

EMC TEST REPORT

**FCC 47 CFR Part 15B
Industry Canada RSS-Gen**

Electromagnetic compatibility - Unintentional radiators

Report Reference No. : G0M-1105-1155 – C-1

Testing Laboratory : Eurofins Product Service GmbH

Address : Storkower Str. 38c
15526 Reichenwalde
Germany

Accreditation : FCC Filed Test Laboratory, Reg.-No.: 96970
A2LA Accredited Testing Laboratory, Certificate No.: 1983.01



Applicant's name : Hughes Telematics, Inc.

Address : 2002 Summit Blvd, Suite 1800
GA 30319 Atlanta, Georgia
USA

Test specification:

Standard..... : 47 CFR Part 15 Subpart B
RSS-Gen, Issue 3, 2010-12
ANSI C63.4:2009

Equipment under test (EUT):

Product description : Telematics Unit

Model No. : AT-100

Hardware version : Rev A

Firmware / Software version : 2.0.0

Contains : FCC-ID: ZOQAT-100 IC: 9734A-AT100

Test result : **Passed**

Possible test case verdicts:

- not applicable to test object: N/A
- test object does meet the requirement.....: P (Pass)
- test object does not meet the requirement.....: F (Fail)

Testing:

Date of receipt of test item: 14.06.2011

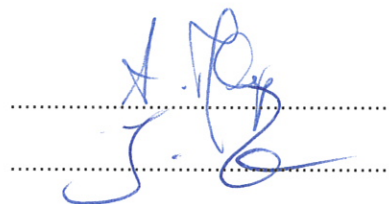
Date (s) of performance of tests: 15.06.2011

Tested by (+ signature).....: Andreas Pflug

Approved by (+ signature): Jens Zimmermann

Date of issue: 26.08.2011

Total number of pages.....: 16


General remarks:

The test results presented in this report relate only to the object tested.

The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Additional comments:

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1 Equipment (Test item) Description:

Description	Telematics Unit
Model	AT-100
Serial number	without
Hardware version	Rev A
Software / Firmware version	2.0.0
Contains FCC-ID	ZOQAT-100
Contains IC	9734A-AT100
Power supply	13.5VDC
AC/DC-Adaptor	None
Highest emission frequency	1.705MHz - 108MHz (up to 1GHz)
Device classification	Class B
Equipment type	Tabletop
Number of tested samples	1

1.2 Supporting Equipment Used During Testing:

Product Type*	Device	Manufacturer	Model No.	Comments
Cable	CAN Bus cable			
AE	companion device	Hughes	AT650	for active CAN Bus connection

***Note:** Use the following abbreviations:

AE : Auxiliary/Associated Equipment, or

SIM : Simulator (Not Subjected to Test)

CABL : Connecting cables

1.3 Operating Modes:

Mode #	Description
1	Active data link between Bluetooth tester and EUT and active GPRS communication link between GSM communication tester and EUT. Data transmission between both communication testers via EUT and receive quality check. EUT controlled via CAN-bus

1.4 Test Equipment Used During Testing

Radiated emissions					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Biconical Antenna	R&S	HK 116	Inv. No. 0012	Jan 10	Jan 13
LPD-Antenne	R&S	HL 223	Inv. No. 0295	Feb 11	Feb 13
LPD-Antenna	R&S	HL 025	Inv. No. 0512	Feb 10	Feb 13
EMI Test Receiver	R&S	ESU8	Inv. No. 0567	Dec 10	Dec 11
EMI Test Receiver	R&S	ESCS30	Inv. No. 0474	Jun 11	Jun 12

2 Result Summary

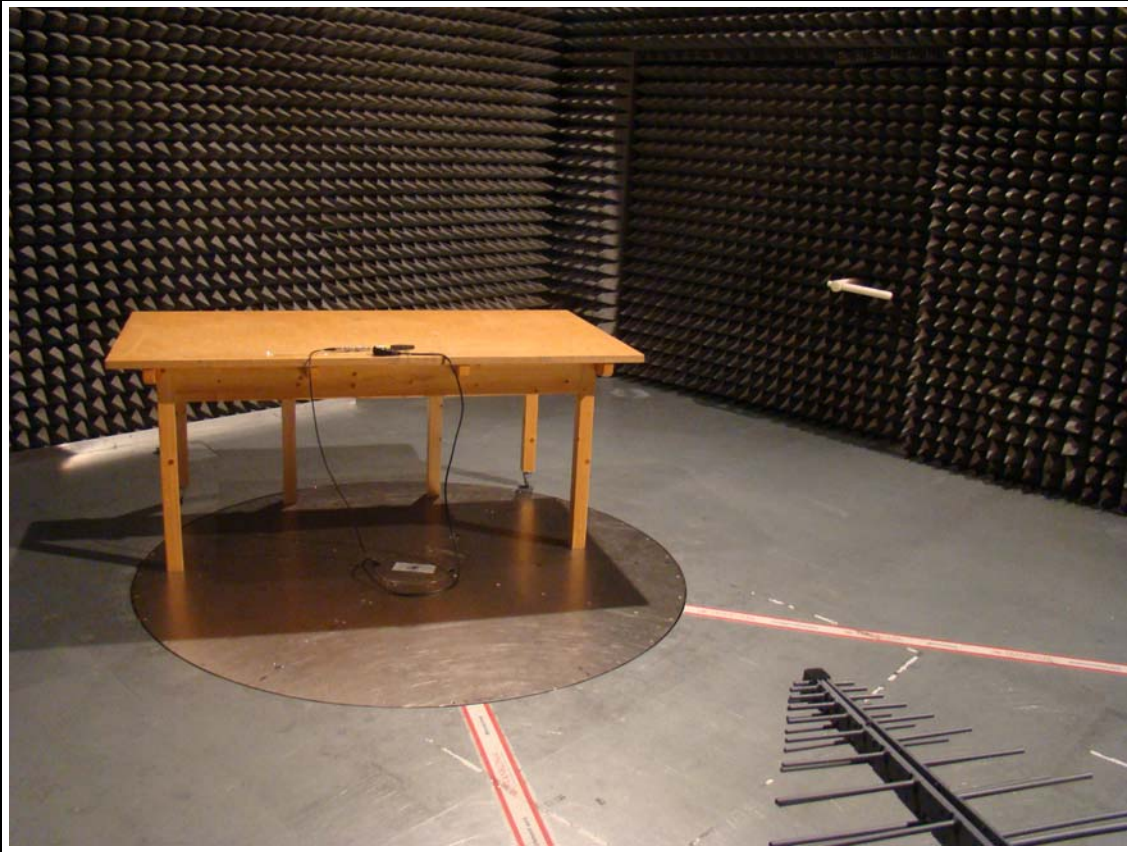
FCC 47 CFR Part 15B, Industry Canada RSS-Gen				
Product Specific Standard	Requirement – Test	Reference Method	Result	Remarks
47 CFR 15.109 RSS-Gen 4.9 & 4.10	Radiated emissions	ANSI C 63.4	PASS	
47 CFR 15.107 RSS-Gen 7.2.4	AC power line conducted emissions	ANSI C63.4	N/A	
Remarks:				

3 Test Conditions and Results

3.1 Test Conditions and Results – Radiated emissions

Radiated emissions acc. FCC 47 CFR 15.109 / IC RSS-Gen			Verdict: PASS	
Laboratory Parameters:		Required prior to the test		During the test
Ambient Temperature		15 to 35°C		23°C
Relative Humidity		30 to 60%		44%
Test according referenced standards		Reference Method		
		ANSI C63.4		
Sample is tested with respect to the requirements of the equipment class		Equipment class		
		Class B		
Test frequency range determined from highest emission frequency		Highest emission frequency		
		1.705MHz - 108MHz (up to 1GHz)		
Fully configured sample scanned over the following frequency range		Frequency range		
		30MHz to 1GHz		
Limits and results Class B				
Frequency [MHz]	Quasi-Peak [dBµV/m]	Result	Average [dBµV/m]	Result
30 – 88	40	PASS	-	-
88 – 216	43.5	PASS	-	-
216 – 960	46	PASS	-	-
960 – 1000	54	PASS	-	-
> 1000	-	-	54	PASS
Comments:				

Test setup

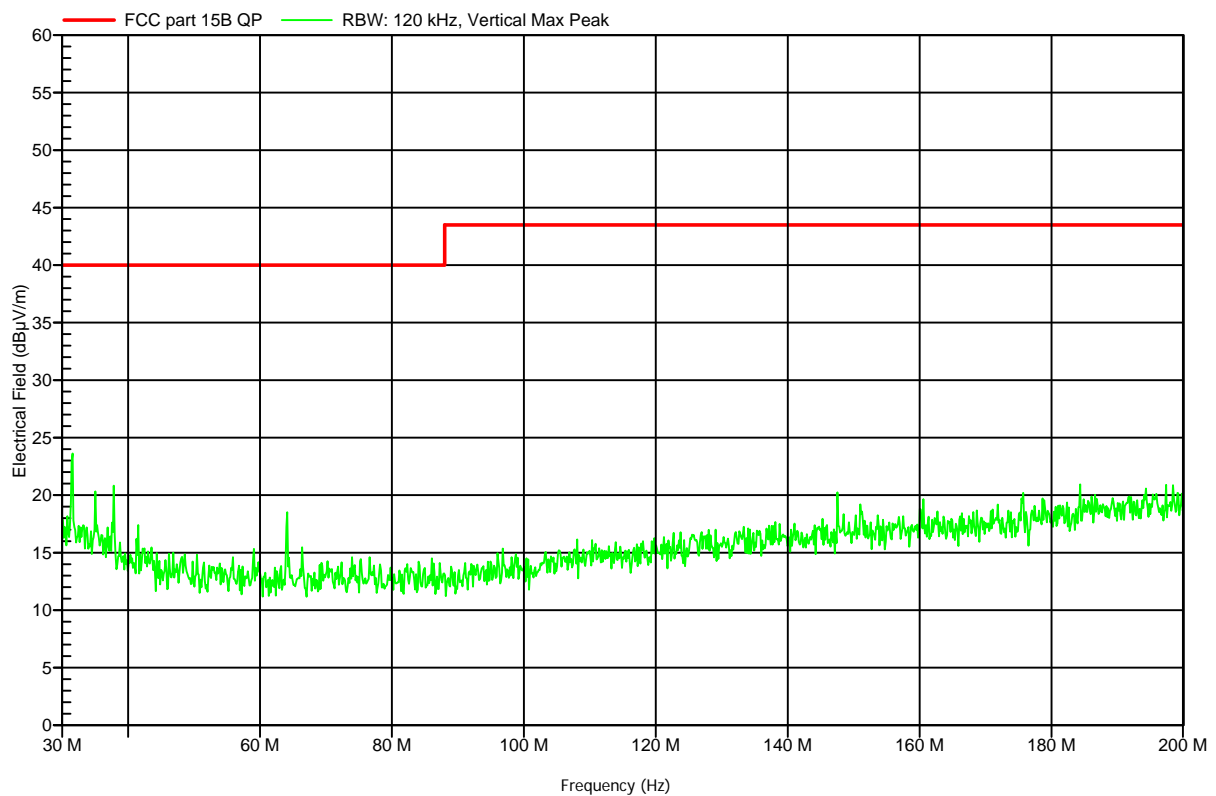


Spurious emissions under normal conditions according to FCC Part 15b

Order number: G0M-1105-1155

Manufacturer: Hughes Telematics, Inc.
 EUT Name: Telematics Unit
 Model: AT-100
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5 VDC
 Antenna: Rohde & Schwarz HK 116, Vertical
 Measurement distance: 3m, converted to 10m
 Mode: channel 188 pl5
 Test Date: 15.06.2011
 Note:

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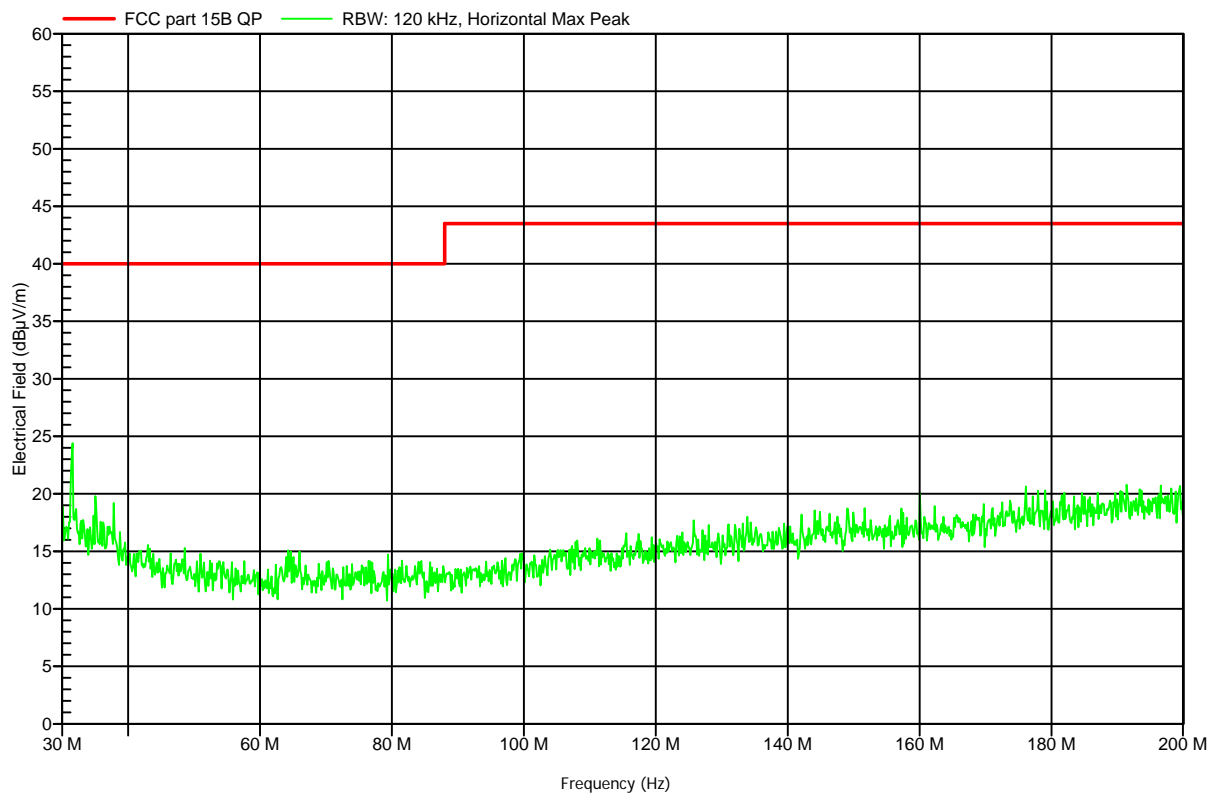
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Order number: G0M-1105-1155

Manufacturer: Hughes Telematics, Inc.
 EUT Name: Telematics Unit
 Model: AT-100
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5 VDC
 Antenna: Rohde & Schwarz HK 116, Horizontal
 Measurement distance: 3m, converted to 10m
 Mode: channel 188 pl5
 Test Date: 15.06.2011
 Note:

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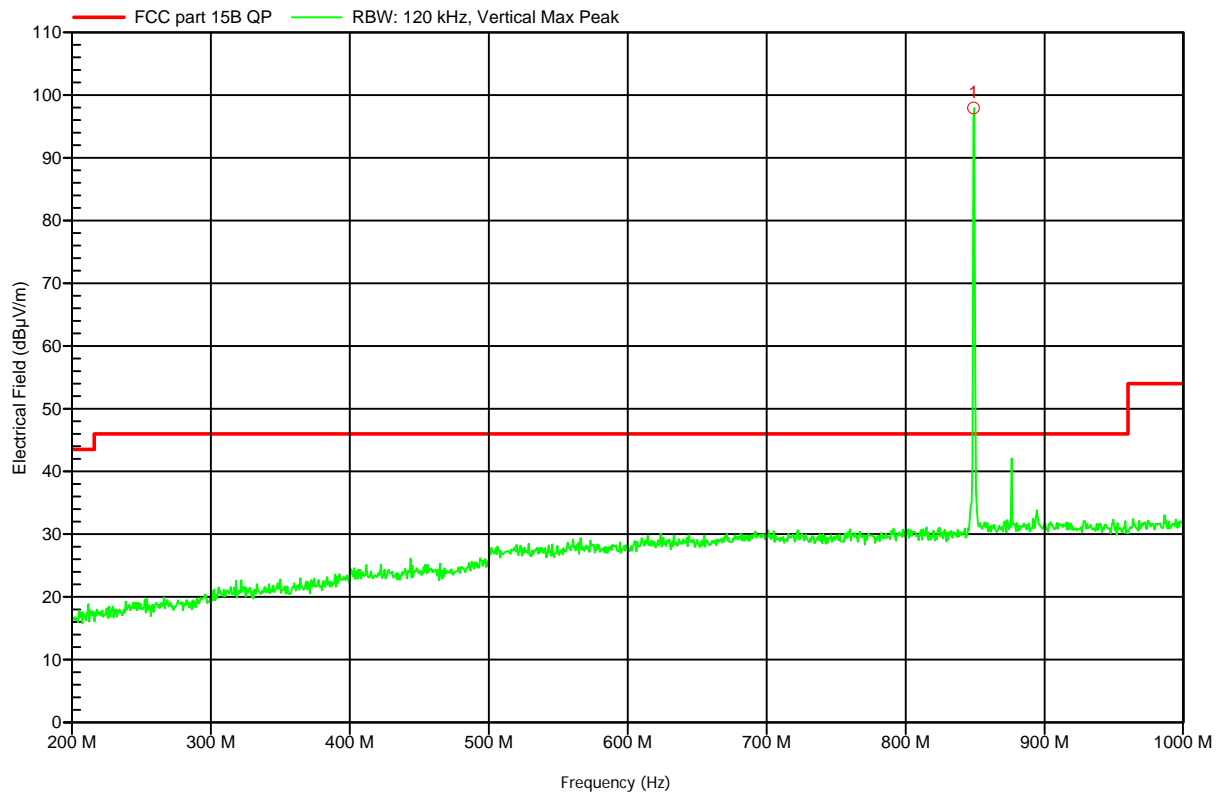
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Order number: G0M-1105-1155

Manufacturer: Hughes Telematics, Inc.
 EUT Name: Telematics Unit
 Model: AT-100
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5 VDC
 Antenna: Rohde & Schwarz HL 223, Vertical
 Measurement distance: 3m, converted to 10m
 Mode: channel 188 pl5
 with notch-filter
 Test Date: 15.06.2011
 Note:

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Frequency
 848.893 MHz channel 188

Test Report No.: G0M-1105-1155-C-1

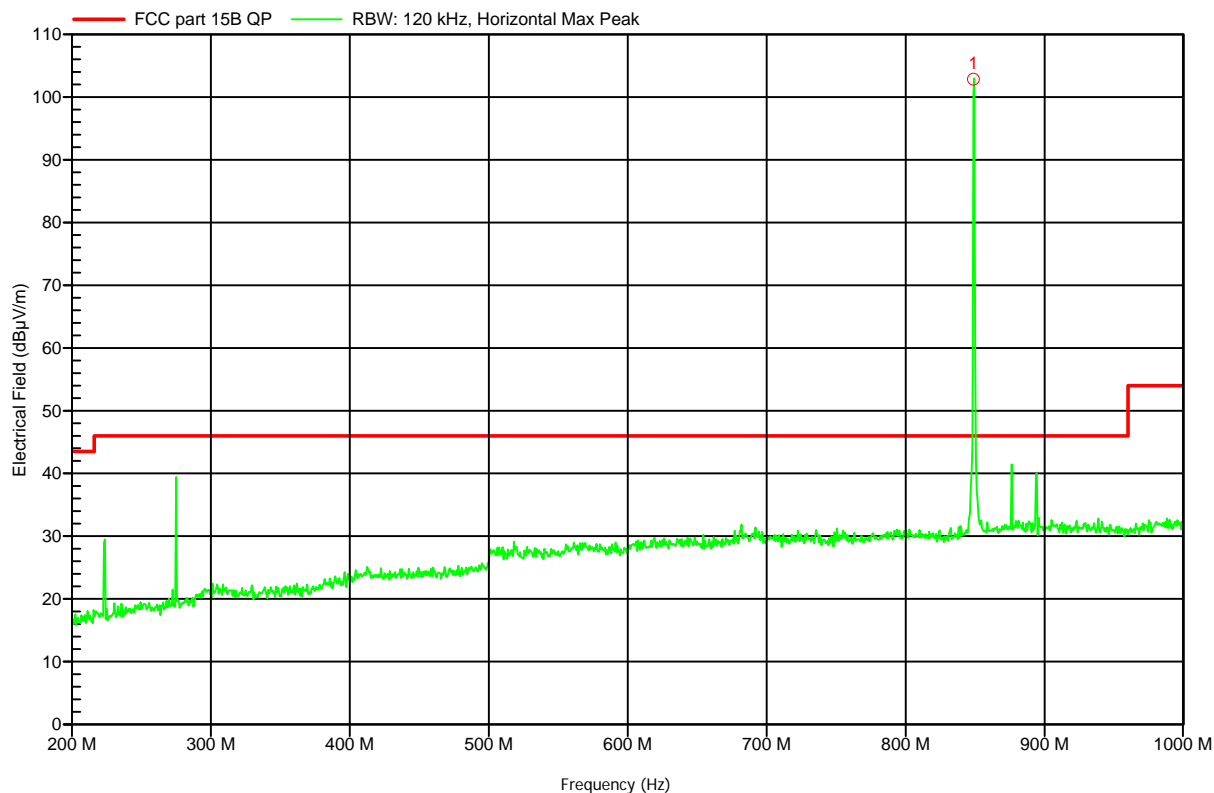
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Spurious emissions under normal conditions according to FCC Part 15b

Order number: G0M-1105-1155

Manufacturer: Hughes Telematics, Inc.
 EUT Name: Telematics Unit
 Model: AT-100
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Pflug
 Test Conditions: Tnom: 23°C, Unom: 13.5 VDC
 Antenna: Rohde & Schwarz HL 223, Horizontal
 Measurement distance: 3m, converted to 10m
 Mode: channel 188 pl5
 with notch-filter
 Test Date: 15.06.2011
 Note:

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Frequency
 848.807 MHz channel 188

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