

APPENDIX 2: Data of EMI test

Conducted Emission

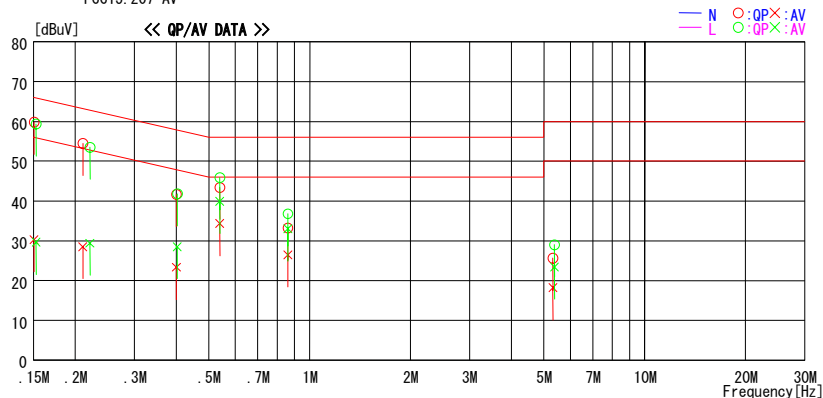
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64
Report No. : 28KE0141-HO
Power : AC120V / 60Hz
Temp./Humi. : 22deg.C / 68%
Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Tx 2405MHz

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]	
0.15055	59.7	30.2	0.1	59.8	30.3	66.0	56.0	6.2	25.7	N
0.21061	54.2	28.2	0.3	54.5	28.5	63.2	53.2	8.7	24.7	N
0.40051	41.3	23.0	0.3	41.6	23.3	57.8	47.8	16.2	24.5	N
0.53895	43.1	34.0	0.3	43.4	34.3	56.0	46.0	12.6	11.7	N
0.86121	32.9	26.1	0.3	33.2	26.4	56.0	46.0	22.8	19.6	N
5.31841	24.8	17.4	0.8	25.6	18.2	60.0	50.0	34.4	31.8	N
0.15265	59.2	29.5	0.1	59.3	29.6	65.9	55.9	6.6	26.3	L
0.22091	53.2	29.1	0.3	53.5	29.4	62.8	52.8	9.3	23.4	L
0.40281	41.5	28.2	0.3	41.8	28.5	57.8	47.8	16.0	19.3	L
0.53904	45.6	39.6	0.3	45.9	39.9	56.0	46.0	10.1	6.1	L
0.86173	36.5	32.7	0.3	36.8	33.0	56.0	46.0	19.2	13.0	L
5.37584	28.2	22.6	0.8	29.0	23.4	60.0	50.0	31.0	26.6	L

CHART:WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C. F[dB] (LISN+CABLE LOSS)
Except for the above table: adequate margin data below the limits.

*The test result is rounded 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 : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64

Report No. : 28KE0141-HO
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Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Tx 2405MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

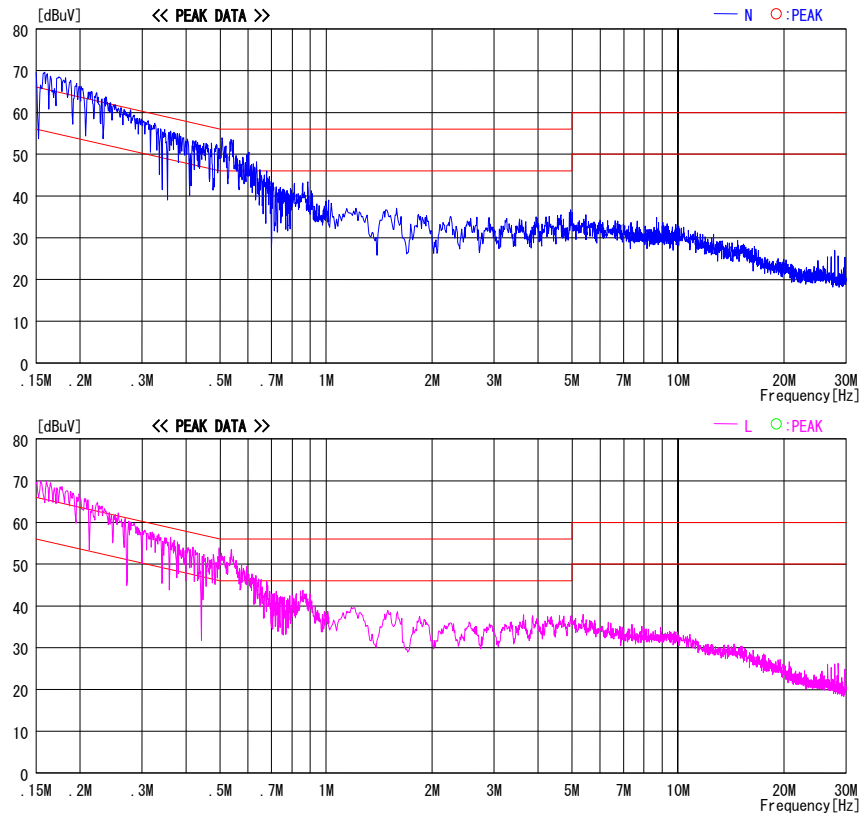


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN+CABLE LOSS)
Except for the above table: adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64

Report No. : 28KE0141-HO
Power : AC120V / 60Hz
Temp./Humi. : 22deg. C / 68%
Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Tx 2440MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

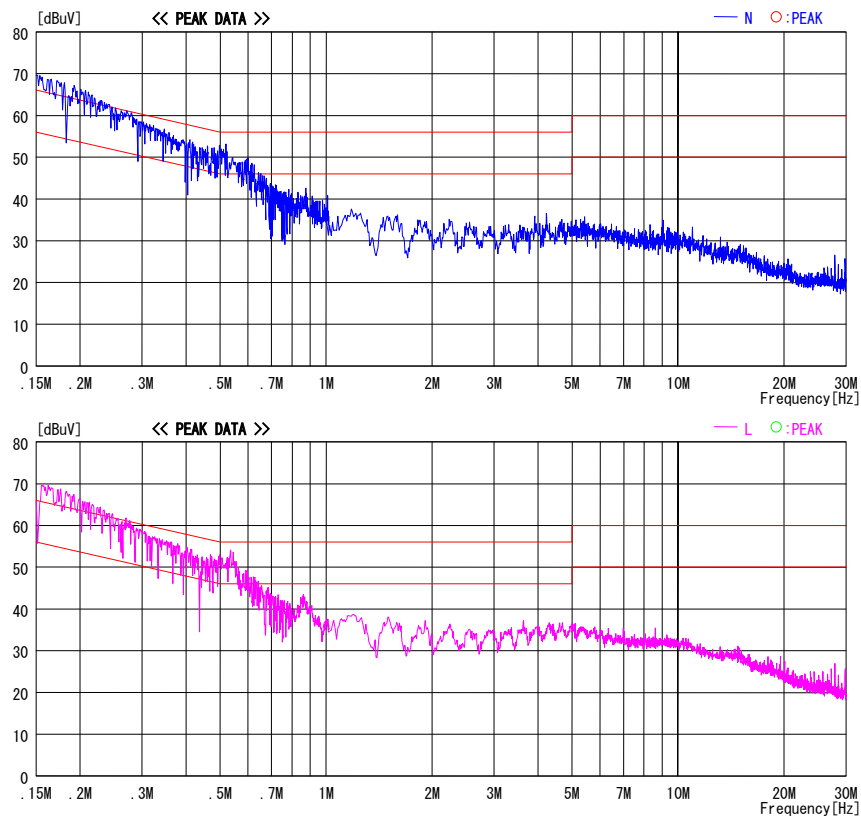


CHART: WITH FACTOR, Peak hold data. CALCURATION: RESULT [dBuV] = READING [dBuV] + C.F [dB] (LISN + CABLE LOSS)
Except for the above table: adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64

Report No. : 28KE0141-HO
Power : AC120V / 60Hz
Temp./Humi. : 22deg. C / 68%
Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Tx 2480MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

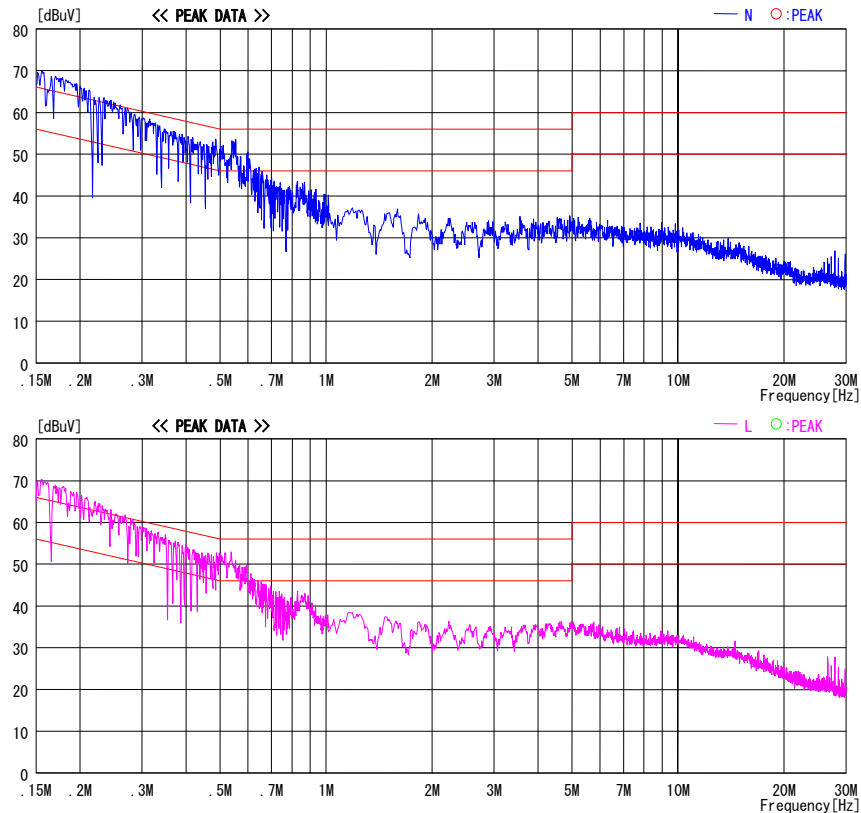


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C.F. [dB] (LISN + CABLE LOSS)
Except for the above table: adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation

Kind of EUT : Wireless Link

Model No. : DMX-WL1T (Transmitter Unit)

Serial No. : 64

Report No. : 28KE0141-HO

Power : AC120V / 60Hz

Temp./Humi. : 22deg. C / 68%

Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Rx 2440MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

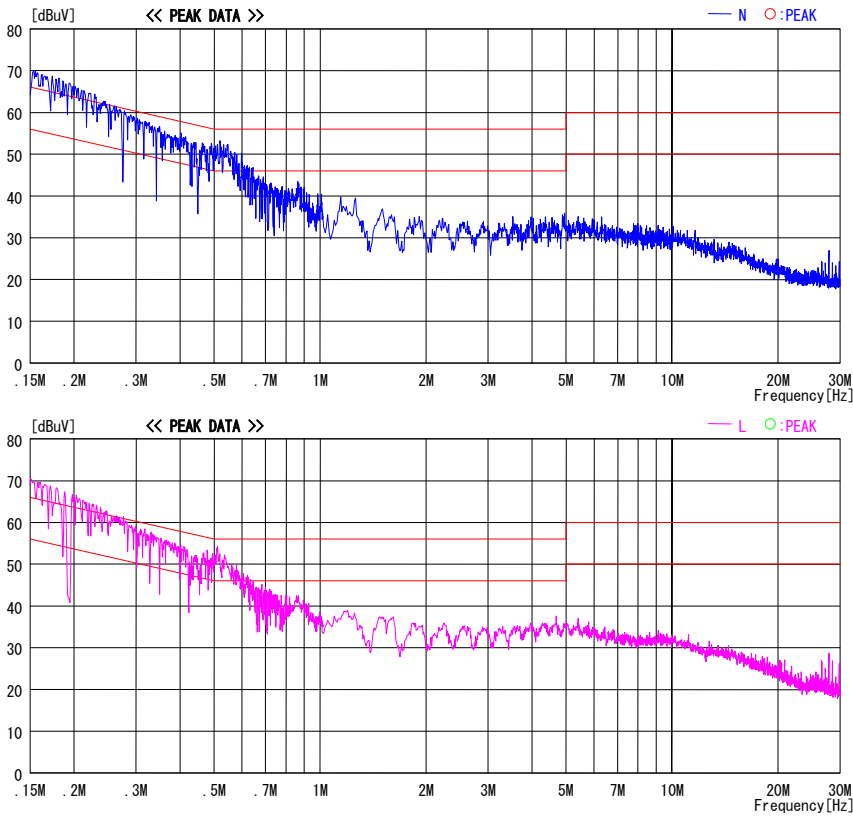


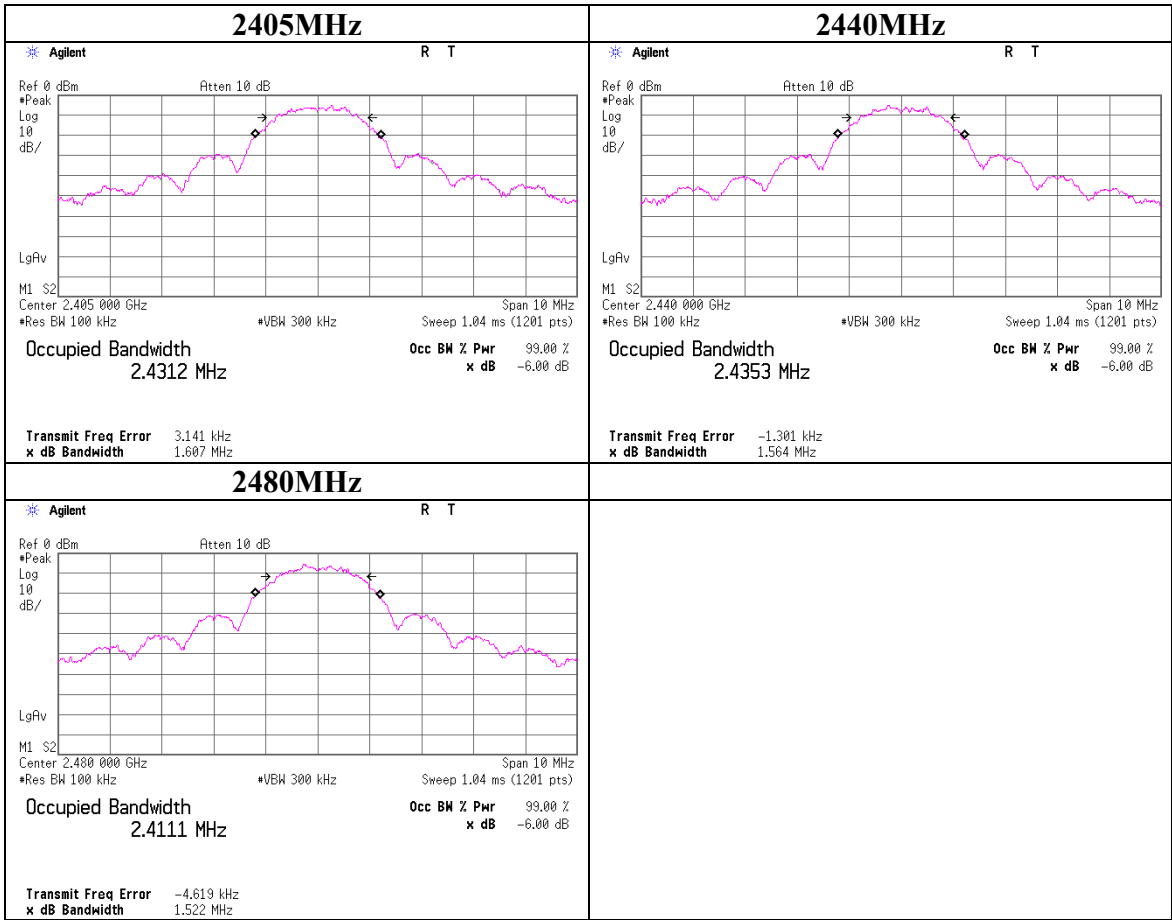
CHART: WITH FACTOR, Peak hold data. CALCURATION: RESULT [dBuV] = READING [dBuV] + C.F [dB] (LISN + CABLE LOSS)
Except for the above table: adequate margin data below the limits.

6dB Bandwidth

Company	Sony Corporation	UL Japan, Inc	
Equipment	Wireless Link	Head Office EMC Lab. No.6 measurement room	
Model	DMX-WL1T (Transmitter Unit)	Regulation	FCC Part15 Subpart C 15.247(a)(2) / RSS-210 A8.2(a)
S/N	11	Test Distance	-
Power	AC 120V / 60Hz	Date	06/25/2008
Mode	Zigbee Transmitting (Tx) mode	Temperature	24deg.C.
		Humidity	64%
		Engineer	Kazufumi Nakai

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2405.0	1.607	>500
Mid	2440.0	1.564	>500
High	2480.0	1.522	>500

6dB Bandwidth



Maximum Peak Output Power

Company	Sony Corporation	UL Japan, Inc	
Equipment	Wireless Link	Head Office EMC Lab. No.6 measurement room	
Model	DMX-WL1T (Transmitter Unit)	Regulation	FCC Part15 Subpart C 15.247(b)(3) / RSS-210 A8.4(4)
S/N	11	Test Distance	-
Power	AC 120V / 60Hz	Date	06/24/2008
Mode	Zigbee Transmitting (Tx) mode	Temperature	22deg.C.
		Humidity	61%
		Engineer	Kazufumi Nakai

Ch	Freq. [MHz]	P/M(PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Result [mW]	Limit 30dBm(1W) [dBm]	Margin [dB]
Low	2405.0	-11.03	1.02	10.08	0.07	1.02	30.00	29.93
Mid	2440.0	-11.13	1.03	10.08	-0.02	1.00	30.00	30.02
High	2480.0	-11.51	1.04	10.08	-0.39	0.91	30.00	30.39

Radiated Spurious Emission (below 1GHz)
Tx, Ch: Low

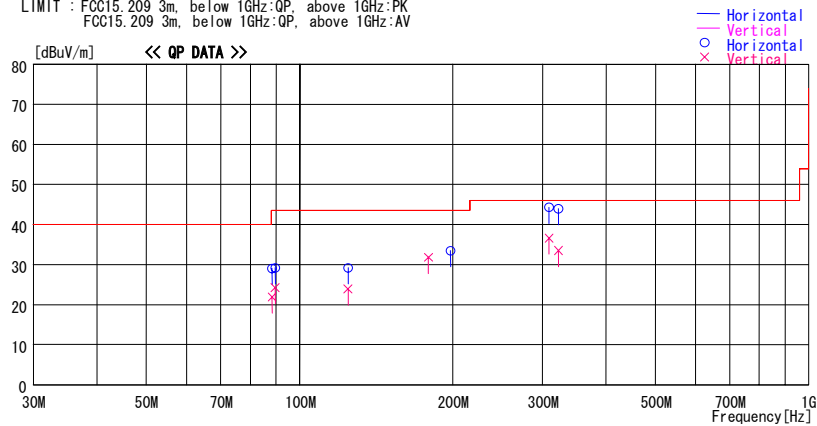
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64
Report No. : 28KE0141-HO
Power : AC 120V / 60Hz
Temp./Humi. : 22deg.C. / 68%
Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Tx 2405MHz, Worst-axis(Hor:X, Ver:Y)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK
FCC15.209 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
88.258	45.1	QP	7.9	-24.0	29.0	86	271	Hori.	43.5	14.5	
88.274	38.0	QP	7.9	-24.0	21.9	302	100	Vert.	43.5	21.6	
89.513	40.1	QP	8.1	-24.0	24.2	296	100	Vert.	43.5	19.3	
89.515	45.1	QP	8.1	-24.0	29.2	86	271	Hori.	43.5	14.3	
124.561	39.8	QP	13.0	-23.6	29.2	294	136	Hori.	43.5	14.3	
124.569	34.5	QP	13.0	-23.6	23.9	354	100	Vert.	43.5	19.6	
179.032	38.5	QP	16.5	-23.2	31.8	10	100	Vert.	43.5	11.7	
198.001	40.1	QP	16.4	-23.0	33.5	125	156	Hori.	43.5	10.0	
309.120	49.5	QP	16.8	-22.0	44.3	155	100	Hori.	46.0	1.7	
309.134	41.8	QP	16.8	-22.0	36.6	177	122	Vert.	46.0	9.4	
322.458	38.5	QP	17.0	-22.0	33.5	205	145	Vert.	46.0	12.5	
322.461	49.0	QP	17.0	-22.0	44.0	155	100	Hori.	46.0	2.0	

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, Ch: Mid

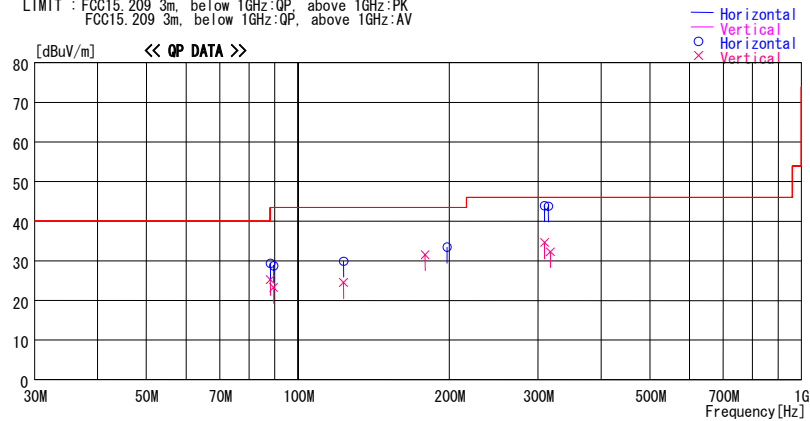
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation Report No. : 28KE0141-HO
Kind of EUT : Wireless Link Power : AC 120V / 60Hz
Model No. : DMX-WL1T (Transmitter Unit) Temp./Humi. : 22deg.C. / 68%
Serial No. : 64 Engineer : Kazutumi Nakai

Mode / Remarks: Zigbee Tx 2440MHz, Worst-axis(Hor:X, Ver:Y)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK
FCC15.209 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
88.256	41.4	QP	7.9	-24.0	25.3	322	156	Vert	43.5	18.2	
88.273	45.5	QP	7.9	-24.0	29.4	267	220	Hori	43.5	14.1	
89.508	44.7	QP	8.1	-24.0	28.8	276	215	Hori	43.5	14.7	
89.513	39.2	QP	8.1	-24.0	23.3	323	150	Vert	43.5	20.2	
123.312	35.2	QP	12.9	-23.6	24.5	349	100	Vert	43.5	19.0	
123.316	40.6	QP	12.9	-23.6	29.9	291	146	Hori	43.5	13.6	
179.031	38.3	QP	16.5	-23.2	31.6	3	100	Vert	43.5	11.9	
198.007	40.1	QP	16.4	-23.0	33.5	126	153	Hori	43.5	10.0	
309.152	49.1	QP	16.8	-22.0	43.9	68	100	Hori	46.0	2.1	
309.176	39.8	QP	16.8	-22.0	34.6	175	100	Vert	46.0	11.4	
314.245	48.9	QP	16.9	-22.0	43.8	70	100	Hori	46.0	2.2	
317.421	37.4	QP	16.9	-22.0	32.3	180	100	Vert	46.0	13.7	

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 rounded off to one or two decimal places, so some differences might be observed.

Radiated Spurious Emission (below 1GHz)
Tx, Ch: High

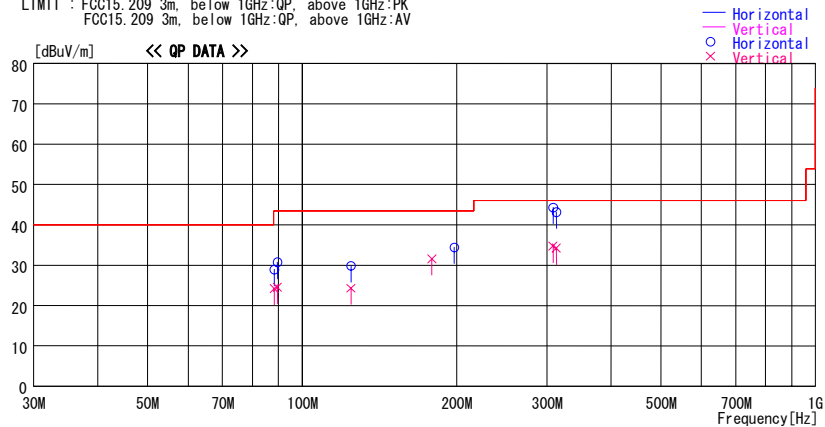
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64
Report No. : 28KE0141-HO
Power : AC 120V / 60Hz
Temp./Humi. : 22deg.C. / 68%
Engineer : Kazufumi Nakai

Mode / Remarks : Zigbee Tx 2480MHz, Worst-axis(Hor:X, Ver:Y)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK
FCC15.209 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
88.266	45.0	QP	7.9	-24.0	28.9	70	300	Hori.	43.5	14.6	
88.266	40.3	QP	7.9	-24.0	24.2	353	147	Vert.	43.5	19.3	
89.517	40.4	QP	8.1	-24.0	24.5	353	157	Vert.	43.5	19.0	
89.521	46.6	QP	8.1	-24.0	30.7	77	244	Hori.	43.5	12.8	
124.573	40.4	QP	13.0	-23.6	29.8	283	146	Hori.	43.5	13.7	
124.577	34.9	QP	13.0	-23.6	24.3	335	100	Vert.	43.5	19.2	
179.024	38.3	QP	16.5	-23.2	31.6	359	100	Vert.	43.5	11.9	
198.003	41.0	QP	16.4	-23.0	34.4	116	170	Hori.	43.5	9.1	
308.462	49.5	QP	16.8	-22.0	44.3	68	100	Hori.	46.0	1.7	
308.498	39.9	QP	16.8	-22.0	34.7	192	170	Vert.	46.0	11.3	
312.935	48.3	QP	16.9	-22.0	43.2	70	100	Hori.	46.0	2.8	
312.963	39.3	QP	16.9	-22.0	34.2	190	168	Vert.	46.0	11.8	

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)
Rx, Ch: Mid

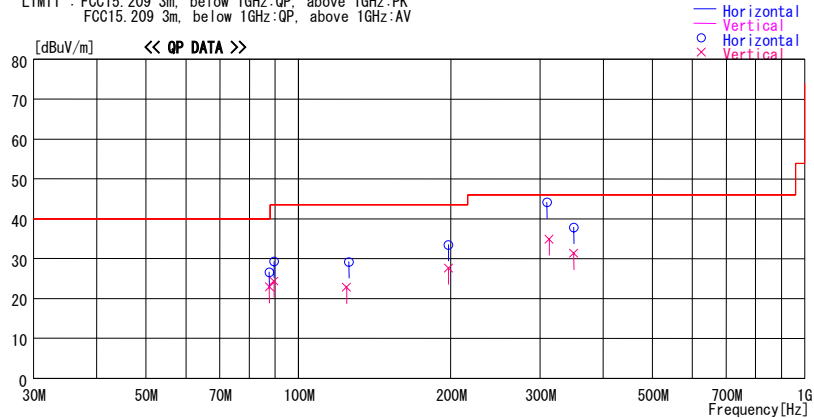
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2008/07/11

Company : Sony Corporation
Kind of EUT : Wireless Link
Model No. : DMX-WL1T (Transmitter Unit)
Serial No. : 64
Report No. : 28KE0141-HO
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C. / 68%
Engineer : Kazutumi Nakai

Mode / Remarks : Zigbee Rx 2440MHz, Worst-axis (Hor:X, Ver:Y)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK
FCC15.209 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
87.633	42.8	QP	7.8	-24.0	26.6	78	300	Hori.	40.0	13.4	
87.637	39.1	QP	7.8	-24.0	22.9	286	100	Vert.	40.0	17.1	
89.501	45.2	QP	8.1	-24.0	29.3	78	306	Hori.	43.5	14.2	
89.512	40.3	QP	8.1	-24.0	24.4	286	100	Vert.	43.5	19.1	
124.560	33.4	QP	13.0	-23.6	22.8	335	100	Vert.	43.5	20.7	
125.822	39.5	QP	13.2	-23.5	29.2	292	136	Hori.	43.5	14.3	
197.996	34.2	QP	16.4	-23.0	27.6	183	164	Vert.	43.5	15.9	
198.007	40.1	QP	16.4	-23.0	33.5	124	159	Hori.	43.5	10.0	
309.715	49.3	QP	16.8	-22.0	44.1	76	100	Hori.	46.0	1.9	
312.906	40.0	QP	16.9	-22.0	34.9	219	178	Vert.	46.0	11.1	
349.714	35.8	QP	17.3	-21.8	31.3	225	139	Vert.	46.0	14.7	
349.717	42.3	QP	17.3	-21.8	37.8	271	100	Hori.	46.0	8.2	

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 rounded off to one or two decimal places, so some differences might be observed.

Radiated Spurious Emission (above 1GHz)

Tx, Ch: Low

		UL Japan, Inc.
Company	Sony Corporation	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Equipment	Wireless Link	Regulation FCC15.247(d) / RSS-210 A8.5
Model	DMX-WL1T (Transmitter Unit)	Test Distance 3m (1G-10GHz) / 1m (10GHz-26.5GHz)
S/N	64	Date 07/11/2008
Power	AC 120V / 60Hz	Temperature 22deg.C.
Mode	Zigbee Tx, 2405MHz	Humidity 68%
Position	H: X-axis, V: Y-axis	Engineer Kazufumi Nakai (1GHz-26.5GHz)

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]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dB/m]	[dB]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.00	50.7	47.8	27.0	32.2	2.8	0.0	48.3	45.4	73.9	25.6	28.5
2	2400.00	57.7	54.5	27.0	32.2	2.8	0.0	55.3	52.1	73.9	18.6	21.8
3	4810.00	41.1	41.3	30.8	30.9	3.8	0.9	45.7	45.9	73.9	28.2	28.0
4	7215.00	41.9	42.0	35.7	32.0	4.7	0.7	51.0	51.1	73.9	22.9	22.8
5	9620.00	41.0	41.3	38.2	32.4	5.7	1.0	53.5	53.8	73.9	20.4	20.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac(1m)												
6	12025.00	NS	NS	-	-	-	-	-	-	73.9	-	-
7	14430.00	NS	NS	-	-	-	-	-	-	73.9	-	-
8	16835.00	NS	NS	-	-	-	-	-	-	73.9	-	-
9	19240.00	NS	NS	-	-	-	-	-	-	73.9	-	-
7	21645.00	NS	NS	-	-	-	-	-	-	73.9	-	-
7	24050.00	46.9	46.7	38.4	31.0	8.4	0.0	53.2	53.0	73.9	20.7	20.9

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

No.	FREQ [MHz]	S/A READING HOR VER [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT HOR VER [dBuV/m]		Limit AV [dBuV/m]	MARGIN HOR VER [dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.00	39.1	36.7	27.0	32.2	2.8	0.0	36.7	34.3	53.9	17.2	19.6
2	2400.00	48.7	44.8	27.0	32.2	2.8	0.0	46.3	42.4	53.9	7.6	11.5
3	4810.00	27.2	27.2	30.8	30.9	3.8	0.9	31.8	31.8	53.9	22.1	22.1
4	7215.00	28.5	28.5	35.7	32.0	4.7	0.7	37.6	37.6	53.9	16.3	16.3
5	9620.00	28.6	28.6	38.2	32.4	5.7	1.0	41.1	41.1	53.9	12.8	12.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac(1m)												
6	12025.00	NS	NS	-	-	-	-	-	-	53.9	-	-
7	14430.00	NS	NS	-	-	-	-	-	-	53.9	-	-
8	16835.00	NS	NS	-	-	-	-	-	-	53.9	-	-
9	19240.00	NS	NS	-	-	-	-	-	-	53.9	-	-
7	21645.00	NS	NS	-	-	-	-	-	-	53.9	-	-
7	24050.00	33.7	33.7	38.4	31.0	8.4	0.0	40.0	40.0	53.9	13.9	13.9

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3.0/1.0) 9.5 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 third harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*NS: No detect Signal.

UL Japan, Inc.

Head Office EMC Lab.

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Radiated Spurious Emission (above 1GHz)

Tx, Ch: Mid

Company Sony Corporation Equipment Wireless Link Model DMX-WL1T (Transmitter Unit) S/N 64 Power AC 120V / 60Hz Mode Zigbee Tx, 2440MHz Position H: X-axis, V: Y-axis	UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber Regulation FCC15.247(d) / RSS-210 A8.5 Test Distance 3m (1G-10GHz) / 1m (10GHz-26.5GHz) Date 07/11/2008 Temperature 22deg.C. Humidity 68% Engineer Kazufumi Nakai (1GHz-26.5GHz)	
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PK DETECT (RBW: 1MHz, VBW: 1MHz)												
No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	RESULT		Limit	MARGIN	
	[MHz]	HOR	VER	Factor	GAIN	LOSS	Filter	HOR	VER	PK	HOR	VER
		[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]		[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4880.00	38.6	38.9	31.0	30.9	3.8	0.9	43.4	43.7	73.9	30.5	30.2
2	7320.00	39.0	38.5	35.9	32.1	4.7	0.7	48.2	47.7	73.9	25.7	26.2
3	9760.00	38.6	38.7	38.3	32.4	5.8	1.0	51.3	51.4	73.9	22.6	22.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac(1m)												
4	12200.00	NS	NS	-	-	-	-	-	-	73.9	-	-
5	14640.00	NS	NS	-	-	-	-	-	-	73.9	-	-
6	17080.00	NS	NS	-	-	-	-	-	-	73.9	-	-
7	19520.00	NS	NS	-	-	-	-	-	-	73.9	-	-
5	21960.00	NS	NS	-	-	-	-	-	-	73.9	-	-
5	24400.00	45.8	45.8	38.6	31.0	8.5	0.0	52.4	52.4	73.9	21.5	21.5

AV DETECT (RBW: 1MHz, VBW: 10Hz)												
No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	RESULT		Limit AV	MARGIN	
	[MHz]	HOR	VER					[dB/m]	[dB]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4880.00	27.1	27.1	31.0	30.9	3.8	0.9	31.9	31.9	53.9	22.0	22.0
2	7320.00	28.5	28.5	35.9	32.1	4.7	0.7	37.7	37.7	53.9	16.2	16.2
3	9760.00	28.2	28.2	38.3	32.4	5.8	1.0	40.9	40.9	53.9	13.0	13.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac(1m)												
4	12200.00	NS	NS	-	-	-	-	-	-	53.9	-	-
5	14640.00	NS	NS	-	-	-	-	-	-	53.9	-	-
6	17080.00	NS	NS	-	-	-	-	-	-	53.9	-	-
7	19520.00	NS	NS	-	-	-	-	-	-	53.9	-	-
5	21960.00	NS	NS	-	-	-	-	-	-	53.9	-	-
5	24400.00	33.5	33.5	38.6	31.0	8.5	0.0	40.1	40.1	53.9	13.8	13.8

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3.0/1.0) 9.5 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 third harmonic, the noise from the EUT was not seen.The data above is its base noise.

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

*NS: No detect Signal.

Radiated Spurious Emission (above 1GHz)

Tx, Ch: High

Company Sony Corporation
Equipment Wireless Link
Model DMX-WL1T (Transmitter Unit)
S/N 64
Power AC 120V / 60Hz
Mode Zigbee Tx, 2480MHz
Position H: X-axis, V: Y-axis

UL Japan, Inc.
Head Office EMC Lab. No.4 Semi Anechoic Chamber
Regulation FCC15.247(d) / RSS-210 A8.5
Test Distance 3m (1G-10GHz) / 1m (10GHz-26.5GHz)
Date 07/11/2008
Temperature 22deg.C.
Humidity 68%
Engineer Kazufumi Nakai
(1GHz-26.5GHz)

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

(ROW=TABLE + DFC + MARG)												
No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	RESULT		Limit	MARGIN	
	[MHz]	HOR	VER	Factor	GAIN	LOSS	Filter	HOR	VER	PK	HOR	VER
		[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.50	59.3	59.9	27.2	32.1	2.9	0.0	57.3	57.9	73.9	16.6	16.0
2	4960.00	41.3	41.2	31.2	30.8	3.8	0.9	46.4	46.3	73.9	27.5	27.6
3	7440.00	42.3	42.1	36.1	32.2	4.7	0.7	51.6	51.4	73.9	22.3	22.5
4	9920.00	41.2	41.2	38.4	32.4	5.9	1.0	54.1	54.1	73.9	19.8	19.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac(1m)												
5	12400.00	NS	NS	-	-	-	-	-	-	73.9	-	-
6	14880.00	NS	NS	-	-	-	-	-	-	73.9	-	-
7	17360.00	NS	NS	-	-	-	-	-	-	73.9	-	-
8	19840.00	NS	NS	-	-	-	-	-	-	73.9	-	-
6	22320.00	NS	NS	-	-	-	-	-	-	73.9	-	-
6	24800.00	47.2	47.1	38.9	31.0	8.5	0.0	54.1	54.0	73.9	19.8	19.9

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	RESULT		Limit	MARGIN	
	[MHz]	HOR	VER	Factor	GAIN	LOSS	Filter	HOR	VER	AV	HOR	VER
[dBuV] [dB/m] [dB] [dB] [dB] [dB] [dBuV/m] [dB]												
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.50	27.1	27.1	27.2	32.1	2.9	0.0	25.1	25.1	53.9	28.8	28.8
2	4960.00	28.7	28.7	31.2	30.8	3.8	0.9	33.8	33.8	53.9	20.1	20.1
3	7440.00	28.5	28.5	36.1	32.2	4.7	0.7	37.8	37.8	53.9	16.1	16.1
4	9920.00			38.4	32.4	5.9	1.0	12.9	12.9	53.9	41.0	41.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac(1m)												
5	12400.00	NS	NS	-	-	-	-	-	-	53.9	-	-
6	14880.00	NS	NS	-	-	-	-	-	-	53.9	-	-
7	17360.00	NS	NS	-	-	-	-	-	-	53.9	-	-
8	19840.00	NS	NS	-	-	-	-	-	-	53.9	-	-
6	22320.00	NS	NS	-	-	-	-	-	-	53.9	-	-
6	24800.00	35.3	35.3	38.9	31.0	8.5	0.0	42.2	42.2	53.9	11.7	11.7

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3.0/1.0) 9.5 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 third harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

*NS: No detect Signal.

Radiated Spurious Emission (above 1GHz)

Rx, Ch: Mid

		UL Japan, Inc.
Company	Sony Corporation	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Equipment	Wireless Link	Regulation
Model	DMX-WL1T (Transmitter Unit)	FCC15.247(d) / RSS-210 A8.5
S/N	64	Test Distance
Power	AC 120V / 60Hz	3m (1G-10GHz)
Mode	Zigbee Rx, 2440MHz	Date
Position	H: X-axis, V: Y-axis	07/11/2008
		Temperature
		22deg.C.
		Humidity
		68%
		Engineer
		Kazufumi Nakai
		(1GHz-10GHz)

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

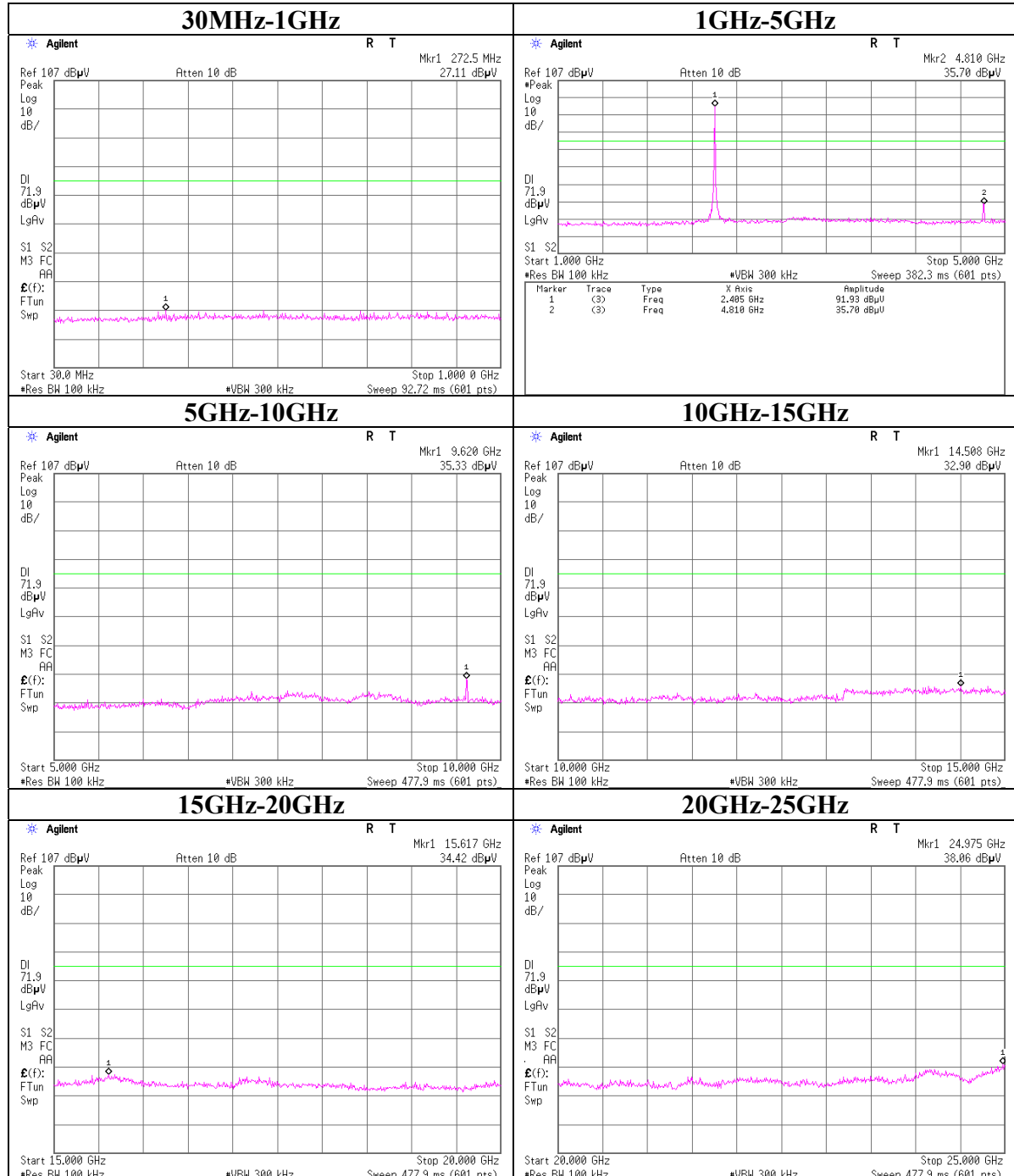
RDFEY (RDF: FREQ, VER: ANT)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2440.00	41.4	41.2	27.1	32.1	2.9	0.0	39.3	39.1	73.9	34.6	34.8

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

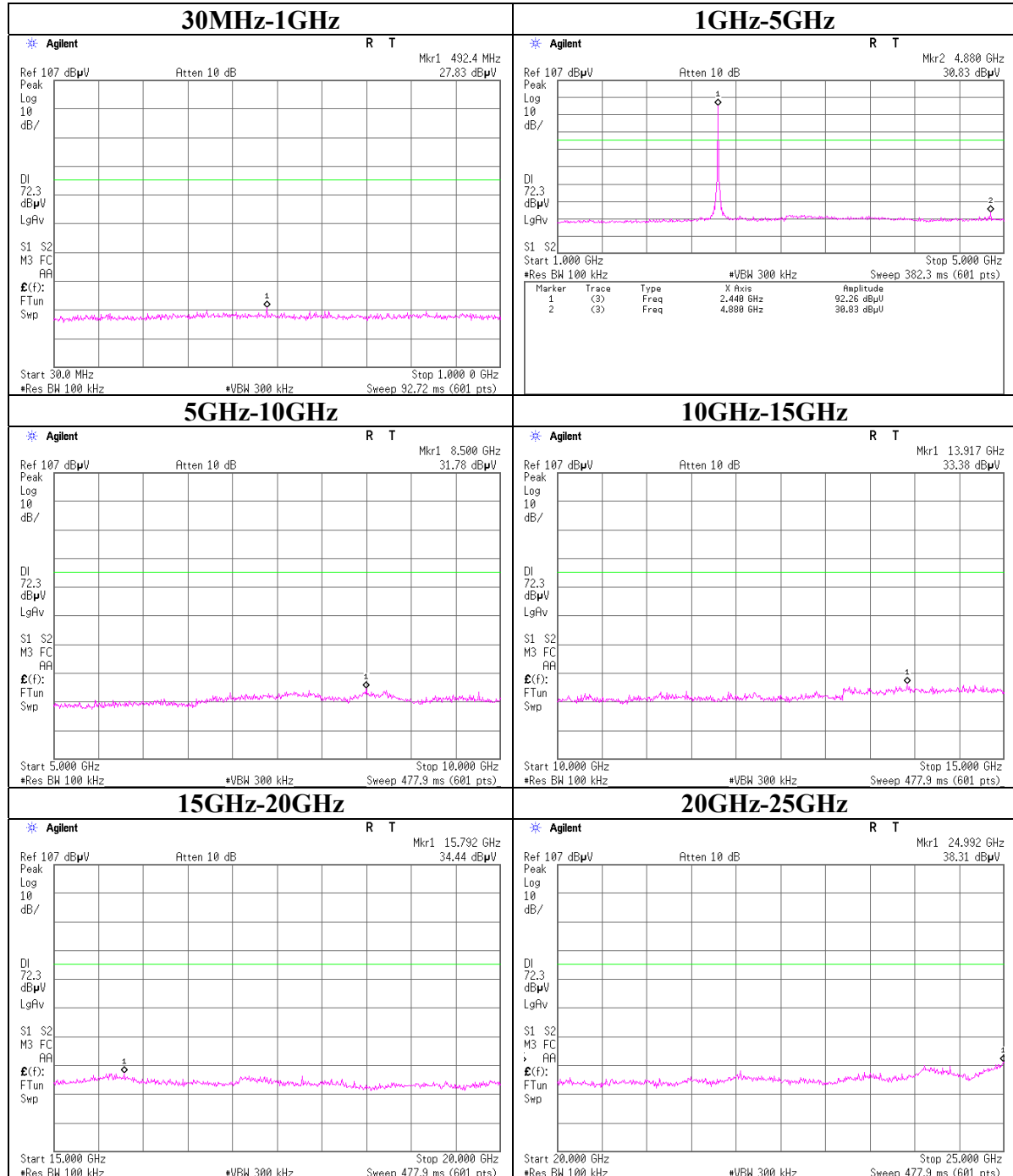
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2440.00	28.2	28.2	27.1	32.1	2.9	0.0	26.1	26.1	53.9	27.8	27.8

*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.
*The test result is rounded off to one or two decimal places, so some differences might be observed.
*NS: No detect Signal.

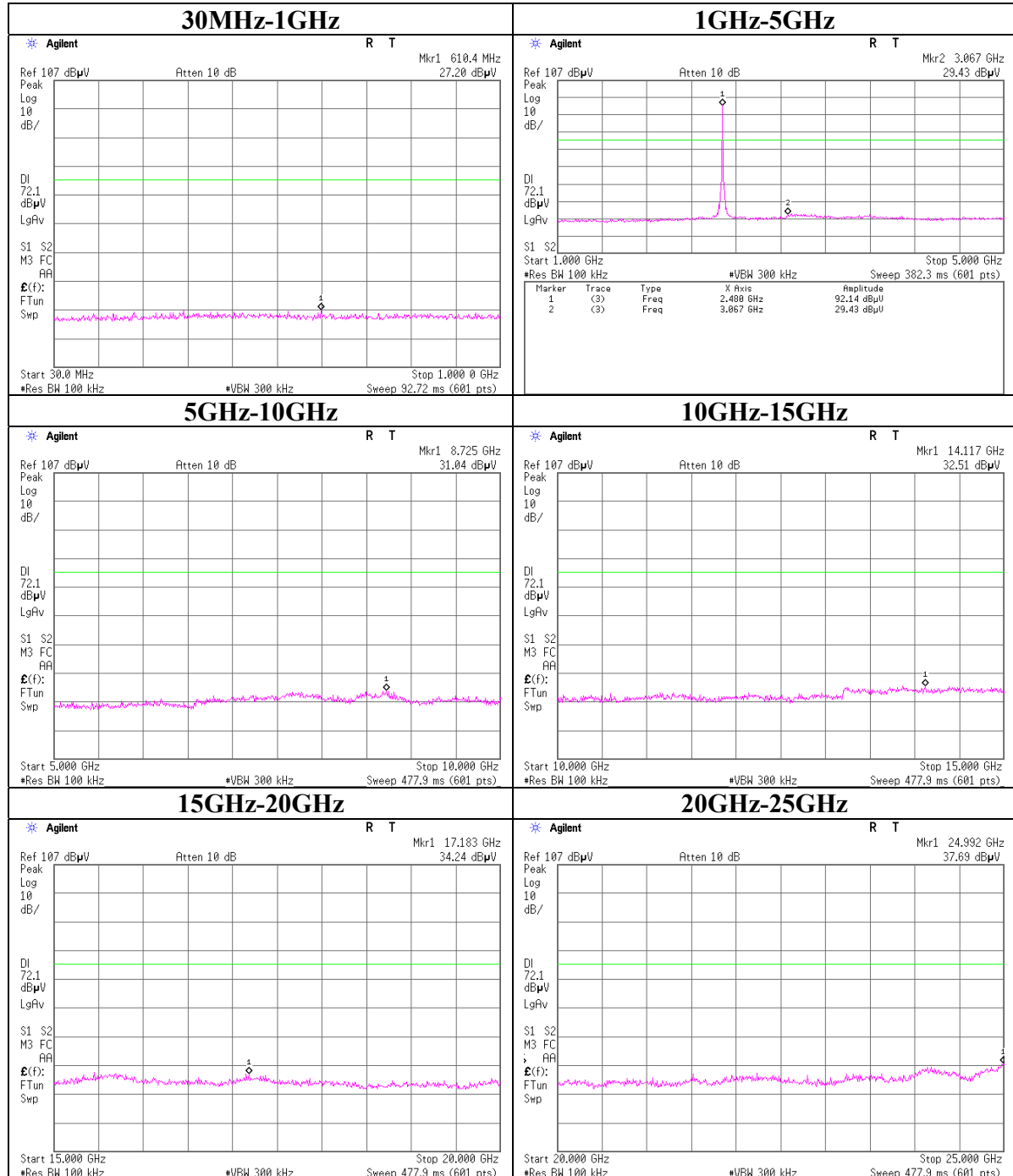
Conducted Spurious Emission
Tx, 2405MHz



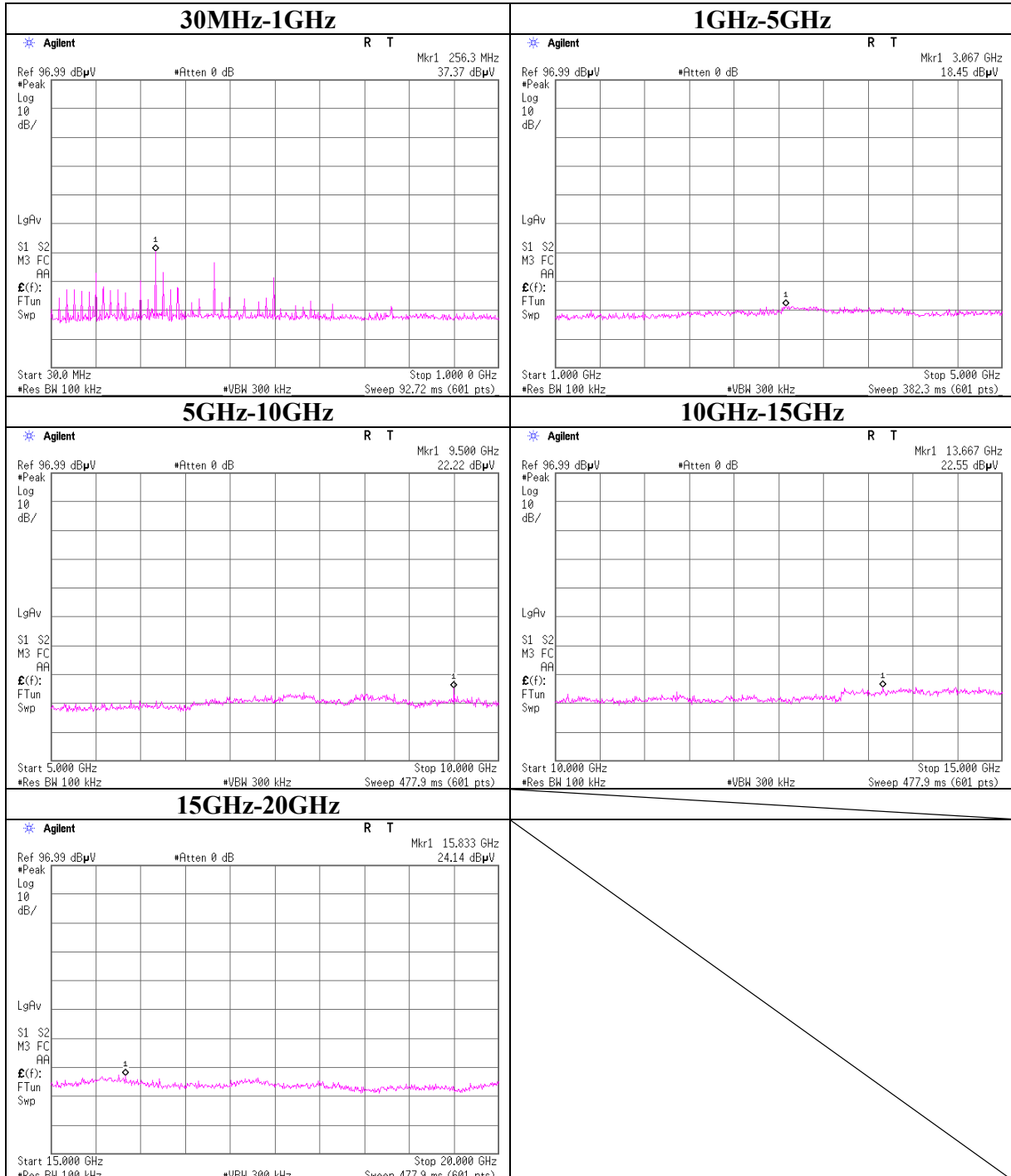
Conducted Spurious Emission
Tx, 2440MHz



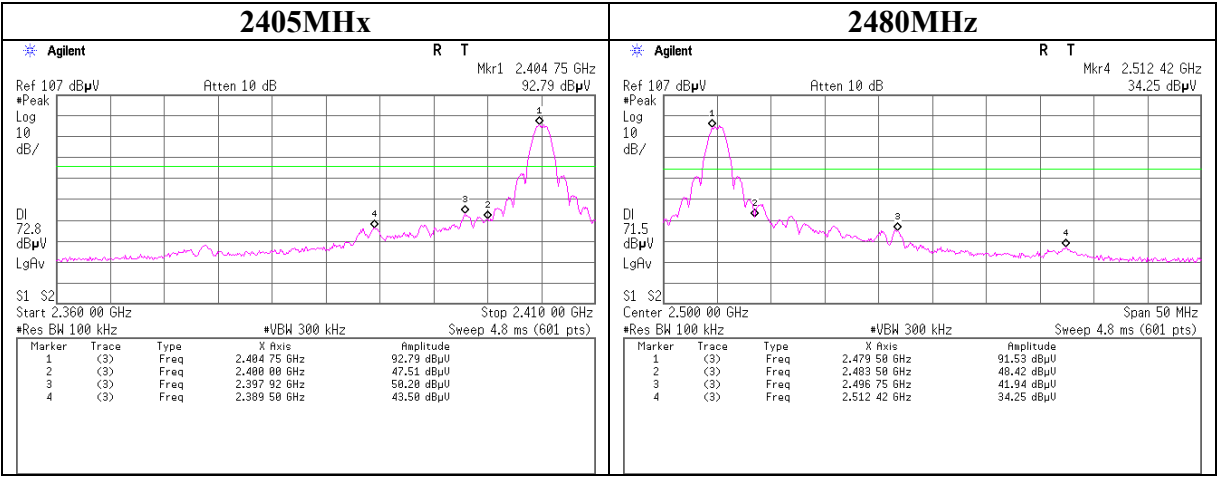
Conducted Spurious Emission Tx, 2480MHz



Conducted Spurious Emission
Rx, 2440MHz



Conducted emission Band Edge compliance



Power Density

UL Japan, Inc
Head Office EMC Lab. No.7 measurement room

Company	Sony Corporation	Regulation	FCC Part15 Subpart C 15.247(b)(3) / RSS-210 A8.2(b)
Equipment	Wireless Link	Test Distance	-
Model	DMX-WL1T	Date	07/10/2008
S/N	11	Temperature	23deg.C.
Power	AC 120V / 60Hz	Humidity	52%
Mode	Tx (Zigbee Module)	Engineer	Kazufumi Nakai

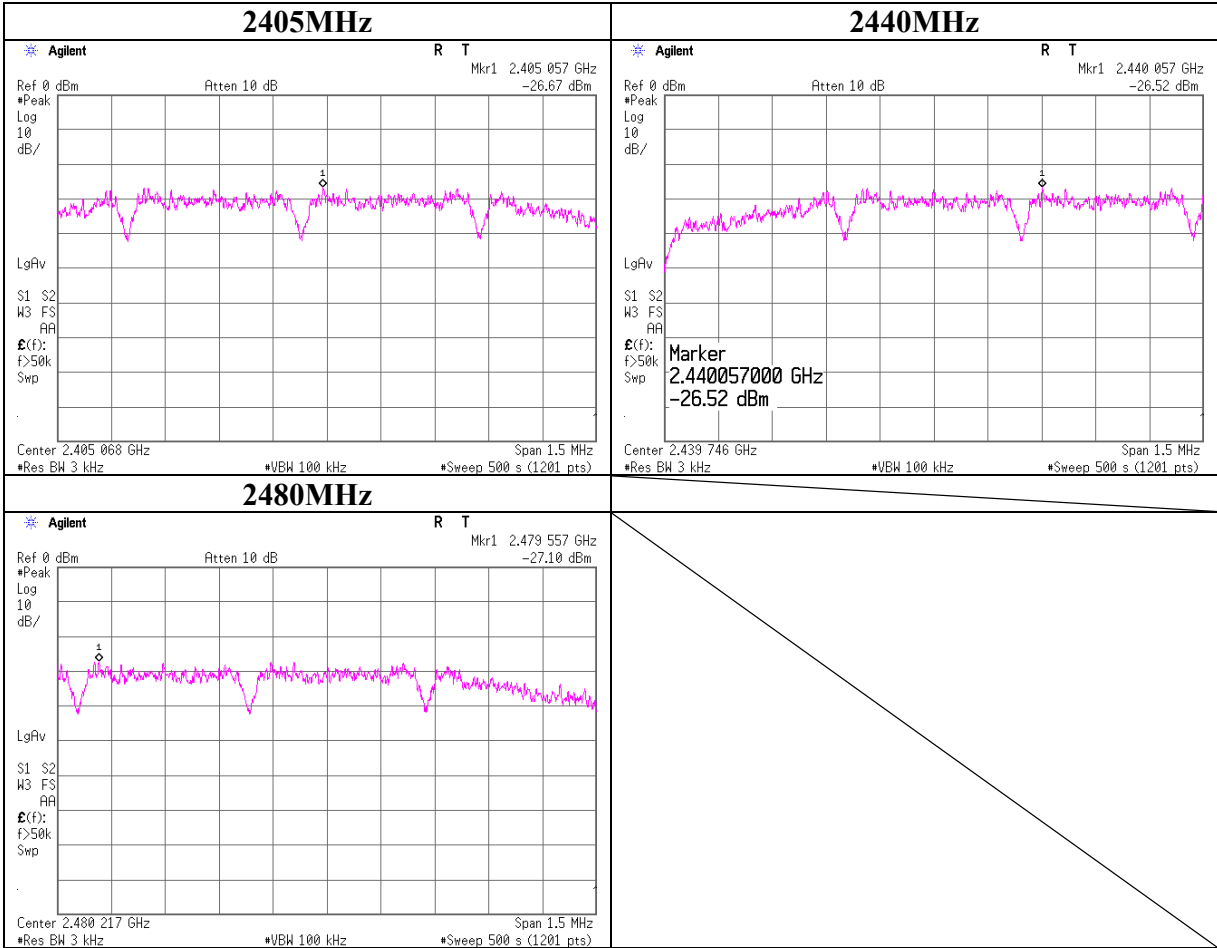
Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
				[dBm]	[mW]	[dBm]	[mW]	
2405.1	-26.67	1.38	10.09	-15.20	0.03	8.00	6.30	23.20
2440.1	-26.52	1.38	10.09	-15.05	0.03	8.00	6.30	23.05
2479.6	-27.10	1.38	10.09	-15.63	0.03	8.00	6.30	23.63

Sample Calculation:

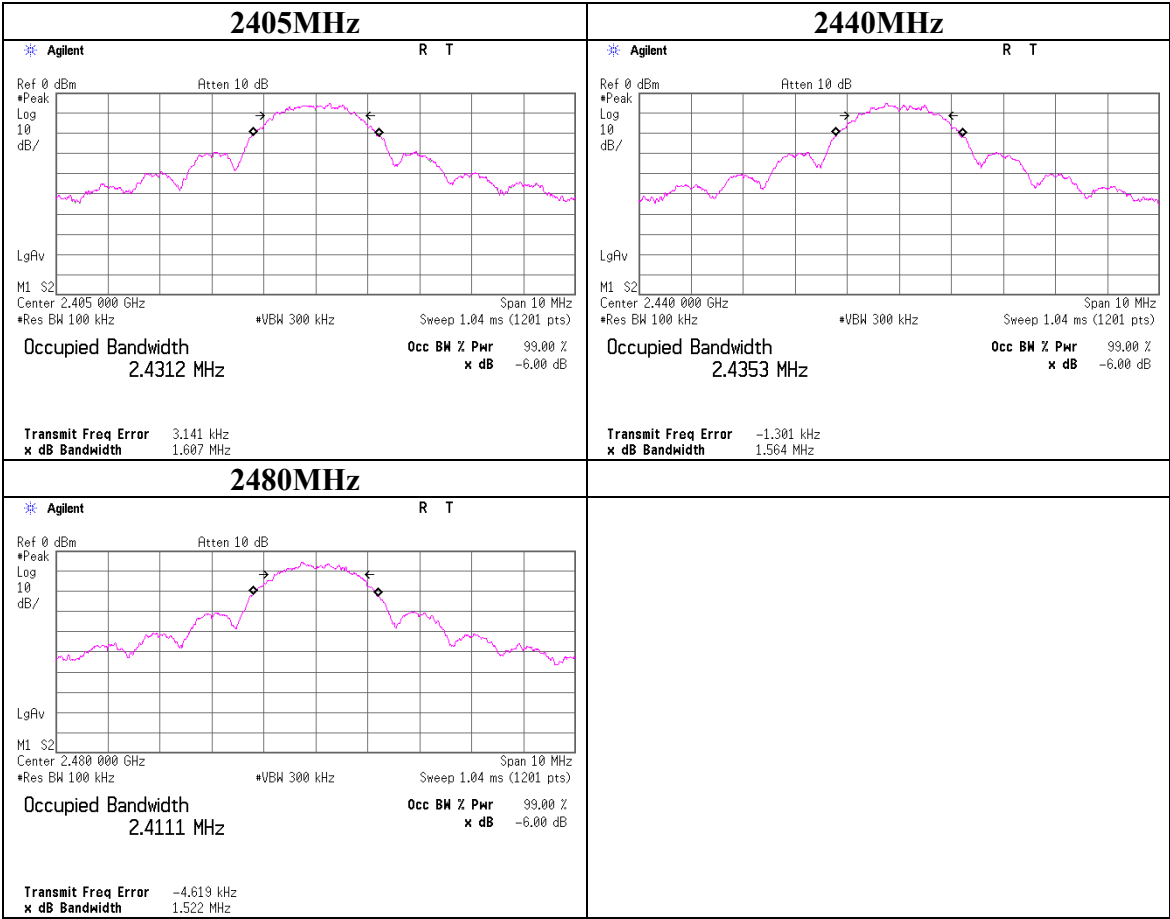
Result [dBm] = S/A Reading + Cable Loss+ Atten. Loss

Result [mW] = $10^{(\text{Result [dBm]} / 10)}$

Power Density



99% Occupied Bandwidth



APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MPM-08	Power Meter	Anritsu	ML2495A	AT	2007/09/12 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	AT	2007/09/12 * 12
MAT-25	Attenuator(10dB)(above 1GHz)	Agilent	8493C	AT	2008/06/25 * 12
MCC-45	Microwave Cable	Murata	MXGS83RK3000	AT	2007/07/11 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	AT	2008/01/10 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT	2008/05/30 * 12
MCC-66	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	AT	2008/04/04 * 12
MAT-23	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2008/03/05 * 12
MOS-17	Thermo-Hygrometer	Custom	CTH-180	AT	2008/01/10 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	AT	2008/06/26 * 12
MCC-06	Microwave Cable 1G-26.5GHz 1m	Suhner	SUCOFLEX 104	AT	2008/02/05 * 12
MOS-04	Digital Humidity Indicator	N.T	NT-1800	AT	2007/11/12 * 12
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE/CE	2008/03/27 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	RE/CE	2008/01/10 * 12
MJM-07	Measure	PROMART	SEN1955	RE/CE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE/CE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2008/06/26 * 12
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2007/08/16 * 12
MCC-57	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2008/03/05 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	RE	2008/03/13 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	RE	2008/04/30 * 12
MBA-05	Biconical Antenna	Schwarzbeck	BBA9106	RE	2008/01/12 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	RE	2008/01/12 * 12
MAT-31	Attenuator(6dB)	TME	UFA-01	RE	2008/03/10 * 12
MCC-50	Coaxial cable	UL Japan	-	RE	2008/03/17 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	RE	2008/03/06 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	RE/CE	2007/09/14 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2008/02/19 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	-	CE	2008/07/03 * 12

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

UL Japan, Inc.

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