

RADIO TEST REPORT

FCC 47 CFR Part 15C

Digital transmission systems operating within the 902.0 MHz - 928.0 MHz band

Report Reference No	G0M-2605-3688-TFC247DT01-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	  Deutsche Akkreditierungsstelle D-PL-12092-01-00 DAkkS - Registration number : D-PL-12092-01-00 FCC Filed Test Laboratory, Reg.-No.: 96970
Applicant	deZem GmbH
Address	Wilmsdorfer Straße 60 10627 Berlin GERMANY
Test Specification	47 CFR Part 15C
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply networks
Model(s)	Harvy2
Brand Name(s)	Harvy2
Hardware Version(s)	1.0 D
Software Version(s)	1.4.0
FCC ID	2BUTG-HARVY2A
Test Result	PASSED

Possible test case verdicts:		
Required by standard but not tested	N/T	
Not required by standard	N/R	
Not applicable to EUT	N/A	
Test object does meet the requirement	P(PASS)	
Test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	20 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	See test sample identification table on page 6	
Report:		
Compiled by	Md Abu Bakar Siddique	
Tested by (+ signature) (Responsible for Test)	Md Abu Bakar Siddique	
Approved by (+ signature) (Senior Radio Expert)	Radwan Jaafar	
Date of Issue	2026-09-23	
Total number of pages	102	
General Remarks:		
1. The test results presented in this report relate only to the object tested, as it was provided by the customer, and under the test conditions described in this report. The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report. 2. The relevant information are provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility. 3. The issuing testing laboratory tested the equipment mentioned on first page in accordance with the requirements set forth in the test specifications mentioned on first page. All indications of Pass/Fail in this report are opinions expressed by Eurofins Product Service GmbH based on interpretations and/or observations of test results. When the test result on first page shows the status "PASSED", the equipment tested is capable of demonstrating compliance with requirements as documented in this test report. 4. This report shall not be reproduced, except in full, without the written approval of the issuing testing laboratory.		
Additional Comments:		
None		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2026-09-23	Initial Release	--

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V _{NOM}	Nominal supply voltage

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1 Equipment (Test Item) Under Test

Description	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply networks			
Model	Harvy2			
Brand Name(s)	Harvy2			
Sample Identification	EUT #	Sample-ID	Serial Number	Date of receipt
	EUT 1	53508	014471	2026-05-26
Hardware Version(s)	1.0 D			
Software Version(s)	1.4.0			
FCC ID	2BUTG-HARVY2A			
Equipment type	End Product			
Radio type	Transceiver			
Assigned frequency bands	902.0 MHz - 928.0 MHz			
Radio technology	Hybrid System			
Modulation	LoRa			
Emission designator	For 125 kHz carrier bandwidth: 125KF1D For 500 kHz carrier bandwidth: 500KF1D			
Number of antenna ports	1			
Antenna	Type	External antenna		
	Model	Delta 22B		
	Manufacturer	Siretta		
	Gain	5.22 dBi (antenna datasheet)		
Radio Module	Type	LoRaWAN module		
	Model	Harvy2		
	Manufacturer	deZem GmbH		
	HW Version	1.0D		
	SW Version	Test 1.0		
	FCC-ID	Not Specified		
Supply Voltage	V _{NOM}	12 V AC via inductive coupling directly from an AC power line.		
Operating Temperature	T _{NOM}	20°C		
Dedicated AC/DC-Adaptor	None			
Manufacturer	deZem GmbH Wilmsdorfer Straße 60 10627 Berlin GERMANY			

1.1 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Laptop	Lenovo	L470	Lab Support Equipment
SFT	Harvy2 Toolbox	deZem GmbH	v0.3.0	Customer Support Equipment
CBL	USB cable	--	--	--
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment: --				

1.2 EUT Configuration

Configuration #	Description
1	EUT is powered by USB type C port connected to test laptop this port is also used for programming the EUT, RS232-port was terminated by provided clamp-on current transformer. External antenna is connected to the EUT and used as radiated sample.
2	EUT is powered by USB port connected to test laptop, External antenna is disconnected from the EUT and used as a conducted sample.
Comment: --	

1.3 Test mode duty cycle

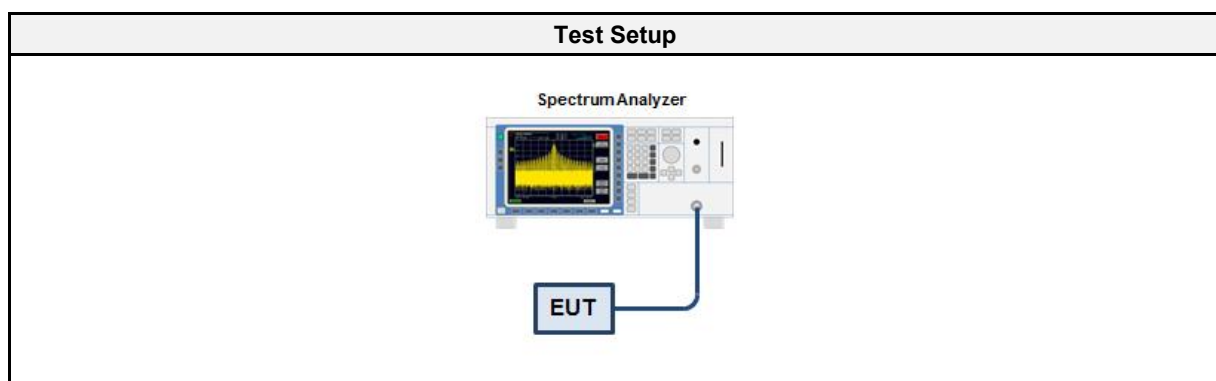
1.3.1 Information

Test Information	
Measurement Method	ANSI C63.10-2020 11.6

1.3.2 Requirements

Requirements	
Duty cycle	Duty cycle correction
$\geq 98 \%$	No correction required
$< 98 \%$	Correction required ($20 \times \log_{10}(1/DC)$)

1.3.3 Setup



1.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08

1.3.5 Procedure

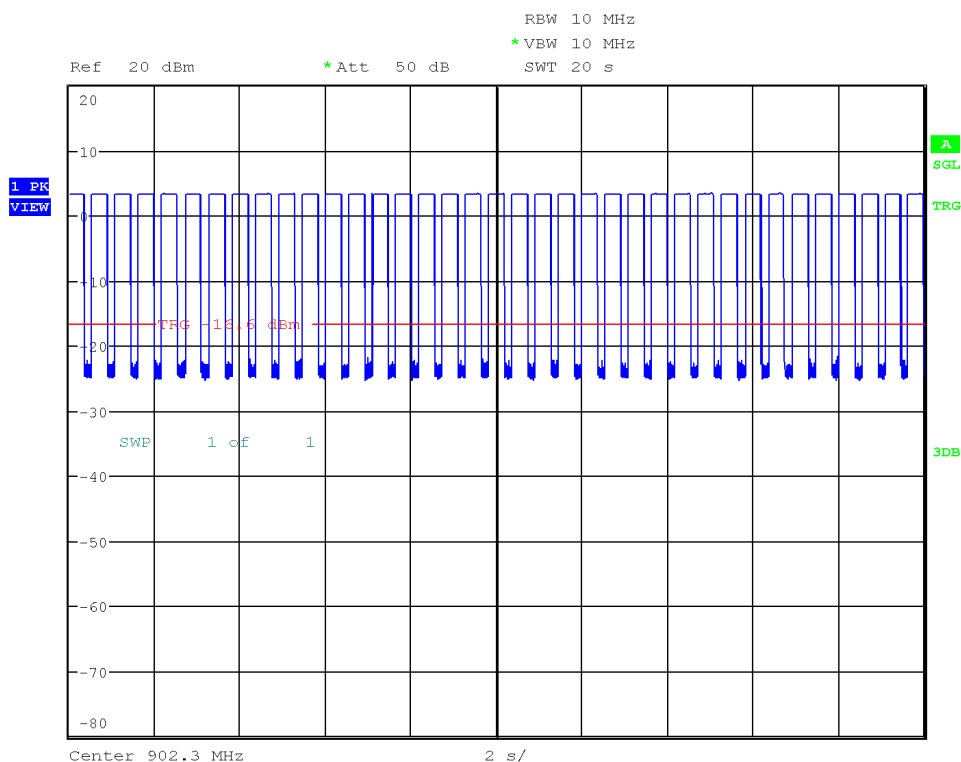
Test Procedure
1. EUT set to test mode 2. Span is set to zero span 3. Detector set to peak 4. Sweep time is set long enough to capture at least 5 bursts 5. Envelope peak value of emission spectrum is selected 6. The maximum burst duration T_{ON} is measured using two markers set to the start and the end of the longest burst 7. The minimum idle duration T_{OFF} is measured using two markers set to the start and the end of the shortest idle period 8. The duty cycle is calculated by $DC = T_{ON} / (T_{ON} + T_{OFF})$ 9. The duty cycle correction is calculated by $DC = 20 \times \log_{10}(T_{ON} / (T_{ON} + T_{OFF}))$

1.3.6 Results

Duty Cycle Results		
Mode	Duty Cycle	Correction Factor [dB]
SF7 - FHSS	0.70	-3.10
SF8 - FHSS	0.70	-3.10
SF9 - FHSS	0.69	-3.22
SF10 - FHSS	0.54	-5.35
SF8 - DTS	0.38	-8.40

Duty Cycle

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: ANSI C63.10:2013
 Reference Method: ANSI C63.10:2013, Section 7.5
 Operating Frequency: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: LoRa, FHSS, 902.3 MHz, Payload 242 bytes, Pause 100ms, DR3(SF7)
 Duty Cycle Period [ms]: 20000
 Maximum Duty Cycle: 0.70
 Maximum Duty Cycle [%]: 70
 Duty Cycle Correction [dB]: -3.10



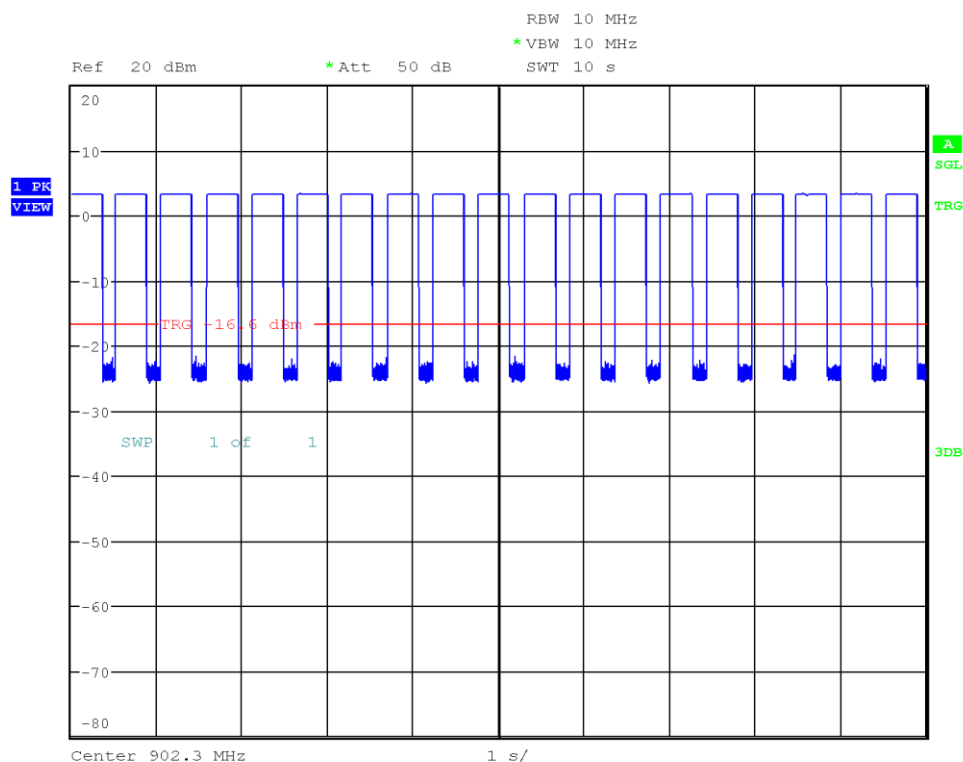
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Duty Cycle

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: ANSI C63.10:2013
 Reference Method: ANSI C63.10:2013, Section 7.5
 Operating Frequency: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: LoRa, FHSS, 902.3 MHz, Payload 125 bytes, Pause 100ms, DR2(SF8)
 Duty Cycle Period [ms]: 10000
 Maximum Duty Cycle: 0.70
 Maximum Duty Cycle [%]: 70
 Duty Cycle Correction [dB]: -3.10



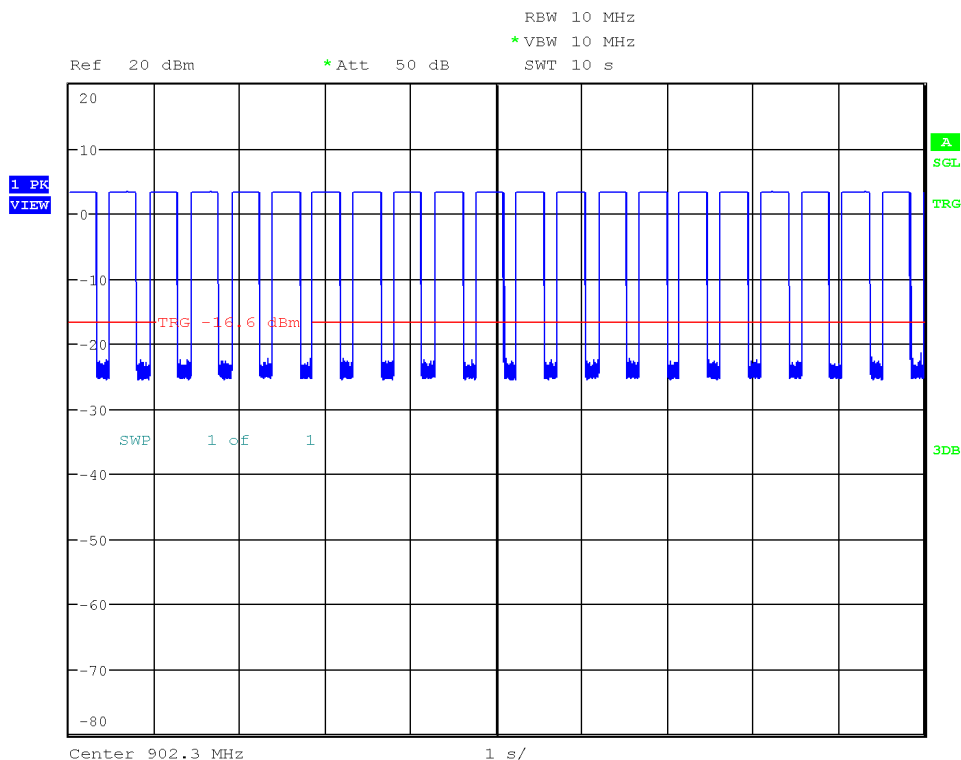
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Duty Cycle

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: ANSI C63.10:2013
 Reference Method: ANSI C63.10:2013, Section 7.5
 Operating Frequency: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: LoRa, FHSS, 902.3 MHz, Payload 53 bytes, Pause 100ms, DR1(SF9)
 Duty Cycle Period [ms]: 10000
 Maximum Duty Cycle: 0.69
 Maximum Duty Cycle [%]: 69
 Duty Cycle Correction [dB]: -3.22



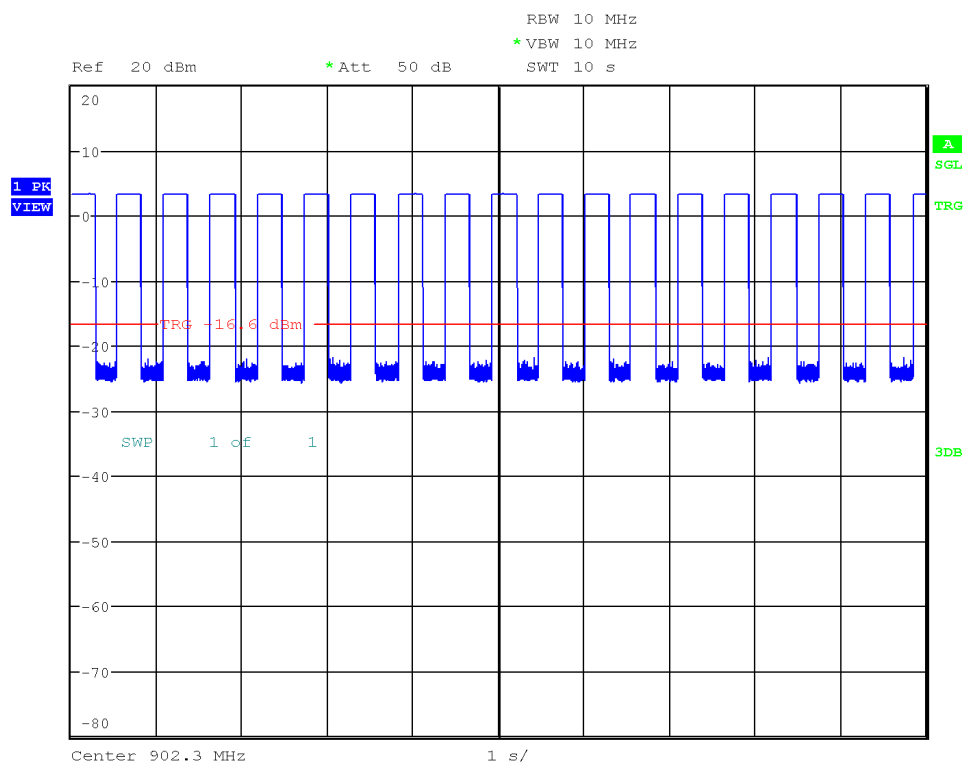
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Duty Cycle

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: ANSI C63.10:2013
 Reference Method: ANSI C63.10:2013, Section 7.5
 Operating Frequency: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: LoRa, FHSS, 902.3 MHz, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Duty Cycle Period [ms]: 10000
 Maximum Duty Cycle: 0.54
 Maximum Duty Cycle [%]: 54
 Duty Cycle Correction [dB]: -5.35



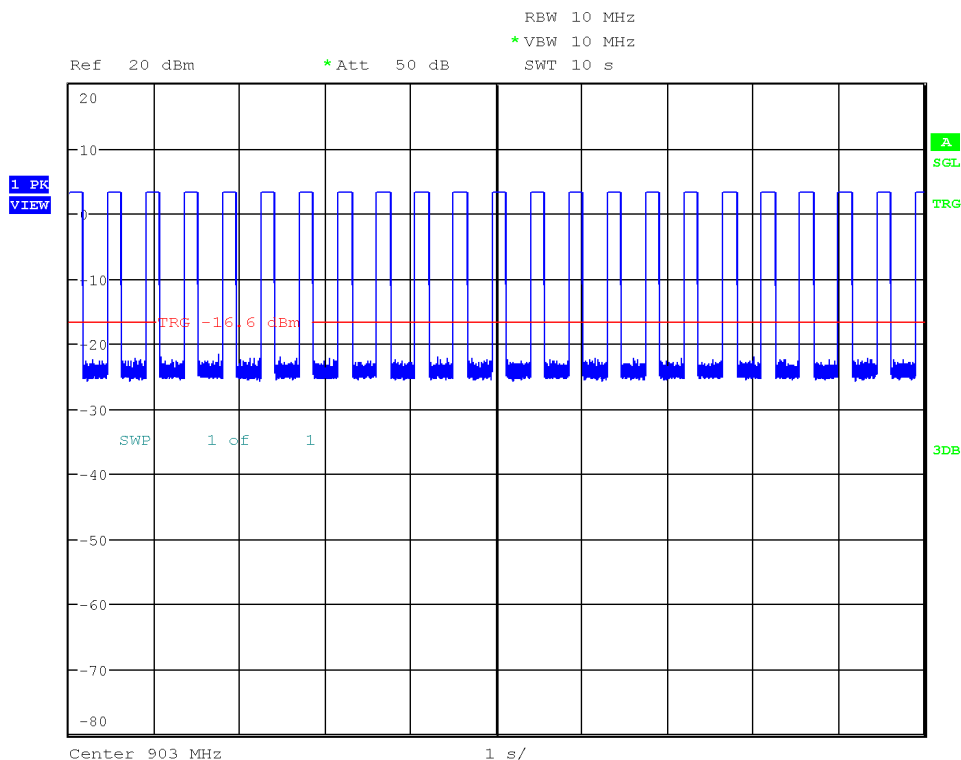
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Duty Cycle

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: ANSI C63.10:2013
 Reference Method: ANSI C63.10:2013, Section 7.5
 Operating Frequency: 903 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: LoRa, DTS, 903 MHz, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Duty Cycle Period [ms]: 10000
 Maximum Duty Cycle: 0.38
 Maximum Duty Cycle [%]: 38
 Duty Cycle Correction [dB]: -8.40



Date: 15.JUN.2026 12:23:58

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

1.4 Test Modes

Mode	Description
Mode 1	Mode = DTS Transmit single frequency Modulation = LoRa Bandwidth = 500 kHz Duty cycle = 38% Power setting = 5 dBm Data rate = DR4(SF8) Pause = 100ms
Mode 2	Mode = FHSS Transmit single frequency Modulation = LoRa Bandwidth = 125 kHz Duty cycle = 54% Power setting = 1 dBm Data rate = DR0(SF10) Pause = 100ms
Mode 3	Mode = FHSS Transmit mode Modulation = LoRa Bandwidth = 125 kHz Duty cycle = 0.007% Power setting = 1 dBm Data rate = DR3(SF7)
Receive	Mode = Receive Modulation = LoRa Bandwidth = 500 kHz Data rate = DR4(SF8)
Comment: Test mode selection was based on pre-compliance measurement of all operational modes. The operational Mode 1 and Mode 2 were selected for power based and bandwidth-based compliance tests.	

1.5 Test Frequencies

Designator	LoRa DTS 500 kHz	Channel	Frequency [MHz]
F1	Tx	0	903.0
F2	Tx	3	907.8
F3	Tx	7	914.2
F4	Rx	3	925.1

Designator	LoRa FHSS 125 kHz	Channel	Frequency [MHz]
F5	Tx	0	902.3
F6	Tx	32	908.7
F7	Tx	64	914.9

1.6 Sample emission level calculation

The following is a description of terms and a sample calculation, as appears in the radiated emissions data table. The numbers used in the calculation are for example only. There is no direct correlation to the specific data taken for the product described in this document:

Reading:

This is the reading obtained on the spectrum analyzer in dBμV. Any external preamplifiers used are taken into account through internal analyzer settings.

A.F.:

This is the antenna factor for the receiving antenna. It is a conversion factor, which converts electric fields strengths to voltages, which can be measured directly on the spectrum analyzer. It is treated as a loss in dB. Cable losses have been included with the A.F. to simplify the calculations. The antenna factor is used in calculations as follows:

$$\text{Reading on Analyzer (dB}\mu\text{V)} + \text{A.F. (dB/m)} = \text{Net field strength (dB}\mu\text{V/m)}$$

Net:

This is the net field strength measurement (as shown above).

Margin:

This is the margin of compliance below the FCC limit. The units are given in dB. A negative margin indicates the emission was below the limit. A positive margin indicates that the emission exceeds the limit.

Field strength limit:

This is the FCC Class B radiated emission limit (in units of dBμV/m). The FCC limits are given in units of μV/m. The following formula is used to convert the units of μV/m to dBμV/m:

$$\text{Field strength limit (dB}\mu\text{V/m)} = 20 \cdot \log (\mu\text{V/m})$$

Example only for radiated field strength:

$$\text{Reading} + \text{AF} = \text{Net Reading} : \text{Net reading} - \text{Field strength limit} = \text{Margin}$$

1.7 Measurement Uncertainties

Test case	Maximum measurement uncertainty
Occupied Bandwidth	1.3 %
20 dB Bandwidth	1.3 %
Frequency hopping channel separation	3.14 %
Time of occupancy (Dwell time)	78.53 %
Maximum peak conducted power	1.24 dB
AC power line conducted emissions	3.82 dB
Band edge compliance	1.8 dB
Conducted spurious emissions	4.25 dB
Transmitter radiated spurious emissions	5.95 dB
Receiver radiated spurious emissions	5.95 dB
6 dB Bandwidth	1.3 %
Power spectral density	1.73 dB

2 Result Summary

FCC 47 CFR Part 15C				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
FCC § 15.247(a)(1)	20 dB Bandwidth	ANSI C63.10-2020	PASS	--
FCC § 15.247(a)(1)(i)	Number of hopping frequencies	ANSI C63.10-2020	N/R	Not required for hybrid system
FCC § 15.247(a)(1)	Frequency hopping channel separation	ANSI C63.10-2020	PASS	--
FCC § 15.247(a)(1)(i)	Time of occupancy (Dwell time)	ANSI C63.10-2020	PASS	--
FCC § 15.247(a)(2)	6 dB Bandwidth	ANSI C63.10-2020	N/R	Not required for hybrid system
FCC § 15.247(e)	Power spectral density	ANSI C63.10-2020	PASS	--
FCC § 15.247(b)	Maximum peak conducted power	ANSI C63.10-2020	PASS	--
FCC § 15.207	AC power line conducted emissions	ANSI C63.10-2020	PASS	--
FCC § 15.247(d)	Band edge compliance	ANSI C63.10-2020	PASS	--
FCC § 15.247(d)	Conducted spurious emissions	ANSI C63.10-2020	PASS	--
FCC § 15.247(d) FCC § 15.209	Transmitter radiated spurious emissions	ANSI C63.10-2020	PASS	--
Comment: The Decision Rule is applied on the basis of ANSI C63.23 and ETSI TR 100 028. These standards provide guidance on how to calculate and apply measurement uncertainty whilst providing maximum uncertainties allowance. In all cases due consideration will be given to ILAC-G8:09/2019. Where a result is considered conditional in respect of its proximity to the limit line, the customer would be made aware of situation so that they can make an informed decision on how to proceed.				

Possible Test Case Verdicts	
PASS	Test object does meet the requirements
FAIL	Test object does not meet the requirements
N/T	Required by standard but not tested
N/R	Not required by standard for the test object

3 Test Conditions and Results

3.1 Test Conditions and Results - Occupied bandwidth and 20 dB bandwidth

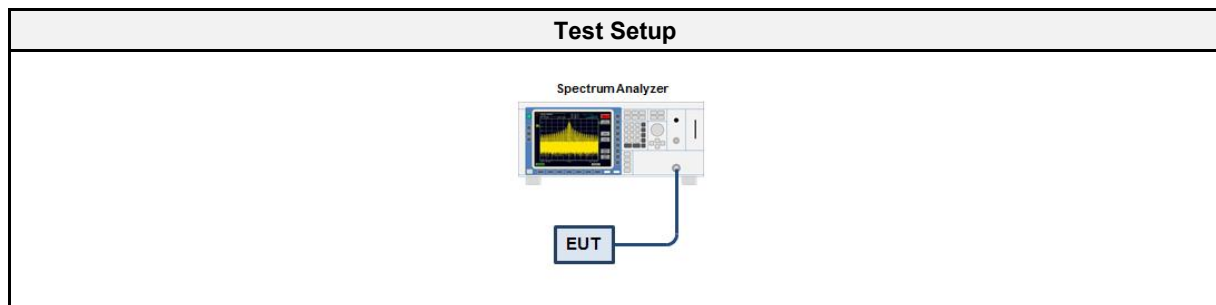
3.1.1 Information

Test Information	
Reference	FCC § 15.247(a)(1)
Measurement Method	ANSI C63.10 6.9.3; ANSI C63.10 6.9.2
Test Sample ID	53508
Operator	Md Abu Bakar Siddique
Date	2026-06-15

3.1.2 Limits

Limits	
Number of hopping channels ≥ 50 Time of occupancy ≤ 0.4 s within 20 s	20 dB BW < 250 kHz
Number of hopping channels ≥ 25 Time of occupancy ≤ 0.4 s within 10 s	250 kHz $\leq$ 20 dB BW < 500 kHz

3.1.3 Setup



3.1.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.1.5 Procedure

Test Procedure - Occupied Bandwidth
1. EUT transmitter is activated in test mode under normal conditions 2. The spectrum analyzer is set to peak detection and maximum hold with a span twice the emission spectrum 3. The resolution bandwidth is set to the range of 1 % to 5 % of the occupied bandwidth 4. The occupied bandwidth is measured with the build-in analyzer function

Test Procedure - 20 dB Bandwidth

1. EUT set to test mode (Communication tester is used if needed)
2. Span set to at least twice the emission spectrum
3. Detector set to peak and max hold
4. RBW is set to 1% to 5% of occupied bandwidth, VBW is set to 3 times RBW
5. Envelope peak value of emission spectrum is selected
6. Marker on envelope of spectrum is set to level of -20 dB to the left of the peak
7. Marker on envelope of spectrum is set to level of -20 dB to the right of the peak
8. 20dB Bandwidth is determined by marker frequency separation

3.1.6 Results

Test Results - Occupied Bandwidth

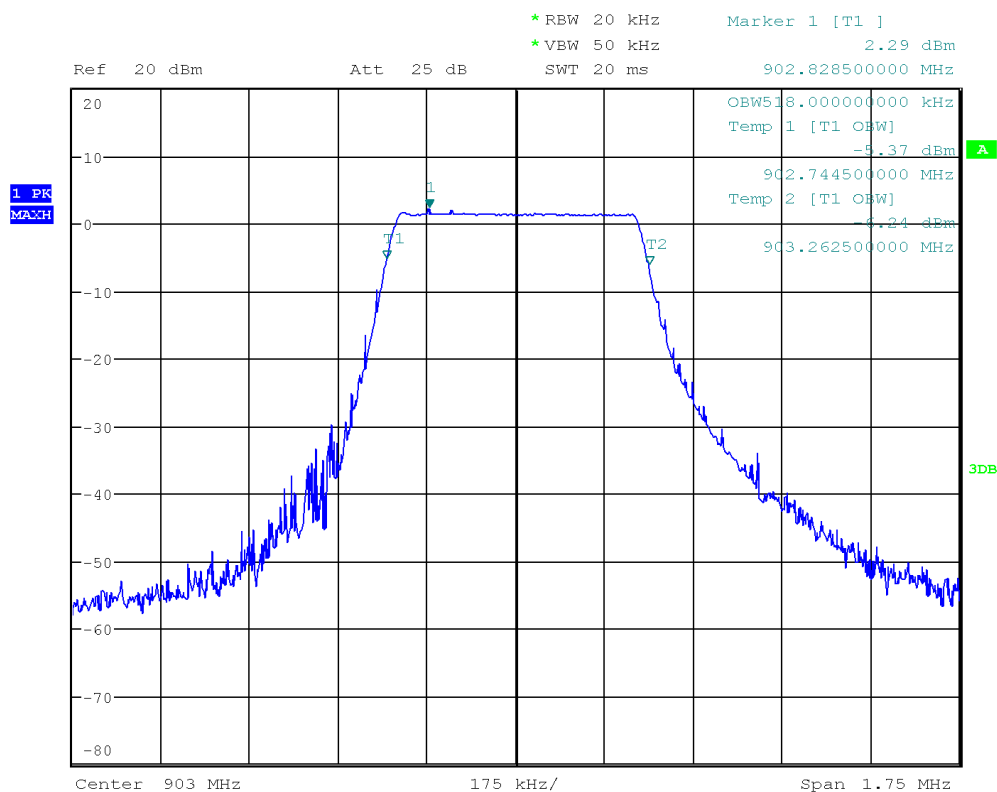
Mode	Frequency [MHz]	Bandwidth [MHz]
Mode 1	903.0	0.518
Mode 1	907.8	0.520
Mode 1	914.2	0.516
Mode 2	902.3	0.126
Mode 2	908.7	0.126
Mode 2	914.9	0.126

Test Results - 20 dB Bandwidth

Mode	Frequency [MHz]	Bandwidth [MHz]
Mode 2	902.3	0.138
Mode 2	908.7	0.138
Mode 2	914.9	0.138

Occupied Bandwidth

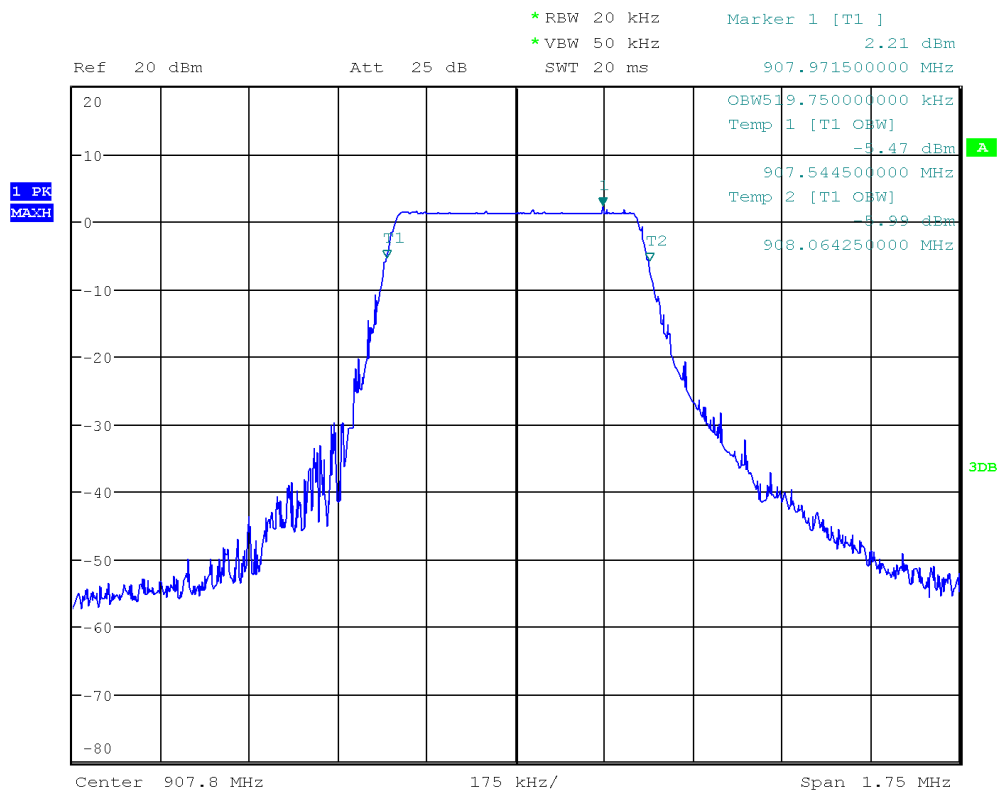
Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.8.1 Option 1, Section 6.9.3
 Operational Mode: LoRa, Channel: 903 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Occupied Bandwidth [MHz]: 0.518



Date: 15.JUN.2026 12:54:32

Occupied Bandwidth

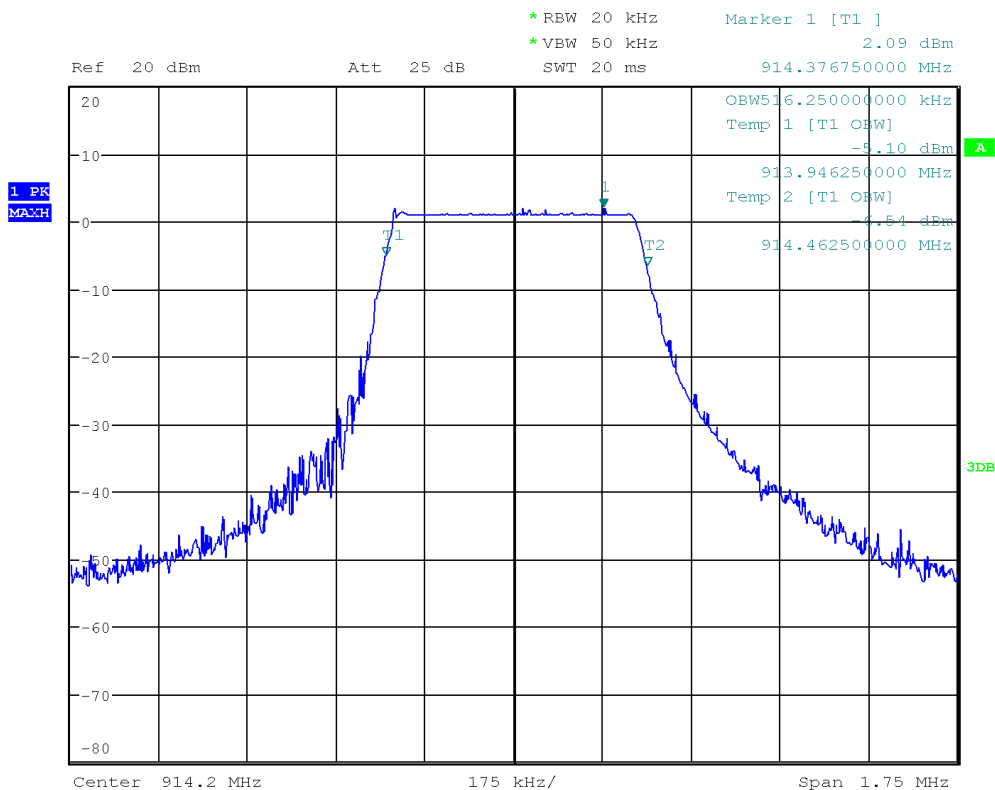
Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.8.1 Option 1, Section 6.9.3
 Operational Mode: LoRa, Channel: 907.8 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Occupied Bandwidth [MHz]: 0.520



Date: 15.JUN.2026 12:58:38

Occupied Bandwidth

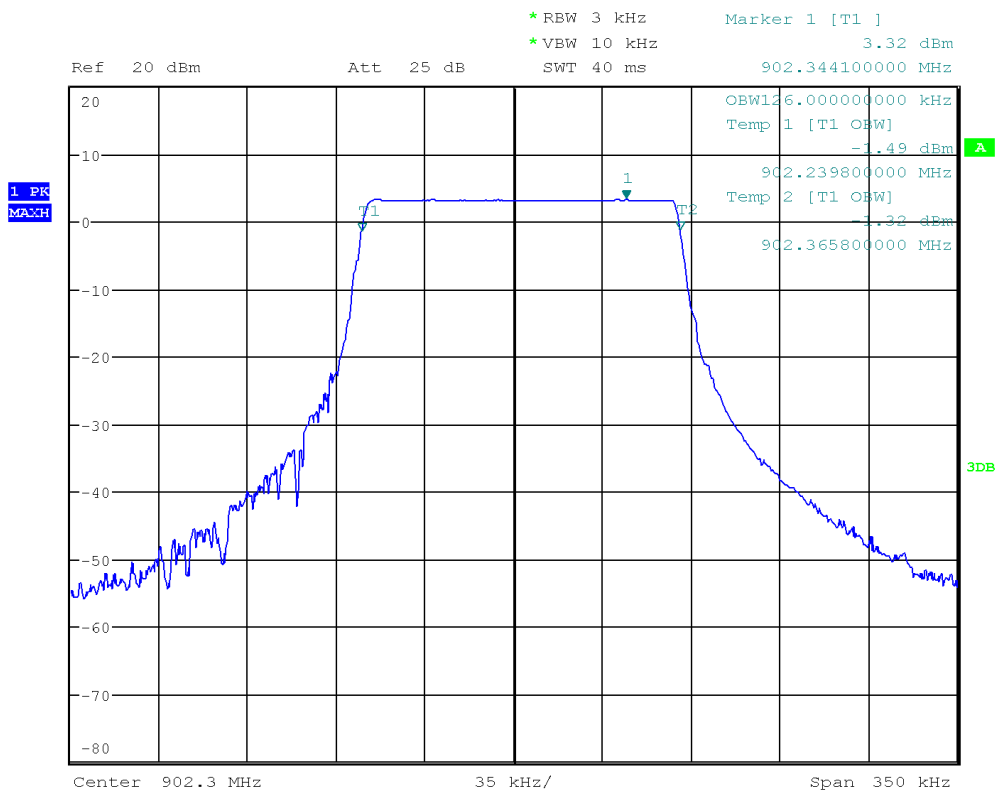
Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.8.1 Option 1, Section 6.9.3
 Operational Mode: LoRa, Channel: 914.2 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Occupied Bandwidth [MHz]: 0.516



Date: 15.JUN.2026 13:00:45

Occupied Bandwidth

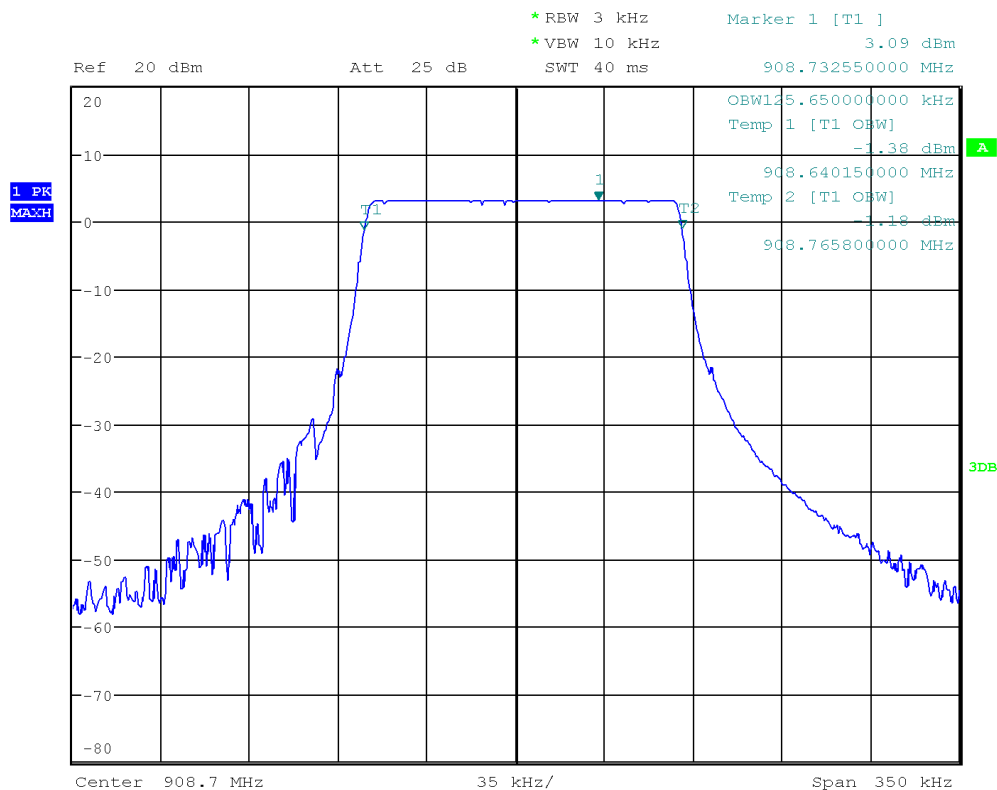
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 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.8.1 Option 1, Section 6.9.3
 Operational Mode: LoRa, Channel: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 2
 Occupied Bandwidth [MHz]: 0.126



Date: 15.JUN.2026 13:15:13

Occupied Bandwidth

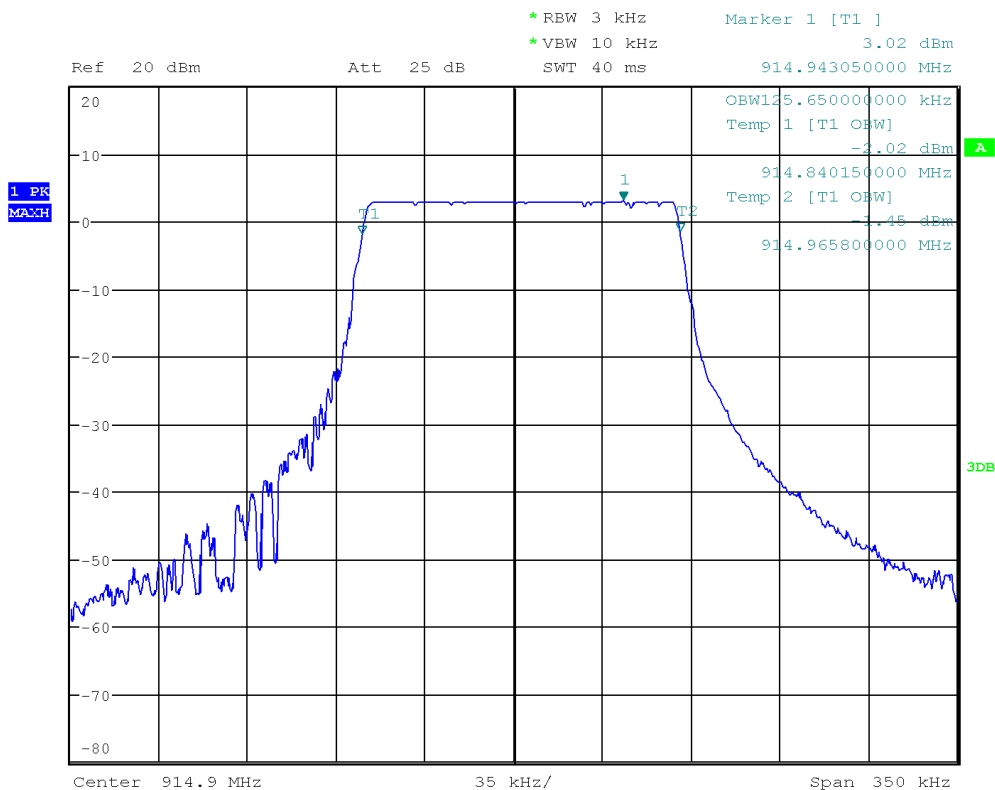
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 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.8.1 Option 1, Section 6.9.3
 Operational Mode: LoRa, Channel: 908.7 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 2
 Occupied Bandwidth [MHz]: 0.126



Date: 15.JUN.2026 13:17:35

Occupied Bandwidth

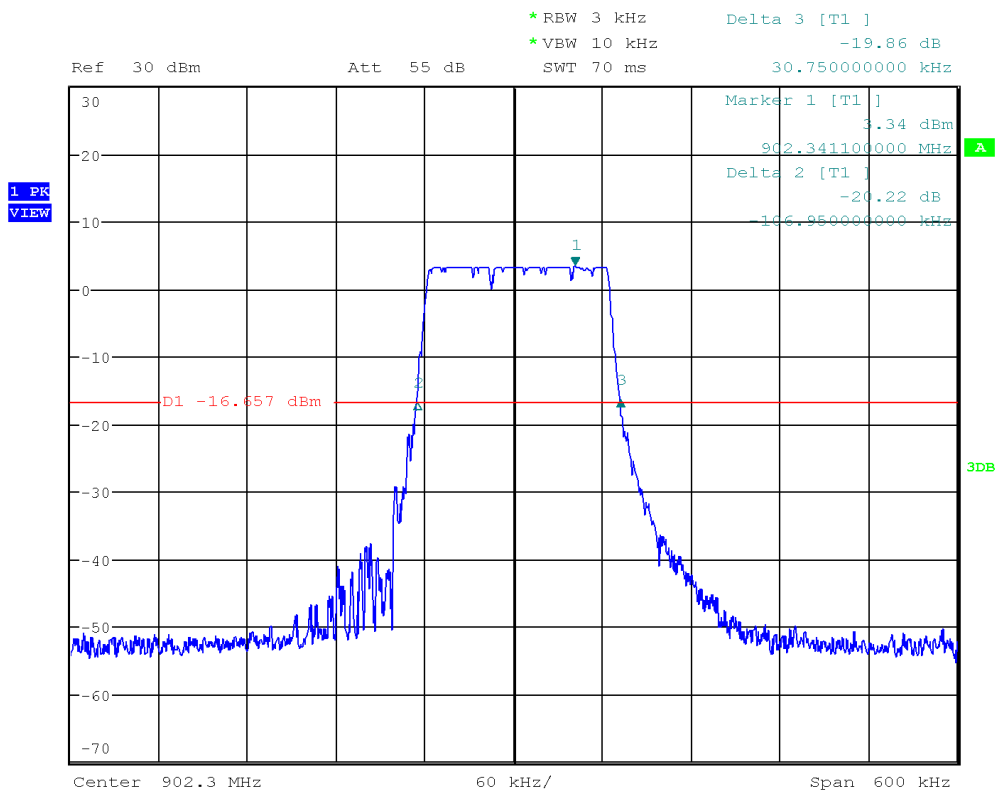
Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.8.1 Option 1, Section 6.9.3
 Operational Mode: LoRa, Channel: 914.9 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 2
 Occupied Bandwidth [MHz]: 0.126



Date: 15.JUN.2026 13:19:43

20 dB Bandwidth

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 6.9.2
 Operational Mode: LoRa, single, Channel: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 2
 Lower Frequency [MHz]: 902.234
 Upper Frequency [MHz]: 902.372
 20 dB Bandwidth [kHz]: 138



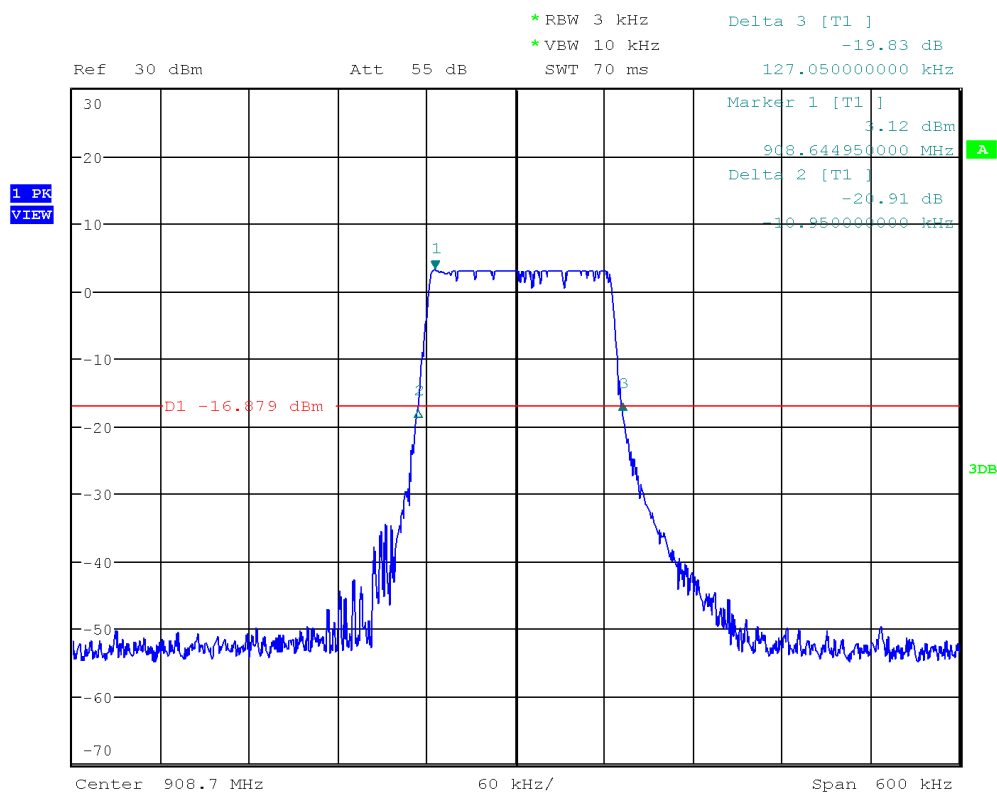
Date: 15.JUN.2026 14:09:21

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

20 dB Bandwidth

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 6.9.2
 Operational Mode: LoRa, single, Channel: 908.7 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 2
 Lower Frequency [MHz]: 908.634
 Upper Frequency [MHz]: 908.772
 20 dB Bandwidth [kHz]: 138



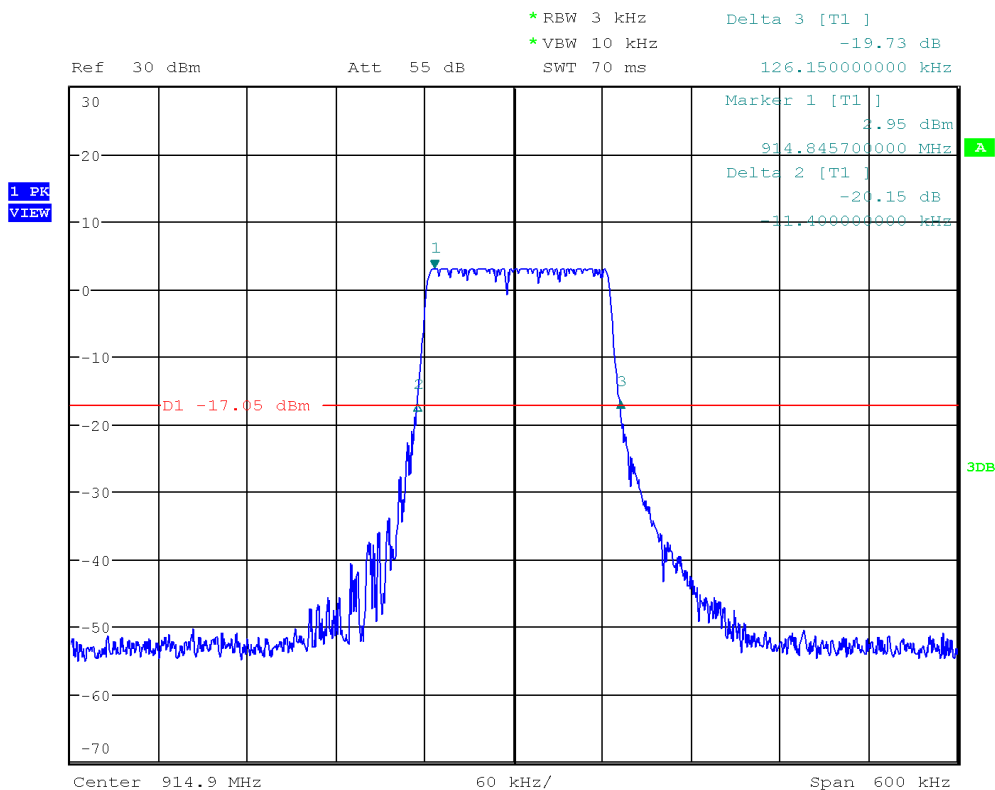
Date: 15.JUN.2026 14:11:11

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

20 dB Bandwidth

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 6.9.2
 Operational Mode: LoRa, single, Channel: 914.9 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 2
 Lower Frequency [MHz]: 914.834
 Upper Frequency [MHz]: 914.972
 20 dB Bandwidth [kHz]: 138



Date: 15.JUN.2026 14:12:40

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.2 Test Conditions and Results - Maximum peak conducted output power

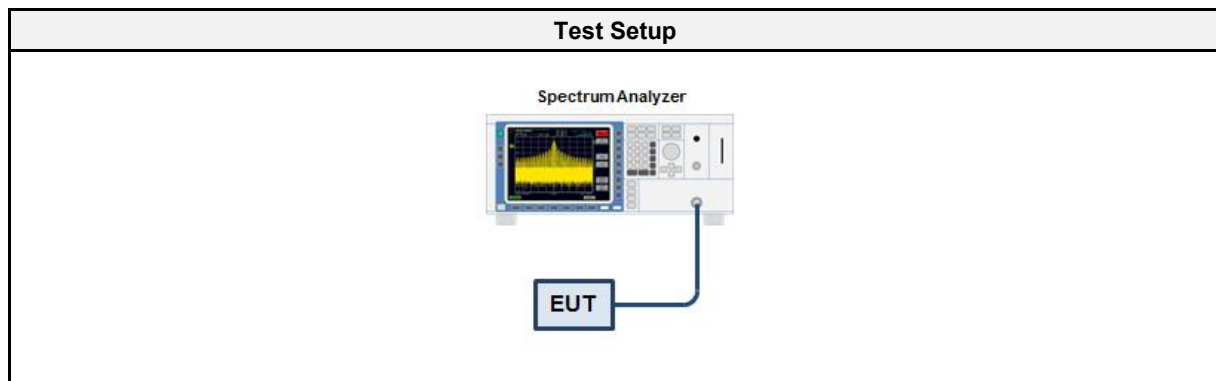
3.2.1 Information

Test Information	
Reference	FCC § 15.247(b)
Measurement Method	ANSI C63.10 11.9.1
Operator	Md Abu Bakar Siddique
Date	2026-06-22

3.2.2 Limits

Limits
Conducted: 1 W (30 dBm); EIRP: 4 W (36 dBm)

3.2.3 Setup



3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.2.5 Procedure

Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Analyzer resolution bandwidth is set $\geq$ DTS bandwidth 3. Detector set to peak and max hold 4. Sweep time is set to auto 5. After the trace has stabilized a marker is set to peak of envelope

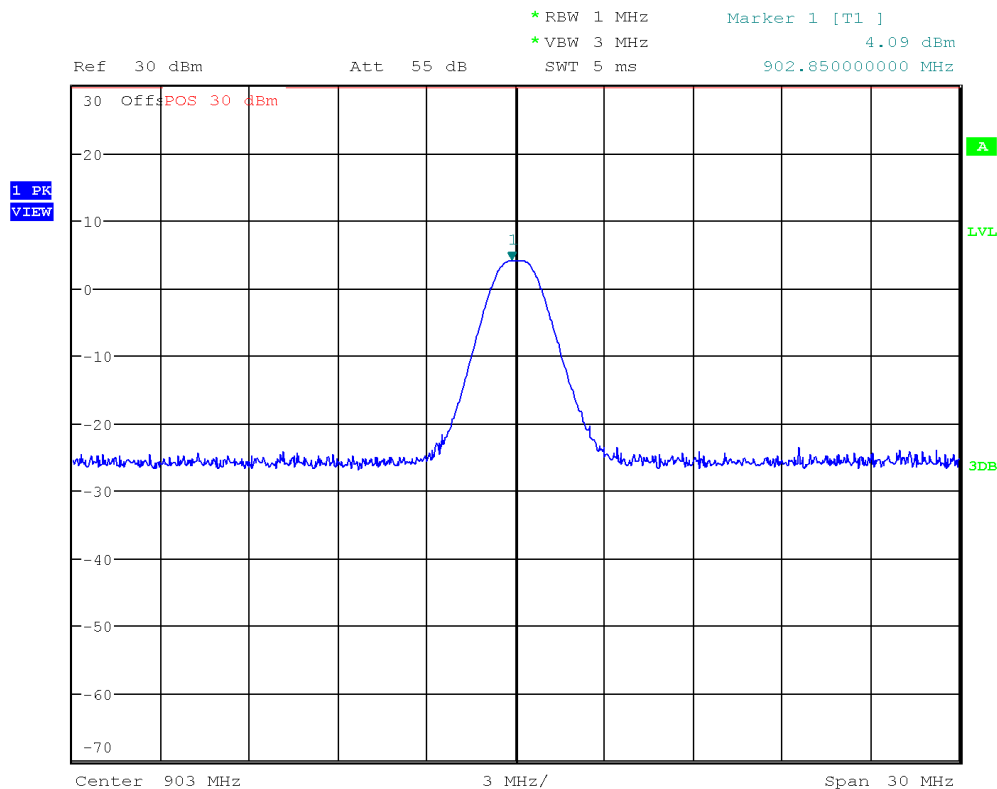
3.2.6 Results

Test Results – Mode 1							
Channel [MHz]	Power [dBm]	Power [W]	Limit [W]	Antenna Gain [dBi]	E.I.R.P. [W]	E.I.R.P. Limit [W]	Verdict
903.0	4.085	0.0026	1.0	5.22	0.0085	4.0	PASS
907.8	3.972	0.0025	1.0	5.22	0.0083	4.0	PASS
914.2	3.844	0.0024	1.0	5.22	0.0080	4.0	PASS

Test Results – Mode 2							
Channel [MHz]	Power [dBm]	Power [W]	Limit [W]	Antenna Gain [dBi]	E.I.R.P. [W]	E.I.R.P. Limit [W]	Verdict
902.3	0.047	0.001	1.0	5.22	0.0033	4.0	PASS
908.7	-0.059	0.001	1.0	5.22	0.0032	4.0	PASS
914.9	-0.055	0.001	1.0	5.22	0.0032	4.0	PASS

Peak Conducted Output Power

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Reference Standards:	FCC 15.247
Reference Method:	ANSI C63.10:2020, Section 11.9.1.1
Operational Mode:	LoRa, Channel: 903 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Md Abu Bakar Siddique
Test Site:	Eurofins Product Service GmbH
Test Date:	2026-06-15
Note:	Mode 1
Peak Power [dBm]:	4.085
Peak Power [W]:	0.0026



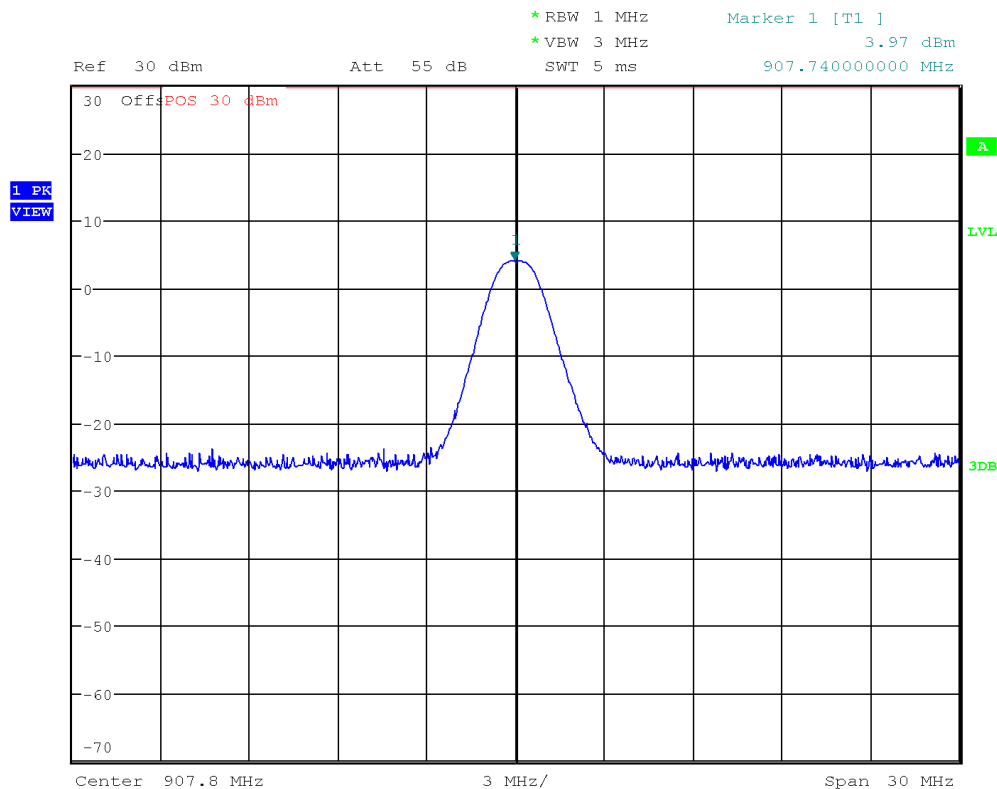
Date: 15.JUN.2026 13:31:38

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Conducted Output Power

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Reference Standards:	FCC 15.247
Reference Method:	ANSI C63.10:2020, Section 11.9.1.1
Operational Mode:	LoRa, Channel: 907.8 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Md Abu Bakar Siddique
Test Site:	Eurofins Product Service GmbH
Test Date:	2026-06-15
Note:	Mode 1
Peak Power [dBm]:	3.972
Peak Power [W]:	0.0025



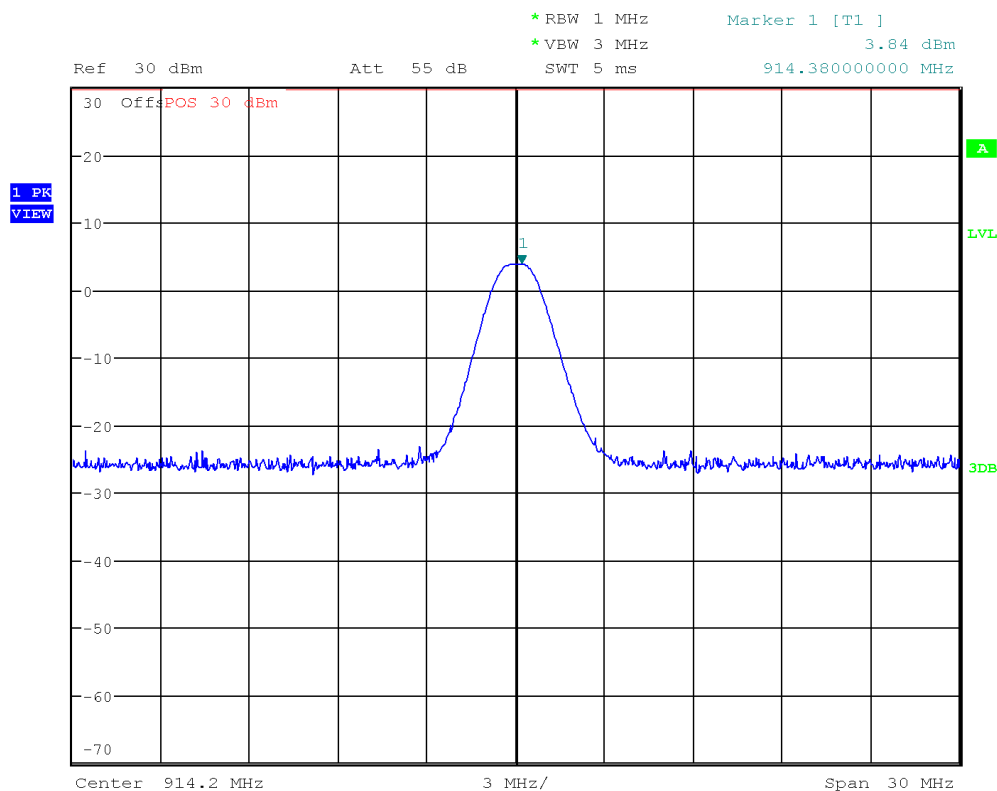
Date: 15.JUN.2026 13:36:30

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Conducted Output Power

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.9.1.1
 Operational Mode: LoRa, Channel: 914.2 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Peak Power [dBm]: 3.844
 Peak Power [W]: 0.0024



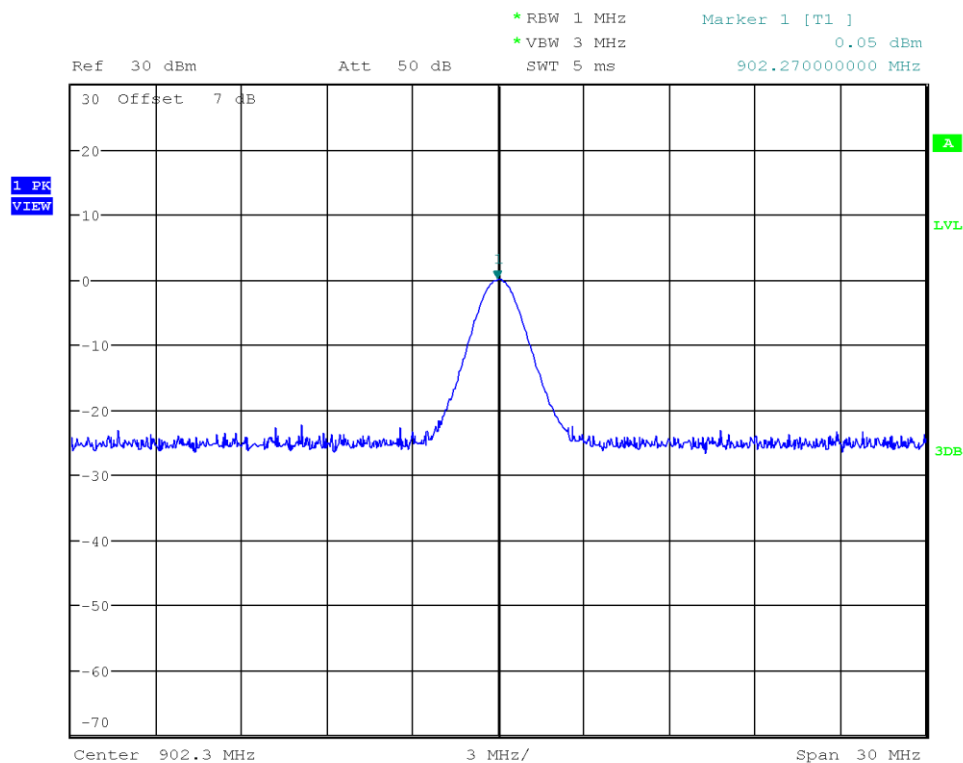
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Conducted Output Power

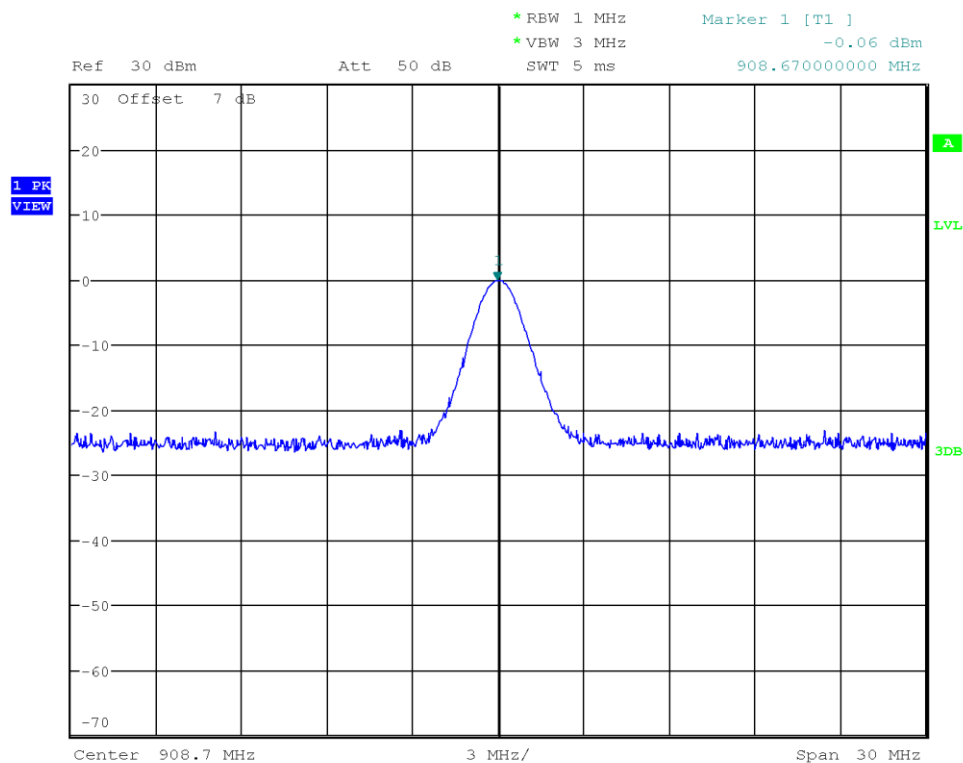
Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Reference Standards:	FCC 15.247
Reference Method:	ANSI C63.10:2020, Section 11.9.1.1
Operational Mode:	LoRa, Channel: 902.3 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Md Abu Bakar Siddique
Test Site:	Eurofins Product Service GmbH
Test Date:	2026-06-22
Note:	Mode 2
Peak Power [dBm]:	0.047
Peak Power [W]:	0.0010



Date: 22.JUN.2026 07:07:07

Peak Conducted Output Power

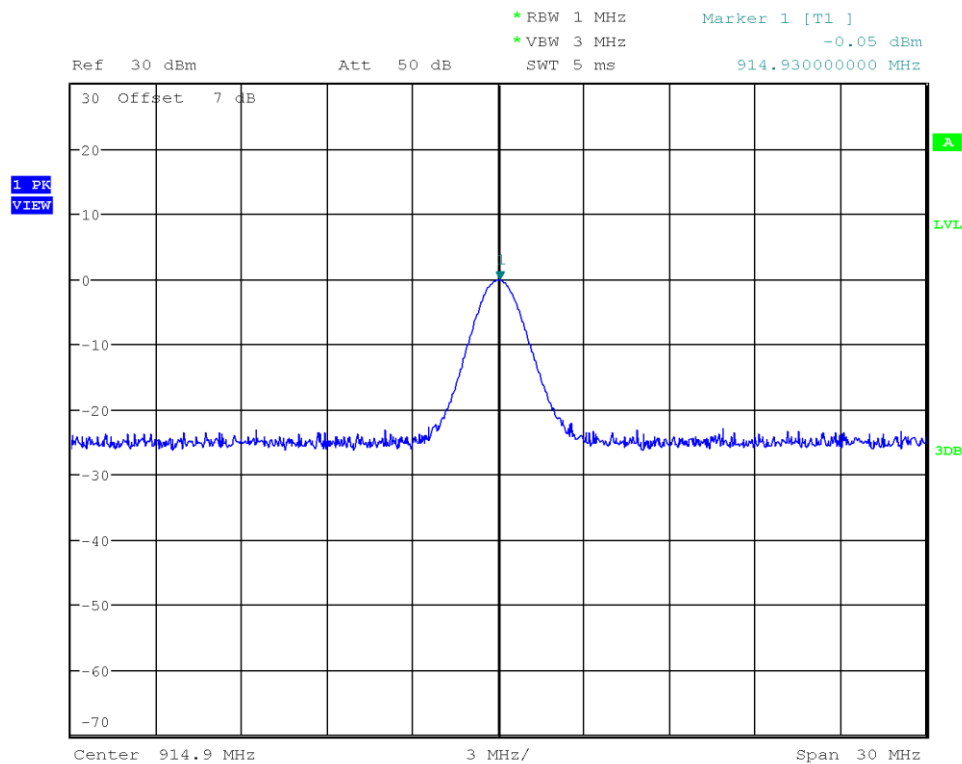
Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Reference Standards:	FCC 15.247
Reference Method:	ANSI C63.10:2020, Section 11.9.1.1
Operational Mode:	LoRa, Channel: 908.7 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Md Abu Bakar Siddique
Test Site:	Eurofins Product Service GmbH
Test Date:	2026-06-22
Note:	Mode 2
Peak Power [dBm]:	-0.059
Peak Power [W]:	0.0010



Date: 22.JUN.2026 07:11:40

Peak Conducted Output Power

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.9.1.1
 Operational Mode: LoRa, Channel: 914.9 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Peak Power [dBm]: -0.055
 Peak Power [W]: 0.0010



Date: 22.JUN.2026 07:12:48

3.3 Test Conditions and Results - Power spectral density

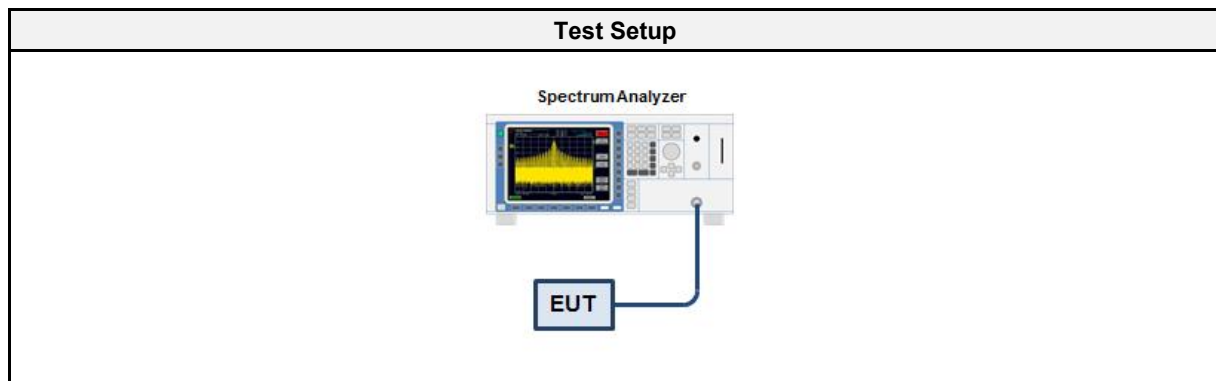
3.3.1 Information

Test Information	
Reference	FCC § 15.247(e)
Measurement Method	ANSI C63.10 11.10.2, 14.5.2
Operator	Md Abu Bakar Siddique
Date	2026-06-22

3.3.2 Limits

Limits
8 dBm / 3 kHz

3.3.3 Setup



3.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.3.5 Procedure

Test Procedure
1. EUT set to test mode 2. The analyzer is set to DTS channel center frequency with a span of 1.5 times the DTS bandwidth 3. The RBW is set to 100 kHz with VBW $\geq$ RBW and the detector is set to peak with max hold 4. After the trace has stabilized a marker is set to the envelope maximum 5. If the power spectral density is above the limit the RBW is reduced (not lower than 3 kHz) and the measurement is repeated 6. If the EUT has more than one transmit chain the procedure is repeated for each transmit chain

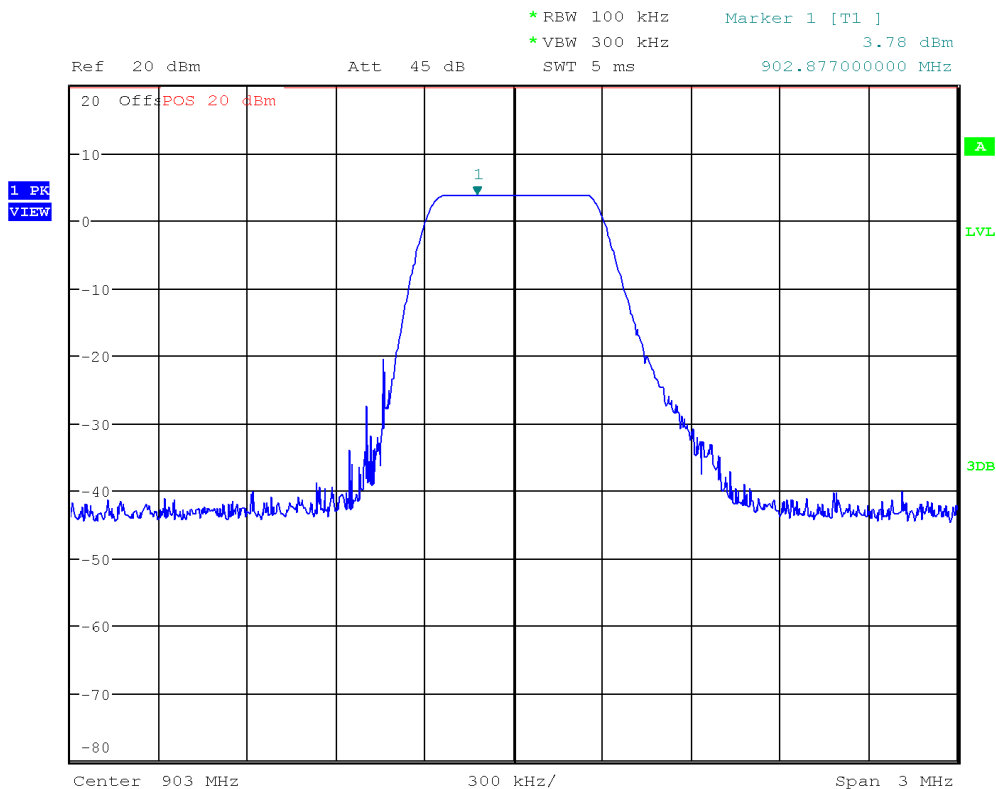
3.3.6 Results

Test Results – Mode 1			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
903.0	3.776	8.0	PASS
907.8	3.641	8.0	PASS
914.2	3.473	8.0	PASS
RBW = 100 kHz			

Test Results – Mode 2			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
902.3	-0.478	8.0	PASS
908.7	-0.594	8.0	PASS
914.9	-0.681	8.0	PASS
RBW = 100 kHz			

Peak Power Spectral Density

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.10.2
 Operational Mode: LoRa, Channel: 903 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Peak Frequency [MHz]: 902.877
 Spectral Density [dBm/RBW]: 3.776
 Resolution Bandwidth [kHz]: 100 kHz



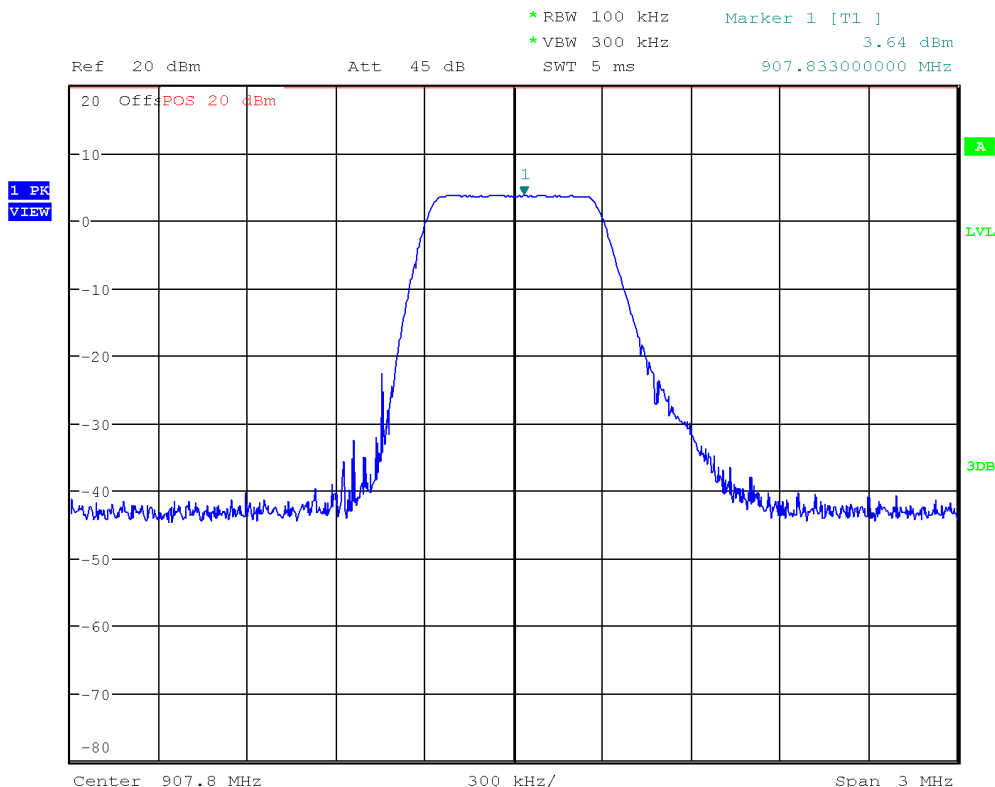
Date: 15.JUN.2026 13:57:06

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Power Spectral Density

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.10.2
 Operational Mode: LoRa, Channel: 907.8 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Peak Frequency [MHz]: 907.833
 Spectral Density [dBm/RBW]: 3.641
 Resolution Bandwidth [kHz]: 100 kHz



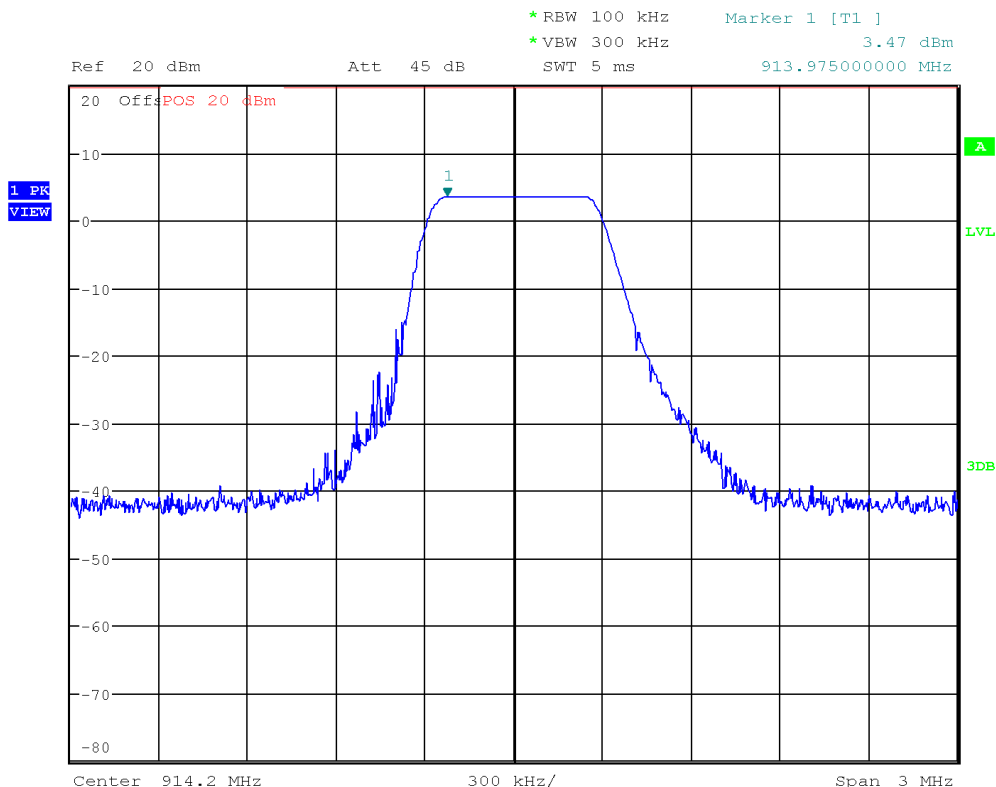
Date: 15.JUN.2026 13:59:38

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Power Spectral Density

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.10.2
 Operational Mode: LoRa, Channel: 914.2 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-15
 Note: Mode 1
 Peak Frequency [MHz]: 913.975
 Spectral Density [dBm/RBW]: 3.473
 Resolution Bandwidth [kHz]: 100 kHz



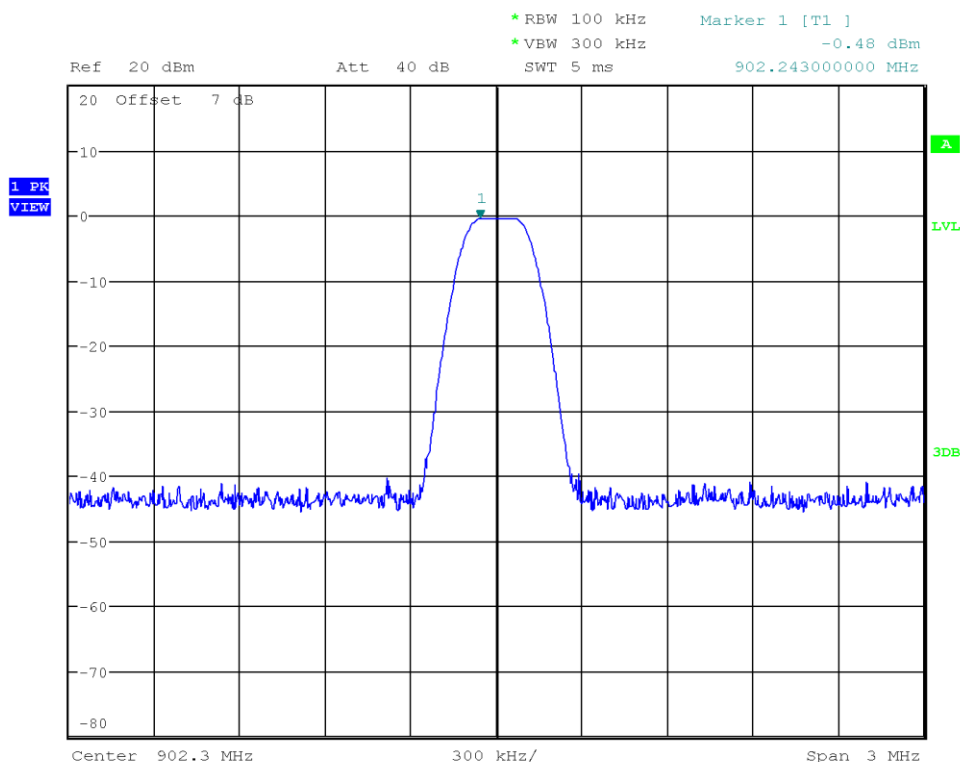
Date: 15.JUN.2026 14:01:06

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Power Spectral Density

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.10.2
 Operational Mode: LoRa, Channel: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Peak Frequency [MHz]: 902.243
 Spectral Density [dBm/RBW]: -0.478
 Resolution Bandwidth [kHz]: 100 kHz



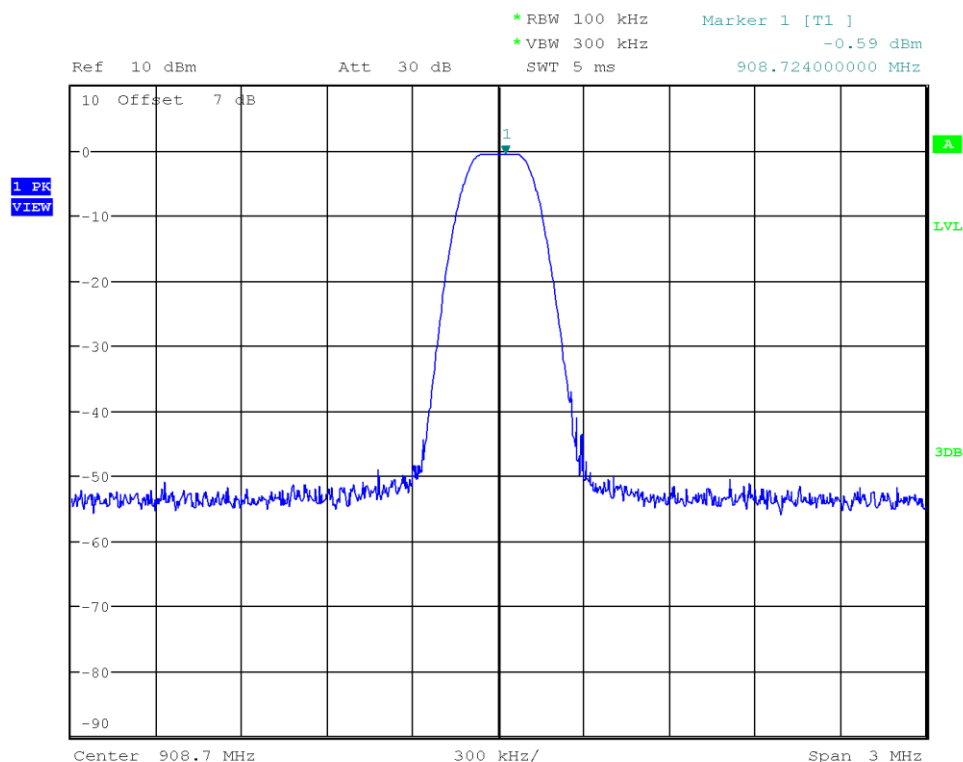
Date: 22.JUN.2026 08:34:59

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Power Spectral Density

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.10.2
 Operational Mode: LoRa, Channel: 908.7 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Peak Frequency [MHz]: 908.724
 Spectral Density [dBm/RBW]: -0.594
 Resolution Bandwidth [kHz]: 100 kHz



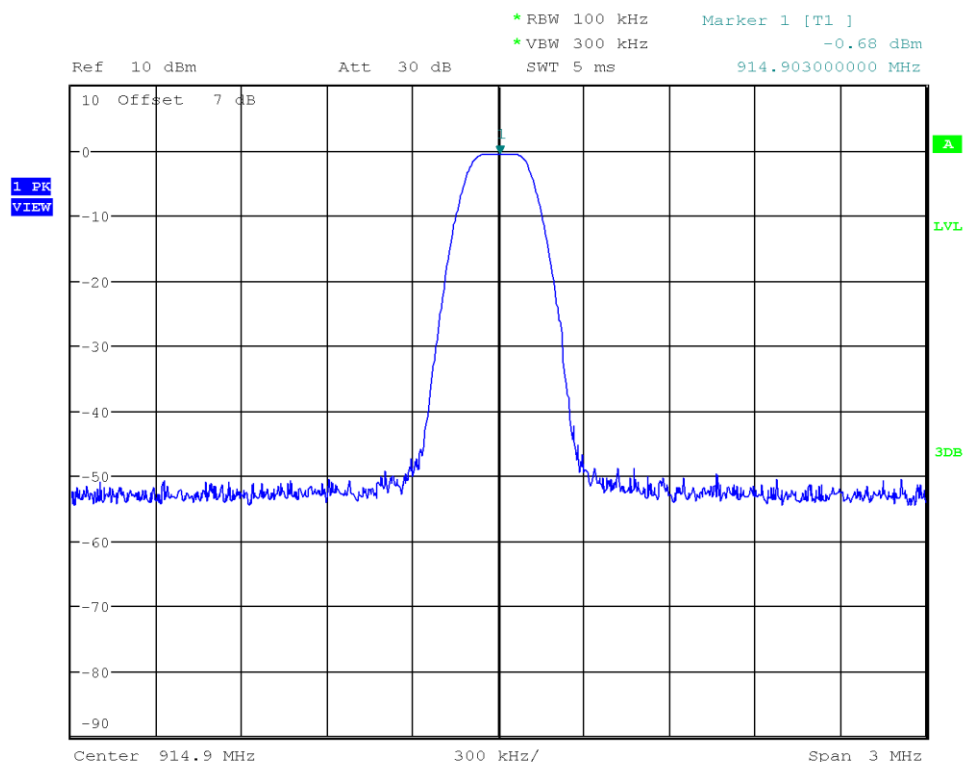
Date: 22.JUN.2026 08:36:18

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Peak Power Spectral Density

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.10.2
 Operational Mode: LoRa, Channel: 914.9 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Peak Frequency [MHz]: 914.903
 Spectral Density [dBm/RBW]: -0.681
 Resolution Bandwidth [kHz]: 100 kHz



Date: 22.JUN.2026 08:37:31

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.4 Test Conditions and Results - Frequency hopping channel separation

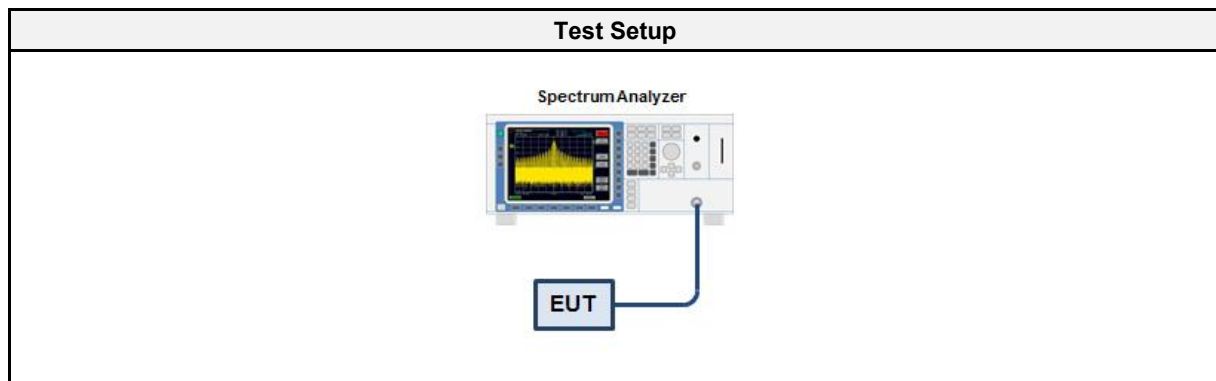
3.4.1 Information

Test Information	
Reference	FCC § 15.247(a)(1)
Measurement Method	ANSI C63.10 7.8.2
Operator	Md Abu Bakar Siddique
Date	2026-06-15

3.4.2 Limits

Limit
≥ 25 kHz or 20 dB bandwidth, whichever is greater

3.4.3 Setup



3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.4.5 Procedure

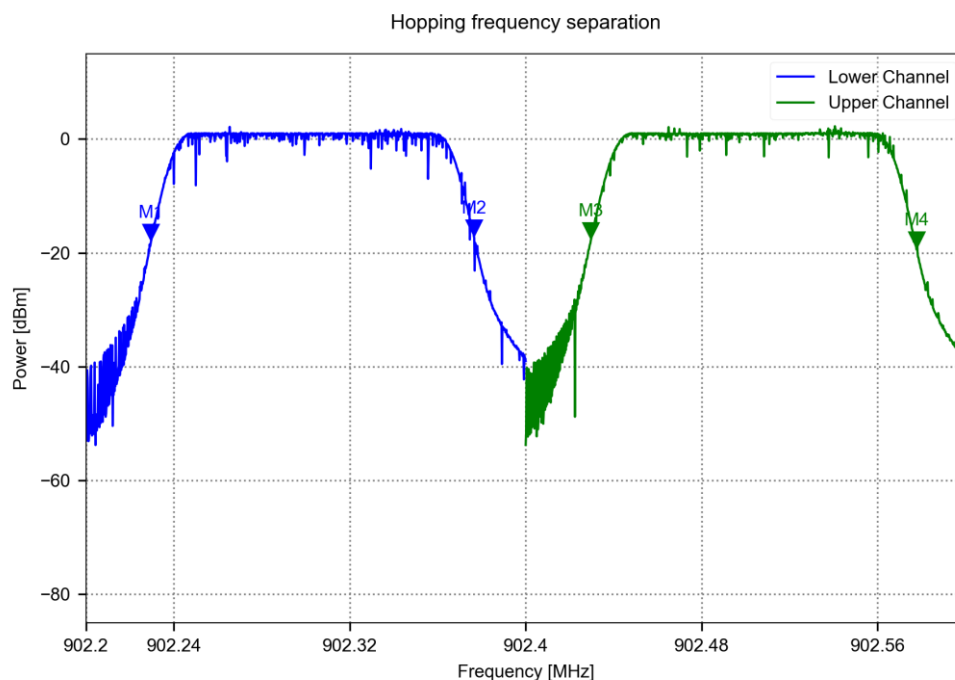
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set to measurement frequency range 3. Detector set to peak and max hold 4. Resolution bandwidth is set small enough to resolve hopping channel emission spectra 5. The two adjacent channel peaks are marked 6. Channel separation is determined from frequency separation of markers

3.4.6 Results

Test Results		
Channel separation [kHz]	Limit [kHz]	Verdict
201	≥138	PASS

Carrier frequency separation

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Reference Standards:	FCC 15.247(a)(1)
Reference Method:	ANSI C63.10:2020 7.8.2
Operational Mode:	other, LoRa, Channels: 902.3 + 902.5 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Md Abu Bakar Siddique
Test Site:	Eurofins Product Service GmbH
Test Date:	2026-06-15
Note:	Mode 2
Lower Frequency (M1) [MHz]:	902.230
Upper Frequency (M2) [MHz]:	902.377
Lower Frequency (M3) [MHz]:	902.430
Upper Frequency (M4) [MHz]:	902.578
Lower center Frequency [MHz]:	902.303
Upper center Frequency [MHz]:	902.504
Hopping Frequency Separation [MHz]:	0.201



3.5 Test Conditions and Results - Time of occupancy (Dwell time)

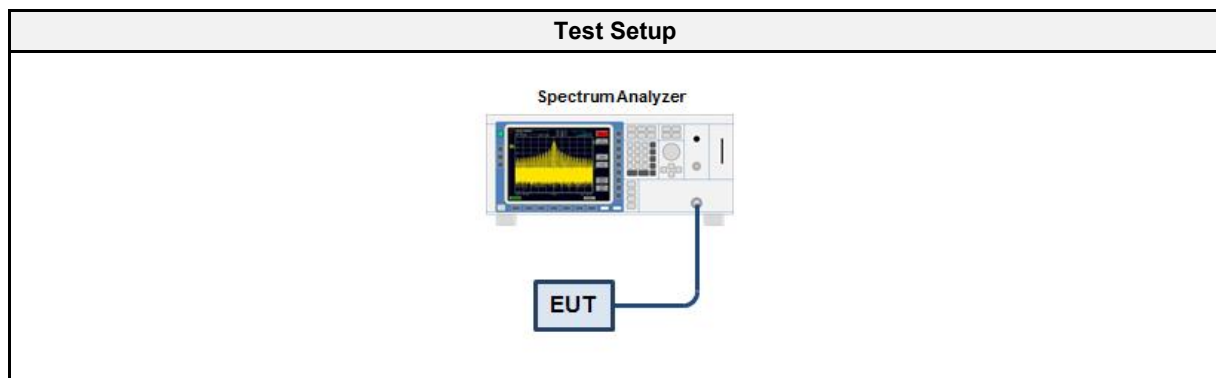
3.5.1 Information

Test Information	
Reference	FCC § 15.247(a)(1)(i)
Measurement Method	ANSI C63.10 7.8.4
Operator	Md Abu Bakar Siddique
Date	2026-06-16

3.5.2 Limits

Limits	
Condition	Limit
20 dB BW < 250 kHz Number of hopping channels ≥ 50	Time of occupancy ≤ 0.4 s within 20 s
250 kHz ≤ 20 dB BW < 500 kHz Number of hopping channels ≥ 25	Time of occupancy ≤ 0.4 s within 10 s

3.5.3 Setup



3.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.5.5 Procedure

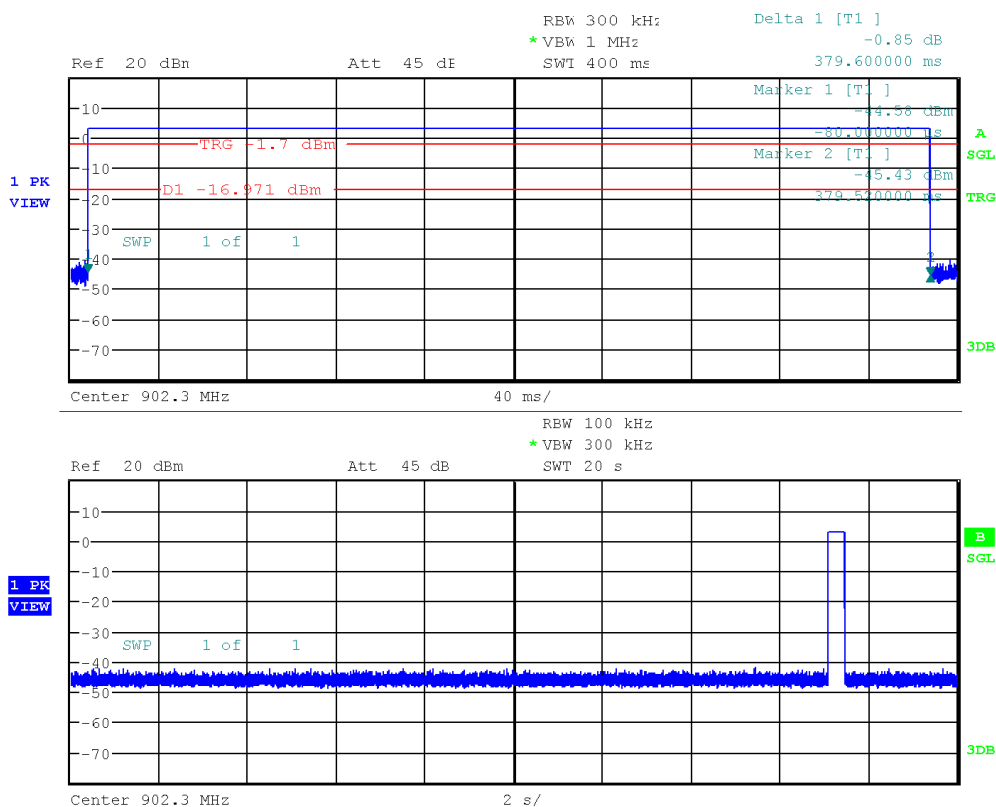
Test Procedure	
1.	EUT set to test hopping mode (Communication tester is used if needed)
2.	Analyzer span is set to zero span
3.	Detector set to peak and max hold
4.	RBW is set to 100 kHz and VBW to 300 kHz
5.	The sweep time is set to capture a bit more than one single dwell time
6.	Trigger is set to video trigger
7.	A marker is set to the start and end positions of the burst
8.	The dwell time is determined from the marker difference
9.	Another sweep is initiated without trigger and sweep time set to the observation time
10.	The number of hops is counted
11.	The total time of occupancy is calculated from the dwell time per hop multiplied by the number of hops

3.5.6 Results

Test Results – Mode 3					
Observation Period [s]	Number of Hops	Dwell time per Hop [s]	Time of occupancy [s]	Limit [s]	Margin [s]
20	1	0.397	0.397	0.4	-0.003

Time of occupancy

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Method: ANSI C63.10:2020 7.8.4
 Operational Mode: LoRa 125kHz, Hopping mode
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-16
 Note: Mode 3
 Dwell Time per Hop [ms]: 379.600
 Number of Hops: 1
 Time of occupancy [s]: 0.380



Date: 16.JUN.2026 06:40:26

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.6 Test Conditions and Results - AC powerline conducted emissions

3.6.1 Information

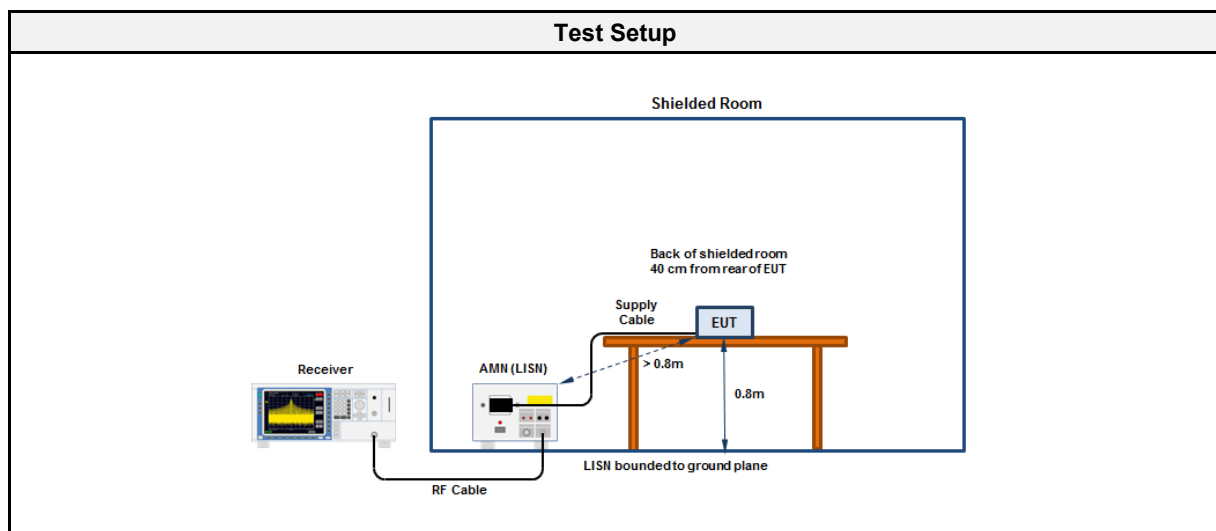
Test Information	
Reference	FCC § 15.207
Measurement Method	ANSI C63.10 6.2
Operator	Md Abu Bakar Siddique
Date	2026-06-19

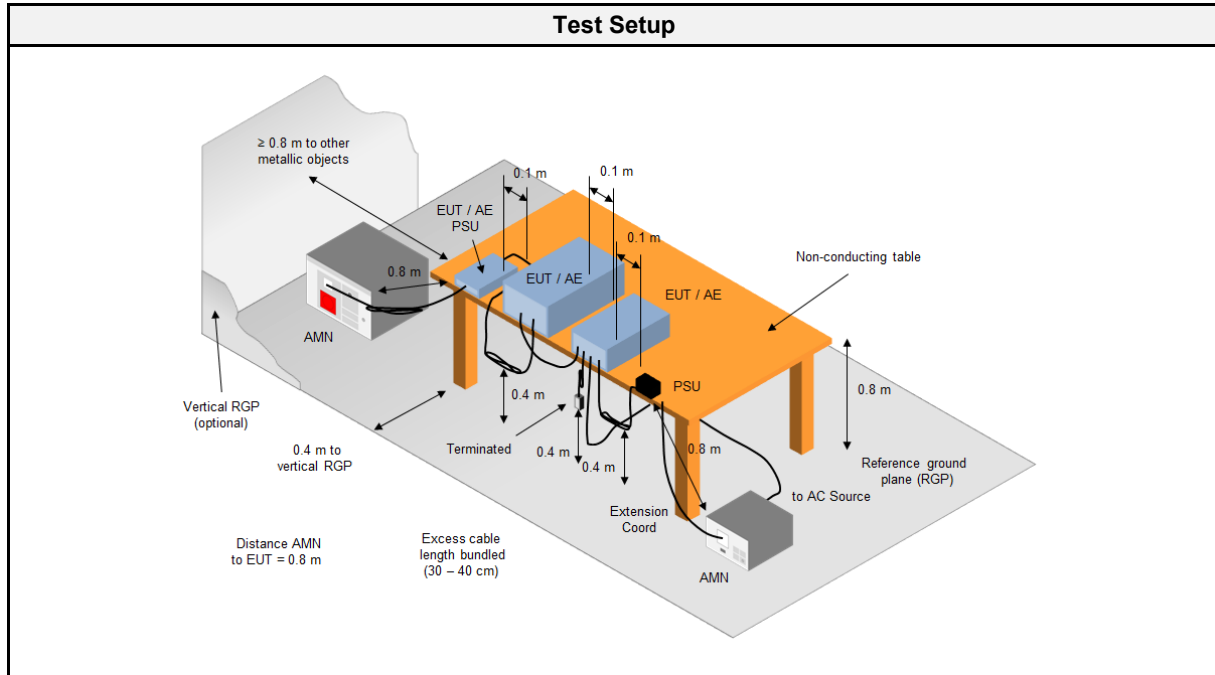
3.6.2 Limits

Limits		
Frequency [MHz]	Quasi-Peak [dBμV]	Average [dBμV]
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5	56	46
5 - 30	60	50

* Limit decreases linearly with the logarithm of the frequency

3.6.3 Setup





3.6.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	Raditeq B.V.	RadiMation	2024.2.5

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
EMI Test Receiver	R&S	ESU 26	EF00887	2025-08	2027-02
Pulse Limiter	R&S	ESH3-Z2	EF01222	2025-08	2027-08
LISN	Schwarzbeck	NSLK 8127 RC	EF01592	2024-07	2026-07

3.6.5 Procedure

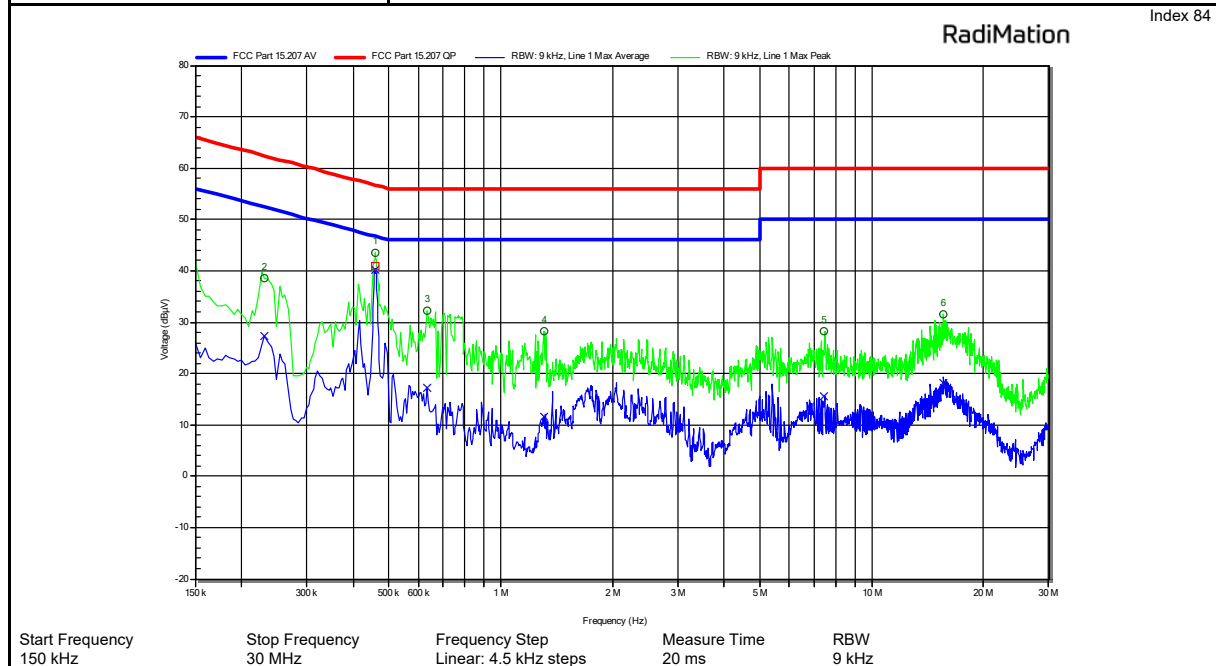
Measurement of table top device	
1.	EUT set to test mode
2.	The EUT is placed on a non conductive table 0.8 m above the reference ground plane and 0.4 m away from the vertical conducting plane.
3.	The power cord that is normally supplied or recommended by the manufacturer is connected to the LISN.
4.	The distance between the outer edge of the EUT and the LISN is set to 0.8 m.
5.	The LISN measurement port is connected to a measurement receiver
6.	Conducted emissions are measured.
7.	The test data is recorded and shown on the next pages.

3.6.6 Results

Test Results					
Port	Coupling	Mode	EUT Configuration	Verdict	Remark
Power	AMN	Mode 1	1	PASS	--
Power	AMN	Mode 2	1	PASS	--
Comment: EUT has no AC-mains port and powered by a laptop's USB port. Test performed on AC-mains port of the lab test laptop charger (not dedicated)					

3.6.7 Records

Conducted emissions at the mains power port according to 47 CFR Part 15.247	
Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC L
Operational Mode:	Mode 1
DUT Configuration:	LoRa, Channel: 903 MHz
Applied to Port:	AC mains



Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.231	38.59	62.41	-23.83	Pass	Line 1
3	0.631	32.32	56	-23.68	Pass	Line 1
4	1.306	28.2	56	-27.8	Pass	Line 1
5	7.454	28.33	60	-31.67	Pass	Line 1
6	15.576	31.44	60	-28.56	Pass	Line 1

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.458	41.03	56.73	-15.70	Pass	Line 1

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.458	40.12	46.73	-6.62	Pass	Line 1
2	0.231	27.3	52.41	-25.12	Pass	Line 1
3	0.631	17.25	46	-28.75	Pass	Line 1
4	1.306	11.53	46	-34.47	Pass	Line 1
5	7.454	15.67	50	-34.33	Pass	Line 1
6	15.576	18.24	50	-31.76	Pass	Line 1

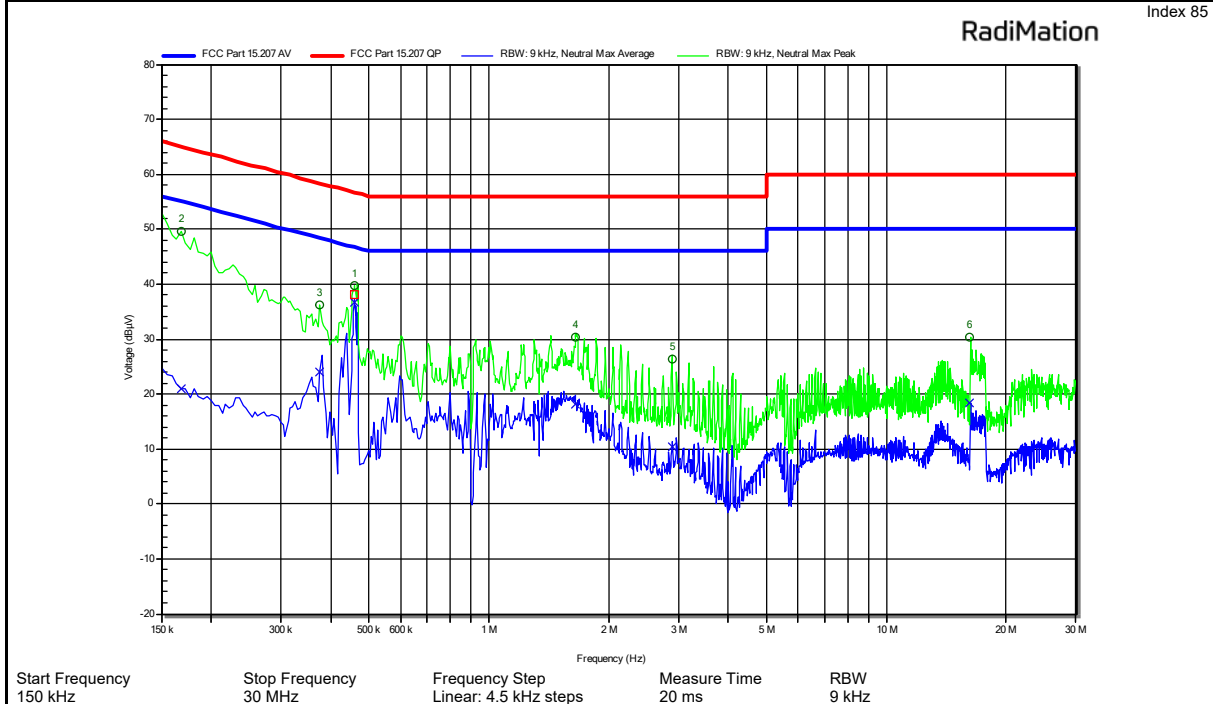
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC N
Operational Mode:	Mode 1
DUT Configuration:	LoRa, Channel: 903 MHz
Applied to Port:	AC mains

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Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.168	49.54	65.06	-15.52	Pass	Neutral
3	0.375	36.33	58.39	-22.05	Pass	Neutral
4	1.653	30.46	56	-25.54	Pass	Neutral
5	2.886	26.4	56	-29.6	Pass	Neutral
6	16.229	30.32	60	-29.68	Pass	Neutral

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.459	38.01	56.73	-18.72	Pass	Neutral

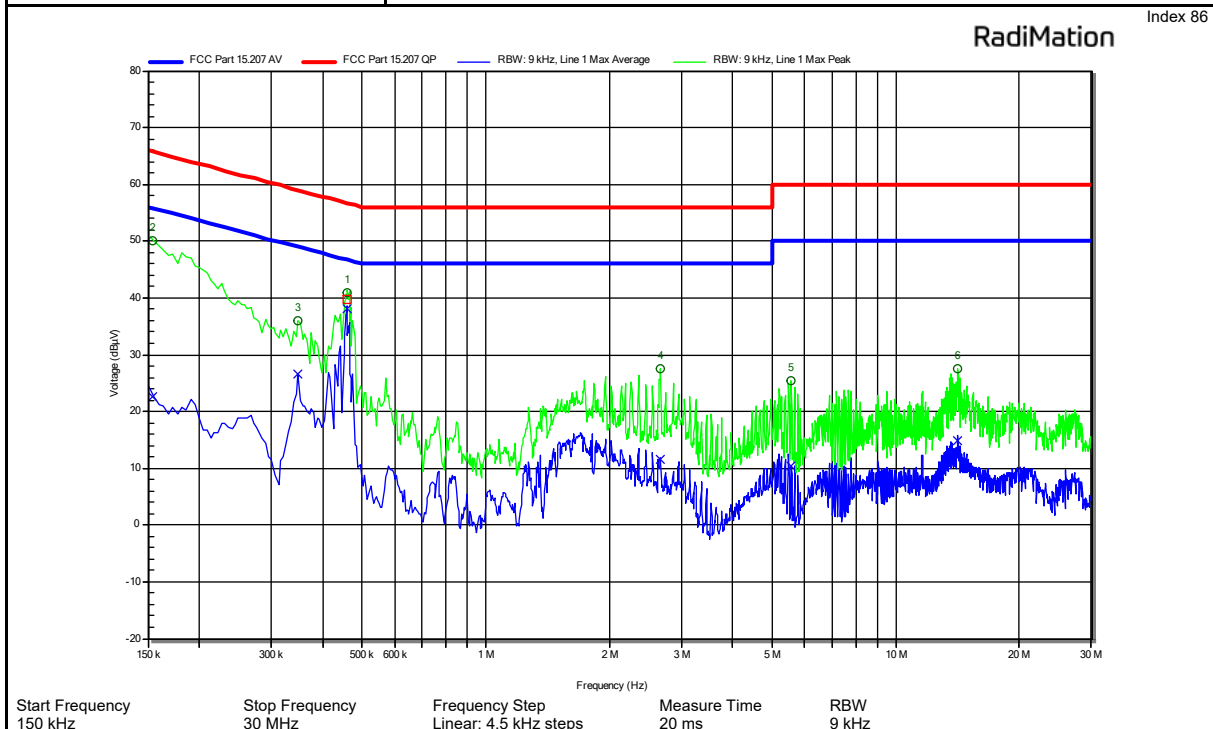
Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.459	36.69	46.72	-10.03	Pass	Neutral
2	0.168	21.04	55.06	-34.02	Pass	Neutral
3	0.375	23.96	48.39	-24.42	Pass	Neutral
4	1.653	18.2	46	-27.8	Pass	Neutral
5	2.886	10.37	46	-35.63	Pass	Neutral
6	16.229	18.47	50	-31.53	Pass	Neutral

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC L
Operational Mode:	Mode 1
DUT Configuration:	LoRa, Channel: 907.8 MHz
Applied to Port:	AC mains



Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.154	49.99	65.75	-15.77	Pass	Line 1
3	0.348	35.97	59.01	-23.04	Pass	Line 1
4	2.666	27.63	56	-28.37	Pass	Line 1
5	5.564	25.47	60	-34.53	Pass	Line 1
6	14.145	27.47	60	-32.53	Pass	Line 1

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.459	39.66	56.71	-17.05	Pass	Line 1

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.459	37.98	46.71	-8.72	Pass	Line 1
2	0.154	22.63	55.75	-33.13	Pass	Line 1
3	0.348	26.61	49.01	-22.4	Pass	Line 1
4	2.666	11.59	46	-34.41	Pass	Line 1
5	5.564	10.3	50	-39.7	Pass	Line 1
6	14.145	14.93	50	-35.07	Pass	Line 1

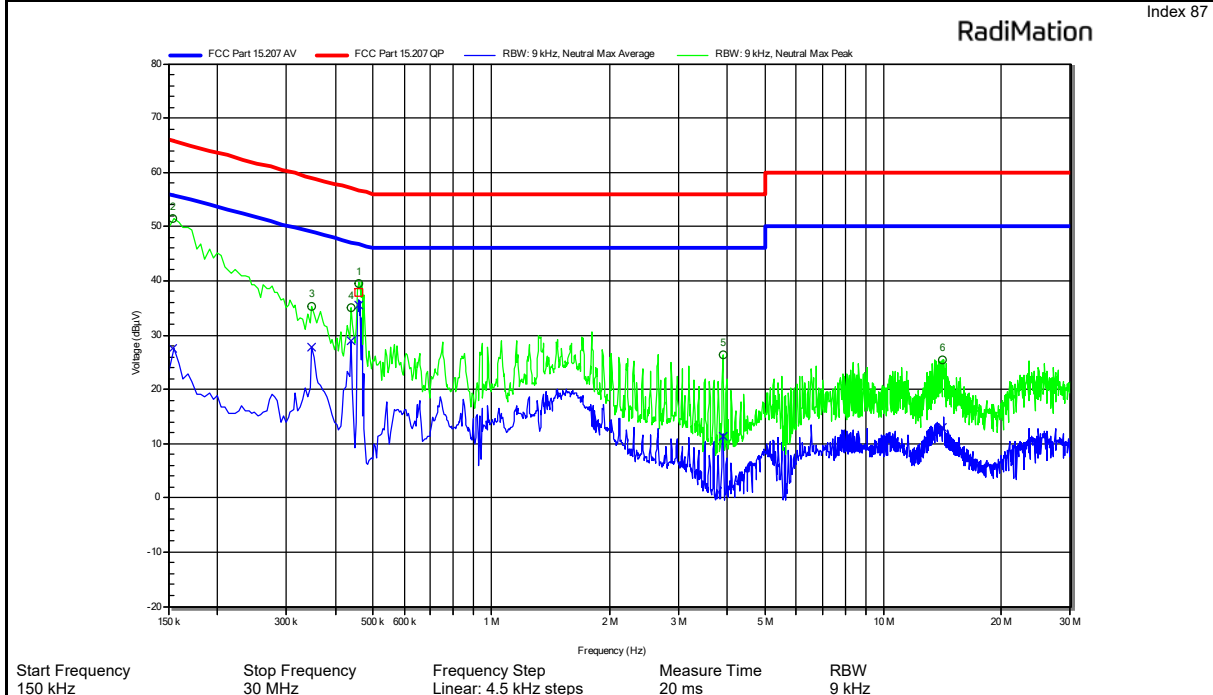
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC N
Operational Mode:	Mode 1
DUT Configuration:	LoRa, Channel: 907.8 MHz
Applied to Port:	AC mains

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Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.154	51.49	65.75	-14.27	Pass	Neutral
3	0.348	35.23	59.01	-23.78	Pass	Neutral
4	0.438	35.06	57.1	-22.03	Pass	Neutral
5	3.89	26.25	56	-29.75	Pass	Neutral
6	14.154	25.32	60	-34.68	Pass	Neutral

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.459	37.77	56.72	-18.95	Pass	Neutral

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.459	35.47	46.72	-11.25	Pass	Neutral
2	0.154	27.63	55.75	-28.13	Pass	Neutral
3	0.348	27.66	49.01	-21.35	Pass	Neutral
4	0.438	28.88	47.1	-18.21	Pass	Neutral
5	3.89	11.29	46	-34.71	Pass	Neutral
6	14.154	13.05	50	-36.95	Pass	Neutral

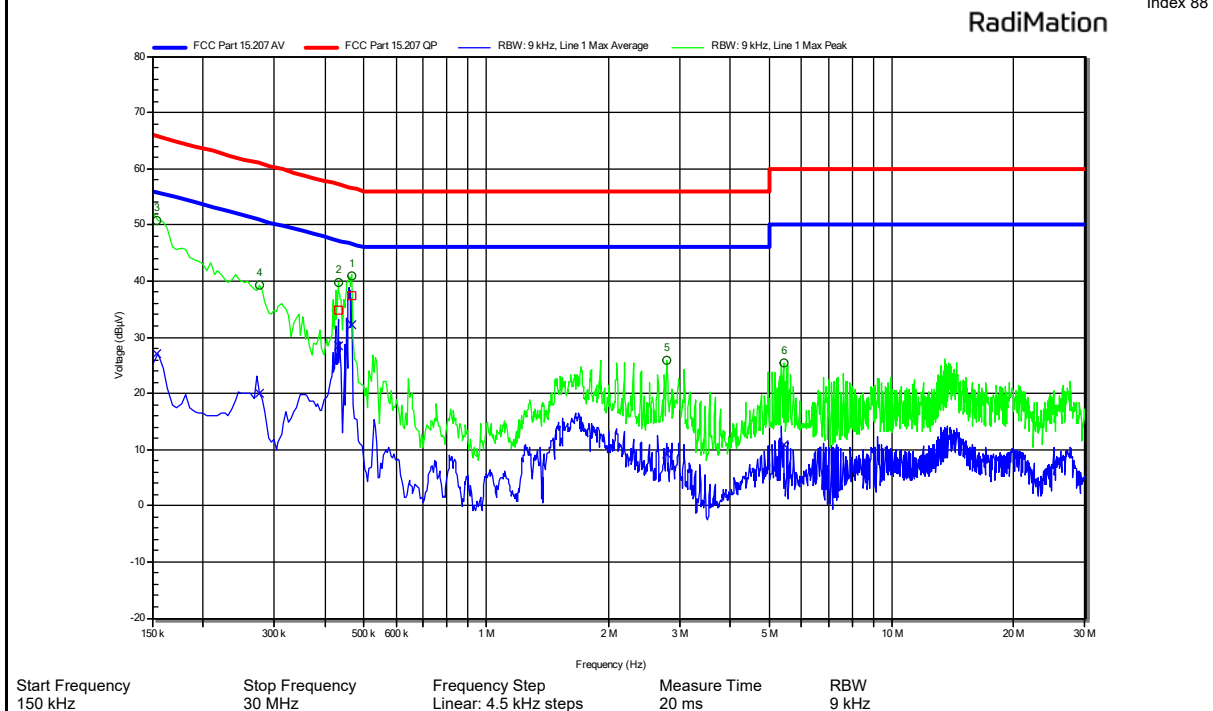
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC L
Operational Mode:	Mode 1
DUT Configuration:	LoRa, Channel: 914.2 MHz
Applied to Port:	AC mains

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Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
3	0.154	50.88	65.75	-14.88	Pass	Line 1
4	0.276	39.16	60.94	-21.78	Pass	Line 1
5	2.787	25.78	56	-30.22	Pass	Line 1
6	5.406	25.34	60	-34.66	Pass	Line 1

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.465	37.35	56.6	-19.25	Pass	Line 1
2	0.432	34.93	57.22	-22.29	Pass	Line 1

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.465	32.21	46.6	-14.4	Pass	Line 1
2	0.432	28.49	47.22	-18.73	Pass	Line 1
3	0.154	27.18	55.75	-28.58	Pass	Line 1
4	0.276	20.08	50.94	-30.86	Pass	Line 1
5	2.787	9.13	46	-36.87	Pass	Line 1
6	5.406	10.78	50	-39.22	Pass	Line 1

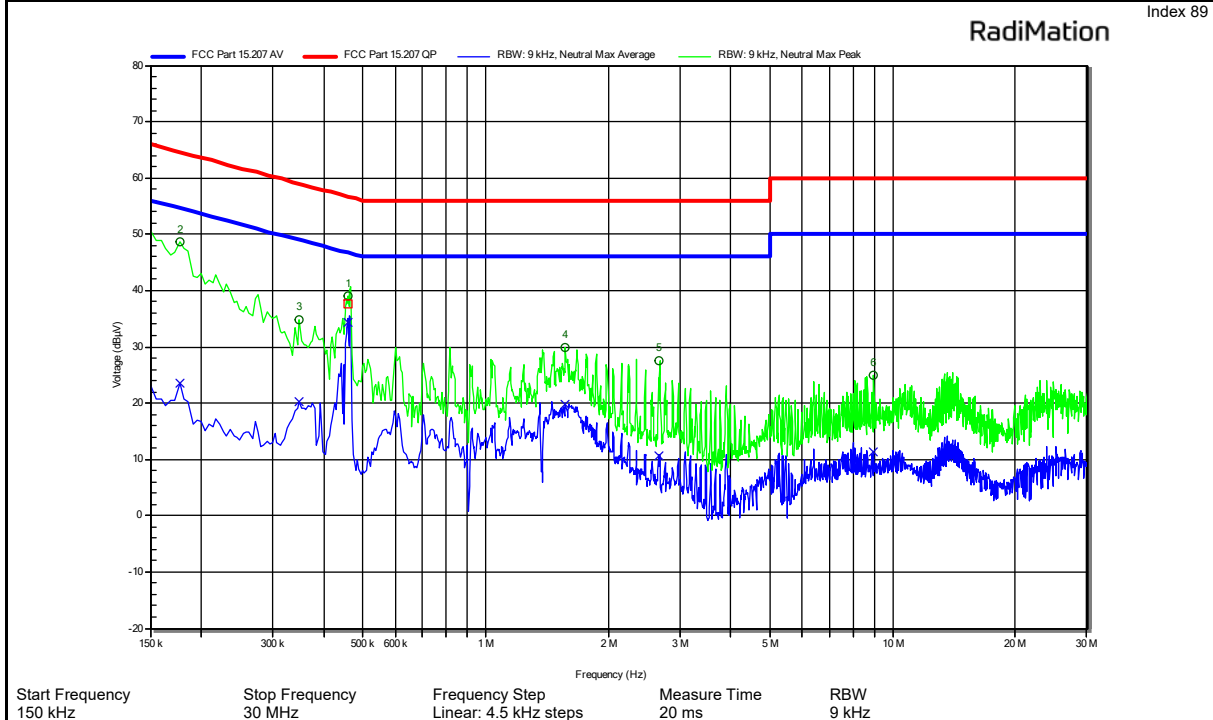
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC N
Operational Mode:	Mode 1
DUT Configuration:	LoRa, Channel: 914.2 MHz
Applied to Port:	AC mains

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Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.177	48.77	64.63	-15.85	Pass	Neutral
3	0.348	34.93	59.01	-24.08	Pass	Neutral
4	1.572	29.96	56	-26.04	Pass	Neutral
5	2.675	27.45	56	-28.55	Pass	Neutral
6	8.957	24.95	60	-35.05	Pass	Neutral

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.458	37.6	56.72	-19.12	Pass	Neutral

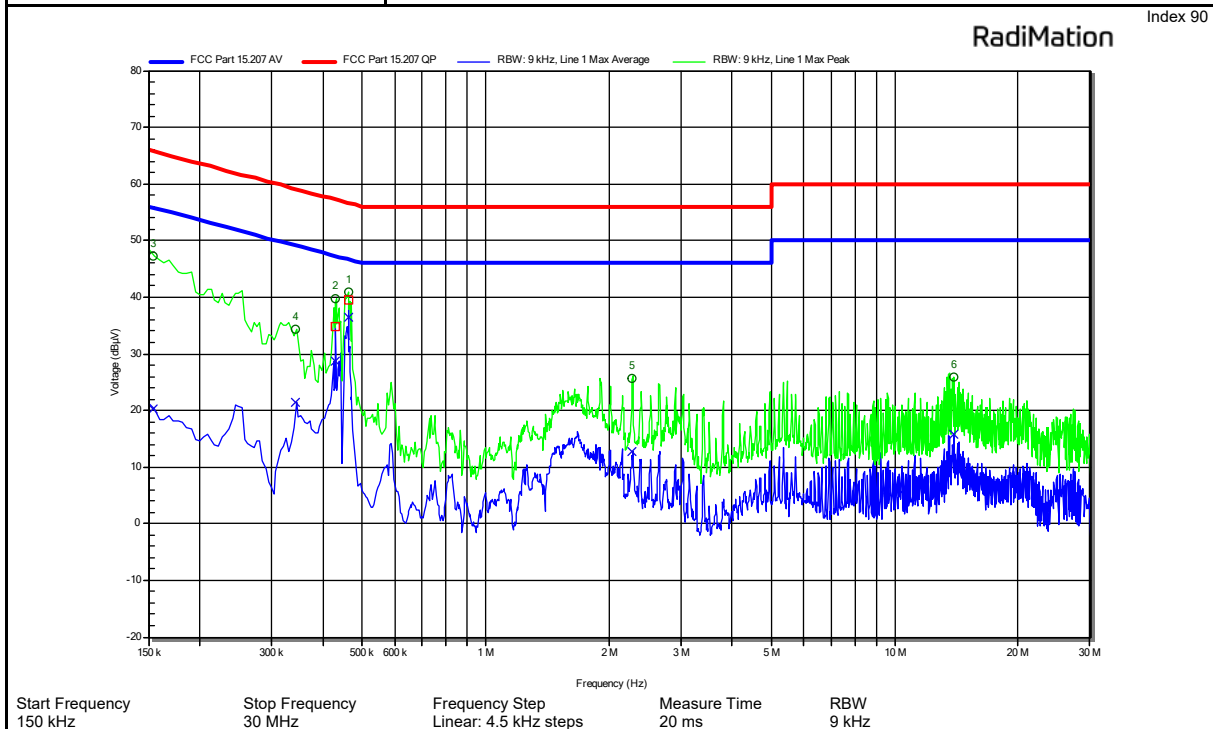
Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.458	34.4	46.72	-12.32	Pass	Neutral
2	0.177	23.49	54.63	-31.13	Pass	Neutral
3	0.348	20.23	49.01	-28.78	Pass	Neutral
4	1.572	19.71	46	-26.29	Pass	Neutral
5	2.675	10.75	46	-35.25	Pass	Neutral
6	8.957	11.38	50	-38.62	Pass	Neutral

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC L
Operational Mode:	Mode 2
DUT Configuration:	LoRa, Channel: 902.3 MHz
Applied to Port:	AC mains



Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
3	0.154	47.19	65.75	-18.57	Pass	Line 1
4	0.343	34.3	59.12	-24.82	Pass	Line 1
5	2.283	25.55	56	-30.45	Pass	Line 1
6	13.938	25.86	60	-34.14	Pass	Line 1

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.461	39.62	56.67	-17.05	Pass	Line 1
2	0.431	34.89	57.24	-22.35	Pass	Line 1

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.461	36.47	46.67	-10.2	Pass	Line 1
2	0.431	28.66	47.24	-18.58	Pass	Line 1
3	0.154	20.31	55.75	-35.45	Pass	Line 1
4	0.343	21.42	49.12	-27.7	Pass	Line 1
5	2.283	12.81	46	-33.19	Pass	Line 1
6	13.938	15.72	50	-34.28	Pass	Line 1

Test Report No.: G0M-2605-3688-TFC247DT01-V01

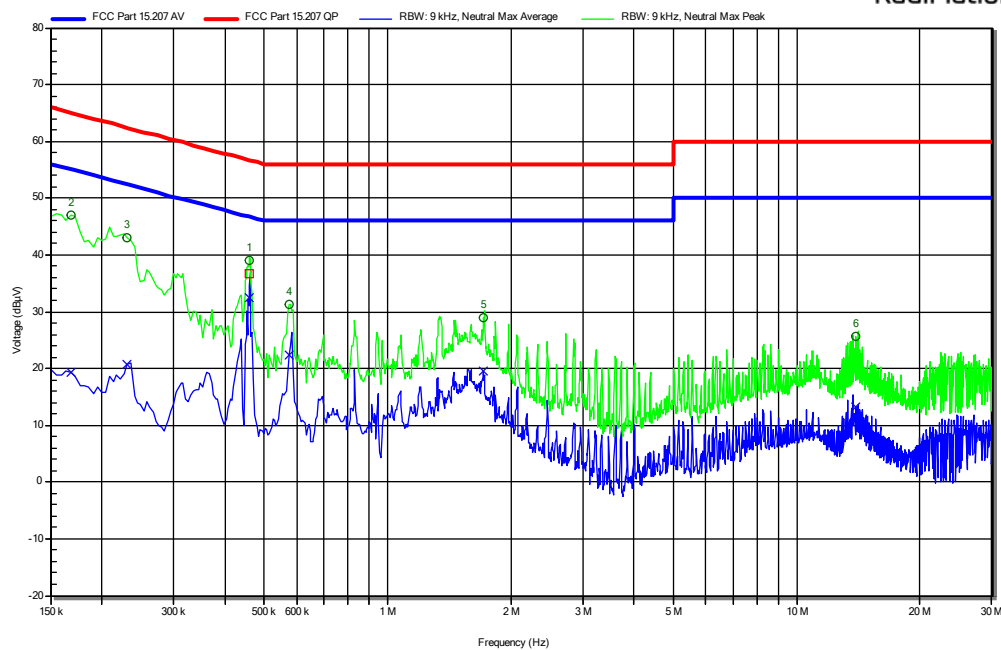
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC N
Operational Mode:	Mode 2
DUT Configuration:	LoRa, Channel: 902.3 MHz
Applied to Port:	AC mains

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RadiMation



Start Frequency 150 kHz Stop Frequency 30 MHz Frequency Step Linear: 4.5 kHz steps Measure Time 20 ms RBW 9 kHz

Peak Number	Frequency (MHz)	Peak (dBμV)	Peak Limit (dBμV)	Peak Difference (dB)	Peak Status	LISN
2	0.168	47.11	65.06	-17.95	Pass	Neutral
3	0.231	42.92	62.41	-19.5	Pass	Neutral
4	0.573	31.26	56	-24.74	Pass	Neutral
5	1.711	29.06	56	-26.94	Pass	Neutral
6	13.961	25.59	60	-34.41	Pass	Neutral

Peak Number	Frequency (MHz)	Quasi-Peak (dBμV)	Peak Limit (dBμV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.46	36.69	56.68	-19.99	Pass	Neutral

Peak Number	Frequency (MHz)	Average (dBμV)	Average Limit (dBμV)	Average Difference (dB)	Average Status	LISN
1	0.46	32.46	46.68	-14.23	Pass	Neutral
2	0.168	19.37	55.06	-35.69	Pass	Neutral
3	0.231	20.63	52.41	-31.79	Pass	Neutral
4	0.573	22.4	46	-23.6	Pass	Neutral
5	1.711	19.54	46	-26.46	Pass	Neutral
6	13.961	13.13	50	-36.87	Pass	Neutral

Test Report No.: G0M-2605-3688-TFC247DT01-V01

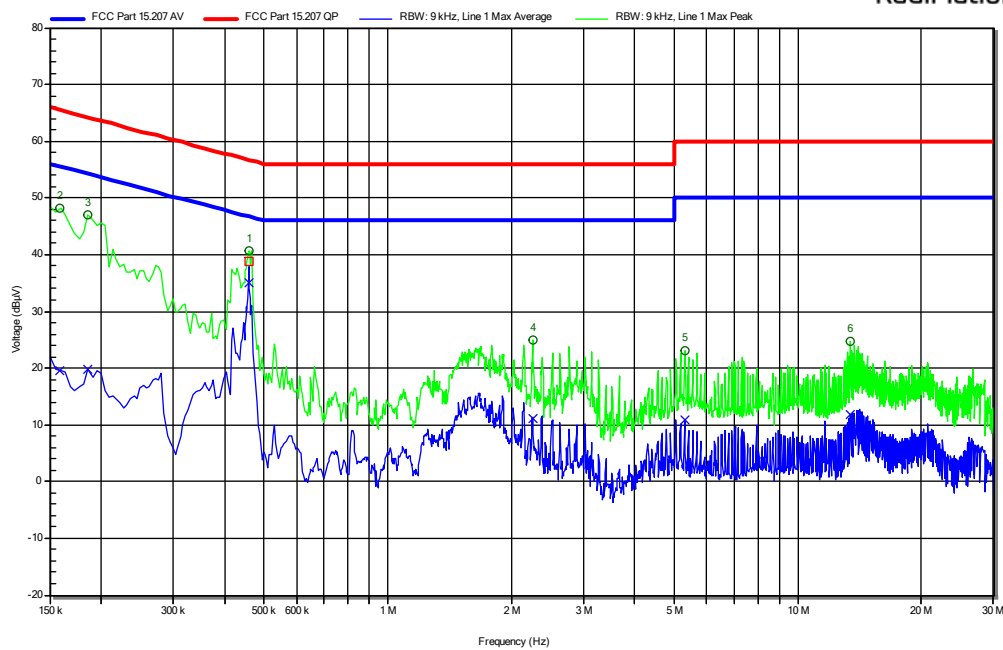
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC L
Operational Mode:	Mode 2
DUT Configuration:	LoRa, Channel: 908.7 MHz
Applied to Port:	AC mains

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RadiMation



Start Frequency 150 kHz Stop Frequency 30 MHz Frequency Step Linear: 4.5 kHz steps Measure Time 20 ms RBW 9 kHz

Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.159	48.23	65.52	-17.28	Pass	Line 1
3	0.186	46.99	64.21	-17.22	Pass	Line 1
4	2.256	25.01	56	-30.99	Pass	Line 1
5	5.294	23.19	60	-36.81	Pass	Line 1
6	13.407	24.8	60	-35.2	Pass	Line 1

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.459	38.75	56.71	-17.96	Pass	Line 1

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.459	34.99	46.71	-11.72	Pass	Line 1
2	0.159	19.65	55.52	-35.86	Pass	Line 1
3	0.186	19.77	54.21	-34.44	Pass	Line 1
4	2.256	11.01	46	-34.99	Pass	Line 1
5	5.294	10.84	50	-39.16	Pass	Line 1
6	13.407	11.7	50	-38.3	Pass	Line 1

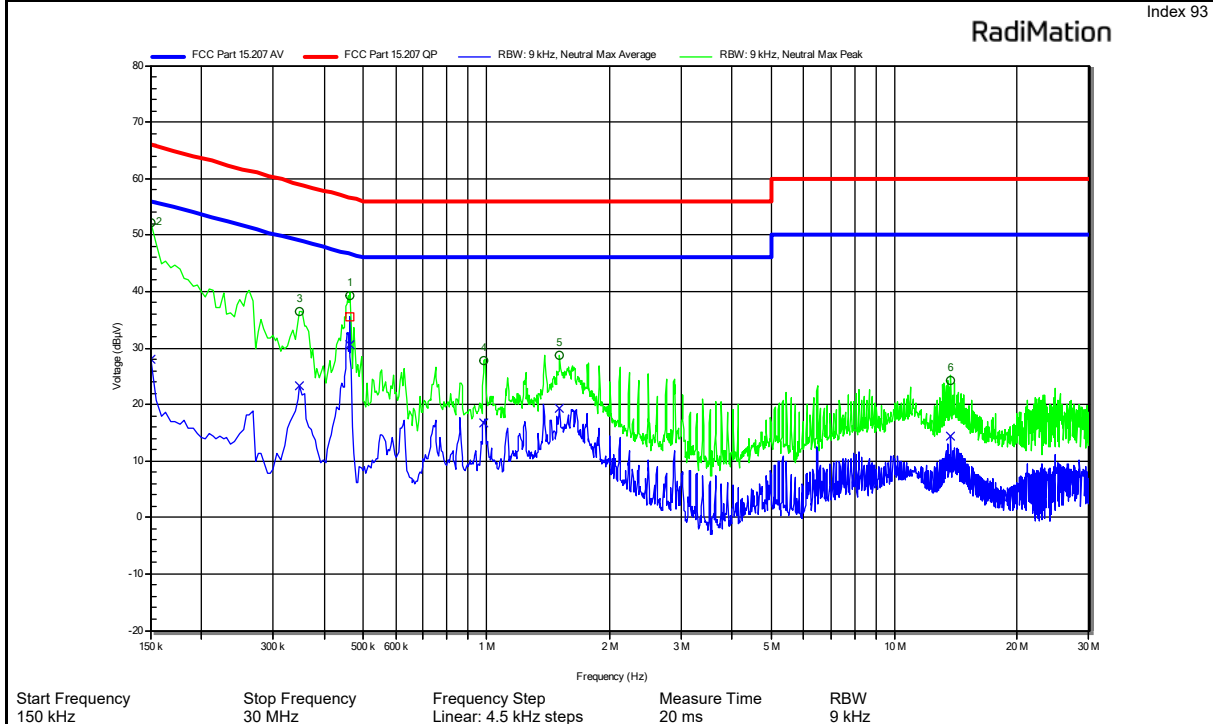
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC N
Operational Mode:	Mode 2
DUT Configuration:	LoRa, Channel: 908.7 MHz
Applied to Port:	AC mains

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Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.15	52.07	66	-13.93	Pass	Neutral
3	0.348	36.36	59.01	-22.65	Pass	Neutral
4	0.987	27.7	56	-28.3	Pass	Neutral
5	1.509	28.79	56	-27.21	Pass	Neutral
6	13.74	24.32	60	-35.68	Pass	Neutral

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.462	35.6	56.65	-21.05	Pass	Neutral

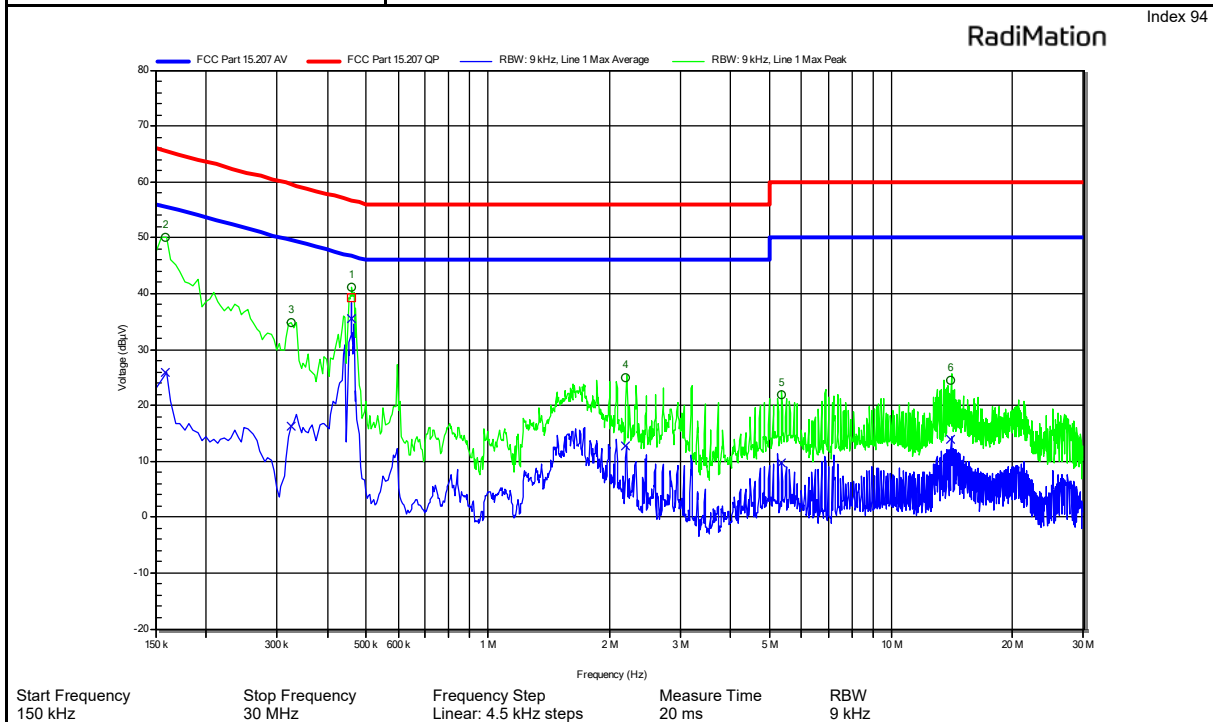
Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.462	30.61	46.65	-16.04	Pass	Neutral
2	0.15	27.95	56	-28.05	Pass	Neutral
3	0.348	23.37	49.01	-25.64	Pass	Neutral
4	0.987	16.84	46	-29.16	Pass	Neutral
5	1.509	19.21	46	-26.79	Pass	Neutral
6	13.74	14.47	50	-35.53	Pass	Neutral

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC L
Operational Mode:	Mode 2
DUT Configuration:	LoRa, Channel: 914.9 MHz
Applied to Port:	AC mains



Peak Number	Frequency (MHz)	Peak (dBμV)	Peak Limit (dBμV)	Peak Difference (dB)	Peak Status	LISN
2	0.159	50.06	65.52	-15.45	Pass	Line 1
3	0.325	34.86	59.57	-24.71	Pass	Line 1
4	2.202	24.85	56	-31.15	Pass	Line 1
5	5.357	21.93	60	-38.07	Pass	Line 1
6	14.087	24.54	60	-35.46	Pass	Line 1

Peak Number	Frequency (MHz)	Quasi-Peak (dBμV)	Peak Limit (dBμV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.459	39.17	56.71	-17.54	Pass	Line 1

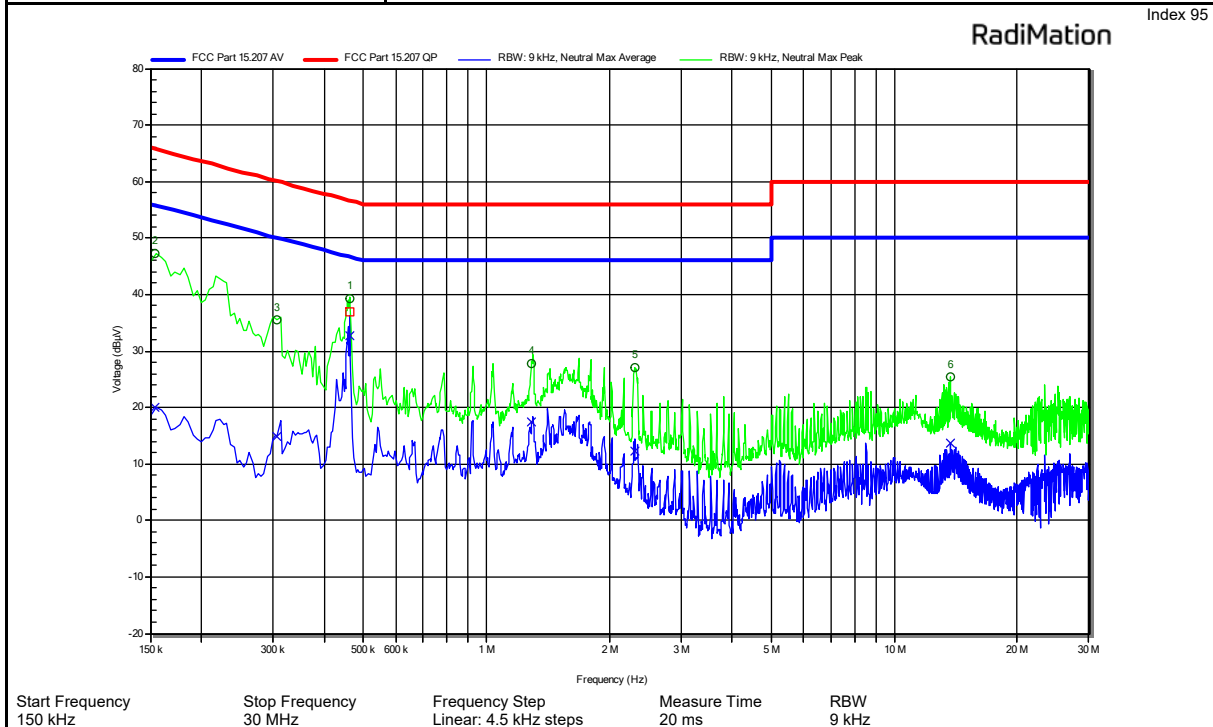
Peak Number	Frequency (MHz)	Average (dBμV)	Average Limit (dBμV)	Average Difference (dB)	Average Status	LISN
1	0.459	35.46	46.71	-11.25	Pass	Line 1
2	0.159	25.94	55.52	-29.57	Pass	Line 1
3	0.325	16.34	49.57	-33.23	Pass	Line 1
4	2.202	12.82	46	-33.18	Pass	Line 1
5	5.357	9.63	50	-40.37	Pass	Line 1
6	14.087	13.93	50	-36.07	Pass	Line 1

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted emissions at the mains power port according to 47 CFR Part 15.247

Project Number:	G0M-2605-3688
Applicant:	deZem GmbH
Model Description:	Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model:	Harvy2
Test Sample ID:	53508
Test Site:	Eurofins Product Service GmbH
Operator:	Mr. Siddique
Test Date & Time:	2026-06-19
Operating Conditions:	ambient temperature: 27 °Celsius power input: 120 V AC
AMN:	Schwarzbeck NSLK 8127 RC N
Operational Mode:	Mode 2
DUT Configuration:	LoRa, Channel: 914.9 MHz
Applied to Port:	AC mains



Peak Number	Frequency (MHz)	Peak (dBµV)	Peak Limit (dBµV)	Peak Difference (dB)	Peak Status	LISN
2	0.154	47.31	65.75	-18.45	Pass	Neutral
3	0.307	35.61	60.04	-24.43	Pass	Neutral
4	1.293	27.87	56	-28.13	Pass	Neutral
5	2.305	27.18	56	-28.82	Pass	Neutral
6	13.709	25.42	60	-34.58	Pass	Neutral

Peak Number	Frequency (MHz)	Quasi-Peak (dBµV)	Peak Limit (dBµV)	Quasi-Peak Difference (dB)	Quasi-Peak Status	LISN
1	0.462	36.94	56.66	-19.72	Pass	Neutral

Peak Number	Frequency (MHz)	Average (dBµV)	Average Limit (dBµV)	Average Difference (dB)	Average Status	LISN
1	0.462	32.58	46.66	-14.08	Pass	Neutral
2	0.154	20.03	55.75	-35.73	Pass	Neutral
3	0.307	14.97	50.04	-35.07	Pass	Neutral
4	1.293	17.41	46	-28.59	Pass	Neutral
5	2.305	12.17	46	-33.83	Pass	Neutral
6	13.709	13.75	50	-36.25	Pass	Neutral

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.7 Test Conditions and Results - Band-edge compliance

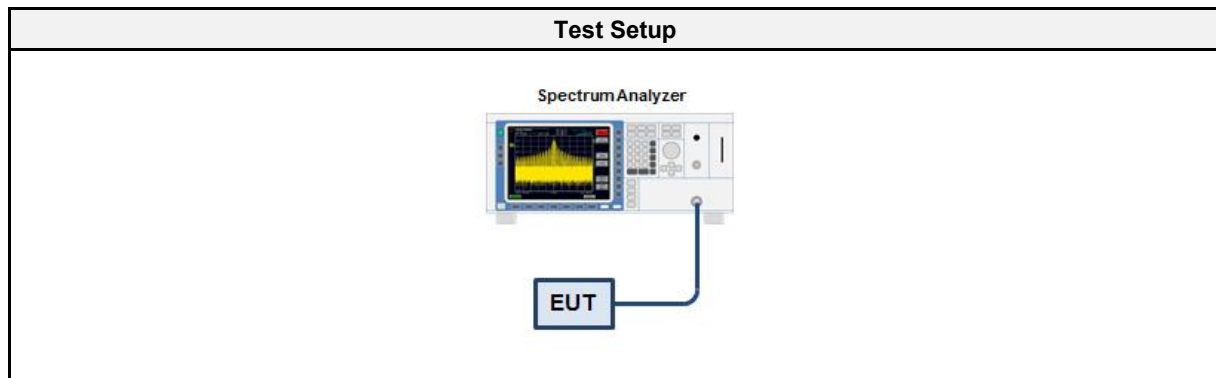
3.7.1 Information

Test Information	
Reference	FCC § 15.247(d)
Measurement Method	ANSI C63.10 6.10; ANSI C63.10 7.8.7.2
Operator	Md Abu Bakar Siddique
Date	2026-06-16

3.7.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.7.3 Setup



3.7.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.7.5 Procedure

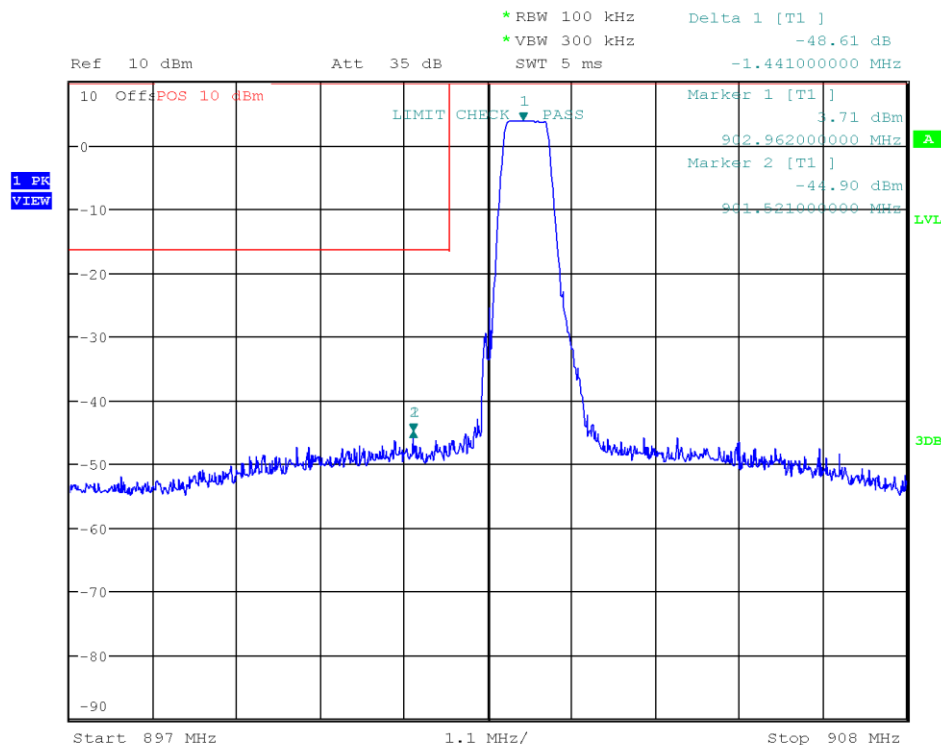
Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set around lower band edge and detector is set to peak and max hold 3. Resolution bandwidth is set to 100 kHz 4. Markers are set to peak emission levels within frequency band and outside frequency band 5. Band edge attenuation is determined from level difference

3.7.6 Results

Test Results				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
Mode 1	903.0	-48.61	-20	PASS
Mode 1	914.2	-55.62	-20	PASS
Mode 2	902.3	-48.17	-20	PASS
Mode 2	914.9	-54.44	-20	PASS

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2605-3688
Applicant: deZem GmbH
Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
Model: Harvy2
Test Sample ID: 53508
Reference Standards: FCC 15.247
Reference Method: ANSI C63.10:2020, Section 11.11, 6.10
Operational Mode: single frequency, Channel: 903.0 MHz
Operating Conditions: Tnom/Vnom
Operator: Md Abu Bakar Siddique
Test Site: Eurofins Product Service GmbH
Test Date: 2026-06-16
Note: Mode 1
Band-edge: Lower
In-band Frequency [MHz]: 902.962
Max. in-band Level [dBm/100 kHz]: 3.708
Out-of-band Frequency [MHz]: 901.521
Max. out-of-band Level [dBm/100 kHz]: -44.9
Attenuation [dB]: -48.61



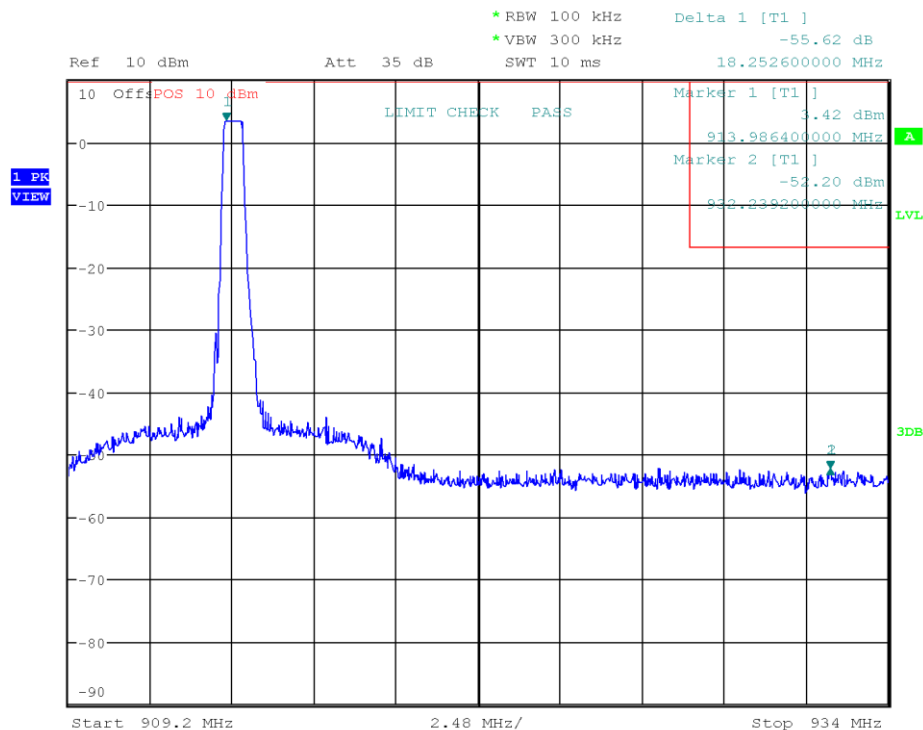
Date: 16.JUN.2026 06:47:47

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11, 6.10
 Operational Mode: single frequency, Channel: 914.2 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-16
 Note: Mode 1
 Band-edge: Upper
 In-band Frequency [MHz]: 913.986
 Max. in-band Level [dBm/100 kHz]: 3.419
 Out-of-band Frequency [MHz]: 932.239
 Max. out-of-band Level [dBm/100 kHz]: -52.201
 Attenuation [dB]: -55.62



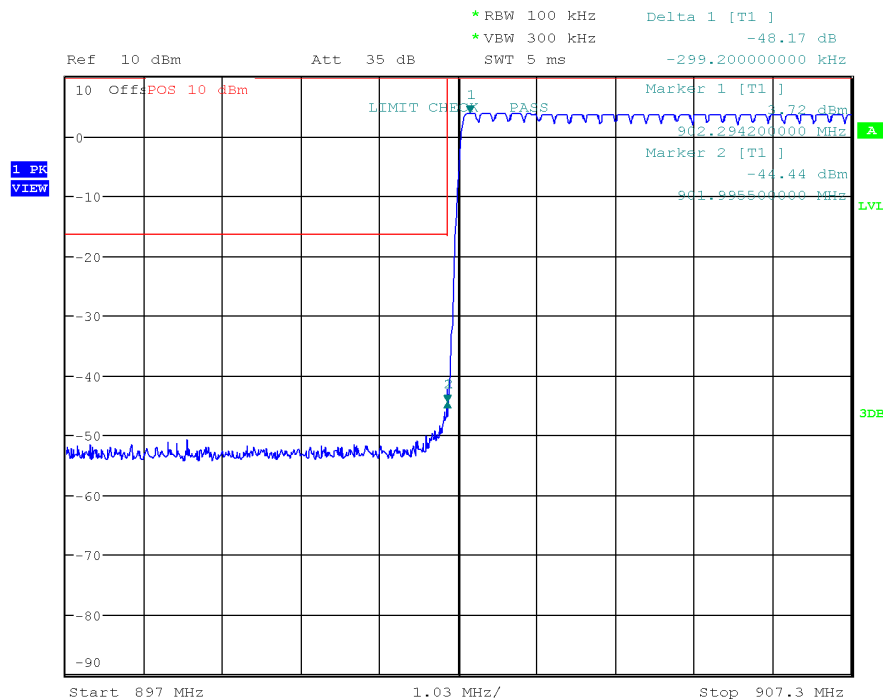
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11, 6.10
 Operational Mode: hopping mode, Channel: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-16
 Note: Mode 2
 Band-edge: Lower
 In-band Frequency [MHz]: 902.294
 Max. in-band Level [dBm/100 kHz]: 3.722
 Out-of-band Frequency [MHz]: 901.995
 Max. out-of-band Level [dBm/100 kHz]: -44.445
 Attenuation [dB]: -48.17



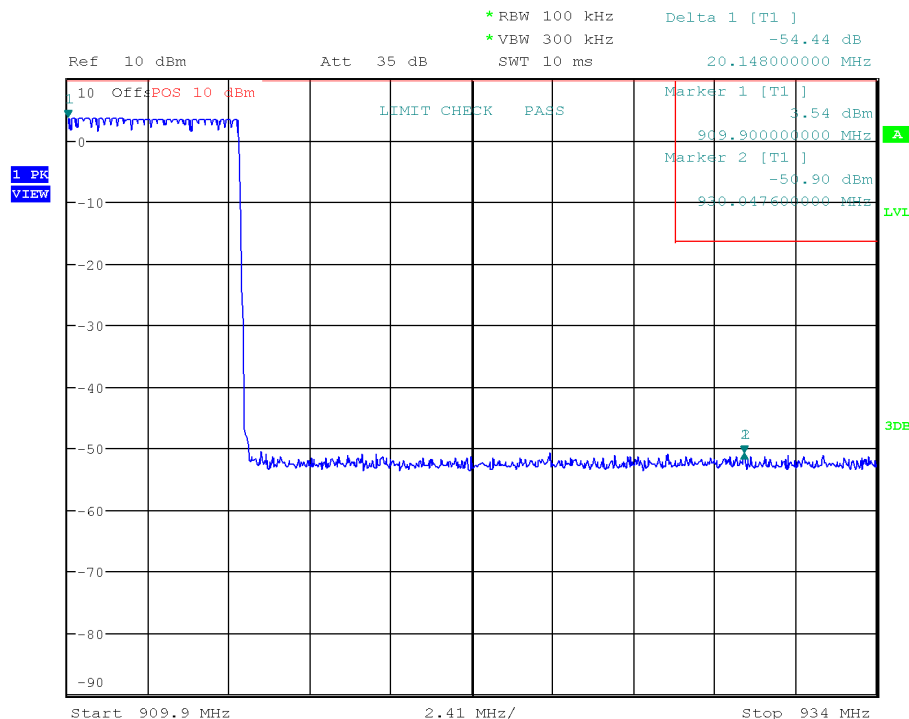
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11, 6.10
 Operational Mode: hopping mode, Channel: 914.9 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-16
 Note: Mode 2
 Band-edge: Upper
 In-band Frequency [MHz]: 909.9
 Max. in-band Level [dBm/100 kHz]: 3.536
 Out-of-band Frequency [MHz]: 930.048
 Max. out-of-band Level [dBm/100 kHz]: -50.901
 Attenuation [dB]: -54.44



Date: 16.JUN.2026 07:56:10

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

3.8 Test Conditions and Results - Conducted spurious emissions

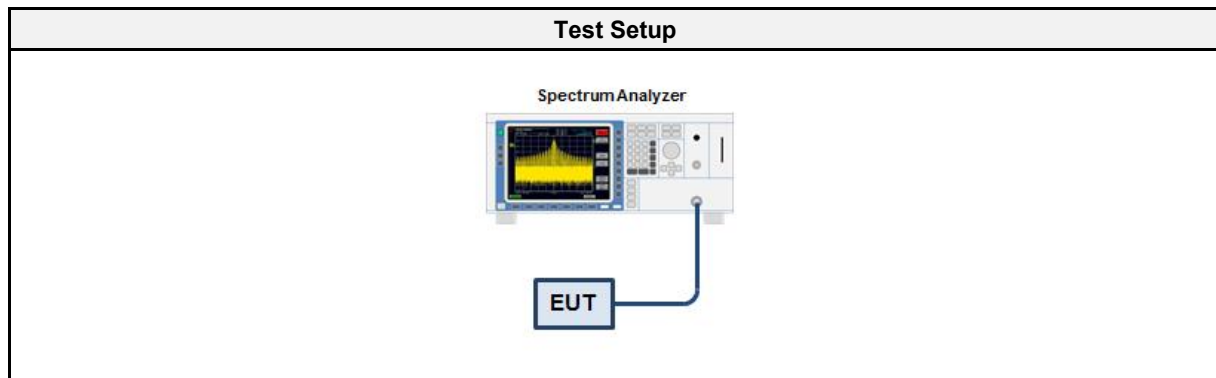
3.8.1 Information

Test Information	
Reference	FCC § 15.247(d)
Measurement Method	ANSI C63.10 7.8.7
Operator	Md Abu Bakar Siddique
Date	2026-06-22

3.8.2 Limits

Limits	
Power Measurement	Out-of-band attenuation [dB]
Peak	20
RMS	30

3.8.3 Setup



3.8.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyzer	R&S	FSU 26	EF01407	2025-08	2026-08
Cable	GIGALANE	1536	EF00779 CAABI	2026-03	2027-03

3.8.5 Procedure

Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Span set around lower band edge and detector is set to peak and max hold 3. Resolution bandwidth is set to 100 kHz 4. Markers are set to peak emission levels outside frequency band

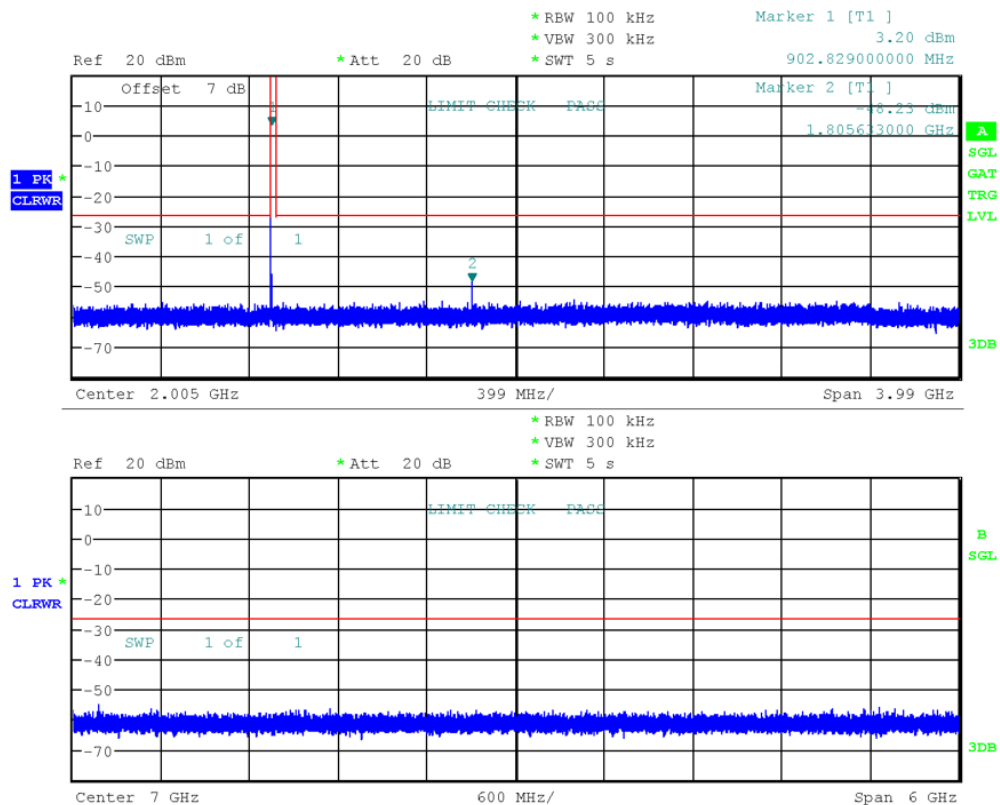
3.8.6 Results

Test Results – Mode 1		
Mode	Channel [MHz]	Verdict
Transmit	903.0	PASS
Transmit	907.8	PASS
Transmit	914.2	PASS

Test Results – Mode 2		
Mode	Channel [MHz]	Verdict
Transmit	902.3	PASS
Transmit	908.7	PASS
Transmit	914.9	PASS

Conducted Spurious Emissions

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11
 Operational Mode: LoRa, Channel: 903 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-17
 Note: Mode 1
 Max. in-band Frequency [MHz]: 903.0
 Max. in-band Level [dBm/100 kHz]: 3.5
 Out-of-band Limit [dBm/100 kHz]: -26.5



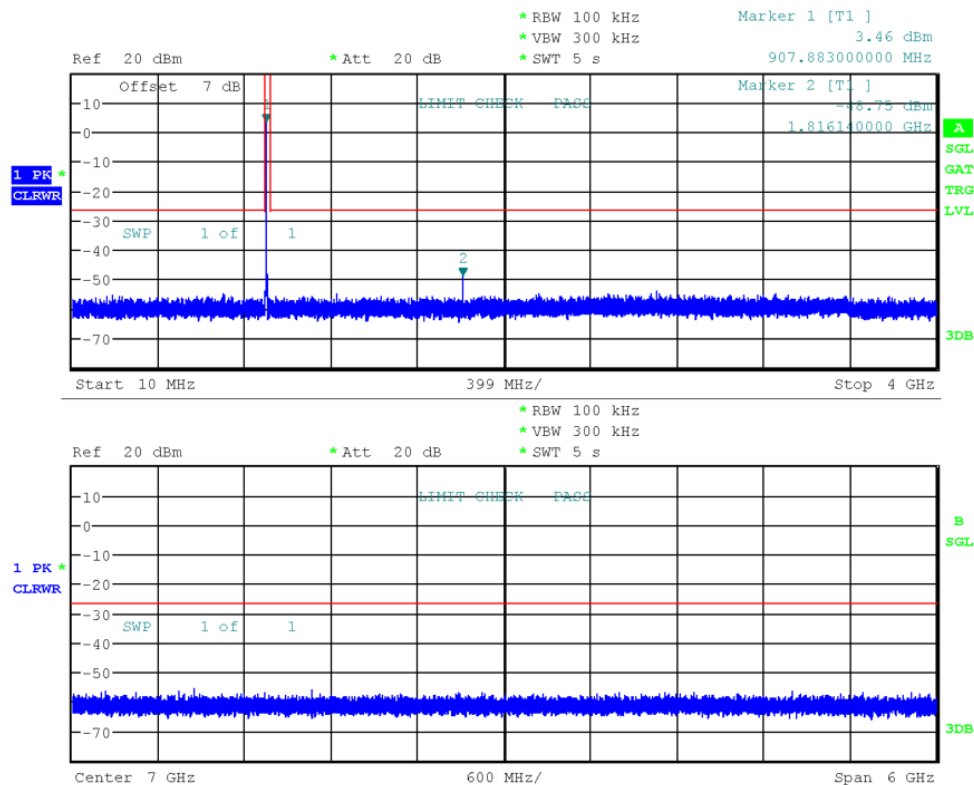
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted Spurious Emissions

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11
 Operational Mode: LoRa, Channel: 907.8 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-17
 Note: Mode 1
 Max. in-band Frequency [MHz]: 907.8
 Max. in-band Level [dBm/100 kHz]: 3.5
 Out-of-band Limit [dBm/100 kHz]: -26.5



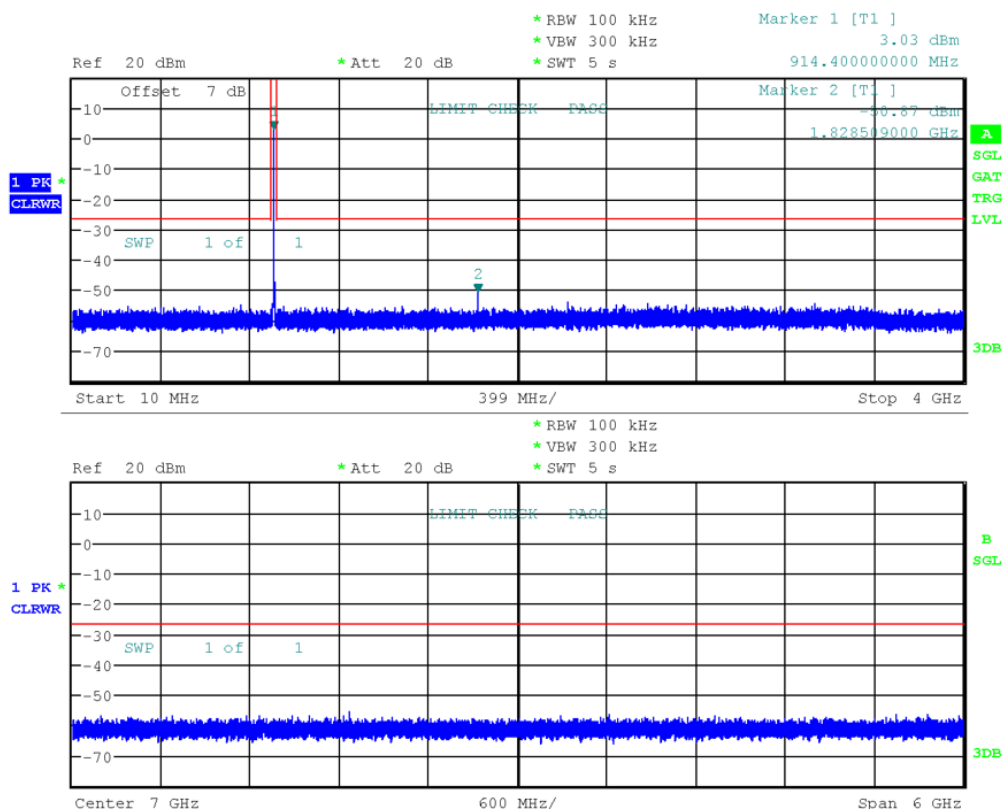
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted Spurious Emissions

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11
 Operational Mode: LoRa, Channel: 914.2 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-17
 Note: Mode 1
 Max. in-band Frequency [MHz]: 914.0
 Max. in-band Level [dBm/100 kHz]: 3.4
 Out-of-band Limit [dBm/100 kHz]: -26.6



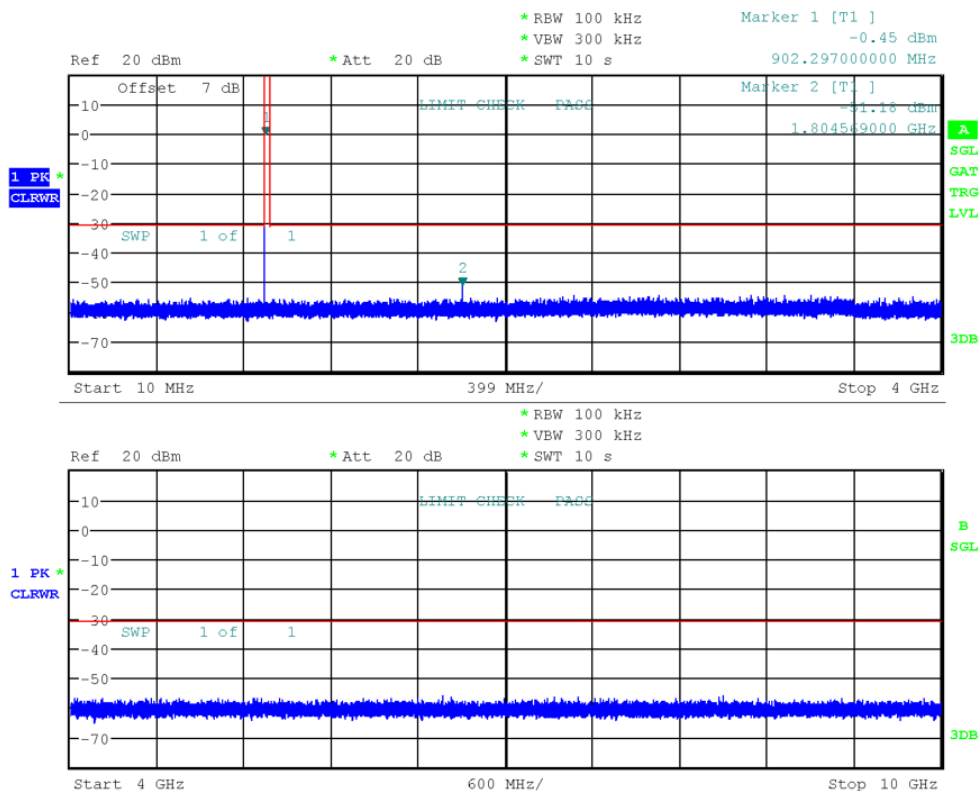
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted Spurious Emissions

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11
 Operational Mode: LoRa, Channel: 902.3 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Burkhard Pudell
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Max. in-band Frequency [MHz]: 902.3
 Max. in-band Level [dBm/100 kHz]: -0.4
 Out-of-band Limit [dBm/100 kHz]: -30.4



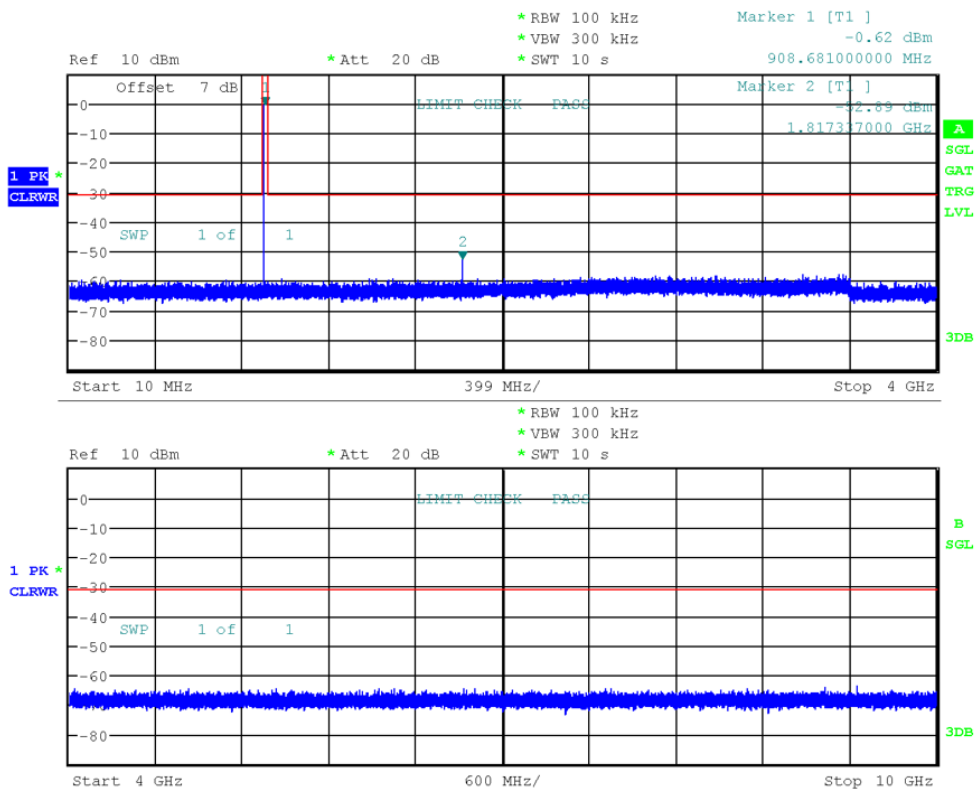
Date: 22.JUN.2026 07:36:25

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted Spurious Emissions

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvey2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11
 Operational Mode: LoRa, Channel: 908.7 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Burkhard Pudell
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Max. in-band Frequency [MHz]: 908.7
 Max. in-band Level [dBm/100 kHz]: -0.6
 Out-of-band Limit [dBm/100 kHz]: -30.6



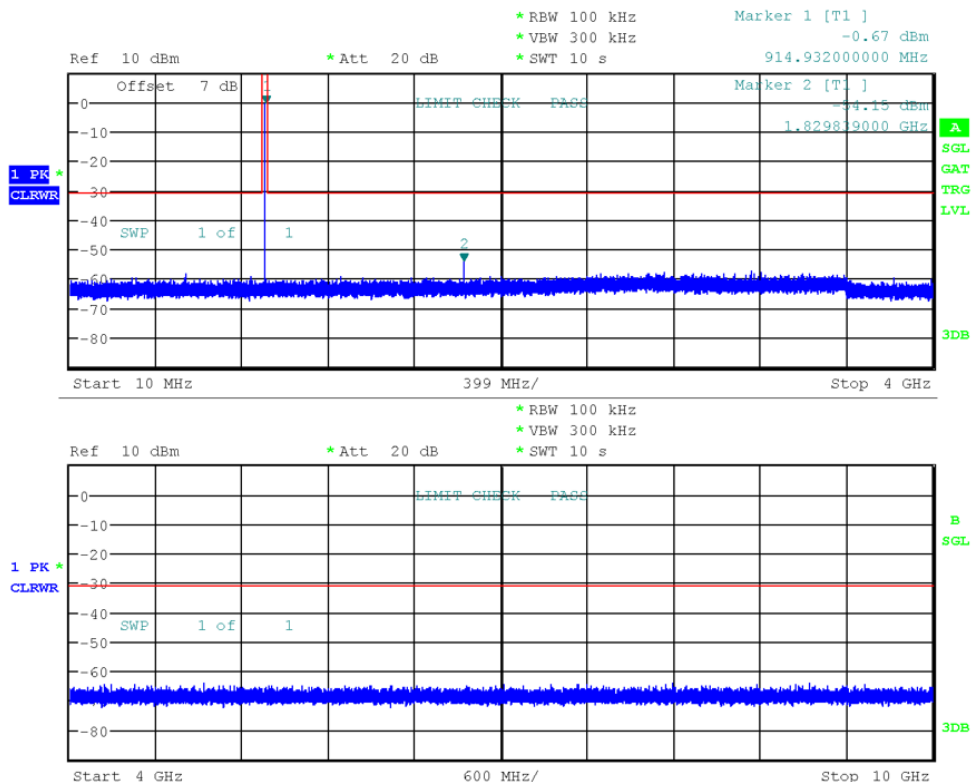
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Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Conducted Spurious Emissions

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvey2
 Test Sample ID: 53508
 Reference Standards: FCC 15.247
 Reference Method: ANSI C63.10:2020, Section 11.11
 Operational Mode: LoRa, Channel: 914.9 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Md Abu Bakar Siddique
 Test Site: Eurofins Product Service GmbH
 Test Date: 2026-06-22
 Note: Mode 2
 Max. in-band Frequency [MHz]: 914.9
 Max. in-band Level [dBm/100 kHz]: -0.6
 Out-of-band Limit [dBm/100 kHz]: -30.6



Date: 22.JUN.2026 07:45:26

3.9 Test Conditions and Results - Transmitter radiated emissions

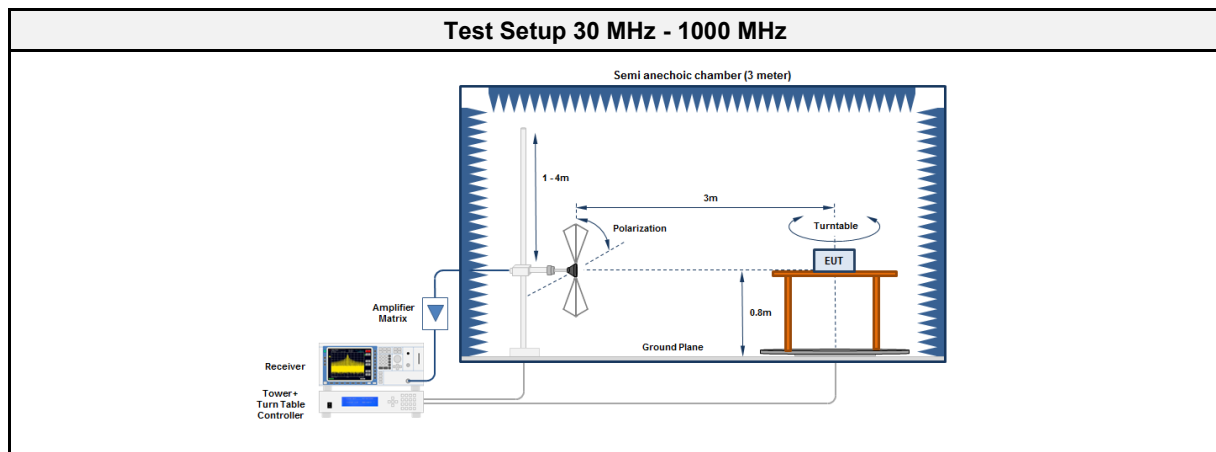
3.9.1 Information

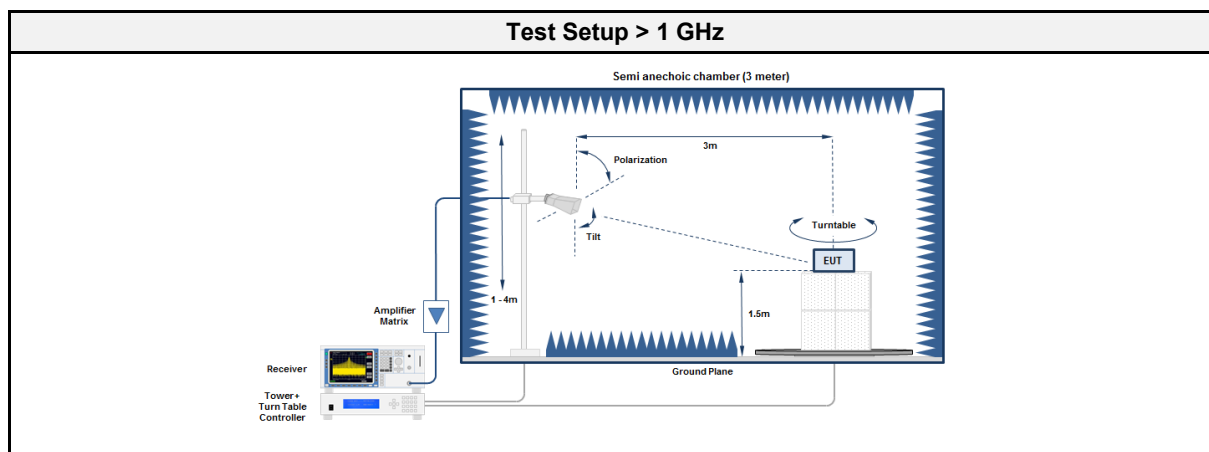
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Md Abu Bakar Siddique
Date	2026-06-15 to 2026-06-19

3.9.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [$\mu\text{V/m}$]	Measurement distance [m]
0.009 - 0.09	Average	2400/F[kHz]	300
0.09 - 0.110	Quasi-Peak	2400/F[kHz]	300
0.110 - 0.490	Average	2400/F[kHz]	300
0.490 - 1.705	Quasi-Peak	24000/F[kHz]	30
1.705 - 30.0	Quasi-Peak	30	30
30 - 88	Quasi-Peak	100	3
88 - 216	Quasi-Peak	150	3
216 - 960	Quasi-Peak	200	3
960 - 1000	Quasi-Peak	500	3
>1000	Average	500	3

3.9.3 Setup





3.9.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	Raditeq B.V.	RadiMation	2024.2.5

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-Anechoic chamber (NSA)	Frankonia	AC1	EF00062	2024-07	2027-07
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	EF01824	2025-10	2028-10
EMI Test Receiver	R&S	ESW 44	EF01856	2025-10	2026-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Semi-Anechoic chamber (SVSWR)	Frankonia	AC1	EF01011	2024-07	2027-07
Horn antenna	Schwarzbeck	BBHA 9120D	EF01561	2024-11	2027-11
Horn Antenna	Schwarzbeck	HWRD 650	EF01679	2024-05	2027-05
EMI Test Receiver	R&S	ESW 44	EF01856	2025-10	2026-10

3.9.5 Procedure

Test Procedure 30 MHz - 1000 MHz	
- EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground - EUT set to test mode - The receiver is set to peak detection with max hold - The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m - All significant emissions are measured again using the corresponding final detector	

Test Procedure > 1 GHz	
- EUT is placed on a non conducting support at the center of a turn table 1.5 m above the ground - EUT set to test mode - The receiver is set to peak detection with max hold - The EUT is rotated through 360° and the height of the antenna is varied from 1 m to 4 m - All significant emissions are measured again using the corresponding final detector	

3.9.6 Results

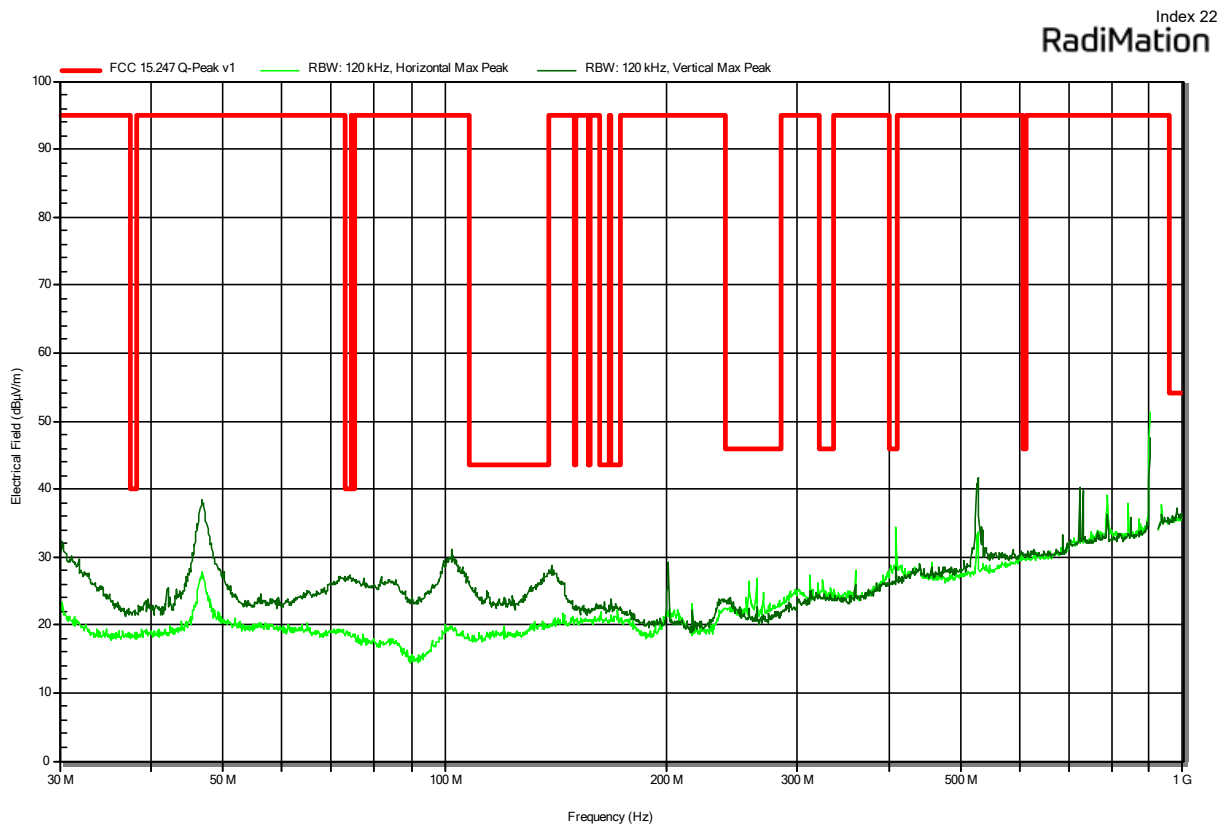
Test Results – Mode 1						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
903	2709.156	59.83	pk	hor	74	-14.17
903	2709.156	49.94	avg	hor	54	-4.06
903	8126.5667	38.23	pk	ver	74	-35.77
903	8126.5667	34.04	avg	ver	54	-19.96
903	9031.6667	40.73	pk	ver	74	-33.27
903	9031.6667	36.88	avg	ver	54	-17.12
907.8	2723.6123	59.12	pk	hor	74	-14.88
907.8	2723.6123	48.88	avg	hor	54	-5.12
907.8	7263.8167	41.5	pk	ver	74	-32.5
907.8	7263.8167	38.59	avg	ver	54	-15.41
907.8	8172.0667	40.32	pk	ver	74	-33.68
907.8	8172.0667	34.58	avg	ver	54	-19.42
907.8	9075.7667	40.7	pk	ver	74	-33.3
907.8	9075.7667	37.03	avg	ver	54	-16.97
914.2	2742.5	58.62	pk	hor	74	-15.38
914.2	2742.5	48.14	avg	hor	54	-5.86
914.2	7311.5333	40.81	pk	ver	74	-33.19
914.2	7311.5333	36.74	avg	ver	54	-17.26
914.2	8228.3	41.26	pk	ver	74	-32.74
914.2	8228.3	38.36	avg	ver	54	-15.64
914.2	9143.55	39.68	pk	ver	74	-34.32
914.2	9143.55	35.56	avg	ver	54	-18.44

Test Results – Mode 2						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
902.3	108.06	28.5	qpk	ver	43.5	-15.04
902.3	2706.8187	60.47	pk	hor	74	-13.53
902.3	2706.8187	52.75	avg	hor	54	-1.25
902.3	8120.6167	38.58	pk	ver	74	-35.42
902.3	8120.6167	34.44	avg	ver	54	-19.56
908.7	113.82	29.8	pk	ver	43.5	-13.72
908.7	2726.1183	59.47	pk	hor	74	-14.53
908.7	2726.1183	51.8	avg	hor	54	-2.2
908.7	7270	39.92	pk	ver	74	-34.08
908.7	7270	35.98	avg	ver	54	-18.02
914.9	113.82	29.3	pk	ver	43.5	-14.25
914.9	2744.7483	59.86	pk	hor	74	-14.14
914.9	2744.7483	51.62	avg	hor	54	-2.38
914.9	7318.7667	39.35	pk	ver	74	-34.65
914.9	7318.7667	34.21	avg	ver	54	-19.79

ANNEX A Transmitter spurious emissions

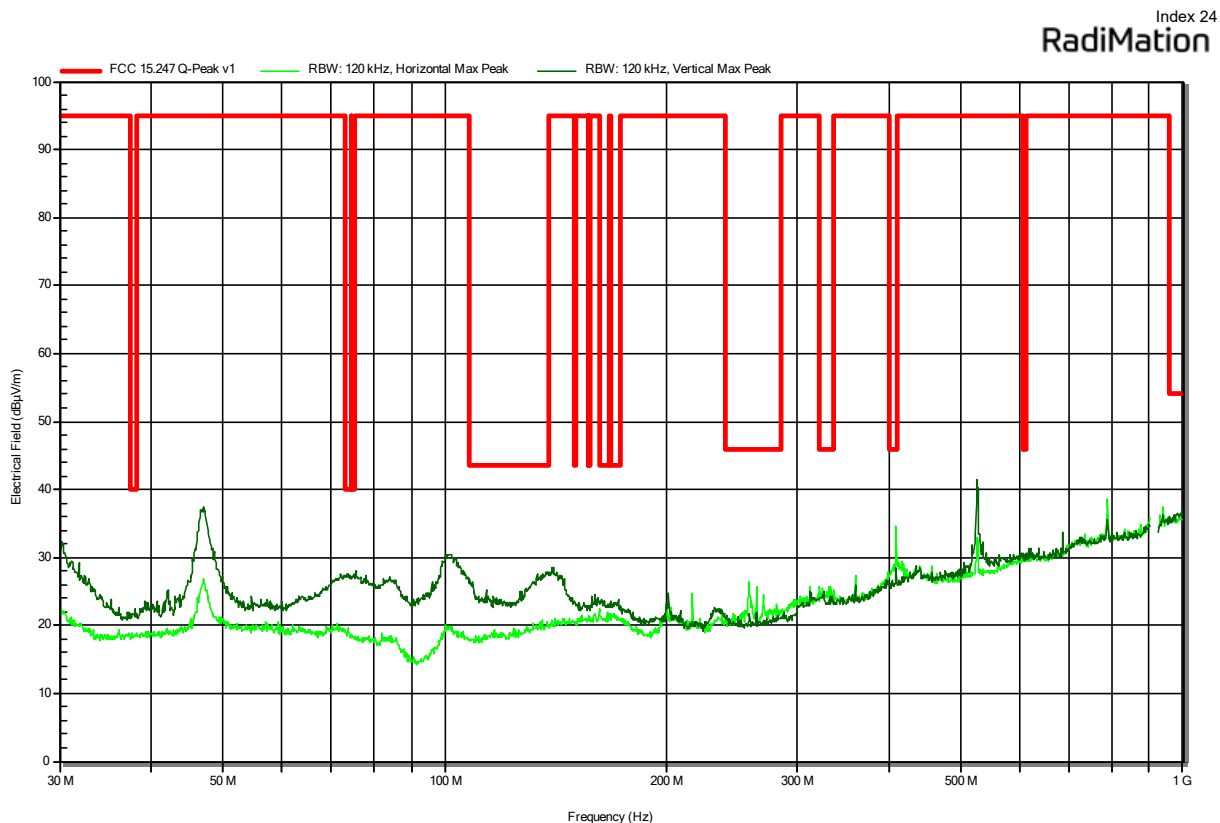
Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 903 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-15



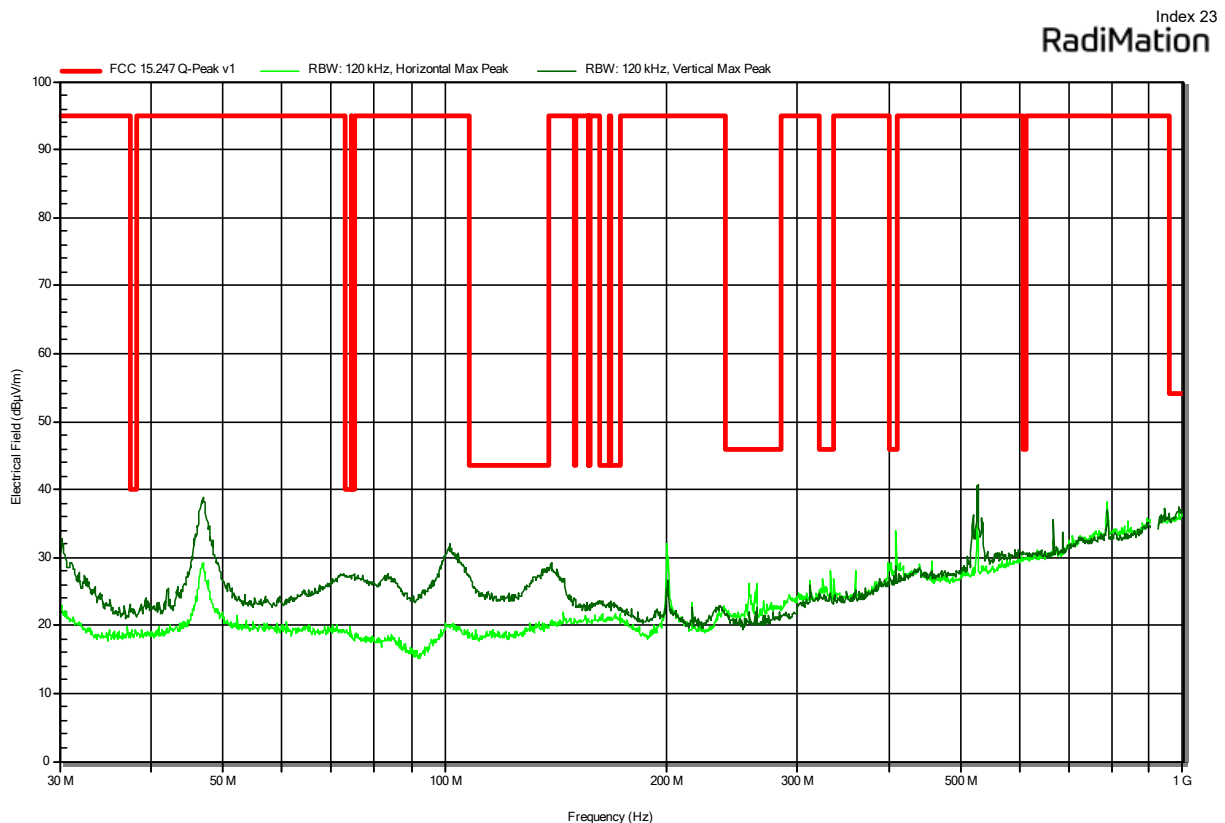
Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 907.8 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-15



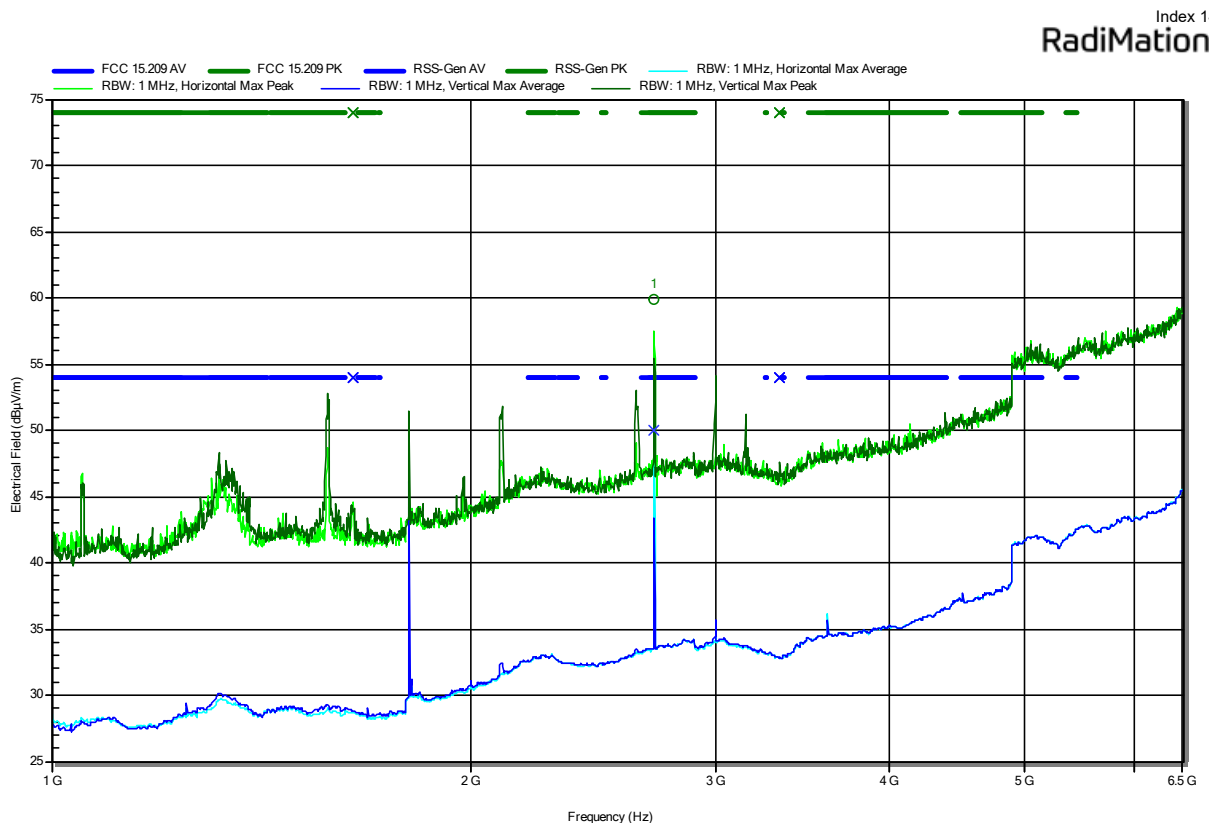
Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 914.2 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-15



Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 903 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-12

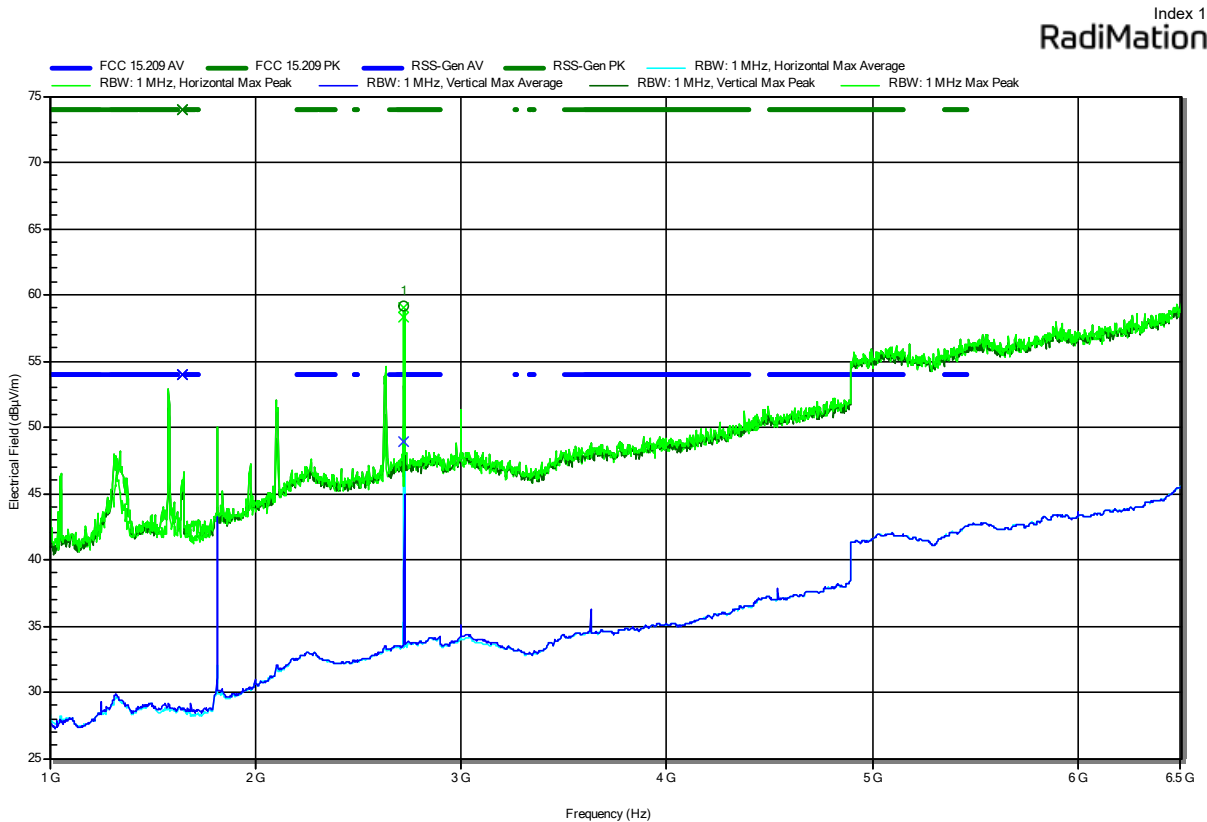


Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	2709.156	59.83	74		-14.17	Pass	Horizontal

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	2709.156	49.94	54		-4.06	Pass	Horizontal

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 907.8 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-12

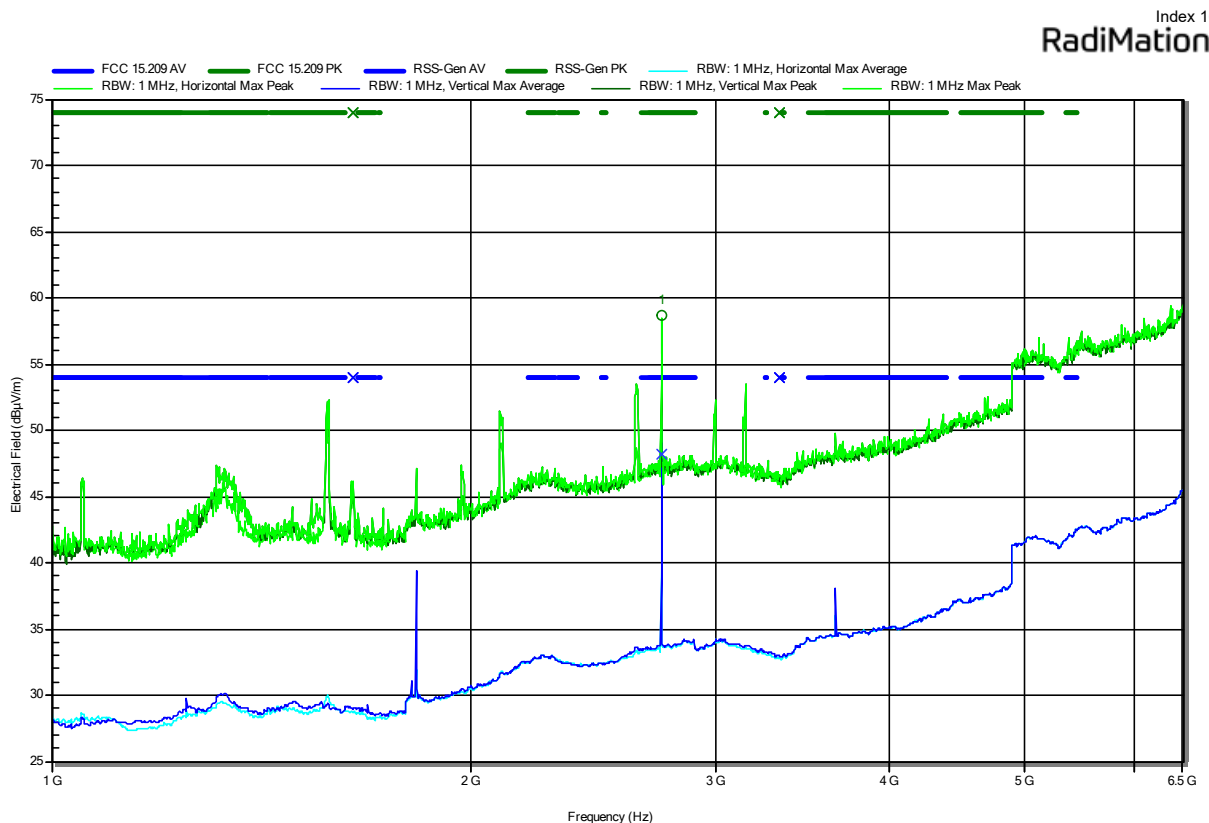


Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	2723.6123	59.12	74		-14.88	Pass	Horizontal

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	2723.6123	48.88	54		-5.12	Pass	Horizontal

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 914.2 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-12

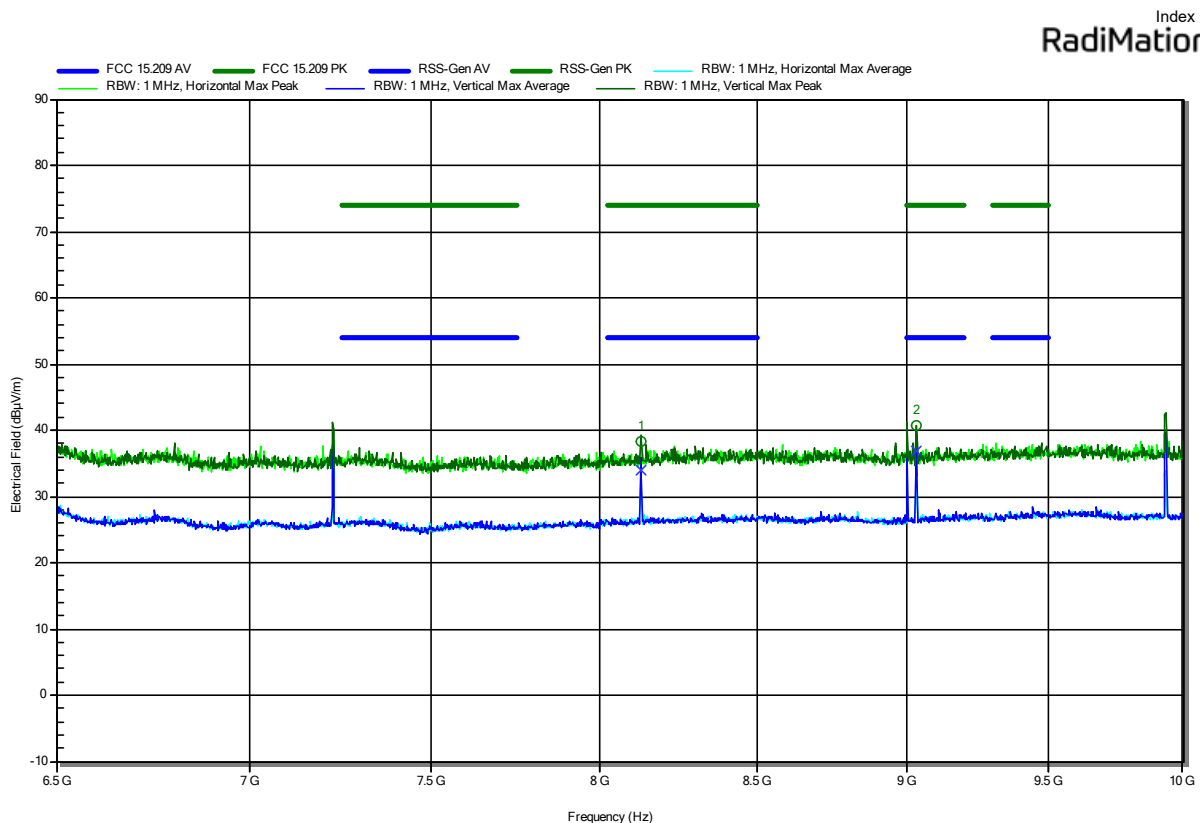


Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	2742.5	58.62	74		-15.38	Pass	Horizontal

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	2742.5	48.14	54		-5.86	Pass	Horizontal

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 903 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-12



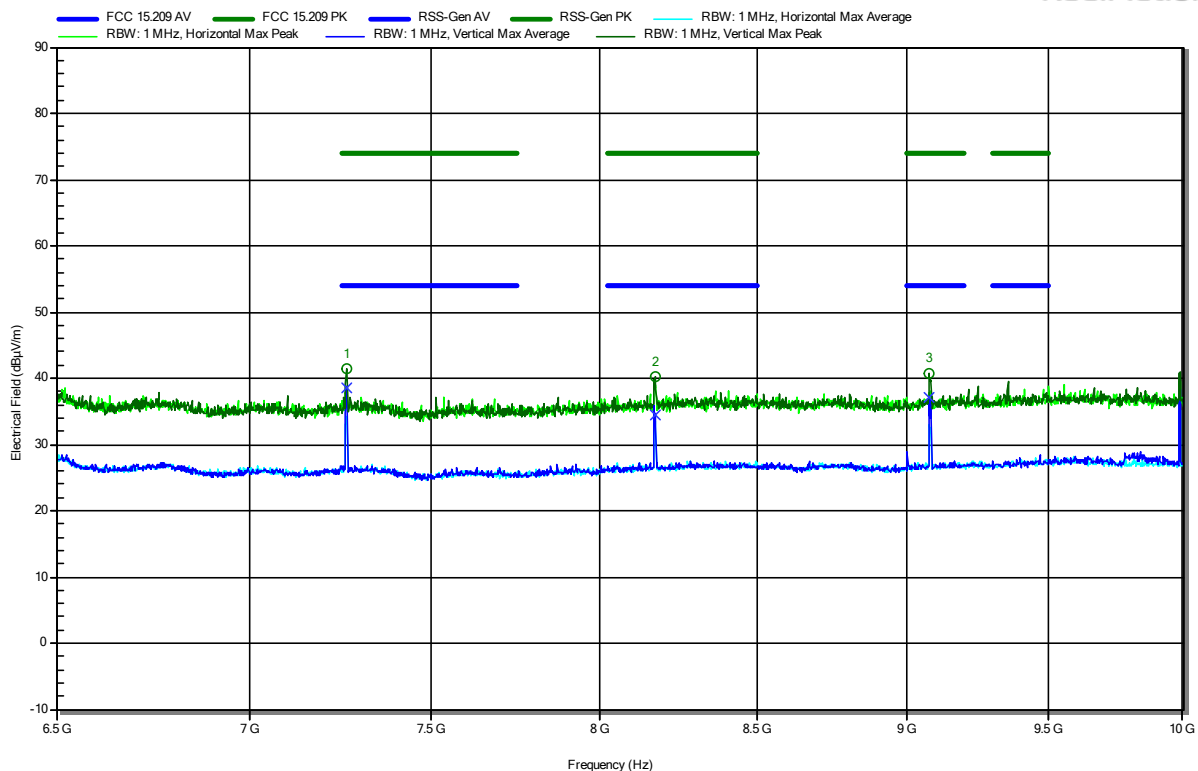
Peak Number	Frequency (MHz)	Peak (dBμV/m)	Peak (dBμV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	8126.5667	38.23	74		-35.77	Pass	Vertical
2	9031.6667	40.73	74		-33.27	Pass	Vertical

Peak Number	Frequency (MHz)	Average (dBμV/m)	Average (dBμV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	8126.5667	34.04	54		-19.96	Pass	Vertical
2	9031.6667	36.88	54		-17.12	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 907.8 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-12

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RadiMation



Peak Number	Frequency (MHz)	Peak (dBμV/m)	Peak (dBμV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	7263.8167	41.5	74		-32.5	Pass	Vertical
2	8172.0667	40.32	74		-33.68	Pass	Vertical
3	9075.7667	40.7	74		-33.3	Pass	Vertical

Peak Number	Frequency (MHz)	Average (dBμV/m)	Average (dBμV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	7263.8167	38.59	54		-15.41	Pass	Vertical
2	8172.0667	34.58	54		-19.42	Pass	Vertical
3	9075.7667	37.03	54		-16.97	Pass	Vertical

Test Report No.: G0M-2605-3688-TFC247DT01-V01

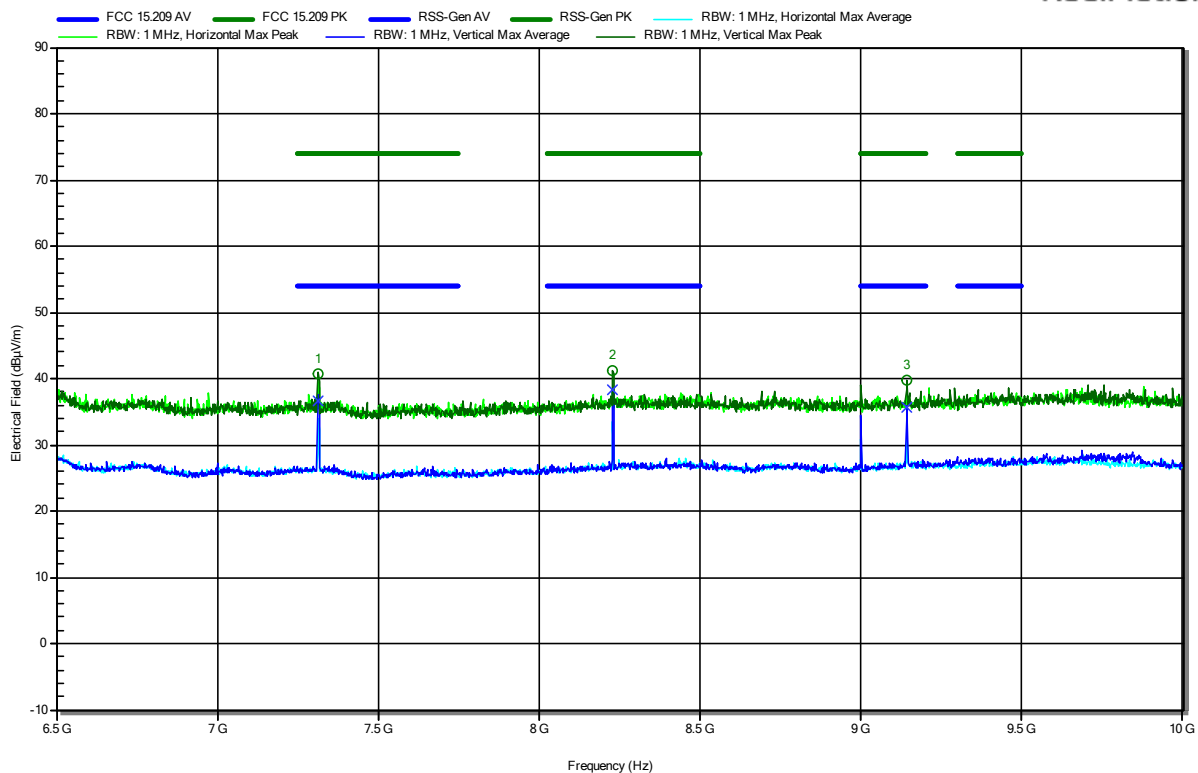
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; LoRa, DTS, 914.2 MHz, 5 dBm, Payload 242 bytes, Pause 100ms, DR4(SF8)
 Test Date: 2026-06-12

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RadiMation



Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	7311.5333	40.81	74		-33.19	Pass	Vertical
2	8228.3	41.26	74		-32.74	Pass	Vertical
3	9143.55	39.68	74		-34.32	Pass	Vertical

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	7311.5333	36.74	54		-17.26	Pass	Vertical
2	8228.3	38.36	54		-15.64	Pass	Vertical
3	9143.55	35.56	54		-18.44	Pass	Vertical

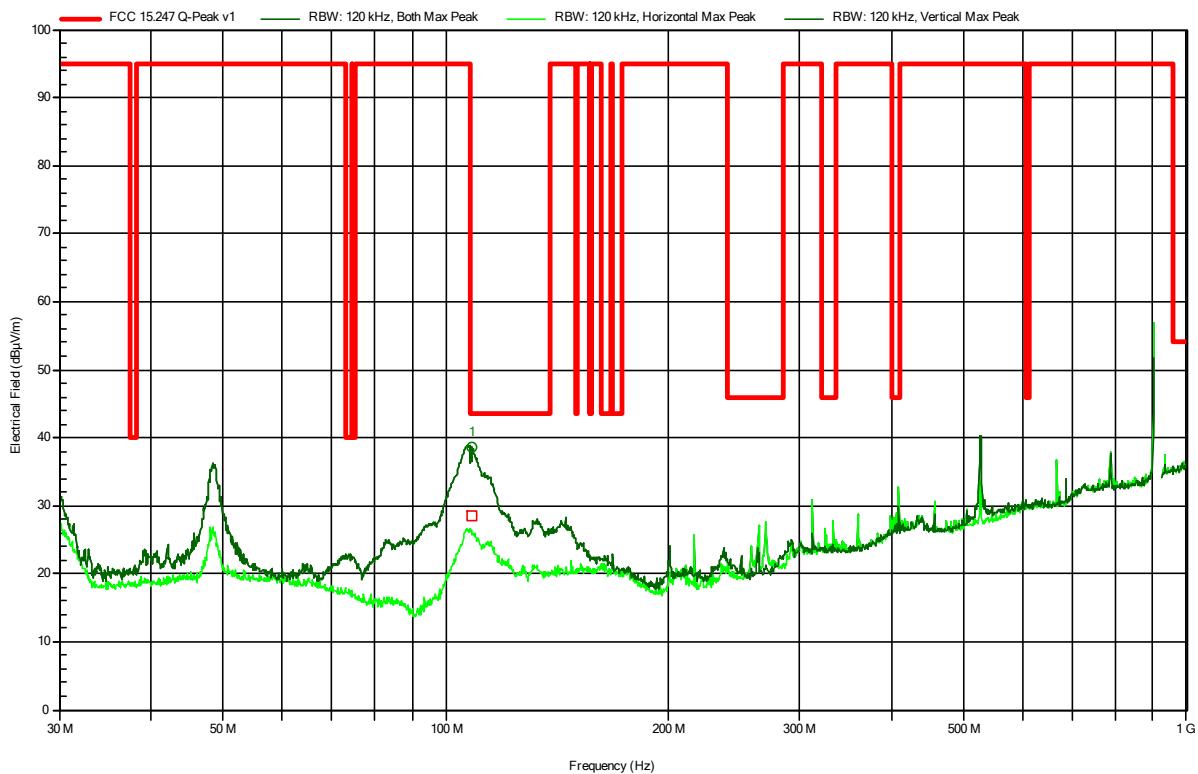
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 902.3 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-16

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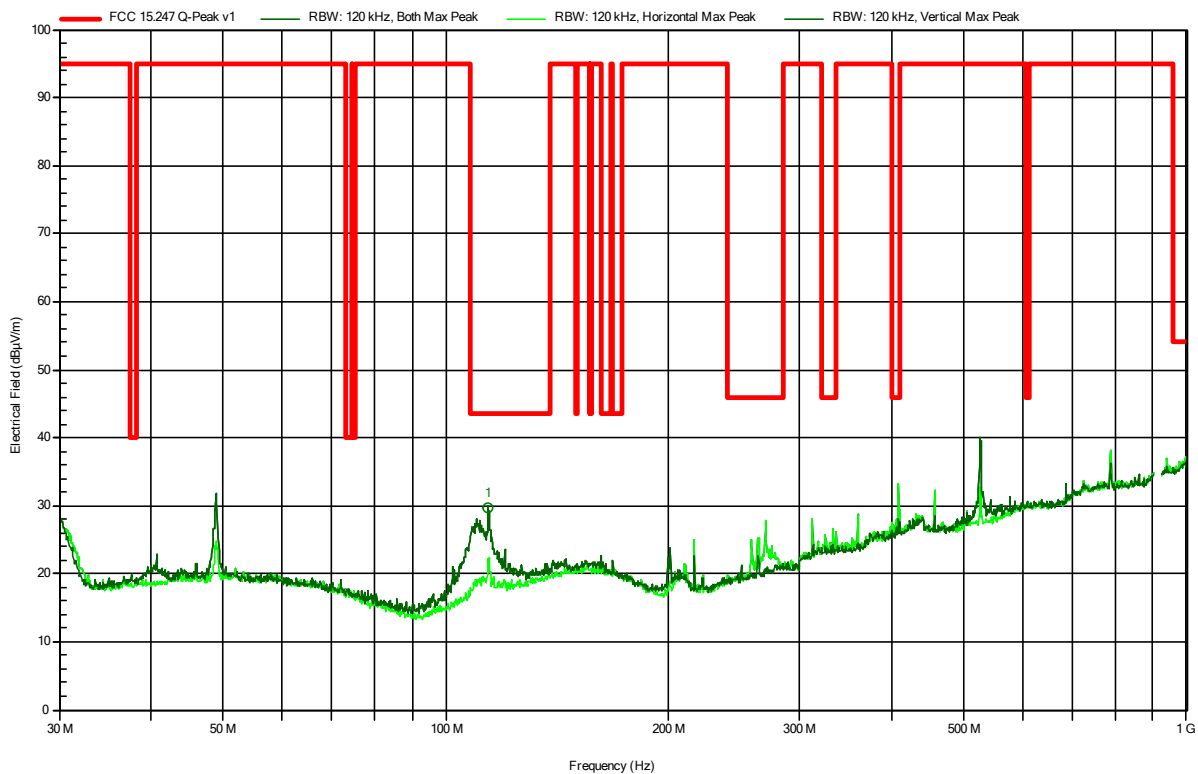


Peak Number	Frequency (MHz)	Quasi-Peak (dBµV/m)	Quasi-Peak Limit (dBµV/m)	Quasi-Peak Difference (dB)	Quasi-Peak Status	Polarization
1	108.06	28.5	43.5	-15.04	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 908.7 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-16

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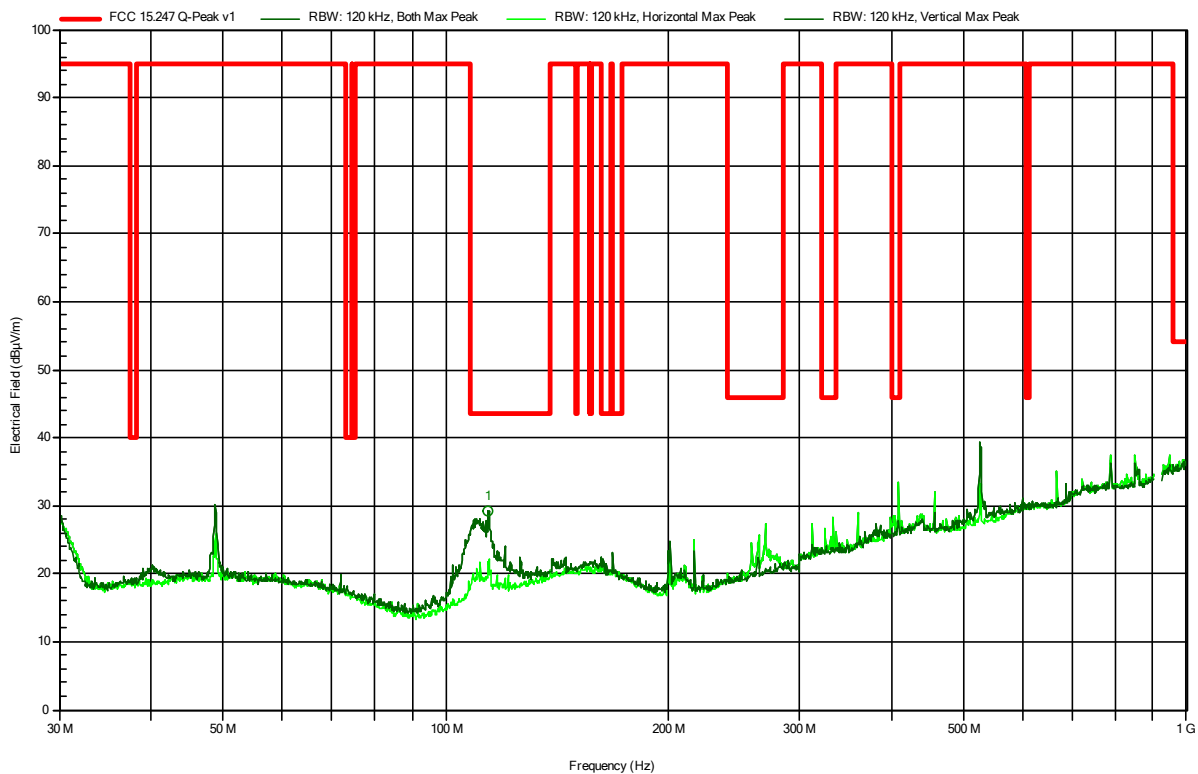


Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit (dB)	Peak Difference (dB)	Peak Status	Polarization
1	113.82	29.8	43.5	-13.72	Pass	Vertical	

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 914.9 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-16

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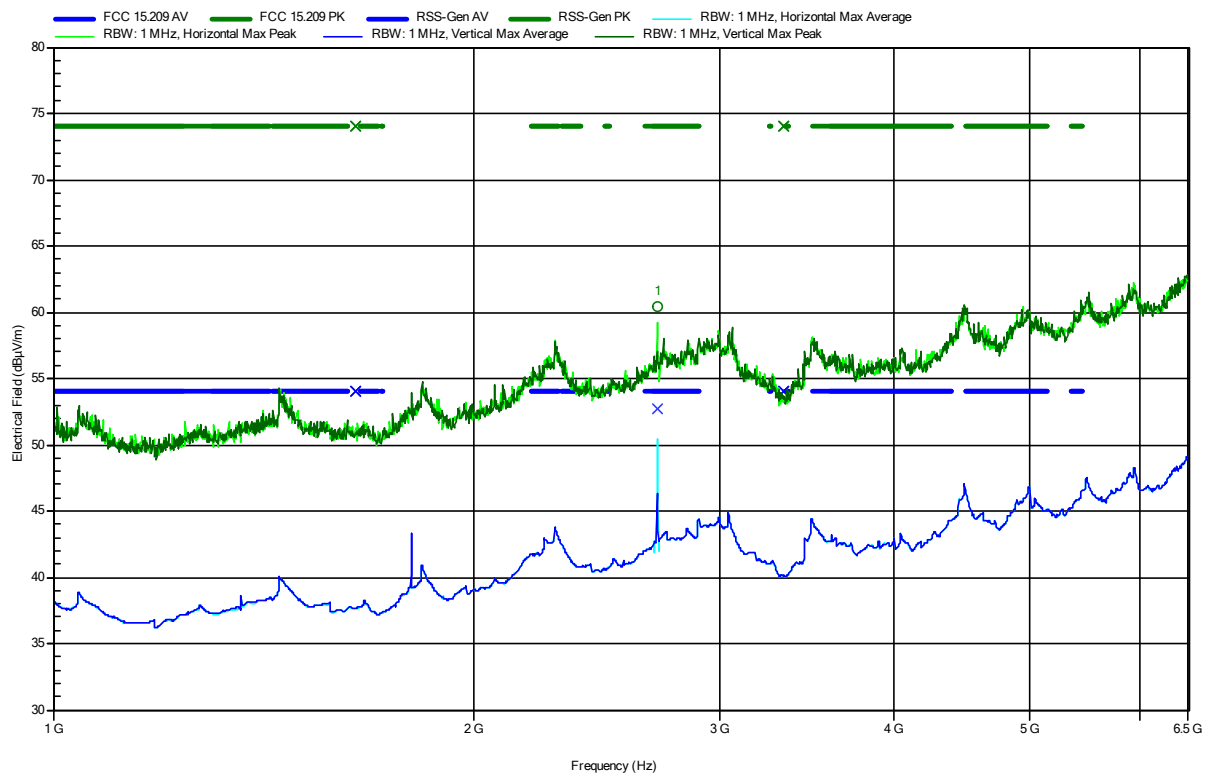


Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit (dB)	Peak Difference (dB)	Peak Status	Polarization
1	113.82	29.3	43.5	-14.25		Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 902.3 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-17

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Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	2706.8187	60.47	74		-13.53	Pass	Horizontal
Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	2706.8187	52.75	54		-1.25	Pass	Horizontal

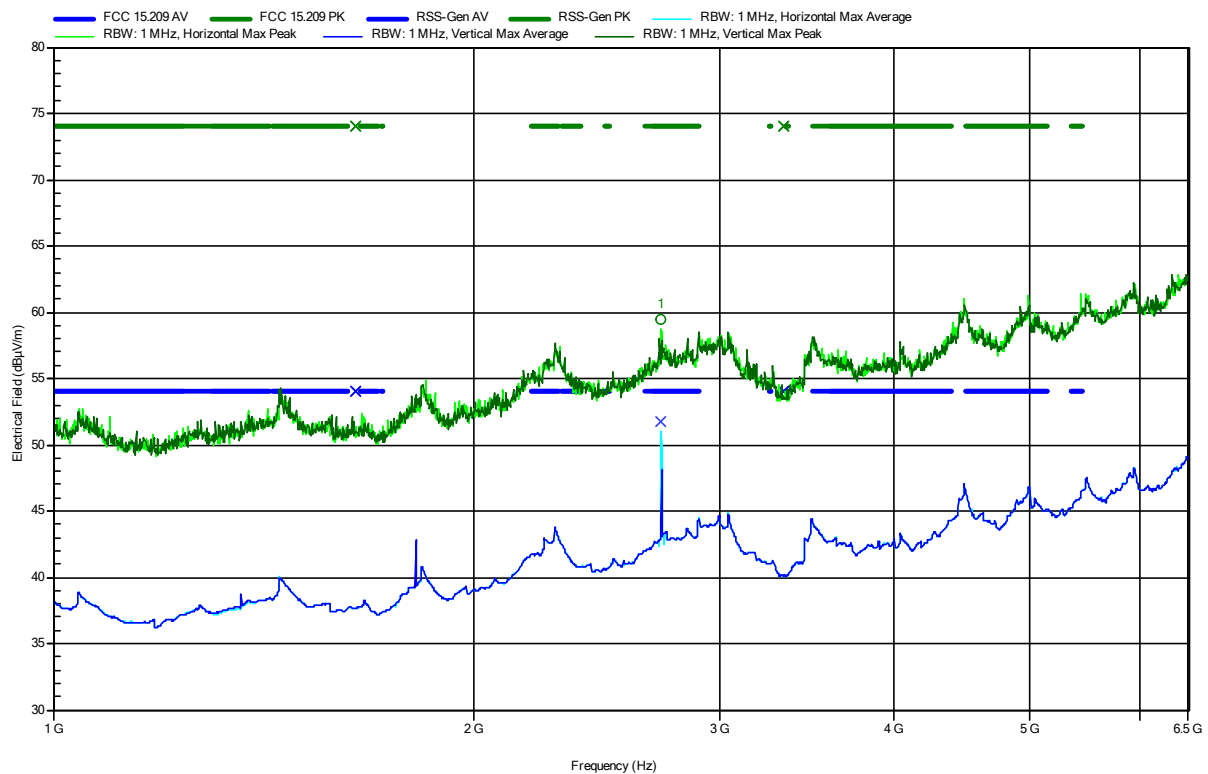
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 908.7 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-17

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Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	2726.1183	59.47	74		-14.53	Pass	Horizontal

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	2726.1183	51.8	54		-2.2	Pass	Horizontal

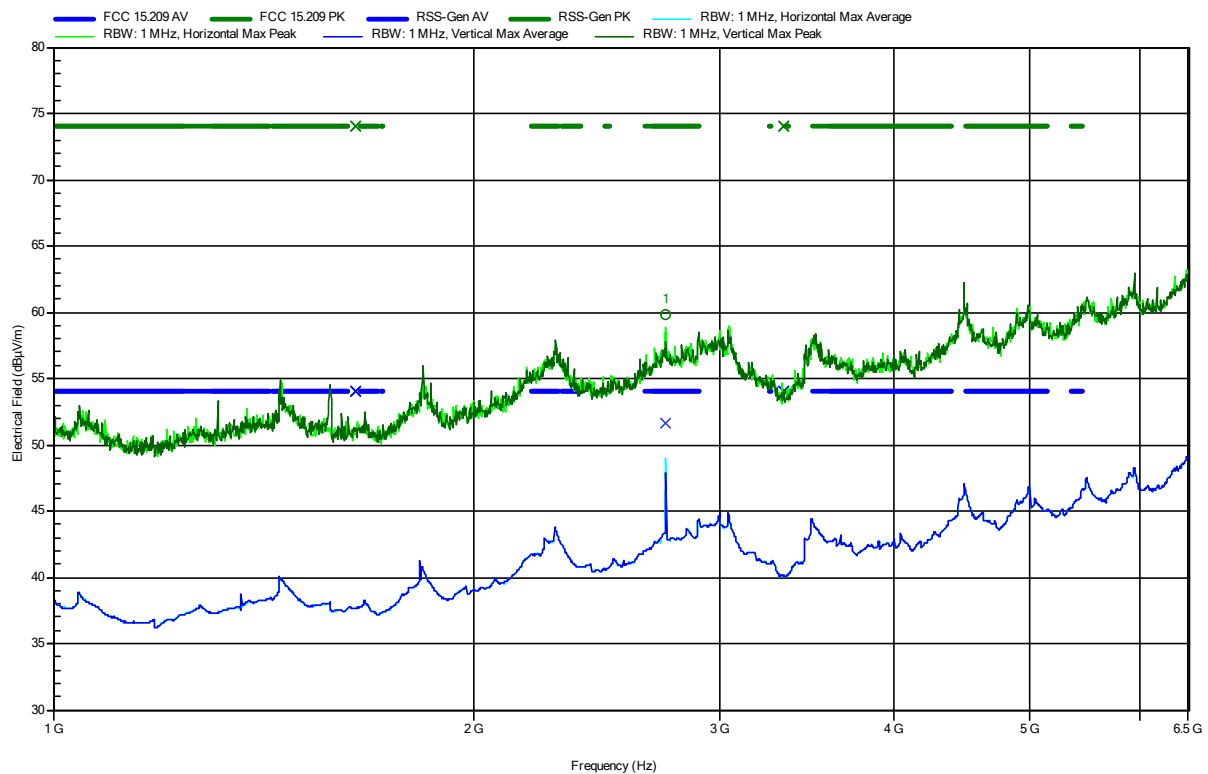
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 914.9 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-17

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Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	2744.7483	59.86	74		-14.14	Pass	Horizontal

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	2744.7483	51.62	54		-2.38	Pass	Horizontal

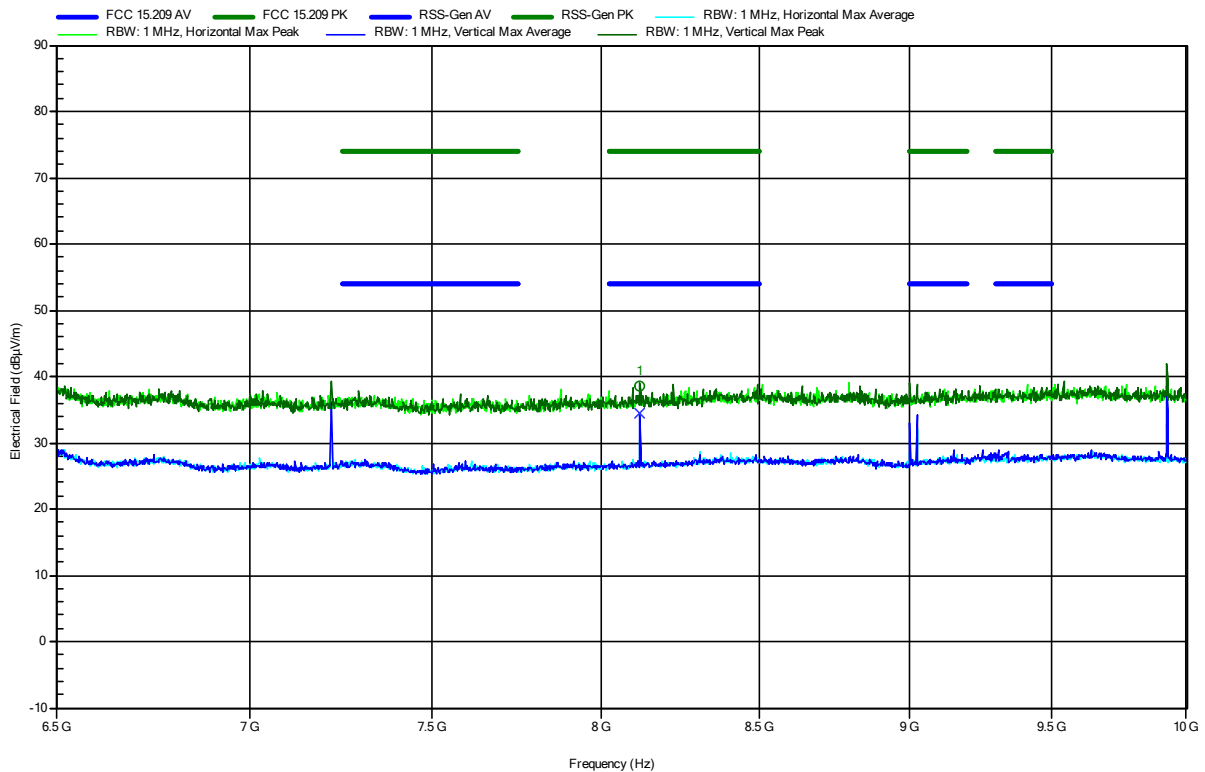
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 902.3 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-17

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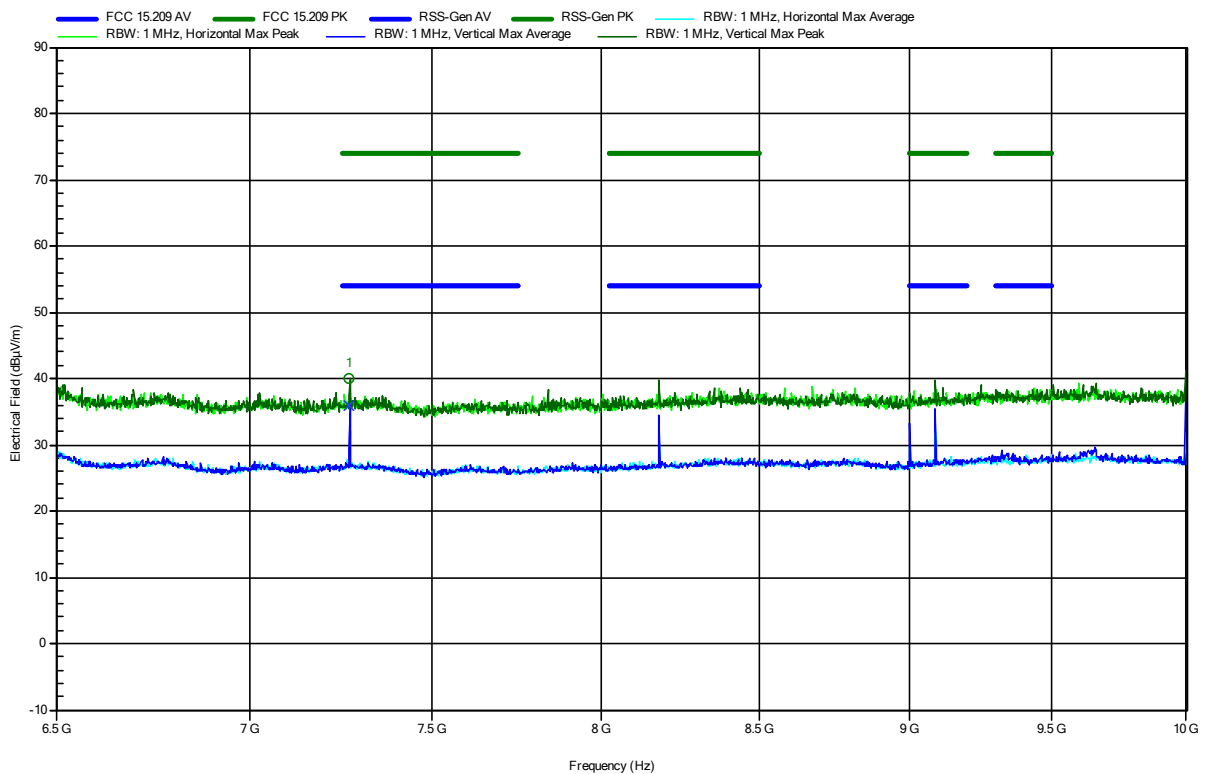
Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	8120.6167	38.58	74		-35.42	Pass	Vertical

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	8120.6167	34.44	54		-19.56	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 908.7 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-17

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Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	7270	39.92	74		-34.08	Pass	Vertical

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	7270	35.98	54		-18.02	Pass	Vertical

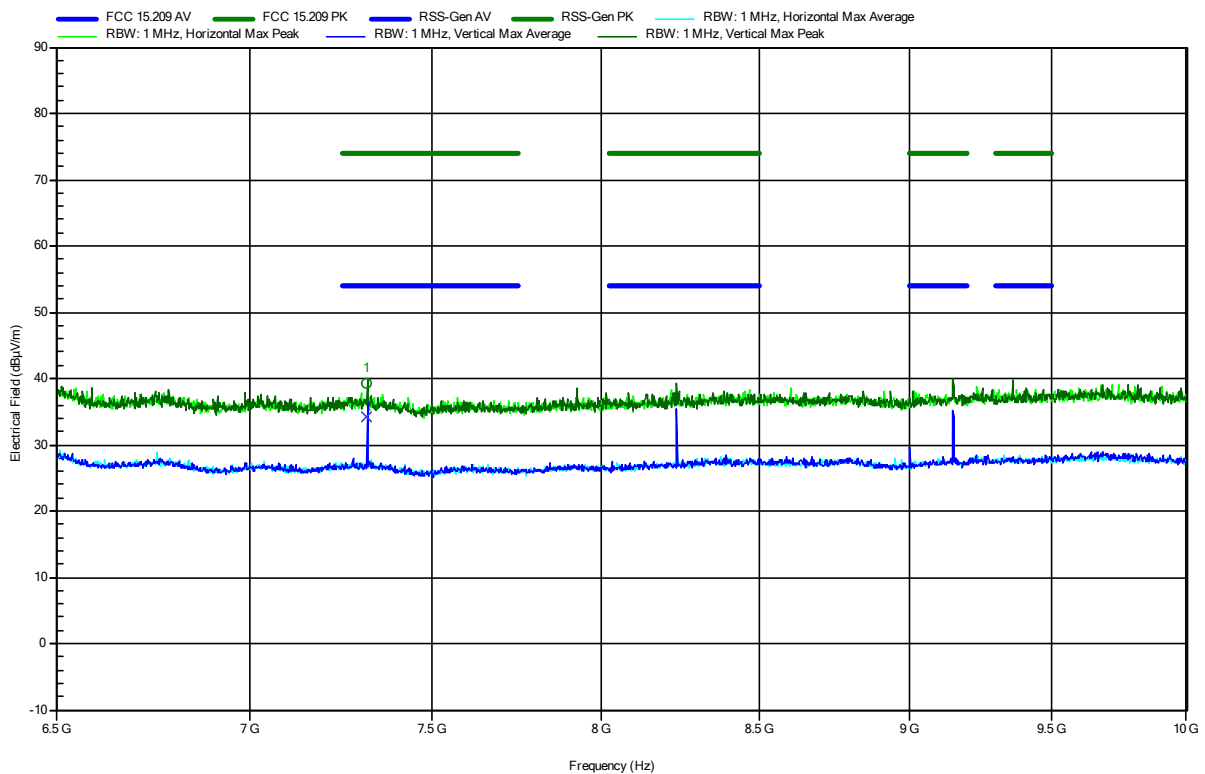
Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2605-3688
 Applicant: deZem GmbH
 Model Description: Self-powered LoRaWAN IoT sensor with four inputs for versatile monitoring in electrical supply network
 Model: Harvy2
 Test Sample ID: 53508
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2024.2.5
 Test Conditions: Tnom: 24 °Celsius, Vnom: 12 V AC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; LoRa, FHSS, 914.9 MHz, 1 dBm, Payload 11 bytes, Pause 100ms, DR0(SF10)
 Test Date: 2026-06-17

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Peak Number	Frequency (MHz)	Peak (dBµV/m)	Peak (dBµV/m)	Limit	Peak Difference (dB)	Peak Status	Polarization
1	7318.7667	39.35	74		-34.65	Pass	Vertical

Peak Number	Frequency (MHz)	Average (dBµV/m)	Average (dBµV/m)	Limit	Average Difference (dB)	Average Status	Polarization
1	7318.7667	34.21	54		-19.79	Pass	Vertical

=== End of test report ===

Test Report No.: G0M-2605-3688-TFC247DT01-V01

Eurofins Product Service GmbH
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