

APPENDIX 2: Data of EMI test

Conducted Emission
Tx, Ch: Low

DATA OF CONDUCTED EMISSION TEST

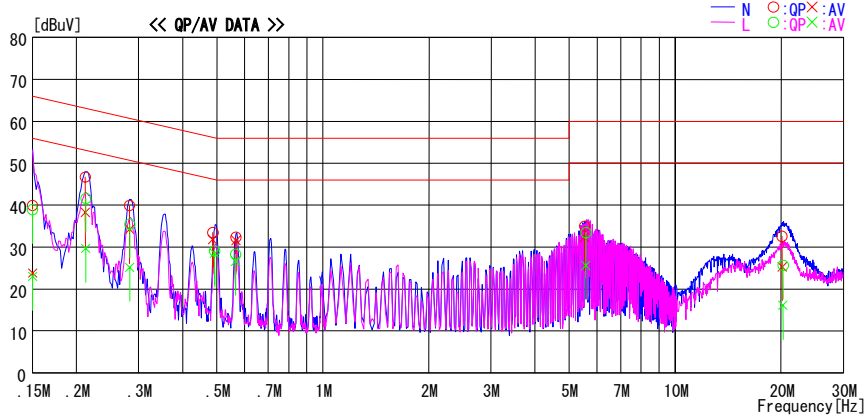
UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245

Report No. : 28LE0031-HO-01
Power : AC120V/60Hz
Temp./Humi. : 24deg.C / 54%
Engineer : Satofumi Matsuyama

Mode / Remarks: Tx Lch(2405.376MHz)

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15000	39.6	23.5	0.3	39.9	23.8	66.0	56.0	26.1	32.2	N	
0.21176	46.4	38.0	0.3	46.7	38.3	63.1	53.1	16.4	14.8	N	
0.28256	39.6	33.9	0.3	39.9	34.2	60.7	50.7	20.8	16.5	N	
0.48690	33.2	31.5	0.3	33.5	31.8	56.2	46.2	22.7	14.4	N	
0.56655	31.9	31.2	0.4	32.3	31.6	56.0	46.0	23.7	14.4	N	
5.52792	34.0	31.4	1.0	35.0	32.4	60.0	50.0	25.0	17.6	N	
20.11764	30.5	23.2	2.1	32.6	25.3	60.0	50.0	27.4	24.7	N	
0.15000	38.7	22.7	0.3	39.0	23.0	66.0	56.0	27.0	33.0	L	
0.21230	41.3	29.4	0.3	41.6	29.7	63.1	53.1	21.5	23.4	L	
0.28296	35.2	24.9	0.3	35.5	25.2	60.7	50.7	25.2	25.5	L	
0.49317	28.8	28.2	0.3	29.1	28.5	56.1	46.1	27.0	17.6	L	
0.56518	27.9	26.2	0.4	28.3	26.6	56.0	46.0	27.7	19.4	L	
5.57579	32.5	24.6	1.0	33.5	25.6	60.0	50.0	26.5	24.4	L	
20.23486	23.6	14.0	2.1	25.7	16.1	60.0	50.0	34.3	33.9	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuA] = READING [dBuV] + C [dB] (Probe factor + 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

Tx, Ch: Low

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
 Kind of EUT : Transmitter
 Model No. : PDX-50TX
 Serial No. : Tx245

Report No. : 28LE0031-HO-01
 Power : AC120V/60Hz
 Temp./Humi. : 24deg. C / 54%
 Engineer : Satofumi Matsuyama

Mode / Remarks : Tx Lch(2405.376MHz)

LIMIT : FCC15.207 QP
 FCC15.207 AV

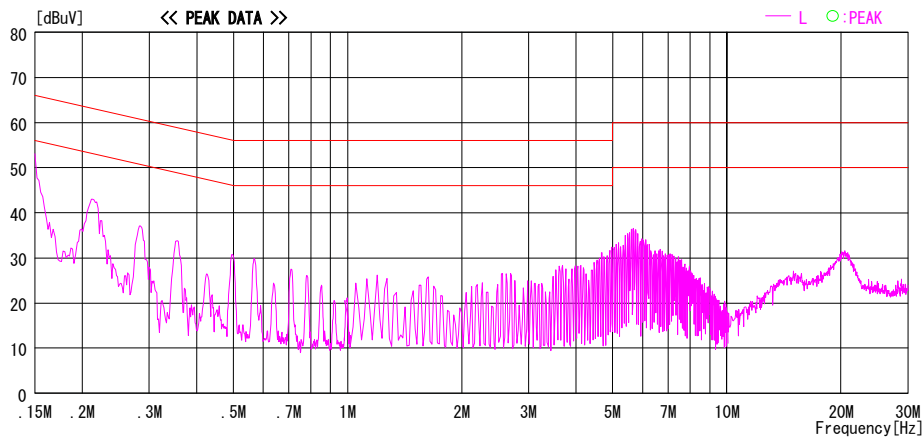
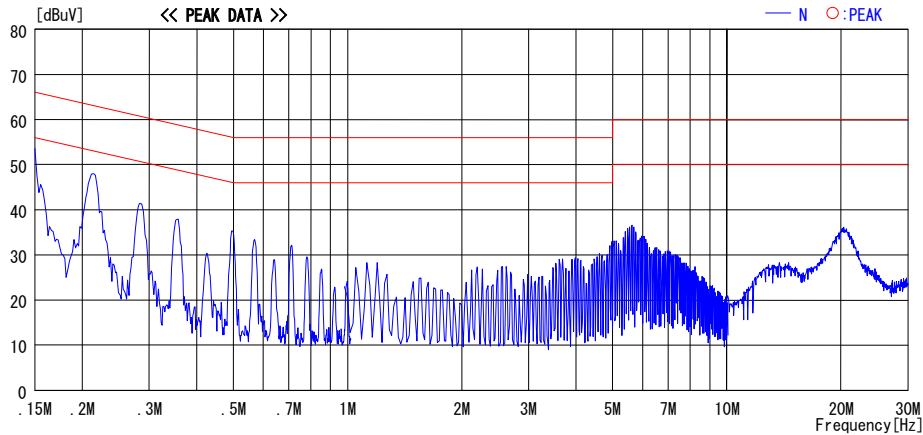


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBA] = READING [dBuV] + C. F [dB] (Probe factor + CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

UL Japan, Inc.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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Facsimile : +81 596 24 8124

Conducted Emission
Tx, Ch: Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
 Date : 2008/10/02

Company : YAMAHA CORPORATION
 Kind of EUT : Transmitter
 Model No. : PDX-50TX
 Serial No. : Tx245

Report No. : 28LE0031-HO-01
 Power : AC120V/60Hz
 Temp./Humi. : 24deg. C / 54%
 Engineer : Satofumi Matsuyama

Mode / Remarks : Tx Mch(2436.096MHz)

LIMIT : FCC15.207 QP
 FCC15.207 AV

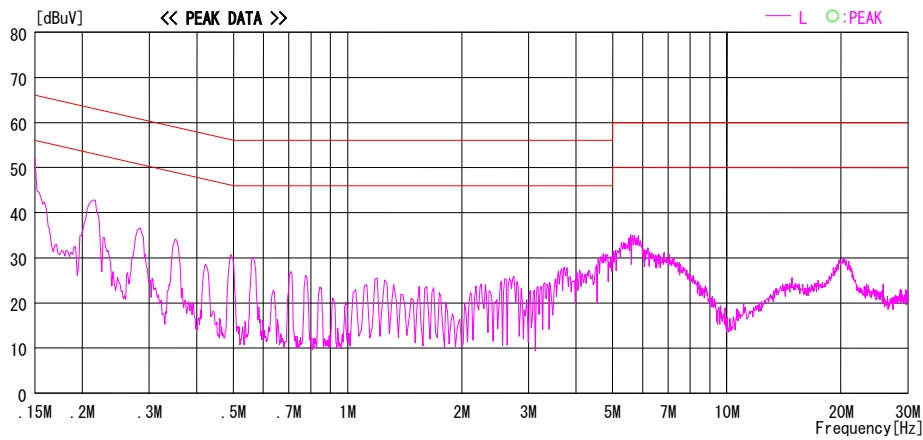
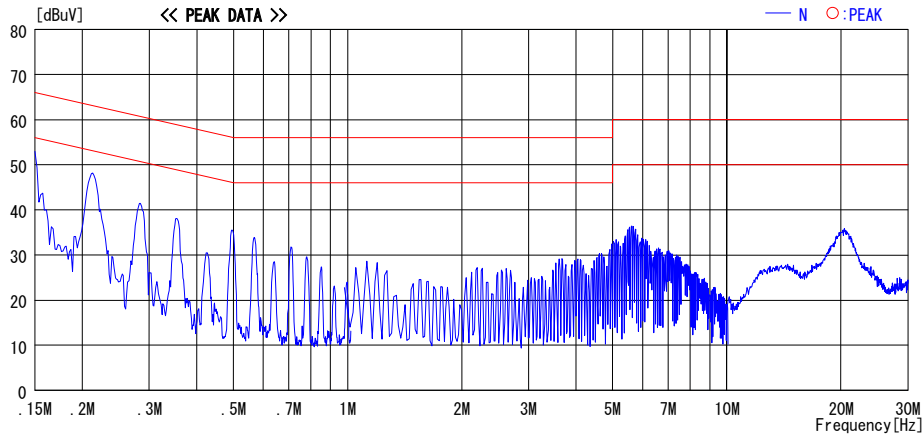


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuA]=READING[dBuV]+C.F[dB] (Probe factor+CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

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Conducted Emission
Tx, Ch: High

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
 Date : 2008/10/02

Company : YAMAHA CORPORATION
 Kind of EUT : Transmitter
 Model No. : PDX-50TX
 Serial No. : Tx245

Report No. : 28LE0031-HO-01
 Power : AC120V/60Hz
 Temp./Humi. : 24deg. C / 54%
 Engineer : Satofumi Matsuyama

Mode / Remarks : Tx Hch(2473.984MHz)

LIMIT : FCC15.207 QP
 FCC15.207 AV

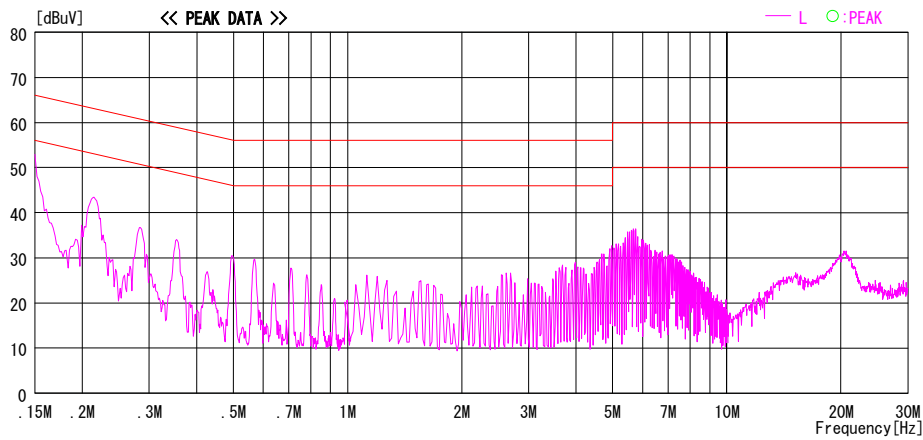
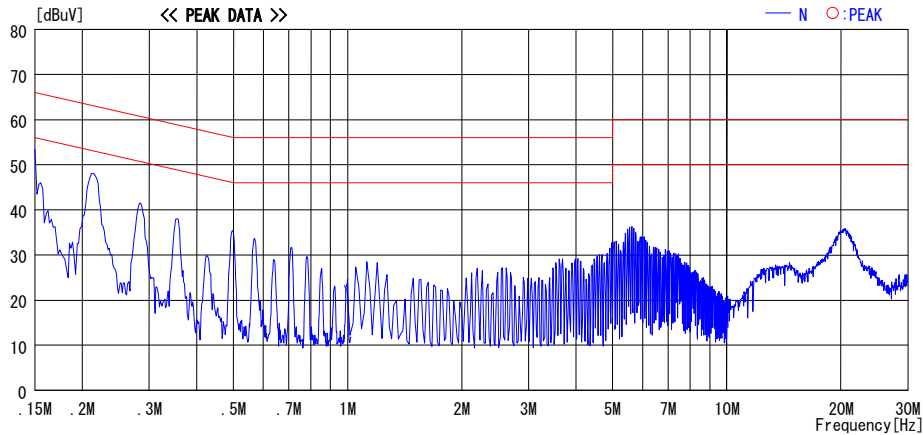


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuA] = READING [dBuV] + C. F [dB] (Probe factor + CABLE LOSS)
 Except for the above table: adequate margin data below the limits.

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Conducted Emission
Rx, Ch: Mid

DATA OF CONDUCTED EMISSION TEST

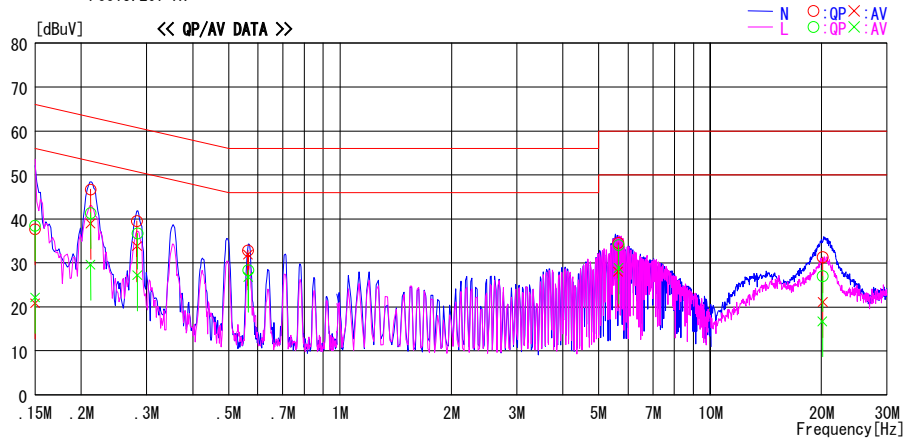
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245

Report No. : 28LE0031-HO-01
Power : AC120V/60Hz
Temp./Humi. : 24deg. C / 54%
Engineer : Satofumi Matsuyama

Mode / Remarks : Rx Mch(2436.096MHz)

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15000	37.4	20.5	0.3	37.7	20.8	66.0	56.0	28.3	35.2	N	
0.21185	46.4	38.6	0.3	46.7	38.9	63.1	53.1	16.4	14.2	N	
0.28276	39.2	33.5	0.3	39.5	33.8	60.7	50.7	21.2	16.9	N	
0.56375	32.4	31.5	0.4	32.8	31.9	56.0	46.0	23.2	14.1	N	
5.64115	33.6	27.0	1.0	34.6	28.0	60.0	50.0	25.4	22.0	N	
20.13640	29.2	19.0	2.1	31.3	21.1	60.0	50.0	28.7	28.9	N	
0.15000	38.2	21.8	0.3	38.5	22.1	66.0	56.0	27.5	33.9	L	
0.21191	41.1	29.3	0.3	41.4	29.6	63.1	53.1	21.7	23.5	L	
0.28366	36.4	26.9	0.3	36.7	27.2	60.7	50.7	24.0	23.5	L	
0.56517	28.0	26.4	0.4	28.4	26.8	56.0	46.0	27.6	19.2	L	
5.65298	33.0	27.8	1.0	34.0	28.8	60.0	50.0	26.0	21.2	L	
20.09627	24.9	14.6	2.1	27.0	16.7	60.0	50.0	33.0	33.3	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuA]=READING [dBuV]+C. F [dB] (Probe factor+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.

6dB Bandwidth

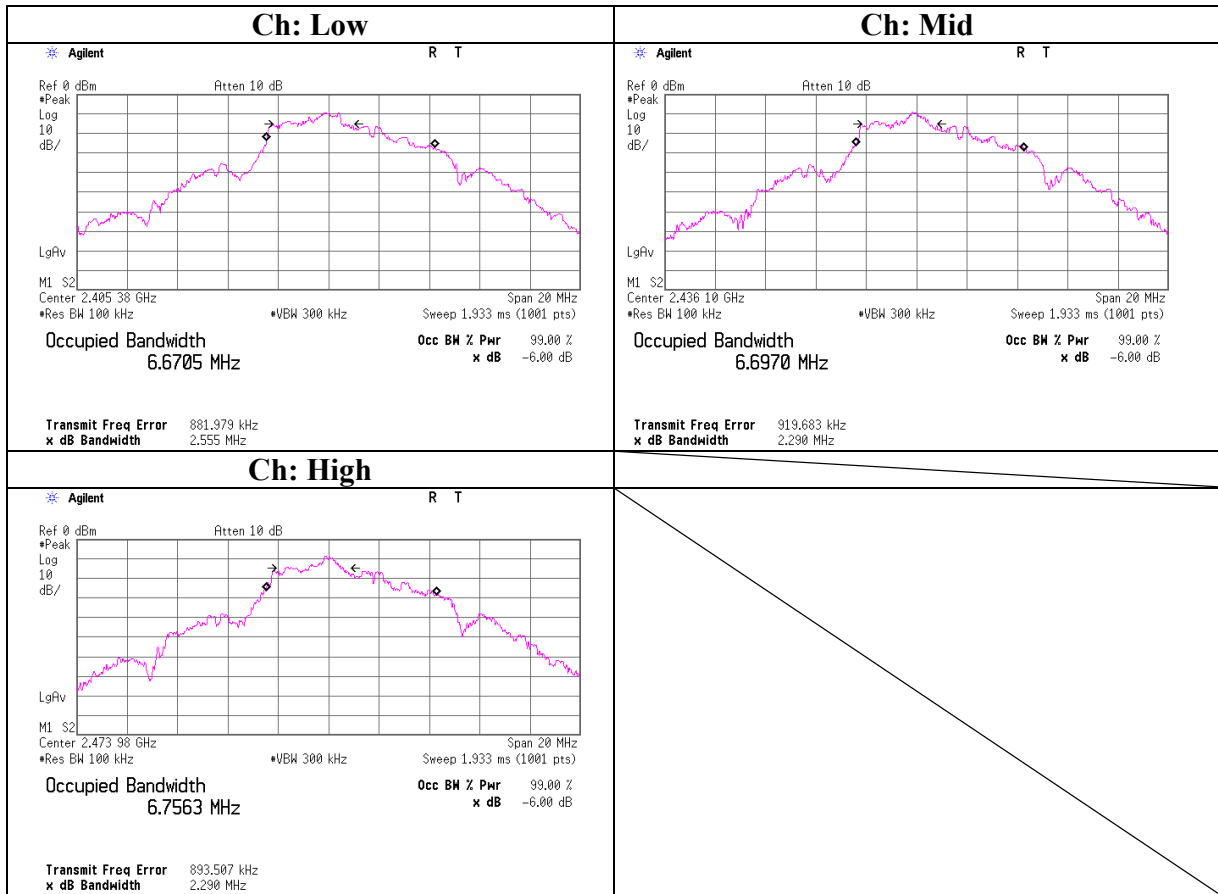
UL Japan, Inc.
Head Office EMC Lab. No.4 Shielded Room

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model No. : PDX-50TX
Serial No. : Tx229
Power : AC120V/60Hz
Mode : Tx (Ch L, M, H)

Test Report No. : 28LE0031-HO-01
Regulation : FCC15.247(a)(2)/RSS-210A8.2(a)
Test distance : -
Date : 10/3/2008
Temperature : 26deg.C.
Humidity : 58%
Engineer : Shinya Watanabe

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2405.4	2.555	>500
Mid	2436.1	2.290	>500
High	2474.0	2.290	>500

6dB Bandwidth



Maximum Peak Output Power

UL Japan, Inc.
Head Office EMC Lab. No.4 Shielded Room

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model No. : PDX-50TX
Serial No. : Tx229
Power : AC120V/60Hz
Mode : Tx (Ch L, M, H)

Test Report No. : 28LE0031-HO-01
Regulation : FCC15.247(b)(3)/RSS-210A8.4(4)
Test distance : -
Date : 10/3/2008
Temperature : 26deg.C.
Humidity : 58%
Engineer : Shinya Watanabe

Ch	Freq. [MHz]	P/M Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2405.4	3.81	1.83	10.09	15.73	37.41	30.00	1000	14.27
Mid	2436.1	3.91	1.84	10.09	15.84	38.37	30.00	1000	14.16
High	2474.0	4.32	1.85	10.09	16.26	42.27	30.00	1000	13.74

Sample Calculation:

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

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Radiated Spurious Emission (below 1GHz)
Without Cradle
Tx, Ch: Low

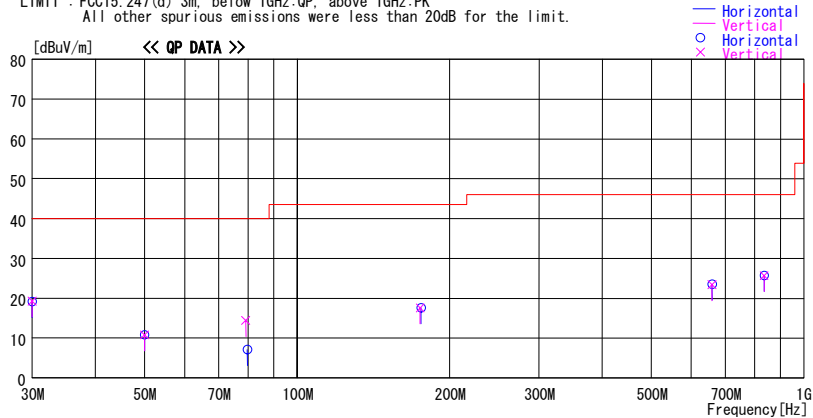
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION Report No. : 28LE0031-HO-01
Kind of EUT : Transmitter Power : DC3.3V
Model No. : PDX-50TX Temp./Humi. : 21deg. C. / 50 %
Serial No. : Tx245 Engineer : Akio Hayashi

Mode / Remarks : Tx Lch(2405.376MHz) Without Cradle Worst-axis(Hor:X-axis, Ver:Z-axis)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
30.001	22.3	QP	18.9	-21.9	19.3	221	100	Vert.	40.0	20.7
30.001	22.2	QP	18.9	-21.9	19.2	230	300	Hori.	40.0	20.8
50.001	22.3	QP	10.2	-21.7	10.8	132	300	Hori.	40.0	29.2
50.001	22.3	QP	10.2	-21.7	10.8	318	100	Vert.	40.0	29.2
79.218	29.4	QP	6.4	-21.4	14.4	35	100	Vert.	40.0	25.6
79.844	22.1	QP	6.4	-21.4	7.1	153	300	Hori.	40.0	32.9
174.871	21.6	QP	16.1	-20.1	17.6	355	100	Vert.	43.5	25.9
175.485	21.6	QP	16.1	-20.1	17.6	19	300	Hori.	43.5	25.9
658.563	21.7	QP	20.1	-18.4	23.4	23	100	Vert.	46.0	22.6
658.364	21.7	QP	20.2	-18.4	23.5	309	100	Hori.	46.0	22.5
835.152	21.3	QP	21.7	-17.3	25.7	264	100	Hori.	46.0	20.3
835.172	21.3	QP	21.7	-17.3	25.7	152	100	Vert.	46.0	20.3

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

Radiated Spurious Emission (below 1GHz)
Without Cradle
Tx, Ch: Mid

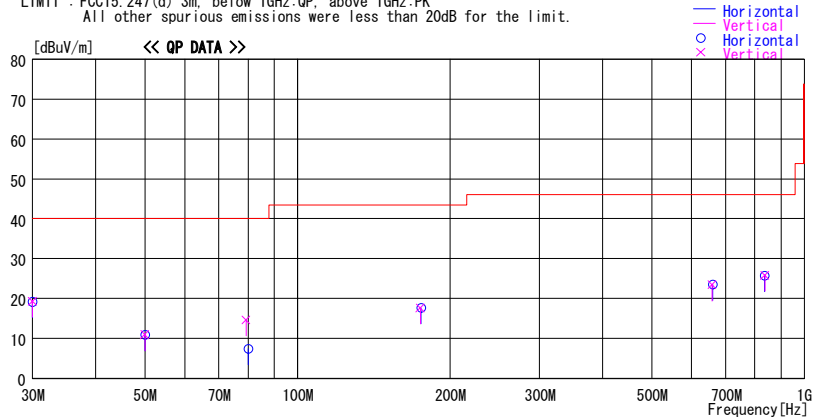
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : DC3.3V
Temp./Humi. : 21deg. C / 50%
Engineer : Akio Hayashi

Mode / Remarks : Tx Mch(2436.096MHz) Without Cradle Worst-axis(Hor:X-axis, Ver:Z-axis)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
30.001	22.3	QP	18.9	-21.9	19.3	209	100	Vert	40.0	20.7
30.001	22.2	QP	18.9	-21.9	19.2	236	300	Hori	40.0	20.8
50.001	22.4	QP	10.2	-21.7	10.9	173	300	Hori	40.0	29.1
50.001	22.4	QP	10.2	-21.7	10.9	329	100	Vert	40.0	29.1
79.218	29.6	QP	6.4	-21.4	14.6	245	100	Vert	40.0	25.4
80.040	22.3	QP	6.4	-21.3	7.4	261	300	Hori	40.0	32.6
174.759	21.6	QP	16.1	-20.1	17.6	357	100	Vert	43.5	25.9
175.449	21.6	QP	16.1	-20.1	17.6	2	300	Hori	43.5	25.9
658.131	21.7	QP	20.1	-18.4	23.4	5	100	Vert	46.0	22.6
658.328	21.7	QP	20.2	-18.4	23.5	311	100	Hori	46.0	22.5
835.162	21.3	QP	21.7	-17.3	25.7	274	100	Hori	46.0	20.3
836.521	21.4	QP	21.7	-17.3	25.8	141	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 rounded off to one or two decimal places, so some differences might be observed.

Radiated Spurious Emission (below 1GHz)
Without Cradle
Tx, Ch: High

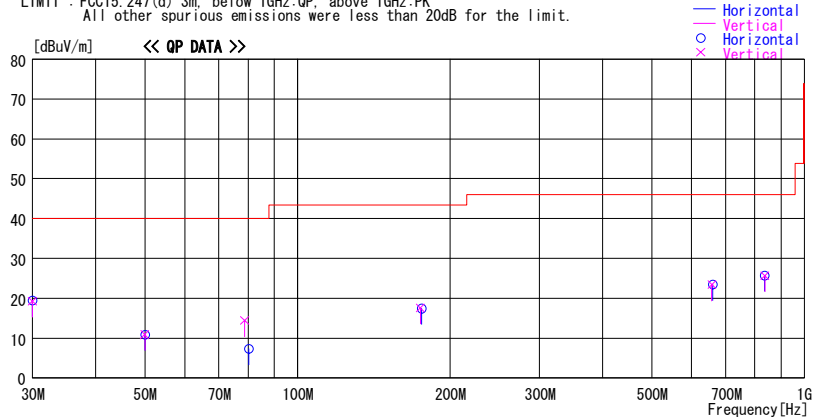
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : DC3.3V
Temp./Humi. : 21deg. C / 50%
Engineer : Akio Hayashi

Mode / Remarks : Tx Hch(2473.984MHz) Without Cradle Worst-axis(Hor:X-axis, Ver:Z-axis)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBUV]		[dB/m]	[dB]	[dBUV/m]	[Deg]	[cm]		[dBUV/m]	[dB]
30.001	22.3	QP	18.9	-21.9	19.3	197	100	Vert	40.0	20.7
30.001	22.5	QP	18.9	-21.9	19.5	224	300	Hori	40.0	20.5
50.001	22.4	QP	10.2	-21.7	10.9	163	300	Hori	40.0	29.1
50.001	22.4	QP	10.2	-21.7	10.9	324	100	Vert	40.0	29.1
78.652	29.4	QP	6.4	-21.4	14.4	246	100	Vert	40.0	25.6
80.218	22.3	QP	6.4	-21.3	7.4	271	300	Hori	40.0	32.6
175.067	21.6	QP	16.1	-20.1	17.6	359	100	Vert	43.5	25.9
175.785	21.5	QP	16.1	-20.1	17.5	42	300	Hori	43.5	26.0
657.821	21.7	QP	20.1	-18.4	23.4	24	100	Vert	46.0	22.6
659.184	21.7	QP	20.2	-18.4	23.5	302	100	Hori	46.0	22.5
834.822	21.4	QP	21.7	-17.3	25.8	243	100	Hori	46.0	20.2
836.777	21.3	QP	21.7	-17.3	25.7	122	100	Vert	46.0	20.3

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

Radiated Spurious Emission (below 1GHz)
Without Cradle
Rx, Ch: Mid

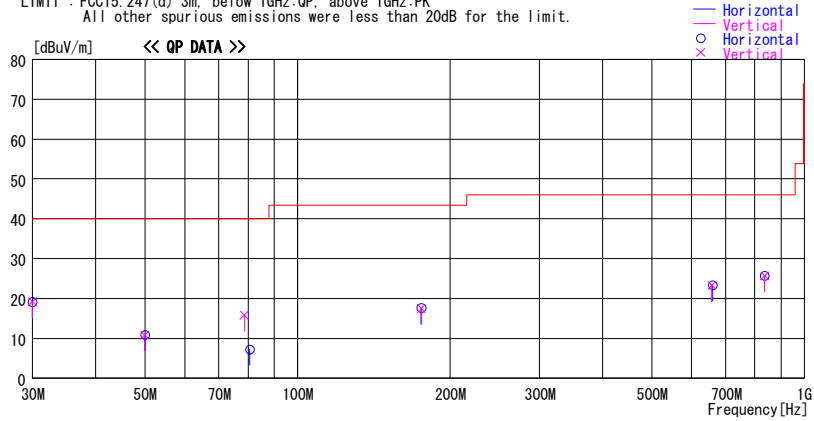
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : DC3.3V
Temp./Humi. : 21deg.C / 50%
Engineer : Akio Hayashi

Mode / Remarks: Rx Mch(2436.096MHz) Without Cradle Worst-axis(Hor:X-axis, Ver:Z-axis)

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



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]							
30.001	22.2	QP	18.9	-21.9	19.2	199	100	Vert	40.0	20.8	
30.001	22.2	QP	18.9	-21.9	19.2	224	300	Hori	40.0	20.8	
50.001	22.3	QP	10.2	-21.7	10.8	285	300	Hori	40.0	29.2	
50.001	22.3	QP	10.2	-21.7	10.8	337	100	Vert	40.0	29.2	
78.637	30.8	QP	6.4	-21.4	15.8	256	100	Vert	40.0	24.2	
80.454	22.2	QP	6.4	-21.3	7.3	234	300	Hori	40.0	32.7	
175.547	21.6	QP	16.1	-20.1	17.6	2	300	Hori	43.5	25.9	
175.811	21.5	QP	16.1	-20.1	17.5	357	100	Vert	43.5	26.0	
657.933	21.6	QP	20.1	-18.4	23.3	5	100	Vert	46.0	22.7	
659.168	21.6	QP	20.2	-18.4	23.4	312	100	Hori	46.0	22.6	
835.335	21.3	QP	21.7	-17.3	25.7	264	100	Hori	46.0	20.3	
835.724	21.3	QP	21.7	-17.3	25.7	142	100	Vert	46.0	20.3	

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

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

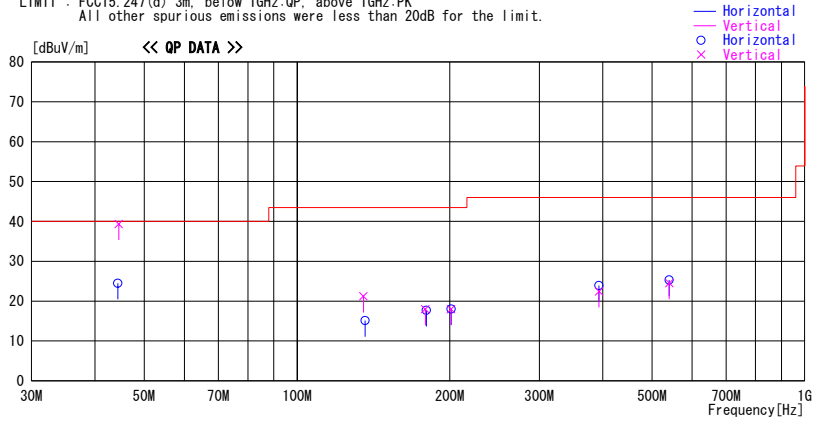
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/02

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 21deg. C / 50%
Engineer : Akio Hayashi

Mode / Remarks : Tx Lch(2405.376MHz) Normal-axis

LIMIT : FCC15.247(d) 3m. below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Loss& Gain [dB]						
44.380	34.4	QP	11.9	-21.8	24.5	359	303	Hori.	40.0	15.5
44.540	49.4	QP	11.8	-21.8	39.4	82	100	Vert.	40.0	0.6
135.161	28.1	QP	13.7	-20.6	21.2	72	100	Vert.	43.5	22.3
136.200	21.9	QP	13.8	-20.6	15.1	280	300	Hori.	43.5	28.4
178.949	21.8	QP	16.3	-20.1	18.0	59	100	Vert.	43.5	25.5
179.849	21.5	QP	16.3	-20.1	17.7	321	300	Hori.	43.5	25.8
200.999	21.3	QP	16.6	-19.9	18.0	10	300	Hori.	43.5	25.5
200.999	21.3	QP	16.6	-19.9	18.0	349	100	Vert.	43.5	25.5
393.208	25.9	QP	17.2	-19.2	23.8	184	100	Hori.	46.0	22.1
393.211	24.5	QP	17.2	-19.2	22.5	333	100	Vert.	46.0	23.6
540.649	25.3	QP	18.2	-19.0	24.5	165	100	Vert.	46.0	21.5
540.651	26.1	QP	18.2	-19.0	25.3	187	100	Hori.	46.0	20.7

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)
With Cradle
Tx, Ch: Mid

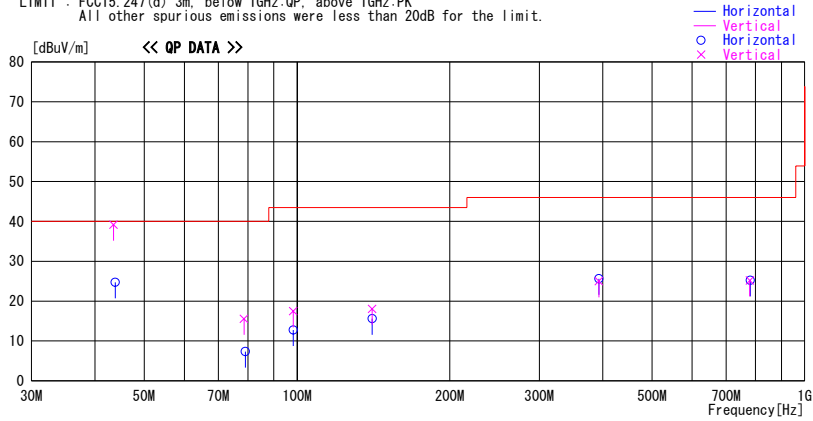
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/03

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 21deg. C / 50%
Engineer : Akio Hayashi

Mode / Remarks : Tx Mch(2436.096MHz) Normal-axis

LIMIT : FCC15.247(d) 3m. below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Gain [dB]						
43.500	48.8	QP	12.2	-21.8	39.2	56	100	Vert.	40.0	0.8
43.880	34.4	QP	12.1	-21.8	24.7	331	300	Hori.	40.0	15.3
78.642	30.6	QP	6.4	-21.4	15.6	319	100	Vert.	40.0	24.4
79.150	22.4	QP	6.4	-21.4	7.4	38	300	Hori.	40.0	32.6
98.296	28.9	QP	9.7	-21.1	17.5	82	100	Vert.	43.5	26.0
98.300	24.2	QP	9.7	-21.1	12.8	1	300	Hori.	43.5	30.7
140.612	24.4	QP	14.2	-20.5	18.1	4	100	Vert.	43.5	25.4
140.700	21.9	QP	14.2	-20.5	15.6	30	300	Hori.	43.5	27.9
393.199	27.0	QP	17.2	-19.2	25.0	319	100	Vert.	46.0	21.0
393.204	27.6	QP	17.2	-19.2	25.6	219	100	Hori.	46.0	20.4
779.341	21.4	QP	21.5	-17.7	25.2	73	100	Vert.	46.0	20.8
780.904	21.4	QP	21.5	-17.7	25.2	61	100	Hori.	46.0	20.8

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)
With Cradle
Tx, Ch: High

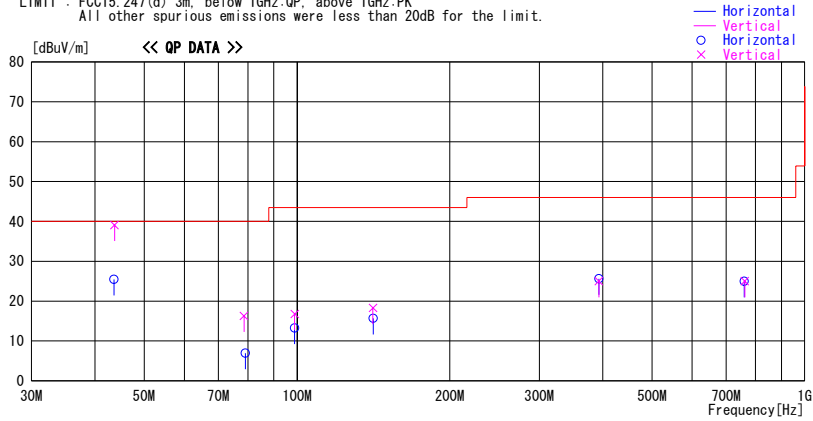
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/03

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 21deg. C / 50%
Engineer : Akio Hayashi

Mode / Remarks : Tx Hch(2473.984MHz) Normal-axis

LIMIT : FCC15.247(d) 3m. below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



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]							
43.580	35.1	QP	12.2	-21.8	25.5	329	315	Hori.	40.0	14.5	
43.700	48.8	QP	12.1	-21.8	39.1	41	100	Vert.	40.0	0.9	
78.641	31.3	QP	6.4	-21.4	16.3	200	100	Vert.	40.0	23.7	
79.077	22.0	QP	6.4	-21.4	7.0	271	300	Hori.	40.0	33.0	
98.926	24.5	QP	9.8	-21.0	13.3	189	300	Hori.	43.5	30.2	
98.960	27.9	QP	9.8	-20.9	16.8	358	100	Vert.	43.5	26.7	
141.051	24.5	QP	14.3	-20.5	18.3	3	100	Vert.	43.5	25.2	
141.252	21.9	QP	14.3	-20.5	15.7	63	300	Hori.	43.5	27.8	
393.198	27.0	QP	17.2	-19.2	25.0	312	100	Vert.	46.0	21.0	
393.199	27.6	QP	17.2	-19.2	25.6	213	100	Hori.	46.0	20.4	
759.728	21.4	QP	21.3	-17.7	25.0	240	100	Hori.	46.0	21.0	
761.767	21.3	QP	21.4	-17.7	25.0	75	100	Vert.	46.0	21.0	

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)
With Cradle
Rx, Ch: Mid

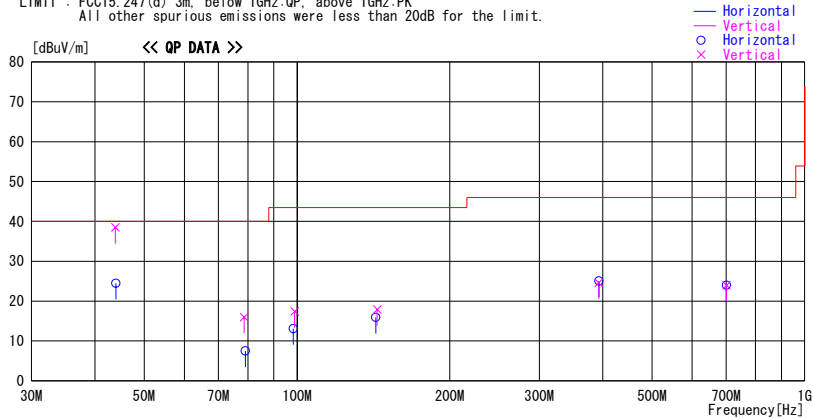
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2008/10/03

Company : YAMAHA CORPORATION
Kind of EUT : Transmitter
Model No. : PDX-50TX
Serial No. : Tx245
Report No. : 28LE0031-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 21deg. C / 50%
Engineer : Akio Hayashi

Mode / Remarks : Rx Mch(2436.096MHz) Normal-axis

LIMIT : FCC15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Loss& Gain [dB]						
43.860	48.2	QP	12.1	-21.8	38.5	66	100	Vert.	40.0	1.5
43.980	34.3	QP	12.0	-21.8	24.5	344	326	Hori.	40.0	15.5
78.644	31.0	QP	6.4	-21.4	16.0	250	100	Vert.	40.0	24.0
79.090	22.5	QP	6.4	-21.4	7.5	38	300	Hori.	40.0	32.5
98.310	24.5	QP	9.7	-21.1	13.1	355	300	Hori.	43.5	30.4
98.980	28.5	QP	9.8	-20.9	17.4	29	100	Vert.	43.5	26.1
142.810	22.0	QP	14.4	-20.5	15.9	273	300	Hori.	43.5	27.6
143.850	24.0	QP	14.4	-20.5	17.9	352	100	Vert.	43.5	25.6
393.201	26.6	QP	17.2	-19.2	24.6	323	100	Vert.	46.0	21.4
393.205	27.1	QP	17.2	-19.2	25.1	221	100	Hori.	46.0	20.9
701.405	21.6	QP	20.7	-18.3	24.0	195	100	Vert.	46.0	22.0
701.411	21.6	QP	20.7	-18.3	24.0	249	100	Hori.	46.0	22.0

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 (above 1GHz)
Without Cradle
Tx, Ch: Low

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model : PDX-50TX
Sample No. : Tx245
Power : DC 3.3V
Mode : Tx 2405.376MHz
Remarks : H: X-axis / V: Z-axis

REPORT NO : 28LE0031-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 09/29/2008
TEMPERATURE : 24deg.C
HUMIDITY : 57%
ENGINEER : Takeshi Choda

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	43.1	46.8	26.8	32.5	2.6	0.0	40.0	43.7	73.9	33.9	30.2
2*	2400.0	78.1	77.7	26.8	32.5	2.6	0.0	75.0	74.6	73.9	-	-
3	4810.8	45.2	47.4	31.2	31.4	4.1	0.7	49.8	52.0	73.9	24.1	21.9
4	7216.1	39.1	39.8	35.5	31.0	4.4	0.6	48.6	49.3	73.9	25.3	24.6
5	9621.5	39.5	39.5	38.6	31.4	5.2	0.9	52.8	52.8	73.9	21.1	21.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	14432.3	N/S	N/S	-	-	-	-	-	-	73.9	-	-
7	16837.6	N/S	N/S	-	-	-	-	-	-	73.9	-	-
8	19243.0	N/S	N/S	-	-	-	-	-	-	73.9	-	-
9	21648.4	N/S	N/S	-	-	-	-	-	-	73.9	-	-
10	24053.8	N/S	N/S	-	-	-	-	-	-	73.9	-	-
11	26459.1	46.7	46.7	39.9	30.0	7.7	0.0	54.8	54.8	73.9	19.1	19.1

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	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	29.5	33.3	26.8	32.5	2.6	0.0	26.4	30.2	53.9	27.5	23.7
2*	2400.0	64.2	65.9	26.8	32.5	2.6	0.0	61.1	62.8	53.9	-	-
3	4810.8	37.2	40.5	31.2	31.4	4.1	0.7	41.8	45.1	53.9	12.1	8.8
4	7216.1	25.8	25.9	35.5	31.0	4.4	0.6	35.3	35.4	53.9	18.6	18.5
5	9621.5	26.1	26.1	38.6	31.4	5.2	0.9	39.4	39.4	53.9	14.5	14.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	14432.3	N/S	N/S	-	-	-	-	-	-	53.9	-	-
7	16837.6	N/S	N/S	-	-	-	-	-	-	53.9	-	-
8	19243.0	N/S	N/S	-	-	-	-	-	-	53.9	-	-
9	21648.4	N/S	N/S	-	-	-	-	-	-	53.9	-	-
10	24053.8	N/S	N/S	-	-	-	-	-	-	53.9	-	-
11	26459.1	32.9	32.9	39.9	30.0	7.7	0.0	41.0	41.0	53.9	12.9	12.9

*Reference data

20dBc(Fundamental 2405.376MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [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												
0	2405.4	105.5	104.4	26.9	32.5	2.6	0.0	102.5	101.4	-	-	-
2	2400.0	71.2	70.6	26.8	32.5	2.6	0.0	68.1	67.5	Funda-20dB	14.4	13.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

*In the frequency over the 3rd harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

*N/S: Non-signal

Radiated Spurious Emission (above 1GHz)
Without Cradle
Tx, Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model : PDX-50TX
Sample No. : Tx245
Power : DC 3.3V
Mode : Tx 2436.096MHz
Remarks : H: X-axis / V: Z-axis

REPORT NO : 28LE0031-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 09/29/2008
TEMPERATURE : 24deg.C
HUMIDITY : 57%
ENGINEER : Takeshi Choda

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]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4872.2	45.5	47.0	31.3	31.4	4.1	0.7	50.2	51.7	73.9	23.7	22.2
2	7308.3	38.5	39.0	35.7	31.0	4.5	0.6	48.3	48.8	73.9	25.6	25.1
3	9744.4	39.1	39.2	38.7	31.4	5.2	0.9	52.5	52.6	73.9	21.4	21.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12180.5	N/S	N/S	-	-	-	-	-	-	73.9	-	-
5	14616.6	N/S	N/S	-	-	-	-	-	-	73.9	-	-
6	17052.7	N/S	N/S	-	-	-	-	-	-	73.9	-	-
7	19488.8	N/S	N/S	-	-	-	-	-	-	73.9	-	-
8	21924.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
9	24361.0	46.2	45.8	40.1	30.0	7.9	0.0	54.7	54.3	73.9	19.2	19.6

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/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4872.2	37.9	40.3	31.3	31.4	4.1	0.7	42.6	45.0	53.9	11.3	8.9
2	7308.3	24.9	24.8	35.7	31.0	4.5	0.6	34.7	34.6	53.9	19.2	19.3
3	9744.4	25.3	25.4	38.7	31.4	5.2	0.9	38.7	38.8	53.9	15.2	15.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12180.5	N/S	N/S	-	-	-	-	-	-	53.9	-	-
5	14616.6	N/S	N/S	-	-	-	-	-	-	53.9	-	-
6	17052.7	N/S	N/S	-	-	-	-	-	-	53.9	-	-
7	19488.8	N/S	N/S	-	-	-	-	-	-	53.9	-	-
8	21924.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
9	24361.0	31.9	31.9	40.1	30.0	7.9	0.0	40.4	40.4	53.9	13.5	13.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

*In the frequency over the 3rd harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

*N/S: Non-signal

Radiated Spurious Emission (above 1GHz)
Without Cradle
Tx, Ch: High

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model : PDX-50TX
Sample No. : Tx245
Power : DC 3.3V
Mode : Tx 2473.984MHz
Remarks : H: X-axis / V: Z-axis

REPORT NO : 28LE0031-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 09/29/2008
TEMPERATURE : 24deg.C
HUMIDITY : 57%
ENGINEER : Takeshi Choda

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]						[dBuV/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	55.8	56.0	27.0	32.5	2.6	0.0	52.9	53.1	73.9	21.0	20.8
2	4948.0	43.4	46.8	31.5	31.4	4.2	0.7	48.4	51.8	73.9	25.5	22.1
3	7422.0	39.6	39.7	36.0	31.0	4.6	0.6	49.8	49.9	73.9	24.1	24.0
4	9895.9	40.5	40.6	38.8	31.4	5.2	0.9	54.0	54.1	73.9	19.9	19.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12369.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
6	14843.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
7	17317.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
8	19791.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
9	22265.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
10	24739.8	45.8	45.3	40.4	30.1	8.0	0.0	54.6	54.1	73.9	19.3	19.8

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/m]		[dB]		
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	46.1	46.0	27.0	32.5	2.6	0.0	43.2	43.1	53.9	10.7	10.8
2	4948.0	35.0	40.1	31.5	31.4	4.2	0.7	40.0	45.1	53.9	13.9	8.8
3	7422.0	25.9	25.7	36.0	31.0	4.6	0.6	36.1	35.9	53.9	17.8	18.0
4	9895.9	26.5	26.5	38.8	31.4	5.2	0.9	40.0	40.0	53.9	13.9	13.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12369.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
6	14843.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
7	17317.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
8	19791.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
9	22265.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
10	24739.8	31.7	31.7	40.4	30.1	8.0	0.0	40.5	40.5	53.9	13.4	13.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

*In the frequency over the 3rd harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

*N/S: Non-signal

**Radiated Spurious Emission (above 1GHz)
Without Cradle
Rx, Ch: Mid**

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company	: YAMAHA CORPORATION	REPORT NO	: 28LE0031-HO-01
Equipment	: Transmitter	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model	: PDX-50TX	TEST DISTANCE	: 3m
Sample No.	: Tx245	DATE	: 09/29/2008
Power	: DC 3.3V	TEMPERATURE	: 24deg.C
Mode	: Rx 2436.096MHz	HUMIDITY	: 57%
Remarks	: H: X-axis / V: Z-axis	ENGINEER	: Takeshi Choda

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2436.1	40.5	40.6	26.9	32.5	2.6	0.0	37.5	37.6	73.9	36.4	36.3
2	7308.3	38.6	39.5	35.7	31.0	3.9	0.0	47.2	48.1	73.9	26.7	25.8

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2436.1	27.3	27.9	26.9	32.5	2.6	0.0	24.3	24.9	53.9	29.6	29.0
2	7308.3	25.3	25.1	35.7	31.0	3.9	0.0	33.9	33.7	53.9	20.0	20.2

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

Radiated Spurious Emission(above 1GHz)
With Cradle
Tx, Ch: Low

Company	: YAMAHA CORPORATION	REPORT NO	: 28LE0031-HO-01
Equipment	: Transmitter	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model	: PDX-50TX	TEST DISTANCE	: 3/1m
Sample No.	: Tx245	DATE	: 09/29/2008
Power	: AC 120V/ 60Hz	TEMPERATURE	: 24deg.C
Mode	: Tx 2405.376MHz	HUMIDITY	: 57%
Remarks	: Normal-axis	ENGINEER	: Takeshi Choda

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	42.9	43.1	26.8	32.5	2.6	0.0	39.8	40.0	73.9	34.1	33.9
2*	2400.0	72.2	70.4	26.8	32.5	2.6	0.0	69.1	67.3	73.9	-	-
3	4810.8	47.3	43.3	31.2	31.4	4.1	0.7	51.9	47.9	73.9	22.0	26.0
4	7216.1	38.8	39.7	35.5	31.0	4.4	0.6	48.3	49.2	73.9	25.6	24.7
5	9621.5	39.8	40.8	38.6	31.4	5.2	0.9	53.1	54.1	73.9	20.8	19.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12026.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
7	14432.3	N/S	N/S	-	-	-	-	-	-	73.9	-	-
8	16837.6	N/S	N/S	-	-	-	-	-	-	73.9	-	-
9	19243.0	N/S	N/S	-	-	-	-	-	-	73.9	-	-
10	21648.4	N/S	N/S	-	-	-	-	-	-	73.9	-	-
11	24053.8	46.1	46.2	39.9	30.0	7.7	0.0	54.2	54.3	73.9	19.7	19.6

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
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2390.0	28.8	28.7	26.8	32.5	2.6	0.0	25.7	25.6	53.9	28.2	28.3
2*	2400.0	58.2	59.3	26.8	32.5	2.6	0.0	55.1	56.2	53.9	-	-
3	4810.8	40.3	33.4	31.2	31.4	4.1	0.7	44.9	38.0	53.9	9.0	15.9
4	7216.1	25.0	25.3	35.5	31.0	4.4	0.6	34.5	34.8	53.9	19.4	19.1
5	9621.5	25.7	25.7	38.6	31.4	5.2	0.9	39.0	39.0	53.9	14.9	14.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12026.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
7	14432.3	N/S	N/S	-	-	-	-	-	-	53.9	-	-
8	16837.6	N/S	N/S	-	-	-	-	-	-	53.9	-	-
9	19243.0	N/S	N/S	-	-	-	-	-	-	53.9	-	-
10	21648.4	N/S	N/S	-	-	-	-	-	-	53.9	-	-
11	24053.8	32.5	32.5	39.9	30.0	7.7	0.0	40.6	40.6	53.9	13.3	13.3

*Reference data

20dBc(Fundamental 2405.376MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [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												
0	2405.4	99.4	97.4	26.9	32.5	2.6	0.0	96.4	94.4	-	-	-
2	2400.0	65.7	64.1	26.8	32.5	2.6	0.0	62.6	61.0	Funda-20dB	13.8	13.4

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

*In the frequency over the 3rd harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

*N/S: Non-signal

**Radiated Spurious Emission (above 1GHz)
With Cradle
Tx, Ch: Mid**

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model : PDX-50TX
Sample No. : Tx245
Power : AC 120V/ 60Hz
Mode : Tx 2436.096MHz
Remarks : Normal-axis

REPORT NO : 28LE0031-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 09/29/2008
TEMPERATURE : 24deg.C
HUMIDITY : 57%
ENGINEER : Takeshi Choda

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 [dBuV]	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4872.2	47.9	44.5	31.3	31.4	4.1	0.7	52.6	49.2	73.9	21.3	24.7
2	7308.3	39.6	39.5	35.7	31.0	4.5	0.6	49.4	49.3	73.9	24.5	24.6
3	9744.4	39.3	40.0	38.7	31.4	5.2	0.9	52.7	53.4	73.9	21.2	20.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12180.5	N/S	N/S	-	-	-	-	-	-	73.9	-	-
5	14616.6	N/S	N/S	-	-	-	-	-	-	73.9	-	-
6	17052.7	N/S	N/S	-	-	-	-	-	-	73.9	-	-
7	19488.8	N/S	N/S	-	-	-	-	-	-	73.9	-	-
8	21924.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-
9	24361.0	45.3	45.4	40.1	30.0	7.9	0.0	53.8	53.9	73.9	20.1	20.0

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					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4872.2	40.8	36.4	31.3	31.4	4.1	0.7	45.5	41.1	53.9	8.4	12.8
2	7308.3	25.1	25.2	35.7	31.0	4.5	0.6	34.9	35.0	53.9	19.0	18.9
3	9744.4	25.5	25.4	38.7	31.4	5.2	0.9	38.9	38.8	53.9	15.0	15.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12180.5	N/S	N/S	-	-	-	-	-	-	53.9	-	-
5	14616.6	N/S	N/S	-	-	-	-	-	-	53.9	-	-
6	17052.7	N/S	N/S	-	-	-	-	-	-	53.9	-	-
7	19488.8	N/S	N/S	-	-	-	-	-	-	53.9	-	-
8	21924.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-
9	24361.0	31.9	31.9	40.1	30.0	7.9	0.0	40.4	40.4	53.9	13.5	13.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

*In the frequency over the 3rd harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

*N/S: Non-signal

**Radiated Spurious Emission (above 1GHz)
With Cradle
Tx, Ch: High**

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model : PDX-50TX
Sample No. : Tx245
Power : AC 120V/ 60Hz
Mode : Tx 2473.984MHz
Remarks : Normal-axis

REPORT NO : 28LE0031-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 09/29/2008
TEMPERATURE : 24deg.C
HUMIDITY : 57%
ENGINEER : Takeshi Choda

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]									
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2483.5	54.1	52.4	27.0	32.5	2.6	0.0	51.2	49.5	73.9	22.7	24.4	
2	4948.0	47.1	43.5	31.5	31.4	4.2	0.7	52.1	48.5	73.9	21.8	25.4	
3	7422.0	40.5	39.4	36.0	31.0	4.6	0.6	50.7	49.6	73.9	23.2	24.3	
4	9895.9	40.4	40.4	38.8	31.4	5.2	0.9	53.9	53.9	73.9	20.0	20.0	
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12369.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-	
6	14843.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-	
7	17317.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-	
8	19791.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-	
9	22265.9	N/S	N/S	-	-	-	-	-	-	73.9	-	-	
10	24739.8	45.6	45.7	40.4	30.1	8.0	0.0	54.4	54.5	73.9	19.5	19.4	

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]		[dB]									
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2483.5	43.8	40.4	27.0	32.5	2.6	0.0	40.9	37.5	53.9	13.0	16.4	
2	4948.0	40.4	35.0	31.5	31.4	4.2	0.7	45.4	40.0	53.9	8.5	13.9	
3	7422.0	25.8	25.3	36.0	31.0	4.6	0.6	36.0	35.5	53.9	17.9	18.4	
4	9895.9	26.5	26.5	38.8	31.4	5.2	0.9	40.0	40.0	53.9	13.9	13.9	
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12369.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-	
6	14843.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-	
7	17317.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-	
8	19791.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-	
9	22265.9	N/S	N/S	-	-	-	-	-	-	53.9	-	-	
10	24739.8	31.8	31.7	40.4	30.1	8.0	0.0	40.6	40.5	53.9	13.3	13.4	

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

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

*In the frequency over the 3rd harmonic, the noise from the EUT was not seen. The data above is its base noise.

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

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

*N/S: Non-signal

**Radiated Spurious Emission (above 1GHz)
With Cradle
Rx, Ch: Mid**

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company	: YAMAHA CORPORATION	REPORT NO	: 28LE0031-HO-01
Equipment	: Transmitter	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model	: PDX-50TX	TEST DISTANCE	: 3m
Sample No.	: Tx245	DATE	: 09/29/2008
Power	: AC 120V/ 60Hz	TEMPERATURE	: 24deg.C
Mode	: Rx 2436.096MHz	HUMIDITY	: 57%
Remarks	: Normal-axis	ENGINEER	: Takeshi Choda

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

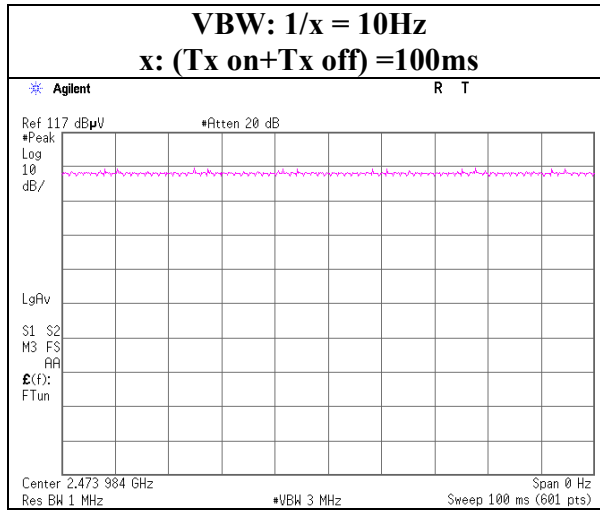
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2436.1	40.7	40.7	26.9	32.5	2.6	0.0	37.7	37.7	73.9	36.2	36.2
2	7308.3	37.9	38.1	35.7	31.0	3.9	0.0	46.5	46.7	73.9	27.4	27.2

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

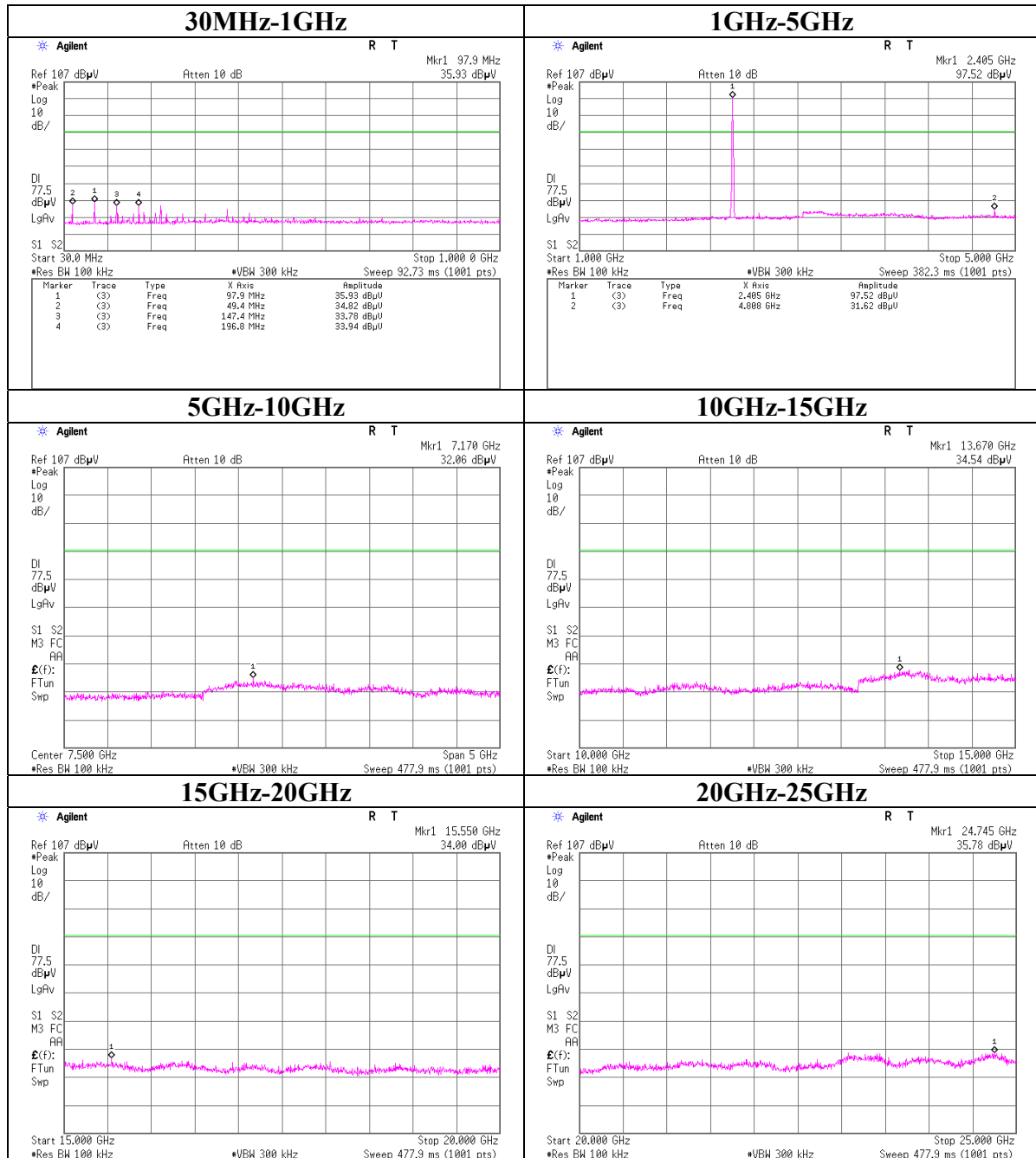
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2436.1	27.9	27.8	26.9	32.5	2.6	0.0	24.9	24.8	53.9	29.0	29.1
2	7308.3	25.6	25.7	35.7	31.0	3.9	0.0	34.2	34.3	53.9	19.7	19.6

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

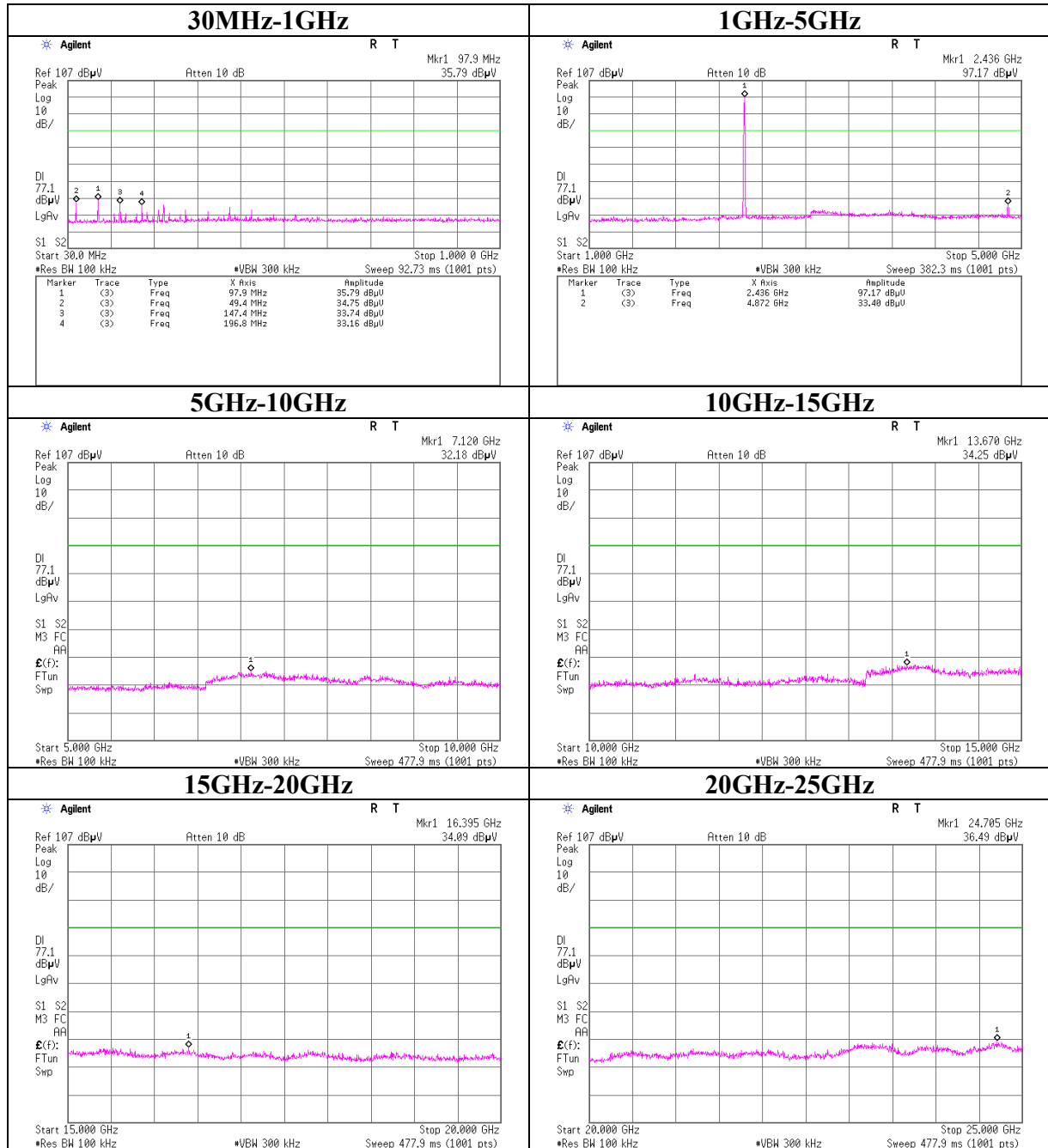
VBW (AV) Calculation



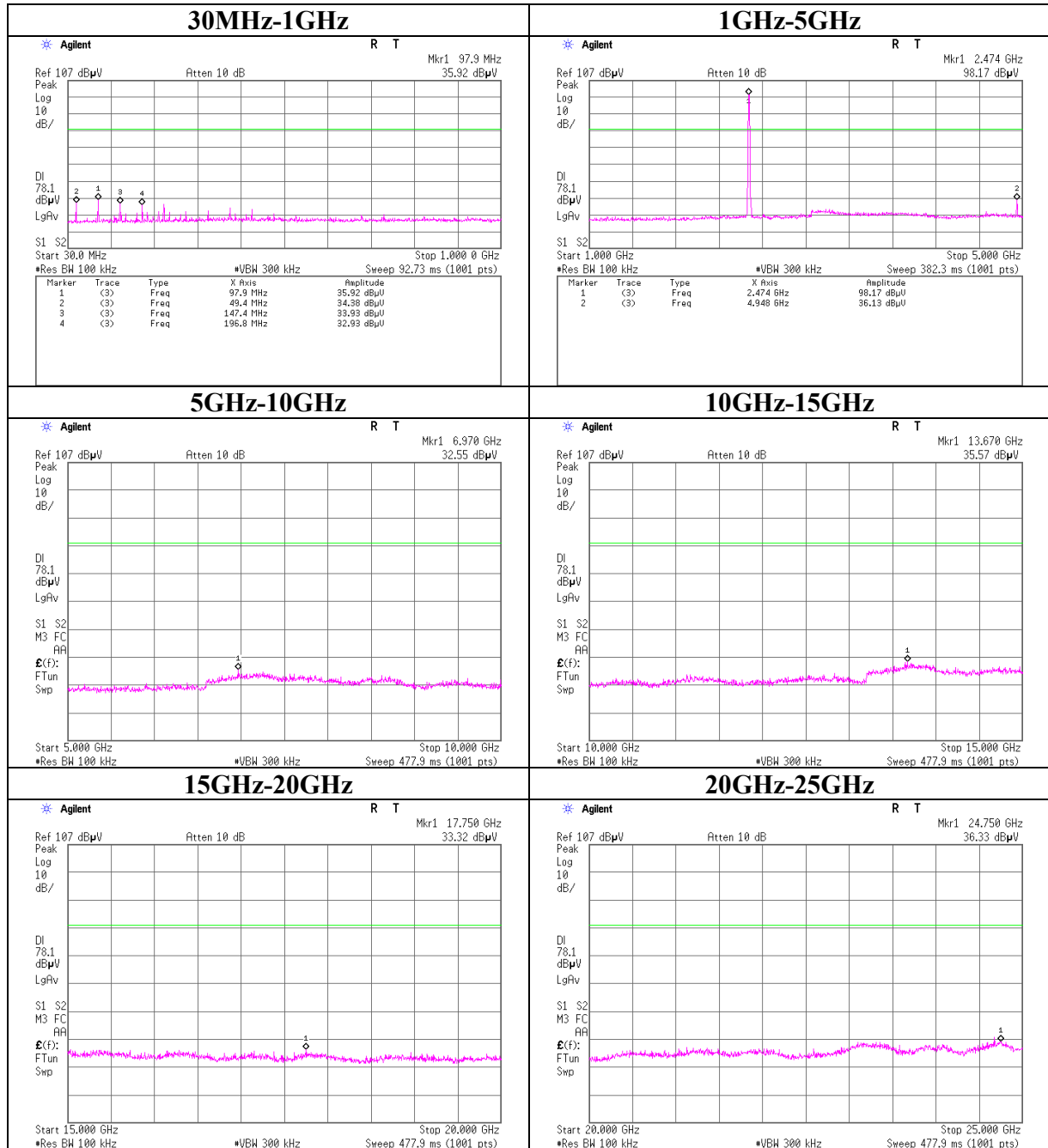
Conducted Spurious Emission
Tx, Ch: Low



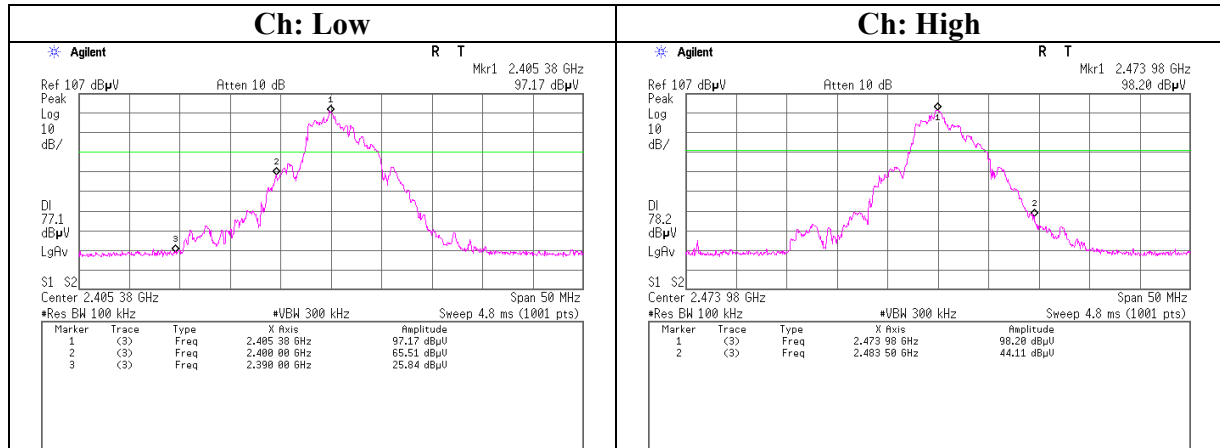
Conducted Spurious Emission
Tx, Ch: Mid



Conducted Spurious Emission
Tx, Ch: High



Conducted emission Band Edge compliance



Power Density

Company : YAMAHA CORPORATION
Equipment : Transmitter
Model No. : PDX-50TX
Serial No. : Tx229
Power : AC120V/60Hz
Mode : Tx (Ch L, M, H)

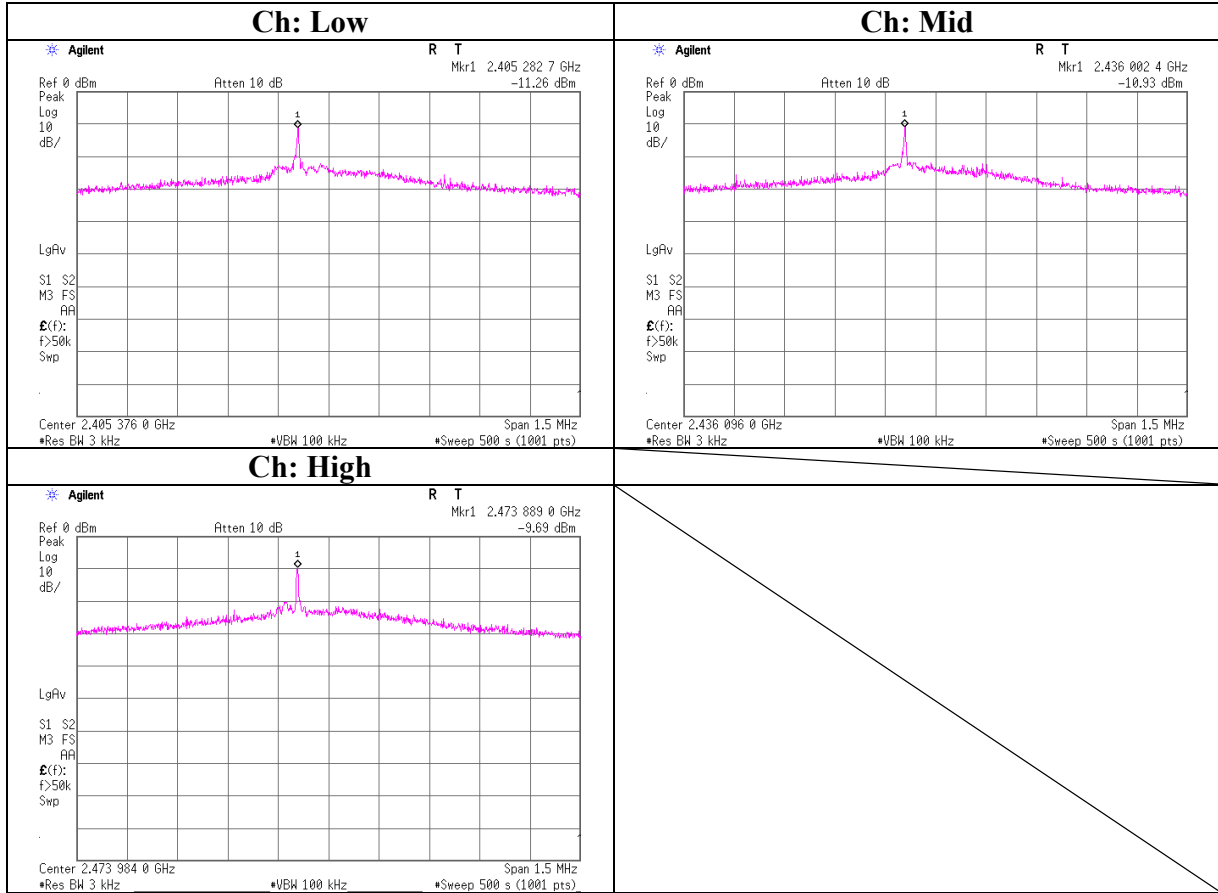
UL Japan, Inc.
Head Office EMC Lab. No.4 Shielded Room
Test Report No. : 28LE0031-HO-01
Regulation : FCC15.247(e)/RSS-210A8.2(b)
Test distance : -
Date : 10/3/2008
Temperature : 26deg.C.
Humidity : 58%
Engineer : Shinya Watanabe

Ch	Freq. [MHz]	Reading [dBm]	Cable [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2405.4	-11.26	1.83	10.09	0.7	8.0	7.3
Mid	2436.1	-10.93	1.84	10.09	1.0	8.0	7.0
High	2474.0	-9.69	1.85	10.09	2.3	8.0	5.8

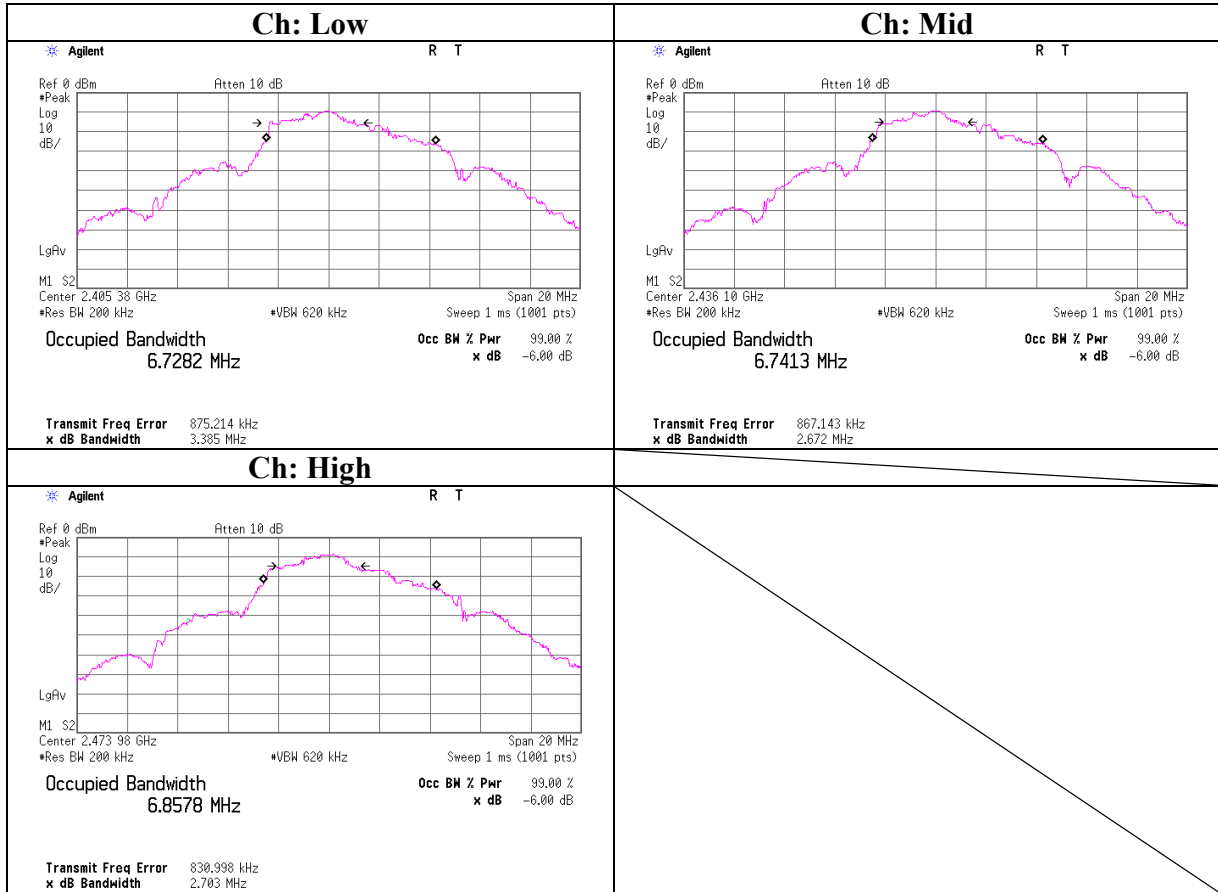
Sample Calculation:

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

Power Density



99% Occupied Bandwidth



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/CE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	RE/CE	2007/12/27 * 12
MJM-05	Measure	PROMART	SEN1955	RE/CE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE/CE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	RE	2007/11/27 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2008/01/19 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2008/05/12 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2008/09/17 * 12
MHA-02	Horn Antenna 18-26.5GHz	EMCO	3160-09	RE	2008/01/19 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/12/26 * 12
MHF-18	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	RE	2007/12/10 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	RE/CE	2008/04/02 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/10/21 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2007/10/21 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2008/02/15 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2007/11/13 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2008/09/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2008/02/20 * 12
MCC-13	Coaxial Cable	Fujikura/Agilent	-	CE	2008/02/15 * 12
MSA-11	Spectrum Analyzer	Agilent	E4448A	AT	2008/06/24 * 12
MPM-13	Power Meter	Anritsu	ML2495A	AT	2008/08/13 * 12
MPSE-18	Power sensor	Anritsu	MA2411B	AT	2008/08/13 * 12
MCC-66	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	AT	2008/04/04 * 12
MAT-22	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2008/03/04 * 12
MOS-23	Thermo-Hygrometer	Custom	CTH-201	AT	2007/12/27 * 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**

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