Test report

447317-2R3TRFWL

Date of issue: July 11, 2022

Applicant:

Canary Medical

Product:

Clinic Wearable Device

Model:	Variant(s):
20024-0120 (REF 43-5570-007-14)	None

Specifications:

- FCC 47 CFR Part 95 Subpart I – Medical Device Radiocommunication Service

Lab and test locations

Company name	Nemko USA Inc.
Address	2210 Faraday Ave, Suite 150
City	Carlsbad
State	California
Postal code	92008
Country	USA
Telephone	+1 760 444 3500
Website	www.nemko.com
FCC Site Number	Test Firm Registration Number: 392943; Designation Number: US5058
ISED Test Site	2040B-3

Tested by	Lan Sayasane, EMC Test Engineer
Tested by	James Cunningham, EMC/MIL/WL Supervisor
Reviewed by	Juan M Gonzalez, Business Development Manager
Review date	July 11, 2022
Reviewer signature	

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.
This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.
This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

Copyright notification

Table of Contents

Section 1 Report summary

1.1 Test specifications

FCC 47 CFR Part 95, Subpart I	Medical Device Radio Communications Service

1.2 Test methods

ANSI C63.10, 2013	American National Standard for Compliance Testing of Unlicensed Wireless Devices.

1.3 Exclusions

None.

1.4 Statement of compliance

Testing was performed against all relevant requirements of the test standard(s).

Results obtained indicate that the product under test complies in full with the tested requirements.

The test results relate only to the item(s) tested.

See "Section 2 Summary of test results" for full details.

1.5 Test report revision history

Table 1.5-1: *Test report revision history*

Revision #	Issue Date	Details of changes made to test report
447317-2TRFWL	2 February 2022	Original report issued
447317-2R1TRFWL	24 February 2022	Added summary table to section 8.4
447317-2R2TRFWL	8 July, 2022	Added correct emission designator
447317-2R3TRFWL	11 July, 2022	Added EIRP calculations

Section 2 Summary of test results

2.1 Sample information

Receipt date	28-Jan-22
Nemko sample ID number	447317

2.2 Testing period

Test start date	31-Jan-22
Test end date	02-Feb-22

2.3 Test results

Table 2.3-1: *FCC Par15 Subpart C, general requirements*

Part	Test description	Verdict
§15.207(a)	Conducted limits	Pass
§15.31(e)	Variation of power source	Pass
§15.203	Antenna requirements	Pass

Notes: None

Table 2.3-2: *Part 95, Subpart I, Medical Device Radio Communications Service results*

Clause	Test description	Verdict
§95.2565	Frequency Accuracy	Pass
§95.2567(a)	Field strength of fundamental	Pass
§95.2573(a)	Emission Bandwidth (20 dB)	Pass
§95.2579	Band Edges	Pass
§95.2579	Unwanted Emissions	Pass
§2.202(a)	99% Occupied bandwidth	Pass

Notes: None

Section 3 Equipment under test (EUT) details

3.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

3.2 Applicant

Company name	Canary Medical
Address	2710 Loker Ave West, Suite 350
City	Carlsbad
State	CA
Postal/Zip code	92010
Country	USA

3.3 Manufacturer

Company name	Canary Medical
Address	2710 Loker Ave West, Suite 350
City	Carlsbad
State	CA
Postal/Zip code	92010
Country	USA

3.4 EUT information

Product name	Clinic Wearable Device
Model	20024-0120 (REF 43-5570-007-14)
Variant(s)	None
Serial number	001435 (LOW channel), 001426 (MID channel), 001403 (HIGH channel)
Part number	N/A

Frequency band(s)	402 – 406 MHz
Minimum frequency(ies)	402.15 MHz
Maximum frequency(ies)	404.85 MHz
Type of modulation	2FSK (Emission designator 300KF1D)
Power requirements	Battery powered. Charged via cradle using wireless power transfer.
Description/theory of operation	Wearable device is intended for pre-operative characterization of patient motion. Data is collected as a baseline before the patient is fitted with a smart knee implant. Device consists of a 3-axis accelerometer and 3-axis gyroscope for capturing motion data. Data is transferred from the wearable to a clinic base station. Wearable device is rechargeable with wireless charging. Wireless charger is sold as an accessory with the wearable.
Antenna information	Integrated antenna

3.5 EUT exercise and monitoring details

EUT description of the methods used to exercise the EUT and all relevant ports:

- EUT was configured to transmit a modulated signal at maximum power at defined frequency channels through custom firmware.

EUT setup/configuration rationale:

- The EUT setup in a configuration that was expected to produce the highest amplitude emissions relative to the limit and that satisfy normal operation/installation practice by the end user.
- The type and construction of cables used in the measurement set-up were consistent with normal or typical use. Cables with mitigation features (for example, screening, tighter/more twists per length, ferrite beads) have been noted below:
  - None
- The EUT was setup in a manner that was consistent with its typical arrangement and use. The measurement arrangement of the EUT, local ancillary equipment and associated cabling was representative of normal practice. Any deviations from typical arrangements have been noted below:
  - None

3.6 EUT setup details

Table 3.6-1: *EUT sub assemblies*

Description	Brand name	Model/Part number	Serial number	Rev.
EUT	Clinic Wearable Device	20024-0120 (REF 43-5570-007-14)	001435 (LOW channel), 001426 (MID channel), 001403 (HIGH channel)	N/A

Table 3.6-2: *EUT interface ports*

Description	Qty.
None	

Table 3.6-3: *Support equipment*

Description	Brand name	Model/Part number	Serial number	Rev.
Charger cradle, wireless power charging	CanarE Charging Cradle	REF 43-5570-007-15	001472	N/A
DC bench power supply	Agilent	E3631A	KR94623593	N/A

Note: Charging cradle only used for AC conducted emissions measurements
DC bench power supply only used for frequency accuracy measurements

Table 3.6-4: *Inter-connection cables*

Cable description	From	To	Length (m)
None			

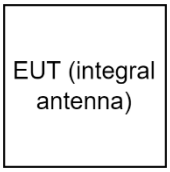

Figure 3.6-1: Test setup diagram

Section 4 Engineering considerations

4.1 Modifications incorporated in the EUT

None.

4.2 Technical judgement

None.

4.3 Deviations from laboratory test procedures

None.

Section 5 Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	86–106 kPa

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages ±5 %, for which the equipment was designed.

Section 6 Measurement uncertainty

6.1 Uncertainty of measurement

Nemko USA Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 “Uncertainty in EMC measurements.” Measurement uncertainty was calculated using the methods described in CISPR 16-4-2 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics, and limit modelling – Measurement instrumentation uncertainty. The expression of Uncertainty in EMC testing. Measurement uncertainty calculations assume a coverage factor of K=2 with 95% certainty.

Table 6.1-1: *Measurement uncertainty calculations*

Measurement		U_{cispr} **dB**	U_{lab} **dB**
Conducted disturbance at AC mains and other port power using a V-AMN	9 kHz to 150 kHz	3.8	2.9
	150 kHz to 30 MHz	3.4	2.3
Conducted disturbance at telecommunication port using AAN	150 kHz to 30 MHz	5.0	4.3
Conducted disturbance at telecommunication port using CVP	150 kHz to 30 MHz	3.9	2.9
Conducted disturbance at telecommunication port using CP	150 kHz to 30 MHz	2.9	1.4
Conducted disturbance at telecommunication port using CP and CVP	150 kHz to 30 MHz	4.0	3.1
Radiated disturbance (electric field strength in a SAC)	30 MHz to 1 GHz	6.3	5.5
Radiated disturbance (electric field strength in a FAR)	1 GHz to 6 GHz	5.2	4.7
Radiated disturbance (electric field strength in a FAR)	6 GHz to 18 GHz	5.5	5.0

Notes: Compliance assessment:

If U_{lab} is less than or equal to U_{cispr} then:

- compliance is deemed to occur is no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit

If U_{lab} is greater than U_{cispr} then:

- compliance is deemed to occur is no measured disturbance level, increased by (U_{lab} - U_{cispr}), exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} - U_{cispr}), exceeds the disturbance limit

V-AMN: V type artificial mains network
AAN: Asymmetric artificial network
CP: Current probe
CVP: Capacitive voltage probe
SAC: Semi-anechoic chamber
FAR: Fully anechoic room

Section 7 Test equipment

7.1 Test equipment list

Table 7.1-1: *Test equipment list*

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
Antenna, Horn	EMCO	3115	1033	2 years	15-Oct-2022
Antenna, Bilog	Schaffner	CBL 6111D	1763	2 years	18-Feb-2022
Triple output DC power supply 0-6v, 5A	Agilent	E3631A	1936	VOU	VOU
Signal and Spectrum Analyzer	Rohde & Schwarz	FSV40	E1120	2 years	9-Dec-2023
EMI Test Receiver	Rohde & Schwarz	ESU 40	E1121	1 year	19-May-2022
DRG Horn (medium	ETS-Lindgren	3117-PA	E1160	NCR	NCR
Temperature Chamber	TESTEQUITY	115A	E1162	1 year	18-Aug-2022
System controller	Sunol Sciences	SC104V	E1191	NCR	NCR
Multimeter	Fluke	111	813	1 year	10-Sep-2022

Notes: N/A – not applicable
NCR – no calibration required
VOU – verify on use

Table 7.1-2: *Test software details*

Manufacturer of Software	Details
Rohde & Schwarz	EMC 32 V10.60.15

Notes: None

Section 8 Testing data

8.1 Frequency accuracy

8.1.1 References and limits

- §95.2565
- Test method: ANSI C63.10

Each MedRadio transmitter type must be designed to maintain a frequency stability of ±100 ppm of the operating frequency over the applicable temperature range set forth in this section. Frequency stability testing shall be performed over the appropriate temperature range.

(a) 25 °C to 45 °C in the case of medical implant transmitters; and
(b) 0 °C to 55 °C in the case of MedRadio programmer/control transmitters and medical body-worn transmitters

8.1.2 Test summary

Verdict	Pass		
Test date	February 2, 2022	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer James Cunningham, EMC/MIL/WL Supervisor	Air pressure	1015 mbar
Test location	☐ 10m semi anechoic chamber ☐ 3m semi anechoic chamber ☒ Wireless bench ☐ Other:	Relative humidity	45 %

8.1.3 Notes

The test was performed as a radiated measurement. The EUT was configured to transmit at maximum power on the middle channel.

8.1.4 Setup details

EUT power input during test	DC powered, 3.3 V via DC bench power supply
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:

Receiver/spectrum analyzer settings:

Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Span	Between two times and five times OBW
Detector mode	Peak
Trace mode	Max Hold
Measurement time	Long enough for trace to stabilize
Measurement method:	Marker signal count function of spectrum analyzer

8.1.5 Test data

Table 8.1-1: *Frequency accuracy test results*

Temperature (°C)	Voltage (V_{DC})	Center Frequency (Hz)	Drift (ppm)	Limit	Verdict
55	3.3	403.658768207	5.2	±100	PASS
50	3.3	403.658186801	3.8	±100	PASS
40	3.3	403.658571785	4.7	±100	PASS
30	3.3	403.658008353	3.3	±100	PASS
20	3.3	403.656668179	Reference	Reference	Reference
10	3.3	403.656129769	1.3	±100	PASS
0	3.3	403.654845715	4.5	±100	PASS

Note: Middle channel, 403.65 MHz was evaluated.

8.1.6 Setup photos

Refer to associated Test Setup Photos report.

Figure 8.1-1: *Frequency stability setup photo*

8.2 Field strength of fundamental

8.2.1 References and limits

- §95.2567(a)
- Test method: ANSI C63.10

Each MedRadio transmitter type must be designed such that the MedRadio equivalent isotropically radiated power (M-EIRP) does not exceed the limits in this section. Compliance with these limits must be determined as set forth in §95.2569.

(a) Transmitters subject to frequency monitoring—401-406 MHz. For MedRadio transmitters that are not excepted under §95.2559(b) from the frequency monitoring requirements of §95.2559(a):

(1) The M-EIRP within any 300 kHz bandwidth within the 402-405 MHz band must not exceed 25 microwatts.

8.2.2 Test summary

Verdict	Pass		
Test date	January 31, 2022 February 1, 2022	Temperature	19 °C 20 °C
Test engineer	Lan Sayasane, EMC Test Engineer James Cunningham, EMC/MIL/WL Supervisor	Air pressure	1008 mbar 1010 mbar
Test location	☐ 10m semi anechoic chamber ☒ 3m semi anechoic chamber ☐ Other:	Relative humidity	44 % 52 %

8.2.3 Notes

The test was performed as a radiated measurement. The EUT was configured to transmit at maximum power on the middle channel. The limit of 25 µW was converted to the equivalent field strength at 3 m measurement distance in dBµV/m:

1. Convert µW to dBm: 25 µW = 0.025 mW => 10 x LOG10(0.025) = -16.02 dBm
2. Convert dBm to dBµV/m at 3 m measurement distance (ERP): = EIRP (dBm) + 97.38 = -16.02 + 97.38 = 81.36 dBµV/m @ 3 m

8.2.4 Setup details

EUT power input during test	Battery powered
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measuring distance	☐ 10m ☒ 3m ☐ Other:
Antenna height variation	1 – 4 m
Turn table position	0 – 360°
Measurement details	Preview measurements were performed with the receiver in continuous scan or sweep mode. Emissions detected within 6 dB or above limit (minimum of 6 frequencies) were maximized by rotating the EUT and adjusting the antenna height and polarization. At the position of maximum emission, the signal was measured with the appropriate detector against the corresponding limit and recorded as the final measurement.

Receiver/spectrum analyzer settings for frequencies below 1 GHz:

Resolution bandwidth	300 kHz
Video bandwidth	1000 MHz
Detector mode	– Peak
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Final measurement)

8.2.5 Test data

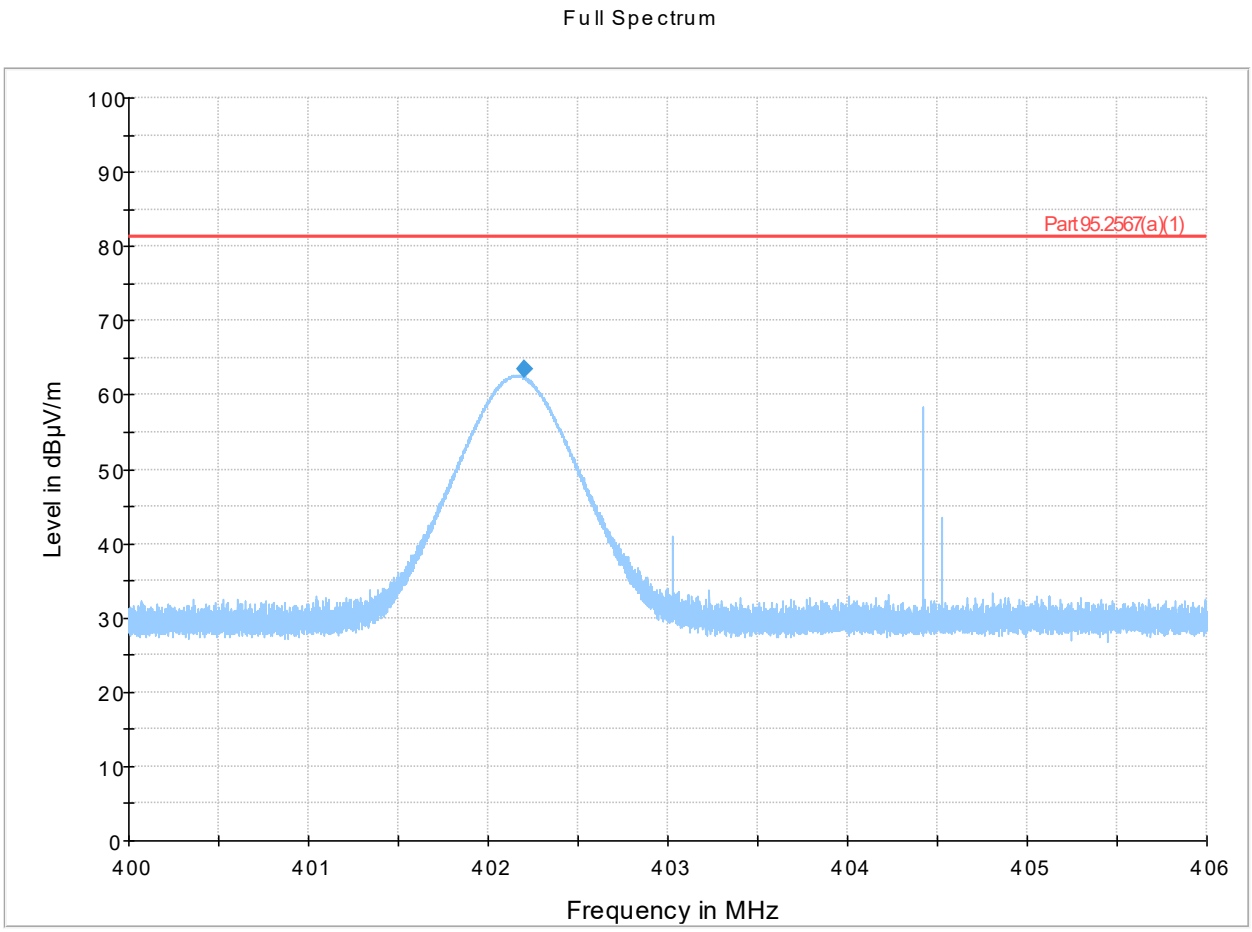

Figure 8.2-1: *Field strength of fundamental, low channel (402.15 MHz) plot (400 MHz - 406 MHz)*

Table 8.2-1*: Field strength of fundamental, low channel (402.15 MHz) results*

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
402.198800	63.42	81.38	17.96	5000.0	300.000	113.0	V	275.0	25.1

Notes:
[1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

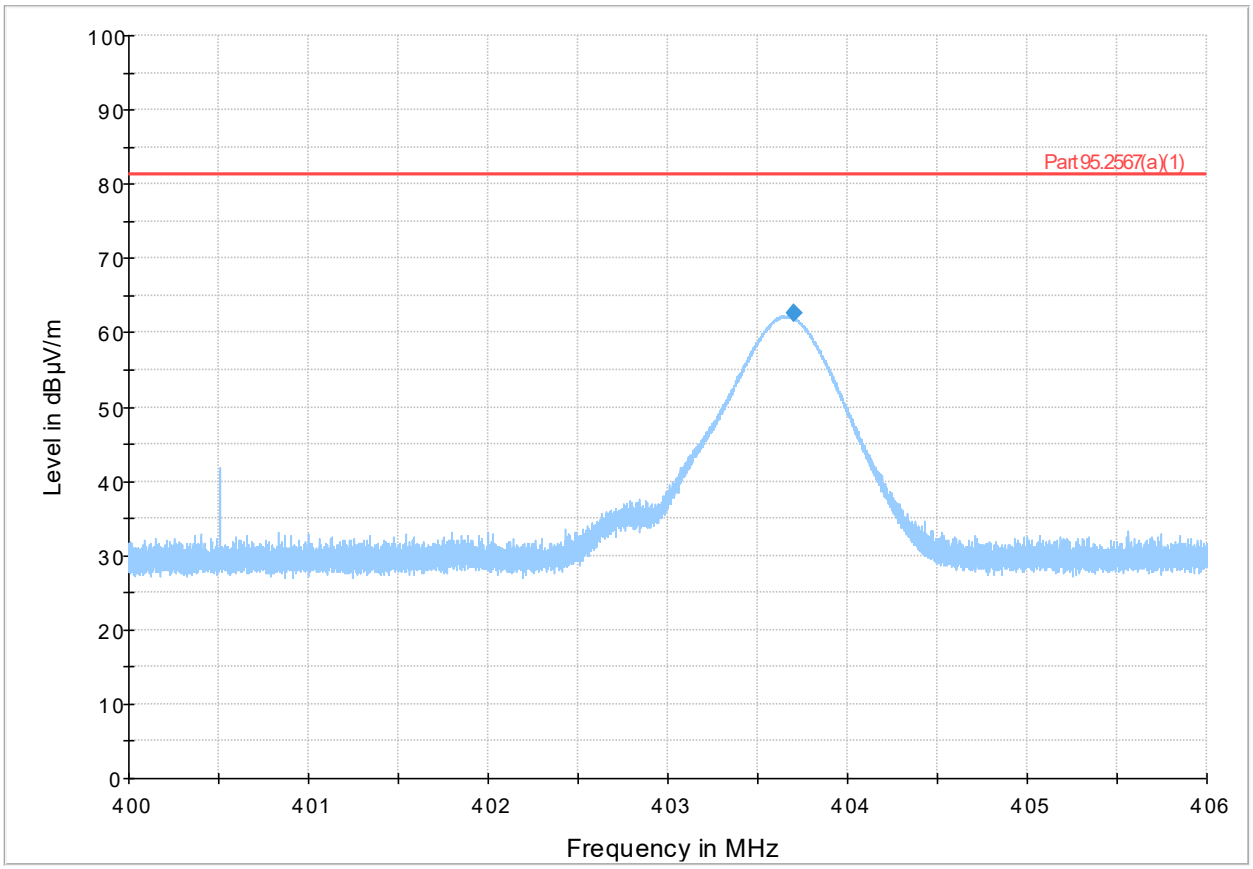

Figure 8.2-2: *Field strength of fundamental, mid channel (403.65 MHz) plot (400 MHz - 406 MHz)*

Table 8.2-2*: Field strength of fundamental, mid channel (403.65 MHz) results*

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
403.698000	62.71	81.38	18.67	5000.0	300.000	113.0	V	78.0	25.1

Notes:
[1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

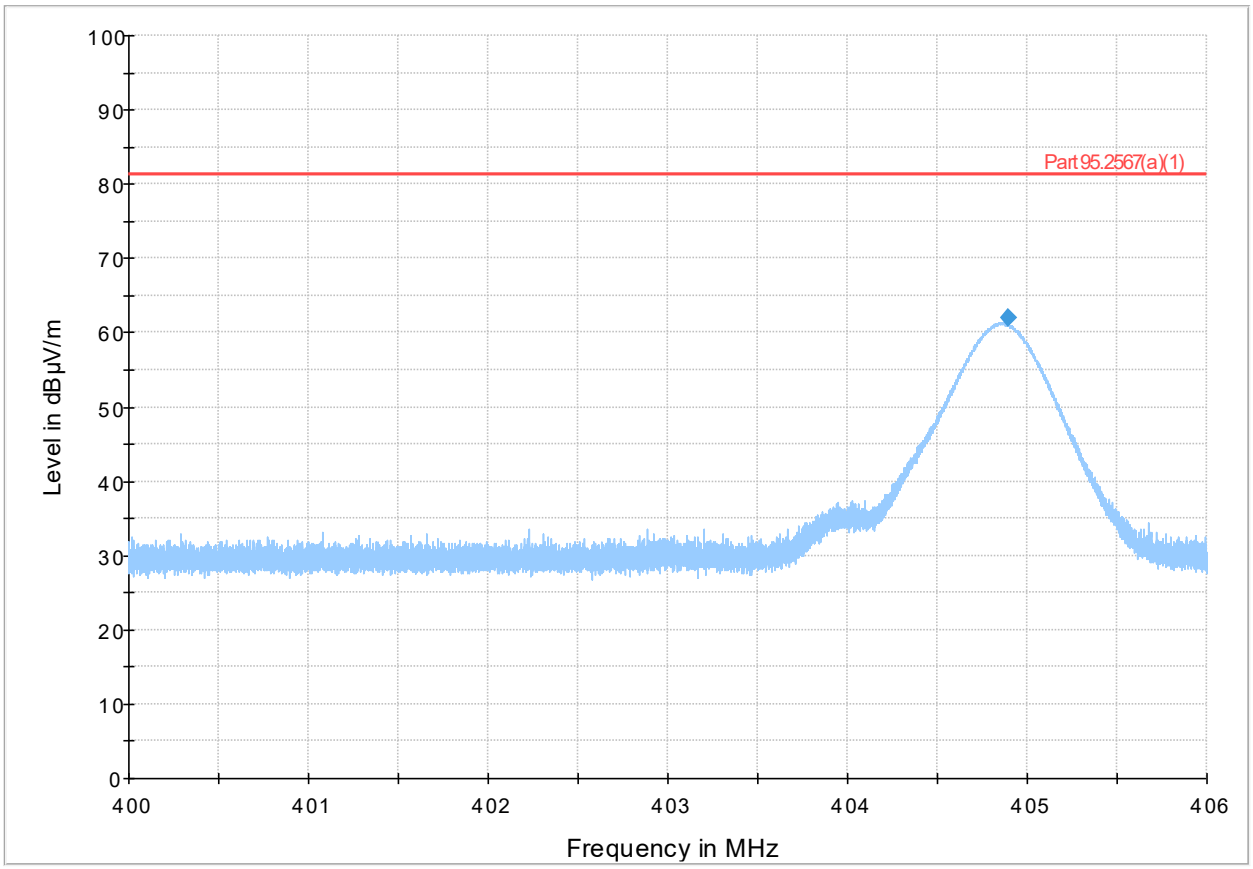

Figure 8.2-3: *Radiated emissions spectral plot, high channel (404.85 MHz) plot (400 MHz - 406 MHz)*

Table 8.2-3*: Radiated emissions, high channel (404.85 MHz) results*

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
404.898800	61.96	81.38	19.42	5000.0	300.000	113.0	V	77.0	25.2

Notes:
[1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Final Results:

Table 8.2-4*: ERP final results*

Channel (MHz)	Field Strength @ 3m (dBµV/m)	ERP (dBm)	ERP (µW)	Limit (µW)
402.15	63.42	-33.96	0.402	25
403.65	62.71	-34.67	0.341	25
404.85	61.96	-35.42	0.287	25

Sample Calculation (402.15 MHz):
ERP (dBm) = Field Strength @ 3m (dBµV/m) – 97.38
ERP (dBm) = 63.42 – 97.38
ERP (dBm) = -33.96 dBm

ERP (µW) = 10^(ERP(dBm)/10)*1000
ERP (µW) = 10^(-33.96/10)*1000
ERP (µW) = 0.40 µW

8.2.6 Setup photos

Refer to associated Test Setup Photos report.

Figure 8.2-4: *Field strength of fundamental setup photo*

8.3 Emission bandwidth; 20 dB bandwidth

8.3.1 References and limits

- §95.2573(a)
- Test method: ANSI C63.10

Each MedRadio transmitter type must be designed such that the MedRadio emission bandwidth does not exceed the applicable authorized bandwidth set forth in this section.

(a) For MedRadio transmitters operating in the 402-405 MHz band, the maximum authorized bandwidth is 300 kHz. Such transmitters must not use more than 300 kHz of bandwidth (total) during a MedRadio communications session. This provision does not preclude full duplex or half duplex communications provided that the total bandwidth of all of the channels employed in a MedRadio communications session does not exceed 300 kHz.

8.3.2 Test summary

Verdict	Pass		
Test date	January 31, 2022 February 1, 2022	Temperature	19 °C 20 °C
Test engineer	Lan Sayasane, EMC Test Engineer James Cunningham, EMC/MIL/WL Supervisor	Air pressure	1008 mbar 1010 mbar
Test location	☐ 10m semi anechoic chamber ☒ 3m semi anechoic chamber ☐ Other:	Relative humidity	44 % 52 %

8.3.3 Notes

The test was performed as a radiated measurement with the EUT oriented to the position of maximum fundamental emission. The EUT was configured to transmit at maximum power on the lowest, middle, and highest channels.

The spectrum analyzer was set to a 5-minute sweep time and left to sweep on a MaxHold for ~ 1 hour. This was sufficient time to capture all transient modulation products.

Resolution bandwidth: 30 kHz
Number of sweep points: 625
Frequency span: 500 kHz
Min. time per sweep point: 5 seconds
Number of sweeps in 1 hour: 12
Actual time per sweep point: 12 x (500 kHz / 625 sweep points) = 9.6 seconds

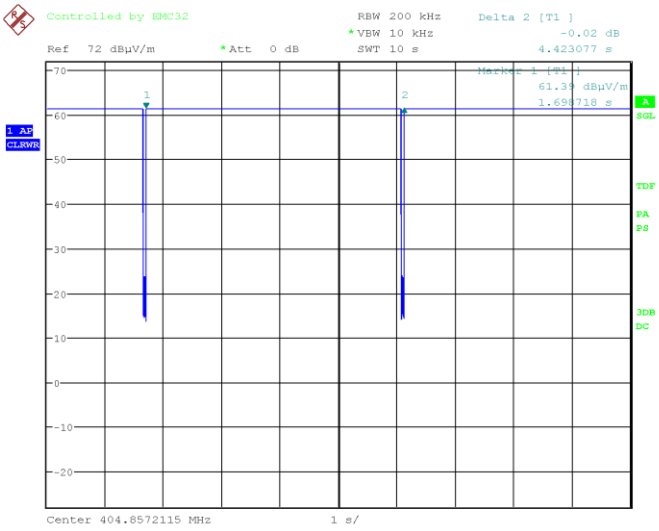

Figure 8.3-1: *Duty cycle*

8.3.4 Setup details

EUT power input during test	Battery powered
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:

Receiver / spectrum analyzer settings:

Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Span	Between 1.5 times and 5 times OBW
Detector mode	Peak
Trace mode	Max Hold
Measurement time	Long enough for trace to stabilize

8.3.5 Test data

Table 8.3-1: *Emission bandwidth; 20 dB bandwidth test results*

Test Frequency (MHz)	20 dB Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
402.15	40.87	300	259.13
403.65	12.82	300	287.18
404.85	12.02	300	287.98

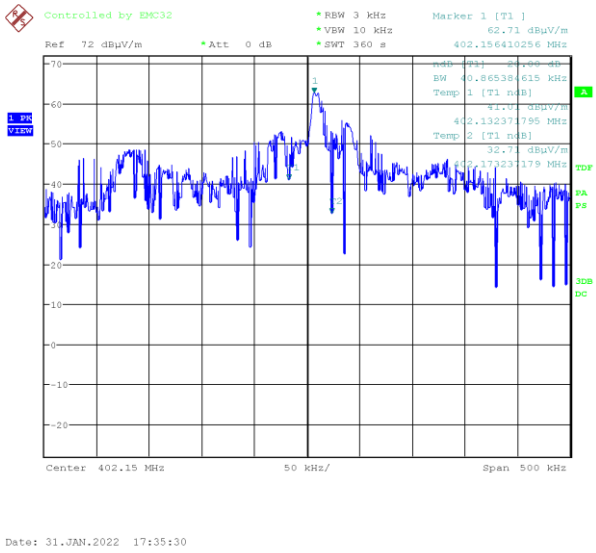

Figure 8.3-2: *Emission bandwidth; 20 dB bandwidth, low channel (402.15 MHz)*

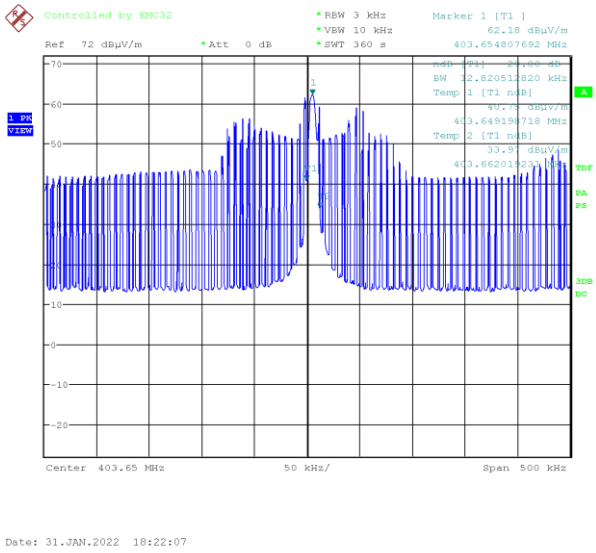

Figure 8.3-3: *Emission bandwidth; 20 dB bandwidth, mid channel (403.65 MHz)*

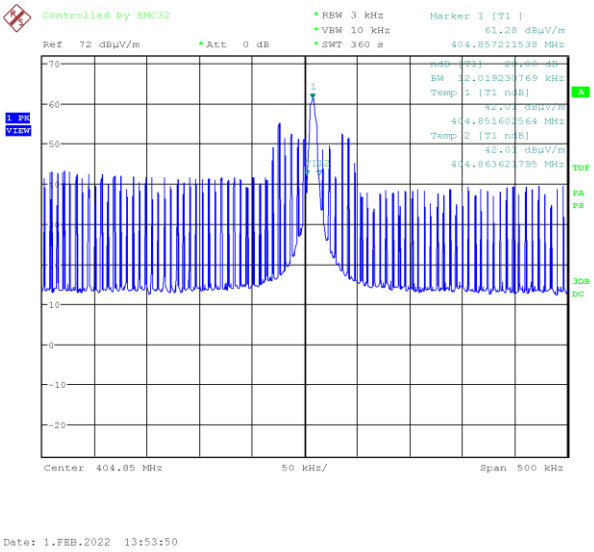

Figure 8.3-4: *Emission bandwidth; 20 dB bandwidth, high channel (404.85MHz)*

8.3.6 Setup photos

Refer to associated Test Setup Photos report.

Figure 8.3-5: *Emission bandwidth; 20 dB bandwidth setup photo*

8.4 Transmitter unwanted emissions and band edges

8.4.1 References and limits

- §95.2579
- Test method: ANSI C63.10

Unwanted emission field strength limits and attenuation requirements apply to each MedRadio transmitter type, as set forth in this section and part 2.

(a) Field strength limits. The field strengths of unwanted emissions from each MedRadio transmitter type, measured at a distance of 3 meters, must not exceed the field strength limits shown in the table in this paragraph for the indicated frequency ranges, if the frequencies of these emissions are:

(1) More than 250 kHz outside of the 402-405 MHz band (for devices designed to operate in the 402-405 MHz band);

Frequency (MHz)	Field strength (µV/m at 3 meters)
30 – 88	100
88 – 216	150
216 – 960	200
Above 960	500

Note to table in paragraph (a)(5): At the boundaries between frequency ranges, the tighter limit (lower field strength) applies. Below 1 GHz, field strength is measured using a CISPR quasi-peak detector. Above 1 GHz, field strength is measured using an average detector with a minimum reference bandwidth of 1 MHz. See also part 2, subpart J of this chapter.

(b) Harmonic emissions. Radiated unwanted emissions from a MedRadio transmitter type must be measured to at least the tenth harmonic of the highest fundamental frequency emitted.

(c) Attenuation requirements, 402-405 MHz. For MedRadio transmitter types designed to operate in the 402-405 MHz band, unwanted emissions must be attenuated below the maximum permitted transmitter output power by at least:

(1) 20 dB, on any frequency within the 402-405 MHz band that is more than 150 kHz away from the center frequency of the occupied bandwidth;

(g) Measurements. Compliance with the limits in paragraphs (c), (d), and (e) of this section is based on the use of measurement instrumentation using a peak detector function with an instrument reference bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

8.4.2 Test summary

Verdict	Pass		
Test date	January 31, 2022 February 1, 2022	Temperature	19 °C 20 °C
Test engineer	Lan Sayasane, EMC Test Engineer James Cunningham, EMC/MIL/WL Supervisor	Air pressure	1008 mbar 1010 mbar
Test location	☐ 10m semi anechoic chamber ☒ 3m semi anechoic chamber ☐ Other:	Relative humidity	44 % 52 %

8.4.3 Notes

The test was performed as a radiated measurement. The EUT was configured to transmit at maximum power on the middle channel. The spectrum was searched from 30 MHz to 5 GHz (> 10th harmonic of the highest transmit frequency). Measurements were performed at a 3 m measurement distance. Spectral plots are corrected with their associate transducer factors (i.e., antenna factors, cable loss, amplifier gains, etc.).

8.4.4 Setup details

EUT power input during test	Battery powered
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measuring distance	☐ 10m ☒ 3m ☐ Other:
Antenna height variation	1 – 4 m
Turn table position	0 – 360°
Measurement details	Preview measurements were performed with the receiver in continuous scan or sweep mode. Emissions detected within 6 dB or above limit (minimum of 6 frequencies) were maximized by rotating the EUT and adjusting the antenna height and polarization. At the position of maximum emission, the signal was measured with the appropriate detector against the corresponding limit and recorded as the final measurement.

Receiver/spectrum analyzer settings for frequencies below 1 GHz:

Resolution bandwidth	120 kHz
Detector mode	– Peak (Preview measurement) – Quasi-peak (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Quasi-peak final measurement)

Receiver/spectrum analyzer settings for frequencies above 1 GHz:

Resolution bandwidth	1 MHz
Detector mode	Peak (Preview measurement) Peak and Average (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak preview measurement) – 5000 ms (Peak and Average final measurement)

8.4.5 Test data

***Table 8.4-1**: Radiated emissions results summary*

Frequency (MHz)	Field strength Limit (µV/m at 3 meters)	Field strength limit (dBµV/m at 3 meters)	Verdict (worst case margin)
30 – 88	100	40.0 (quasi-peak)	Pass (9.29 dB)
88 – 216	150	43.5 (quasi-peak)	Pass (16.20 dB)
216 – 960	200	46.0 (quasi-peak)	Pass (11.51 dB)
Above 960	500	53.9 (average)	Pass (20.10 dB)
		73.9 (peak)	Pass (31.65 dB)

Full Spectrum

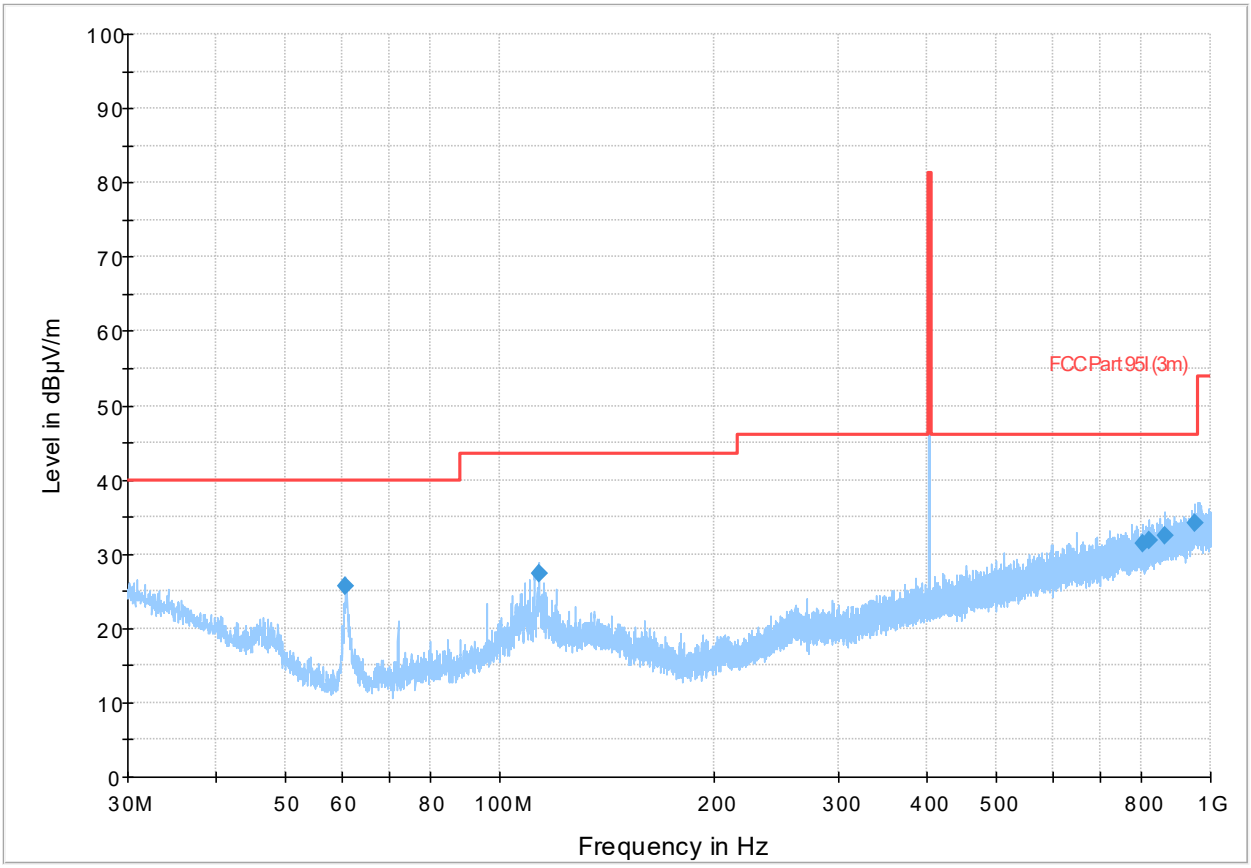

***Figure 8.4-1:** Radiated emissions spectral plot, low channel (402.15 MHz) (30 MHz - 1 GHz)*

***Table 8.4-2**: Radiated emissions, low channel (402.15 MHz) results*

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
60.801333	25.69	40.00	14.31	5000.0	120.000	100.0	V	308.0	12.7
113.666333	27.30	43.50	16.20	5000.0	120.000	369.0	V	170.0	19.1
804.691000	31.49	46.00	14.51	5000.0	120.000	141.0	V	278.0	31.8
821.235333	31.91	46.00	14.09	5000.0	120.000	298.0	H	0.0	32.3
863.086667	32.56	46.00	13.44	5000.0	120.000	153.0	V	239.0	33.0
949.053333	34.27	46.00	11.73	5000.0	120.000	385.0	V	20.0	34.6

Notes: [1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

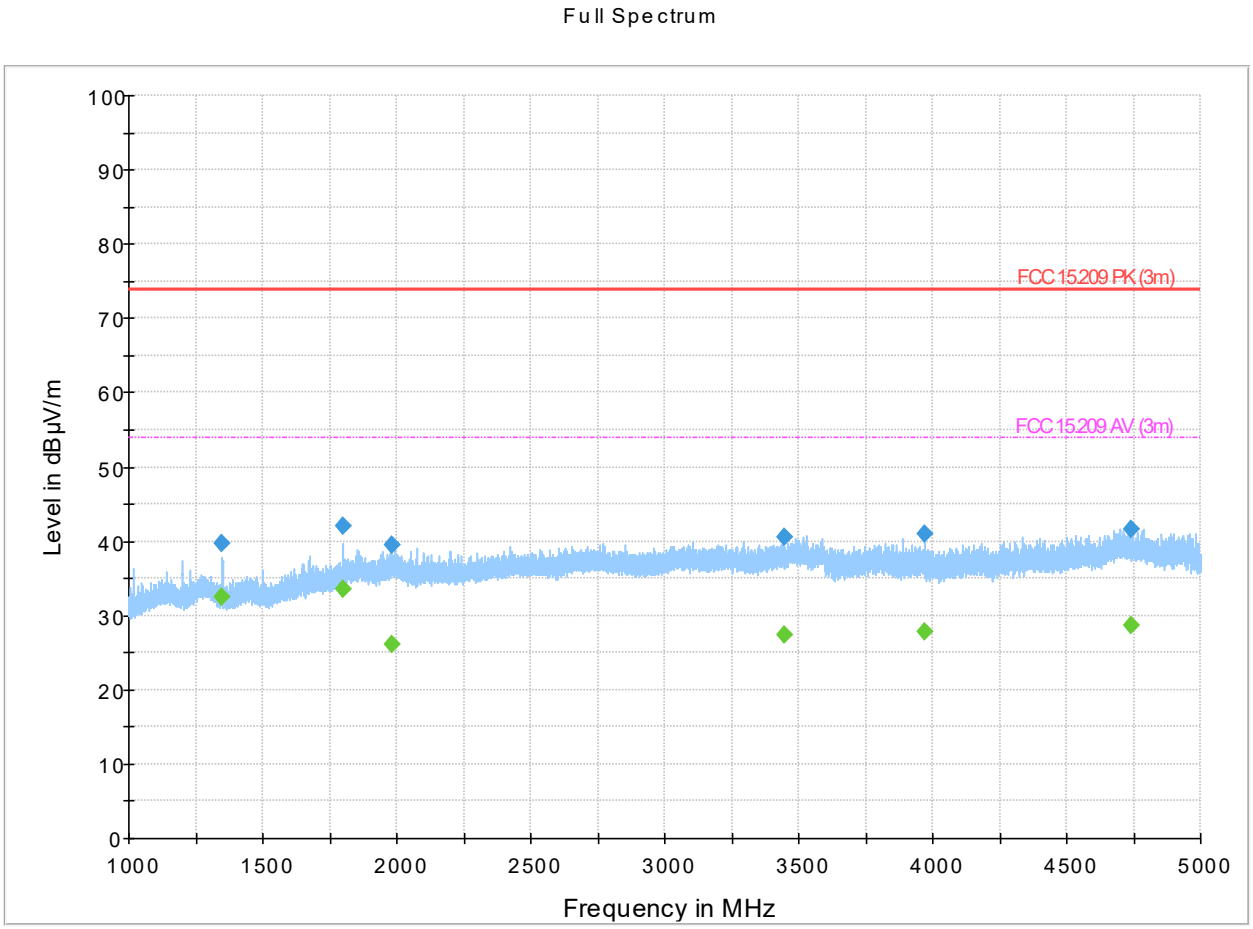

Figure 8.4-2: *Radiated emissions spectral plot, low channel (402.15 MHz) (1 GHz - 5 GHz)*

Table 8.4-3*: Radiated emissions, low channel (402.15 MHz) results*

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1349.852067	39.69	---	73.90	34.21	5000.0	1000.000	192.0	V	201.0	-13.4
1349.852067	---	32.42	53.90	21.48	5000.0	1000.000	192.0	V	201.0	-13.4
1799.846300	---	33.60	53.90	20.30	5000.0	1000.000	210.0	V	178.0	-10.7
1799.846300	41.94	---	73.90	31.96	5000.0	1000.000	210.0	V	178.0	-10.7
1979.963200	39.43	---	73.90	34.47	5000.0	1000.000	287.0	V	291.0	-9.9
1979.963200	---	26.18	53.90	27.72	5000.0	1000.000	287.0	V	291.0	-9.9
3446.848667	---	27.34	53.90	26.56	5000.0	1000.000	115.0	V	234.0	-5.5
3446.848667	40.58	---	73.90	33.32	5000.0	1000.000	115.0	V	234.0	-5.5
3969.224300	41.00	---	73.90	32.90	5000.0	1000.000	318.0	H	234.0	-3.3
3969.224300	---	27.91	53.90	25.99	5000.0	1000.000	318.0	H	234.0	-3.3
4743.795300	41.63	---	73.90	32.27	5000.0	1000.000	183.0	V	0.0	-0.7
4743.795300	---	28.58	53.90	25.32	5000.0	1000.000	183.0	V	0.0	-0.7

Notes: [1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

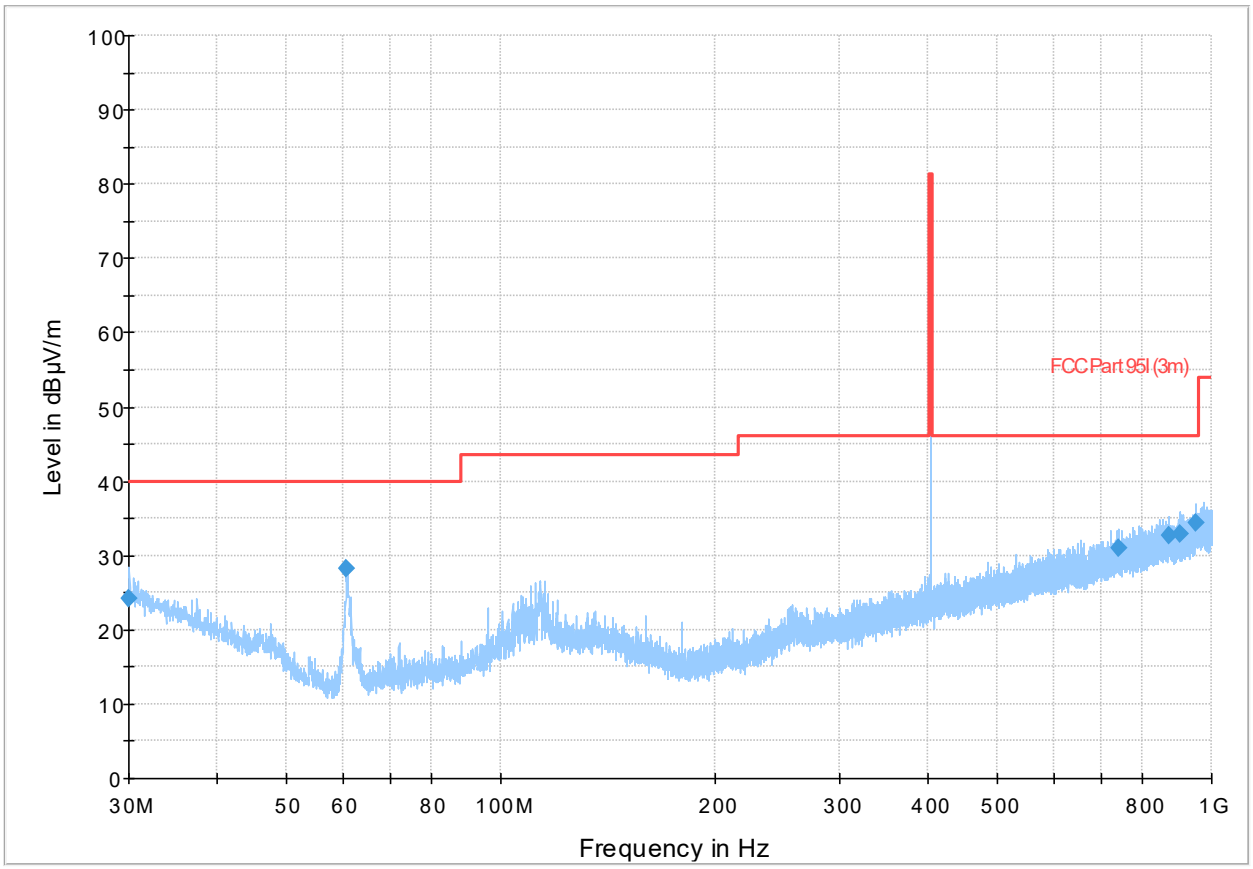

Figure 8.4-3: *Radiated emissions spectral plot, mid channel (403.65 MHz) (30 MHz - 1 GHz)*

Table 8.4-4*: Radiated emissions, mid channel (403.65 MHz) results*

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.000000	24.22	40.00	15.78	5000.0	120.000	375.0	H	43.0	26.6
60.824333	28.14	40.00	11.86	5000.0	120.000	107.0	V	315.0	12.7
741.591667	31.05	46.00	14.95	5000.0	120.000	303.0	H	222.0	31.4
871.175000	32.66	46.00	13.34	5000.0	120.000	148.0	V	307.0	33.0
903.480333	33.01	46.00	12.99	5000.0	120.000	147.0	V	0.0	33.3
949.013333	34.32	46.00	11.68	5000.0	120.000	386.0	V	240.0	34.6

Notes:
[1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

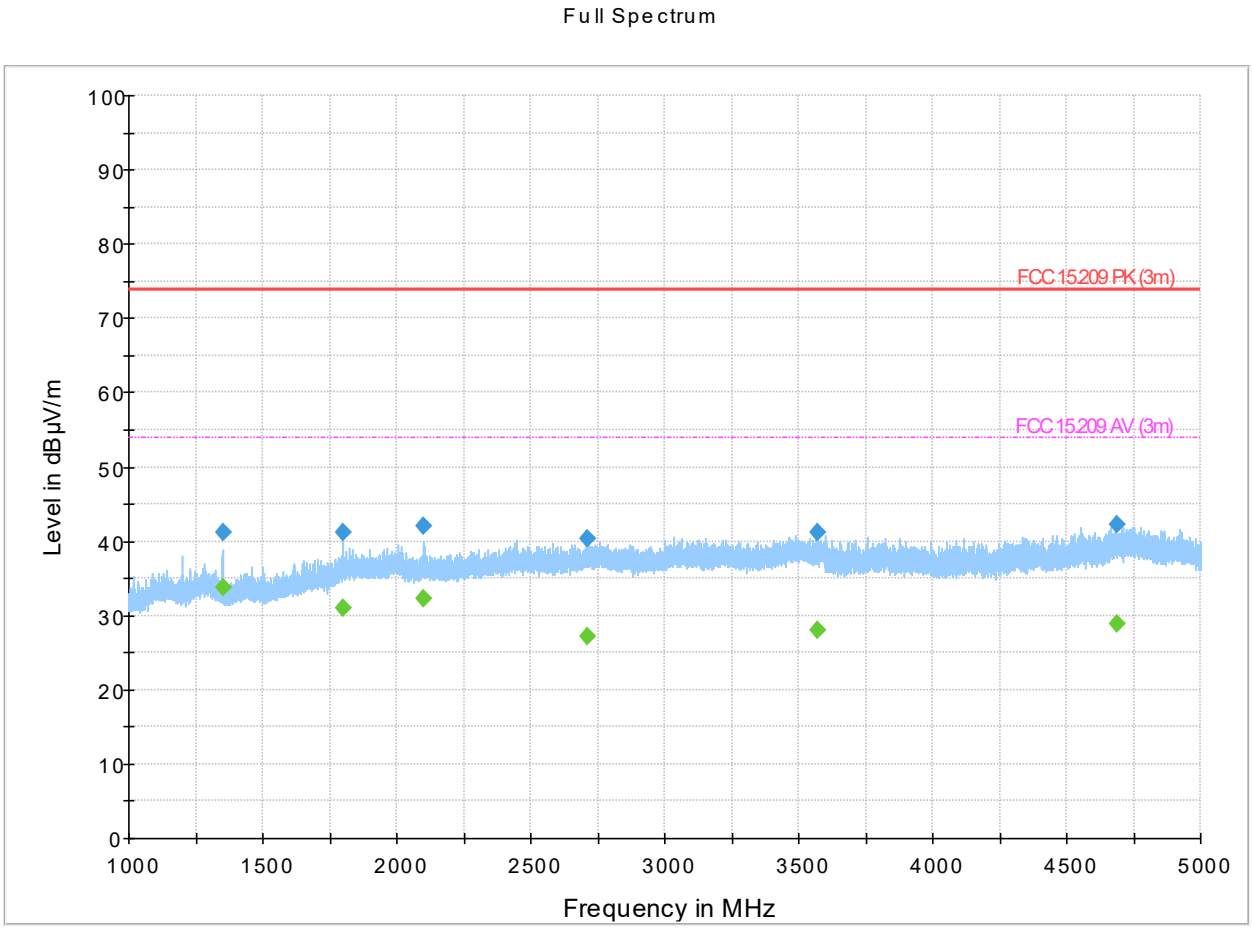

Figure 8.4-4: *Radiated emissions spectral plot, mid channel (403.65 MHz) (1 GHz - 5 GHz)*

Table 8.4-5*: Radiated emissions, mid channel (403.65 MHz) results*

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1350.013500	41.20	---	73.90	32.70	5000.0	1000.000	193.0	V	257.0	-13.4
1350.013500	---	33.83	53.90	20.07	5000.0	1000.000	193.0	V	257.0	-13.4
1800.123834	---	30.95	53.90	22.95	5000.0	1000.000	134.0	V	272.0	-10.7
1800.123834	41.14	---	73.90	32.76	5000.0	1000.000	134.0	V	272.0	-10.7
2100.008567	---	32.35	53.90	21.55	5000.0	1000.000	228.0	V	20.0	-10.0
2100.008567	42.00	---	73.90	31.90	5000.0	1000.000	228.0	V	20.0	-10.0
2713.824666	---	27.22	53.90	26.68	5000.0	1000.000	189.0	V	64.0	-7.8
2713.824666	40.38	---	73.90	33.52	5000.0	1000.000	189.0	V	64.0	-7.8
3570.785800	---	27.99	53.90	25.91	5000.0	1000.000	323.0	V	270.0	-4.9
3570.785800	41.27	---	73.90	32.63	5000.0	1000.000	323.0	V	270.0	-4.9
4687.166800	42.25	---	73.90	31.65	5000.0	1000.000	402.0	V	210.0	-0.7
4687.166800	---	28.94	53.90	24.96	5000.0	1000.000	402.0	V	210.0	-0.7

Notes: [1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

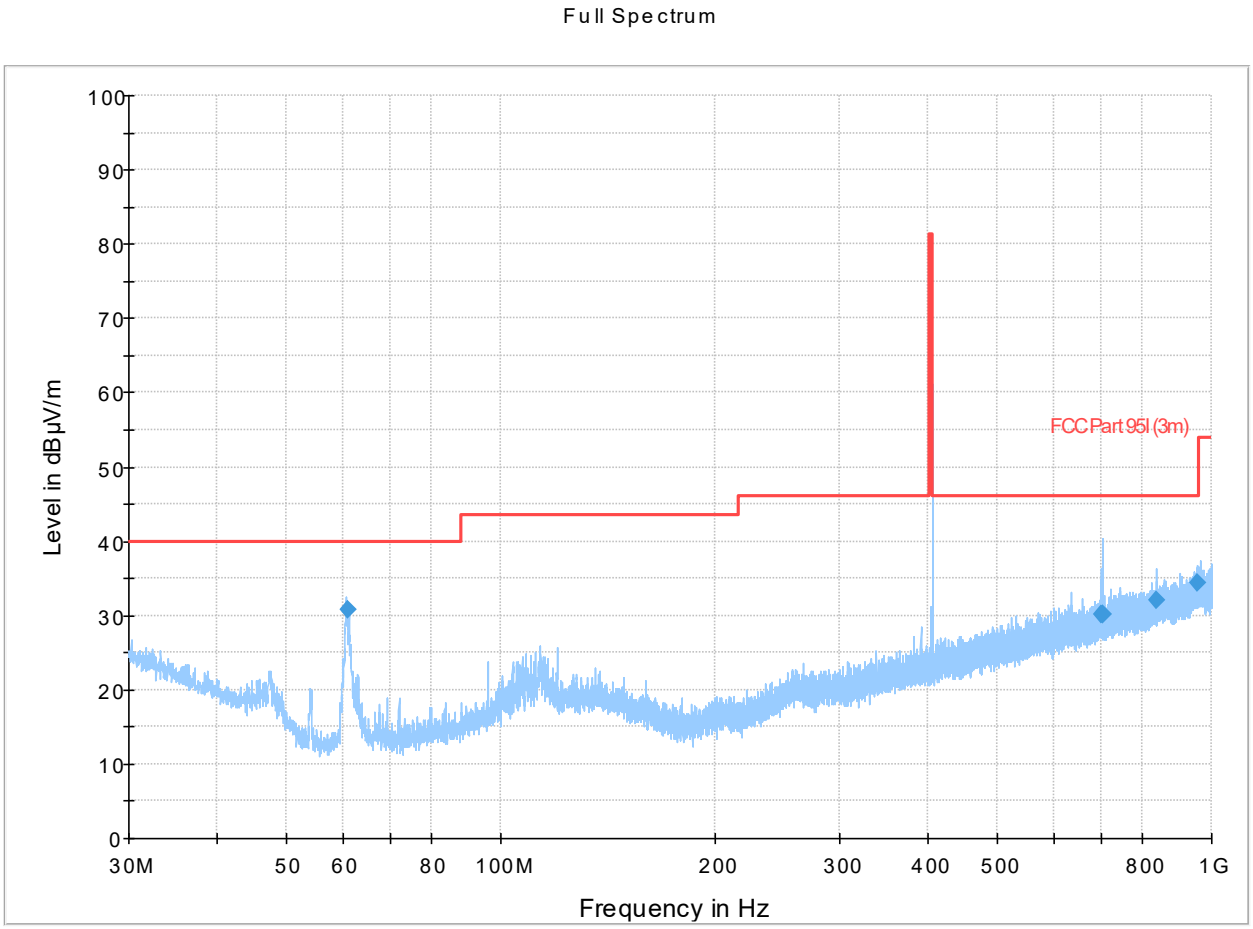

Figure 8.4-5: *Radiated emissions spectral plot, high channel (404.85 MHz) (30 MHz - 1 GHz)*

Table 8.4-6*: Radiated emissions, high channel (404.85 MHz) results*

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
60.847333	30.71	40.00	9.29	5000.0	120.000	107.0	V	172.0	12.7
699.009333	30.18	46.00	15.82	5000.0	120.000	161.0	V	0.0	30.6
702.461333	30.11	46.00	15.89	5000.0	120.000	308.0	V	238.0	30.5
702.815333	30.11	46.00	15.89	5000.0	120.000	292.0	V	0.0	30.5
836.234667	32.07	46.00	13.93	5000.0	120.000	401.0	V	174.0	32.4
956.179333	34.49	46.00	11.51	5000.0	120.000	193.0	H	0.0	34.7

Notes:
[1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

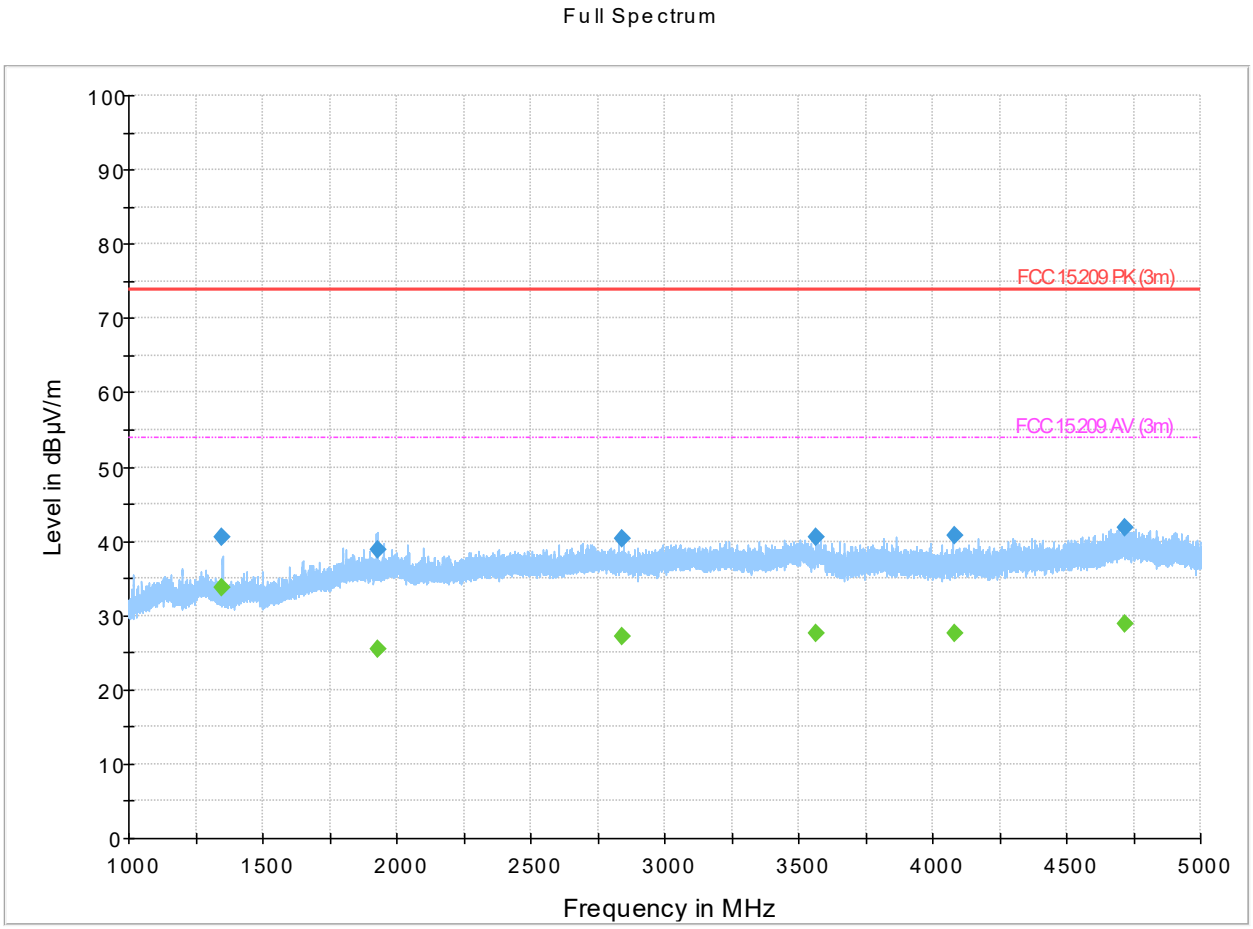

Figure 8.4-6: *Radiated emissions spectral plot, high channel (404.85 MHz) (1 GHz - 5 GHz)*

Table 8.4-7*: Radiated emissions, high channel (404.85 MHz) results*

Frequency (MHz)	MaxPeak (dBµV/m)	CAverage (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1349.989167	40.65	---	73.90	33.25	5000.0	1000.000	194.0	V	288.0	-13.4
1349.989167	---	33.80	53.90	20.10	5000.0	1000.000	194.0	V	288.0	-13.4
1927.441333	---	25.39	53.90	28.51	5000.0	1000.000	183.0	V	227.0	-10.0
1927.441333	38.92	---	73.90	34.98	5000.0	1000.000	183.0	V	227.0	-10.0
2843.056534	---	27.07	53.90	26.83	5000.0	1000.000	348.0	H	260.0	-7.5
2843.056534	40.45	---	73.90	33.45	5000.0	1000.000	348.0	H	260.0	-7.5
3563.528433	40.54	---	73.90	33.36	5000.0	1000.000	153.0	H	200.0	-5.0
3563.528433	---	27.66	53.90	26.24	5000.0	1000.000	153.0	H	200.0	-5.0
4080.965300	40.77	---	73.90	33.13	5000.0	1000.000	162.0	H	231.0	-2.8
4080.965300	---	27.65	53.90	26.25	5000.0	1000.000	162.0	H	231.0	-2.8
4716.988967	41.88	---	73.90	32.02	5000.0	1000.000	305.0	H	174.0	-0.6
4716.988967	---	28.96	53.90	24.94	5000.0	1000.000	305.0	H	174.0	-0.6

Notes: [1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

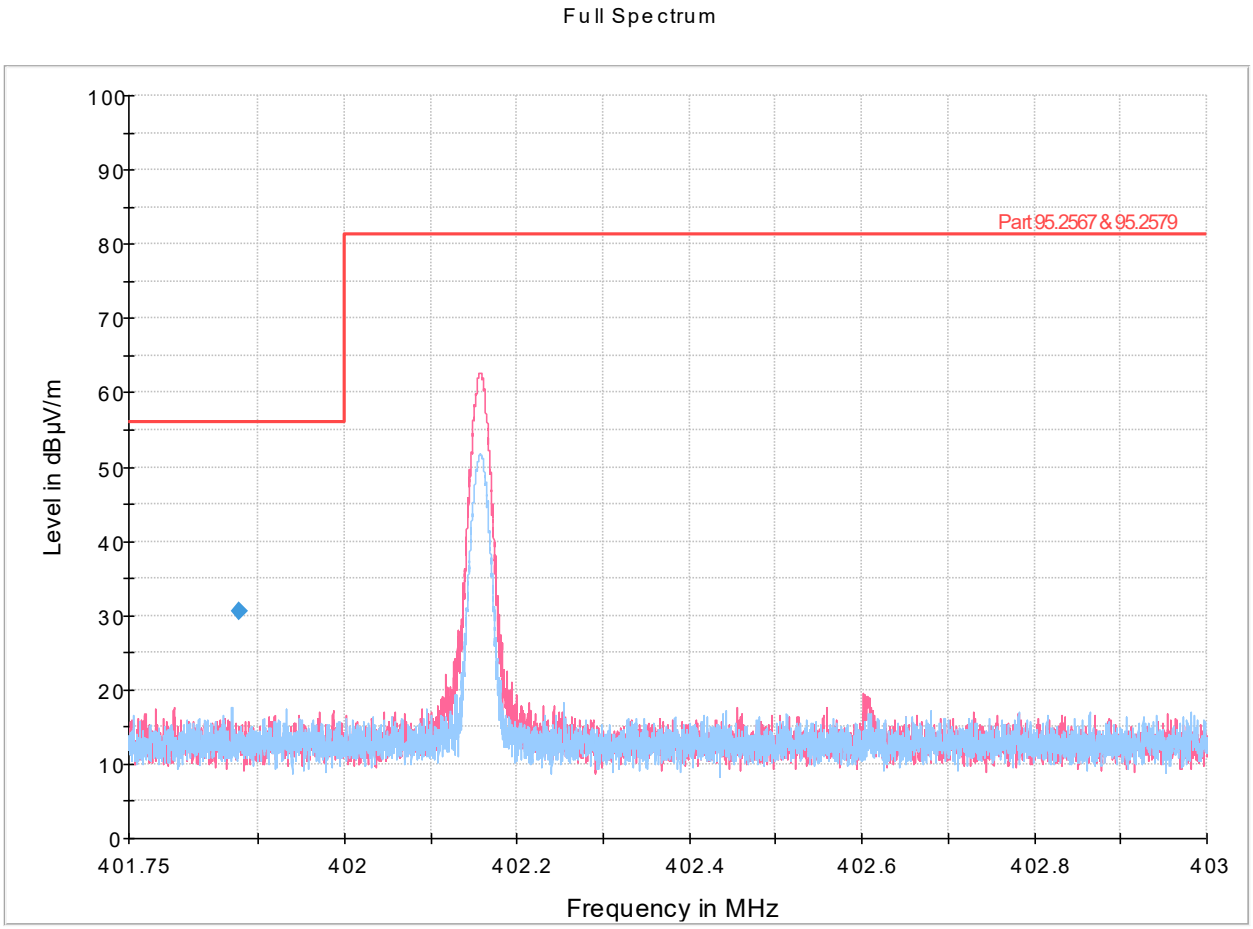

Figure 8.4-7: *Radiated emissions spectral plot, low band edge (401.75 MHz - 403 MHz)*

Table 8.4-8*: Radiated emissions, low band edge results*

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
401.878708	30.53	56.00	25.47	5000.0	10.000	127.0	H	333.0	25.1

Notes:
[1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

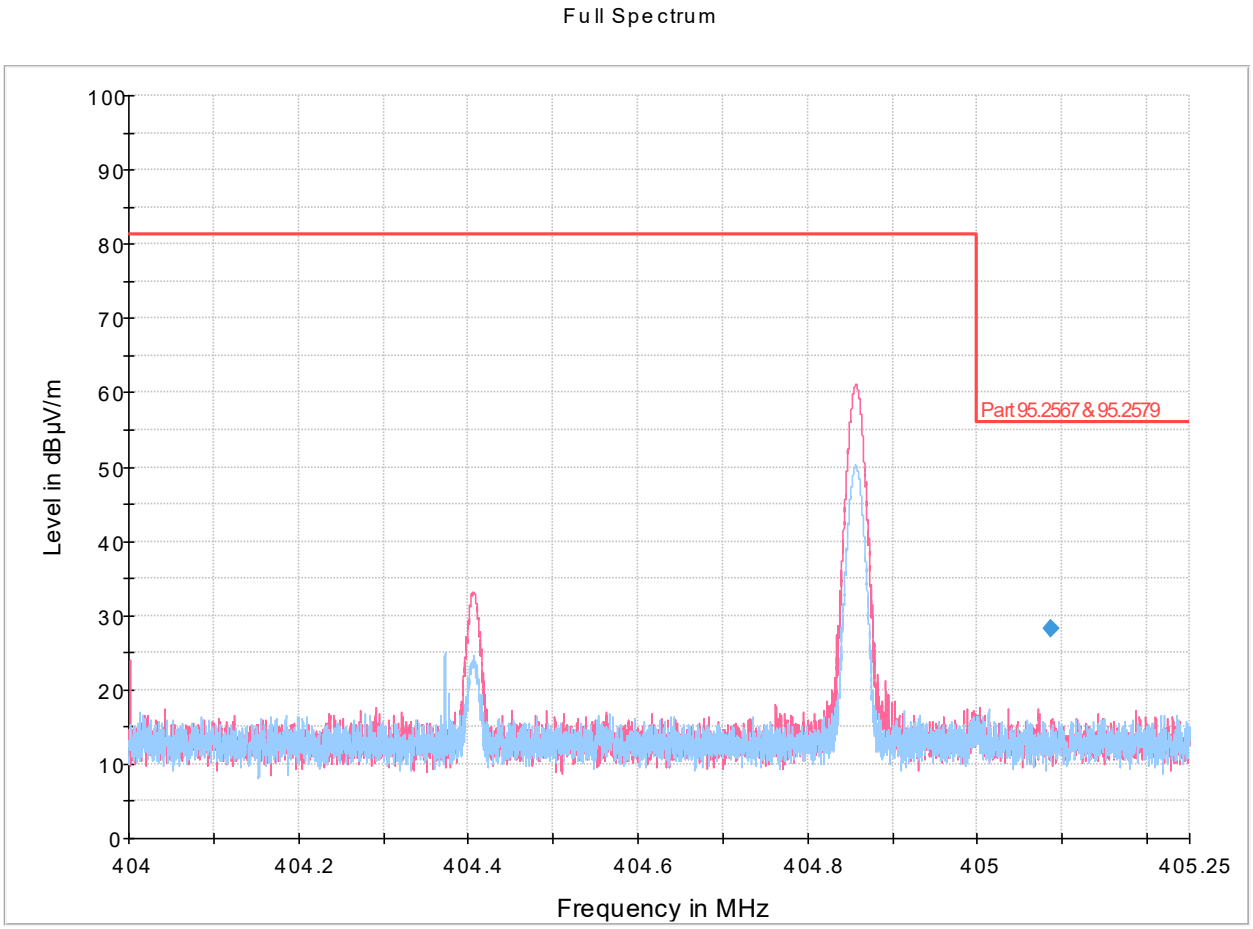

Figure 8.4-8: *Radiated emissions spectral plot, high band edge (404 MHz - 405.25 MHz)*

Table 8.4-9*: Radiated emissions, high band edge results*

Frequency (MHz)	MaxPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
405.085708	28.20	56.00	27.80	5000.0	10.000	294.0	V	0.0	25.2

Notes: [1] Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)
[2] Correction factors = antenna factor ACF (dB) + cable loss (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.4.6 Setup photos

Refer to associated Test Setup Photos report.

Figure 8.4-9: *Transmitter unwanted emissions setup photo*

8.5 AC power line conducted emissions

8.5.1 References and limits

- §15.207(a)
- Test method: ANSI C63.4

For Low-power radio-frequency devices that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 Ω line impedance stabilization network (LISN). The lower limit applies at the boundary between the frequency ranges.

Frequency of emission, MHz	Conducted limit, dBµV	
	Quasi-peak	**Average**
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

- Note: * - Decreases with the logarithm of the frequency.

8.5.2 Test summary

Verdict	Pass		
Test date	February 1, 2022	Temperature	20 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1010 mbar
Test location	☒ Ground plan ☐ Other:	Relative humidity	52 %

8.5.3 Notes

Testing was performed with the EUT transmitting on a fixed channel at full power. Lowest, middle, and highest channels were evaluated.

The spectral plots within this section have been corrected with all relevant transducer factors.

8.5.4 Setup details

EUT power input during test	120 VAC/60 Hz, EUT connected to cradle, charging via wireless power transfer
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measurement details	A preview measurement was generated with the receiver in continuous scan mode. Emissions detected within 6 dB or above limit were re-measured with the appropriate detector against the correlating limit and recorded as the final measurement.

Receiver settings:

Resolution bandwidth	9 kHz
Video bandwidth	30 kHz
Detector mode	– Peak and Average (Preview measurement) – Quasi-peak and CAverage (Final measurement)
Trace mode	Max Hold
Measurement time	– 100 ms (Peak and Average preview measurement) – 5000 ms (Quasi-peak final measurement) – 5000 ms (CAverage final measurement)

8.5.5 Test data

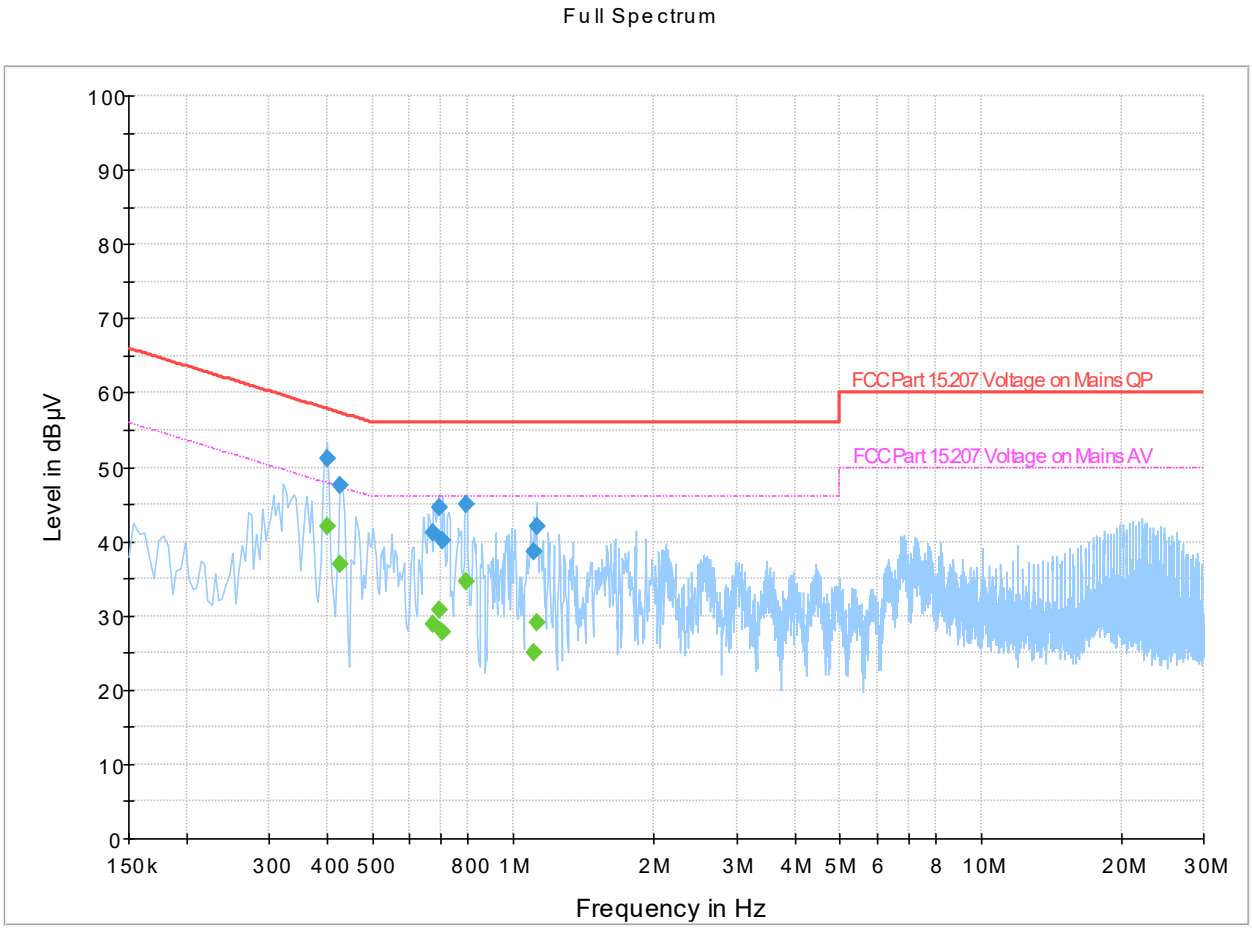

Figure 8.5-1: *Conducted emissions at mains port spectral plot, low channel (402.15 MHz) (150 kHz - 30 MHz)*

***Table 8.5-1**: Conducted emissions at mains port, low channel (402.15 MHz) results*

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.398000	---	41.96	47.90	5.93	5000.0	9.000	L1	ON	19.4
0.398000	51.09	---	57.90	6.80	5000.0	9.000	L1	ON	19.4
0.426000	---	36.89	47.33	10.44	5000.0	9.000	L1	ON	19.4
0.426000	47.56	---	57.33	9.77	5000.0	9.000	L1	ON	19.4
0.674000	---	28.85	46.00	17.15	5000.0	9.000	L1	ON	19.4
0.674000	41.23	---	56.00	14.77	5000.0	9.000	L1	ON	19.4
0.694000	---	30.85	46.00	15.15	5000.0	9.000	L1	ON	19.4
0.694000	44.52	---	56.00	11.48	5000.0	9.000	L1	ON	19.4
0.706000	---	27.79	46.00	18.21	5000.0	9.000	L1	ON	19.4
0.706000	40.22	---	56.00	15.78	5000.0	9.000	L1	ON	19.4
0.790000	---	34.52	46.00	11.48	5000.0	9.000	L1	ON	19.4
0.790000	45.00	---	56.00	11.00	5000.0	9.000	L1	ON	19.4
1.106000	---	25.14	46.00	20.86	5000.0	9.000	L1	ON	19.4
1.106000	38.69	---	56.00	17.31	5000.0	9.000	L1	ON	19.4
1.122000	---	29.04	46.00	16.96	5000.0	9.000	L1	ON	19.4
1.122000	41.95	---	56.00	14.05	5000.0	9.000	L1	ON	19.4

Notes:
[1] Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).
[2] Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

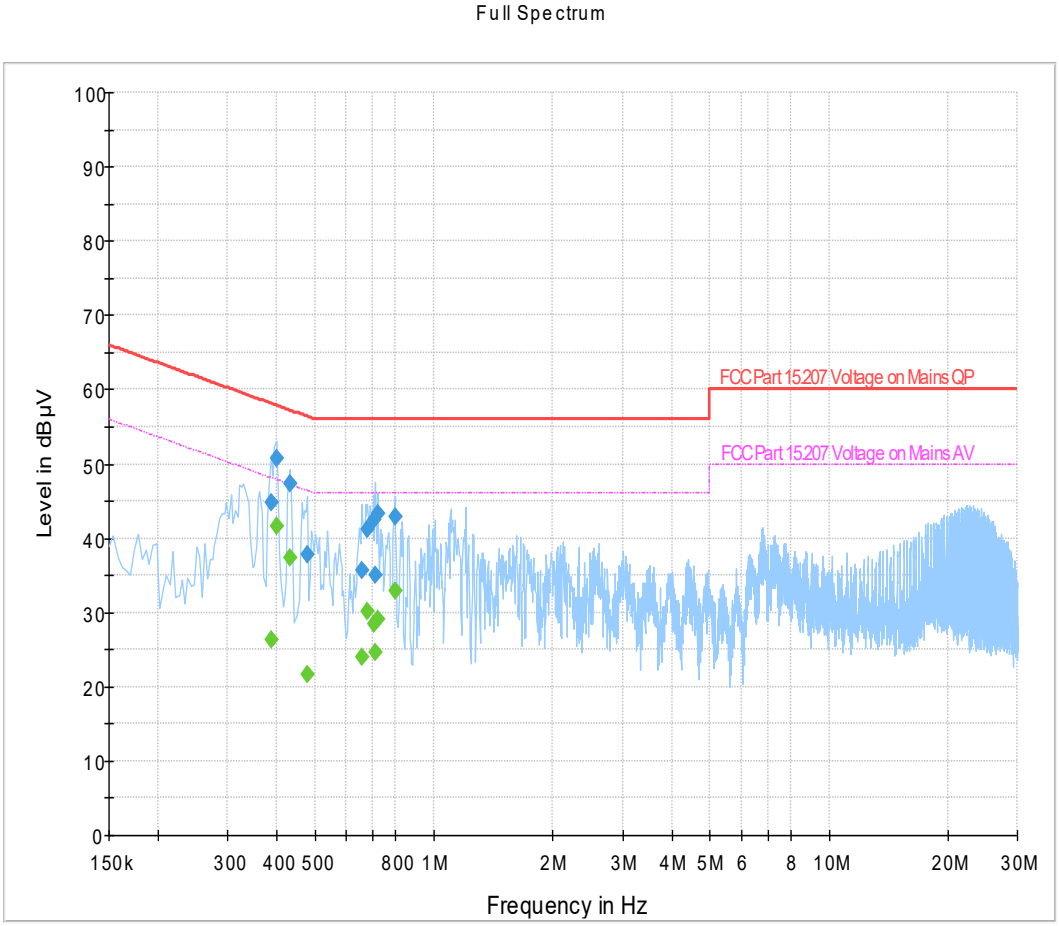

Figure 8.5-2: *Conducted emissions at mains port spectral plot, mid channel (403.65 MHz) (150 kHz - 30 MHz)*

***Table 8.5-2**: Conducted emissions at mains port, mid channel (403.65 MHz) results*

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.386000	---	26.30	48.15	21.85	5000.0	9.000	L1	ON	19.4
0.386000	44.84	---	58.15	13.31	5000.0	9.000	L1	ON	19.4
0.398000	---	41.58	47.90	6.32	5000.0	9.000	L1	ON	19.4
0.398000	50.76	---	57.90	7.14	5000.0	9.000	L1	ON	19.4
0.430000	---	37.30	47.25	9.95	5000.0	9.000	L1	ON	19.4
0.430000	47.35	---	57.25	9.91	5000.0	9.000	L1	ON	19.4
0.478000	---	21.62	46.37	24.75	5000.0	9.000	L1	ON	19.4
0.478000	37.71	---	56.37	18.66	5000.0	9.000	L1	ON	19.4
0.654000	---	24.01	46.00	21.99	5000.0	9.000	L1	ON	19.4
0.654000	35.75	---	56.00	20.25	5000.0	9.000	L1	ON	19.4
0.678000	---	30.05	46.00	15.95	5000.0	9.000	L1	ON	19.4
0.678000	41.22	---	56.00	14.78	5000.0	9.000	L1	ON	19.4
0.702000	---	28.48	46.00	17.52	5000.0	9.000	L1	ON	19.4
0.702000	42.56	---	56.00	13.44	5000.0	9.000	L1	ON	19.4
0.710000	34.94	---	56.00	21.06	5000.0	9.000	N	ON	19.4
0.710000	---	24.65	46.00	21.35	5000.0	9.000	N	ON	19.4
0.718000	---	29.00	46.00	17.00	5000.0	9.000	L1	ON	19.4
0.718000	43.41	---	56.00	12.59	5000.0	9.000	L1	ON	19.4
0.794000	42.85	---	56.00	13.15	5000.0	9.000	L1	ON	19.4
0.794000	---	32.80	46.00	13.20	5000.0	9.000	L1	ON	19.4

Notes:
[1] Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).
[2] Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Full Spectrum

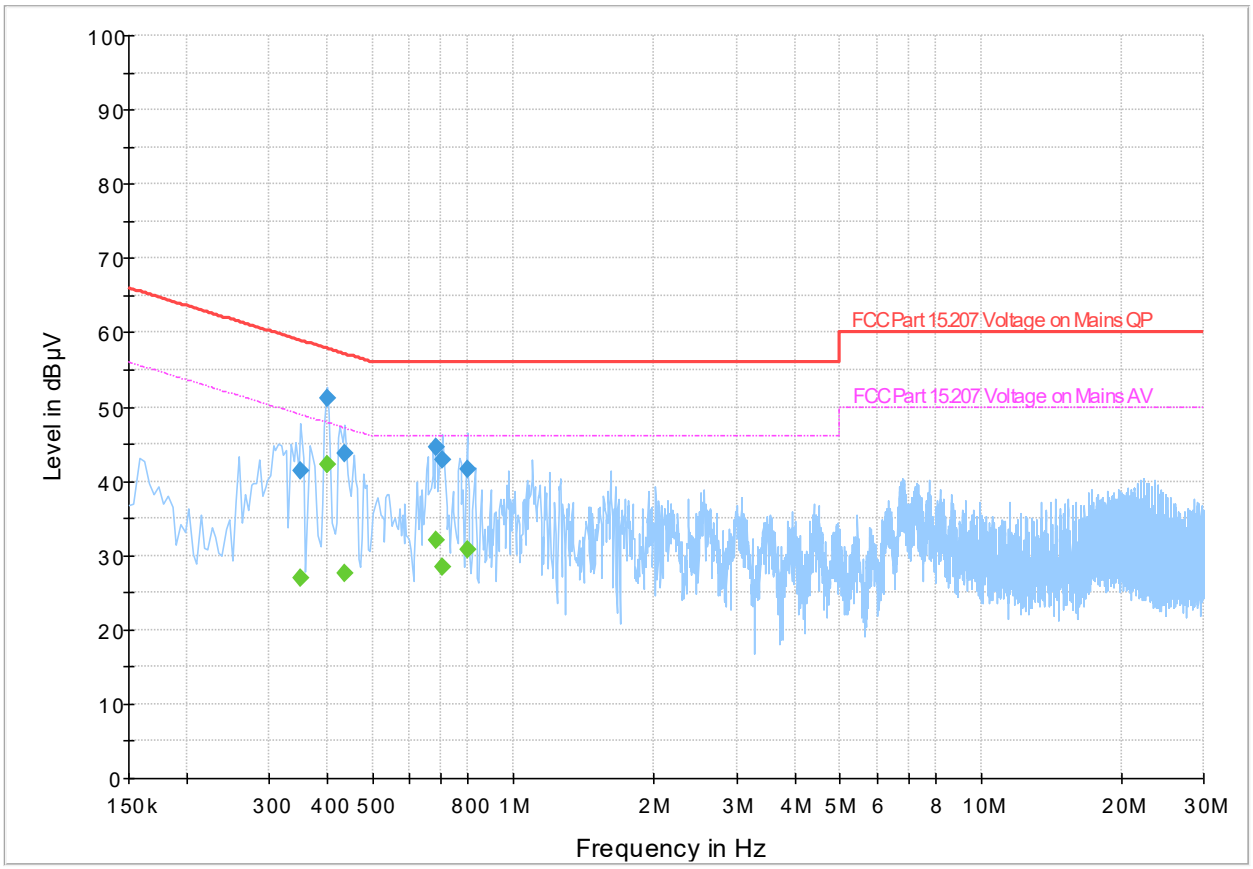

Figure 8.5-3: *Conducted emissions at mains port spectral plot, high channel (404.85 MHz) (150 kHz - 30 MHz)*

Table 8.5-3*: Conducted emissions at mains port, high channel (404.85 MHz) results*

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.350000	---	26.87	48.96	22.09	5000.0	9.000	L1	ON	19.4
0.350000	41.40	---	58.96	17.57	5000.0	9.000	L1	ON	19.4
0.398000	---	42.16	47.90	5.74	5000.0	9.000	L1	ON	19.4
0.398000	51.10	---	57.90	6.79	5000.0	9.000	L1	ON	19.4
0.434000	---	27.62	47.18	19.56	5000.0	9.000	L1	ON	19.4
0.434000	43.73	---	57.18	13.44	5000.0	9.000	L1	ON	19.4
0.682000	---	32.00	46.00	14.00	5000.0	9.000	L1	ON	19.4
0.682000	44.51	---	56.00	11.49	5000.0	9.000	L1	ON	19.4
0.706000	---	28.54	46.00	17.46	5000.0	9.000	L1	ON	19.4
0.706000	42.85	---	56.00	13.16	5000.0	9.000	L1	ON	19.4
0.794000	---	30.82	46.00	15.18	5000.0	9.000	L1	ON	19.4
0.794000	41.70	---	56.00	14.30	5000.0	9.000	L1	ON	19.4

Notes:
[1] Result (dBµV) = receiver analyzer value (dBµV) + correction factor (dB).
[2] Correction factors = LISN factor IL (dB) + cable loss (dB) + transient limiter (dB)
[3] Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

8.5.6 Setup photos

Refer to associated Test Setup Photos report.

Figure 8.5-4: *AC power line conducted emissions setup photo*

8.6 99% Occupied bandwidth

8.6.1 References and limits

- §2.202(a)
- Test method: ANSI C63.10

(a) Occupied bandwidth. The frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. In some cases, for example multichannel frequency-division systems, the percentage of 0.5 percent may lead to certain difficulties in the practical application of the definitions of occupied and necessary bandwidth; in such cases a different percentage may prove useful.

8.6.2 Test summary

Verdict	Pass		
Test date	January 31, 2022 February 1, 2022	Temperature	19 °C 20 °C
Test engineer	Lan Sayasane, EMC Test Engineer James Cunningham, EMC/MIL/WL Supervisor	Air pressure	1008 mbar 1010 mbar
Test location	☐ 10m semi anechoic chamber ☒ 3m semi anechoic chamber ☐ Other:	Relative humidity	44 % 52 %

8.6.3 Notes

The test was performed as a radiated measurement with the EUT oriented to the position of maximum fundamental emission. The EUT was configured to transmit at maximum power on the lowest, middle, and highest channels.

8.6.4 Setup details

EUT power input during test	Battery powered
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:

Receiver / spectrum analyzer settings:

Resolution bandwidth	1% - 5% OBW
Video bandwidth	3*RBW
Span	Between 1.5 times and 5 times OBW
Detector mode	Peak
Trace mode	Max Hold
Measurement time	Long enough for trace to stabilize

8.6.5 Test data

Table 8.6-1: *99% Occupied bandwidth test results*

Test Frequency (MHz)	99% Bandwidth (kHz)
402.15	435.10
403.65	463.94
404.85	404.86

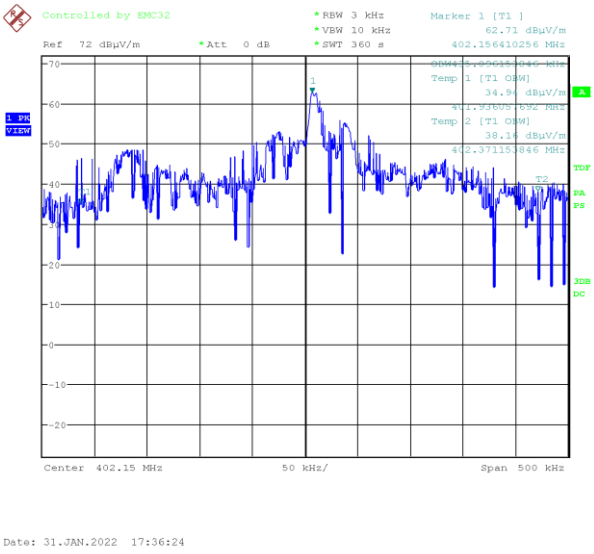

Figure 8.6-1: *99% Occupied bandwidth, low channel (402.15 MHz)*

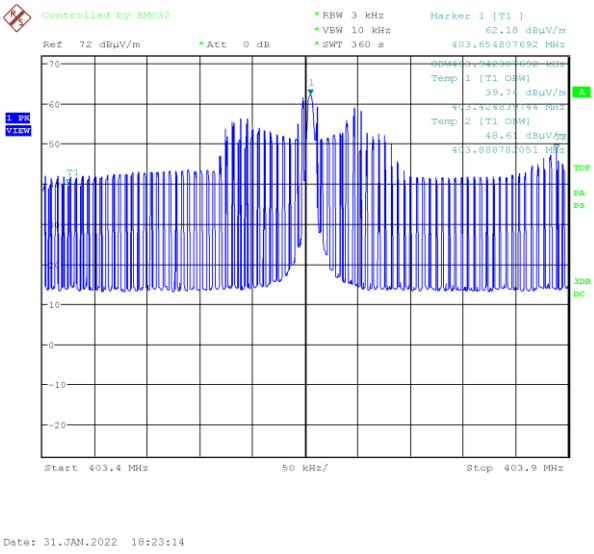

Figure 8.6-2: *99% Occupied bandwidth, mid channel (403.65 MHz)*

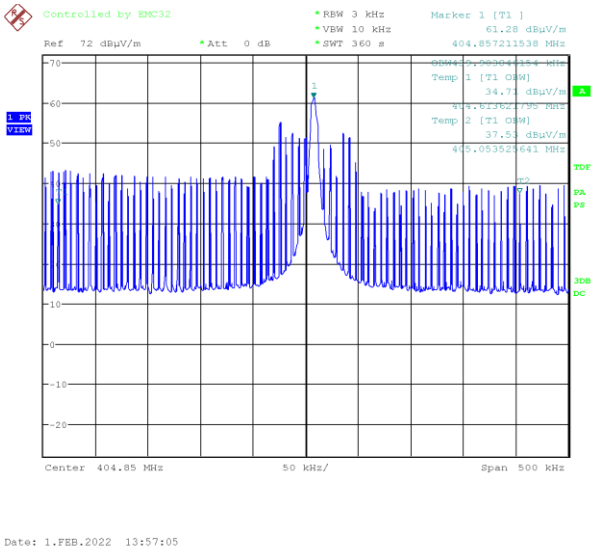

Figure 8.6-3: *99% Occupied bandwidth, high channel (404.85 MHz)*

8.6.6 Setup photos

Refer to associated Test Setup Photos report.

Figure 8.6-4: *99% Occupied bandwidth setup photo*

Section 9 Attestation Letter

Not applicable.

End of test report