

APPENDIX 2: Data of EMI test

Conducted Emission

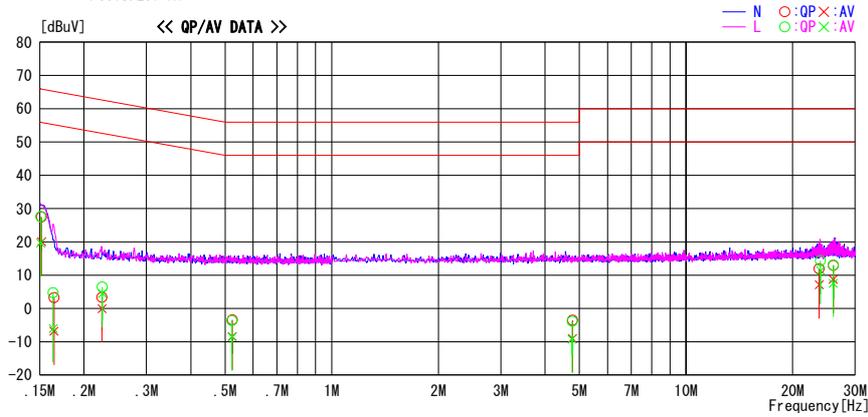
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2007/11/08

Company : Sony Corporation
Kind of EUT : Compact Disc Receiver
Model No. : HCD-BX50BTi
Serial No. : 01155
Report No. : 28CE0262-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 44%
Operator : Shinya Watanabe

Mode / Remarks : Test mode (Bluetooth Tx 2441MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15170	27.1	19.6	0.4	27.5	20.0	65.9	55.9	38.4	35.9	N
0.16445	2.9	-7.2	0.4	3.3	-6.8	65.2	55.2	61.9	62.0	N
0.22480	2.9	-0.4	0.4	3.3	0.0	62.6	52.6	59.3	52.6	N
0.52400	-3.9	-8.8	0.4	-3.5	-8.4	56.0	46.0	59.5	54.4	N
4.77999	-4.4	-9.9	0.8	-3.6	-9.1	56.0	46.0	59.6	55.1	N
23.75432	9.9	5.1	2.0	11.9	7.1	60.0	50.0	48.1	42.9	N
26.02432	10.8	6.6	2.1	12.9	8.7	60.0	50.0	47.1	41.3	N
0.15085	27.2	19.3	0.4	27.6	19.7	66.0	56.0	38.4	36.3	L
0.16360	4.4	-6.4	0.4	4.8	-6.0	65.3	55.3	60.6	61.3	L
0.22510	6.1	4.1	0.4	6.5	4.5	62.6	52.6	56.1	48.1	L
0.52315	-4.0	-8.9	0.4	-3.6	-8.5	56.0	46.0	59.6	54.5	L
4.77099	-4.7	-10.0	0.8	-3.9	-9.2	56.0	46.0	59.9	55.2	L
23.95632	12.4	9.4	2.0	14.4	11.4	60.0	50.0	45.6	38.6	L
26.02632	11.0	5.4	2.1	13.1	7.5	60.0	50.0	47.0	42.5	L

CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCULATION: RESULT=READING+C.F (L1SN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

*The test result is round off to one or two decimal places, so some differences might be observed.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/11/08

Company	: Sony Corporation	Report No.	: 28CE0262-HO
Kind of EUT	: Compact Disc Receiver	Power	: AC120V / 60Hz
Model No.	: HCD-BX50BT1	Temp./Humi.	: 24deg. C / 44%
Serial No.	: 01155	Operator	: Shinya Watanabe

Mode / Remarks : Test mode (Bluetooth Tx 2402MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.207 QP
FCC15.207 AV

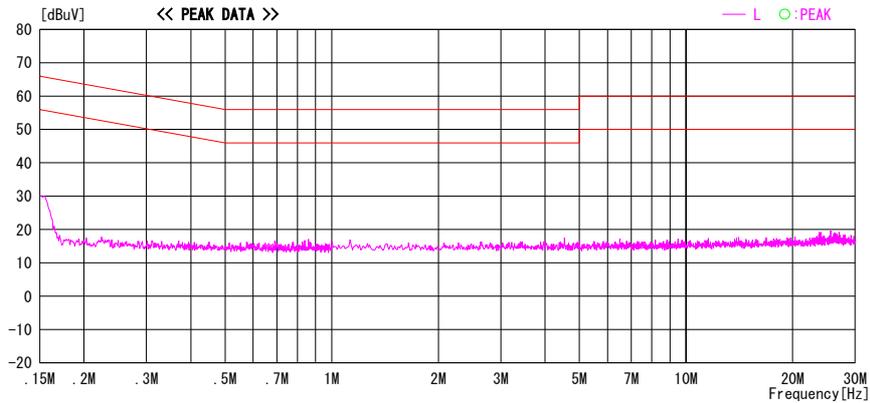
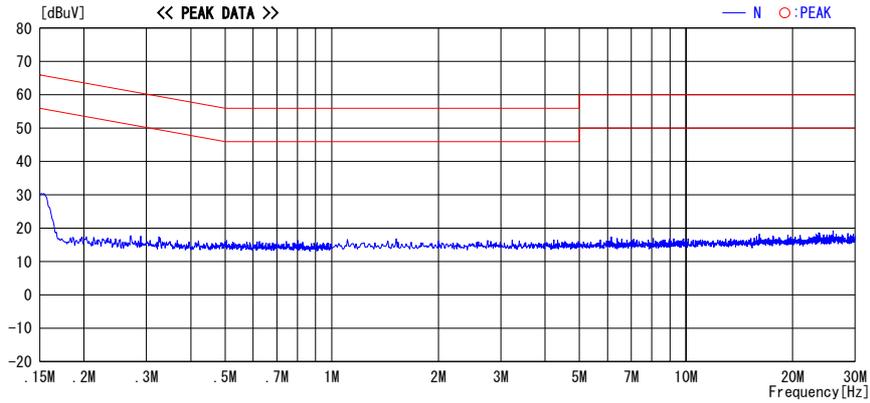


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UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/11/08

Company : Sony Corporation	Report No. : 28CE0262-HO
Kind of EUT : Compact Disc Receiver	Power : AC120V / 60Hz
Model No. : HCD-BX50BT1	Temp./Humi. : 24deg.C / 44%
Serial No. : 01155	Operator : Shinya Watanabe

Mode / Remarks : Test mode (Bluetooth Tx 2441MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.207 QP
FCC15.207 AV

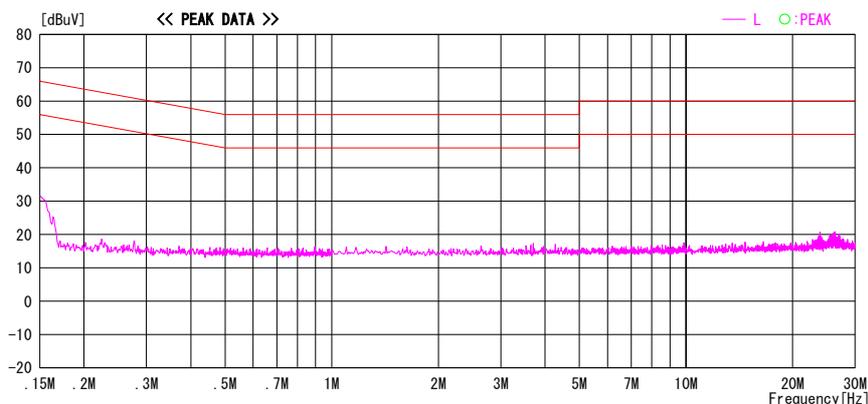
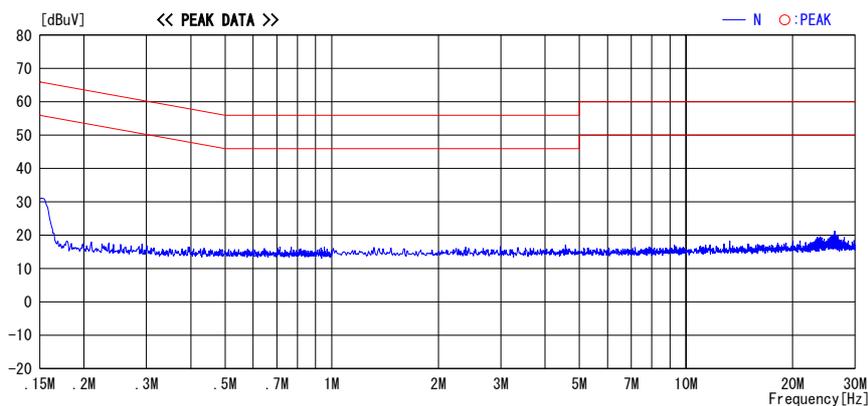


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UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2007/11/08

Company : Sony Corporation
Kind of EUT : Compact Disc Receiver
Model No. : HCD-BX50BT1
Serial No. : 01155
Report No. : 28CE0262-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg. C / 44%
Operator : Shinya Watanabe

Mode / Remarks : Test mode (Bluetooth Tx 2480MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.207 QP
FCC15.207 AV

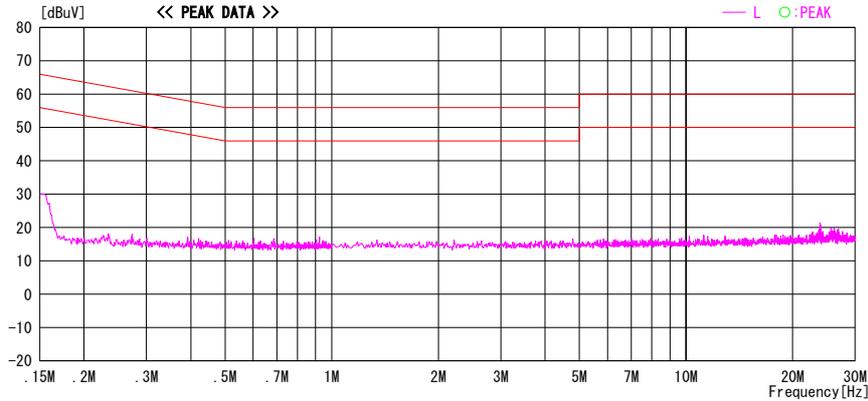
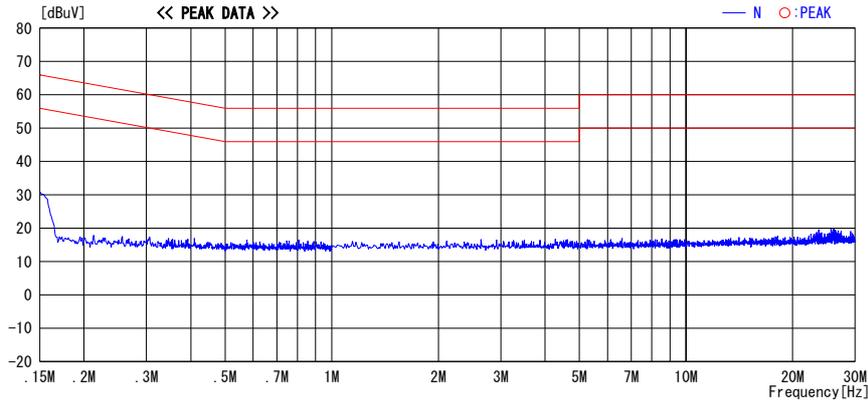


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
 Date : 2007/11/08

Company : Sony Corporation	Report No. : 28CE0262-HO
Kind of EUT : Compact Disc Receiver	Power : AC120V / 60Hz
Model No. : HCD-BX50BT1	Temp./Humi. : 24deg. C / 44%
Serial No. : 01155	Operator : Shinya Watanabe

Mode / Remarks : Test mode (Bluetooth Rx 2441MHz, EUT-axis:Normal)

LIMIT : FCC15.207 QP
FCC15.207 AV

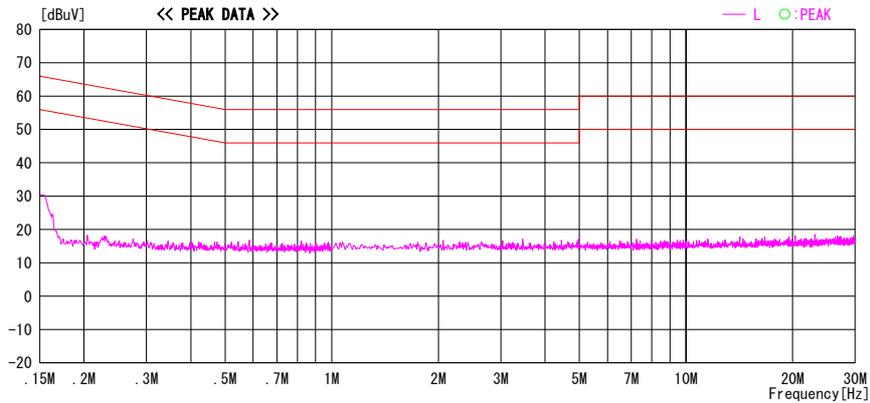
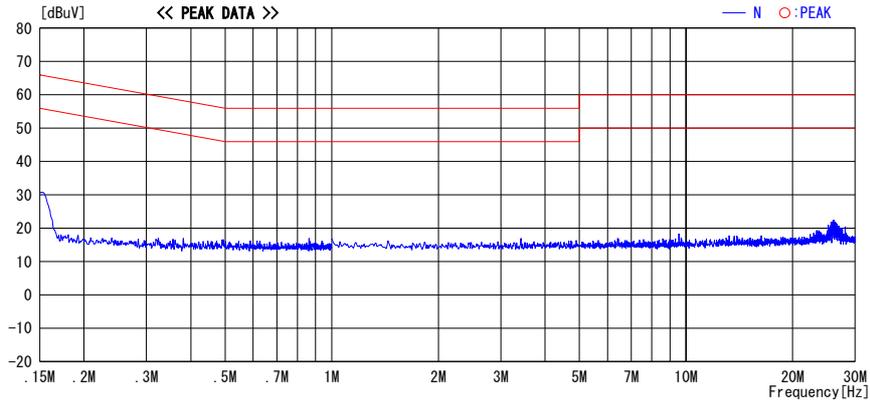


CHART: WITH FACTOR Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F(L1SN LOSS+CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2007/11/08

Company : Sony Corporation
Kind of EUT : Compact Disc Receiver
Model No. : HCD-BX50BTi
Serial No. : 01155
Report No. : 28CE0262-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 44%
Operator : Shinya Watanabe

Mode / Remarks : Test mode (Standby, EUT-axis:Normal)

LIMIT : FCC15.207 GP
FCC15.207 AV

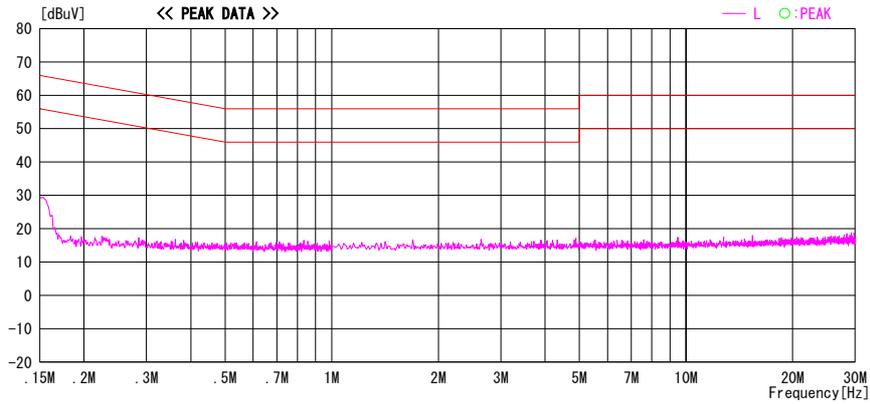
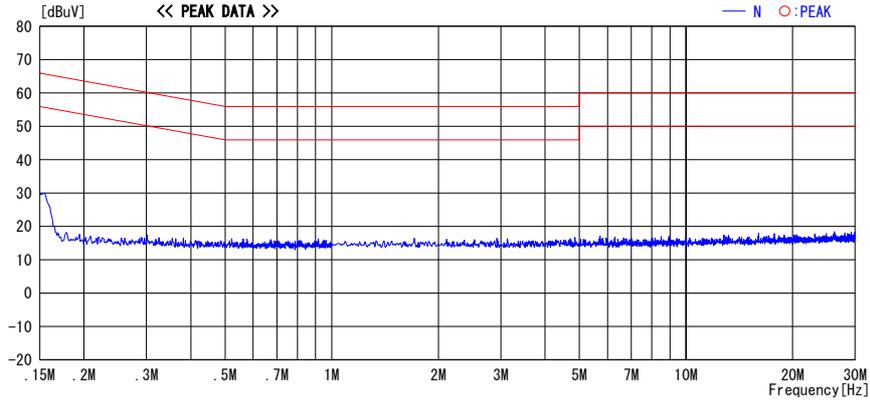


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Carrier Frequency Separation

Company :	Sony Corporation	UL Japan, Inc.	
Equipment :	Compact Disc Receiver	Head Office EMC Lab. No.6 Shield Room	
Model :	HCD-BX50BTi	Regulation :	FCC15.247(a)(1) / RSS-210 A8.1(b)
S/N :	01155	Test Distance :	-
Power :	AC 120V / 60Hz	Date :	November 6, 2007
Mode :	Test mode (Bluetooth Tx, PRBS9, DH5) Hopping On	Temperature :	25 deg.C.
		Humidity :	47 %
		Engineer :	Tomotaka Sasagawa

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.000	>0.64MHz: two-thirds of the 20dB (0.96MHz) Bandwidth or 25[kHz](whichever is greater)
Mid	2441.0	1.000	>0.64MHz: two-thirds of the 20dB (0.96MHz) Bandwidth or 25[kHz](whichever is greater)
High	2480.0	1.000	>0.64MHz: two-thirds of the 20dB (0.97MHz) Bandwidth or 25[kHz](whichever is greater)
Inquiry	2441.0	2.000	>0.56MHz: two-thirds of the 20dB (0.84MHz) Bandwidth or 25[kHz](whichever is greater)

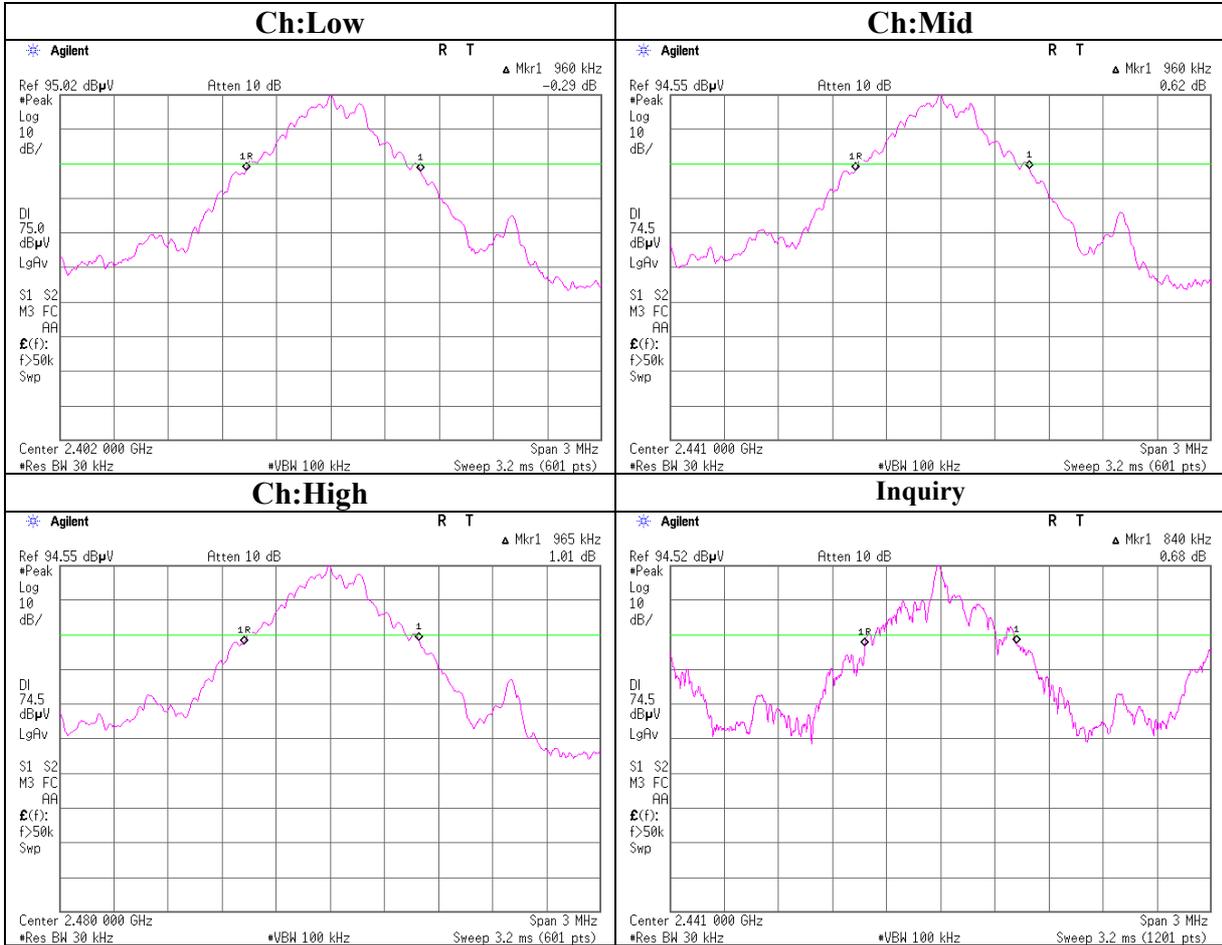
20dB Bandwidth

Company : Sony Corporation
Equipment: Compact Disc Receiver
Model : HCD-BX50BTi
S/N : 01155
Power : AC 120V / 60Hz
Mode : Test mode (Bluetooth Tx, PRBS9, DH5)
Tx (Hopping off) / Inquiry

UL Japan, Inc.
Head Office EMC Lab. No.6 Shield Room
Regulation : FCC15.247(a)(1)/RSS-210A8.1(a)
Test Distance : -
Date : November 6, 2007
Temperature : 25 deg.C.
Humidity : 47 %
Engineer : Tomotaka Sasagawa

Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	0.960	-
Mid	2441.0	0.960	-
High	2480.0	0.965	-
Inquiry	2441.0	0.840	-

20dB Bandwidth



Number of Hopping Frequency

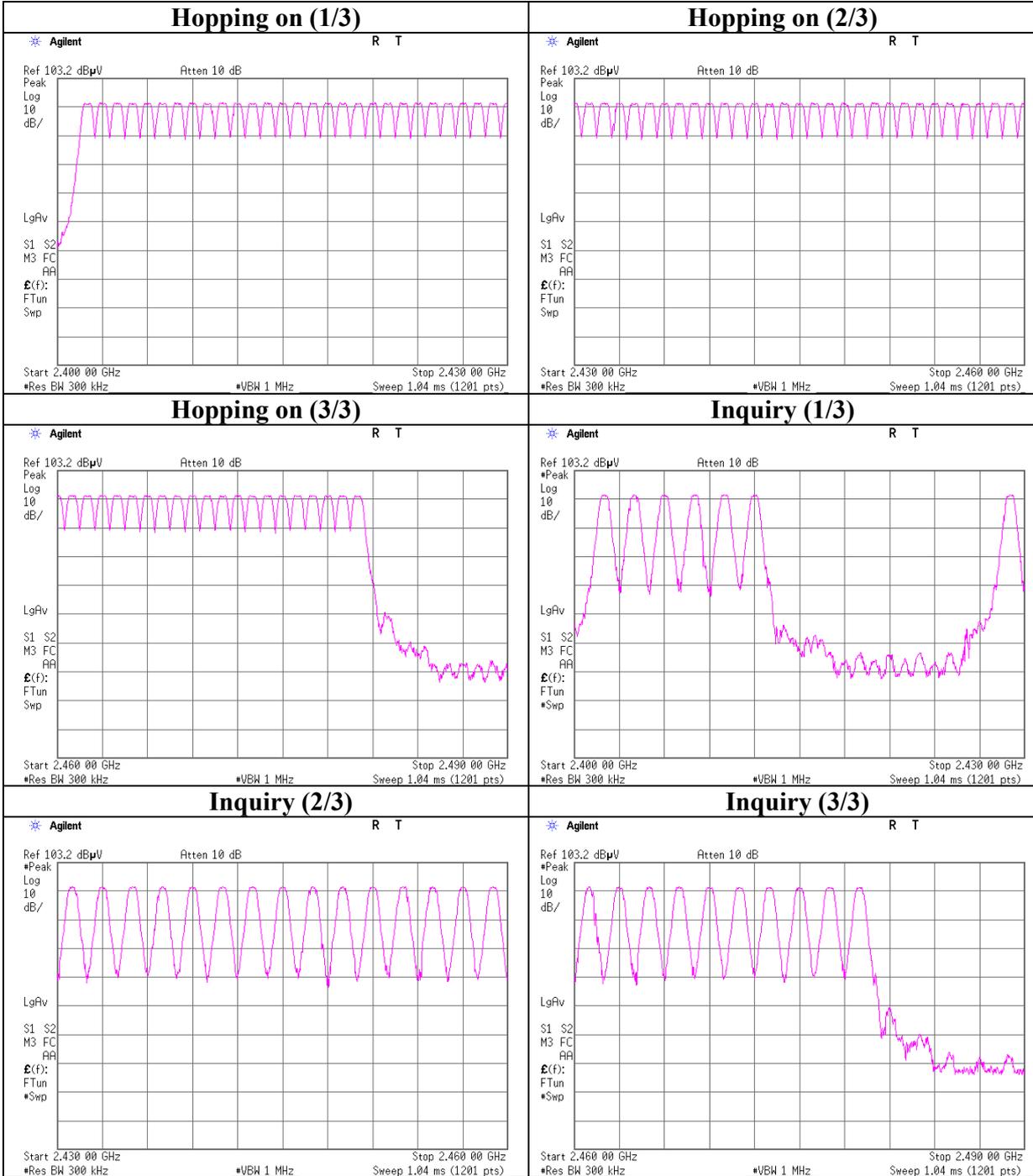
Company : Sony Corporation
Equipment : Compact Disc Receiver
Model : HCD-BX50BTi
S/N : 01155
Power : AC 120V / 60Hz
Mode : Test mode (Bluetooth Tx, PRBS9, DH5)
Tx (Hopping on) /Inquiry

UL Japan, Inc.
Head Office EMC Lab. No.6 Shield Room
Regulation : FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
Test Distance : -
Date : November 6, 2007
Temperature : 25 deg.C.
Humidity : 47 %
Engineer : Tomotaka Sasagawa

Mode	Number of channel [number]	Limit [time]
Tx(Hopping on)	79	≥ 15

Mode	Number of channel [number]	Limit [time]
Inquiry	32	≥ 15

Number of Hopping Frequency



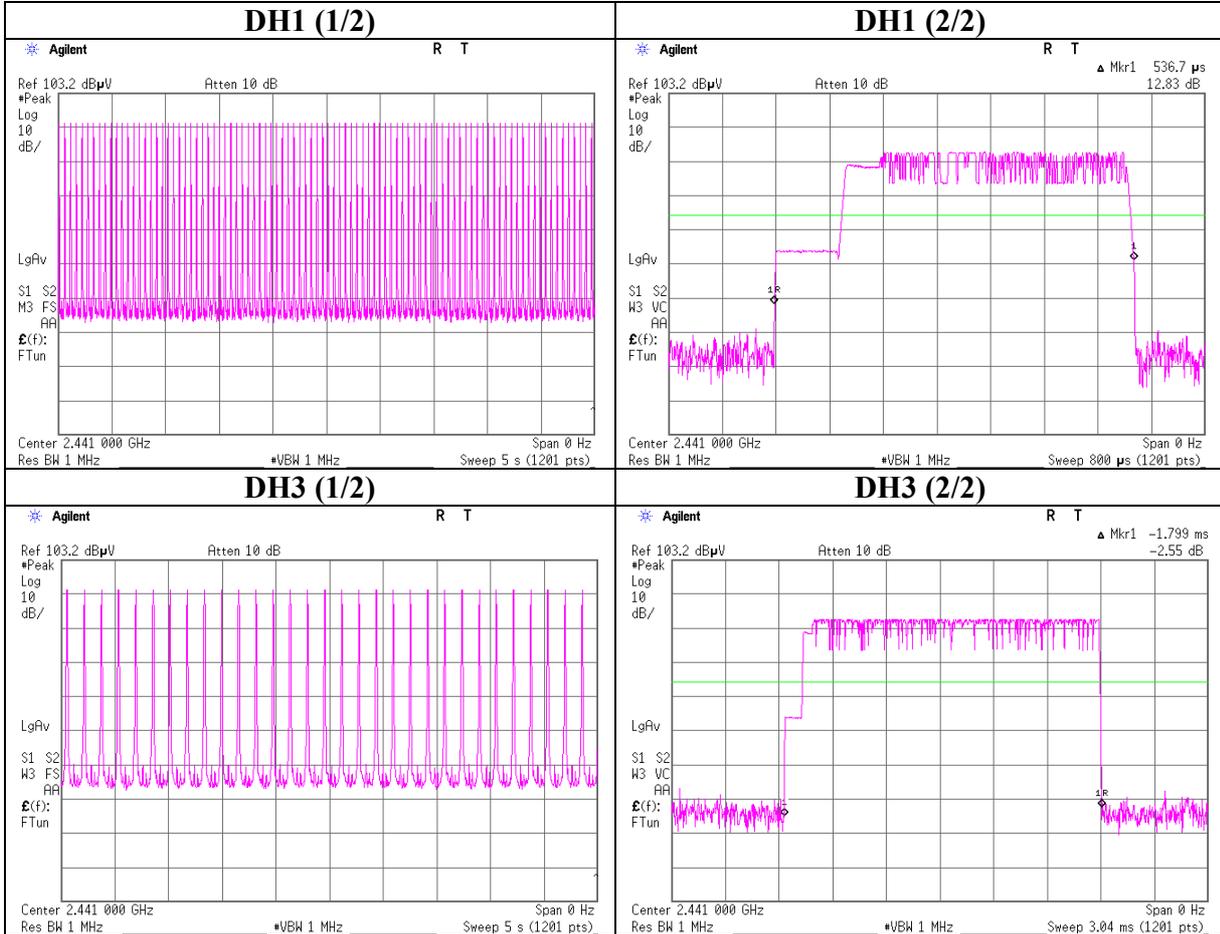
Dwell time

Company : Sony Corporation
Equipment : Compact Disc Receiver
Model : HCD-BX50BTi
S/N : 01155
Power : AC 120V / 60Hz
Mode : Test mode (Bluetooth Tx, PRBS9, DH5)
Tx (Hopping on) /Inquiry

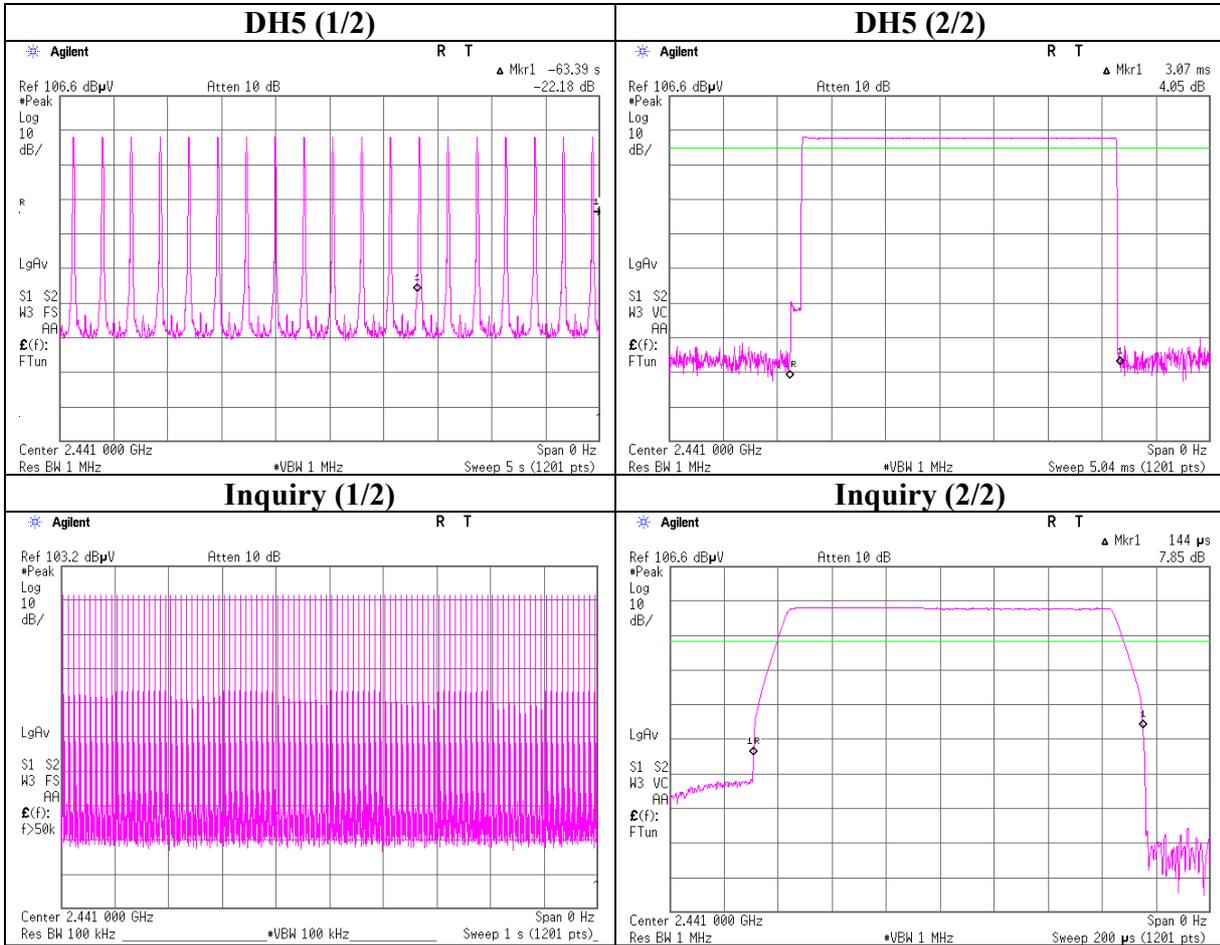
UL Japan, Inc.
Head Office EMC Lab. No.6 Shield Room
Regulation : FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
Test Distance : -
Date : November 6, 2007
Temperature : 25 deg.C.
Humidity : 47 %
Engineer : Tomotaka Sasagawa

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period				Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	51 times / 5 sec. x	31.6 sec. =	323 times		0.537	173	400
DH3	31 times / 5 sec. x	31.6 sec. =	196 times		1.799	353	400
DH5	19 times / 5 sec. x	31.6 sec. =	121 times		3.070	371	400
Inquiry	101 times / 1 sec. x	12.8 sec. =	1293 times		0.144	186	400

Dwell time



Dwell time



Maximum Peak Output Power

Company : Sony Corporation
Equipment : Compact Disc Receiver
Model : HCD-BX50BTi
S/N : 01155
Power : AC 120V / 60Hz
Mode : Test mode (Bluetooth Tx, PRBS9, DH5)
Tx(Hopping Off)/Inquiry

UL Japan, Inc.
Head Office EMC Lab. No.6 Shield Room
Regulation : FCC15.247(b)(1)/RSS-210A8.4(2)
Test Distance : -
Date : November 6, 2007
Temperature : 25 deg.C.
Humidity : 47 %
Engineer : Tomotaka Sasagawa

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-12.30	0.55	10.12	-1.63	0.69	20.97	125	22.60
Mid	2441.0	-12.21	0.56	10.14	-1.51	0.71	20.97	125	22.48
High	2480.0	-12.40	0.56	10.15	-1.69	0.68	20.97	125	22.66
Inquiry	2441.0	-12.27	0.56	10.14	-1.57	0.70	20.97	125	22.54

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer)+ Attenuator

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

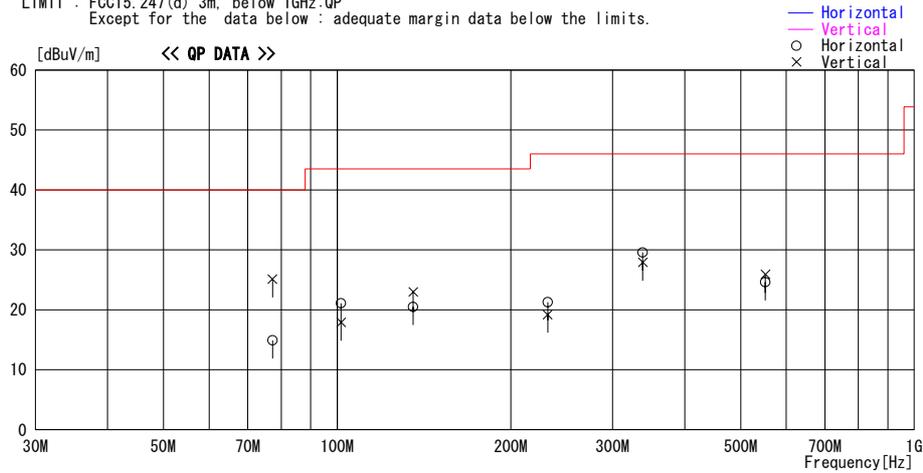
Radiated Spurious Emission (below 1GHz)
Tx, Bluetooth, Low ch
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/11/05

Company : Sony Corporation
Kind of EUT : Compact Disc Receiver
Model No. : HCD-BX50BTi
Serial No. : 01155
Report No. : 28CE0262-H0
Power : AC 120V / 60Hz
Temp./Humi. : 25deg. C / 51%
Operator : Kenichi Adachi

Mode / Remarks : Test mode (Bluetooth Tx 2402MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
77.233	30.0	QP	6.4	-21.5	14.9	247	221	Hori.	40.0	25.1	
77.233	40.2	QP	6.4	-21.5	25.1	183	100	Vert.	40.0	14.9	
101.551	32.2	QP	10.1	-21.2	21.1	185	293	Hori.	43.5	22.4	
101.551	29.0	QP	10.1	-21.2	17.9	0	100	Vert.	43.5	25.6	
135.402	27.6	QP	13.7	-20.8	20.5	87	211	Hori.	43.5	23.0	
135.402	30.1	QP	13.7	-20.8	23.0	91	100	Vert.	43.5	20.5	
231.612	24.0	QP	16.9	-19.6	21.3	0	141	Hori.	46.0	24.7	
231.615	21.9	QP	16.9	-19.6	19.2	267	100	Vert.	46.0	26.8	
338.500	33.1	QP	15.6	-19.1	29.6	9	100	Hori.	46.0	16.4	
338.500	31.4	QP	15.6	-19.1	27.9	110	157	Vert.	46.0	18.1	
552.000	25.5	QP	18.4	-19.3	24.6	0	289	Hori.	46.0	21.4	
552.000	26.8	QP	18.4	-19.3	25.9	297	100	Vert.	46.0	20.1	

CHART: WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

*The test result is rounded off to one or two decimal places, so some differences might be observed.

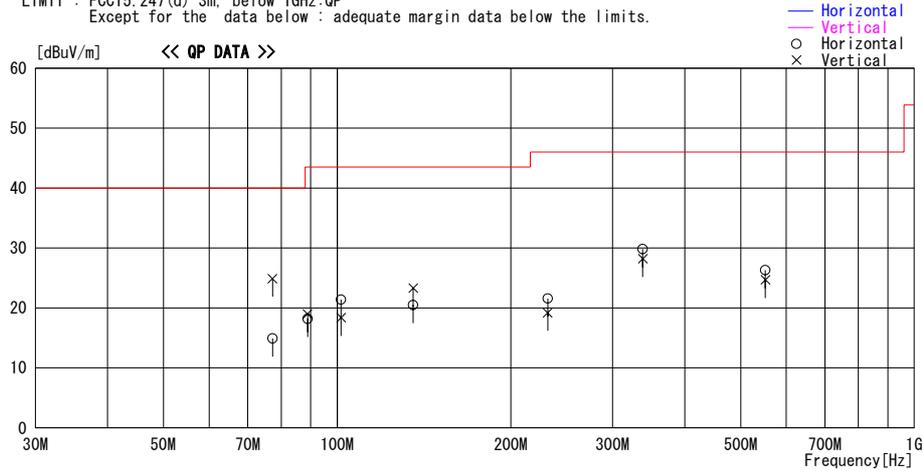
Radiated Spurious Emission (below 1GHz)
Tx, Bluetooth, Mid ch
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/11/05

Company : Sony Corporation
Kind of EUT : Compact Disc Receiver
Model No. : HCD-BX50BTi
Serial No. : 01155
Report No. : 28CE0262-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg.C / 51%
Operator : Kenichi Adachi

Mode / Remarks : Test mode (Bluetooth Tx 2441MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
77.234	30.0	QP	6.4	-21.5	14.9	235	222	Hori.	40.0	25.1	
77.234	40.0	QP	6.4	-21.5	24.9	180	100	Vert.	40.0	15.1	
88.864	31.6	QP	8.0	-21.4	18.2	171	205	Hori.	43.5	25.3	
88.864	32.4	QP	8.0	-21.4	19.0	230	100	Vert.	43.5	24.5	
101.551	32.5	QP	10.1	-21.2	21.4	178	294	Hori.	43.5	22.1	
101.551	29.5	QP	10.1	-21.2	18.4	180	100	Vert.	43.5	25.1	
135.403	27.6	QP	13.7	-20.8	20.5	88	211	Hori.	43.5	23.0	
135.403	30.4	QP	13.7	-20.8	23.3	92	100	Vert.	43.5	20.2	
231.611	24.3	QP	16.9	-19.6	21.6	0	139	Hori.	46.0	24.4	
231.611	21.9	QP	16.9	-19.6	19.2	249	100	Vert.	46.0	26.8	
338.500	33.3	QP	15.6	-19.1	29.8	8	100	Hori.	46.0	16.2	
338.500	31.7	QP	15.6	-19.1	28.2	115	160	Vert.	46.0	17.8	
552.000	27.2	QP	18.4	-19.3	26.3	290	100	Hori.	46.0	19.7	
552.000	25.6	QP	18.4	-19.3	24.7	0	291	Vert.	46.0	21.3	

CHART: WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)
*The test result is round off to one or two decimal places, so some differences might be observed.

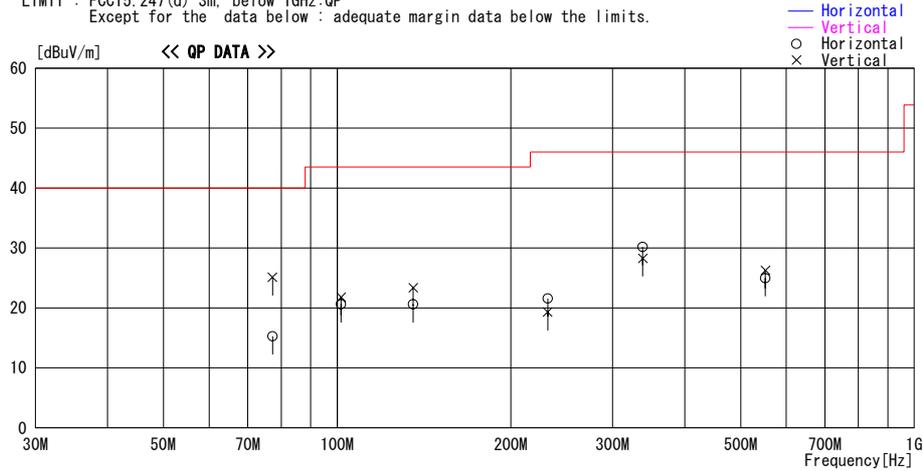
Radiated Spurious Emission (below 1GHz)
Tx, Bluetooth, High ch
DATA OF RADIATED EMISSION TEST

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Company : Sony Corporation
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Model No. : HCD-BX50BTi
Serial No. : 01155
Report No. : 28CE0262-HO
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Temp./Humi. : 25deg.C / 51%
Operator : Kenichi Adachi

Mode / Remarks : Test mode (Bluetooth Tx 2480MHz, PRBS9, DH5, EUT-axis:Normal)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
77.231	30.4	QP	6.4	-21.5	15.3	238	216	Hori.	40.0	24.7	
77.231	40.2	QP	6.4	-21.5	25.1	179	100	Vert.	40.0	14.9	
101.553	31.7	QP	10.1	-21.2	20.6	180	293	Hori.	43.5	22.9	
101.553	32.9	QP	10.1	-21.2	21.8	183	100	Vert.	43.5	21.7	
135.400	27.7	QP	13.7	-20.8	20.6	90	208	Hori.	43.5	22.9	
135.400	30.5	QP	13.7	-20.8	23.4	88	100	Vert.	43.5	20.1	
231.612	24.3	QP	16.9	-19.6	21.6	0	136	Hori.	46.0	24.4	
231.612	22.0	QP	16.9	-19.6	19.3	256	100	Vert.	46.0	26.7	
338.500	33.7	QP	15.6	-19.1	30.2	3	100	Hori.	46.0	15.8	
338.500	31.8	QP	15.6	-19.1	28.3	110	155	Vert.	46.0	17.7	
552.000	25.9	QP	18.4	-19.3	25.0	0	289	Hori.	46.0	21.0	
552.000	27.2	QP	18.4	-19.3	26.3	289	100	Vert.	46.0	19.7	

CHART: WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)
*The test result is round off to one or two decimal places, so some differences might be observed.

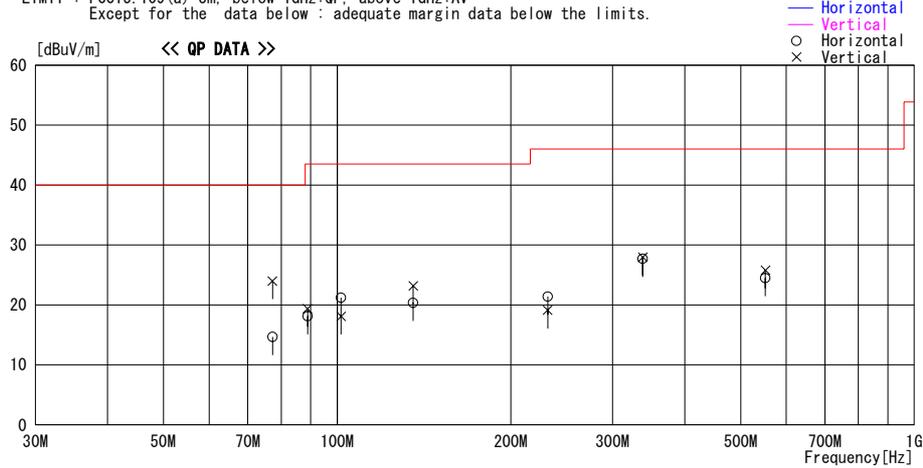
Radiated Spurious Emission (below 1GHz)
Rx, Bluetooth, Mid ch
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/11/05

Company : Sony Corporation
Kind of EUT : Compact Disc Receiver
Model No. : HCD-BX50BTI
Serial No. : 01155
Report No. : 28CE0262-HO
Power : AC 120V / 60Hz
Temp./Humi. : 25deg.C / 51%
Operator : Kenichi Adachi

Mode / Remarks : Test mode (Bluetooth Rx 2441MHz, EUT-axis:Normal)

LIMIT : FCC15.109(a) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Loss& Gain [dB]							
77.233	29.8	QP	6.4	-21.5	14.7	250	219	Hori.	40.0	25.3	
77.233	39.1	QP	6.4	-21.5	24.0	181	100	Vert.	40.0	16.0	
88.861	31.5	QP	8.0	-21.4	18.1	168	208	Hori.	43.5	25.4	
88.861	32.8	QP	8.0	-21.4	19.4	236	100	Vert.	43.5	24.1	
101.552	32.3	QP	10.1	-21.2	21.2	182	291	Hori.	43.5	22.3	
101.552	29.2	QP	10.1	-21.2	18.1	0	100	Vert.	43.5	25.4	
135.407	27.5	QP	13.7	-20.8	20.4	84	212	Hori.	43.5	23.1	
135.407	30.3	QP	13.7	-20.8	23.2	89	100	Vert.	43.5	20.3	
231.614	24.1	QP	16.9	-19.6	21.4	0	138	Hori.	46.0	24.6	
231.621	21.8	QP	16.9	-19.6	19.1	253	100	Vert.	46.0	26.9	
338.500	31.2	QP	15.6	-19.1	27.7	10	100	Hori.	46.0	18.3	
338.500	31.5	QP	15.6	-19.1	28.0	117	158	Vert.	46.0	18.0	
552.000	25.4	QP	18.4	-19.3	24.5	0	293	Hori.	46.0	21.5	
552.000	26.7	QP	18.4	-19.3	25.8	291	100	Vert.	46.0	20.2	

CHART: WITH FACTOR ANT TYPE: -30MHz: LOOP, 30-300MHz: BICONICAL, 300MHz-1000MHz: LOGPERIODIC, 1000MHz-: HORN
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)
*The test result is round off to one or two decimal places, so some differences might be observed.

Radiated Spurious Emission (above 1GHz)
Tx, Bluetooth, Low ch

Company : Sony Corporation
Equipment : Compact Disc Receiver
Model : HCD-BX50BTi
S/N : 01155
Power : AC 120V / 60Hz
Mode : Test mode (Bluetooth Tx 2402MHz, PRBS9, DH5)
Position : Normal-axis

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.247(d) / RSS-210 A8.5
Test Distance : 3m (below 10GHz) / 1m (above10GHz)
Date : November 5, 2007
Temperature : 23 deg.C.
Humidity : 51 %
Engineer : Kenichi Adachi

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	1602.02	51.4	53.4	26.0	32.8	2.9	0.0	-	47.5	49.5	73.9	26.4	24.4
2	2385.93	54.7	47.5	27.1	32.5	3.6	0.0	-	52.9	45.7	73.9	21.0	28.2
3	2390.00	49.1	43.1	27.1	32.5	3.6	0.0	-	47.3	41.3	73.9	26.6	32.6
4**	2400.00	69.4	58.6	27.1	32.5	3.6	0.0	-	67.6	56.8	73.9	-	-
5	4804.00	42.2	42.0	31.3	31.4	4.8	0.5	-	47.4	47.2	73.9	26.5	26.7
6	7206.00	43.1	43.2	35.7	31.0	5.4	0.6	-	53.8	53.9	73.9	20.1	20.0
7	9608.00	42.8	42.6	38.5	31.4	6.4	0.8	-	57.1	56.9	73.9	16.8	17.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
8	12010.00	-	-	39.1	30.6	7.3	0.0	-	-	-	73.9	-	-
9	14412.00	-	-	40.9	29.6	7.8	0.0	-	-	-	73.9	-	-
10	16814.00	45.7	45.5	39.5	29.7	8.4	0.0	-	54.4	54.2	73.9	19.5	19.7
11	19216.00	-	-	39.7	29.3	8.2	0.0	-	-	-	73.9	-	-
12	21618.00	-	-	40.4	30.0	9.9	0.0	-	-	-	73.9	-	-
13	24020.00	46.0	45.9	40.6	29.9	10.1	0.0	-	57.3	57.2	73.9	16.6	16.7

** Reference data

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	1602.02	46.8	49.7	26.0	32.8	2.9	0.0	-	42.9	45.8	53.9	11.0	8.1
2	2385.93	46.5	37.5	27.1	32.5	3.6	0.0	-	44.7	35.7	53.9	9.2	18.2
3	2390.00	37.4	31.5	27.1	32.5	3.6	0.0	-	35.6	29.7	53.9	18.3	24.2
4**	2400.00	55.2	45.3	27.1	32.5	3.6	0.0	-	53.4	43.5	53.9	-	-
5	4804.00	29.8	29.8	31.3	31.4	4.8	0.5	-	35.0	35.0	53.9	18.9	18.9
6	7206.00	30.5	30.4	35.7	31.0	5.4	0.6	-	41.2	41.1	53.9	12.7	12.8
7	9608.00	30.7	30.6	38.5	31.4	6.4	0.8	-	45.0	44.9	53.9	8.9	9.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
8	12010.00	-	-	39.1	30.6	7.3	0.0	-	-	-	53.9	-	-
9	14412.00	-	-	40.9	29.6	7.8	0.0	-	-	-	53.9	-	-
10	16814.00	31.4	31.4	39.5	29.7	8.4	0.0	-	40.1	40.1	53.9	13.8	13.8
11	19216.00	-	-	39.7	29.3	8.2	0.0	-	-	-	53.9	-	-
12	21618.00	-	-	40.4	30.0	9.9	0.0	-	-	-	53.9	-	-
13	24020.00	33.8	33.7	40.6	29.9	10.1	0.0	-	45.1	45.0	53.9	8.8	8.9

** Reference data

20dBc (Fundamental) 2402.0 MHz (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
0	2402.00	105.2	94.6	27.1	32.5	3.6	0.0	-	103.4	92.8	-	-	-
4	2400.00	56.3	51.3	27.1	32.5	3.6	0.0	-	54.5	49.5	Funda-20dB	28.9	23.3

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB
*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

*In the frequency over the second harmonic, the noise from the EUT was not seen.The data above is its base noise.
*The limit is rounded down to one decimal place.
*The test result is round off to one or two decimal places, so some differences might be observed.

Radiated Spurious Emission (above 1GHz)
Tx, Bluetooth, Mid ch

Company :	Sony Corporation	UL Japan, Inc.	
Equipment :	Compact Disc Receiver	Head Office EMC Lab. No.2 Semi Anechoic Chamber	
Model :	HCD-BX50BTi	Regulation :	FCC15.247(d) / RSS-210 A8.5
S/N :	01155	Test Distance :	3m (below 10GHz) / 1m (above10GHz)
Power :	AC 120V / 60Hz	Date :	November 5, 2007
Mode :	Test mode (Bluetooth Tx 2441MHz, PRBS9, DH5)	Temperature :	23 deg.C.
Position :	Normal-axis	Humidity :	51 %
		Engineer :	Kenichi Adachi

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT [dBuV/m]		Limit PK [dBuV/m]	MARGIN [dB]	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1**	1627.98	52.2	54.2	26.0	32.8	2.9	0.0	-	48.3	50.3	73.9	-	-
2	4882.00	41.9	41.8	31.4	31.4	4.8	0.4	-	47.1	47.0	73.9	26.8	26.9
3	7323.00	42.4	42.3	36.0	31.0	5.5	0.6	-	53.5	53.4	73.9	20.4	20.5
4	9764.00	42.9	42.8	38.7	31.4	6.5	0.7	-	57.4	57.3	73.9	16.5	16.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12205.00	-	-	39.2	30.3	7.2	0.0	-	-	-	73.9	-	-
6	14646.00	-	-	40.5	29.8	7.9	0.0	-	-	-	73.9	-	-
7	17087.00	45.1	45.0	40.9	29.5	8.5	0.0	-	55.5	55.4	73.9	18.4	18.5
8	19528.00	-	-	39.8	29.6	9.3	0.0	-	-	-	73.9	-	-
9	21969.00	-	-	40.5	30.0	10.2	0.0	-	-	-	73.9	-	-
10	24410.00	45.2	45.0	40.7	30.0	10.3	0.0	-	56.7	56.5	73.9	17.2	17.4

** Reference data.

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT [dBuV/m]		Limit AV [dBuV/m]	MARGIN [dB]	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1**	1627.98	49.1	51.9	26.0	32.8	2.9	0.0	-	45.2	48.0	53.9	-	-
2	4882.00	29.5	29.5	31.4	31.4	4.8	0.4	-	34.7	34.7	53.9	19.2	19.2
3	7323.00	30.4	30.3	36.0	31.0	5.5	0.6	-	41.5	41.4	53.9	12.4	12.5
4	9764.00	30.7	30.6	38.7	31.4	6.5	0.7	-	45.2	45.1	53.9	8.7	8.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12205.00	-	-	39.2	30.3	7.2	0.0	-	-	-	53.9	-	-
6	14646.00	-	-	40.5	29.8	7.9	0.0	-	-	-	53.9	-	-
7	17087.00	32.3	32.2	40.9	29.5	8.5	0.0	-	42.7	42.6	53.9	11.2	11.3
8	19528.00	-	-	39.8	29.6	9.3	0.0	-	-	-	53.9	-	-
9	21969.00	-	-	40.5	30.0	10.2	0.0	-	-	-	53.9	-	-
10	24410.00	33.4	33.3	40.7	30.0	10.3	0.0	-	44.9	44.8	53.9	9.0	9.1

** Reference data.

20dBc (Fundamental) 2441.0 MHz (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT [dBuV/m]		Limit 20dBc [dBuV/m]	MARGIN [dB]	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
0	2441.00	106.6	94.6	27.2	32.5	3.7	0.0	-	105.0	93.0	-	-	-
1	1627.98	49.3	52.0	26.0	32.8	2.9	0.0	-	45.4	48.1	Funda-20dB	39.6	24.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

*In the frequency over the second harmonic, the noise from the EUT was not seen.The data above is its base noise.

*The limit is rounded down to one decimal place.

*The test result is round off to one or two decimal places, so some differences might be observed.

Radiated Spurious Emission (above 1GHz)

Tx, Bluetooth, High ch

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company :	Sony Corporation	Regulation :	FCC15.247(d) / RSS-210 A8.5
Equipment :	Compact Disc Receiver	Test Distance :	3m (below 10GHz) / 1m (above10GHz)
Model :	HCD-BX50BTi	Date :	November 5, 2007
S/N :	01155	Temperature :	23 deg.C.
Power :	AC 120V / 60Hz	Humidity :	51 %
Mode :	Test mode (Bluetooth Tx 2480MHz, PRBS9, DH5)	Engineer :	Kenichi Adachi
Position :	Normal-axis		

PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1**	1653.97	52.4	55.8	26.0	32.7	2.9	0.0	-	48.6	52.0	73.9	-	-
2	2483.50	60.7	50.0	27.2	32.5	3.7	0.0	-	59.1	48.4	73.9	14.8	25.5
3	4960.00	41.9	41.8	31.5	31.4	4.8	0.3	-	47.1	47.0	73.9	26.8	26.9
4	7440.00	42.8	42.9	36.2	31.0	5.5	0.6	-	54.1	54.2	73.9	19.8	19.7
5	9920.00	43.0	43.1	38.9	31.4	6.5	0.6	-	57.6	57.7	73.9	16.3	16.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
6	12400.00	-	-	39.2	30.1	7.3	0.0	-	-	-	73.9	-	-
7	14880.00	-	-	40.2	29.9	7.9	0.0	-	-	-	73.9	-	-
8	17360.00	45.0	45.1	43.6	29.6	8.6	0.0	-	58.1	58.2	73.9	15.8	15.7
9	19840.00	-	-	39.8	29.8	9.4	0.0	-	-	-	73.9	-	-
10	22320.00	-	-	40.7	30.0	10.2	0.0	-	-	-	73.9	-	-
11	24800.00	45.6	45.7	40.8	30.1	10.6	0.0	-	57.4	57.5	73.9	16.5	16.4

** Reference data

AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1**	1653.97	49.3	52.8	26.0	32.7	2.9	0.0	-	45.5	49.0	53.9	-	-
2	2483.50	47.7	39.0	27.2	32.5	3.7	0.0	-	46.1	37.4	53.9	7.8	16.5
3	4960.00	29.6	29.7	31.5	31.4	4.8	0.3	-	34.8	34.9	53.9	19.1	19.0
4	7440.00	30.6	30.6	36.2	31.0	5.5	0.6	-	41.9	41.9	53.9	12.0	12.0
5	9920.00	30.7	30.6	38.9	31.4	6.5	0.6	-	45.3	45.2	53.9	8.6	8.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
6	12400.00	-	-	39.2	30.1	7.3	0.0	-	-	-	53.9	-	-
7	14880.00	-	-	40.2	29.9	7.9	0.0	-	-	-	53.9	-	-
8	17360.00	32.4	32.5	43.6	29.6	8.6	0.0	-	45.5	45.6	53.9	8.4	8.3
9	19840.00	-	-	39.8	29.8	9.4	0.0	-	-	-	53.9	-	-
10	22320.00	-	-	40.7	30.0	10.2	0.0	-	-	-	53.9	-	-
11	24800.00	33.6	33.6	40.8	30.1	10.6	0.0	-	45.4	45.4	53.9	8.5	8.5

** Reference data

20dBc (Fundamental 2480.0 MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	Dwell Factor [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
0	2480.00	106.8	95.7	27.2	32.5	3.7	0.0	-	105.2	94.1	-	-	-
1	1653.97	50.2	53.0	26.0	32.7	2.9	0.0	-	46.4	49.2	Funda-20dB	38.8	24.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

*In the frequency over the second harmonic, the noise from the EUT was not seen. The data above is its base noise.

*The limit is rounded down to one decimal place.

*The test result is round off to one or two decimal places, so some differences might be observed.

UL Japan, Inc.

Head Office EMC Lab.

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Radiated Spurious Emission (above 1GHz)
Rx, Bluetooth, Mid ch

Company : Sony Corporation
Equipment : Compact Disc Receiver
Model : HCD-BX50BTi
S/N : 01155
Power : AC 120V / 60Hz
Mode : Test mode (Bluetooth Rx 2441MHz, PRBS9, DH5)
Position : Normal-axis

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber
Regulation : FCC15.109(a) / RSS-210 A8.5
Test Distance : 3m
Date : November 5, 2007
Temperature : 23 deg.C.
Humidity : 51 %
Engineer : Kenichi Adachi

PK DETECT (Reference data) (RBW: 1MHz, VBW: 1MHz)

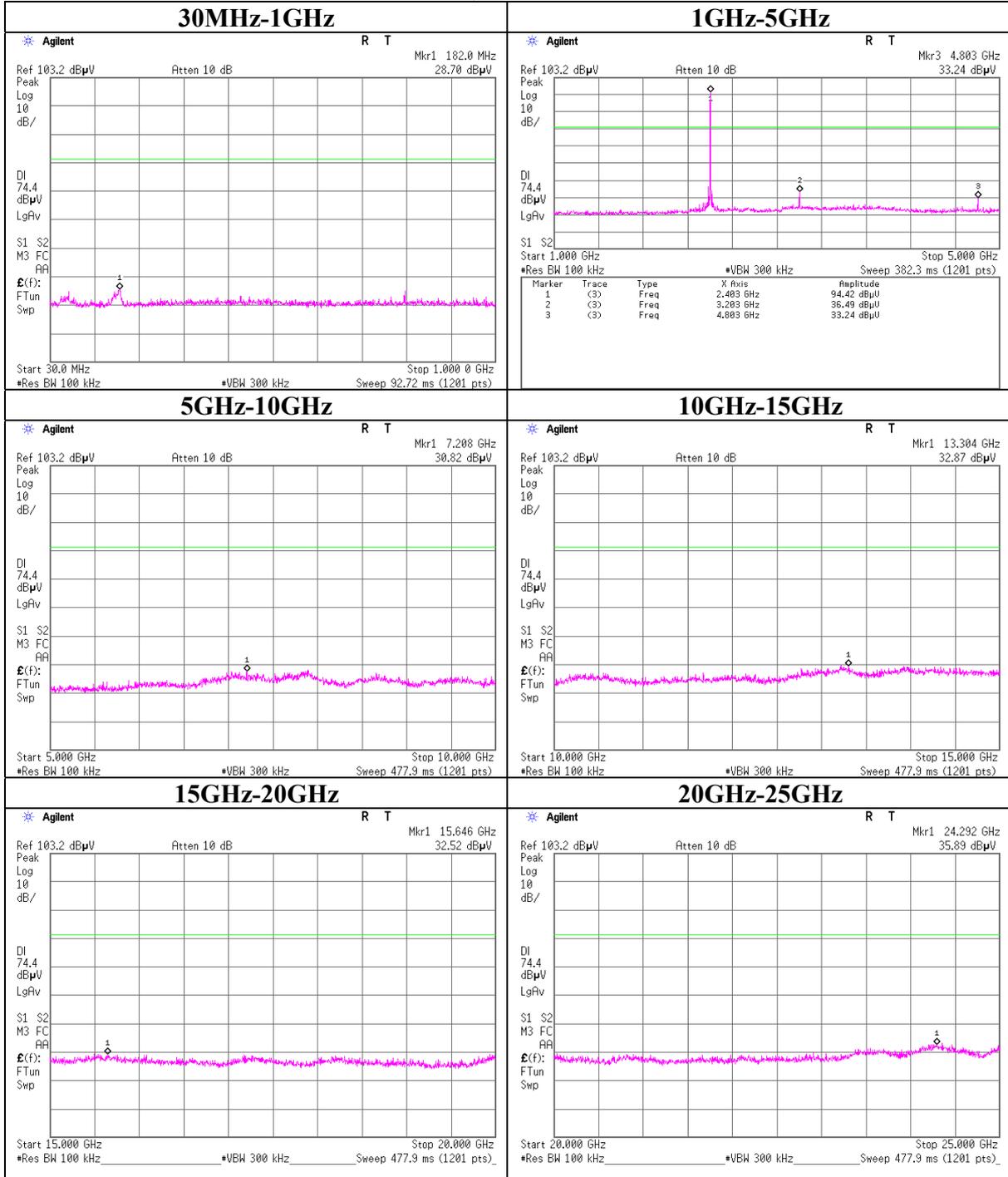
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV]	VER [dBuV]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1626.30	52.4	54.0	26.0	32.8	2.9	0.0	48.5	50.1	73.9	25.4	23.8
2	2441.00	44.9	45.0	27.2	32.5	3.7	0.0	43.3	43.4	73.9	30.6	30.5
3	7323.00	42.2	42.3	36.0	31.0	5.5	0.0	52.7	52.8	73.9	21.2	21.1

AV DETECT (RBW: 1MHz, VBW: 10Hz)

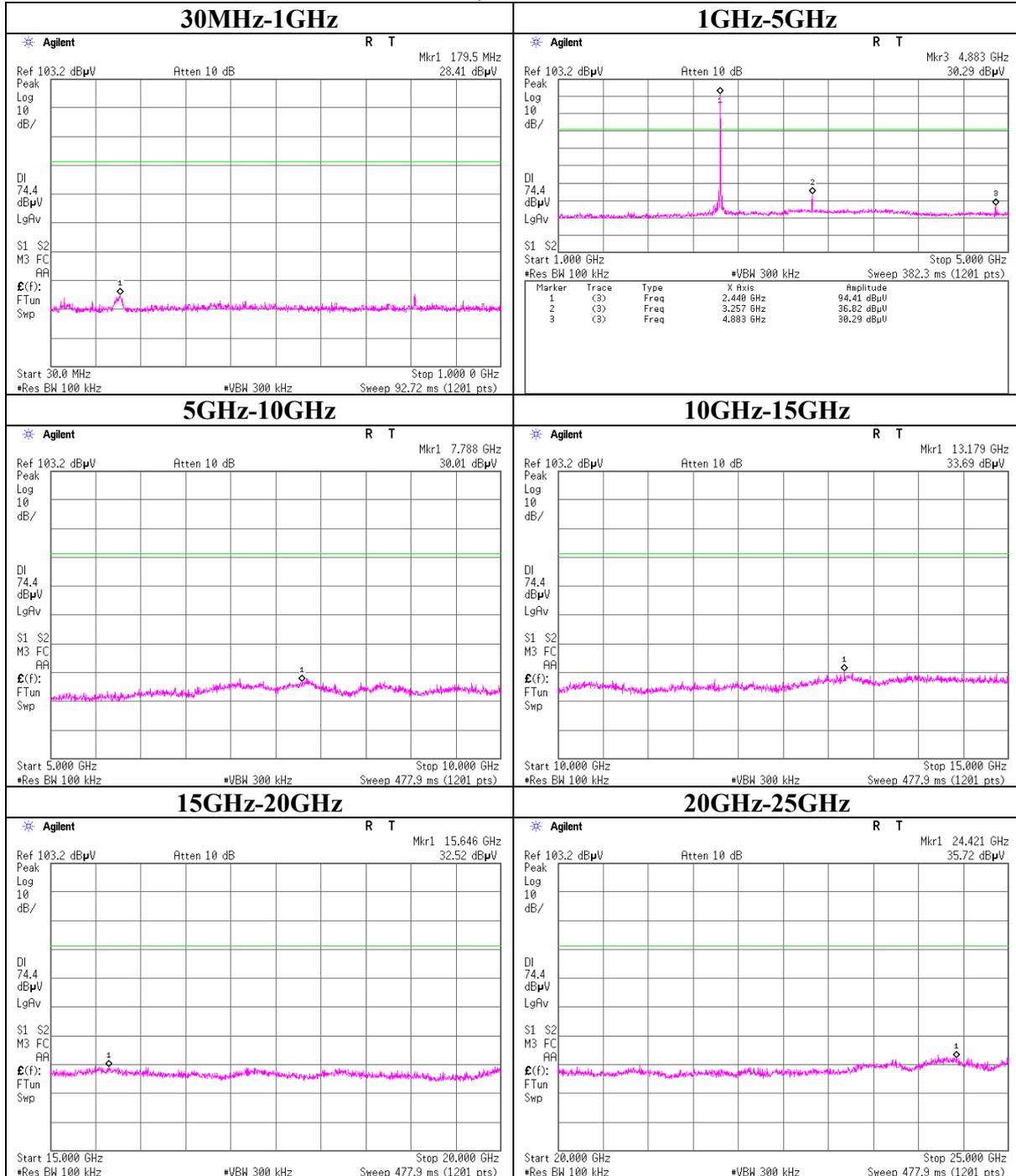
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV]	VER [dBuV]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1626.30	49.2	51.6	26.0	32.8	2.9	0.0	45.3	47.7	53.9	8.6	6.2
2	2441.00	30.8	30.9	27.2	32.5	3.7	0.0	29.2	29.3	53.9	24.7	24.6
3	7323.00	30.4	30.5	36.0	31.0	5.5	0.0	40.9	41.0	53.9	13.0	12.9

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Hi-Pass Filter was not used for factor 0.0dB of the above table.
*The limit is rounded down to one decimal place.
*The test result is round off to one or two decimal places, so some differences might be observed.

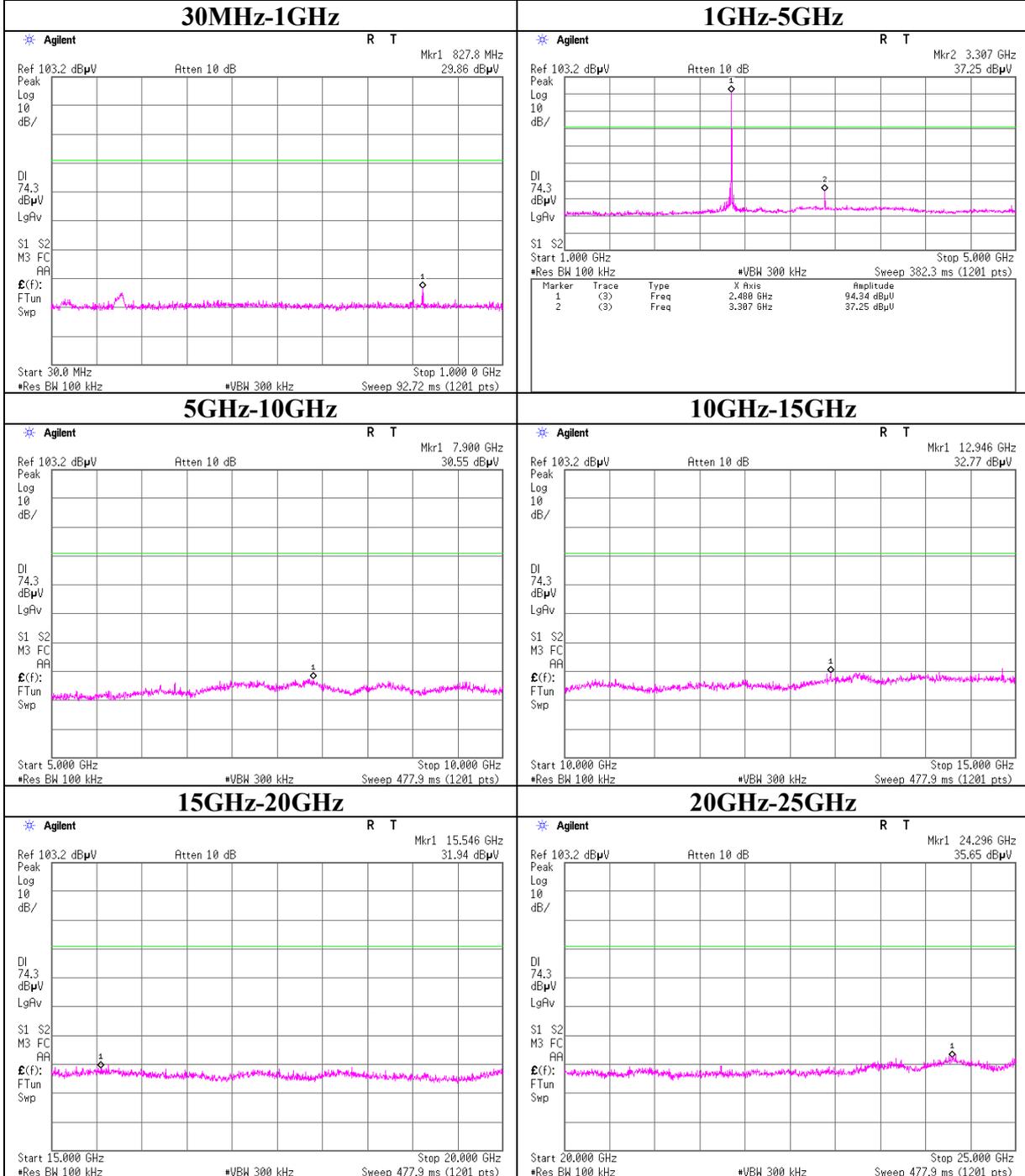
Conducted Spurious Emission
Tx, Ch:Low



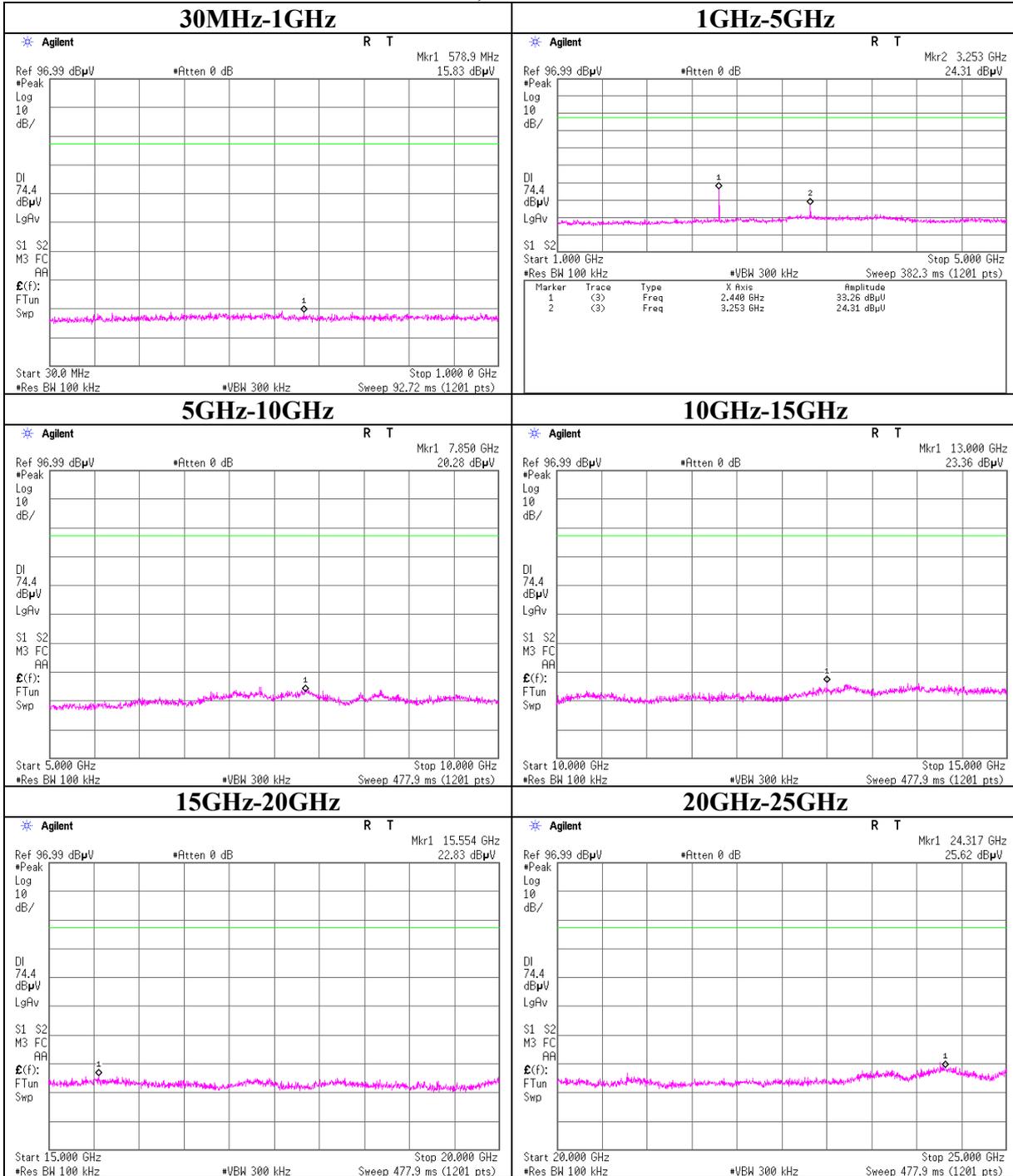
Conducted Spurious Emission
Tx, Ch:Mid



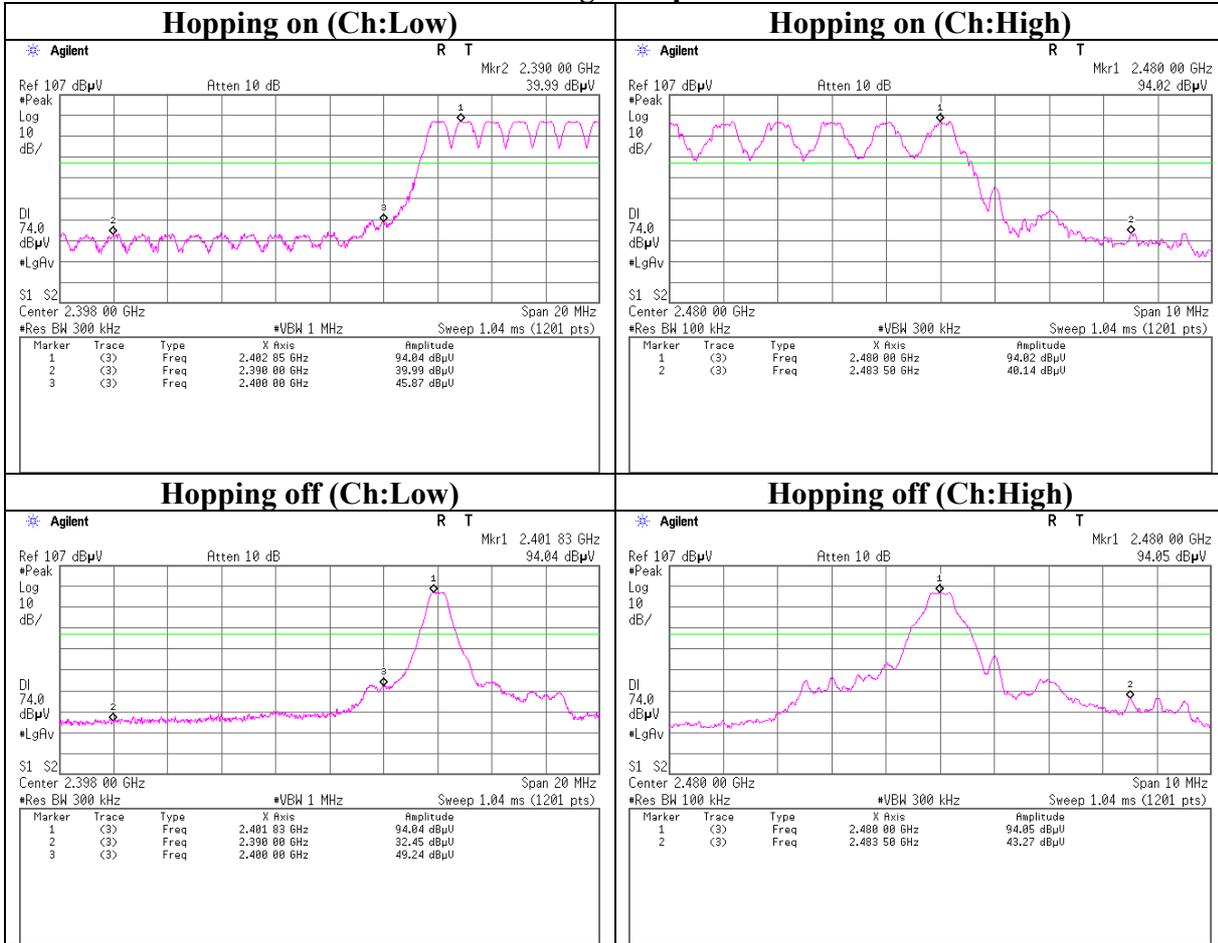
Conducted Spurious Emission
Tx, Ch:High



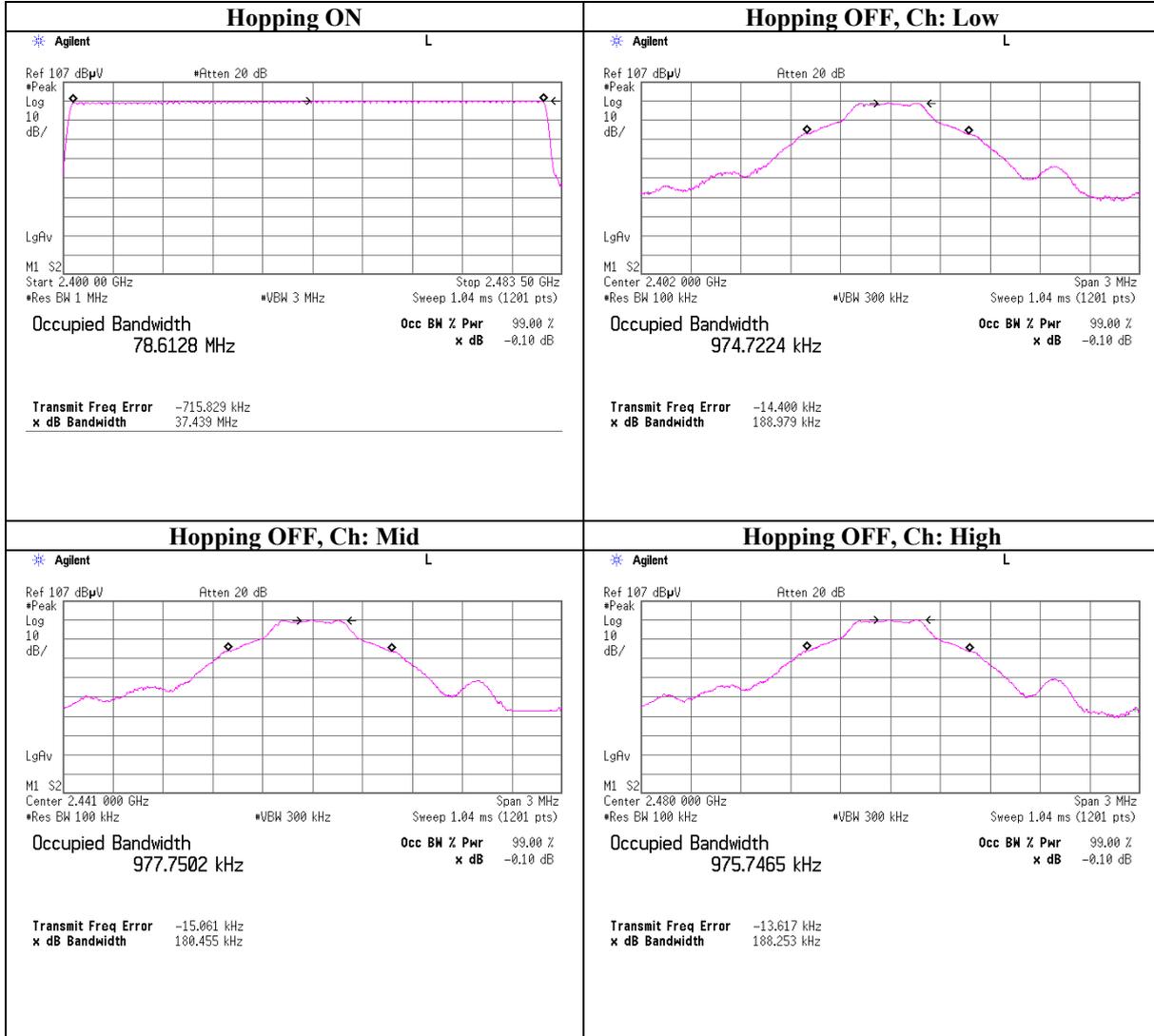
Conducted Spurious Emission
Rx, Ch:Mid



Conducted Spurious Emission Band Edge compliance



99% Occupied Bandwidth



*Refer to 20dB Bandwidth for 99% Occupied Bandwidth, inquiry mode

APPENDIX 3:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2007/04/02 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2007/06/20 * 12
MCC-25	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/08/27 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2007/09/27 * 12
MHF-06	High Pass Filter 3.5-24GHz	Tokimec	TF323DCA	RE	2007/05/30 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/08/28 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2007/01/30 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2007/01/30 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	RE	2007/03/01 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2007/02/27 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2007/09/13 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2006/12/27 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/10/21 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2007/10/21 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE / CE	-
MJM-05	Measure	PROMART	SEN1955	RE	-
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2006/11/27 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	AT	2007/07/04 * 12
MPM-08	Power Meter	Anritsu	ML2495A	AT	2007/09/12 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	AT	2007/09/12 * 12
MCC-65	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	AT	2007/04/03 * 12
MAT-22	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2007/03/07 * 12
MCC-37	Microwave Cable	Hirose Electric	U.FL-2LP-066-A-(200)	AT	2007/11/07 * 12
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	CE	2007/03/03 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	CE	2007/06/29 * 12
MCC-50	Coaxial cable	UL Japan	-	CE	2007/03/06 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	CE	2007/06/01 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	CE	2007/09/14 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	CE	2006/01/19 * 24
MJM-07	Measure	PROMART	SEN1955	CE	-

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

**Test Item: CE: Conducted Emission
RE: Radiated Emission
AT: Antenna Terminal Conducted test**

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