



Product Service

EMC TEST REPORT

Report Number : **68.760.10.271.01** Date of Issue: 26 January 2011

Model : **NI3421-A01**

Product Type : Tablet PC

Applicant : Notion Ink Design Labs Pvt. Ltd.

Address : 6th Block, D tower, Subramanya Arcade, Bannerghatta Road,
Bangalore, Karnataka, India 560029

Production Facility : Wanlida Group Co., Ltd.

Address : Wanlida Industry Zone, Nanjing, Fujian, China 363601

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including
Appendices : 41

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test site1:

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
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Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
Futian District 518048,
Shenzhen,P.R.C.

Telephone: 86 755 8828 6998

Fax: 86 755 8828 5299

Test site2:

Company name: Audix Technology (Shenzhen) Co.,Ltd
Block Shenzhen, Science & Industry Park,
Nantou, Shenzhen,
Guangdong,
China

Telephone: 86 755 2663 9496

Fax: 86 755 2663 2877

3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Tablet PC

Model no.: NI3421-A01

Options and accessories: NIL

Rating: DC 19V, 2.1A
Test with adaptor:
Input: AC 100-240V, 50/60Hz, 1A
Output: DC 19V, 2.1A

Antenna: Integral antenna inside enclosure of EUT, NOT accessible by end user

RF Transmission
Frequency: WiFi/Bluetooth: 2400-2483.5MHz
GSM850/WCDMA850: 824-849MHz
GSM1900/WCDMA1900: 1920-1980MHz

Description of the EUT: NIL

Auxiliary Equipment and Cable Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
LCD monitor	DELL	1907FPt	7735430660P0G WD-04
Keyboard	DELL	SK-8115	E145614
Mouse	DELL	OCJ339	G0203WAZ
Headphone	ODDO	---	----
SD card	Kingston	SD4/4GBFE	----
USB flash drive	Kingston	USB/4GB	---
Laptop	Lenovo	X61	L3-L3729 08/03
VGA cable	DELL	Unshield	140cm
HDMI Cable	DELL	Shield	120cm
AC Power cable	DELL	Unshield	180cm



Product Service

4 Summary of Test Standards

Test Standards	
Part 15 Subpart B, Oct. 1, 2009	PART 15 - RADIO FREQUENCY DEVICES Subpart B - Unintentional Radiators



Product Service

5 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart B					
Test Condition	Pages	Test Result			Test Location
		Pass	Fail	N/A	
15.107 Conducted Emission AC Power Port	9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2
15.109 Spurious radiated emissions	15	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Site2

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: Y2GNI3421A01 filing to comply with Section 15.107, 15.109 of the FCC Part 15, Subpart B Rules.

The product NI3421-A01 alternative 2 kinds of components as listed:

Items	Model	Manufacturer
LCD panel	A101SW01	AUO
	PQ 3Qi-01	Pixel Qi
Touch Panel	1013V04	CANDO
	3FA16-A1CC4H	Sintek Photronic Corp.

All the configurations of the product were tested and only the worst test results are listed in the report.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: 5 December 2010

Testing Start Date: 6 December 2010

Testing End Date: 20 December 2010

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Tested By
Test Lab Engineer

2011-01-26
Date

Sunny Lu
Name



Signature

Prepared By
Project Engineer

2011-01-26
Date

Ken Li
Name



Signature

Reviewed By
Assistant EMC Manager

2011-01-26
Date

Paul Yu
Name



Signature

7 Technical Requirement

7.1 Conducted Emission

Test Method

- 1 The EUT was placed on a table, which is 0.8m above ground plane
- 2 The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
- 3 Maximum procedure was performed to ensure EUT compliance
- 4 A EMI test receiver is used to test the emissions from both sides of AC line

Limit

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50
Decreasing linearly with logarithm of the frequency		

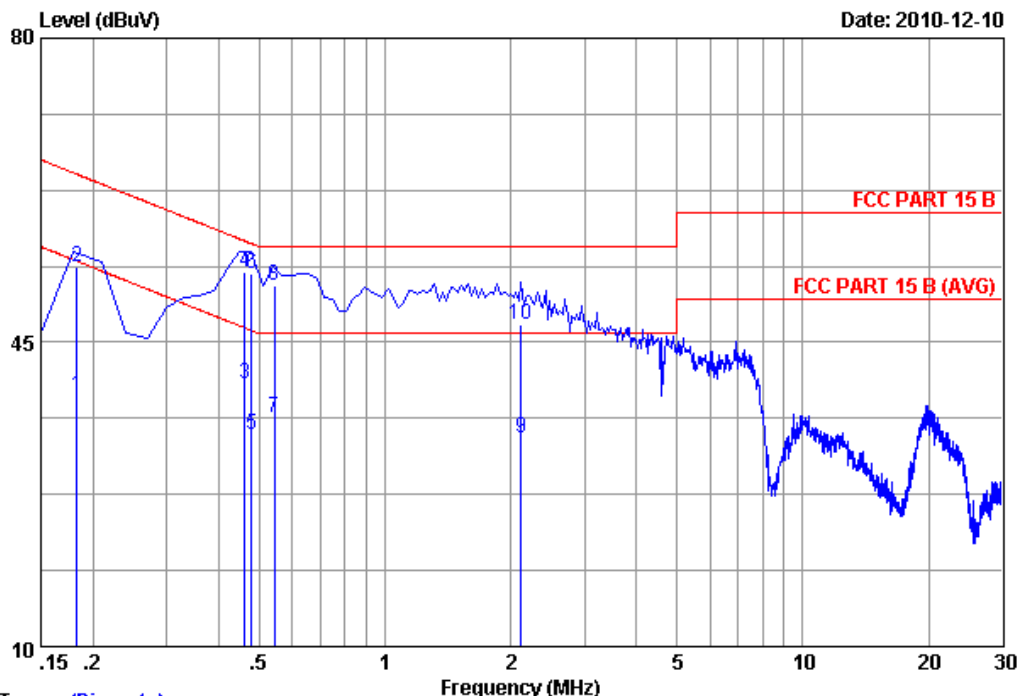
Remark: The worst test results are listed in report, which the EUT were test with LCD Panel PQ 3Qi-01 and Touch Panel 3FA16-A1CC4H.

Conducted Emission

Data: 3

File: D:\DATA\2010 test data\T\TUV\20101210.EM6 (4)

Date: 2010-12-10



Trace: (Discrete)

Site no :1#conduction
 Dis./Ant. : ** 2010 ESH2-Z5 LINE
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55%
 EUT : NI3421-A01
 Power Rating : AC 120V/60Hz
 Test Mode : Reading Memory and GPS ON

Data No : 3

Engineer : Paul Tian

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18288	0.22	9.88	28.80	38.90	54.35	15.45	Average
2	0.18288	0.22	9.88	43.60	53.70	64.35	10.65	QP
3	0.46100	0.24	9.88	30.10	40.22	46.67	6.45	Average
4	0.46100	0.24	9.88	43.00	53.12	56.67	3.55	QP
5	0.47980	0.24	9.88	24.20	34.32	46.34	12.02	Average
6	0.47980	0.24	9.88	42.70	52.82	56.34	3.52	QP
7	0.54400	0.24	9.88	26.20	36.32	46.00	9.68	Average
8	0.54400	0.24	9.88	41.40	51.52	56.00	4.48	QP
9	2.120	0.25	9.91	23.80	33.96	46.00	12.04	Average
10	2.120	0.25	9.91	36.90	47.06	56.00	8.94	QP

Remarks: 1. Emission Level = LISN Factor + Cable Loss (Include 10dB pulse limit) + Reading.

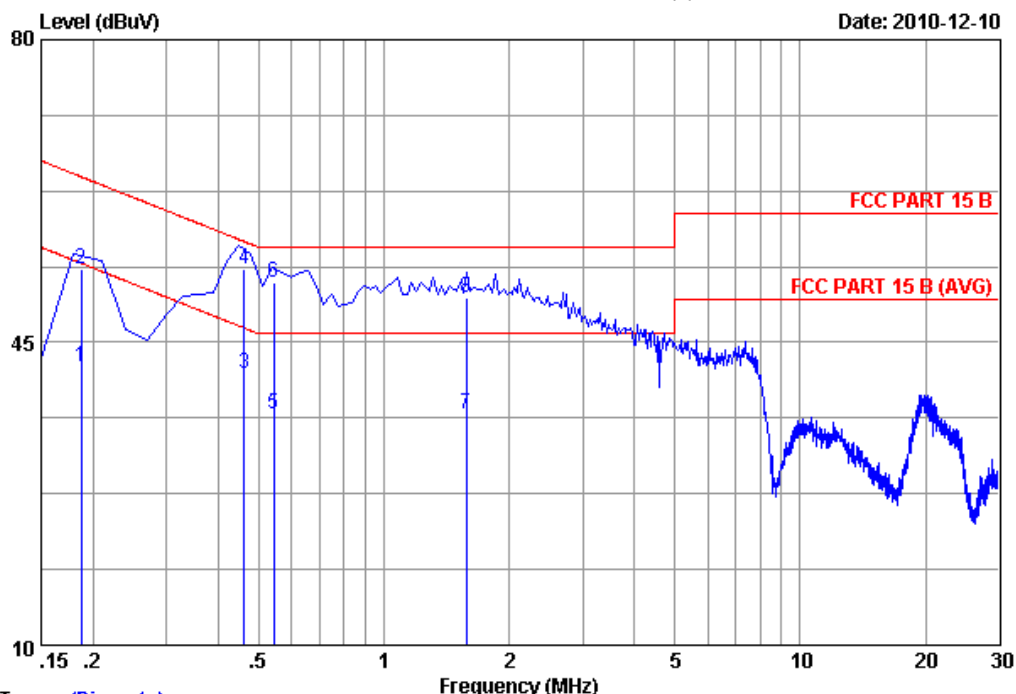
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Conducted Emission

Data: 4

File: D:\DATA\2010 test data\T\TUV\20101210.EM6 (4)

Date: 2010-12-10



Trace: (Discrete)

Site no : 1#conduction Data No : 4
 Dis./Ant. : ** 2010 ESH2-Z5 NEUTRAL
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55% Engineer : Paul Tian
 EUT : NI3421-A01
 Power Rating : AC 120V/60Hz
 Test Mode : Reading Memory and GPS ON

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18770	0.21	9.88	32.00	42.09	54.14	12.05	Average
2	0.18770	0.21	9.88	43.30	53.39	64.14	10.75	QP
3	0.46100	0.22	9.88	31.30	41.40	46.67	5.27	Average
4	0.46100	0.22	9.88	43.40	53.50	56.67	3.17	QP
5	0.54400	0.22	9.88	26.61	36.71	46.00	9.29	Average
6	0.54400	0.22	9.88	41.81	51.91	56.00	4.09	QP
7	1.580	0.26	9.90	26.60	36.76	46.00	9.24	Average
8	1.580	0.26	9.90	40.00	50.16	56.00	5.84	QP

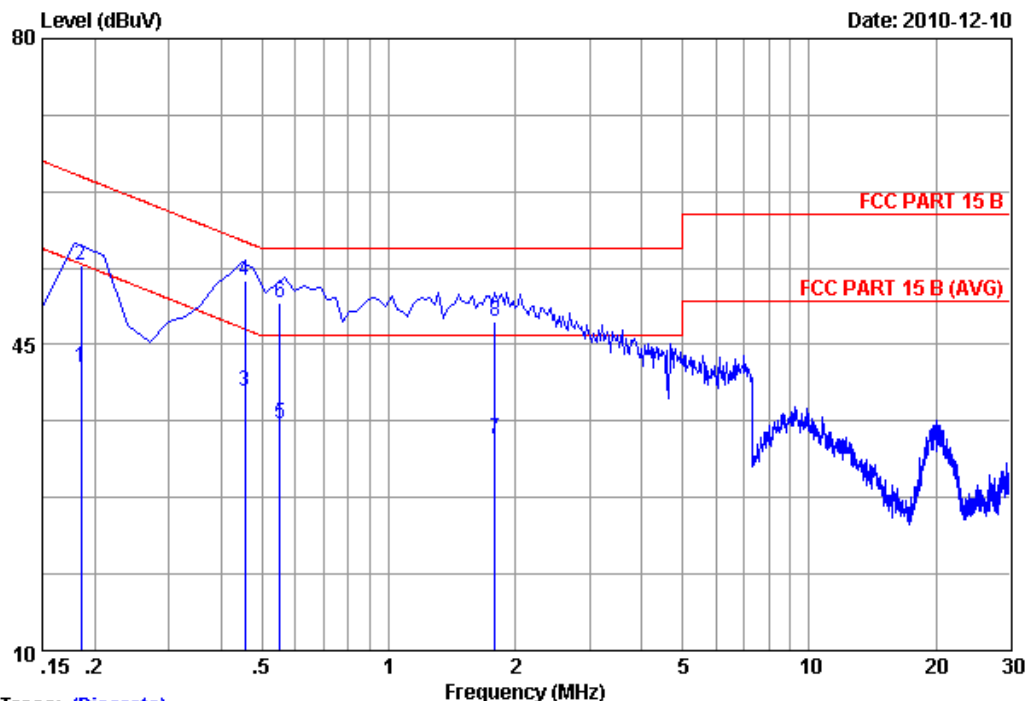
Remarks: 1. Emission Level=LISN Factor+Cable Loss (Include 10dB pulse limit) +Reading.
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Conducted Emission

Data: 2

File: D:\DATA\2010 test data\T\TUV\20101210.EM6 (4)

Date: 2010-12-10



Trace: (Discrete)

Site no :1#conduction
Dis./Ant. : ** 2010 ESH2-25 LINE
Limit : FCC PART 15 B
Env./Ins. : 29.5°C/55%
EUT : NI3421-A01
Power Rating : AC 120V/60Hz
Test Mode : Connect To PC

Data No : 2

Engineer : Paul Tian

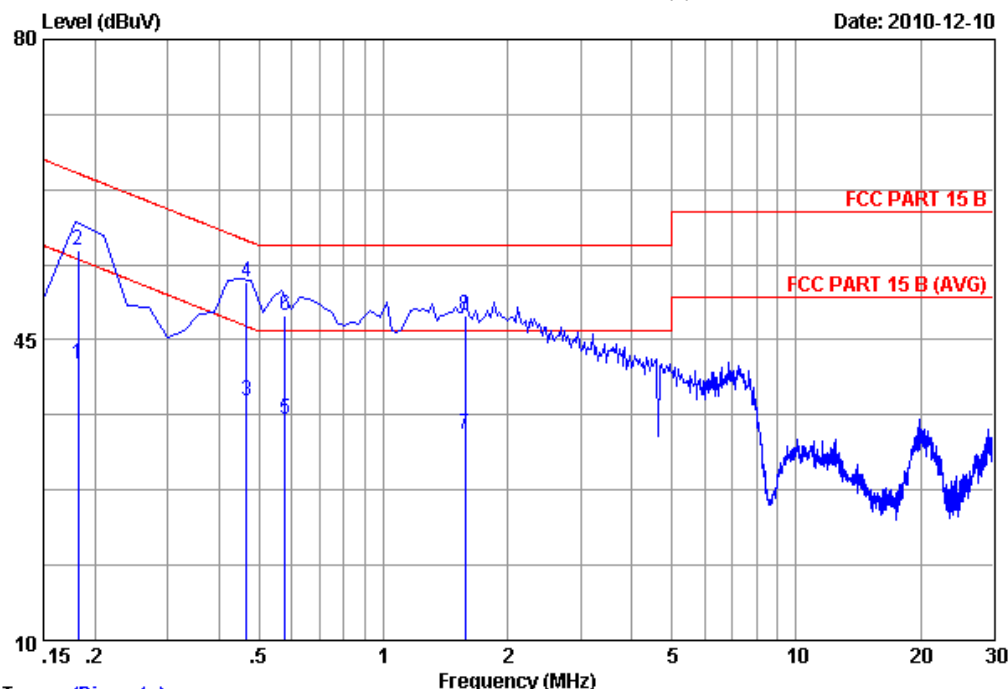
No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18527	0.22	9.88	32.30	42.40	54.25	11.85	Average
2	0.18527	0.22	9.88	44.00	54.10	64.25	10.15	QP
3	0.45600	0.24	9.88	29.60	39.72	46.77	7.05	Average
4	0.45600	0.24	9.88	42.10	52.22	56.77	4.55	QP
5	0.55140	0.24	9.88	25.80	35.92	46.00	10.08	Average
6	0.55140	0.24	9.88	39.70	49.82	56.00	6.18	QP
7	1.789	0.25	9.90	24.10	34.25	46.00	11.75	Average
8	1.789	0.25	9.90	37.50	47.65	56.00	8.35	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.

2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Conducted Emission

Data: 1 File: D:\DATA\2010 test data\T\TUV\20101210.EM6 (4) Date: 2010-12-10



Trace: (Discrete)

Site no : 1#conduction Data No : 1
 Dis./Ant. : ** 2010 ESH2-Z5 NEUTRAL
 Limit : FCC PART 15 B
 Env./Ins. : 29.5°C/55% Engineer : Paul Tian
 EUT : NI3421-A01
 Power Rating : AC 120V/60Hz
 Test Mode : Connect To PC

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.18200	0.21	9.88	32.00	42.09	54.39	12.30	Average
2	0.18200	0.21	9.88	45.30	55.39	64.39	9.00	QP
3	0.46500	0.22	9.88	27.70	37.80	46.60	8.80	Average
4	0.46500	0.22	9.88	41.60	51.70	56.60	4.90	QP
5	0.57800	0.23	9.88	25.60	35.71	46.00	10.29	Average
6	0.57800	0.23	9.88	37.70	47.81	56.00	8.19	QP
7	1.580	0.26	9.90	23.80	33.96	46.00	12.04	Average
8	1.580	0.26	9.90	37.70	47.86	56.00	8.14	QP

Remarks: 1. Emission Level=LISN Factor+Cable Loss(Include 10dB pulse limit)+Reading.
 2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

Test Equipment List**Conducted Emission Test**

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Test Receiver	Rohde & Schwarz	ESHS10	838693/001	Dec.18, 11
L.I.S.N.#1	Rohde & Schwarz	ESH2-Z5	834066/011	Mar.30, 11
L.I.S.N.#3	Kyoritsu	KNW-242C	8-1920-1	May.08, 11
Terminator	Hubersuhner	50Ω	No. 1	May.08, 11
Terminator	Hubersuhner	50Ω	No. 2	May.08, 11
RF Cable	Fujikura	3D-2W	LISN Cable 1#	May.08, 11
Coaxial Switch	Anritsu	MP59B	M55367	May.08, 11
Passive Probe	Rohde & Schwarz	ESH2-Z3	299.7810.52	May.08, 11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	May.08, 11

7.2 Radiated emissions

Test Method

- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- 5 Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.

Limit

Frequency MHz	Field Strength uV/m	Field Strength dBμV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

Remark: The worst test results are listed in report, which the EUT were test with LCD Panel PQ 3Qi-01 and Touch Panel 3FA16-A1CC4H.

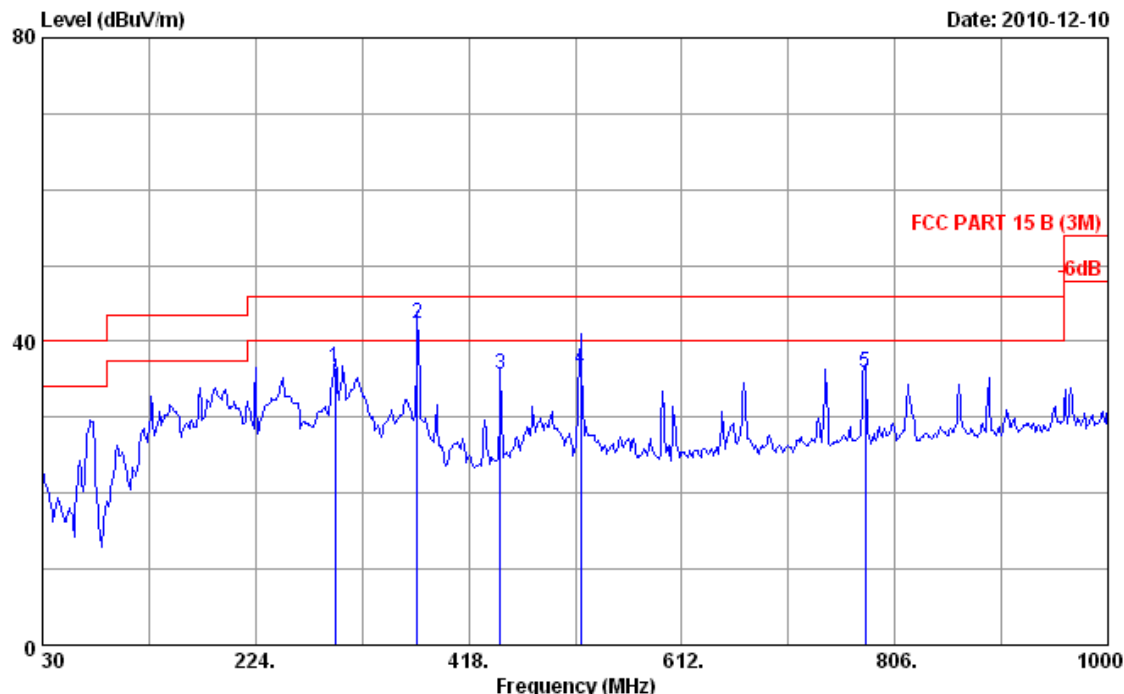
Radiated Emission

TC1-Read Memory mode test result:

Data: 2

File: E:\2010 Test Data\T\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



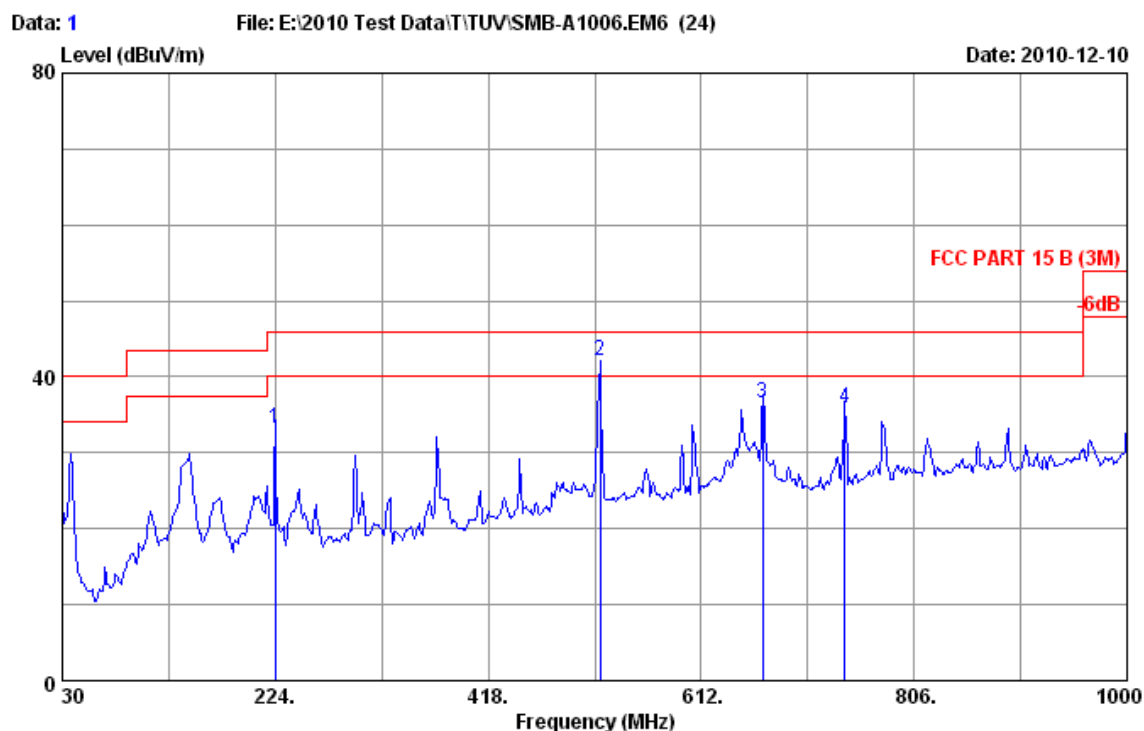
Site no. : 3m Chamber
 Dis. / Ant. : 3m 2010 CBL6112D
 Limit : FCC PART 15 B (3M)
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Reading Memory and GPS ON

Data no. : 2
 Ant. pol. : HORIZONTAL
 Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	296.750	13.84	2.46	20.27	36.57	46.00	9.43	QP
2	371.275	15.52	2.79	24.10	42.41	46.00	3.59	QP
3	447.100	17.00	3.21	15.43	35.64	46.00	10.36	QP
4	519.740	17.90	3.66	14.80	36.36	46.00	9.64	QP
5	778.840	20.48	4.81	10.66	35.95	46.00	10.05	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission



Site no.	: 3m Chamber	Data no.	: 1
Dis. / Ant.	: 3m 2010 CBL6112D	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B (3M)	Engineer	: Chris
Env. / Ins.	: 24°C/56%		
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Reading Memory and GPS ON		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1	224.000	10.78	1.94	20.53	33.25	46.00	12.75	QP
2	519.750	17.90	3.66	20.50	42.06	46.00	3.94	QP
3	668.260	19.50	4.38	12.72	36.60	46.00	9.40	QP
4	742.950	20.15	4.67	11.00	35.82	46.00	10.18	QP

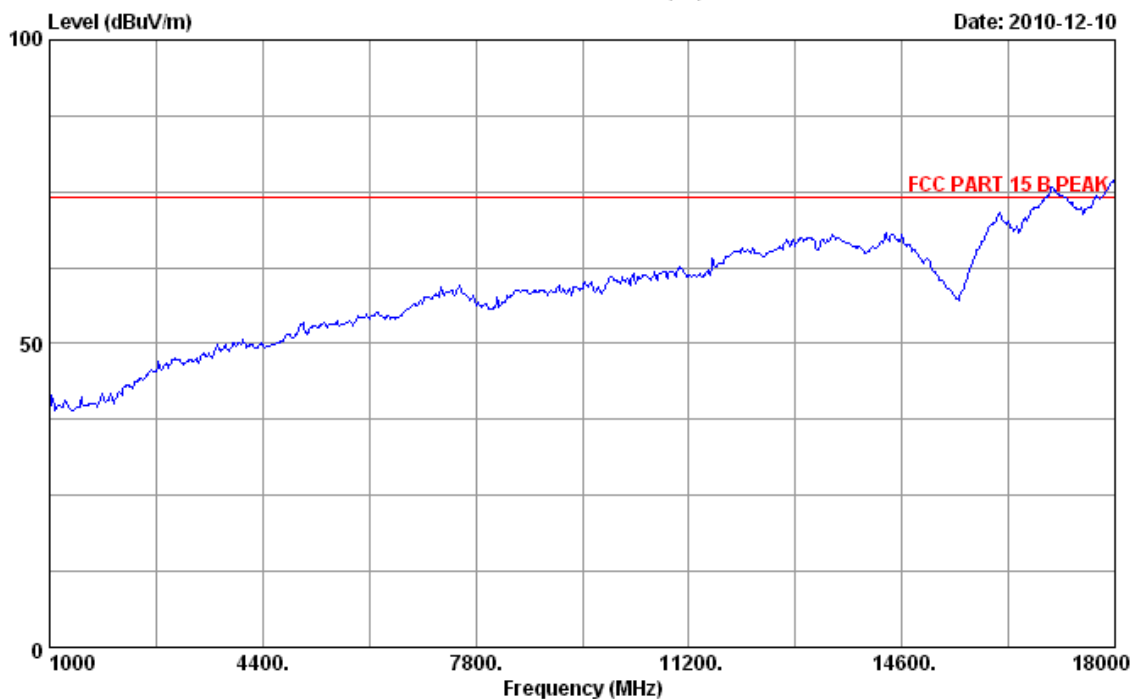
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 13

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



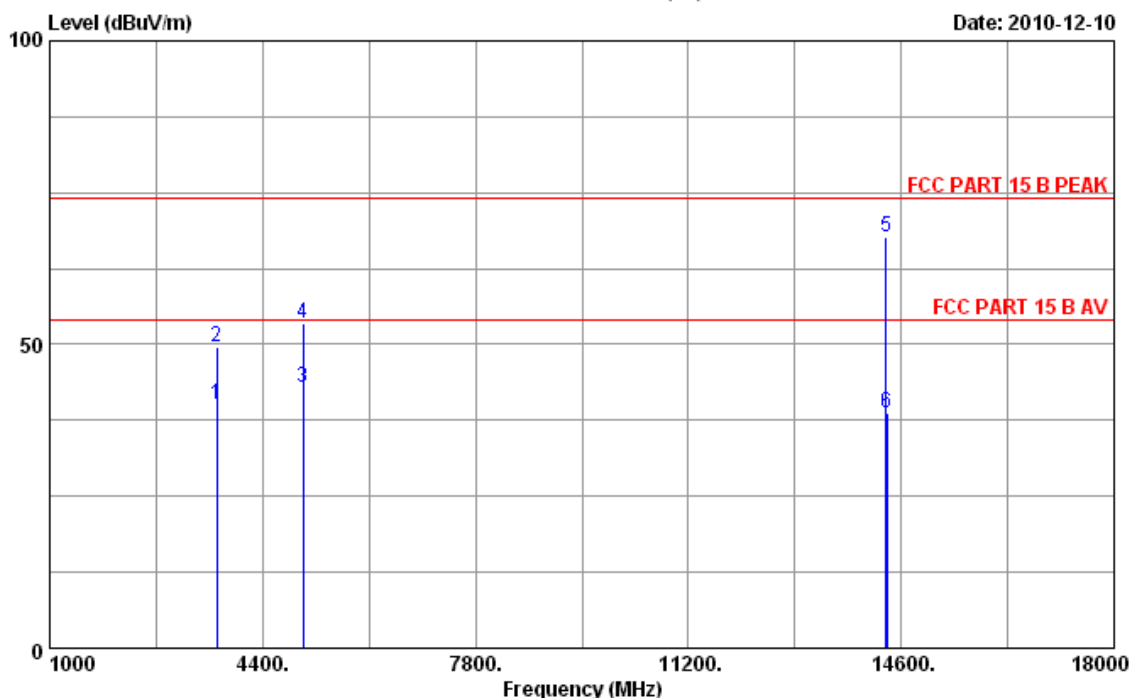
Site no.	: 3m Chamber	Data no.	: 13
Dis. / Ant.	: 3m 2009 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Chris
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Reading Memory and GPS ON		

Radiated Emission

Data: 14

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Reading Memory and GPS ON

Data no. : 14
 Ant. pol. : HORIZONTAL
 Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	3667.530	32.02	7.21	36.72	40.09	54.00	13.91	Average
2	3669.000	32.02	7.21	46.10	49.47	74.00	24.53	Peak
3	5045.060	34.68	8.30	34.74	42.85	54.00	11.15	Average
4	5046.000	34.68	8.30	45.33	53.44	74.00	20.56	Peak
5	14362.000	42.30	14.23	44.74	67.69	74.00	6.31	Peak
6	14364.910	42.30	14.23	15.66	38.61	54.00	15.39	Average

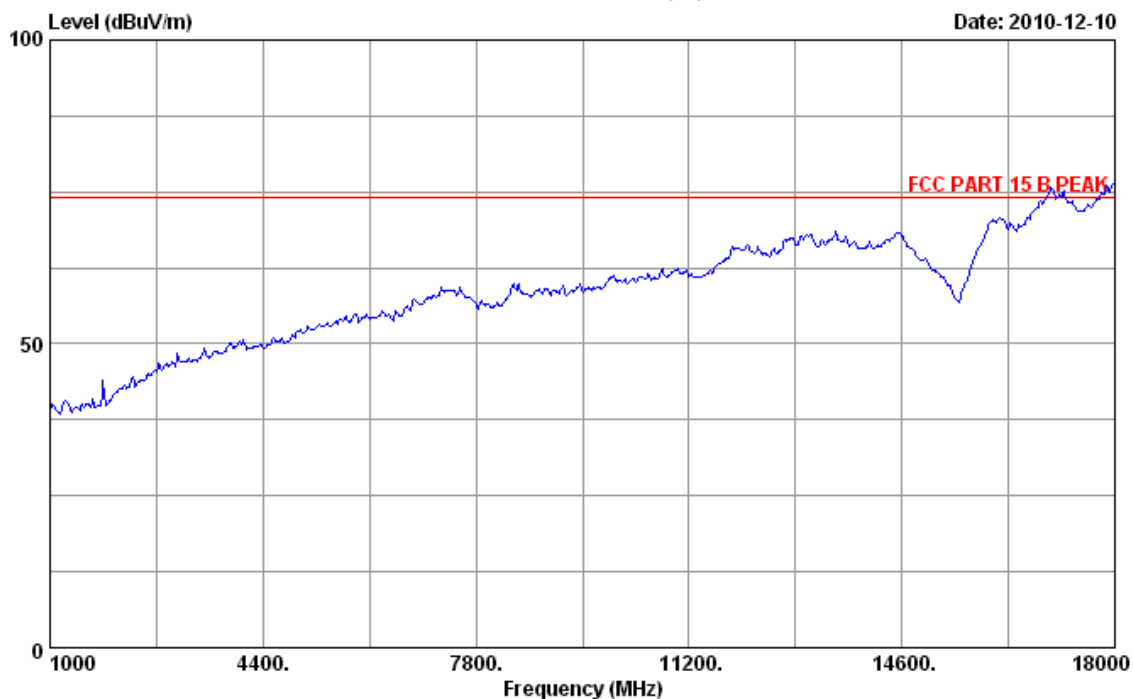
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 15

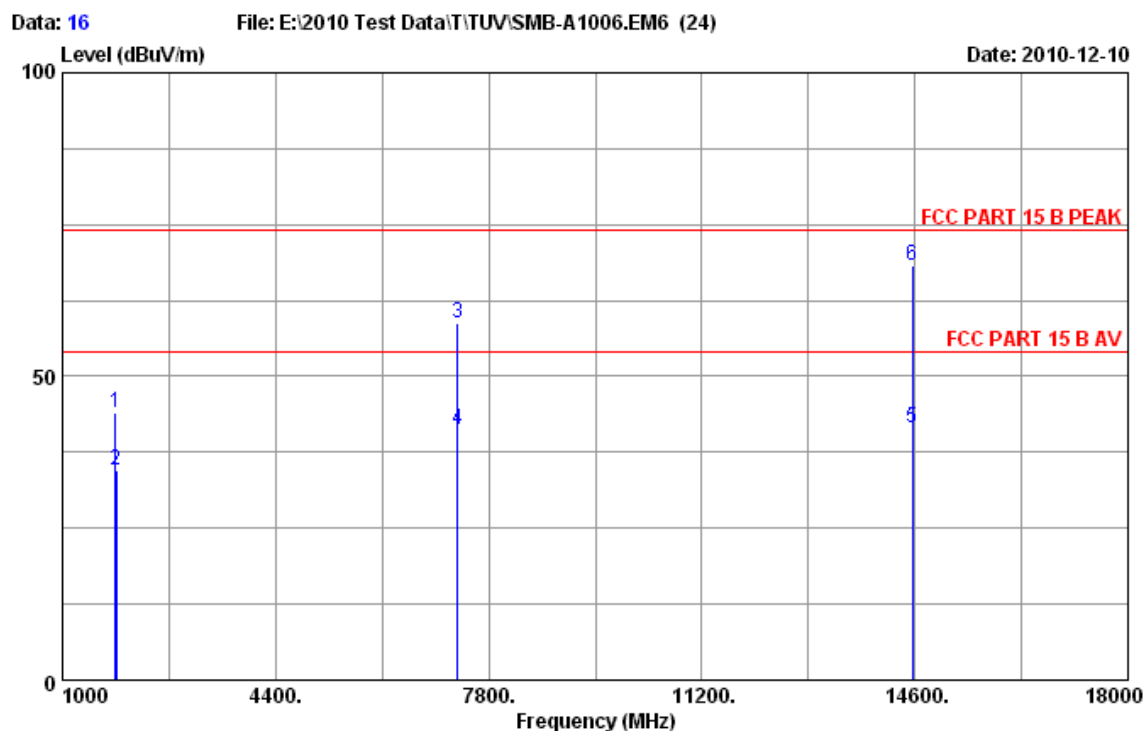
File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no.	: 3m Chamber	Data no.	: 15
Dis. / Ant.	: 3m 2009 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Chris
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Reading Memory and GPS ON		

Radiated Emission



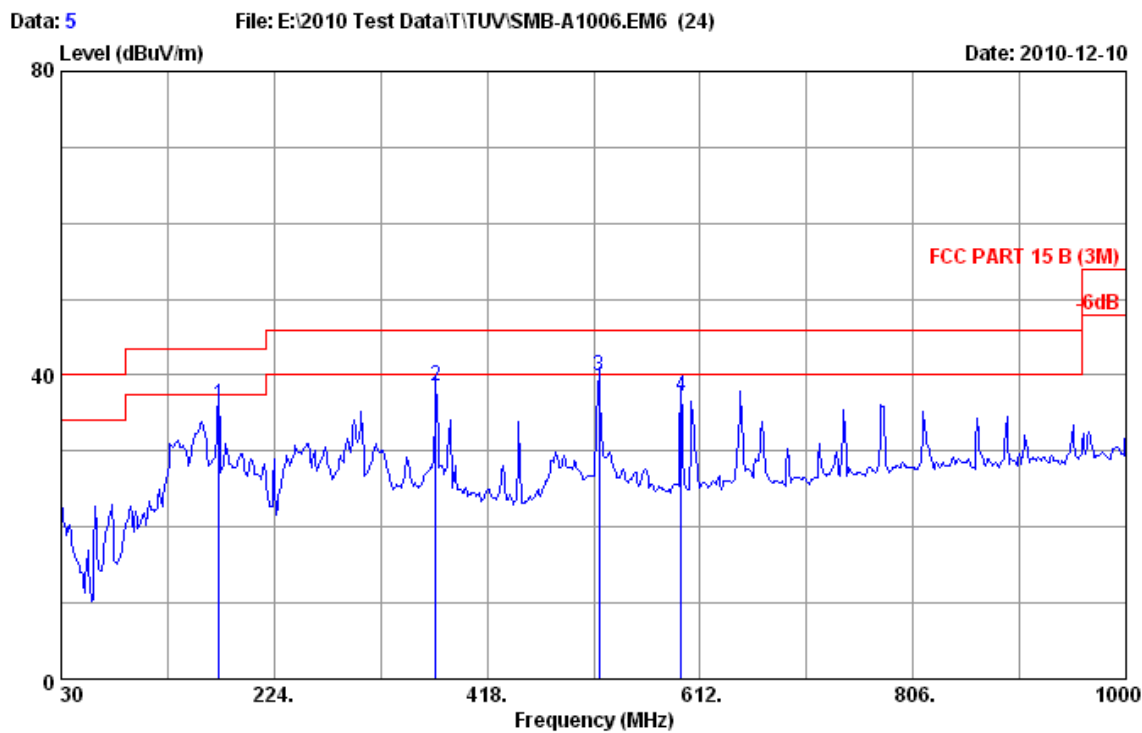
Site no.	: 3m Chamber	Data no.	: 16
Dis. / Ant.	: 3m 2009 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Chris
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Reading Memory and GPS ON		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission		Limits (dBUV/m)	Margin (dB)	Remark
				Reading (dBUV)	Level (dBUV/m)			
1	1850.000	25.97	5.12	49.66	43.96	74.00	30.04	Peak
2	1852.690	25.97	5.12	40.28	34.58	54.00	19.42	Average
3	7307.000	37.81	10.02	44.76	58.65	74.00	15.35	Peak
4	7308.950	37.81	10.02	27.33	41.22	54.00	12.78	Average
5	14563.160	41.97	14.35	18.78	41.52	54.00	12.48	Average
6	14566.000	41.97	14.35	45.42	68.16	74.00	5.84	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

TC2-Read SD Card Mode test result:



Site no.	: 3m Chamber	Data no.	: 5
Dis. / Ant.	: 3m 2010 CBL6112D	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B (3M)	Engineer	: Chris
Env. / Ins.	: 24°C/56%		
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Read SD		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1	173.560	9.88	1.41	52.98	36.21	43.50	7.29	Peak
2	371.440	15.52	2.79	49.00	38.60	46.00	7.40	Peak
3	519.850	17.90	3.66	47.22	39.98	46.00	6.02	Peak
4	594.540	19.05	4.09	42.85	37.30	46.00	8.70	Peak

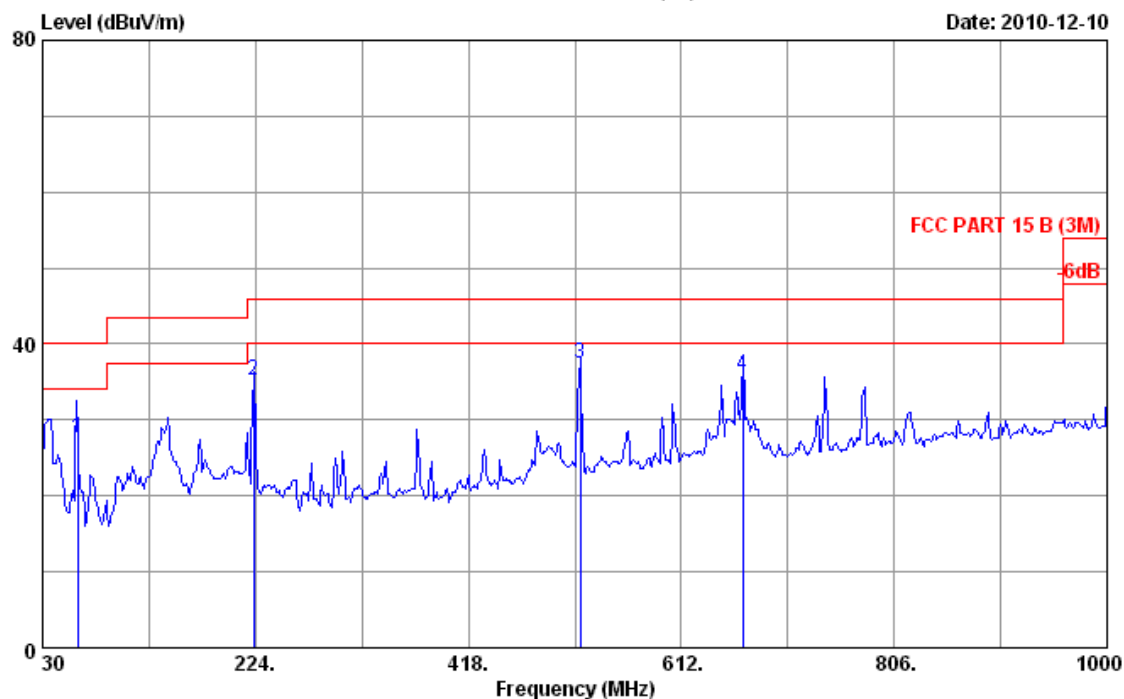
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 6

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no.	: 3m Chamber	Data no.	: 6
Dis. / Ant.	: 3m 2010 CBL6112D	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B (3M)		
Env. / Ins.	: 24°C/56%	Engineer	: Chris
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Read SD		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	62.010	6.54	0.86	20.20	27.60	40.00	12.40	QP
2	222.060	10.64	1.92	22.66	35.22	46.00	10.78	QP
3	519.850	17.90	3.66	15.77	37.33	46.00	8.67	QP
4	668.260	19.50	4.38	12.05	35.93	46.00	10.07	QP

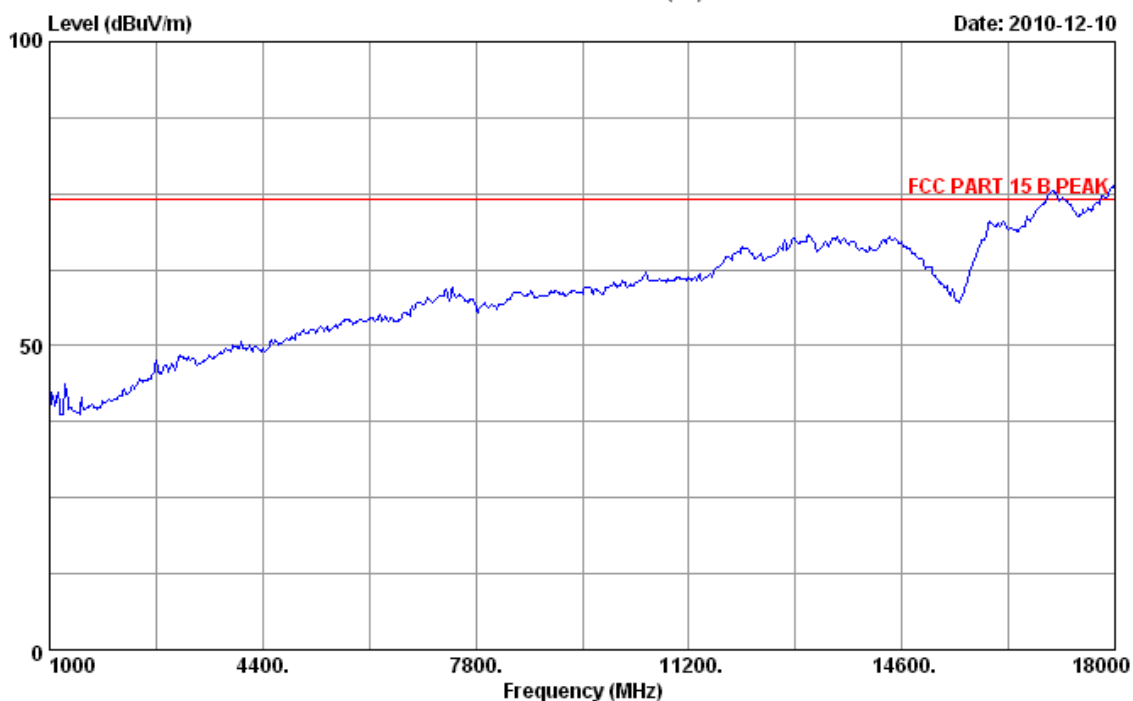
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 21

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Read SD

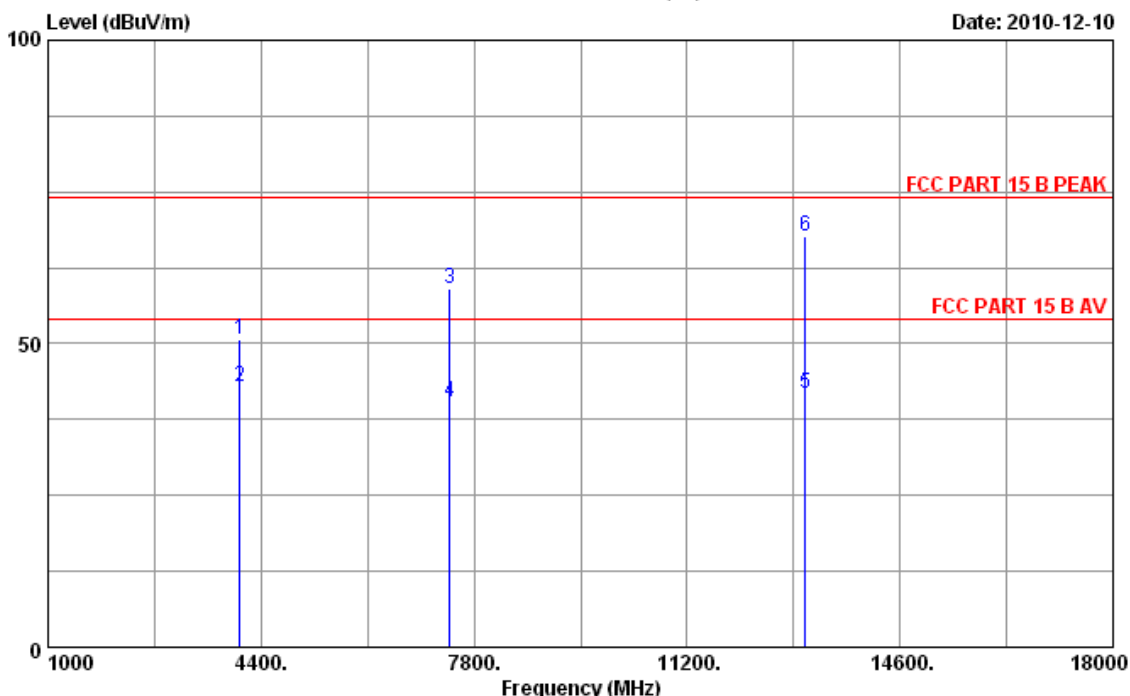
Data no. : 21
 Ant. pol. : HORIZONTAL
 Engineer : Chris

Radiated Emission

Data: 22

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
Dis. / Ant. : 3m 2009 3115
Limit : FCC PART 15 B PEAK
Env. / Ins. : 24°C/56%
EUT : NI3421-A01
Power rating : AC 120V/60Hz
Test Mode : Read SD

Data no. : 22
Ant. pol. : HORIZONTAL
Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	4060.000	33.32	7.52	45.54	50.81	74.00	23.19	Peak
2	4062.810	33.32	7.52	37.51	42.78	54.00	11.22	Average
3	7409.000	37.91	10.08	44.92	58.99	74.00	15.01	Peak
4	7411.200	37.91	10.08	26.41	40.48	54.00	13.52	Average
5	13086.320	41.64	13.45	18.50	41.80	54.00	12.20	Average
6	13087.000	41.64	13.45	44.43	67.73	74.00	6.27	Peak

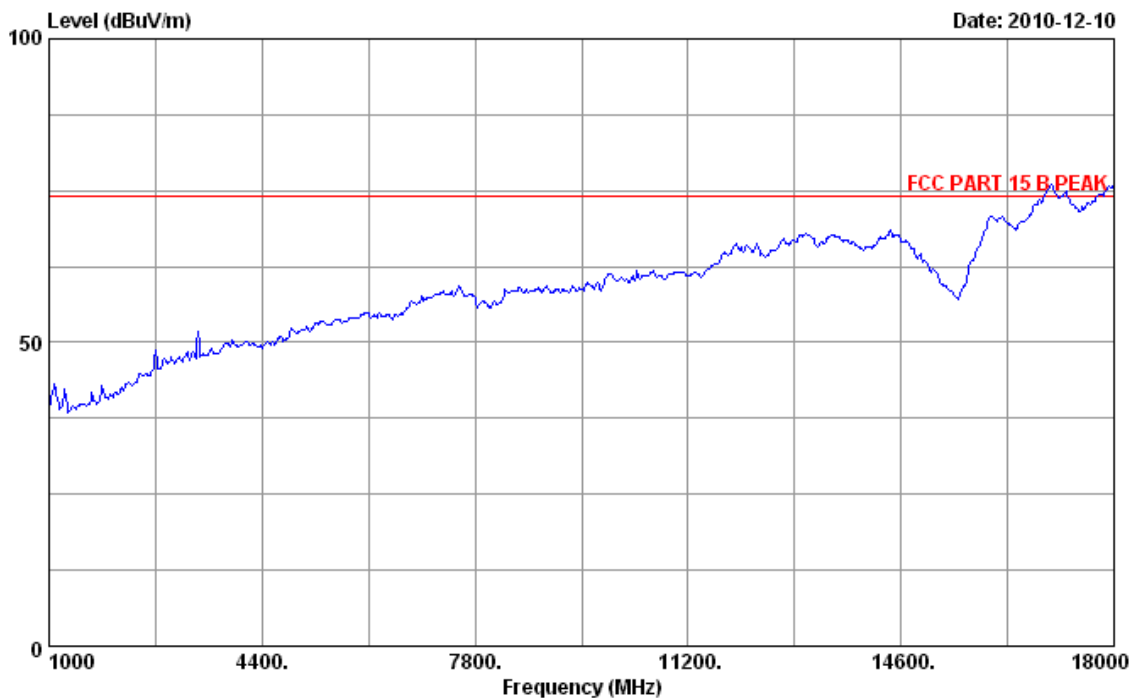
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 23

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Read SD

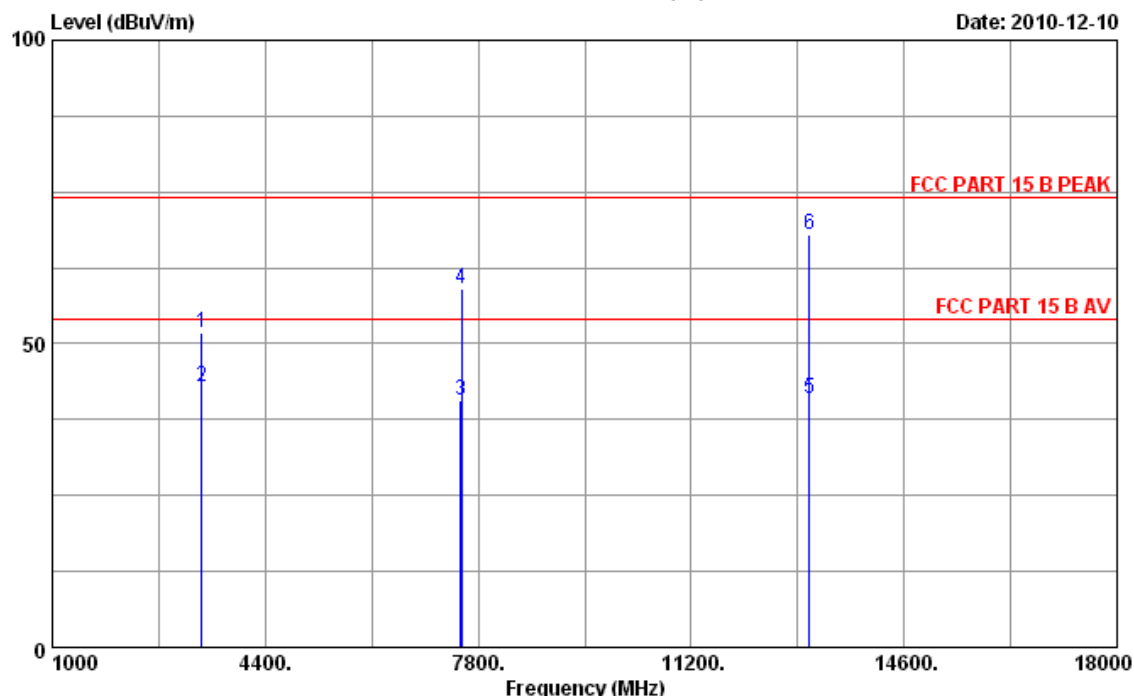
Data no. : 23
 Ant. pol. : VERTICAL
 Engineer : Chris

Radiated Emission

Data: 24

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Read SD

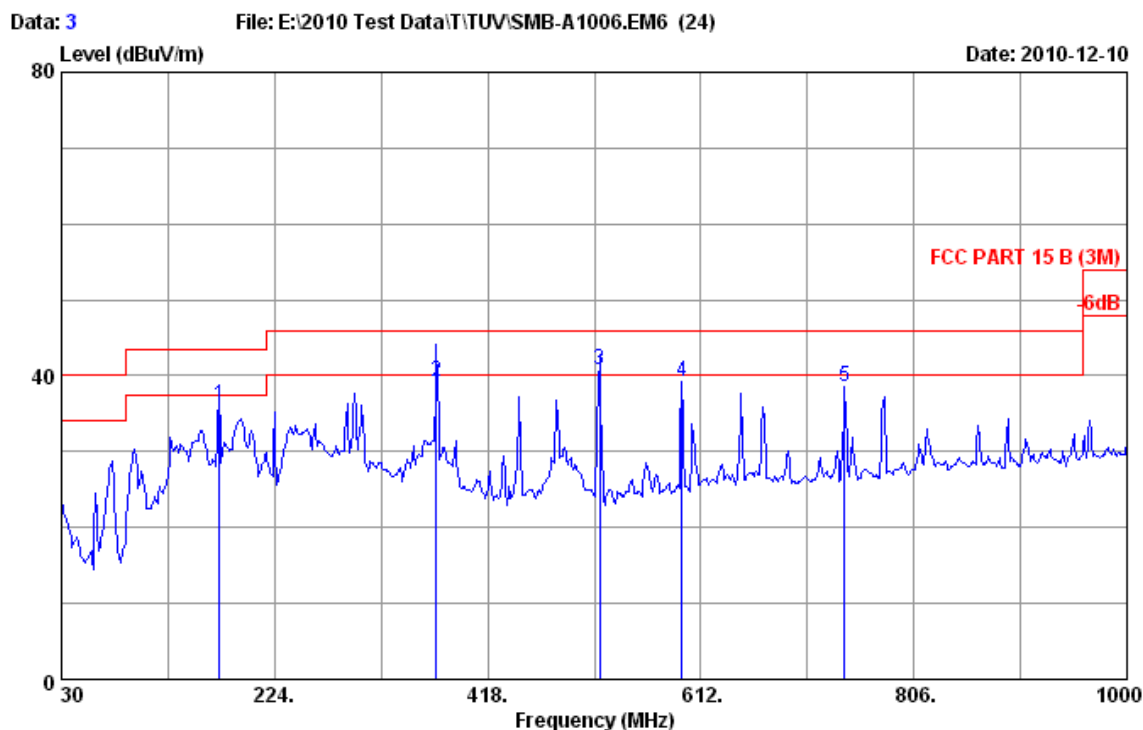
Data no. : 24
 Ant. pol. : VERTICAL
 Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	3380.000	31.20	6.98	49.84	51.90	74.00	22.10	Peak
2	3382.420	31.20	6.98	40.78	42.84	54.00	11.16	Average
3	7526.590	37.85	10.14	26.61	40.64	54.00	13.36	Average
4	7528.000	37.85	10.14	44.92	58.95	74.00	15.05	Peak
5	13085.220	41.64	13.45	17.75	41.05	54.00	12.95	Average
6	13087.000	41.64	13.45	44.60	67.90	74.00	6.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

TC3-Read USB Mode test result:



Site no.	: 3m Chamber	Data no.	: 3
Dis. / Ant.	: 3m 2010 CBL6112D	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B (3M)	Engineer	: Chris
Env. / Ins.	: 24°C/56%		
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Read USB		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1	173.560	9.88	1.41	24.78	36.07	43.50	7.43	QP
2	371.250	15.52	2.79	20.80	39.11	46.00	6.89	QP
3	519.750	17.90	3.66	19.30	40.86	46.00	5.14	QP
4	594.540	19.05	4.09	16.09	39.23	46.00	6.77	QP
5	742.950	20.15	4.67	13.77	38.59	46.00	7.41	QP

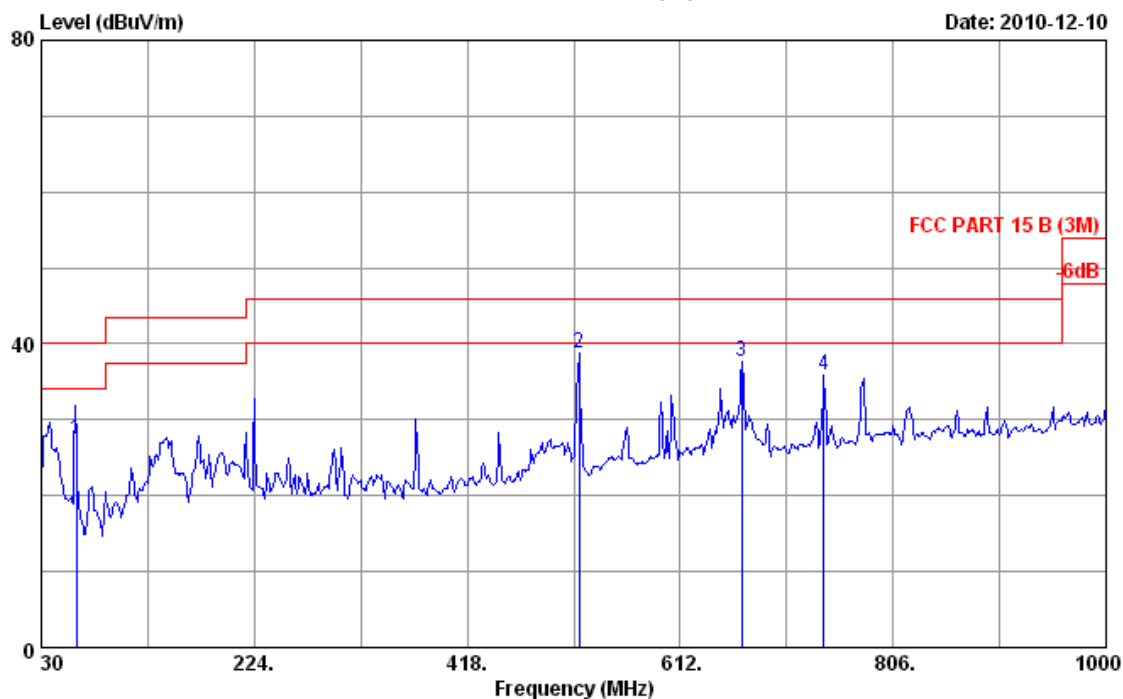
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 4

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
Dis. / Ant. : 3m 2010 CBL6112D
Limit : FCC PART 15 B (3M)
Env. / Ins. : 24°C/56%
EUT : NI3421-A01
Power rating : AC 120V/60Hz
Test Mode : Read USB

Data no. : 4
Ant. pol. : VERTICAL
Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	62.010	6.54	0.86	20.02	27.42	40.00	12.58	QP
2	519.850	17.90	3.66	17.15	38.71	46.00	7.29	QP
3	668.260	19.50	4.38	13.83	37.71	46.00	8.29	QP
4	742.950	20.15	4.67	11.13	35.95	46.00	10.05	QP

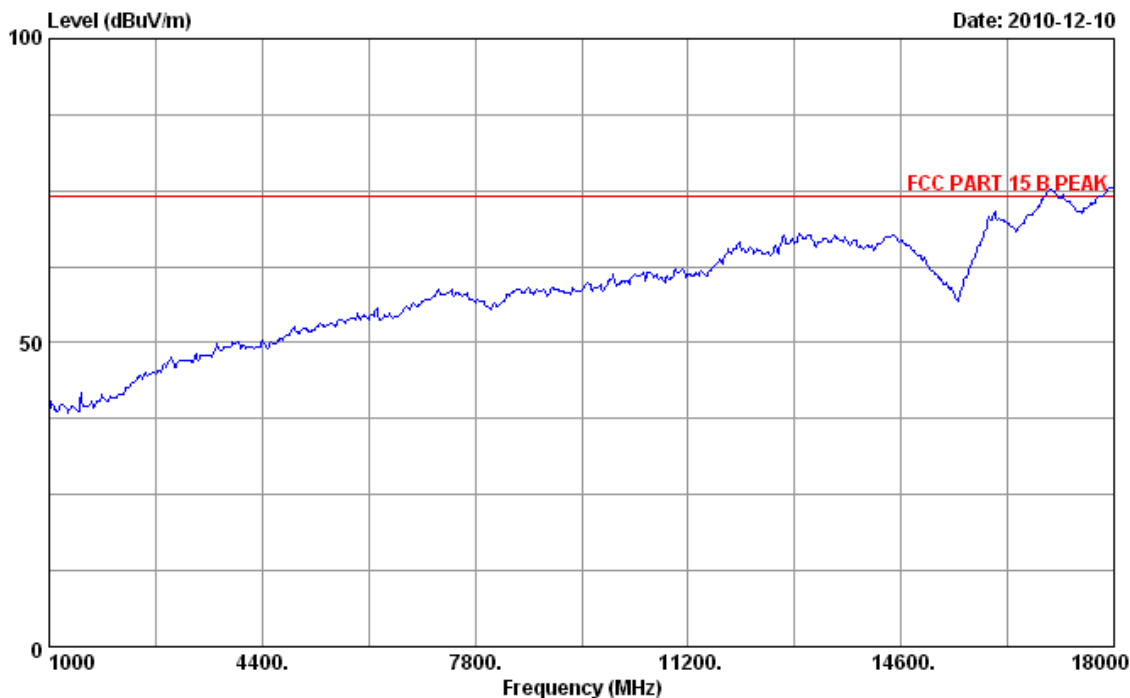
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 19

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Read USB

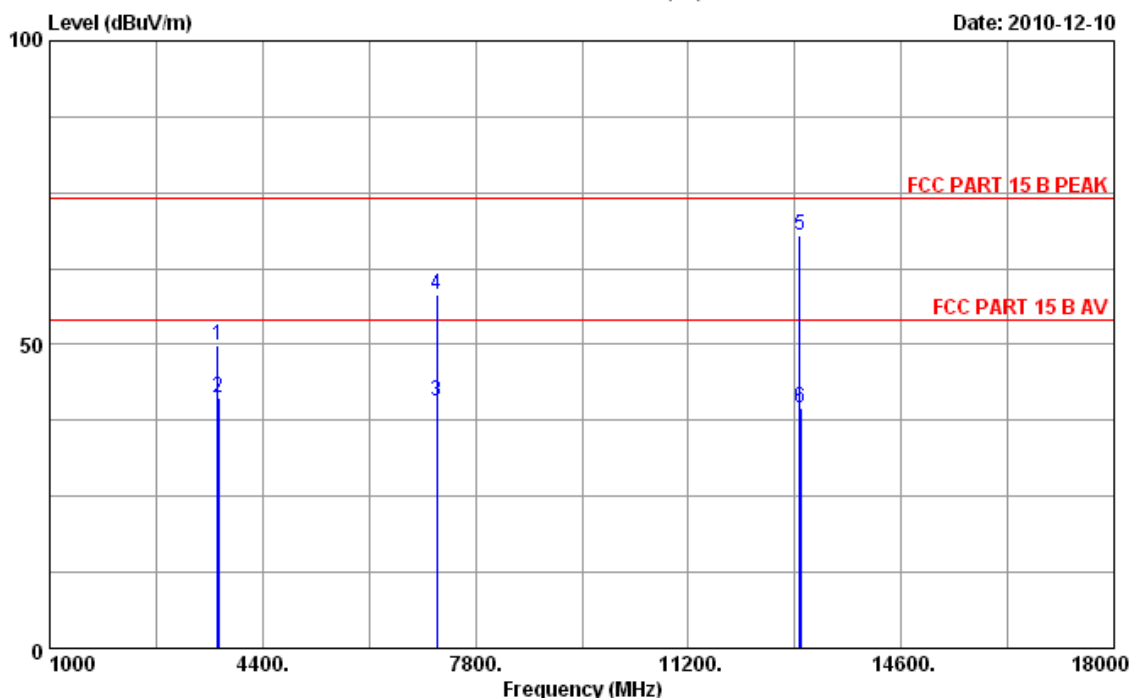
Data no. : 19
 Ant. pol. : HORIZONTAL
 Engineer : Chris

Radiated Emission

Data: 20

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
Dis. / Ant. : 3m 2009 3115
Limit : FCC PART 15 B PEAK
Env. / Ins. : 24°C/56%
EUT : NI3421-A01
Power rating : AC 120V/60Hz
Test Mode : Read USB

Data no. : 20
Ant. pol. : HORIZONTAL
Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	3686.000	32.10	7.23	46.46	49.94	74.00	24.06	Peak
2	3689.370	32.10	7.23	37.63	41.11	54.00	12.89	Average
3	7186.170	37.69	9.95	27.08	40.76	54.00	13.24	Average
4	7188.000	37.69	9.95	44.66	58.34	74.00	15.66	Peak
5	12985.000	41.33	13.39	44.96	68.04	74.00	5.96	Peak
6	12988.310	41.33	13.39	16.48	39.56	54.00	14.44	Average

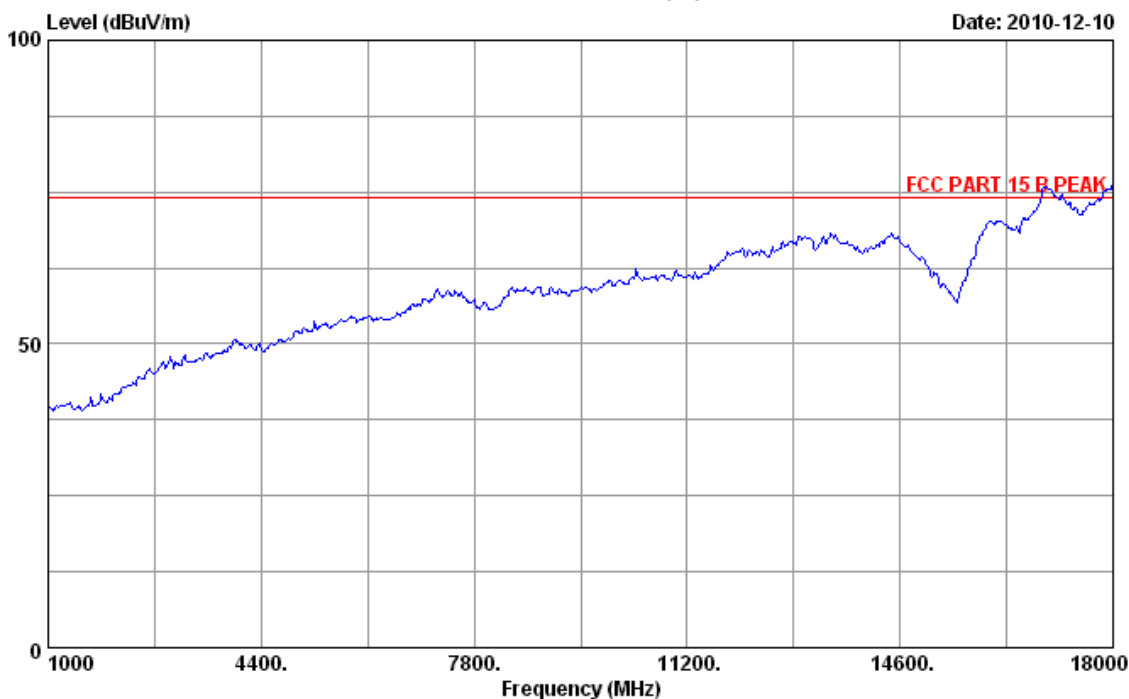
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 17

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Read USB

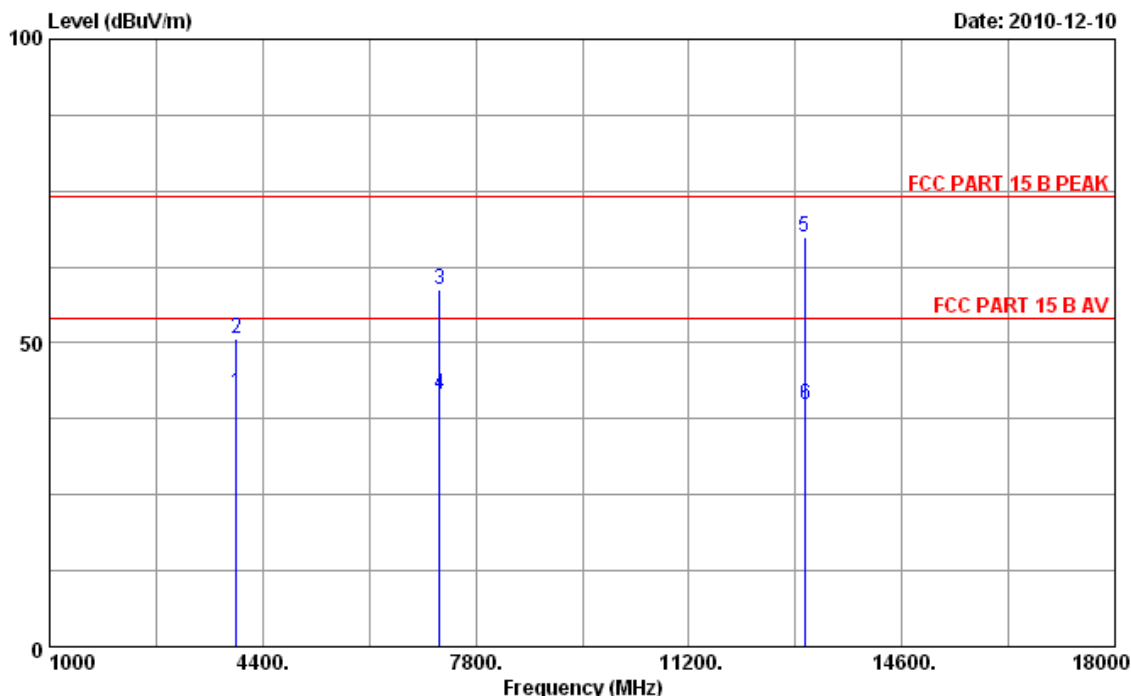
Data no. : 17
 Ant. pol. : VERTICAL
 Engineer : Chris

Radiated Emission

Data: 18

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Read USB

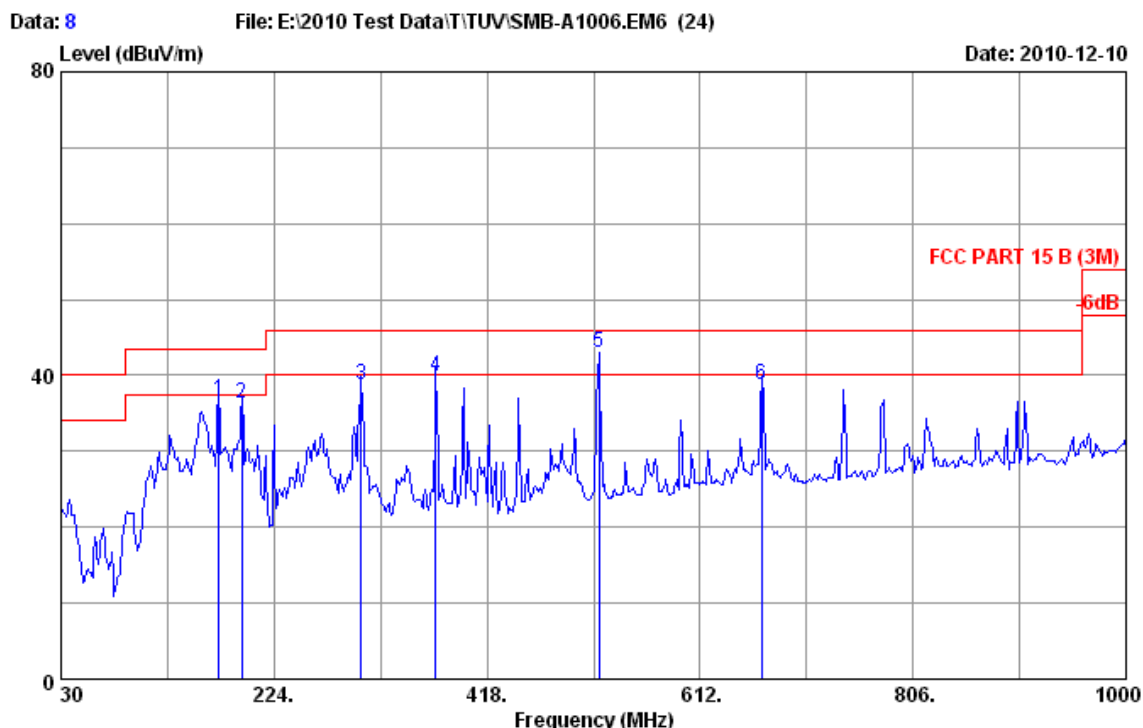
Data no. : 18
 Ant. pol. : VERTICAL
 Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	3973.270	33.33	7.45	36.52	41.69	54.00	12.31	Average
2	3975.000	33.33	7.45	45.43	50.60	74.00	23.40	Peak
3	7222.000	37.72	9.97	45.05	58.78	74.00	15.22	Peak
4	7225.410	37.72	9.97	27.81	41.54	54.00	12.46	Average
5	13053.000	41.54	13.43	44.25	67.51	74.00	6.49	Peak
6	13056.290	41.54	13.43	16.68	39.94	54.00	14.06	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

TC4-Connect to PC Mode test result:



Site no.	: 3m Chamber	Data no.	: 8
Dis. / Ant.	: 3m 2010 CBL6112D	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B (3M)		
Env. / Ins.	: 24°C/56%	Engineer	: Chris
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Connect to PC		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1	173.560	9.88	1.41	25.56	36.85	43.50	6.65	QP
2	194.900	9.90	1.66	24.65	36.21	43.50	7.29	QP
3	303.540	14.02	2.50	22.33	38.85	46.00	7.15	QP
4	371.440	15.52	2.79	21.66	39.97	46.00	6.03	QP
5	519.700	17.90	3.66	21.40	42.96	46.00	3.04	QP
6	668.260	19.50	4.38	14.99	38.87	46.00	7.13	QP

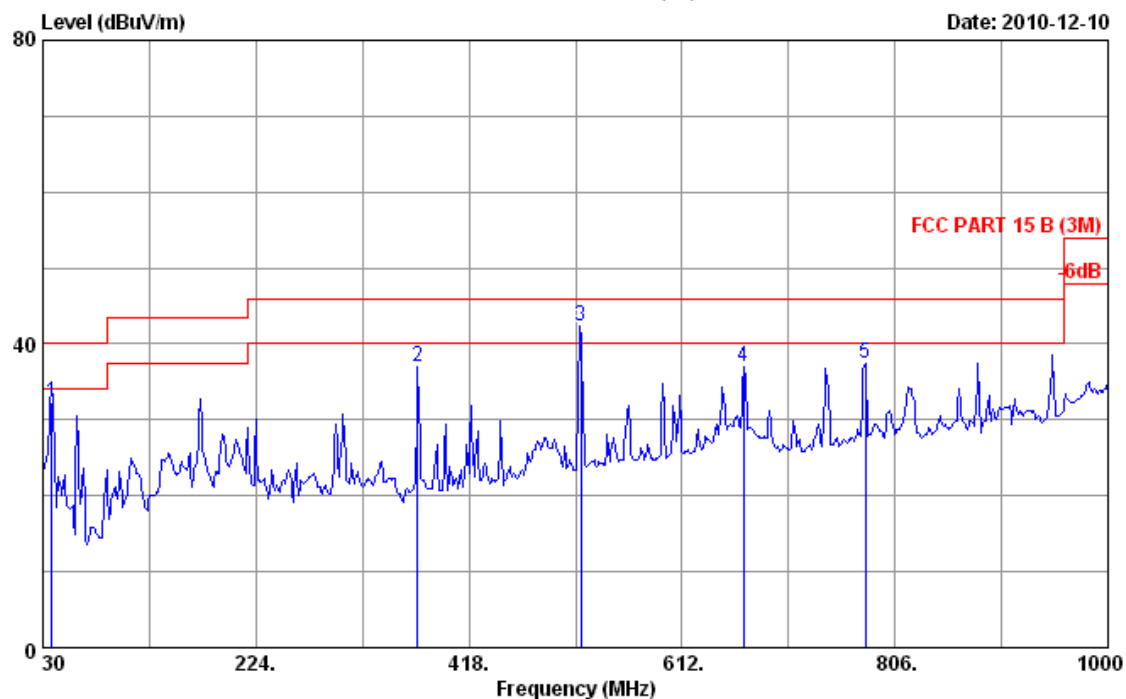
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 7

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber Data no. : 7
Dis. / Ant. : 3m 2010 CBL6112D Ant. pol. : VERTICAL
Limit : FCC PART 15 B (3M)
Env. / Ins. : 24°C/56% Engineer : Chris
EUT : NI3421-A01
Power rating : AC 120V/60Hz
Test Mode : Connect to PC

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	37.760	14.56	0.67	17.10	32.33	40.00	7.67	QP
2	371.440	15.52	2.79	18.62	36.93	46.00	9.07	QP
3	519.770	17.90	3.66	20.99	42.55	46.00	3.45	QP
4	668.260	19.50	4.38	13.13	37.01	46.00	8.99	QP
5	778.840	20.48	4.81	12.14	37.43	46.00	8.57	QP

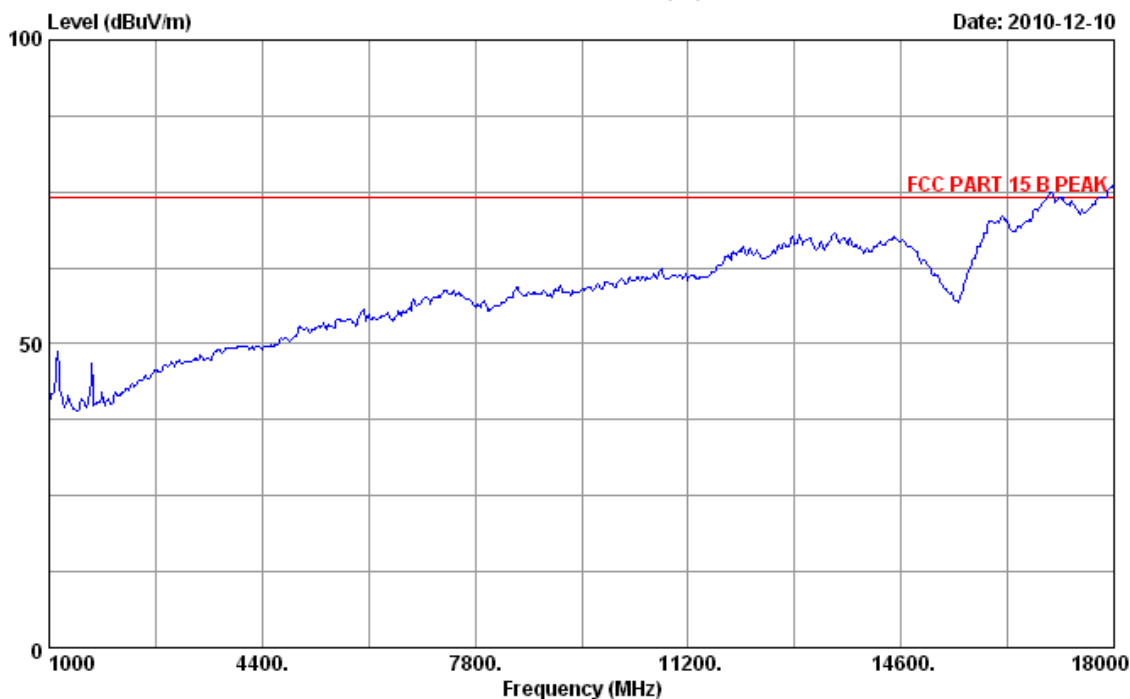
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission

Data: 11

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Connect to PC

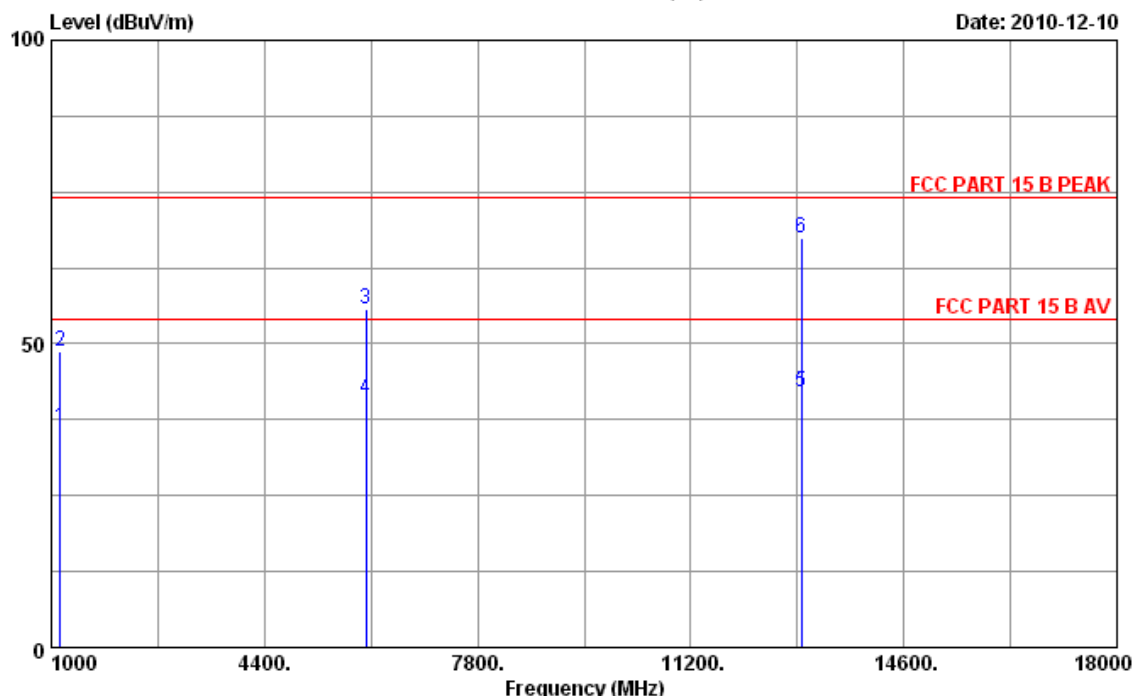
Data no. : 11
 Ant. pol. : HORIZONTAL
 Engineer : Chris

Radiated Emission

Data: 12

File: E:\2010 Test Data\TUV\SMB-A1006.EM6 (24)

Date: 2010-12-10

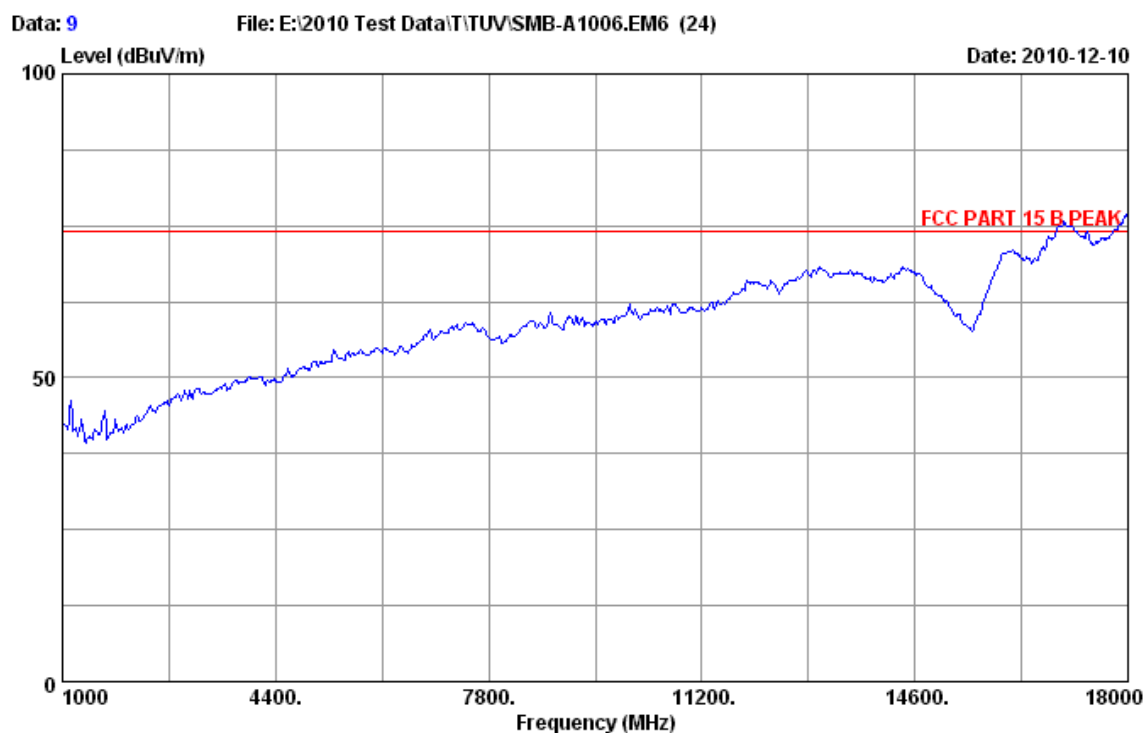


Site no.	: 3m Chamber	Data no.	: 12
Dis. / Ant.	: 3m 2009 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 B PEAK		
Env. / Ins.	: 24°C/56%	Engineer	: Chris
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Connect to PC		

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
				Reading (dBuV)	Level (dBuV/m)			
1	1135.370	25.34	4.15	44.27	36.11	54.00	17.89	Average
2	1136.000	25.34	4.15	57.02	48.86	74.00	25.14	Peak
3	6015.000	36.08	9.06	44.97	55.72	74.00	18.28	Peak
4	6016.240	36.08	9.06	30.25	41.00	54.00	13.00	Average
5	12967.860	41.26	13.38	19.21	42.18	54.00	11.82	Average
6	12968.000	41.26	13.38	44.47	67.44	74.00	6.56	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Radiated Emission



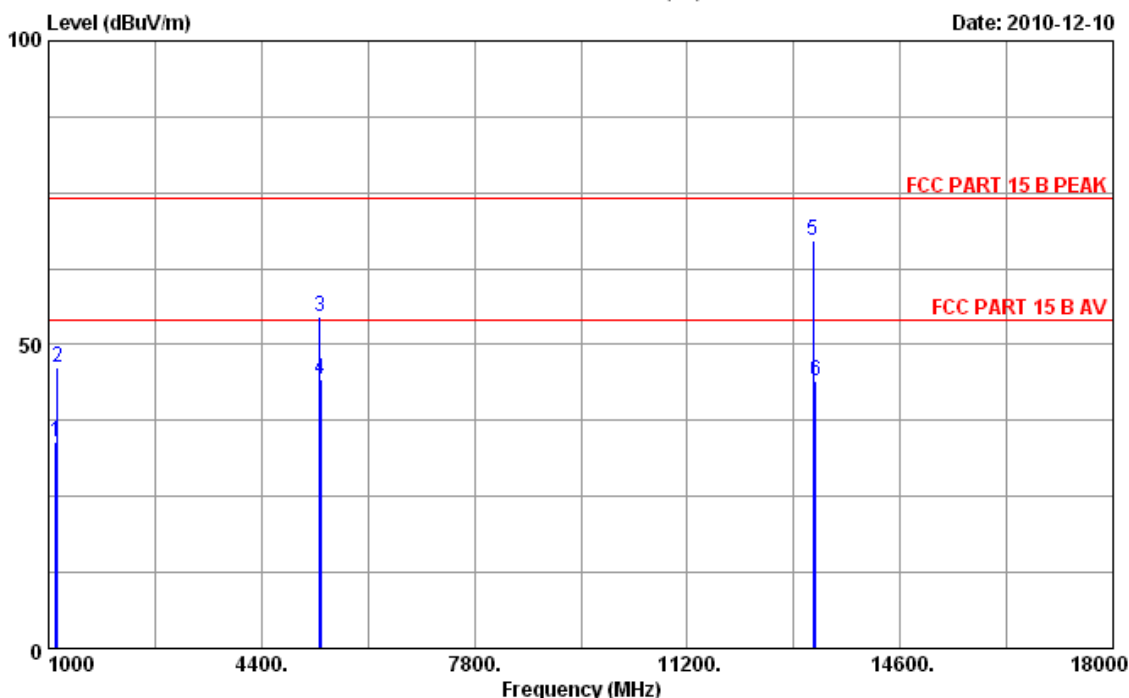
Site no.	: 3m Chamber	Data no.	: 9
Dis. / Ant.	: 3m 2009 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 B PEAK	Engineer	: Chris
Env. / Ins.	: 24°C/56%		
EUT	: NI3421-A01		
Power rating	: AC 120V/60Hz		
Test Mode	: Connect to PC		

Radiated Emission

Data: 10

File: E:\2010 Test Data\TUTUV\SMB-A1006.EM6 (24)

Date: 2010-12-10



Site no. : 3m Chamber
 Dis. / Ant. : 3m 2009 3115
 Limit : FCC PART 15 B PEAK
 Env. / Ins. : 24°C/56%
 EUT : NI3421-A01
 Power rating : AC 120V/60Hz
 Test Mode : Connect to PC

Data no. : 10
 Ant. pol. : VERTICAL
 Engineer : Chris

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1121.300	25.35	4.12	42.30	34.09	54.00	19.91	Average
2	1136.000	25.34	4.15	54.33	46.17	74.00	27.83	Peak
3	5335.000	35.13	8.53	45.72	54.68	74.00	19.32	Peak
4	5349.775	35.16	8.54	35.41	44.42	54.00	9.58	Average
5	13206.000	41.98	13.52	43.63	67.07	74.00	6.93	Peak
6	13252.100	42.12	13.56	20.41	43.92	54.00	10.08	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Test Equipment List**Radiated Emission Test**

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 11
Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 11
Amplifier	HP	8447D	2648A04738	May.08, 11
Bilog Antenna	Schaffner	CBL6111C	2598	Dec.14, 10
RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 11
Coaxial Switch	Anritsu	MP59B	M73989	May.08, 11

8 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dB μ V/m)	U=4.32dB (30MHz-25GHz)
CE	Disturbance Voltage (dB μ V)	U=2.40dB(150KHz-30MHz)