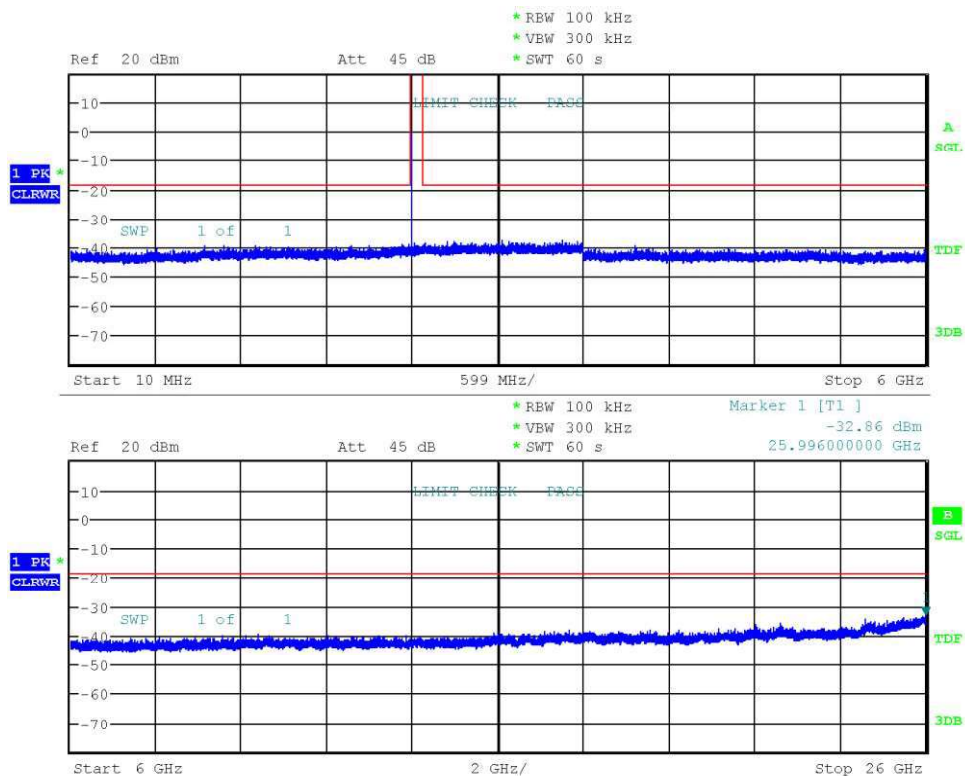


3.6.6 Results

Test Results		
Mode	Channel [MHz]	Verdict
GFSK 1 Mbit/s	2402	PASS
GFSK 1 Mbit/s	2440	PASS
GFSK 1 Mbit/s	2480	PASS
GFSK 2 Mbit/s	2402	PASS
GFSK 2 Mbit/s	2440	PASS
GFSK 2 Mbit/s	2480	PASS

Conducted Spurious Emissions

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 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: Azamat ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-09-25
 Note: 1 Mbit
 Max. in-band Frequency [MHz]: 2402.2
 Max. in-band Level [dBm/100 kHz]: 1.6
 Out-of-band Limit [dBm/100 kHz]: -18.4



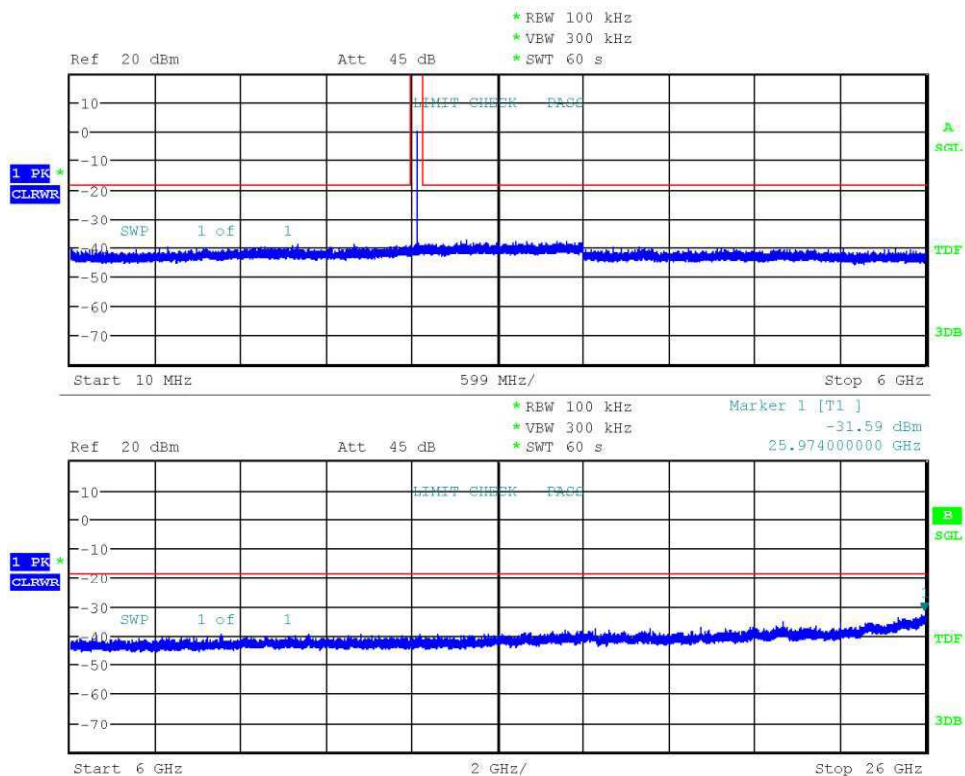
Date: 25.SEP.2023 14:36:01

Test Report No.: G0M-2303-1961-TFC247BL-V05

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

Conducted Spurious Emissions

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 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: Azamat ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-09-25
 Note: 1 Mbit
 Max. in-band Frequency [MHz]: 2440.2
 Max. in-band Level [dBm/100 kHz]: 1.6
 Out-of-band Limit [dBm/100 kHz]: -18.4



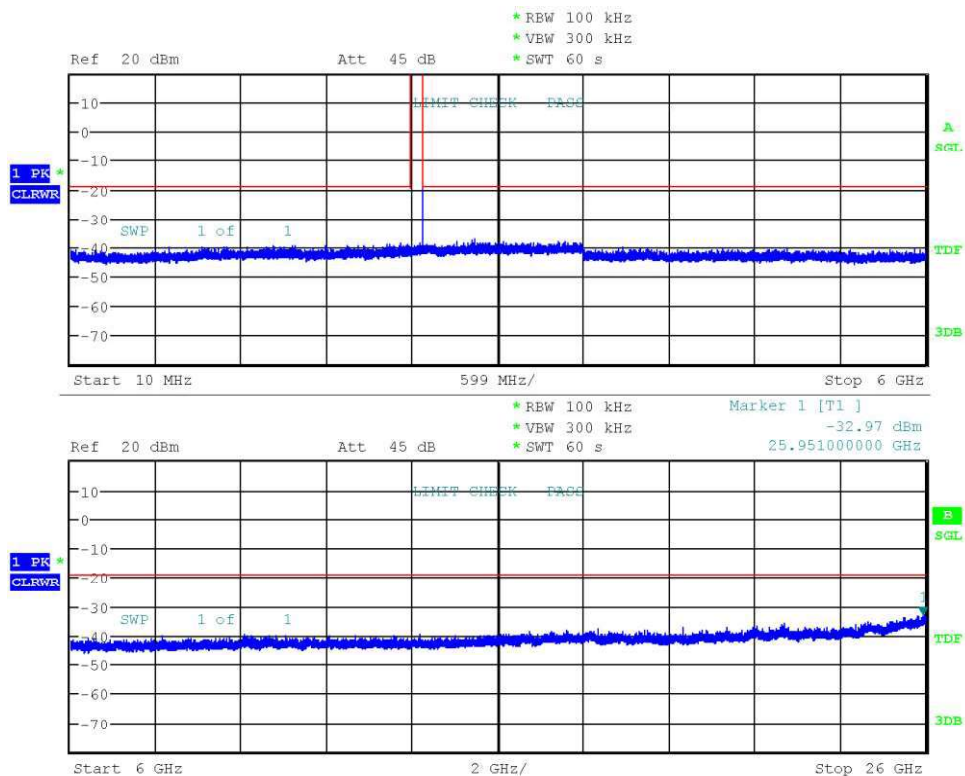
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Test Report No.: G0M-2303-1961-TFC247BL-V05

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

Conducted Spurious Emissions

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 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: Azamat ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-09-25
 Note: 1 Mbit
 Max. in-band Frequency [MHz]: 2480.3
 Max. in-band Level [dBm/100 kHz]: 1.3
 Out-of-band Limit [dBm/100 kHz]: -18.7



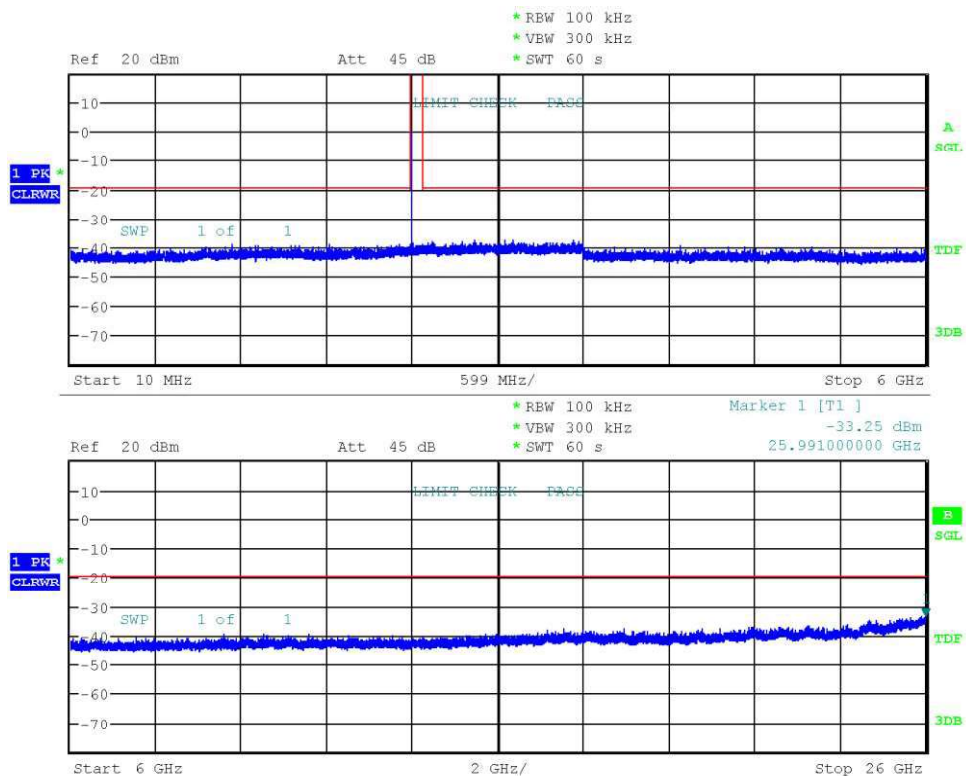
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Test Report No.: G0M-2303-1961-TFC247BL-V05

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

Conducted Spurious Emissions

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 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: Azamat ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-09-25
 Note: 2 Mbit
 Max. in-band Frequency [MHz]: 2401.5
 Max. in-band Level [dBm/100 kHz]: 0.8
 Out-of-band Limit [dBm/100 kHz]: -19.2



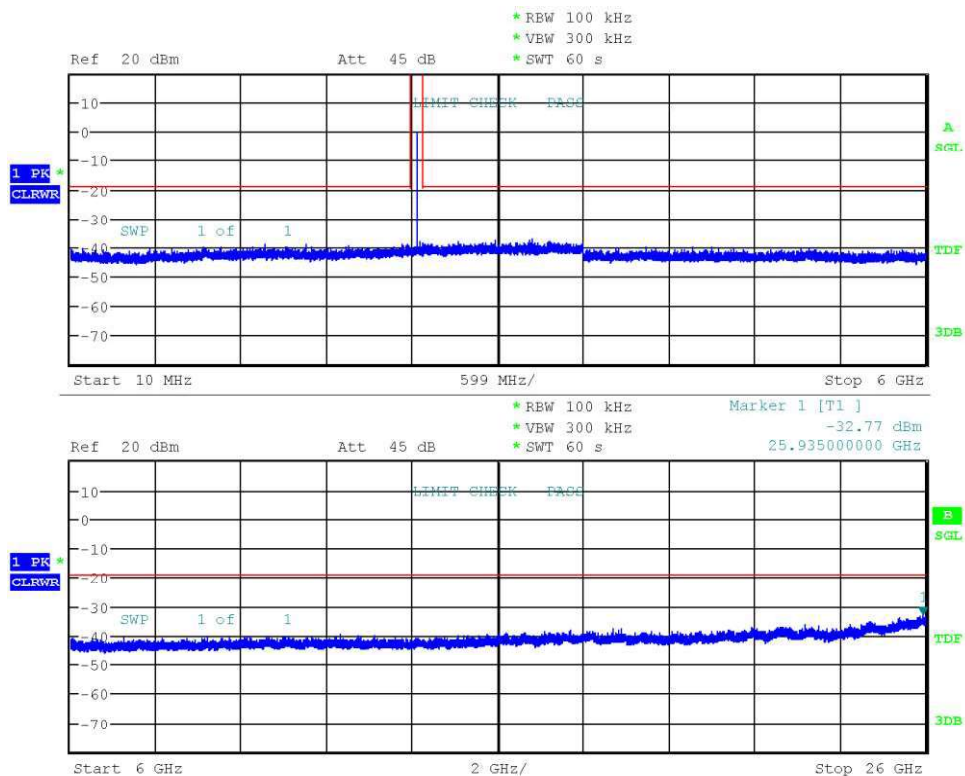
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Test Report No.: G0M-2303-1961-TFC247BL-V05

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

Conducted Spurious Emissions

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 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: Azamat ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-09-25
 Note: 2 Mbit
 Max. in-band Frequency [MHz]: 2439.5
 Max. in-band Level [dBm/100 kHz]: 0.9
 Out-of-band Limit [dBm/100 kHz]: -19.1



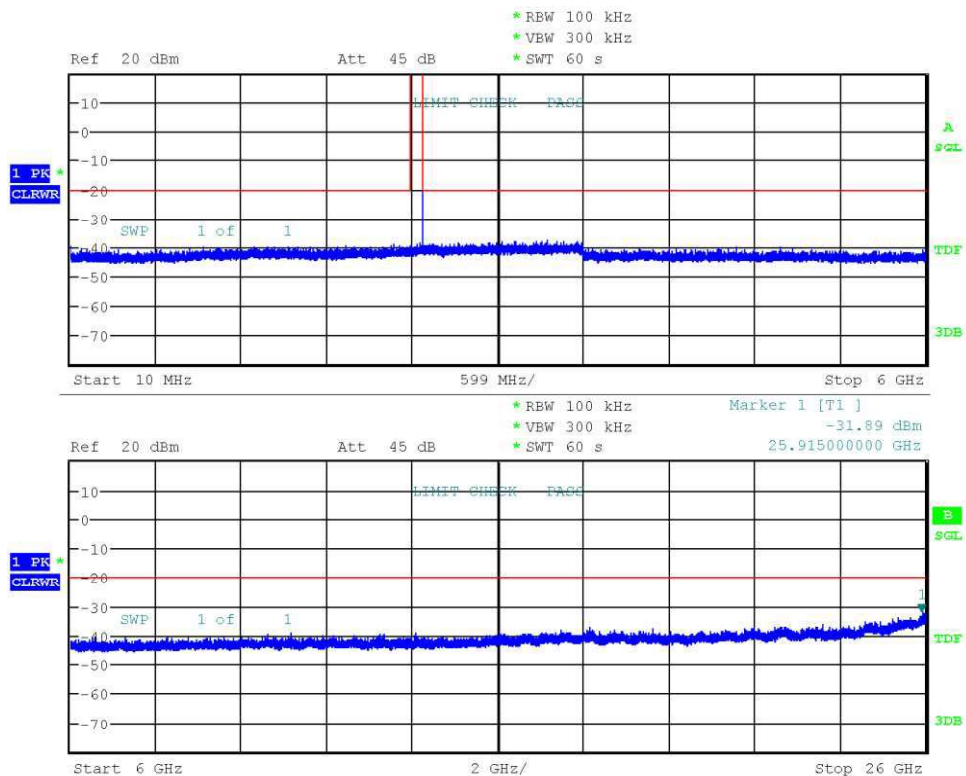
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Test Report No.: G0M-2303-1961-TFC247BL-V05

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

Conducted Spurious Emissions

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 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: Azamat ibraimov
 Test Site: Eurofins Product Service GmbH
 Test Date: 2023-09-25
 Note: 2 Mbit
 Max. in-band Frequency [MHz]: 2480.0
 Max. in-band Level [dBm/100 kHz]: 0.2
 Out-of-band Limit [dBm/100 kHz]: -19.8



Date: 25.SEP.2023 15:26:37

3.7 Test Conditions and Results - Transmitter radiated emissions

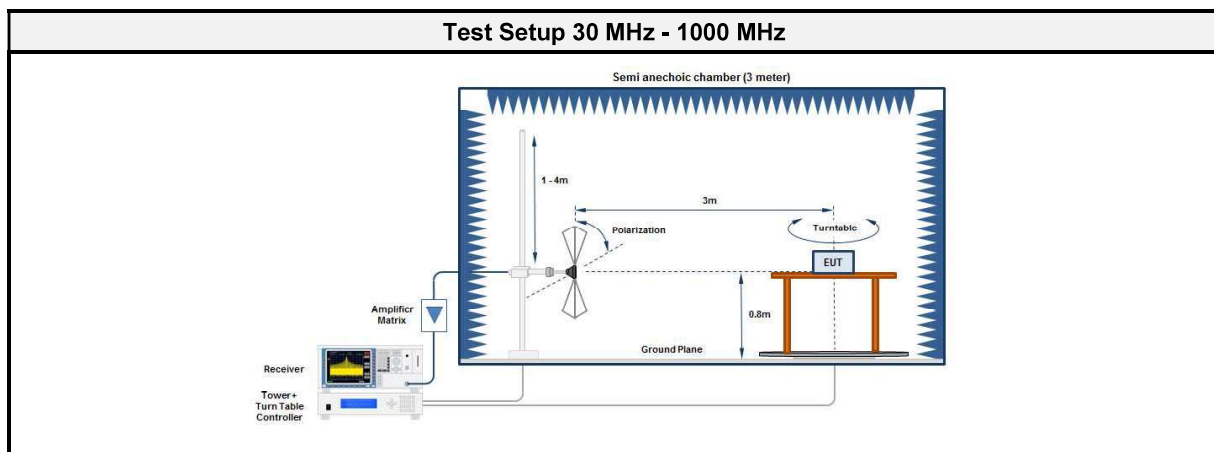
3.7.1 Information

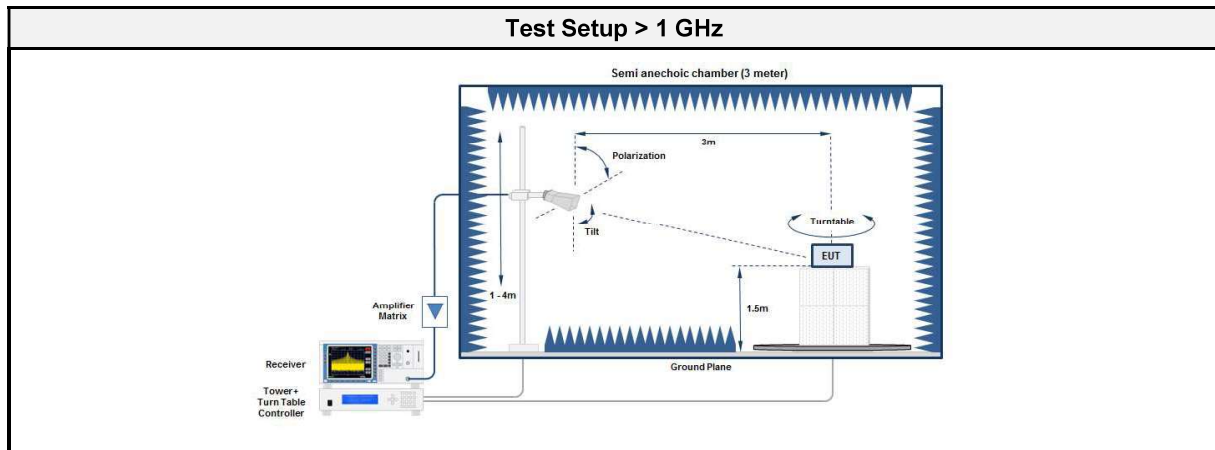
Test Information	
Reference	FCC § 15.247(d); FCC § 15.209; ISSED RSS-Gen, Issue 5 A2 (section 6.13)
Measurement Uncertainty	± 5.95 dB
Measurement Method	ANSI C63.10 6.4, 6.5, 6.6, 11.12
Operator	Azamat Ibraimov, Florian Voigt
Date	2023-07-12 - 2023-08-18

3.7.2 Limits

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

3.7.3 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	2023-02	2024-02
Antenna	Schwarzbeck	VULB 9168	EF01824	2022-10	2023-10

Test Equipment > 1 GHz					
Description	Manufacturer	Model	Identifier	Cal. Date	Cal. Due
Anechoic Chamber	Frankonia	AC1	EF01011	2022-11	2023-11
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2023-02	2024-02
Antenna	Schwarzbeck	BBHA 9120D	EF01561	2021-11	2024-11
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03
Horn antenna	Amplifier Research	ATH18G40	EF01152	2020-11	2023-11

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 - GFSK 1 Mbit/s						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	249.9717	33.20	qpk	ver	46.00	-12.79
2402	1500.2	48.09	pk	ver	74.00	-25.91
2402	1500.2	39.64	avg	ver	54.00	-14.36
2402	2377.6	38.90	pk	ver	74.00	-35.10
2402	2377.6	27.97	avg	ver	54.00	-26.03
2402	4500	49.91	pk	hor	74.00	-24.09
2402	4500	51.86	pk	ver	74.00	-22.14
2402	4500	44.79	avg	hor	54.00	-09.21
2402	4500	47.71	avg	ver	54.00	-06.29
2402	7501	40.89	pk	ver	74.00	-33.11
2402	7501	36.67	avg	ver	54.00	-17.33
2440	249.9717	33.40	pk	ver	46.00	-12.57
2440	406.3115	34.10	pk	hor	46.00	-11.94
2440	1500	36.46	pk	ver	74.00	-37.54
2440	1500	33.26	avg	ver	54.00	-20.74
2440	4500	51.92	pk	ver	74.00	-22.08
2440	4500	47.26	avg	ver	54.00	-06.74
2440	7500	47.20	pk	ver	74.00	-26.80
2440	7500	40.79	avg	ver	54.00	-13.21
2480	249.996	32.40	pk	ver	46.00	-13.59
2480	406.2872	33.90	pk	hor	46.00	-12.09
2480	1500	36.63	pk	ver	74.00	-37.37
2480	1500	31.32	avg	ver	54.00	-22.68
2480	4500	51.58	pk	ver	74.00	-22.42
2480	4500	47.32	avg	ver	54.00	-06.68
2480	7500	40.57	pk	ver	74.00	-33.43
2480	7500	36.76	avg	ver	54.00	-17.24

Test Results - GFSK 2 Mbit/s						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2402	249.996	31.80	pk	ver	46.00	-14.15
2402	406.457	33.90	pk	hor	46.00	-12.12
2402	1499.9	37.36	pk	ver	74.00	-36.64
2402	1499.9	31.56	avg	ver	54.00	-22.44
2402	2380.2	40.49	pk	hor	74.00	-33.51
2402	2380.2	29.08	avg	hor	54.00	-24.92
2402	4500.1	50.53	pk	ver	74.00	-23.47
2402	4500.1	45.88	avg	ver	54.00	-08.12
2402	7501	41.36	pk	ver	74.00	-32.64
2402	7501	37.18	avg	ver	54.00	-16.82
2440	249.996	33.00	pk	ver	46.00	-13.00
2440	409.367	33.00	pk	hor	46.00	-12.98
2440	1500.1	36.43	pk	ver	74.00	-37.57
2440	1500.1	33.03	avg	ver	54.00	-20.97
2440	4500	48.89	pk	ver	74.00	-25.11
2440	4500	44.79	avg	ver	54.00	-09.21
2440	7500	41.97	pk	ver	74.00	-32.03
2440	7500	37.29	avg	ver	54.00	-16.71
2480	249.9717	33.40	pk	ver	46.00	-12.64
2480	332.7612	32.40	pk	hor	46.00	-13.57
2480	1500	35.32	pk	ver	74.00	-38.68
2480	1500	31.77	avg	ver	54.00	-22.23
2480	4500	50.96	pk	ver	74.00	-23.04
2480	4500	46.25	avg	ver	54.00	-07.75
2480	7501	41.33	pk	ver	74.00	-32.67
2480	7501	36.86	avg	ver	54.00	-17.14

3.8 Test Conditions and Results - Receiver radiated emissions

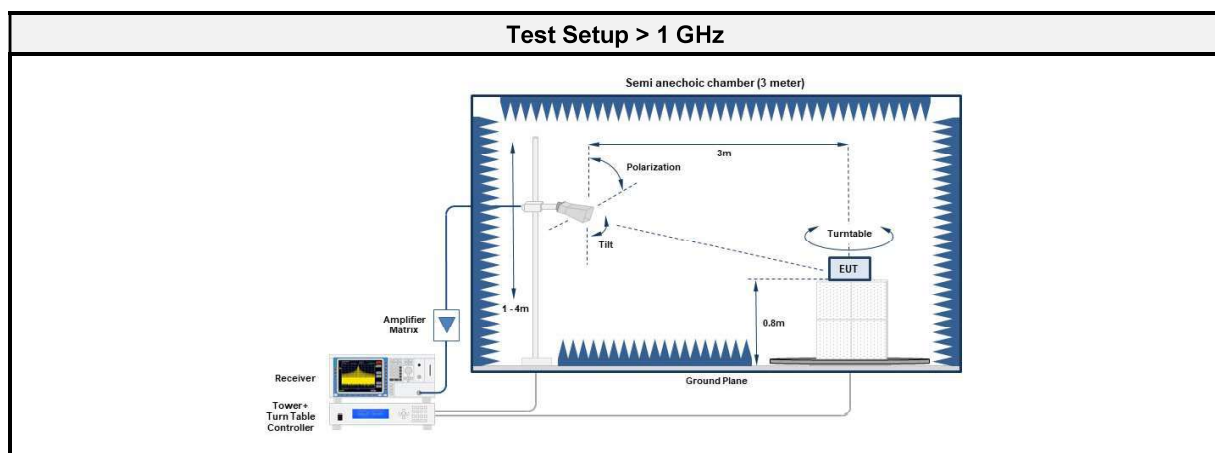
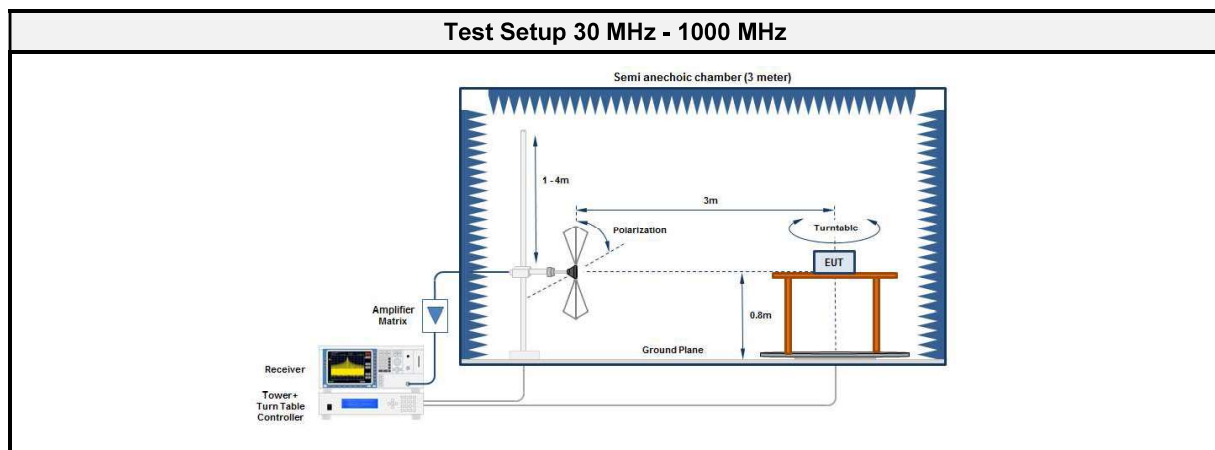
3.8.1 Information

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	Azamat Ibraimov
Date	2023-08-18

3.8.2 Limits

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

3.8.3 Setup



3.8.4 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	2023-02	2024-02
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	AC1	EF01011	2022-11	2023-11
Measurement Receiver	Agilent	N9038A-526/WXP	EF01070	2023-02	2024-02
Antenna	Schwarzbeck	BBHA 9120D	EF00018	2022-12	2025-12
Antenna	Schwarzbeck	HWRD 650	EF01679	2021-03	2024-03

3.8.5 Procedure

Test Procedure
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

3.8.6 Results

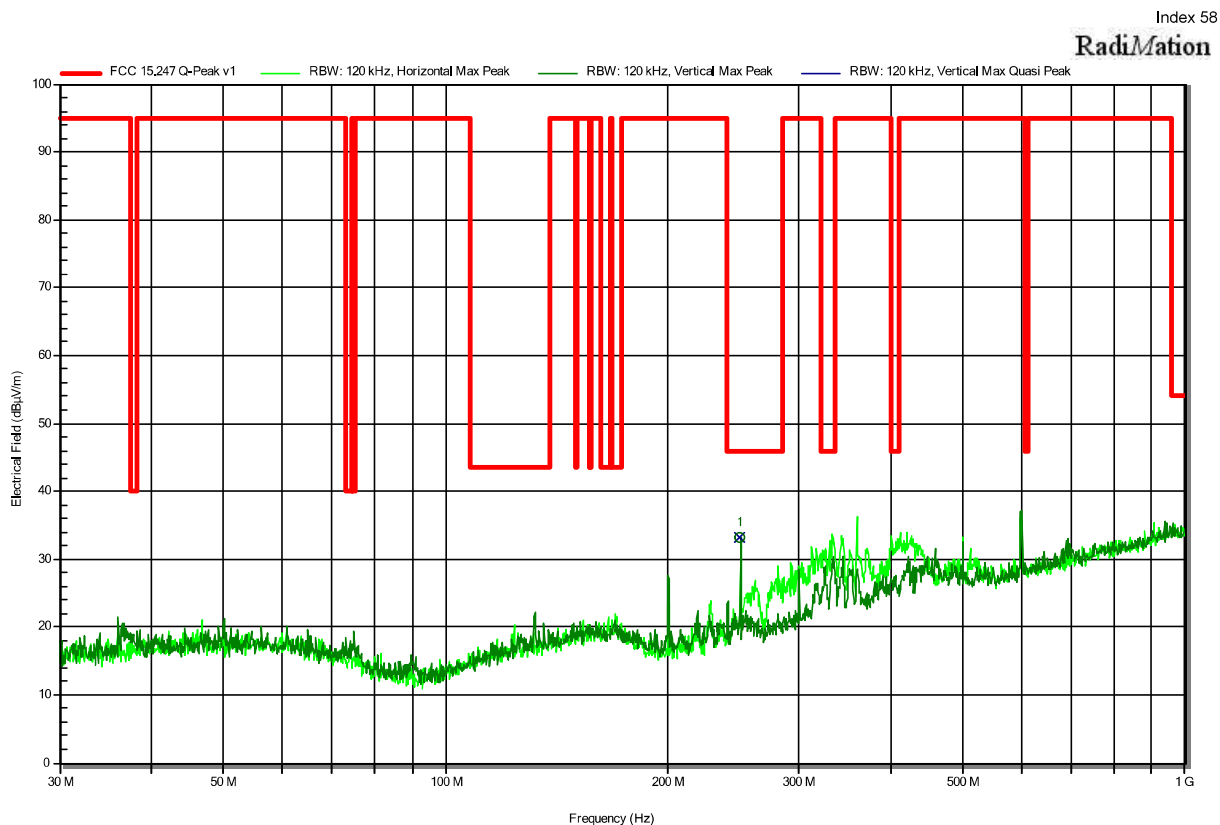
Test Results - 1 MBit/s						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2440	199.7985	27.50	pk	ver	43.50	-16.01
2440	249.9717	33.30	pk	hor	46.00	-12.69
2440	600.36	35.60	qpk	ver	46.00	-10.41
2440	3000	44.38	pk	ver	74.00	-29.62
2440	3000	41.68	avg	ver	53.98	-12.30
2440	4500	45.80	pk	ver	74.00	-28.20
2440	4500	40.69	avg	ver	53.98	-13.29
2440	7500	42.24	pk	ver	74.00	-31.76
2440	7500	38.68	avg	ver	53.98	-15.30
2440	9000	39.46	pk	ver	74.00	-34.54
2440	9000	33.63	avg	ver	53.98	-20.35
2440	10500	38.77	pk	ver	74.00	-35.23
2440	10500	34.83	avg	ver	53.98	-19.15

Test Results - 2 MBit/s						
Channel [MHz]	Emission [MHz]	Level [dBμV/m]	Det.	Pol.	Limit [dBμV/m]	Margin [dB]
2440	200.0167	27.50	pk	ver	43.50	-15.99
2440	249.9717	32.50	pk	ver	46.00	-13.46
2440	359.9455	34.00	pk	hor	46.00	-12.01
2440	599.7053	31.60	qpk	ver	46.00	-14.42
2440	3000	44.71	pk	ver	74.00	-29.29
2440	3000	39.69	avg	ver	53.98	-14.29
2440	4500	48.78	pk	ver	74.00	-25.22
2440	4500	45.39	avg	ver	53.98	-08.59
2440	7500	40.56	pk	ver	74.00	-33.44
2440	7500	37.23	avg	ver	53.98	-16.75

ANNEX A Transmitter spurious emissions

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

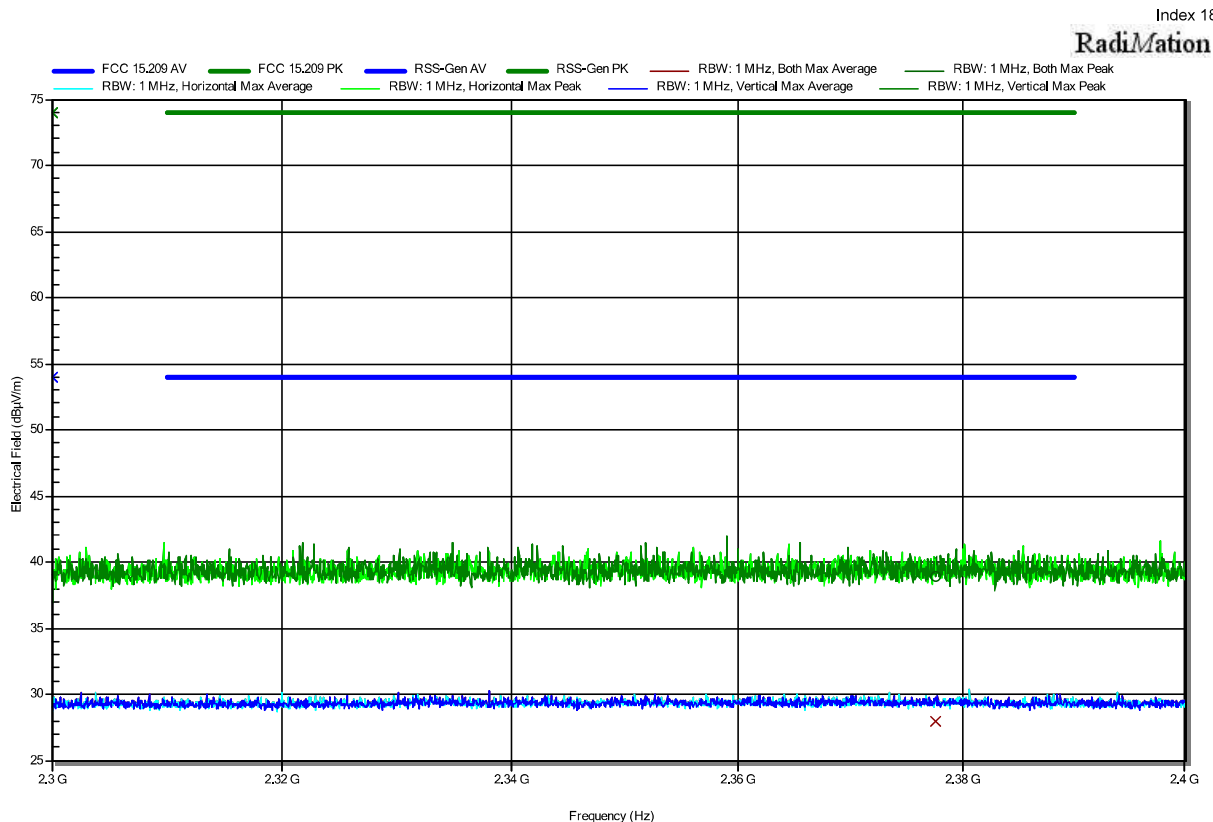
Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 Test Site: Eurofins Product Service GmbH
 Operator: A.Ibraimov
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom: 13.8 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BTLE, 2402 MHz, 2-GFSK, 1Mbps
 Test Date: 2023-08-18
 Note:



Frequency	Quasi-Peak	Quasi-Peak Limit	Quasi-Peak Difference	Quasi-Peak Status	Polarization
249.9717 MHz	33.2 dBμV/m	46 dBμV/m	-12.79 dB	Pass	Vertical

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

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Voigt
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 13.8 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BTLE, 2402 MHz, 2-GFSK, 1Mbps
 Test Date: 2023-07-13
 Note:



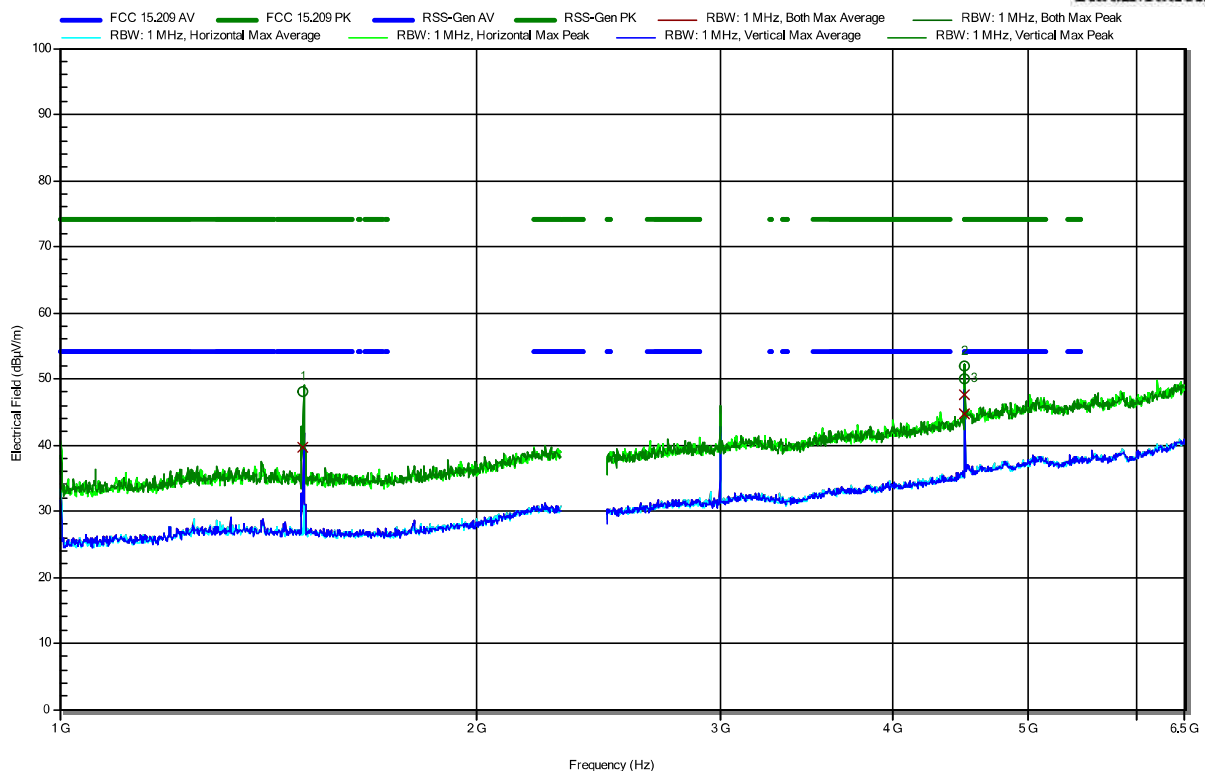
Frequency 2.3776 GHz	Peak 38.9 dBµV/m	Peak Limit 74 dBµV/m	Peak Difference -35.1 dB	Peak Status Pass	Polarization Vertical
Frequency 2.3776 GHz	Average 27.97 dBµV/m	Average Limit 54 dBµV/m	Average Difference -26.03 dB	Average Status Pass	Polarization Vertical

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

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 Test Site: Eurofins Product Service GmbH
 Operator: Mr. Voigt
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 24 °Celsius, Vnom: 13.8 VDC
 Antenna: Schwarzbeck BBHA 9120D
 Measurement distance: 3 m
 Mode: Tx; BTLE, 2402 MHz, 2-GFSK, 1Mbps
 Test Date: 2023-07-12
 Note:

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RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
1.5002 GHz	48.09 dBµV/m	74 dBµV/m	-25.91 dB	Pass	Vertical
4.5 GHz	49.91 dBµV/m	74 dBµV/m	-24.09 dB	Pass	Horizontal
4.5 GHz	51.86 dBµV/m	74 dBµV/m	-22.14 dB	Pass	Vertical

Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
1.5002 GHz	39.64 dBµV/m	54 dBµV/m	-14.36 dB	Pass	Vertical
4.5 GHz	44.79 dBµV/m	54 dBµV/m	-9.21 dB	Pass	Horizontal
4.5 GHz	47.71 dBµV/m	54 dBµV/m	-6.29 dB	Pass	Vertical

Test Report No.: G0M-2303-1961-TFC247BL-V05

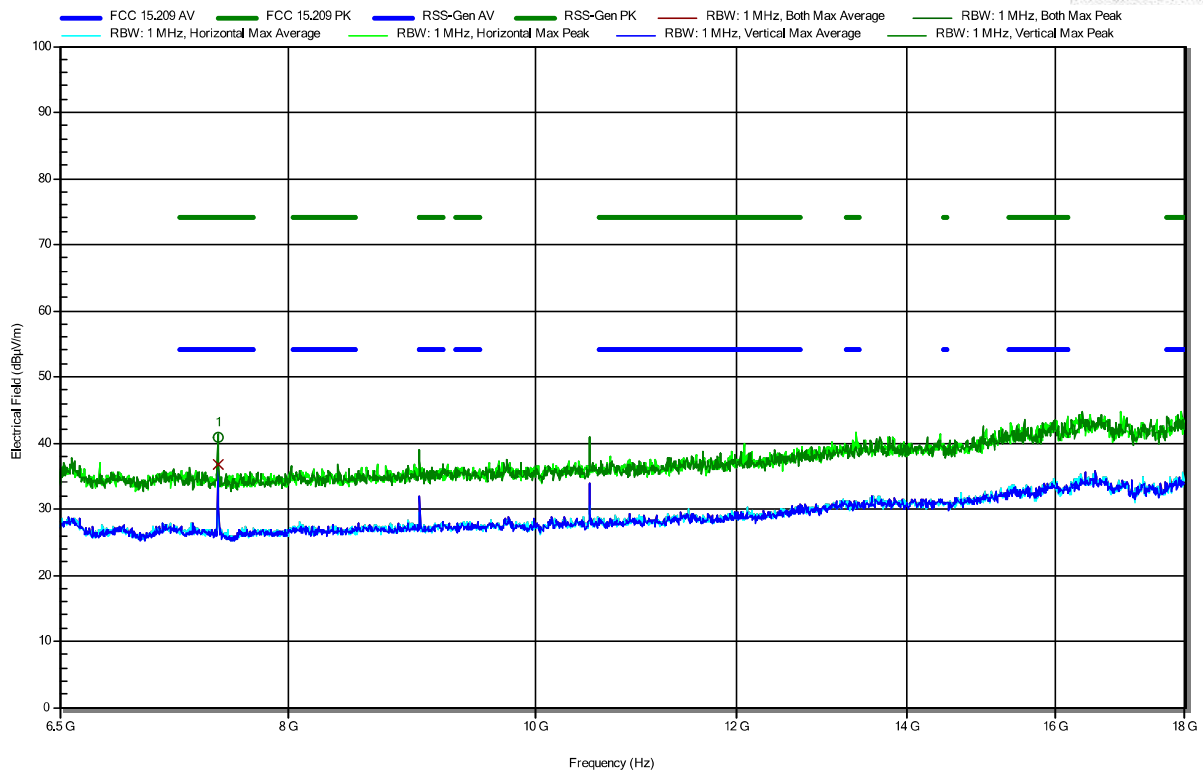
Eurofins Product Service GmbH
 Storkower Str. 38c, D-15526 Reichenwalde, Germany

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

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 Test Site: Eurofins Product Service GmbH
 Operator: A.Ibraimov
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom: 13.8 VDC
 Antenna: Schwarzbeck HWRD 650
 Measurement distance: 3 m
 Mode: Tx; BTLE, 2402 MHz, 2-GFSK, 1Mbps
 Test Date: 2023-08-16
 Note:

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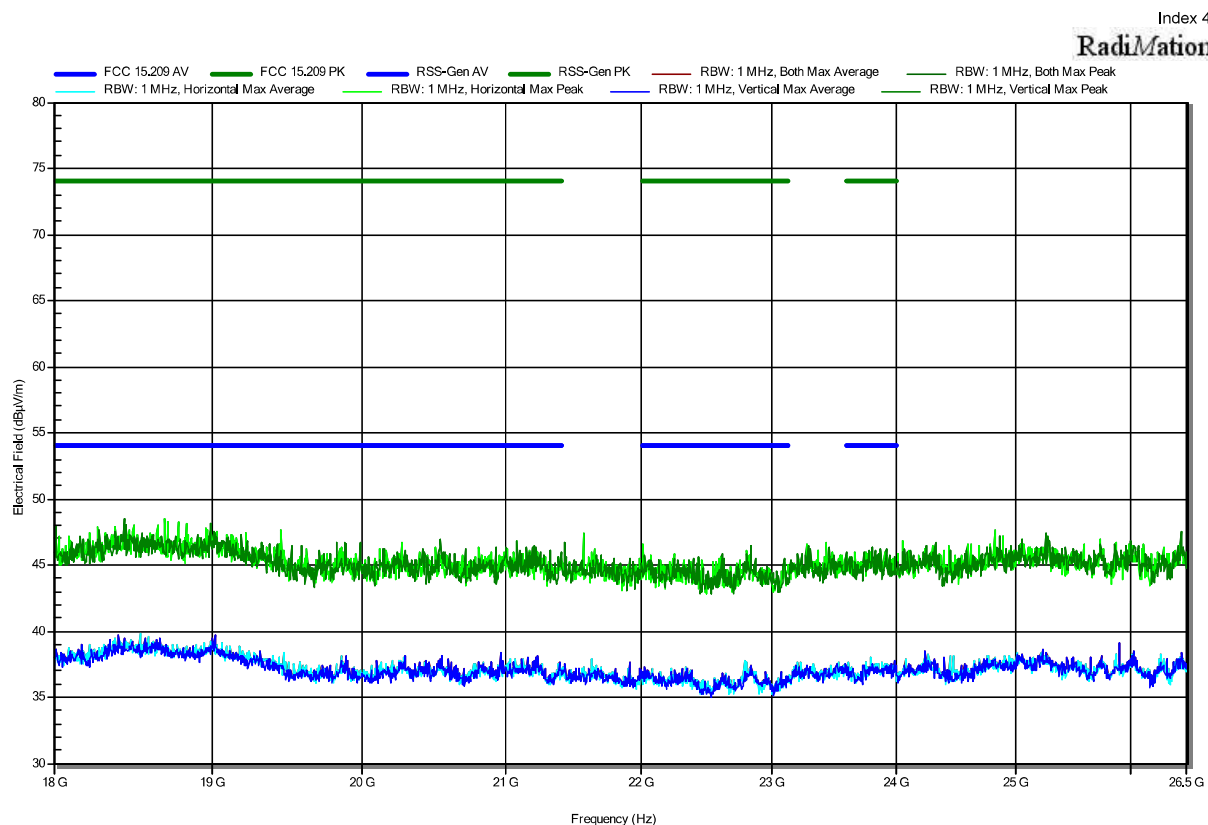
RadiMation



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
7.501 GHz	40.89 dBV/m	74 dBV/m	-33.11 dB	Pass	Vertical
Frequency	Average	Average Limit	Average Difference	Average Status	Polarization
7.501 GHz	36.67 dBV/m	54 dBV/m	-17.33 dB	Pass	Vertical

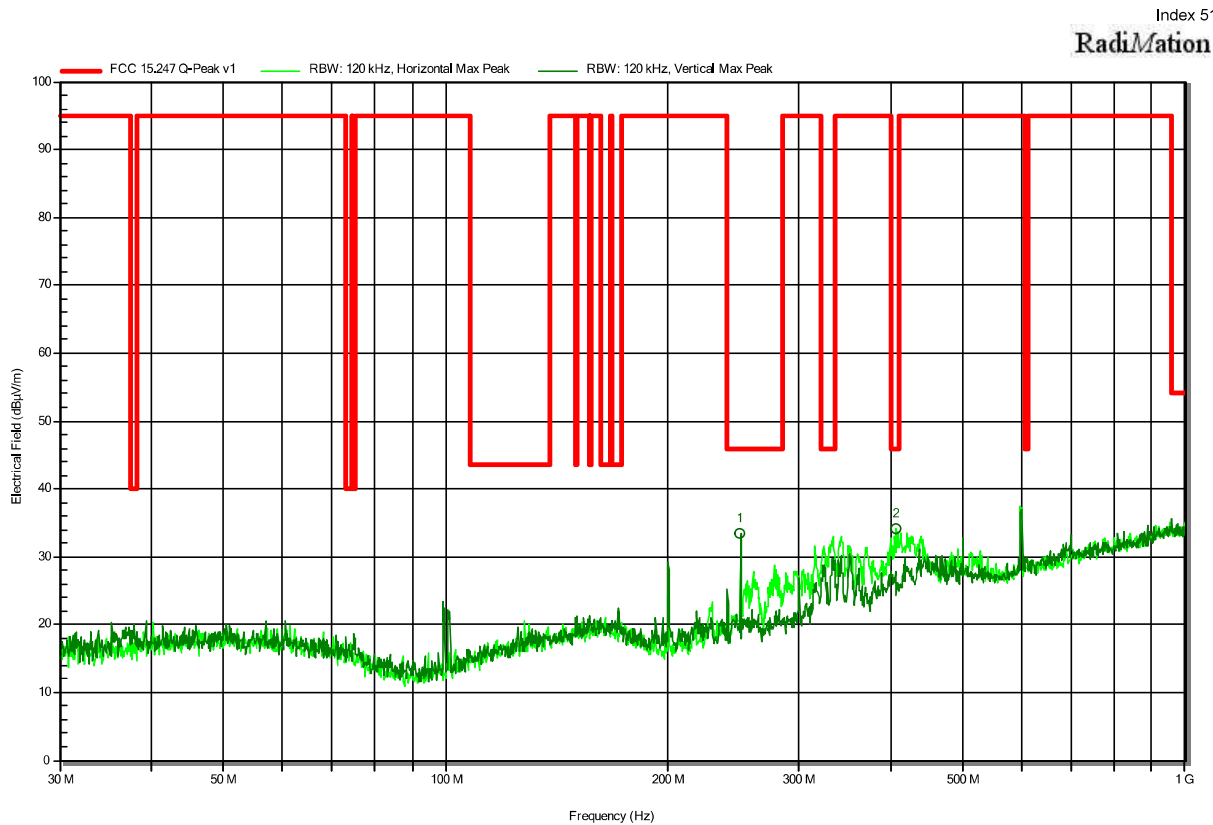
Radiated Spurious Emissions according to 47 CFR Part 15.247, RSS-247

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 Test Site: Eurofins Product Service GmbH
 Operator: A.Ibraimov
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom: 13.8 VDC
 Antenna: Configurable Antenna
 Measurement distance: 3 m
 Mode: Tx; BTLE, 2402 MHz, 2-GFSK, 1Mbps
 Test Date: 2023-08-16
 Note:



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

Project Number: G0M-2303-1961
 Applicant: Navico Inc.
 Model Description: Marine and recreational IoT Gateway and vessel management system
 Model: Connect 1
 Test Sample ID: 44396
 Test Site: Eurofins Product Service GmbH
 Operator: A.Ibraimov
 Measurement software: RadiMation, version 2020.1.8
 Test Conditions: Tnom: 25 °Celsius, Vnom: 13.8 VDC
 Antenna: Schwarzbeck VULB 9168
 Measurement distance: 3 m
 Mode: Tx; BTLE, 2440 MHz, 2-GFSK, 1Mbps
 Test Date: 2023-08-18
 Note:



Frequency	Peak	Peak Limit	Peak Difference	Peak Status	Polarization
249.9717 MHz	33.4 dBμV/m	46 dBμV/m	-12.57 dB	Pass	Vertical
406.3115 MHz	34.1 dBμV/m	46 dBμV/m	-11.94 dB	Pass	Horizontal