EUROFINS PRODUCT SERVICE GMBH

TEST-REPORT

FCC PART 15 SUBPART C
IC RSS 210 ISSUE 8

Telematics Unit
AT-100

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

TEST REPORT NUMBER: G0M-1105-1155-P-15

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1 General Information

1.1 Notes

The results of this test report relate exclusively to the item tested as specified in chapter "Description of test item" and are not transferable to any other test items.
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Operator:

Date	Eurofins-Lab.	Name	Signature
26.08.2011		W. Treffke	W. Treffke

Technical responsibility for area of testing:

Date	Eurofins	Name	Signature
26.08.2011		J. Zimmermann	J. Z

1.2 Testing laboratory

EUROFINS PRODUCT SERVICE GMBH
Storkower Strasse 38c
D-15526 Reichenwalde b. Berlin
Germany
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Telefax :+49 33631 888 660

DAKKS ACCREDITED TESTING LABORATORY
DAKKS-REGISTRATION NUMBER: D-PL-12092-01-01

RECOGNIZED NOTIFIED BODY EMC
REGISTRATION NUMBER: BNetzA-bS EMV-07/61

RECOGNIZED NOTIFIED BODY R&TTE
REGISTRATION NUMBER: BNetzA-bS-02/51-53

FCC FILED TEST LABORATORY
REG.-NO. 96970

A2LA ACCREDITED TESTING LABORATORY
CERTIFICATE NO. 1983.01

BLUETOOTH QUALIFICATION TEST FACILITY (BQTF)
ACCREDITED BY BLUETOOTH QUALIFICATION REVIEW BOARD

INDUSTRY CANADA FILED TEST LABORATORY
REG. NO. IC 3470

Test location, where different:

Name	: ./.
Street	: ./.
Town	: ./.
Country	: ./.
Telephone	: ./.
Fax	: ./.

1.3 Details of approval holder

Name	: Hughes Telematics, Inc.
Street	: 2002 Summit Blvd, Suite 1800
Town	: GA 30319 Atlanta, Georgia
Country	: USA
Telephone	: +1 404 573 5848
Fax	: +1 404 285 0648
Contact	: Mr. Bryant Elliott
Telephone	: +1 404 573 5848

Manufacturer:
(if applicable)

Name	: Hughes Telematics, Inc.
Street	: 2002 Summit Blvd, Suite 1800
Town	: GA 30319 Atlanta, Georgia
Country	: USA

1.4 Application details

Date of receipt of application	: 14.06.2011
Date of receipt of test item	: 14.06.2011
Date of test	: 22.06.2011 – 27.06.2011

1.5 Acronyms and abbreviations

EUT	:	Equipment under Test
TX	:	Transmission
RX	:	Reception
RBW	:	Measurement Resolution Bandwidth
Pol	:	Measurement Polarization
e.i.r.p.	:	Equivalent isotropic radiated power
FHSS	:	Frequency hopping spread spectrum
DSSS	:	Direct Sequence Spread Spectrum
OFDM	:	Orthogonal frequency division multiplexing
CCK	:	Complementary code keying
GFSK	:	Gaussian frequency shift keying
DQPSK	:	Differential quadrature phase shift keying
PSK	:	Phase shift keying
T_{nom}	:	Nominal Temperature
T_{min}	:	Minimum Temperature
T_{max}	:	Maximum Temperature
V_{nom}	:	Nominal Supply Voltage
V_{min}	:	Minimum Supply Voltage
V_{max}	:	Maximum Supply Voltage
VDC	:	DC voltage
N/A	:	Not applicable
IC	:	Industry Canada

1.6 Test standards

Technical standard	:	☒ **FCC PART 15 SUBPART C** ☒ **IC RSS 210 ISSUE 8**

1.7 Test item

Description of test item	:	Telematics Unit
Type identification	:	AT-100
Serial number	:	without
Hardware version	:	Rev A
Software version	:	2.0.0
Equipment type	:	End product
FCC-ID	:	ZOQAT-100
IC	:	9734A-AT100

Technical data

Radio type	:	Transceiver
Radio technology	:	Bluetooth
Frequency range	:	2400 - 2483.5MHz
Assigned frequency band	:	2400 - 2483.5MHz
Tested frequencies	:	F_1 2402MHz
		F_2 2441MHz
		F_3 2480MHz
Spreading	:	FHSS
Modulation(s)	:	GFSK, PI/4-DQPSK, 8-PSK
Operating mode(s)	:	semi duplex
Number of channels	:	79
Duty cycle(s)	:	46%
Number of antennas	:	1
Antenna type(s)	:	integrated
Antenna model(s)	:	Pulse W3008K
Antenna gain(s)	:	2dBi
Power supply	:	12VDC
Device classification	:	Mobile Device (Human Body distance > 20 cm)

1.8 Additional information

None

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed. ☒

or

The deviations as specified in 2.5 were ascertained in the course of the tests performed. ☐

2.2 Test environment

Temperature	: 22	...	26°C
Relative humidity content	: 20	...	75%
Air pressure	: 86	...	103kPa

Extreme conditions parameters:

V_{nom}	:	12VDC
V_{min} (V_{nom}-15%)	:	N/A
V_{max} (V_{nom}+15%)	:	N/A
T_{nom}	:	25°C

Other parameter: None

2.3 Test equipment utilized

Measurement Equipment List					
No.:	**Measurement device:**	**Type:**	**Manufacturer:**	**Last Cal.**	**Next Cal.**
ETS 0086	Semi-anechoic chamber	AC1	Frankonia	09.12.2010	09.12.2012
ETS 0253	Spectrum Analyzer	FSIQ26	Rohde & Schwarz	04.11.2010	04.11.2012
ETS 0030	Biconical Antenna	HK 116	Rohde & Schwarz	10.02.2011	20.02.2012
ETS 0295	LPD Antenna	HL 223	Rohde & Schwarz	09.02.2011	09.02.2012
ETS 0018	Horn Antenna	BBHA 9120D	Schwarzbeck	26.08.2010	26.08.2011
ETS 0432	Amplifier-Matrix			02.06.2010	02.06.2012
ETS 0496	Spectrum Analyzer	FSP30	Rohde & Schwarz	26.08.2010	26.08.2011
ETS 0288	LISN	ESH2-Z5	Rohde & Schwarz	07.09.2010	07.09.2012

2.4 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBµV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

Reading on Analyzer (dBµV) + A.F. (dB) = Net field strength (dBµV/m)

Net:

This is the net field strength measurement (as shown above).

Limit:

This is the FCC Class B radiated emission limit (in units of dBµV/m). The FCC limits are given in units of µV/m. The following formula is used to convert the units of µV/m to dBµV/m:

Limit (dBµV/m) = 20*log (µV/m)

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Example only:

Reading	+	AF	=	Net Reading	:	Net reading - FCC limit = Margin
21.5 dBµV	+	26 dB	=	47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m = -9.5 dB

2.5 Test results

Test case	Clause	Required	Result	Remarks
INFORMATIONAL TRANSMITTER PARAMETERS				
Occupied Bandwidth	IC RSS-Gen. 4.6.1	☒		
TRANSMITTER PARAMETERS				
20dB Bandwidth	FCC § 15.247(a)(1) IC RSS-210 § A8.1	☒	PASS	
Frequency hopping channel number	FCC § 15.247(a)(1)(iii) IC RSS-210 § A8.1	☒	PASS	
Frequency hopping channel spacing	FCC § 15.247(a)(1) IC RSS-210 § A8.1	☒	PASS	
Time of occupancy (dwell time)	FCC § 15.247(a)(1)(iii) IC RSS-210 § A8.1	☒	PASS	
Maximum peak conducted output power	FCC § 15.247(b) IC RSS-210 § A8.4	☒	PASS	
Maximum peak e.i.r.p. output power	FCC § 15.247(b) IC RSS-210 § A8.4	☒	PASS	
Band-edge Compliance	FCC § 15.247(d) IC RSS-210 § A8.5	☒	PASS	
Conducted spurious emissions	FCC § 15.247(d) IC RSS-210 § A8.5	☒	PASS	
Radiated spurious emissions	FCC § 15.247(d) FCC § 15.209 IC RSS-210 A8.5 IC RSS-Gen 4.9 IC RSS-Gen 7.2.5	☒	PASS	
RECEIVER PARAMETERS				
Radiated spurious emissions	FCC § 15.109 IC RSS-Gen 4.10 IC RSS-Gen 6.1	☒	PASS	
POWER LINE PARAMETERS				
AC power line conducted emissions	FCC § 15.207 IC RSS-Gen. 7.2.4	☐	N/A	

3 Informational Transmitter parameters

3.1 Transmitter Modes for conformance testing

The following transmission modes are elected for compliance testing.

TEST MODE DH5	
Conditions	
Spread Spectrum	☒ Yes ☐ No
Spreading Technique	FHSS
Modulation	GFSK
Packet Type	DH5
Data rate	1Mbps
Duty Cycle	46%

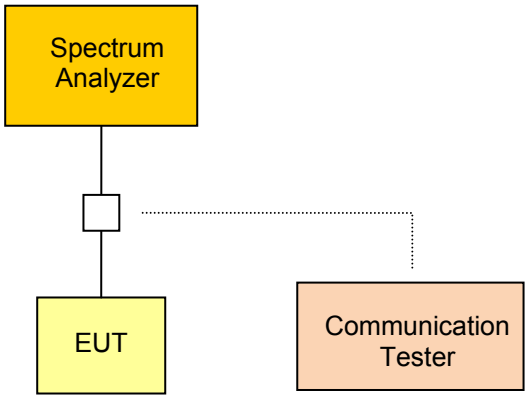
TEST MODE 2-DH5	
Conditions	
Spread Spectrum	☒ Yes ☐ No
Spreading Technique	FHSS
Modulation	π/4-DQPSK
Packet Type	2-DH5
Data rate	2Mbps
Duty Cycle	46%

TEST MODE 3-DH5	
Conditions	
Spread Spectrum	☒ Yes ☐ No
Spreading Technique	FHSS
Modulation	8-DPSK
Packet Type	3-DH5
Data rate	3Mbps
Duty Cycle	46%

3.2 Occupied Bandwidth

According RSS-Gen Section 4.6.1 the 99% emission bandwidth occupied by the modulated transmitted signal has to be reported as calculated or measured.

3.2.1 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) with maximum power under normal test conditions. The span of the analyzer is set wide enough to capture all significant emissions of the modulation spectrum. The resolutions bandwidth is set as close as possible to 1% of the selected span without being below 1%. The occupied bandwidth is than measured evaluated by an internal measurement procedure of the analyzer.

3.2.2 Results

Transmitter occupied bandwidth			
Measurement Conditions			
Power occupation		99%	
Channel [MHz]	**Lower edge frequency [MHz]**	**Upper edge frequency [MHz]**	**Occupied Bandwidth [MHz]**
Test modeDH5			
2402	2401.50	2402.45	0.950
2441	2440.51	2441.46	0.950
2480	2479.53	2480.46	0.930
Test mode 3-DH5			
2402	2401.36	2402.60	1.240
2441	2440.37	2441.59	1.22
2480	2479.37	2480.59	1.22
See attached diagram in Annex			

4 Transmitter parameters

4.1 20dB Bandwidth

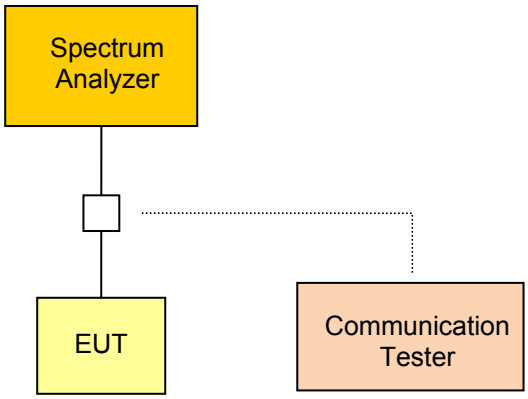
According FCC rules 47 CFR 15.247(a)(1) and RSS-210 Section A8.1 the 20dB Bandwidth determines the necessary carrier spacing used in the frequency hopping system.

4.1.1 Limits

According FCC and IC rules frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

20dB bandwidth limits	
Output Power	**20dB Bandwidth Limit**
≤ 125mW / 21dBm	1.5 * carrier spacing
125mW – 1W / 21 – 30dBm	1.0 * carrier spacing

4.1.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) with maximum power under normal test conditions. The resolution bandwidth is set to 1% of the 20dB bandwidth of the emission spectrum (VBW≥RBW). The center frequency is set to the hopping channel center frequency. The span of the analyzer is set to 2 -3 times the 20dB bandwidth. The bandwidth is determined using markers with peak detector and max hold.

According to 47 CFR 15.31 battery power equipment is measured using new batteries and equipment using external power supply is measured with 85%, 100% and 115% of the nominal rated supply voltage.

4.1.3 Results

20dB bandwidth		
Measurement Conditions		
Max. output power	9.8dBm	
Carrier spacing	1MHz	
Channel [MHz]	**20dB Bandwidth [MHz]**	**Bandwidth Limit [MHz]**
Test mode DH5		
2402	0.886	≤ 1.5
2441	0.921	≤ 1.5
2480	0.882	≤ 1.5
Test mode 2-DH5		
2402	1.353	≤ 1.5
2441	1.238	≤ 1.5
2480	1.185	≤ 1.5
Test mode 3-DH5		
2402	1.251	≤ 1.5
2441	1.256	≤ 1.5
2480	1.243	≤ 1.5
See attached diagrams in Annex		
Measurement uncertainty		4.22dB
Verdict		**PASS**

4.2 Frequency hopping channel number

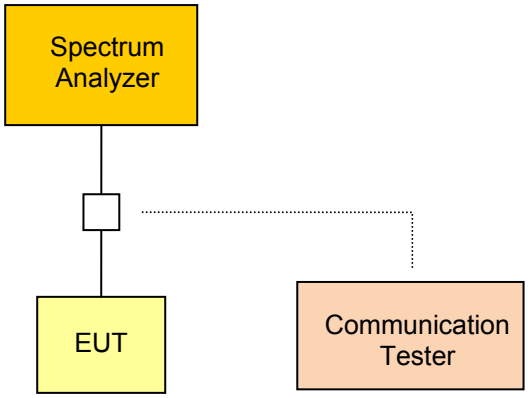
According FCC rules 47 CFR 15.247(a)(1)(iii) and RSS-210 Section A8.1 the number of hopping channels used, determines if the system can be certified as a hopping system and also the power level the system can use.

4.2.1 Limits

According FCC and IC rules frequency hopping systems shall use a minimum of 15 hopping channels. If the hopping system uses at least 75 hopping channels, the maximum conducted output power can be increased from 0.125W to 1W.

Frequency hopping channel number limits	
Max. conducted output Power	**Minimum number of channels**
≤ 125mW / 21dBm	15
125mW – 1W / 21 - 30dBm	75

4.2.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) with hopping activated. The resolution bandwidth is set to 1% of the span (VBW≥RBW) and the span is set to 2400 – 2483.5MHz. The power level is measured with peak detector and max hold.

4.2.3 Results

Number of hopping channels	
Measurement Conditions	
Test mode	DH5
Maximum output power	2.6dBm
Number of channels	**Hopping channel limit**
79	≥ 15
See attached diagrams in Annex	
Measurement uncertainty	4.22dB
Verdict	**PASS**

4.3 Frequency hopping channel spacing

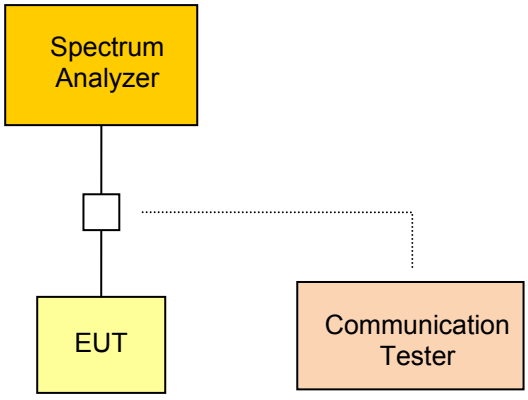
According FCC rules 47 CFR 15.247(a)(1) and RSS-210 Section A8.1 the minimum hopping channel frequency spacing is correlated to the 20dB bandwidth of the hopping channel emission and and maximum peak output power.

4.3.1 Limits

According FCC and IC rules frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

Frequency hopping channel spacing limits	
Max. conducted output Power	**Minimum hopping channel spacing**
≤ 125mW / 21dBm	≥ 25kHz or ⅔ of 20dB bandwidth
125mW – 1W / 21 – 30dBm	≥ 25kHz or 20dB bandwidth

4.3.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) with hopping activated. The resolution bandwidth is set to 1% of the span (VBW≥RBW) and the span is set wide enough to capture two adjacent channels. The power level is measured with peak detector and max hold.

4.3.3 Results

Frequency hopping channel spacing	
Measurement Conditions	
Test mode	DH5
Tested channels	2441MHz / 2442MHz
Max. output power	2.6dBm
Channel spacing [kHz]	**Channel spacing limit [kHz]**
1000	≥ ⅔ * 921 = 614
See attached diagrams in Annex	
Measurement uncertainty	4.22dB
Verdict	**PASS**

4.4 Time of occupancy (Dwell time)

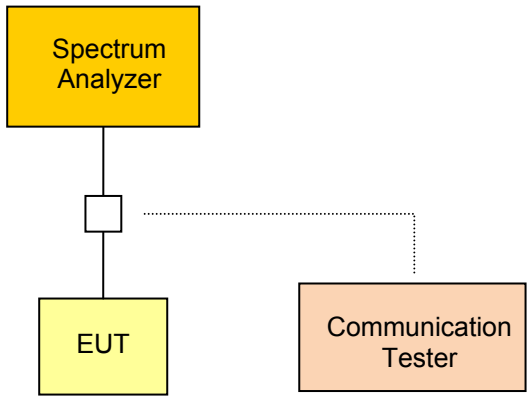
According FCC rules 47 CFR 15.247(a)(1)(iii) and RSS-210 Section A8.1 the average time of occupancy on any channel is limited.

4.4.1 Limits

According FCC and IC rules the average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

Time of occupancy (dwell time) limits	
Dwell time limit	**Channel occupancy period**
0.4s	0.4 * Number of hopping channels

4.4.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) with hopping activated. The resolution bandwidth is set to 1MHz (VBW≥RBW) and the span is set to zero centered on a hopping channel. The sweep time is set large enough to capture the dwell time. The power level is measured with peak detector and max hold.

4.4.3 Results

Time of occupancy (Dwell time)		
Measurement Conditions		
Test mode	DH5	
Tested channel	2441	
Number of hopping channels	79	
Time of occupancy	**Channel occupancy period**	
186.2ms	31.6s	
See attached diagrams in Annex		
Measurement uncertainty		4.22dB
Verdict		**PASS**

4.5 Maximum peak conducted output power

According FCC rules 47 CFR 15.247(b)(1) and RSS-210 Section A8.4 the maximum peak conducted output power is limited and has be verified.

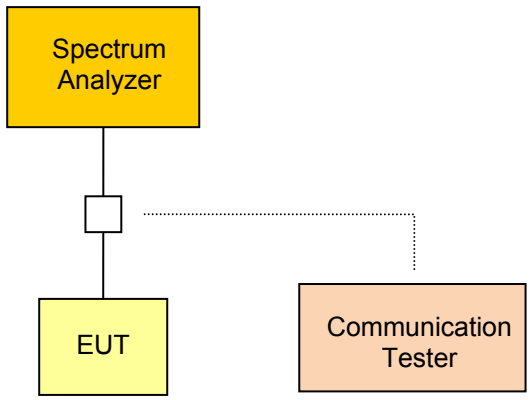
4.5.1 Limits

For frequency hopping systems operating in the band 2400-2483.5 MHz employing at least 75 hopping channels, the maximum peak conducted output power shall not exceed 1 W; for all other frequency hopping systems in the band, the maximum peak conducted output power shall not exceed 0.125 W.

Maximum peak conducted output power limits	
Number of Hopping Channels	**Conducted Power Limit**
≥ 75	1W (30dBm)*
15 - 74	125mW (21dBm)*

*) The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.5.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) with maximum power under normal test conditions. The resolution bandwidth is set higher than the 20dB Bandwidth of the emission spectrum (VBW≥RBW). The span of the analyzer is set larger than 5 times the resolution bandwidth. The maximum power emitted by the EUT is measured using peak detector and max hold.

According to 47 CFR 15.31 battery power equipment is measured using new batteries and equipment using external power supply is measured with 85%, 100% and 115% of the nominal rated supply voltage.

4.5.3 Results

Maximum peak conducted output power		
Measurement Conditions		
Antenna gain	2dBi	
Number of hopping channels	79	
Channel [MHz]	**Conducted output power [dBm]**	**Power Limit [dBm]**
Test mode DH5		
2402	2.1	30
2441	2.6	30
2480	2.5	30
Test mode 2-DH5		
2402	2.0	30
2441	2.4	30
2480	2.4	30
Test mode 3-DH5		
2402	2.0	30
2441	2.4	30
2480	2.4	30
See attached diagrams in Annex		
Measurement uncertainty		4.22dB
Verdict		**PASS**

4.6 Maximum e.i.r.p. output power

According FCC rules 47 CFR 15.247(b)(1) and RSS-210 Section A8.4 the maximum peak e.i.r.p. conducted output power is limited and has be verified.

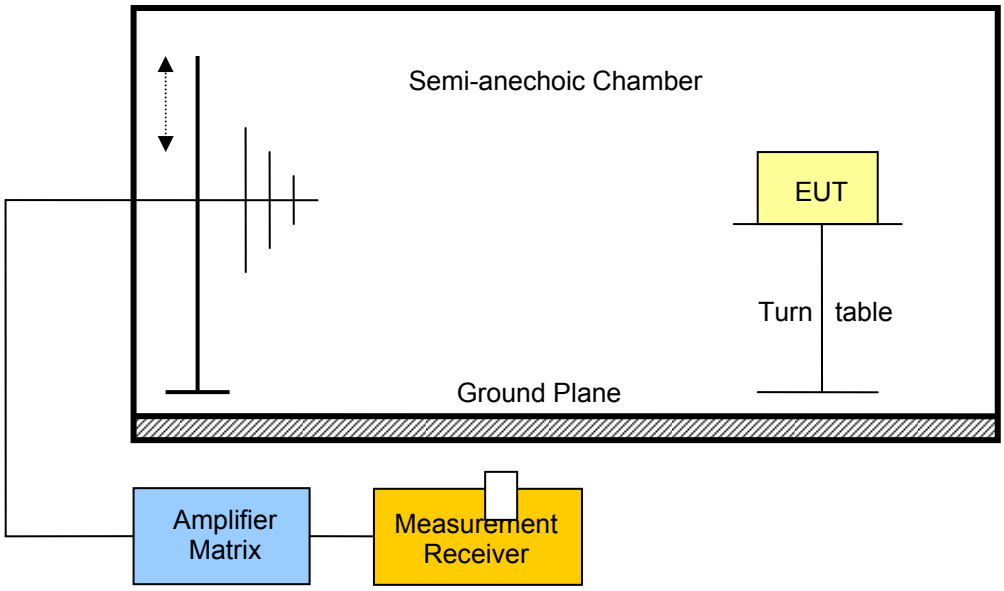
4.6.1 Limits

According to the FCC Rules the conducted output power limit specified is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi. This translates to the following e.i.r.p. power limits.

Maximum e.i.r.p. output power limits	
Number of Hopping Channels	**E.I.R.P. Power Limit**
≥ 75	4W e.i.r.p. (36dBm e.i.r.p.)
15 - 74	500mW e.i.r.p. (27dBm e.i.r.p.)*

*) According RSS-210 the e.i.r.p. output power is generally limited to 4W (36dBm) without limit on the number of hopping channels.

4.6.2 Measurement procedure



The EUT is placed on a table in a semi-anechoic chamber. The EUT is activated with the transmission modes stated in the test report. The emission level of all emission up to the 10th harmonic is scanned. In the frequency range below 1GHz a resolution bandwidth of 100kHz is used and above 1GHz a resolution bandwidth of 1MHz is used. To obtain the peak emission level the EUT is rotated through 360° and the height of the measurement antenna changed. All emissions that come to within 20dB of the limit line are recorded.

Alternate validation procedure

Alternatively the e.i.r.p. power is calculated from the declared antenna gain and the measured maximum peak conducted output power.

Which method has been used is stated in the result table.

4.6.3 Results

Maximum e.i.r.p. output power		
Measurement Conditions		
Validation method	☐ Measurement ☒ Alternate	
Antenna gain	2dBi	
Channel [MHz]	**E.I.R.P. output power [dBm e.i.r.p.]**	**E.I.R.P. Power Limit [dBm e.i.r.p.]**
Test mode DH5		
2402	4.1	36
2441	4.6	36
2480	4.5	36
Test mode 2-DH5		
2402	4.0	36
2441	4.4	36
2480	4.4	36
Test mode 3-DH5		
2402	4.0	36
2441	4.4	36
2480	4.4	36
See attached diagrams in Annex		
Measurement uncertainty		4.22dB
Verdict		**PASS**

4.7 Transmitter band-edge compliance

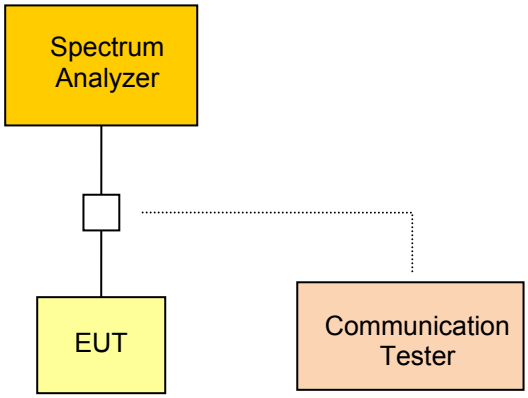
According FCC rules 47 CFR 15.209, 15.247(d) and RSS-210 Section A8.5 the emission level of out-of-band emissions are limited and has to be validated.

4.7.1 Limits

The emission limit of out of band emission in any 100kHz bandwidth outside the frequency band in which the spread spectrum device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits (see "Transmitter spurious emissions"-measurement) is not required.

Transmitter band-edge emission limits	
TX-Power Detector	**Out of band attenuation**
Peak	-20dBc/100kHz
RMS	-30dBc/100kHz

4.7.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode (using a communication tester if needed) without hopping with maximum power under normal test conditions. The span of the analyzer is set large enough to capture the maximum emission within the emission band as well as any modulation product which fall outside the authorized band of operation. The resolution bandwidth is set to 1% of the span (VBW≥RBW). The

A marker is set on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Using the delta-marker function the highest peak of the in-band emission is measured.

The same measurement procedure is repeated in hopping mode.

4.7.3 Results

Transmitter band-edge emissions		
Measurement Conditions		
Power mode	Peak	
Mode	**Lower edge emission [dBc]**	**Upper edge emission [dBc]**
Test mode DH5		
Hopping	-41.45	-41.23
Single	-43.03	-41.24
Test mode 2-DH5		
Hopping	-36.90	-37.15
Single	-38.34	-41.18
Test mode 3-DH5		
Hopping	-39.22	-36.95
Single	-38.75	-41,50
See attached diagram in Annex		
Verdict		**PASS**

4.8 Transmitter conducted spurious emissions

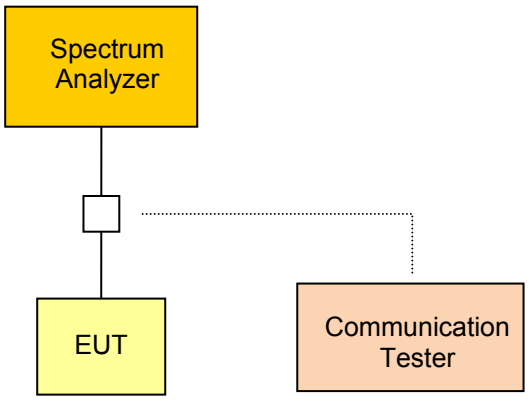
According FCC rules 47 CFR 15.247(d) and RSS-210 Section A8.5 unwanted emissions in the spurious domain are power limited and has to be validated.

4.8.1 Limits

The emission limit of out of band emission in any 100kHz bandwidth outside the frequency band in which the spread spectrum device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits (see "Transmitter radiated spurious emissions"-measurement) is not required.

Transmitter conducted spurious emission limits	
TX-Power Detector	**Out of band attenuation**
Peak	-20dBc/100kHz
RMS	-30dBc/100kHz

4.8.2 Measurement procedure



The EUT is connected to a spectrum analyzer and set to transmission mode with maximum power under normal test conditions. The span of the analyzer is set large enough to capture the maximum emission within the emission band as well as any spurious emission outside the authorized band of operation. The resolution bandwidth is set to 100kHz (VBW≥RBW). The emissions are measured using peak detector and max hold.

The measurement is performed over the frequency range of 30MHz up to the tenth harmonic.

4.8.3 Results

Transmitter conducted spurious emissions						
Measurement Conditions						
Modulated		☒ Yes ☐ No				
Channel Frequency [MHz]	**Emission Frequency [MHz]**	**Emission Level [dBm]**	**Peak field Strength [dBm]**	**Limit [dBm]**	**Detector**	**Margin [dB]**
Test mode DH5						
2402	no significant spurious emissions					
2441	no significant spurious emissions					
2480	no significant spurious emissions					
Test mode 3-DH5						
2402	no significant spurious emissions					
2441	no significant spurious emissions					
2480	no significant spurious emissions					
See attached diagrams in Annex						
Verdict					**PASS**	

4.9 Transmitter radiated spurious emissions

According FCC rules 47 CFR 15.209, 15.247(d) and RSS-210 Section A8.5 unwanted emissions in the spurious domain are power limited and has to be validated.

4.9.1 Limits

The emission limit of out of band emission in any 100kHz bandwidth outside the frequency band in which the spread spectrum device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits (see "Transmitter spurious emissions"-measurement) is not required.

Transmitter out-of-band emission limits	
TX-Power Detector	**Out of band attenuation**
Peak	-20dBc/100kHz
RMS	-30dBc/100kHz

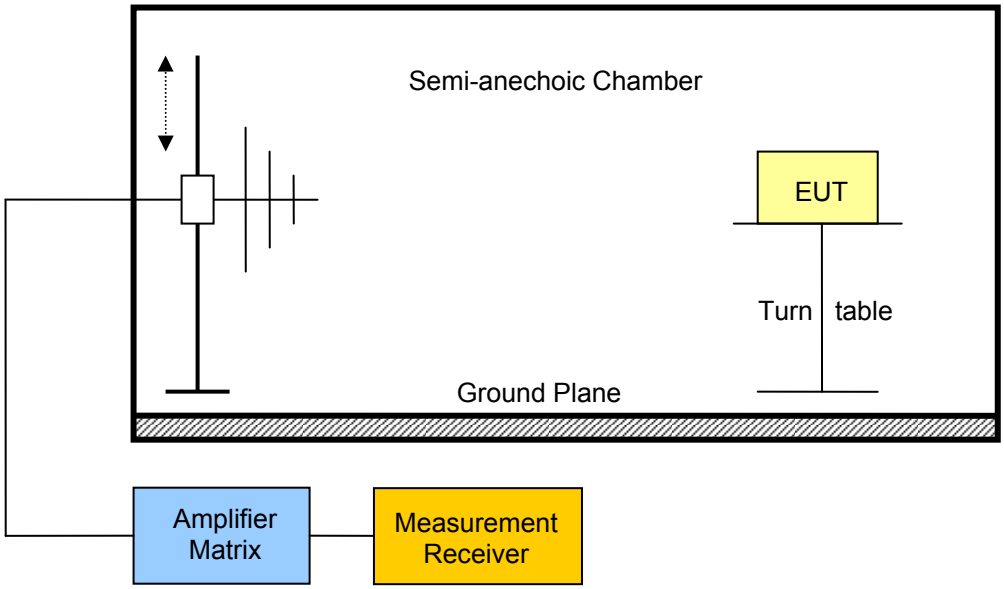
In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Transmitter restricted band spurious emission limits				
Frequency range [MHz]	**Detector**	**Limit [µV/m]**	**Limit [dBµV/m]**	**Limit Distance [m]**
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3

When average radiated emission measurements are specified, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test.

4.9.2 Measurement procedure

The spurious emission measurement is performed on 3m a semi-anechoic test site.



The EUT is placed on a non-metallic table. Any emission is received by the measurement antenna and measured via a measurement receiver connected to the antenna. To obtain the maximum emission the EUT is rotated through 360°.

Due to practical reasons the spurious emission level check is first performed with a peak detector and the quasi-peak and average limits.

If any emission is detected that gets close to the emission limit the detector is changed and the quasi-peak or average detector is used. Which detector is used is determined by the emission frequency. If pulsed transmission is used, averaging over the pulse train is used.

The measurement values are also corrected to obtain the field strength values at the defined measurement distances of the emission limits.

The measurement is performed over the frequency range of 30MHz up to the tenth harmonic.

4.9.3 Results

Transmitter radiated spurious emissions						
Measurement Conditions						
Measurement distance *		3m				
Modulated		☒ Yes ☐ No				
Channel Frequency [MHz]	**Emission Frequency [MHz]**	**Polarization**	**Measured Field Strength [dBµV/m]**	**Limit [dBµV/m]**	**Detector**	**Margin [dB]**
Test mode DH5						
2402	2390	v	50.2	74	p	-23.80
2402	4802	v	52.5	74	p	-21.50
2402	4804	v	45.9	54	av	-08.10
2441	4882	v	53.2	74	p	-20.80
2441	4882	v	45.6	54	av	-08.40
2480	2484	h	50.4	74	p	-23.60
2480	2484	v	56.7	74	p	-17.30
2480	2484	v	41.5	54	av	-12.50
2480	4962	v	52.8	74	p	-21.20
2480	4960	v	45.3	54	av	-08.70
Test mode 3-DH5						
no significant spurious emissions						
See attached diagrams in Annex						
Verdict					**PASS**	

*** Note:** Physical distance between EUT and measurement antenna.

5 Receiver parameters

5.1 Receiver spurious emissions

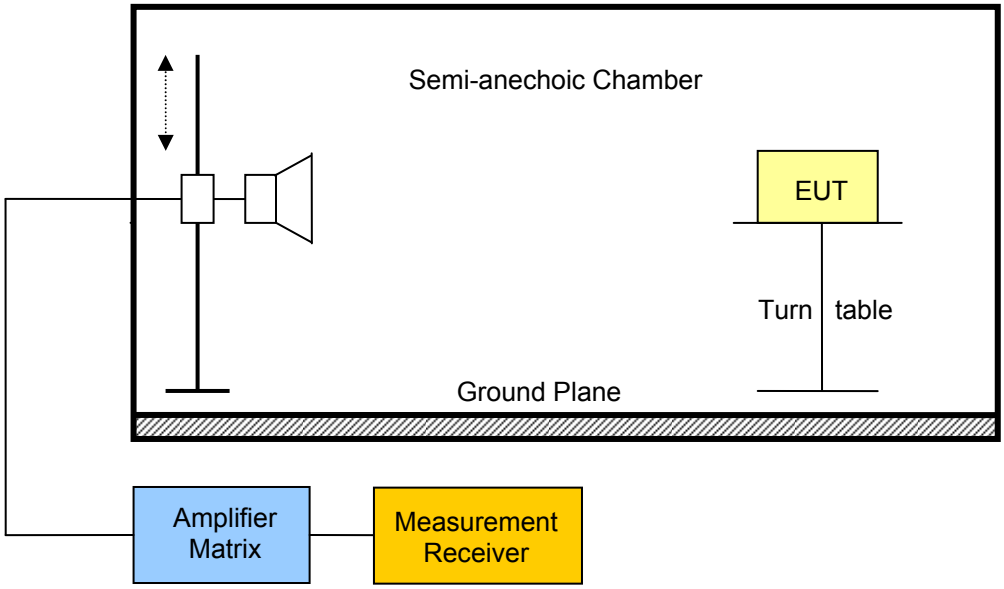
According RSS-Gen Section 4.9 the emissions of unintentional radiators have to comply with limits stated in the rules.

5.1.1 Limits

Receiver spurious emission limits @ 3m				
Frequency range [MHz]	**Detector**	**Limit [µV/m]**	**Limit [dBµV/m]**	**Limit Distance [m]**
30 – 88	Quasi-Peak	100	40	3
88 – 216	Quasi-Peak	150	43.5	3
216 – 960	Quasi-Peak	200	46	3
960 – 1000	Quasi-Peak	500	54	3
> 1000	Average	500	54	3

5.1.2 Measurement procedure

The spurious emission measurement is performed on a 3m open area test site.



The EUT is placed on a non-metallic table. Any emission is received by a loop antenna and measured via a measurement receiver connected to the loop antenna. To obtain the maximum emission the EUT is rotated through 360°.

Due to practical reasons the spurious emission level check is first performed with a peak detector and the quasi-peak and average limits.

If any emission is detected that gets close to the emission limit the detector is changed and the quasi-peak or average detector is used. Which detector is used is determined by the emission frequency. If pulsed transmission is used, averaging over the pulse train is used.

The measurement values are also corrected to obtain the field strength values at the defined measurement distances of the emission limits.

The measurement is performed over the frequency range of 30MHz up to the 3rd harmonic.

5.1.3 Results

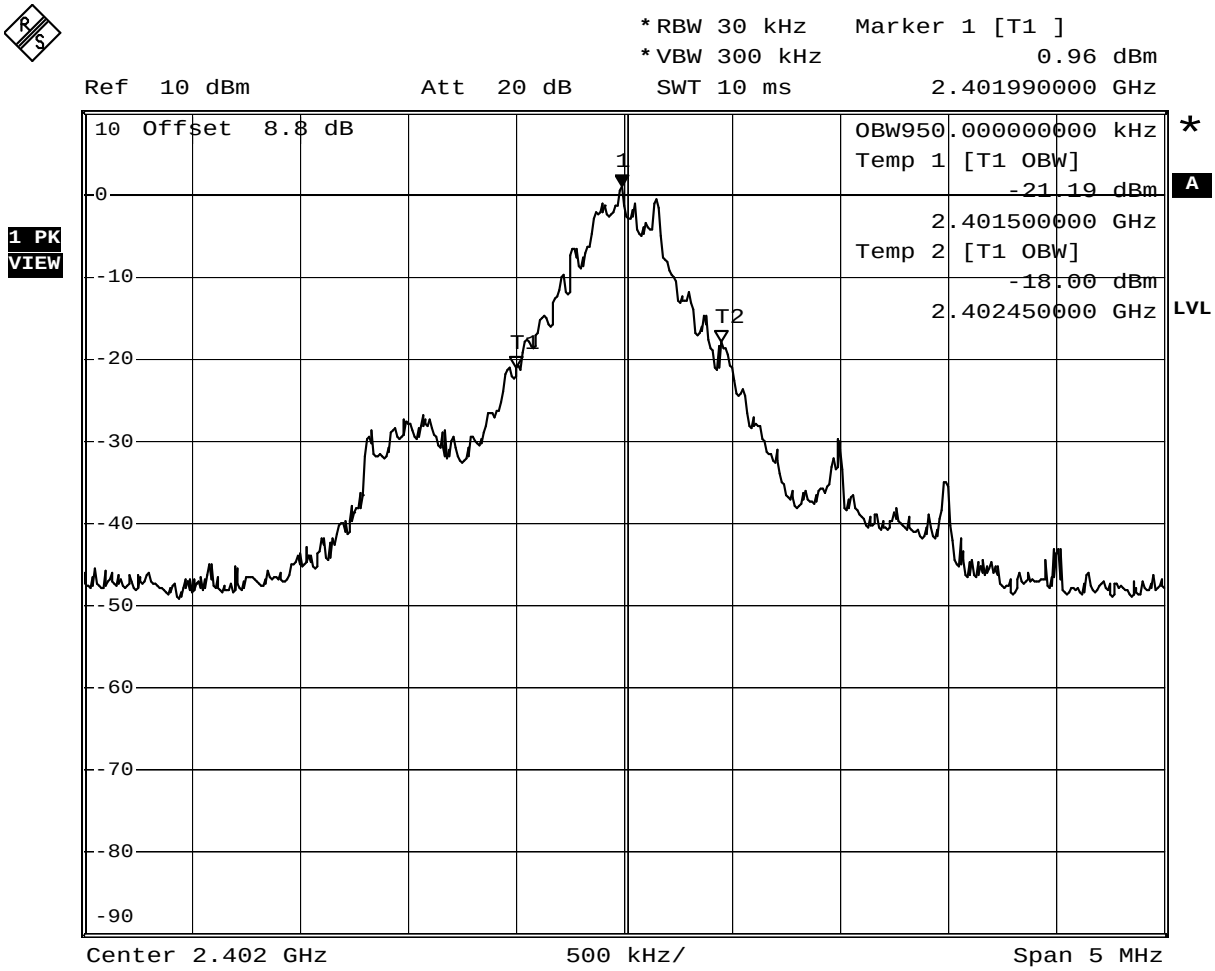
Receiver spurious Emissions						
Measurement Conditions						
Measurement distance *		3m				
Channel Frequency [MHz]	**Emission Frequency [MHz]**	**Polarization**	**Measured Field Strength [µV/m]**	**Limit [µV/m]**	**Detector**	**Margin [µV/m]**
Scan	193.868	v	42.27	150	Peak	-107.73
	199.319	h	43.60	150	Peak	-106.40
	996.794	v	13.26	500	Peak	-486.74
	998.397	h	15.19	500	Peak	-484.81
	3862.000	v	152.93	500	Peak	-347.07
	3940.000	h	145.55	500	Peak	-354.45
	7912.000	v	323.97	500	Peak	-176.03
	7984.000	h	313.69	500	Peak	-186.31
See attached diagrams in Annex						
Verdict					**PASS**	

*** Note:** Physical distance between EUT and measurement antenna.

Annex B Transmitter occupied bandwidth

RSS Gen
Occupied Bandwidth

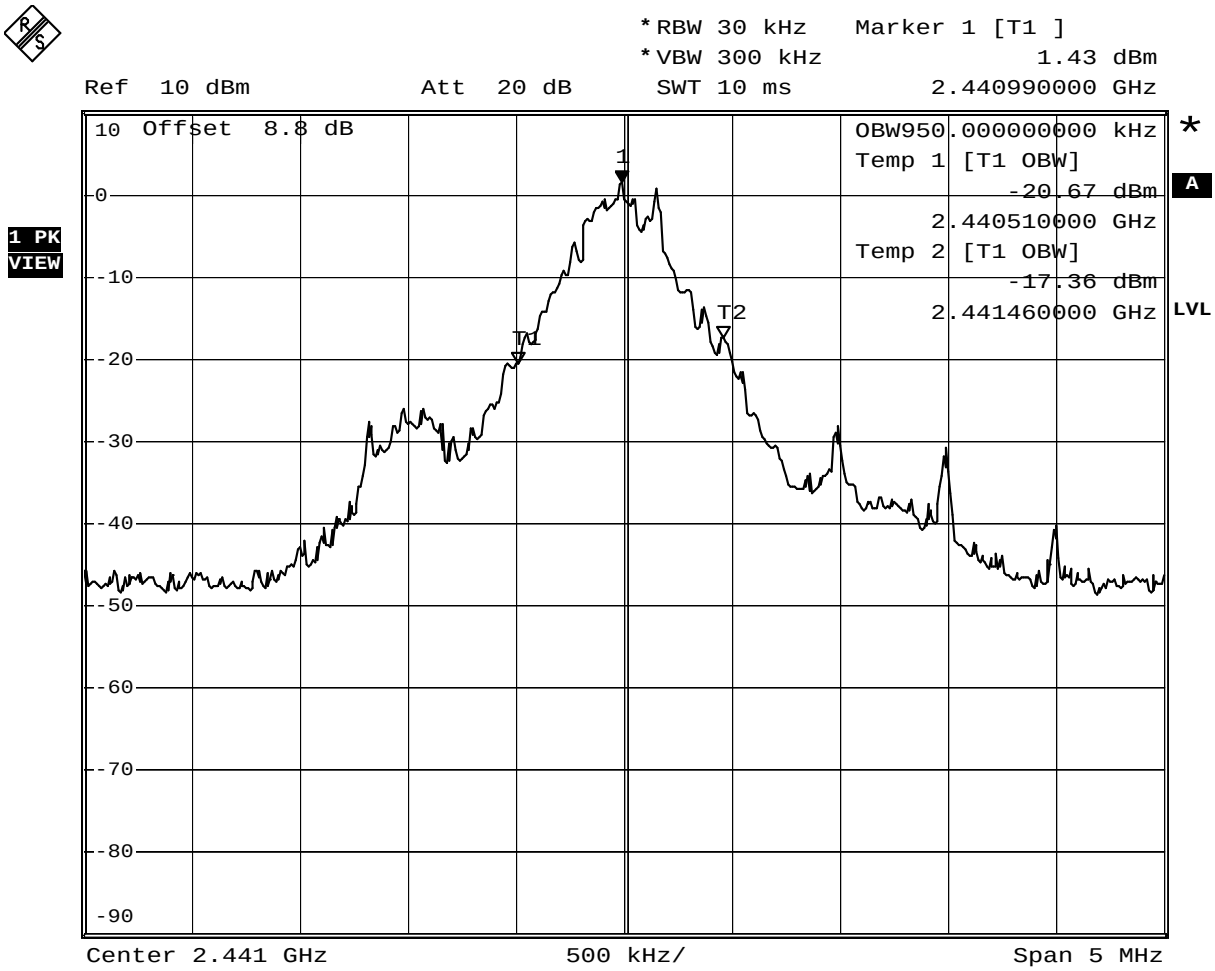
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 0 / 2402 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	GFSK



Comment: Occupied bandwidth: 950 KHz
Date: 24.JUN.2011 11:13:05

RSS Gen
Occupied Bandwidth

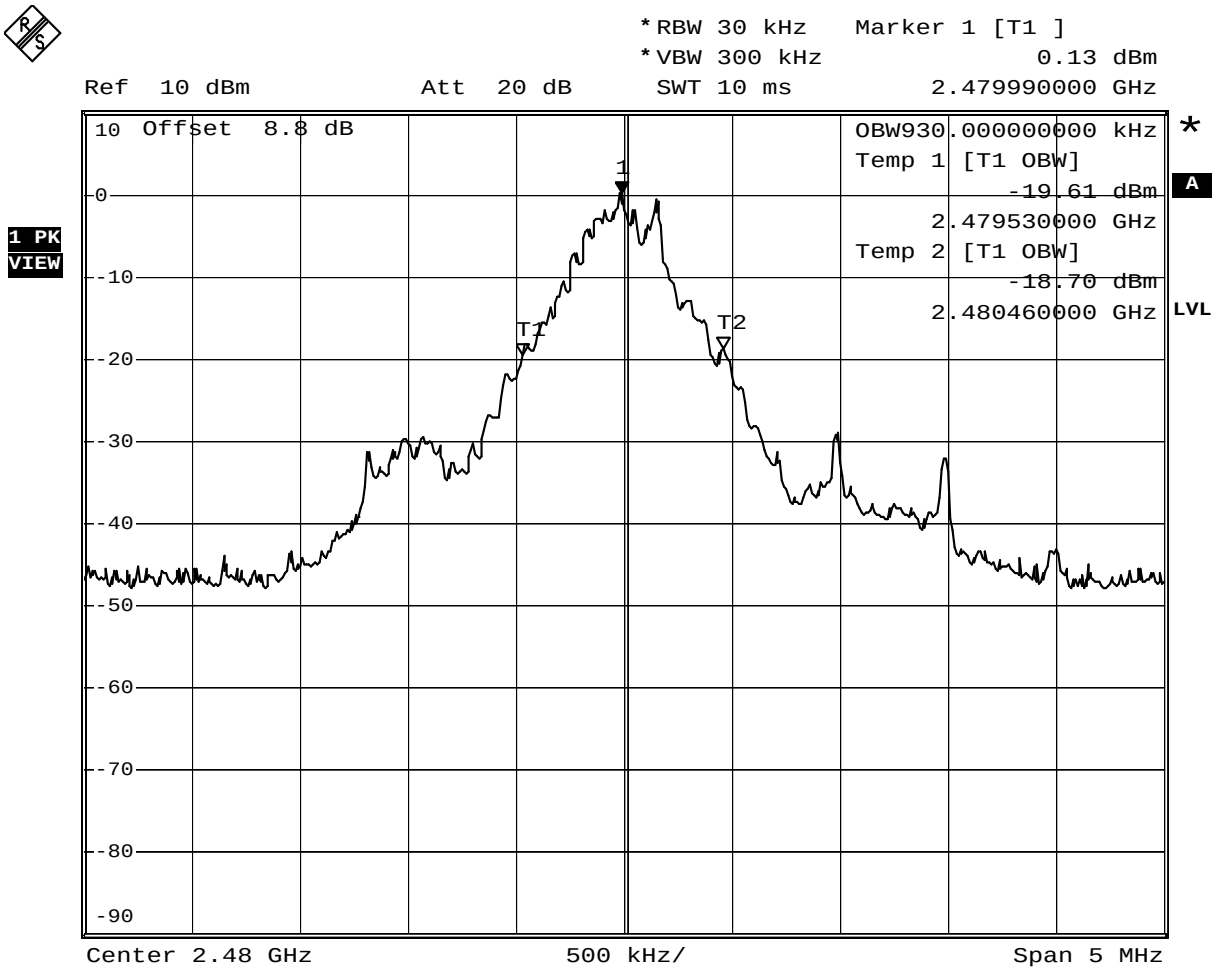
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 39 / 2441 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	GFSK



Comment: Occupied bandwidth: 950 KHz
Date: 24.JUN.2011 11:14:24

RSS Gen
Occupied Bandwidth

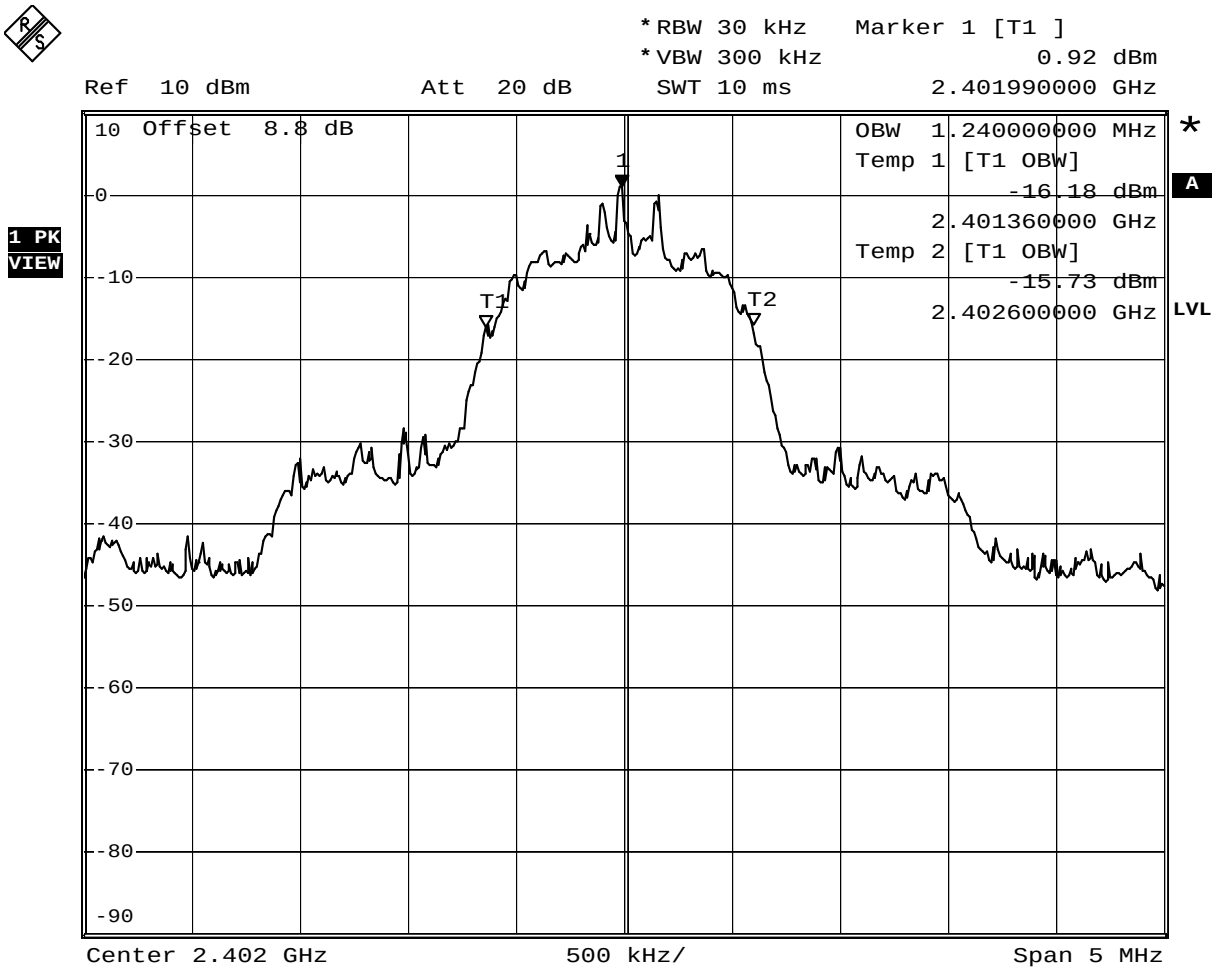
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 78 / 2480 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	GFSK



Comment: Occupied bandwidth: 930 KHz
Date: 24.JUN.2011 11:15:43

RSS Gen
Occupied Bandwidth

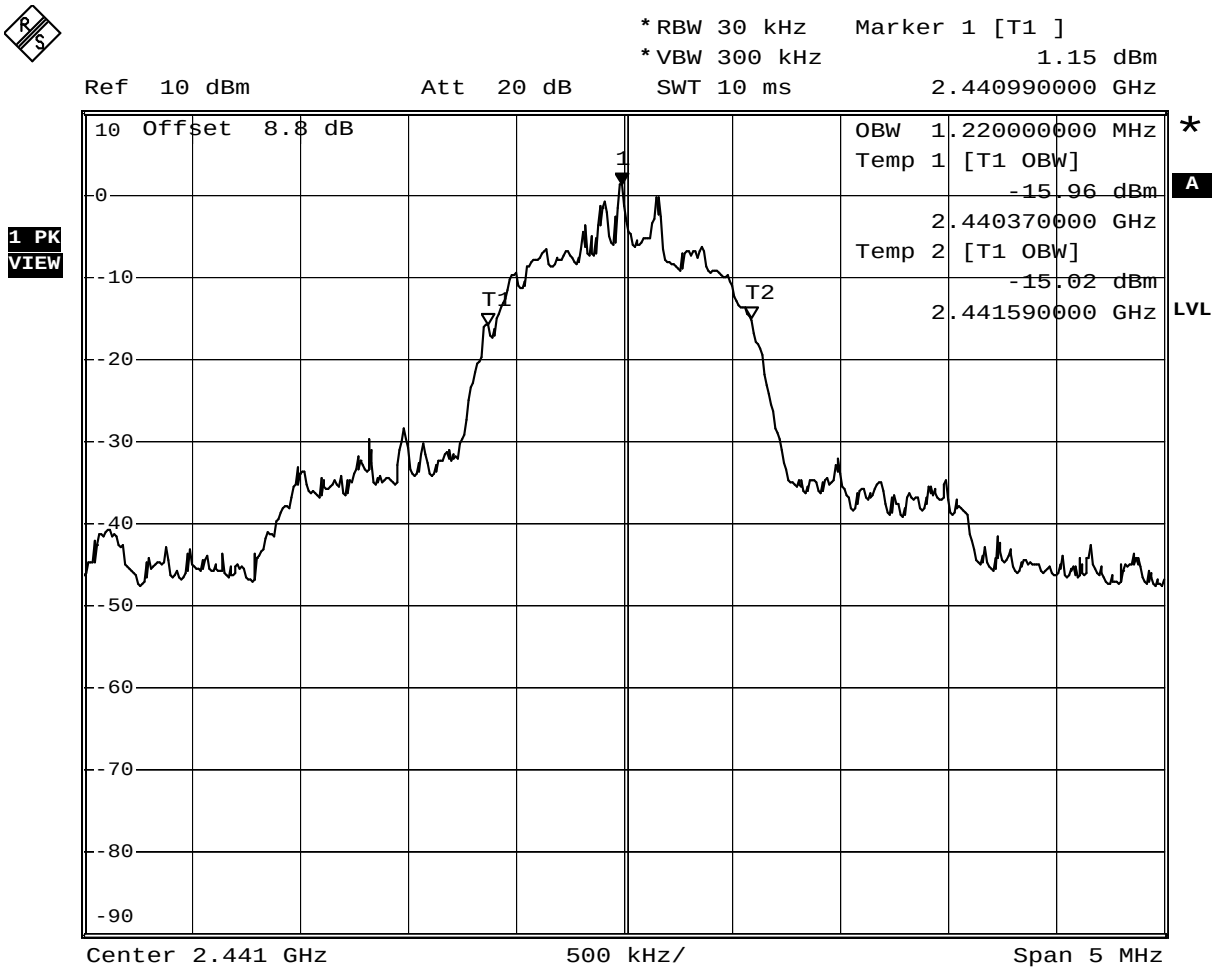
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 0 / 2402 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	8DPSK



Comment: Occupied bandwidth: 1240 KHz
Date: 24.JUN.2011 11:19:43

RSS Gen
Occupied Bandwidth

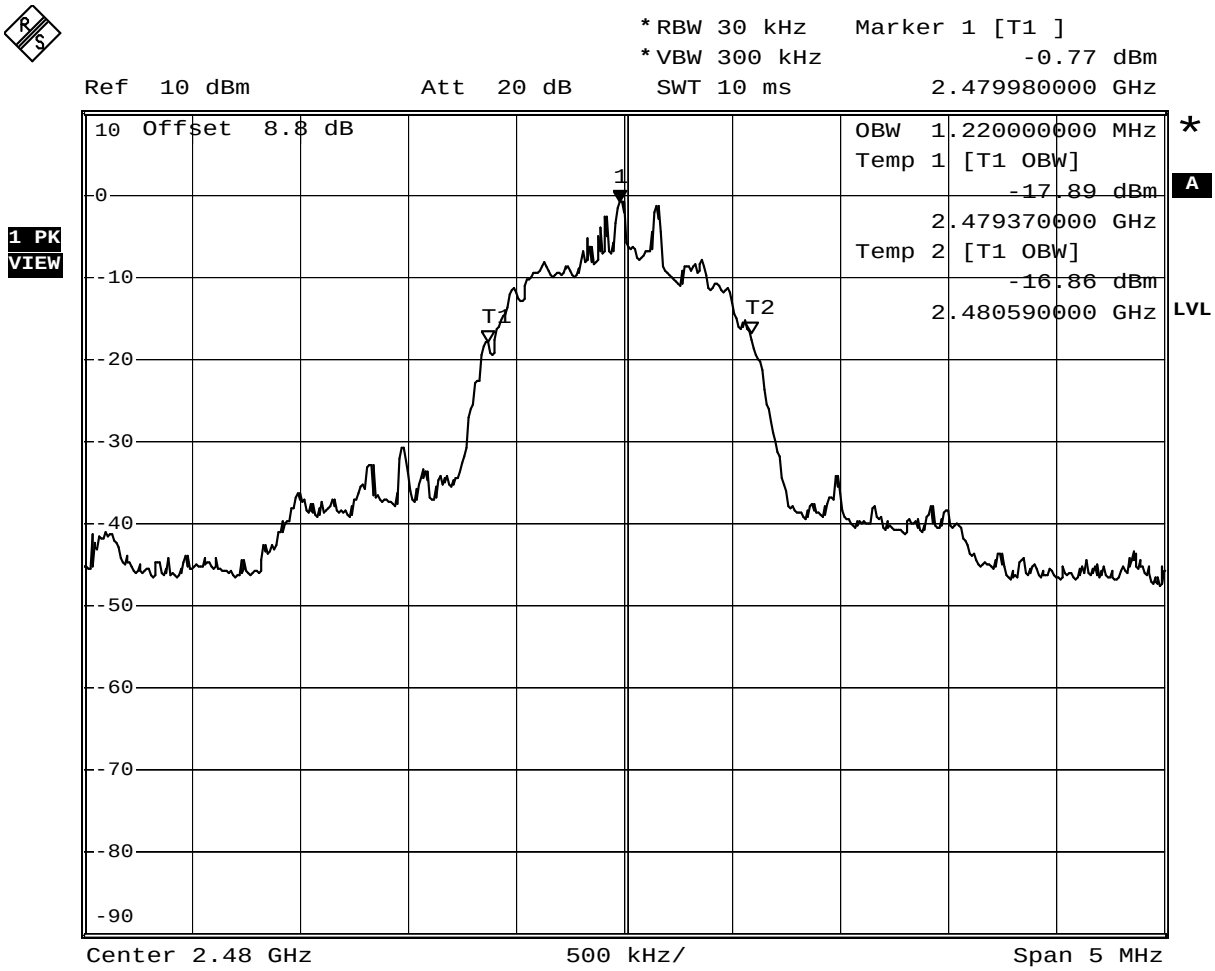
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 39 / 2441 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	8DPSK



Comment: Occupied bandwidth: 1220 KHz
Date: 24.JUN.2011 11:18:36

RSS Gen
Occupied Bandwidth

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	4.4.1 Occupied Bandwidth
Comment 1	Channel.: 78 / 2480 MHz
Comment 2	A spectrum analyzer with an integrated 99% power bandwidth function is used
Comment 3	8DPSK

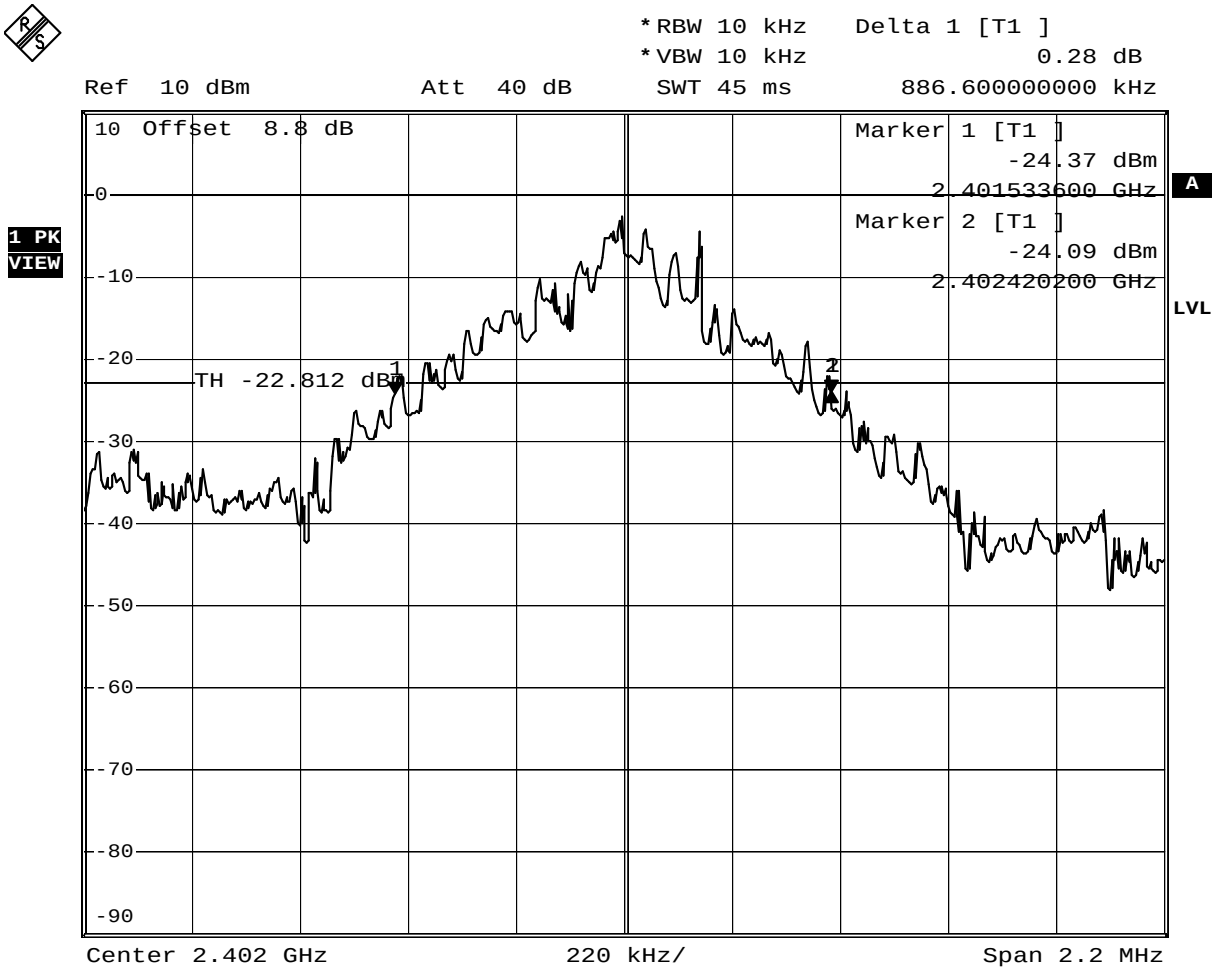



```
Comment: Occupied bandwidth: 1220 KHz
Date:      24.JUN.2011  11:17:18
```

Annex C Transmitter 20dB bandwidth

FCC part 15.247
20 dB bandwidth

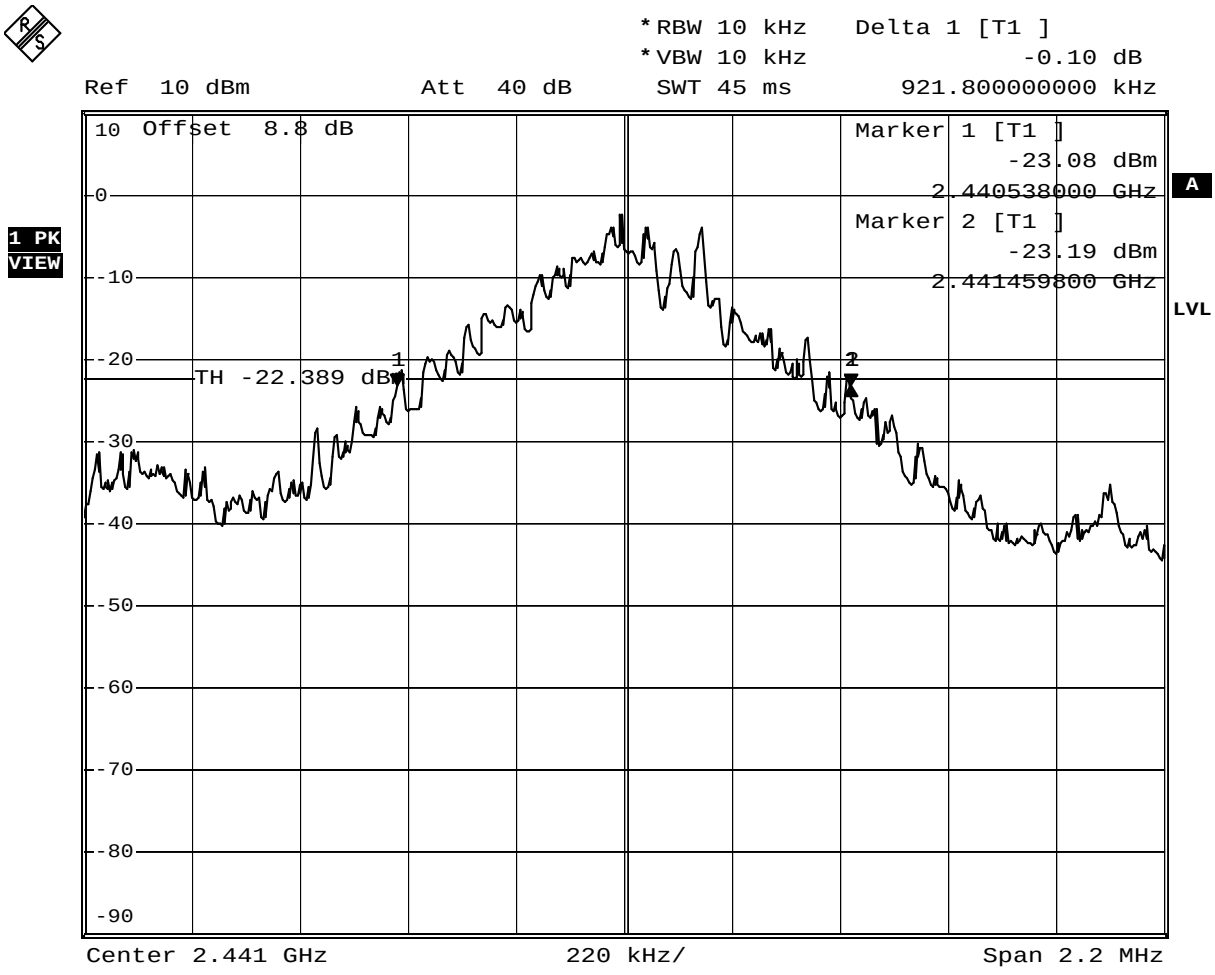
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 0 / 2402 MHz / GFSK
Comment 3	pass




```
Comment: 20 dB bandwidth: 886.6 KHz
Date:      24.JUN.2011  10:12:51
```

FCC part 15.247
20 dB bandwidth

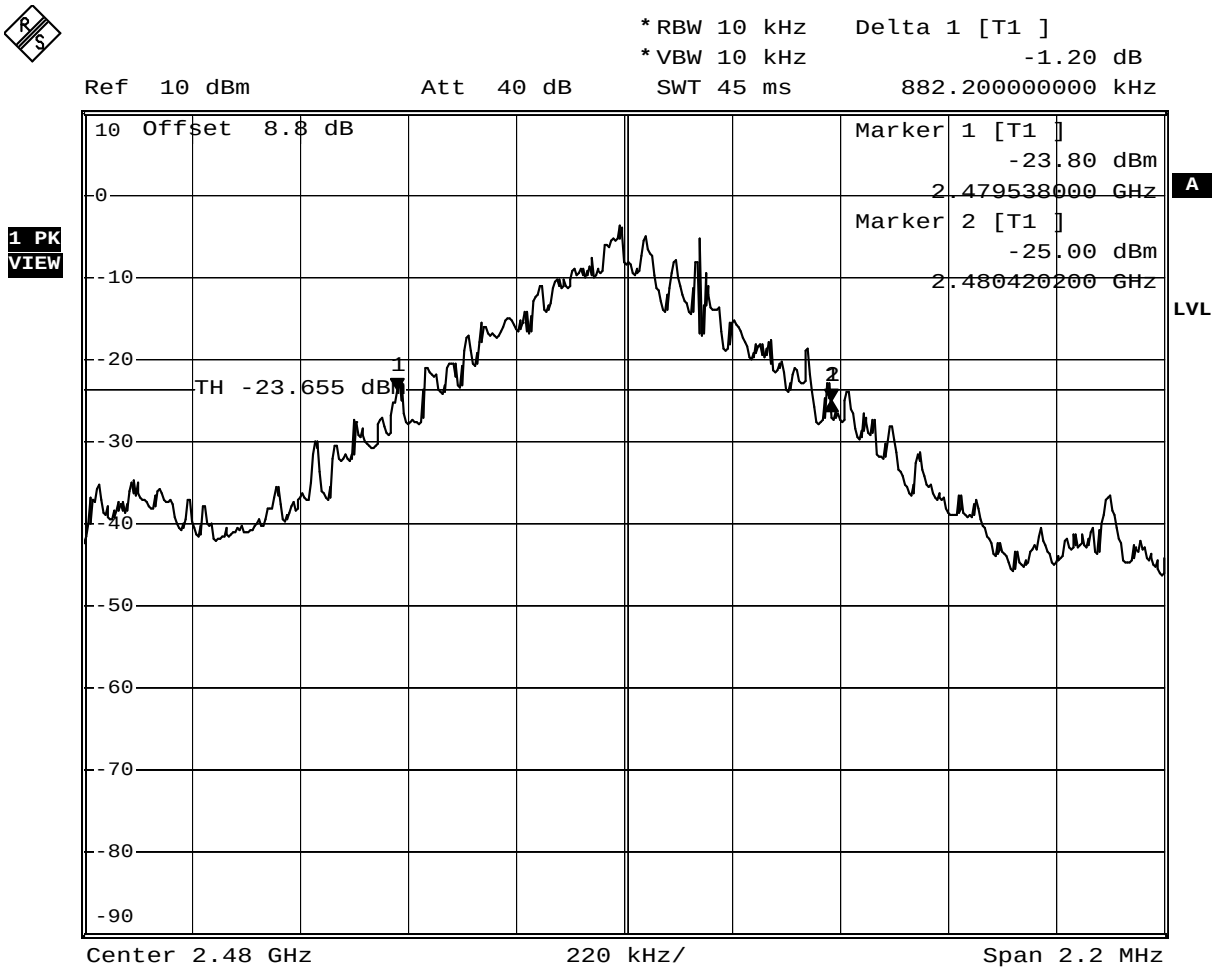
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 39 / 2441 MHz / GFSK
Comment 3	pass



Comment: 20 dB bandwidth: 921.8 KHz
Date: 24.JUN.2011 10:14:42

FCC part 15.247
20 dB bandwidth

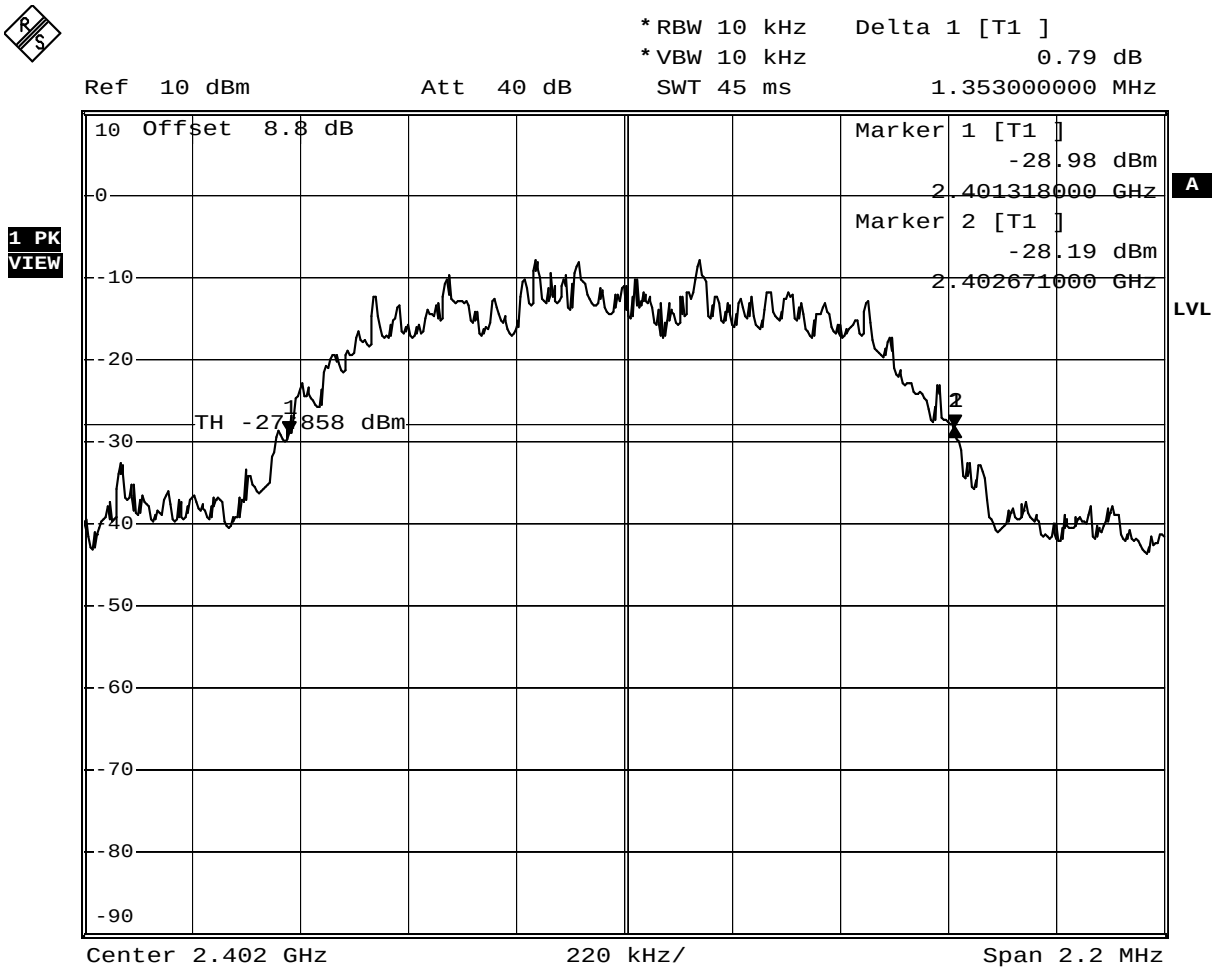
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 78 / 2480 MHz / GFSK
Comment 3	pass



Comment: 20 dB bandwidth: 882.2 KHz
Date: 24.JUN.2011 10:16:01

FCC part 15.247
20 dB bandwidth

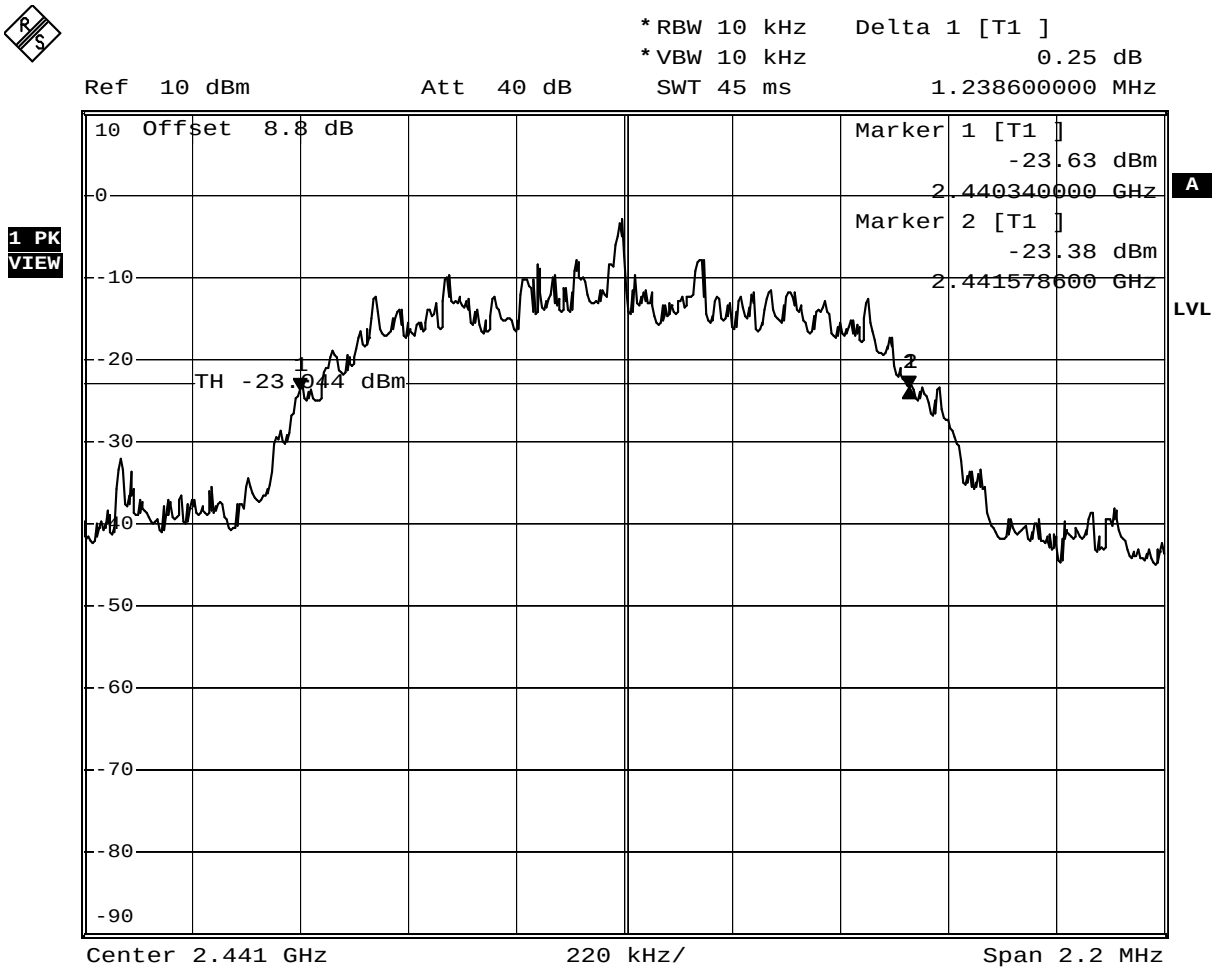
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 0 / 2402 MHz / Pi/4-DQPSK
Comment 3	pass



Comment: 20 dB bandwidth: 1353 KHz
Date: 24.JUN.2011 10:19:53

FCC part 15.247
20 dB bandwidth

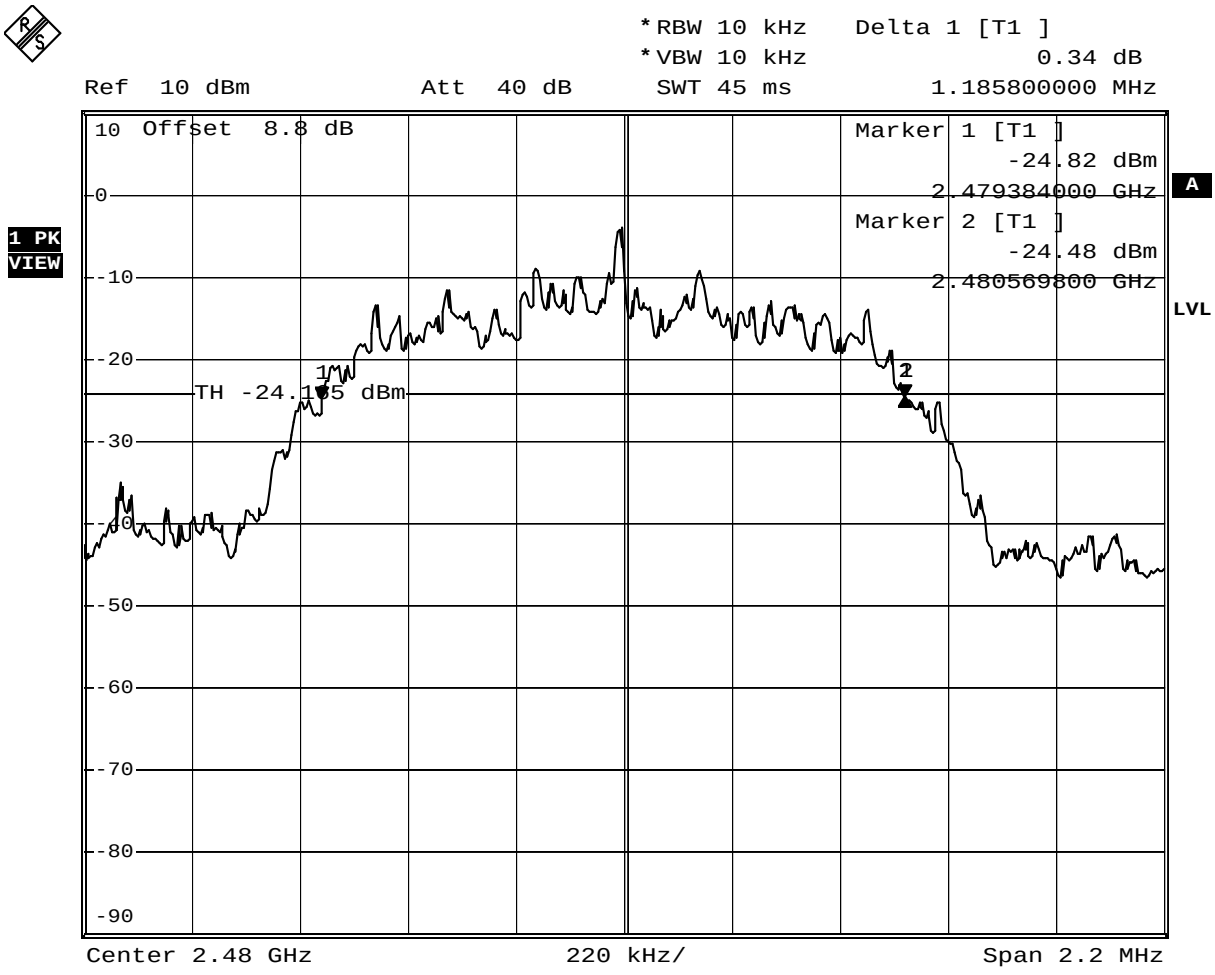
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 39 / 2441 MHz / Pi/4-DQPSK
Comment 3	pass




```
Comment: 20 dB bandwidth: 1238.6 KHz
Date:      24.JUN.2011  10:18:50
```

FCC part 15.247
20 dB bandwidth

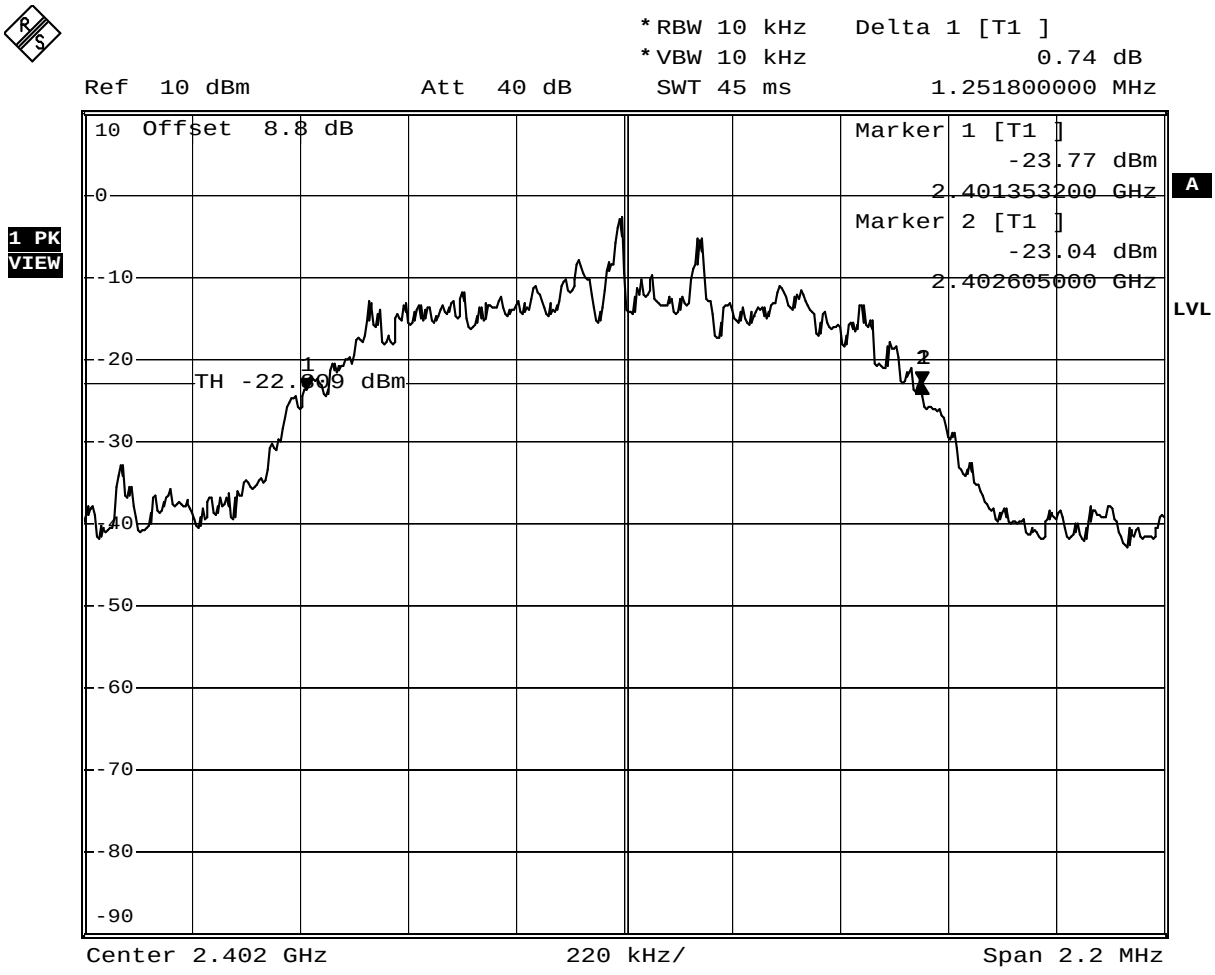
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 78 / 2480 MHz / Pi/4-DQPSK
Comment 3	pass




```
Comment: 20 dB bandwidth: 1185.8 KHz
Date:      24.JUN.2011  10:17:38
```

FCC part 15.247
20 dB bandwidth

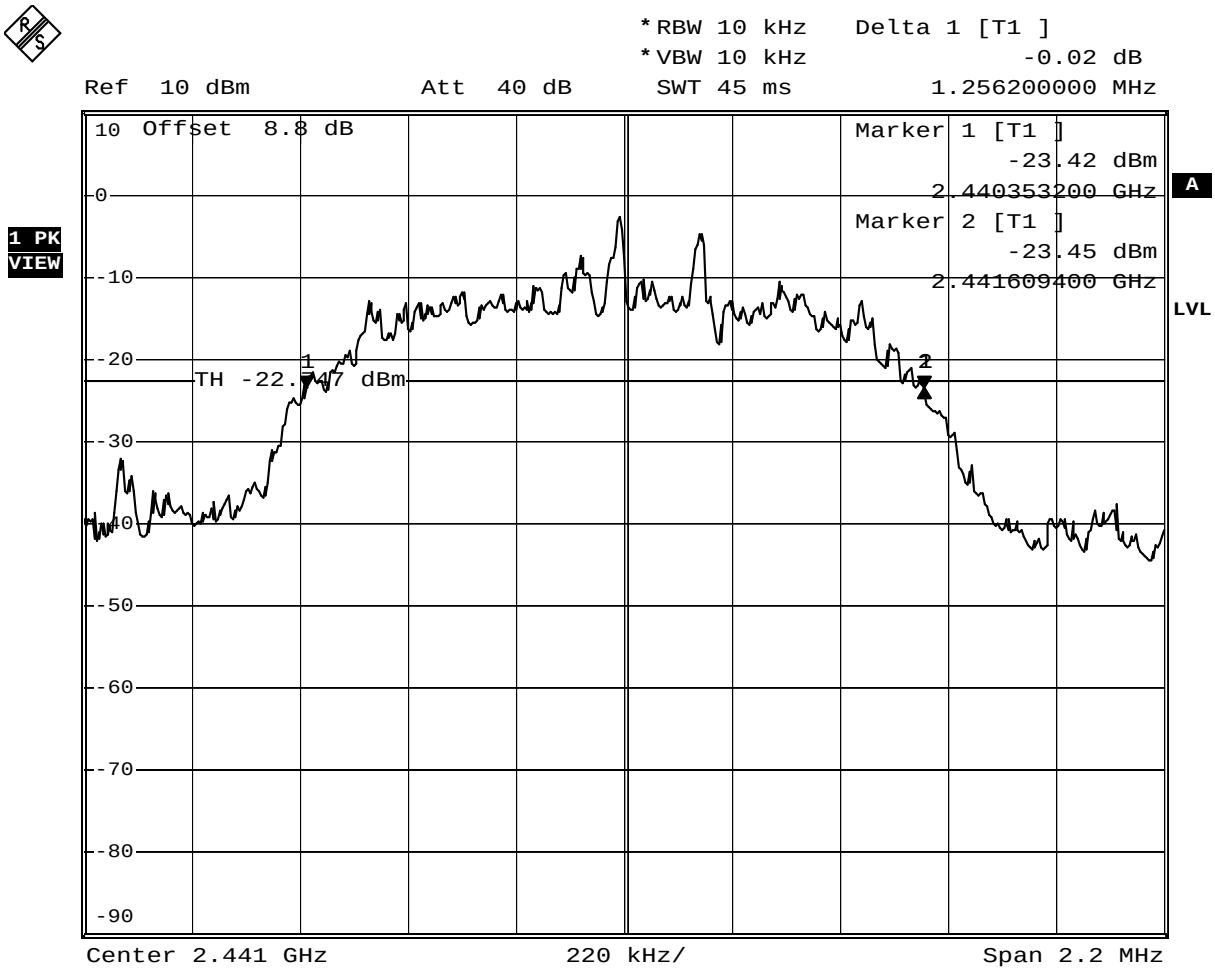
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 0 / 2402 MHz / 8DPSK
Comment 3	pass



Comment: 20 dB bandwidth: 1251.8 KHz
Date: 24.JUN.2011 10:21:29

FCC part 15.247
20 dB bandwidth

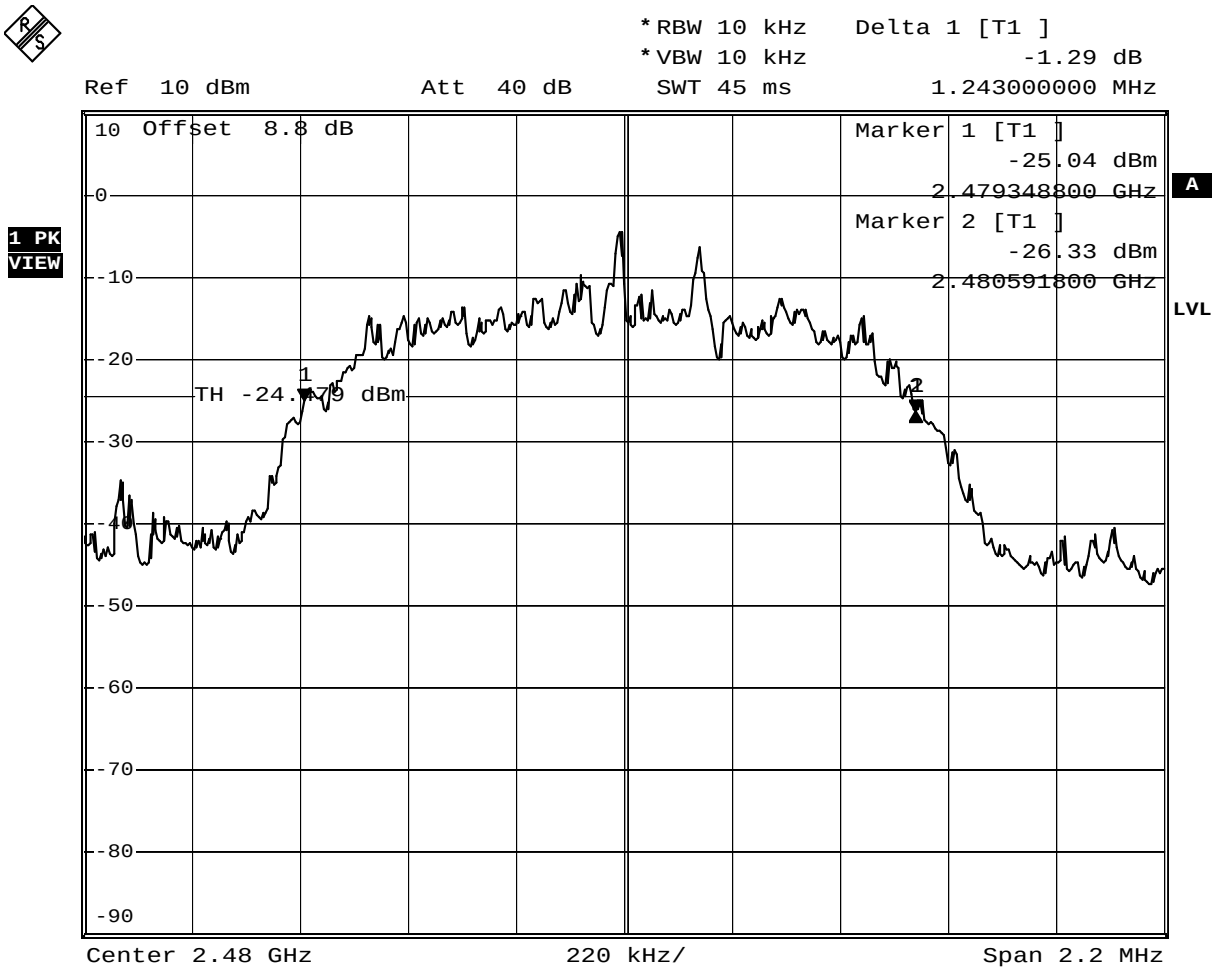
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 39 / 2441 MHz / 8DPSK
Comment 3	pass



Comment: 20 dB bandwidth: 1256.2 KHz
Date: 24.JUN.2011 10:23:17

FCC part 15.247
20 dB bandwidth

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	20 dB bandwidth
Comment 2	Channel.: 78 / 2480 MHz / 8DPSK
Comment 3	pass

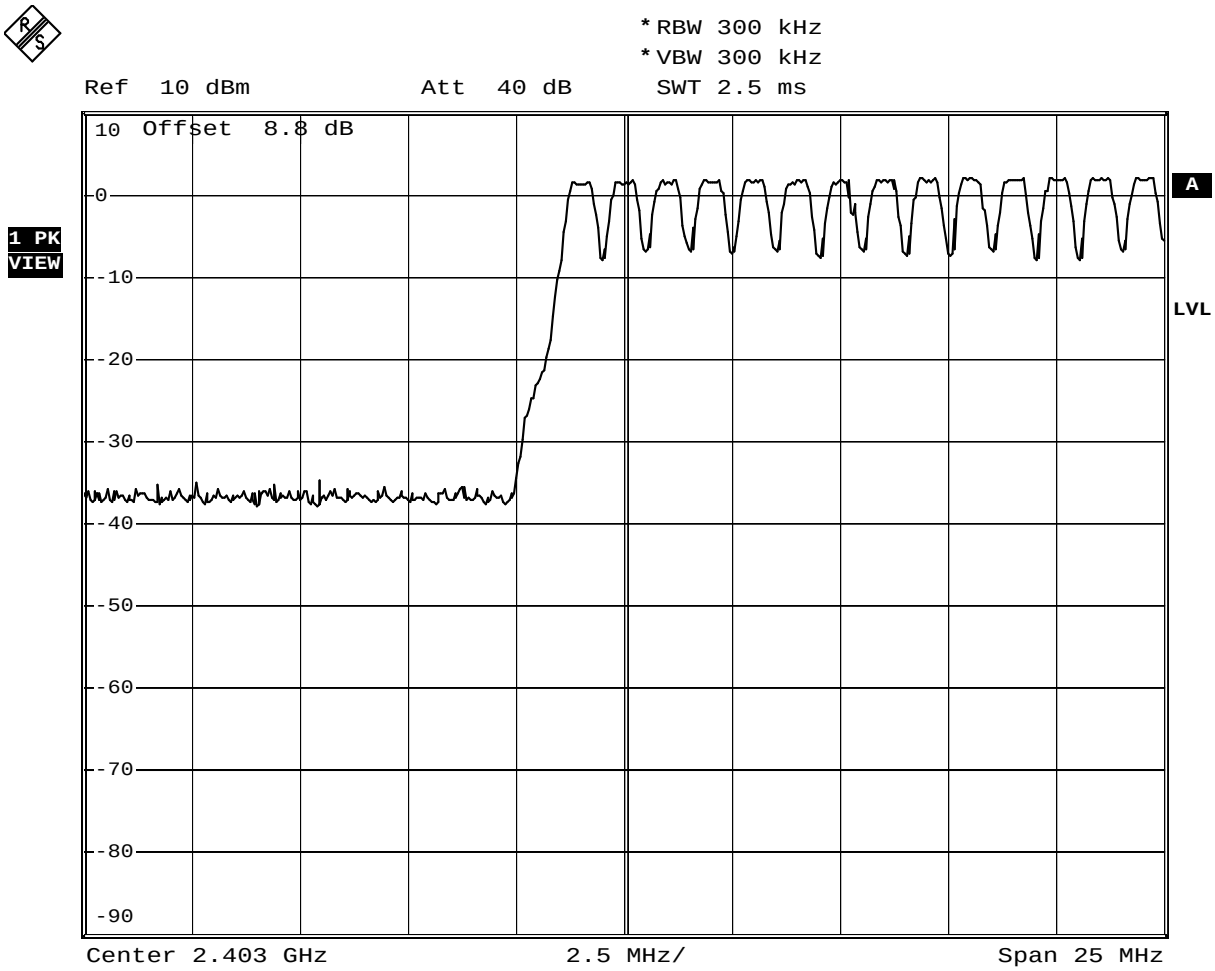


Comment: 20 dB bandwidth: 1243 KHz
Date: 24.JUN.2011 10:24:23

Annex D Hopping channels

FCC part 15.247
Number of hopping frequencies

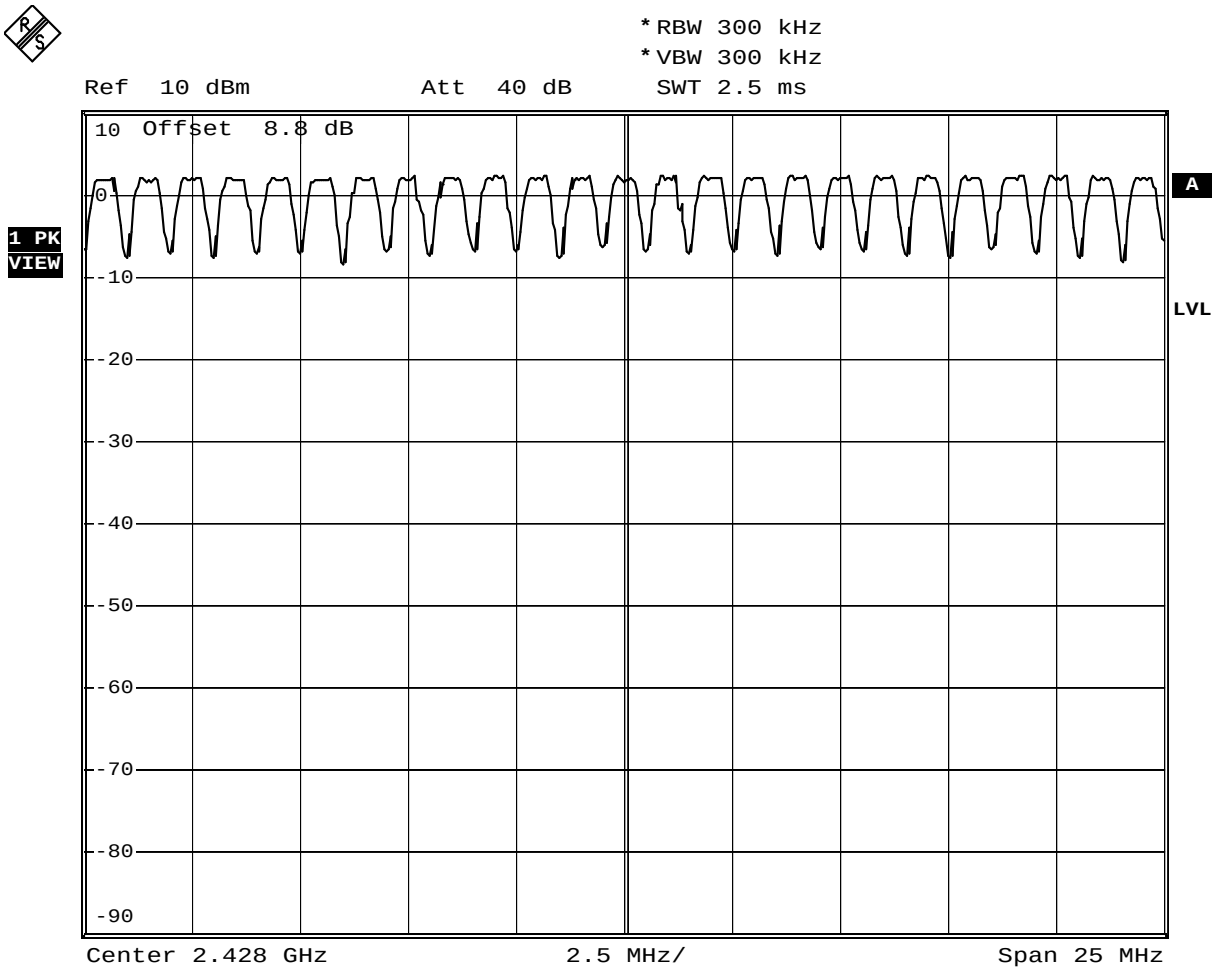
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.: 0-13
Comment 3	pass



Comment: Number of hopping frequencies
Date: 24.JUN.2011 11:03:50

FCC part 15.247
Number of hopping frequencies

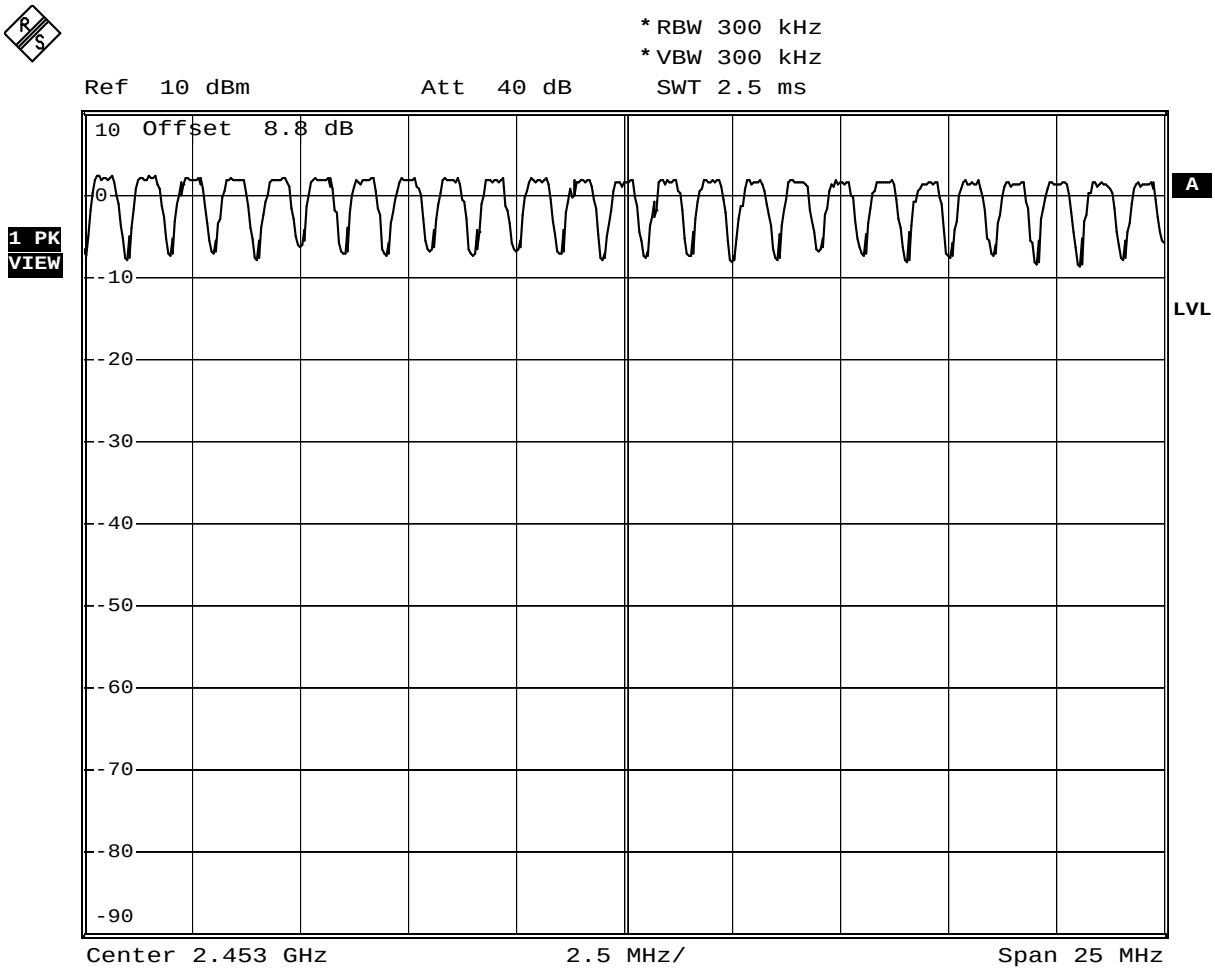
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.: 14-38
Comment 3	pass



Comment: Number of hopping frequencies
Date: 24.JUN.2011 11:05:16

FCC part 15.247
Number of hopping frequencies

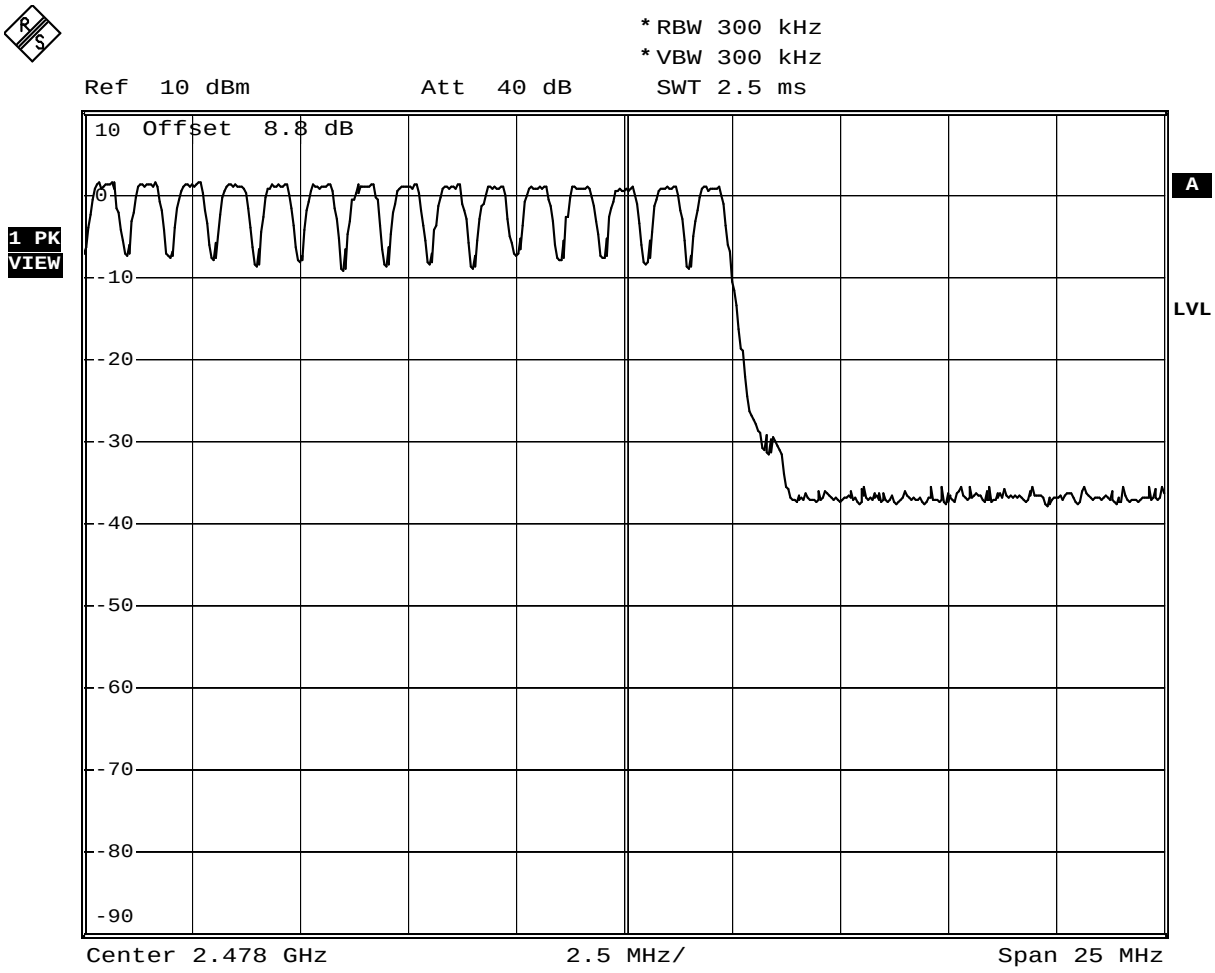
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.:39-63
Comment 3	pass



Comment: Number of hopping frequencies
Date: 24.JUN.2011 11:06:56

FCC part 15.247
Number of hopping frequencies

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Number of hopping frequencies
Comment 2	Channel.: 64-78
Comment 3	pass

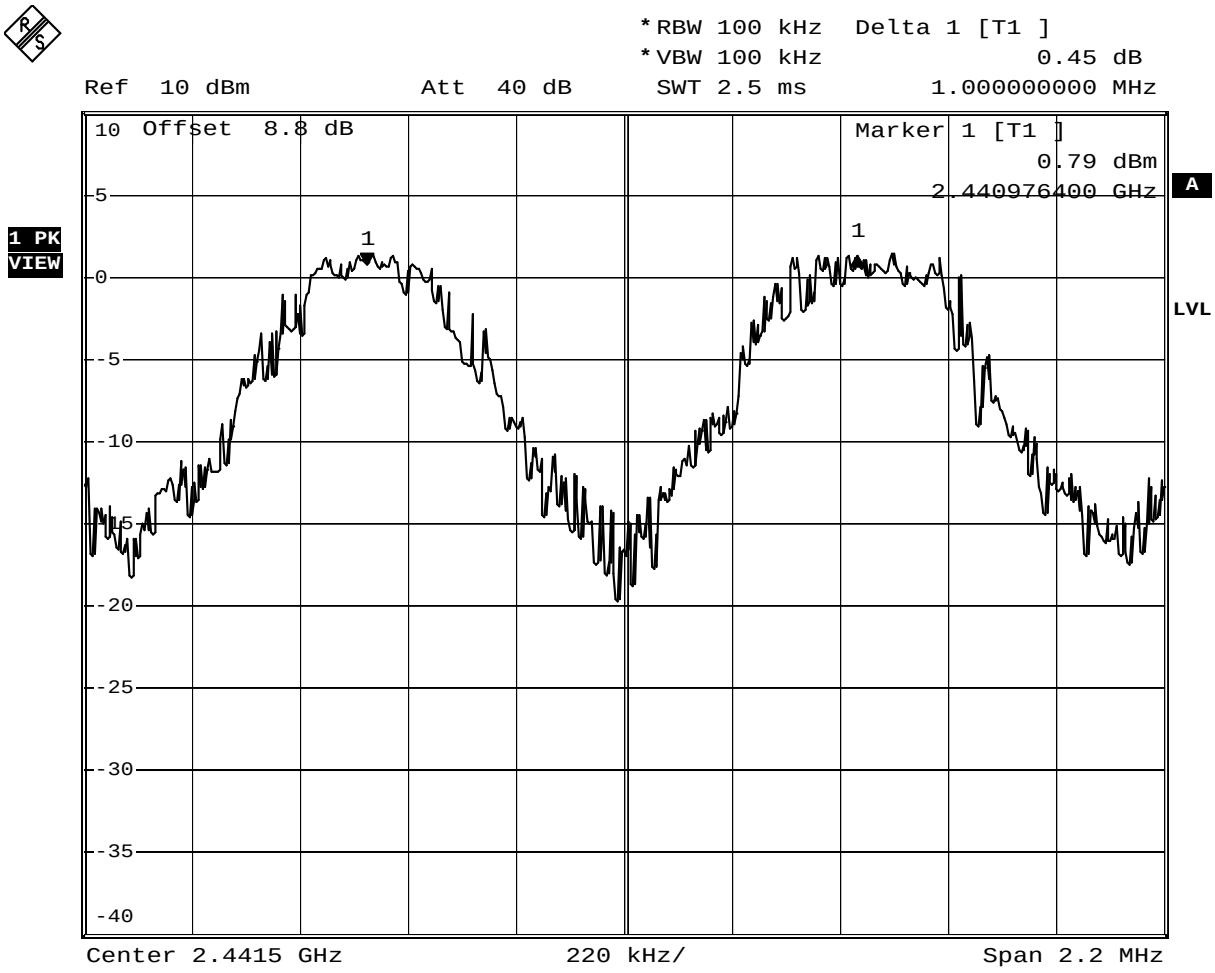


Comment: Number of hopping frequencies
Date: 24.JUN.2011 11:08:33

Annex E Hopping channel separation

FCC part 15.247
Carrier frequency separation

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)(1)
Comment 1	Carrier frequency separation
Comment 2	Channel.: 39/40 / 2441/2442 MHz
Comment 3	Hopping mode

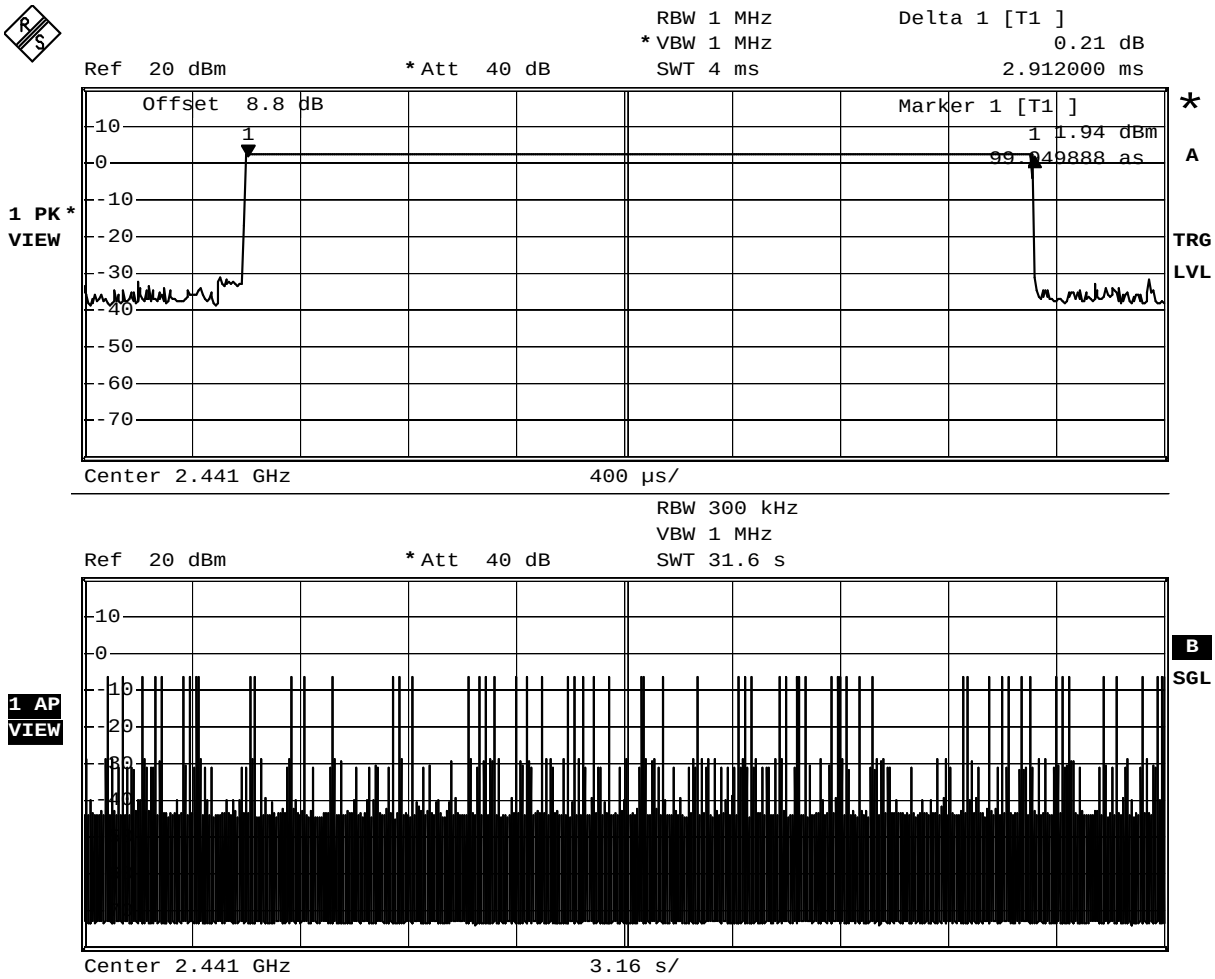


Comment: Limit: > two-thirds of the 20 dB bandwidth ; Result: Pass
Date: 24.JUN.2011 11:00:33

Annex F Time of occupancy

FCC part 15.247
Time of occupancy (dwell time)

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(a)
Comment 1	Time of occupancy
Comment 2	Channel.: 39 / 2441 MHz (Hopping mode)
Comment 3	64 events * 2.91 ms result: 186.2 ms

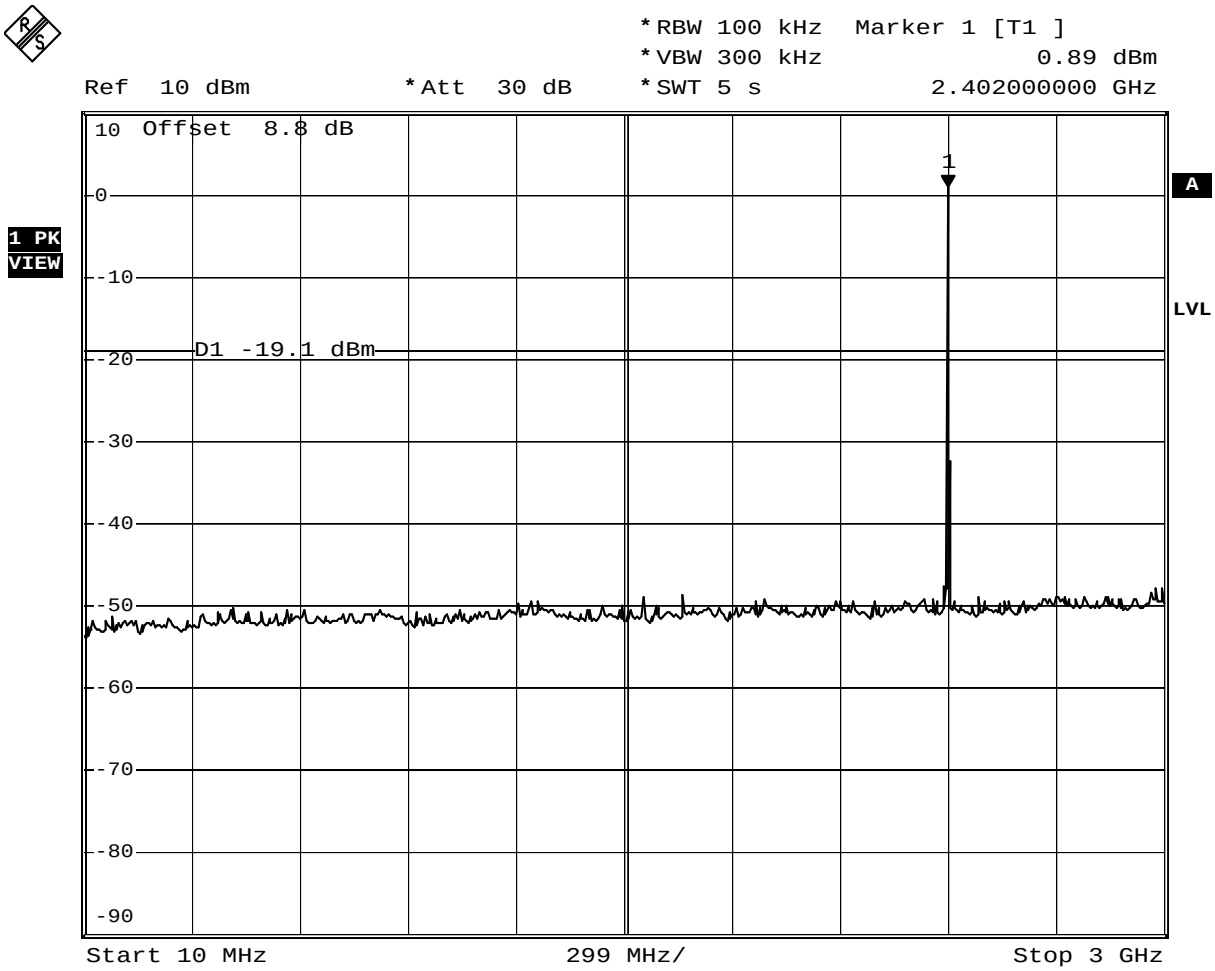


Comment: Burst length=2.912 ms
Date: 24.JUN.2011 11:27:06

Annex G Transmitter conducted spurious emissions

FCC part 15.247 (d)
Spurious Emissions

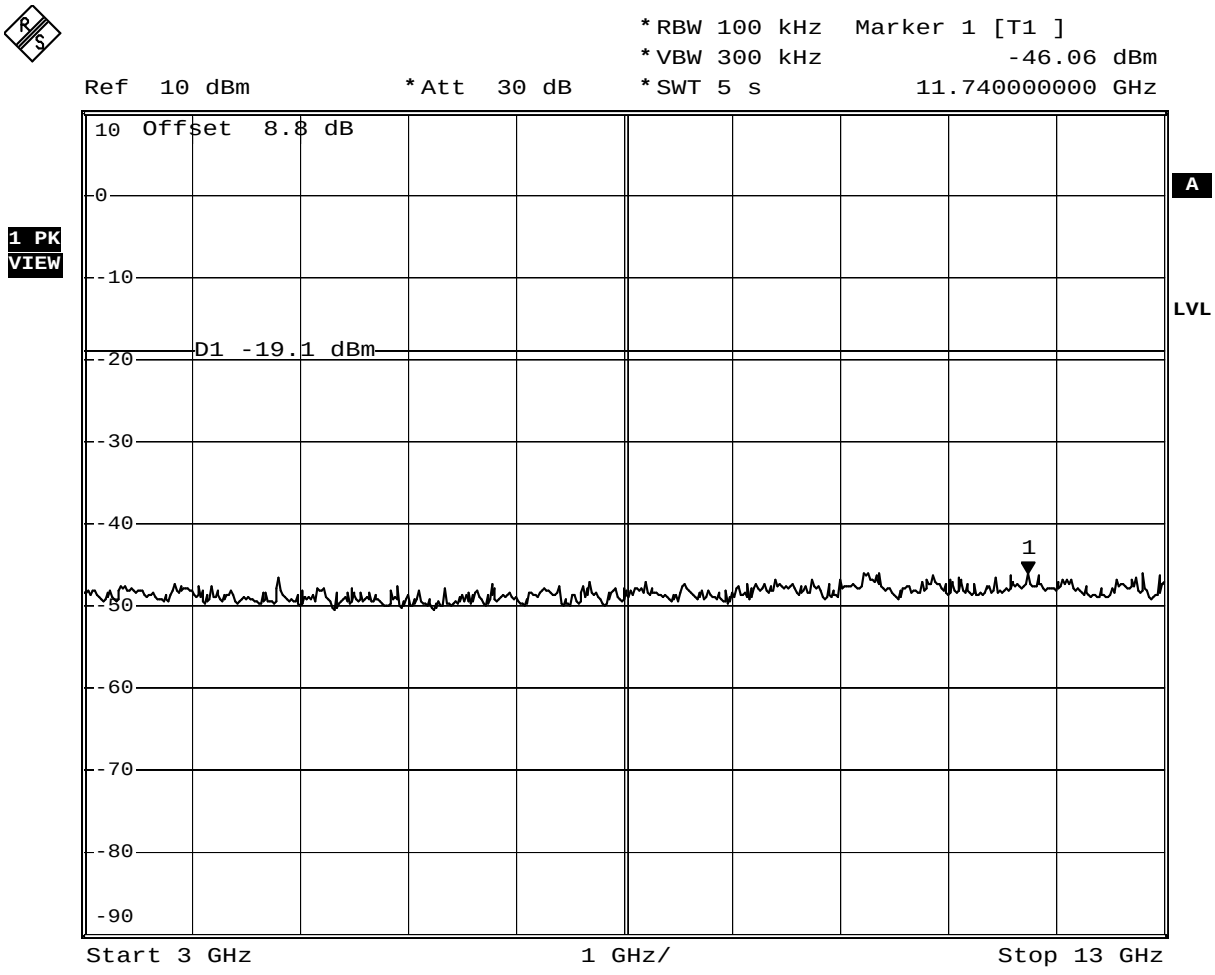
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2402 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 11:33:33

FCC part 15.247 (d)
Spurious Emissions

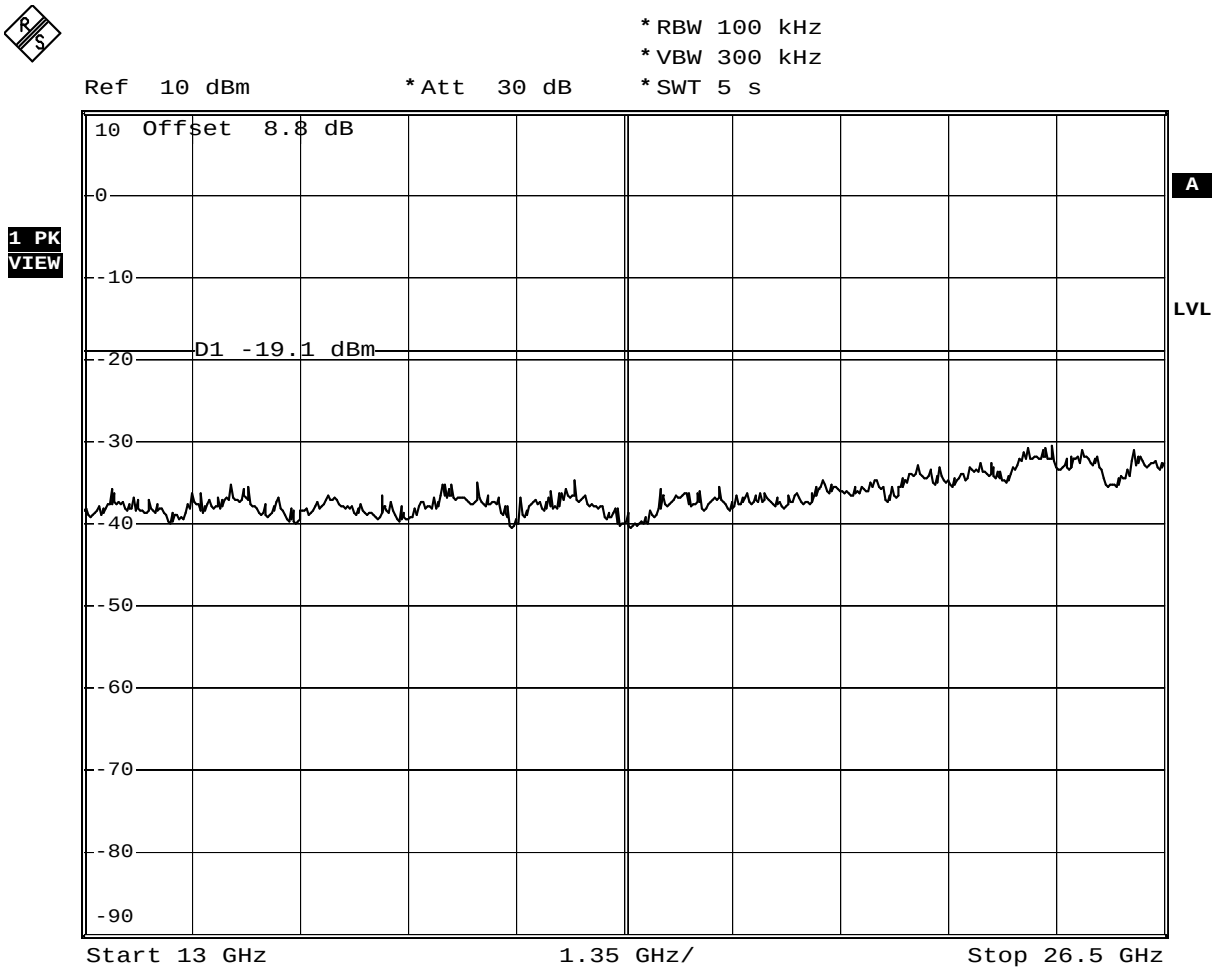
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2402 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 11:35:14

FCC part 15.247 (d)
Spurious Emissions

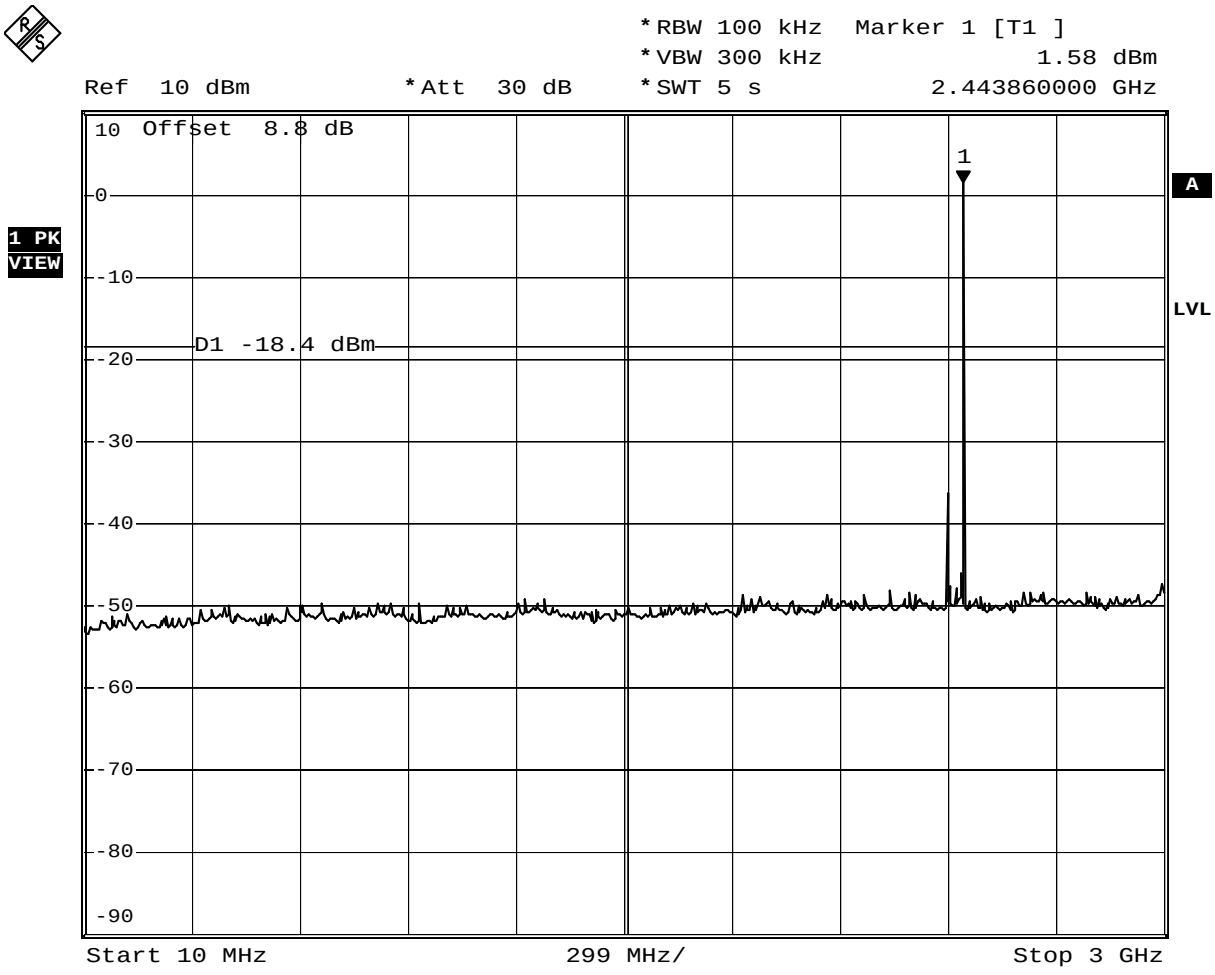
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2402 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 11:36:01

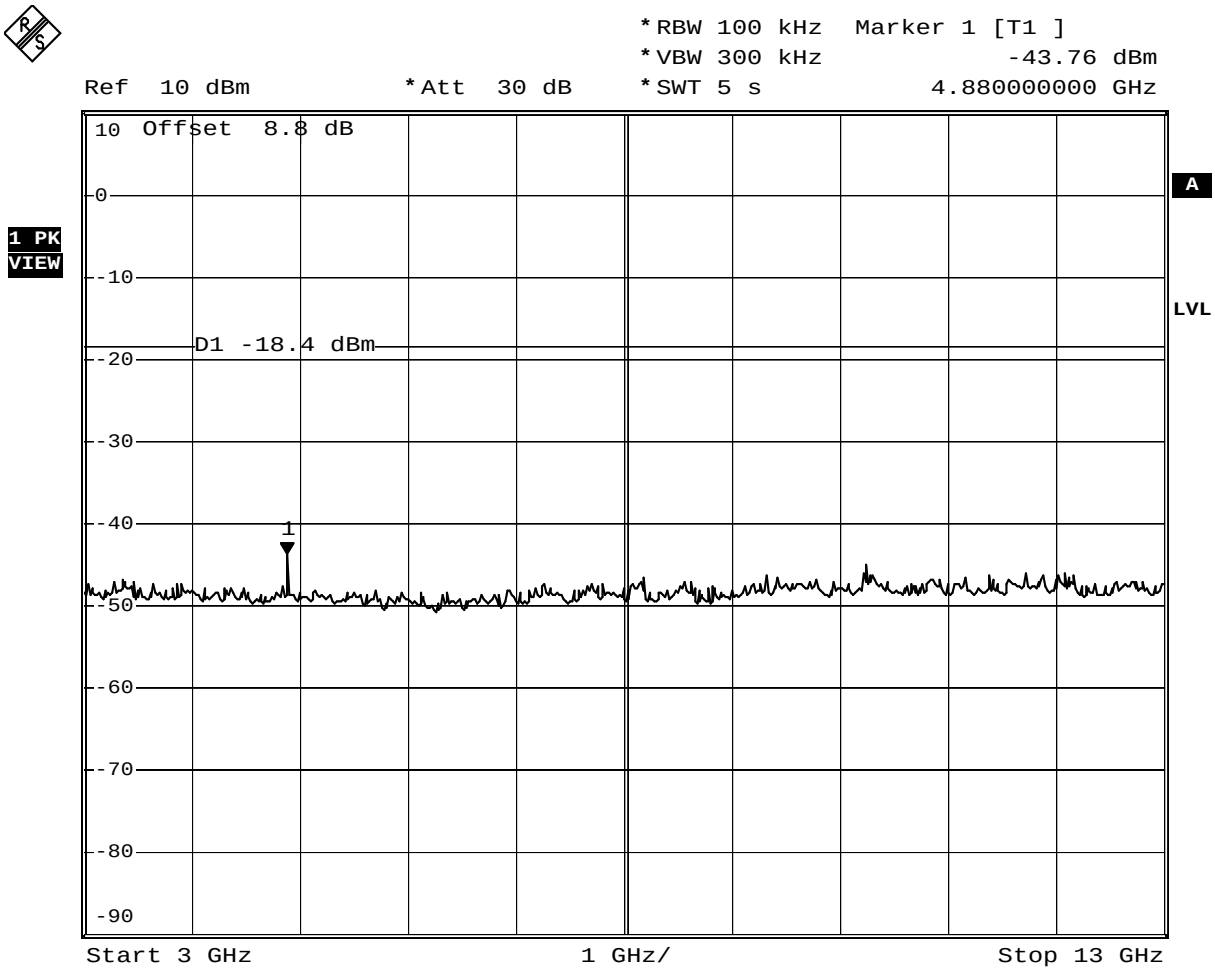
FCC part 15.247 (d)
Spurious Emissions

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2441 MHz
Comment 3	GFSK / DH5



FCC part 15.247 (d)
Spurious Emissions

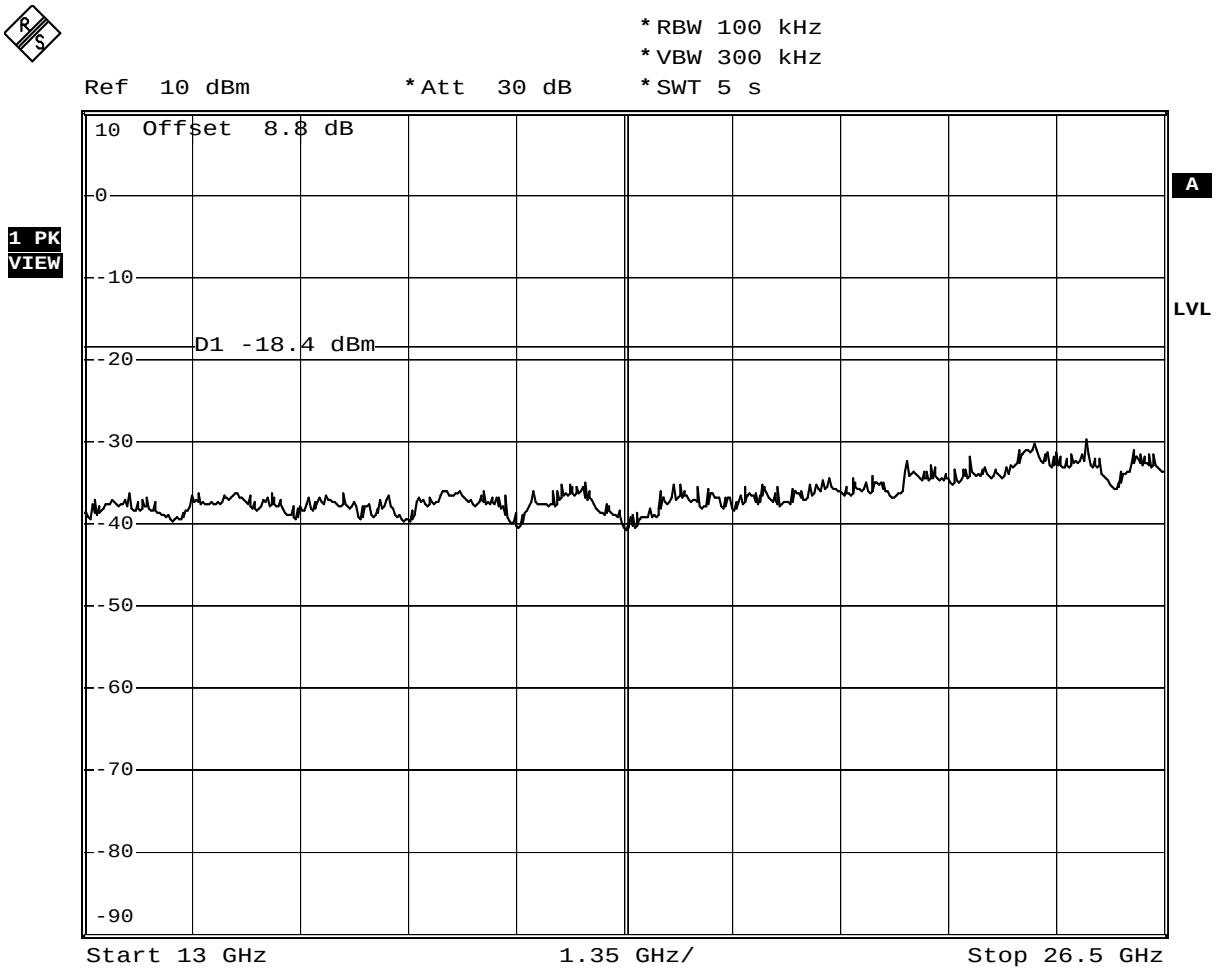
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2441 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 11:41:08

FCC part 15.247 (d)
Spurious Emissions

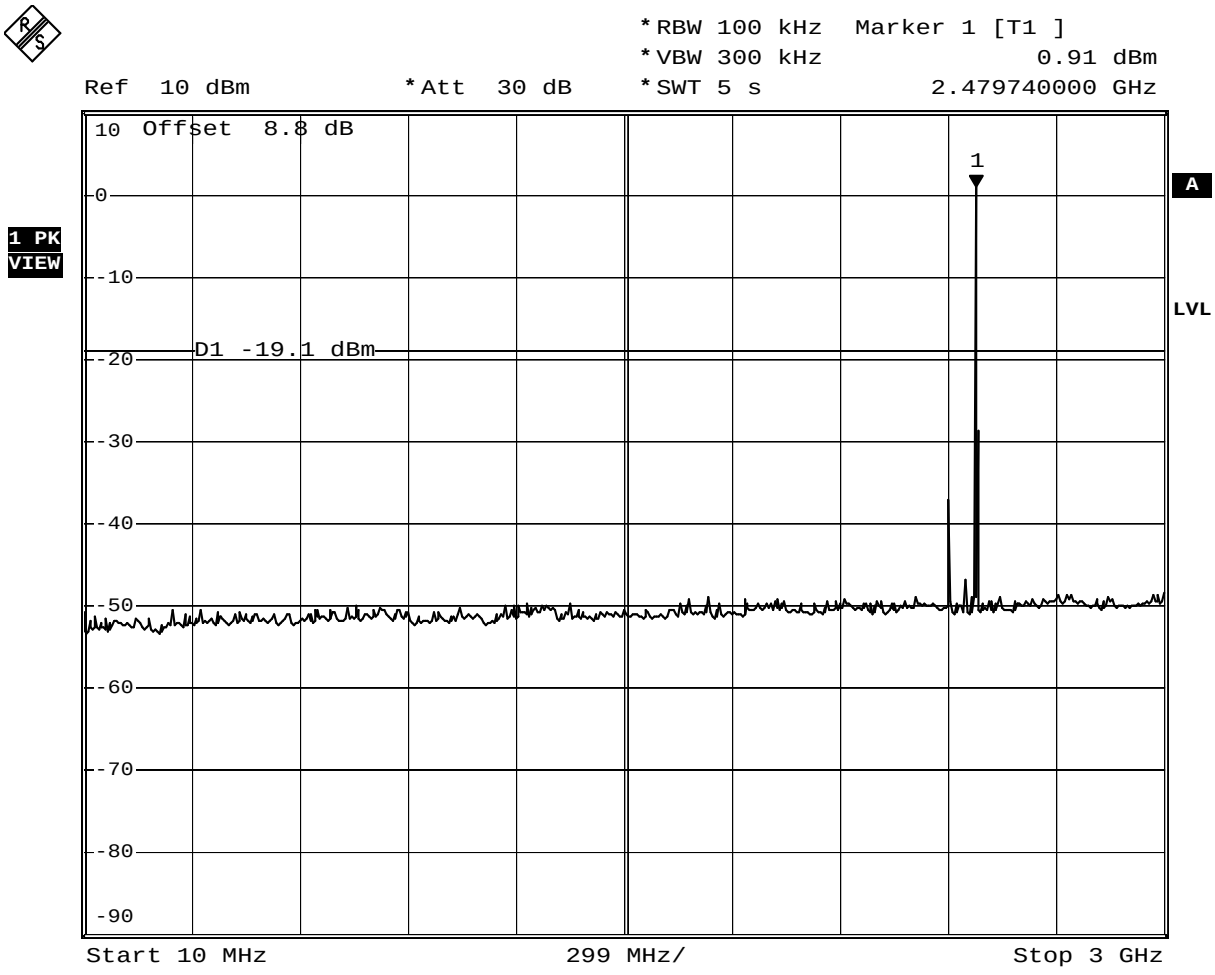
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2441 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 11:42:08

FCC part 15.247 (d)
Spurious Emissions

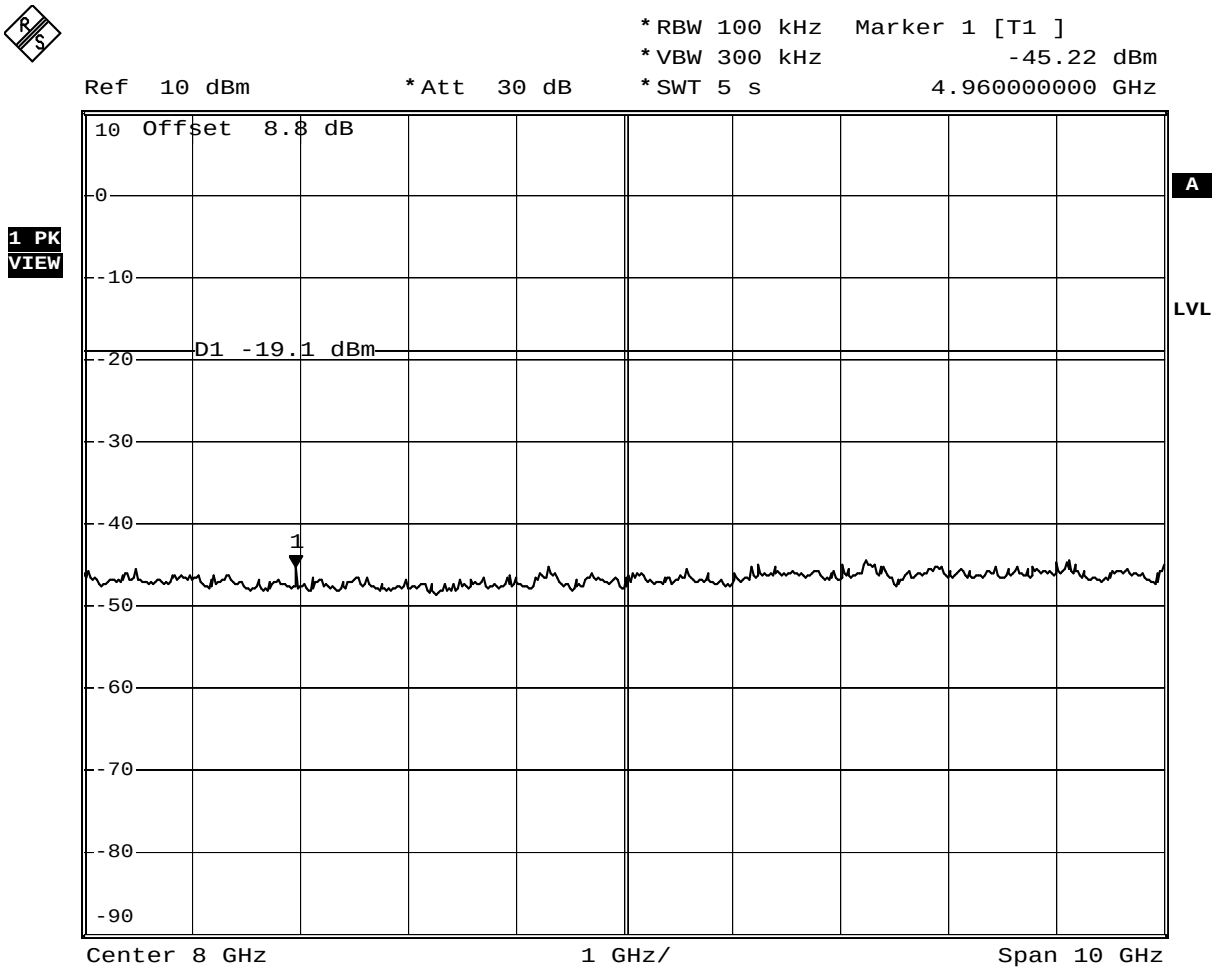
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 11:44:00

FCC part 15.247 (d)
Spurious Emissions

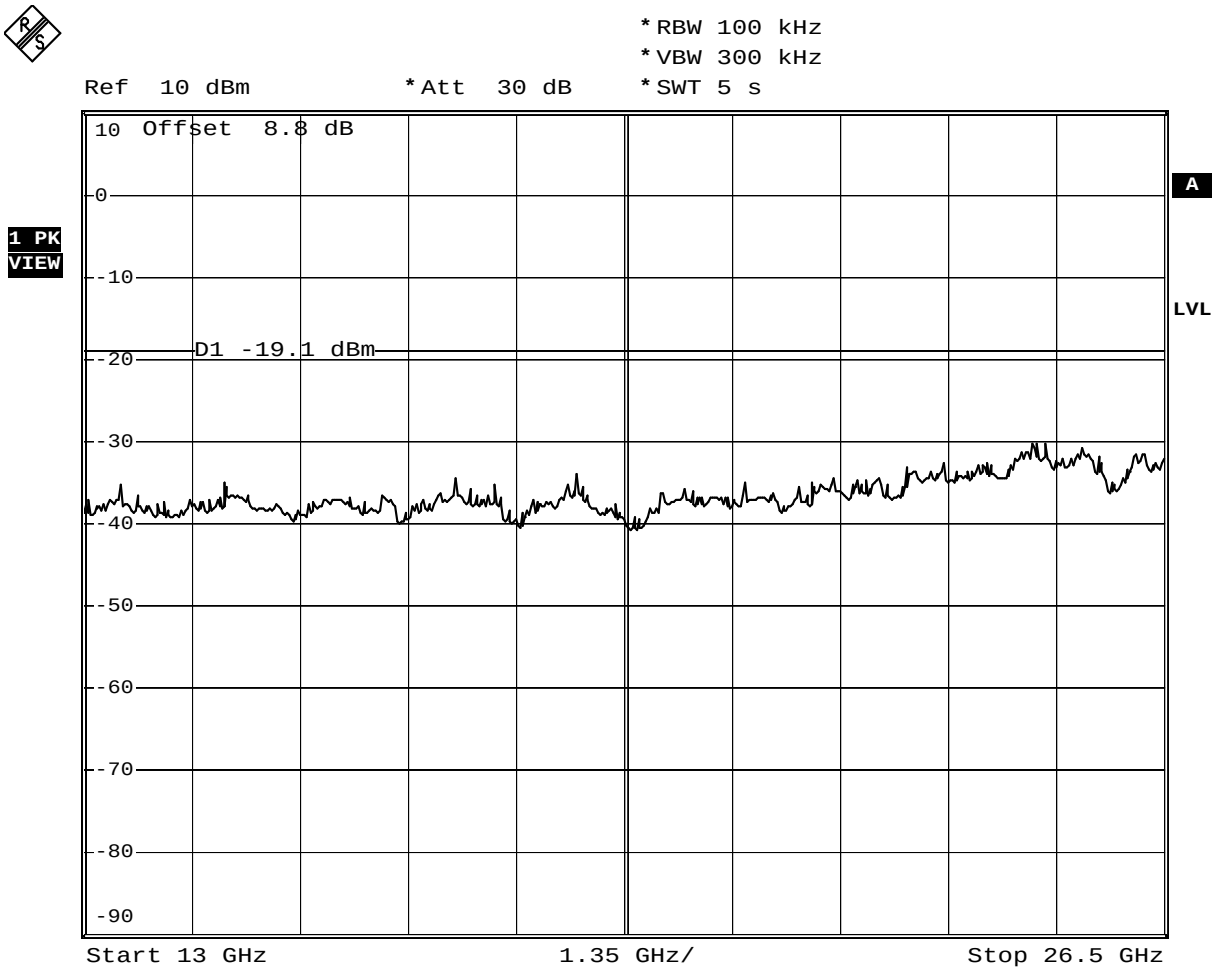
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 12:13:02

FCC part 15.247 (d)
Spurious Emissions

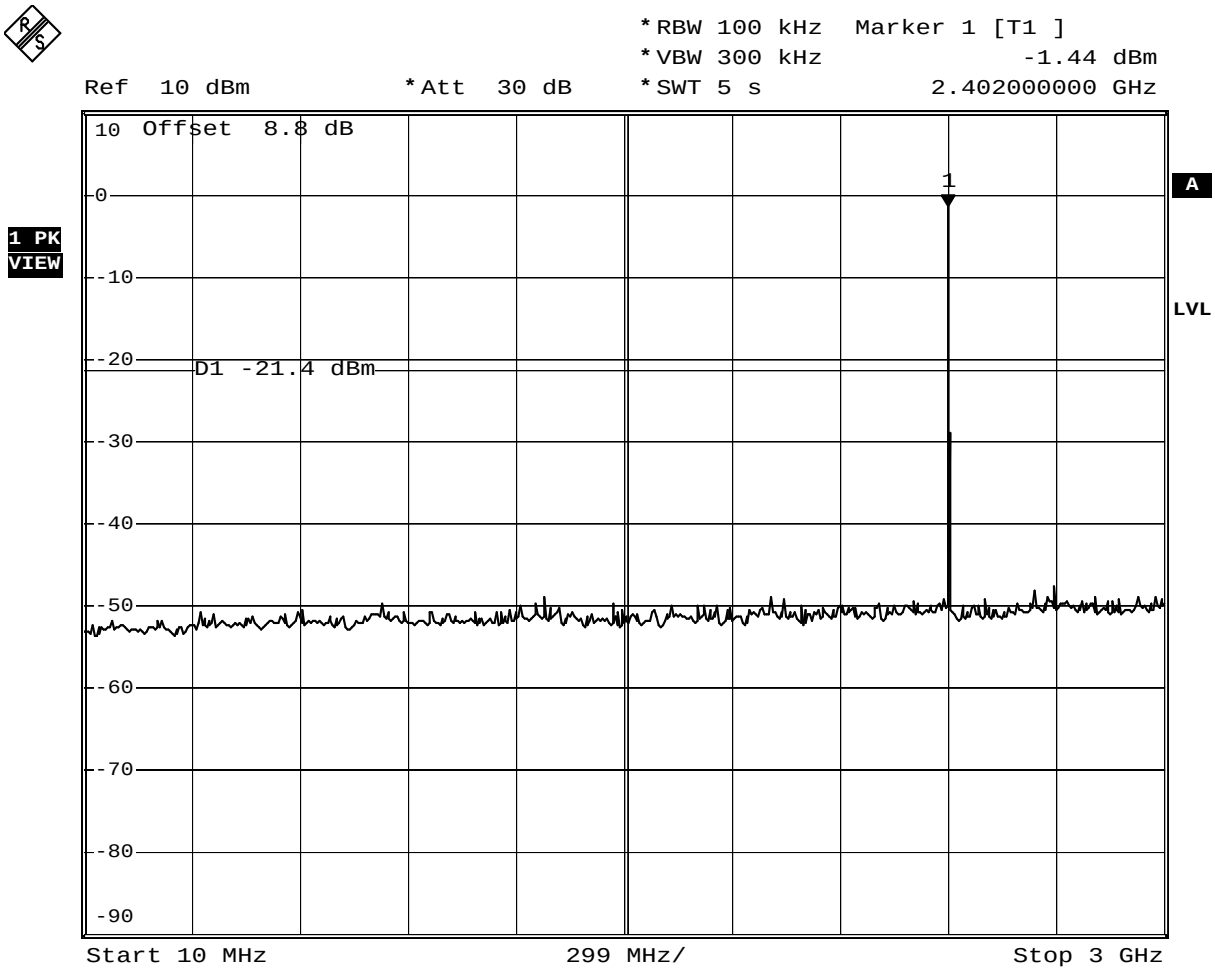
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	GFSK / DH5



Date: 24.JUN.2011 12:13:59

FCC part 15.247 (d)
Spurious Emissions

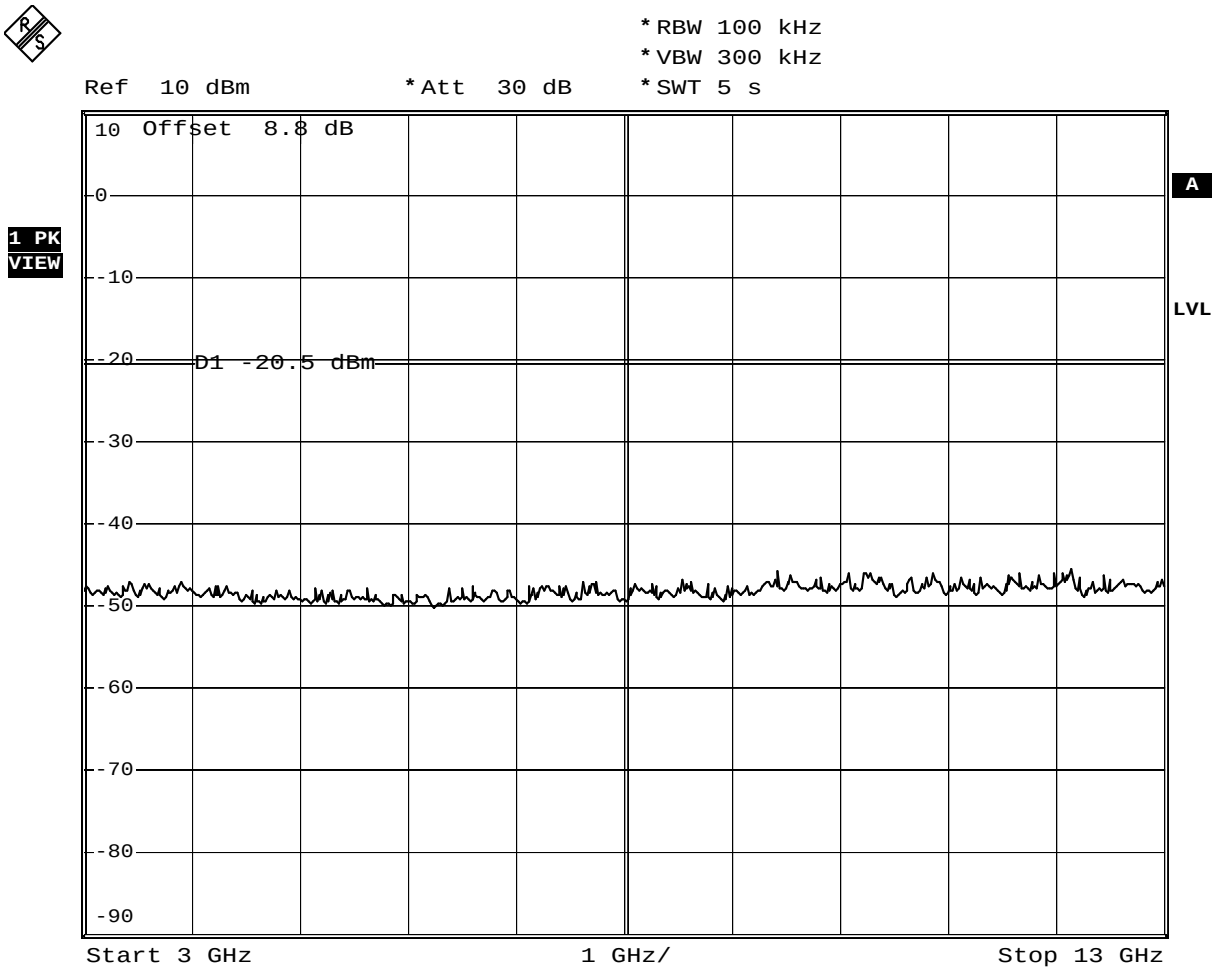
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2402 MHz
Comment 3	8DPSK / 3DH5



Date: 24.JUN.2011 12:20:54

FCC part 15.247 (d)
Spurious Emissions

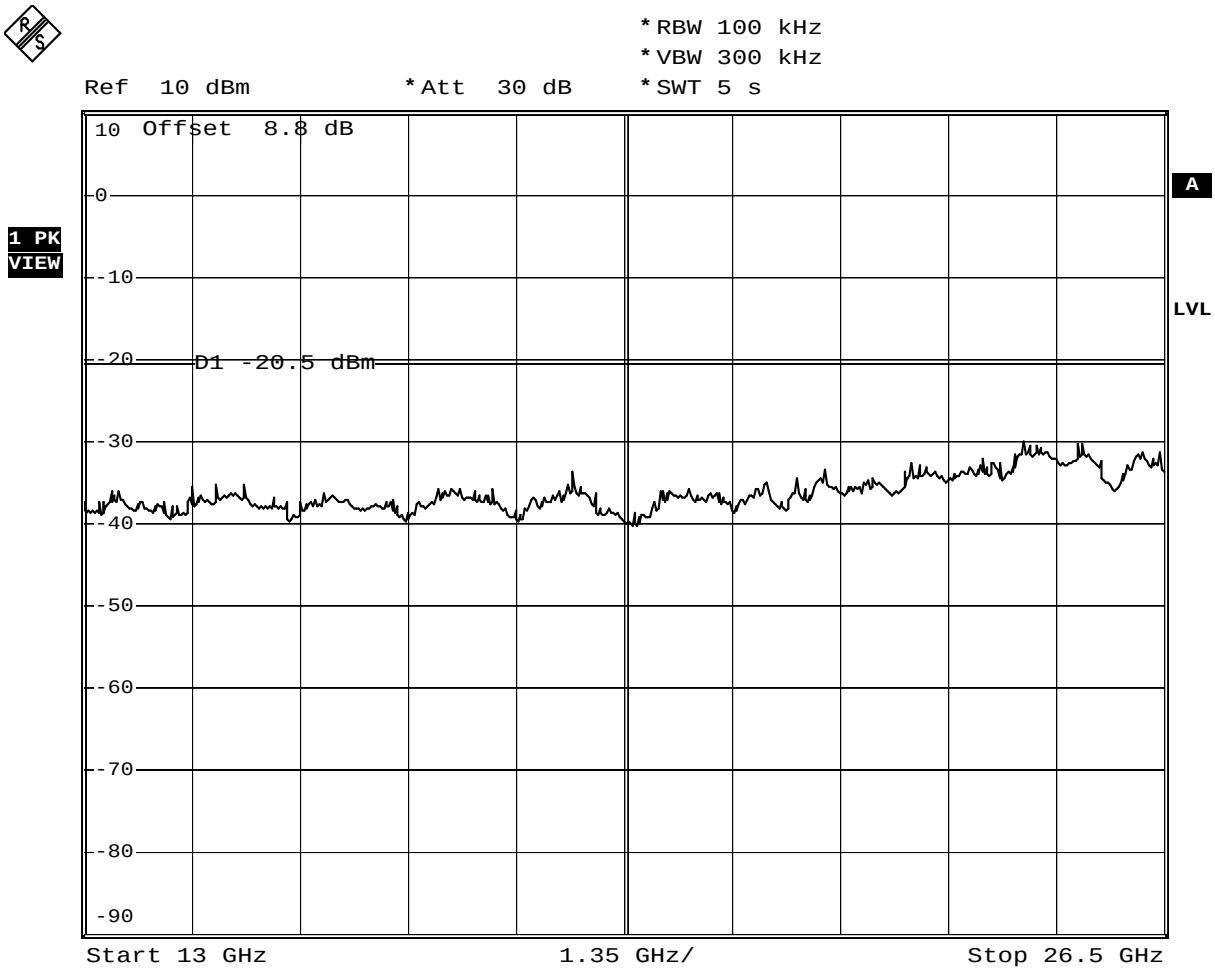
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2402 MHz
Comment 3	8DPSK / 3DH5



Date: 24.JUN.2011 12:18:28

FCC part 15.247 (d)
Spurious Emissions

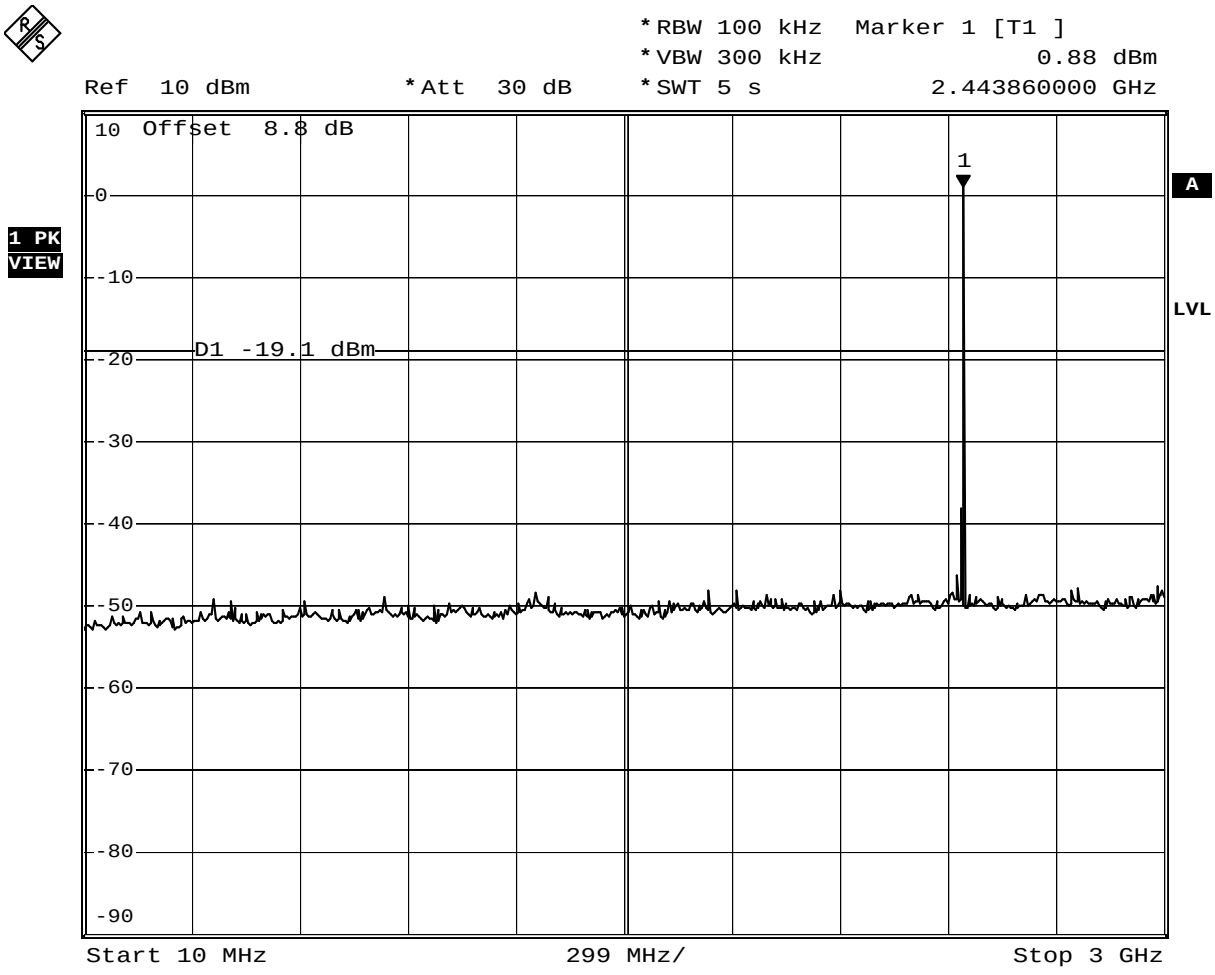
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2402 MHz
Comment 3	8DPSK / 3DH5



Date: 24.JUN.2011 12:19:44

FCC part 15.247 (d)
Spurious Emissions

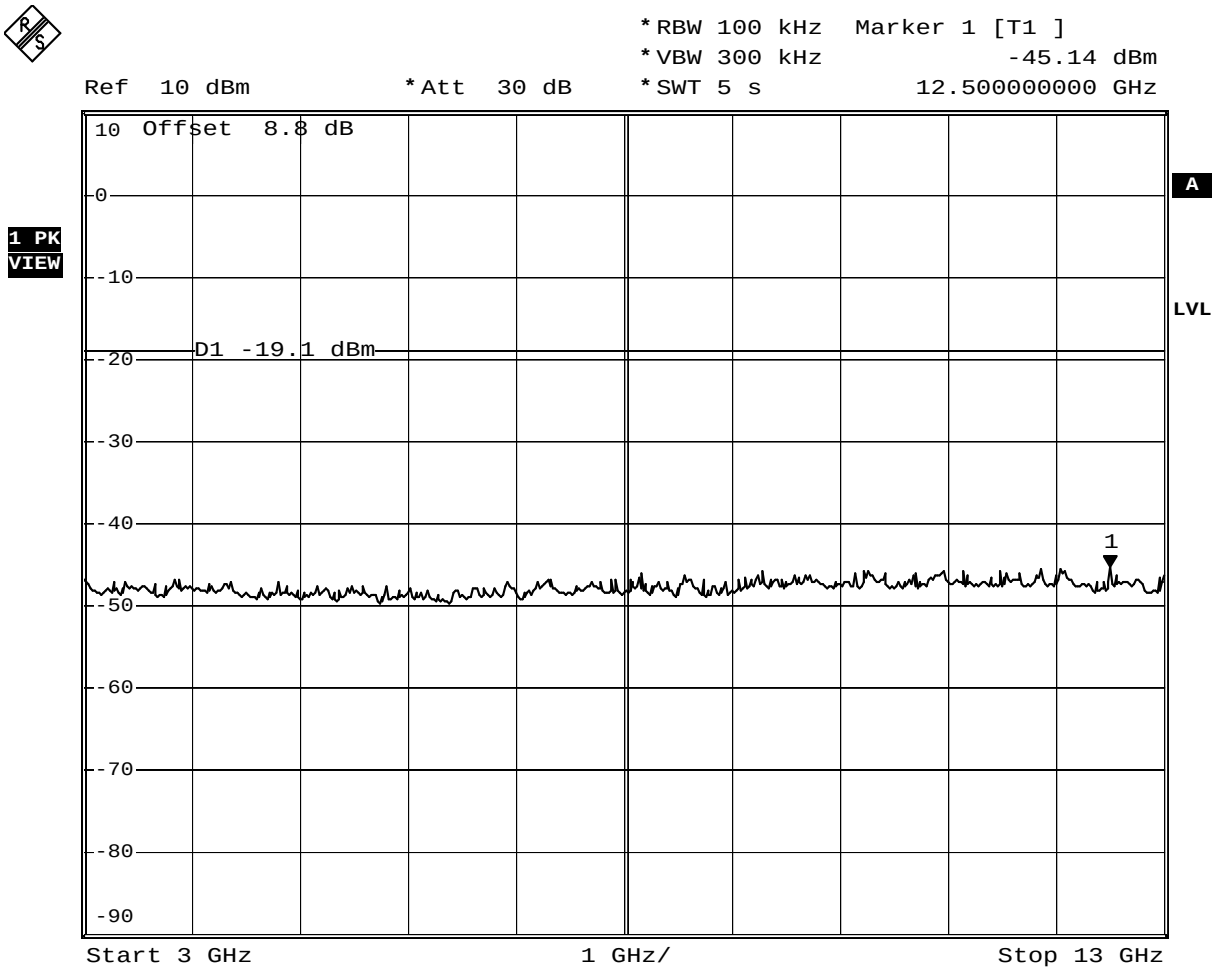
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2441 MHz
Comment 3	8DPSK / 3DH5



Date: 27.JUN.2011 07:50:09

FCC part 15.247 (d)
Spurious Emissions

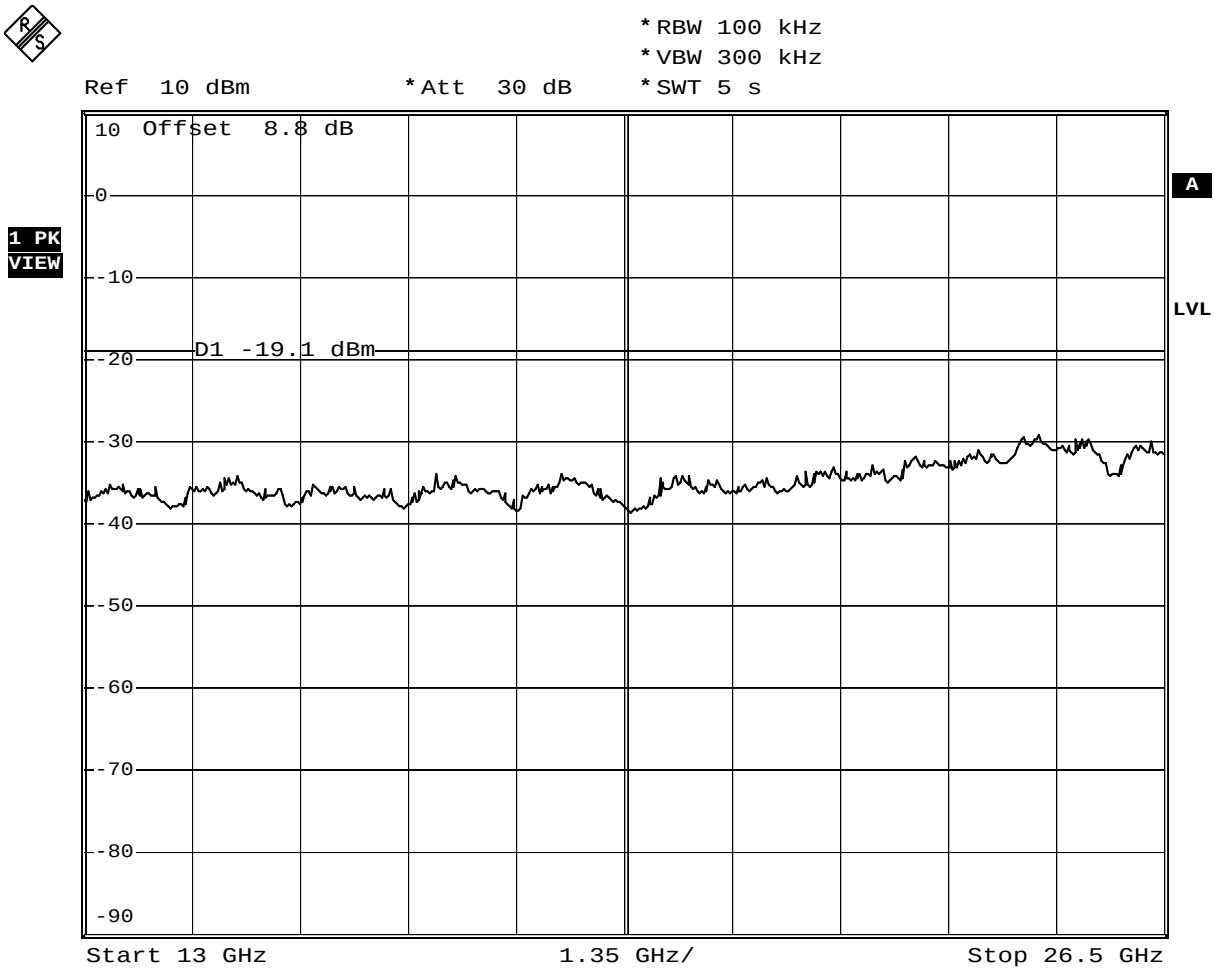
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2441 MHz
Comment 3	8DPSK / 3DH5



Date: 27.JUN.2011 07:52:13

FCC part 15.247 (d)
Spurious Emissions

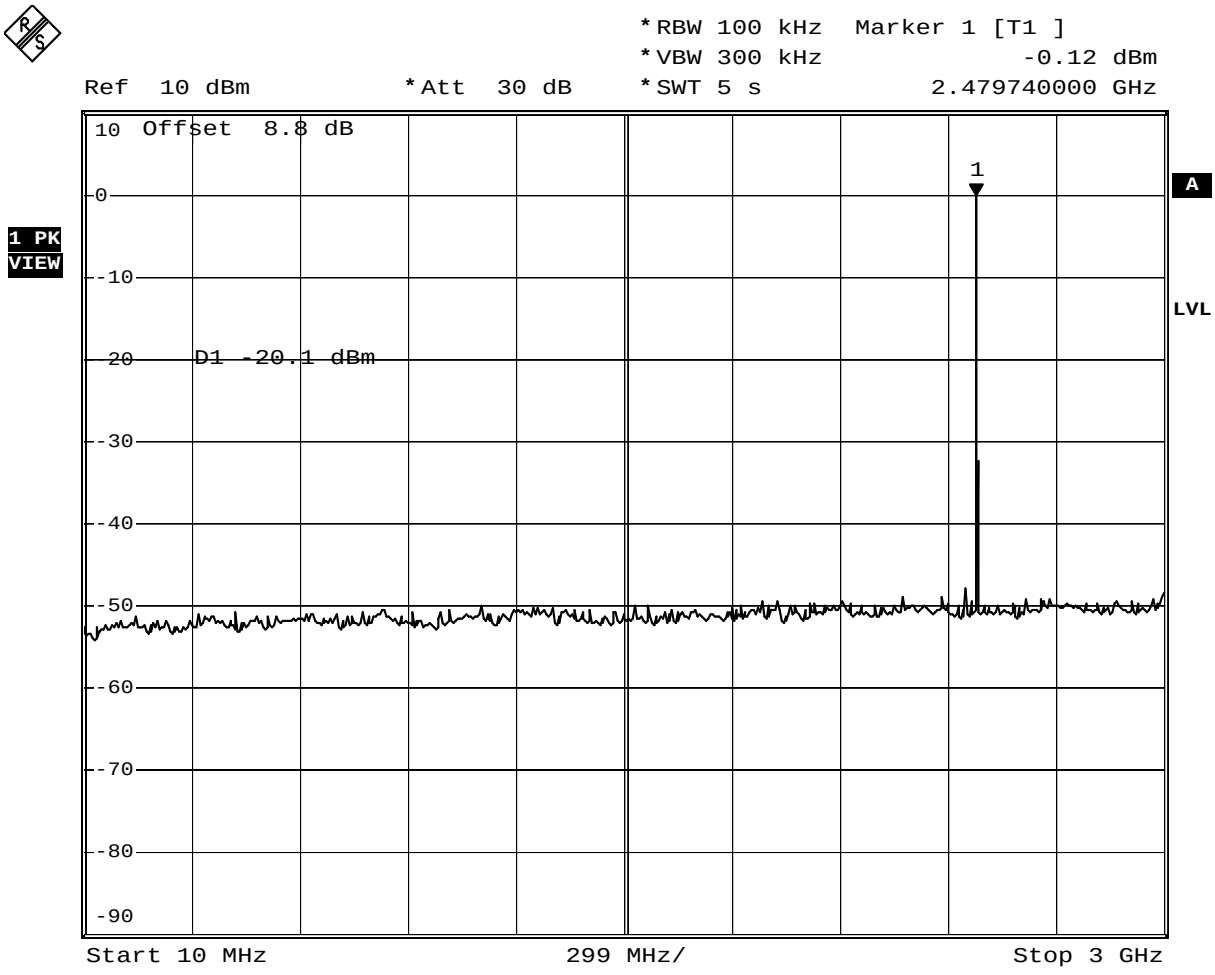
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2441 MHz
Comment 3	8DPSK / 3DH5



Date: 27.JUN.2011 08:04:11

FCC part 15.247 (d)
Spurious Emissions

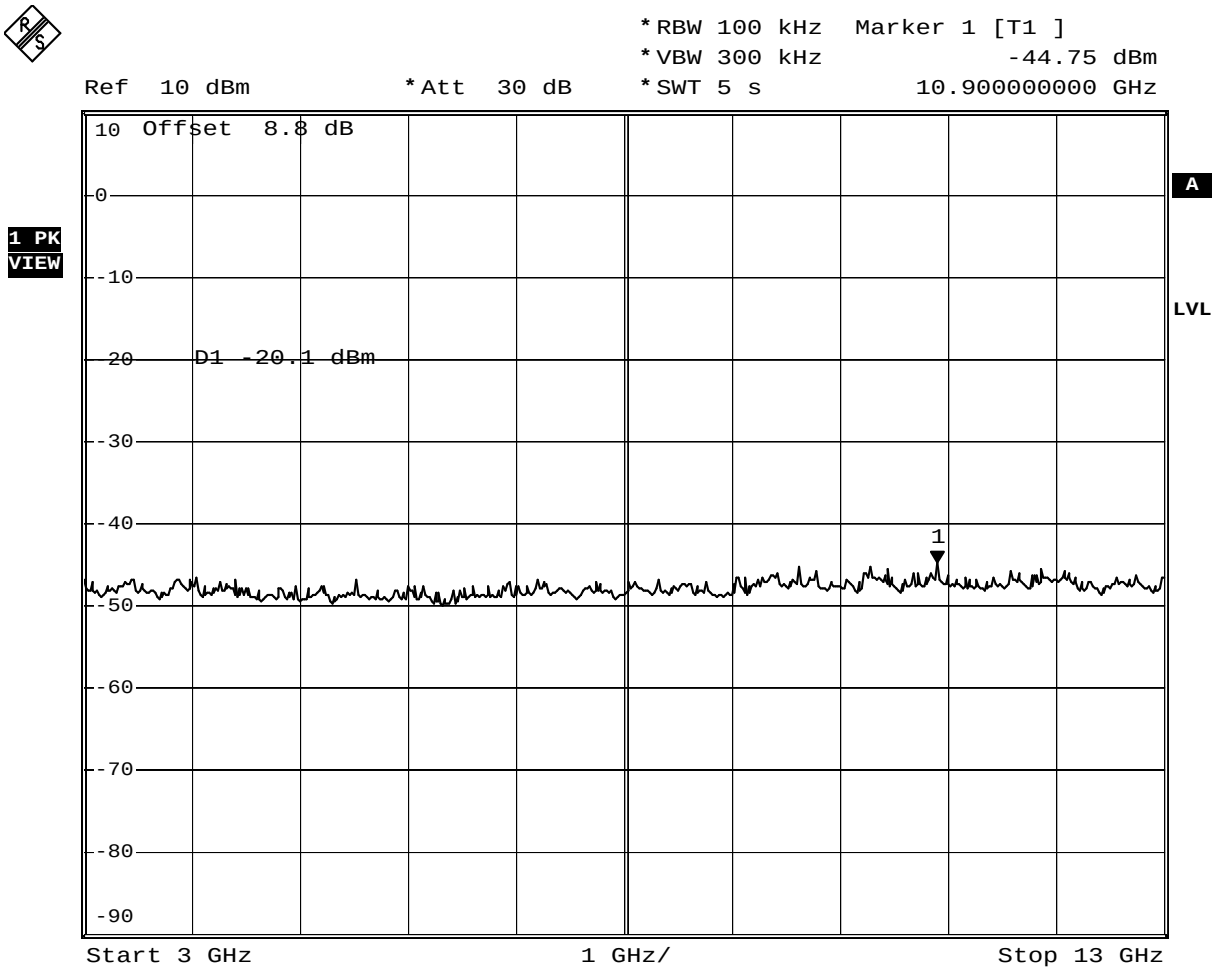
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	8DPSK / 3DH5



Date: 27.JUN.2011 08:10:54

FCC part 15.247 (d)
Spurious Emissions

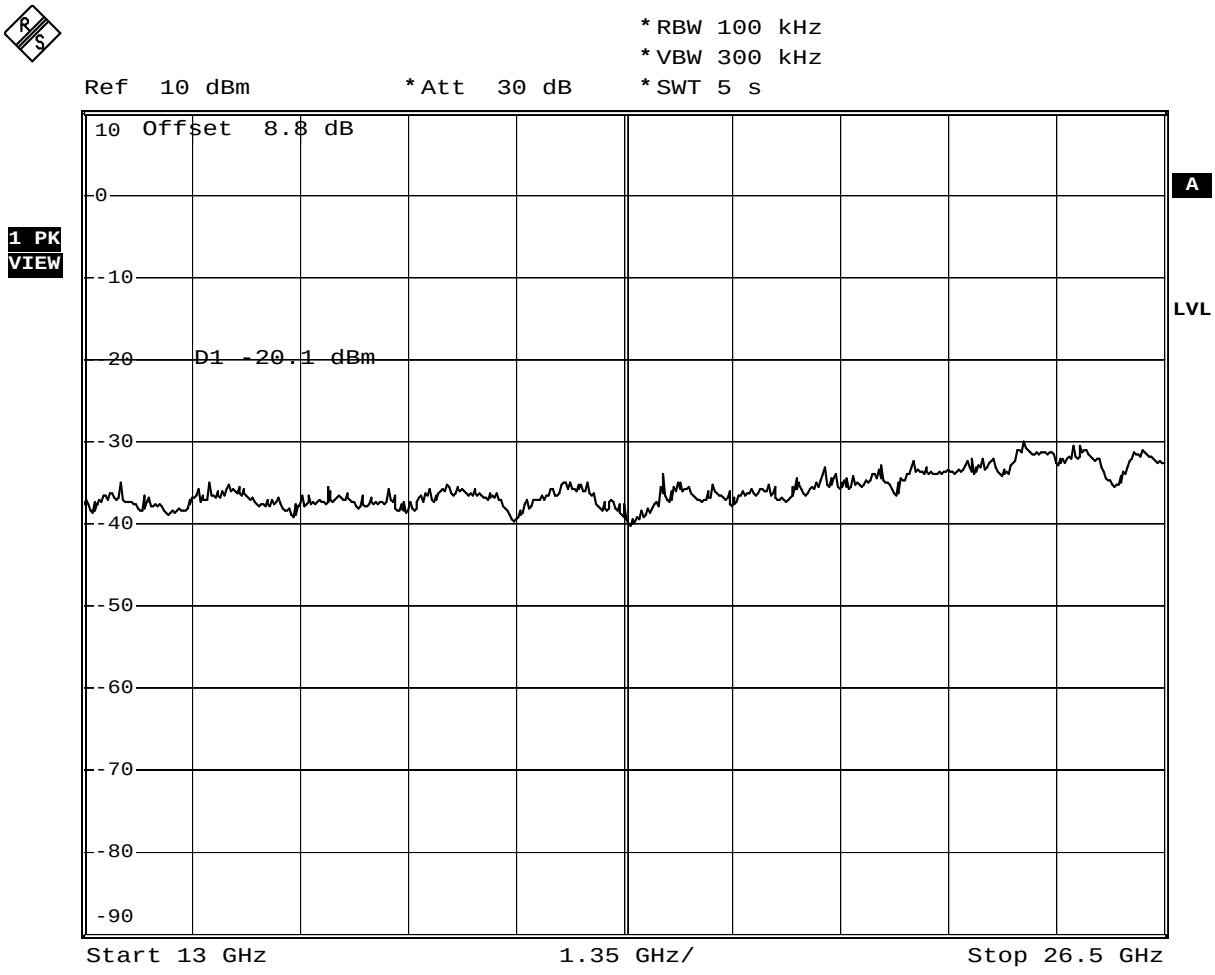
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	8DPSK / 3DH5



Date: 27.JUN.2011 08:13:05

FCC part 15.247 (d)
Spurious Emissions

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15.247 (d)
Comment 1	Spurious Emissions conducted
Comment 2	Channel : 2480 MHz
Comment 3	8DPSK / 3DH5

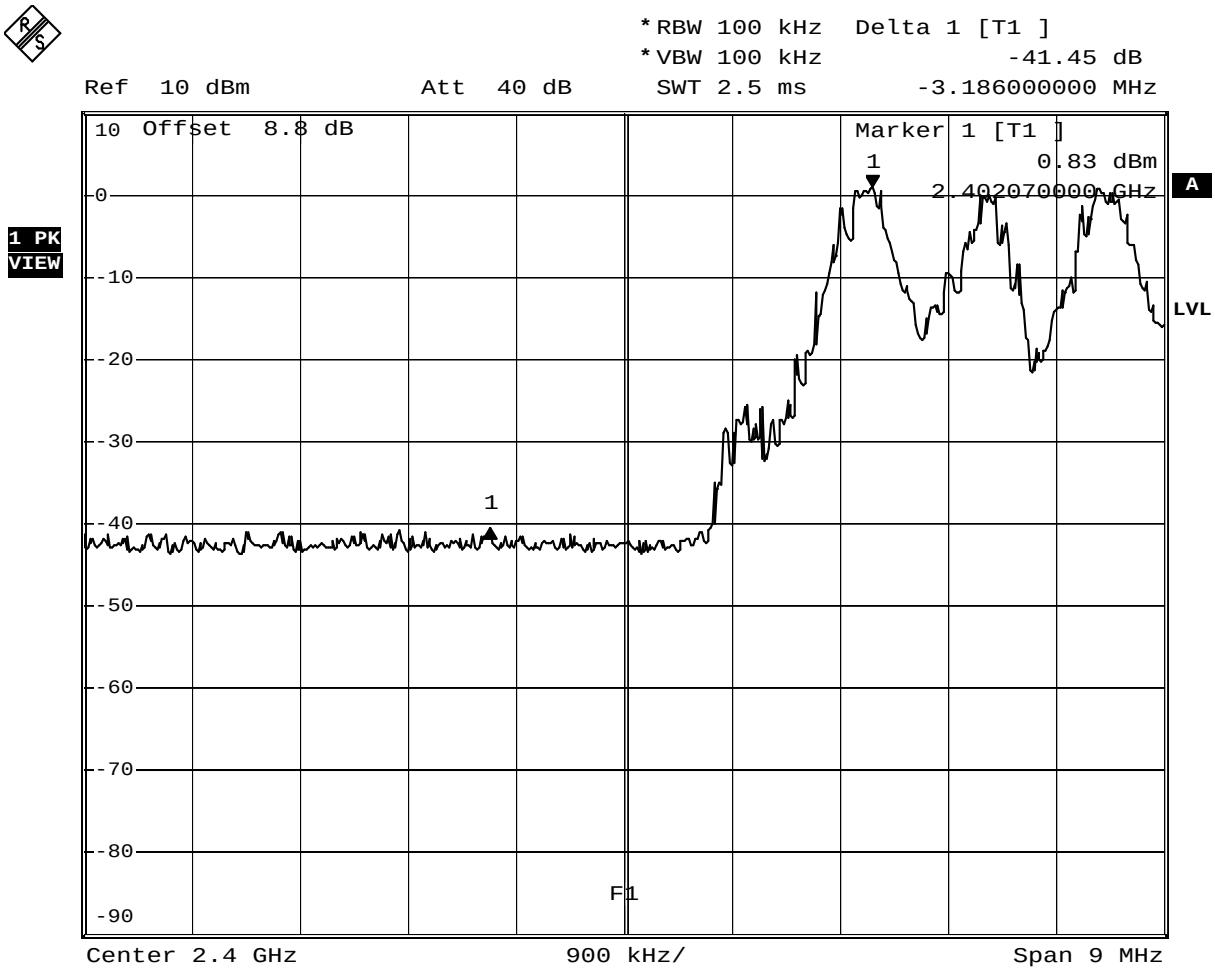


Date: 27.JUN.2011 08:15:16

Annex H Band edge compliance

FCC part 15.247
Band-edge compliance of RF conducted emissions

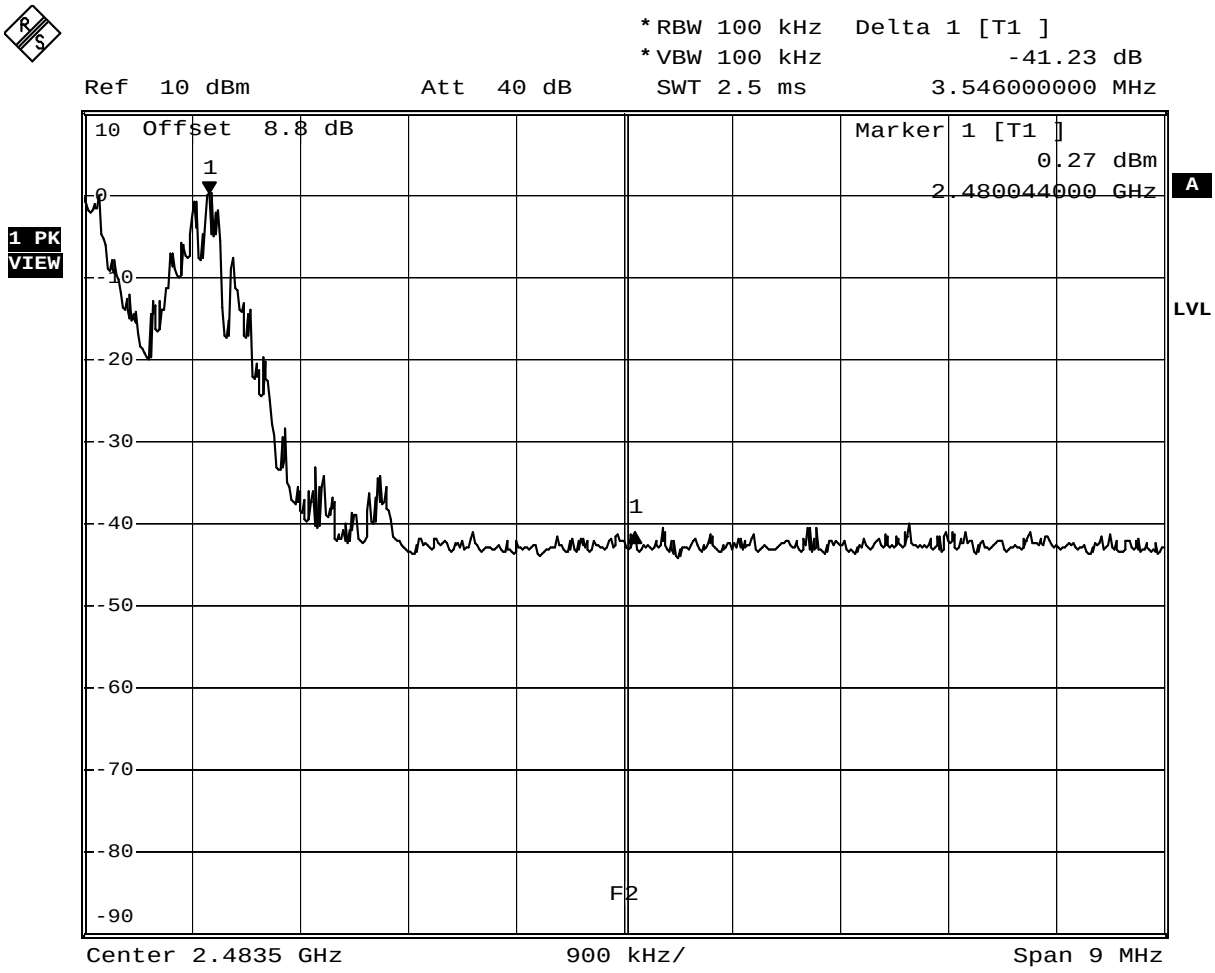
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 0 / 2402 MHz / GFSK
Comment 3	hopping mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:46:46

FCC part 15.247
Band-edge compliance of RF conducted emissions

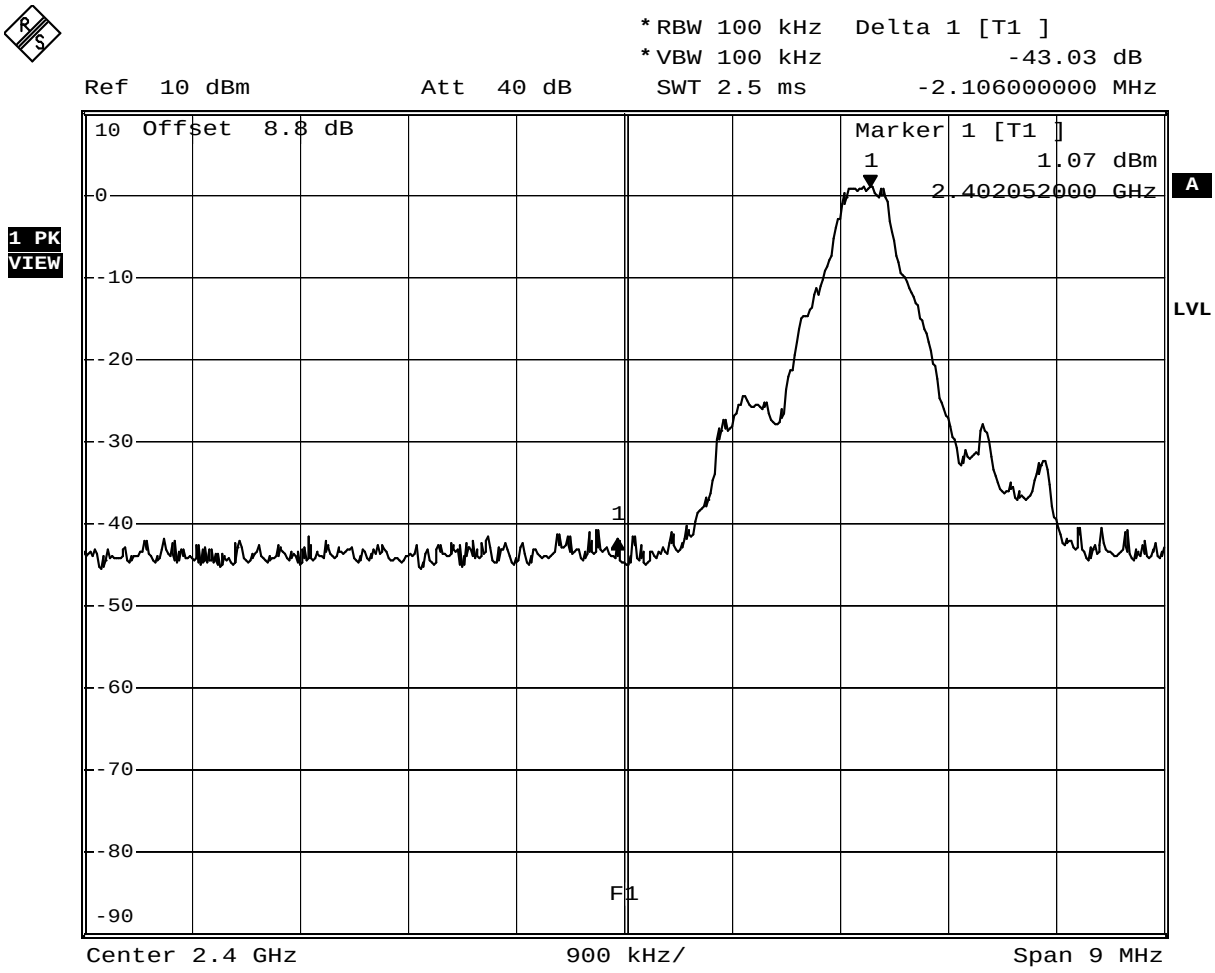
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 78 / 2480 MHz / GFSK
Comment 3	hopping mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:48:02

FCC part 15.247
Band-edge compliance of RF conducted emissions

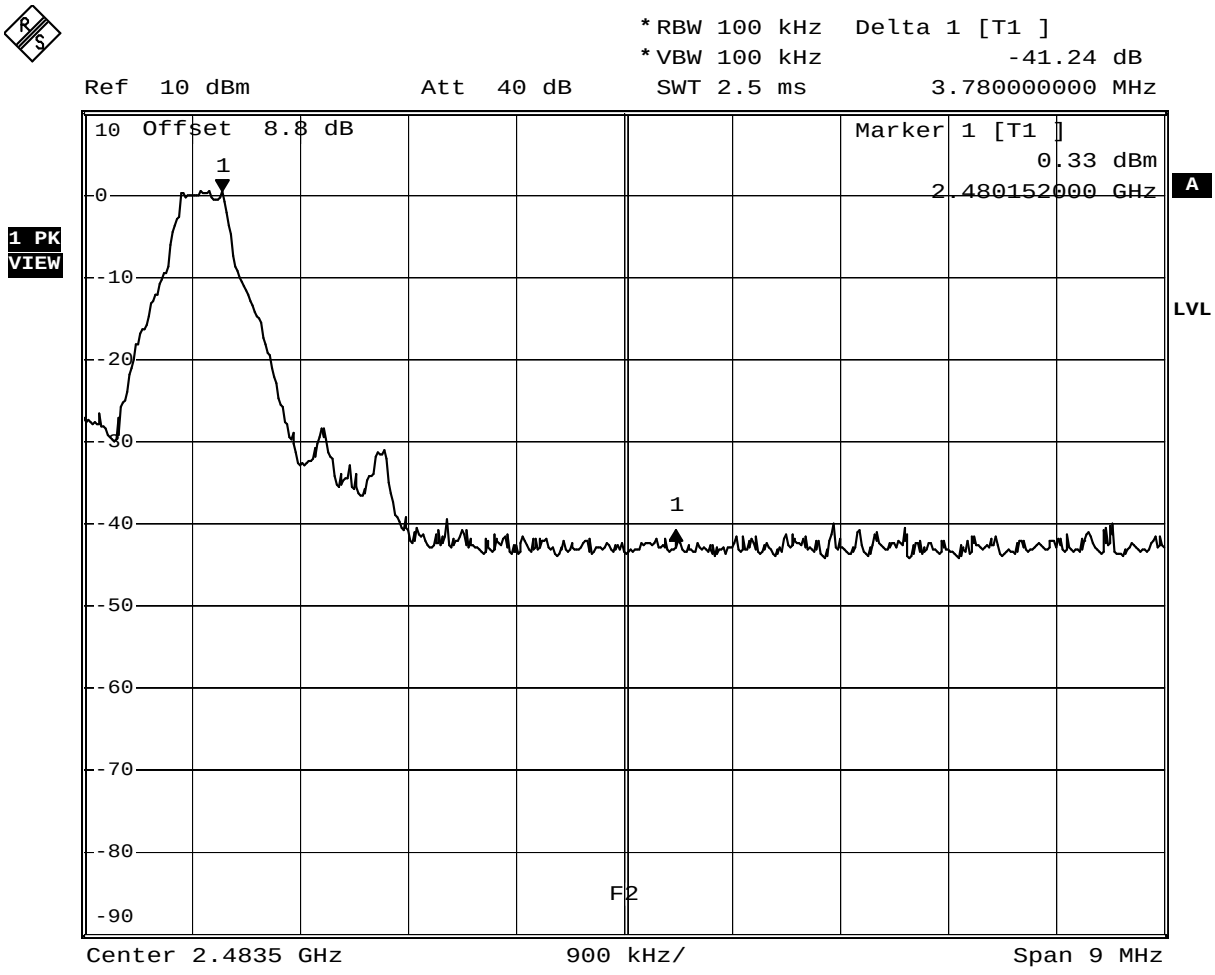
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 0 / 2402 MHz / GFSK
Comment 3	Single frequency mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:33:53

FCC part 15.247
Band-edge compliance of RF conducted emissions

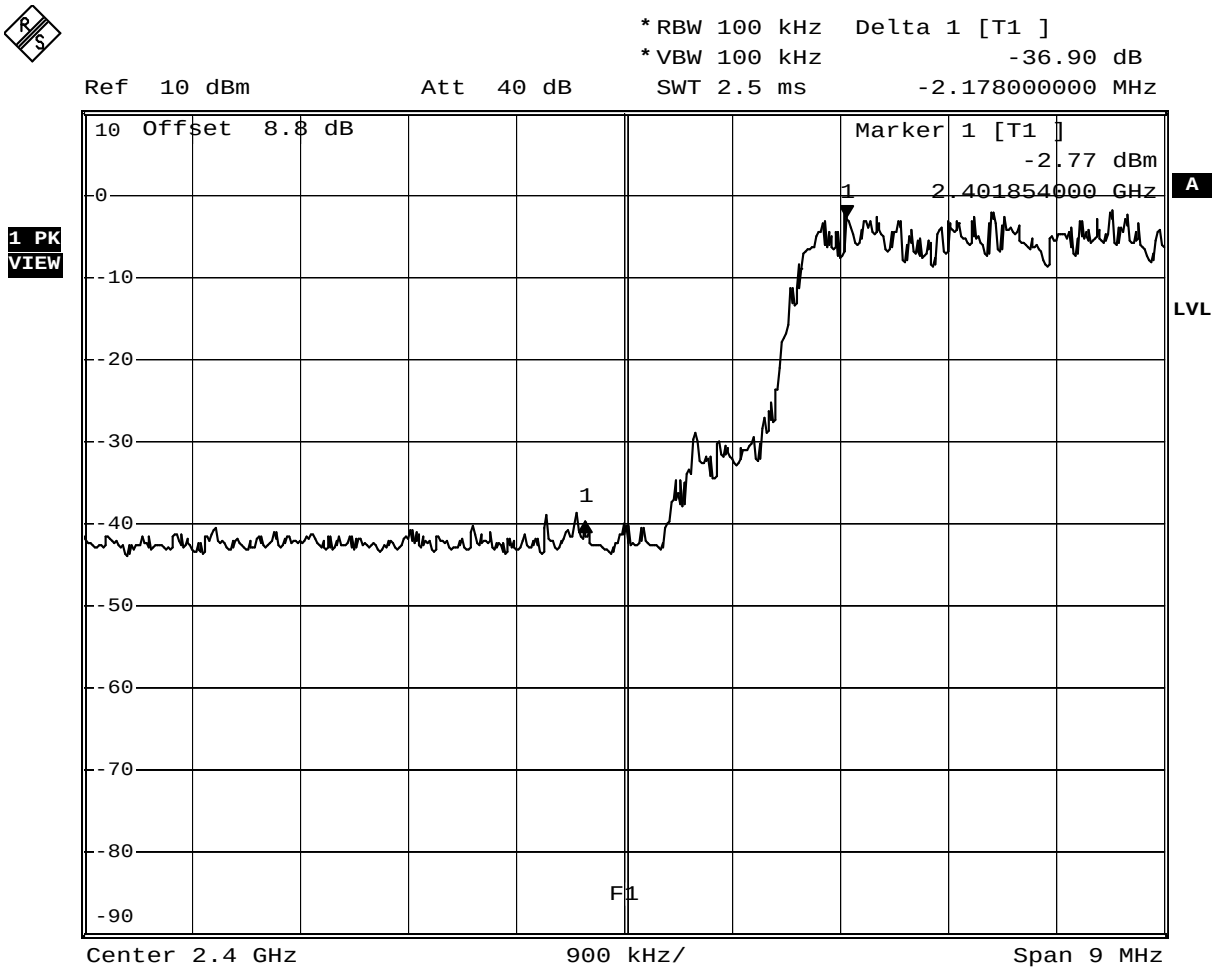
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 78 / 2480 MHz / GFSK
Comment 3	Single frequency mode



Date: 24.JUN.2011 10:32:38

FCC part 15.247
Band-edge compliance of RF conducted emissions

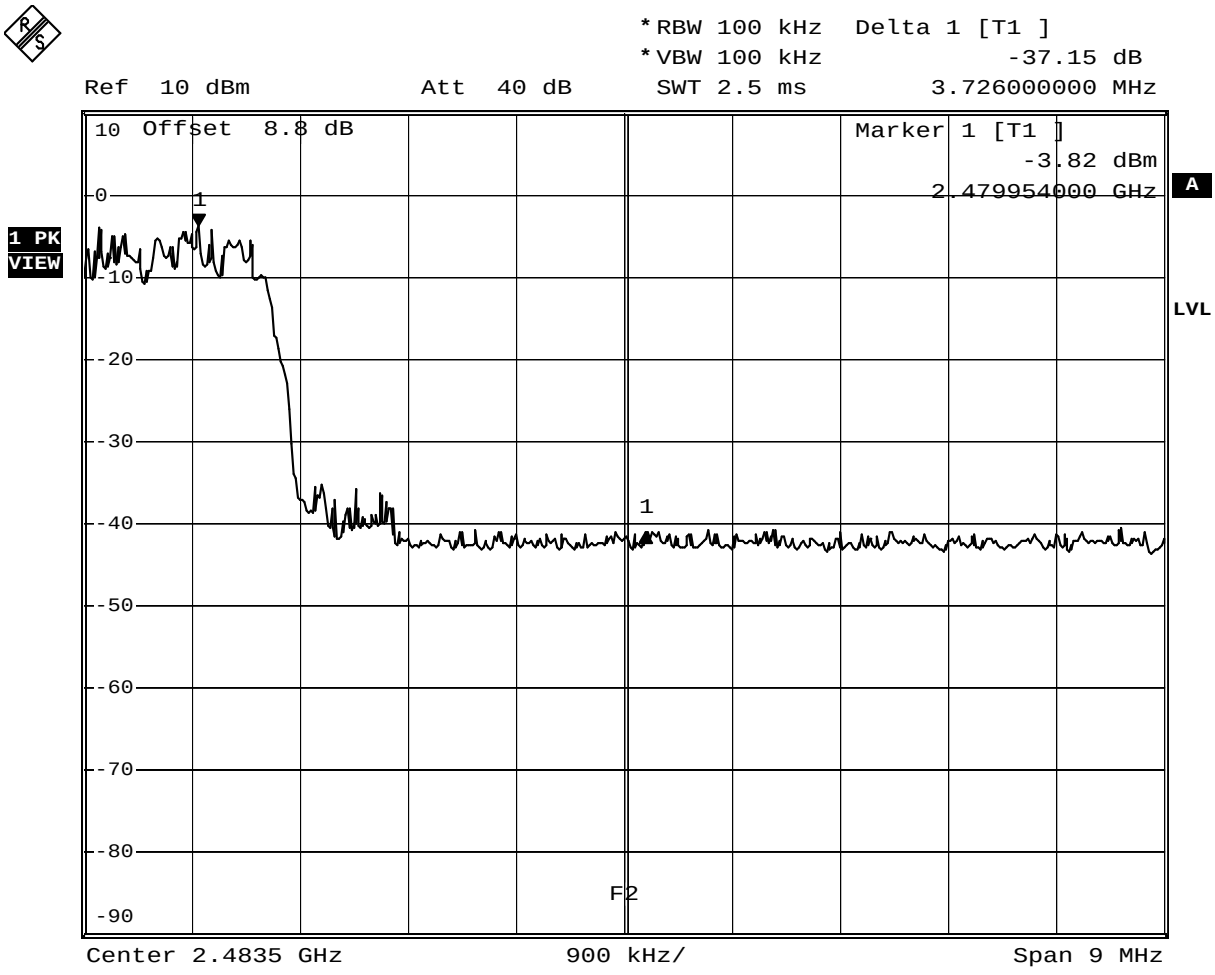
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 0 / 2402 MHz / Pi/4-DQPSK
Comment 3	hopping mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:51:55

FCC part 15.247
Band-edge compliance of RF conducted emissions

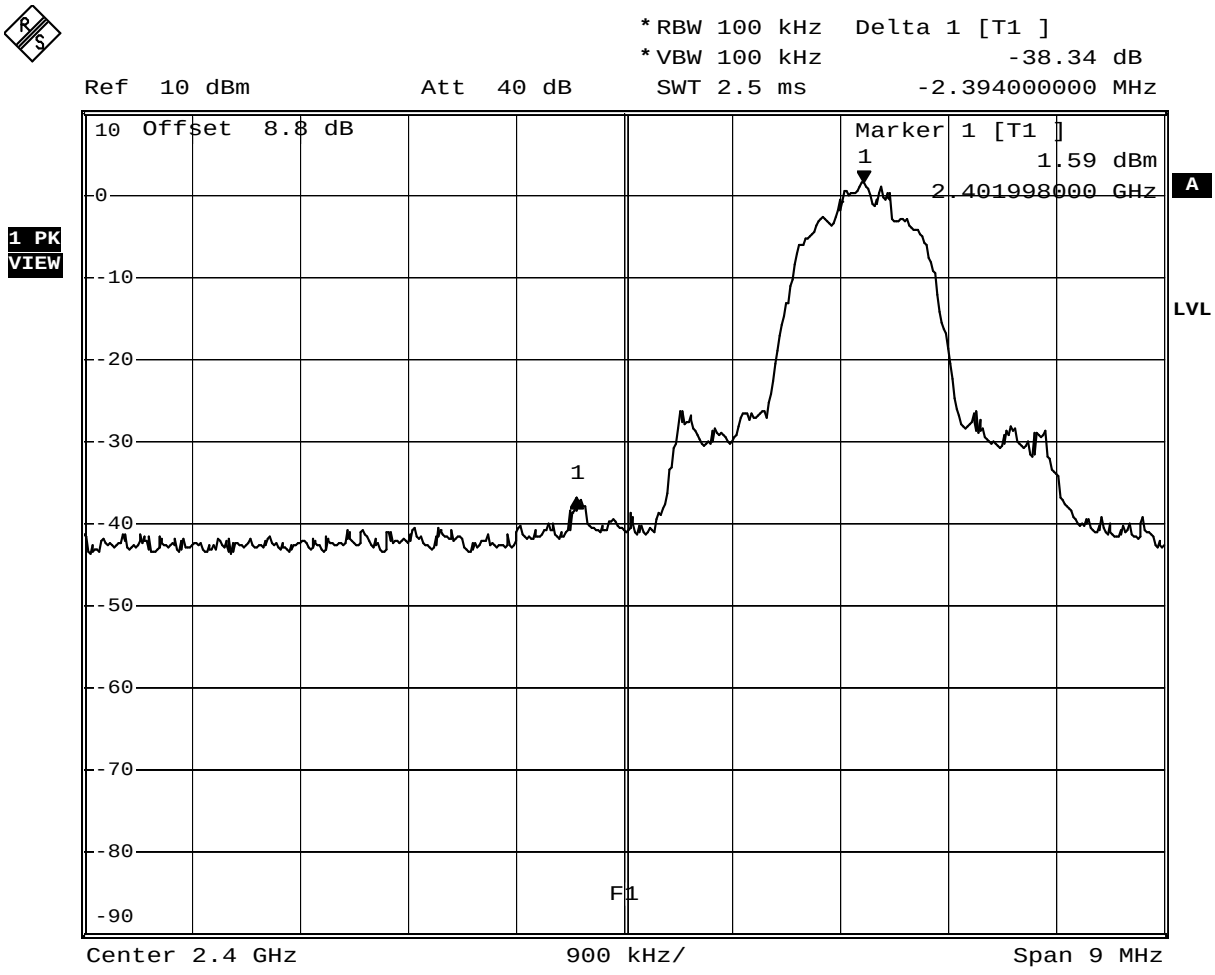
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 78 / 2480 MHz / Pi/4-DQPSK
Comment 3	hopping mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:49:54

FCC part 15.247
Band-edge compliance of RF conducted emissions

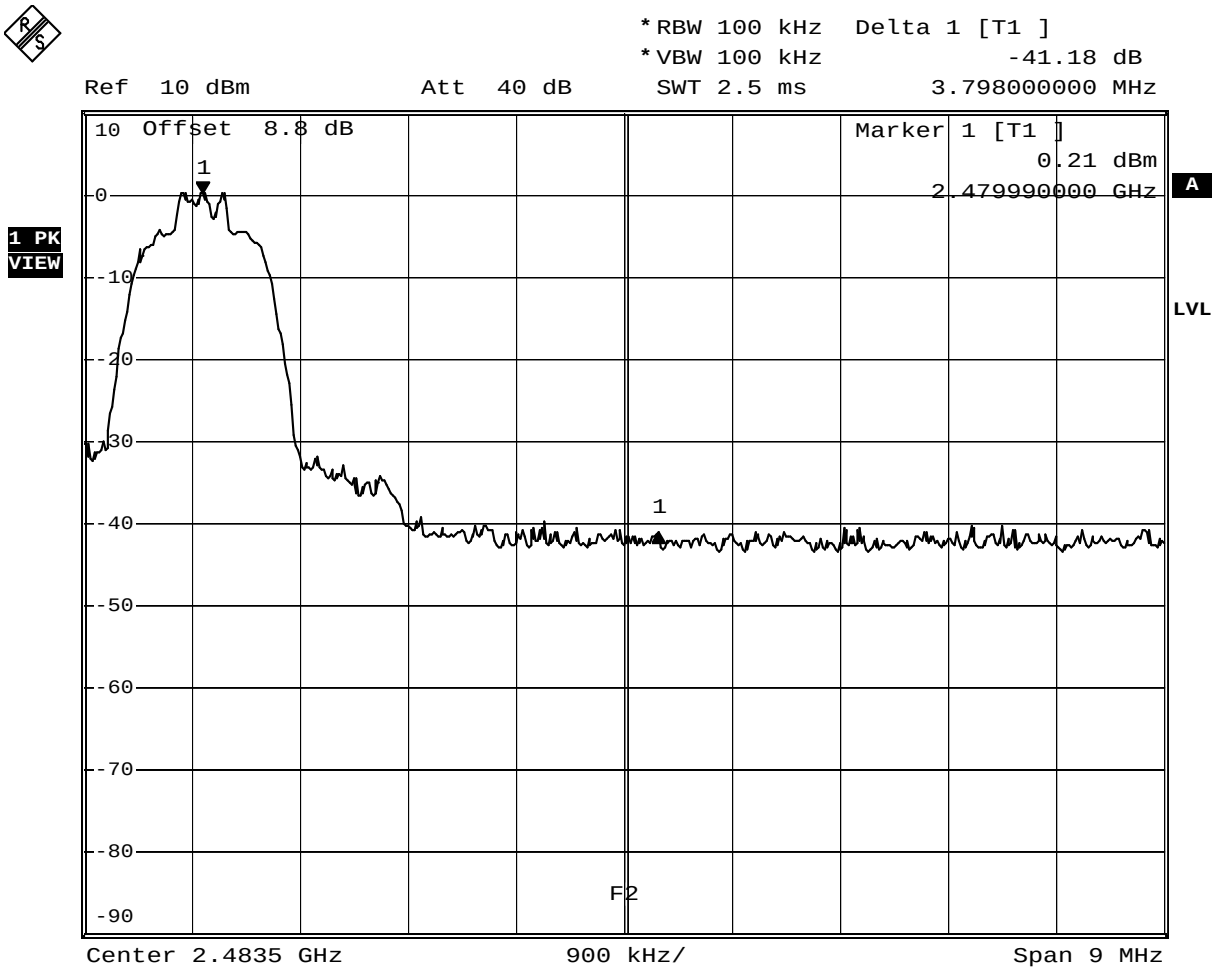
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 0 / 2402 MHz / Pi/4-DQPSK
Comment 3	Single frequency mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:35:16

FCC part 15.247
Band-edge compliance of RF conducted emissions

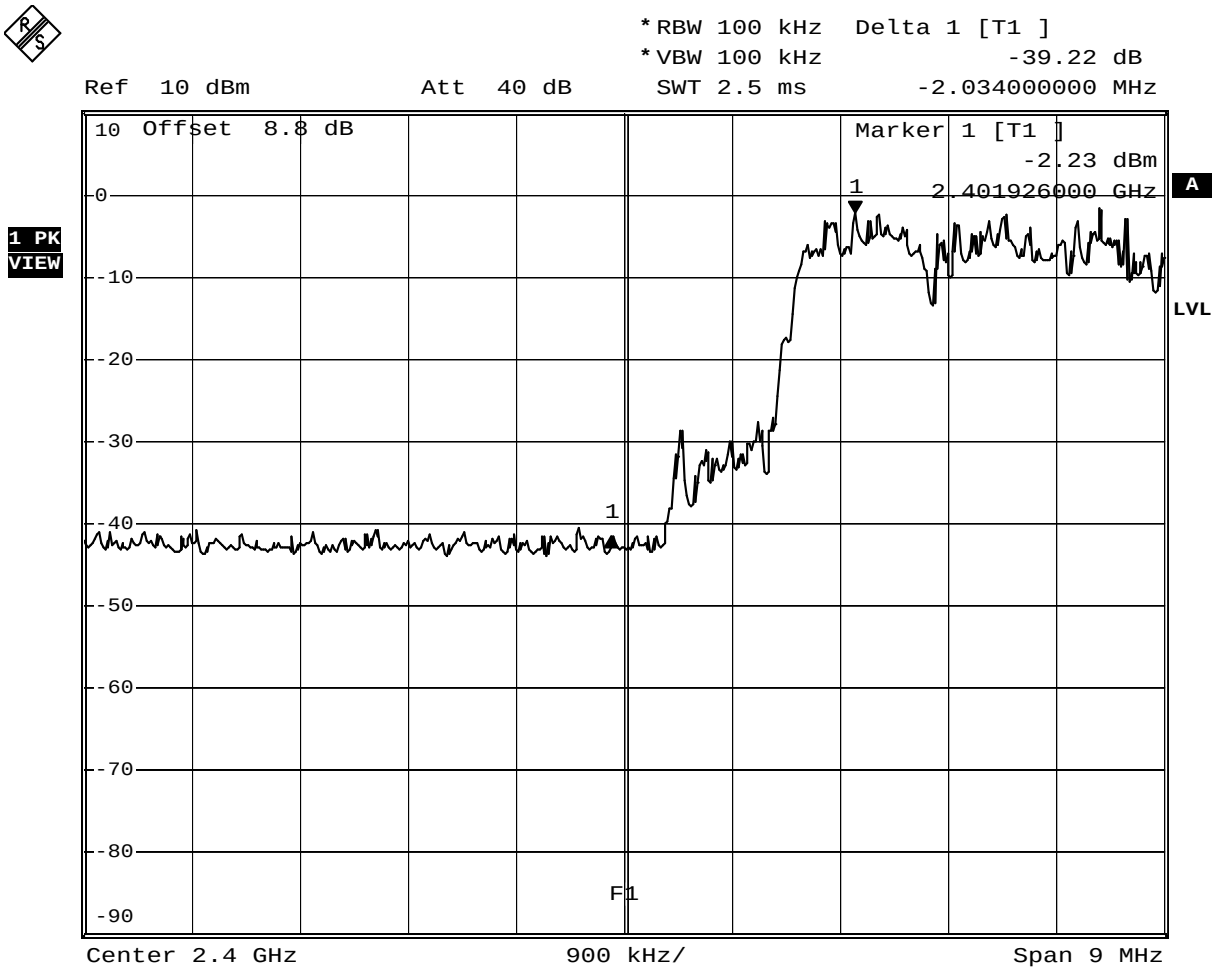
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 78 / 2480 MHz / Pi/4-DQPSK
Comment 3	Single frequency mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:41:38

FCC part 15.247
Band-edge compliance of RF conducted emissions

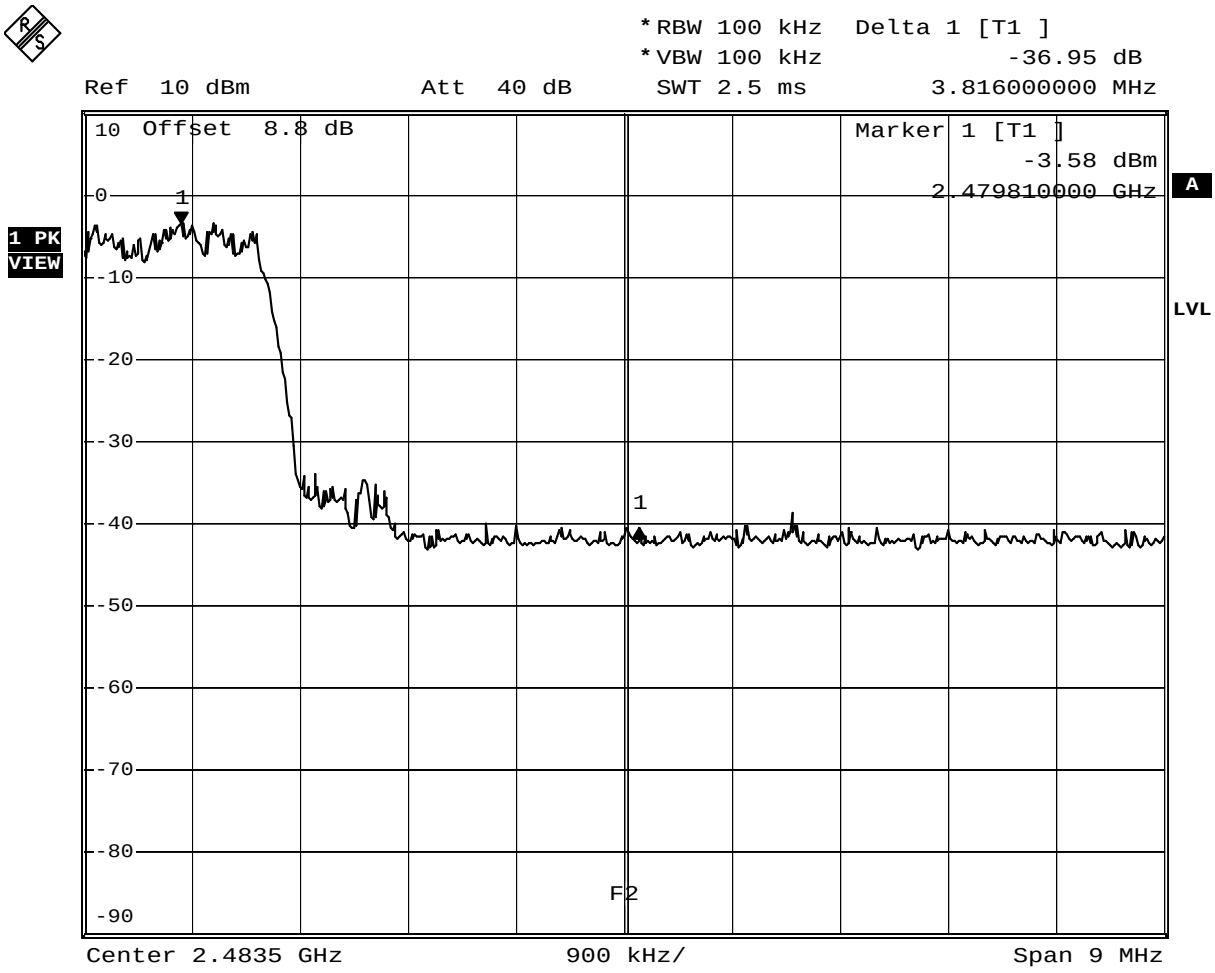
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 0 / 2402 MHz / 8DPSK
Comment 3	hopping mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:53:56

FCC part 15.247
Band-edge compliance of RF conducted emissions

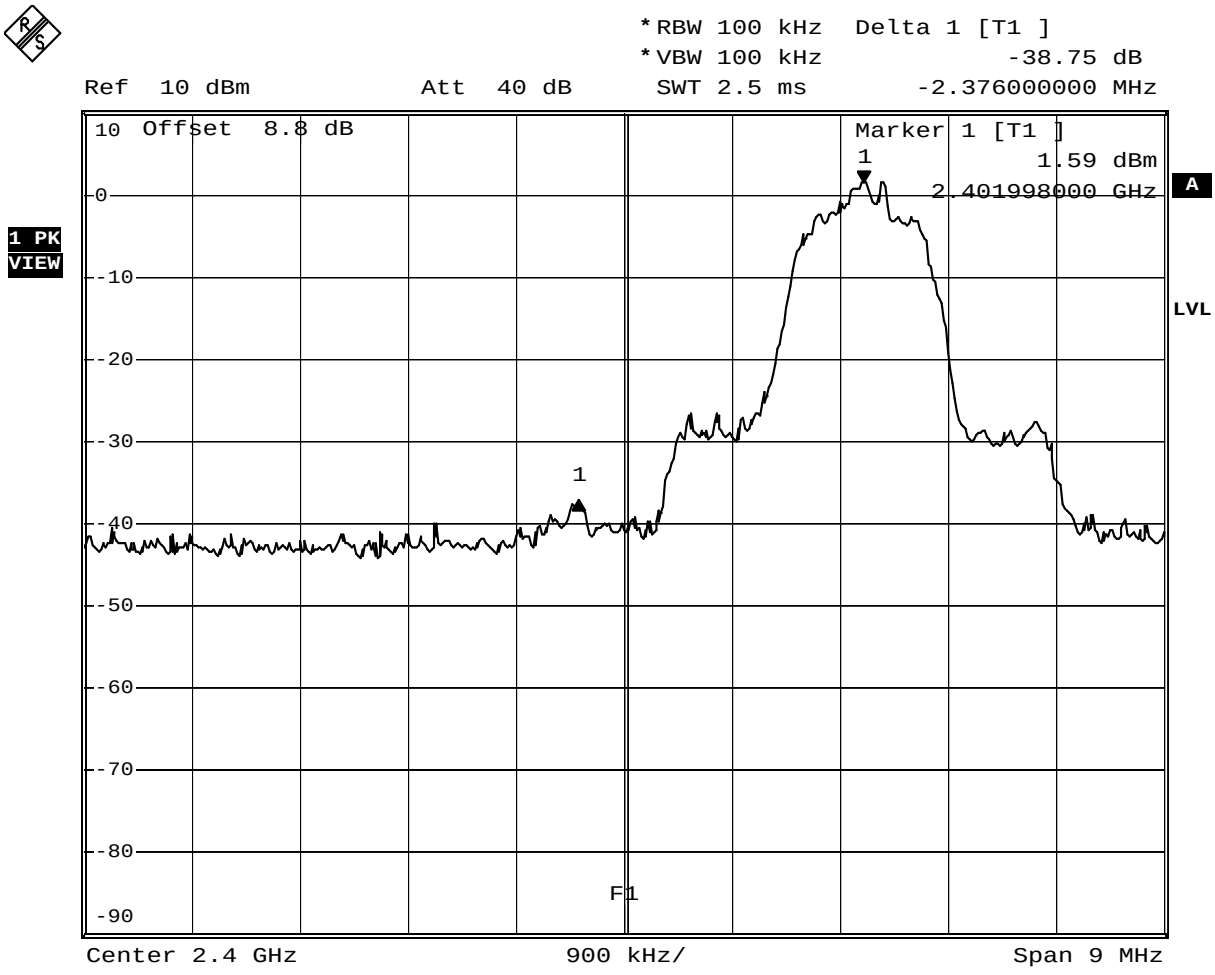
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 78 / 2480 MHz / 8DPSK
Comment 3	hopping mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:55:52

FCC part 15.247
Band-edge compliance of RF conducted emissions

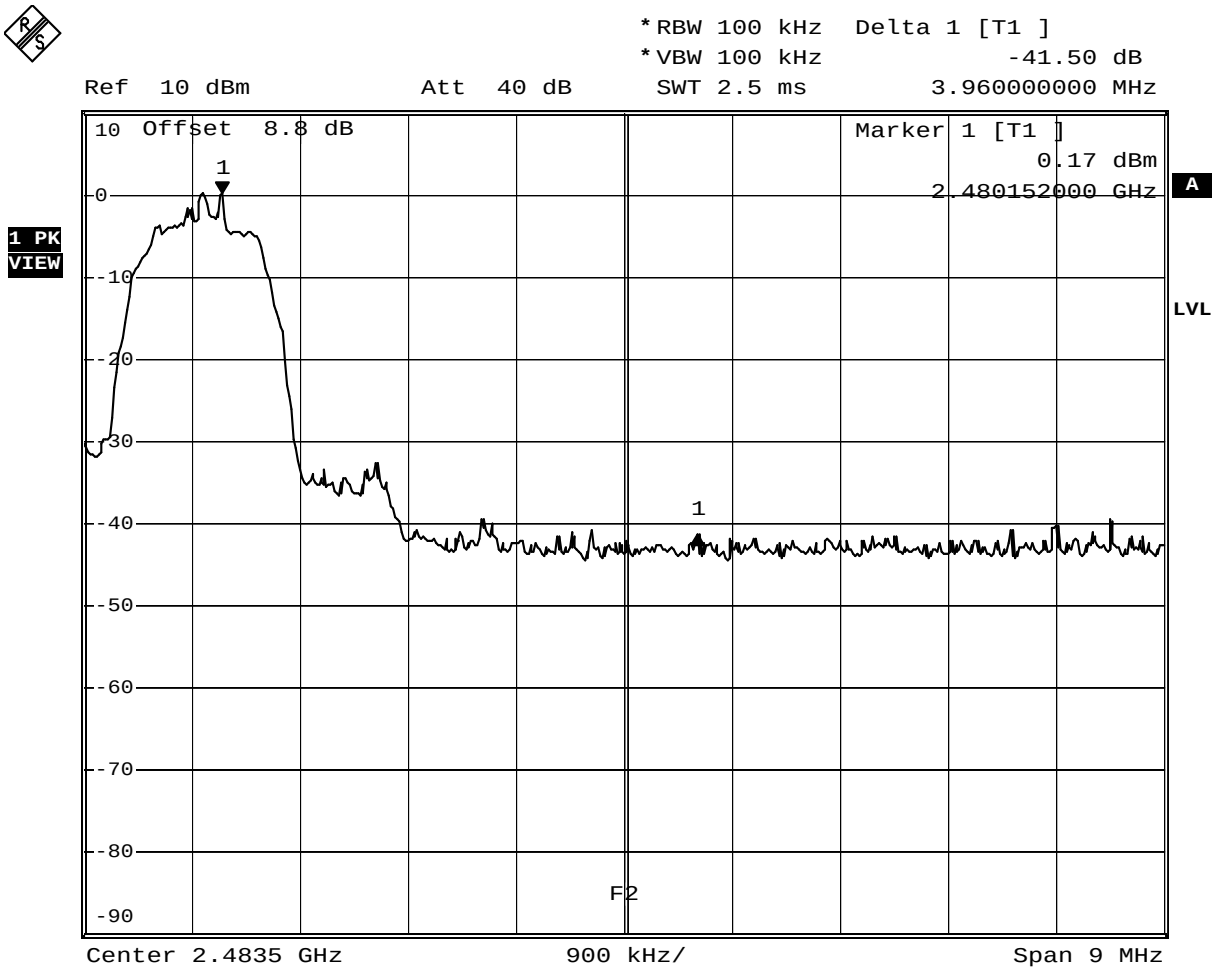
EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 0 / 2402 MHz / 8DPSK
Comment 3	Single frequency mode



Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:43:18

FCC part 15.247
Band-edge compliance of RF conducted emissions

EUT	Telematics Unit
Model	AT-100
Approval Holder	Hughes Telematics, Inc. / Ord.: G0M-1105-1155
Temperature / Voltage	tnom / Vnom
Test Site / Operator	Eurofins Product Service GmbH / Mr. Treffke
Test Specification	FCC part 15 section 247(c)
Comment 1	Band-edge compliance
Comment 2	Channel.: 78 / 2480 MHz / 8DPSK
Comment 3	Single frequency mode



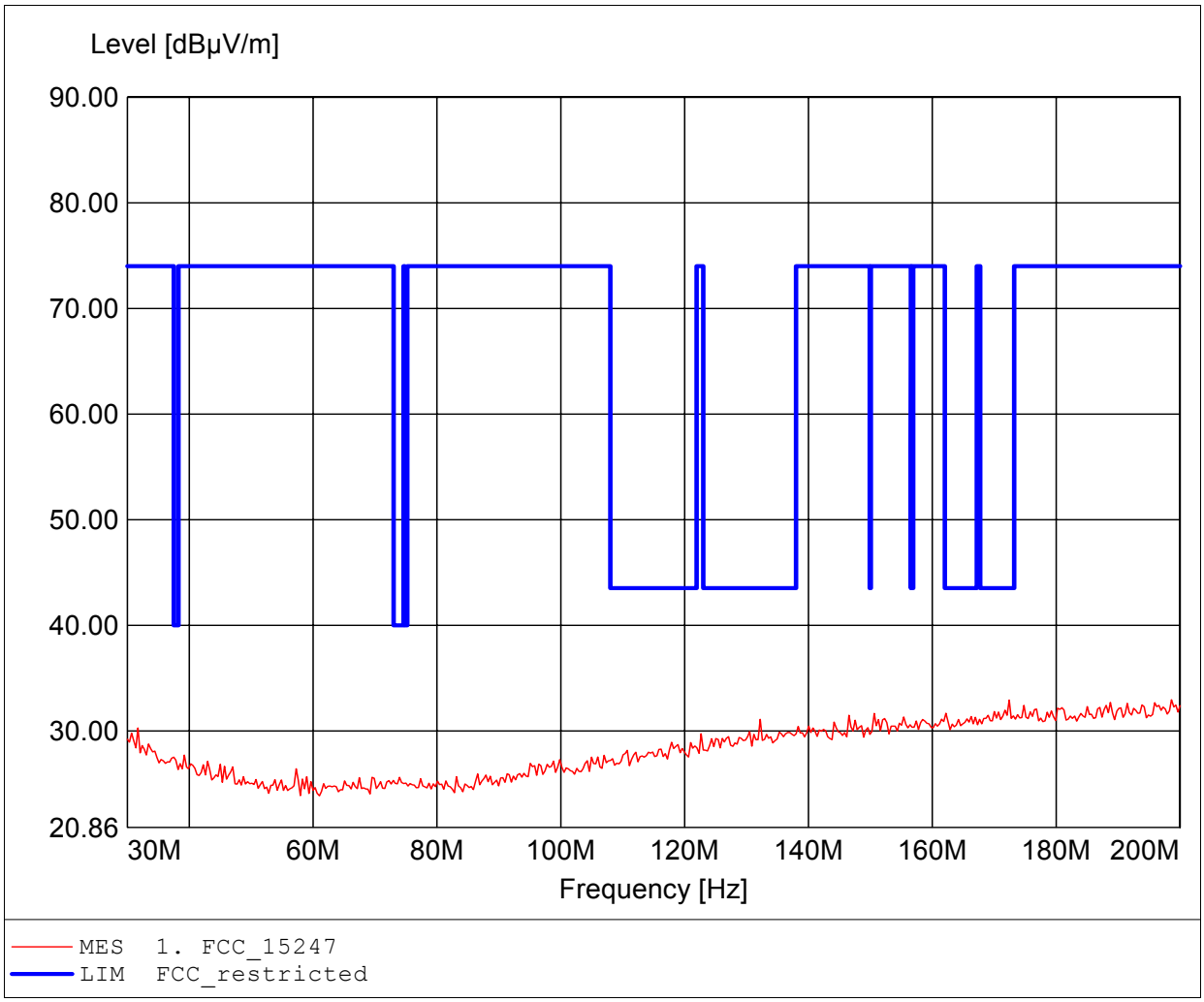
Comment: Limit: Marker Delta value >20 dB; Result: PASS
Date: 24.JUN.2011 10:44:39

Annex I Transmitter radiated spurious emissions

Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

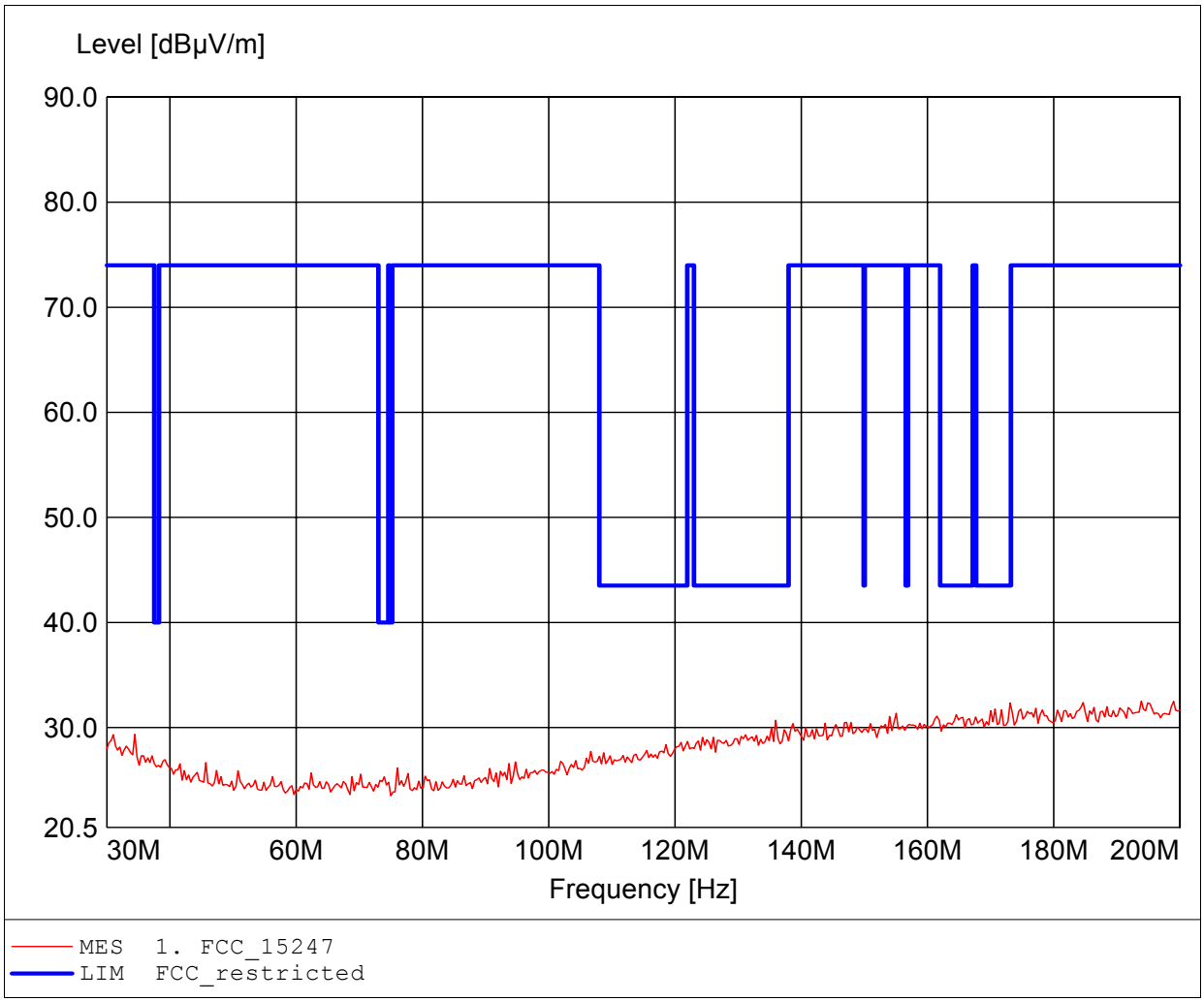
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz, worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247
Comment 1:	Dist.: 3m, Ant.: HK 116
Comment 2:	Freq: 198.637MHz, Emax: 32.95dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

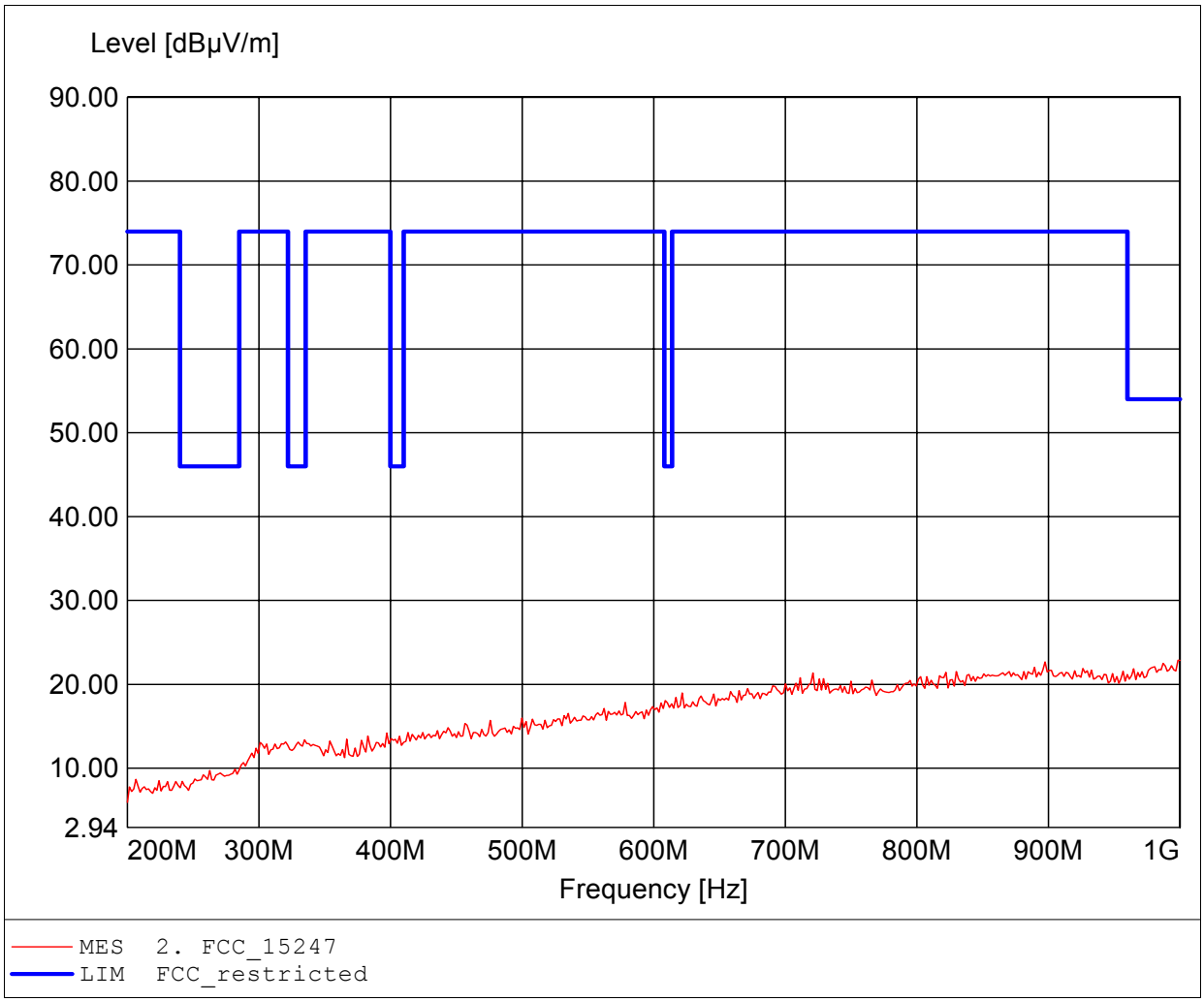
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz, worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247
Comment 1:	Dist.: 3m, Ant.: HK 116
Comment 2:	Freq: 193.868MHz, Emax: 32.51dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

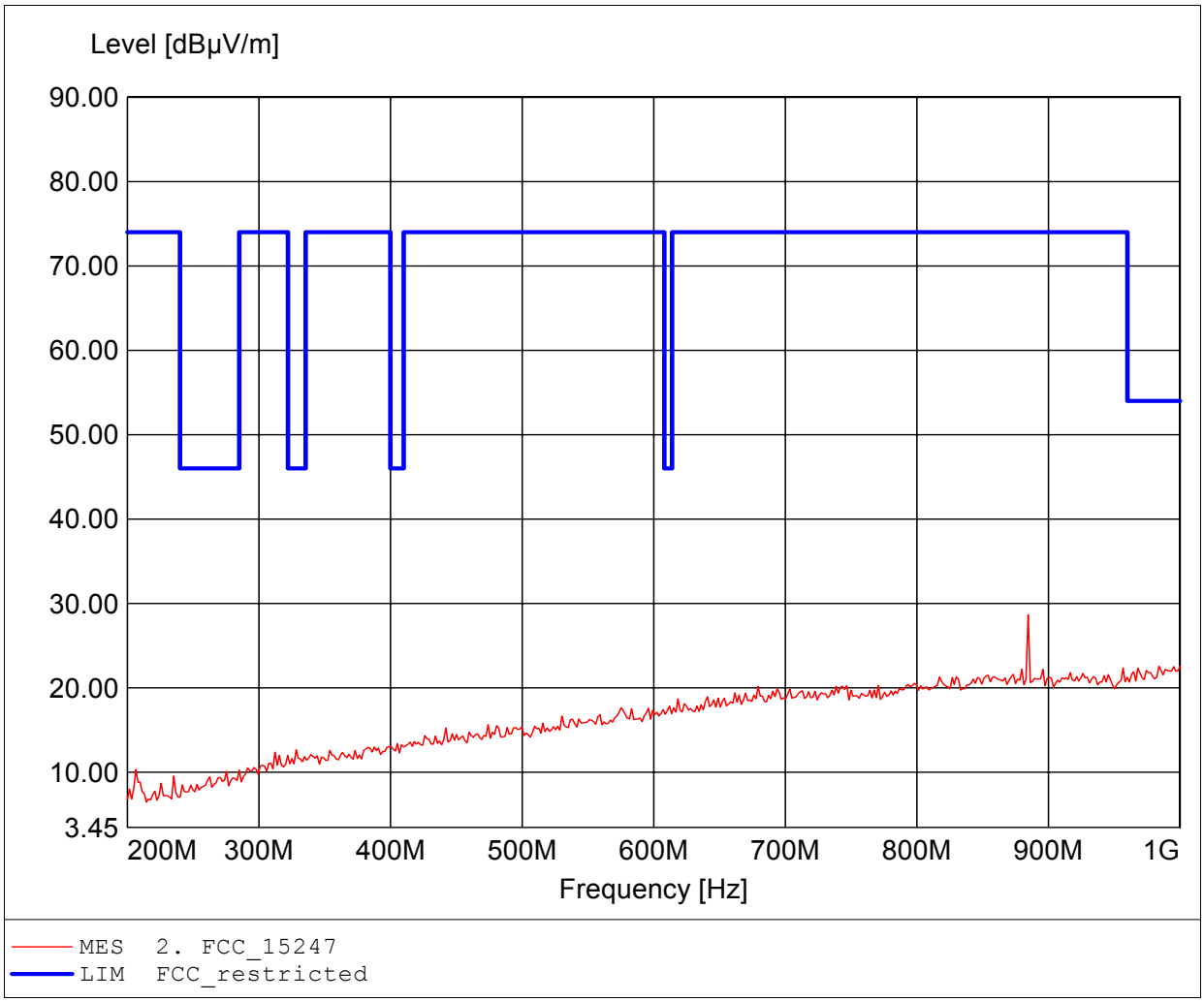
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz, worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247
Comment 1:	Dist.: 3m, Ant.: HL 223, amplif.
Comment 2:	Freq: 998.397MHz, Emax: 22.88dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

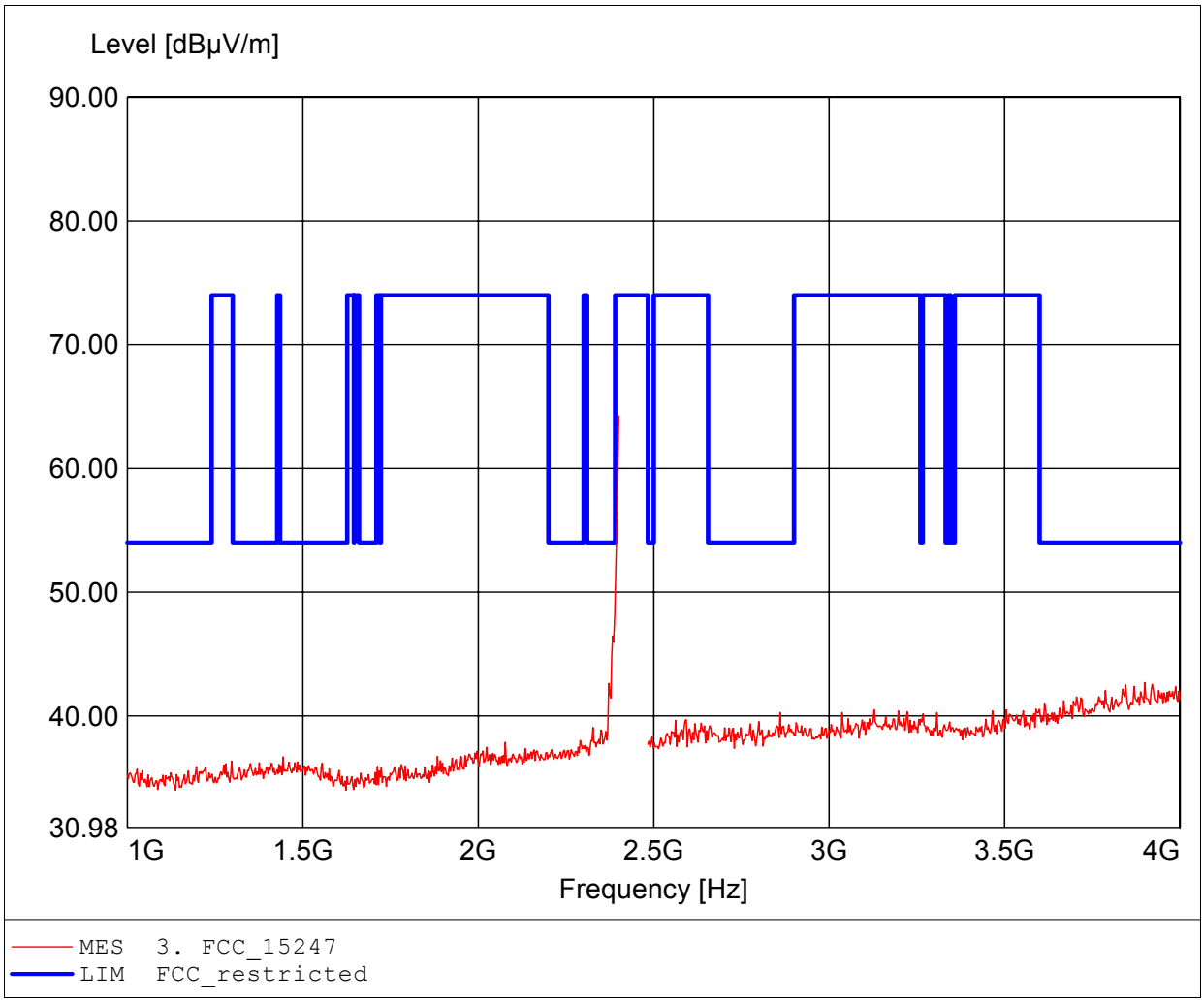
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz, worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247
Comment 1:	Dist.: 3m, Ant.: HL 223, amplif.
Comment 2:	Freq: 884.569MHz, Emax: 28.66dBµV/m, RBW: 100kHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

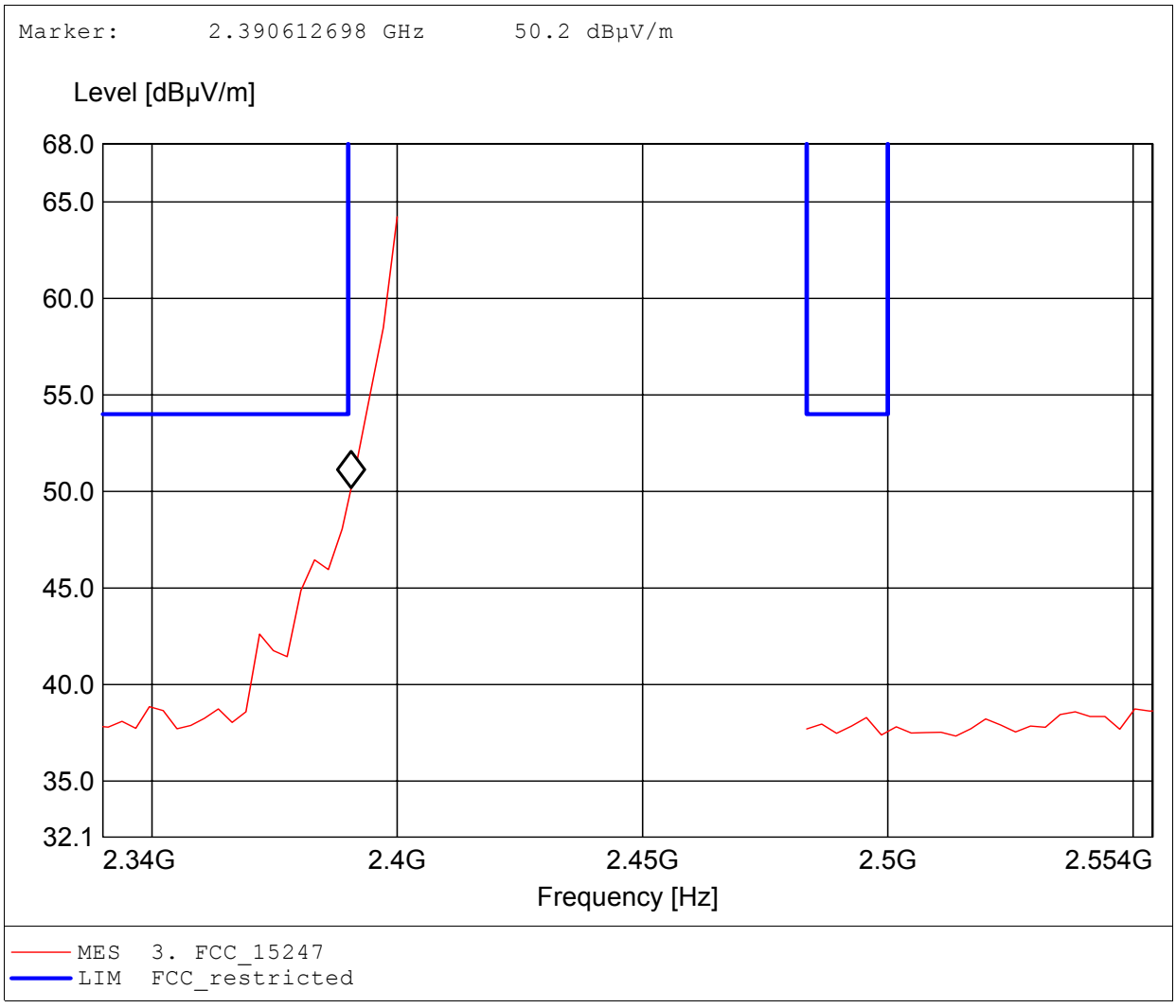
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.400GHz, Emax: 64.23dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

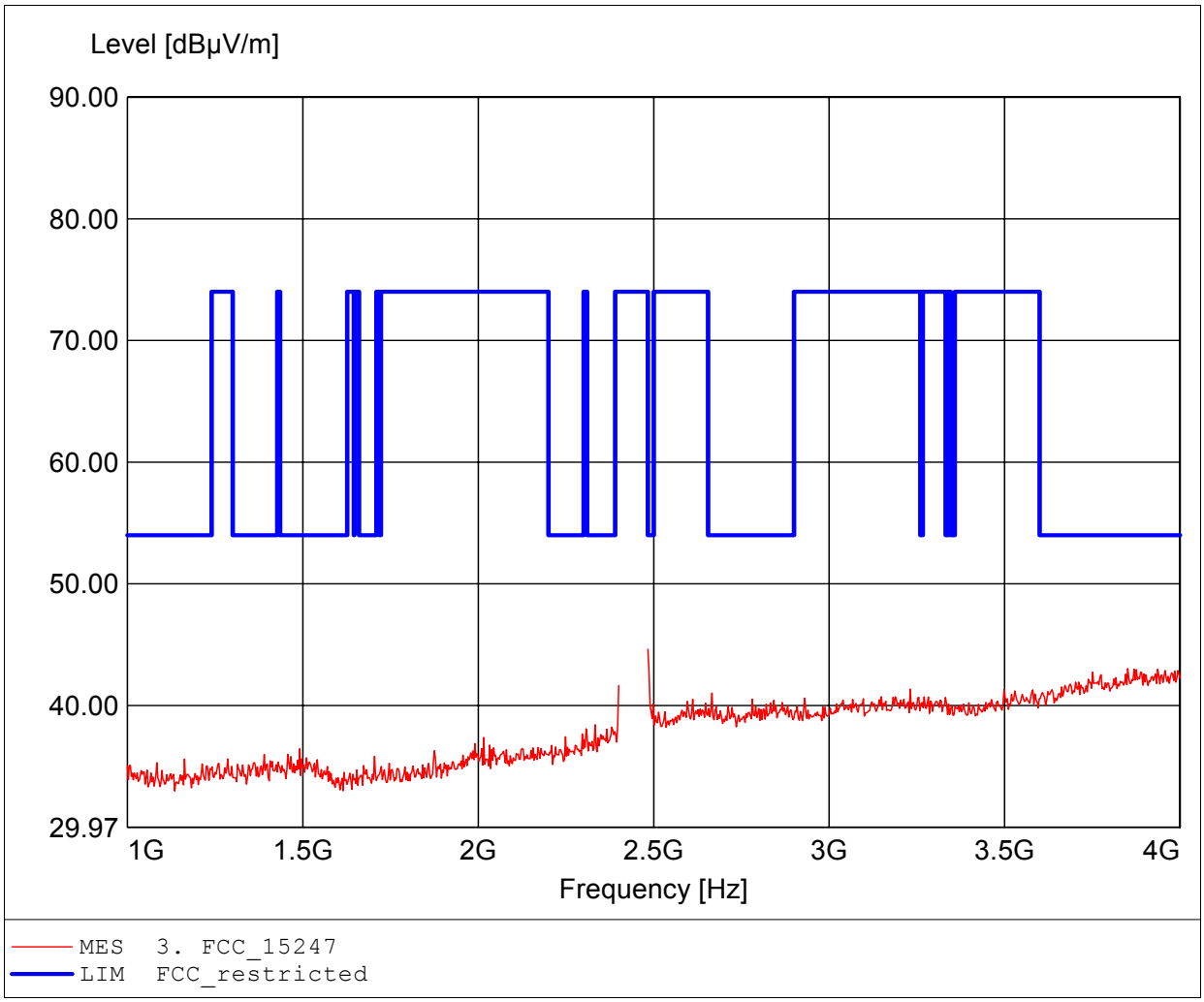
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.400GHz, Emax: 64.23dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

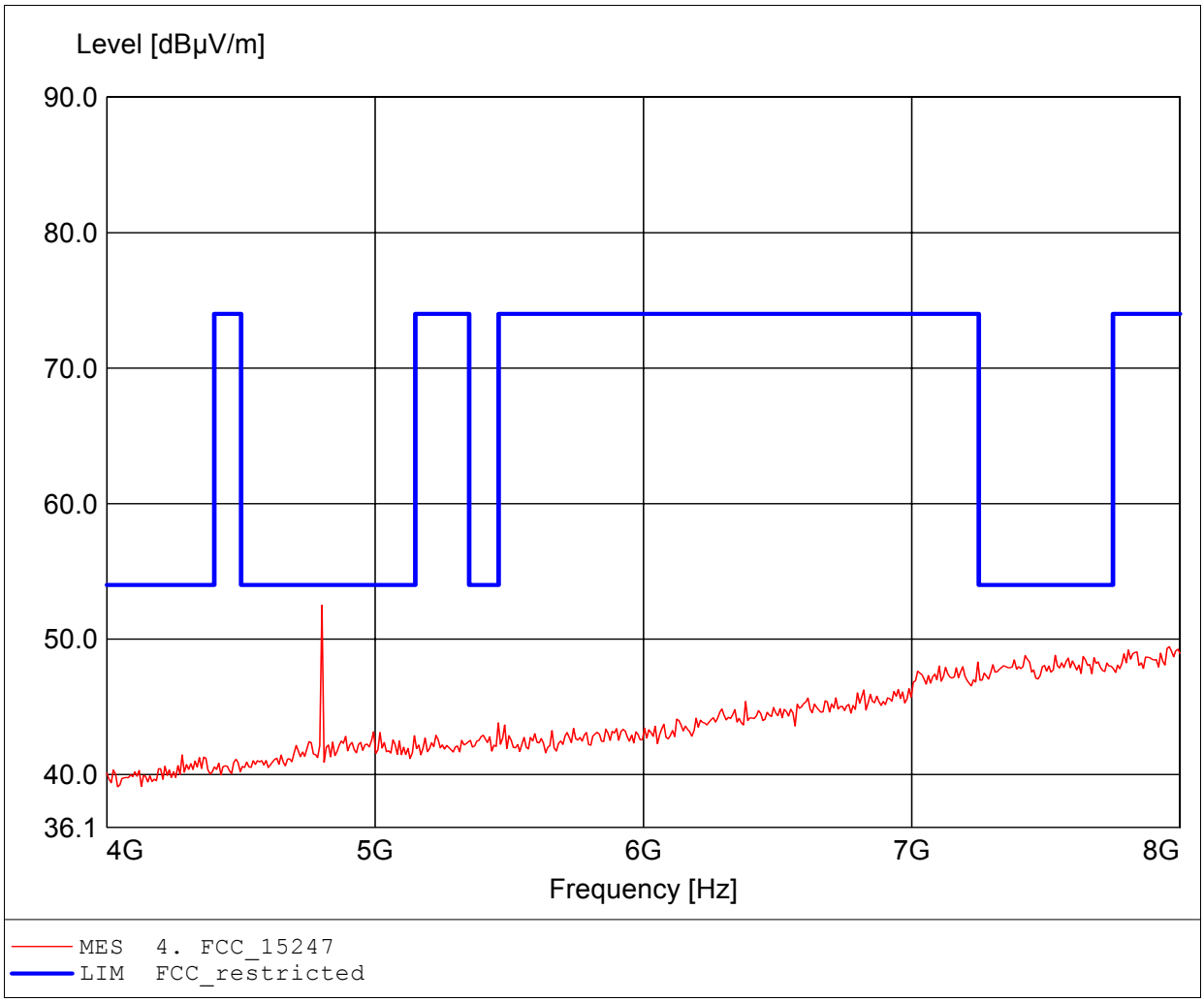
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.484GHz, Emax: 44.62dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

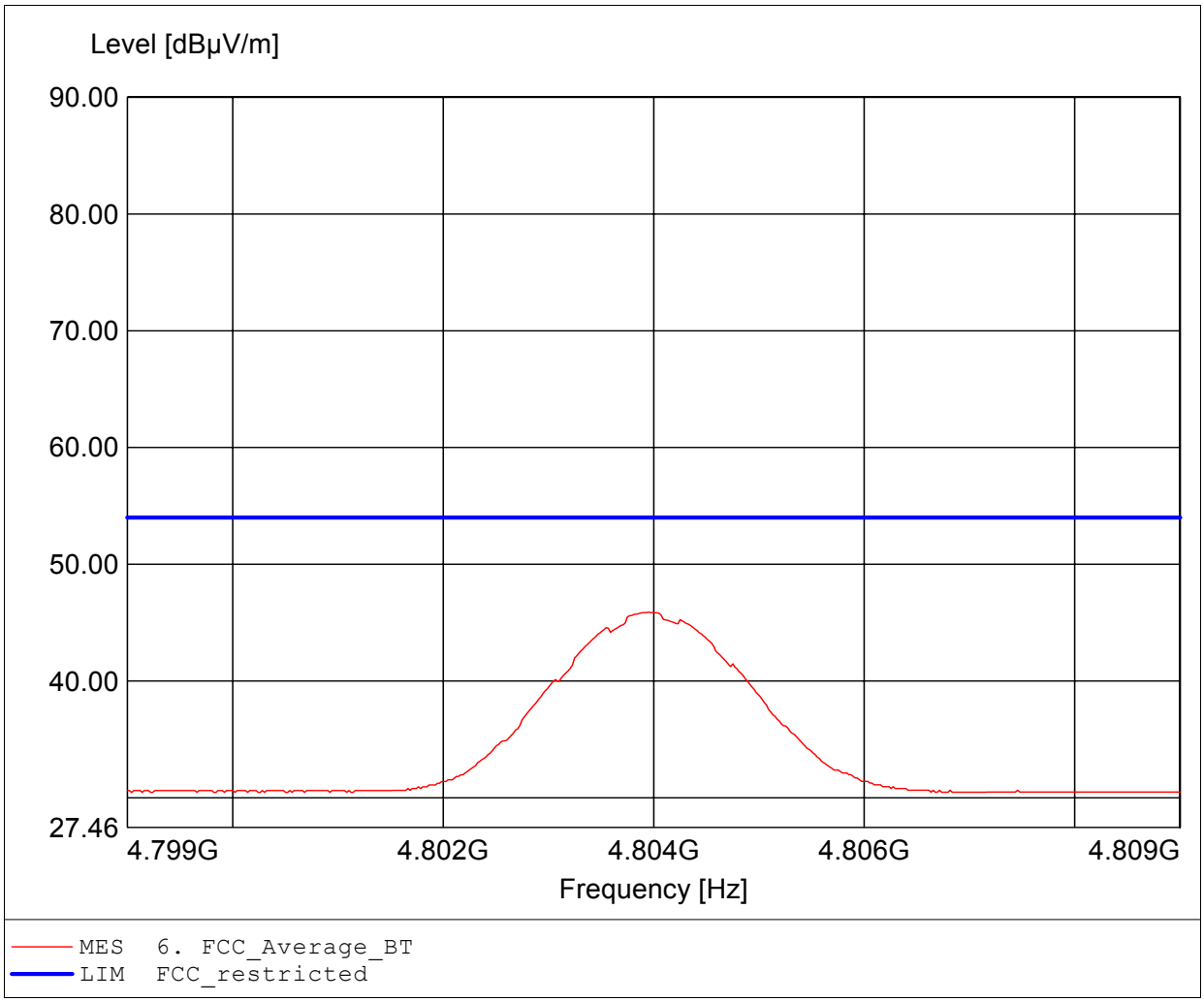
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 4.802GHz, Emax: 52.50dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

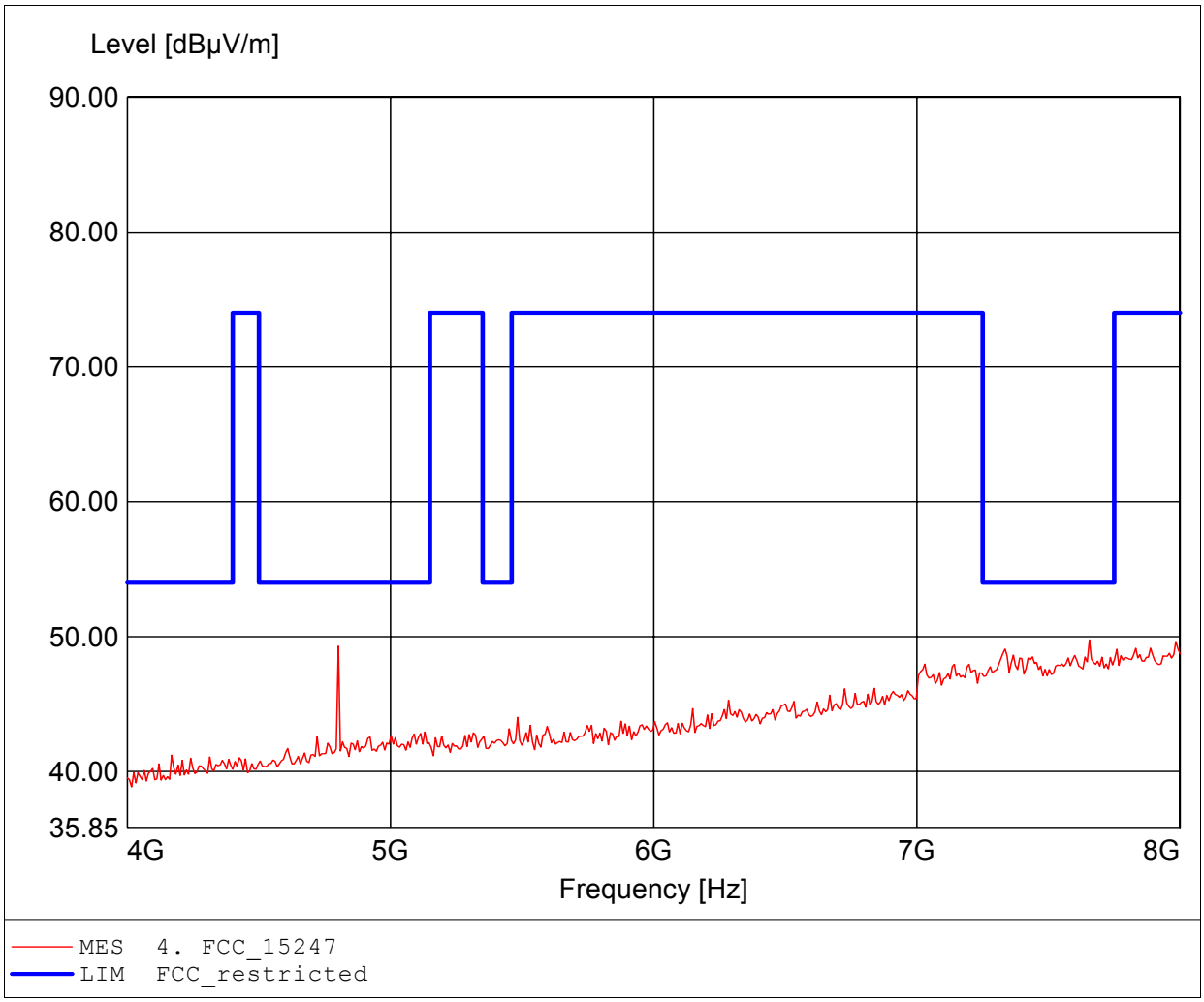
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, average detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 4.804GHz, Emax: 45.90dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

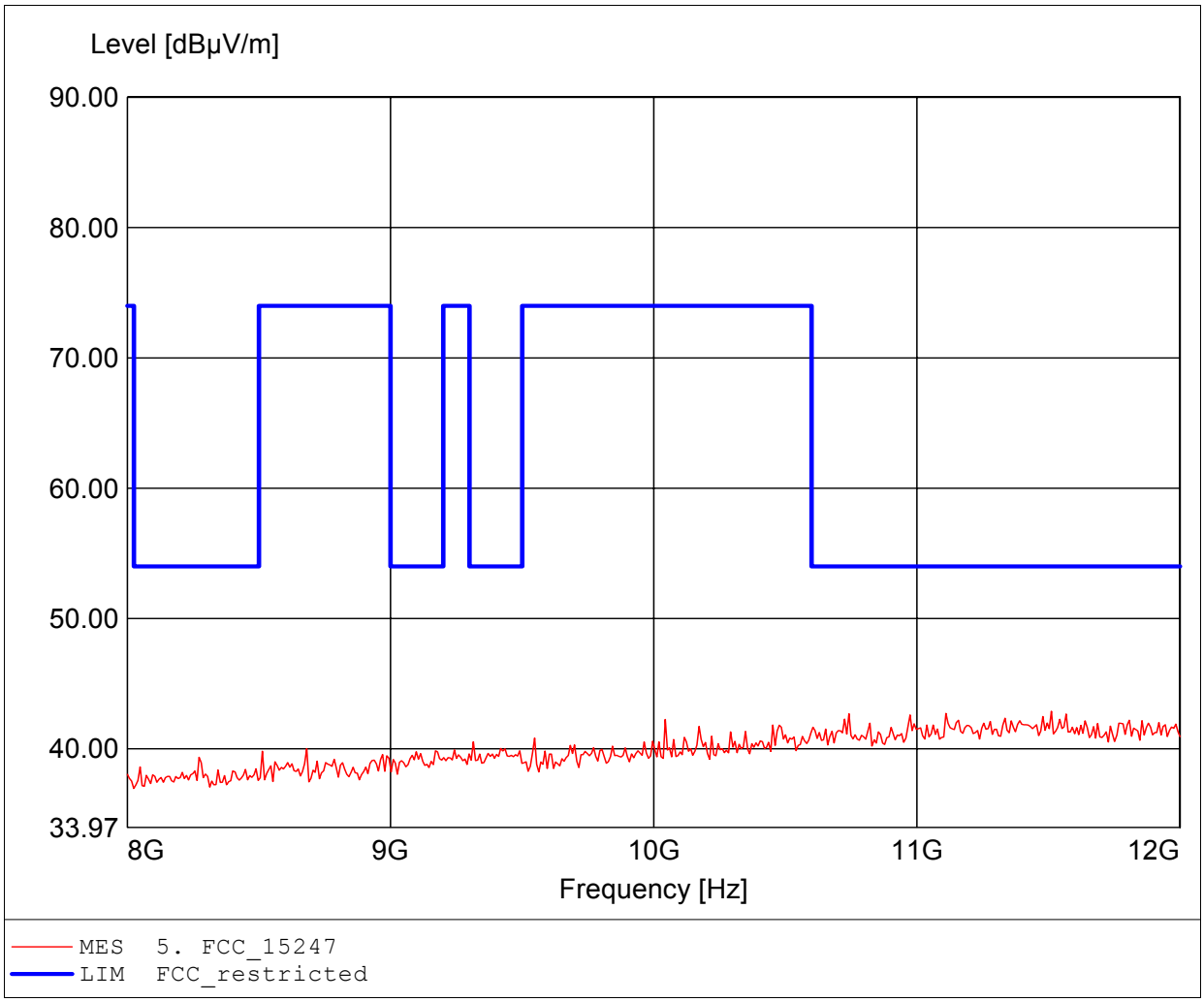
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.655GHz, Emax: 49.76dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

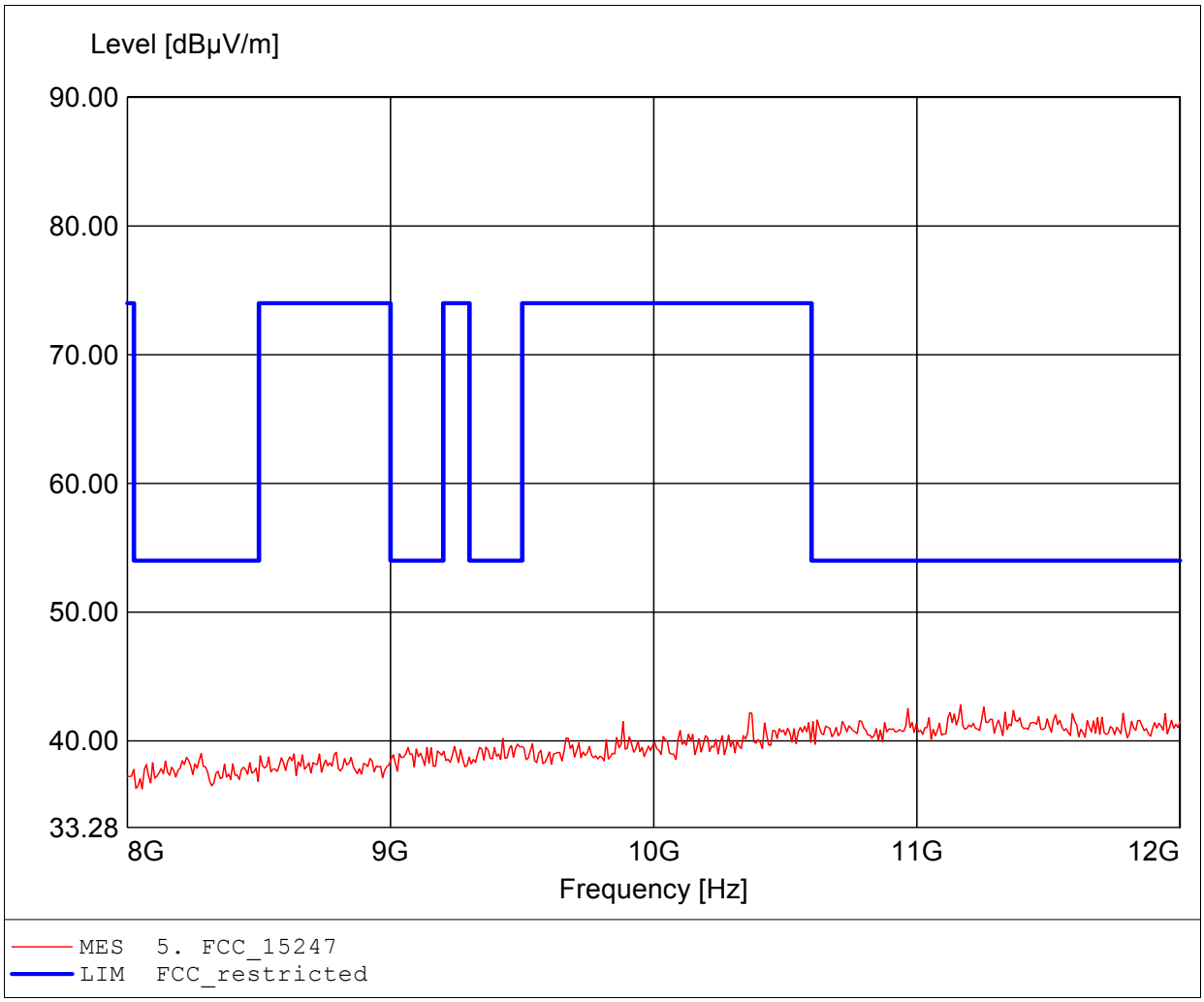
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.511GHz, Emax: 42.88dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

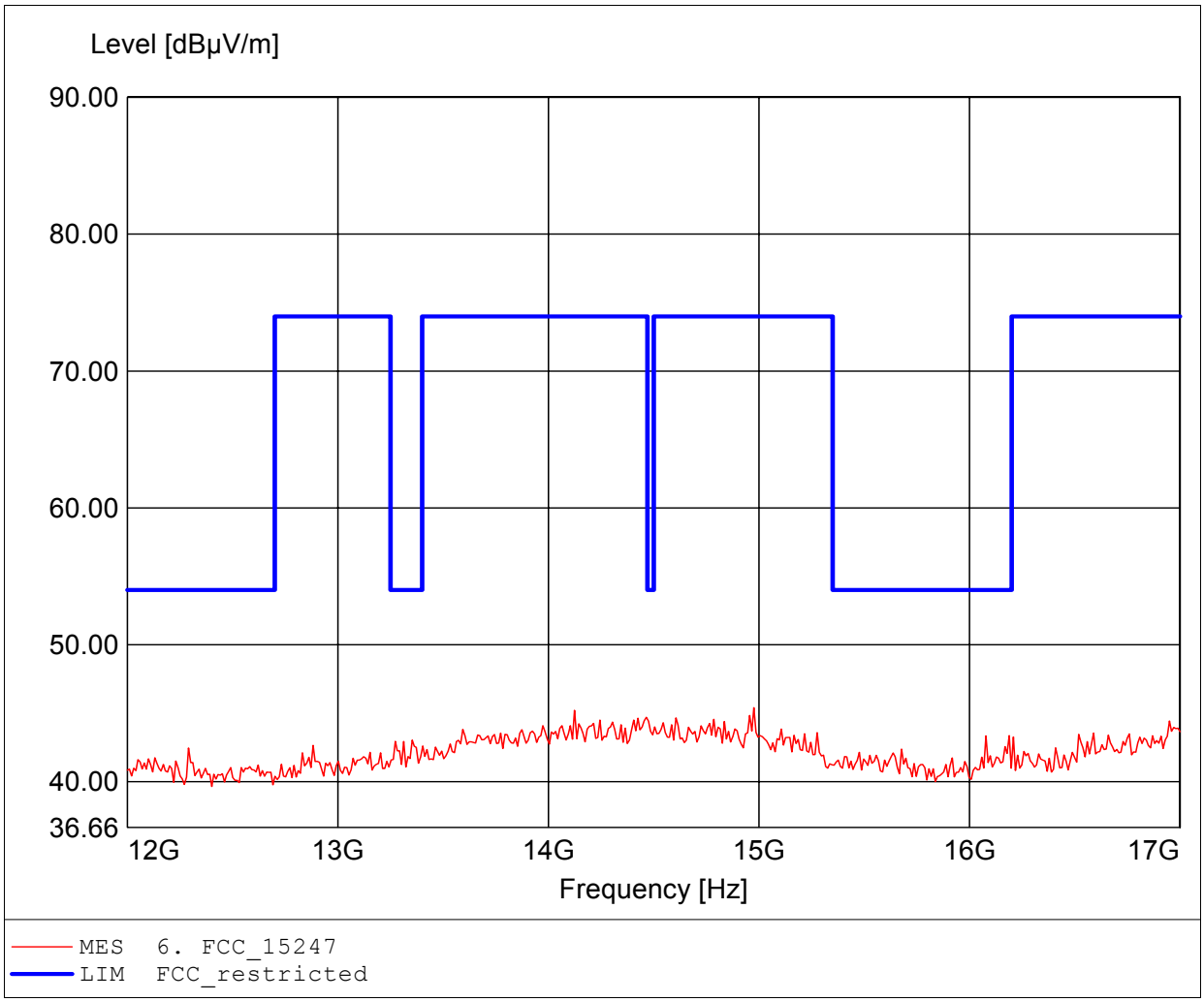
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.166GHz, Emax: 42.81dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

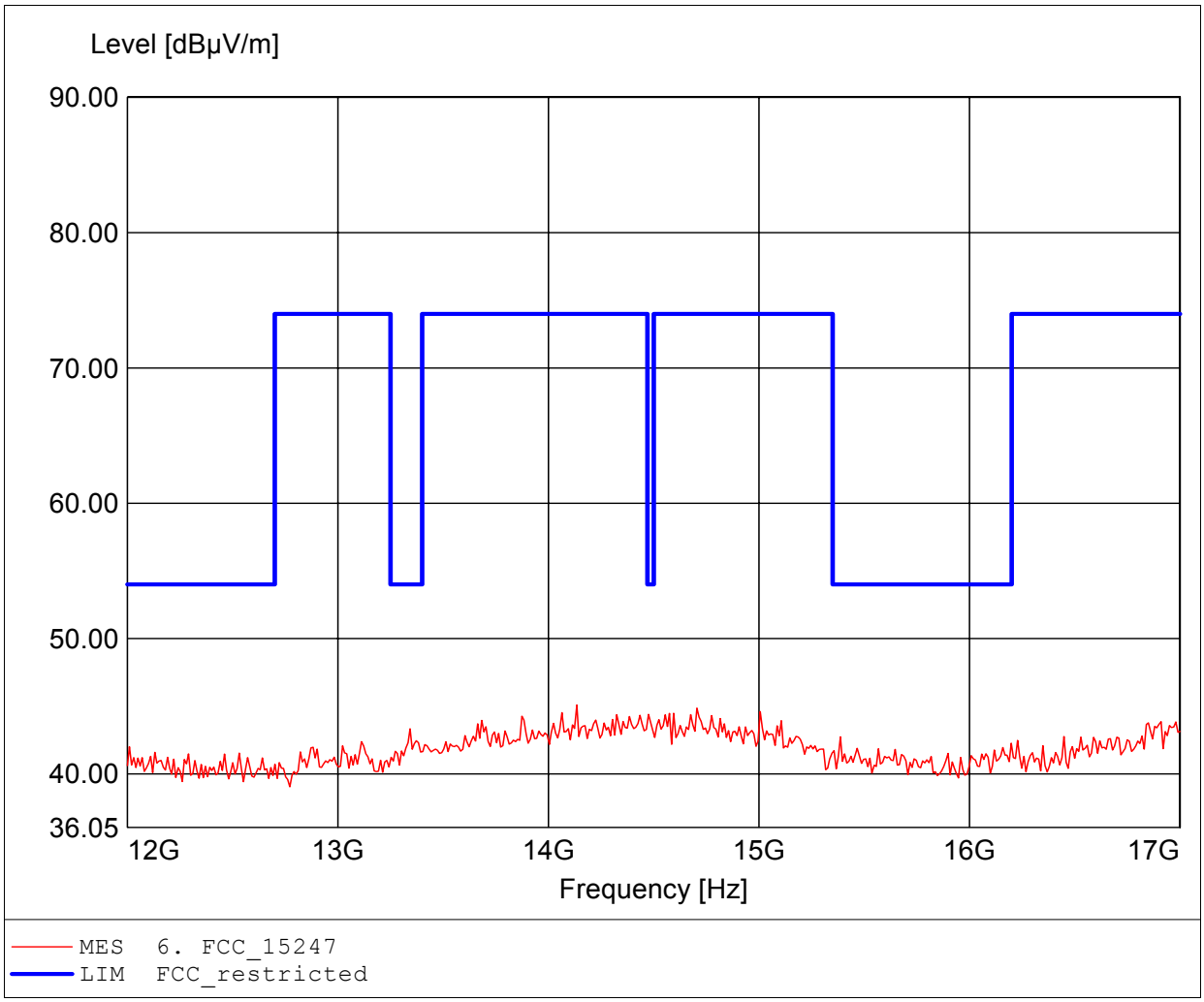
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 14.976GHz, Emax: 45.41dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

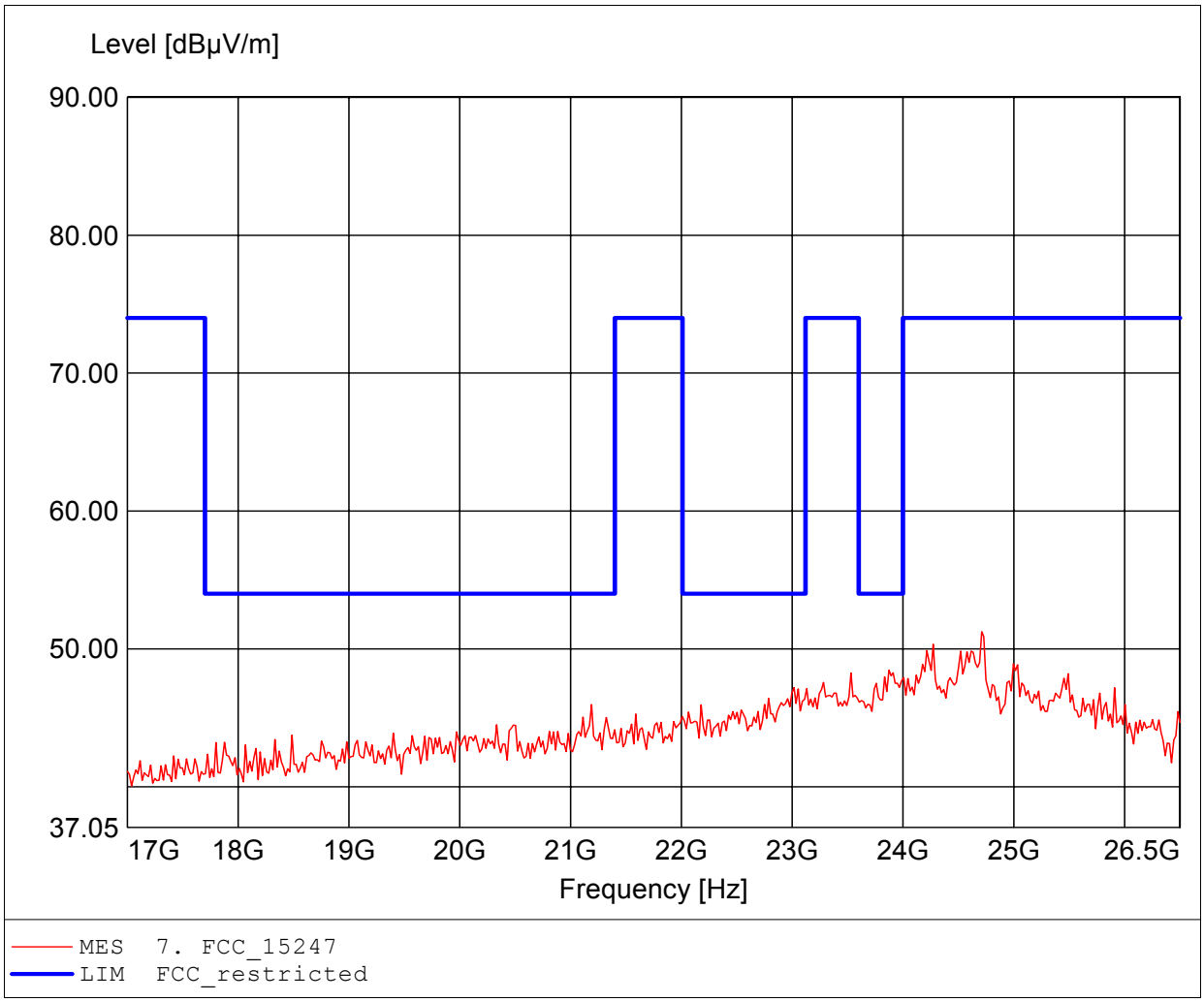
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 14.134GHz, Emax: 45.09dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

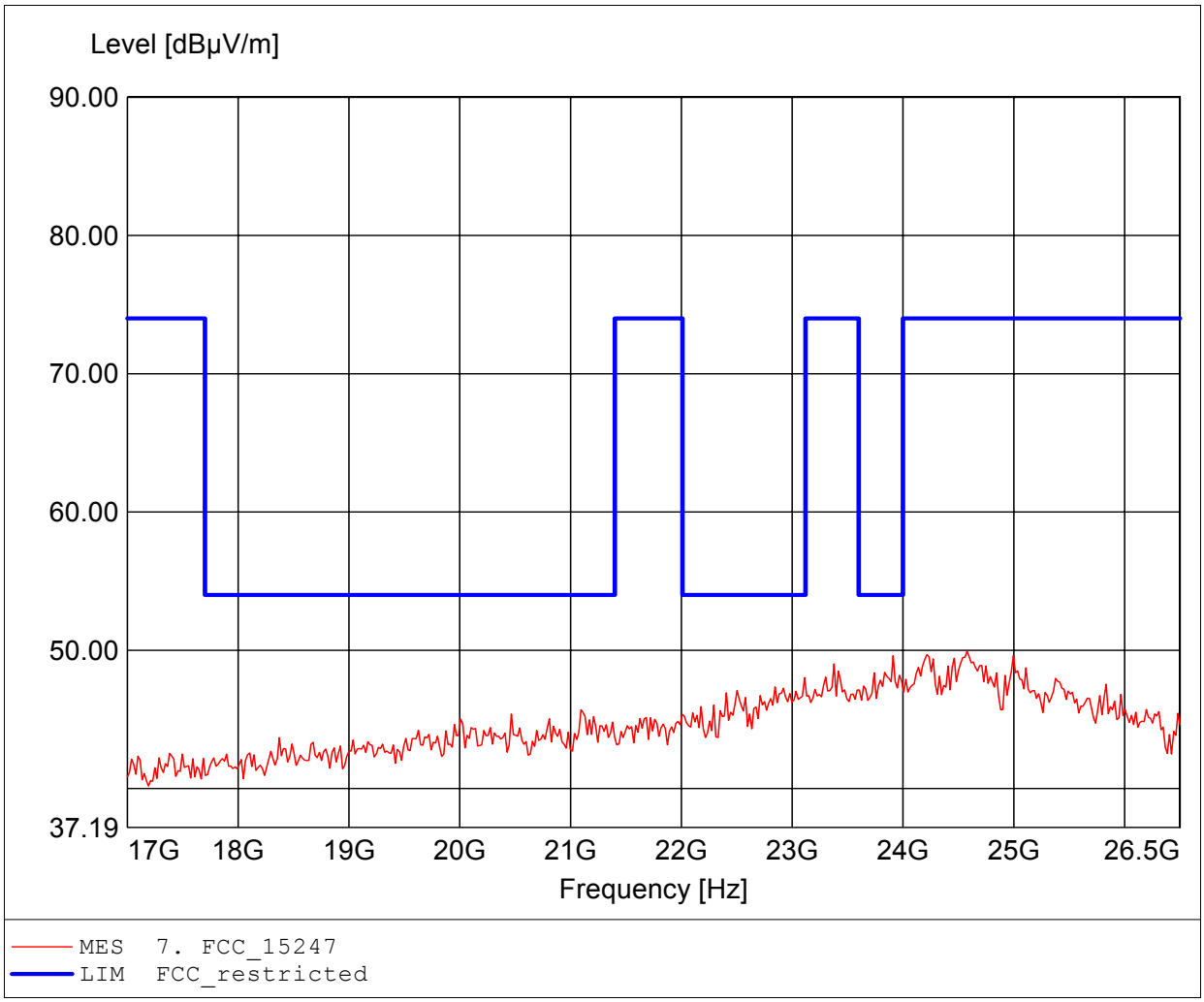
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: HL025, amplif.
Comment 2:	Freq: 24.710GHz, Emax: 51.24dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

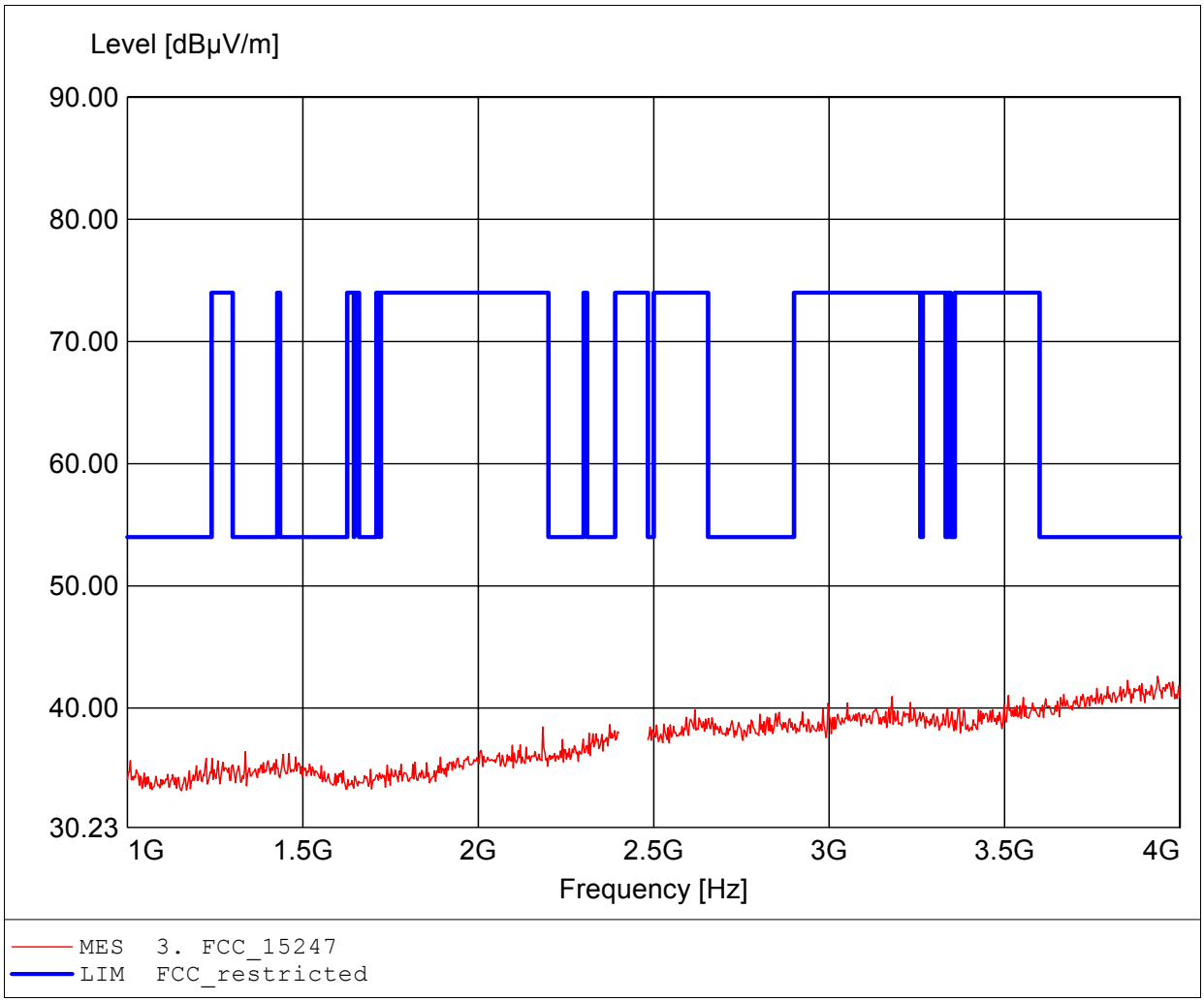
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2402 MHz worst case
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: HL025, amplif.
Comment 2:	Freq: 24.577GHz, Emax: 49.93dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

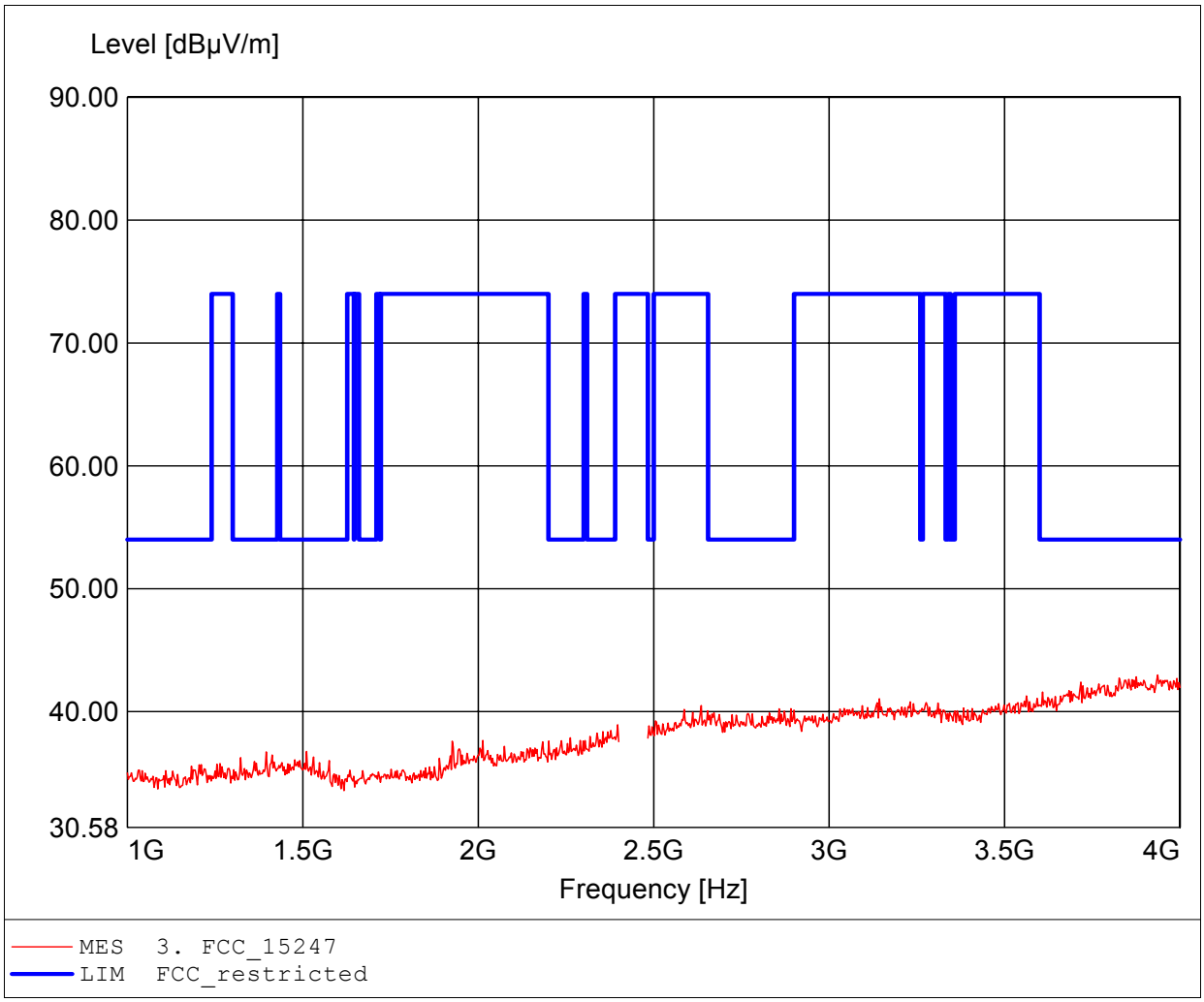
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: basic,  Tx, 2441 MHz
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    according to §15.247, peak detector
Comment 1:             Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:             Freq: 3.936GHz, Emax: 42.61dBµV/m, RBW: 1MHz
```



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

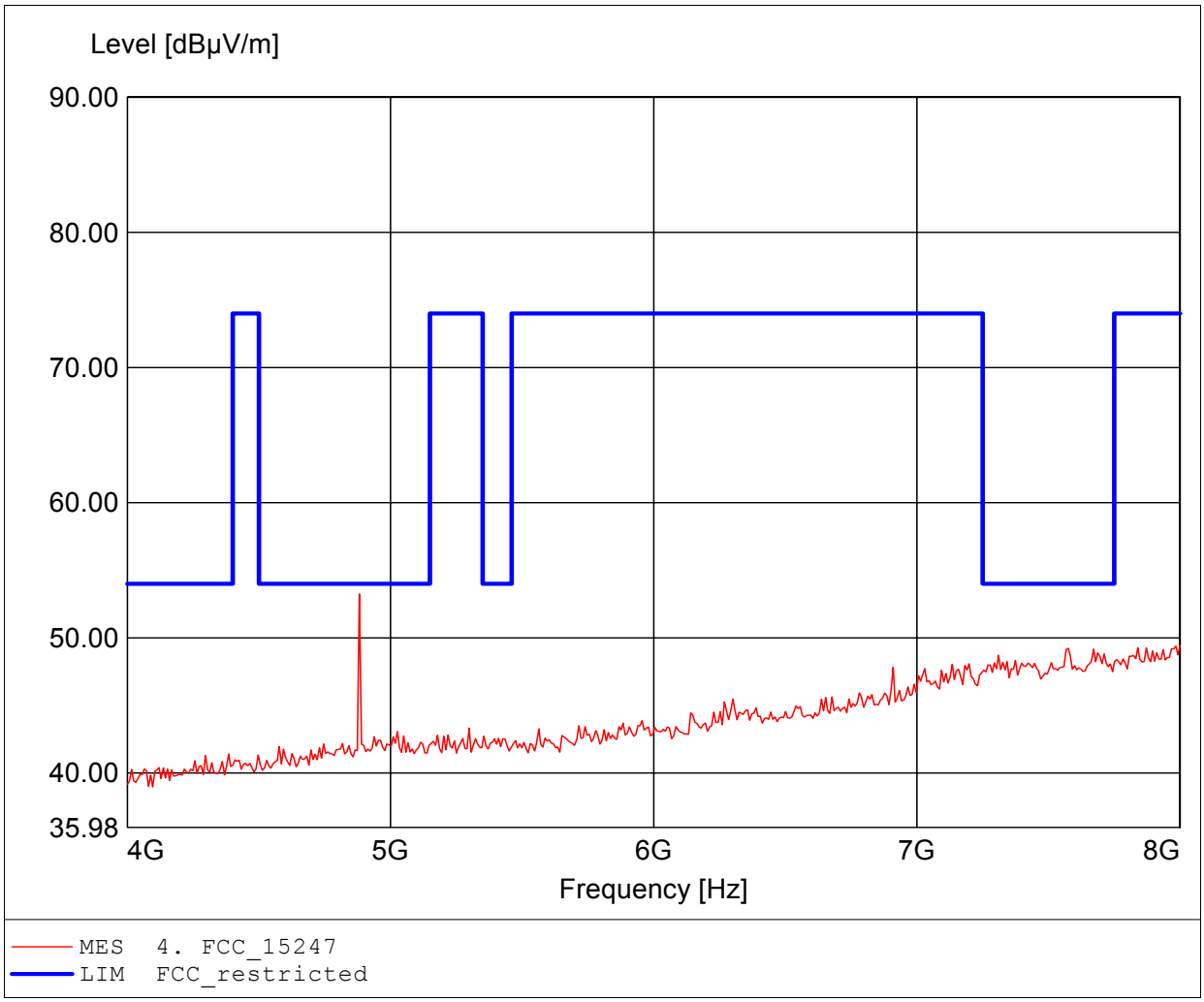
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 3.936GHz, Emax: 42.99dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

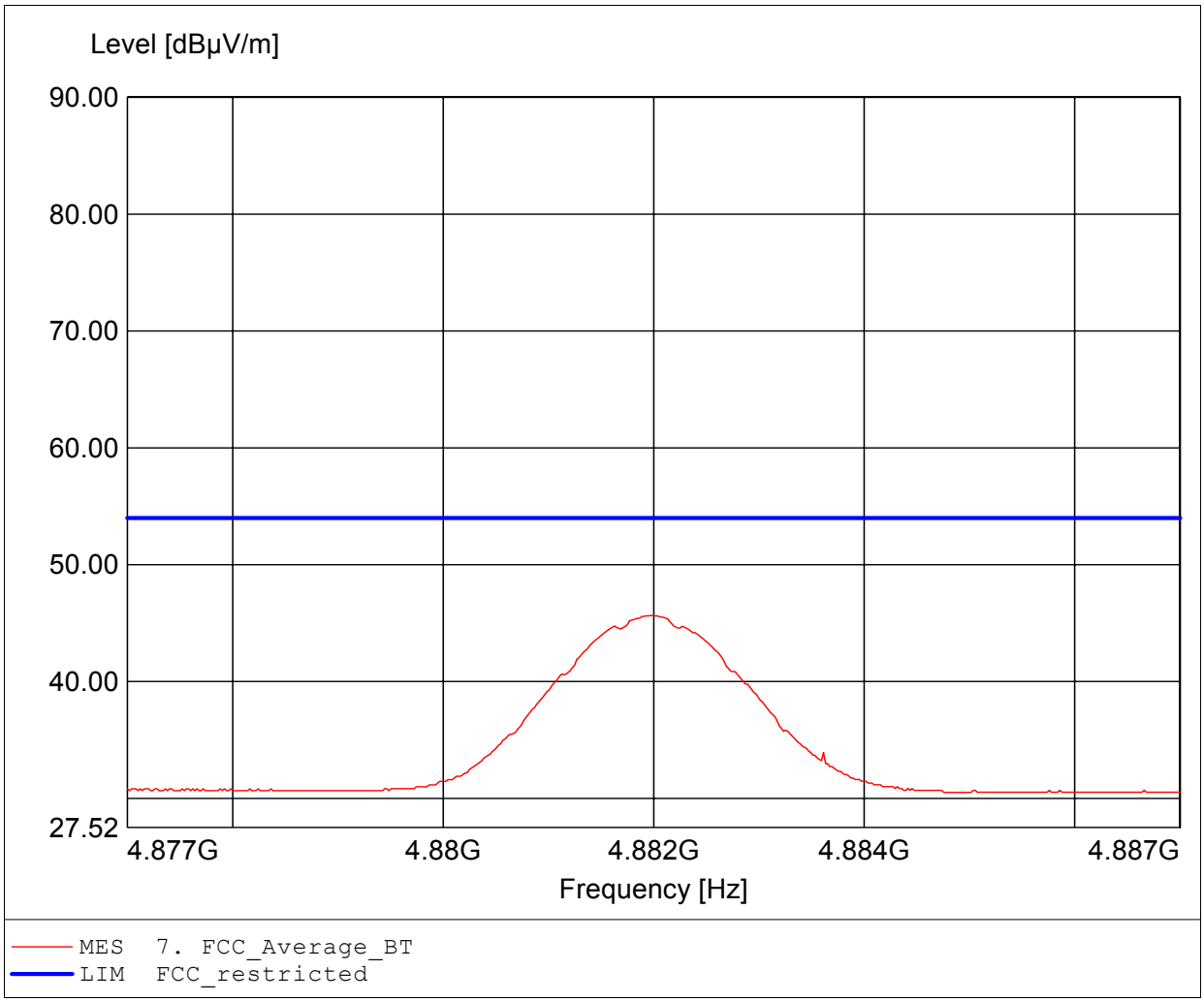
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 4.882GHz, Emax: 53.25dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

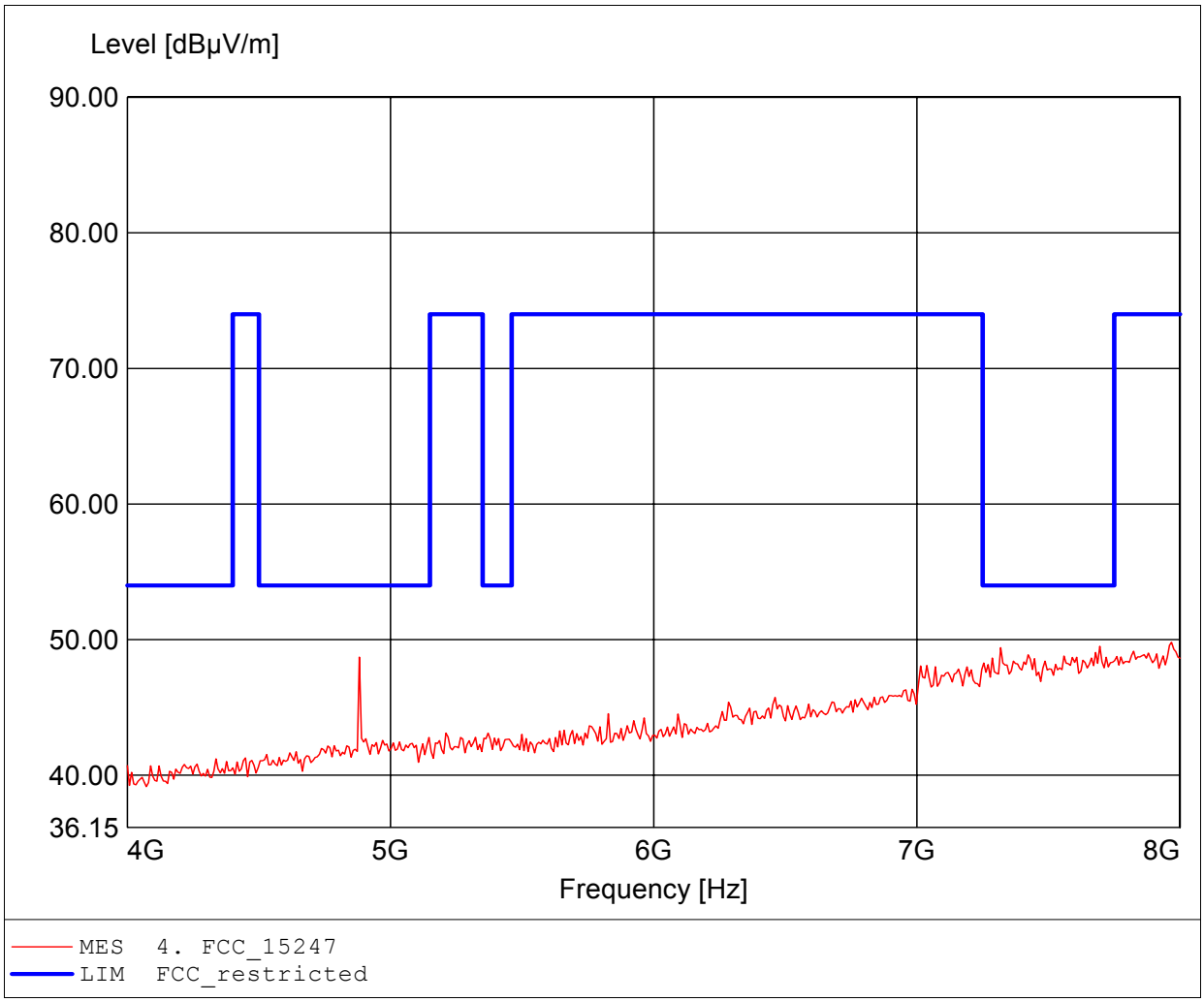
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, average detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 4.882GHz, Emax: 45.65dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

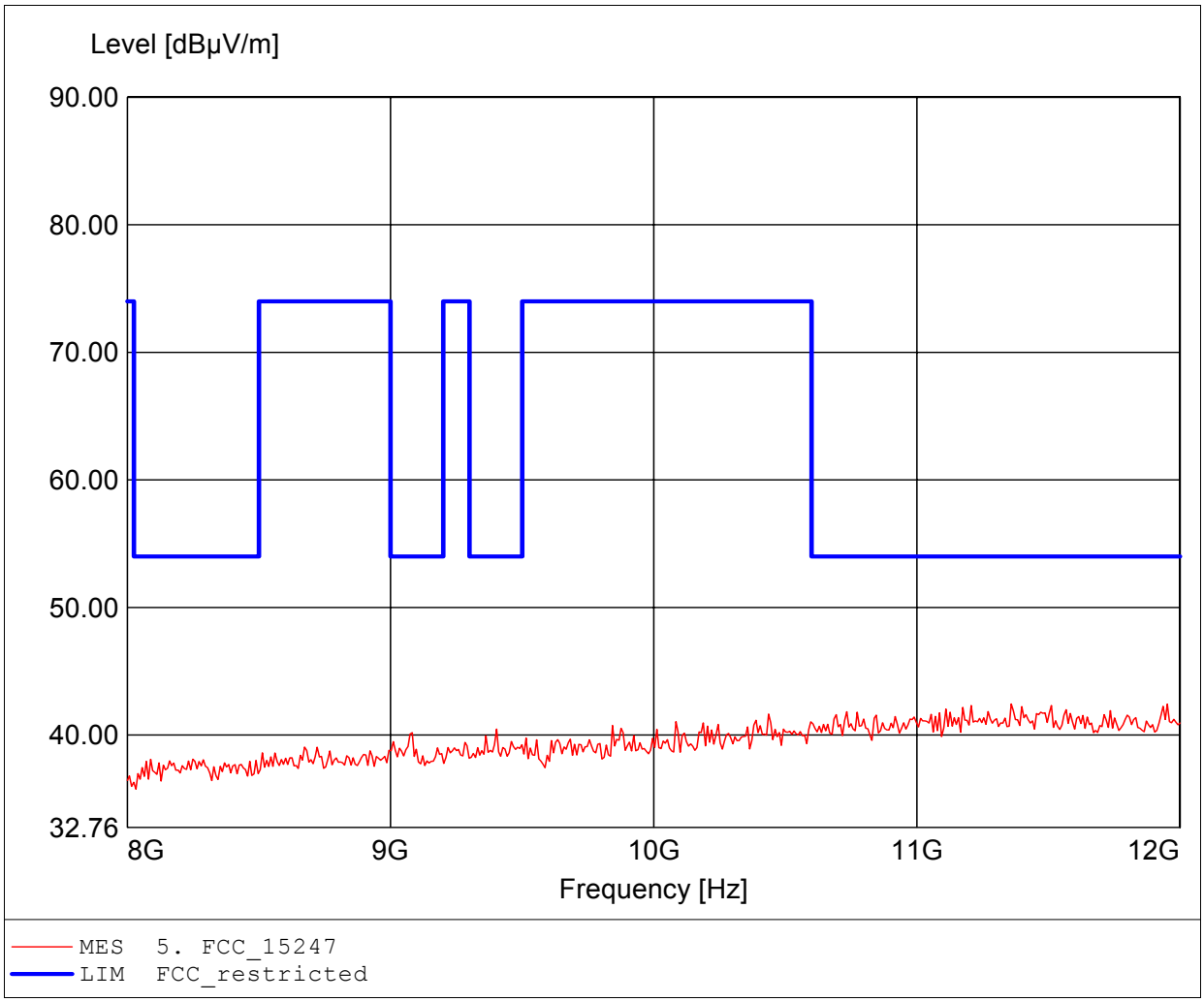
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.968GHz, Emax: 49.80dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

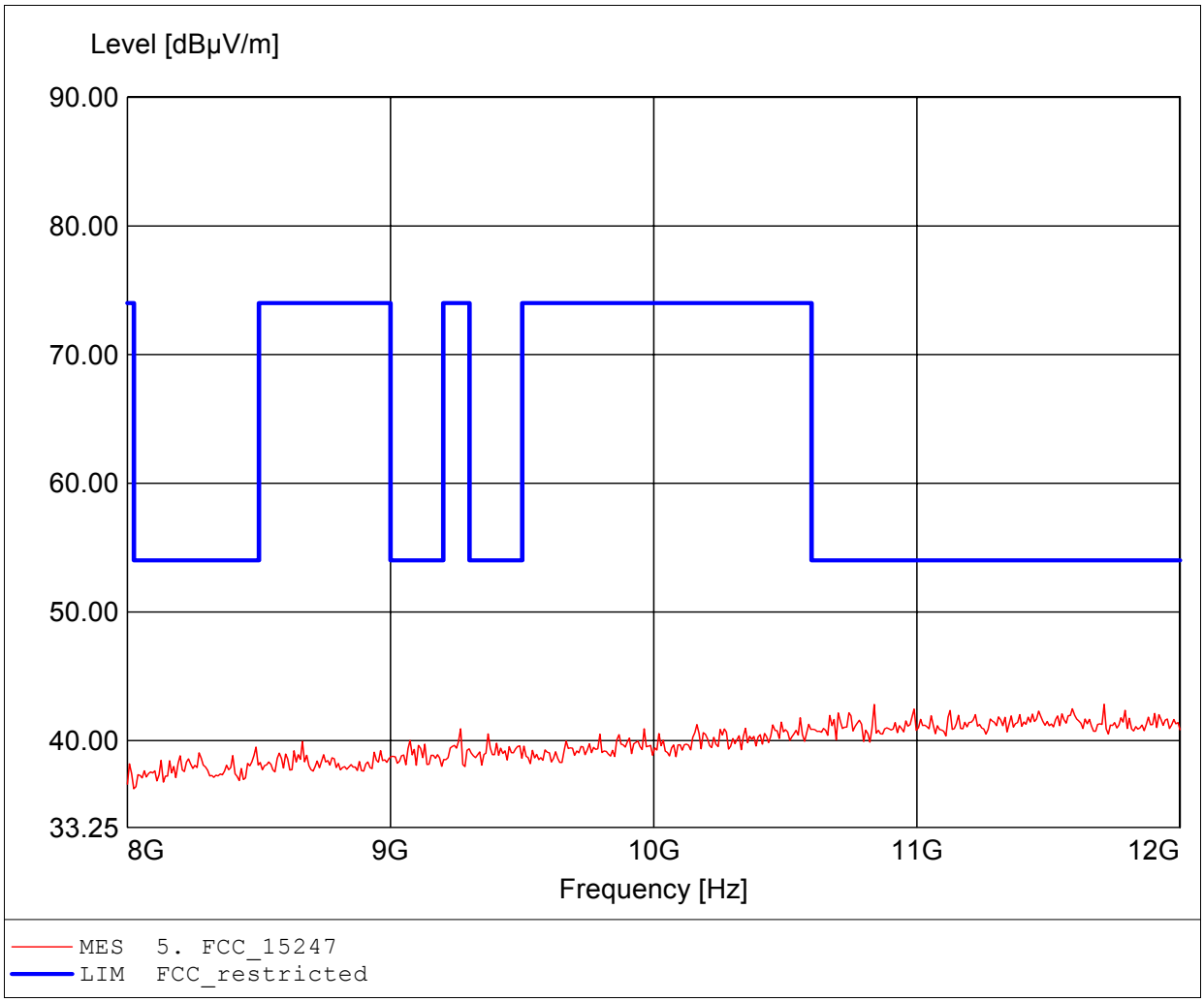
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.359GHz, Emax: 42.44dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

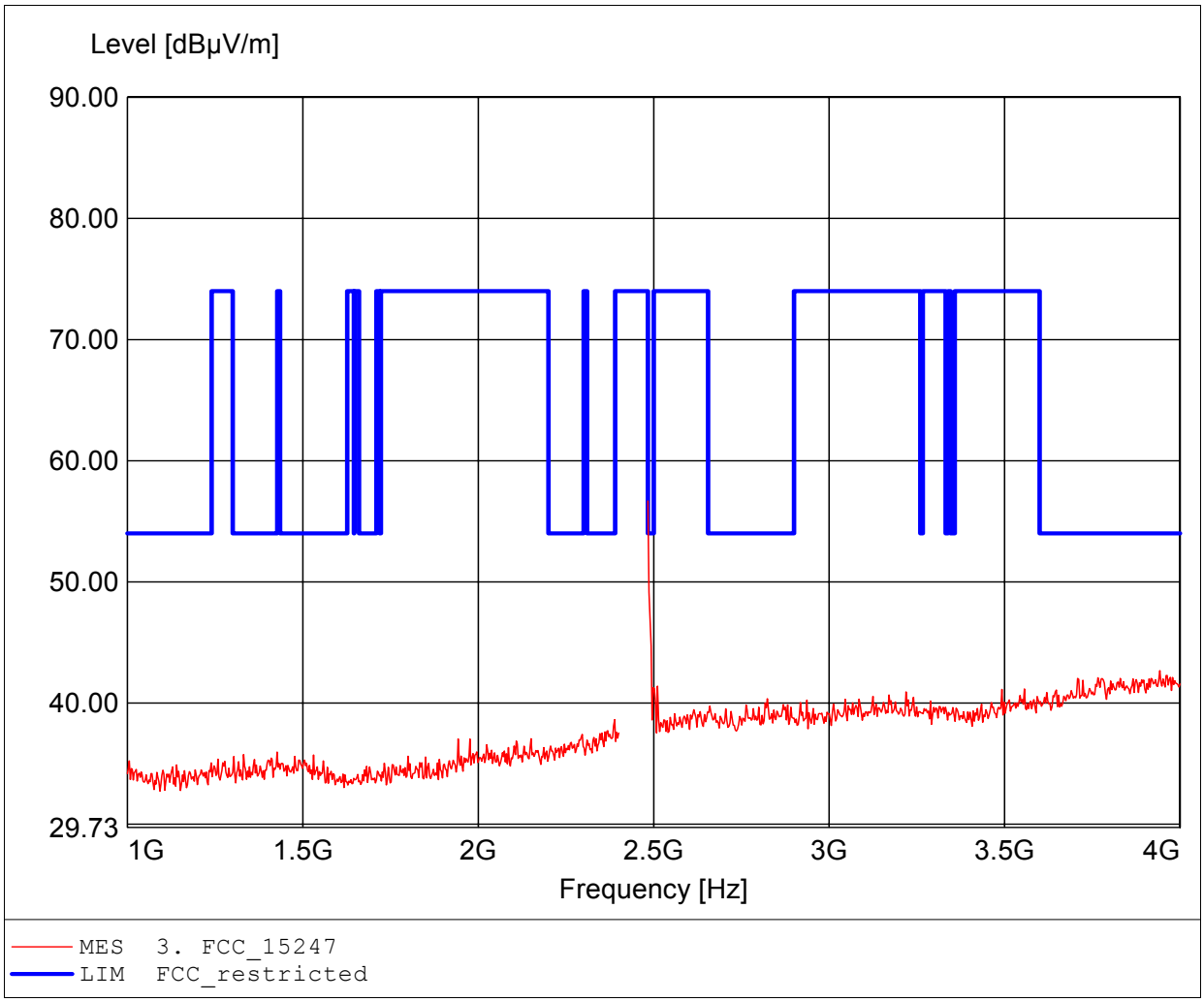
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.711GHz, Emax: 42.82dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

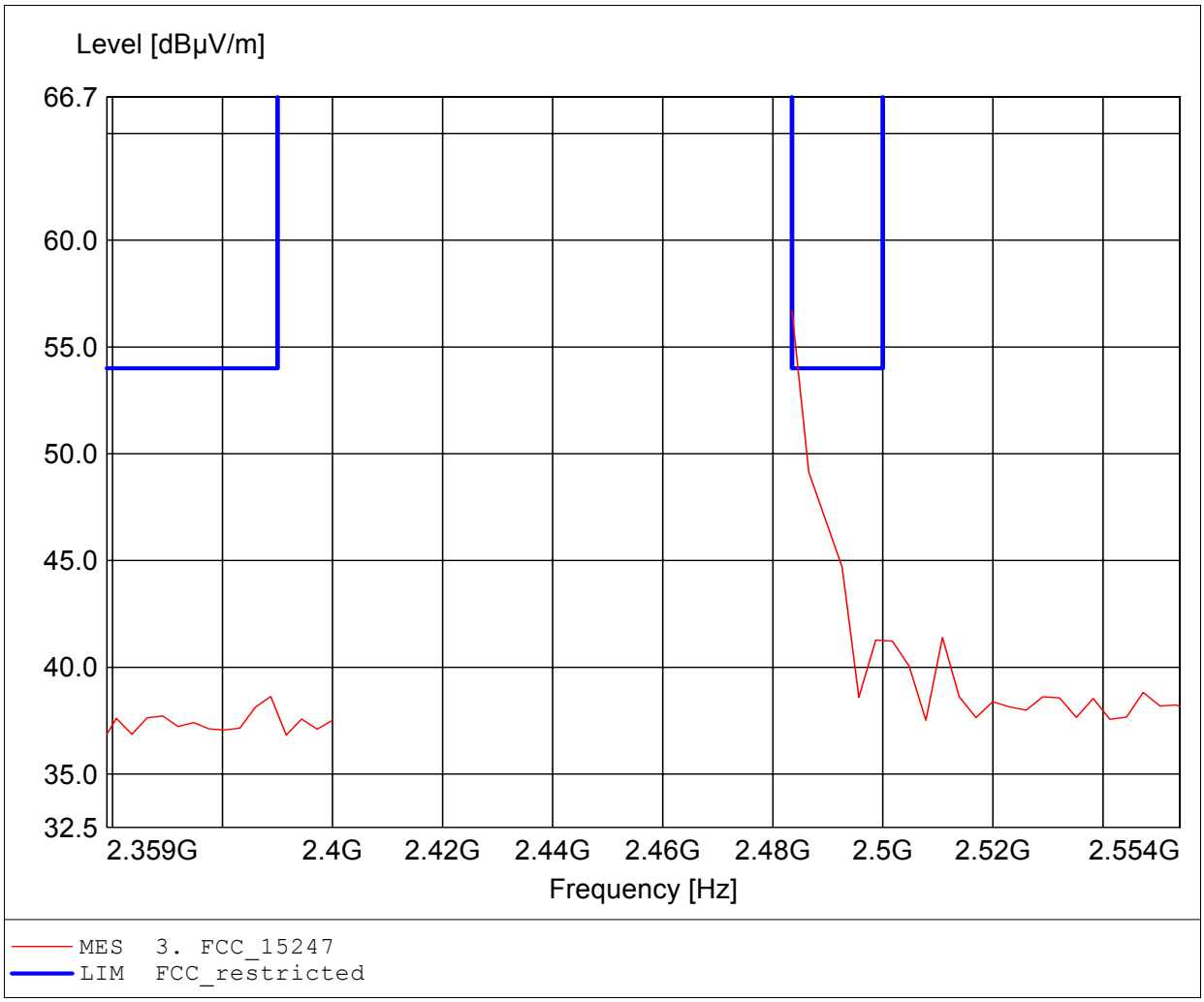
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.484GHz, Emax: 56.68dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

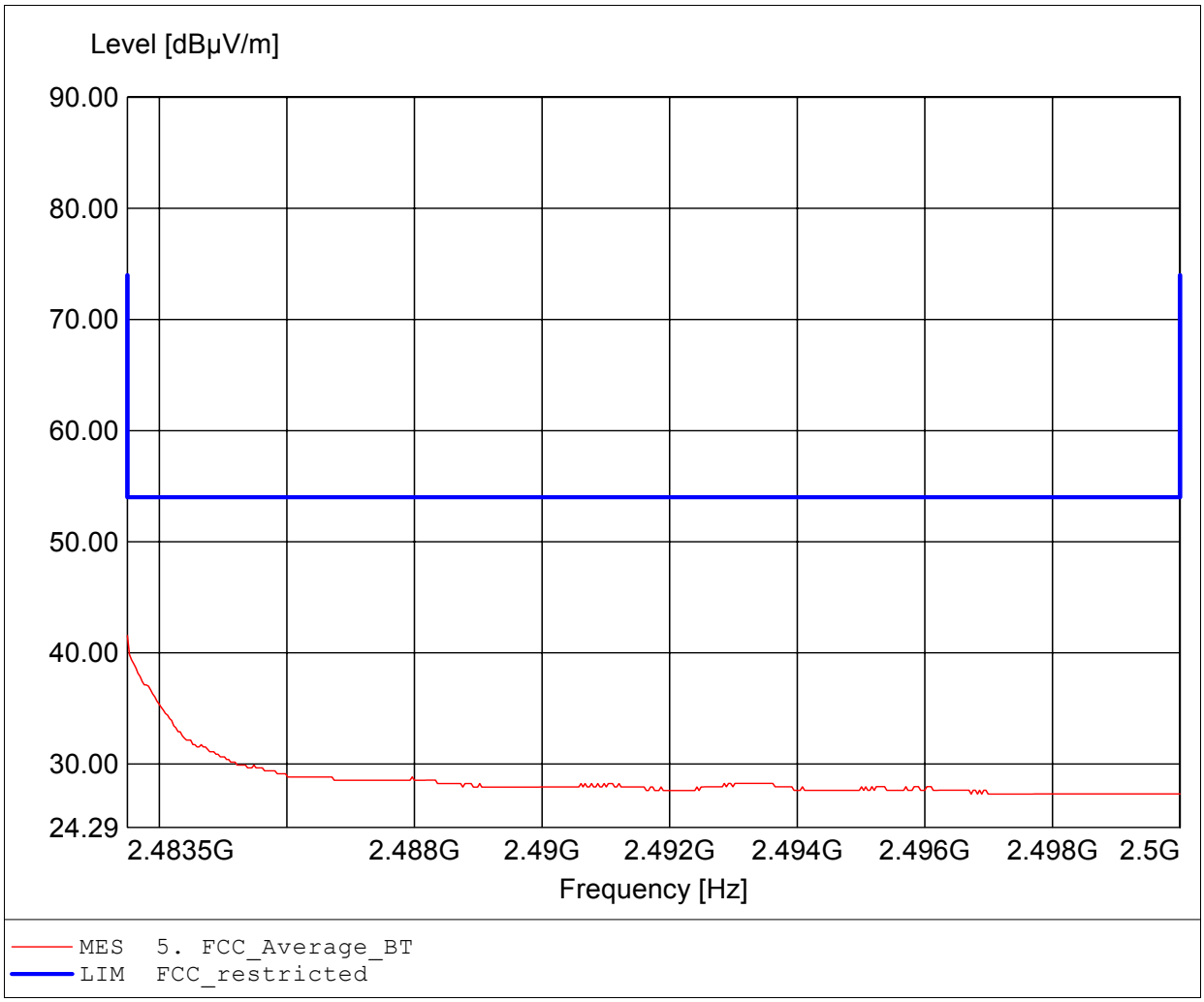
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.484GHz, Emax: 56.68dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

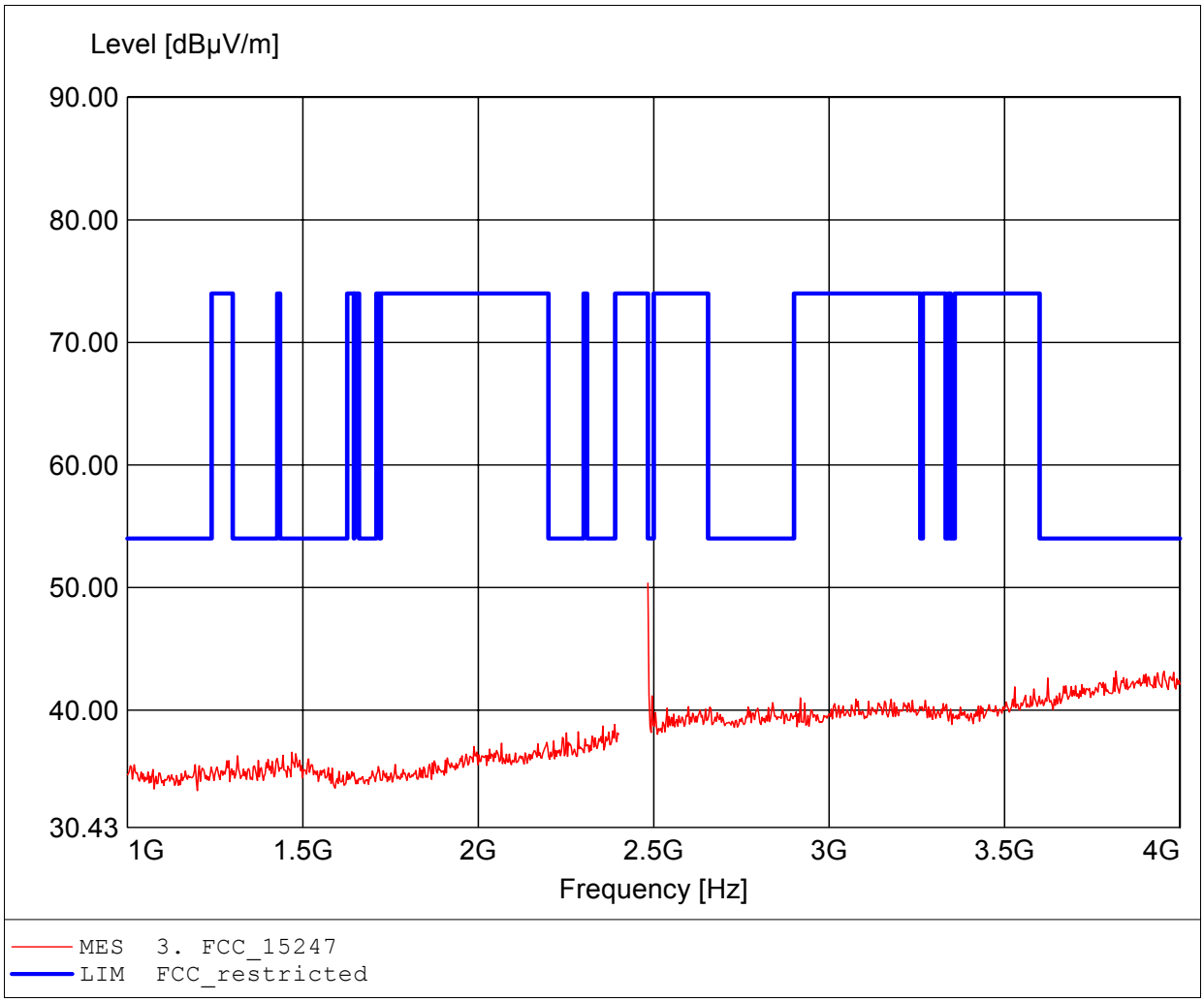
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, average detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 2.484GHz, Emax: 41.55dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

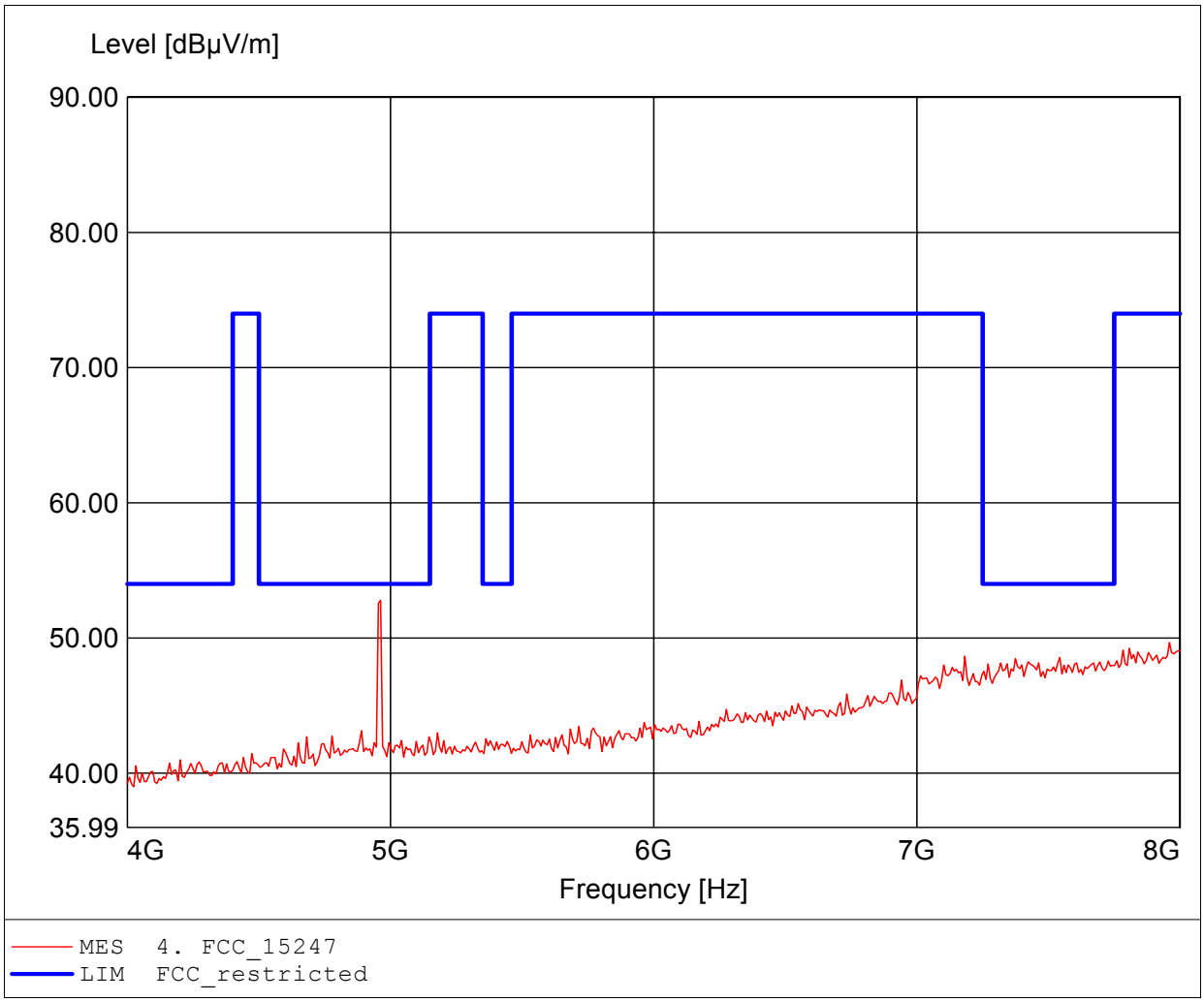
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.484GHz, Emax: 50.36dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 4.962GHz, Emax: 52.78dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

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Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: basic,  Tx, 2480 MHz
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    according to §15.247, average detector
Comment 1:             Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:             Freq: 4.960GHz, Emax: 45.32dBµV/m, RBW: 1MHz
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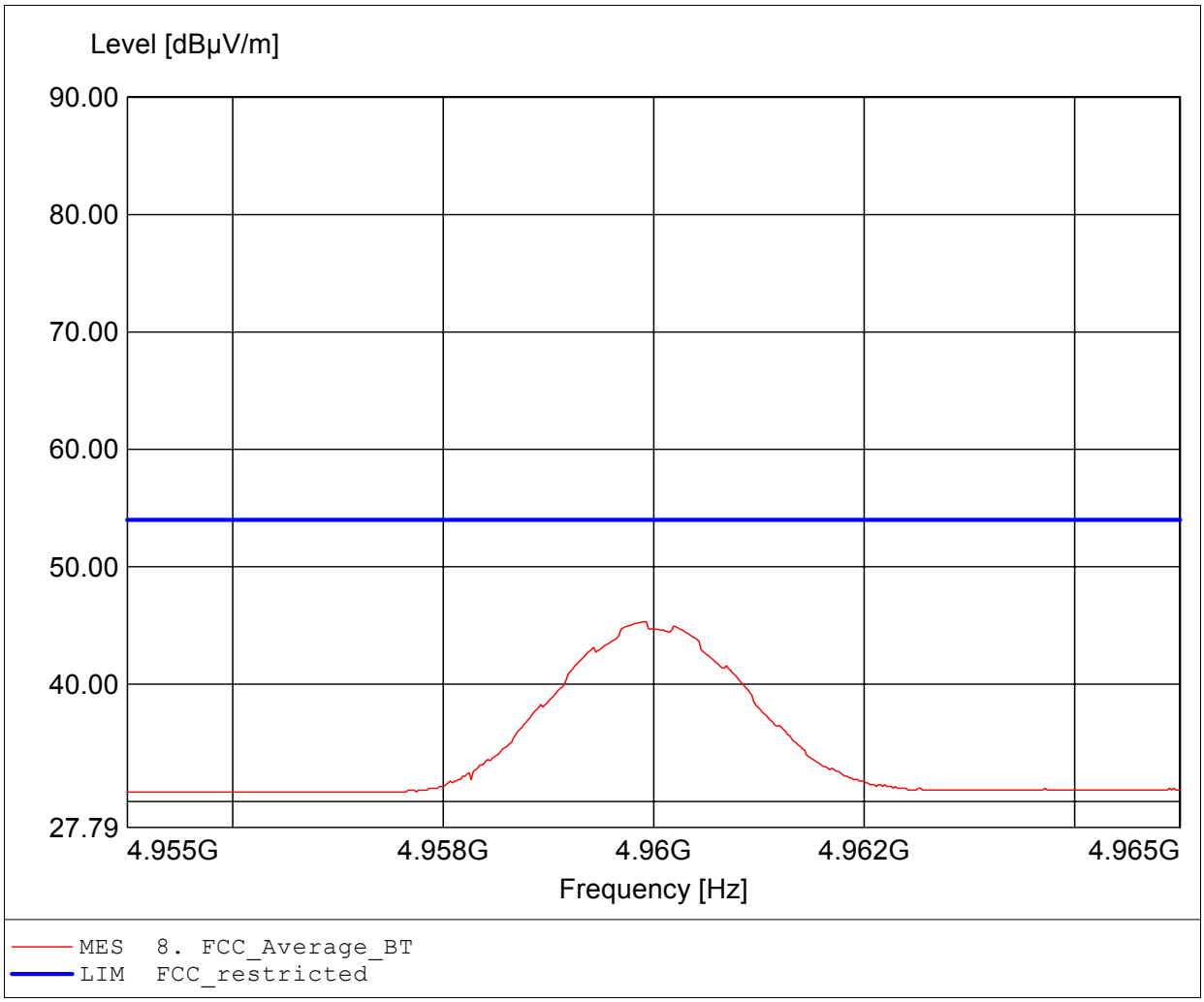
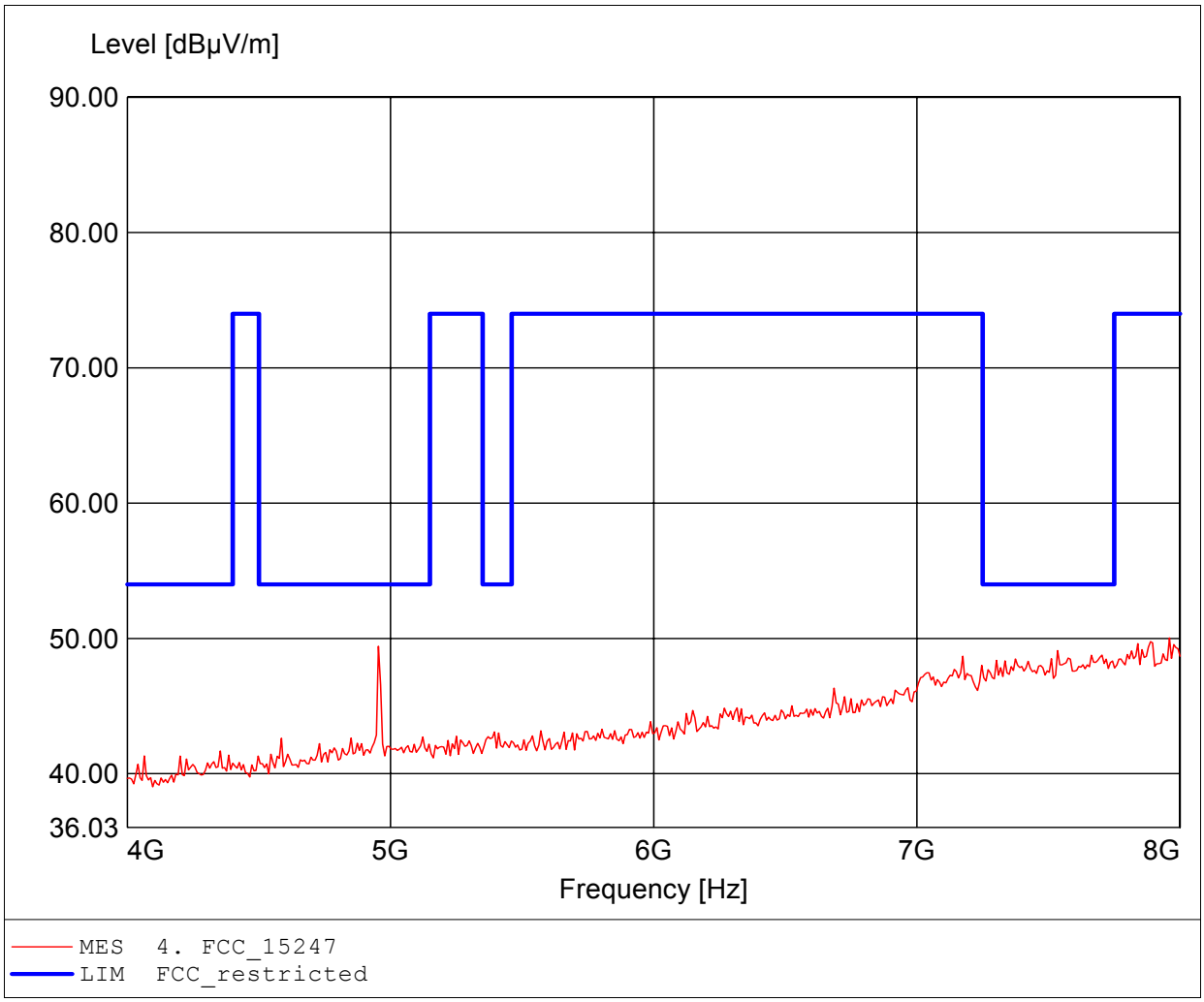


Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

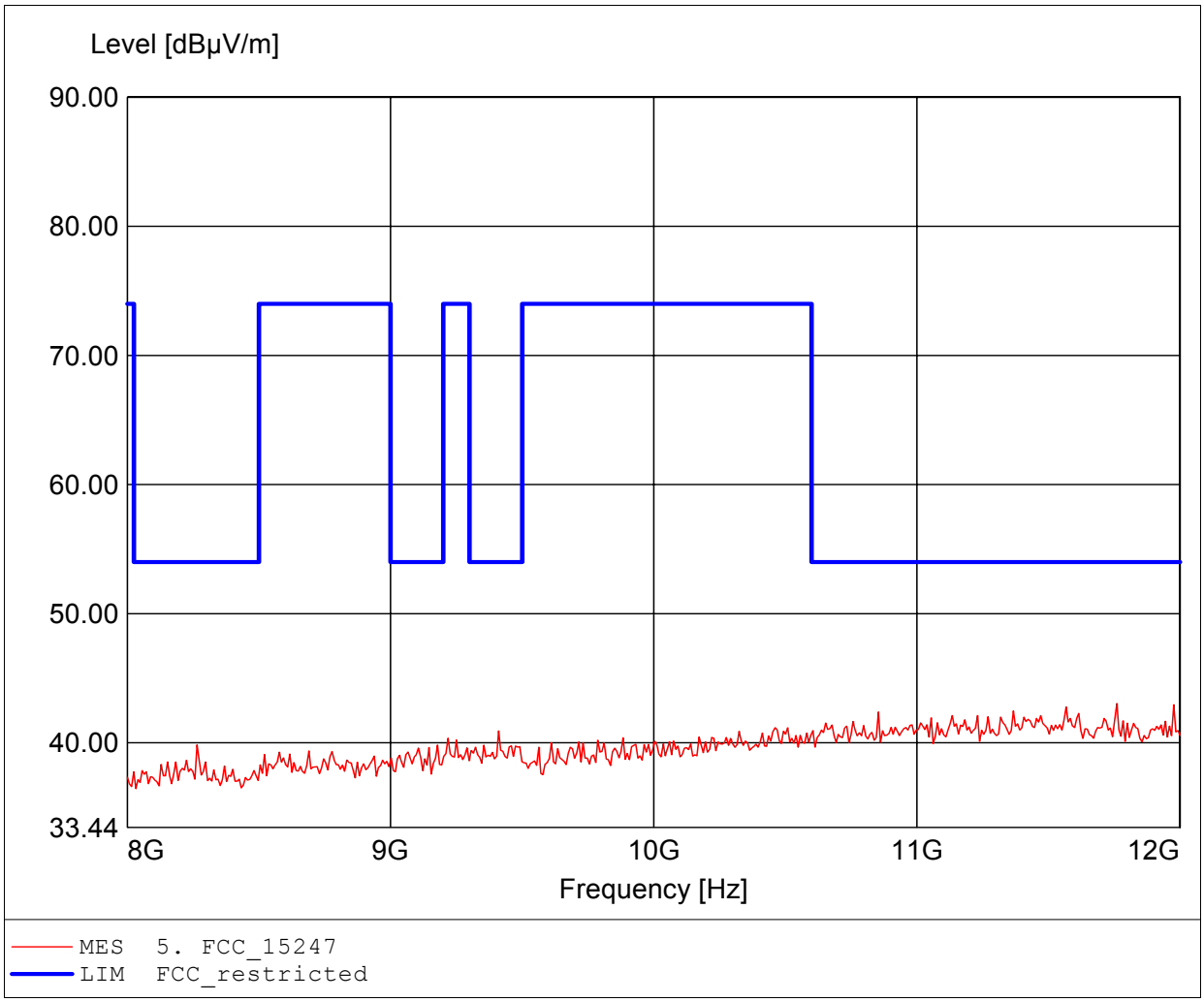
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.960GHz, Emax: 50.03dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

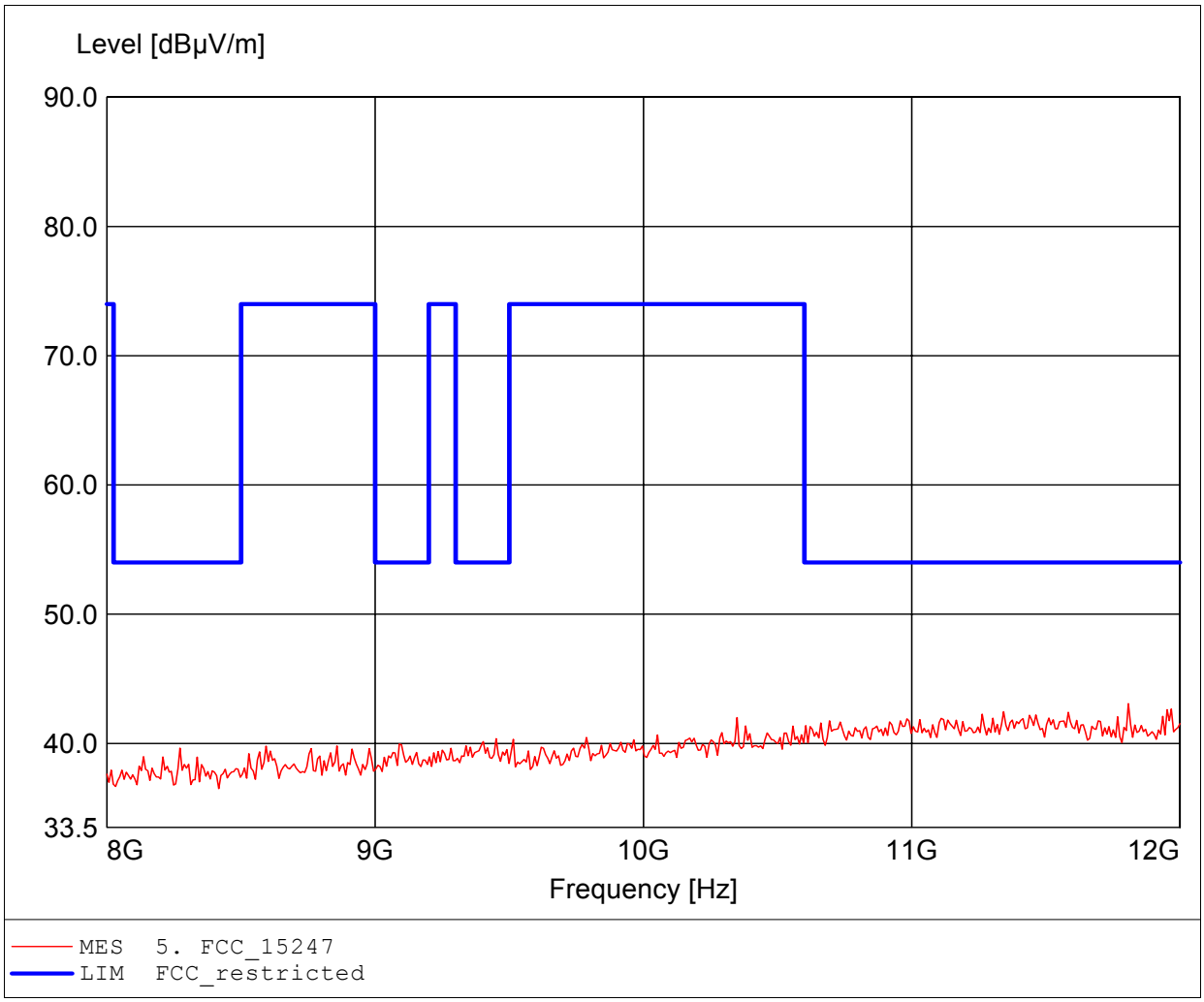
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.760GHz, Emax: 43.04dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

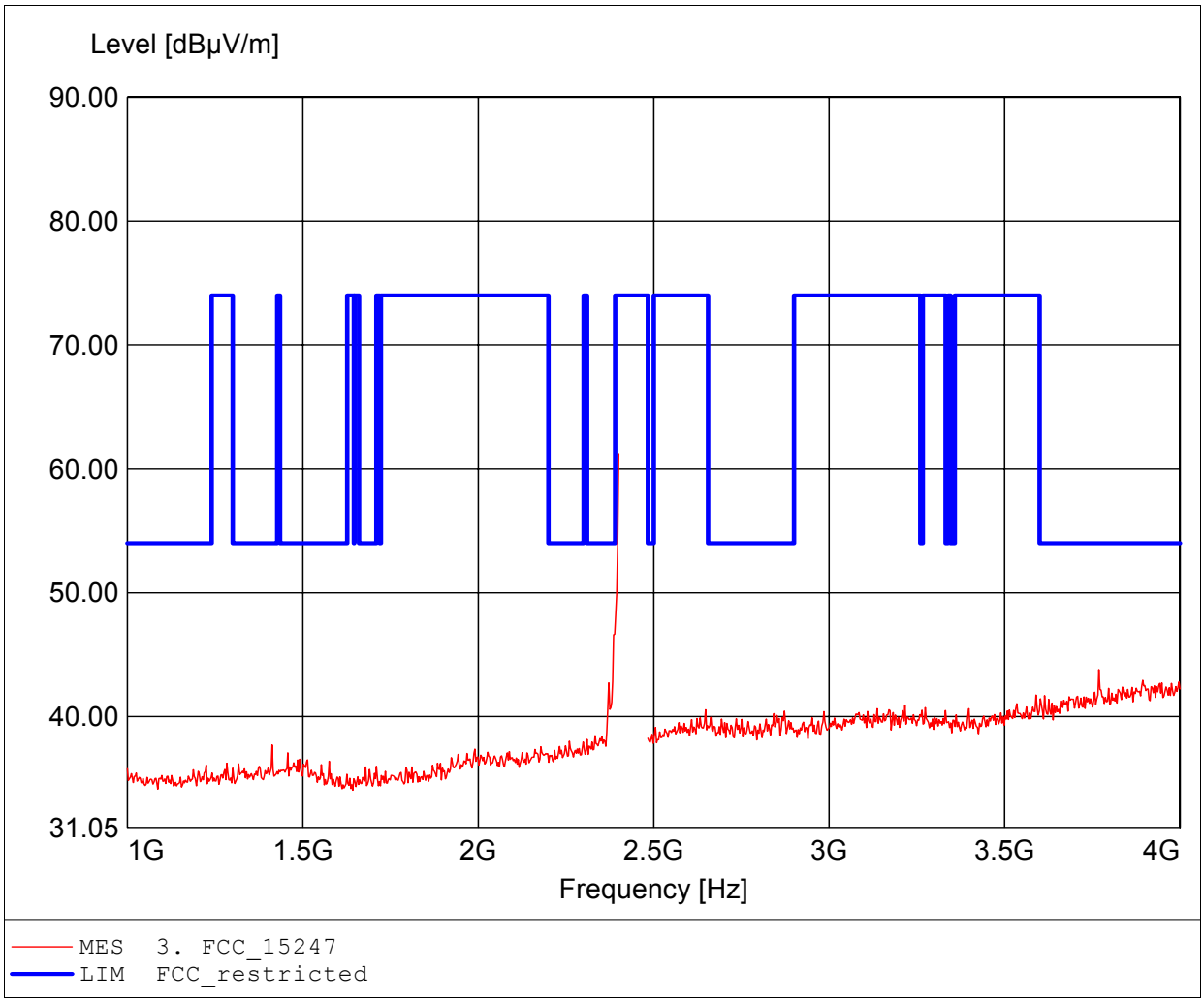
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: basic, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.808GHz, Emax: 43.08dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

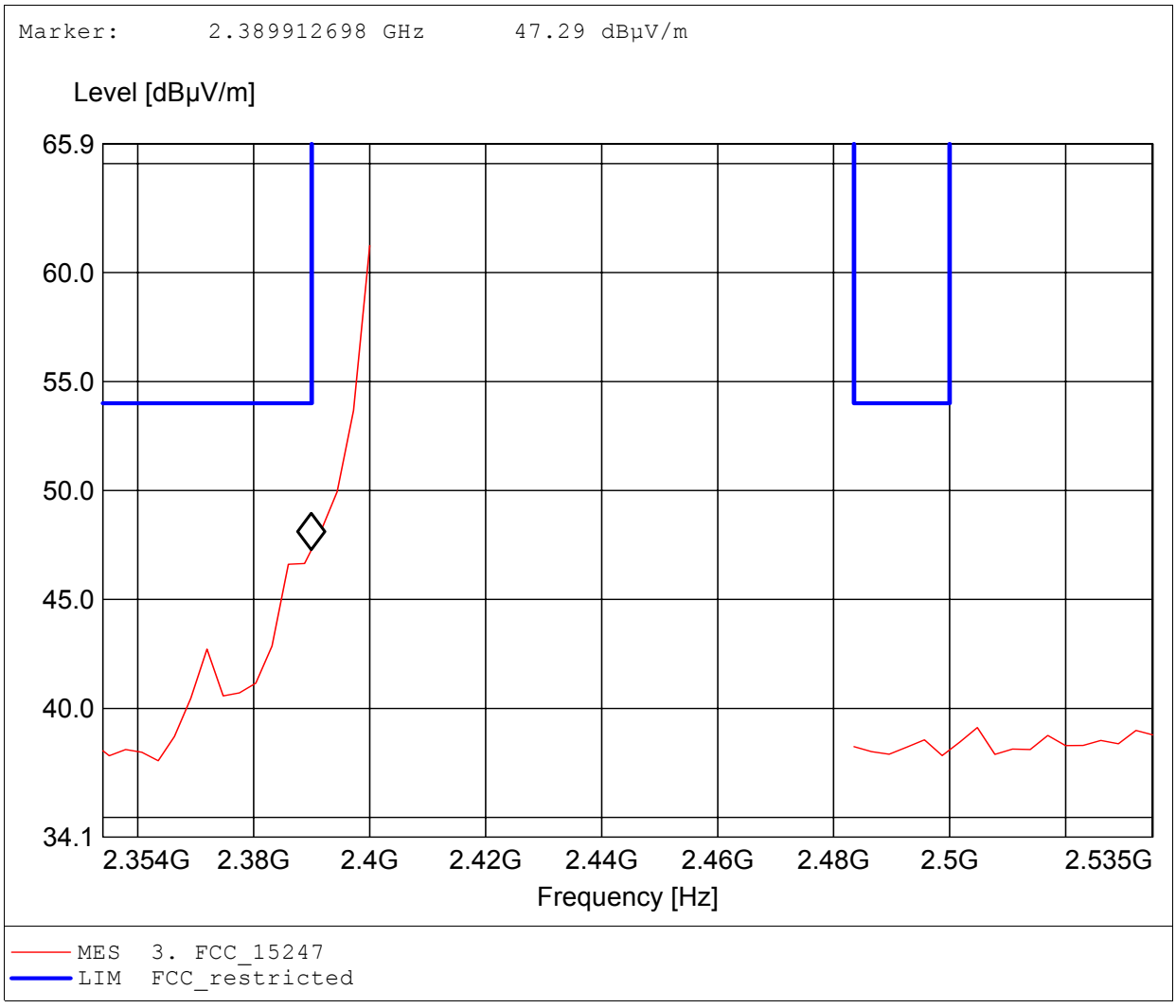
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.400GHz, Emax: 61.23dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

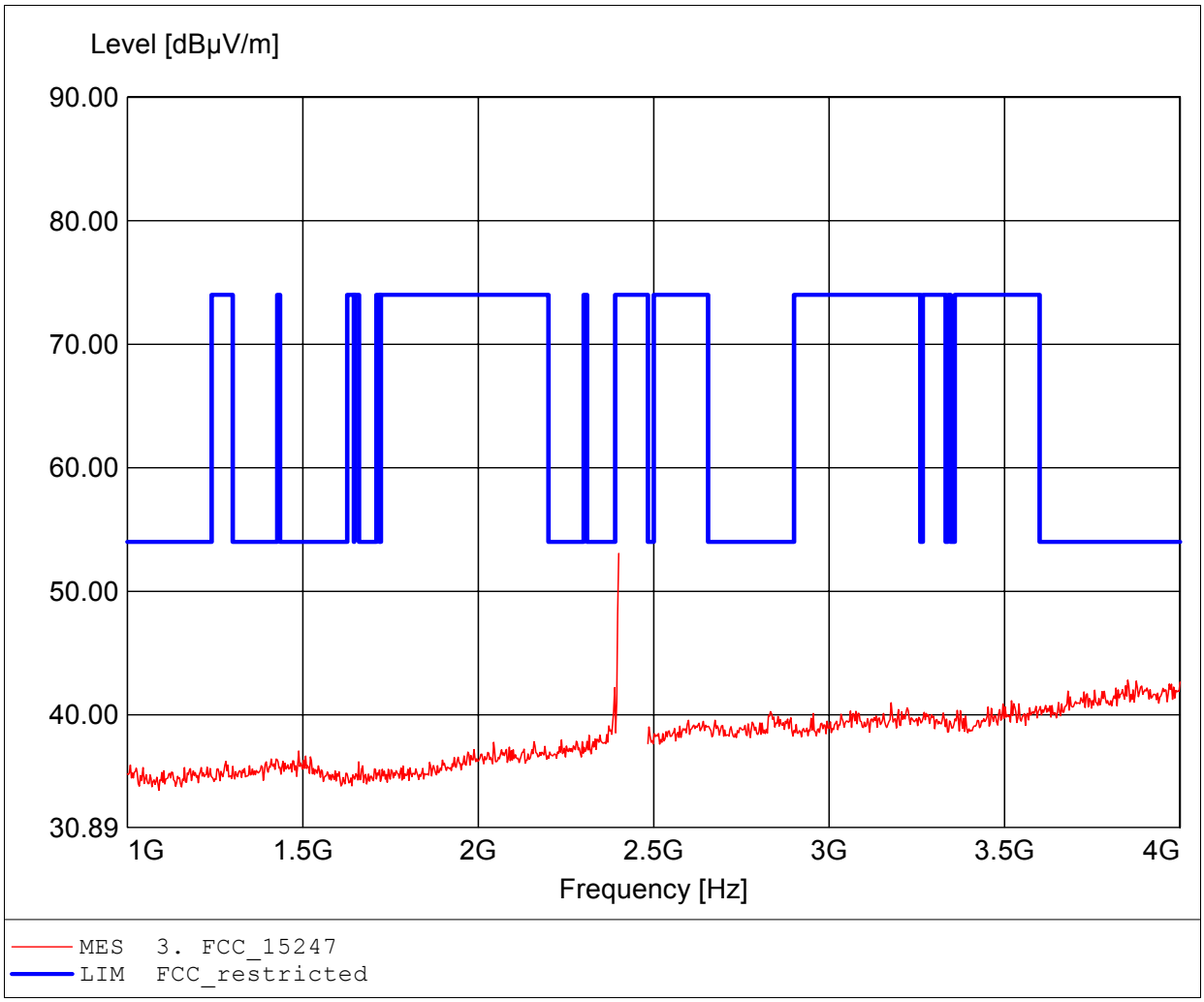
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.400GHz, Emax: 61.23dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

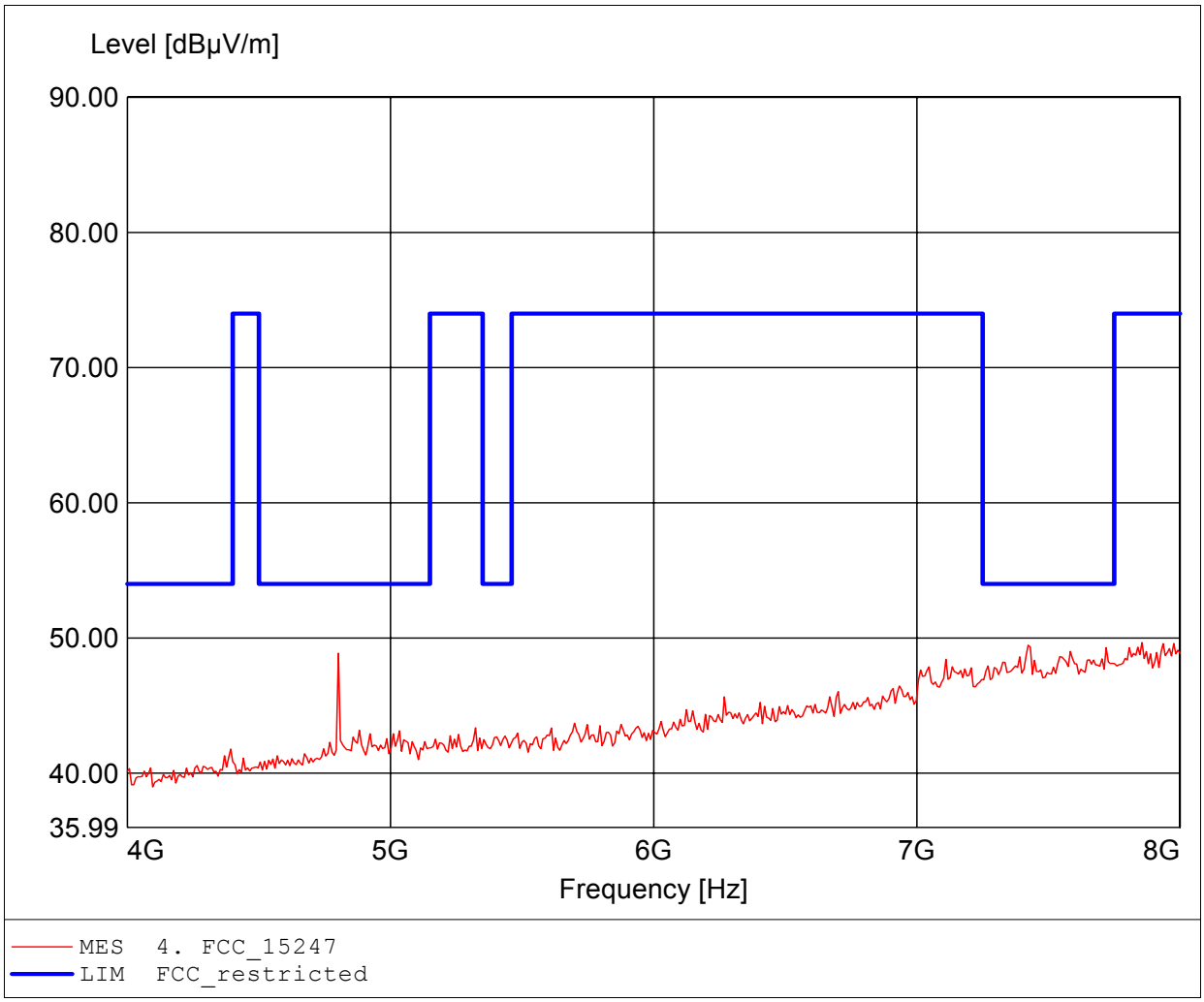
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.400GHz, Emax: 53.08dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

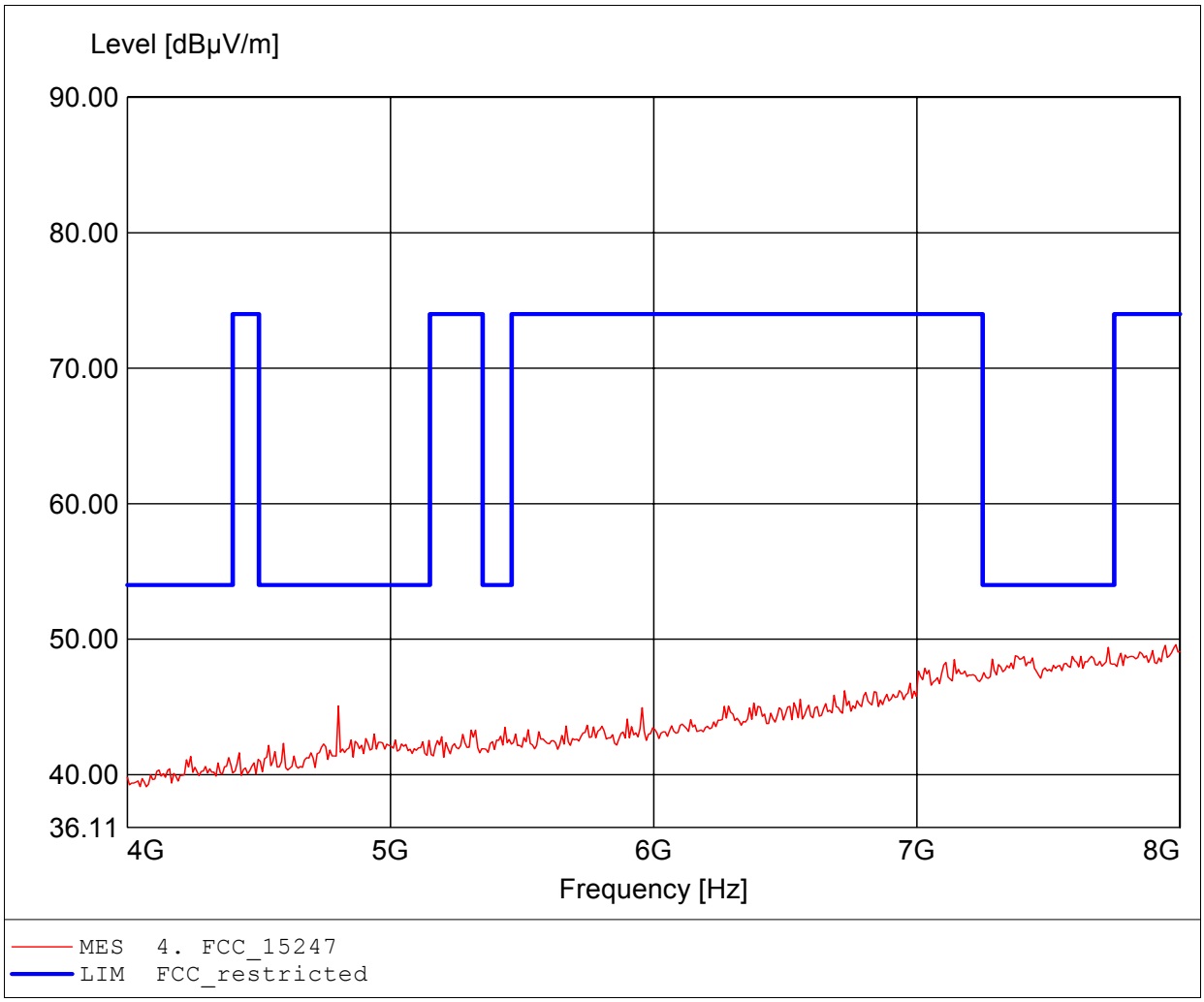
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.856GHz, Emax: 49.66dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

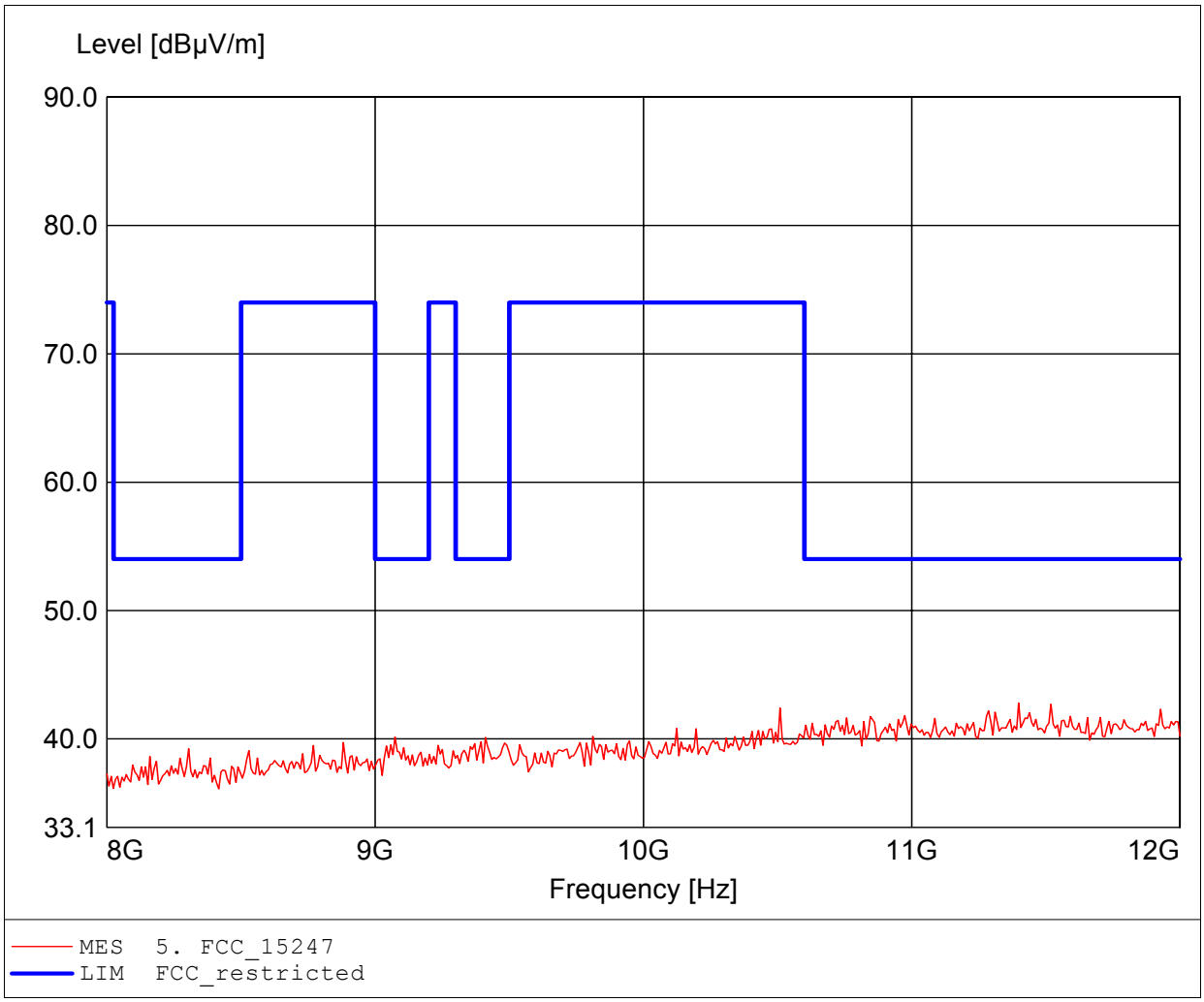
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.984GHz, Emax: 49.59dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

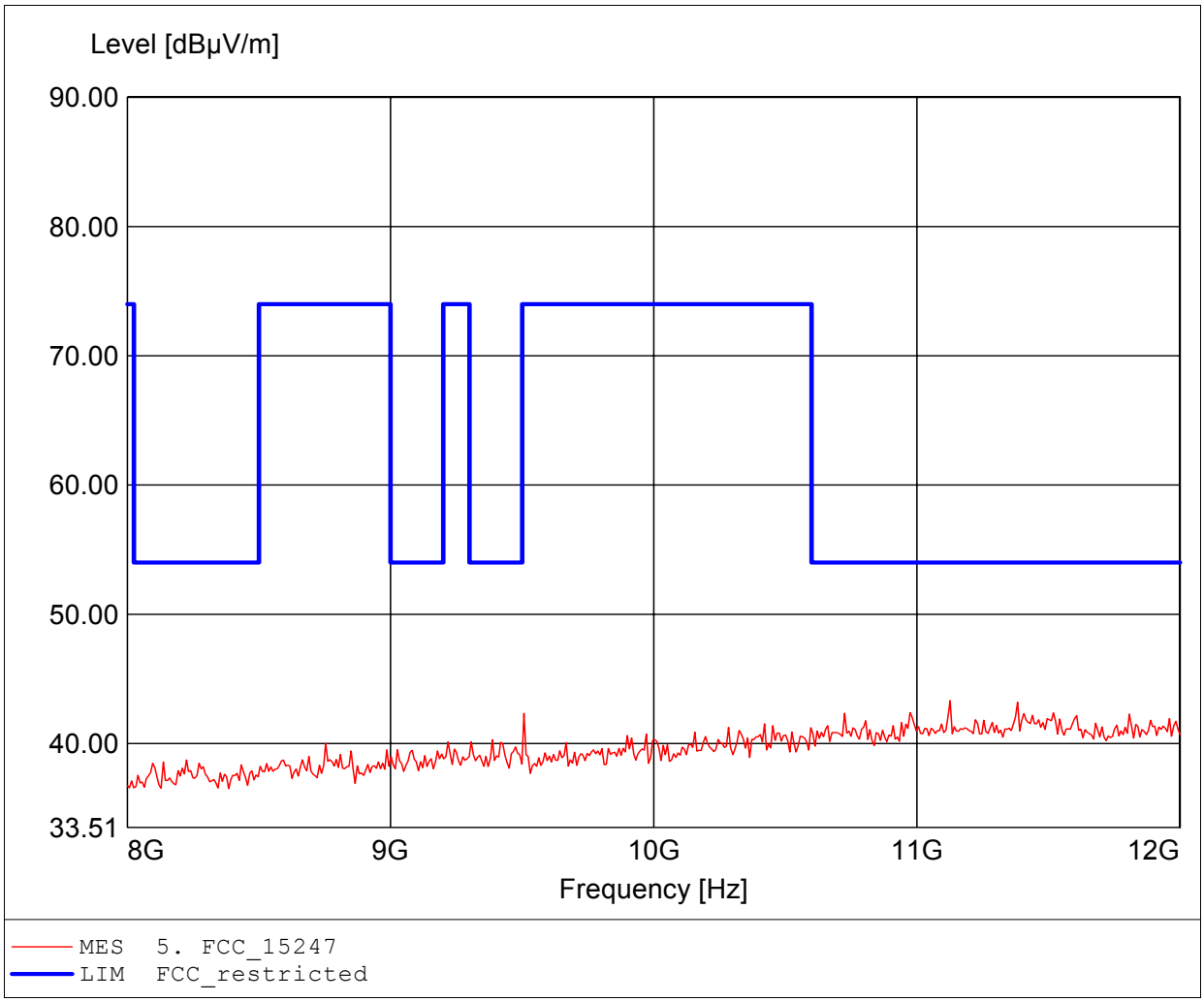
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.399GHz, Emax: 42.80dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

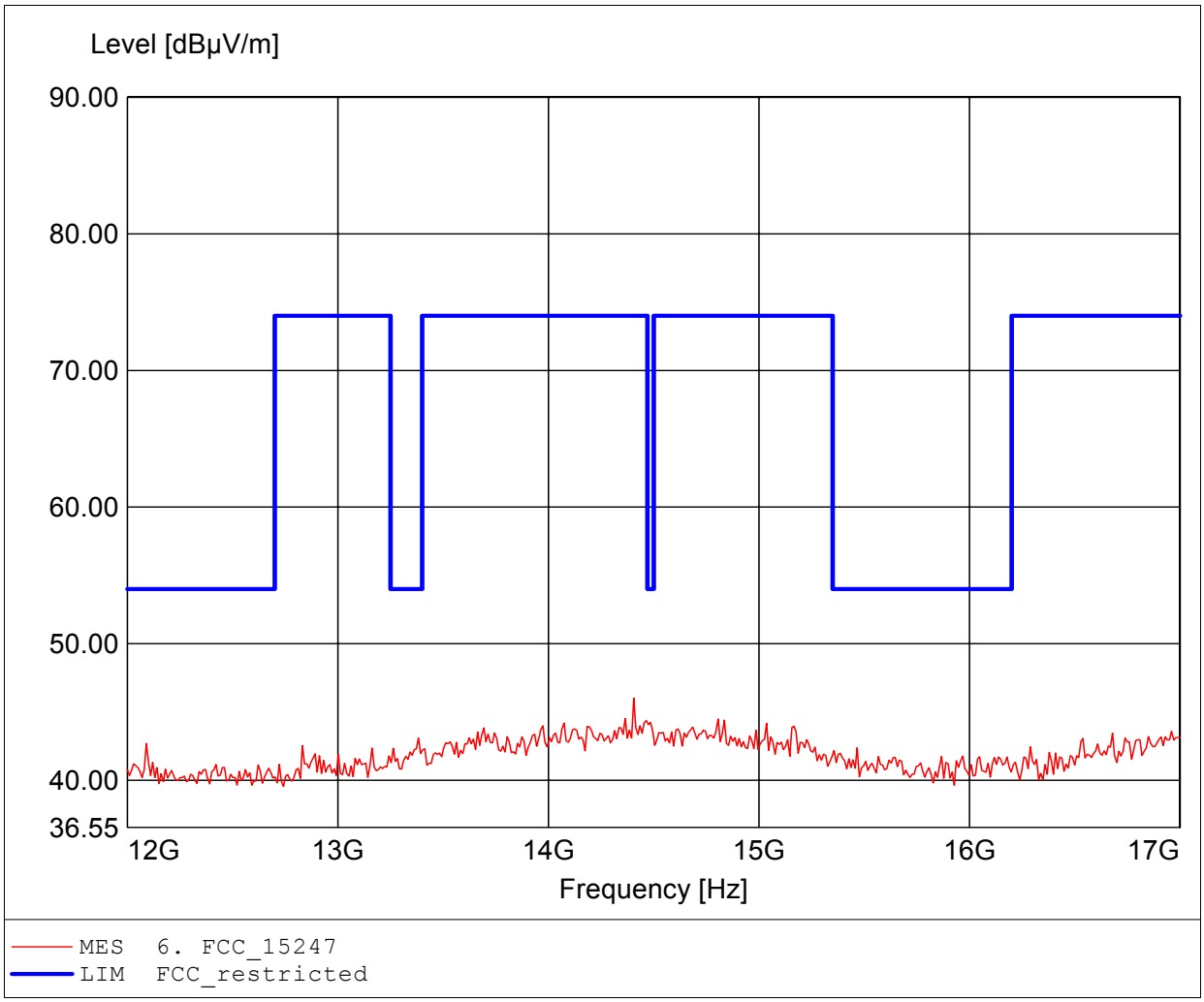
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.126GHz, Emax: 43.32dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

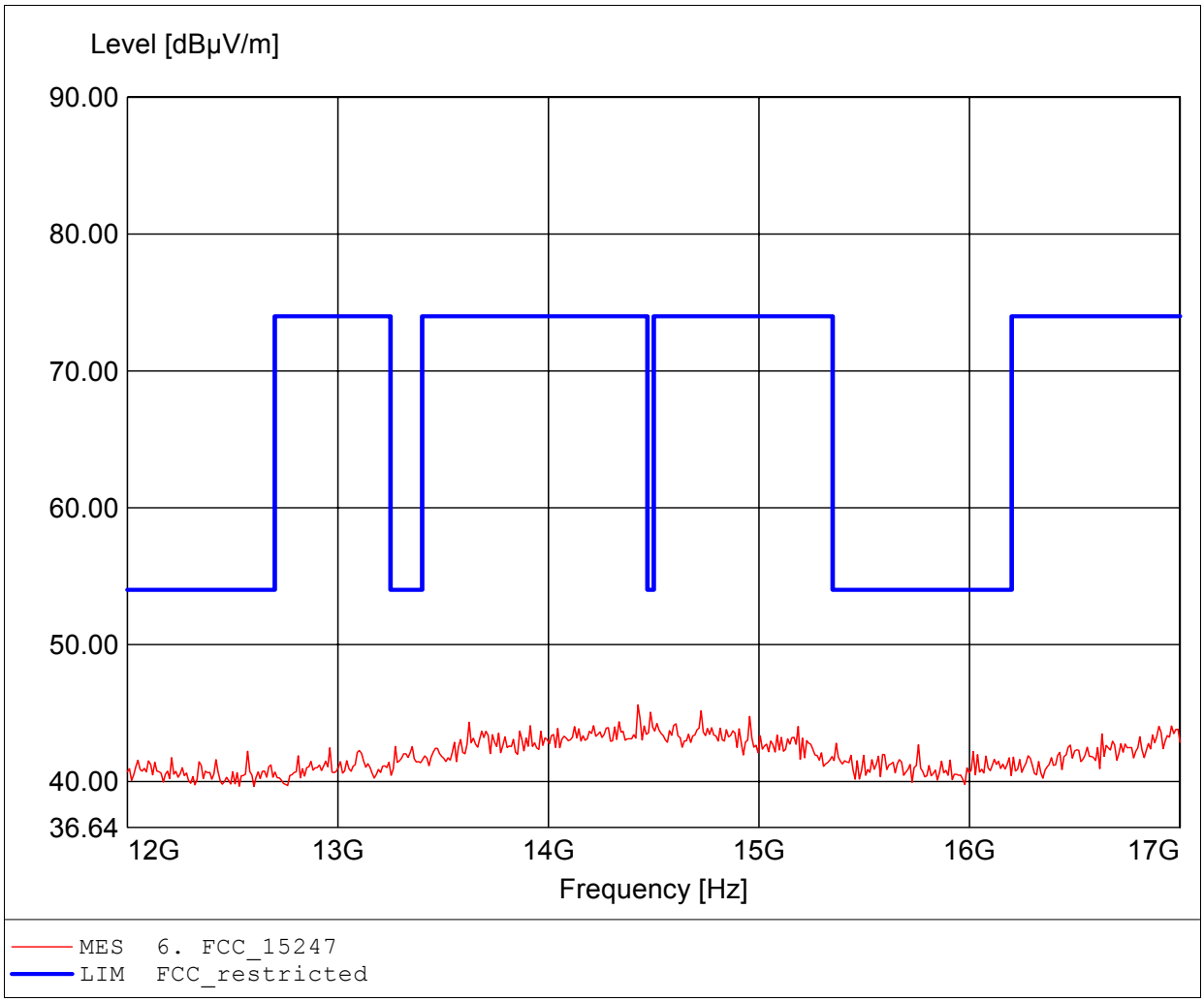
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 14.405GHz, Emax: 46.02dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

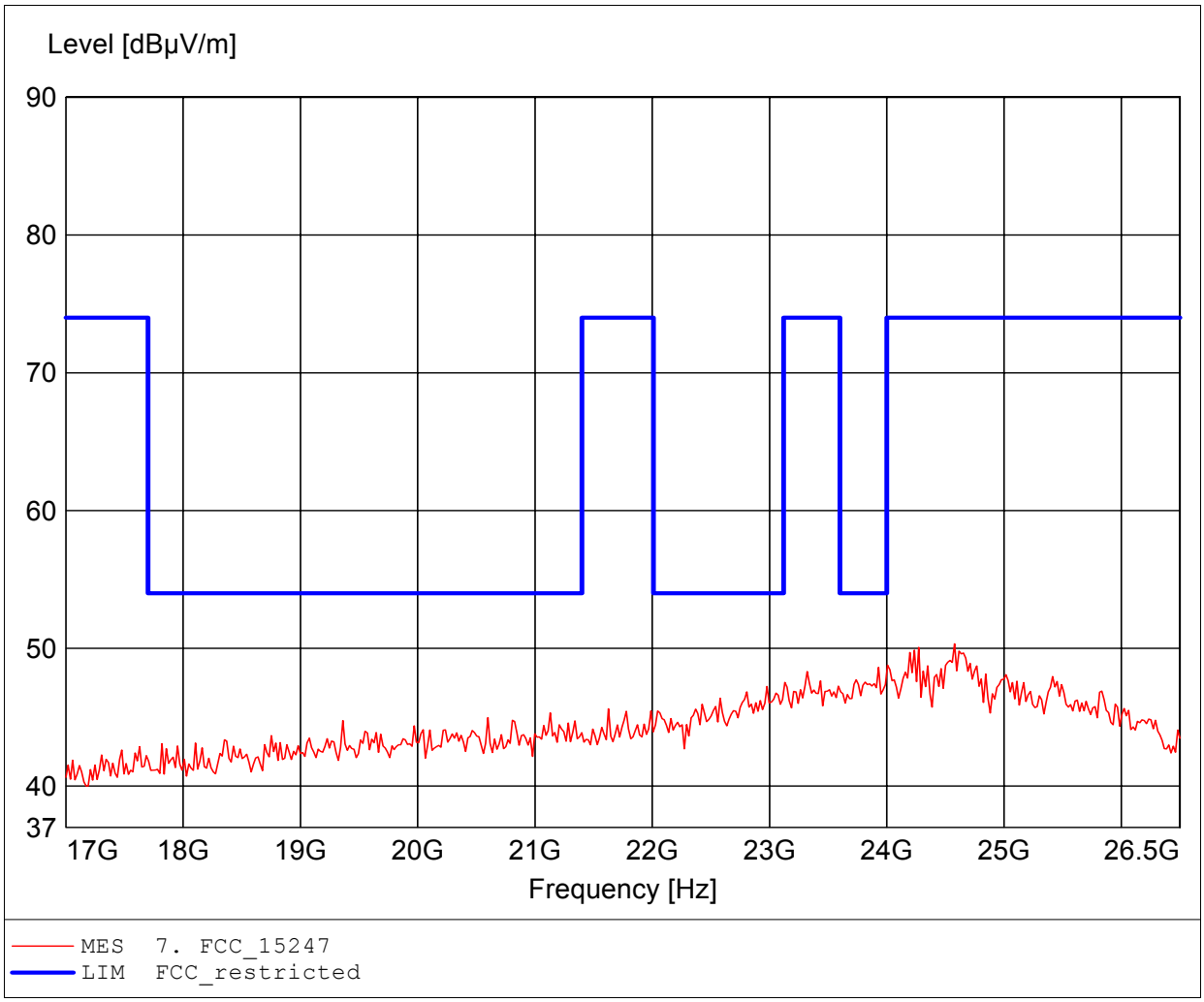
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 14.425GHz, Emax: 45.59dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

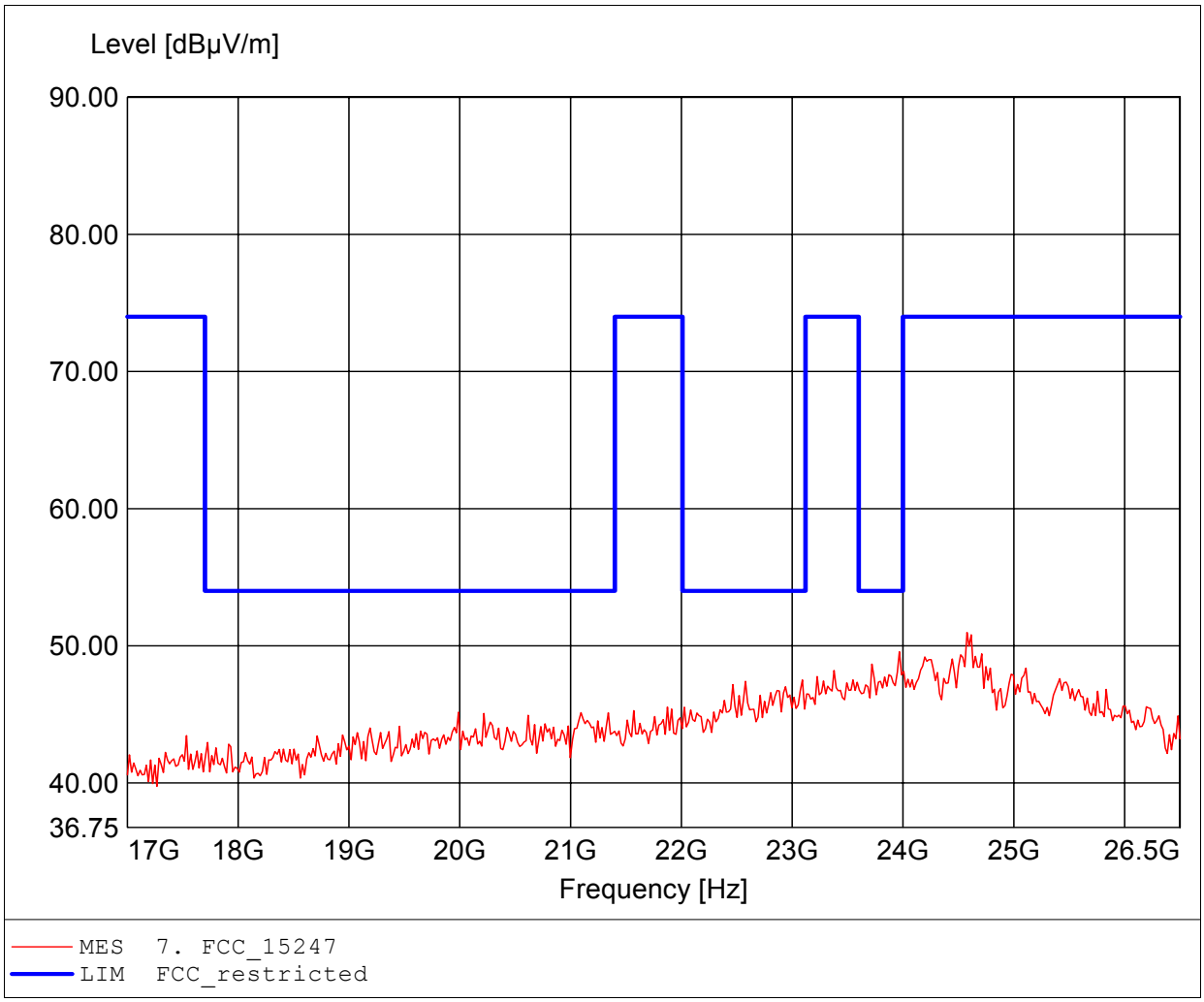
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: HL025, amplif.
Comment 2:	Freq: 24.577GHz, Emax: 50.33dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

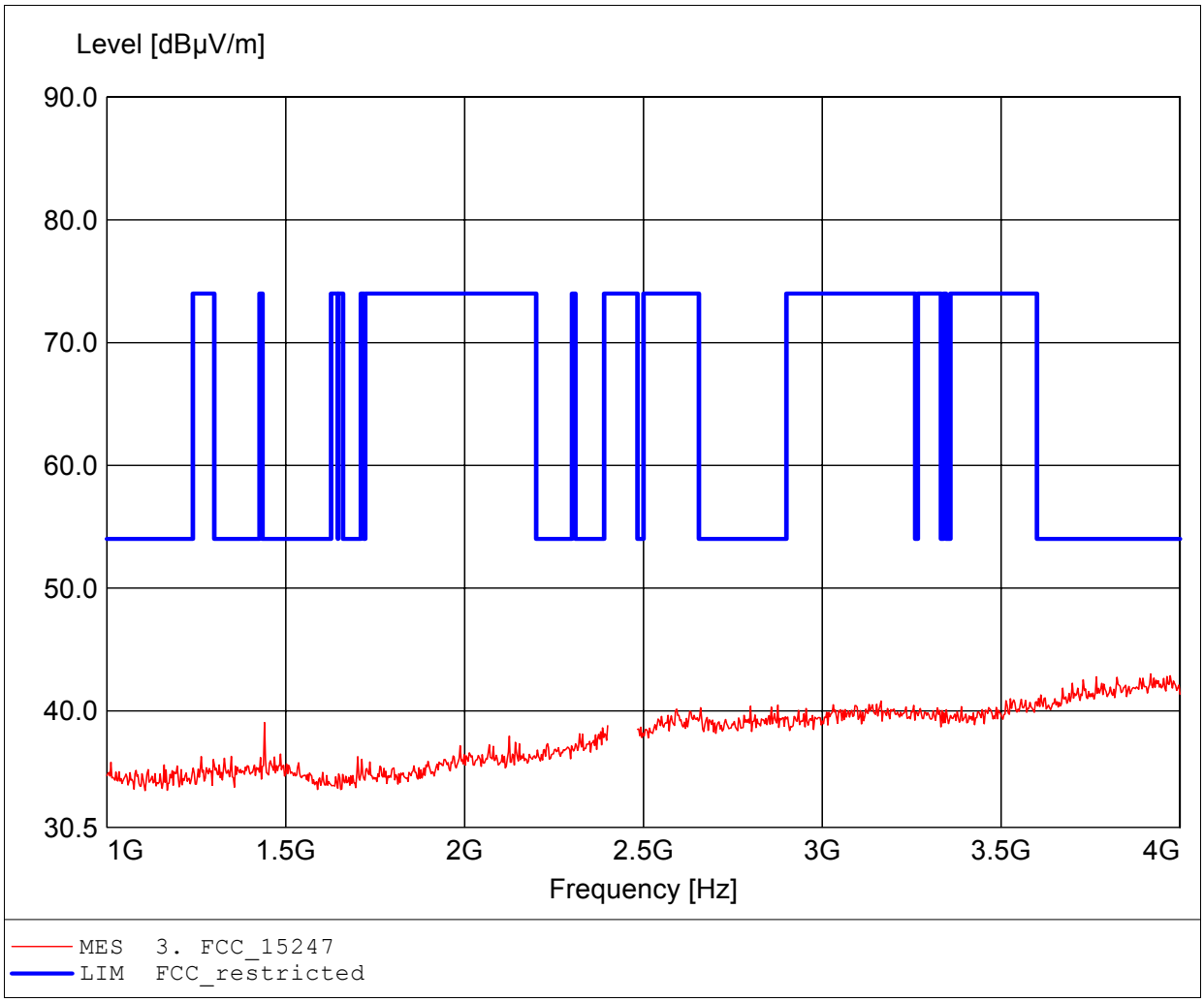
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2402 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: HL025, amplif.
Comment 2:	Freq: 24.577GHz, Emax: 50.96dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

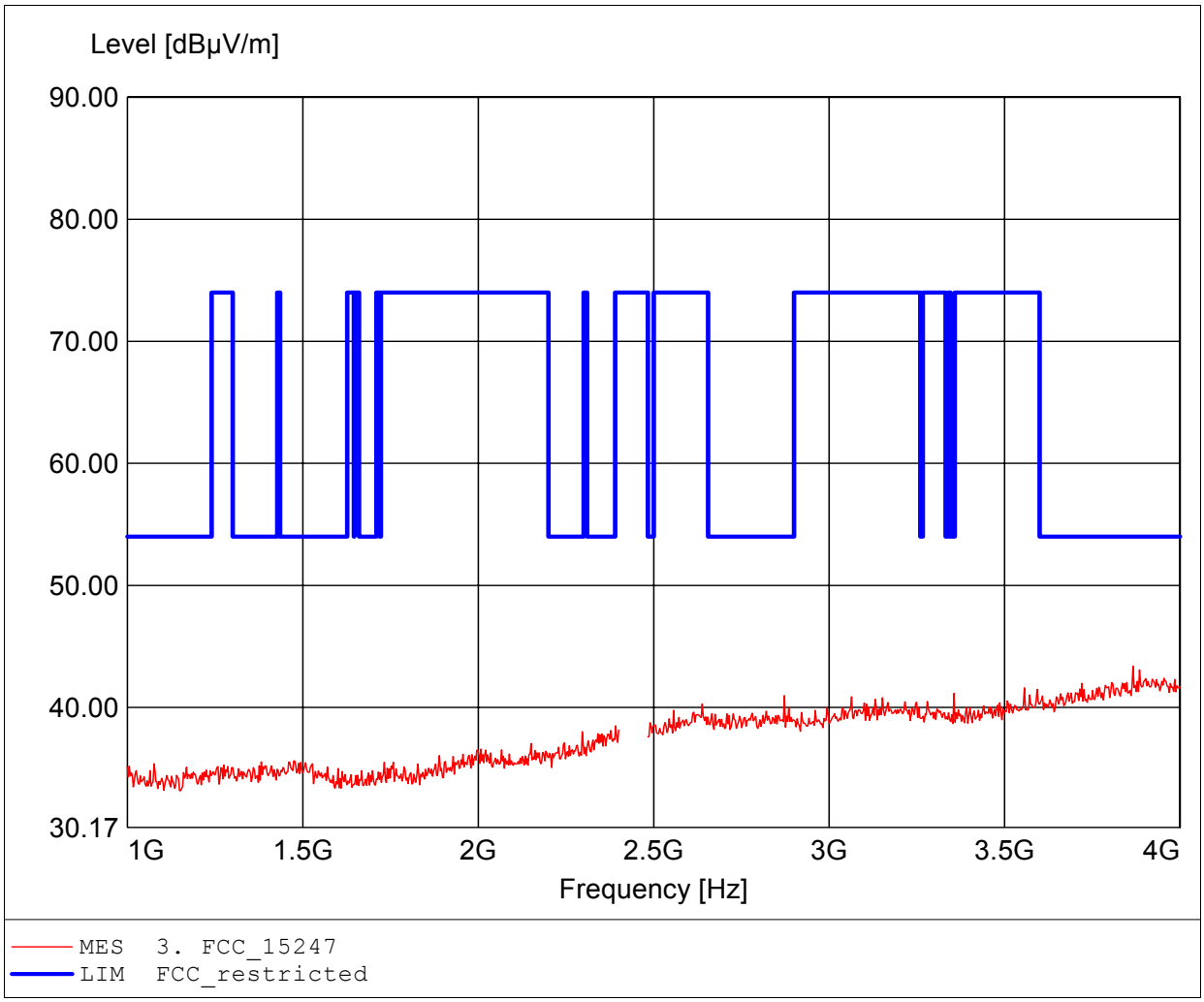
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 3.918GHz, Emax: 43.02dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

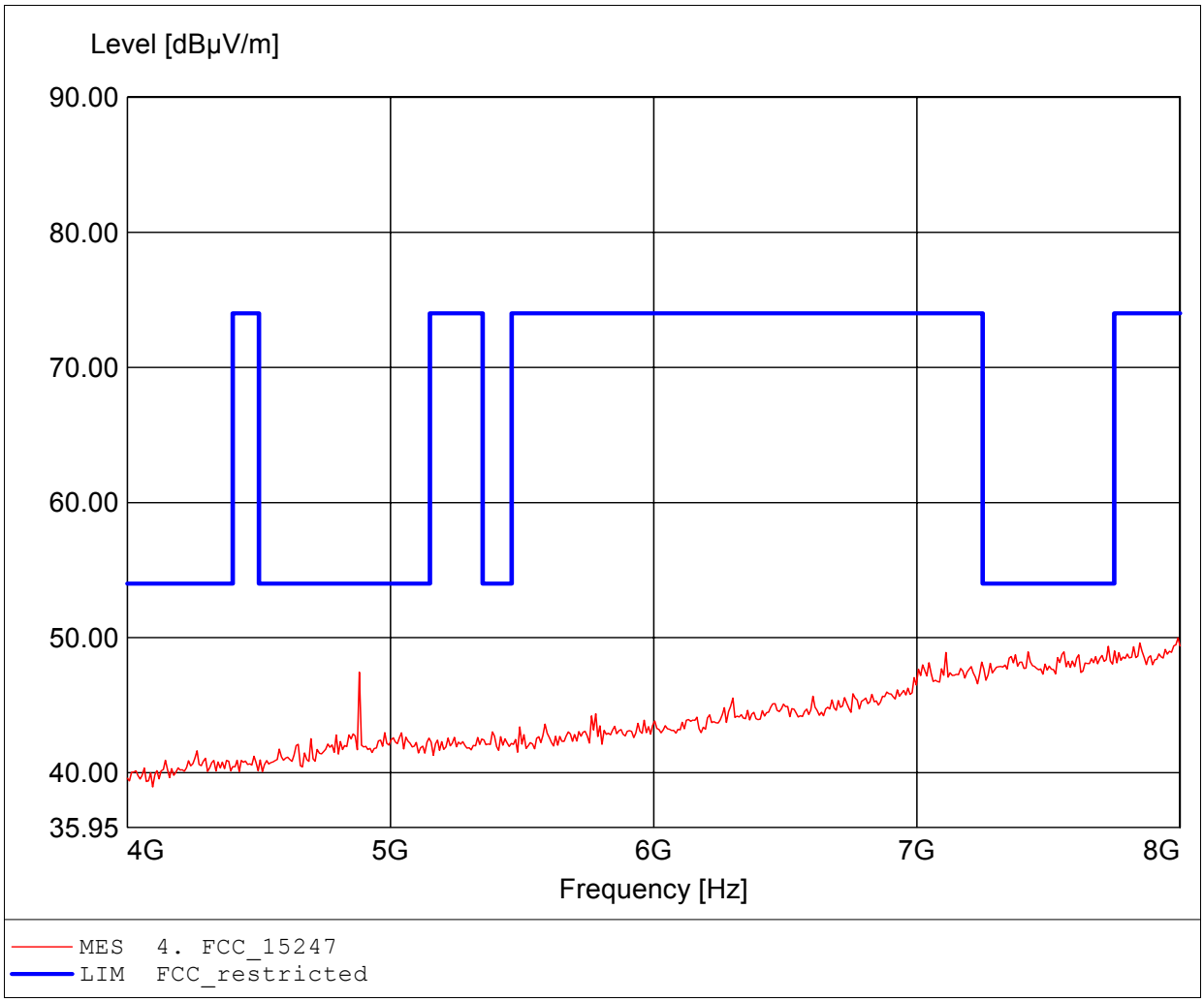
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 3.866GHz, Emax: 43.38dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

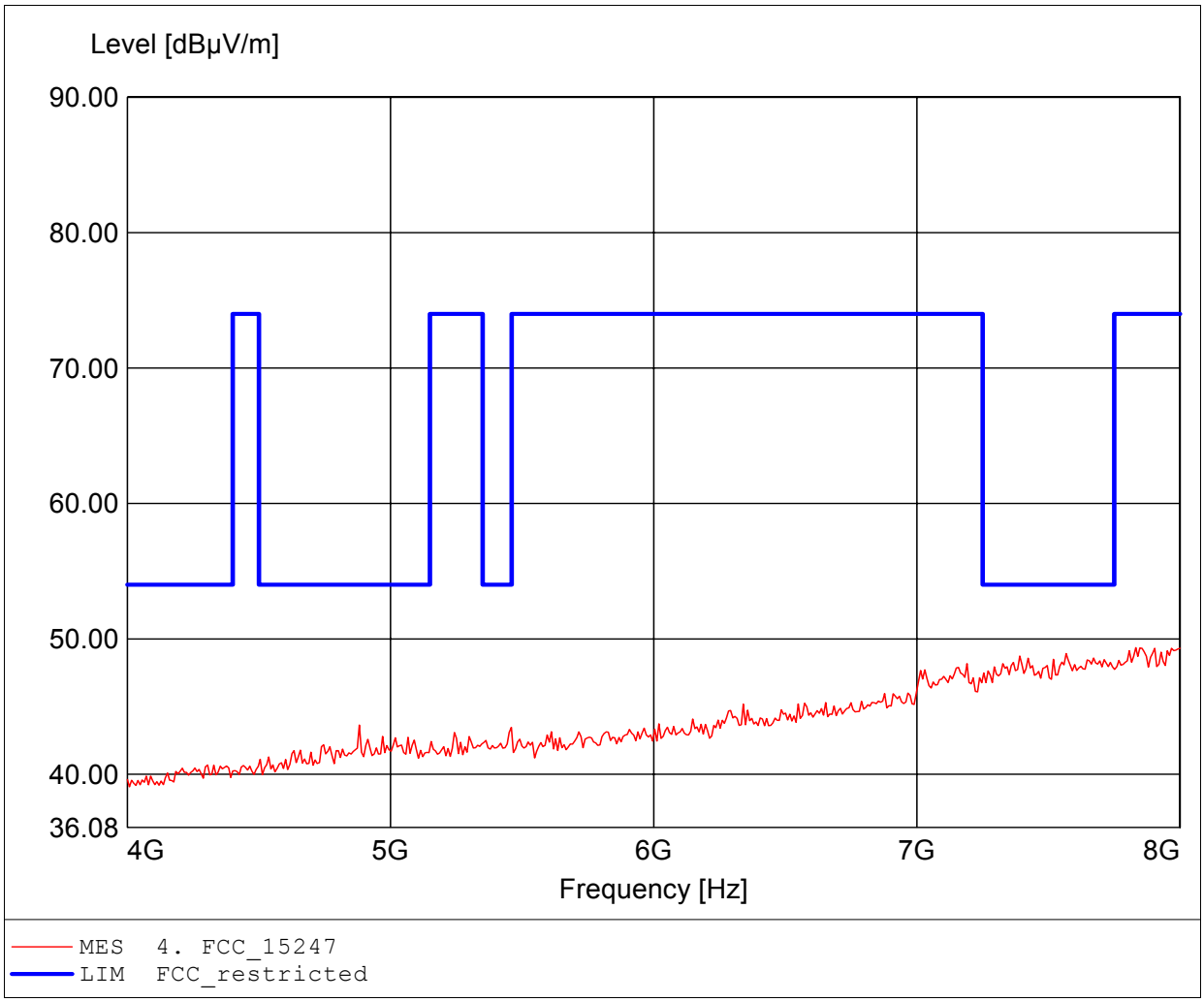
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.992GHz, Emax: 49.98dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

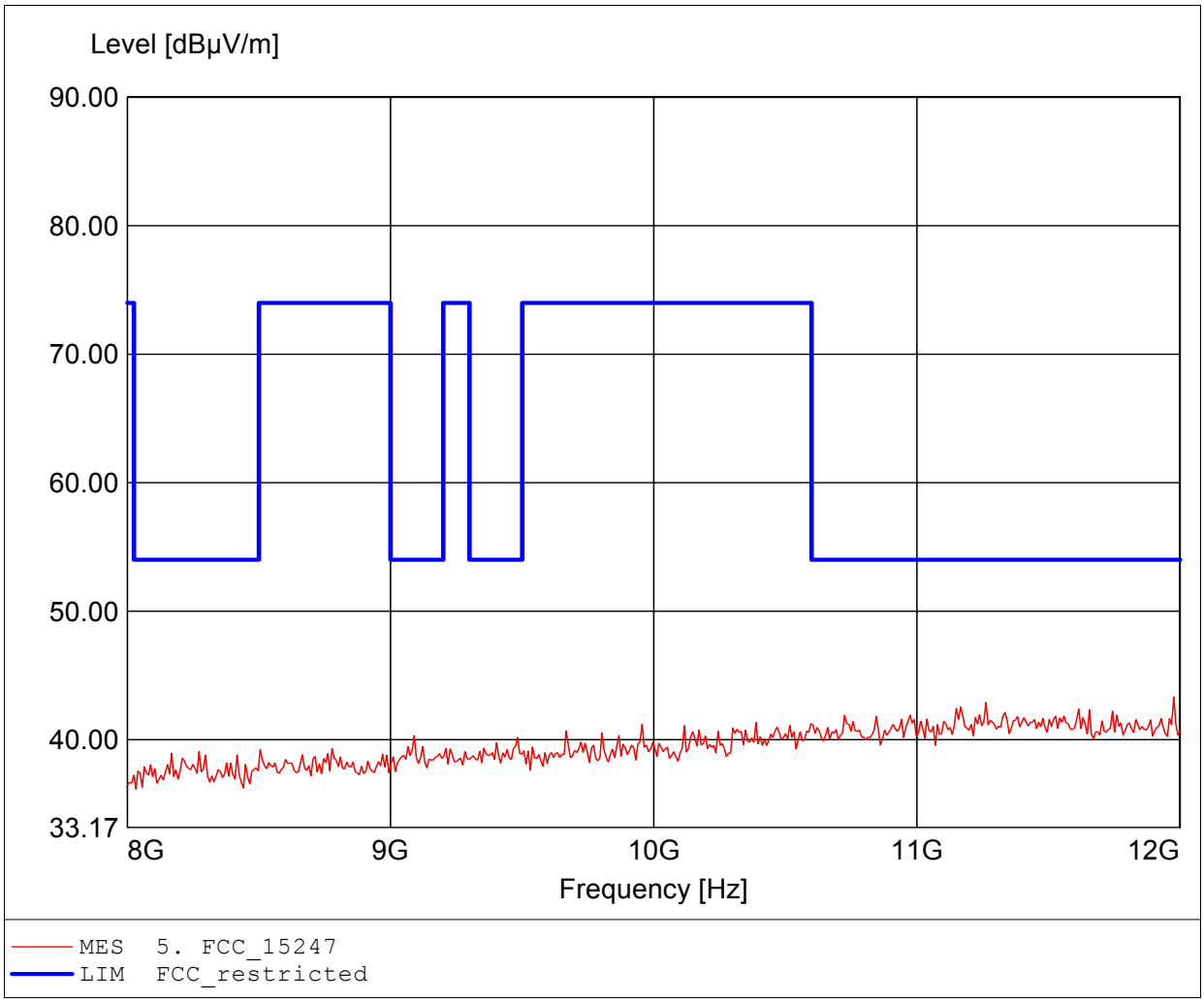
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.832GHz, Emax: 49.35dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

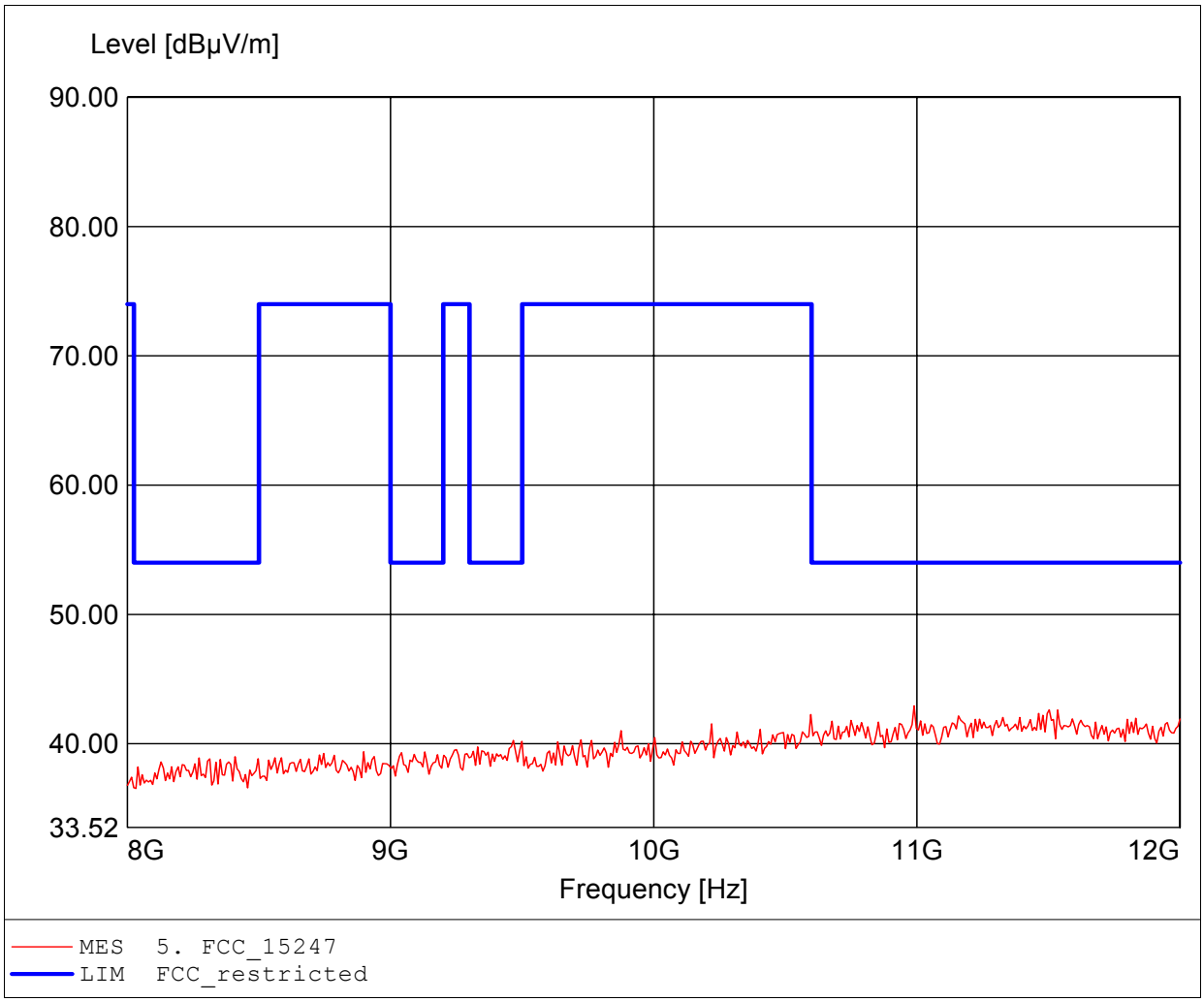
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.976GHz, Emax: 43.31dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

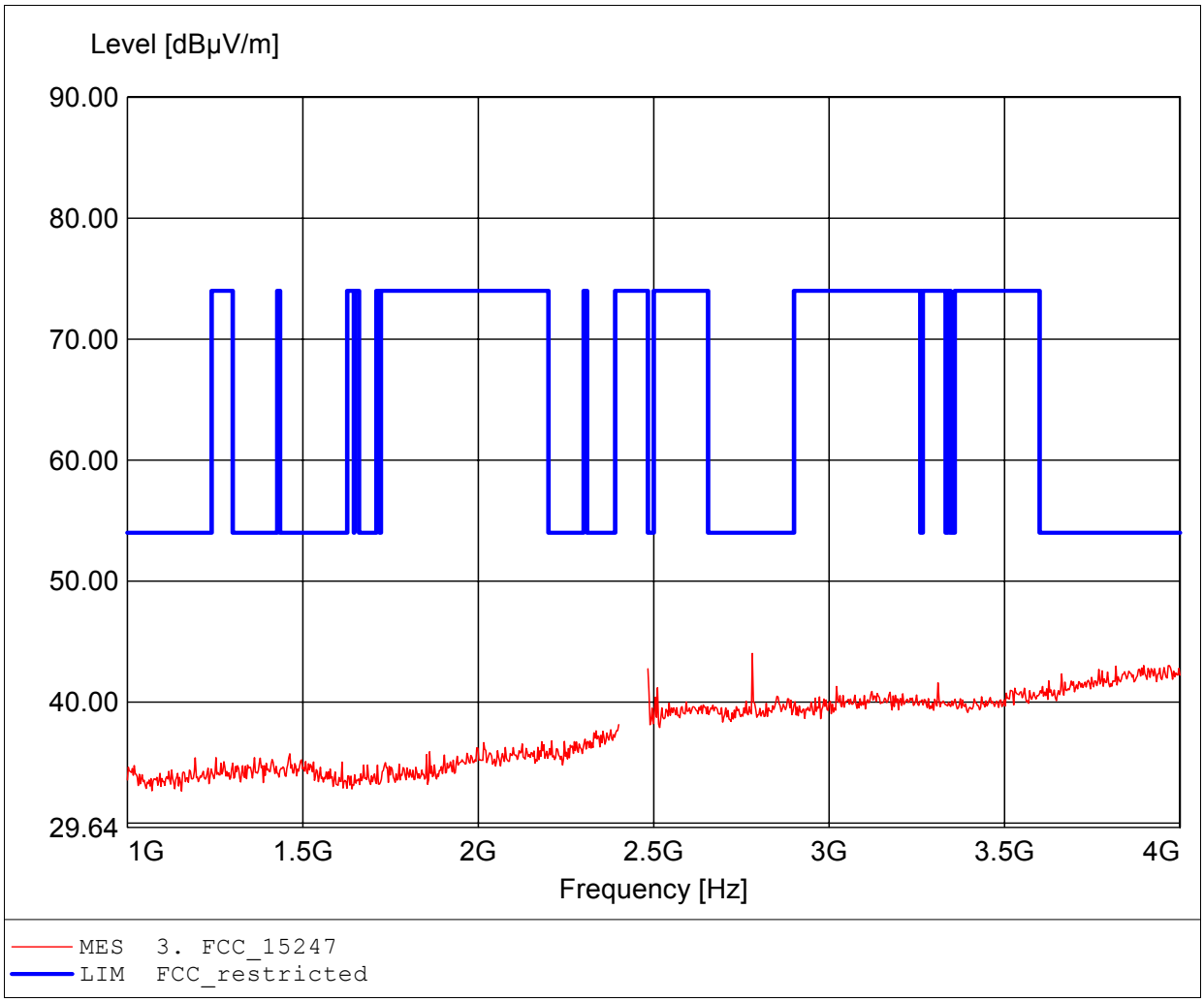
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2441 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 10.990GHz, Emax: 42.92dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

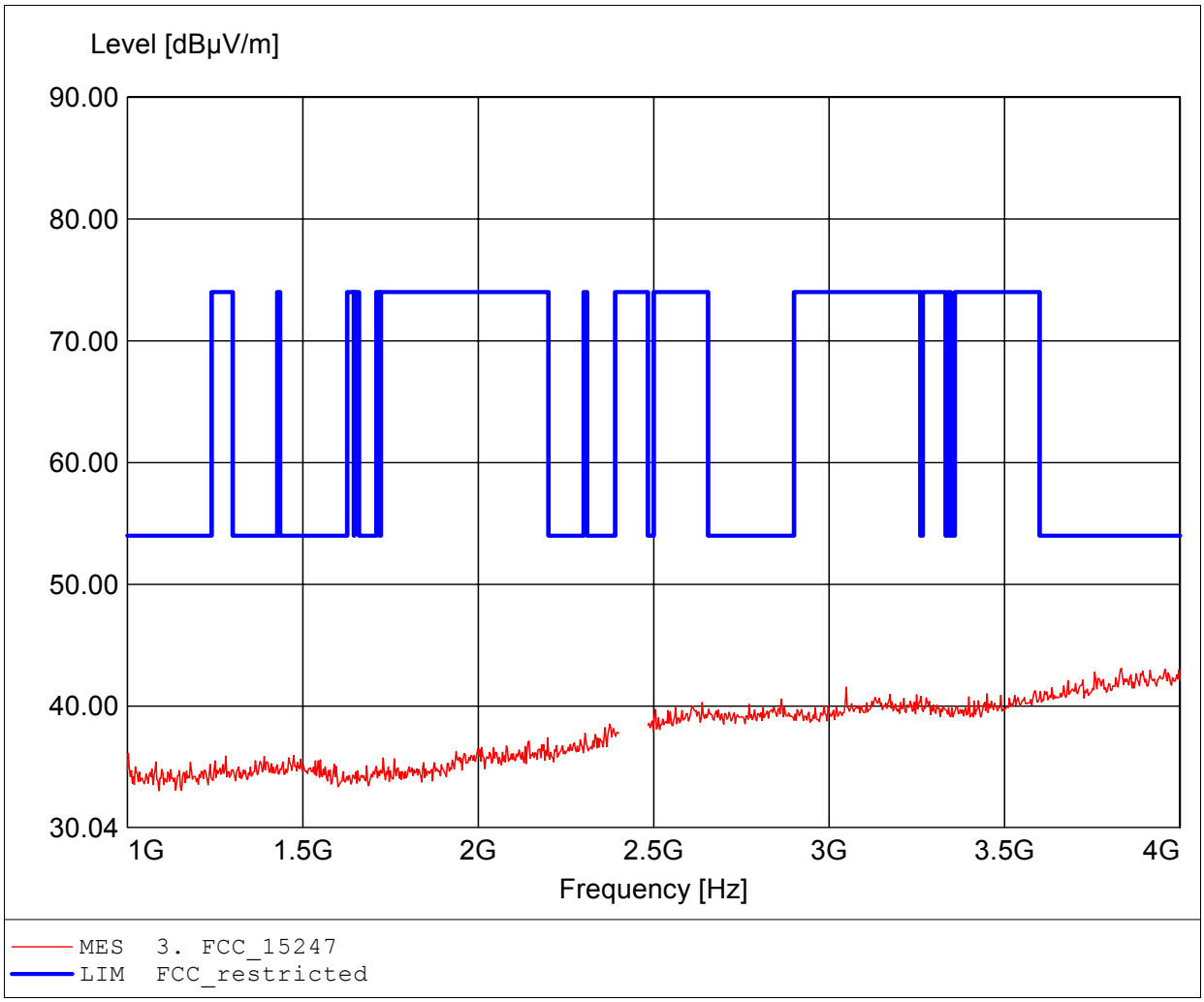
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 2.781GHz, Emax: 44.02dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

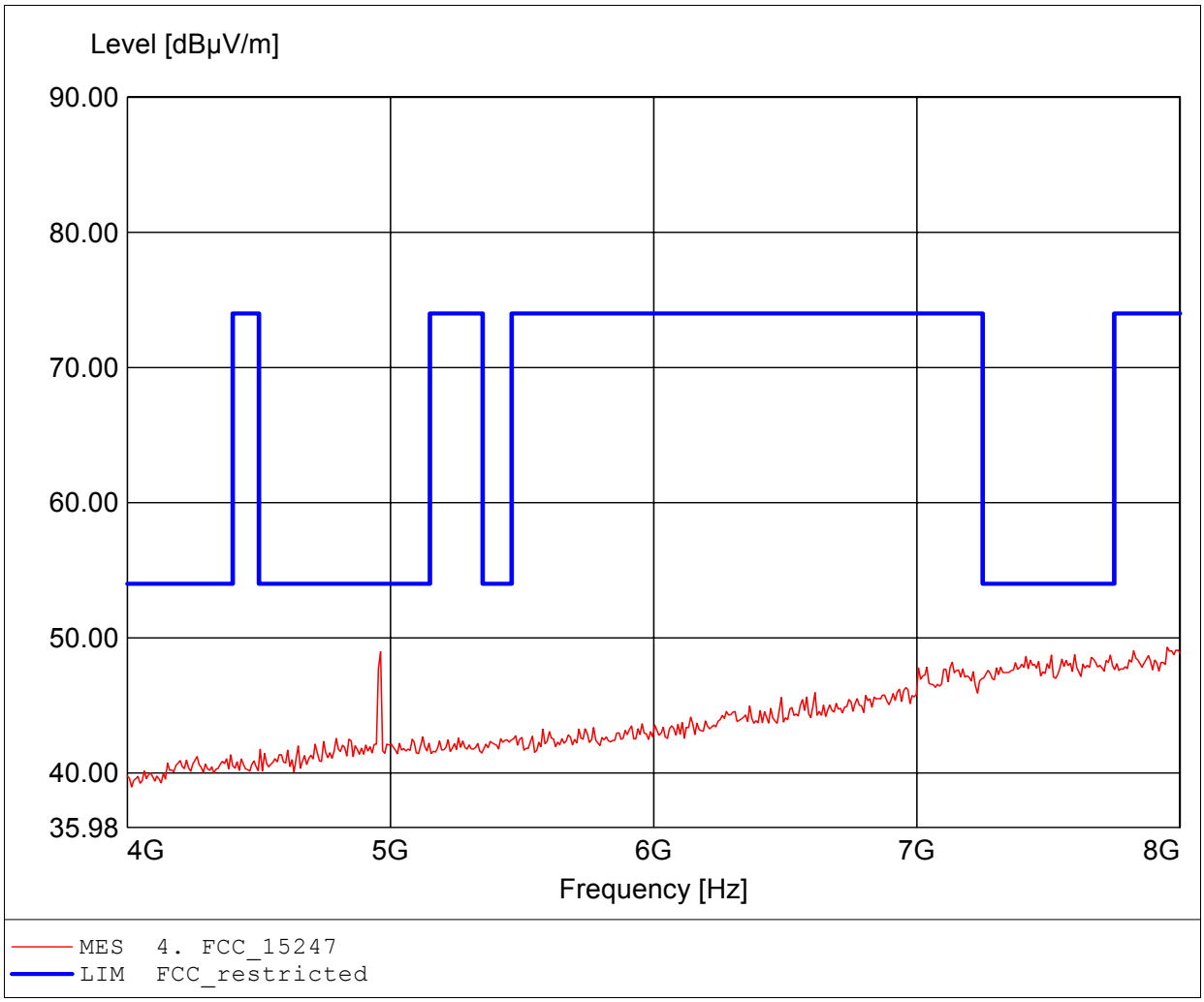
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, amplif.
Comment 2:	Freq: 3.833GHz, Emax: 43.11dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

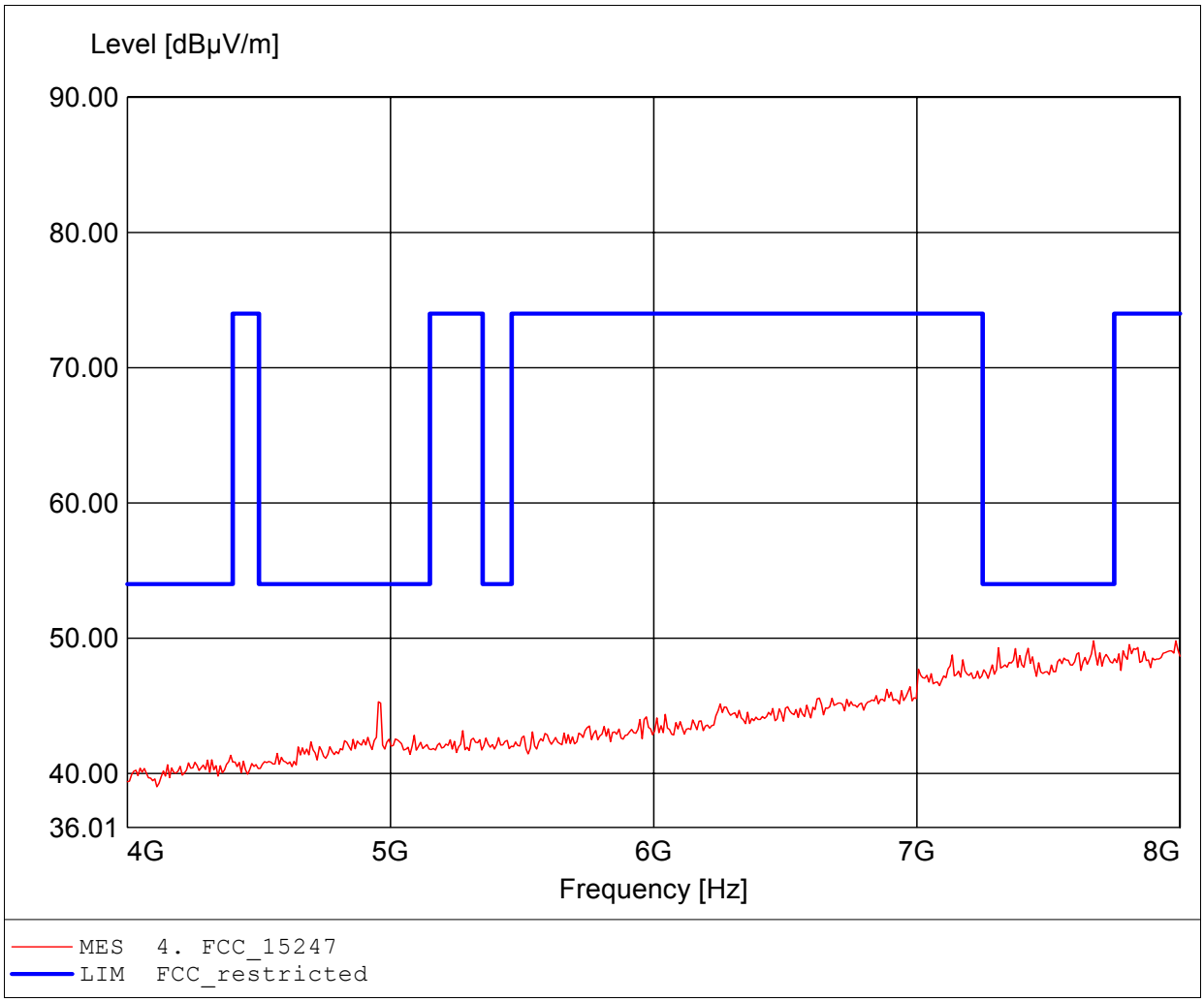
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.952GHz, Emax: 49.31dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

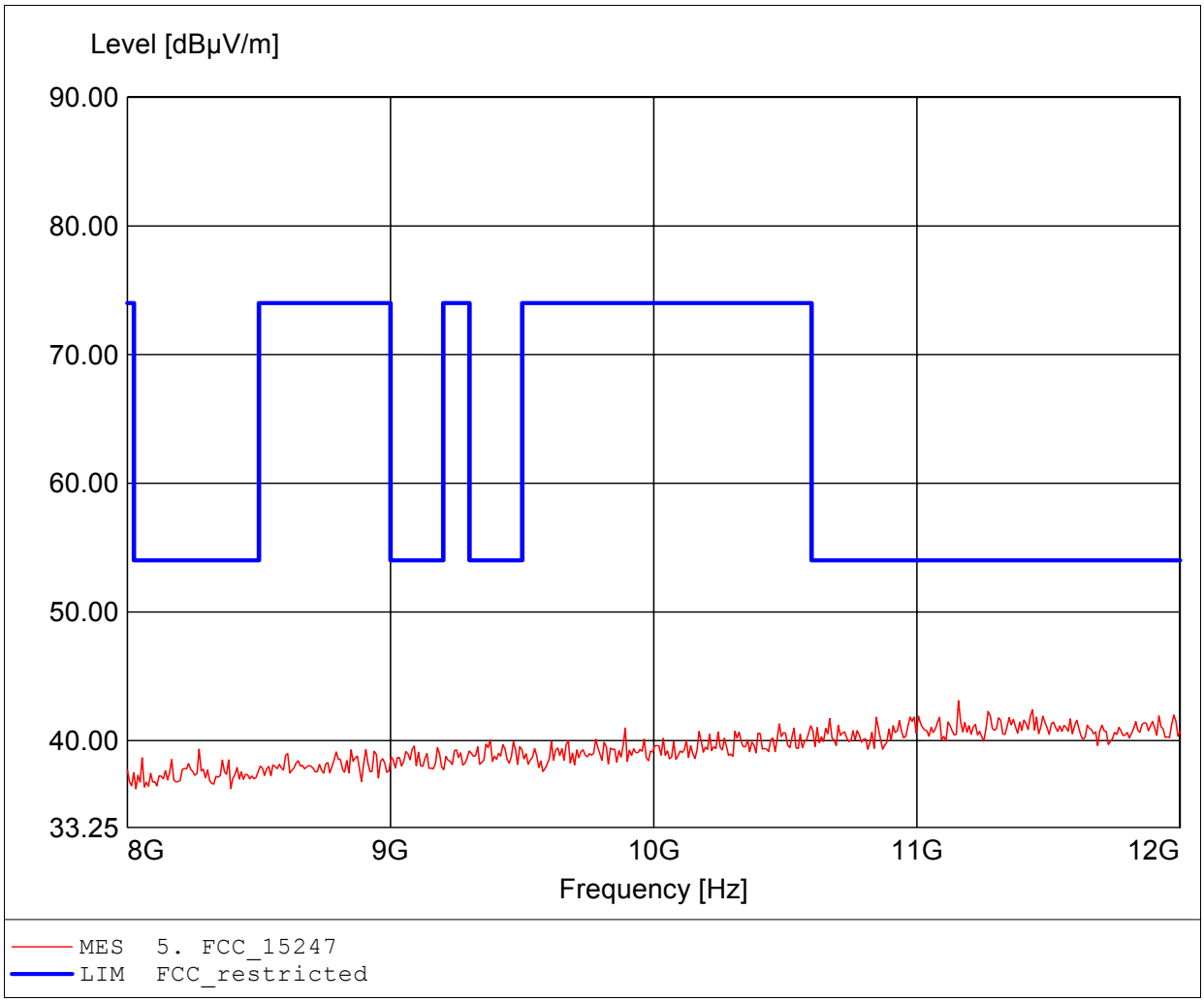
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 7.984GHz, Emax: 49.81dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

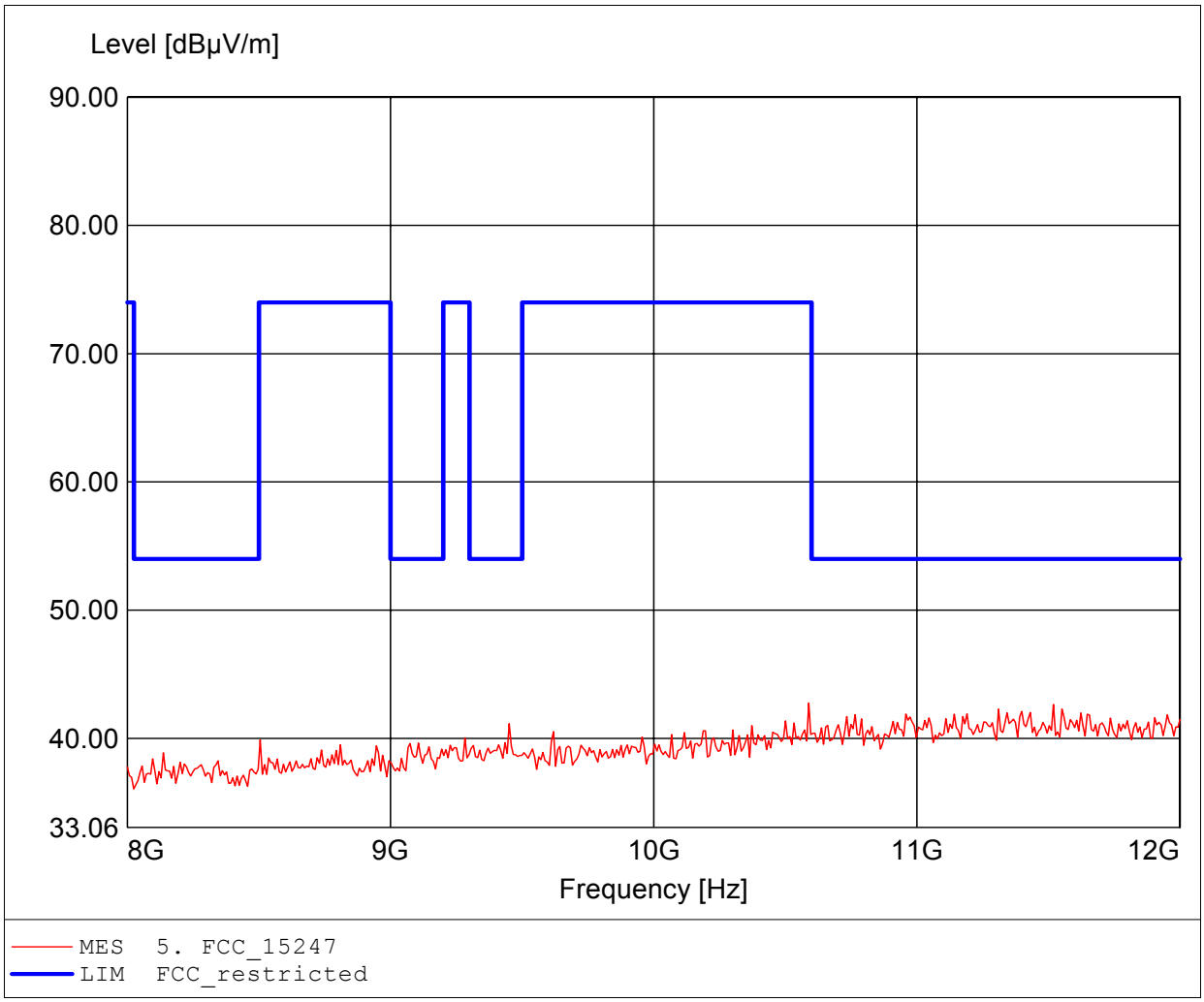
Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 11.158GHz, Emax: 43.12dBµV/m, RBW: 1MHz



Spurious emissions Field Strength

FCC RULES PART 15, SUBPART C

Approval Holder:	Hughes Telematics, Inc. / G0M-1105-1155
EUT / Model:	Telematics Unit / AT-100
Configuration:	Setup: EDR, Tx, 2480 MHz
Test Site / Operator:	Eurofins Product Service GmbH / Mr. Treffke
Test Condition:	Tnom.: 25°C / Vnom: 12V DC
Test Specification:	according to §15.247, peak detector
Comment 1:	Dist.: 3m, Ant.: BBHA9120D, ampl.+HP.
Comment 2:	Freq: 10.589GHz, Emax: 42.75dBµV/m, RBW: 1MHz

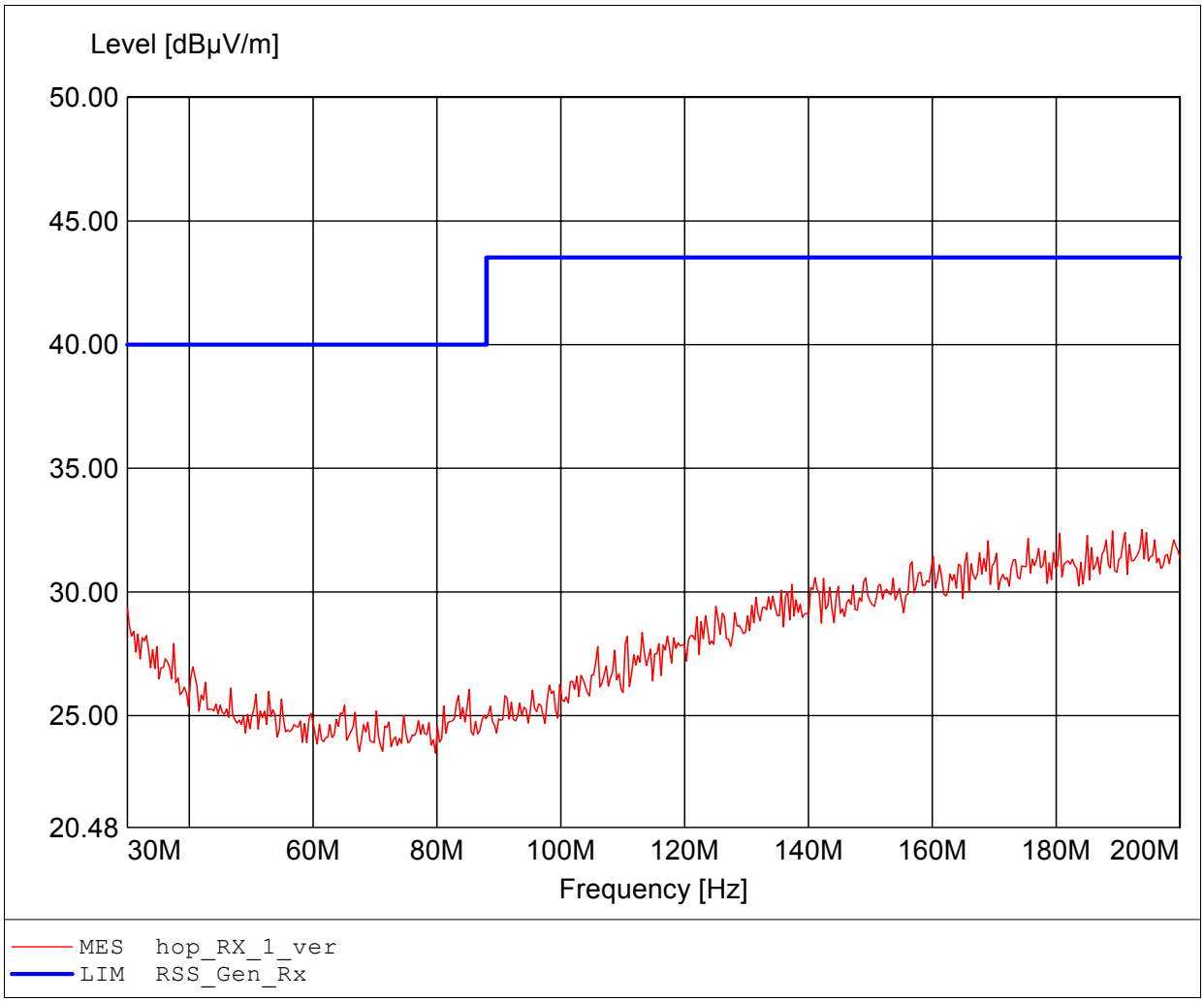


Annex J Receiver radiated spurious emissions

Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

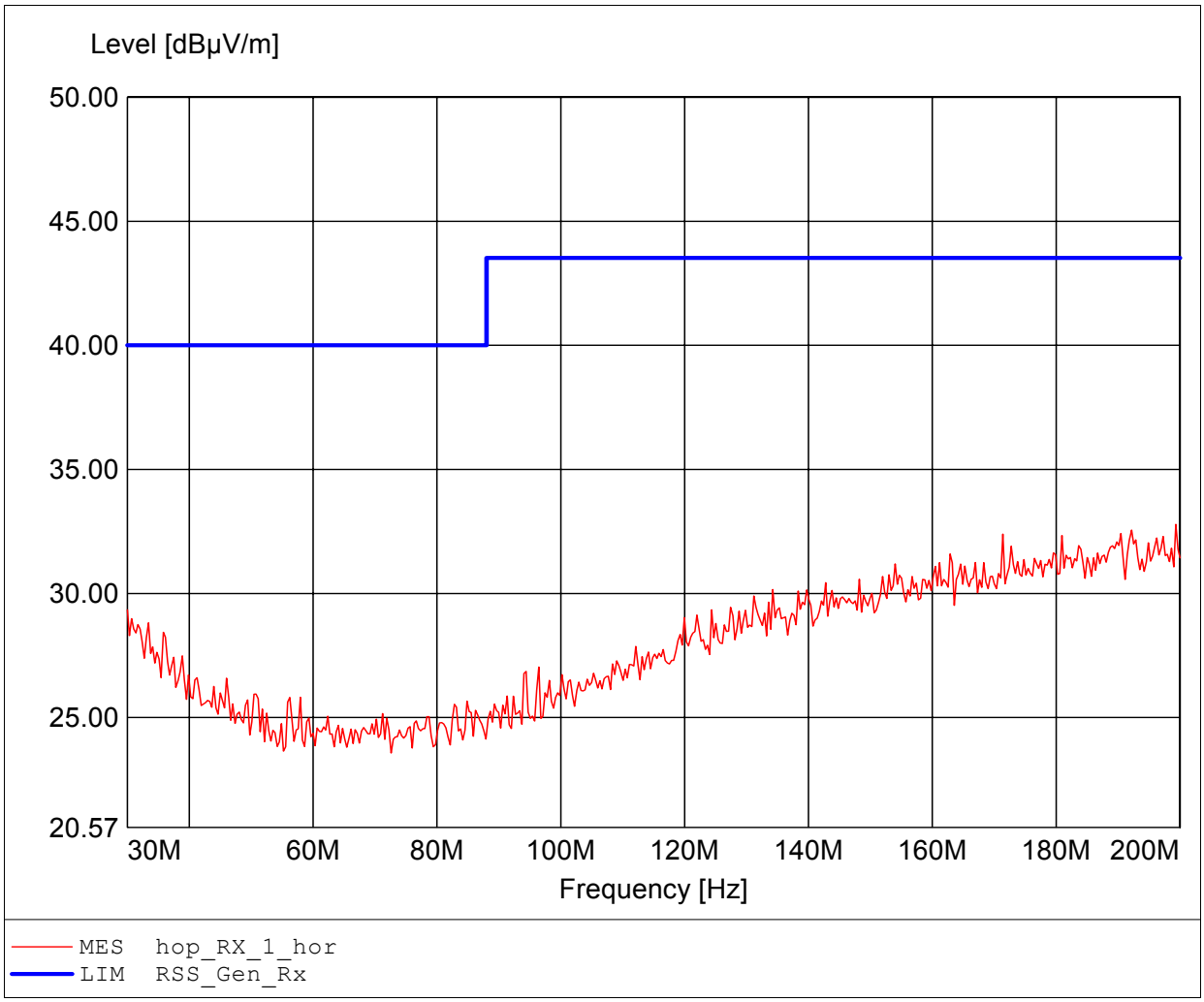
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HK 116
Comment 2:             Freq:193.868MHz Emax:32.52dBµV/m RBW: 100 kHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

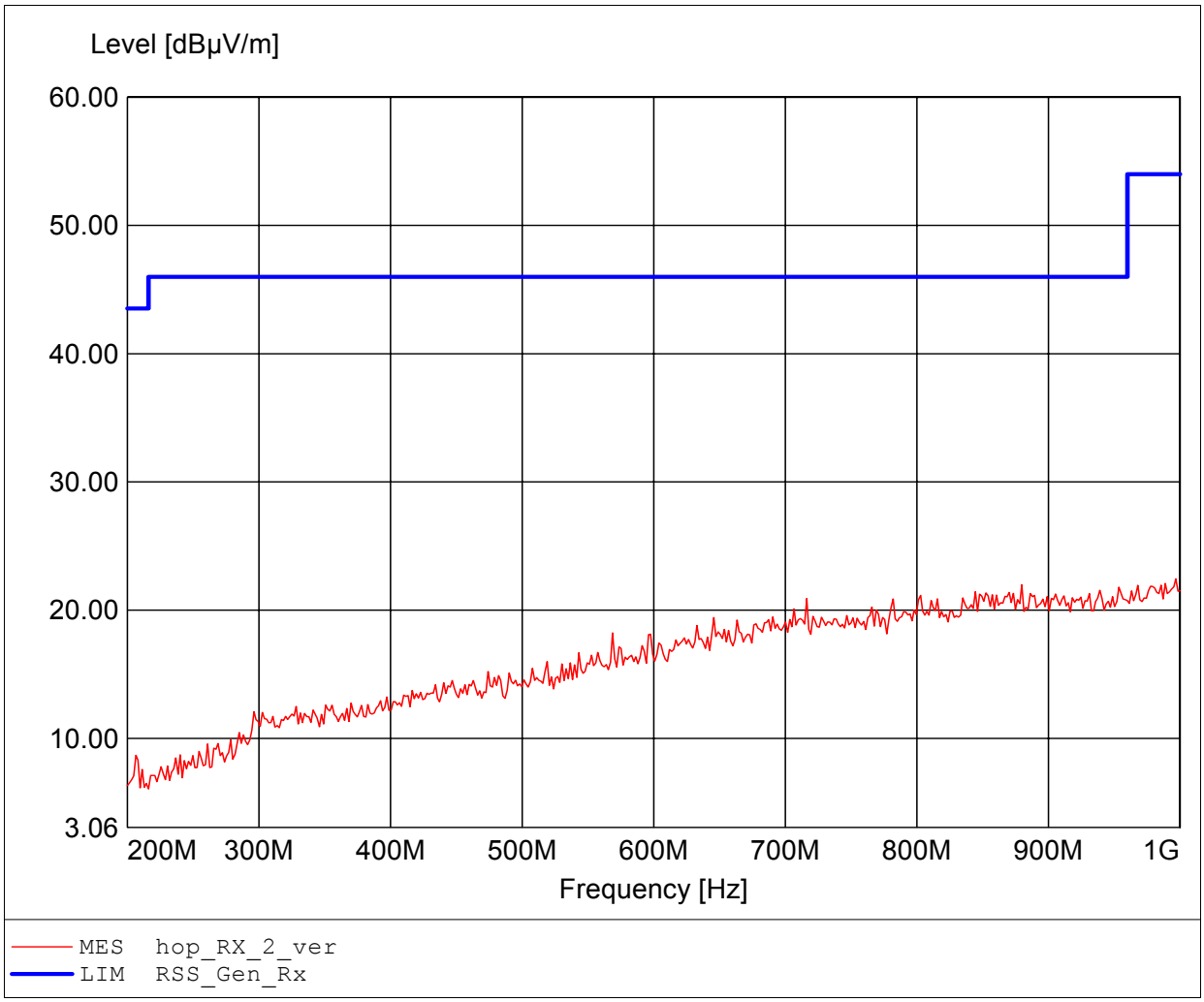
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HK 116
Comment 2:             Freq:199.319MHz Emax:32.79dBµV/m RBW: 100 kHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

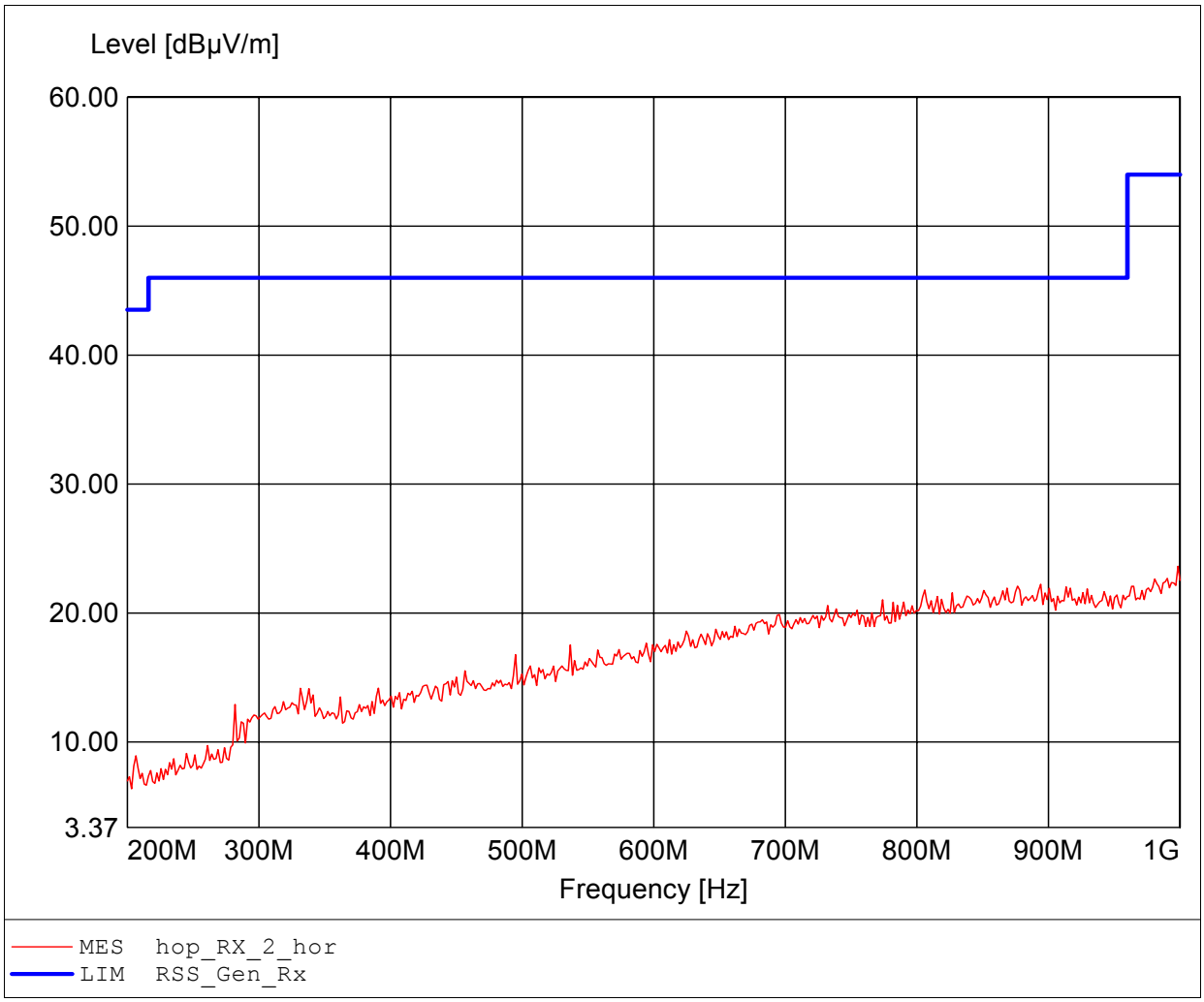
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HL 223, ampl.
Comment 2:             Freq:996.794MHz Emax:22.45dBµV/m RBW: 100 kHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

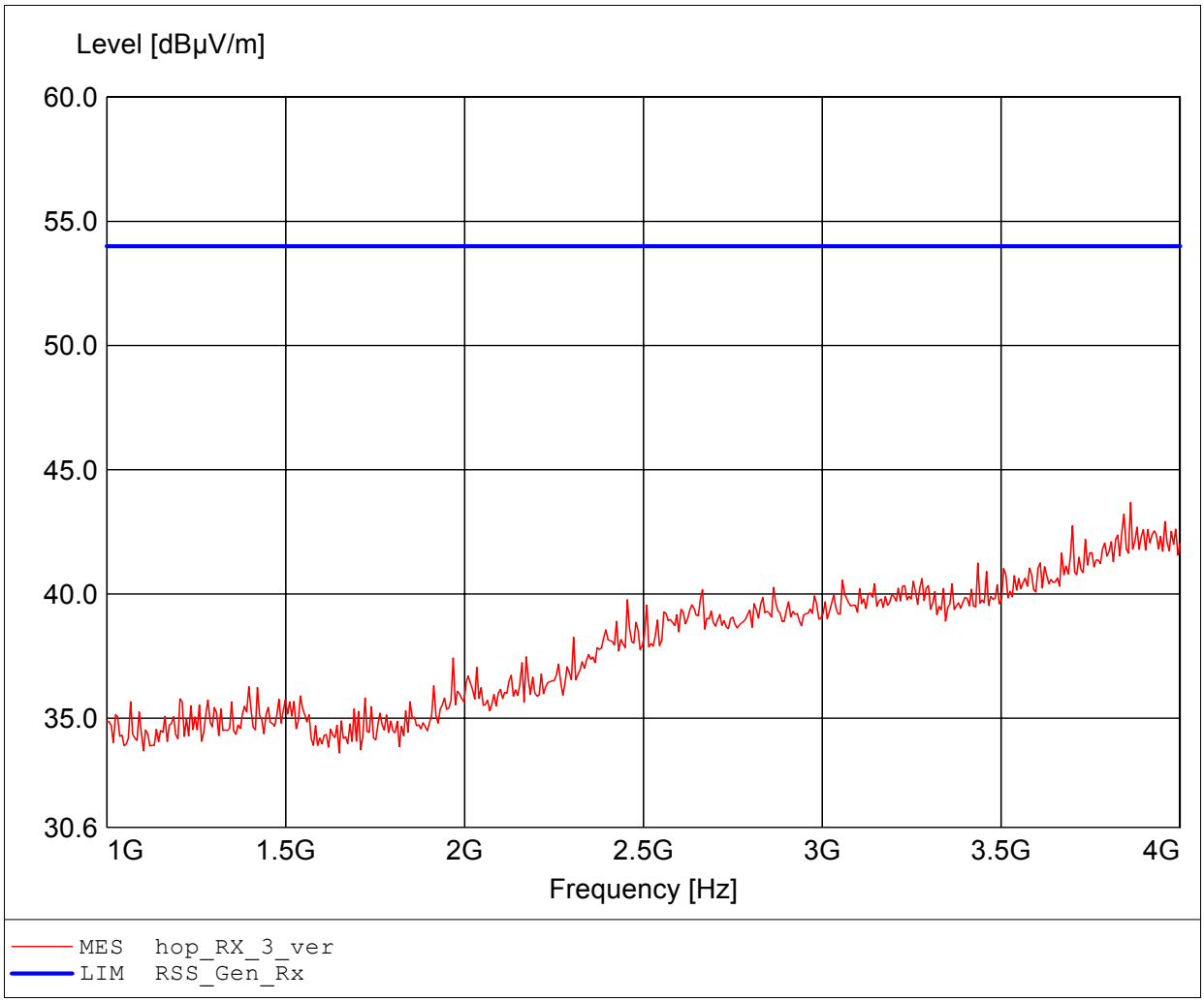
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HL 223, ampl.
Comment 2:             Freq:998.397MHz Emax:23.63dBµV/m RBW: 100 kHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

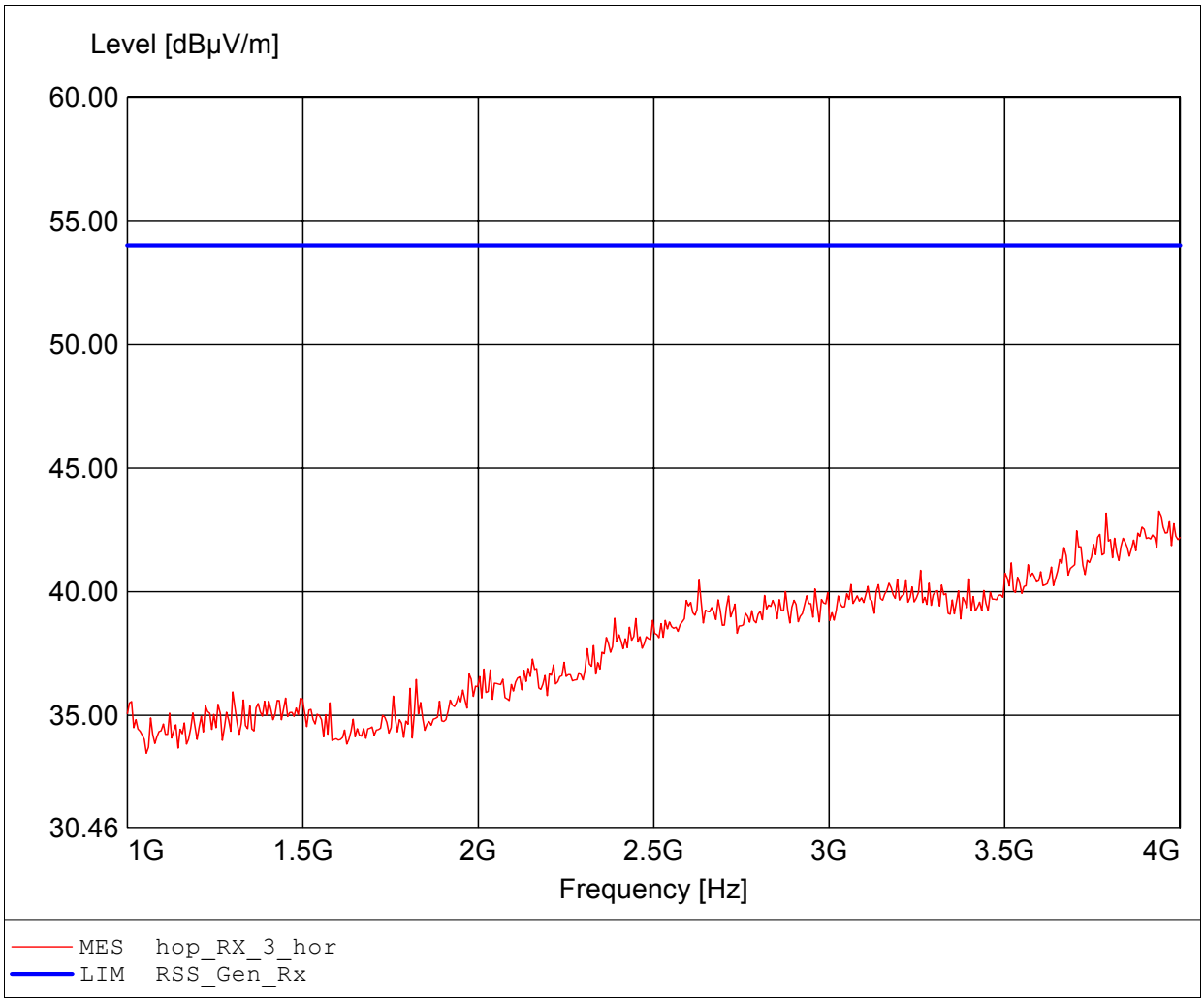
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HL025, ampl.
Comment 2:             Freq:3.862GHz Emax:43.69dBµV/m RBW: 1 MHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

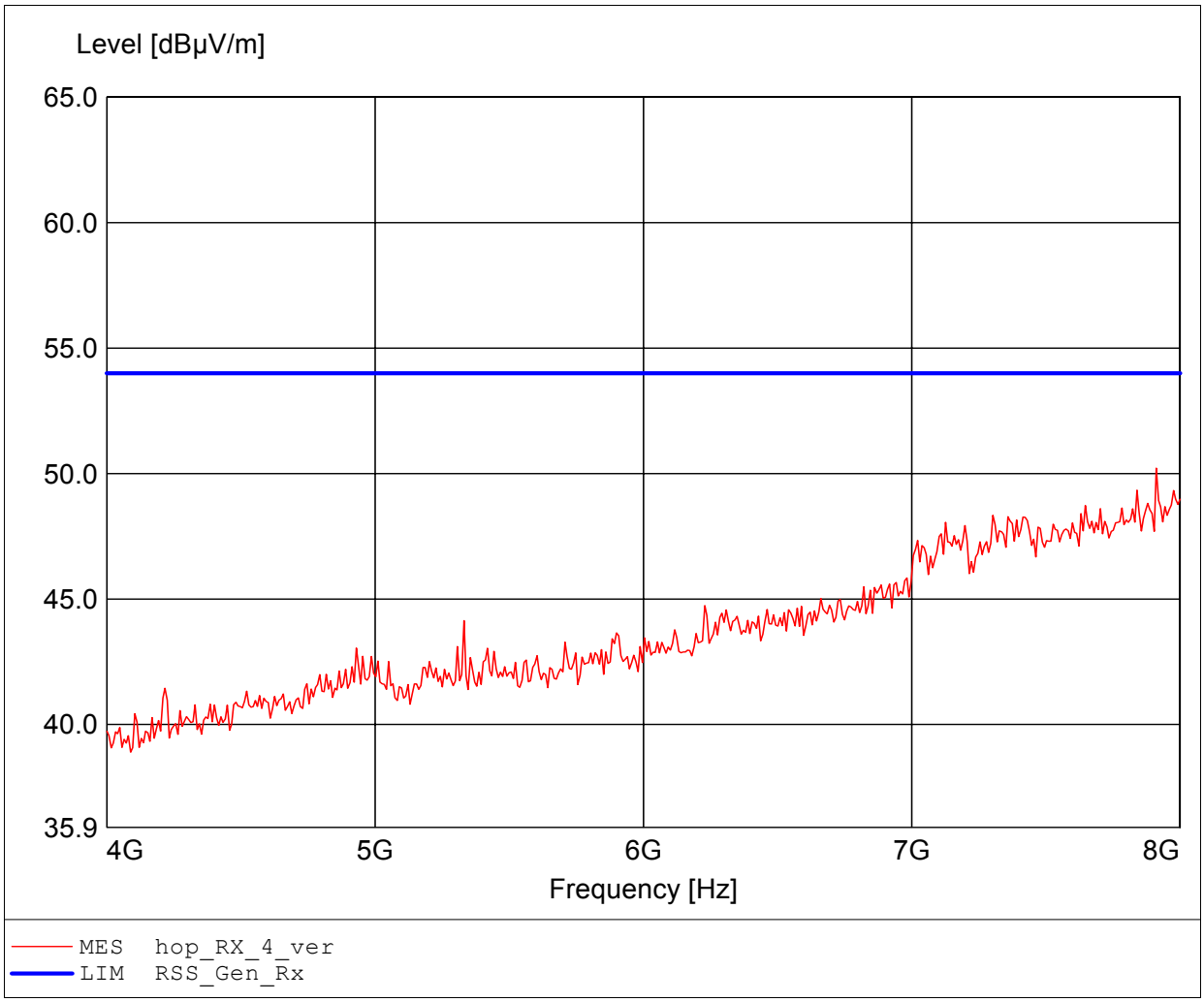
```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HL025, ampl.
Comment 2:             Freq:3.940GHz Emax:43.26dBµV/m RBW: 1 MHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HL025, ampl.
Comment 2:             Freq:7.912GHz Emax:50.21dBµV/m RBW: 1 MHz
```



Field Strength under normal conditions

Standards Industry Canada, RSS-GEN

```
Approval Holder:       Hughes Telematics, Inc. /  G0M-1105-1155
EUT  /  Model:         Telematics Unit / AT-100
Configuration:         Setup: Rx
Test Site / Operator:  Eurofins Product Service GmbH  /  Mr. Treffke
Test Condition:        Tnom.: 25°C   /   Vnom: 12V DC
Test Specification:    Freq. / CH: hop
Comment 1:             Dist.: 3m, Ant.: HL025, ampl.
Comment 2:             Freq:7.984GHz Emax:49.93dBµV/m RBW: 1 MHz
```