Product Service

EMC TEST REPORT

Report Number	:	**68.760.10.216.01**	Date of Issue:	28 September 2010

Model	:	**DS-A001**
Product Type	:	Docking Station
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	:	20

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Jiangsu TÜV Product Service Ltd. – Shenzhen Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. Jiangsu TÜV Product Service Ltd. – Shenzhen Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from Jiangsu TÜV Product Service Ltd. – Shenzhen Branch issued reports.

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2 Details about the Test Laboratory

Details about the Test Laboratory

Company name: Jiangsu TÜV Product Service Ltd. – Shenzhen Branch
6th Floor, H Hall,
Century Craftwork Culture Square,
No. 4001, Fuqiang Road,
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Shenzhen,P.R.C.

Telephone: 86 755 8828 6998
Fax: 86 755 8828 5299

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: Docking Station

Model no.: DS-A001

Brand Name: MALATA

Options and accessories: NIL

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

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
Laptop	Lenovo	X61	L3-L3729 08/03
Tablet PC	Malata	SMB-A1002(FCC ID: SMFSMBA1002)	----
LCD monitor	Skyworth	26L16SW	A145567
Headphone	Ouyun	OH601	----
SD card	Kingston	SD4/4GBFE	----
USB Flash drive	Kingston	USB/4G	----
HDMI cable	Lenovo	Shield	100cm
AC Power cable	Lenovo	Unshield	180cm

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4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart B	PART 15 - RADIO FREQUENCY DEVICES Subpart B - Unintentional Radiators

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5 Summary of Test Results

Technical Requirements				
FCC Part 15 Subpart B				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
15.107 Conducted Emission AC Power Port	8	☒	☐	☐
15.109 Spurious radiated emissions	14	☒	☐	☐

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6 General Remarks

Remarks
This submittal(s) (test report) is intended for FCC ID: SMFDSA001 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: 1 September 2010

Testing Start Date: 2 September 2010

Testing End Date: 27 September 2010

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Reviewed by:

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Assistant EMC Manager

Prepared by:

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Senior EMC Project Engineer

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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 dBµV	AV Limit dBµV
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Decreasing linearly with logarithm of the frequency

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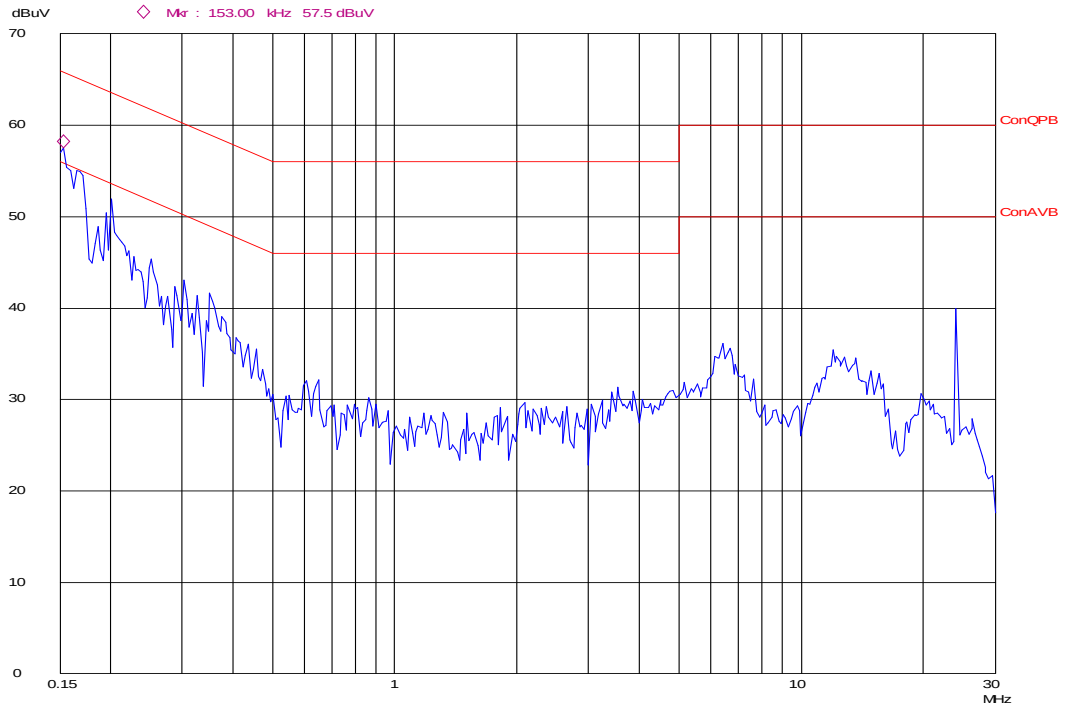
Conducted Emission

Conducted Disturbance

EUT: M/N:DS-A001
Op Cond: Charging
Test Spec: L
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBµV	QP Test result dBµV	QP Limit dBµV	Margin dB
0.156	9.8	41.5	51.3	65.7	14.4
0.180	9.8	28.5	38.3	64.5	26.2
0.204	9.8	35.0	44.8	63.4	18.6

Frequency MHz	Cable Loss dB	Reading dBµV	AV Test result dBµV	AV Limit dBµV	Margin dB
0.156	9.8	28.7	38.5	55.7	17.2
0.180	9.8	3.1	12.9	54.5	41.6
0.204	9.8	22.2	32.0	53.4	21.4

Remark: Test Result= Reading + Cable Loss

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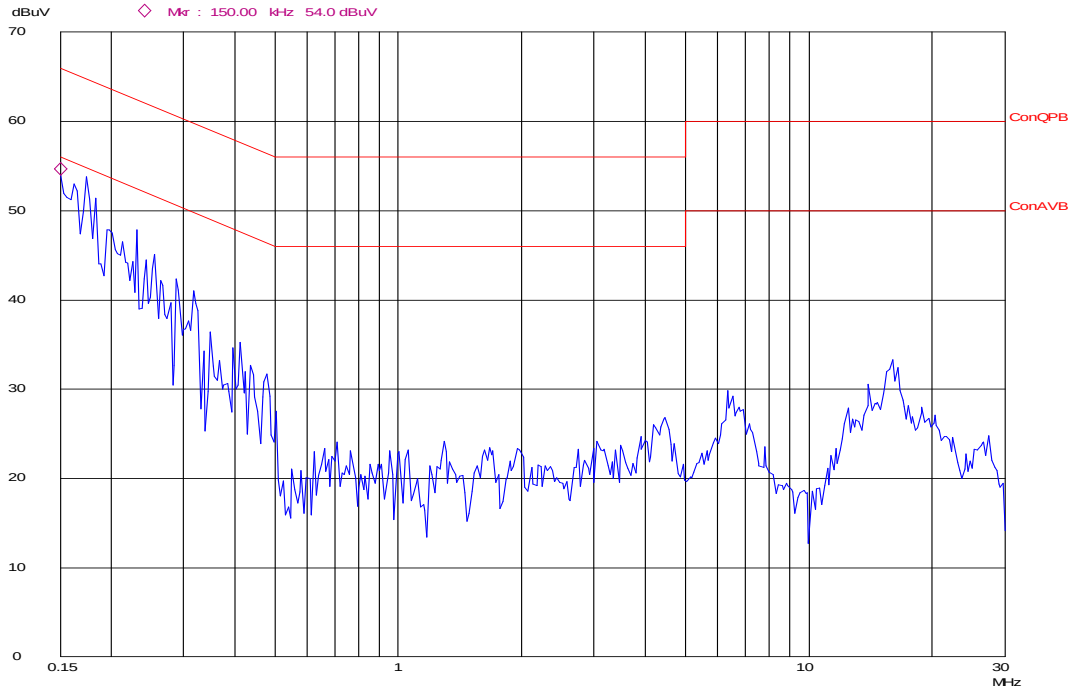
Conducted Emission

Conducted Disturbance

EUT: M/N:DS-A001
Op Cond: Charging
Test Spec: N
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBµV	QP Test result dBµV	QP Limit dBµV	Margin dB
0.153	9.8	40.1	49.9	65.8	15.9
0.204	9.8	33.0	42.8	63.4	20.6
23.995	10.3	28.8	39.1	60	20.9

Frequency MHz	Cable Loss dB	Reading dBµV	AV Test result dBµV	AV Limit dBµV	Margin dB
0.153	9.8	46.0	36.3	55.8	19.5
0.204	9.8	43.6	28.1	53.4	25.3
23.995	10.3	28.7	39.0	50	11.0

Remark: Test Result= Reading + Cable Loss

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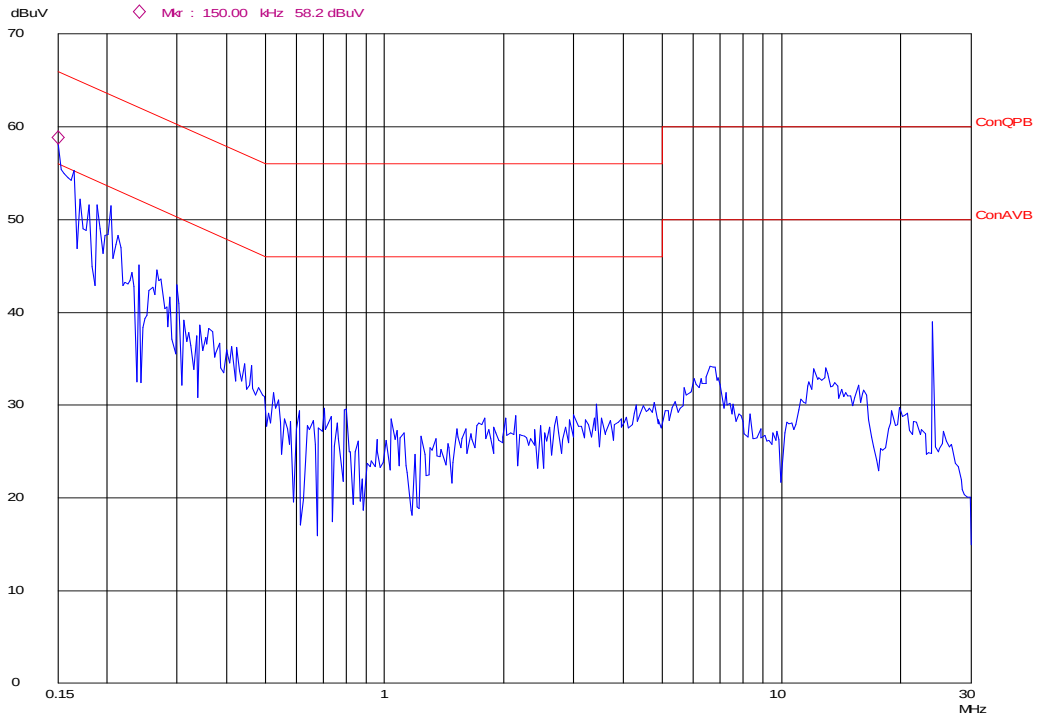
Conducted Emission

Conducted Disturbance

EUT: M/N:DS-A001
Op Cond: Communication
Test Spec: L
Comment: AC 120V/60Hz



Frequency MHz	Cable Loss dB	Reading dBµV	QP Test result dBµV	QP Limit dBµV	Margin dB
0.153	9.8	41.5	51.3	65.8	14.5
0.165	9.8	38.4	48.2	65.2	17.0
0.201	9.8	35.5	45.3	63.6	18.3

Frequency MHz	Cable Loss dB	Reading dBµV	AV Test result dBµV	AV Limit dBµV	Margin dB
0.153	9.8	28.6	38.4	55.8	17.4
0.165	9.8	21.3	31.1	55.2	24.1
0.201	9.8	22.2	32.0	53.6	21.6

Remark: Test Result= Reading + Cable Loss

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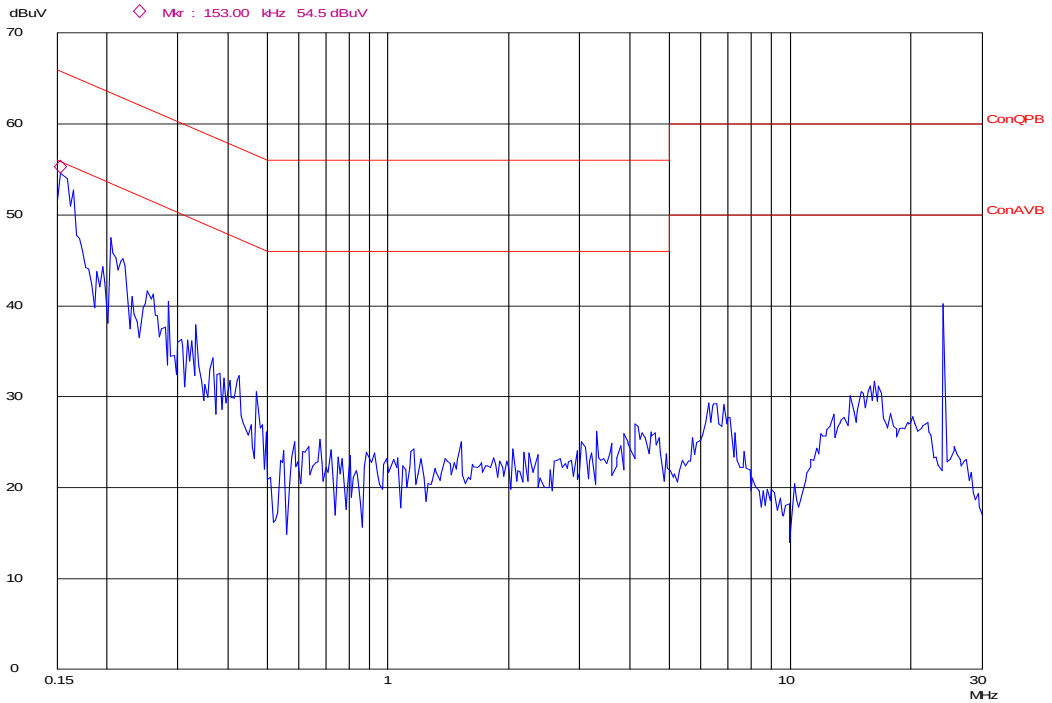
Conducted Emission

Conducted Disturbance

EUT: M/N:DS-A001
Op Cond: Communication
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	39.6	49.4	66	16.6
0.174	9.8	33.9	43.7	64.8	21.1
0.231	9.8	24.2	34.0	62.4	28.4

Frequency MHz	Cable Loss dB	Reading dBµV	AV Test result dBµV	AV Limit dBµV	Margin dB
0.150	9.8	24.2	34.0	56	22
0.174	9.8	8.6	18.4	54.8	36.4
0.231	9.8	1.1	10.9	52.4	41.5

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

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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

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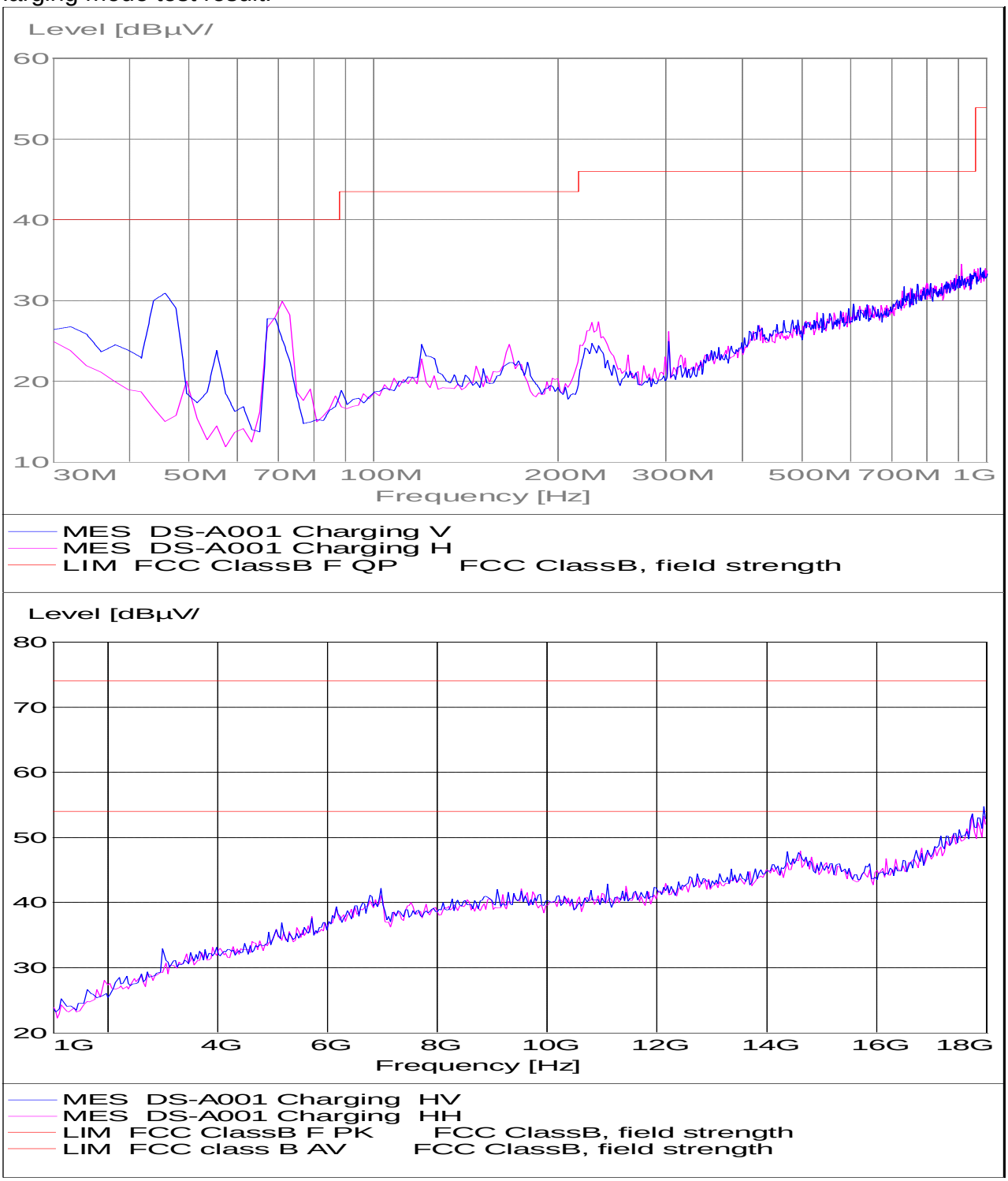
Radiated Emission

Charging mode test result:



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Radiated Emission

Charging mode test result:

Frequency MHz	Cable Loss dB	Antenna Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBµV/m	Detector	Result
30.01	0.9	18.8	5.2	24.9	Horizontal	40.0	QP	Pass
70.821	1.4	7.5	21.0	29.9	Horizontal	40.0	QP	Pass
226.332	2.6	11.0	13.8	27.4	Horizontal	46.0	QP	Pass
31.943	0.9	18.8	7.1	26.8	Vertical	40.0	QP	Pass
45.551	1.2	10.5	19.2	30.9	Vertical	40.0	QP	Pass
66.433	1.4	6.8	19.6	27.8	Vertical	40.0	QP	Pass

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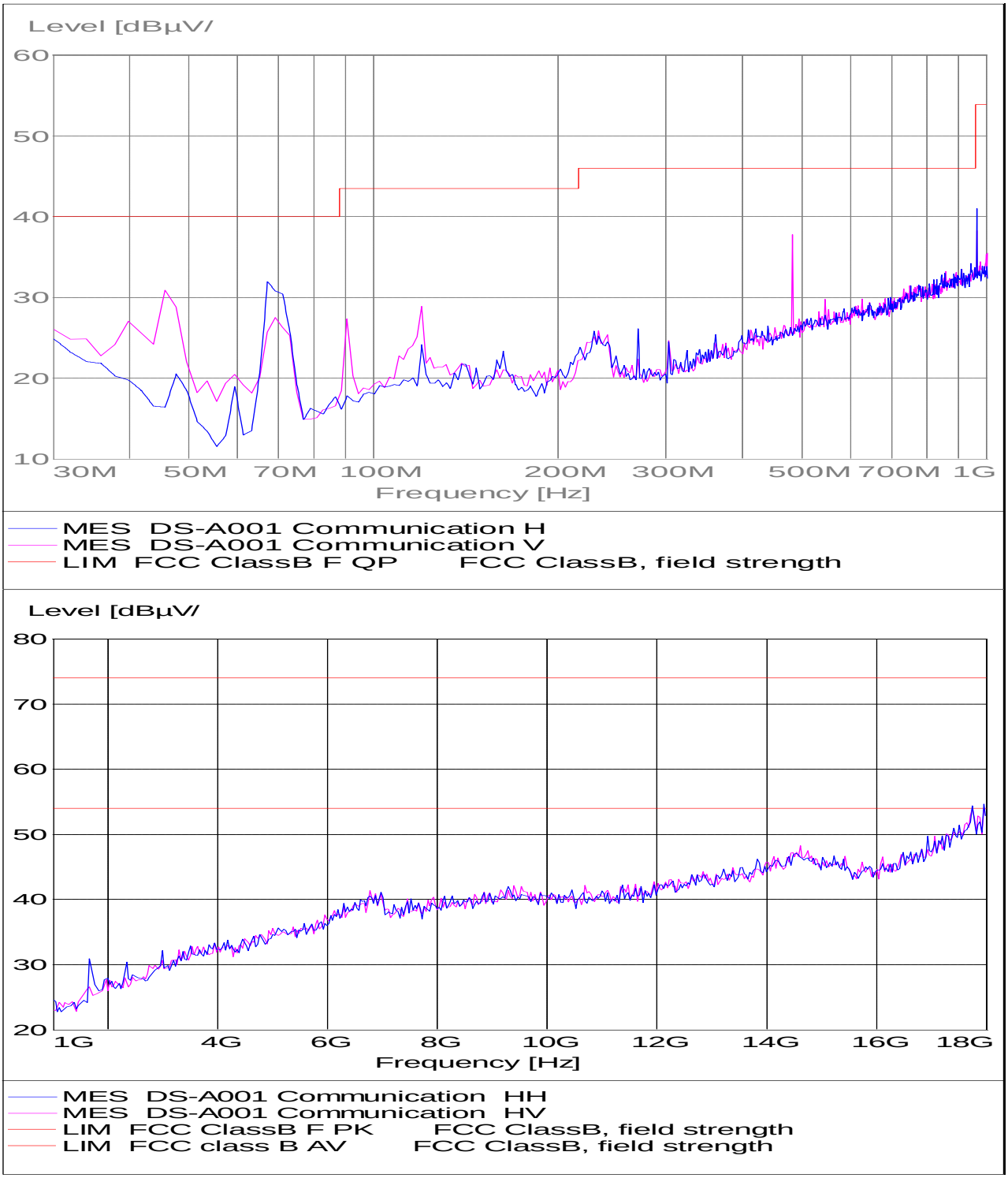
Radiated Emission

Communication mode test result:



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Radiated Emission

Communication mode test result:

Frequency MHz	Cable Loss dB	Antenna Factor dB/m	Reading dBuV	Emission Level dBuV/m	Polarization	Limit dBµV/m	Detector	Result
66.933	1.4	6.8	22.7	30.9	Vertical	40.0	QP	Pass
119.418	1.9	12.7	14.3	28.9	Vertical	43.5	QP	Pass
269.098	2.8	13.2	19.1	35.1	Horizontal	46.0	QP	Pass
45.551	1.2	10.5	20.1	31.8	Horizontal	40.0	QP	Pass
119.418	1.9	12.7	9.6	24.2	Horizontal	43.5	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

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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 (dBμV/m)	U=4.6dB (30MHz-25GHz)
CE	Disturbance Voltage (dBμV)	U=3.3dB

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