



Product Service

EMC TEST REPORT

Report Number : **68.760.11.067.01** Date of Issue: 07 March 2011

Model : **SMB-A1011**

Product Type : Tablet PC

Applicant : Wanlida Group Co., Ltd.

Address : No. 618 Jiahe Road, Wanlida Industry Zone,
Xiamen Fujian, China 361006

Production Facility : Wanlida Group Co., Ltd.

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

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

Total pages including
Appendices : 22

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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: China Shenzhen Academy of Metrology and Quality Inspection,
Metrology and Quality Inspection building,
Central Section of LongZhu Road,
Nan Shan,
Shenzhen,

Telephone: 86 755 2694 1599

Fax: 86 755 2694 1545

3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Tablet PC

Model no.: SMB-A1011

Options and accessories: NIL

Rating: DC 12V, 2A
Test with adaptor:
Input: AC 100-240V, 50/60Hz, 1A
Output: DC 12V, 2A

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

RF Transmission
Frequency: 2400-2483.5MHz

Description of the EUT: NIL

Auxiliary Equipment and Cable Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
LCD monitor	Lenovo	9227-AE1	V1TDB38
Keyboard	Lenovo	SK-8825 (L)	02553778
Mouse	Lenovo	MO28UOL	4418011108
PC host	Lenovo	9439	L3BDF2K
Headphone	Ouyun	OH601	----
SD card	Kingston	SD4/4GBFE	----
VGA cable	Lenovo	Shield	140cm
HDMI cable	malata	Shield	100cm
AC Power cable	Lenovo	Unshield	180cm



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4 Summary of Test Standards

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

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	8	☒	☐	☐	Test Site2
15.109 Spurious radiated emissions	14	☒	☐	☐	Test Site2



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6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: SMFSMBA1011 filing to comply with Section 15.107, 15.109 of the FCC Part 15, Subpart B Rules.

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: 27 December 2010

Testing Start Date: 14 January 2011

Testing End Date: 02 March 2011

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Tested By
Test Lab Engineer

2011-03-07
Date

Eric Gao
Name

Signature

Prepared By
Project Engineer

2011-03-07
Date

Ken Li
Name

Signature

Reviewed By
Assistant EMC Manager

2011-03-07
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

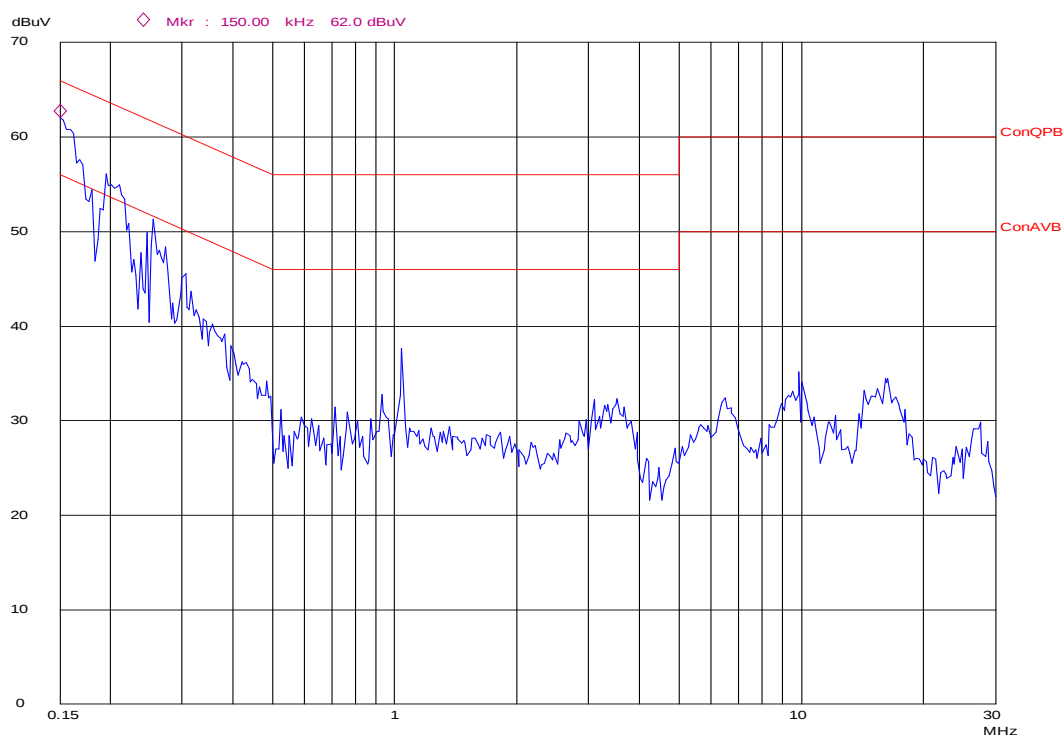
Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Note: "*" Decreasing linearly with logarithm of the frequency

Conducted Emission

Conducted disturbance

EUT: M/N:SMB-A1011
Op Cond: Read memory
Test Spec: L
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBμV	QP Test result dBμV	QP Limit dBμV	Margin dB
0.150	9.8	48.7	58.5	66	7.5
0.198	9.8	41.0	50.8	63.7	12.9
0.255	9.8	34.8	44.6	61.6	17

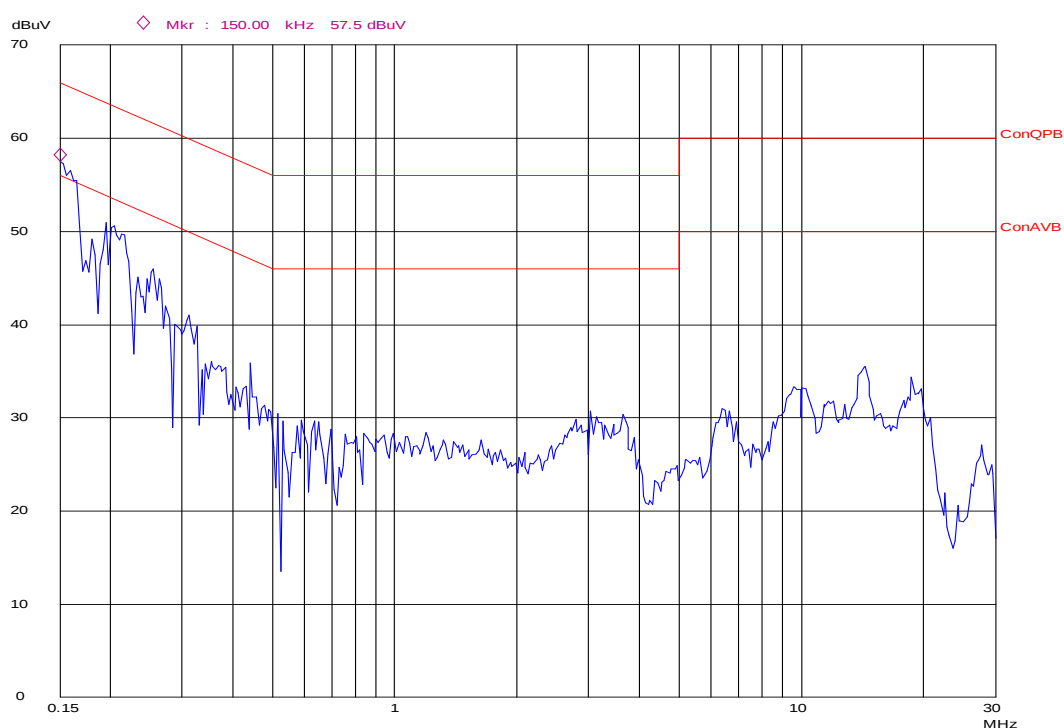
Frequency MHz	Cable Loss dB	Reading dBμV	AV Test result dBμV	AV Limit dBμV	Margin dB
0.150	9.8	32.5	42.3	56	13.7
0.198	9.8	23.3	33.1	53.7	20.6
0.255	9.8	18.5	28.3	51.6	23.3

Remark: Test Result= Reading + Cable Loss

Conducted Emission

Conducted disturbance

EUT: M/N: SMB-A1011
Op Cond: Read memory
Test Spec: N
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBμV	QP Test result dBμV	QP Limit dBμV	Margin dB
0.150	9.8	45.9	55.7	66	10.3
0.195	9.8	36.5	46.3	63.8	17.5
0.255	9.8	32.3	42.1	61.6	19.5

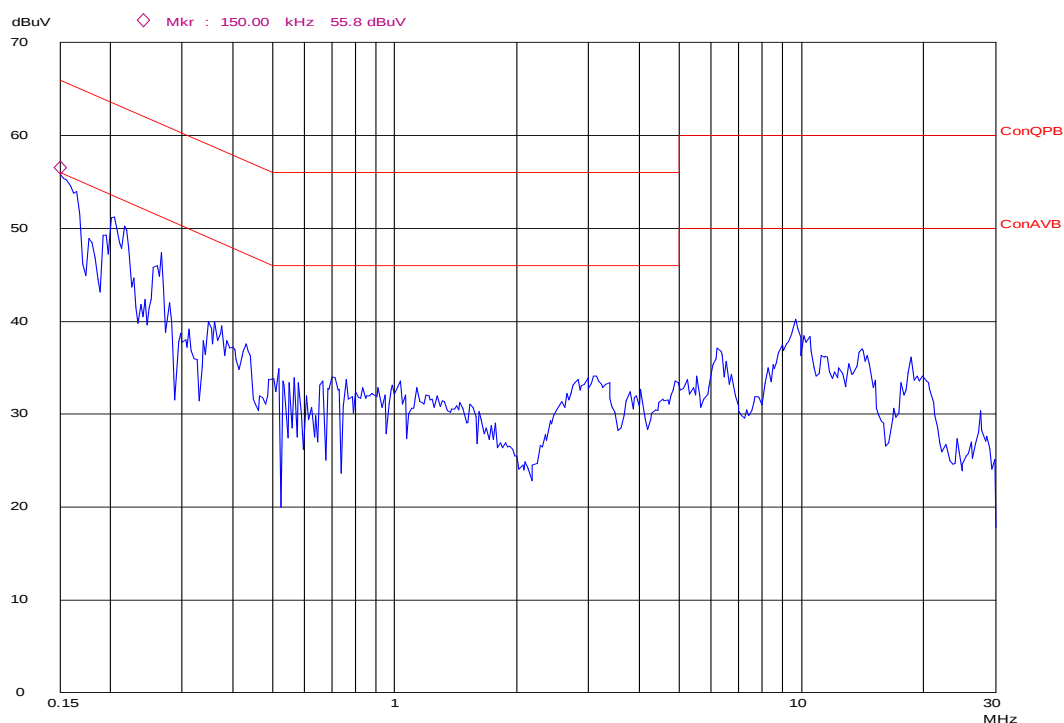
Frequency MHz	Cable Loss dB	Reading dBμV	AV Test result dBμV	AV Limit dBμV	Margin dB
0.150	9.8	29.9	39.7	56	16.3
0.195	9.8	17.9	27.7	53.8	26.1
0.255	9.8	17.4	27.2	51.6	24.4

Remark: Test Result= Reading + Cable Loss

Conducted Emission

Conducted disturbance

EUT: M/N:SMB-A1011
Op Cond: Read SD
Test Spec: L
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBμV	QP Test result dBμV	QP Limit dBμV	Margin dB
0.150	9.8	43.7	53.5	66	12.5
0.204	9.8	37.4	47.2	63.4	16.2
0.267	9.8	31.5	41.3	61.2	19.9

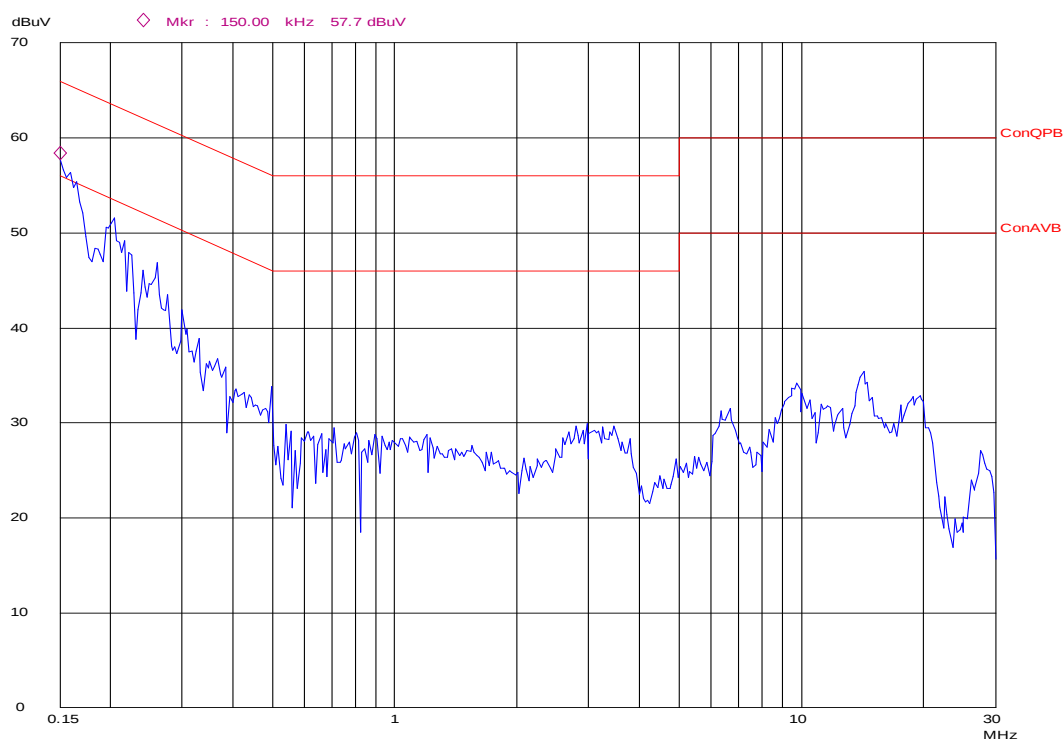
Frequency MHz	Cable Loss dB	Reading dBμV	AV Test result dBμV	AV Limit dBμV	Margin dB
0.150	9.8	27.8	37.6	56	18.4
0.204	9.8	24.2	34.0	53.4	19.4
0.267	9.8	16.8	26.6	51.2	24.6

Remark: Test Result= Reading + Cable Loss

Conducted Emission

Conducted disturbance

EUT: M/N: SMB-A1011
Op Cond: Read SD
Test Spec: N
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBμV	QP Test result dBμV	QP Limit dBμV	Margin dB
0.150	9.8	44.5	54.3	66	11.7
0.198	9.8	37.1	46.9	63.7	16.8
0.249	9.8	32.0	41.8	61.8	20

Frequency MHz	Cable Loss dB	Reading dBμV	AV Test result dBμV	AV Limit dBμV	Margin dB
0.150	9.8	28.5	38.3	56	17.7
0.198	9.8	21.2	31.0	53.7	22.7
0.249	9.8	16.2	26.0	51.8	25.8

Remark: Test Result= Reading + Cable Loss



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Test Equipment List

Conducted Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESCS30	100003	Sep 21 2011
AMN	Rohde & Schwarz	ESH3-Z5	100229	Sep 21 2011
AMN	Rohde & Schwarz	ENV216	100042	Sep 21 2011

7.2 Radiated emissions

Test Method

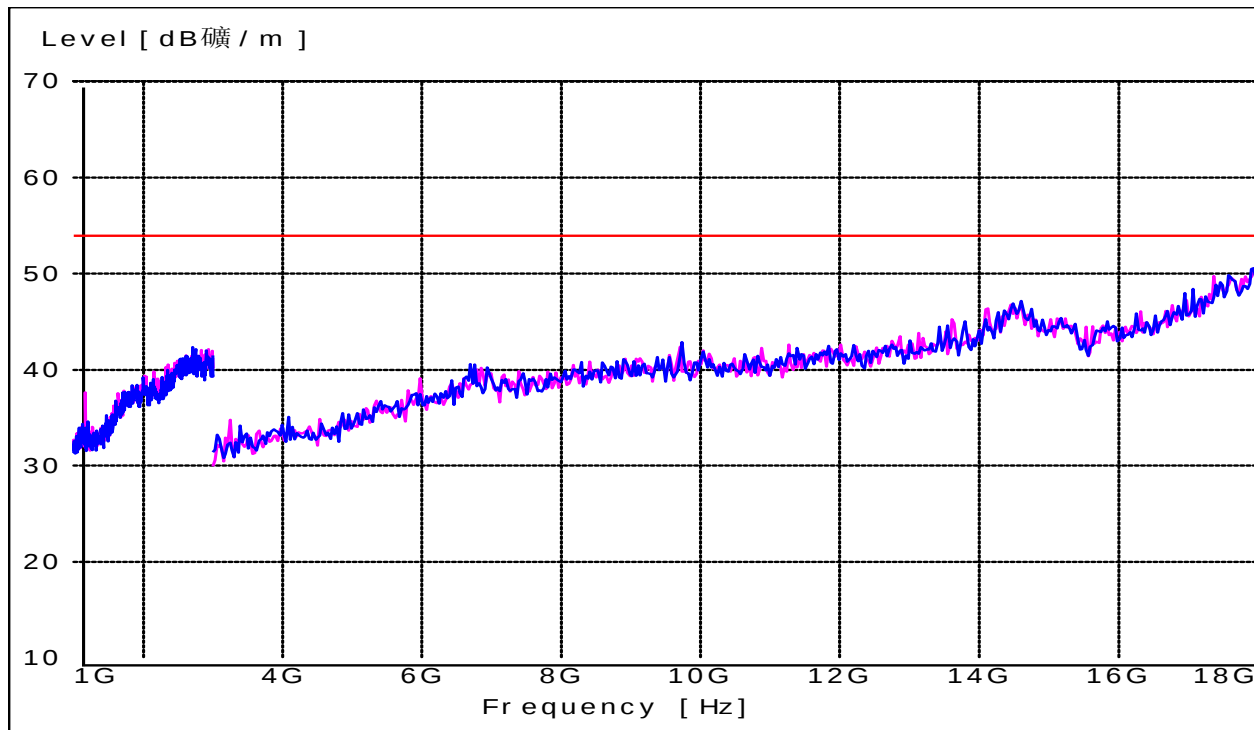
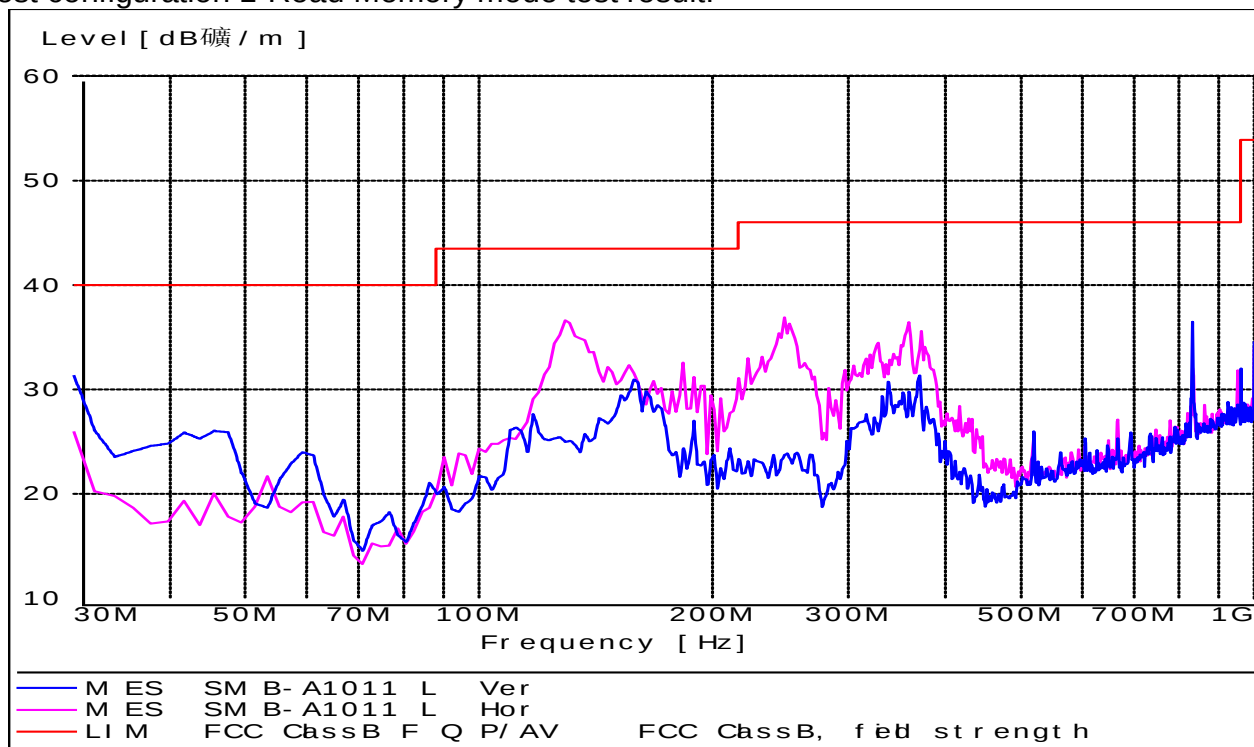
- 1 The EUT is placed on a turntable, which is 0.8m above ground plane.
- 2 The turntable shall be rotated for 360 degrees to determine the position of maximum emission level
- 3 EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- 4 Maximum 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

Radiated Emission

Test configuration 1-Read Memory mode test result:



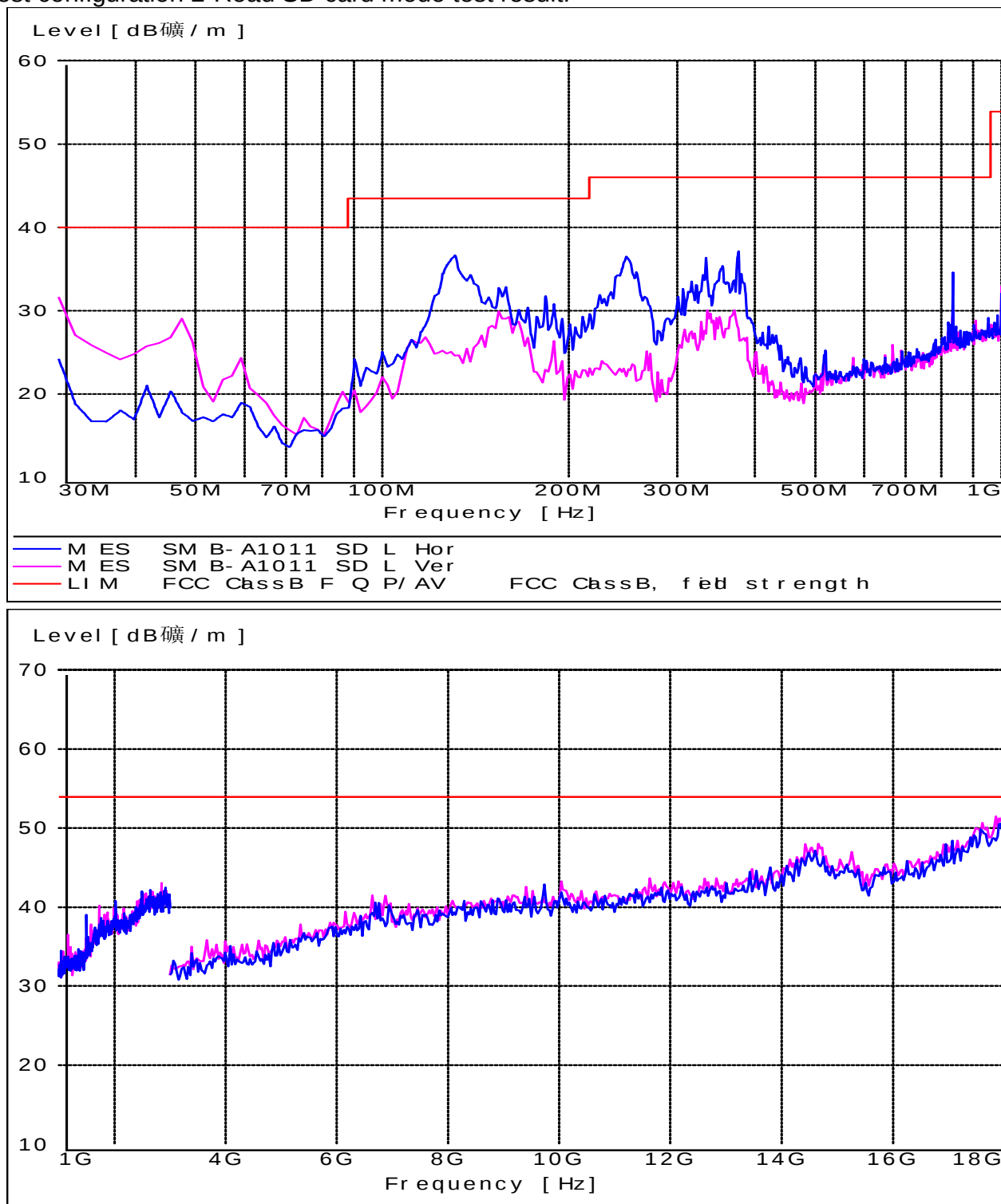
Radiated Emission

Read Memory mode test result:

Frequency MHz	Cable Loss dB	Antenna Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
129.138	1.9	12.6	22.2	36.6	Horizontal	43.5	QP	Pass
247.715	2.7	12.7	21.5	36.9	Horizontal	46.0	QP	Pass
358.517	3.2	15.9	17.4	36.5	Horizontal	46.0	QP	Pass

Radiated Emission

Test configuration 2-Read SD card mode test result:



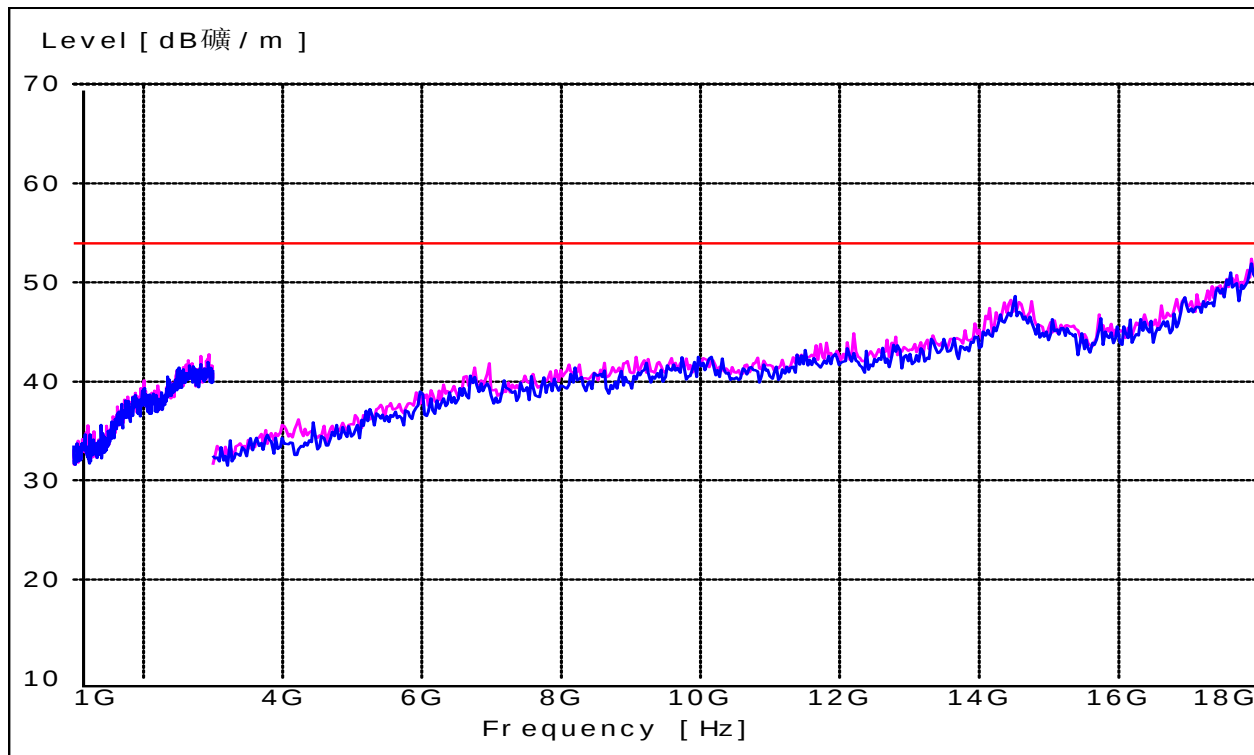
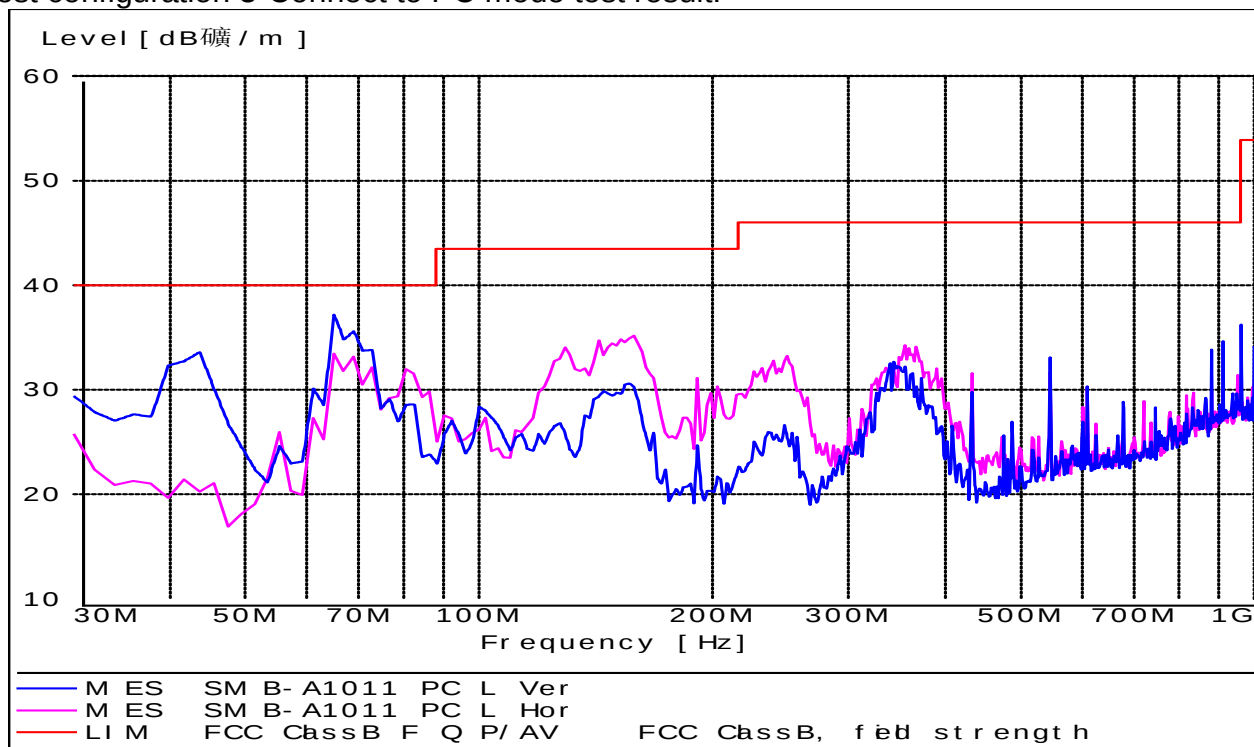
Radiated Emission

Read SD card mode test result:

Frequency MHz	Cable Loss dB	Antenna Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
131.082	1.9	12.3	22.4	36.6	Horizontal	43.5	QP	Pass
247.715	2.7	12.7	21.1	36.5	Horizontal	46.0	QP	Pass
376.012	3.2	15.9	17.9	37.0	Horizontal	46.0	QP	Pass

Radiated Emission

Test configuration 3-Connect to PC mode test result:



Radiated Emission

Connect to PC mode test result:

Frequency MHz	Cable Loss dB	Antenna Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBuV/m	Detector	Result
66.331	1.4	6.8	25.3	33.5	Horizontal	40.0	QP	Pass
80.541	1.4	9.3	21.3	32.0	Horizontal	40.0	QP	Pass
158.296	2.1	11.0	22.1	35.2	Horizontal	43.5	QP	Pass
66.332	1.4	6.8	27.8	36.0	Vertical	40.0	QP	Pass
43.660	1.2	11.7	20.7	33.6	Vertical	40.0	QP	Pass



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Test Equipment List

Radiated Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	Sep 21 2011
Bilog Antenna	Chase	CBL6112B	2591	Sep 21 2011
Signal Generator	Rohde & Schwarz	SMR20	100047	Sep 21 2011
Antenna	Schwarzbeck	VUBA9117	115	Sep 21 2011
Horn Antenna	Rohde & Schwarz	HF906	100013	Sep 21 2011

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=4.6dB, k=2 (30MHz-25GHz)
CE	Disturbance Voltage (dB μ V)	U=3.3, k=2 (150KHz-30MHz)