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# VARIANT FCC TEST REPORT

**REPORT NO.:** RF150729C24B-3

**MODEL NO.:** P200 Plus

**FCC ID:** B32P400PLUS

**RECEIVED:** Dec. 11, 2015

**TESTED:** Dec. 18, 2015 ~ Dec. 23, 2015

**ISSUED:** Dec. 31, 2015

**APPLICANT:** Verifone, Inc.

**ADDRESS:** 1400 West Stanford Ranch Road Suite 200 Rocklin  
CA 95765 USA

**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.)  
Ltd., Taoyuan Branch

**LAB ADDRESS:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist.,  
New Taipei City, Taiwan ( R.O.C )

**TEST LOCATION:** No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan  
Dist., Taoyuan City 33383, Taiwan, R.O.C.

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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF150729C24B-3	Original release	Dec. 31, 2015



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## REPORT ISSUE RECORD OF EUT

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF150729C24-3	Original release	Aug. 21, 2015
RF150729C24B-3	<p>1. Add series model: P200 Plus.</p> <p>2. The differences between the original model (P400 Plus) and new adding model (P200 Plus) are:</p> <ul style="list-style-type: none"><li>* LCM (Touch Panel and Non-touch Panel).</li><li>* The matching values of CTLS (RFID).</li></ul> <p>3. Dongle cable update to "CBL435-044-01-A".</p>	Dec. 31, 2015



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## 1. CERTIFICATION

**PRODUCT:** Point of Sale Terminal

**MODEL NO.:** P200 Plus

**BRAND:** Verifone

**APPLICANT:** Verifone, Inc.

**TESTED:** Dec. 18, 2015 ~ Dec. 23, 2015

**TEST SAMPLE:** Identical Prototype

**STANDARDS:** FCC Part 15, Subpart C (Section 15.247)

ANSI C63.10-2013

This report issued as a supplementary report to BV ADT report no.: RF150729C24-3.

This report shall be used by combining with its original report.

**PREPARED BY** : Rona Chen, DATE : Dec. 31, 2015

Rona Chen / Specialist

**APPROVED BY** : Stanley Wu, DATE : Dec. 31, 2015

Stanley Wu / Assistant Manager



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## 2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247) (Bluetooth LE 4.2)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -16.79dB at 0.57228MHz.
15.205 & 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -6.48dB at 376.29MHz.
15.247(d)	Band Edge Measurement	N/A	Refer to Note
15.247(d)	Antenna Port Emission	N/A	Refer to Note
15.247(a)(2)	6dB bandwidth	N/A	Refer to Note
15.247(b)	Conducted power	N/A	Refer to Note
15.247(e)	Power Spectral Density	N/A	Refer to Note
15.203	Antenna Requirement	PASS	No antenna connector is used.

**Note:**

1. "N/A" means Not Applicable.
2. Only AC Power Conducted Emission and Radiated Emissions tests were performed for this addendum. Refer to original report for other test data.

### 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~1000MHz	2.95 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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



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### 3. GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

EUT	Point of Sale Terminal
MODEL NO.	P200 Plus
POWER SUPPLY	9.0Vdc (adapter)
MODULATION TYPE	GFSK
TRANSFER RATE	1Mbps
OPERATING FREQUENCY	2402 ~ 2480MHz
NUMBER OF CHANNEL	40
CHANNEL SPACING	2MHz
ANTENNA TYPE	PIFA antenna with 1.49dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

#### NOTE:

1. This report is issued as a supplementary report to BV ADT report no.: RF150729C24-3. The difference compared with original report is listed as below. Therefore, only AC Power Conducted Emission and Radiated Emissions tests were verified.
  - Add series model: P200 Plus.
  - The differences between the original model (P400 Plus) and new adding model (P200 Plus) are:
    - LCM (Touch Panel and Non-touch Panel)
    - The matching values of CTLS (RFID).
    - Dongle cable update to "CBL435-044-01-A".

2. The EUT contains following accessory devices.

ITEM	BRAND	MODEL	SPECIFICATION
Adapter 1	Verifone	A109-1090103U	I/P: 100-240Vac, 50/60Hz, 0.25A O/P: 9Vdc, 1A 1.75m shielded cable w/o core
Adapter 2	Verifone	2ACA009E UL	I/P: 100-240Vac, 50/60Hz, 0.5A O/P: 9Vdc, 1A 1.7m shielded cable with 1 core
Dongle	Verifone	CBL435-044-01-A	1.0 meter with one core with shielding

3. The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.



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### 3.2 DESCRIPTION OF TEST MODES

#### Bluetooth LE 4.2:

40 channels are provided to this EUT:

CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480



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### 3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

#### BLUETOOTH LE 4.2:

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	-	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz

**PLC**: Power Line Conducted Emission

**APCM**: Antenna Port Conducted Measurement

**NOTE:** The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

#### RADIATED EMISSION TEST (ABOVE 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE	DATA RATE (Mbps)
-	0 to 39	39	GFSK	1.0

#### RADIATED EMISSION TEST (BELOW 1GHz):

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE	DATA RATE (Mbps)
-	0 to 39	39	GFSK	1.0

#### POWER LINE CONDUCTED EMISSION TEST:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE	DATA RATE (Mbps)
-	0 to 39	39	GFSK	1.0



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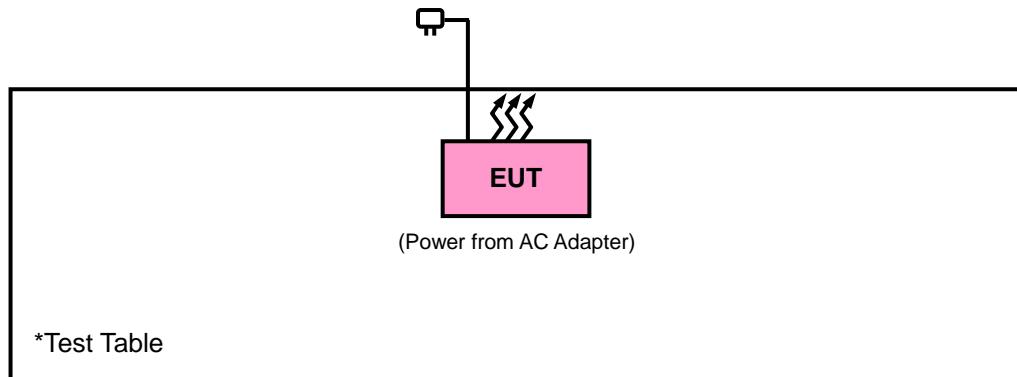
### **TEST CONDITION:**

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 65%RH	120Vac, 60Hz	Gavin Wu
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Gavin Wu
PLC	25deg. C, 65%RH	120Vac, 60Hz	Toby Tian

### **3.3 DESCRIPTION OF SUPPORT UNITS**

The EUT has been tested as an independent unit together with other necessary accessories or support units.

#### **3.3.1 CONFIGURATION OF SYSTEM UNDER TEST**



### **3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS**

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C (15.247)**

**ANSI C63.10-2013**

**558074 D01 DTS Meas Guidance v03r03**

**FCC Public Notice DA 00-705**

All test items have been performed and recorded as per the above standards.

**NOTE:** The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.



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## 4. TEST TYPES AND RESULTS (FOR BLUETOOTH LE 4.2)

### 4.1 RADIATED EMISSION AND BANEDGE MEASUREMENT

#### 4.1.1 LIMITS OF RADIATED EMISSION AND BANEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
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

**NOTE:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dB<sub>u</sub>V/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



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#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver Agilent	N9038A	MY51210203	Jan.21, 2015	Jan.21, 2016
Spectrum Analyzer Agilent	N9010A	MY52220314	Sep.03, 2015	Sep.02, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2015	Dec. 16, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Feb. 04, 2015	Feb. 04, 2016
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Feb. 09, 2015	Feb. 09, 2016
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Feb. 04, 2015	Feb. 04, 2016
Loop Antenna	EM-6879	269	Jul. 31, 2015	Jul. 30, 2016
Preamplifier Agilent	8449B	3008A01962	Oct. 15, 2015	Oct. 14, 2016
Preamplifier EMCI	EMC 184045	980116	Jan. 09, 2015	Jan. 08, 2016
Preamplifier EMCI	EMC 330H	980112	Dec. 27, 2014	Dec. 26, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4 2950114	Oct. 12, 2015	Oct. 11, 2016
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 12, 2015	Oct. 11, 2016
RF Coaxial Cable Worken	8D-FB	Cable-Ch10-01	Oct. 12, 2015	Oct. 11, 2016
Software BV ADT	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

**NOTE:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in HwaYa Chamber 10.
4. The horn antenna and HP preamplifier (model: EMC 184045) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 690701.
6. The IC Site Registration No. is IC 7450F-10.



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#### 4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Height of receiving antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

#### NOTE:

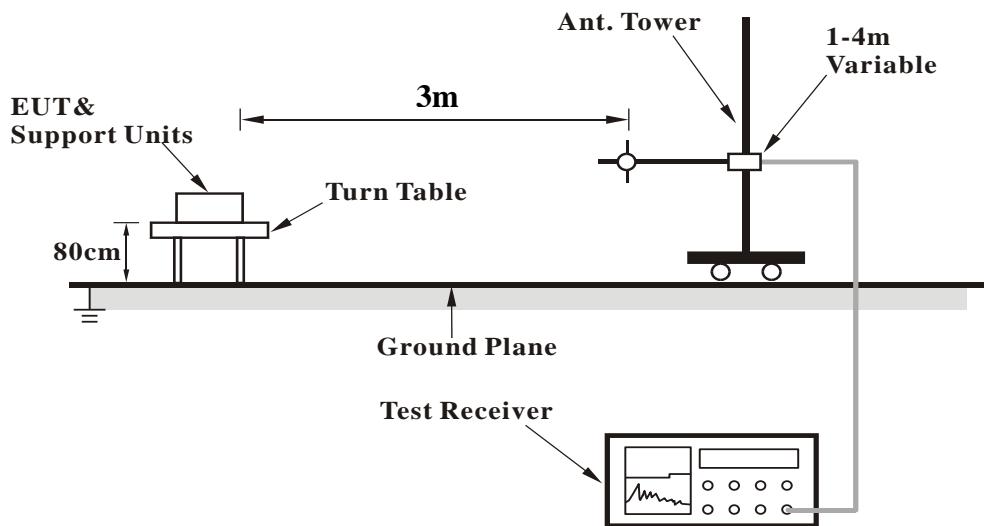
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

#### 4.1.4 DEVIATION FROM TEST STANDARD

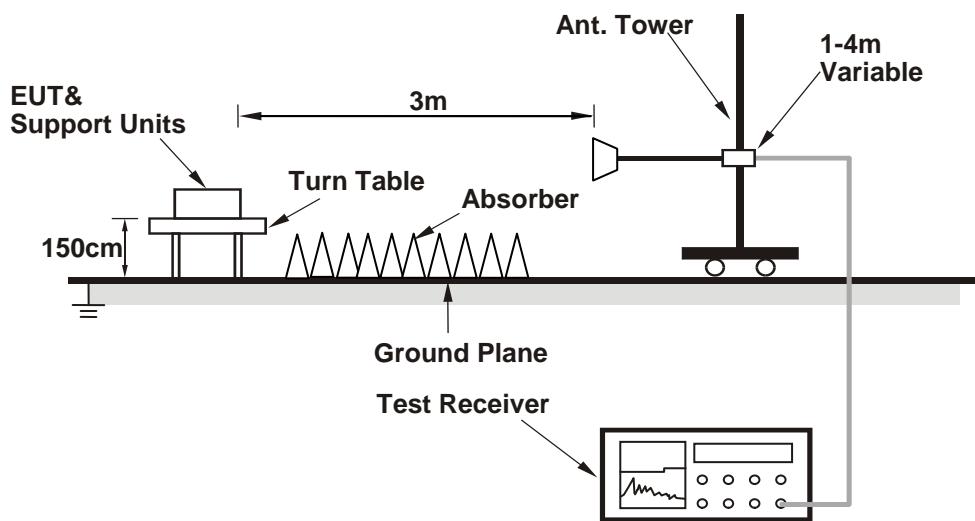
No deviation.

#### 4.1.5 TEST SETUP

<Frequency Range 30MHz ~ 1GHz>



<Frequency Range above 1GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.6 EUT OPERATING CONDITIONS

- Placed the EUT on a testing table.
- Use the software to control the EUT under transmission condition continuously at specific channel frequency.



#### 4.1.7 TEST RESULTS

##### ABOVE 1GHz WORST-CASE DATA

EUT TEST CONDITION		MEASUREMENT DETAIL							
CHANNEL	Channel 39	FREQUENCY RANGE				1GHz ~ 25GHz			
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION				Peak (PK) Average (AV)			
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY				Gavin Wu			

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2368	34.8	41.42	54	-19.2	26.81	4.07	37.5	102	266	Average
2368	56.91	63.53	74	-17.09	26.81	4.07	37.5	102	266	Peak
2480	99.72	105.74			27.15	4.15	37.32	102	266	Average
2480	100.58	106.6			27.15	4.15	37.32	102	266	Peak
2494	36.32	42.21	54	-17.68	27.2	4.16	37.25	102	266	Average
2494	57.38	63.27	74	-16.62	27.2	4.16	37.25	102	266	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2310	34.98	41.75	54	-19.02	26.67	4.01	37.45	126	158	Average
2310	57.4	64.17	74	-16.6	26.67	4.01	37.45	126	158	Peak
2480	98.42	104.44			27.15	4.15	37.32	126	158	Average
2480	99.31	105.33			27.15	4.15	37.32	126	158	Peak
2484	36.15	42.17	54	-17.85	27.15	4.15	37.32	126	158	Average
2484	57.36	63.38	74	-16.64	27.15	4.15	37.32	126	158	Peak

##### REMARKS:

1. Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor  
Margin value = Emission level – Limit value
2. 2480MHz: Fundamental frequency.



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**9 kHz ~ 30 MHz DATA:**

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

**30 MHz ~ 1 GHz WORST-CASE DATA :**

EUT TEST CONDITION		MEASUREMENT DETAIL					
CHANNEL	Channel 39	FREQUENCY RANGE				30MHz ~ 1GHz	
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION				Peak (PK)	
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY				Gavin Wu	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
181.32	26.2	46.13	43.5	-17.3	10.67	1.22	31.82	100	151	Peak
231.76	35.59	55.3	46	-10.41	10.71	1.42	31.84	123	116	Peak
287.05	33.4	50.95	46	-12.6	12.57	1.6	31.72	108	212	Peak
338.46	38.55	54.77	46	-7.45	13.87	1.73	31.82	100	315	Peak
<b>376.29</b>	<b>39.52</b>	<b>54.84</b>	<b>46</b>	<b>-6.48</b>	<b>14.77</b>	<b>1.85</b>	<b>31.94</b>	<b>109</b>	<b>346</b>	<b>Peak</b>
754.59	28.28	35.52	46	-17.72	21.59	2.54	31.37	113	16	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
128.94	27.41	46.54	43.5	-16.09	11.61	1.14	31.88	105	287	Peak
227.88	28.66	48.54	46	-17.34	10.54	1.41	31.83	113	164	Peak
352.04	31.37	47.29	46	-14.63	14.19	1.76	31.87	108	149	Peak
368.53	36.56	52.08	46	-9.44	14.59	1.82	31.93	100	115	Peak
497.54	28.32	40.63	46	-17.68	17.27	2.08	31.66	100	230	Peak
629.46	24.3	34.17	46	-21.7	19.96	2.31	32.14	100	178	Peak

**REMARKS:** Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

Margin value = Emission level – Limit value



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## 4.2 CONDUCTED EMISSION MEASUREMENT

### 4.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	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 0.50MHz.  
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

### 4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 16, 2015	Nov. 15, 2016
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2014	Dec. 25, 2015
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2015	Feb. 25, 2016
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 24, 2015	Jul. 23, 2016
Software ADT	BV ADT_Cond_V7.3.7.3	NA	NA	NA

**NOTE:** 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.  
2. The test was performed in HwaYa Shielded Room 1.  
3. The VCCI Site Registration No. is C-2040.

#### 4.2.3 TEST PROCEDURES

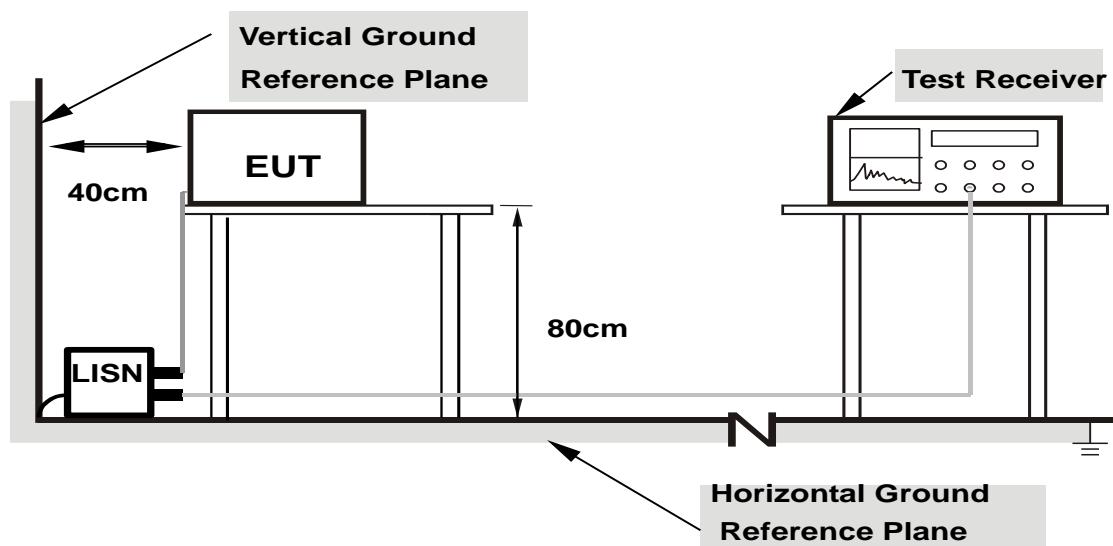
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**NOTE:** All modes of operation were investigated and the worst-case emissions are reported.

#### 4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

#### 4.2.5 TEST SETUP



**Note:**

1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.2.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.

#### 4.2.7 TEST RESULTS

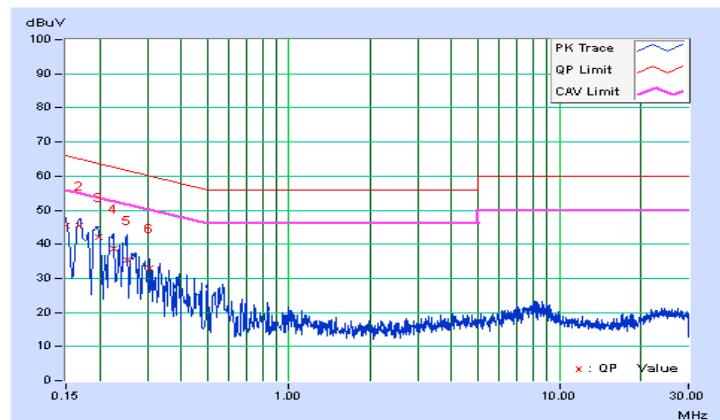
##### CONDUCTED WORST-CASE DATA :

Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Toby Tian	Test Date	2015/12/18

No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.82	35.74	23.86	45.56	33.68	66.00	56.00	-20.44	-22.32
2	0.16878	9.83	35.67	20.62	45.50	30.45	65.02	55.02	-19.52	-24.57
3	0.19717	9.84	32.26	16.81	42.10	26.65	63.73	53.73	-21.63	-27.08
4	0.22429	9.84	28.88	14.63	38.72	24.47	62.66	52.66	-23.93	-28.18
5	0.25166	9.85	25.62	11.95	35.47	21.80	61.70	51.70	-26.23	-29.90
6	0.30640	9.86	23.09	8.89	32.95	18.75	60.07	50.07	-27.12	-31.32

##### Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value





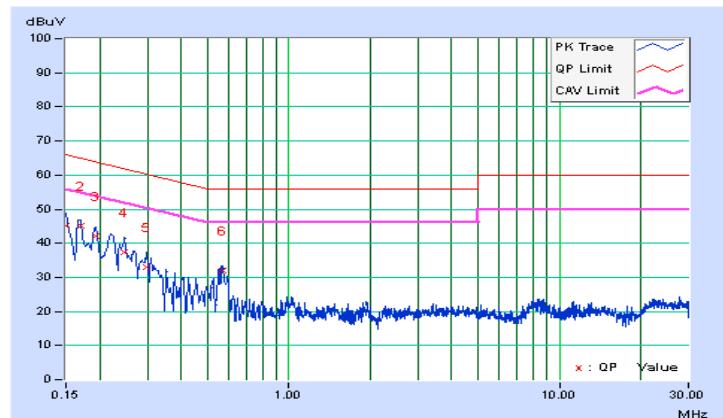
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Frequency Range	150kHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9kHz
Input Power	120Vac, 60Hz	Environmental Conditions	25°C, 65%RH
Tested by	Toby Tian	Test Date	2015/12/18

No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	1	9.82	35.32	24.25	45.14	34.07	66.00	56.00	-20.86	-21.93
2	0.16955	9.82	35.37	22.92	45.19	32.74	64.98	54.98	-19.79	-22.24
3	0.19305	9.83	32.34	20.72	42.17	30.55	63.90	53.90	-21.74	-23.36
4	0.24775	9.84	27.60	14.31	37.44	24.15	61.83	51.83	-24.39	-27.68
5	0.29858	9.85	23.20	12.24	33.05	22.09	60.28	50.28	-27.23	-28.19
<b>6</b>	<b>0.57228</b>	<b>9.89</b>	<b>22.18</b>	<b>19.32</b>	<b>32.07</b>	<b>29.21</b>	<b>56.00</b>	<b>46.00</b>	<b>-23.93</b>	<b>-16.79</b>

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value





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## 5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



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## 6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Fax: 886-2-26051924

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**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.



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## 7. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---