



Product Service

FCC - TEST REPORT

Report Number : **68.760.12.033.01** Date of Issue: 18 August 2012

Model : **KT400**

Product Type : Vehicle ECU Diagnosis

Applicant : Bosch Automotive Diagnostics Equipment (Shenzhen) Limited

Address : 5/F,A, Gardon City Cyber Port, Nanhai Road No.1079,
Nanshan District, Shenzhen 518067 P.R. China

Production Facility : Bosch Automotive Diagnostics Equipment (Shenzhen) Limited

Address : 5/F,A, Gardon City Cyber Port, Nanhai Road No.1079,
Nanshan District, Shenzhen 518067 P.R. China

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

Total pages including
Appendices : 34

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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
6th Floor, H Hall,
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: Shenzhen Academy of Metrology & Quality Inspection
Longzhu road,
Nan Shan,
Shenzhen 518055, Guangdong, China

Telephone: 86 755 2694 1723

Fax: 86 755 2694 1545

3 Description of the Equipment Under Test

Description of the Equipment Under Test

Product: Vehicle ECU Diagnosis

Model no.: KT400

Brand Name: BOSCH

Options and accessories: NIL

Rating: 7-32VDC
Charged by external adapter FJ-SW1402800T:
Adaptor Input: 100-240VAC, 50/60Hz, 1.5A Max
Adaptor Output: 14VDC, 2800mA
or charged by Lead-acid battery power sources used on vehicles

Description of the EUT: NIL

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenovo	T61	-
Engine	IMSEOER	ME797	-

4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart B, 10-1-2011 Edition	Unintentional Radiators

5 Summary of Test Results

Emission Tests					
FCC Part 15 Subpart B					
Test Condition	Pages	Test Result			Test Site
		Pass	Fail	N/A	
Radiated Emission 30MHz to 6000MHz	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site 2
Conducted Emission on AC 150kHz to 30MHz	25	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Site 2



Product Service

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: WSO-KT400 complies with Section 15.107, 15.109 of the FCC Part 15, Subpart B Rules.

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: 19 June 2012

Testing Start Date: 20 June 2012

Testing End Date: 3 July 2012

- Jiangsu TÜV Product Service Ltd. – Shenzhen Branch -

Reviewed by:

Prepared by:

Tested by:

Ken Li
EMC Project Manager

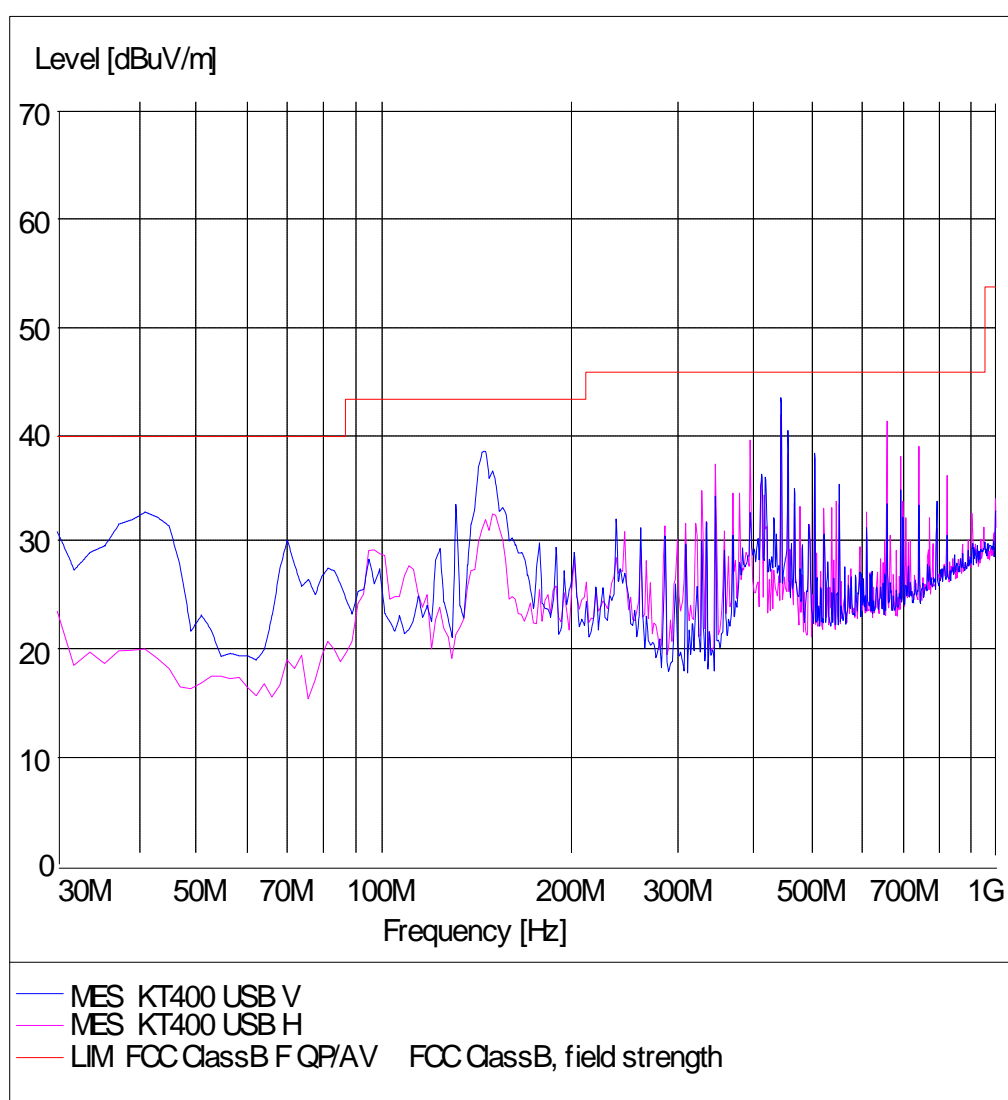
Cookies Bu
EMC Project Engineer

Eric Gao
EMC Test Engineer

7 Emission Test Results

7.1 Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Data transmitting via USB port
Test Spec: Vertical and horizontal, 30MHz-1GHz
Comment: AC 120V/60Hz





Product Service

Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Data transmitting via USB port

Test Specification : Horizontal and Vertical, 30MHz-1GHz

Model No : KT400

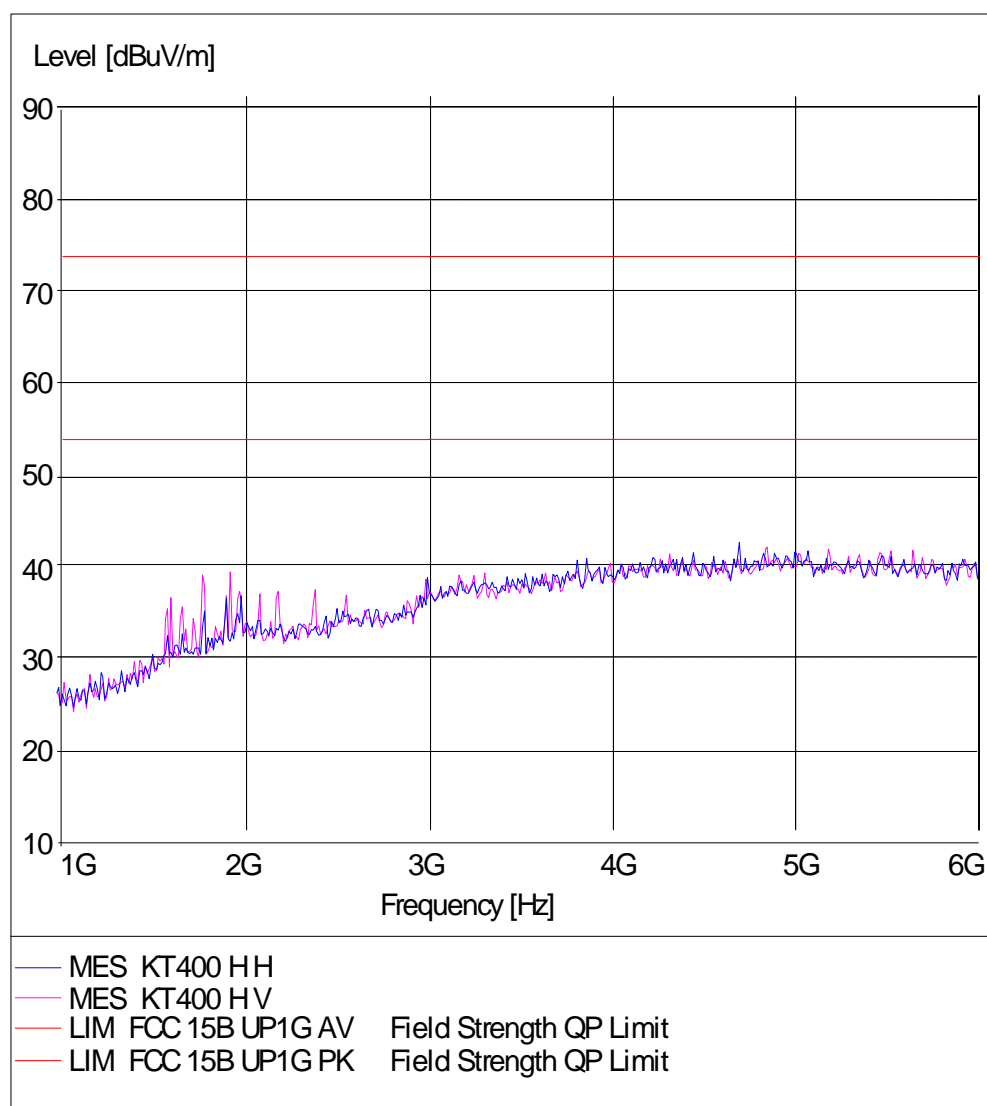
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
447.426	44.0	46.0	2.0
665.651	41.5	46.0	4.5

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
41.664	31.9	40.0	8.1
148.577	36.9	43.5	6.6

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Data transmitting via USB port
Test Spec: Vertical and horizontal, above 1GHz
Comment: AC 120V/60Hz





Product Service

Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Data transmitting via USB port

Test Specification : Horizontal and Vertical, above 1GHz

Model No : KT400

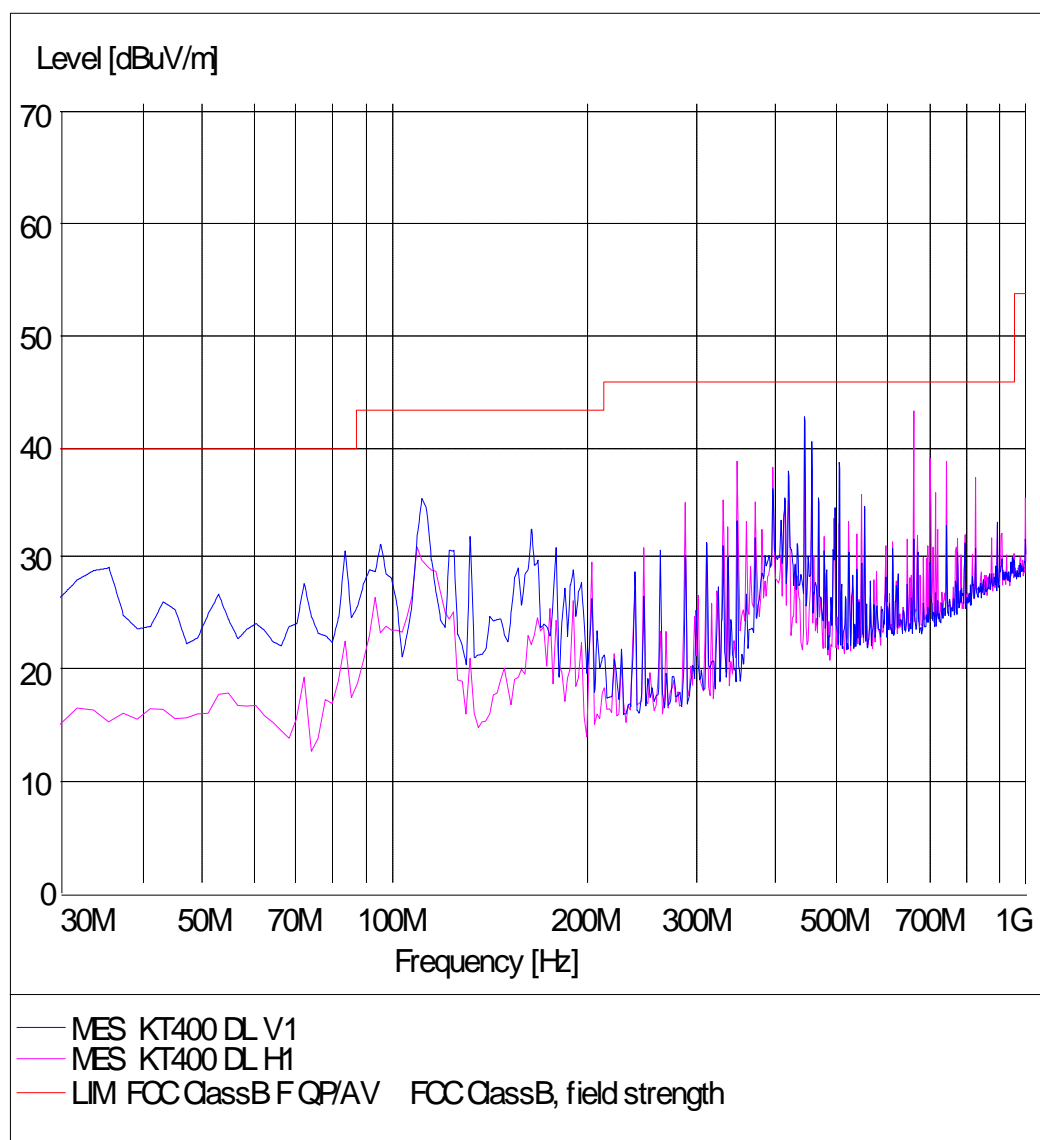
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Data transmitting via USB port
Test Spec: Vertical and horizontal, 30MHz-1GHz
Comment: DC 12V



Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012
 Test requirement : FCC Part 15 Subpart B
 Test method : FCC Part 15 Subpart B
 Operating mode : Data transmitting via USB port
 Test Specification : Horizontal and Vertical, 30MHz-1GHz
 Model No : KT400

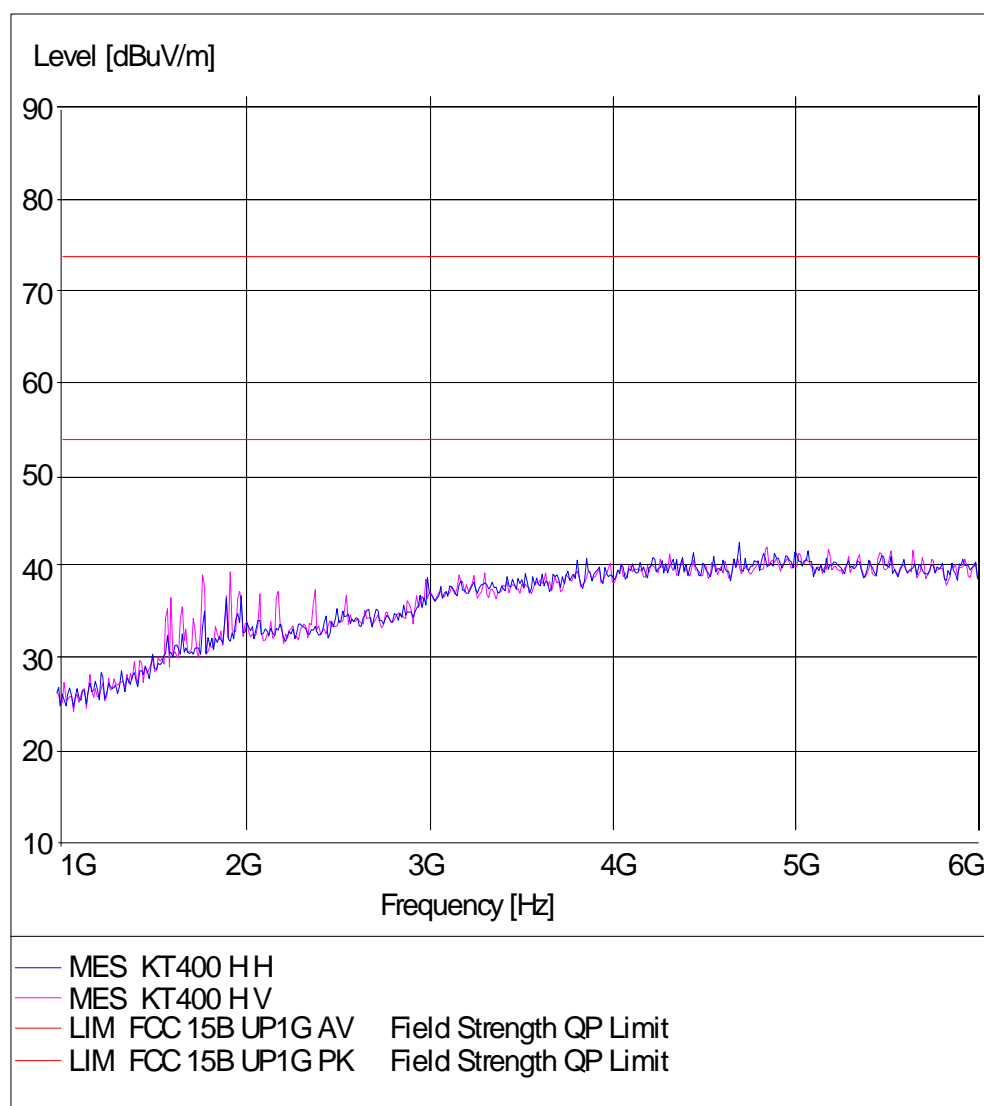
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
113.587	31.2	43.5	12.3
665.05	43.1	46.0	2.9
447.935	41.2	46.0	4.8

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
111.643	33.9	43.5	9.6
447.93	44.2	46.0	1.8

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Data transmitting via USB port
Test Spec: Vertical and horizontal, above 1GHz
Comment: DC12V





Product Service

Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Data transmitting via USB port

Test Specification : Horizontal and Vertical, above 1GHz

Model No : KT400

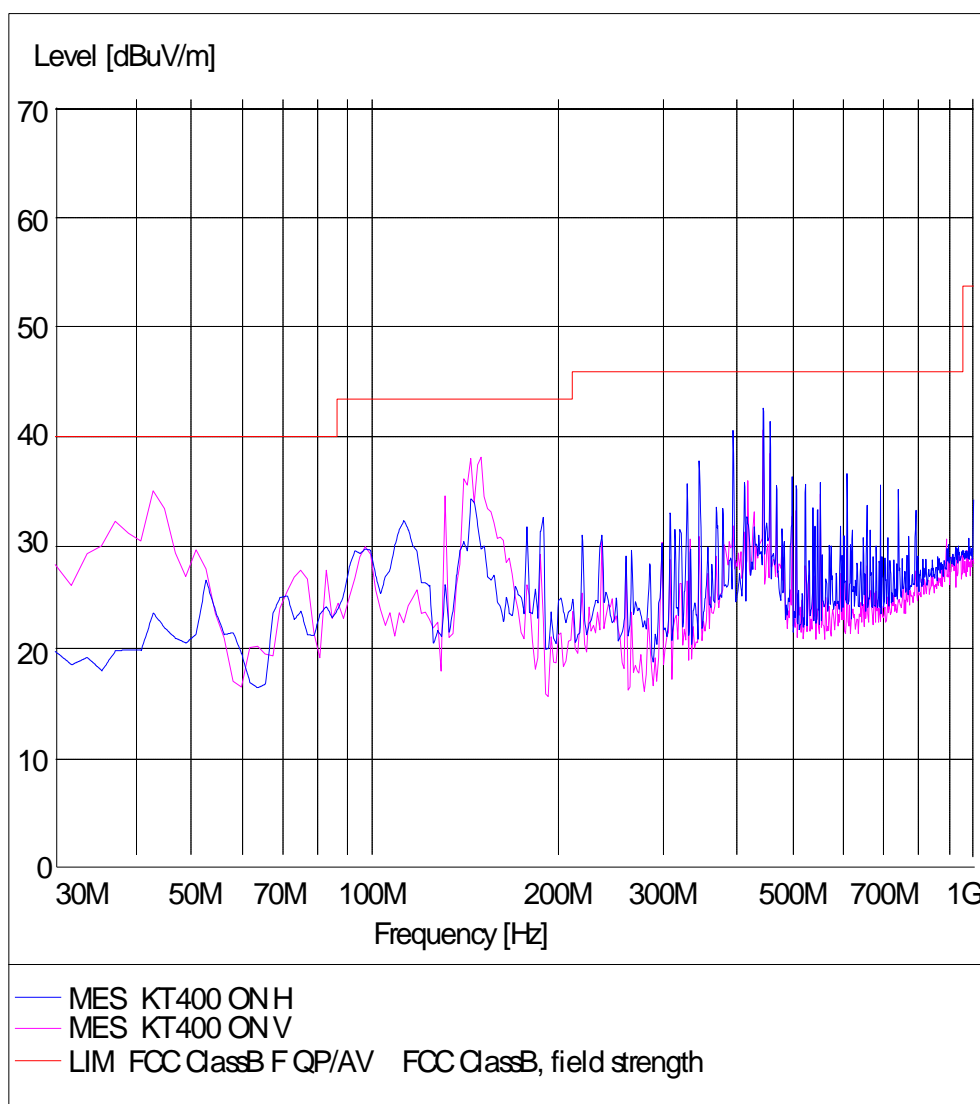
Test Result	
<input checked="checked" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Diagnostic mode
Test Spec: Vertical and horizontal
Comment: AC 120V/60Hz





Product Service

Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Diagnostic mode

Test Specification : Horizontal and Vertical, 30MHz-1GHz

Model No : KT400

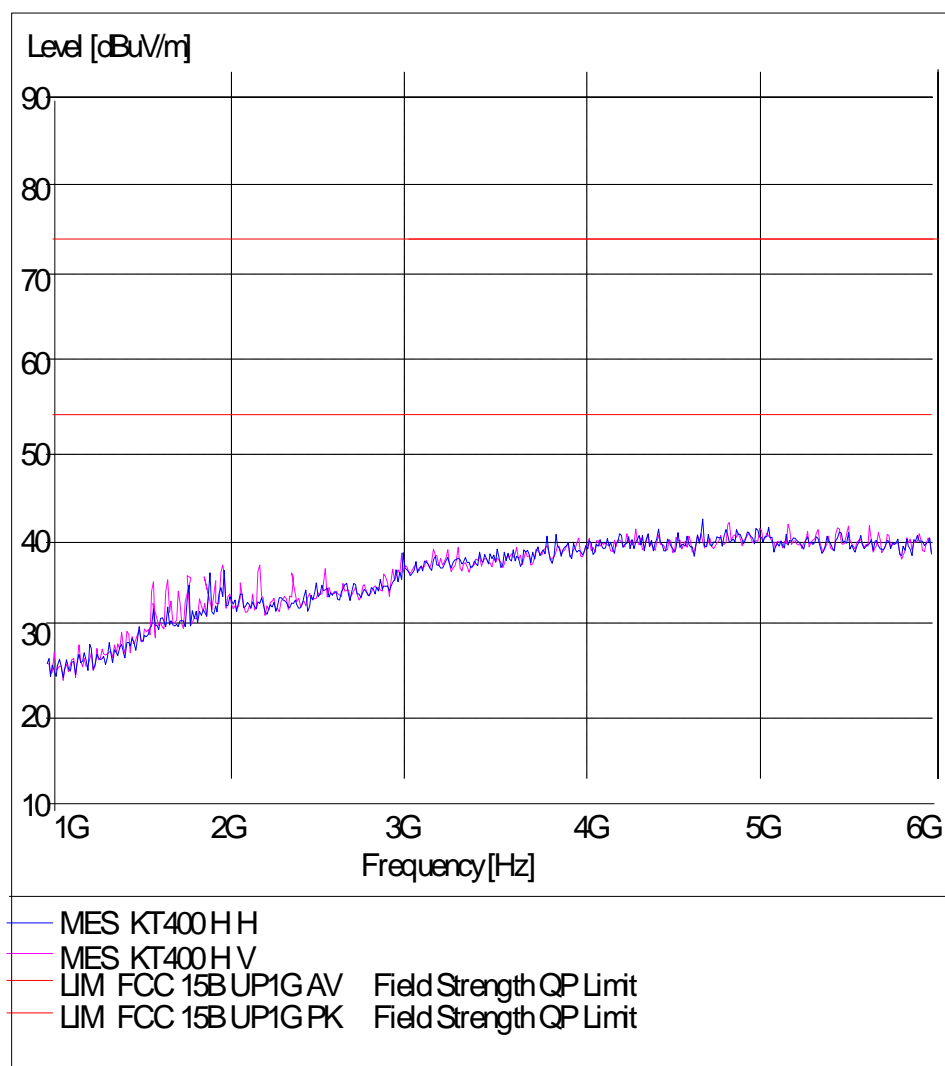
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
146.661	32.7	43.5	10.8
447.41	43.6	46.0	2.4

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
43.607	32.4	40.0	7.6
152.464	36.8	43.5	6.7

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Diagnostic mode
Test Spec: Vertical and horizontal, above 1GHz
Comment: AC 120V/60Hz





Product Service

Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Diagnostic mode

Test Specification : Horizontal and Vertical, above 1GHz

Model No : KT400

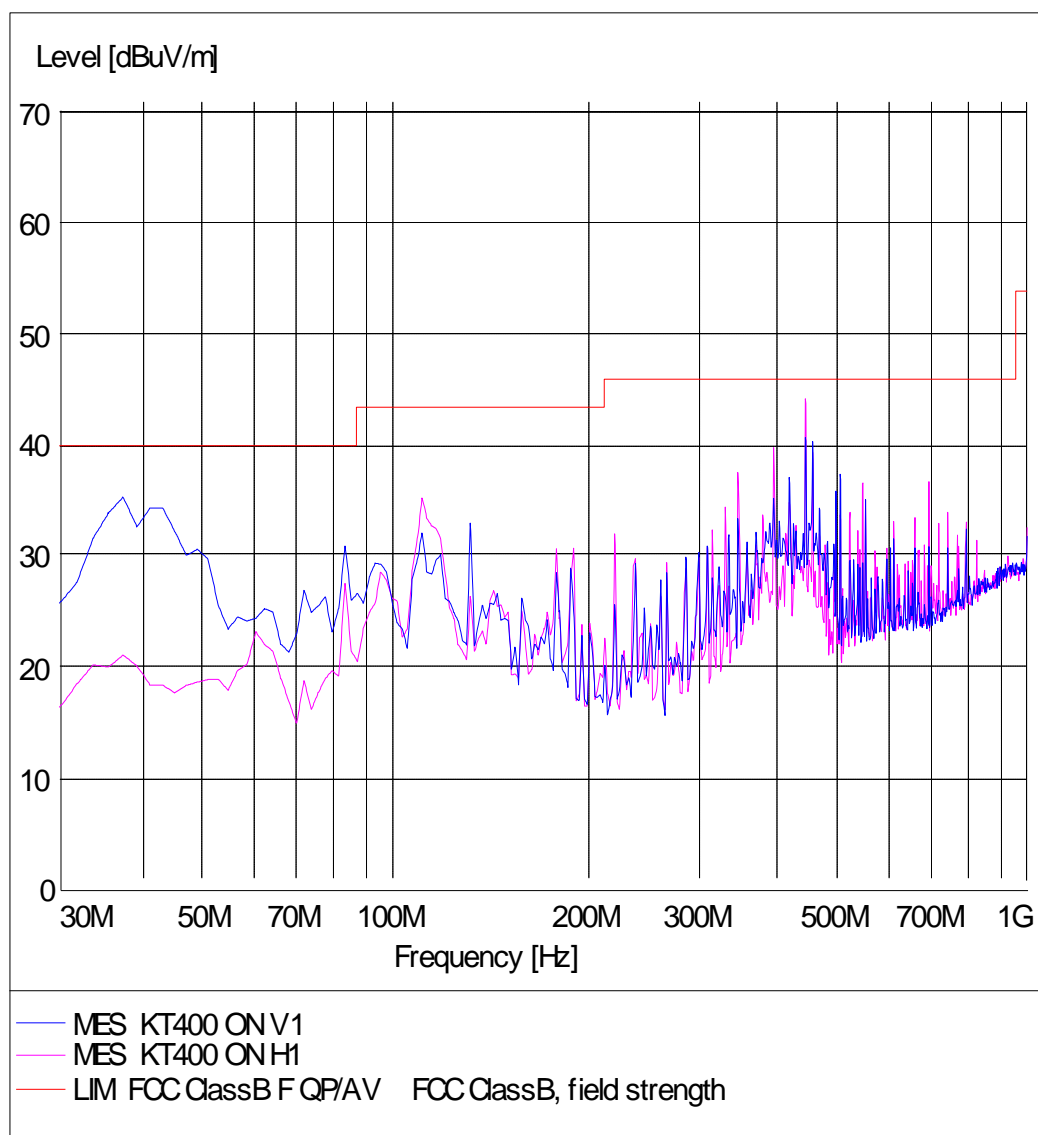
Test Result	
<input checked="checked" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Diagnostic mode
Test Spec: Vertical and horizontal
Comment: DC12V



Radiated Emission Test 30MHz – 6000MHz

Date of test : 3July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Diagnostic mode

Test Specification : Horizontal and Vertical

Model No : KT400

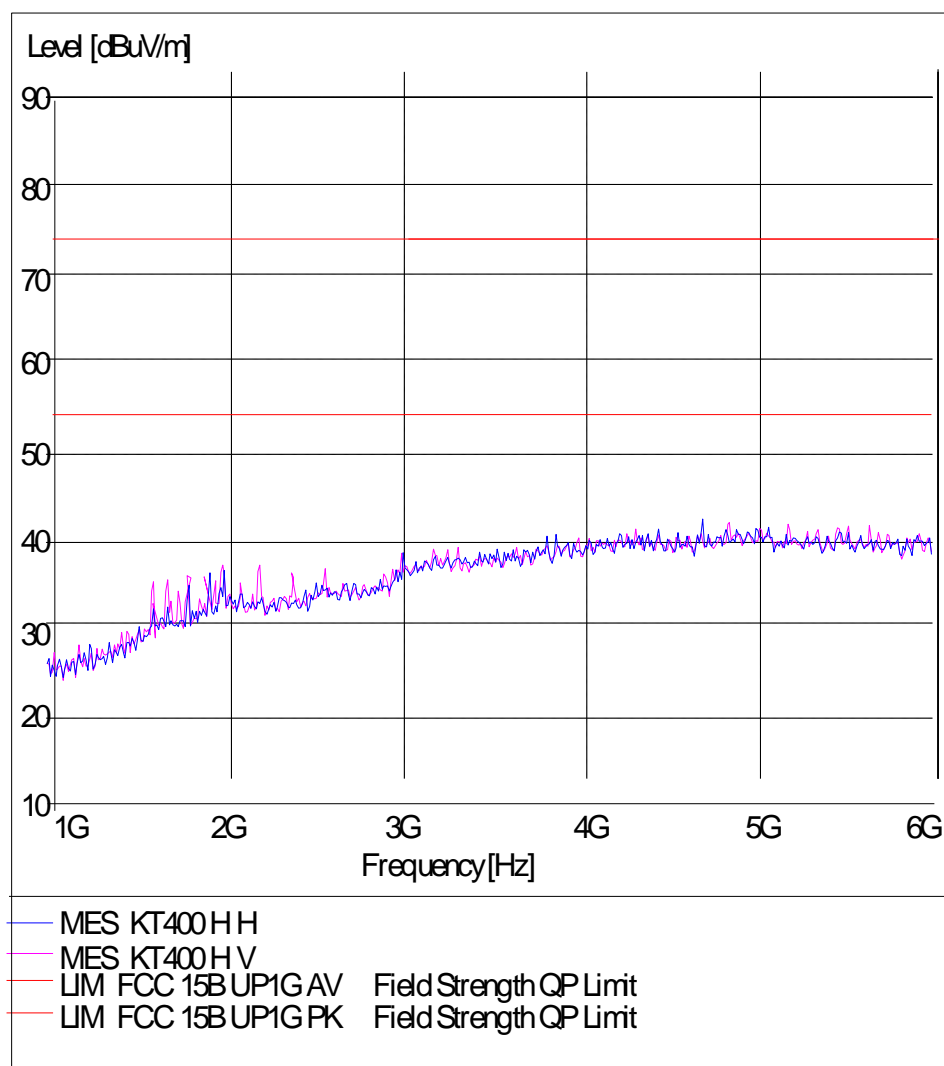
Test Result	
<input checked="checked" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
111.643	35.4	43.5	8.1
447.41	44.5	46.0	1.5

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
37.775	34.6	40.0	5.4

Radiated Emission Test 30MHz – 6000MHz

EUT: KT400
Op Cond: Diagnostic mode
Test Spec: Vertical and horizontal, above 1GHz
Comment: DC 12V





Product Service

Radiated Emission Test 30MHz – 6000MHz

Date of test : 3 July 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Diagnostic mode

Test Specification : Horizontal and Vertical, above 1GHz

Model No : KT400

Test Result	
<input checked="checked" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	Horizontal dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

Frequency MHz	Vertical dB μ V/m	Limit dB μ V/m	Margin dB
/	/	/	/

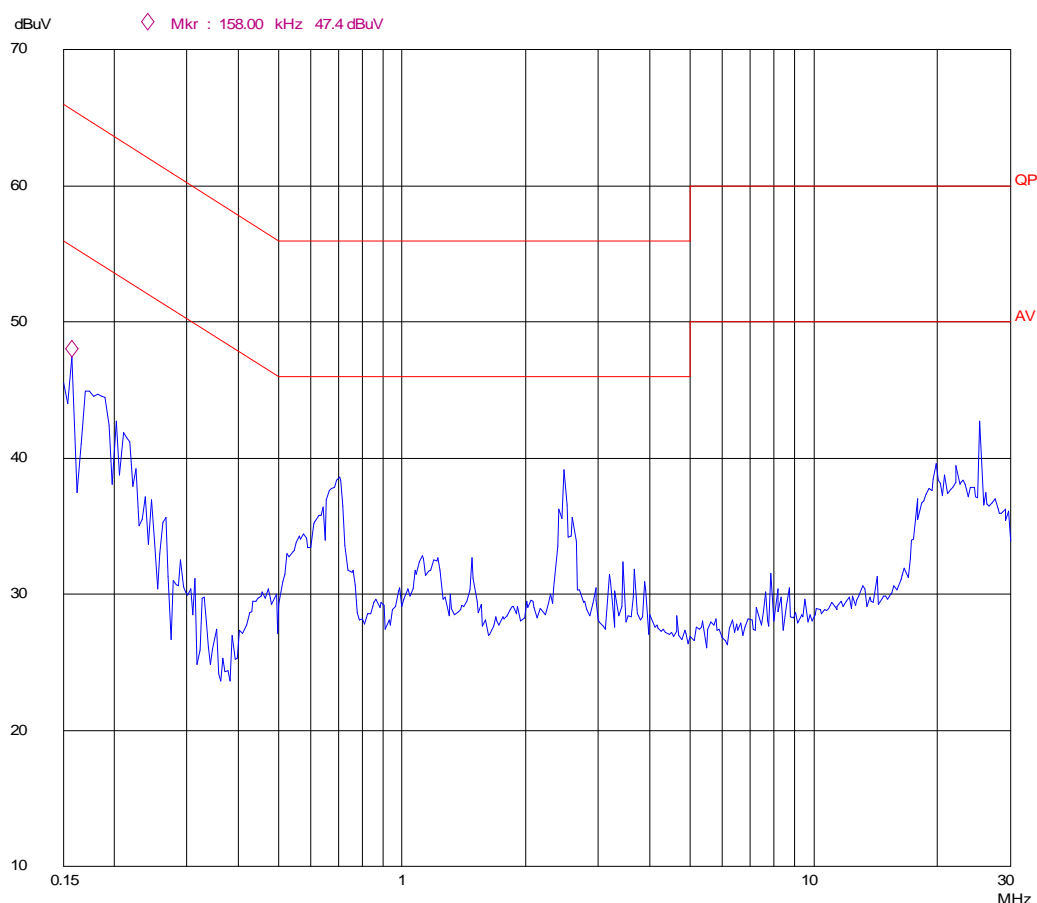
Test Equipment List

Radiated Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESI26	838786/013	2013-01-20
Bilog Antenna	Chase	CBL6112B	2591	2013-01-20
Horn Antenna	Rohde & Schwarz	HF906	100014	2013-01-20
3m Semi-anechoic chamber	Albatross Project	9X6X6	----	2012-10-09

7.2 Conducted Emission Test 150kHz – 30MHz

EUT: KT400
Op Cond: Data transmitting via USB port
Test Spec: Power line, Live
Comment: AC 120V/60Hz



Conducted Emission Test 150kHz – 30MHz

Date of test : 20 June 2012
 Test requirement : FCC Part 15 Subpart B
 Test method : FCC Part 15 Subpart B
 Operating mode : Data transmitting via USB port
 Tested on : Power Line, Live
 Model No : KT400

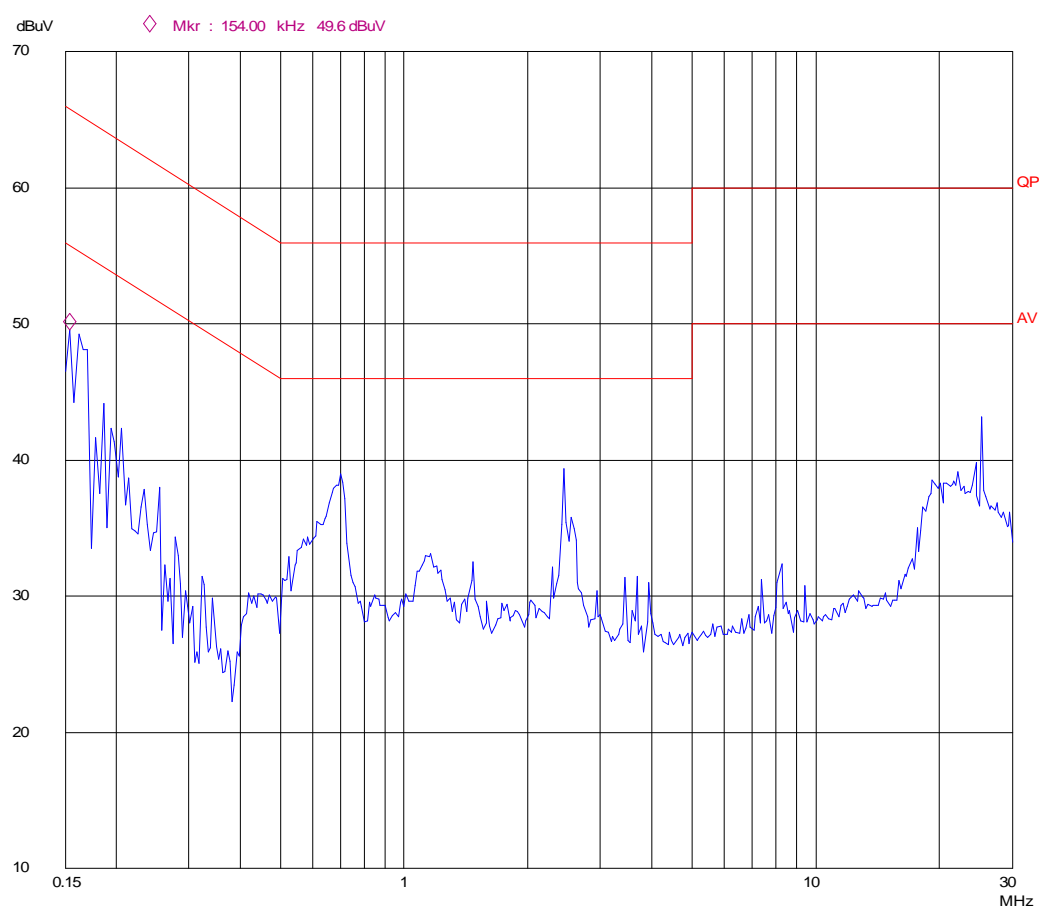
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	QP Test result dBμV	QP Limit dBμV	Margin dB
/	/	/	/

Frequency MHz	AV Test result dBμV	AV Limit dBμV	Margin dB
/	/	/	/

Conducted Emission Test 150kHz – 30MHz

EUT: KT400
Op Cond: Data transmitting via USB port
Test Spec: Power line, Neutral
Comment: AC 120V/60Hz





Product Service

Conducted Emission Test 150kHz – 30MHz

Date of test : 20 June 2012
Test requirement : FCC Part 15 Subpart B
Test method : FCC Part 15 Subpart B
Operating mode : Data transmitting via USB port
Tested on : Power Line, Neutral
Model No : KT400

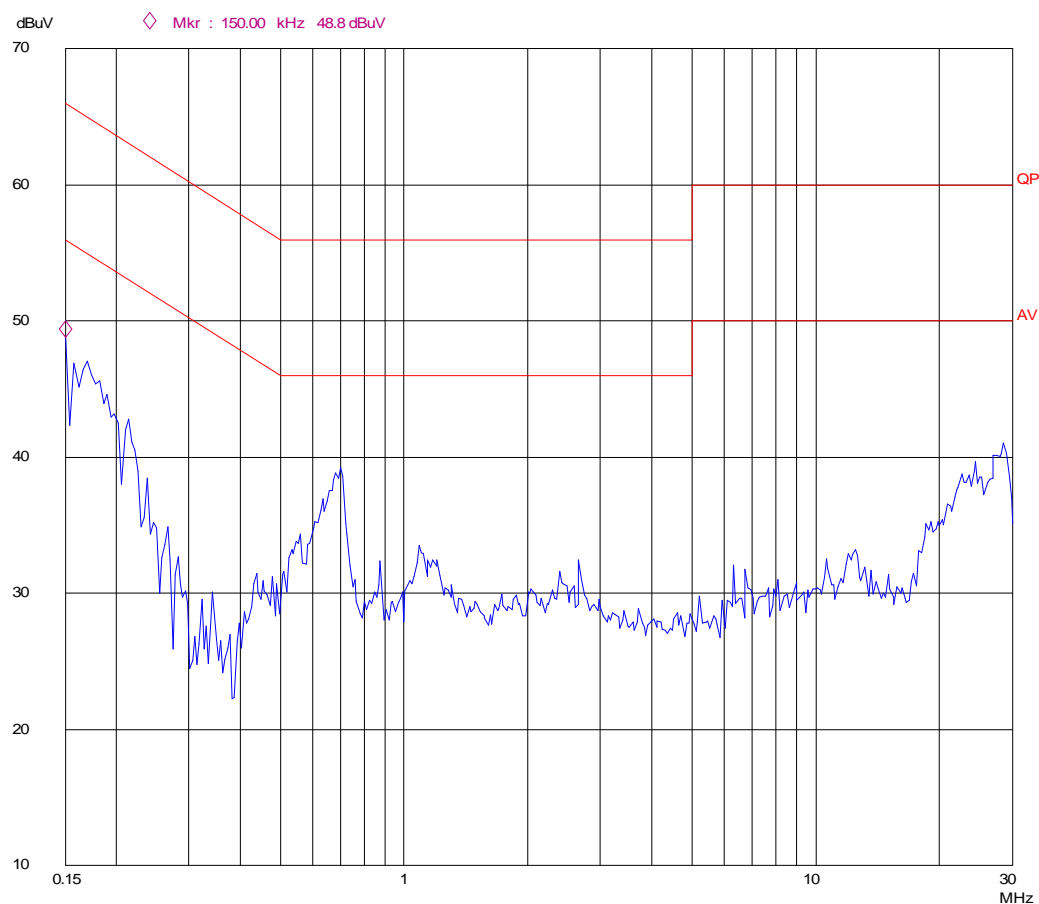
Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	QP Test result dB μ V	QP Limit dB μ V	Margin dB
/	/	/	/

Frequency MHz	AV Test result dB μ V	AV Limit dB μ V	Margin dB
/	/	/	/

Conducted Emission Test 150kHz – 30MHz

EUT: KT400
Op Cond: Diagnostic mode
Test Spec: Power line, Live
Comment: AC 120V/60Hz



Conducted Emission Test 150kHz – 30MHz

Date of test : 20 June 2012

Test requirement : FCC Part 15 Subpart B

Test method : FCC Part 15 Subpart B

Operating mode : Diagnostic mode

Tested on : Power Line, Live

Model No : KT400

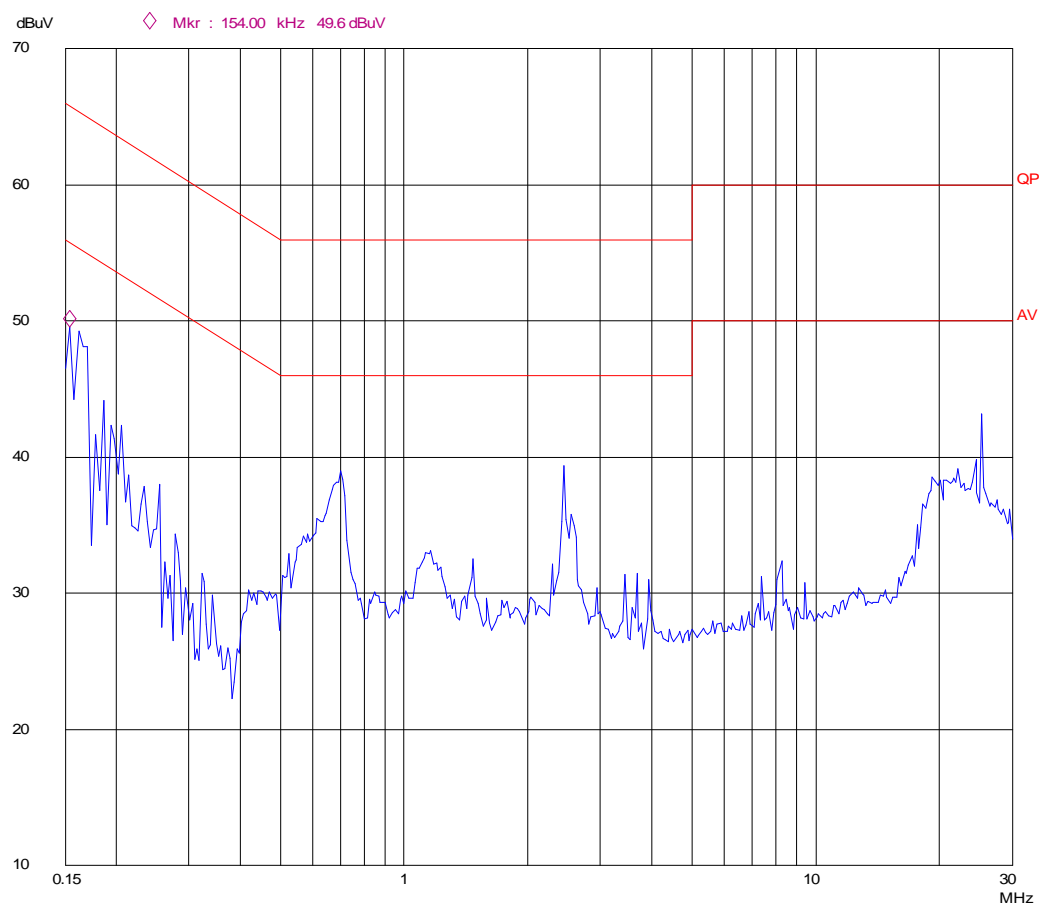
Test Result	
<input checked="checked" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	QP Test result dB μ V	QP Limit dB μ V	Margin dB
/	/	/	/

Frequency MHz	AV Test result dB μ V	AV Limit dB μ V	Margin dB
/	/	/	/

Conducted Emission Test 150kHz – 30MHz

EUT: KT400
Op Cond: Diagnostic mode
Test Spec: Power line, Neutral
Comment: AC 120V/60Hz





Product Service

Conducted Emission Test 150kHz – 30MHz

Date of test : 20 June 2012
Test requirement : FCC Part 15 Subpart B
Test method : FCC Part 15 Subpart B
Operating mode : Diagnostic mode
Tested on : Power Line, Neutral
Model No : KT400

Test Result	
<input checked="" type="checkbox"/>	Passed
<input type="checkbox"/>	Not Passed

Frequency MHz	QP Test result dB μ V	QP Limit dB μ V	Margin dB
/	/	/	/

Frequency MHz	AV Test result dB μ V	AV Limit dB μ V	Margin dB
/	/	/	/

Test Equipment List

Conducted Emission Test

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESCS30	100003	2013-01-20
AMN	Rohde & Schwarz	ESH3-Z5	100229	2013-01-20
AMN	Rohde & Schwarz	ENV216	100042	2013-01-20

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=4.60dB (30MHz-25GHz)
CE	Disturbance Voltage (dB μ V)	U=3.50dB(150KHz-30MHz)