APPENDIX 2: Data of EMI test

Carrier Frequency Separation

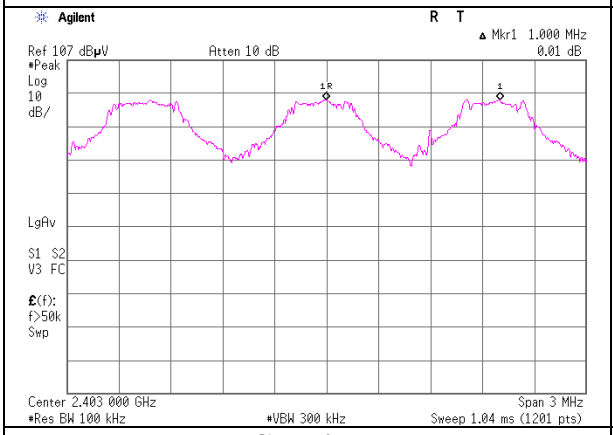
UL Japan, Inc.
Head Office EMC Lab. No.7 shielded Room

COMPANY	: Matsushita Electric Industrial Co., Ltd.	REGULATION	: FCC15.247(a)(1)/RSS-210A8.1(b)
EQUIPMENT	: PCB assy with Bluetooth for car audio	TEST DISTANCE	: -
MODEL	: YEP0PT9918A0	DATE	: 05/09/2007
S/ N	: 9X7 001	TEMPERATURE	: 24deg.C
POWER	: DC 5.0V	HUMIDITY	: 42%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Norihisa Hashimoto

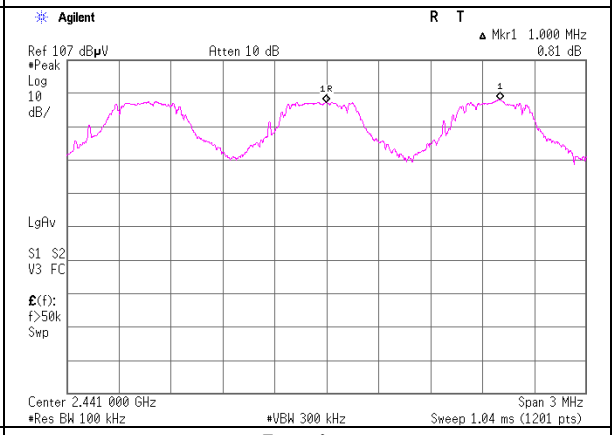
Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.000	>two-thirds of 0.850[MHz] (20dB Bandwidth) or 25[kHz](whichever is greater)
Mid	2441.0	1.000	>two-thirds of 0.838[MHz] (20dB Bandwidth) or 25[kHz](whichever is greater)
High	2480.0	1.000	>two-thirds of 0.838[MHz] (20dB Bandwidth) or 25[kHz](whichever is greater)
Inquiry	2441.0	2.000	>two-thirds of 0.798[MHz] (20dB Bandwidth) or 25[kHz](whichever is greater)

Carrier Frequency Separation

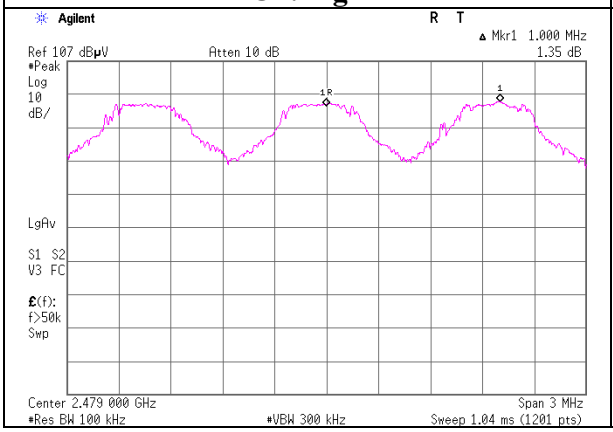
Ch:Low



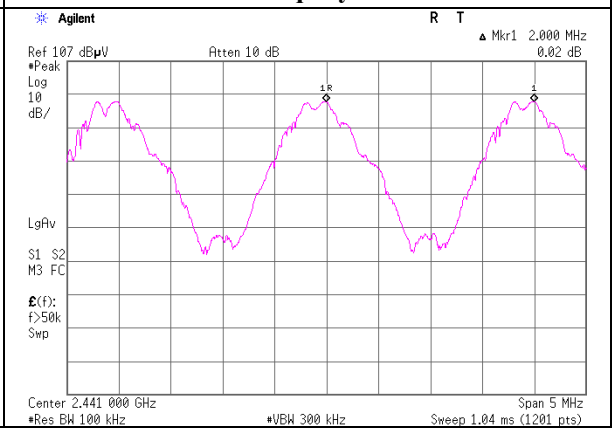
Ch:Mid



Ch:High



Inquiry



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20dB Bandwidth

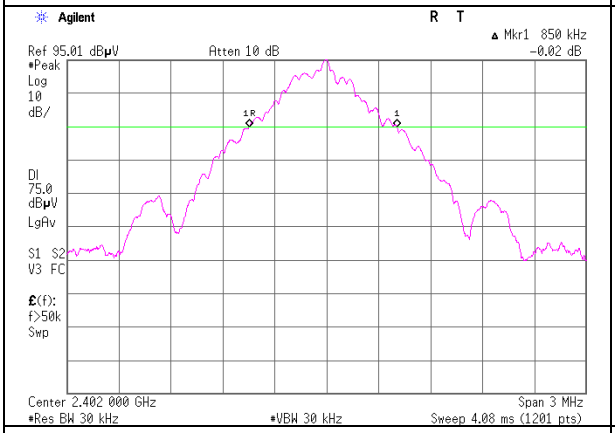
UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room

COMPANY	: Matsushita Electric Industrial Co., Ltd.	REGULATION	: FCC15.247(a)(1)/RSS-210A8.1(a)
EQUIPMENT	: PCB assy with Bluetooth for car audio	TEST DISTANCE	: -
MODEL	: YEP0PT9918A0	DATE	: 05/09/2007
S/ N	: 9X7 001	TEMPERATURE	: 24deg.C
POWER	: DC 5.0V	HUMIDITY	: 42%
MODE	: Tx (Hopping off) /Inquiry	ENGINEER	: Norihisa Hashimoto

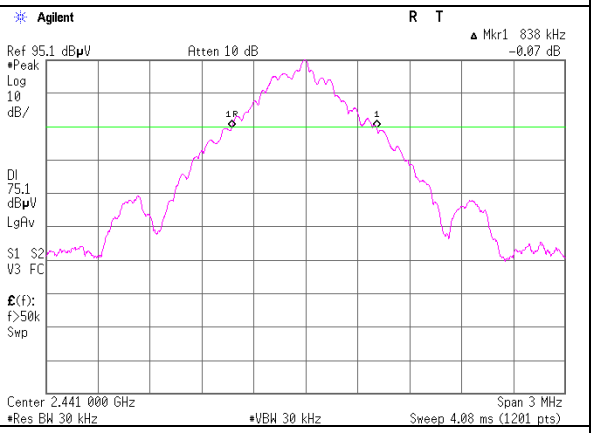
Ch	Freq. [MHz]	20dB Bandwidth [MHz]	Limit [MHz]
Low	2402.0	0.850	-
Mid	2441.0	0.838	-
High	2480.0	0.838	-
Inquiry	2441.0	0.798	-

20dB Bandwidth

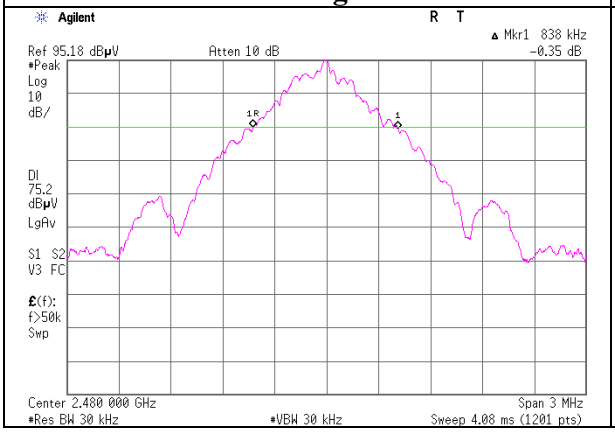
Ch:Low



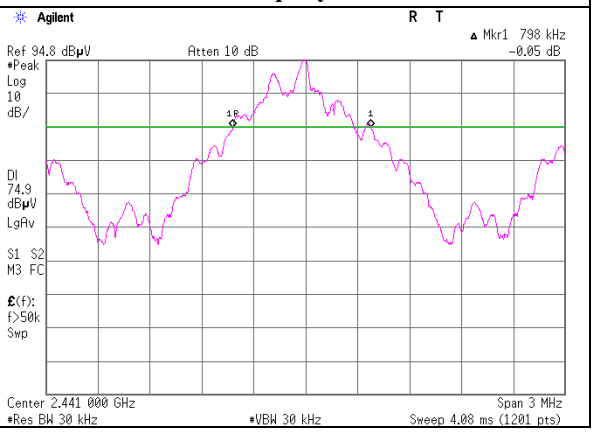
Ch:Mid



Ch:High



Inquiry



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Number of Hopping Frequency

UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room

COMPANY	: Matsushita Electric Industrial Co., Ltd.	REGULATION	: FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
EQUIPMENT	: PCB assy with Bluetooth for car audio	TEST DISTANCE	: -
MODEL	: YEP0PT9918A0	DATE	: 05/09/2007
S/ N	: 9X7 001	TEMPERATURE	: 24deg.C
POWER	: DC 5.0V	HUMIDITY	: 42%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Norihisa Hashimoto

Mode	Number of channel [time]	Limit [time]
Tx(Hoppng on)	79	≧15

Mode	Number of channel [time]	Limit [time]
Inquiry	32	≧15

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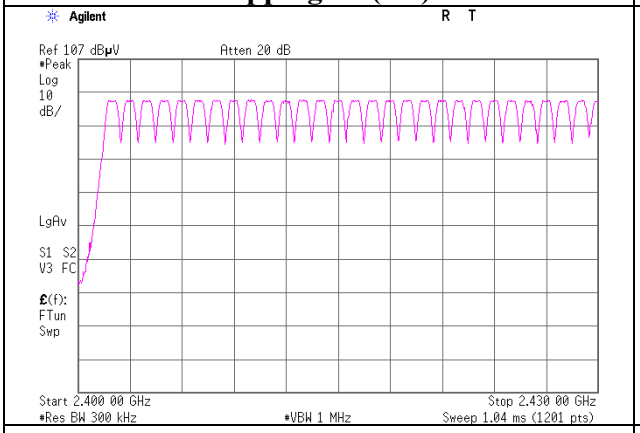
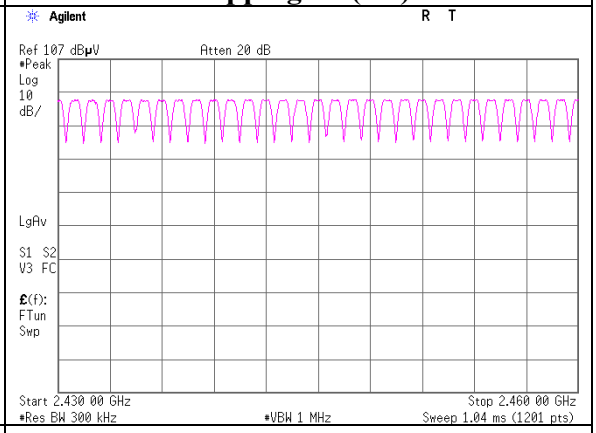
Number of Hopping Frequency

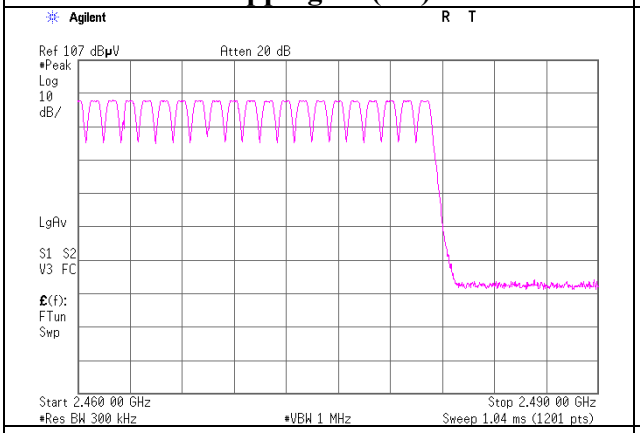
Hopping on (1/3)



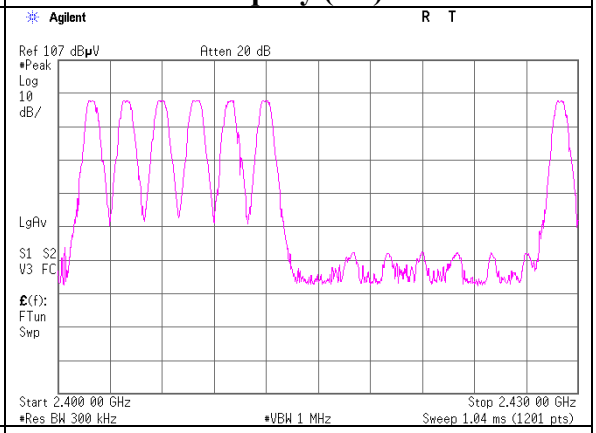
Hopping on (2/3)



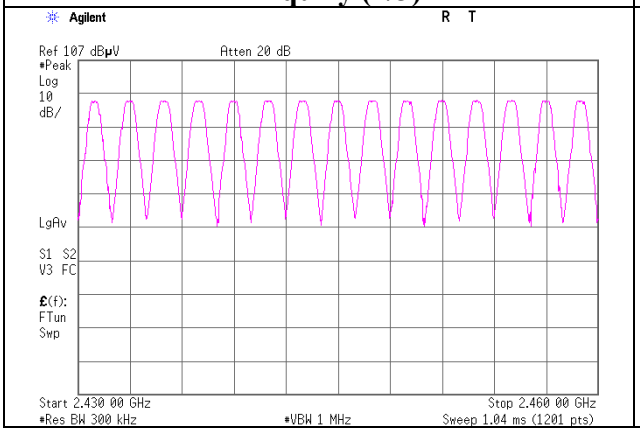
Hopping on (3/3)



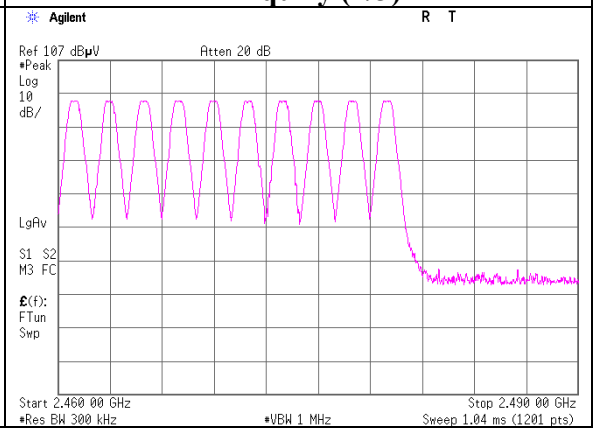
Inquiry (1/3)



Inquiry (2/3)



Inquiry (2/3)



Dwell time

UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room

COMPANY	: Matsushita Electric Industrial Co., Ltd.	REGULATION	: FCC15.247(a)(1)(iii)/RSS-210A8.1(d)
EQUIPMENT	: PCB assy with Bluetooth for car audio	TEST DISTANCE	: -
MODEL	: YEP0PT9918A0	DATE	: 05/09/2007
S/ N	: 9X7 001	TEMPERATURE	: 24deg.C
POWER	: DC 5.0V	HUMIDITY	: 42%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Norihisa Hashimoto

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	53 times / 5 sec. x 31.6 sec. = 334 times	0.502	168	400
DH3	24 times / 5 sec. x 31.6 sec. = 153 times	1.760	269	400
DH5	sweep time 31.6 sec = 97 times	3.013	292	400
Inquiry	100 times / 1 sec. x 12.8 sec. = 1280 times	0.207	265	400

DH1 Average 1:54 2:54 3:52 4:52 5:52
DH3 Average 1:24 2:23 3:23 4:26 5:25

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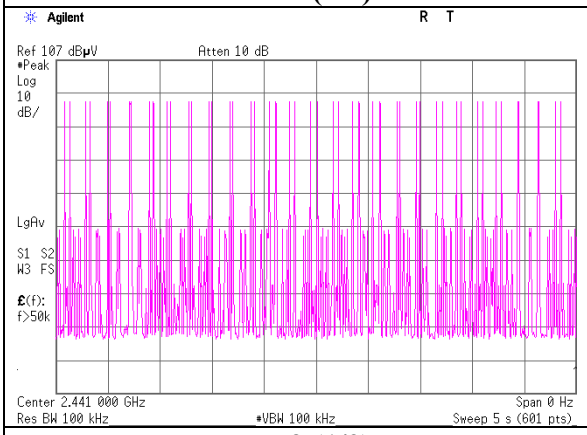
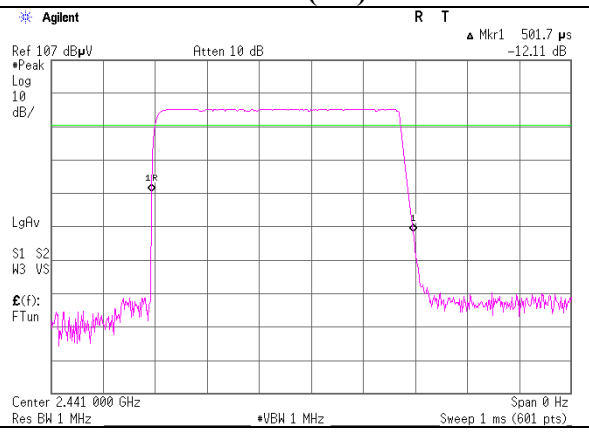
Dwell time

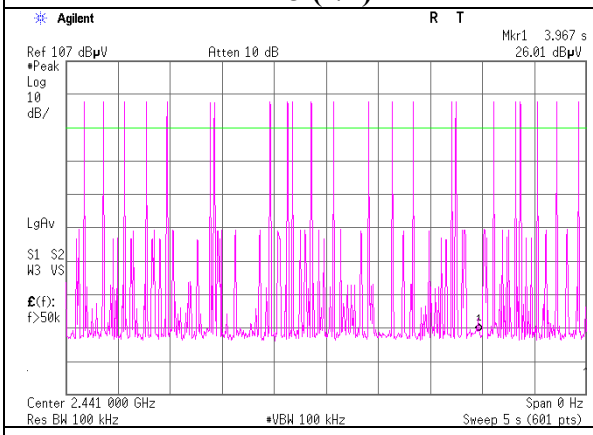
DH1 (1/2)



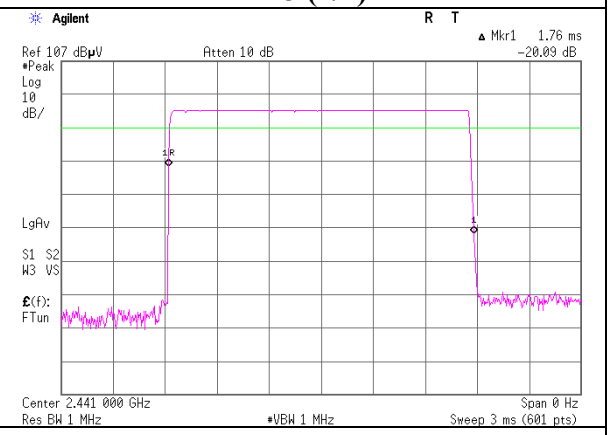
DH1 (2/2)



DH3 (1/2)

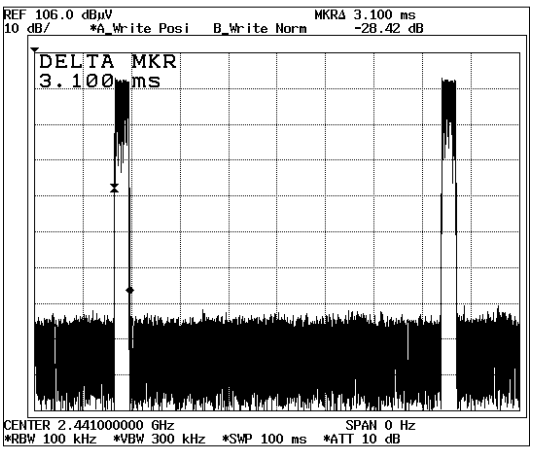


DH3 (2/2)



Dwell time factor

20log(3.1ms*2)/100ms= -24.1dB



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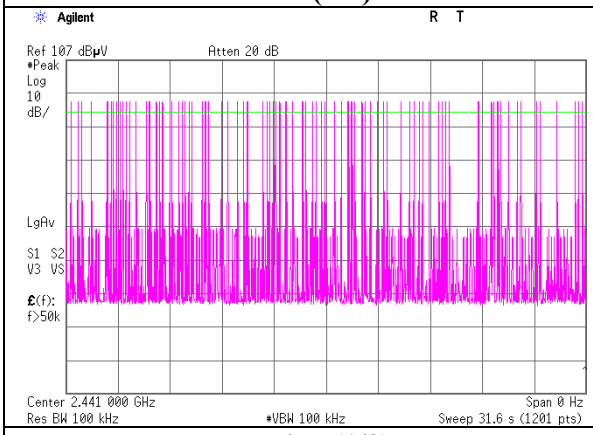
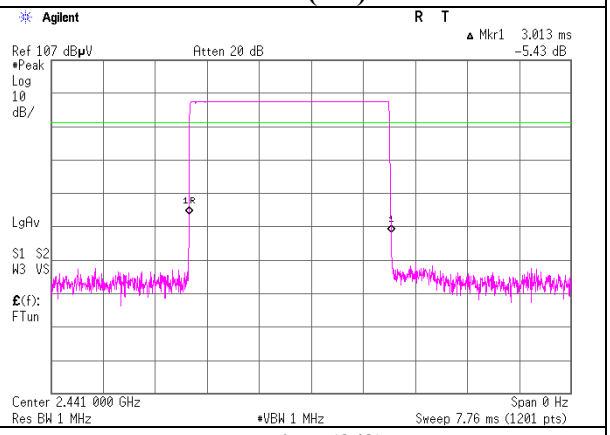
Dwell time

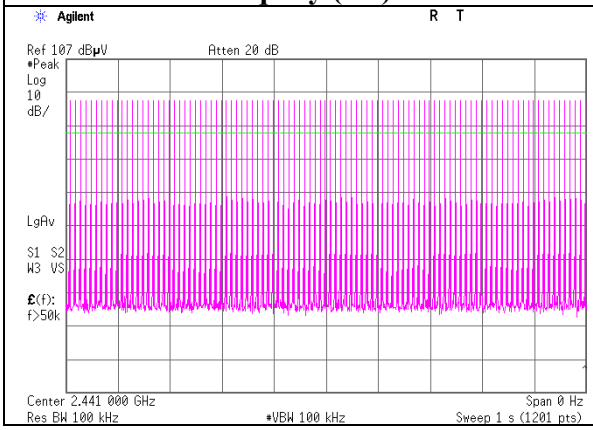
DH5 (1/2)



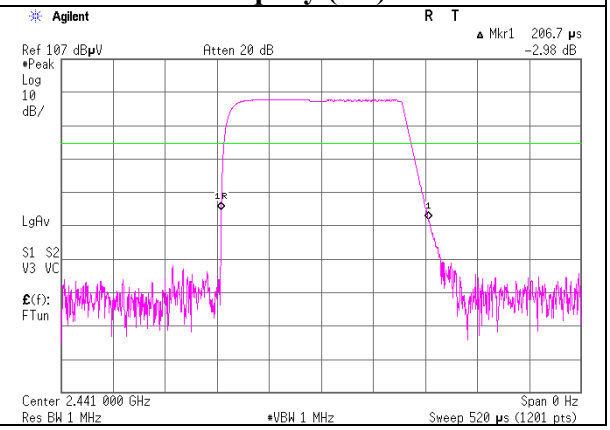
DH5 (2/2)



Inquiry (1/2)



Inquiry (2/2)



Maximum Peak Output Power

UL Japan, Inc.
Head Office EMC Lab. No.7 Shielded Room

COMPANY	: Matsushita Electric Industrial Co., Ltd.	REGULATION	: FCC15.247(b)(1)/RSS-210A8.4(2)
EQUIPMENT	: PCB assy with Bluetooth for car audio	TEST DISTANCE	: -
MODEL	: YEP0PT9918A0	DATE	: 05/09/2007
S/ N	: 9X7 001	TEMPERATURE	: 24deg.C
POWER	: DC 5.0V	HUMIDITY	: 42%
MODE	: Tx(Hopping Off)/Inquiry	ENGINEER	: Norihisa Hashimoto

Ch	Freq.	P/M Reading	Cable Loss	Atten.	Result		Limit		Margin
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
Low	2402.0	-11.61	1.25	9.98	-0.38	0.92	20.97	125	21.35
Mid	2441.0	-11.64	1.25	10.04	-0.35	0.92	20.97	125	21.32
High	2480.0	-11.70	1.00	10.03	-0.67	0.86	20.97	125	21.64
Inquiry	2441.0	-11.68	1.25	10.04	-0.39	0.91	20.97	125	21.36

Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9918A0)
Tx, Ch. Low

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

-

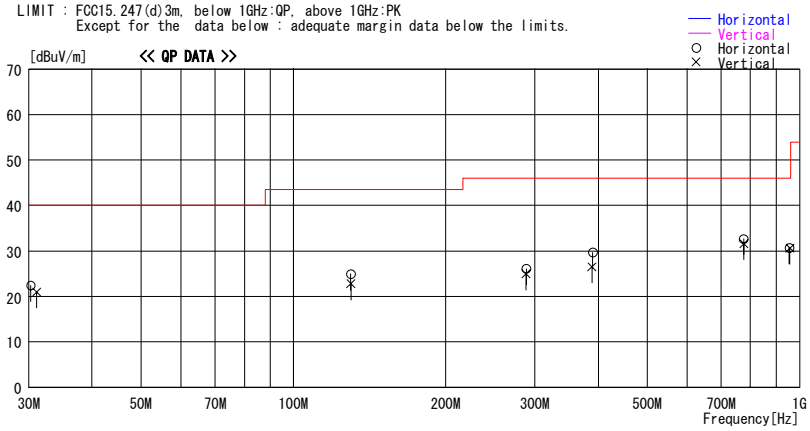
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 27HE0140-HO
Kind of EUT	: PCB assy with Bluetooth for car audio	Power	: DC 5.0V
Model No.	: YEP0PT9918A0	Temp./Humi.	: 27deg.C / 46%
Serial No.	: 9X7 002	Operator	: Tomotaka Sasagawa

Mode / Remarks : Transmitting mode 2402MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]		[dBuV/m]	[dB]
30.270	25.6	QP	18.8	-22.0	22.4	Hori.	40.0	17.6
31.080	24.7	QP	18.3	-22.0	21.0	Vert.	40.0	19.0
129.823	32.4	QP	13.5	-20.9	25.0	Hori.	43.5	18.5
129.899	30.2	QP	13.5	-20.9	22.8	Vert.	43.5	20.7
288.390	25.9	QP	19.4	-19.2	26.1	Hori.	46.0	19.9
288.245	24.8	QP	19.4	-19.2	25.0	Vert.	46.0	21.0
388.902	28.2	QP	17.6	-19.3	26.5	Vert.	46.0	19.5
390.442	31.4	QP	17.6	-19.3	29.7	Hori.	46.0	16.3
776.223	27.8	QP	21.6	-17.8	31.6	Vert.	46.0	14.4
775.308	28.9	QP	21.6	-17.8	32.7	Hori.	46.0	13.3
954.665	24.5	QP	22.8	-16.6	30.7	Hori.	46.0	15.3
957.220	24.3	QP	22.9	-16.6	30.6	Vert.	46.0	15.4

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)

Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9918A0)
Tx, Ch. Mid

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

DATA OF RADIATED EMISSION TEST

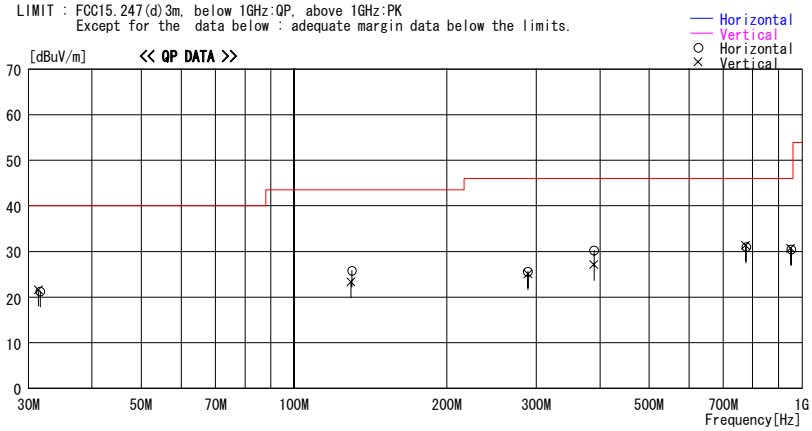
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEPOPT9918A0
Serial No. : 9X7 002

Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Transmitting mode 2441MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]		[dBuV/m]	[dB]
31.350	25.4	QP	18.2	-22.0	21.6	Vert.	40.0	18.4
31.620	25.2	QP	18.1	-22.0	21.3	Hori.	40.0	18.7
129.443	30.8	QP	13.5	-20.9	23.4	Vert.	43.5	20.1
129.899	33.2	QP	13.5	-20.9	25.8	Hori.	43.5	17.7
288.390	25.4	QP	19.4	-19.2	25.6	Hori.	46.0	20.4
288.760	24.9	QP	19.4	-19.2	25.1	Vert.	46.0	20.9
390.008	31.9	QP	17.6	-19.3	30.2	Hori.	46.0	15.8
389.602	28.9	QP	17.6	-19.3	27.2	Vert.	46.0	18.8
776.223	27.2	QP	21.6	-17.8	31.0	Hori.	46.0	15.0
775.308	27.6	QP	21.6	-17.8	31.4	Vert.	46.0	14.6
951.011	24.5	QP	22.8	-16.6	30.7	Vert.	46.0	15.3
953.111	24.3	QP	22.8	-16.6	30.5	Hori.	46.0	15.5

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)

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Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9918A0)
Tx, Ch. High

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

DATA OF RADIATED EMISSION TEST

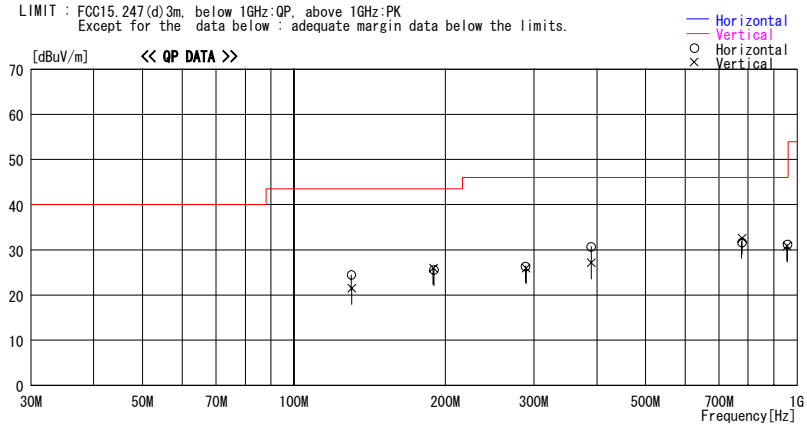
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEPOPT9918A0
Serial No. : 9X7 002

Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Transmitting mode 2480MHz

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



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]
129.899	31.9	QP	13.5	-20.9	24.5	Hori.	43.5	19.0
130.169	28.9	QP	13.5	-20.9	21.5	Vert.	43.5	22.0
189.300	29.1	QP	16.9	-20.1	25.9	Vert.	43.5	17.6
189.840	28.7	QP	17.0	-20.1	25.6	Hori.	43.5	17.9
288.390	26.2	QP	19.4	-19.2	26.4	Hori.	46.0	19.6
289.470	25.8	QP	19.4	-19.2	26.0	Vert.	46.0	20.0
390.007	28.8	QP	17.6	-19.3	27.1	Vert.	46.0	18.9
390.007	32.4	QP	17.6	-19.3	30.7	Hori.	46.0	15.3
776.221	27.9	QP	21.6	-17.8	31.7	Hori.	46.0	14.3
778.120	28.8	QP	21.6	-17.8	32.6	Vert.	46.0	13.4
956.612	24.5	QP	22.9	-16.6	30.8	Vert.	46.0	15.2
957.312	24.9	QP	22.9	-16.6	31.2	Hori.	46.0	14.8

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)

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Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9918A0)
Rx, Ch. Mid

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

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DATA OF RADIATED EMISSION TEST

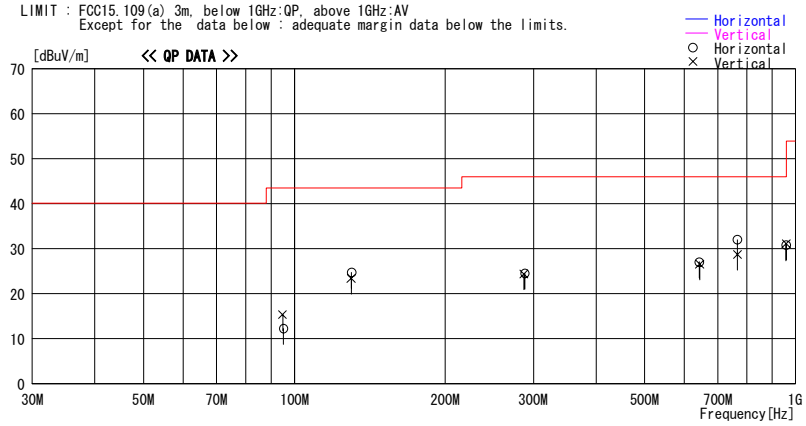
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/29

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEP0PT9918A0
Serial No. : 9X7 002

Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Receiving mode

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]
94.800	27.8	QP	8.8	-21.3	15.3	Vert.	43.5	28.2
95.070	24.6	QP	8.9	-21.3	12.2	Hori.	43.5	31.3
129.925	32.1	QP	13.5	-20.9	24.7	Hori.	43.5	18.8
129.899	30.8	QP	13.5	-20.9	23.4	Vert.	43.5	20.1
288.390	24.3	QP	19.4	-19.2	24.5	Hori.	46.0	21.5
287.400	24.2	QP	19.3	-19.2	24.3	Vert.	46.0	21.7
643.006	25.8	QP	19.9	-18.7	27.0	Hori.	46.0	19.0
644.406	25.3	QP	19.9	-18.7	26.5	Vert.	46.0	19.5
767.006	28.5	QP	21.5	-18.0	32.0	Hori.	46.0	14.0
766.978	25.2	QP	21.5	-18.0	28.7	Vert.	46.0	17.3
958.712	24.5	QP	22.9	-16.6	30.8	Hori.	46.0	15.2
959.412	24.7	QP	22.9	-16.6	31.0	Vert.	46.0	15.0

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)

Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9919A0)
Tx, Ch. Low

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

DATA OF RADIATED EMISSION TEST

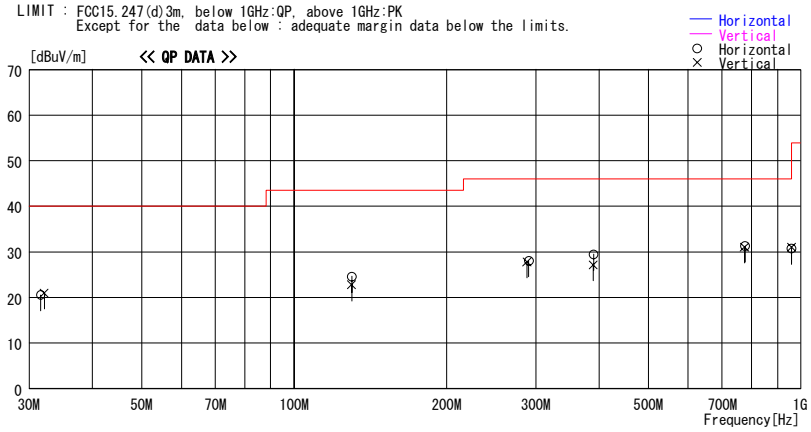
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEP0PT9919A0
Serial No. : E1-001

Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Transmitting mode 2402MHz

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



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]
31.620	24.5	QP	18.1	-22.0	20.6	Hori.	40.0	19.4
32.160	25.2	QP	17.8	-22.0	21.0	Vert.	40.0	19.0
129.990	32.0	QP	13.5	-20.9	24.6	Hori.	43.5	18.9
129.899	30.2	QP	13.5	-20.9	22.8	Vert.	43.5	20.7
290.800	27.8	QP	19.5	-19.2	28.1	Hori.	46.0	17.9
288.390	27.6	QP	19.4	-19.2	27.8	Vert.	46.0	18.2
389.602	28.9	QP	17.6	-19.3	27.2	Vert.	46.0	18.8
390.302	31.2	QP	17.6	-19.3	29.5	Hori.	46.0	16.5
776.221	27.5	QP	21.6	-17.8	31.3	Hori.	46.0	14.7
775.423	27.3	QP	21.6	-17.8	31.1	Vert.	46.0	14.9
958.712	24.5	QP	22.9	-16.6	30.8	Hori.	46.0	15.2
960.112	24.7	QP	22.9	-16.5	31.1	Vert.	53.9	22.8

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)

Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9919A0)
Tx, Ch. Mid

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

DATA OF RADIATED EMISSION TEST

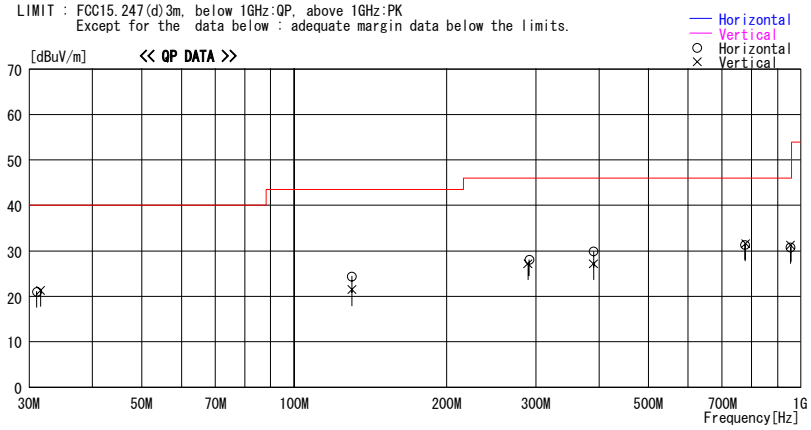
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEPOPT9919A0
Serial No. : E1-001

Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Transmitting mode 2441MHz

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



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]
31.080	24.8	QP	18.3	-22.0	21.1	Hori.	40.0	18.9
31.620	25.2	QP	18.1	-22.0	21.3	Vert.	40.0	18.7
129.887	31.8	QP	13.5	-20.9	24.4	Hori.	43.5	19.1
130.169	28.9	QP	13.5	-20.9	21.5	Vert.	43.5	22.0
290.870	27.8	QP	19.5	-19.2	28.1	Hori.	46.0	17.9
289.770	26.9	QP	19.5	-19.2	27.2	Vert.	46.0	18.8
390.223	31.6	QP	17.6	-19.3	29.9	Hori.	46.0	16.1
390.302	28.9	QP	17.6	-19.3	27.2	Vert.	46.0	18.8
776.540	27.5	QP	21.6	-17.8	31.3	Hori.	46.0	14.7
778.108	27.8	QP	21.6	-17.8	31.6	Vert.	46.0	14.4
954.223	24.6	QP	22.8	-16.6	30.8	Hori.	46.0	15.2
956.780	24.9	QP	22.9	-16.6	31.2	Vert.	46.0	14.8

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)

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Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9919A0)
Tx, Ch. High

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

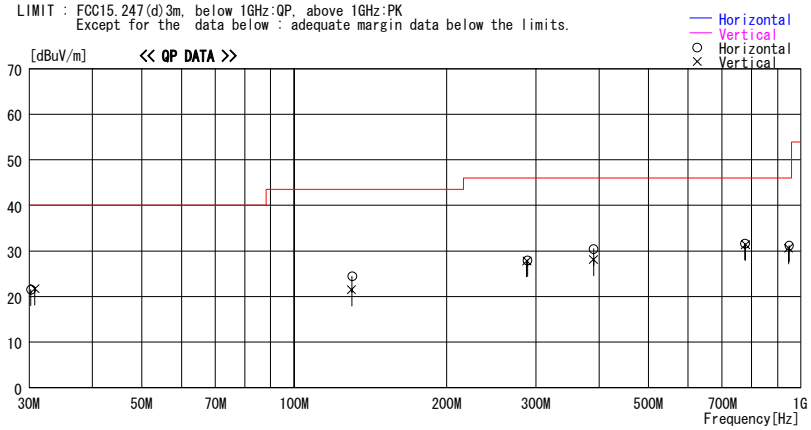
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEP0PT9919A0
Serial No. : E1-001
Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Transmitting mode 2480MHz

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



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]
30.270	24.8	QP	18.8	-22.0	21.6	Hori.	40.0	18.4
30.810	25.2	QP	18.5	-22.0	21.7	Vert.	40.0	18.3
130.223	31.9	QP	13.5	-20.9	24.5	Hori.	43.5	19.0
129.899	28.9	QP	13.5	-20.9	21.5	Vert.	43.5	22.0
288.760	27.8	QP	19.4	-19.2	28.0	Hori.	46.0	18.0
288.230	27.6	QP	19.4	-19.2	27.8	Vert.	46.0	18.2
390.450	32.2	QP	17.6	-19.3	30.5	Hori.	46.0	15.5
390.302	29.8	QP	17.6	-19.3	28.1	Vert.	46.0	17.9
776.223	27.8	QP	21.6	-17.8	31.6	Hori.	46.0	14.4
777.890	27.6	QP	21.6	-17.8	31.4	Vert.	46.0	14.6
946.111	24.5	QP	22.7	-16.6	30.6	Vert.	46.0	15.4
948.911	25.0	QP	22.8	-16.6	31.2	Hori.	46.0	14.8

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)

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Radiated Spurious Emission (below 1GHz)
(model:YEP0PT9919A0)
Rx, Ch. Mid

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

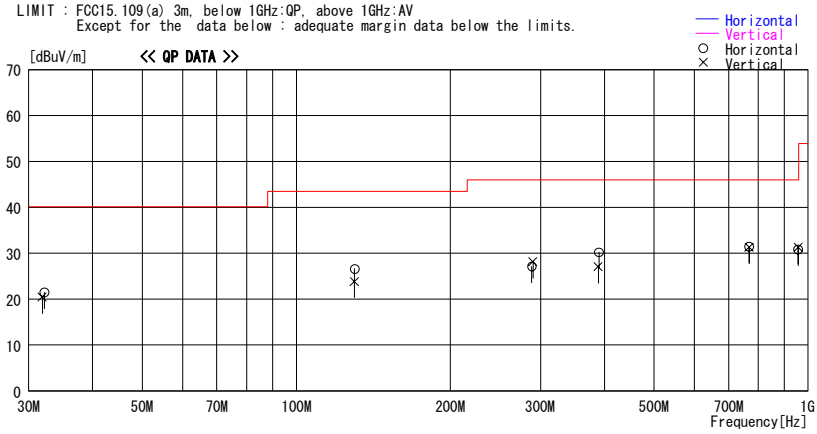
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEPOPT9919A0
Serial No. : E1-001
Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 27deg.C / 46%
Operator : Tomotaka Sasagawa

Mode / Remarks : Receiving mode

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 Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Polar.	Limit [dBuV/m]	Margin [dB]
31.890	24.5	QP	17.9	-22.0	20.4	Vert.	40.0	19.6
32.160	25.6	QP	17.8	-22.0	21.4	Hori.	40.0	18.6
129.899	31.2	QP	13.5	-20.9	23.8	Vert.	43.5	19.7
129.901	34.0	QP	13.5	-20.9	26.6	Hori.	43.5	16.9
288.390	26.9	QP	19.4	-19.2	27.1	Hori.	46.0	18.9
290.112	27.8	QP	19.5	-19.2	28.1	Vert.	46.0	17.9
390.221	31.9	QP	17.6	-19.3	30.2	Hori.	46.0	15.8
389.602	28.7	QP	17.6	-19.3	27.0	Vert.	46.0	19.0
767.608	27.9	QP	21.5	-18.0	31.4	Hori.	46.0	14.6
768.308	27.7	QP	21.5	-18.0	31.2	Vert.	46.0	14.8
957.312	24.5	QP	22.9	-16.6	30.8	Hori.	46.0	15.2
958.012	24.9	QP	22.9	-16.6	31.2	Vert.	46.0	14.8

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)

UL Japan, Inc.
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Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9918A0)
Tx, Ch. Low

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

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 27HE0140-HO	
Equipment	: PCB assy with Bluetooth for car audio	REGULATION	: FCC15.247(d)/RSS-210A8.5	
Model	: YEP0PT9918A0	TEST DISTANCE	: 3/1m	
Sample No.	: 9X7 002	DATE	: 05/30/2007	: 05/30/2007
Power	: DC5.0V	TEMPERATURE	: 26deg.C	: 26deg.C
Mode	: Tx 2402MHz(DH5)	HUMIDITY	: 46%	: 47%
Remarks	: Normal position	ENGINEER	: Hisayoshi Sato	: Makoto Kosaka

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2390.0	42.8	42.1	27.1	32.3	3.2	0.0	-	40.8	40.1	73.9	33.1	33.8
2	4804.0	54.9	47.8	31.3	31.6	4.5	0.8	-	59.9	52.8	73.9	14.0	21.1
3	7206.0	41.6	42.5	35.7	31.4	5.2	0.5	-	51.6	52.5	73.9	22.3	21.4
4	9608.0	44.2	46.8	38.5	31.9	6.2	0.5	-	57.5	60.1	73.9	16.4	13.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12010.0	41.9	42.1	39.1	31.1	7.1	0.0	-	47.5	47.7	73.9	26.4	26.2
6	14412.0	NS	NS	-	-	-	-	-	-	-	-	-	-
7	16814.0	NS	NS	-	-	-	-	-	-	-	-	-	-
8	19216.0	NS	NS	-	-	-	-	-	-	-	-	-	-
9	21618.0	NS	NS	-	-	-	-	-	-	-	-	-	-
10	24020.0	45.0	44.6	40.6	30.7	10.3	0.0	-	55.7	55.3	73.9	18.2	18.6

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Dwell Factor													
1	2390.0	30.3	29.9	27.1	32.3	3.2	0.0	-24.1	4.2	3.8	53.9	49.7	50.1
2	4804.0	48.4	40.0	31.3	31.6	4.5	0.8	-24.1	29.3	20.9	53.9	24.6	33.0
3	7206.0	29.6	29.7	35.7	31.4	5.2	0.5	-24.1	15.5	15.6	53.9	38.4	38.3
4	9608.0	33.5	35.8	38.5	31.9	6.2	0.5	-24.1	22.7	25.0	53.9	31.2	28.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Dwell Factor													
5	12010.0	29.1	30.2	39.1	31.1	7.1	0.0	-24.1	10.6	11.7	53.9	43.3	42.2
6	14412.0	NS	NS	-	-	-	-	-	-	-	-	-	-
7	16814.0	NS	NS	-	-	-	-	-	-	-	-	-	-
8	19216.0	NS	NS	-	-	-	-	-	-	-	-	-	-
9	21618.0	NS	NS	-	-	-	-	-	-	-	-	-	-
10	24020.0	32.8	32.8	40.6	30.7	10.3	0.0	-24.1	19.4	19.4	53.9	34.5	34.5

20dBc(Fundamental 2402MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass		RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	-	HOR	VER	20dBc	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]		[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2402.0	98.8	96.6	27.1	32.3	3.3	0.0	0.0	96.9	94.7	-	-	-
2	2400.0	41.9	40.5	27.1	32.3	3.3	0.0	0.0	40.0	38.6	Funda-20dB	36.9	36.1

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 fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
*The limit is rounded down to the second decimal place. .
*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*Dwell time Factor 20log (6.2ms/100ms) = -24.1
*NS:Non signal

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9918A0)
Tx, Ch. Mid

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

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 27HE0140-HO	
Equipment	: PCB assy with Bluetooth for car audio	REGULATION	: FCC15.247(d)/RSS-210A8.5	
Model	: YEP0PT9918A0	TEST DISTANCE	: 3/1m	
Sample No.	: 9X7 002	DATE	: 05/30/2007	: 05/30/2007
Power	: DC5.0V	TEMPERATURE	: 26deg.C	: 26deg.C
Mode	: Tx 2441MHz(DH5)	HUMIDITY	: 46%	: 47%
Remarks	: Normal position	ENGINEER	: Hisayoshi Sato	: Makoto Kosaka

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	4882.0	54.9	48.1	31.4	31.6	4.5	0.7	-	59.9	53.1	73.9	14.0	20.8
2	7323.0	42.3	47.7	36.0	31.4	5.3	0.5	-	52.7	58.1	73.9	21.2	15.8
3	9764.0	45.8	46.7	38.7	32.0	6.2	0.4	-	59.1	60.0	73.9	14.8	13.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
4	12205.0	41.3	42.2	39.2	30.9	7.2	0.0	-	47.3	48.2	73.9	26.6	25.7
5	14646.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
6	17087.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
7	19528.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
8	21969.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
9	24410.0	42.3	45.0	40.7	30.6	10.5	0.0	-	53.4	56.1	73.9	20.5	17.8

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Dwell Factor													
1	4882.0	48.5	40.1	31.4	31.6	4.5	0.7	-24.1	29.4	21.0	53.9	24.5	32.9
2	7323.0	30.7	30.0	36.0	31.4	5.3	0.5	-24.1	17.0	16.3	53.9	36.9	37.6
3	9764.0	35.3	36.8	38.7	32.0	6.2	0.4	-24.1	24.5	26.0	53.9	29.4	27.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Dwell Factor													
4	12205.0	28.9	29.8	39.2	30.9	7.2	0.0	-24.1	10.8	11.7	53.9	43.1	42.2
5	14646.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
6	17087.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
7	19528.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
8	21969.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
9	24410.0	32.3	32.3	40.7	30.6	10.5	0.0	-24.1	19.3	19.3	53.9	34.6	34.6

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 fifth 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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*Dwell time Factor 20log (6.2ms/100ms) = -24.1
*NS:Non signal

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9918A0)
Tx, Ch. High

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

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 27HE0140-HO	
Equipment	: PCB assy with Bluetooth for car audio	REGULATION	: FCC15.247(d)/RSS-210A8.5	
Model	: YEP0PT9918A0	TEST DISTANCE	: 3/1m	
Sample No.	: 9X7 002	DATE	: 05/30/2007	: 05/30/2007
Power	: DC5.0V	TEMPERATURE	: 26deg.C	: 26deg.C
Mode	: Tx 2480MHz(DH5)	HUMIDITY	: 46%	: 47%
Remarks	: Normal position	ENGINEER	: Hisayoshi Sato	: Makoto Kosaka

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2483.5	56.0	52.3	27.2	32.3	3.1	0.0	-	54.0	50.3	73.9	19.9	23.6
2	4960.0	55.9	46.2	31.5	31.6	4.6	0.7	-	61.1	51.4	73.9	12.8	22.5
3	7440.0	42.6	42.7	36.2	31.4	5.4	0.6	-	53.4	53.5	73.9	20.5	20.4
4	9920.0	46.5	47.1	38.9	32.0	6.2	0.3	-	59.9	60.5	73.9	14.0	13.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12400.0	41.3	41.7	39.2	30.7	7.3	0.0	-	47.6	48.0	73.9	26.3	25.9
6	14880.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
7	17360.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
8	19840.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
9	22320.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
10	24800.0	44.7	45.1	40.8	30.5	10.7	0.0	-	56.2	56.6	73.9	17.7	17.3

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Dwell Factor													
1	2483.5	49.6	46.5	27.2	32.3	3.1	0.0	-24.1	23.5	20.4	53.9	30.4	33.5
2	4960.0	48.9	38.1	31.5	31.6	4.6	0.7	-24.1	30.0	19.2	53.9	23.9	34.7
3	7440.0	30.7	30.4	36.2	31.4	5.4	0.6	-24.1	17.4	17.1	53.9	36.5	36.8
4	9920.0	36.4	37.6	38.9	32.0	6.2	0.3	-24.1	25.7	26.9	53.9	28.2	27.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Dwell Factor													
5	12400.0	29.0	29.3	39.2	30.7	7.3	0.0	-24.1	11.2	11.5	53.9	42.7	42.4
6	14880.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
7	17360.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
8	19840.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
9	22320.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
10	24800.0	32.5	32.6	40.8	30.5	10.7	0.0	-24.1	19.9	20.0	53.9	34.0	33.9

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 fifth 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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*Dwell time Factor 20log (6.2ms/100ms) = -24.1
*NS:Non signal

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9918A0)
Rx, Ch. Mid

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

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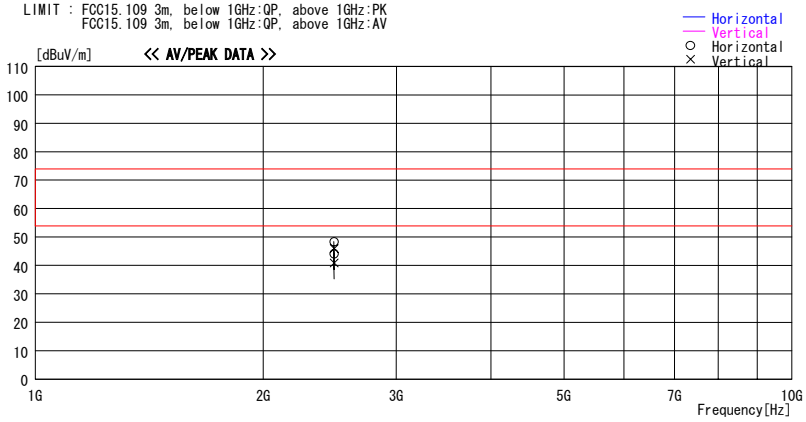
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/30

Company	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 27HE0140-HO
Kind of EUT	: PCB assy with Bluetooth for car audio	Power	: DC 5.0V
Model No.	: YEP0PT9918A0	Temp./Humi.	: 26deg.C / 47%
Serial No.	: 9X7 002	Operator	: Makoto Kosaka

Mode / Remarks : Rx EUT Position Normal axis

LIMIT : FCC15.109 3m, below 1GHz:QP, above 1GHz:PK
FCC15.109 3m, below 1GHz:QP, above 1GHz:AV



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]
2483.050	48.0	PK	27.2	-29.2	46.0	105	100	Vert.	73.9	27.9
2483.050	42.8	AV	27.2	-29.2	40.8	105	100	Vert.	53.9	13.1
2481.050	50.3	PK	27.2	-29.2	48.3	113	100	Hori.	73.9	25.6
2481.050	46.1	AV	27.2	-29.2	44.1	113	100	Hori.	53.9	9.8

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)

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9919A0)
Tx, Ch. Low

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

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 27HE0140-HO	
Equipment	: PCB assy with Bluetooth for car audio	REGULATION	: FCC15.247(d)/RSS-210A8.5	
Model	: YEP0PT9919A0	TEST DISTANCE	: 3/1m	
Sample No.	: E1-001	DATE	: 05/29/2007	: 05/30/2007
Power	: DC5.0V	TEMPERATURE	: 26deg.C	: 26deg.C
Mode	: Tx 2402MHz(DH5)	HUMIDITY	: 47%	: 46%
Remarks	: Normal position	ENGINEER	: Tomotaka Sasagawa	: Hisayoshi Sato

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2390.0	48.2	47.6	27.1	32.3	3.2	0.0	-	46.2	45.6	73.9	27.7	28.3
2	4804.0	53.2	50.5	31.3	31.6	4.5	0.1	-	57.5	54.8	73.9	16.4	19.1
3	7206.0	43.2	42.8	35.7	31.4	5.2	0.3	-	53.0	52.6	73.9	20.9	21.3
4	9608.0	42.7	42.2	38.5	31.9	6.2	0.7	-	56.2	55.7	73.9	17.7	18.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12010.0	43.4	45.2	39.1	31.1	7.1	0.0	-	49.0	50.8	73.9	24.9	23.1
6	14412.0	NS	NS	-	-	-	-	-	-	-	-	-	-
7	16814.0	NS	NS	-	-	-	-	-	-	-	-	-	-
8	19216.0	NS	NS	-	-	-	-	-	-	-	-	-	-
9	21618.0	NS	NS	-	-	-	-	-	-	-	-	-	-
10	24020.0	45.0	45.1	40.6	30.7	10.3	0.0	-	55.7	55.8	73.9	18.2	18.1

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Dwell Factor													
1	2390.0	38.7	38.9	27.1	32.3	3.2	0.0	-24.1	12.6	12.8	53.9	41.3	41.1
2	4804.0	45.1	42.2	31.3	31.6	4.5	0.1	-24.1	25.3	22.4	53.9	28.6	31.5
3	7206.0	31.0	29.8	35.7	31.4	5.2	0.3	-24.1	16.7	15.5	53.9	37.2	38.4
4	9608.0	31.4	31.2	38.5	31.9	6.2	0.7	-24.1	20.8	20.6	53.9	33.1	33.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Dwell Factor													
5	12010.0	30.0	32.1	39.1	31.1	7.1	0.0	-24.1	11.5	13.6	53.9	42.4	40.3
6	14412.0	NS	NS	-	-	-	-	-	-	-	-	-	-
7	16814.0	NS	NS	-	-	-	-	-	-	-	-	-	-
8	19216.0	NS	NS	-	-	-	-	-	-	-	-	-	-
9	21618.0	NS	NS	-	-	-	-	-	-	-	-	-	-
10	24020.0	32.7	32.8	40.6	30.7	10.3	0.0	-24.1	19.3	19.4	53.9	34.6	34.5

20dBc(Fundamental 2402MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass		RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	-	HOR	VER	20dBc	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]		[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2402.0	101.3	94.2	27.1	32.3	3.3	0.0	0.0	99.4	92.3	-	-	-
2	2400.0	43.6	41.2	27.1	32.3	3.3	0.0	0.0	41.7	39.3	Funda-20dB	37.7	33.0

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 fifth 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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*Dwell time Factor 20log (6.2ms/100ms) = -24.1
*NS:Non signal

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9919A0)
Tx, Ch. Mid

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

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 27HE0140-HO
Equipment	: PCB assy with Bluetooth for car audio	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model	: YEP0PT9919A0	TEST DISTANCE	: 3/1m
Sample No.	: E1-001	DATE	: 05/30/2007
Power	: DC5.0V	TEMPERATURE	: 26deg.C
Mode	: Tx 2441MHz(DH5)	HUMIDITY	: 46%
Remarks	: Normal position	ENGINEER	: Hisayoshi Sato

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	4882.0	55.0	48.1	31.4	31.6	4.5	0.7	-	60.0	53.1	73.9	13.9	20.8
2	7323.0	43.1	42.3	36.0	31.4	5.3	0.5	-	53.5	52.7	73.9	20.4	21.2
3	9764.0	44.0	45.5	38.7	32.0	6.2	0.4	-	57.3	58.8	73.9	16.6	15.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
4	12205.0	42.2	42.3	39.2	30.9	7.2	0.0	-	48.2	48.3	73.9	25.7	25.6
5	14646.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
6	17087.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
7	19528.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
8	21969.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
9	24410.0	45.0	45.0	40.7	30.6	10.5	0.0	-	56.1	56.1	73.9	17.8	17.8

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Dwell Factor													
1	4882.0	48.2	40.4	31.4	31.6	4.5	0.7	-24.1	29.1	21.3	53.9	24.8	32.6
2	7323.0	29.8	29.8	36.0	31.4	5.3	0.5	-24.1	16.1	16.1	53.9	37.8	37.8
3	9764.0	32.7	35.3	38.7	32.0	6.2	0.4	-24.1	21.9	24.5	53.9	32.0	29.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Dwell Factor													
4	12205.0	29.2	30.9	39.2	30.9	7.2	0.0	-24.1	11.1	12.8	53.9	42.8	41.1
5	14646.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
6	17087.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
7	19528.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
8	21969.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
9	24410.0	32.6	32.7	40.7	30.6	10.5	0.0	-24.1	19.6	19.7	53.9	34.3	34.2

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 fifth 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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*Dwell time Factor 20log (6.2ms/100ms) = -24.1
*NS:Non signal

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9919A0)
Tx, Ch. High

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

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 27HE0140-HO	
Equipment	: PCB assy with Bluetooth for car audio	REGULATION	: FCC15.247(d)/RSS-210A8.5	
Model	: YEP0PT9919A0	TEST DISTANCE	: 3/1m	
Sample No.	: E1-001	DATE	: 05/29/2007	: 05/30/2007
Power	: DC5.0V	TEMPERATURE	: 26deg.C	: 26deg.C
Mode	: Tx 2480MHz(DH5)	HUMIDITY	: 47%	: 46%
Remarks	: Normal position	ENGINEER	: Tomotaka Sasagawa	: Hisayoshi Sato

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss													
1	2483.5	58.3	52.0	27.2	32.3	3.1	0.0	-	56.3	50.0	73.9	17.6	23.9
2	4960.0	56.4	49.8	31.5	31.6	4.6	0.0	-	60.9	54.3	73.9	13.0	19.6
3	7440.0	43.5	42.9	36.2	31.4	5.4	0.5	-	54.2	53.6	73.9	19.7	20.3
4	9920.0	43.9	44.5	38.9	32.0	6.2	0.7	-	57.7	58.3	73.9	16.2	15.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac													
5	12400.0	41.3	43.6	39.2	30.7	7.3	0.0	-	47.6	49.9	73.9	26.3	24.0
6	14880.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
7	17360.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
8	19840.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
9	22320.0	NS	NS	-	-	-	-	-	-	-	73.9	-	-
19	24800.0	44.5	44.8	40.8	30.5	10.7	0.0	-	56.0	56.3	73.9	17.9	17.6

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

No.	FREQ	S/A READING		ANT	AMP	CABLE	Hi-Pass	Dwell	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	Factor	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss + Dwell Factor													
1	2483.5	49.8	43.6	27.2	32.3	3.1	0.0	-24.1	23.7	17.5	53.9	30.2	36.4
2	4960.0	49.2	41.3	31.5	31.6	4.6	0.0	-24.1	29.6	21.7	53.9	24.3	32.2
3	7440.0	32.1	31.0	36.2	31.4	5.4	0.5	-24.1	18.7	17.6	53.9	35.2	36.3
4	9920.0	33.5	33.7	38.9	32.0	6.2	0.7	-24.1	23.2	23.4	53.9	30.7	30.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac + Dwell Factor													
5	12400.0	29.5	31.3	39.2	30.7	7.3	0.0	-24.1	11.7	13.5	53.9	42.2	40.4
6	14880.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
7	17360.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
8	19840.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
9	22320.0	NS	NS	-	-	-	-	-	-	-	53.9	-	-
19	24800.0	32.7	32.7	40.8	30.5	10.7	0.0	-24.1	20.1	20.1	53.9	33.8	33.8

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 fifth 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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.
*Dwell time Factor 20log (6.2ms/100ms) = -24.1
*NS:Non signal

Radiated Spurious Emission (above 1GHz)
(model:YEP0PT9919A0)
Rx, Ch. Mid

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

DATA OF RADIATED EMISSION TEST

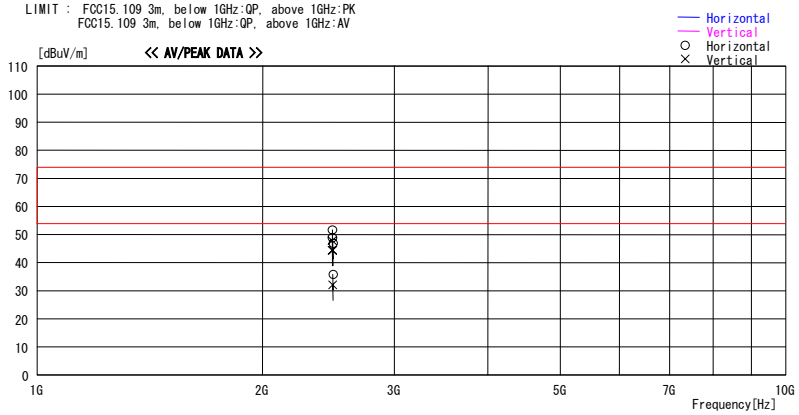
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2007/05/31

Company : Matsushita Electric Industrial Co., Ltd.
Kind of EUT : PCB assy with Bluetooth for car audio
Model No. : YEP0PT9919A0
Serial No. : EI-001

Report No. : 27HE0140-HO
Power : DC 5.0V
Temp./Humi. : 26deg.C / 46%
Operator : Hisayoshi Sato

Mode / Remarks : Rx EUT Position Normal axis

LIMIT : FCC15.109 3m, below 1GHz:QP, above 1GHz:PK
FCC15.109 3m, below 1GHz:QP, above 1GHz:AV



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]
2479.080	49.8	PK	27.2	-29.2	47.8	100	100	Vert.	73.9	26.1
2479.080	46.4	AV	27.2	-29.2	44.4	100	100	Vert.	53.9	9.5
2479.081	50.9	AV	27.2	-29.2	48.9	120	100	Hori.	53.9	5.0
2479.081	53.7	PK	27.2	-29.2	51.7	120	100	Hori.	73.9	22.2
2483.500	48.9	PK	27.2	-29.2	46.9	120	100	Hori.	73.9	27.0
2483.500	34.1	AV	27.2	-29.2	32.1	100	100	Vert.	53.9	21.8
2483.500	46.4	PK	27.2	-29.2	44.4	100	100	Vert.	73.9	29.5
2483.500	37.8	AV	27.2	-29.2	35.8	120	100	Hori.	53.9	18.1

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)

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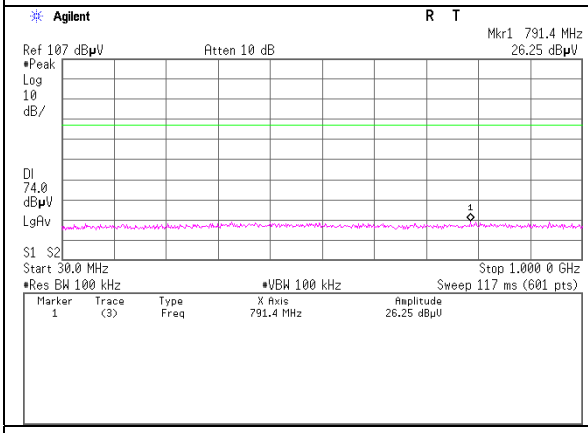
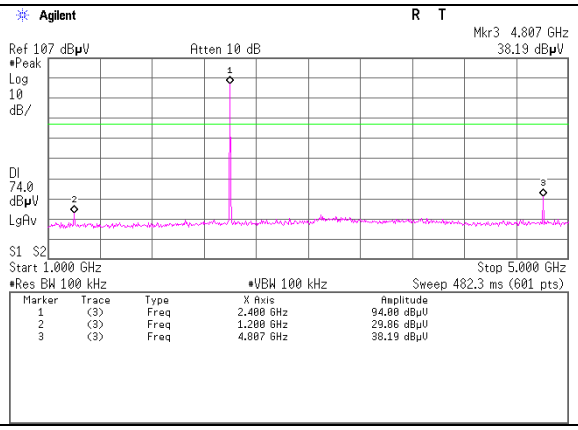
Conducted Spurious Emission

Tx, Ch. Low

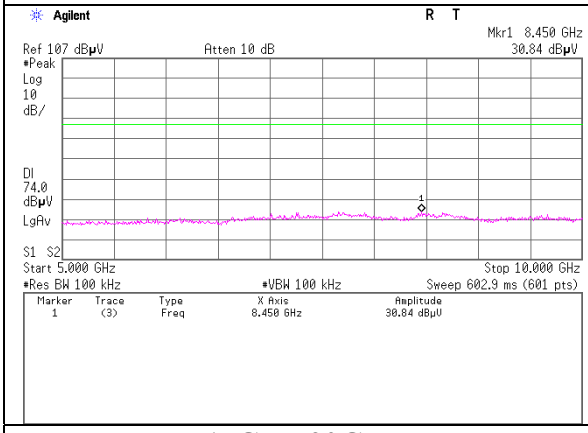
30MHz-1GHz



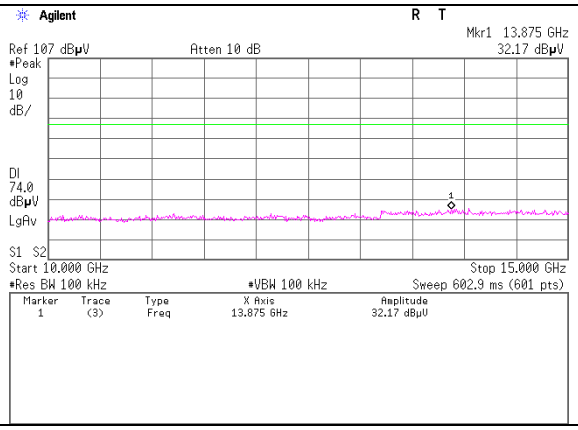
1GHz-5GHz



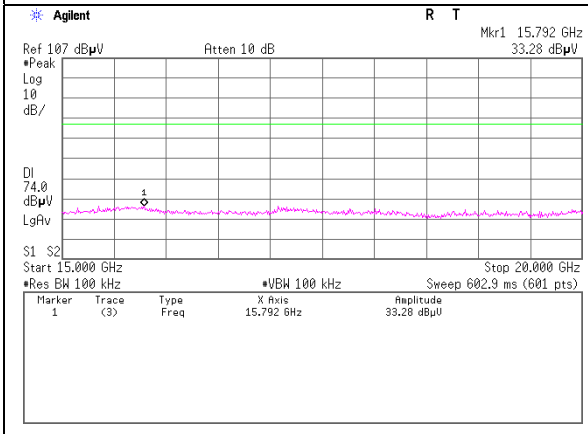
5GHz-10GHz



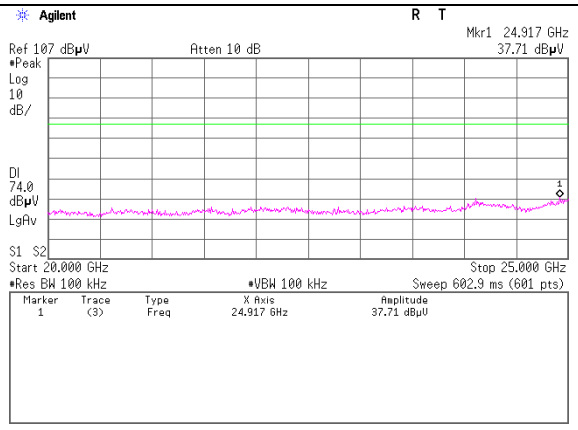
10GHz-15GHz



15GHz-20GHz

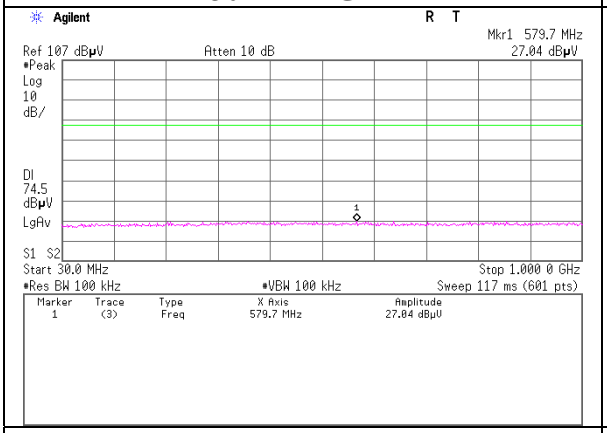


20GHz-25GHz

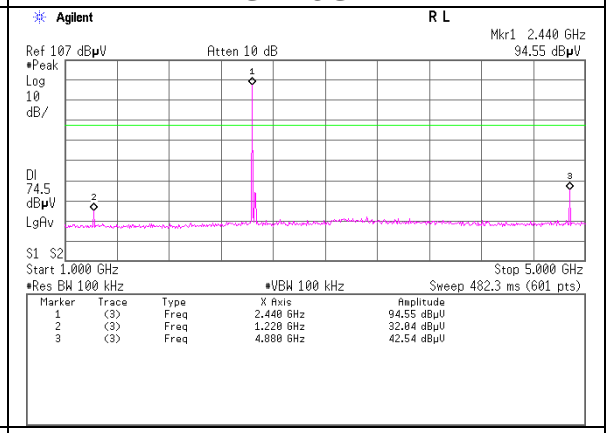


Conducted Spurious Emission
Tx, Ch. Mid

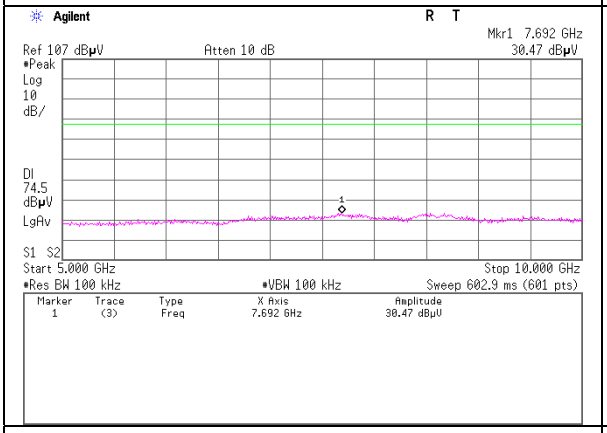
30MHz-1GHz



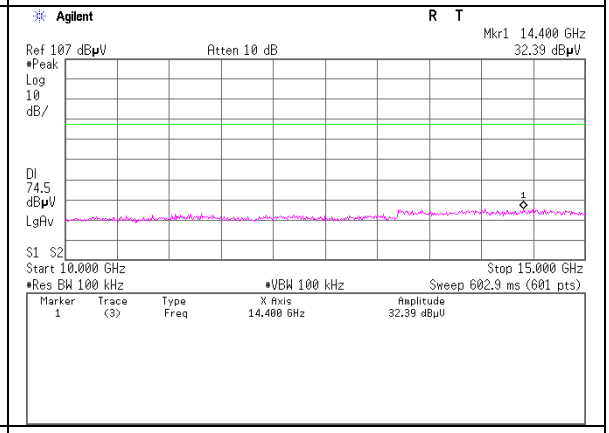
1GHz-5GHz



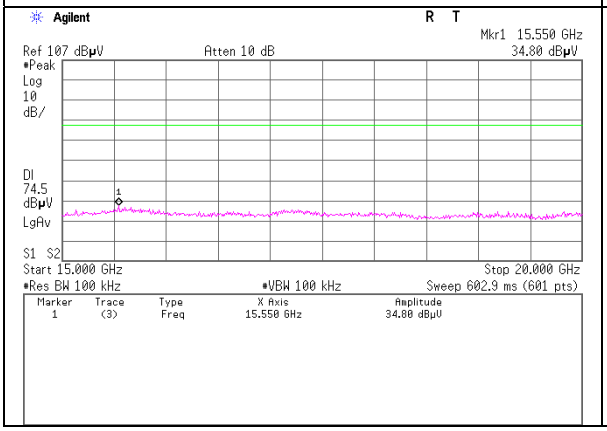
5GHz-10GHz



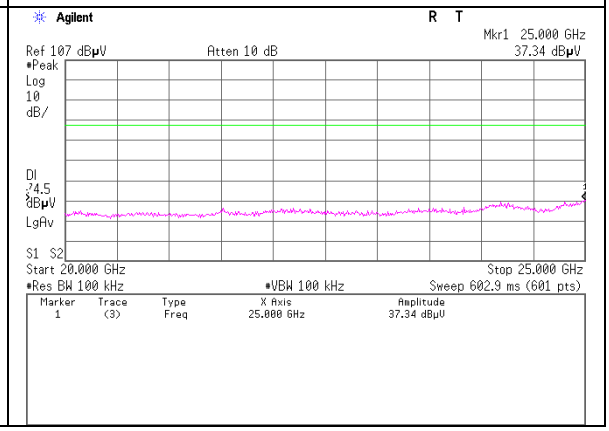
10GHz-15GHz



15GHz-20GHz

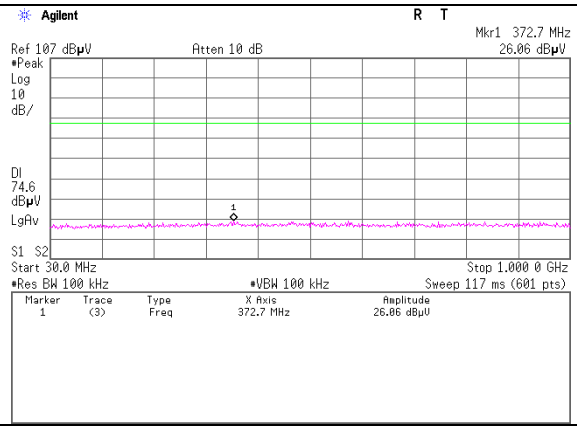


20GHz-25GHz

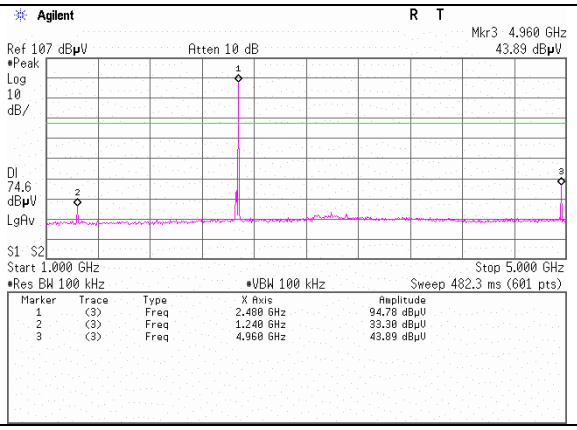


Conducted Spurious Emission
Tx, Ch. High

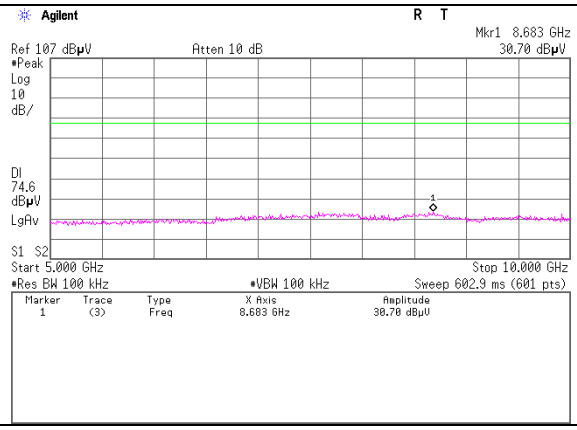
30MHz-1GHz



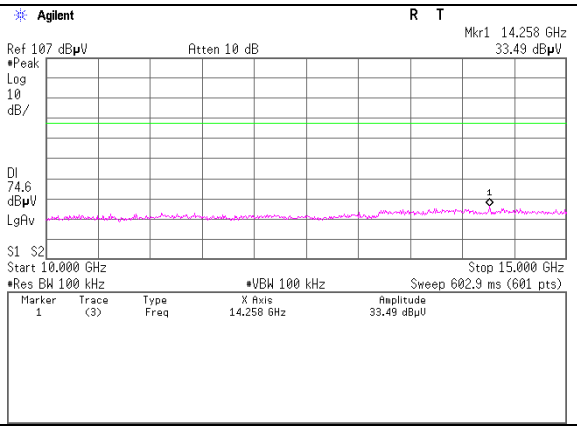
1GHz-5GHz



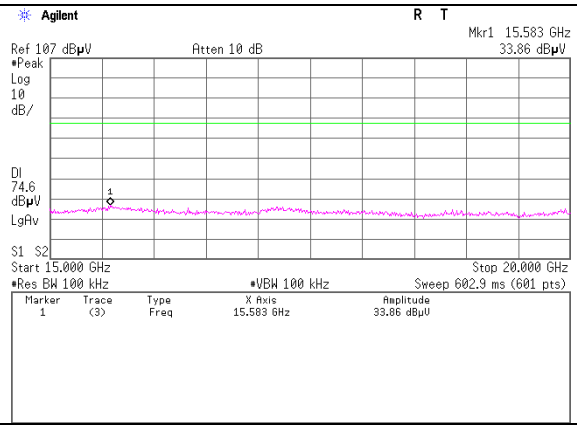
5GHz-10GHz



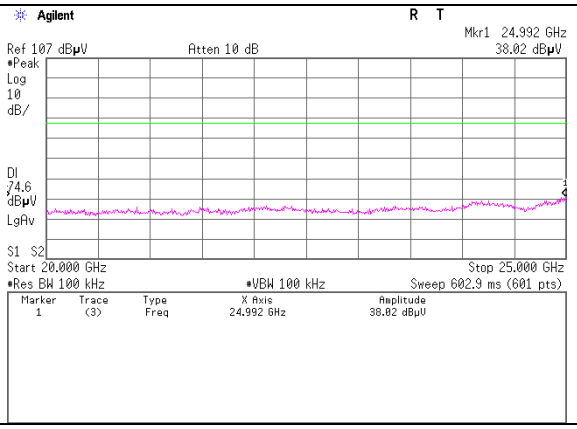
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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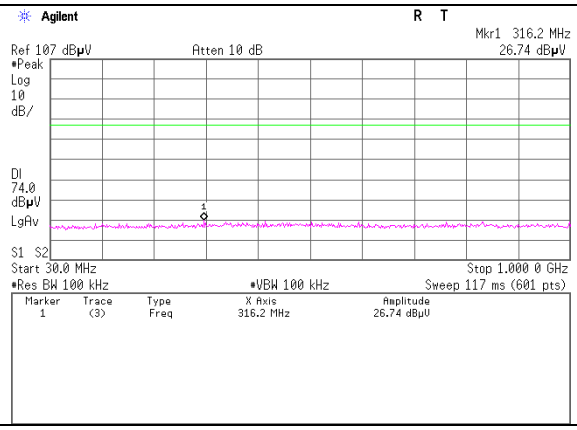
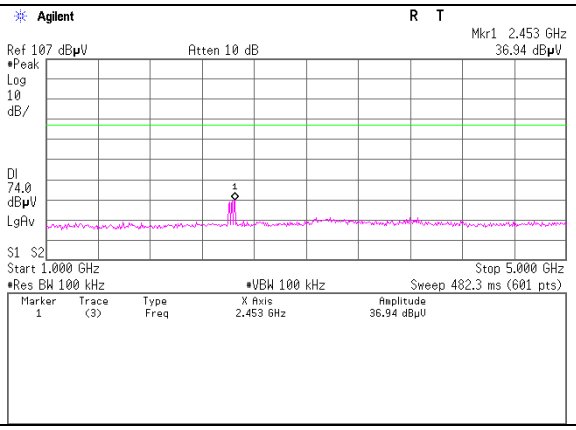
Conducted Spurious Emission

Rx, Ch. Mid

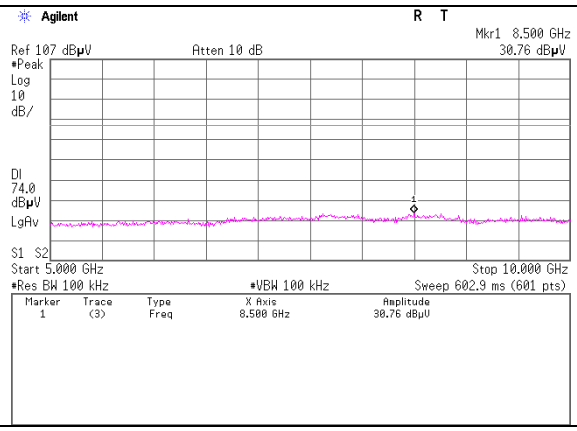
30MHz-1GHz



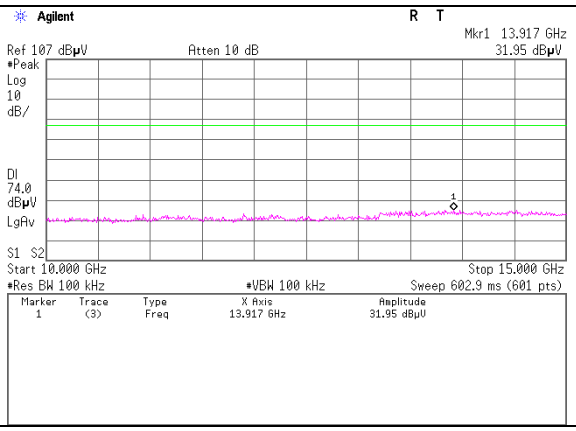
1GHz-5GHz



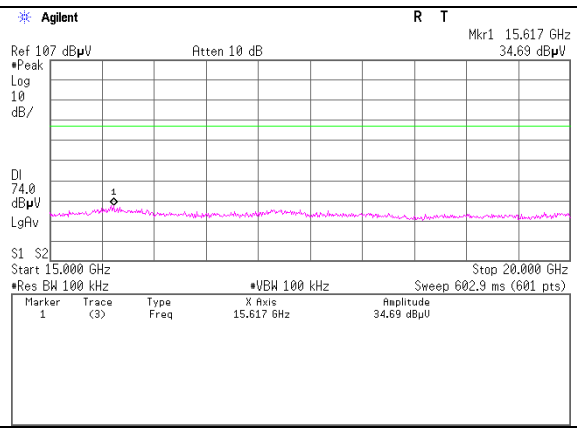
5GHz-10GHz



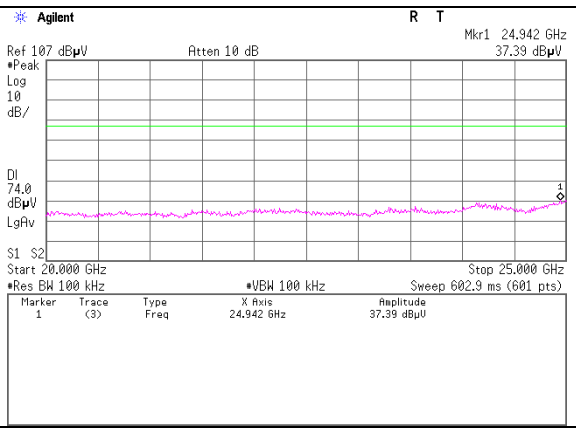
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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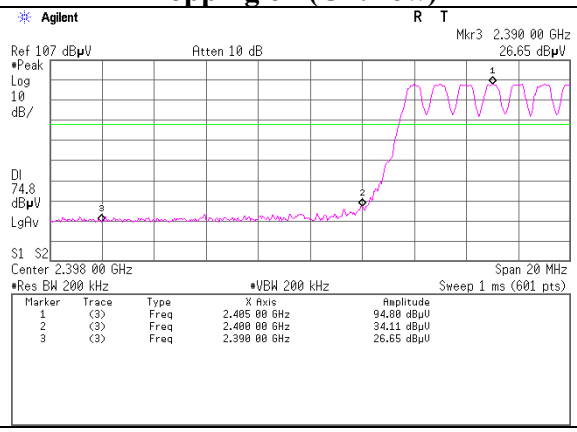
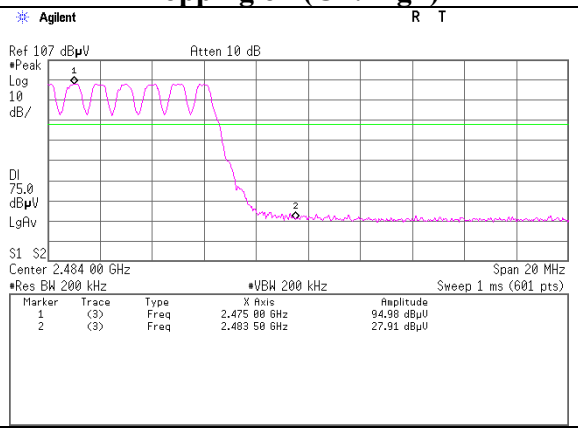
Conducted Spurious Emission
Band Edge compliance

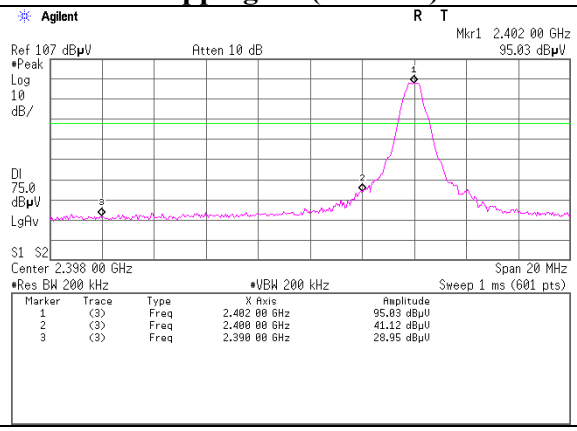
Hopping on (Ch:Low)



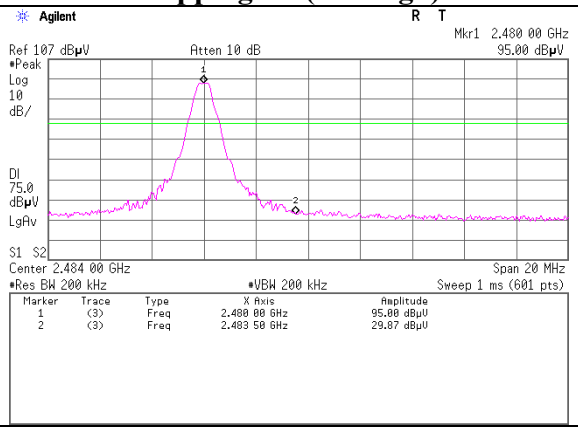
Hopping on (Ch:High)



Hopping off (Ch:Low)

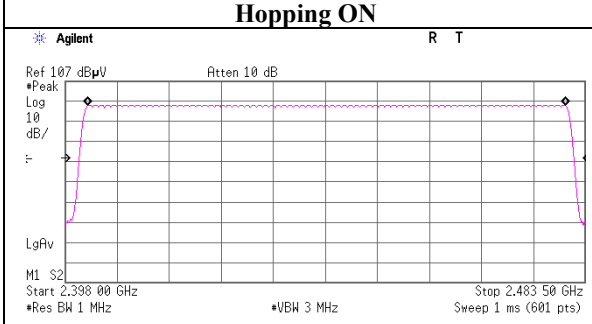


Hopping off (Ch:High)



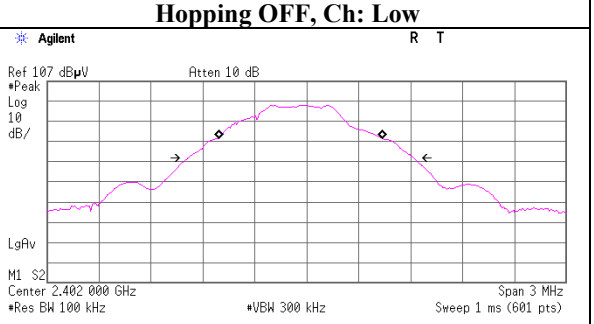
99% Occupied Bandwidth

Hopping ON



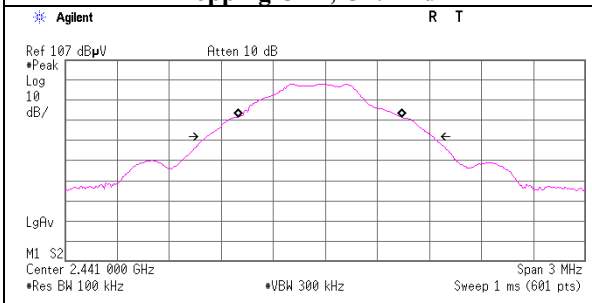
Transmit Freq Error 205.979 kHz
x dB Bandwidth 81.303 MHz

Hopping OFF, Ch: Low



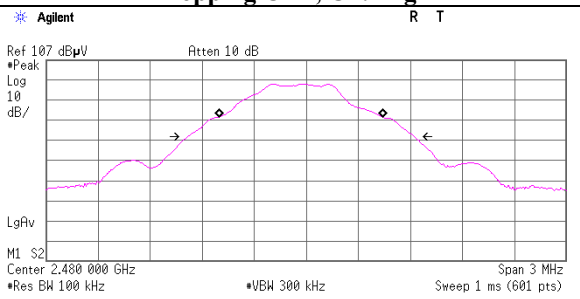
Transmit Freq Error -34.376 kHz
x dB Bandwidth 1.307 MHz

Hopping OFF, Ch: Mid



Transmit Freq Error -32.077 kHz
x dB Bandwidth 1.305 MHz

Hopping OFF, Ch: High



Transmit Freq Error -29.748 kHz
x dB Bandwidth 1.309 MHz

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
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2007/01/30 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2007/02/22 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2006/08/29 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2006/09/11 * 12
MHF-12	High Pass Filter 3.5-18GHz	TOKIMEC	TF323DCA	RE	2006/12/18 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	RE	2006/05/20 * 12
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2006/11/27 * 12
MMM-01	Digital Tester	Fluke	FLUKE 26-3	RE	2006/08/08 * 12
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE	-
MPSU-03	Power Supply	NF	EPO2000S	RE	Pre Check
MJM-05	Measure	PROMART	SEN1955	RE	-
MHA-02	Horn Antenna	EMCO	3160-09	RE(MW)	2007/01/30 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2007/02/27 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2006/12/27 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2006/10/07 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2006/10/07 * 12
MJM-05	Measure	PROMART	SEN1955	RE	-
MPA-09	Pre Amplifier	Agilent	8447D	RE	2006/09/07 * 12
MHF-06	High Pass Filter 3.5-24GHz	Tokimec	TF323DCA	RE	2007/05/30 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	AT	2006/06/02 * 12
MPM-08	Power Meter	Anritsu	ML2495A	AT	2006/09/20 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	AT	2006/09/20 * 12
MCC-26	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	AT	2006/08/29 * 12
MAT-22	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2007/03/07 * 12
MOS-04	Digital Humidity Indicator	N.T	NT-1800	AT	2006/11/27 * 12
MDPS-04	DC Power Supply	KENWOOD TMI	PW18-1.3AT	AT	Pre Check
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE	2007/02/03 * 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.

Test Item:

RE: Radiated emission

AT: Antenna terminal conducted test

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