



FCC LISTED, REGISTRATION
NUMBER: 2764.01

ISED LISTED REGISTRATION
NUMBER: 23595-1

Test report No:
5868ERM.008

Partial Test report

USA FCC Part 15.247, 15.205, 15.209

Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

CANADA RSS-247, RSS-Gen

Digital Transmission Systems, Frequency Hopping Systems and License-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350MHz, and 5470-5895 MHz bands.

(*) Identification of item tested	The ADC-JAM2000 is an Ethernet gateway that can detect disruptions in the 2.4GHz ISM band.	
(*) Trademark	Alarm.com	
(*) Model and /or type reference tested	ADC-JAM2000	
(*) Derived model not tested	--	
Other identification of the product	FCC ID: YL6-143JAM2000 IC: 9111A-143JAM2000 HVIN: ADC-JAM2000	
(*) Features	LoRa, Bluetooth LE, Ethernet	
Manufacturer	Alarm.com Incorporated 8281 Greensboro Drive, Suite 100, Tysons, VA 22102, USA	
Test method requested, standard	USA FCC Part 15.247 (11-18-2024 Edition): Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz USA FCC Part 15.205 (11-18-2024 Edition): Restricted bands of operation. USA FCC Part 15.209 (11-18-2024 Edition): Radiated emission limits; general requirements. CANADA RSS-247 Issue 4 (July 2025). CANADA RSS-Gen Issue 5 (April 2018)/A1 (March 2019)/A2 (Feb 2021). ANSI C63.10-2020 + Cor. 1-2023 + C63.10a-2024 + Errata to C63.10a-2024: American National Standard for Testing Unlicensed Wireless Devices.	
Summary	See Appendix A	
Approved by (name / position & signature)	Domingo Galvez EMC&RF Lab Manager	 Digitally signed by Domingo Galvez DN: cn=Domingo Galvez, o=DEKRA Certification Inc., ou=Regulatory Lab Manager, email=domingo.galvez@dekra.com, c=US
Date of issue	2026-06-18	
Report template No	FDT08_25 (*) "Data provided by the client"	

Index

Acronyms.....3

Competences and guarantees3

General conditions4

Uncertainty4

Data provided by the client.....4

Usage of samples5

Test sample description6

Identification of the client7

Testing period and place.....7

Document history7

Environmental conditions8

Remarks and comments8

Testing verdicts.....9

Summary9

List of equipment used during the test10

Appendix A: Test results (Multi-transmitter)11

Acronyms

Acronym ID	Acronym Description
# of Tx Chains	Number of Transmission Chains
BEL	Band Edge Left
BER	Band Edge Right
DC	Duty Cycle
Freq	Frequency
Freq Rng	Frequency Range
Lvl Meas Pk	Level Pre Measurement Peak
MP	Measurement Point
MU	Medium Utilization Factor
Max EIRP	Maximum Burst EIRP
Max RMS	Maximum Burst RMS
Max Tx Seq	Maximum Transmission Sequence Time
Min Tx Gap	Minimum Transmission Gap Time
Mod	Modulation
Occ Ch BW	Occupied Channel Bandwidth
PSD	Power Spectrum Density
Port	Active Port
T	Temperature
Unwanted Freq	Unwanted Emissions Frequency
Unwanted Lvl	Unwanted Emissions Level

Competences and guarantees

DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate **2764.01** and **CAB ID US0215**.

DEKRA Certification Inc. is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Certification Inc. has a calibration and maintenance program for its measurement equipment.

DEKRA Certification Inc. guarantees the reliability of the data presented in this report, which is the result of the measurements, and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Certification Inc. at the time of performance of the test.

DEKRA Certification Inc. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA Certification Inc.

General conditions

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Certification Inc.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Certification Inc. and the Accreditation Bodies.

Uncertainty

Uncertainty (factor $k=2$) was calculated according to the DEKRA Certification internal document PODT000.

Test case	Frequency (MHz)	U ($k=2$)	Units
Radiated Spurious Emission	30-180	4.27	dB
	180-1000	3.14	dB
	1000-18000	3.30	dB
	18000-40000	3.49	dB

Data provided by the client

The following data has been provided by the client:

1. Information relating to the description of the sample ("Identification of the item tested", "Trademark", "Model and/or type reference tested").
2. The ADC-JAM2000 is an Ethernet gateway that can detect disruptions in the 2.4GHz ISM band.

DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

Usage of samples

Samples used for the test have been selected by: The client.

The sample(s) is composed of the following elements, accessories and auxiliary equipment:

Id	Control Number	Description	Model	Serial N°	Date of Reception	Application
S/01	5868/01	J2 device (Radiated)	ADC-JAM2000	J2-RAD-#1	2026-04-07	Element Under Test
S/01	5868/06	USB to UART câble	FTDI Chip/ TTL-234X-3V3	-	2026-04-07	Accessory
S/01	5868/08	Switching Adapter	Shenzhen Honor Electronic/ ADS-6AM-06- 05050EPCU	-	2026-04-07	Accessory
S/01	5868/13	Ethernet cable E5	E529413	-	2026-04-07	Accessory

Notes referenced to samples during the project:

Id	Note
S/01	Sample S/01 was used for: All the Emission limitations radiated (RSE) tests indicated in appendix A.

Test sample description

Test Sample description (compulsory information for EMC and RF testing services)

Ports..... :	Port name and description		CaBTLE				
			Specified max length [m]	Attached during test	Shielded	Coupled to patient ⁽³⁾	
	Ethernet			[X]	[]	[]	
	5 VDC Power			[X]	[]	[]	
				[]	[]	[]	
				[]	[]	[]	
				[]	[]	[]	
.....			[]	[]	[]		
Supplementary information to the ports..... :		No data Provided					
Rated power supply :	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	[X]	AC: 100-240VAC In, 5VDC Out	[]	[]	[]	[]	[]
	[]	AC:	[]	[]	[]	[]	[]
	[]	DC:					
[]		DC:					
Rated Power..... :	5VDC, 1A						
Clock frequencies..... :	24 MHz, 32 MHz						
Other parameters..... :	300-600 kHz power regulator switching frequency						
Software version..... :	1						
Hardware version..... :	1						
Dimensions in cm (W x H x D)..... :	115 x 115 x 32 mm						
Mounting position..... :	[X]	Table top equipment					
	[X]	Wall/Ceiling mounted equipment					
	[]	Floor standing equipment					
	[]	Hand-held equipment					
	[]	Other:					
Modules/parts :	Module/parts of test item		Type		Manufacturer		
	No data provided						
							
							
							
Accessories (not part of the test item) :	Description		Type		Manufacturer		
	No data provided						
Documents as provided by the applicant :	Description		File name		Issue date		
	Declaration Equipment Data		FDT30_19		2026-05-07		
							

⁽³⁾ Only for Medical Equipment

Identification of the client

Alarm.com Incorporated
8281 Greensboro Drive,
Suite 100,
Tysons, VA 22102
USA

Testing period and place

Test Location	DEKRA Certification Inc. 405 Glenn Dr. Suite 12, Sterling, VA 20164 United States of America.
Date (start)	2026-05-26
Date (finish)	2026-06-18

Document history

Report number	Date	Description
5868ERM.008	2026-06-18	First release

Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

In the semianechoic chamber, the following limits were not exceeded during the test.

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

Temperature	Min. = 15 °C Max. = 35 °C
Relative humidity	Min. = 30 % Max. = 60 %
Air pressure	Min. = 860mbar Max. = 1060mbar

Remarks and comments

The tests have been performed by the technical personnel: Prudhvi Kothapalli, Abraham Gebrmichale, and Yuri Barone.

Testing verdicts

Fail	F
Inconclusive	I
Not applicable	N/A
Not measured	N/M
Pass	P

Summary

FCC PART 15 PARAGRAPH / RSS-247 (LoRa & BTLE)				
Report Section 15.247 Spec Clause	RSS Spec Clause	Test Description	Verdict	Remark
§ 2.1049 & § 15.247 (a) (1)	RSS 247 6.2.4	20dB Emission Bandwidth, Occupied Bandwidth & Carrier Frequency Separation	N/M	Refer 1
§ 15.247 (a) (1) (iii)	RSS 247 6.2.4	Number of hopping channels	N/M	Refer 1
§ 15.247 (a) (1) (iii)	RSS 247 6.2.4	Time of Occupancy (Dwell Time)	N/M	Refer 1
§ 15.247 (b) (3)	RSS 247 6.2.4.1	Maximum peak conducted output power and antenna gain	N/M	Refer 1
§ 15.247 (d)	RSS-247 6.2.4.2	Band-edge conducted emissions compliance (Transmitter)	N/M	Refer 1
§ 15.247 (d)	RSS-247 6.2.4.2 RSS-Gen 8.9 & 8.10	Emission limitations Conducted (Transmitter)	N/M	Refer 1
§ 15.247 (d)	RSS-247 6.2.4.2 RSS-Gen 8.9 & 8.10	Emission limitations Radiated (Transmitter)	P	N/A
<u>Supplementary information and remarks:</u> 1) Only multi-transmitter radiated spurious emission test was requested.				

List of equipment used during the test

Test Equipment for Radiated emission testing:

Radiated Measurements

Control No.	Equipment	Model	Manufacturer	Next Calibration
01057	3115 DOUBTLE-RIDGED WAVEGUIDE HORN ANTENNA (750 MHz-18 GHz)	3115	ETS LINDGREN	2026-07-18
01056	3116C DOUBTLE-RIDGED WAVEGUIDE HORN ANTENNA (18-40GHz)	3116C	ETS LINDGREN	2027-02-23
01066	3142E BICONILOG ANTENNA	3142E	ETS LINDGREN	2028-02-03
01213	CONTROL ROOM	CR	FRANKONIA	--
01010	ESR7 EMI TEST RECEIVER	ESR7	RHODE & SCHWARZ	2027-04-11
01111	ETHERNET SNMP THERMOMETER	HWg-STE Plain	HW GROUP	2026-10-24
01108	ETHERNET SNMP THERMOMETER	HWg-STE Plain	HW GROUP	2026-10-18
01566	FRANKONIA TRANSPARENT RF SQUARE TEST TABTLE	RF Sq Table	FRANKONIA	--
01014	FSV40 SIGNAL ANALYZER 40GHZ	FSV40	RHODE & SCHWARZ	2026-10-04
00981	LOW NOISE PREAMPLIFIER (1-18GHz)	BLMA0118-2A	BONN ELEKTRONIK	2027-02-21
00982	LOW NOISE PREAMPLIFIER (18-40GHz)	BLMA1840-1M	BONN ELEKTRONIK	2027-04-11
01179	SEMI-ANECHOIC CHAMBER	SAC 3plus 'L'	FRANKONIA	--
01314	WIRELESS MEASUREMENT SOFTWARE R&S EMC32	--	RHODE & SCHWARZ	--

Appendix A: Test results (Multi-transmitter)

Appendix A Content

Product information 13

Description of test conditions..... 14

 RSS-247 / FCC 15.247 [RSE] Radiated Emissions For transmitters17

Product information

The following information is provided by the client

Information	Description
Modulation	LoRa: CSS BTLE: GFSK
Operating Frequency Range	LoRa: 902-928 MHz BTLE: 2.400 - 2.483.5 GHz
Nominal Channel Bandwidth	LoRa: 500kHz, 125 KHz BTLE: 2 MHz
RF Output Power	LoRa: 22 dBm BTLE: 4 dBm
Antenna type	LoRa: Chip Antenna BTLE: Microstrip PCB
Antenna gain	LoRa: 2.32 dBi BTLE: 1.99 dBi
Nominal Voltage	
- Supply Voltage	5 VDC
- Type of power source	AC voltage
Equipment type	LoRa, BTLE

Description of test conditions

(*): Data provided by the client.

TEST CONDITIONS	DESCRIPTION				
TC/01 ⁽¹⁾	<u>Power supply (V):</u> DC 5 V				
	<u>Test Frequencies for Radiated tests:</u>				
	Technology	Tested Frequency (MHz)	BW (MHz)	Modulation	Mode
	LoRa	914.9	0.125	CSS	TX
	BTLE	2402	2	GFSK	1 MBPS
	The test was performed with the equipment transmitting with LoRa and BTLE radios simultaneously. These measurements have been performed in order to check the impact of the multi-transmitter of all radio interfaces that can be transmitting simultaneously.				

Note (1): Preliminary scan was performed to determine the worst case. The following tables and plots show the results for the worst case in BTLE + LoRa.

RADIATED MEASUREMENTS:

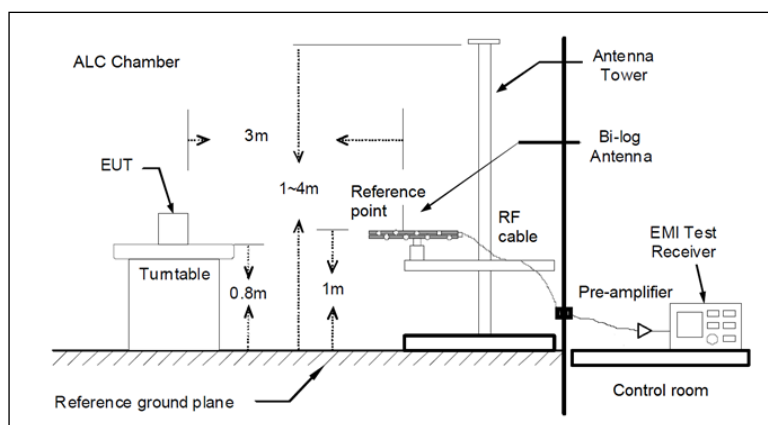
TEST SETUP:

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency ranges 30-1000 MHz (Bilog antenna) and 1-18 GHz (Double ridge horn antennas) and 1m for the frequency range 18 GHz- 26 GHz DouBTLE ridge horn antenna.

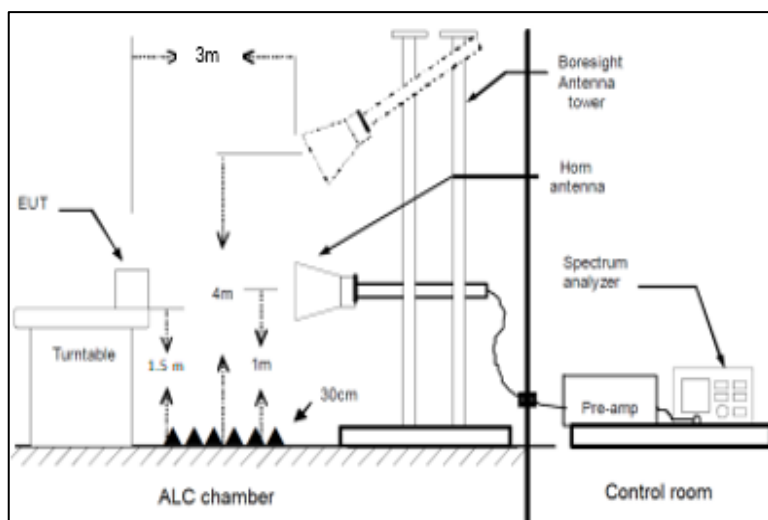
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

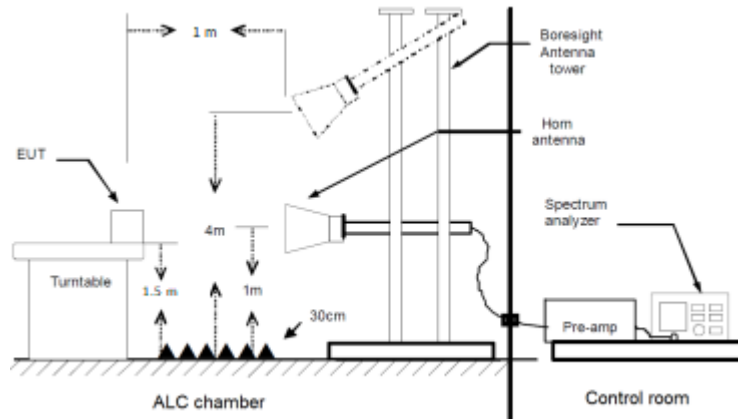
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, Cable loss and pre-amplifiers gain.



Radiated measurements Setup $f < 1$ GHz



Radiated measurements setup $1 < f < 18$ GHz



Radiated measurements setup $f \geq 18$ GHz

Frequency range 9KHz – 30 MHz

No radiofrequency signal generated in the device found below 10° sub-harmonic, no further investigation required.

Frequency range 30 MHz – 1000 MHz

The spurious emissions below 1 GHz do not depend on the operating channel selected in the EUT.

RSS-247 / FCC 15.247 [RSE] Radiated Emissions For transmitters

Limits

USA FCC Part 15.247 (05-05-2025):

FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.247:

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Secs. 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Secs. 15.205(a), must also comply with the radiated emission limits specified in Secs. 15.209(a) (see Secs. 15.205(c)).

FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.209:

(a) the emissions from an intentional radiator shall not exceed the field strength levels specified in the following Table.

Frequency Range (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
0.009-0.490	2400/F(kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705 - 30.0	30	-	30
30 - 88	100 ⁽¹⁾	40	3
88 - 216	150 ⁽¹⁾	43.5	3
216 - 960	200 ⁽¹⁾	46	3
Above 960	500	54	3

Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54–72 MHz, 76–88 MHz, 174–216 MHz or 470–806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., Secs. 15.231 and 15.241

(d) The emission limits shown in the above Table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

(f) In accordance with Secs. 15.33(a), in some cases the emissions from an intentional radiator must be measured to beyond the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator because of the incorporation of a digital device. If measurements above the tenth harmonic are so required, the radiated emissions above the tenth harmonic shall comply with the general radiated emission limits Applicable to the incorporated digital device, as shown in Secs. 15.109 and as based on the frequency of the emission being measured, or, except for emissions contained in the restricted frequency bands shown in Secs. 15.205, the limit on spurious emissions specified for the intentional radiator, whichever is the higher limit. Emissions which must be measured above the tenth harmonic of the highest fundamental frequency designed to be emitted by the intentional radiator and which fall within the restricted bands shall comply with the general radiated emission limits in Secs. 15.109 that are Applicable to the incorporated digital device.

FCC Rules and Regulations 47 CFR Part 15, Subpart B, Secs. 15.109:

(g) As an alternative to the radiated emission limits shown in paragraphs (a) and (b) of this section, digital devices may be shown to comply with the standards contained in the Third Edition of the International Special Committee on Radio

Interference (CISPR), Pub. 22, "Information Technology Equipment—Radio Disturbance Characteristics—Limits and Methods of Measurement" (incorporated by reference, see § 15.38). In addition:

(2) If, in accordance with § 15.33 of this part, measurements must be performed above 1000 MHz, compliance above 1000 MHz shall be demonstrated with the emission limit in paragraph (a) or (b) of this section, as appropriate. Measurements above 1000 MHz may be performed at the distance specified in the CISPR 22 publications for measurements below 1000 MHz provided the limits in paragraphs (a) and (b) of this section are extrapolated to the new measurement distance using an inverse linear distance extrapolation factor (20 dB/decade), e.g., the radiated limit above 1000 MHz for a Class B digital device is 150 $\mu\text{V/m}$, as measured at a distance of 10 meters.

Frequency range (MHz)	Class A limits		Class B limits	
	AVG Limit for 3 m (1) (dB $\mu\text{V/m}$)	PK Limit for 3 m (1,2) (dB $\mu\text{V/m}$)	AVG Limit for 3 m (1) (dB $\mu\text{V/m}$)	PK Limit for 3 m (1,2) (dB $\mu\text{V/m}$)
1000 - 3000	60	80	54	74
3000 - 6000	60	80	54	74
6000 - 40000 ⁽³⁾	60	80	54	74

- Limits are specified by FCC at a distance of 10m and extrapolated here for 3m by adding inverse linear distance (1/d) proportionality factor of 20dB/decade, used per §15.31(f)(1)
- Frequencies above 1 GHz, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit Applicable to the equipment under test, as per §15.35(b)
- According with the CISPR 22 (third Edition) There are no limits in the frequency range of 6 - 40 GHz, so expand the frequency range beyond 6GHz using the same limits.

FCC Rules and Regulations 47 CFR Part 15, Subpart C, Secs. 15.205:

(1) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

(MHz)	(MHz)	(MHz)	(GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

CANADA RSS-247 Issue 4 (July 2025):

2.4 RSS-Gen compliance

Equipment being certified under this standard shall also comply with the general requirements set out in Radio Standards Specification RSS-Gen, General Requirements for Compliance of Radio Apparatus. Where contradictions exist between this standard and RSS-Gen, this standard shall take precedence.

CANADA RSS-Gen Issue 5 (April 2018):

8.9 Transmitter emission limits:

Except where otherwise indicated in the Applicable RSS, radiated emissions shall comply with the field strength limits shown in Table 5 and Table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

General field strength limits at frequencies above 30 MHz

Frequency Range (MHz)	Field strength ($\mu\text{V/m}$)	Field strength ($\text{dB}\mu\text{V/m}$)	Measurement distance (m)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

General field strength limits at frequencies below 30 MHz

Frequency Range (MHz)	Field strength ($\mu\text{A/m}$)	Field strength ($\text{dB}\mu\text{A/m}$)	Measurement distance (m)
0.009-0.490 ⁽¹⁾	6.37/F(kHz)	-	300
0.490-1.705	63.7/F(kHz)	-	30
1.705 - 30.0	0.08	-	30

The emission limits f or the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

RSS-Gen Issue 5, Secs 8.10:

Restricted frequency bands, identified in Table 7, are designated primarily for safety-of-life services (distress calling and certain aeronautical activities), certain satellite downlinks, radio astronomy and some government use.

- c) Unwanted emissions that do not fall within the restricted frequency bands listed in Table 7 shall comply either with the limits specified in the Applicable RSS or with those specified in Table 5 and Table 6.

Table 7 – Restricted frequency bands

(MHz)	(MHz)	(MHz)	(GHz)
0.090-0.110	16.42-16.423	1435-1626.5	13.25-13.4
0.495-0.505	16.69475-16.69525	1645.5-1646.5	14.47-14.5
2.1735-2.1905	16.80425-16.80475	1660-1710	15.35-16.2
3.020 - 3.026	25.5-25.67	1718.8-1722.2	17.7-21.4
4.125-4.128	37.5-38.25	2200-2300	22.01-23.12
4.17725-4.17775	73-74.6	2310-2390	23.6-24.0
4.20725-4.20775	74.8-75.2	2483.5-2500	31.2-31.8
5.677 - 5.683	108-121.94	2655-2900	36.43-36.5
6.215-6.218	123-138	3260-3267	Above 38.6
6.26775-6.26825	149.9-150.05	3332-3339	
6.31175-6.31225	156.52475-156.52525	3345.8-3358	
8.291-8.294	156.7-156.9	3500-4400	
8.362-8.366	162.0125-167.17	4.5-5.15	
8.37625-8.38675	167.72-173.2	5.35-5.46	
8.41425-8.41475	240-285	7.25-7.75	
12.29-12.293	322-335.4	8.025-8.5	
12.51975-12.52025	399.9-410	9.0-9.2	
12.57675-12.57725	608-614	9.3-9.5	
13.36-13.41	960-1427	10.6-12.7	

Test condition: TC/01

Sample: S/01

Results

Attachments

Operation Band MHz = [903, 2437] Active Port = 1

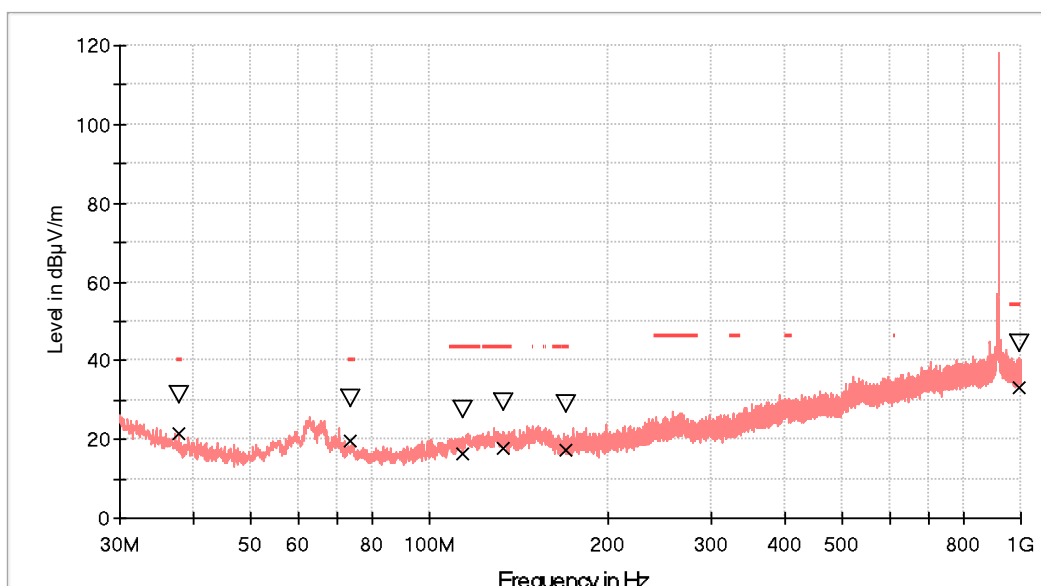
Frequency Range GHz = [0.03, 1]

Modulation = LoRa (CSS)

Modulation = BTLE (1 MBPS)

MIMO Mode = SISO

RF_FCC_15.247_E Field_30MHz_1GHz_SAC2



- PK+_MAXH
- ▽ MaxPeak-PK+ (Single)
- TX limits to Spurious Emission FCC15.247 (30MHz to 1GHz) Restricted Bands QPK Limit
- x QuasiPeak-QPK (Single)

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)	Pol	Margin - QPK (dB)	Limit - QPK (dBμV/m)
37.808500	31.1	21.3	H	18.7	40.0
73.553000	30.3	19.5	V	20.5	40.0
114.147500	27.8	16.3	V	27.2	43.5
133.062500	29.4	17.9	V	25.7	43.5
170.262000	29.0	17.5	H	26.0	43.5
991.367000	44.5	33.0	H	21.0	54.0

Operation Band MHz = [903, 2437] Active Port = 1

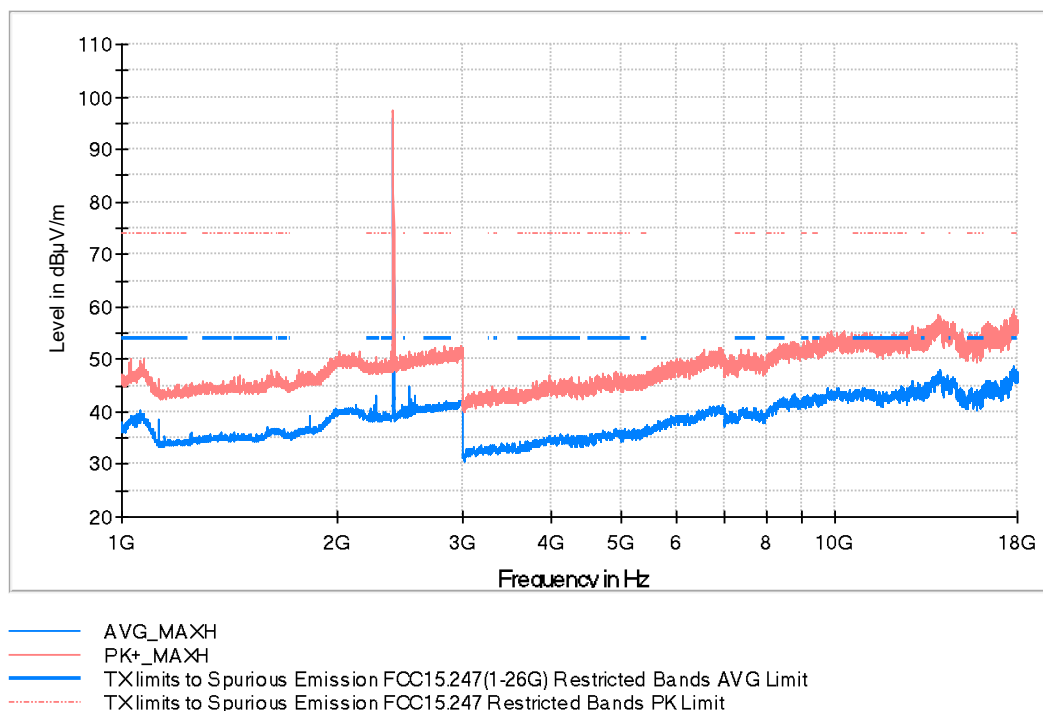
Frequency Range GHz = [1, 18]

Modulation = LoRa (CSS)

Modulation = BTLE (1 MBPS)

MIMO Mode = SISO

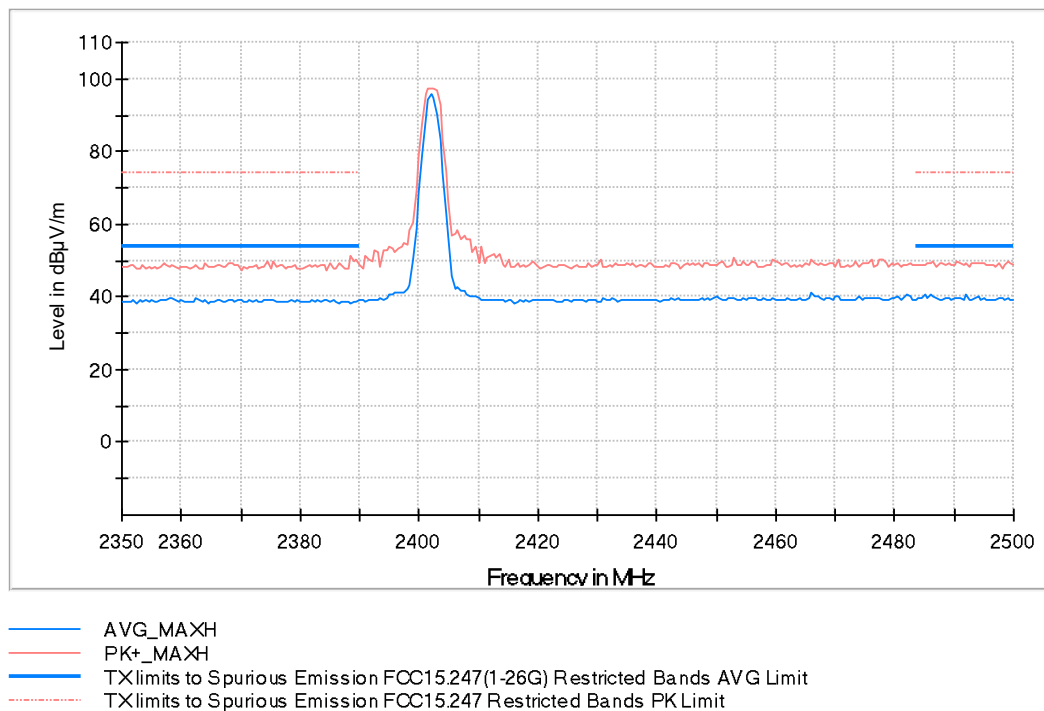
RF_FCC_15.247_E Field_1GHz_18GHz_HPF(SAC2)



Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Margin - AVG	Limit - AVG	Comment
1029.500000	50.1	38.2	V	15.8	54.0	
2402.500000	97.3	94.7	V	---	---	BT_Fundamental
3914.000000	46.1	34.2	V	19.8	54.0	

Restricted Bands

Copy of RF_FCC_15.247_E Field_1GHz_18GHz_HPF(SAC2)



Operation Band MHz = [903, 2437] Active Port = 1

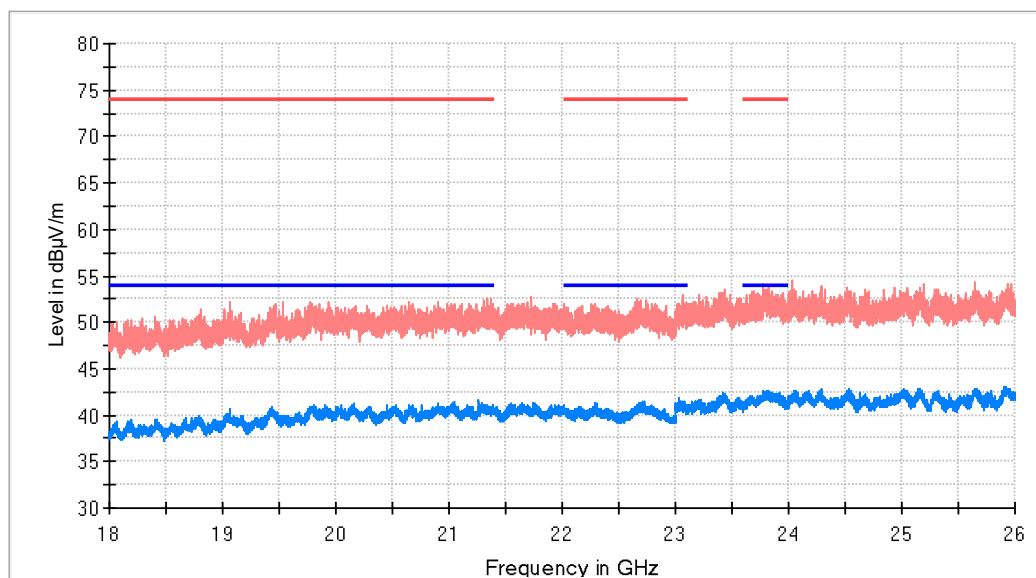
Frequency Range GHz = [18, 26]

Modulation = LoRa (CSS)

Modulation = BTLE (1 MBPS)

MIMO Mode = SISO

RF_FCC_15.247_E Field_18GHz_26GHz



— AVG_MAXH
— PK+_MAXH
— TX limits to Spurious Emission FCC15.247 Restricted Bands PK Limit
— TX limits to Spurious Emission FCC15.247(1-26G) Restricted Bands AVG Limit

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	PoI	Margin - AVG (dB)	Limit - AVG (dBμV/m)
26753.000000	51.0	41.7	V	12.3	54.0

Radiated emission electromagnetic field

(30MHz – 1GHz)

Pre-Scan Spectrum Analyzer Parameters

Subrange	Preamp	Detectors	Bandwidth
30 MHz - 1 GHz	20 dB	PK+	100 kHz

Final Scan Spectrum Analyzer Parameters

Subrange	Preamp	Detectors	Bandwidth
30 MHz - 1 GHz	20 dB	QPK, PK+	120 kHz

(1GHz – 18GHz)

Pre-Scan Spectrum Analyzer Parameters

Subrange	Preamp	Detectors	Bandwidth
1 GHz - 18 GHz	20 dB	PK+ ; AVG	1 MHz

(18GHz – 26GHz)

Pre-Scan Spectrum Analyzer Parameters

Subrange	Preamp	Detectors	Bandwidth
18 GHz - 26 GHz	20 dB	PK+ ; AVG	1 MHz