Annex A201 - Test Results

No. 1-9702-25-01-19_TR1-A201-R01

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Description	radiated test results

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1. General description

Kind of test item	:	INDOOR/OUTDOOR MLAT ADS-B RTX System with Site Monitor		
Model name	:	RTX103025S		
S/N serial number	:	001001		
		ITEM	P/N SICE	ALTERNATIVE P/N
		RTX rack with site monitor	ATRGML0033-SM RTGML33RASM	-/-
		RTX rack with Site Monitor and Flarm	ATRGML0033-SM-FL RTGML33RASMFL	-/-

2. Radiated spurious emissions

§2.1053 Measurements required: Field strength of spurious radiation

(a) Measurements shall be made to detect spurious emissions that may be radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of §2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required, with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from halfwave dipole antennas.

(b) The measurements specified in paragraph (a) of this section shall be made for the following equipment:

(1) Those in which the spurious emissions are required to be 60 dB or more below the mean power of the transmitter.

(2) All equipment operating on frequencies higher than 25 MHz.

(3) All equipment where the antenna is an integral part of, and attached directly to the transmitter.

(4) Other types of equipment as required, when deemed necessary by the Commission.

§87.139 Emission limitations

(a) Except for ELTs and when using single sideband (R3E, H3E, J3E), or frequency modulation (F9) or digital modulation (F9Y) for telemetry or telecommand in the 1435-1525 MHz, 2345-2395 MHz, or 5091-5150 MHz band or digital modulation (G7D) for differential GPS, the mean power of any emissions must be attenuated below the mean power of the transmitter (pY) as follows:

(1) When the frequency is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth the attenuation must be at least 25 dB;

(2) When the frequency is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth the attenuation must be at least 35 dB.

(3) When the frequency is removed from the assigned frequency by more than 250 percent of the authorized bandwidth the attenuation for aircraft station transmitters must be at least 40 dB; and the attenuation for aeronautical station transmitters must be at least 43 + 10 log10 pY dB.

Measurement parameters:

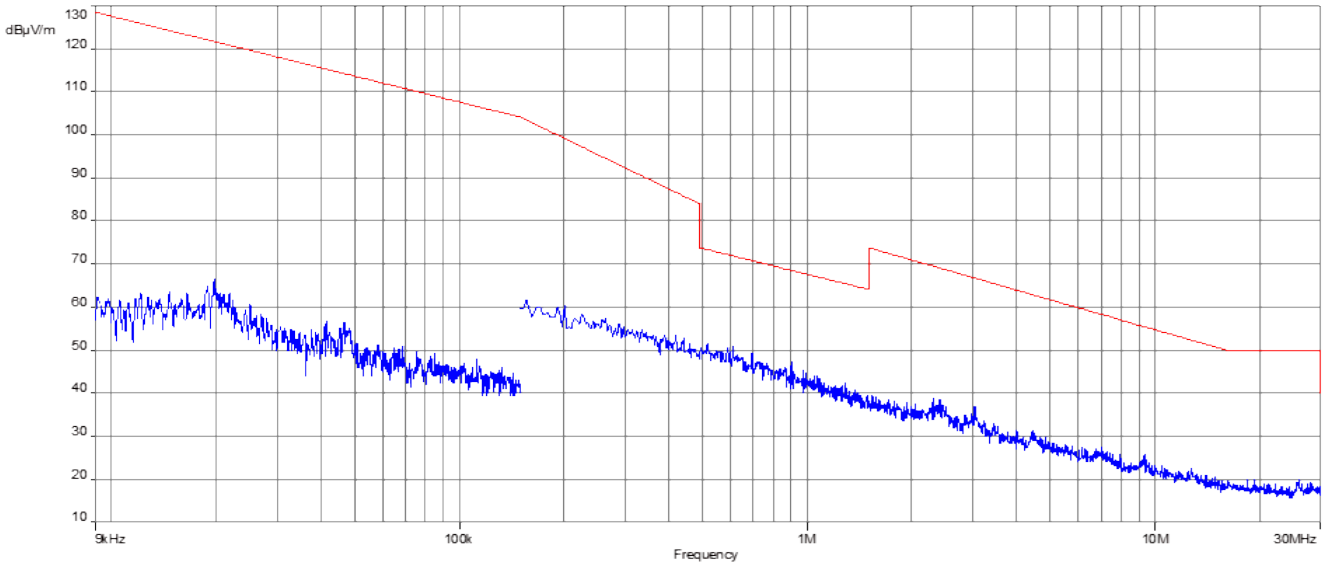
Measurement parameters	
Detector:	RMS
Sweep time:	1 s
Resolution bandwidth:	1 MHz
Video bandwidth:	≥ ResBW
Span:	see plots
Trace-Mode:	Max-Hold
Test setup	See sub clause 7.1A, B, C
Measurement uncertainty	See sub clause 9

Limits:

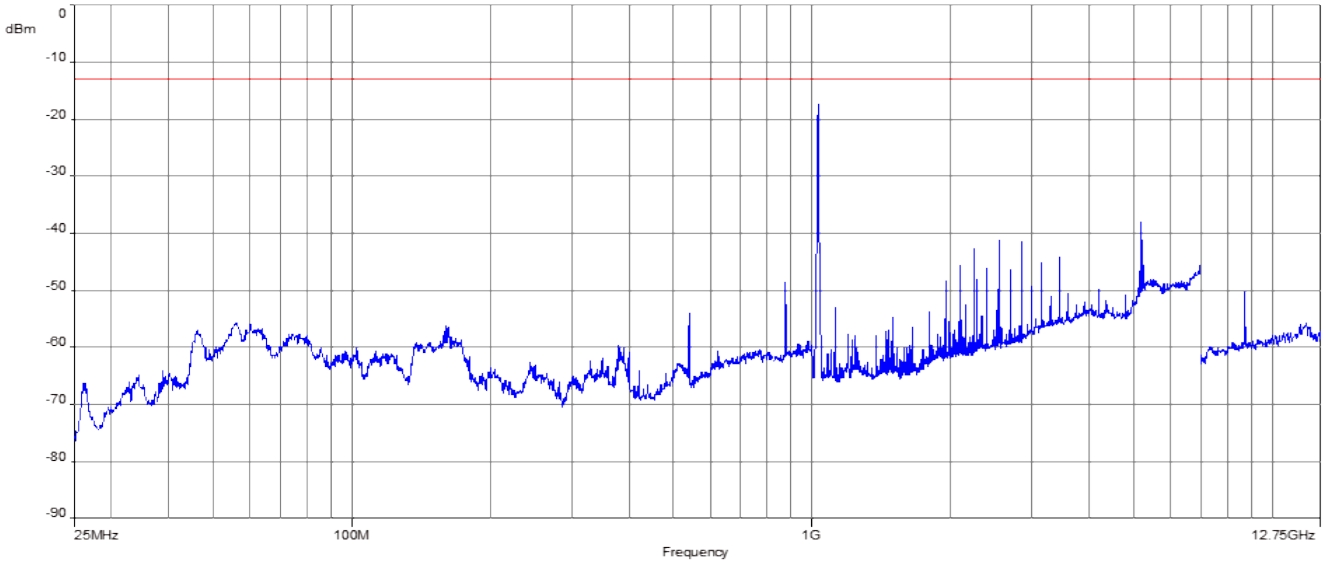
	max. spurious level	
1030 MHz	43 + 10 $\log_{10}$ pY dB	(-13 dBm)
1090 MHz (site monitor)	43 + 10 $\log_{10}$ pY dB	(-13 dBm)

Plots:

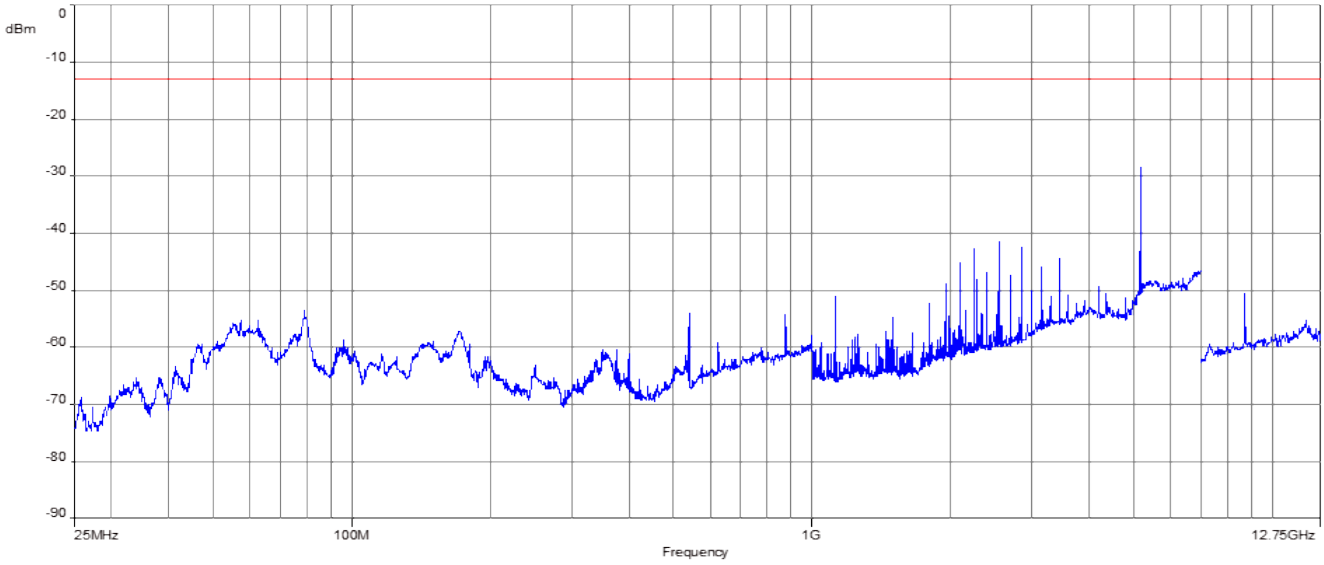
Plot 1: 1030 MHz, cabinet radiation (valid for all modes), 9 kHz – 30 MHz



Plot 2: 1030 MHz, cabinet radiation (valid for all modes), 25 MHz – 12.75 GHz



Plot 3: 1090 MHz, cabinet radiation (site monitor), 25 MHz – 12.75 GHz



3. Document History

Release	Applied changes	Release date
R01	initial release	August 22, 2025

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