

DATA OF CONDUCTION TEST

UL Japan, Inc.
YAMAKITA No.1 SHIELD ROOM
Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2441MHz DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C Engineer : Makoto Hosaka
Humidity : 33 %
Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV	QP [dB μ V]	AV				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]
1.	0.1500	34.6	-	34.1	-	0.1	0.1	0.0	34.8	-	66.0	56.0	31.2	-
2.	0.1750	34.4	-	33.7	-	0.1	0.1	0.0	34.6	-	64.7	54.7	30.1	-
3.	0.2000	34.0	-	33.3	-	0.1	0.1	0.0	34.2	-	63.6	53.6	29.4	-
4.	0.2500	32.0	-	31.4	-	0.1	0.1	0.0	32.2	-	61.8	51.8	29.6	-
5.	0.5000	25.8	-	25.9	-	0.2	0.2	0.0	26.3	-	56.0	46.0	29.7	-
6.	19.1462	21.7	-	23.6	-	0.9	1.6	0.0	26.1	-	60.0	50.0	33.9	-

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

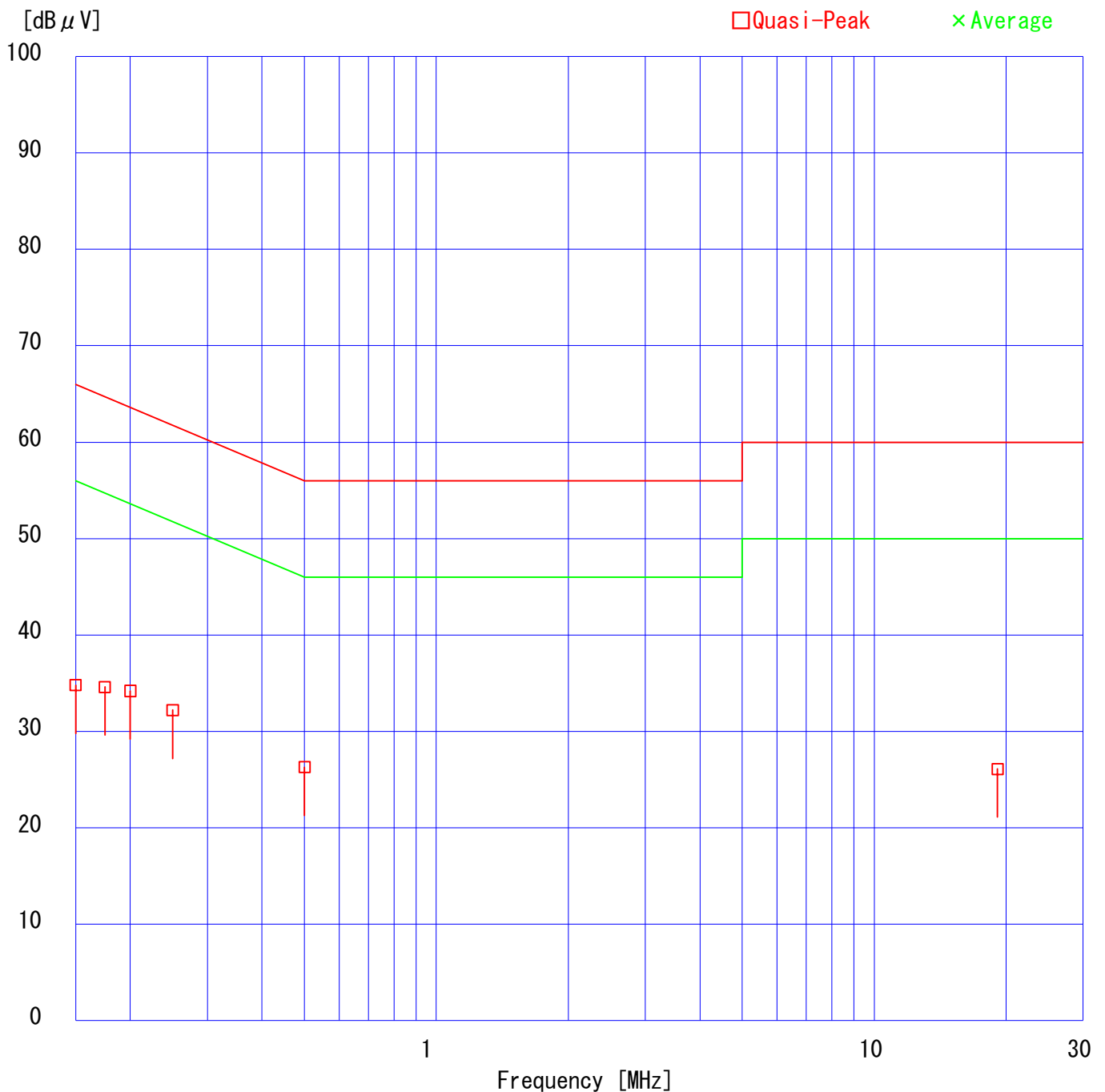
■ LISN: KLS-01 (NNLK8126) ■ COAXIAL CABLE: KCC-14/15/16/18
■ PULSE LIMITTER: KPL-01 (PLO1) ■ EMI RECEIVER: KTR-02 (ESCS30)

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Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST CHART

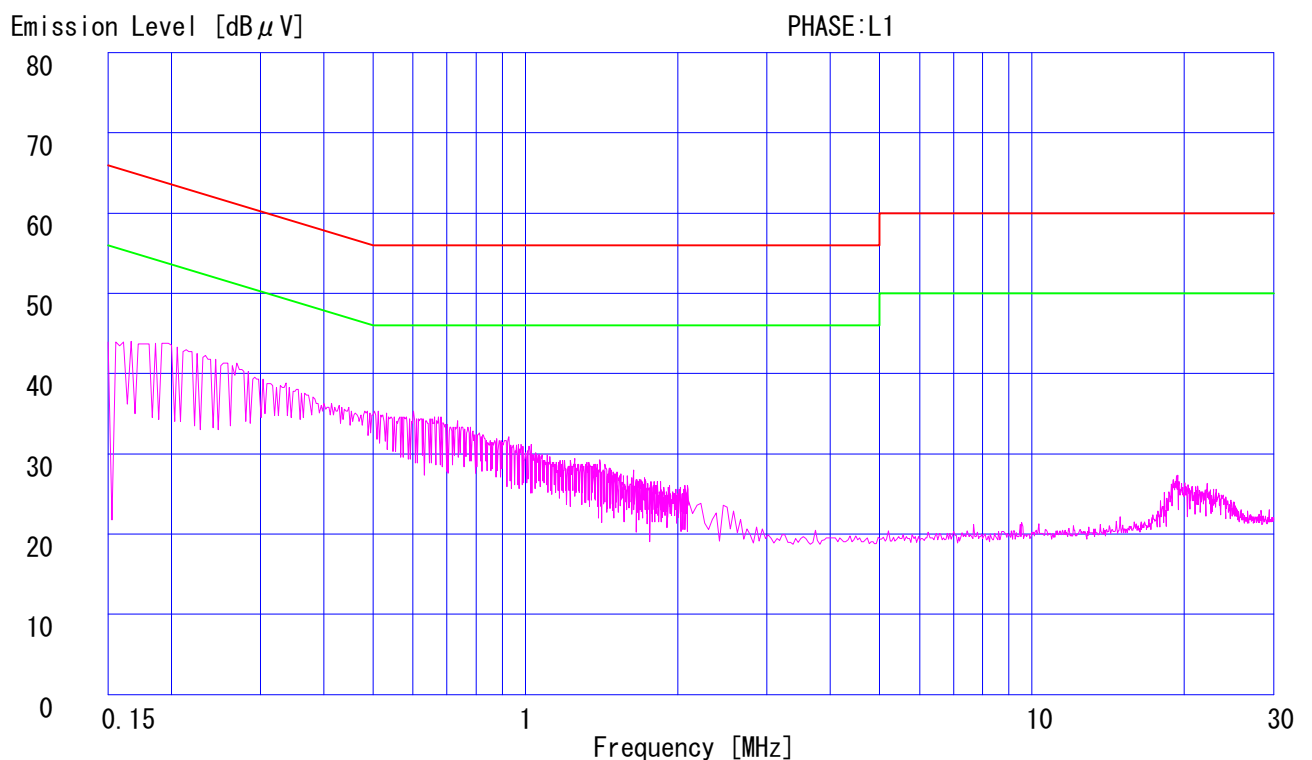
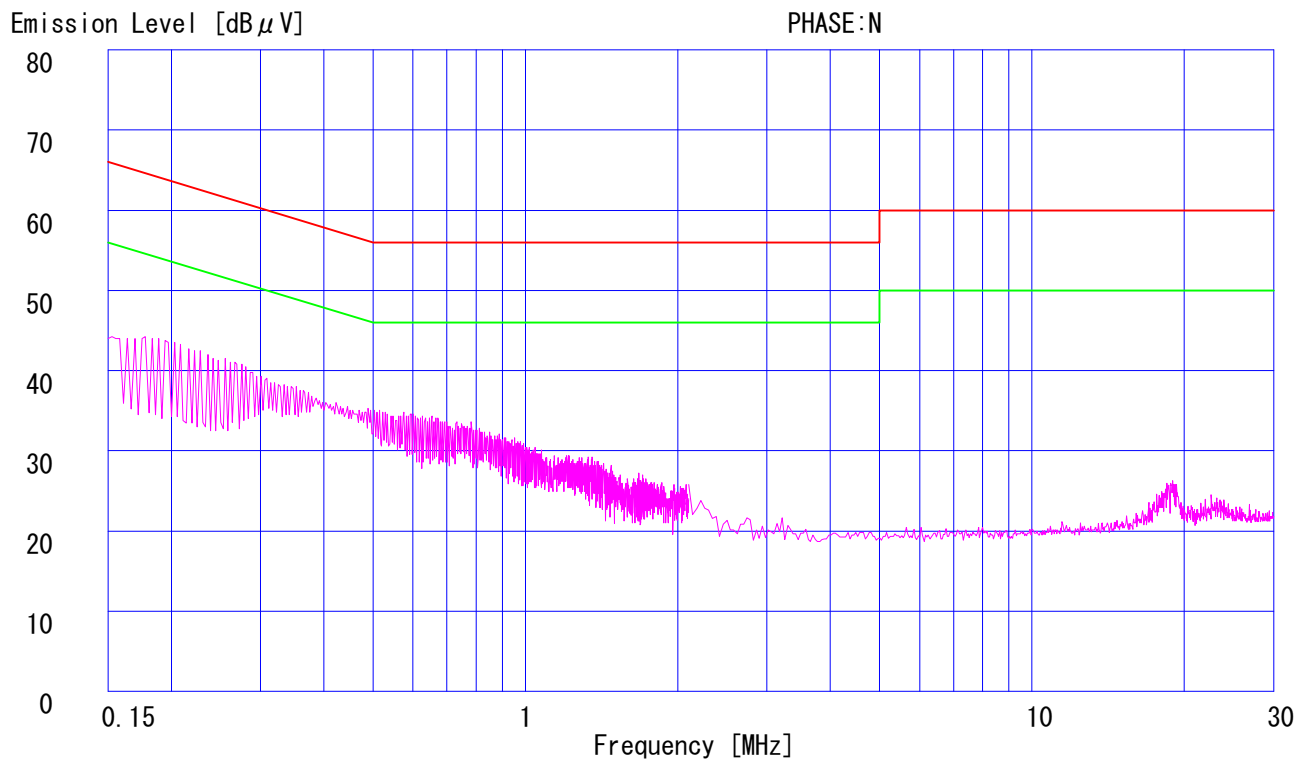
UL Japan, Inc.

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Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2441MHz DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub.22)
Regulation 2 : None

Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST CHART

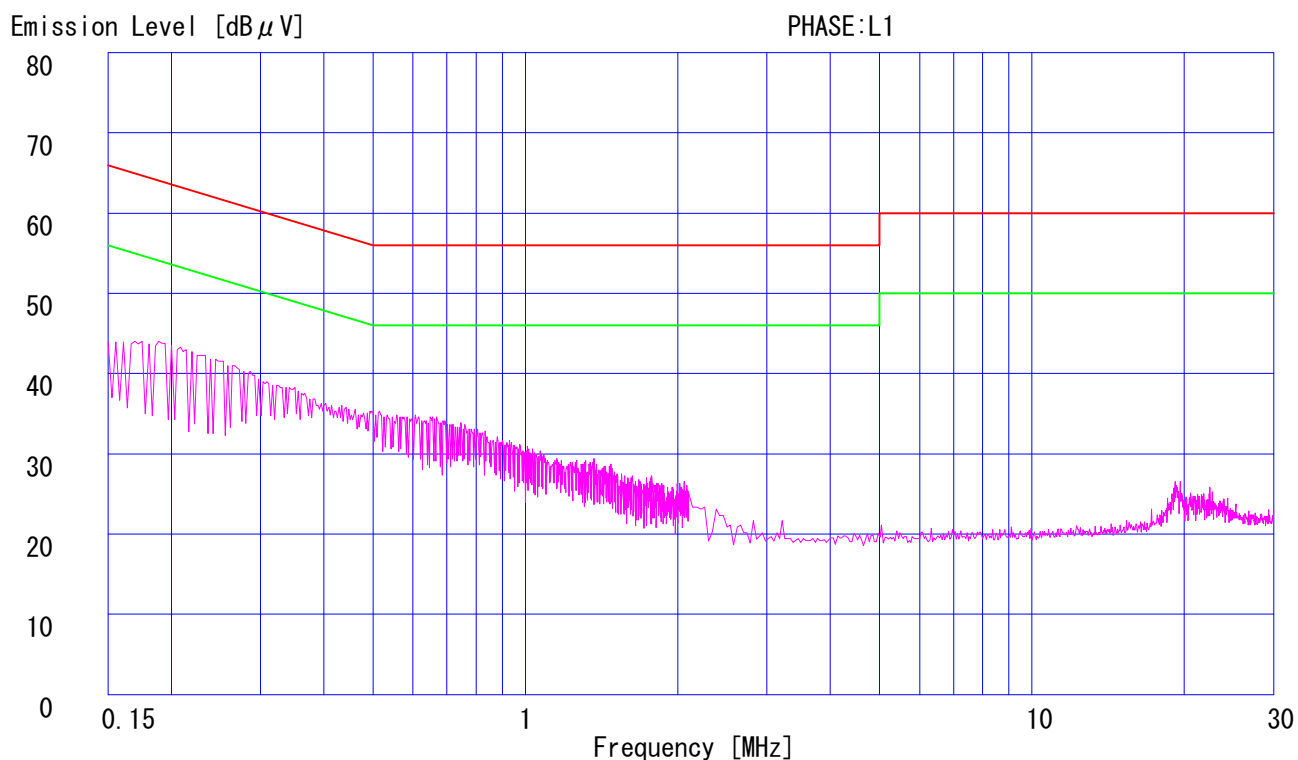
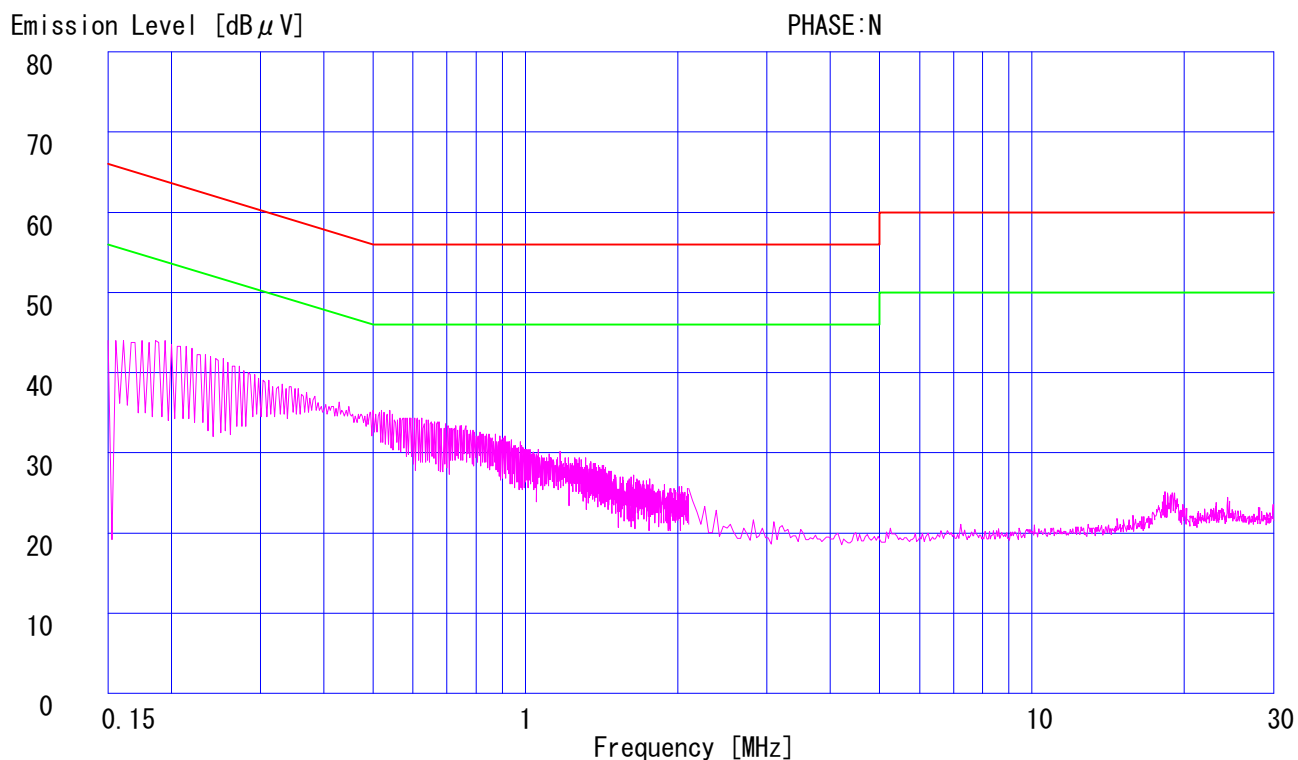
UL Japan, Inc.

YAMAKITA No.1 SHIELD ROOM

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2402MHz DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST CHART

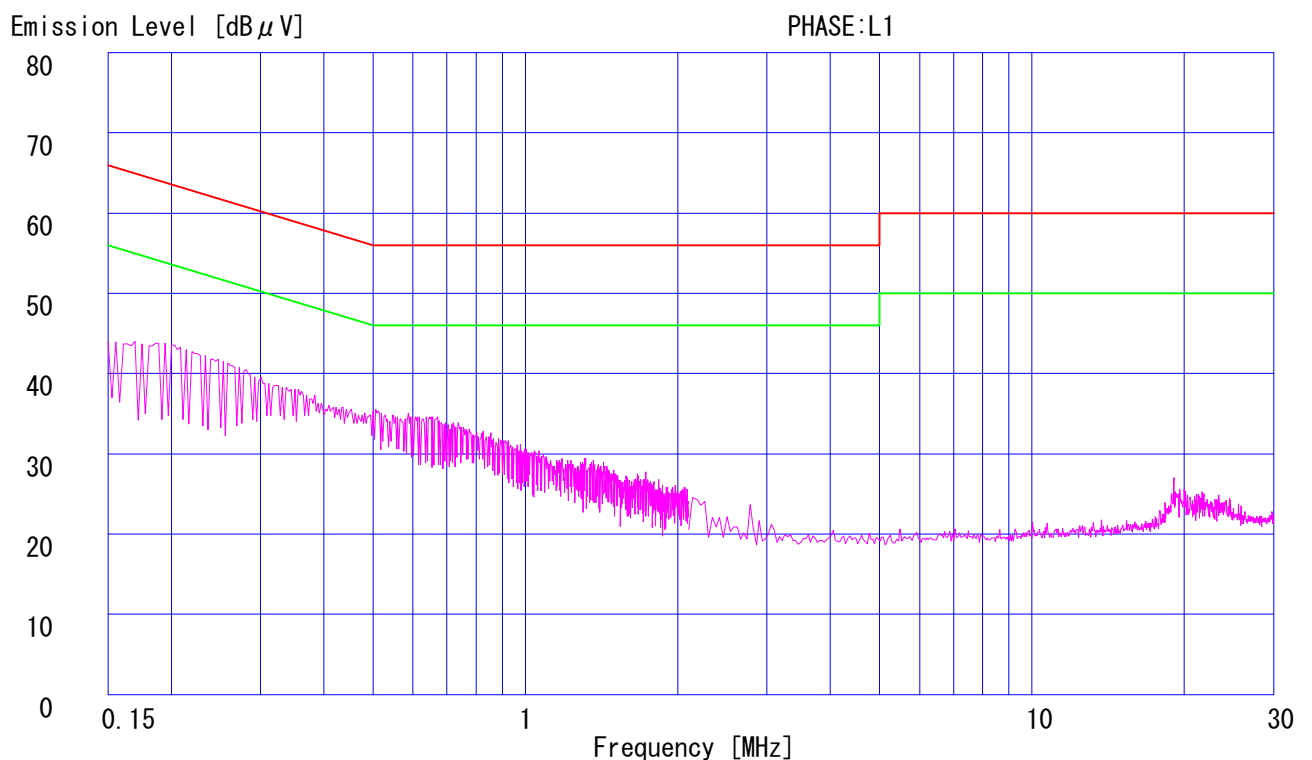
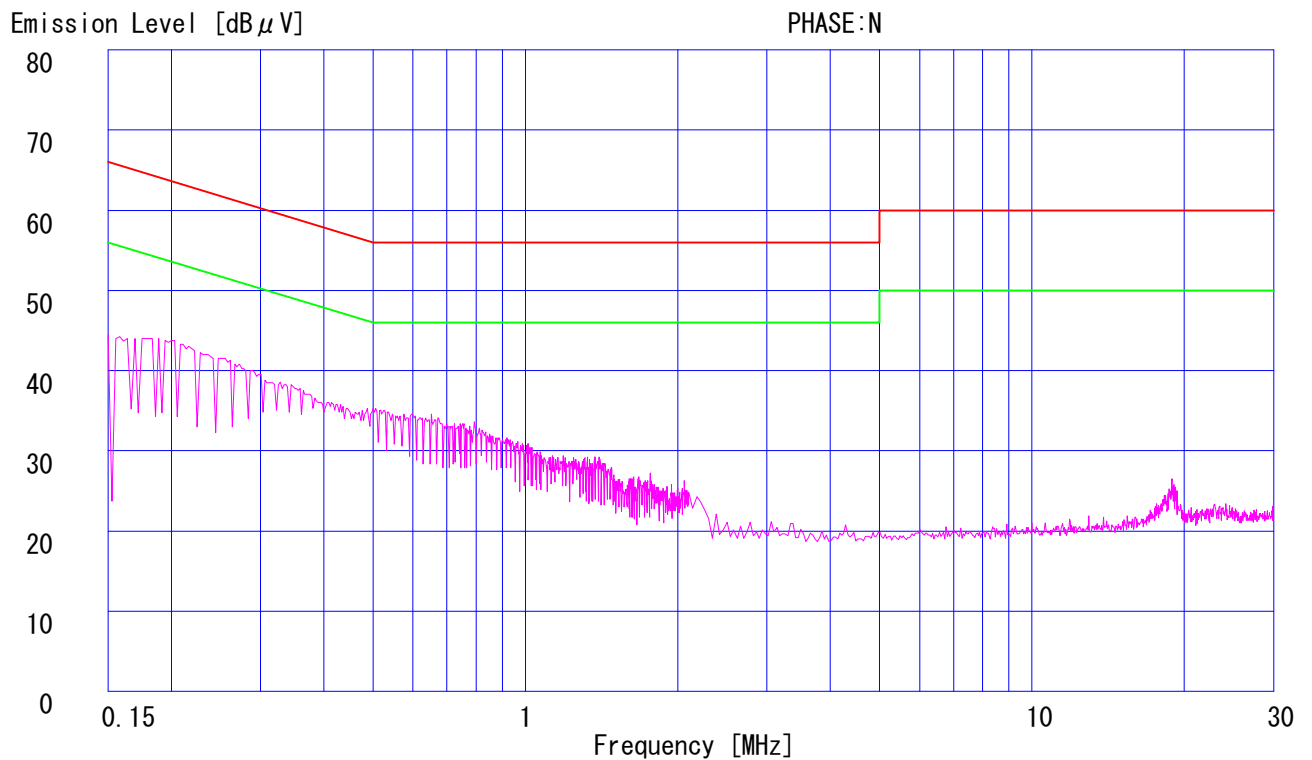
UL Japan, Inc.

YAMAKITA No.1 SHIELD ROOM

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2480MHz DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST

UL Japan, Inc.
YAMAKITA No.1 SHIELD ROOM
Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2441MHz 3DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C Engineer : Makoto Hosaka
Humidity : 33 %
Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)

No.	FREQ. [MHz]	READING(N)		READING(L1)		LISN FACTOR [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS		MARGIN	
		QP [dB μ V]	AV	QP [dB μ V]	AV				QP [dB]	AV [dB μ V]	QP [dB μ V]	AV [dB μ V]	QP [dB]	AV [dB]
1.	0.1500	34.6	-	34.5	-	0.1	0.1	0.0	34.8	-	66.0	56.0	31.2	-
2.	0.1750	34.4	-	34.3	-	0.1	0.1	0.0	34.6	-	64.7	54.7	30.1	-
3.	0.2000	34.0	-	34.0	-	0.1	0.1	0.0	34.2	-	63.6	53.6	29.4	-
4.	0.2500	32.0	-	32.1	-	0.1	0.1	0.0	32.3	-	61.8	51.8	29.5	-
5.	0.5000	25.8	-	25.7	-	0.2	0.2	0.0	26.2	-	56.0	46.0	29.8	-
6.	18.9439	22.7	-	23.5	-	0.9	1.6	0.0	26.0	-	60.0	50.0	34.0	-

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

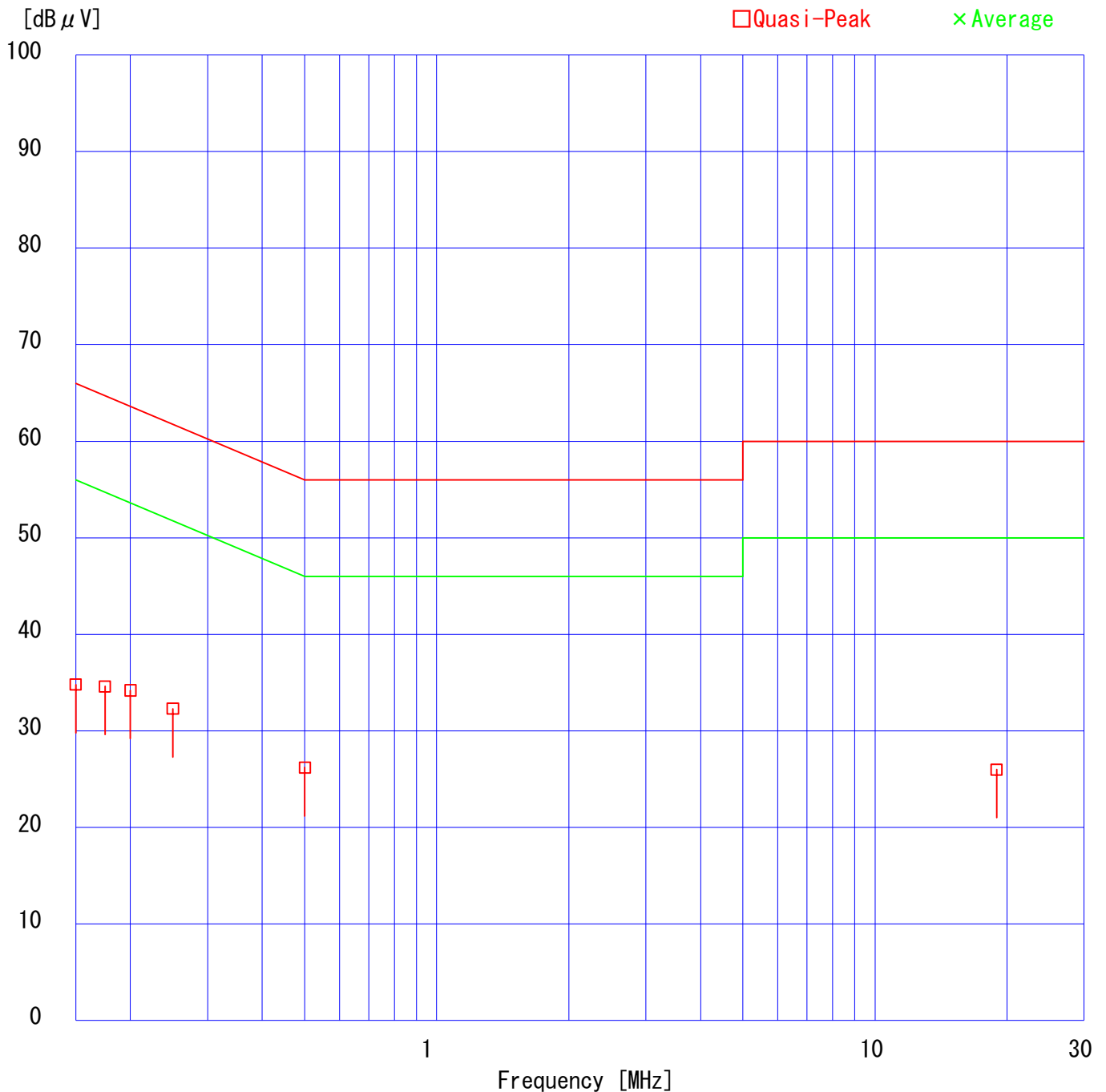
■ LISN: KLS-01 (NNLK8126) ■ COAXIAL CABLE: KCC-14/15/16/18
■ PULSE LIMITTER: KPL-01 (PLO1) ■ EMI RECEIVER: KTR-02 (ESCS30)

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Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2441MHz 3DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation : FCC Part15C § 15. 207. (CISPR Pub. 22)

Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST CHART

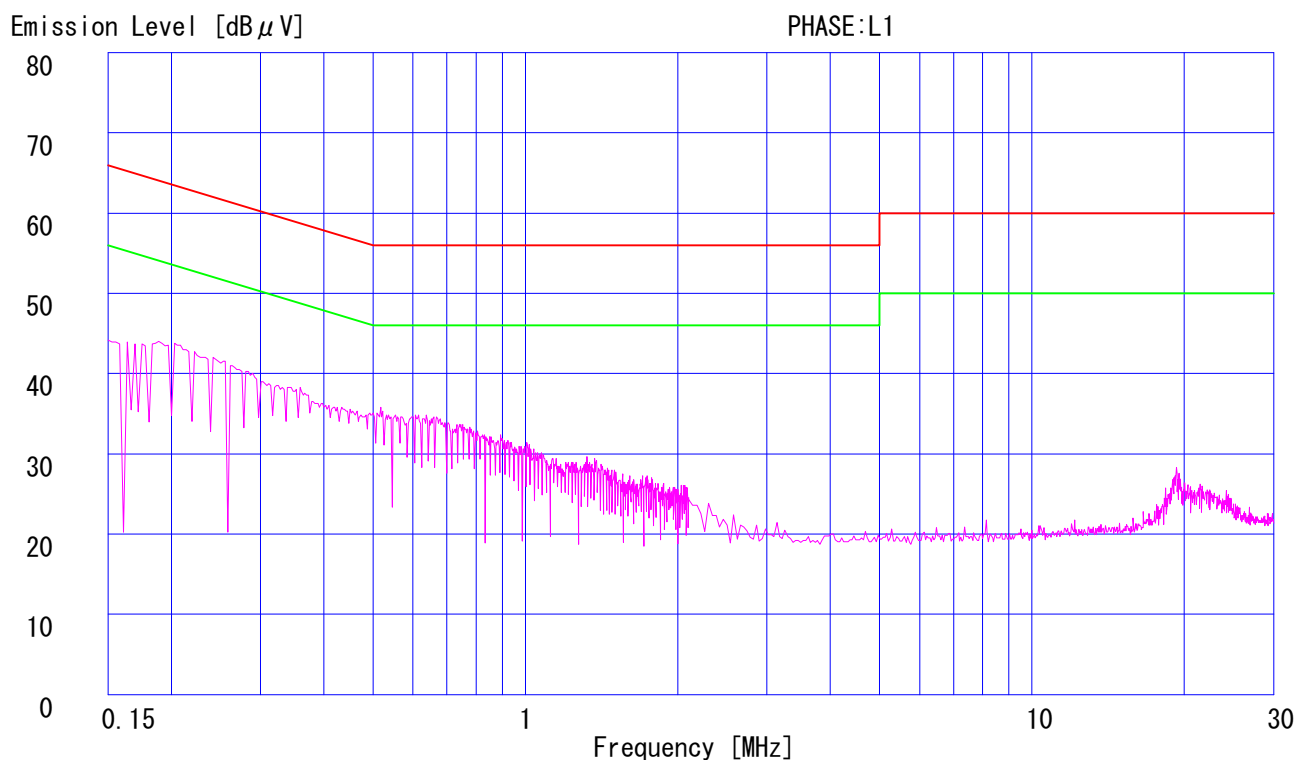
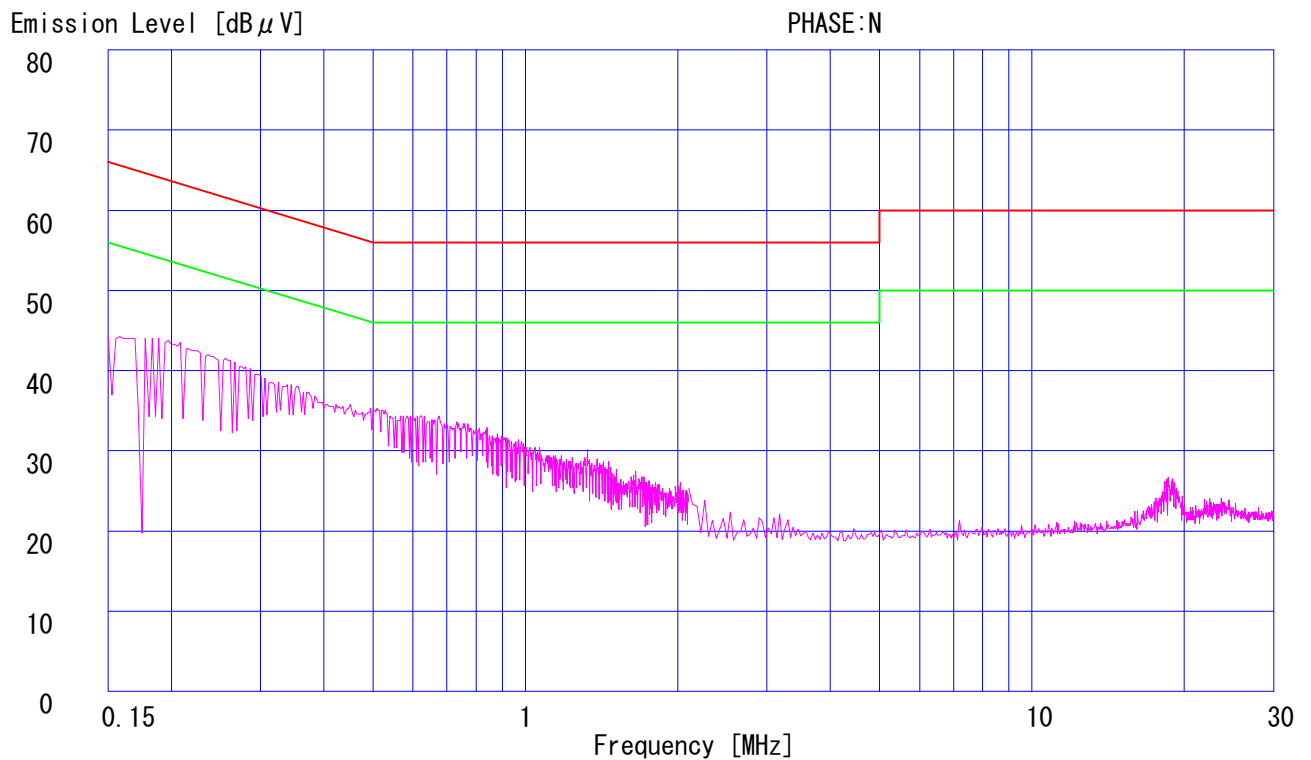
UL Japan, Inc.

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Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2441MHz 3DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST CHART

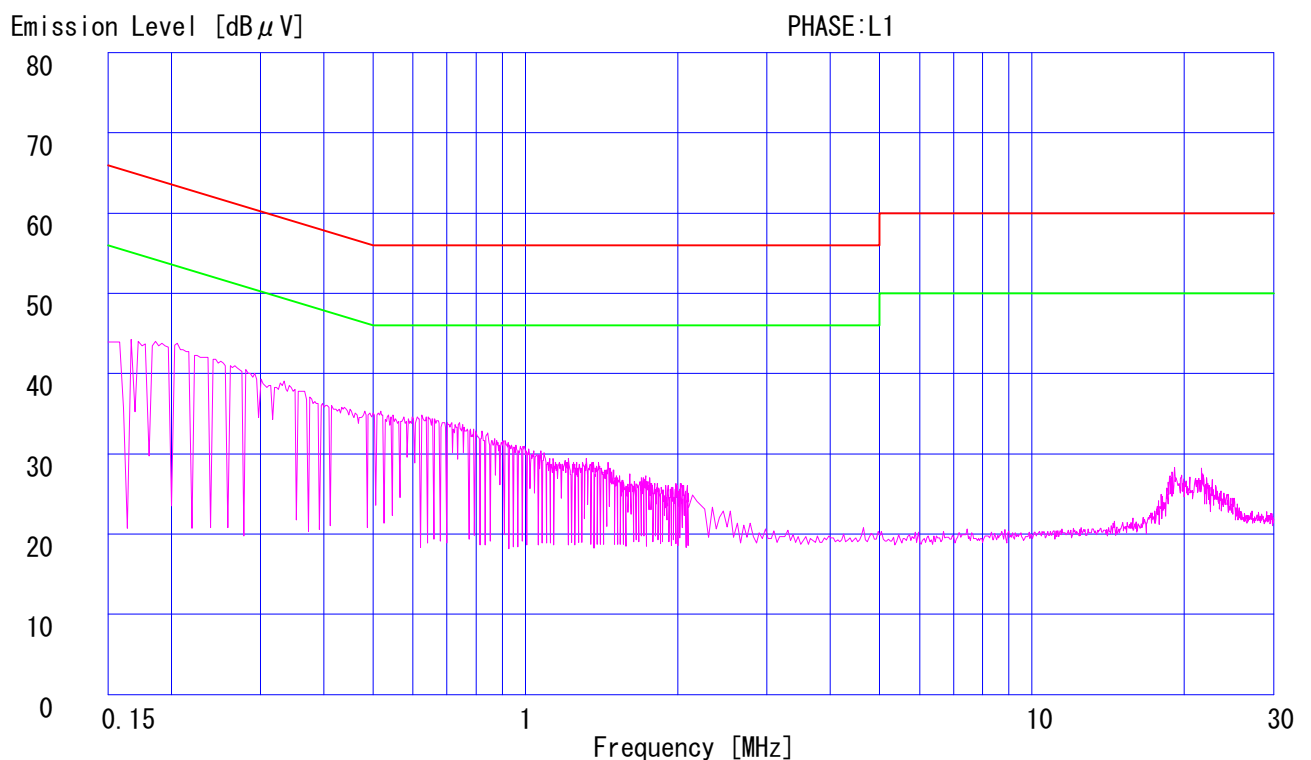
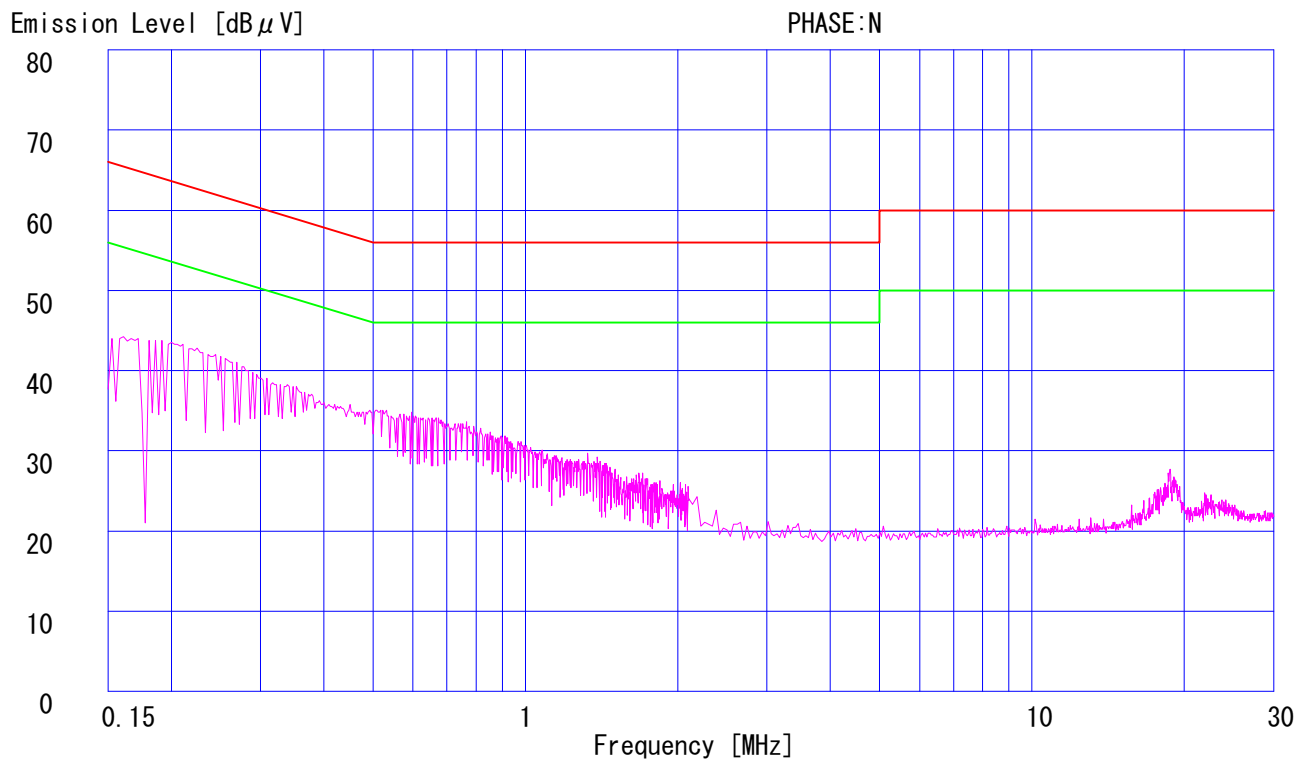
UL Japan, Inc.

YAMAKITA No.1 SHIELD ROOM

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HC1119
Power : AC120V/60Hz
Mode : Transmitting 2402MHz 3DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Makoto Hosaka



DATA OF CONDUCTION TEST CHART

UL Japan, Inc.

YAMAKITA No.1 SHIELD ROOM

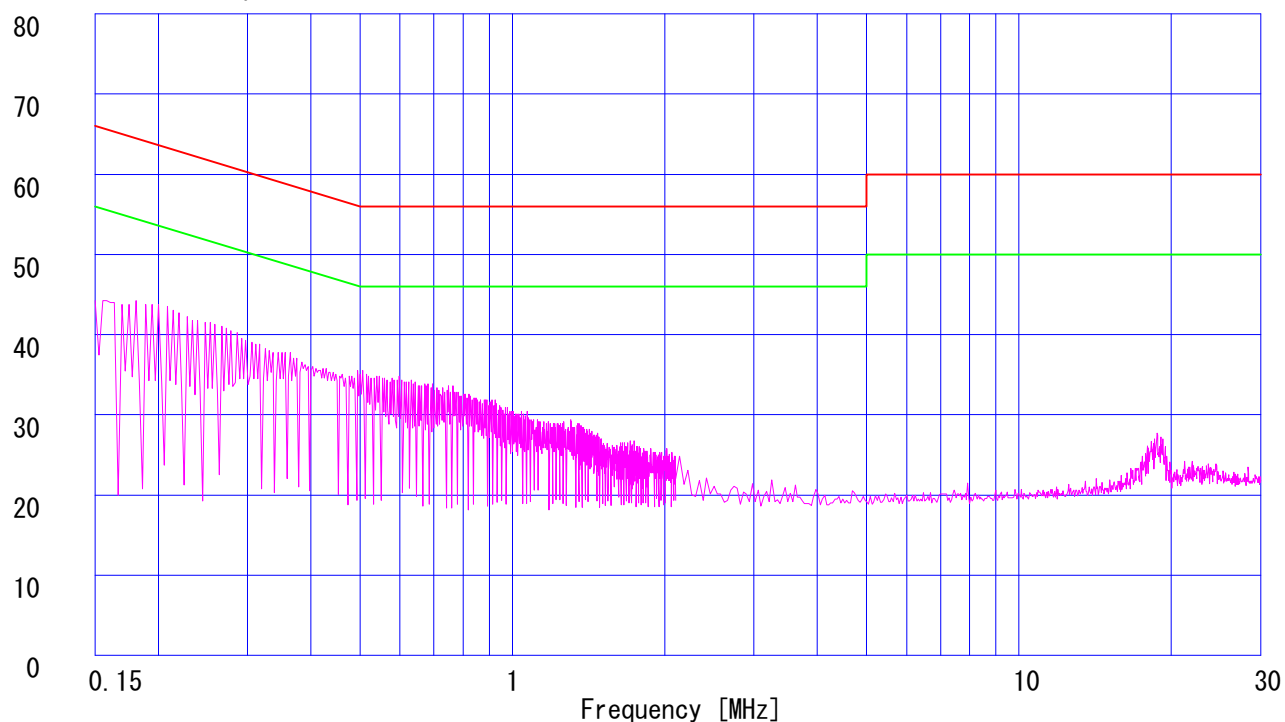
Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adapter
Model No. : AS-BT100
Serial No. : HCI119
Power : AC120V/60Hz
Mode : Transmitting 2480MHz 3DH5
Remarks : -
Date : 12/16/2008
Phase : Single Phase
Temperature : 22 °C
Humidity : 33 %
Regulation 1 : FCC Part15C § 15.207. (CISPR Pub. 22)
Regulation 2 : None

Engineer : Makoto Hosaka

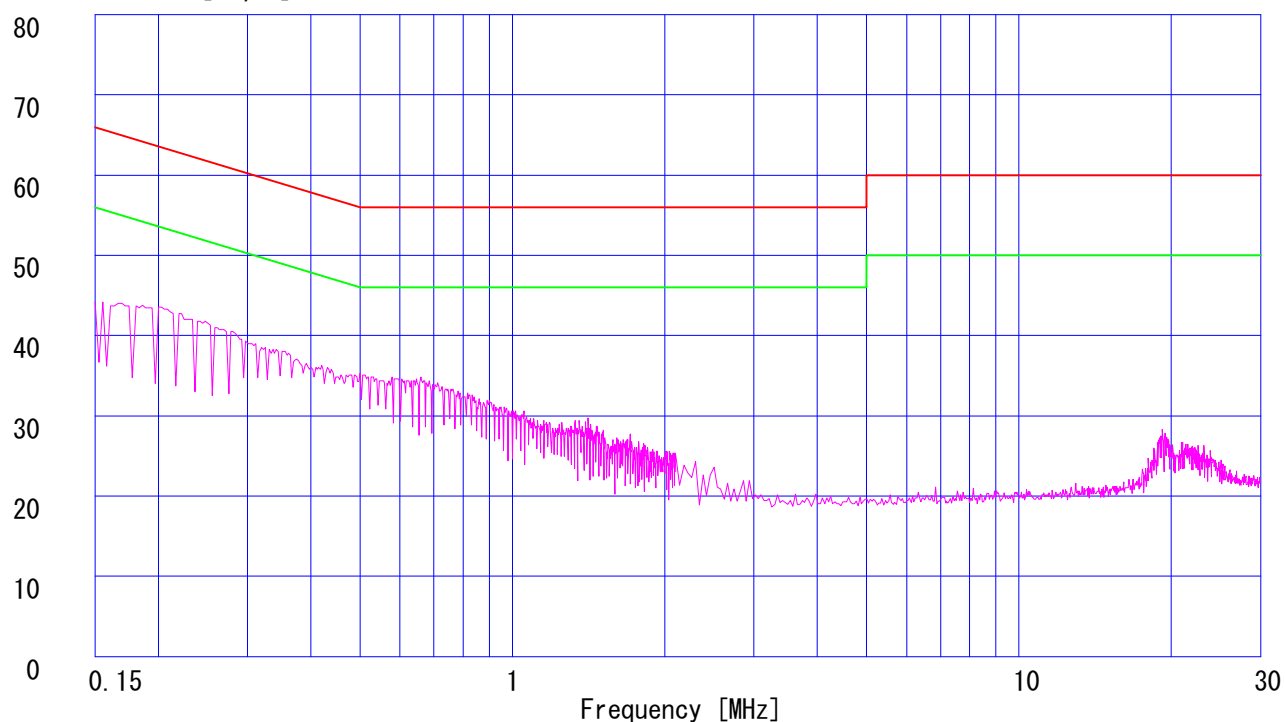
Emission Level [dB μ V]

PHASE:N



Emission Level [dB μ V]

PHASE:L1



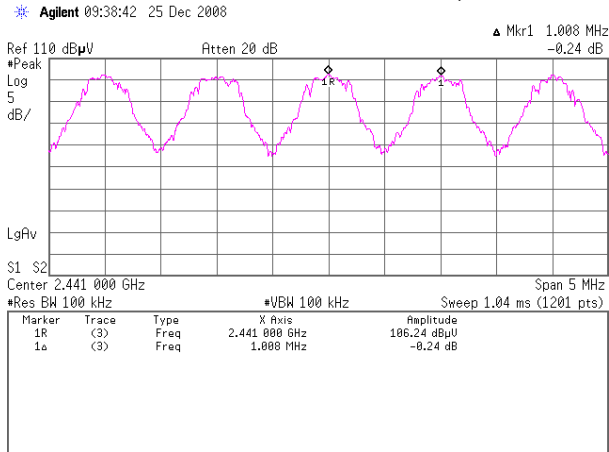
Company:	PIONEER CORPORATION	Report No.:	29EE0038-YK-01-B-R1
Kind of Equipment:	Bluetooth Adapter	Model No.:	AS-BT100
Serial No.:	HCI119	Power:	DC 5 V

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

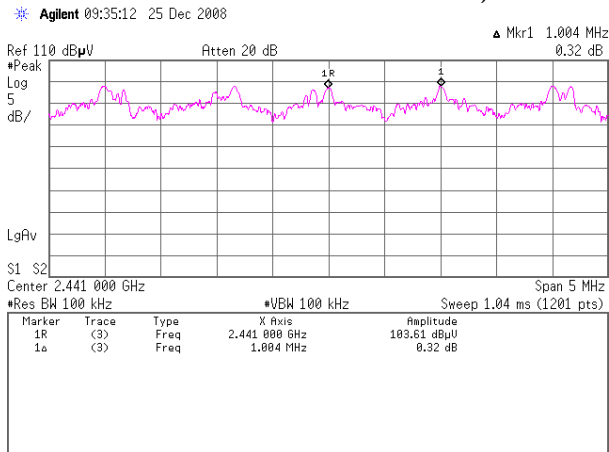
UL Japan, Inc. Yamakita EMC lab.	No.2	shielded room
Date:	2008/12/25	
Temp./Humid.:	22	deg. C. / 35 %
Engineer:	Tatsuya Arai	
Test mode:	Transmitting	

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

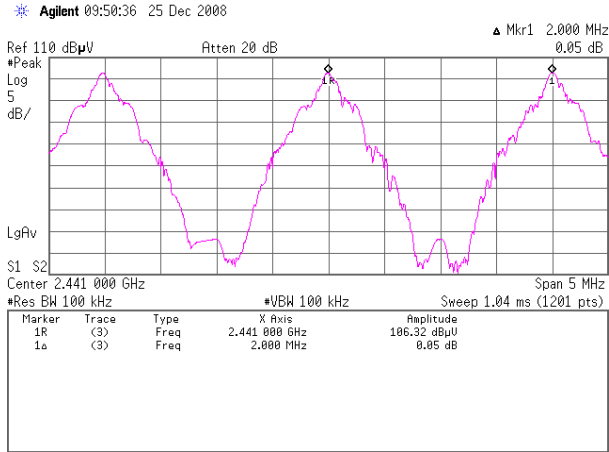
1. Hopping, DH5: 1.008MHz ($2/3 * 20\text{dB Bandwidth}$: $2/3 * 930.0\text{kHz} = 620.0\text{kHz}$)



2. Hopping, 3DH5: 1.004MHz ($2/3 * 20\text{dB Bandwidth}$: $2/3 * 1.273\text{MHz} = 848.7\text{kHz}$)



3. Inquiry: 2.000MHz ($2/3 * 20\text{dB Bandwidth}$: $2/3 * 822.5\text{kHz} = 548.3\text{kHz}$)



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

UL Japan, Inc. Yamakita EMC lab.

Date:

Temp./Humid.:

Engineer:

Test mode:

No.2 shielded room

2008/12/25

22 deg. C. / 35 %

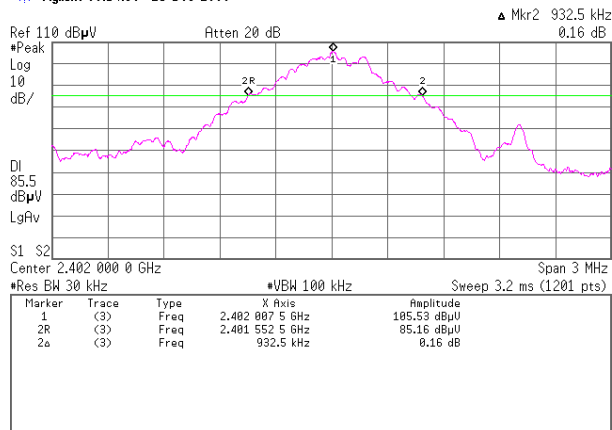
Tatsuya Arai

Transmitting

[Hopping off, DH5]

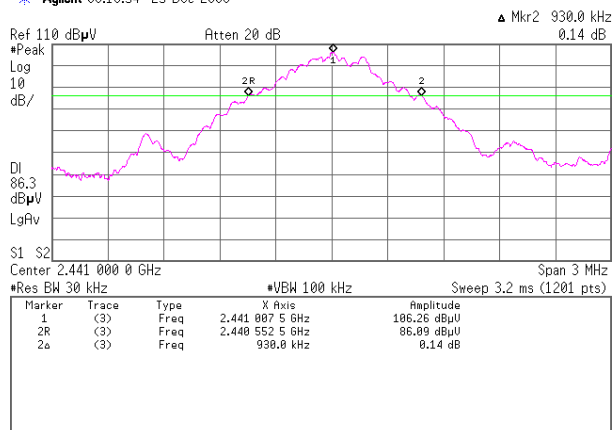
1. ch : 2402MHz/20dB Bandwidth: 932.5kHz

Agilent 08:14:39 25 Dec 2008



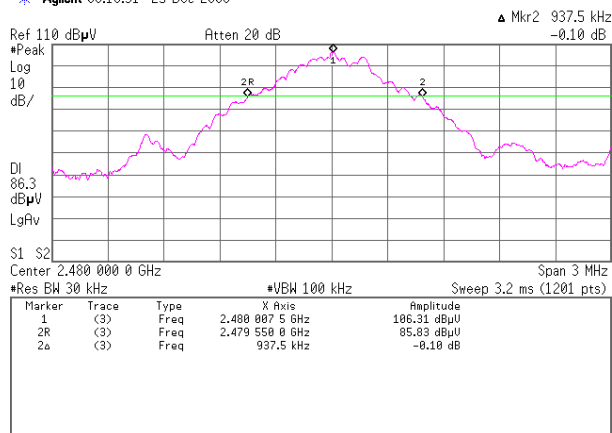
2. ch : 2441MHz/20dB Bandwidth: 930.0kHz

Agilent 08:16:54 25 Dec 2008



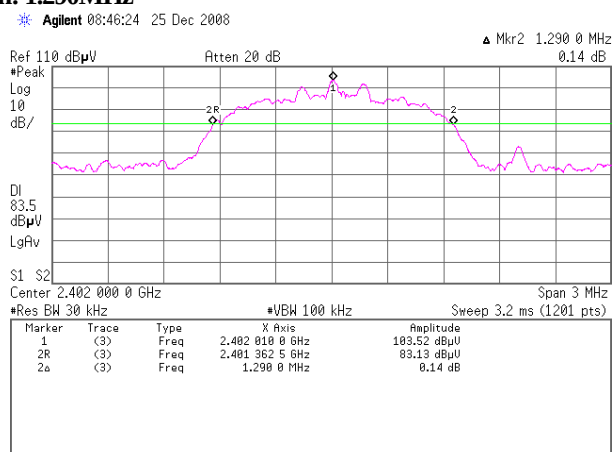
3. ch : 2480MHz/20dB Bandwidth: 937.5kHz

Agilent 08:18:31 25 Dec 2008

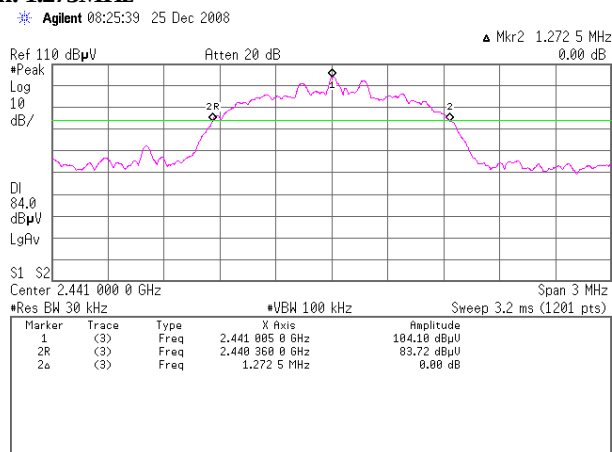


[Hopping off, 3DH5]

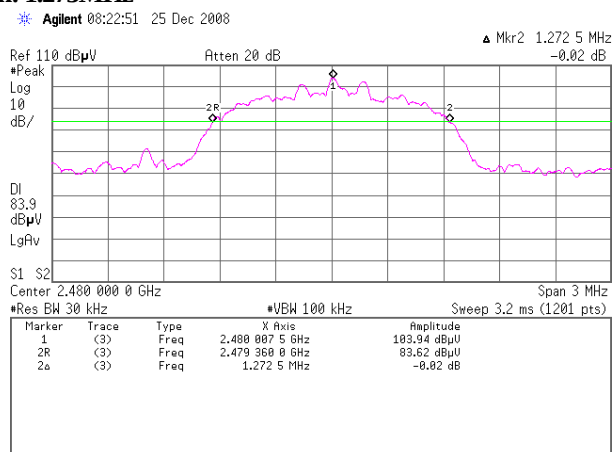
4. ch : 2402MHz/20dB Bandwidth: 1.290MHz



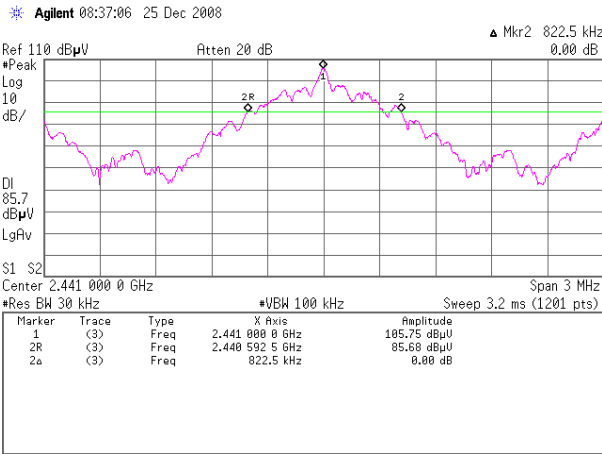
5. ch : 2441MHz/20dB Bandwidth: 1.273MHz



6. ch : 2480MHz/20dB Bandwidth: 1.273MHz



[Inquiry]
7. Inauriry/20dB Bandwidth: 822.5kHz

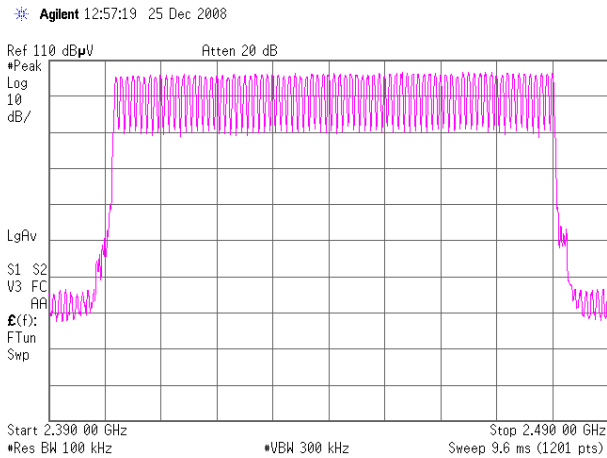


Channel Utilization (Regulation: FCC 15.247(a)(1)(iii))

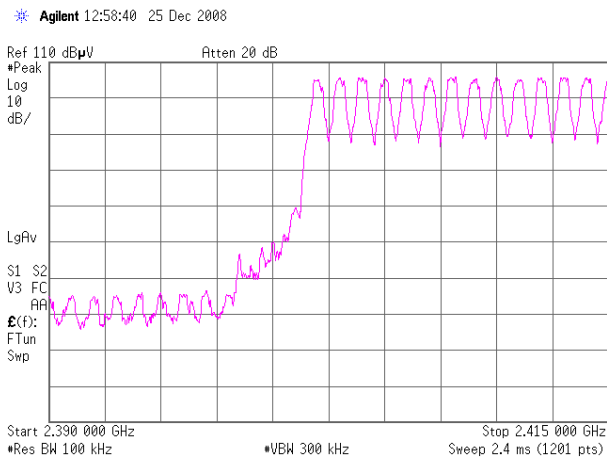
UL Japan, Inc. Yamakita EMC lab.
Date:
Temp./Humid.:
Engineer:
Test mode:

No.2 shielded room
2008/12/25
22 deg. C. / 35 %
Tatsuya Arai
Transmitting

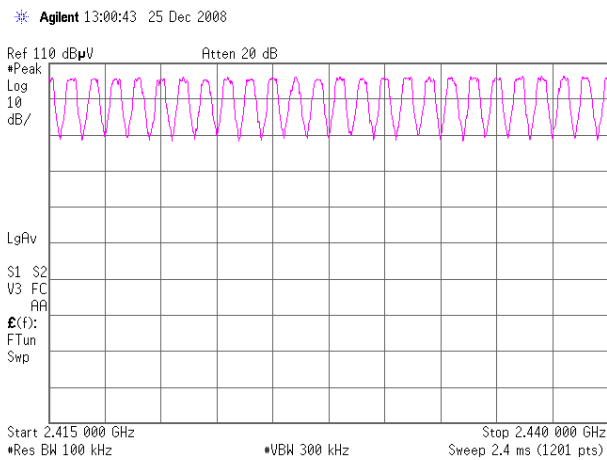
Hopping, DH5: 79ch
1.



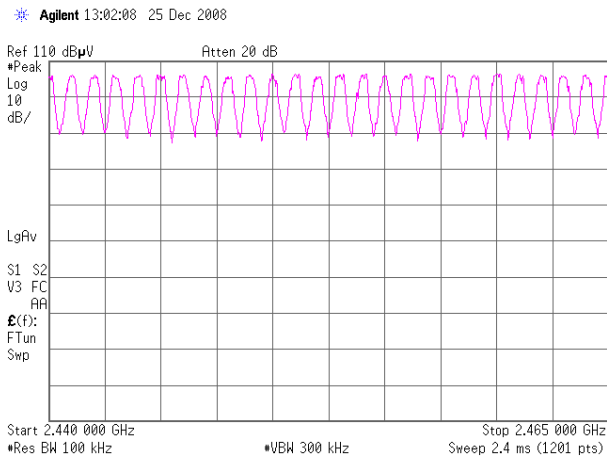
2.



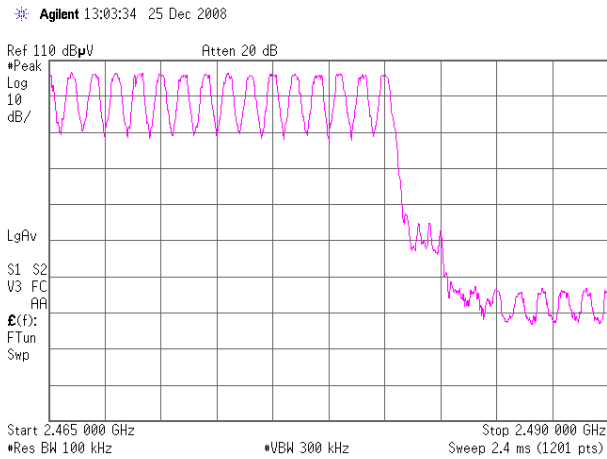
3.



4.

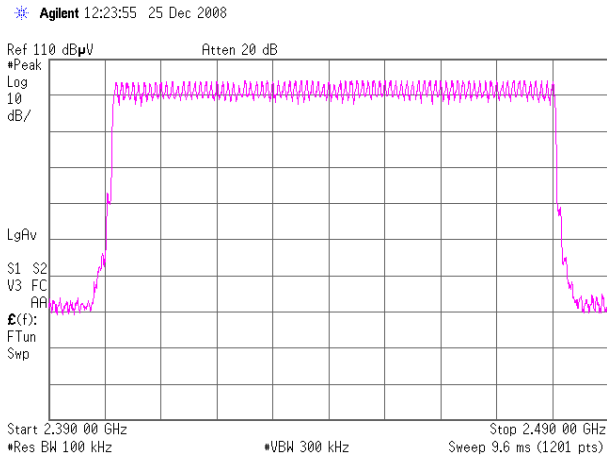


5.

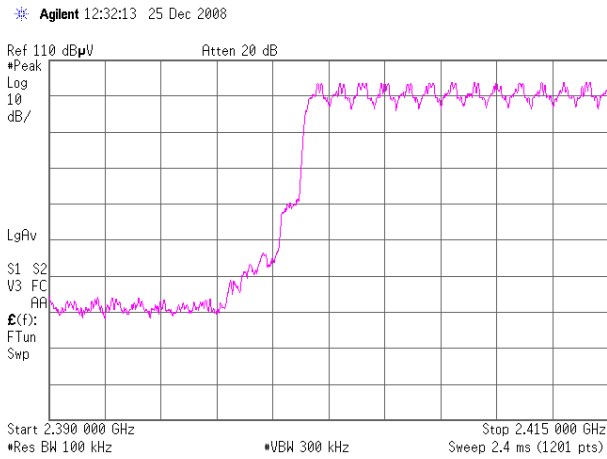


Hopping, 3DH5: 79ch

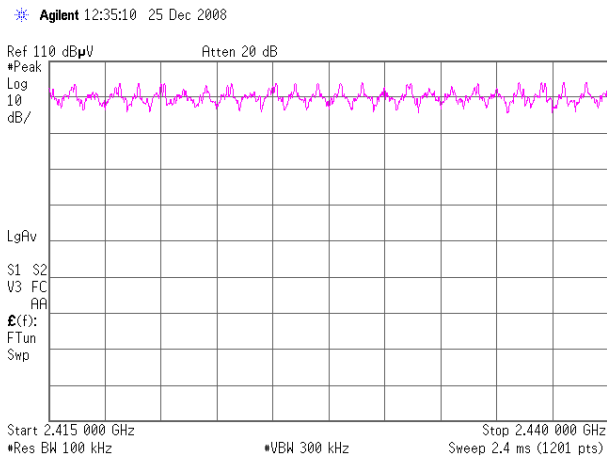
1.



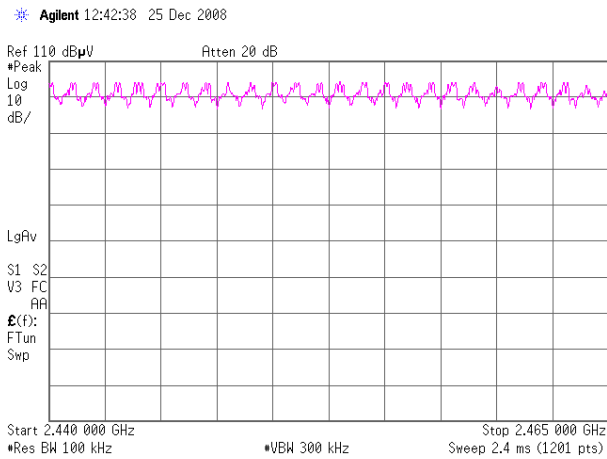
2.



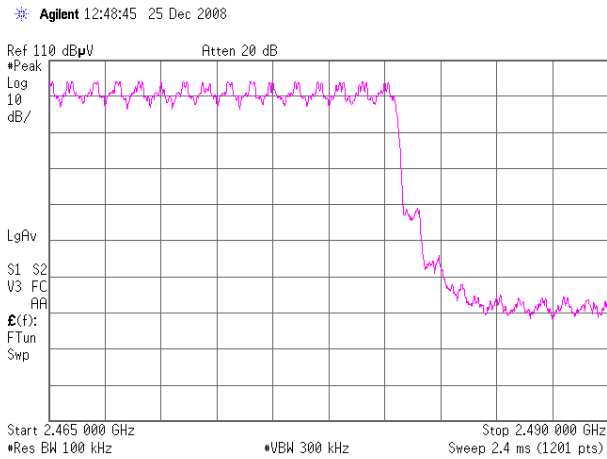
3.



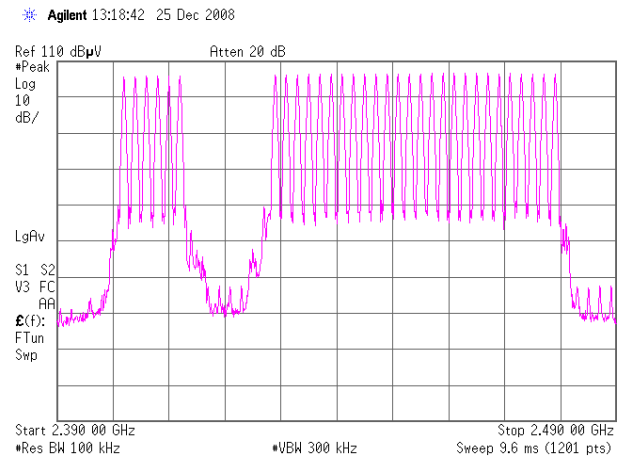
4.



5.



1. Inquiry: 32ch



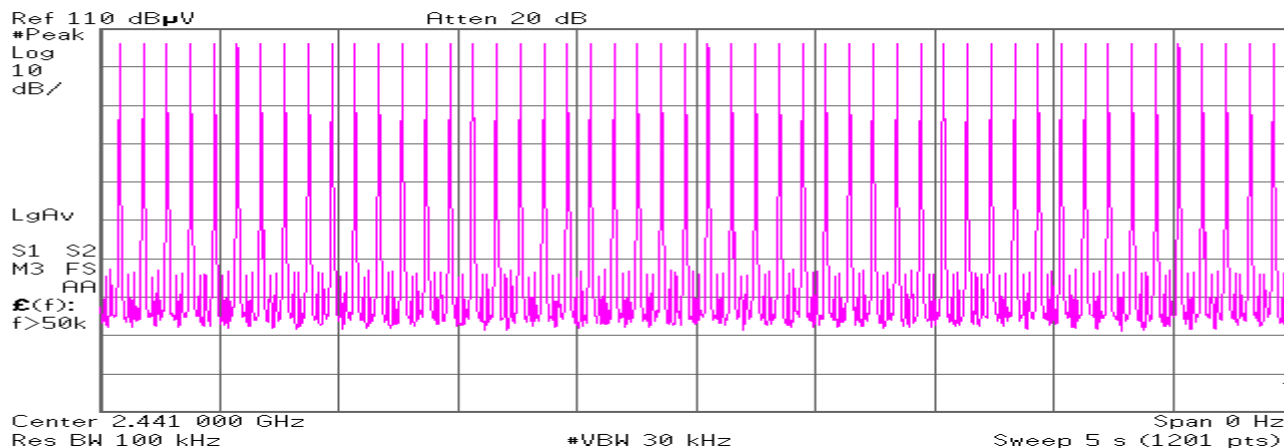
Dwell Time (Regulation: FCC 15.247(a)(1)(iii))

UL Japan, Inc. Yamakita EMC lab.	No.2	shielded room
Date:	2008/12/25	
Temp./Humid.:	22	deg. C. / 35 %
Engineer:	Tatsuya Arai	
Test mode:	Transmitting	

Hopping (DH1):

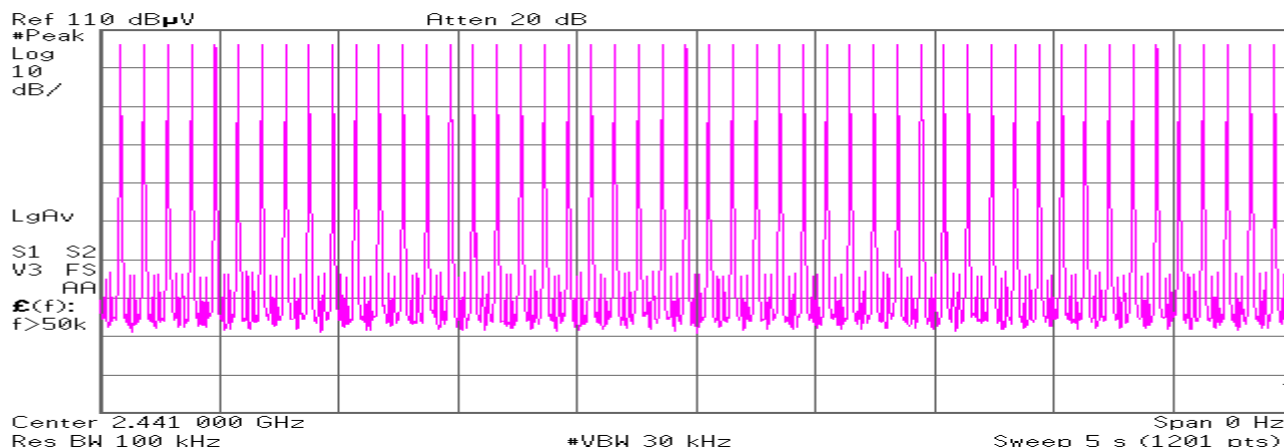
Count 1

Agilent 10:44:10 25 Dec 2008



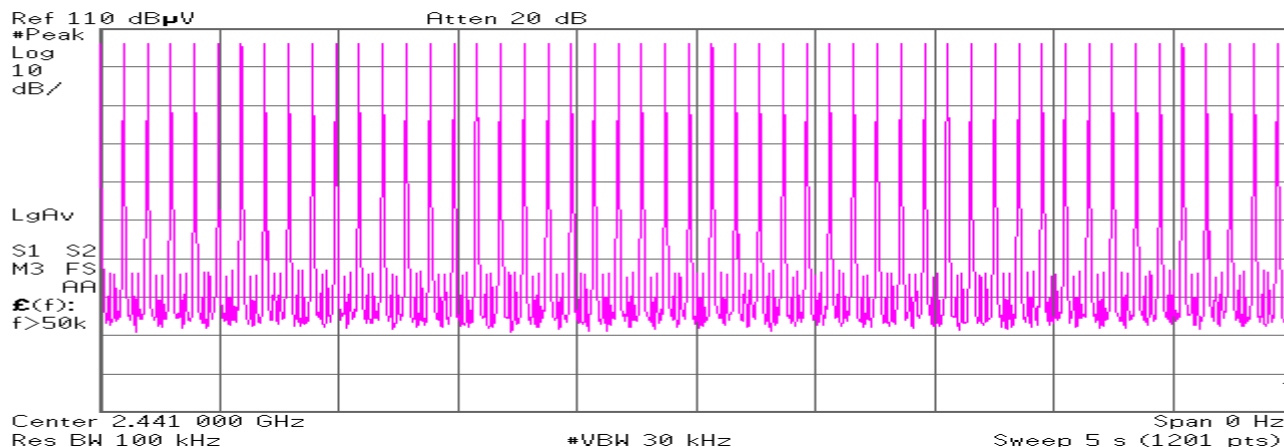
Count 2

Agilent 10:44:34 25 Dec 2008

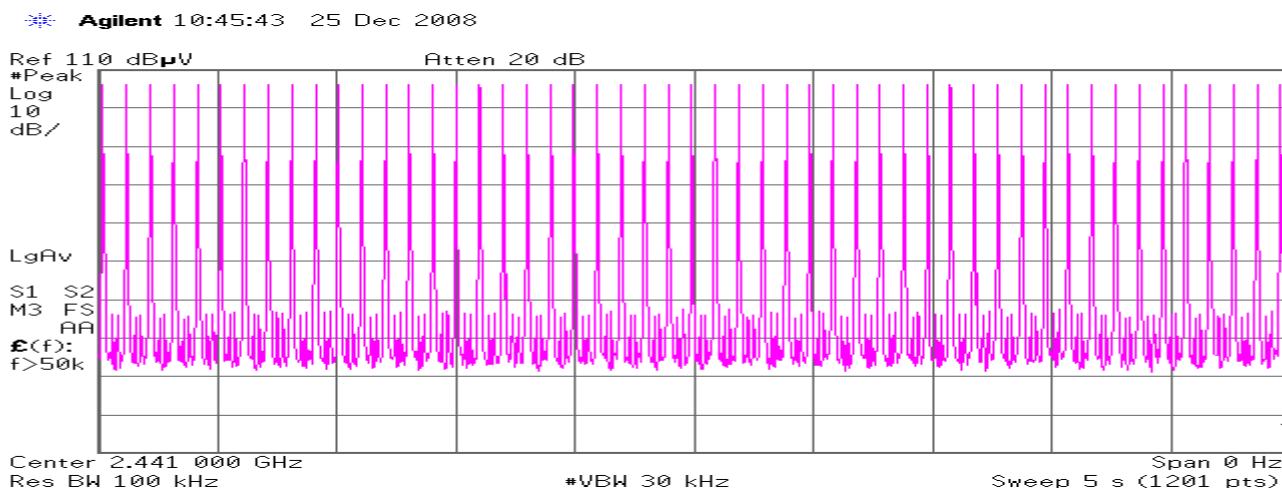


Count 3

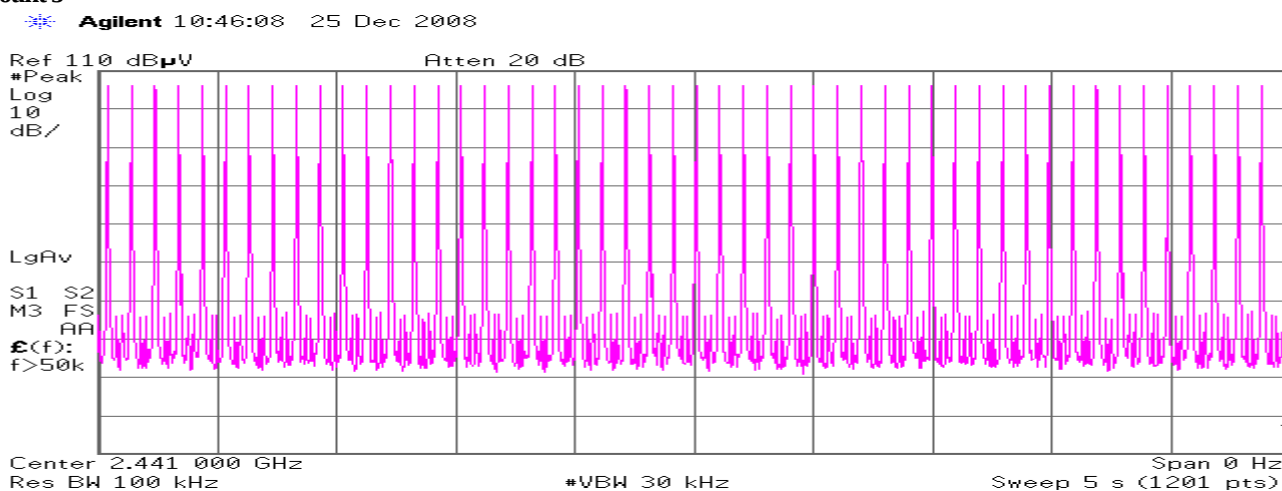
Agilent 10:45:02 25 Dec 2008



Count 4



Count 5



Duty cycle(Hopping DH1)



Average times of rising in 5 sec. of sweep = (50+ 50 + 51 + 51 + 51) / 5 = 50.6

Average times of rising in 1 sec. = 50.6 / 5s = 10.12

Average times of rising in 0.4x = 0.4 * 79ch * 10.12 = 319.792

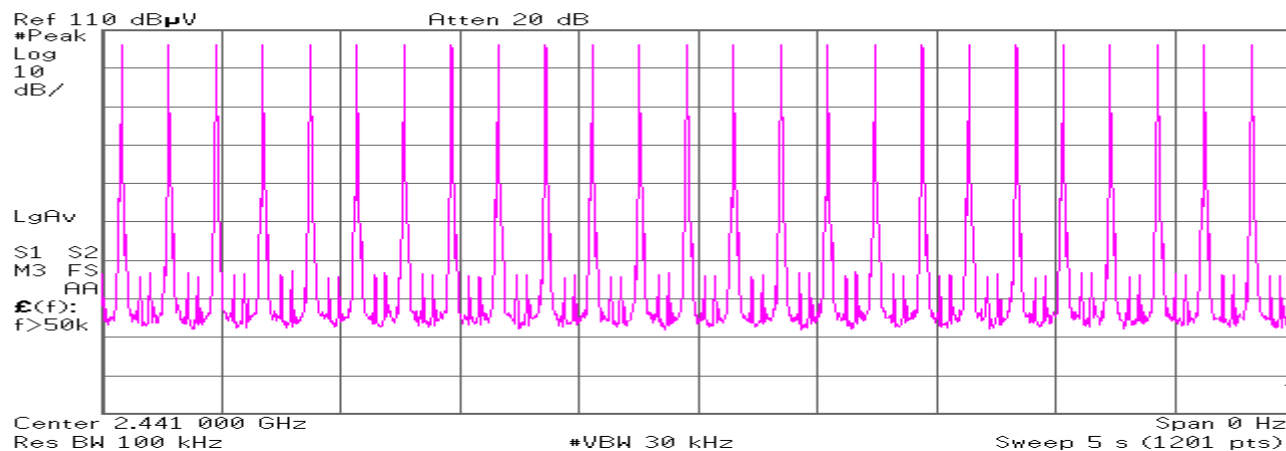
Dwell time = 319.79 * 0.390 = 124.72 [ms]

Limit : Dwell Time < 0.4[s]

Hopping (DH3):

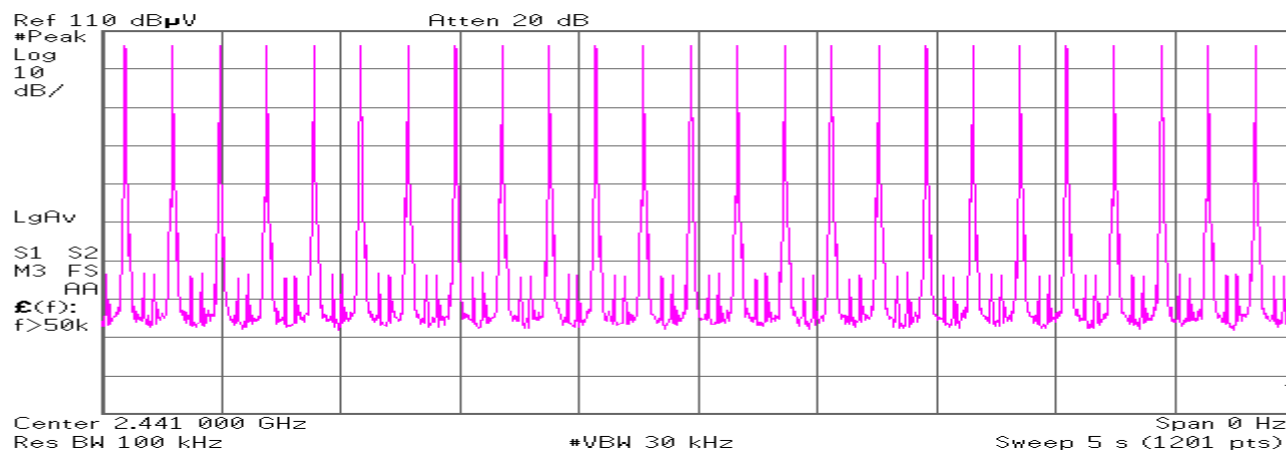
Count 1

Agilent 10:50:05 25 Dec 2008



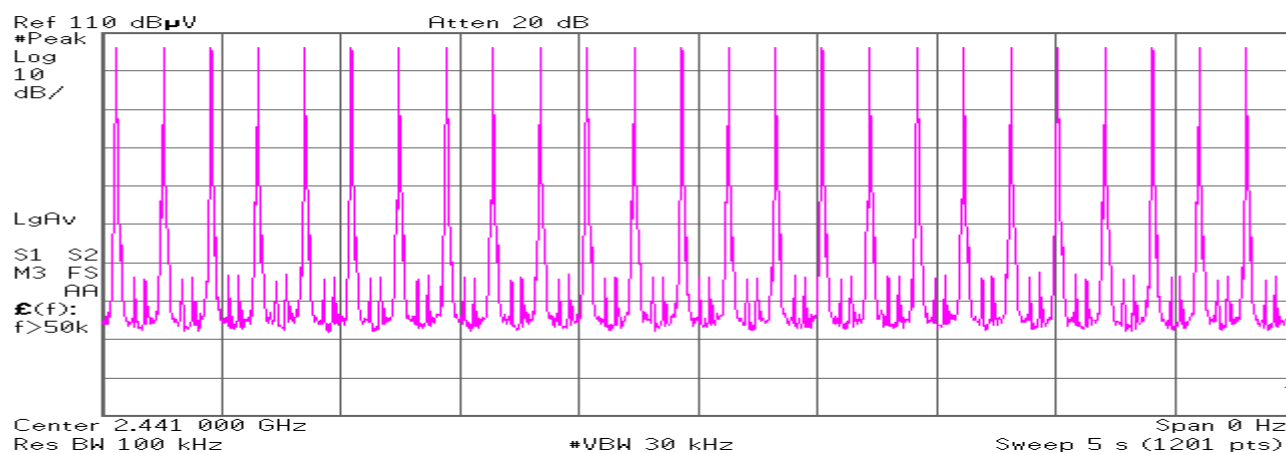
Count 2

Agilent 10:50:25 25 Dec 2008

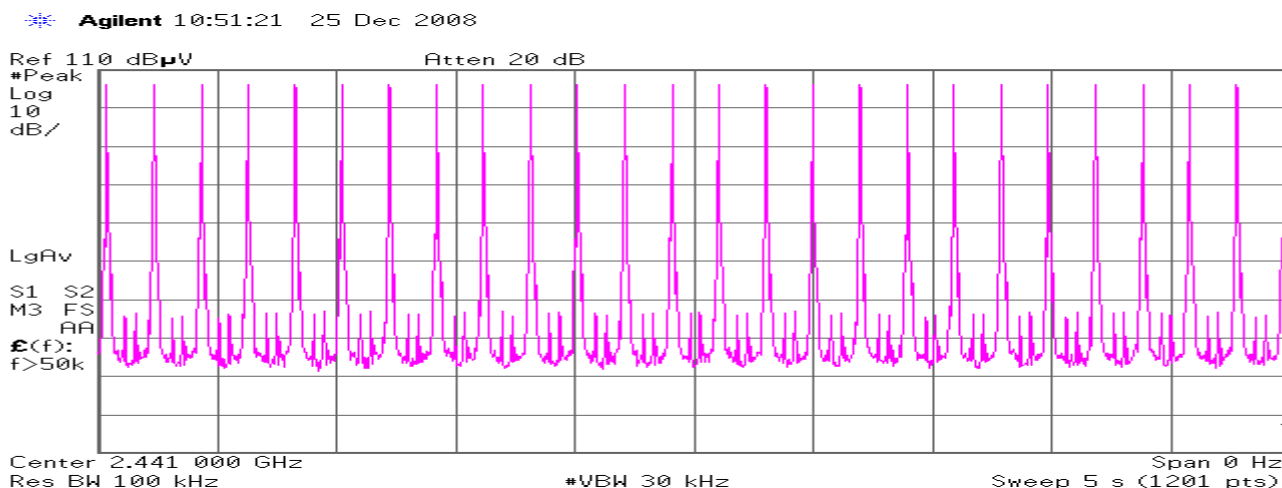


Count 3

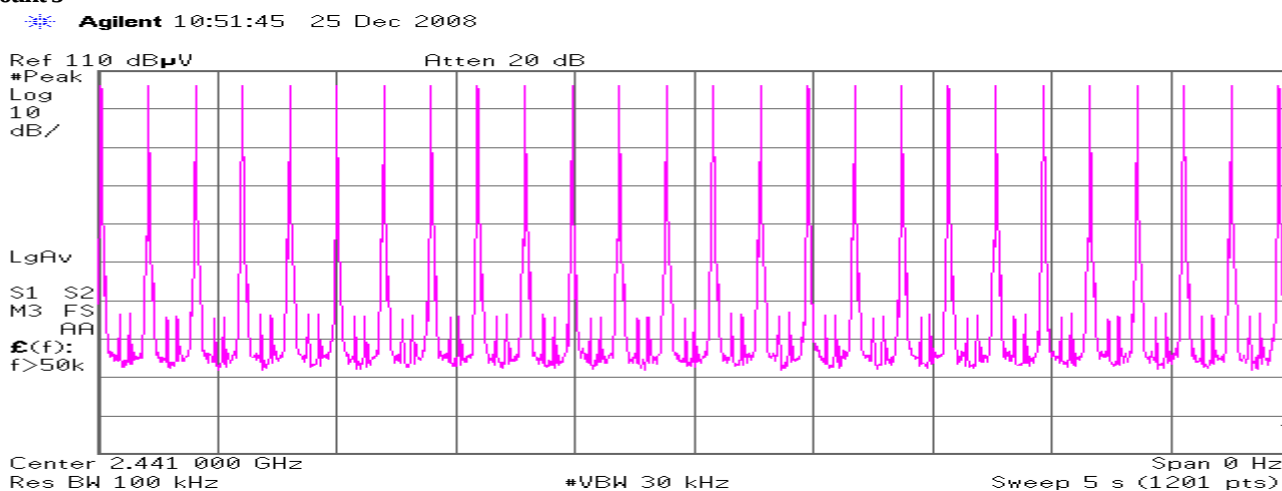
Agilent 10:50:47 25 Dec 2008



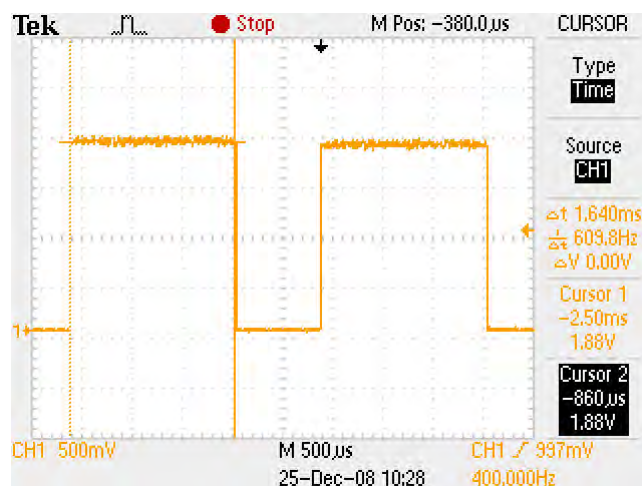
Count 4



Count 5



Duty cycle(Hopping DH3)



Average times of rising in 5 sec. of sweep = (25 + 25 + 25 + 26 + 26) / 5 = 25.4

Average times of rising in 1 sec. = 25.4 / 5s = 5.08

Average times of rising in 0.4x = 0.4 * 79ch * 5.08 = 160.528

Dwell time = 160.53 * 1.64 = 263.27 [ms]

Limit : Dwell Time < 0.4[s]

Company: PIONEER CORPORATION
Kind of Equipment: Bluetooth Adapter
Serial No.: HCI119

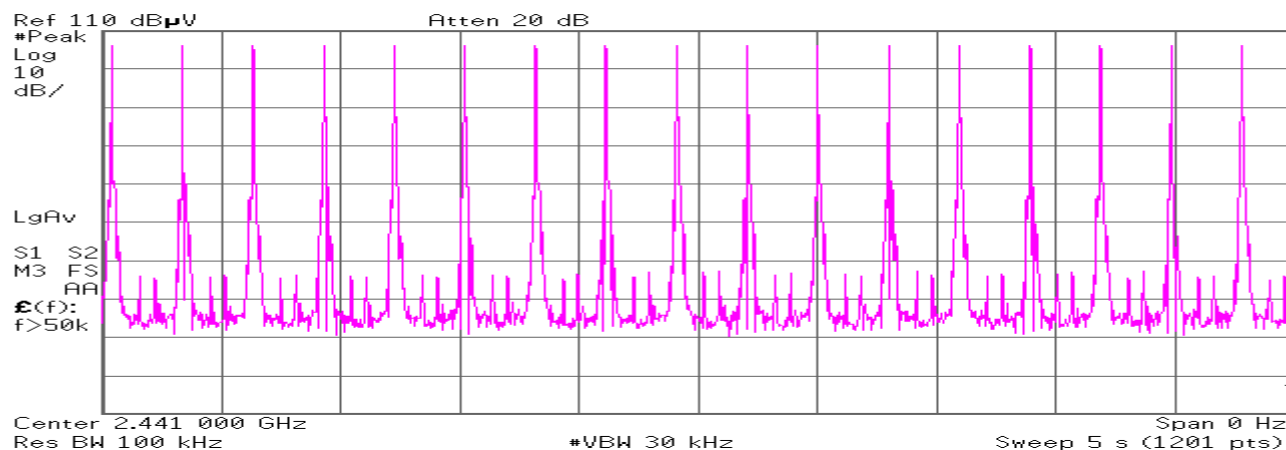
Report No.:
Model No.:
Power:

29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

Hopping (DH5):

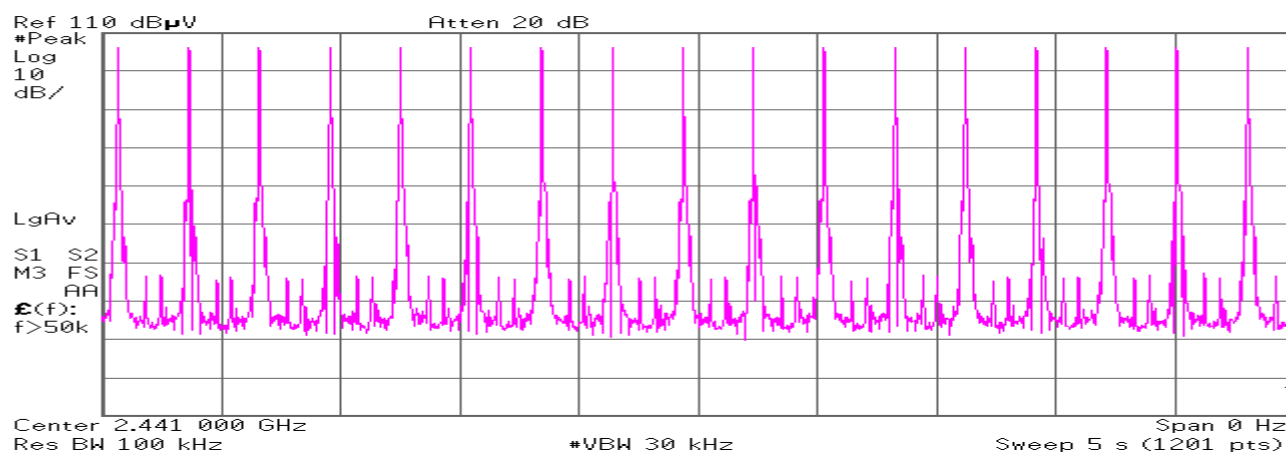
Count 1

Agilent 10:53:26 25 Dec 2008



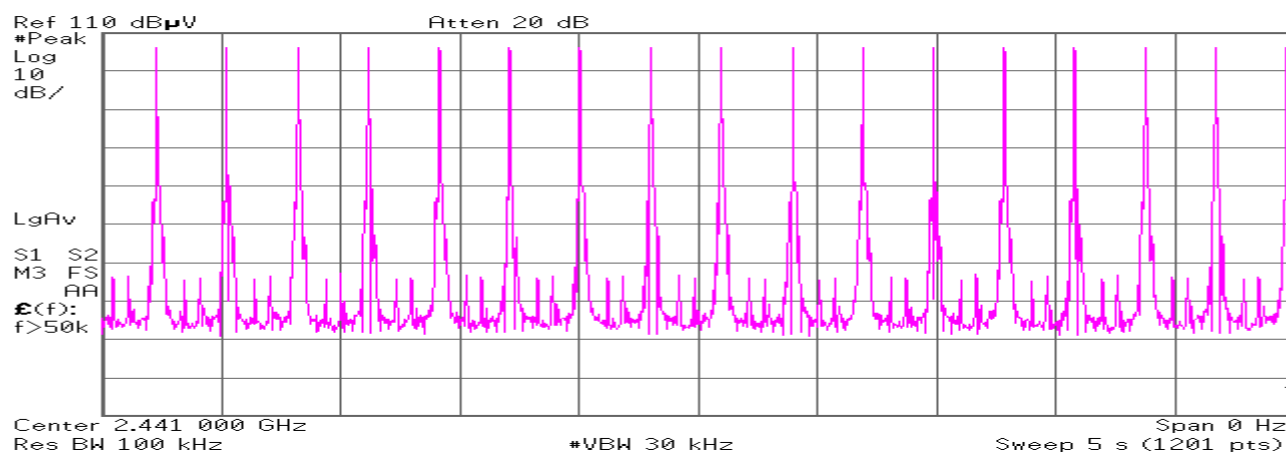
Count 2

Agilent 10:53:45 25 Dec 2008



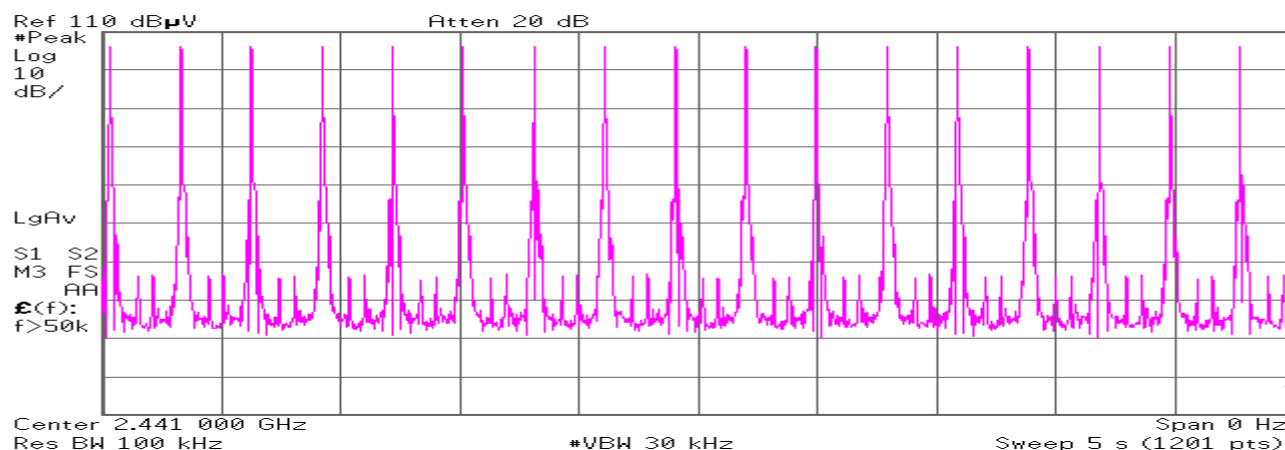
Count 3

Agilent 10:54:06 25 Dec 2008



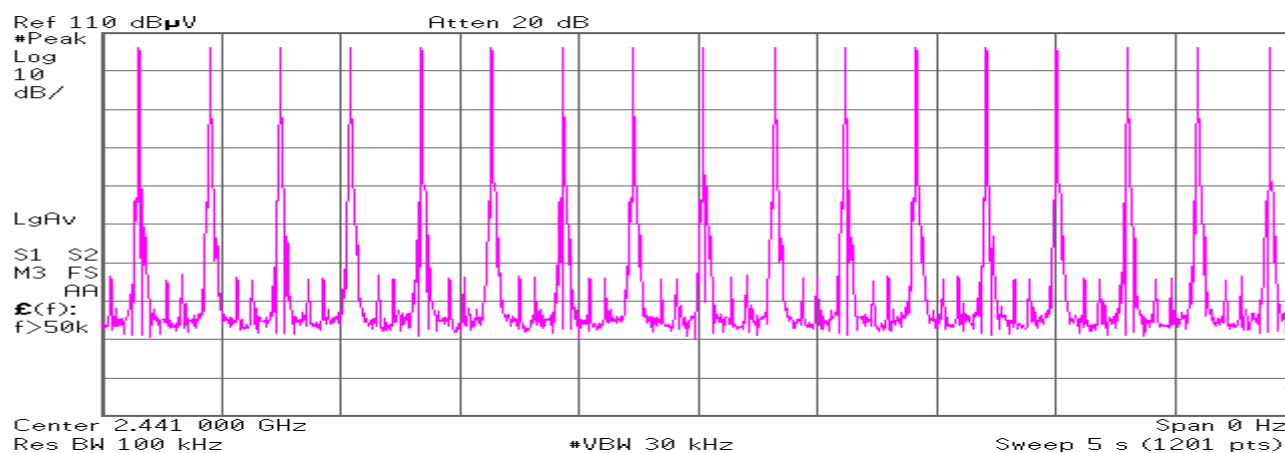
Count 4

Agilent 10:54:31 25 Dec 2008



Count 5

Agilent 10:55:04 25 Dec 2008



Duty cycle(Hopping DH5)



Average times of rising in 5 sec. of sweep = $(17 + 17 + 17 + 17 + 17) / 5 = 17$

Average times of rising in 1 sec. = $17 / 5s = 3.4$

Average times of rising in 0.4x = $0.4 * 79ch * 3.4 = 107.44$

Dwell time = $107.44 * 2.88 = 309.43 [ms]$

Limit : Dwell Time < 0.4[s]

Company: PIONEER CORPORATION
Kind of Equipment: Bluetooth Adapter
Serial No.: HCI119

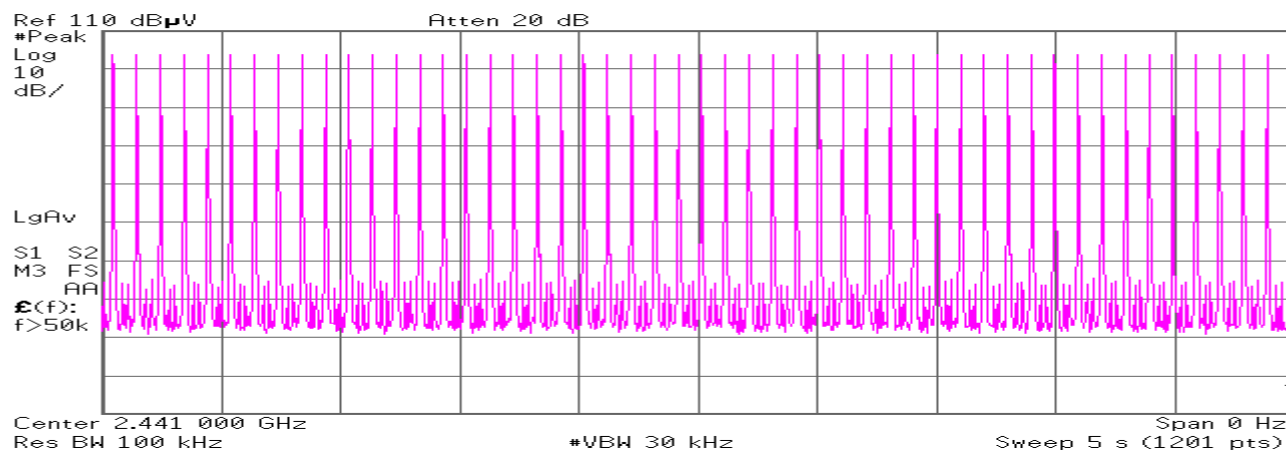
Report No.:
Model No.:
Power:

29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

Hopping (3DH1):

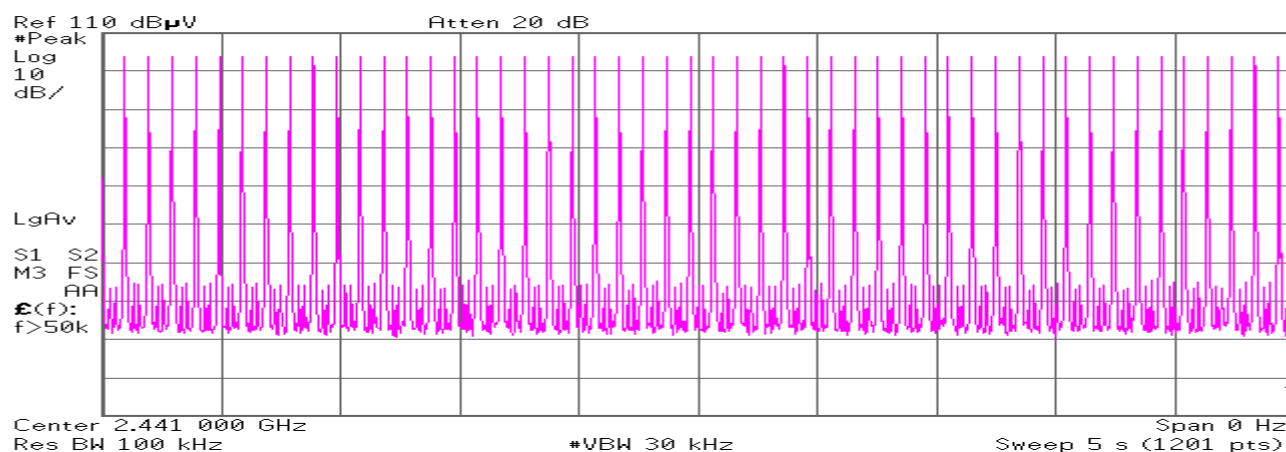
Count 1

Agilent 12:04:47 25 Dec 2008



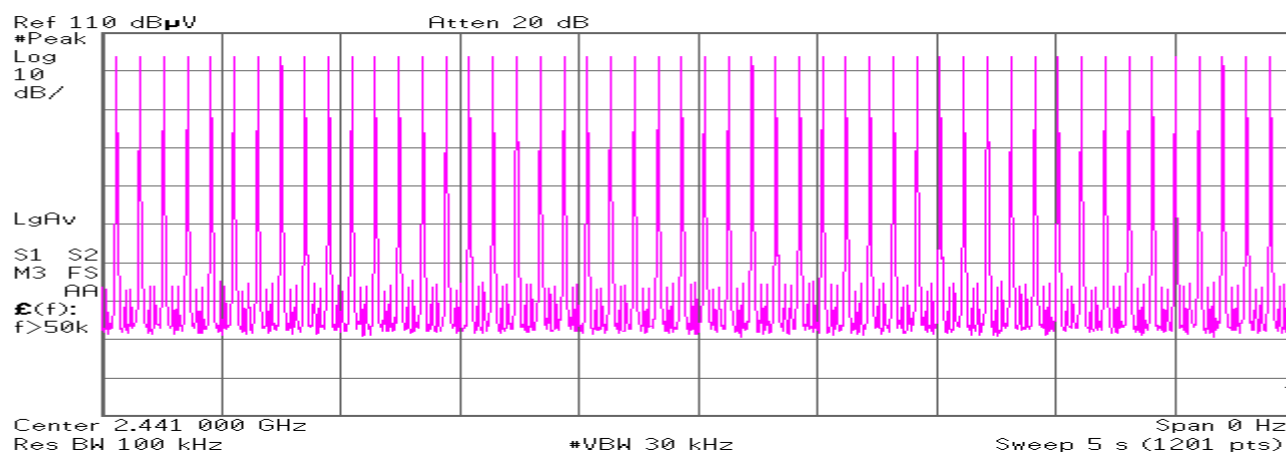
Count 2

Agilent 12:05:06 25 Dec 2008

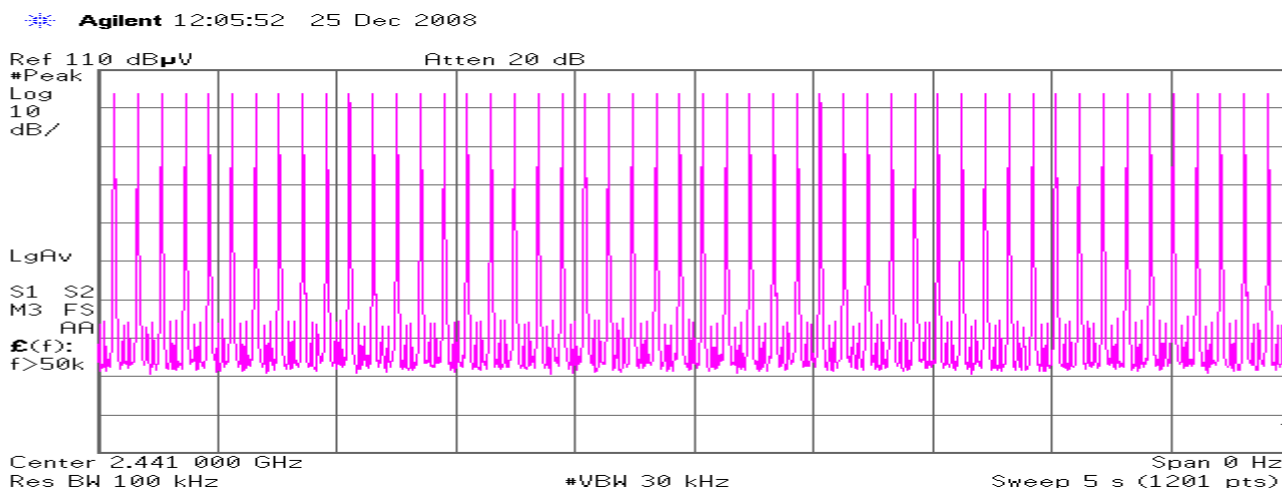


Count 3

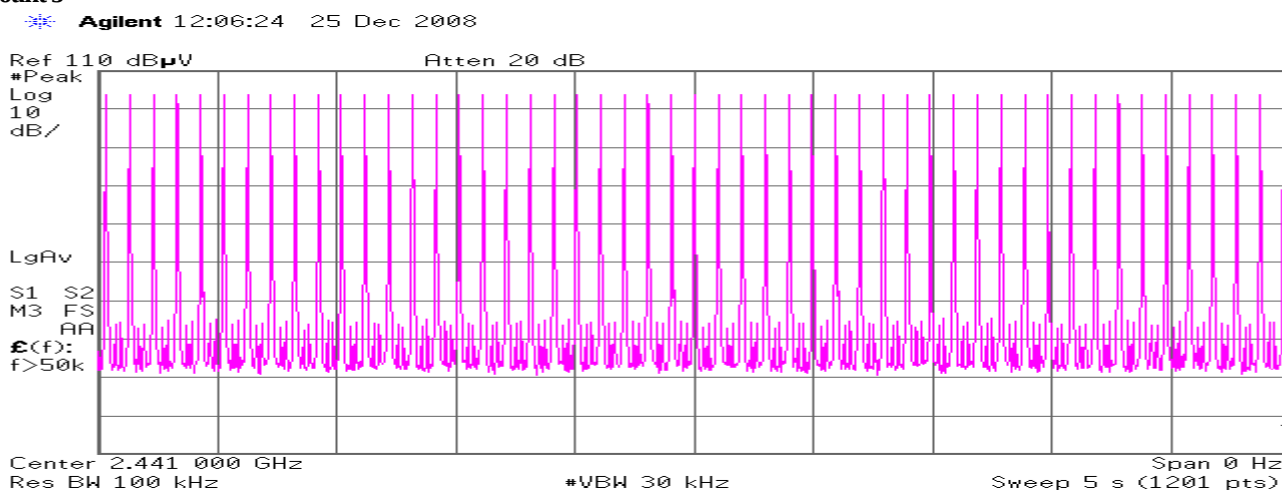
Agilent 12:05:26 25 Dec 2008



Count4



Count5



Duty cycle(Hopping 3DH1)



Average times of rising in 5 sec. of sweep = $(51 + 50 + 51 + 50 + 51) / 5 = 50.6$

Average times of rising in 1 sec. = $50.6 / 5s = 10.12$

Average times of rising in 0.4x = $0.4 * 79ch * 10.12 = 319.79$

Dwell time = $319.79 * 0.4 = 127.92 [ms]$

Limit : Dwell Time < 0.4[s]

Company: PIONEER CORPORATION
Kind of Equipment: Bluetooth Adapter
Serial No.: HCI119

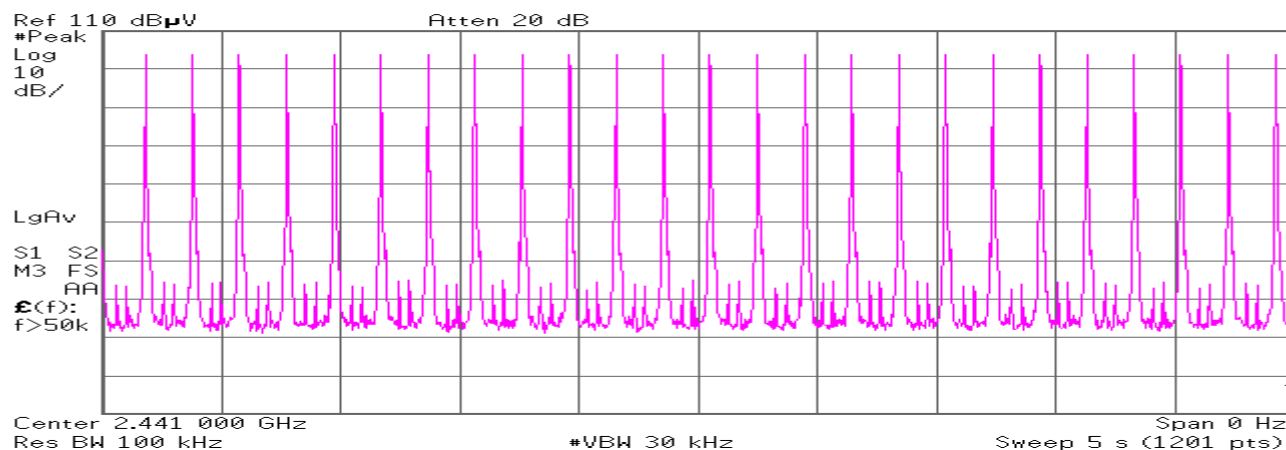
Report No.:
Model No.:
Power:

29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

Hopping (3DH3):

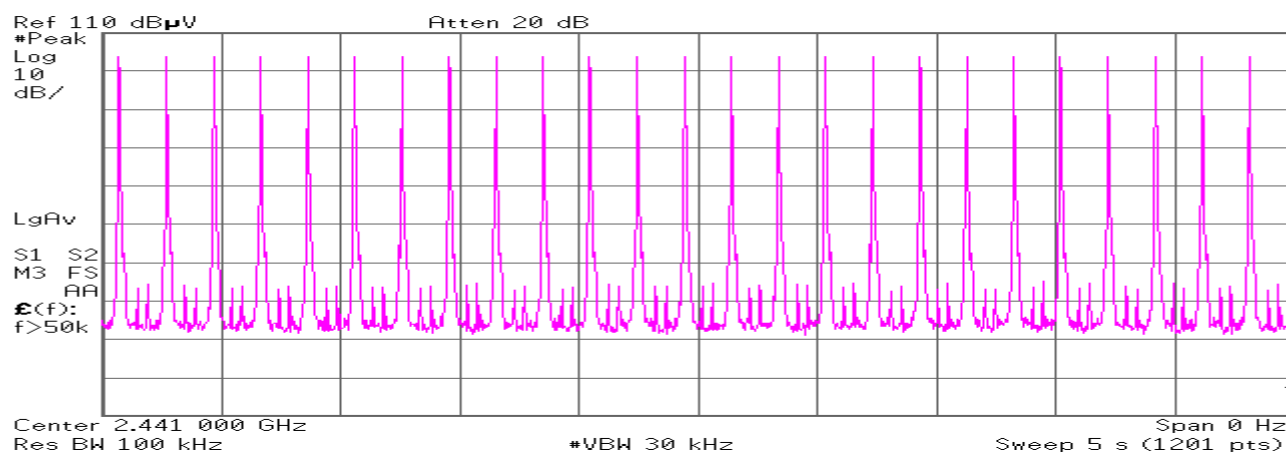
Count 1

Agilent 12:08:01 25 Dec 2008



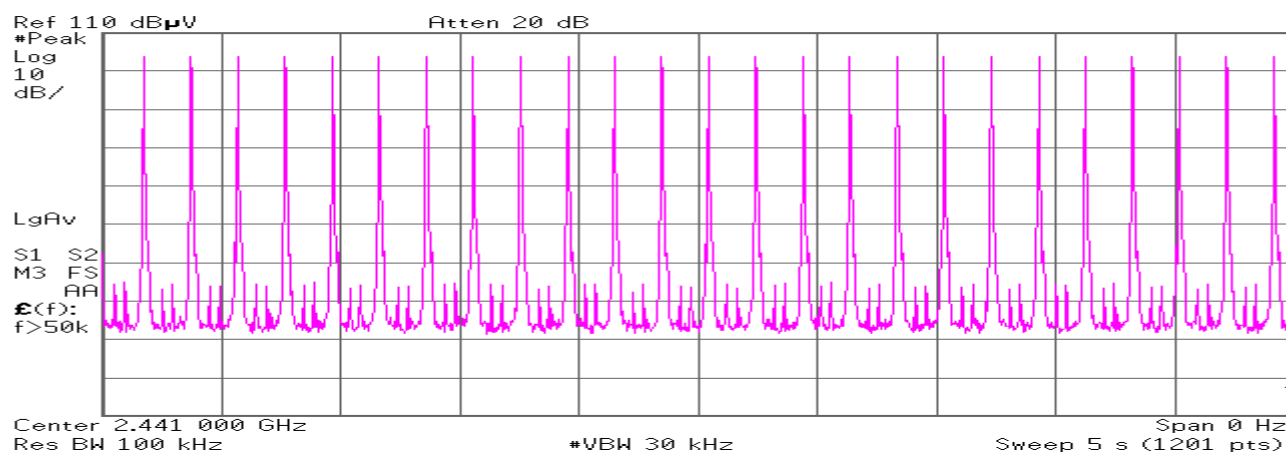
Count 2

Agilent 12:08:31 25 Dec 2008

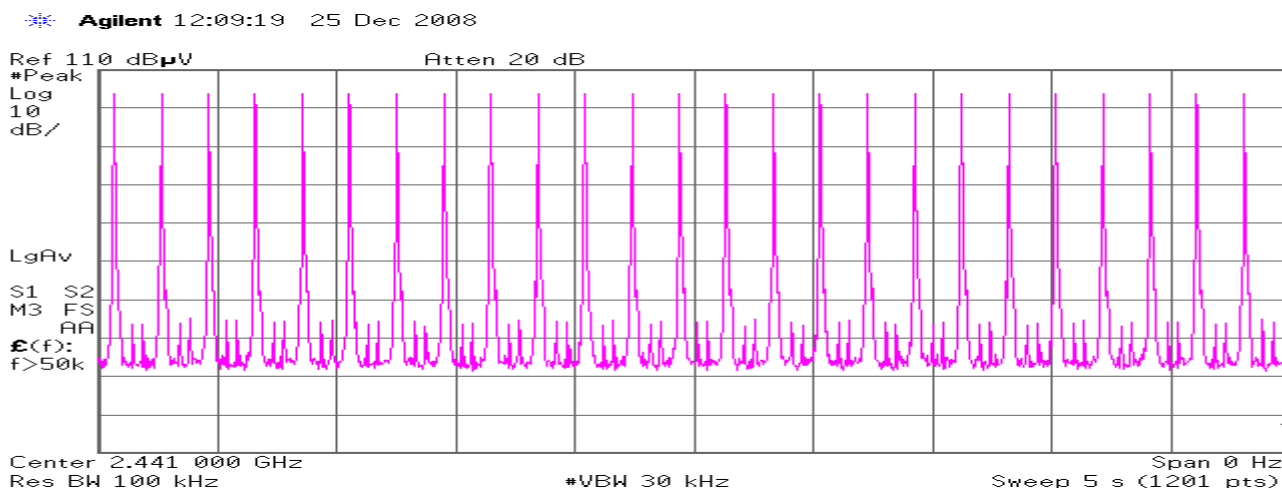


Count 3

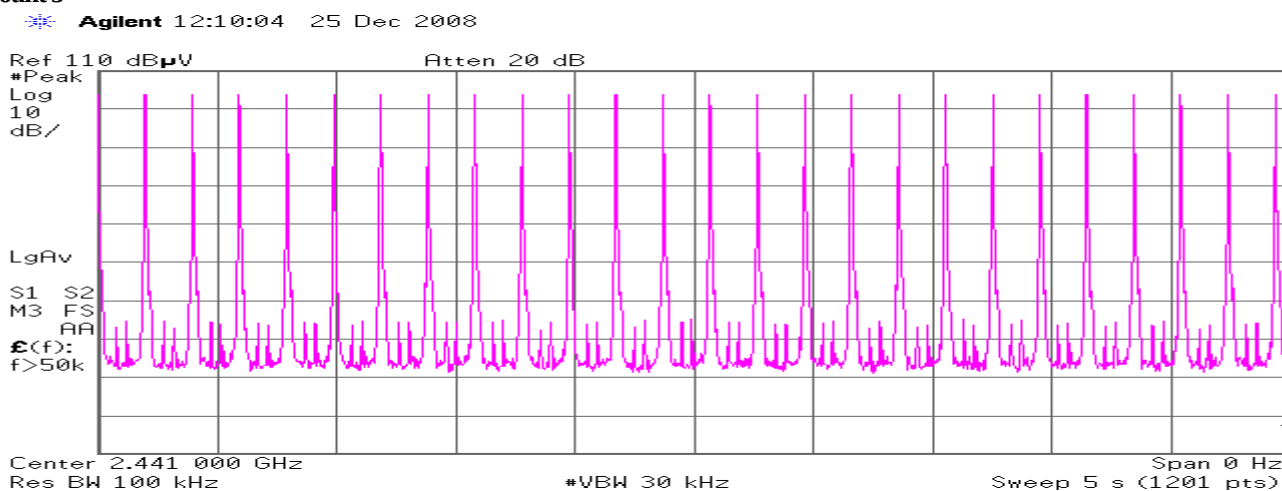
Agilent 12:08:52 25 Dec 2008



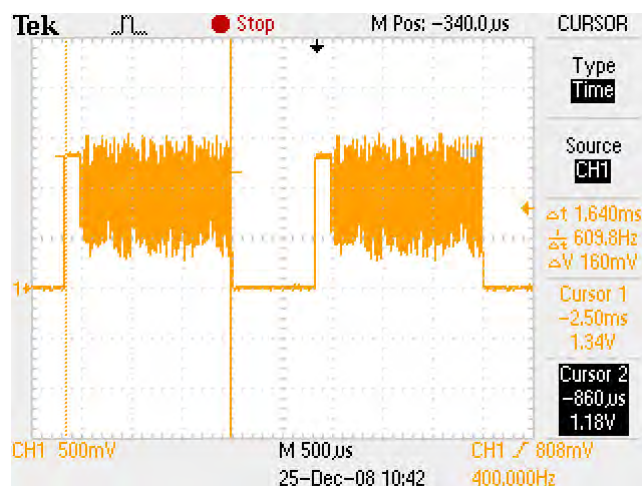
Count 4



Count 5



Duty cycle(Hopping 3DH3)



Average times of rising in 5 sec. of sweep = (25 + 25 + 25 + 25 + 26) / 5 = 25.2

Average times of rising in 1 sec. = 25.2 / 5s = 5.04

Average times of rising in 0.4x = 0.4 * 79ch * 5.04 = 159.26

Dwell time = 159.26 * 1.64 = 261.19 [ms]

Limit : Dwell Time < 0.4[s]

Company: PIONEER CORPORATION
Kind of Equipment: Bluetooth Adapter
Serial No.: HCI119

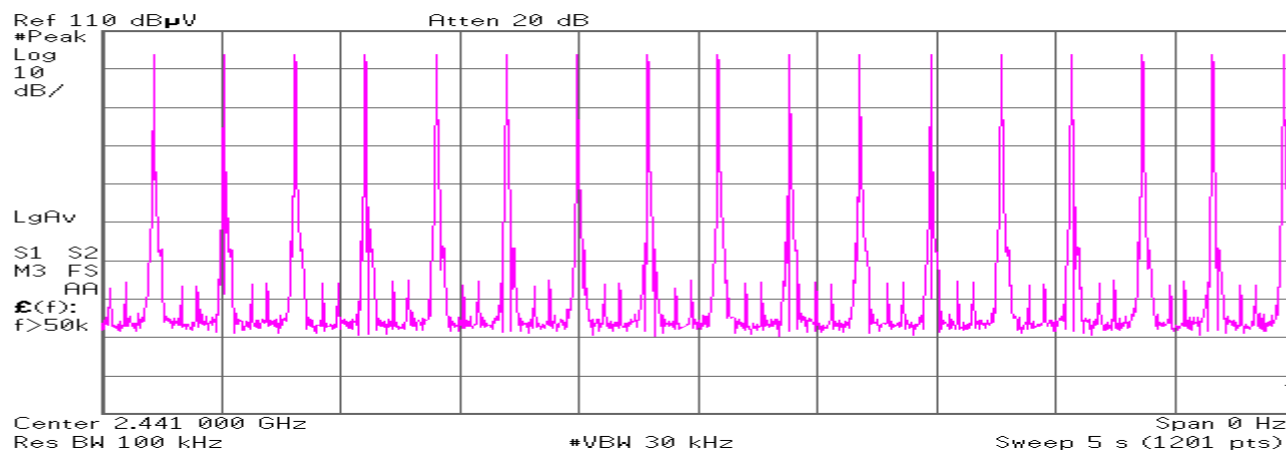
Report No.:
Model No.:
Power:

29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

Hopping (3DH5):

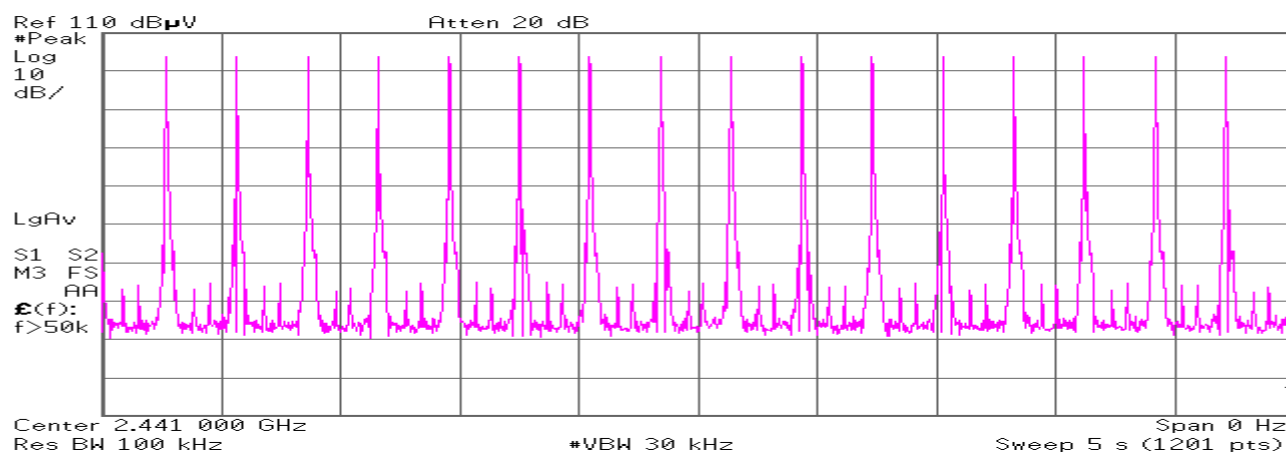
Count 1

Agilent 12:11:53 25 Dec 2008



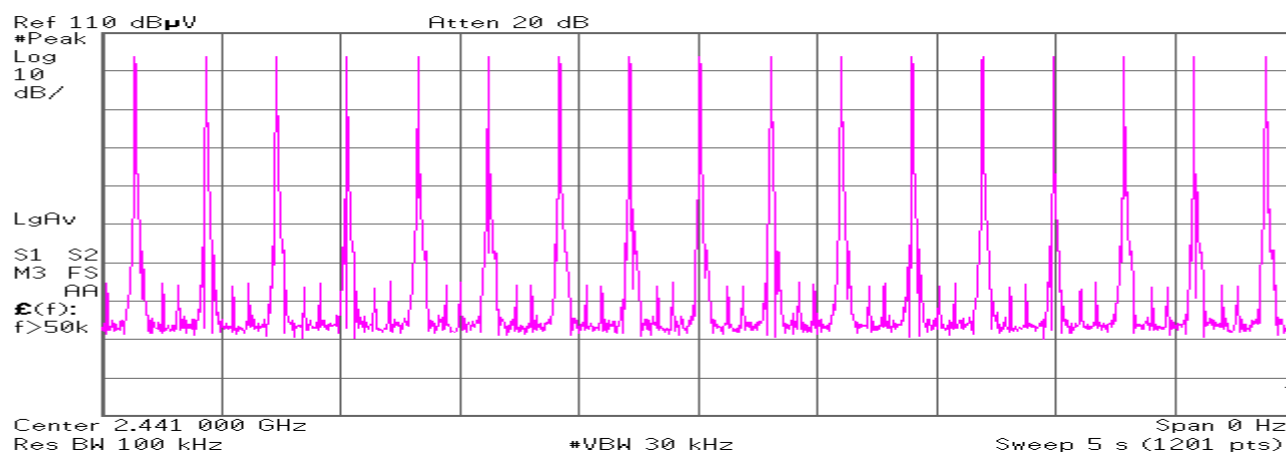
Count 2

Agilent 12:12:28 25 Dec 2008

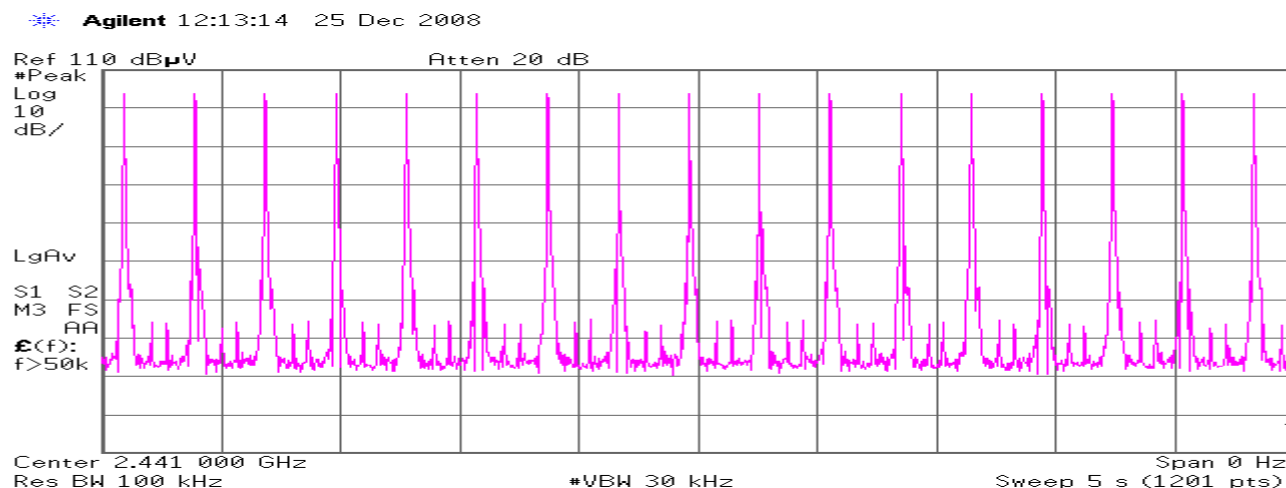


Count 3

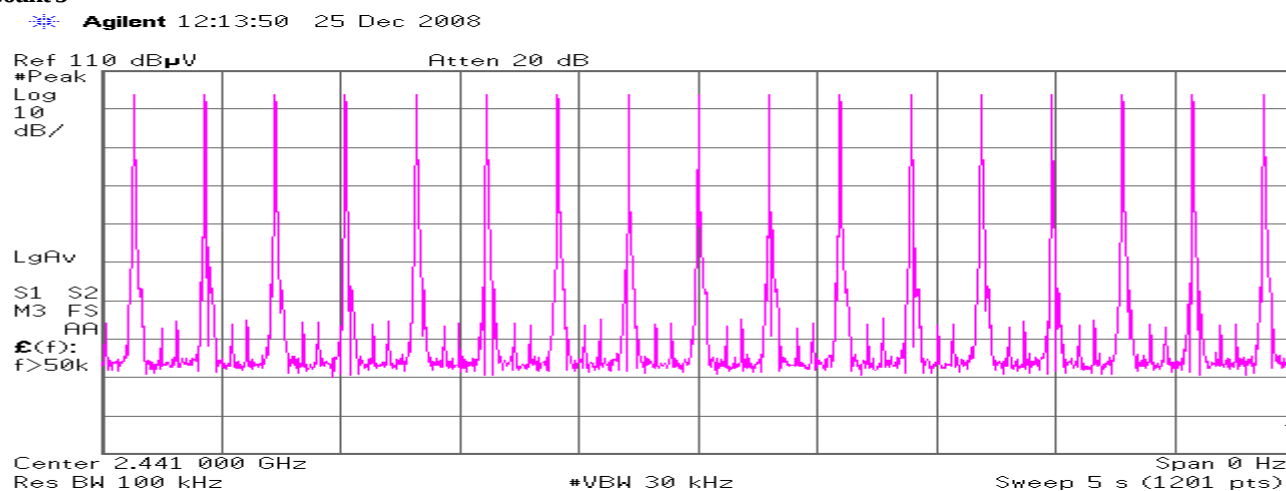
Agilent 12:12:50 25 Dec 2008



Count 4



Count 5



Duty cycle(Hopping 3DH5)



Average times of rising in 5 sec. of sweep = $(17 + 16 + 17 + 17 + 17) / 5 = 16.8$

Average times of rising in 1 sec. = $16.8 / 5s = 3.36$

Average times of rising in 0.4x = $0.4 * 79ch * 3.36 = 106.18$

Dwell time = $106.18 * 2.84 = 301.55 [ms]$

Limit : Dwell Time < 0.4[s]

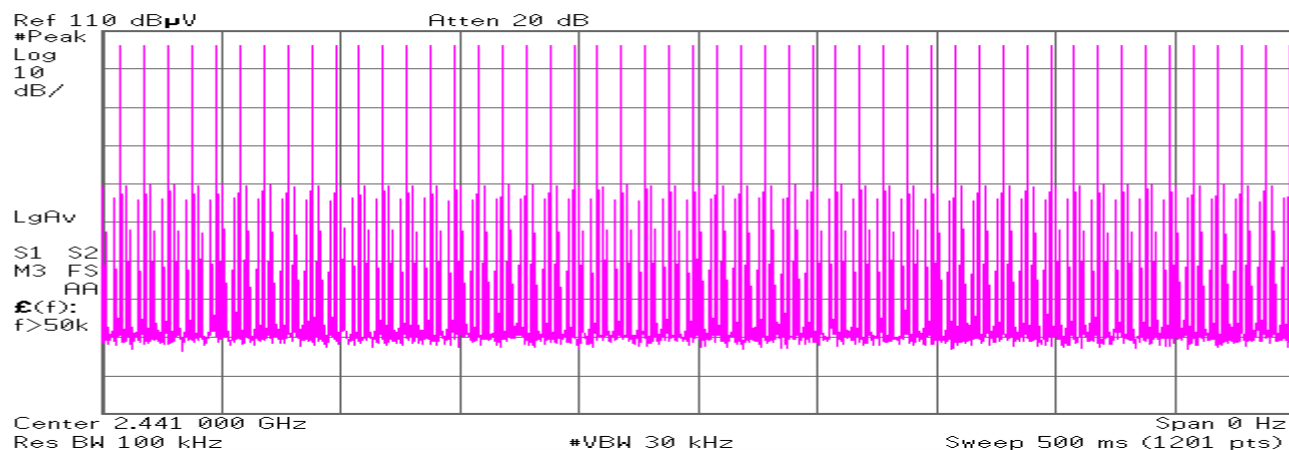
Company: PIONEER CORPORATION
Kind of Equipment: Bluetooth Adapter
Serial No.: HCI119

Report No.:
Model No.:
Power:

29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

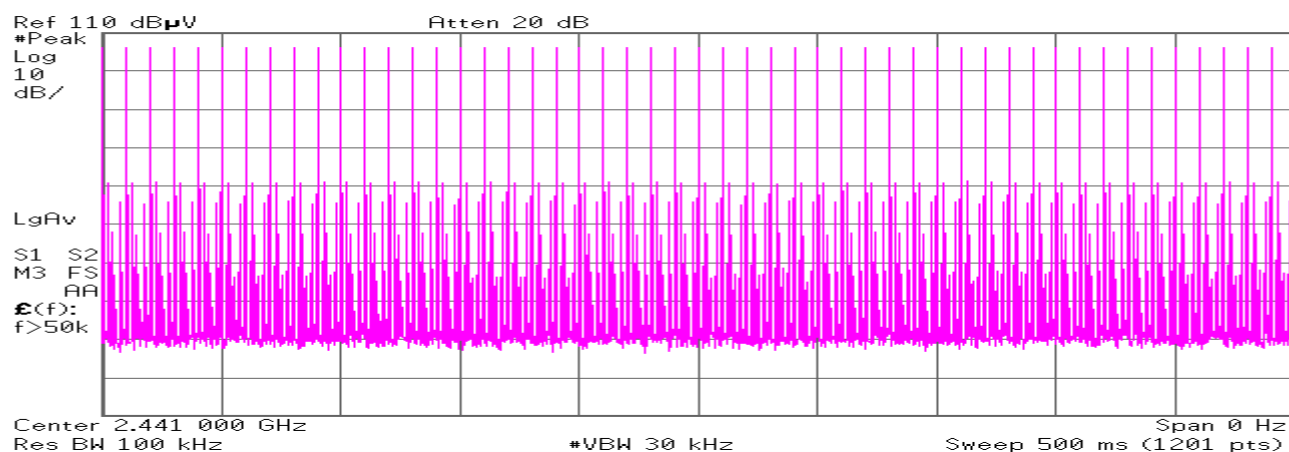
Inquiry: Count 1

Agilent 10:05:24 25 Dec 2008



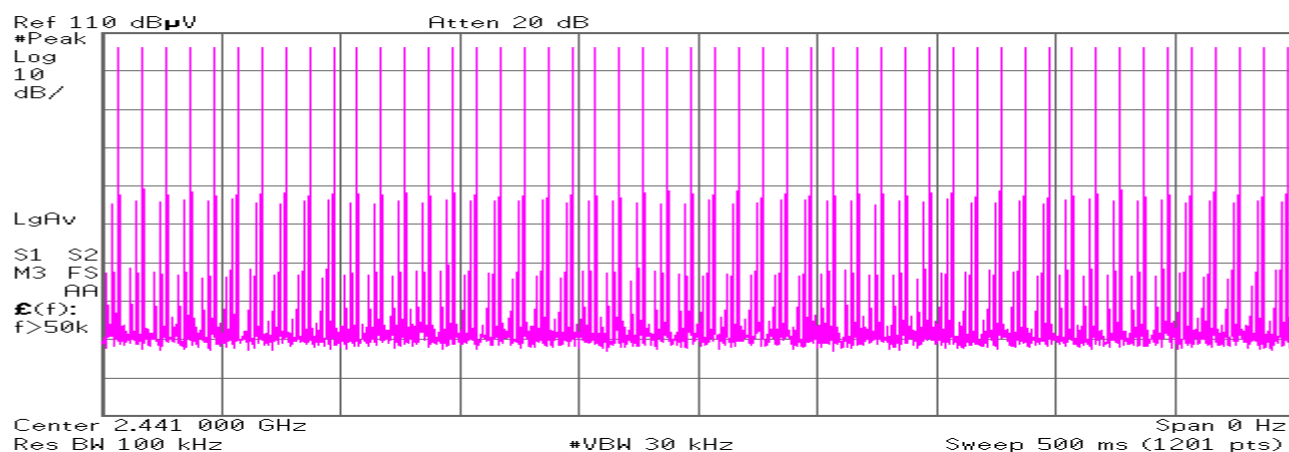
Count 2

Agilent 10:06:01 25 Dec 2008

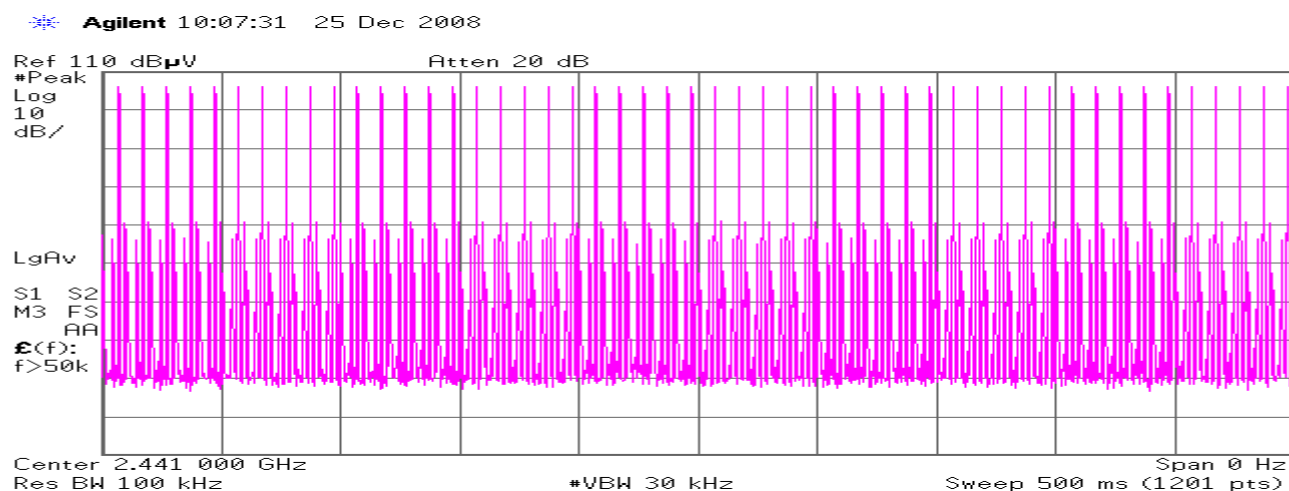


Count 3

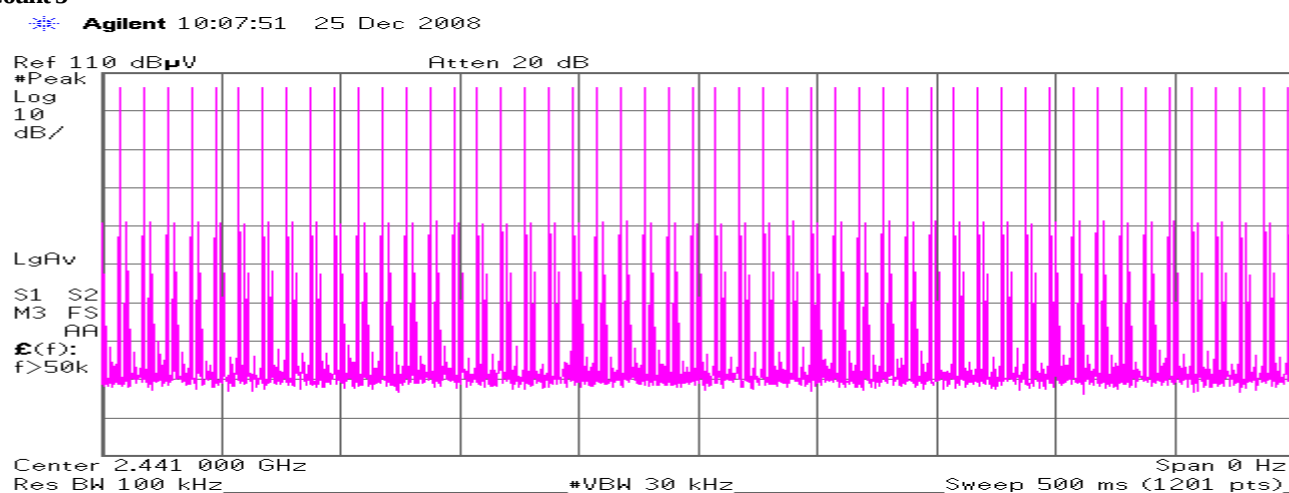
Agilent 10:06:56 25 Dec 2008



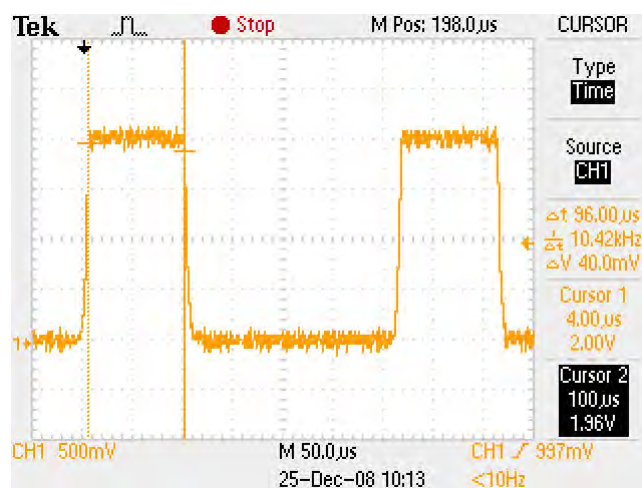
Count4



Count5



Duty cycle(Inquiry)



Average times of rising in 0.5 sec. of sweep = $(50 + 50 + 50 + 50 + 50) / 5 = 50.0$

Average times of rising in 1 sec. = $50.0 / 0.5s = 100.0$

Average times of rising in 0.4x = $0.4 * 32ch * 100.0 = 1280.0$

Dwell time = $1280.0 * 0.096 = 122.88 [ms]$

Limit : Dwell Time < 0.4[s]

Company: PIONEER CORPORATION
Kind of Equipment: Bluetooth Adapter
Serial No.: HCI119

Report No.: 29EE0038-YK-01-B-R1
Model No.: AS-BT100
Power: DC 5 V

Maximum Peak Conducted Output Power (Regulation: FCC 15.247(b)(1))

UL Japan, Inc Yamakita EMC lab.
No.2 Shielded Room

DATE: 2008/12/26
TEMP./HUMID.: 22deg.C/36%
TEST MODE: Transmitting

ENGINEER: Tatsuya Arai

DH5

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	-0.49	1.00	0.51	20.96	20.45
Mid	2441.00	0.25	1.00	1.25	20.96	19.71
High	2480.00	0.41	1.00	1.41	20.96	19.55
Inquiry	-	0.26	1.00	1.26	20.96	19.70

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:Customer's cable

2DH5

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	-1.89	1.00	-0.89	20.96	21.85
Mid	2441.00	-1.28	1.00	-0.28	20.96	21.24
High	2480.00	-1.32	1.00	-0.32	20.96	21.28

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:Customer's cable

3DH5

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	-1.90	1.00	-0.90	20.96	21.86
Mid	2441.00	-1.25	1.00	-0.25	20.96	21.21
High	2480.00	-1.20	1.00	-0.20	20.96	21.16

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:Customer's cable

Out of Band Emission (Antenna Terminal Conducted) (Regulation: FCC 15.247(d))

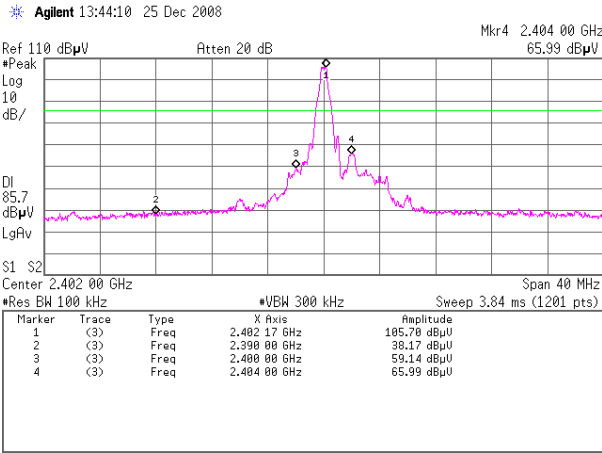
UL Japan, Inc. Yamakita EMC lab.
Date:
Temp./Humid.:
Engineer:
Test mode:

No.2 shielded room
2008/12/26
22 deg. C. / 36 %
Tatsuya Arai
Transmitting

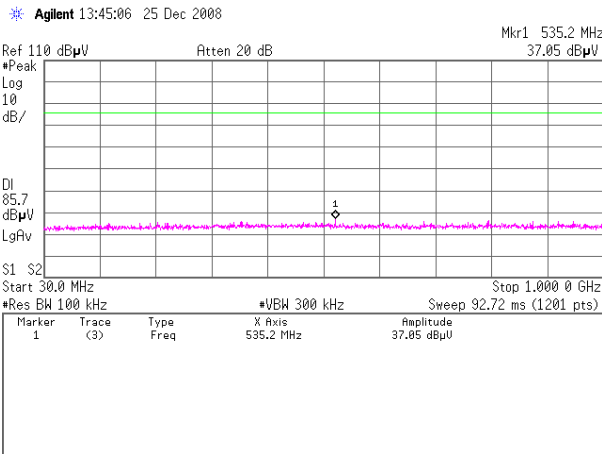
[Transmitting DH5]

Ch:2402MHz

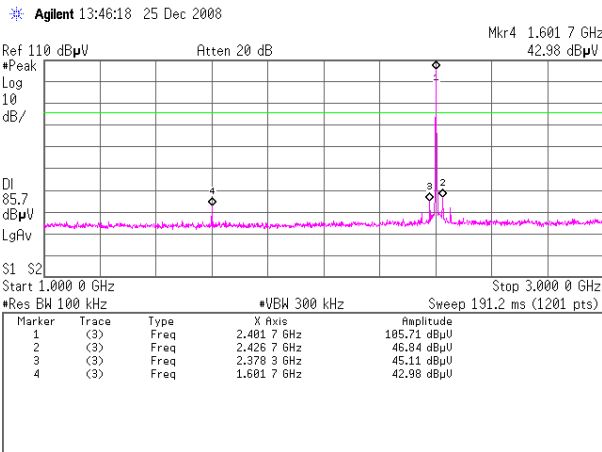
1.



2.

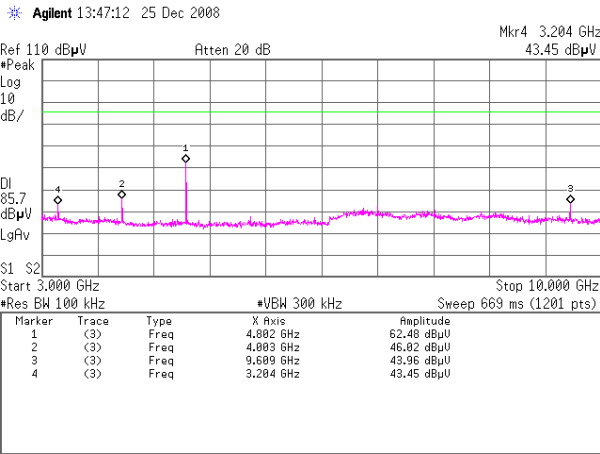


3.

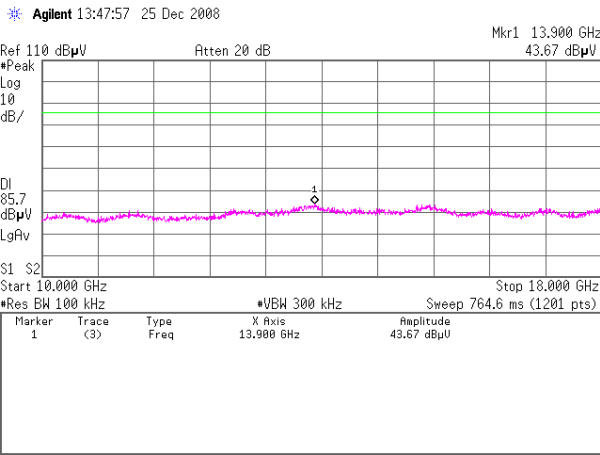


[Transmitting DH5]
Ch:2402MHz

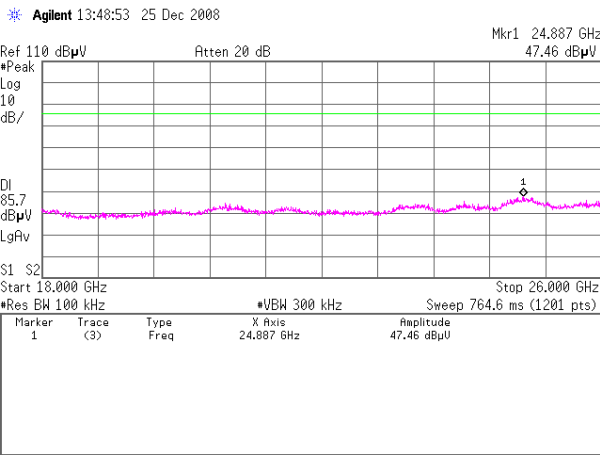
4.



5.

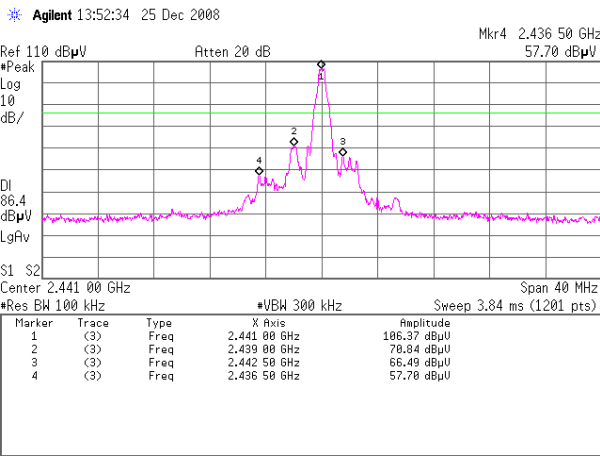


6.

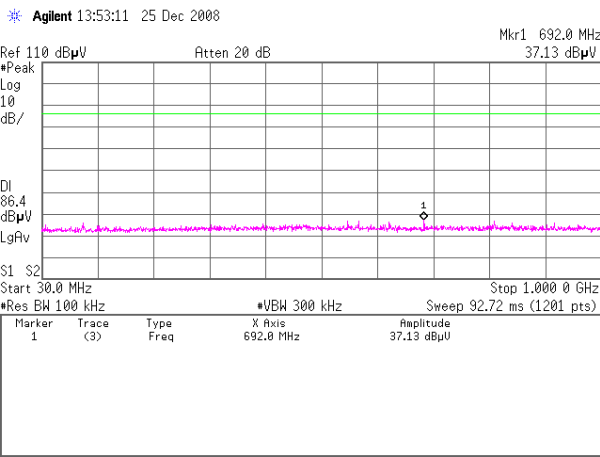


[Transmitting DH5]
Ch:2441MHz

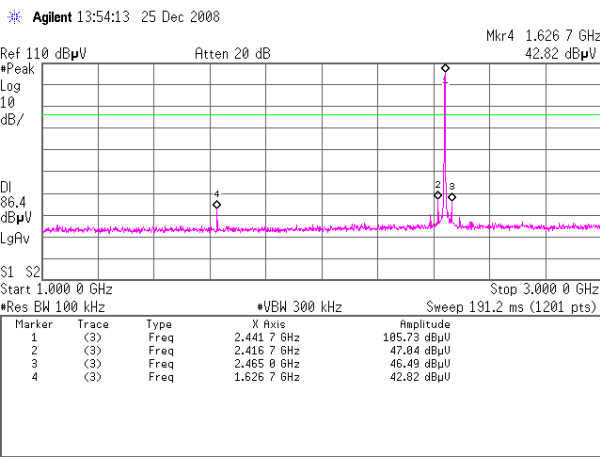
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

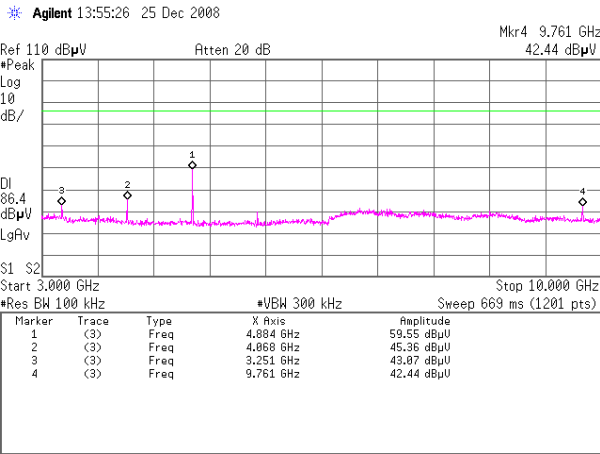
PIONEER CORPORATION
Bluetooth Adapter
HCI119

Report No.:
Model No.:
Power:

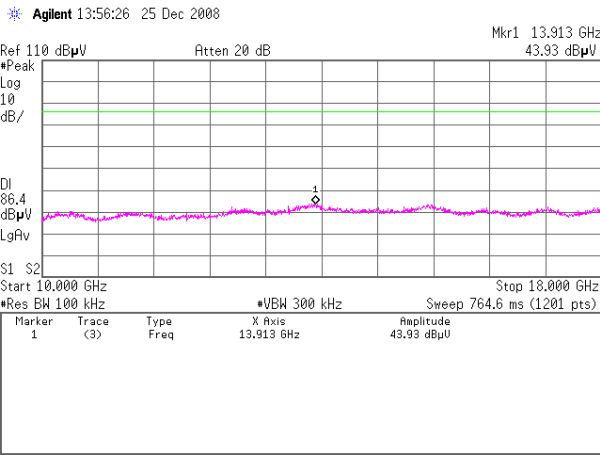
29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

[Transmitting DH5]
Ch:2441MHz

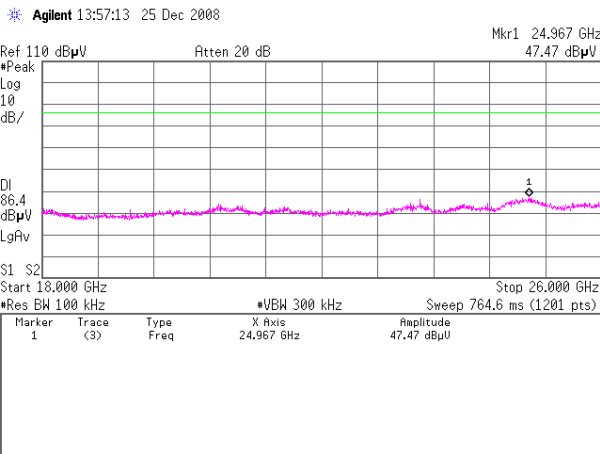
4.



5.



6.



Company:
Kind of Equipment:
Serial No.:

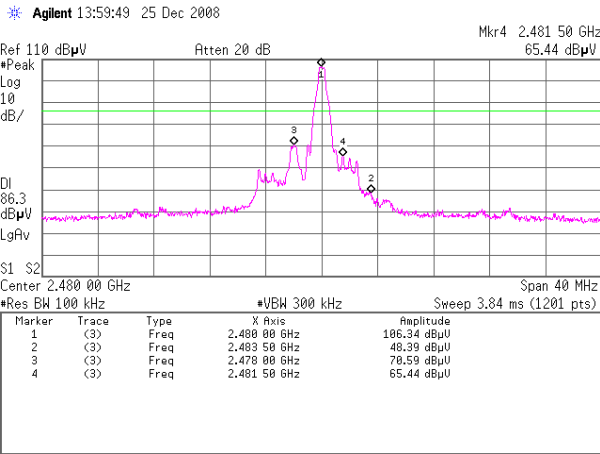
PIONEER CORPORATION
Bluetooth Adapter
HCI119

Report No.:
Model No.:
Power:

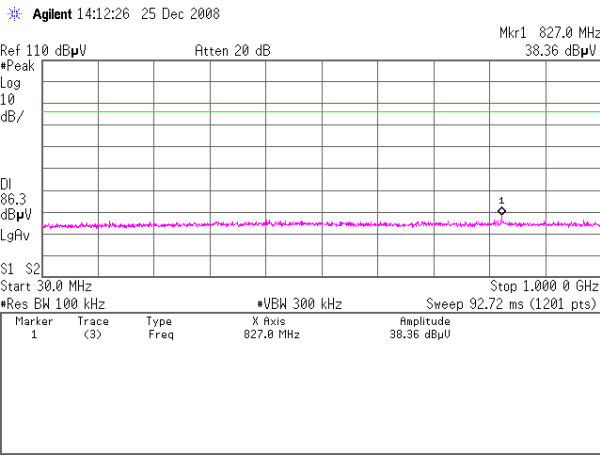
29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

[Transmitting DH5]
Ch:2480MHz

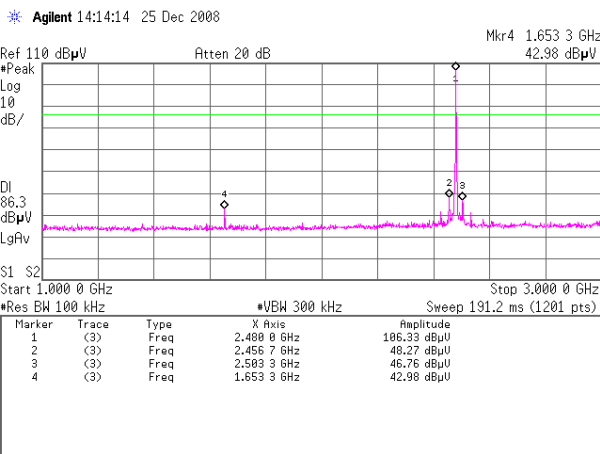
1.



2.

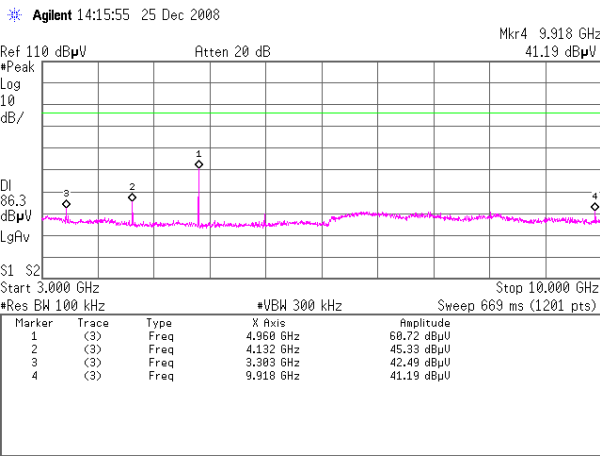


3.

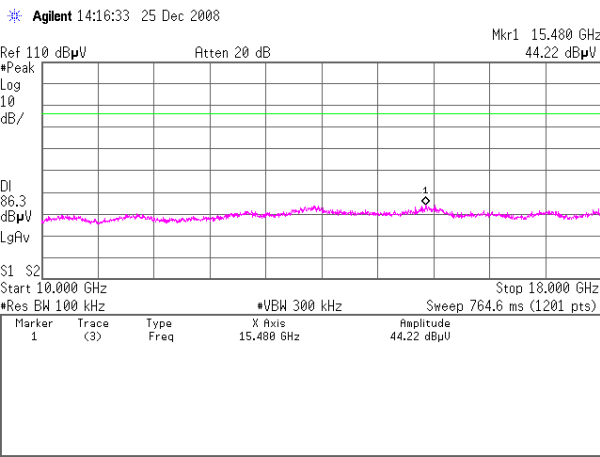


[Transmitting DH5]
Ch:2480MHz

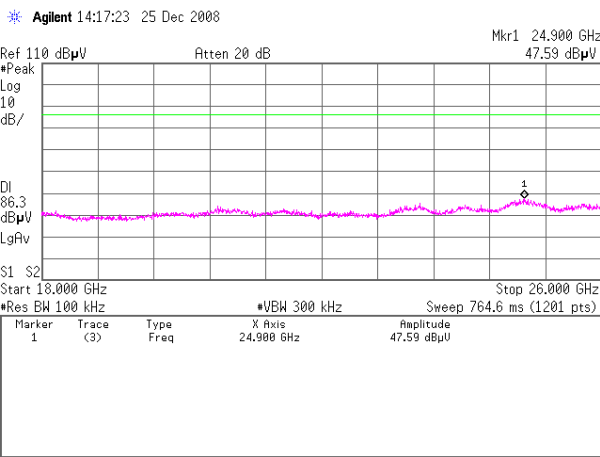
4.



5.

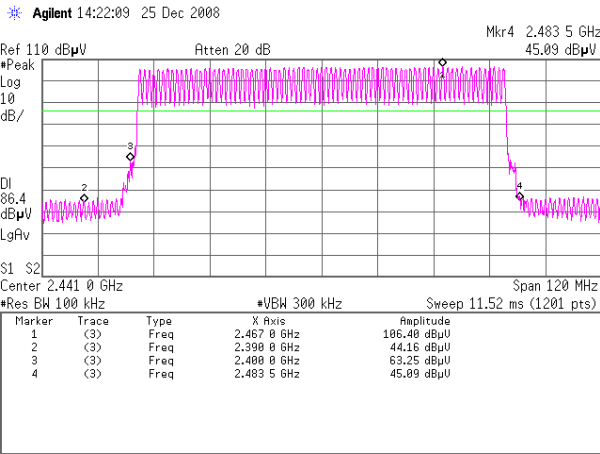


6.

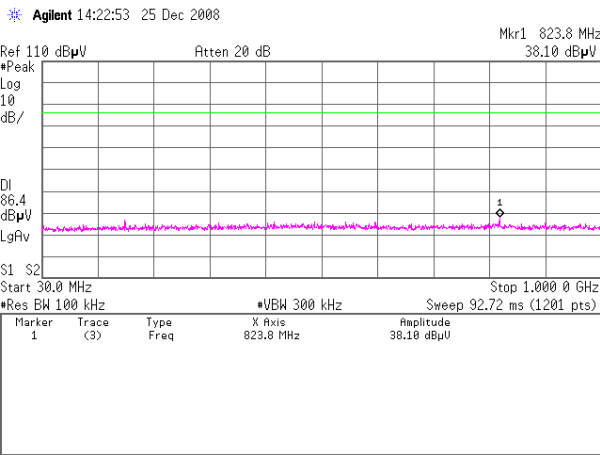


[Transmitting DH5]
Hopping

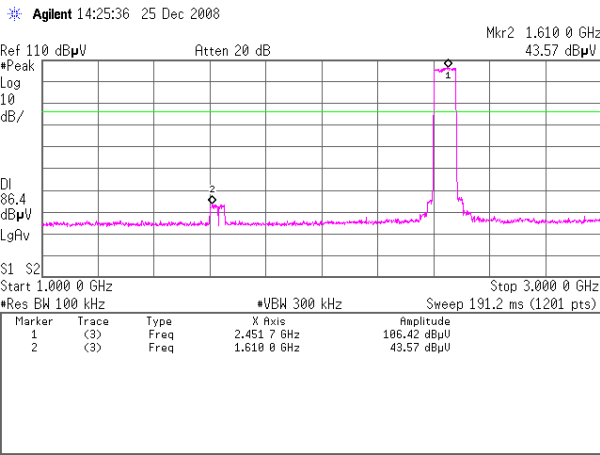
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

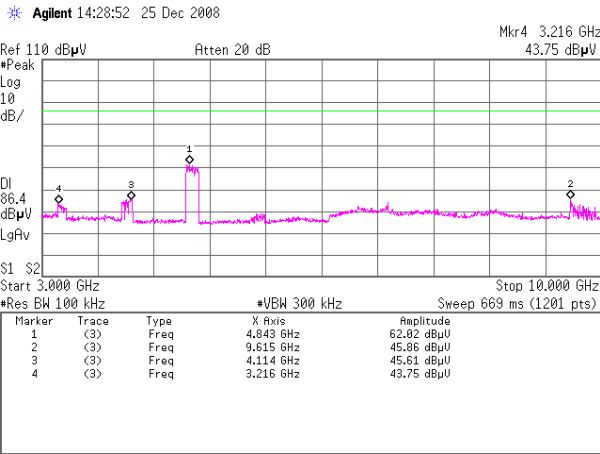
PIONEER CORPORATION
Bluetooth Adapter
HCI119

Report No.:
Model No.:
Power:

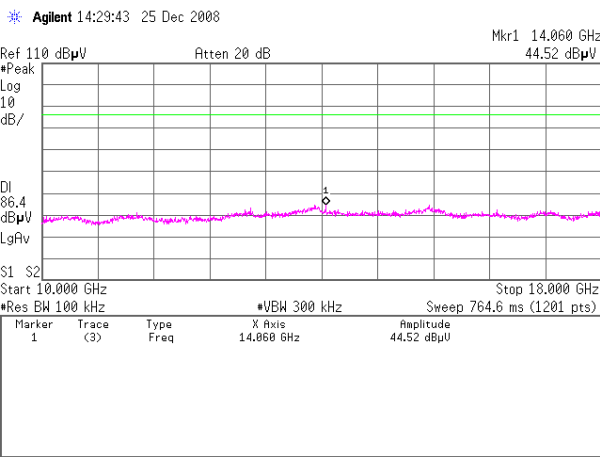
29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

[Transmitting DH5]
Hopping

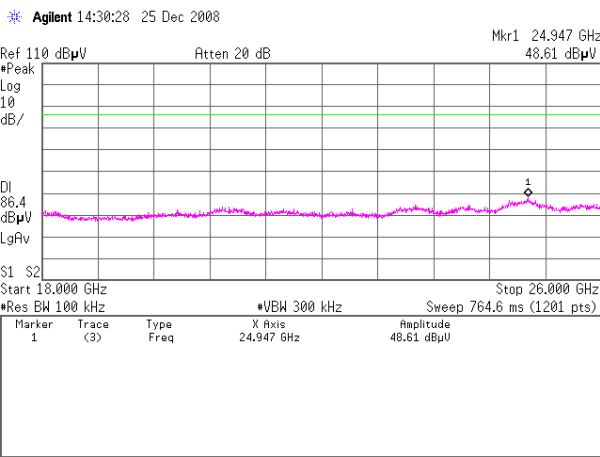
4.



5.

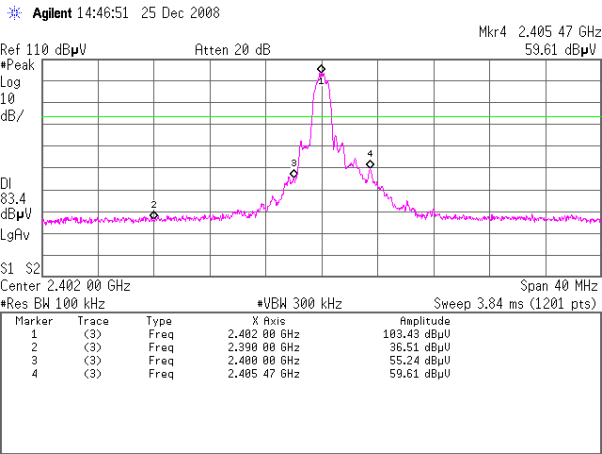


6.

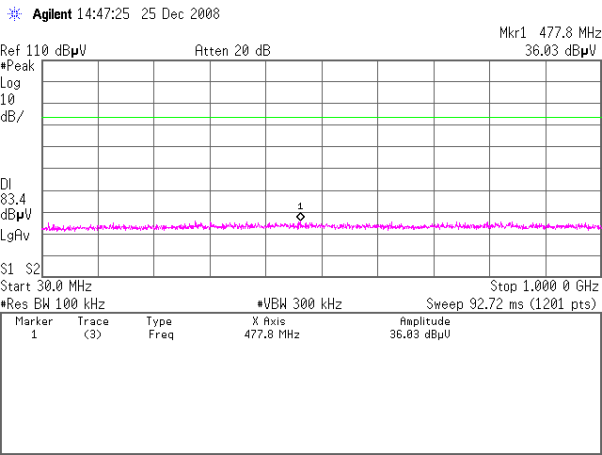


[Transmitting 3DH5]
Ch:2402MHz

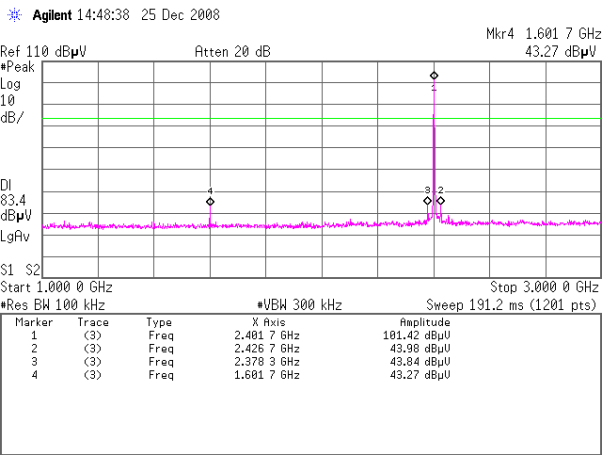
1.



2.

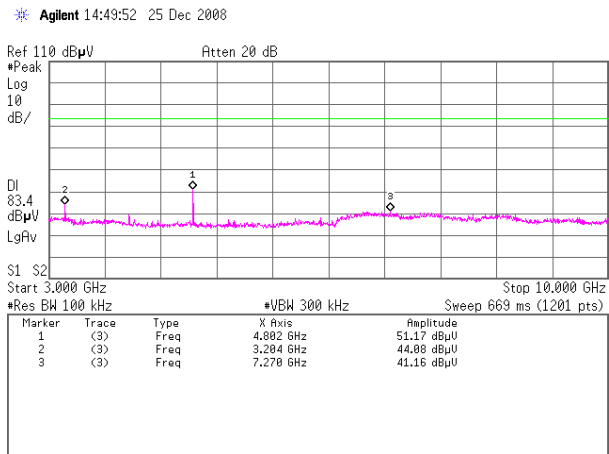


3.

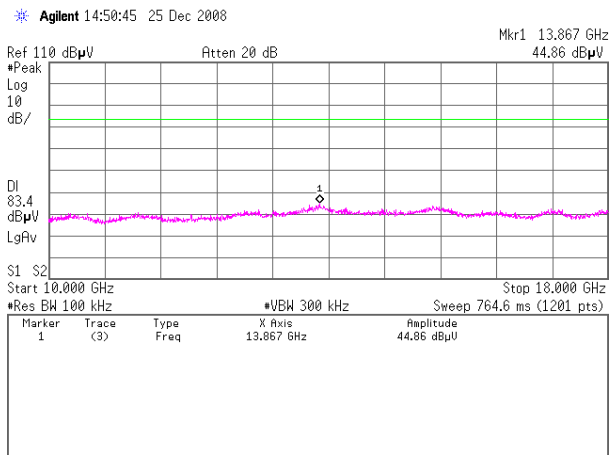


[Transmitting 3DH5]
Ch:2402MHz

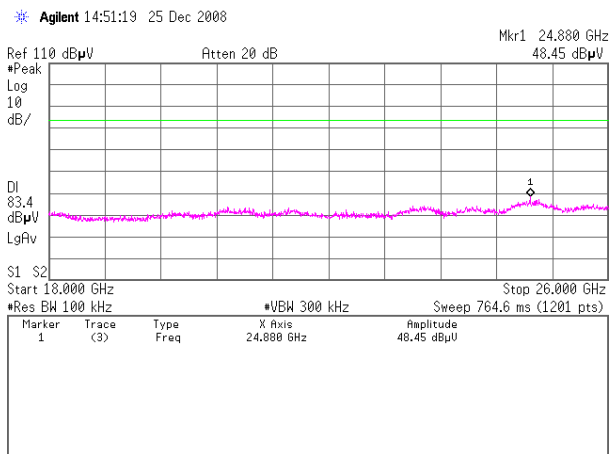
4.



5.

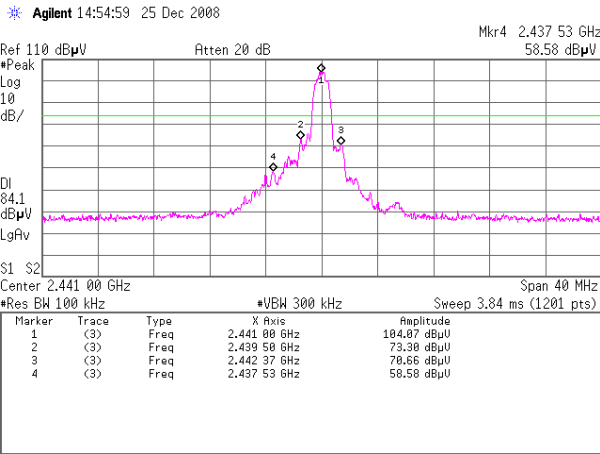


6.

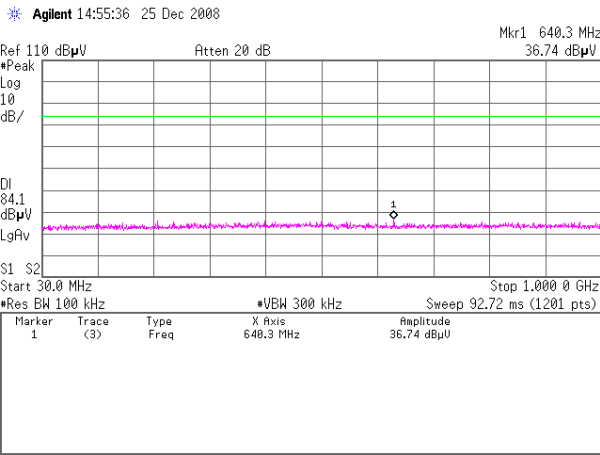


[Transmitting 3DH5]
Ch:2441MHz

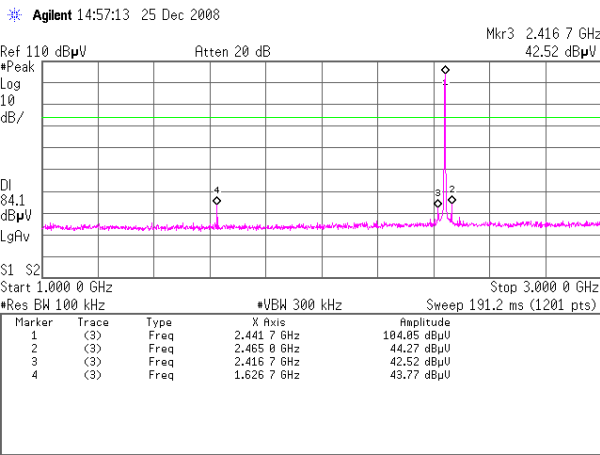
1.



2.

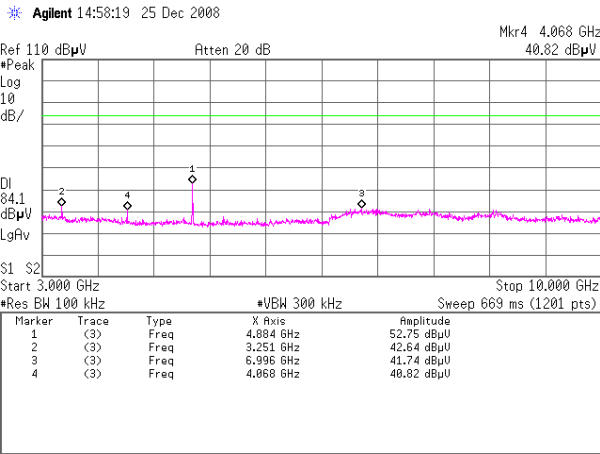


3.

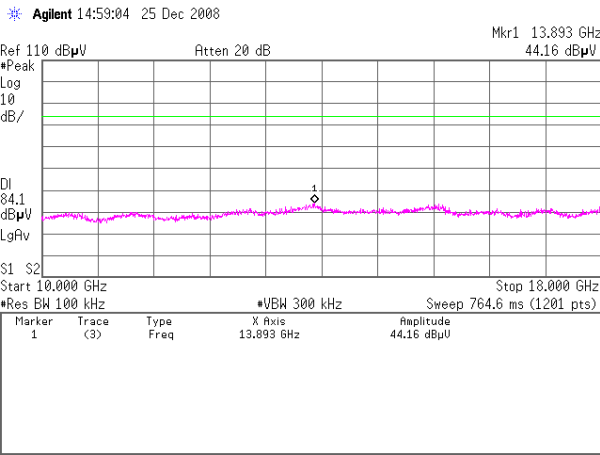


[Transmitting 3DH5]
Ch:2441MHz

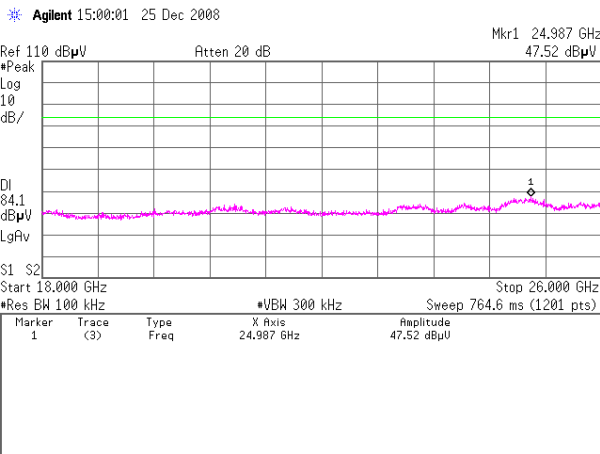
4.



5.



6.



Company:
Kind of Equipment:
Serial No.:

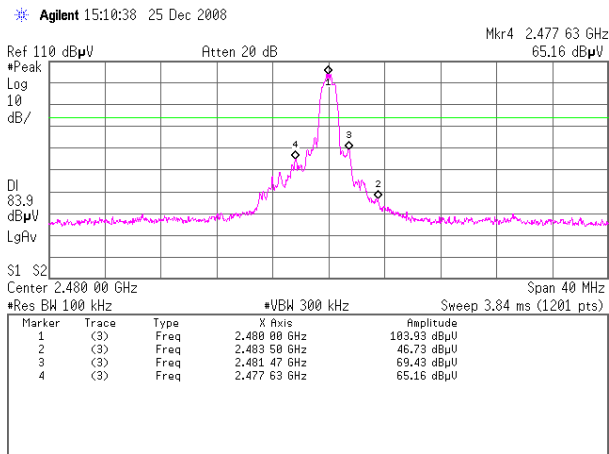
PIONEER CORPORATION
Bluetooth Adapter
HCI119

Report No.:
Model No.:
Power:

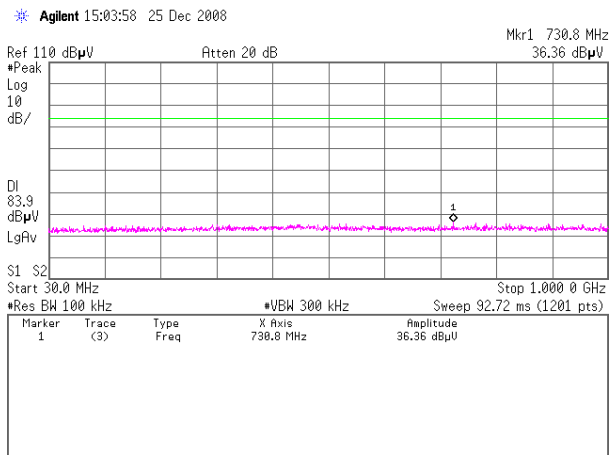
29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

[Transmitting 3DH5]
Ch:2480MHz

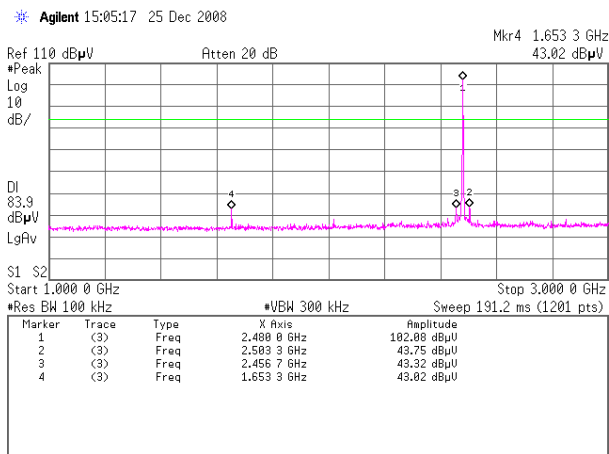
1.



2.

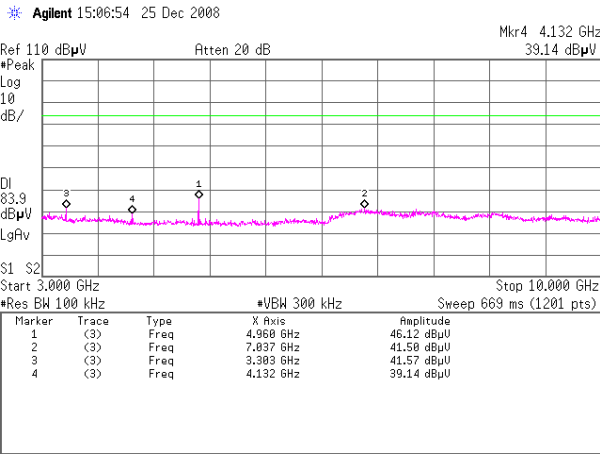


3.

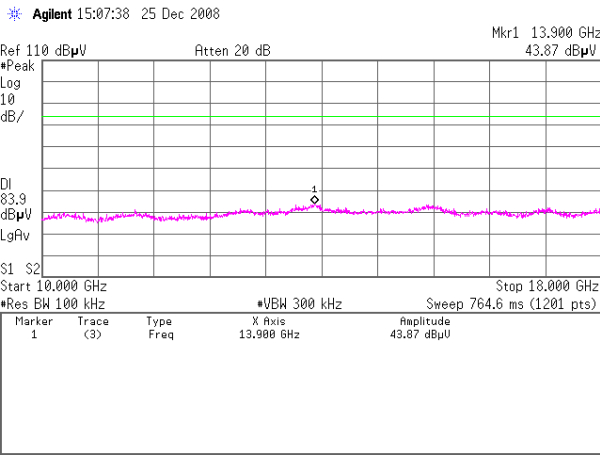


[Transmitting 3DH5]
Ch:2480MHz

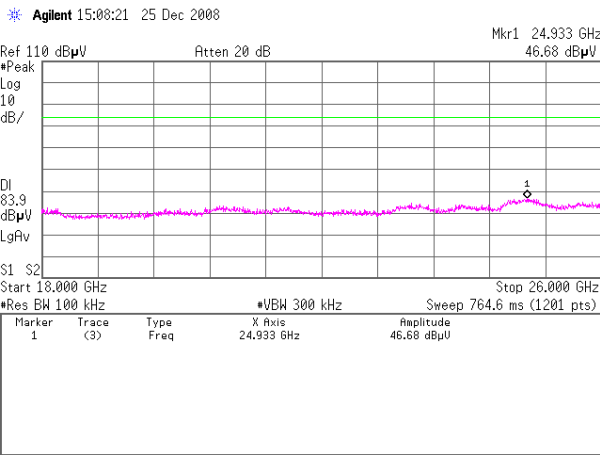
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5.

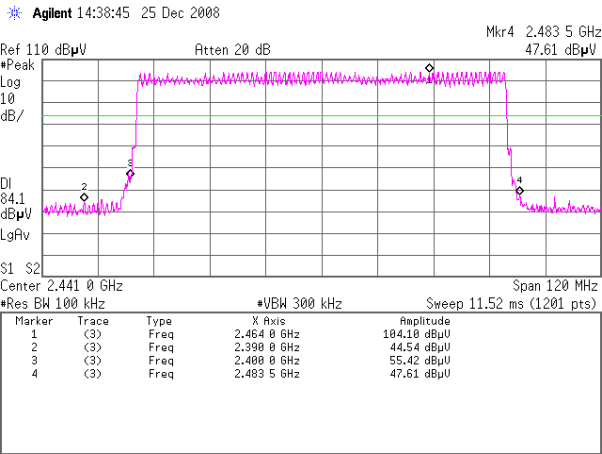


6.

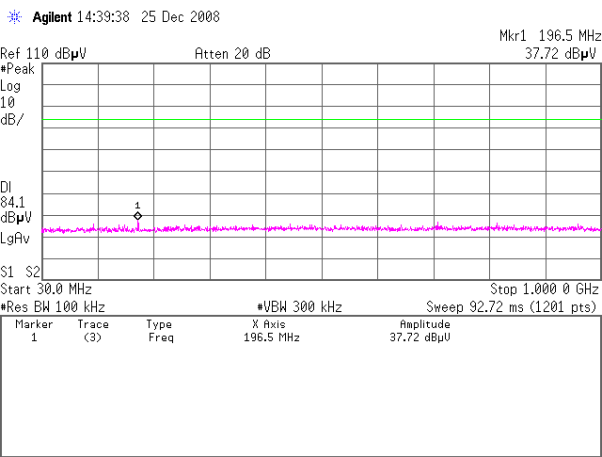


[Transmitting 3DH5]
Hopping

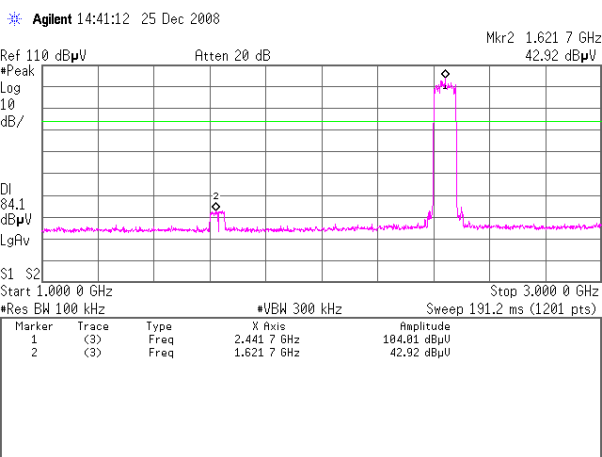
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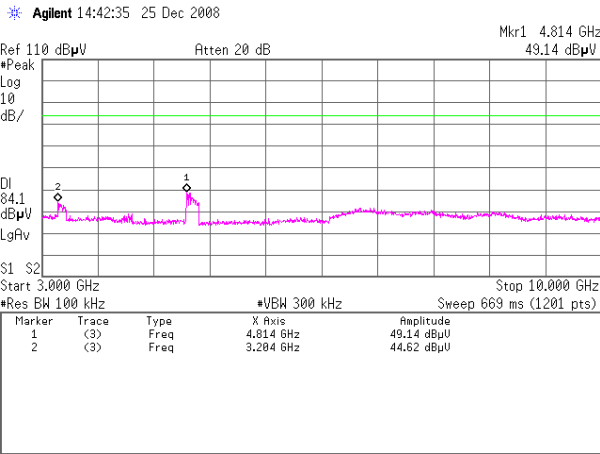
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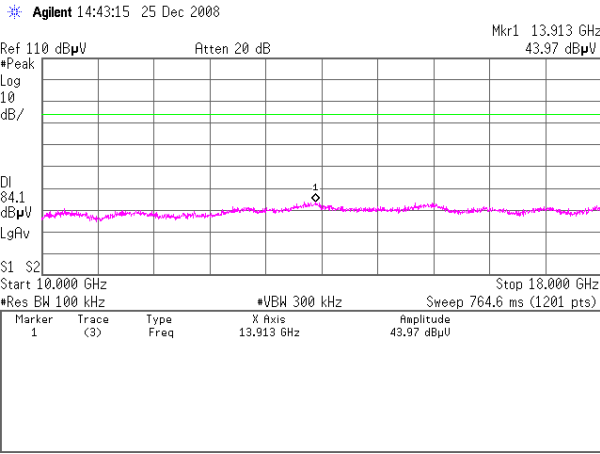
3.



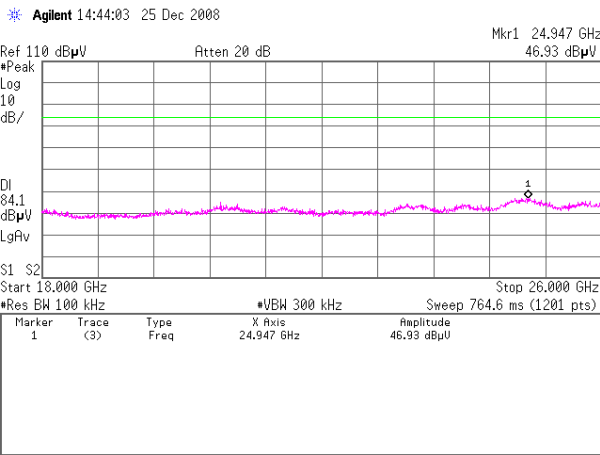
[Transmitting 3DH5]
Hopping
4.



5.

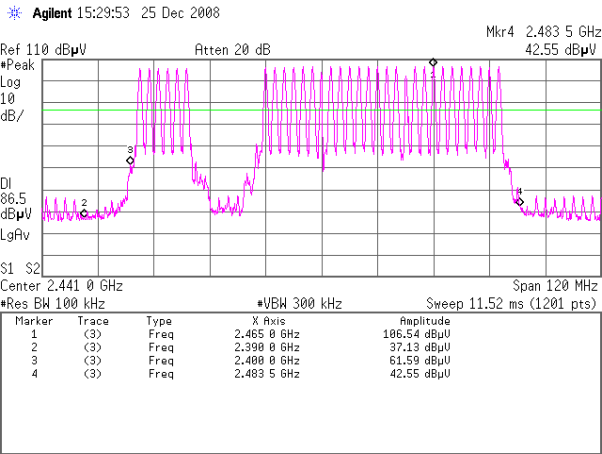


6.

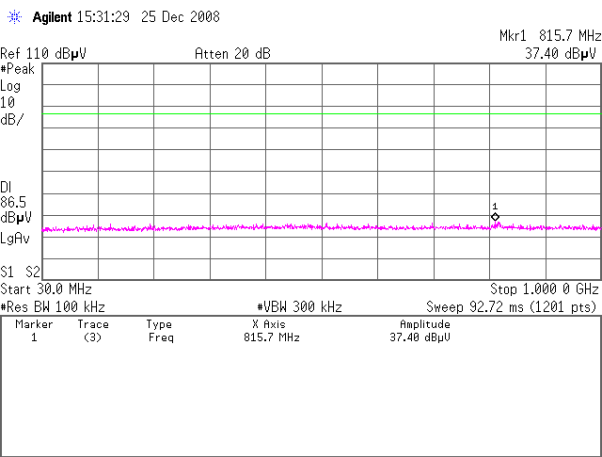


[Transmitting]
Inquiry

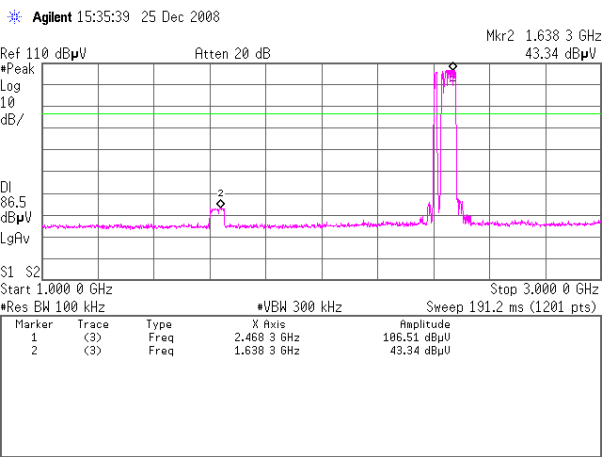
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

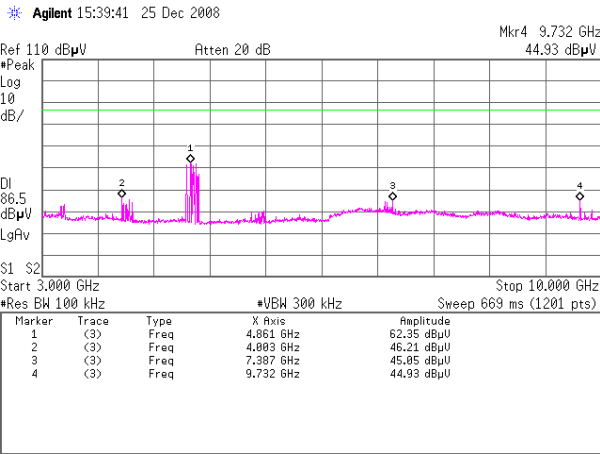
PIONEER CORPORATION
Bluetooth Adapter
HCI119

Report No.:
Model No.:
Power:

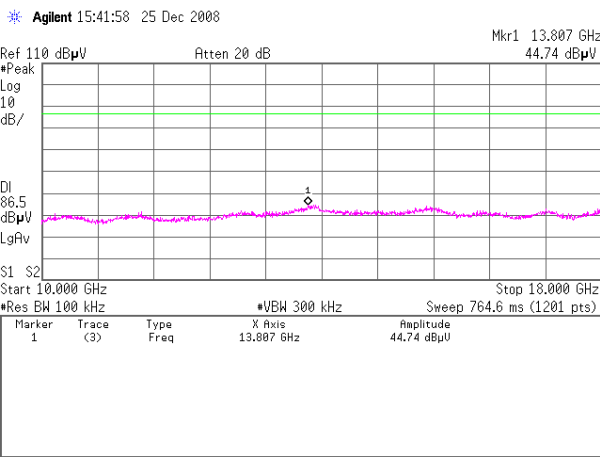
29EE0038-YK-01-B-R1
AS-BT100
DC 5 V

[Transmitting]
Inquiry

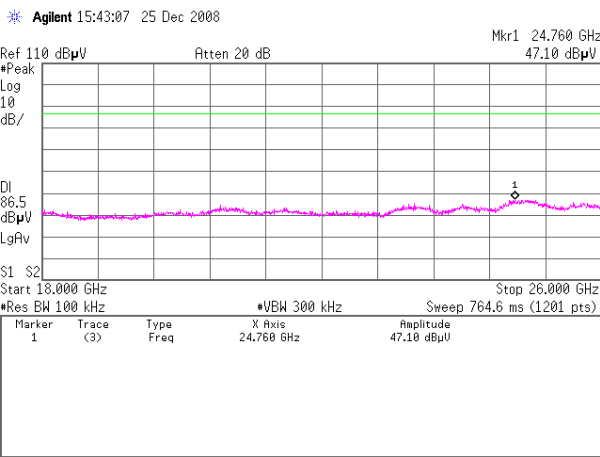
4.



5.



6.



DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2402MHz DH5
Remarks : -
Date : 12/17/2008
Test Distance : 3 m
Temperature : 21 °C
Humidity : 42 %
Regulation : FCC Part15C § 15.209

Engineer : Makoto Hosaka

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	45.35	BB	21.1	25.0	11.7	27.7	1.4	6.0	12.5	16.4	40.0	27.5	23.6
2.	51.89	BB	21.8	23.4	9.8	27.7	1.5	6.0	11.4	13.0	40.0	28.6	27.0
3.	96.01	BB	21.7	26.7	9.4	27.5	2.1	6.0	11.7	16.7	43.5	31.8	26.8

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz / KLA-03 (USLP9143) 300-1000MHz

■ CABLE: KCC-30/31/32/34 ■ PREAMP: KAF-05 (8447D) ■ EMI RECEIVER: KTR-04 (ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2441MHz DH5
Remarks : -
Date : 12/17/2008
Test Distance : 3 m
Temperature : 21 °C
Humidity : 42 %
Regulation : FCC Part15C § 15.209

Engineer : Makoto Hosaka

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	45.35	BB	21.3	25.3	11.7	27.7	1.4	6.0	12.7	16.7	40.0	27.3	23.3
2.	51.89	BB	21.9	23.3	9.8	27.7	1.5	6.0	11.5	12.9	40.0	28.5	27.1
3.	96.01	BB	21.7	27.1	9.4	27.5	2.1	6.0	11.7	17.1	43.5	31.8	26.4

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz / KLA-03 (USLP9143) 300-1000MHz

■ CABLE: KCC-30/31/32/34 ■ PREAMP: KAF-05 (8447D) ■ EMI RECEIVER: KTR-04 (ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2480MHz DH5
Remarks : -
Date : 12/17/2008
Test Distance : 3 m
Temperature : 21 °C
Humidity : 42 %
Regulation : FCC Part15C § 15.209

Engineer : Makoto Hosaka

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	45.35	BB	21.2	25.4	11.7	27.7	1.4	6.0	12.6	16.8	40.0	27.4	23.2
2.	51.89	BB	21.9	23.2	9.8	27.7	1.5	6.0	11.5	12.8	40.0	28.5	27.2
3.	96.01	BB	21.5	26.6	9.4	27.5	2.1	6.0	11.5	16.6	43.5	32.0	26.9

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz / KLA-03 (USLP9143) 300-1000MHz

■ CABLE: KCC-30/31/32/34 ■ PREAMP: KAF-05 (8447D) ■ EMI RECEIVER: KTR-04 (ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2402MHz DH5
Remarks : PK (RBW:1MHz, VBW:1MHz)
Date : 12/17/2008
Test Distance : 3 m
Temperature : 19 °C Engineer : Tatsuya Arai
Humidity : 34 %
Regulation : FCC Part15C § 15.209(PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1602.04	BB	46.8	48.0	25.9	35.9	3.6	0.0	40.4	41.6	74.0	33.6	32.4
2.	2390.00	BB	45.4	45.6	28.8	35.4	4.3	0.0	43.1	43.3	74.0	30.9	30.7
3.	2400.00	BB	56.7	54.0	28.8	35.3	4.3	0.0	54.5	51.8	74.0	19.5	22.2
4.	4804.00	BB	53.7	51.9	33.6	34.1	5.6	0.0	58.8	57.0	74.0	15.2	17.0
5.	7206.00	BB	45.2	45.0	36.1	34.7	6.5	0.0	53.1	52.9	74.0	20.9	21.1
6.	9608.00	BB	46.0	46.2	37.6	35.3	7.3	0.0	55.6	55.8	74.0	18.4	18.2

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

■ ANTENNA:KHA-01&KHA-03

■ CABLE:KCC-D3/D16 ■ AMP:KAF-07 (8449B) ■ EMI RECEIVER:KTR-01 (ESI40)

DATA OF RADIATION TEST (Above 1GHz)

UL Japan, Inc.

YAMAKITA NO.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Company : PIONEER CORPORATION

Equipment : Bluetooth Adapter

Model : AS-BT100

Sample No. : HCI119

Power : DC5V

Mode : Transmitting 2402MHz(DH5)

Regulation : FCC Part15C Section 15.209

Test Distance : 3m

Date : 2008/12/17

Temperature : 19deg.C

Humidity : 34%

ENGINEER : Tatsuya Arai

AV calculation value SPECTRUMANALYZER RBW:1MHz (Outside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
1	2400.00	49.0	45.9	28.8	35.3	4.3	0.0	0.00	46.8	43.7	54.0	7.2	10.3	300
2	7206.00	31.0	31.3	36.1	34.7	6.5	0.0	0.00	38.9	39.2	54.0	15.1	14.8	300

AV calculation value SPECTRUMANALYZER RBW:1MHz (Inside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
3*	1602.04	35.7	37.5	25.9	35.9	3.6	0.0	0.00	29.3	31.1	54.0	24.7	22.9	10
4	2390.00	45.4	45.6	28.8	35.4	4.3	0.0	-24.79	18.3	18.5	54.0	35.7	35.5	1M
5	4804.00	53.7	51.9	33.6	34.1	5.6	0.0	-24.79	34.0	32.2	54.0	20.0	21.8	1M
6	9608.00	46.0	46.2	37.6	35.3	7.3	0.0	-24.79	30.8	31.0	54.0	23.2	23.0	1M

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + ATT + Duty Factor

Duty Factor calculation: $20 \cdot \log(2.88[\text{ms}] \cdot 2/100[\text{ms}]) = -24.79[\text{dB}]$ See Dwell Time data

*) ON time of some channel during 100ms: Twice

This is the worst case in hopping sequence of Bluetooth.

AV calculation is in accordance with FCC Public Notice DA00-705.

* This noise is not pulse emission, therefore measurement was performed with 10Hz VBW according to DA00-705.

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2441MHz DH5
Remarks : PK (RBW:1MHz, VBW:1MHz)
Date : 12/17/2008
Test Distance : 3 m
Temperature : 19 °C Engineer : Tatsuya Arai
Humidity : 34 %
Regulation : FCC Part15C § 15.209 (PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1626.67	BB	47.3	47.6	26.1	35.9	3.7	0.0	41.2	41.5	74.0	32.8	32.5
2.	4882.00	BB	56.3	53.8	33.8	34.1	5.6	0.0	61.6	59.1	74.0	12.4	14.9
3.	7323.00	BB	44.6	45.4	36.2	34.8	6.6	0.0	52.6	53.4	74.0	21.4	20.6
4.	9764.00	BB	46.6	46.4	37.6	35.4	7.4	0.0	56.2	56.0	74.0	17.8	18.0

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

■ ANTENNA: KHA-01&KHA-03

■ CABLE: KCC-D3/D16 ■ AMP: KAF-07 (8449B) ■ EMI RECEIVER: KTR-01 (ES140)

DATA OF RADIATION TEST (Above 1GHz)

UL Japan, Inc.

YAMAKITA NO.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Company : PIONEER CORPORATION

Equipment : Bluetooth Adapter

Model : AS-BT100

Sample No. : HCI119

Power : DC5V

Mode : Transmitting 2441MHz(DH5)

Regulation : FCC Part15C Section 15.209

Test Distance : 3m

Date : 2008/12/17

Temperature : 19deg.C

Humidity : 34%

ENGINEER : Tatsuya Arai

AV calculation value SPECTRUMANALYZER RBW:1MHz (Outside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
1*	1626.67	36.3	38.0	26.1	35.9	3.7	0.0	0.00	30.2	31.9	54.0	23.8	22.1	10
2	9764.00	32.1	32.4	37.6	35.4	7.4	0.0	0.00	41.7	42.0	54.0	12.3	12.0	300

AV calculation value SPECTRUMANALYZER RBW:1MHz (Inside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
3	4882.00	56.3	53.8	33.8	34.1	5.6	0.0	-24.79	36.8	34.3	54.0	17.2	19.7	1M
4	7323.00	44.6	45.4	36.2	34.8	6.6	0.0	-24.79	27.8	28.6	54.0	26.2	25.4	1M

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + ATT + Duty Factor

Duty Factor calculation: $20 \cdot \log(2.88[\text{ms}] \cdot 2 / 100[\text{ms}]) = -24.79[\text{dB}]$ See Dwell Time data

*) ON time of some channel during 100ms: Twice

This is the worst case in hopping sequence of Bluetooth.

AV calculation is in accordance with FCC Public Notice DA00-705.

* This noise is not pulse emission, therefore measurement was performed with 10Hz VBW according to DA00-705.

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2480MHz DH5
Remarks : PK(RBW:1MHz, VBW:1MHz)
Date : 12/17/2008
Test Distance : 3 m
Temperature : 19 °C Engineer : Tatsuya Arai
Humidity : 34 %
Regulation : FCC Part15C § 15.209(PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1652.66	BB	39.8	41.0	26.3	35.9	3.7	0.0	33.9	35.1	74.0	40.1	38.9
2.	2483.50	BB	45.3	44.5	28.8	35.3	4.4	0.0	43.2	42.4	74.0	30.8	31.6
3.	4960.00	BB	52.5	50.8	34.1	34.1	5.7	0.0	58.2	56.5	74.0	15.8	17.5
4.	7440.00	BB	44.5	44.5	36.3	34.8	6.6	0.0	52.6	52.6	74.0	21.4	21.4
5.	9920.00	BB	46.4	46.1	37.6	35.4	7.5	0.0	56.1	55.8	74.0	17.9	18.2

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

■ ANTENNA:KHA-01&KHA-03

■ CABLE:KCC-D3/D16 ■ AMP:KAF-07 (8449B) ■ EMI RECEIVER:KTR-01 (ESI40)

DATA OF RADIATION TEST (Above 1GHz)

UL Japan, Inc.

YAMAKITA NO.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Company : PIONEER CORPORATION

Equipment : Bluetooth Adapter

Model : AS-BT100

Sample No. : HCI119

Power : DC5V

Mode : Transmitting 2480MHz(DH5)

Regulation : FCC Part15C Section 15.209

Test Distance : 3m

Date : 2008/12/17

Temperature : 19deg.C

Humidity : 34%

ENGINEER : Tatsuya Arai

AV calculation value SPECTRUMANALYZER RBW:1MHz (Outside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
1*	1652.66	33.1	34.8	26.3	35.9	3.7	0.0	0.00	27.2	28.9	54.0	26.8	25.1	10
2	9920.00	32.0	32.0	37.6	35.4	7.5	0.0	0.00	41.7	41.7	54.0	12.3	12.3	300

AV calculation value SPECTRUMANALYZER RBW:1MHz (Inside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
3	2483.50	45.3	44.5	28.8	35.3	4.4	0.0	-24.79	18.4	17.6	54.0	35.6	36.4	1M
4	4960.00	52.5	50.8	34.1	34.1	5.7	0.0	-24.79	33.4	31.7	54.0	20.6	22.3	1M
5	7440.00	44.5	44.5	36.3	34.8	6.6	0.0	-24.79	27.8	27.8	54.0	26.2	26.2	1M

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + ATT + Duty Factor

Duty Factor calculation: $20 \cdot \log(2.88[\text{ms}] \cdot 2 / 100[\text{ms}]) = -24.79[\text{dB}]$ See Dwell Time data

*) ON time of some channel during 100ms: Twice

This is the worst case in hopping sequence of Bluetooth.

AV calculation is in accordance with FCC Public Notice DA00-705.

* This noise is not pulse emission, therefore measurement was performed with 10Hz VBW according to DA00-705.

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER COPORATION
 Kind of Equipment : Bluetooth Adaptor
 Model No. : AS-BT100
 Serial No. : HC1119
 Power : DC5V
 Mode : Transmitting 2402MHz 3DH5
 Remarks : -
 Date : 12/17/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 42 %
 Regulation : FCC Part15C § 15.209

Engineer : Makoto Hosaka

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	45.35	BB	21.2	24.5	11.7	27.7	1.4	6.0	12.6	15.9	40.0	27.4	24.1
2.	52.23	BB	21.8	23.7	9.7	27.7	1.5	6.0	11.3	13.2	40.0	28.7	26.8
3.	96.01	BB	21.8	26.5	9.4	27.5	2.1	6.0	11.8	16.5	43.5	31.7	27.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz / KLA-03 (USLP9143) 300-1000MHz

■ CABLE: KCC-30/31/32/34 ■ PREAMP: KAF-05 (8447D) ■ EMI RECEIVER: KTR-04 (ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2441MHz 3DH5
Remarks : -
Date : 12/17/2008
Test Distance : 3 m
Temperature : 21 °C
Humidity : 42 %
Regulation : FCC Part15C § 15.209

Engineer : Makoto Hosaka

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	45.35	BB	21.2	24.6	11.7	27.7	1.4	6.0	12.6	16.0	40.0	27.4	24.0
2.	52.23	BB	22.0	23.6	9.7	27.7	1.5	6.0	11.5	13.1	40.0	28.5	26.9
3.	96.01	BB	21.6	27.0	9.4	27.5	2.1	6.0	11.6	17.0	43.5	31.9	26.5

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz / KLA-03 (USLP9143) 300-1000MHz

■ CABLE: KCC-30/31/32/34 ■ PREAMP: KAF-05 (8447D) ■ EMI RECEIVER: KTR-04 (ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2480MHz 3DH5
Remarks : -
Date : 12/17/2008
Test Distance : 3 m
Temperature : 21 °C
Humidity : 42 %
Regulation : FCC Part15C § 15.209

Engineer : Makoto Hosaka

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	45.35	BB	21.1	24.9	11.7	27.7	1.4	6.0	12.5	16.3	40.0	27.5	23.7
2.	52.26	BB	21.5	24.1	9.7	27.7	1.5	6.0	11.0	13.6	40.0	29.0	26.4
3.	96.01	BB	22.1	26.7	9.4	27.5	2.1	6.0	12.1	16.7	43.5	31.4	26.8

CALCULATION: READING + ANT. FACTOR + CABLE LOSS - AMP. GAIN + ATTEN.

■ ANTENNA: KBA-03 (BBA9106) 30-299.99MHz / KLA-03 (USLP9143) 300-1000MHz

■ CABLE: KCC-30/31/32/34 ■ PREAMP: KAF-05 (8447D) ■ EMI RECEIVER: KTR-04 (ESVS10)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2402MHz 3DH5
Remarks : PK (RBW:1MHz, VBW:1MHz)
Date : 12/17/2008
Test Distance : 3 m
Temperature : 19 °C Engineer : Tatsuya Arai
Humidity : 34 %
Regulation : FCC Part15C § 15.209(PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1602.03	BB	48.4	47.0	25.9	35.9	3.6	0.0	42.0	40.6	74.0	32.0	33.4
2.	2390.00	BB	45.4	45.5	28.8	35.4	4.3	0.0	43.1	43.2	74.0	30.9	30.8
3.	2400.00	BB	60.9	57.4	28.8	35.3	4.3	0.0	58.7	55.2	74.0	15.3	18.8
4.	4804.00	BB	48.4	45.9	33.6	34.1	5.6	0.0	53.5	51.0	74.0	20.5	23.0
5.	7206.00	BB	45.1	45.3	36.1	34.7	6.5	0.0	53.0	53.2	74.0	21.0	20.8
6.	9608.00	BB	45.9	46.1	37.6	35.3	7.3	0.0	55.5	55.7	74.0	18.5	18.3

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

■ ANTENNA:KHA-01&KHA-03

■ CABLE:KCC-D3/D16 ■ AMP:KAF-07 (8449B) ■ EMI RECEIVER:KTR-01 (ESI40)

DATA OF RADIATION TEST (Above 1GHz)

UL Japan, Inc.

YAMAKITA NO.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Company : PIONEER CORPORATION

Equipment : Bluetooth Adapter

Model : AS-BT100

Sample No. : HCI119

Power : DC5V

Mode : Transmitting 2402MHz(3DH5)

Regulation : FCC Part15C Section 15.209

Test Distance : 3m

Date : 2008/12/17

Temperature : 19deg.C

Humidity : 34%

ENGINEER : Tatsuya Arai

AV calculation value SPECTRUMANALYZER RBW:1MHz (Outside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
1	2400.00	48.5	44.7	28.8	35.3	4.3	0.0	0.00	46.3	42.5	54.0	7.7	11.5	300
2	7206.00	31.1	31.0	36.1	34.7	6.5	0.0	0.00	39.0	38.9	54.0	15.0	15.1	300
3	9608.00	32.2	32.1	37.6	35.3	7.3	0.0	0.00	41.8	41.7	54.0	12.2	12.3	300

AV calculation value SPECTRUMANALYZER RBW:1MHz (Inside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
4*	1602.03	40.0	39.7	25.9	35.9	3.6	0.0	0.00	33.6	33.3	54.0	20.4	20.7	10
5	2390.00	45.4	45.5	28.8	35.4	4.3	0.0	-24.91	18.2	18.3	54.0	35.8	35.7	1M
6	4804.00	48.4	45.9	33.6	34.1	5.6	0.0	-24.91	28.6	26.1	54.0	25.4	27.9	1M

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + ATT + Duty Factor

Duty Factor calculation: $20 \cdot \log(2.84[\text{ms}] \cdot 2/100[\text{ms}]) = -24.91[\text{dB}]$ See Dwell Time data

*) ON time of some channel during 100ms: Twice

This is the worst case in hopping sequence of Bluetooth.

AV calculation is in accordance with FCC Public Notice DA00-705.

* This noise is not pulse emission, therefore measurement was performed with 10Hz VBW according to DA00-705.

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
Kind of Equipment : Bluetooth Adaptor
Model No. : AS-BT100
Serial No. : HC1119
Power : DC5V
Mode : Transmitting 2441MHz 3DH5
Remarks : PK (RBW:1MHz, VBW:1MHz)
Date : 12/17/2008
Test Distance : 3 m
Temperature : 19 °C Engineer : Tatsuya Arai
Humidity : 34 %
Regulation : FCC Part15C § 15.209 (PK Detection)

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1626.67	BB	45.4	41.1	26.1	35.9	3.7	0.0	39.3	35.0	74.0	34.7	39.0
2.	4882.00	BB	50.6	48.6	33.8	34.1	5.6	0.0	55.9	53.9	74.0	18.1	20.1
3.	7323.00	BB	45.0	45.3	36.2	34.8	6.6	0.0	53.0	53.3	74.0	21.0	20.7
4.	9764.00	BB	46.6	46.0	37.6	35.4	7.4	0.0	56.2	55.6	74.0	17.8	18.4

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

■ ANTENNA:KHA-01&KHA-03

■ CABLE:KCC-D3/D16 ■ AMP:KAF-07 (8449B) ■ EMI RECEIVER:KTR-01 (ESI40)

DATA OF RADIATION TEST (Above 1GHz)

UL Japan, Inc.

YAMAKITA NO.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Company : PIONEER CORPORATION

Equipment : Bluetooth Adapter

Model : AS-BT100

Sample No. : HCI119

Power : DC5V

Mode : Transmitting 2441MHz(3DH5)

Regulation : FCC Part15C Section 15.209

Test Distance : 3m

Date : 2008/12/17

Temperature : 19deg.C

Humidity : 34%

ENGINEER : Tatsuya Arai

AV calculation value SPECTRUMANALYZER RBW:1MHz (Outside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
1*	1626.76	32.0	34.9	26.1	35.9	3.7	0.0	0.00	25.9	28.8	54.0	28.1	25.2	10
2	9764.00	32.4	32.2	37.6	35.4	7.4	0.0	0.00	42.0	41.8	54.0	12.0	12.2	300

AV calculation value SPECTRUMANALYZER RBW:1MHz (Inside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
3	4882.00	50.6	48.6	33.8	34.1	5.6	0.0	-24.91	31.0	29.0	54.0	23.0	25.0	1M
4	7323.00	45.0	45.3	36.2	34.8	6.6	0.0	-24.91	28.1	28.4	54.0	25.9	25.6	1M

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + ATT + Duty Factor

Duty Factor calculation: $20 \cdot \log(2.84[\text{ms}] \cdot 2/100[\text{ms}]) = -24.91[\text{dB}]$ See Dwell Time data

*) ON time of some channel during 100ms: Twice

This is the worst case in hopping sequence of Bluetooth.

AV calculation is in accordance with FCC Public Notice DA00-705.

* This noise is not pulse emission, therefore measurement was performed with 10Hz VBW according to DA00-705.

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Applicant : PIONEER CORPORATION
 Kind of Equipment : Bluetooth Adaptor
 Model No. : AS-BT100
 Serial No. : HC1119
 Power : DC5V
 Mode : Transmitting 2480MHz 3DH5
 Remarks : PK (RBW:1MHz, VBW:1MHz)
 Date : 12/17/2008
 Test Distance : 3 m
 Temperature : 19 °C
 Humidity : 34 %
 Regulation : FCC Part15C § 15.209(PK Detection)

Engineer : Tatsuya Arai

No.	FREQ. [MHz]	ANT TYPE	READING		ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT		LIMITS [dB μ V/m]	MARGIN	
			HOR [dB μ V]	VER [dB μ V]					HOR [dB μ V/m]	VER [dB μ V/m]		HOR [dB]	VER [dB]
1.	1652.77	BB	46.5	47.3	26.3	35.9	3.7	0.0	40.6	41.4	74.0	33.4	32.6
2.	2483.50	BB	44.9	43.8	28.8	35.3	4.4	0.0	42.8	41.7	74.0	31.2	32.3
3.	4960.00	BB	48.3	47.6	34.1	34.1	5.7	0.0	54.0	53.3	74.0	20.0	20.7
4.	7440.00	BB	45.3	45.4	36.3	34.8	6.6	0.0	53.4	53.5	74.0	20.6	20.5
5.	9920.00	BB	45.9	45.8	37.6	35.4	7.5	0.0	55.6	55.5	74.0	18.4	18.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

■ ANTENNA: KHA-01&KHA-03

■ CABLE: KCC-D3/D16 ■ AMP: KAF-07 (8449B) ■ EMI RECEIVER: KTR-01 (ESI40)

DATA OF RADIATION TEST (Above 1GHz)

UL Japan, Inc.

YAMAKITA NO.1 ANECHOIC CHAMBER

Report No. : 29EE0038-YK-01-B-R1

Company : PIONEER CORPORATION

Equipment : Bluetooth Adapter

Model : AS-BT100

Sample No. : HCI119

Power : DC5V

Mode : Transmitting 2480MHz(3DH5)

Regulation : FCC Part15C Section 15.209

Test Distance : 3m

Date : 2008/12/17

Temperature : 19deg.C

Humidity : 34%

ENGINEER : Tatsuya Arai

AV calculation value SPECTRUMANALYZER RBW:1MHz (Outside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
1*	1652.64	33.7	36.3	26.3	35.9	3.7	0.0	0.00	27.8	30.4	54.0	26.2	23.6	10
2	9920.00	32.1	32.2	37.6	35.4	7.5	0.0	0.00	41.8	41.9	54.0	12.2	12.1	300

AV calculation value SPECTRUMANALYZER RBW:1MHz (Inside Restricted Band)

No.	FREQ [MHz]	READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN [dB]	Duty Factor	RESULT		LIMIT [dBuV/m]	MARGIN		VBW [Hz]
		HOR [dBuV]	VER [dBuV]						HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]	
3	2483.50	44.9	43.8	28.8	35.3	4.4	0.0	-24.91	17.9	16.8	54.0	36.1	37.2	1M
4	4960.00	48.3	47.6	34.1	34.1	5.7	0.0	-24.91	29.1	28.4	54.0	24.9	25.6	1M
5	7440.00	45.3	45.4	36.3	34.8	6.6	0.0	-24.91	28.5	28.6	54.0	25.5	25.4	1M

Sample Calculation :

RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + ATT + Duty Factor

Duty Factor calculation: $20 \cdot \log(2.84[\text{ms}] \cdot 2 / 100[\text{ms}]) = -24.91[\text{dB}]$ See Dwell Time data

*) ON time of some channel during 100ms: Twice

This is the worst case in hopping sequence of Bluetooth.

AV calculation is in accordance with FCC Public Notice DA00-705.

* This noise is not pulse emission, therefore measurement was performed with 10Hz VBW according to DA00-705.

Duty Cycle

UL Japan, Inc. Yamakita EMC lab.

Date:

Temp./Humid.:

Engineer:

Test mode:

No.1 Anechoic Chamber

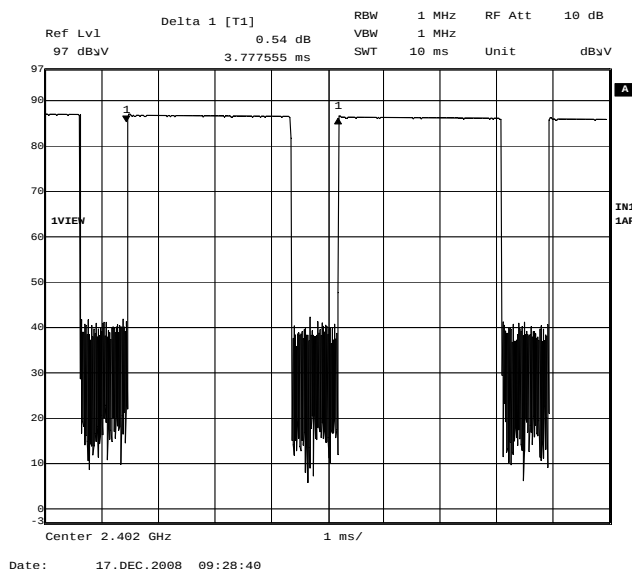
2008/12/17

19 deg. C. / 34 %

Tatsuya Arai

Transmitting

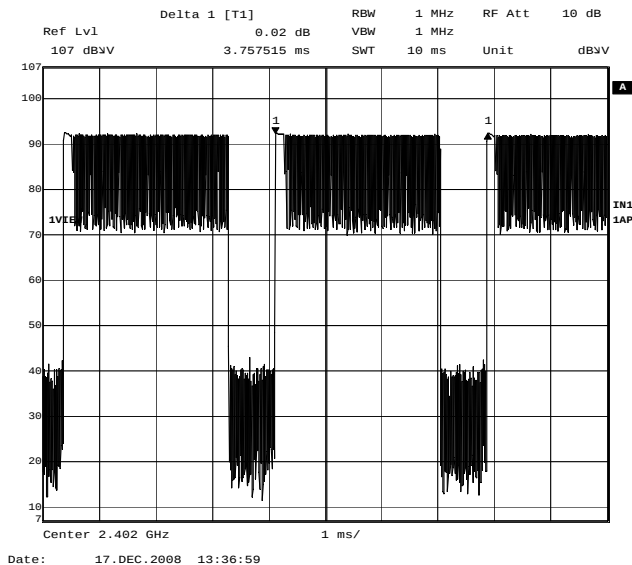
[DH5]



Duty Cycle: 3.78ms

AV Detector VBW: $1000 / 3.78\text{ms} = 264.55\text{Hz} \rightarrow 300\text{Hz}$

[3DH5]



Duty Cycle: 3.76ms

AV Detector VBW: $1000 / 3.76\text{ms} = 265.96\text{Hz} \rightarrow 300\text{Hz}$

* All the measured noise was pulse emission.

* Duty cycle was within 100msec.

This purpose of the Duty Cycle calculation measures the pulse timing that we ensure Spectrum Analyzer can detect the pulse emission correctly. Therefore, if the pulse train can happen by 50msec(20Hz) or less, the average value measurement by setting the repetition frequency is done more correctly than VBW=10Hz that DA 00-705 accepts for AV detect. For instance, if pulse cycle is every 10msec, we set VBW = 100Hz(=1000/10) in order not to overlook a pulse unexpectedly.

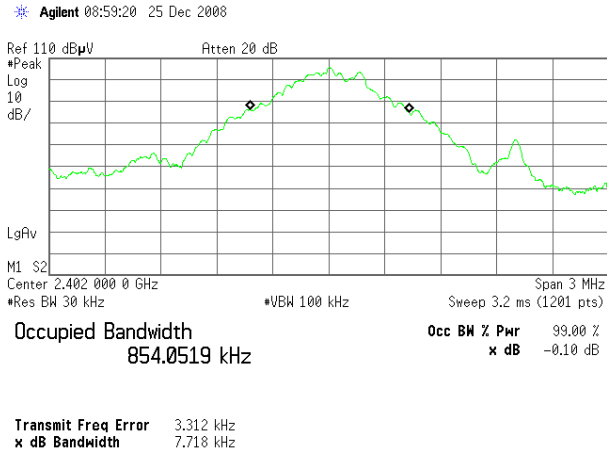
Occupied Bandwidth (99%) (Regulation: RSS-Gen 4.6.1)

UL Japan, Inc. Yamakita EMC lab.
Date:
Temp./Humid.:
Engineer:
Test mode:

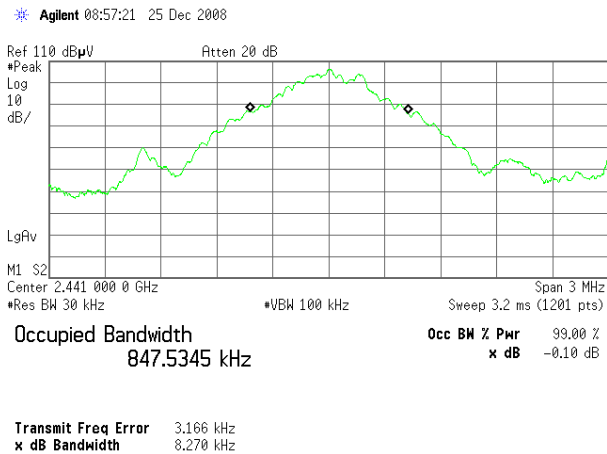
No.2 shielded room
2008/12/25
22 deg. C. / 35 %
Tatsuya Arai
Transmitting

[Hopping off, DH5]

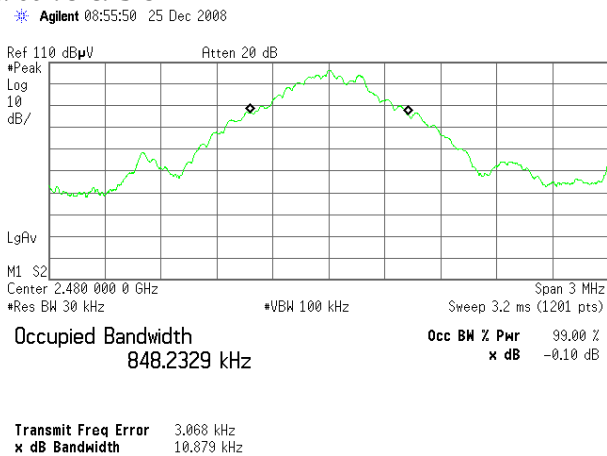
1. ch : 2402MHz/Occupied Bandwidth: 854.0519kHz



2. ch : 2441MHz/Occupied Bandwidth: 847.5345kHz

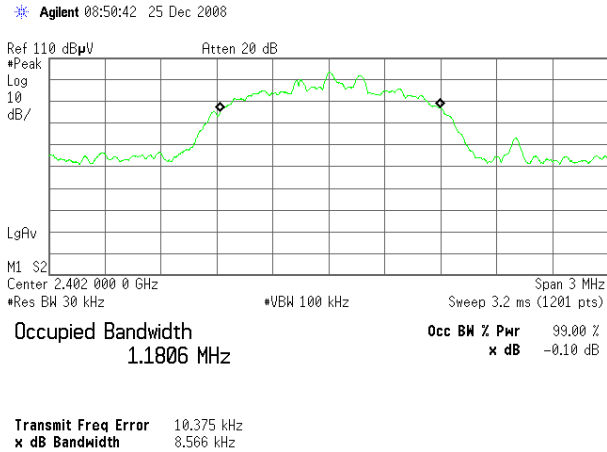


3. ch : 2480MHz/Occupied Bandwidth: 848.2329kHz

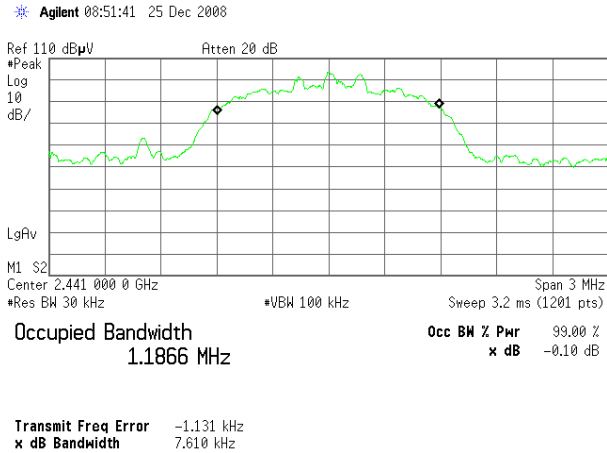


[Hopping off, 3DH5]

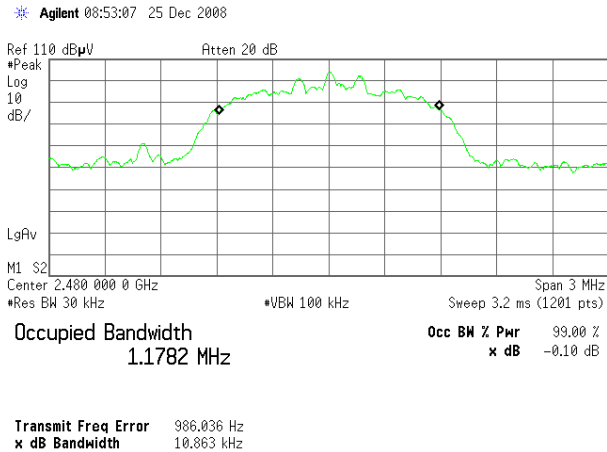
4. ch : 2402MHz/Occupied Bandwidth: 1.1806MHz



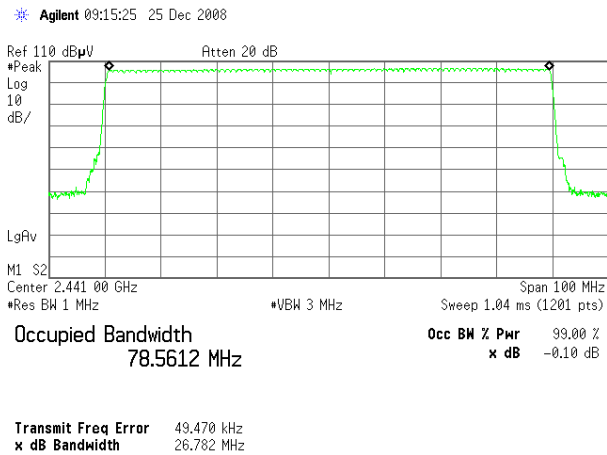
5. ch : 2441MHz/Occupied Bandwidth: 1.1866MHz



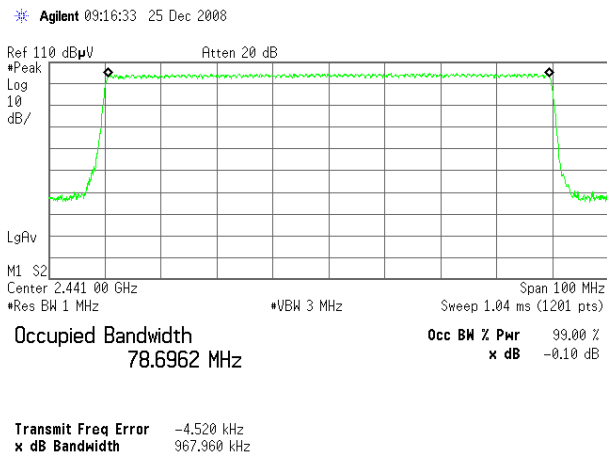
6. ch : 2480MHz/Occupied Bandwidth: 1.1782MHz



7. Hopping, DH5/Occupied Bandwidth: 78.5612MHz



8. Hopping, 3DH5/Occupied Bandwidth: 78.6962MHz



APPENDIX 3

Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
CUST-YA-CE	Conducted emission(software)	UL Japan	CE(Ver.1.6)	-	CE	-
CUST-YA-RE	Radiated emission(software)	UL Japan	RE(Ver.1.5)	-	RE	-
KCC-14/15/16/18/KPL-01/KRM-01	Coaxial Cable/Pulse Limiter/RF Relay Matrix	Fujikura/Suhner/PMM/TSJ	5D-2W/8D-2W/S04272B/S04272B/P L01/-	-/9909017	CE	2008/05/15 * 12
KLS-01	LISN(AMN)	Schwarzbeck	NSLK8126	8126354	CE	2008/04/07 * 12
KSA-04	Spectrum Analyzer	Advantest	R3271A	95060087	CE	2008/09/29 * 12
KTR-02	Test Receiver	Rohde & Schwarz	ESCS30	830986/017	CE	2008/09/12 * 12
KOS-04	Humidity Indicator	SATO	PC-5000TRH	B-08	CE	2008/07/07 * 12
KJM-08	Measure	KOMELON	KMC-36	-	CE	-
KAEC-01(NSA)	Anechoic Chamber	JSE	Semi 3m	1	RE	2008/08/06 * 12
KAF-08	Pre Amplifier	Anritsu	MH648A	M90147	RE	2008/06/03 * 12
KAT6-01	Attenuator	INMET	18N-6dB	-	RE	2008/03/17 * 12
KBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1926	RE	2008/12/28 * 12
KLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	170	RE	2008/12/28 * 12
KCC-30/31/32/34/KRM-03	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	5D-2W/S04272B/R FM-E421	-/01055	RE	2008/10/22 * 12
KSA-04	Spectrum Analyzer	Advantest	R3271A	95060087	RE	2008/09/29 * 12
KTR-04	Test Receiver	Rohde & Schwarz	ESVS10	825475/006	RE	2008/10/20 * 12
KAF-07	Pre Amplifier	Hewlett Packard	8449B	3008A01002	RE	2007/12/10 * 12
KCC-D3/D16	Coaxial Cable	Rosenberger/INSULATE D WIRE INC	2201/KPS-1501-200-KPS	001/04202005	RE	2008/04/16 * 12
KHA-01	Horn Antenna	A.H.Systems	SAS-200/571	354	RE	2008/08/11 * 12
KHA-03	Horn Antenna	EMCO	3160-09	1239	RE	2008/04/30 * 12
KTR-01	Test Receiver	Rohde & Schwarz	ESI40	100054/040	RE/AT	2008/04/18 * 12
KOS-02	Humidity Indicator	Custom	CTH-190	K-02	RE	2008/07/07 * 12
KJM-07	Measure	KOMELON	KMC-36	-	RE	-
KSA-08	Spectrum Analyzer	Agilent	E4446A	MY46180525	AT	2008/01/11 * 12
KOSC-01	Oscilloscope	Tektronix	TDS-2022B	C050588	AT	2008/05/07 * 12
KDT-01	Coaxial Crystal Detector	Agilent	8473C	1822A05320	AT	Pre Check
KPM-05	Power meter	Agilent	E4417A	GB41290718	AT	2008/03/21 * 12
KPSS-01	Power sensor	Agilent	E9327A	US40440544	AT	2008/03/27 * 12
KOS-01	Humidity Indicator	Custom	CTH-190	K-01	AT	2008/07/14 * 12
KCC-D20	Coaxial Cable	SUHNER	SUCOFLEX102	31110/2	AT	2008/07/09 * 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 :

CE: Conducted emission ,
RE: Radiated emission ,
AT: Antenna terminal disturbance voltage