

FCC TEST REPORT

REPORT NO.: RF150109C17

MODEL NO.: PSG01-2

FCC ID: RHHPSG01

RECEIVED: Jan. 09, 2015

TESTED: Jan. 14, 2015

ISSUED: Jan. 22, 2015

APPLICANT: Philio Technology Corporation

ADDRESS: 8F., No.653-2, Zhongzheng Rd., Xinzhuang Dist.,
New Taipei City 24257, Taiwan (R.O.C)

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 Tsuen, Kwei
Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF150109C17	Original release.	Jan. 22, 2015

1. CERTIFICATION

PRODUCT: Z-Wave Smoke Sensor

MODEL NO.: PSG01-2

BRAND: 

APPLICANT: Philio Technology Corporation

TESTED: Jan. 14, 2015

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: FCC Part 15, Subpart C (Section 15.249)

ANSI C63.10-2009

The above equipment (model: PSG01-2) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & 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.

PREPARED BY :  , **DATE :** Jan. 22, 2015
Suntee Liu / Specialist

APPROVED BY :  , **DATE :** Jan. 22, 2015
Ken Liu / Senior Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C (Section 15.249)			
STANDARD PARAGRAPH	TEST TYPE	RESULT	REMARK
15.207	Conducted Emission Test	NA	EUT is powered from battery
15.209 15.249 15.249 (d)	Radiated Emission Test Band Edge Measurement Limit: 50dB less than the peak value of fundamental frequency or meet radiated emission limit in section 15.209	PASS	Meet the requirement of limit. Minimum passing margin is -8.2dB at 852.39MHz.

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
Radiated emission	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Z-Wave Smoke Sensor
MODEL NO.	PSG01-2
POWER SUPPLY	3Vdc (battery)
MODULATION TYPE	FSK
DATA RATE	9.6/40/100kbps
OPERATING FREQUENCY	908.4MHz ~ 916.0MHz
NUMBER OF CHANNEL	2
ANTENNA TYPE	Monopole antenna with 0dBi gain
DATA CABLE	NA
I/O PORT	Refer to user's manual
ACCESSORY DEVICES	NA

NOTE:

1. 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.

3.2 DESCRIPTION OF TEST MODES

2 channels are provided to this EUT.

CHENNEL	FREQUENCY
1	908.4MHz
2	916.0MHz

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE $<$ 1G	PLC	BM	
-	√	√	NOTE 2	√	-

Where **RE $<$ 1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission
RE $\geq$ 1G: Radiated Emission above 1GHz
BM: Bandedge Measurement

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.
2. No need to concern of PLC due to the EUT is powered from DC.

RADIATED EMISSION TEST (ABOVE 1 GHz):

- ☒ 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
-	1 to 2	1, 2	FSK

RADIATED EMISSION TEST (BELOW 1 GHz):

- ☒ 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
-	1 to 2	1, 2	FSK

BANDEDGE MEASUREMENT:

- ☒ 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
-	1 to 2	1, 2	FSK

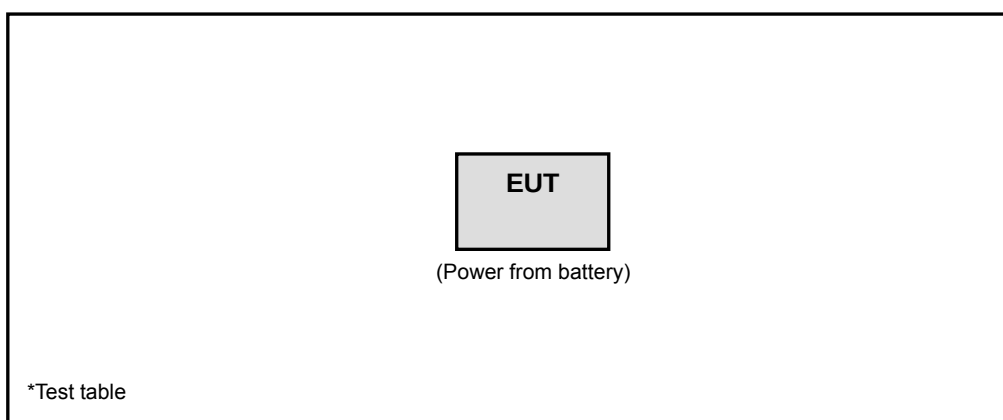
TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE $\geq$ 1G	25 deg. C, 65% RH	3Vdc	Ted Chang
RE $<$ 1G	25 deg. C, 65% RH	3Vdc	Ted Chang
BM	25 deg. C, 65% RH	3Vdc	Ted Chang

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT was tested as an independent unit.

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 (Section 15.249)

ANSI C63.10-2009

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

4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BAND EDGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BAND EDGE MEASUREMENT

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902 ~ 928 MHz	50	500
2400 ~ 2483.5 MHz	50	500
5725 ~ 5875 MHz	50	500
24 ~ 24.25 GHz	250	2500

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits as below table, whichever is the lesser attenuation

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009 ~ 0.490	$2400/F(\text{kHz})$	300
0.490 ~ 1.705	$24000/F(\text{kHz})$	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 (dBuV/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.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Dec. 01, 2014	Nov. 30, 2015
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Feb. 11, 2014	Feb. 10, 2015
BILOG Antenna SCHWARZBECK	VULB9168	9168-156	Feb. 25, 2014	Feb. 24, 2015
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-209	Aug. 25, 2014	Aug. 24, 2015
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Feb. 17, 2014	Feb. 16, 2015
Preamplifier Agilent	8449B	3008A01911	Aug. 09, 2014	Aug. 08, 2015
Preamplifier Agilent	8447D	2944A10638	Aug. 09, 2014	Aug. 08, 2015
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	248780/4 309222/4 274092/4	Aug. 09, 2014	Aug. 08, 2015
RF signal cable Worken	8D-FB	Cable-CH9-01	Aug. 11, 2014	Aug. 10, 2015
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn Table Controller EMCO	2090	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 Chamber 9.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 215374.
5. The IC Site Registration No. is IC 7450F-9.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. 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. The antenna is a broadband antenna, and its height 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:

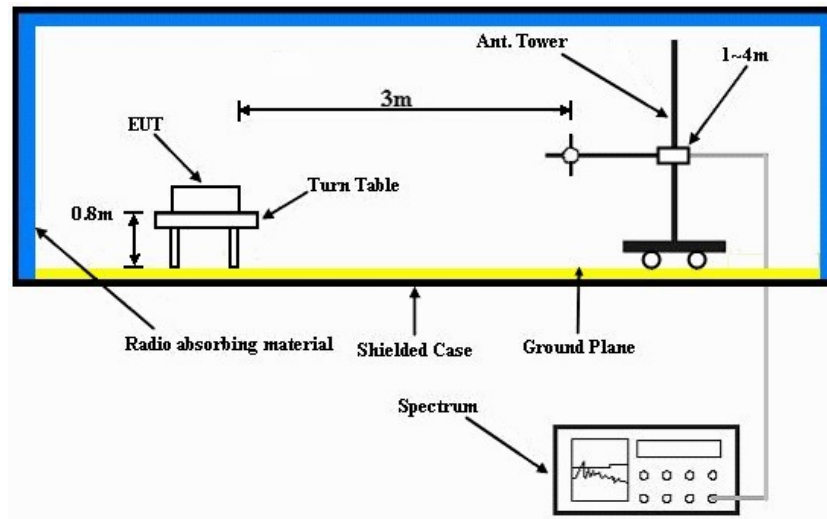
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. All modes of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

4.1.4 DEVIATION FROM TEST STANDARD

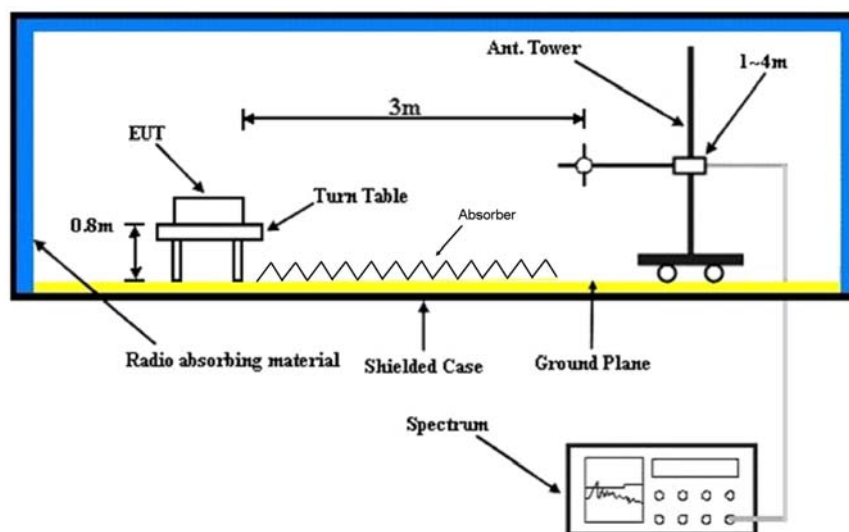
No deviation.

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

- Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 TEST RESULTS

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	3Vdc	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Ted Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	902.00	44.2 PK	74.0	-29.8	1.50 H	32	17.60	26.60
2	902.00	23.8 AV	54.0	-30.2	1.50 H	32	-2.80	26.60
3	*908.40	94.8 PK			1.50 H	32	68.00	26.80
4	*908.40	74.4 AV			1.50 H	32	47.60	26.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	902.00	44.2 PK	74.0	-29.8	1.02 V	121	17.60	26.60
2	902.00	23.8 AV	54.0	-30.2	1.02 V	121	-2.80	26.60
3	*908.40	91.5 PK			1.02 V	121	64.70	26.80
4	*908.40	71.1 AV			1.02 V	121	44.30	26.80

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 2	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	3Vdc	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Ted Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*916.00	94.6 PK			1.00 H	27	67.40	27.20
2	*916.00	74.2 AV			1.00 H	27	47.00	27.20
3	928.00	45.3 PK	74.0	-28.7	1.00 H	27	18.00	27.30
4	928.00	24.9 AV	54.0	-29.1	1.00 H	27	-2.40	27.30
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*916.00	92.0 PK			1.00 V	121	64.80	27.20
2	*916.00	71.6 AV			1.00 V	121	44.40	27.20
3	928.00	45.5 PK	74.0	-28.5	1.00 V	121	18.20	27.30
4	928.00	25.1 AV	54.0	-28.9	1.00 V	121	-2.20	27.30

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

ABOVE 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	3Vdc	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Ted Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1816.80	40.5 PK	74.0	-33.5	1.06 H	301	47.90	-7.40
2	1816.80	20.1 AV	54.0	-33.9	1.06 H	301	27.50	-7.40
3	2725.20	49.9 PK	74.0	-24.1	1.00 H	3	53.80	-3.90
4	2725.20	29.5 AV	54.0	-24.5	1.00 H	3	33.40	-3.90
5	4542.00	49.9 PK	74.0	-24.1	1.08 H	32	49.10	0.80
6	4542.00	29.5 AV	54.0	-24.5	1.08 H	32	28.70	0.80
7	6358.80	55.4 PK	74.0	-18.6	1.58 H	18	50.20	5.20
8	6358.80	35.0 AV	54.0	-19.0	1.58 H	18	29.80	5.20
9	8175.60	57.4 PK	74.0	-16.6	1.40 H	68	48.30	9.10
10	8175.60	37.0 AV	54.0	-17.0	1.40 H	68	27.90	9.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1816.80	36.5 PK	74.0	-37.5	1.02 V	54	43.90	-7.40
2	1816.80	16.1 AV	54.0	-37.9	1.02 V	54	23.50	-7.40
3	2725.50	45.7 PK	74.0	-28.3	1.20 V	335	49.60	-3.90
4	2725.50	25.3 AV	54.0	-28.7	1.20 V	335	29.20	-3.90
5	4542.00	46.0 PK	74.0	-28.0	1.02 V	34	45.20	0.80
6	4542.00	25.6 AV	54.0	-28.4	1.02 V	34	24.80	0.80
7	6358.80	52.5 PK	74.0	-21.5	1.00 V	217	47.30	5.20
8	6358.80	32.1 AV	54.0	-21.9	1.00 V	217	26.90	5.20
9	8175.60	54.1 PK	74.0	-19.9	1.02 V	64	45.00	9.10
10	8175.60	33.7 AV	54.0	-20.3	1.02 V	64	24.60	9.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 2	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	3Vdc	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Ted Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1832.00	39.7 PK	74.0	-34.3	1.02 H	304	47.10	-7.40
2	1832.00	19.3 AV	54.0	-34.7	1.02 H	304	26.70	-7.40
3	2748.00	49.6 PK	74.0	-24.4	1.00 H	29	53.40	-3.80
4	2748.00	29.2 AV	54.0	-24.8	1.00 H	29	33.00	-3.80
5	4580.00	49.9 PK	74.0	-24.1	1.22 H	18	49.00	0.90
6	4580.00	29.5 AV	54.0	-24.5	1.22 H	18	28.60	0.90
7	6412.00	55.6 PK	74.0	-18.4	1.55 H	338	50.20	5.40
8	6412.00	35.2 AV	54.0	-18.8	1.55 H	338	29.80	5.40
9	8244.00	58.0 PK	74.0	-16.0	1.40 H	69	48.90	9.10
10	8244.00	37.6 AV	54.0	-16.4	1.40 H	69	28.50	9.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1832.00	38.2 PK	74.0	-35.8	1.02 V	36	45.60	-7.40
2	1832.00	17.8 AV	54.0	-36.2	1.02 V	36	25.20	-7.40
3	2748.00	49.3 PK	74.0	-24.7	1.02 V	99	53.10	-3.80
4	2748.00	28.9 AV	54.0	-25.1	1.02 V	99	32.70	-3.80
5	4580.00	46.9 PK	74.0	-27.1	1.42 V	66	46.00	0.90
6	4580.00	26.5 AV	54.0	-27.5	1.42 V	66	25.60	0.90
7	6412.00	53.0 PK	74.0	-21.0	1.07 V	209	47.60	5.40
8	6412.00	32.6 AV	54.0	-21.4	1.07 V	209	27.20	5.40
9	8244.00	57.1 PK	74.0	-16.9	1.41 V	32	48.00	9.10
10	8244.00	36.7 AV	54.0	-17.3	1.41 V	32	27.60	9.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

BELOW 1GHz WORST-CASE DATA:

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 1	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	3Vdc	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Ted Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	748.36	33.6 QP	46.0	-12.4	1.01 H	233	37.30	-3.70
2	780.70	35.6 QP	46.0	-10.4	1.01 H	202	38.50	-2.90
3	813.03	36.6 QP	46.0	-9.4	1.01 H	212	39.10	-2.50
4	845.36	37.6 QP	46.0	-8.4	1.01 H	32	39.80	-2.20
5	876.29	35.9 QP	46.0	-10.1	1.50 H	64	37.80	-1.90
6	973.29	35.6 QP	54.0	-18.4	1.26 H	66	35.50	0.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	32.81	22.5 QP	40.0	-17.5	1.24 V	150	38.60	-16.10
2	780.70	31.8 QP	46.0	-14.2	2.00 V	310	34.70	-2.90
3	813.03	33.1 QP	46.0	-12.9	2.00 V	0	35.60	-2.50
4	845.36	33.3 QP	46.0	-12.7	1.24 V	12	35.50	-2.20
5	876.29	33.0 QP	46.0	-13.0	1.24 V	12	34.90	-1.90
6	973.29	34.5 QP	54.0	-19.5	1.00 V	123	34.40	0.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 2	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	3Vdc	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Ted Chang

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	756.80	33.3 QP	46.0	-12.7	1.00 H	220	36.70	-3.40
2	787.72	36.3 QP	46.0	-9.7	1.00 H	201	39.10	-2.80
3	820.06	37.0 QP	46.0	-9.0	1.00 H	5	39.40	-2.40
4	852.39	37.8 QP	46.0	-8.2	1.00 H	31	39.90	-2.10
5	884.72	36.3 QP	46.0	-9.7	1.49 H	57	37.90	-1.60
6	980.32	35.9 QP	54.0	-18.1	1.24 H	75	35.80	0.10
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	32.81	21.5 QP	40.0	-18.5	1.50 V	142	37.60	-16.10
2	789.13	31.3 QP	46.0	-14.7	1.25 V	135	34.10	-2.80
3	820.06	32.6 QP	46.0	-13.4	2.00 V	5	35.00	-2.40
4	852.39	32.1 QP	46.0	-13.9	1.00 V	80	34.20	-2.10
5	947.99	33.4 QP	46.0	-12.6	1.00 V	307	33.70	-0.30
6	980.32	35.1 QP	54.0	-18.9	1.00 V	126	35.00	0.10

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB)
– Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

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

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:

Linko EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-5935343

Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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

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

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