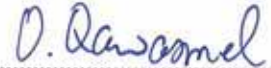


RADIO REPORT FCC 47 CFR Part 15C Digital transmission systems operating within the 2400.0 MHz - 2483.5 MHz band	
Report Reference No	G0M-2209-1690-TFC247BL-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	    DAkkS - Registration 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
Applicant	digades GmbH
Address	Äußere Weberstraße 20 02763 Zittau DE
Test Specification	47 CFR Part 15C RSS-247, Issue 2, 2017-02 RSS-Gen, Issue 5, Amendment 2, 2021-02
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Head-up display for motorcycle helmets
Model(s)	TILSBERK Head-Up Display
Additional Model(s)	None
Brand Name(s)	TILSBERK Head-Up Display
Hardware Version(s)	HW3622
Software Version(s)	SW0201
FCC ID	QNFHUD
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	2022-12-19	
Report:		
Compiled by	Odai Qawasmeh	
Tested by (+ signature) (Responsible for Test)	Odai Qawasmeh	
Approved by (+ signature) (Test Lab Engineer)	Wilfried Treffke	
Date of Issue	2023-02-15	
Total number of pages	174	
General Remarks:		
The test results presented in this report relate only to the object tested. 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. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2023-02-15	Initial Release	

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 _{NOM}	Nominal supply voltage

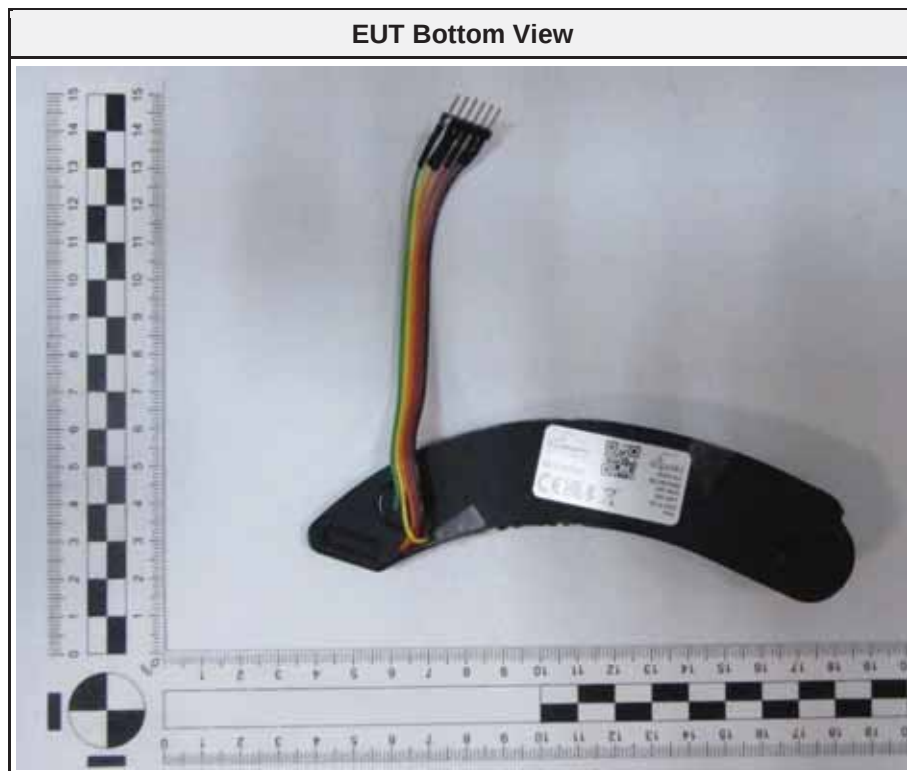
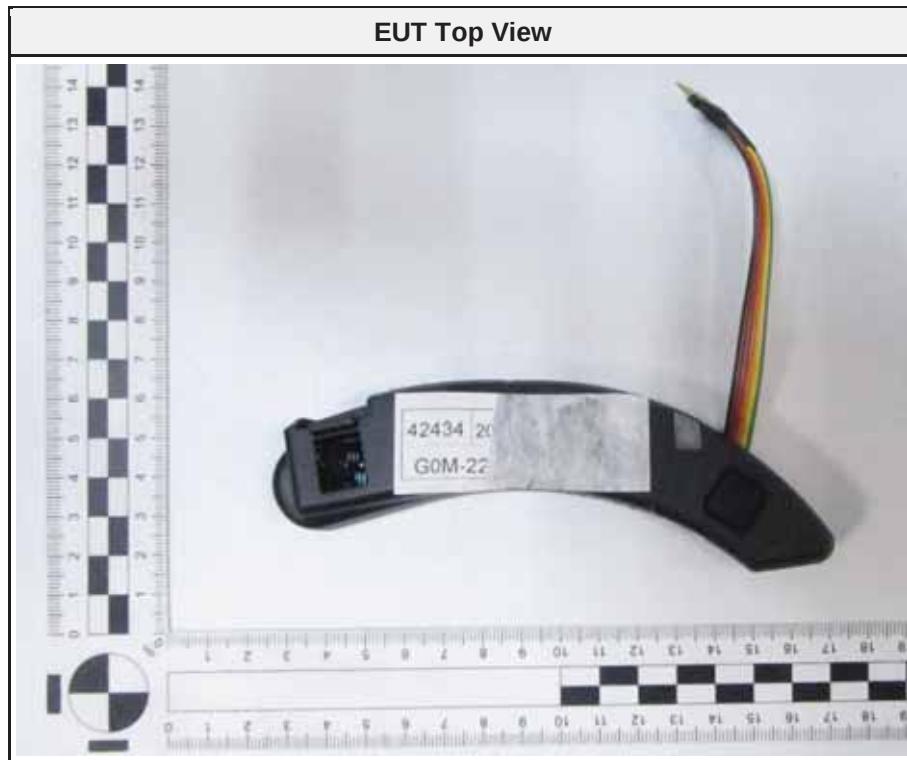
REPORT INDEX

1	Equipment (Test Item) Under Test.....	6
1.1	Photos – Equipment External	7
1.2	Photos – Equipment Internal	10
1.3	Support Equipment.....	15
1.4	Test Modes	16
1.5	Test Frequencies.....	17
1.6	Sample emission level calculation	18
2	Result Summary.....	19
3	Test Conditions and Results.....	20
3.1	Test Conditions and Results - Occupied bandwidth.....	20
3.2	Test Conditions and Results - 6 dB bandwidth.....	28
3.3	Test Conditions and Results - Maximum peak conducted output power	36
3.4	Test Conditions and Results - Power spectral density	44
3.5	Test Conditions and Results - Band-edge compliance.....	52
3.6	Test Conditions and Results - Conducted spurious emissions.....	58
3.7	Test Conditions and Results - Transmitter radiated emissions	66
ANNEX A	Transmitter spurious emissions	80

1 Equipment (Test Item) Under Test

Description	Head-up display for motorcycle helmets	
Model	TILSBERK Head-Up Display	
Additional Model(s)	None	
Brand Name(s)	TILSBERK Head-Up Display	
Serial Number(s)	0003246	
Test Sample Id(s)	Radiated Sample: 42434 Conducted Sample: 42435	
Hardware Version(s)	HW3622	
Software Version(s)	SW0201	
FCC ID	QNFHUD	
Equipment type	End Product	
Radio type	Transceiver	
Assigned frequency bands	2400.0 MHz - 2483.5 MHz	
Radio technology	Bluetooth LE 5.0	
Bluetooth Specification	LE 1M PHY	Yes
	LE 2M PHY	Yes
	LE Coded PHY S=8 (125 kbit)	No
	LE Coded PHY S=2 (500 kbit)	No
	Stable Modulation Index - Transmitter	No
	Stable Modulation Index - Receiver	No
Modulation	GFSK	
Number of antenna ports	1	
Antenna	Type	Integrated
	Model	PCB Antenna
	Manufacturer	digades GmbH
	Gain	0.89 dBi (determined by measurement)
Supply Voltage	V _{NOM}	5 VDC
Operating Temperature	T _{NOM}	25 °C
AC/DC-Adaptor	None	
Manufacturer	digades GmbH Äußere Weberstraße 20 02763 Zittau DE	

1.1 Photos – Equipment External



EUT Front View



EUT Back View



EUT Side View



EUT Side View



EUT label



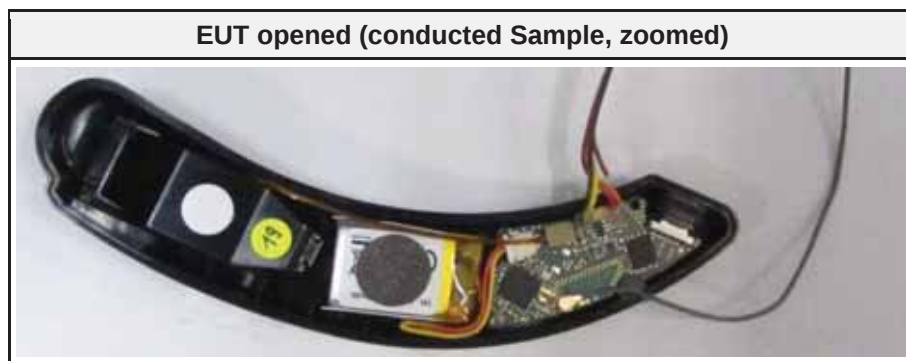
EUT PRINT TILSBERK



EUT conducted sample



1.2 Photos – Equipment Internal



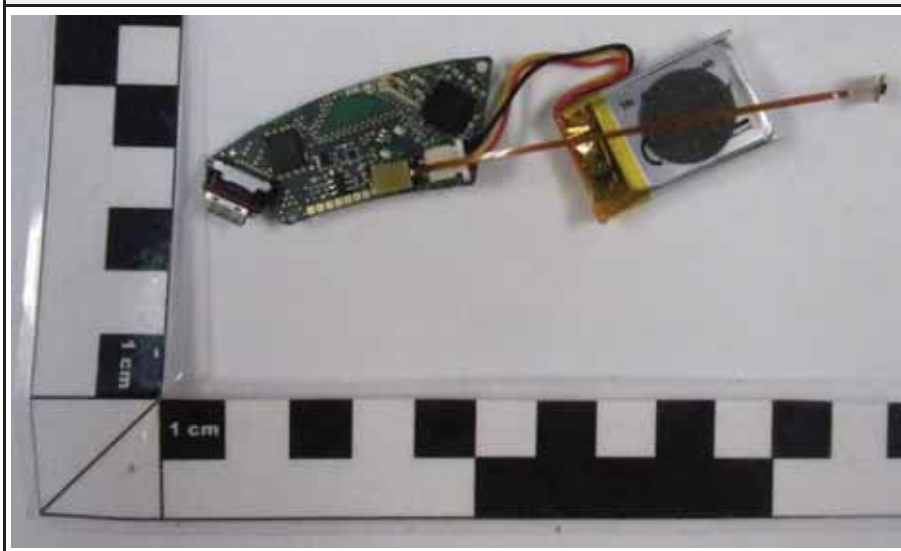
EUT opened (radiated Sample)



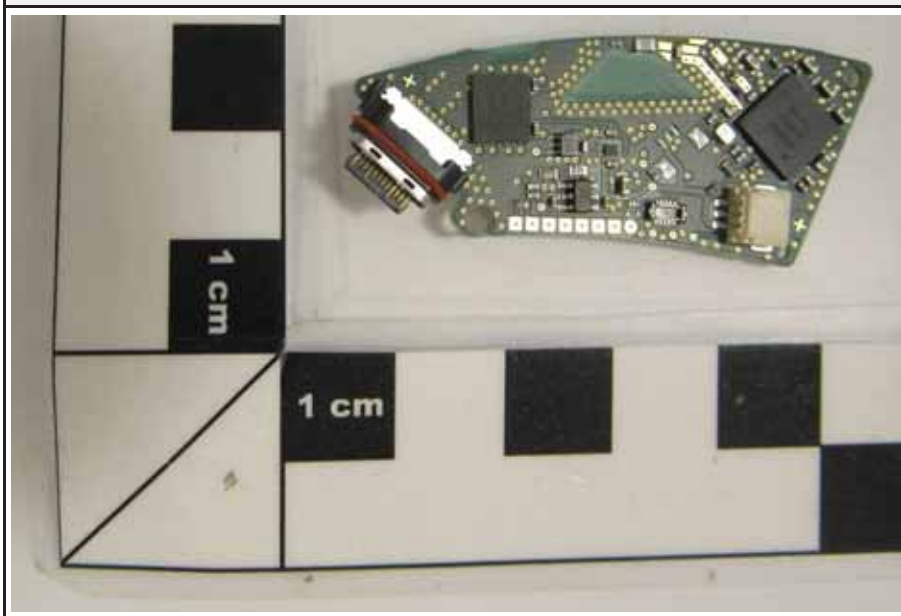
EUT opened (radiated Sample, zoomed)



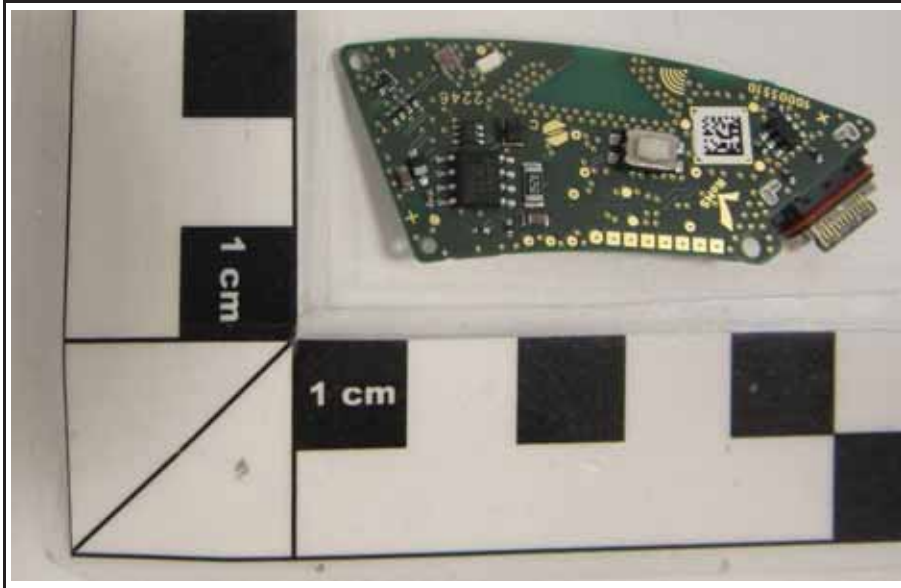
EUT outside of enclosure



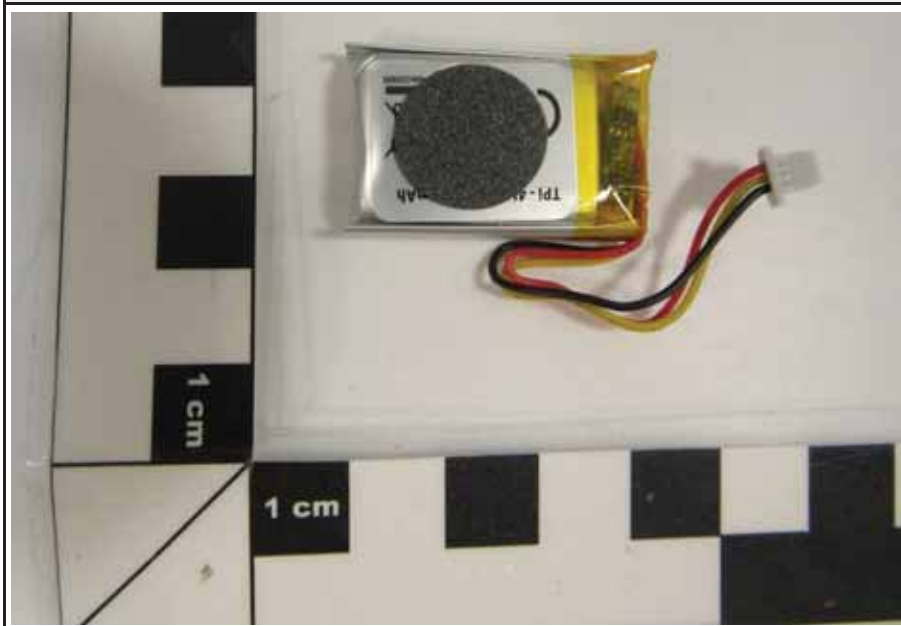
PCB Top View



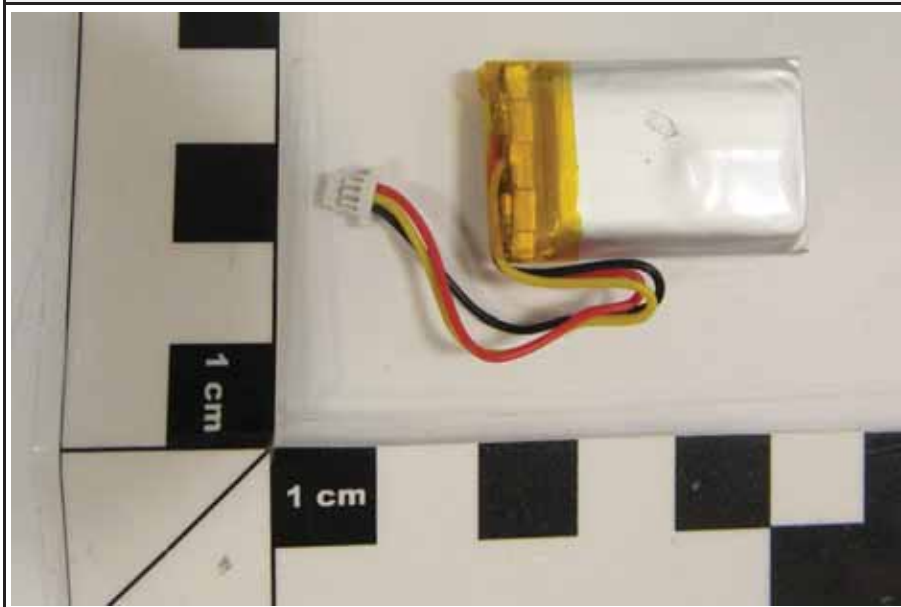
PCB Bottom View



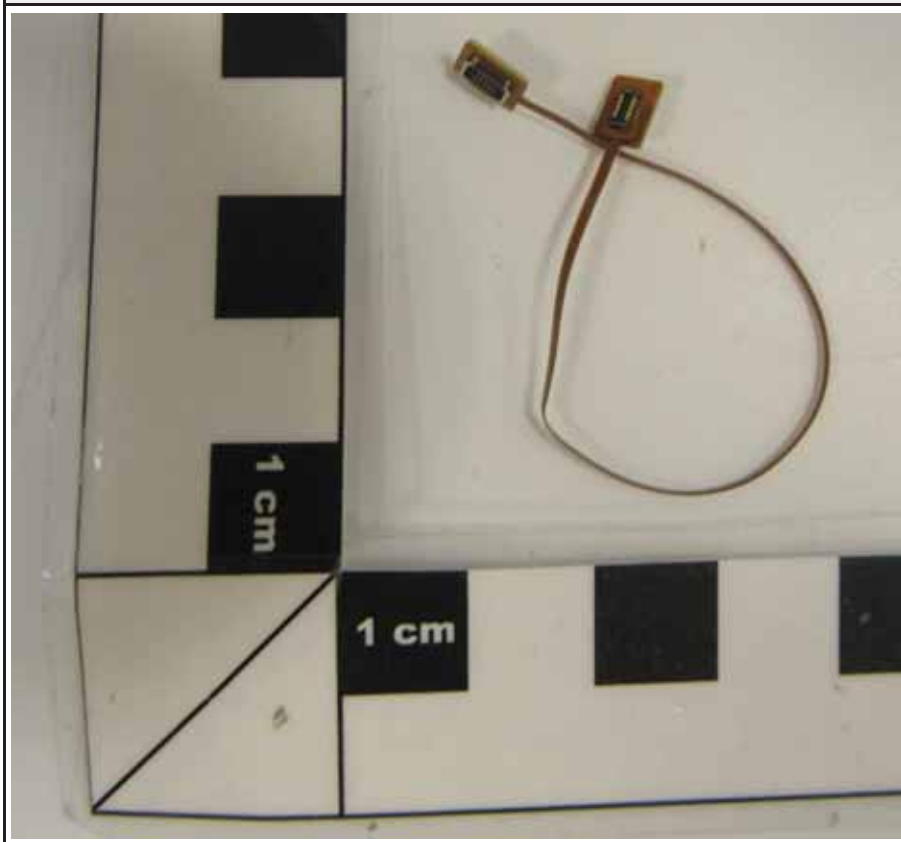
EUT Battery Top View



EUT Battery Bottom View



Flexible PCB cable



1.3 Support Equipment

Product Type	Device	Manufacturer	Model	Comment
AE	Notebook	Lenovo	-	-
CBL	USB to UART	-	-	-
SFT	nRF Connect Desktop	Nordic	-	for configuring test modes
Description:				
AE	Auxiliary Equipment			
SIM	Simulator			
CBL	Connecting Cable			
SFT	Software			
Comment:				

1.4 Test Modes

Mode	Description
GFSK 1 Mbit/s	Mode = Transmit Modulation = GFSK Spreading = None Packet Type = PRBS9 Packet Length = 193 Bytes Duty cycle = 87.7% Power = +4 dBm (Software Setting)
GFSK 2 Mbit/s	Mode = Transmit Modulation = GFSK Spreading = None Packet Type = PRBS9 Packet Length = 239 Bytes Duty cycle = 81.3% Power = +4 dBm (Software Setting)
Comment:	

1.5 Test Frequencies

Designator	Mode	Channel	Frequency [MHz]
F1	Tx	0	2402
F2	Tx	19	2440
F3	Tx	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 dB μ V. 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 dB μ V/m). The FCC limits are given in units of μ V/m. The following formula is used to convert the units of μ V/m to dB μ V/m:

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

Example only for radiated field strength:

Reading + AF	= Net Reading	:	Net reading	- Field strength limit	= Margin
+21.5 dB μ V	+ 26 dB/m	:	47.5 dB μ V/m	- 57.0 dB μ V/m	= -9.5

2 Result Summary

FCC 47 CFR Part 15C, ISED RSS-247				
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	Informational only
FCC § 15.247(a)(2) ISED RSS-247, Issue 2 (section 5.2)	6 dB Bandwidth	ANSI C63.10-2013	PASS	
FCC § 15.247(b) ISED RSS-247, Issue 2 (section 5.4)	Maximum peak conducted power	ANSI C63.10-2013	PASS	
FCC § 15.247(e) ISED RSS-247, Issue 2 (section 5.2)	Power spectral density	ANSI C63.10-2013	PASS	
FCC § 15.207 ISED RSS-247, Issue 2 (section 3.1)	AC power line conducted emissions	ANSI C63.10-2013	N/R	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Band edge compliance	ANSI C63.10-2013	PASS	
FCC § 15.247(d) ISED RSS-247, Issue 2 (section 5.5)	Conducted spurious emissions	ANSI C63.10-2013	PASS	
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 - Occupied bandwidth

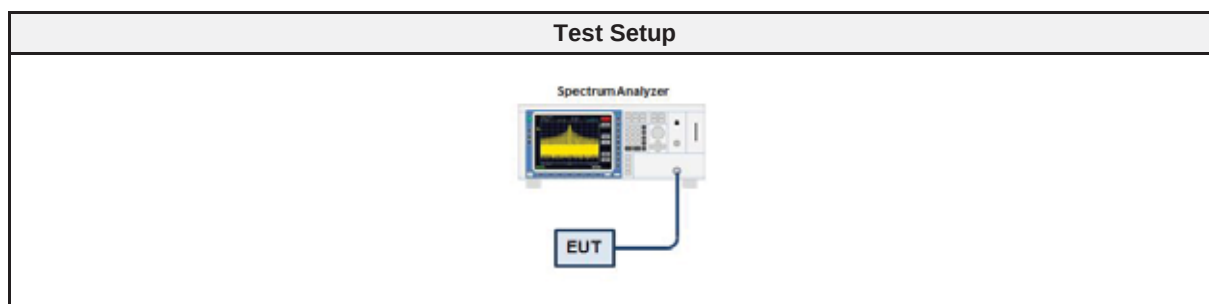
3.1.1 Information

Test Information	
Reference	ISED RSS-Gen, Issue 5 A2 (section 6.7)
Measurement Method	ANSI C63.10 6.9.3
Measurement Uncertainty	$\pm 1.26 \%$
Test Sample ID	42435
Operator	Odai Qawasmeh
Date	2022-12-19

3.1.2 Limits

Limits
None (Informational only)

3.1.3 Setup



3.1.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Cable	Gigalane	CAABD	EF00779	2022-02	2023-02

3.1.5 Procedure

Test Procedure
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

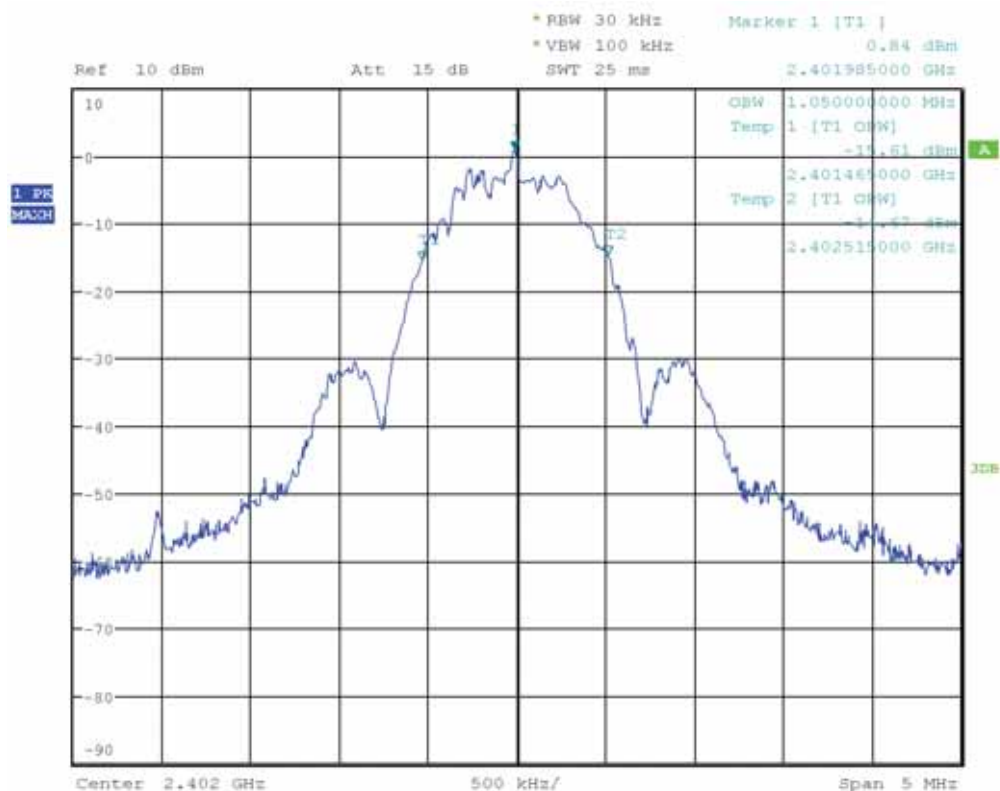
3.1.6 Results

Test Results – 1 Mbit/s		
Mode	Frequency [MHz]	Bandwidth [MHz]
GFSK	2402	1.050
GFSK	2440	1.055
GFSK	2480	1.055

Test Results – 2 Mbit/s		
Mode	Frequency [MHz]	Bandwidth [MHz]
GFSK	2402	2.050
GFSK	2440	2.060
GFSK	2480	2.065

Occupied Bandwidth

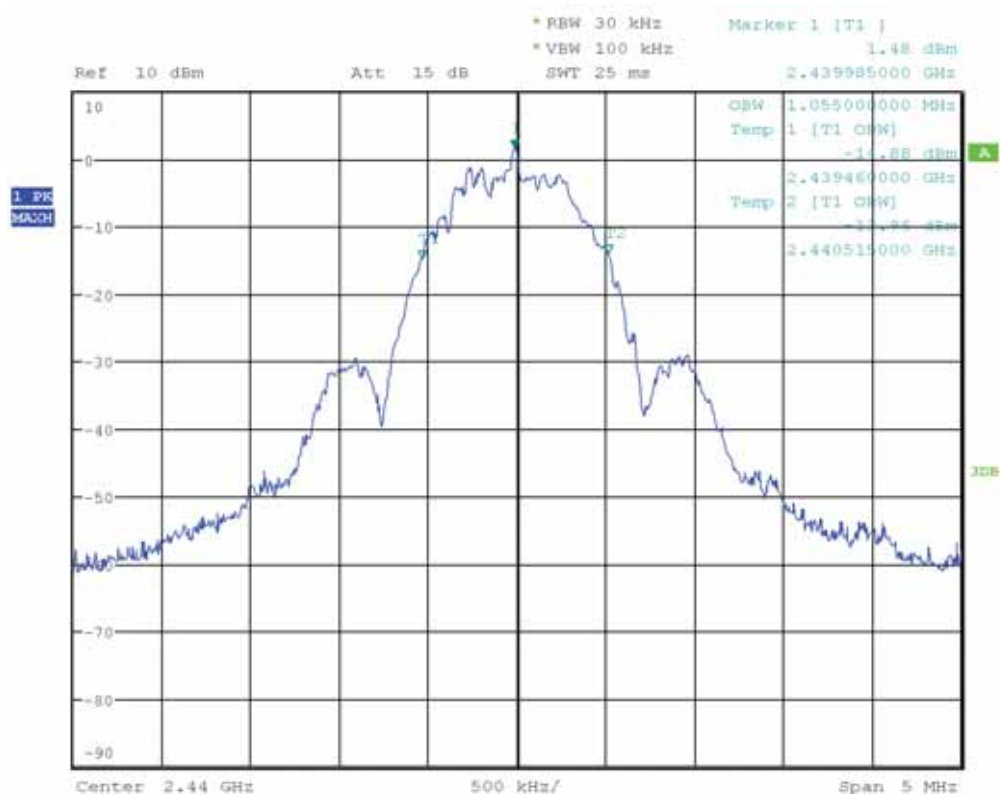
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Occupied Bandwidth [MHz]: 1.050



Date: 19.DEC.2022 12:48:08

Occupied Bandwidth

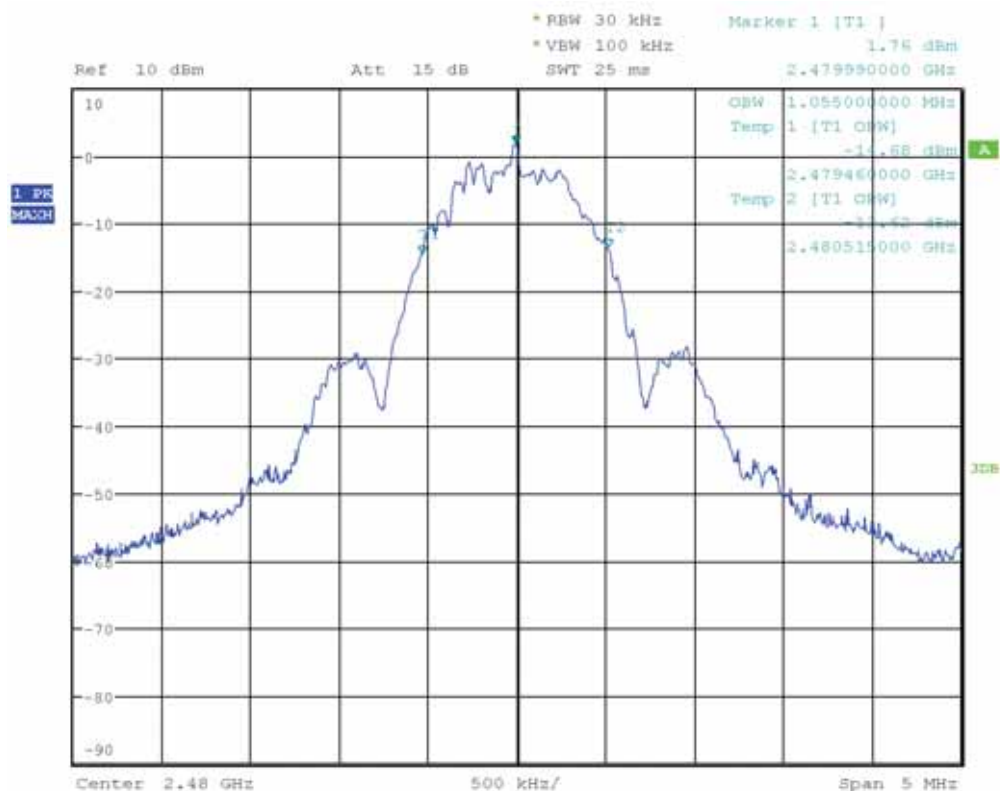
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Occupied Bandwidth [MHz]: 1.055



Date: 19.DEC.2022 12:50:11

Occupied Bandwidth

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Occupied Bandwidth [MHz]: 1.055



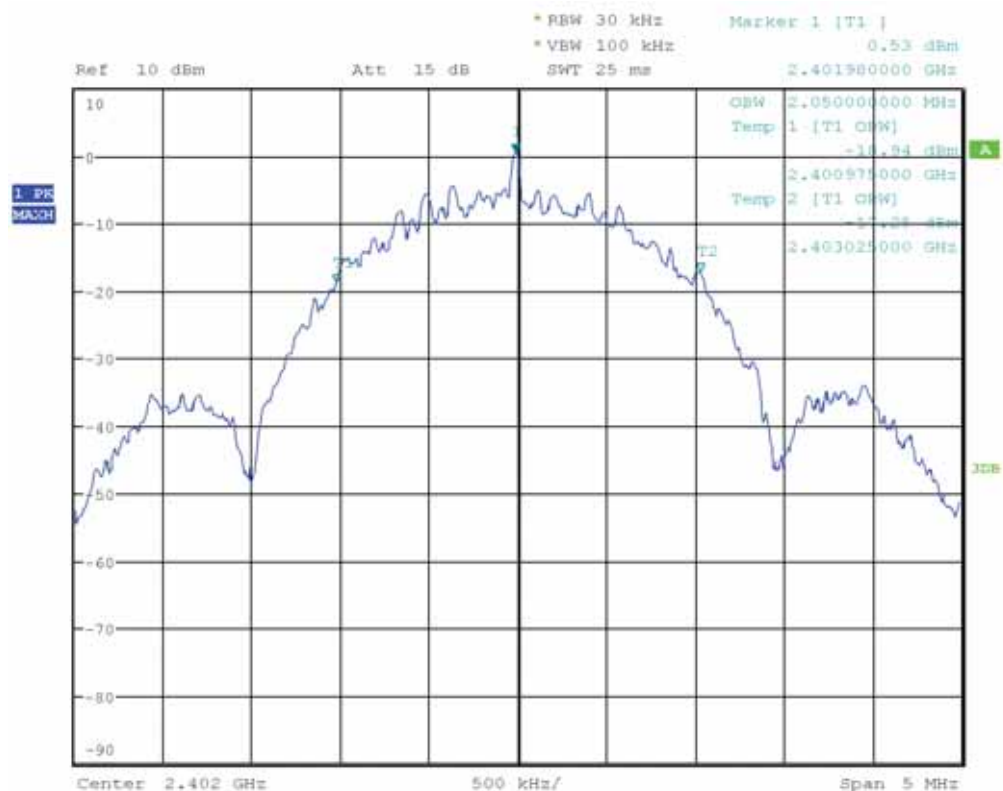
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Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Occupied Bandwidth

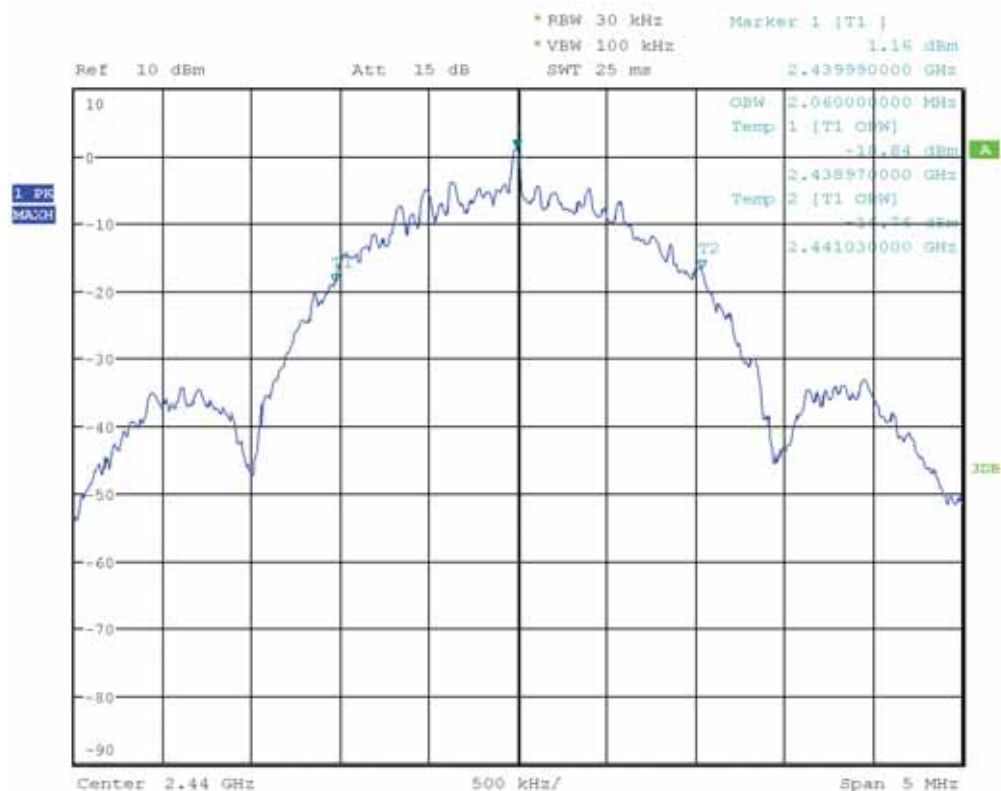
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Occupied Bandwidth [MHz]: 2.050



Date: 19.DEC.2022 13:01:36

Occupied Bandwidth

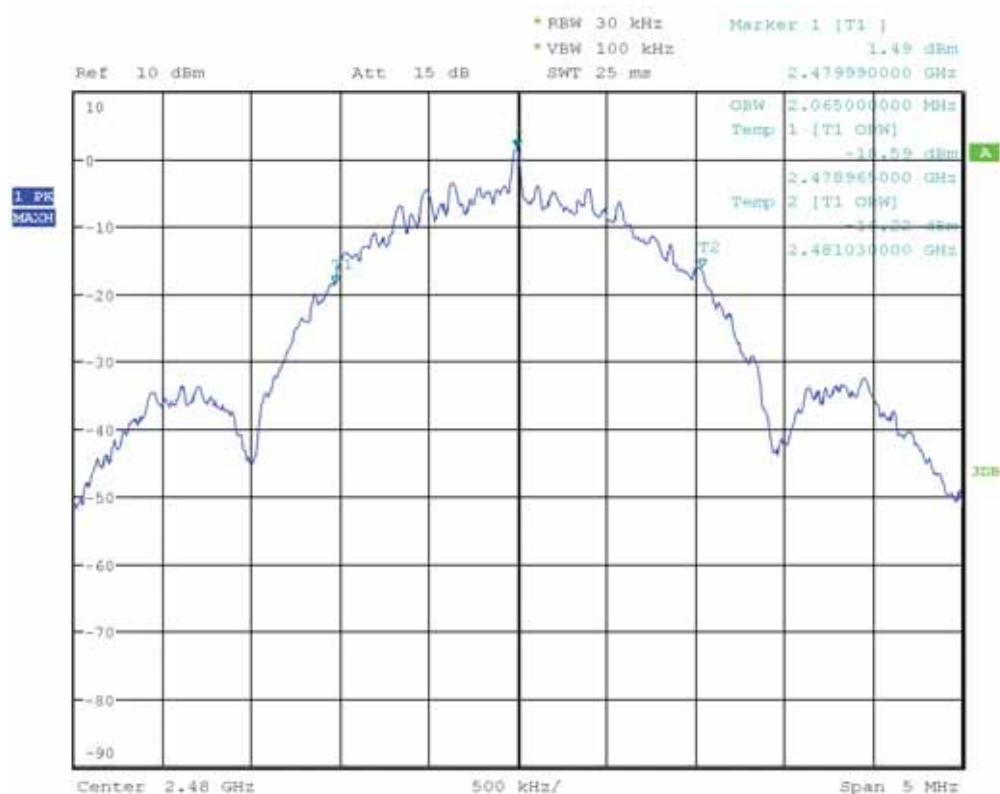
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Occupied Bandwidth [MHz]: 2.060



Date: 19.DEC.2022 13:00:18

Occupied Bandwidth

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 6.9.3
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Occupied Bandwidth [MHz]: 2.065



Date: 19.DEC.2022 12:56:36

3.2 Test Conditions and Results - 6 dB bandwidth

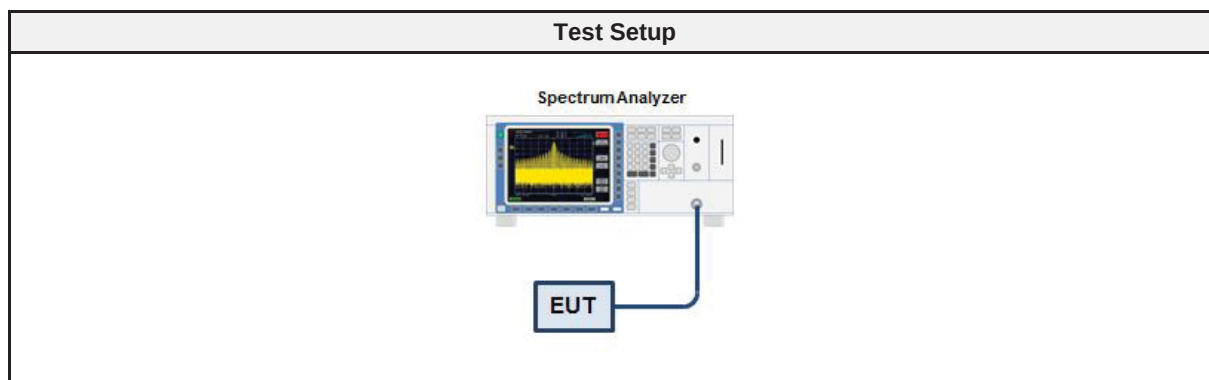
3.2.1 Information

Test Information	
Reference	FCC § 15.247(a)(2); ISSED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.8
Measurement Uncertainty	$\pm 1.26 \%$
Operator	Odai Qawasmeh
Date	2022-12-19

3.2.2 Limits

Limits
$\geq 500\text{kHz}$

3.2.3 Setup



3.2.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Cable	Gigalane	CAABD	EF00779	2022-02	2023-02

3.2.5 Procedure

Test Procedure
1. EUT set to test mode 2. Span set to at least twice the emission spectrum 3. Detector set to peak and max hold and RBW is set to 100 kHz 4. Envelope peak value of emission spectrum is selected 5. Marker on envelope of spectrum is set to level of -6 dB to the left of the peak 6. Marker on envelope of spectrum is set to level of -6 dB to the right of the peak 7. 6 dB Bandwidth is determined by marker frequency separation

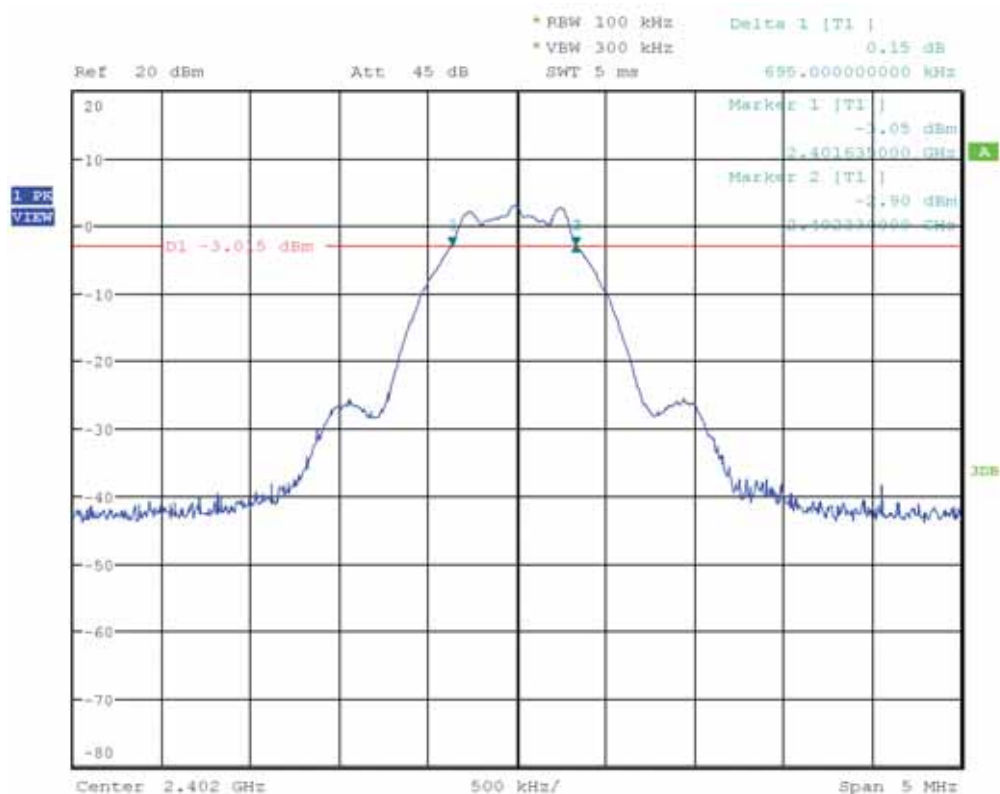
3.2.6 Results

Test Results – 1 Mbit/s				
Mode	Frequency [MHz]	Bandwidth [kHz]	Limit [kHz]	Verdict
GFSK	2402	695	500	PASS
GFSK	2440	700	500	PASS
GFSK	2480	705	500	PASS

Test Results – 2 Mbit/s				
Mode	Frequency [MHz]	Bandwidth [kHz]	Limit [kHz]	Verdict
GFSK	2402	1160	500	PASS
GFSK	2440	1155	500	PASS
GFSK	2480	1170	500	PASS

DTS (6 dB) Bandwidth

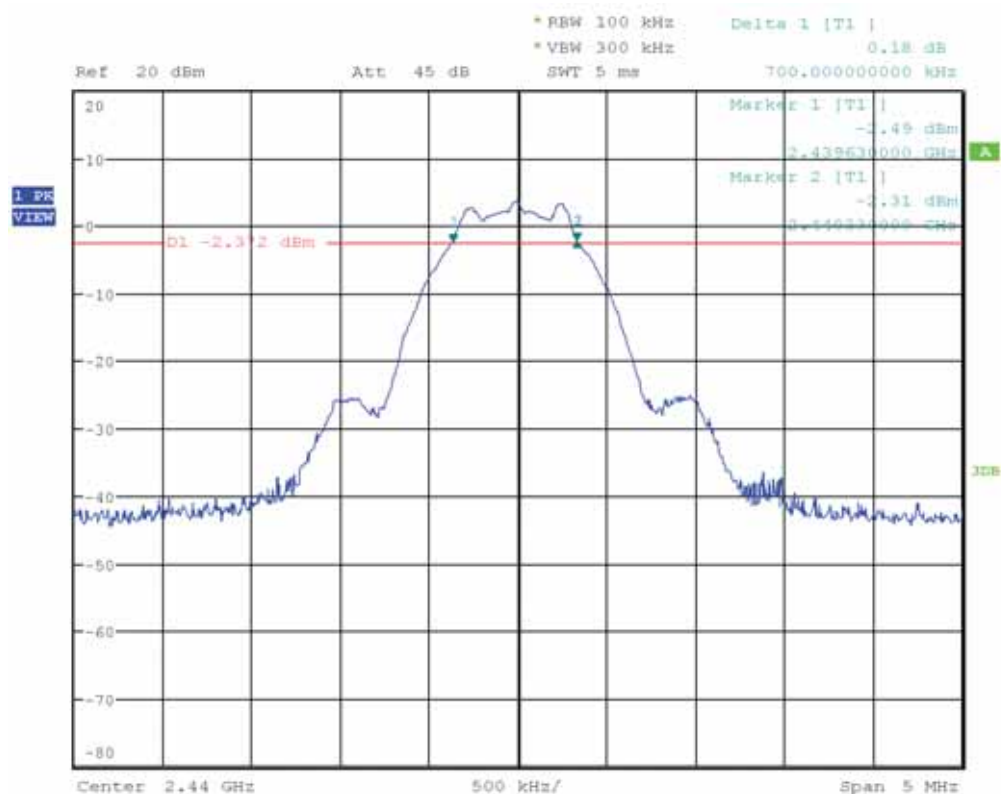
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Lower Frequency [MHz]: 2401.635
 Upper Frequency [MHz]: 2402.330
 6 dB Bandwidth [kHz]: 695



Date: 19.DEC.2022 13:06:06

DTS (6 dB) Bandwidth

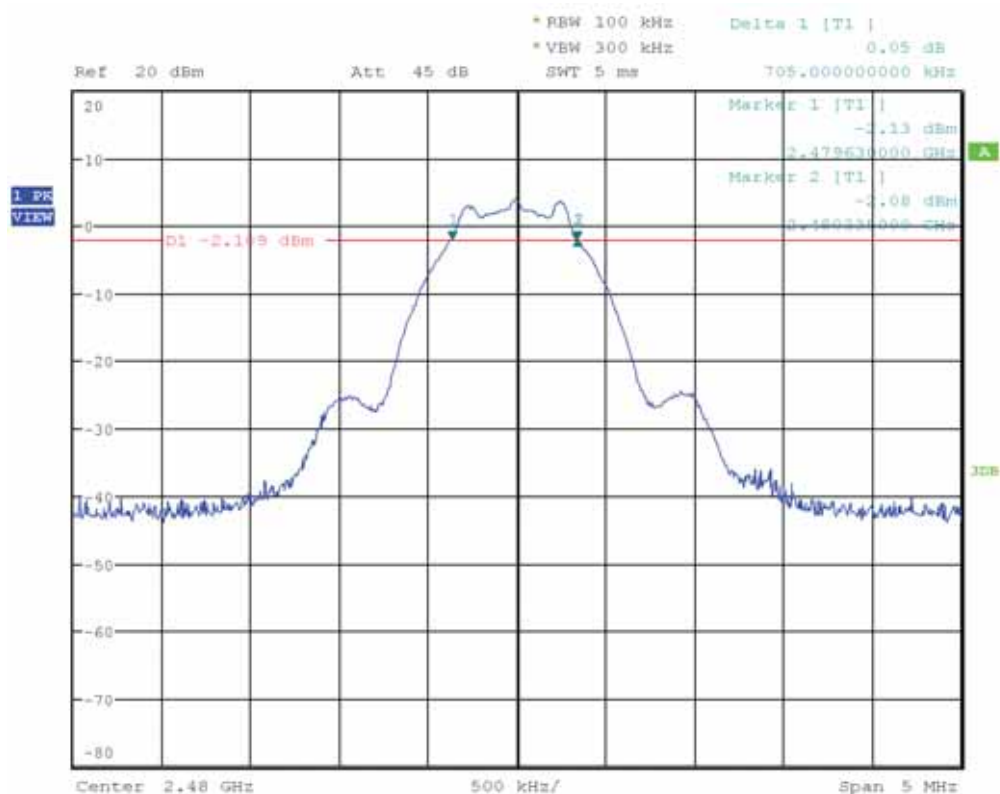
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Lower Frequency [MHz]: 2439.630
 Upper Frequency [MHz]: 2440.330
 6 dB Bandwidth [kHz]: 700



Date: 19.DEC.2022 13:07:11

DTS (6 dB) Bandwidth

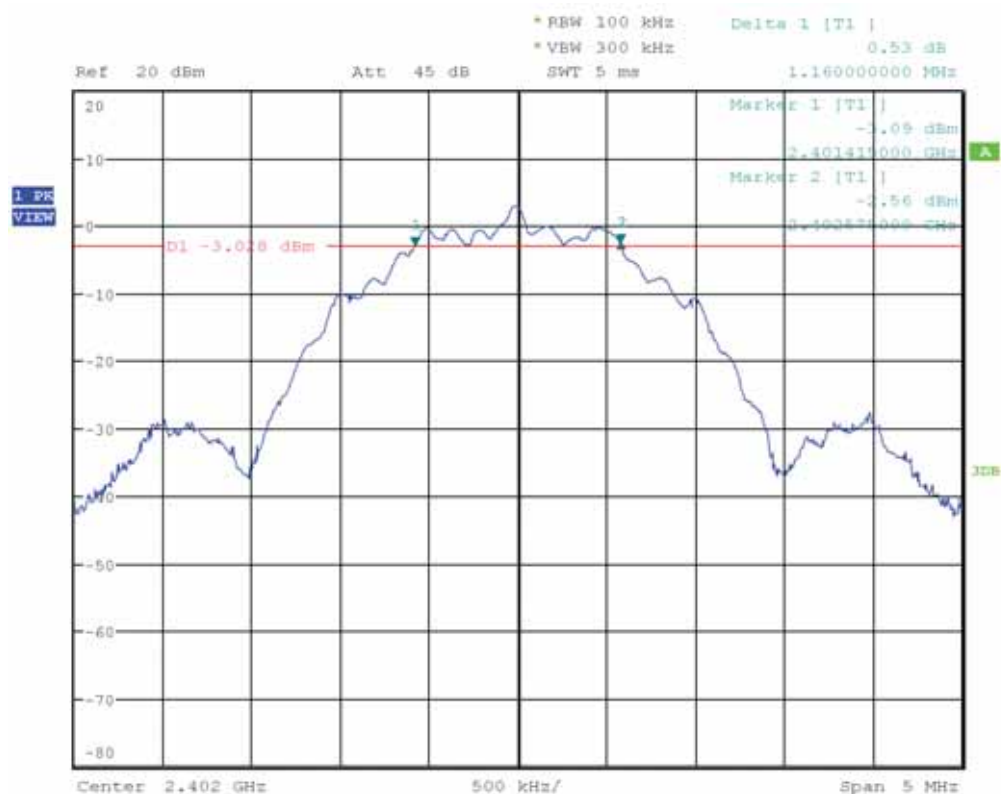
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Lower Frequency [MHz]: 2479.630
 Upper Frequency [MHz]: 2480.335
 6 dB Bandwidth [kHz]: 705



Date: 19.DEC.2022 13:08:23

DTS (6 dB) Bandwidth

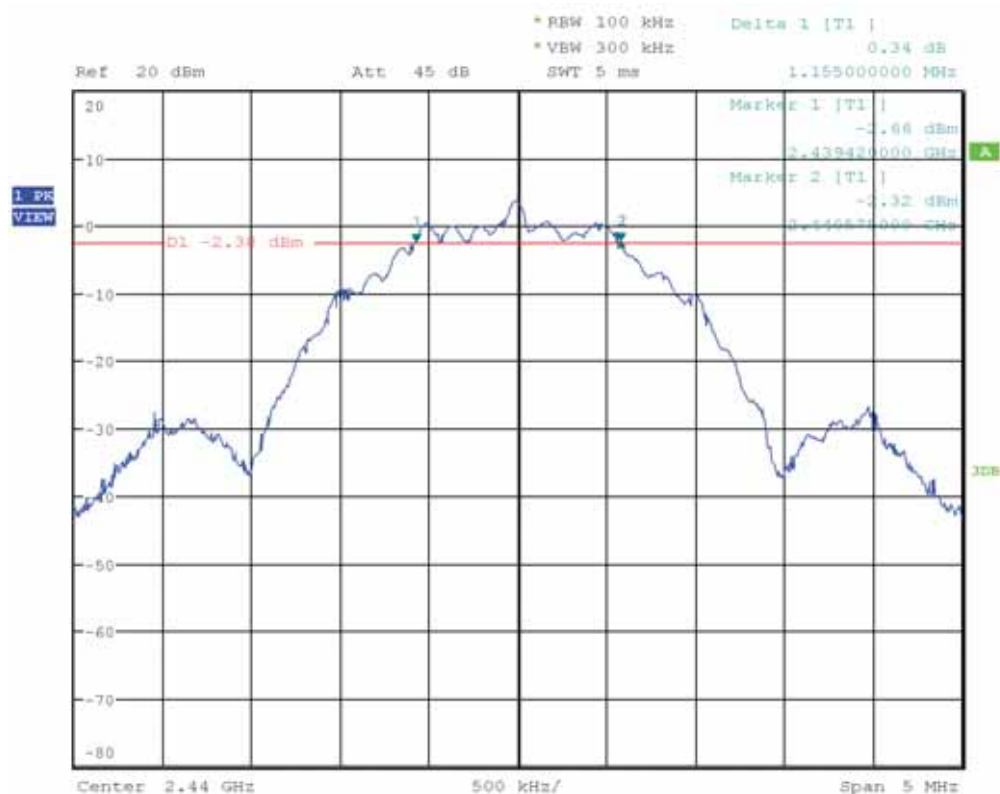
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Lower Frequency [MHz]: 2401.415
 Upper Frequency [MHz]: 2402.575
 6 dB Bandwidth [kHz]: 1160



Date: 19.DEC.2022 13:09:34

DTS (6 dB) Bandwidth

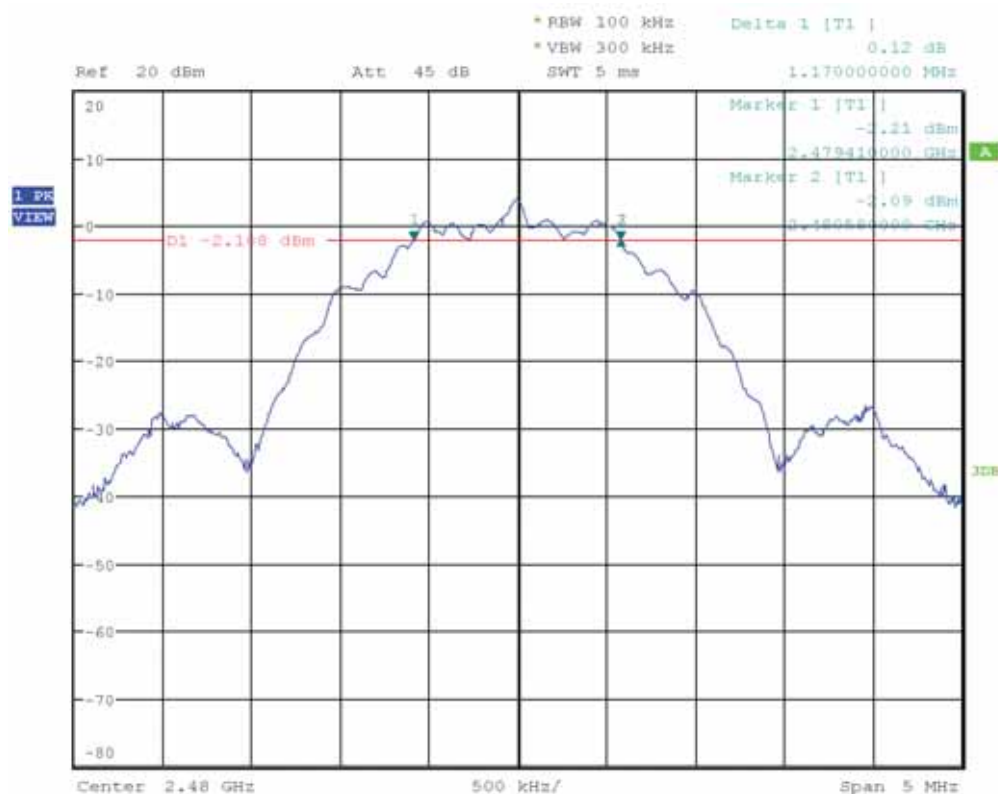
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Lower Frequency [MHz]: 2439.420
 Upper Frequency [MHz]: 2440.575
 6 dB Bandwidth [kHz]: 1155



Date: 19.DEC.2022 13:10:17

DTS (6 dB) Bandwidth

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.8.1 Option 1
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Lower Frequency [MHz]: 2479.410
 Upper Frequency [MHz]: 2480.580
 6 dB Bandwidth [kHz]: 1170



Date: 19.DEC.2022 13:11:15

3.3 Test Conditions and Results - Maximum peak conducted output power

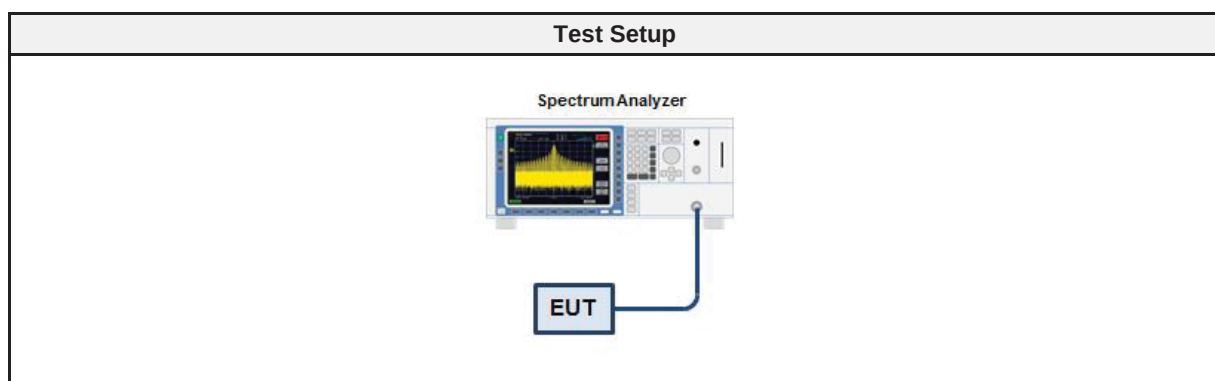
3.3.1 Information

Test Information	
Reference	FCC § 15.247(b); ISSED RSS-247, Issue 2 (section 5.4)
Measurement Method	ANSI C63.10 11.9.1
Measurement Uncertainty	± 2.86 dB
Operator	Odai Qawasmeh
Date	2022-12-19

3.3.2 Limits

Limits
1 W (30 dBm)
The conducted output power limit specified above is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in the table, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.3 Setup



3.3.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Cable	Gigalane	CAABD	EF00779	2022-02	2023-02

3.3.5 Procedure

Test Procedure
1. EUT set to test mode (Communication tester is used if needed) 2. Analyzer resolution bandwidth is set ≥ 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

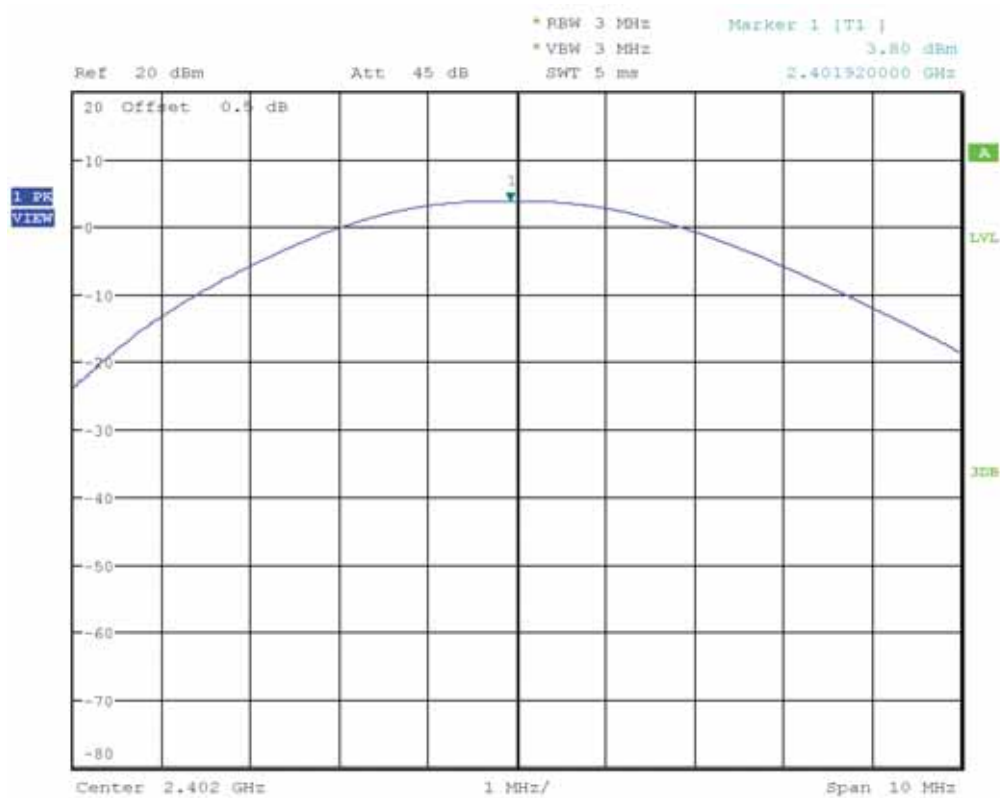
3.3.6 Results

Test Results – 1 Mbit/s				
Channel [MHz]	Power [dBm]	Power [W]	Limit [W]	Verdict
2402	3.803	0.0024	1.0	PASS
2440	4.463	0.0028	1.0	PASS
2480	4.772	0.0030	1.0	PASS

Test Results – 2 Mbit/s				
Channel [MHz]	Power [dBm]	Power [W]	Limit [W]	Verdict
2402	3.821	0.0024	1.0	PASS
2440	4.500	0.0028	1.0	PASS
2480	4.762	0.0030	1.0	PASS

Peak Conducted Output Power

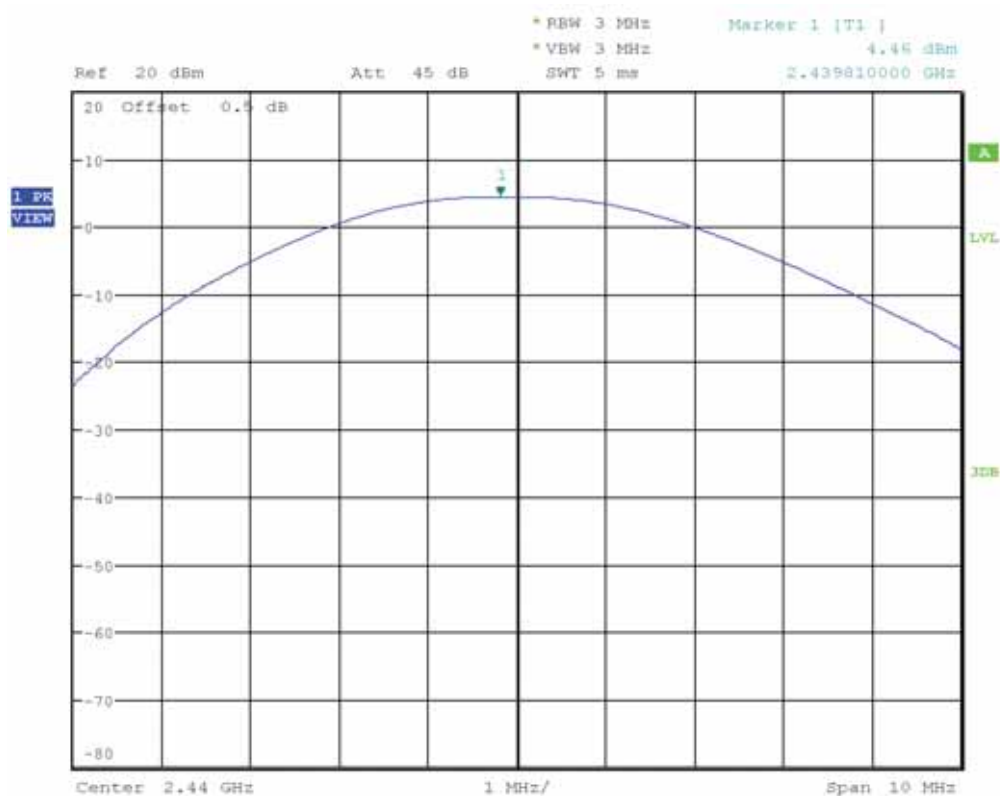
Project Number:	G0M-2209-1690
Applicant:	digades GmbH
Model Description:	Head-up display for motorcycle helmets
Model:	TILSBERK Head-Up Display
Test Sample ID:	42435
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Odai Qawasmeh
Test Site:	Eurofins Product Service GmbH
Test Date:	2022-12-19
Note:	1 Mbit/s
Peak Power [dBm]:	3.803
Peak Power [W]:	0.0024



Date: 19.DEC.2022 13:13:53

Peak Conducted Output Power

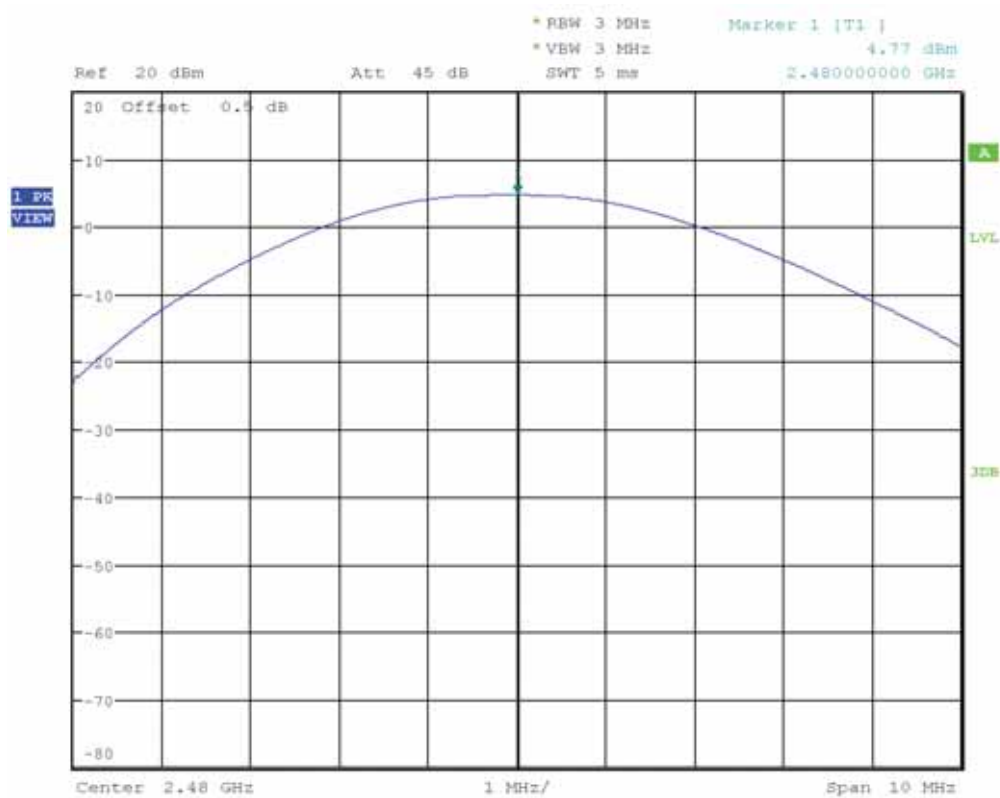
Project Number:	G0M-2209-1690
Applicant:	digades GmbH
Model Description:	Head-up display for motorcycle helmets
Model:	TILSBERK Head-Up Display
Test Sample ID:	42435
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Odai Qawasmeh
Test Site:	Eurofins Product Service GmbH
Test Date:	2022-12-19
Note:	1 Mbit/s
Peak Power [dBm]:	4.463
Peak Power [W]:	0.0028



Date: 19.DEC.2022 13:14:55

Peak Conducted Output Power

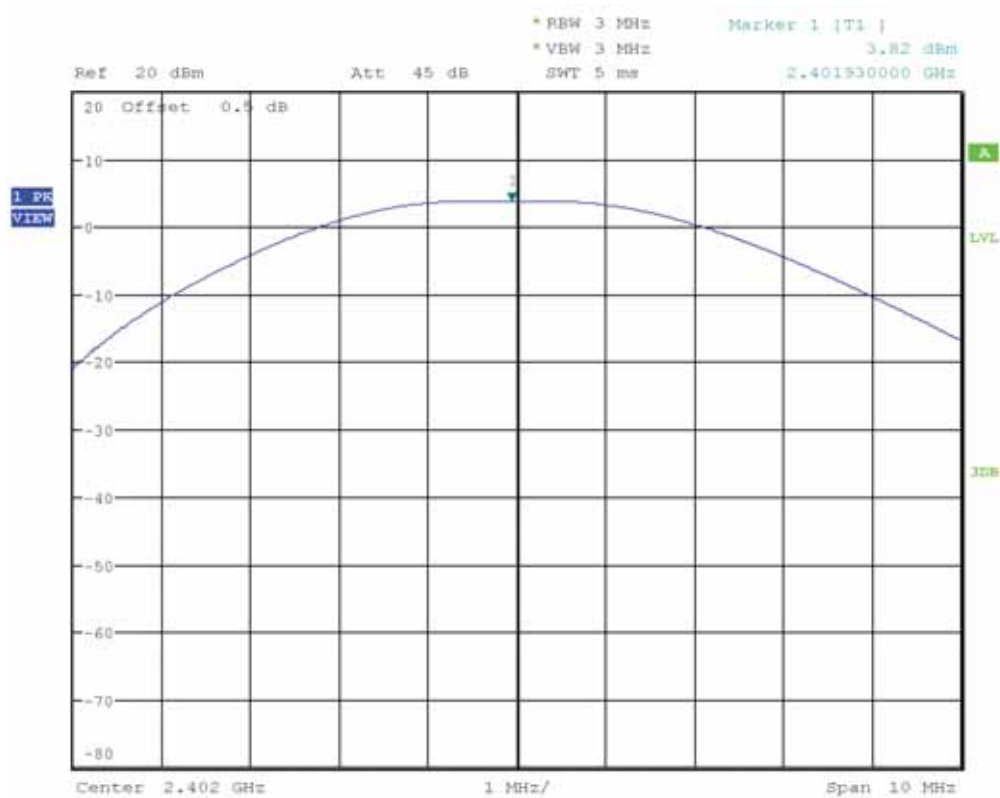
Project Number:	G0M-2209-1690
Applicant:	digades GmbH
Model Description:	Head-up display for motorcycle helmets
Model:	TILSBERK Head-Up Display
Test Sample ID:	42435
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Odai Qawasmeh
Test Site:	Eurofins Product Service GmbH
Test Date:	2022-12-19
Note:	1 Mbit/s
Peak Power [dBm]:	4.772
Peak Power [W]:	0.0030



Date: 19.DEC.2022 13:16:23

Peak Conducted Output Power

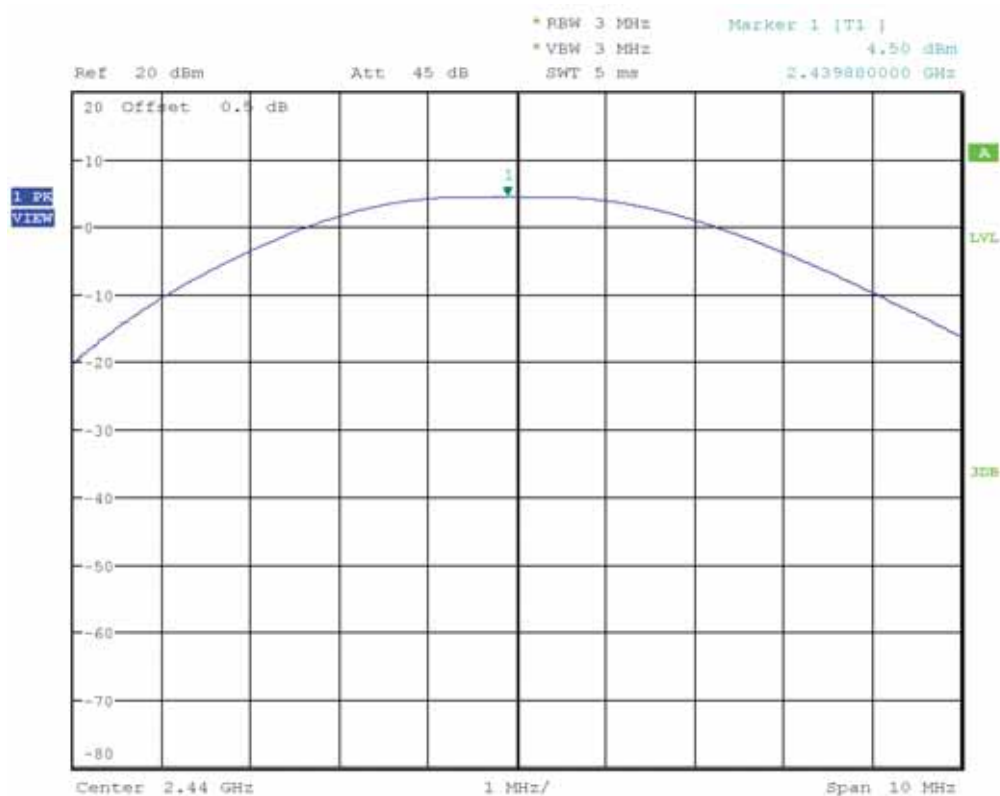
Project Number:	G0M-2209-1690
Applicant:	digades GmbH
Model Description:	Head-up display for motorcycle helmets
Model:	TILSBERK Head-Up Display
Test Sample ID:	42435
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 0, 2402 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Odai Qawasmeh
Test Site:	Eurofins Product Service GmbH
Test Date:	2022-12-19
Note:	2 Mbit/s
Peak Power [dBm]:	3.821
Peak Power [W]:	0.0024



Date: 19.DEC.2022 13:18:37

Peak Conducted Output Power

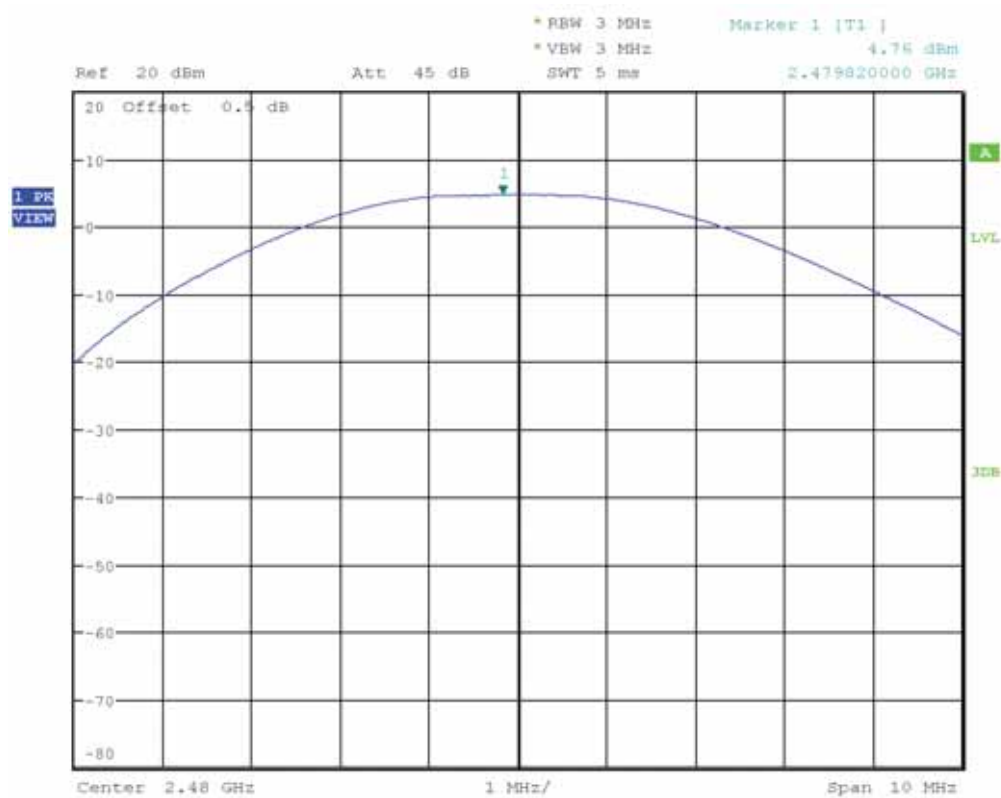
Project Number:	G0M-2209-1690
Applicant:	digades GmbH
Model Description:	Head-up display for motorcycle helmets
Model:	TILSBERK Head-Up Display
Test Sample ID:	42435
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 19, 2440 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Odai Qawasmeh
Test Site:	Eurofins Product Service GmbH
Test Date:	2022-12-19
Note:	2 Mbit/s
Peak Power [dBm]:	4.500
Peak Power [W]:	0.0028



Date: 19.DEC.2022 13:19:31

Peak Conducted Output Power

Project Number:	G0M-2209-1690
Applicant:	digades GmbH
Model Description:	Head-up display for motorcycle helmets
Model:	TILSBERK Head-Up Display
Test Sample ID:	42435
Reference Standards:	FCC 15.247, RSS-247
Reference Method:	ANSI C63.10:2013, Section 11.9.1.1
Operational Mode:	GFSK, Channel: 39, 2480 MHz
Operating Conditions:	Tnom/Vnom
Operator:	Odai Qawasmeh
Test Site:	Eurofins Product Service GmbH
Test Date:	2022-12-19
Note:	2 Mbit/s
Peak Power [dBm]:	4.762
Peak Power [W]:	0.0030



Date: 19.DEC.2022 13:20:13

3.4 Test Conditions and Results - Power spectral density

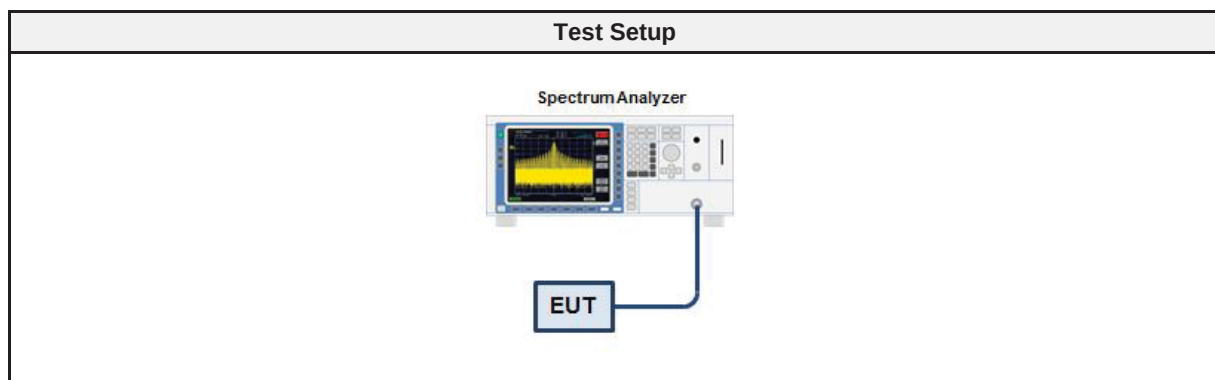
3.4.1 Information

Test Information	
Reference	FCC § 15.247(e); ISSED RSS-247, Issue 2 (section 5.2)
Measurement Method	ANSI C63.10 11.10.2, 14.3.2
Measurement Uncertainty	± 2.86 dB
Operator	Odai Qawasmeh
Date	2022-12-19

3.4.2 Limits

Limits
8 dBm / 3 kHz

3.4.3 Setup



3.4.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Cable	Gigalane	CAABD	EF00779	2022-02	2023-02

3.4.5 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

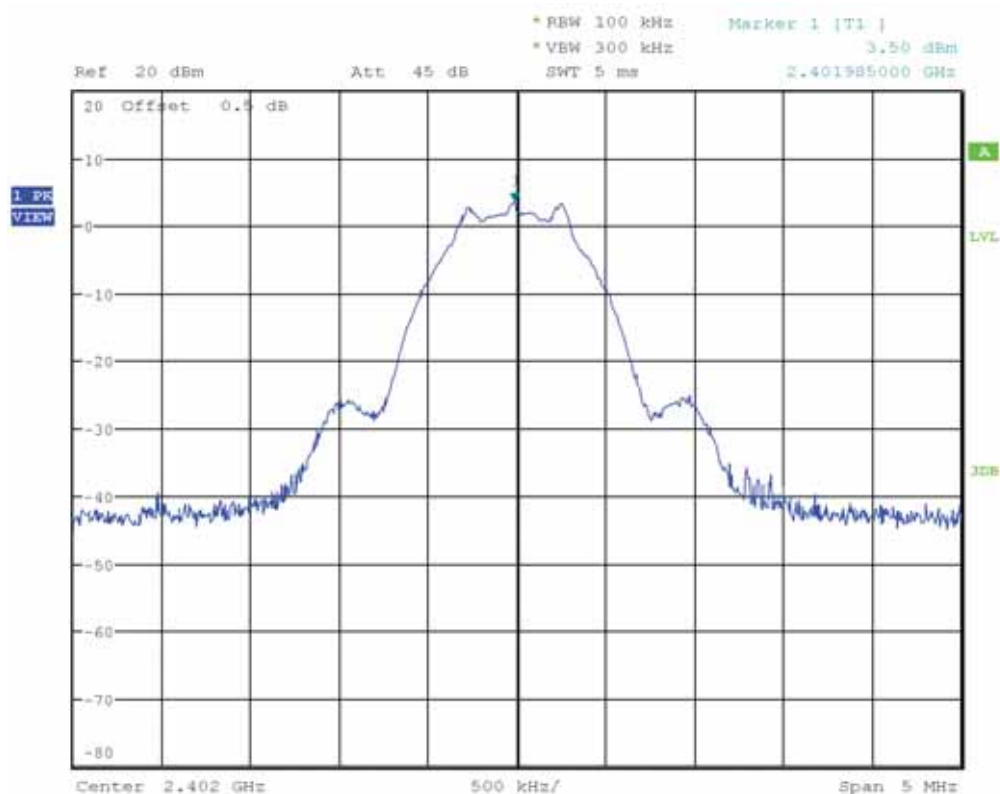
3.4.6 Results

Test Results – 1 Mbit/s			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
2402	3.496	8.0	PASS
2440	4.157	8.0	PASS
2480	4.369	8.0	PASS
RBW = 100 kHz			

Test Results – 2 Mbit/s			
Channel [MHz]	PSD [dBm/RBW]	Limit [dBm/3kHz]	Verdict
2402	3.496	8.0	PASS
2440	4.149	8.0	PASS
2480	4.412	8.0	PASS
RBW = 100 kHz			

Peak Power Spectral Density

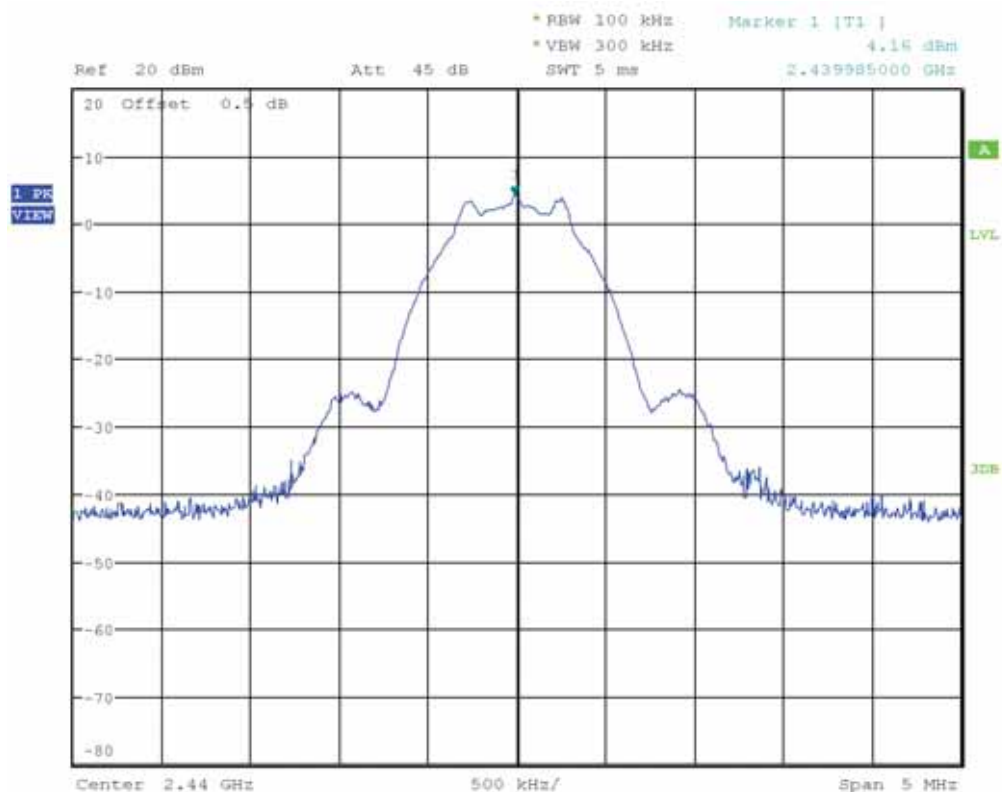
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Peak Frequency [MHz]: 2401.985
 Spectral Density [dBm/RBW]: 3.496
 Resolution Bandwidth [kHz]: 100 kHz



Date: 19.DEC.2022 13:22:49

Peak Power Spectral Density

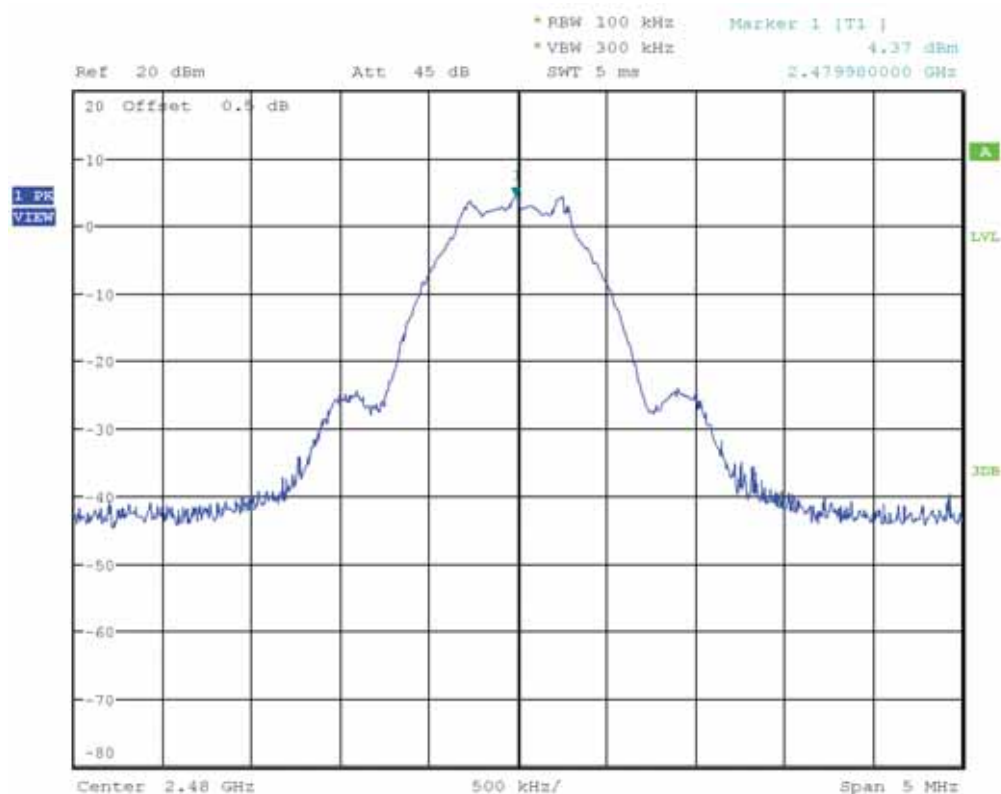
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Peak Frequency [MHz]: 2439.985
 Spectral Density [dBm/RBW]: 4.157
 Resolution Bandwidth [kHz]: 100 kHz



Date: 19.DEC.2022 13:24:05

Peak Power Spectral Density

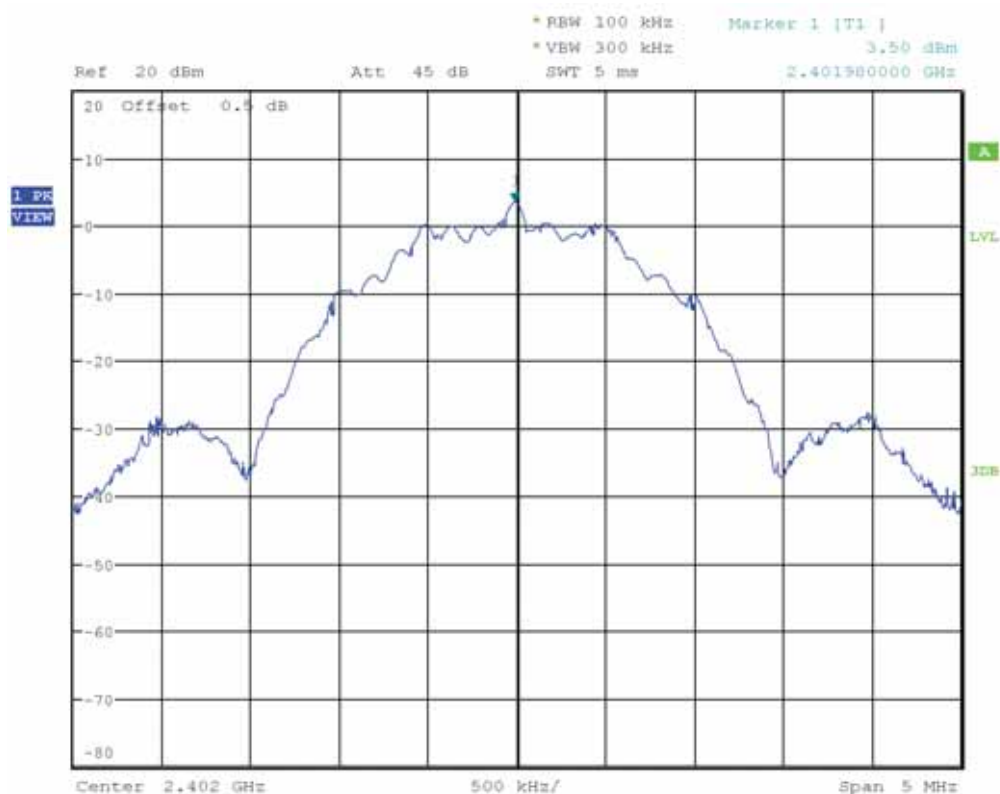
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Peak Frequency [MHz]: 2479.980
 Spectral Density [dBm/RBW]: 4.369
 Resolution Bandwidth [kHz]: 100 kHz



Date: 19.DEC.2022 13:24:44

Peak Power Spectral Density

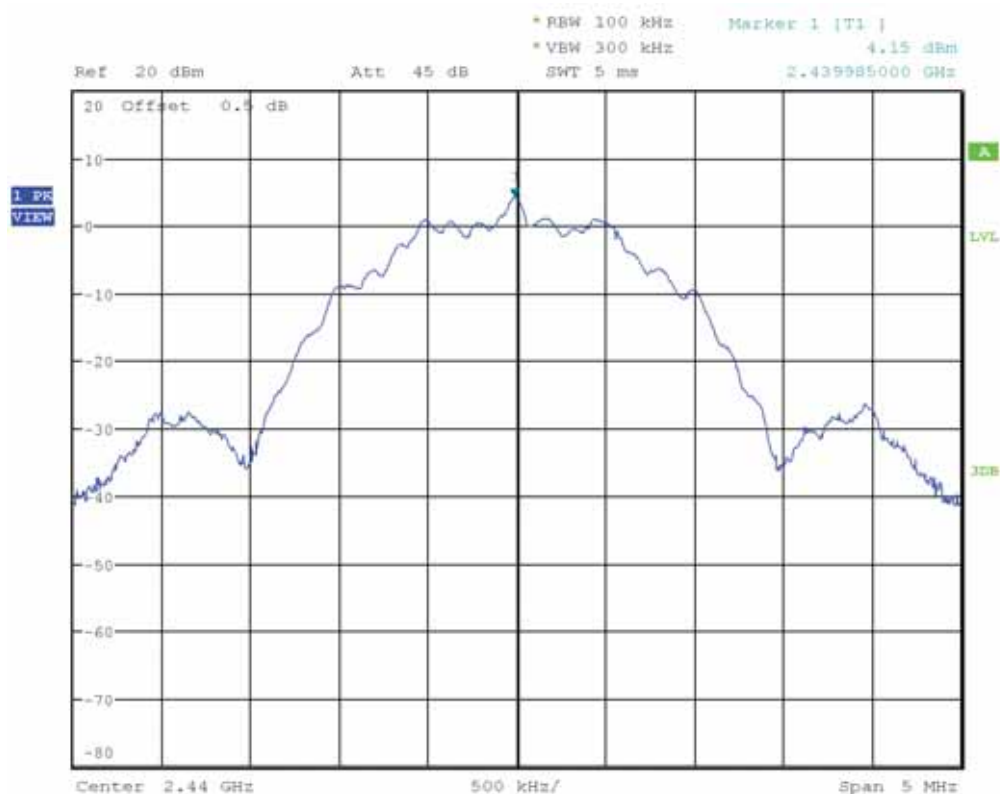
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Peak Frequency [MHz]: 2401.980
 Spectral Density [dBm/RBW]: 3.496
 Resolution Bandwidth [kHz]: 100 kHz



Date: 19.DEC.2022 13:25:30

Peak Power Spectral Density

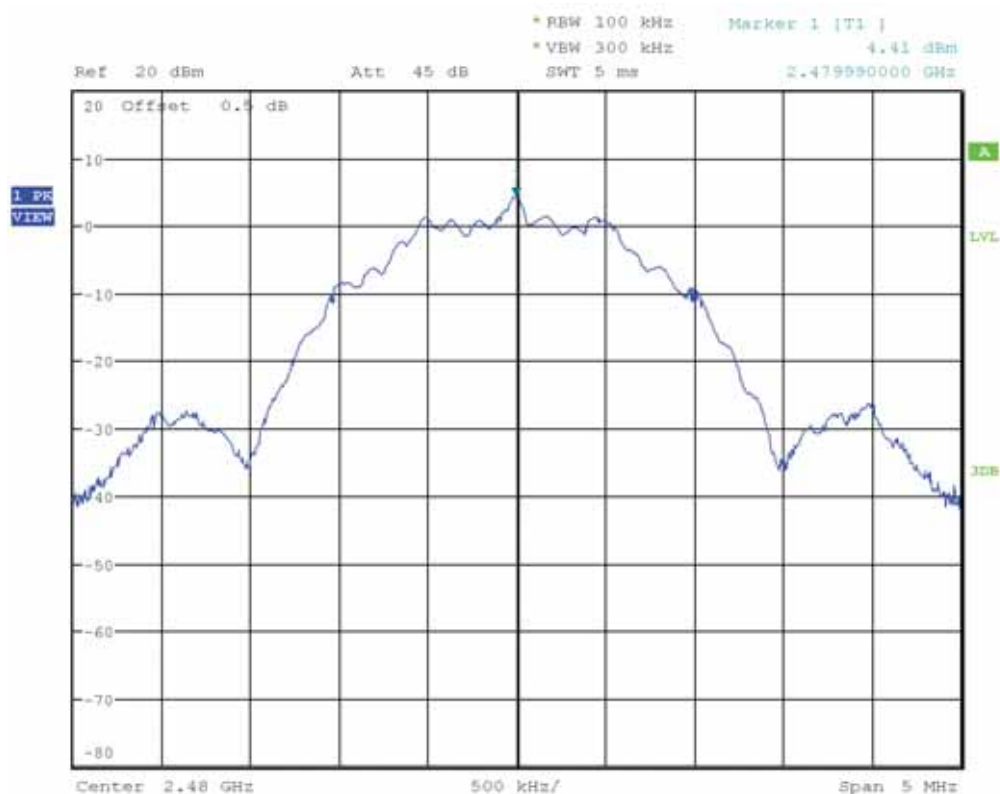
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Peak Frequency [MHz]: 2439.985
 Spectral Density [dBm/RBW]: 4.149
 Resolution Bandwidth [kHz]: 100 kHz



Date: 19.DEC.2022 13:26:42

Peak Power Spectral Density

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.10.2
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Peak Frequency [MHz]: 2479.990
 Spectral Density [dBm/RBW]: 4.412
 Resolution Bandwidth [kHz]: 100 kHz



Date: 19.DEC.2022 13:27:30

3.5 Test Conditions and Results - Band-edge compliance

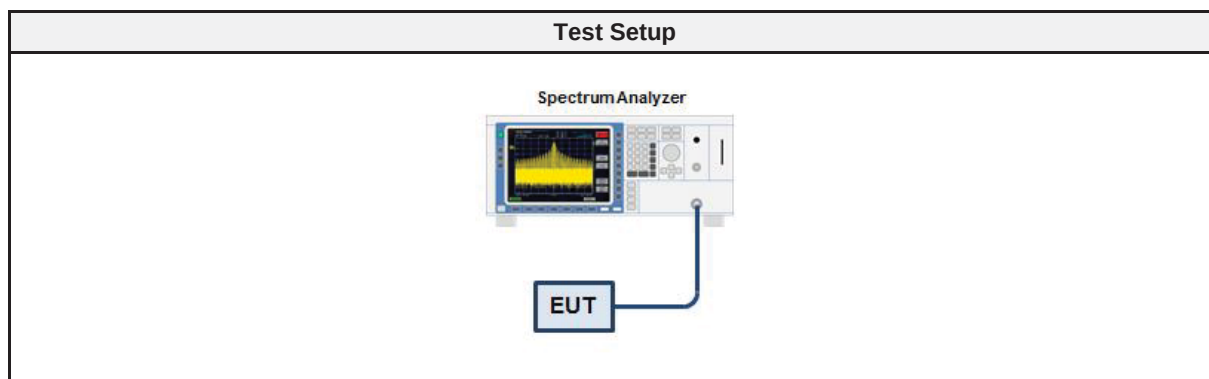
3.5.1 Information

Test Information	
Reference	FCC § 15.247(d); ISSED RSS-247, Issue 2 (section 5.5)
Measurement Uncertainty	± 3.64 dB
Measurement Method	ANSI C63.10 11.13
Operator	Odai Qawasmeh
Date	2022-12-19

3.5.2 Limits

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

3.5.3 Setup



3.5.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Cable	Gigalane	CAABD	EF00779	2022-02	2023-02

3.5.5 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

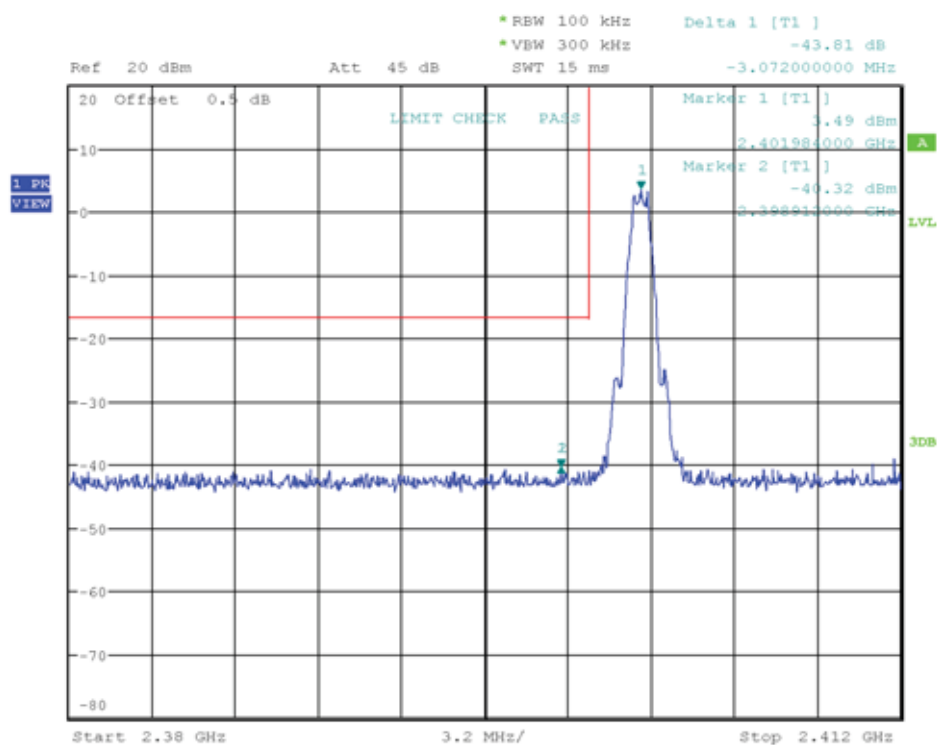
3.5.6 Results

Test Results – 1 Mbit/s				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
GFSK	2402	-43.81	-20	PASS
GFSK	2480	-43.88	-20	PASS

Test Results – 2 Mbit/s				
Mode	Channel [MHz]	Out-of-band Attenuation [dB]	Limit [dB]	Verdict
GFSK	2402	-33.05	-20	PASS
GFSK	2480	-44.52	-20	PASS

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Band-edge: Lower
 In-band Frequency [MHz]: 2401.984
 Max. in-band Level [dBm/100 kHz]: 3.491
 Out-of-band Frequency [MHz]: 2398.912
 Max. out-of-band Level [dBm/100 kHz]: -40.32
 Attenuation [dB]: -43.81



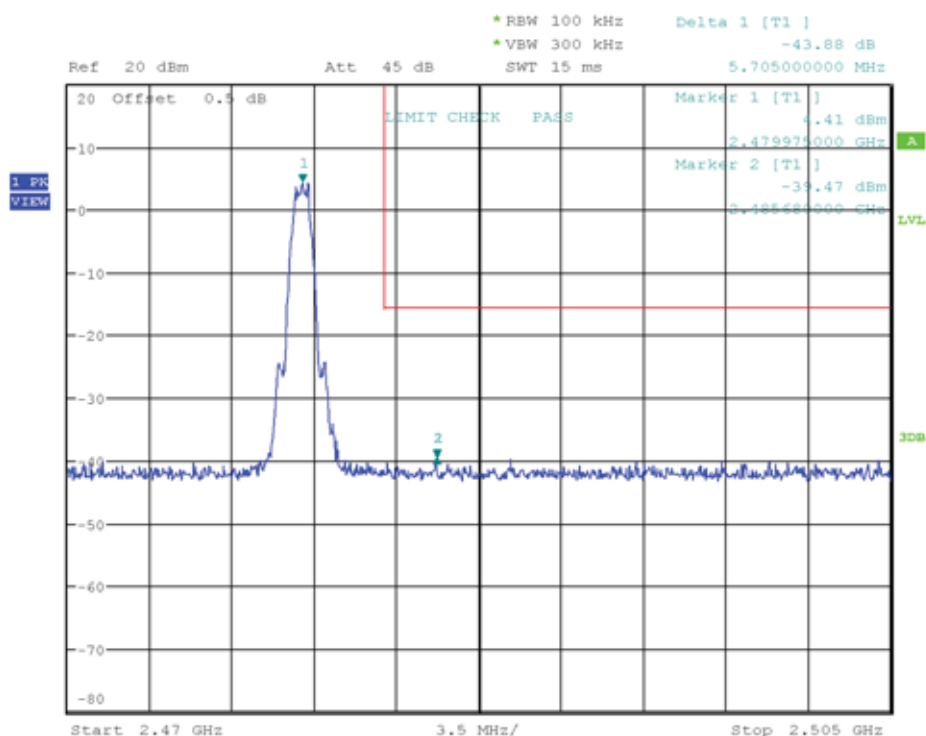
Date: 19.DEC.2022 13:32:18

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2209-1690
Applicant: digades GmbH
Model Description: Head-up display for motorcycle helmets
Model: TILSBERK Head-Up Display
Test Sample ID: 42435
Reference Standards: FCC 15.247, RSS-247
Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
Operating Conditions: Tnom/Vnom
Operator: Odai Qawasmeh
Test Site: Eurofins Product Service GmbH
Test Date: 2022-12-19
Note: 1 Mbit/s
Band-edge: Upper
In-band Frequency [MHz]: 2479.975
Max. in-band Level [dBm/100 kHz]: 4.411
Out-of-band Frequency [MHz]: 2485.68
Max. out-of-band Level [dBm/100 kHz]: -39.465
Attenuation [dB]: -43.88



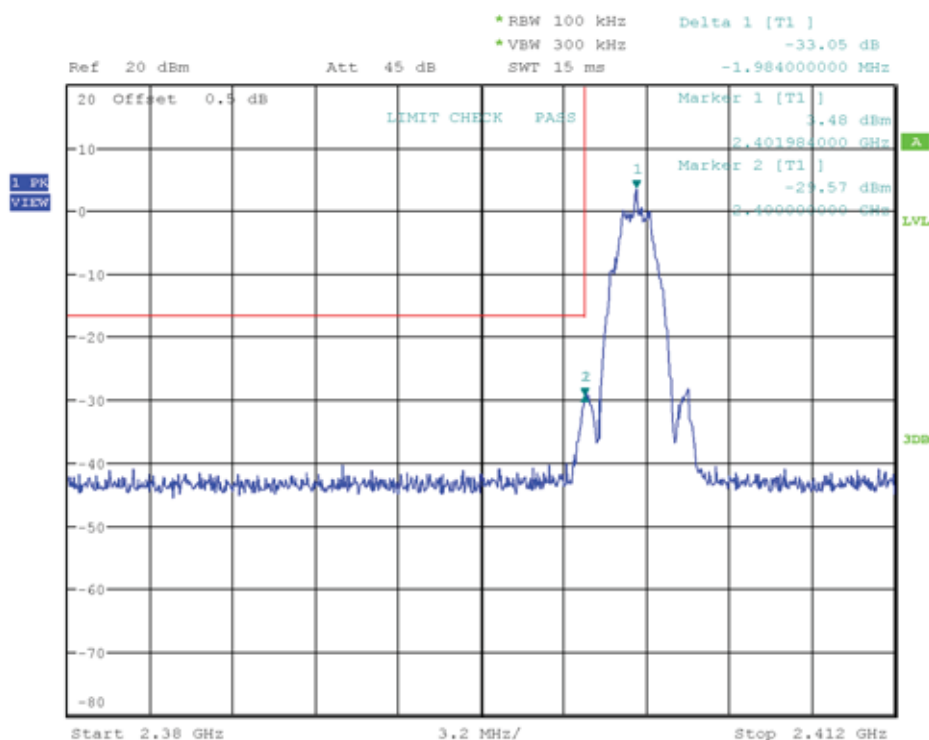
Date: 19.DEC.2022 13:35:34

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Band-edge: Lower
 In-band Frequency [MHz]: 2401.984
 Max. in-band Level [dBm/100 kHz]: 3.476
 Out-of-band Frequency [MHz]: 2400.0
 Max. out-of-band Level [dBm/100 kHz]: -29.57
 Attenuation [dB]: -33.05



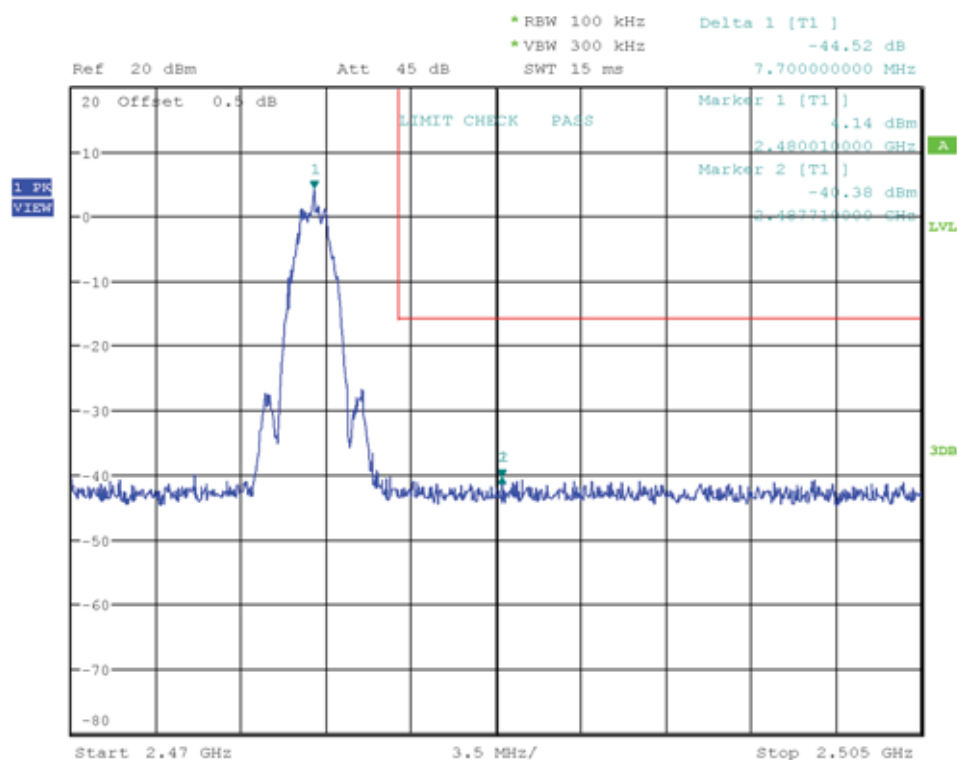
Date: 19.DEC.2022 13:37:37

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Emissions in nonrestricted frequency bands at the Band-edge

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 7.8.6, 6.10.4
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Band-edge: Upper
 In-band Frequency [MHz]: 2480.01
 Max. in-band Level [dBm/100 kHz]: 4.14
 Out-of-band Frequency [MHz]: 2487.71
 Max. out-of-band Level [dBm/100 kHz]: -40.381
 Attenuation [dB]: -44.52



Date: 19.DEC.2022 13:36:44

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

3.6 Test Conditions and Results - Conducted spurious emissions

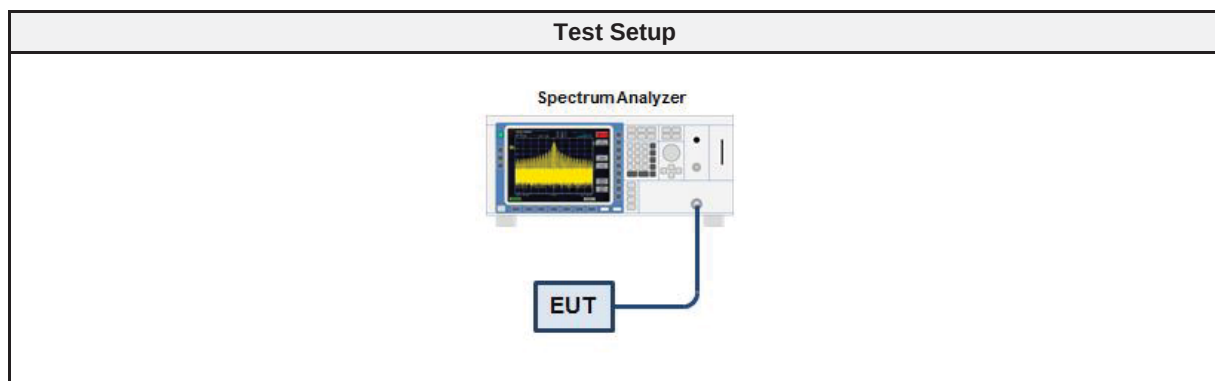
3.6.1 Information

Test Information	
Reference	FCC § 15.247(d); ISED RSS-247, Issue 2 (section 5.5)
Measurement Uncertainty	± 4.25 dB
Measurement Method	ANSI C63.10 11.11
Operator	Odai Qawasmeh
Date	2022-12-19

3.6.2 Limits

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

3.6.3 Setup



3.6.4 Equipment

Test Equipment					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Spectrum Analyser	R&S	FSU 26	EF01003	2022-07	2023-07
Cable	Gigalane	CAABD	EF00779	2022-02	2023-02

3.6.5 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

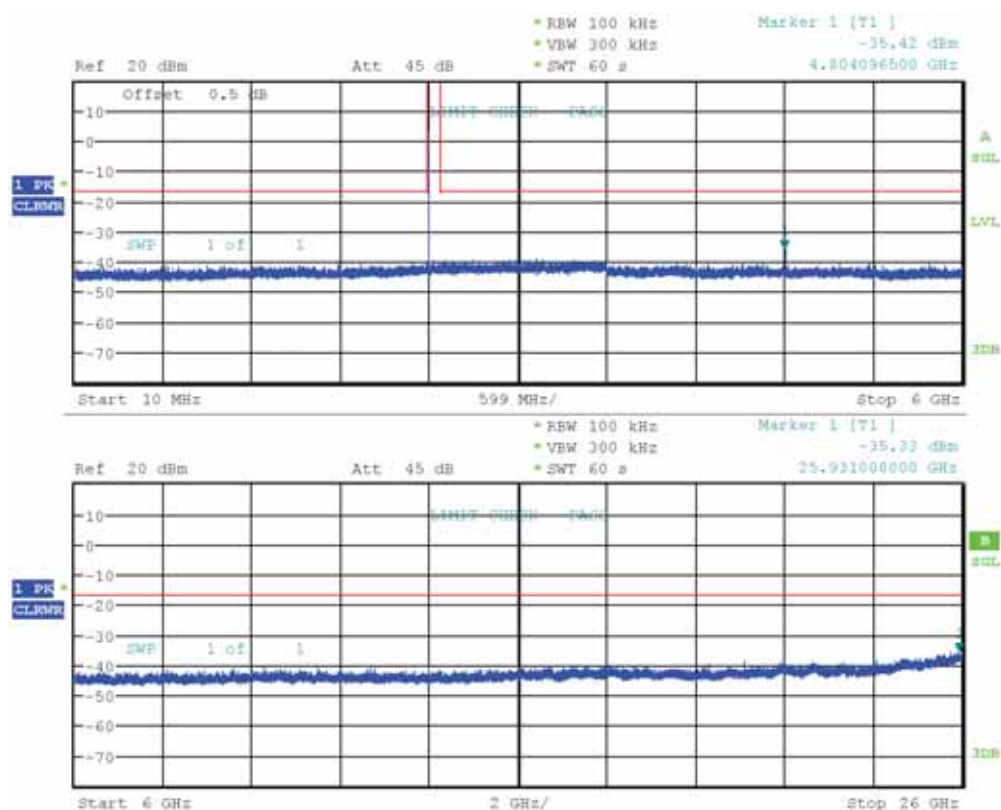
3.6.6 Results

Test Results – 1 Mbit/s		
Mode	Channel [MHz]	Verdict
GFSK	2402	PASS
GFSK	2440	PASS
GFSK	2480	PASS

Test Results – 2 Mbit/s		
Mode	Channel [MHz]	Verdict
GFSK	2402	PASS
GFSK	2440	PASS
GFSK	2480	PASS

Conducted Spurious Emissions

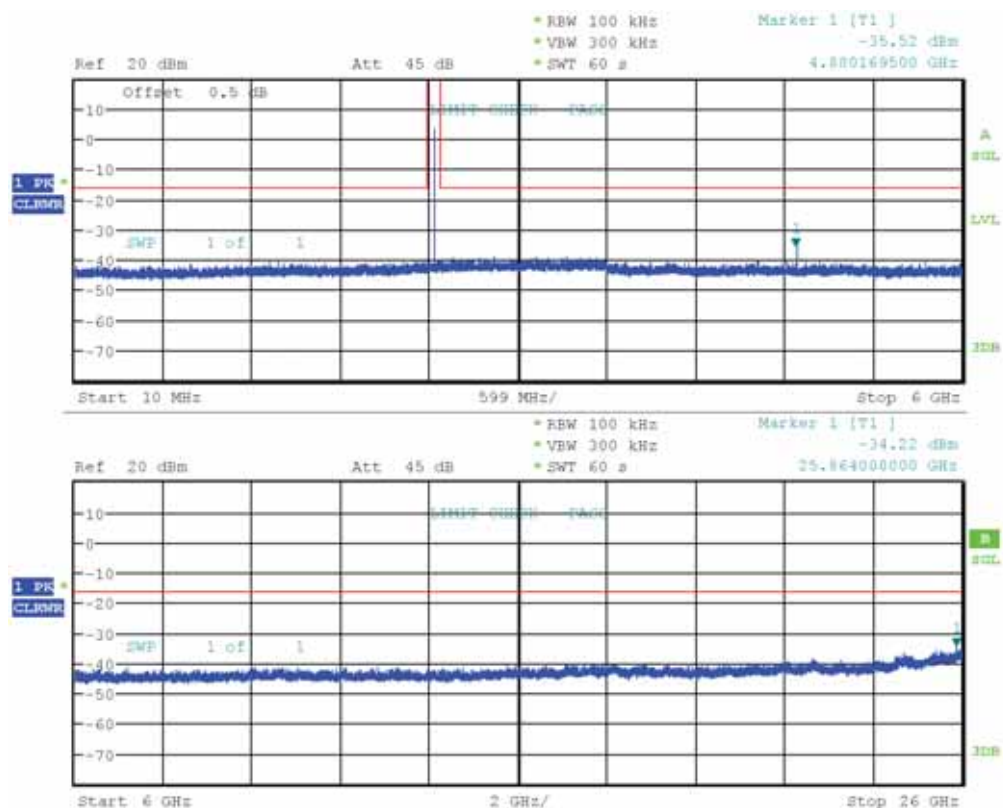
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Max. in-band Frequency [MHz]: 2402.0
 Max. in-band Level [dBm/100 kHz]: 3.5
 Out-of-band Limit [dBm/100 kHz]: -16.5



Date: 19.DEC.2022 13:42:50

Conducted Spurious Emissions

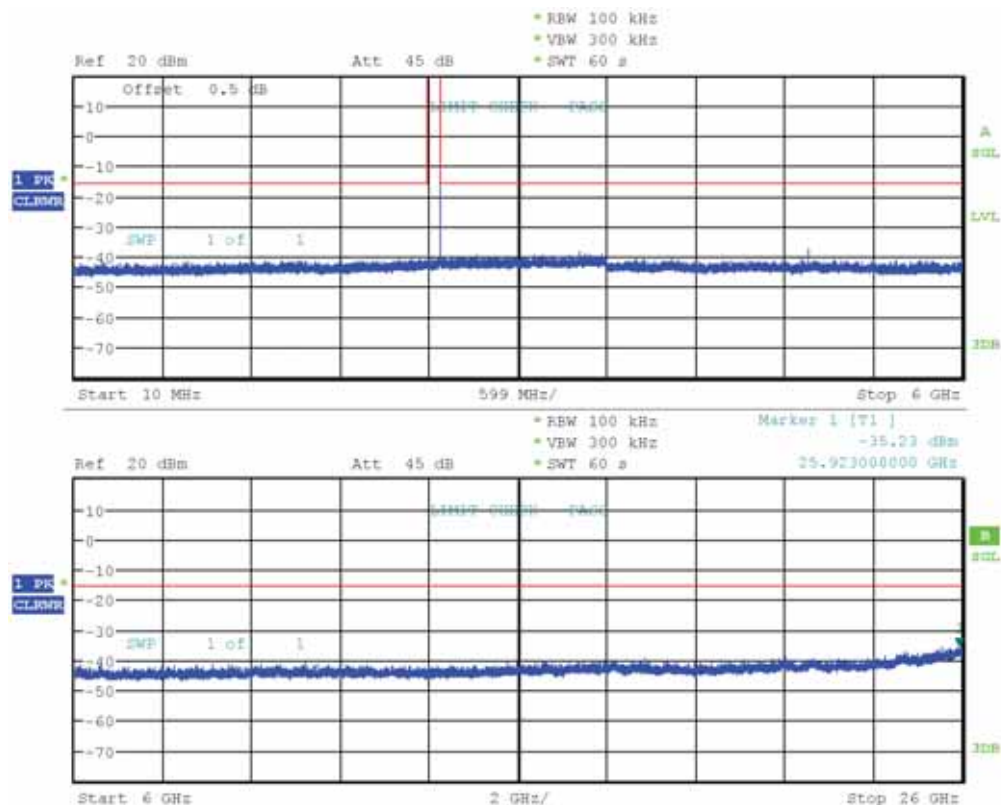
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 1 Mbit/s
 Max. in-band Frequency [MHz]: 2440.0
 Max. in-band Level [dBm/100 kHz]: 4.2
 Out-of-band Limit [dBm/100 kHz]: -15.8



Date: 19.DEC.2022 13:46:14

Conducted Spurious Emissions

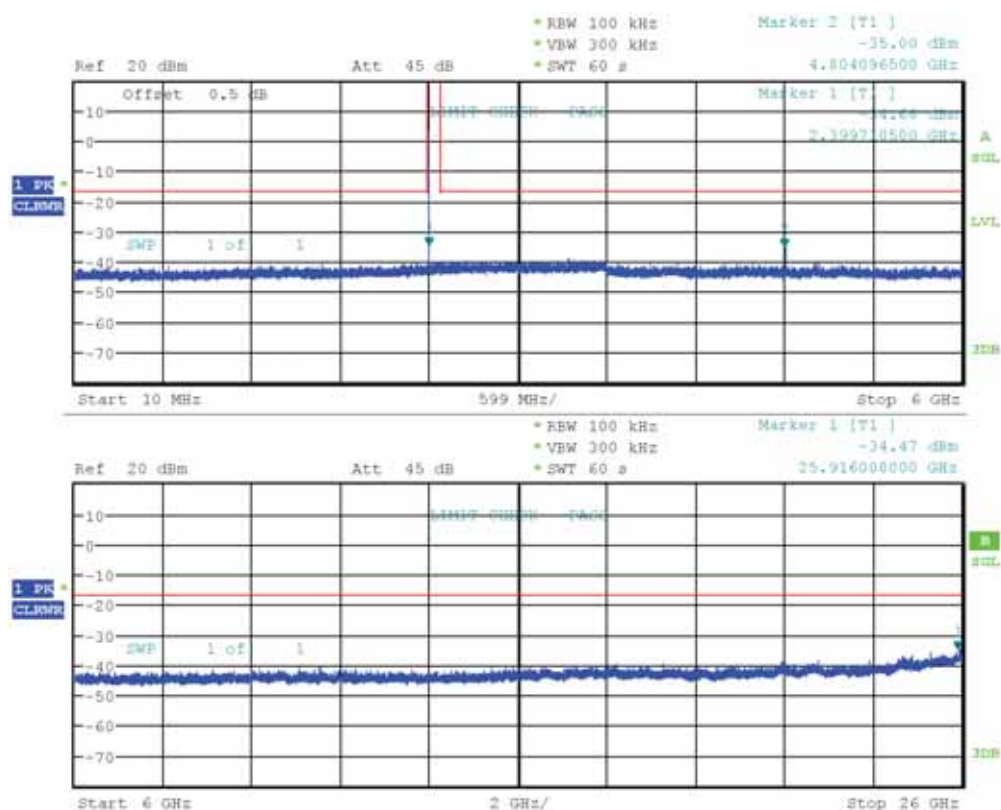
Project Number: G0M-2209-1690
Applicant: digades GmbH
Model Description: Head-up display for motorcycle helmets
Model: TILSBERK Head-Up Display
Test Sample ID: 42435
Reference Standards: FCC 15.247, RSS-247
Reference Method: ANSI C63.10:2013, Section 11.11
Operational Mode: GFSK, Channel: 39, 2480 MHz
Operating Conditions: Tnom/Vnom
Operator: Odai Qawasmeh
Test Site: Eurofins Product Service GmbH
Test Date: 2022-12-19
Note: 1 Mbit/s
Max. in-band Frequency [MHz]: 2480.0
Max. in-band Level [dBm/100 kHz]: 4.4
Out-of-band Limit [dBm/100 kHz]: -15.6



Date: 19.DEC.2022 13:51:17

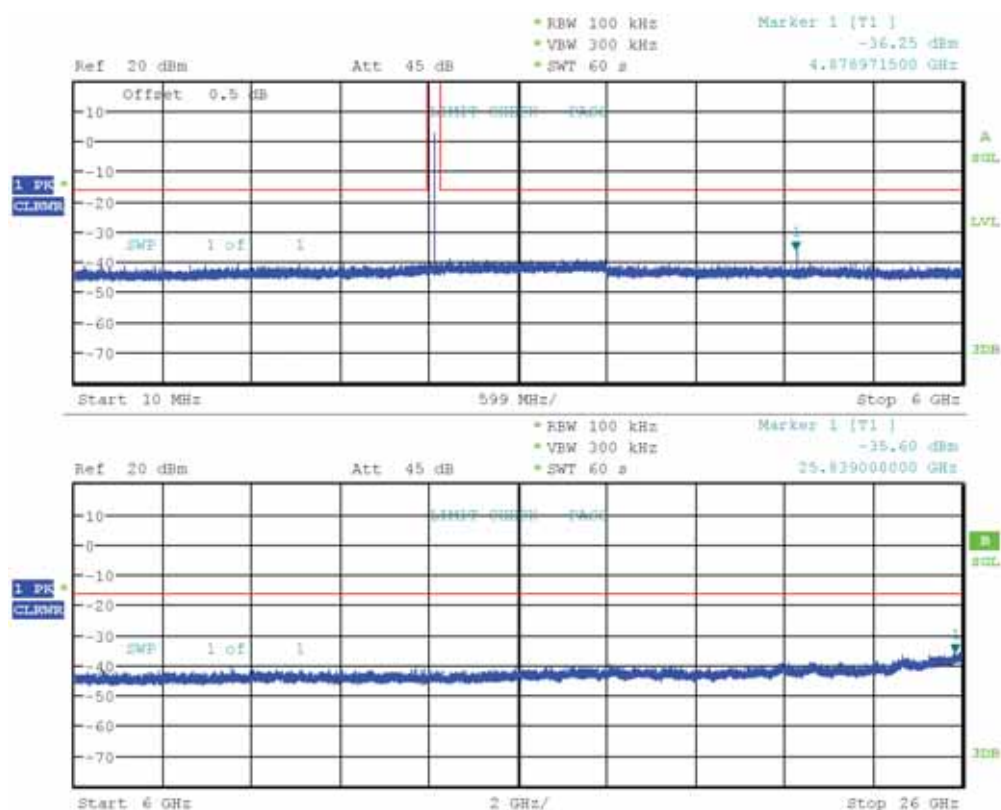
Conducted Spurious Emissions

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 0, 2402 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Max. in-band Frequency [MHz]: 2402.0
 Max. in-band Level [dBm/100 kHz]: 3.5
 Out-of-band Limit [dBm/100 kHz]: -16.5



Conducted Spurious Emissions

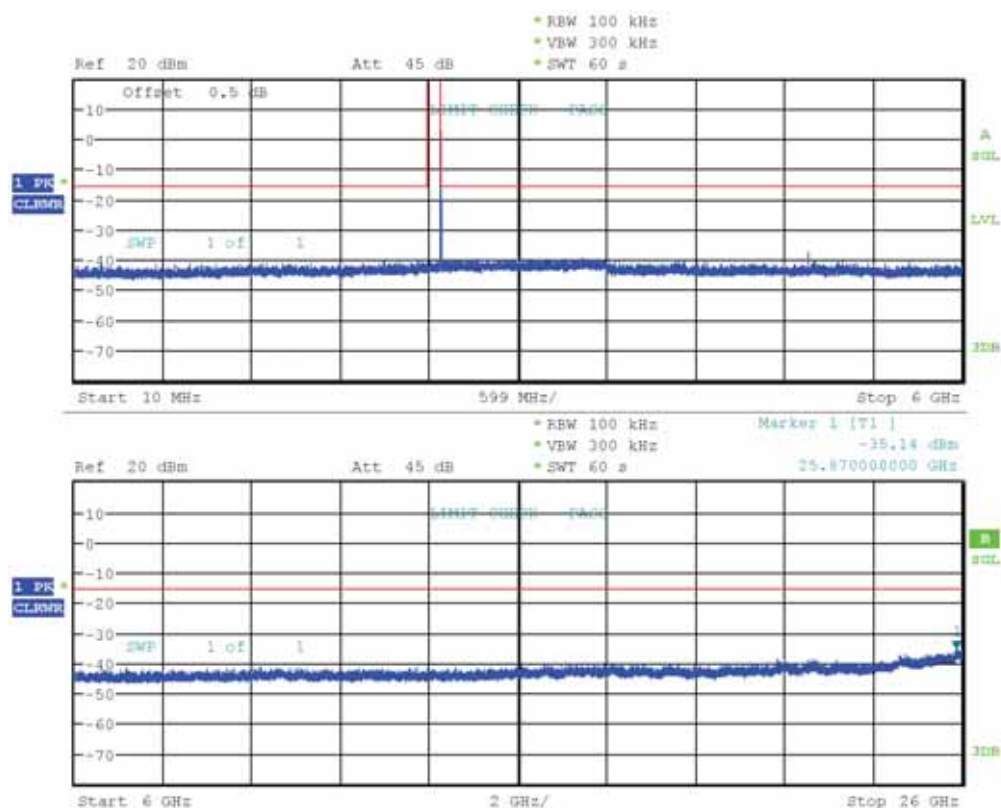
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 19, 2440 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Max. in-band Frequency [MHz]: 2440.0
 Max. in-band Level [dBm/100 kHz]: 4.2
 Out-of-band Limit [dBm/100 kHz]: -15.8



Date: 19.DEC.2022 13:58:11

Conducted Spurious Emissions

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42435
 Reference Standards: FCC 15.247, RSS-247
 Reference Method: ANSI C63.10:2013, Section 11.11
 Operational Mode: GFSK, Channel: 39, 2480 MHz
 Operating Conditions: Tnom/Vnom
 Operator: Odai Qawasmeh
 Test Site: Eurofins Product Service GmbH
 Test Date: 2022-12-19
 Note: 2 Mbit/s
 Max. in-band Frequency [MHz]: 2480.0
 Max. in-band Level [dBm/100 kHz]: 4.4
 Out-of-band Limit [dBm/100 kHz]: -15.6



Date: 19.DEC.2022 14:01:40

3.7 Test Conditions and Results - Transmitter radiated emissions

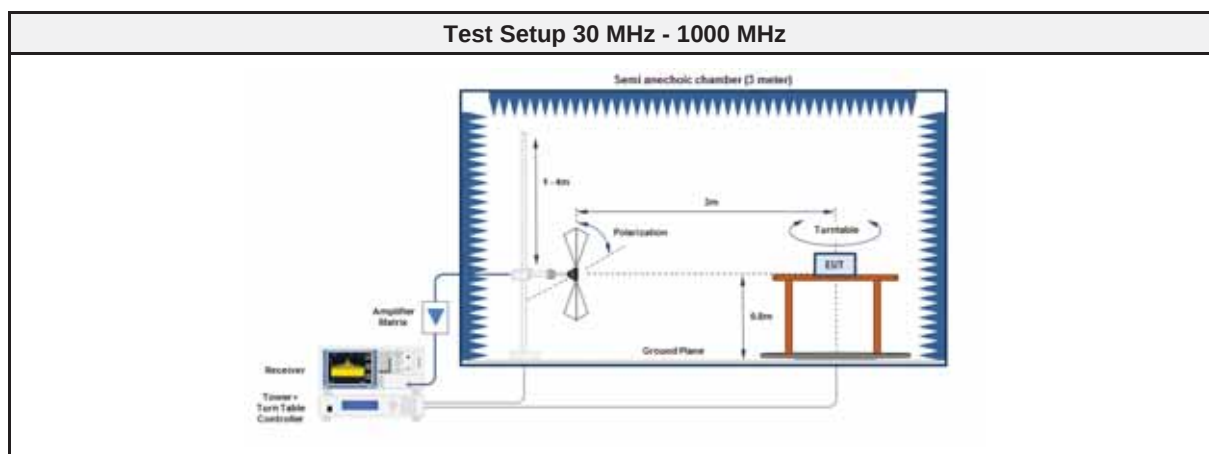
3.7.1 Information

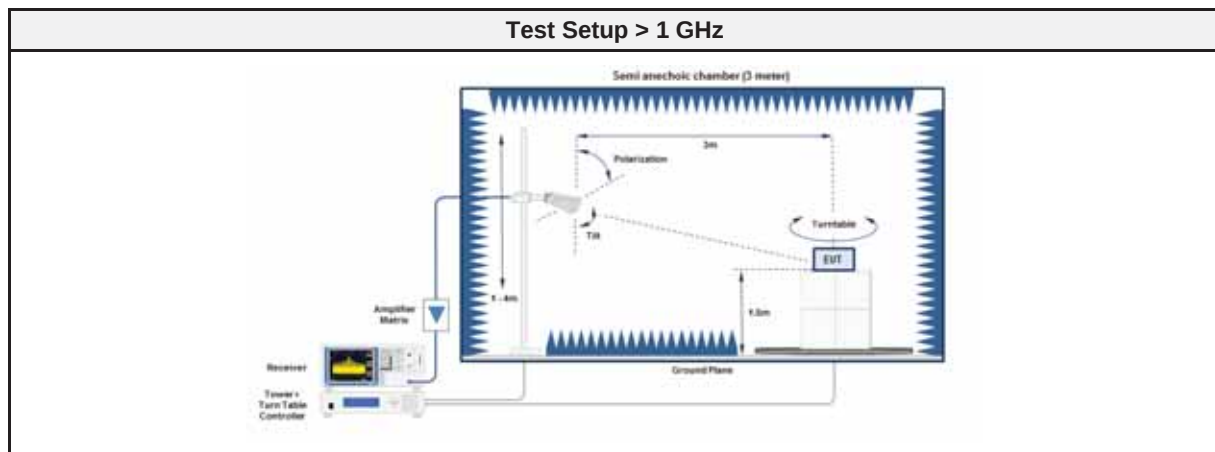
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 A2 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Odai Qawasmeh + Radwan Jaafar
Date	2022-12-20 – 2023-01-12

3.7.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [µV/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

3.7.3 Setup





3.7.4 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	2022-11	2025-11
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2021-07	2023-01
Antenna	R&S	HK 116	EF00030	2021-05	2024-05
Antenna	R&S	HL 223	EF00187	2022-06	2025-06

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC2	EF01616	2022-10	2023-10
Spectrum analyzer	R&S	FSW43	EF00896	2022-08	2023-08
Antenna	Schwarzbeck	BBHA 9120D	EF01678	2021-03	2024-03
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03
Antenna	Amplifier Research	AT4560	EF00302	2021-06	2023-06

3.7.5 Procedure

Test Procedure 30 MHz - 1000 MHz
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

Test Procedure > 1 GHz
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

3.7.6 Results

Test Results – 1 Mbit/s						
Channel [MHz]	Emission [MHz]	Level [dBµV/m]	Det.	Pol.	Limit [dBµV/m]	Margin [dB]
2402	170.4583	15.20	pk	ver	43.50	-28.34
2402	976.84	28.70	pk	hor	54.00	-25.29
2402	2273.8	52.15	pk	ver	74.00	-21.85
2402	2273.8	47.19	avg	ver	54.00	-06.81
2402	2277.8	51.08	pk	ver	74.00	-22.92
2402	2277.8	48.10	avg	ver	54.00	-05.90
2402	2277.8	52.24	pk	hor	74.00	-21.76
2402	2277.8	48.58	avg	hor	54.00	-05.42
2402	2289.9	50.36	pk	ver	74.00	-23.64
2402	2289.9	47.73	avg	ver	54.00	-06.27
2402	2290.2	51.33	pk	hor	74.00	-22.67
2402	2290.2	47.10	avg	hor	54.00	-06.90
2402	2290.4	49.77	pk	hor	74.00	-24.23
2402	2290.4	44.89	avg	hor	54.00	-09.11
2402	2293.7	52.64	pk	ver	74.00	-21.36
2402	2293.7	49.03	avg	ver	54.00	-04.97
2402	2293.8	51.99	pk	hor	74.00	-22.01
2402	2293.8	49.34	avg	hor	54.00	-04.66
2402	2294.1	53.15	pk	hor	74.00	-20.85
2402	2294.1	50.76	avg	hor	54.00	-03.24
2402	2297.6	51.81	pk	hor	74.00	-22.19
2402	2297.6	48.06	avg	hor	54.00	-05.94
2402	2297.7	53.42	pk	hor	74.00	-20.58
2402	2297.7	50.00	avg	hor	54.00	-04.00
2402	2297.9	52.62	pk	ver	74.00	-21.38
2402	2297.9	49.74	avg	ver	54.00	-04.26
2402	2313.9	51.81	pk	ver	74.00	-22.19
2402	2313.9	48.66	avg	ver	54.00	-05.34
2402	2314.1	52.76	pk	hor	74.00	-21.24
2402	2314.1	49.53	avg	hor	54.00	-04.47
2402	2318	54.03	pk	hor	74.00	-19.97
2402	2318	50.71	avg	hor	54.00	-03.29
2402	2318	52.79	pk	hor	74.00	-21.21
2402	2318	49.96	avg	hor	54.00	-04.04
2402	2318	52.53	pk	ver	74.00	-21.47
2402	2318	49.23	avg	ver	54.00	-04.77
2402	2334	50.57	pk	ver	74.00	-23.43
2402	2334	46.53	avg	ver	54.00	-07.47
2402	2334.1	51.20	pk	hor	74.00	-22.80
2402	2334.1	46.76	avg	hor	54.00	-07.24
2402	2362	47.98	pk	ver	74.00	-26.02
2402	2362	43.95	avg	ver	54.00	-10.05
2402	2485.8	53.93	pk	hor	74.00	-20.07
2402	2485.8	51.72	avg	hor	54.00	-02.28
2402	2485.8	52.46	pk	hor	74.00	-21.54
2402	2485.8	50.04	avg	hor	54.00	-03.96

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

2402	2486	51.58	pk	ver	74.00	-22.42
2402	2486	48.86	avg	ver	54.00	-05.14
2402	2489.9	52.80	pk	hor	74.00	-21.20
2402	2489.9	50.28	avg	hor	54.00	-03.72
2402	2490	50.61	pk	ver	74.00	-23.39
2402	2490	47.78	avg	ver	54.00	-06.22
2402	2490	51.76	pk	hor	74.00	-22.24
2402	2490	49.12	avg	hor	54.00	-04.88
2402	2698	45.12	pk	hor	74.00	-28.88
2402	2698	41.83	avg	hor	54.00	-12.17
2402	4803.5	51.77	pk	ver	74.00	-22.23
2402	4803.5	45.03	avg	ver	54.00	-08.97
2402	4803.9	51.45	pk	ver	74.00	-22.55
2402	4803.9	45.30	avg	ver	54.00	-08.70
2402	4804.4	52.85	pk	hor	74.00	-21.15
2402	4804.4	46.60	avg	hor	54.00	-07.40
2402	12011	42.20	pk	ver	74.00	-31.80
2402	12011	34.51	avg	ver	54.00	-19.49
2440	168.6945	16.60	pk	hor	43.50	-26.92
2440	986.42	29.10	pk	ver	54.00	-24.91
2440	2248.2	47.38	pk	ver	74.00	-26.62
2440	2248.2	43.87	avg	ver	54.00	-10.13
2440	2268	48.85	pk	ver	74.00	-25.15
2440	2268	45.21	avg	ver	54.00	-08.79
2440	2296	49.46	pk	ver	74.00	-24.54
2440	2296	45.76	avg	ver	54.00	-08.24
2440	2315.9	51.92	pk	hor	74.00	-22.08
2440	2315.9	48.84	avg	hor	54.00	-05.16
2440	2331.6	52.91	pk	hor	74.00	-21.09
2440	2331.6	47.90	avg	hor	54.00	-06.10
2440	2332.5	52.99	pk	hor	74.00	-21.01
2440	2332.5	46.81	avg	hor	54.00	-07.19
2440	2336.1	52.66	pk	hor	74.00	-21.34
2440	2336.1	49.88	avg	hor	54.00	-04.12
2440	2352.1	52.86	pk	hor	74.00	-21.14
2440	2352.1	49.65	avg	hor	54.00	-04.35
2440	2355.8	53.85	pk	hor	74.00	-20.15
2440	2355.8	51.25	avg	hor	54.00	-02.75
2440	2356.3	52.40	pk	hor	74.00	-21.60
2440	2356.3	48.82	avg	hor	54.00	-05.18
2440	2483.9	45.54	pk	hor	74.00	-28.46
2440	2483.9	43.13	avg	hor	54.00	-10.87
2440	2484	49.68	pk	hor	74.00	-24.32
2440	2484	46.09	avg	hor	54.00	-07.91
2440	2484.1	44.71	pk	ver	74.00	-29.29
2440	2484.1	39.97	avg	ver	54.00	-14.03
2440	2499.8	49.65	pk	hor	74.00	-24.35
2440	2499.8	46.66	avg	hor	54.00	-07.34
2440	2668.1	45.50	pk	hor	74.00	-28.50
2440	2668.1	42.86	avg	hor	54.00	-11.14

2440	4879.5	51.83	pk	hor	74.00	-22.17
2440	4879.5	46.08	avg	hor	54.00	-07.92
2440	4879.7	52.26	pk	hor	74.00	-21.74
2440	4879.7	47.09	avg	hor	54.00	-06.91
2440	4880.1	48.67	pk	ver	74.00	-25.33
2440	4880.1	46.15	avg	ver	54.00	-07.85
2440	7319.4	54.70	pk	ver	74.00	-19.30
2440	7319.4	49.88	avg	ver	54.00	-04.12
2440	7320.7	55.06	pk	ver	74.00	-18.94
2440	7320.7	49.84	avg	ver	54.00	-04.16
2440	12199	43.00	pk	ver	74.00	-31.00
2440	12199	34.02	avg	ver	54.00	-19.98
2480	172.4005	15.60	pk	hor	43.50	-27.93
2480	992.08	28.90	pk	ver	54.00	-25.09
2480	2292	49.79	pk	hor	74.00	-24.21
2480	2336	50.51	pk	hor	74.00	-23.49
2480	2336	50.39	pk	hor	74.00	-23.61
2480	2336	46.51	avg	hor	54.00	-07.49
2480	2336	49.83	pk	ver	74.00	-24.17
2480	2352	54.47	pk	hor	74.00	-19.53
2480	2352	52.32	pk	hor	74.00	-21.68
2480	2352	47.08	avg	hor	54.00	-06.92
2480	2352	53.46	pk	ver	74.00	-20.54
2480	2356	53.08	pk	hor	74.00	-20.92
2480	2356	51.54	pk	ver	74.00	-22.46
2480	2360	48.07	pk	ver	74.00	-25.93
2480	2368	50.37	pk	ver	74.00	-23.63
2480	2372	54.28	pk	hor	74.00	-19.72
2480	2372	53.00	pk	hor	74.00	-21.00
2480	2372	48.95	avg	hor	54.00	-05.05
2480	2372	52.93	pk	ver	74.00	-21.07
2480	2376	53.95	pk	hor	74.00	-20.05
2480	2376	52.73	pk	ver	74.00	-21.27
2480	2380	50.45	pk	ver	74.00	-23.55
2480	2483.8	52.16	pk	ver	74.00	-21.84
2480	2483.8	38.67	avg	ver	54.00	-15.33
2480	2483.9	54.50	pk	hor	74.00	-19.50
2480	2483.9	40.14	avg	hor	54.00	-13.86
2480	2484	53.38	pk	hor	74.00	-20.62
2480	2484	39.81	avg	hor	54.00	-14.19
2480	2668	51.68	pk	hor	74.00	-22.32
2480	2668	51.26	pk	hor	74.00	-22.74
2480	2668	48.09	avg	hor	54.00	-05.91
2480	2672	52.11	pk	hor	74.00	-21.89
2480	2672	51.77	pk	hor	74.00	-22.23
2480	2672	46.38	avg	hor	54.00	-07.62
2480	2692	50.84	pk	hor	74.00	-23.16
2480	4959.4	51.78	pk	ver	74.00	-22.22
2480	4959.4	45.66	avg	ver	54.00	-08.34
2480	4959.4	51.56	pk	hor	74.00	-22.44

2480	4959.4	46.73	avg	hor	54.00	-07.27
2480	4960.1	49.17	pk	ver	74.00	-24.83
2480	4960.1	45.26	avg	ver	54.00	-08.74
2480	7439.2	55.31	pk	ver	74.00	-18.69
2480	7439.2	49.56	avg	ver	54.00	-04.44
2480	7440.8	51.61	pk	hor	74.00	-22.39
2480	7440.8	42.89	avg	hor	54.00	-11.11
2480	12399	42.12	pk	ver	74.00	-31.88
2480	12399	35.11	avg	ver	54.00	-18.89
2480	18393	48.01	pk	ver	74.00	-25.99
2480	18393	35.67	avg	ver	54.00	-18.33

Test Results – 2 Mbit/s						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	172.3368	16.00	pk	ver	43.50	-27.51
2402	996.04	29.60	pk	ver	54.00	-24.38
2402	2209.8	49.19	pk	hor	74.00	-24.81
2402	2213.6	48.42	pk	hor	74.00	-25.58
2402	2230	49.12	pk	hor	74.00	-24.88
2402	2233.6	48.67	pk	hor	74.00	-25.33
2402	2250.5	48.68	pk	hor	74.00	-25.32
2402	2253.9	48.37	pk	hor	74.00	-25.63
2402	2257.5	49.87	pk	hor	74.00	-24.13
2402	2209.8	43.91	pk	hor	54.00	-10.09
2402	2213.6	41.82	pk	hor	54.00	-12.18
2402	2230	44.43	pk	hor	54.00	-09.57
2402	2233.6	44.10	pk	hor	54.00	-09.90
2402	2250.5	43.07	pk	hor	54.00	-10.93
2402	2253.9	44.36	pk	hor	54.00	-09.64
2402	2257.5	44.09	pk	hor	54.00	-09.91
2402	2270	46.20	pk	hor	74.00	-27.80
2402	2270	41.28	avg	hor	54.00	-12.72
2402	2270.3	48.61	pk	hor	74.00	-25.39
2402	2270.3	42.41	pk	hor	54.00	-11.59
2402	2273.9	52.32	pk	hor	74.00	-21.68
2402	2273.9	47.21	pk	hor	54.00	-06.79
2402	2274	50.21	pk	ver	74.00	-23.79
2402	2277.5	51.71	pk	hor	74.00	-22.29
2402	2277.5	46.92	pk	hor	54.00	-07.08
2402	2277.9	49.92	pk	ver	74.00	-24.08
2402	2278.4	50.08	pk	hor	74.00	-23.92
2402	2278.4	44.13	avg	hor	54.00	-09.87
2402	2282	46.40	pk	ver	74.00	-27.60
2402	2289.9	48.73	pk	ver	74.00	-25.27
2402	2290	49.30	pk	hor	74.00	-24.70
2402	2290	45.02	avg	hor	54.00	-08.98
2402	2290.5	50.77	pk	hor	74.00	-23.23
2402	2290.5	45.50	pk	hor	54.00	-08.50
2402	2293.9	50.93	pk	ver	74.00	-23.07
2402	2294	53.05	pk	hor	74.00	-20.95

Test Report No.: G0M-2209-1690-TFC247BL-V01

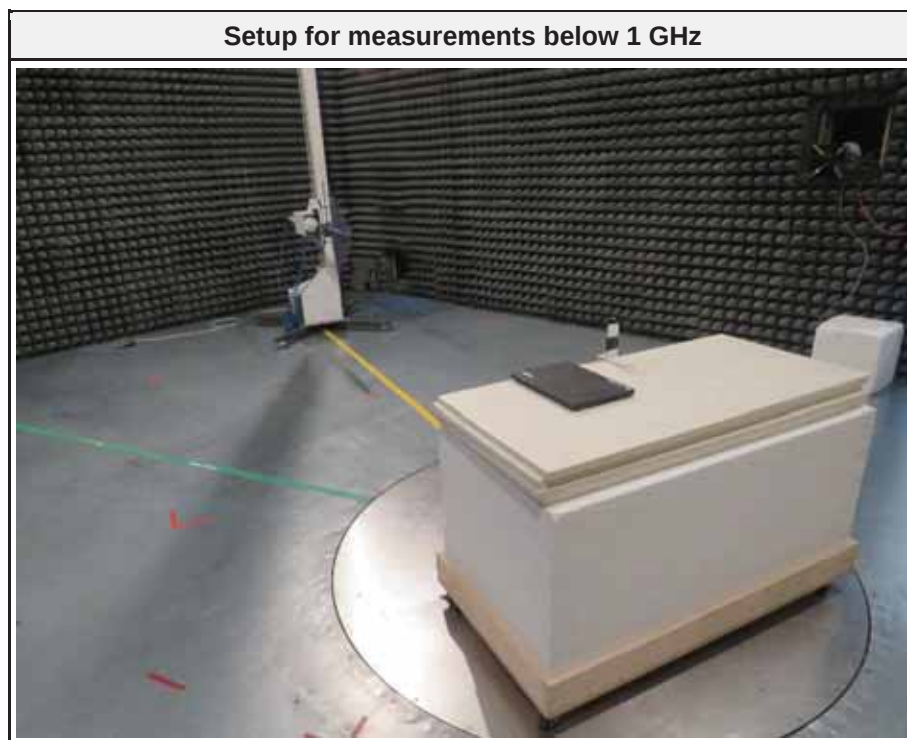
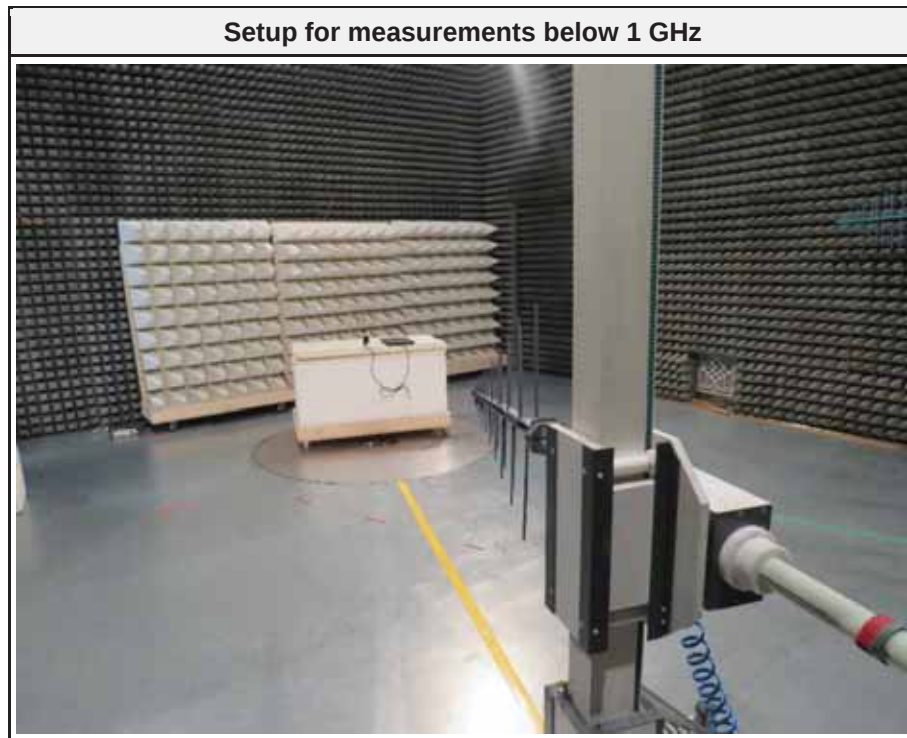
Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

2402	2294	49.18	pk	hor	54.00	-04.82
2402	2294	51.42	pk	hor	74.00	-22.58
2402	2294	47.50	avg	hor	54.00	-06.50
2402	2298	50.92	pk	ver	74.00	-23.08
2402	2298	51.08	pk	hor	74.00	-22.92
2402	2298	47.40	avg	hor	54.00	-06.60
2402	2298.5	52.78	pk	hor	74.00	-21.22
2402	2298.5	48.47	pk	hor	54.00	-05.53
2402	2313.6	52.07	pk	hor	74.00	-21.93
2402	2313.6	47.27	avg	hor	54.00	-06.73
2402	2314	50.79	pk	ver	74.00	-23.21
2402	2314	45.86	avg	ver	54.00	-08.14
2402	2314.1	53.15	pk	hor	74.00	-20.85
2402	2317.9	52.11	pk	hor	74.00	-21.89
2402	2317.9	48.60	avg	hor	54.00	-05.40
2402	2317.9	53.48	pk	hor	74.00	-20.52
2402	2318	51.24	pk	ver	74.00	-22.76
2402	2318	47.24	avg	ver	54.00	-06.76
2402	2322	50.37	pk	hor	74.00	-23.63
2402	2334	49.49	pk	ver	74.00	-24.51
2402	2334	42.90	avg	ver	54.00	-11.10
2402	2334.2	51.22	pk	hor	74.00	-22.78
2402	2338.1	52.26	pk	hor	74.00	-21.74
2402	2342.1	50.22	pk	hor	74.00	-23.78
2402	2358.4	51.44	pk	hor	74.00	-22.56
2402	2362.1	48.09	pk	ver	74.00	-25.91
2402	2362.1	42.30	avg	ver	54.00	-11.70
2402	2362.4	51.20	pk	hor	74.00	-22.80
2402	2485.9	50.41	pk	ver	74.00	-23.59
2402	2485.9	53.58	pk	hor	74.00	-20.42
2402	2485.9	49.81	pk	hor	54.00	-04.19
2402	2486.1	51.97	pk	hor	74.00	-22.03
2402	2486.1	48.03	avg	hor	54.00	-05.97
2402	2489.9	51.28	pk	hor	74.00	-22.72
2402	2489.9	46.96	avg	hor	54.00	-07.04
2402	2490	49.85	pk	ver	74.00	-24.15
2402	2490	52.74	pk	hor	74.00	-21.26
2402	2490	48.71	pk	hor	54.00	-05.29
2402	2493.9	50.24	pk	hor	74.00	-23.76
2402	2493.9	44.87	pk	hor	54.00	-09.13
2402	4802.9	48.29	pk	ver	74.00	-25.71
2402	4802.9	41.09	avg	ver	54.00	-12.91
2402	4803.9	50.98	pk	hor	74.00	-23.02
2402	4803.9	44.64	avg	hor	54.00	-09.36
2402	4803.9	49.58	pk	ver	74.00	-24.42
2402	4803.9	42.09	avg	ver	54.00	-11.91
2440	173.1953	16.60	pk	ver	43.50	-26.90
2440	979	29.00	pk	ver	54.00	-25.04
2440	2296	48.02	pk	ver	74.00	-25.98
2440	2311.9	50.58	pk	ver	74.00	-23.42

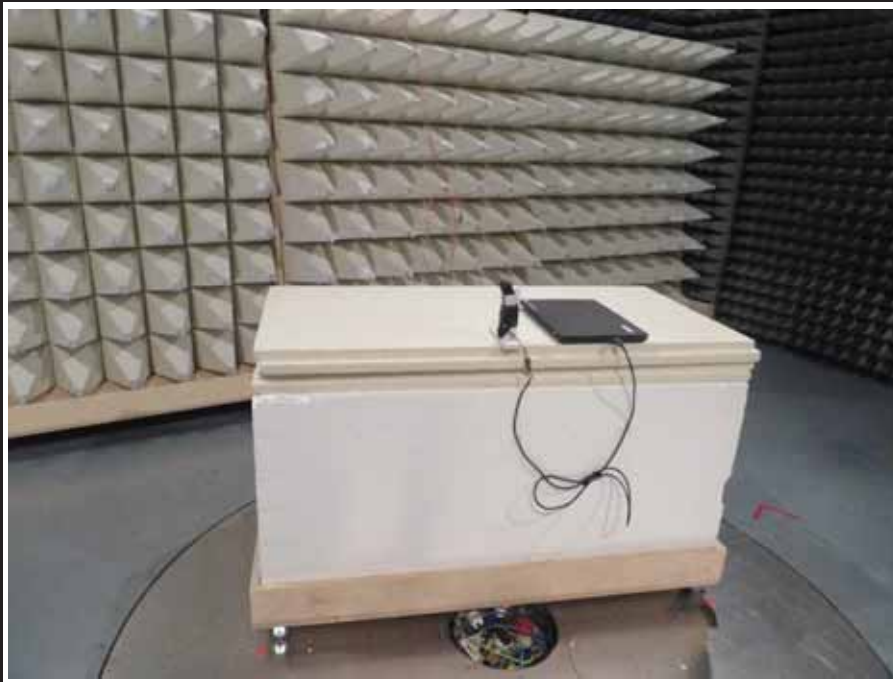
2440	2312.1	53.24	pk	hor	74.00	-20.76
2440	2315.5	51.83	pk	hor	74.00	-22.17
2440	2315.7	49.27	pk	ver	74.00	-24.73
2440	2327.5	50.89	pk	hor	74.00	-23.11
2440	2328	48.68	pk	ver	74.00	-25.32
2440	2331.6	52.51	pk	hor	74.00	-21.49
2440	2331.6	47.81	avg	hor	54.00	-06.19
2440	2331.9	50.70	pk	ver	74.00	-23.30
2440	2332.1	52.62	pk	hor	74.00	-21.38
2440	2335.9	51.12	pk	ver	74.00	-22.88
2440	2336.5	52.99	pk	hor	74.00	-21.01
2440	2336.6	52.49	pk	hor	74.00	-21.51
2440	2336.6	46.48	avg	hor	54.00	-07.52
2440	2339.9	49.38	pk	ver	74.00	-24.62
2440	2351.9	50.12	pk	ver	74.00	-23.88
2440	2352.5	52.83	pk	hor	74.00	-21.17
2440	2356	51.16	pk	ver	74.00	-22.84
2440	2356.3	53.69	pk	hor	74.00	-20.31
2440	2483.9	45.46	pk	ver	74.00	-28.54
2440	2484	49.65	pk	hor	74.00	-24.35
2440	2484.2	47.37	pk	hor	74.00	-26.63
2440	2484.2	42.90	avg	hor	54.00	-11.10
2440	2499.8	49.28	pk	hor	74.00	-24.72
2440	2667.6	48.53	pk	hor	74.00	-25.47
2440	2667.6	42.43	avg	hor	54.00	-11.57
2440	2667.9	46.51	pk	hor	74.00	-27.49
2440	2668.2	45.88	pk	ver	74.00	-28.12
2440	4879.1	47.63	pk	ver	74.00	-26.37
2440	4879.1	43.90	avg	ver	54.00	-10.10
2440	4880.9	52.62	pk	hor	74.00	-21.38
2440	4880.9	46.57	avg	hor	54.00	-07.43
2440	4881.1	46.90	pk	ver	74.00	-27.10
2440	4881.1	41.04	avg	ver	54.00	-12.96
2440	7318.6	53.89	pk	ver	74.00	-20.11
2440	7318.6	49.24	avg	ver	54.00	-04.76
2440	12198	40.77	pk	ver	74.00	-33.23
2440	12198	33.11	avg	ver	54.00	-20.89
2480	166.6418	15.90	pk	ver	43.50	-27.59
2480	977.02	30.00	pk	ver	54.00	-24.04
2480	2336	50.56	pk	hor	74.00	-23.44
2480	2352	54.34	pk	hor	74.00	-19.66
2480	2352	53.17	pk	ver	74.00	-20.83
2480	2356	52.84	pk	hor	74.00	-21.16
2480	2356	51.17	pk	ver	74.00	-22.83
2480	2368	51.76	pk	hor	74.00	-22.24
2480	2368	49.99	pk	ver	74.00	-24.01
2480	2372	54.04	pk	hor	74.00	-19.96
2480	2372	52.30	pk	hor	74.00	-21.70
2480	2372	52.51	pk	ver	74.00	-21.49
2480	2376	52.32	pk	hor	74.00	-21.68

2480	2376	52.49	pk	ver	74.00	-21.51
2480	2380	49.96	pk	ver	74.00	-24.04
2480	2483.5	51.98	pk	hor	74.00	-22.02
2480	2483.5	43.77	avg	hor	54.00	-10.23
2480	2483.6	51.76	pk	ver	74.00	-22.24
2480	2483.6	41.96	avg	ver	54.00	-12.04
2480	2499.8	46.18	pk	hor	74.00	-27.82
2480	2499.8	40.48	avg	hor	54.00	-13.52
2480	2668	51.55	pk	hor	74.00	-22.45
2480	2668	49.79	pk	hor	74.00	-24.21
2480	2668	47.29	pk	ver	74.00	-26.71
2480	2672	52.47	pk	hor	74.00	-21.53
2480	2672	49.83	pk	hor	74.00	-24.17
2480	2692	50.49	pk	hor	74.00	-23.51
2480	4959.1	48.56	pk	ver	74.00	-25.44
2480	4959.1	42.89	avg	ver	54.00	-11.11
2480	4960	52.37	pk	hor	74.00	-21.63
2480	4960	44.90	avg	hor	54.00	-09.10
2480	4960	50.48	pk	ver	74.00	-23.52
2480	4960	44.88	avg	ver	54.00	-09.12
2480	7438.6	55.03	pk	ver	74.00	-18.97
2480	7438.6	49.93	avg	ver	54.00	-04.07
2480	12398	43.64	pk	ver	74.00	-30.36
2480	12398	36.93	avg	ver	54.00	-17.07
2480	17776	43.26	pk	hor	74.00	-30.74
2480	17776	32.26	avg	hor	54.00	-21.74

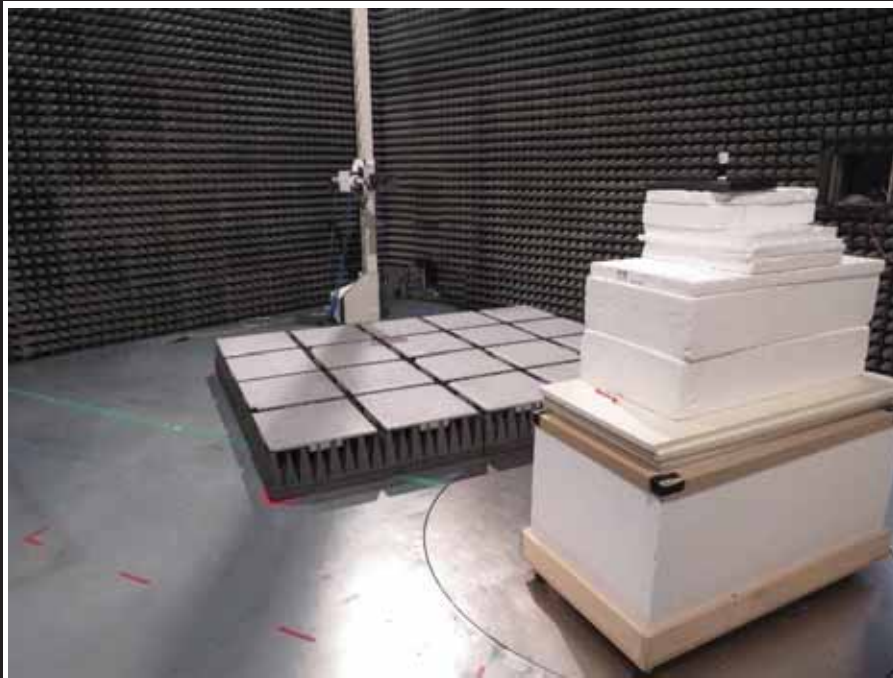
3.7.7 Setup Photos



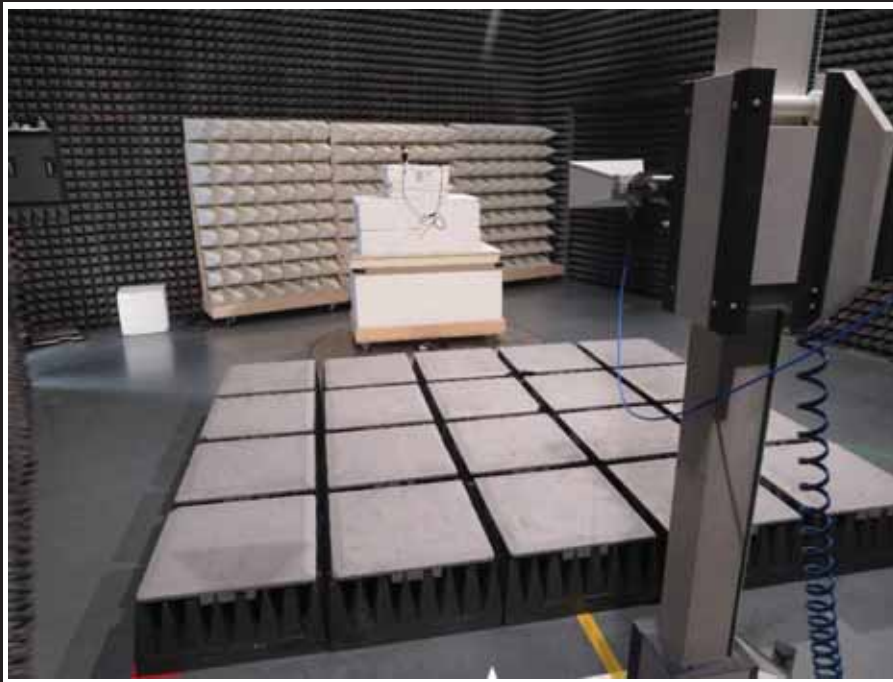
EUT Test Setup



Setup for measurements above 1 GHz



Setup for measurements above 1 GHz



EUT Test Setup (EUT vertical)



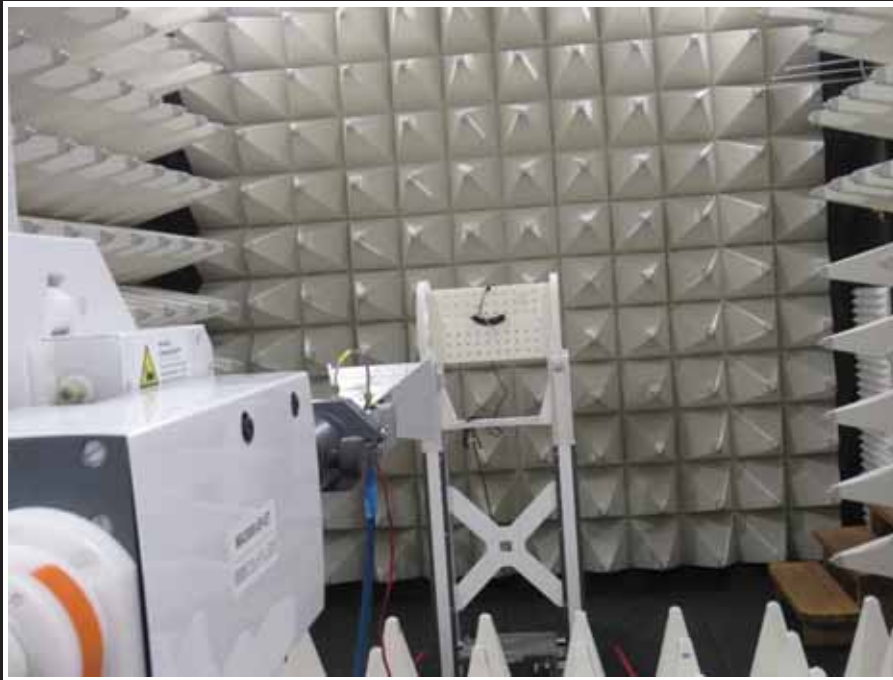
EUT Test Setup (EUT horizontal 1)



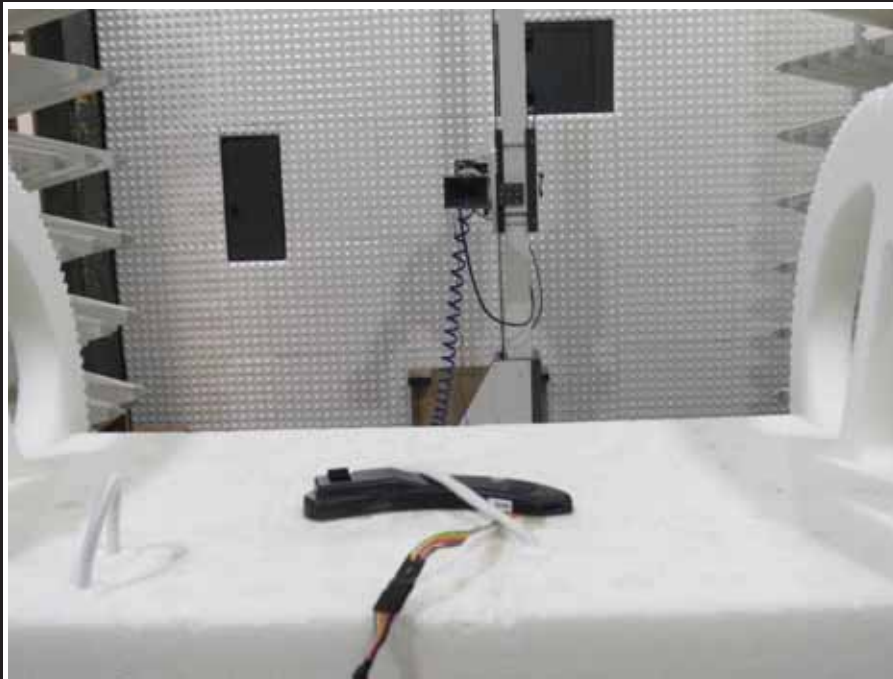
EUT Test Setup (EUT horizontal 2)



Setup for measurements above 1 GHz



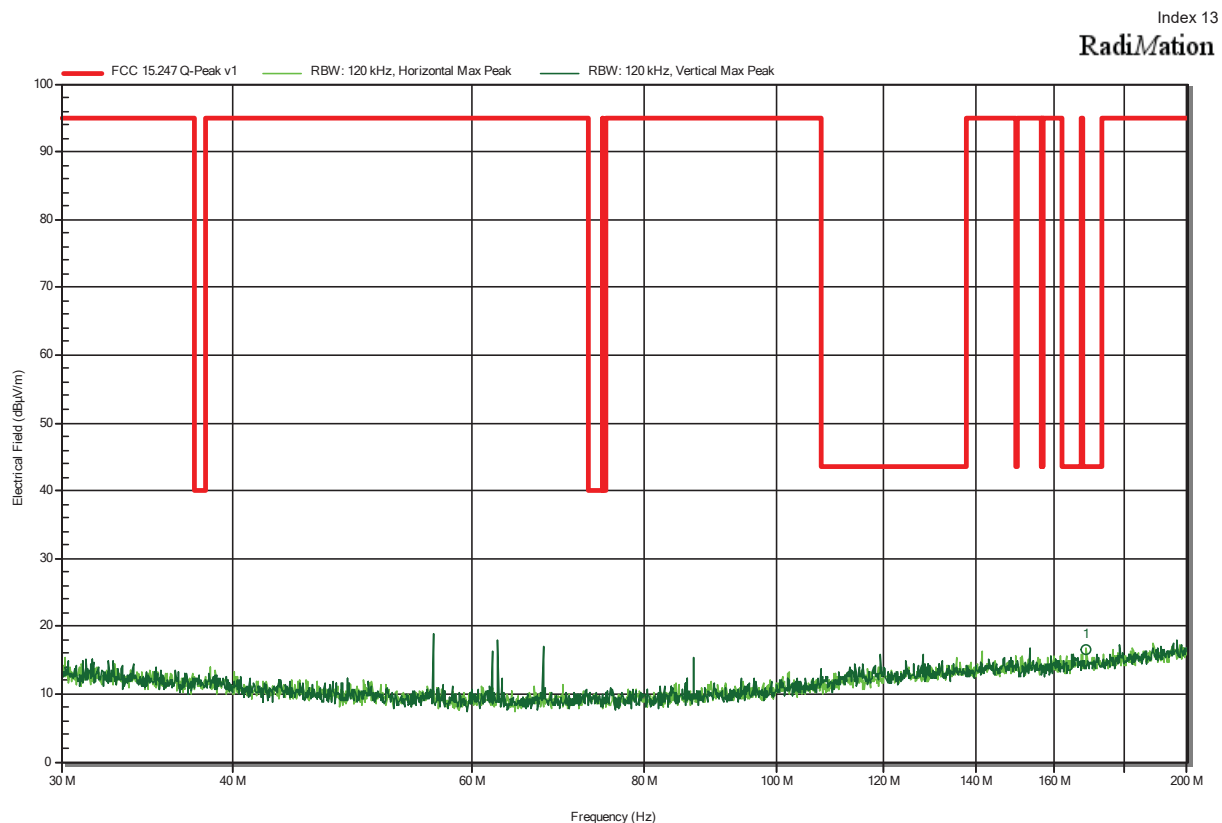
Setup for measurements above 1 GHz



ANNEX A Transmitter spurious emissions

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HK 116
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:



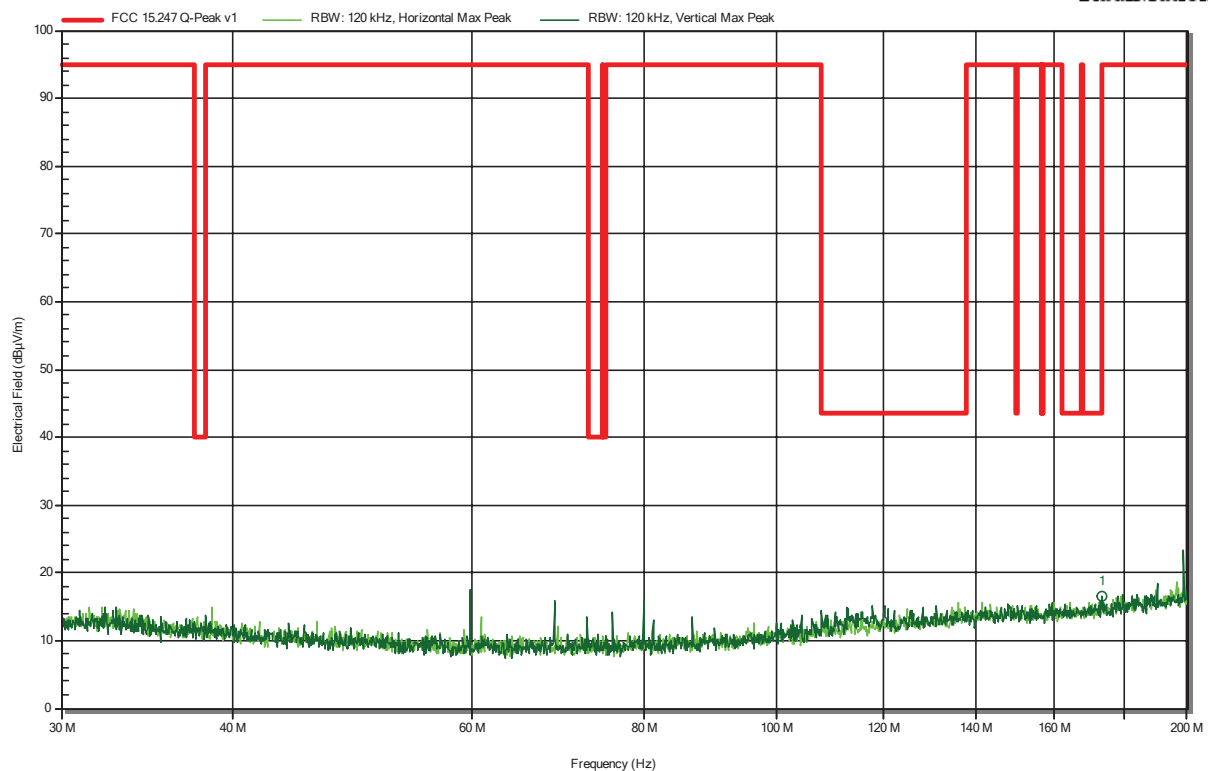
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
168.6945 MHz	16.6 dBµV/m	43.5 dBµV/m	-26.92 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HK 116
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 10

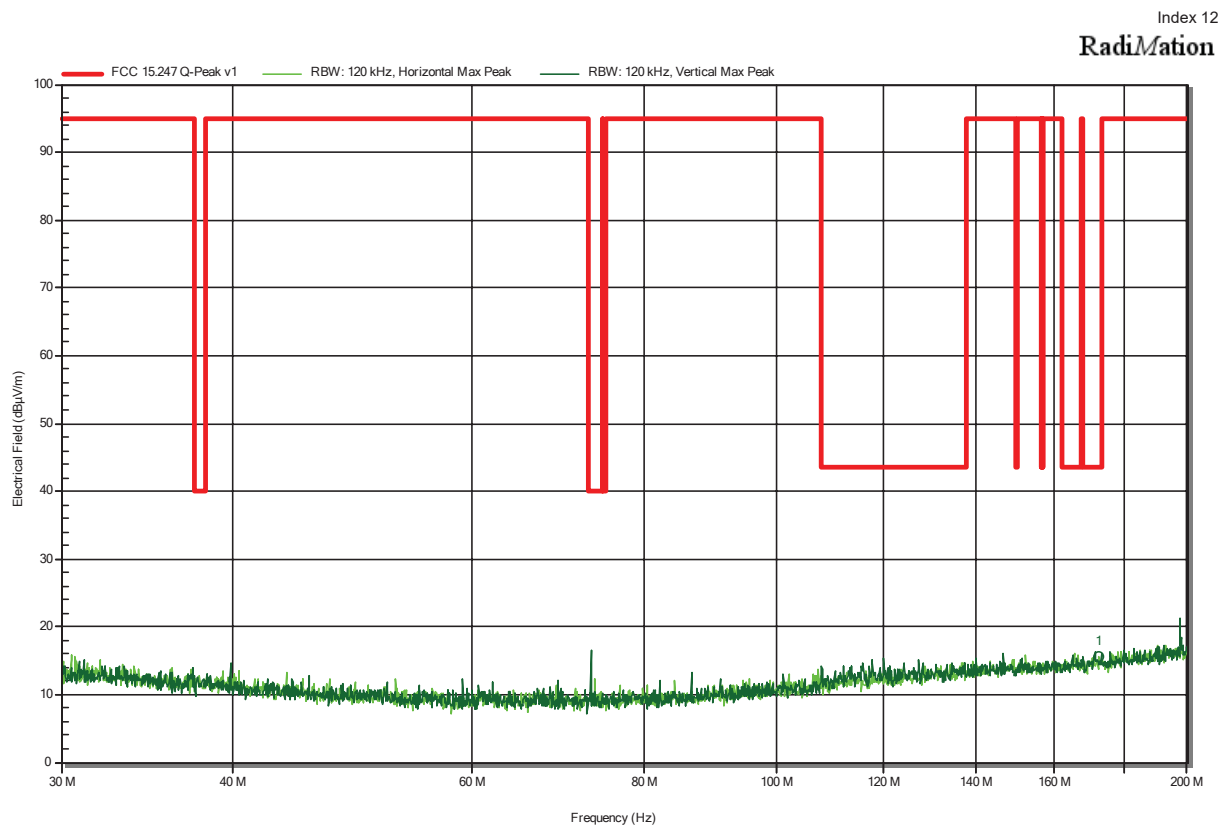
RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
173.1953 MHz	16.6 dBµV/m	43.5 dBµV/m	-26.9 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HK 116
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:



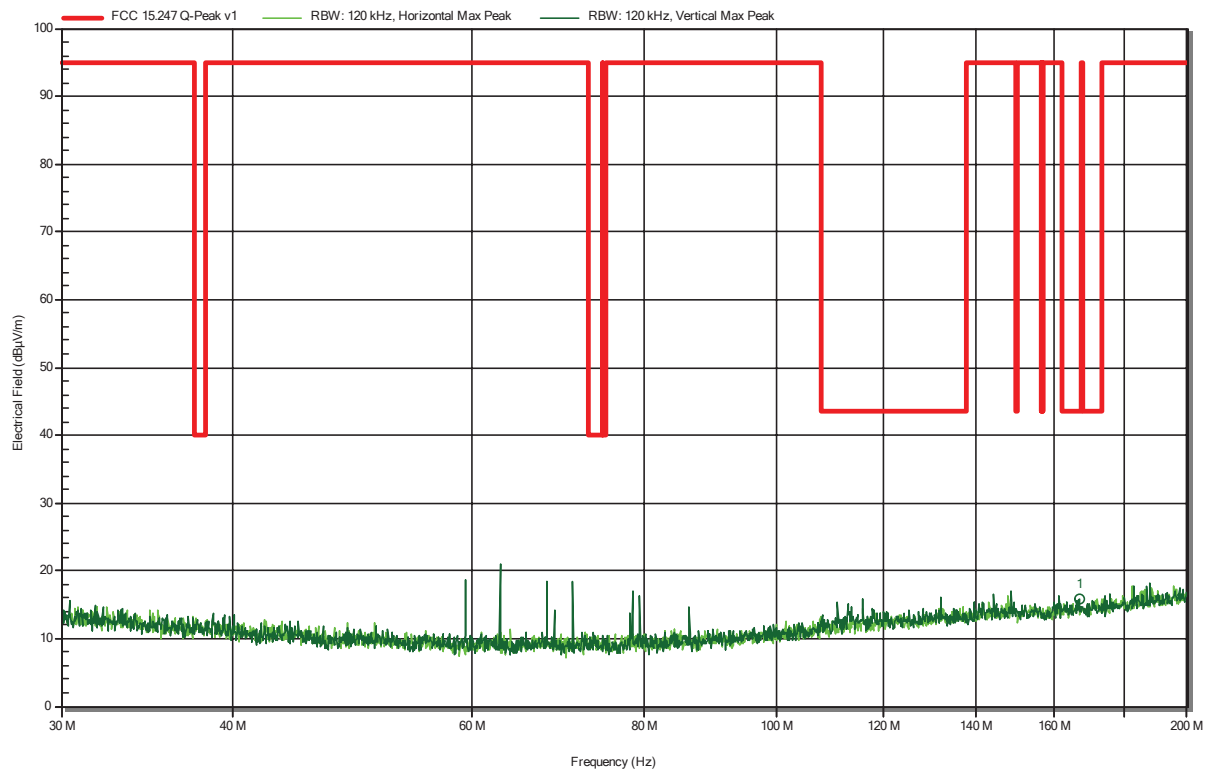
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
172.4005 MHz	15.6 dBµV/m	43.5 dBµV/m	-27.93 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HK 116
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 11

RadiMation



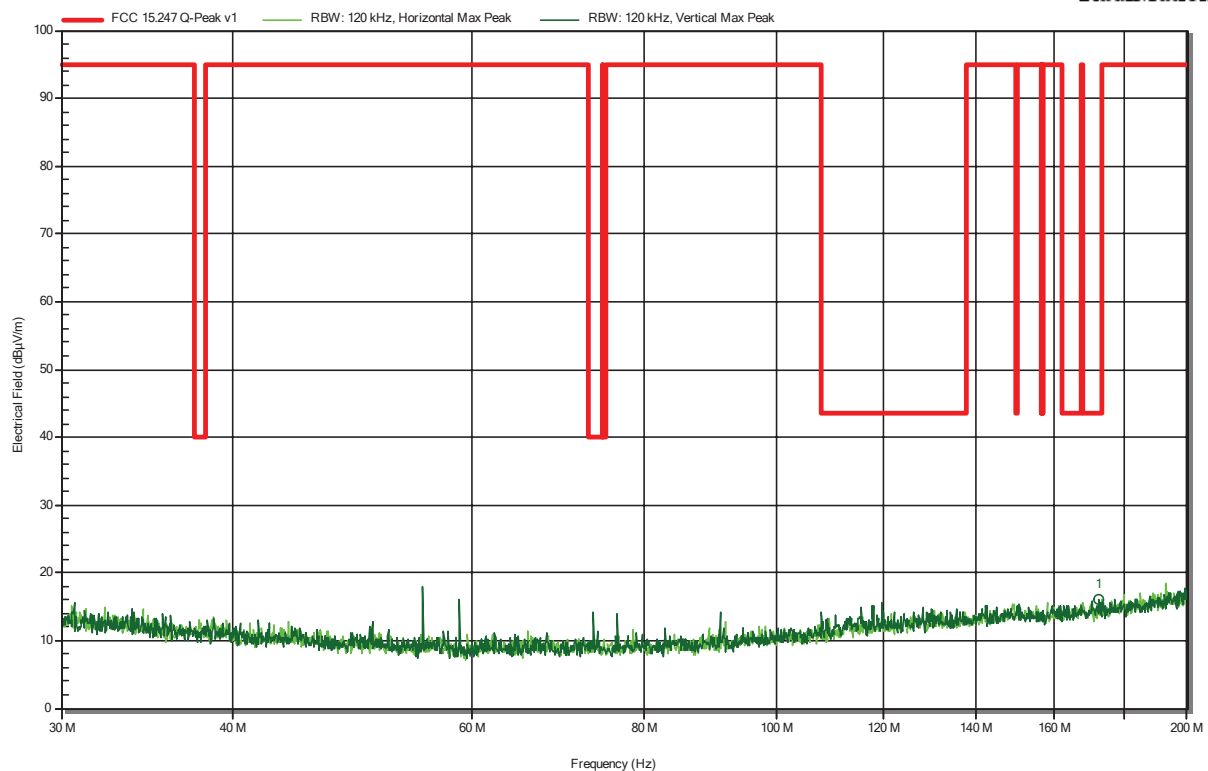
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
166.6418 MHz	15.9 dBµV/m	43.5 dBµV/m	-27.59 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HK 116
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 9

RadiMation



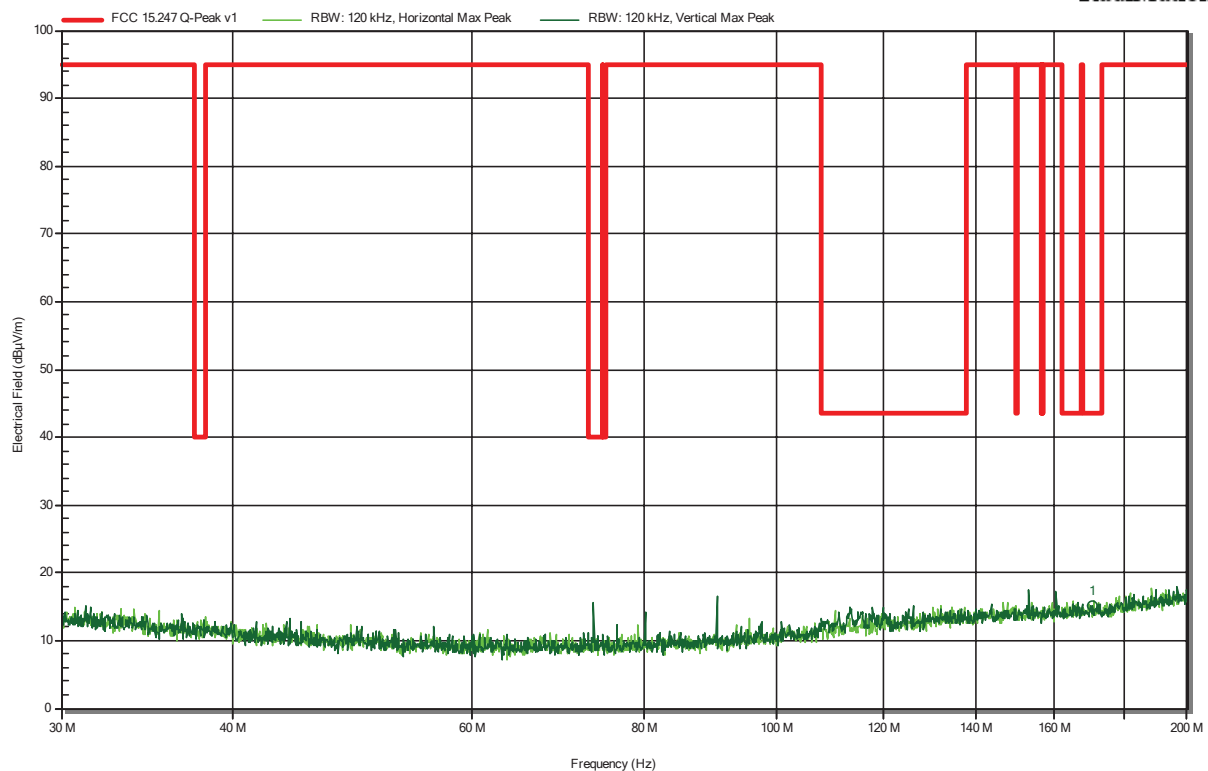
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
172.3368 MHz	16 dBμV/m	43.5 dBμV/m	-27.51 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HK 116
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 14

RadiMation



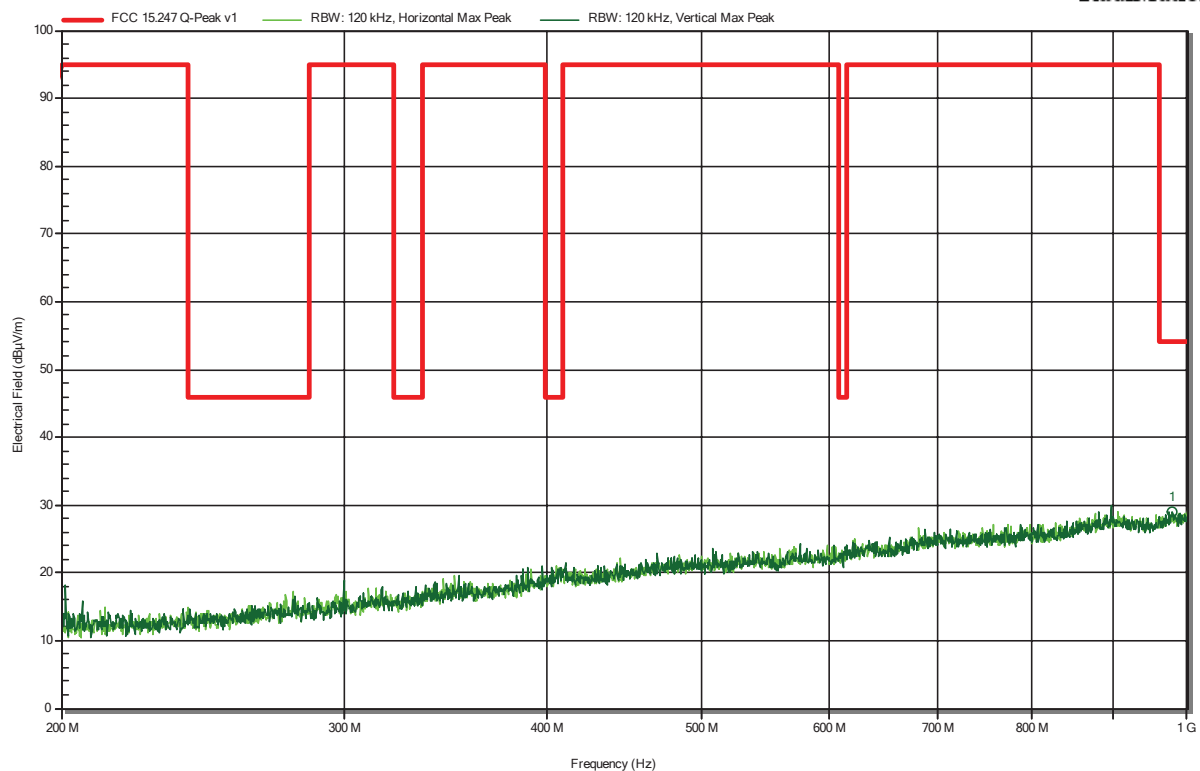
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
170.4583 MHz	15.2 dBµV/m	43.5 dBµV/m	-28.34 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HL 223
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 7

RadiMation



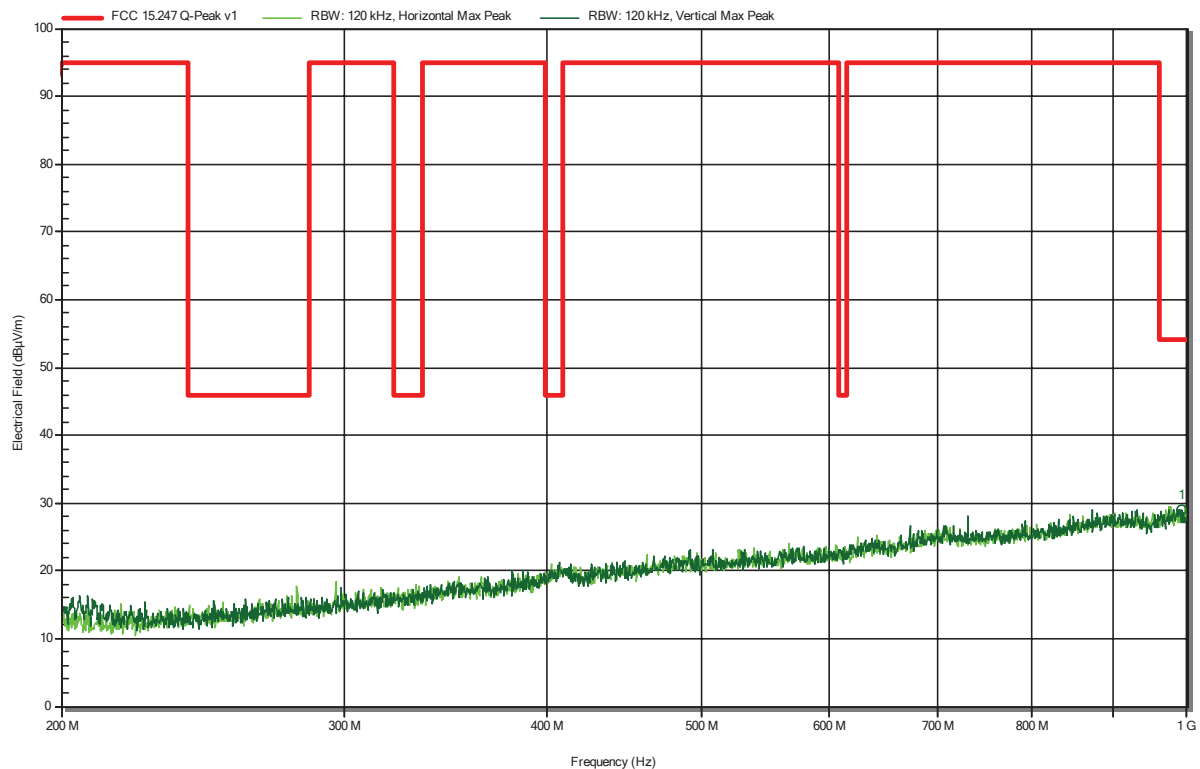
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
979 MHz	29 dBµV/m	54 dBµV/m	-25.04 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HL 223
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 3

RadiMation



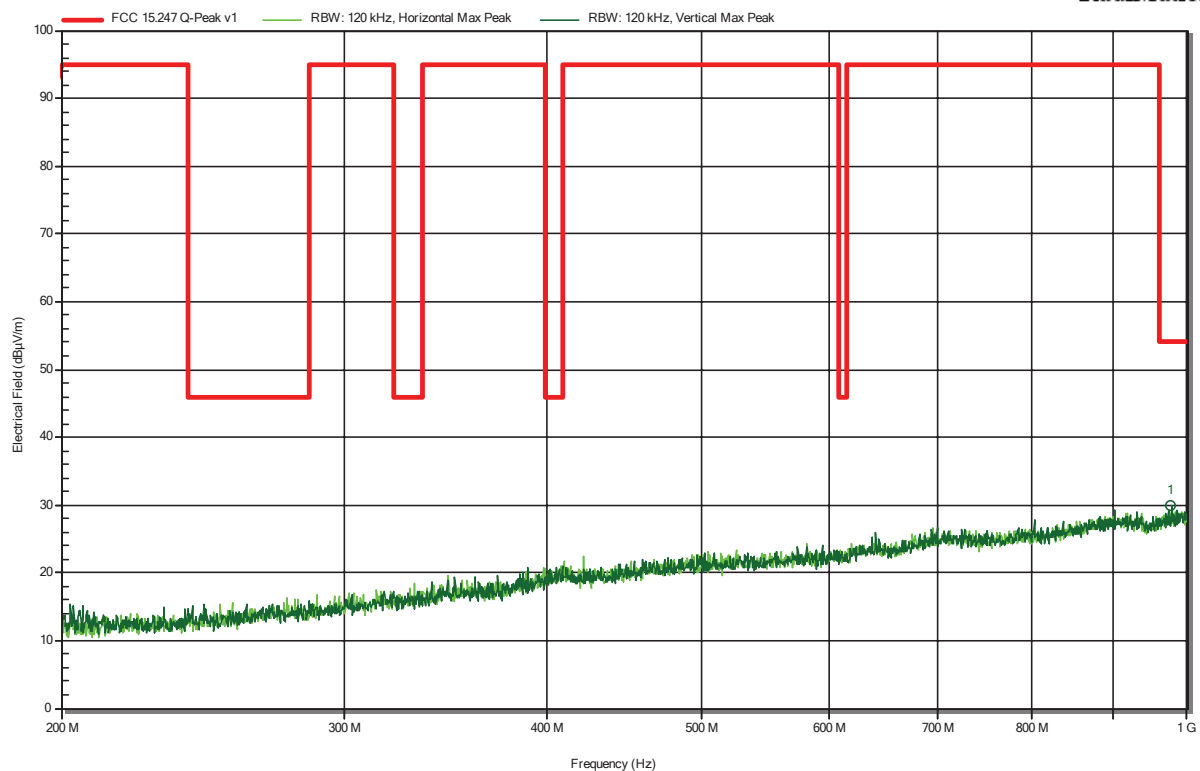
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
992.08 MHz	28.9 dBµV/m	54 dBµV/m	-25.09 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HL 223
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 6

RadiMation



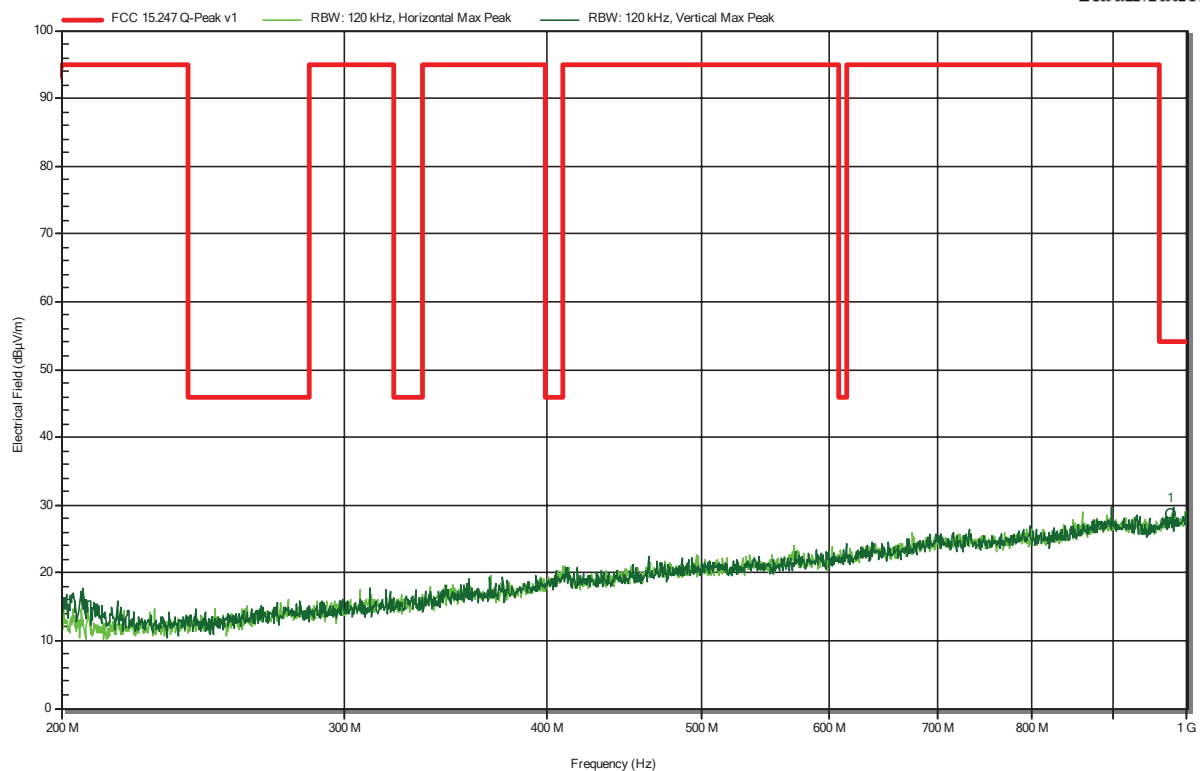
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
977.02 MHz	30 dBµV/m	54 dBµV/m	-24.04 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HL 223
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 1

RadiMation



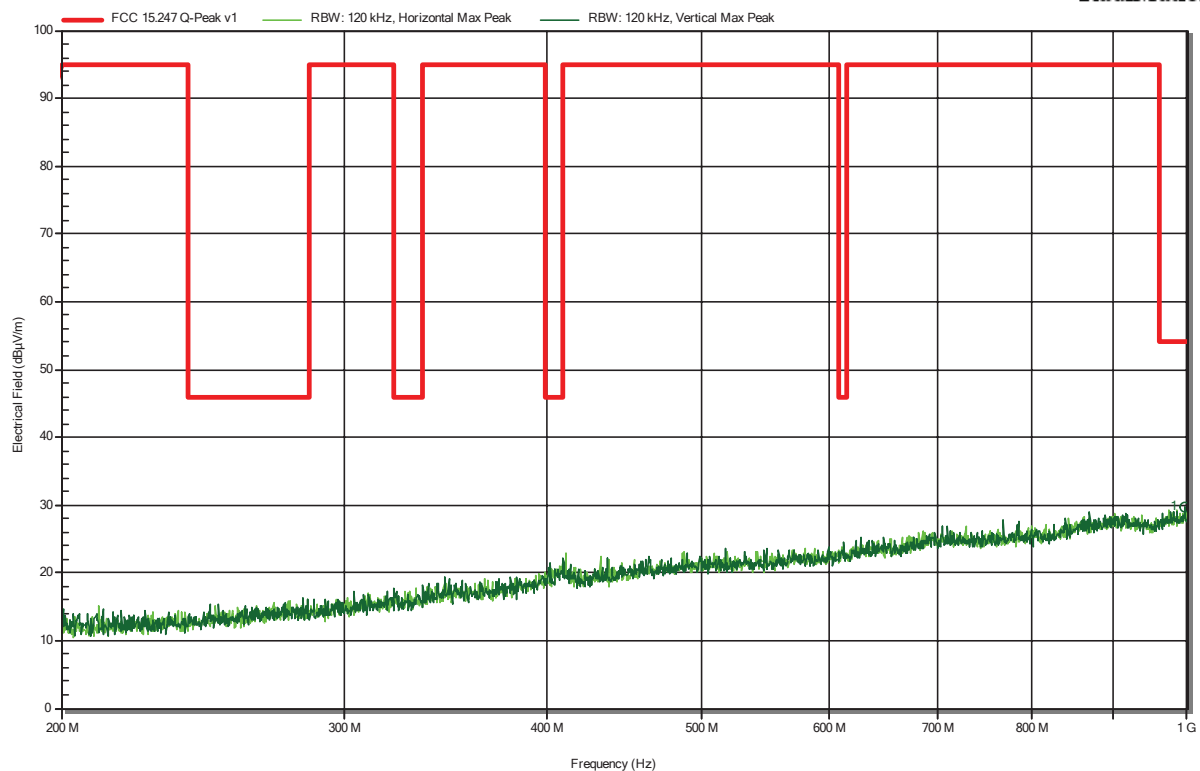
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
976.84 MHz	28.7 dBµV/m	54 dBµV/m	-25.29 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HL 223
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:

Index 8

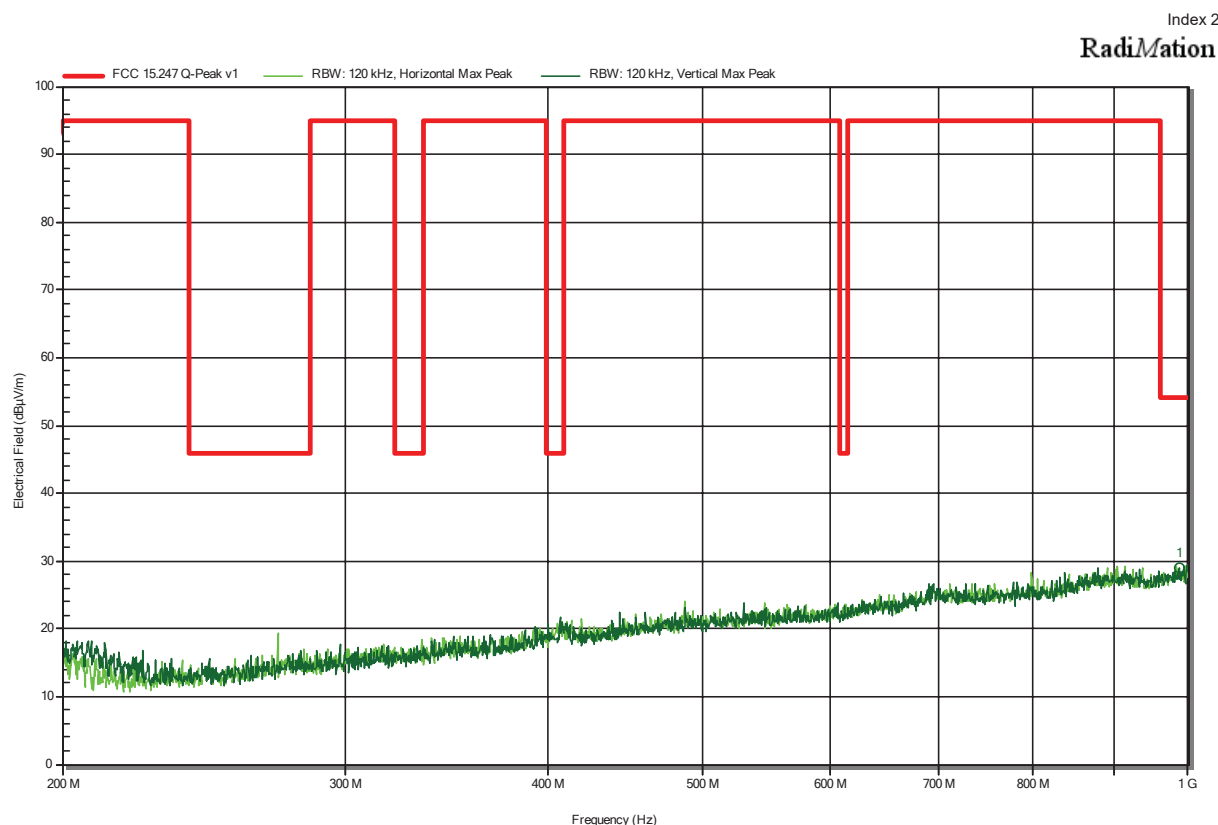
RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
996.04 MHz	29.6 dBµV/m	54 dBµV/m	-24.38 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Rohde & Schwarz HL 223
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-20
 Note:



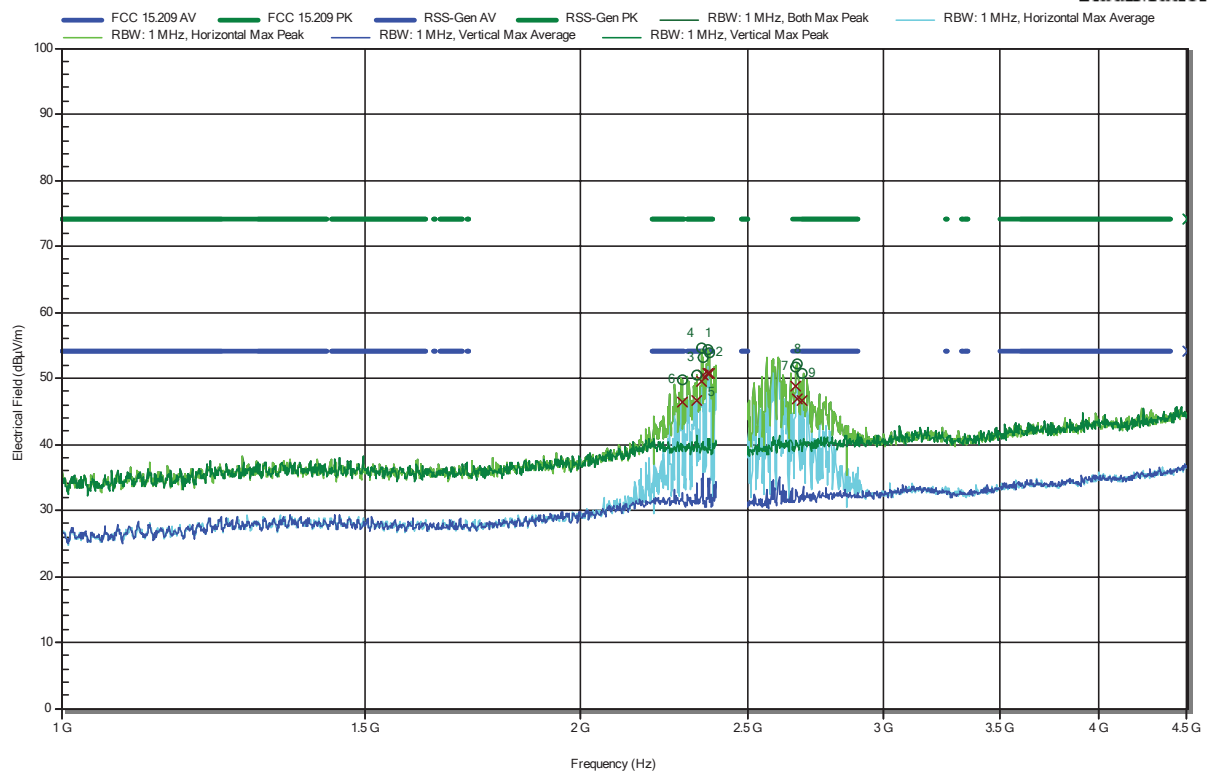
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
986.42 MHz	29.1 dBµV/m	54 dBµV/m	-24.91 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 41

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.292 GHz	49.79 dBμV/m	74 dBμV/m	-24.21 dB	Pass	Horizontal
2.336 GHz	50.51 dBμV/m	74 dBμV/m	-23.49 dB	Pass	Horizontal
2.352 GHz	54.47 dBμV/m	74 dBμV/m	-19.53 dB	Pass	Horizontal
2.356 GHz	53.08 dBμV/m	74 dBμV/m	-20.92 dB	Pass	Horizontal
2.372 GHz	54.28 dBμV/m	74 dBμV/m	-19.72 dB	Pass	Horizontal
2.376 GHz	53.95 dBμV/m	74 dBμV/m	-20.05 dB	Pass	Horizontal
2.668 GHz	51.68 dBμV/m	74 dBμV/m	-22.32 dB	Pass	Horizontal
2.672 GHz	52.11 dBμV/m	74 dBμV/m	-21.89 dB	Pass	Horizontal
2.692 GHz	50.84 dBμV/m	74 dBμV/m	-23.16 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

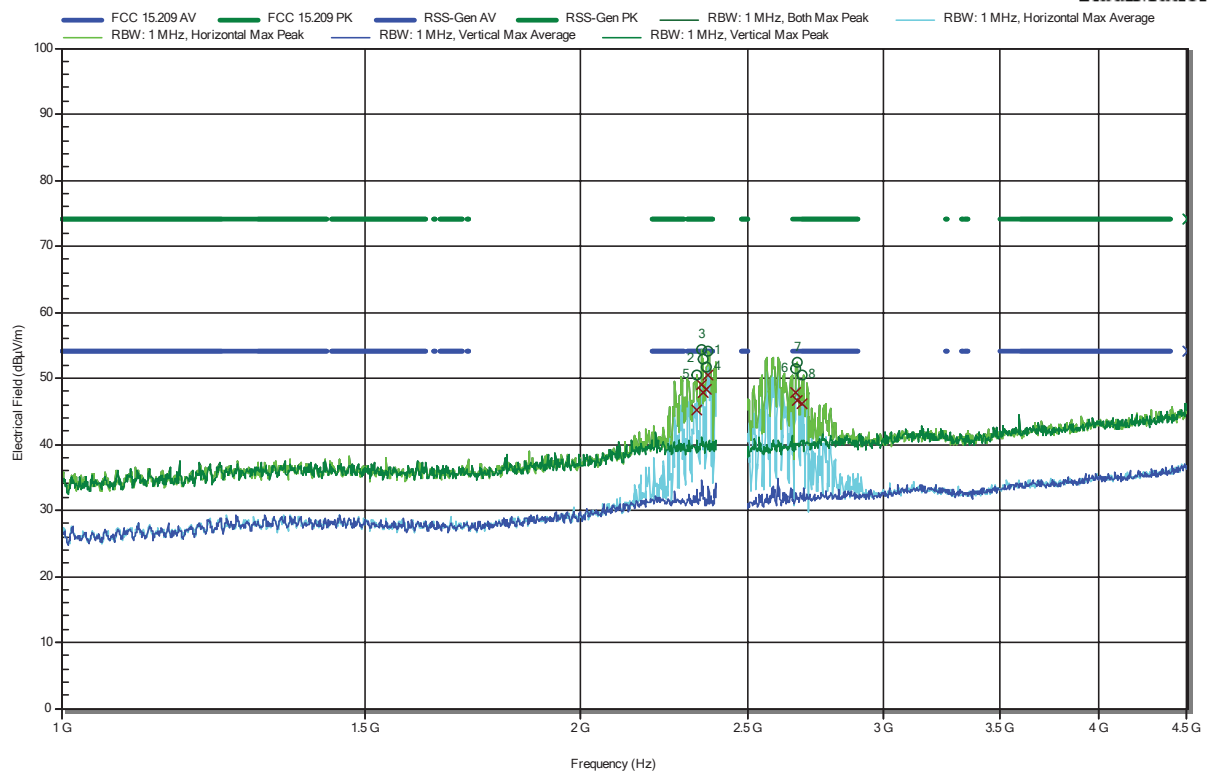
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.292 GHz	46.32 dBµV/m	54 dBµV/m	-7.68 dB	Pass	Horizontal
2.336 GHz	46.67 dBµV/m	54 dBµV/m	-7.33 dB	Pass	Horizontal
2.352 GHz	49.44 dBµV/m	54 dBµV/m	-4.56 dB	Pass	Horizontal
2.356 GHz	50.57 dBµV/m	54 dBµV/m	-3.43 dB	Pass	Horizontal
2.372 GHz	50.75 dBµV/m	54 dBµV/m	-3.25 dB	Pass	Horizontal
2.376 GHz	50.68 dBµV/m	54 dBµV/m	-3.32 dB	Pass	Horizontal
2.668 GHz	48.73 dBµV/m	54 dBµV/m	-5.27 dB	Pass	Horizontal
2.672 GHz	46.82 dBµV/m	54 dBµV/m	-7.18 dB	Pass	Horizontal
2.692 GHz	46.7 dBµV/m	54 dBµV/m	-7.3 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 40

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.336 GHz	50.56 dBμV/m	74 dBμV/m	-23.44 dB	Pass	Horizontal
2.352 GHz	54.34 dBμV/m	74 dBμV/m	-19.66 dB	Pass	Horizontal
2.356 GHz	52.84 dBμV/m	74 dBμV/m	-21.16 dB	Pass	Horizontal
2.368 GHz	51.76 dBμV/m	74 dBμV/m	-22.24 dB	Pass	Horizontal
2.372 GHz	54.04 dBμV/m	74 dBμV/m	-19.96 dB	Pass	Horizontal
2.668 GHz	51.55 dBμV/m	74 dBμV/m	-22.45 dB	Pass	Horizontal
2.672 GHz	52.47 dBμV/m	74 dBμV/m	-21.53 dB	Pass	Horizontal
2.692 GHz	50.49 dBμV/m	74 dBμV/m	-23.51 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

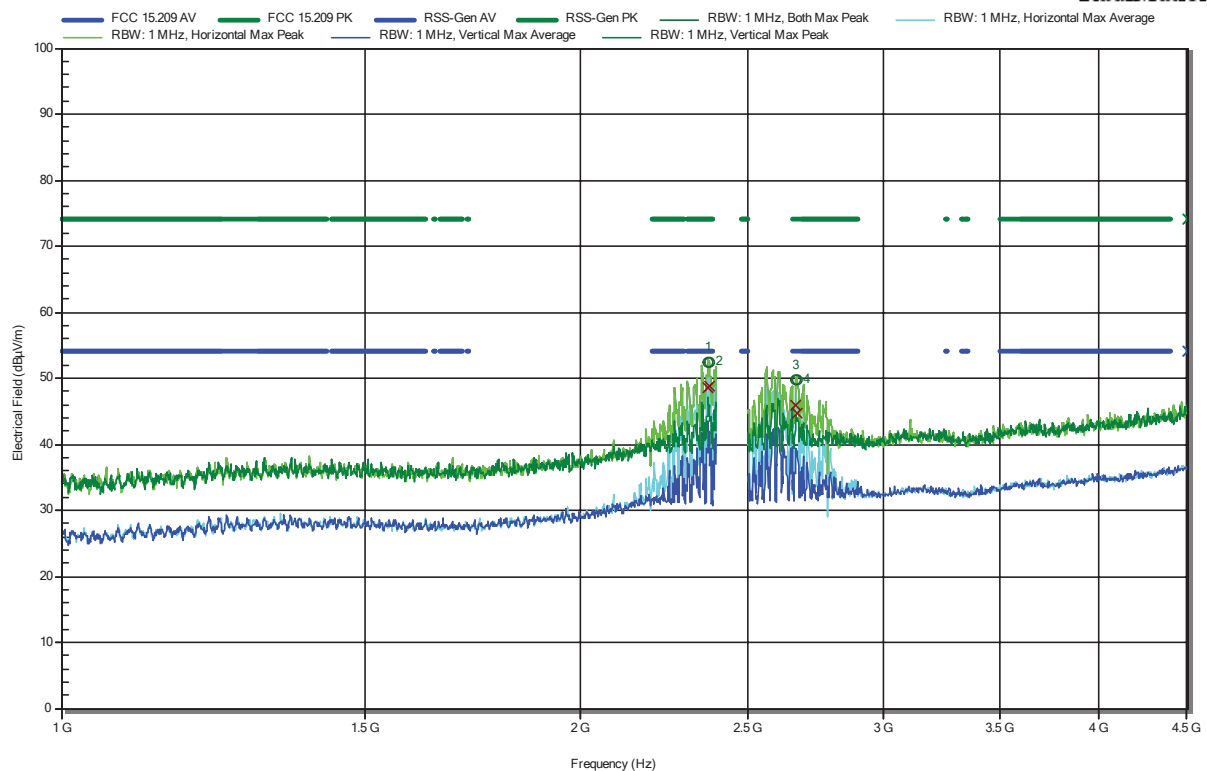
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.336 GHz	45.23 dBµV/m	54 dBµV/m	-8.77 dB	Pass	Horizontal
2.352 GHz	49.15 dBµV/m	54 dBµV/m	-4.85 dB	Pass	Horizontal
2.356 GHz	47.89 dBµV/m	54 dBµV/m	-6.11 dB	Pass	Horizontal
2.368 GHz	48.21 dBµV/m	54 dBµV/m	-5.79 dB	Pass	Horizontal
2.372 GHz	50.59 dBµV/m	54 dBµV/m	-3.41 dB	Pass	Horizontal
2.668 GHz	47.72 dBµV/m	54 dBµV/m	-6.28 dB	Pass	Horizontal
2.672 GHz	46.74 dBµV/m	54 dBµV/m	-7.26 dB	Pass	Horizontal
2.692 GHz	46.05 dBµV/m	54 dBµV/m	-7.95 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 58

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.372 GHz	52.3 dBμV/m	74 dBμV/m	-21.7 dB	Pass	Horizontal
2.376 GHz	52.32 dBμV/m	74 dBμV/m	-21.68 dB	Pass	Horizontal
2.668 GHz	49.79 dBμV/m	74 dBμV/m	-24.21 dB	Pass	Horizontal
2.672 GHz	49.83 dBμV/m	74 dBμV/m	-24.17 dB	Pass	Horizontal

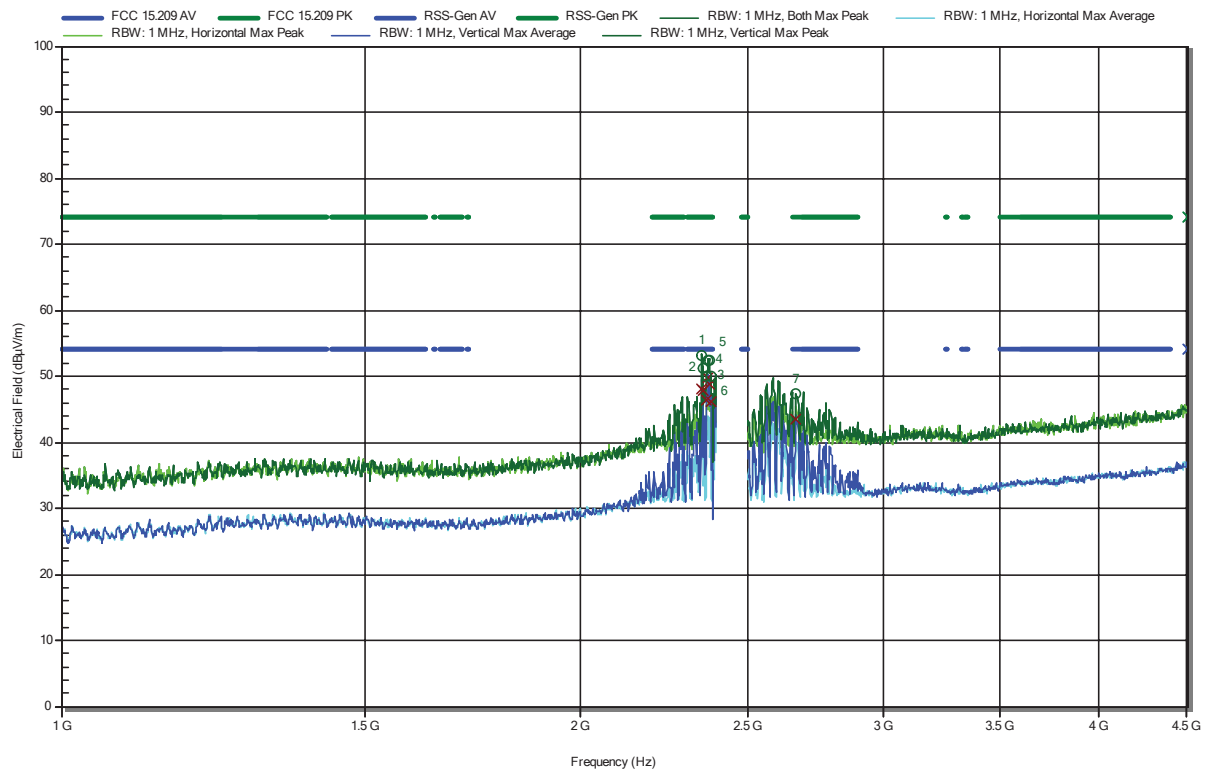
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.372 GHz	48.5 dB μ V/m	54 dB μ V/m	-5.5 dB	Pass	Horizontal
2.376 GHz	48.79 dB μ V/m	54 dB μ V/m	-5.21 dB	Pass	Horizontal
2.668 GHz	45.84 dB μ V/m	54 dB μ V/m	-8.16 dB	Pass	Horizontal
2.672 GHz	44.65 dB μ V/m	54 dB μ V/m	-9.35 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 27

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.352 GHz	53.17 dBµV/m	74 dBµV/m	-20.83 dB	Pass	Vertical
2.356 GHz	51.17 dBµV/m	74 dBµV/m	-22.83 dB	Pass	Vertical
2.368 GHz	49.99 dBµV/m	74 dBµV/m	-24.01 dB	Pass	Vertical
2.372 GHz	52.51 dBµV/m	74 dBµV/m	-21.49 dB	Pass	Vertical
2.376 GHz	52.49 dBµV/m	74 dBµV/m	-21.51 dB	Pass	Vertical
2.38 GHz	49.96 dBµV/m	74 dBµV/m	-24.04 dB	Pass	Vertical
2.668 GHz	47.29 dBµV/m	74 dBµV/m	-26.71 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

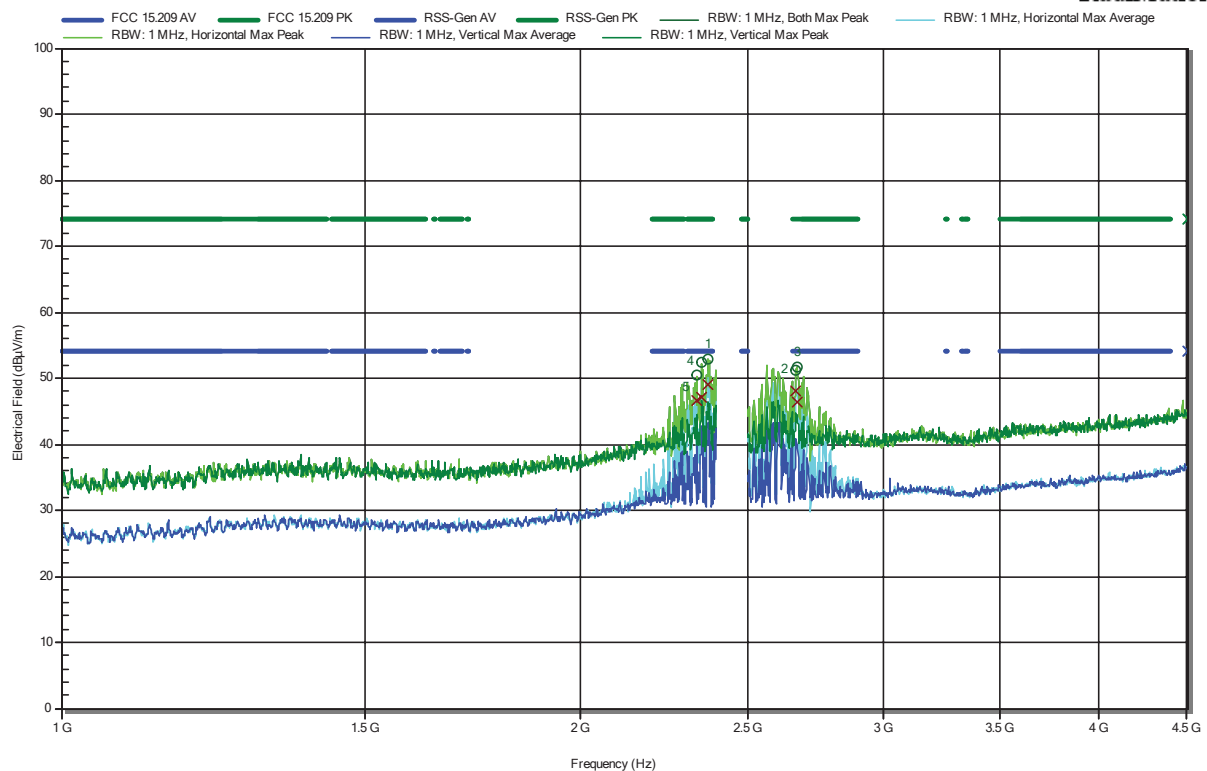
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.352 GHz	47.96 dB μ V/m	54 dB μ V/m	-6.04 dB	Pass	Vertical
2.356 GHz	47.84 dB μ V/m	54 dB μ V/m	-6.16 dB	Pass	Vertical
2.368 GHz	46.27 dB μ V/m	54 dB μ V/m	-7.73 dB	Pass	Vertical
2.372 GHz	49.65 dB μ V/m	54 dB μ V/m	-4.35 dB	Pass	Vertical
2.376 GHz	48.77 dB μ V/m	54 dB μ V/m	-5.23 dB	Pass	Vertical
2.38 GHz	46.09 dB μ V/m	54 dB μ V/m	-7.91 dB	Pass	Vertical
2.668 GHz	43.58 dB μ V/m	54 dB μ V/m	-10.42 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 55

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.336 GHz	50.39 dBµV/m	74 dBµV/m	-23.61 dB	Pass	Horizontal
2.352 GHz	52.32 dBµV/m	74 dBµV/m	-21.68 dB	Pass	Horizontal
2.372 GHz	53 dBµV/m	74 dBµV/m	-21 dB	Pass	Horizontal
2.668 GHz	51.26 dBµV/m	74 dBµV/m	-22.74 dB	Pass	Horizontal
2.672 GHz	51.77 dBµV/m	74 dBµV/m	-22.23 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.336 GHz	46.51 dBµV/m	54 dBµV/m	-7.49 dB	Pass	Horizontal
2.352 GHz	47.08 dBµV/m	54 dBµV/m	-6.92 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

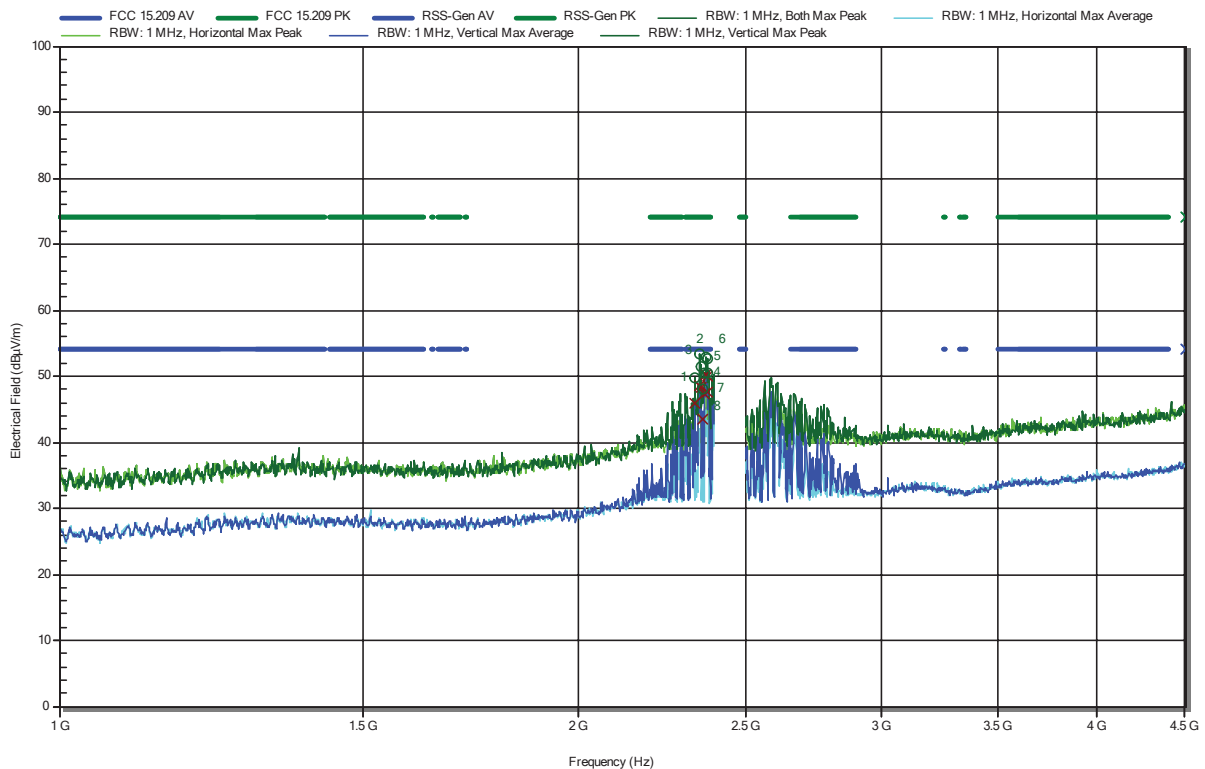
2.372 GHz	48.95 dBµV/m	54 dBµV/m	-5.05 dB	Pass	Horizontal
2.668 GHz	48.09 dBµV/m	54 dBµV/m	-5.91 dB	Pass	Horizontal
2.672 GHz	46.38 dBµV/m	54 dBµV/m	-7.62 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 24

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.336 GHz	49.83 dBµV/m	74 dBµV/m	-24.17 dB	Pass	Vertical
2.352 GHz	53.46 dBµV/m	74 dBµV/m	-20.54 dB	Pass	Vertical
2.356 GHz	51.54 dBµV/m	74 dBµV/m	-22.46 dB	Pass	Vertical
2.36 GHz	48.07 dBµV/m	74 dBµV/m	-25.93 dB	Pass	Vertical
2.368 GHz	50.37 dBµV/m	74 dBµV/m	-23.63 dB	Pass	Vertical
2.372 GHz	52.93 dBµV/m	74 dBµV/m	-21.07 dB	Pass	Vertical
2.376 GHz	52.73 dBµV/m	74 dBµV/m	-21.27 dB	Pass	Vertical
2.38 GHz	50.45 dBµV/m	74 dBµV/m	-23.55 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

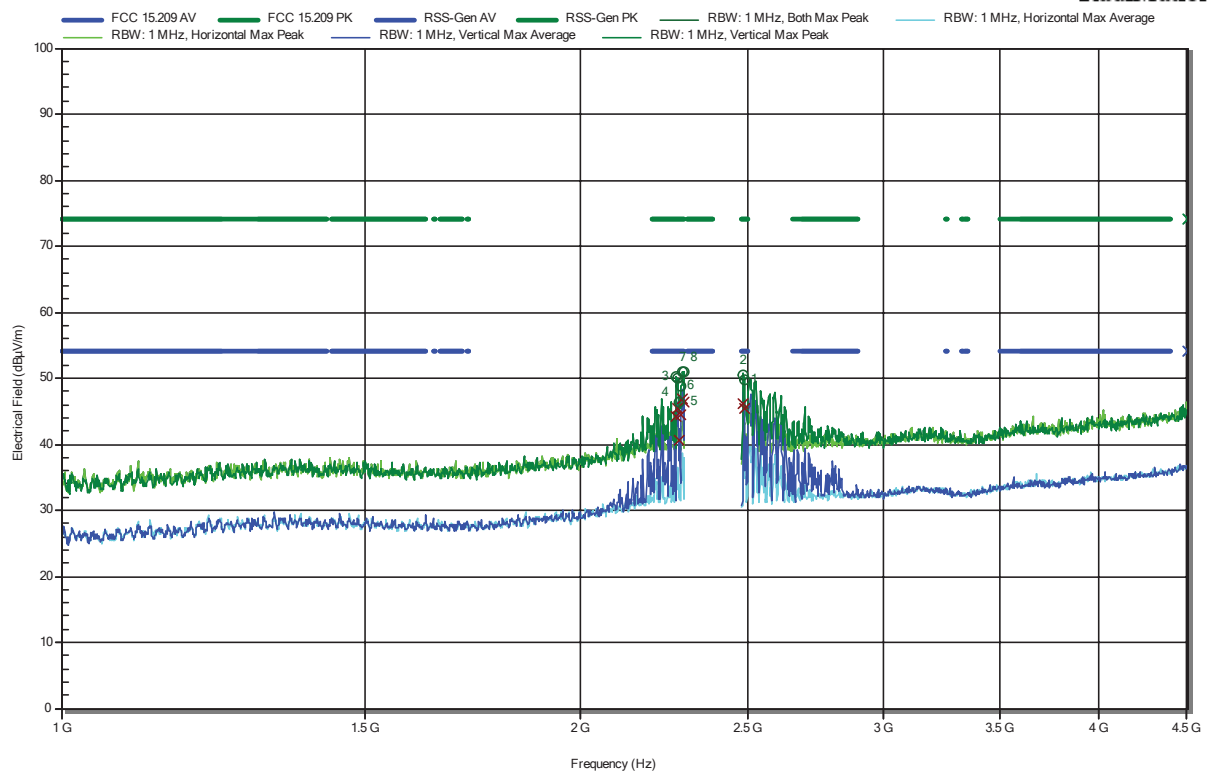
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.336 GHz	45.82 dBµV/m	54 dBµV/m	-8.18 dB	Pass	Vertical
2.352 GHz	48.53 dBµV/m	54 dBµV/m	-5.47 dB	Pass	Vertical
2.356 GHz	48.42 dBµV/m	54 dBµV/m	-5.58 dB	Pass	Vertical
2.36 GHz	43.53 dBµV/m	54 dBµV/m	-10.47 dB	Pass	Vertical
2.368 GHz	47.38 dBµV/m	54 dBµV/m	-6.62 dB	Pass	Vertical
2.372 GHz	50.17 dBµV/m	54 dBµV/m	-3.83 dB	Pass	Vertical
2.376 GHz	50.09 dBµV/m	54 dBµV/m	-3.91 dB	Pass	Vertical
2.38 GHz	47.53 dBµV/m	54 dBµV/m	-6.47 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT vertical

Index 31

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.274 GHz	50.21 dBµV/m	74 dBµV/m	-23.79 dB	Pass	Vertical
2.2779 GHz	49.92 dBµV/m	74 dBµV/m	-24.08 dB	Pass	Vertical
2.282 GHz	46.4 dBµV/m	74 dBµV/m	-27.6 dB	Pass	Vertical
2.2899 GHz	48.73 dBµV/m	74 dBµV/m	-25.27 dB	Pass	Vertical
2.2939 GHz	50.93 dBµV/m	74 dBµV/m	-23.07 dB	Pass	Vertical
2.298 GHz	50.92 dBµV/m	74 dBµV/m	-23.08 dB	Pass	Vertical
2.4859 GHz	50.41 dBµV/m	74 dBµV/m	-23.59 dB	Pass	Vertical
2.49 GHz	49.85 dBµV/m	74 dBµV/m	-24.15 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

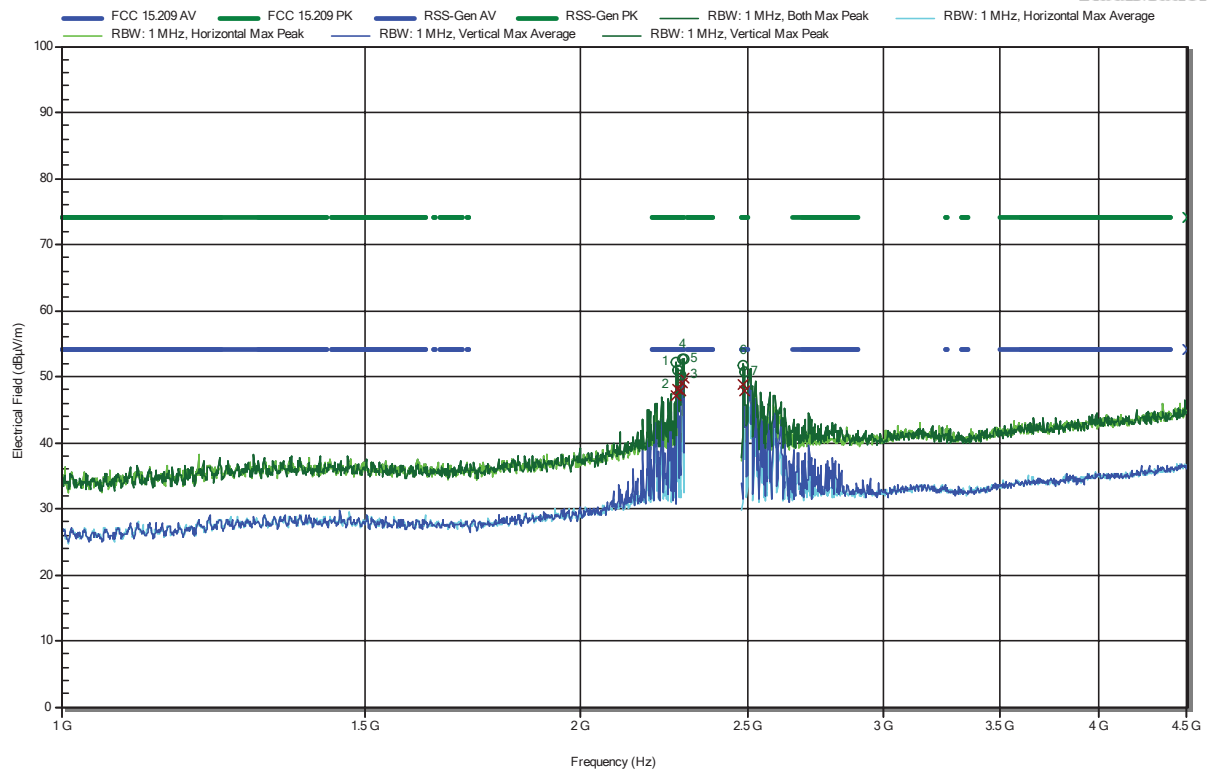
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.274 GHz	44.12 dBµV/m	54 dBµV/m	-9.88 dB	Pass	Vertical
2.2779 GHz	45.49 dBµV/m	54 dBµV/m	-8.51 dB	Pass	Vertical
2.282 GHz	40.7 dBµV/m	54 dBµV/m	-13.3 dB	Pass	Vertical
2.2899 GHz	44.56 dBµV/m	54 dBµV/m	-9.44 dB	Pass	Vertical
2.2939 GHz	46.97 dBµV/m	54 dBµV/m	-7.03 dB	Pass	Vertical
2.298 GHz	46.42 dBµV/m	54 dBµV/m	-7.58 dB	Pass	Vertical
2.4859 GHz	46.04 dBµV/m	54 dBµV/m	-7.96 dB	Pass	Vertical
2.49 GHz	45.52 dBµV/m	54 dBµV/m	-8.48 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 16

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.2738 GHz	52.15 dBµV/m	74 dBµV/m	-21.85 dB	Pass	Vertical
2.2778 GHz	51.08 dBµV/m	74 dBµV/m	-22.92 dB	Pass	Vertical
2.2899 GHz	50.36 dBµV/m	74 dBµV/m	-23.64 dB	Pass	Vertical
2.2937 GHz	52.64 dBµV/m	74 dBµV/m	-21.36 dB	Pass	Vertical
2.2979 GHz	52.62 dBµV/m	74 dBµV/m	-21.38 dB	Pass	Vertical
2.486 GHz	51.58 dBµV/m	74 dBµV/m	-22.42 dB	Pass	Vertical
2.49 GHz	50.61 dBµV/m	74 dBµV/m	-23.39 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.2738 GHz	47.19 dBµV/m	54 dBµV/m	-6.81 dB	Pass	Vertical
2.2778 GHz	48.1 dBµV/m	54 dBµV/m	-5.9 dB	Pass	Vertical
2.2899 GHz	47.73 dBµV/m	54 dBµV/m	-6.27 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

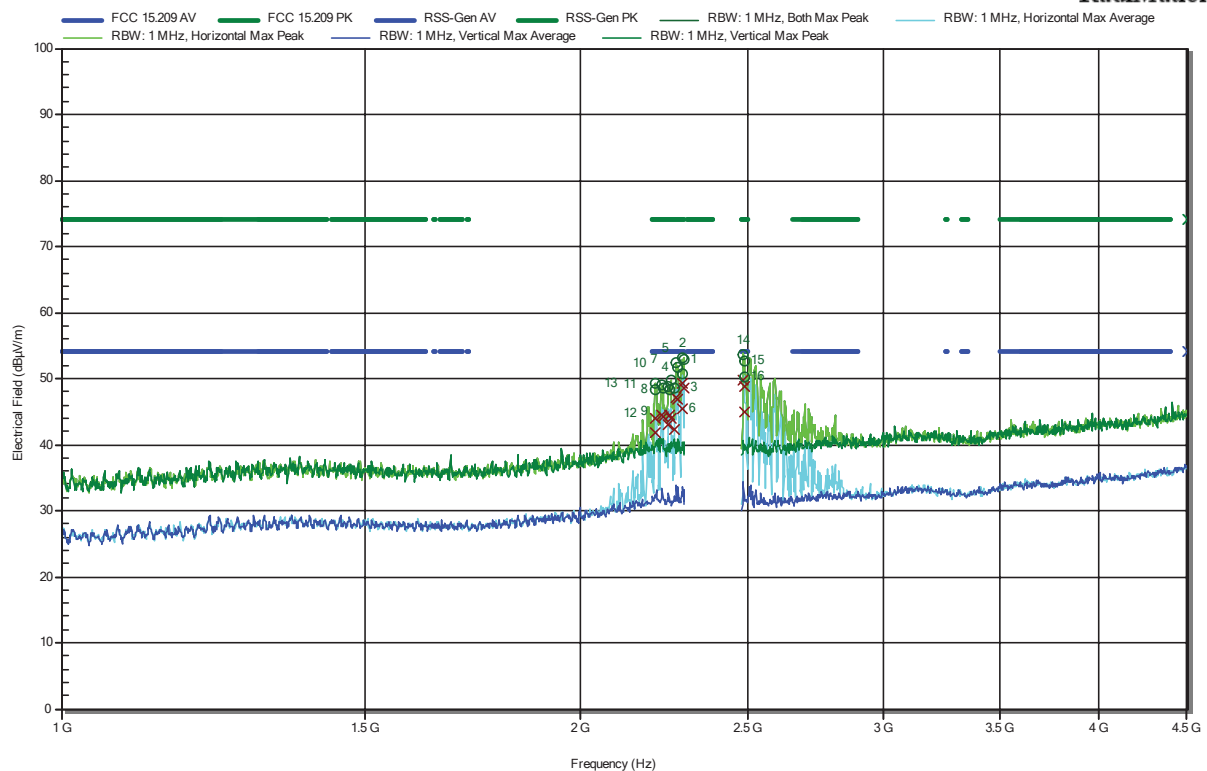
2.2937 GHz	49.03 dB μ V/m	54 dB μ V/m	-4.97 dB	Pass	Vertical
2.2979 GHz	49.74 dB μ V/m	54 dB μ V/m	-4.26 dB	Pass	Vertical
2.486 GHz	48.86 dB μ V/m	54 dB μ V/m	-5.14 dB	Pass	Vertical
2.49 GHz	47.78 dB μ V/m	54 dB μ V/m	-6.22 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 34

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.2098 GHz	49.19 dBμV/m	74 dBμV/m	-24.81 dB	Pass	Horizontal
2.2136 GHz	48.42 dBμV/m	74 dBμV/m	-25.58 dB	Pass	Horizontal
2.23 GHz	49.12 dBμV/m	74 dBμV/m	-24.88 dB	Pass	Horizontal
2.2336 GHz	48.67 dBμV/m	74 dBμV/m	-25.33 dB	Pass	Horizontal
2.2505 GHz	48.68 dBμV/m	74 dBμV/m	-25.32 dB	Pass	Horizontal
2.2539 GHz	48.37 dBμV/m	74 dBμV/m	-25.63 dB	Pass	Horizontal
2.2575 GHz	49.87 dBμV/m	74 dBμV/m	-24.13 dB	Pass	Horizontal
2.2703 GHz	48.61 dBμV/m	74 dBμV/m	-25.39 dB	Pass	Horizontal
2.2739 GHz	52.32 dBμV/m	74 dBμV/m	-21.68 dB	Pass	Horizontal
2.2775 GHz	51.71 dBμV/m	74 dBμV/m	-22.29 dB	Pass	Horizontal
2.2905 GHz	50.77 dBμV/m	74 dBμV/m	-23.23 dB	Pass	Horizontal
2.294 GHz	53.05 dBμV/m	74 dBμV/m	-20.95 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

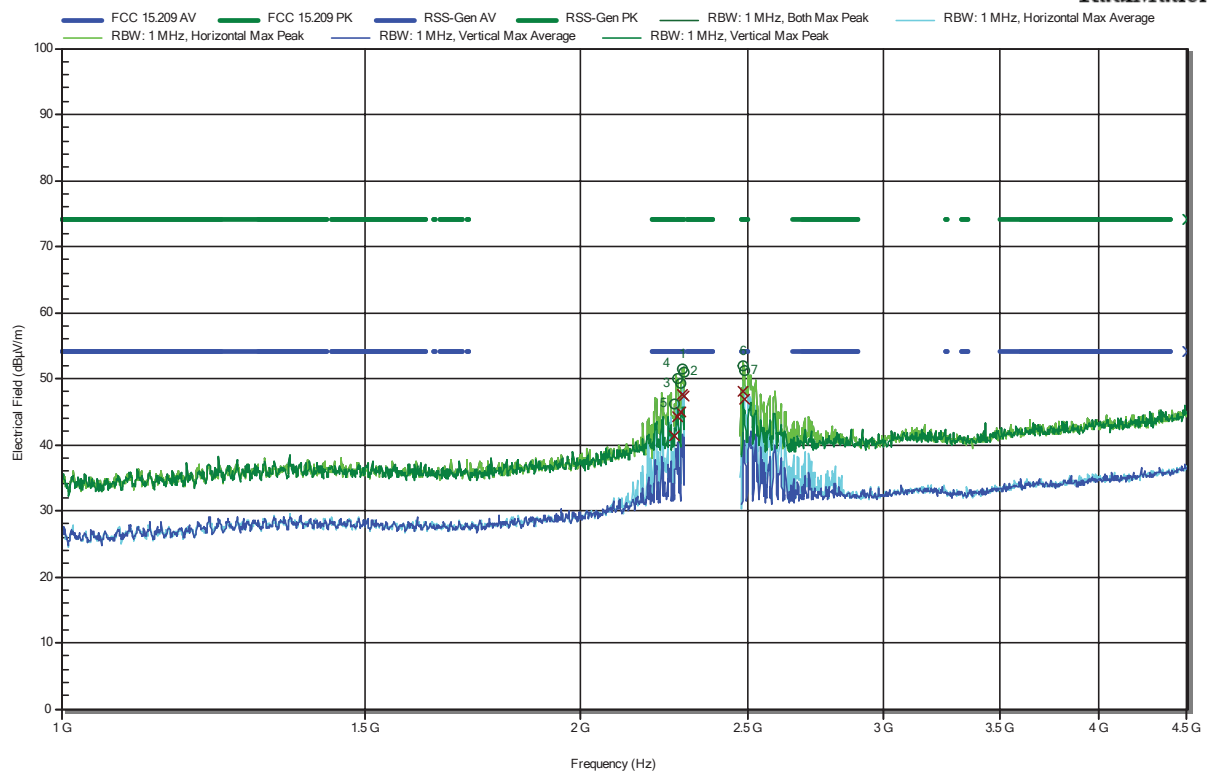
2.2985 GHz	52.78 dBµV/m	74 dBµV/m	-21.22 dB	Pass	Horizontal
2.4859 GHz	53.58 dBµV/m	74 dBµV/m	-20.42 dB	Pass	Horizontal
2.49 GHz	52.74 dBµV/m	74 dBµV/m	-21.26 dB	Pass	Horizontal
2.4939 GHz	50.24 dBµV/m	74 dBµV/m	-23.76 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.2098 GHz	43.91 dBµV/m	54 dBµV/m	-10.09 dB	Pass	Horizontal
2.2136 GHz	41.82 dBµV/m	54 dBµV/m	-12.18 dB	Pass	Horizontal
2.23 GHz	44.43 dBµV/m	54 dBµV/m	-9.57 dB	Pass	Horizontal
2.2336 GHz	44.1 dBµV/m	54 dBµV/m	-9.9 dB	Pass	Horizontal
2.2505 GHz	43.07 dBµV/m	54 dBµV/m	-10.93 dB	Pass	Horizontal
2.2539 GHz	44.36 dBµV/m	54 dBµV/m	-9.64 dB	Pass	Horizontal
2.2575 GHz	44.09 dBµV/m	54 dBµV/m	-9.91 dB	Pass	Horizontal
2.2703 GHz	42.41 dBµV/m	54 dBµV/m	-11.59 dB	Pass	Horizontal
2.2739 GHz	47.21 dBµV/m	54 dBµV/m	-6.79 dB	Pass	Horizontal
2.2775 GHz	46.92 dBµV/m	54 dBµV/m	-7.08 dB	Pass	Horizontal
2.2905 GHz	45.5 dBµV/m	54 dBµV/m	-8.5 dB	Pass	Horizontal
2.294 GHz	49.18 dBµV/m	54 dBµV/m	-4.82 dB	Pass	Horizontal
2.2985 GHz	48.47 dBµV/m	54 dBµV/m	-5.53 dB	Pass	Horizontal
2.4859 GHz	49.81 dBµV/m	54 dBµV/m	-4.19 dB	Pass	Horizontal
2.49 GHz	48.71 dBµV/m	54 dBµV/m	-5.29 dB	Pass	Horizontal
2.4939 GHz	44.87 dBµV/m	54 dBµV/m	-9.13 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 61

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.27 GHz	46.2 dBµV/m	74 dBµV/m	-27.8 dB	Pass	Horizontal
2.2784 GHz	50.08 dBµV/m	74 dBµV/m	-23.92 dB	Pass	Horizontal
2.29 GHz	49.3 dBµV/m	74 dBµV/m	-24.7 dB	Pass	Horizontal
2.294 GHz	51.42 dBµV/m	74 dBµV/m	-22.58 dB	Pass	Horizontal
2.298 GHz	51.08 dBµV/m	74 dBµV/m	-22.92 dB	Pass	Horizontal
2.4861 GHz	51.97 dBµV/m	74 dBµV/m	-22.03 dB	Pass	Horizontal
2.4899 GHz	51.28 dBµV/m	74 dBµV/m	-22.72 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.27 GHz	41.28 dBµV/m	54 dBµV/m	-12.72 dB	Pass	Horizontal
2.2784 GHz	44.13 dBµV/m	54 dBµV/m	-9.87 dB	Pass	Horizontal
2.29 GHz	45.02 dBµV/m	54 dBµV/m	-8.98 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

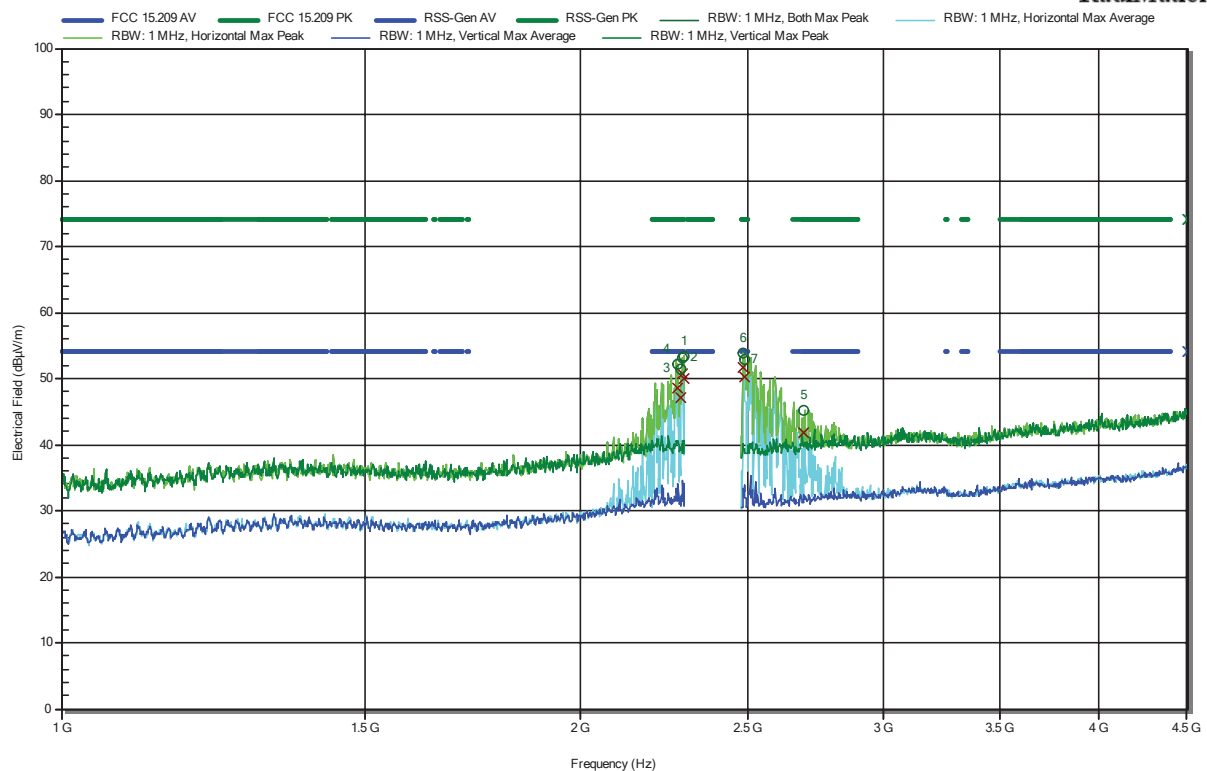
2.294 GHz	47.5 dB μ V/m	54 dB μ V/m	-6.5 dB	Pass	Horizontal
2.298 GHz	47.4 dB μ V/m	54 dB μ V/m	-6.6 dB	Pass	Horizontal
2.4861 GHz	48.03 dB μ V/m	54 dB μ V/m	-5.97 dB	Pass	Horizontal
2.4899 GHz	46.96 dB μ V/m	54 dB μ V/m	-7.04 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 46

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.2778 GHz	52.24 dBμV/m	74 dBμV/m	-21.76 dB	Pass	Horizontal
2.2902 GHz	51.33 dBμV/m	74 dBμV/m	-22.67 dB	Pass	Horizontal
2.2941 GHz	53.15 dBμV/m	74 dBμV/m	-20.85 dB	Pass	Horizontal
2.2977 GHz	53.42 dBμV/m	74 dBμV/m	-20.58 dB	Pass	Horizontal
2.4858 GHz	53.93 dBμV/m	74 dBμV/m	-20.07 dB	Pass	Horizontal
2.4899 GHz	52.8 dBμV/m	74 dBμV/m	-21.2 dB	Pass	Horizontal
2.698 GHz	45.12 dBμV/m	74 dBμV/m	-28.88 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.2778 GHz	48.58 dBμV/m	54 dBμV/m	-5.42 dB	Pass	Horizontal
2.2902 GHz	47.1 dBμV/m	54 dBμV/m	-6.9 dB	Pass	Horizontal
2.2941 GHz	50.76 dBμV/m	54 dBμV/m	-3.24 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

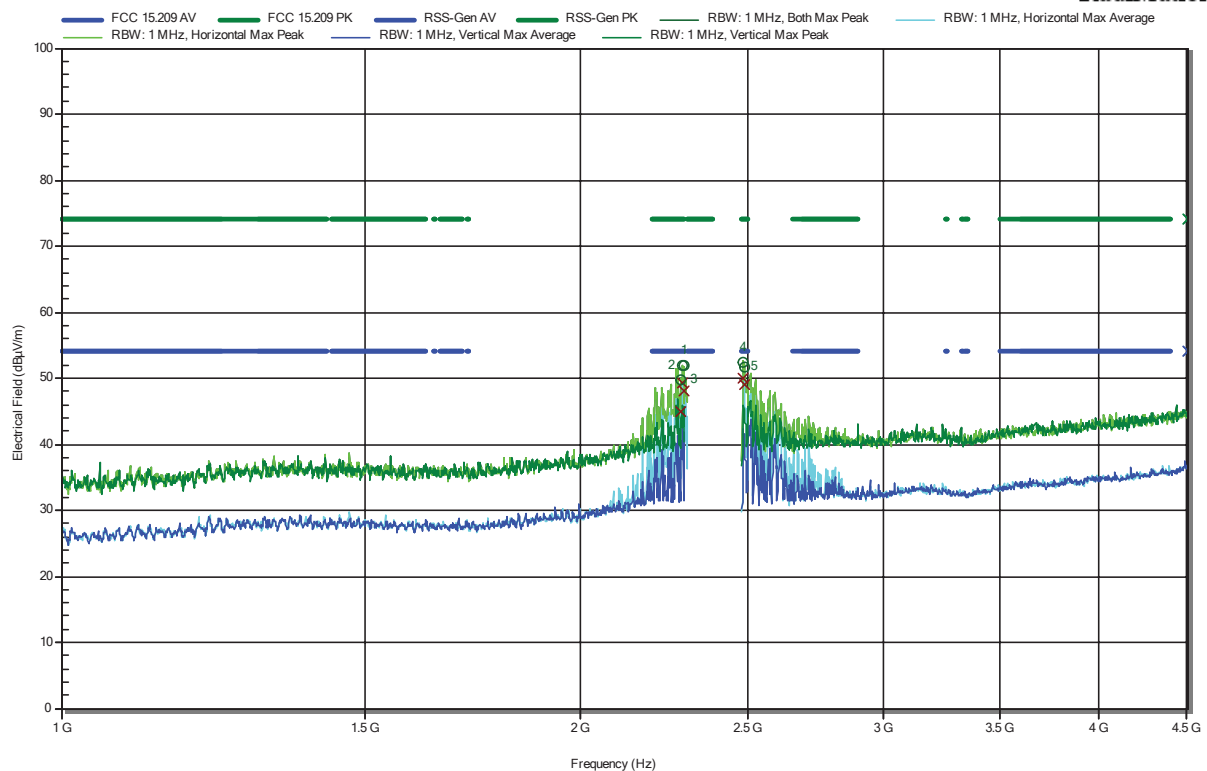
2.2977 GHz	50 dBµV/m	54 dBµV/m	-4 dB	Pass	Horizontal
2.4858 GHz	51.72 dBµV/m	54 dBµV/m	-2.28 dB	Pass	Horizontal
2.4899 GHz	50.28 dBµV/m	54 dBµV/m	-3.72 dB	Pass	Horizontal
2.698 GHz	41.83 dBµV/m	54 dBµV/m	-12.17 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 50

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.2904 GHz	49.77 dBV/m	74 dBV/m	-24.23 dB	Pass	Horizontal
2.2938 GHz	51.99 dBV/m	74 dBV/m	-22.01 dB	Pass	Horizontal
2.2976 GHz	51.81 dBV/m	74 dBV/m	-22.19 dB	Pass	Horizontal
2.4858 GHz	52.46 dBV/m	74 dBV/m	-21.54 dB	Pass	Horizontal
2.49 GHz	51.76 dBV/m	74 dBV/m	-22.24 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.2904 GHz	44.89 dBV/m	54 dBV/m	-9.11 dB	Pass	Horizontal
2.2938 GHz	49.34 dBV/m	54 dBV/m	-4.66 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

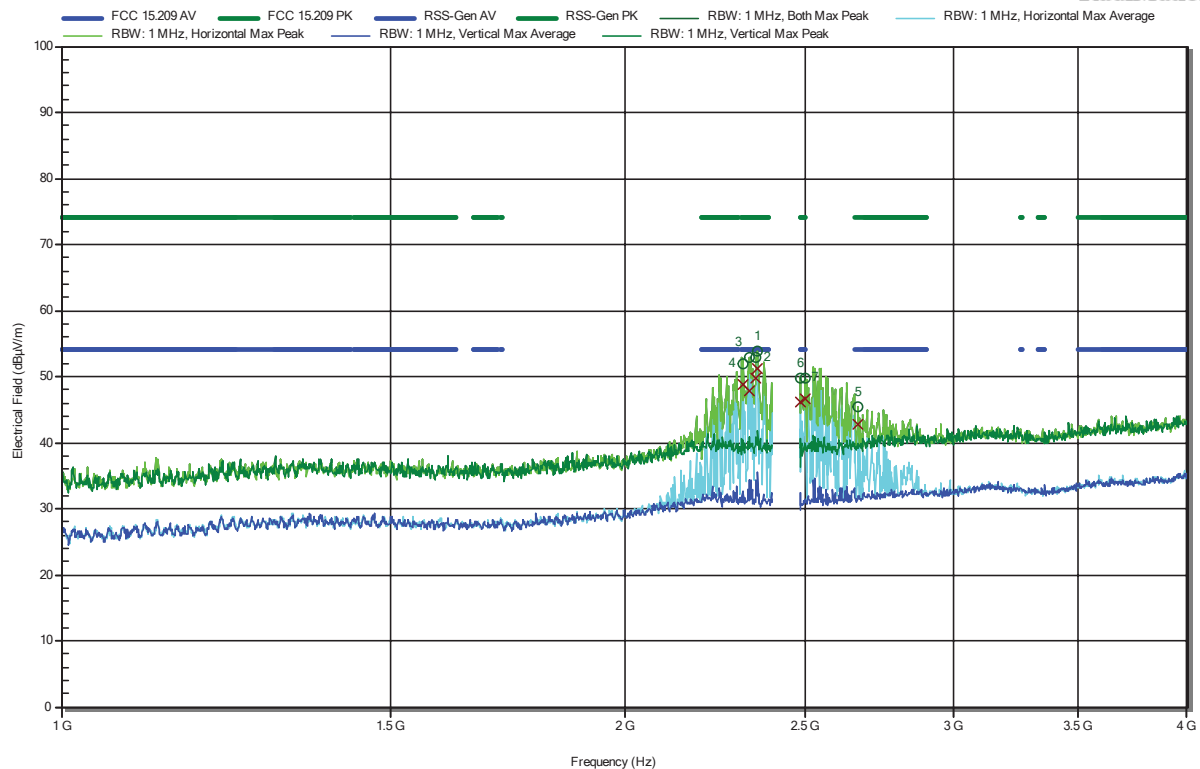
2.2976 GHz	48.06 dBµV/m	54 dBµV/m	-5.94 dB	Pass	Horizontal
2.4858 GHz	50.04 dBµV/m	54 dBµV/m	-3.96 dB	Pass	Horizontal
2.49 GHz	49.12 dBµV/m	54 dBµV/m	-4.88 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 45

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3159 GHz	51.92 dBμV/m	74 dBμV/m	-22.08 dB	Pass	Horizontal
2.3316 GHz	52.91 dBμV/m	74 dBμV/m	-21.09 dB	Pass	Horizontal
2.3521 GHz	52.86 dBμV/m	74 dBμV/m	-21.14 dB	Pass	Horizontal
2.3558 GHz	53.85 dBμV/m	74 dBμV/m	-20.15 dB	Pass	Horizontal
2.484 GHz	49.68 dBμV/m	74 dBμV/m	-24.32 dB	Pass	Horizontal
2.4998 GHz	49.65 dBμV/m	74 dBμV/m	-24.35 dB	Pass	Horizontal
2.6681 GHz	45.5 dBμV/m	74 dBμV/m	-28.5 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3159 GHz	48.84 dBμV/m	54 dBμV/m	-5.16 dB	Pass	Horizontal
2.3316 GHz	47.9 dBμV/m	54 dBμV/m	-6.1 dB	Pass	Horizontal
2.3521 GHz	49.65 dBμV/m	54 dBμV/m	-4.35 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

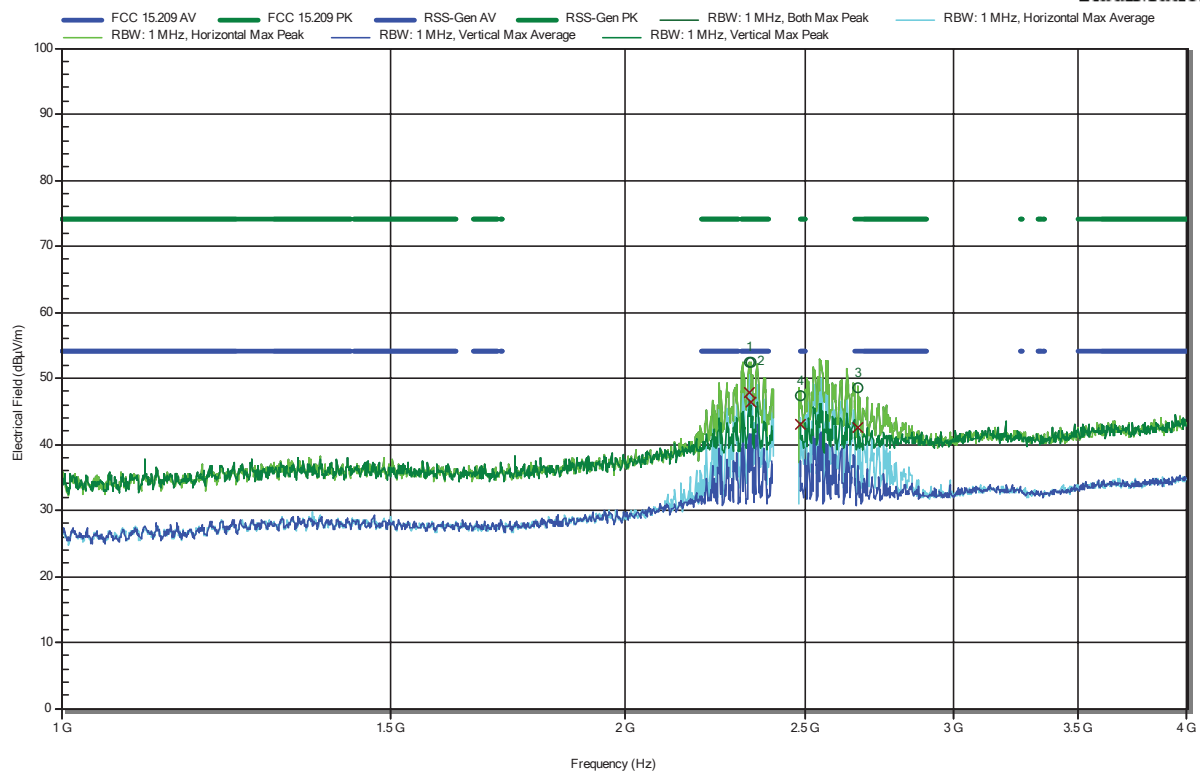
2.3558 GHz	51.25 dBµV/m	54 dBµV/m	-2.75 dB	Pass	Horizontal
2.484 GHz	46.09 dBµV/m	54 dBµV/m	-7.91 dB	Pass	Horizontal
2.4998 GHz	46.66 dBµV/m	54 dBµV/m	-7.34 dB	Pass	Horizontal
2.6681 GHz	42.86 dBµV/m	54 dBµV/m	-11.14 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 59

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3316 GHz	52.51 dBµV/m	74 dBµV/m	-21.49 dB	Pass	Horizontal
2.3366 GHz	52.49 dBµV/m	74 dBµV/m	-21.51 dB	Pass	Horizontal
2.4842 GHz	47.37 dBµV/m	74 dBµV/m	-26.63 dB	Pass	Horizontal
2.6676 GHz	48.53 dBµV/m	74 dBµV/m	-25.47 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3316 GHz	47.81 dBµV/m	54 dBµV/m	-6.19 dB	Pass	Horizontal
2.3366 GHz	46.48 dBµV/m	54 dBµV/m	-7.52 dB	Pass	Horizontal
2.4842 GHz	42.9 dBµV/m	54 dBµV/m	-11.1 dB	Pass	Horizontal
2.6676 GHz	42.43 dBµV/m	54 dBµV/m	-11.57 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

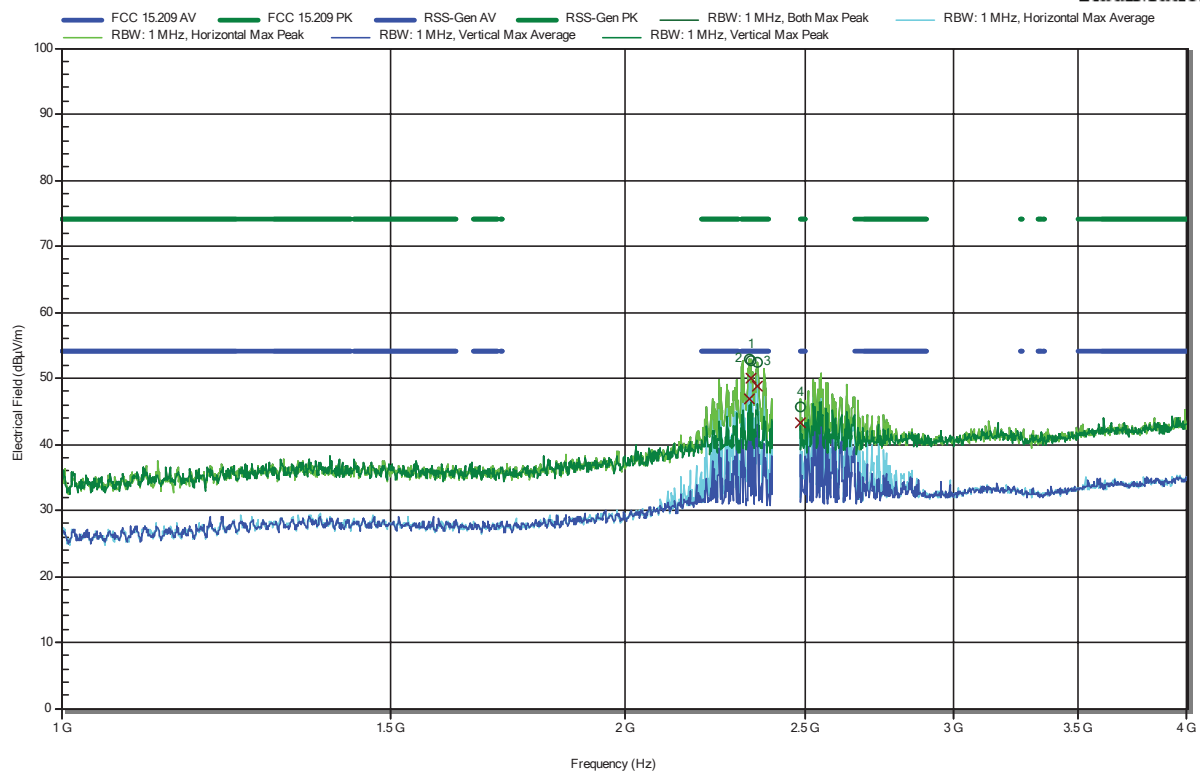
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 52

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3325 GHz	52.99 dBµV/m	74 dBµV/m	-21.01 dB	Pass	Horizontal
2.3361 GHz	52.66 dBµV/m	74 dBµV/m	-21.34 dB	Pass	Horizontal
2.3563 GHz	52.4 dBµV/m	74 dBµV/m	-21.6 dB	Pass	Horizontal
2.4839 GHz	45.54 dBµV/m	74 dBµV/m	-28.46 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3325 GHz	46.81 dBµV/m	54 dBµV/m	-7.19 dB	Pass	Horizontal
2.3361 GHz	49.88 dBµV/m	54 dBµV/m	-4.12 dB	Pass	Horizontal
2.3563 GHz	48.82 dBµV/m	54 dBµV/m	-5.18 dB	Pass	Horizontal
2.4839 GHz	43.13 dBµV/m	54 dBµV/m	-10.87 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

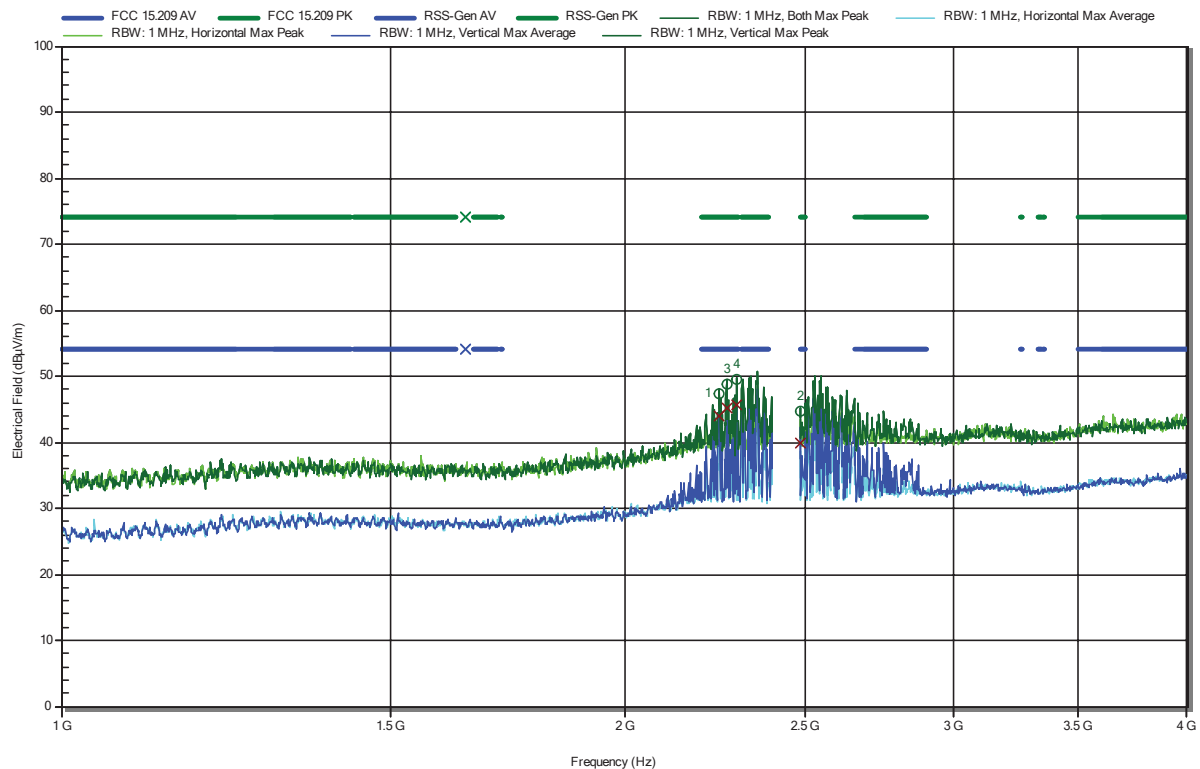
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 21

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.2482 GHz	47.38 dBμV/m	74 dBμV/m	-26.62 dB	Pass	Vertical
2.268 GHz	48.85 dBμV/m	74 dBμV/m	-25.15 dB	Pass	Vertical
2.296 GHz	49.46 dBμV/m	74 dBμV/m	-24.54 dB	Pass	Vertical
2.4841 GHz	44.71 dBμV/m	74 dBμV/m	-29.29 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.2482 GHz	43.87 dBμV/m	54 dBμV/m	-10.13 dB	Pass	Vertical
2.268 GHz	45.21 dBμV/m	54 dBμV/m	-8.79 dB	Pass	Vertical
2.296 GHz	45.76 dBμV/m	54 dBμV/m	-8.24 dB	Pass	Vertical
2.4841 GHz	39.97 dBμV/m	54 dBμV/m	-14.03 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

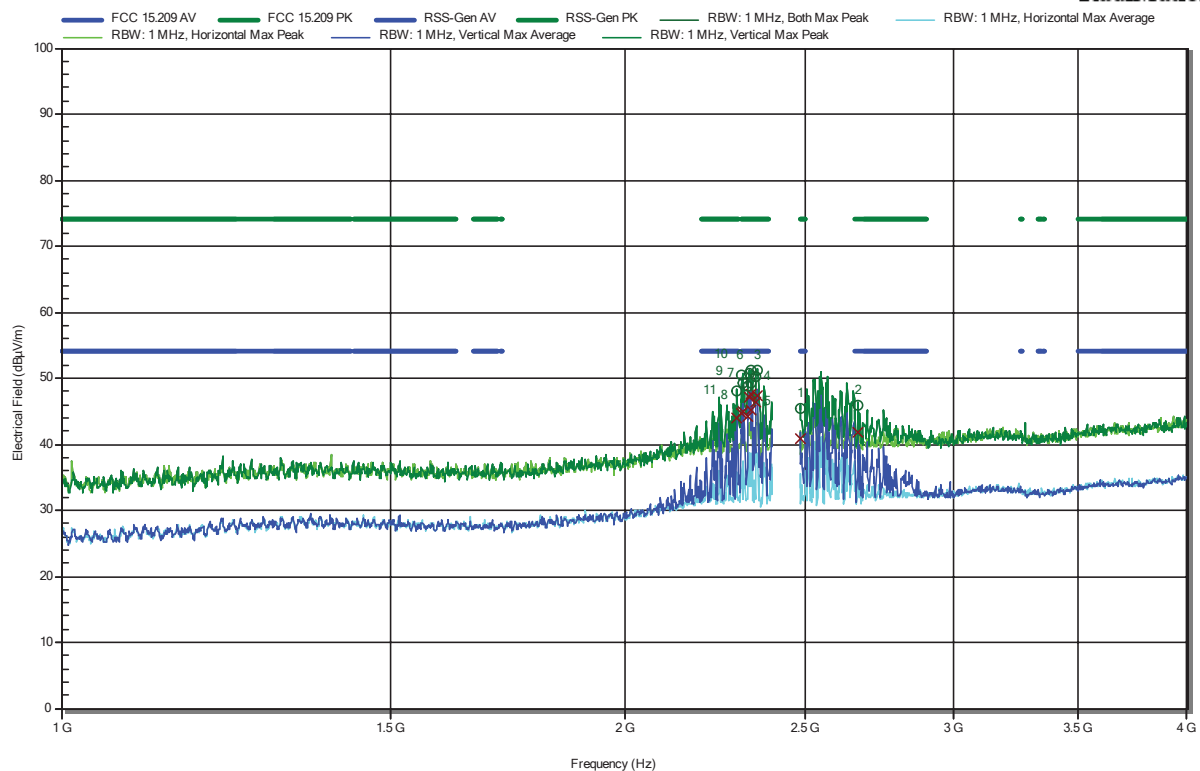
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT vertical

Index 28

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.296 GHz	48.02 dBμV/m	74 dBμV/m	-25.98 dB	Pass	Vertical
2.3119 GHz	50.58 dBμV/m	74 dBμV/m	-23.42 dB	Pass	Vertical
2.3157 GHz	49.27 dBμV/m	74 dBμV/m	-24.73 dB	Pass	Vertical
2.328 GHz	48.68 dBμV/m	74 dBμV/m	-25.32 dB	Pass	Vertical
2.3319 GHz	50.7 dBμV/m	74 dBμV/m	-23.3 dB	Pass	Vertical
2.3359 GHz	51.12 dBμV/m	74 dBμV/m	-22.88 dB	Pass	Vertical
2.3399 GHz	49.38 dBμV/m	74 dBμV/m	-24.62 dB	Pass	Vertical
2.3519 GHz	50.12 dBμV/m	74 dBμV/m	-23.88 dB	Pass	Vertical
2.356 GHz	51.16 dBμV/m	74 dBμV/m	-22.84 dB	Pass	Vertical
2.4839 GHz	45.46 dBμV/m	74 dBμV/m	-28.54 dB	Pass	Vertical
2.6682 GHz	45.88 dBμV/m	74 dBμV/m	-28.12 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

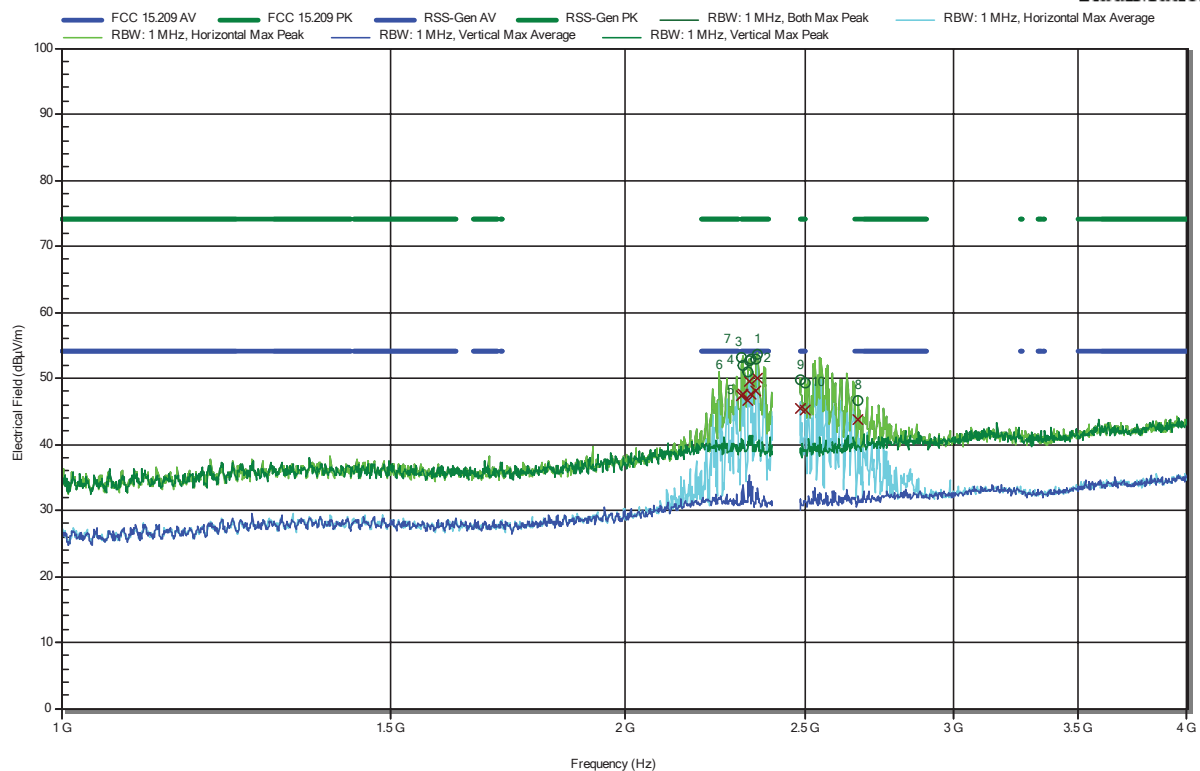
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.296 GHz	43.88 dBµV/m	54 dBµV/m	-10.12 dB	Pass	Vertical
2.3119 GHz	44.7 dBµV/m	54 dBµV/m	-9.3 dB	Pass	Vertical
2.3157 GHz	44.9 dBµV/m	54 dBµV/m	-9.1 dB	Pass	Vertical
2.328 GHz	44.22 dBµV/m	54 dBµV/m	-9.78 dB	Pass	Vertical
2.3319 GHz	47.03 dBµV/m	54 dBµV/m	-6.97 dB	Pass	Vertical
2.3359 GHz	47.52 dBµV/m	54 dBµV/m	-6.48 dB	Pass	Vertical
2.3399 GHz	45.1 dBµV/m	54 dBµV/m	-8.9 dB	Pass	Vertical
2.3519 GHz	46.37 dBµV/m	54 dBµV/m	-7.63 dB	Pass	Vertical
2.356 GHz	47.31 dBµV/m	54 dBµV/m	-6.69 dB	Pass	Vertical
2.4839 GHz	40.92 dBµV/m	54 dBµV/m	-13.08 dB	Pass	Vertical
2.6682 GHz	41.7 dBµV/m	54 dBµV/m	-12.3 dB	Pass	Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 36

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3121 GHz	53.24 dBμV/m	74 dBμV/m	-20.76 dB	Pass	Horizontal
2.3155 GHz	51.83 dBμV/m	74 dBμV/m	-22.17 dB	Pass	Horizontal
2.3275 GHz	50.89 dBμV/m	74 dBμV/m	-23.11 dB	Pass	Horizontal
2.3321 GHz	52.62 dBμV/m	74 dBμV/m	-21.38 dB	Pass	Horizontal
2.3365 GHz	52.99 dBμV/m	74 dBμV/m	-21.01 dB	Pass	Horizontal
2.3525 GHz	52.83 dBμV/m	74 dBμV/m	-21.17 dB	Pass	Horizontal
2.3563 GHz	53.69 dBμV/m	74 dBμV/m	-20.31 dB	Pass	Horizontal
2.484 GHz	49.65 dBμV/m	74 dBμV/m	-24.35 dB	Pass	Horizontal
2.4998 GHz	49.28 dBμV/m	74 dBμV/m	-24.72 dB	Pass	Horizontal
2.6679 GHz	46.51 dBμV/m	74 dBμV/m	-27.49 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

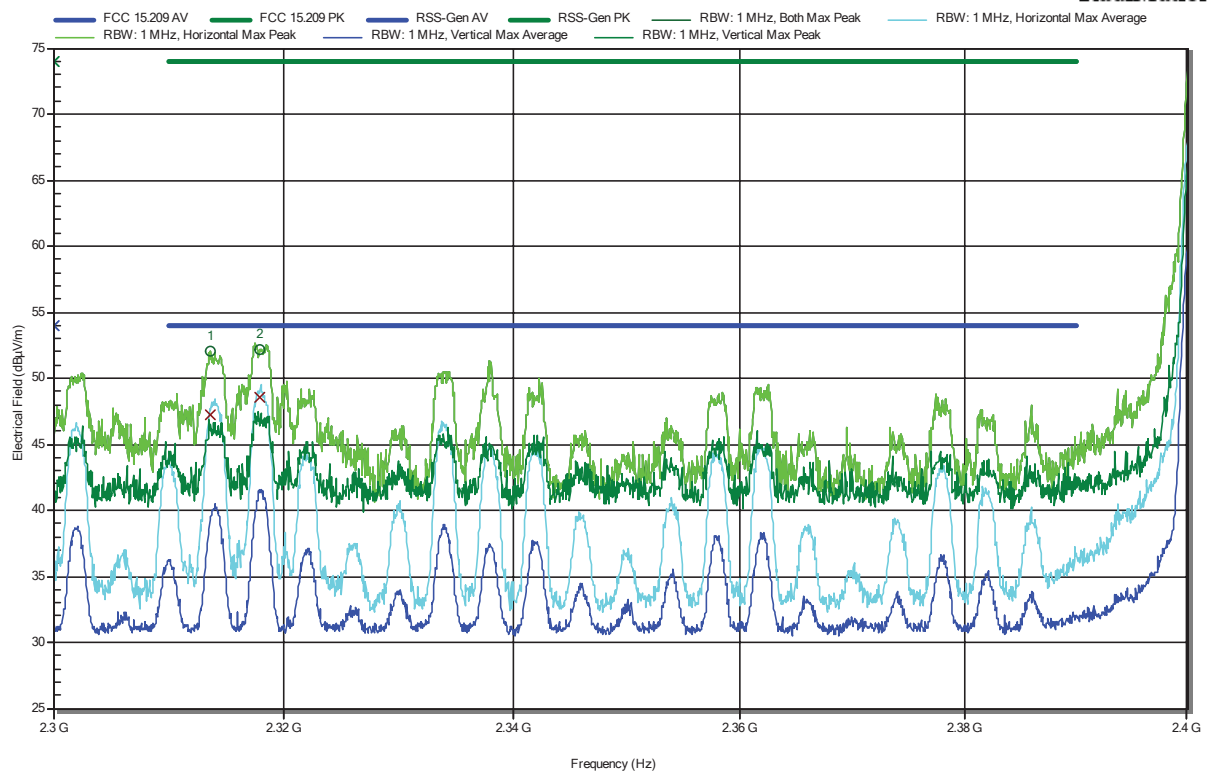
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3121 GHz	47.4 dB μ V/m	54 dB μ V/m	-6.6 dB	Pass	Horizontal
2.3155 GHz	47.59 dB μ V/m	54 dB μ V/m	-6.41 dB	Pass	Horizontal
2.3275 GHz	46.51 dB μ V/m	54 dB μ V/m	-7.49 dB	Pass	Horizontal
2.3321 GHz	49.44 dB μ V/m	54 dB μ V/m	-4.56 dB	Pass	Horizontal
2.3365 GHz	47.56 dB μ V/m	54 dB μ V/m	-6.44 dB	Pass	Horizontal
2.3525 GHz	48.13 dB μ V/m	54 dB μ V/m	-5.87 dB	Pass	Horizontal
2.3563 GHz	49.93 dB μ V/m	54 dB μ V/m	-4.07 dB	Pass	Horizontal
2.484 GHz	45.35 dB μ V/m	54 dB μ V/m	-8.65 dB	Pass	Horizontal
2.4998 GHz	45.27 dB μ V/m	54 dB μ V/m	-8.73 dB	Pass	Horizontal
2.6679 GHz	43.79 dB μ V/m	54 dB μ V/m	-10.21 dB	Pass	Horizontal

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 62

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3136 GHz	52.07 dBμV/m	74 dBμV/m	-21.93 dB	Pass	Horizontal
2.3179 GHz	52.11 dBμV/m	74 dBμV/m	-21.89 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3136 GHz	47.27 dBμV/m	54 dBμV/m	-6.73 dB	Pass	Horizontal
2.3179 GHz	48.6 dBμV/m	54 dBμV/m	-5.4 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

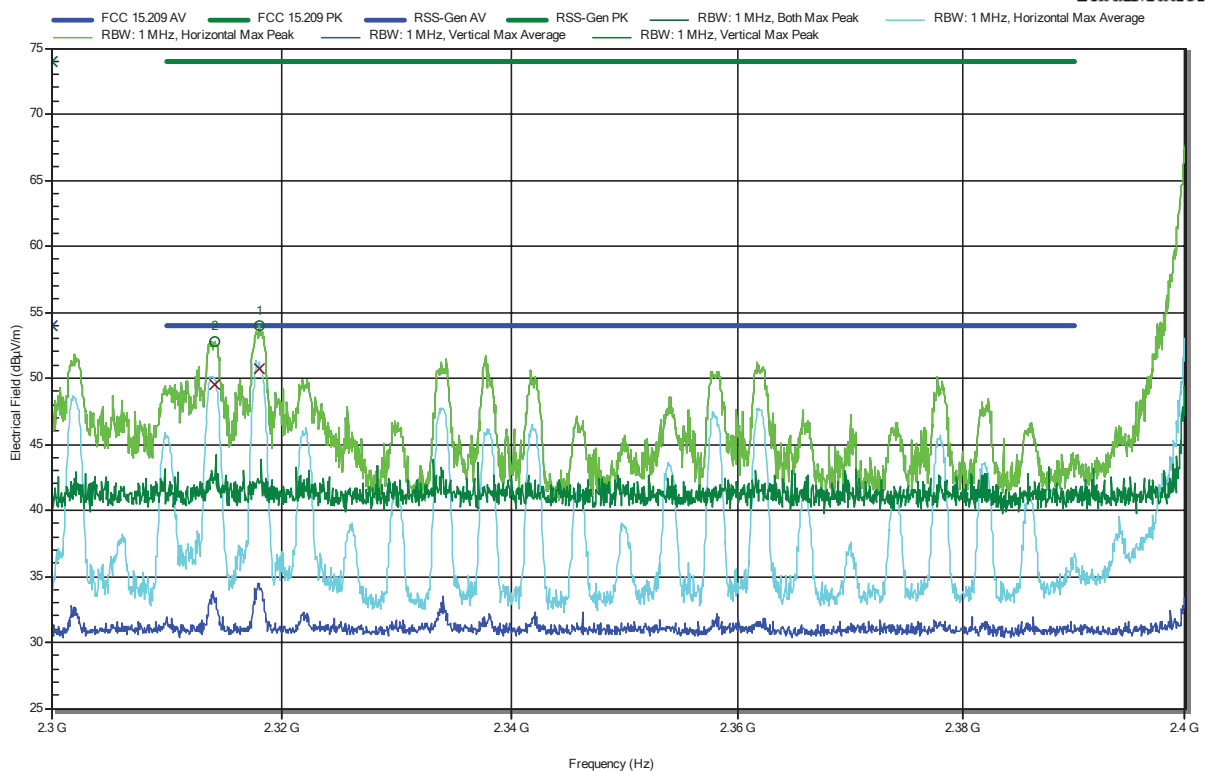
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
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 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 47

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3141 GHz	52.76 dBμV/m	74 dBμV/m	-21.24 dB	Pass	Horizontal
2.318 GHz	54.03 dBμV/m	74 dBμV/m	-19.97 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3141 GHz	49.53 dBμV/m	54 dBμV/m	-4.47 dB	Pass	Horizontal
2.318 GHz	50.71 dBμV/m	54 dBμV/m	-3.29 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

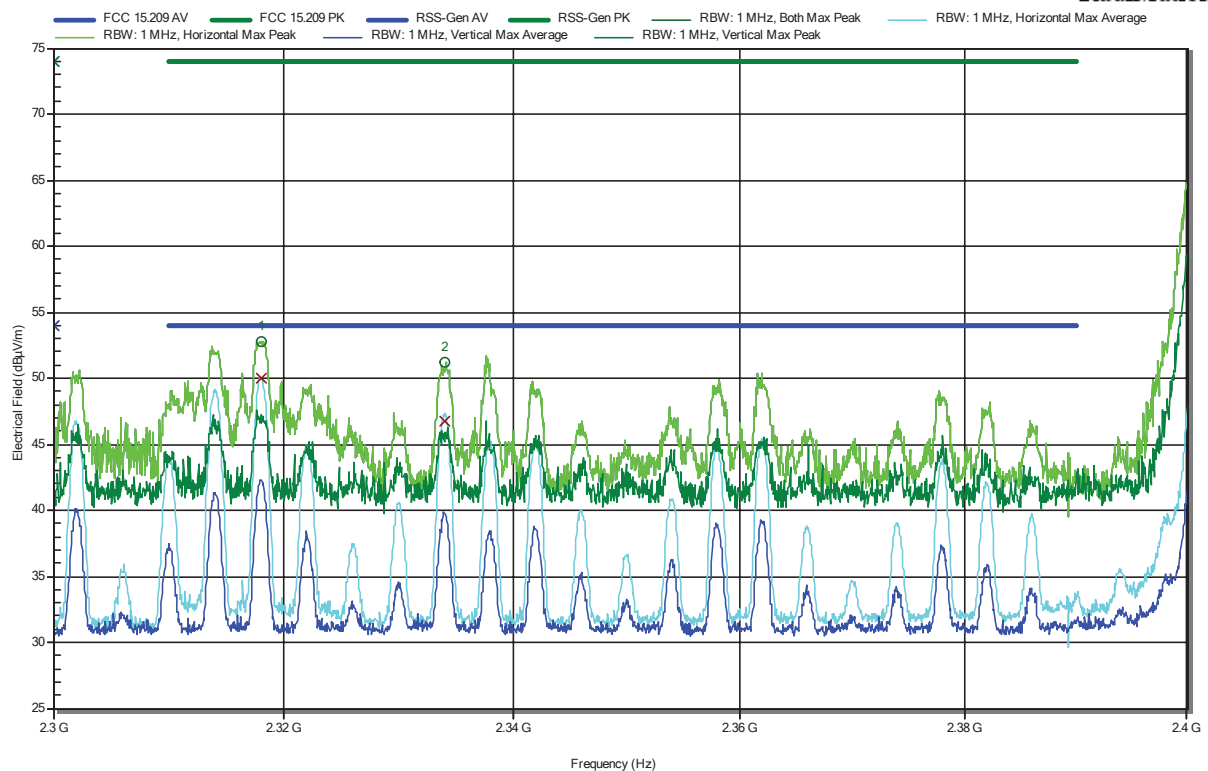
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 51

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.318 GHz	52.79 dBμV/m	74 dBμV/m	-21.21 dB	Pass	Horizontal
2.3341 GHz	51.2 dBμV/m	74 dBμV/m	-22.8 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.318 GHz	49.96 dBμV/m	54 dBμV/m	-4.04 dB	Pass	Horizontal
2.3341 GHz	46.76 dBμV/m	54 dBμV/m	-7.24 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

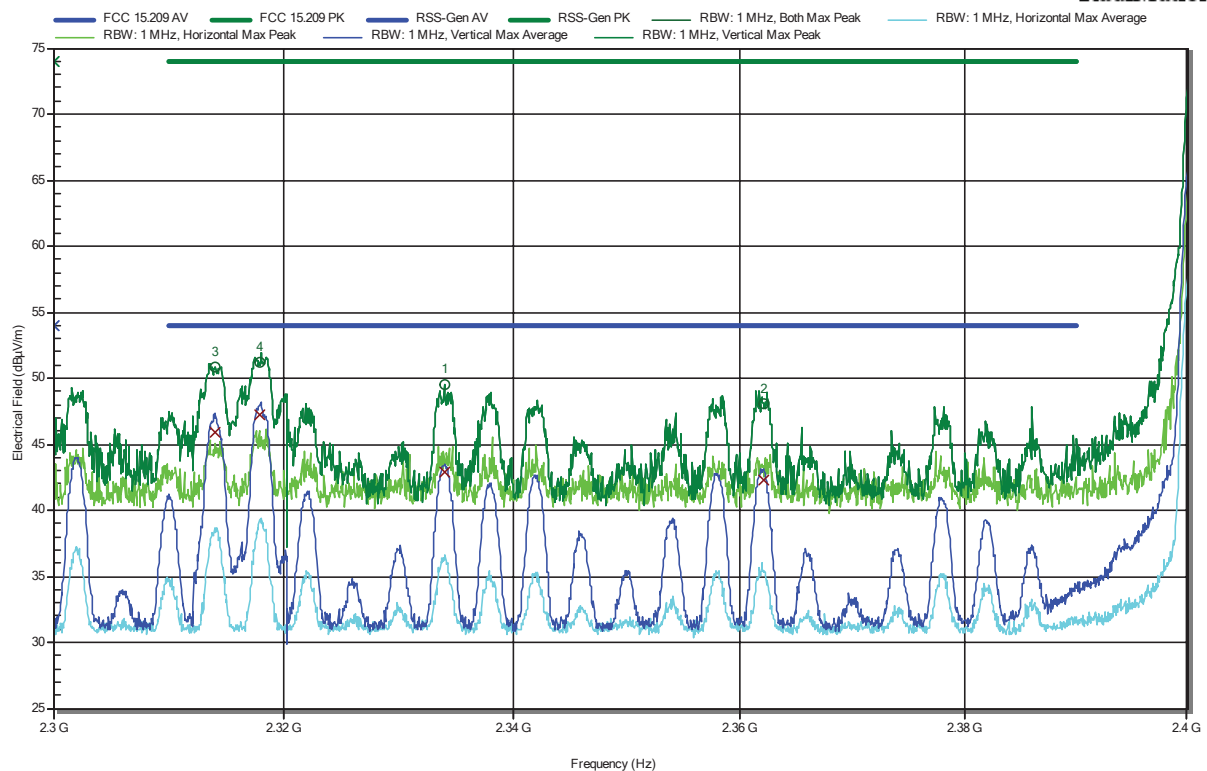
Eurofins Product Service GmbH
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 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT vertical

Index 30

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.314 GHz	50.79 dBμV/m	74 dBμV/m	-23.21 dB	Pass	Vertical
2.318 GHz	51.24 dBμV/m	74 dBμV/m	-22.76 dB	Pass	Vertical
2.334 GHz	49.49 dBμV/m	74 dBμV/m	-24.51 dB	Pass	Vertical
2.3621 GHz	48.09 dBμV/m	74 dBμV/m	-25.91 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.314 GHz	45.86 dBμV/m	54 dBμV/m	-8.14 dB	Pass	Vertical
2.318 GHz	47.24 dBμV/m	54 dBμV/m	-6.76 dB	Pass	Vertical
2.334 GHz	42.9 dBμV/m	54 dBμV/m	-11.1 dB	Pass	Vertical
2.3621 GHz	42.3 dBμV/m	54 dBμV/m	-11.7 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

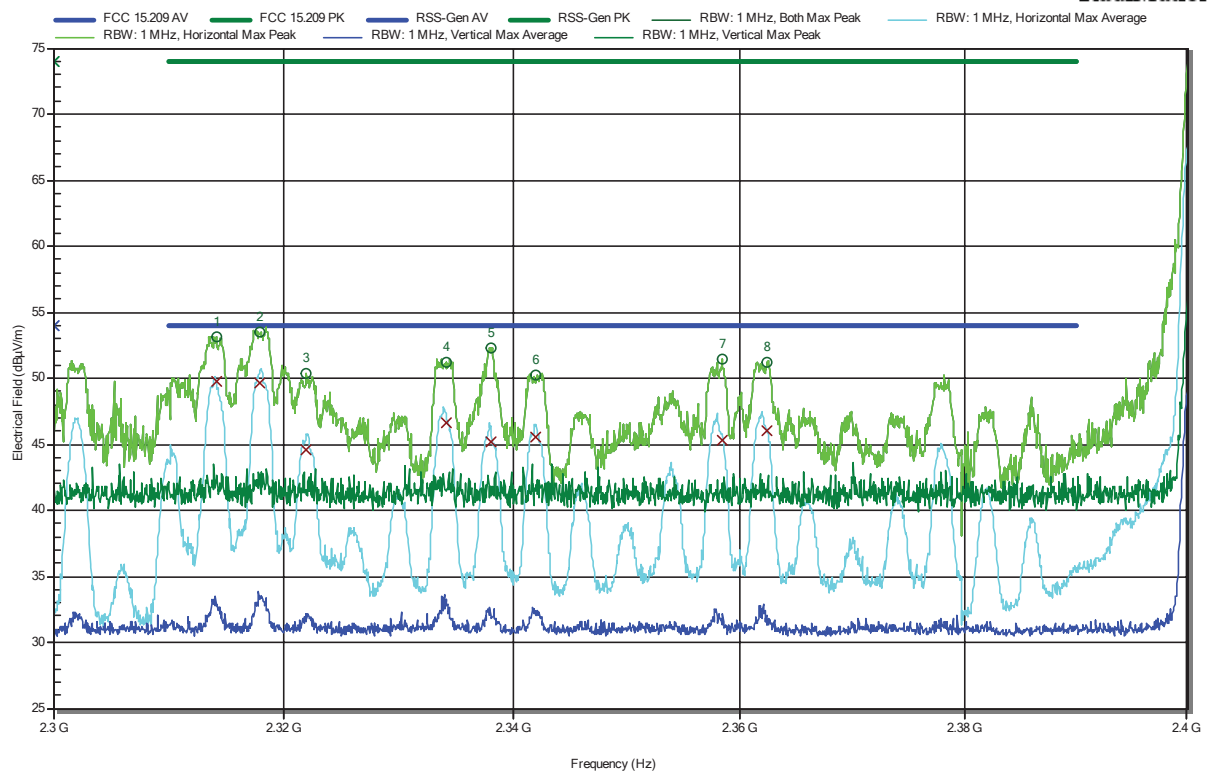
Eurofins Product Service GmbH
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 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 35

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3141 GHz	53.15 dBµV/m	74 dBµV/m	-20.85 dB	Pass	Horizontal
2.3179 GHz	53.48 dBµV/m	74 dBµV/m	-20.52 dB	Pass	Horizontal
2.322 GHz	50.37 dBµV/m	74 dBµV/m	-23.63 dB	Pass	Horizontal
2.3342 GHz	51.22 dBµV/m	74 dBµV/m	-22.78 dB	Pass	Horizontal
2.3381 GHz	52.26 dBµV/m	74 dBµV/m	-21.74 dB	Pass	Horizontal
2.3421 GHz	50.22 dBµV/m	74 dBµV/m	-23.78 dB	Pass	Horizontal
2.3584 GHz	51.44 dBµV/m	74 dBµV/m	-22.56 dB	Pass	Horizontal
2.3624 GHz	51.2 dBµV/m	74 dBµV/m	-22.8 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

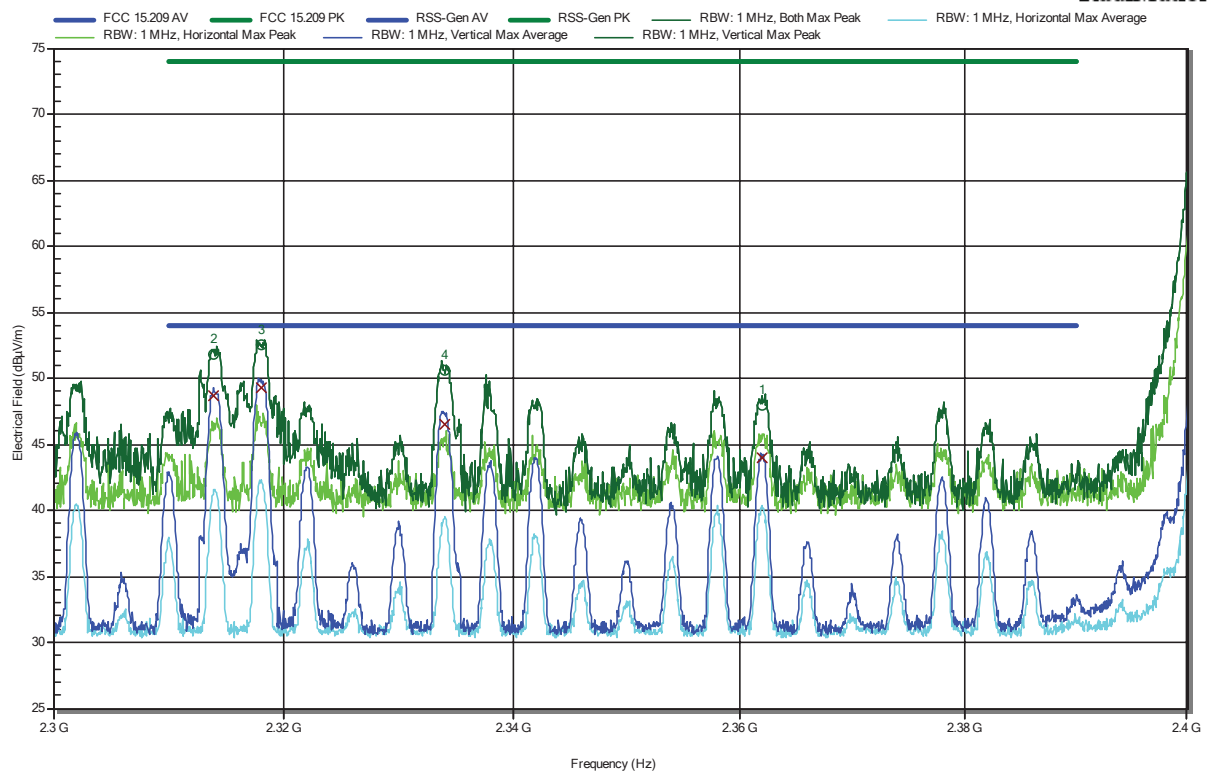
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3141 GHz	49.79 dBµV/m	54 dBµV/m	-4.21 dB	Pass	Horizontal
2.3179 GHz	49.67 dBµV/m	54 dBµV/m	-4.33 dB	Pass	Horizontal
2.322 GHz	44.59 dBµV/m	54 dBµV/m	-9.41 dB	Pass	Horizontal
2.3342 GHz	46.64 dBµV/m	54 dBµV/m	-7.36 dB	Pass	Horizontal
2.3381 GHz	45.12 dBµV/m	54 dBµV/m	-8.88 dB	Pass	Horizontal
2.3421 GHz	45.57 dBµV/m	54 dBµV/m	-8.43 dB	Pass	Horizontal
2.3584 GHz	45.29 dBµV/m	54 dBµV/m	-8.71 dB	Pass	Horizontal
2.3624 GHz	46.05 dBµV/m	54 dBµV/m	-7.95 dB	Pass	Horizontal

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 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 15

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3139 GHz	51.81 dBμV/m	74 dBμV/m	-22.19 dB	Pass	Vertical
2.318 GHz	52.53 dBμV/m	74 dBμV/m	-21.47 dB	Pass	Vertical
2.334 GHz	50.57 dBμV/m	74 dBμV/m	-23.43 dB	Pass	Vertical
2.362 GHz	47.98 dBμV/m	74 dBμV/m	-26.02 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3139 GHz	48.66 dBμV/m	54 dBμV/m	-5.34 dB	Pass	Vertical
2.318 GHz	49.23 dBμV/m	54 dBμV/m	-4.77 dB	Pass	Vertical
2.334 GHz	46.53 dBμV/m	54 dBμV/m	-7.47 dB	Pass	Vertical
2.362 GHz	43.95 dBμV/m	54 dBμV/m	-10.05 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

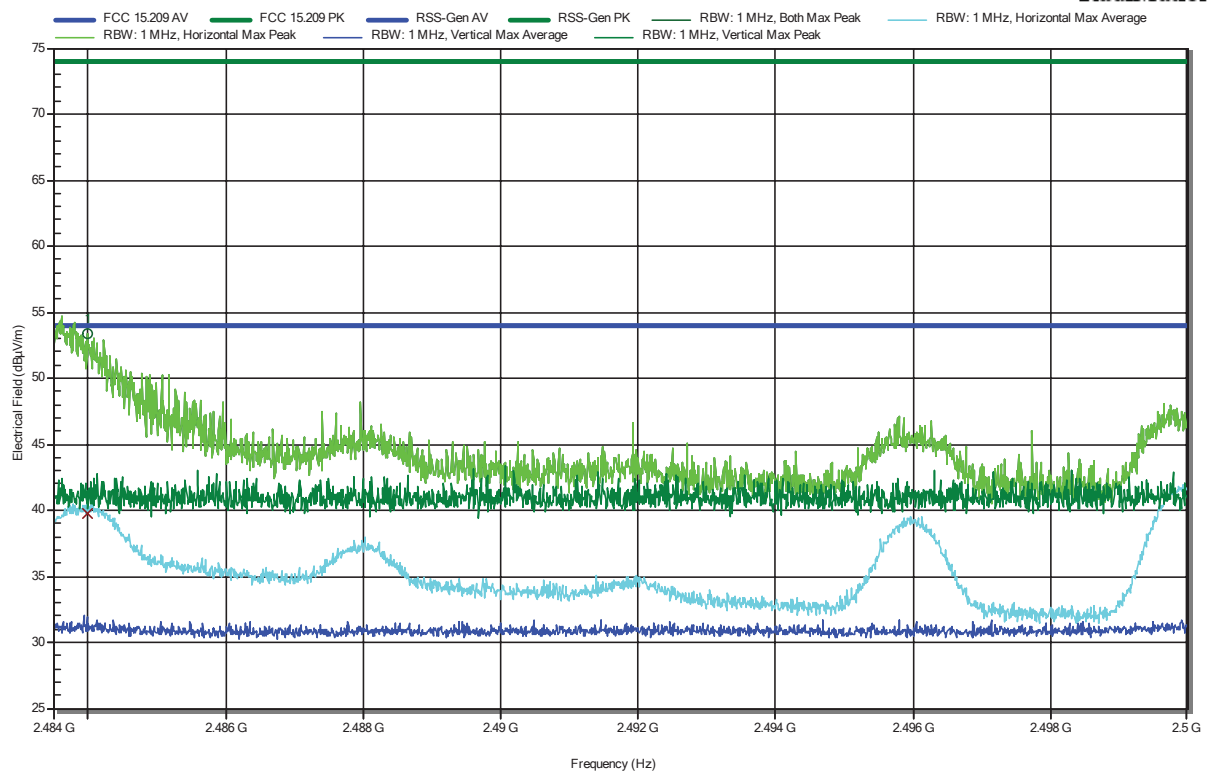
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 42

RadiMation



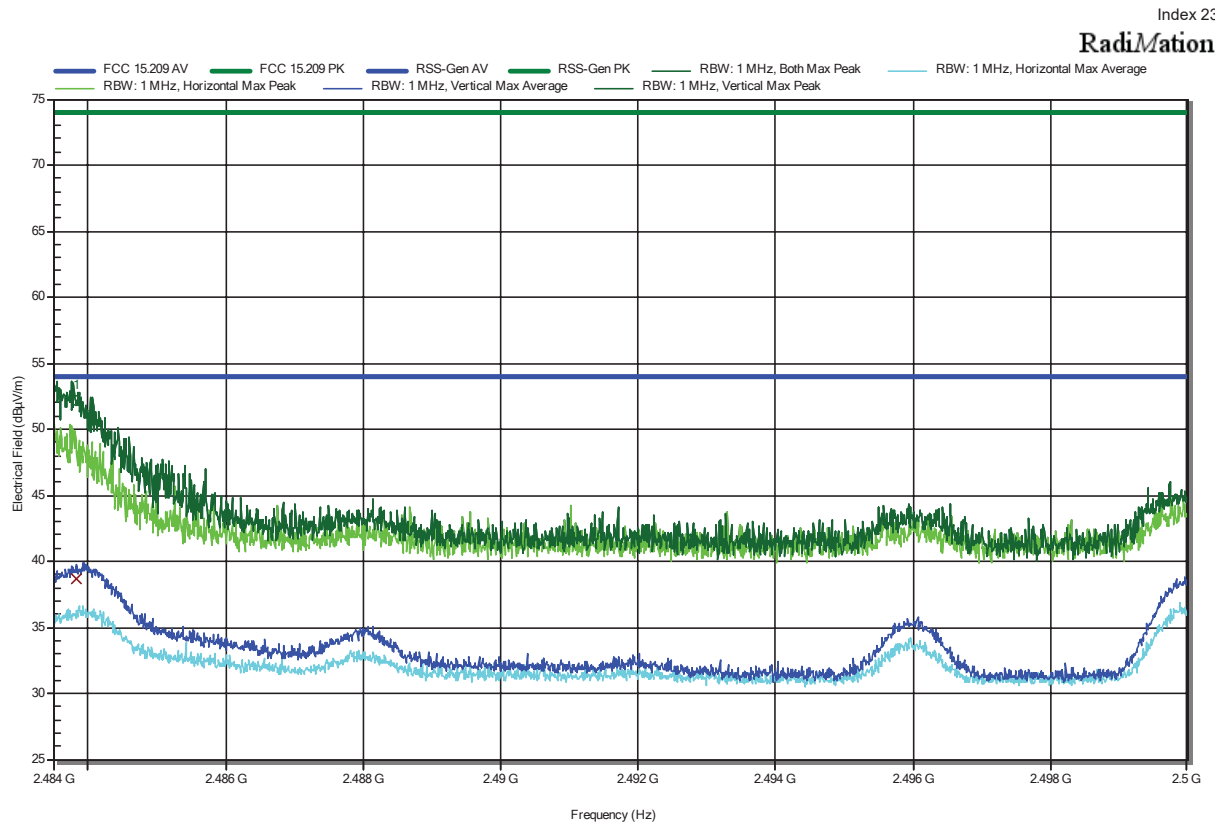
Frequency 2.484 GHz	Peak 53.38 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -20.62 dB	Peak Status Pass	Polarization Horizontal
Frequency 2.484 GHz	Average 39.81 dBμV/m	Average Limit 54 dBμV/m	Average Difference -14.19 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

Eurofins Product Service GmbH
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical



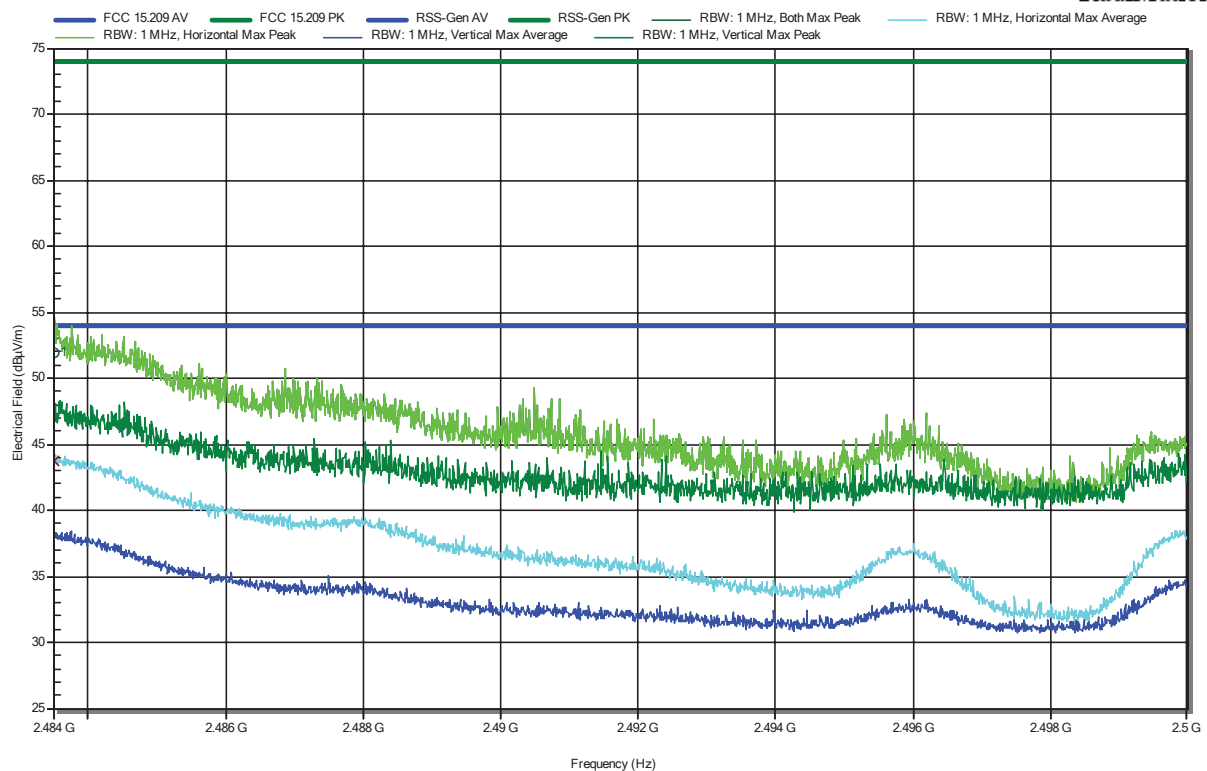
Frequency 2.4838 GHz	Peak 52.16 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -21.84 dB	Peak Status Pass	Polarization Vertical
Frequency 2.4838 GHz	Average 38.67 dBµV/m	Average Limit 54 dBµV/m	Average Difference -15.33 dB	Average Status Pass	Polarization Vertical

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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 57

RadiMation



Frequency 2.4835 GHz	Peak 51.98 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -22.02 dB	Peak Status Pass	Polarization Horizontal
Frequency 2.4835 GHz	Average 43.77 dBμV/m	Average Limit 54 dBμV/m	Average Difference -10.23 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

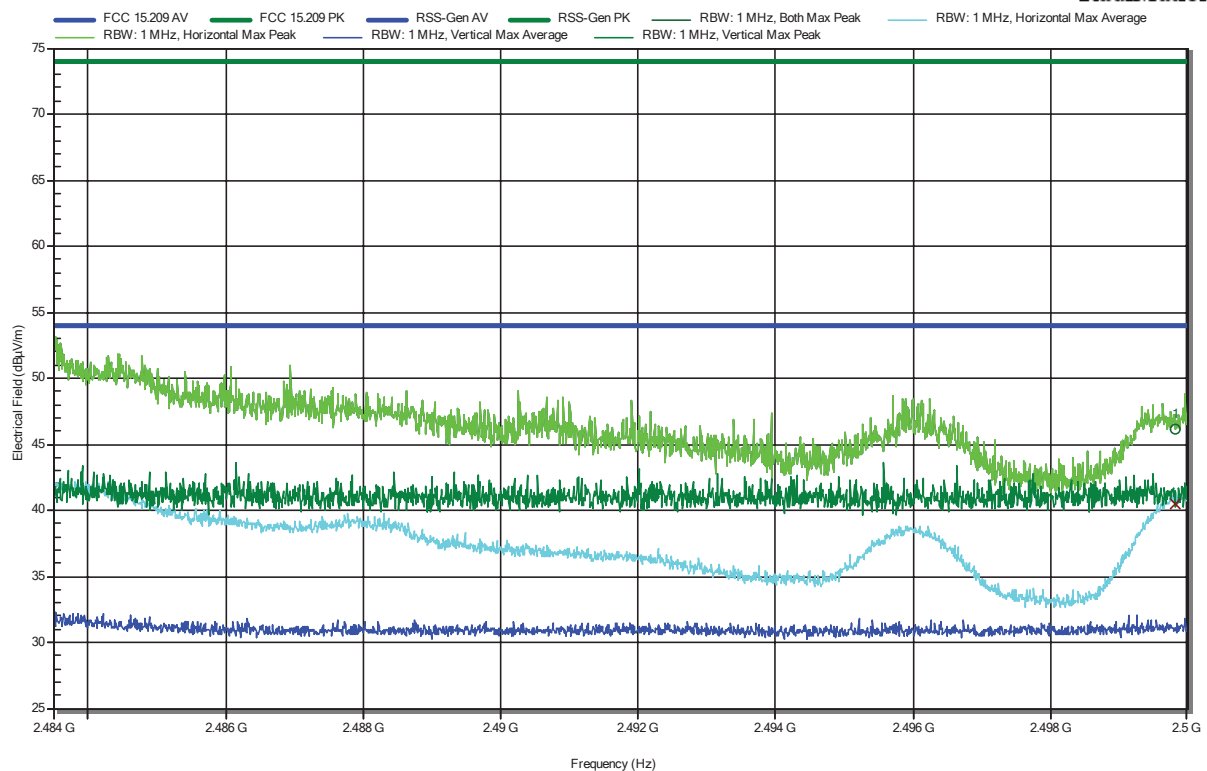
Eurofins Product Service GmbH
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 39

RadiMation



Frequency 2.4998 GHz	Peak 46.18 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -27.82 dB	Peak Status Pass	Polarization Horizontal
Frequency 2.4998 GHz	Average 40.48 dBµV/m	Average Limit 54 dBµV/m	Average Difference -13.52 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

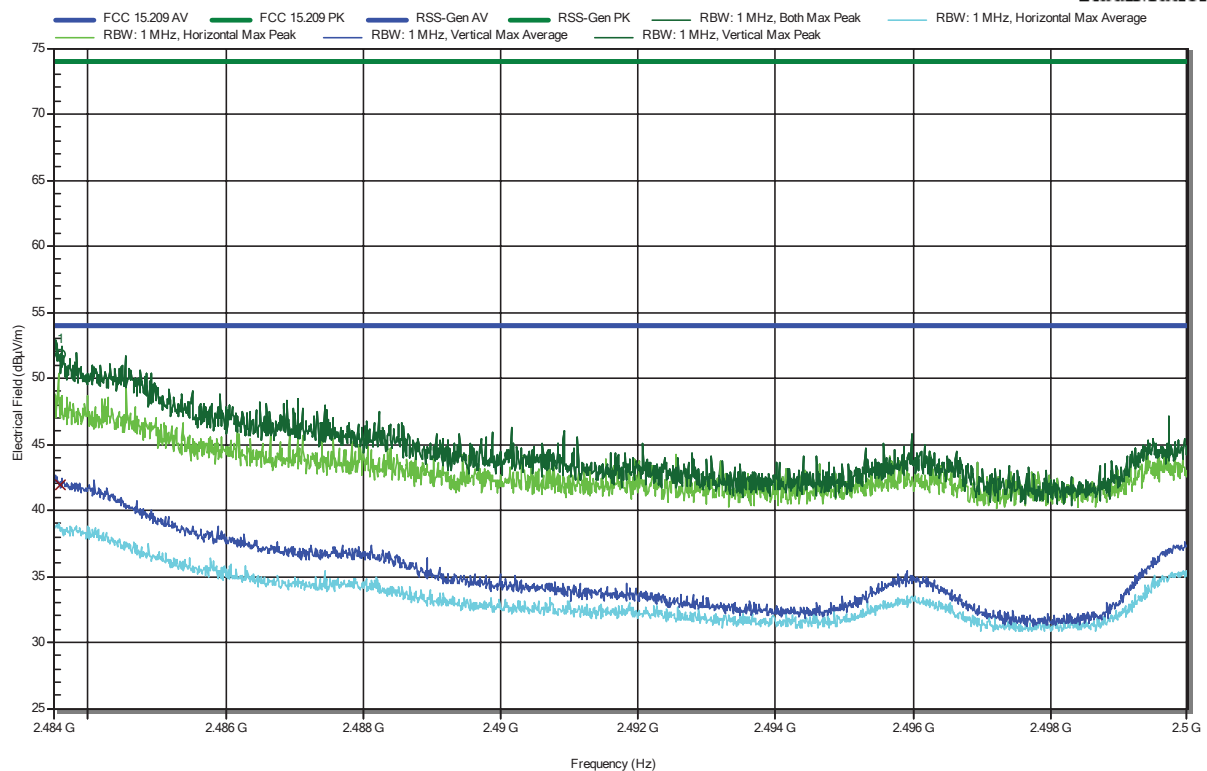
Eurofins Product Service GmbH
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 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 25

RadiMation



Frequency 2.4836 GHz	Peak 51.76 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -22.24 dB	Peak Status Pass	Polarization Vertical
Frequency 2.4836 GHz	Average 41.96 dBµV/m	Average Limit 54 dBµV/m	Average Difference -12.04 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

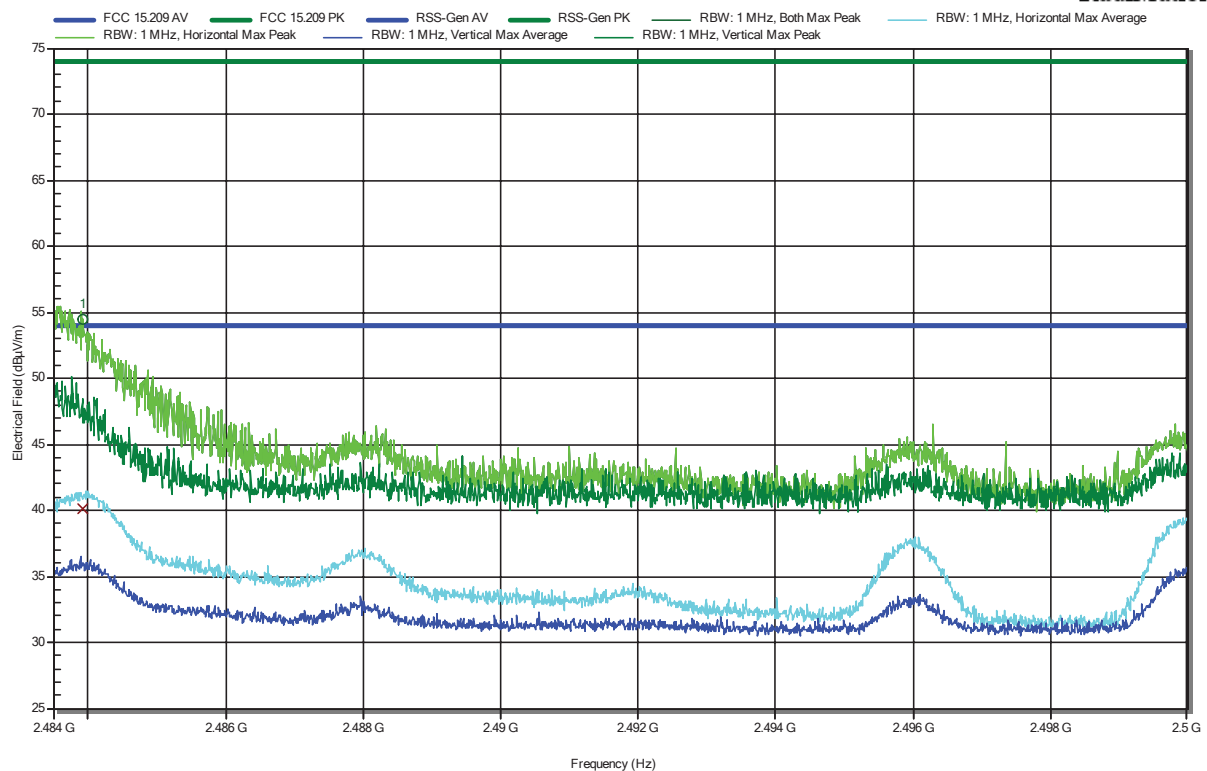
Eurofins Product Service GmbH
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 56

RadiMation



Frequency 2.4839 GHz	Peak 54.5 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -19.5 dB	Peak Status Pass	Polarization Horizontal
Frequency 2.4839 GHz	Average 40.14 dBµV/m	Average Limit 54 dBµV/m	Average Difference -13.86 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

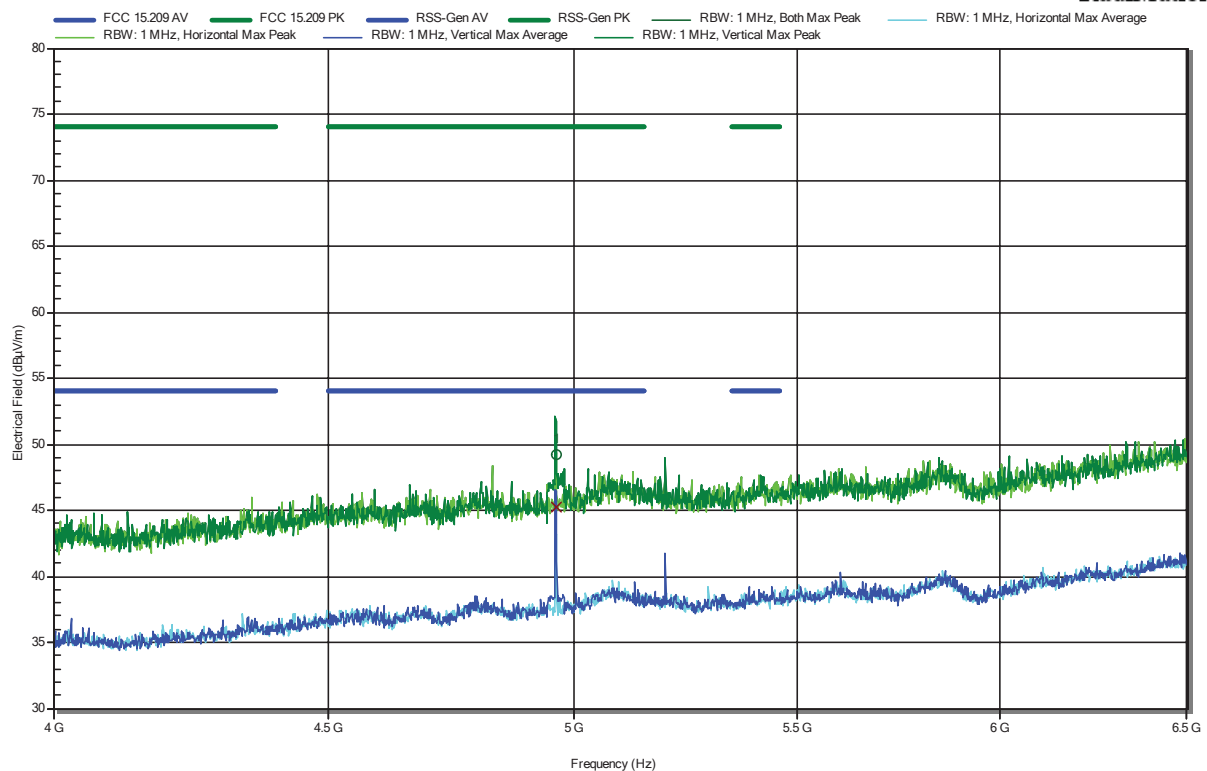
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 54

RadiMation



Frequency 4.9601 GHz	Peak 49.17 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -24.83 dB	Peak Status Pass	Polarization Vertical
Frequency 4.9601 GHz	Average 45.26 dBμV/m	Average Limit 54 dBμV/m	Average Difference -8.74 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

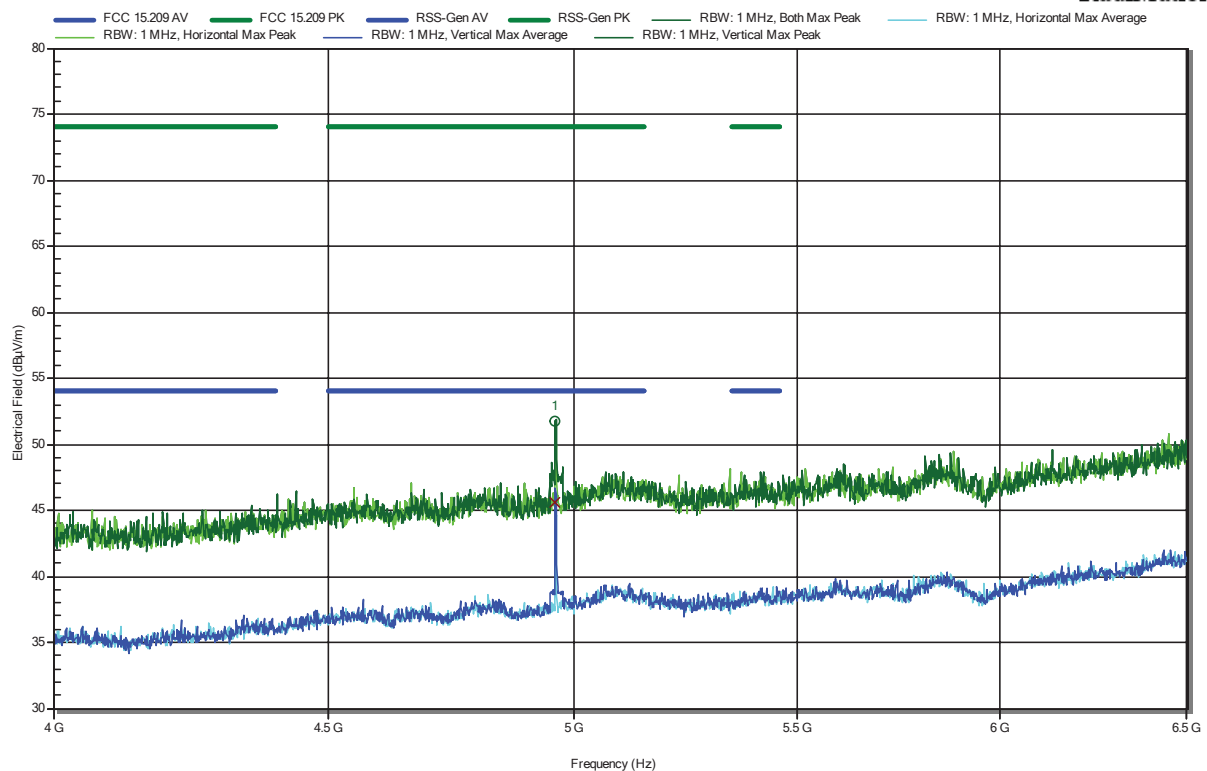
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 22

RadiMation



Frequency 4.9594 GHz	Peak 51.78 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -22.22 dB	Peak Status Pass	Polarization Vertical
Frequency 4.9594 GHz	Average 45.66 dBμV/m	Average Limit 54 dBμV/m	Average Difference -8.34 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

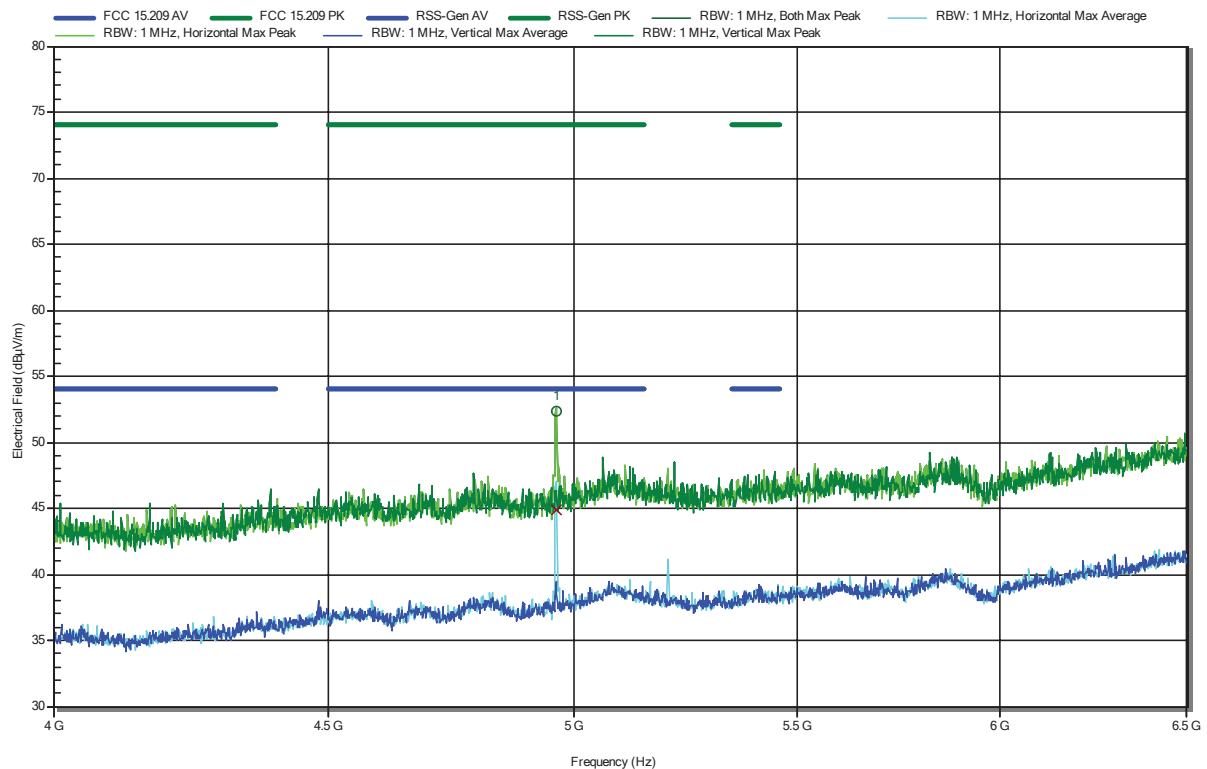
Eurofins Product Service GmbH
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 38

RadiMation



Frequency 4.96 GHz	Peak 52.37 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -21.63 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.96 GHz	Average 44.9 dBμV/m	Average Limit 54 dBμV/m	Average Difference -9.1 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

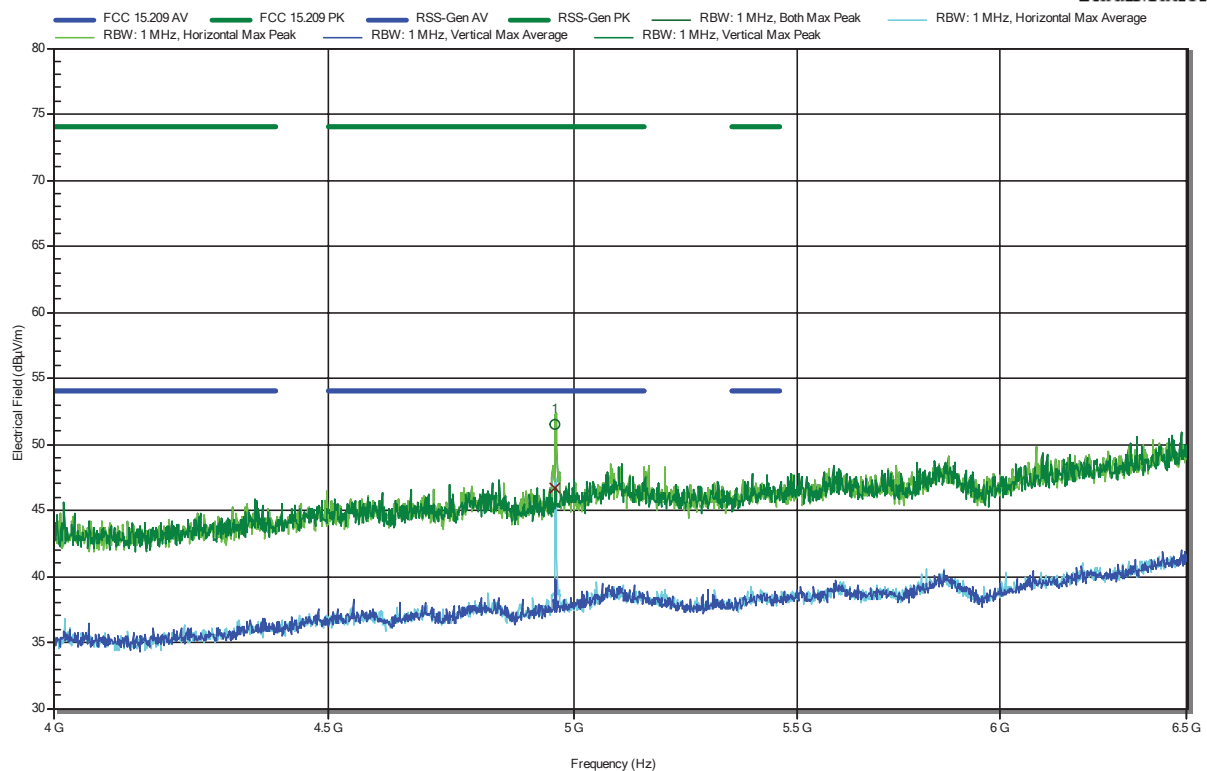
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 43

RadiMation



Frequency 4.9594 GHz	Peak 51.56 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -22.44 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.9594 GHz	Average 46.73 dBμV/m	Average Limit 54 dBμV/m	Average Difference -7.27 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

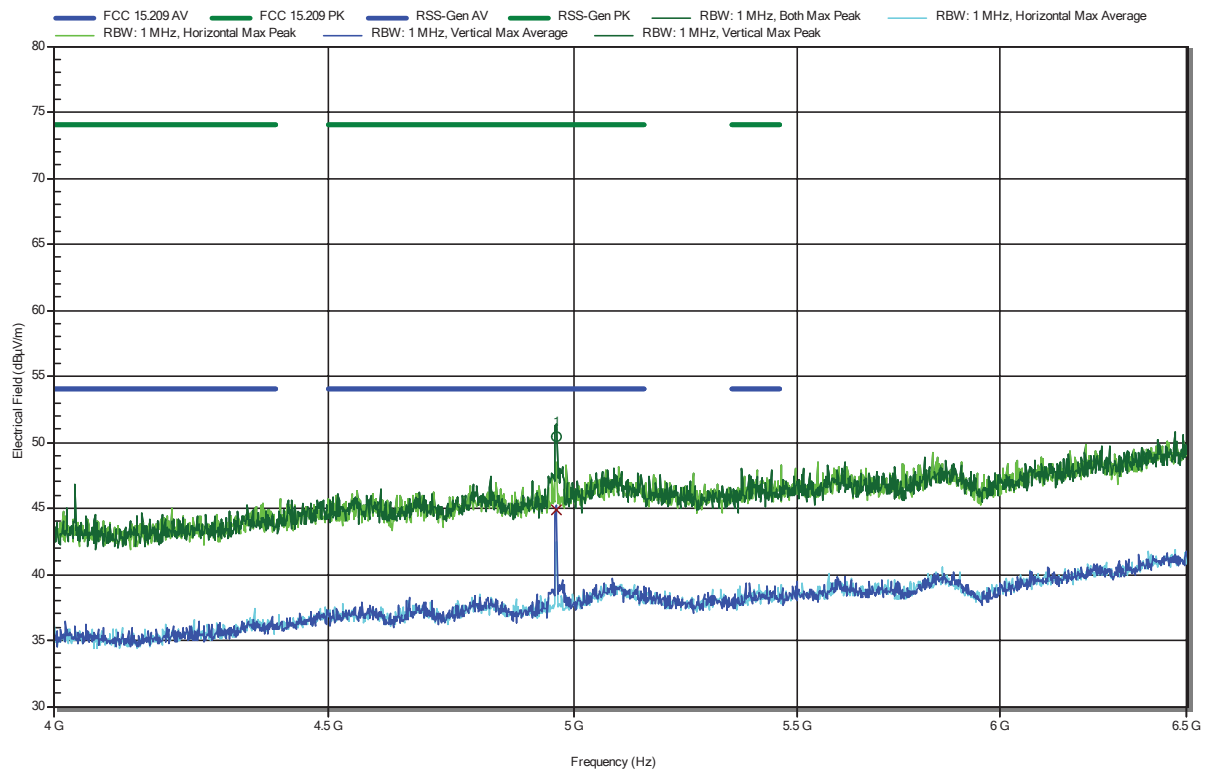
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 26

RadiMation



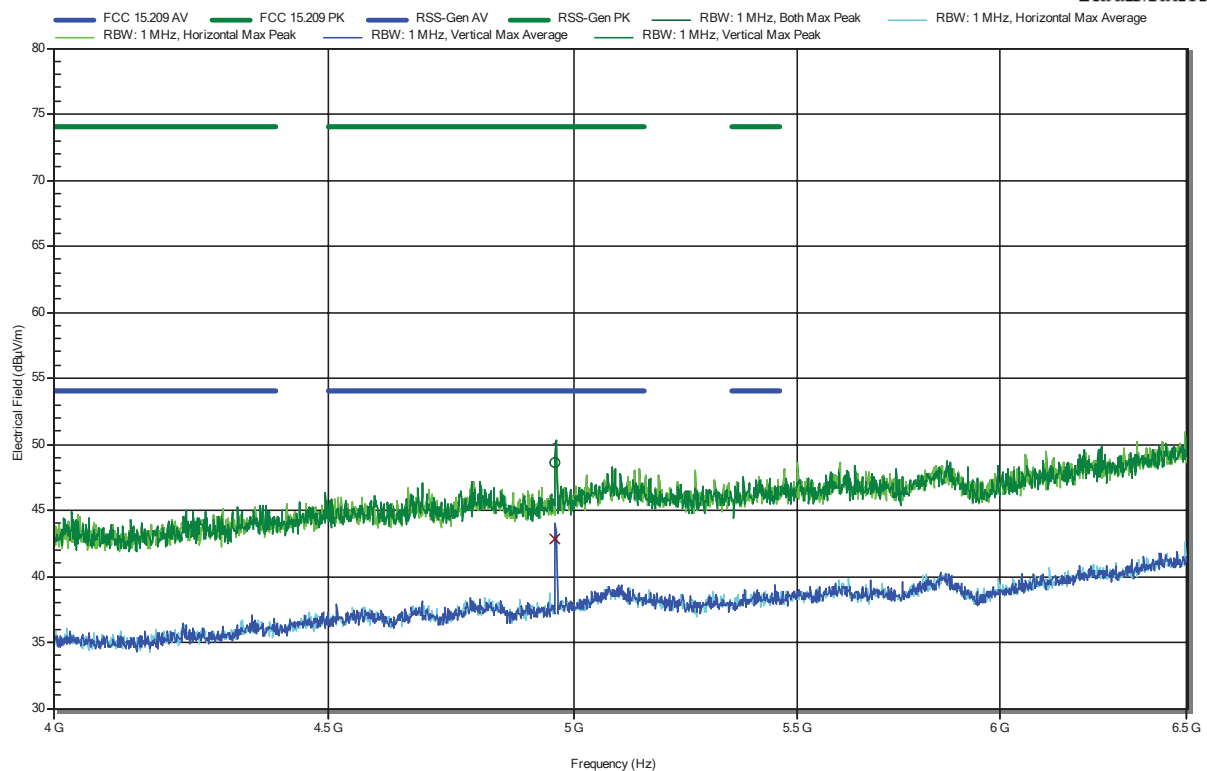
Frequency 4.96 GHz	Peak 50.48 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -23.52 dB	Peak Status Pass	Polarization Vertical
Frequency 4.96 GHz	Average 44.88 dBμV/m	Average Limit 54 dBμV/m	Average Difference -9.12 dB	Average Status Pass	Polarization Vertical

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 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 64

RadiMation



Frequency 4.9591 GHz	Peak 48.56 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -25.44 dB	Peak Status Pass	Polarization Vertical
Frequency 4.9591 GHz	Average 42.89 dBµV/m	Average Limit 54 dBµV/m	Average Difference -11.11 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

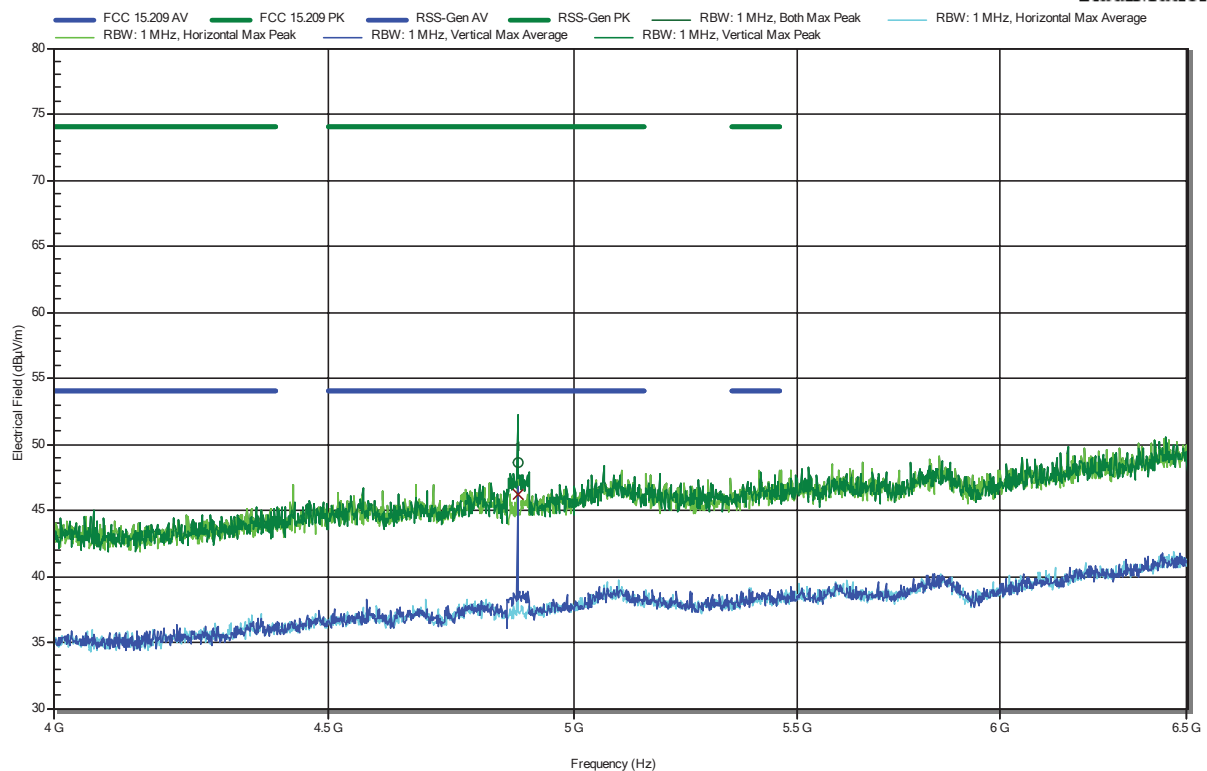
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 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 53

RadiMation



Frequency 4.8801 GHz	Peak 48.67 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -25.33 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8801 GHz	Average 46.15 dBμV/m	Average Limit 54 dBμV/m	Average Difference -7.85 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

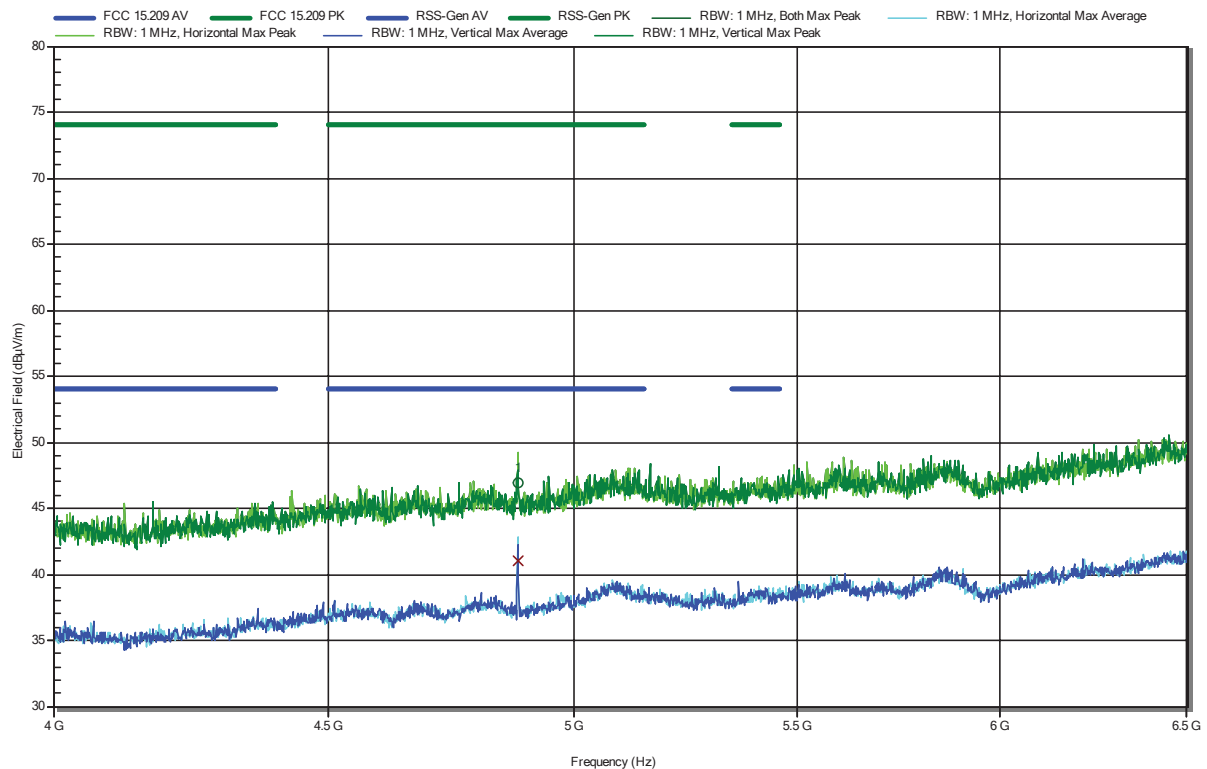
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT vertical

Index 29

RadiMation



Frequency 4.8811 GHz	Peak 46.9 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -27.1 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8811 GHz	Average 41.04 dBµV/m	Average Limit 54 dBµV/m	Average Difference -12.96 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

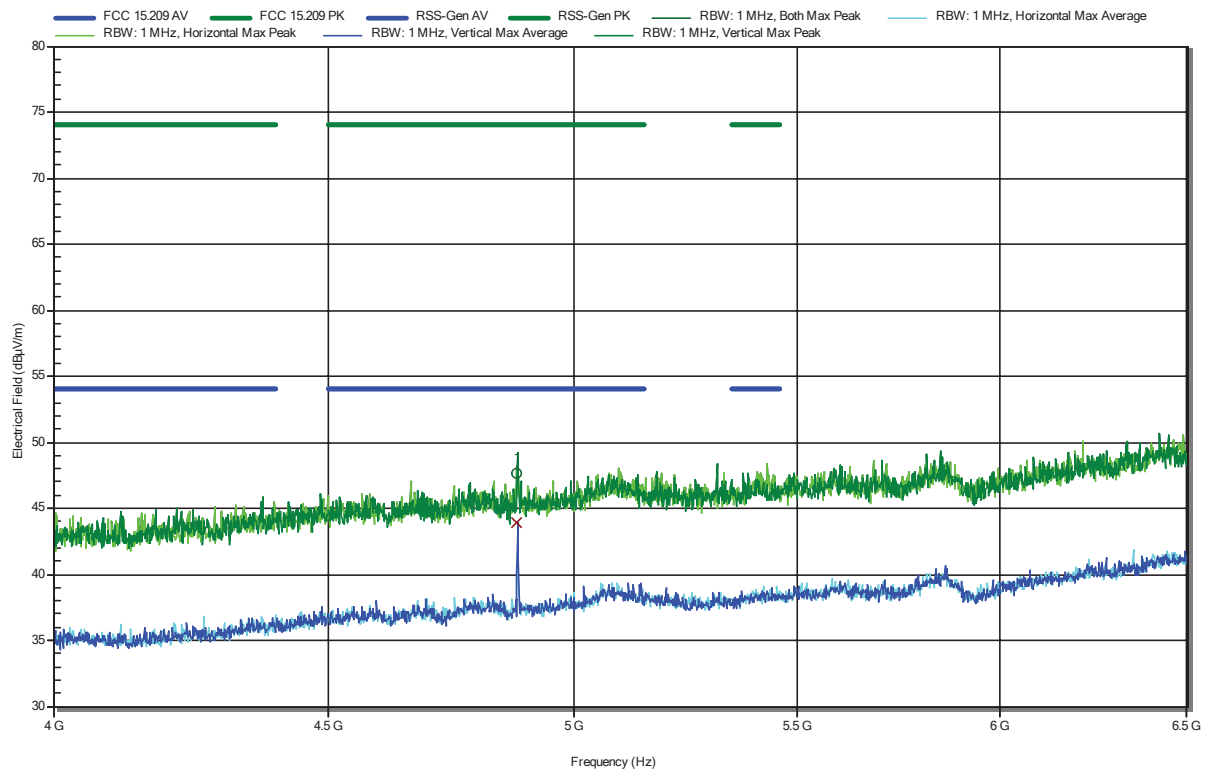
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 60

RadiMation



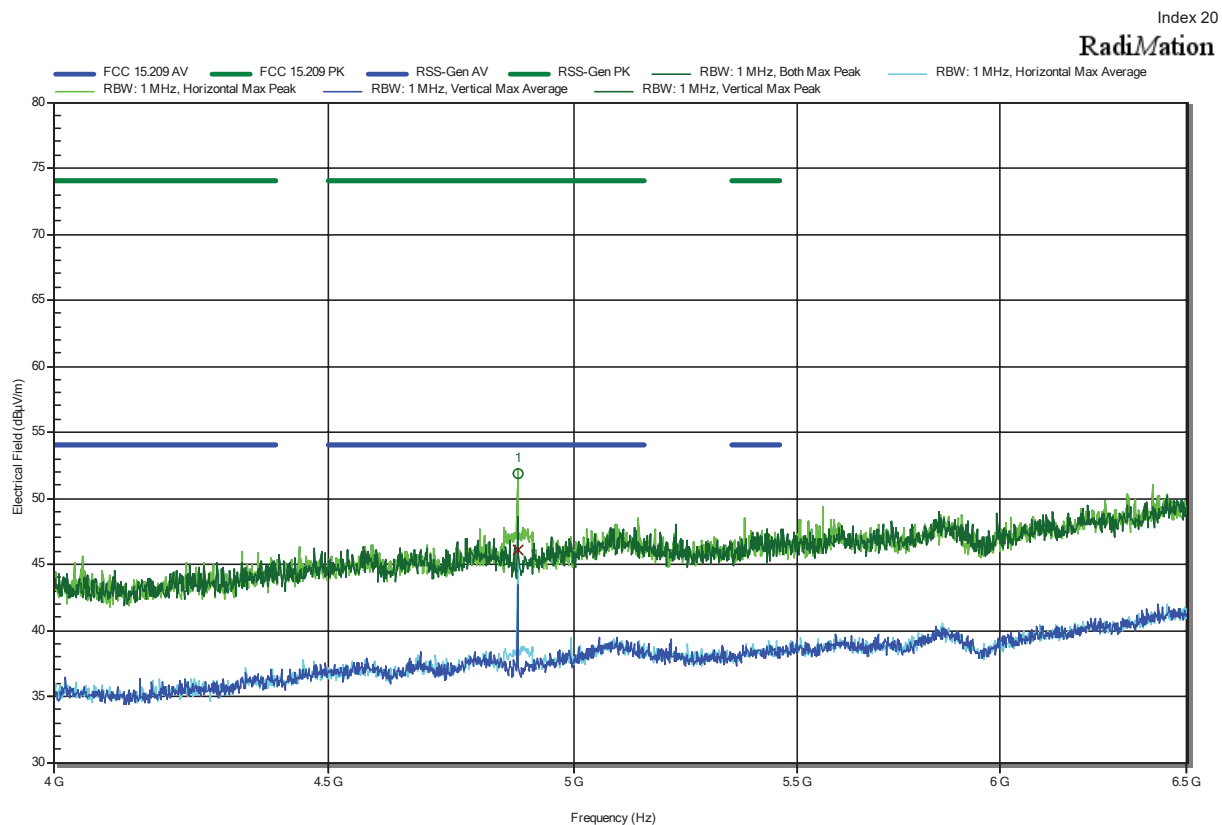
Frequency 4.8791 GHz	Peak 47.63 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -26.37 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8791 GHz	Average 43.9 dBμV/m	Average Limit 54 dBμV/m	Average Difference -10.1 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical



Frequency 4.8795 GHz	Peak 51.83 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -22.17 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.8795 GHz	Average 46.08 dBμV/m	Average Limit 54 dBμV/m	Average Difference -7.92 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

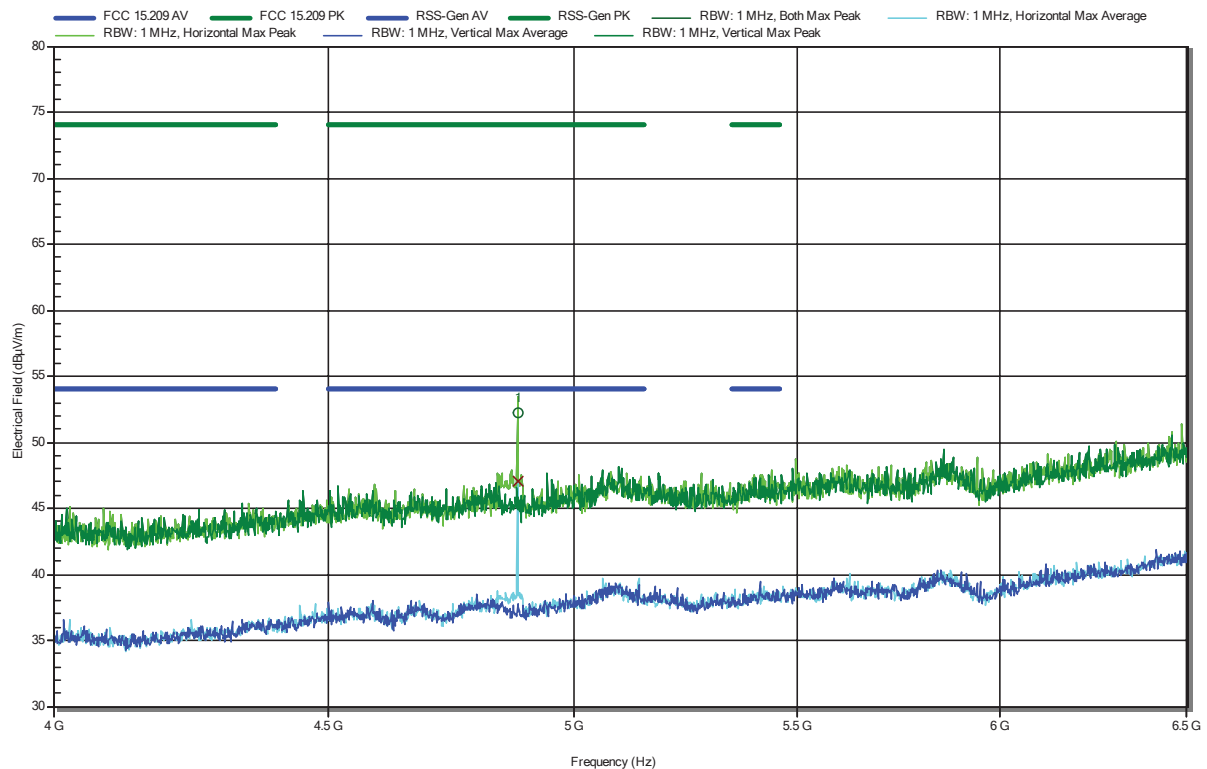
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 44

RadiMation



Frequency 4.8797 GHz	Peak 52.26 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -21.74 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.8797 GHz	Average 47.09 dBμV/m	Average Limit 54 dBμV/m	Average Difference -6.91 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

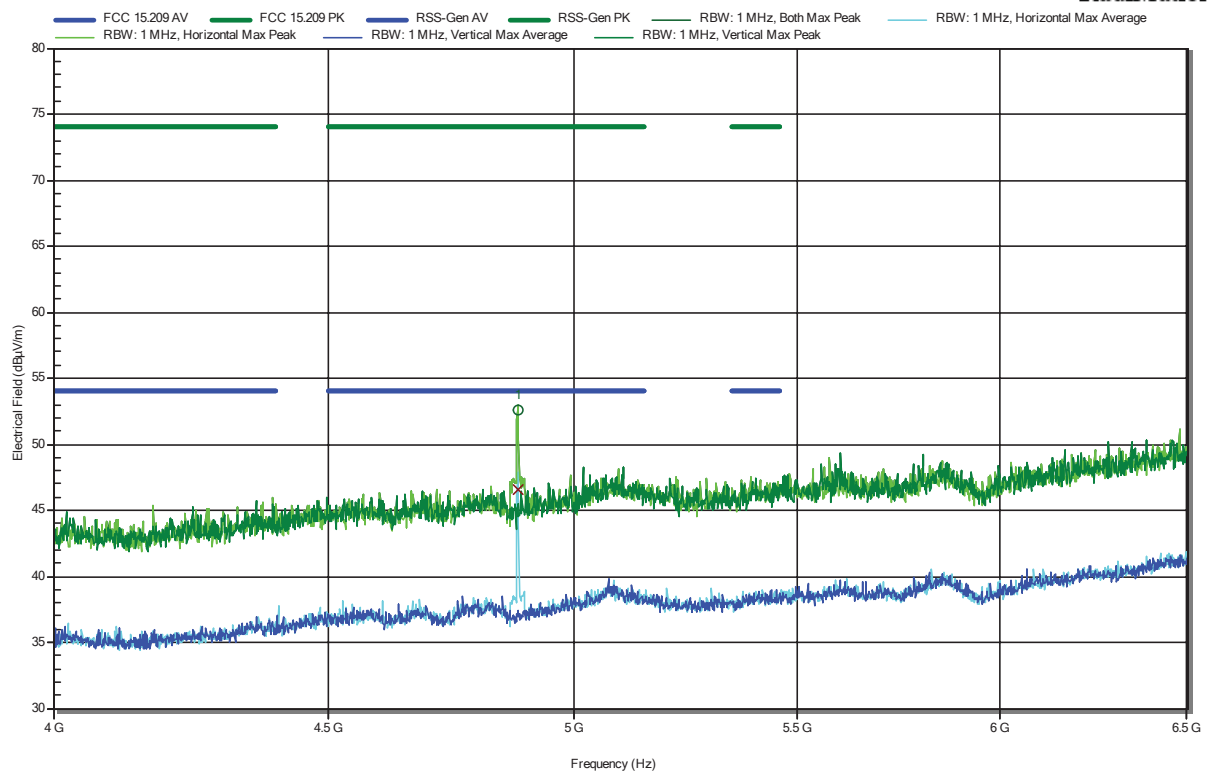
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 37

RadiMation



Frequency 4.8809 GHz	Peak 52.62 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -21.38 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.8809 GHz	Average 46.57 dBμV/m	Average Limit 54 dBμV/m	Average Difference -7.43 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

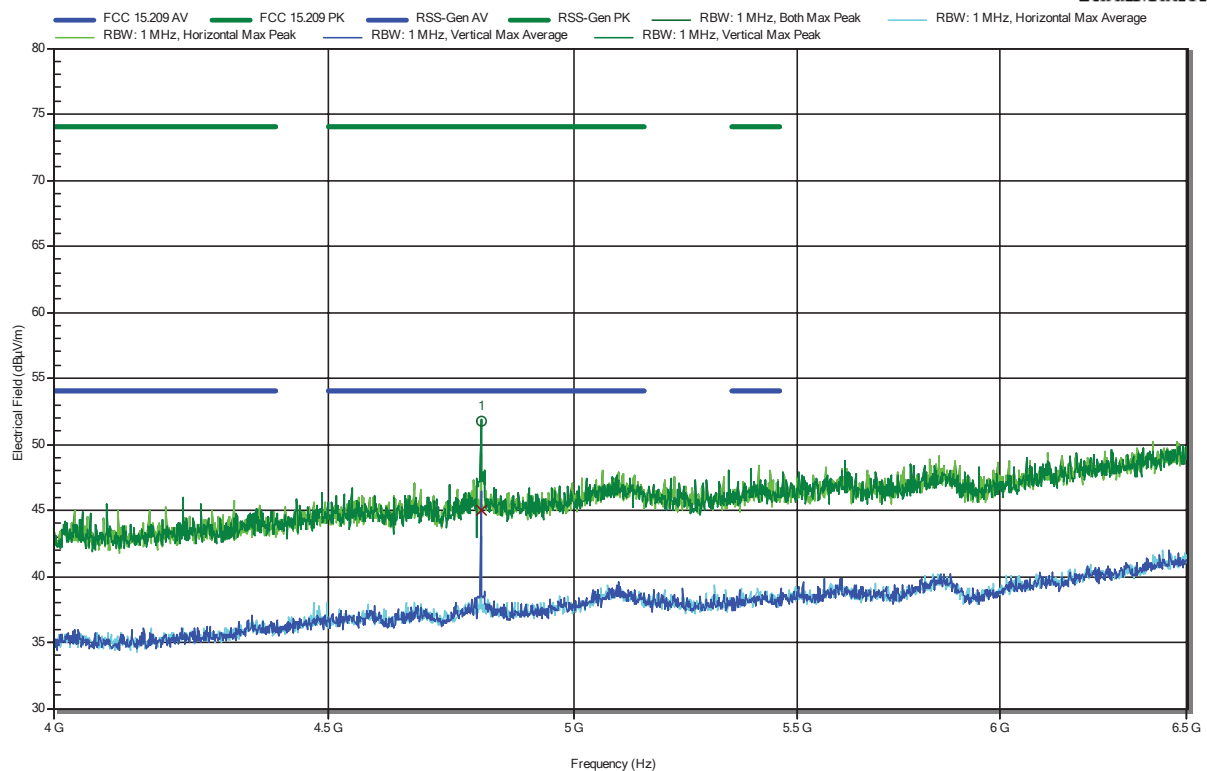
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 49

RadiMation



Frequency 4.8035 GHz	Peak 51.77 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -22.23 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8035 GHz	Average 45.03 dBµV/m	Average Limit 54 dBµV/m	Average Difference -8.97 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

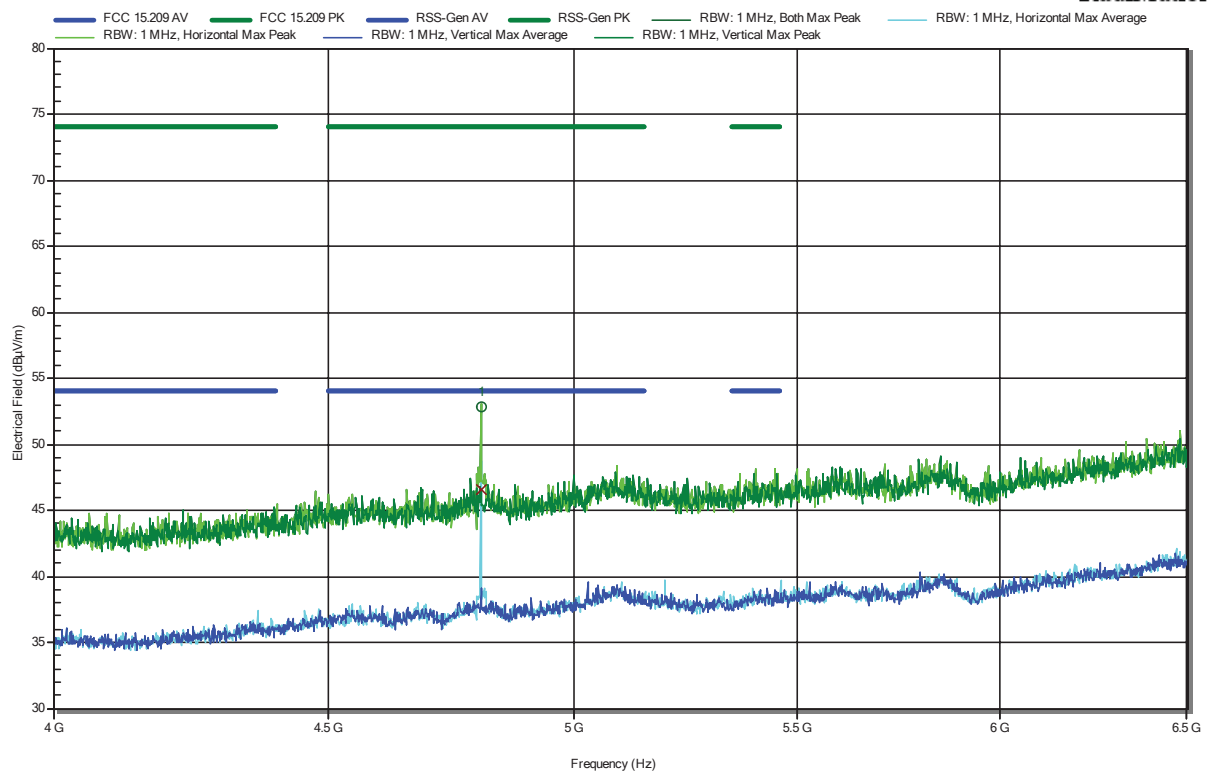
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 48

RadiMation



Frequency 4.8044 GHz	Peak 52.85 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -21.15 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.8044 GHz	Average 46.6 dBμV/m	Average Limit 54 dBμV/m	Average Difference -7.4 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

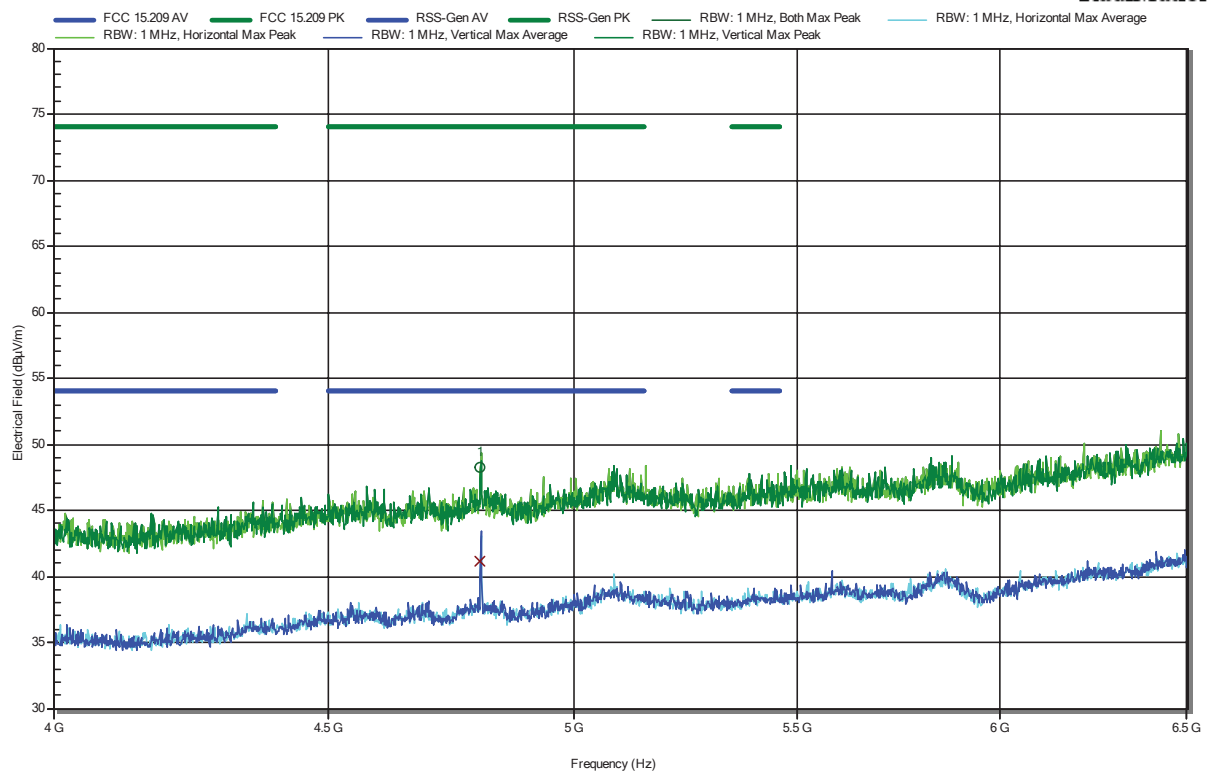
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT vertical

Index 32

RadiMation



Frequency 4.8029 GHz	Peak 48.29 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -25.71 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8029 GHz	Average 41.09 dBμV/m	Average Limit 54 dBμV/m	Average Difference -12.91 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

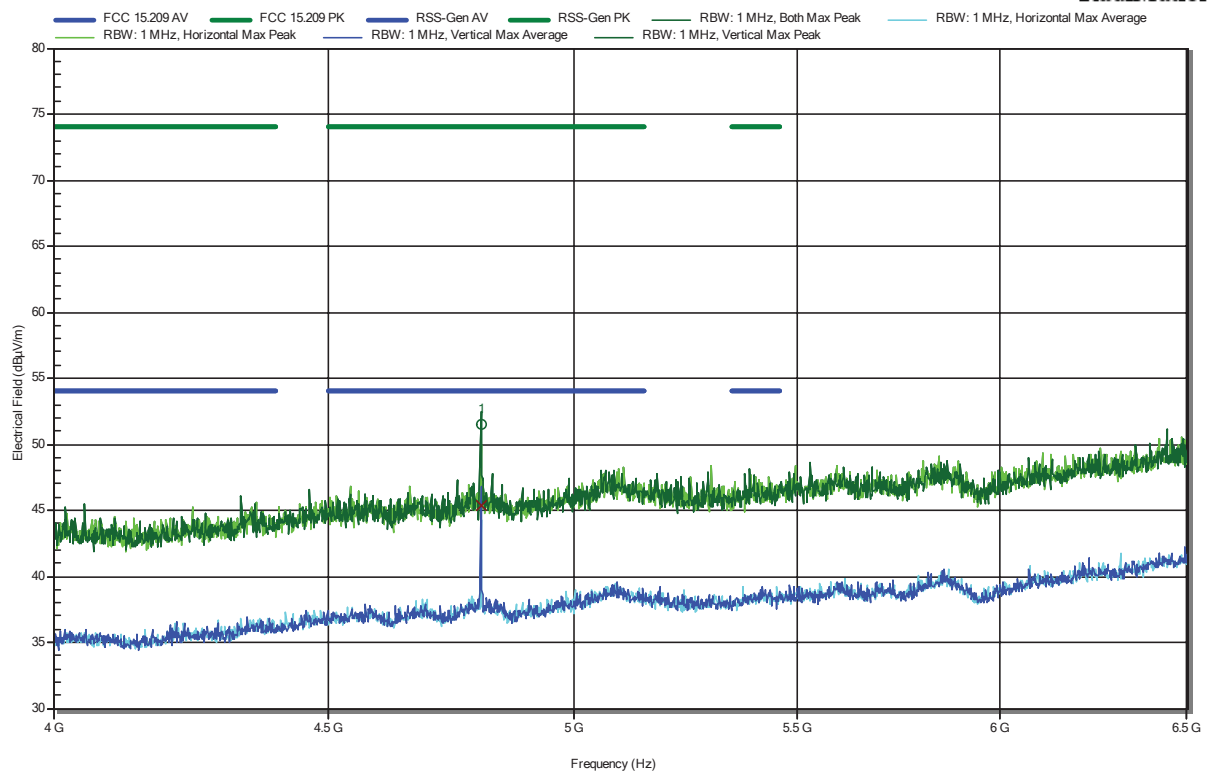
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2022-12-22
 Note: EUT vertical

Index 19

RadiMation



Frequency 4.8039 GHz	Peak 51.45 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -22.55 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8039 GHz	Average 45.3 dBμV/m	Average Limit 54 dBμV/m	Average Difference -8.7 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

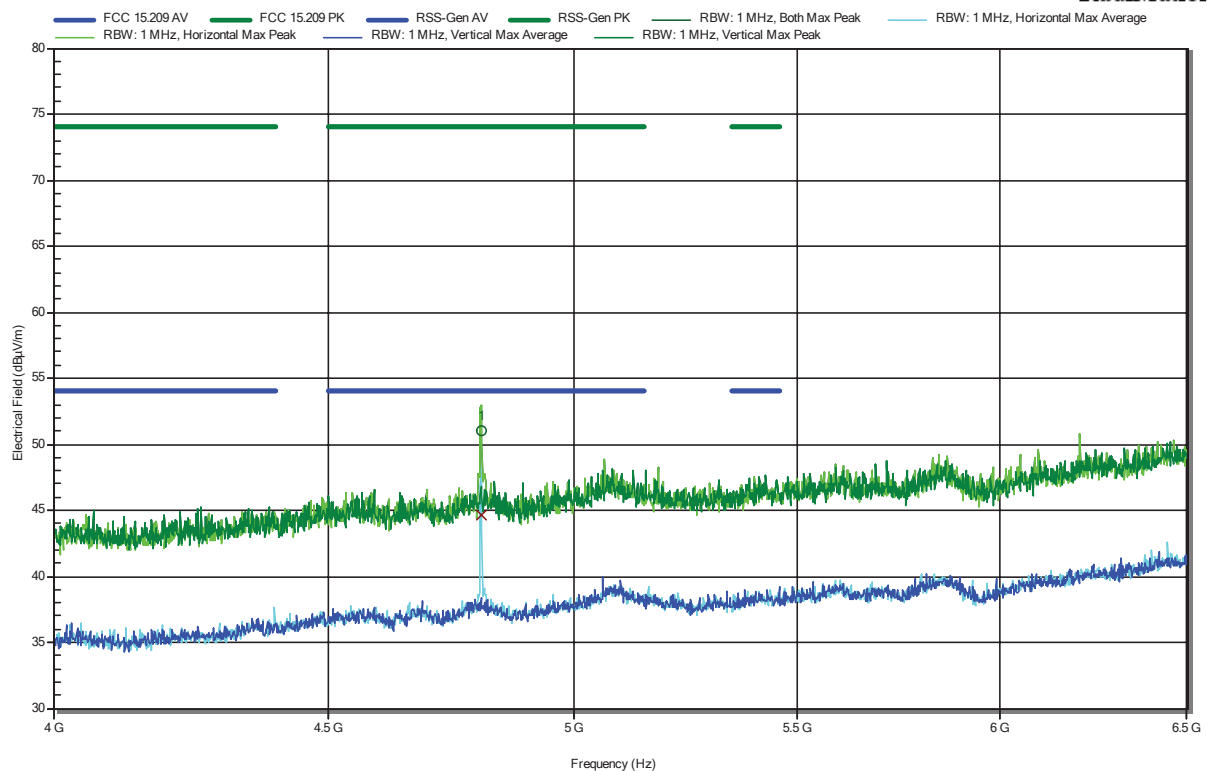
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 2

Index 33

RadiMation



Frequency 4.8039 GHz	Peak 50.98 dBμV/m	Peak Limit 74 dBμV/m	Peak Difference -23.02 dB	Peak Status Pass	Polarization Horizontal
Frequency 4.8039 GHz	Average 44.64 dBμV/m	Average Limit 54 dBμV/m	Average Difference -9.36 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

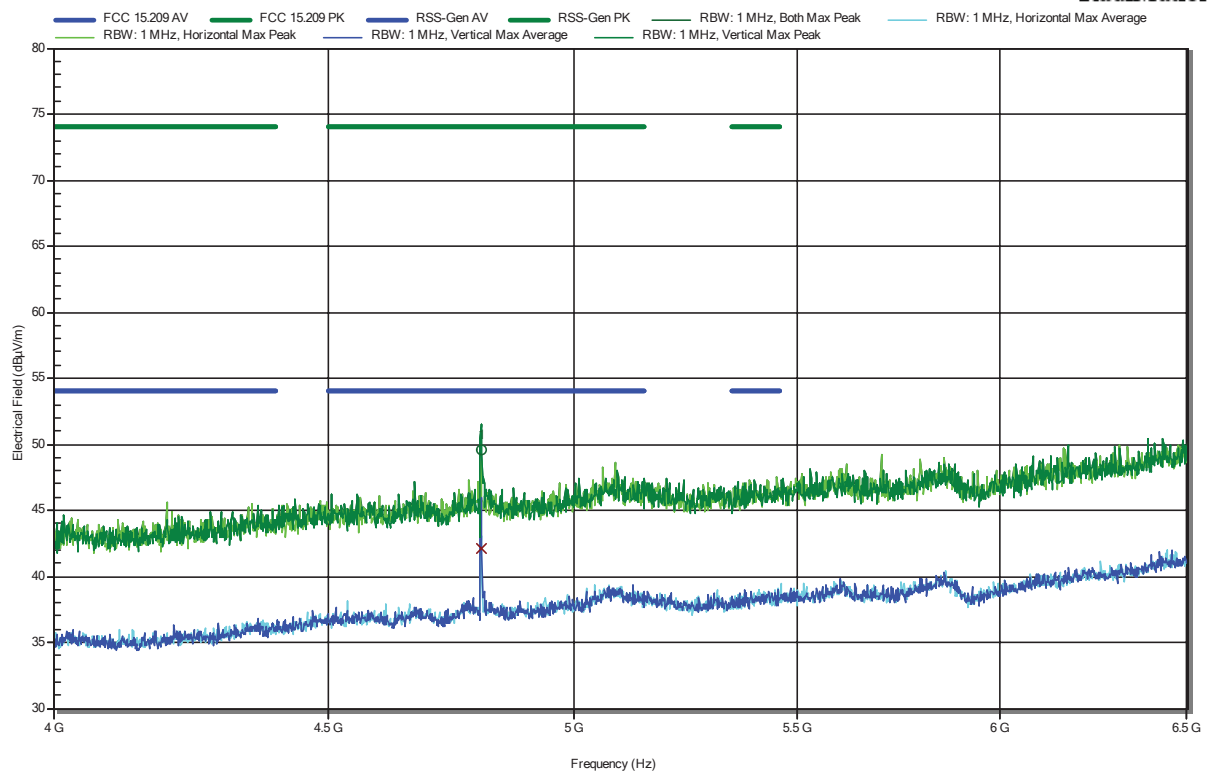
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Qawasmeh
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-05
 Note: EUT horizontal 1

Index 63

RadiMation



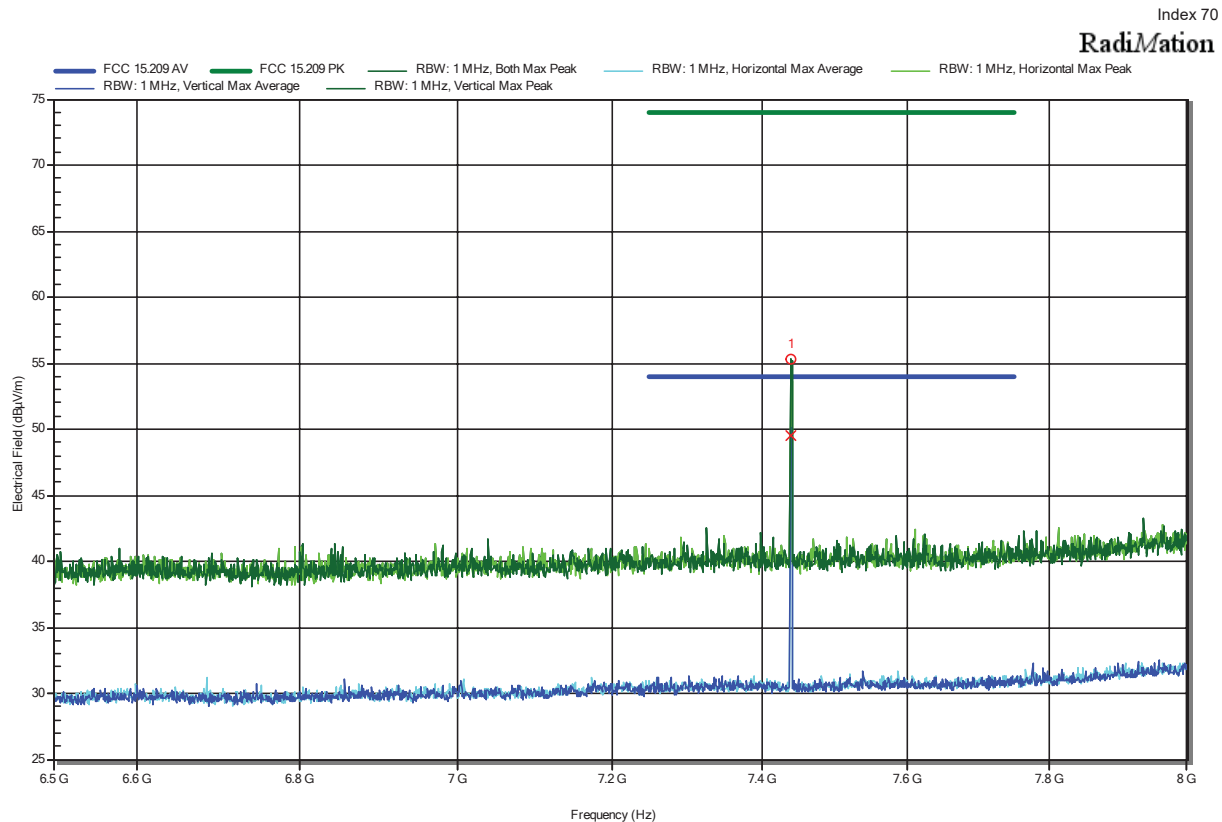
Frequency 4.8039 GHz	Peak 49.58 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -24.42 dB	Peak Status Pass	Polarization Vertical
Frequency 4.8039 GHz	Average 42.09 dBµV/m	Average Limit 54 dBµV/m	Average Difference -11.91 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical



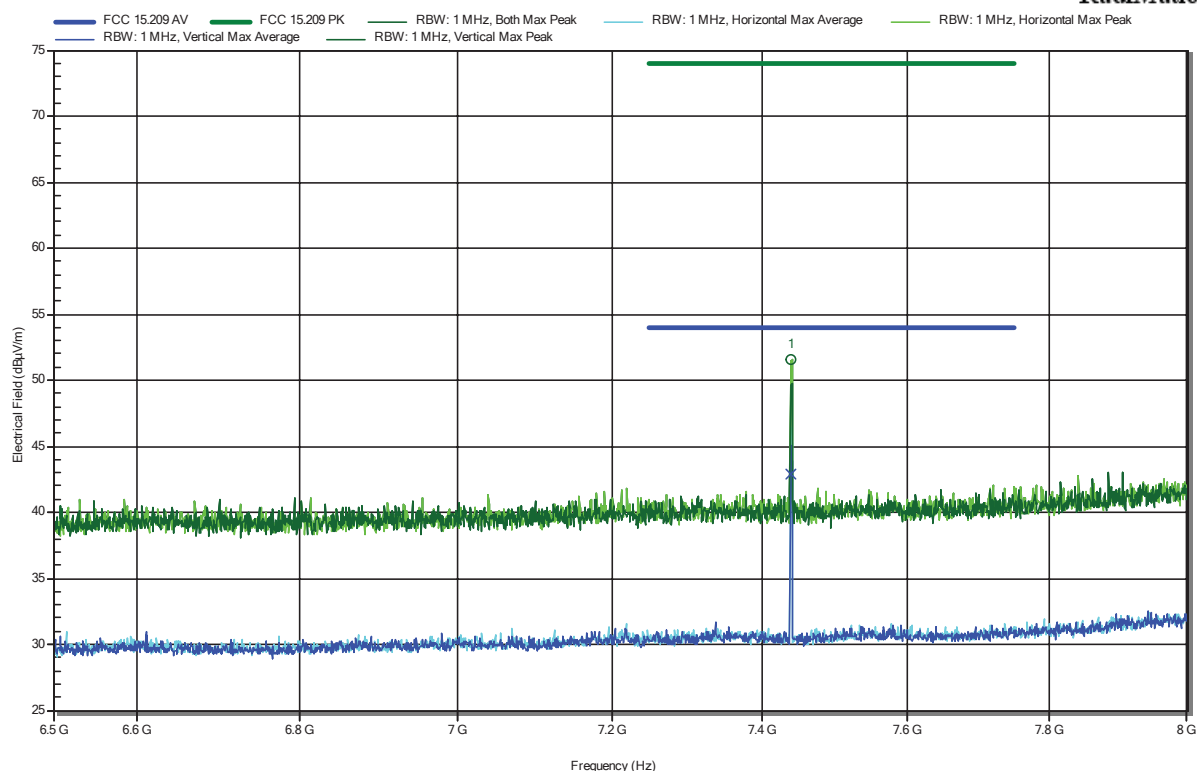
Frequency 7.4392 GHz	Peak 55.31 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -18.69 dB	Peak Status Pass	Polarization Vertical
Frequency 7.4392 GHz	Average 49.56 dBµV/m	Average Limit 54 dBµV/m	Average Difference -4.44 dB	Average Status Pass	Polarization Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT horizontal

Index 71

RadiMation



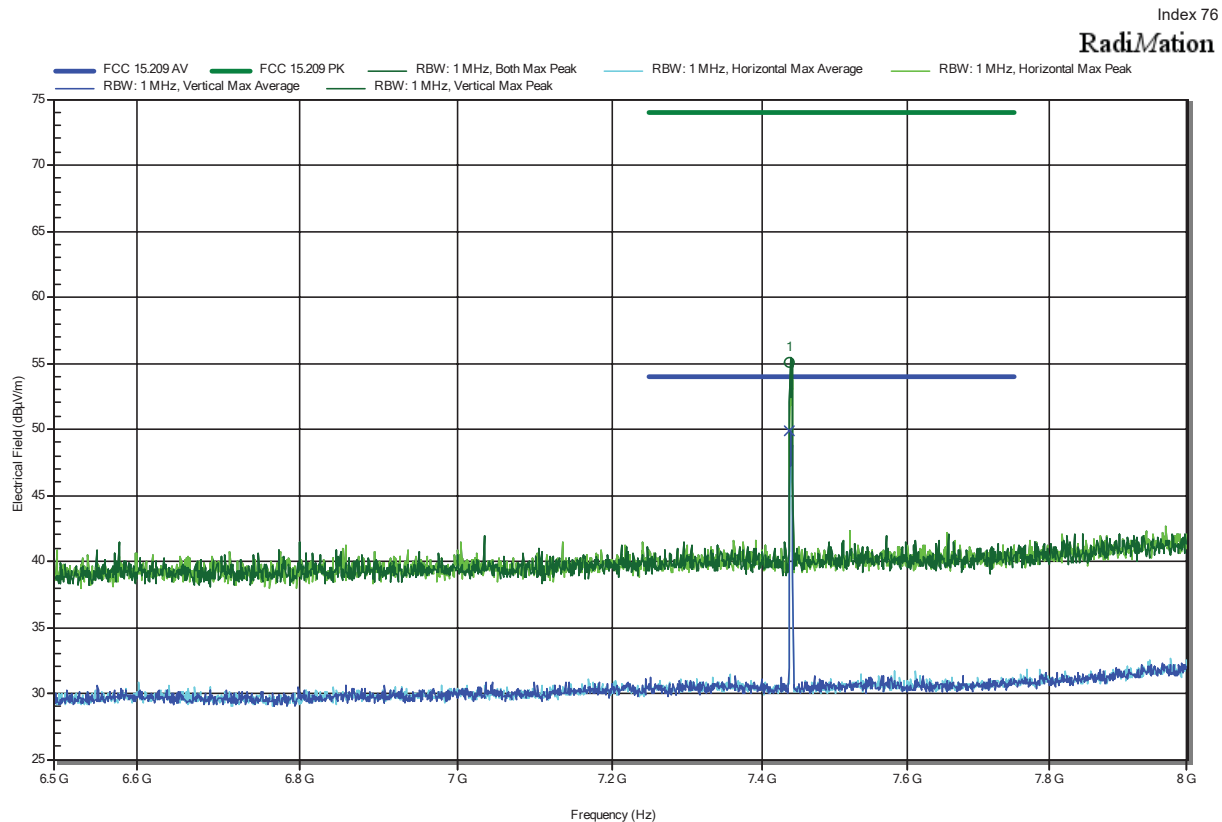
Frequency 7.4408 GHz	Peak 51.61 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -22.39 dB	Peak Status Pass	Polarization Horizontal
Frequency 7.4408 GHz	Average 42.89 dBµV/m	Average Limit 54 dBµV/m	Average Difference -11.11 dB	Average Status Pass	Polarization Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Radiated Spurious Emissions according to FCC 15.247

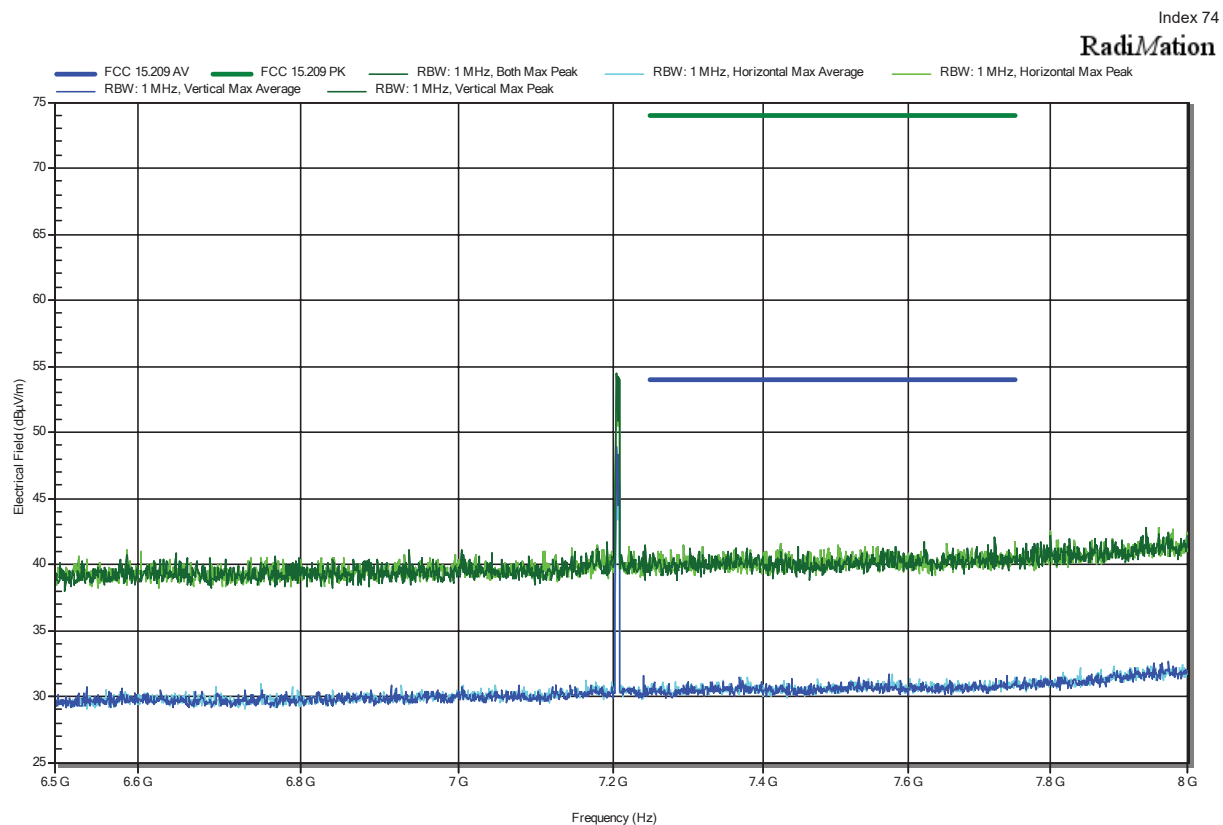
Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical



Frequency 7.4386 GHz	Peak 55.03 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -18.97 dB	Peak Status Pass	Polarization Vertical
Frequency 7.4386 GHz	Average 49.93 dBµV/m	Average Limit 54 dBµV/m	Average Difference -4.07 dB	Average Status Pass	Polarization Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

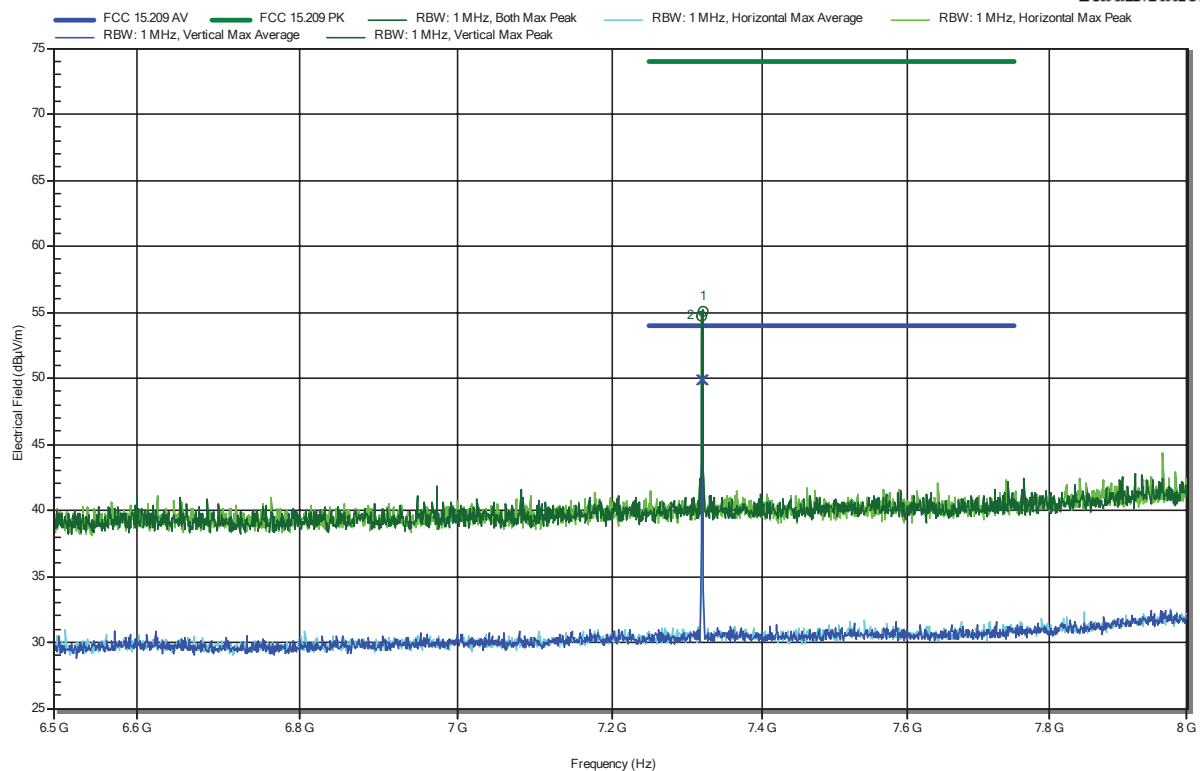


Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 73

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
7.3194 GHz	54.7 dBμV/m	74 dBμV/m	-19.3 dB	Pass	Vertical
7.3207 GHz	55.06 dBμV/m	74 dBμV/m	-18.94 dB	Pass	Vertical

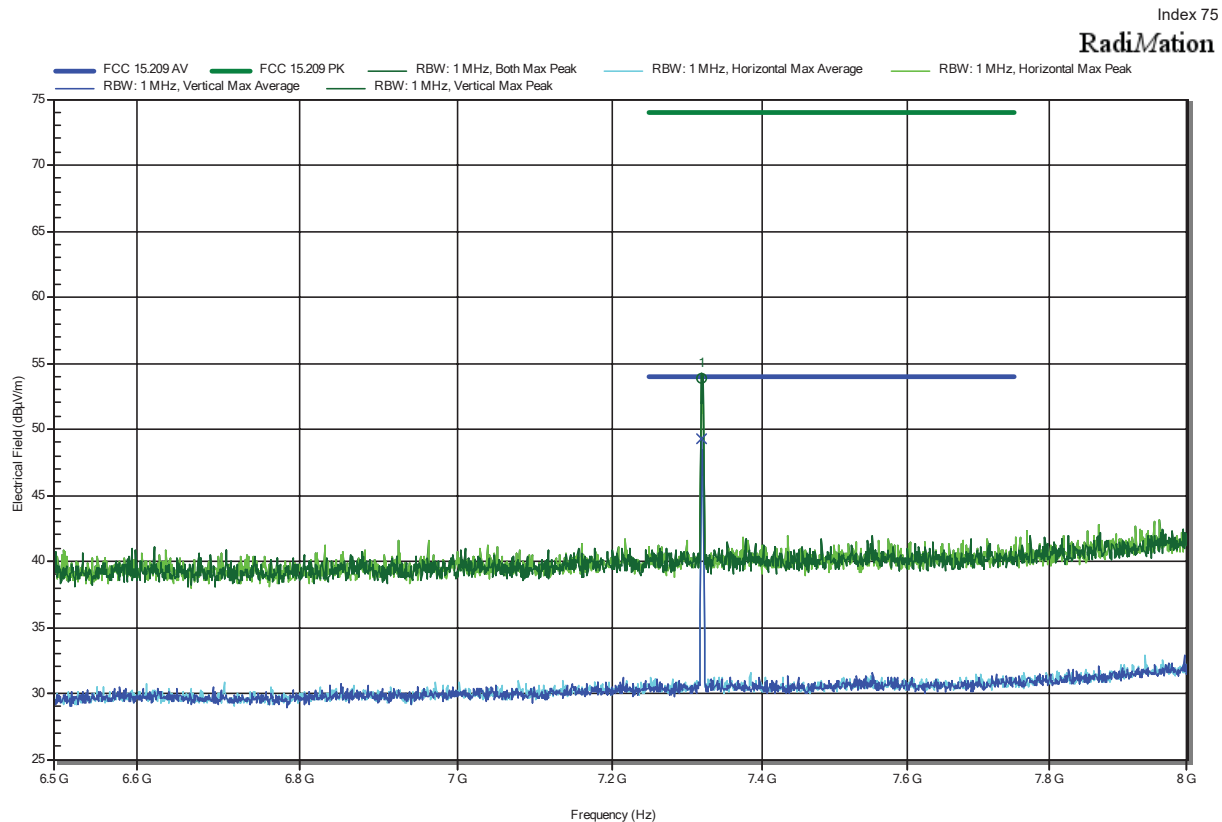
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
7.3194 GHz	49.88 dBμV/m	54 dBμV/m	-4.12 dB	Pass	Vertical
7.3207 GHz	49.84 dBμV/m	54 dBμV/m	-4.16 dB	Pass	Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical



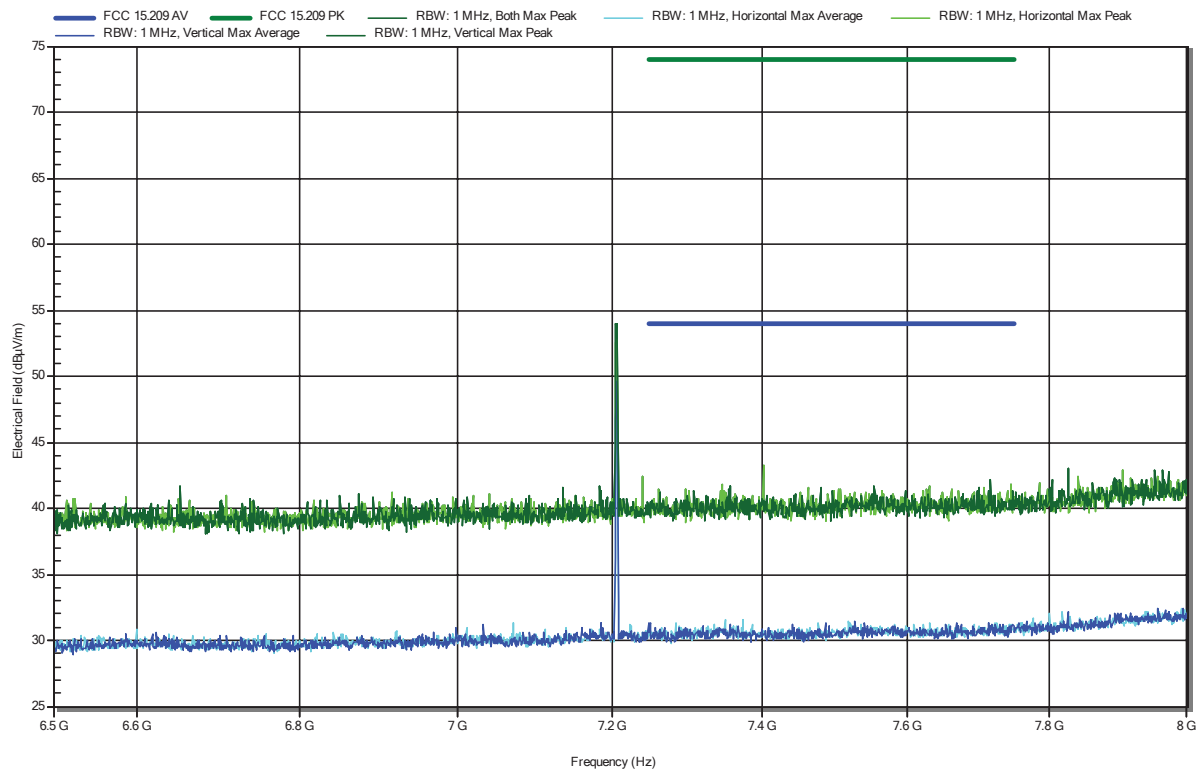
Frequency 7.3186 GHz	Peak 53.89 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -20.11 dB	Peak Status Pass	Polarization Vertical
Frequency 7.3186 GHz	Average 49.24 dBµV/m	Average Limit 54 dBµV/m	Average Difference -4.76 dB	Average Status Pass	Polarization Vertical

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 72

RadiMation

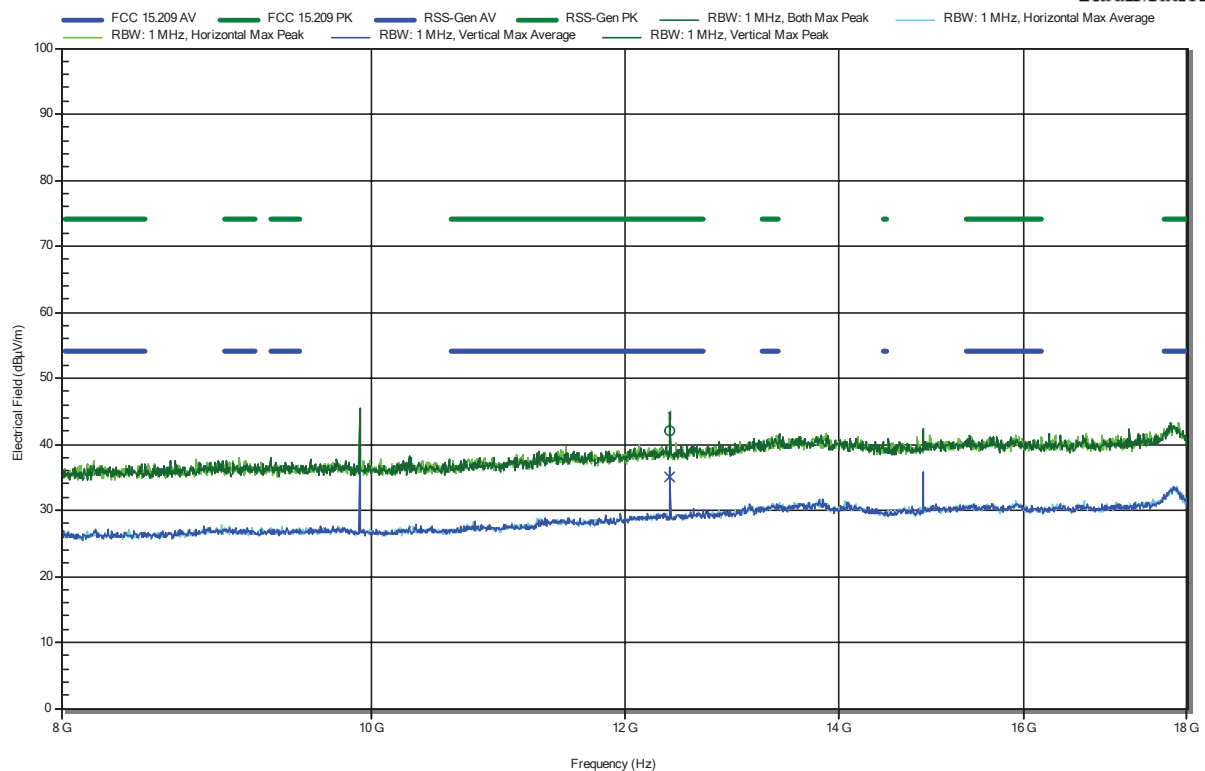


Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 82

RadiMation



Frequency 12.399 GHz	Peak 42.12 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -31.88 dB	Peak Status Pass	Polarization Vertical
Frequency 12.399 GHz	Average 35.11 dBµV/m	Average Limit 54 dBµV/m	Average Difference -18.89 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

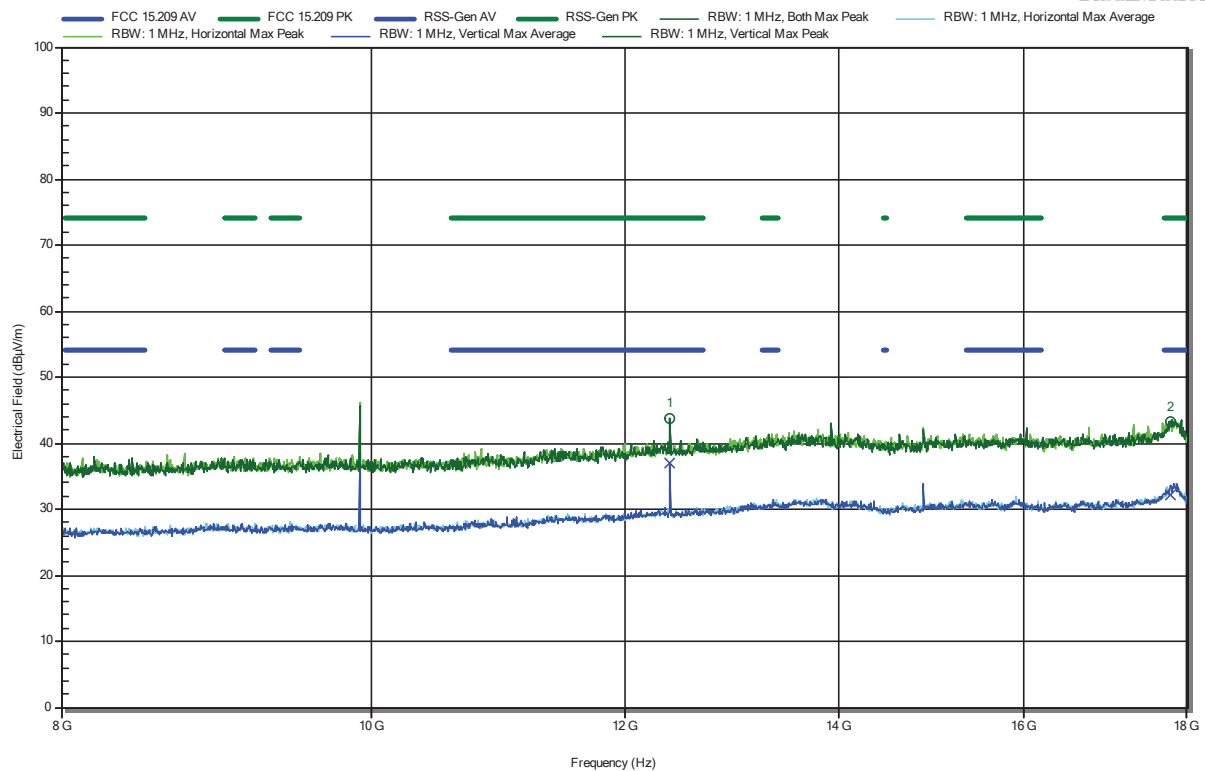
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 77

RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
12.398 GHz	43.64 dBμV/m	74 dBμV/m	-30.36 dB	Pass	Vertical
17.776 GHz	43.26 dBμV/m	74 dBμV/m	-30.74 dB	Pass	Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
12.398 GHz	36.93 dBμV/m	54 dBμV/m	-17.07 dB	Pass	Vertical
17.776 GHz	32.26 dBμV/m	54 dBμV/m	-21.74 dB	Pass	Horizontal

Test Report No.: G0M-2209-1690-TFC247BL-V01

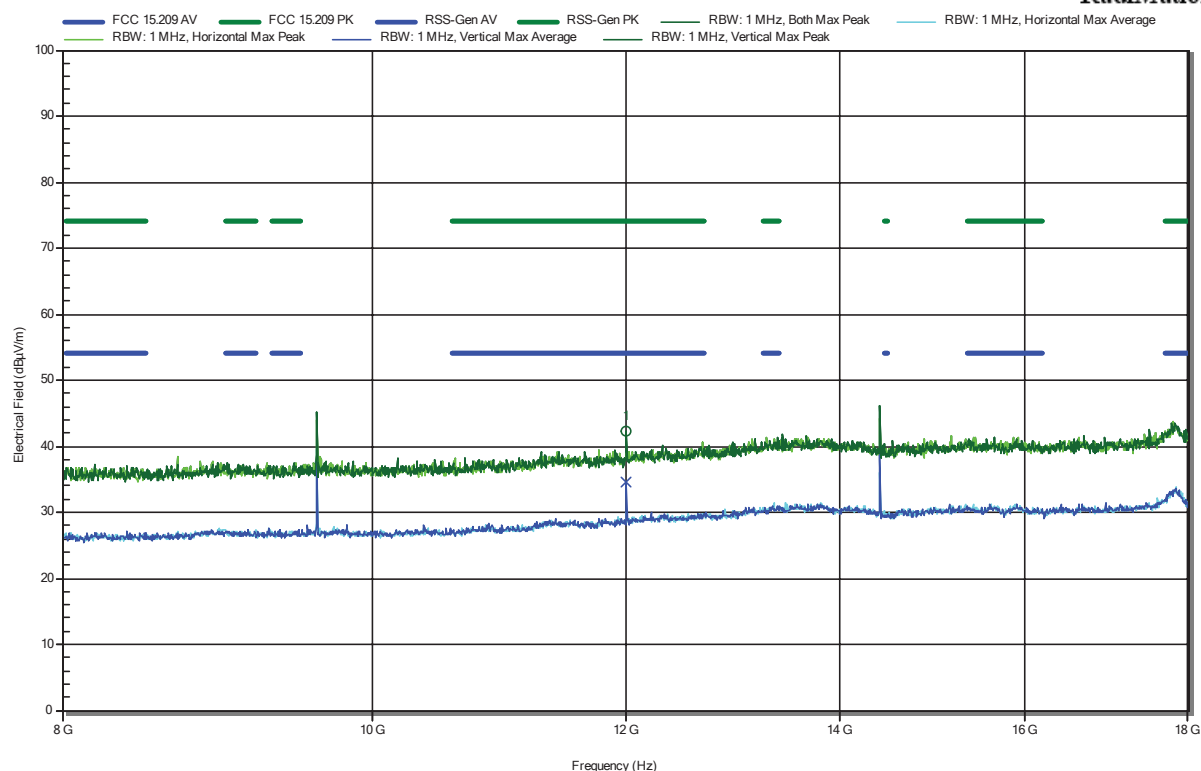
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 80

RadiMation



Frequency 12.011 GHz	Peak 42.2 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -31.8 dB	Peak Status Pass	Polarization Vertical
Frequency 12.011 GHz	Average 34.51 dBµV/m	Average Limit 54 dBµV/m	Average Difference -19.49 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

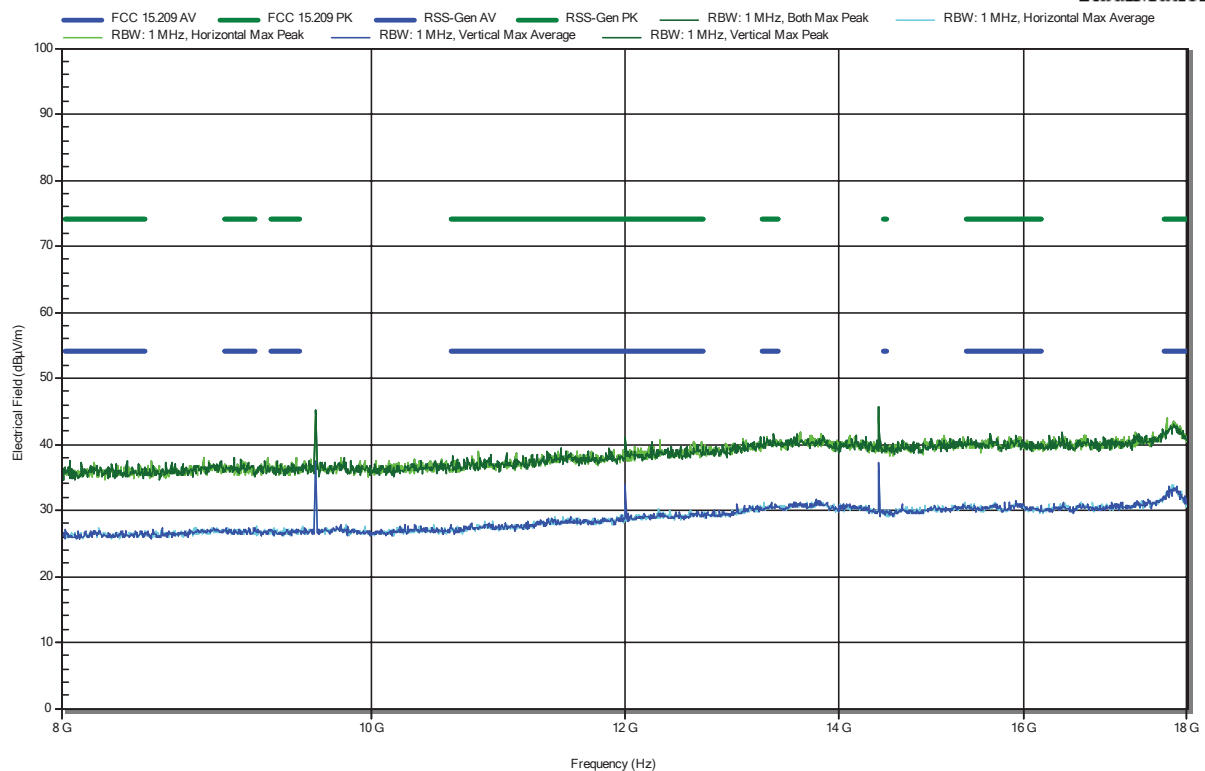
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 79

RadiMation

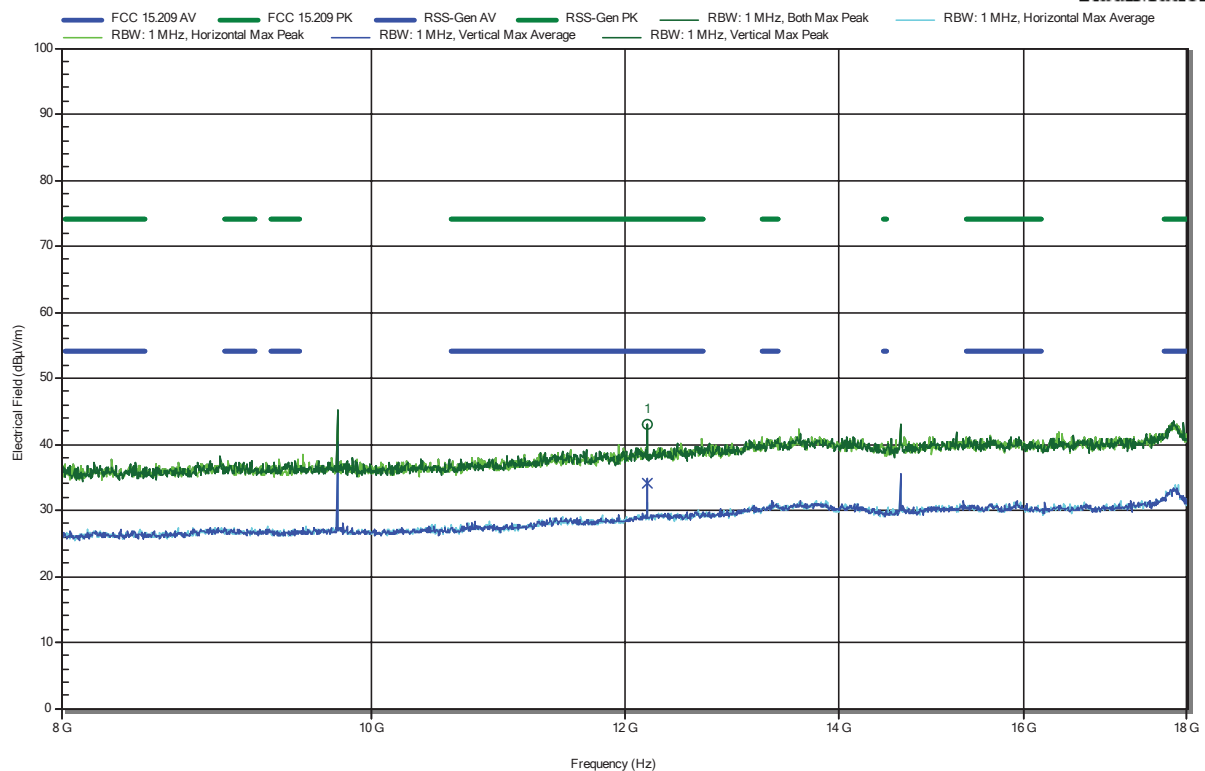


Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 81

RadiMation



Frequency 12.199 GHz	Peak 43 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -31 dB	Peak Status Pass	Polarization Vertical
Frequency 12.199 GHz	Average 34.02 dBµV/m	Average Limit 54 dBµV/m	Average Difference -19.98 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

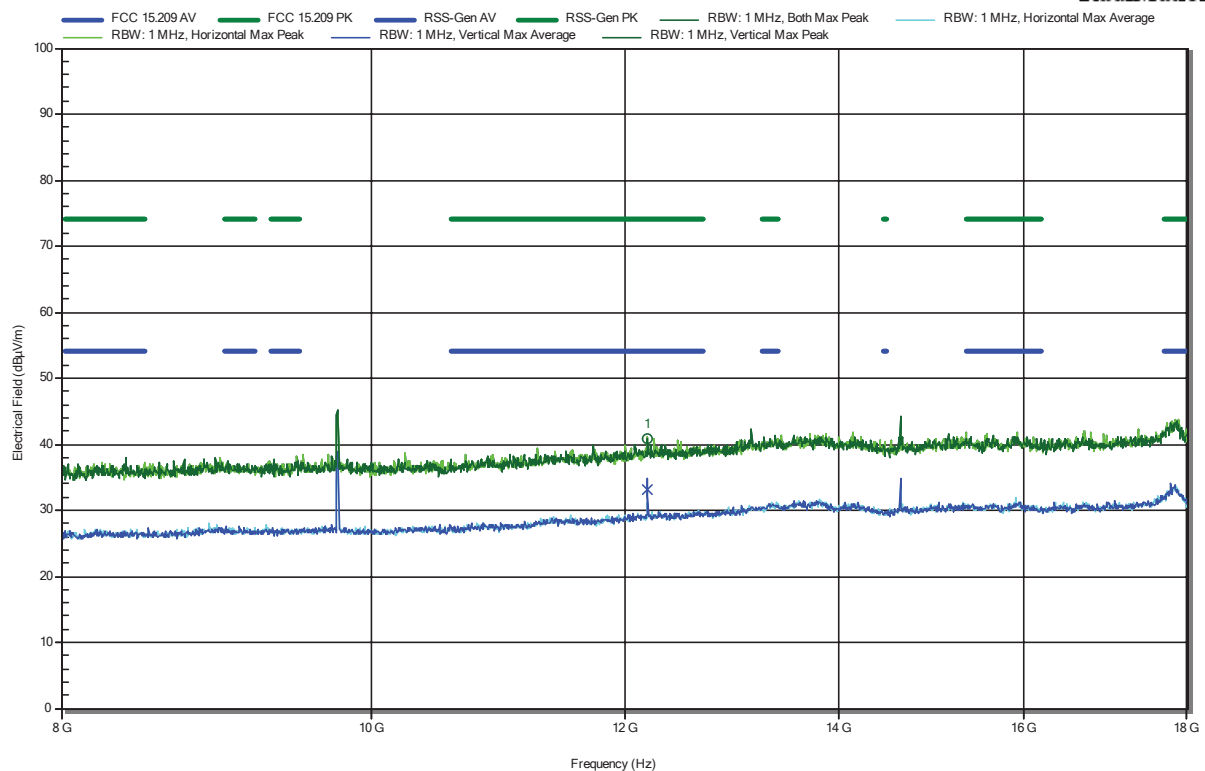
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 78

RadiMation



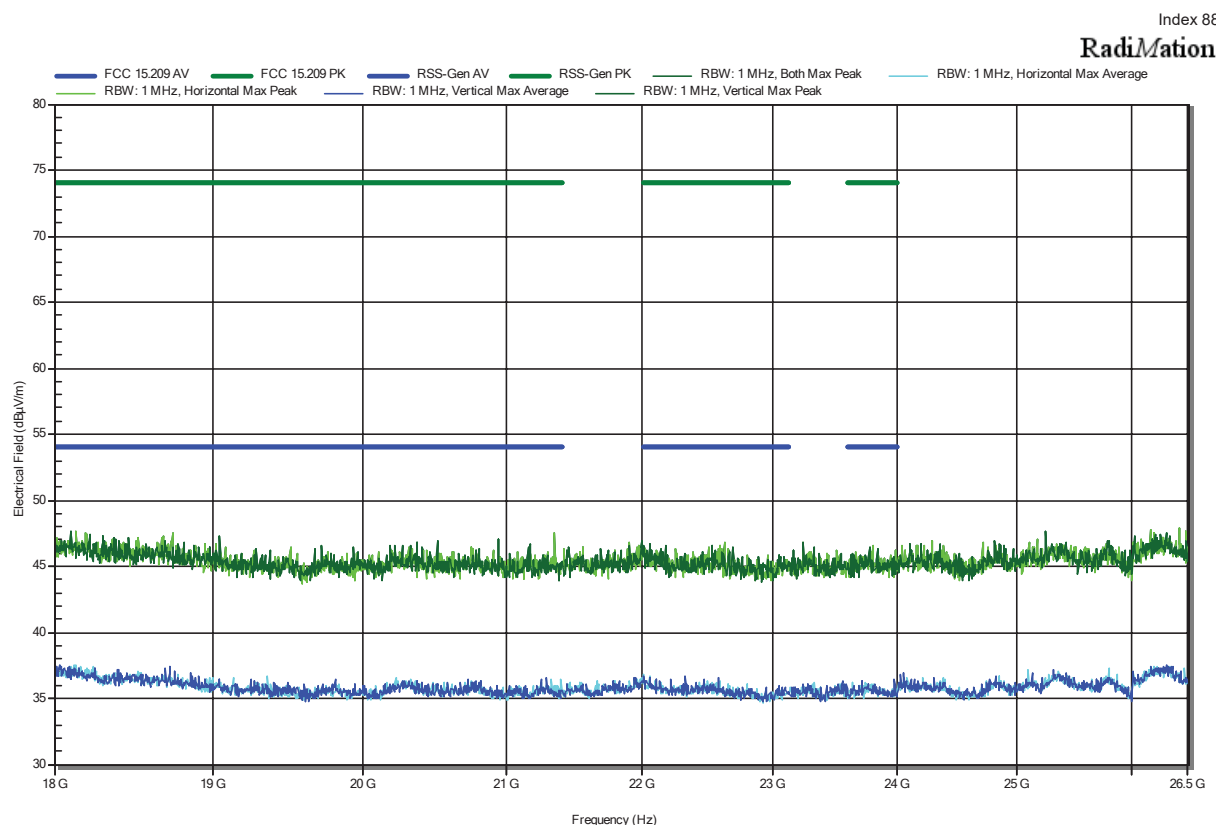
Frequency 12.198 GHz	Peak 40.77 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -33.23 dB	Peak Status Pass	Polarization Vertical
Frequency 12.198 GHz	Average 33.11 dBµV/m	Average Limit 54 dBµV/m	Average Difference -20.89 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

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

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

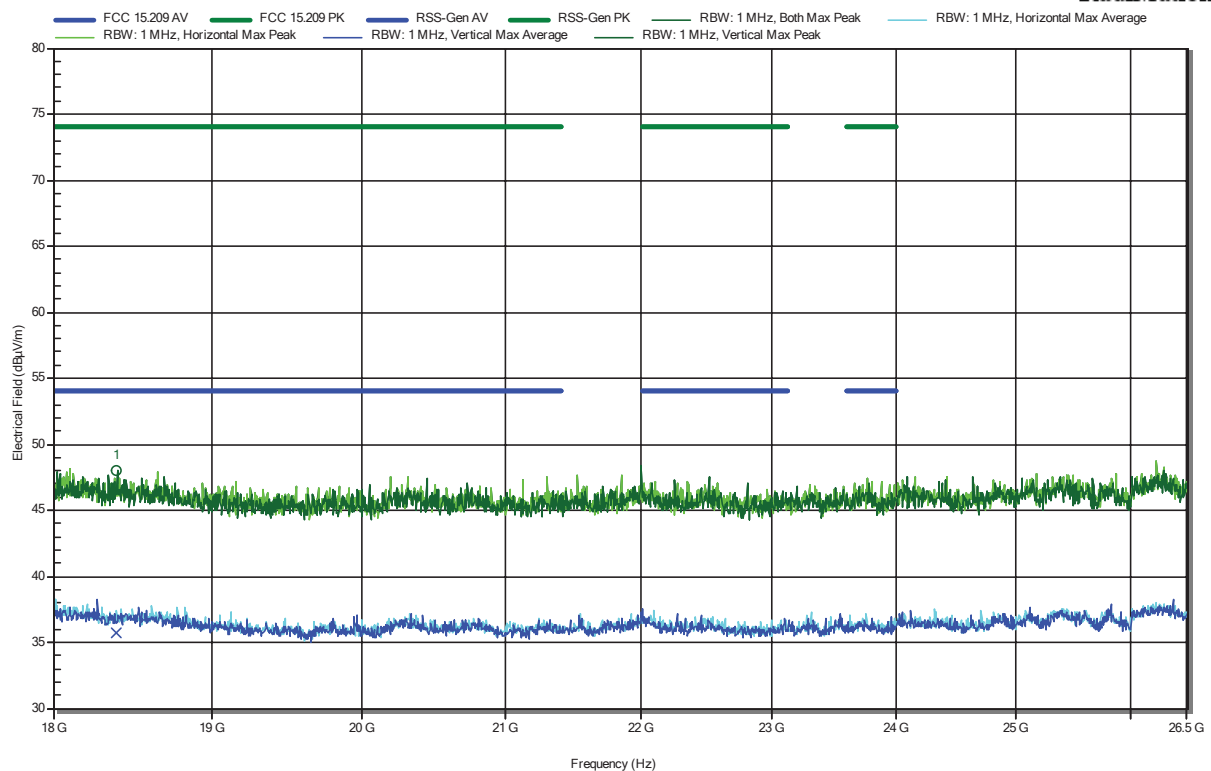


Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2480 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

Index 83

RadiMation



Frequency 18.393 GHz	Peak 48.01 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -25.99 dB	Peak Status Pass	Polarization Vertical
Frequency 18.393 GHz	Average 35.67 dBµV/m	Average Limit 54 dBµV/m	Average Difference -18.33 dB	Average Status Pass	Polarization Vertical

Test Report No.: G0M-2209-1690-TFC247BL-V01

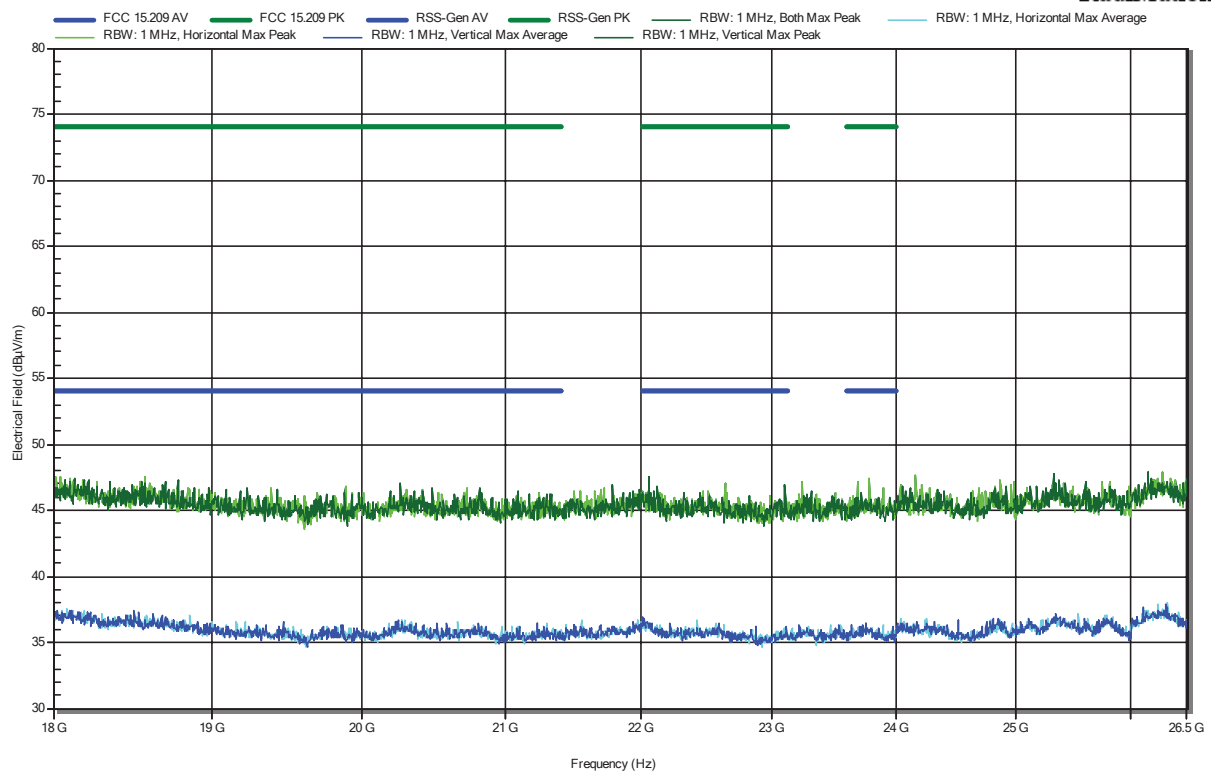
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
 Model: TILSBERK Head-Up Display
 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

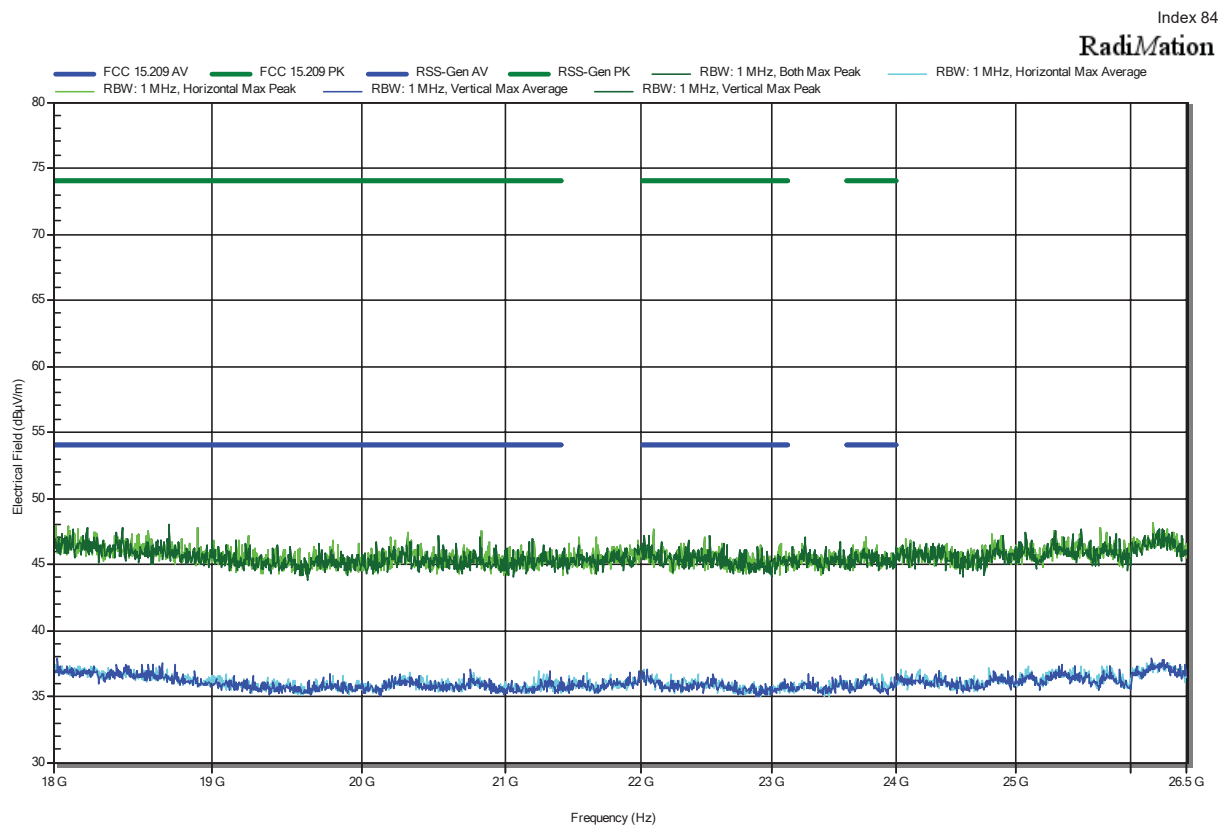
Index 86

RadiMation



Radiated Spurious Emissions according to FCC 15.247

Project Number: G0M-2209-1690
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 Test Sample ID: 42434
 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

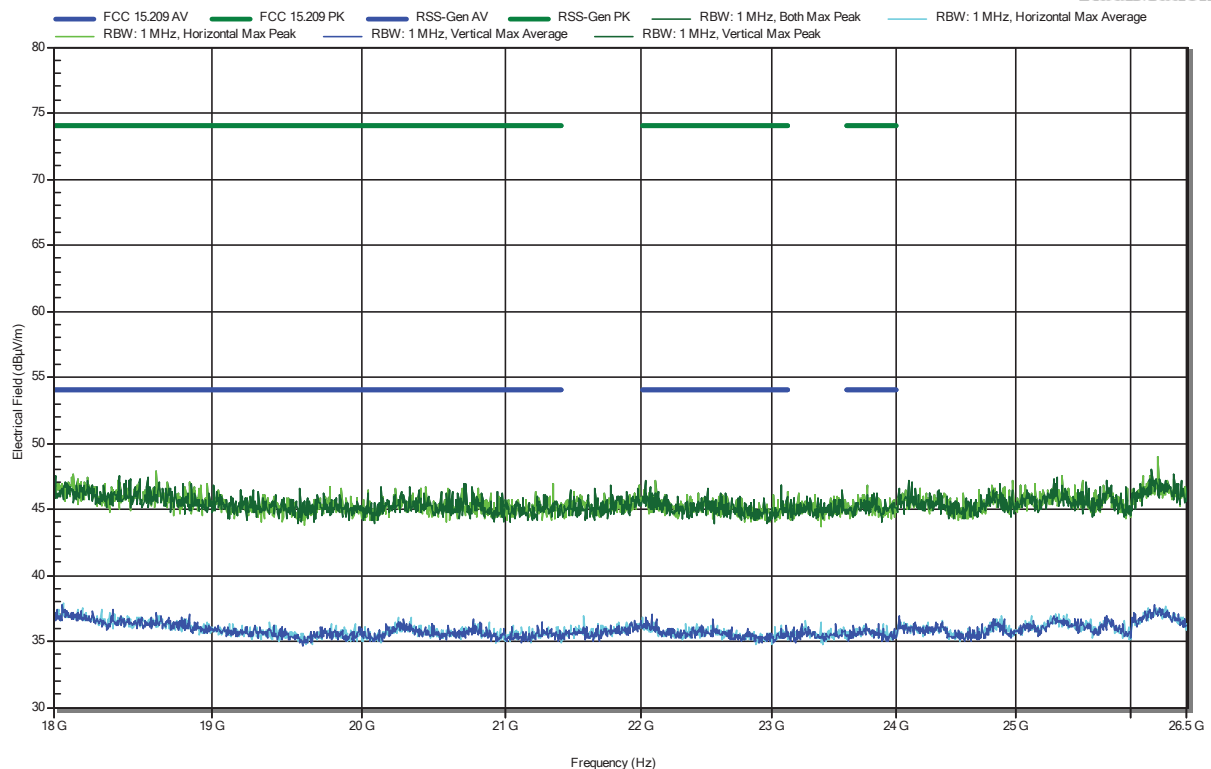


Radiated Spurious Emissions according to FCC 15.247

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 Applicant: digades GmbH
 Model Description: Head-up display for motorcycle helmets
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 Test Site: Eurofins Product Service GmbH
 Operator: R. Jaafar
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2440 MHz, 2 Mbit/s, PRBS9, 239 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical

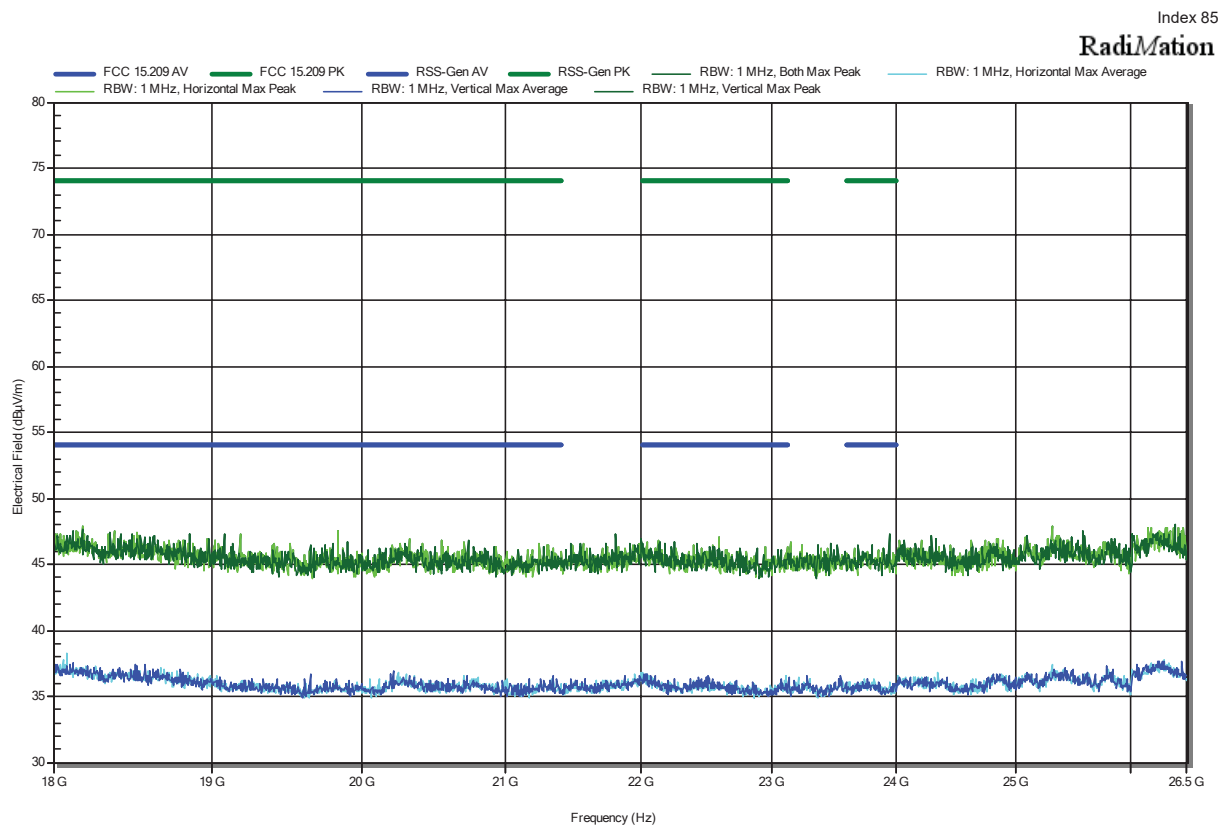
Index 87

RadiMation



Radiated Spurious Emissions according to FCC 15.247

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 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 21 °Celsius, Vnom: 3.4 VDC
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT-LE 5.0, 2402 MHz, 1 Mbit/s, PRBS9, 193 Bytes, Pout = 4 dBm
 Test Date: 2023-01-12
 Note: EUT vertical



== = END OF TEST REPORT == =