Boss Snowplow A Division of the Toro Company

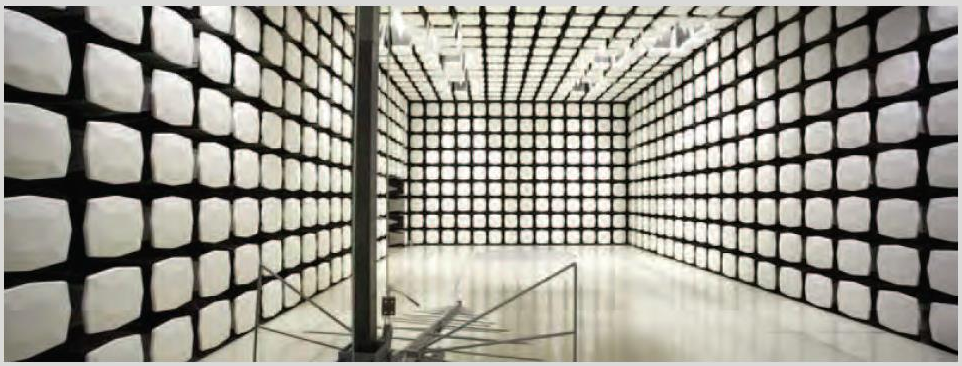
Sprayer Controls, Model: 143-7443

FCC 15.247:2022

RSS-247 Issue 2:2017

902-928 MHz Other Wideband (DTS) Transceiver Radio

Report: BONY0001.0 Rev. 1, Issue Date: June 27, 2023



CERT #3310.05

CERTIFICATE OF TEST

Last Date of Test: September 28, 2022
Boss Snowplow A Division of the Toro Company
EUT: Sprayer Controls, Model: 143-7443

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017, RSS-Gen Issue 5:2018+A1:2019+A2:2021	

Results

Test Description	Result	FCC Section(s)	RSS Section(s)	ANSI C63.10 Section(s)	Comments
Band Edge Compliance - Hopping Mode	N/A	15.247(d)	RSS-247 5.5	7.8.6	Not required for DTS devices.
Band Edge Compliance	Pass	15.247(d), KDB 558074 -8.5	RSS-247 5.5	11.11	
Carrier Frequency Separation	N/A	15.247(a)(1)	RSS-247 5.1(b)	7.8.2	Not required for DTS devices.
Duty Cycle	Pass	15.247	RSS-Gen 3.2	7.5	
Dwell Time	N/A	15.247(a)(1)	RSS-247 5.1(d)	7.8.4	Not required for DTS devices.
Emissions Bandwidth (6 dB)	Pass	15.247(a)	RSS-247 5.2(a)	7.8.7	
Equivalent Isotropic Radiated Power (EIRP)	Pass	15.247(b)	RSS-247 5.4(d)	7.8.5	
Number of Hopping Frequencies	N/A	15.247(a)(1)	RSS-247 5.1(d)	7.8.3	Not required for DTS devices.
Occupied Bandwidth (99%)	Pass	15.247(a)	RSS-Gen 6.7	7.8.7	
Output Power	Pass	15.247(b)	RSS-247 5.4(d)	7.8.5	
Power Spectral Density	N/A	15.247(e)	RSS-247 5.2(b)	11.10.2	Not required for FHSS devices.
Powerline Conducted Emissions (Receiver)	N/A	15.101, 15.107	RSS-Gen 5.2	ANSI C63.4 - 12.2.4	Not requested.
Powerline Conducted Emissions (Transmitter)	N/A	15.207	RSS-Gen 8.8	6.2	
Radiated Emissions for Receiver	N/A	15.101, 15.109	RSS-Gen 5.2	ANSI C63.4 - 12.2.5	Separate Report
Spurious Conducted Emissions	Pass	15.247(d)	RSS-247 5.5	7.8.8	
Spurious Radiated Emissions	Pass	15.247(d)	RSS-247 5.5	6.5, 6.6	

Deviations From Test Standards

None

Approved By:

James E Morris

James Morris, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
01	Updated which data rates were used along with modulation type.	2023-06-27	12
	Updated EUT name to "Sprayer Controls, Model: 143-7443."	2023-06-27	1, 2, 10, 12, 13, 15, 18, 21, 24, 27, 30, 33, 36, 39
	Updated radio on cover to "902-928 MHz LoRa (DTS) Transceiver Radio."	2023-06-27	1
	Updated certificate of test.	2023-06-27	2
	Updated functional description.	2023-06-27	10
	Updated power settings table.	2023-06-27	11
	Removed Configuration BONY0001-3.	2023-06-27	13

ACCREDITATIONS AND AUTHORIZATIONS

United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

United Kingdom

BEIS – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIT / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFCA – Recognized by OFCA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

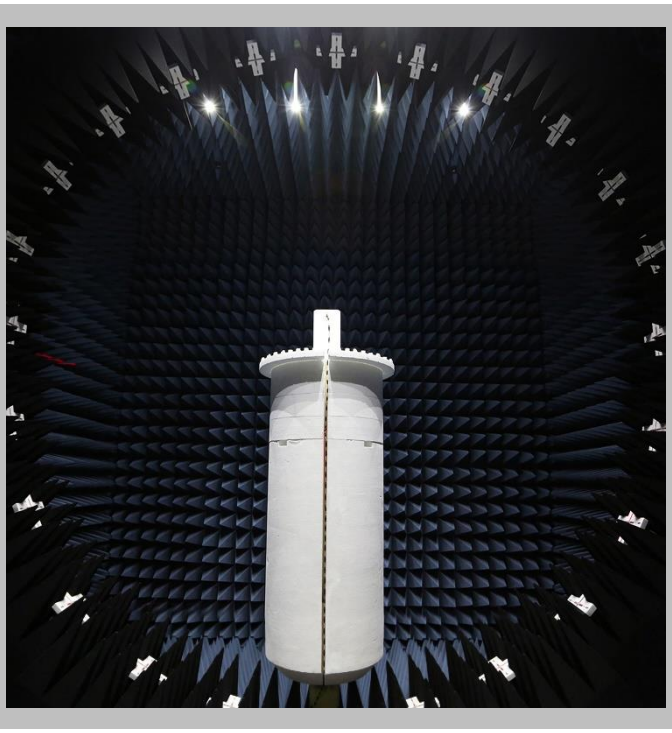
For details on the Scopes of our Accreditations, please visit:

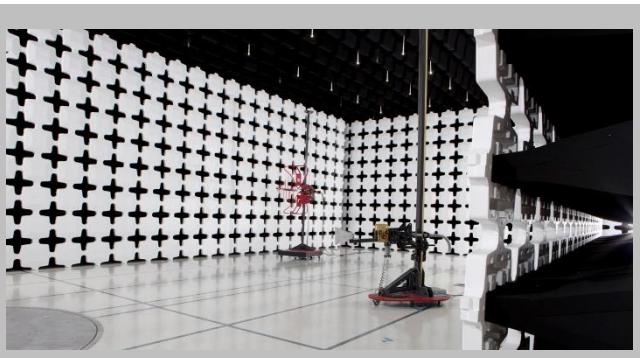
California Minnesota Oregon Texas Washington

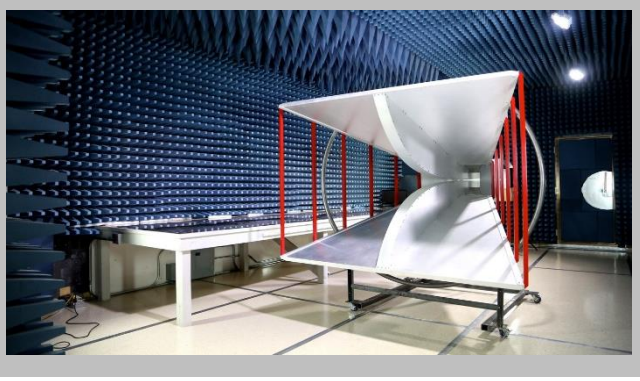
FACILITIES

element
2020.12.15

California	Minnesota	Oregon	Texas	Washington
Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-11 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
A2LA				
Lab Code: 3310.04	Lab Code: 3310.05	Lab Code: 3310.02	Lab Code: 3310.03	Lab Code: 3310.06
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

element
TMU.2015.07.10

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found in the table below. A lab specific value may also be found in the applicable test description section. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	3.2 dB	-3.2 dB

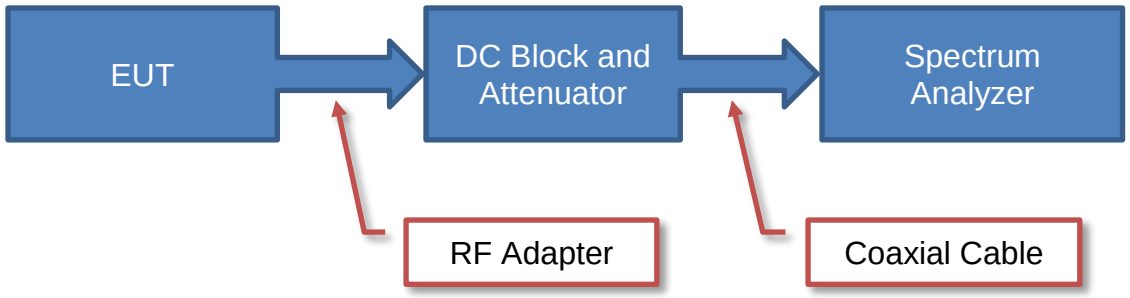
TEST SETUP BLOCK DIAGRAMS

Measurement Bandwidths

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

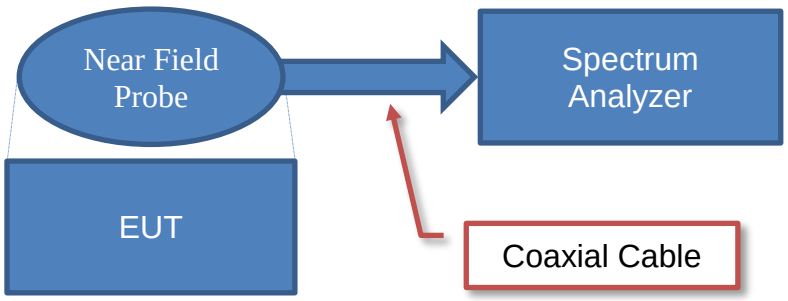
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

Near Field Test Fixture Measurements

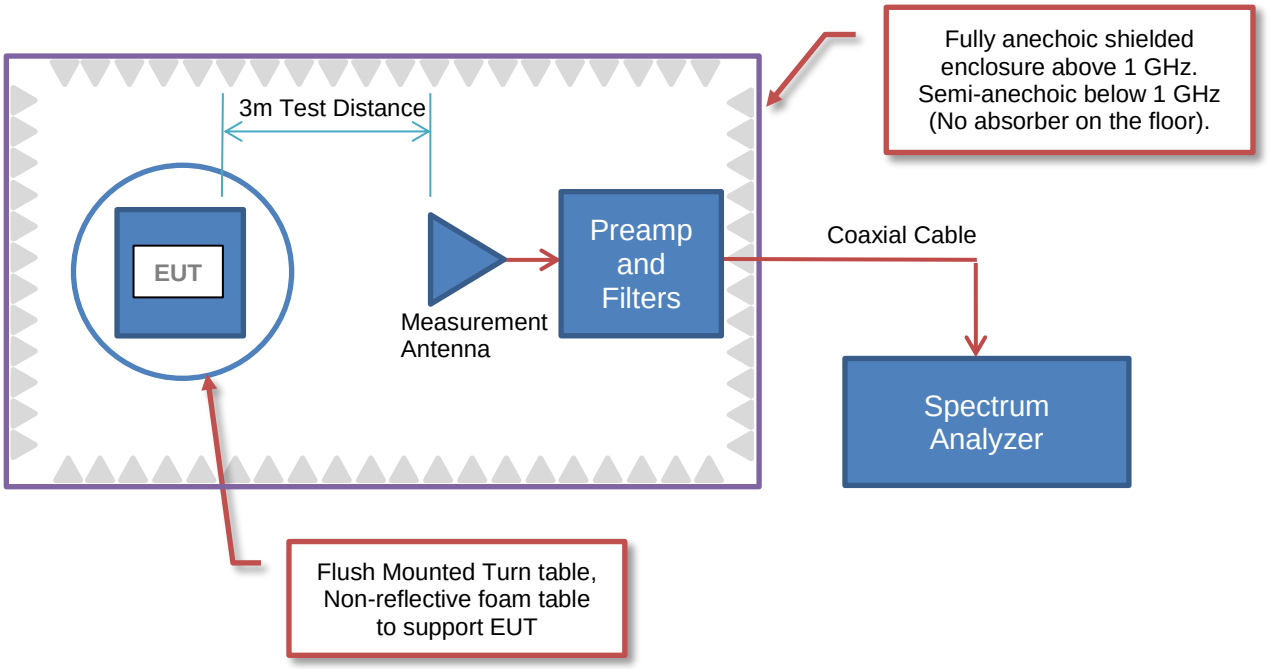


Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)		Factor: Antenna Factor		Factor: Cable Factor		Factor: Amplifier Gain		Distance Adjustment Factor		External Attenuation		Field Strength
42.6	+	28.6	+	3.1	-	40.8	+	0.0	+	0.0	=	**33.5**

Conducted Emissions:

Measured Level (Amplitude)		Factor: Transducer Factor		Factor: Cable Factor		External Attenuation		Adjusted Level
26.7	+	0.3	+	0.1	+	20.0	=	**47.1**

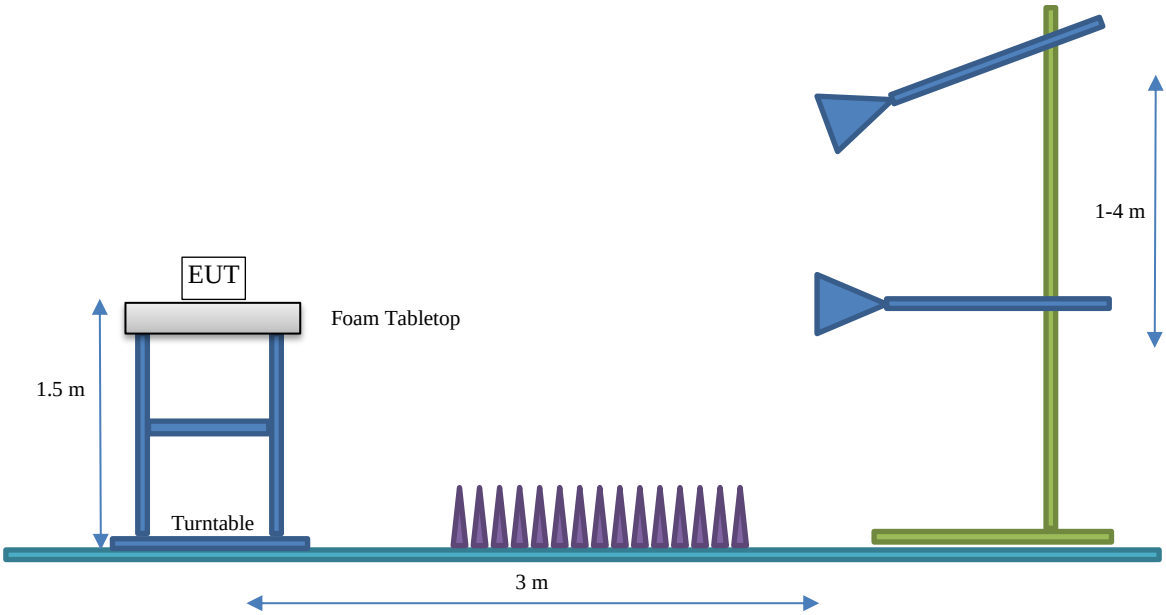
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)		Substitution Antenna Factor (dBi)		EIRP to ERP (if applicable)		Measured power (dBm ERP/EIRP)
10.0	+	6.0	-	2.15	=	**13.9/16.0**

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



PRODUCT DESCRIPTION

Client and Equipment under Test (EUT) Information

Company Name:	Boss Snowplow A Division of the Toro Company
Address:	2010 The Boss Way
City, State, Zip:	Iron Mountain, MI 49801
Test Requested By:	Derek Meyer
EUT:	Sprayer Controls, Model: 143-7443
First Date of Test:	September 20, 2022
Last Date of Test:	September 28, 2022
Receipt Date of Samples:	September 20, 2022
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
Sprayer Control, Battery powered device containing pre-approved radios: Wi-Fi (802.11b/g/n) (FCC ID: 2AEMIARGN; IC: 20127-ARGN), a LoRa module (915MHz), and a GPS Module (Sierra Wireless XM1110; GPS L1 1575.42MHz, GLONASS L1 (1598.0625MHz – 1605.375MHz))

Testing Objective:
Seeking to demonstrate compliance in the 902 - 928 MHz band for operation under FCC 15.247:2022 and RSS-247 Issue 2:2017, RSS-Gen Issue 5:2018+A1:2019+A2:2021 specifications.

POWER SETTINGS AND ANTENNAS

The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Type	Provided by:	Frequency Range (MHz)	Gain (dBi)
Dielectric Resonator	Abracon (Model ACAG1204-915-T)	915 MHz	3.42

The EUT was tested using the power settings provided by the manufacturer which were based upon:

☒ Test software settings Test software/firmware installed on EUT: Firmware V1
☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Modulation Types	Position (if multiple channels)	Power Setting
Single Data Rate / Modulation	Low Channel	23
	Mid Channel	23
	High Channel	23

CONFIGURATIONS

Configuration BONY0001- 1

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Sprayer Controls	Boss Snowplow A Division of the Toro Company	143-7443	22100007

Configuration BONY0001- 2

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Sprayer Controls	Boss Snowplow A Division of the Toro Company	143-7443	22100007

Peripherals in Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
WiFi/BT Antenna (Omni)	L-Com	HGV-2404U	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
12V Lead Acid Battery	Interstate	HD-24DP	None

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
Antenna Cable (WiFi/BT)	Yes	7.6 m	No	Sprayer Controls	WiFi/BT Antenna
Battery Cable	No	1.8 m	No	Battery	Sprayer Controller
Wiring Harness (3x bundles)	No	1 m	No	Sprayer Controls	Unterminated

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2022-09-20	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2022-09-20	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2022-09-20	Equivalent Isotropic Radiated Power (EIRP)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2022-09-20	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
5	2022-09-20	DTS Bandwidth (6 Db)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
6	2022-09-20	Occupied Bandwidth (99%)	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2022-09-20	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2022-09-20	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
9	2022-09-28	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

SPURIOUS RADIATED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.
For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.
The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.
Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.
If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.
Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.
Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of 10*log(1/dc).

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	ETS Lindgren	3115	AJQ	2021-01-25	2023-01-25
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2022-01-18	2023-01-18
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2022-01-18	2023-01-18
Filter - High Pass	Micro-Tronics	HPM50108	LFM	2022-08-27	2023-08-27
Antenna - Standard Gain	ETS Lindgren	3160-07	AXP	NCR	NCR
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	2022-01-18	2023-01-18
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVV	2022-01-18	2023-01-18
Antenna - Biconilog	ETS Lindgren	3142D	AXO	2021-09-14	2023-09-14
Cable	ESM Cable Corp.	Bilog Cables	MNH	2021-10-13	2022-10-13
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AVO	2021-10-13	2022-10-13
Filter - Low Pass	Micro-Tronics	LPM50004	LFK	2022-08-27	2023-08-27
Filter - Low Pass	Micro-Tronics	LPM50003	LFJ	2022-08-27	2023-08-27
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2022-06-10	2023-06-10
Filter - Band Pass/Notch	K&L Microwave	3TNF-500/1000-N/N	HGS	2022-06-22	2023-06-22

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 12400 MHz

POWER INVESTIGATED

Battery (12VDC)

CONFIGURATIONS INVESTIGATED

BONY0001-2

MODES INVESTIGATED

Transmitting LoRa 915 MHz, Modulated, 500 kHz Bandwidth

SPURIOUS RADIATED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

EUT:	Sprayer Controls, Model: 143-7443	Work Order:	BONY0001
Serial Number:	22100007	Date:	2022-09-28
Customer:	Boss Snowplow A Division of the Toro Company	Temperature:	21.8°C
Attendees:	Derek Meyer	Relative Humidity:	34%
Customer Project:	None	Bar. Pressure (PMSL):	1035 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	Battery (12VDC)	Configuration:	BONY0001-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017, RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	5	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

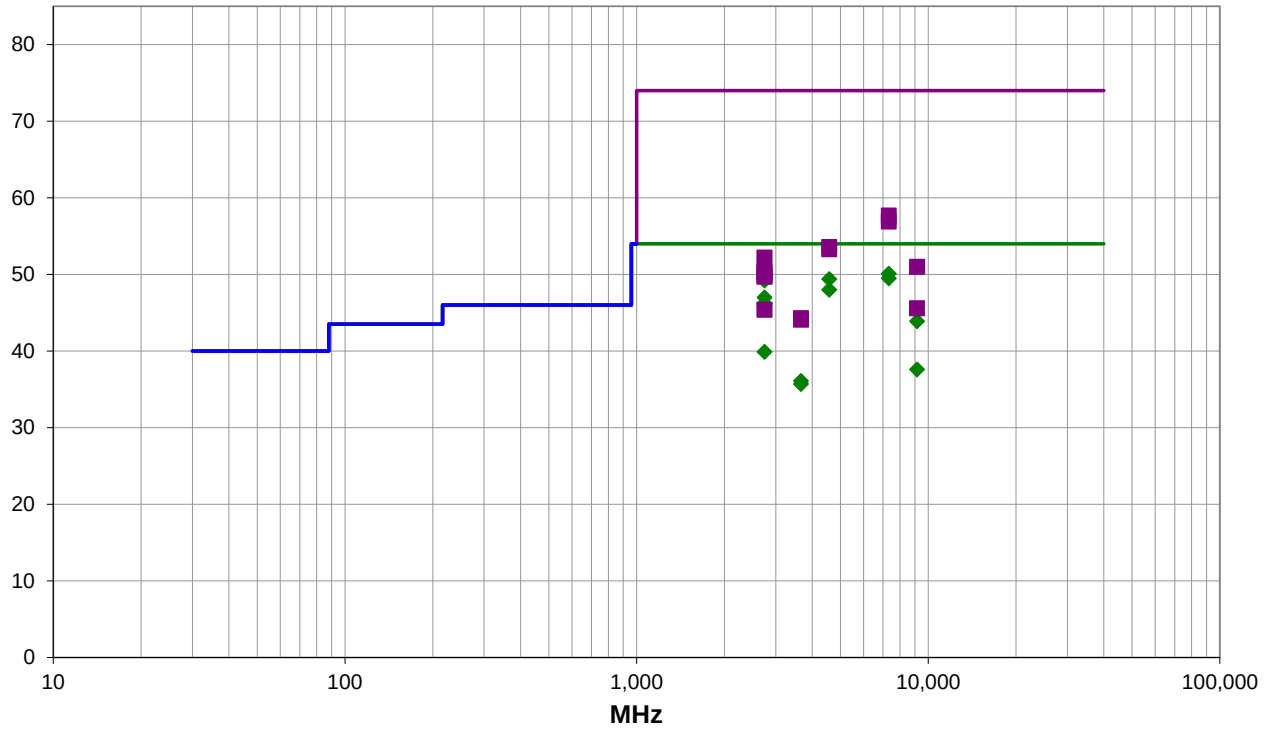
External BT antenna cable is bulky, will not make a standard cable bundle. Test mode is 91.7%. An upwards duty cycle correction factor (DCCF) was applied, DCCF=10*log(1/duty cycle)=0.4.

EUT OPERATING MODES

Transmitting LoRa 915 MHz, Modulated, 500 kHz Bandwidth

DEVIATIONS FROM TEST STANDARD

None



Run #: 5 PK AV QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

RESULTS - Run #5

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7320.217	38.4	11.3	2.4	94.0	0.4	0.0	Vert	AV	0.0	50.1	54.0	-3.9	EUT On Side
7321.380	37.8	11.3	1.5	85.9	0.4	0.0	Horz	AV	0.0	49.5	54.0	-4.5	EUT Vert
4574.620	45.3	3.7	1.4	108.0	0.4	0.0	Horz	AV	0.0	49.4	54.0	-4.6	EUT Vert
2745.120	51.4	-2.6	3.0	117.0	0.4	0.0	Horz	AV	0.0	49.2	54.0	-4.8	EUT Vert
4575.192	43.9	3.7	1.2	126.0	0.4	0.0	Vert	AV	0.0	48.0	54.0	-6.0	EUT On Side
2744.960	49.2	-2.6	3.8	227.0	0.4	0.0	Horz	AV	0.0	47.0	54.0	-7.0	EUT Horz
2745.000	48.4	-2.6	2.6	67.9	0.4	0.0	Horz	AV	0.0	46.2	54.0	-7.8	EUT On Side
2745.040	48.4	-2.6	1.5	167.9	0.4	0.0	Vert	AV	0.0	46.2	54.0	-7.8	EUT On Side
2745.000	48.2	-2.6	1.8	282.0	0.4	0.0	Vert	AV	0.0	46.0	54.0	-8.0	EUT Horz
9151.380	45.1	-1.6	1.2	80.0	0.4	0.0	Vert	AV	0.0	43.9	54.0	-10.1	EUT On Side
2745.080	42.1	-2.6	1.5	264.9	0.4	0.0	Vert	AV	0.0	39.9	54.0	-14.1	EUT Vert
7319.517	46.4	11.3	2.4	94.0	0.0	0.0	Vert	PK	0.0	57.7	74.0	-16.3	EUT On Side
9151.790	38.8	-1.6	2.1	192.9	0.4	0.0	Horz	AV	0.0	37.6	54.0	-16.4	EUT Vert
7321.250	45.6	11.3	1.5	85.9	0.0	0.0	Horz	PK	0.0	56.9	74.0	-17.1	EUT Vert
3660.000	35.3	0.4	2.7	41.0	0.4	0.0	Horz	AV	0.0	36.1	54.0	-17.9	EUT Vert
3660.267	34.9	0.4	2.8	109.0	0.4	0.0	Vert	AV	0.0	35.7	54.0	-18.3	EUT On Side
4574.250	49.9	3.7	1.4	108.0	0.0	0.0	Horz	PK	0.0	53.6	74.0	-20.4	EUT Vert
4574.375	49.6	3.7	1.2	126.0	0.0	0.0	Vert	PK	0.0	53.3	74.0	-20.7	EUT On Side
2744.880	54.8	-2.6	3.0	117.0	0.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	EUT Vert
9151.750	52.6	-1.6	1.2	80.0	0.0	0.0	Vert	PK	0.0	51.0	74.0	-23.0	EUT On Side
2744.880	53.0	-2.6	3.8	227.0	0.0	0.0	Horz	PK	0.0	50.4	74.0	-23.6	EUT Horz
2744.500	52.8	-2.6	1.8	282.0	0.0	0.0	Vert	PK	0.0	50.2	74.0	-23.8	EUT Horz
2745.460	52.4	-2.6	2.6	67.9	0.0	0.0	Horz	PK	0.0	49.8	74.0	-24.2	EUT On Side
2744.830	52.3	-2.6	1.5	167.9	0.0	0.0	Vert	PK	0.0	49.7	74.0	-24.3	EUT On Side
9147.880	47.3	-1.7	2.1	192.9	0.0	0.0	Horz	PK	0.0	45.6	74.0	-28.4	EUT Vert
2744.920	48.0	-2.6	1.5	264.9	0.0	0.0	Vert	PK	0.0	45.4	74.0	-28.6	EUT Vert
3660.017	43.9	0.4	2.8	109.0	0.0	0.0	Vert	PK	0.0	44.3	74.0	-29.7	EUT On Side
3659.500	43.7	0.4	2.7	41.0	0.0	0.0	Horz	PK	0.0	44.1	74.0	-29.9	EUT Vert

CONCLUSION

Pass

Tested By

DUTY CYCLE

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

DUTY CYCLE

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**Sprayer Controls, Model: 143-7443**			**Work Order:**	**BONY0001**
Serial Number:	**22100007**			**Date:**	**20-Sep-22**
Customer:	**Boss Snowplow A Division of the Toro Company**			**Temperature:**	**22.3 °C**
Attendees:	**Derek Meyer**			**Humidity:**	**57.6% RH**
Project:	**None**			**Barometric Pres.:**	**1010 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**Battery**	**Job Site:**	**MN04**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

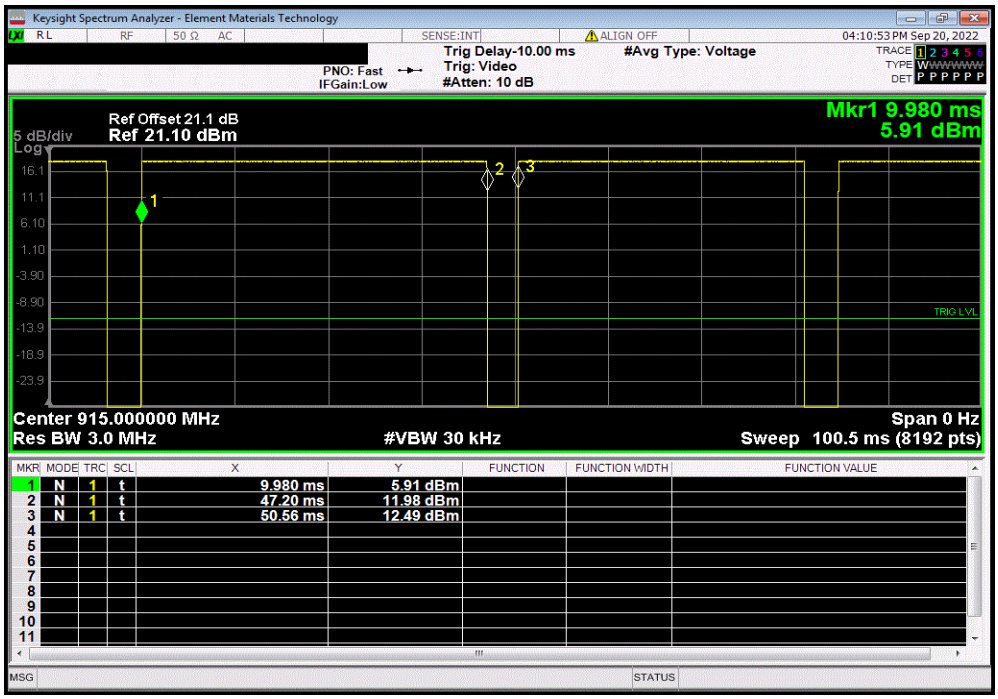
None

Configuration #	**1**	*Signature*

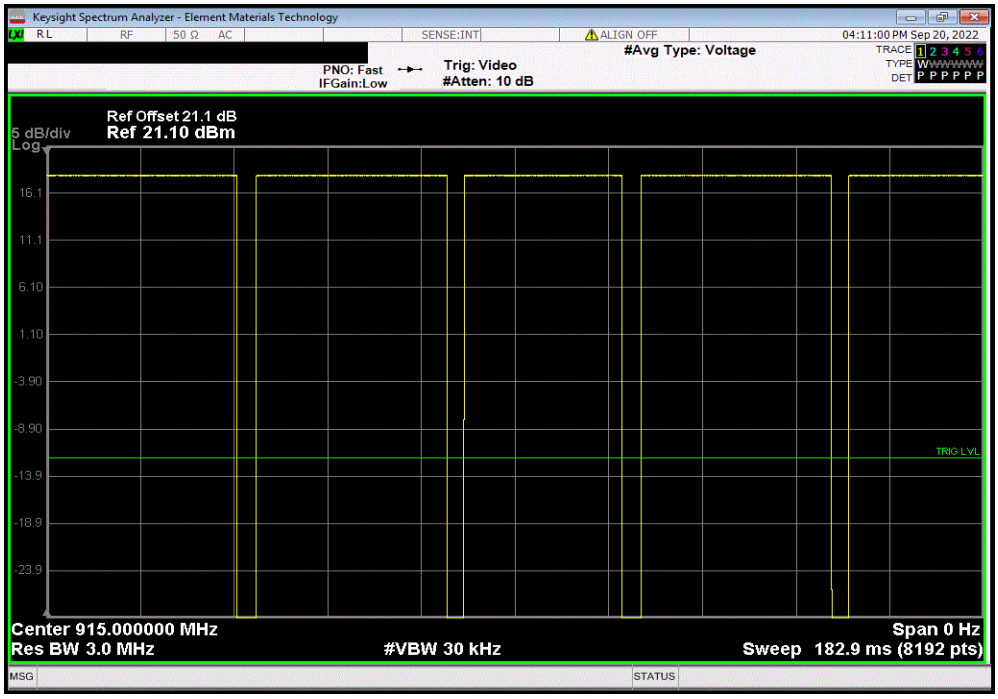
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
LoRa Single Channel, 915 MHz	37.223 ms	40.584 ms	1	91.7	N/A	N/A
LoRa Single Channel, 915 MHz	N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE

LoRa Single Channel, 915 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	37.223 ms	40.584 ms	1	91.7	N/A	N/A



LoRa Single Channel, 915 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A



OUTPUT POWER

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

OUTPUT POWER

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**Sprayer Controls, Model: 143-7443**			**Work Order:**	**BONY0001**
Serial Number:	**22100007**			**Date:**	**20-Sep-22**
Customer:	**Boss Snowplow A Division of the Toro Company**			**Temperature:**	**22.4 °C**
Attendees:	**Derek Meyer**			**Humidity:**	**57.6% RH**
Project:	**None**			**Barometric Pres.:**	**1010 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**Battery**	**Job Site:**	**MN04**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

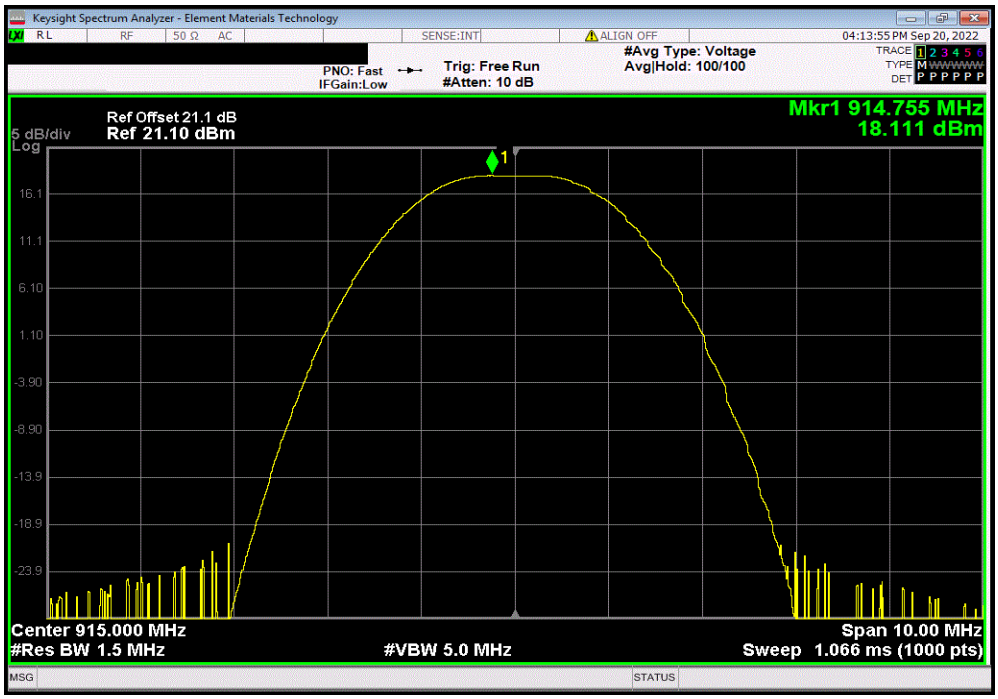
None

Configuration #	**1**	*Signature*

	Out Pwr (dBm)	**Limit (dBm)**	**Result**
LoRa Single Channel, 915 MHz	18.1	30	Pass

OUTPUT POWER

LoRa Single Channel, 915 MHz						
				Out Pwr (dBm)	Limit (dBm)	Result
				18.1	30	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum.

Prior to measuring peak transmit power the DTS bandwidth (B) was measured.

The method found in ANSI C63.10:2013 Section 11.9.1.1 was used because the RBW on the analyzer was greater than the DTS Bandwidth of the radio.

Equivalent Isotropic Radiated Power (EIRP) = Max Measured Power + Antenna gain (dBi)

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	Sprayer Controls, Model: 143-7443			**Work Order:**	BONY0001
Serial Number:	22100007			**Date:**	20-Sep-22
Customer:	Boss Snowplow A Division of the Toro Company			**Temperature:**	22.4 °C
Attendees:	Derek Meyer			**Humidity:**	57.8% RH
Project:	None			**Barometric Pres.:**	1010 mbar
Tested by:	Kyle McMullan	**Power:**	Battery	**Job Site:**	MN04

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

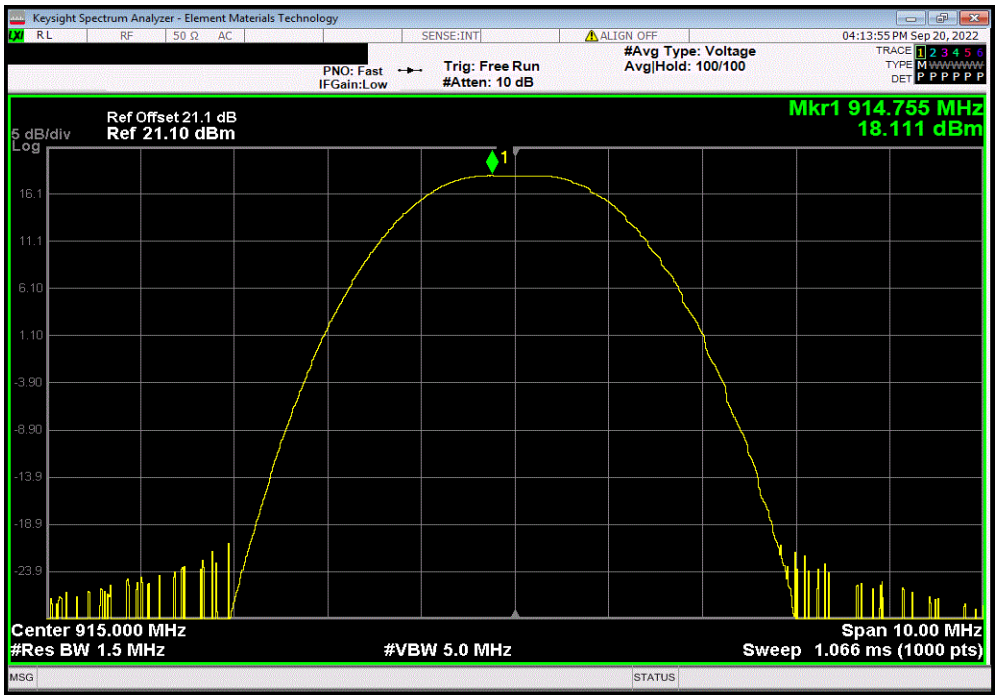
Configuration #	**1**	*Signature*

	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
LoRa Single Channel, 915 MHz	18.1	3.42	21.5	36	Pass

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

TbtTx 2022.06.03.0 XMit 2022.02.07.0

LoRa Single Channel, 915 MHz						
		Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
		18.1	3.42	21.5	36	Pass



BAND EDGE COMPLIANCE

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5182A	TIF	2020-08-29	2023-08-29
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to lowest and highest transmit frequencies in each available band. Since the EUT only uses one transmit frequency, this was the same frequency.

The spectrum was scanned below the lower band edge and above the higher band edge.

BAND EDGE COMPLIANCE

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**Sprayer Controls, Model: 143-7443**			**Work Order:**	**BONY0001**
Serial Number:	**22100007**			**Date:**	**20-Sep-22**
Customer:	**Boss Snowplow A Division of the Toro Company**			**Temperature:**	**22.3 °C**
Attendees:	**Derek Meyer**			**Humidity:**	**57.4% RH**
Project:	**None**			**Barometric Pres.:**	**1010 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**Battery**	**Job Site:**	**MN04**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

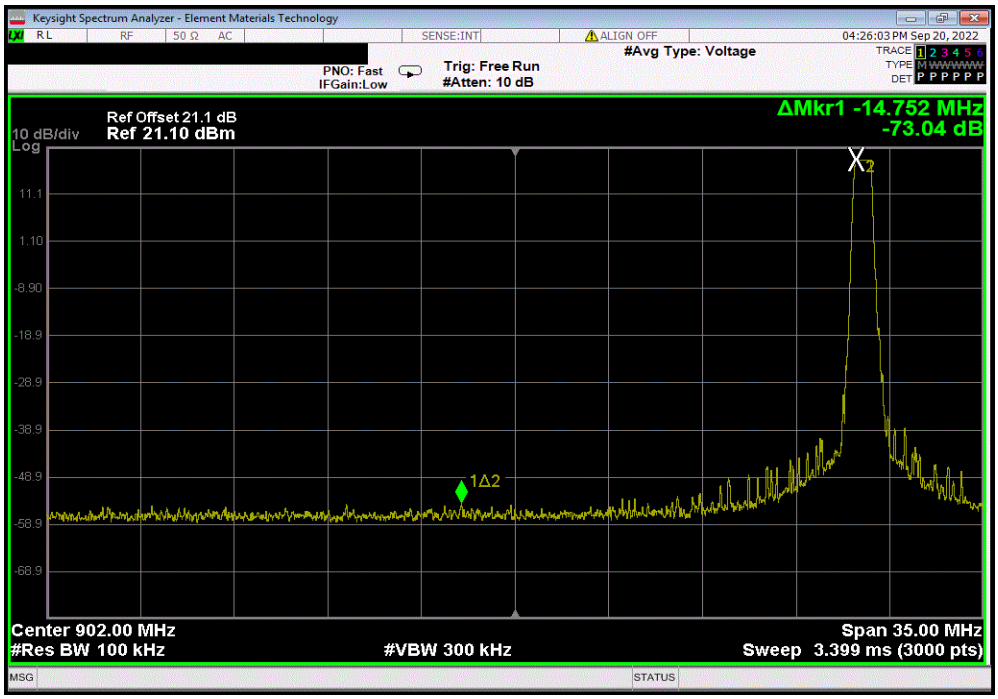
None

Configuration #	**1**	*Signature*

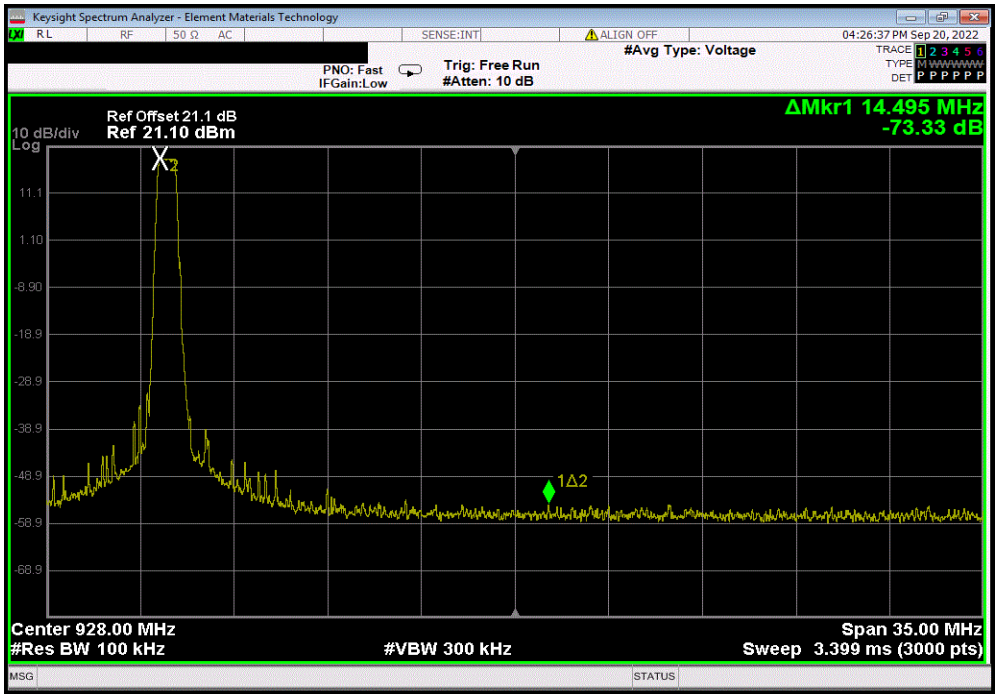
	Value (dBc)	**Limit ≤ (dBc)**	**Result**
LoRa Single Channel, 915 MHz	-73.04	-20	Pass
LoRa Single Channel, 915 MHz	-73.33	-20	Pass

BAND EDGE COMPLIANCE

LoRa Single Channel, 915 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-73.04	-20	Pass



LoRa Single Channel, 915 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-73.33	-20	Pass



DTS BANDWIDTH (6 dB)

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The EUT was set to the channels and modes listed in the datasheet.

The 6dB DTS bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

DTS BANDWIDTH (6 dB)

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	Sprayer Controls, Model: 143-7443			**Work Order:**	BONY0001
Serial Number:	22100007			**Date:**	20-Sep-22
Customer:	Boss Snowplow A Division of the Toro Company			**Temperature:**	22.3 °C
Attendees:	Derek Meyer			**Humidity:**	57.3% RH
Project:	None			**Barometric Pres.:**	1010 mbar
Tested by:	Kyle McMullan	**Power:**	Battery	**Job Site:**	MN04

TEST SPECIFICATIONS	Test Method
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

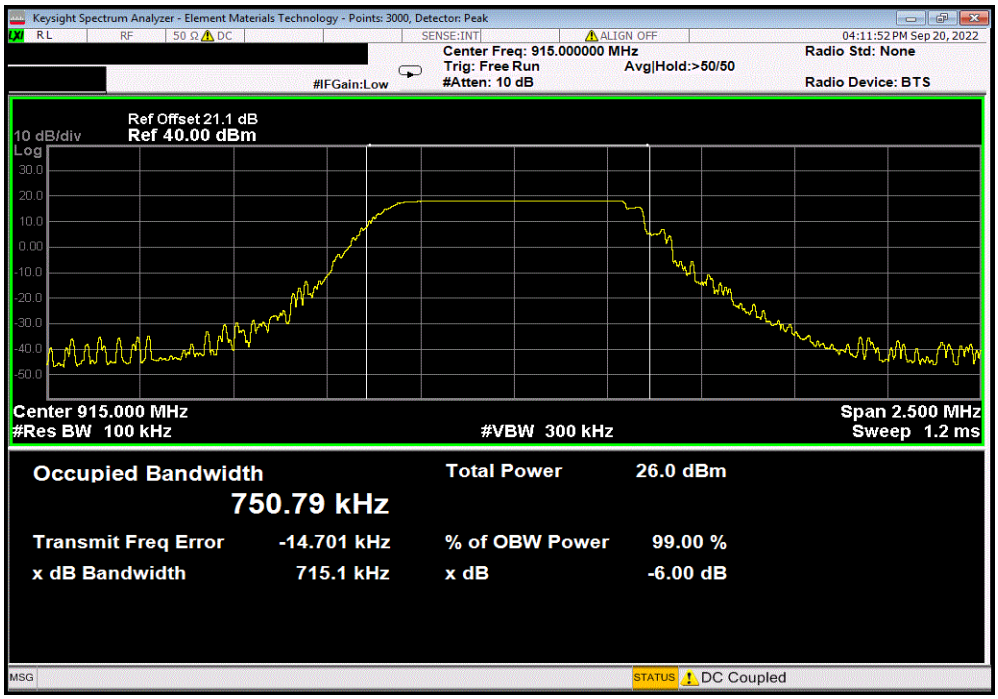
None

Configuration #	1	Signature

	Value	Limit (>)	Result
LoRa Single Channel, 915 MHz	715.085 kHz	500 kHz	Pass

DTS BANDWIDTH (6 dB)

LoRa Single Channel, 915 MHz						
				Value	Limit (>)	Result
				715.085 kHz	500 kHz	Pass



OCCUPIED BANDWIDTH

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The 99% occupied bandwidth was measured with the EUT configured for continuous modulated operation.

Per ANSI C63.10:2013, 6.9.3, the spectrum analyzer was configured as follows:

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) of the spectrum analyzer was set to the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) bandwidth was set to at least 3 times the resolution bandwidth. The analyzer sweep time was set to auto to prevent video filtering or averaging. A sample detector was used unless the device was not able to be operated in a continuous transmit mode, in which case a peak detector was used.

The spectrum analyzer occupied bandwidth measurement function was used to sum the power of the transmission in linear terms to obtain the 99% bandwidth.

OCCUPIED BANDWIDTH

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**Sprayer Controls, Model: 143-7443**			**Work Order:**	**BONY0001**
Serial Number:	**22100007**			**Date:**	**20-Sep-22**
Customer:	**Boss Snowplow A Division of the Toro Company**			**Temperature:**	**22.4 °C**
Attendees:	**Derek Meyer**			**Humidity:**	**57.7% RH**
Project:	**None**			**Barometric Pres.:**	**1010 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**Battery**	**Job Site:**	**MN04**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

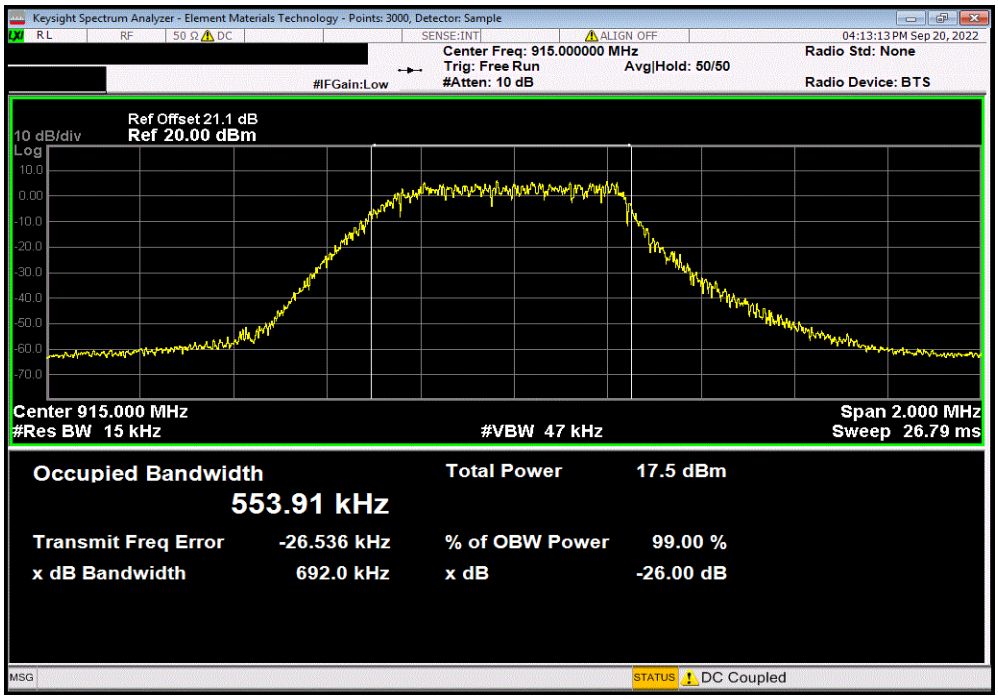
Configuration #	**1**	*Signature*

	Value	**Limit**	**Result**
LoRa Single Channel, 915 MHz	553.905 kHz	N/A	N/A

OCCUPIED BANDWIDTH

TbtTx 2022.06.03.0 XMit 2022.02.07.0

LoRa Single Channel, 915 MHz						
				Value	Limit	Result
				553.905 kHz	N/A	N/A



SPURIOUS CONDUCTED EMISSIONS

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions were measured with the EUT set to its only transmit frequency. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the fundamental was measured with a 100 kHz resolution bandwidth and the highest value was recorded. The rest of the spectrum was then measured with a 100 kHz resolution bandwidth and the highest value was found. The difference between the value found on the fundamental and the rest of the spectrum was compared against the limit to determine compliance.

The reference level offset for the fundamental screen capture was based on a measured value of the loss between the spectrum analyzer and the EUT which was verified at the time of test. The remaining screen capture(s) use an internal transducer factor on the analyzer to correct the displayed trace based on the cable loss over frequency. The reference level offset for the additional screen capture(s) is then based on the expected attenuator value and any other losses.

Fundamental Offset = Ref Lvl Offset showing measured composite factor of all losses

Remaining Screen capture(s) Offset = “Internal” cable loss factor not shown on screen capture + Ref Lvl Offset showing expected attenuator value and any other losses

SPURIOUS CONDUCTED EMISSIONS

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**Sprayer Controls, Model: 143-7443**			**Work Order:**	**BONY0001**
Serial Number:	**22100007**			**Date:**	**20-Sep-22**
Customer:	**Boss Snowplow A Division of the Toro Company**			**Temperature:**	**22.4 °C**
Attendees:	**Derek Meyer**			**Humidity:**	**57.6% RH**
Project:	**None**			**Barometric Pres.:**	**1010 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**Battery**	**Job Site:**	**MN04**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

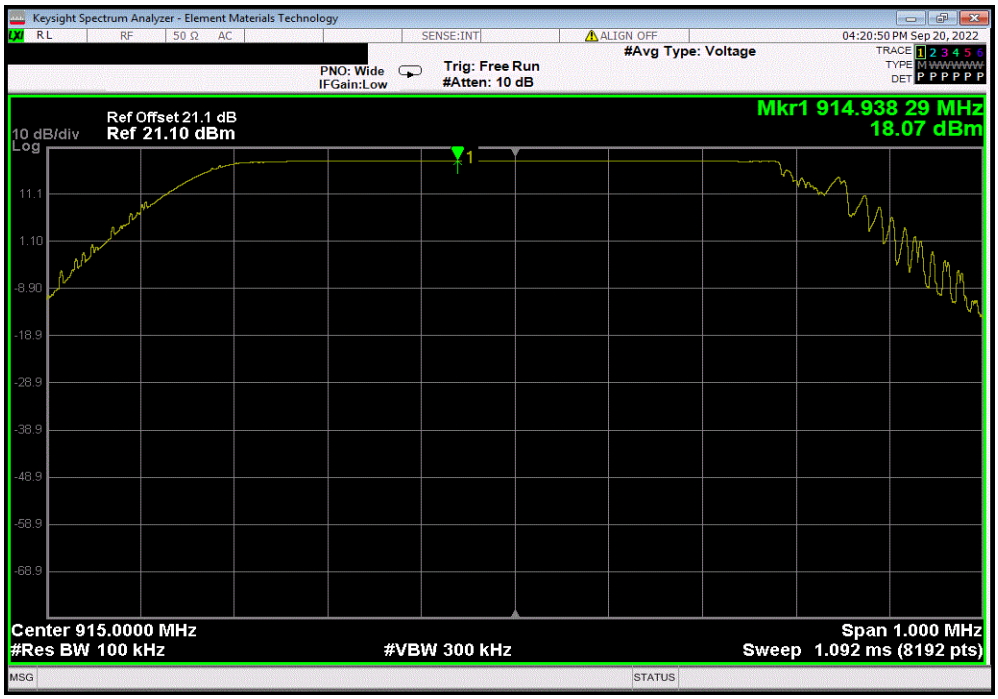
DEVIATIONS FROM TEST STANDARD

None

Configuration #	**1**	*Signature*

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
LoRa Single Channel, 915 MHz	Fundamental	914.94	N/A	N/A	N/A
LoRa Single Channel, 915 MHz	30 MHz - 12.5 GHz	2744.44	-59.9	-20	Pass

LoRa Single Channel, 915 MHz					
Frequency Range		Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	Fundamental	914.94	N/A	N/A	N/A



LoRa Single Channel, 915 MHz				
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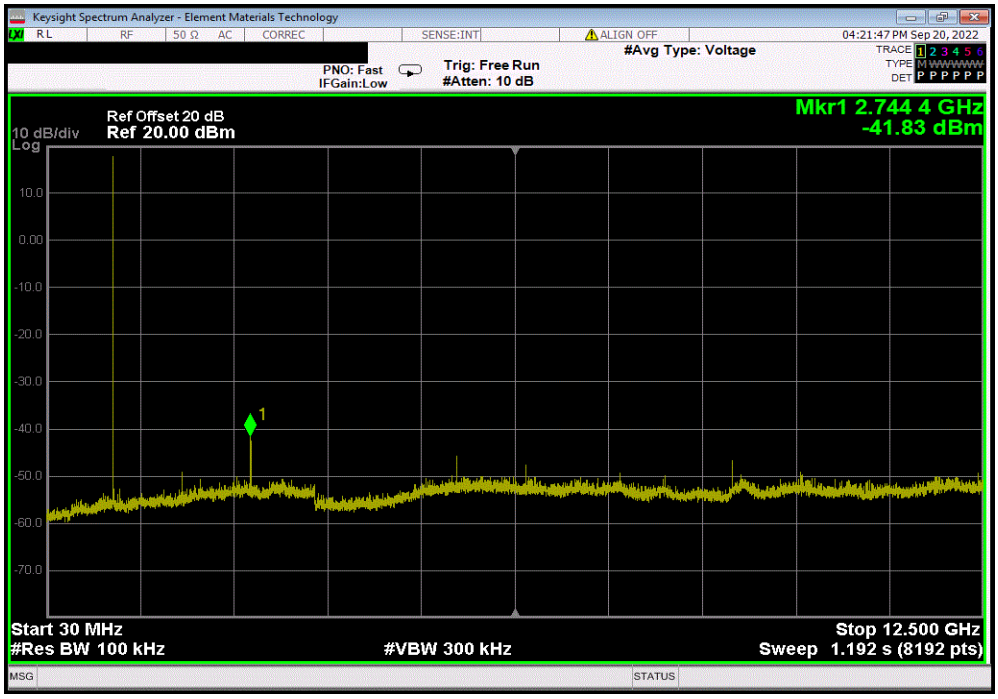


POWER SPECTRAL DENSITY

XMit 2022.02.07.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2022-09-10	2023-09-10
Attenuator	Fairview Microwave	SA18S5W-20	RFX	2022-05-30	2023-05-30
Block - DC	Fairview Microwave	SD3379	AMI	2022-09-10	2023-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2022-04-25	2023-04-25

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

Per the procedure outlined in ANSI C63.10 the peak power spectral density was measured in a 3 kHz RBW.

POWER SPECTRAL DENSITY

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**Sprayer Controls, Model: 143-7443**			**Work Order:**	**BONY0001**
Serial Number:	**22100007**			**Date:**	**20-Sep-22**
Customer:	**Boss Snowplow A Division of the Toro Company**			**Temperature:**	**22.4 °C**
Attendees:	**Derek Meyer**			**Humidity:**	**57.6% RH**
Project:	**None**			**Barometric Pres.:**	**1010 mbar**
Tested by:	**Kyle McMullan**	**Power:**	**Battery**	**Job Site:**	**MN04**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

None

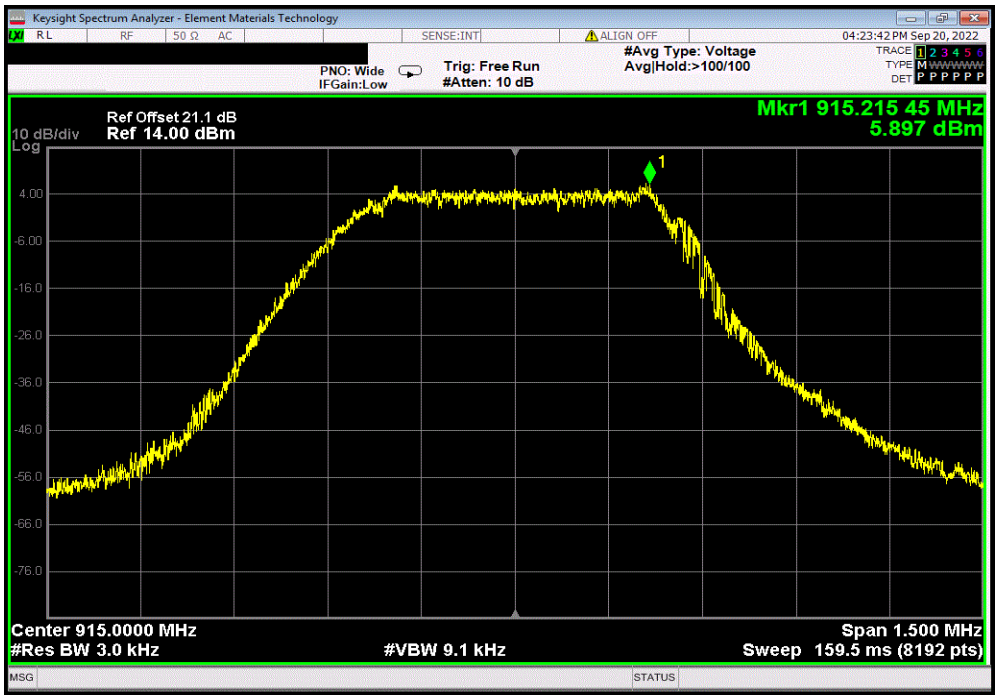
DEVIATIONS FROM TEST STANDARD

None

Configuration #	**1**	*Signature*

	Value dBm/3kHz	**Limit < dBm/3kHz**	**Results**
LoRa Single Channel, 915 MHz	5.9	8	Pass

LoRa Single Channel, 915 MHz						
				Value dBm/3kHz	Limit < dBm/3kHz	Results
				5.9	8	Pass



End of Test Report