



# element

**Dot Ai Corporation**

**DAIC-ACB-XN; DAIC-MCB-XN**

**FCC 15.247:2025**

**RSS-Gen Issue 5:2018+A1:2019+A2:2021**

**RSS-247 Issue 3:2023**

**LoRa FHSS transceiver**

**Report: DTAI0006.2 Rev. 02, Issue Date: August 28, 2025**



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# CERTIFICATE OF TEST



**Last Date of Test: August 1, 2025**  
**Dot Ai Corporation**  
**EUT: DAIC-ACB-XN; DAIC-MCB-XN**

## Radio Equipment Testing

### Standards

Specification	Method
FCC 15.247:2025	
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2020
RSS-247 Issue 3:2023	

### Guidance

FCC KDB 558074 v05r02:2019

### Results

Test Description	Result	FCC Section(s)	RSS Section(s)	ANSI C63.10 Section(s)	Comments
Powerline Conducted Emissions (Transmitter)	Pass	15.207	RSS-Gen 8.8	6.2	
Radiated Band Edge Emissions	N/A	15.247(d)	RSS-247 5.5	6.5	Not required for a 902-928 MHz radio as there are no restricted bands adjacent to that band
Spurious Radiated Emissions	Pass	15.247(d)	RSS-247 5.5	6.4, 6.5, 6.6	
Duty Cycle	N/A	15.247	RSS-Gen 3.2	7.5	See Data.
Carrier Frequency Separation	Pass	15.247(a)(1)	RSS-247 5.1(b)	7.8.2	
Number of Hopping Frequencies	Pass	15.247(a)(1)	RSS-247 5.1(d)	7.8.3	
Dwell Time	Pass	15.247(a)(1)	RSS-247 5.1(d)	7.8.4	
Occupied Bandwidth (20 dB)	Pass	15.247(a)(1)	RSS-247 5.1(a)	7.8.7	
Occupied Bandwidth (99%)	N/A	15.247(a)	RSS-Gen 6.7	7.8.7	See Data.
Output Power	Pass	15.247(b)	RSS-247 5.4(d)	7.8.5	
Equivalent Isotropic Radiated Power (EIRP)	Pass	15.247(b)	RSS-247 5.4(d)	7.8.5	
Band Edge Compliance	Pass	15.247(d)	RSS-247 5.5	7.8.6	
Band Edge Compliance - Hopping Mode	Pass	15.247(d)	RSS-247 5.5	7.8.6	
Spurious Conducted Emissions	Pass	15.247(d)	RSS-247 5.5	7.8.8	
Power Spectral Density	N/A	15.247(e)	RSS-247 5.2(b)	11.10.2	Not required for FHSS devices.

*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.*

# CERTIFICATE OF TEST



Powerline Conducted Emissions (Receiver)	N/A	15.101, 15.107	RSS-Gen 5.2	ANSI C63.4 - 12.2.4	Not included per FCC 15.101 as this will be covered under SDoC rules for the FCC. RSS-Gen section 7 stated receiver requirements only apply to standalone receivers operating in the 30-960 MHz band and this is not a standalone receiver.
Radiated Emissions for Receiver	N/A	15.101, 15.109	RSS-Gen 5.2	ANSI C63.4 - 12.2.5	Not included per FCC 15.101 as this will be covered under SDoC rules for the FCC. RSS-Gen section 7 stated receiver requirements only apply to standalone receivers operating in the 30-960 MHz band and this is not a standalone receiver.

## Deviations From Test Standards

None

## Approved By:

Cole Ghizzone, Operations Manager  
Signed for and on behalf of Element

*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
00	None		
	Corrected cover page to show the EUT is FHSS		1
	Updated Customer / Manufacturer to Dot Ai Corporation		1, 3, 11-14, 18, 21, 27, 29, 32, 35, 38, 41, 44, 47, 50, 53, 55, 58, 61
	Corrected EUT Model from DIAC-ACB-XN-L to DIAC-ACB-XN		1, 3, 11-14, 18, 21, 27, 29, 32, 35, 38, 41, 44, 47, 50, 53, 55, 58, 61
01	Corrected power and antenna page – removed reference to “software”	2025-08-22	12
	Corrected configurations DTAI000-1, DTAI000-2, and DTAI000-5		13-15
	Corrected test name from DTS Bandwidth (6 dB) to Occupied Bandwidth (20 dB)		3, 15, 43-45
	Updated FCC and RSS rule parts for Occupied Bandwidth (20 dB) from 15.274(a) and RSS-247 5.2(s) to 15.247(a)(1) and RSS-247 5.1(a) respectively.		3
02	Updated antenna gain with new values	2025-08-28	12
	Updated antenna gain and EIRP values		54

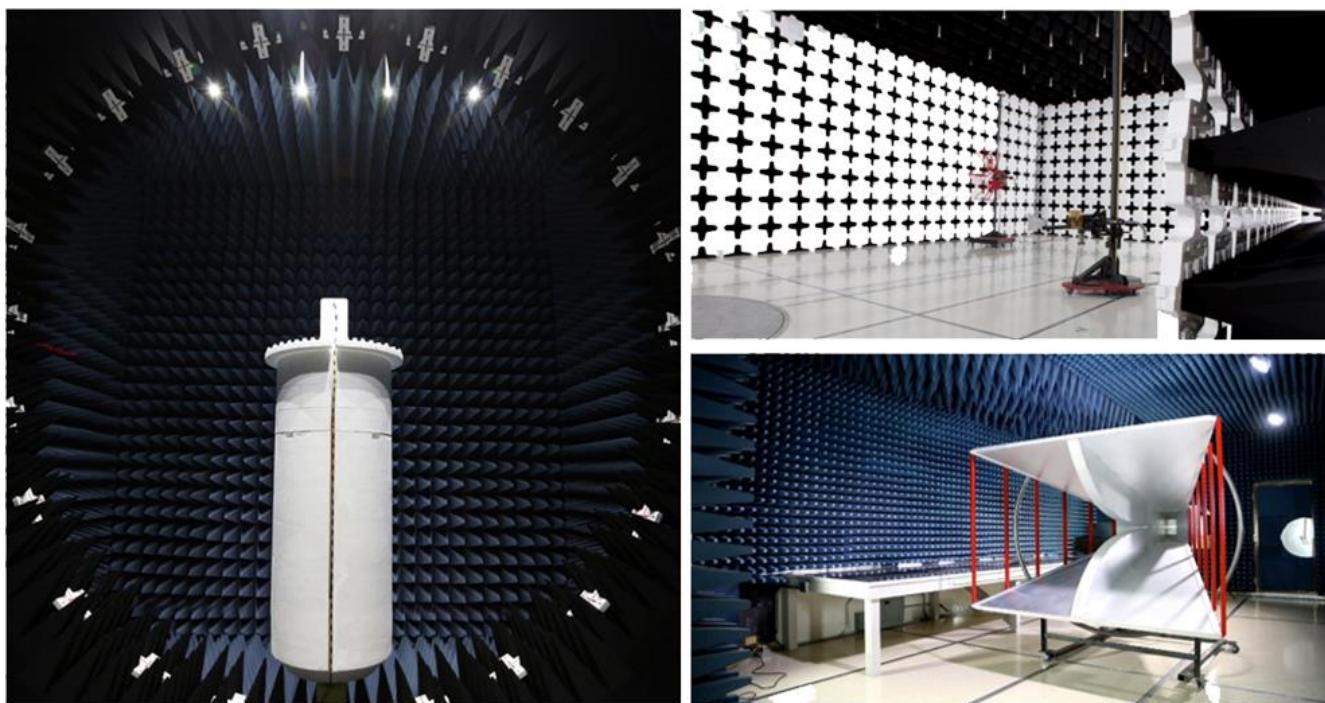
# FACILITIES

Testing was performed at the following location(s)

Location	Labs <sup>(1)</sup>	Address	A2LA <sup>(2)</sup>	ISED <sup>(3)</sup>	BSMI <sup>(4)</sup>	VCCI <sup>(5)</sup>	CAB	FDA <sup>(6)</sup>
<input type="checkbox"/> California	OC01-17	41 Tesla Irvine, CA 92618 (949) 861-8918	3310.04	2834B	SL2-IN-E-1154R	A-0029	US0158	TL-55
<input type="checkbox"/> Minnesota	MN01-11	9349 W Broadway Ave. Brooklyn Park, MN 55445 (612) 638-5136	3310.05	2834E	SL2-IN-E-1152R	A-0109	US0175	TL-57
<input checked="" type="checkbox"/> Oregon	EV01-12	6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	3310.02	2834D	SL2-IN-E-1017	A-0108	US0017	TL-56
<input type="checkbox"/> Washington	NC01-05	19201 120th Ave NE Bothell, WA 98011 (425) 984-6600	3310.06	2834F	SL2-IN-E-1153R	A-0110	US0157	TL-67
<input type="checkbox"/> Offsite	N/A	See Product Description	N/A	N/A	N/A	N/A	N/A	N/A

See data sheets for specific labs

- (1) The lab designations denote individual rooms within each location. (OC01, OC02, OC03, etc.)
- (2) A2LA Certificate No.
- (3) ISED Company No.
- (4) BSMI No.
- (5) VCCI Site Filing No.
- (6) FDA ASCA No.



# MEASUREMENT UNCERTAINTY

## 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 reported is based on statistical analysis that was performed by the laboratory. 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.

### Various Measurements

Test	All Labs (+/-)
Frequency Accuracy (%)	0.0007
Amplitude Accuracy (dB)	1.2
Conducted Power (dB)	1.2
Radiated Power via Substitution (dB)	0.7
Temperature (degrees C)	0.7
Humidity (% RH)	2.5
Voltage (AC) (%)	1
Voltage (DC) (%)	0.7
Near-field Measurement of E-Field (dB)	1.89
Near-field Measurement of H-Field (dB)	2.65

### Field Strength Measurements (dB)

Range	EV01 (+/-)	EV06 (+/-)
10kHz-30MHz	1.8	N/A
30MHz-1GHz 3m	4.6	N/A
1GHz-6GHz	5.1	N/A
6GHz-40GHz	5.2	N/A

### AC Powerline Conducted Emissions Measurements (dB)

Range	EV07 (+/-)	EV06 (+/-)
9kHz-150kHz LISN	3.6	N/A
150kHz-30MHz LISN	3.2	N/A
150kHz-30MHz CVP	3.2	N/A
150kHz-30MHz Telecom-ISN	4.4	N/A

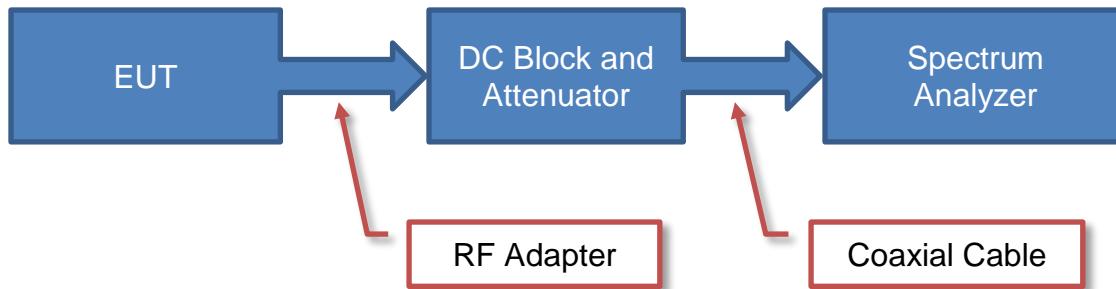
# TEST SETUP BLOCK DIAGRAMS

## 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.

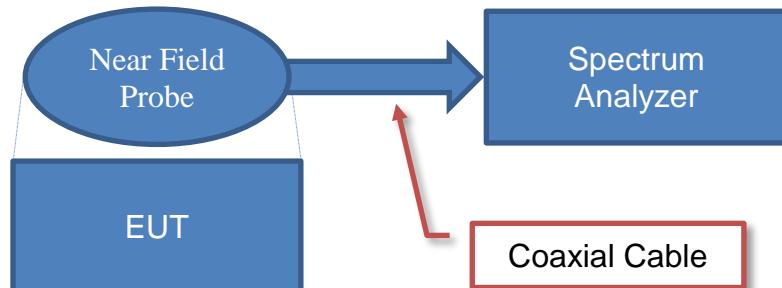
## Antenna Port Conducted Measurements



## Sample Calculation (logarithmic units)

$$\begin{array}{ccc} \text{Measured} & \text{Measured} & \text{Reference} \\ \text{Value} & = & \text{Level} \\ 71.2 & = & 42.6 \\ & & + \\ & & \text{Level} \\ & & \text{Offset} \\ & & 28.6 \end{array}$$

## Near Field Test Fixture Measurements

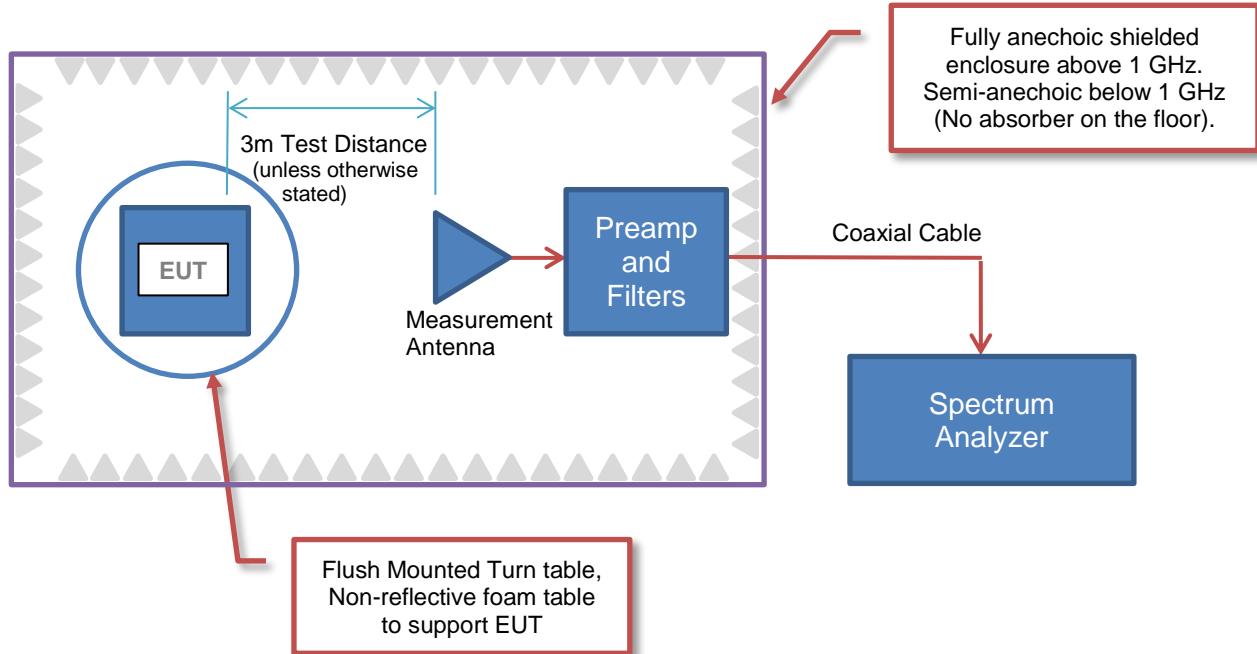


## Sample Calculation (logarithmic units)

$$\begin{array}{ccc} \text{Measured} & \text{Measured} & \text{Reference} \\ \text{Value} & = & \text{Level} \\ 71.2 & = & 42.6 \\ & & + \\ & & \text{Level} \\ & & \text{Offset} \\ & & 28.6 \end{array}$$

# TEST SETUP BLOCK DIAGRAMS

## Emissions Measurements



## Sample Calculation (logarithmic units)

### Radiated Emissions:

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

### Conducted Emissions:

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

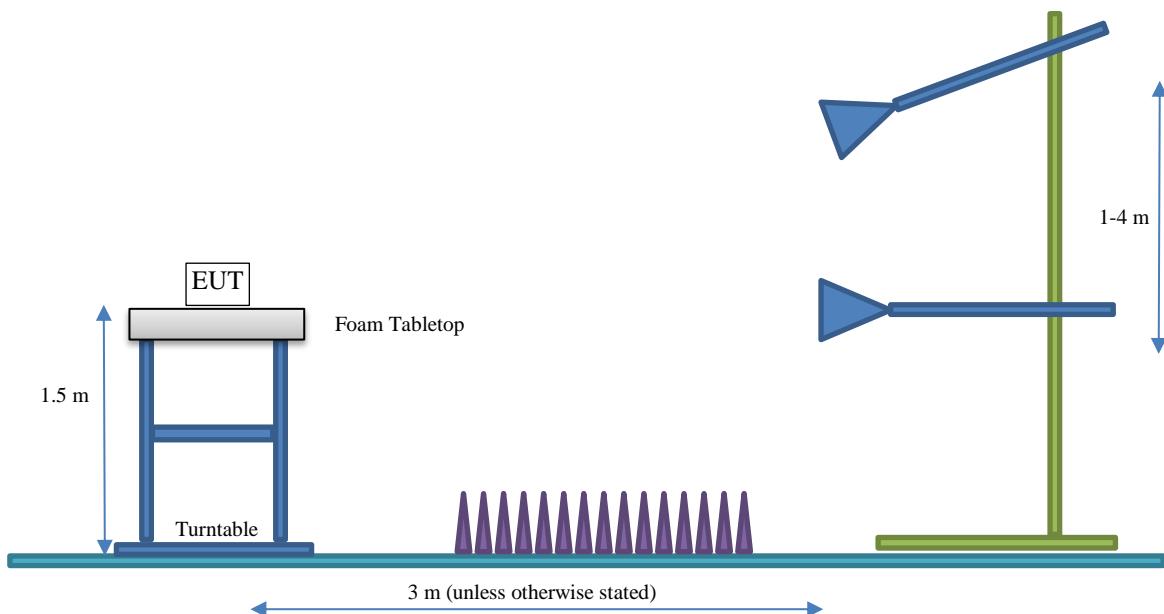
### Radiated Power (ERP/EIRP) – Substitution Method:

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

<b>Company Name:</b>	Dot Ai Corporation
<b>Address:</b>	2 Shaker Road
<b>City, State, Zip:</b>	Shirley, MA 01464
<b>Test Requested By:</b>	Vijayan Nambiar
<b>EUT:</b>	DAIC-ACB-XN; DAIC-MCB-XN
<b>First Date of Test:</b>	July 30, 2025
<b>Last Date of Test:</b>	August 1, 2025
<b>Receipt Date of Samples:</b>	July 30, 2025
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage
<b>Purchase Authorization:</b>	Verified

## Information Provided by the Party Requesting the Test

### Functional Description of the EUT:

DAIC-MCB-XN and DAIC-ACB-XN are asset tracking devices that contain one BLE radio and one 900 MHz LoRa radio. Both models share the same PCB design and operate from the same supply voltage. The only distinction lies in the power source: the DAIC-MCB-XN is powered by internal 18650 rechargeable batteries, while the DAIC-ACB-XN is powered externally via an M12 connector. Together, they provide flexible options for asset tracking applications that demand both wireless versatility and deployment adaptability.

### Testing Objective:

Seeking to demonstrate compliance of the LoRa radio with operation under FCC 15.247:2025 and RSS-Gen Issue 5:2018+A1:2019+A2:2021, RSS-247 Issue 3:2023 specifications under technology category Other.

# 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)
Inverted F	Dot Ai Corporation	902 – 928	3.67

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

### Firmware used for testing:

	Model:	Version:
<input checked="" type="checkbox"/> Test firmware settings	DAIC-ACB-XN	1.2.6+0
<input type="checkbox"/> Rated power settings	DAIC-MCB-XN	1.2.6+5

## SETTINGS FOR ALL TESTS IN THIS REPORT

Radio Type	Modulation Type	Number of channels	Bandwidth (kHz)	Channel separation (kHz)	Spreading Factor (SF)	Coding Rate	Data Rate (bit/sec)	Channel	Frequency (MHz)	Power Setting (dBm)
LoRa	FHSS / CSS	50	125	200	10	4/5	980	Low	910.3	17
								Mid	915.3	
								High	920.1	

# CONFIGURATIONS



## Configuration DTAI0006-1

Software/Firmware Running During Test	
Description	Version
Firmware	1.2.6+0
nRF Connect for Desktop (Serial Terminal)	v5.1.0

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Access Bridge	Dot Ai Corporation	DAIC-ACB-XN	25020-DC9F98DBAE33

Peripheral Equipment Inside Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	C.SA Electronics	CS-1205000	None
Laptop	Dell	Inspiron	9WF2KL3
AC Adapter (Laptop)	Dell	LA65NM170	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power (Laptop)	No	0.9	No	AC Power	AC Adapter (Laptop)
DC Power (Laptop)	No	1.8	No	AC Adapter	Laptop
AC Power	No	2.4	No	AC Power	AC Adapter
DC Power	No	1.2	Yes	AC Adapter	M12 Cable Harness
M12 Cable Harness	No	0.5	No	Access Bridge	DC

## Configuration DTAI0006-2

Software/Firmware Running During Test	
Description	Version
Firmware	1.2.6+0
nRF Connect for Desktop (Serial Terminal)	v5.1.0

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Access Bridge	Dot Ai Corporation	DAIC-ACB-XN	250311-FA26729161F0

Peripheral Equipment Inside Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	C.SA Electronics	CS-1205000	None
Laptop	Dell	Inspiron	9WF2KL3
AC Adapter (Laptop)	Dell	LA65NM170	None

# CONFIGURATIONS



Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power (Laptop)	No	0.9	No	AC Power	AC Adapter (Laptop)
DC Power (Laptop)	No	1.8	No	AC Adapter	Laptop
AC Power	No	2.4	No	AC Power	AC Adapter
DC Power	No	1.2	Yes	AC Adapter	M12 Cable Harness
M12 Cable Harness	No	0.5	No	Access Bridge	DC

## Configuration DTAI0006-3

Software/Firmware Running During Test	
Description	Version
AuTerm	0.35a
Firmware	1.2.6+5

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Marker Bridge	Dot Ai Corporation	DAIC-MCB-XN	250520-D0A1DE7162A5

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Inspiron	9WF2KL3
AC Adapter (Laptop)	Dell	LA65NM170	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power (Laptop)	No	0.9	No	AC Power	AC Adapter (Laptop)
DC Power (Laptop)	No	1.8	No	AC Adapter	Laptop

# CONFIGURATIONS



## Configuration DTAI0006-5

Software/Firmware Running During Test	
Description	Version
Firmware	1.2.6+0
nRF Connect for Desktop (Serial Terminal)	v5.1.0

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Access Bridge	Dot Ai Corporation	DAIC-ACB-XN	25020-DC9F98DBAE33

Peripheral Equipment Inside Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
AC Adapter	C.SA Electronics	CS-1205000	None

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Inspiron	9WF2KL3

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	2.4	No	AC Power	AC Adapter
DC Power	No	1.2	Yes	AC Adapter	M12 Cable Harness
M12 Cable Harness	No	0.5	No	Access Bridge	DC

# MODIFICATIONS



## Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2025-07-30	Powerline 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.
2	2025-07-31	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.
3	2025-07-31	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.
4	2025-07-31	Equivalent Isotropic Radiated 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.
5	2025-07-31	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.
6	2025-07-31	Occupied Bandwidth (20 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.
7	2025-07-31	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	2025-07-31	Band Edge Compliance – Hopping Mode	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	2025-07-31	Dwell Time	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
10	2025-07-31	Carrier Frequency Separation	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
11	2025-07-31	Number of Hopping Frequencies	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
12	2025-08-01	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

# POWERLINE CONDUCTED EMISSIONS (TRANSMITTER)



## TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Per the standard, an insulating material was also added to ground plane between the EUT's power and remote I/O cables. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
LISN	Solar Electronics	9252-50-R-24-BNC	LIR	2024-09-13	2025-09-13
Receiver	Gauss Instruments	TDEMI 30M	ARN	2025-06-12	2026-06-12
Cable - Conducted Cable Assembly	Northwest EMC	EVG, HHD, RKT, VAB	EVGA	2025-04-08	2026-04-08

## CONFIGURATIONS INVESTIGATED

DTAI0006-5

## MODES INVESTIGATED

LoRa CSS, BW = 125 kHz, Mid Ch = 915.3 MHz, SF = 10

# POWERLINE CONDUCTED EMISSIONS (TRANSMITTER)



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	25020-DC9F98DBAE33	Date:	2025-07-30
Customer:	Dot Ai Corporation	Temperature:	24.2°C
Attendees:	None	Relative Humidity:	46.3%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mb
Tested By:	Jeff Alcocke and Chris Pinkham	Job Site:	EV07
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-5

## TEST PARAMETERS

Run #:	7	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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## COMMENTS

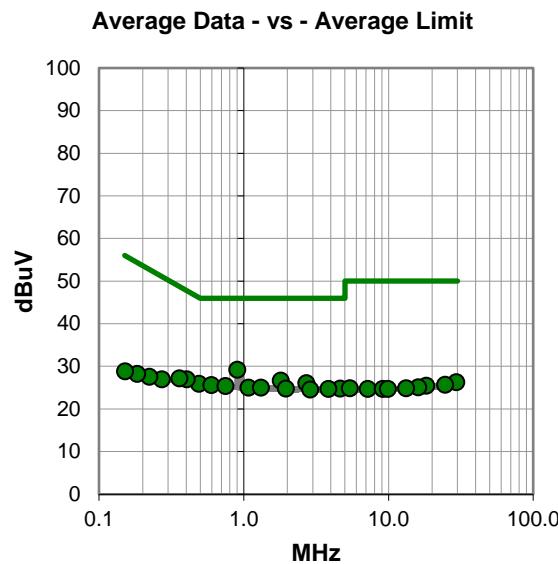
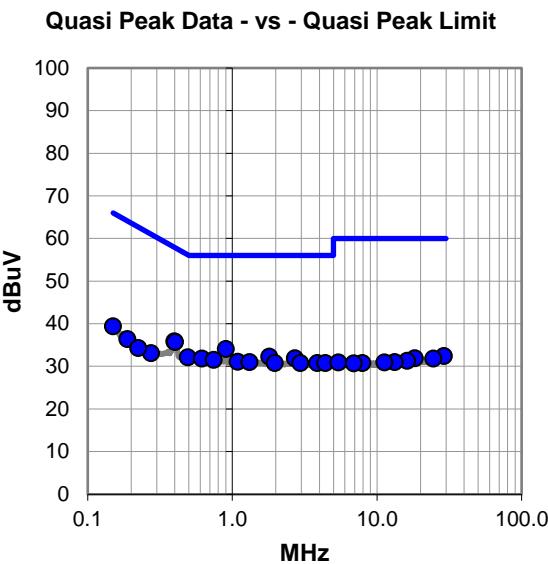
None

## EUT OPERATING MODES

LoRa CSS, BW = 125 kHz, Mid Ch = 915.3 MHz, SF = 10

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS (TRANSMITTER)



## RESULTS - Run #7

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.901	14.2	19.9	34.1	56.0	-21.9
0.397	16.0	19.9	35.9	57.9	-22.0
0.402	15.8	19.9	35.7	57.8	-22.1
1.802	12.3	20.0	32.3	56.0	-23.7
0.493	12.2	19.9	32.1	56.1	-24.0
2.704	11.8	20.1	31.9	56.0	-24.1
0.617	11.9	19.9	31.8	56.0	-24.2
0.742	11.6	19.9	31.5	56.0	-24.5
1.088	11.2	19.9	31.1	56.0	-24.9
1.313	11.0	20.0	31.0	56.0	-25.0
1.969	10.8	20.0	30.8	56.0	-25.2
2.957	10.7	20.1	30.8	56.0	-25.2
3.864	10.6	20.2	30.8	56.0	-25.2
4.399	10.5	20.3	30.8	56.0	-25.2
0.150	19.2	20.2	39.4	66.0	-26.6
28.997	10.1	22.3	32.4	60.0	-27.6
0.188	16.4	20.0	36.4	64.1	-27.7
0.274	13.2	19.9	33.1	61.0	-27.9
18.216	10.6	21.3	31.9	60.0	-28.1
24.546	10.1	21.7	31.8	60.0	-28.2
0.223	14.3	20.0	34.3	62.7	-28.4
16.113	10.1	21.2	31.3	60.0	-28.7
13.244	10.1	20.9	31.0	60.0	-29.0
5.409	10.6	20.3	30.9	60.0	-29.1
11.243	10.2	20.7	30.9	60.0	-29.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.902	9.3	19.9	29.2	46.0	-16.8
1.802	6.7	20.0	26.7	46.0	-19.3
2.704	6.0	20.1	26.1	46.0	-19.9
0.490	6.0	19.9	25.9	46.2	-20.3
0.597	5.7	19.9	25.6	46.0	-20.4
0.747	5.5	19.9	25.4	46.0	-20.6
0.403	7.1	19.9	27.0	47.8	-20.8
1.078	5.1	19.9	25.0	46.0	-21.0
1.319	5.0	20.0	25.0	46.0	-21.0
1.957	4.8	20.0	24.8	46.0	-21.2
4.653	4.5	20.3	24.8	46.0	-21.2
3.858	4.5	20.2	24.7	46.0	-21.3
2.881	4.5	20.1	24.6	46.0	-21.4
0.359	7.3	19.9	27.2	48.8	-21.6
29.546	4.0	22.3	26.3	50.0	-23.7
0.272	7.1	19.9	27.0	51.1	-24.1
24.714	4.0	21.7	25.7	50.0	-24.3
18.295	4.2	21.3	25.5	50.0	-24.5
16.067	4.0	21.1	25.1	50.0	-24.9
0.223	7.6	20.0	27.6	52.7	-25.1
5.409	4.6	20.3	24.9	50.0	-25.1
13.251	4.0	20.9	24.9	50.0	-25.1
7.213	4.3	20.4	24.7	50.0	-25.3
9.158	4.2	20.5	24.7	50.0	-25.3
9.915	4.1	20.6	24.7	50.0	-25.3

## CONCLUSION

Pass

Tested By

# POWERLINE CONDUCTED EMISSIONS (TRANSMITTER)



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	25020-DC9F98DBAE33	Date:	2025-07-30
Customer:	Dot Ai Corporation	Temperature:	24.2°C
Attendees:	None	Relative Humidity:	46.3%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mb
Tested By:	Jeff Alcocke and Chris Pinkham	Job Site:	EV07
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-5

## TEST PARAMETERS

Run #:	8	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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## COMMENTS

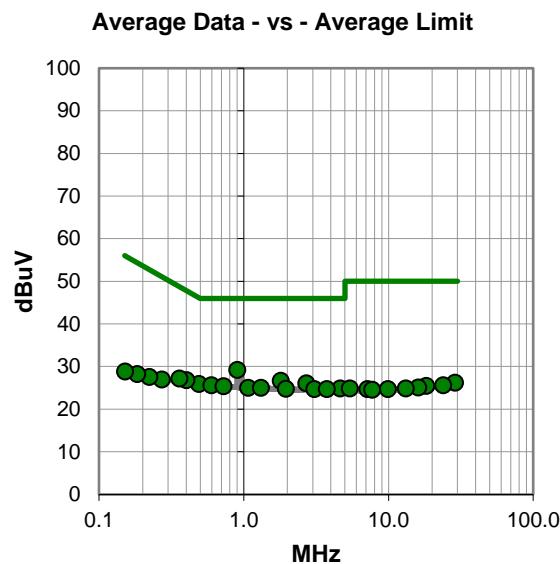
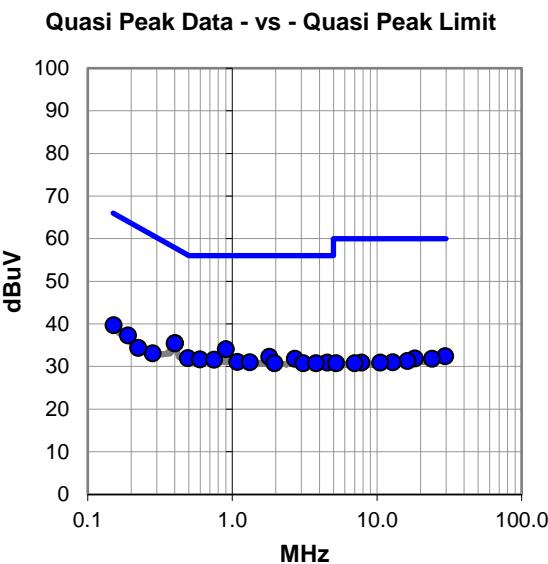
None

## EUT OPERATING MODES

LoRa CSS, BW = 125 kHz, Mid Ch = 915.3 MHz, SF = 10

## DEVIATIONS FROM TEST STANDARD

None



# POWERLINE CONDUCTED EMISSIONS (TRANSMITTER)



## RESULTS - Run #8

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.901	14.2	19.9	34.1	56.0	-21.9
0.402	15.6	19.9	35.5	57.8	-22.3
0.400	15.5	19.9	35.4	57.8	-22.4
1.804	12.3	20.0	32.3	56.0	-23.7
0.492	12.1	19.9	32.0	56.1	-24.1
2.704	11.7	20.1	31.8	56.0	-24.2
0.599	11.8	19.9	31.7	56.0	-24.3
0.748	11.7	19.9	31.6	56.0	-24.4
1.085	11.2	19.9	31.1	56.0	-24.9
1.320	11.0	20.0	31.0	56.0	-25.0
4.518	10.6	20.3	30.9	56.0	-25.1
1.958	10.8	20.0	30.8	56.0	-25.2
3.092	10.7	20.1	30.8	56.0	-25.2
3.795	10.6	20.2	30.8	56.0	-25.2
0.152	19.5	20.2	39.7	65.9	-26.2
0.190	17.3	20.0	37.3	64.1	-26.8
29.563	10.1	22.3	32.4	60.0	-27.6
0.281	13.2	19.9	33.1	60.8	-27.7
18.217	10.6	21.3	31.9	60.0	-28.1
23.994	10.1	21.7	31.8	60.0	-28.2
0.223	14.4	20.0	34.4	62.7	-28.3
16.212	10.1	21.2	31.3	60.0	-28.7
12.826	10.2	20.8	31.0	60.0	-29.0
7.811	10.4	20.5	30.9	60.0	-29.1
10.551	10.2	20.7	30.9	60.0	-29.1

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.902	9.3	19.9	29.2	46.0	-16.8
1.804	6.7	20.0	26.7	46.0	-19.3
2.704	6.0	20.1	26.1	46.0	-19.9
0.490	6.0	19.9	25.9	46.2	-20.3
0.597	5.7	19.9	25.6	46.0	-20.4
0.727	5.5	19.9	25.4	46.0	-20.6
0.402	6.9	19.9	26.8	47.8	-21.0
1.076	5.1	19.9	25.0	46.0	-21.0
1.319	5.0	20.0	25.0	46.0	-21.0
4.654	4.6	20.3	24.9	46.0	-21.1
1.955	4.8	20.0	24.8	46.0	-21.2
3.075	4.6	20.1	24.7	46.0	-21.3
3.748	4.5	20.2	24.7	46.0	-21.3
0.359	7.3	19.9	27.2	48.8	-21.6
28.942	3.9	22.3	26.2	50.0	-23.8
0.272	7.1	19.9	27.0	51.1	-24.1
23.943	3.9	21.7	25.6	50.0	-24.4
18.249	4.2	21.3	25.5	50.0	-24.5
16.079	3.9	21.2	25.1	50.0	-24.9
0.223	7.6	20.0	27.6	52.7	-25.1
5.409	4.6	20.3	24.9	50.0	-25.1
13.211	4.0	20.9	24.9	50.0	-25.1
7.172	4.3	20.4	24.7	50.0	-25.3
9.915	4.1	20.6	24.7	50.0	-25.3
7.749	4.1	20.5	24.6	50.0	-25.4

## CONCLUSION

Pass

Tested By

# SPURIOUS RADIATED EMISSIONS



## 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 (in no-hop, single channel mode) 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. A reference preview scan (pre-scan) is 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.

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  $10 \times \log(1/dc)$ .

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Biconilog	Teseq	CBL 6141B	AXR	2025-04-15	2027-04-15
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	2024-10-28	2025-10-28
Cable	N/A	Bilog Cables	EVA	2024-10-29	2025-10-29
Filter - Low Pass	Micro-Tronics	LPM50003	LFB	2024-10-28	2025-10-28
Filter - Low Pass	Micro-Tronics	LPM50004	LFD	2024-10-28	2025-10-28
Filter - Band Pass/Notch	K&L Microwave	3TNF-500/1000-N/N	HFT	2024-12-04	2025-12-04
Filter - High Pass	Micro-Tronics	HPM50108	HFV	2024-10-28	2025-10-28
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2024-03-08	2026-03-08
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2024-10-28	2025-10-28
Cable	N/A	Double Ridge Horn Cables	EVB	2025-05-02	2026-05-02
Attenuator	Coaxicom	3910-20	AXZ	2024-10-28	2025-10-28
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	2025-01-23	2026-01-23
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2024-10-28	2025-10-28
Cable	None	Standard Gain Horn Cables	EVF	2024-10-28	2025-10-28
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2024-11-25	2025-11-25
Antenna - Loop	EMCO	6502	AOA	2024-10-23	2026-10-23

## FREQUENCY RANGE INVESTIGATED

9 kHz TO 12400 MHz

## POWER INVESTIGATED

12VDC via 110VAC/60Hz

Battery

# SPURIOUS RADIATED EMISSIONS



## CONFIGURATIONS INVESTIGATED

DTAI0006-1  
DTAI0006-3

## MODES INVESTIGATED

LoRa, CSS, Low Channel = 910.3 MHz, Mid Ch = 915.5, High Ch = 920.1 MHz, BW = 125 kHz, SF = 10

# SPURIOUS RADIATED EMISSIONS



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	25020-DC9F98DBAE33	Date:	2025-08-01
Customer:	Dot Ai Corporation	Temperature:	22.2°C
Attendees:	None	Relative Humidity:	51.5%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mb
Tested By:	Jeff Alcocke and Chris Pinkham	Job Site:	EV01
Power:	12VDC via 110VAC/60Hz	Configuration:	DTAI0006-1

## TEST PARAMETERS

Run #:	154	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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## COMMENTS

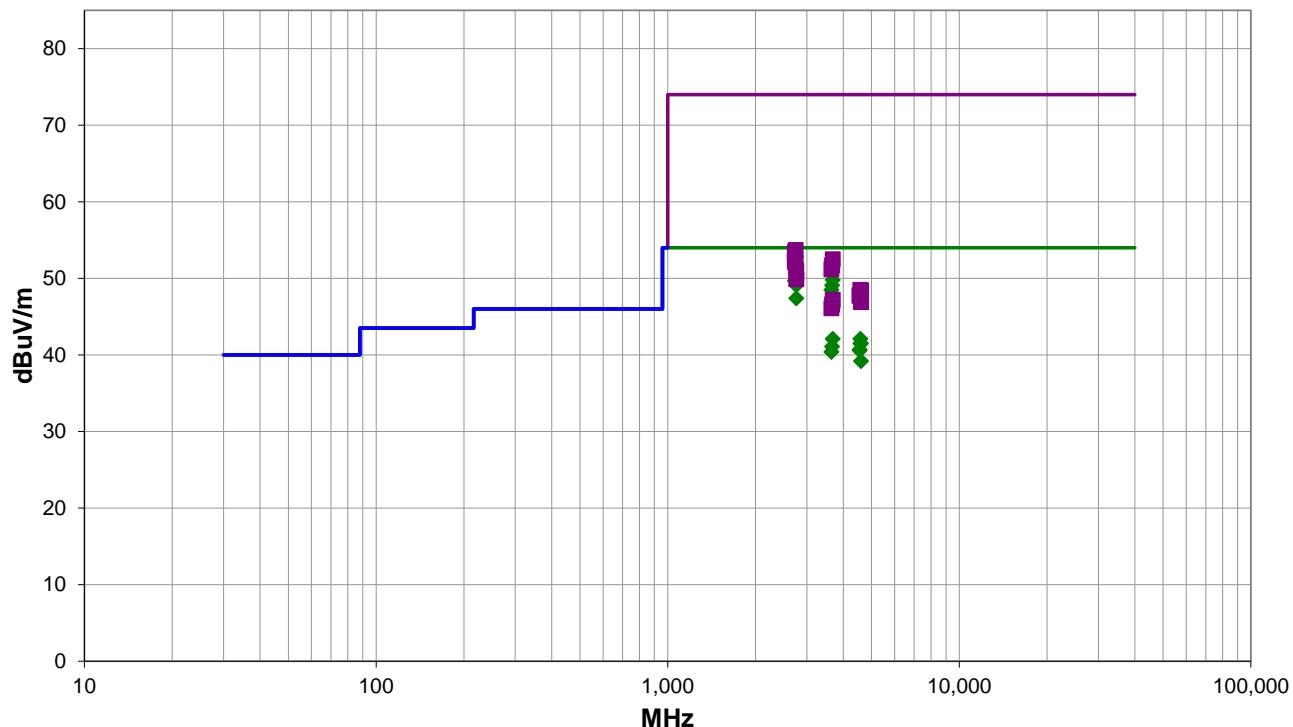
EUT Horizontal - Worst Case. EUT operates 45.3% duty cycle, the RMS Average data was corrected to 100% duty cycle using the following formula: Duty Cycle Correction Factor =  $10 \times \text{LOG}(1/0.453) = 3.4 \text{ dB}$ .

## EUT OPERATING MODES

LoRa, CSS, Low Channel = 910.3 MHz, Mid Ch = 915.5, High Ch = 920.1 MHz, BW = 125 kHz, SF = 10

## DEVIATIONS FROM TEST STANDARD

None



Run #: 154

PK AV QP

# SPURIOUS RADIATED EMISSIONS



## RESULTS - Run #154

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
2746.517	51.9	-3.1	1.89	136.0	3.4	0.0	Vert	AV	0.0	52.2	54.0	-1.8	Mid Ch
2730.983	51.9	-3.3	1.88	129.0	3.4	0.0	Vert	AV	0.0	52.0	54.0	-2.0	Low Ch
2746.442	50.4	-3.1	1.43	210.0	3.4	0.0	Horz	AV	0.0	50.7	54.0	-3.3	Mid Ch
3680.458	43.4	3.0	1.5	109.0	3.4	0.0	Horz	AV	0.0	49.8	54.0	-4.2	High Ch
2730.933	49.6	-3.3	1.5	206.0	3.4	0.0	Horz	AV	0.0	49.7	54.0	-4.3	Low Ch
2760.325	48.8	-3.1	1.5	199.0	3.4	0.0	Horz	AV	0.0	49.1	54.0	-4.9	High Ch
3662.058	42.8	2.9	1.5	113.0	3.4	0.0	Horz	AV	0.0	49.1	54.0	-4.9	Mid Ch
3641.158	42.4	2.7	1.5	110.0	3.4	0.0	Horz	AV	0.0	48.5	54.0	-5.5	Low Ch
2760.317	47.1	-3.1	1.5	224.0	3.4	0.0	Vert	AV	0.0	47.4	54.0	-6.6	High Ch
3680.350	35.7	3.0	1.5	181.0	3.4	0.0	Vert	AV	0.0	42.1	54.0	-11.9	High Ch
4577.608	32.8	5.9	1.49	74.0	3.4	0.0	Horz	AV	0.0	42.1	54.0	-11.9	Mid Ch
4600.642	32.1	6.0	1.5	86.0	3.4	0.0	Horz	AV	0.0	41.5	54.0	-12.5	High Ch
4577.558	32.2	5.9	1.5	163.0	3.4	0.0	Vert	AV	0.0	41.5	54.0	-12.5	Mid Ch
3661.933	34.8	2.9	1.58	177.0	3.4	0.0	Vert	AV	0.0	41.1	54.0	-12.9	Mid Ch
4551.350	31.5	5.8	2.13	79.0	3.4	0.0	Horz	AV	0.0	40.7	54.0	-13.3	Low Ch
4551.492	31.4	5.8	1.59	165.0	3.4	0.0	Vert	AV	0.0	40.6	54.0	-13.4	Low Ch
3641.258	34.3	2.7	1.64	179.0	3.4	0.0	Vert	AV	0.0	40.4	54.0	-13.6	Low Ch
4600.608	29.8	6.0	1.5	240.0	3.4	0.0	Vert	AV	0.0	39.2	54.0	-14.8	High Ch
2746.508	56.8	-3.1	1.89	136.0	0.0	0.0	Vert	PK	0.0	53.7	74.0	-20.3	Mid Ch
2730.933	56.7	-3.3	1.88	129.0	0.0	0.0	Vert	PK	0.0	53.4	74.0	-20.6	Low Ch
3680.108	49.5	3.0	1.5	109.0	0.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	High Ch
2730.725	55.5	-3.3	1.5	206.0	0.0	0.0	Horz	PK	0.0	52.2	74.0	-21.8	Low Ch
2746.417	55.1	-3.1	1.43	210.0	0.0	0.0	Horz	PK	0.0	52.0	74.0	-22.0	Mid Ch
3661.900	48.8	2.9	1.5	113.0	0.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	Mid Ch
3641.225	48.5	2.7	1.5	110.0	0.0	0.0	Horz	PK	0.0	51.2	74.0	-22.8	Low Ch
2760.250	54.1	-3.1	1.5	199.0	0.0	0.0	Horz	PK	0.0	51.0	74.0	-23.0	High Ch
2760.058	53.0	-3.1	1.5	224.0	0.0	0.0	Vert	PK	0.0	49.9	74.0	-24.1	High Ch
4577.408	42.6	5.9	1.49	74.0	0.0	0.0	Horz	PK	0.0	48.5	74.0	-25.5	Mid Ch
4600.592	42.4	6.0	1.5	86.0	0.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	High Ch
4577.650	41.9	5.9	1.5	163.0	0.0	0.0	Vert	PK	0.0	47.8	74.0	-26.2	Mid Ch
4551.308	42.0	5.8	1.59	165.0	0.0	0.0	Vert	PK	0.0	47.8	74.0	-26.2	Low Ch
4551.725	41.9	5.8	2.13	79.0	0.0	0.0	Horz	PK	0.0	47.7	74.0	-26.3	Low Ch
3680.175	44.2	3.0	1.5	181.0	0.0	0.0	Vert	PK	0.0	47.2	74.0	-26.8	High Ch
4601.258	40.9	6.0	1.5	240.0	0.0	0.0	Vert	PK	0.0	46.9	74.0	-27.1	High Ch
3662.208	43.7	2.9	1.58	177.0	0.0	0.0	Vert	PK	0.0	46.6	74.0	-27.4	Mid Ch
3640.883	43.4	2.7	1.64	179.0	0.0	0.0	Vert	PK	0.0	46.1	74.0	-27.9	Low Ch

# SPURIOUS RADIATED EMISSIONS



## CONCLUSION

Pass



Tested By

# SPURIOUS RADIATED EMISSIONS



EUT:	DAIC-MCB-XN	Work Order:	DTAI0006
Serial Number:	250520-D0A1DE7162A5	Date:	2025-08-01
Customer:	Dot Ai Corporation	Temperature:	22.3°C
Attendees:	None	Relative Humidity:	49.5%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mb
Tested By:	Christopher Pinkham and Jeff Alcock	Job Site:	EV01
Power:	Battery	Configuration:	DTAI0006-3

## TEST PARAMETERS

Run #:	158	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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## COMMENTS

The frequency range investigated was limited to the range which had the highest risk, as determined by testing of the DAIC-ACB-XN: 1-12.4 GHz.

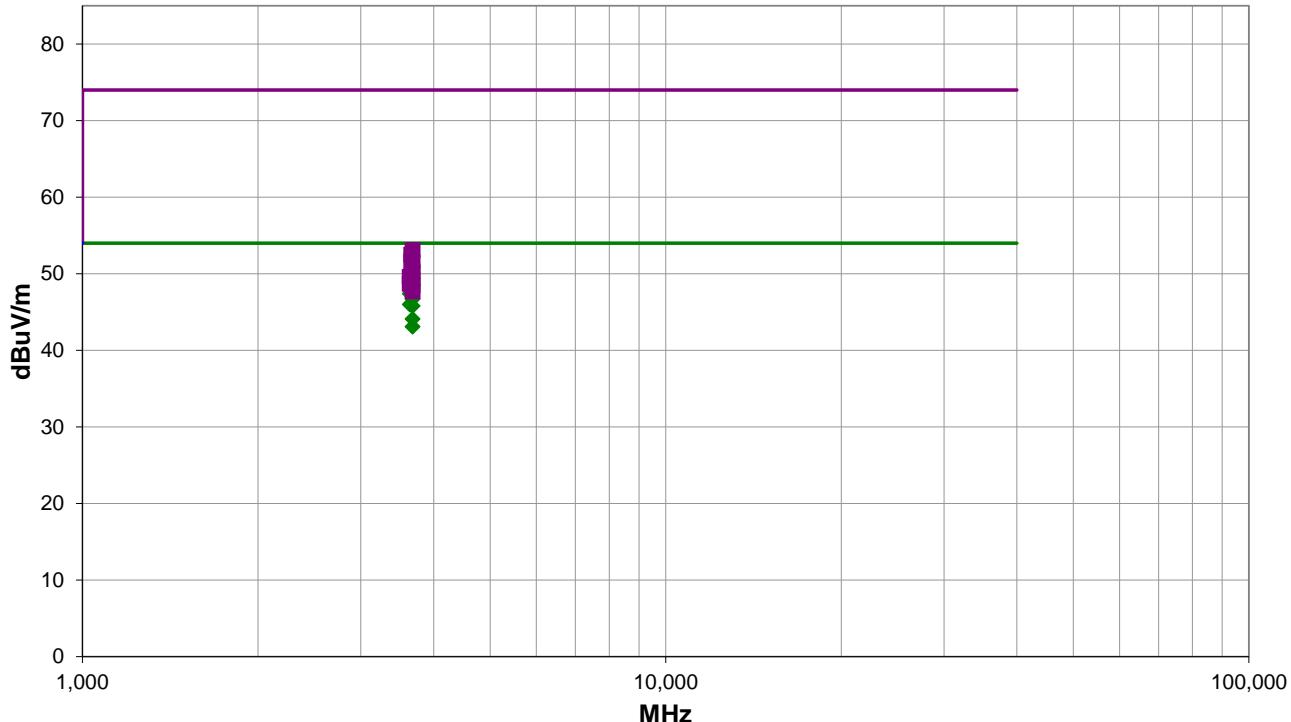
EUT Horizontal - Worst Case. EUT operates 45.3% duty cycle, the RMS Average data was corrected to 100% duty cycle using the following formula: Duty Cycle Correction Factor =  $10 \times \log(1/0.453) = 3.4 \text{ dB}$ .

## EUT OPERATING MODES

LoRa CSS (Beaconing), BW =125 kHz, Power = 17 dBm, Low Channel = 910.3 MHz, Mid Channel = 915.5 MHz, High Channel = 920.1 MHz, SF=10

## DEVIATIONS FROM TEST STANDARD

None



Run #: 158

■ PK    ♦ AV    ● QP

# SPURIOUS RADIATED EMISSIONS



## RESULTS - Run #158

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
3680.308	44.5	3.0	1.5	130.0	3.4	0.0	Horz	AV	0.0	50.9	54.0	-3.1	High Ch, EUT Horz
3661.900	43.8	2.9	1.5	20.0	3.4	0.0	Horz	AV	0.0	50.1	54.0	-3.9	Mid Ch, EUT Horz
3680.442	42.2	3.0	1.43	53.0	3.4	0.0	Vert	AV	0.0	48.6	54.0	-5.4	High Ch, EUT Vert
3662.050	42.2	2.9	1.5	53.0	3.4	0.0	Vert	AV	0.0	48.5	54.0	-5.5	Mid Ch, EUT Vert
3641.292	44.0	0.0	1.5	262.0	3.4	0.0	Horz	AV	0.0	47.4	54.0	-6.6	Low Ch, EUT Horz
3680.225	40.3	3.0	1.5	37.0	3.4	0.0	Horz	AV	0.0	46.7	54.0	-7.3	High Ch, EUT On Side
3641.192	42.6	0.0	1.5	66.0	3.4	0.0	Vert	AV	0.0	46.0	54.0	-8.0	Low Ch, EUT Vert
3680.350	39.4	3.0	1.5	86.0	3.4	0.0	Vert	AV	0.0	45.8	54.0	-8.2	High Ch, EUT On Side
3680.525	37.7	3.0	1.76	182.0	3.4	0.0	Vert	AV	0.0	44.1	54.0	-9.9	High Ch, EUT Horz
3680.517	36.7	3.0	1.5	304.0	3.4	0.0	Horz	AV	0.0	43.1	54.0	-10.9	High Ch, EUT Vert
3680.625	50.1	3.0	1.5	130.0	0.0	0.0	Horz	PK	0.0	53.1	74.0	-20.9	High Ch, EUT Horz
3661.892	49.6	2.9	1.5	20.0	0.0	0.0	Horz	PK	0.0	52.5	74.0	-21.5	Mid Ch, EUT Horz
3662.383	48.7	2.9	1.5	53.0	0.0	0.0	Vert	PK	0.0	51.6	74.0	-22.4	Mid Ch, EUT Vert
3680.183	48.5	3.0	1.43	53.0	0.0	0.0	Vert	PK	0.0	51.5	74.0	-22.5	High Ch, EUT Vert
3680.433	47.3	3.0	1.5	37.0	0.0	0.0	Horz	PK	0.0	50.3	74.0	-23.7	High Ch, EUT On Side
3641.167	49.6	0.0	1.5	262.0	0.0	0.0	Horz	PK	0.0	49.6	74.0	-24.4	Low Ch, EUT Horz
3680.425	46.4	3.0	1.5	86.0	0.0	0.0	Vert	PK	0.0	49.4	74.0	-24.6	High Ch, EUT On Side
3641.300	48.7	0.0	1.5	66.0	0.0	0.0	Vert	PK	0.0	48.7	74.0	-25.3	Low Ch, EUT Vert
3680.450	45.5	3.0	1.76	182.0	0.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	High Ch, EUT Horz
3680.325	44.7	3.0	1.5	304.0	0.0	0.0	Horz	PK	0.0	47.7	74.0	-26.3	High Ch, EUT Vert

## CONCLUSION

Pass



Tested By

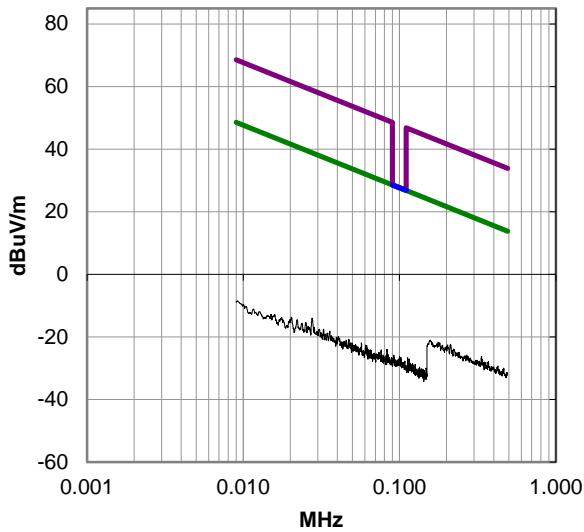
# SPURIOUS RADIATED EMISSIONS



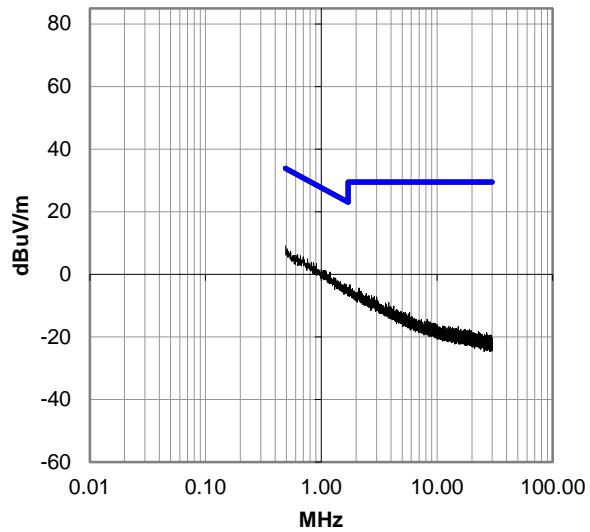
## PRESCAN DATA: DTAI0006-1 – Mid Channel

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

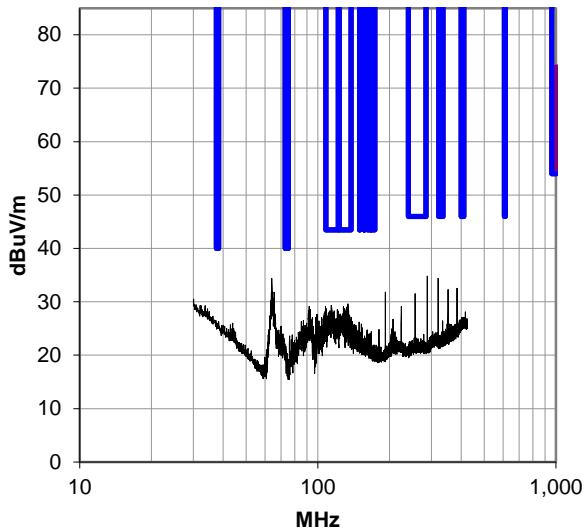
0.009-0.49 MHz, Run 177



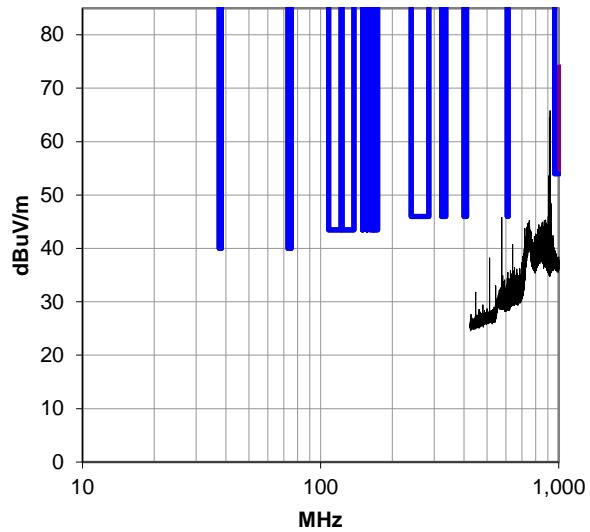
0.49-30 MHz, Run 178



30-425 MHz, Run 171



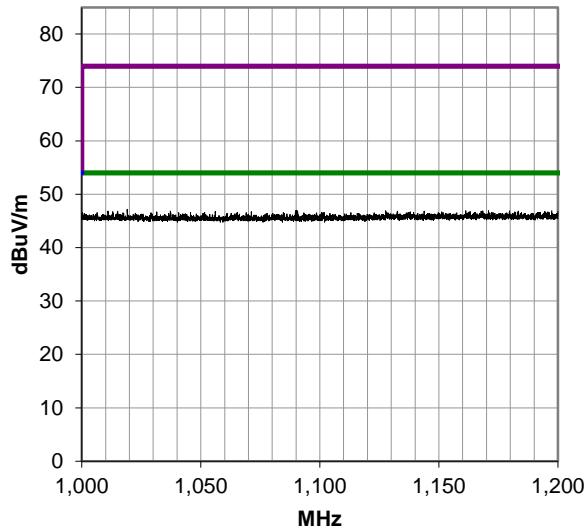
425-1000 MHz, Run 168



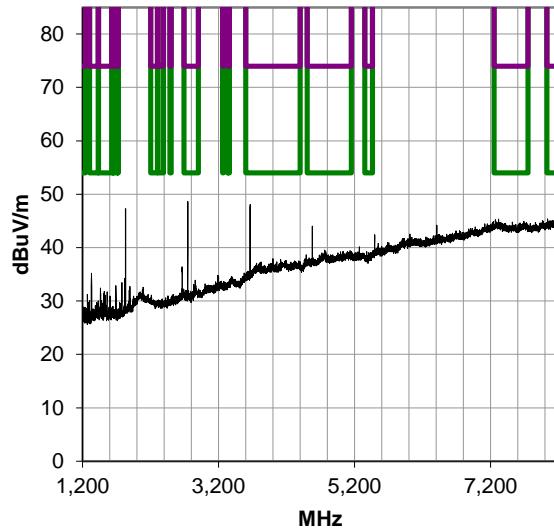
# SPURIOUS RADIATED EMISSIONS



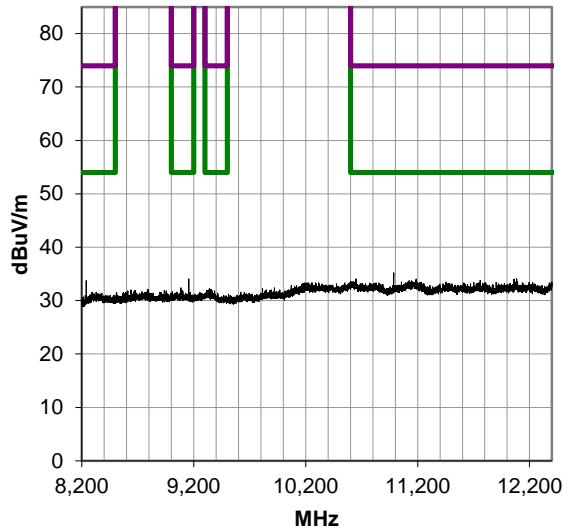
1000-1200 MHz, Run 18



1200-8200 MHz, Run 19



8200-12400 MHz, Run 20

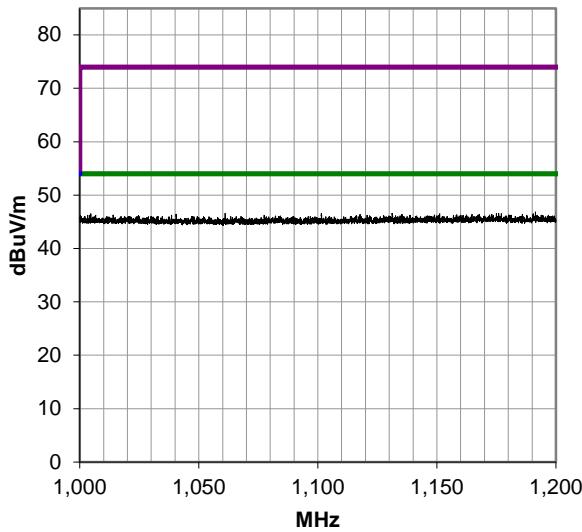


# SPURIOUS RADIATED EMISSIONS

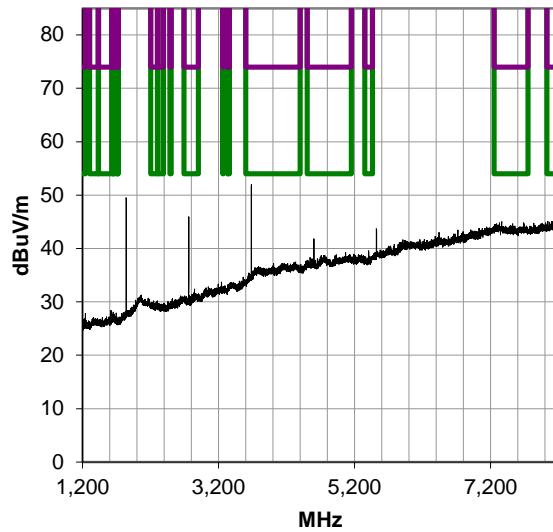
## PRESCAN DATA: DTAI0006-3 – High Channel

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

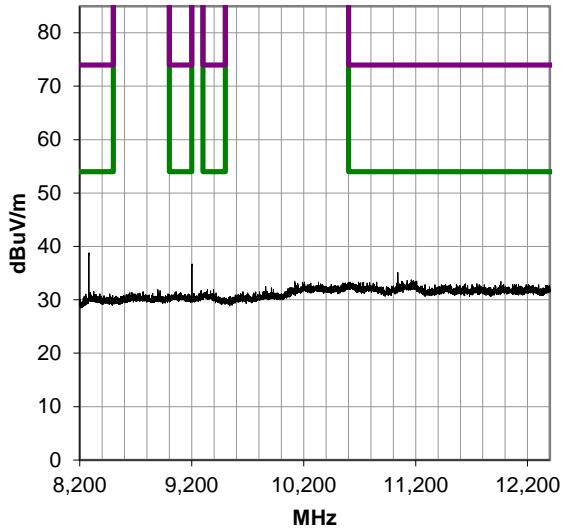
1000-1200 MHz, Run 159



1200-8200 MHz, Run 157



8200-12400 MHz, Run 158



# DUTY CYCLE



## TEST DESCRIPTION

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.

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.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21

# DUTY CYCLE

EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23.5°C
Attendees:	None	Relative Humidity:	49.3%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

N/A

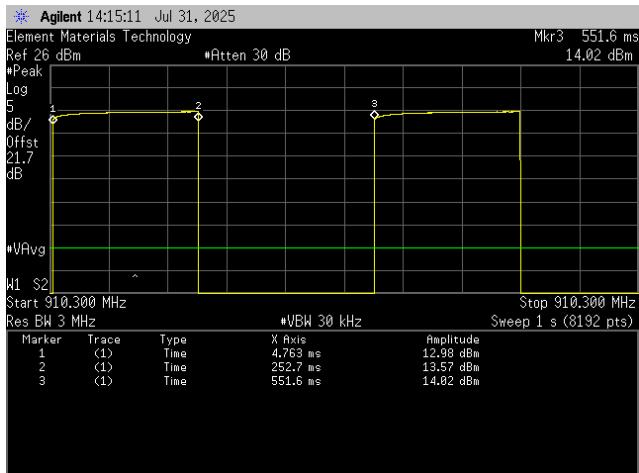


Tested By

## TEST RESULTS

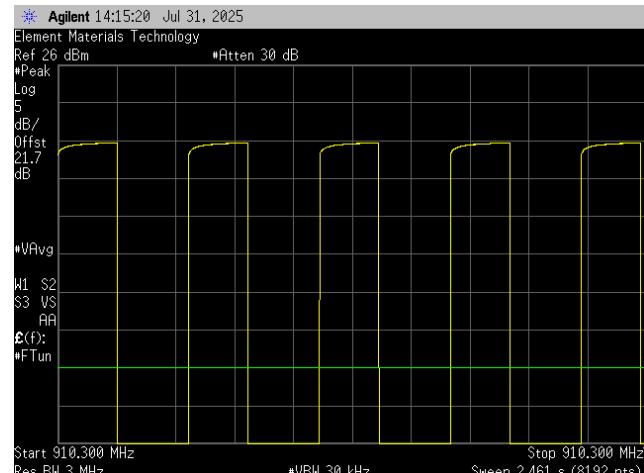
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
LoRa CSS, 125 kHz BW, Single Channel						
Low Channel, 910.3 MHz	247.955 ms N/A	546.864 ms N/A	1 5	45.3 N/A	N/A N/A	N/A N/A

# DUTY CYCLE



LoRa CSS, 125 kHz BW, Single Channel

Low Channel, 910.3 MHz



LoRa CSS, 125 kHz BW, Single Channel

Low Channel, 910.3 MHz

# CARRIER FREQUENCY SEPARATION



## TEST DESCRIPTION

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.

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

The channel carrier frequencies in the 902-928 MHz band must be separated by 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. The EUT was operated in pseudorandom hopping mode. The spectrum was scanned across two adjacent peaks. The separation between the peaks of these channels was measured.

The measured 20 dB bandwidth for this radio is 136.3 kHz.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# CARRIER FREQUENCY SEPARATION



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23.7°C
Attendees:	None	Relative Humidity:	49.8%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

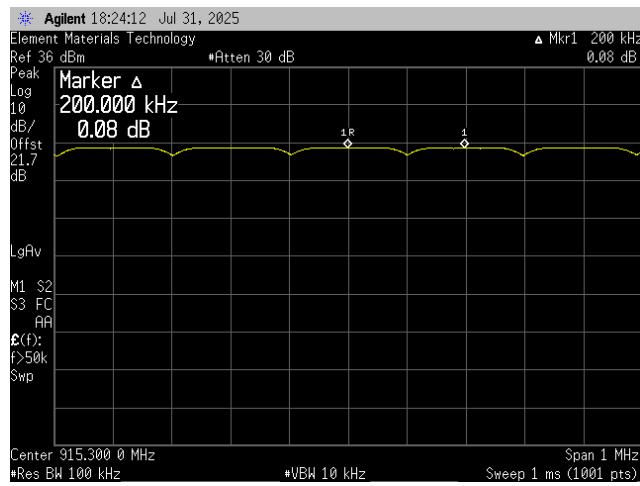
Pass

Tested By

## TEST RESULTS

	Value (kHz)	Limit (kHz)	Results
LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)			
Mid Channel, 915.5 MHz	200	> 136.3	Pass

# CARRIER FREQUENCY SEPARATION



**LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)**

**Mid Channel, 915.5 MHz**

# NUMBER OF HOPPING FREQUENCIES



## TEST DESCRIPTION

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.

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

The number of hopping frequencies was measured across the authorized band. The hopping function of the EUT was enabled.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# NUMBER OF HOPPING FREQUENCIES



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23.8°C
Attendees:	None	Relative Humidity:	49.8%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

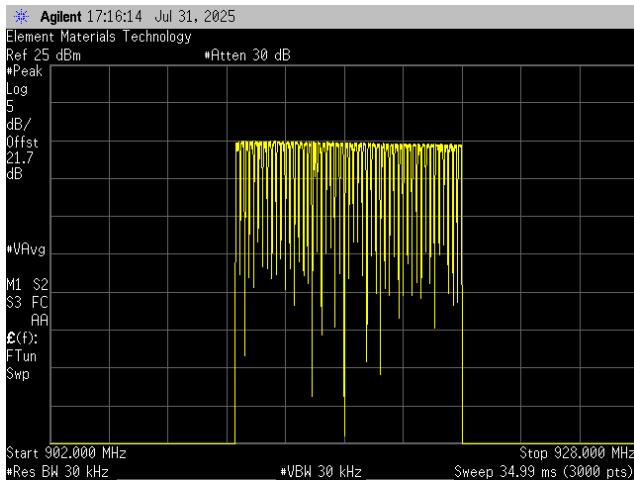
Pass

Tested By

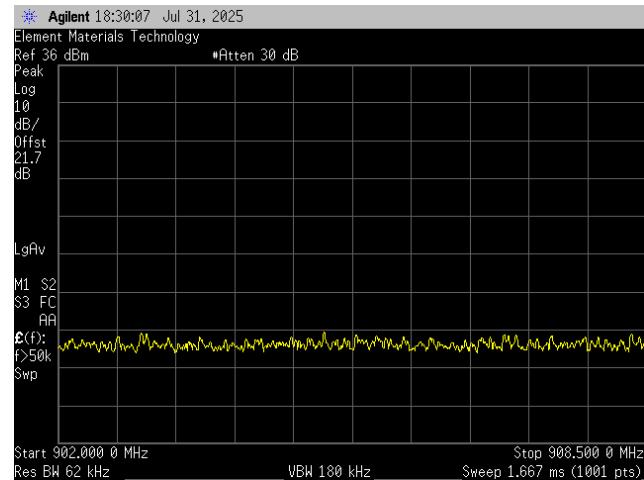
## TEST RESULTS

	Number of Ch. In capture	Total Number of Channels	Limit (≥)	Results
LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)				
902 – 928 MHz	-	-	-	-
902 – 908.5 MHz	0	-	-	-
905.5 - 915 MHz	24	-	-	-
915 – 921.5 MHz	26	-	-	-
921.5 - 928 MHz	0	-	-	-
Calculation	-	50	50	Pass

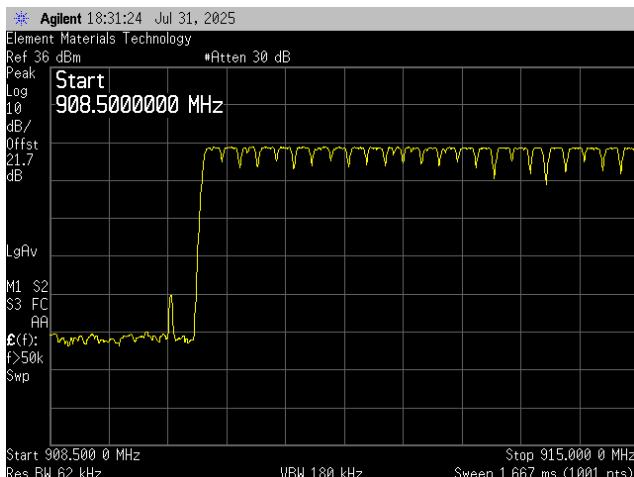
# NUMBER OF HOPPING FREQUENCIES



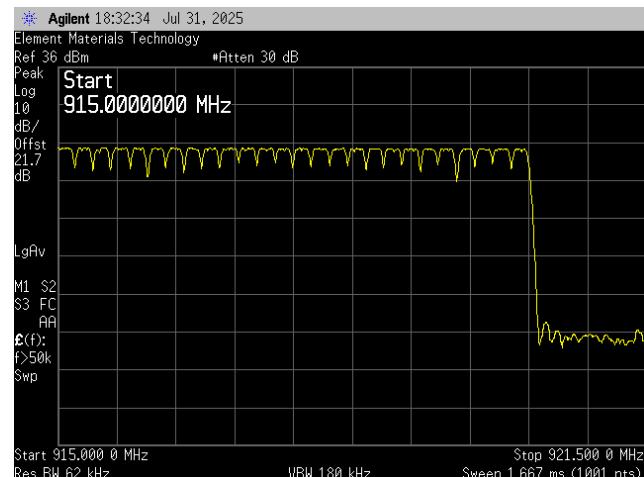
LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)



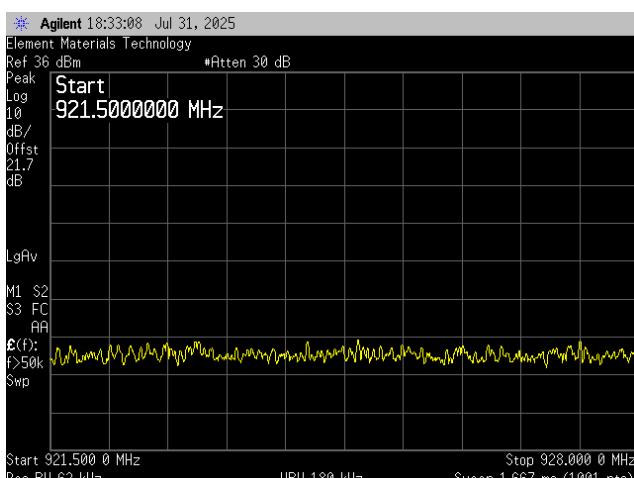
LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)



LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)



LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)



LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)

# DWELL TIME



## TEST DESCRIPTION

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.

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

The average dwell time per hopping channel was measured at one hopping channel in the middle of the authorized band. The hopping function of the EUT was enabled.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# DWELL TIME

EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23.7°C
Attendees:	None	Relative Humidity:	49.7%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

Pass

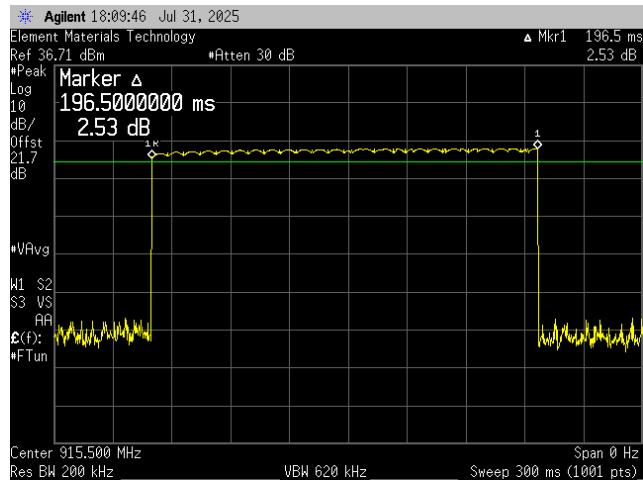


Tested By

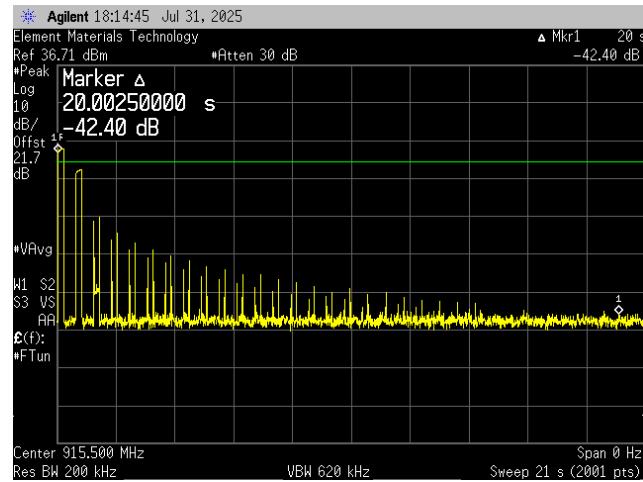
## TEST RESULTS

	Pulse Width (ms)	Number of Pulses	On Time (ms) During 20 s	Limit (ms)	Results
LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)					
Mid Channel, 915.5 MHz	196.5 196.5	N/A 1	N/A 196.5	N/A ≤ 400	N/A Pass

# DWELL TIME



LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)  
Mid Channel, 915.5 MHz



LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)  
Mid Channel, 915.5 MHz

# OCCUPIED BANDWIDTH (20 dB)



## TEST DESCRIPTION

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.

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

The 20 dB emissions bandwidth was measured with the EUT set to low, medium and high transmit frequencies in the band. The EUT was transmitting at the data rate(s) listed in the datasheet in a no-hop mode. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21

# OCCUPIED BANDWIDTH (20 dB)



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corp.	Temperature:	23.5°C
Attendees:	None	Relative Humidity:	49.3%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

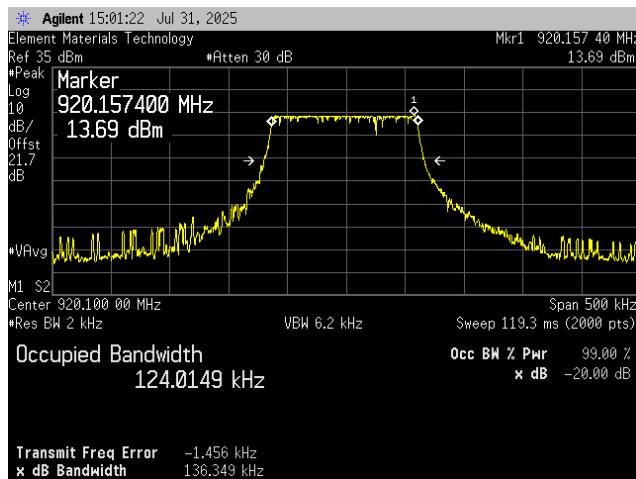
Pass

Tested By

## TEST RESULTS

	Value	Limit (<)	Result
LoRa CSS, 125 kHz BW, Single Channel			
Low Channel, 910.3 MHz	135.356 kHz	250 kHz	Pass
Mid Channel, 915.5 MHz	135.136 kHz	250 kHz	Pass
High Channel, 920.1 MHz	136.349 kHz	250 kHz	Pass

# OCCUPIED BANDWIDTH (20 dB)



**LoRa CSS, 125 kHz BW, Single Channel  
 High Channel, 920.1 MHz**

# OCCUPIED BANDWIDTH (99%)



## TEST DESCRIPTION

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.

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 C63.10:2020, 6.9.3, the spectrum analyzer was configured as follows:

Sweep time: Auto

Resolution Bandwidth: 1% to 5% of the OBW

Video Bandwidth:  $\geq 3 * \text{RBW}$

Trace: Max Hold

Span: Large enough to capture all products of the modulation process, including the emission skirts.

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.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21

# OCCUPIED BANDWIDTH (99%)



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23.5°C
Attendees:	None	Relative Humidity:	49.3%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

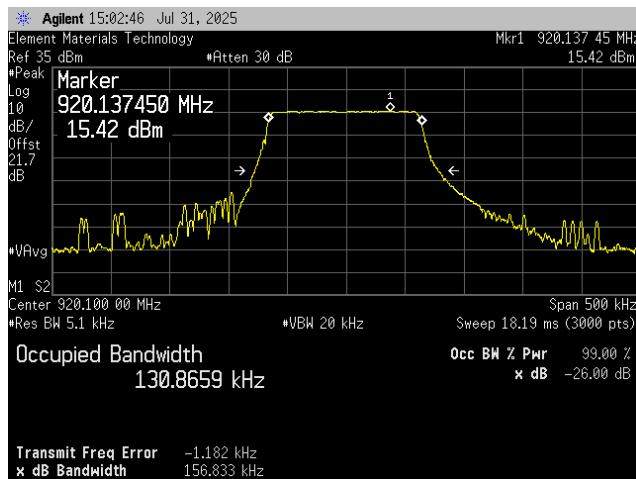
N/A

Tested By

## TEST RESULTS

	Value	Limit	Result
LoRa CSS, 125 kHz BW, Single Channel			
Low Channel, 910.3 MHz	130.255 kHz	N/A	N/A
Mid Channel, 915.5 MHz	130.859 kHz	N/A	N/A
High Channel, 920.1 MHz	130.887 kHz	N/A	N/A

# OCCUPIED BANDWIDTH (99%)



LoRa CSS, 125 kHz BW, Single Channel  
 High Channel, 920.1 MHz

# OUTPUT POWER



## TEST DESCRIPTION

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.

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

The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

The method found in ANSI C63.10:2020 Section 7.8.5 was used for a FHSS radio.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# OUTPUT POWER



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23°C
Attendees:	None	Relative Humidity:	49.7%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

Pass

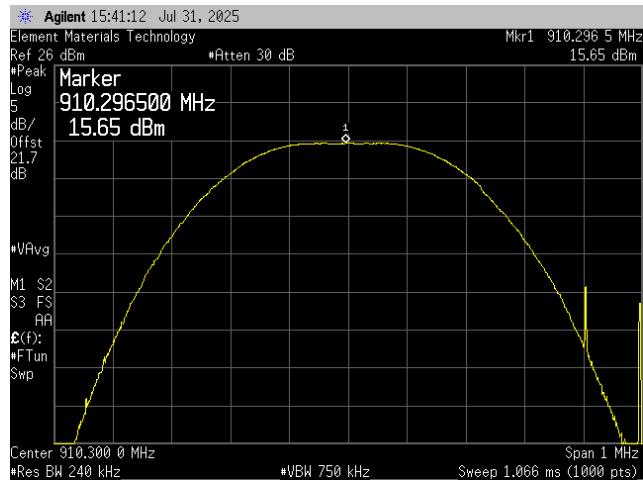


Tested By

## TEST RESULTS

	Out Pwr (dBm)	Limit (dBm)	Result
LoRa CSS, 125 kHz BW, Single Channel			
Low Channel, 910.3 MHz	15.645	36	Pass
Mid Channel, 915.5 MHz	15.502	36	Pass
High Channel, 920.1 MHz	15.125	36	Pass

# OUTPUT POWER



LoRa CSS, 125 kHz BW, Single Channel

Low Channel, 910.3 MHz

# EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



## TEST DESCRIPTION

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.

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

The peak output power was measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting in a no hop mode at the data rate(s) listed in the datasheet.

The method found in ANSI C63.10:2020 Section 7.8.5 was used for a FHSS radio.

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

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21

# EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23°C
Attendees:	None	Relative Humidity:	49.7%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

None

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

Pass

Tested By

## TEST RESULTS

	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
LoRa CSS, 125 kHz BW, Single Channel					
Low Channel, 910.3 MHz	15.645	3.67	19.3	30	Pass
Mid Channel, 915.5 MHz	15.502	3.67	19.2	30	Pass
High Channel, 920.1 MHz	15.125	3.67	18.8	30	Pass

# BAND EDGE COMPLIANCE



## TEST DESCRIPTION

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.

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 band were measured with the EUT set to low and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet in a no hop mode. The channels closest to the band edges were selected.

The spectrum was scanned below the lower band edge and above the higher band edge. The analyzer screen captures for this test show an example of the emission mask for the test mode also used during the radiated spurious emissions at the restricted band edges test.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# BAND EDGE COMPLIANCE



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23°C
Attendees:	None	Relative Humidity:	49.6%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

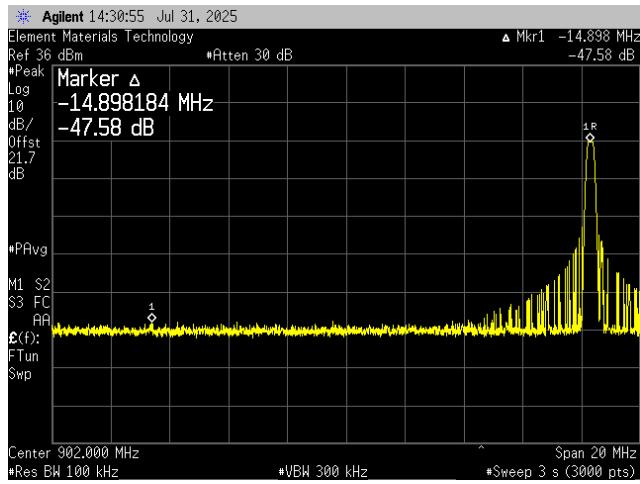
Pass

Tested By

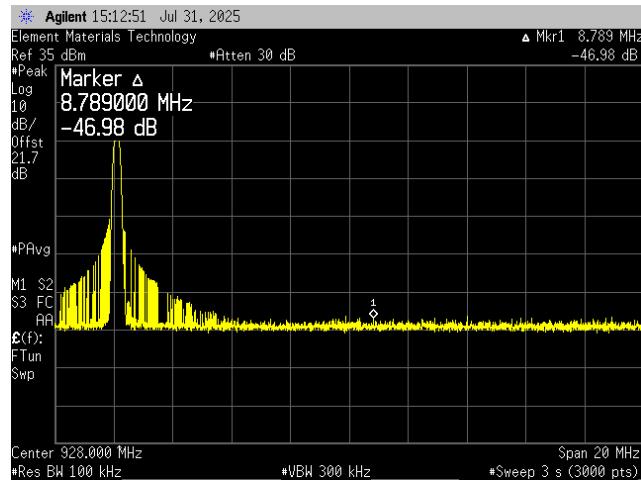
## TEST RESULTS

	Value (dBc)	Limit ≤ (dBc)	Result
LoRa CSS, 125 kHz BW, Single Channel			
Low Channel, 910.3 MHz	-47.58	-20	Pass
High Channel, 920.1 MHz	-46.98	-20	Pass

# BAND EDGE COMPLIANCE



LoRa CSS, 125 kHz BW, Single Channel  
Low Channel, 910.3 MHz



LoRa CSS, 125 kHz BW, Single Channel  
High Channel, 920.1 MHz

# BAND EDGE COMPLIANCE - HOPPING MODE



## TEST DESCRIPTION

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.

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 band were measured with the EUT set to its normal pseudo-random hopping sequence. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge. The analyzer screen captures for this test show an example of the emission mask for the test mode also used during the radiated spurious emissions at the restricted band edges test.

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# BAND EDGE COMPLIANCE - HOPPING MODE



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23.7°C
Attendees:	None	Relative Humidity:	49.9%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

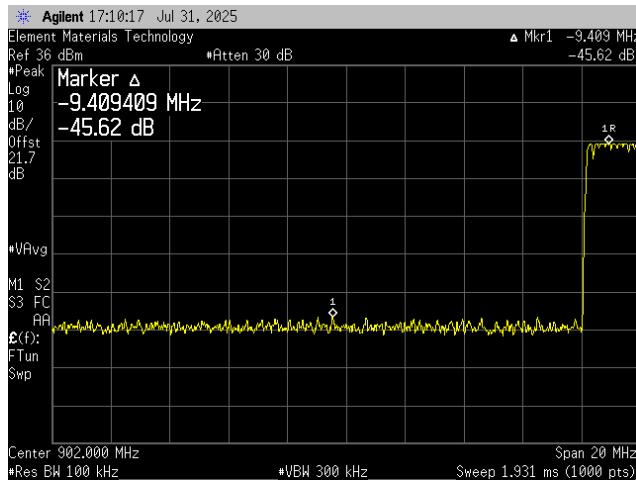
Pass

Tested By

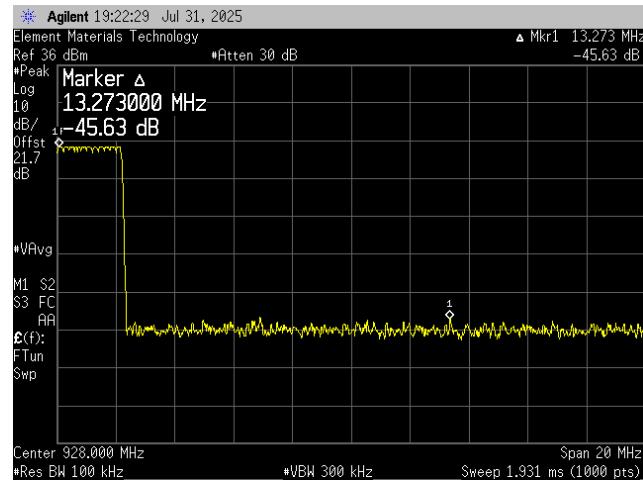
## TEST RESULTS

	Value (dBc)	Limit ≤ (dBc)	Result
LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)			
Low Channel, 910.3 MHz	-45.62	-20	Pass
High Channel, 920.1 MHz	-45.63	-20	Pass

# BAND EDGE COMPLIANCE - HOPPING MODE



**LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)**  
**Low Channel, 910.3 MHz**



**LoRa, CSS, 125 kHz BW, Hopping Mode (All Channels)**  
**High Channel, 920.1 MHz**

# SPURIOUS CONDUCTED EMISSIONS



## TEST DESCRIPTION

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.

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 low, medium and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet in a no-hop mode. 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

## TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2025-03-14	2026-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2025-03-21	2026-03-21
Block - DC	Fairview Microwave	SD3379	AMW	2025-03-21	2026-03-21
Attenuator	S.M. Electronics	SA26B-20	AWV	2025-03-21	2026-03-21
Generator - Signal	Agilent	N5181A	TIG	2023-04-18	2026-04-18

# SPURIOUS CONDUCTED EMISSIONS



EUT:	DAIC-ACB-XN	Work Order:	DTAI0006
Serial Number:	250311-FA26729161F0	Date:	2025-07-31
Customer:	Dot Ai Corporation	Temperature:	23°C
Attendees:	None	Relative Humidity:	49.7%
Customer Project:	None	Bar. Pressure (PMSL):	1017 mbar
Tested By:	Jeff Alcocke	Job Site:	EV06
Power:	12 VDC via 110VAC/60Hz	Configuration:	DTAI0006-2

## COMMENTS

Reference level offset includes; DC block, 20 dB attenuator, measurement cable, and manufacturers patch cable.

## DEVIATIONS FROM TEST STANDARD

None

## CONCLUSION

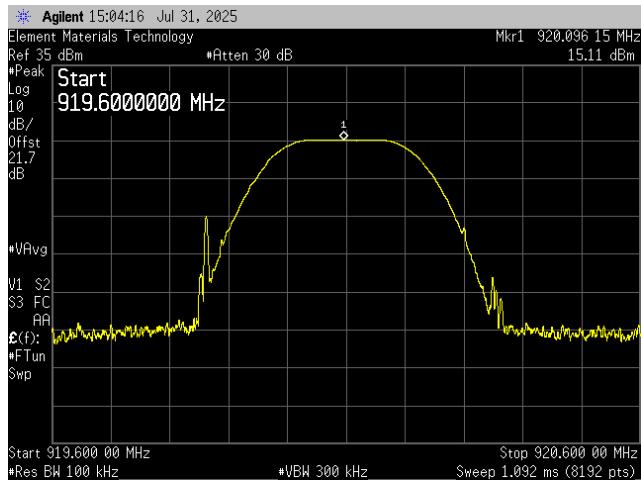
Pass

Tested By

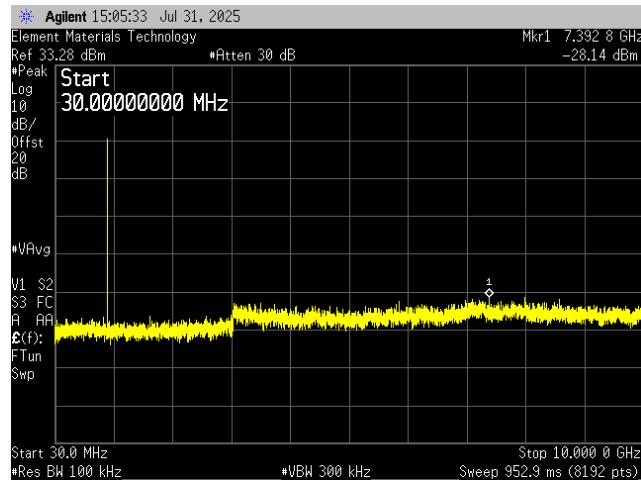
## TEST RESULTS

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
LoRa CSS, 125 kHz BW, Single Channel					
Low Channel, 910.3 MHz	Fundamental 30 MHz - 10 GHz	910.26 7704.4	N/A -43.66	N/A -20	N/A Pass
Mid Channel, 915.5 MHz	Fundamental 30 MHz - 10 GHz	915.25 8588.1	N/A -43.76	N/A -20	N/A Pass
High Channel, 920.1 MHz	Fundamental 30 MHz - 10 GHz	920.1 7392.8	N/A -43.25	N/A -20	N/A Pass

# SPURIOUS CONDUCTED EMISSIONS



LoRa CSS, 125 kHz BW, Single Channel  
High Channel, 920.1 MHz



LoRa CSS, 125 kHz BW, Single Channel  
High Channel, 920.1 MHz

End of Test Report