








<b>RADIO REPORT</b> <b>FCC 47 CFR Part 15C</b> <b>Digital transmission systems operating within the 2400.0 MHz - 2483.5 MHz band</b>	
<b>Report Reference No</b>	G0M-2112-1241-TFC247BL-V02
<b>Testing Laboratory</b>	Eurofins Product Service GmbH
<b>Address</b>	Storkower Str. 38c 15526 Reichenwalde Germany
<b>Accreditation</b>	    DAkks - Registration number : D-PL-12092-01-03 (ISED) ISED Testing Laboratory site: 3470A DAkks - Registration number : D-PL-12092-01-04 (FCC) FCC Filed Test Laboratory, Reg.-No.: 96970
<b>Applicant</b>	fischertechnik GmbH
<b>Address</b>	Klaus-Fischer-Str. 1 72178 Waldachtal Germany
<b>Test Specification</b>	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 2, 2021-02
<b>Non-Standard Test Method</b>	None
<b>Equipment under Test (EUT):</b>	
<b>Product Description</b>	Roboter Chassis Early Coding for Toy and Education market
<b>Model(s)</b>	Roboter Chassis 183268
<b>Additional Model(s)</b>	None
<b>Brand Name(s)</b>	fischertechnik
<b>Hardware Version(s)</b>	PL-221c
<b>Software Version(s)</b>	0.20
<b>FCC ID</b>	2AFD4-183268
<b>IC</b>	N/A
<b>Test Result</b>	<b>PASSED</b>

<b>Possible test case verdicts:</b>		
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)	
<b>Testing:</b>		
Test Lab Temperature	20 °C - 30 °C	
Test Lab Humidity	25 % - 55 %	
Date of receipt of test item	2022-03-04	
<b>Report:</b>		
Compiled by	Burkhard Pudell	
Tested by (+ signature) (Responsible for Test)	Burkhard Pudell	
Approved by (+ signature) (Radio Team Leader)	Dr.-Ing. Dhamia Almozani	
Approved by (+ signature) (Test Lab Engineer)	Wilfried Treffke	
Date of Issue	2022-12-12	
Total number of pages	41	
<b>General Remarks:</b>		
<p>The test results presented in this report relate only to the object tested.</p> <p>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.</p> <p>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.</p>		
<b>Additional Comments:</b>		

**VERSION HISTORY**

Version History			
Version	Issue Date	Remarks	Revised By
01	2022-10-18	Initial Release	
02	2022-12-12	Replaced document: G0M-2112-1241-TFC247BL-V01 Replaced by: G0M-2112-1241-TFC247BL -V02  Reason: Add. FCC-ID: 2AFD4-183268 and FCC-ID Radio Module SQGBL651 at page 6.  Add. FCC Module Report Information to test mode/ comment at page 12.	B. Pudell

**ABBREVIATIONS AND ACRONYMS**

Acronyms	
Acronym	Description
EUT	Equipment Under Test
FCC	Federal Communications Commission
ISED	Innovation, Science and Economic Development Canada
RBW	Resolution bandwidth
RMS	Root mean square
VBW	Video bandwidth
V <sub>NOM</sub>	Nominal supply voltage

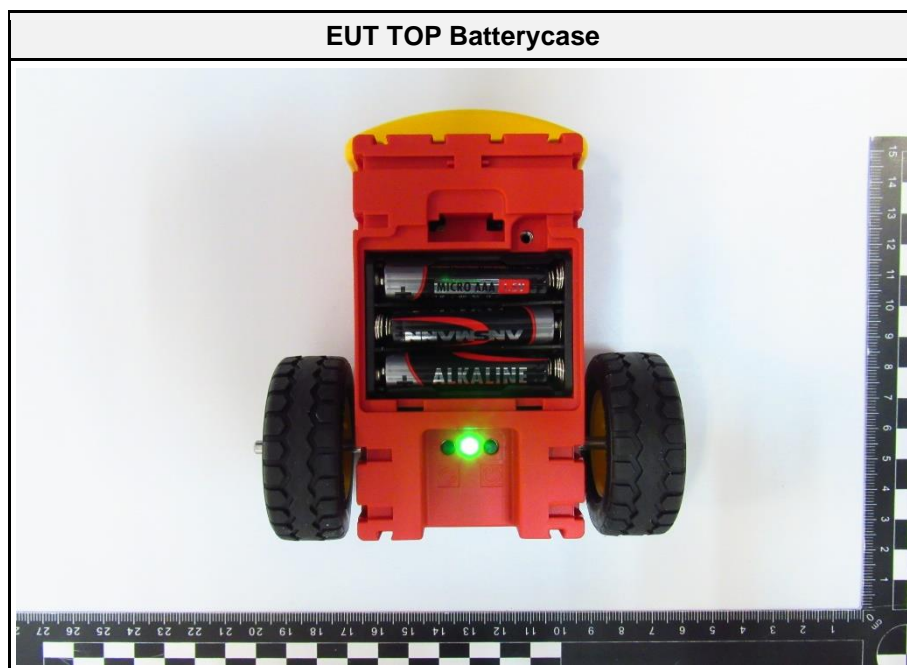
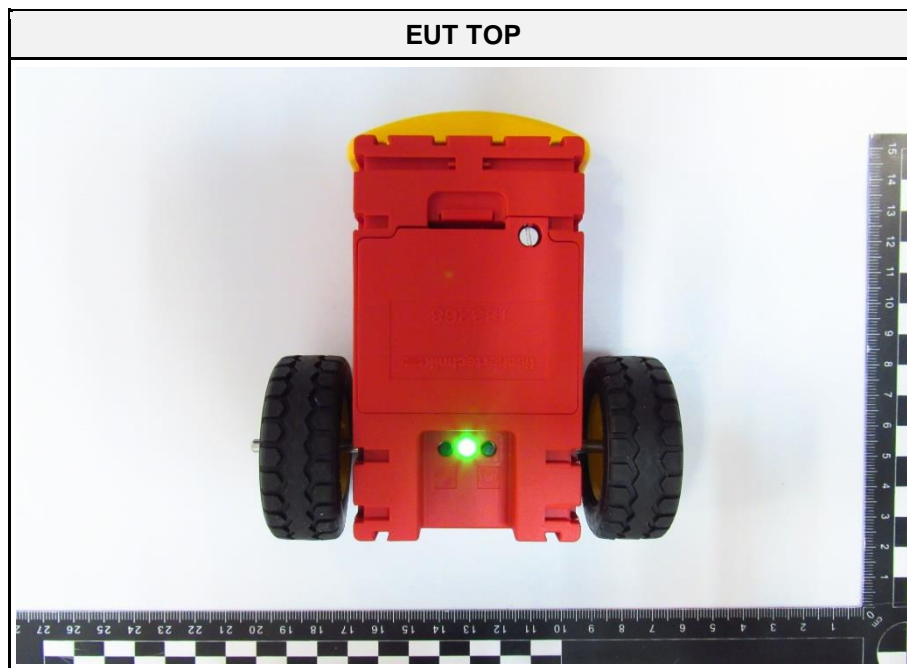
**REPORT INDEX**

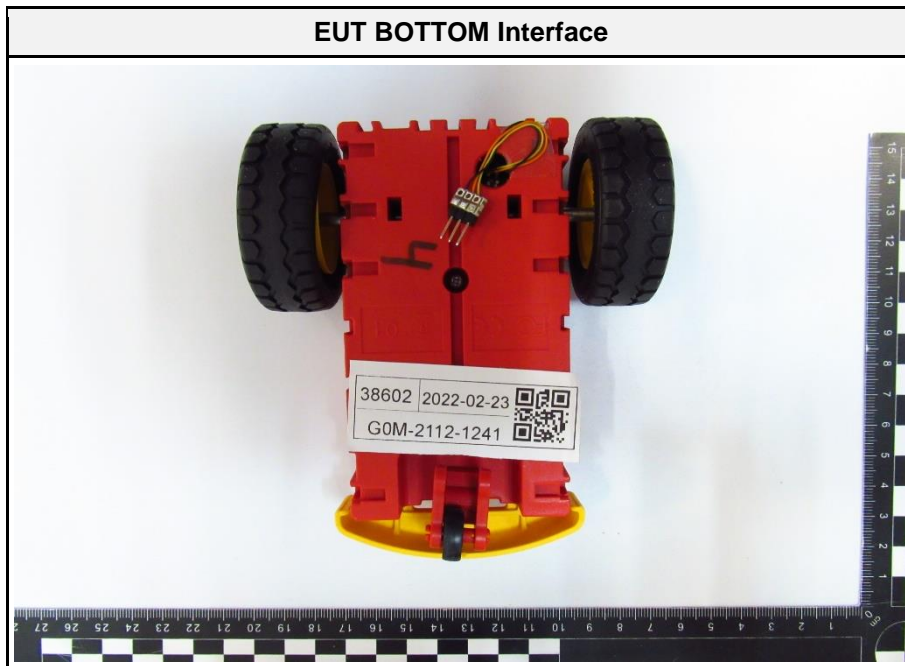
<b>1</b>	<b>Equipment (Test Item) Under Test.....</b>	<b>6</b>
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## 1 Equipment (Test Item) Under Test

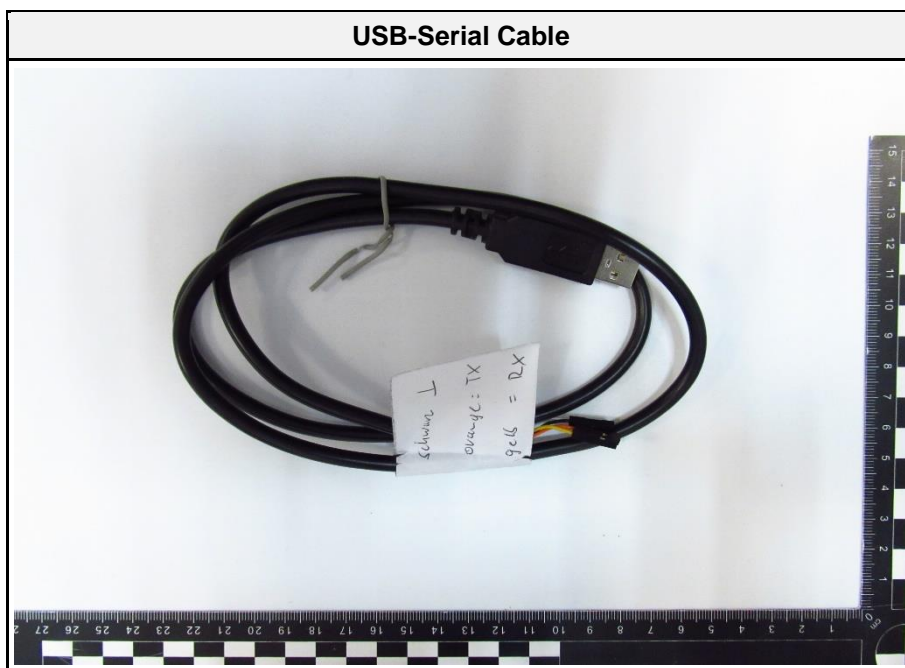
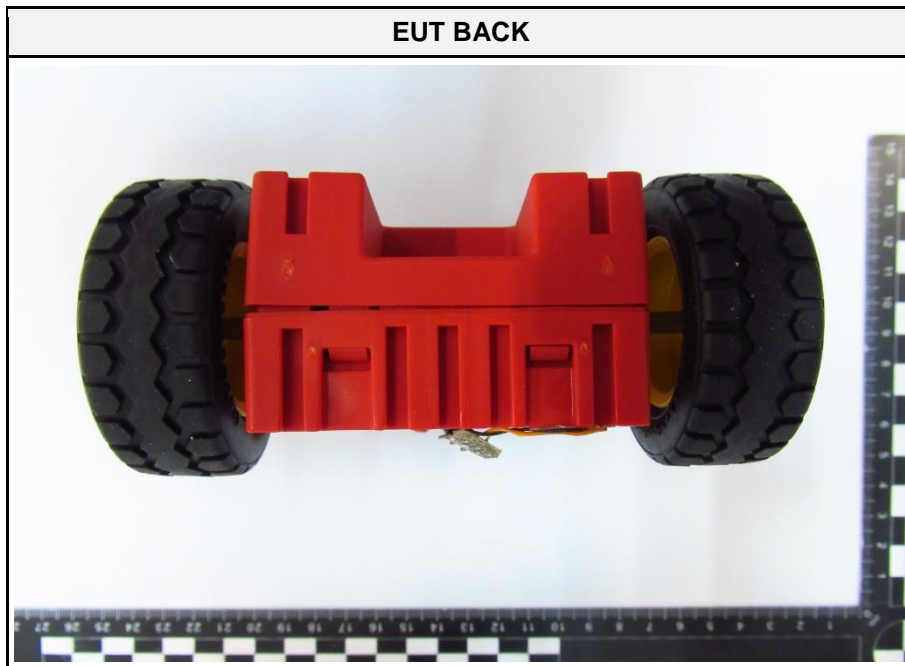
Description	Roboter Chassis Early Coding for Toy and Education market	
Model	Roboter Chassis 183268	
Additional Model(s)	None	
Brand Name(s)	fischertechnik	
Serial Number(s)	183268 (SID: 38602)	
Hardware Version(s)	PL-221c	
Software Version(s)	0.20	
PMN	none	
HVIN	none	
FVIN	none	
HMN	none	
FCC ID	2AFD4-183268	
IC	N/A	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400 - 2483.5 MHz	
Radio technology	Bluetooth LE 5.0	
Bluetooth Specification	LE 1M PHY	Yes
	LE 2M PHY	No
	LE Coded PHY S=2 (500 kbit)	No
	LE Coded PHY S=8 (125 kbit)	No
	Stable Modulation Index - Transmitter	No
	Stable Modulation Index - Receiver	No
Modulation	GFSK	
Number of antenna ports	1	
Radio Module	Type	WiFi/ Bluetooth module
	Model	453-00005 / Chip: nRF52810
	Manufacturer	Laird / Chip: Nordic Semiconductor
	HW Version	none
	SW Version	none
	FCC-ID	SQGBL651
	IC	None
Antenna	Type	Printed PCB antenna
	Model	Laird dipol
	Manufacturer	Laird
	Gain	max 2.0 dBi
Supply Voltage	V <sub>NOM</sub>	4.5 V DC (3x AAA Battery)
Operating Temperature	T <sub>NOM</sub>	20 °C
AC/DC-Adaptor	Model	none
	Vendor	none
	Input	none
	Output	none
Manufacturer	Knobloch Elektronik- Produktions- und Vertriebs GmbH Selitstraße 10 55234 Erbes-Büdesheim GERMANY	

1.1 Photos – Equipment External

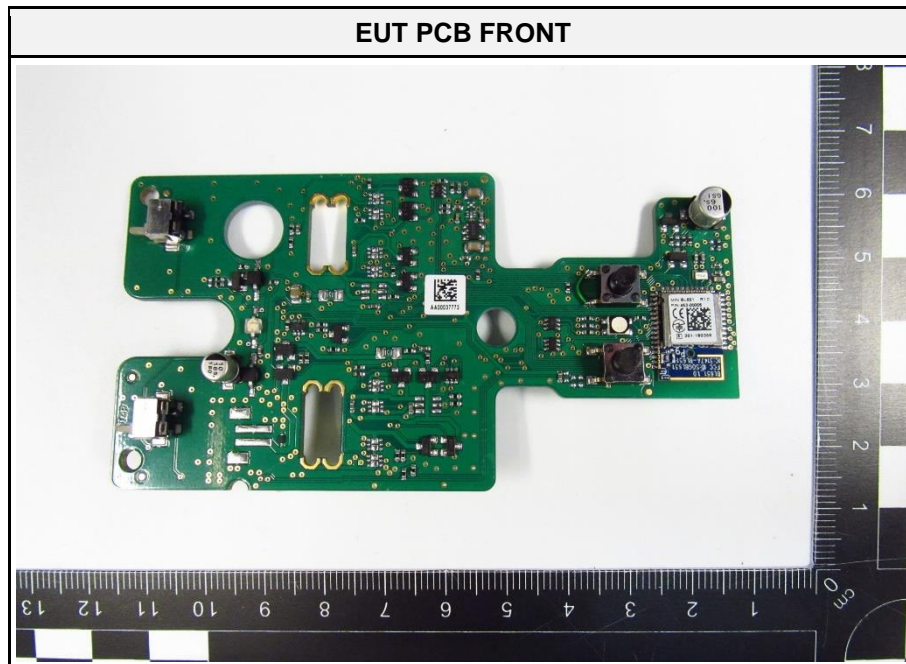
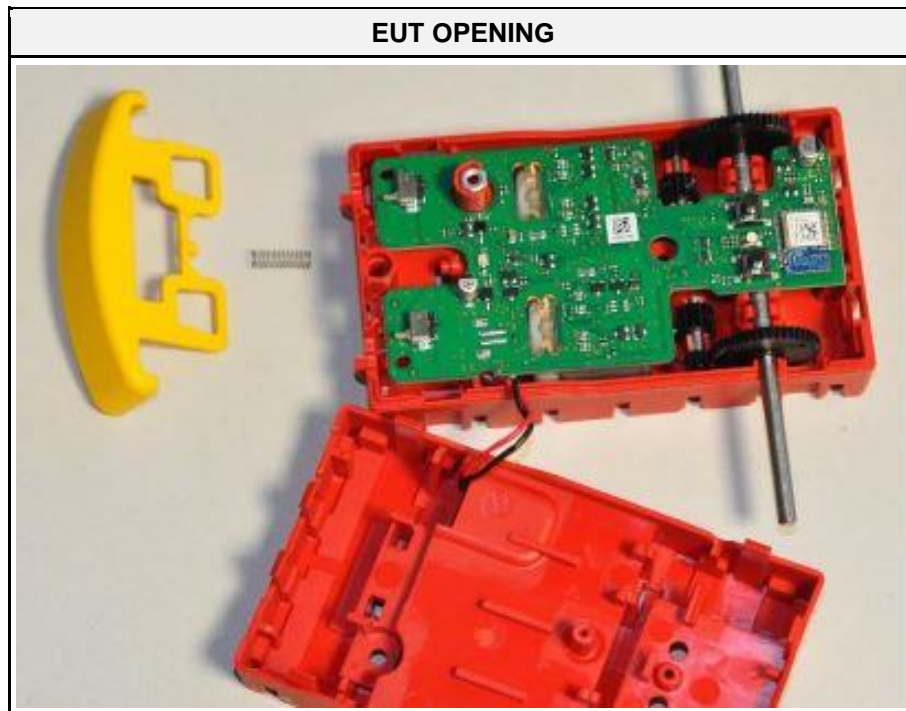




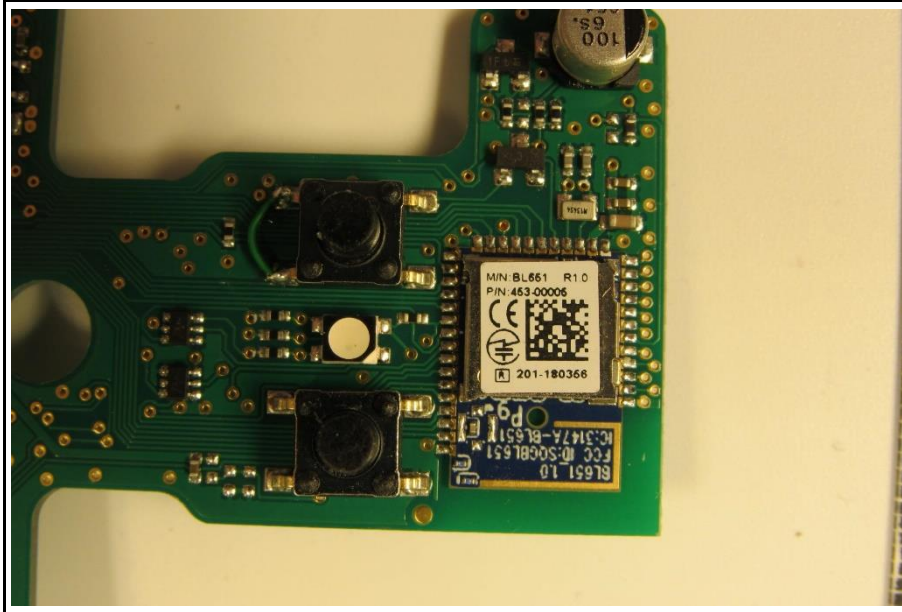




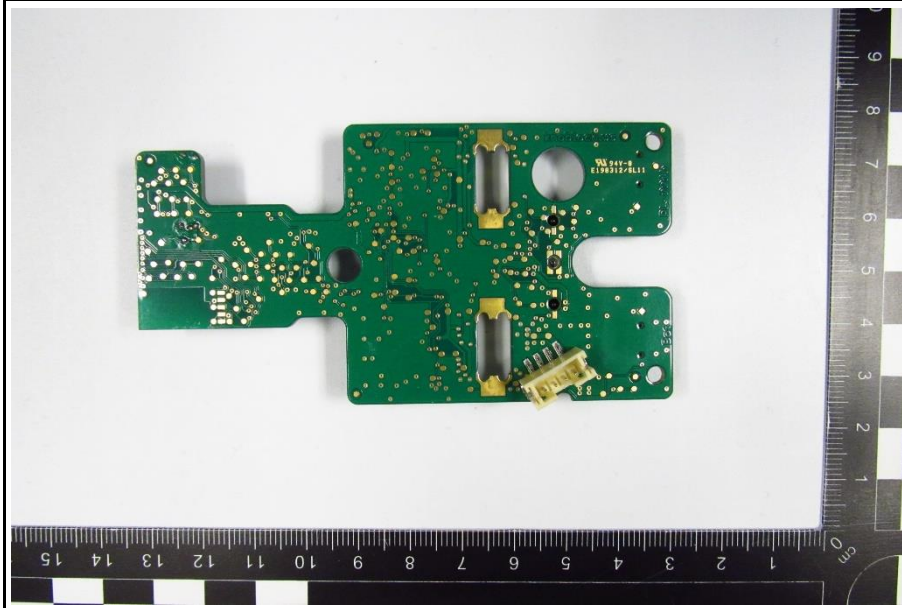
## 1.2 Photos – Equipment Internal



EUT BT-Module



EUT PCB BACK



### 1.3 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
SIM	Laptop	Lenovo	L460	Control unit
CBL	USB Adapter	none	none	USB - Serial
SFT	Remote Control	Putty v0.76	Lenovo	Control tool
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

### 1.4 Test Modes

Mode	Description
GFSK	Mode = Transmit Modulation = GFSK Packet type = LE 1M PHY Payload = 37 byte Duty cycle = 64% Power setting = 4 dBm
Receive	Mode = Receive
Comment: The above settings were found as worst case during pre-tests. / The above settings are found as worst case during evaluation of the original modular test report FCC [FR852803AE Rev.01], issued on [2018.Jun.] by [International Certification Corp. – TAF Lab. 2732] and. Conducted peak/average output power was evaluated to determine the worst case settings.	

### 1.5 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx / Rx	0	2402
F2	Tx / Rx	19	2440
F3	Tx / Rx	39	2480

### 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).

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:

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

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.

Example only:

Reading + AF	= Net Reading	:	Net reading - FCC limit	= Margin
+21.5 dBµV + 26 dB/m	= 47.5 dBµV/m	:	47.5 dBµV/m - 57.0 dBµV/m	= -9.5 dB

## 2 Result Summary

FCC 47 CFR Part 15C				
Product Standard Reference	Requirement	Reference Method	Result	Remarks
ISED RSS-Gen, Issue 5 A2 (section 6.7)	Occupied Bandwidth	ANSI C63.10-2013	N/R	
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	N/T	
FCC § 15.247(b) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	N/T	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	N/T	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	N/R	Battery supplied only
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	N/T	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	N/T	
FCC § 15.247(d) FCC § 15.209 ISED RSS-Gen, Issue 5 A2 (section 6.13)	Transmitter radiated spurious emissions	ANSI C63.10-2013	PASS	
ISED RSS-247, Issue 2 (section 3.1)	Receiver radiated spurious emissions	ANSI C63.4-2014	N/R	
Comment: The Decision Rule is applied on the basis of ETSI TR 102 273 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 - Transmitter radiated emissions

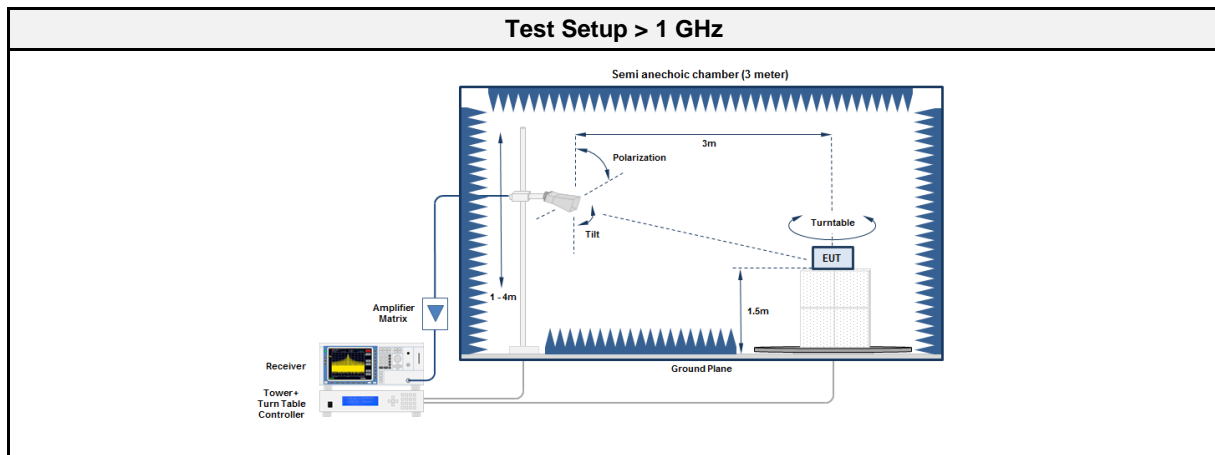
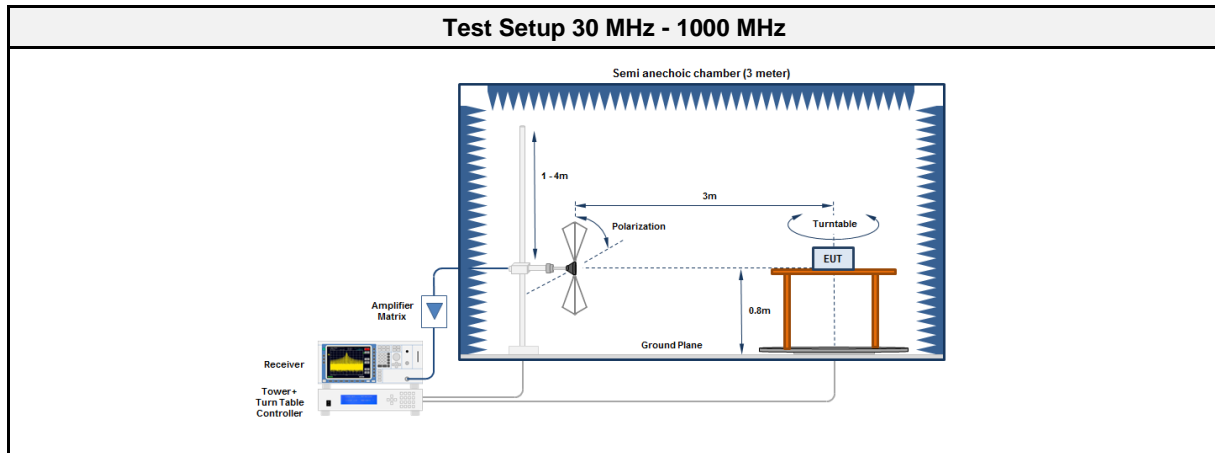
##### 3.1.1 Information

Test Information	
Reference	FCC § 15.247(d); FCC § 15.209
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Burkhard Pudell
Date	2022-03-07

##### 3.1.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [ $\mu$ 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

### 3.1.3 Setup



### 3.1.4 Equipment

Test Software			
Description	Manufacturer	Name	Version
EMC Software	DARE Instruments	RadiMation	2020.1.8

Test Equipment 30 MHz - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00187	2019-05	2022-05

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2021-02	2024-02
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2022-07
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2019-10	2022-10
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2022-03
Antenna	Amplifier Research	AT4560	EF00302	2021-06	2023-06

Test Report No.: G0M-2112-1241-TFC247BL-V02

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



### 3.1.5 Procedure

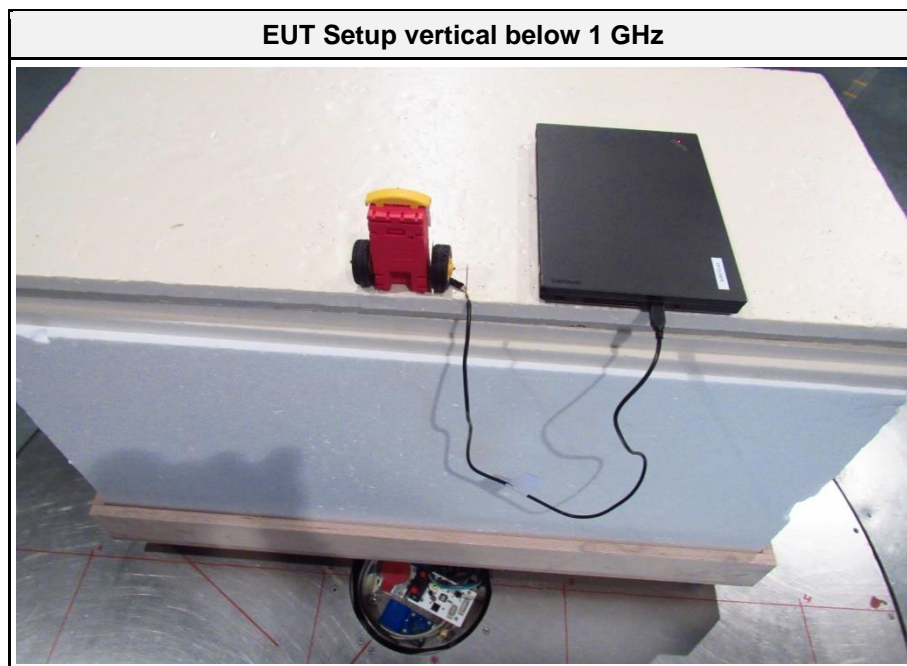
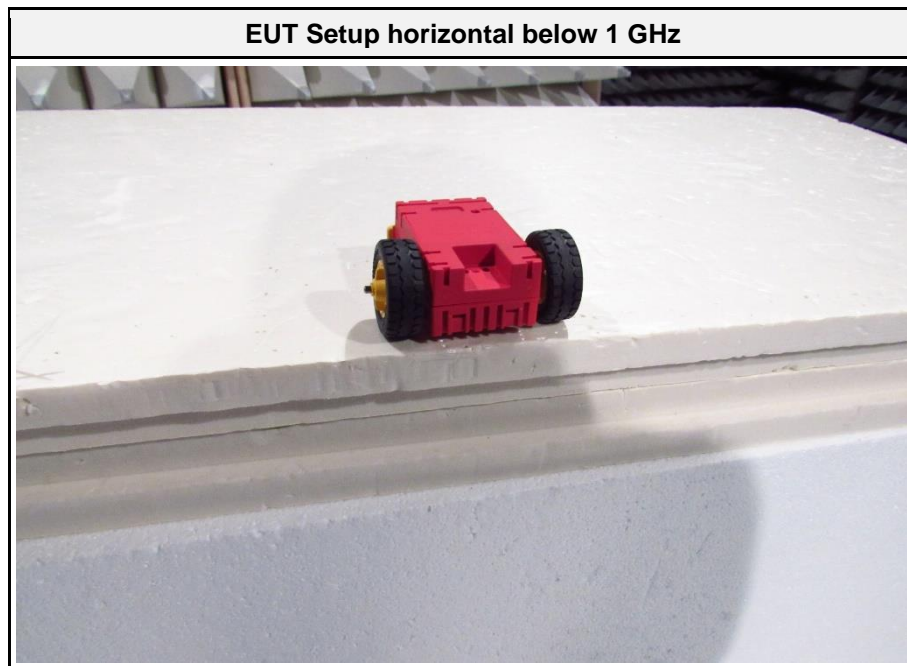
<b>Test Procedure 30 MHz - 1000 MHz</b>	
1.	EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground
2.	EUT set to test mode
3.	The receiver is set to peak detection with max hold
4.	The EUT is rotated through 360° and the height of the antenna is varied from 1 m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

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

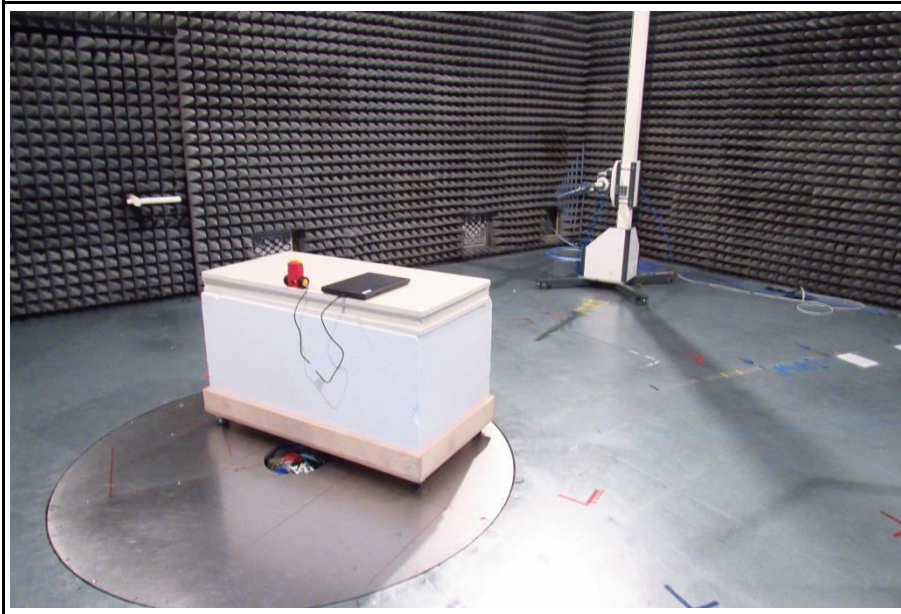
### 3.1.6 Results

<b>Test Results</b>						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	168.0188	32.30	pk	ver	43.50	-11.24
2402	4803.3	45.89	avg	ver	54.00	-08.11
2402	4803.6	45.37	avg	ver	54.00	-08.63
2402	4803.7	50.27	avg	ver	54.00	-03.73
2440	168.0273	32.20	pk	ver	43.50	-11.31
2440	4879.6	44.72	avg	ver	54.00	-09.28
2440	4879.6	45.61	avg	ver	54.00	-08.39
2440	4880.5	46.86	avg	ver	54.00	-07.14
2480	167.9975	31.90	pk	ver	43.50	-11.61
2480	4959	42.36	avg	ver	54.00	-11.64
2480	4959	42.36	avg	ver	54.00	-11.64
2480	4960	48.14	avg	ver	54.00	-05.86

3.1.7 Setup Photos



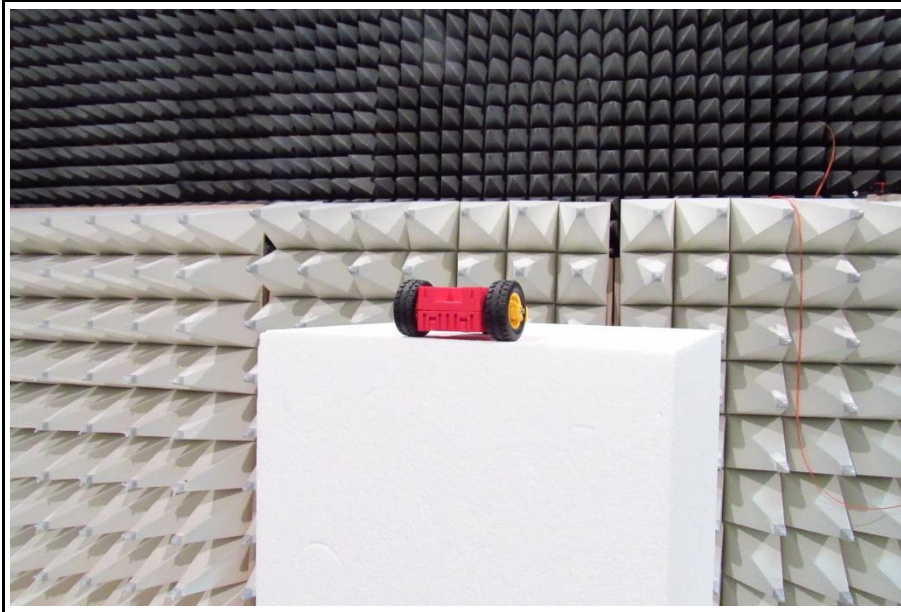
Setup for TX measurement below 1 GHz



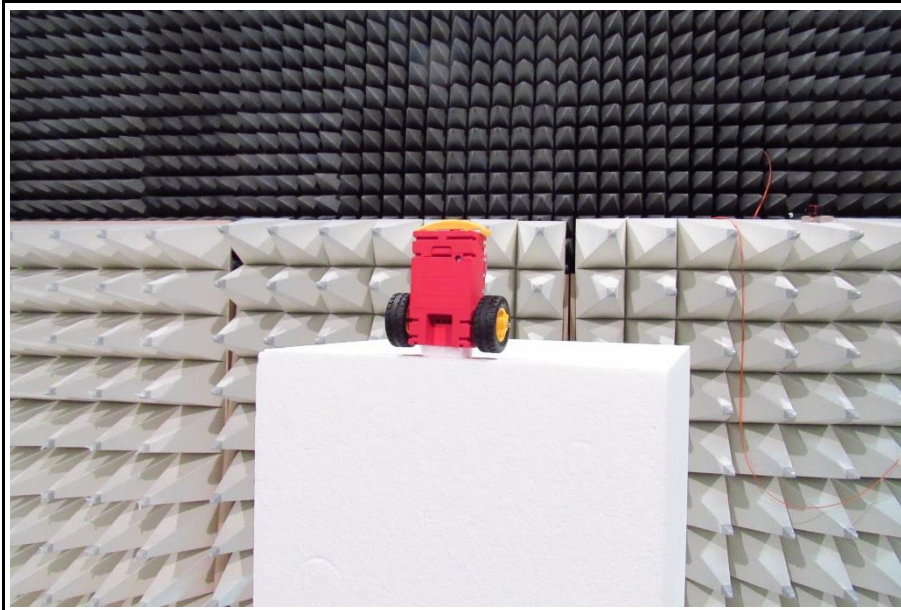
Setup for TX measurement below 1 GHz



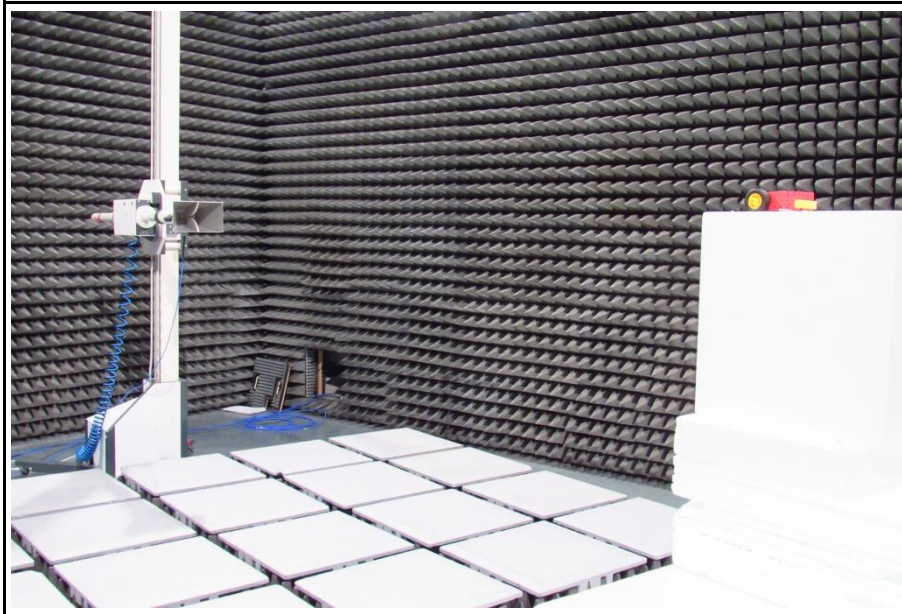
**EUT Setup horizontal above 1 GHz**



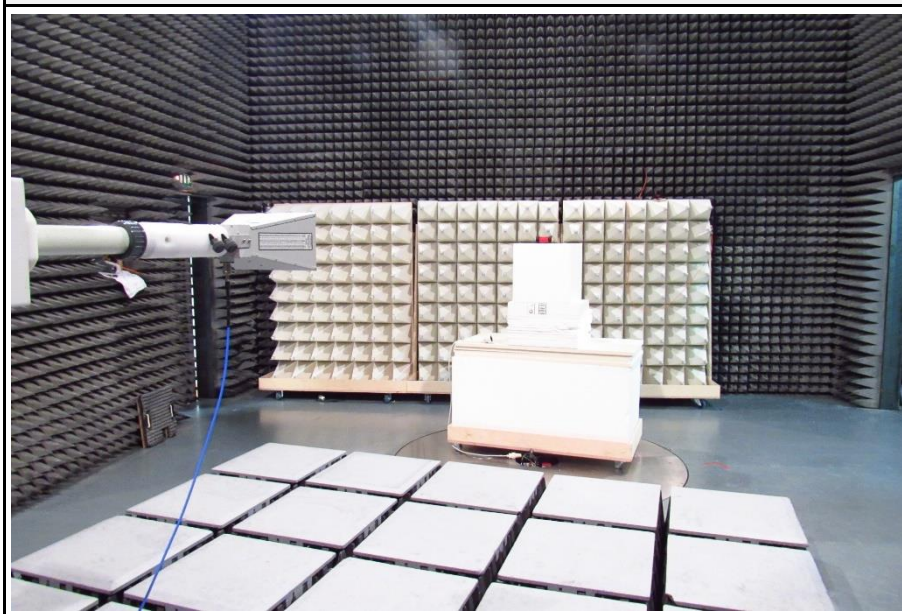
**EUT Setup vertical above 1 GHz**



Setup for TX measurement above 1 GHz



Setup for TX measurement above 1 GHz



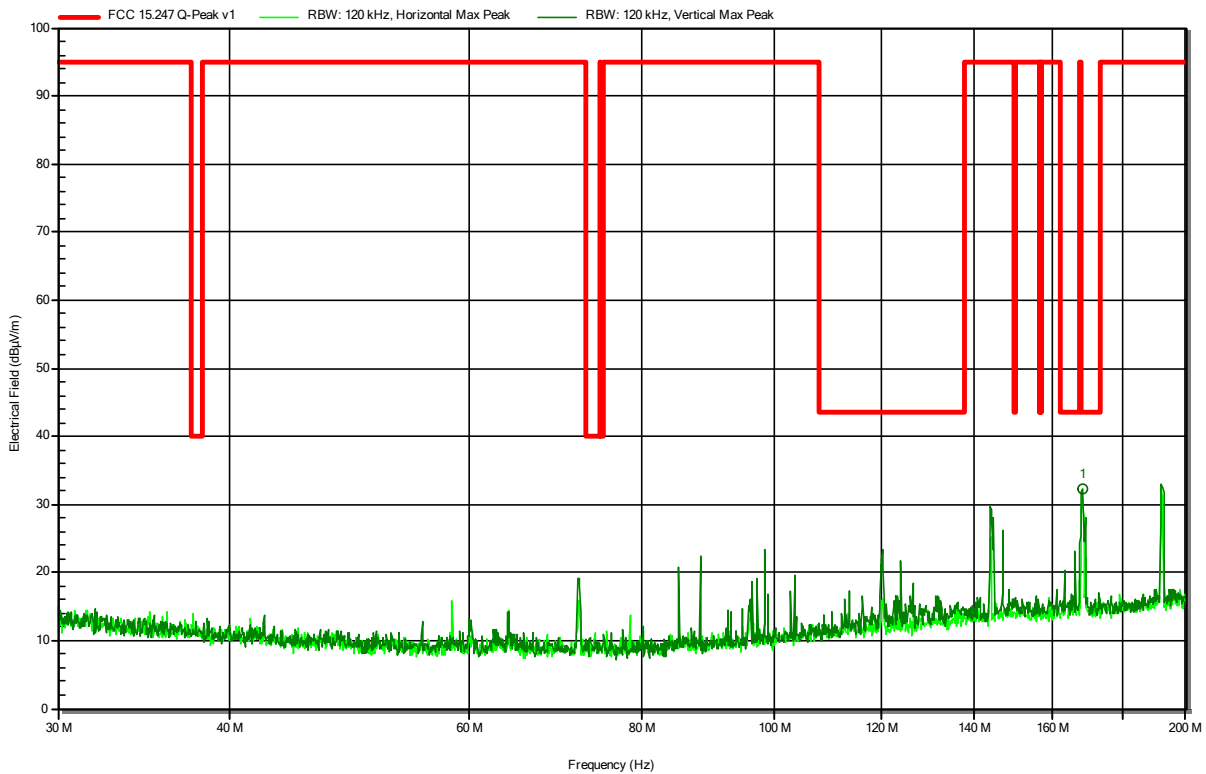
## ANNEX A Transmitter spurious emissions

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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RadiMation



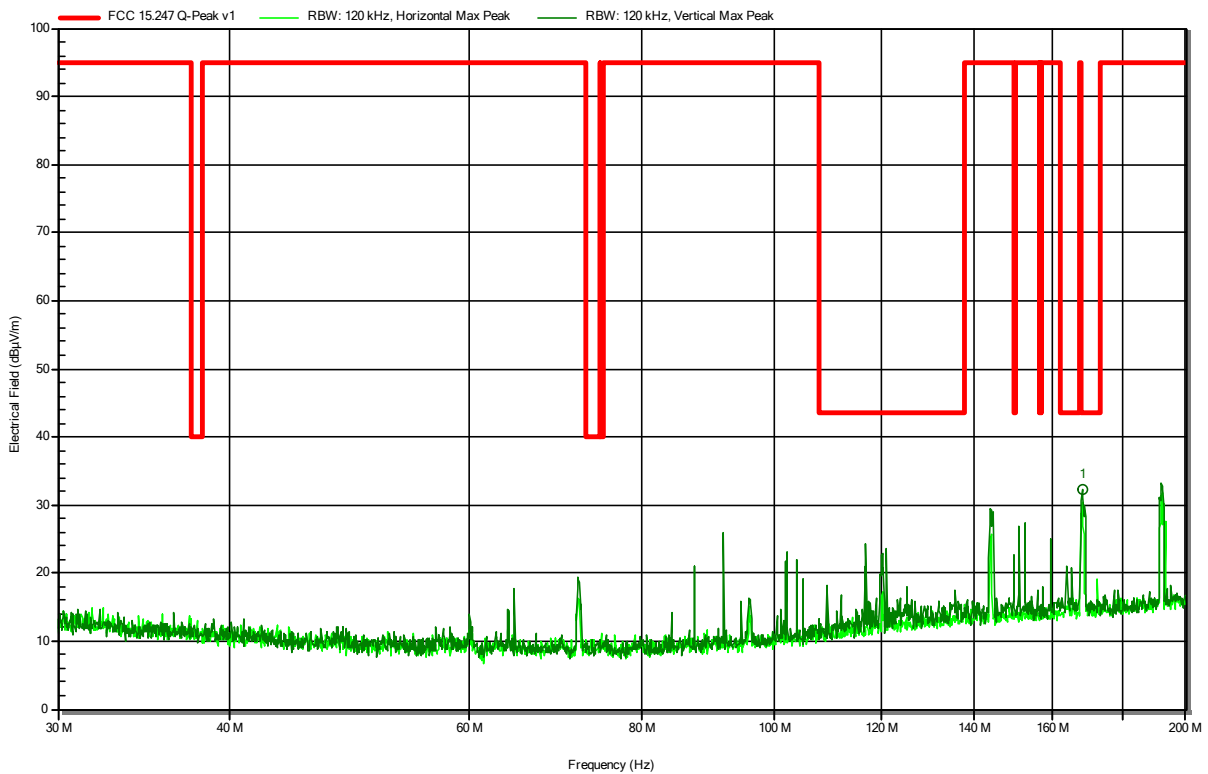
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
168.0188 MHz	32.3 dBµV/m	43.5 dBµV/m	-11.24 dB	Pass	Vertical

**Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247**

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 19 (2440 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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**RadiMation**



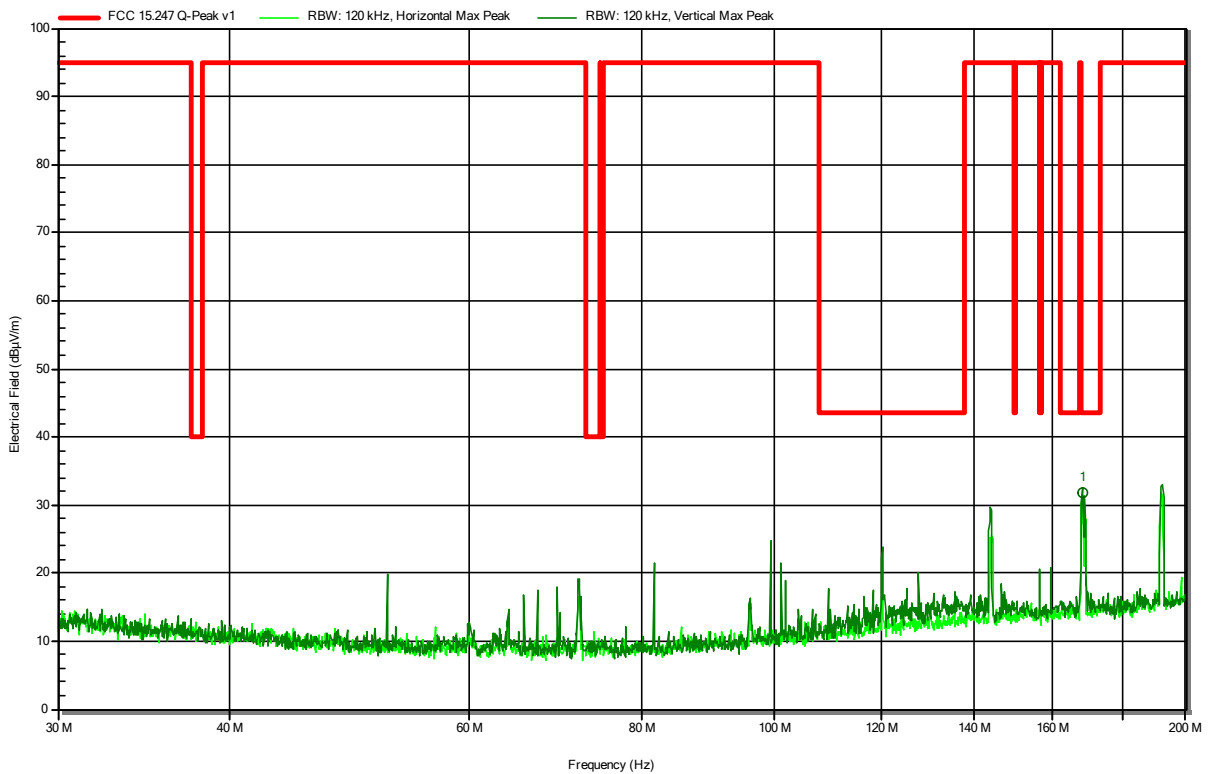
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
168.0273 MHz	32.2 dBµV/m	43.5 dBµV/m	-11.31 dB	Pass	Vertical

**Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247**

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 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Rohde & Schwarz HK 116  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
167.9975 MHz	31.9 dBµV/m	43.5 dBµV/m	-11.61 dB	Pass	Vertical

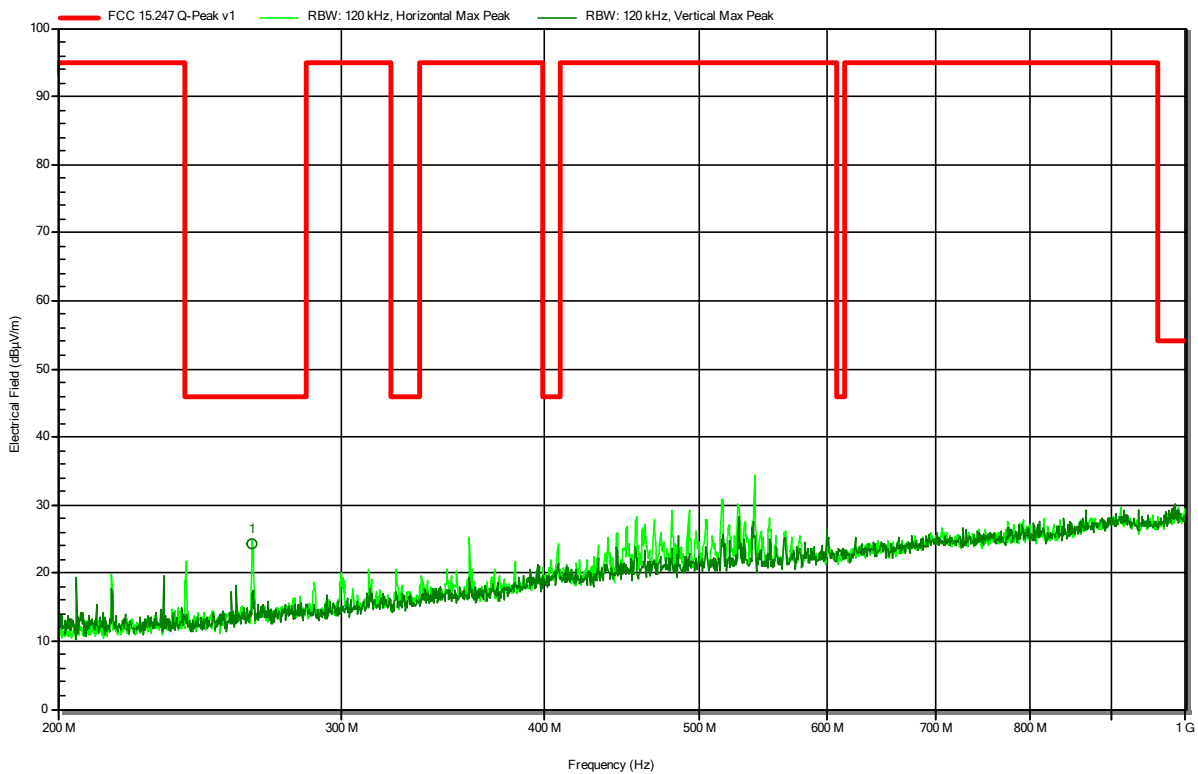


### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

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 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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RadiMation



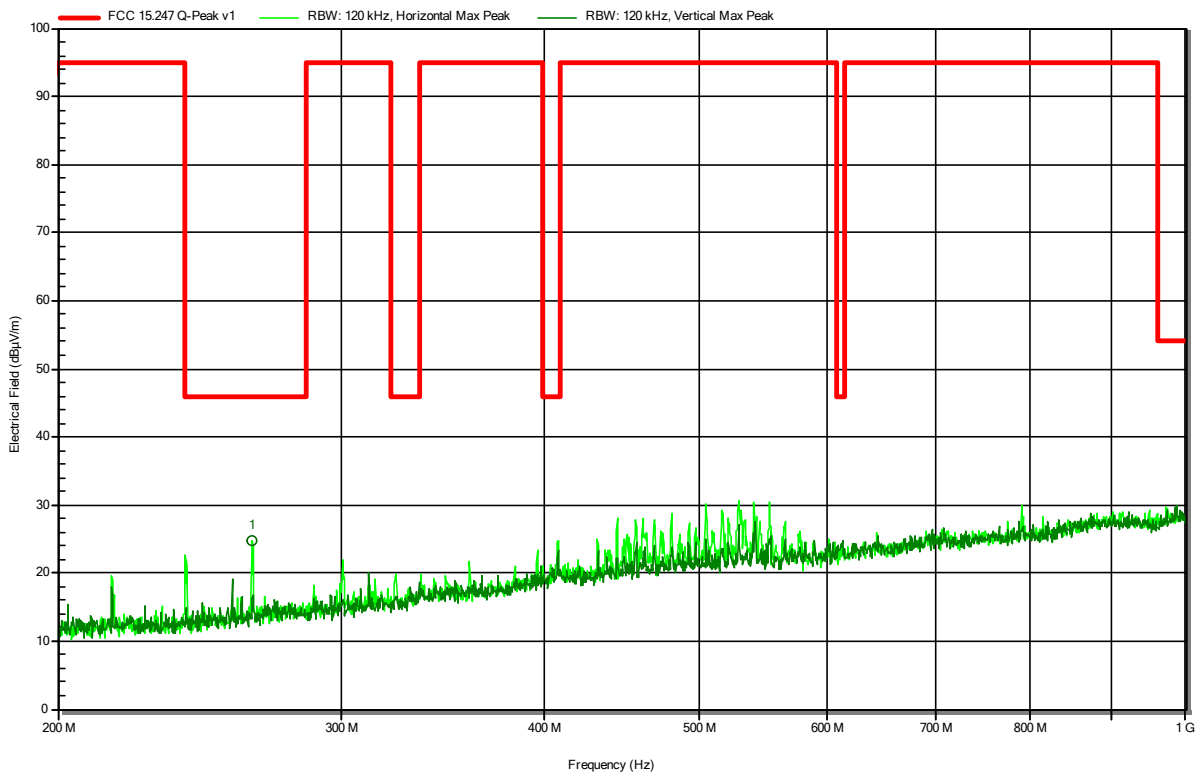
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
263.98 MHz	24.4 dBµV/m	46 dBµV/m	-21.63 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

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 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 19 (2440 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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**RadiMation**



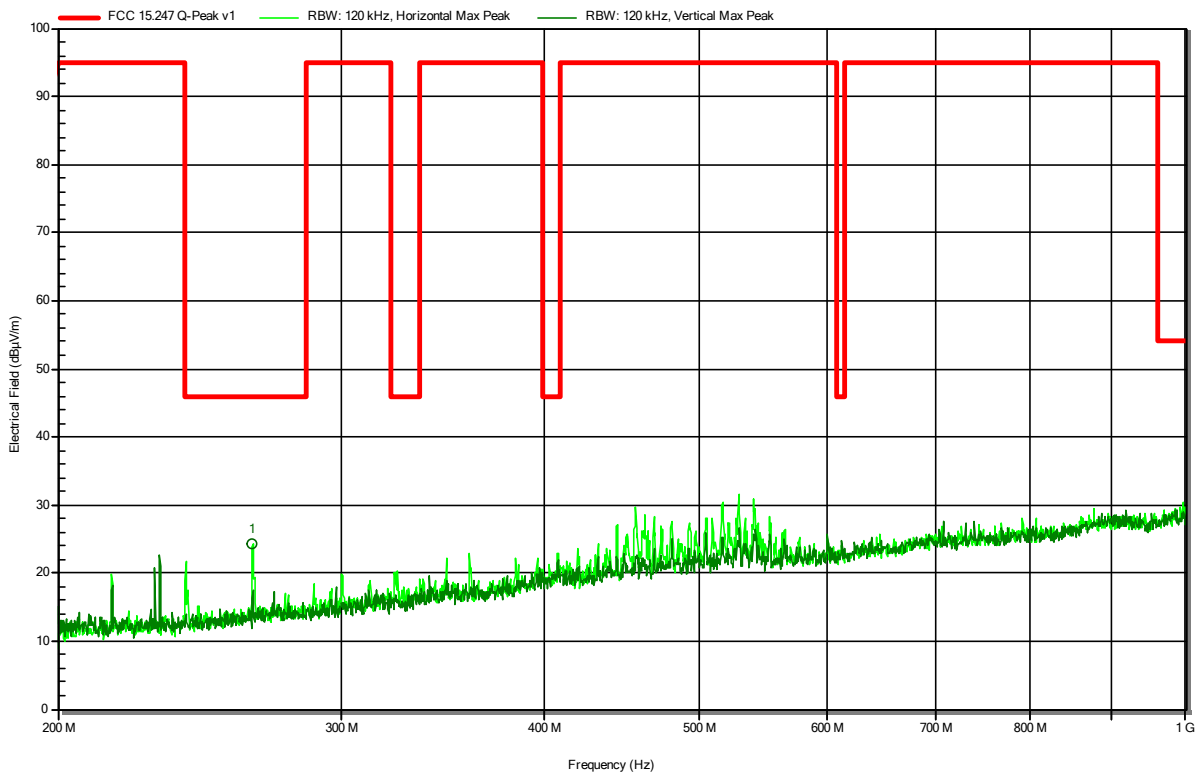
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
263.96 MHz	24.7 dBµV/m	46 dBµV/m	-21.32 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mr. Qawasmeh  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Rohde & Schwarz HL 223  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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RadiMation



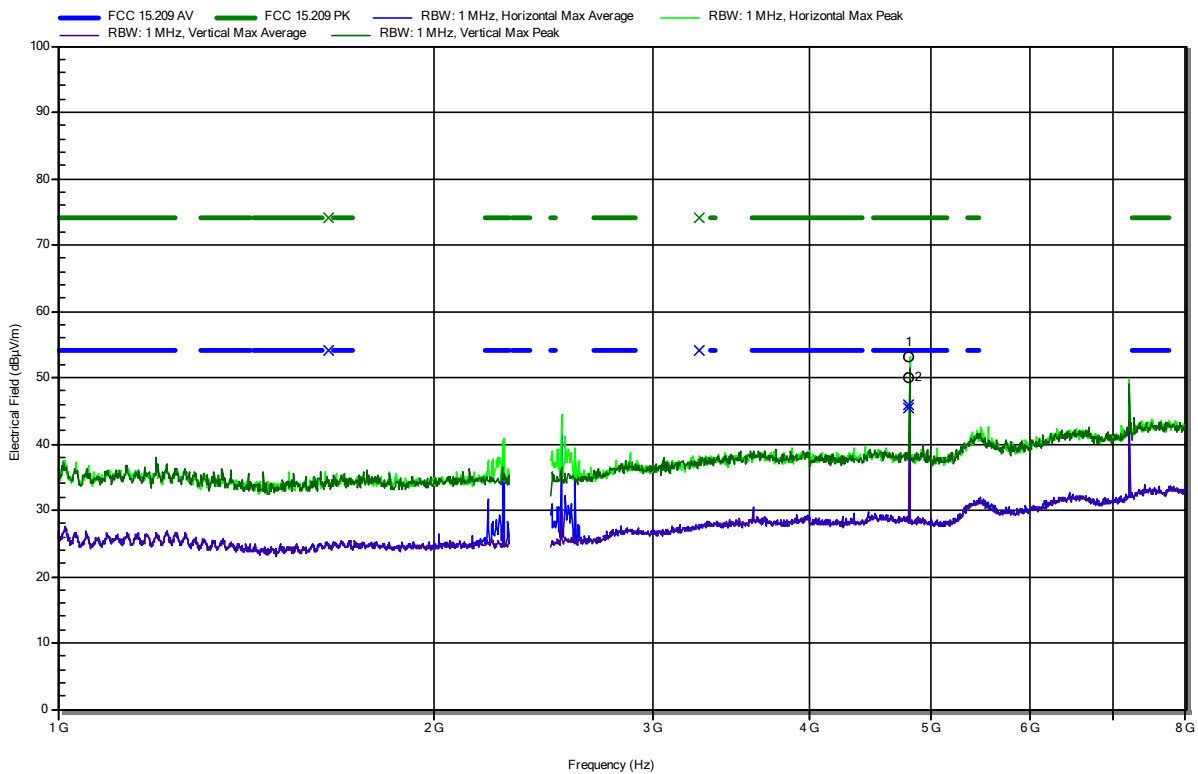
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
264.02 MHz	24.3 dBµV/m	46 dBµV/m	-21.67 dB	Pass	Horizontal

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: EUT horizontal

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.8033 GHz	53.11 dBµV/m	74 dBµV/m	-20.89 dB	Pass	Horizontal
4.8036 GHz	50.05 dBµV/m	74 dBµV/m	-23.95 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.8033 GHz	45.89 dBµV/m	54 dBµV/m	-8.11 dB	Pass	Horizontal
4.8036 GHz	45.37 dBµV/m	54 dBµV/m	-8.63 dB	Pass	Vertical

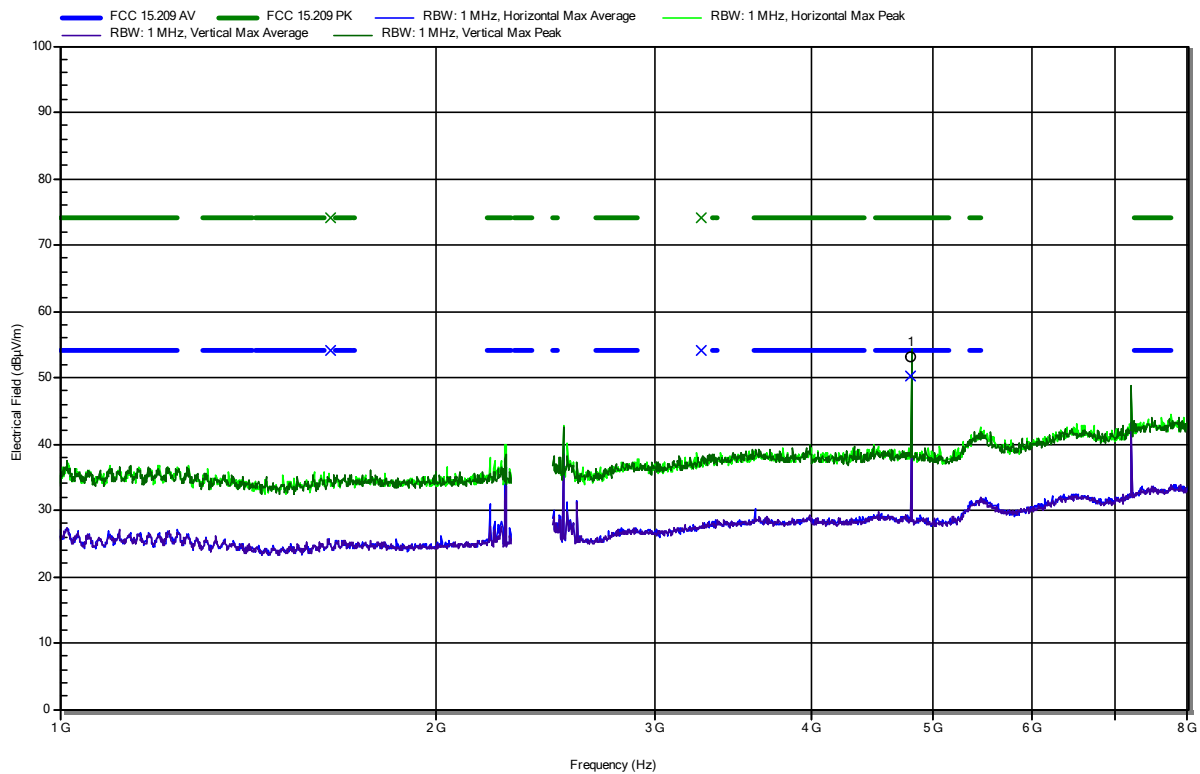
Test Report No.: G0M-2112-1241-TFC247BL-V02

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

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: EUT vertical

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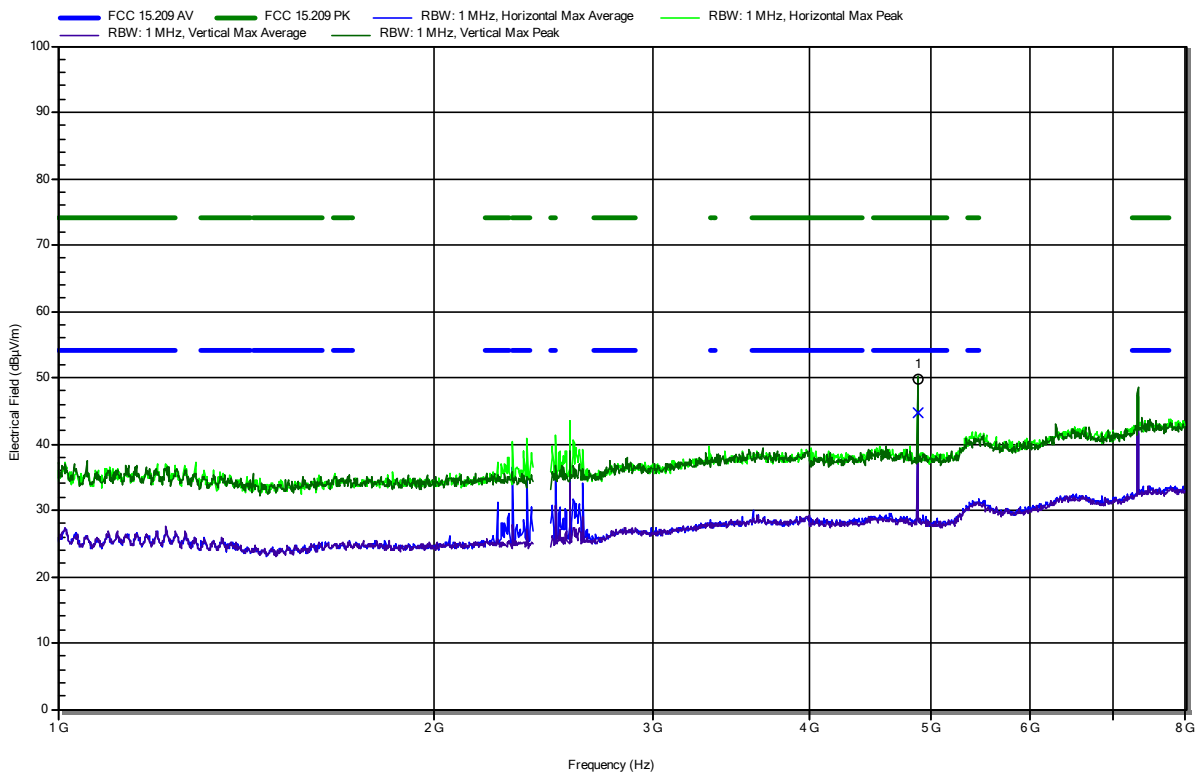
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.8037 GHz	53.1 dBµV/m	74 dBµV/m	-20.9 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.8037 GHz	50.27 dBµV/m	54 dBµV/m	-3.73 dB	Pass	Vertical

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 19 (2440 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: EUT horizontal

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**RadiMation**



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.8796 GHz	49.69 dBµV/m	74 dBµV/m	-24.31 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.8796 GHz	44.72 dBµV/m	54 dBµV/m	-9.28 dB	Pass	Vertical

Test Report No.: G0M-2112-1241-TFC247BL-V02

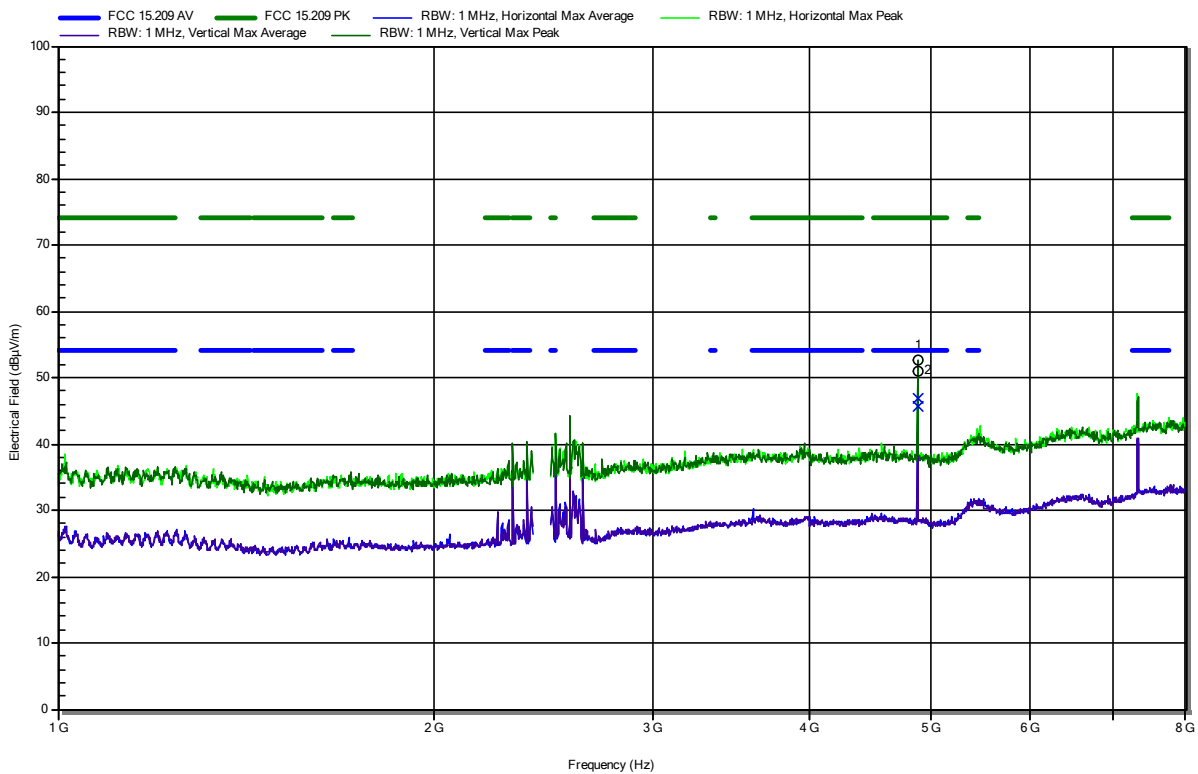
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 19 (2440 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: EUT vertical

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.8796 GHz	52.58 dBµV/m	74 dBµV/m	-21.42 dB	Pass	Vertical
4.8805 GHz	50.92 dBµV/m	74 dBµV/m	-23.08 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.8796 GHz	45.61 dBµV/m	54 dBµV/m	-8.39 dB	Pass	Vertical
4.8805 GHz	46.86 dBµV/m	54 dBµV/m	-7.14 dB	Pass	Horizontal

Test Report No.: G0M-2112-1241-TFC247BL-V02

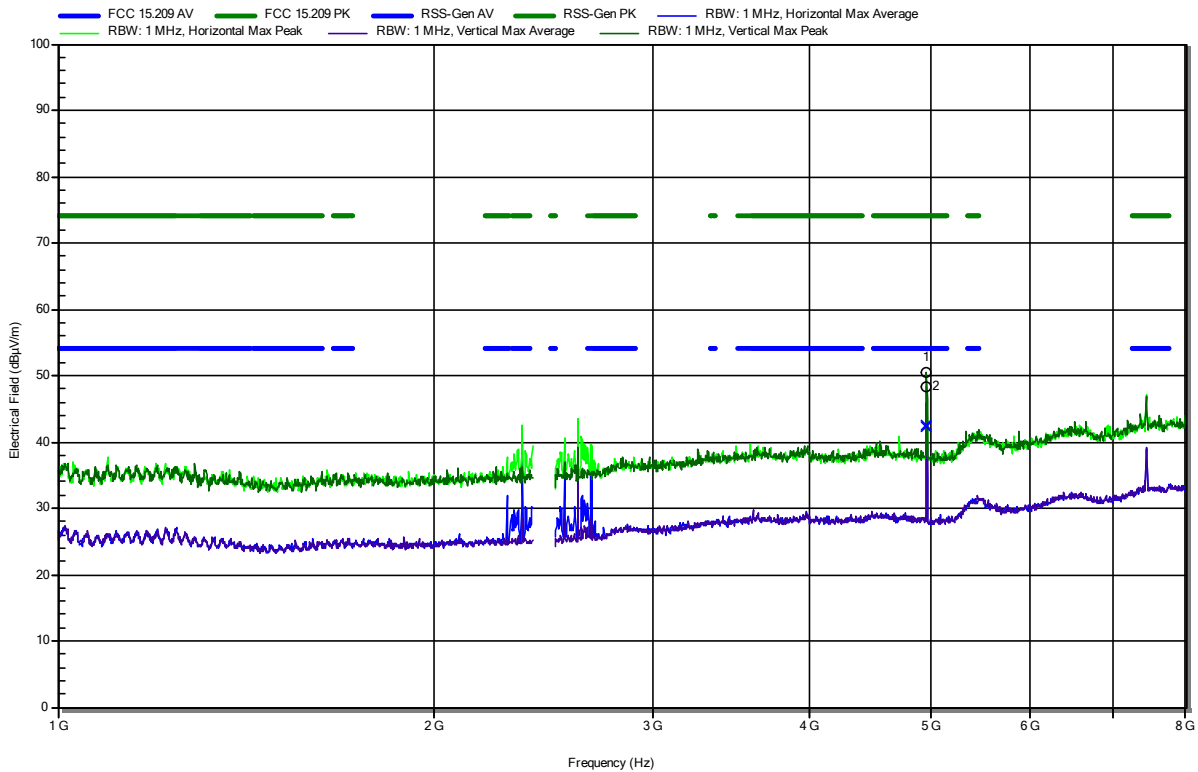
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: EUT horizontal

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.959 GHz	50.41 dBµV/m	74 dBµV/m	-23.59 dB	Pass	Vertical
4.959 GHz	48.4 dBµV/m	74 dBµV/m	-25.6 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.959 GHz	42.36 dBµV/m	54 dBµV/m	-11.64 dB	Pass	Vertical
4.959 GHz	42.49 dBµV/m	54 dBµV/m	-11.51 dB	Pass	Horizontal

Test Report No.: G0M-2112-1241-TFC247BL-V02

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

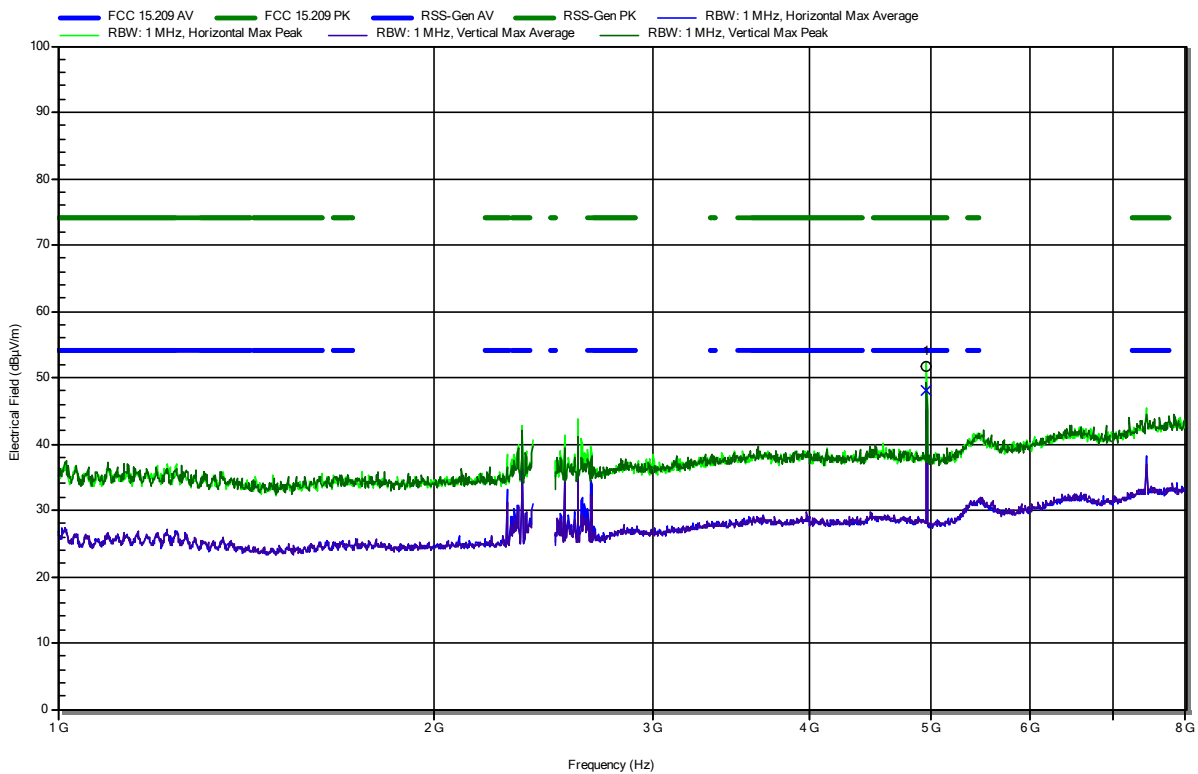


### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: EUT vertical

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
4.96 GHz	51.76 dBµV/m	74 dBµV/m	-22.24 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
4.96 GHz	48.14 dBµV/m	54 dBµV/m	-5.86 dB	Pass	Horizontal

Test Report No.: G0M-2112-1241-TFC247BL-V02

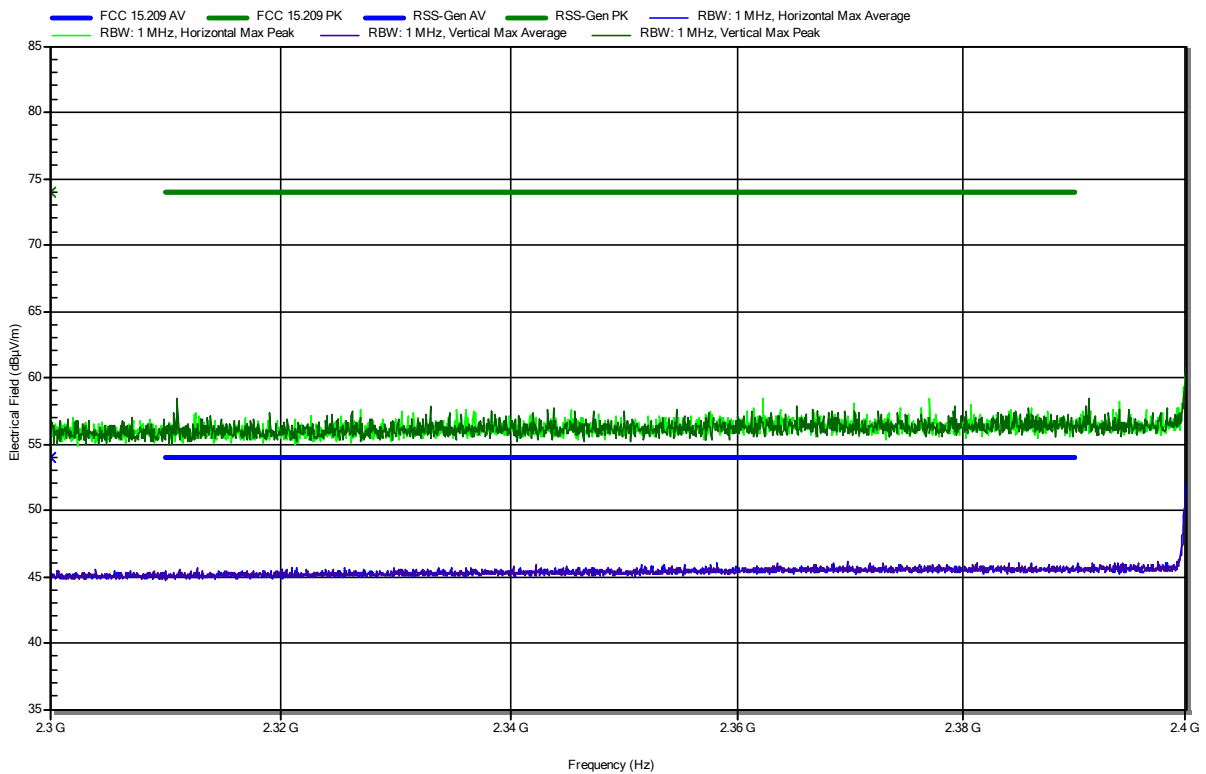
Eurofins Product Service GmbH  
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: lower bandedge EUT vertical

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**RadiMation**

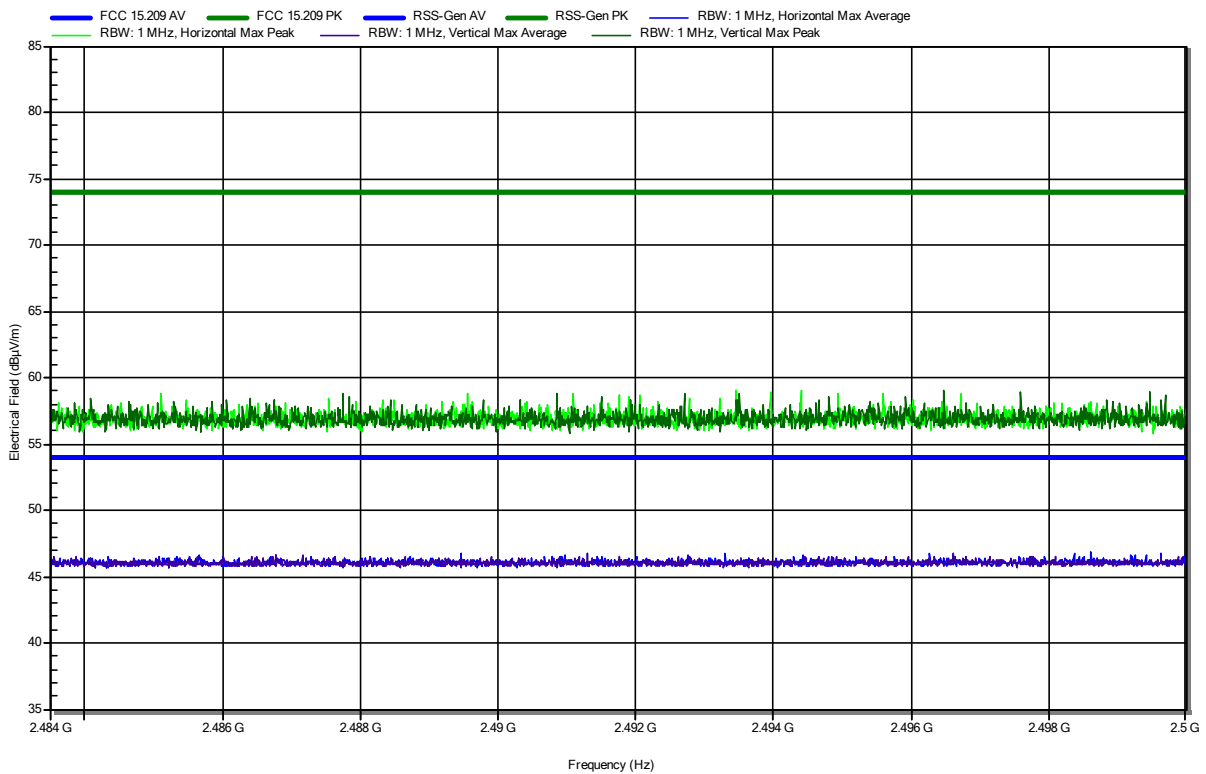


### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck BBHA 9120B  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-11  
 Note: upper bandedge EUT vertical

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**RadiMation**

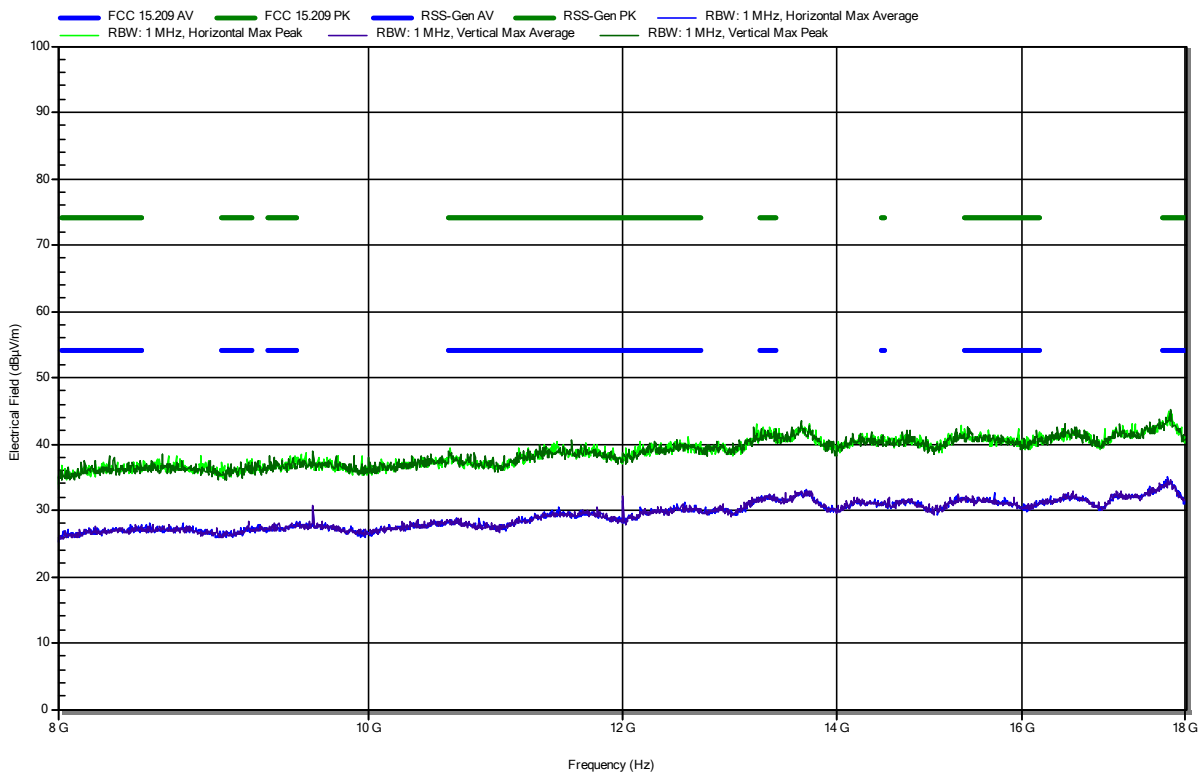


**Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247**

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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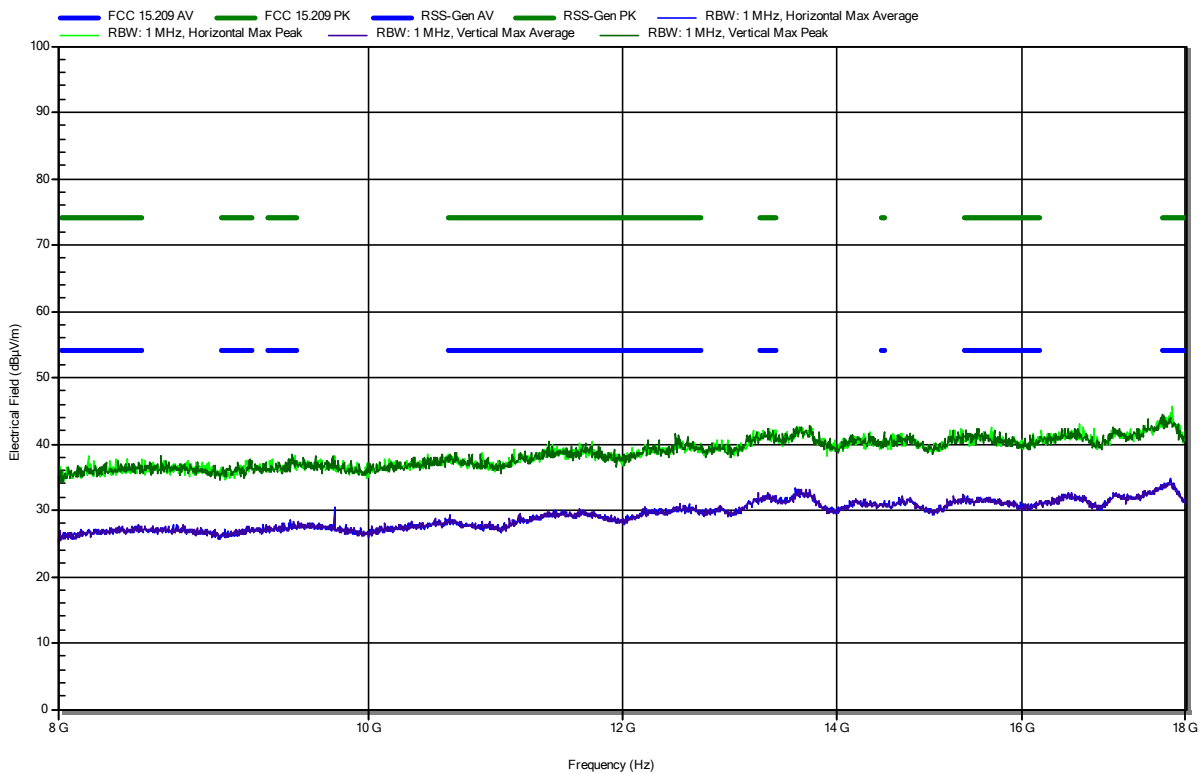
**RadiMation**



**Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247**

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 19 (2440 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

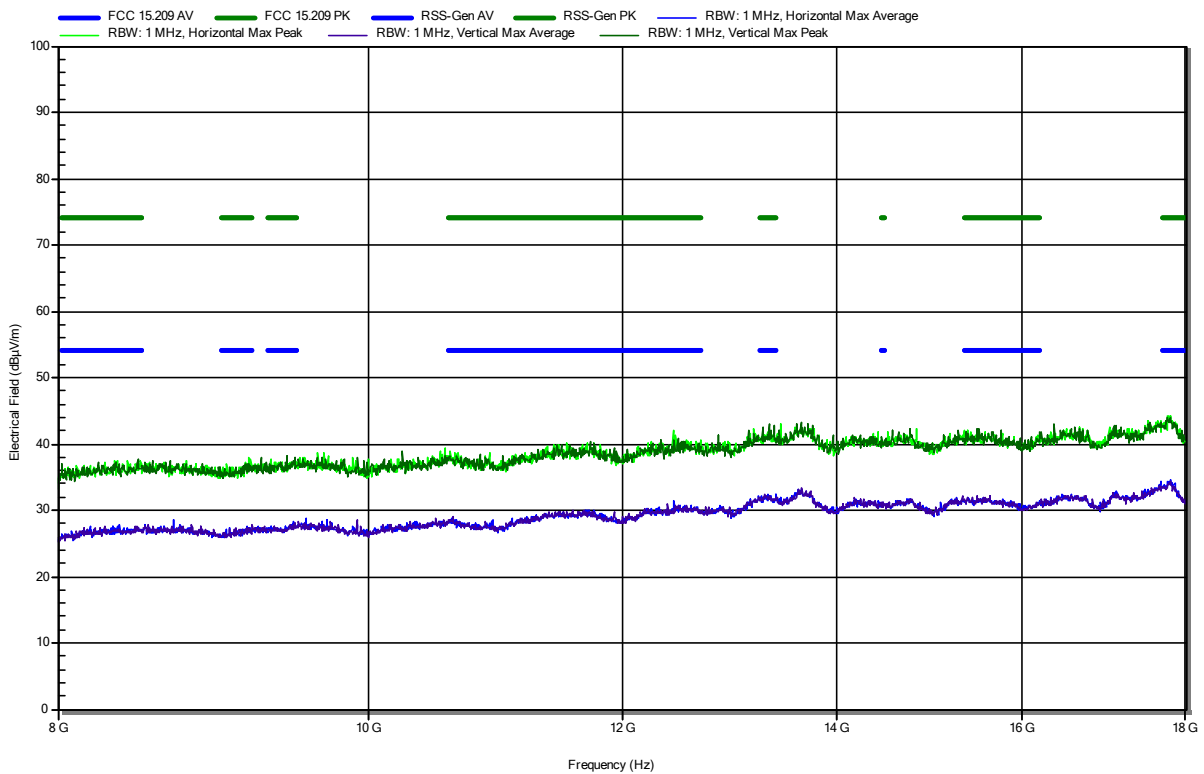
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**RadiMation**



### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Schwarzbeck HWRD 650  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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RadiMation

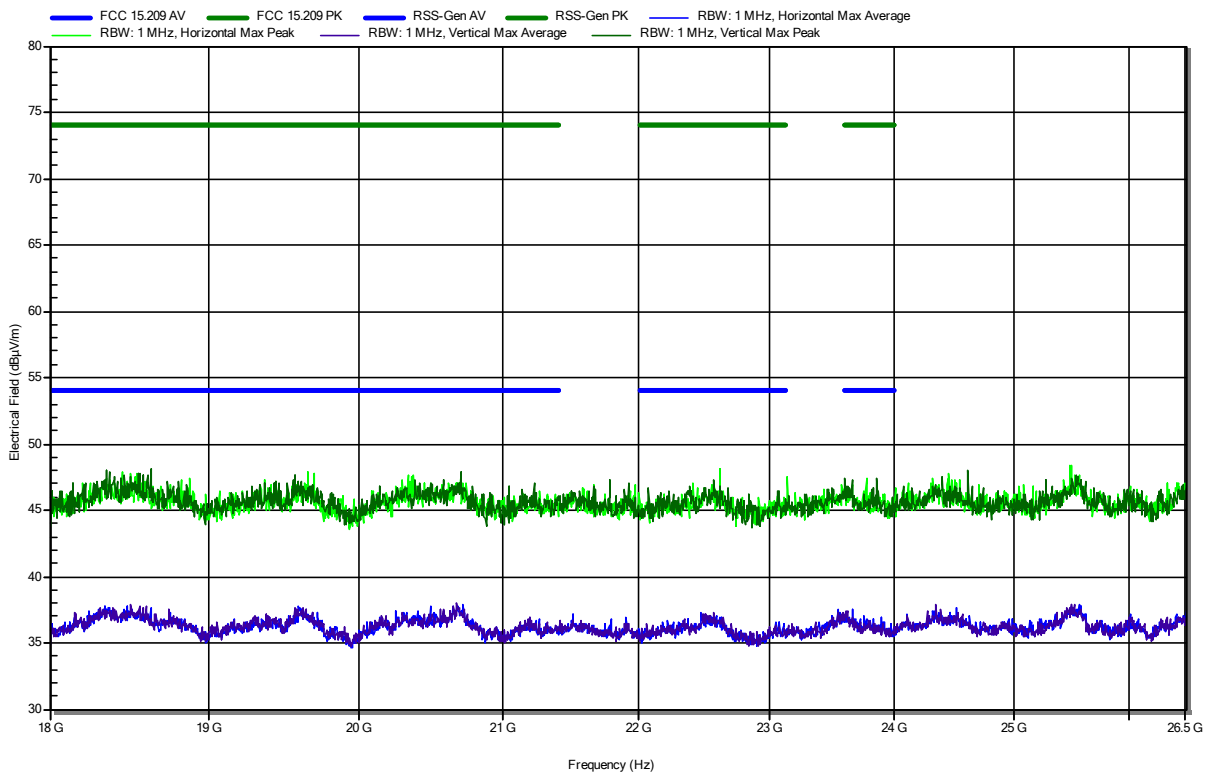


### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 0 (2402 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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**RadiMation**

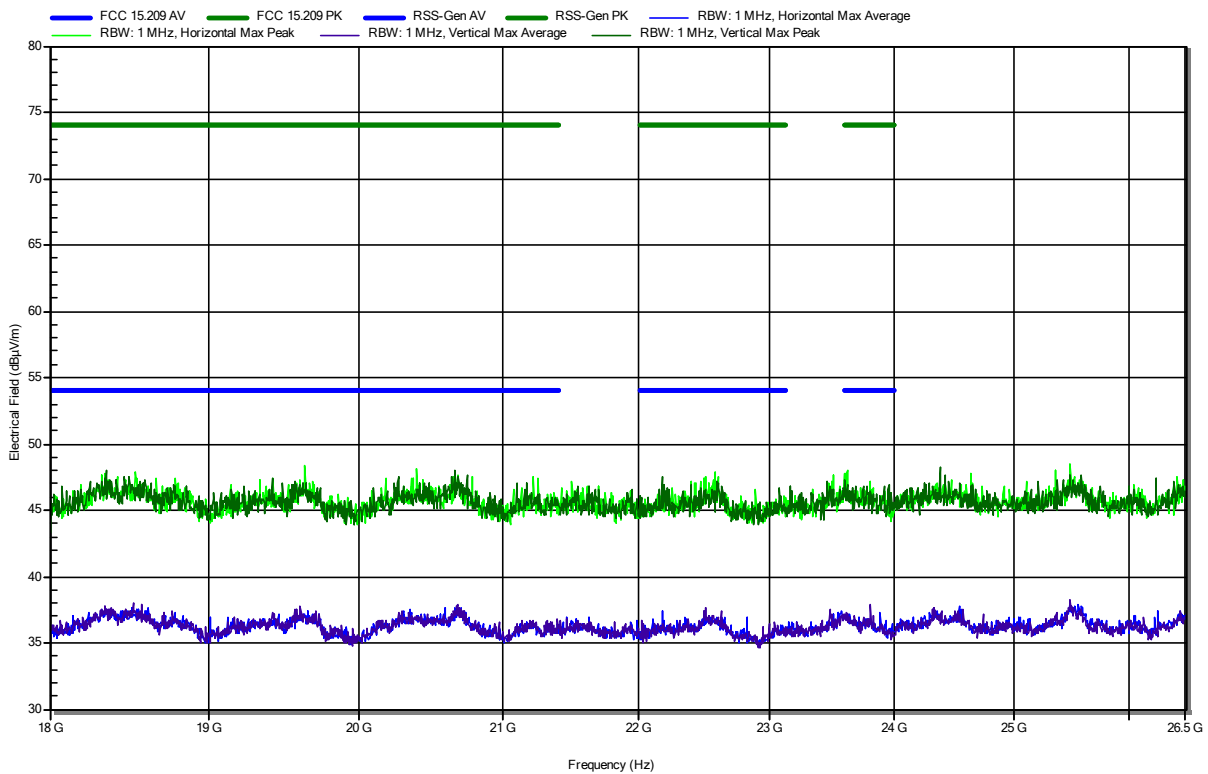


### Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 19 (2440 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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RadiMation



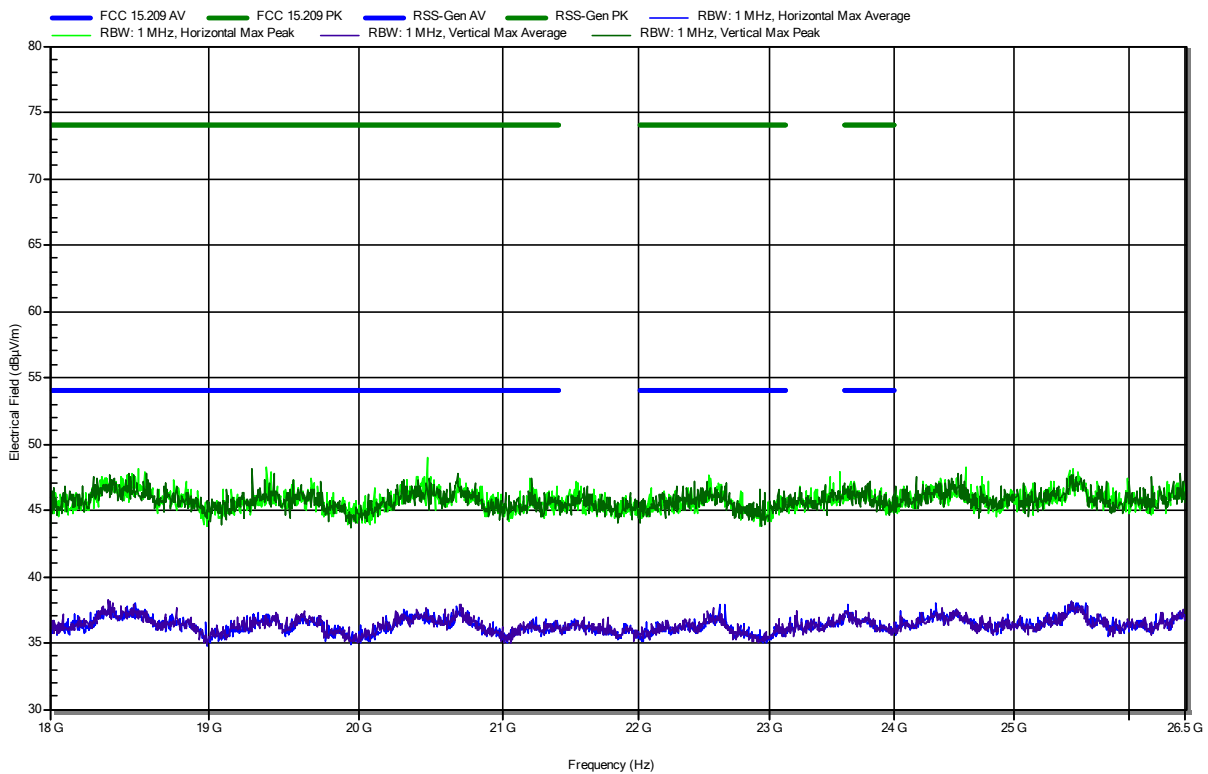


**Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247**

Project Number: G0M-2112-1241  
 Applicant: fischertechnik GmbH  
 Model Description: Roboter Chassis Early Coding for Toy and Education market  
 Model: Roboter Chassis 183268  
 Test Sample ID: 38602 (SN:183268 )  
 Test Site: Eurofins Product Service GmbH  
 Operator: Mrs Hoang  
 Measurement software: RadiMation, version 2020.1.8  
 Test Conditions: Tnom: 24 °Celsius, Vnom: 4.5 V DC (3x AA Battery)  
 Antenna: Amplifier Research AT4560  
 Measurement distance: 3 m  
 Mode: Tx; BT-LE\_CH 39 (2480 MHz)\_1Mbite\_GFSK\_37 Byte\_Pmax= 4 dBm  
 Test Date: 2022-03-07  
 Note: EUT vertical

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**RadiMation**



=== END OF TEST REPORT ===