

Compliance test report ID **188681-1TRFWL**

Date of issue  
November 4, 2011

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**FCC 47 CFR Part 90, Subpart M, Section 90.353**

LMS operations in the 902–928 MHz band

Applicant **Kapsch TrafficCom IVHS Corp.**  
Product **JANUS<sup>®</sup> HOTPass<sup>®</sup> Interior OBU**  
Model **802120-TAB**  
FCC ID **JQU802120**

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Nemko Canada Inc., a testing laboratory, is accredited by the Standards Council of Canada. The tests included in this report are within the scope of this accreditation




**Test location**

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**Tested by** Andrey Adelberg, Senior Wireless/EMC Specialist

**Reviewed by**  November 4, 2011  

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Kevin Rose, Wireless/EMC Specialist **Date**

**Limits of responsibility**

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Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.  
This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko Canada's ISO/IEC 17025 accreditation.

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## Section 1 Report summary

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### 1.1 Applicant

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Kapsch TrafficCom IVHS Corp.  
6020 Ambler Drive  
Mississauga, ON, Canada  
L4W 2P1

### 1.2 Manufacturer

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Kapsch TrafficCom IVHS Corp.  
6020 Ambler Drive  
Mississauga, ON, Canada  
L4W 2P1

### 1.3 Test specifications

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FCC 47 CFR Part 90, Subpart M, Section 90.353  
LMS operations in the 902–928 MHz band

### 1.4 Statement of compliance

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In the configuration tested, the EUT was found compliant.

Testing was completed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See “Summary of test results” for full details.

### 1.5 Exclusions

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None

### 1.6 Test report revision history

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Revision #	Details of changes made to test report
TRF	Original report issued

## Section 2 Summary of test results

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### 2.1 FCC Part 90, Subpart I tests result summary

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Part	Test description	Verdict
§90.205(l)	Power and antenna height limits	Pass
§90.209	Bandwidth limitations	Pass
§90.210(k)	Emission masks	Pass
§90.210(k)	Spurious emissions	Pass
§90.213	Frequency stability	Pass*

Notes: \* - The EUT is a mobile transponder therefore it is exempt from this requirement.

### 2.2 FCC Part 90, Subpart M tests result summary

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Part	Test description	Verdict
§90.353(h)	Authorized bands	Pass
§90.357(b)	Frequencies for LMS systems in the 902–928 MHz band	Pass

## Section 3 Equipment under test (EUT) details

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### 3.1 Sample information

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**Receipt date** October 13, 2011  
**Nemko sample ID number** 1, 2

### 3.2 EUT information

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**Product name** JANUS<sup>®</sup> HOTPass<sup>®</sup> Interior OBU  
**Model** 802120-TAB  
**Serial number** None

### 3.3 Technical information

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**Operating band** 902–928 MHz  
**Operating frequency** 915 ±0.6 MHz  
**Modulation type** Fixed OOK, Manchester encoded 500 kbps  
**Occupied bandwidth** 6.12 MHz (99 % OBW)  
**Emission designator** 6M12P1D  
**Power requirements** 3.6 V<sub>DC</sub> internal Lithium battery  
**Antenna information** 0 dBi (-2.15 dBd)  
 The EUT uses a unique antenna coupling/ non-detachable antenna to the intentional radiator.

### 3.4 Product description and theory of operation

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The EUT is a Transponder that operates within 902–928 MHz ISM band at frequency 915 ±0.6 MHz, which is mounted on a vehicle at a location that is visible to the Reader Antenna when the vehicle passes through the RF capture zone, which is dictated by the directional pattern of the Reader Antenna. This Transponder is designed for interior mounting in a passenger vehicle, specifically on the windshield near the top and near the vehicle centerline.

The Transponder responds to and emits with horizontal polarization when correctly oriented for normal operation with the flat surface of the Transponder against the vehicle windshield. In this location the boresite will point towards the Reader antenna when the vehicle approaches the Reader antenna. Outside the RF Capture Zone of the Reader, the unit does not transmit but continuously receives.

The transponder has a external switch which allows the user (driver) to declare a state of occupancy (i.e. whether or not high occupancy) that the transponder will report to the reader.

### 3.5 EUT exercise details

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The units are internally battery powered and are continuously in the Receive mode. They require an external RF trigger to stimulate a response. Each RF trigger will produce one burst of transmission from a unit.

The trigger pulse can be generated by using a signal generator gated by a function generator, or by using a signal generator that has the internal pulse modulation function.



3.6 EUT setup diagram

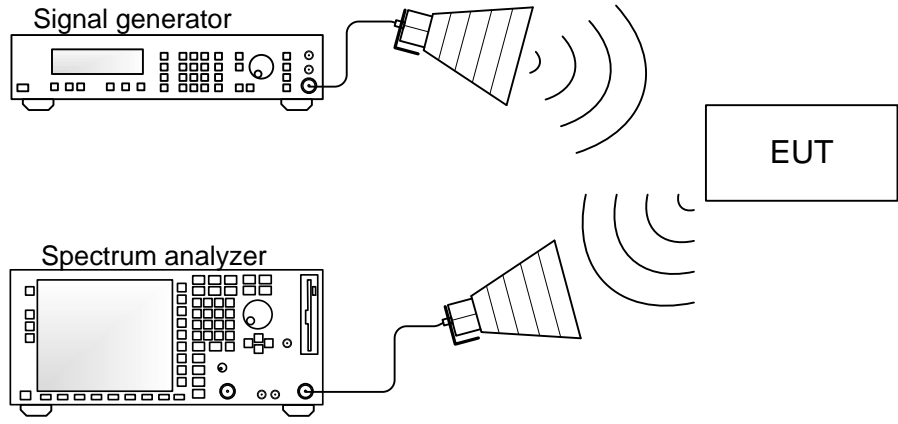


Diagram 3.6-1: Setup diagram





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## Section 4 Engineering considerations

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### 4.1 Modifications incorporated in the EUT

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There were no modifications performed to the EUT during this assessment.

### 4.2 Technical judgment

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None

### 4.3 Deviations from laboratory tests procedures

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No deviations were made from laboratory procedures.

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## Section 5 Test conditions

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### 5.1 Atmospheric conditions

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Temperature: 15–30 °C  
Relative humidity: 20–75 %  
Air pressure: 86–106 kPa

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

### 5.2 Power supply range

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The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages  $\pm 5\%$ , for which the equipment was designed.

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## Section 6 Measurement uncertainty

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### 6.1 Uncertainty of measurement

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Nemko Canada Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 "Uncertainty in EMC measurements." Measurement uncertainty was calculated using the methods described in CISPR 16-4 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC measurements; as well as described in UKAS LAB34: The expression of Uncertainty in EMC Testing. Measurement uncertainty calculations assume a coverage factor of  $K=2$  with 95% certainty.

## Section 7 Test equipment

### 7.1 Test equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
3 m EMI test chamber	TDK	SAC-3	FA002047	1 year	Mar. 09/12
Flush mount turntable	Sunol	FM2022	FA002082	—	NCR
Controller	Sunol	SC104V	FA002060	—	NCR
Antenna mast	Sunol	TLT2	FA002061	—	NCR
Bilog antenna	Sunol	JB3	FA002108	1 year	Jan. 31/12
Horn antenna #2	EMCO	3115	FA000825	1 year	Feb. 04/12
1–18 GHz pre-amplifier	JCA	JCA118-503	FA002091	1 year	Aug. 15/12
Temperature chamber	Thermotron	SM-16C	FA001030	1 year	NCR
Multimeter	Fluke	16	FA001831	1 year	Jan. 26/12
50 coax cable	Huber + Suhner	NONE	FA002013	1 year	Aug. 15/12
50 coax cable	Huber + Suhner	NONE	FA002074	1 year	Aug. 15/12
Note: NCR - no calibration required					

## Section 8    Testing data

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### 8.1    Clause 90.205 Effective radiated power of carrier

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#### 8.1.1    Definitions and limits

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Applicants for licenses must request and use no more power than the actual power necessary for satisfactory operation. Except where otherwise specifically provided for, the maximum power that will be authorized to applicants whose license applications for new stations are filed after August 18, 1995 is as follows:

(l) 902–928 MHz.

LMS systems operating pursuant to subpart M of this part in the 902–927.25 MHz band will be authorized a maximum of 30 watts ERP. LMS equipment operating in the 927.25–928 MHz band will be authorized a maximum of 300 watts ERP. ERP must be measured as peak envelope power. Antenna heights will be as specified in §90.353(h).

**Table 8.1-1:** ERP limits

Assigned frequency band (MHz)	ERP	
	(W)	(dBm)
902.00–927.25	30	44.8
927.25–928.00	300	54.8

#### 8.1.2    Test summary

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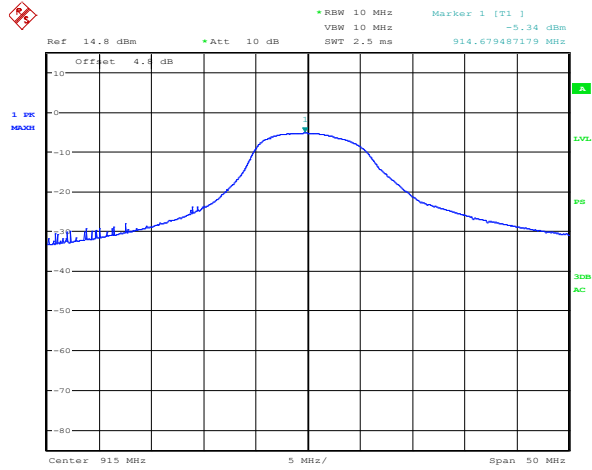
<b>Test date</b>	October 18, 2011	<b>Test engineer</b>	Andrey Adelberg	<b>Verdict</b>	Pass
<b>Temperature</b>	24 °C	<b>Air pressure</b>	1000 mbar	<b>Relative humidity</b>	31 %

#### 8.1.3    Observations/special notes

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The test was performed using peak detector of the spectrum analyzer with RBW and VBW of 10 MHz. The test was performed conducted on the specially modified sample for that matter. The antenna gain declared by the manufacturer is 0 dBi (-2.15 dBd).

8.1.4 Test data



Date: 18.OCT.2011 15:52:00

Plot 8.1-1: Peak power measurement

Table 8.1-2: ERP calculation

Frequency (MHz)	Peak output power (dBm)	Antenna gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)
915	-5.34	-2.15	-7.49	44.8	52.29

## 8.2 Clause 90.209 Occupied bandwidth

### 8.2.1 Definitions and limits

- (a) Each authorization issued to a station licensed under this part will show an emission designator representing the class of emission authorized. The designator will be prefixed by a specified necessary bandwidth. This number does not necessarily indicate the bandwidth occupied by the emission at any instant. In those cases where §2.202 of this chapter does not provide a formula for the computation of necessary bandwidth, the occupied bandwidth, as defined in part 2 of this chapter, may be used in lieu of the necessary bandwidth.
- (b) The maximum authorized single channel bandwidth of emission corresponding to the type of emission specified in §90.207 is as follows:
- (1) For A1A or A1B emissions, the maximum authorized bandwidth is 0.25 kHz. The maximum authorized bandwidth for type A3E emission is 8 kHz.
  - (2) For operations below 25 MHz utilizing J3E emission, the bandwidth occupied by the emission shall not exceed 3000 Hz. The assigned frequency will be specified in the authorization. The authorized carrier frequency will be 1400 Hz lower in frequency than the assigned frequency. Only upper sideband emission may be used. In the case of regularly available double sideband radiotelephone channels, an assigned frequency for J3E emissions is available either 1600 Hz below or 1400 Hz above the double sideband radiotelephone assigned frequency.
  - (3) For all other types of emissions, the maximum authorized bandwidth shall not be more than that normally authorized for voice operations.
  - (4) Where a frequency is assigned exclusively to a single licensee, more than a single emission may be used within the authorized bandwidth. In such cases, the frequency stability requirements of §90.213 must be met for each emission.
  - (5) Unless specified elsewhere, channel spacings and bandwidths that will be authorized in the following frequency bands are given in the following table:

**Table 8.2-1:** Occupied bandwidth requirements

Frequency band (MHz)	Channel spacing (kHz)	Authorized bandwidth (kHz)
Below 25*		
25–50	20	20
72–76	20	20
150–174	7.5	**20/11.25/6
216–220****	6.25	20/11.25/6
220–222	5	4
406–512*	6.25	**20/11.25/6
806–809/851–854	12.5	20
809–824/854–869	25	20
896–901/935–940	12.5	13.6
902–928***		
929–930	25	20
1427–1432****	12.5	12.5
2450–2483.5*		
Above 2500*		

\* Bandwidths for radiolocation stations in the 420–450 MHz band and for stations operating in bands subject to this footnote will be reviewed and authorized on a case-by-case basis.

\*\* Operations using equipment designed to operate with a 25 kHz channel bandwidth will be authorized a 20 kHz bandwidth. Operations using equipment designed to operate with a 12.5 kHz channel bandwidth will be authorized a 11.25 kHz bandwidth. Operations using equipment designed to operate with a 6.25 kHz channel bandwidth will be authorized a 6 kHz bandwidth. All stations must operate on channels with a bandwidth of 12.5 kHz or less beginning January 1, 2013, unless the operations meet the efficiency standard of §90.203(j)(3).

\*\*\* The maximum authorized bandwidth shall be 12 MHz for non-multilateration LMS operations in the band 909.75–921.75 MHz and 2 MHz in the band 902.00–904.00 MHz. The maximum authorized bandwidth for multilateration LMS operations shall be 5.75 MHz in the 904.00–909.75 MHz band; 2 MHz in the 919.75–921.75 MHz band; 5.75 MHz in the 921.75–927.25 MHz band and its associated 927.25–927.50 MHz narrowband forward link; and 8.00 MHz if the 919.75–921.75 MHz and 921.75–927.25 MHz bands and their associated 927.25–927.50 MHz and 927.50–927.75 MHz narrowband forward links are aggregated.

\*\*\*\*See §90.259.

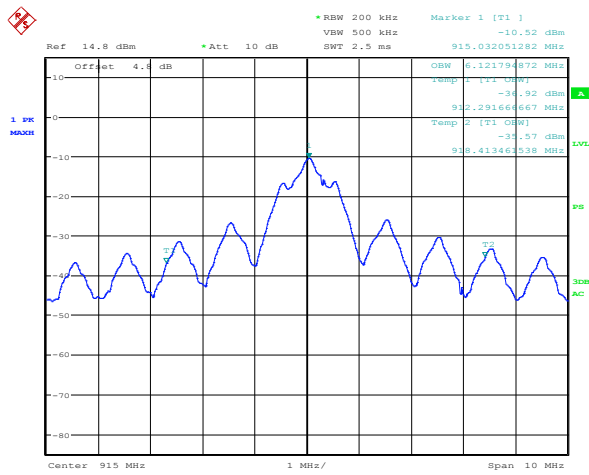
8.2.2 Test summary

<b>Test date</b>	October 18, 2011	<b>Test engineer</b>	Andrey Adelberg	<b>Verdict</b>	Pass
<b>Temperature</b>	24 °C	<b>Air pressure</b>	995 mbar	<b>Relative humidity</b>	36 %

8.2.3 Observations/special notes

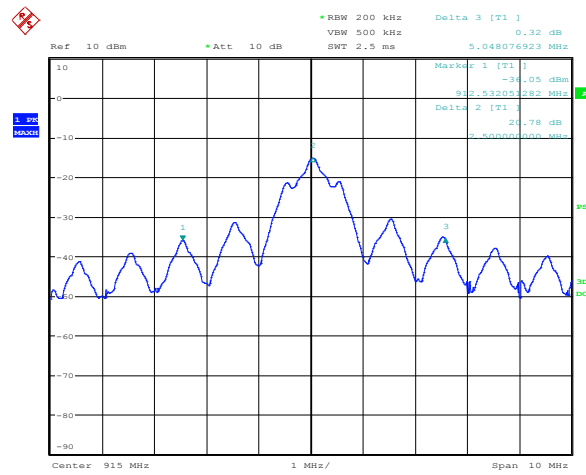
The RBW was set to  $\geq 1$  % of occupied bandwidth. VBW was set wider than RBW.  
 The test was performed conducted, using a peak detector of spectrum analyzer, on specially modified sample for that purpose.

8.2.4 Test data



Date: 18.OCT.2011 15:52:46

Plot 8.2-1: 99 % Occupied bandwidth



Date: 19.OCT.2011 14:37:22

Plot 8.2-2: 20 dB bandwidth

Table 8.2-2: 20 dB Bandwidth measurements

Frequency (MHz)	20 dB occupied bandwidth (MHz)	Limit (MHz)	Margin (MHz)
915	5.05	12.00	6.95

Table 8.2-3: 99 % occupied bandwidth measurements

Frequency (MHz)	99 % Occupied bandwidth (MHz)
915	6.12



### 8.3 Clause 90.210 Emission mask

#### 8.3.1 Definitions and limits

Except as indicated elsewhere in this part, transmitters used in the radio services governed by this part must comply with the emission masks outlined in this section. Unless otherwise stated, per paragraphs (d)(4), (e)(4), and (m) of this section, measurements of emission power can be expressed in either peak or average values provided that emission powers are expressed with the same parameters used to specify the unmodulated transmitter carrier power. For transmitters that do not produce a full power unmodulated carrier, reference to the unmodulated transmitter carrier power refers to the total power contained in the channel bandwidth. Unless indicated elsewhere in this part, the table in this section specifies the emission masks for equipment operating in the frequency bands governed under this part.

**Table 8.3-1:** Emission mask requirements

Frequency band, (MHz)	Mask for equipment with Audio low pass filter	Mask for equipment without Audio low pass filter
Below 25	A or B	A or C
25–50	B	C
72–76	B	C
150–174	B, D, or E	C, D, or E
150 Paging only	B	C
220–222	F	F
421–512	B, D, or E	C, D, or E
450 Paging only	B	G
806–809/851–854	B	H
809–824/854–869	B	G
896–901/935–940	I	J
902–928	K	K
929–930	B	G
4940–4990	L or M	L or M
5850–5925		
All other bands	B	C

(k)(3) *Other transmitters.* For all other transmitters authorized under subpart M that operate in the 902–928 MHz band, the peak power of any emission shall be attenuated below the power of the highest emission contained within the licensee's sub-band in accordance with the following schedule:

- (i) On any frequency within the authorized bandwidth: Zero dB.
- (ii) On any frequency outside the licensee's sub-band edges:  $55 + 10 \times \log_{10}(P)$  dB, where (P) is the highest emission (watts) of the transmitter inside the licensee's sub-band.

(4) In the 902–928 MHz band, the resolution bandwidth of the instrumentation used to measure the emission power shall be 100 kHz, except that, in regard to paragraph (2) of this section, a minimum spectrum analyzer resolution bandwidth of 300 Hz shall be used for measurement center frequencies with 1 MHz of the edge of the authorized subband. The video filter bandwidth shall not be less than the resolution bandwidth.

(5) Emission power shall be measured in peak values.

(6) The LMS sub-band edges for non-multilateration systems for which emissions must be attenuated are 902.00, 904.00, 909.75 and 921.75 MHz.

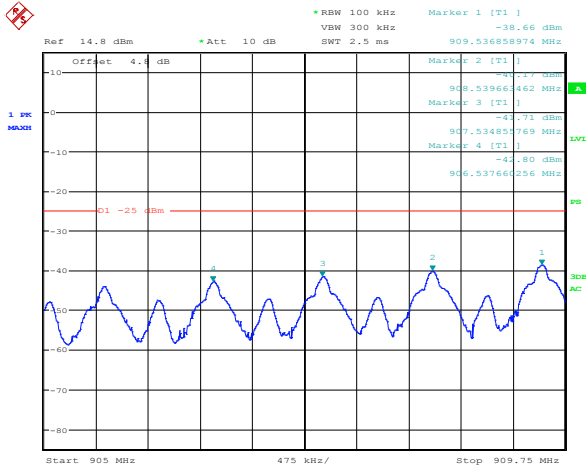
#### 8.3.2 Test summary

<b>Test date</b>	October 18, 2011	<b>Test engineer</b>	Andrey Adelberg	<b>Verdict</b>	Pass
<b>Temperature</b>	25 °C	<b>Air pressure</b>	1003 mbar	<b>Relative humidity</b>	39 %

#### 8.3.3 Observations/special notes

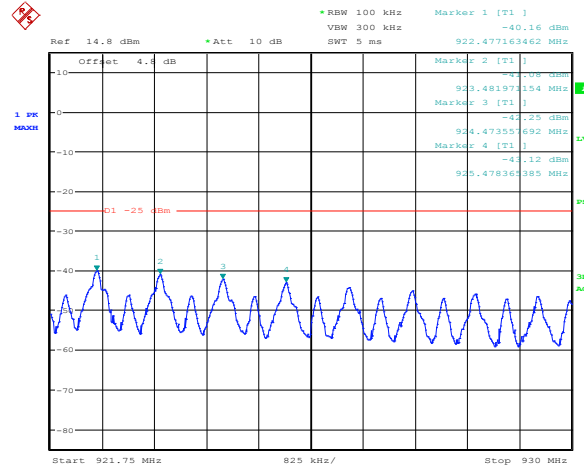
The test was performed conducted on the specially modified unit for conducted measurements. The test was done using spectrum analyzer with peak detector and RBW was set to 100 kHz.

8.3.4 Test data



Date: 18.OCT.2011 15:53:50

Plot 8.3-1: Lower band edge at 909.75 MHz



Date: 18.OCT.2011 15:54:31

Plot 8.3-2: Upper band edge at 921.75 MHz

Table 8.3-2: Conducted spurious emissions measurements

Frequency (MHz)	Measured power (dBm)	EUT antenna gain (dBd)	ERP* (dBm)	Limit (dBm)	Margin (dB)
906.538	-42.80	-2.15	-44.95	-25.00	19.95
907.535	-41.71	-2.15	-43.86	-25.00	18.86
908.540	-40.17	-2.15	-42.32	-25.00	17.32
909.537	-38.66	-2.15	-40.81	-25.00	15.81
922.477	-40.16	-2.15	-42.31	-25.00	17.31
923.482	-41.08	-2.15	-43.23	-25.00	18.23
924.474	-42.25	-2.15	-44.40	-25.00	19.40
925.478	-43.12	-2.15	-45.27	-25.00	20.27

\* - ERP = Measured power at antenna connector + EUT antenna gain.

## 8.4 Clause 90.210 Spurious emissions

### 8.4.1 Definitions and limits

(k)(3)(ii) On any frequency outside the licensee's sub-band edges:  $55 + 10 \log_{10}(P)$  dB, where (P) is the highest emission (watts) of the transmitter inside the licensee's sub-band.

**Table 8.4-1: Spurious emissions limit**

Frequency range (MHz)	Attenuation below carrier (dBc)	ERP of spurious emissions (dBm)
30–10 <sup>th</sup> harmonic	$55 + 10 \times \text{Log}(P)$	-25

### 8.4.2 Test summary

<b>Test date</b>	October 18, 2011	<b>Test engineer</b>	Andrey Adelberg	<b>Verdict</b>	Pass
<b>Temperature</b>	23 °C	<b>Air pressure</b>	1002 mbar	<b>Relative humidity</b>	38 %

### 8.4.3 Observations/special notes

For radiated measurements at the frequencies below 1 GHz the RBW was set to 100 kHz and for frequencies above 1 GHz the RBW was set to 1 MHz. VBW was wider than RBW at any time  
 Radiated emissions were tested using substitution method for field strength at 3 m to ERP conversion.  
 Two EUT possible positions were assessed; only worst-case emissions are reported.  
 Conducted measurements were performed on the sample especially modified for that matter.

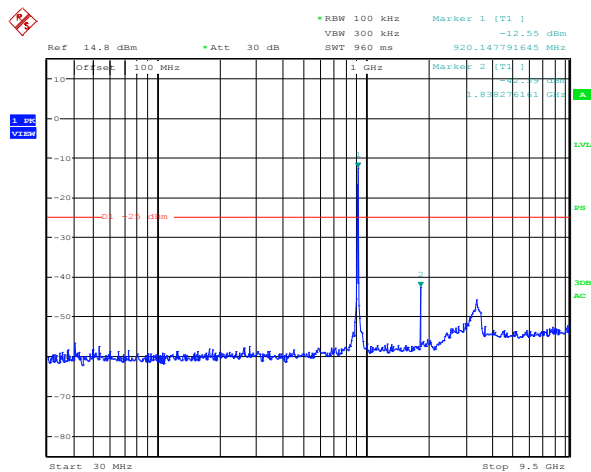
8.4.1 Test data

**Table 8.4-2:** Radiated spurious emissions measurements

Frequency (MHz)	Field strength (dBµV/m)	Substitution method				
		SG-CL (dBm)	Tx antenna gain (dBd)	ERP* (dBm)	Limit (dBm)	Margin (dB)
1829.59	64.63	-41.91	6.23	-35.68	-25.00	10.68
2745.82	54.11	-56.80	7.57	-49.23	-25.00	24.23
4577.36	56.27	-47.48	8.52	-38.96	-25.00	13.96

\* - ERP = SG-CL (Signal generator level – cable loss) + antenna gain.

Conducted spurious emissions



Date: 18.OCT.2011 15:56:45

**Plot 8.4-1:** Spurious emissions within 30–9500 MHz

**Table 8.4-3:** Conducted spurious emissions measurements

Frequency (MHz)	Measured power (dBm)	EUT antenna gain (dBd)	ERP* (dBm)	Limit (dBm)	Margin (dB)
1838.27	-42.59	-2.15	-44.74	-25.00	19.74

\* - ERP = Measured power at antenna connector + EUT antenna gain.

## 8.5 Clause 90.213 Frequency stability

### 8.5.1 Definitions and limits

a) Unless noted elsewhere, transmitters used in the services governed by this part must have minimum frequency stability as specified in the following table:

**Table 8.5-1: Frequency stability limits**

Frequency range (MHz)	Fixed and base stations (ppm)	Mobile stations (ppm)	
		Over 2 W output power	Over 2 W output power
Below 25	100	100	200
25–50	20	20	50
72–76	5		50
150–174	5	5	50
216–220	1		1
220–222	0.1	1.5	1.5
421–512	2.5	5	5*
806–809	1	1.5	1.5
809–824	1.5	2.5	2.5
851–854	1	1.5	1.5
854–869	1.5	2.5	2.5
896–901	0.1	1.5	1.5
902–928	2.5	2.5	2.5
902–928*	2.5	2.5	2.5
929–930	1.5		
935–940	0.1	1.5	1.5
1427–1432	300	300	300
Above 2450			

\* - Fixed non-multilateration transmitters with an authorized bandwidth that is more than 40 kHz from the band edge, intermittently operated hand-held readers, and mobile transponders are not subject to frequency tolerance restrictions.

### 8.5.2 Test summary

<b>Test date</b>	October 19, 2011	<b>Test engineer</b>	Andrey Adelberg	<b>Verdict</b>	Pass
<b>Temperature</b>	22 °C	<b>Air pressure</b>	1002 mbar	<b>Relative humidity</b>	39 %

### 8.5.3 Observations/special notes

Since the EUT is a mobile transponder it is exempt from this requirement.

8.5.4 Test data

Table 8.5-2: Frequency stability measurements

Test conditions	Frequency (MHz)							Offset* (ppm)
	Power up	1 min	2 min	3 min	4 min	5 min	10 min	
+50 °C, Nominal	915.048049	915.050770	915.050770	915.050770	915.050770	915.050770	915.050770	107.92
+40 °C, Nominal	915.045849	915.034860	915.034860	915.034860	915.034860	915.034860	915.034860	90.53
+30 °C, Nominal	915.042444	915.076448	915.076448	915.076448	915.076448	915.076448	915.076448	135.98
+20 °C, +15 %	915.039503	915.092088	915.092088	915.092088	915.092088	915.092088	915.092088	153.07
+20 °C, Nominal	915.032051	914.952033	914.952033	914.952033	914.952033	914.952033	914.952033	Reference
+20 °C, -15 %	915.022196	915.035255	915.035255	915.035255	915.035255	915.035255	915.035255	90.96
+10 °C, Nominal	915.016650	914.986465	914.986465	914.986465	914.986465	914.986465	914.986465	37.63
0 °C, Nominal	914.999644	915.002759	915.002759	915.002759	915.002759	915.002759	915.002759	55.44
-10 °C, Nominal	914.976854	914.929194	914.929194	914.929194	914.929194	914.929194	914.929194	-24.96
-20 °C, Nominal	914.948455	914.875174	914.875174	914.875174	914.875174	914.875174	914.875174	-84.00
-30 °C, Nominal	914.918058	914.921772	914.921772	914.921772	914.921772	914.921772	914.921772	-33.07

\* Note: Offset calculation:  $\frac{F_{Measured} - F_{reference}}{F_{reference}} \times 1 \cdot 10^6$

## 8.6 Clause 90.353 LMS operations in the 902–928 MHz band

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### 8.6.1 Definitions and limits

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LMS systems may be authorized within the 902–928 MHz band, subject to the conditions in this section. LMS licensees are required to maintain whatever records are necessary to demonstrate compliance with these provisions and must make these records available to the Commission upon request:

- (h) Non-multilateration stations are authorized to operate on a shared, non-exclusive basis in the 902–904 MHz and 909.75–921.75 MHz sub-bands. Non-multilateration systems and multilateration systems will share the 919.75–921.75 MHz band on a co-equal basis. Non-multilateration LMS systems may not provide non-vehicular location services. The maximum antenna height above ground for non-multilateration LMS systems is 15 meters.
- (i) Non-multilateration LMS licenses will be issued on a site-by-site basis, except that municipalities or other governmental operatives may file jointly for a non-multilateration license covering a given U.S. Department of Commerce Bureau of Economic Analysis Economic Area (EA). Such an application must identify all planned sites. After receiving the license, the non-multilateration EA licensee must notify the Commission if sites are deleted or if new sites are added, before those sites may be put into operation.

### 8.6.2 Test summary

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<b>Test date</b>	October 18, 2011	<b>Test engineer</b>	Andrey Adelberg	<b>Verdict</b>	Pass
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### 8.6.3 Observations/special notes

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The EUT operates within 909.75–921.75 MHz band. The only operational frequency is 915 ±0.6 MHz.

## 8.7 Clause 90.357 Frequencies for LMS systems in the 902–928 MHz band

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### 8.7.1 Definitions and limits

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(b) Non-multilateration LMS systems will be authorized in the frequency bands stated in the Table 1 below.

**Table 8.7-1:** LMS frequency bands

LMS sub-band*
902.00–904.00 MHz
909.75–921.75 MHz

\*- Applicants for non-multilateration LMS systems should request only the minimum amount of bandwidth necessary to meet their operational needs.

### 8.7.2 Test summary

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**Test date**      October 18, 2011                      **Test engineer**      Andrey Adelberg                      **Verdict**                      Pass

### 8.7.3 Observations/special notes

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The EUT operates within 909.75–921.75 MHz band. The only operational frequency is 915 ±0.6 MHz.



## Section 9 Block diagrams of test set-ups

### 9.1 Radiated emissions set-up

