

FCC TEST REPORT

for

TT Micro AS

DAB+/DAB/FM/Internet radio

Model Number: Pinell explorer

Prepared for: TT Micro AS

Address : Olaf Helsetsvei 1,0496 Oslo Norway

Prepared By: NS Technology Co., Ltd.

Address : Chenwu Industrial Zone, Houjie Town, Dongguan City,

Guangdong, China

Tel: +86-769-85935656 Fax: +86-769-85991080

Report Number : NSE- F10064956

Date of Test : May 18~May 26, 2010

Date of Report : May 28, 2010

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NS Technology Co., Ltd.

Applicant: TT Micro AS

Address: Olaf Helsetsvei 1,0496 Oslo Norway

Manufacturer: TT Micro AS

Address: Olaf Helsetsvei 1,0496 Oslo Norway

E.U.T: DAB+/DAB/FM/Internet radio

Model Number: Pinell explorer

Trade Name: Scansonic **Operating Frequency:** IEEE802.11b 2412~2462MHz IEEE802.11g 2412~2462MHz

Date of Receipt: May 7, 2010 **Date of Test:** May 18~May 26, 2010

Test Specification: FCC Part 15 Subpart C: Oct. 1, 2009

ANSI C63.4:2003

Test Result: The equipment under test was found to be compliance with the requirements of

the standards applied.

Issue Date: May 28, 2010

Tested by: Reviewed by: Approved by:

Jade/ Engineer Iceman Hu / Supervisor Steven Lee / Manager

Other Aspects:

None.

Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested

This test report is based on a single evaluation of one sample of above mentioned products, It is not permitted to be duplicated in extracts without written approval of NS Technology Co., Ltd.

1. GENERAL PRODUCT INFORMATION

1.1. Product Function

Details please refer to Technical Construction Form and User Manual.

1.2. Description of Device (EUT)

E.U.T. : DAB+/DAB/FM/Internet radio

Model No. : Pinell explorer
Operating Frequency : 2412~2462MHz
Number of Channels : 11 Channels

Channel frequency F = 2412 + 5(K-1) K=1,2,.....11

Type of Modulation : DSSS for IEEE 802.11b/g
Data Rate : IEEE 802.11b:11/5.5/2/1M bps

IEEE 802.11g:54/48/36/24/18/12/9/6Mbps

Antenna Type : Integral Antenna Gain : 0.5dBi

System Input Voltage : DC 15V from adapter input AC 120V/60Hz

Temperature Range(Operating) : $0 \sim +40^{\circ}$ C

Adapter : M/N:VA24A-150150

I/P:100-240V~50/60Hz 0.5A

O/P:15V___1. 5A

DC Line:Unshielded,Undetachable,1.5m

1.3. Difference between Model Numbers

1.4. Independent Operation Modes

The basic operation modes are:

1.4.1. IEEE 802.11b; TX CH1 (2412MHz)

1.4.2. IEEE 802.11b; TX CH 6 (2437MHz)

1.4.3. IEEE 802.11b; TX CH11 (2462MHz)

1.4.4. IEEE 802.11g; TX CH1 (2412MHz)

1.4.5. IEEE 802.11g; TX CH 6 (2437MHz)

1.4.6. IEEE 802.11g; TX CH11 (2462MHz)

2. TEST SITES

2.1. Test Facilities

EMC Lab : Certificated by TUV Rheinland, Germany.

Date of registration: July 28, 2003

Certificated by FCC, USA Registration No.: 502831

Date of registration: February 09, 2009

Certificated by VCCI, Japan

Registration No.: R-2527 & C-2770 Date of registration: March 23, 2007

Certificated by CNAL, CHINA

Registration No.: L1744

Date of registration: November 25, 2004

Certificated by Intertek ETL SEMKO

Registration No.: TMP-013

Date of registration: June 11, 2005

Certificated by TUV/PS, Hong Kong Date of registration: December 1, 2005

Certificated by Industry Canada

Registration No.: 5936A

Date of registration: March 4, 2009

Certificated by ATCB, America Date of registration: August 03, 2006

Name of Firm : NS Technology Co., Ltd.

Site Location : Chenwu Industrial Zone, Houjie Town, Dongguan City,

Guangdong, China

2.2. List of Test and Measurement Instruments

2.2.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCS30	100340	May 31,09	May 31,10
Artificial Mains	Rohde&Schwarz	ESH3-Z5	100317	May 31,09	May 31,10
Network					
Artificial Mains Network	Kyoritsu	KNW-407	8-1579-1	Jan.19,09	Jan.19,11
(AUX)					
Pulse Limiter	Rohde&Schwarz	ESH3-Z2	100168	May 2,10	May 2,11

2.2.2.For radiated emission test (30MHz-1GHz)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESCS30	100340	May 31,09	May 31,10
Spectrum Analyzer	Agilent	E7405A	MY45118807	May 31,09	May 31,10
Bilog Antenna	Teseq	CBL 6111D	25758	Oct. 27,09	Oct. 27,10
Signal Amplifier	Agilent	8447D	2944A10488	May 2,10	May 2,11
50Ω Coaxial Switch	ANRITSU	MP59B	6200530577	May 2,10	May 2,11

2.2.3.For radiated emission test(above 1GHz)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	Agilent	E7405A	MY45118807	May 31,09	May 31,10
Horn Antenna	EMCO	3117	00062558	Jan. 19,09	Jan. 19,11
Signal Amplifier	BURGEON	PEC-38-30M18G	NSEMC001	May 31,09	May 31,11
		-12-SFF			- '

2.2.4.For output power Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	Agilent	E7405A	MY45118807	May 31,09	May 31,10

2.2.5. For power spectral density and 6dB bandwidth Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	Rohde&Schwarz	FSL3	101507	May 30,09	May 30,10

2.2.6.For Band edge compliance test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESCS30	100340	May 31,09	May 31,10
Spectrum Analyzer	Agilent	E7405A	MY45118807	May 31,09	May 31,10
Bilog Antenna	Teseq	CBL 6111D	25758	Oct. 27,09	Oct. 27,10
Signal Amplifier	Agilent	8447D	2944A10488	May 2,10	May 2,11
50Ω Coaxial Switch	ANRITSU	MP59B	6200530577	May 2,10	May 2,11

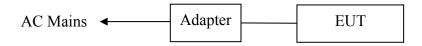
3. TEST SET-UP AND OPERATION MODES

3.1. Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its highest possible radiated level. The test modes were adapted accordingly in reference to the Operating Instructions.

3.2. Block Diagram of Test Set-up

System Diagram of Connections Between EUT and Simulators



(EUT: DAB+/DAB/FM/Internet radio)

3.3. Test Operation Mode and Test Software

Refer to clause 1.4

3.4. Special Accessories and Auxiliary Equipment None.

3.5. Countermeasures to Achieve EMC Compliance

None.

4. TEST SUMMARY

Test items and result lists

No.	Item	Standard	Results
1	Data rate VS power	N/A	N/A
2	Conduction Emission Test	FCC Part15C: 15.207 ANSI C63.4-2003 KDB558074	PASS
3	Radiated Emission Test	FCC Part15C: 15.209 ANSI C63.4-2003 KDB558074	PASS
4	Band Edge Compliance Test	FCC Part15: 15.247 KDB558074	PASS
5	Output Power Test	FCC Part15: 15.247 KDB558074	PASS
6	6dB Bandwith Test	FCC Part15: 15.247 KDB558074	PASS
7	Power Spectral Density Test	FCC Part15: 15.247 KDB558074	PASS
8	Antenna requirement	FCC Part 15:15.203	PASS

5. DATA RATE VS POWER

Mode	data rate (Mbps)	СН	Read (dBm)	Factor (dB)	Result (dBm)
	1	СН6	11.51	1.5	13.09
11b	2	CH6	11.58	1.5	13.21
110	5.5	CH6	11.75	1.5	13.26
	11	CH6	11.94	1.5	13.54
	54	CH6	12.21	1.5	8.99
	48	CH6	11.84	1.5	8.91
	36	СН6	11.74	1.5	8.87
11g	24	СН6	11.68	1.5	8.68
115	18	СН6	11.28	1.5	8.61
	12	CH6	11.74	1.5	8.54
	9	CH6	11.48	1.5	8.50
	6	CH6	11.67	1.5	8.49

Result=Read+Factor

When IEEE 802.11b's data rate was 11Mbps; IEEE 802.11g's data rate was 54Mbps, the EUT have maximum output power and all the test was performed in this data rate set.

6. EMISSION TEST RESULTS

6.1. Conducted Emission at The Mains Terminals Test

RESULT : **Pass**

Test procedure : FCC Part 15 Subpart C

Frequency range : $0.15 \sim 30 \text{MHz}$ Test Site : Shielded Room

Limits : FCC Part 15 Subpart C

Test Setup

Date of test : May 21, 2010 Model No. : Pinell explorer

Input Voltage : DC 15V from adapter input AC 120V/60Hz

Operation Mode : TX Mode

The EUT was put on a wooden table which was 0.8metre high above the ground and connected to the AC mains through a Artificial Mains Network (A.M.N). The mains lead in excess of 1 m separating the EUT from the AMN was folded at the cable centre into a bundle no longer than 0.4 m.

The EUT was kept 0.4m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during conducted emission test.

The bandwidth of the test receiver (R&S ESCS30) was set at 9 kHz.

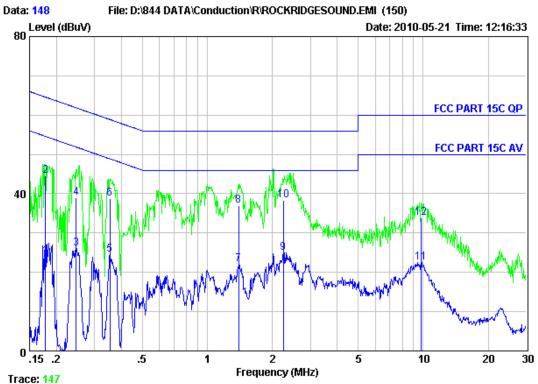
The frequency range from 150 kHz to 30 MHz was investigated.

The test data of the worst case condition(s) was reported on the following page.

When 802.11b's data rate was 11MHz;802.11g's data rate was 54MHz;the EUT have Maximum output and all the test was performed in this data rate set.

Note: Test uncertainty: ±2.54dB at a level of confidence of 95%.:

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11ace. 147

Test Site : 844 Shielded Room

Limit : FCC PART 15C QP LISN Phase : LINE

EUT : DAB+/DAB/FM/Internet radio

Power : DC 15V from adapter input AC 120V/60Hz

M/N : Pinell explorer

TestEngineer : Jade

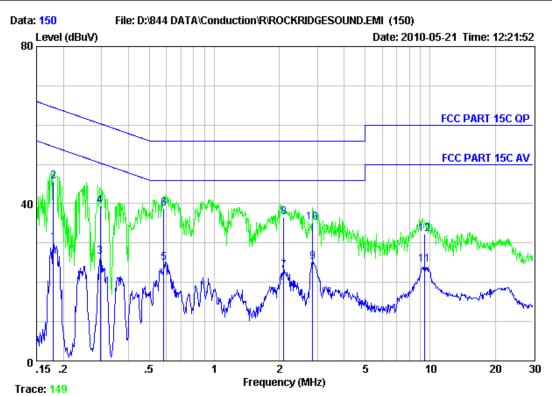
Comment : Temp:25.3'C Humi:55% Press:101.52kPa

Test Mode : TX Mode

	Freq. (MHz)	Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18	24.06	54.59	30.53	^
_	0.10	24.00	34.39	30.33	Average
2	0.18	44.50	64.59	20.09	QP
3	0.25	26.13	51.86	25.73	Average
4	0.25	39.10	61.86	22.76	QP
5	0.35	24.58	48.87	24.29	Average
6	0.35	38.80	58.87	20.07	QP
7	1.40	22.03	46.00	23.97	Average
8	1.40	37.10	56.00	18.90	QP
9	2.25	25.02	46.00	20.98	Average
10	2.25	38.40	56.00	17.60	QP
11	9.76	22.51	50.00	27.49	Average
12	9.76	33.90	60.00	26.10	QP

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Test Site : 844 Shielded Room

Limit : FCC PART 15C QP LISN Phase : NEUTRAL

EUT : DAB+/DAB/FM/Internet radio

Power : DC 15V from adapter input AC 120V/60Hz

M/N : Pinell explorer

TestEngineer : Jade

Comment : Temp:25.3'C Humi:55% Press:101.52kPa

Test Mode : TX Mode

	Freq. (MHz)	Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18	30.19	54.50	24.31	Average
2	0.18	45.70	64.50	18.80	QP
3	0.30	26.48	50.37	23.89	Average
4	0.30	39.40	60.37	20.97	QP
5	0.58	25.06	46.00	20.94	Average
6	0.58	38.70	56.00	17.30	QP
7	2.10	23.06	46.00	22.94	Average
8	2.10	36.60	56.00	19.40	QP
9	2.85	25.27	46.00	20.73	Average
10	2.85	35.20	56.00	20.80	QP
11	9.45	24.49	50.00	25.51	Average
12	9.45	32.40	60.00	27.60	OP

FCC ID: YFR00001

6.2. Radiated Emission

6.2.1. Test limits

1) FCC part 15C section 15.209

2) FCC part 15C section 15.247(a)

6.2.2.Test procedure

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table

can rotate 360 degrees to determine the position of the maximum emission level. The

EUT was set 3 meters away from the receiving antenna which was mounted on a antenna

tower. At the frequency band of 30MHz to 1GHz, The measuring antenna moved up and

down to find out the maximum emission level. It moved from 1 to 4 m for horizontal and

vertical polarizations. The broadband antenna (calibrated by dipole antenna) was used as

a receiving antenna. At the frequency band of 1GHz to 25GHz, The measuring antenna

moved from 1 to 4 m for horizontal and vertical polarization. The horn antenna was used

as a receiving antenna.

The resolution bandwidth and video bandwidth of the test receiver was 120 kHz and

300kHz for Quasi-peak detection at frequency below 1GHz.

The resolution bandwidth and video bandwidth of the test receiver was 1MHz and 1MHz

for Peak detection at frequency above 1GHz.

For Average measurement at frequency above 1GHz. The resolution bandwidth of the test

receiver was 1MHz; due to the shortest pulse width T is 116us, according the video

bandwidth should not smaller than 1/T, so the video bandwidth is 10Hz.

In 18GHz to 25GHz, The EUT was checked by Horn ANT. But the test result is

background.

When 802.11b's data rate was 11MHz;802.11g's data rate was 54MHz;the EUT have

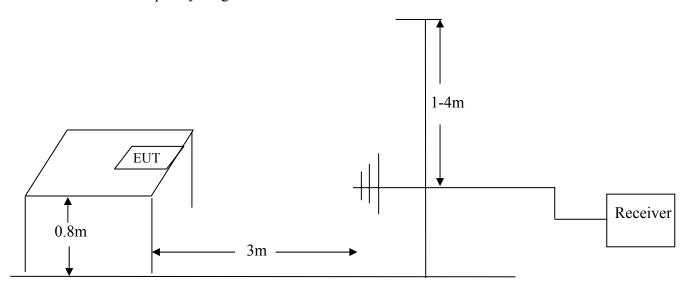
Maximum output and all the test was performed in this data rate set.

The EUT was tested in Chamber Site.

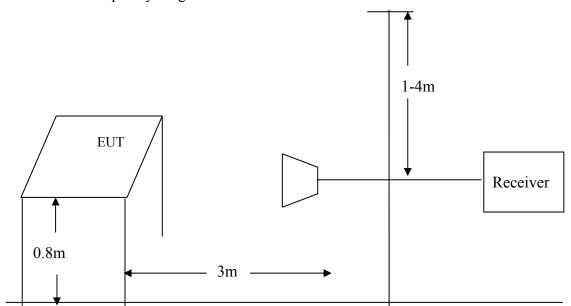
Note: Test uncertainty: $\pm 2.62 dB$ at a level of confidence of 95%.:

6.2.3.Test Setup Diagram

5.1.3.1. Frequency range: 30MHz-1000MHz

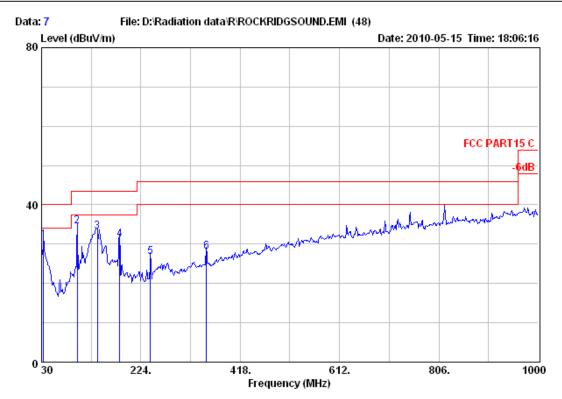


5.1.3.2. Frequency range: 1 GHz -25GHz



The test plots as following:

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Test Site : 10m Chamber Limit : FCC PART15 C

Dis. / Ant. : 3m 25758-3 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 230V/50Hz

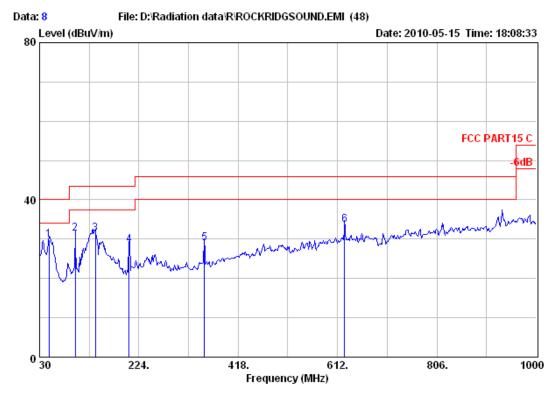
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode

		Freq.	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Reading (dBuV)	Ant. Factor (dB/m)	Cable Loss (dB)	Remark
_	1	33.88	30.97	40.00	9.03	11.78	18.60	0.59	QP
	2	99.84	34.48	43.50	9.02	23.12	10.30	1.06	QP
	3	138.64	33.17	43.50	10.33	19.74	12.18	1.25	QP
	4	182.29	31.26	43.50	12.24	20.69	9.12	1.45	QP
	5	242.43	26.79	46.00	19.21	13.90	11.20	1.69	QP
	6	352.04	28.12	46.00	17.88	11.02	15.04	2.06	QP

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Test Site : 10m Chamber Limit : FCC PART15 C

Dis. / Ant. : 3m 25758-3 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 230V/50Hz

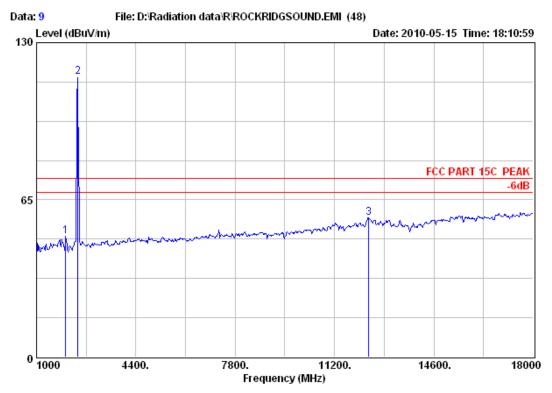
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode

	Freq.	Emission Level (dBuV/m)	Limits (dBuV/m)	_	Reading (dBuV)	Ant. Factor (dB/m)	Cable Loss (dB)	Remark
1	48.43	29.84	40.00	10.16	19.35	9.82	0.67	QP
2	99.84	31.41	43.50	12.09	20.05	10.30	1.06	QP
3	138.64	31.52	43.50	11.98	18.09	12.18	1.25	QP
4	204.60	28.50	43.50	15.00	18.58	8.37	1.55	QP
5	352.04	29.02	46.00	16.98	11.92	15.04	2.06	QP
6	625.58	33.70	46.00	12.30	10.28	20.65	2.77	QP

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

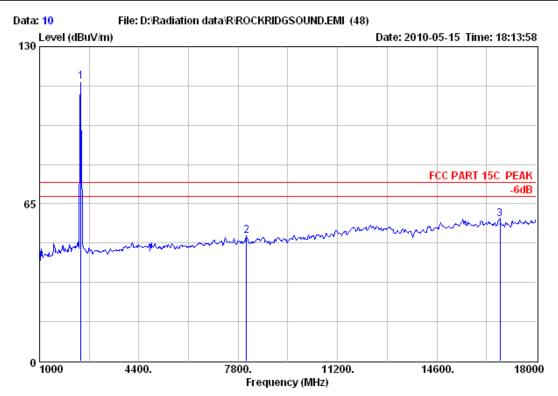
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH1 2412MHz

	Emission				Ant.	Cable	
Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1 2003.00	50.01	74.00	23.99	16.71	31.10	2.20	Peak
2 2412.00	115.76	74.00	-41.76	82.03	31.50	2.23	Peak
312373.00	57.53	74.00	16.47	14.74	39.95	2.84	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

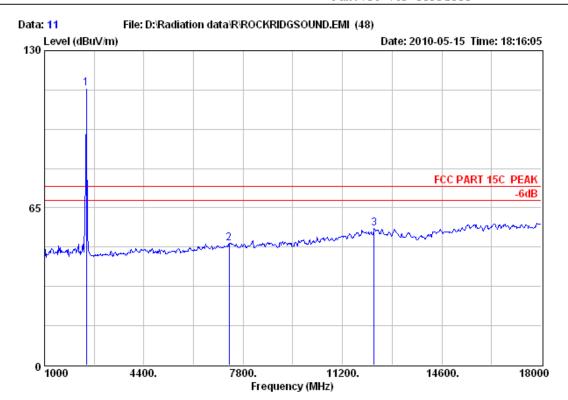
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH1 2412MHz

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-								
	1 2412.00	115.69	74.00	-41.69	81.96	31.50	2.23	Peak
	2 8089.00	51.61	74.00	22.39	12.05	36.98	2.58	Peak
	316759.00	58.67	74.00	15.33	12.46	43.10	3.11	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

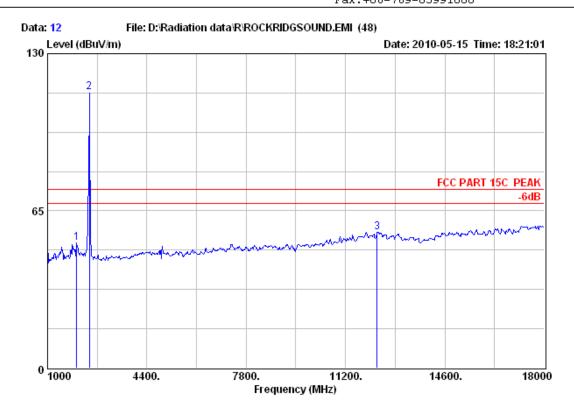
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH6 2437MHz

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-								
	1 2437.00	114.26	74.00	-40.26	80.49	31.54	2.23	Peak
	2 7324.00	50.45	74.00	23.55	11.09	36.83	2.53	Peak
	312288.00	56.38	74.00	17.62	13.62	39.92	2.84	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

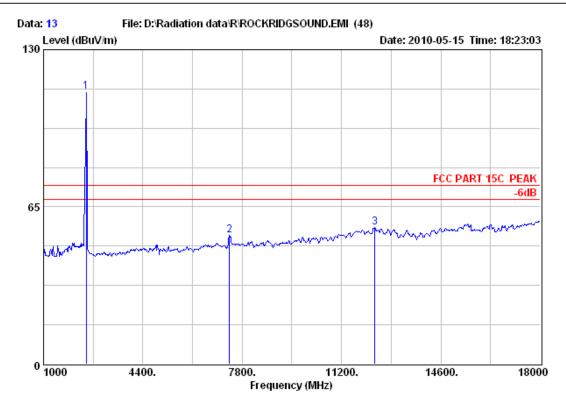
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH6 2437MHz

	Emission				Ant.	Cable	
Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1 2003.00	51.67	74.00	22.33	18.37	31.10	2.20	Peak
2 2437.00	114.19	74.00	-40.19	80.42	31.54	2.23	Peak
312288.00	56.08	74.00	17.92	13.32	39.92	2.84	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

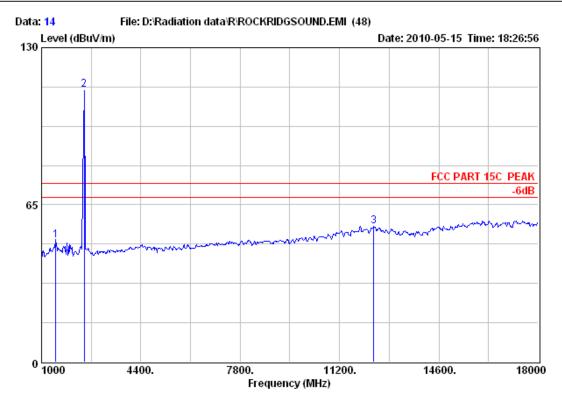
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH11 2462MHz

	Emission				Ant.	Cable	
Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1 2462.00	112.69	74.00	-38.69	78.90	31.56	2.23	Peak
2 7358.00	53.12	74.00	20.88	13.76	36.83	2.53	Peak
312339.00	56.57	74.00	17.43	13.79	39.94	2.84	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

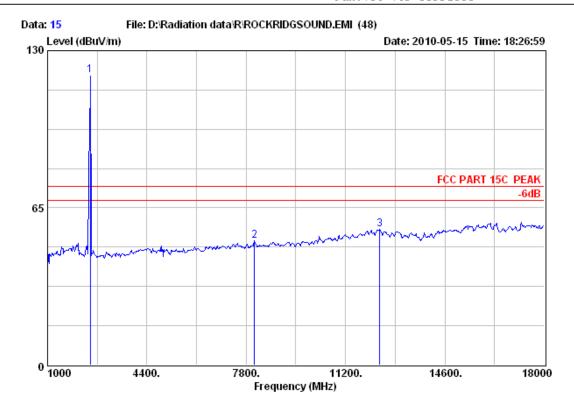
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH11 2462MHz

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-								
	1 1493.00	50.51	74.00	23.49	20.66	27.70	2.15	Peak
	2 2462.00	112.59	74.00	-38.59	78.80	31.56	2.23	Peak
	312373.00	56.04	74.00	17.96	13.25	39.95	2.84	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

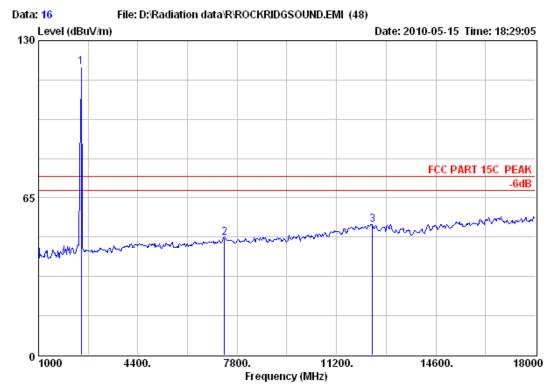
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH11 2462MHz

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-								
	1 2462.00	119.97	74.00	-45.97	86.18	31.56	2.23	Peak
	2 8089.00	51.42	74.00	22.58	11.86	36.98	2.58	Peak
	312373.00	55.97	74.00	18.03	13.18	39.95	2.84	Peak

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Test Site : 10m Chamber Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

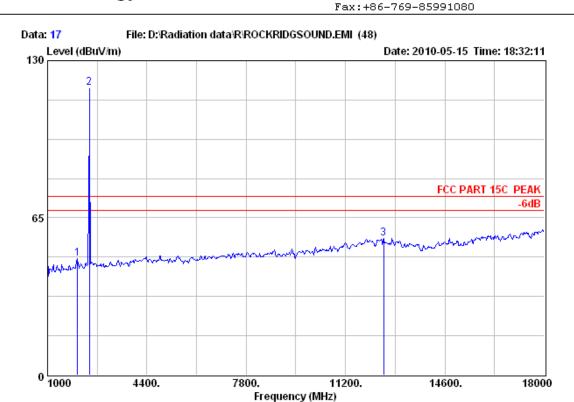
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH11 2462MHz

	Emission				Ant.	Cable	
Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1 2462.00	118.96	74.00	-44.96	85.17	31.56	2.23	Peak
2 7358.00	48.68	74.00	25.32	9.32	36.83	2.53	Peak
312424.00	53.96	74.00	20.04	11.14	39.97	2.85	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

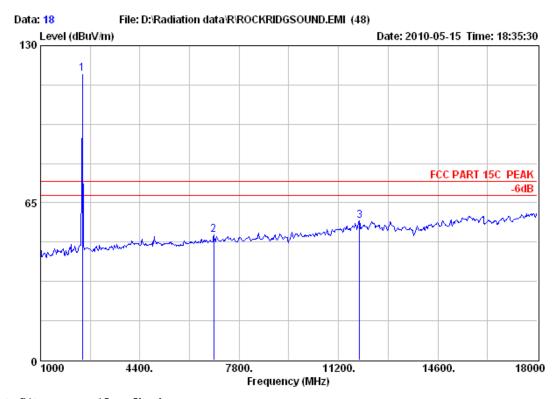
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH6 2437MHz

	Emission				Ant.	Cable	
Freq.	Level (dBuV/m)	Limits	_	_			Remark
1 2020.00	48.21	74.00	25.79	14.89	31.12	2.20	Peak
2 2437.00	118.67	74.00	-44.67	84.90	31.54	2.23	Peak
312509.00	56.51	74.00	17.49	13.65	40.01	2.85	Peak

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Test Site : 10m Chamber Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

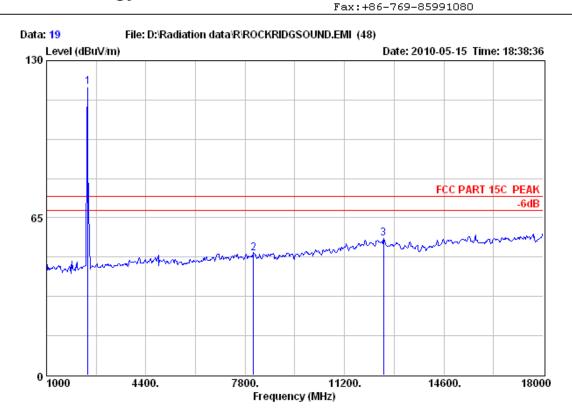
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH6 2437MHz

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-								
	1 2437.00	118.57	74.00	-44.57	84.80	31.54	2.23	Peak
	2 6933.00	51.62	74.00	22.38	12.25	36.86	2.51	Peak
	311914.00	57.49	74.00	16.51	15.00	39.67	2.82	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

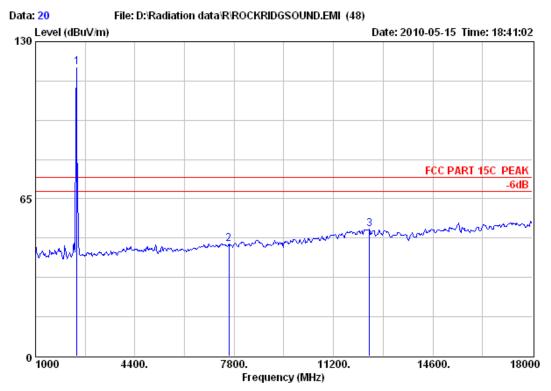
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH1 2412MHz

	Emission				Ant.	Cable	
Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1 2412.00	119.26	74.00	-45.26	85.53	31.50	2.23	Peak
2 8089.00	50.51	74.00	23.49	10.95	36.98	2.58	Peak
312543.00	56.42	74.00	17.58	13.54	40.03	2.85	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

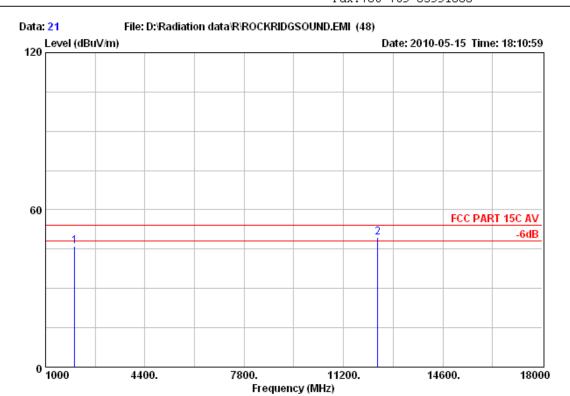
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH1 2412MHz

	Emission				Ant.	Cable	
Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1 2412.00	119.37	74.00	-45.37	85.64	31.50	2.23	Peak
2 7613.00	46.26	74.00	27.74	6.86	36.85	2.55	Peak
312424.00	52.41	74.00	21.59	9.59	39.97	2.85	Peak

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

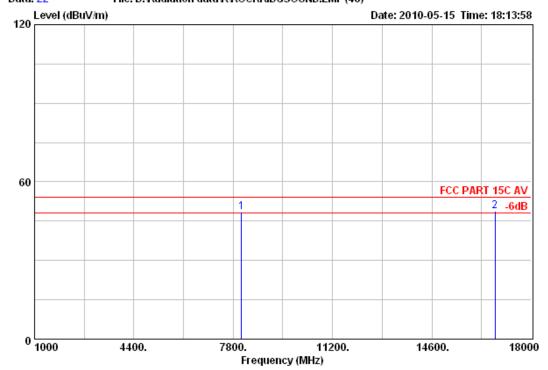
Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH1 2412MHz

	Cable	Ant.				Emission	
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)
Average	2.20	31.10	12.71	7.99	54.00	46.01	1 2003.00
Average	2.84	39.95	6.74	4.47	54.00	49.53	212373.00

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

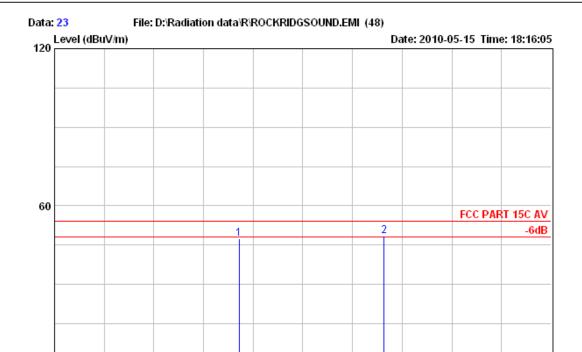
Test Mode : TX Mode 802.11g CH1 2412MHz

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
. 80	00.085	48.61	54.00	5.39	9.05	36.98	2.58	Average
16	759.00	48.67	54.00	5.33	2.46	43.10	3.11	Average

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14600.

18000



Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

7800.

Frequency (MHz)

11200.

EUT : DAB+/DAB/FM/Internet radio

4400.

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

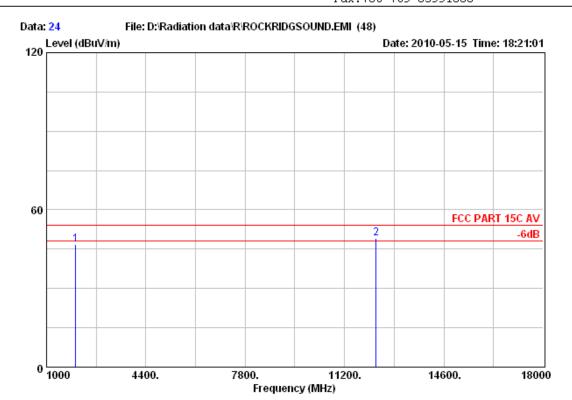
0 1000

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH6 2437MHz

	Cable	Ant.				Emission	
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)
Average	2.53	36.83	8.09	6.55	54.00	47.45	1 7324.00
Average	2.84	39.92	5.62	5.62	54.00	48.38	212288.00

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

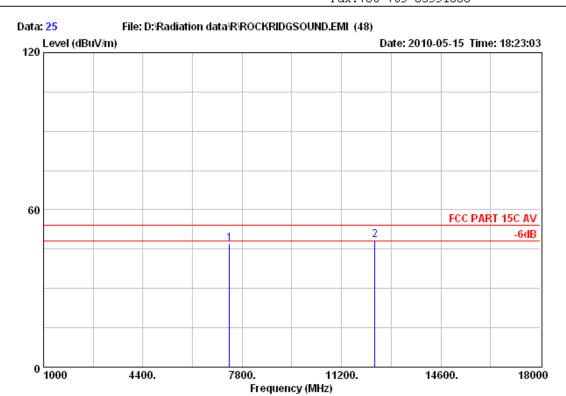
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH6 2437MHz

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 2003.00	46.67	54.00	7.33	13.37	31.10	2.20	Average
212288.00	49.08	54.00	4.92	6.32	39.92	2.84	Average

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

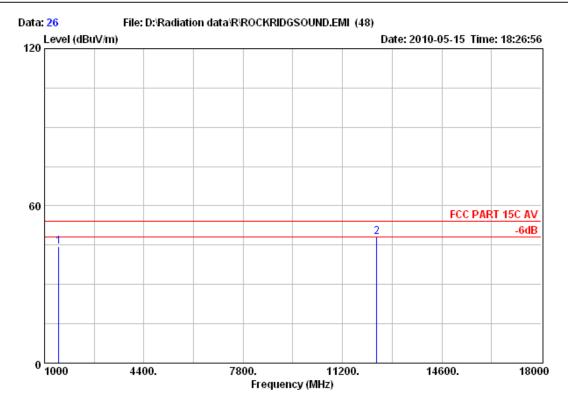
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH11 2462MHz

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 7358.00	47.12	54.00	6.88	7.76	36.83	2.53	Average
212339.00	48.57	54.00	5.43	5.79	39.94	2.84	Average

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

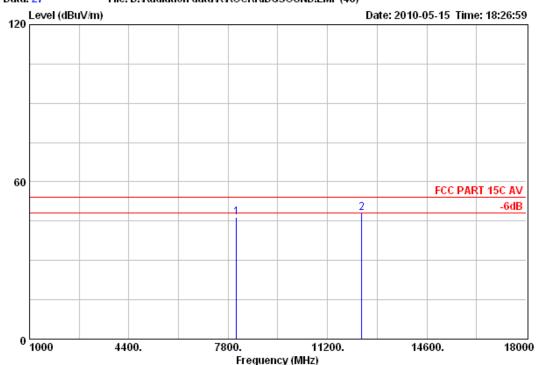
Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11g CH11 2462MHz

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 1493.00	44.51	54.00	9.49	14.66	27.70	2.15	Average
212373.00	48.04	54.00	5.96	5.25	39.95	2.84	Average

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

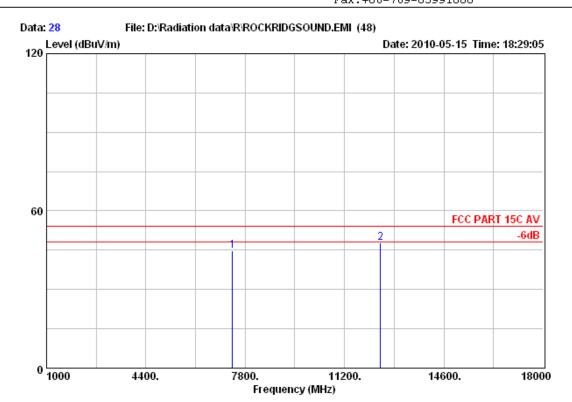
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH11 2462MHz

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 8089.00	46.42	54.00	7.58	6.86	36.98	2.58	Average
212373.00	47.97	54.00	6.03	5.18	39.95	2.84	Average

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

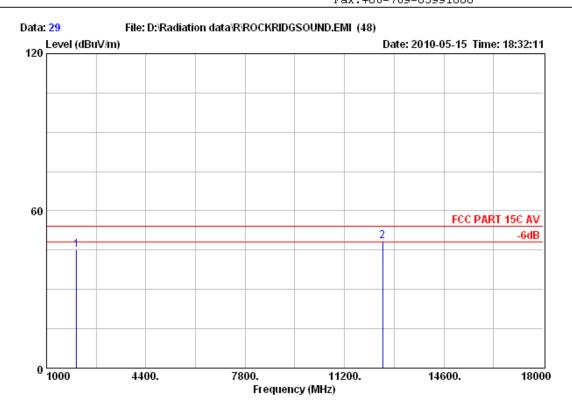
Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

Test Mode : TX Mode 802.11b CH11 2462MHz

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 7358.00	44.68	54.00	9.32	5.32	36.83	2.53	Average
212424.00	47.96	54.00	6.04	5.14	39.97	2.85	Average

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

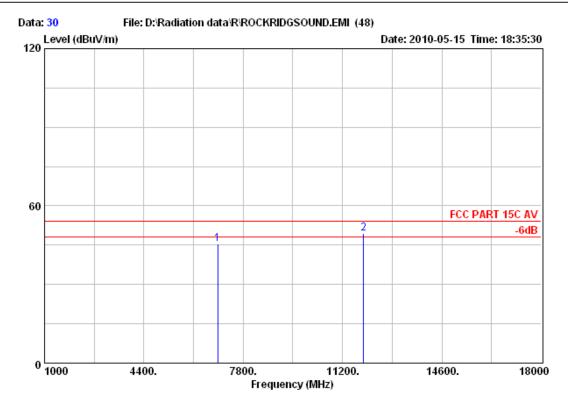
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 2020.00	45.21	54.00	8.79	11.89	31.12	2.20	Average
212509.00	48.51	54.00	5.49	5.65	40.01	2.85	Average

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

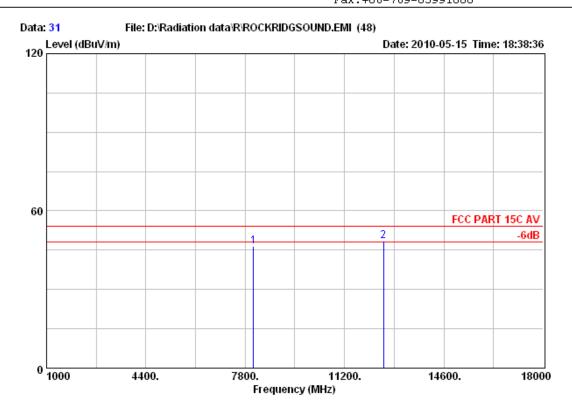
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 6933.00	45.62	54.00	8.38	6.25	36.86	2.51	Average
211914.00	49.49	54.00	4.51	7.00	39.67	2.82	Average

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Test Site : 10m Chamber Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

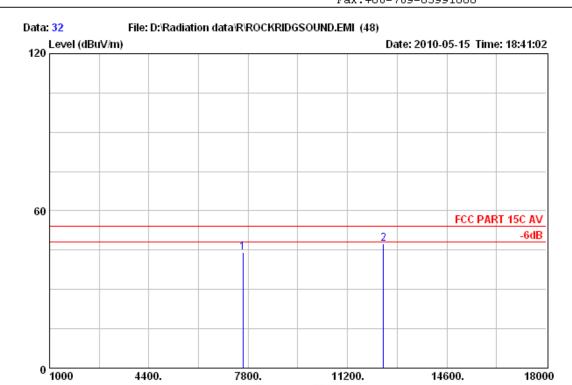
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
_								
	1 8089.00	46.51	54.00	7.49	6.95	36.98	2.58	Average
	212543.00	48.42	54.00	5.58	5.54	40.03	2.85	Average

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Frequency (MHz)

Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

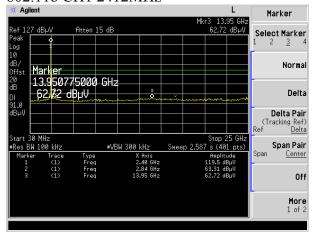
Test Engineer : Jade

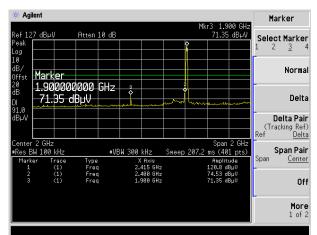
Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Emission				Ant.	Cable	
Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1 7613.00	44.26	54.00	9.74	4.86	36.85	2.55	Average
212424.00	47.41	54.00	6.59	4.59	39.97	2.85	Average

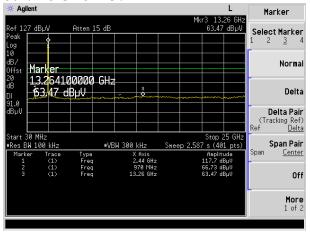
Conducted emission test data

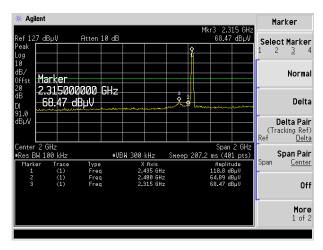
802.11b CH1 2412MHz



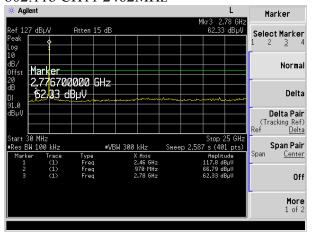


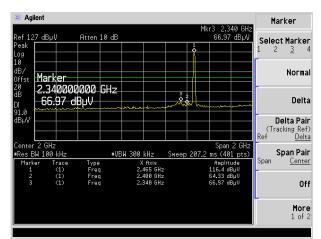
802.11b CH6 2437MHz



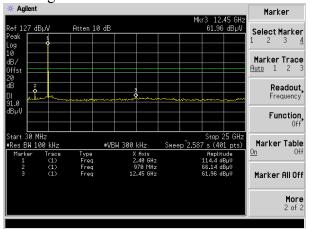


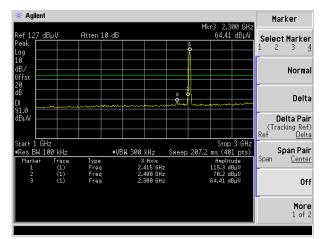
802.11b CH11 2462MHz



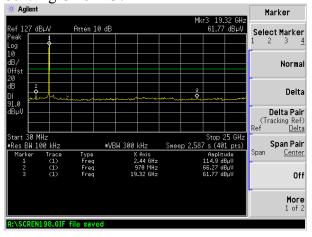


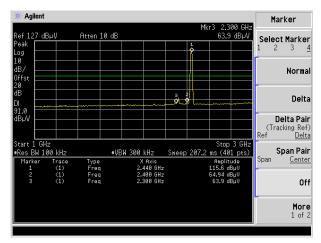
802.11g CH1 2412MHz



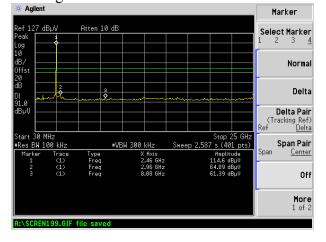


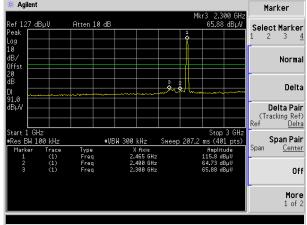
802.11g CH6 2437MHz





802.11g CH11 2462MHz





6.3. 6dB Bandwidth

6.3.1. Test limits

>500kHz.

6.3.2. Test procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to the spectrum analyzer through an RF attenuator.
- 3. Set SA Center Frequency = Operation frequency, RBW=100kHz, VBW=300kHz.
- 4. Set SA trace max hold, then view.

6.3.3. Test result

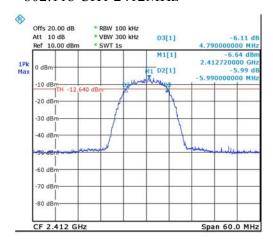
Pass

Test Channel	Frequency MHz	6dB bandwidth MHz	Conclusion
802.11b CH1	2412MHz	10.78	Pass
802.11b CH6	2437MHz	10.78	Pass
802.11b CH11	2462MHz	10.78	Pass
802.11g CH1	2412MHz	16.53	Pass
802.11g CH6	2437MHz	16.61	Pass
802.11g CH11	802.11g CH11 2462MHz		Pass

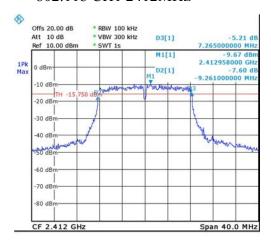
When 802.11b's data rate was 11MHz;802.11g's data rate was 54MHz;the EUT have Maximum output and all the test was performed in this data rate set.

The test plots as following:

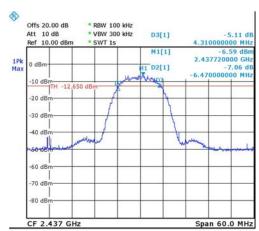
802.11b CH1 2412MHz



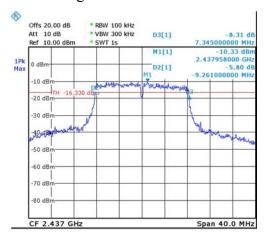
802.11b CH1 2412MHz



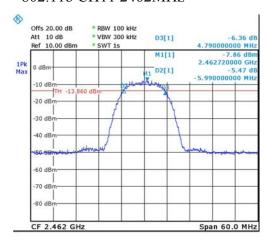
802.11b CH6 2437MHz



802.11g CH1 2437MHz



802.11b CH11 2462MHz



802.11g CH1 2462MHz



6.4. Power Spectral Density Test

6.4.1.Test procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to the spectrum analyzer through an RF attenuator.
- 3. Set SA Center Frequency = Operation frequency, RBW=3kHz,VBW=30kHz.
- 4. Set SA trace max hold, then view.

6.4.2. Test result

Pass

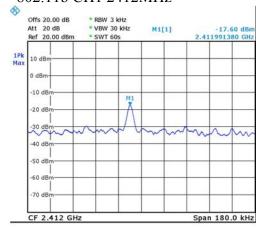
Test Channel	Read (dBm)	Factor (dB)	Result (dBm)	Limit
802.11b CH1	-17.60	1.5	-16.10	8.0
802.11b CH6	-20.32	1.5	-18.82	8.0
802.11b CH11	-20.69	1.5	-19.19	8.0
802.11g CH1	-19.65	1.5	-18.15	8.0
802.11g CH6	-19.26	1.5	-17.76	8.0
802.11g CH11	-19.71	1.5	-18.21	8.0

Note:Result=Read+Factor(antenna gain +cable loss)

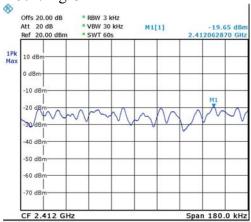
The test plots as following:

When 802.11b's data rate was 11MHz;802.11g's data rate was 54MHz;the EUT have Maximum output and all the test was performed in this data rate set.

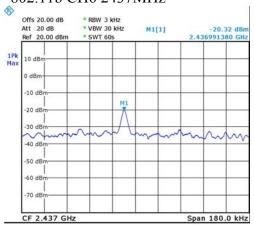
802.11b CH1 2412MHz



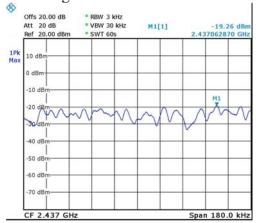
802.11g CH1 2412MHz



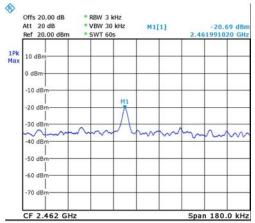
802.11b CH6 2437MHz



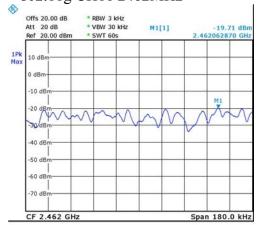
802.11g CH1 2437MHz



802.11b CH11 2462MHz



802.11g CH11 2462MHz



6.5. Output Power Test

6.5.1. Test procedure

- 1. The EUT was placed on a table which is 0.8m above ground plane.
- 2. Connect EUT RF output port to the spectrum analyzer through an RF attenuator.

6.5.2. Test result

Pass

Test Channel	Read (dBm)	Factor1 (dB)	Factor2 (dB)	Result (dBm)	Limit
802.11b CH1	-0.19	12.55	1.5	13.86	30.00
802.11b CH6	-0.56	12.60	1.5	13.54	30.00
802.11b CH11	-0.90	12.58	1.5	13.18	30.00
802.11g CH1	-5.93	13.18	1.5	8.75	30.00
802.11g CH6	-5.71	13.20	1.5	8.99	30.00
802.11g CH11	-6.03	13.18	1.5	8.65	30.00

Note:Result=Read+Factor1(20log(26dBEBW))+factor2(cable loss+antenna gain) When 802.11b's data rate was 11MHz;802.11g's data rate was 54MHz;the EUT have Maximum output and all the test was performed in this data rate set.

802.11b CH1 2412MHz



802.11b CH1 2412MHz



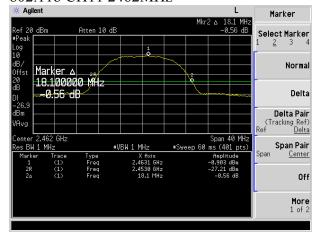
802.11b CH6 2437MHz



802.11g CH1 2437MHz



802.11b CH11 2462MHz



802.11g CH11 2462MHz



6.6. Band Edge

6.6.1. Test limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

6.6.2. Test procedure

The EUT was placed on a turn table which was 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on a antenna tower. At the frequency band of 1G Hz to 18GHz, The measuring antenna moved from 1 to 4 m for horizontal and vertical polarization. The horn antenna was used was a receiving antenna.

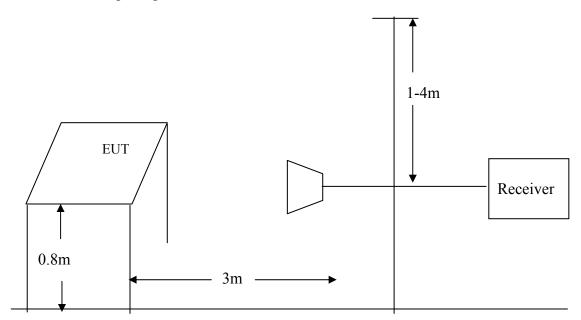
The resolution bandwidth and video bandwidth of the test receiver was 1MHz and 1MHz for Peak detection at frequency above 1GHz.

The resolution bandwidth and video bandwidth of the test receiver was 1MHz and 10Hz for Average detection at frequency above 1GHz.

When 802.11b's data rate was 11MHz;802.11g's data rate was 54MHz;the EUT have Maximum output and all the test was performed in this data rate set.

The EUT was tested in Chamber Site.

6.6.3. Test Setup Diagram

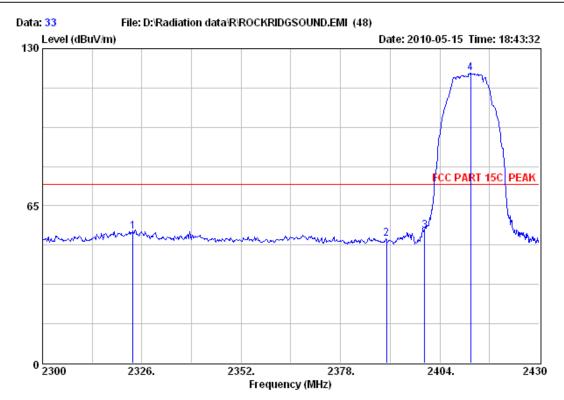


6.6.4. Test result

PASS.

The test plots as following:

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

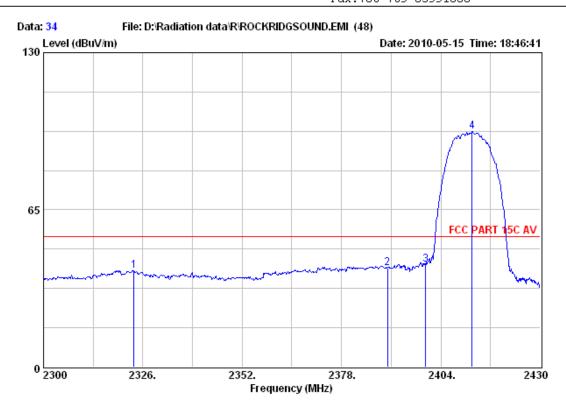
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1	2323.66	54.46	74.00	19.54	20.81	31.43	2.22	Peak
2	2390.00	51.47	74.00	22.53	17.77	31.48	2.22	Peak
3	2400.00	54.59	74.00	19.41	20.86	31.50	2.23	Peak
4	2412.06	119.70	74.00	-45.70	85.97	31.50	2.23	Peak

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

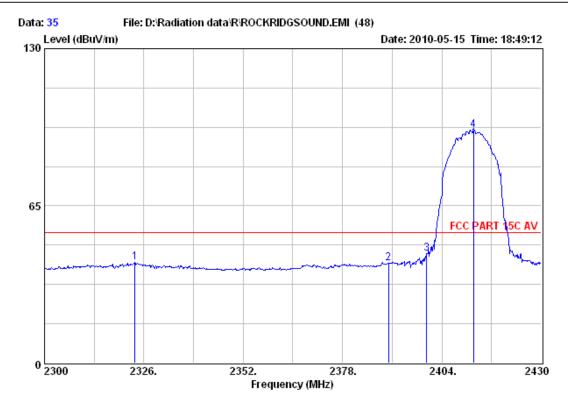
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
Average	2.22	31.43	6.26	14.09	54.00	39.91	1 2323.66	1
Average	2.22	31.48	7.08	13.22	54.00	40.78	2 2390.00	2
Average	2.23	31.50	8.65	11.62	54.00	42.38	3 2400.00	3
Average	2.23	31.50	63.69	-43.42	54.00	97.42	4 2412.19	_

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

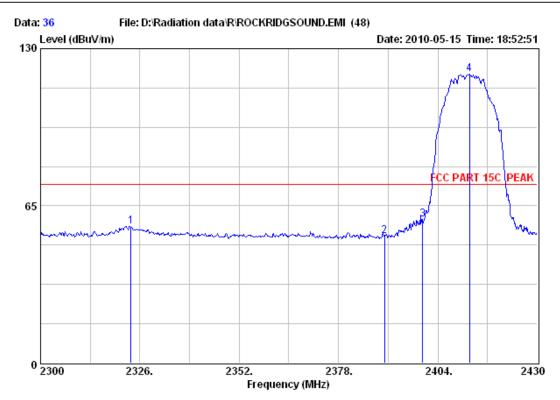
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
								-
Average	2.22	31.43	7.94	12.41	54.00	41.59	1 2323.66	
Average	2.22	31.48	7.67	12.63	54.00	41.37	2 2390.00	
Average	2.23	31.50	11.38	8.89	54.00	45.11	3 2400.00	
Average	2.23	31.50	62.43	-42.16	54.00	96.16	4 2412.32	

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Test Site : 10m Chamber

: FCC PART 15C PEAK Limit

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

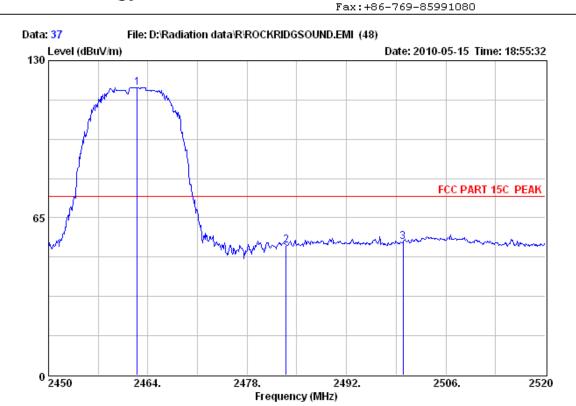
: DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

: Temp.:25.2'C Humi.:56% Press:101.51kPa

			Emission				Ant.	Cable	
		Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
		(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-									
	1	2323.66	56.48	74.00	17.52	22.83	31.43	2.22	Peak
	2	2390.00	52.34	74.00	21.66	18.64	31.48	2.22	Peak
	3	2400.00	59.39	74.00	14.61	25.66	31.50	2.23	Peak
	4	2412.32	119.34	74.00	-45.34	85.61	31.50	2.23	Peak

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Test Site : 10m Chamber

: FCC PART 15C PEAK Limit

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

: DC 15V from adapter input AC 120V/60Hz

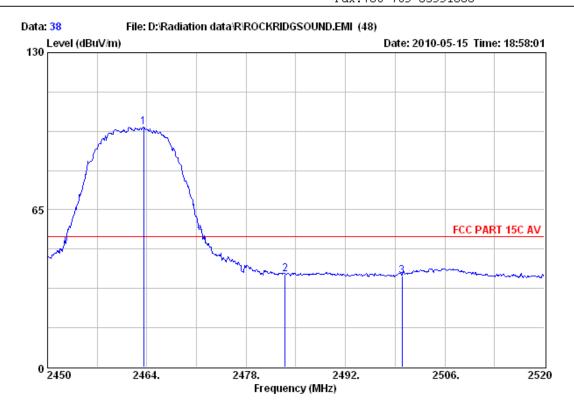
Test Engineer : Jade

: Temp.:25.2'C Humi.:56% Press:101.51kPa

Comment : Temp.:25.2'C num:....
Test Mode : TX Mode 802.11b CH11 2462MHz

			Emission				Ant.	Cable	
		Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
		(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-									
	1	2462.53	118.95	74.00	-44.95	85.16	31.56	2.23	Peak
	2	2483.50	53.42	74.00	20.58	19.61	31.58	2.23	Peak
	3	2500.00	54.88	74.00	19.12	21.05	31.60	2.23	Peak

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Test Site : 10m Chamber : FCC PART 15C AV Limit

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

: DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

: DC 15V from adapter input AC 120V/60Hz

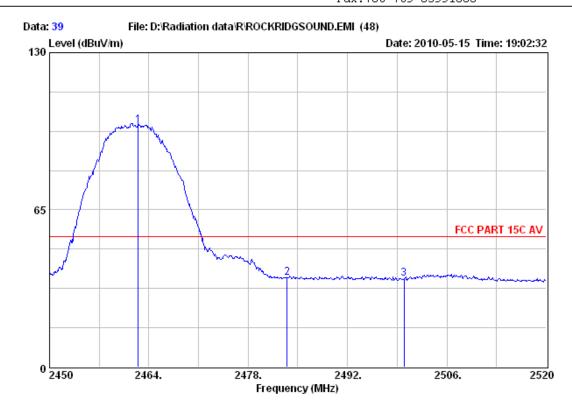
Test Engineer : Jade

: Temp.:25.2'C Humi.:56% Press:101.51kPa

Comment : Temp.:25.2'C num:....
Test Mode : TX Mode 802.11b CH11 2462MHz

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
Average	2.23	31.56	65.55	-45.34	54.00	99.34	2463.58	1
Average	2.23	31.58	4.47	15.72	54.00	38.28	2483.50	2
Average	2.23	31.60	3.99	16.18	54.00	37.82	2500.00	3

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Test Site : 10m Chamber : FCC PART 15C AV Limit

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

: DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

: DC 15V from adapter input AC 120V/60Hz

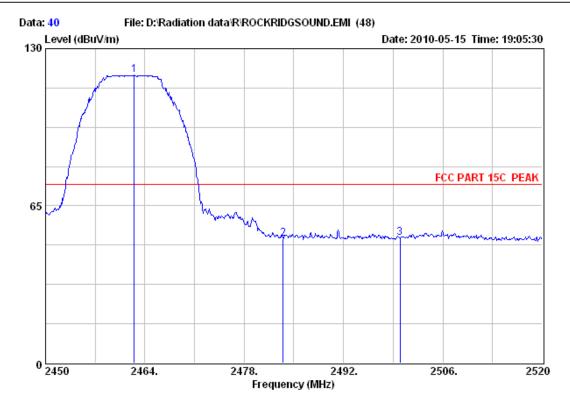
Test Engineer : Jade

: Temp.:25.2'C Humi.:56% Press:101.51kPa

Comment : Temp.:25.2'C num:......
Test Mode : TX Mode 802.11b CH11 2462MHz

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
Average	2.23	31.56	66.13	-45.92	54.00	99.92	2462.53	1
Average	2.23	31.58	2.95	17.24	54.00	36.76	2483.50	2
Average	2.23	31.60	2.59	17.58	54.00	36.42	2500.00	3

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Test Site : 10m Chamber

: FCC PART 15C PEAK Limit

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

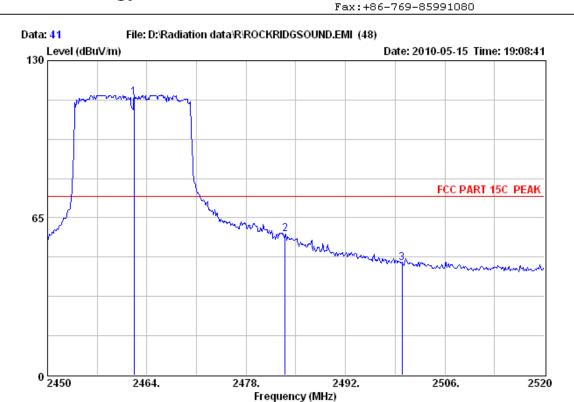
: DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

: Temp.:25.2'C Humi.:56% Press:101.51kPa Comment : Temp.:25.2'C Humi.:56% Pres Test Mode : TX Mode 802.11b CH11 2462MHz

		Emission				Ant.	Cable	
	Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1	2462.53	119.01	74.00	-45.01	85.22	31.56	2.23	Peak
2	2483.50	51.39	74.00	22.61	17.58	31.58	2.23	Peak
3	2500.00	51.69	74.00	22.31	17.86	31.60	2.23	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

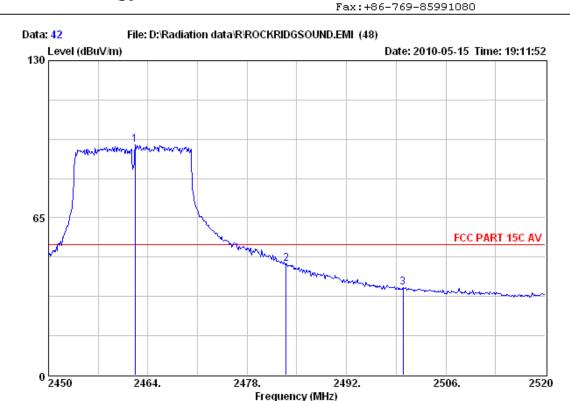
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Freq.	Emission Level (dBuV/m)	Limits (dBuV/m)	_	_	Factor		Remark
_	2462.18 2483.50	114.78 58.21	74.00 74.00	-40.78 15.79	80.99 24.40	31.56 31.58		Peak Peak
3	2500.00	46.38	74.00	27.62	12.55	31.60	2.23	Peak

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

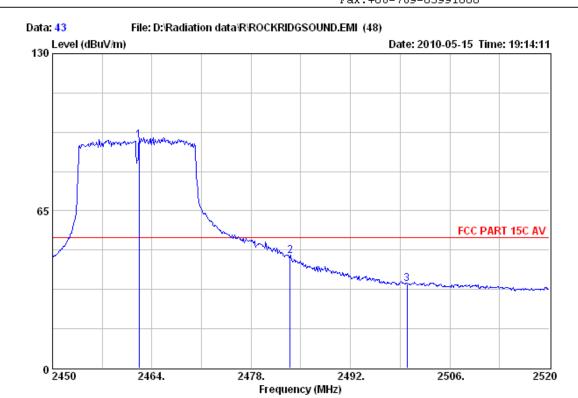
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
Average	2.23	31.56	61.49	-41.28	54.00	95.28	2462.18	1
Average	2.23	31.58	12.08	8.11	54.00	45.89	2483.50	2
Average	2.23	31.60	2.38	17.79	54.00	36.21	2500.00	3

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

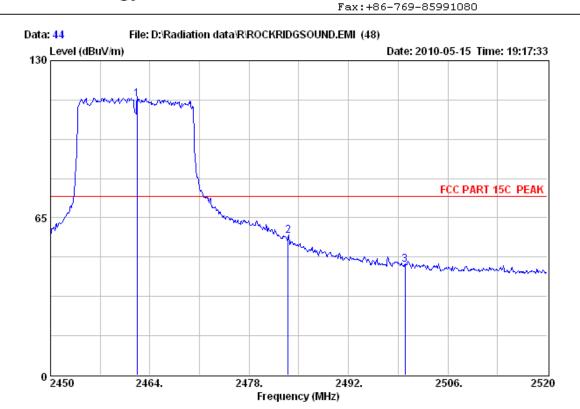
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
Average	2.23	31.56	60.53	-40.32	54.00	94.32	2462.18	1
Average	2.23	31.58	12.70	7.49	54.00	46.51	2483.50	2
Average	2.23	31.60	1.08	19.09	54.00	34.91	2500.00	3

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

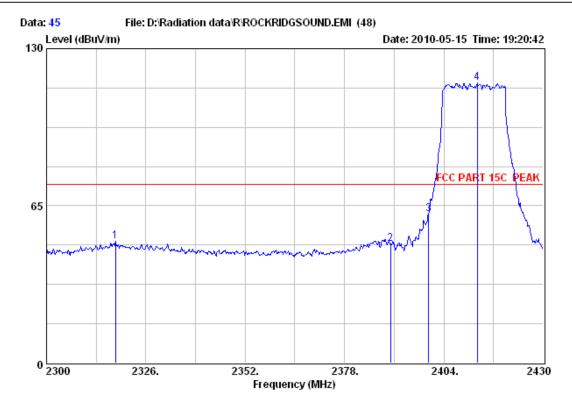
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

		Emission				Ant.	Cable	
	Freq. (MHz)	Level (dBuV/m)	Limits (dBuV/m)	_	_			Remark
1	2462.18	113.98	74.00	-39.98	80.19	31.56	2.23	Peak
2	2483.50	57.72	74.00	16.28	23.91	31.58	2.23	Peak
3	2500.00	45.76	74.00	28.24	11.93	31.60	2.23	Peak

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

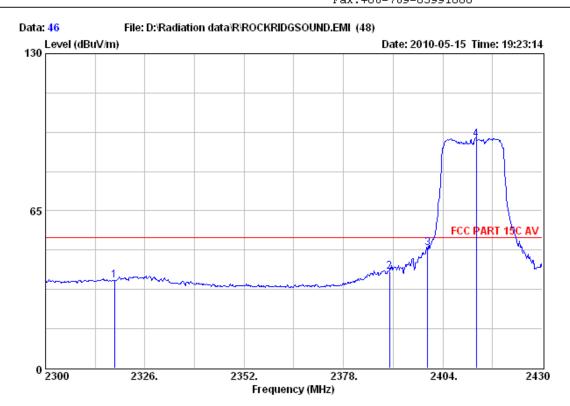
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

			Emission				Ant.	Cable	
		Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
		(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
-									
	1	2318.07	50.19	74.00	23.81	16.56	31.41	2.22	Peak
	2	2390.00	49.12	74.00	24.88	15.42	31.48	2.22	Peak
	3	2400.00	61.67	74.00	12.33	27.94	31.50	2.23	Peak
	4	2412.71	115.85	74.00	-41.85	82.12	31.50	2.23	Peak

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: HORIZONTAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

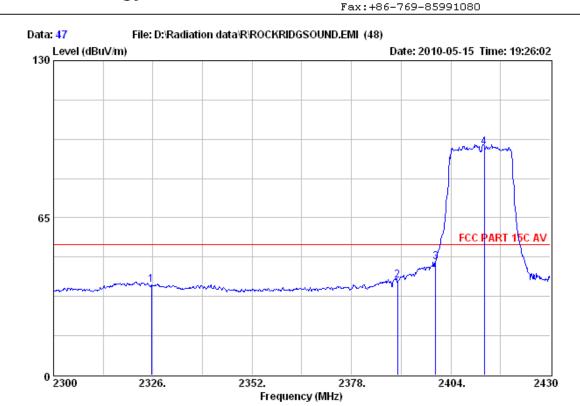
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

	Cable	Ant.				Emission		
Remark	Loss	Factor	Reading	Margin	Limits	Level	Freq.	
	(dB)	(dB/m)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(MHz)	
Average	2.22	31.41	2.69	17.68	54.00	36.32	2318.07	1
Average	2.22	31.48	6.02	14.28	54.00	39.72	2390.00	2
Average	2.23	31.50	15.84	4.43	54.00	49.57	2400.00	3
Average	2.23	31.50	60.84	-40.57	54.00	94.57	2412.71	4

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Test Site : 10m Chamber
Limit : FCC PART 15C AV

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

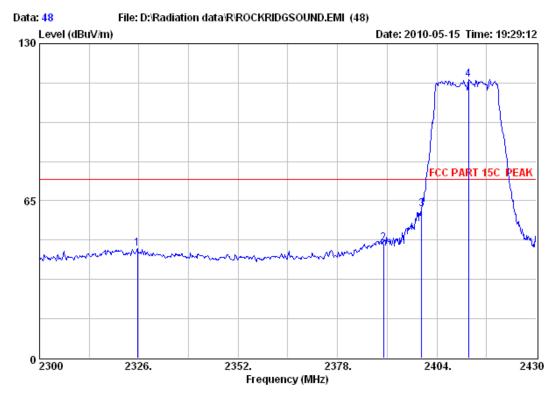
Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1	2325.61	37.18	54.00	16.82	3.53	31.43	2.22	Average
2	2390.00	39.18	54.00	14.82	5.48	31.48	2.22	Average
3	2400.00	46.78	54.00	7.22	13.05	31.50	2.23	Average
4	2412.71	94.32	54.00	-40.32	60.59	31.50	2.23	Average

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Test Site : 10m Chamber

Limit : FCC PART 15C PEAK

Dis. / Ant. : 3m 3117 Ant. Pol.: VERTICAL

EUT : DAB+/DAB/FM/Internet radio

M/N : Pinell explorer

Power : DC 15V from adapter input AC 120V/60Hz

Test Engineer : Jade

Comment : Temp.:25.2'C Humi.:56% Press:101.51kPa

		Emission				Ant.	Cable	
	Freq.	Level	Limits	Margin	Reading	Factor	Loss	Remark
	(MHz)	(dBuV/m)	(dBuV/m)	(dB)	(dBuV)	(dB/m)	(dB)	
1	2325.61	45.18	74.00	28.82	11.53	31.43	2.22	Peak
2	2390.00	47.58	74.00	26.42	13.88	31.48	2.22	Peak
3	2400.00	61.42	74.00	12.58	27.69	31.50	2.23	Peak
4	2412.32	115.12	74.00	-41.12	81.39	31.50	2.23	Peak

6.7. ANTENNA REQUIREMENT

6.7.1.STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

6.7.2. ANTENNA CONNECTED CONSTRUCTION

The antenna used for this product is PCB antenna (see EUT photo) that no antenna other than that furnished by the responsible party shall be used with the device, The maximum peak gain of this antenna is only 0.5dBi.