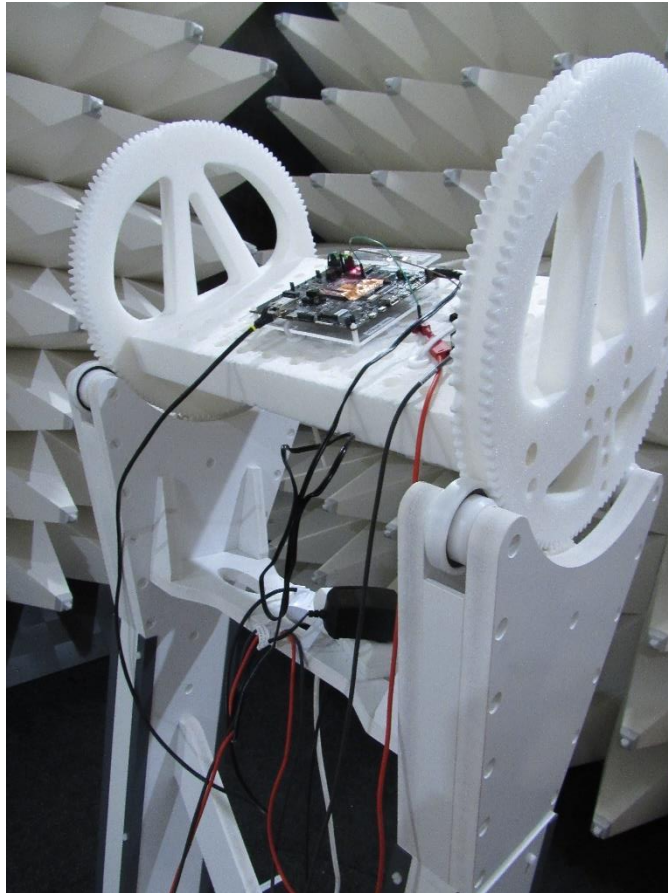
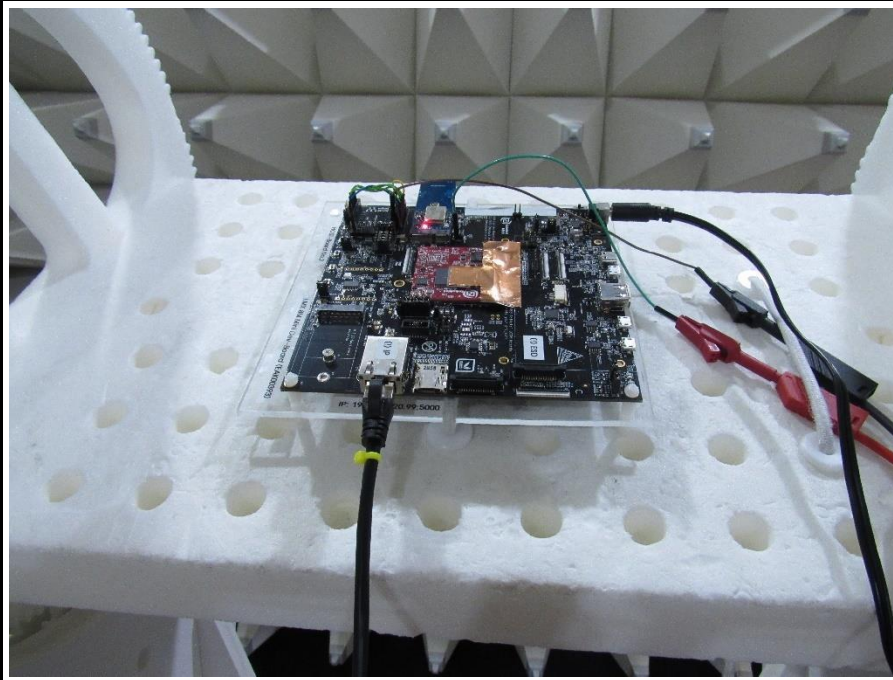


EUT Test Setup above 1 GHz-Antenna 2



EUT Test Setup above 1 GHz-Antenna 3



3.11 Test Conditions and Results - Receiver radiated emissions

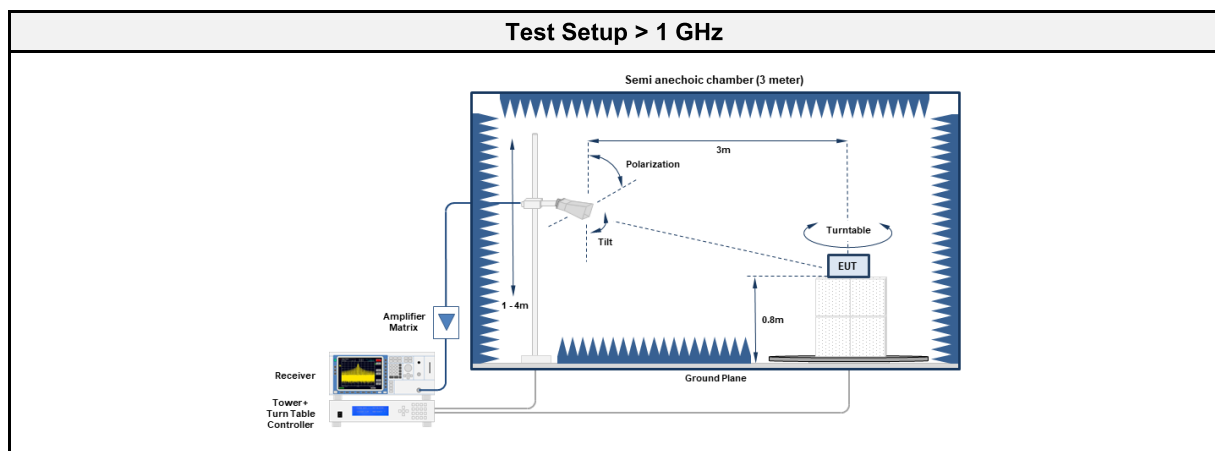
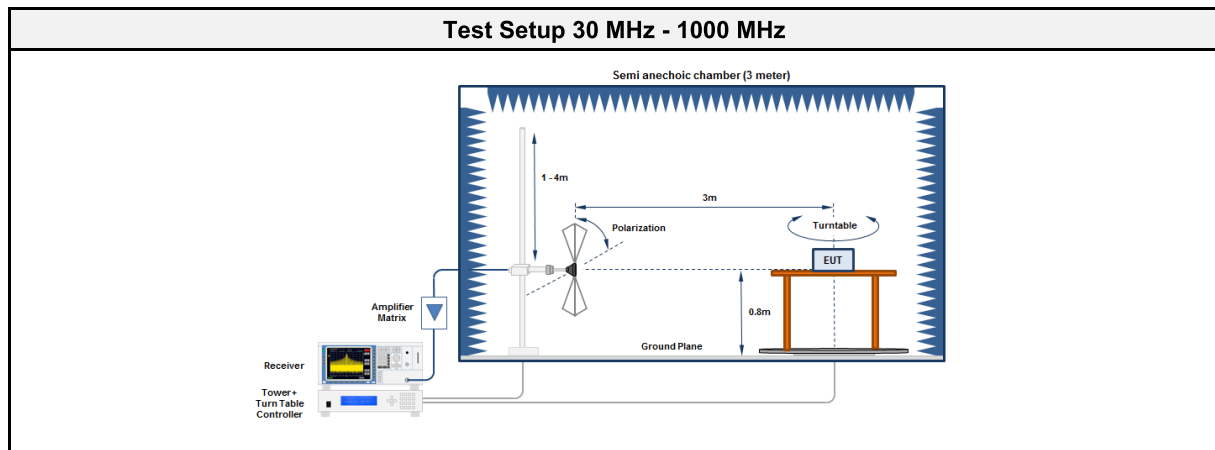
3.11.1 Information

Test Information	
Reference	ISED RSS-247, Issue 3 (section 3.1)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.4-2014 8.1-8.3
Operator	Md Abu Bakar Siddique
Date	2024-02-05

3.11.2 Limits

Limits			
Frequency range [MHz]	Detector	Field strength [$\mu\text{V}/\text{m}$]	Measurement distance [m]
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

3.11.3 Setup



3.11.4 Equipment

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

Test Equipment 30 - 1000 MHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF00062	2022-11	2025-11
Measurement Receiver	R&S	ESU8	EF00379	2023-08	2024-08
Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2025-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC2	EF01616	2023-12	2024-12
Spectrum analyzer	R&S	FSW43	EF00896	2023-08	2024-08
Antenna	Schwarzbeck	BBHA 9120B	EF01678	2021-03	2024-03
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03

3.11.5 Procedure

Test Procedure
<ol style="list-style-type: none"> 1. EUT is placed on a non conducting support at the center of a turn table 0.8 m above the ground 2. EUT is 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

3.11.6 Results

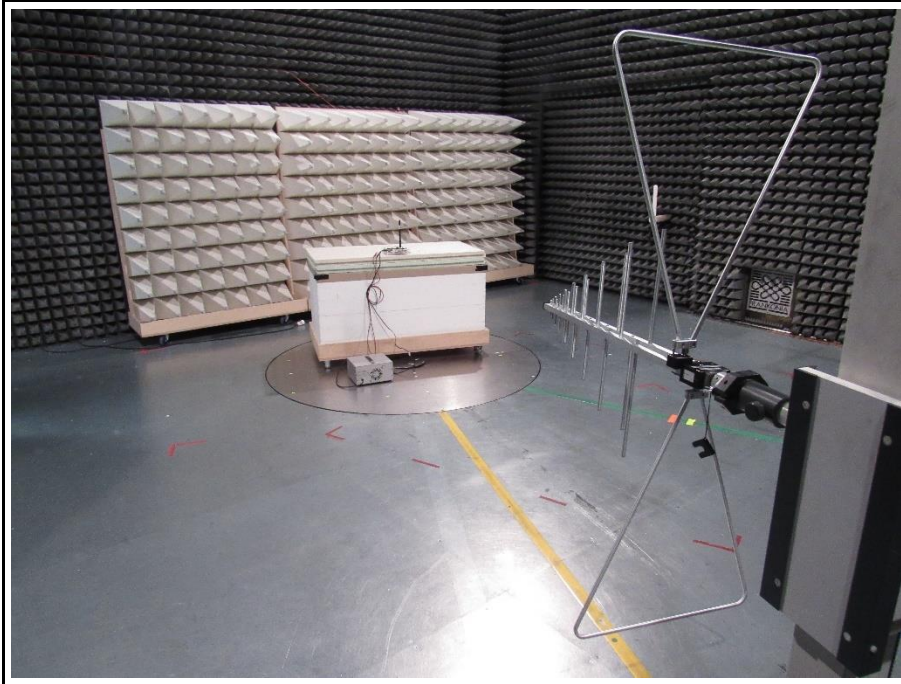
Test Results – Antenna 1 (External, ANT-Taoglas-GW.51.5153) – Annex D						
Mode	Emission [MHz]	Level [dB μ V/m]	Det.	Pol.	Limit [dB μ V/m]	Margin [dB]
Scan mode	2318	40.22	pk	ver	53.98	-13.76
Scan mode	3903	41.41	pk	ver	53.98	-12.57

Test Results – Antenna 2 (External, ANT-2J Antennas-2JF1002P) – Annex E						
Mode	Emission [MHz]	Level [dB μ V/m]	Det.	Pol.	Limit [dB μ V/m]	Margin [dB]
Scan mode	2120	37.51	pk	ver	53.98	-16.47

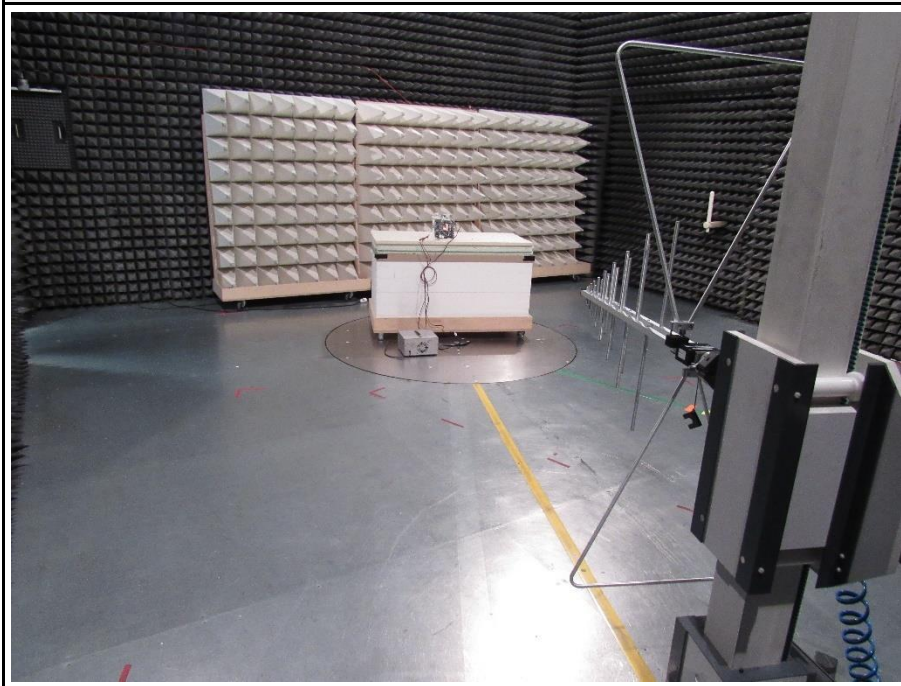
Test Results – Antenna 3 (External, ANT-TDK-ANT162442DT-2001A2) – Annex F						
Mode	Emission [MHz]	Level [dB μ V/m]	Det.	Pol.	Limit [dB μ V/m]	Margin [dB]
Scan mode	1600	39.05	pk	hor	53.98	-14.93
Scan mode	1749	44.82	pk	ver	53.98	-09.16

3.11.7 Setup Photos

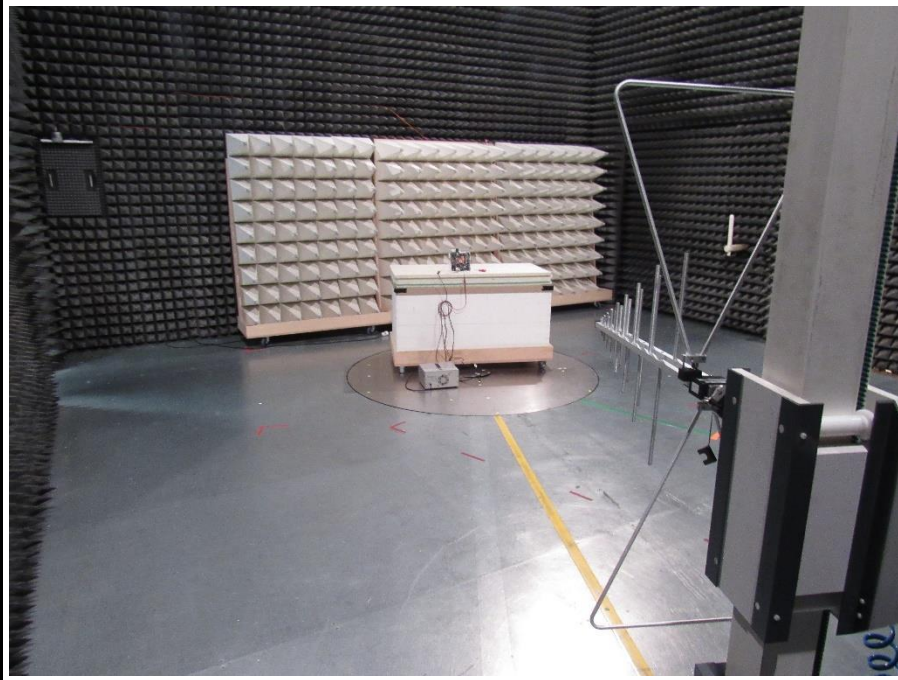
Setup for measurements below 1 GHz- Antenna 1



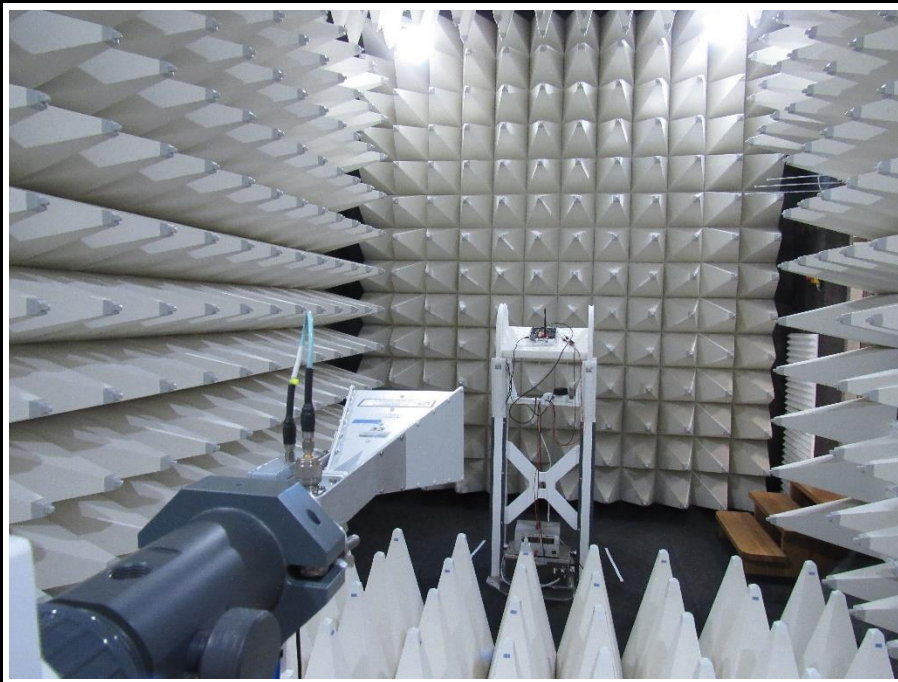
Setup for measurements below 1 GHz- Antenna 2



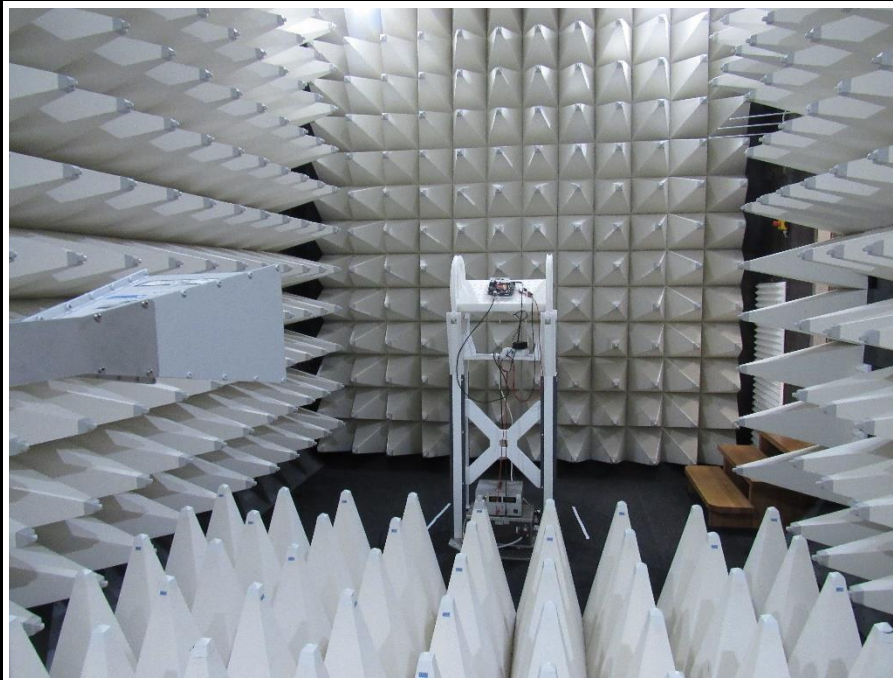
Setup for measurements below 1 GHz- Antenna 3



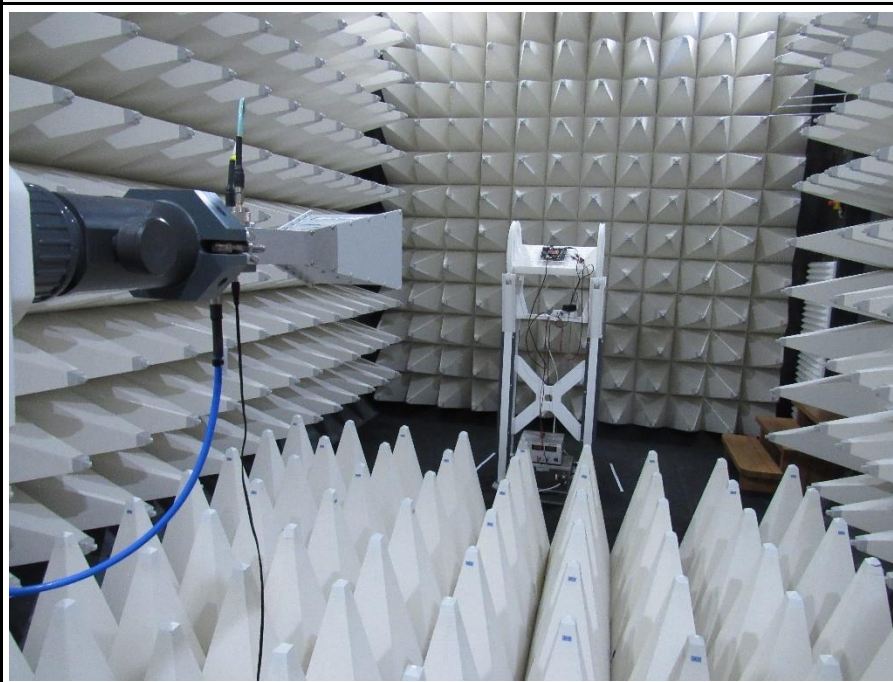
Setup for measurements above 1 GHz-Antenna 1



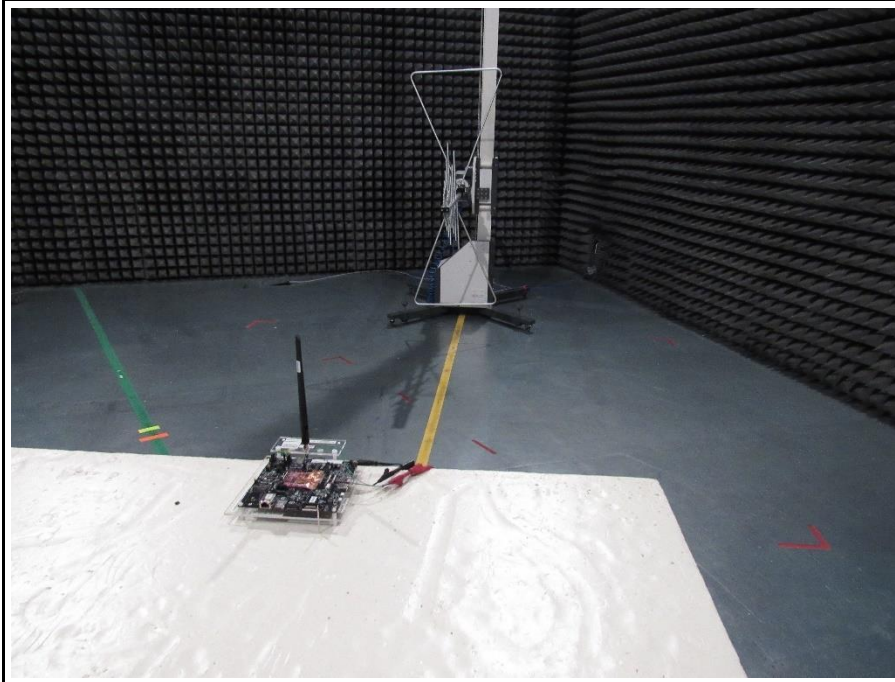
Setup for measurements above 1 GHz-Antenna 2



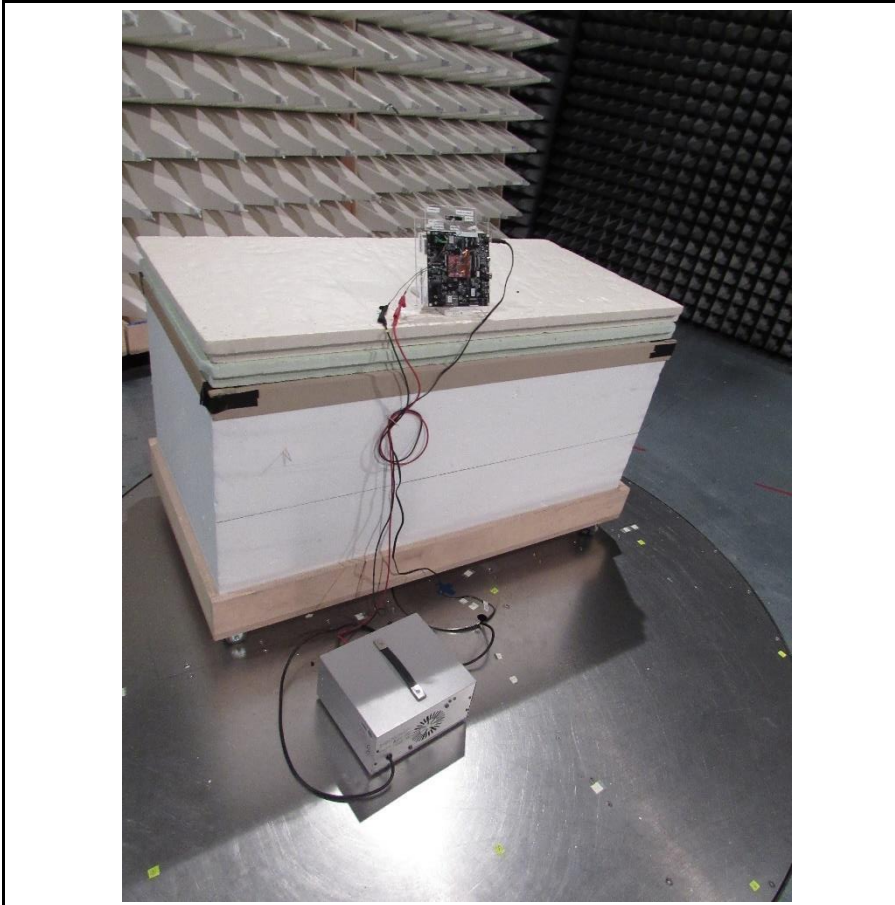
Setup for measurements above 1 GHz-Antenna 3



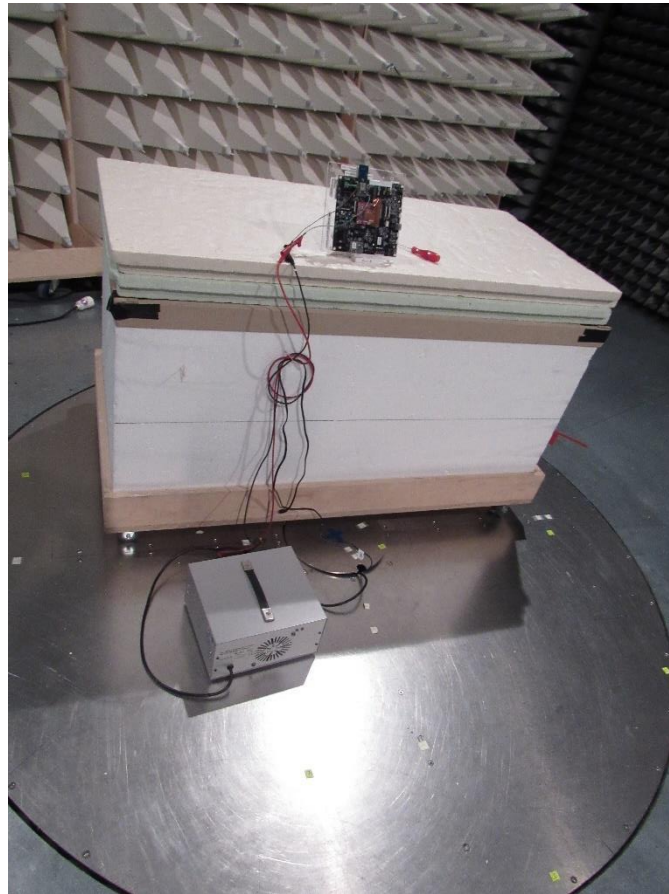
EUT Test Setup below 1 GH- Antenna 1



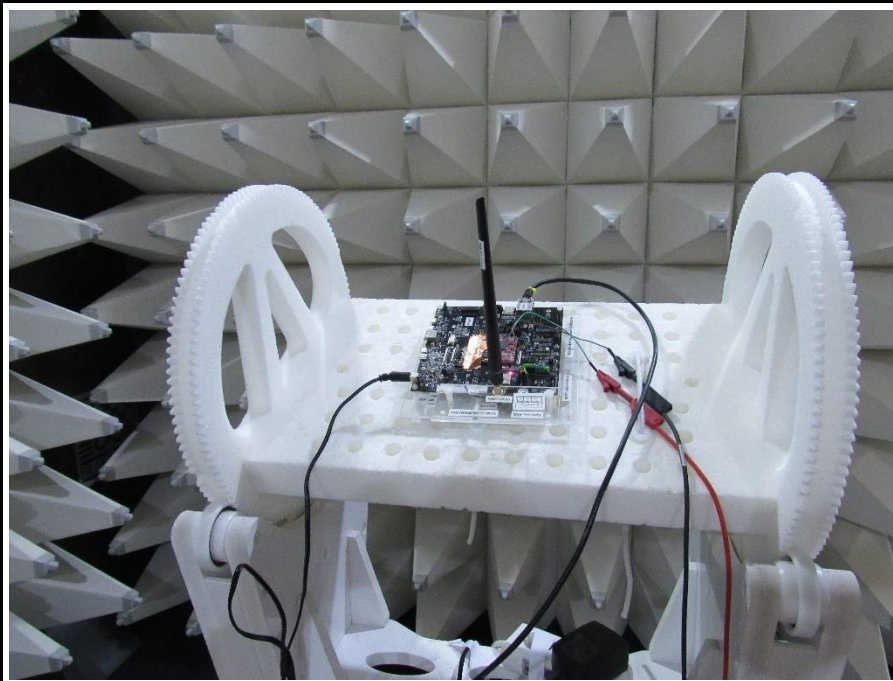
EUT Test Setup below 1 GH- Antenna 2



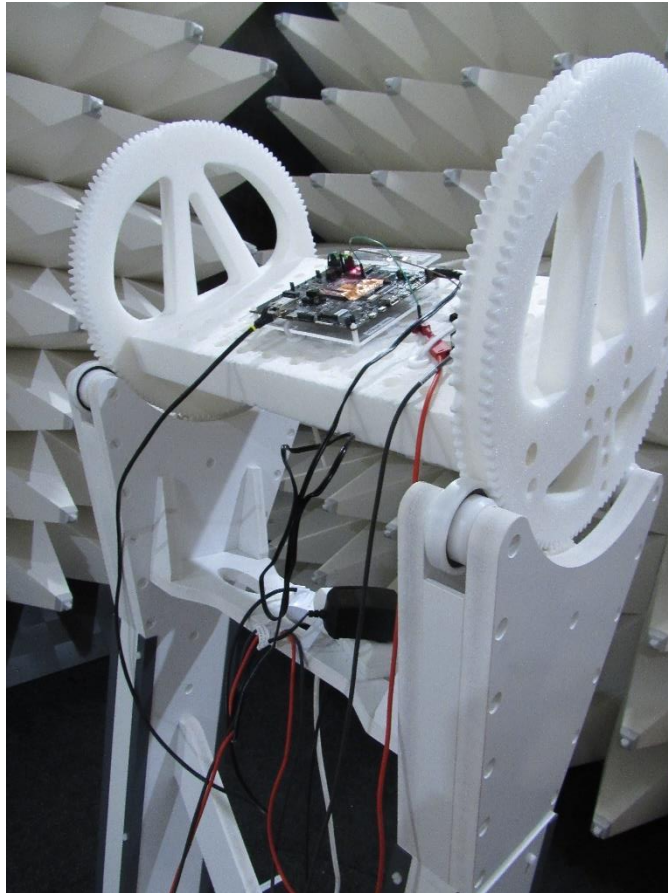
EUT Test Setup below 1 GH- Antenna 3



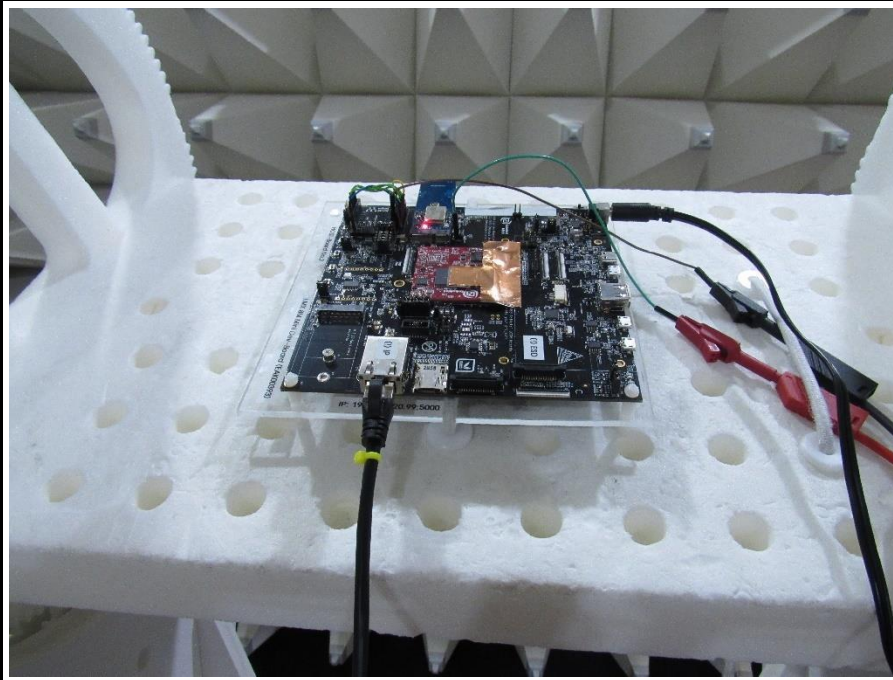
EUT Test Setup above 1 GHz-Antenna 1



EUT Test Setup above 1 GHz-Antenna 2



EUT Test Setup above 1 GHz-Antenna 3



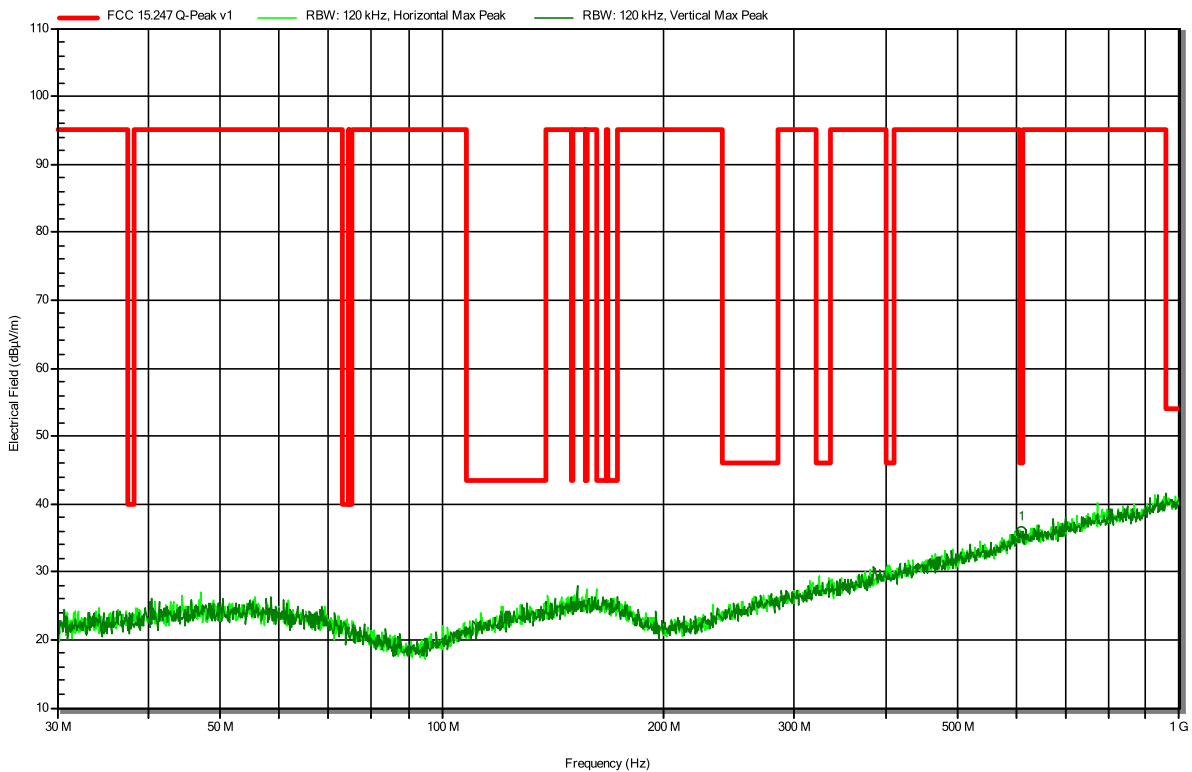
ANNEX A Transmitter spurious emissions in the spurious domain with Antenna 1 (External, ANT-Taoglas-GW.51.5153)

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation



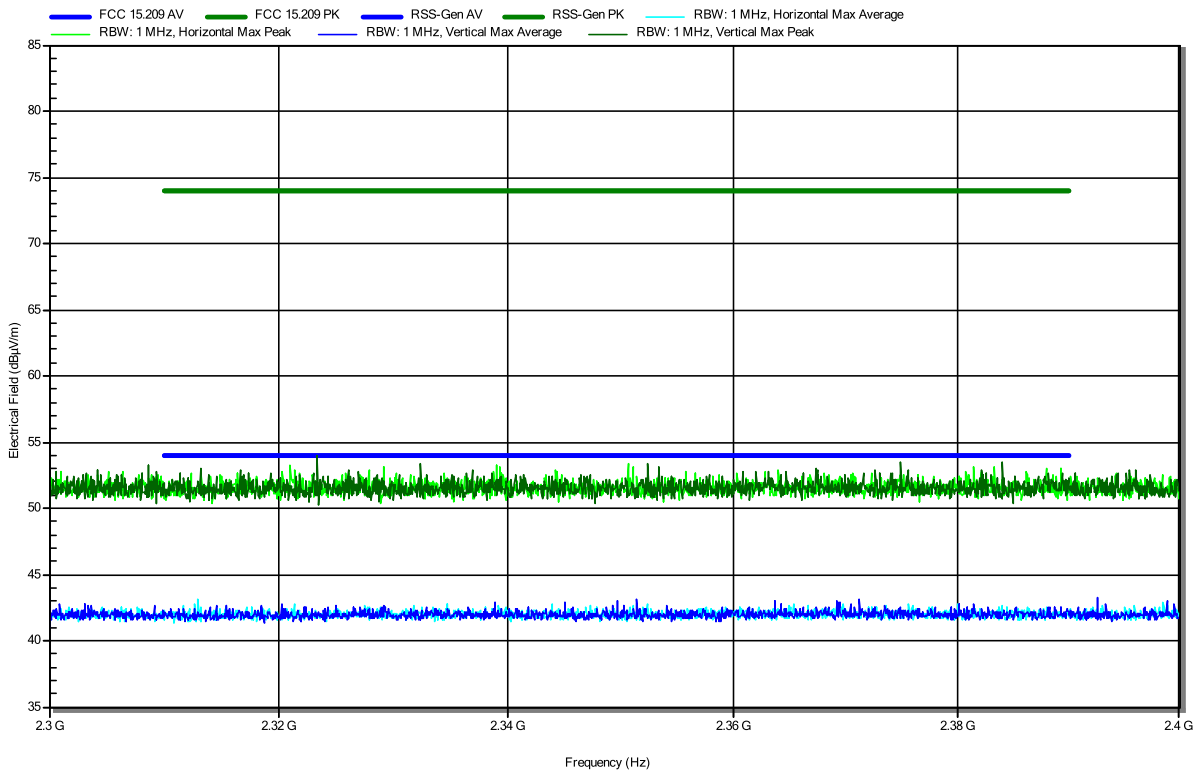
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
609.09 MHz	36 dBµV/m	46 dBµV/m	-10.03 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-29
 Note: Lower bandedge

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RadiMation

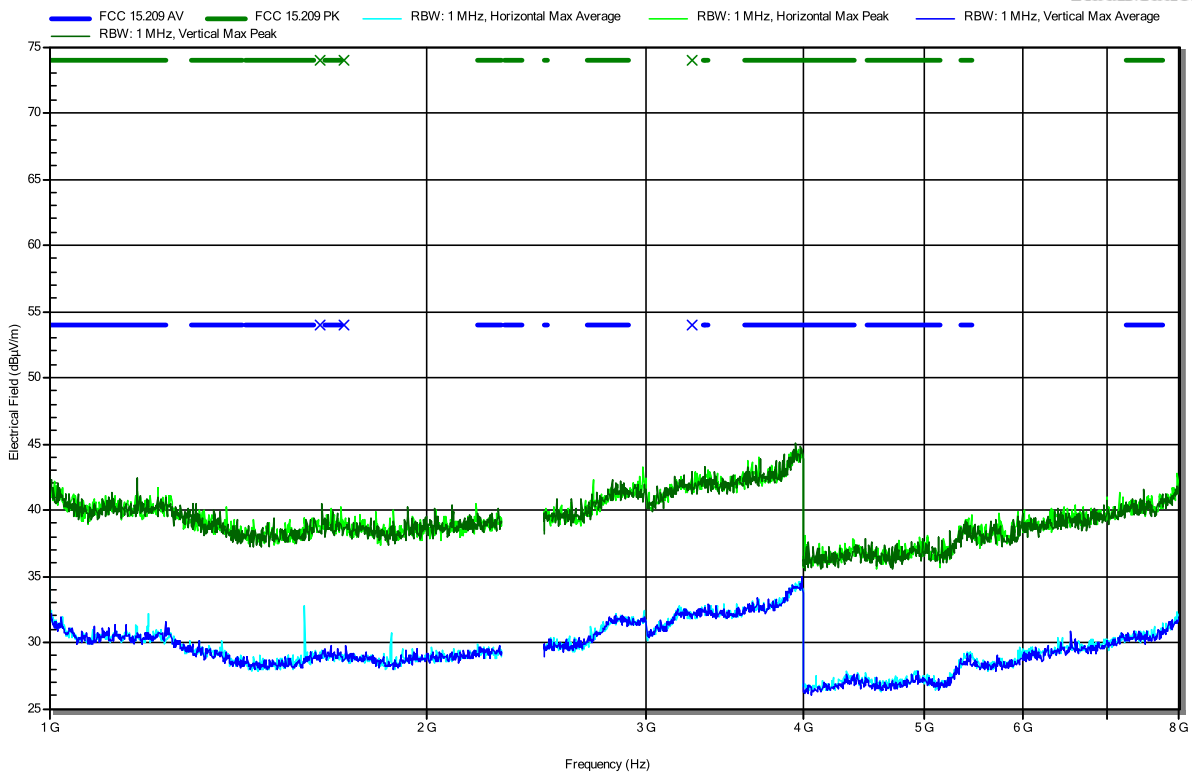


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-29

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RadiMation

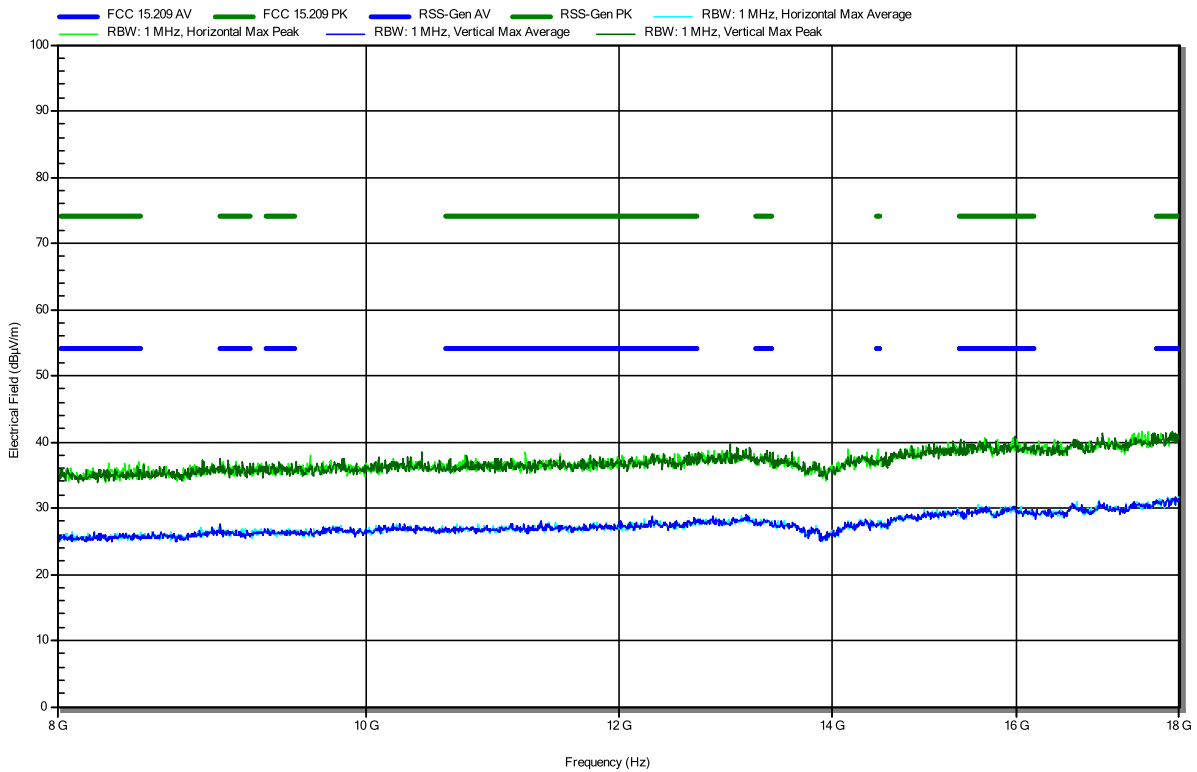


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom:
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation

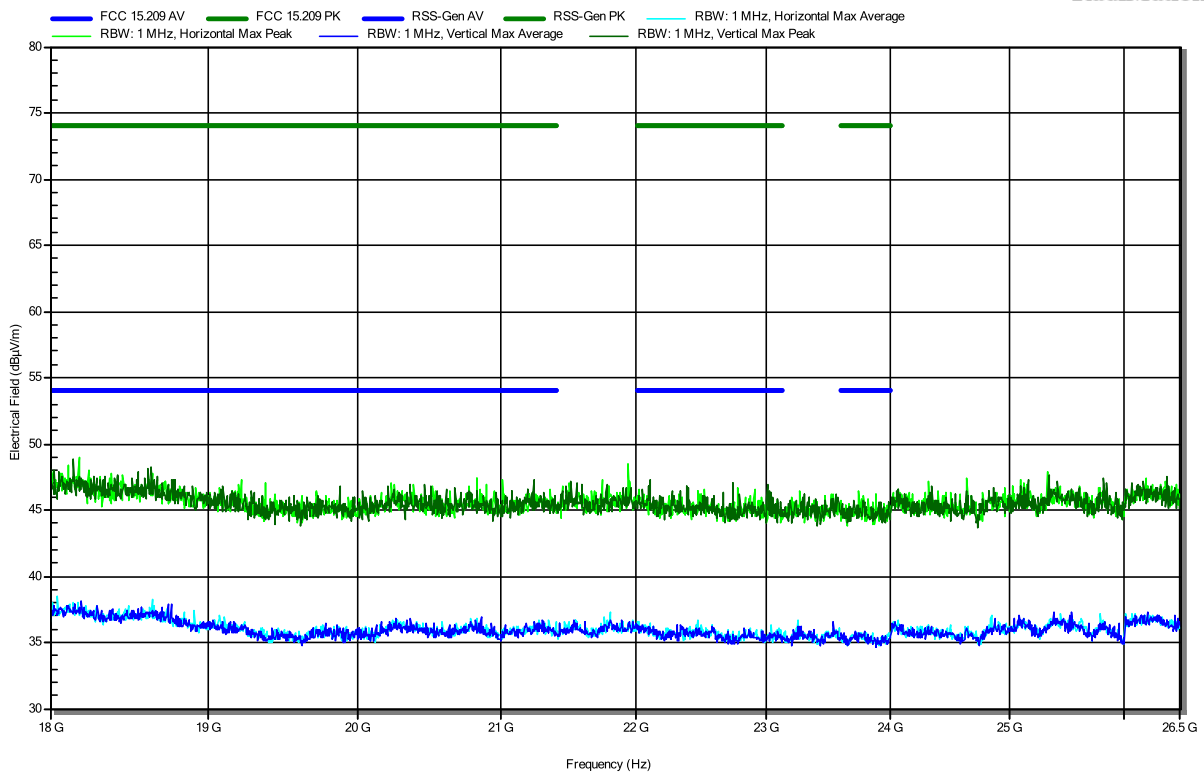


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-30

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RadiMation

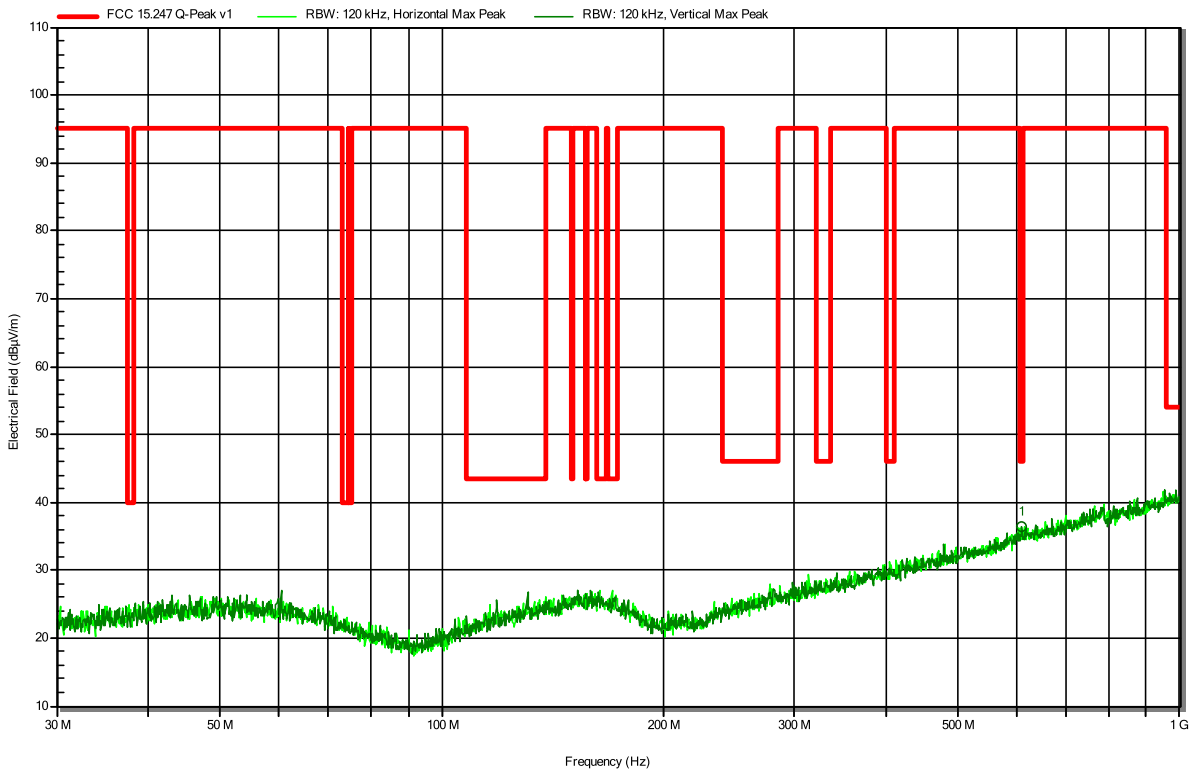


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation



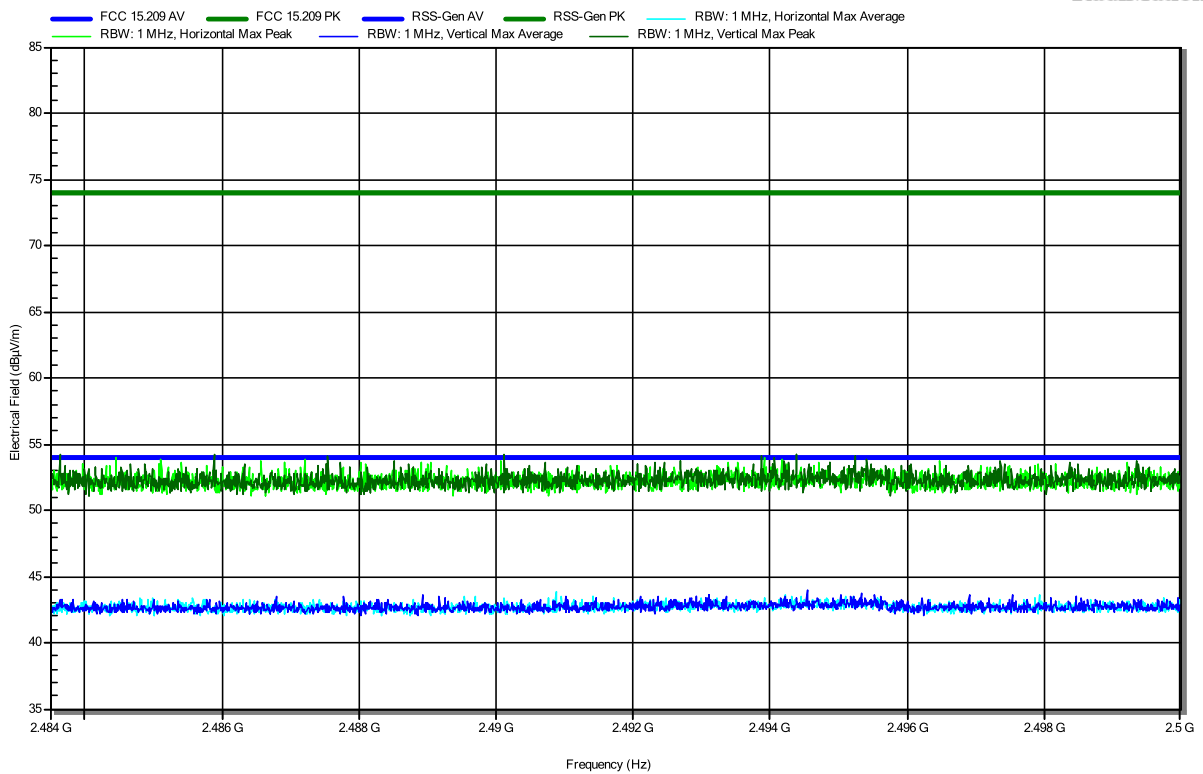
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
609.5427 MHz	36.5 dBµV/m	46 dBµV/m	-9.49 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-29
 Note: Upper bandedge

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RadiMation

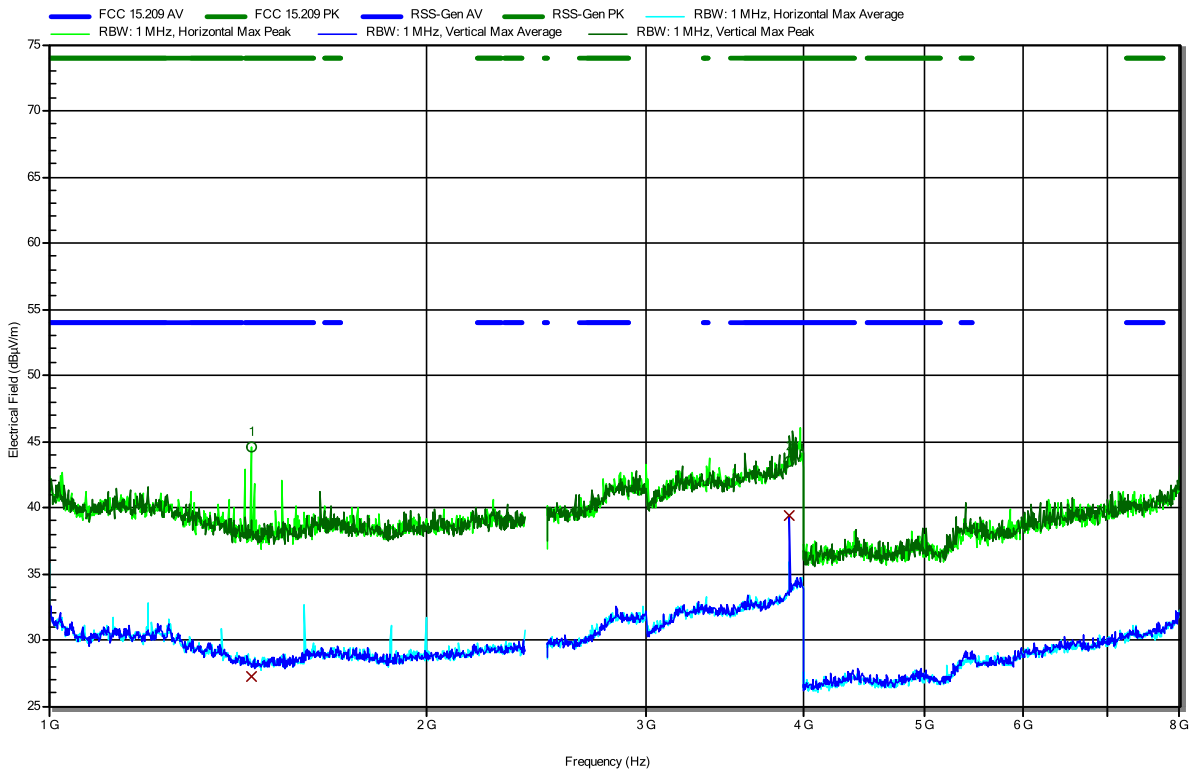


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-29

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.45 GHz	44.64 dBµV/m	74 dBµV/m	-29.36 dB	Pass	Horizontal
3.903 GHz	43.55 dBµV/m	74 dBµV/m	-30.45 dB	Pass	Vertical

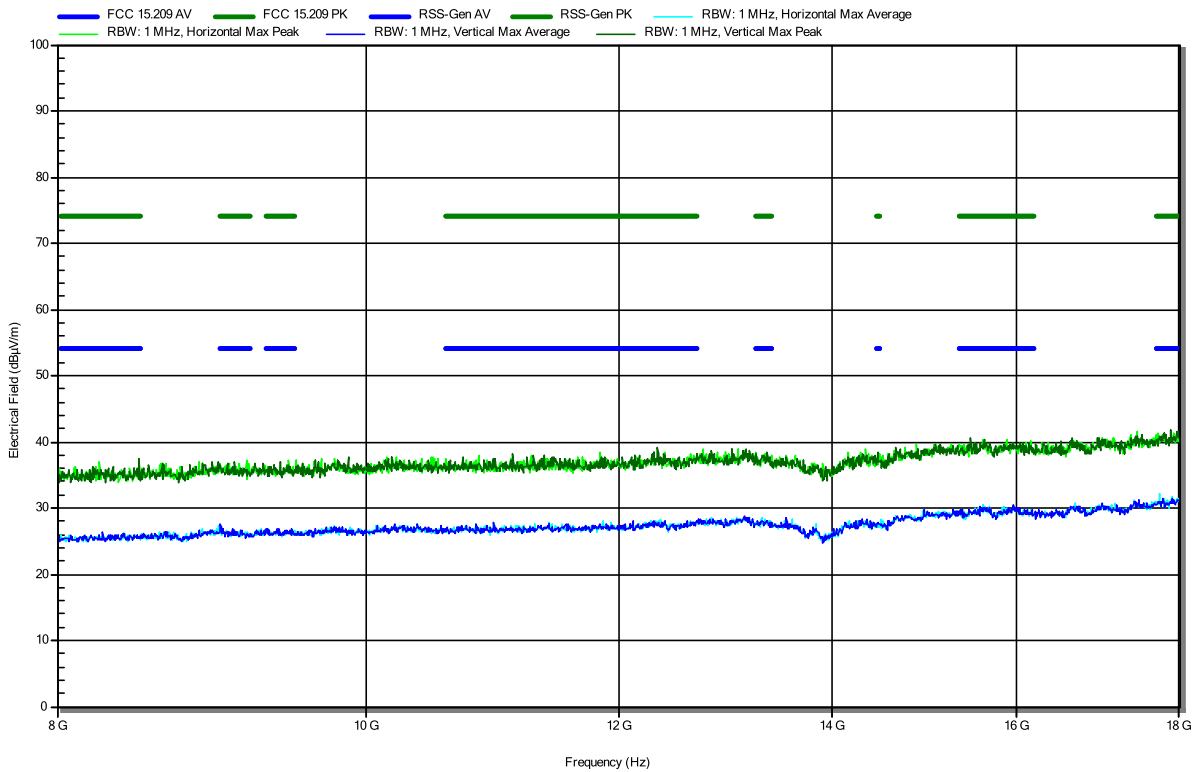
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.45 GHz	27.26 dBµV/m	54 dBµV/m	-26.74 dB	Pass	Horizontal
3.903 GHz	39.39 dBµV/m	54 dBµV/m	-14.61 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom:
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation

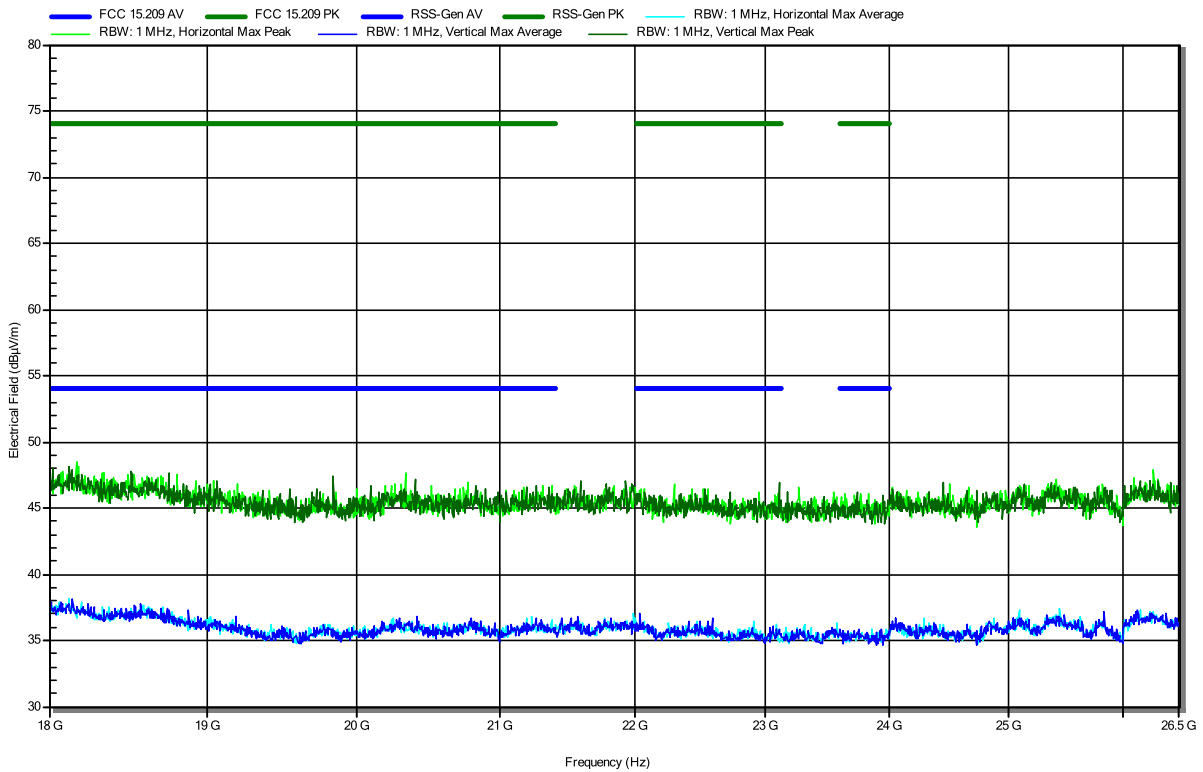


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-30

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RadiMation

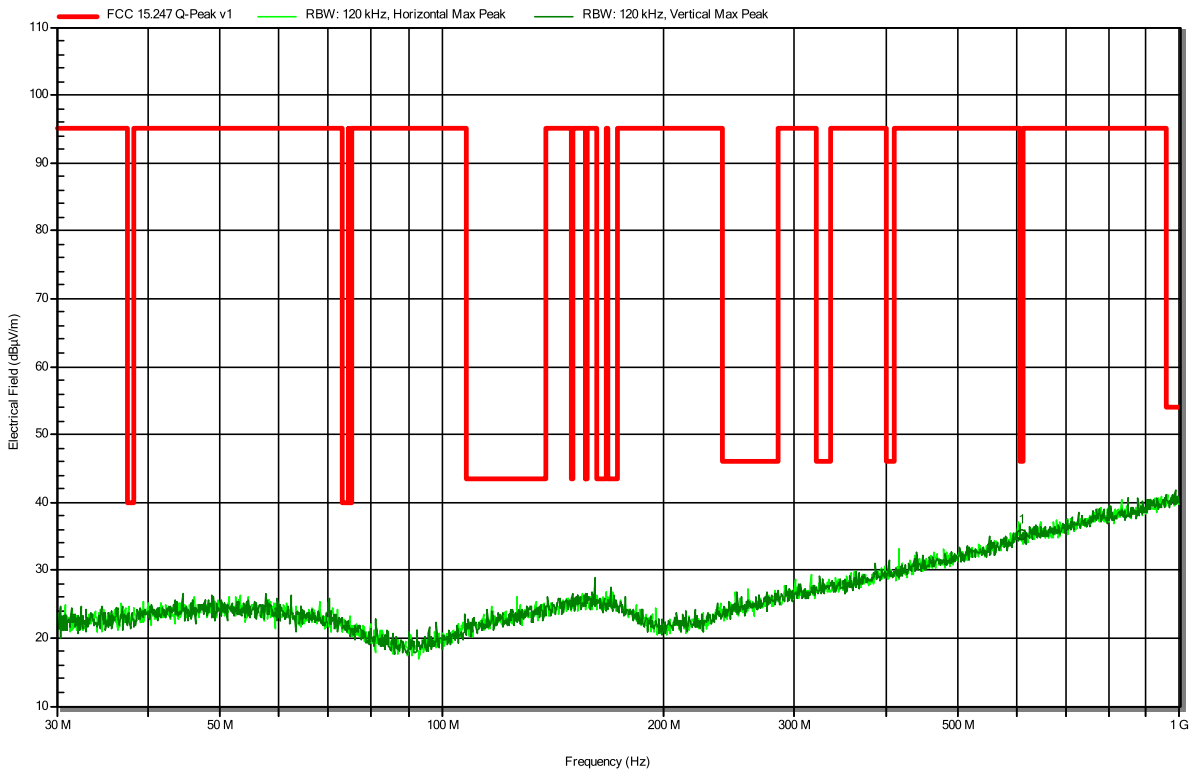


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2441 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation



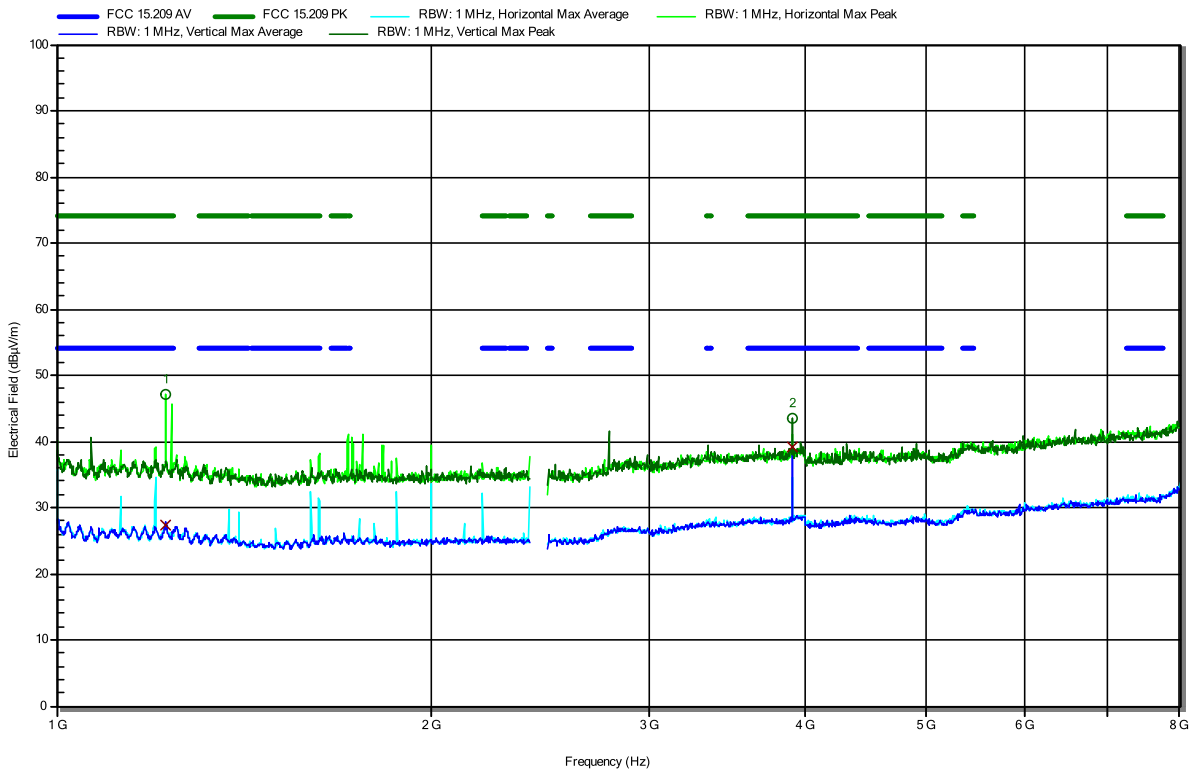
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
608.993 MHz	35.2 dBµV/m	46 dBµV/m	-10.82 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2441 MHz, GFSK, DH5
 Test Date: 2024-01-30

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.222 GHz	47.07 dBµV/m	74 dBµV/m	-26.93 dB	Pass	Horizontal
3.9033 GHz	43.38 dBµV/m	74 dBµV/m	-30.62 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.222 GHz	27.46 dBµV/m	54 dBµV/m	-26.54 dB	Pass	Horizontal
3.9033 GHz	39.18 dBµV/m	54 dBµV/m	-14.82 dB	Pass	Vertical

Test Report No.: G0M-2309-2215-TFC247BT-V01

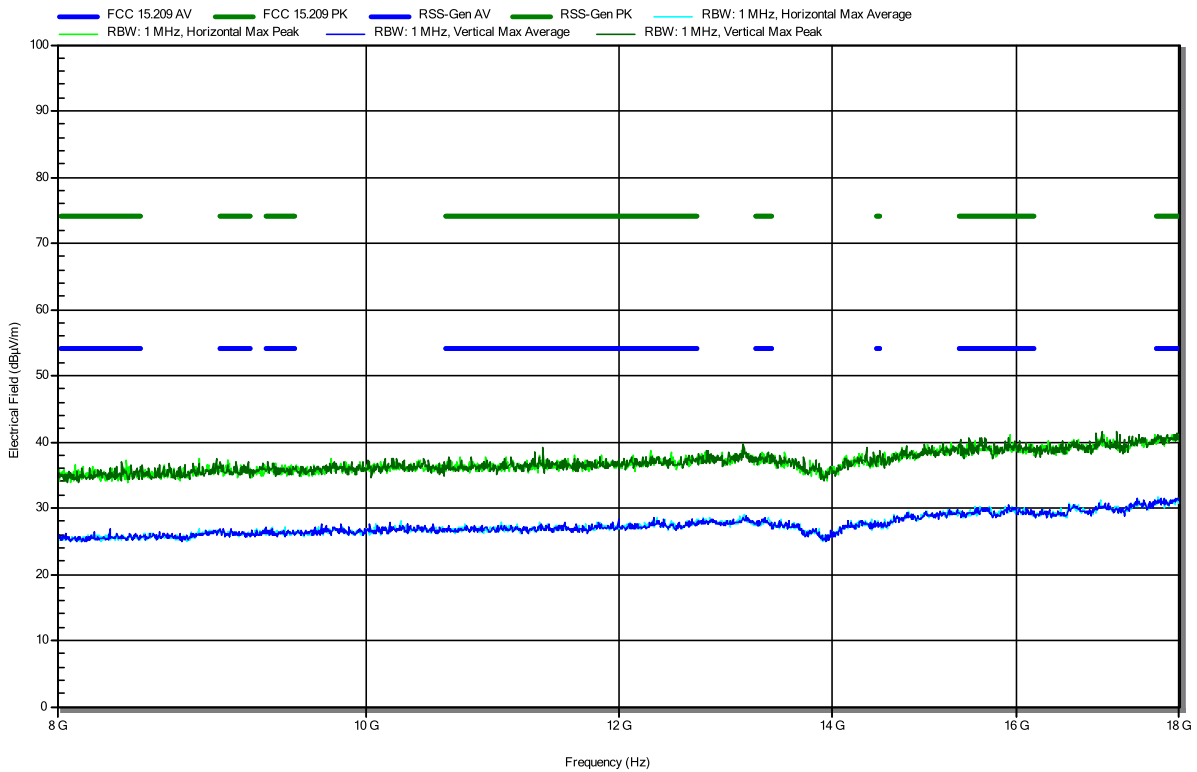
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom:
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BT, 2441 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation

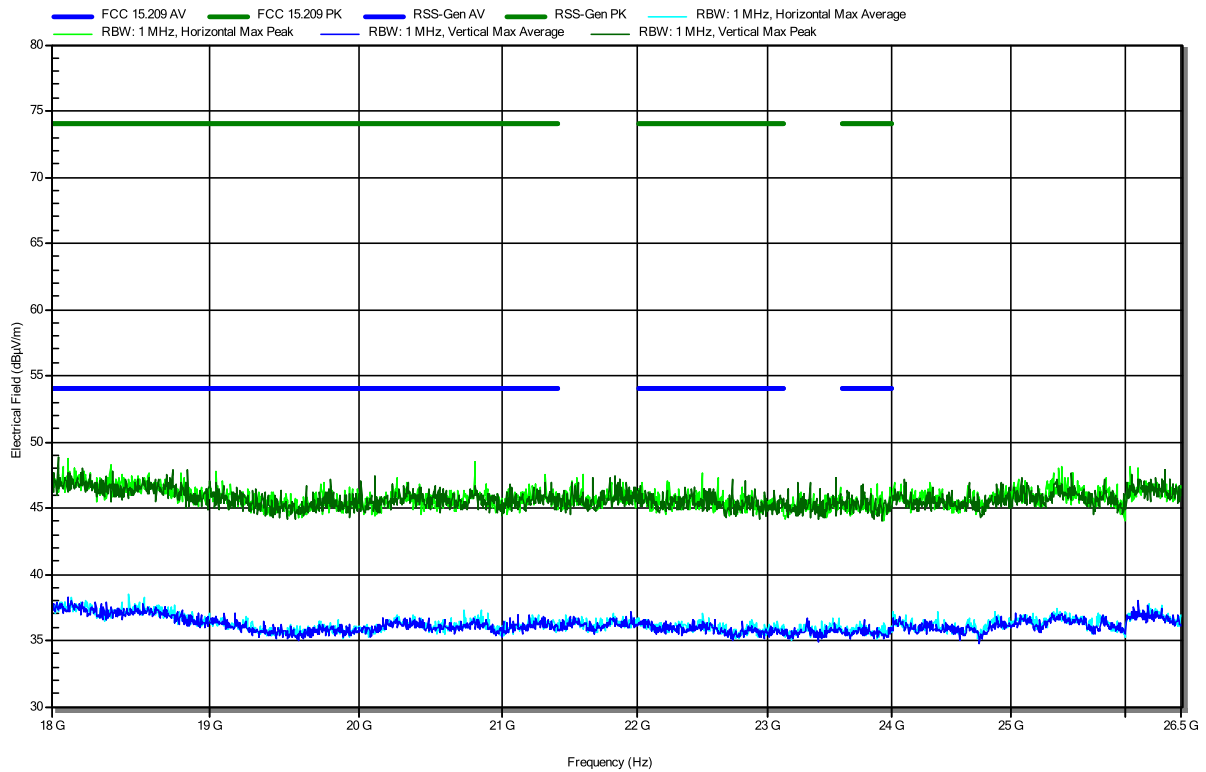


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Amplifier Research AT4560
 Measurement distance: 3 m
 Mode: Tx; BT, 2441 MHz, GFSK, DH5
 Test Date: 2024-01-30

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RadiMation



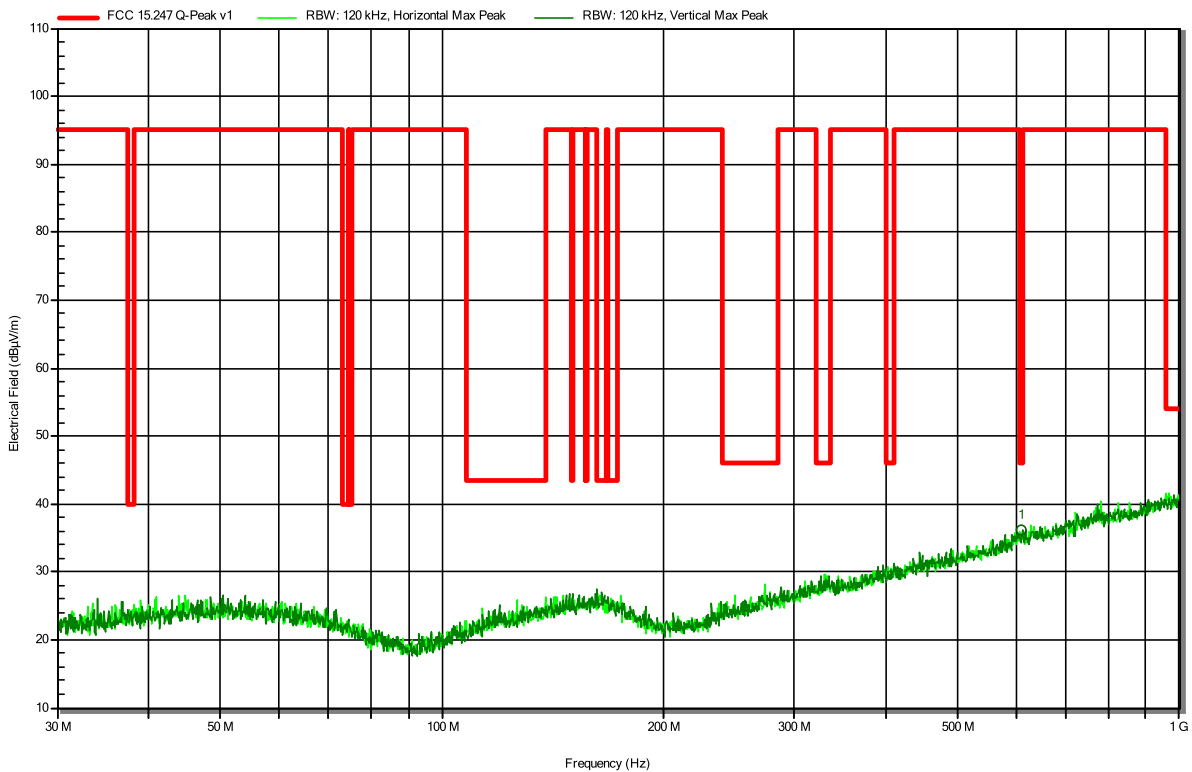
ANNEX B Transmitter spurious emissions in the spurious domain with Antenna 2 (External, ANT-2J Antennas-2JF1002P)

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 22 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation



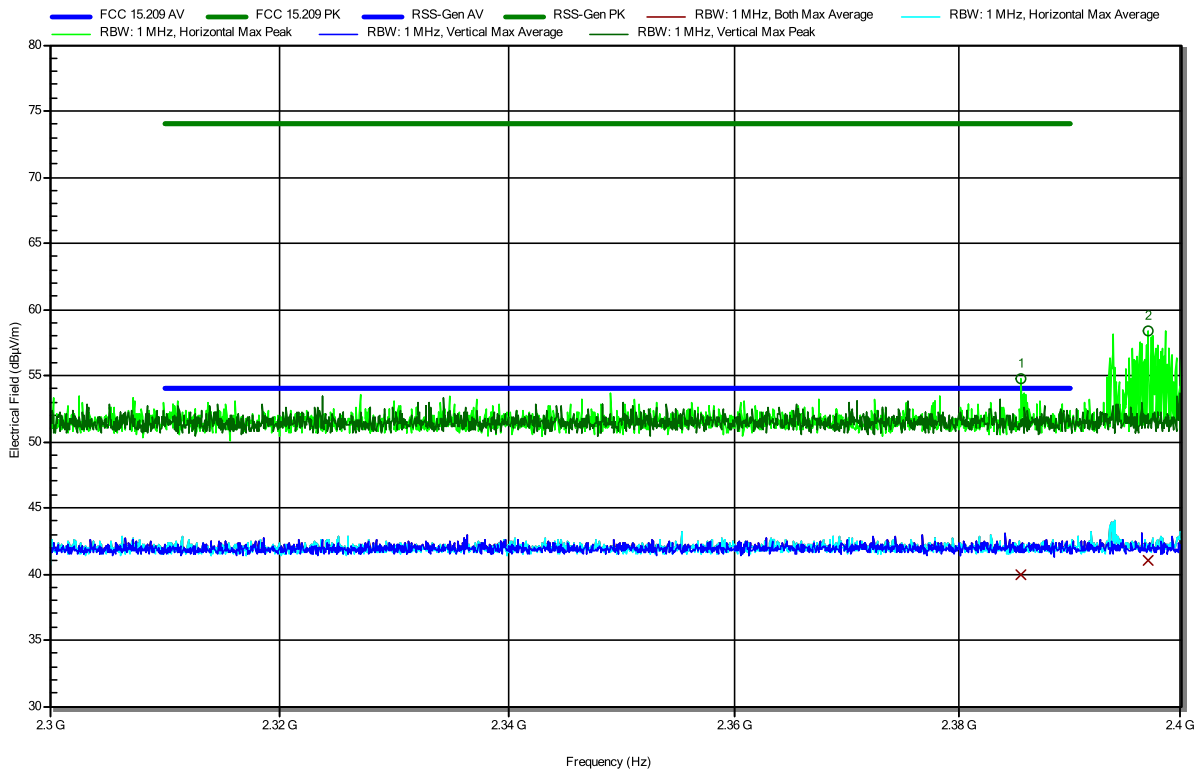
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
611.321 MHz	36.1 dBµV/m	46 dBµV/m	-9.91 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-30
 Note: lower bandedge

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3856 GHz	54.76 dBµV/m	74 dBµV/m	-19.24 dB	Pass	Horizontal
2.397 GHz	58.38 dBµV/m				Horizontal

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3856 GHz	39.93 dBµV/m	54 dBµV/m	-14.07 dB	Pass	Horizontal
2.397 GHz	41.02 dBµV/m				Horizontal

Test Report No.: G0M-2309-2215-TFC247BT-V01

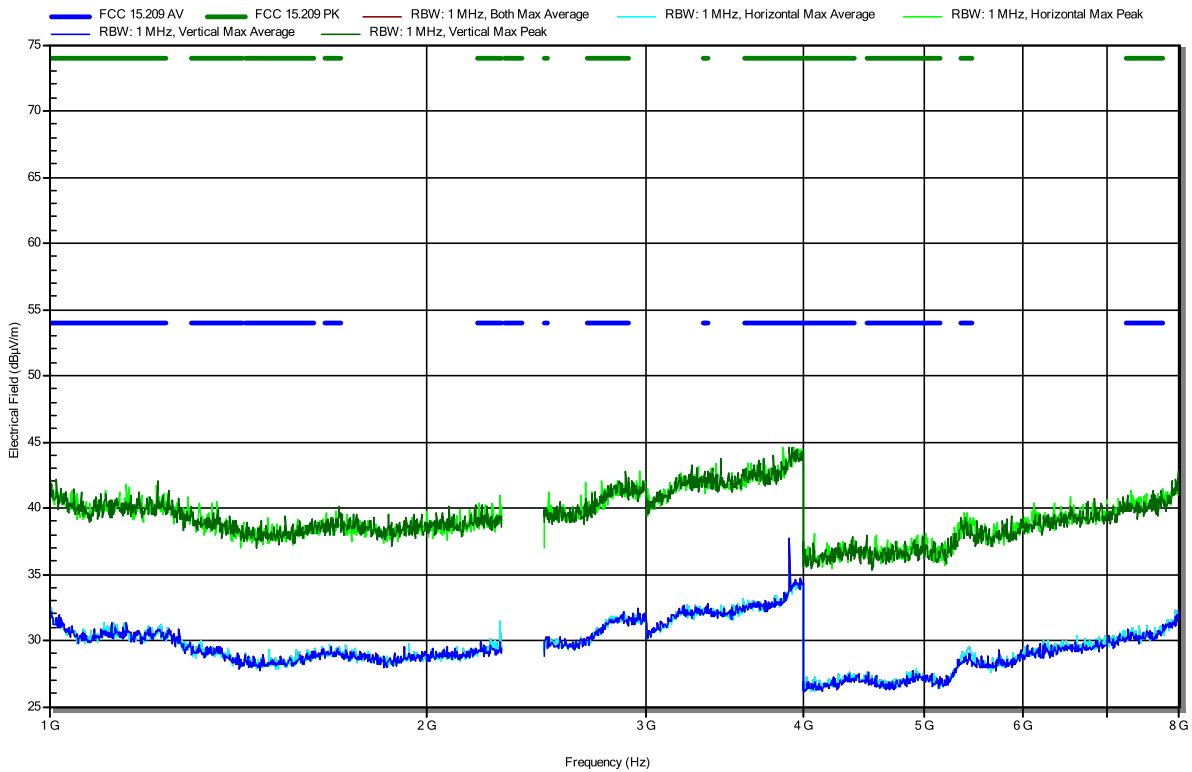
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-30

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RadiMation

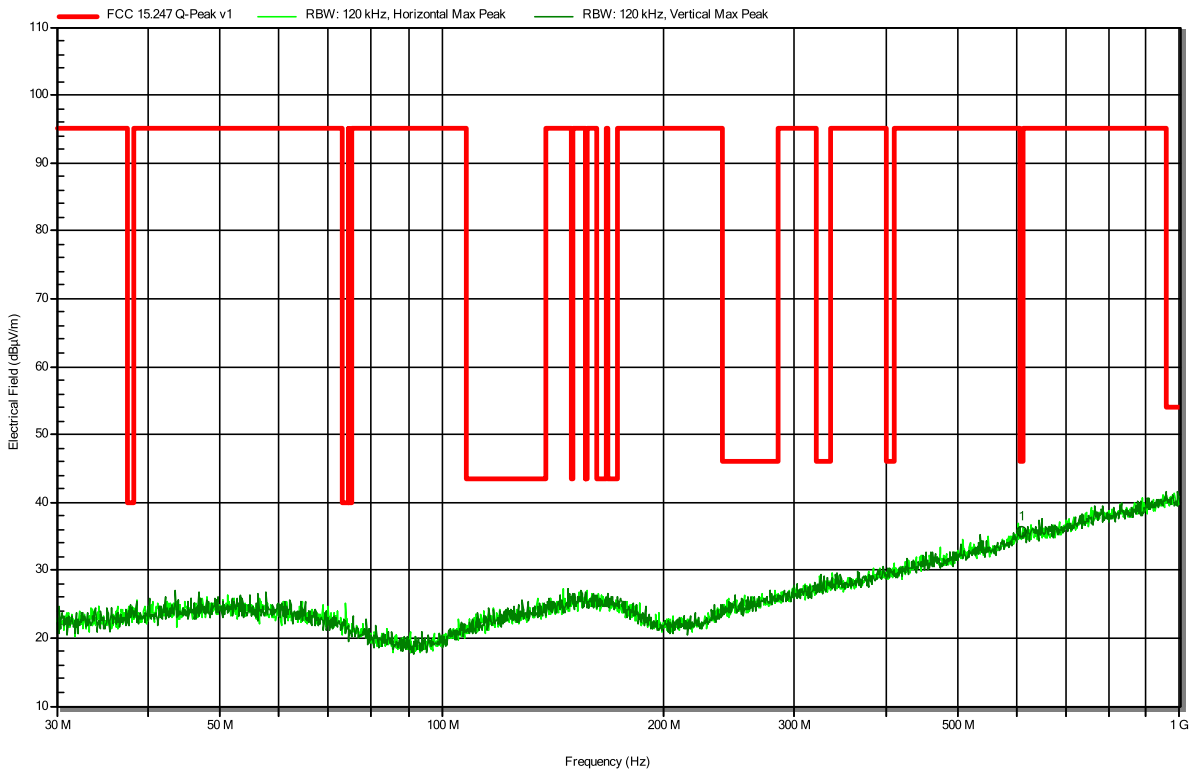


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 22 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-02-05

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RadiMation



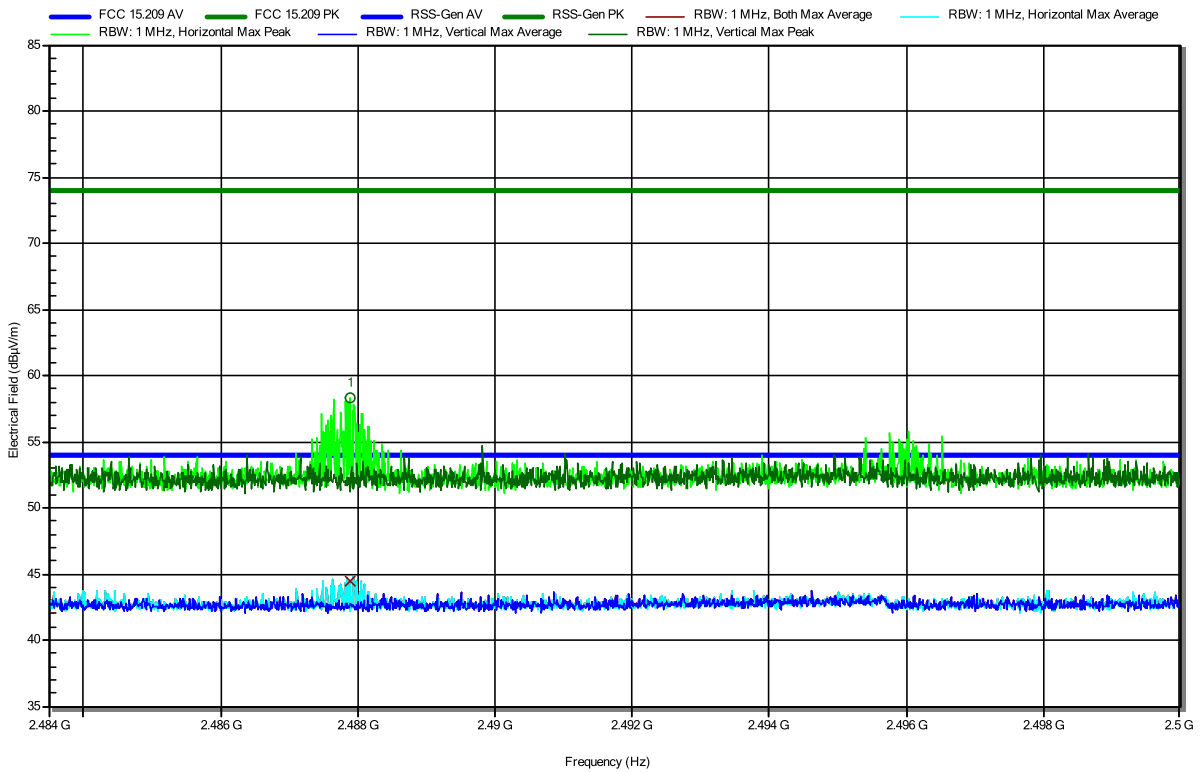
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
610.933 MHz	35.7 dBµV/m	46 dBµV/m	-10.26 dB	Pass	Horizontal

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-30
 Note: upper bandedge

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.4879 GHz	58.3 dBµV/m	74 dBµV/m	-15.7 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.4879 GHz	44.41 dBµV/m	54 dBµV/m	-9.59 dB	Pass	Horizontal

Test Report No.: G0M-2309-2215-TFC247BT-V01

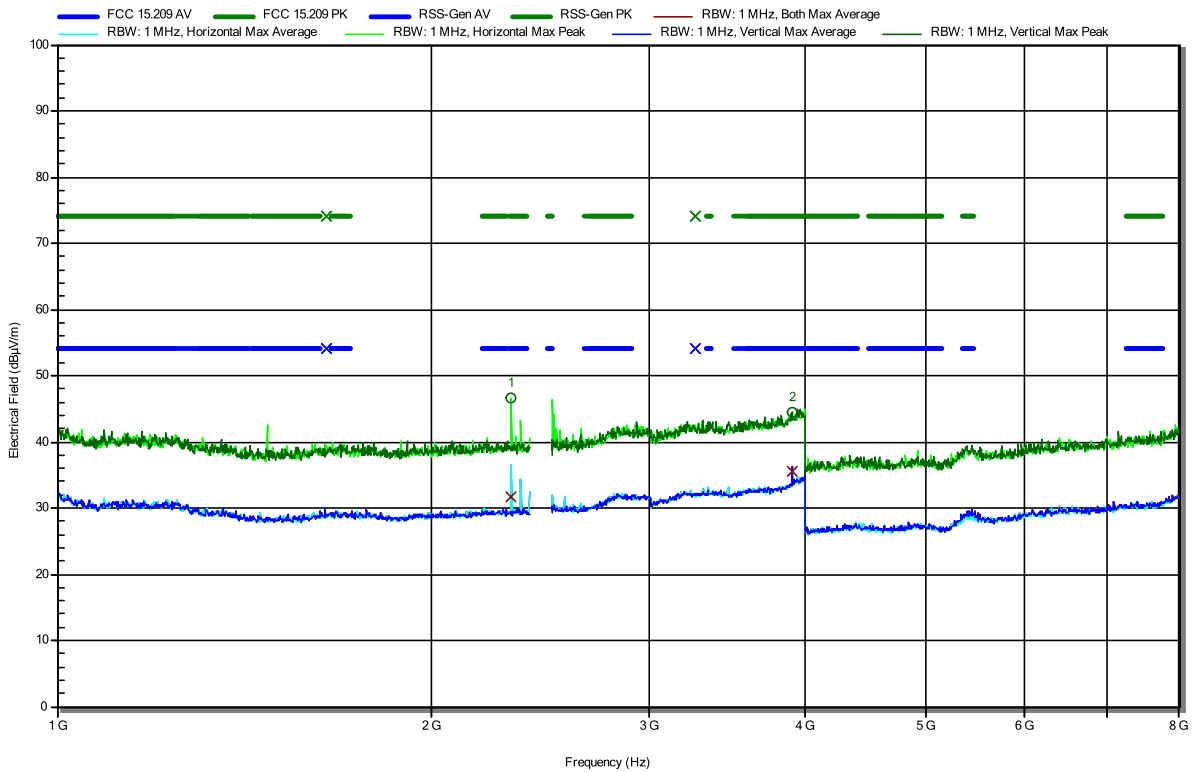
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-30

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.32 GHz	46.64 dBµV/m	74 dBµV/m	-27.36 dB	Pass	Horizontal
3.903 GHz	44.41 dBµV/m	74 dBµV/m	-29.59 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.32 GHz	31.61 dBµV/m	54 dBµV/m	-22.39 dB	Pass	Horizontal
3.903 GHz	35.5 dBµV/m	54 dBµV/m	-18.5 dB	Pass	Vertical

Test Report No.: G0M-2309-2215-TFC247BT-V01

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

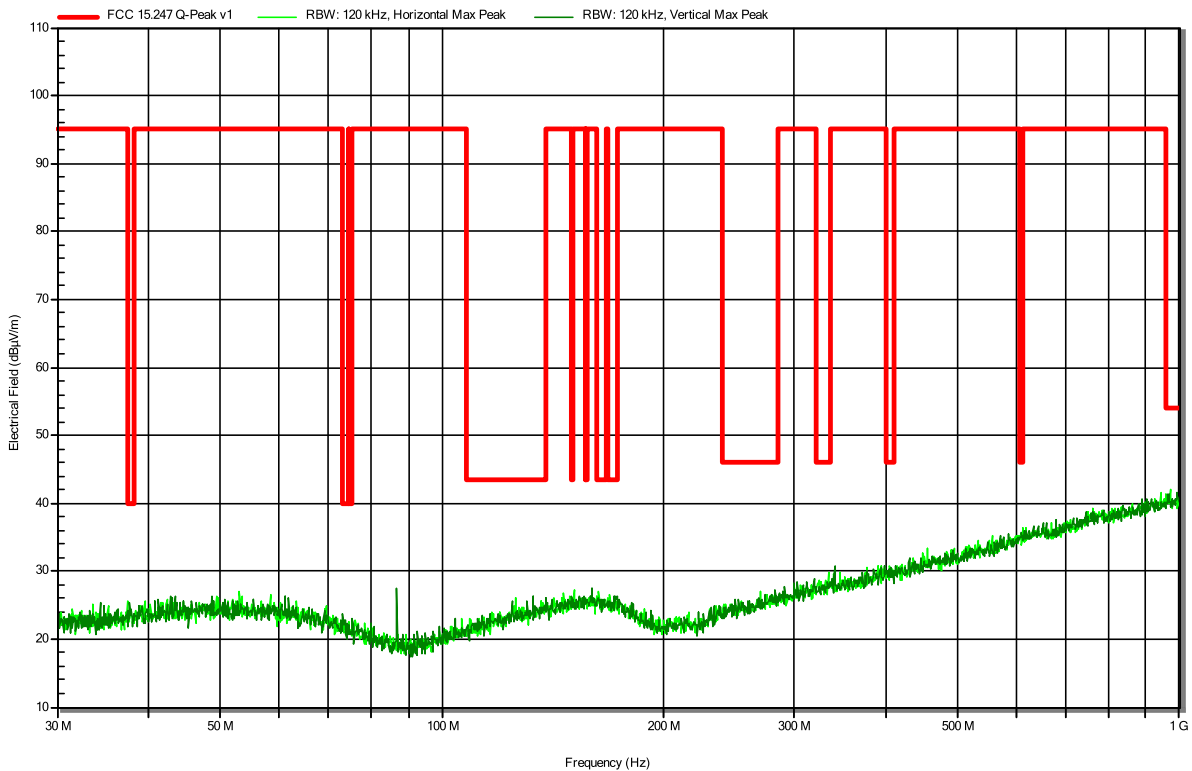
ANNEX C Transmitter spurious emissions in the spurious domain with Antenna 3 (External, ANT-TDK-ANT162442DT-2001A2)

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-02-05

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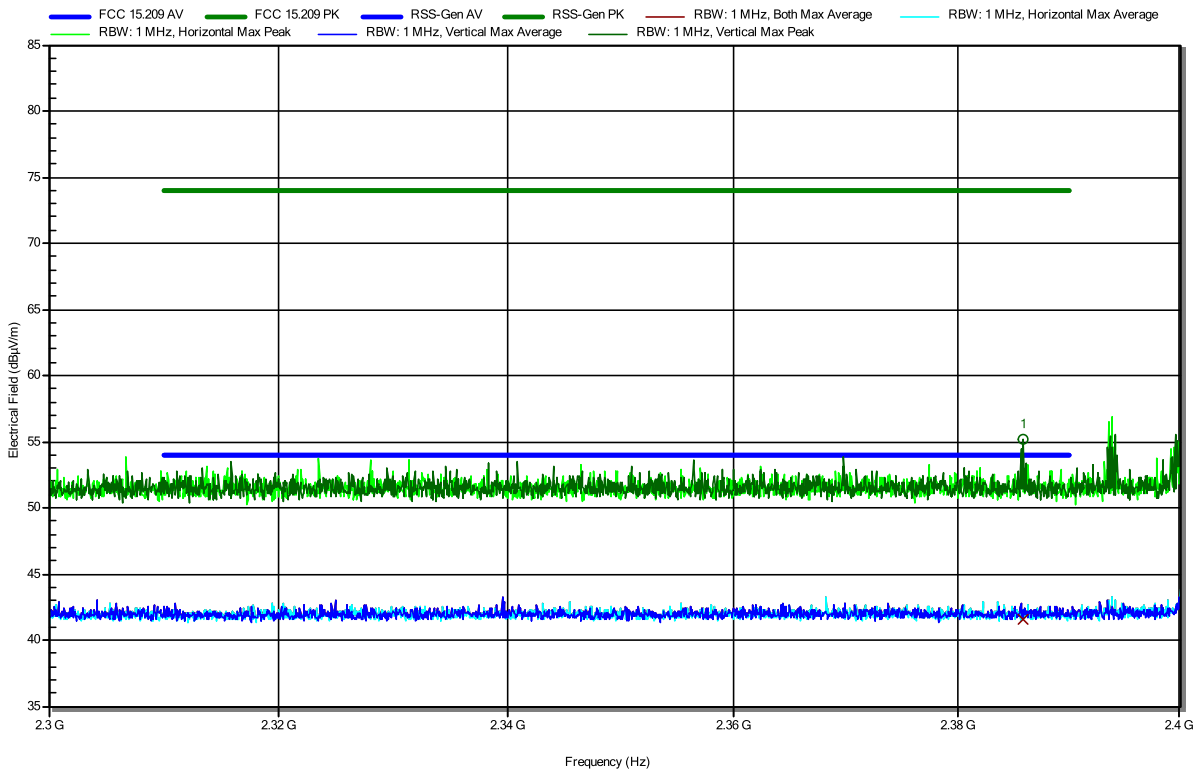


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-30
 Note: lower bandedge

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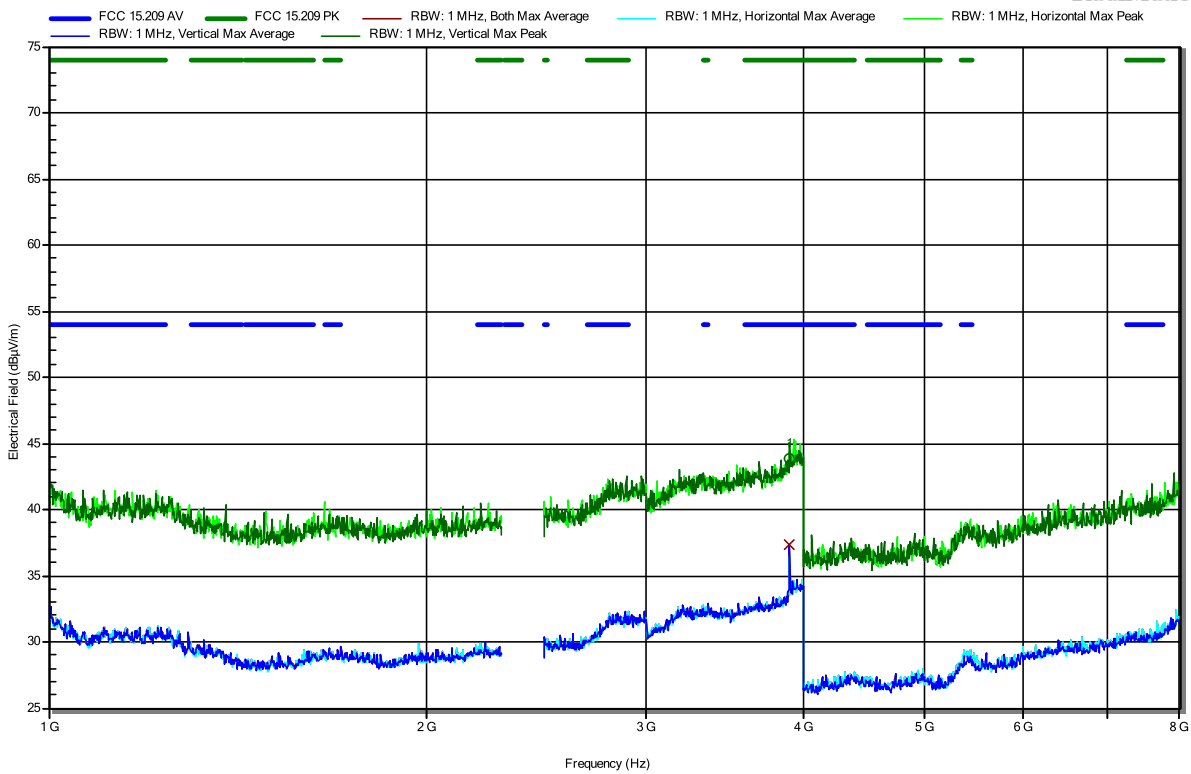
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.3859 GHz	55.12 dBµV/m	74 dBµV/m	-18.88 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.3859 GHz	41.52 dBµV/m	54 dBµV/m	-12.48 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2402 MHz, GFSK, DH5
 Test Date: 2024-01-30

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RadiMation



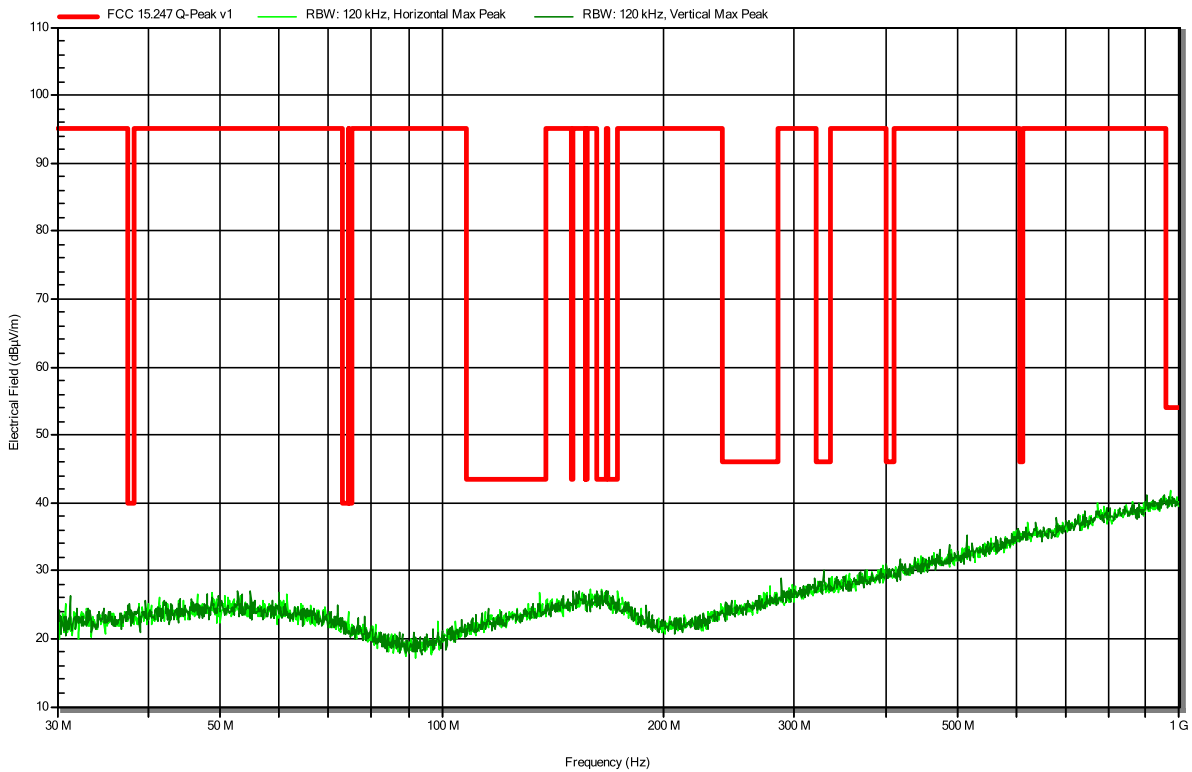
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
3.9035 GHz	43.89 dBµV/m	74 dBµV/m	-30.11 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
3.9035 GHz	37.3 dBµV/m	54 dBµV/m	-16.7 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-02-05

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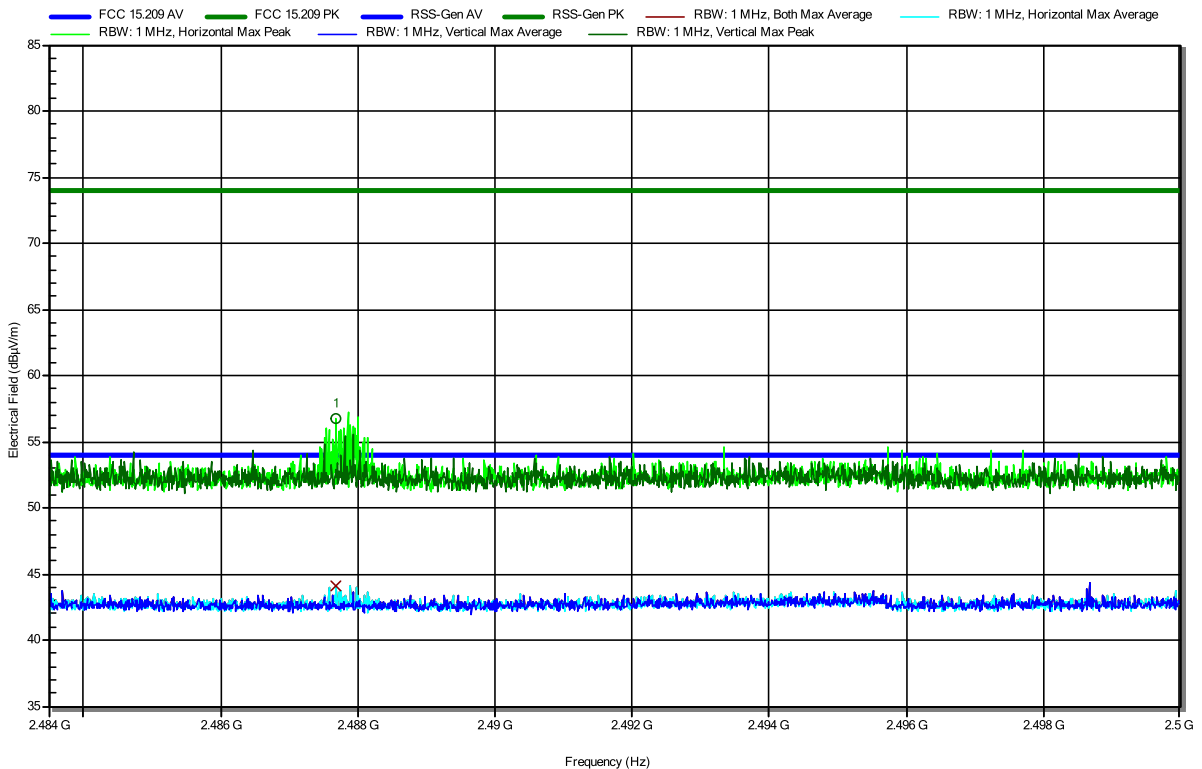


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-30
 Note: upper bandedge

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.4877 GHz	56.74 dBµV/m	74 dBµV/m	-17.26 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
2.4877 GHz	44.12 dBµV/m	54 dBµV/m	-9.88 dB	Pass	Horizontal

Test Report No.: G0M-2309-2215-TFC247BT-V01

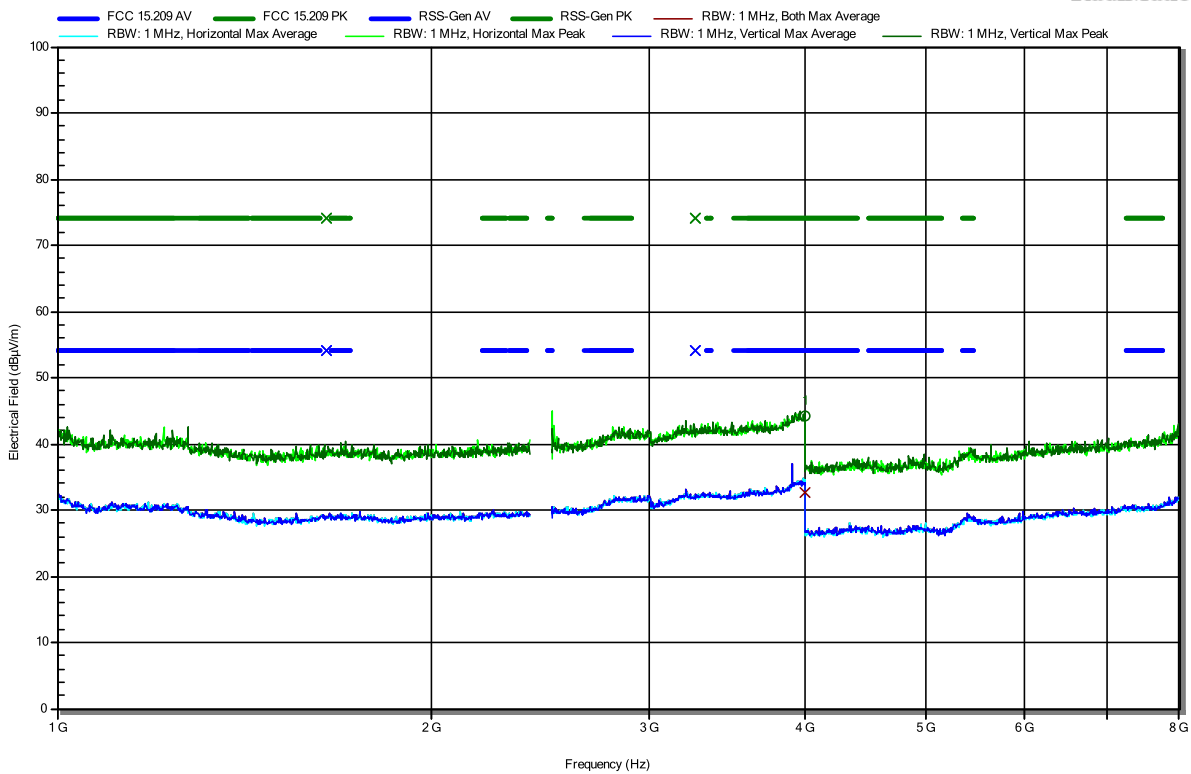
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Tx; BT, 2480 MHz, GFSK, DH5
 Test Date: 2024-01-30

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Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
3.998 GHz	44.28 dBµV/m	74 dBµV/m	-29.72 dB	Pass	Horizontal
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
3.998 GHz	32.57 dBµV/m	54 dBµV/m	-21.43 dB	Pass	Horizontal

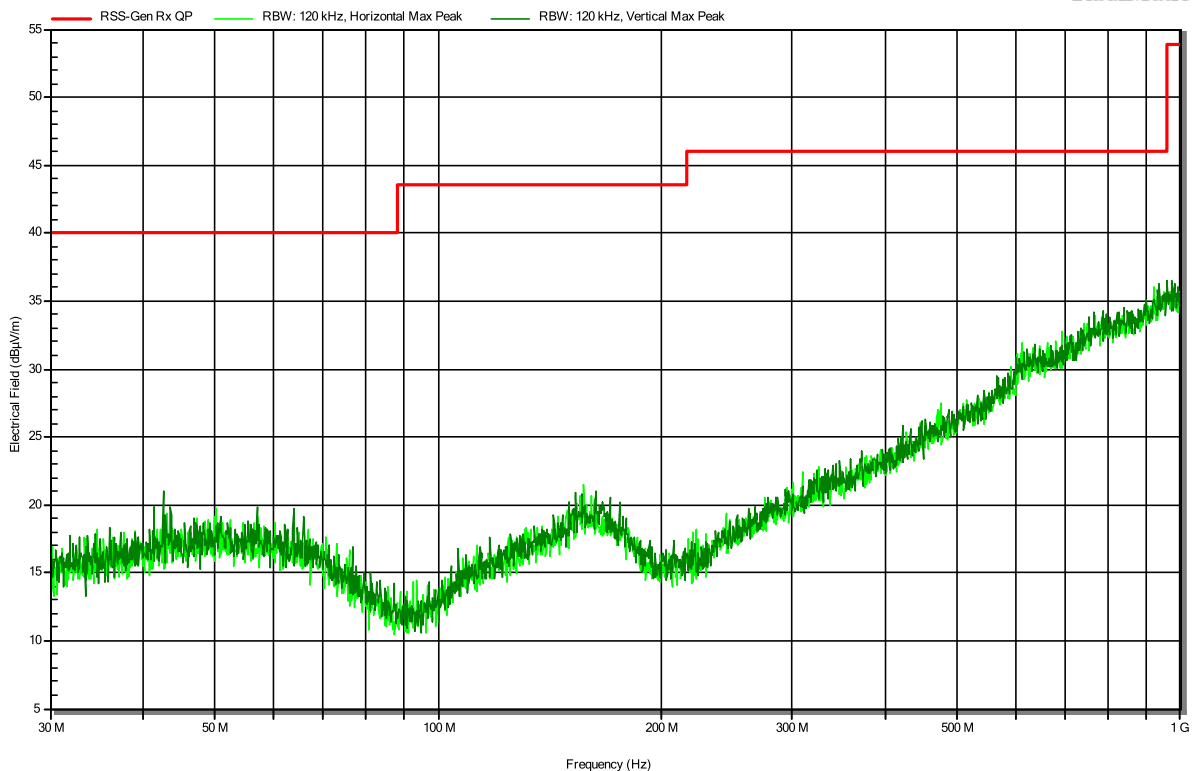
ANNEX D Receiver spurious emissions with Antenna 1 (External, ANT-Taoglas-GW.51.5153)

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 22 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-02-05

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RadiMation

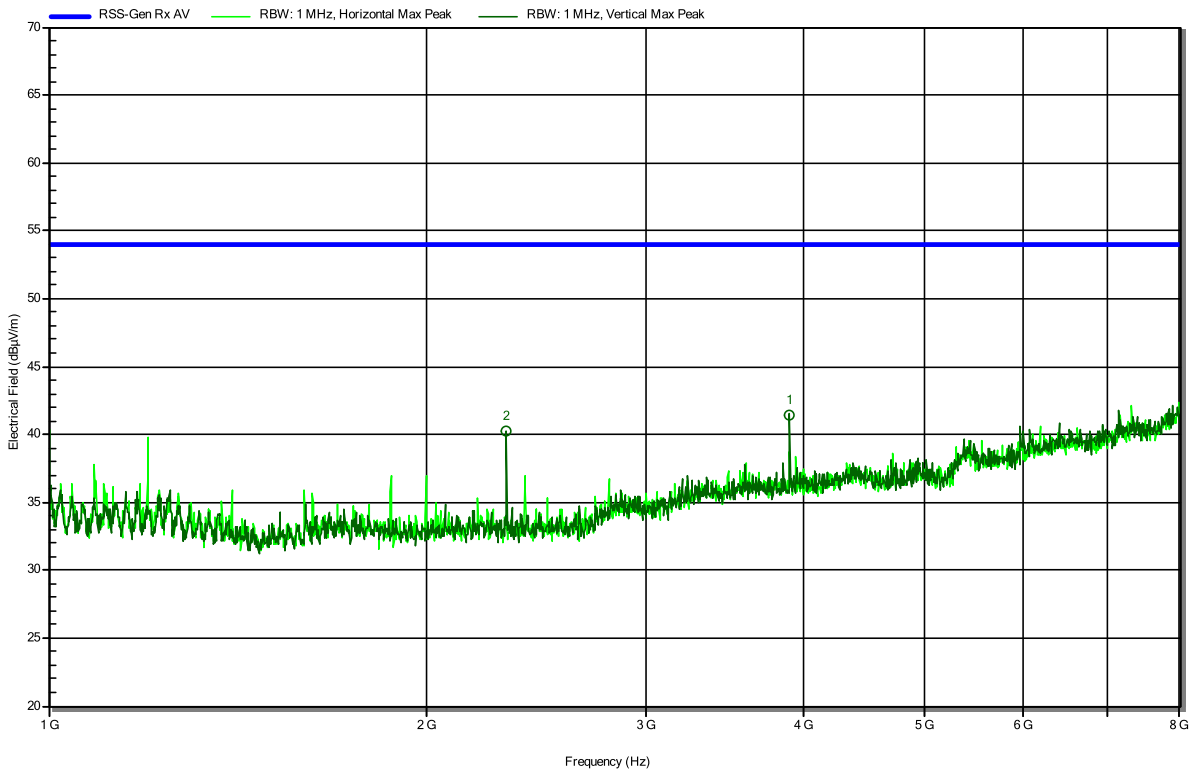


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 22 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-01-30

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RadiMation



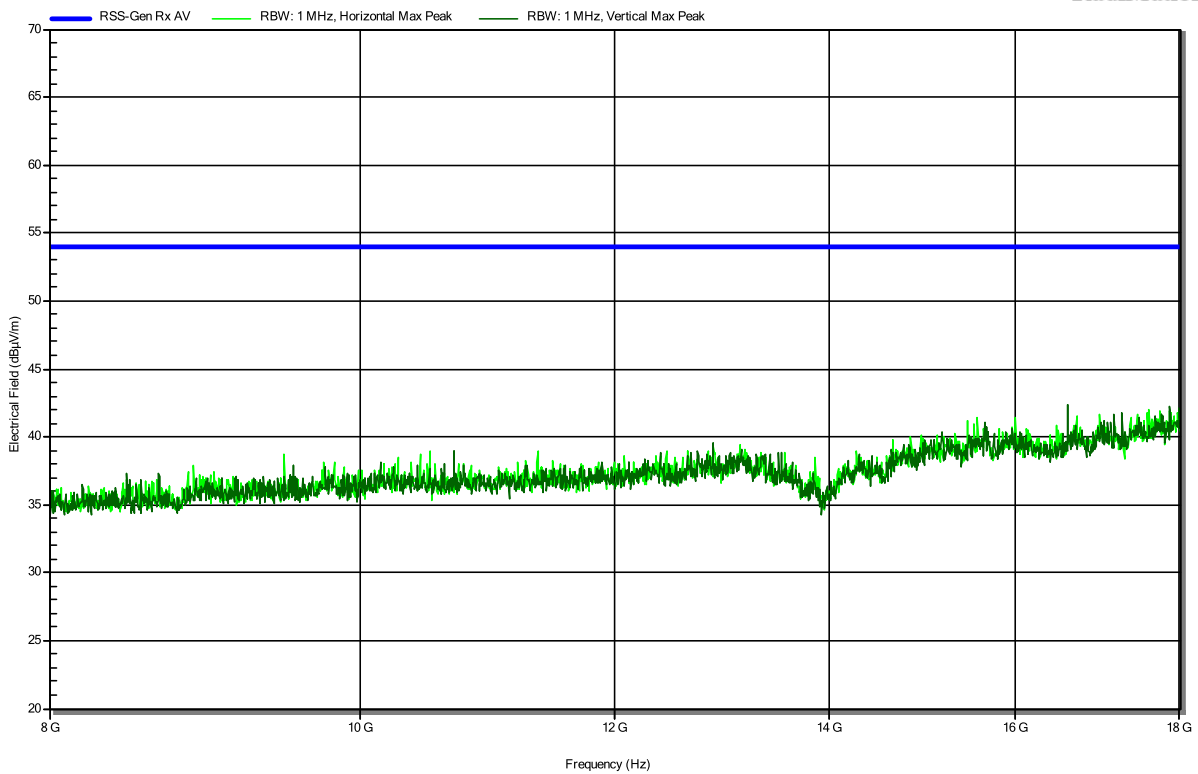
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.318 GHz	40.22 dBµV/m	53.98 dBµV/m	-13.76 dB	Pass	Vertical
3.903 GHz	41.41 dBµV/m	53.98 dBµV/m	-12.57 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46900
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 22 °Celsius, Vnom:
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-01-30

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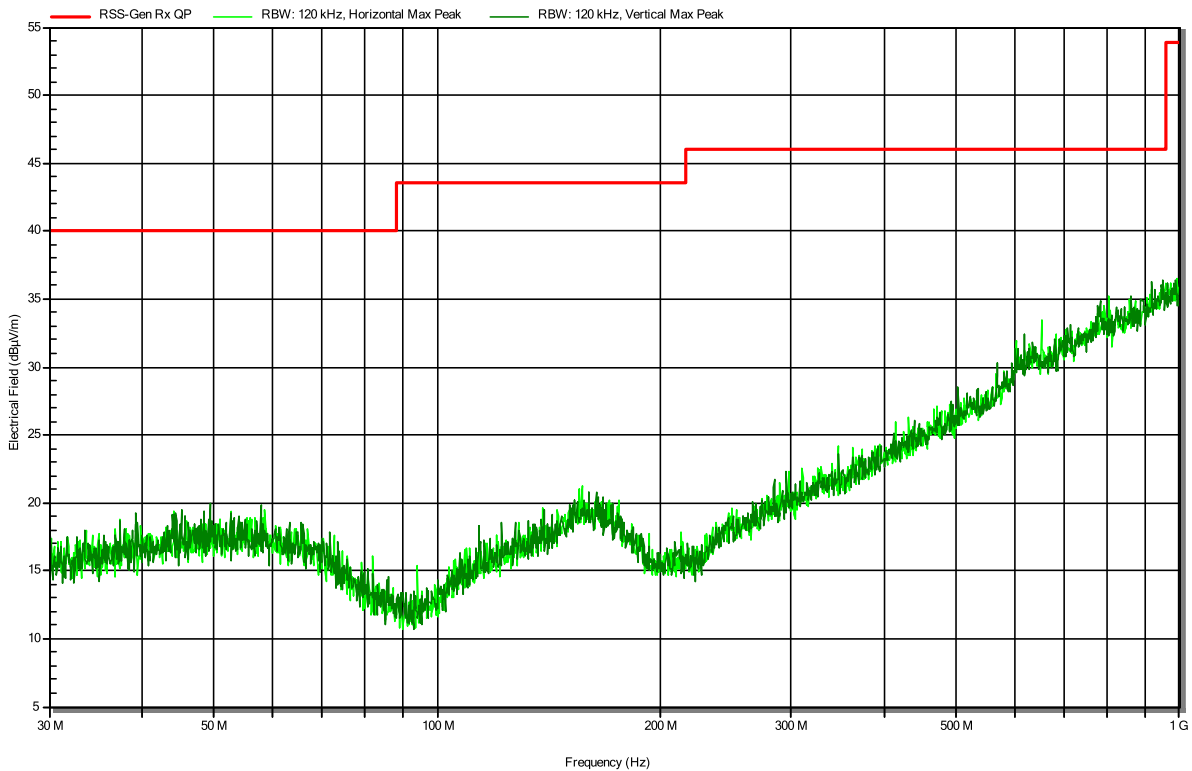
ANNEX E Receiver spurious emissions with Antenna 2 (External, ANT-2J Antennas-2JF1002P)

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-02-05

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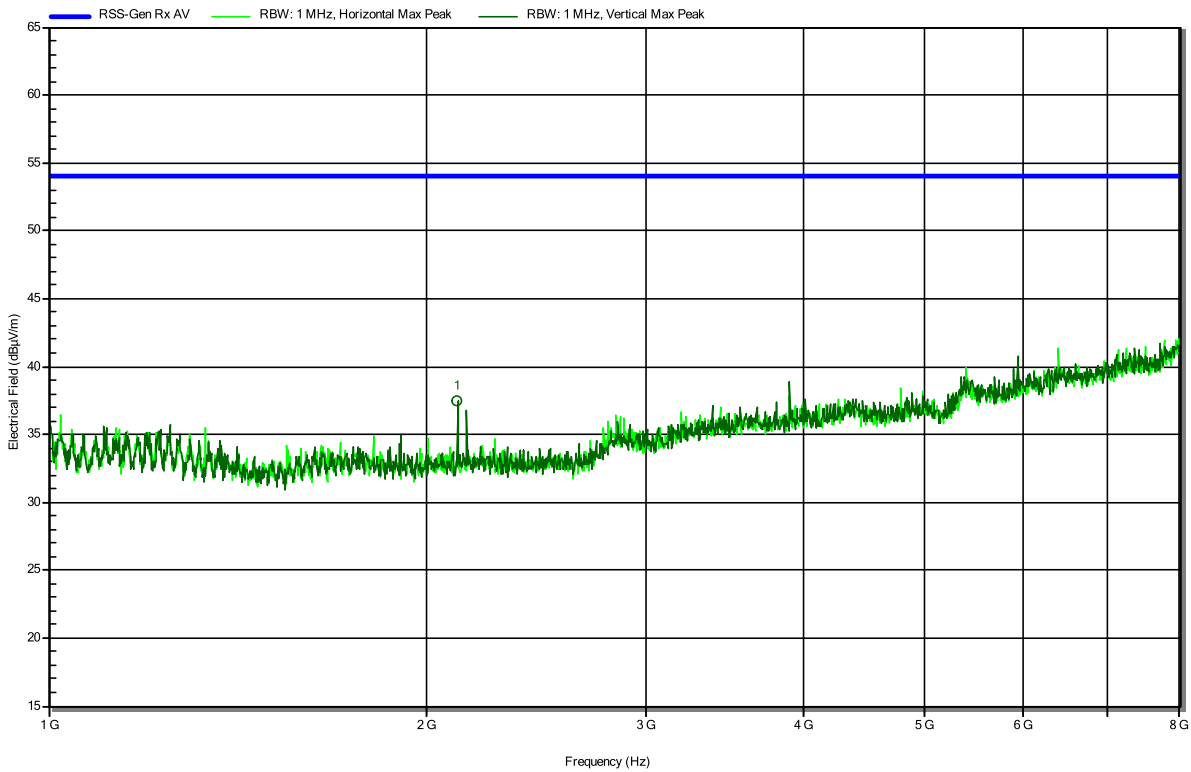


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-01-30

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RadiMation



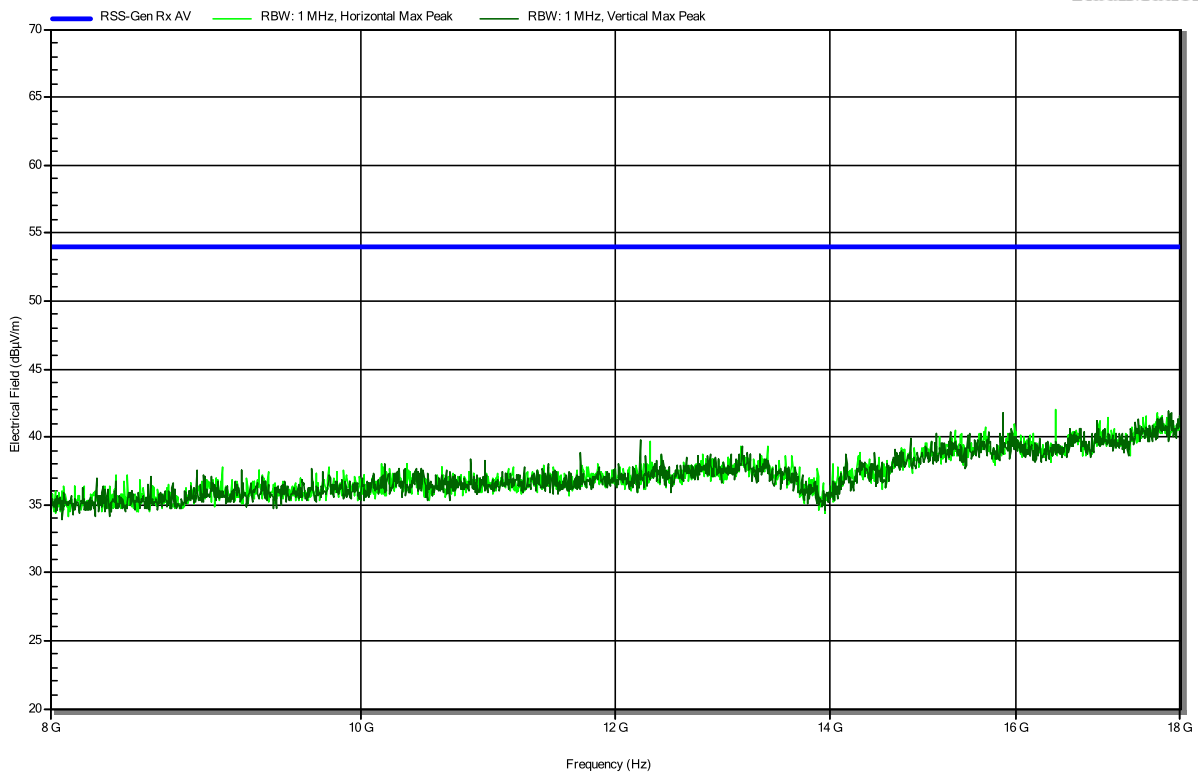
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
2.12 GHz	37.51 dBµV/m	53.98 dBµV/m	-16.47 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46856
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 22 °Celsius, Vnom:
 Antenna: Schwarzbeck HWRD 650, Vertical
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-01-30

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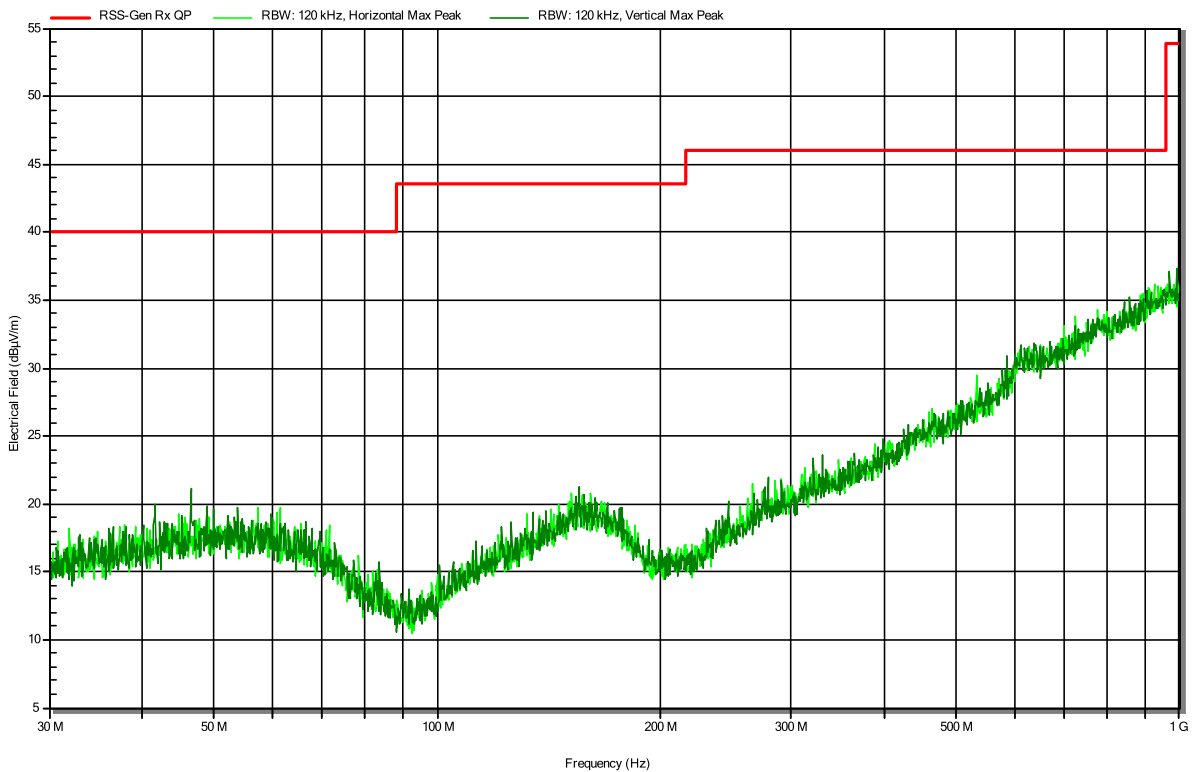
ANNEX F Receiver spurious emissions with Antenna 3 (External, ANT-TDK-ANT162442DT-2001A2)

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 23 °Celsius, Vnom:
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-02-05

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RadiMation

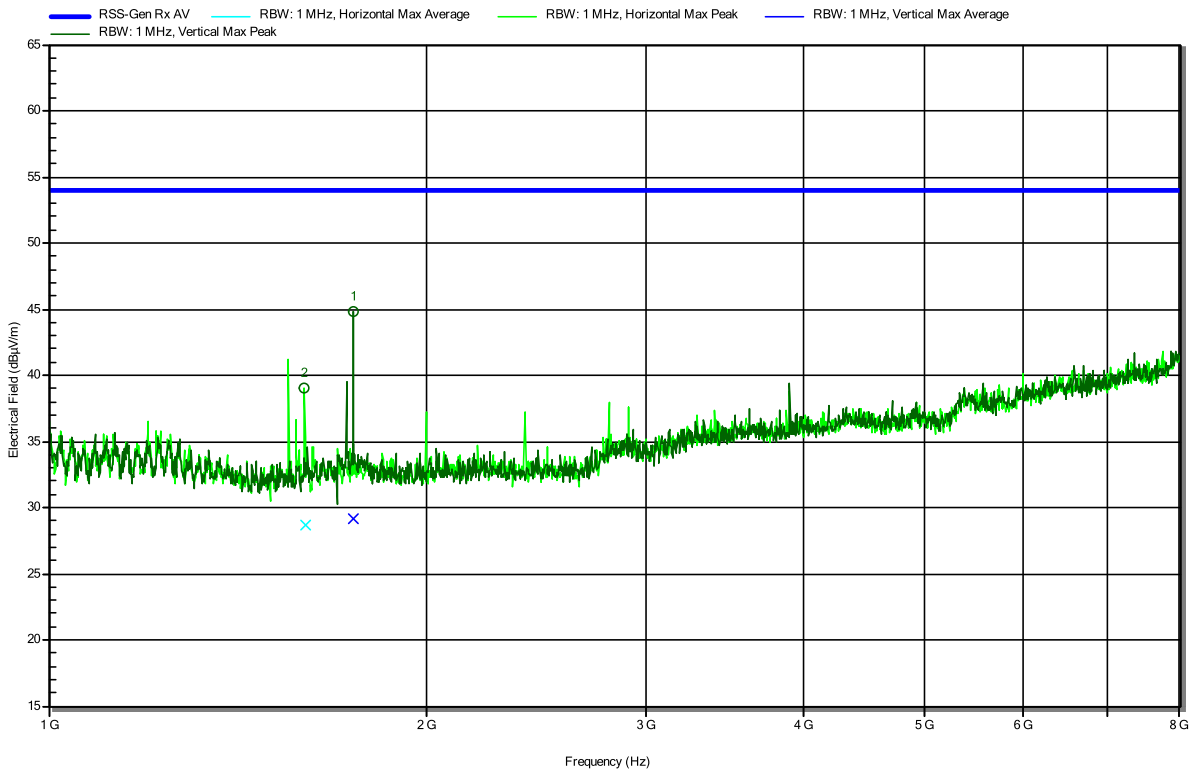


Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck BBHA 9120B
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-01-30

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RadiMation



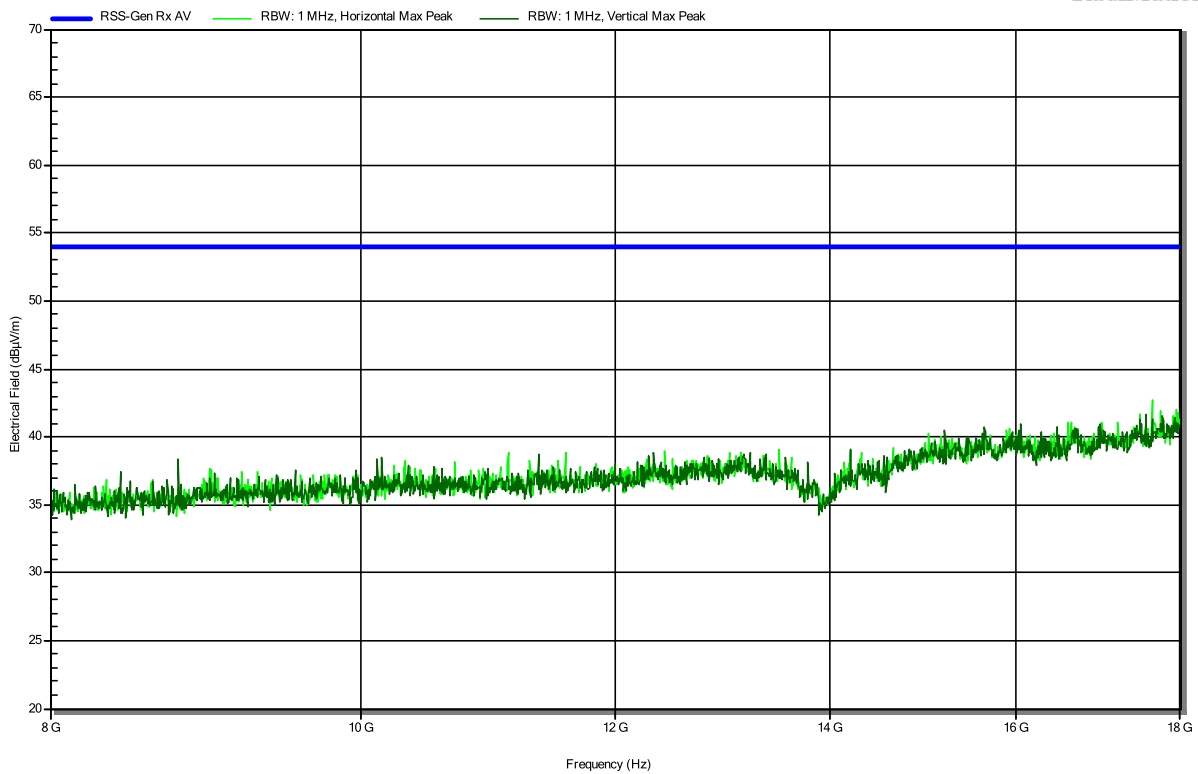
Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.6 GHz	39.05 dBµV/m	53.98 dBµV/m	-14.93 dB	Pass	Horizontal
1.749 GHz	44.82 dBµV/m	53.98 dBµV/m	-9.16 dB	Pass	Vertical

Radiated Spurious Emissions according to 47 CFR Part 15.247

Project Number: G0M-2309-2215
 Applicant: Panasonic Industrial Devices Europe GmbH
 Model Description: Wi-Fi 6 Dual Band 2.4 GHz/5 GHz, Bluetooth® and 802.15.4 Module
 Model: ENWF9511C1KF
 Test Sample ID: 46898
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Siddique
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom:
 Antenna: Schwarzbeck HWRD 650, Vertical
 Measurement distance: 3 m
 Mode: Rx; BT, Scan mode
 Test Date: 2024-01-30

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== END OF TEST REPORT ==