# APPLICATION FOR CERTIFICATION On Behalf of

Electronic Arts Inc.

PS3 Wireless Dongle Receiver

Model Number: 19474-D

FCC ID: XZKBW19474R

Prepared for: Electronic Arts Inc.

4330 Sanderson Way, Burnaby, BC, Canada VSG 4X1.

Prepared By: Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

Tel: (0755) 26639496

Report Number : ACS-F10152

Date of Test : Jun.24~Jul.04, 2010

Date of Report : Jul.08, 2010

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## TEST REPORT CERTIFICATION

Applicant : Electronic Arts Inc.

Manufacturer : Berway Technology Ltd.

EUT Description : PS3 Wireless Dongle Receiver

MODEL NO. : 19474-D

FCC ID : XZKBW19474R

POWER SUPPLY : DC 5V

TEST VOLTAGE : DC 5V From PS3 Input AC 120V/60Hz

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2008

The device described above is tested by Audix Technology (Shenzhen) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits for radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shenzhen) Co., Ltd. is assumed full responsibility for the accuracy and completeness of tests. Also, this report shows that EUT is technically compliant with FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shenzhen) Co., Ltd.

AUDIX)

②信筝科技(深圳)有限公司

Audix Technology (Shenzhen) Co., Ltd.

EMC 部門報告専用章

Stamp only for EMC Dept. Report

Signature:

Jamy Yu / Supervisor

Approved & Authorized Signer:

Ken Lu / Manager

# 1. SUMMARY OF STANDARDS AND RESULTS

# 1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION								
Description of Test Item	Results							
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.10-2009	PASS						
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.10-2009	PASS						
Band Edge Compliance Test	FCC Part 15: 15.249 ANSI C63.10-2009	PASS						
20dB Bandwidth Test	FCC Part 15: 15.215 ANSI C63.10-2009	PASS						

## 2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name : PS3 Wireless Dongle Receiver

Model Number : 19474-D

FCC ID : XZKBW19474R

Operation frequency: 2406MHz~2476MHz

Modulation : FSK

Applicant : Electronic Arts Inc.

4330 Sanderson Way, Burnaby, BC, Canada VSG 4X1.

Manufacturer : Berway Technology Ltd.

Unit 1301-03, No.88, Kwai Cheong Road, Kwai Chung, N.T.

Hong Kong

Date of Test : Jun.24~Jul.04, 2010

Date of Receipt : Jun.01, 2010

Sample Type : Prototype production

## 2.2. Tested Supporting System Details

2.2.1.TV

EMC CODE : ACS-EMC-TV01T

M/N : 1419A Manufacturer : TCL

Power cord : Unshielded, Undetachabled, 1.8m

2.2.2.PS3

M/N : CECHC04

S/N : 02-27430423-6785596-CECHC04

Manufacturer : SONY

## 2.3. Test Facility

Site Description

Name of Firm : Audix Technology (Shenzhen) Co., Ltd.

No. 6, Ke Feng Rd., 52 Block, Shenzhen

Science & Industrial Park, Nantou, Shenzhen, Guangdong, China

3m Anechoic Chamber : Mar.31, 2009 File on Federal

Communication Commission Registration Number: 90454

3m & 10m Anechoic Chamber : Dec. 30, 2009 File on Federal

Communication Commission Registration Number: 794232

EMC Lab. : Accredited by DATech, German

Registration Number: DAT-P-091/99-01

Feb. 02, 2009

Accredited by NVLAP, USA NVLAP Code: 200372-0

Apr. 01, 2010

## 2.4. Test Uncertainty (95% confidence levels, k=2)

Test Item	Uncertainty
Uncertainty for Conduction emission test in No. 1 Conduction	2.40dB
Uncertainty for Radiation Emission test	3.82 dB (Polarize: V)
in 3m chamber	4.32 dB (Polarize: H)
	2.70 dB
Uncertainty for Radiated Spurious	(Bilog antenna 30M~1000MHz)
Emission test in RF chamber	2.27 dB
	(Horn antenna 1000M~25000MHz)
Uncertainty for Temperature and humidity	2%
test	1℃
Uncertainty for Bandwidth test	1x10 <sup>-9</sup>
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and	0.6℃
humidity	3%

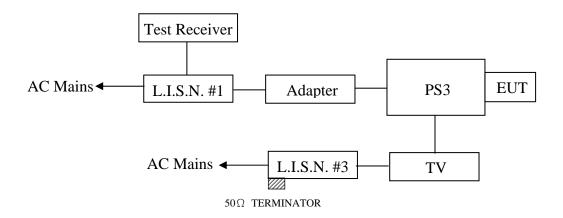
## 3. POWER LINE CONDUCTED EMISSION TEST

# 3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Dec.18, 09	1 Year
2.	L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Mar.30, 10	1 Year
3.	L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 10	1 Year
4.	Terminator	Hubersuhner	50Ω	No. 1	May.08, 10	1 Year
5.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 10	1Year
6.	Coaxial Switch	Anritsu	MP59B	M55367	May.08, 10	1 Year
7.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 10	1 Year

# 3.2. Block Diagram of Test Setup

## 3.2.1. Block diagram of connection between the EUT and Supporting System



(EUT: PS3 Wireless Dongle Receiver)

## 3.3. Power Line Conducted Emission Test Limits

	Maximum RF Line Voltage				
Frequency	Quasi-Peak Level	Average Level			
	$dB(\mu V)$	$dB(\mu V)$			
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*			
500kHz ~ 5MHz	56	46			
5MHz ~ 30MHz	60	50			

Notes: 1. \* Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

## 3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1. PS3 Wireless Dongle Receiver (EUT)

Model Number : 19474-D Serial Number : N/A

3.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2

## 3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 3.2.
- 3.5.2. Turned on the power of all equipment.
- 3.5.3. Let the EUT worked in test mode (Tx Mode) and measured it.

#### 3.6. Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PS3 connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#3). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2009 on Conducted Emission Test.

The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

The test result are reported on Section 3.7.,

#### 3.7. Power Line Conducted Emission Test Results

**PASS.** (All emissions not reported below are too low against the prescribed limits.)



Postcode:518057

Data no

:6

# Data: 6 File: D:\DATA\2010 REPORT\B\Berway\ACS10QH075.EMI.EM6 (6) 80 Level (dBuV) Date: 2010-07-01 FCC PART 15 C FCC PART 15 C (AVG) 40 0 .15 .2 2 5 20 .5 10 30 Frequency (MHz)

Trace: (Discrete)

Dis./Ant.

Site no :Audix No.1 Conduction

:\*\* 2010 ESH2-Z5 NEUTRAL

:FCC PART 15 C Limit

Env./Ins. :Temp:23'C Humi:54% Engineer :Leo-Li

:PS3 Wireless Dongle Receiver Power Rating :DC 5V From PS3 Input AC 120V/60Hz

Test Mode :Tx Mode 19474-D

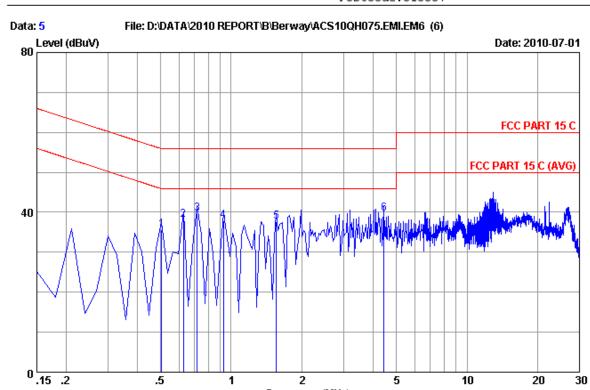
		Cable		Emission	n			
No	Freq	Loss	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB)	(dB)	(dBuA)	(dBuA)	(dB)	(dB)	
1	0.50820	9.88	25.09	35.19	56.00	20.81	QP	
2	0.71715	9.89	29.48	39.61	56.00	16.39	QP	
3	0.92610	9.89	28.13	38.27	56.00	17.73	QP	
4	1.971	9.90	29.10	39.26	56.00	16.74	QP	
5	2.986	9.93	28.63	38.83	56.00	17.17	QP	
6	12.806	10.02	33.28	43.83	60.00	16.17	QP	

Remarks: 1.Emission Level=Cable Loss(Include 10dB pulse limit) + Reading. 2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Frequency (MHz)

Data no

:5

Trace: (Discrete)

Site no :Audix No.1 Conduction

Dis./Ant. :\*\* 2010 ESH2-Z5 LINE

Limit :FCC PART 15 C

Env./Ins. :Temp:23'C Humi:54% Engineer :Leo-Li

EUT :PS3 Wireless Dongle Receiver Power Rating :DC 5V From PS3 Input AC 120V/60Hz

Test Mode :Tx Mode 19474-D

		Cable		Emission	n			
No	Freq	Loss	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB)	(dB)	(dBuA)	(dBuA)	(dB)	(dB)	
1	0.50820	9.88	25.61	35.73	56.00	20.27	QP	
2	0.62760	9.88	27.91	38.04	56.00	17.96	QP	
3	0.71715	9.89	29.52	39.66	56.00	16.34	QP	
4	0.92610	9.89	27.88	37.99	56.00	18.01	QP	
5	1.553	9.90	27.63	37.77	56.00	18.23	QP	
6	4.448	9.94	29.45	39.66	56.00	16.34	QP	

Remarks: 1.Emission Level=Cable Loss(Include 10dB pulse limit)+Reading.

2. If the average limit is met when useing a quasi-peak detector. the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

# 4. RADIATED EMISSION TEST

# 4.1. Test Equipment

Frequency rang: 30~1000MHz

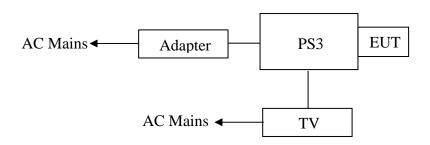
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05,09	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 10	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 10	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 10	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.14, 09	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 10	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 10	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 10	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Nov.25, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 10	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08, 10	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	May.08, 10	1 Year

# 4.2. Block Diagram of Test Setup

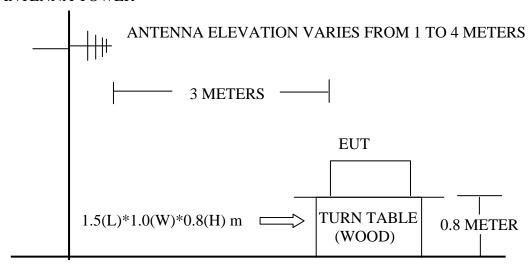
## 4.2.1. Block Diagram of connection between EUT and simulators



(EUT: PS3 Wireless Dongle Receiver)

#### 4.2.2. Anechoic Chamber Setup Diagram

#### ANTENNA TOWER



**GROUND PLANE** 

## 4.3. Radiated Emission Limit Standard: FCC 15.209 and 15.249

FREQUENCY	DISTANCE	FIELD STREN	NGTHS LIMIT	
MHz	Meters	$\mu V/m$	$dB(\mu V)/m$	
30 ~ 88	3	100	40.0	
88 ~ 216	3	150	43.5	
216 ~ 960	3	200	46.0	
960 ~ 1000	3	500	54.0	
Above 1000MHz	3	$74.0 \text{ dB}(\mu\text{V})/\text{m} \text{ (Peak)}$		
		$54.0 \text{ dB}(\mu\text{V})/\text{m} \text{ (Average)}$		
Field Strength of	3	94.0 dB(μV	/)/m (Average)	
Fundamental emission for		114.0 dB(μ	V)/m(Peak)	
2.4GHz-2.4835GHz		. , , , , ,		
Field Strength of	3	$74.0 \text{ dB}(\mu\text{V})/\text{m} \text{ (Peak)}$		
Harmonics		54.0 dB(μV	/)/m (Average)	

Remark : (1) Emission level  $dB\mu V = 20 \log Emission level \mu V/m$ 

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.
- (4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

## 4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.4.1. PS3 Wireless Dongle Receiver(EUT)

Model Number : 19474-D Serial Number : N/A

4.4.2. Support Equipment: As Tested Supporting System Detail, in Section 2.2.

## 4.5. Operating Condition of EUT

- 4.5.1. Setup the EUT as shown in Section 4.2..
- 4.5.2. Turned on the power of all equipment.
- 4.5.3. Let the EUT worked in test mode (Tx Mode) and tested it.

## 4.6. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.10-2009 on radiated emission Test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as the test photo indicated.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's RBW is set at 1MHz and VBW is set at 3MHz for peak emissions measurement above 1GHz

This device is pulse modulated, a duty cycle factor was used to calculate average level based measured peak level.

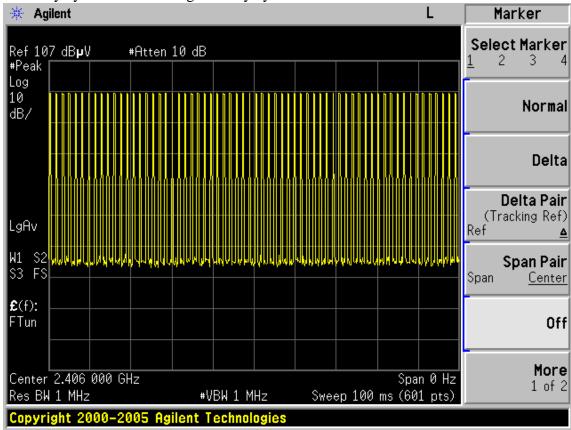
The frequency range from 30MHz to 10th harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

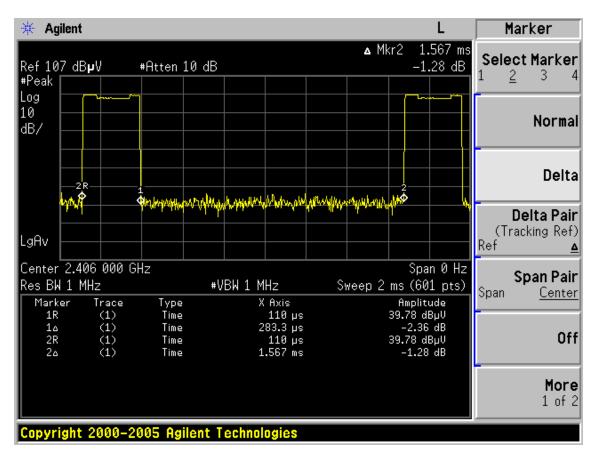
#### 4.7. Radiated Emission Test Results

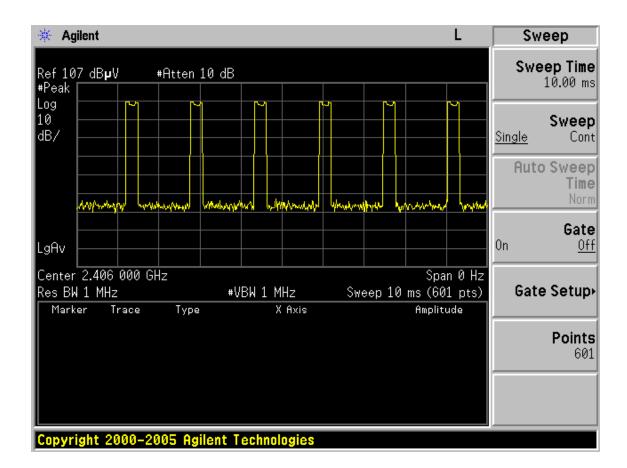
#### PASS

All the emissions from 30MHz to 25GHz were comply with the 15.209 and 15.249 Limit.

Duty cycle: 0.2833ms /1.567ms\*100% = 18.08% Duty cycle factor = 20log (1/duty cycle) = 14.86dB





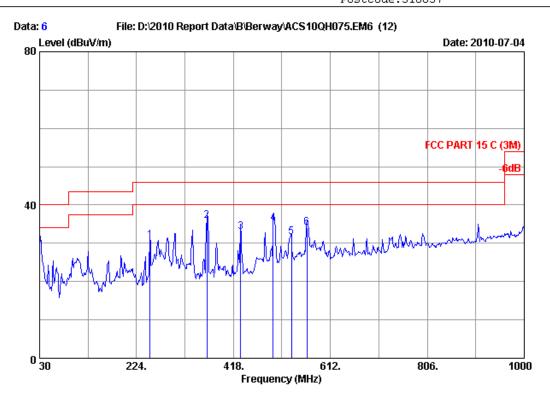


## Radiated spurious emissions from 30MHz to 1GHz test result



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Site no. : 3m Chamber Data no. : 6

Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : VERTICAL

Limit : FCC PART 15 C (3M) Env. / Ins. : 24\*C/56% Engineer : Leo-Li

EUT : PS3 Wireless Dongle Receiver

Power Rating : DC 5V From PS3 Input AC 120V/60Hz

Test Mode : Tx Mode 19474-D

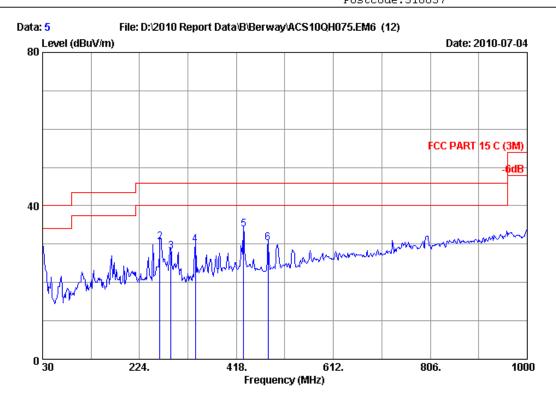
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark	
1	251.160	12.90	2.18	15.77	30.85	46.00	15.15	QP	
2	364.650	15.55	2.76	17.67	35.98	46.00	10.02	QP	
3	432.550	17.42	3.12	12.35	32.89	46.00	13.11	QP	
4	497.540	18.27	3.53	13.35	35.15	46.00	10.85	QP	
5	534.400	18.25	3.74	9.59	31.58	46.00	14.42	QP	
6	565.440	19.61	3.92	10.51	34.04	46.00	11.96	QP	

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

2. The emission levels that are 20dB below the official limit are not reported.



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Site no. : 3m Chamber Data no. : 5

Dis. / Ant. : 3m 2010 CBL6111C Ant. pol. : HORIZONTAL

Limit : FCC PART 15 C (3M) Env. / Ins. : 24\*C/56% Engineer : Leo-Li

: PS3 Wireless Dongle Receiver

Power Rating : DC 5V From PS3 Input AC 120V/60Hz

Test Mode : Tx Mode 19474-D

No.	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.61	8.44	29.05	40.00	10.95	QP
2	264.740	13.80	2.26	14.58	30.64	46.00	15.36	QP
3	287.050	13.48	2.40	12.25	28.13	46.00	17.87	QP
4	335.550	14.62	2.63	12.59	29.84	46.00	16.16	QP
5	432.550	17.42	3.12	13.29	33.83	46.00	12.17	QP
6	481.050	18.11	3.43	8.66	30.20	46.00	15.80	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.

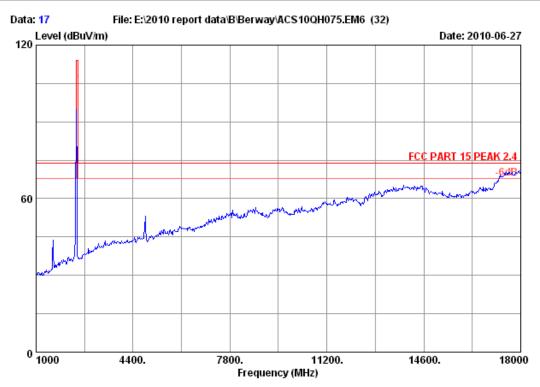
2. The emission levels that are 20dB below the official limit are not reported.

## Radiated emissions from 1GHz to 18GHz (include fundamental) test result



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Site no. : 3m Chamber Data no. : 17

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

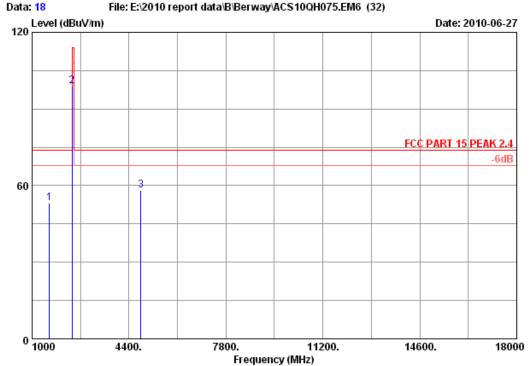
EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2406MHz M/N : 19474-D



Postcode:518057

File: E:\2010 report data\B\Berway\AC\$10QH075.EM6 (32)



Site no. : 3m Chamber Data no. : 18

Ant. pol. : HORIZONTAL Dis. / Ant. : 3m 3115(0911)

: FCC PART 15 PEAK 2.4 Limit

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

: PS3 Wireless Dongle Receiver

Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2406MHz : 19474-D

		Ant.	Cable	Amp.		Emissio	n			
	Freq. (MHz)	Factor (dB/m)	loss (dB)		Reading (dBuV)			_	Remark	
_	1604.000				57.26	53.28	74.00	20.72	Peak	
_	2406.000 4812.000				98.78 48.37			14.96 15.81	Peak Peak	

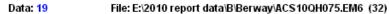
#### Remarks:

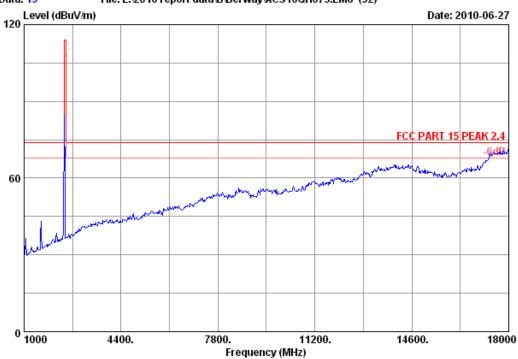
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
1604	53.28	14.86	38.42	54	PASS
2406	99.04	14.86	84.18	94	PASS
4812	58.19	14.86	43.33	54	PASS







Site no. : 3m Chamber Data no. : 19
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

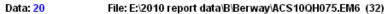
Limit : FCC PART 15 PEAK 2.4

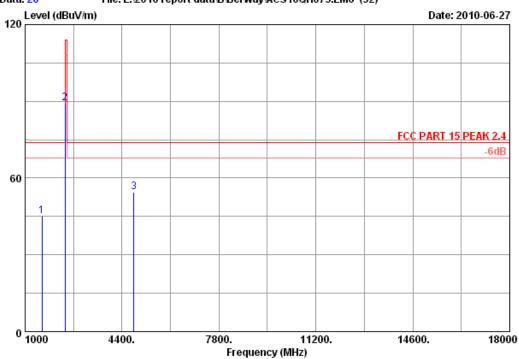
Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Power : DC 5v 122...
Test mode : Tx 2406MHz
M/N : 19474-D







Site no. : 3m Chamber Data no. : 20
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Power : DC 0. | Test mode : Tx 2406MHz M/N : 19474-D

		Ant.	Cable	Amp.		Emissio	n			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1595.000	26.96	5.88	36.95	49.29	45.18	74.00	28.82	Peak	
2	2406.000	29.45	7.43	36.62	88.90	89.16	114.00	24.84	Peak	
3	4812.000	34.30	10.62	35.10	44.58	54.40	74.00	19.60	Peak	

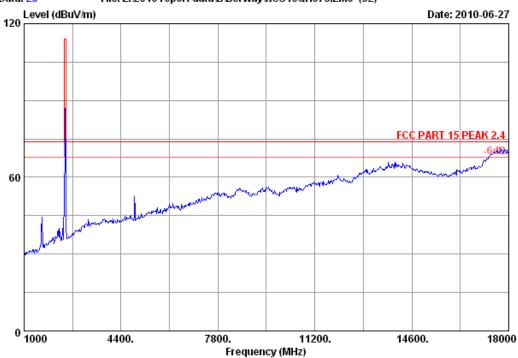
#### Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
1595	45.18	14.86	30.32	54	PASS
2406	89.16	14.86	74.30	94	PASS
4812	54.40	14.86	39.54	54	PASS







Site no. : 3m Chamber Data no. : 23

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

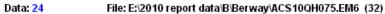
Limit : FCC PART 15 PEAK 2.4

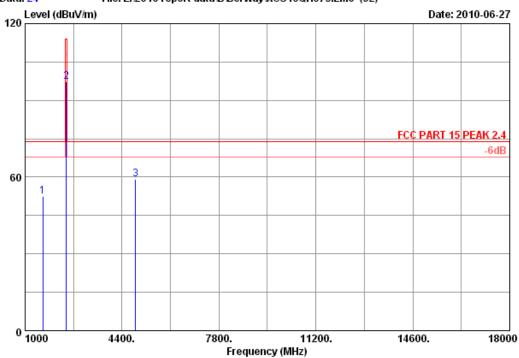
Env. / Ins. : 23 \* C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Power : DC SV 12---Test mode : Tx 2440MHz
M/N : 19474-D







Site no. : 3m Chamber Data no. : 24

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver

Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2440MHz M/N : 19474-D

	•		Cable loss (dB)	•	Reading (dBuV)				Remark	
2	1626.000 2440.000 4880.000	29.47	7.50	36.61	56.21 96.91 48.97	52.39 97.27 59.06	74.00 114.00 74.00	21.61 16.73 14.94	Peak Peak Peak	

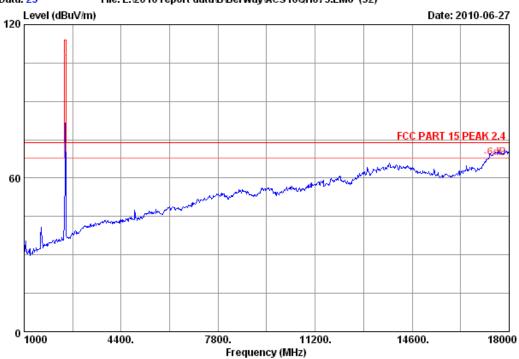
#### Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
1626	52.39	14.86	37.53	54	PASS
2440	97.27	14.86	82.41	94	PASS
4880	59.06	14.86	44.20	54	PASS







Site no. : 3m Chamber Data no. : 25
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

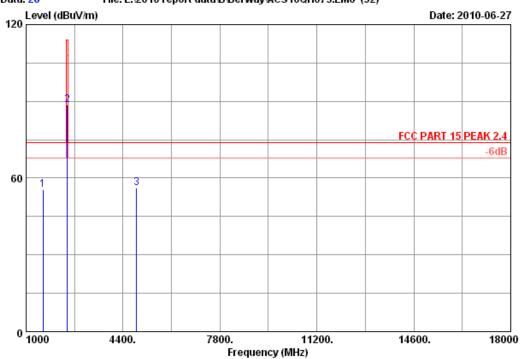
Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2440MHz M/N : 19474-D







Site no. : 3m Chamber Data no. : 26
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2440MHz M/N : 19474-D

Freq. (MHz)	Factor (dB/m)	loss (dB)	Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	_	Remark	
1 1595.00 2 2440.00 3 4880.00	29.47		36.61	59.52 88.19 46.11	55.41 88.55 56.20	74.00 114.00 74.00	18.59 25.45 17.80	Peak Peak Peak	

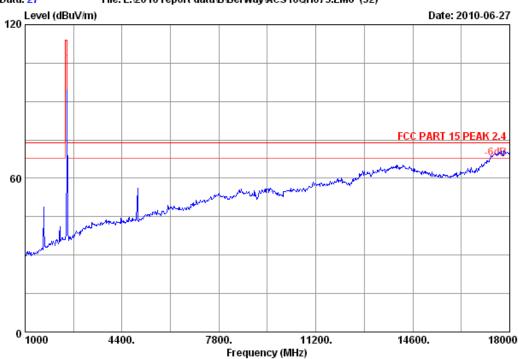
#### Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency	PK measured	Duty cycle	Average level	Average Limit	Result
(MHz)	level (dBuV/m)	factor (dB)	(dBuV/m)	(dBuV/m)	Kesuit
1595	55.41	14.86	40.55	54	PASS
2440	88.55	14.86	73.69	94	PASS
4880	56.20	14.86	41.34	54	PASS







Site no. : 3m Chamber Data no. : 27

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

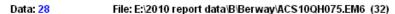
Limit : FCC PART 15 PEAK 2.4

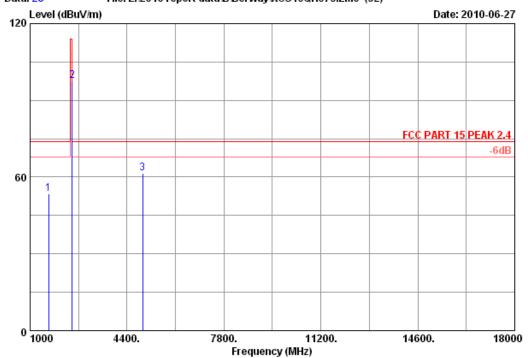
Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Power : DC 5v 12...
Test mode : Tx 2476MHz
\*\*/W : 19474-D







Site no. : 3m Chamber Data no. : 28

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver

Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2476MHz M/N : 19474-D

	Freq.	Ant. Factor (dB/m)	Cable loss (dB)	•	Reading (dBuV)		 _	Remark	
2	1650.000 2476.000 4952.000	29.49	7.54	36.60	57.12 97.08 51.15	53.43 97.51 61.50	 20.57 16.49 12.50	Peak Peak Peak	

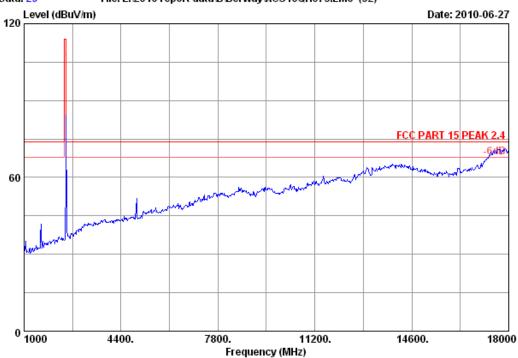
#### Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency	PK measured	Duty cycle	Average level	Average Limit	Result
(MHz)	level (dBuV/m)	factor (dB)	(dBuV/m)	(dBuV/m)	Result
1650	53.43	14.86	38.57	54	PASS
2476	97.51	14.86	82.65	94	PASS
4952	61.50	14.86	46.64	54	PASS







Site no. : 3m Chamber Data no. : 29
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

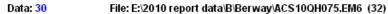
Limit : FCC PART 15 PEAK 2.4

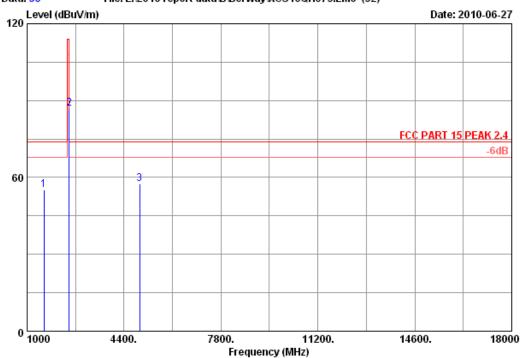
Env. / Ins. : 23 \* C / 54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Power : DC 0: Test mode : Tx 2476MHz M/N : 19474-D







Site no. : 3m Chamber Data no. : 30
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver
Power : DC 5V From PS3 Input AC 120V/60Hz

Power : DC C: Test mode : Tx 2476MHz M/N : 19474-D

		Ant.	Cable	Amp.		Emissic	n			
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark	
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	1595.000	26.96	5.88	36.95	59.35	55.24	74.00	18.76	Peak	
2	2476.000	29.49	7.54	36.60	86.63	87.06	114.00	26.94	Peak	
3	4952.000	34.52	10.78	34.95	47.01	57.36	74.00	16.64	Peak	

#### Remarks:

- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
1595	55.24	14.86	40.38	54	PASS
2476	87.06	14.86	72.20	94	PASS
4952	57.36	14.86	42.50	54	PASS

## 5. BAND EDGE COMPLIANCE TEST

## 5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year
2.	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3.	Amplifier	Agilent	8449B	3008A02495	May.08, 10	1 Year
4.	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	May.08,10	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08,10	1 Year
6.	RF Cable	Hubersuhner	SUCOFLEX102	28610/2	May.08,10	1 Year

#### 5.2. Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in section 15.209, which is the lesser attenuation.

## 5.3. Test Produce

- 1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.
- 2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
- 3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
- 4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
  - (a) PEAK: RBW=1MHz; VBW=3MHz, PK detector, Sweep=AUTO
  - (b)This device is pulse modulated, a duty cycle factor was used to calculate average level based measured peak level.

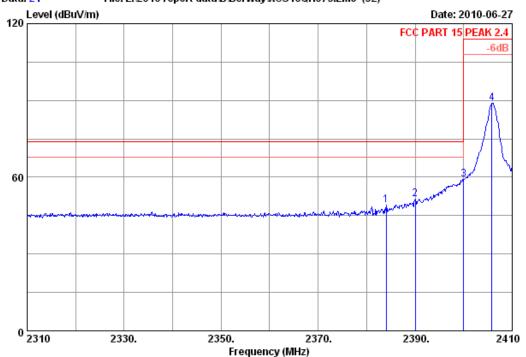
## 5.4. Test Results

Pass (The testing data was attached in the next pages.)



Postcode:518057

#### Data: 21 File: E:\2010 report data\B\Berway\AC\$10QH075.EM6 (32)



Site no. : 3m Chamber Data no. : 21

Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23\*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2406MHz M/N : 19474-D

		Ant.	Cable	Amp.		Emissio	n		
	Freq.	Factor	loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2384.000	29.43	7.39	36.62	49.02	49.22	74.00	24.78	Peak
2	2390.000	29.44	7.39	36.62	51.24	51.45	74.00	22.55	Peak
3	2400.000	29.44	7.43	36.62	58.84	59.09	74.00	14.91	Peak
4	2405.800	29.45	7.43	36.62	88.81	89.07	114.00	24.93	Peak

#### Remarks

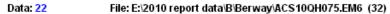
1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.

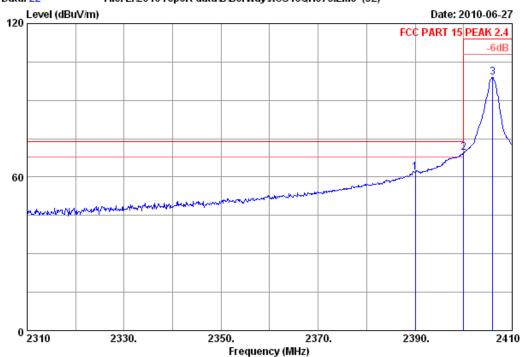
2. The emission levels that are 20dB below the official limit are not reported.

	Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
F	2384	49.22	14.86	34.36	54	PASS
	2390	51.45	14.86	36.59	54	PASS
	2400	59.09	14.86	44.23	54	PASS
	2405.8	89.07	14.86	74.21	94	PASS



Postcode:518057





Site no. : 3m Chamber Data no. : 22

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver

Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2406MHz M/N : 19474-D

	-	Ant. Factor (dB/m)	Cable loss (dB)		Reading (dBuV)		 _	Remark	
2 2	2390.000 2400.000 2406.000	29.44	7.43	36.62	61.47 67.37 98.68	61.68 67.62 98.94	 12.32 6.38 15.06	Peak Peak Peak	

#### Remarks:

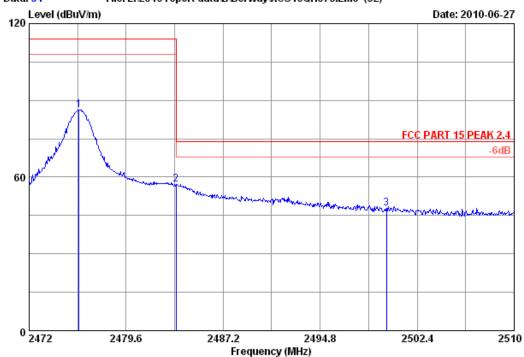
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency	PK measured	Duty cycle	Average level	Average Limit	Result
(MHz)	level (dBuV/m)	factor (dB)	(dBuV/m)	(dBuV/m)	Result
2390	61.68	14.86	46.82	54	PASS
2400	67.62	14.86	52.76	54	PASS
2406	98.94	14.86	84.08	94	PASS



Postcode:518057





Site no. : 3m Chamber Data no. : 31
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2476MHz M/N : 19474-D

	q. Facto z) (dB/m)	r loss (dB)	Factor (dB)	Reading (dBuV)		Limits (dBuV/m)	_	Remark	
2 2483.	914 29.4 500 29.4 000 29.5	9 7.58	36.60	85.82 56.85 47.27	86.25 57.32 47.79	114.00 74.00 74.00	27.75 16.68 26.21	Peak Peak Peak	

#### Remarks:

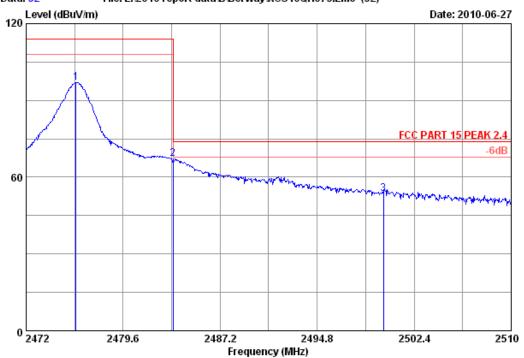
- 1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.
- 2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2475.914	86.25	14.86	71.39	94	PASS
2483.500	57.32	14.86	42.46	54	PASS
2500.000	47.79	14.86	32.93	54	PASS



Postcode:518057





Site no. : 3m Chamber Data no. : 32

Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL

Limit : FCC PART 15 PEAK 2.4

Env. / Ins. : 23 \*C/54% Engineer : Paul Tian

EUT : PS3 Wireless Dongle Receiver

Power : DC 5V From PS3 Input AC 120V/60Hz

Test mode : Tx 2476MHz M/N : 19474-D

	Freq.	Ant. Factor (dB/m)		Amp. Factor (dB)	Reading (dBuV)			_	Remark	
1 2 3	2475.914 2483.500 2500.000	29.49	7.58	36.60 36.60 36.60	96.56 66.68 53.10	96.99 67.15 53.62	114.00 74.00 74.00	17.01 6.85 20.38	Peak Peak Peak	

#### Remarks:

1. Emission Level= Antenna Factor + Cable Loss -Amp Factor + Reading.

2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK measured level (dBuV/m)	Duty cycle factor (dB)	Average level (dBuV/m)	Average Limit (dBuV/m)	Result
2475.914	96.99	14.86	82.13	94	PASS
2483.500	67.15	14.86	52.29	54	PASS
2500,000	53.62	14.86	38.76	54	PASS

# 6. BANDWIDTH TEST

# 6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08,10	1 Year

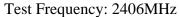
## 6.2. Limit

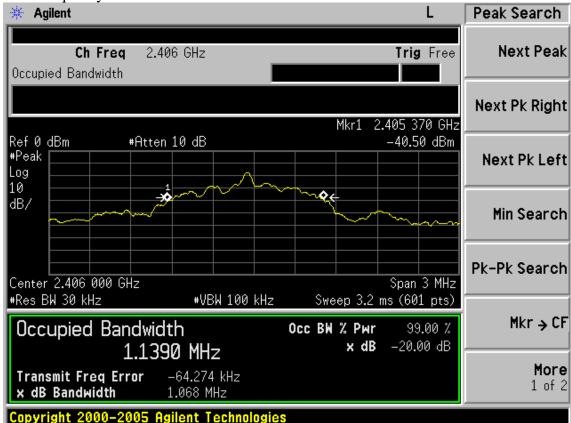
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

## 6.3. Test Results

EUT: PS3 Wireless Dongle Receiver					
M/N: 19474-D2					
Test date:2010-06-24	Pressure:100.5 kpa	Humidity:57 %			
Tested by:Paul Tian	Test site: RF site	Temperature : 25 °C			

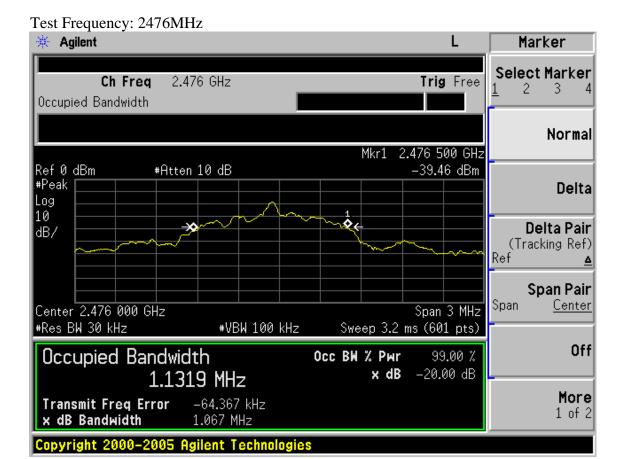
Frequency	20dB bandwidth (KHz)	Limit (KHz)				
2406	1068.0	N/A				
2440	1072.0	N/A				
2476	1067.0	N/A				
Conclusion: PA	Conclusion: PASS					





## Test Frequency: 2440MHz





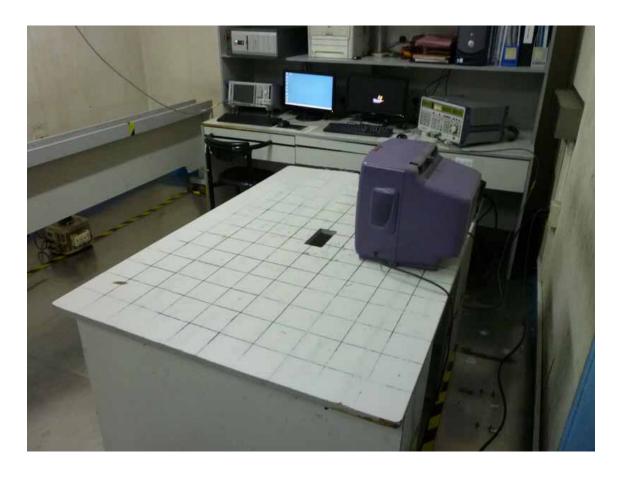
# 7. DEVIATION TO TEST SPECIFICATIONS

[ NONE]

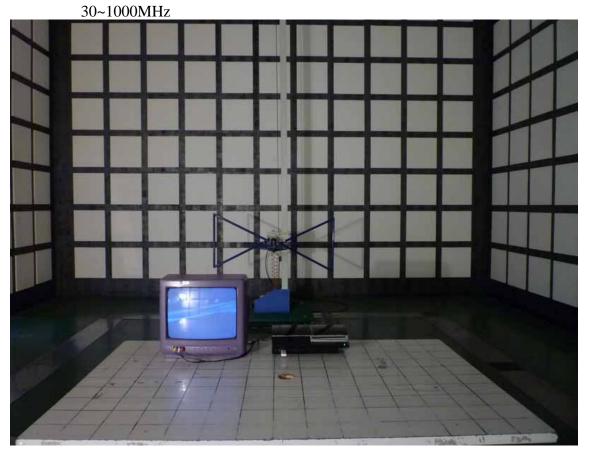
# 8. PHOTOGRAPH OF TEST

8.1. Photos of Power Line Conducted Emission Test



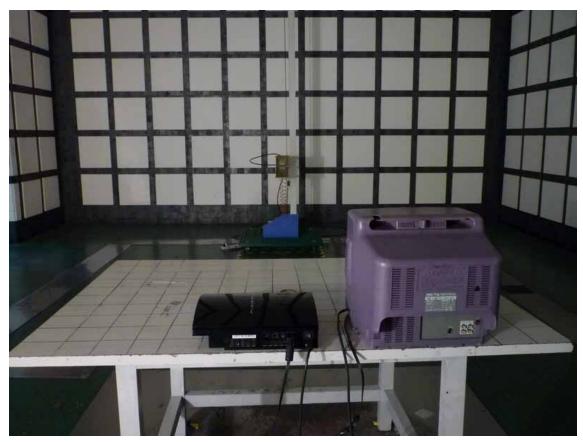


# 8.2. Photos of Radiated Emission Test (In Anechoic Chamber)









# 9. PHOTOGRAPH OF EUT

Figure 1



**Figure 2** General Appearance of the EUT



Figure 3
Inside of the EUT



Figure 4
Inside of the EUT

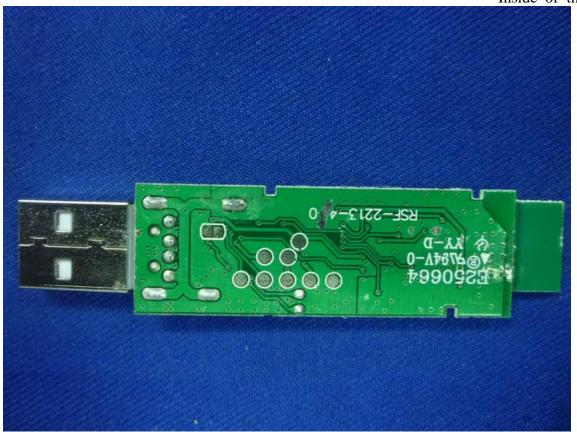


Figure 5
Inside of the EUT

