

FCC TEST REPORT

REPORT NO.: RF140703D10

MODEL NO.: FF05-05AA, FF05-05AB

FCC ID: 2ADB4-FF05-05AA

RECEIVED: Jul. 3, 2014

TESTED: Jul. 4 ~ 11, 2014

ISSUED: Jun. 1, 2015

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Taiwan Branch

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ISSUED BY: Bureau Veritas Consumer Products Services
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF140703D10	Original release	Jun. 1, 2015

1 CERTIFICATION

PRODUCT: Macaroon Wireless Charger Received Dongle
BRAND: RATTAN
MODEL NO.: FF05-05AA, FF05-05AB
APPLICANT: Foxconn Interconnect Technology Limited Taiwan Branch
TESTED: Jul. 4 ~ 11, 2014
TEST SAMPLE: ENGINEERING SAMPLE
STANDARDS: FCC Part 15, Subpart C (Section 15.209)
ANSI C63.10-2009

The above equipment 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 : Celia Chen , **DATE:** Jun. 1, 2015
(Celia Chen / Senior Specialist)

APPROVED BY : Rex Lai , **DATE:** Jun. 1, 2015
(Rex Lai / Assistant Manager)

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD PARAGRAPH	TEST TYPE	RESULT	REMARK
15.207	Conducted Emission Test	PASS	Meet the requirement of limit. Minimum passing margin is -9.47dB at 0.51056MHz.
15.209	Radiated Emission Test	PASS	Meet the requirement of limit. Minimum passing margin is -6.3dB at 196.65MHz.

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:

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

MEASUREMENT	UNCERTAINTY
Conducted emissions	3.43 dB
Radiated emissions	4.00 dB

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Macaroon Wireless Charger Received Dongle
MODEL NO.	FF05-05AA, FF05-05AB
POWER SUPPLY	5Vdc
MODULATION TYPE	Load Modulation
CARRIER FREQUENCY OF EACH CHANNEL	138kHz & 146kHz
NUMBER OF CHANNEL	2
ANTENNA TYPE	Loop antenna
DATA CABLE	Shielded Micro USB or Lightning cable (0.1m)
I/O PORT	Refer to user's manual
ACCESSORY DEVICES	N/A

NOTE:

1. The EUT is a Macaroon Wireless Charger Received Dongle with two samples the different as follows.

Sample	Model	Interface
Sample 1	FF05-05AB	Lightning type
Sample 2	FF05-05AA	Micro USB type

After pre-tested, **Sample 1** was selected as a representative one and therefore only its test data was recorded in this report.

2. The EUT was tested the following modes:

Test Mode	Test condition	Operating frequency
A	Transmitter (EUT only)	138kHz
B	Transmitter + Charging (EUT with iPad)	146kHz

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.

3.2 DESCRIPTION OF TEST MODES

2 channels were provided to this EUT

Channel	Frequency (kHz)
1	138
2	146

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	Applicable to		Description
	PLC	RE<1G	
A	√	√	Transmitter (EUT only)
B	√	√	Transmitter + Charging (EUT with iPad)

Where PLC: Power Line Conducted Emission

RE<1G RE: Radiated Emission below 1GHz

POWER LINE CONDUCTED EMISSION TEST:

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL
A	1 to 2	1
B	1 to 2	2

RADIATED EMISSION TEST (BELOW 1 GHZ):

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL
A	1 to 2	1
B	1 to 2	2

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (SYSTEM)	TESTED BY
PLC	29deg. C, 69% RH	120Vac, 60Hz	Dalen Dai
RE<1G	26deg. C, 71% RH	120Vac, 60Hz	Dalen Dai

3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

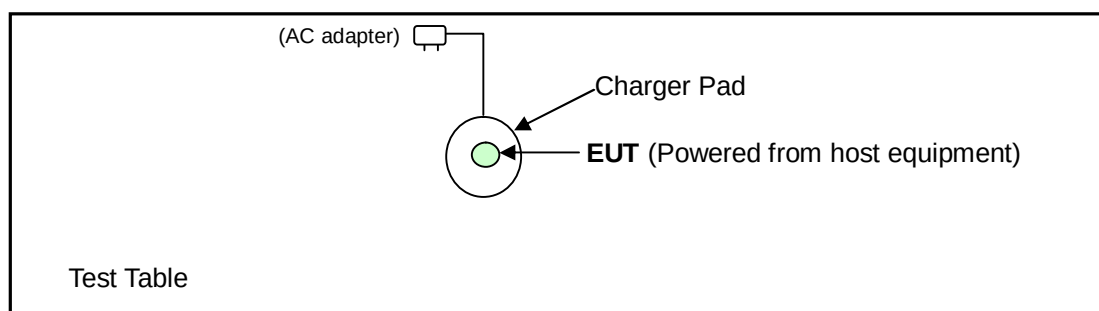
NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	iPad	Apple	A1430	DYTHR47KDVGL	FCC DoC Approved
2	Charger Pad	RATTAN	5CF1P21-05003-EH	N/A	N/A
3	AC adapter	PHIHONG	PSAA10A-050Q	N/A	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A
2	N/A
3	AC I/P: 100-240V, 0.5A, 50-60Hz DC O/P: 5V, 2A

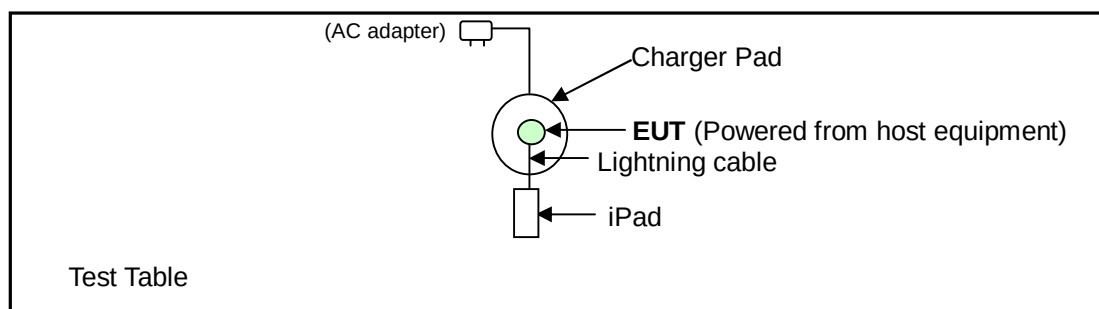
NOTE: 1. All power cords of the above support units are non shielded (1.8m).
2. The support units 2 & 3 were provided by client.

3.3.1 CONFIGURATION OF SYSTEM UNDER TEST

Mode A



Mode B



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 15.209)

ANSI C63.10-2009

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

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

4 TEST PROCEDURE AND RESULT

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ 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.

4.1.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	100276	Apr. 18, 2014	Apr. 17, 2015
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	100219	Nov. 17, 2013	Nov. 16, 2014
LISN With Adapter (for EUT)	AD10	C10Ada-001	Nov. 17, 2013	Nov. 16, 2014
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Nov. 25, 2013	Nov. 24, 2014
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 08, 2014	May 07, 2015
Software	ADT_Cond_V7.3.7	NA	NA	NA
RF cable (JYEBAO)	5D-FB	Cable-C10.01	Feb. 18, 2014	Feb. 17, 2015
SUHNTER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-011484	May 27, 2014	May 26, 2015

Notes: 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 Shielded Room No. 10.
 3. The VCCI Site Registration No. C-1852.

4.1.3 TEST PROCEDURES

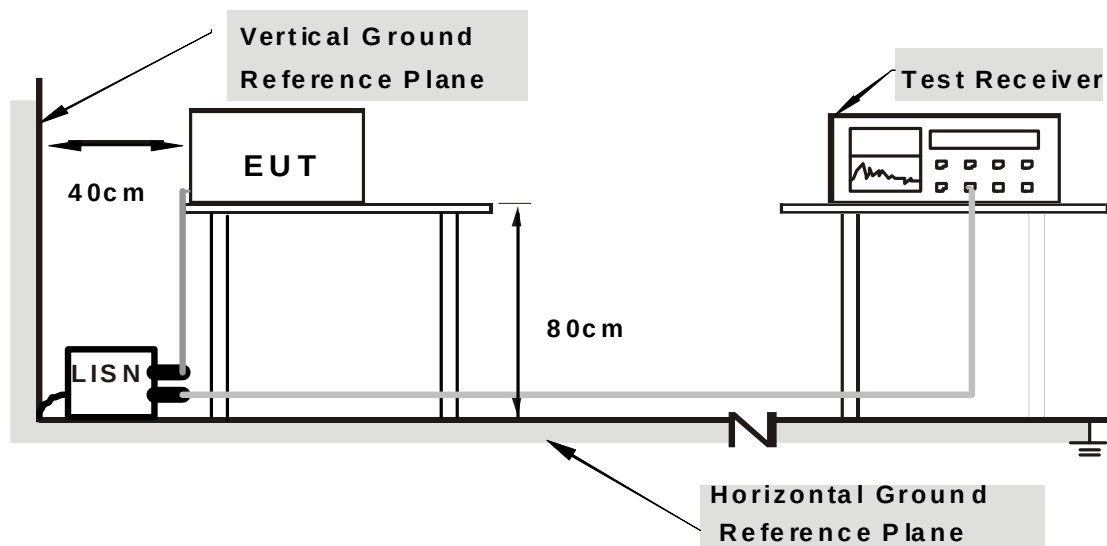
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling 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.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



Note: Support units were connected to second LISN.

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

4.1.6 EUT OPERATING CONDITIONS

For Mode A

- Turn on the power of all equipment.
- Set the EUT under transmission condition continuously at specific channel frequency.

For Mode B

- Turn on the power of all equipment.
- Set the EUT under transmission condition continuously at specific channel frequency and iPad under charging condition.

4.1.7 TEST RESULTS

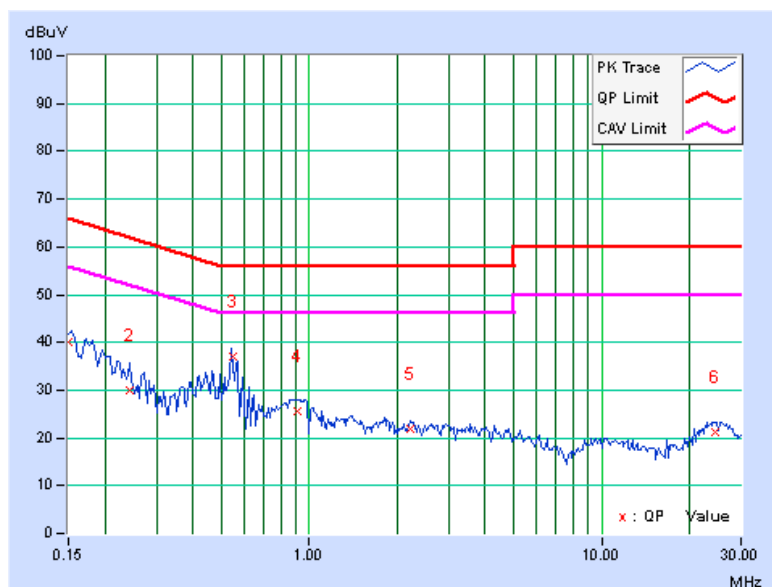
CONDUCTED WORST-CASE DATA

PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	1	TEST MODE	A

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.17	40.02	32.82	40.19	32.99	66.00	56.00	-25.81	-23.01
2	0.24375	0.18	29.66	19.45	29.84	19.63	61.97	51.97	-32.12	-32.33
3	0.54571	0.20	36.98	29.79	37.18	29.99	56.00	46.00	-18.82	-16.01
4	0.90781	0.20	25.51	14.95	25.71	15.15	56.00	46.00	-30.29	-30.85
5	2.22266	0.25	21.72	13.33	21.97	13.58	56.00	46.00	-34.03	-32.42
6	24.46094	1.45	19.68	11.72	21.13	13.17	60.00	50.00	-38.87	-36.83

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

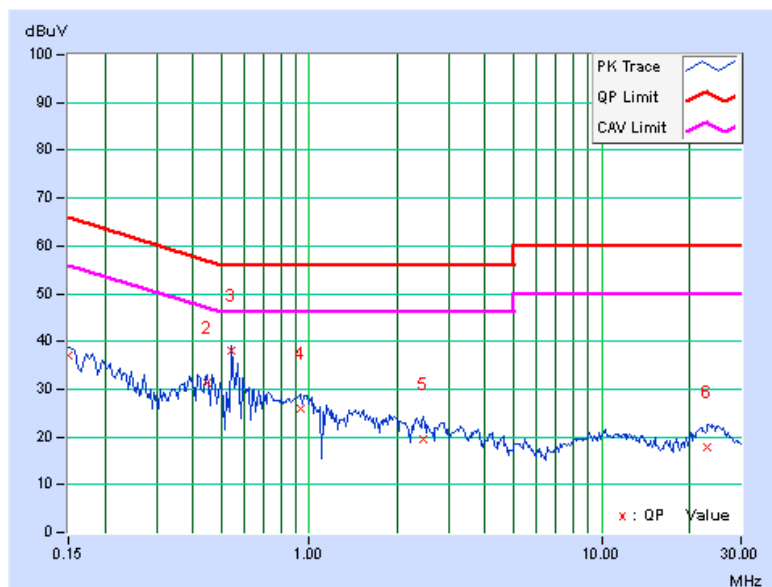


PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	1	TEST MODE	A

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.56	36.37	26.57	36.93	27.13	66.00	56.00	-29.07	-28.87
2	0.44688	0.55	30.70	19.82	31.25	20.37	56.93	46.93	-25.68	-26.56
3	0.54453	0.56	37.40	28.99	37.96	29.55	56.00	46.00	-18.04	-16.45
4	0.93888	0.59	25.47	14.34	26.06	14.93	56.00	46.00	-29.94	-31.07
5	2.46875	0.62	18.98	8.46	19.60	9.08	56.00	46.00	-36.40	-36.92
6	23.10547	1.35	16.39	7.80	17.74	9.15	60.00	50.00	-42.26	-40.85

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

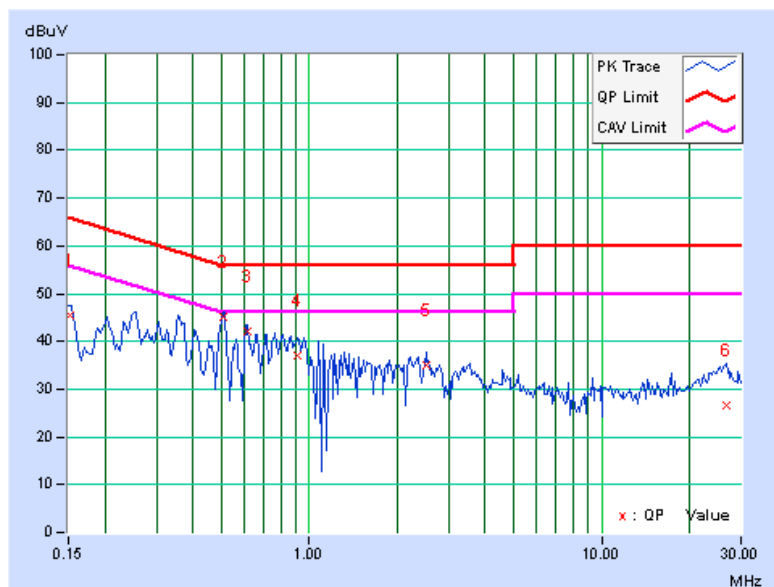


PHASE	Line 1	6dB BANDWIDTH	9kHz
CHANNEL	2	TEST MODE	B

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15256	0.17	45.40	37.59	45.57	37.76	65.86	55.86	-20.29	-18.10
2	0.51056	0.20	44.95	36.33	45.15	36.53	56.00	46.00	-10.85	-9.47
3	0.61356	0.20	41.89	32.76	42.09	32.96	56.00	46.00	-13.91	-13.04
4	0.90781	0.20	36.84	21.72	37.04	21.92	56.00	46.00	-18.96	-24.08
5	2.50663	0.27	34.82	24.15	35.09	24.42	56.00	46.00	-20.91	-21.58
6	26.87109	1.51	25.05	16.19	26.56	17.70	60.00	50.00	-33.44	-32.30

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

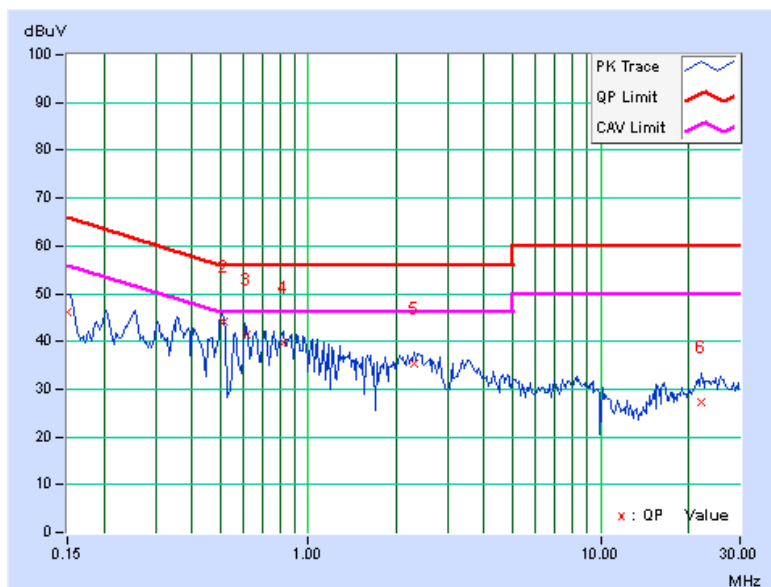


PHASE	Line 2	6dB BANDWIDTH	9kHz
CHANNEL	2	TEST MODE	B

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.56	45.40	37.03	45.96	37.59	66.00	56.00	-20.04	-18.41
2	0.51183	0.56	43.69	35.00	44.25	35.56	56.00	46.00	-11.75	-10.44
3	0.61212	0.56	40.83	31.91	41.39	32.47	56.00	46.00	-14.61	-13.53
4	0.82188	0.58	39.13	26.90	39.71	27.48	56.00	46.00	-16.29	-18.52
5	2.30469	0.63	34.69	23.02	35.32	23.65	56.00	46.00	-20.68	-22.35
6	22.06641	1.33	25.97	18.86	27.30	20.19	60.00	50.00	-32.70	-29.81

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



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

FOR FREQUENCY BELOW 30MHz

FREQUENCY (MHz)	FIELD STRENGTH (dBuV/m)		MEASUREMENT DISTANCE (meters)
	uV/m	dBuV/m	
0.009 – 0.490	2400 / F (kHz)	48.52-13.80	300
0.490 – 1.705	24000 / F (kHz)	33.80-22.97	30
1.705 – 30.0	30	29.54	30

FOR FREQUENCY BETWEEN 30-1000MHz

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	uV/m	dBuV/m	uV/m	dBuV/m
30-88	90	39.1	100	40.0
88-216	150	43.5	150	43.5
216-960	210	46.4	200	46.0
Above 960	300	49.5	500	54.0

4.2.2 TEST INSTRUMENT

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 26, 2014	Feb. 25, 2015
HP Preamplifier	8449B	3008A01201	Feb. 26, 2014	Feb. 25, 2015
Agilent TEST RECEIVER	N9038A	MY51210129	Jan. 18, 2014	Jan. 17, 2015
Schwarzbeck Antenna	VULB 9168	139	Feb. 24, 2014	Feb. 23, 2015
Schwarzbeck Antenna	VHBA 9123	480	May 29, 2013	May 28, 2015
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_V 7.6.15.9.4	NA	NA	NA
SUHNER RF cable	SF102	CABLE-CH6	Aug. 16, 2013	Aug. 15, 2014
Loop Antenna R & S	HFH2-Z2	100070	Mar. 06, 2014	Mar. 05, 2016

- NOTE:** 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

4.2.3 TEST PROCEDURE

- 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's 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.

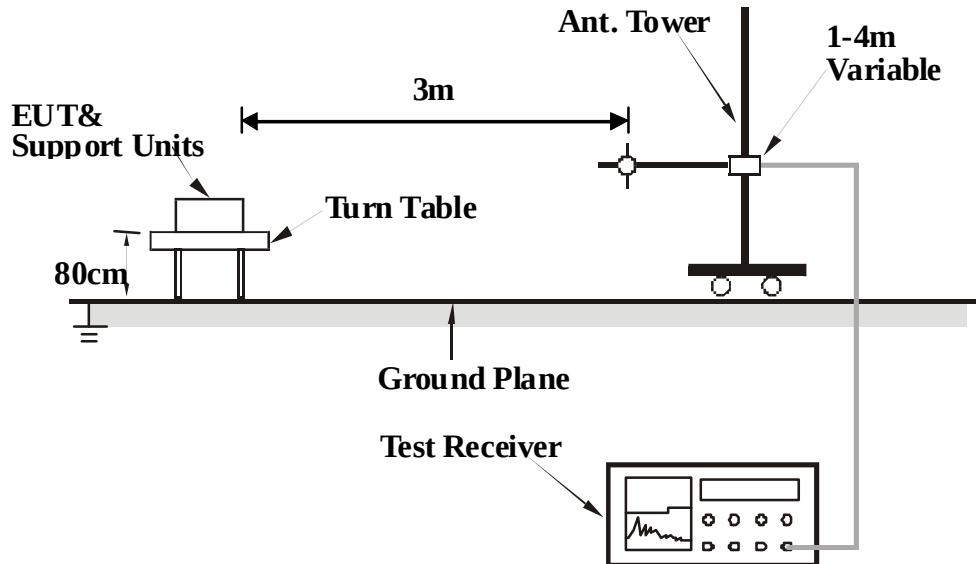
Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. 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



For the actual test configuration, please refer to the related item in this test report - Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITION

Same as item 4.1.6.

4.2.7 TEST RESULT

FREQUENCY RANGE	9 kHz ~ 30 MHz	DETECTOR FUNCTION	Average
CHANNEL	1	TEST MODE	A

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA OPEN AT 3m								
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	*0.138	70.5 AV	104.8	-34.3	1.00	0	50.55	19.98
2	0.414	50.8 AV	95.3	-44.5	1.00	0	30.65	20.15
3	0.690	33.8 AV	70.8	-37.1	1.00	0	13.44	20.33

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA CLOSE AT 3m								
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	*0.138	61.2 AV	104.8	-43.6	1.00	0	41.19	19.98
2	0.414	45.4 AV	95.3	-49.9	1.00	0	25.26	20.15
3	0.690	32.8 AV	70.8	-38.0	1.00	0	12.48	20.33

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.
6. Loop antenna was used for all radiated emission below 30MHz.



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FREQUENCY RANGE	9 kHz ~ 30 MHz	DETECTOR FUNCTION	Average
CHANNEL	2	TEST MODE	B

ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA OPEN AT 3m								
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	*0.146	70.5 AV	104.3	-33.8	1.00	0	50.55	19.98
2	0.438	48.2 AV	94.8	-46.6	1.00	0	28.00	20.17
3	0.730	39.6 AV	70.3	-30.8	1.00	0	19.21	20.36
ANTENNA POLARITY & TEST DISTANCE: LOOP ANTENNA CLOSE AT 3m								
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	*0.146	63.2 AV	104.3	-41.1	1.00	0	43.20	19.98
2	0.438	40.6 AV	94.8	-54.2	1.00	0	20.45	20.17
3	0.730	32.3 AV	70.3	-38.1	1.00	0	11.90	20.36

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.
6. Loop antenna was used for all radiated emission below 30MHz.



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FREQUENCY RANGE	30-1000MHz	DETECTOR FUNCTION	Quasi-Peak
CHANNEL	1	TEST MODE	A

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	66.47	23.7 QP	40.0	-16.3	1.33 H	246	38.55	-14.84
2	117.98	31.1 QP	43.5	-12.4	1.81 H	261	47.08	-16.00
3	183.65	27.1 QP	43.5	-16.4	1.00 H	98	42.31	-15.23
4	201.88	32.8 QP	43.5	-10.8	1.64 H	98	48.98	-16.23
5	245.00	27.9 QP	46.0	-18.1	1.70 H	246	42.05	-14.19
6	294.52	27.0 QP	46.0	-19.0	2.14 H	128	39.28	-12.26
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	49.06	29.3 QP	40.0	-10.7	1.52 V	76	42.90	-13.62
2	61.91	30.5 QP	40.0	-9.5	1.71 V	360	44.96	-14.49
3	105.22	31.6 QP	43.5	-11.9	1.09 V	268	48.96	-17.39
4	123.22	29.8 QP	43.5	-13.7	1.00 V	288	45.38	-15.62
5	190.44	26.9 QP	43.5	-16.6	1.43 V	236	42.92	-16.01
6	337.68	26.4 QP	46.0	-19.6	1.78 V	144	37.91	-11.47

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

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FREQUENCY RANGE	30-1000MHz	DETECTOR FUNCTION	Quasi-Peak
CHANNEL	2	TEST MODE	B

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	50.76	27.5 QP	40.0	-12.5	1.27 H	72	41.12	-13.64
2	100.42	34.6 QP	43.5	-9.0	1.55 H	98	52.65	-18.10
3	116.04	36.2 QP	43.5	-7.3	1.08 H	108	52.55	-16.31
4	168.37	33.0 QP	43.5	-10.5	1.39 H	61	46.65	-13.64
5	196.65	37.2 QP	43.5	-6.3	1.24 H	242	53.45	-16.23
6	291.71	35.4 QP	46.0	-10.6	1.00 H	209	47.75	-12.36
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	42.08	33.6 QP	40.0	-6.4	1.19 V	338	47.67	-14.04
2	51.56	32.9 QP	40.0	-7.1	1.73 V	335	46.53	-13.66
3	60.13	31.9 QP	40.0	-8.1	1.56 V	36	46.22	-14.36
4	114.07	33.3 QP	43.5	-10.2	2.05 V	148	49.81	-16.51
5	137.86	32.0 QP	43.5	-11.6	1.00 V	253	46.16	-14.21
6	193.69	34.0 QP	43.5	-9.5	1.37 V	153	50.15	-16.18

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



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

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

No modifications were made to the EUT by the lab during the test.

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