



# RADIO TEST REPORT

**Test Report No. : 28CE0165-YK-01-A**

**Applicant** : Sony Corporation  
**Type of Equipment** : Wireless Speaker System  
**Model No.** : SRS-BT100  
**FCC ID** : AK8SRST100  
**Test Standard** : FCC Part15 Subpart C: 2007  
**Test Result** : Complied

1. This test report shall not be reproduced except in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.

**Date of test:** October 31, November 5 and 6, 2007

**Tested by:**

*M. Hosaka*

Makoto Hosaka

*T. Arai*

Tatsuya Arai

**Approved by:**

*O. Watatani*

Osamu Watatani  
Manager of Yamakita EMC Lab.

**UL Japan, Inc.**

**YAMAKITA EMC LAB.**

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

MF060b (18.06.07)

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## 1 Applicant Information

Company Name : Sony Corporation  
Address : Shinagawa INTERCITY C Tower  
2-15-3 Konan, Minato-ku, Tokyo, 108-6201 JAPAN  
Telephone Number : +81-3-5769-5640  
Facsimile Number : +81-3-5769-5085  
Contact Person : Kikuo Murata

## 2 Equipment under test (E.U.T.)

### 2.1 Identification of E.U.T.

Type of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001 (Radiated emission test), K002 (other test)  
Rating : DC12V (AC Adaptor: 100-240V/50,60Hz)  
Country of Manufacture : Malaysia  
Receipt Date of Sample : October 31, 2007  
Condition of EUT : Engineering prototype  
(Not for Sale: This sample is equivalent to mass-produced items.)  
Modification of EUT : No modification by the test lab.

### 2.2 Product Description

Model: SRS-BT100 (referred to as the EUT in this report) is a Wireless Speaker System.

Equipment type : Transceiver  
Frequency of operation : 2402-2480MHz  
Clock frequency : Micom clock: 24MHz, AC adaptor: 0.09MHz  
Bandwidth & channel spacing : 79MHz & 1MHz  
Type of modulation : FHSS  
Antenna type : Pattern antenna  
Antenna connector type : Integral  
Antenna gain : 2.845dBi  
ITU code : F1D  
Operation temperature range : 0 to +40 deg.C.

#### FCC Part15.31 (e)

The Bluetooth module is provided with stable power supply (DC 1.8 V), therefore, the equipment complies power supply regulation.

#### FCC Part15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the module. Therefore, the equipment complies with the antenna requirement of Section 15.203.

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### 3 Test Specification, Procedures and Results

#### 3.1 Test specification

Test specification : FCC Part15 Subpart C: 2007  
 Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators  
 Section 15.207 Conducted limits  
 Section 15.209 Radiated emission limits, general requirements  
 Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz,  
 and 5725-5850MHz

#### 3.2 Procedures & Results

Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin	Results
Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Section 15.207	-	N/A	31.8dB (0.1500MHz, N, QP, Tx 2402MHz 3DH5)	Complied
Carrier Frequency Separation	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)	Conducted	N/A	*See data.	Complied
20dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)	Conducted	N/A		Complied
Number of Hopping Frequency	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)(iii)	Conducted	N/A		Complied
Dwell time	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (a)(1)(iii)	Conducted	N/A		Complied
Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247 (b)(1)	Conducted	N/A		Complied
Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.209 Section15.247 (d)	Conducted / Radiated	N/A	8.9dB (1602.10MHz, AV, Vertical, Tx 2402MHz 3DH5)	Complied

Note: UL Japan's EMI Work Procedures No.QPM05.

The measurements also referred to FCC Public Notice DA 00-705 "Guidance on Measurement for Frequency Hopping Spread Spectrum Systems".

#### 3.3 Addition to standard

Item	Test Procedure	Specification	Remarks	Worst Margin	Results
Occupied Bandwidth (99%)	ANSI C63.4:2003 13. Measurement of intentional radiators RSS-Gen 4.4.1	RSS-Gen 4.4.1	Conducted -		Complied

\* Other than above, no addition, exclusion nor deviation has been made from the standard.

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### 3.4 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

	No.1 open site	No.2 open site	No.1 anechoic chamber
<b>Conducted emission</b>			
150kHz-30MHz	2.8 dB	2.8 dB	2.8 dB
<b>Radiated emission (3m)</b>			
30-300MHz	4.5 dB	4.4 dB	4.5 dB
300-1000MHz	4.3 dB	4.3 dB	4.3 dB
1GHz<	5.7 dB	5.7 dB	5.7 dB

<b>Antenna port conducted test</b>	
Below 1GHz	±0.4dB
1GHz and above	±0.7dB

#### **Conducted Emission Test**

The data listed in this test report has enough margin, more than site margin.

#### Spurious emission test (Radiated)

The data listed in this test report has enough margin, more than site margin.

### 3.5 Test Location

UL Japan, Inc. Yamakita EMC Lab.

907, Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken 258-0124 JAPAN

Telephone number : +81 465 77 1011

Facsimile number : +81 465 77 2112

NVLAP Lab. code : 200441-0

No. 1 test site has been fully described in a report submitted to FCC office, and accepted on August 26, 2005 (Registration No.: 95486).

IC Registration No. : 2973B-1

No. 2 test site has been fully described in a report submitted to FCC office, and accepted on April 4, 2005 (Registration No.: 466226).

IC Registration No. : 2973B-3

No. 1 anechoic chamber has been fully described in a report submitted to FCC office, and accepted on November 2, 2005 (Registration No.: 95967).

IC Registration No. : 2973B-2

Test room	Width x Depth x Height (m)	Test room	Width x Depth x Height (m)
No.1 shielded room	8.0 x 5.0 x 2.5	No.1 Semi-anechoic chamber	10.0 x 7.5 x 5.7
No.2 shielded room	5.0 x 4.0 x 2.5		
No.3 shielded room	4.0 x 5.0 x 2.7		

Open test site	Maximum measurement distance
No.1 open test site	30m
No.2 open test site	10m

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## 4 System Test Configuration

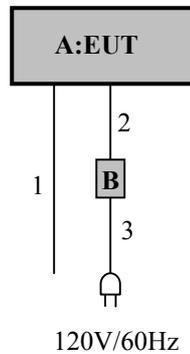
### 4.1 Justification

The system was configured in typical fashion (as a customer would normally use it) for testing.

Test mode: Transmitting (Packet size: DH5 and 3DH5)  
 - Low channel : 2402MHz  
 - Middle channel : 2441MHz  
 - High channel : 2480MHz  
 - Hopping  
 - Inquiry

\*Remarks: Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT. However, the limit level 125mW of AFH mode was used for the test.

### 4.2 Configuration of Tested System



\* Test data was taken under worse case conditions.

#### Description of EUT and support equipment

No.	Item	Model number	Serial number *1)	Manufacturer	FCC ID (Remarks)
A	SRS-BT100	SRS-BT100	K001	SONY	AK8SRST100 (EUT)
			K002		
B	AC Adaptor	AC-ES1230K	0605-A-0069950G	SONY	EUT

\*1) K001 (Radiated emission test), K002 (other test)

#### List of cables used

No.	Name	Length (m)	Shield		Remark
			Connector	Cable	
1	Audio cable	2.0	Shielded	Shielded	-
2	DC Cable	1.0	Unshielded	Unshielded	-
3	AC Cable	2.0	Unshielded	Unshielded	-

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## **SECTION 5: Conducted emission**

### **5.1 Operating environment**

The test was carried out in No.1 shielded room.

Temperature : See test data  
Humidity : See test data

### **5.2 Test configuration**

EUT was placed on a wooden platform of nominal size, 1m by 1.8m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT was aligned and was flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from LISN and excess AC cable was bundled in center. I/O cable was bundled in center. It was folded back and for the forming a bundle 30cm to 40cm long and was hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source.

A drawing of the set up is shown in the photos of Appendix 1.

### **5.3 Test conditions**

Frequency range : 0.15 - 30MHz  
EUT position : Table top  
EUT operation mode : Transmitting

### **5.4 Test procedure**

The AC Mains Terminal Continuous disturbance Voltage had been measured with the EUT within a screened room. The EUT was connected to a Line Impedance Stabilization Network (LISN).

An overview sweep with peak detection has been performed.

The measurements had been performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver.

Detector Type : Quasi-Peak/ Average  
IF Bandwidth : 9kHz

### **5.5 Results**

Summary of the test results : Pass

Date : October 31, 2007 Test engineer : Tatsuya Arai

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## 6 Carrier Frequency Separation

### Test Procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Date: November 6, 2007

Test engineer : Tatsuya Arai

## 7 20dB Bandwidth & Occupied Bandwidth (99%)

### Test Procedure

The bandwidth was measured with a spectrum analyzer connected to the antenna port.

The channel separation in Hopping mode and Inquiry mode was separated by 25kHz and 2/3 of the 20dB bandwidth.

Summary of the test results: Pass

Date: November 6, 2007

Test engineer : Tatsuya Arai

## 8 Number of Hopping Frequency

### Test Procedure

The Number of Hopping Frequency was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Date: November 5, 2007

Test engineer : Tatsuya Arai

## 9 Dwell time

### Test Procedure

The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Measurement was performed with the packet type of DH1, DH3, DH5, 3DH1, 3DH3 and 3DH5.

Summary of the test results: Pass

Date: November 5, 2007

Test engineer : Tatsuya Arai

## 10 Maximum Peak Output Power

### Test Procedure

The Maximum Peak Output Power was measured with a power meter connected to the antenna port.

Summary of the test results: Pass

Date: November 5, 2007

Test engineer : Tatsuya Arai

## 11 Out of Band Emissions (Antenna Port Conducted)

### Test Procedure

The Out of Band Emissions was measured with a spectrum analyzer connected to the antenna port.

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a conducted measurement.

Summary of the test results: Pass

Date: November 6, 2007

Test engineer : Tatsuya Arai

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## 12 Out of Band Emissions (Radiated)

### 12.1 Operating environment

The test was carried out in No.1 anechoic chamber.

### 12.2 Test configuration

EUT was placed on a urethane platform of nominal size, 0.5m by 0.5m, raised 80cm above the conducting ground plane. A drawing of the set up is shown in the photos of Appendix 1.

### 12.3 Test conditions

Frequency range : 30MHz - 26GHz  
Test distance : 3m  
EUT operation mode : Transmitting

### 12.4 Test procedure

The Radiated Electric Field Strength intensity has been measured with a ground plane and at a distance of 3m. The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization.

Measurements were performed with QP, PK, and AV detector.

The radiated emission measurements were made with the following detector function of the test receiver.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver	Spectrum Analyzer
Detector IF Bandwidth	QP: BW 120kHz	PK: RBW: 1MHz/VBW: 1MHz, AV (Except pulse emission): RBW: 1MHz/VBW: 10Hz
Measuring antenna	Biconical (30-300MHz) Logperiodic (300MHz-1GHz)	Horn

\* The test above 1GHz was performed with PK DETECT. Average emission values were calculated with PK DETECT and Duty cycle factor.

\* Duty cycle was within 100msec.

### 12.5 Band edge

Band edge level at 2400MHz is less than 20dB of peak point of the carrier. Refer to the data of Out of Band Emissions (Antenna Port Conducted).

Band edge level at 2390MHz and 2483.5MHz is below the limits of FCC 15.209. Refer to the data of Radiated emission.

### 12.6 Results

Summary of the test results : Pass  
No noise was detected above the 5<sup>th</sup> order harmonics.

Date : October 31, 2007 Test engineer : Makoto Hosaka and Tatsuya Arai

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### **APPENDIX 1: Photographs of test setup**

Page 11 : Conducted emission  
Page 12 : Radiated emission

### **APPENDIX 2: Test Data**

Page 13 - 22 : Conducted emission  
Page 23 : Carrier Frequency Separation  
Page 24 - 26 : 20dB Bandwidth  
Page 27 - 31 : Number of Hopping Frequency  
Page 32 - 45 : Dwell time  
Page 46 : Maximum Peak Output Power  
Page 47 - 64 : Out of Band Emissions (Antenna Port Conducted)  
Page 65 - 82 : Out of Band Emissions (Radiated)  
Page 83 - 85 : Occupied Bandwidth

### **APPENDIX 3: Test instruments**

Page 86 : Test instruments

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# DATA OF CONDUCTION TEST

UL Japan, Inc.  
YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
 Kind of Equipment : Wireless Speaker System  
 Model No. : SRS-BT100  
 Serial No. : K001  
 Power : AC120V/60Hz  
 Mode : Transmitting 2402MHz (DH5)  
 Remarks : -  
 Date : 10/31/2007  
 Phase : Single Phase  
 Temperature : 22 °C  
 Humidity : 57 %  
 Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22 )

Engineer : Tatsuya Arai

No.	FREQ. [MHz]	READING (N)		READING (L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV	QP [dB μ V]	AV				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]
1.	0.1500	33.7	-	33.7	-	0.1	0.1	0.0	33.9	-	66.0	56.0	32.1	-
2.	0.1769	31.8	-	31.9	-	0.1	0.1	0.0	32.1	-	64.6	54.6	32.5	-
3.	0.1988	29.8	-	29.7	-	0.1	0.1	0.0	30.0	-	63.7	53.7	33.7	-
4.	0.2599	24.0	-	23.8	-	0.1	0.1	0.0	24.2	-	61.4	51.4	37.2	-
5.	0.2916	21.2	-	21.1	-	0.1	0.1	0.0	21.4	-	60.5	50.5	39.1	-
6.	0.3331	17.5	-	17.3	-	0.1	0.1	0.0	17.7	-	59.4	49.4	41.7	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

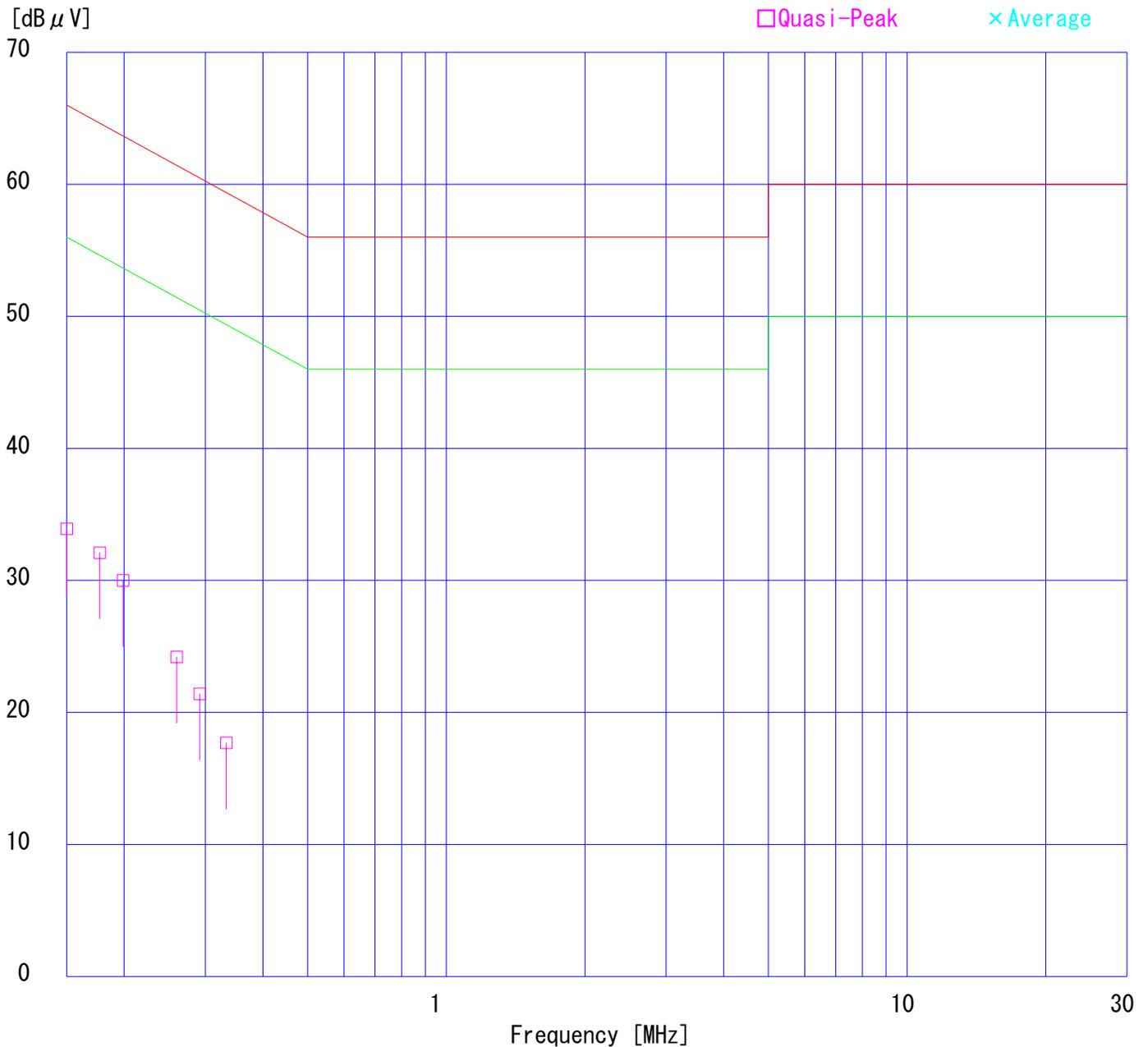
■KLS-01 (NSLK8126) ■COAXIAL CABLE:KCC-14/15/16/18  
 ■PULSE LIMITTER:KPL-01 (PL01) ■EMI RECEIVER:KTR-02 (ESCS30)

# DATA OF CONDUCTION TEST

UL Japan, Inc.  
YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2402MHz (DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22 )

Engineer : Tatsuya Arai

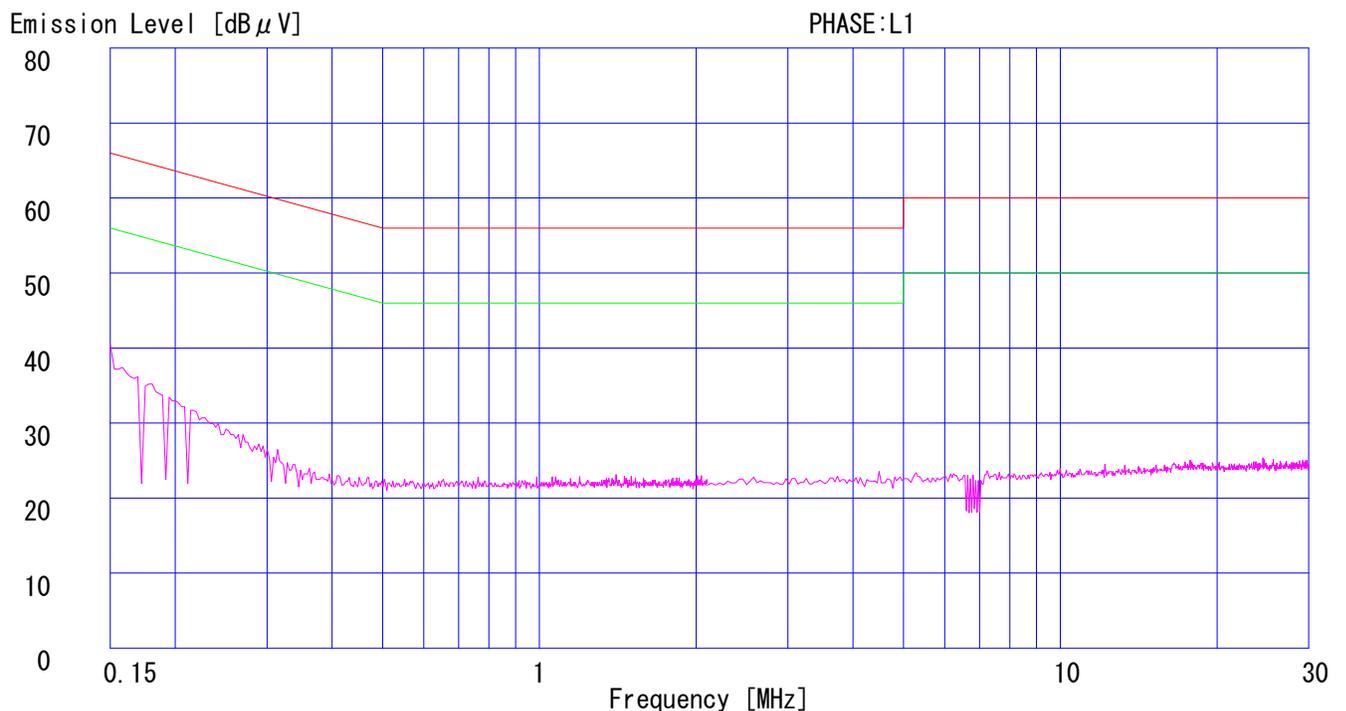
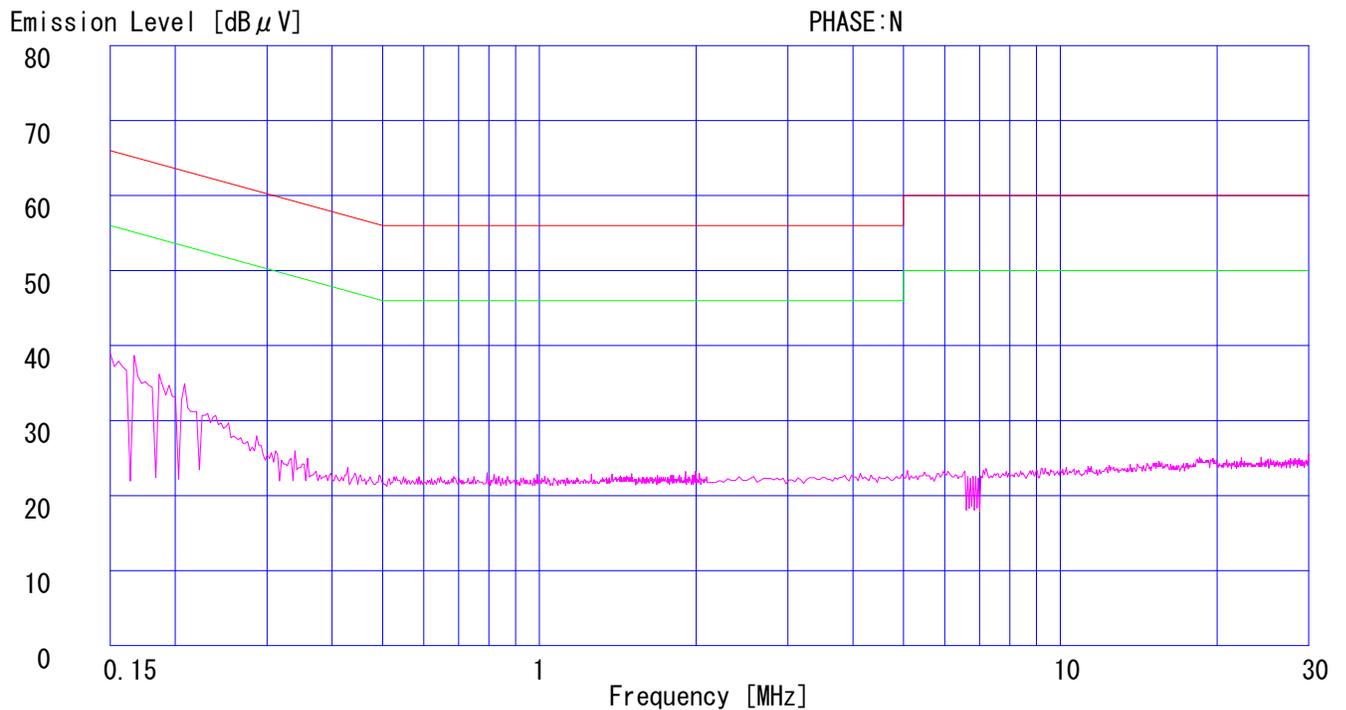


# DATA OF CONDUCTION TEST CHART

UL Japan, Inc.  
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Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2402MHz (DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub.22 )  
Regulation 2 : None

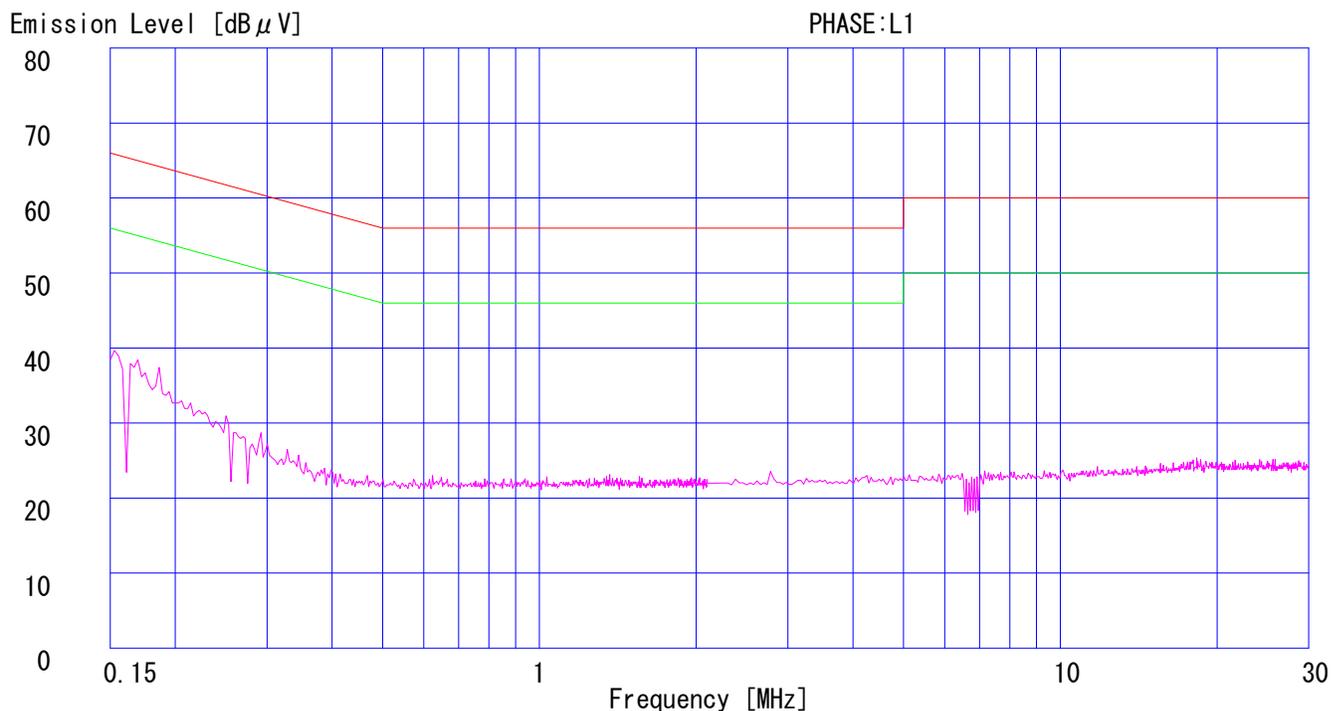
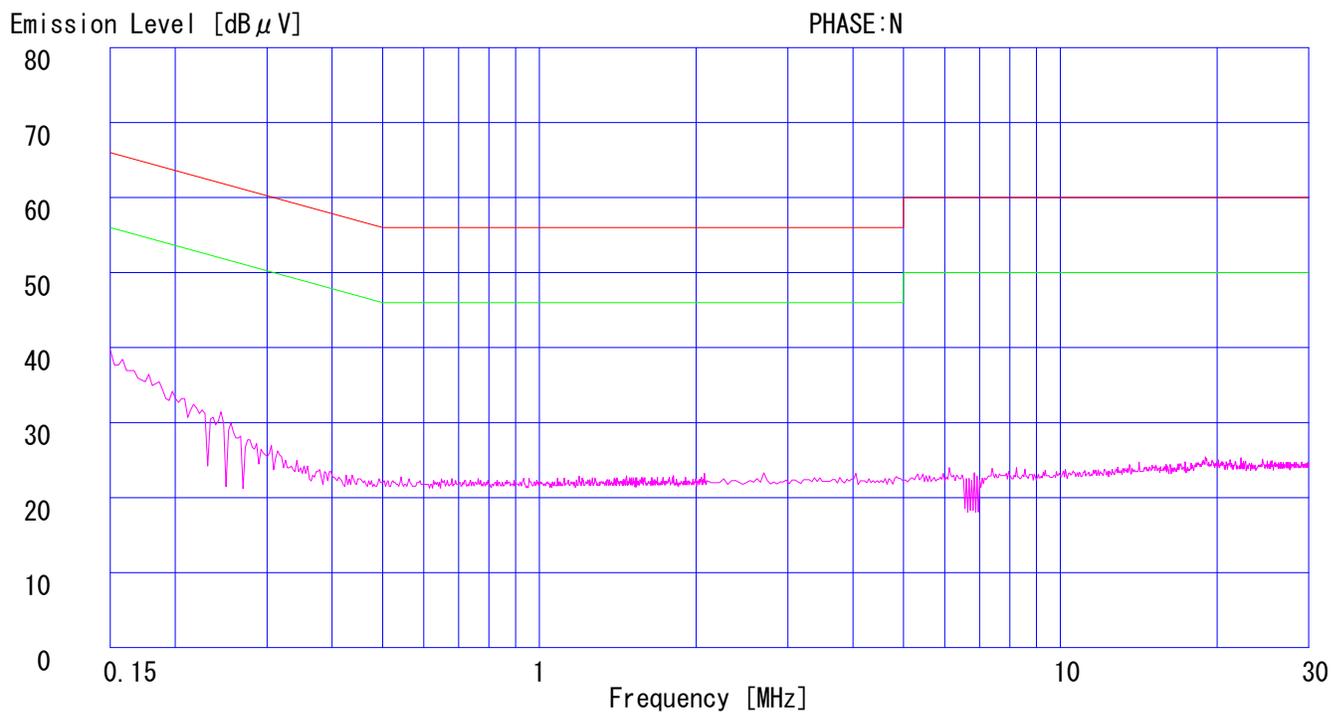
Engineer : Tatsuya Arai



# DATA OF CONDUCTION TEST CHART

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Report No. : 28CE0165-YK-01

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2441MHz (DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub.22 )  
Regulation 2 : None  
Engineer : Tatsuya Arai

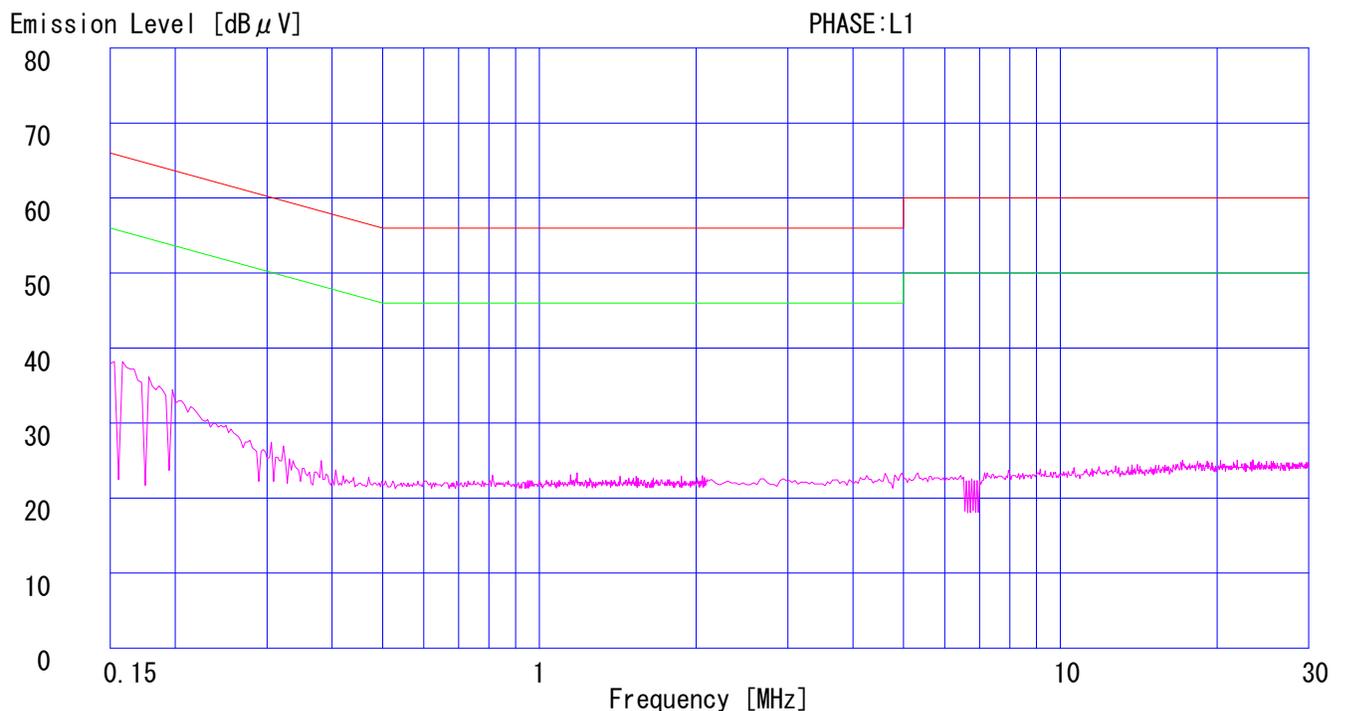
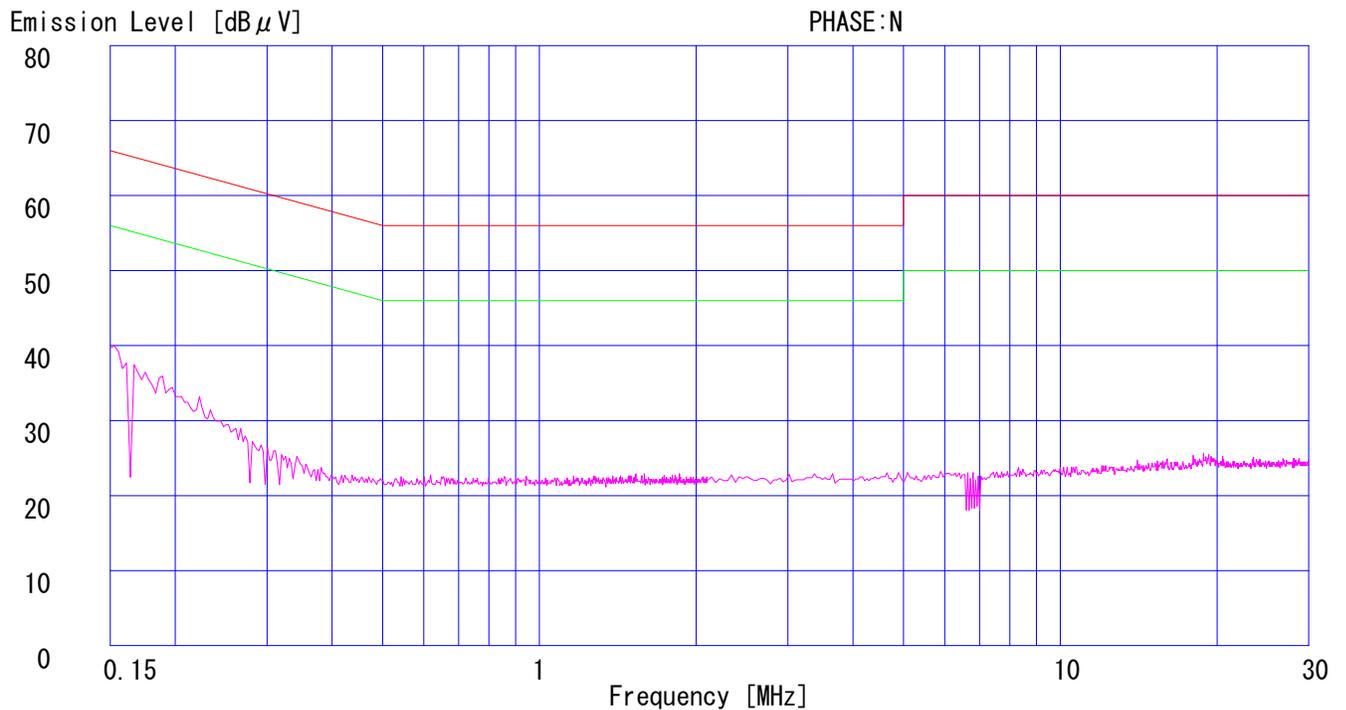


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YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2480MHz (DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub.22 )  
Regulation 2 : None

Engineer : Tatsuya Arai



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Kind of Equipment : Wireless Speaker System  
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Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2402MHz (3DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C Engineer : Tatsuya Arai  
Humidity : 57 %  
Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22 )

No.	FREQ. [MHz]	READING (N)		READING (L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV	QP [dB μ V]	AV				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]
1.	0.1500	34.0	-	33.9	-	0.1	0.1	0.0	34.2	-	66.0	56.0	31.8	-
2.	0.1765	32.2	-	32.2	-	0.1	0.1	0.0	32.4	-	64.6	54.6	32.2	-
3.	0.1998	29.9	-	29.8	-	0.1	0.1	0.0	30.1	-	63.6	53.6	33.5	-
4.	0.2487	24.6	-	24.6	-	0.1	0.1	0.0	24.8	-	61.8	51.8	37.0	-
5.	0.2929	21.6	-	21.5	-	0.1	0.1	0.0	21.8	-	60.4	50.4	38.6	-
6.	0.3406	17.3	-	17.2	-	0.1	0.1	0.0	17.5	-	59.2	49.2	41.7	-

CALCULATION: READING + LISN FACTOR + CABLE LOSS + ATTEN.

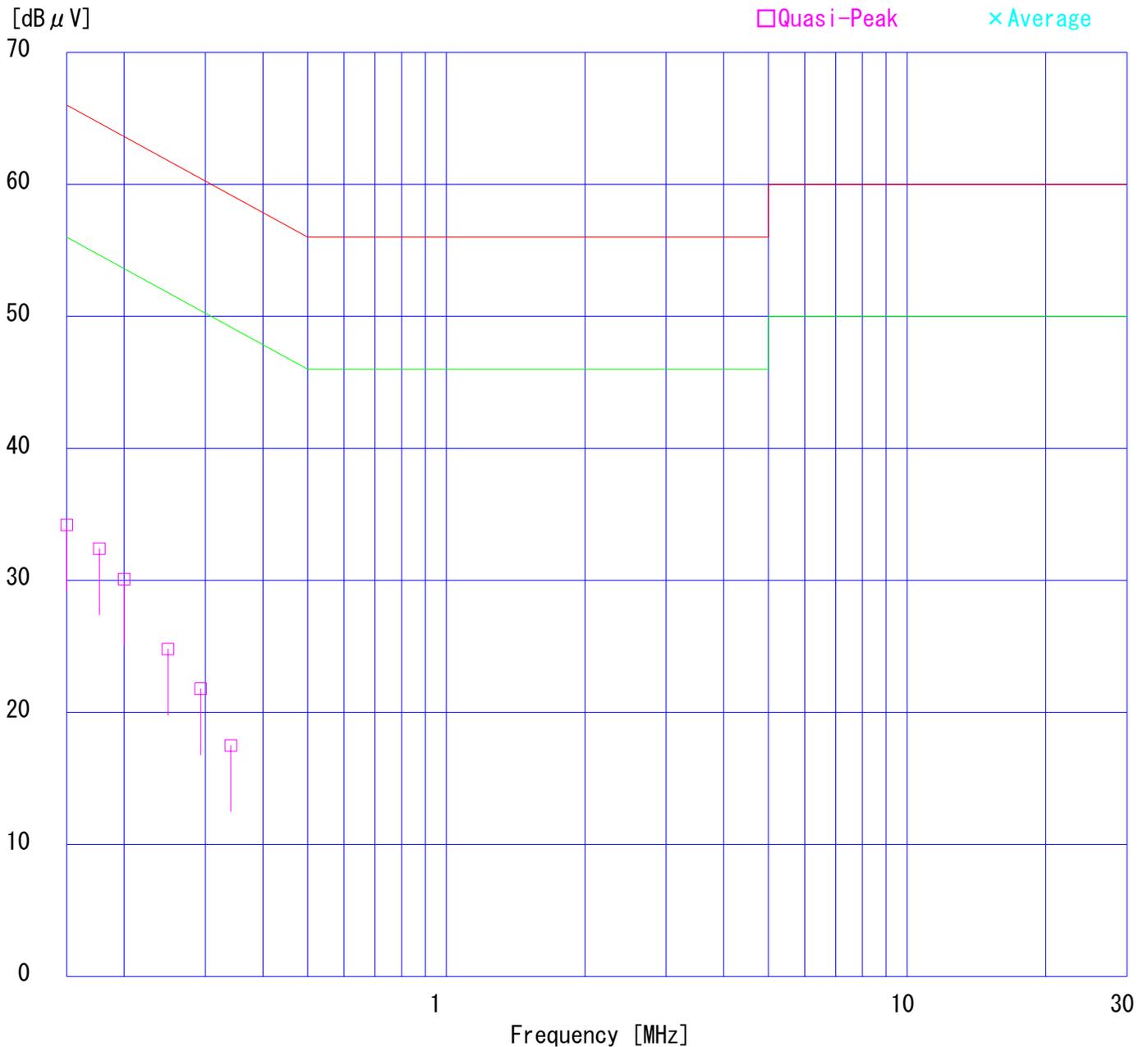
■KLS-01 (NSLK8126) ■COAXIAL CABLE:KCC-14/15/16/18  
■PULSE LIMITTER:KPL-01 (PL01) ■EMI RECEIVER:KTR-02 (ESCS30)

# DATA OF CONDUCTION TEST

UL Japan, Inc.  
YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2402MHz (3DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22 )

Engineer : Tatsuya Arai

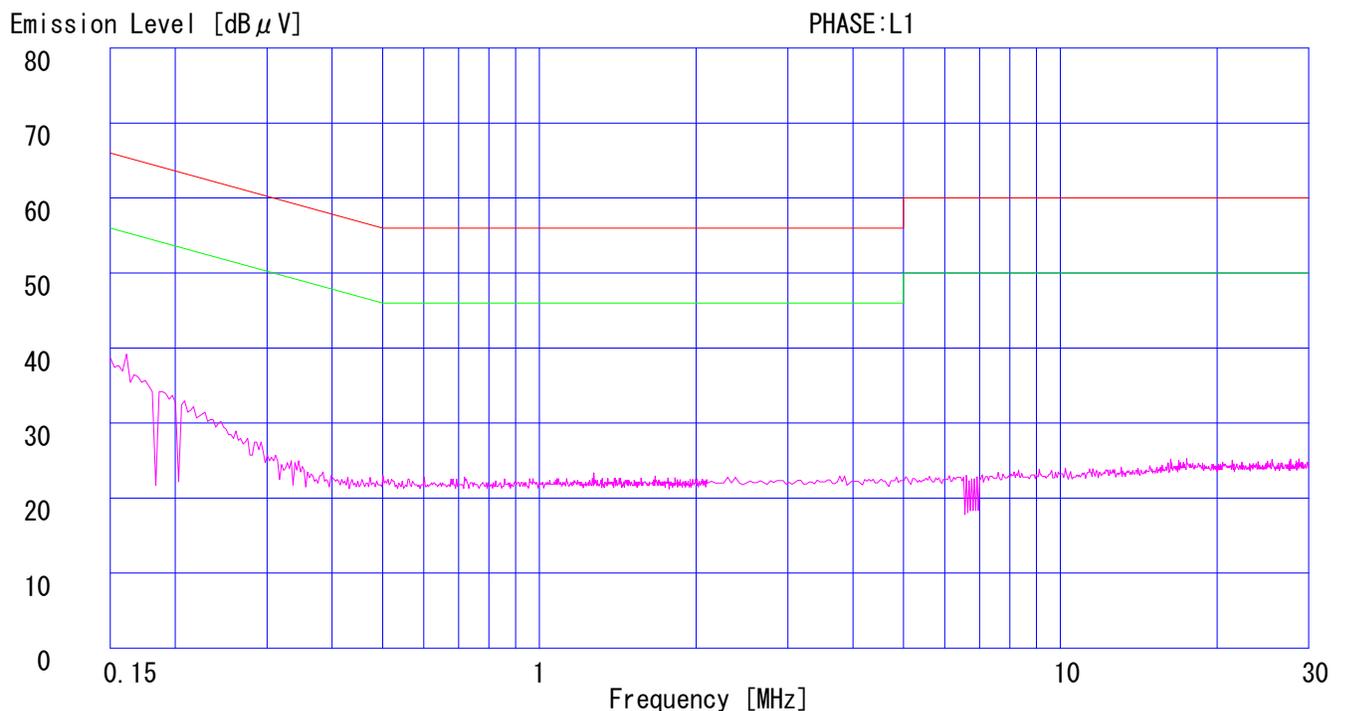
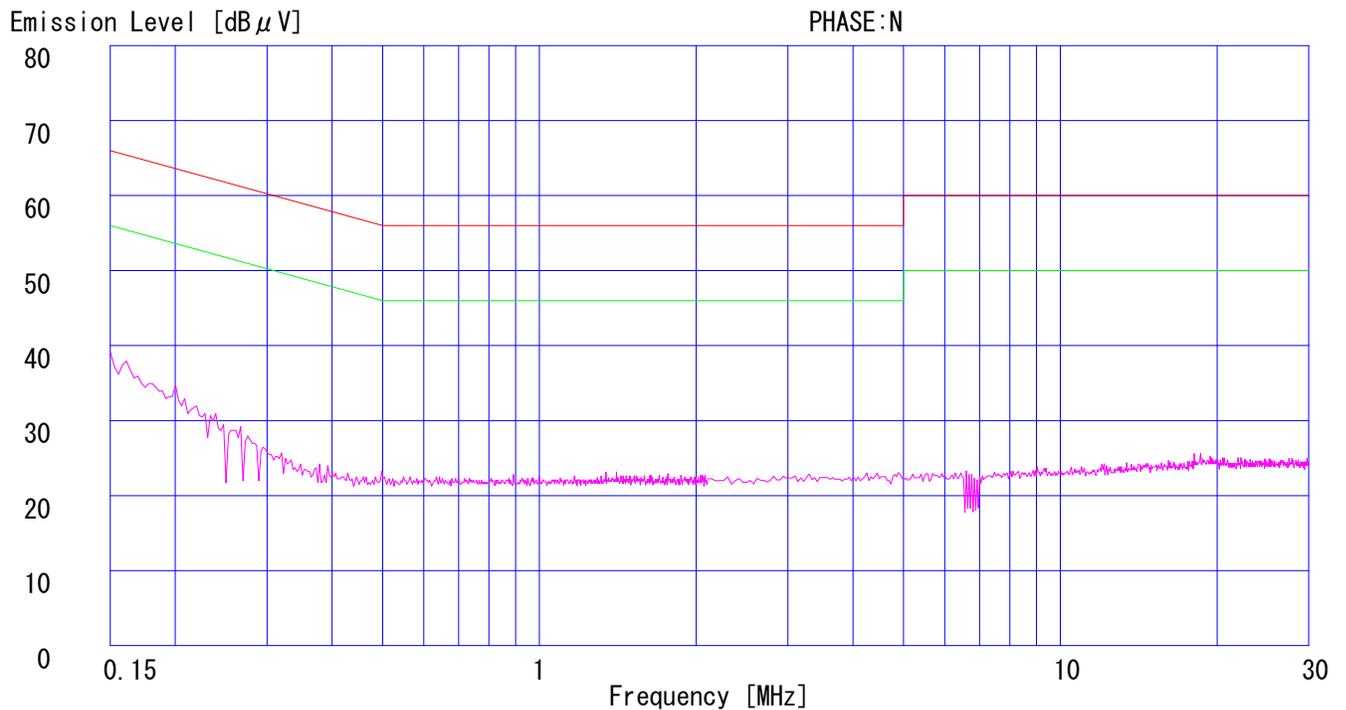


# DATA OF CONDUCTION TEST CHART

UL Japan, Inc.  
YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2402MHz (3DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub.22 )  
Regulation 2 : None

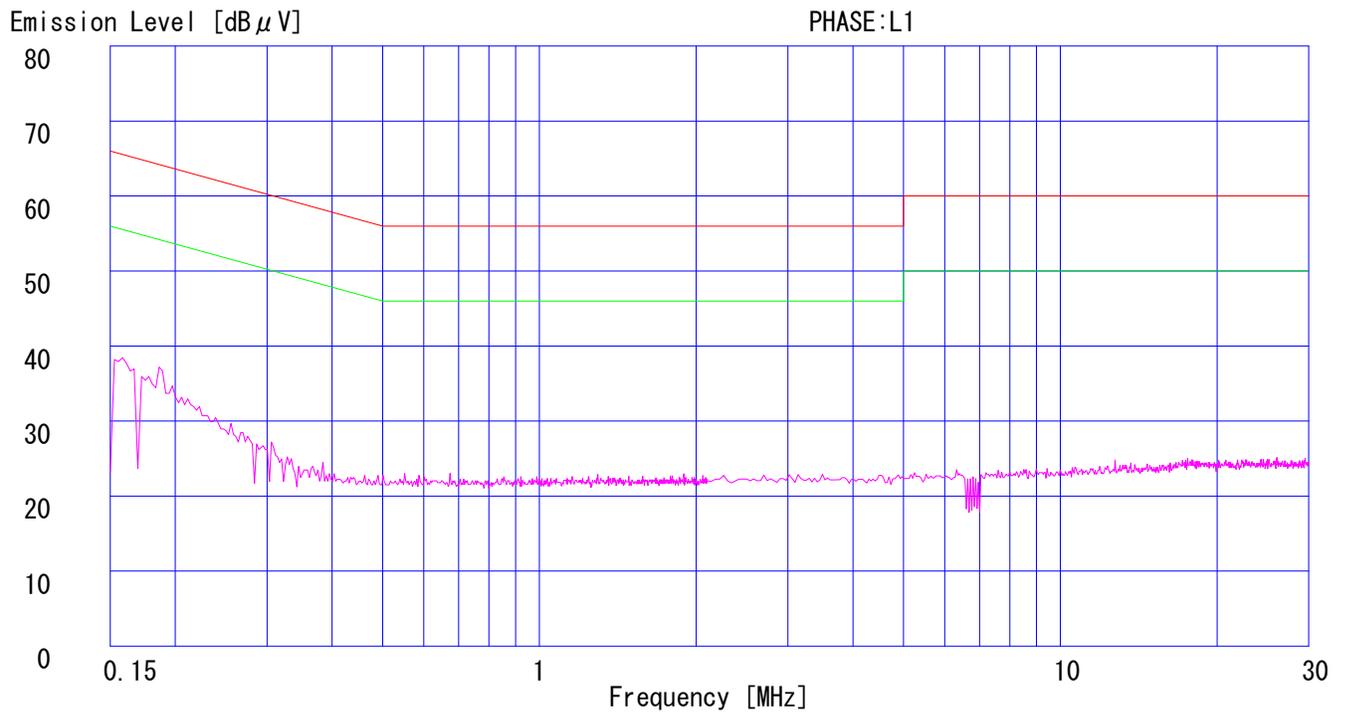
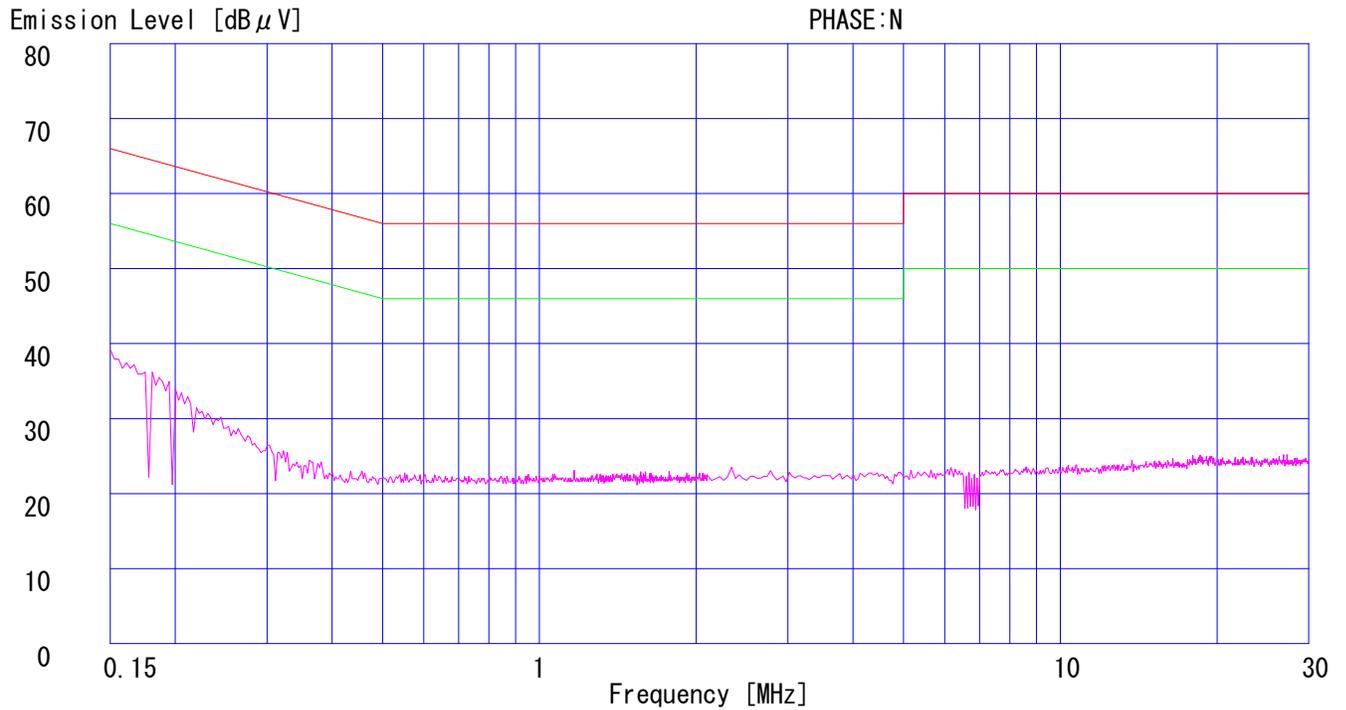
Engineer : Tatsuya Arai



# DATA OF CONDUCTION TEST CHART

UL Japan, Inc.  
YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

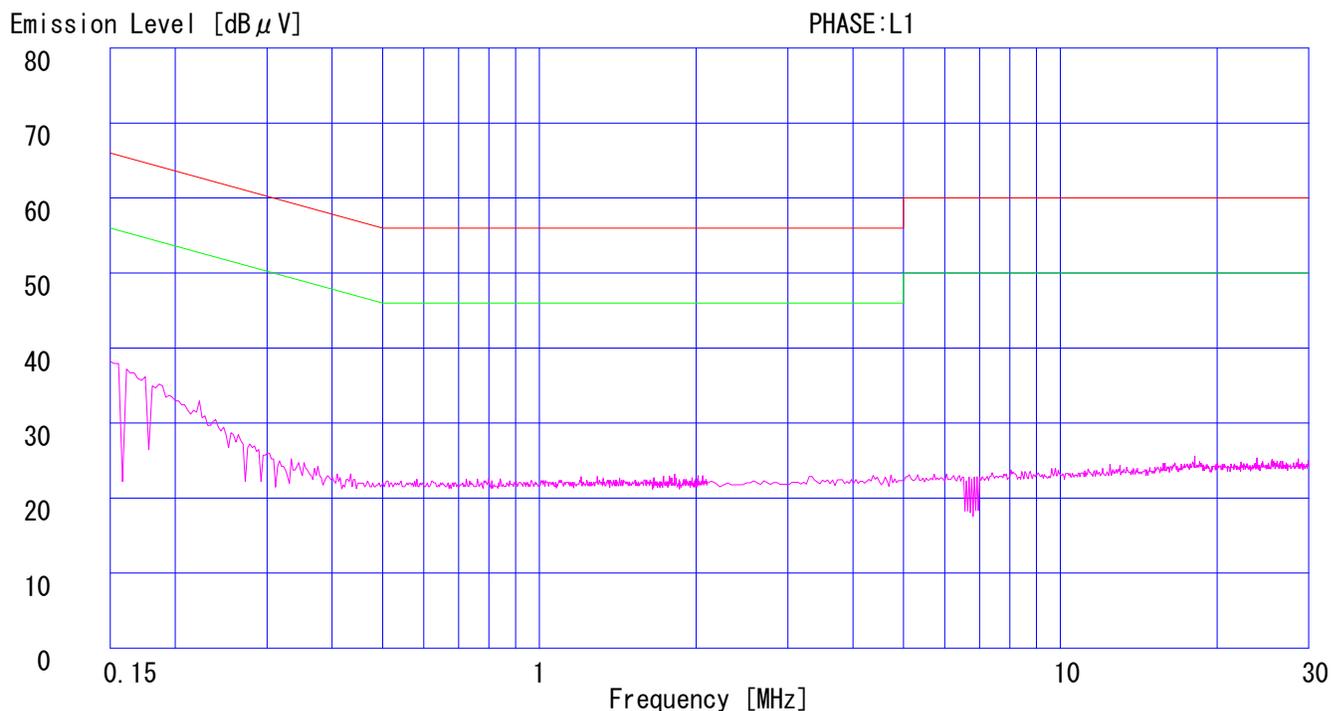
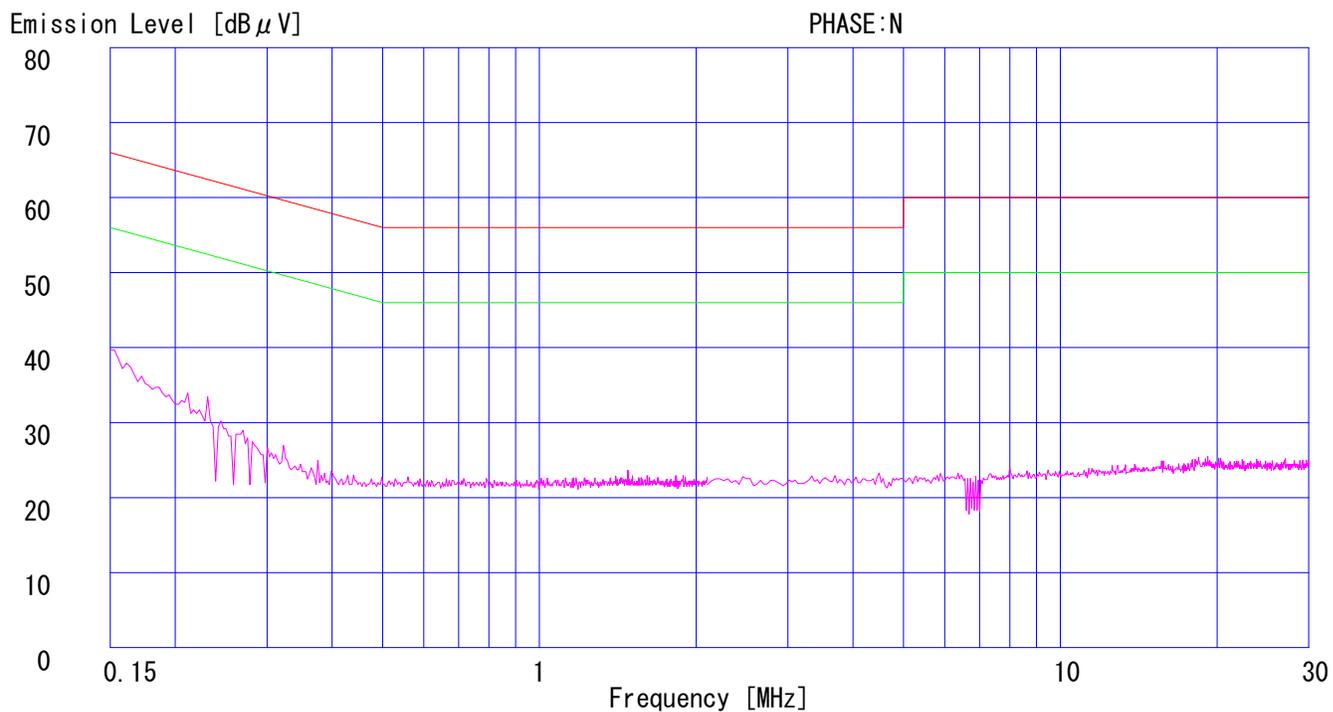
Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2441MHz (3DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub.22 )  
Regulation 2 : None  
Engineer : Tatsuya Arai



# DATA OF CONDUCTION TEST CHART

UL Japan, Inc.  
YAMAKITA No.1 SHIELD ROOM  
Report No. : 28CE0165-YK-01-A

Applicant : Sony Corporation  
Kind of Equipment : Wireless Speaker System  
Model No. : SRS-BT100  
Serial No. : K001  
Power : AC120V/60Hz  
Mode : Transmitting 2480MHz (3DH5)  
Remarks : -  
Date : 10/31/2007  
Phase : Single Phase  
Temperature : 22 °C  
Humidity : 57 %  
Regulation 1 : FCC Part15C § 15. 207. (CISPR Pub.22 )  
Regulation 2 : None  
Engineer : Tatsuya Arai



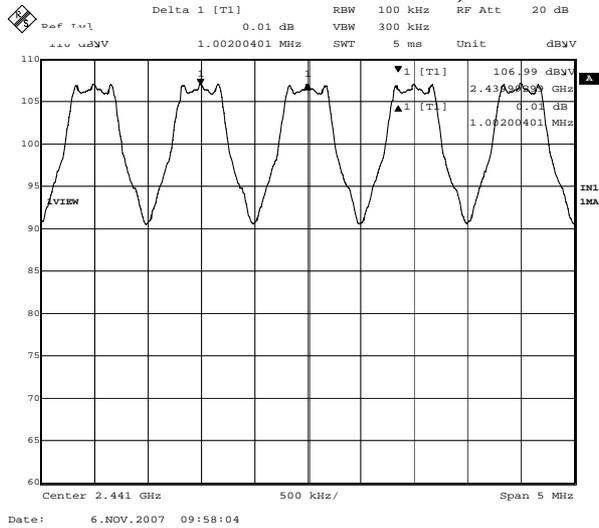
## Channel Separation: FCC 15.247(a)(1)

**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRSBT100  
**POWER** : AC120V/60Hz

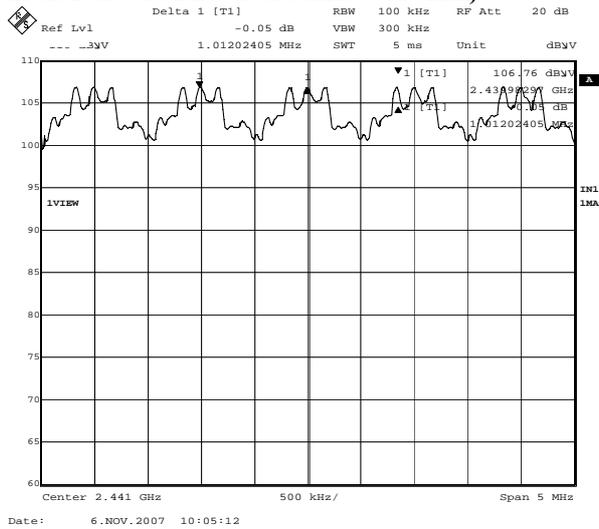
**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)  
**DATE** : 2007.11.6  
**TEMP./HUMI** : 24deg.C./55%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

Limit:  $\geq 25\text{kHz}$  or  $2/3 * 20\text{dB Bandwidth}$  (Power : No greater than 125mW)

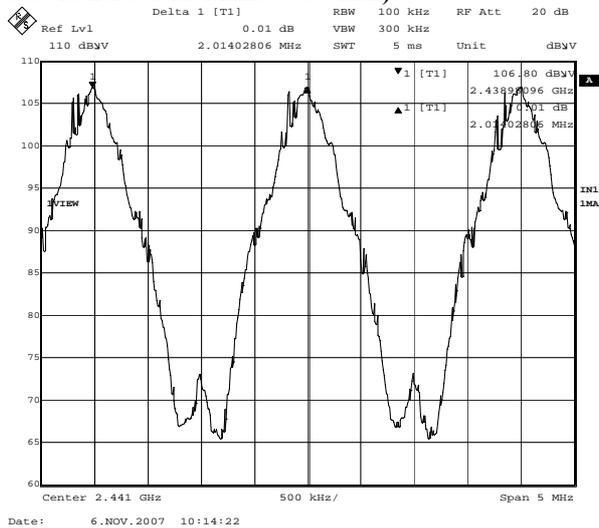
**1. Hopping, DH5: 1.002MHz ( $2/3 * 20\text{dB Bandwidth}$ :  $2/3 * 1.130\text{MHz} = 753.3\text{kHz}$ )**



**2. Hopping, 3DH5: 1.012MHz ( $2/3 * 20\text{dB Bandwidth}$ :  $2/3 * 1.413\text{MHz} = 942.0\text{kHz}$ )**



**3. Inquiry: 2.014MHz ( $2/3 * 20\text{dB Bandwidth}$ :  $2/3 * 1.118\text{MHz} = 745.3\text{kHz}$ )**



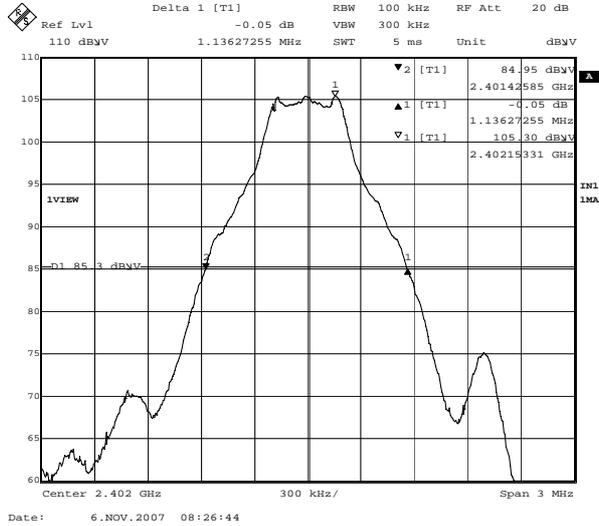
## 20dB Bandwidth: FCC 15.247(a)(1)

**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRSBT100  
**POWER** : AC120V/60Hz

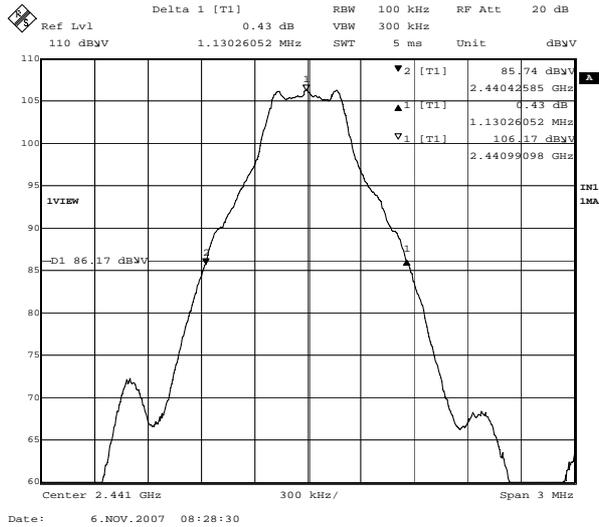
**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)  
**DATE** : 2007.11.6  
**TEMP./HUMI** : 24deg.C./55%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

[Hopping off, DH5]

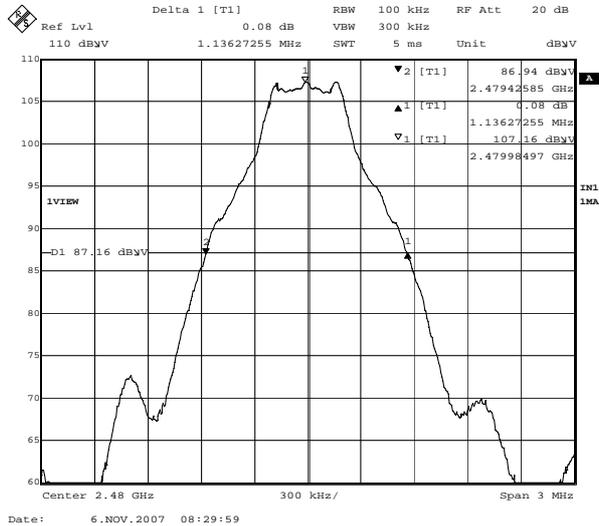
### 1. ch : 2402MHz/20dB Bandwidth:1.136MHz



### 2. ch : 2441MHz/20dB Bandwidth:1.130MHz



### 3. ch : 2480MHz/20dB Bandwidth:1.136MHz



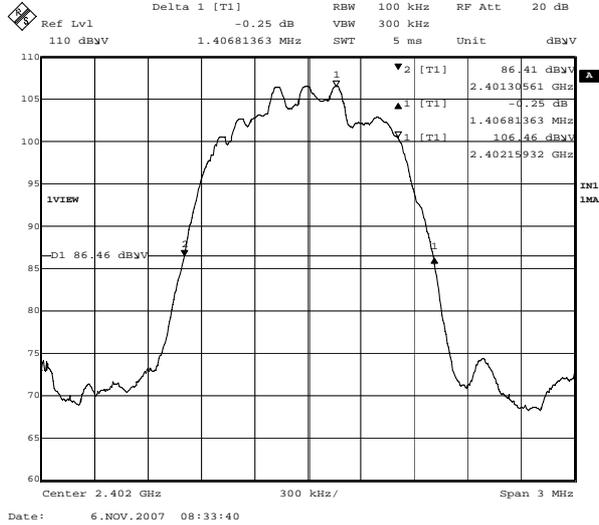
## 20dB Bandwidth: FCC 15.247(a)(1)

**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8RSRBT100  
**POWER** : AC120V/60Hz

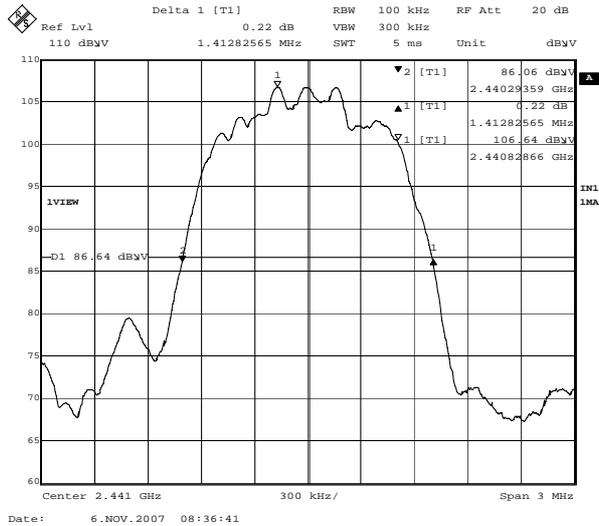
**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)  
**DATE** : 2007.11.6  
**TEMP./HUMI** : 24deg.C./55%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

[Hopping off, 3DH5]

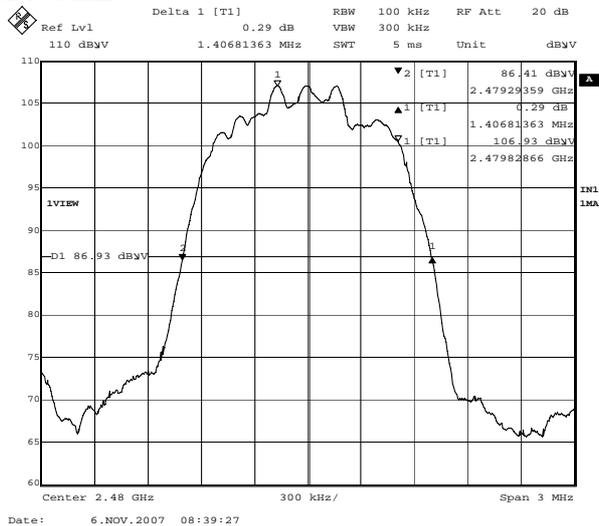
### 4. ch : 2402MHz/20dB Bandwidth:1.407MHz



### 5. ch : 2441MHz/20dB Bandwidth:1.413MHz



### 6. ch : 2480MHz/20dB Bandwidth:1.407MHz



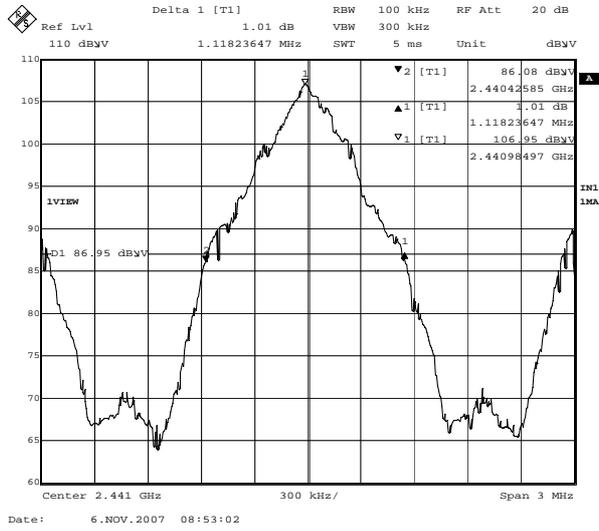
**20dB Bandwidth: FCC 15.247(a)(1)**

COMPANY : Sony Corporation  
 EQUIPMENT : Wireless Speaker System  
 MODEL NUMBER: SRS-BT100  
 SERIAL NUMBER: K002  
 FCC ID : AK8SRSBT100  
 POWER : AC120V/60Hz

UL Japan, Inc. Yamakita No.4 Shielded Room  
 REPORT NO : 28CE0165-YK-01-A  
 REGULATION : Fcc Part15SubpartC 247(a)(1)  
 DATE : 2007.11.6  
 TEMP./HUMI : 24deg.C./55%  
 TEST MODE : Transmitting  
 ENGINEER : Tatsuya Arai

[Inquiry]

**7. Inaury/20dB Bandwidth:1.118MHz**



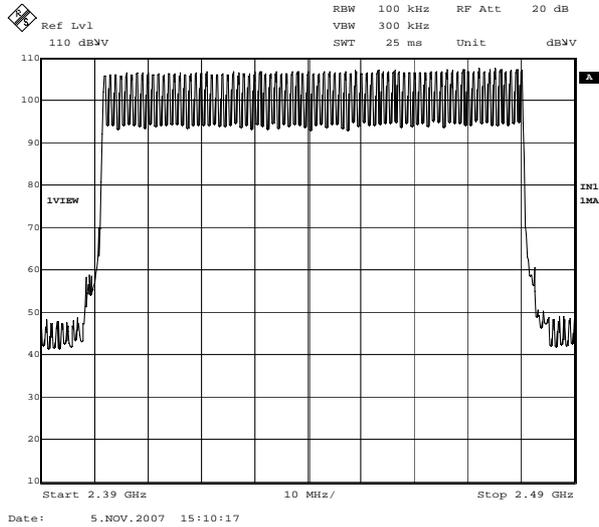
# Channel Utilization: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRSBT100  
POWER : AC120V/60Hz

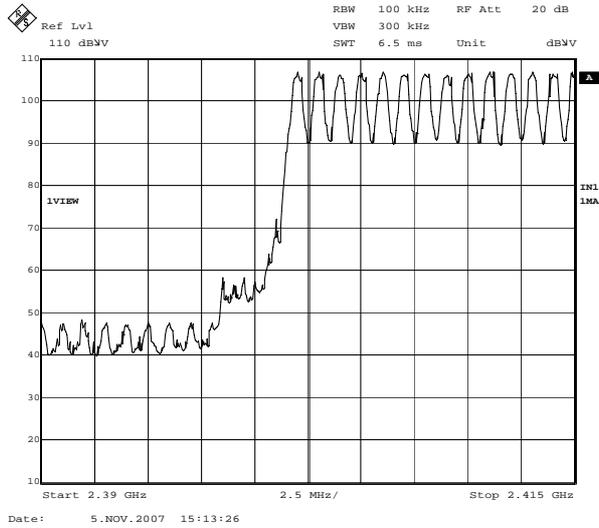
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

## Hopping, DH5: 79ch

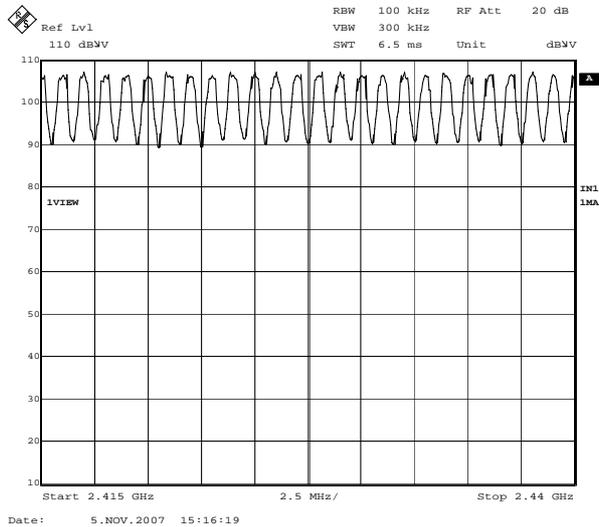
1.



2.



3.

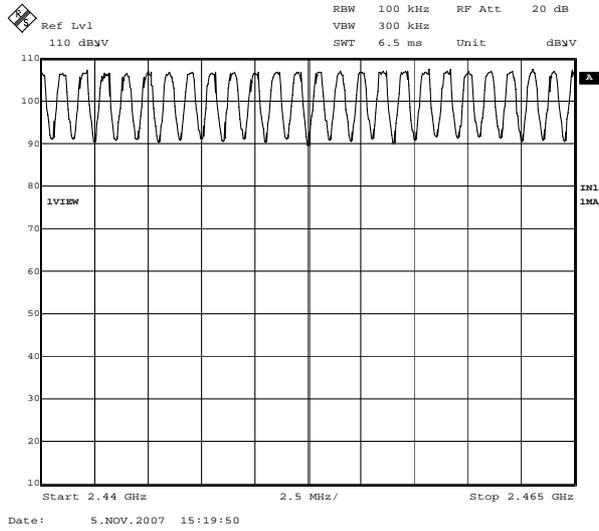


### Channel Utilization: FCC 15.247(a)(1)(iii)

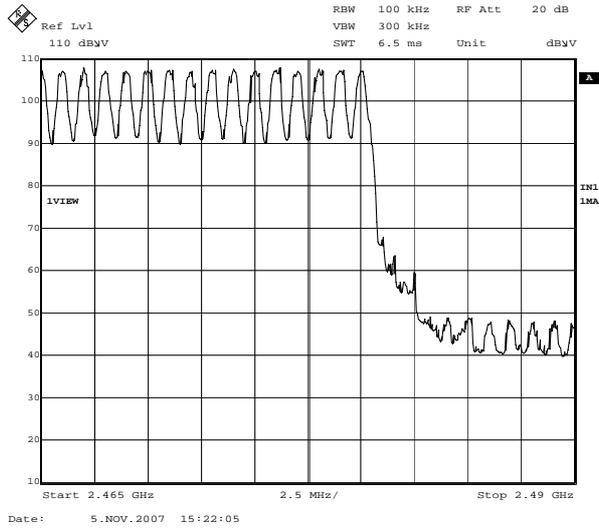
**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRST100  
**POWER** : AC120V/60Hz

**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)(iii)  
**DATE** : 2007.11.5  
**TEMP./HUMI** : 24deg.C./46%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

4.



5.



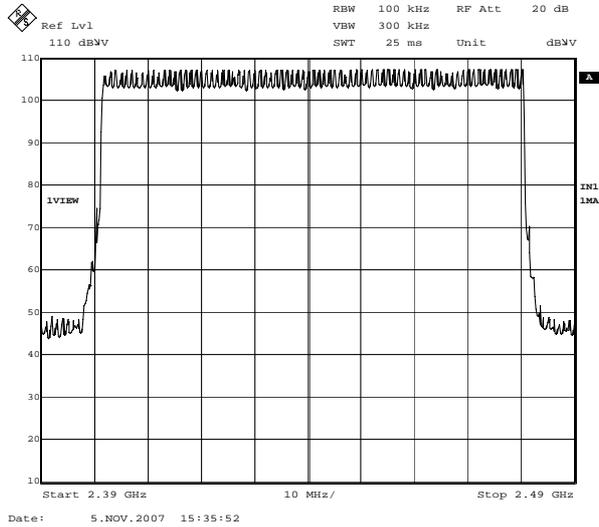
# Channel Utilization: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SR5BT100  
POWER : AC120V/60Hz

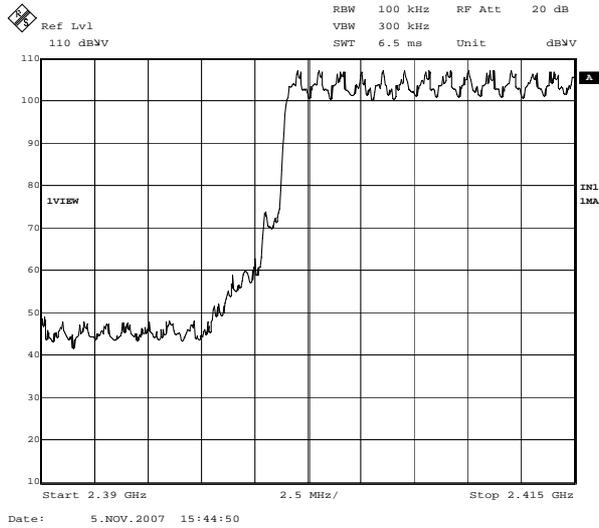
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : FCC Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

## Hopping, 3DH5: 79ch

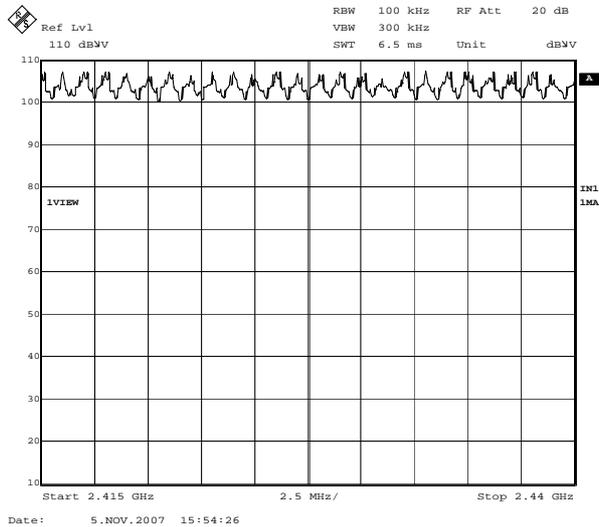
1.



2.



3.

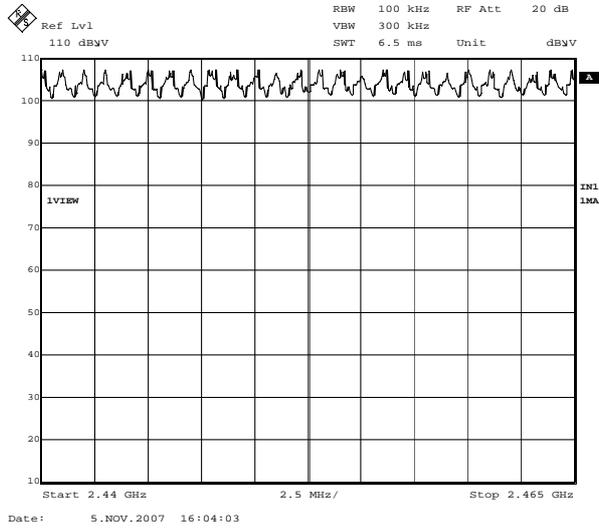


### Channel Utilization: FCC 15.247(a)(1)(iii)

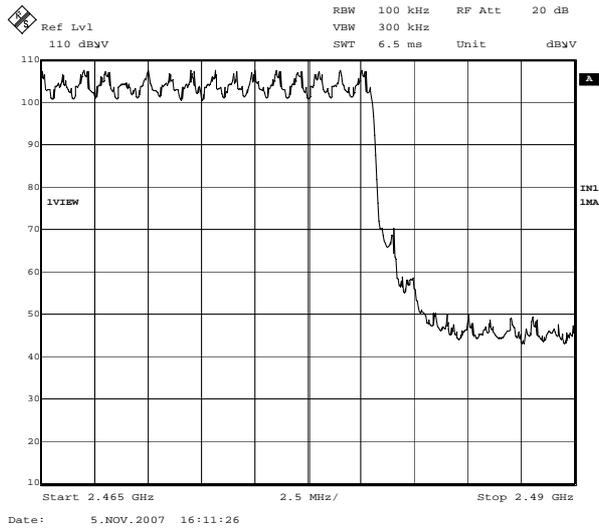
**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRST100  
**POWER** : AC120V/60Hz

**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)(iii)  
**DATE** : 2007.11.5  
**TEMP./HUMI** : 24deg.C./46%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

4.



5.



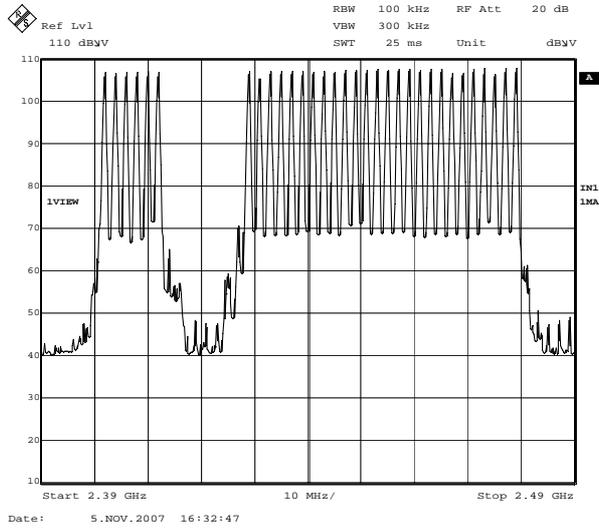
# Channel Utilization: FCC 15.247(a)(1)(iii)

UL Japan, Inc. Yamakita No.4 Shielded Room

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRGBT100  
POWER : AC120V/60Hz

REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

## 1. Inquiry: 32ch



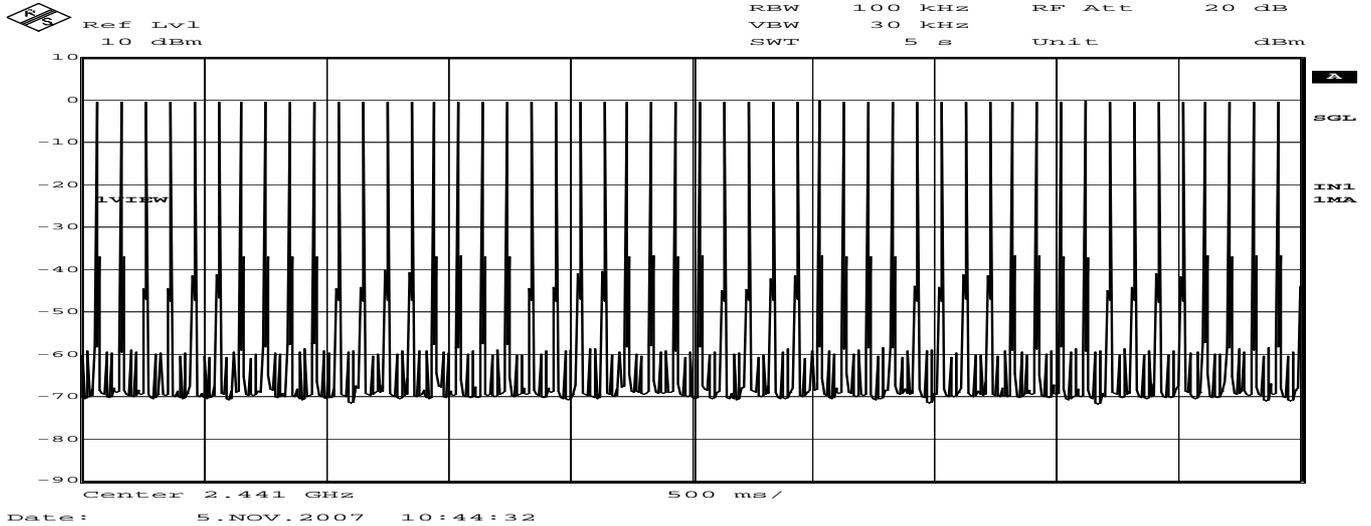
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRSBT100  
POWER : AC120V/60Hz

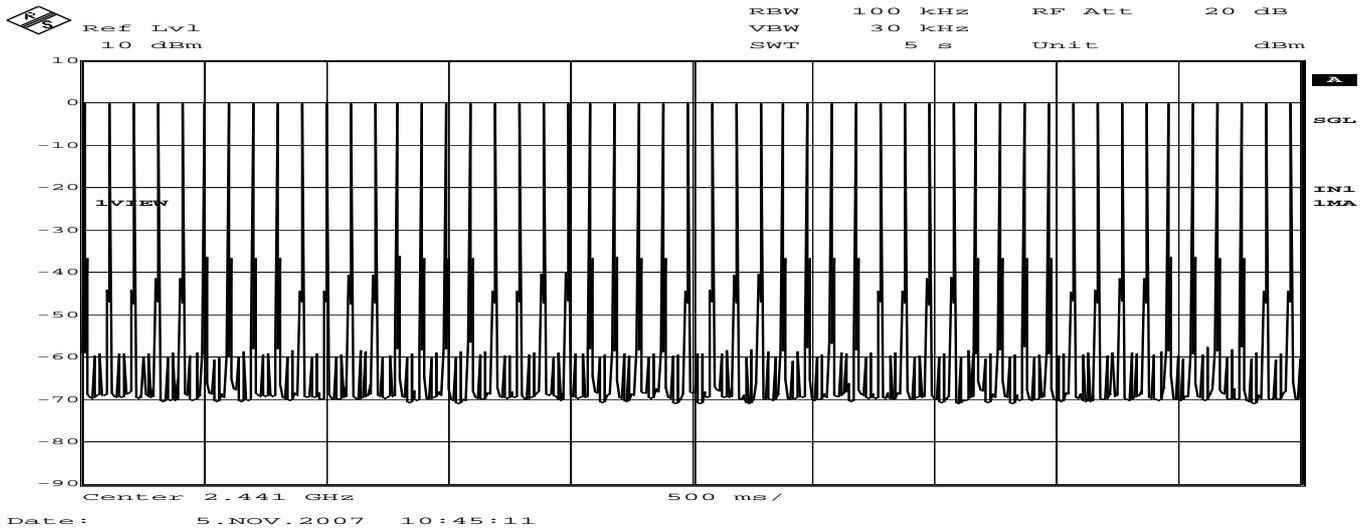
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

Hopping (DH1):

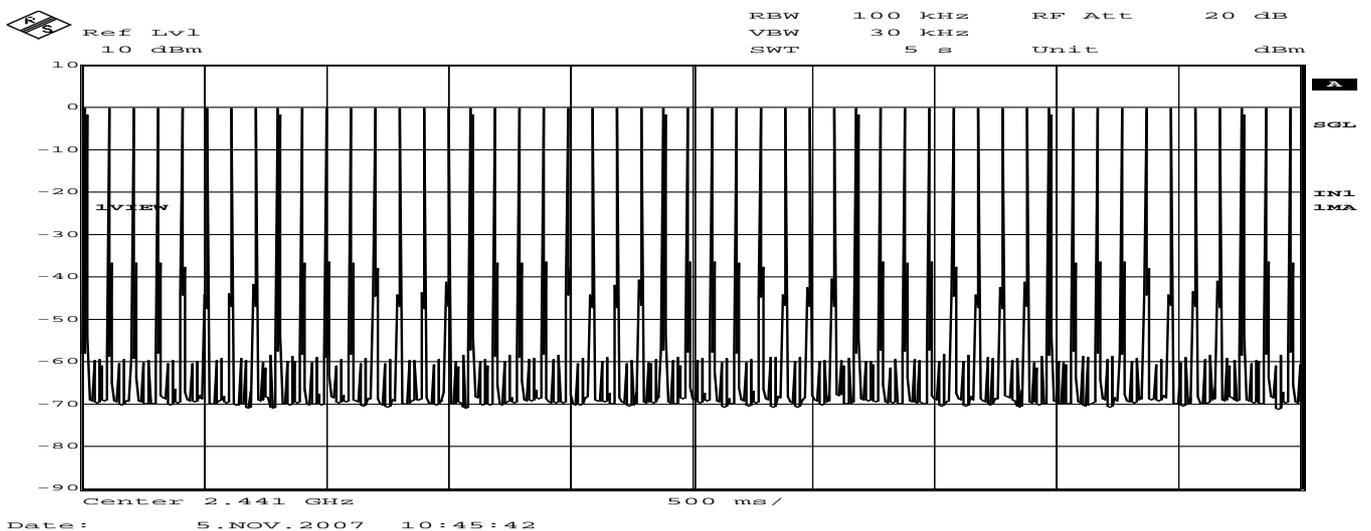
Count 1



Count 2



Count 3

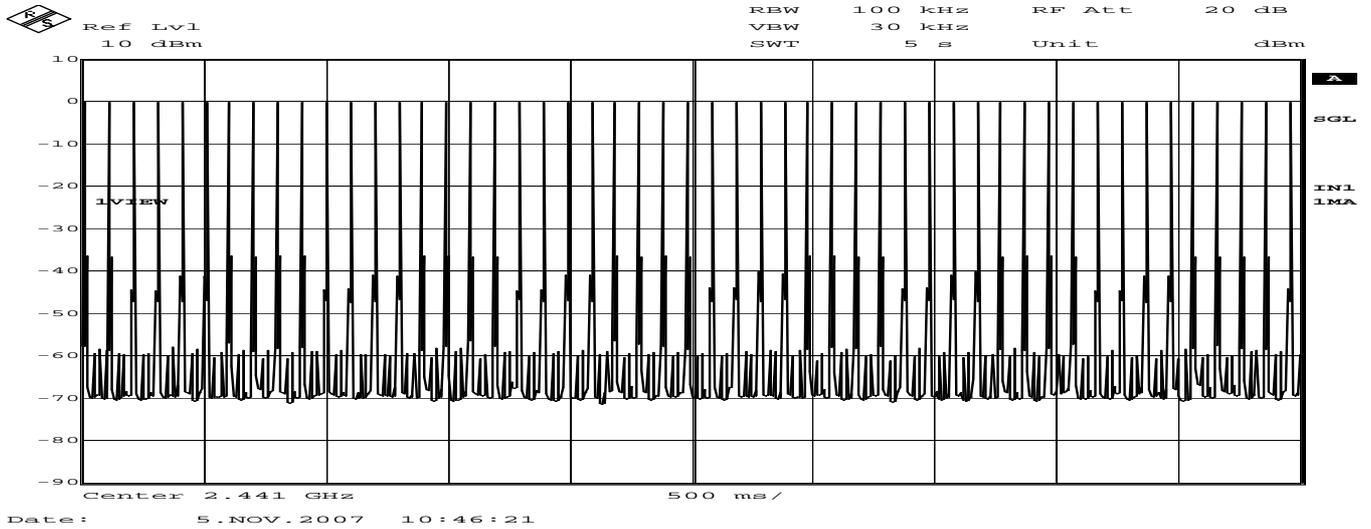


**Dwell Time: FCC 15.247(a)(1)(iii)**

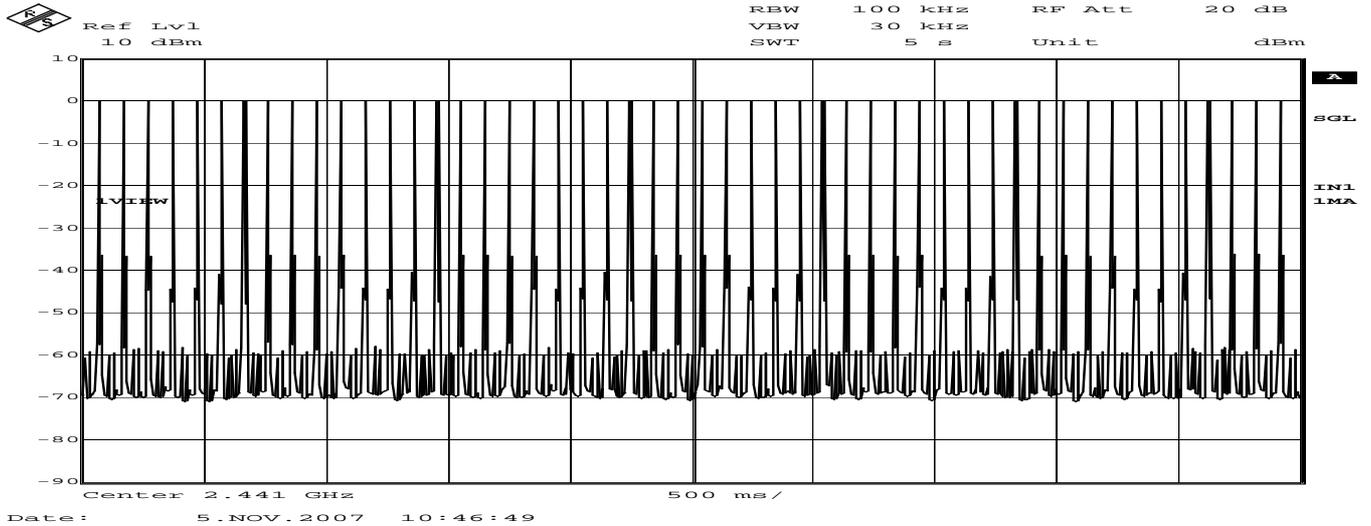
**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRBT100  
**POWER** : AC120V/60Hz

**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)(iii)  
**DATE** : 2007.11.5  
**TEMP./HUMI** : 24deg.C./46%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

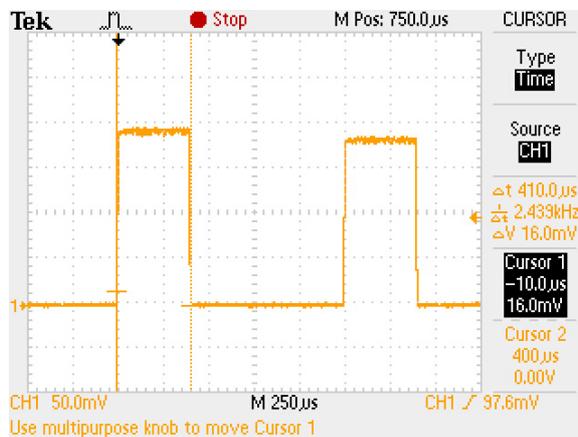
**Count 4**



**Count 5**



**Duty cycle(Hopping DH1)**



Average times of rising in 30 sec. of sweep =  $(50 + 51 + 51 + 51 + 50) / 5 = 50.6$   
 Average times of rising in 1 sec. =  $50.6 / 5s = 10.12$   
 Average times of rising in 0.4x =  $0.4 * 79ch * 10.12 = 319.79$   
 Dwell time =  $319.79 * 0.410 = 131.11$  [ms]  
 Limit : Dwell Time < 0.4[s]

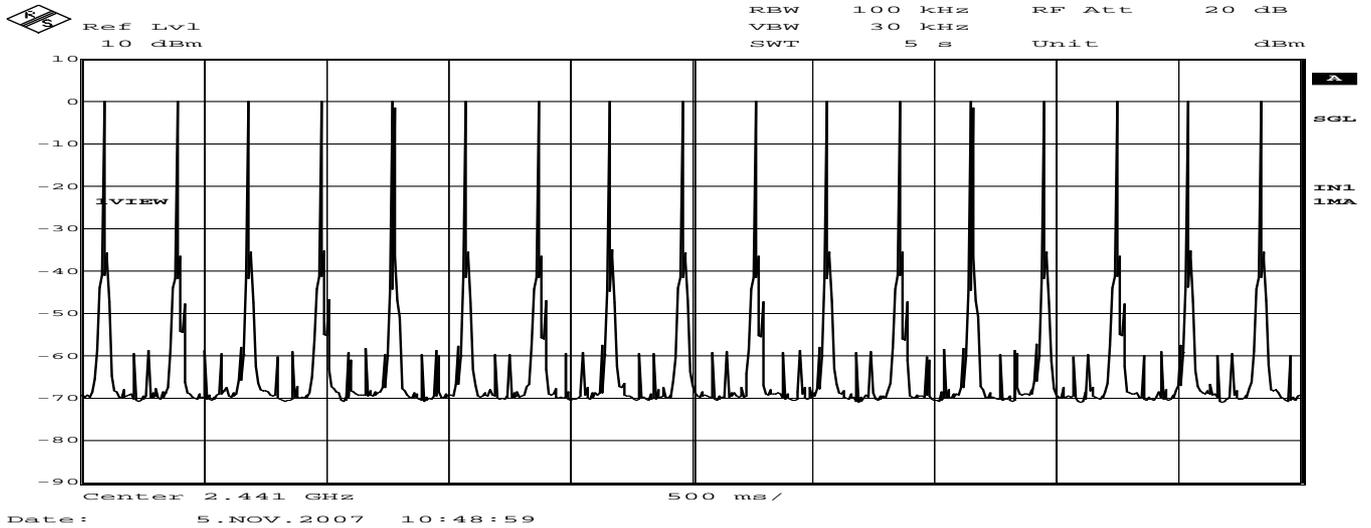
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRSBT100  
POWER : AC120V/60Hz

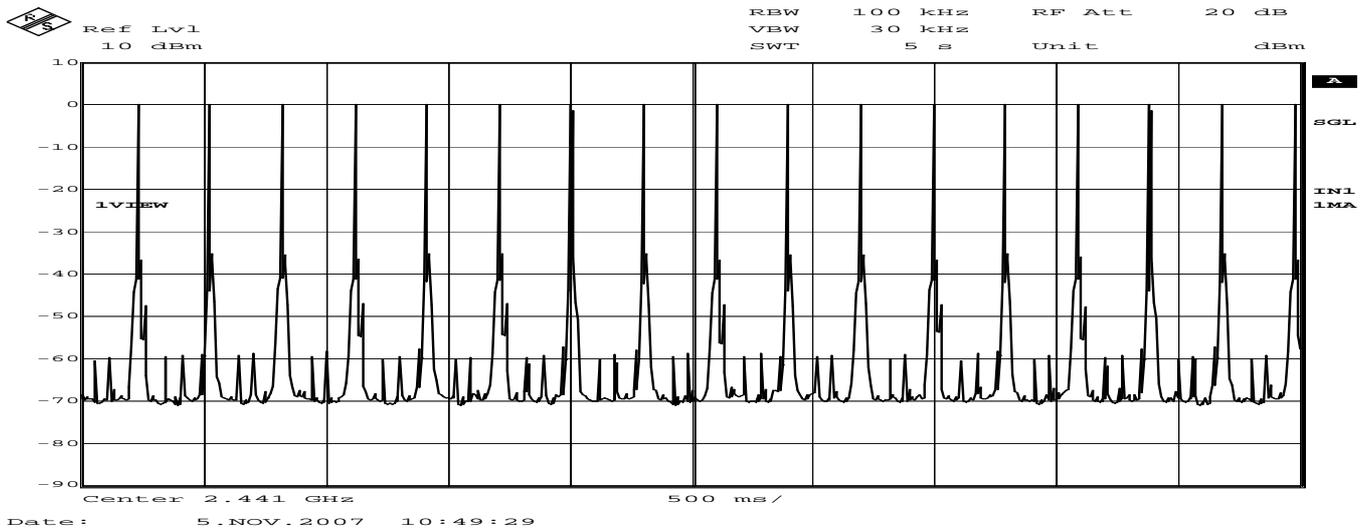
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

Hopping (DH3):

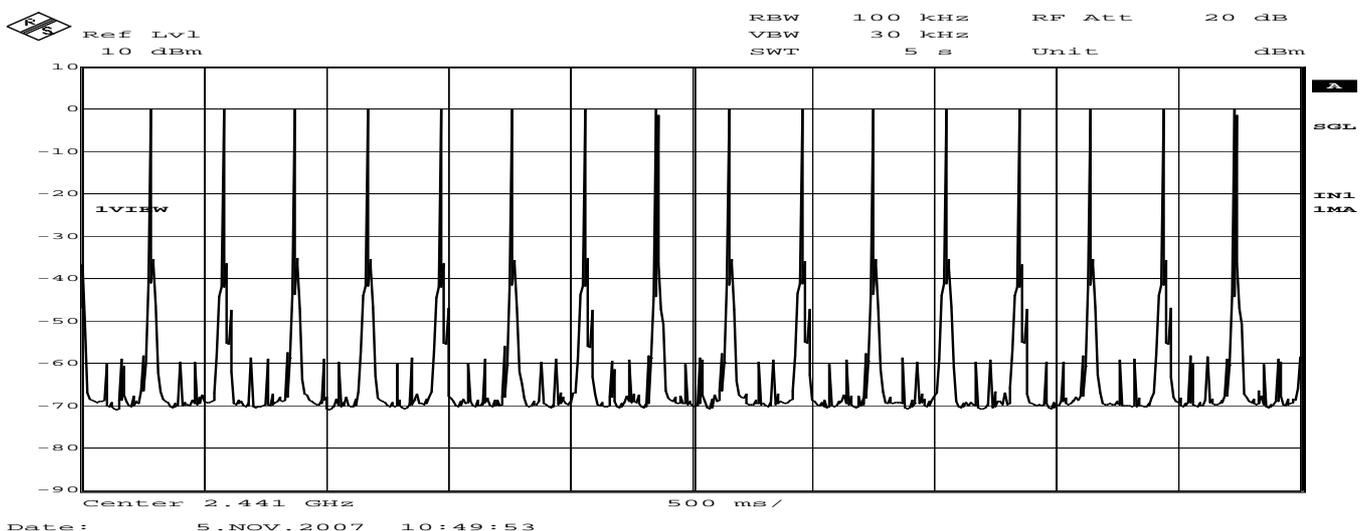
Count 1



Count 2



Count 3

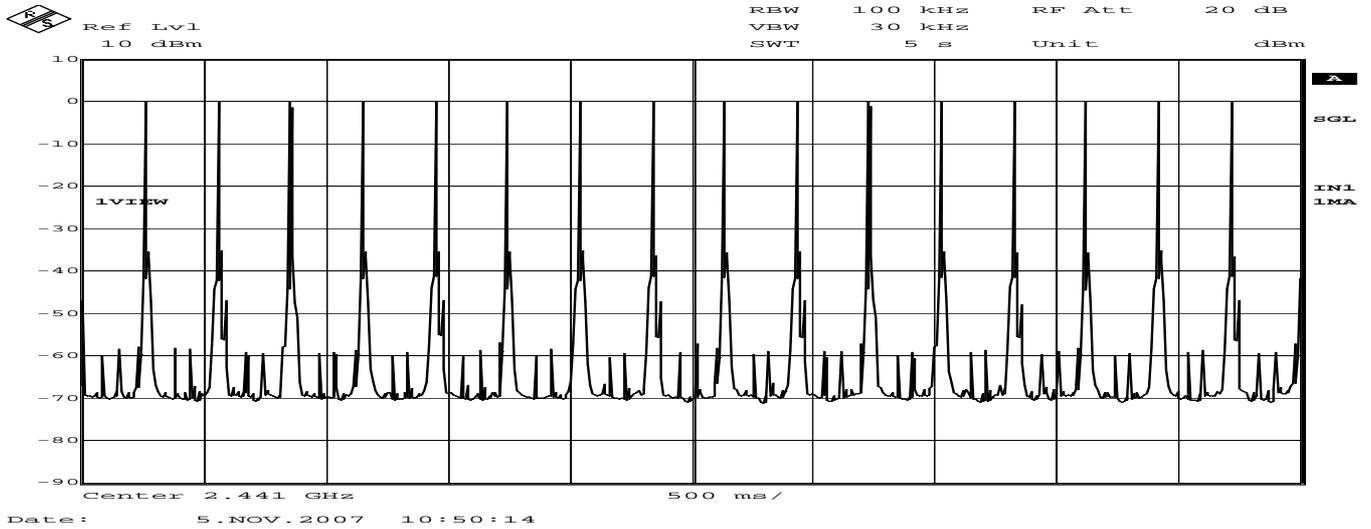


## Dwell Time: FCC 15.247(a)(1)(iii)

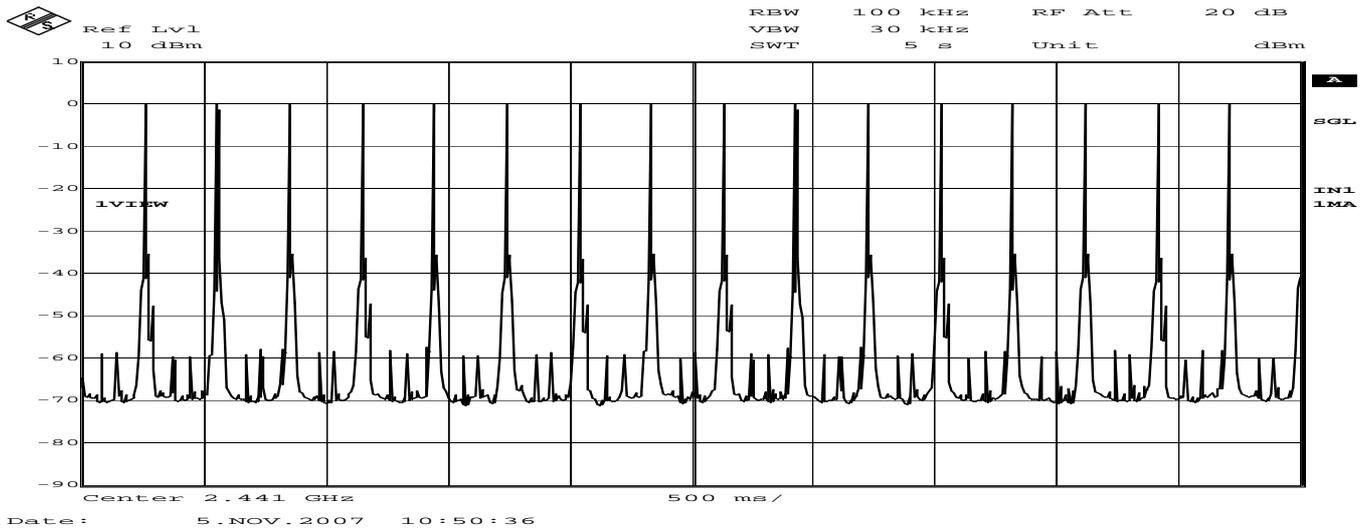
**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRSBT100  
**POWER** : AC120V/60Hz

**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)(iii)  
**DATE** : 2007.11.5  
**TEMP./HUMI** : 24deg.C./46%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

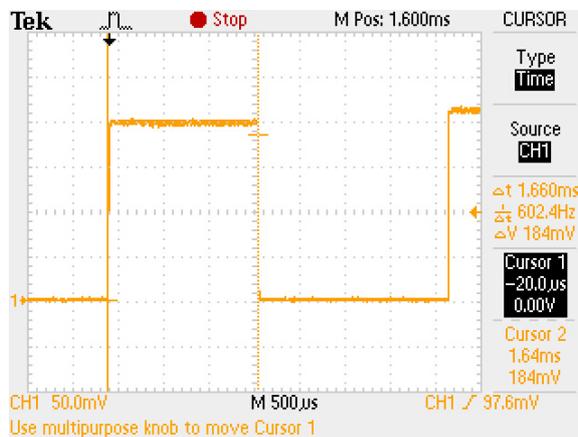
### Count 4



### Count 5



### Duty cycle(Hopping DH3)



Average times of rising in 30 sec. of sweep =  $(17 + 17 + 17 + 16 + 16) / 5 = 16.6$   
 Average times of rising in 1 sec. =  $16.6 / 5s = 3.32$   
 Average times of rising in 0.4x =  $0.4 * 79ch * 3.32 = 104.91$   
 Dwell time =  $104.91 * 1.66 = 174.15 [ms]$   
 Limit : Dwell Time < 0.4[s]

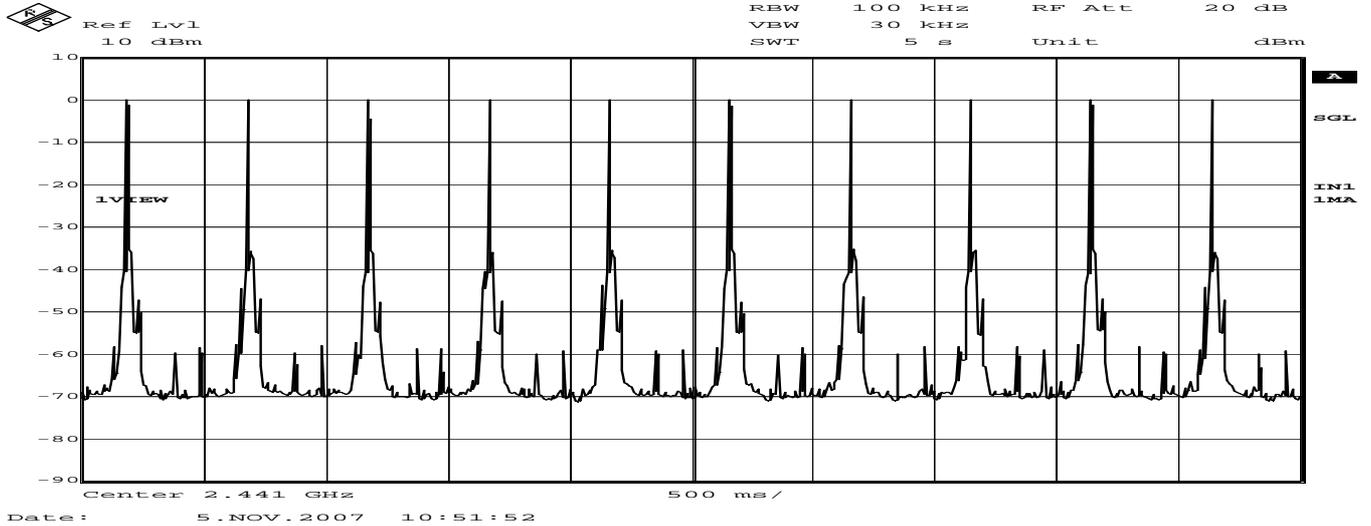
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRSBT100  
POWER : AC120V/60Hz

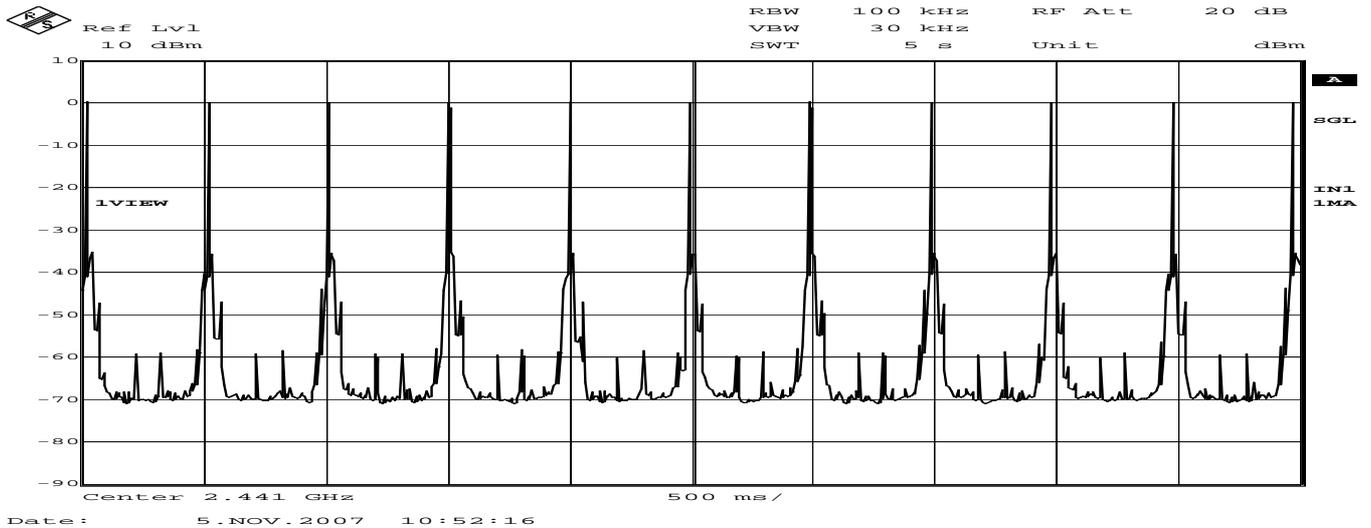
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

Hopping (DH5):

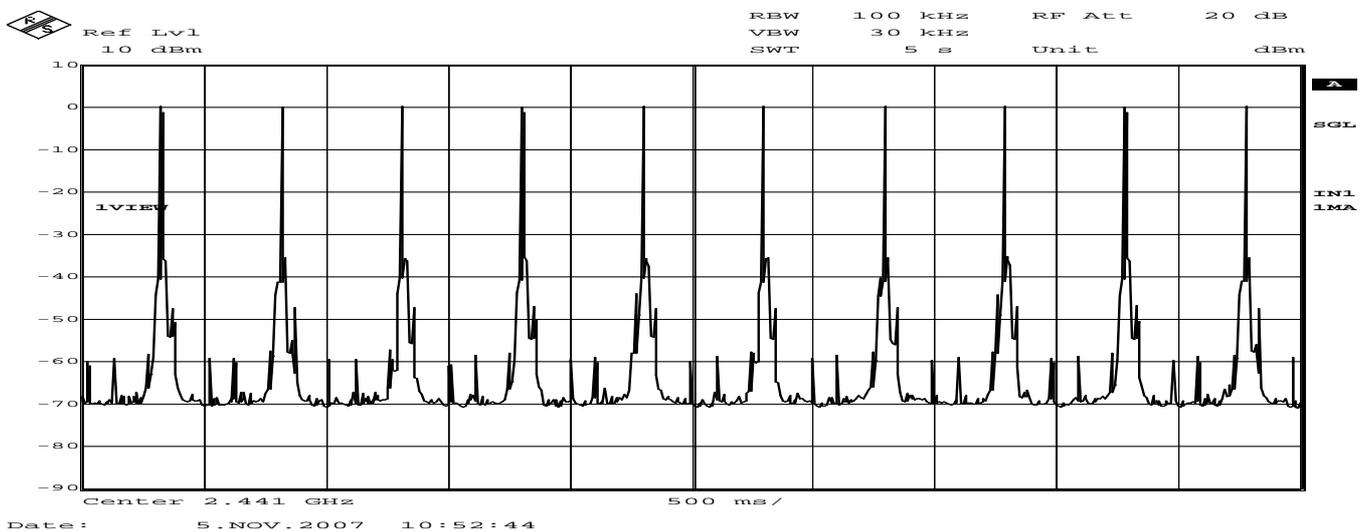
Count 1



Count 2



Count 3

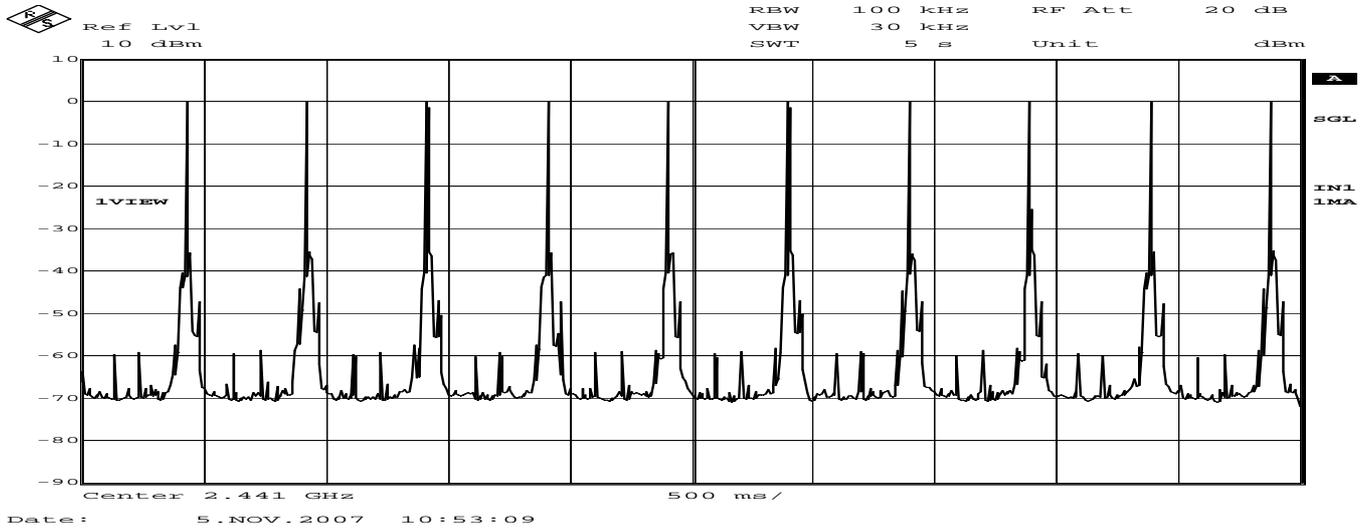


## Dwell Time: FCC 15.247(a)(1)(iii)

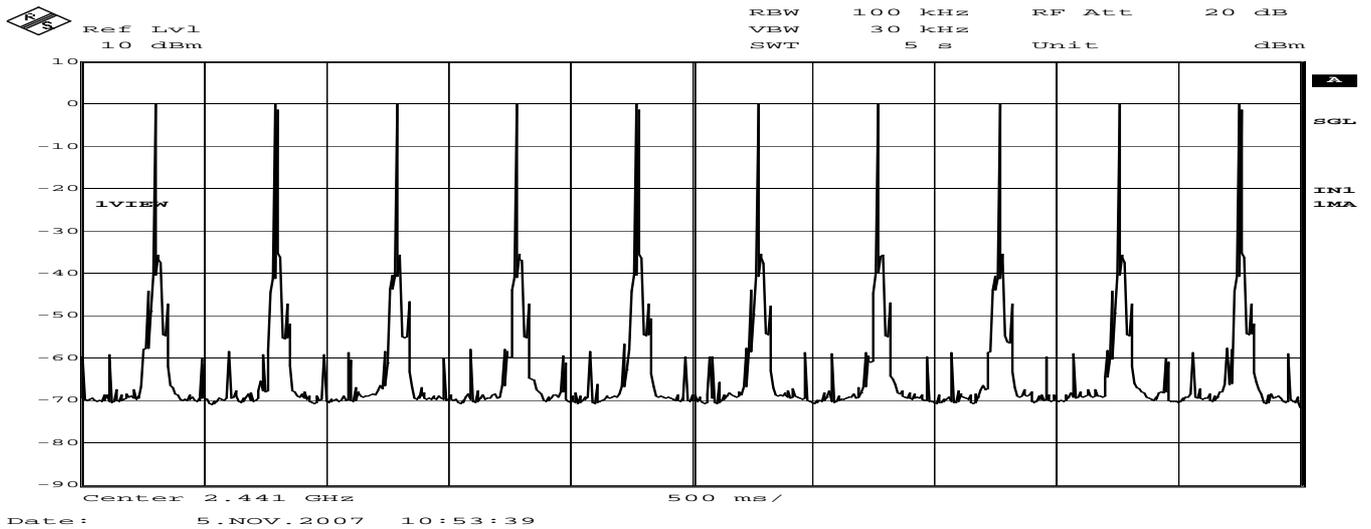
**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRSBT100  
**POWER** : AC120V/60Hz

**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)(iii)  
**DATE** : 2007.11.5  
**TEMP./HUMI** : 24deg.C./46%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

### Count 4



### Count 5



### Duty cycle(Hopping DHS)



Average times of rising in 30 sec. of sweep =  $(10 + 11 + 10 + 10 + 10) / 5 = 10.2$   
 Average times of rising in 1 sec. =  $10.2 / 5s = 2.04$   
 Average times of rising in 0.4x =  $0.4 * 79ch * 2.04 = 64.46$   
 Dwell time =  $64.46 * 2.92 = 188.22$  [ms]  
 Limit : Dwell Time < 0.4[s]

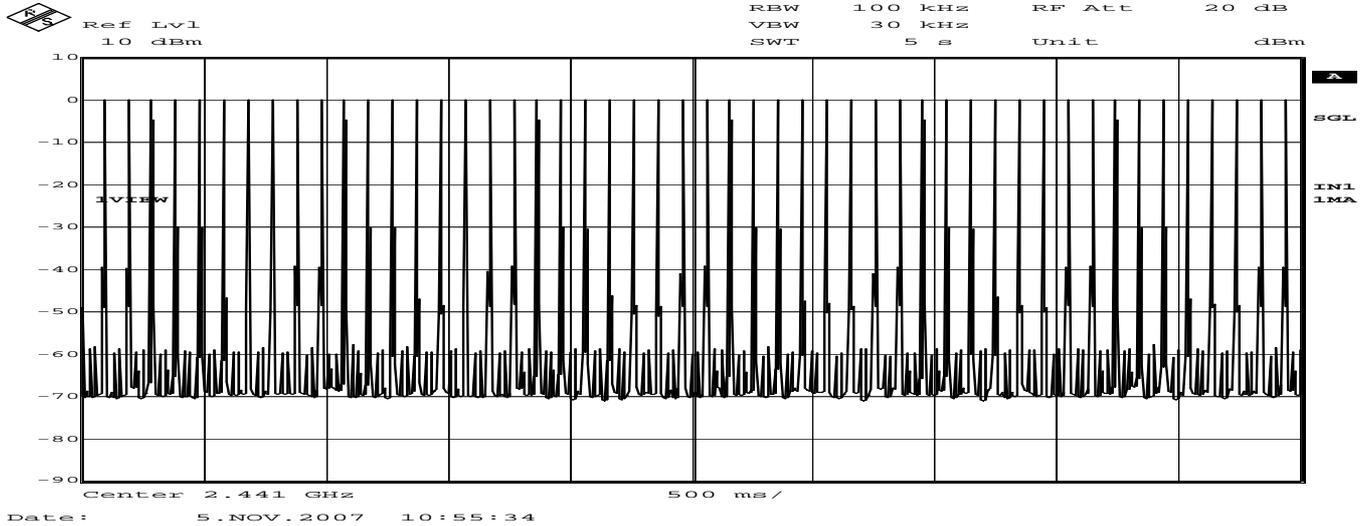
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRSBT100  
POWER : AC120V/60Hz

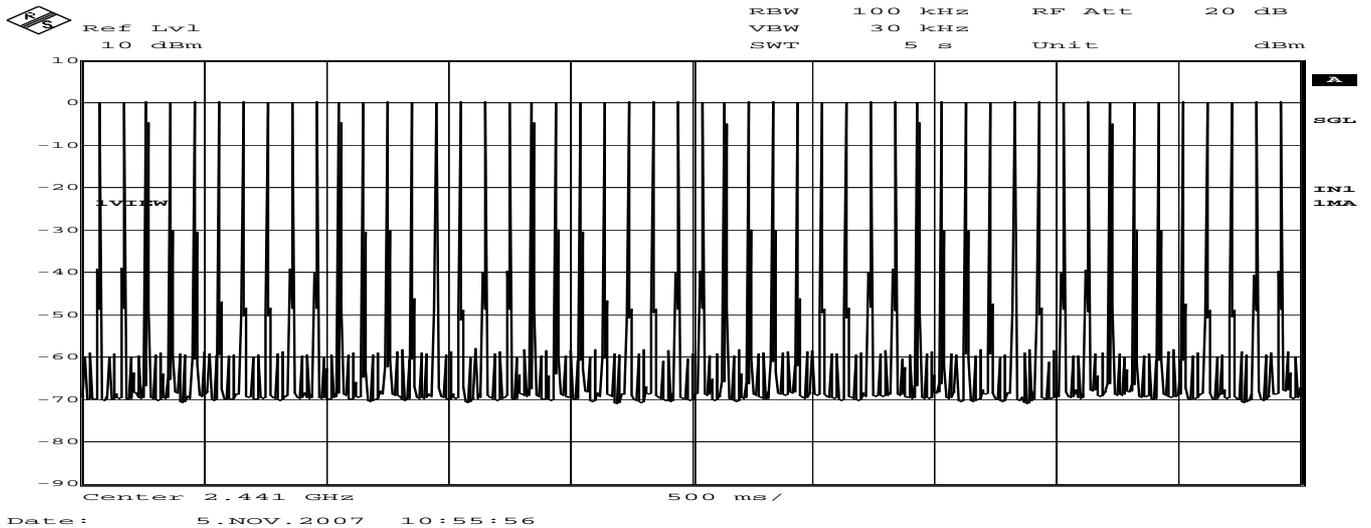
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

Hopping (3DH1):

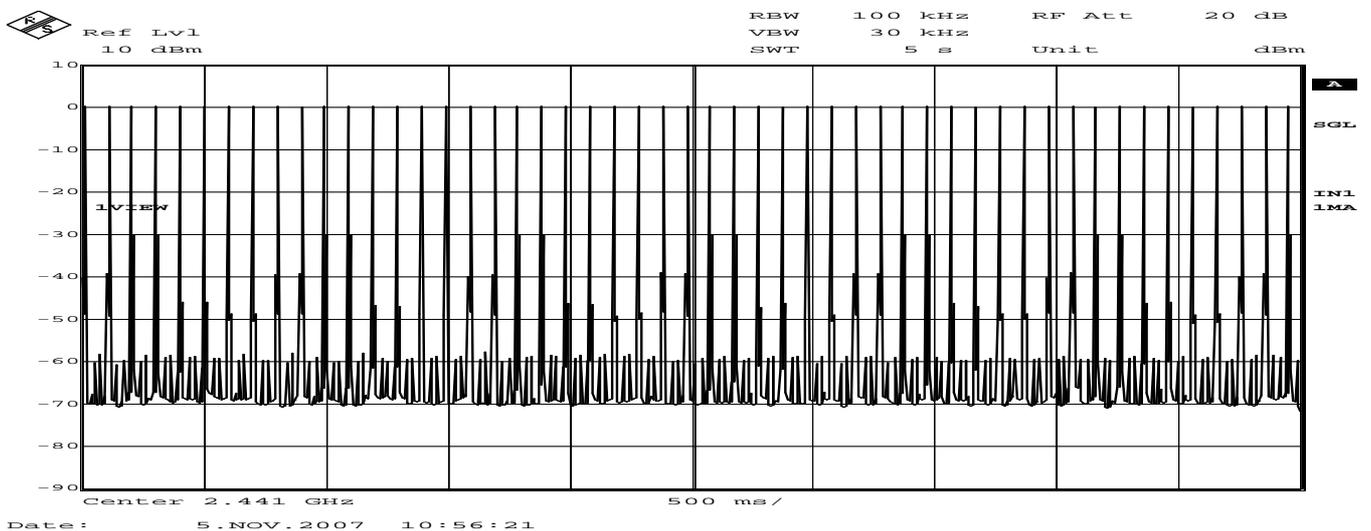
Count 1



Count 2



Count 3

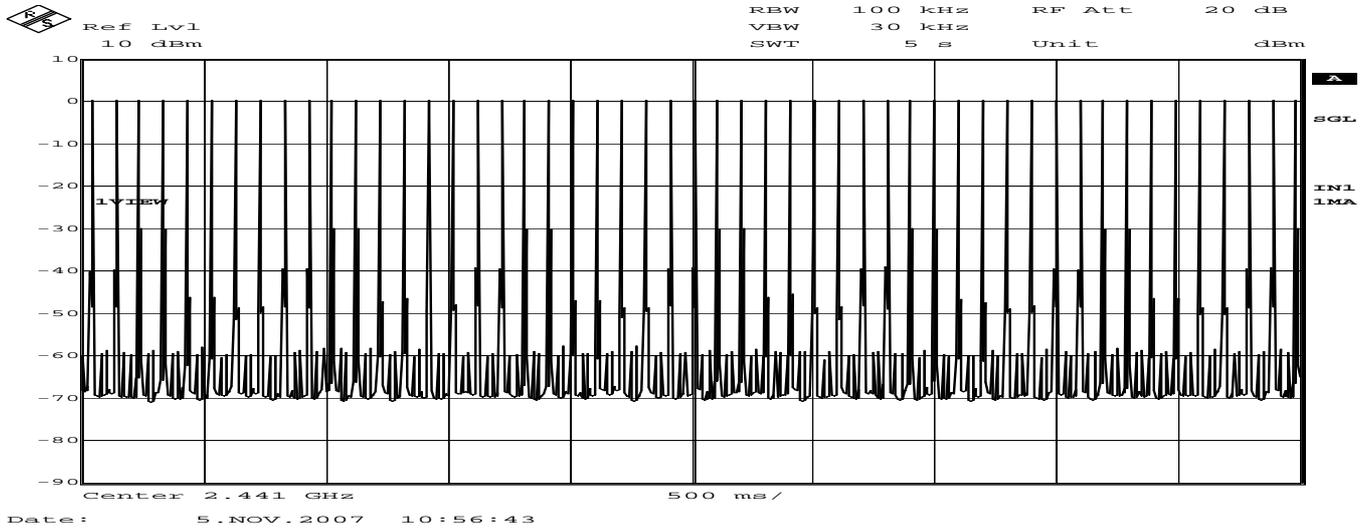


## Dwell Time: FCC 15.247(a)(1)(iii)

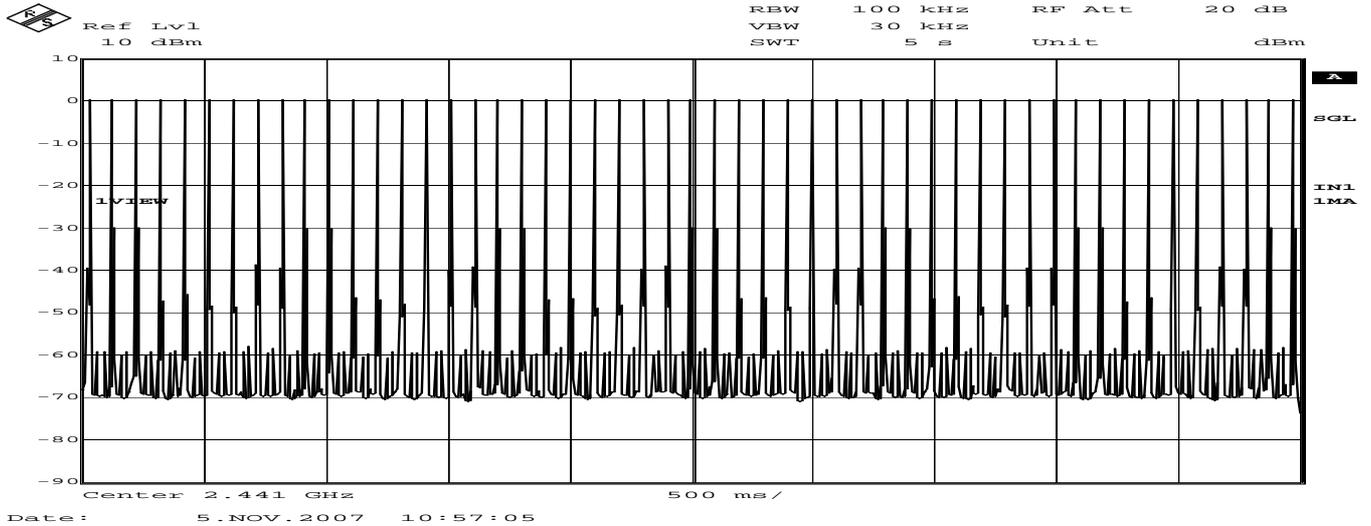
**COMPANY** : Sony Corporation  
**EQUIPMENT** : Wireless Speaker System  
**MODEL NUMBER**: SRS-BT100  
**SERIAL NUMBER**: K002  
**FCC ID** : AK8SRSBT100  
**POWER** : AC120V/60Hz

**UL Japan, Inc. Yamakita No.4 Shielded Room**  
**REPORT NO** : 28CE0165-YK-01-A  
**REGULATION** : Fcc Part15SubpartC 247(a)(1)(iii)  
**DATE** : 2007.11.5  
**TEMP./HUMI** : 24deg.C./46%  
**TEST MODE** : Transmitting  
**ENGINEER** : Tatsuya Arai

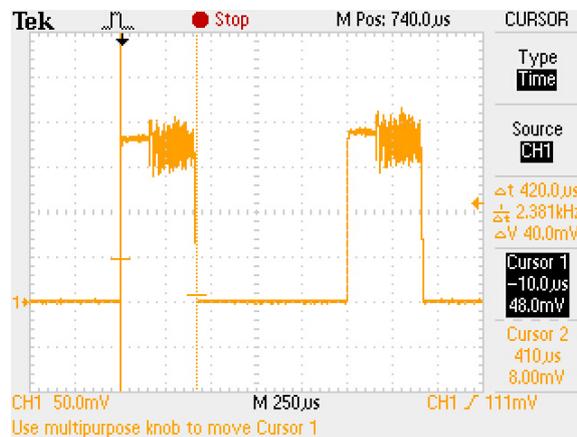
### Count 4



### Count 5



### Duty cycle(Hopping 3DH1)



Average times of rising in 30 sec. of sweep =  $(50 + 50 + 51 + 51 + 51) / 5 = 50.6$   
 Average times of rising in 1 sec. =  $50.6 / 5s = 10.12$   
 Average times of rising in 0.4x =  $0.4 * 79ch * 10.12 = 319.79$   
 Dwell time =  $319.79 * 0.420 = 134.31$  [ms]  
 Limit : Dwell Time < 0.4[s]

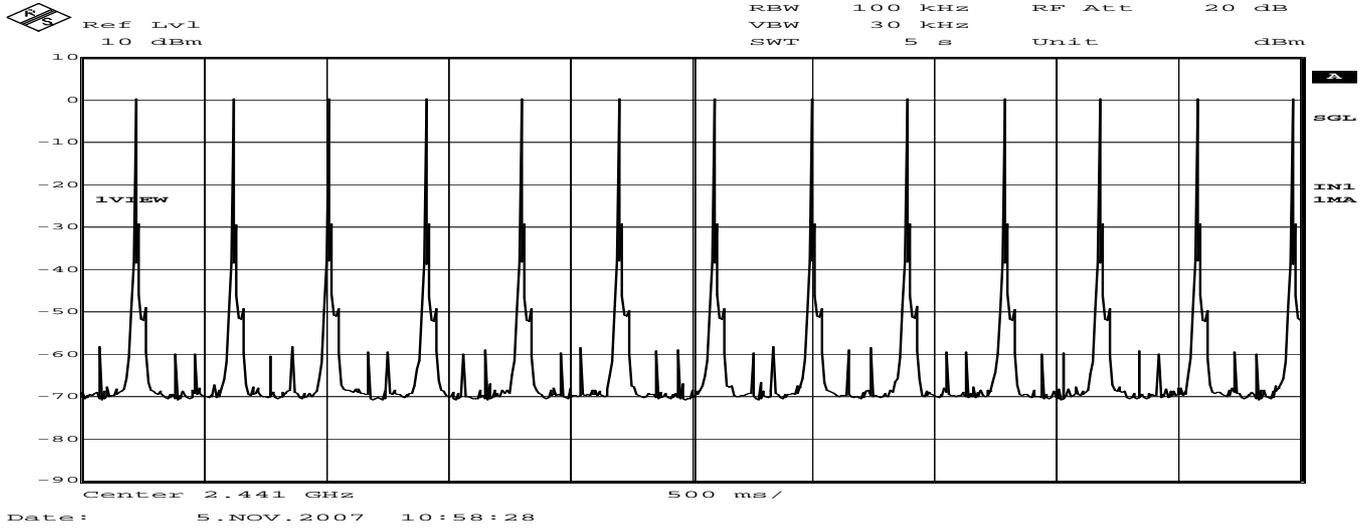
Dwell Time: FCC 15.247(a)(1)(iii)

COMPANY : Sony Corporation  
EQUIPMENT : Wireless Speaker System  
MODEL NUMBER: SRS-BT100  
SERIAL NUMBER: K002  
FCC ID : AK8SRSBT100  
POWER : AC120V/60Hz

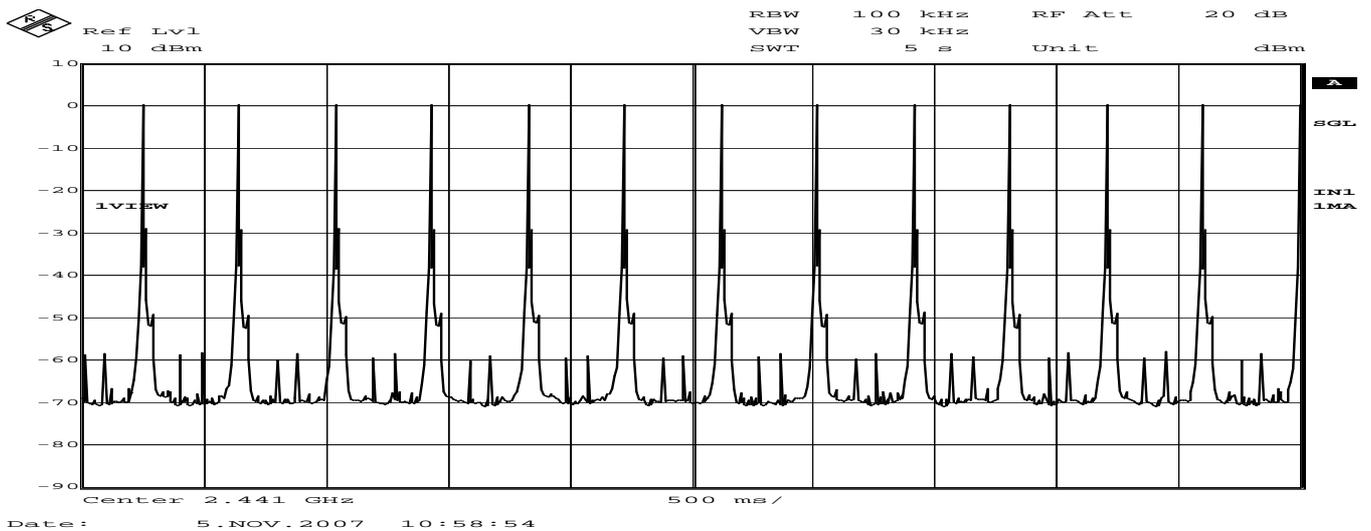
UL Japan, Inc. Yamakita No.4 Shielded Room  
REPORT NO : 28CE0165-YK-01-A  
REGULATION : Fcc Part15SubpartC 247(a)(1)(iii)  
DATE : 2007.11.5  
TEMP./HUMI : 24deg.C./46%  
TEST MODE : Transmitting  
ENGINEER : Tatsuya Arai

Hopping (3DH3):

Count 1



Count 2



Count 3

