FCC 47 CFR PART 15 SUBPART B & IC ICES-003 TEST REPORT

for

Remote controller + dongle

MODEL / Serial Number:
KWR800003/01BS / 3139 228 12501,
KWR800003/01BU / 3139 228 12441,
OVU810007/01U / 3139 228 12481

Test Report Number:
T130802W02-D

Issued for

Home Control Singapore Pte Ltd
620A Lorong 1 Toa Payoh Singapore 319762.

Issued By:

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Issued Date: August 16, 2013

Testing Laboratory
1309

ACCREDITED
TESTING CERT #0824.01

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		August 16, 2013		Initial Issue	ALL	Kelly Cheng

TABLE OF CONTENTS

1 TEST RESULT CERTIFICATION 4

2 EUT DESCRIPTION 5

3 TEST METHODOLOGY 6

3.1. DECISION OF FINAL TEST MODE 6

3.2. EUT SYSTEM OPERATION 6

4 SETUP OF EQUIPMENT UNDER TEST 7

4.1. DESCRIPTION OF SUPPORT UNITS 7

4.2. CONFIGURATION OF SYSTEM UNDER TEST 8

5 FACILITIES AND ACCREDITATIONS 9

5.1. FACILITIES 9

5.2. ACCREDITATIONS 9

5.3. MEASUREMENT UNCERTAINTY 10

6 CONDUCTED EMISSION MEASUREMENT 11

6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT 11

6.2. TEST INSTRUMENTS 11

6.3. TEST PROCEDURES 12

6.4. TEST SETUP 13

6.5. DATA SAMPLE: 13

6.6. TEST RESULTS 14

7 RADIATED EMISSION MEASUREMENT 16

7.1. LIMITS OF RADIATED EMISSION MEASUREMENT 16

7.2. TEST INSTRUMENTS 18

7.3. TEST PROCEDURES 19

7.4. TEST SETUP 20

7.5. DATA SAMPLE: 21

7.6. TEST RESULTS 22

8 PHOTOGRAPHS OF THE TEST CONFIGURATION 26

APPENDIX 1 - PHOTOGRAPHS OF EUT

1 TEST RESULT CERTIFICATION

Product:	Remote controller + dongle
Model / Serial Number:	KWR800003/01BS / 3139 228 12501, KWR800003/01BU / 3139 228 12441, OVU810007/01U / 3139 228 12481
Brand:	Google
Applicant:	**Home Control Singapore Pte Ltd** 620A Lorong 1 Toa Payoh Singapore 319762.
Manufacturer:	**Home Control Singapore Pte Ltd** 620A Lorong 1 Toa Payoh Singapore 319762.
Tested:	August 9, 2013
Test Voltage:	DC 3V

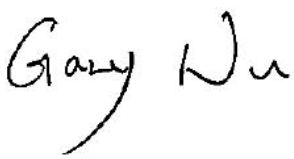
EMISSION			
Standard	**Item**	**Result**	**Remarks**
FCC 47 CFR Part 15 Subpart B, ICES-003 Issue 5-2012 ANSI C63.4-2009	Conducted (Power Port)	PASS	Meet Class B limit
	Radiated	PASS	Meet Class B limit

Note: 1. The statements of test result on the above are decided by the request of test standard only; the measurement uncertainties are not factored into this compliance determination.
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard
None

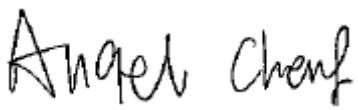
The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:



Gary Wu
Section Manager

Reviewed by:



Angel Cheng
Section Manager

2 EUT DESCRIPTION

Product	Remote controller + dongle
Brand Name	Google
Model / Serial Number	KWR800003/01BS / 3139 228 12501, KWR800003/01BU / 3139 228 12441, OVU810007/01U / 3139 228 12481
Applicant	Home Control Singapore Pte Ltd
Identify Number	T130802W02
Received Date	August 2, 2013
EUT Power Rating	Dongle: Powered from host device Remote controller: Battery: LITHIUM(DC 3V)

Remark: *1. The detail descriptions please see as below.*

Model	serial model	Different
KWR800003/01BS	3139 228 12501	Consist of KWR800003/01BU and OVU810007/01U
KWR800003/01BU	3139 228 12441	Remote controller
OVU810007/01U	3139 228 12481	Dongle

2. Client consigns only one sample to test (model number: KWR800003/01BS). Therefore, the testing Lab. just guarantees the unit, which has been tested.

I/O Port

I/O PORT TYPES	Q'TY	TESTED WITH
USB Dongle	1	1

3 TEST METHODOLOGY

3.1. DECISION OF FINAL TEST MODE

1. The following test mode was scanned during the preliminary test:

Pre-Test Mode
Mode 1: Normal Operation

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test Mode		
Emission	Conducted Emission	**Mode 1**
	Radiated Emission	**Mode 1**

Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.

3.2. EUT SYSTEM OPERATION

1. Setup the EUT and simulators as shown on 4.2.
2. Turn on the power of all equipment.
3. Plug the dongle into a pc. The pc will automatically find the new hardware.
4. Go to the “device manager” to check if the hardware is installed properly.
5. Open a word pad.
6. Press any alphanumeric key from the remote at the keyboard to input to the PC.
7. Start testing.

Note: *Test program is self-repeating throughout the test.*

4 SETUP OF EQUIPMENT UNDER TEST

4.1. DESCRIPTION OF SUPPORT UNITS

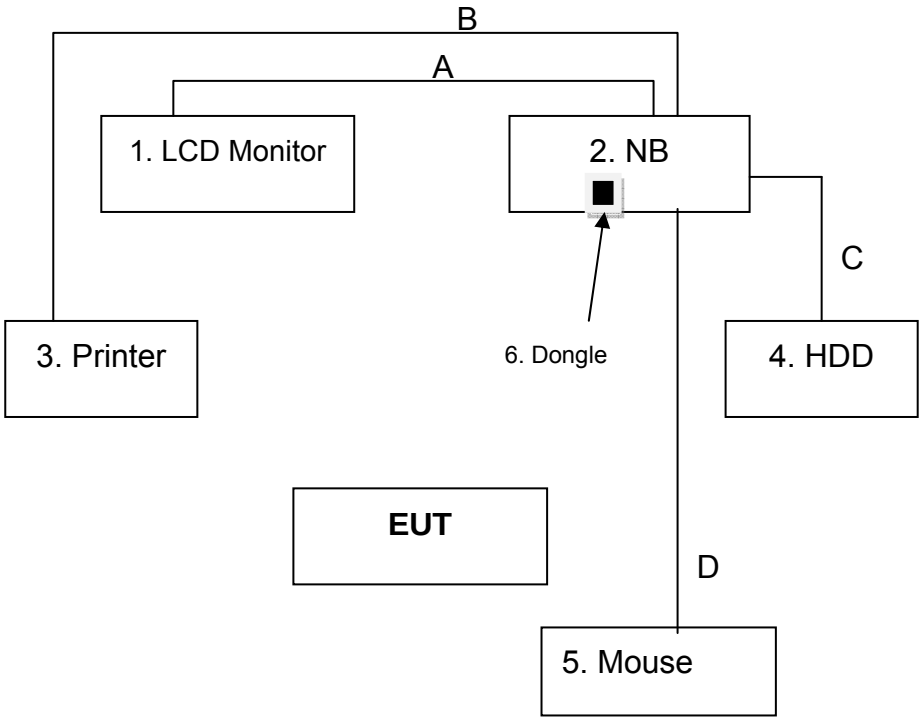
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Trade Name	Model No.	Serial No.	FCC ID	Power Cord
1.	LCD Monitor	DELL	OXN867	J0206CRS	R41108	N/A
2.	NB	HP	Pavilion dv6	CNF9491GLJ	R33022	Unshielded, 2.0m
3.	Printer	EPSON	Stylus-C63	FAPY150360	R33126	Unshielded, 1.8m
4.	HDD	WD	My Passport	WX21A11V0883	D33015	N/A
5.	Mouse	DELL	OXN867	J0206CRS	R41108	N/A

No.	Cable Name	Unit	Shielded	Length	With Core
(A)	VGA Cable	1	■Shielded, ☐Non	1.8 m	■With Core× 2 , ☐Non
(B)	USB Cable	1	■Shielded, ☐Non	1.8 m	☐With Core×____, ■Non
(C)	USB Cable	1	■Shielded, ☐Non	1.5 m	☐With Core×____, ■Non
(D)	MOUSE Cable	1	■Shielded, ☐Non	1.8 m	☐With Core×____, ■Non

Note: Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.2. CONFIGURATION OF SYSTEM UNDER TEST



5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at:

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)

☒ No.139, Wugong Rd., Wugu Dist., New Taipei City 24891, Taiwan (R.O.C.)

☐ No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township, Taoyuan County 33841, TAIWAN, R.O.C.

☐ No.163-1, Jhongsheng Rd., Sindian City, Taipei County 23151, Taiwan.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Taiwan	TAF (TAF 1309)
USA	A2LA (0824.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada (3M Semi Anechoic Chamber: IC 2324G-1 / IC 2324G-2 / 2324J-1 / 2324J-2 to perform)
Norway	Nemko
Japan	VCCI 966 Chamber C: Radiated emissions: 30 MHz -1000 MHz: R-3282 / Above 1GHz: G-146 10M Chamber: Radiated emissions: 30 MHz -1000 MHz: R-3283 / Above 1GHz: G-147 Conducted Emission B: C-3700 / T-1839
USA	FCC (3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements)

Copies of granted accreditation certificates are available for downloading from our web site, http:///www.ccsrf.com

5.3. 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	±1.2575 dB
Radiated emissions	30~200MHz	±3.9163 dB
	200~1000MHz	±3.9030 dB
	Above 1GHz	±2.5208 dB

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

Consistent with industry standard (e.g. CISPR 22:2008, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than U_{CISPR} which is 3.6dB and 5.2dB respectively. CCS values (called U_{Lab} in CISPR 16-4-2) is less than U_{CISPR} as shown in the table above. Therefore, MU need not be considered for compliance.

6 CONDUCTED EMISSION MEASUREMENT

6.1. LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

6.2. TEST INSTRUMENTS

Conducted Emission Room # B				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver	R&S	ESCI	101073	07/30/2014
LISN	R&S	ENV216	101054	06/05/2014
LISN	SCHWARZBECK	NSLK 8127	8127-541	12/10/2013
ISN	FCC	FCC-TLISN-T2-02-09	100105	07/29/2014
ISN	FCC	FCC-TLISN-T8-02-09	100106	07/30/2014
Capacitive Voltage Probe	FCC	F-CVP-1	100185	03/24/2014
Test S/W	CCS-3A1-CE			

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

6.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

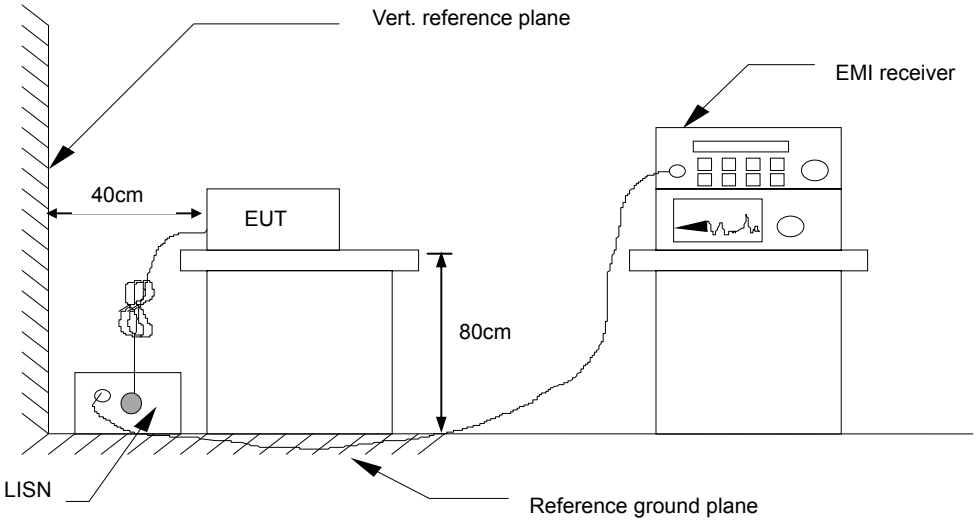
Procedure of Preliminary Test

- The EUT and support equipment, if needed, were set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor standing equipment, it is placed on the ground plane, which has a 12 mm non-conductive covering to insulate the EUT from the ground plane.
- All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- The test equipment EUT installed by AC 120VAC/60Hz main power, through a Line Impedance Stabilization Network (LISN), which was supplied power source and was grounded to the ground plane.
- All support equipment power by from a second LISN.
- The test program of the EUT was started. Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.
- The Receiver scanned from 150kHz to 30MHz for emissions in each of the test modes.
- During the above scans, the emissions were maximized by cable manipulation.
- The test mode(s) described in Item 3.1 were scanned during the preliminary test.
- After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

Procedure of Final Test

- EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.
- The test data of the worst-case condition(s) was recorded.

6.4. TEST SETUP



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

6.5. DATA SAMPLE:

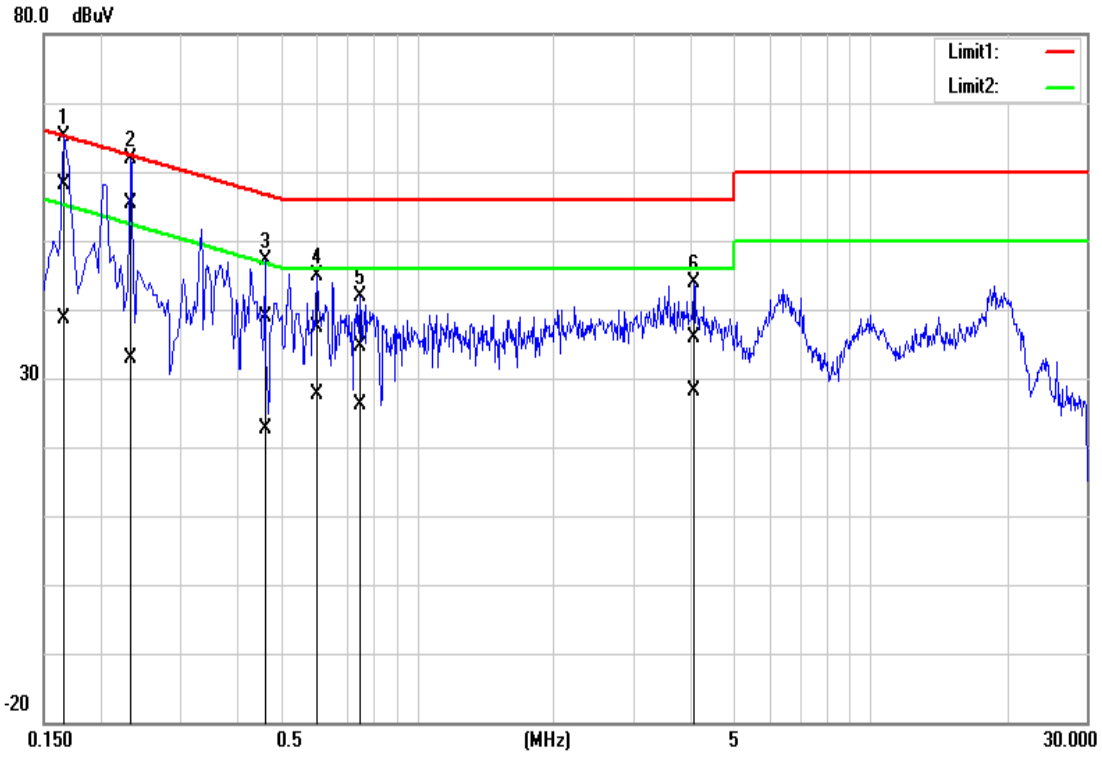
Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correctrion factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak. limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
x.xx	43.95	33.00	10.00	53.95	43.00	56.00	46.00	-2.05	-3.00	Pass

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer/Receiver reading + Insertion loss of LISN, if it > 0.5 dB
Correction Factor (dB) = LISN Factor + Cable Loss
Result (dBuV) = Raw reading converted to dBuV and CF added
Limit (dBuV) = Limit stated in standard
Margin (dB) = Result (dBuV) – Limit (dBuV)

6.6. TEST RESULTS

CCS Conduction Test

Model No.	KWR800003/01BS	Test Date	2013/8/9
Environmental Conditions	25°C, 57% RH	Test Mode	Mode 1
Tested by	Bland Cheng	Line	L1

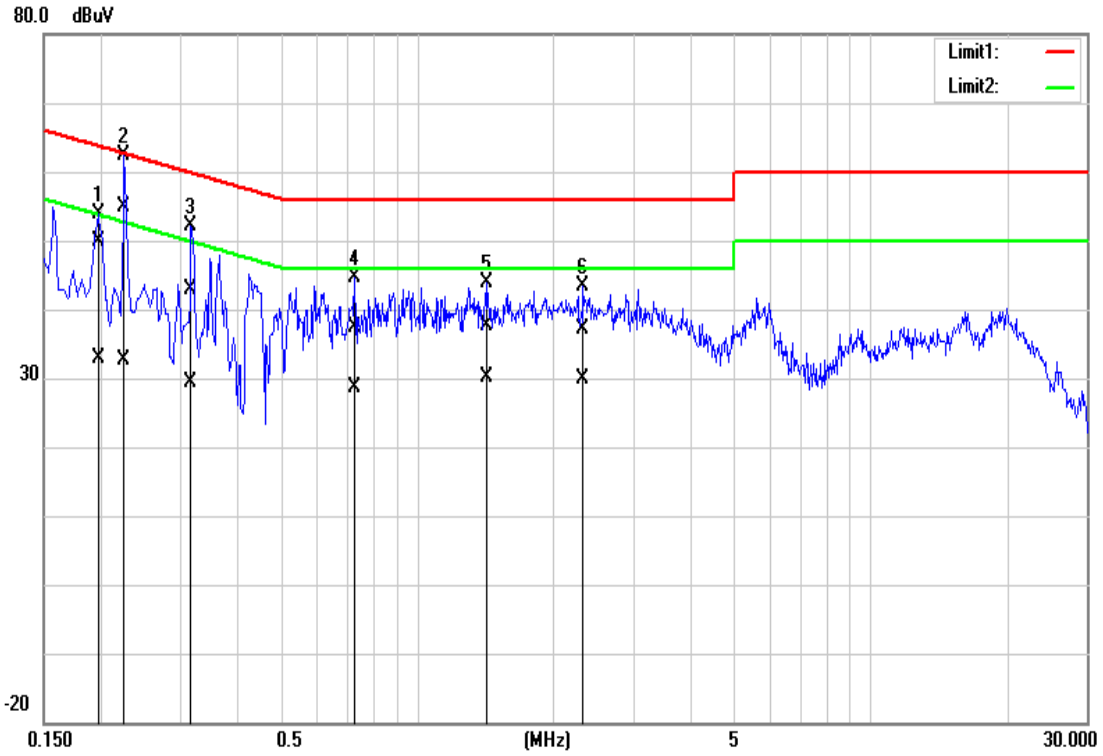


NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1*	0.1660	48.50	28.96	9.61	58.11	38.57	65.15	55.16	-7.04	-16.59	Pass
2	0.2340	45.81	23.18	9.62	55.43	32.80	62.30	52.31	-6.87	-19.51	Pass
3	0.4620	29.28	12.97	9.62	38.90	22.59	56.66	46.66	-17.76	-24.07	Pass
4	0.6020	27.83	17.96	9.63	37.46	27.59	56.00	46.00	-18.54	-18.41	Pass
5	0.7500	25.02	16.54	9.64	34.66	26.18	56.00	46.00	-21.34	-19.82	Pass
6	4.0820	26.08	18.44	9.73	35.81	28.17	56.00	46.00	-20.19	-17.83	Pass

REMARKS: L1 = Line One (Live Line)

CCS Conduction Test

Model No.	KWR800003/01BS	Test Date	2013/8/9
Environmental Conditions	24°C, 50% RH	Test Mode	Mode 1
Tested by	Bland Cheng	Line	L2



NO.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark (Pass/Fail)
1	0.1980	40.13	23.32	9.67	49.80	32.99	63.69	53.69	-13.89	-20.70	Pass
2*	0.2260	45.11	23.08	9.67	54.78	32.75	62.59	52.60	-7.81	-19.85	Pass
3	0.3180	33.11	19.64	9.67	42.78	29.31	59.76	49.76	-16.98	-20.45	Pass
4	0.7300	27.79	18.94	9.69	37.48	28.63	56.00	46.00	-18.52	-17.37	Pass
5	1.4299	27.95	20.44	9.71	37.66	30.15	56.00	46.00	-18.34	-15.85	Pass
6	2.3260	27.37	20.23	9.74	37.11	29.97	56.00	46.00	-18.89	-16.03	Pass

REMARKS: L2 = Line Two (Neutral Line)

7 RADIATED EMISSION MEASUREMENT

7.1. LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40GHz, whichever is lower

Below 1GHz (for digital device)

FREQUENCY (MHz)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Limit tables for non-digital device:

Class A Radiated Emission limit at 10m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	90	39
88 - 216	150	43.5
216 – 960	210	46.4
Above 960	300	49.5

Class B Radiated Emission limit at 3m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	100	40
88 - 216	150	43.5
216 – 960	200	46
Above 960	500	54

Above 1GHz (for all device)

Frequency (MHZ)	Class A (dBuV/m) (At 10m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	49.5	69.5	54	74

NOTE: (1) The lower limit shall apply at the transition frequencies.
(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).
(3) The measurement above 1GHz is at close-in distances 3m,and determine the limit **L_2** corresponding to the close-in distance **d_2** by applying the following relation: **$L_2 = L_1 (d_1/d_2)$**, where **L_1** is the specified limit in microvolts per metre (**uV/m**) at the distance **d_1** (**10m**), **L_2** is the new limit for distance **d_2** (**3m**).
So the new Class A limit above 1GHz at 3m is as following table:

Frequency (MHZ)	Class A (dBuV/m) (At 3m)	
	Average	Peak
Above 1000	60	80

7.2. TEST INSTRUMENTS

Wugu 10M Chamber				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY48250297	10/04/2013
EMI Test Receiver	R&S	ESCI	100961	09/02/2013
EMI Test Receiver	R&S	ESCI	100962	09/02/2013
Pre-Amplifier	HP	8447D	2944A07754	06/05/2014
Pre-Amplifier	HP	8447D	2944A08150	06/05/2014
Pre-Amplifier	EMC	EMC012645	980056	05/09/2014
Pre-Amplifier	MITEQ	AMF-6F-260400-40-8P	985646	08/05/2014
Bilog Antenna	TESEQ	CBL 6112D	31674	10/01/2013
Bilog Antenna	TESEQ	CBL6112D	31675	10/01/2013
Horn Antenna	EMCO	3117	55167	01/09/2014
Horn Antenna	EMCO	3116	26370	01/07/2014
Coaxial Cable	Huber+Suhner	104PEA	33948/4PEA	05/09/2014
Coaxial Cable	Huber+Suhner	104PEA	33949/4PEA	05/09/2014
Coaxial Cable	Huber+Suhner	104	330026/4	05/09/2014
Coaxial Cable	Huber+Suhner	104	330029/4	05/09/2014
Coaxial Cable	Huber+Suhner	104	329382/4	05/09/2014
Coaxial Cable	Huber+Suhner	104	330028/4	05/09/2014
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Antenna Tower	Sunol Sciences	TLT2	031010-5	N.C.R.
Controller	Sunol Sciences	SC104V	031010-1	N.C.R.
Site NSA	CCS	N/A	N/A	11/04/2013
Site VSWR	CCS	N/A	N/A	12/02/2013
Test S/W	EZ-EMC (CCS-3A1RE)			

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. N.C.R = No Calibration Request.

7.3. TEST PROCEDURES (please refer to measurement standard or CCS SOP PA-031)

The basic test procedure was in accordance with ANSI C63.4-2009 and ICES-003: 2004.

Frequency range 30MHz ~ 1GHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position.
2. The EUT was set 10 meters away form the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The height of antenna is varied from one meter to four meter 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.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was turned to heights for 1 meter to 4 meters and the turn table was turned form 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1GHz.

NOTE: The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.

Frequency range above 1GHz

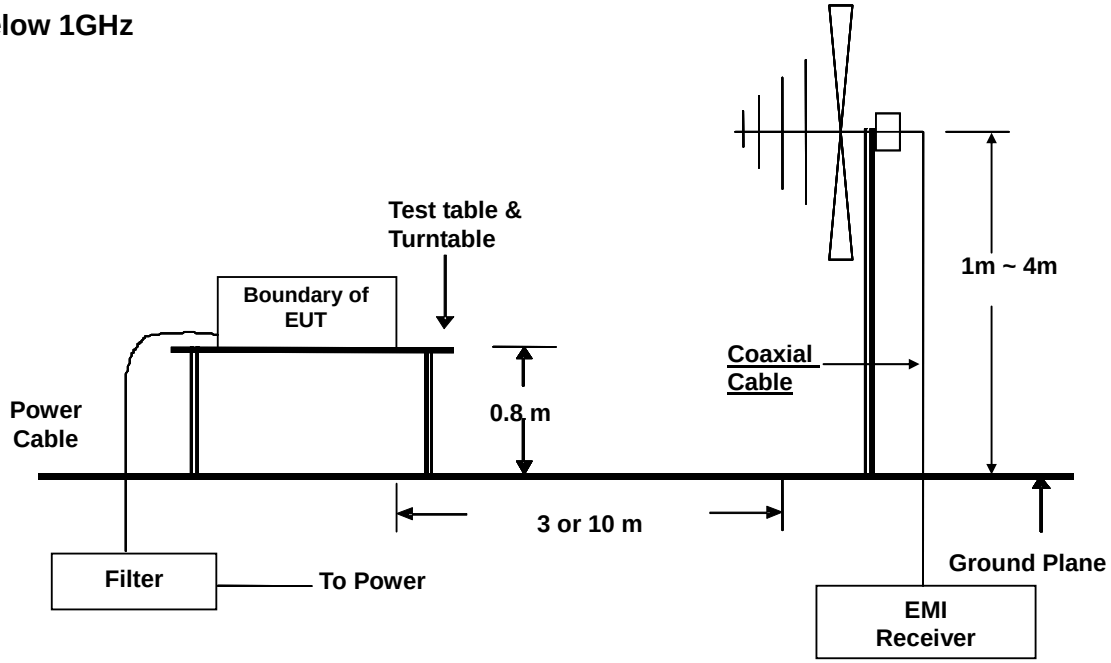
1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber room. The table was rotated 360 degrees to determine the position.
2. The EUT was set 3 meters away form the directional antenna, which was pointed towards the source of the emission within the EUT. This could be done by either pointing the antenna at an angle towards the source of the emission, or by rotating the EUT, in both height and polarization, to maximize the measured emission.
3. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3 dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was turned to heights and the rotatable table was turned form 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.

NOTE:

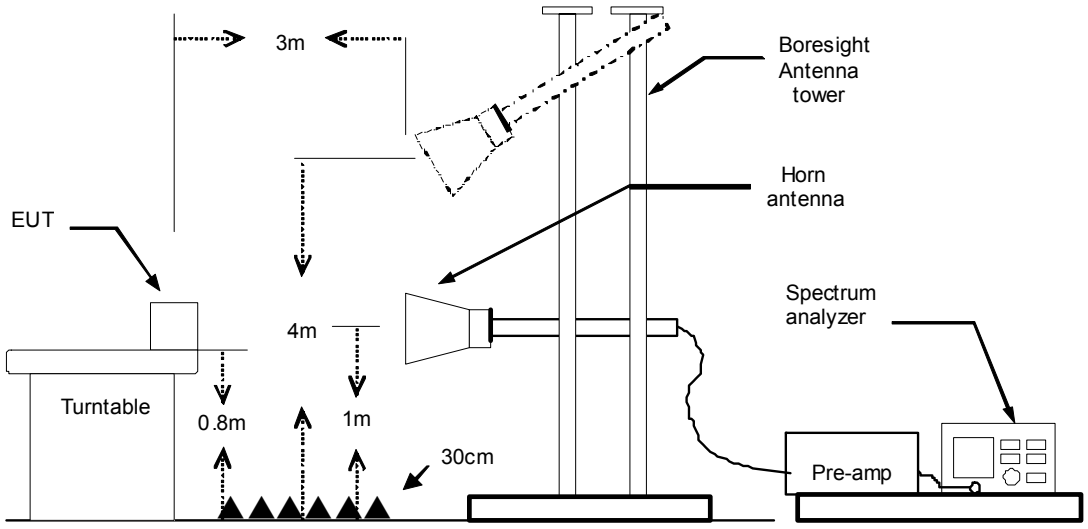
1. The resolution bandwidth is 1MHz and video bandwidth of test spectrum analyzer is 1 MHz for peak detection at above 1GHz. The resolution bandwidth is 1MHz and video bandwidth of test spectrum analyzer is 100Hz for average detection at frequency above 1 GHz.
2. For measurement of frequency above 1GHz, the EUT was set 3 meters away from the directional antenna.

7.4. TEST SETUP

Below 1GHz



Above 1GHz



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

7.5. DATA SAMPLE:

Below 1GHz

Frequency (MHz)	Reading (dBuV)	Correction Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (◦)	Remark
xx.xx	16.49	9.86	26.35	30.00	-3.65	116.00	101.00	QP

Above 1GHz

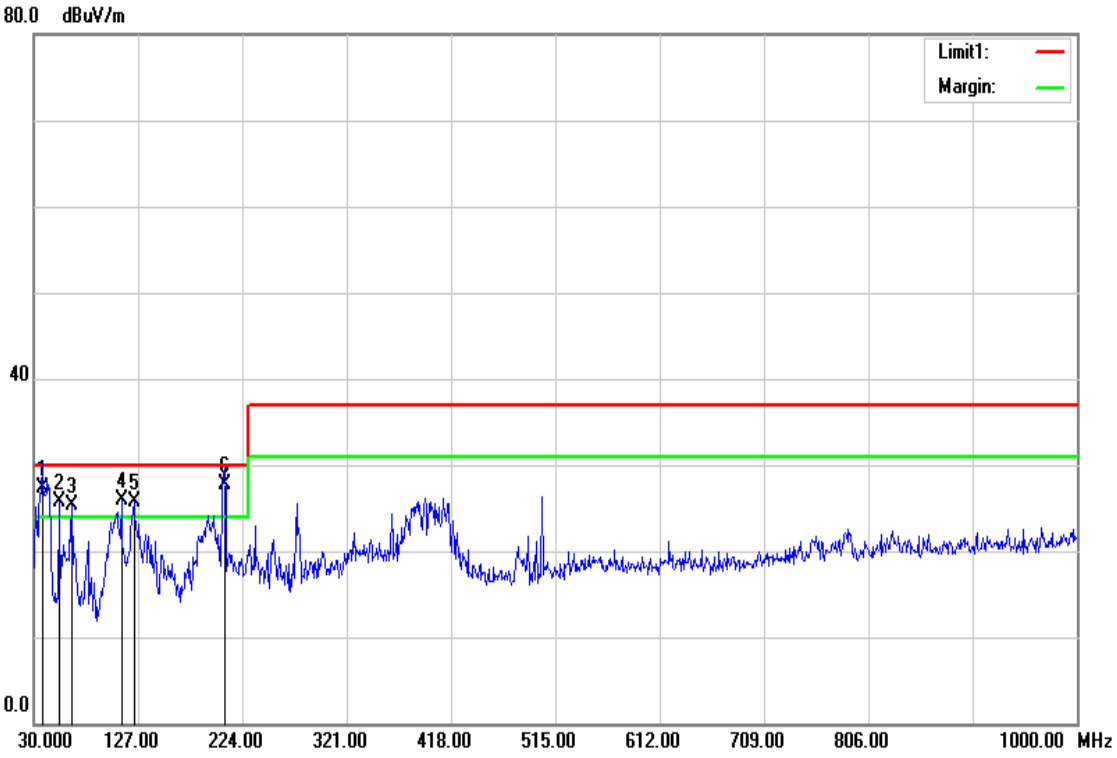
Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
xx.xx	60.80	-14.59	46.21	74.00	-27.79	200	351	peak
xx.xx	52.05	-13.17	38.88	54.00	-15.12	200	135	AVG

Frequency (MHz) = Emission frequency in MHz
Reading (dBuV) = Uncorrected Analyzer / Receiver reading
Correction Factor (dB/m) = Antenna factor + Cable loss – Amplifier gain
Result (dBuV/m) = Reading (dBuV) + Corr. Factor (dB/m)
Limit (dBuV/m) = Limit stated in standard
Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)
Q.P. = Quasi-Peak

7.6. TEST RESULTS

Below 1000MHz

Model No.	KWR800003/01BS	Test Mode	Mode 1
Environmental Conditions	26°C, 60% RH	Test Date	2013/8/9
Antenna Pole	Vertical	Antenna Distance	10m
Detector Function:	Quasi-peak.	Tested by	Moore Cheng
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		

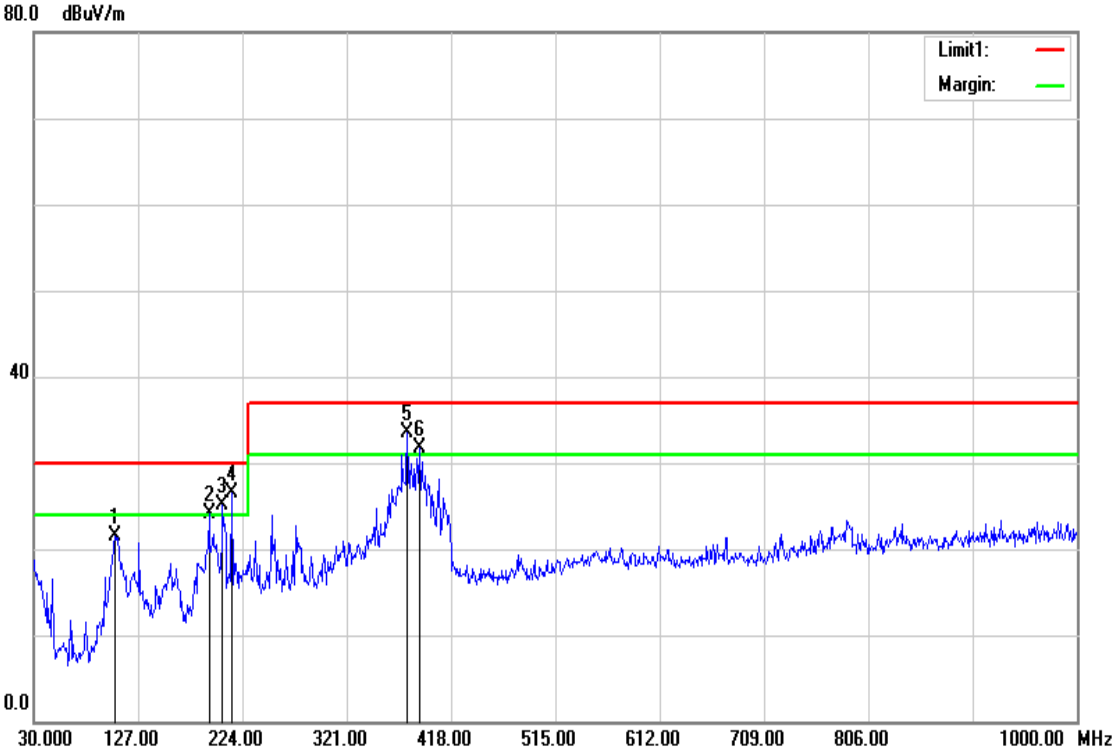


No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	37.7600	36.42	-9.11	27.31	30.00	-2.69	100	73	QP
2	53.2800	44.41	-18.71	25.70	30.00	-4.30	399	46	QP
3	65.8900	44.84	-19.50	25.34	30.00	-4.66	112	0	QP
4	111.4800	39.83	-13.88	25.95	30.00	-4.05	100	132	QP
5	123.1200	39.15	-13.37	25.78	30.00	-4.22	100	347	QP
6	207.5100	42.40	-14.76	27.64	30.00	-2.36	100	292	QP

REMARKS: 1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard.

Below 1000MHz

Model No.	KWR800003/01BS	Test Mode	Mode 1
Environmental Conditions	26°C, 60% RH	Test Date	2013/8/9
Antenna Pole	Horizontal	Antenna Distance	10m
Detector Function:	Quasi-peak.	Tested by	Moore Cheng
Standard	FCC CLASS B W/ CISPR 22 CLASS B LIMIT		



No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	105.6600	36.05	-14.61	21.44	30.00	-8.56	400	288	QP
2	192.9600	39.79	-15.59	24.20	30.00	-5.80	400	55	QP
3	205.5700	40.61	-15.41	25.20	30.00	-4.80	400	264	QP
4	214.3000	41.92	-15.38	26.54	30.00	-3.46	400	350	QP
5	377.2600	42.60	-9.18	33.42	37.00	-3.58	217	0	QP
6	388.9000	40.71	-8.94	31.77	37.00	-5.23	110	0	QP

REMARKS: 1. The other emission levels were very low against the limit.
2. 30MHz to 1000MHz test is Applicable CISPR 22 standard.

Above 1000MHz

Model No.	KWR800003/01BS	**Test Mode**	Mode 1
Environmental Conditions	26°C, 60% RH	**Test Date**	2013/8/9
Antenna Pole	Vertical	**Antenna Distance**	3m
Highest frequency generated or used	2.4GHz	**Upper frequency**	12GHz
Detector Function:	Average & peak	**Tested by**	Moore Cheng

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	1501.500	74.06	-20.33	53.73	74.00	-20.27	202	59	peak
2	1501.500	65.25	-20.33	44.92	54.00	-9.08	202	59	AVG
3	14379.000	56.40	-2.23	54.17	74.00	-19.83	202	180	peak
4	14379.000	45.89	-2.23	43.66	54.00	-10.34	202	180	AVG
5	15118.500	56.88	-0.86	56.02	74.00	-17.98	202	1	peak
6	15118.500	46.09	-0.86	45.23	54.00	-8.77	202	1	AVG
7	16028.000	56.59	-0.64	55.95	74.00	-18.05	100	0	peak
8	16028.000	45.85	-0.64	45.21	54.00	-8.79	100	0	AVG
9	16699.500	55.41	0.03	55.44	74.00	-18.56	202	360	peak
10	16699.500	44.78	0.03	44.81	54.00	-9.19	202	360	AVG
11	17277.500	55.84	-1.06	54.78	74.00	-19.22	202	359	peak
12	17277.500	44.89	-1.06	43.83	54.00	-10.17	202	359	AVG

REMARKS:

1. The other emission levels were very low against the limit.

2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

Model No.	KWR800003/01BS	**Test Mode**	Mode 1
Environmental Conditions	26°C, 60% RH	**Test Date**	2013/8/9
Antenna Pole	Horizontal	**Antenna Distance**	3m
Highest frequency generated or used	2.4GHz	**Upper frequency**	12GHz
Detector Function:	Average & peak	**Tested by**	Moore Cheng

No.	Frequency (MHz)	Reading (dBuV)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Degree (°)	Remark
1	13529.000	56.90	-3.22	53.68	74.00	-20.32	179	360	peak
2	13529.000	46.07	-3.22	42.85	54.00	-11.15	179	360	AVG
3	14192.000	55.56	-1.95	53.61	74.00	-20.39	100	360	peak
4	14192.000	44.84	-1.95	42.89	54.00	-11.11	100	360	AVG
5	15161.000	56.25	-0.89	55.36	74.00	-18.64	100	216	peak
6	15161.000	45.41	-0.89	44.52	54.00	-9.48	100	216	AVG
7	16045.000	55.31	-0.61	54.70	74.00	-19.30	100	360	peak
8	16045.000	44.60	-0.61	43.99	54.00	-10.01	100	360	AVG
9	16852.500	56.24	-0.02	56.22	74.00	-17.78	100	29	peak
10	16852.500	45.30	-0.02	45.28	54.00	-8.72	100	29	AVG
11	17473.000	57.02	-1.76	55.26	74.00	-18.74	100	141	peak
12	17473.000	46.28	-1.76	44.52	54.00	-9.48	100	141	AVG

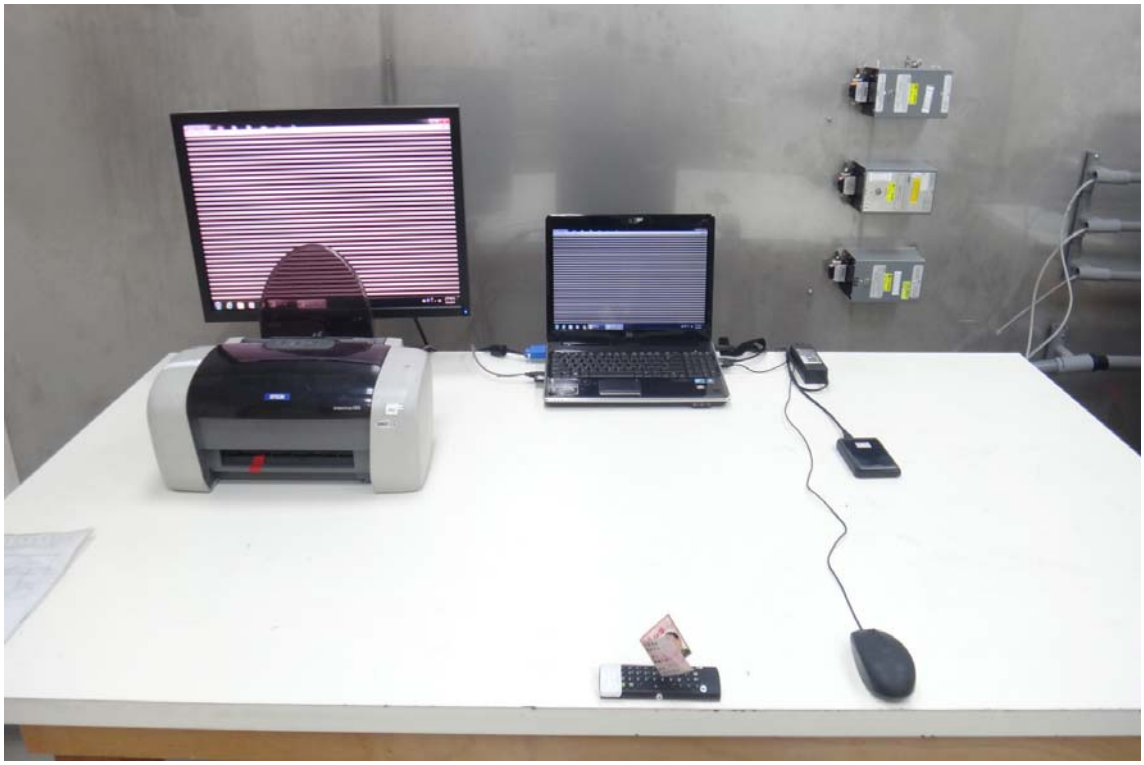
REMARKS:

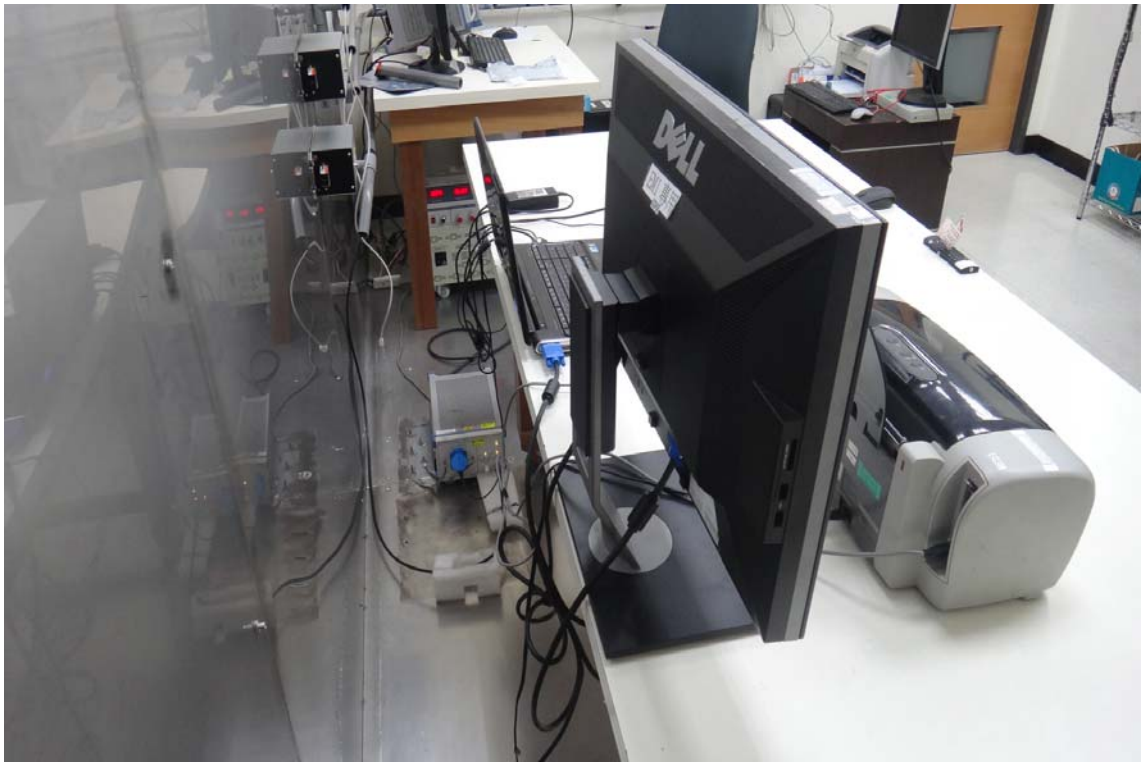
1. The other emission levels were very low against the limit.

2. Margin (dB) = Result (dBuV/m) – Limit (dBuV/m)

8 PHOTOGRAPHS OF THE TEST CONFIGURATION

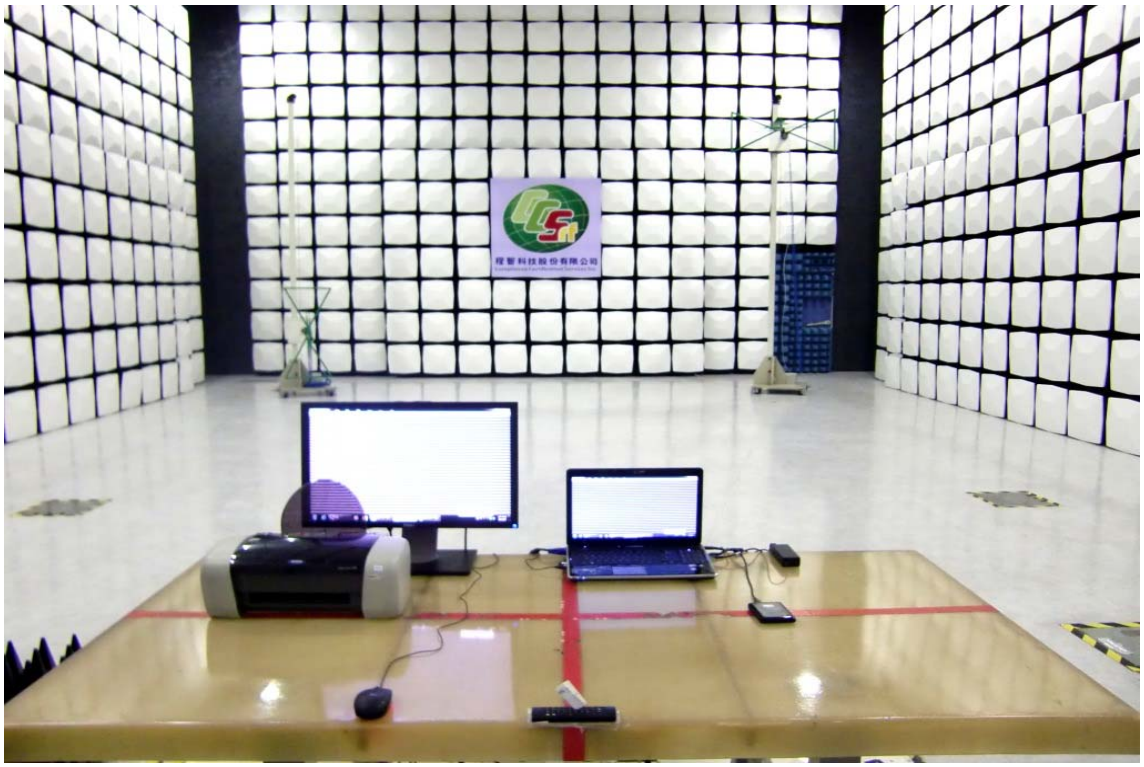
CONDUCTED EMISSION TEST





RADIATED EMISSION TEST

Below 1GHz



Above 1GHz