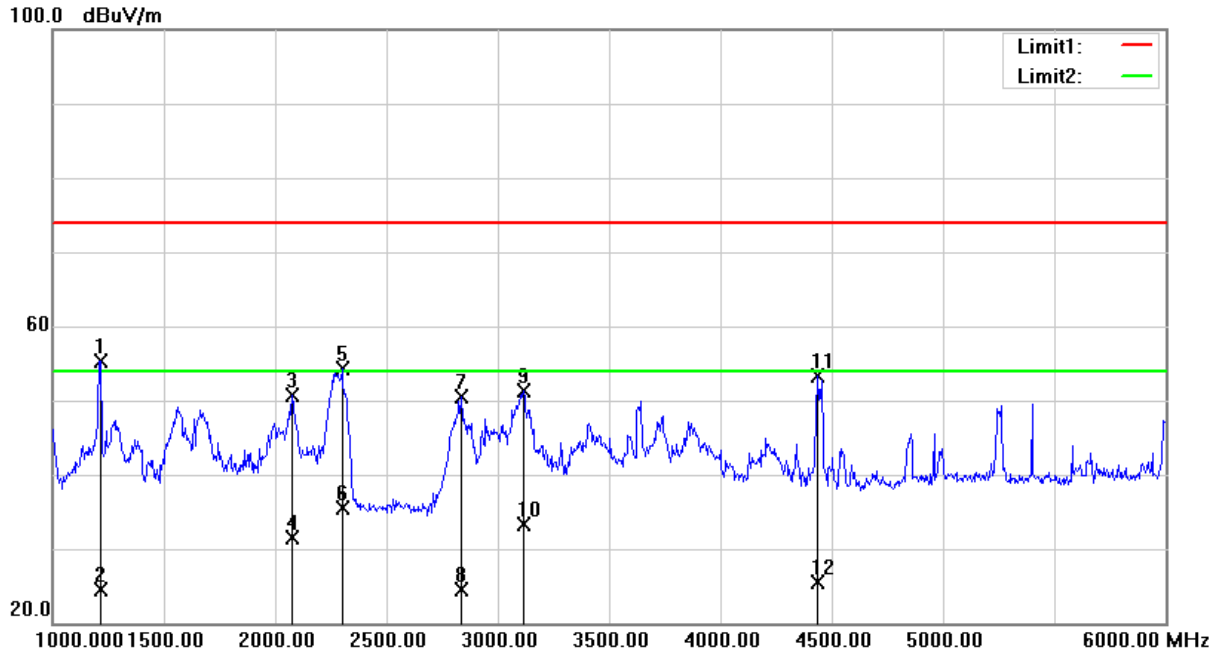


No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (degree)	Antenna Height (cm)	Detector
1	148.3400	45.34	-9.21	36.13	43.50	-7.37	258	200	QP
2	237.5800	43.69	-8.68	35.01	46.00	-10.99	158	100	QP
3	312.2700	35.88	-7.90	27.98	46.00	-18.02	224	100	QP
4	556.7100	37.22	-2.79	34.43	46.00	-11.57	211	100	QP
5	697.3600	32.03	-0.35	31.68	46.00	-14.32	41	100	QP
6	856.4400	33.03	2.45	35.48	46.00	-10.52	148	200	QP

Remark: 1. QP = Quasi Peak
 2. Correction Factor = Antenna factor + Cable loss (Antenna to preamplifier) - preamplifier Gain + Cable loss (preamplifier to receiver)
 3. Measurement Value = Reading Level + Correct Factor
 4. Margin Level = Measurement Value - Limit Value



Test Voltage	120Vac, 60Hz	Frequency Range	1 – 6GHz
Environmental Conditions	23°C, 58% RH	6dB Bandwidth	1MHz
Test Date	2020/10/22	Test Distance	3m
Tested by	Karwin Kao	Polarization	Vertical
Test Site	W08		



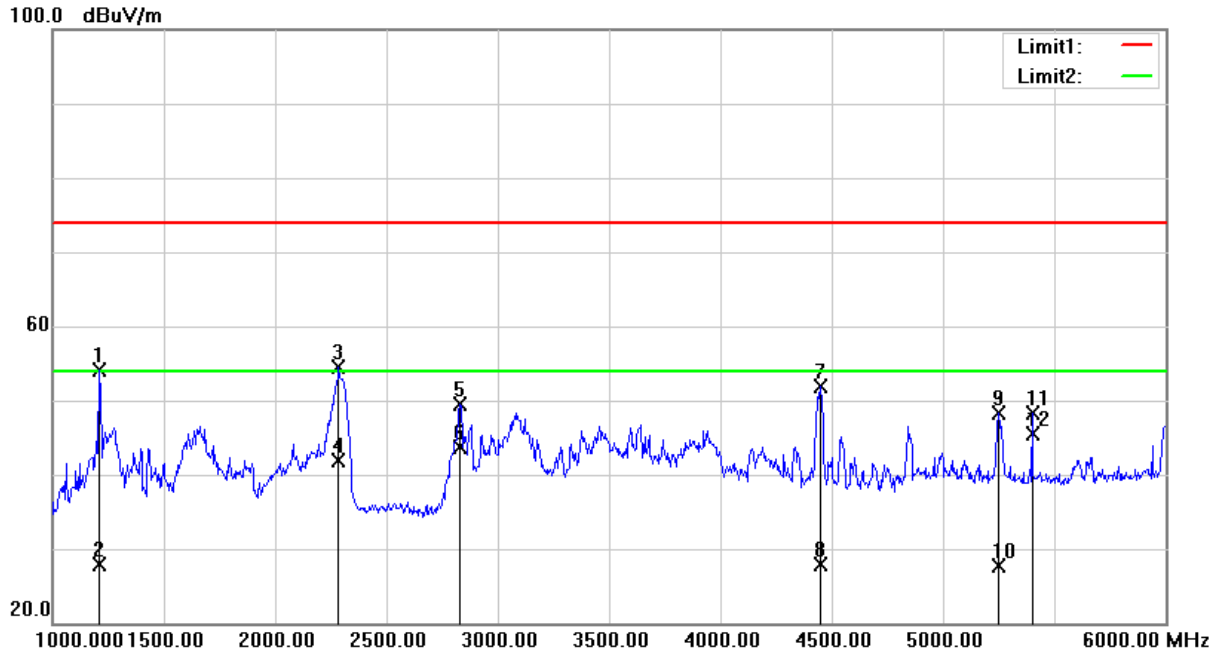
No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (degree)	Antenna Height (cm)	Detector
1	1215.000	85.67	-30.28	55.39	74.00	-18.61	360	163	peak
2	1215.000	54.77	-30.28	24.49	54.00	-29.51	360	163	AVG
3	2075.000	79.43	-28.81	50.62	74.00	-23.38	163	200	peak
4	2075.000	60.36	-28.81	31.55	54.00	-22.45	172	200	AVG
5	2300.000	78.78	-24.55	54.23	74.00	-19.77	200	100	peak
6	2300.000	60.03	-24.55	35.48	54.00	-18.52	135	116	AVG
7	2835.000	75.32	-24.87	50.45	74.00	-23.55	360	110	peak
8	2835.000	49.44	-24.87	24.57	54.00	-29.43	360	110	AVG
9	3115.000	75.66	-24.36	51.30	74.00	-22.70	135	200	peak
10	3115.000	57.70	-24.36	33.34	54.00	-20.66	135	200	AVG
11	4435.000	73.14	-19.78	53.36	74.00	-20.64	68	100	peak
12	4435.000	45.27	-19.78	25.49	54.00	-28.51	68	100	AVG

Remark:

1. peak = Peak, AVG = Average
2. Correction Factor = Antenna factor + Cable loss (Antenna to preamplifier) - preamplifier Gain + Cable loss (preamplifier to receiver)
3. Measurement Value = Reading Level + Correct Factor
4. Margin Level = Measurement Value - Limit Value



Test Voltage	120Vac, 60Hz	Frequency Range	1 – 6GHz
Environmental Conditions	23°C, 58% RH	6dB Bandwidth	1MHz
Test Date	2020/10/22	Test Distance	3m
Tested by	Karwin Kao	Polarization	Horizontal
Test Site	W08		



No.	Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB/m)	Measurement (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (degree)	Antenna Height (cm)	Detector
1	1210.000	84.46	-30.28	54.18	74.00	-19.82	62	100	peak
2	1210.000	58.16	-30.28	27.88	54.00	-26.12	62	100	AVG
3	2285.000	79.45	-24.90	54.55	74.00	-19.45	113	200	peak
4	2285.000	66.90	-24.90	42.00	54.00	-12.00	113	200	AVG
5	2830.000	74.49	-24.89	49.60	74.00	-24.40	360	100	peak
6	2830.000	68.55	-24.89	43.66	54.00	-10.34	360	100	AVG
7	4450.000	71.61	-19.69	51.92	74.00	-22.08	170	100	peak
8	4450.000	47.62	-19.69	27.93	54.00	-26.07	170	100	AVG
9	5250.000	67.24	-19.01	48.23	74.00	-25.77	58	100	peak
10	5250.000	46.79	-19.01	27.78	54.00	-26.22	58	100	AVG
11	5400.000	67.05	-18.74	48.31	74.00	-25.69	138	100	peak
12	5400.000	64.16	-18.74	45.42	54.00	-8.58	138	100	AVG

Remark: 1. peak = Peak, AVG = Average
 2. Correction Factor = Antenna factor + Cable loss (Antenna to preamplifier) - preamplifier Gain + Cable loss (preamplifier to receiver)
 3. Measurement Value = Reading Level + Correct Factor
 4. Margin Level = Measurement Value - Limit Value

4.2.7 Photographs of Test Configuration

Radiated Emission Test (30MHz~1GHz)



Radiated Emission Test (Above 1GHz)



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