



RADIO TEST REPORT

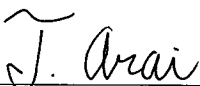
Test Report No.: 28GE0110-YK-A

Applicant : Pioneer Corporation
Type of Equipment : CAR AUDIO with built in Bluetooth
Model No. : 86120-48G00
FCC ID : AJDK018
Test regulation : FCC Part15 Subpart C: 2008
Test result : Complied

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.

Date of test: February 14, 15 and 26, 2008

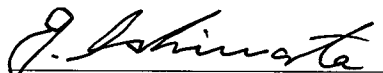
Tested by:


Tatsuya Arai

&


Akira Sato

Tested by:


Go Ishiwata

&


Toyokazu Imamura

Approved by:


Osamu Watatani
Manager of Yamakita EMC Lab.

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YAMAKITA EMC LAB.

907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

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1 Applicant information

Company Name : Pioneer Corporation
 Address : 25-1 Nishi-machi, Yamada-aza, Kawagoe-shi, Saitama, 350-8555, JAPAN
 Telephone Number : +81 49 228 6295
 Facsimile Number : +81 49 228 6496
 Contact Person : Yasushi Mori

2 Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : CAR AUDIO with built in Bluetooth
 Model No. : 86120-48G00
 Serial No. : K2GK078 (Radiated emission test), K2GK068 (other test)
 Rating : DC13.2V
 Country of Mass-production : Japan
 Condition of EUT : Production prototype
 (Not for Sale: This sample is equivalent to mass-produced items.)
 Modification of EUT : No modification by the test lab.
 Receipt Date of Sample : February 14, 2008

2.2 Product description

Model: 86120-48G00 (referred to as the EUT in this report) is a CAR AUDIO with built in Bluetooth.

The difference between the EUT and its derived models:

	86120-48G00	86120-48K80	86120-0E130	86120-0E280
Country of mass-production	Japan	Japan	U.S.A	U.S.A
Option (USB device connection) *1)	None	Available	None	Available

*1) USB device unit is connected via AVC-LAN12P cable. The difference (with/without USB device unit) does not give any change on radio characteristic of the CAR AUDIO.

Equipment type : Transceiver
 Frequency of operation : 2402-2480MHz
 Clock frequency : System microcomputer: 24MHz
 FM/AM Tuner: 74.1MHz
 (1st IF: 10.7MHz, 2nd IF: 700kHz, 2nd local: 11.4MHz)
 Grill microcomputer: 38kHz
 XM Tuner: 4.75MHz (Decoder: 24.265MHz)
 Bluetooth Module: 29.75MHz (CPU Clock: 26MHz to 120MHz)
 Bandwidth & channel spacing : 79MHz & 1MHz
 Type of modulation : FHSS
 Antenna model & type : Dielectric patch antenna (made by TDK): CABPB1240E
 Antenna gain with cable loss : +2.0dBi
 Antenna connector type : U.FL (manufactured by Hirose)
 ITU code : F1D, G1D
 Operation temperature range : -30 to +65 deg.C.

FCC Part15.31 (e)

The equipment provides the Bluetooth module with stable power supply (DC 3.3 V), therefore, the equipment complies power supply regulation.

FCC Part15.203 Antenna requirement

The equipment and its antenna comply with this requirement since this antenna is built in the equipment and it cannot be replaced by end users.

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3 Test specification, procedures and results

3.1 Test specification

Test specification : FCC Part15 Subpart C: 2008, final revised on January 30, 2008
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.209 Radiated emission limits, general requirements
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz,
and 5725-5850MHz

3.2 Procedures & results

Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin	Results
Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	FCC Section 15.207	-	N/A *1)	N/A	N/A
Carrier Frequency Separation	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.247 (a)(1)	Conducted	N/A	*See data.	Complied
20dB Bandwidth	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.247 (a)(1)	Conducted	N/A		Complied
Number of Hopping Frequency	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.247 (a)(1)(iii)	Conducted	N/A		Complied
Dwell time	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.247 (a)(1)(iii)	Conducted	N/A		Complied
Maximum Peak Output Power	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.247 (b)(1)	Conducted	N/A		Complied
Band Edge Compliance	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.247 (d)	Radiated	N/A		Complied
Spurious Emission	FCC Public Notice DA 00-705 & ANSI C63.4:2003 13. Measurement of intentional radiators	FCC Section15.209 & Section15.247 (d)	Conducted/ Radiated	N/A	6.3dB (357.01MHz, Horizontal, Tx 2402MHz, 3DH5)	Complied

*1) The test is not applicable since the EUT has no AC mains.
Note: UL Japan's EMI Work Procedures No.QPM05 and QPM15.

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3.3 Addition to standard

Item	Test Procedure	Specification	Remarks	Worst Margin	Results
Occupied Bandwidth (99%)	ANSI C63.4:2003 13. Measurement of intentional radiators RSS-Gen 4.6.1	RSS-Gen 4.6.1	Conducted	-	Complied

* Other than above, no addition, exclusion nor deviation has been made from the standard.

3.4 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

	No.1 open site (±)	No.2 open site (±)	No.1 anechoic chamber (±)
Radiated emission (3m)			
30-300MHz	4.5 dB	4.4 dB	4.5 dB
300-1000MHz	4.3 dB	4.3 dB	4.3 dB
1GHz<	5.7 dB	5.7 dB	5.7 dB

The data listed in this test report has enough margin, more than site margin.

Antenna port conducted test	(±)
Below 1GHz	0.4dB
1GHz and above	0.7dB

3.5 Test location

UL Japan, Inc. Yamakita EMC Lab.
 907, Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken 258-0124 JAPAN
 Telephone number : +81 465 77 1011
 Facsimile number : +81 465 77 2112
 NVLAP Lab. code : 200441-0

No. 1 test site has been fully described in a report submitted to FCC office, and accepted on August 26, 2005 (Registration No.: 95486).

IC Registration No. : 2973B-1

No. 2 test site has been fully described in a report submitted to FCC office, and accepted on February 27, 2008 (Registration No.: 466226).

IC Registration No. : 2973B-3

No. 1 anechoic chamber has been fully described in a report submitted to FCC office, and accepted on November 2, 2005 (Registration No.: 95967).

IC Registration No. : 2973B-2

Test room	Width x Depth x Height (m)	Test room	Width x Depth x Height (m)
No.1 shielded room	8.0 x 5.0 x 2.5	No.1 Semi-anechoic chamber	10.0 x 7.5 x 5.7
No.2 shielded room	5.0 x 4.0 x 2.5		
No.3 shielded room	4.0 x 5.0 x 2.7		

Open test site	Maximum measurement distance
No.1 open test site	30m
No.2 open test site	10m

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4 System test configuration

4.1 Justification

The system was configured in typical fashion (as a customer would normally use it) for testing.

Test item	Operating mode	Tested frequency
Carrier frequency separation	Transmitting Hopping ON (DH5/3DH5)/Inquiry, Payload: PRBS9	-
20dB bandwidth	Transmitting Hopping OFF (DH5/3DH5)/Inquiry, Payload: PRBS9	2402MHz, 2441MHz, 2480MHz
Number of hopping frequency	Transmitting Hopping ON (DH5/3DH5)/Inquiry, Payload: PRBS9	-
Dwell time	Transmitting (Hopping ON) -DH1 -DH3 -DH5 -3DH1 -3DH3 -3DH5 ----- -Inquiry	-
Maximum peak output power	Transmitting Hopping OFF (DH5/3DH5)/Inquiry, Payload: PRBS9 -DH5 -2DH5 -3DH5	2402MHz, 2441MHz, 2480MHz
Band edge compliance & Spurious emission (Conducted)	Transmitting (DH5/3DH5), Payload: PRBS9 -Hopping ON/Inquiry -Hopping OFF	Band edge compliance: 2402MHz, 2480MHz
(Radiated)	Transmitting (DH5/3DH5), Payload: PRBS9	Spurious emission: 2402MHz, 2441MHz, 2480MHz
99% occupied bandwidth	Transmitting (DH5/3DH5), Payload: PRBS9 -Hopping ON -Hopping OFF	2402MHz, 2441MHz, 2480MHz

*As a result of preliminary test, the formal test was performed with the above modes, which had the maximum payload (except Dwell time test)

*Remarks: Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.

However, the limit level 125mWof AFH mode was used due to the overlap of the bandwidth.

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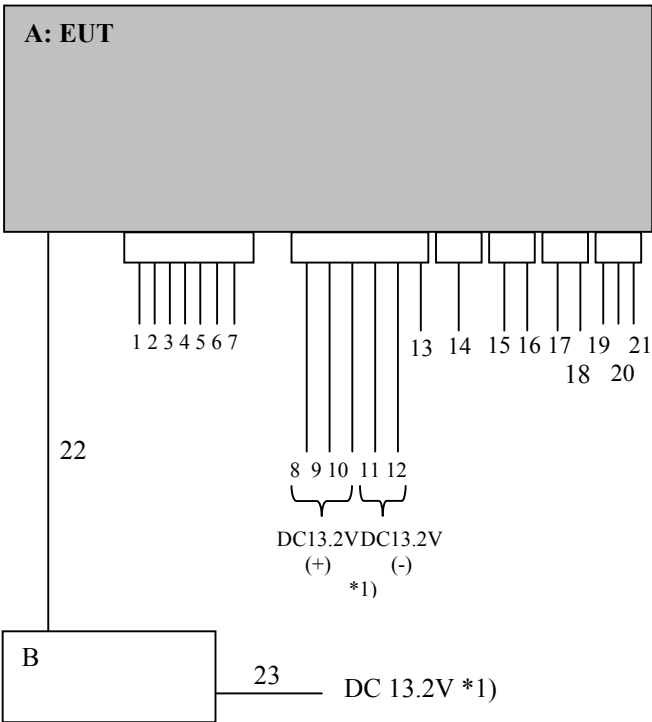
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Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

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4.2 Configuration of tested system



* Test data was taken under worse case conditions.

Description of EUT and support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	CAR AUDIO with built in Bluetooth	86120-48G00	*2)	PIONEER CORPORATION	EUT
B	Test jig	-	-	-	-

*1) DC power supply (Model No.: PAN35-10A) was used for DC 13.2V input.

*2) Out of Band emission (Radiated): K2GK078, other test: K2GK068

List of cables used *3)

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	HF OF cable	1.2	Unshielded	Unshielded	-
2	ADIM cable	1.2	Unshielded	Unshielded	-
3	SPD cable	1.2	Unshielded	Unshielded	-
4	MIN-J 8P cable	1.2	Unshielded	Unshielded	-
5	Remote control cable	1.2	Unshielded	Unshielded	-
6	Display cable	1.2	Unshielded	Unshielded	-
7	Amplifier cable	1.2	Unshielded	Unshielded	-
8	ACC cable	2.0	Unshielded	Unshielded	-
9	ILL + cable	2.0	Unshielded	Unshielded	-
10	+B cable	2.0	Unshielded	Unshielded	-
11	GND cable	2.0	Unshielded	Unshielded	-
12	ILL - cable	2.0	Unshielded	Unshielded	-
13	Amplifier cable	1.2	Unshielded	Unshielded	-
14	EMV cable	1.2	Unshielded	Unshielded	-
15	UTX cable	0.8	Unshielded	Unshielded	-
16	AVC-LAN 12P cable	1.2	Unshielded	Unshielded	-
17	SNS2 cable	1.2	Unshielded	Unshielded	-
18	Microphone cable	3.0	Unshielded	Unshielded	-
19	ANT+ cable	0.15	Unshielded	Unshielded	-
20	Antenna (MAIN) cable	0.15	Unshielded	Unshielded	-
21	Antenna (SUB) cable	0.15	Unshielded	Unshielded	-
22	IF cable	0.5	Unshielded	Unshielded	-
23	DC cable	0.8	Unshielded	Unshielded	-

*3) All cables used for the measurement are exclusive use or marketed.

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907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

Telephone: +81 465 77 1011

Facsimile: +81 465 77 2112

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5 Carrier frequency separation

Test Procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Date : February 26, 2008 Test engineer : Tatsuya Arai

6 20dB bandwidth & Occupied bandwidth (99%)

Test Procedure

The bandwidth was measured with a spectrum analyzer connected to the antenna port.

The channel separation in Hopping mode and Inquiry mode was separated by 25kHz and 2/3 of the 20dB bandwidth.

Summary of the test results: Pass

Date : February 26, 2008 Test engineer : Tatsuya Arai

7 Number of hopping frequency

Test Procedure

The Number of Hopping Frequency was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Date : February 26, 2008 Test engineer : Tatsuya Arai

8 Dwell time

Test Procedure

The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Measurement was performed with the packet type of DH1, DH3, DH5 3DH1, 3DH3 and 3DH5.

Summary of the test results: Pass

Date : February 26, 2008 Test engineer : Tatsuya Arai

9 Maximum peak output power

Test Procedure

The Maximum Peak Output Power was measured with a power meter connected to the antenna port.

Summary of the test results: Pass

Date : February 26, 2008 Test engineer : Akira Sato

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10 Out of band emissions (Antenna port conducted)

Test Procedure

The Out of Band Emissions was measured with a spectrum analyzer connected to the antenna port.

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a conducted measurement.

Summary of the test results: Pass

Date : February 26, 2008

Test engineer : Akira Sato

11 Out of band emissions (Radiated)

11.1 Operating environment

The test was carried out in No.1 anechoic chamber.

11.2 Test configuration

EUT was placed on a urethane platform of nominal size, 0.5m by 0.5m, raised 80cm above the conducting ground plane. Photographs of the set up are shown in Appendix 1.

11.3 Test conditions

Frequency range : 30MHz - 26.5GHz
Test distance : 3m (30MHz-18GHz), 1m (18-26.5GHz)
EUT operation mode : Transmitting

11.4 Test procedure

The Radiated Electric Field Strength intensity has been measured with a ground plane and at a distance of 3m or 1m. The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for both vertical and horizontal antenna polarization. Measurements were performed with QP, PK, and AV detector.

The radiated emission measurements were made with the following detector function of the test receiver.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver	Spectrum Analyzer
Detector IF Bandwidth	QP: BW 120kHz	PK: RBW: 1MHz/VBW: 1MHz, AV RBW: 1MHz/VBW: 300Hz, 10Hz (See data)
Measuring antenna	Biconical (30-300MHz) Logperiodic (300MHz-1GHz)	Horn

The EUT was tested in the direction normally used.

11.5 Band edge

Band edge level at 2390MHz and 2483.5MHz is below the limits of FCC 15.209 and band edge level at 2400MHz is below the 20dBc. Refer to the data.

11.6 Results

Summary of the test results : Pass *No noise was detected above the 5th order harmonics.

Date : February 14 and 15, 2008

Test engineer : Go Ishiwata and Toyokazu Imamura

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907 Kawanishi, Yamakita-machi, Ashigarakami-gun, Kanagawa-ken, 258-0124 JAPAN

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APPENDIX 1: Photographs of test setup

Page 12 : Radiated emission

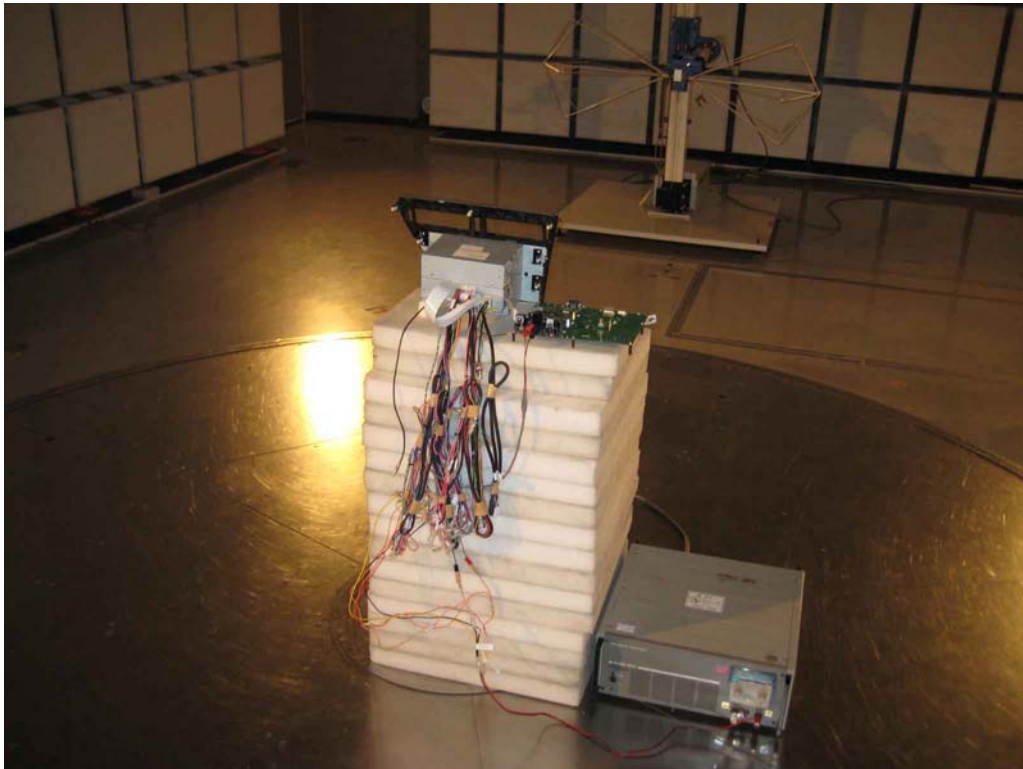
APPENDIX 2: Test Data

Page 13 : Carrier frequency separation
Page 14 - 16 : 20dB bandwidth
Page 17 - 21 : Number of hopping frequency
Page 22 - 36 : Dwell time
Page 37 : Maximum peak output power
Page 38 - 55 : Out of band emissions (Antenna Port Conducted)
Page 56 - 73 : Out of band emissions (Radiated)
Page 74 : Duty cycle
Page 75 - 77 : Occupied bandwidth

APPENDIX 3: Test instruments

Page 78 : Test instruments

Radiated emission



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Facsimile: +81 465 77 2112

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Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

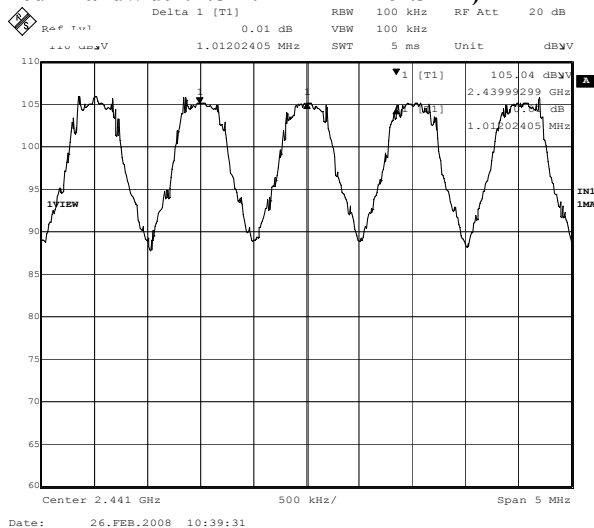
Channel Separation (Regulation: FCC 15.247(a)(1))

UL Japan, Inc. Yamakita No.2 Shielded Room

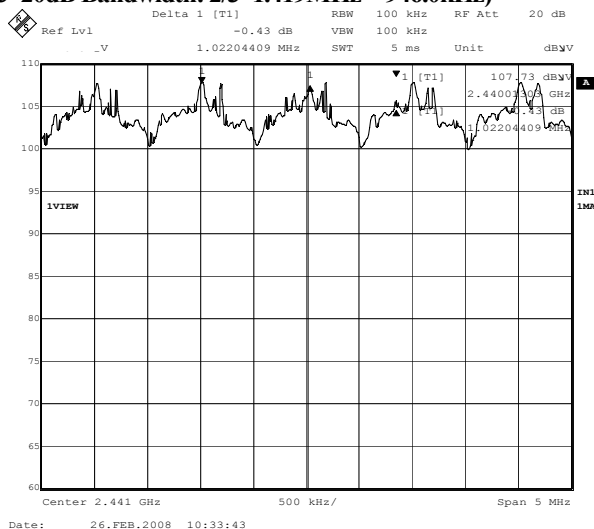
Date: 2008.2.26
Temp./Humid.: 24deg.C/39%
Engineer: Tatsuya Arai
Test mode: Transmitting

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

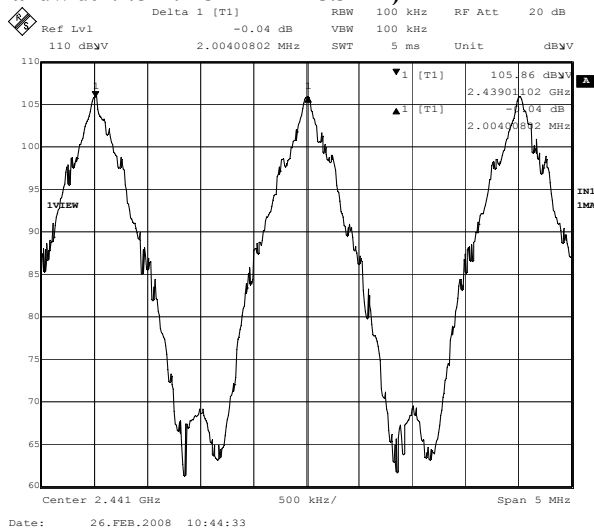
1. Hopping, DH5: 1.012MHz ($2/3 * 20\text{dB}$ Bandwidth: $2/3 * 1.142\text{MHz} = 761.3\text{kHz}$)



2. Hopping, 3DH5: 1.022MHz ($2/3 * 20\text{dB}$ Bandwidth: $2/3 * 1.419\text{MHz} = 946.0\text{kHz}$)



3. Inquiry: 2.004MHz ($2/3 * 20\text{dB}$ Bandwidth: $2/3 * 1.118\text{MHz} = 745.3\text{kHz}$)



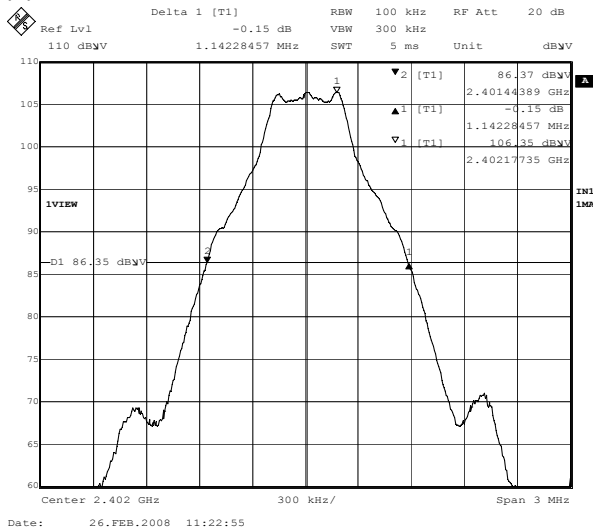
20dB Bandwidth (Regulation: FCC 15.247(a)(1))

UL Japan, Inc. Yamakita No.2 Shielded Room

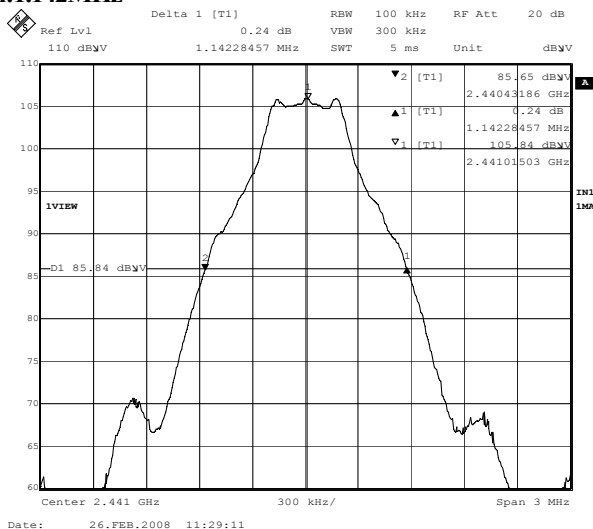
Date: 2008.2.26
Temp./Humid.: 24deg.C/39%
Engineer: Tatsuya Arai
Test mode: Transmitting

[Hopping off, DHS]

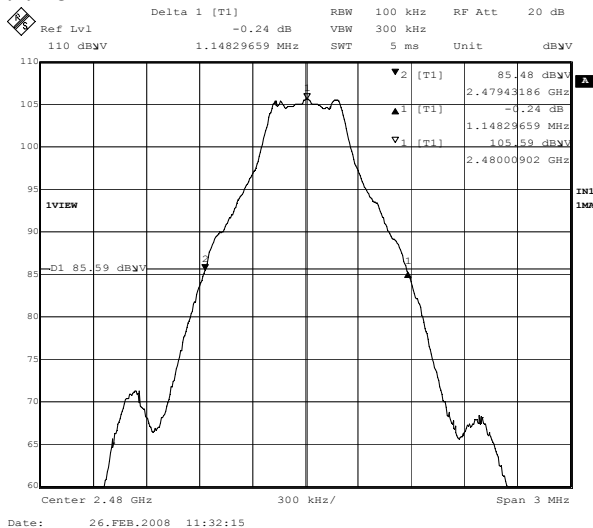
1. ch : 2402MHz/20dB Bandwidth:1.142MHz



2. ch : 2441MHz/20dB Bandwidth:1.142MHz

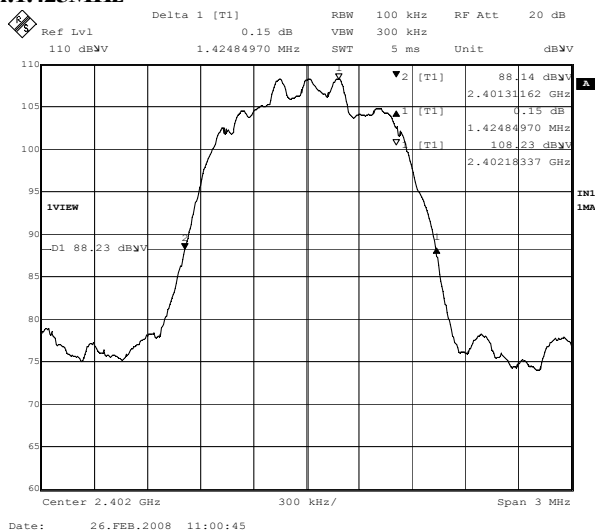


3. ch : 2480MHz/20dB Bandwidth:1.148MHz

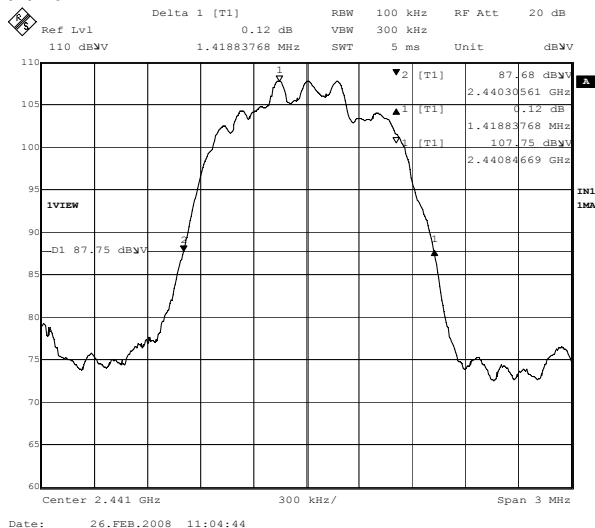


[Hopping off, 3DH5]

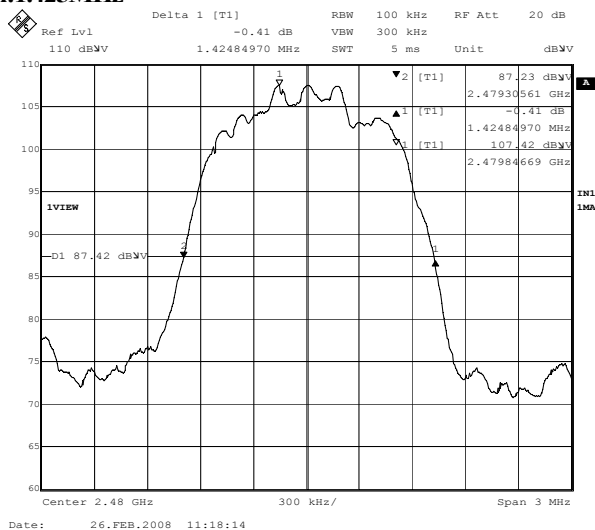
4. ch : 2402MHz/20dB Bandwidth:1.425MHz



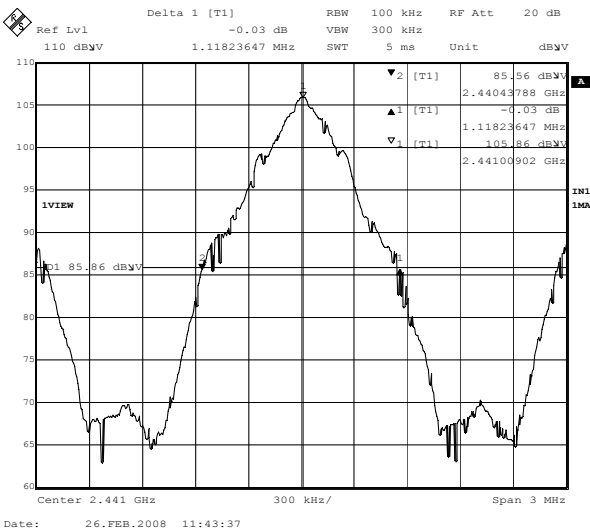
5. ch : 2441MHz/20dB Bandwidth:1.419MHz



6. ch : 2480MHz/20dB Bandwidth:1.425MHz



[Inquiry]
7. Inauiry/20dB Bandwidth:1.118MHz



Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

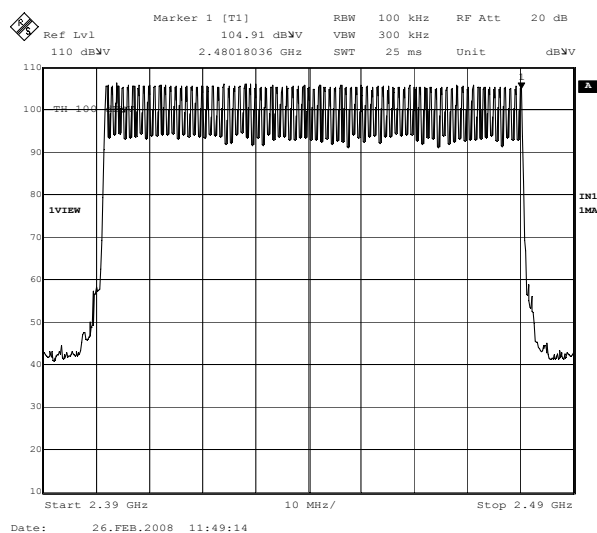
Channel Utilization (Regulation: FCC 15.247(a)(1)(iii))

UL Japan, Inc. Yamakita No.2 Shielded Room

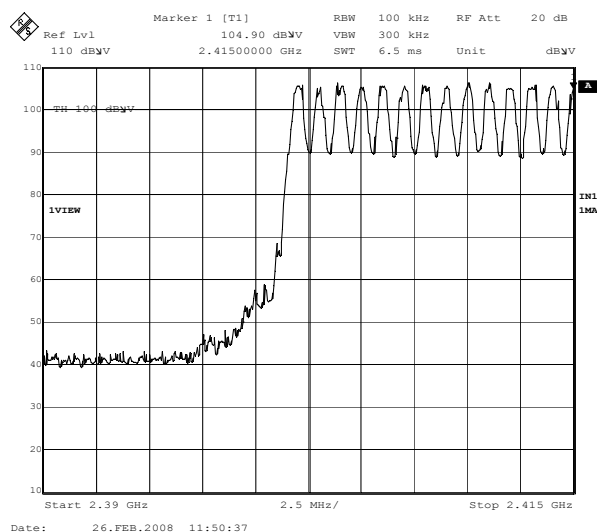
Date: 2008.2.26
Temp./Humid.: 24deg.C/39%
Engineer: Tatsuya Arai
Test mode: Transmitting

Hopping, DH5: 79ch

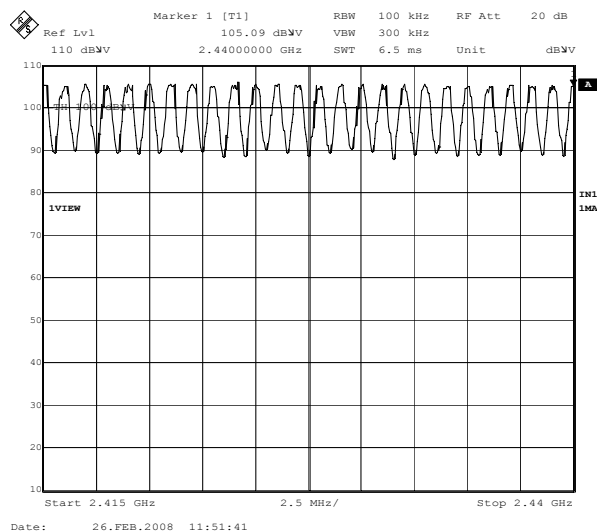
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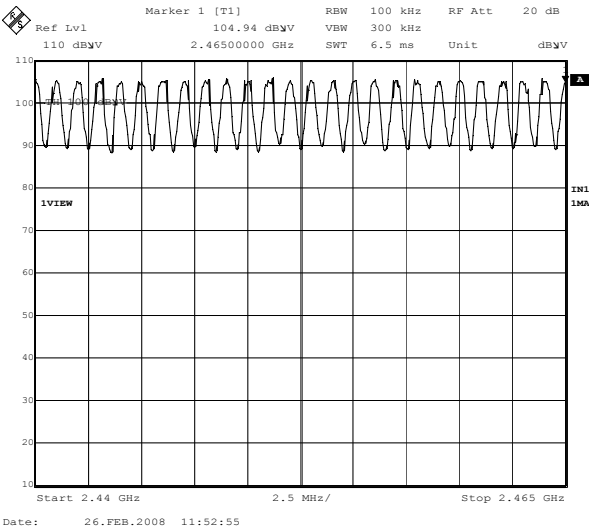
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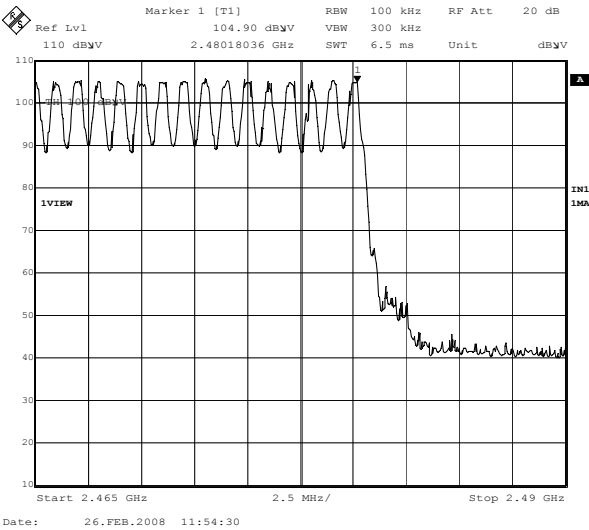
3.



4.

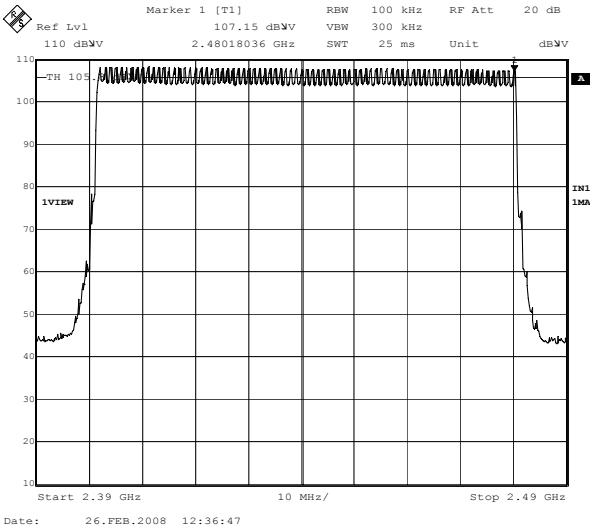


5.

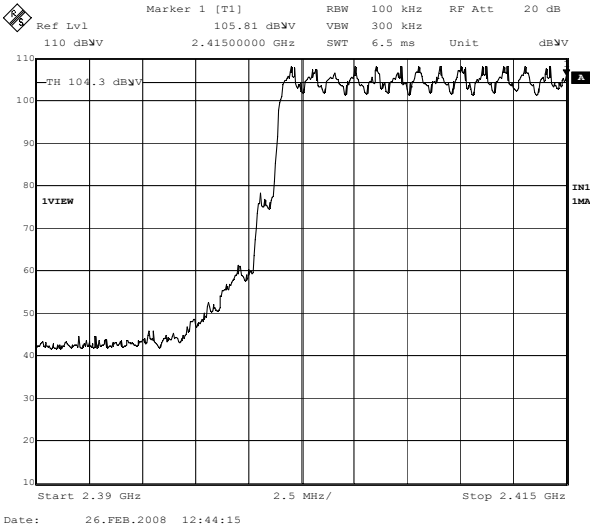


Hopping, 3DH5: 79ch

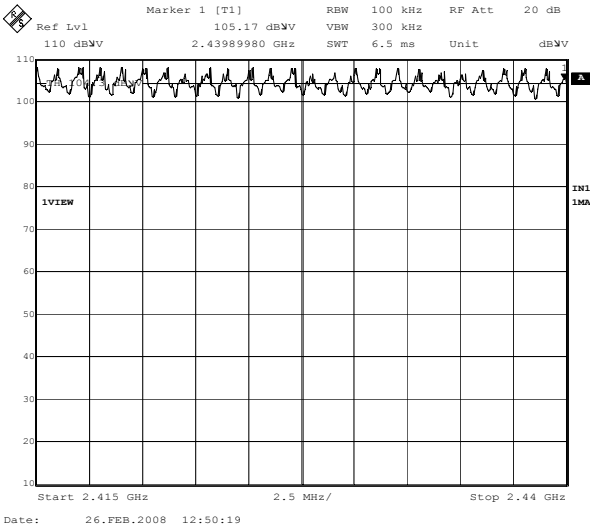
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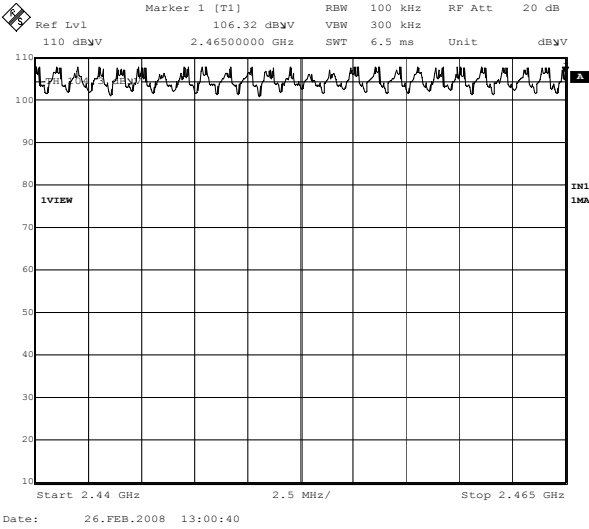
2.



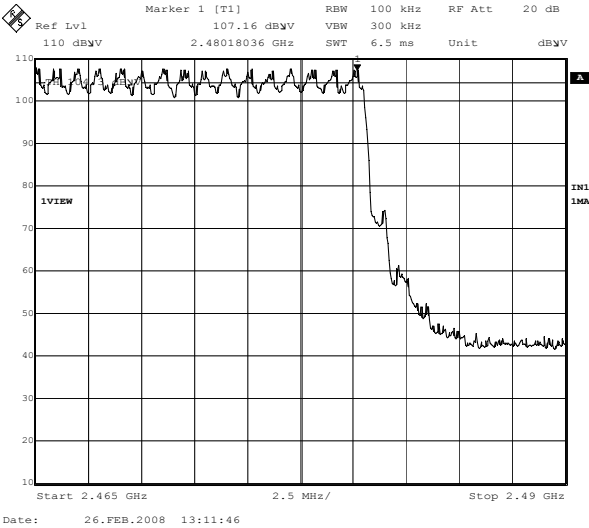
3.



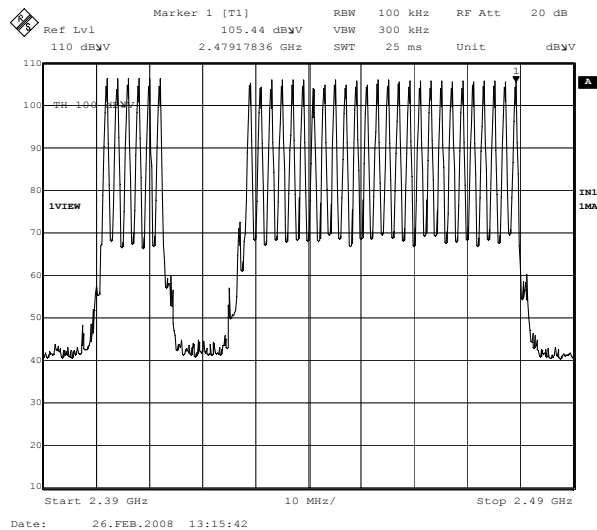
4.



5.



1. Inquiry: 32ch



Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

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

UL Japan, Inc. Yamakita No.2 Shielded Room

Date: 2008.2.26

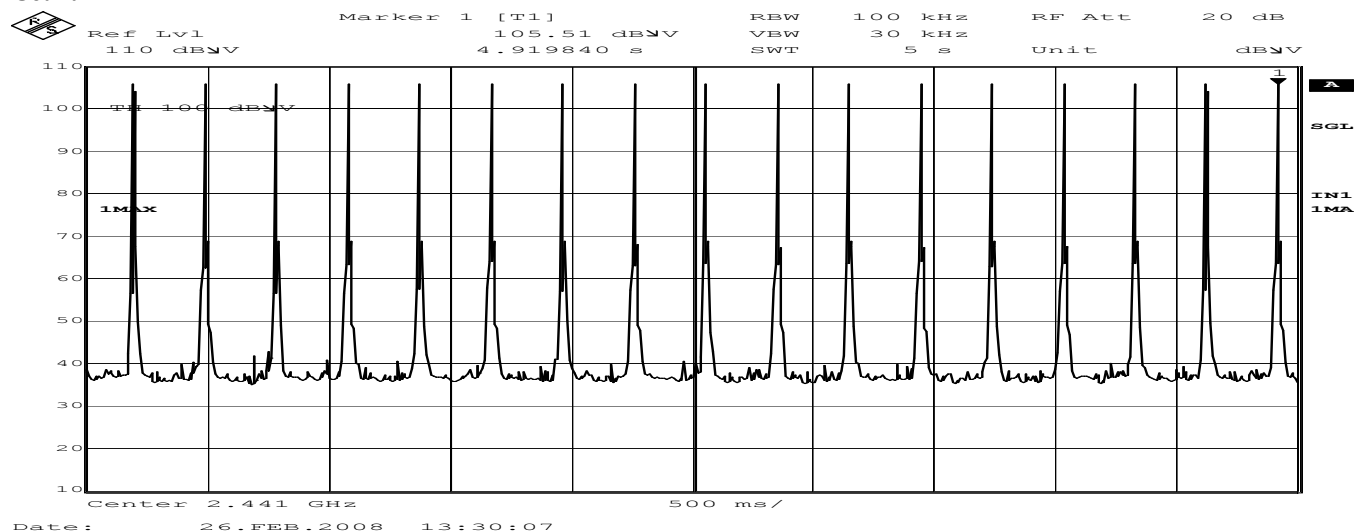
Temp./Humid.: 24deg.C/39%

Engineer: Tatsuya Arai

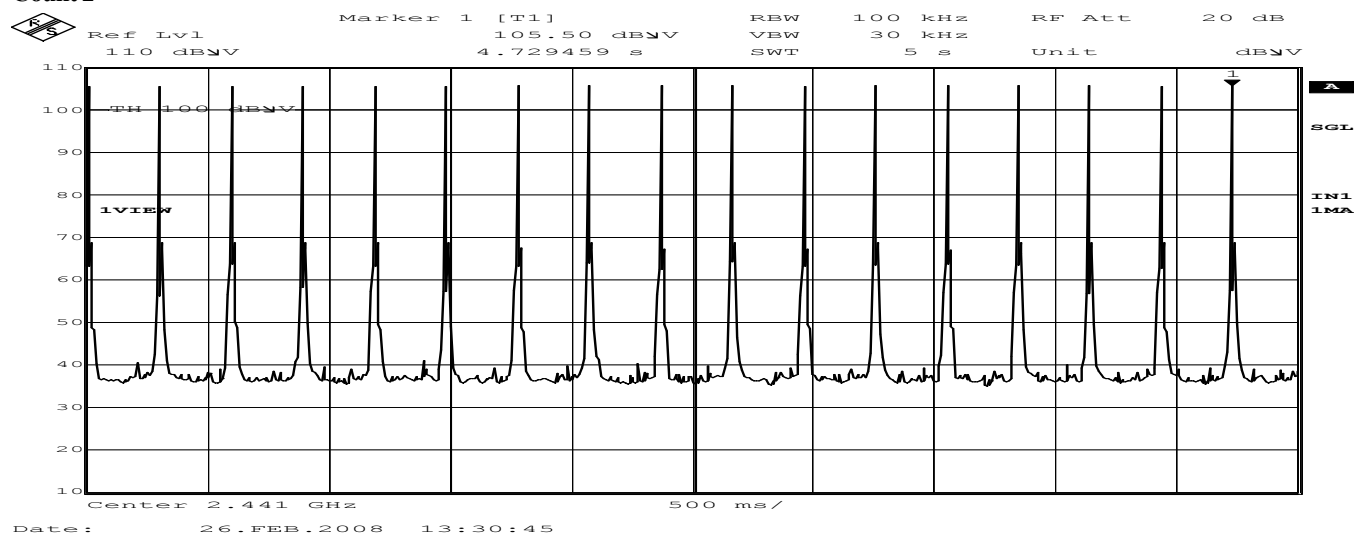
Test mode: Transmitting

Hopping (DH1):

Count 1



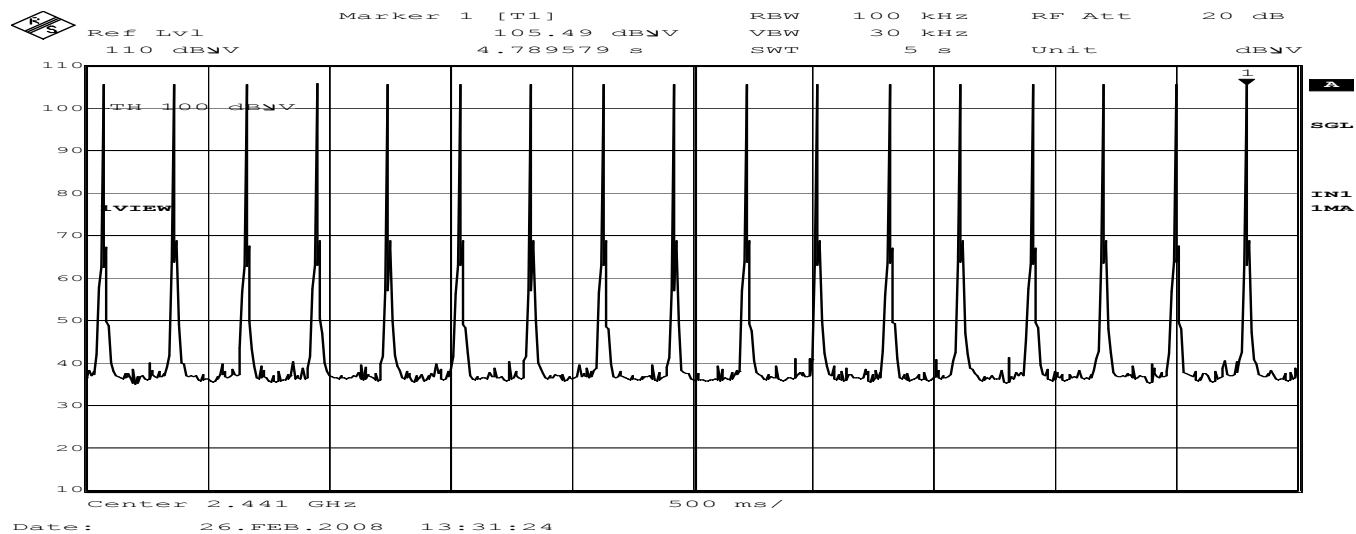
Count 2



Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

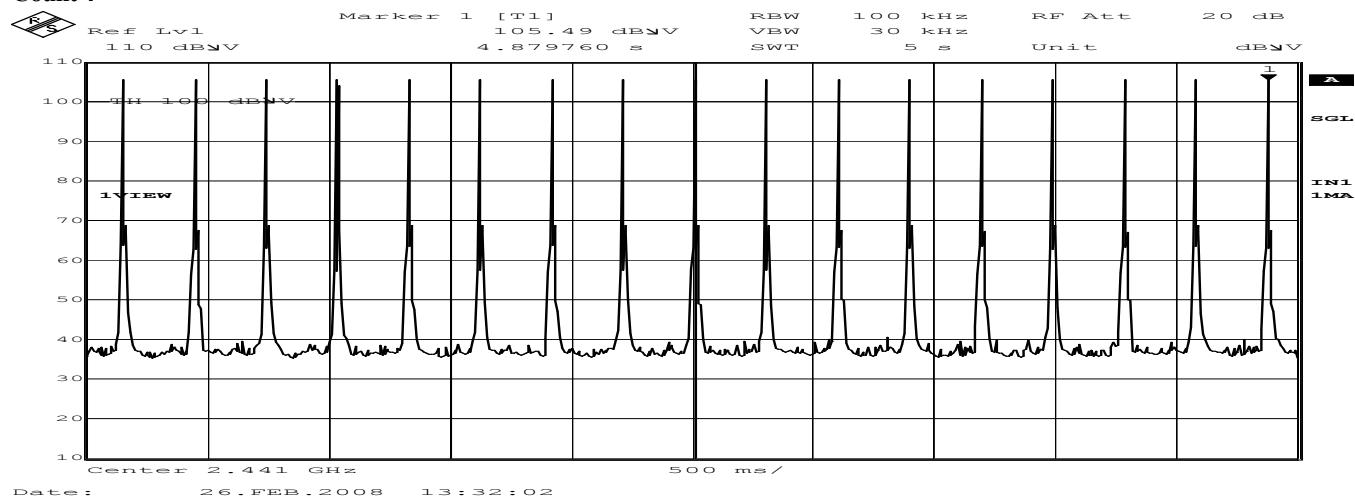
Count 3



Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

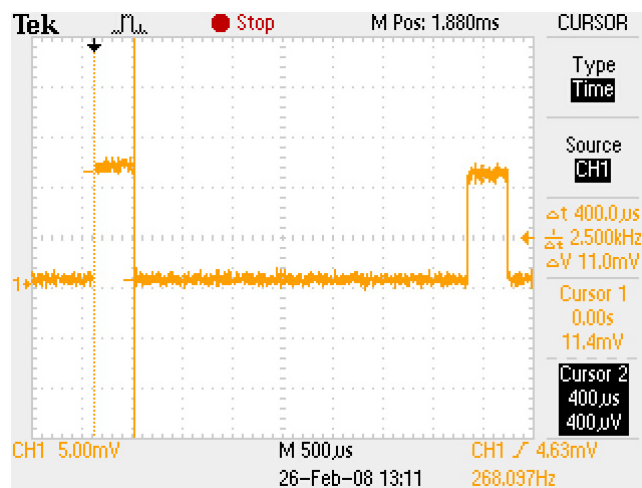
Count 4



Count 5



Duty cycle(Hopping DH1)



Average times of rising in 5 sec. of sweep = $(17 + 17 + 17 + 17 + 17) / 5 = 17.0$

Average times of rising in 1 sec. = $17.0 / 5s = 3.4$

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

Dwell time = $107.44 * 0.400 = 42.98 [ms]$

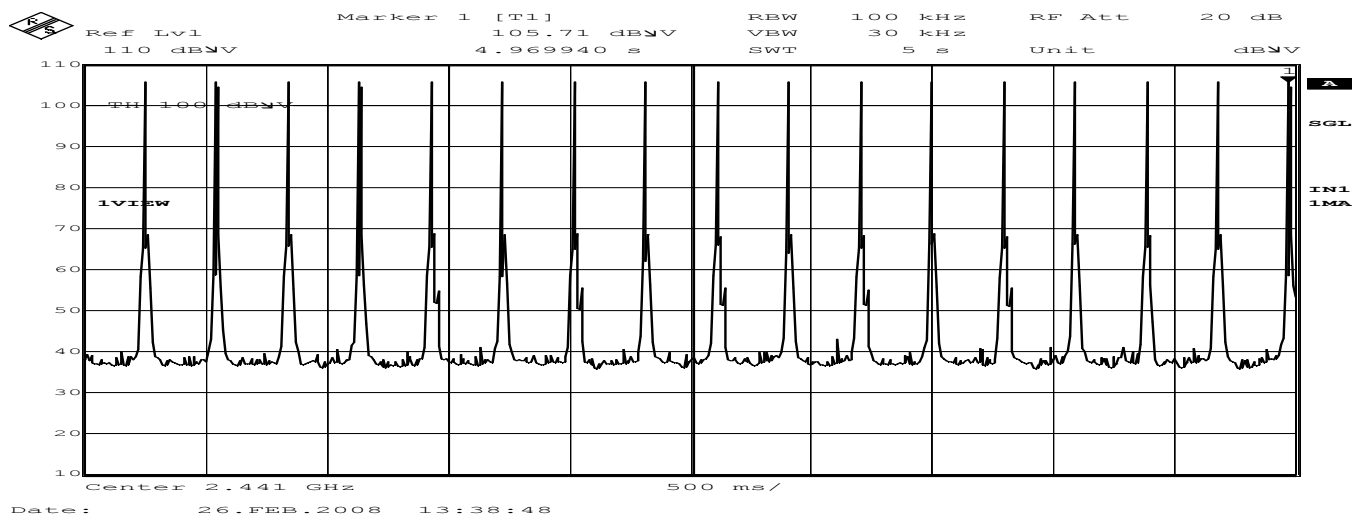
Limit : Dwell Time < 0.4[s]

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

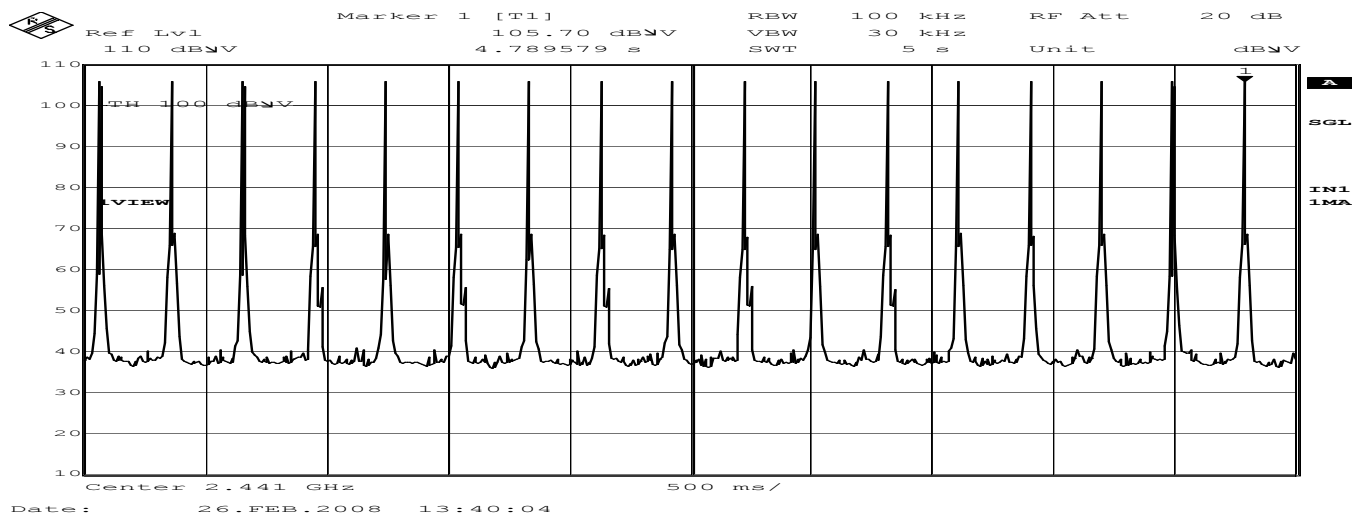
Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

Hopping (DH3):

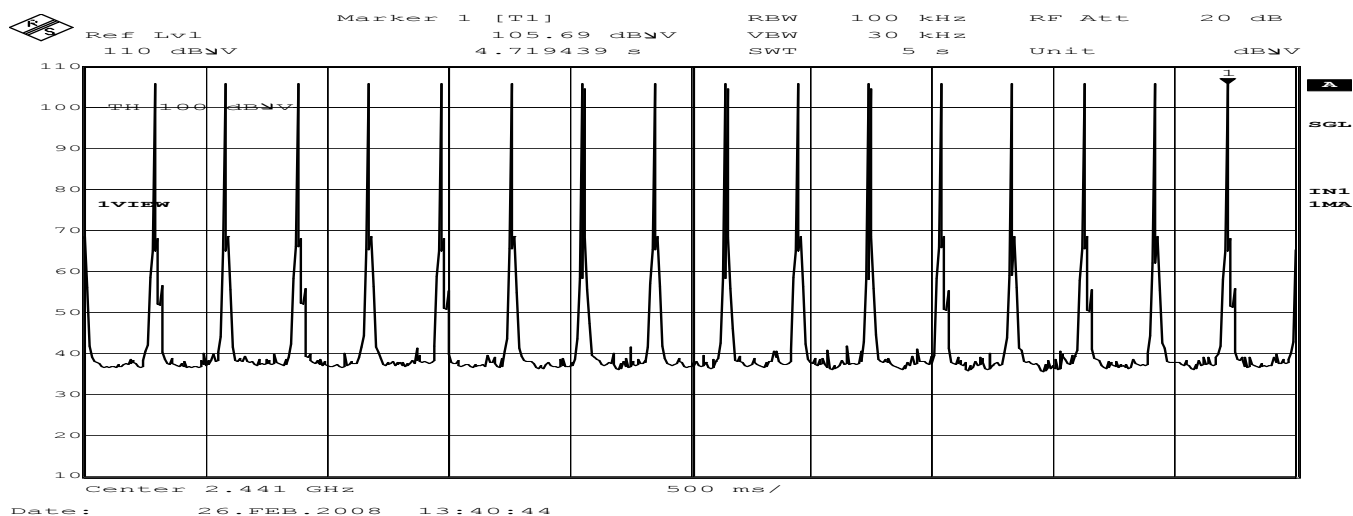
Count 1



Count 2



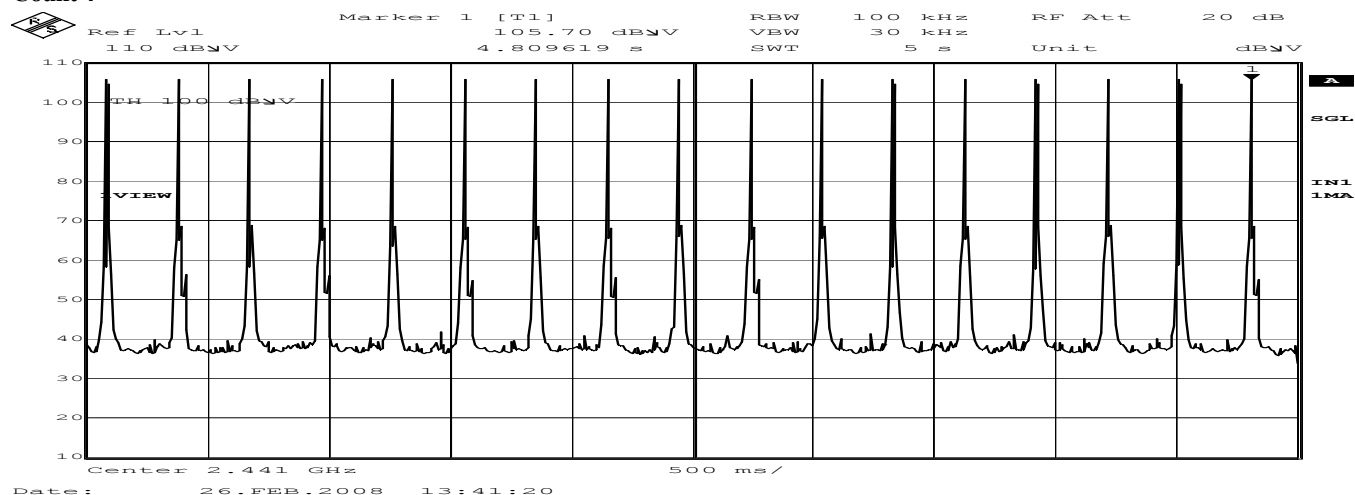
Count 3



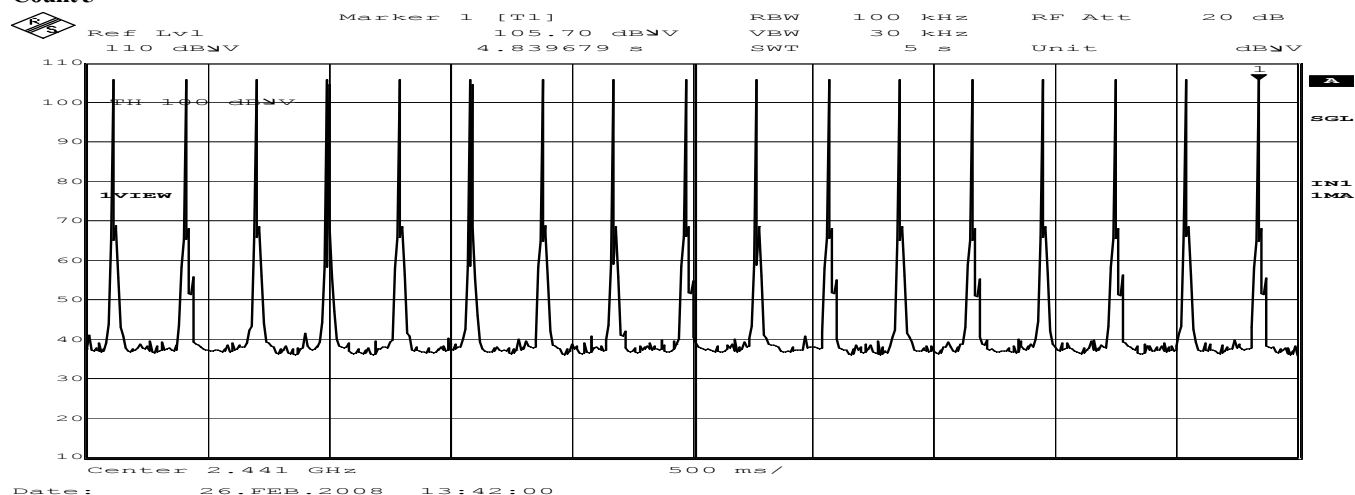
Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

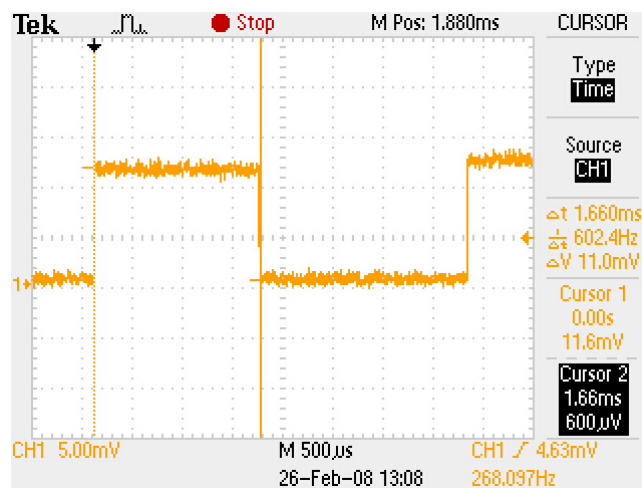
Count 4



Count 5



Duty cycle(Hopping DH3)



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

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 = $106.18 * 1.66 = 176.26 [ms]$

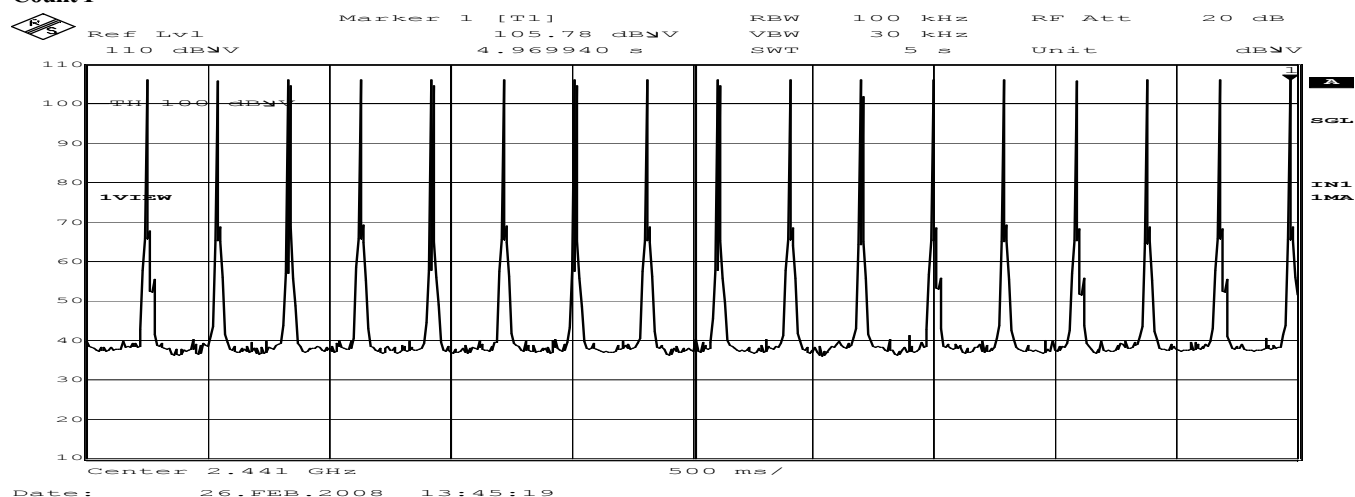
Limit : Dwell Time < 0.4[s]

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

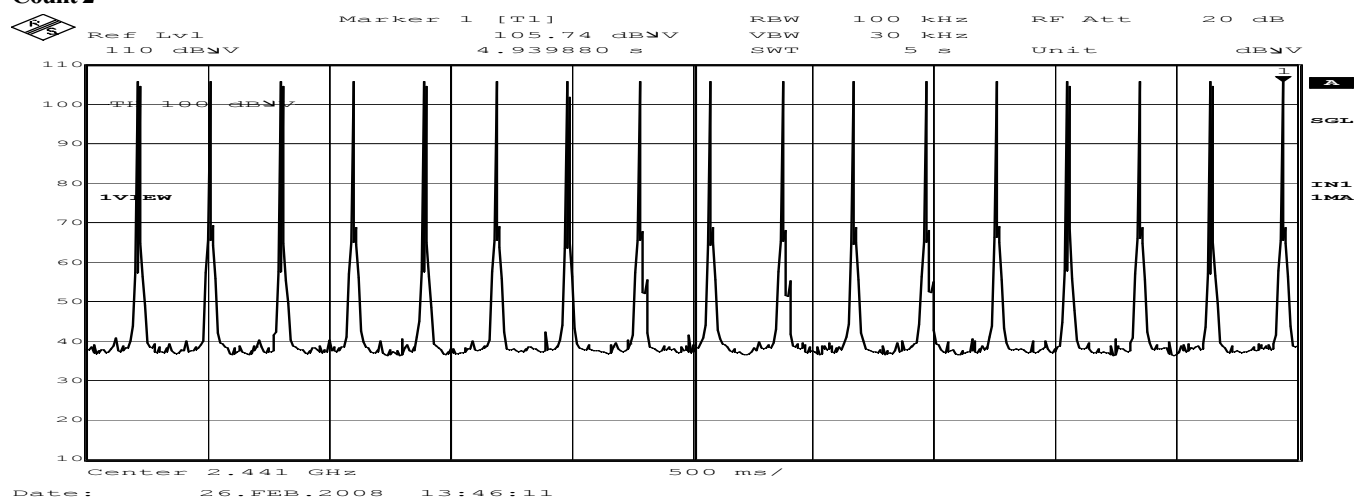
Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

Hopping (DHS):

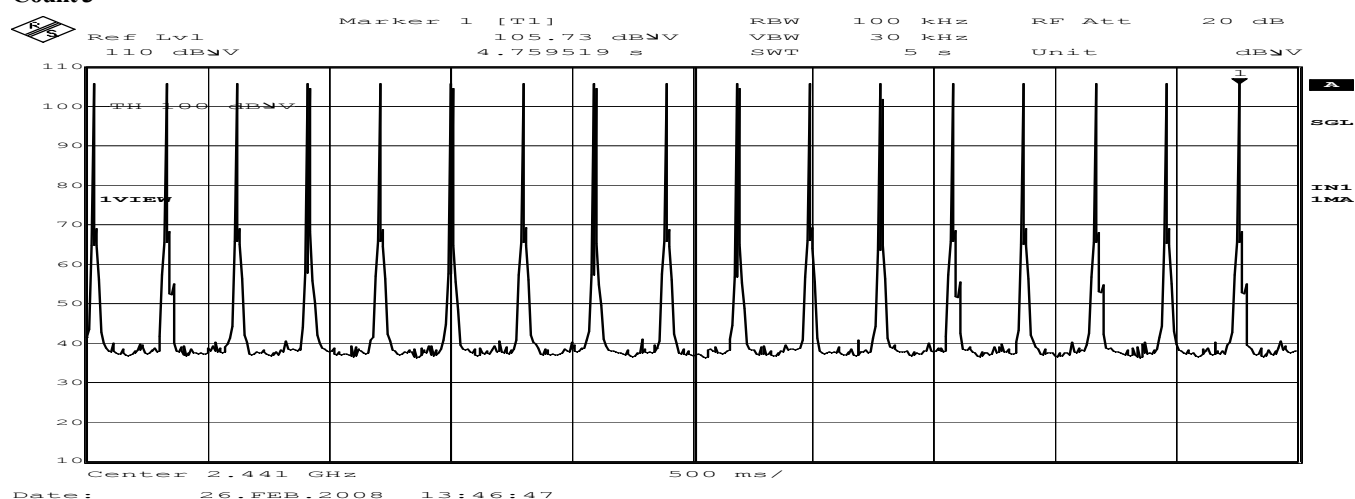
Count 1



Count 2



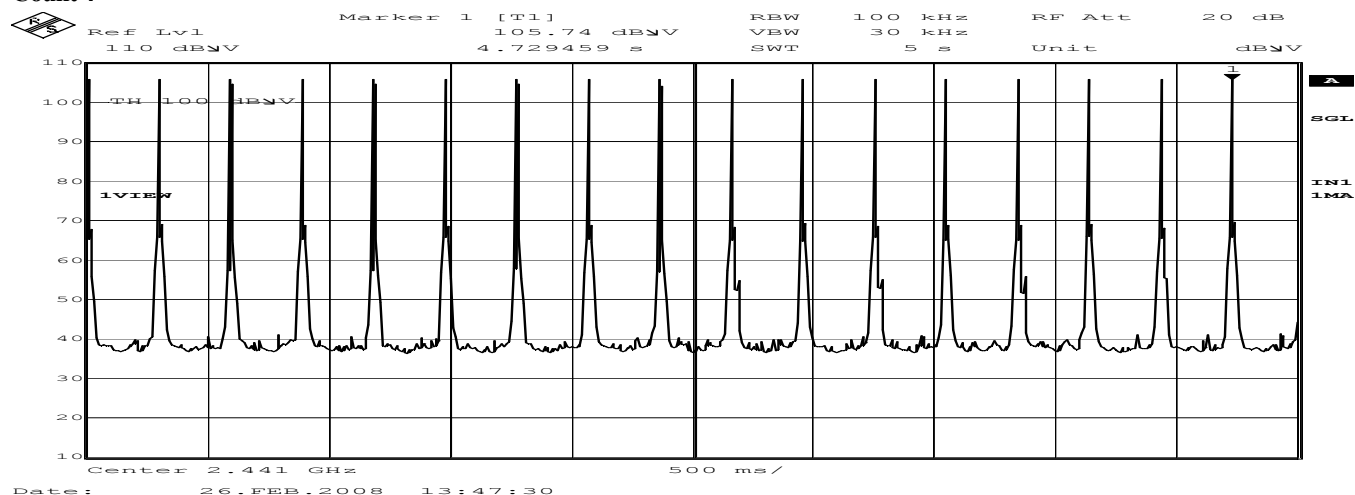
Count 3



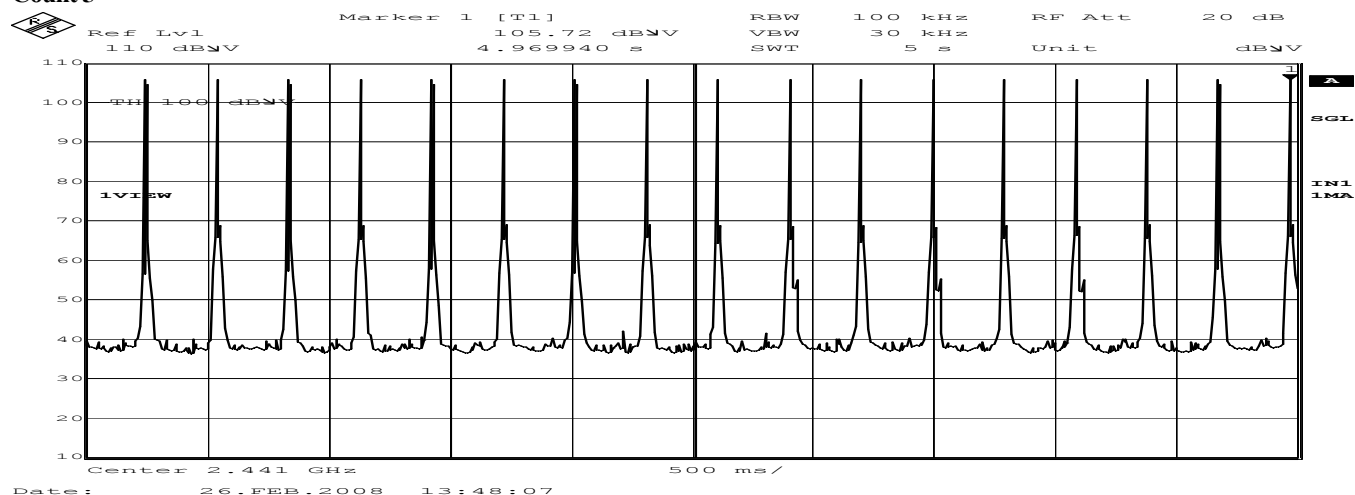
Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

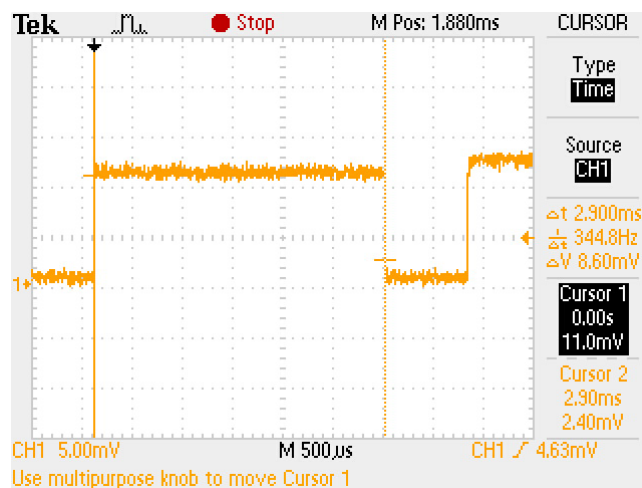
Count 4



Count 5



Duty cycle(Hopping DH5)



Average times of rising in 5 sec. of sweep = $(17 + 17 + 17 + 17 + 17) / 5 = 17.0$

Average times of rising in 1 sec. = $17.0 / 5s = 3.4$

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

Dwell time = $107.44 * 2.90 = 311.58 [ms]$

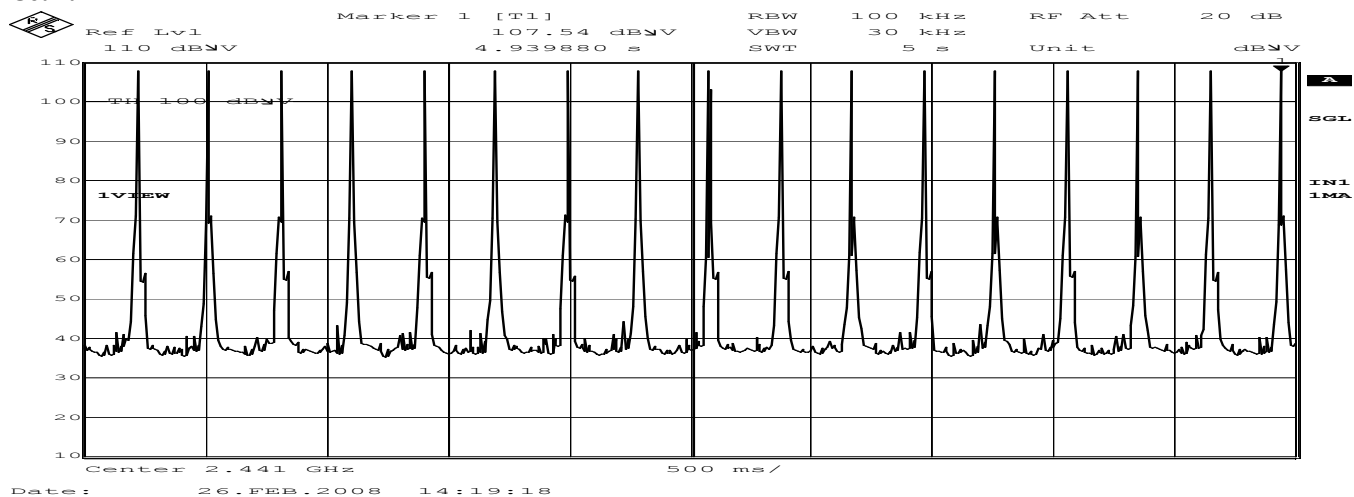
Limit : Dwell Time < 0.4[s]

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

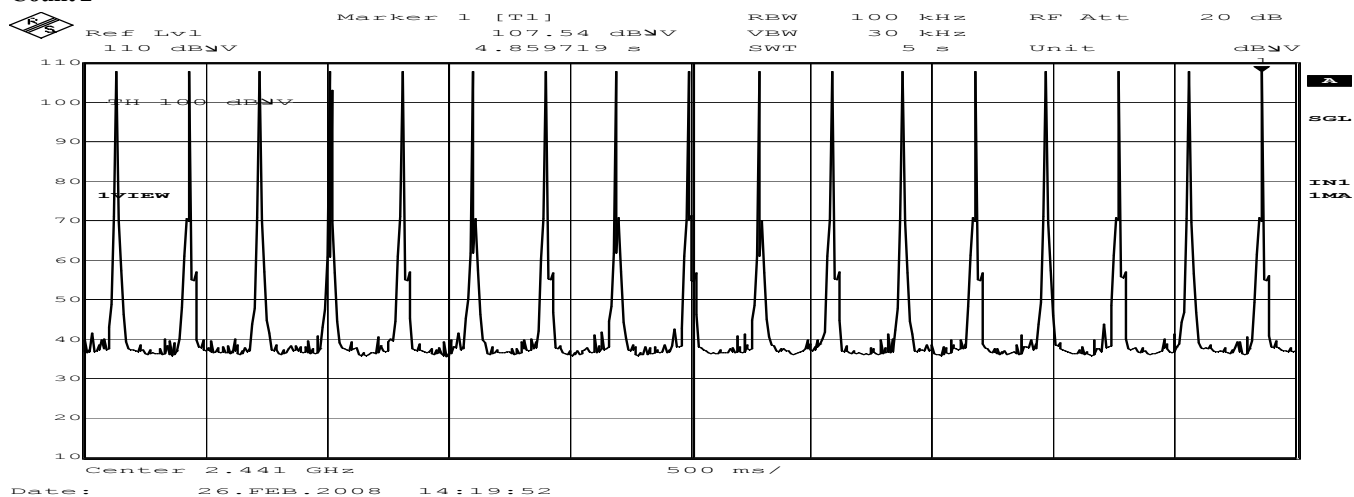
Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

Hopping (3DH1):

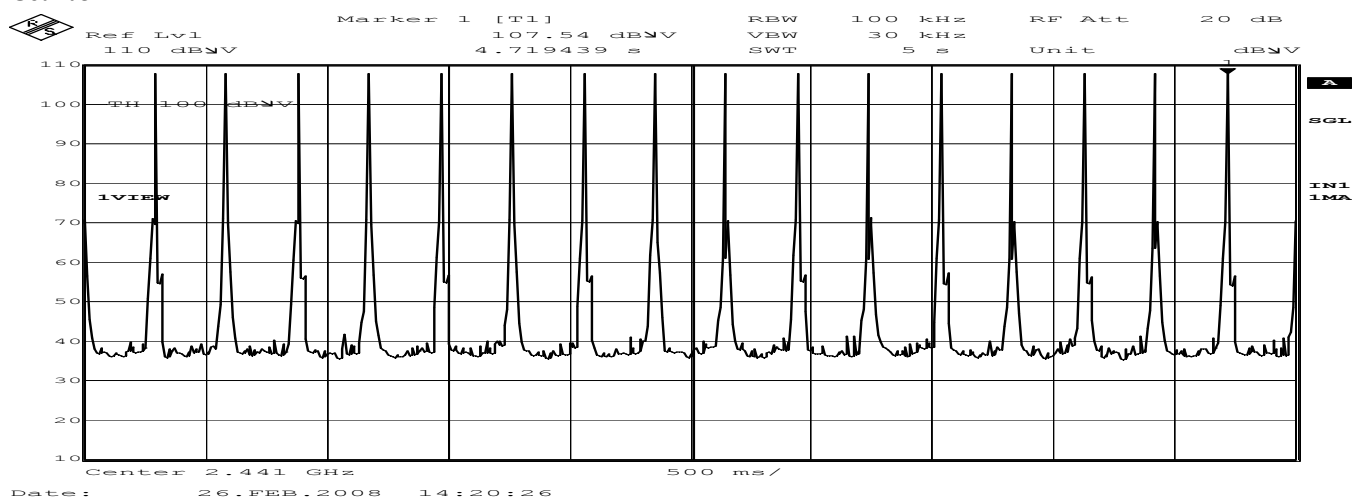
Count 1



Count 2



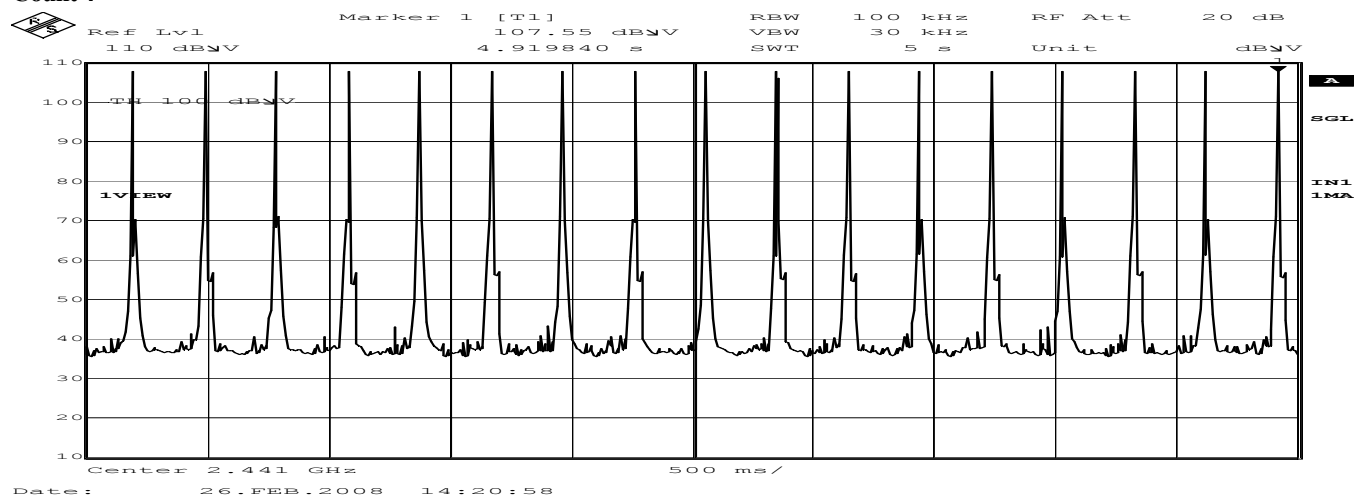
Count 3



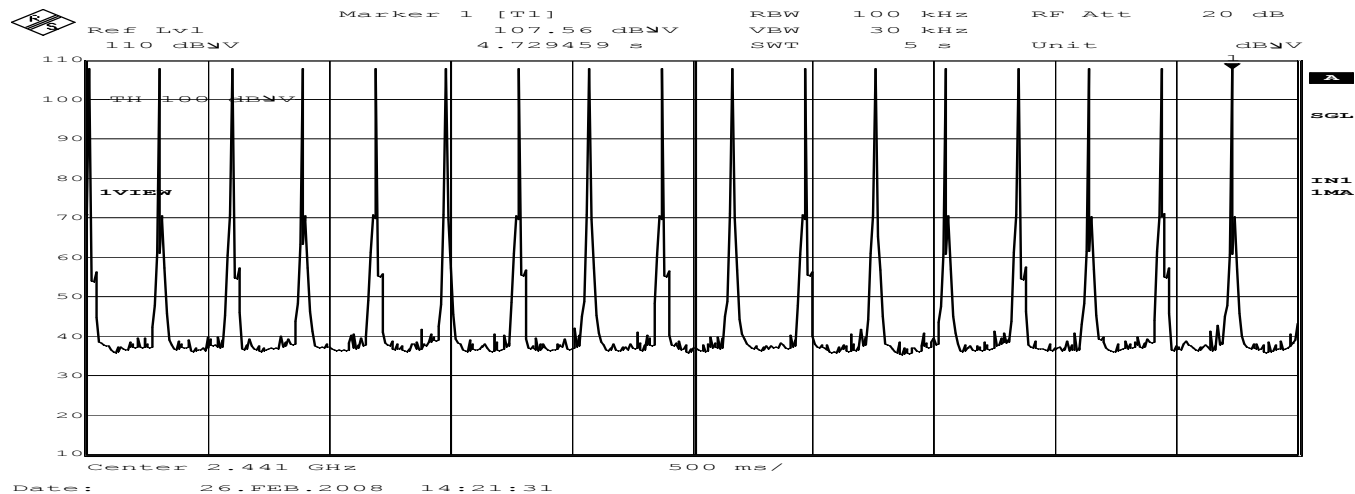
Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

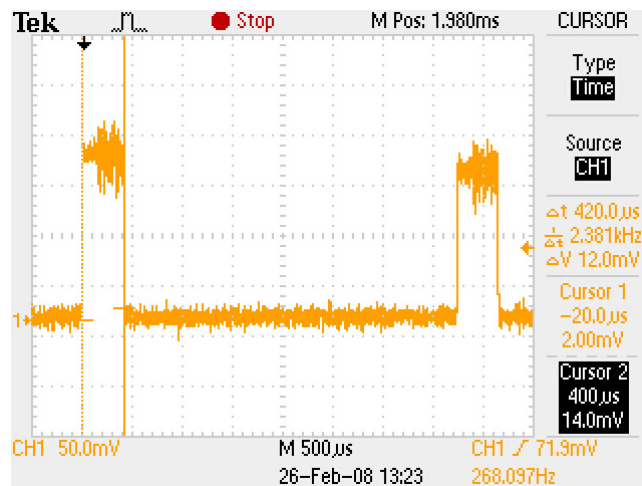
Count 4



Count 5



Duty cycle(Hopping 3DH1)



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

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 = $106.18 * 0.42 = 44.60$ [ms]

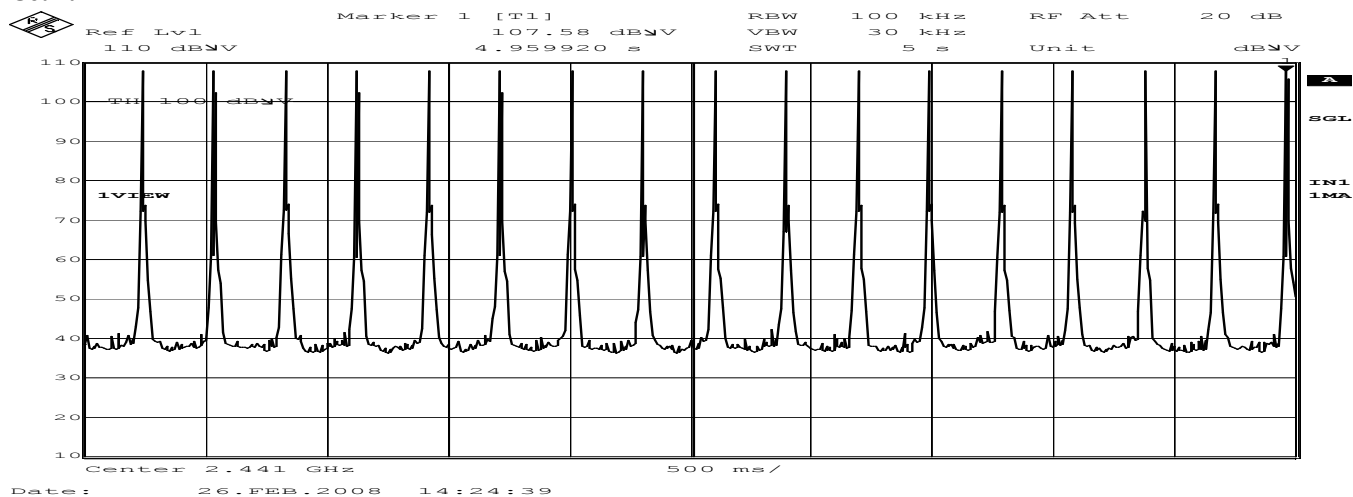
Limit : Dwell Time < 0.4[s]

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

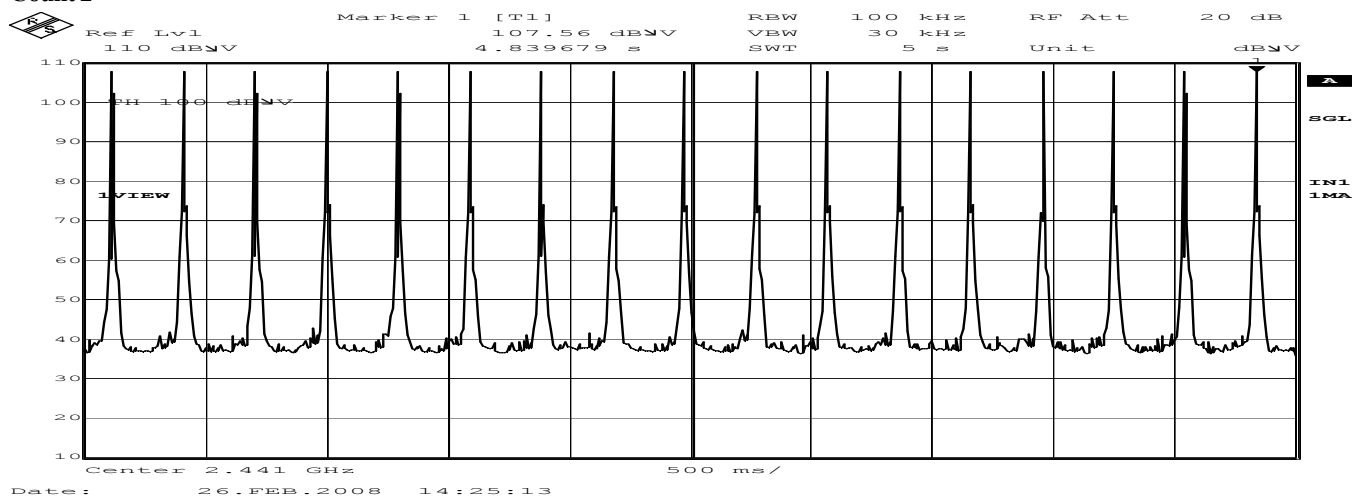
Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

Hopping (3DH3):

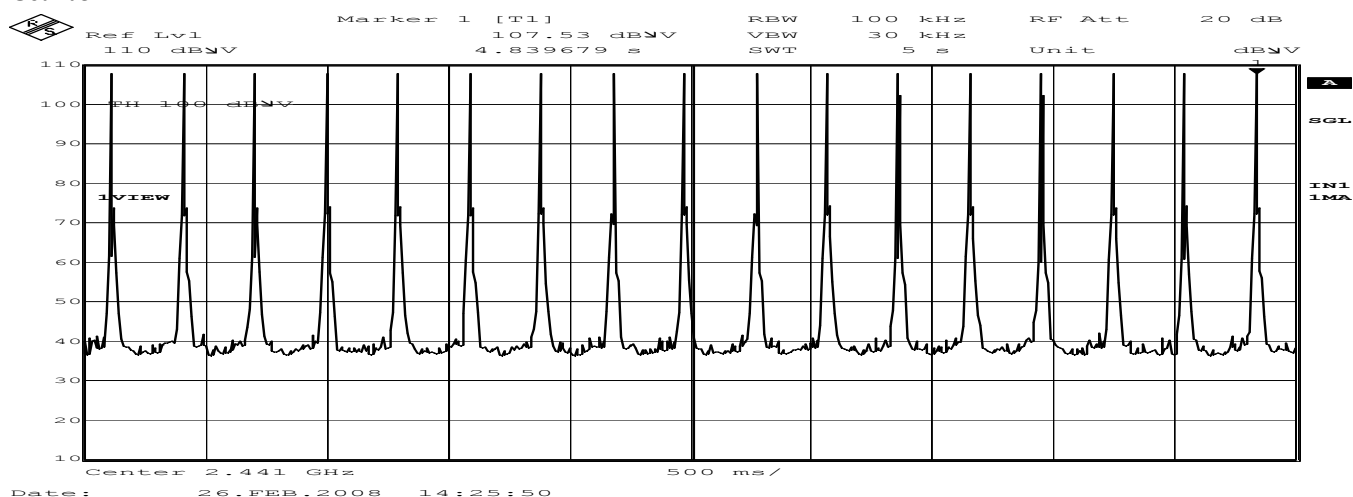
Count 1



Count 2



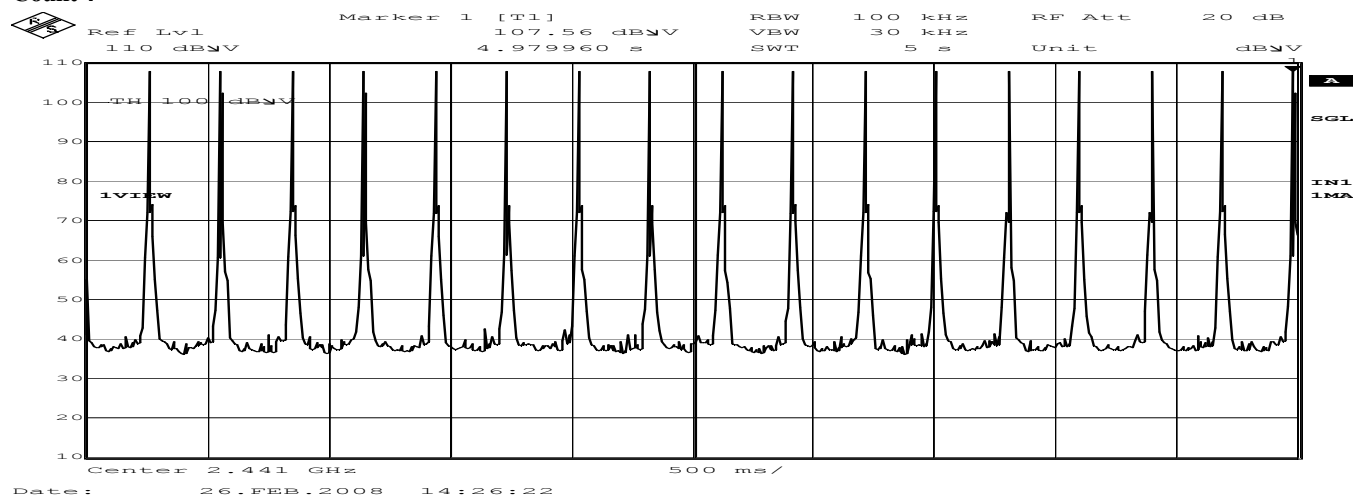
Count 3



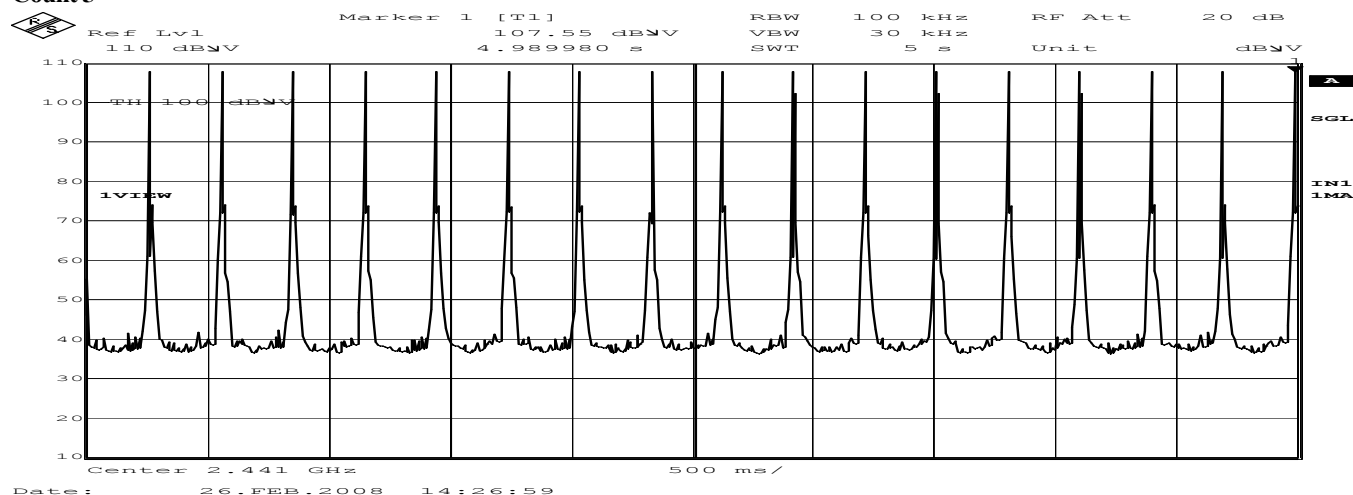
Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

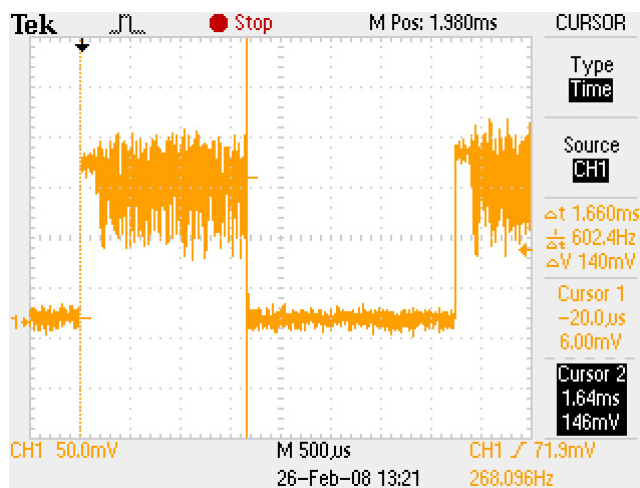
Count 4



Count 5



Duty cycle(Hopping 3DH3)



Average times of rising in 5 sec. of sweep = $(17 + 17 + 17 + 17 + 17) / 5 = 17.0$

Average times of rising in 1 sec. = $17.0 / 5s = 3.4$

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

Dwell time = $107.44 * 1.66 = 178.35 [ms]$

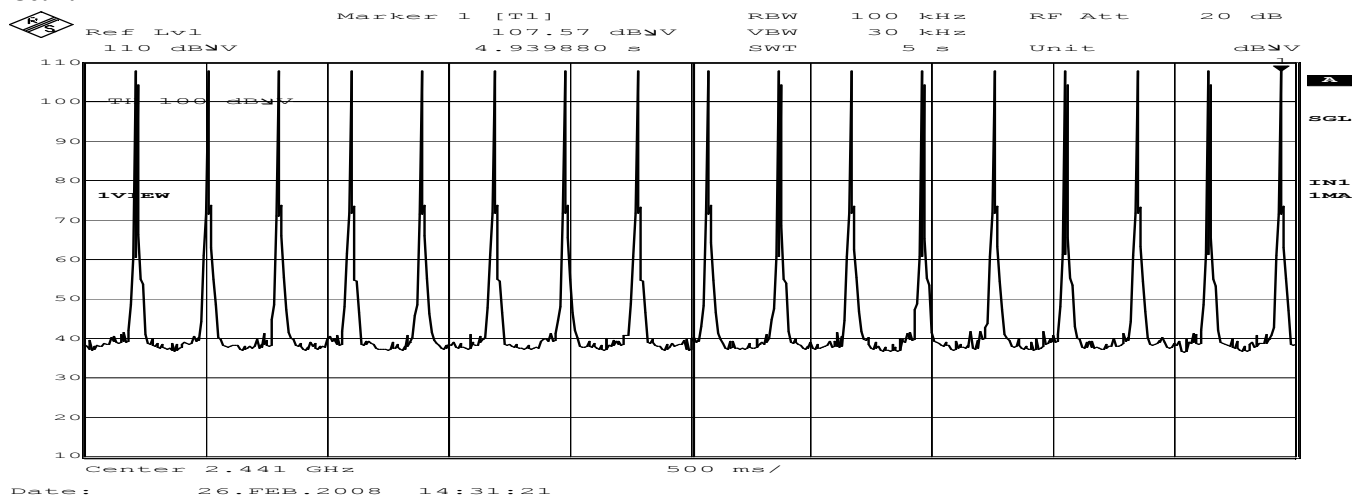
Limit : Dwell Time < 0.4[s]

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

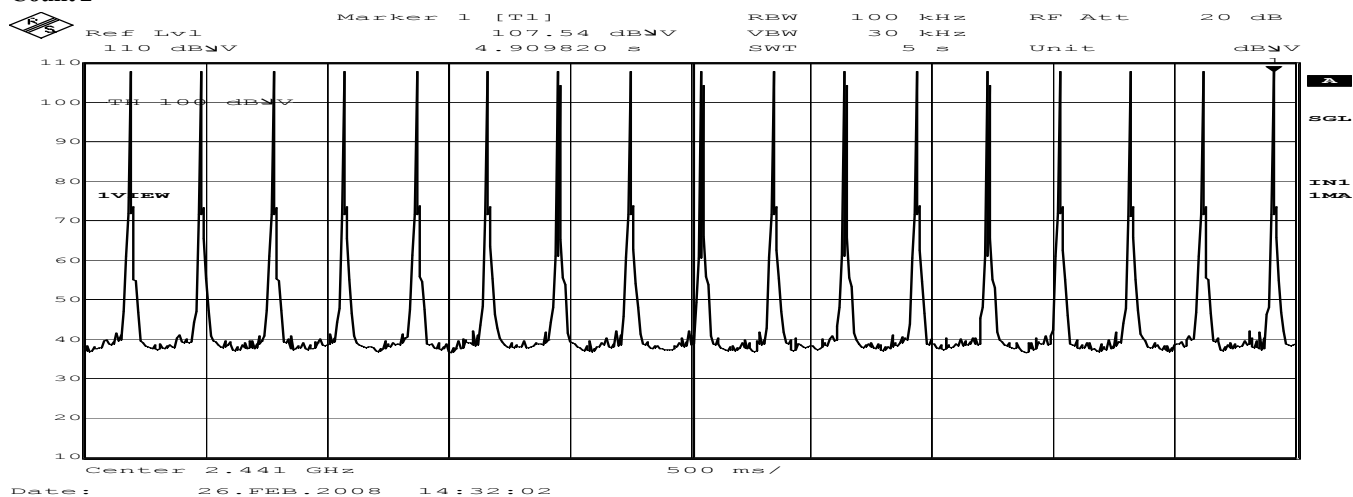
Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

Hopping (3DH5):

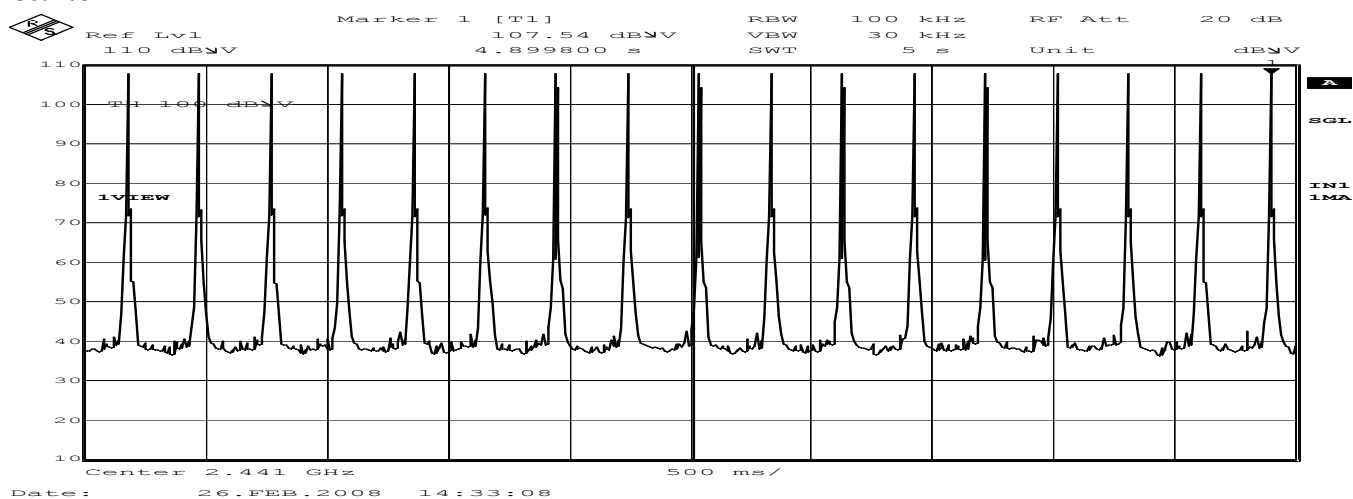
Count 1



Count 2



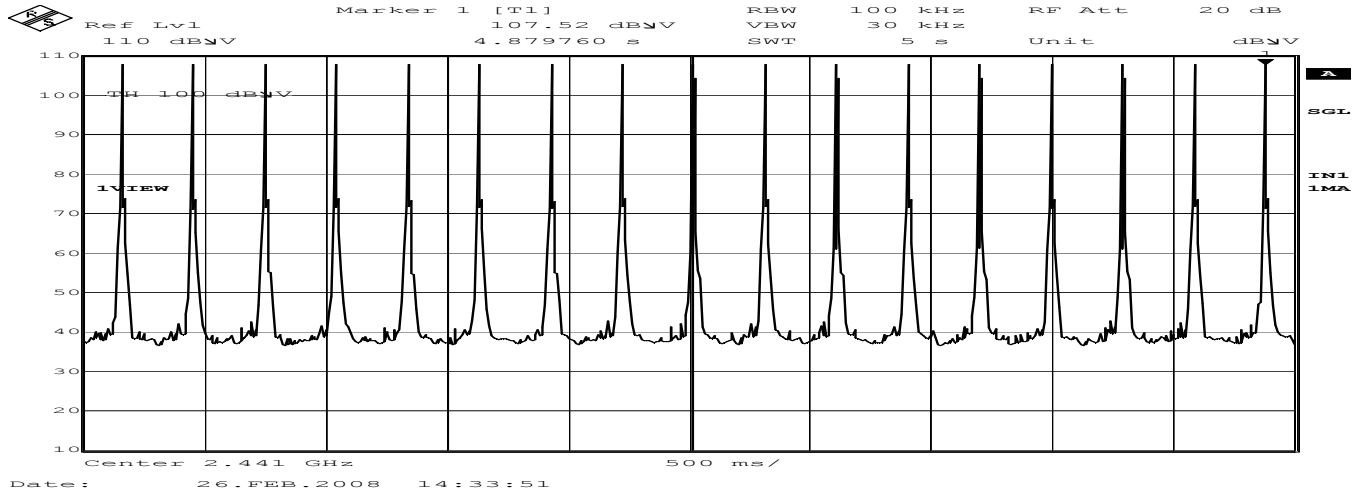
Count 3



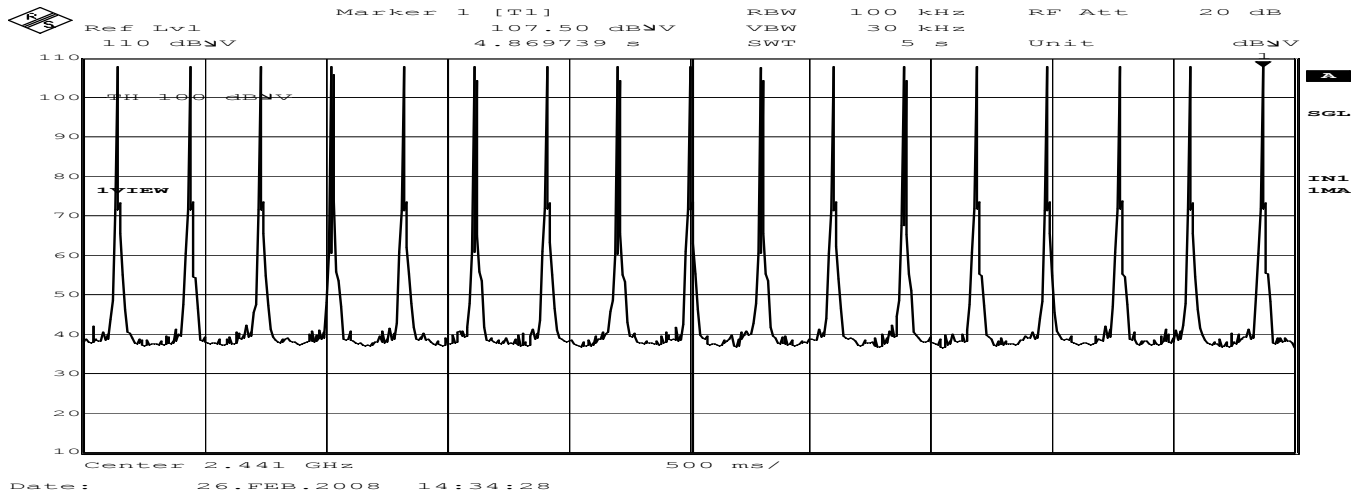
Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

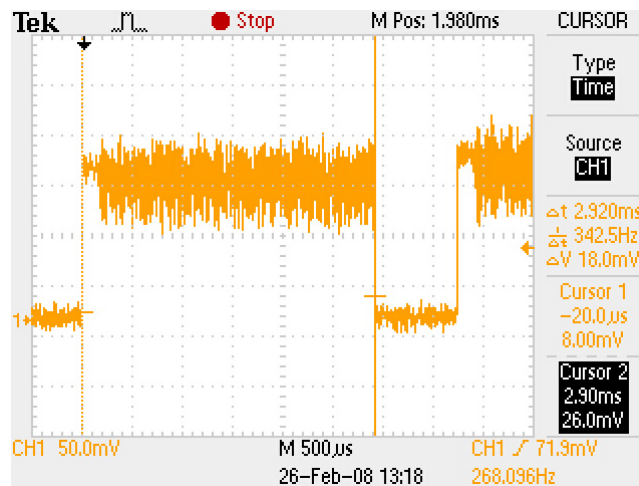
Count 4



Count 5



Duty cycle(Hopping 3DH5)



Average times of rising in 5 sec. of sweep = $(17 + 17 + 17 + 17 + 17) / 5 = 17.0$

Average times of rising in 1 sec. = $17.0 / 5s = 3.4$

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

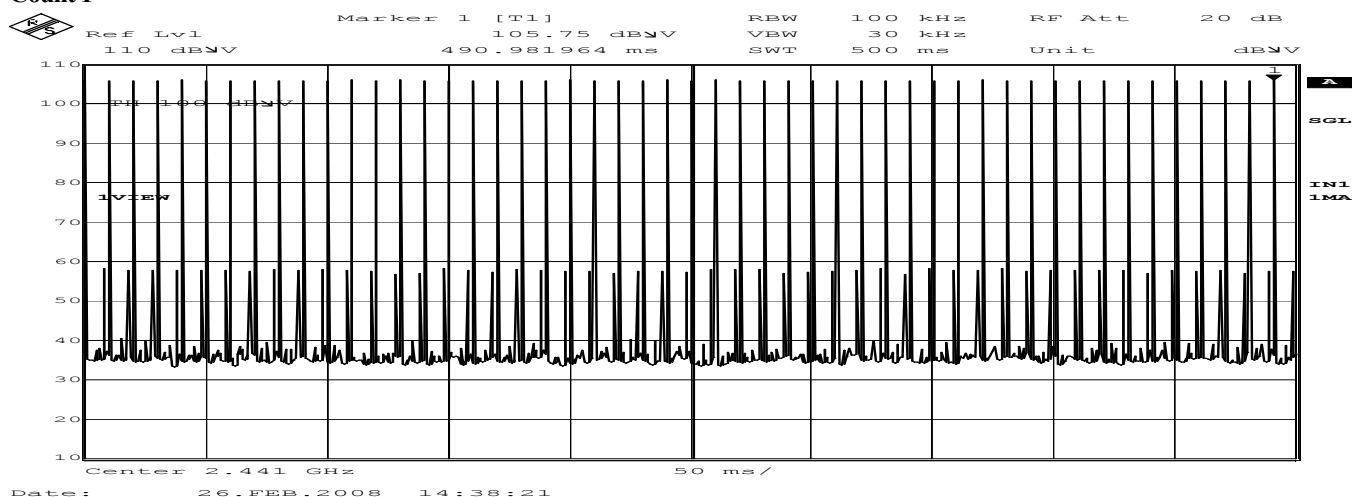
Dwell time = $107.44 * 2.92 = 313.72 [ms]$

Limit : Dwell Time < 0.4[s]

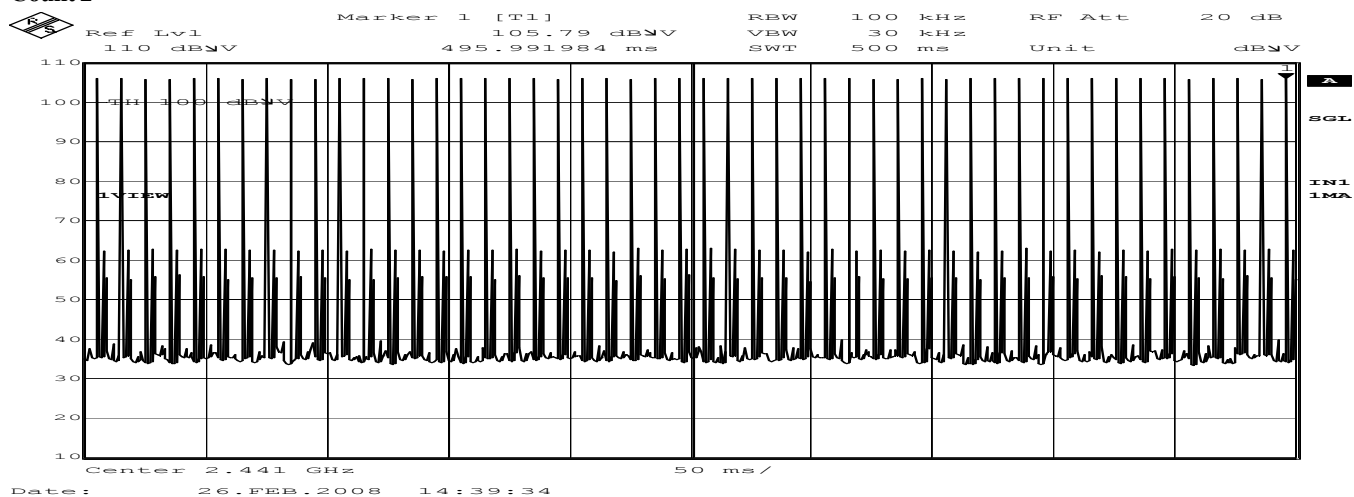
Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

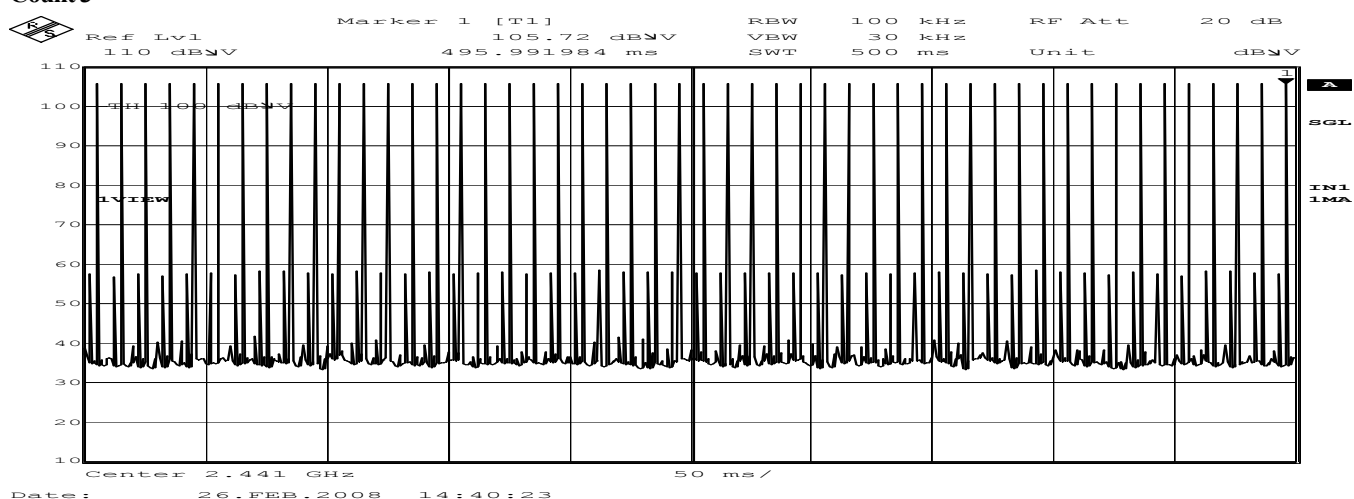
Inquiry:
Count 1



Count 2



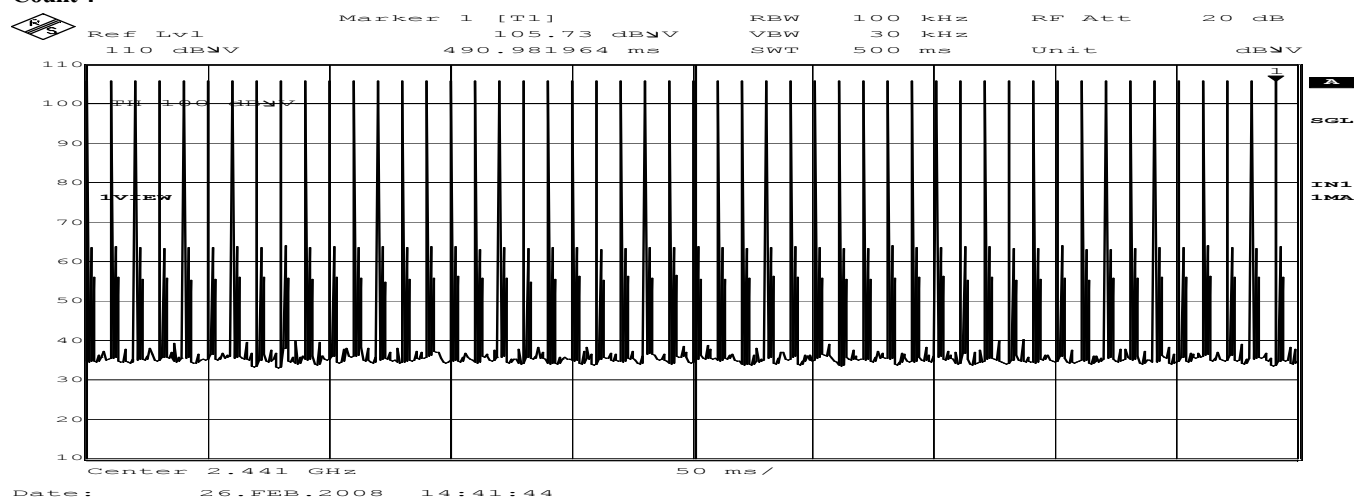
Count 3



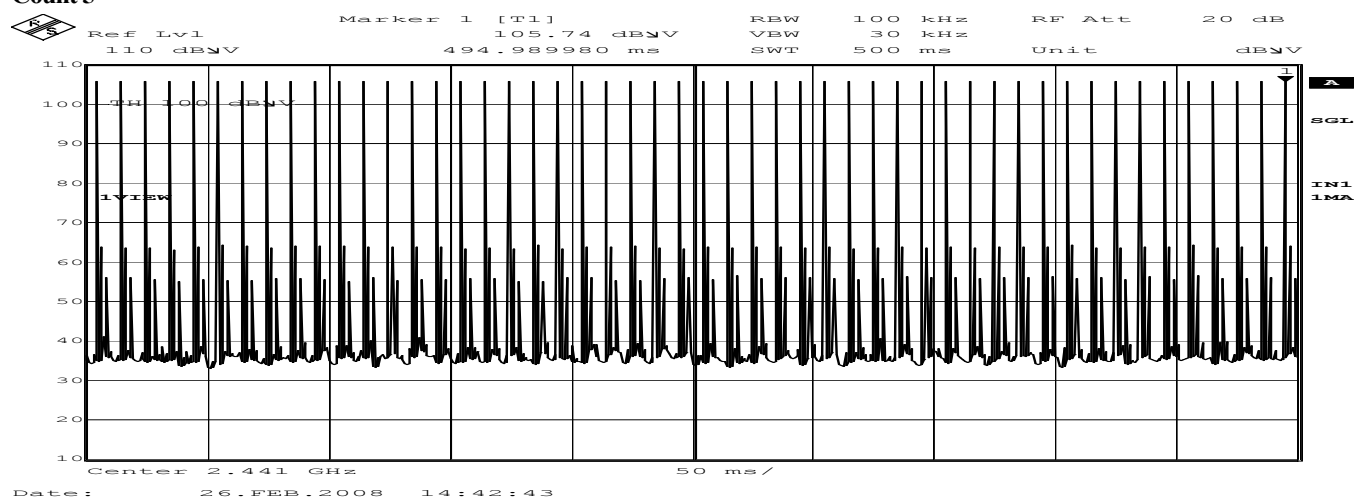
Company: Pioneer Corporation
 Kind of Equipment: CAR AUDIO with built in Bluetooth
 Serial No.: K2GK068

Report No.: 28GE0110-YK-A
 Model No.: 86120-48G00
 Power: DC13.2V

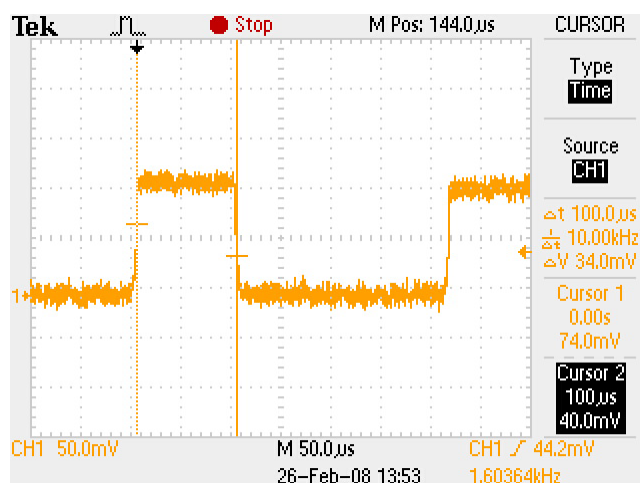
Count 4



Count 5



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 = $1280.0 * 0.100 = 128.0 [ms]$

Limit : Dwell Time < 0.4[s]

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

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

UL Japan, Inc.
YAMAKITA No.2 Shielded Room

DATE : 2008.2.26
TEMP./HUMI : 24deg.C/39%
TEST MODE : Transmitting

ENGINEER : Akira Sato

DH5

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	-0.16	1.16	1.00	20.96	19.96
Mid	2441.00	-0.64	1.16	0.52	20.96	20.44
High	2480.00	-0.96	1.16	0.20	20.96	20.76
Inquiry	-	-0.50	1.16	0.66	20.96	20.30

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:Customer's cable + KCC-D7

2DH5

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	2.12	1.16	3.28	20.96	17.68
Mid	2441.00	1.92	1.16	3.08	20.96	17.88
High	2480.00	1.28	1.16	2.44	20.96	18.52

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:Customer's cable + KCC-D7

3DH5

CH	FREQ [GHz]	P/M Reading [dBm]	Cable Loss [dB]	Results [dBm]	Limit (125mW) [dBm]	MARGIN [dB]
Low	2402.00	2.27	1.16	3.43	20.96	17.53
Mid	2441.00	2.14	1.16	3.30	20.96	17.66
High	2480.00	1.34	1.16	2.50	20.96	18.46

Limit: 125mW=20.96dBm

P/M: Power Meter

CABLE LOSS:Customer's cable + KCC-D7

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

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

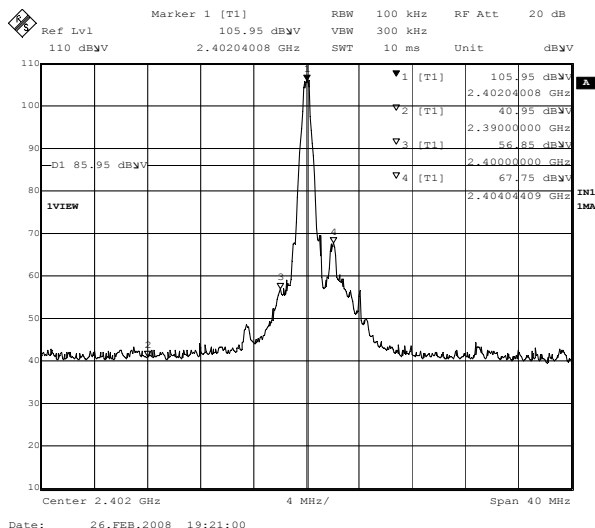
UL Japan, Inc. Yamakita No.2 Shielded Room

Date: 2008.2.26
Temp/Humid.: 24deg.C/39%
Engineer: Akira Sato
Test mode: Transmitting

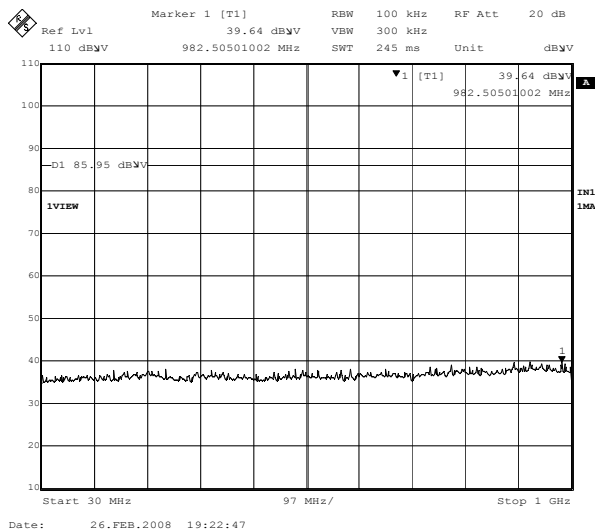
[Transmitting DH5]

Ch:2402MHz

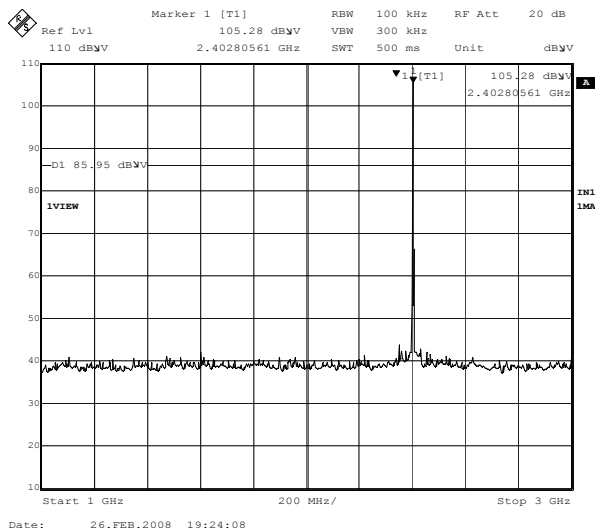
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

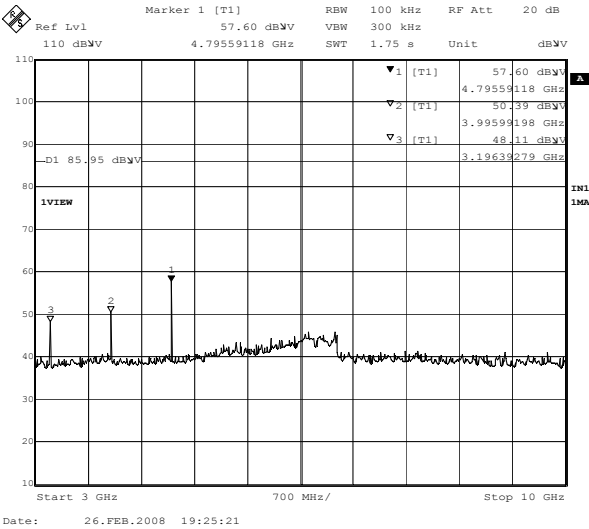
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

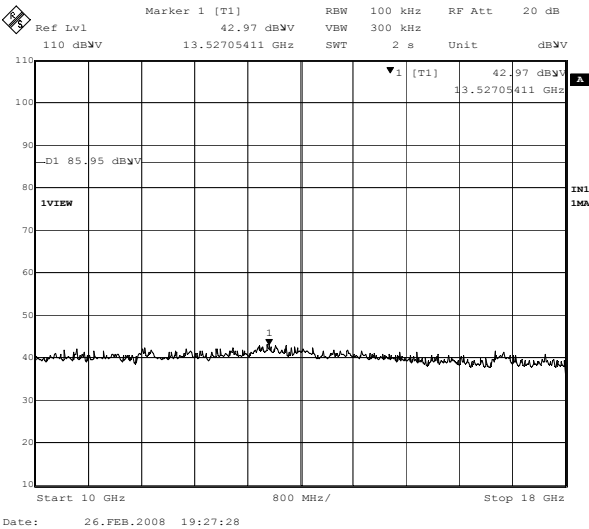
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DH5]
Ch:2402MHz

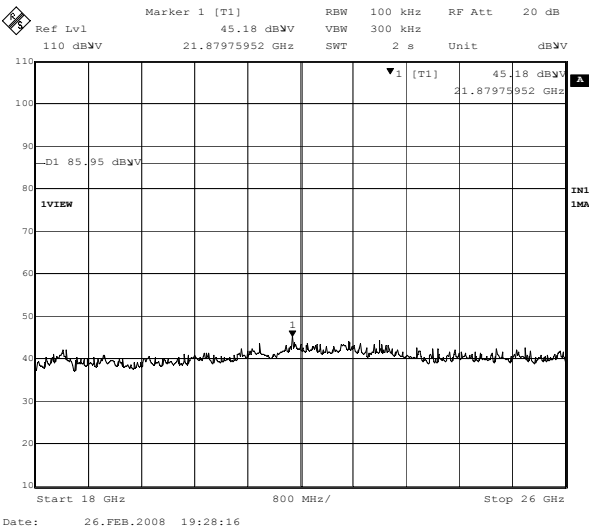
4.



5.



6.



Company:
Kind of Equipment:
Serial No.:

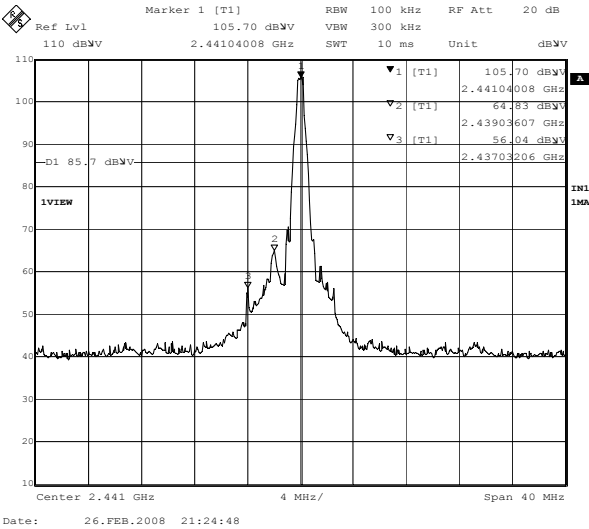
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

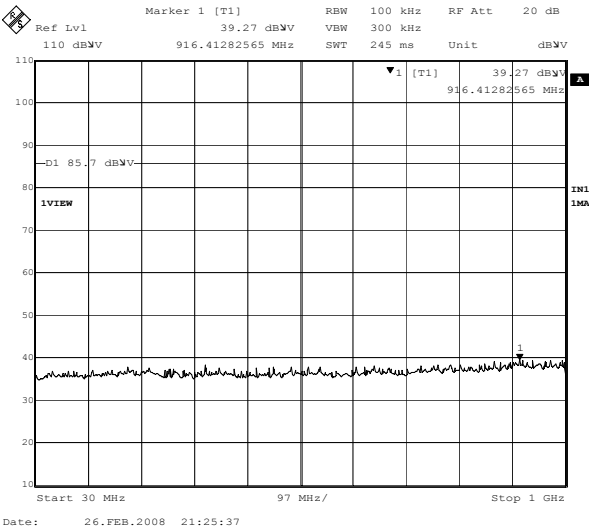
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DH5]
Ch:2441MHz

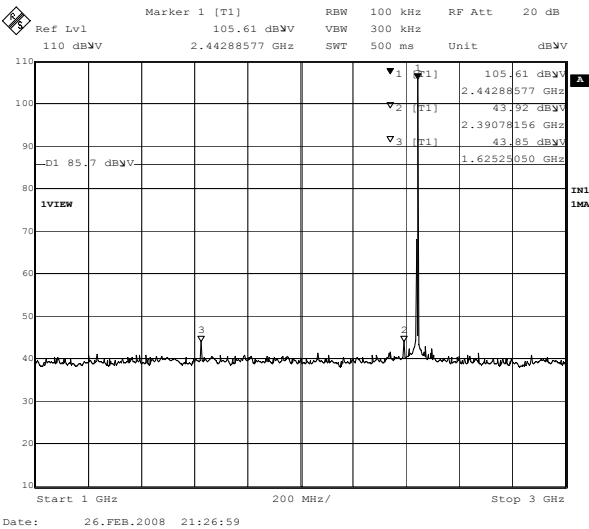
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

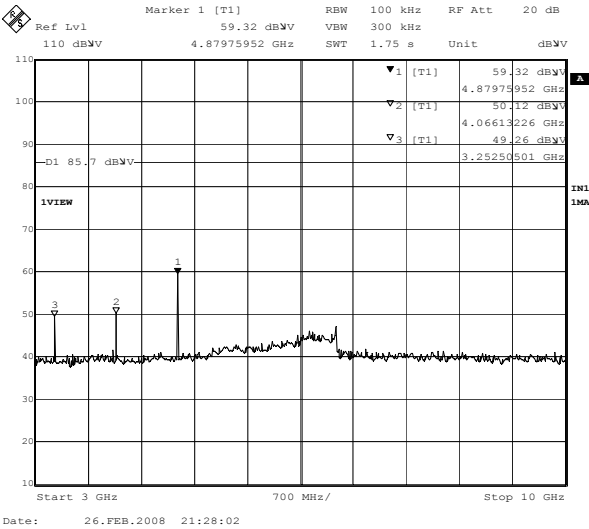
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

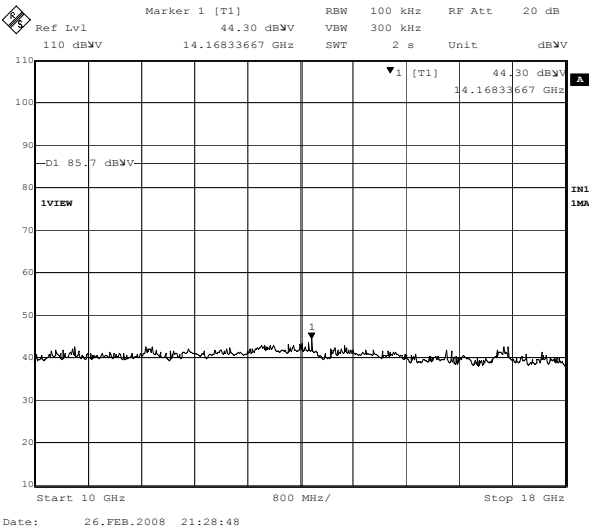
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DH5]
Ch:2441MHz

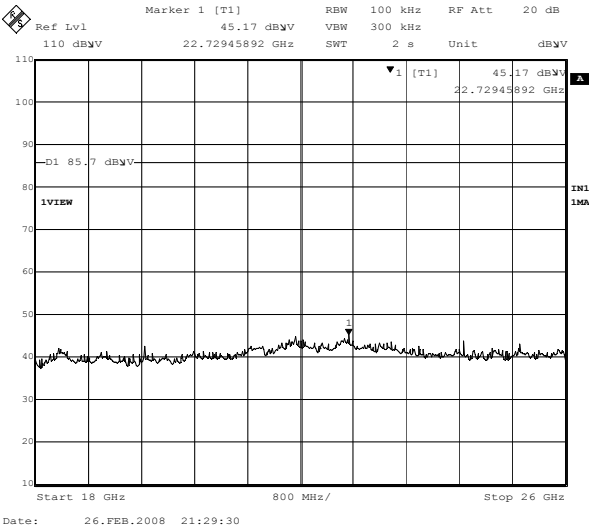
4.



5.



6.



Company:
Kind of Equipment:
Serial No.:

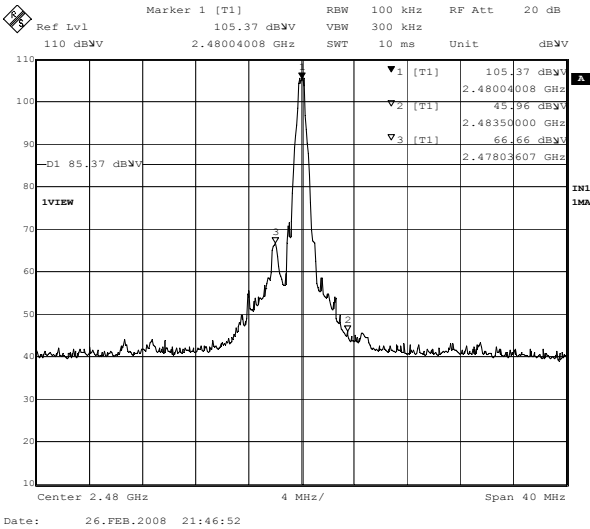
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

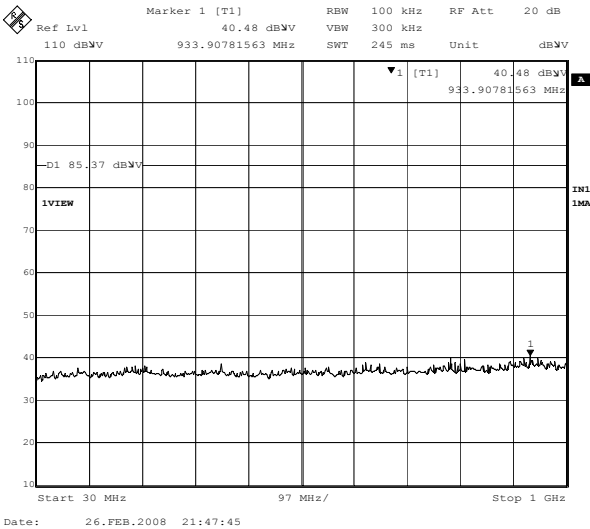
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DH5]
Ch:2480MHz

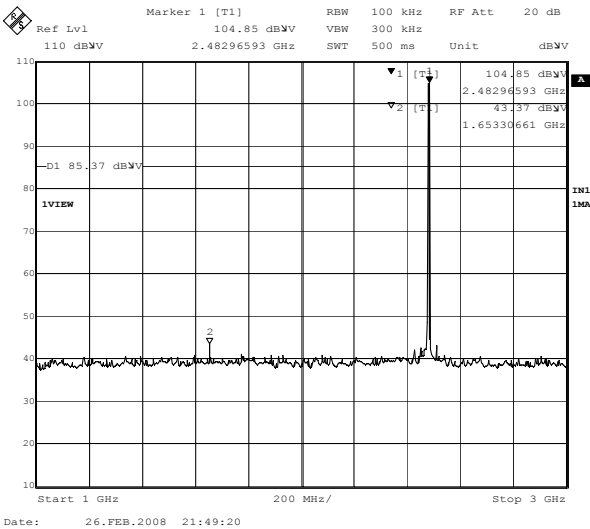
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

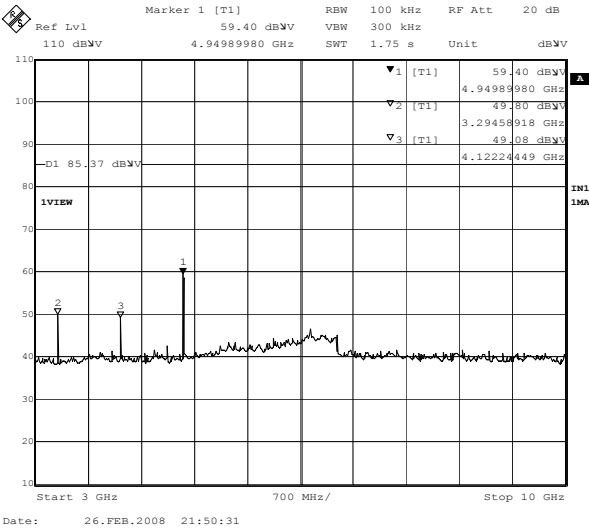
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

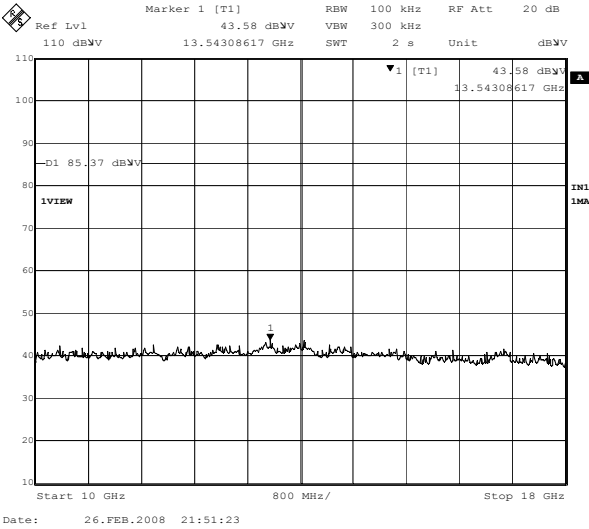
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DH5]
Ch:2480MHz

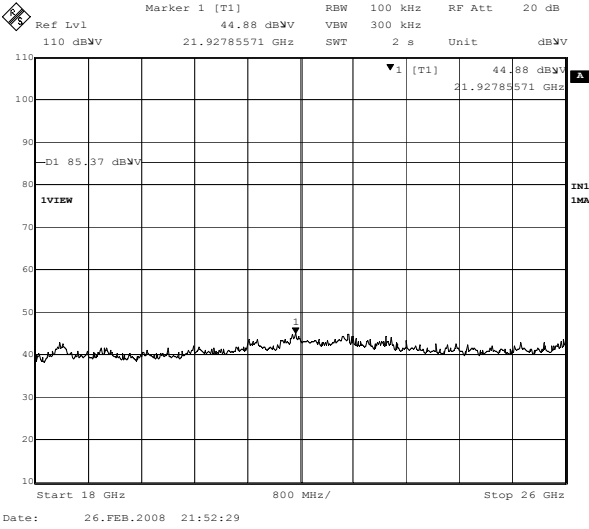
4.



5.



6.



Company:
Kind of Equipment:
Serial No.:

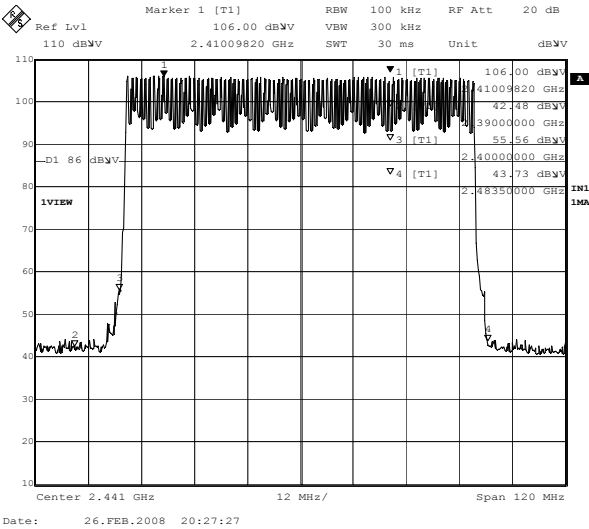
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

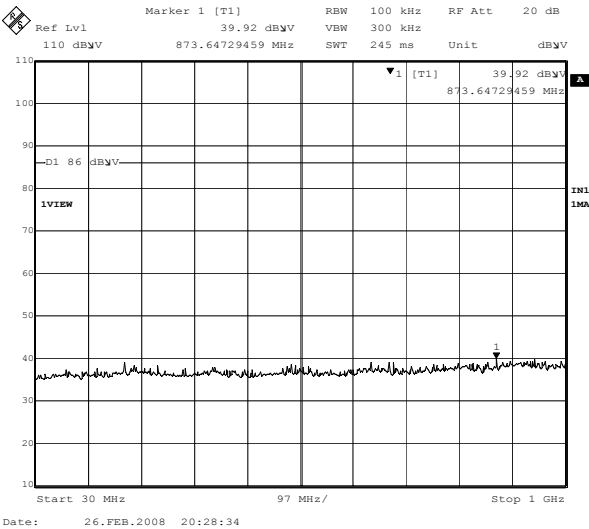
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DHS]
Hopping

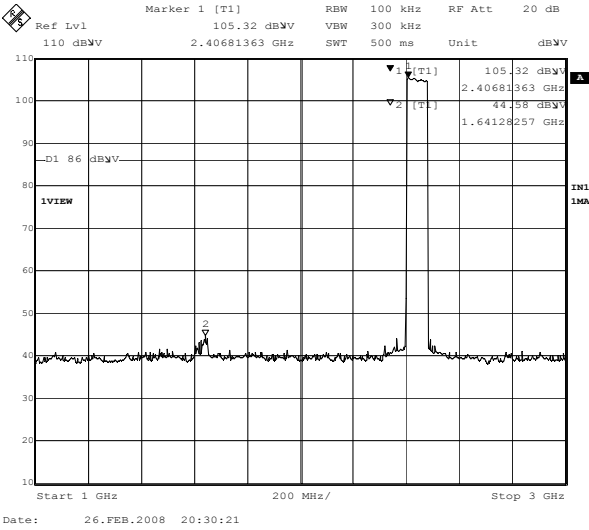
1.



2.



3.



Company:
Kind of Equipment:
Serial No.:

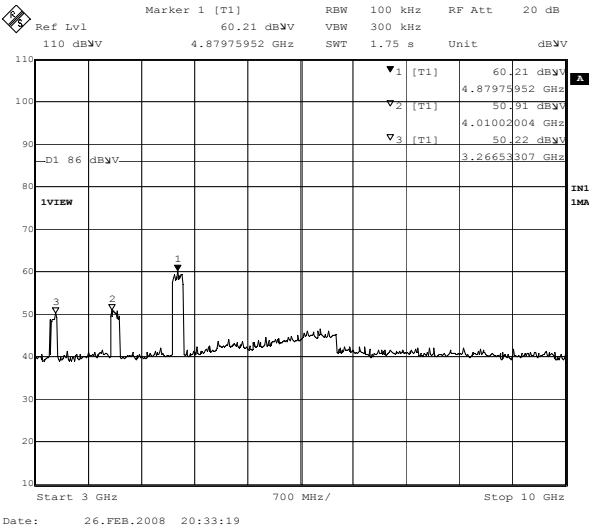
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

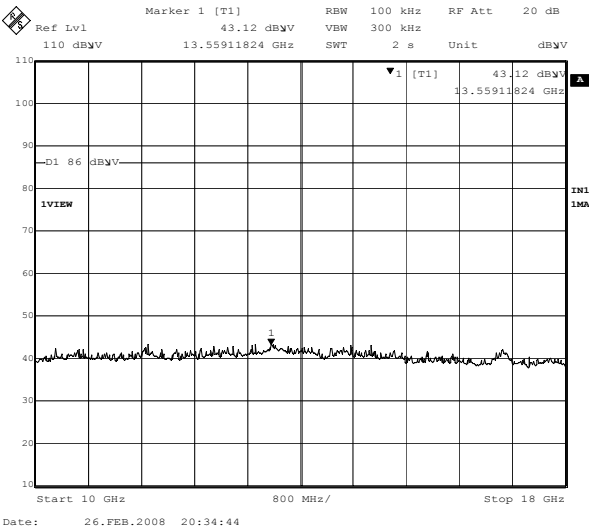
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting DH5]
Hopping

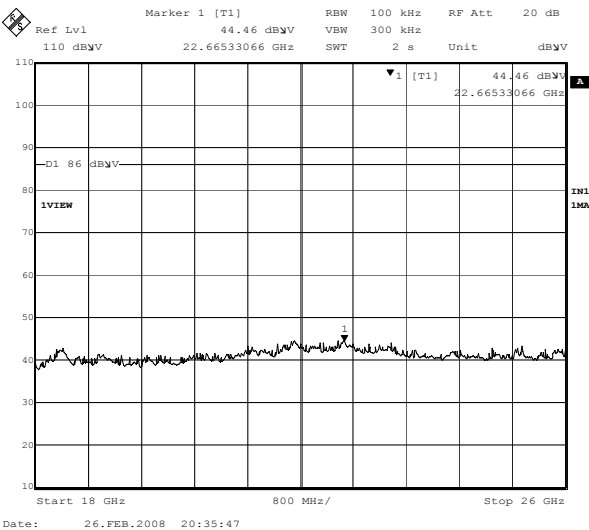
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5.

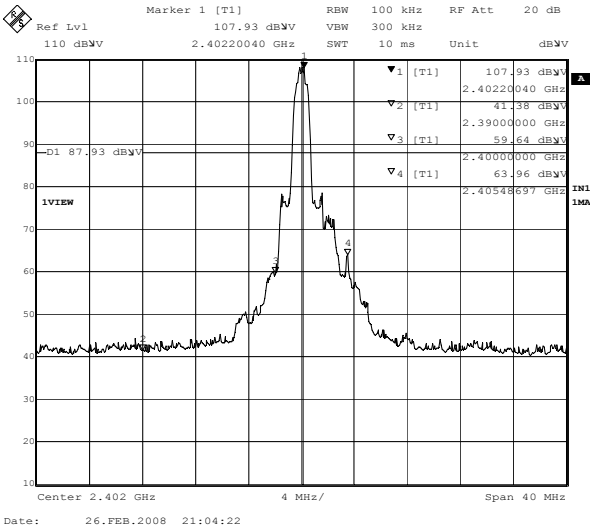


6.

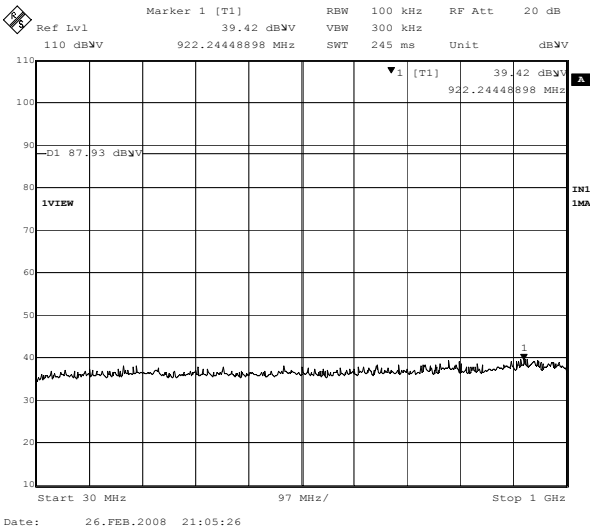


[Transmitting 3DH5]
Ch:2402MHz

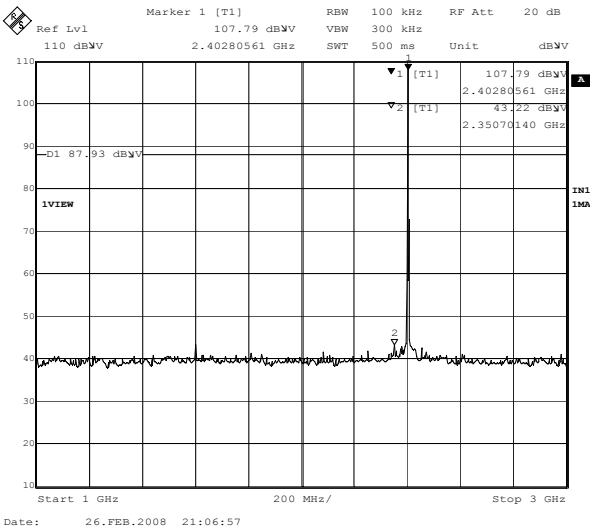
1.



2.

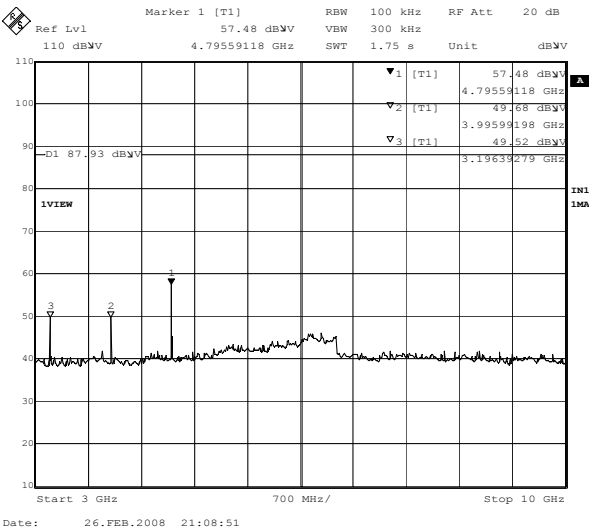


3.

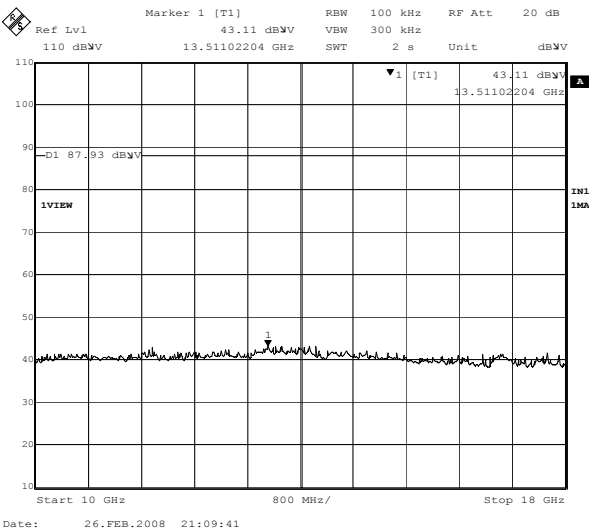


[Transmitting 3DH5]
Ch:2402MHz

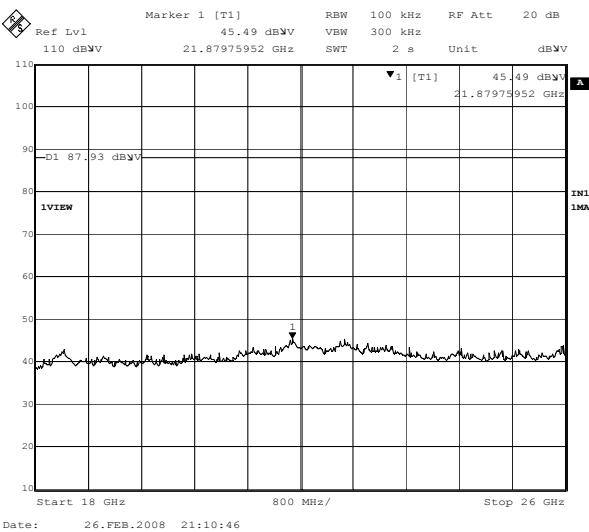
4.



5.

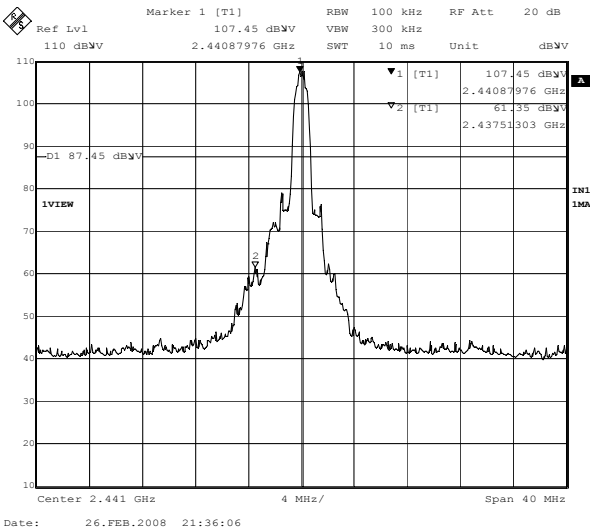


6.

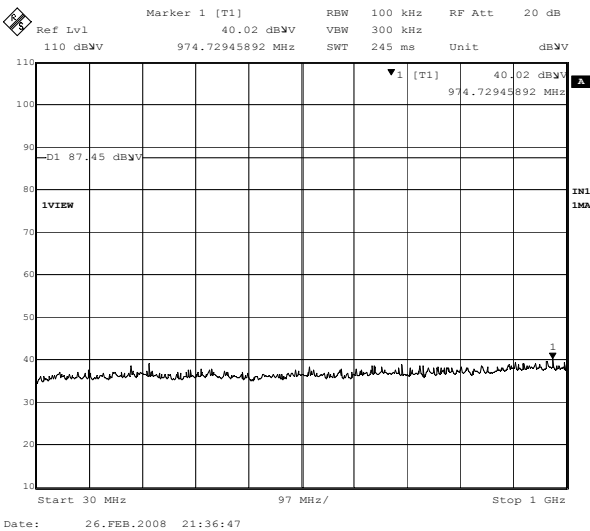


[Transmitting 3DH5]
Ch:2441MHz

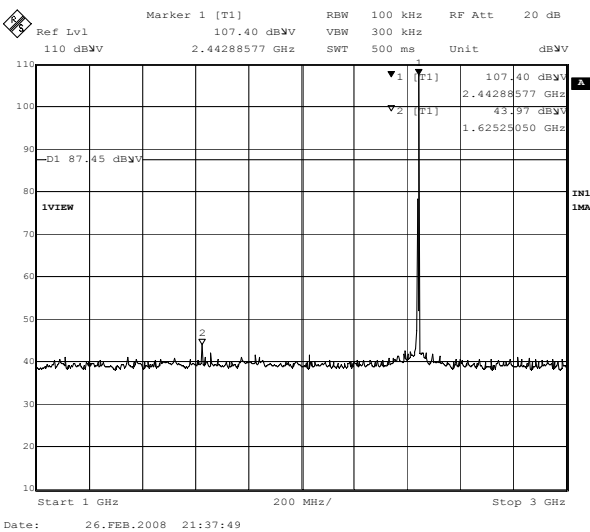
1.



2.

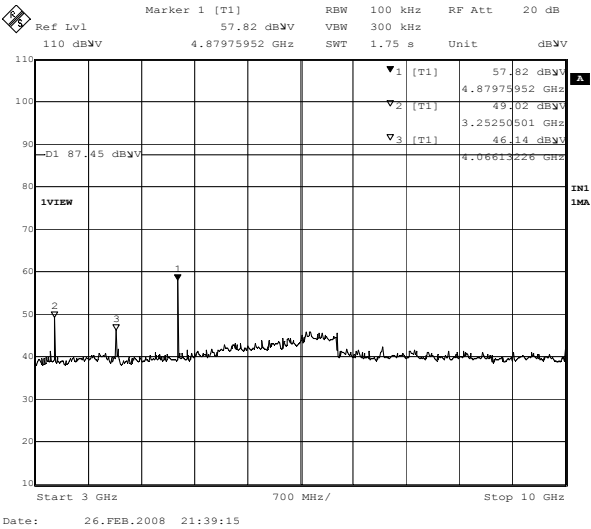


3.

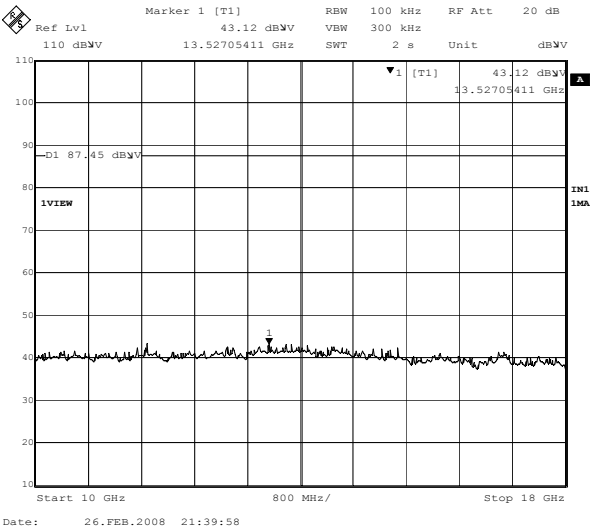


[Transmitting 3DH5]
Ch:2441MHz

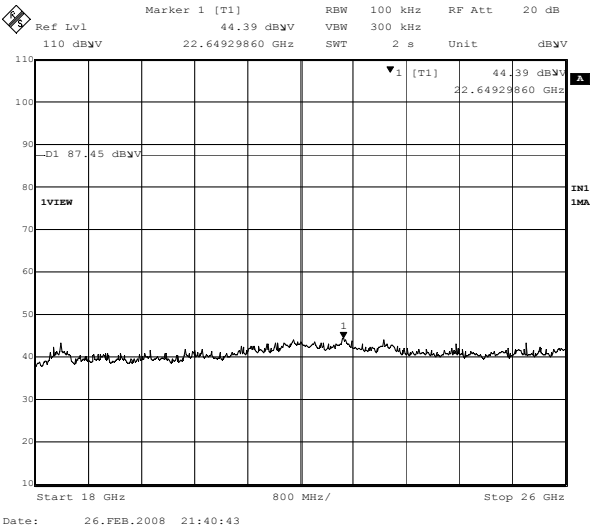
4.



5.

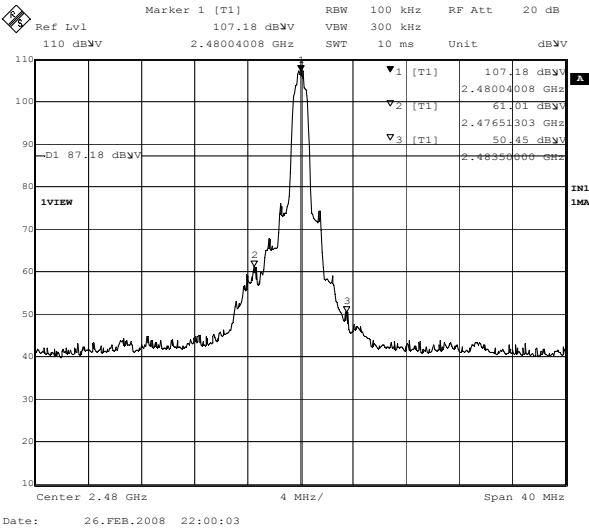


6.

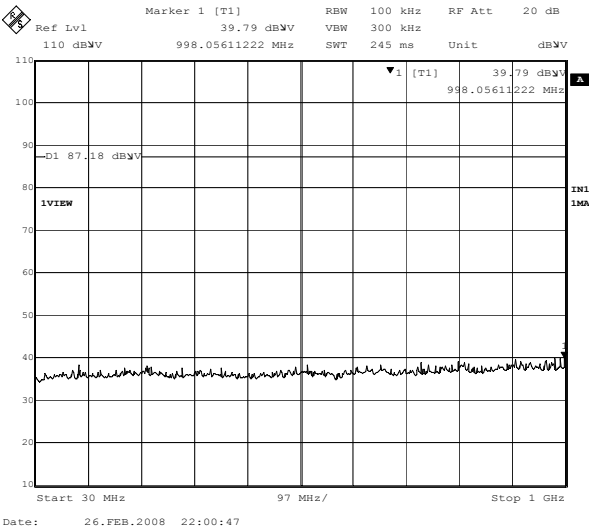


[Transmitting 3DH5]
Ch:2480MHz

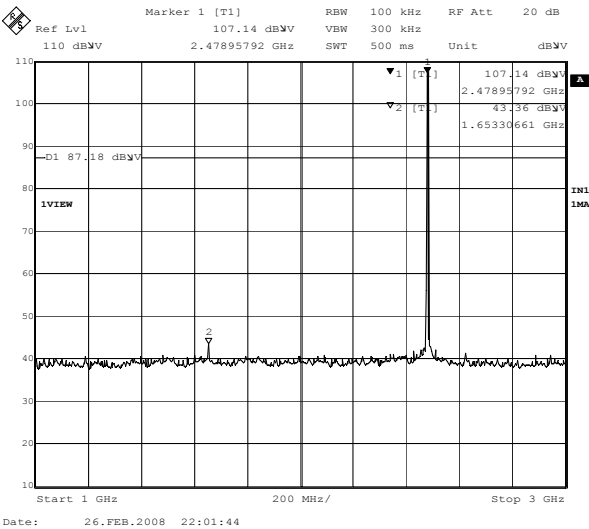
1.



2.

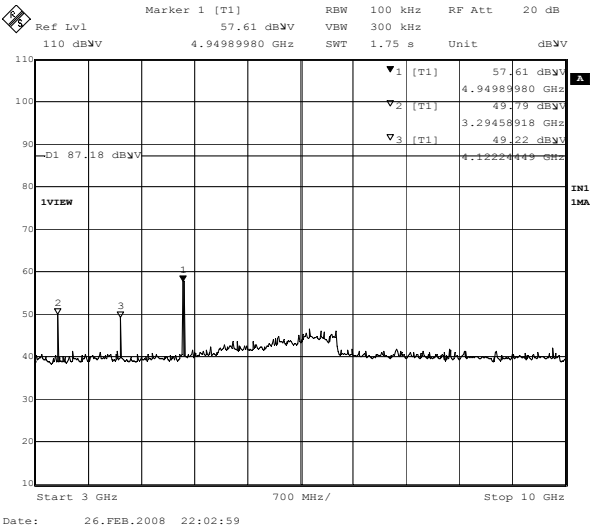


3.

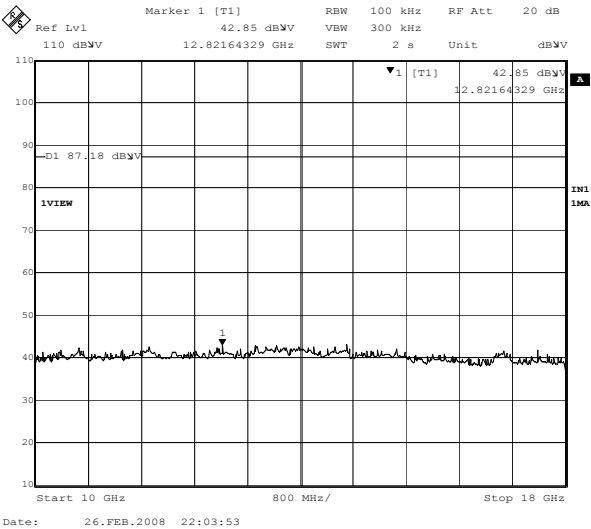


[Transmitting 3DH5]
Ch:2480MHz

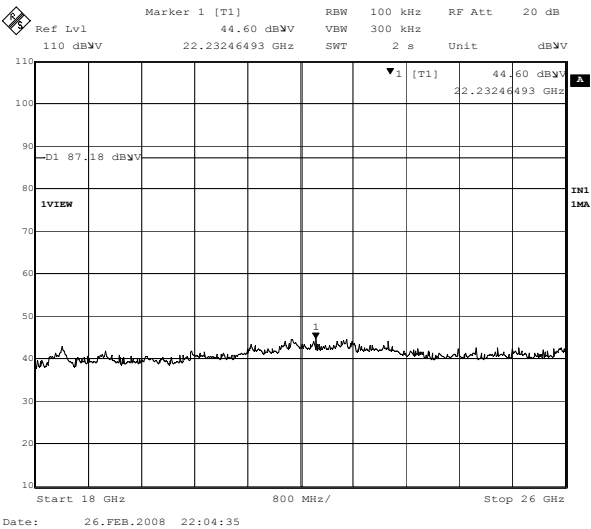
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5.

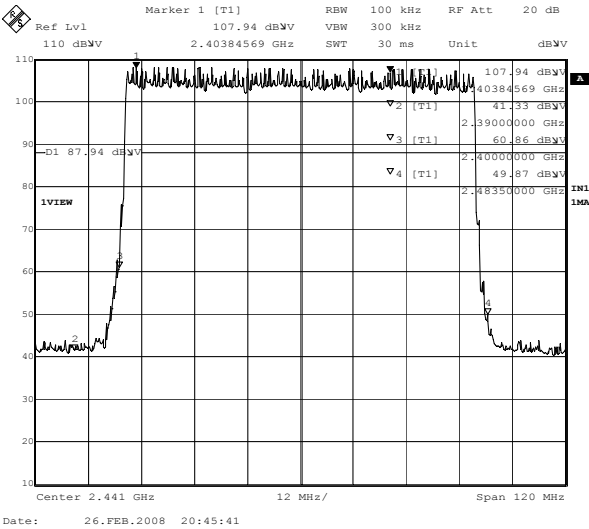


6.

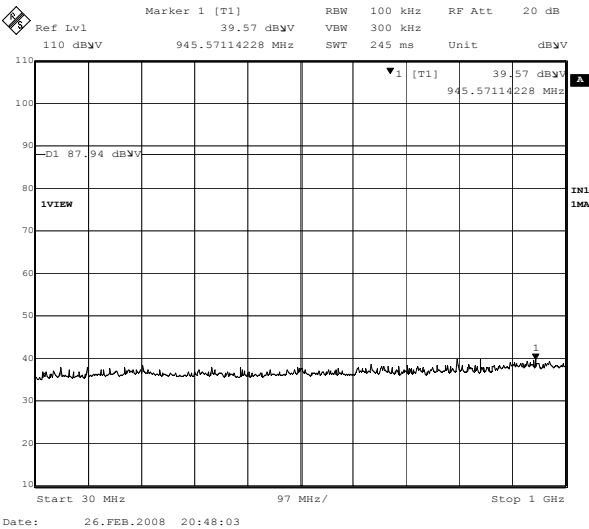


[Transmitting 3DH5]
Hopping

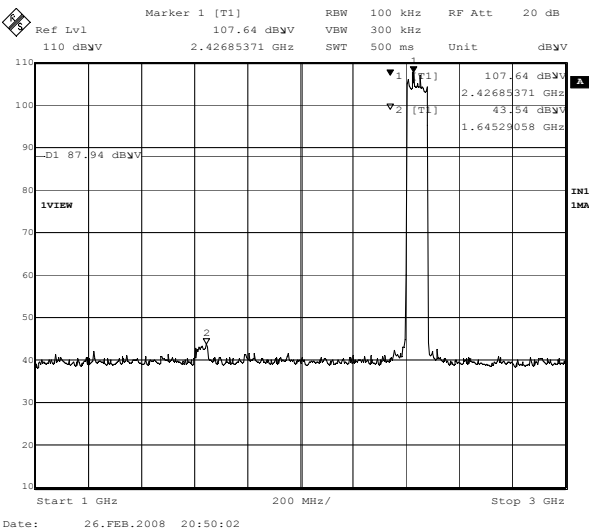
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2.

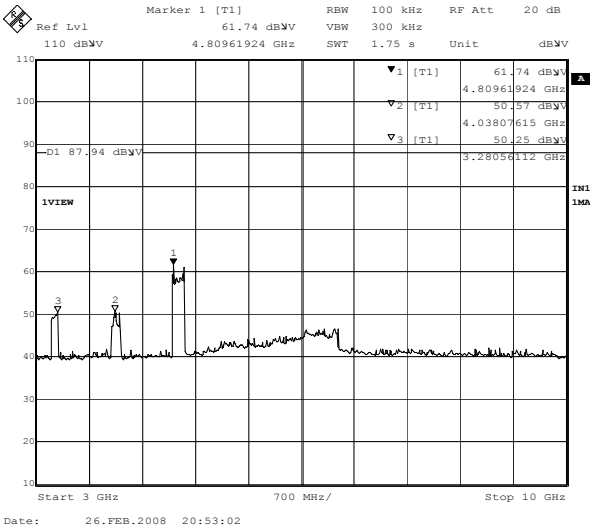


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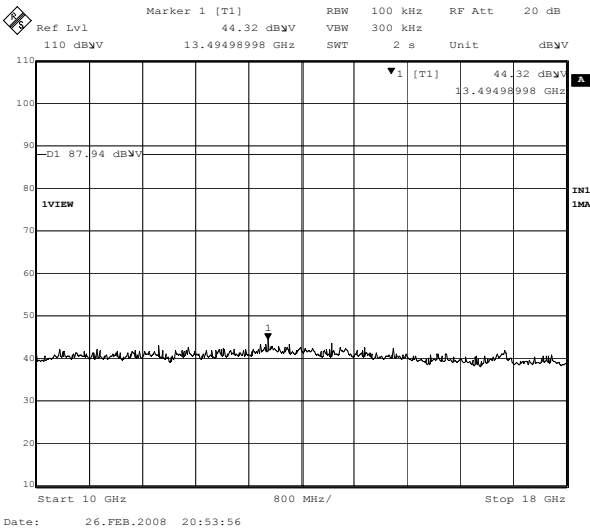


[Transmitting3 DH5]
Hopping

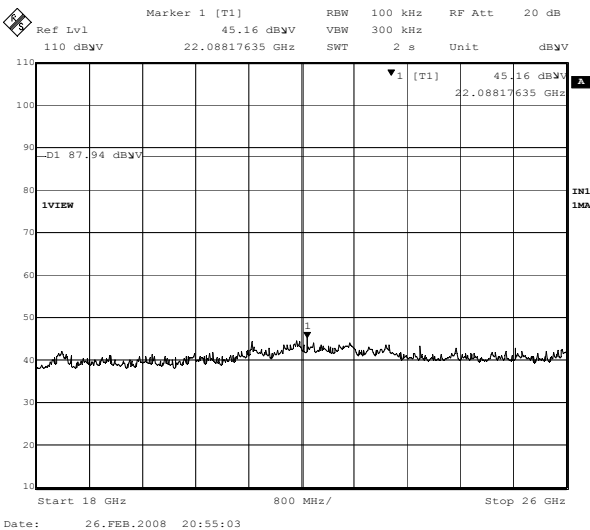
4.



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Company:
Kind of Equipment:
Serial No.:

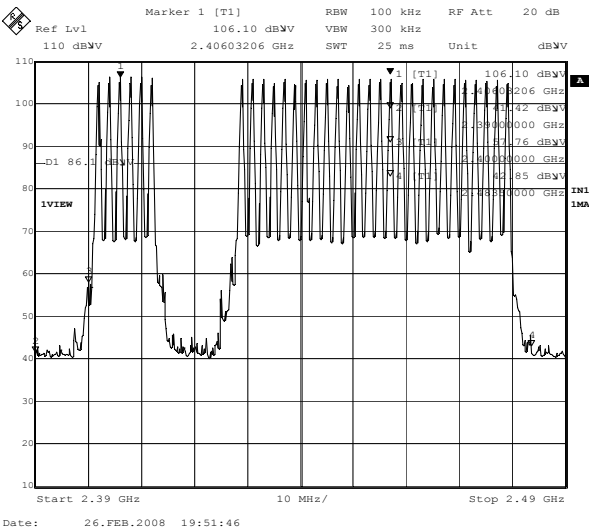
Pioneer Corporation
CAR AUDIO with built in Bluetooth
K2GK068

Report No.:
Model No.:
Power:

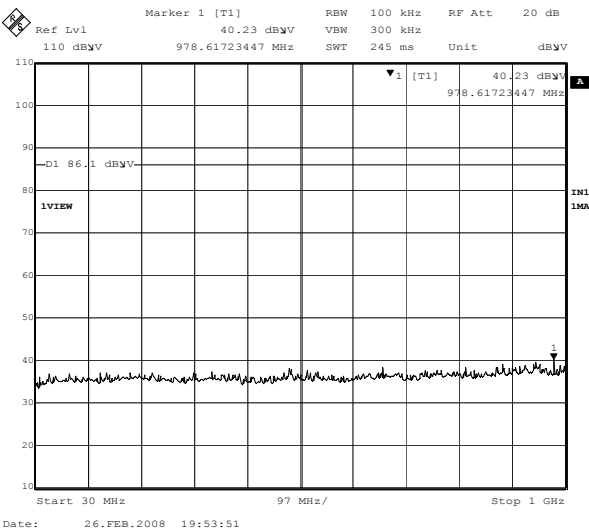
28GE0110-YK-A
86120-48G00
DC13.2V

[Transmitting]
Inquiry

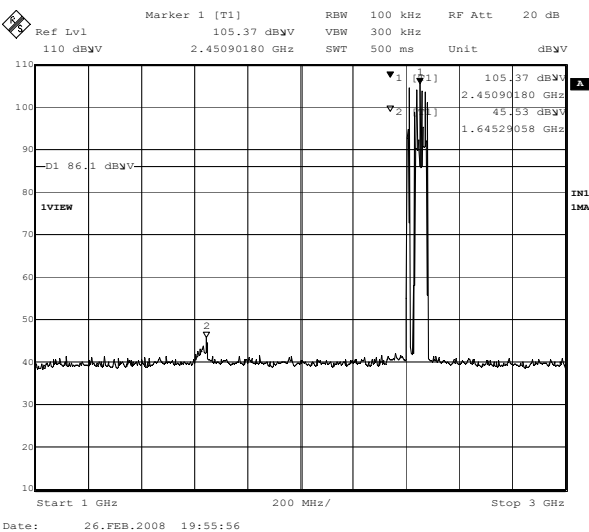
1.



2.

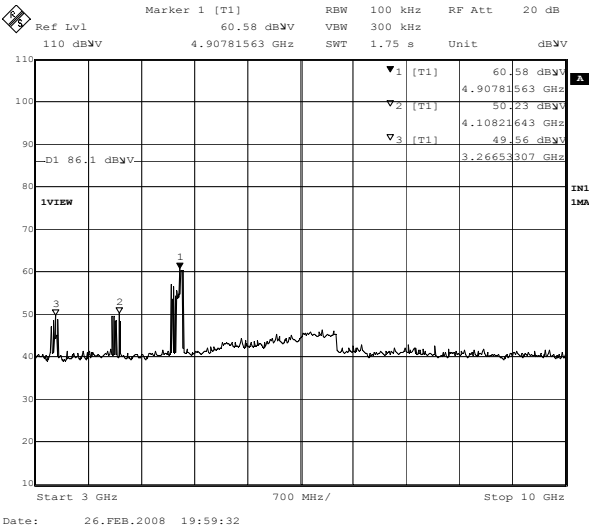


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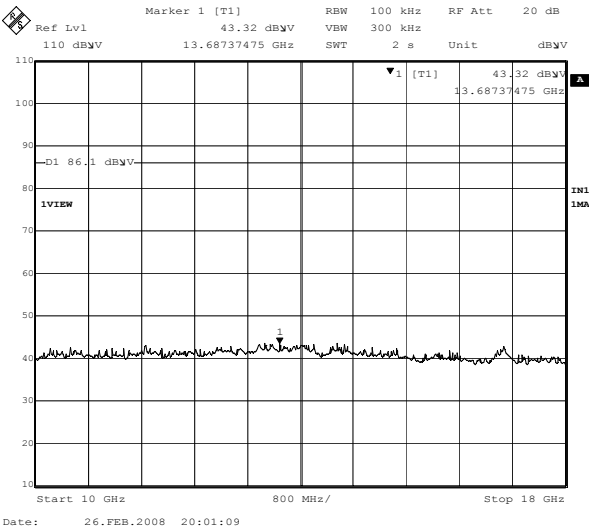


[Transmitting]
Inquiry

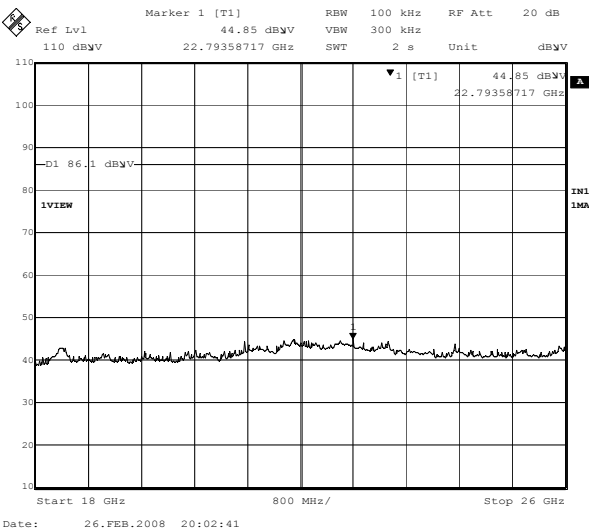
4.



5.



6.



DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2402MHz
 Remarks : DH5
 Date : 2/14/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 30 %
 Regulation : FCC Part15C § 15.209

Engineer : Go Ishiwata

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.	74.89	BB	27.6	34.1	6.4	28.5	1.7	5.8	13.0	19.5	40.0	27.0	20.5
2.	160.00	BB	27.3	27.4	15.2	28.2	2.7	5.8	22.8	22.9	43.5	20.7	20.6
3.	238.01	BB	32.3	26.7	17.2	27.7	3.3	5.8	30.9	25.3	46.0	15.1	20.7
4.	297.50	BB	32.4	25.4	20.2	27.4	3.8	5.9	34.9	27.9	46.0	11.1	18.1
5.	357.01	BB	41.0	36.2	16.0	28.0	4.6	5.9	39.5	34.7	46.0	6.5	11.3
6.	595.01	BB	32.7	36.0	20.0	29.2	5.9	5.9	35.3	38.6	46.0	10.7	7.4

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. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2441MHz
 Remarks : DH5
 Date : 2/14/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 30 %
 Regulation : FCC Part15C § 15.209

Engineer : Go Ishiwata

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.	75.68	BB	27.9	34.2	6.4	28.5	1.7	5.8	13.3	19.6	40.0	26.7	20.4
2.	160.01	BB	27.0	27.1	15.2	28.2	2.7	5.8	22.5	22.6	43.5	21.0	20.9
3.	238.01	BB	32.1	26.9	17.2	27.7	3.3	5.8	30.7	25.5	46.0	15.3	20.5
4.	297.50	BB	32.7	25.6	20.2	27.4	3.8	5.9	35.2	28.1	46.0	10.8	17.9
5.	357.01	BB	40.9	36.4	16.0	28.0	4.6	5.9	39.4	34.9	46.0	6.6	11.1
6.	595.01	BB	32.4	35.8	20.0	29.2	5.9	5.9	35.0	38.4	46.0	11.0	7.6

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. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2480MHz
 Remarks : DH5
 Date : 2/14/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 30 %
 Regulation : FCC Part15C § 15.209

Engineer : Go Ishiwata

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.	75.69	BB	28.0	34.0	6.4	28.5	1.7	5.8	13.4	19.4	40.0	26.6	20.6
2.	160.01	BB	26.9	26.9	15.2	28.2	2.7	5.8	22.4	22.4	43.5	21.1	21.1
3.	238.00	BB	32.0	27.2	17.2	27.7	3.3	5.8	30.6	25.8	46.0	15.4	20.2
4.	297.51	BB	32.5	25.7	20.2	27.4	3.8	5.9	35.0	28.2	46.0	11.0	17.8
5.	357.01	BB	40.7	36.6	16.0	28.0	4.6	5.9	39.2	35.1	46.0	6.8	10.9
6.	595.00	BB	32.3	35.9	20.0	29.2	5.9	5.9	34.9	38.5	46.0	11.1	7.5

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. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2402MHz
 Remarks : 3DH5
 Date : 2/14/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 30 %
 Regulation : FCC Part15C § 15.209

Engineer : Go Ishiwata

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.	75.68	BB	27.3	34.0	6.4	28.5	1.7	5.8	12.7	19.4	40.0	27.3	20.6
2.	160.00	BB	27.3	27.5	15.2	28.2	2.7	5.8	22.8	23.0	43.5	20.7	20.5
3.	238.00	BB	32.6	27.1	17.2	27.7	3.3	5.8	31.2	25.7	46.0	14.8	20.3
4.	297.50	BB	32.2	25.9	20.2	27.4	3.8	5.9	34.7	28.4	46.0	11.3	17.6
5.	357.01	BB	41.2	36.5	16.0	28.0	4.6	5.9	39.7	35.0	46.0	6.3	11.0
6.	595.00	BB	32.7	36.0	20.0	29.2	5.9	5.9	35.3	38.6	46.0	10.7	7.4

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. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2441MHz
 Remarks : 3DH5
 Date : 2/14/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 30 %
 Regulation : FCC Part15C § 15.209

Engineer : Go Ishiwata

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.	75.89	BB	27.0	33.8	6.4	28.5	1.7	5.8	12.4	19.2	40.0	27.6	20.8
2.	160.01	BB	27.0	27.3	15.2	28.2	2.7	5.8	22.5	22.8	43.5	21.0	20.7
3.	238.01	BB	32.5	27.0	17.2	27.7	3.3	5.8	31.1	25.6	46.0	14.9	20.4
4.	297.50	BB	32.5	25.6	20.2	27.4	3.8	5.9	35.0	28.1	46.0	11.0	17.9
5.	357.01	BB	40.9	36.4	16.0	28.0	4.6	5.9	39.4	34.9	46.0	6.6	11.1
6.	595.01	BB	32.6	35.8	20.0	29.2	5.9	5.9	35.2	38.4	46.0	10.8	7.6

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. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2480MHz
 Remarks : 3DH5
 Date : 2/14/2008
 Test Distance : 3 m
 Temperature : 21 °C
 Humidity : 30 %
 Regulation : FCC Part15C § 15.209

Engineer : Go Ishiwata

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.	75.69	BB	27.6	33.6	6.4	28.5	1.7	5.8	13.0	19.0	40.0	27.0	21.0
2.	160.02	BB	27.4	27.7	15.2	28.2	2.7	5.8	22.9	23.2	43.5	20.6	20.3
3.	238.00	BB	32.3	27.2	17.2	27.7	3.3	5.8	30.9	25.8	46.0	15.1	20.2
4.	297.50	BB	32.1	26.0	20.2	27.4	3.8	5.9	34.6	28.5	46.0	11.4	17.5
5.	357.01	BB	41.0	36.4	16.0	28.0	4.6	5.9	39.5	34.9	46.0	6.5	11.1
6.	595.02	BB	32.4	36.2	20.0	29.2	5.9	5.9	35.0	38.8	46.0	11.0	7.2

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. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
Kind of Equipment : CD Receiver
Model No. : 86120-48G00
Serial No. : K2GK078
Power : DC13.2V
Mode : Transmitting 2402MHz
Remarks : DH5 PK (RBW/VBW:1MHz/1MHz)
Date : 2/15/2008
Test Distance : 3 m
Temperature : 23 °C Engineer : Toyokazu Imamura
Humidity : 35 %
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.	1871.03	BB	48.2	49.6	28.3	37.2	4.9	0.0	44.2	45.6	74.0	29.8	28.4
2.	2390.00	BB	45.7	45.0	28.5	37.5	5.0	0.0	41.7	41.0	74.0	32.3	33.0
3.	2431.68	BB	47.7	45.0	28.4	37.5	5.0	0.0	43.6	40.9	74.0	30.4	33.1
4.	4804.00	BB	47.7	45.9	32.9	37.8	5.7	0.0	48.5	46.7	74.0	25.5	27.3
5.	7206.00	BB	45.4	44.5	36.5	37.2	7.6	0.0	52.3	51.4	74.0	21.7	22.6
6.	9608.00	BB	45.7	45.3	37.7	37.4	7.7	0.0	53.7	53.3	74.0	20.3	20.7
7.	12010.00	BB	45.5	45.3	40.0	36.5	8.9	0.0	57.9	57.7	74.0	16.1	16.3

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz / KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2402MHz
 Remarks : DH5 AV (RBW/VBW:1MHz/300Hz;Harmonics and bandedge,10Hz;other)
 Date : 2/15/2008
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 35 %
 Regulation : FCC Part15C § 15.209 (AV Detection)

Engineer : Toyokazu Imamura

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.	1871.03	BB	39.4	42.5	28.3	37.2	4.9	0.0	35.4	38.5	54.0	18.6	15.5
2.	2390.00	BB	34.4	32.9	28.5	37.5	5.0	0.0	30.4	28.9	54.0	23.6	25.1
3.	2431.68	BB	36.2	33.4	28.4	37.5	5.0	0.0	32.1	29.3	54.0	21.9	24.7
4.	4804.00	BB	39.5	37.0	32.9	37.8	5.7	0.0	40.3	37.8	54.0	13.7	16.2
5.	7206.00	BB	33.1	33.1	36.5	37.2	7.6	0.0	40.0	40.0	54.0	14.0	14.0
6.	9608.00	BB	33.1	33.3	37.7	37.4	7.7	0.0	41.1	41.3	54.0	12.9	12.7
7.	12010.00	BB	32.9	33.0	40.0	36.5	8.9	0.0	45.3	45.4	54.0	8.7	8.6

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2441MHz
 Remarks : DH5 PK (RBW/VBW:1MHz/1MHz)
 Date : 2/15/2008
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 35 %
 Regulation : FCC Part15C § 15.209 (PK Detection)

Engineer : Toyokazu Imamura

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.	1871.03	BB	50.1	49.5	28.3	37.2	4.9	0.0	46.1	45.5	74.0	27.9	28.5
2.	4882.00	BB	48.5	45.2	33.1	37.7	5.8	0.0	49.7	46.4	74.0	24.3	27.6
3.	7323.00	BB	44.8	44.7	36.7	37.6	7.7	0.0	51.6	51.5	74.0	22.4	22.5
4.	9764.00	BB	45.1	44.8	37.7	37.1	7.7	0.0	53.4	53.1	74.0	20.6	20.9
5.	12205.00	BB	45.0	44.5	40.2	36.4	9.0	0.0	57.8	57.3	74.0	16.2	16.7

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
Kind of Equipment : CD Receiver
Model No. : 86120-48G00
Serial No. : K2GK078
Power : DC13.2V
Mode : Transmitting 2441MHz
Remarks : DH5 AV (RBW/VBW:1MHz/300Hz;Harmonics,10Hz;other)
Date : 2/15/2008
Test Distance : 3 m
Temperature : 23 °C Engineer : Toyokazu Imamura
Humidity : 35 %
Regulation : FCC Part15C § 15.209 (AV 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.	1871.03	BB	41.4	42.1	28.3	37.2	4.9	0.0	37.4	38.1	54.0	16.6	15.9
2.	4882.00	BB	41.4	33.8	33.1	37.7	5.8	0.0	42.6	35.0	54.0	11.4	19.0
3.	7323.00	BB	33.0	33.0	36.7	37.6	7.7	0.0	39.8	39.8	54.0	14.2	14.2
4.	9764.00	BB	33.3	33.3	37.7	37.1	7.7	0.0	41.6	41.6	54.0	12.4	12.4
5.	12205.00	BB	32.9	33.0	40.2	36.4	9.0	0.0	45.7	45.8	54.0	8.3	8.2

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz
■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2480MHz
 Remarks : DH5 PK (RBW/VBW:1MHz/1MHz)
 Date : 2/15/2008
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 35 %
 Regulation : FCC Part15C § 15.209 (PK Detection)

Engineer : Toyokazu Imamura

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.	1871.03	BB	49.7	50.0	28.3	37.2	4.9	0.0	45.7	46.0	74.0	28.3	28.0
2.	2427.12	BB	47.8	44.7	28.5	37.5	5.0	0.0	43.8	40.7	74.0	30.2	33.3
3.	2483.50	BB	48.4	52.8	28.3	37.6	5.1	0.0	44.2	48.6	74.0	29.8	25.4
4.	4960.00	BB	48.3	45.6	33.4	37.6	5.8	0.0	49.9	47.2	74.0	24.1	26.8
5.	7440.00	BB	45.5	44.0	36.8	38.0	7.9	0.0	52.2	50.7	74.0	21.8	23.3
6.	9920.00	BB	45.2	44.5	37.7	36.7	7.7	0.0	53.9	53.2	74.0	20.1	20.8
7.	12400.00	BB	45.2	45.0	40.3	36.3	9.1	0.0	58.3	58.1	74.0	15.7	15.9

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz / KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
Kind of Equipment : CD Receiver
Model No. : 86120-48G00
Serial No. : K2GK078
Power : DC13.2V
Mode : Transmitting 2480MHz
Remarks : DH5 AV (RBW/VBW:1MHz/300Hz;Harmonics and bandedge,10Hz;other)
Date : 2/15/2008
Test Distance : 3 m
Temperature : 23 °C Engineer : Toyokazu Imamura
Humidity : 35 %
Regulation : FCC Part15C § 15.209 (AV 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.	1871.03	BB	41.4	43.2	28.3	37.2	4.9	0.0	37.4	39.2	54.0	16.6	14.8
2.	2427.12	BB	36.6	33.7	28.5	37.5	5.0	0.0	32.6	29.7	54.0	21.4	24.3
3.	2483.50	BB	42.4	46.7	28.3	37.6	5.1	0.0	38.2	42.5	54.0	15.8	11.5
4.	4960.00	BB	40.7	36.3	33.4	37.6	5.8	0.0	42.3	37.9	54.0	11.7	16.1
5.	7440.00	BB	33.1	32.7	36.8	38.0	7.9	0.0	39.8	39.4	54.0	14.2	14.6
6.	9920.00	BB	33.3	32.6	37.7	36.7	7.7	0.0	42.0	41.3	54.0	12.0	12.7
7.	12400.00	BB	33.0	32.7	40.3	36.3	9.1	0.0	46.1	45.8	54.0	7.9	8.2

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz / KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
Kind of Equipment : CD Receiver
Model No. : 86120-48G00
Serial No. : K2GK078
Power : DC13.2V
Mode : Transmitting 2402MHz
Remarks : 3DH5 PK (RBW/VBW:1MHz/1MHz)
Date : 2/15/2008
Test Distance : 3 m
Temperature : 23 °C Engineer : Toyokazu Imamura
Humidity : 35 %
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.	1871.03	BB	48.5	48.6	28.3	37.2	4.9	0.0	44.5	44.6	74.0	29.5	29.4
2.	2390.00	BB	45.7	45.1	28.5	37.5	5.0	0.0	41.7	41.1	74.0	32.3	32.9
3.	2431.68	BB	48.2	45.2	28.4	37.5	5.0	0.0	44.1	41.1	74.0	29.9	32.9
4.	4804.00	BB	47.7	45.8	32.9	37.8	5.7	0.0	48.5	46.6	74.0	25.5	27.4
5.	7206.00	BB	45.9	45.7	36.5	37.2	7.6	0.0	52.8	52.6	74.0	21.2	21.4
6.	9608.00	BB	44.4	44.6	37.7	37.4	7.7	0.0	52.4	52.6	74.0	21.6	21.4
7.	12010.00	BB	45.0	44.7	40.0	36.5	8.9	0.0	57.4	57.1	74.0	16.6	16.9

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz / KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2402MHz
 Remarks : 3DH5 AV (RBW/VBW:1MHz/300Hz;Harmonics and bandedge,10Hz;other)
 Date : 2/15/2008
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 35 %
 Regulation : FCC Part15C § 15.209 (AV Detection)

Engineer : Toyokazu Imamura

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.	1871.03	BB	40.1	40.3	28.3	37.2	4.9	0.0	36.1	36.3	54.0	17.9	17.7
2.	2390.00	BB	34.1	32.8	28.5	37.5	5.0	0.0	30.1	28.8	54.0	23.9	25.2
3.	2431.68	BB	36.4	34.1	28.4	37.5	5.0	0.0	32.3	30.0	54.0	21.7	24.0
4.	4804.00	BB	37.7	35.9	32.9	37.8	5.7	0.0	38.5	36.7	54.0	15.5	17.3
5.	7206.00	BB	33.0	33.0	36.5	37.2	7.6	0.0	39.9	39.9	54.0	14.1	14.1
6.	9608.00	BB	33.2	33.2	37.7	37.4	7.7	0.0	41.2	41.2	54.0	12.8	12.8
7.	12010.00	BB	32.9	33.1	40.0	36.5	8.9	0.0	45.3	45.5	54.0	8.7	8.5

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
Kind of Equipment : CD Receiver
Model No. : 86120-48G00
Serial No. : K2GK078
Power : DC13.2V
Mode : Transmitting 2441MHz
Remarks : 3DH5 PK (RBW/VBW:1MHz/1MHz)
Date : 2/15/2008
Test Distance : 3 m
Temperature : 23 °C Engineer : Toyokazu Imamura
Humidity : 35 %
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.	1871.03	BB	48.1	48.6	28.3	37.2	4.9	0.0	44.1	44.6	74.0	29.9	29.4
2.	4882.00	BB	48.5	45.1	33.1	37.7	5.8	0.0	49.7	46.3	74.0	24.3	27.7
3.	7323.00	BB	44.5	44.5	36.7	37.6	7.7	0.0	51.3	51.3	74.0	22.7	22.7
4.	9764.00	BB	45.9	44.8	37.7	37.1	7.7	0.0	54.2	53.1	74.0	19.8	20.9
5.	12205.00	BB	44.7	44.5	40.2	36.4	9.0	0.0	57.5	57.3	74.0	16.5	16.7

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2441MHz
 Remarks : 3DH5 AV (RBW/VBW:1MHz/300Hz;Harmonics, 10Hz;other)
 Date : 2/15/2008
 Test Distance : 3 m
 Temperature : 23 °C Engineer : Toyokazu Imamura
 Humidity : 35 %
 Regulation : FCC Part15C § 15.209 (AV 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.	1871.03	BB	40.3	40.3	28.3	37.2	4.9	0.0	36.3	36.3	54.0	17.7	17.7
2.	4882.00	BB	39.3	33.6	33.1	37.7	5.8	0.0	40.5	34.8	54.0	13.5	19.2
3.	7323.00	BB	32.9	32.9	36.7	37.6	7.7	0.0	39.7	39.7	54.0	14.3	14.3
4.	9764.00	BB	33.3	33.2	37.7	37.1	7.7	0.0	41.6	41.5	54.0	12.4	12.5
5.	12205.00	BB	32.9	32.8	40.2	36.4	9.0	0.0	45.7	45.6	54.0	8.3	8.4

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.
YAMAKITA No.1 ANECHOIC CHAMBER
Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
Kind of Equipment : CD Receiver
Model No. : 86120-48G00
Serial No. : K2GK078
Power : DC13.2V
Mode : Transmitting 2480MHz
Remarks : 3DH5 PK (RBW/VBW:1MHz/1MHz)
Date : 2/15/2008
Test Distance : 3 m
Temperature : 23 °C Engineer : Toyokazu Imamura
Humidity : 35 %
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.	1871.03	BB	48.3	47.8	28.3	37.2	4.9	0.0	44.3	43.8	74.0	29.7	30.2
2.	2427.12	BB	48.0	45.9	28.5	37.5	5.0	0.0	44.0	41.9	74.0	30.0	32.1
3.	2483.50	BB	50.8	54.5	28.3	37.6	5.1	0.0	46.6	50.3	74.0	27.4	23.7
4.	4960.00	BB	49.0	46.1	33.4	37.6	5.8	0.0	50.6	47.7	74.0	23.4	26.3
5.	7440.00	BB	44.2	45.0	36.8	38.0	7.9	0.0	50.9	51.7	74.0	23.1	22.3
6.	9920.00	BB	44.7	45.0	37.7	36.7	7.7	0.0	53.4	53.7	74.0	20.6	20.3
7.	12400.00	BB	44.4	44.7	40.3	36.3	9.1	0.0	57.5	57.8	74.0	16.5	16.2

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz / KHA-03 (3160-09) 18-26GHz
■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

DATA OF RADIATION TEST

UL Japan, Inc.

YAMAKITA No.1 ANECHOIC CHAMBER

Report No. : 28GE0110-YK-A

Applicant : PIONEER CORPORATION
 Kind of Equipment : CD Receiver
 Model No. : 86120-48G00
 Serial No. : K2GK078
 Power : DC13.2V
 Mode : Transmitting 2480MHz
 Remarks : 3DH5 AV (RBW/VBW:1MHz/300Hz;Harmonics and bandedge,10Hz;other)
 Date : 2/15/2008
 Test Distance : 3 m
 Temperature : 23 °C
 Humidity : 35 %
 Regulation : FCC Part15C § 15.209 (AV Detection)

Engineer : Toyokazu Imamura

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.	1871.03	BB	40.3	39.6	28.3	37.2	4.9	0.0	36.3	35.6	54.0	17.7	18.4
2.	2427.12	BB	35.7	33.5	28.5	37.5	5.0	0.0	31.7	29.5	54.0	22.3	24.5
3.	2483.50	BB	44.9	47.7	28.3	37.6	5.1	0.0	40.7	43.5	54.0	13.3	10.5
4.	4960.00	BB	38.6	35.8	33.4	37.6	5.8	0.0	40.2	37.4	54.0	13.8	16.6
5.	7440.00	BB	33.0	32.8	36.8	38.0	7.9	0.0	39.7	39.5	54.0	14.3	14.5
6.	9920.00	BB	33.1	33.1	37.7	36.7	7.7	0.0	41.8	41.8	54.0	12.2	12.2
7.	12400.00	BB	32.8	32.7	40.3	36.3	9.1	0.0	45.9	45.8	54.0	8.1	8.2

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

■ ANTENNA: KHA-01 (SAS-200 571) 1-18GHz/KHA-03 (3160-09) 18-26GHz

■ CABLE: KCC-D3/D7 ■ PREAMP: KAF-02 (8449B) ■ SPECTRUMANALYZER: ESI40 (KTR-01)

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

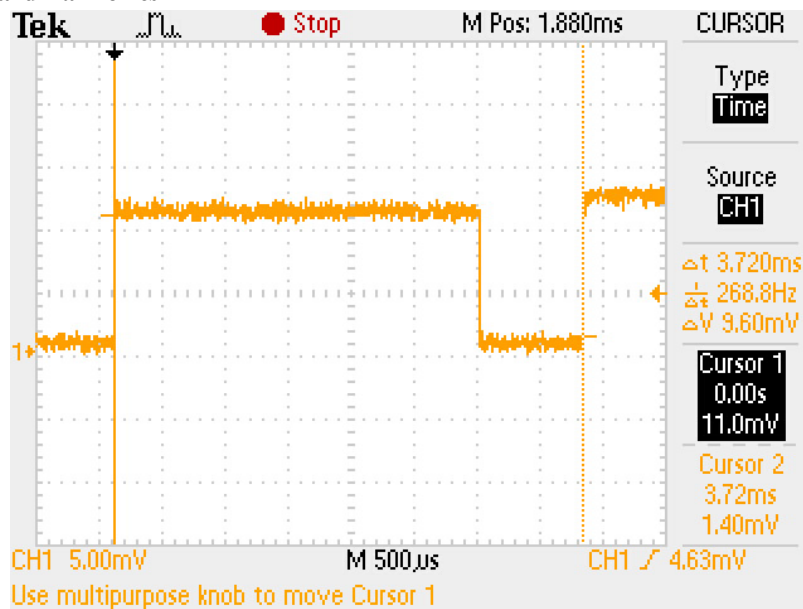
Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

Duty Cycle

UL Japan, Inc. Yamakita No.2 Shielded Room

Date: 2008.2.26
Temp./Humid.: 24deg.C/39%
Engineer: Tatsuya Arai
Test mode: Transmitting

Fundamental (band edge) and Harmonics



Duty Cycle: 3.72ms

AV Detector VBW: $1000 \text{ ms} / 3.72 \text{ ms} = 268.8 \text{ Hz} \rightarrow 300 \text{ Hz}$

- * All the measured noise was pulse emission.
- * Duty cycle was within 100msec.

Company: Pioneer Corporation
Kind of Equipment: CAR AUDIO with built in Bluetooth
Serial No.: K2GK068

Report No.: 28GE0110-YK-A
Model No.: 86120-48G00
Power: DC13.2V

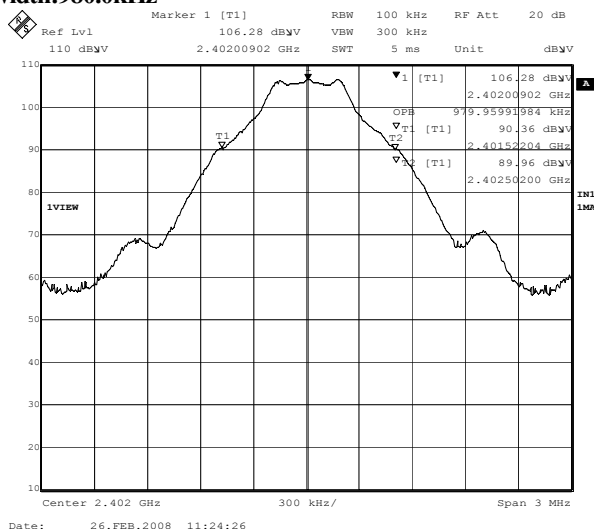
Occupied Bandwidth (99%) (Regulation: RSS-Gen 4.6.1)

UL Japan, Inc. Yamakita No.2 Shielded Room

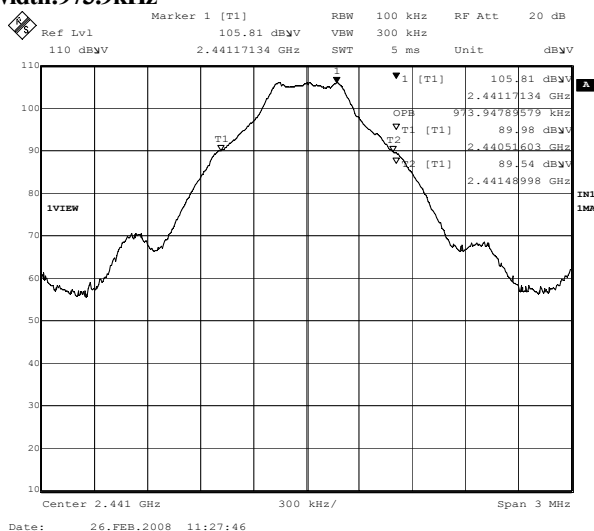
Date: 2008.2.26
Temp./Humid.: 24deg.C/39%
Engineer: Tatsuya Arai
Test mode: Transmitting

[Hopping off, DH5]

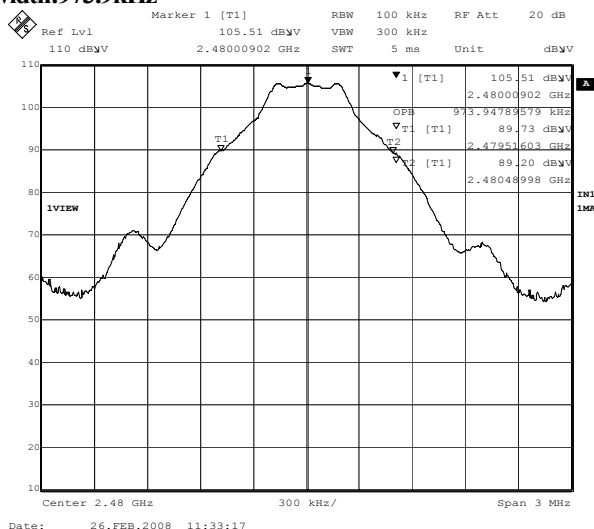
1. ch : 2402MHz/Occupied Bandwidth:980.0kHz



2. ch : 2441MHz/Occupied Bandwidth:973.9kHz

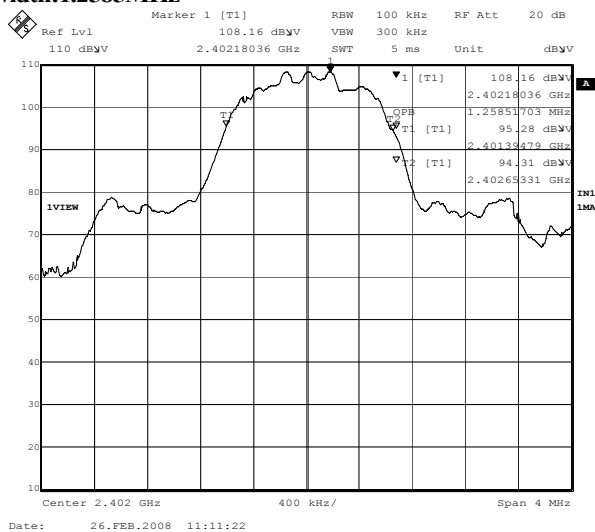


3. ch : 2480MHz/Occupied Bandwidth:973.9kHz

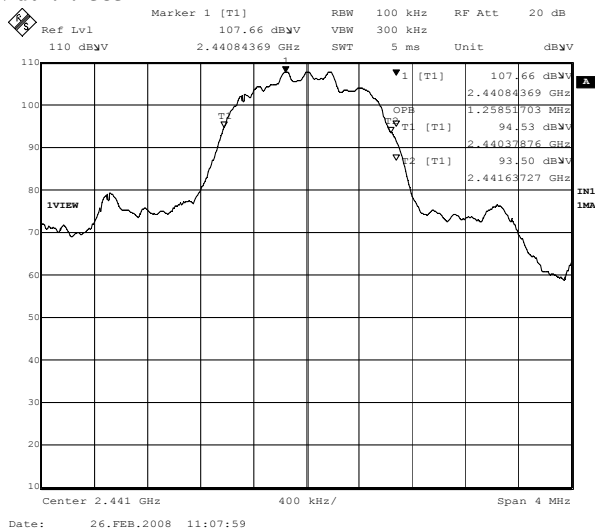


[Hopping off, 3DH5]

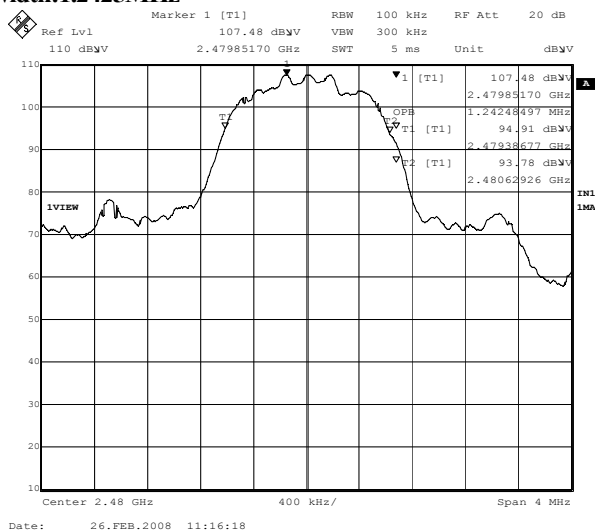
4. ch : 2402MHz/Occupied Bandwidth:1.2585MHz



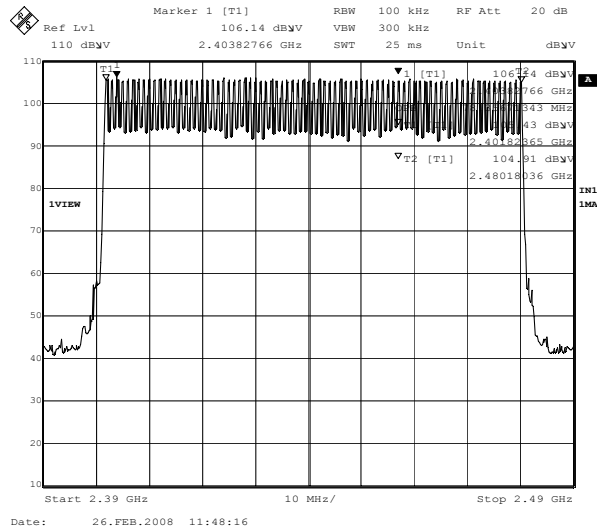
5. ch : 2441MHz/Occupied Bandwidth:1.2585MHz



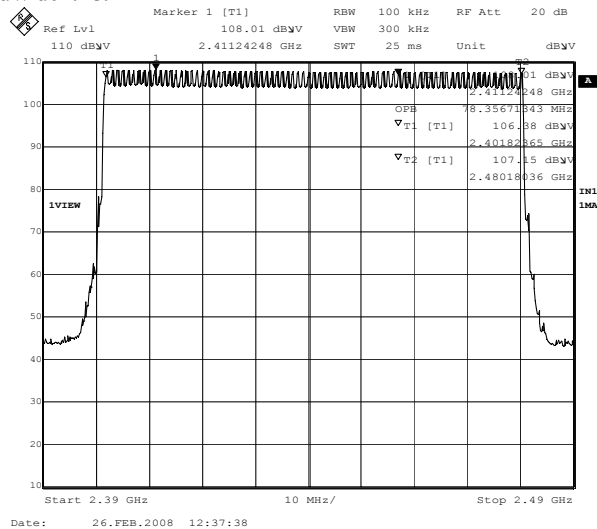
6. ch : 2480MHz/Occupied Bandwidth:1.2425MHz



7. Hopping, DH5/Occupied Bandwidth:78.4MHz



8. Hopping, 3DH5/Occupied Bandwidth:78.4MHz



APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
YA-RE	Radiated emission(software)	UL Japan	RE(Ver.1.5)	RE	-
KAEC-01(NSA)	Anechoic Chamber	JSE	Semi 3m	RE	2007/08/26 * 12
KAF-05	Pre Amplifier	Agilent	8447D	RE	2007/04/13 * 12
KAT6-01	Attenuator	INMET	18N-6dB	RE	2008/03/17 * 12
KBA-03	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/12/27 * 12
KCC-30/31/32 /34/KRM-03	Coaxial Cable/RF Relay Matrix	Fujikura/Suhner/TSJ	5D-2W/S04272B/RFM- E421	RE	2007/11/01 * 12
KLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2007/12/27 * 12
KSA-04	Spectrum Analyzer	Advantest	R3271A	RE	2007/09/25 * 12
KTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE/AT 1,2,3,4,6	2007/04/12 * 12
KOS-02	Humidity Indicator	Custom	CTH-190	RE	2006/07/10 * 24
KJM-01	Measure	TAJIMA	GL19-55	RE	-
KAF-02	Pre Amplifier	Hewlett Packard	8449B	RE	2007/04/24 * 12
KCC-D3/D7	Coaxial Cable	Rosenberger/Advantest	2201/JUN-08-01-061	RE	2007/04/11 * 12
KCC-D7	Coaxial Cable	Advantest	A01002	AT all	2007/04/11 * 12
KDT-01	Coaxial Crystal Detector	Agilent	8473C	AT 4	Pre Check
KHA-01	Horn Antenna	A.H.Systems	SAS-200/571	RE	2007/08/14 * 12
KHA-03	Horn Antenna	EMCO	3160-09	RE	2007/04/14 * 12
KPM-05	Power meter	Agilent	E4417A	AT 5	2007/04/03 * 12
KPSS-01	Power sensor	Agilent	E9327A	AT 5	2007/03/13 * 12
KOSC-01	Oscilloscope	Tektronix	TDS-2022B	AT 4	2007/05/15 * 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: Out of Band Emission (Radiated)
- AT: Antenna terminal conducted test
 - 1: Carrier Frequency Separation
 - 2: Bandwidth
 - 3: Number of Hopping Frequency
 - 4: Dwell time
 - 5: Maximum Peak Output Power
 - 6: Out of Band Emission (Conducted)

*Some calibrations were performed after the tested dates , however those EMI test equipment have been controlled by means of an unbroken chains of calibrations .