



# TEST REPORT

Report number : Z071C-13468

Issue date : December 28, 2013

The device, as described herewith, was tested pursuant to applicable test procedure and complies with the requirements of;

## FCC Part15 Subpart C

The test results are traceable to the international or national standards.

Applicant	: KYOCERA Corporation
Equipment under test (EUT)	: Mobile Phone
Model number	: KYY22
FCC ID	: JOYKYY22

Date of test : December 12, 20, 21, 2013  
 Test place : TÜV SÜD Zacta Ltd. Yonezawa Testing Center  
 4149-7 Hachimanpara 5-chome  
 Yonezawa-shi Yamagata 992-1128 Japan  
 Phone: +81-238-28-2880 Fax: +81-238-28-2888  
 Test results : Complied

The results in this report are applicable only to the equipment tested.  
 This report shall not be re-produced except in full without the written approval of TÜV SÜD Zacta Ltd.  
 This test report must not be used by client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

Tested by : Chiaki Kanno  
 Chiaki Kanno

Tested by : Taiji Watanabe  
 Taiji Watanabe

Authorized by : Hiroaki Suzuki  
 Hiroaki Suzuki  
 Manager of EMC Technical Department





## ***Table of contents***

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	<b>Page</b>
<b>1. Summary of Test .....</b>	<b>3</b>
1.1 Purpose of test .....	3
1.2 Standards .....	3
1.3 List of applied test to the EUT .....	3
1.4 Modification to the EUT by laboratory .....	3
<b>2. Equipment Under Test .....</b>	<b>4</b>
2.1 General Description of equipment .....	4
2.2 EUT information .....	4
2.3 Variation of the family model(s) .....	5
2.4 Operating channels and frequencies .....	5
2.5 Description of Test mode .....	5
2.6 Operating mode .....	6
<b>3. Configuration of equipment .....</b>	<b>7</b>
3.1 Equipment(s) used .....	7
3.2 System configuration .....	7
<b>4. Spurious Emissions - Radiated - .....</b>	<b>8</b>
4.1 Measurement procedure .....	8
4.2 Calculation method .....	9
4.3 Limit .....	9
4.4 Test data .....	10
<b>5. Restricted Band of Operation .....</b>	<b>12</b>
5.1 Measurement procedure .....	12
5.2 Limit .....	12
5.3 Measurement Result .....	12
5.4 Test data .....	13
<b>6. Antenna requirement .....</b>	<b>19</b>
<b>7. Uncertainty of measurement .....</b>	<b>20</b>
<b>8. Laboratory description .....</b>	<b>21</b>
<b>Appendix A. Test equipment .....</b>	<b>22</b>

## 1. Summary of Test

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### 1.1 Purpose of test

It is the original test in order to verify conformance to FCC Part 15 Subpart C.

### 1.2 Standards

CFR47 FCC Part 15 Subpart C

#### 1.2.1 Test Methods

ANSI C63.4-2003, KDB558074

#### 1.2.2 Deviation from standards

None

### 1.3 List of applied test to the EUT

Test items Section	Test items	Condition	Result
15.247(d) 15.205 15.209	Spurious Emissions	Radiated	PASS
15.247(d) 15.205 15.209	Restricted Bands of Operation	Radiated	PASS

\*: Conducted test was to proceed at FCCID:JOYKYY21.

FCCID:JOYKYY22 was measured by applying only Radiated test.

#### 1.3.1 Test set up

Table-Top

### 1.4 Modification to the EUT by laboratory

None



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## **2. Equipment Under Test**

### **2.1 General Description of equipment**

EUT is the Mobile Phone.

### **2.2 EUT information**

Applicant	:	KYOCERA Corporation Yokohama Office 2-1-1 Kagahara, Tsuzuki-ku Yokohama-shi, Kanagawa, Japan Phone: +81-45-943-6253 Fax: +81-45-943-6314
Equipment under test	:	Mobile Phone
Trade name	:	Kyocera
Model number	:	KYY22
Serial number	:	N/A
EUT condition	:	Pre-Production
Max. frequency	:	1.5GHz
Power ratings	:	Battery: DC 3.8V
Size	:	(W) 65.0 × (D) 11.0 × (H) 134.0 mm
Environment	:	Indoor and Outdoor use
Terminal limitation	:	-20°C to 60°C
RF Specification Protocol	:	IEEE802.11b, IEEE802.11g, IEEE802.11n (HT20)
Frequency range	:	2412MHz-2462MHz
Number of RF Channels	:	11 Channels
Modulation type	:	IEEE802.11b: DSSS (DBPSK, DQPSK, CCK) IEEE802.11g / n (HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Data rate	:	IEEE802.11b: 1, 2, 5.5, 11Mbps IEEE802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps IEEE802.11n (HT20 LGI): 6.5, 13, 19.5, 26, 39, 52, 58.5, 65Mbps IEEE802.11n (HT20 SGI): 7.2, 14.4, 21.7, 28.9, 43.3, 57.8, 65, 72.2Mbps
Channel separation	:	5MHz
Antenna type	:	Internal antenna
Antenna gain	:	0dBi

### 2.3 Variation of the family model(s)

Not applicable

### 2.4 Operating channels and frequencies

Channel	Frequency [MHz]
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

### 2.5 Description of Test mode

The EUT had been tested under operating condition.  
There are three channels have been tested as following:

Tested Channel	Frequency [MHz]
Low	2412
Middle	2437
High	2462

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

Tested Channel	Modulation Type	Data Rate
Low, Middle, High	IEEE802.11b: DSSS	1Mbps
Low, Middle, High	IEEE802.11g: OFDM	6Mbps
Low, Middle, High	IEEE802.11n (HT20): OFDM	MCS0

The field strength of spurious emissions was measured at each position of all three axis X, Y and Z to compare the level, and the maximum noise.

The worst emission was found in X axis and the worst case recorded.

## 2.6 Operating mode

### [Tx mode]

- i) Test program setup to the DM tool
- ii) Select a Test mode  
Operating frequency: Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz
- iii) Start test mode

### [Rx mode]

- i) Test program setup to the DM tool
- ii) Select a Test mode  
Operating frequency: Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz
- iii) Start test mode



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### ***3. Configuration of equipment***

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#### **3.1 Equipment(s) used**

<b>No.</b>	<b>Equipment</b>	<b>Company</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>FCC ID / DoC</b>	<b>Comment</b>
1	Mobile Phone	KYOCERA	KYY22	N/A	JOYKYY22	EUT

#### **3.2 System configuration**

1. Mobile Phone  
(EUT)

Note1: Numbers assigned to equipment or cables on this diagram correspond to the list in "3.1 Equipment(s) used".

## 4. Spurious Emissions - Radiated -

### 4.1 Measurement procedure [FCC 247(d), 15.205, 15.209]

Test was applied by following conditions.

Test method	:	ANSI C63.4
Frequency range	:	9kHz to 25GHz
Test place	:	3m Semi-anechoic chamber
EUT was placed on	:	FRP table / (W)2.0m × (D)1.0m × (H)0.8m
Antenna distance	:	3m
Test receiver setting	:	Below 1GHz
- Detector	:	Average (9kHz-90kHz, 110kHz-490kHz), Quasi-peak
- Bandwidth	:	200Hz, 120kHz
Spectrum analyzer setting	:	Above 1GHz
- Peak	:	RBW=1MHz, VBW=1MHz, Span=0Hz, Sweep=auto
- Average	:	RBW=1MHz, VBW=10Hz, Span=0Hz, Sweep=auto Display mode=Linear

Radiated emission measurements are performed at 3m distance with the broadband antenna (Loop antenna, Biconical antenna, Log periodic antenna and Double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission. As for the Loop antenna, it is positioned with its plane vertical, and the center of the Loop antenna is 1m above the ground plane.

The EUT is Placed on a turntable, which is 0.8m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

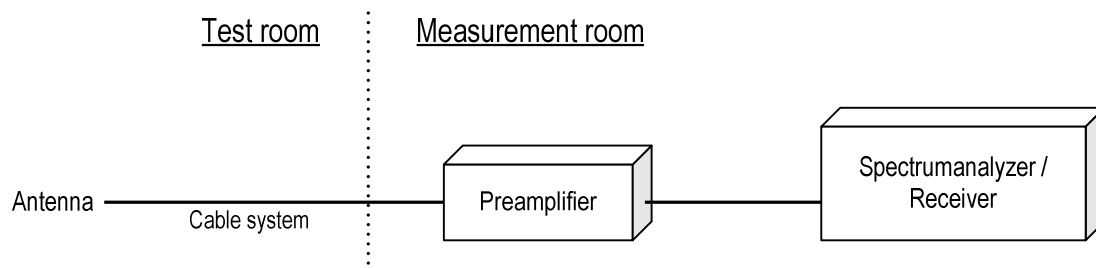
The EUT was set to operate with following conditions.

- Channel Low: 2412MHz, Channel Middle: 2437MHz, Channel High: 2462MHz

The test mode of EUT is as follows.

- Tx mode, Rx mode

- Test configuration





## 4.2 Calculation method

[9kHz to 150kHz]

Emission level = Reading + (Ant. factor + Cable system loss )

Margin = Limit – Emission level

[150kHz to 25GHz]

Emission level = Reading + (Ant. factor + Cable system loss – Amp. Gain)

Margin = Limit – Emission level

## 4.3 Limit

Frequency [MHz]	Field strength		Distance [m]
	[uV/m]	[dBuV/m]	
0.009-0.490	2400 / F [kHz]	20logE [uV/m]	300
0.490-1.705	24000 / F [kHz]	20logE [uV/m]	30
1.705-30	30	29.5	30
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	300	54.0	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level [dBuV/m] = 20log Emission [uV/m]
3. As shown in 15.35(b), 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 modulation.



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#### 4.4 Test data

Date : Dec. 12, 2013 Test personnel :  
 Temperature : 25.1 [°C]  
 Humidity : 21.1 [%] Tested by :  
 Test place : 3m Semi-anechoic chamber Taiki Watanabe

Date : Dec. 20, 2013 Test personnel :  
 Temperature : 23.5 [°C]  
 Humidity : 22.1 [%] Tested by :  
 Test place : 3m Semi-anechoic chamber Taiki Watanabe

Date : Dec. 21, 2013 Test personnel :  
 Temperature : 22.0 [°C]  
 Humidity : 23.0 [%] Tested by :  
 Test place : 3m Semi-anechoic chamber Chiaki Kanno

#### [IEEE802.11b] Channel Low

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	4824.000	H	42.9	30.2	8.7	51.6	38.9	74.0	54.0	22.4	15.1	100.0	65.0
2	4824.000	V	44.6	32.4	8.7	53.3	41.1	74.0	54.0	20.7	12.9	102.0	161.0

#### Channel Middle

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2381.000	H	55.1	43.4	0.9	56.0	44.3	74.0	54.0	18.0	9.7	100.0	4.0
2	2381.000	V	55.3	43.4	0.9	56.2	44.3	74.0	54.0	17.8	9.7	109.0	0.0
3	2493.000	H	51.7	39.3	1.1	52.8	40.4	74.0	54.0	21.2	13.6	100.0	2.0
4	2493.000	V	50.1	38.6	1.1	51.2	39.7	74.0	54.0	22.8	14.3	100.0	0.0
5	4874.000	H	44.5	32.6	9.0	53.5	41.6	74.0	54.0	20.5	12.4	100.0	148.0
6	4874.000	V	45.4	34.5	9.0	54.4	43.5	74.0	54.0	19.6	10.5	102.0	158.0

#### Channel High

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2381.000	H	50.5	36.9	0.9	51.4	37.8	74.0	54.0	22.6	16.2	100.0	6.0
2	2381.000	V	50.0	36.5	0.9	50.9	37.4	74.0	54.0	23.1	16.6	108.0	0.0
3	2498.250	H	50.9	38.8	1.2	52.1	40.0	74.0	54.0	21.9	14.0	100.0	2.0
4	2498.116	V	51.7	39.2	1.2	52.9	40.4	74.0	54.0	21.1	13.6	105.0	0.0
5	4924.000	H	44.8	32.9	9.1	53.9	42.0	74.0	54.0	20.1	12.0	100.0	141.0
6	4924.000	V	45.6	34.9	9.1	54.7	44.0	74.0	54.0	19.3	10.0	100.0	163.0

#### Note:

1. Emission Level (Margin) = Limit - [Reading + Factor (Antenna + Cable - Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.
3. No emission was detected in the receive mode.



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### [IEEE802.11g] Channel Low

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	4824.000	H	43.5	30.2	8.7	52.2	38.9	74.0	54.0	21.8	15.1	100.0	0.0

### Channel Middle

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2384.635	H	58.4	45.9	0.9	59.3	46.8	74.0	54.0	14.7	7.2	100.0	3.0
2	2384.635	V	58.7	46.4	0.9	59.6	47.3	74.0	54.0	14.4	6.7	110.0	0.0
3	2489.400	H	56.7	41.7	1.1	57.8	42.8	74.0	54.0	16.2	11.2	100.0	117.0
4	2489.400	V	58.8	42.9	1.1	59.9	44.0	74.0	54.0	14.1	10.0	105.0	352.0
5	4874.000	H	44.2	30.6	9.0	53.2	39.6	74.0	54.0	20.8	14.4	100.0	0.0

### Channel High

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2501.700	H	55.5	37.6	1.2	56.7	38.8	74.0	54.0	17.3	15.2	100.0	113.0
2	2506.250	V	52.8	35.3	1.2	54.0	36.5	74.0	54.0	20.0	17.5	106.0	355.0
3	4924.000	H	43.6	30.2	9.1	52.7	39.3	74.0	54.0	21.3	14.7	100.0	0.0

Note:

1. Emission Level (Margin) = Limit - [Reading + Factor ( Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.
3. No emission was detected in the receive mode.

### [IEEE802.11n (HT20)]

#### Channel Low

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2501.700	H	55.5	37.6	1.2	56.7	38.8	74.0	54.0	17.3	15.2	100.0	113.0
2	2506.250	V	52.8	35.3	1.2	54.0	36.5	74.0	54.0	20.0	17.5	106.0	355.0
3	4824.000	H	43.6	30.3	8.7	52.3	39.0	74.0	54.0	21.7	15.0	100.0	0.0

#### Channel Middle

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2385.360	H	59.8	48.1	0.9	60.7	49.0	74.0	54.0	13.3	5.0	100.0	7.0
2	2385.360	V	58.1	46.4	0.9	59.0	47.3	74.0	54.0	15.0	6.7	110.0	355.0
3	2488.800	H	59.2	43.4	1.1	60.3	44.5	74.0	54.0	13.7	9.5	114.0	27.0
4	2488.800	V	57.4	42.1	1.1	58.5	43.2	74.0	54.0	15.5	10.8	108.0	2.0
5	4874.000	H	43.9	30.6	9.0	52.9	39.6	74.0	54.0	21.1	14.4	100.0	0.0

#### Channel High

No.	Frequency [MHz]	(P)	Reading PK [dB(μV)]	Reading CAV [dB(μV)]	c. f [dB(1/m)]	Result PK [dB(μV/m)]	Result CAV [dB(μV/m)]	Limit PK [dB(μV/m)]	Limit AV [dB(μV/m)]	Margin PK [dB]	Margin CAV [dB]	Height [cm]	Angle [°]
1	2513.800	H	52.0	39.8	1.2	53.2	41.0	74.0	54.0	20.8	13.0	100.0	1.0
2	2513.800	V	51.2	39.5	1.2	52.4	40.7	74.0	54.0	21.6	13.3	105.0	353.0
3	4924.000	H	42.7	30.0	9.1	51.8	39.1	74.0	54.0	22.2	14.9	100.0	0.0

Note:

1. Emission Level (Margin) = Limit - [Reading + Factor ( Antenna + Cable – Amp)]
2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.
3. No emission was detected in the receive mode.

## 5. Restricted Band of Operation

### 5.1 Measurement procedure [FCC 247(d), 15.205, 15.209]

Test was applied by following conditions.

Test method : ANSI C63.4  
 Test place : 3m Semi-anechoic chamber  
 EUT was placed on : FRP table / (W)2.0m × (D)1.0m × (H)0.8m  
 Antenna distance : 3m

Spectrum analyzer setting  
 - Peak : RBW=1MHz, VBW=1MHz, Span=Arbitrary setting, Sweep=auto  
 - Average : RBW=1MHz, VBW=10Hz, Span=Arbitrary setting, Sweep=auto  
 Display mode=Linear

Radiated emission measurements are performed at 3m distance with the broadband antenna (Double ridged guide antenna). The antenna is positioned both the horizontal and vertical planes of polarization and height is varied 1m to 4m and stopped at height producing the maximum emission.

The EUT is Placed on a turntable, which is 0.8m above ground plane. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. The test results represent the worst case emission for each emission with manipulating the EUT, support equipment, interconnecting cables and varying the mode of operation. Sufficient time for the EUT, support equipment, and test equipment are allowed in order for them to warm up to their normal operating condition.

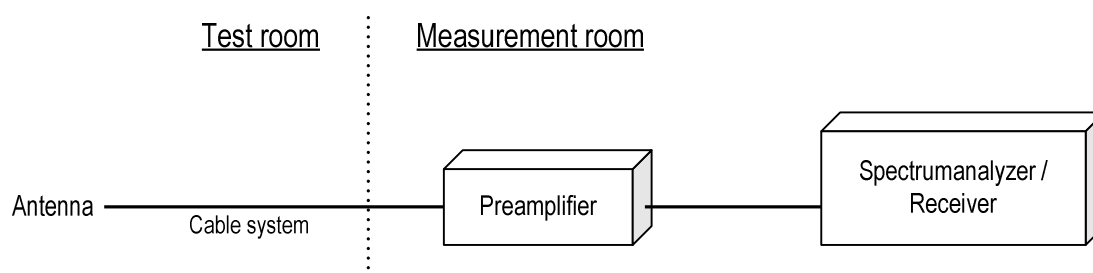
The EUT was set to operate with following conditions.

- Channel Low: 2412MHz, Channel High: 2462MHz

The test mode of EUT is as follows.

- Tx mode

- Test configuration



### 5.2 Limit

Emission at the boundary of the restricted band provided by 15.205 shall be lower than 15.209 limit.

### 5.3 Measurement Result

Channel	Frequency [MHz]	Results Chart	Result
Low	2412	See the Trace Data	Pass
High	2462	See the Trace Data	Pass



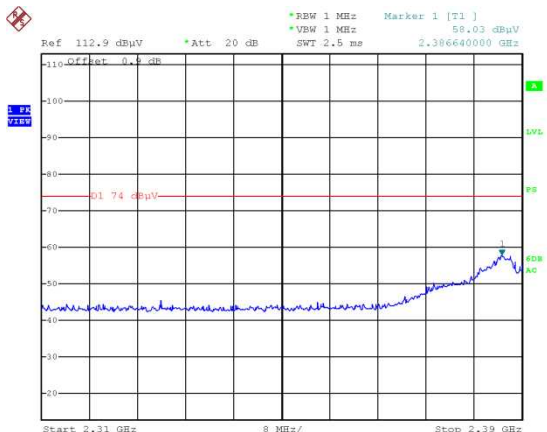
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### 5.4 Test data

Date : Dec. 19, 2013  
 Temperature : 23.5 [°C]  
 Humidity : 37.5 [%]  
 Test place : 3m Semi-anechoic chamber

Test personnel :  
 Tested by : Chiaki Kanno

### [IEEE802.11b] Channel Low Horizontal Peak



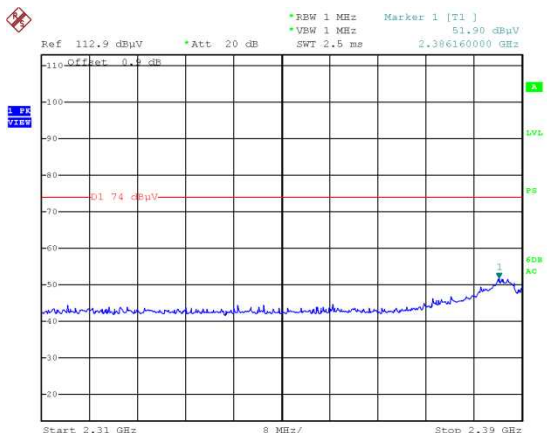
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### Average



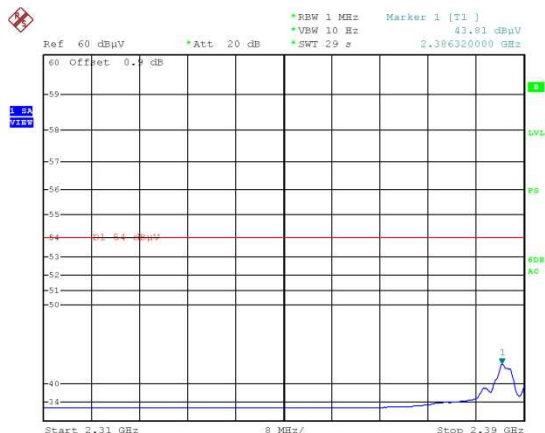
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### Vertical Peak



Date: 19.DEC.2013 12:31:03

### Average

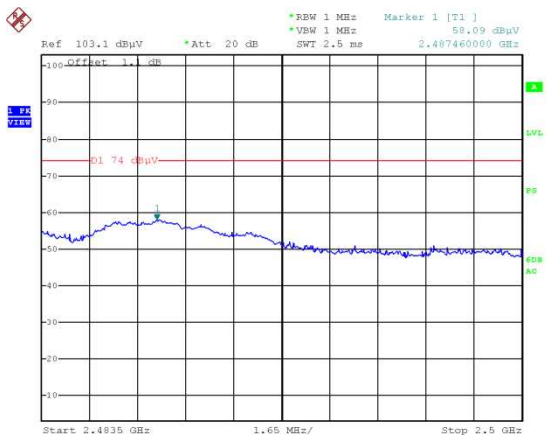


Date: 19.DEC.2013 12:32:27



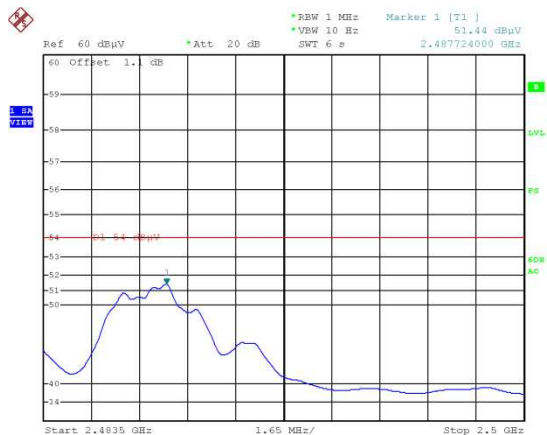
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### Channel High Horizontal Peak



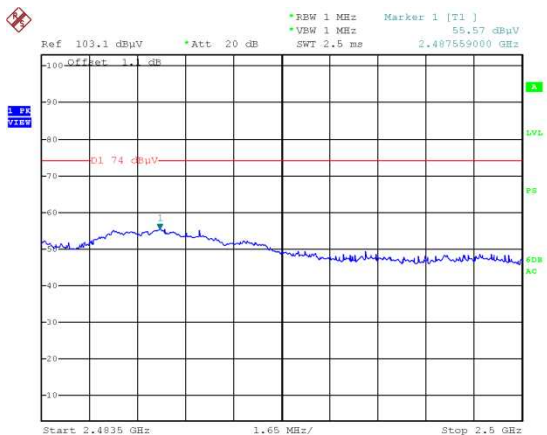
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### Average



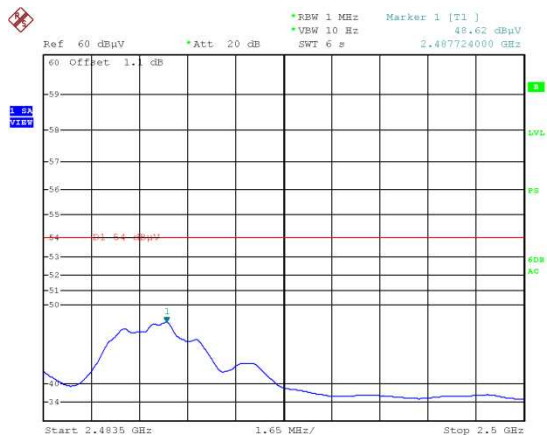
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### Vertical Peak



Date: 19.DEC.2013 12:49:20

### Average

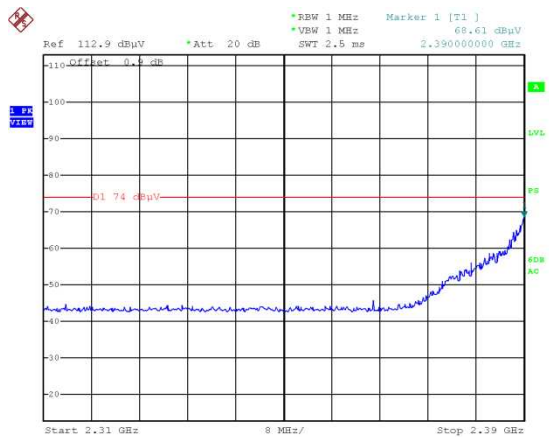


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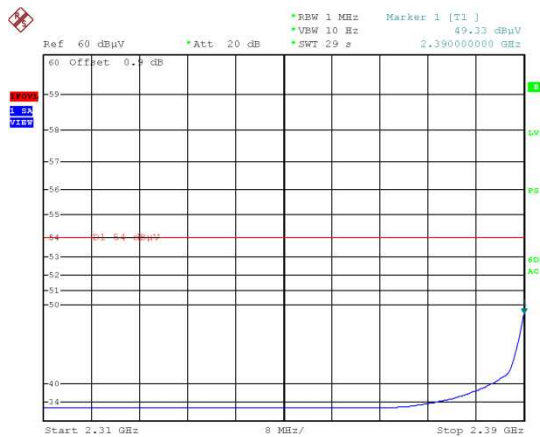
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### [IEEE802.11g] Channel Low Horizontal Peak



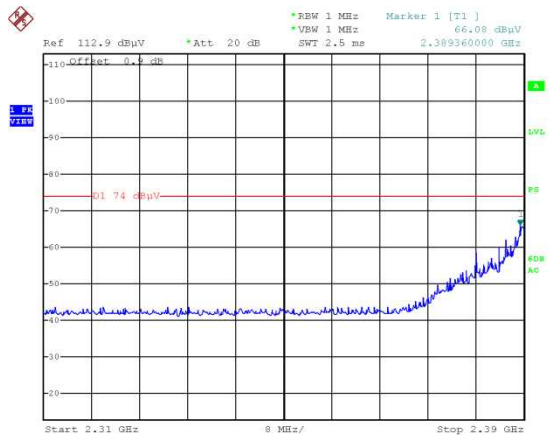
Date: 19.DEC.2013 13:01:10

### Average



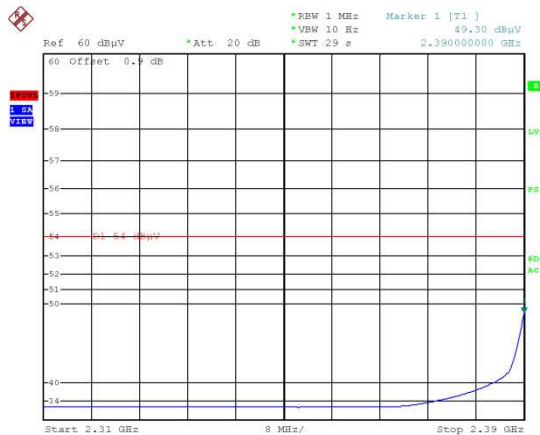
Date: 19.DEC.2013 13:02:15

### Vertical Peak



Date: 19.DEC.2013 13:06:02

### Average

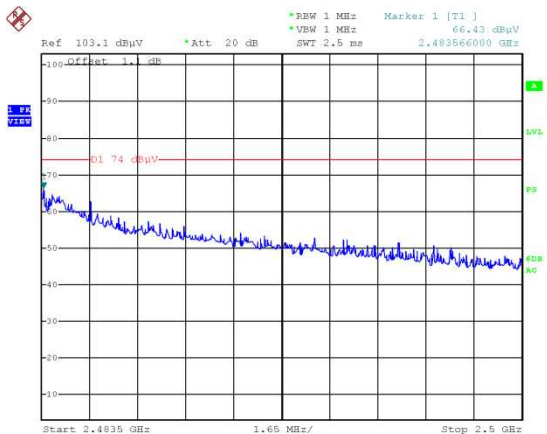


Date: 19.DEC.2013 13:07:03



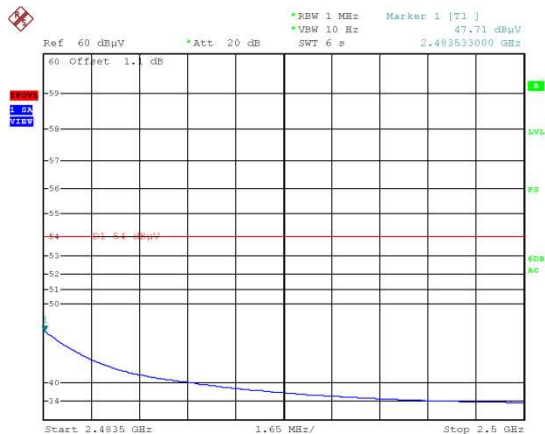
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### Channel High Horizontal Peak



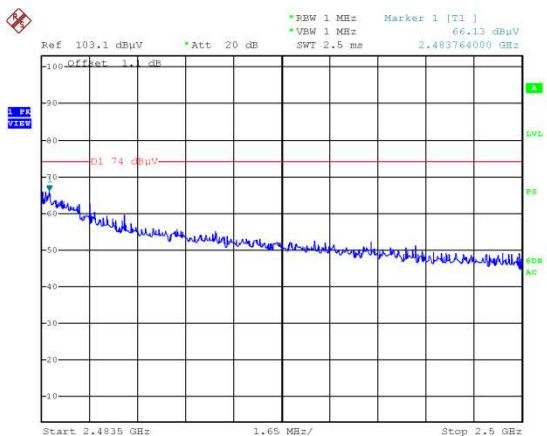
Date: 19.DEC.2013 13:20:28

### Average



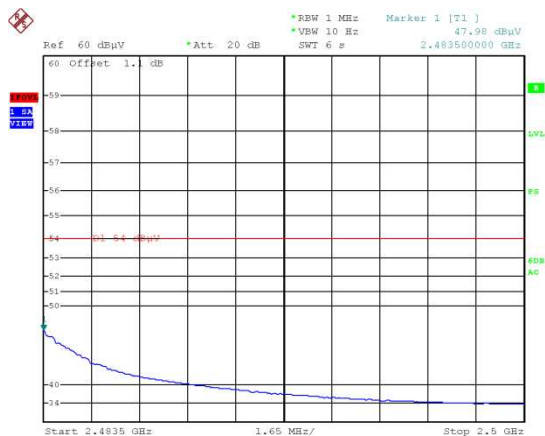
Date: 19.DEC.2013 13:21:35

### Vertical Peak



Date: 19.DEC.2013 13:25:32

### Average



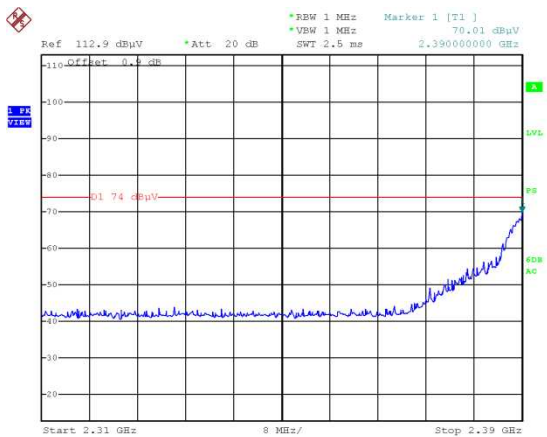
Date: 19.DEC.2013 13:27:56





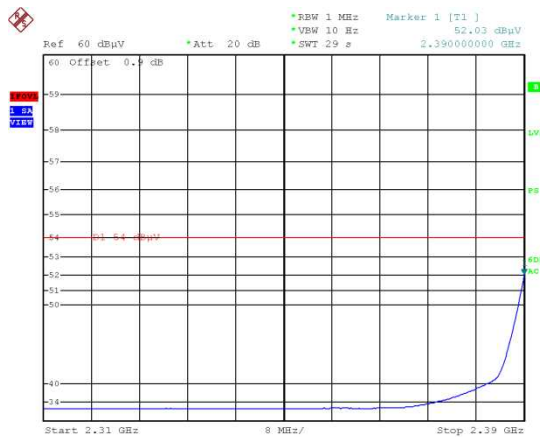
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### [IEEE802.11n (HT20)] Channel Low Horizontal Peak



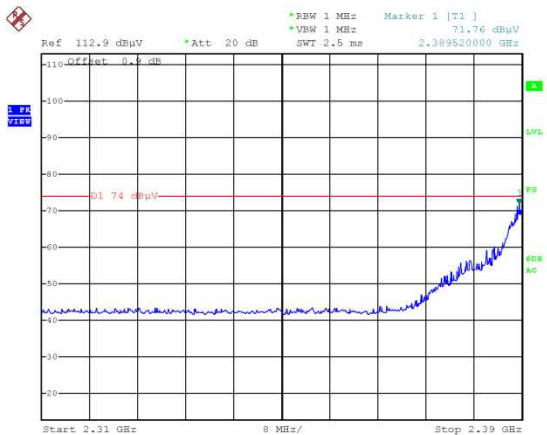
Date: 19.DEC.2013 13:40:37

### Average



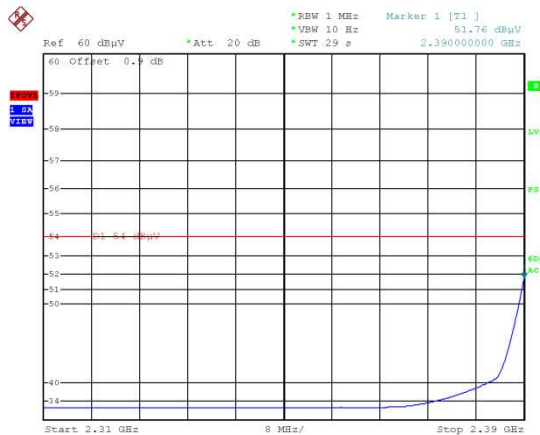
Date: 19.DEC.2013 13:41:54

### Vertical Peak



Date: 19.DEC.2013 13:46:44

### Average

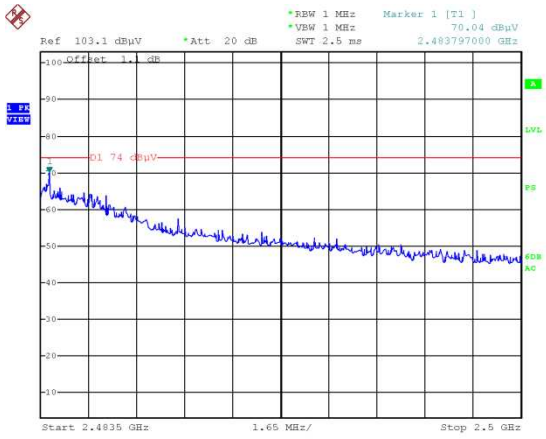


Date: 19.DEC.2013 13:48:19



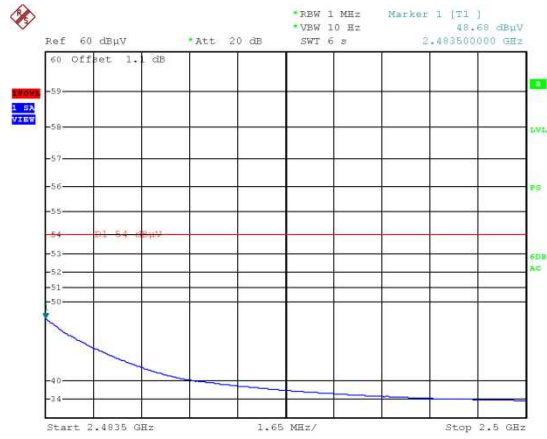
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### Channel High Horizontal Peak



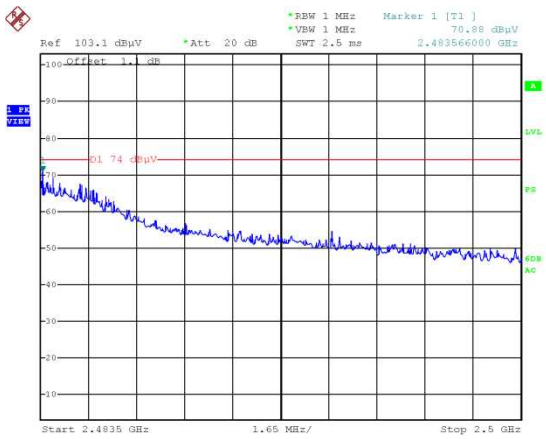
Date: 19.DEC.2013 13:56:07

### Average



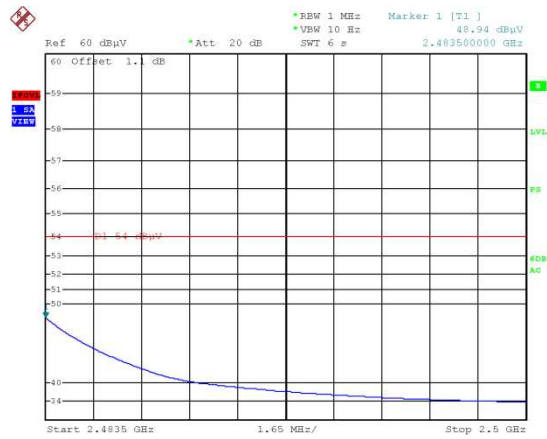
Date: 19.DEC.2013 13:58:06

### Vertical Peak



Date: 19.DEC.2013 14:02:42

### Average



Date: 19.DEC.2013 14:04:28



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## ***6. Antenna requirement***

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According to FCC section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

The antenna is a special antenna mounted inside of the EUT. Therefore, the EUT complies with the antenna requirement of FCC section 15.203.

## 7. Uncertainty of measurement

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Expanded uncertainties stated are calculated with a coverage Factor  $k=2$ .

Please note that these results are not taken into account when determining compliance or non-compliance with test result.

Test item	Measurement uncertainty
Conducted emission at mains port	$\pm 3.0\text{dB}$
Radiated emission (9kHz – 30MHz)	$\pm 4.4\text{dB}$
Radiated emission (30MHz – 1000MHz)	$\pm 4.5\text{dB}$
Radiated emission (1000MHz – 26GHz)	$\pm 3.9\text{dB}$



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## 8. Laboratory description

### 1. Location:

TÜV SÜD Zacta Ltd. Yonezawa Testing Center  
 4149-7 Hachimanpara 5-chome Yonezawa-shi Yamagata 992-1128 Japan  
 Phone: +81-238-28-2880 Fax: +81-238-28-2888

### 2. Facility filing information:

1) NVLAP accreditation: NVLAP Lab. code: 200306-0

2) VLAC accreditation: Lab. code: VLAC-013

Site name	Radiated emission	Conducted emission for mains port	Conducted emission for telecom port	Radiated emission (CMAD)	Expiry Date
3m Semi-anechoic chamber	VLAC-013	-	-	-	Jul. 3, 2015
10m Semi-anechoic chamber				VLAC-013	
Shielded room No.1	-	VLAC-013	-	-	

3) FCC filing:

Site name	Registration Number	Expiry Date
Site 2	91065	Oct.31, 2014
Site 3		
3m Semi-anechoic chamber	540072	Jan. 9, 2016
10m Semi-anechoic chamber		
Shielded room No.1		

4) Industry Canada Oats site filing:

Site name	Sites on file: Oats 3m/10m	Expiry Date
Site 2	4224A-2	Jan. 23, 2015
Site 3	4224A-3	
3m Semi-anechoic chamber	4224A-4	
10m Semi-anechoic chamber	4224A-5	

5) VCCI site filing:

Site name	Radiated emission	Conducted emission for mains port	Conducted emission for telecom port	Expiry Date
Site 2	R-137	C-133	T-1221	Nov. 16, 2014 Nov. 28, 2014* (*:Telecom port)
Site 3	R-138	C-134	T-1222	
3m Semi-anechoic chamber	-	A-0166	-	Jul. 3, 2015
10m Semi-anechoic chamber				
Shielded room No.1	-	A-0166	-	

6) TÜV SÜD PS authorization:

Authorized as an EMC test laboratory

7) TÜV Rheinland authorization:

Authorized as an EMC test laboratory



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## Appendix A. Test equipment

### Radiated emission

Equipment	Company	Model No.	Serial No.	Cal. Due	Cal. Date
EMI Receiver	ROHDE&SCHWARZ	ECSI	100451	Nov. 2014	Nov. 16, 2013
Preamplifier	ANRITSU	MH648A	M96057	Jun. 2014	Jun. 12, 2013
Loop antenna	ROHDE&SCHWARZ	HFH2-Z2	892246/010	Sep. 2014	Sep. 14, 2012
Biconical antenna	Schwarzbeck	VHA9103/BBA9106	2155	May 2014	May 1, 2013
Log periodic antenna	Schwarzbeck	UHALP9108A	0560	May 2014	May 1, 2013
Attenuator	TME	CFA-01NPJ-6	N/A (S275)	Jun. 2014	Jun. 6, 2013
Attenuator	TME	CFA-01NPJ-3	N/A (S272)	Jun. 2014	Jun. 6, 2013
Spectrum analyzer	Agilent Technologies	E4440A	US4432655	May 2014	May 14, 2013
Preamplifier	Agilent Technologies	8449B	3008A1008	Dec. 2014	Dec. 9, 2013
Double ridged guide antenna	EMCO	3115	4328	Jan. 2014	Jan. 21, 2013
Attenuator	AEROFLEX	40A-03	081217-20	Feb. 2014	Feb. 23, 2013
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	BBHA9170189	May 2015	May 2, 2013
Preamplifier	TSJ	MLA-1840-B03-35	1240332	May 2015	May 2, 2013
Notch filter	Micro-Tronics	BRM50702	045	Nov. 2014	Nov. 12, 2013
Microwave cable	SUHNER	SUCOFLEX104/9m	322083/4	May 2014	May 14, 2013
		SUCOFLEX104/9m	346316/4	Oct. 2014	Oct. 6, 2013
		SUCOFLEX104/1m	322084/4	Oct. 2014	Oct. 6, 2013
		SUCOFLEX104/1.5m	317226/4	Oct. 2014	Oct. 6, 2013
		SUCOFLEX104/7m	41625/6	Oct. 2014	Oct. 6, 2013
PC	DELL	DIMENSION E521	75465BX	N/A	N/A
Software	TOYO Corporation	EP5/RE-AJ	0611193/V5.3.61	N/A	N/A
3m Semi-anechoic chamber	TOKIN	N/A	N/A (9002-NSA)	May 2014	May 6, 2013
3m Semi-anechoic chamber	TOKIN	N/A	N/A (9002-SVSWR)	May 2014	May 6, 2013