

TEST REPORT FOR FCC PART 15 B
For
Texas Instruments Incorporated
TI-Nspire Navigator Access Point
Model No.: TINAVAP2
Brand: TEXAS INSTRUMENTS

Prepared for

Texas Instruments Incorporated
12500 TI Boulevard Dallas, TX 75243-4136 USA

Prepared by

Audix Technology (Wujiang) Co., Ltd. EMC Dept.
No. 1289 Jiangxing East Road, the Eastern Part of Wujiang Economic Development Zone
Jiangsu China 215200

Tel.: +86-512-63403993

Fax: +86-512-63403339

Report Number : ACWE-F1112003
Date of Test : Dec.07 ~08, 2011
Date of Report : Dec.20, 2011

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TEST REPORT VERIFICATION

Applicant	:	Texas Instruments Incorporated
Manufacturer	:	Inventec Appliances(Pudong) Corporation
EUT Description	:	TI-Nspire Navigator Access Point
(A) Model No.	:	TINAVAP2
(B) Brand	:	TEXAS INSTRUMENTS
(C) Power Supply	:	DC 5V (Via Laptop)
(D) Test Voltage	:	DC 5V

Applicable standards:

FCC 47 CFR Part 15 Subpart B/Oct. 2010 and CISPR 22/1997
ANSI C63.4-2009
ICES-003 Issue 4 Feb. 2004

Note: These results are deemed satisfactory evidence of compliance with ICES-003 of the Canadian Interference-Causing Equipment Regulations.

The device described above was tested by Audix Technology (Wujiang) Co., Ltd. EMC Dept. to determine the maximum emission levels emanating from the device. The maximum emission levels were compared with the requirements in section §15.107(a) and §15.109(a)(g) of FCC Part 15 regulation.

The measurement results are contained in this test report and Audix Technology (Wujiang) Co., Ltd. EMC Dept. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC limits.

This report applies to above tested sample only and which shall not be reproduced in part without written approval of Audix Technology (Wujiang) Co., Ltd. EMC Dept.

Date of Test : Dec.07 ~08, 2011

Date of Report : Dec.20, 2011

Prepared by


:



(Candy Tang/Senior Assistant)

Reviewer

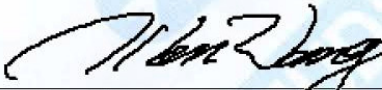
:



(Kin Lin/Deputy Manager)

Approved & Authorized Signer

:



(Allen Wang/Senior Manager)

1 SUMMARY OF STANDARDS AND RESULTS

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted Emission	FCC 47 CFR Part 15 Subpart B/ Oct. 2010	§15.107 (a) Class B	PASS
Radiated Emission	FCC 47 CFR Part 15 Subpart B/ Oct. 2010	§15.109 (a) (g) Class B	PASS

2 GENERAL INFORMATION

2.1 Description of Device (EUT)

Product : TI-Nspire Navigator Access Point
Model Number : TINAVAP2
Brand : TEXAS INSTRUMENTS
Applicant : Texas Instruments Incorporated
12500 TI Boulevard Dallas, TX 75243-4136 USA
Manufacturer : Inventec Appliances(Pudong) Corporation
No. 789 Pu Xing Road, Shanghai, PRC
Date of Receipt of Sample : Dec.05, 2011
Date of Test : Dec.07 ~08, 2011

2.2 UUT's Configuration

Test UUT : UUT×1
I/O Ports : USB port×1

2.3 Operating Condition of EUT

- 2.3.1 Set up the EUT as showed in respective block diagram of test setup.
- 2.3.2 Turn on the power of all equipment.
- 2.3.3 Driving software “TI-Nspire™ CAS Navigator™ Teacher Software” to make the EUT operating normally.

2.4 Tested Supporting System Details

2.4.1 TI-nspire CX CAS (NSC)

Manufacturer : TI
Brand : TEXAS INSTRUMENTS

2.4.2 TI-Navigator Cradle

Manufacturer : TI
Brand : TEXAS INSTRUMENTS
Model No. : TINAVWC2

2.4.3 Laptop Computer

Manufacturer : DELL
Model Number : PP26L
Serial Number : JX193A01
FCC ID : FCC By DoC
Power Cord : Unshielded, Detachable, 1.5 m
AC Adapter : M/N: LA65NS1-00
Brand: DELL
Input: AC 100-240V, 50-60Hz, 1.5A
Output: DC 19.5V,3.34A
DC Cord: Unshielded, Undetachable,
2.0m, 1 ferrite core.

2.5 Description of Test Facility

Name of Firm	:	Audix Technology (Wujiang) Co., Ltd EMC Dept.
Site Location	:	No. 1289 Jiangxing East Road, the Eastern Part of Wujiang Economic Development Zone Jiangsu China 215200
Test Facilities	:	No. 1 10m semi-anechoic chamber FCC Filing Date of Validity: Aug. 20, 2012 Registration No. : 252588 No. 1 conducted shielding enclosure
NVLAP Lab Code	:	200786-0 (NVLAP is a NATA accredited body under Mutual Recognition Agreement) Date of Validity: Sep.30, 2012
DAR-Registration No.	:	DAT-P-264/07-00 Date of Validity: Dec.14, 2012

2.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conducted Disturbance Measurement	0.15MHz~30MHz	± 2.84dB
At 10m Semi-Anechoic Chamber		
Radiated Disturbance Measurement	30MHz~1000MHz	± 3.26dB (Horizontal)
		± 3.49dB (Vertical)
Radiated Disturbance Measurement	Above 1GHz	± 4.66dB

Remark : Uncertainty = $ku_c(y)$

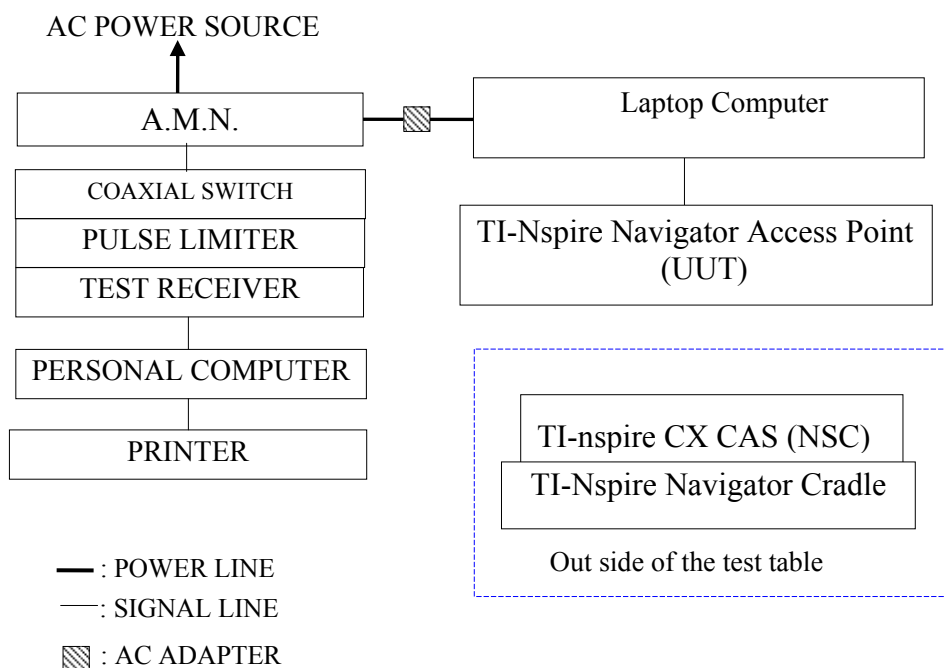
3 POWERLINE CONDUCTED EMISSION MEASUREMENT

3.1 Test Equipment

The following test equipments were used during the conducted emission measurement :

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R & S	ESCI	100352	2011-01-04	2012-01-03
2.	A.M.N	R & S	ESH2-Z5	100153	2011-03-25	2012-03-23
3.	L.I.S.N.	Kyoritsu	KNW-407	8-1793-4	2011-08-06	2012-08-05
4.	Pulse Limiter	R&S	ESH3-Z2	100605	2011-08-06	2012-08-05
5.	50Ω Coaxial Switch	Anritsu	MP59B	6200547934	2011-08-14	2012-08-13
6.	50ohm Terminator	Tektronis	MS4630B	001-con	2011-03-25	2012-03-24
7.	RF Cable	Harbour Industries	RG400	003	2011-03-24	2012-03-23

3.2 Block Diagram of Test Setup



3.3 Power line Conducted Emission Limit

(§15.107(a), Class B)

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level	Average Level
150kHz ~ 5MHz	79dB μ V	66dB μ V
5MHz ~ 30MHz	73B μ V	60B μ V

Remark 1. If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary.

2. The tight limit applies at the band edges.

3.4 Test Procedure

The measuring process is according to ANSI C63.4 clause 12 and laboratory internal procedure TKC-301-010.

In the conducted emission measurement, the EUT and all peripheral devices were set up on a non-metallic table which was 0.8 meters height above the ground plane, and 0.4 meters far away from the vertical plane. The EUT was powered by AC mains through Artificial Mains Network (A.M.N), other peripheral devices were powered by AC mains through the second Line Impedance Stabilization Network (L.I.S.N). For the measurement, the A.M.N measuring port was terminated by 50Ω measuring equipment and the second L.I.S.N measuring port was terminated by a 50Ω resistive load. All measurements were done on the phase and neutral line of the EUT's power cord. All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver was set to 9 kHz.

The required frequency band (0.15 MHz ~ 30 MHz) was pre-scanned with peak detector; the final measurement was measured with quasi-peak detector and average detector. (If the average limit is met when using a quasi-peak detector, the average detector is unnecessary).

The emission level is calculated automatically by the test system which uses the following equation :

Emission level (dBμV) = Meter-Reading (dBμV) + A.M.N factor (dB) + Cable loss (dB).
(Cable loss include pulse limiter loss)

3.5 Power line Conducted Emission Measurement Results

PASSED

(All the emissions not reported below are too low against the prescribed limits.)

The details of test modes and reference test data are as follows :

Test Date: Dec.08, 2011 Temperature: 21.5°C Humidity: 42%

Item	Test Condition	USB Cable	Reference Test Data No.	
			Neutral	Line
1	Test Configuration 1	60 inch	※# 18	# 17
4		12 inch	# 19	# 20

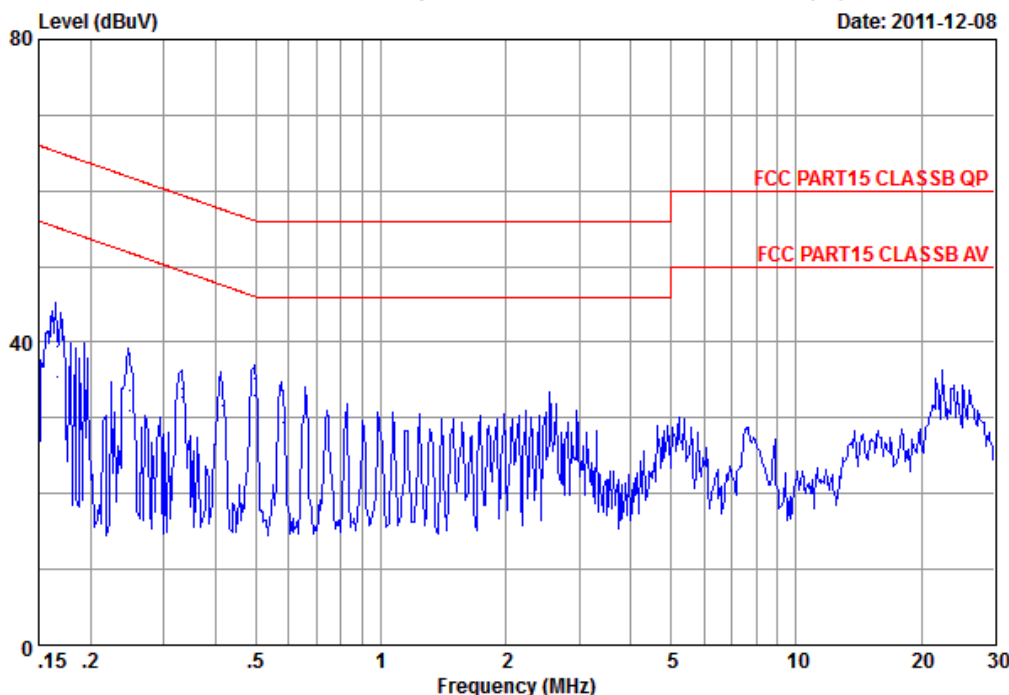
NOTE 1 – ‘※’ means the worst test mode.

NOTE 2 – The worst emission is detected at 0.50 MHz with emission level of 32.88 dB (μV) and with Average detector (limit is 46.03 dB (μV)), when the Neutral of the EUT is connected to A.M.N.



Audix Technology (Wu Jiang) Co.,Ltd
 No.1289,Jiang Xing East Road,The Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel : (0512) 63403993 Fax: (0512) 63403339

Data: 18 File: F:\2011Test Data\Report\G1112001-G1112050\G1112004.EM6 (20) Date: 2011-12-08



Site no. : NO.1 Conducted Shielding Enclosure Data no. : 18
 AMN/LISN : NNLK8129-N-1108 Phase : NEUTRAL
 Limit : FCC PART15 CLASSB QP
 Env. / Ins. : 21.5*C&42%/ESCI Engineer : Sam.Z
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : 120Vac/60Hz
 Test mode : Test Configuration 1
 Memo : 60'' USB Cable

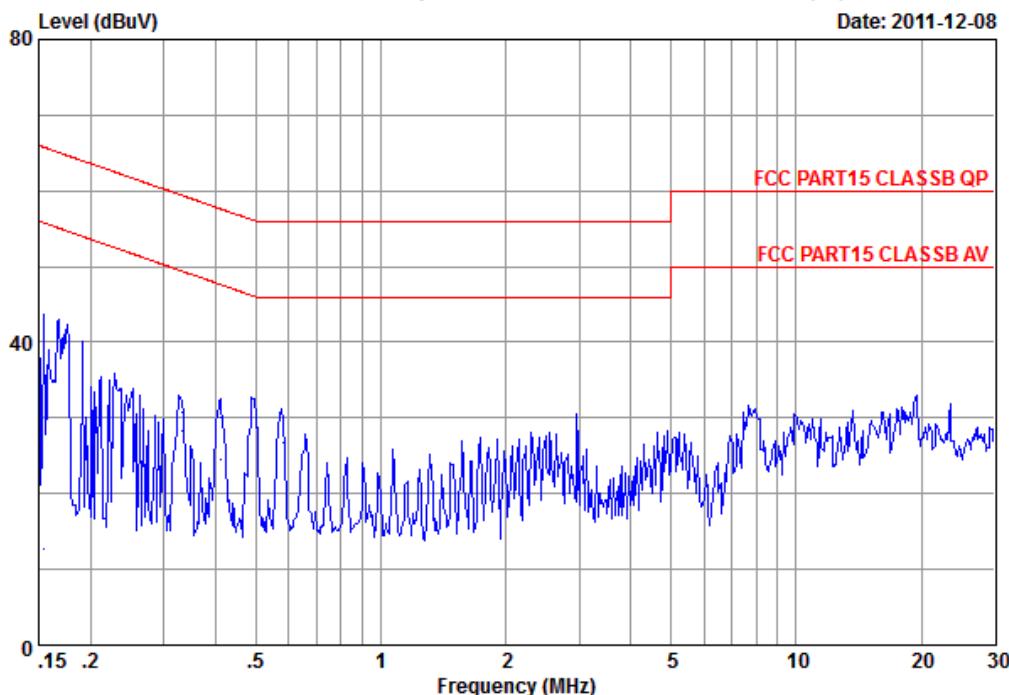
Freq (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.17	0.20	9.88	29.39	39.47	65.11	25.64 QP
2	0.17	0.20	9.88	25.29	35.37	55.11	19.74 Average
3	0.25	0.18	9.88	23.60	33.66	61.79	28.13 QP
4	0.25	0.18	9.88	21.00	31.06	51.79	20.73 Average
5	0.33	0.20	9.88	23.79	33.87	59.38	25.51 QP
6	0.33	0.20	9.88	22.69	32.77	49.38	16.61 Average
7	0.41	0.21	9.87	24.30	34.38	57.57	23.19 QP
8	0.41	0.21	9.87	21.60	31.68	47.57	15.89 Average
9	0.50	0.22	9.86	25.10	35.18	56.03	20.85 QP
10	0.50	0.22	9.86	22.80	32.88	46.03	13.15 Average
11	0.58	0.19	9.85	23.50	33.54	56.00	22.46 QP
12	0.58	0.19	9.85	19.30	29.34	46.00	16.66 Average

Note: 1. Emission Level= AMN Factor + Cabel Loss + 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.



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 Economic Development Zone,JiangSu,China
 Tel : (0512) 63403993 Fax: (0512) 63403339

Data: 17 File: F:\2011Test Data\Report\G1112001-G1112050\G1112004.EM6 (20)



Site no. : NO.1 Conducted Shielding Enclosure Data no. : 17
 AMN/LISN : NNLK8129-L1-1108 Phase : LINE
 Limit : FCC PART15 CLASSB QP
 Env. / Ins. : 21.5*C&42%/ESCI Engineer : Sam.Z
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : 120Vac/60Hz
 Test mode : Test Configuration 1
 Memo : 60'' USB Cable

	Freq (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.24	9.88	26.60	36.72	65.78	29.06	QP
2	0.15	0.24	9.88	2.50	12.62	55.78	43.16	Average
3	0.33	0.13	9.88	20.80	30.81	59.43	28.62	QP
4	0.33	0.13	9.88	18.20	28.21	49.43	21.22	Average
5	0.41	0.12	9.87	20.00	29.99	57.61	27.62	QP
6	0.41	0.12	9.87	14.50	24.49	47.61	23.12	Average
7	0.50	0.11	9.86	20.60	30.57	56.02	25.45	QP
8	0.50	0.11	9.86	18.70	28.67	46.02	17.35	Average
9	0.58	0.14	9.85	19.00	28.99	56.00	27.01	QP
10	0.58	0.14	9.85	16.80	26.79	46.00	19.21	Average
11	2.98	0.21	9.93	15.89	26.03	56.00	29.97	QP
12	2.98	0.21	9.93	14.59	24.73	46.00	21.27	Average

Note: 1. Emission Level= AMN Factor + Cabel Loss + 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.

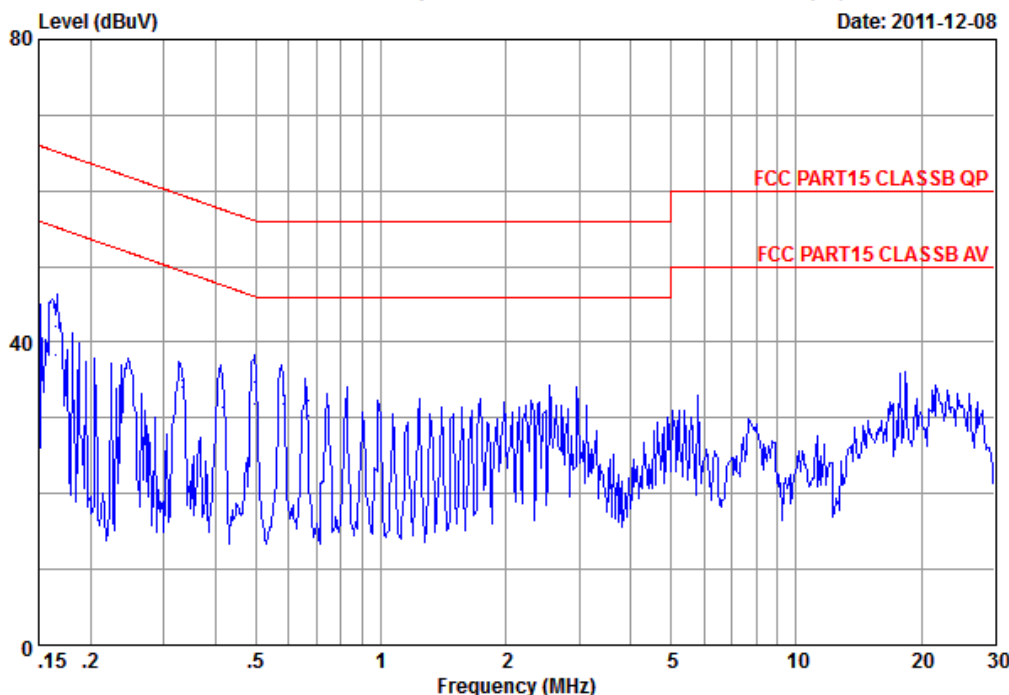


Audix Technology (Wu Jiang) Co.,Ltd
 No.1289,Jiang Xing East Road,The Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel : (0512)63403993 Fax: (0512)63403339

Data: 19

File: F:\2011Test Data\Report\G1112001-G1112050\G1112004.EM6 (20)

Date: 2011-12-08



Site no. : NO.1 Conducted Shielding Enclosure Data no. : 19
 AMN/LISN : NNLK8129-N-1108 Phase : NEUTRAL
 Limit : FCC PART15 CLASSB QP
 Env. / Ins. : 21.5*C&42%/ESCI Engineer : Sam.Z
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : 120Vac/60Hz
 Test mode : Test Configuration 1
 Memo : 12'' USB Cable

Freq (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark	
1	0.17	0.20	9.88	32.10	42.18	65.21	23.03	QP
2	0.17	0.20	9.88	28.30	38.38	55.21	16.83	Average
3	0.33	0.20	9.88	24.99	35.07	59.43	24.36	QP
4	0.33	0.20	9.88	23.99	34.07	49.43	15.36	Average
5	0.41	0.21	9.87	24.50	34.58	57.57	22.99	QP
6	0.41	0.21	9.87	21.40	31.48	47.57	16.09	Average
7	0.50	0.22	9.86	24.70	34.78	56.03	21.25	QP
8	0.50	0.22	9.86	21.70	31.78	46.03	14.25	Average
9	0.58	0.19	9.85	22.90	32.94	56.00	23.06	QP
10	0.58	0.19	9.85	21.90	31.94	46.00	14.06	Average
11	0.67	0.16	9.85	22.40	32.41	56.00	23.59	QP
12	0.67	0.16	9.85	20.20	30.21	46.00	15.79	Average

Note: 1. Emission Level= AMN Factor + Cabel Loss + 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.

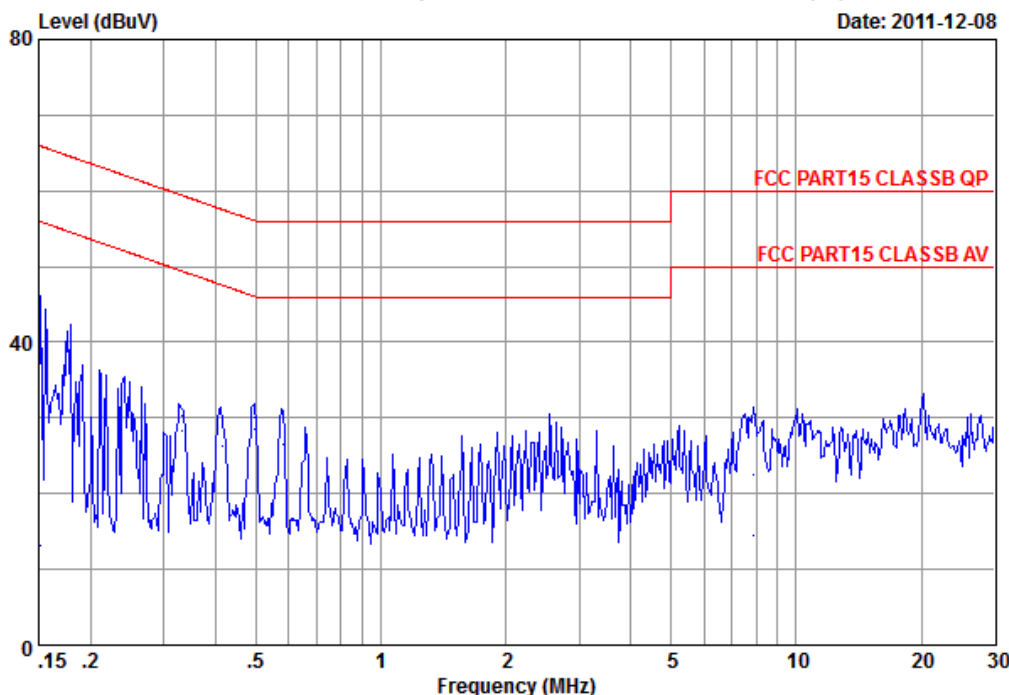


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 Tel : (0512) 63403993 Fax: (0512) 63403339

Data: 20

File: F:\2011Test Data\Report\G1112001-G1112050\G1112004.EM6 (20)

Date: 2011-12-08



Site no. : NO.1 Conducted Shielding Enclosure Data no. : 20
 AMN/LISN : NNLK8129-L1-1108 Phase : LINE
 Limit : FCC PART15 CLASSB QP
 Env. / Ins. : 21.5*C&42%/ESCI Engineer : Sam.Z
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : 120Vac/60Hz
 Test mode : Test Configuration 1
 Memo : 12'' USB Cable

	Freq (MHz)	AMN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.15	0.25	9.88	28.40	38.53	65.94	27.41	QP
2	0.15	0.25	9.88	3.00	13.13	55.94	42.81	Average
3	0.33	0.13	9.88	20.30	30.31	59.43	29.12	QP
4	0.33	0.13	9.88	18.20	28.21	49.43	21.22	Average
5	0.41	0.12	9.87	20.00	29.99	57.57	27.58	QP
6	0.41	0.12	9.87	16.20	26.19	47.57	21.38	Average
7	0.50	0.11	9.86	20.10	30.07	56.05	25.98	QP
8	0.50	0.11	9.86	18.50	28.47	46.05	17.58	Average
9	0.58	0.14	9.85	19.40	29.39	56.00	26.61	QP
10	0.58	0.14	9.85	16.60	26.59	46.00	19.41	Average
11	7.86	0.25	9.98	12.20	22.43	60.00	37.57	QP
12	7.86	0.25	9.98	4.30	14.53	50.00	35.47	Average

Note: 1. Emission Level= AMN Factor + Cabel Loss + 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.

4 RADIATED DISTURBANCE MEASUREMENT

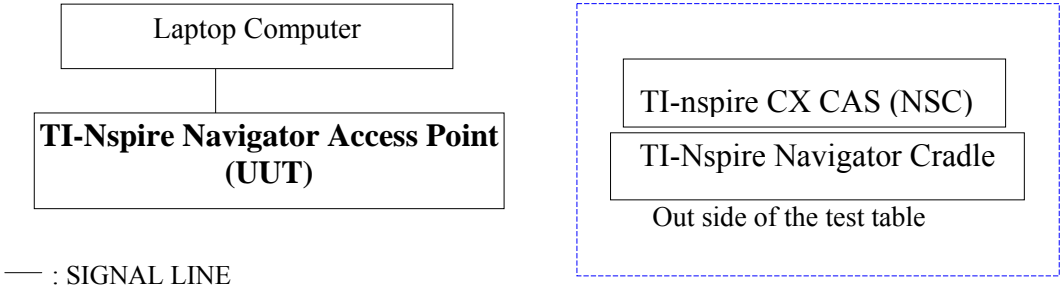
4.1 Test Equipment

The following test equipment was used during the radiated emission measurement :
(At 10m Semi-Anechoic Chamber)

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Spectrum Analyzer	Agilent	E7405A	MY45107028	2011-03-25	2012-03-24
2.	Spectrum Analyzer	Agilent	E7405A	MY45107030	2011-03-25	2012-03-24
3.	Spectrum Analyzer	Agilent	E4447A	MY45300134	2010-12-30	2011-12-29
4.	Pre-Amplifier	Agilent	8447D	2944A10923	2011-07-19	2012-07-18
5.	Pre-Amplifier	Agilent	8447D	2944A10922	2011-08-14	2012-08-13
6.	Bi-log Antenna (Horizontal)	Schaffner	CBL6112D	22253	2011-05-06	2012-05-05
7.	Bi-log Antenna (Vertical)	Schaffner	CBL6112D	22250	2011-06-08	2012-06-07
8.	Horn Antenna	ESCO	3115	00062593	2011-05-06	2012-05-05
9.	Test Receiver	R&S	ESCI	100351	2011-01-05	2012-01-04
10.	50Ω Coaxial Switch # 1	ANRITSU	MP59B	6200547935	2011-08-14	2012-08-13
11.	50Ω Coaxial Switch # 2	ANRITSU	MP59B	6200547937	2011-08-14	2012-08-13
12.	50Ω Coaxial Switch # 3	ANRITSU	MP59B	6200547938	2011-08-14	2012-08-13
13.	Microwave amplifier	Agilent	8449B	3008A02229	2011-11-02	2012-11-01
14.	RF Cable	Yuhang	CSYH	001	2011-08-14	2012-08-13
15.	RF Cable	Yuhang	CSYH	002	2011-08-14	2012-08-13
16.	RF Cable	Yuhang	CSYH	003	2011-08-14	2012-08-13
17.	RF Cable	Yuhang	CSYH	004	2011-08-14	2012-08-13
18.	RF Cable	Yuhang	CSYH	005	2011-03-24	2012-08-23
19.	RF Cable	Yuhang	CSYH	006	2011-03-24	2012-08-23
20.	RF Cable	Yuhang	CSYH	008	2011-03-24	2012-08-23
21.	RF Cable	Yuhang	CSYH	009	2011-03-24	2012-08-23
22.	RF Cable	Huber+Suhner	SUCOFLEX 102	28571	2011-03-24	2012-03-23
23.	RF Cable	Huber+Suhner	SUCOFLEX 102	29052	2011-04-11	2012-04-10

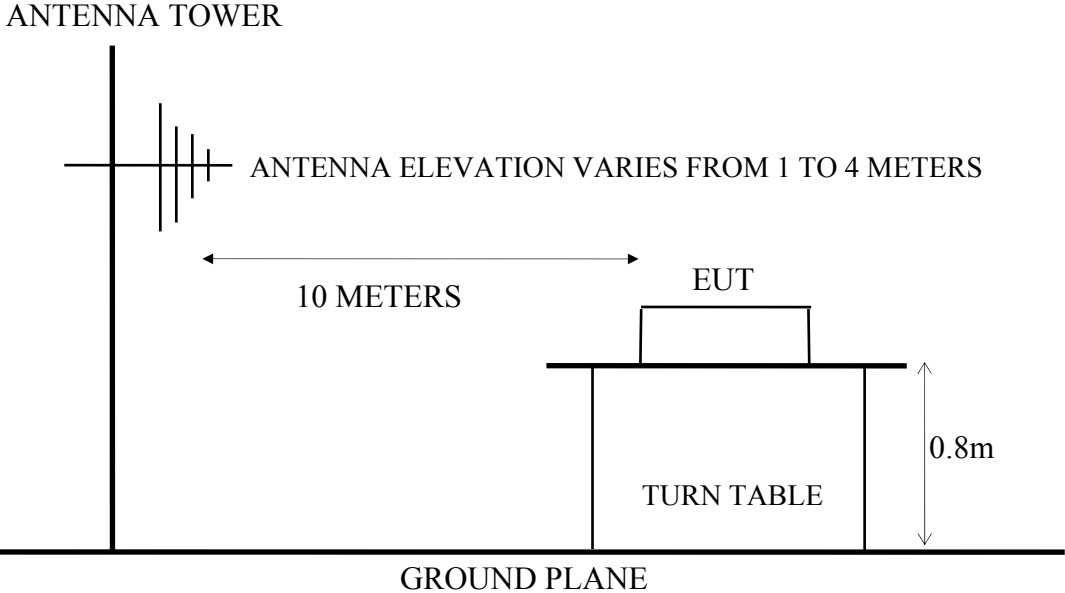
4.2 Block Diagram of Test Setup

4.2.1 Block Diagram of connection between EUT and simulators



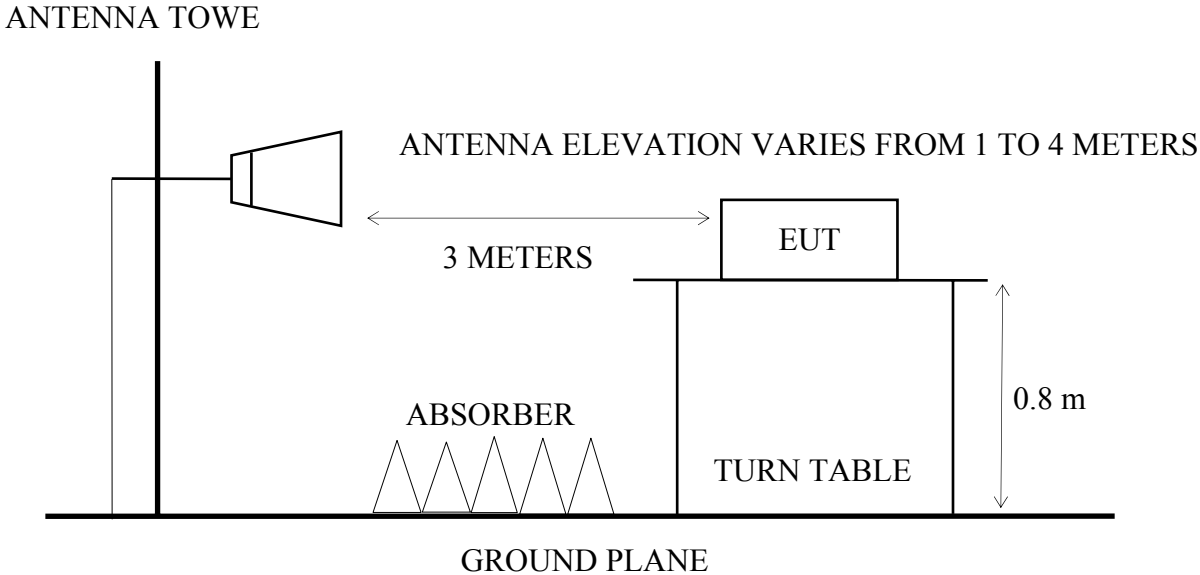
4.2.2 Test Setup at No. 1 10m Semi-Anechoic Chamber Setup Diagram (Test distance: 10m)

For 30MHz~1000MHz



4.2.3 Test Setup at No. 1 10m Semi-Anechoic Chamber Setup Diagram

For 1000MHz~12000MHz



4.3 Radiation Emission Limit

(§15.109(a) (g), Class B)

All emanations from receiver shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS	
		(μ V/m)	(dB μ V/m)
30 ~ 88	10	90	39
88~216	10	150	43.5
216~960	10	210	46.4
Above 960	10	300	49.5
Above 1000	3	1000	60 (Average)
			80 (Peak)

Notes : (1) Emission level(dB μ V/m)=20 log Emission level(μ V/m).

(2) The tight limit applies at the edge between two frequency bands.

(3) The 3m limit applies relation: $L_2 = L_1 (d_1/d_2)$

4.4 Test Procedure

The measuring process is according to ANSI C63.4 clause 12 and laboratory internal procedure TKC-301-011.

In the radiated emission measurement, the EUT and all simulators were set up on a non-metallic turn table which was 0.8 meters above the ground plane. Measurement distance between EUT and receiving antennas was set at 3 meters. The specified distance is the distance between the antennas and the closest periphery of EUT. During the radiated measurement, the EUT was rotated 360° and receiving antennas were moved from 1 ~ 4 meters for finding maximum emission. Two receiving antennas were used for both horizontal and vertical polarization detection for 30MHz~1GHz, One receiving antenna was used for both horizontal and vertical polarization detection for above 1GHz. All cables or wires placement were verified to find out the maximum emission.

The bandwidth of measuring receiver (or spectrum analyzer) was set to:

RBW (120 kHz), VBW (300 kHz) for QP detector below 1GHz

RBW (1 MHz), VBW (1MHz) for Peak detector above 1GHz

RBW (1 MHz), VBW (10 Hz) for Average detector above 1GHz

The required frequency band (30 MHz ~ 12000 MHz) was pre-scanned with peak detector; all final measurements were measured with quasi-peak detector below 1GHz, measured with average detector and peak detector above 1GHz., if necessary which is against note 1 of section 8.3.1.2 of ANSI C63.4-2003 standard.

The emission level is calculated automatically by the test system which uses the following equation :

1. For 30-1000MHz measurement:

Emission Level (dB μ V/m) = Meter-Reading (dB μ V)+Antenna Factor (dB/m)+Cable Loss (dB)

2. For Above 1GHz measurement:

Emission Level (dB μ V/m) = Meter-Reading (dB μ V)+Antenna Factor (dB/m)+Cable Loss(dB)
-Pre-amplifier factor (dB)

4.5 Radiated Emission Measurement Results

PASSED.

(All the emissions not reported below are too low against the prescribed limits.)

4.5.1 Frequency Range: 30MHz~1GHz

The details of test modes and reference test data are as follows:

Test Date : Dec.07, 2011 Temperature : 20°C Humidity : 55%

Item	Test Condition	USB Cable	Reference Test Data No.	
			Horizontal	Vertical
※1	Test Configuration 1	12 inch	# 5	# 6
2		60 inch	# 7	# 8

NOTE 1 - '※' means the worst test mode.

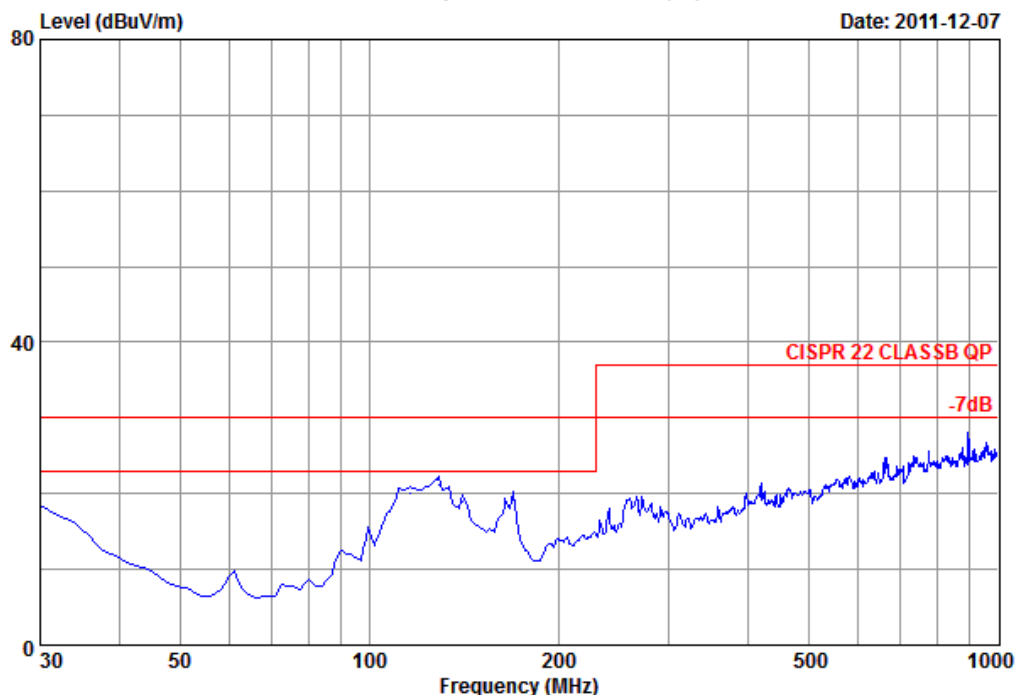
NOTE 2 - 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 3 - The worst emission at horizontal polarization was detected at 128.94 MHz with emission level of 21.22 dB μ V/m (limit is 30.00 dB μ V/m), when the antenna was 3.3 m height and the turntable was at 225°. The worst emission at vertical polarization was detected at 30.00 MHz with emission level of 21.64 dB μ V/m (limit is 30.00 dB μ V/m), when the antenna was 1.0 m height and the turntable was at 135°.



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 5 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (16)



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 5
 Dis./Ant. : 10m . 6112D(22253)-1105 Ant.pol : HORIZONTAL
 Limit : CISPR 22 CLASSB QP
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 12" USB Cable

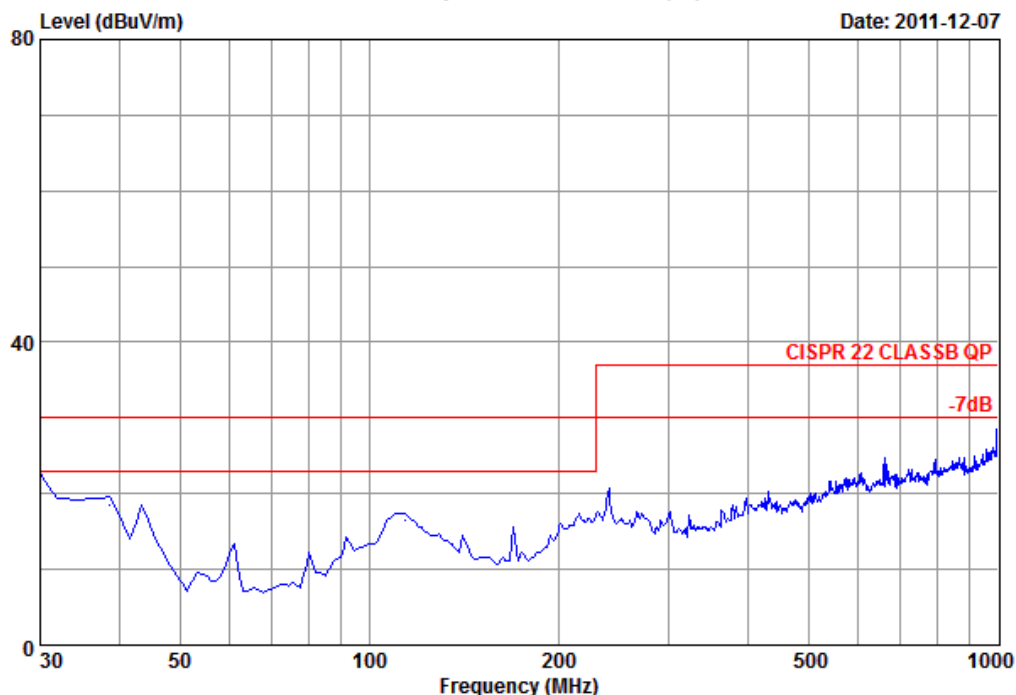
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	116.33	12.57	1.35	6.06	19.98	30.00	10.02	QP
2	128.94	12.87	1.53	6.82	21.22	30.00	8.78	QP
3	140.58	12.00	1.68	5.17	18.85	30.00	11.15	QP
4	169.68	9.90	1.74	7.63	19.27	30.00	10.73	QP
5	271.53	12.65	2.23	3.75	18.63	37.00	18.37	QP
6	897.18	20.42	4.35	2.22	26.99	37.00	10.01	QP

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



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 6 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (16)



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 6
 Dis./Ant. : 10m . 6112D(22250)-1106 Ant.pol : VERTICAL
 Limit : CISPR 22 CLASSB QP
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 12" USB Cable

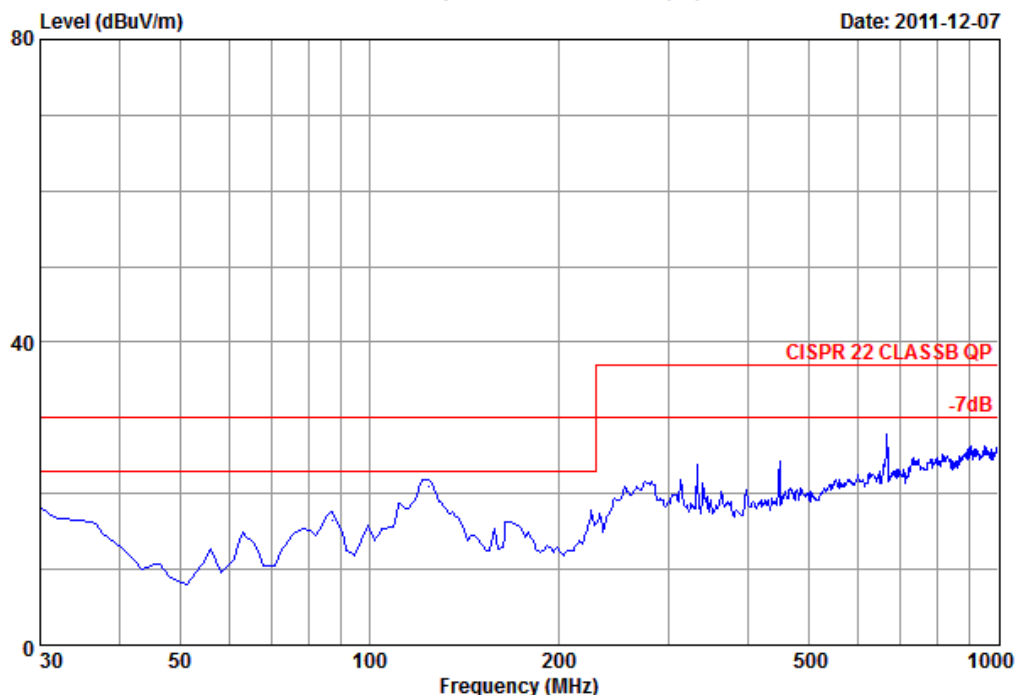
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.00	20.30	0.65	0.69	21.64	30.00	8.36	QP
2	38.73	15.60	0.61	2.39	18.60	30.00	11.40	QP
3	114.39	12.30	1.12	3.04	16.46	30.00	13.54	QP
4	240.49	11.30	1.57	6.88	19.75	37.00	17.25	QP
5	659.53	19.20	2.86	1.57	23.63	37.00	13.37	QP
6	994.18	21.78	3.71	1.95	27.44	37.00	9.56	QP

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



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 7 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (16)



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 7
 Dis./Ant. : 10m . 6112D(22253)-1105 Ant.pol : HORIZONTAL
 Limit : CISPR 22 CLASSB QP
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 60" USB Cable

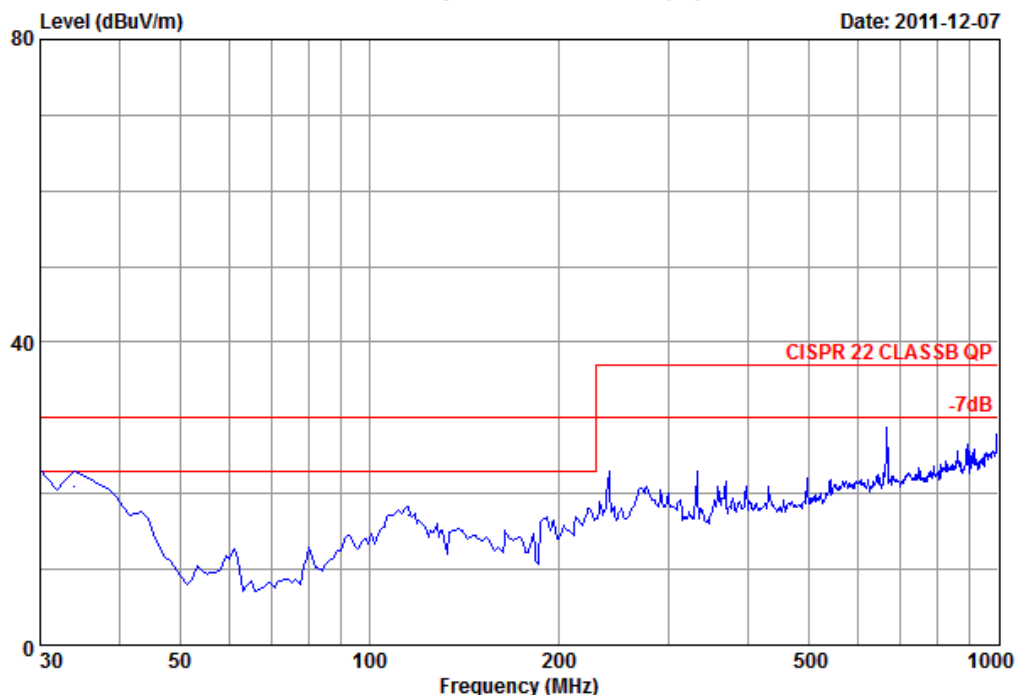
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	87.23	8.60	1.18	6.82	16.60	30.00	13.40	QP
2	124.09	12.80	1.44	6.67	20.91	30.00	9.09	QP
3	274.44	12.70	2.30	6.64	21.64	37.00	15.36	QP
4	332.64	14.26	2.49	5.16	21.91	37.00	15.09	QP
5	449.04	16.20	2.83	4.20	23.23	37.00	13.77	QP
6	664.38	19.44	3.87	3.45	26.76	37.00	10.24	QP

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



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 8 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (16)



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 8
 Dis./Ant. : 10m . 6112D(22250)-1106 Ant.pol : VERTICAL
 Limit : CISPR 22 CLASSB QP
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 60" USB Cable

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.00	20.30	0.65	-0.73	20.22	30.00	9.78	QP
2	33.88	17.80	0.63	2.48	20.91	30.00	9.09	QP
3	115.36	12.30	1.10	3.79	17.19	30.00	12.81	QP
4	240.49	11.30	1.57	9.06	21.93	37.00	15.07	QP
5	664.38	19.20	2.82	5.70	27.72	37.00	9.28	QP
6	1000.00	21.60	3.86	1.88	27.34	37.00	9.66	QP

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

4.5.2 Frequency Range: Above 1GHz

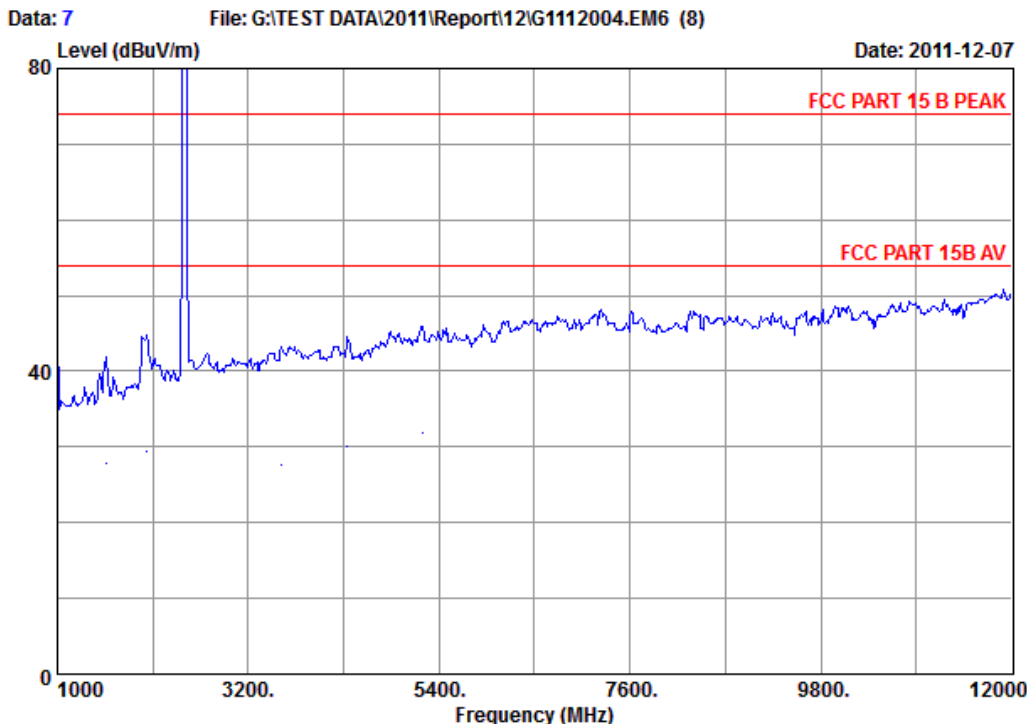
The details of test modes and reference test data are as follows:

Test Date: Dec.07, 2011 Temperature: 20.0°C Humidity: 55`%

Item	Test Condition	USB Cable	Reference Test Data No.	
			Horizontal	Vertical
1	Test Configuration 1	12 inch	# 7	# 8
2		60 inch	# 5	# 6



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 7
 Dis./Ant. : 3m 3115(62593)-1105 Ant.pol : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT. : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 12" USB Cable

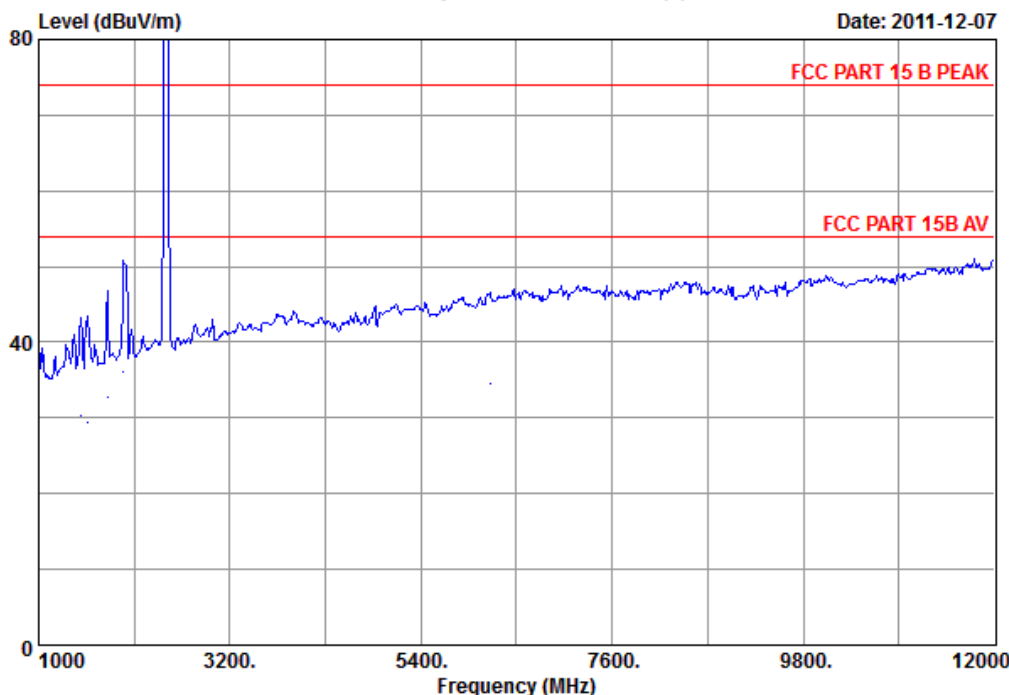
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1000.00	23.60	1.58	52.05	34.50	42.73	74.00	31.27	Peak
2	1000.00	23.60	1.58	39.50	34.50	30.18	54.00	23.82	Average
3	1572.00	25.70	2.10	48.59	34.60	41.79	74.00	32.21	Peak
4	1572.00	25.70	2.10	34.60	34.60	27.80	54.00	26.20	Average
5	2034.00	27.30	2.29	49.88	34.62	44.85	74.00	29.15	Peak
6	2034.00	27.30	2.29	34.50	34.62	29.47	54.00	24.53	Average
7	2452.00	28.54	2.21	100.05	34.78	96.02	74.00	-22.02	Peak
8	3574.00	31.87	3.29	26.50	34.05	27.61	54.00	26.39	Average
9	3574.00	31.87	3.29	42.18	34.05	43.29	74.00	30.71	Peak
10	4344.00	32.55	3.57	41.63	33.20	44.55	74.00	29.45	Peak
11	4344.00	32.55	3.57	27.20	33.20	30.12	54.00	23.88	Average
12	5202.00	33.94	4.03	41.38	33.40	45.95	74.00	28.05	Peak
13	5202.00	33.94	4.03	27.40	33.40	31.97	54.00	22.03	Average

Remarks: 1.Emission Level= Antenna factor + Cable loss + Reading - Preamp
 2.The emission level that are 20dB below the official limit are not reported



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 8 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (8) Date: 2011-12-07



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 8
 Dis./Ant. : 3m 3115(62593)-1105 Ant.pol : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT. : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 12" USB Cable

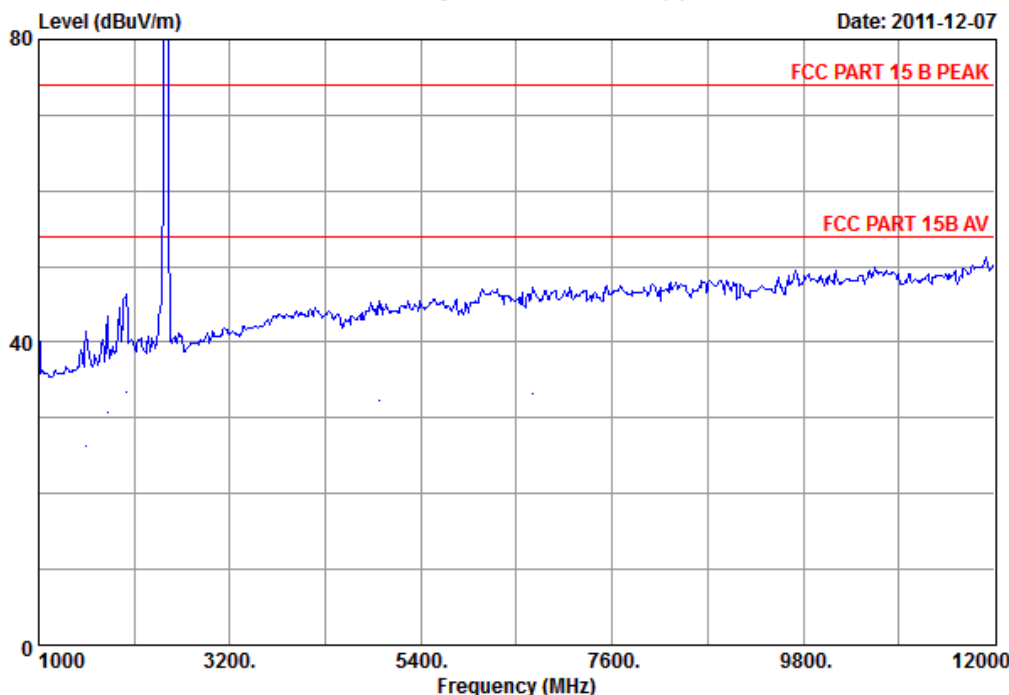
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1000.00	23.60	1.58	48.77	34.50	39.45	74.00	34.55	Peak
2	1001.00	23.60	1.58	36.60	34.50	27.28	54.00	26.72	Average
3	1484.00	25.34	2.07	50.51	34.59	43.33	74.00	30.67	Peak
4	1484.00	25.34	2.07	37.49	34.59	30.31	54.00	23.69	Average
5	1572.00	25.70	2.10	50.25	34.60	43.45	74.00	30.55	Peak
6	1572.00	25.70	2.10	36.20	34.60	29.40	54.00	24.60	Average
7	1792.00	26.48	2.32	52.69	34.60	46.89	74.00	27.11	Peak
8	1792.00	26.48	2.32	38.50	34.60	32.70	54.00	21.30	Average
9	1979.00	27.14	2.33	55.99	34.60	50.86	74.00	23.14	Peak
10	1979.00	27.14	2.33	41.20	34.60	36.07	54.00	17.93	Average
11	2452.00	28.54	2.21	101.33	34.78	97.30	74.00	-23.30	Peak
12	6192.00	34.92	4.23	39.78	32.44	46.49	74.00	27.51	Peak
13	6192.00	34.92	4.23	27.90	32.44	34.61	54.00	19.39	Average

Remarks: 1.Emission Level= Antenna factor + Cable loss + Reading - Preamp
 2.The emission level that are 20dB below the official limit are not reported



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 5 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (8) Date: 2011-12-07



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 5
 Dis./Ant. : 3m 3115(62593)-1105 Ant.pol : HORIZONTAL
 Limit : FCC PART 15 B PEAK
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT. : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 60" USB Cable

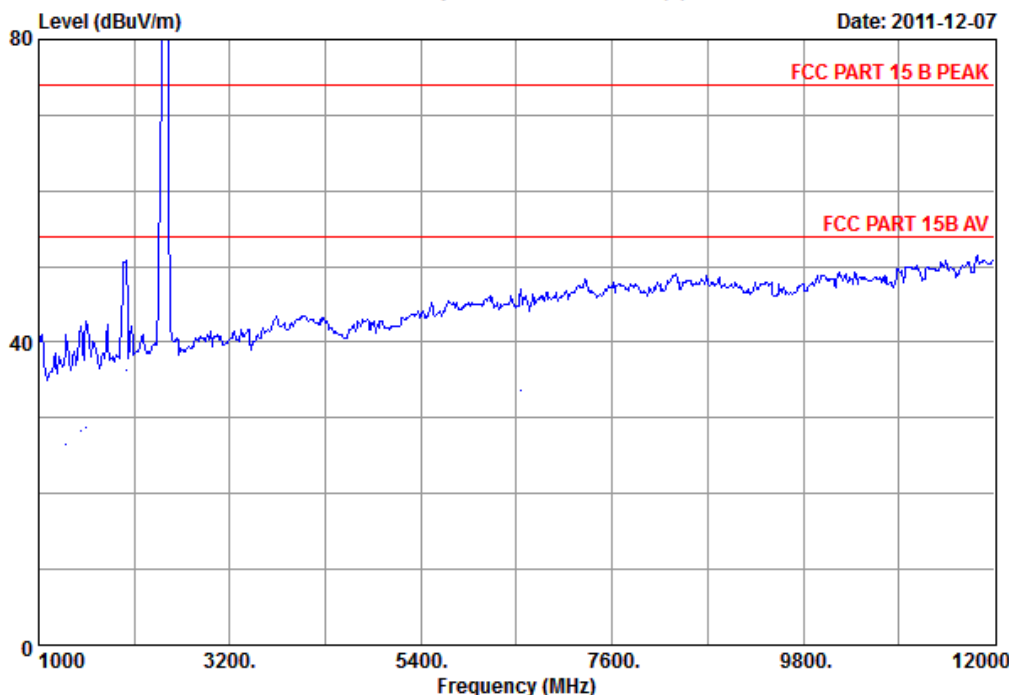
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1000.00	23.60	1.58	50.94	34.50	41.62	74.00	32.38	Peak
2	1000.00	23.60	1.58	38.50	34.50	29.18	54.00	24.82	Average
3	1539.00	25.58	2.09	48.29	34.60	41.36	74.00	32.64	Peak
4	1539.00	25.58	2.09	33.20	34.60	26.27	54.00	27.73	Average
5	1792.00	26.48	2.32	49.15	34.60	43.35	74.00	30.65	Peak
6	1792.00	26.48	2.32	36.50	34.60	30.70	54.00	23.30	Average
7	2012.00	27.25	2.29	51.51	34.61	46.44	74.00	27.56	Peak
8	2012.00	27.25	2.29	38.50	34.61	33.43	54.00	20.57	Average
9	2452.00	28.54	2.21	101.94	34.78	97.91	74.00	-23.91	Peak
10	4927.00	33.35	3.81	41.66	33.37	45.45	74.00	28.55	Peak
11	4927.00	33.35	3.81	28.60	33.37	32.39	54.00	21.61	Average
12	6687.00	35.57	4.58	39.63	32.54	47.24	74.00	26.76	Peak
13	6687.00	35.57	4.58	25.49	32.54	33.10	54.00	20.90	Average

Remarks: 1.Emission Level= Antenna factor + Cable loss + Reading - Preamp
 2.The emission level that are 20dB below the official limit are not reported



Audix Technology(Wujiang)Co.,Ltd.
 No.1289,Jiang Xing East Road,Eastern Part of WuJiang
 Economic Development Zone,JiangSu,China
 Tel:0512-63403993 Fax:0512-63403339

Data: 6 File: G:\TEST DATA\2011\Report\12\G1112004.EM6 (8) Date: 2011-12-07



Site No. : NO.1 10m Semi-Anechoic Chamber Data NO. : 6
 Dis./Ant. : 3m 3115(62593)-1105 Ant.pol : VERTICAL
 Limit : FCC PART 15 B PEAK
 Env./Ins. : 20*C 55%/ESCI Engineer : Andy
 EUT. : TI-Nspire Navigator Access Point
 M/N : TINAVAP2
 Power Rating : DC 5V Via Laptop
 Test Mode : Test Configuration 1
 Memo : 60" USB Cable

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	1000.00	23.60	1.58	50.56	34.50	41.24	74.00	32.76	Peak
2	1001.00	23.60	1.58	36.50	34.50	27.18	54.00	26.82	Average
3	1319.00	24.78	1.89	48.90	34.56	41.01	74.00	32.99	Peak
4	1319.00	24.78	1.89	34.49	34.56	26.60	54.00	27.40	Average
5	1484.00	25.34	2.07	49.19	34.59	42.01	74.00	31.99	Peak
6	1484.00	25.34	2.07	35.59	34.59	28.41	54.00	25.59	Average
7	1539.00	25.58	2.09	49.76	34.60	42.83	74.00	31.17	Peak
8	1539.00	25.58	2.09	35.60	34.60	28.67	54.00	25.33	Average
9	2012.00	27.25	2.29	55.89	34.61	50.82	74.00	23.18	Peak
10	2012.00	27.25	2.29	41.50	34.61	36.43	54.00	17.57	Average
11	2419.00	28.44	2.76	102.70	34.77	99.13	74.00	-25.13	Peak
12	6544.00	35.35	4.41	39.78	32.51	47.03	74.00	26.97	Peak
13	6544.00	35.35	4.41	26.50	32.51	33.75	54.00	20.25	Average

Remarks: 1.Emission Level= Antenna factor + Cable loss + Reading - Preamp
 2.The emission level that are 20dB below the official limit are not reported

5 DEVIATION TO TEST SPECIFICATIONS

【NONE】