

Medtronic MiniMed

REVISED TEST REPORT TO 111618-1

MiniMed Flex Charger
Model: MMT-8070

MiniMed Insulin Pump
Model: M065019C001*

*(See Appendix B for Manufacturers Declaration)

Tested to The Following Standards:

FCC Part 15 Subpart C Section(s)

15.207 & 15.209

Report No.: 111618-1A

Date of issue: November 25, 2025



Test Certificate # 803.01

This test report bears the accreditation symbol indicating that the testing performed herein meets the test and reporting requirements of ISO/IEC 17025 under the applicable scope of testing for CKC Laboratories, Inc.

We strive to create long-term, trust based relationships by providing sound, adaptive, customer first testing services. We embrace each of our customers' unique EMC challenges, not as an interruption to set processes, but rather as the reason we are in business.

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Administrative Information

Test Report Information

REPORT PREPARED FOR:

Medtronic MiniMed
18000 Devonshire Street
Northridge, CA 91325-1219

Representative: Nghi Nguyen
Customer Reference Number: 6000025282

DATE OF EQUIPMENT RECEIPT:**DATE(S) OF TESTING:****REPORT PREPARED BY:**

Lisa Bevington
CKC Laboratories, Inc.
5046 Sierra Pines Drive
Mariposa, CA 95338

Project Number: 111618

July 9, 2025

July 9, 10, 14 & 16, 2025 &
September 23, 2025

Revision History

Original: Testing of MiniMed Flex Charger, Model: MMT-8070, MiniMed Insulin Pump Model: M065019C001 to FCC Part 15 Subpart C Sections 15.207 & 15.209.

Revision A: To correct typos on the Radiated Field Strength Measurement and updated the Field Strength of Spurious Emissions data to the correct limit.

Report Authorization

The test data contained in this report documents the observed testing parameters pertaining to and are relevant for only the equipment provided by the client, tested in the agreed upon operational mode(s) and configuration(s) as identified herein. Compliance assessment remains the client's responsibility. This report may not be used to claim product endorsement by A2LA or any government agencies. This test report has been authorized for release under quality control from CKC Laboratories, Inc.

A handwritten signature in black ink that reads "Steve Behm".

Steve Behm
Director of Quality Assurance & Engineering Services
CKC Laboratories, Inc.

Test Facility Information



Our laboratories are configured to effectively test a wide variety of product types. CKC utilizes first class test equipment, anechoic chambers, data acquisition and information services to create accurate, repeatable and affordable test results.

TEST LOCATION(S):
CKC Laboratories, Inc.
22116 23rd Drive S.E. Suite A
Bothell, WA 98021-4413

Software Versions

CKC Laboratories Proprietary Software	Version
EMITest Emissions	5.03.20

Site Registration & Accreditation Information

Location	*NIST CB #	FCC	Canada	Japan
Canyon Park, Bothell, WA	US0103	US1024	3082C	A-0136
Brea, CA	US0103	US1024	3082D	A-0136
Fremont, CA	US0103	US1024	3082B	A-0136
Mariposa, CA	US0103	US1024	3082A	A-0136

*CKC's list of NIST designated countries can be found at: <https://standards.gov/cabs/designations.html>

Summary of Results

Standard / Specification: FCC Part 15 Subpart C - 15.209

Test Procedure	Description	Modifications	Results
15.215(c)	Occupied Bandwidth	NA	Pass
15.209	Field Strength of Fundamental	NA	Pass
15.209	Field Strength of Spurious Emissions	NA	Pass
15.207	AC Conducted Emissions	NA	Pass

NA = Not Applicable

ISO/IEC 17025 Decision Rule

The equipment sample utilized for testing is selected by the manufacturer. The declaration of pass or fail herein is a binary statement for simple acceptance rule (ILAC G8) based upon assessment to the specification(s) listed above, without consideration of measurement uncertainties. For performance related tests, equipment was monitored for specified criteria identified in that section of testing.

Modifications During Testing

This list is a summary of the modifications made to the equipment during testing.

Summary of Conditions

No modifications were made during testing.

Conditions During Testing

This list is a summary of the conditions noted to the equipment during testing.

Summary of Conditions

None

Equipment Under Test (EUT)

During testing, numerous configurations may have been utilized. The configurations listed below support compliance to the standard(s) listed in the Summary of Results section.

Configuration 1 (For Wireless Charger Em)

Equipment Under Test

Device	Manufacturer	Model	SN
MiniMed Flex Charger	Medtronic MiniMed	MMT-8070	MDCHGR01031 and MDCHGR01035 (used interchangeably)
MiniMed Insulin Pump	Medtronic MiniMed	M065019C001	JUN042025-1-001 and JUN042025-1-004 (pump units with resistor load, both units used interchangeably)

Support Equipment

Device	Manufacturer	Model	SN
Load	Medtronic MiniMed	Charger Tool	JUN042025-1-001 and JUN042025-1-004 (used interchangeably)

Configuration 2 (Using Drained Battery Pump) (See Appendix A Test Data)

Equipment Under Test

Device	Manufacturer	Model	SN
MiniMed Flex Charger	Medtronic MiniMed	MMT-8070	MDCHGR01031
MiniMed Insulin Pump	Medtronic MiniMed	M065019C001	DV10000498

Support Equipment

Device	Manufacturer	Model	SN
NA			

General Product Information:

Description of EUT	
Wireless charger for medical device	
Product Information	Manufacturer-Provided Details
Operating Frequencies Tested:	142kHz
Equipment Type:	Stand-Alone Equipment
Maximum Duty Cycle:	Tested 100% as worst case
Modulation Type(s):	WPT FSK (for wireless charger) and WPT ASK (for pump)
Antenna Type(s):	Coil
Antenna Connection Type:	Integral
Nominal Input Voltage:	120VAC
Firmware / Software Version(s):	Charger: NA (wireless charger has no firmware/software) Pump: 1.0.0.RC1-rc1-48b66239 (DV1.1)
Firmware / Software Description:	Charger: NA (wireless charger has no firmware/software) Pump: 1.0.0.RC1-rc1-48b66239 (DV1.1)
Firmware / Software Setting(s):	Charger: NA (wireless charger has no firmware/software) Pump: 1.0.0.RC1-rc1-48b66239 (DV1.1)
Tune-up or Adjustment(s):	NA
The validity of results is dependent on the stated product details, the accuracy of which the manufacturer assumes full responsibility.	

EUT and Accessory Photo(s)



Support Equipment Photo(s)



AC Adapter

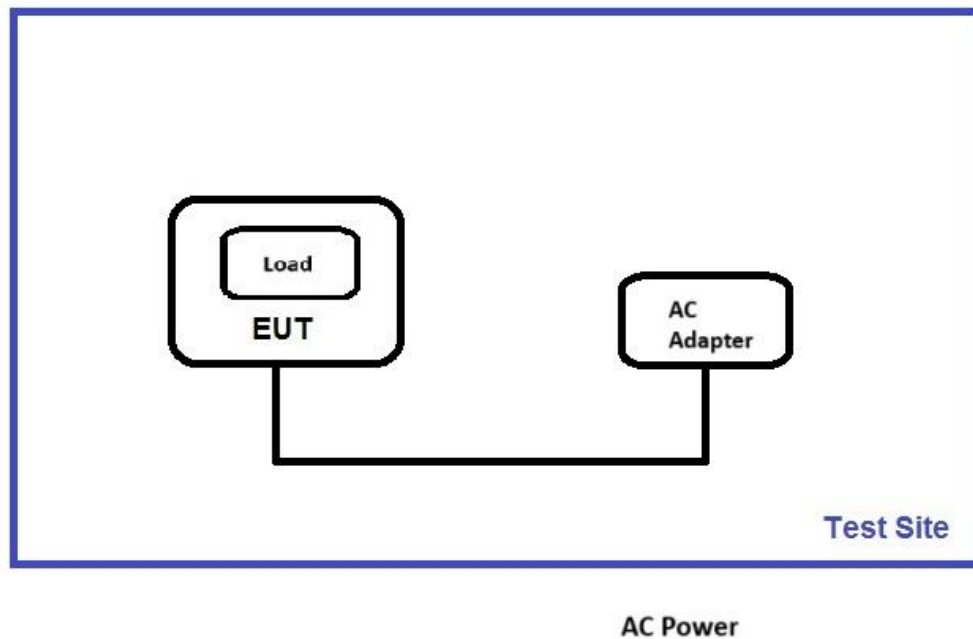


Load

Block Diagram of Test Setup(s)

Config#	Setup Description of Block Diagram
1	Wireless charger transmitting with a load designed for maximum charging rate.

Test Setup Block Diagram



FCC Part 15 Subpart C

15.215(c) Occupied Bandwidth (20dB BW)

Test Setup/Conditions			
Test Location:	Bothell Lab C3	Test Engineer:	M. Atkinson
Test Method:	ANSI C63.10 (2020)	Test Date(s):	7/14/2025
Configuration:	1		
Test Setup:	EUT is continuously transmitting on test table. The manufacturer declares the companion load device is not capable of misalignment due to the built in magnets for alignment. The companion load is configured to draw maximum power while charger as worst case.		

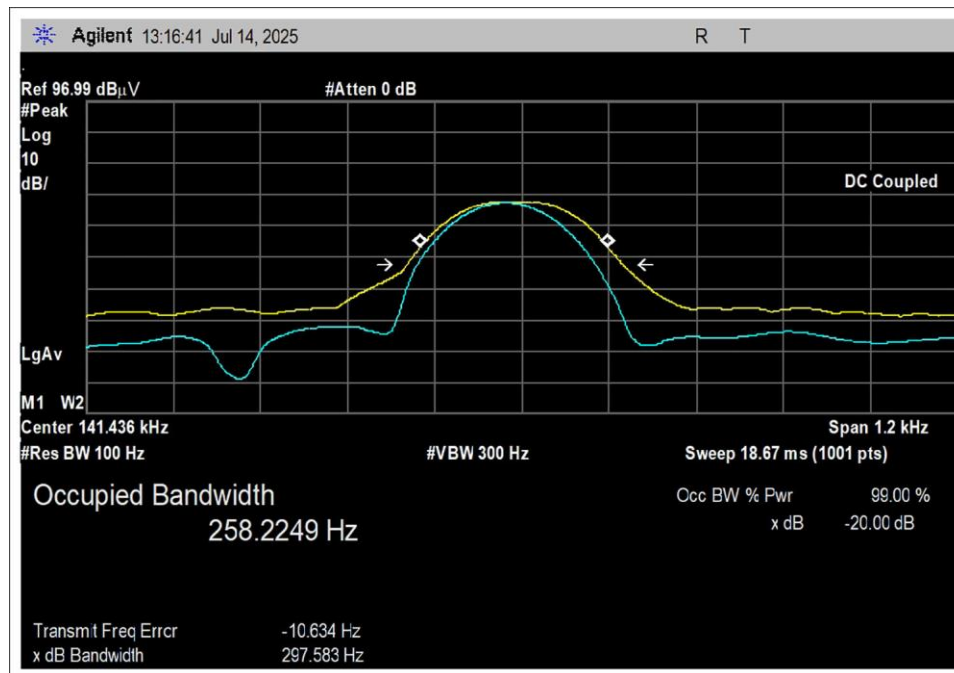
Environmental Conditions			
Temperature (°C)	22-26	Relative Humidity (%):	38-45

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
02871	Spectrum Analyzer	Agilent	E4440A	9/19/2024	9/19/2026
P08205	Flex Cable	Mini-Circuits	CBL-6FT-NMNM+	1/22/2025	1/22/2027
P07485	Cable	Andrews	FSJ1	1/29/2025	1/29/2027
00052	Loop Antenna	EMCO	6502	4/21/2025	4/21/2027

Test Data Summary					
Frequency (MHz)	Antenna Port	Modulation	Measured (Hz)	Limit (kHz)	Results
141.5kHz	1	WPT FSK	297.583Hz*	None	PASS

*Unable to meet ratio in 6.9.2 in ANSI C63.10 (2020), OBW is reported with 100Hz RBW setting.

Plot(s)



Test Setup Photo(s)



Charger with Load, Below 1GHz, 0.8m

15.209 Field Strength of Fundamental

Test Setup/Conditions			
Test Location:	Bothell Lab C3	Test Engineer:	M. Atkinson
Test Method:	ANSI C63.10 (2020)	Test Date(s):	7/14/2025
Configuration:	1		
Test Setup:	EUT is continuously transmitting on test table. The manufacturer declares the companion load device is not capable of misalignment due to the built in magnets for alignment. The companion load is configured to draw maximum power while charger as worst case. XYZ EUT axes and 3 x orthogonal measurement axes investigated, worst case reported. The voltage was varied on the AC adapter which is sold with the device.		

Environmental Conditions			
Temperature (°C)	22-26	Relative Humidity (%):	38-45

Test Equipment					
Asset#	Description	Manufacturer	Model	Cal Date	Cal Due
See datasheet for radiated equipment	Spectrum Analyzer	Agilent	E4440A	9/19/2024	9/19/2026
Additional Equipment used for Voltage Variation Testing					
01315	AC Power Supply	PPS	NA	8/25/2023	8/25/2025
01318	Multimeter	Fluke	Fluke 85	6/13/2025	6/13/2027

Test Data Summary - Voltage Variations					
Frequency (kHz)	Modulation / Ant Port	V _{Minimum} (dBuV/m)	V _{Nominal} (dBuV/m)	V _{Maximum} (dBuV/m)	Max Deviation from V _{Nominal} (dB)
142.3	WPT FSK	-6.2	-6.2	-6.2	0.0

Test performed using operational mode with the highest output power, representing worst case.

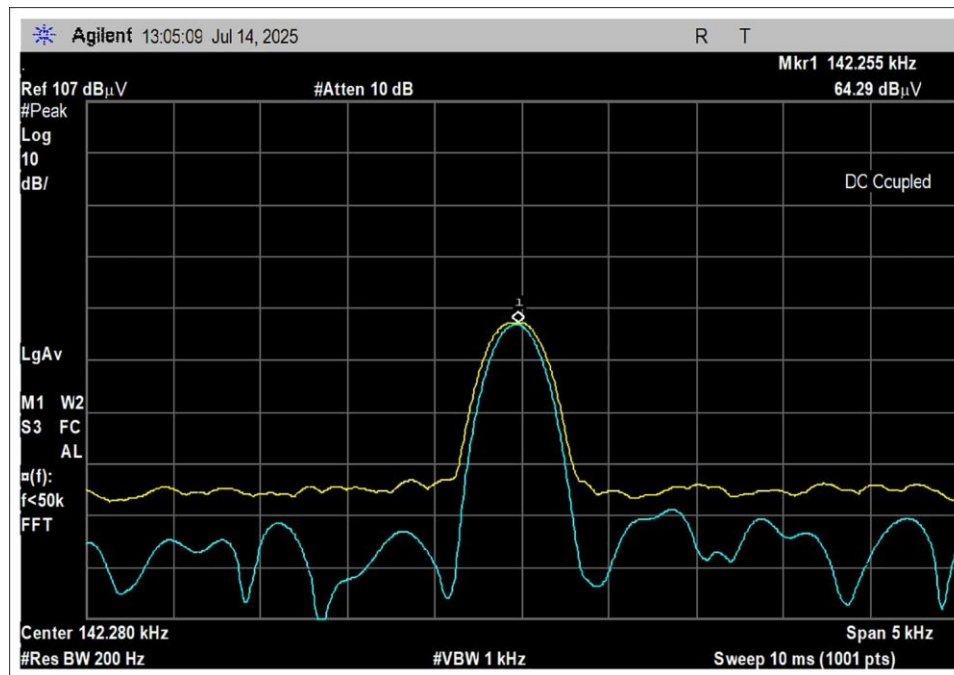
Parameter Definitions:

Measurements performed at input voltage V_{Nominal} ± 15%.

Parameter	Value
V _{Nominal} :	120 VAC
V _{Minimum} :	102.00 VAC
V _{Maximum} :	138.00 VAC

Test Data Summary – Radiated Field Strength Measurement					
Frequency (kHz)	Modulation	Ant. Type	Measured (dBuV/m @ 300m)	Limit (dBuV/m @ 300m)	Results
142.3	WPT FSK	Coil	-6.2	≤24.5	Pass

Plot(s)



Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **111618** Date: 7/14/2025
 Test Type: **Radiated Scan** Time: 12:59:22
 Tested By: M. Atkinson Sequence#: 42
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 43.3%
 Temperature: 23.4°C
 Pressure: 101.4

Frequency: Fundamental

Test Method: ANSI C63.10 (2020)

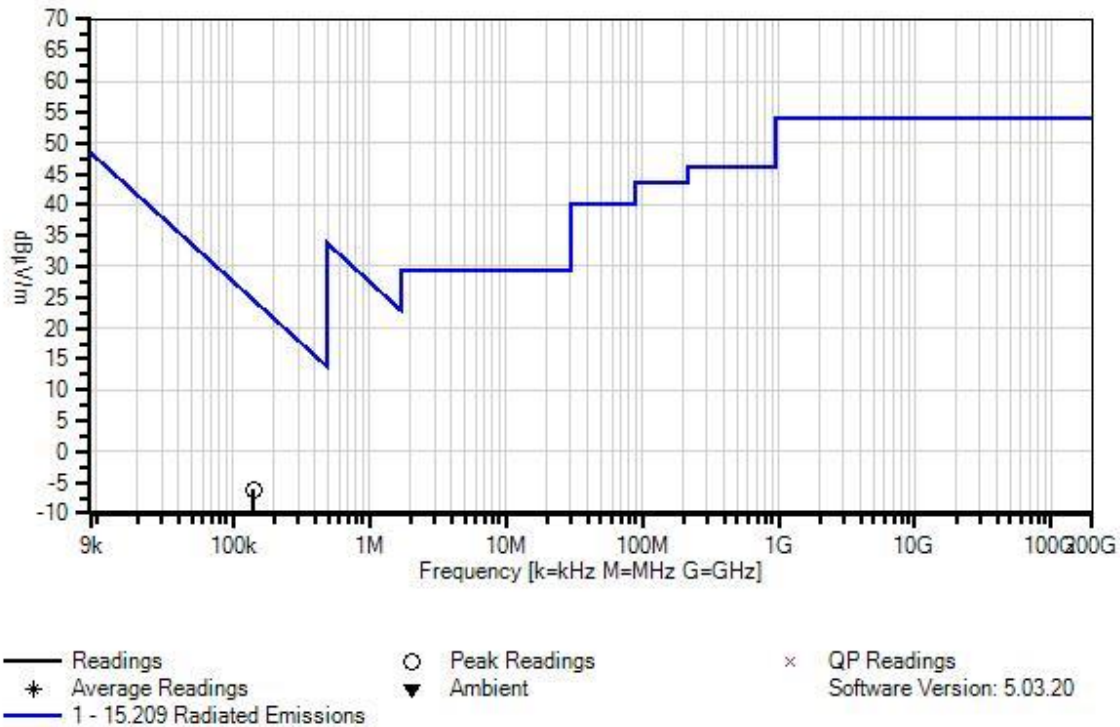
Test set up:
 Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.

X, Y & Z axes investigated worst case reported

3 x orthogonal antenna polarities investigated, worst case reported.

Note: Investigated a modified unit with resistor load to draw maximum power, as well as an unmodified unit in various states of charge. Worst case was found using the resistor load, see appendix A section for additional data collected on unit with drained battery.

Medtronic MiniMed W/O#: 111618 Sequence#: 42 Date: 7/14/2025
15.209 Radiated Emissions Test Distance: 3 Meters Para



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	AN00052	Loop Antenna	6502	4/21/2025	4/21/2027

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	Dist dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	142.255k	64.3	+0.0	+0.0	+9.5	-80.0	-6.2	24.5	-30.7	Para

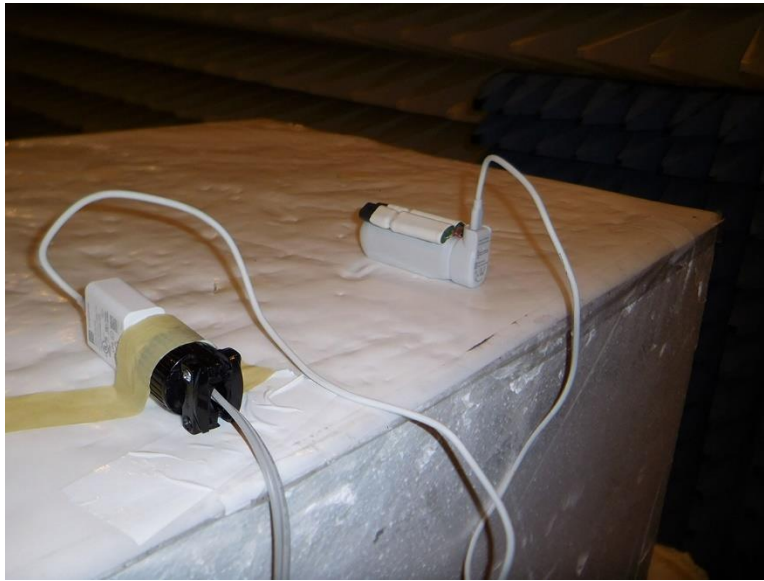
Test Setup Photo(s)



Charger with Load, Below 1GHz, 0.8m



X (With Load)



Y (With Load)



Z (With Load)

15.209 Field Strength of Spurious Emissions

Test Setup/Conditions

Test Location:	Bothell Lab C3	Test Engineer:	M. Atkinson
Test Method:	ANSI C63.10 (2020)	Test Date(s):	7/10/25 to 7/16/25
Configuration:	1		

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **111618** Date: 7/14/2025
 Test Type: **Radiated Scan** Time: 14:00:52
 Tested By: C. Plumadore Sequence#: 43
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

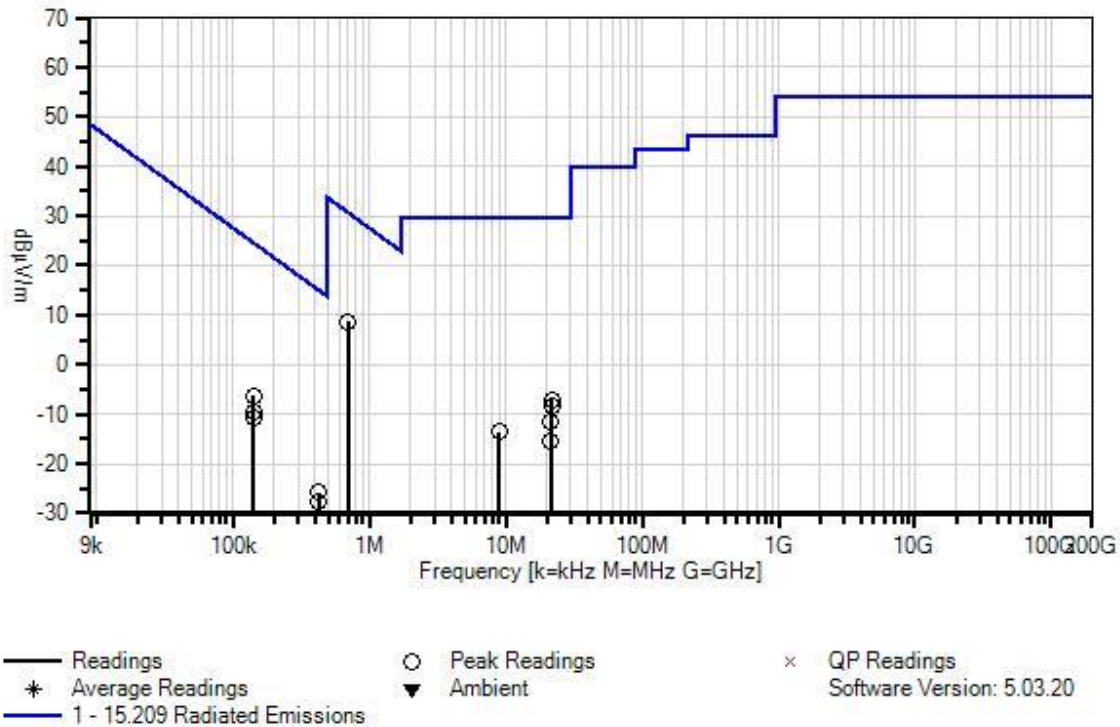
Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 41%
 Temperature: 24°C
 Pressure: 102kPa
 Frequency: 9kHz-30MHz
 Test Method: ANSI C63.10 (2020)
 Test set up:
 Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.
 X, Y & Z axes investigated worst case reported
 3 x orthogonal antenna polarities investigated, worst case reported.
 Note: Investigated a modified unit with resistor load to draw maximum power, as well as an unmodified unit in various states of charge. Worst case was found using the resistor load, see appendix A section for additional data collected on unit with drained battery.

Medtronic MiniMed W/O#: 111618 Sequence#: 43 Date: 7/14/2025
15.209 Radiated Emissions Test Distance: 3 Meters Para



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	AN00052	Loop Antenna	6502	4/21/2025	4/21/2027

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB		Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	703.500k	38.9	+0.0	+0.0	+9.8		-40.0	8.7	30.6	-21.9	Para
2	142.330k	64.2	+0.0	+0.0	+9.5		-80.0	-6.3	24.5	-30.8	Perp
3	141.121k	64.1	+0.0	+0.0	+9.5		-80.0	-6.4	24.6	-31.0	Para
4	141.502k	60.8	+0.0	+0.0	+9.5		-80.0	-9.7	24.6	-34.3	Perp
5	142.330k	59.8	+0.0	+0.0	+9.5		-80.0	-10.7	24.5	-35.2	GndPa
6	21.860M	24.6	+0.0	+0.2	+8.1		-40.0	-7.1	29.5	-36.6	GndPa
7	21.640M	23.2	+0.0	+0.2	+8.2		-40.0	-8.4	29.5	-37.9	Para
8	427.500k	44.6	+0.0	+0.0	+9.6		-80.0	-25.8	15.0	-40.8	Para
9	425.760k	44.6	+0.0	+0.0	+9.6		-80.0	-25.8	15.0	-40.8	Perp
10	21.340M	20.3	+0.0	+0.2	+8.2		-40.0	-11.3	29.5	-40.8	Perp
11	424.890k	42.9	+0.0	+0.0	+9.6		-80.0	-27.5	15.0	-42.5	GndPa
12	8.920M	16.7	+0.1	+0.1	+9.5		-40.0	-13.6	29.5	-43.1	GndPa
13	21.540M	16.2	+0.0	+0.2	+8.2		-40.0	-15.4	29.5	-44.9	Para

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions s**
 Work Order #: **111245** Date: 7/14/2025
 Test Type: **Radiated Scan** Time: 10:37:50
 Tested By: M. Atkinson Sequence#: 52
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 43%
 Temperature: 23°C
 Pressure: 101.5kPa

 Frequency: 30-1000MHz

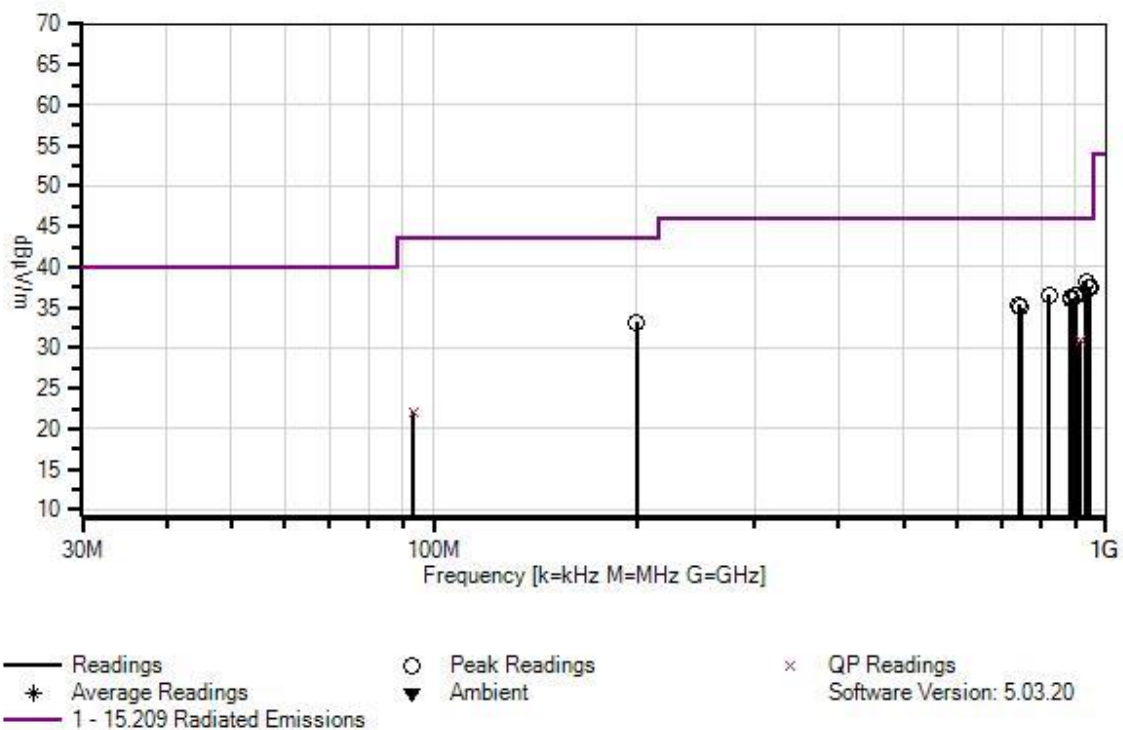
 Test Method: ANSI C63.10 (2020)

 Test set up:
 Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.

 X, Y & Z axes investigated worst case reported

 Note: Investigated a modified unit with resistor load to draw maximum power, as well as an unmodified unit in various states of charge. Worst case was found using the resistor load, see appendix A section for additional data collected on unit with drained battery.

Medtronic MiniMed W/O#: 111245 Sequence#: 52 Date: 7/14/2025
15.209 Radiated Emissions Test Distance: 3 Meters Horiz



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02307	Preamp	8447D	4/25/2025	4/25/2027
T2	AN03863	Biconilog Antenna	3142E	1/15/2025	1/15/2027
T3	ANP08256	Attenuator	WA1/6-6-0403	3/18/2025	3/18/2027
T4	ANP05333	Cable	Heliac	1/8/2025	1/8/2027
T5	ANP05360	Cable	RG214	1/7/2025	1/7/2027
T6	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	933.444M	29.1	-27.5 +2.5	+25.7 +0.7	+6.1	+1.5	+0.0	38.1	46.0	-7.9	Horiz
2	944.537M	28.8	-27.5 +2.5	+25.4 +0.7	+6.1	+1.5	+0.0	37.5	46.0	-8.5	Horiz
3	946.872M	28.6	-27.5 +2.5	+25.5 +0.7	+6.1	+1.5	+0.0	37.4	46.0	-8.6	Horiz
4	821.351M	29.6	-27.9 +2.6	+23.8 +0.9	+6.1	+1.4	+0.0	36.5	46.0	-9.5	Horiz
5	901.334M	29.2	-27.6 +2.6	+23.9 +0.8	+6.1	+1.4	+0.0	36.4	46.0	-9.6	Horiz
6	903.086M	29.1	-27.6 +2.6	+24.0 +0.8	+6.1	+1.4	+0.0	36.4	46.0	-9.6	Horiz
7	883.820M	29.7	-27.7 +2.6	+23.3 +0.8	+6.1	+1.4	+0.0	36.2	46.0	-9.8	Horiz
8	887.906M	29.5	-27.7 +2.6	+23.4 +0.8	+6.1	+1.4	+0.0	36.1	46.0	-9.9	Horiz
9	886.155M	29.5	-27.7 +2.6	+23.4 +0.8	+6.1	+1.4	+0.0	36.1	46.0	-9.9	Horiz
10	889.074M	29.3	-27.7 +2.6	+23.4 +0.8	+6.1	+1.4	+0.0	35.9	46.0	-10.1	Horiz
11	200.175M	42.2	-27.3 +0.9	+10.1 +0.5	+6.1	+0.7	+0.0	33.2	43.5	-10.3	Horiz
12	742.535M	29.7	-28.1 +2.6	+22.8 +0.9	+6.1	+1.3	+0.0	35.3	46.0	-10.7	Horiz
13	747.789M	29.4	-28.1 +2.6	+22.8 +0.9	+6.1	+1.3	+0.0	35.0	46.0	-11.0	Horiz
14	916.514M QP	22.5	-27.6 +2.5	+25.2 +0.7	+6.1	+1.5	+0.0	30.9	46.0	-15.1	Horiz
^	916.514M	29.8	-27.6 +2.5	+25.2 +0.7	+6.1	+1.5	+0.0	38.2	46.0	-7.8	Horiz
16	93.219M QP	35.0	-27.8 +0.6	+7.4 +0.3	+6.1	+0.5	+0.0	22.1	43.5	-21.4	Horiz
^	93.219M	45.9	-27.8 +0.6	+7.4 +0.3	+6.1	+0.5	+0.0	33.0	43.5	-10.5	Horiz

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **111618** Date: 7/14/2025
 Test Type: **Radiated Scan** Time: 10:38:57
 Tested By: M. Atkinson Sequence#: 51
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 43%
 Temperature: 23°C
 Pressure: 101.5kPa

 Frequency: 30-1000MHz

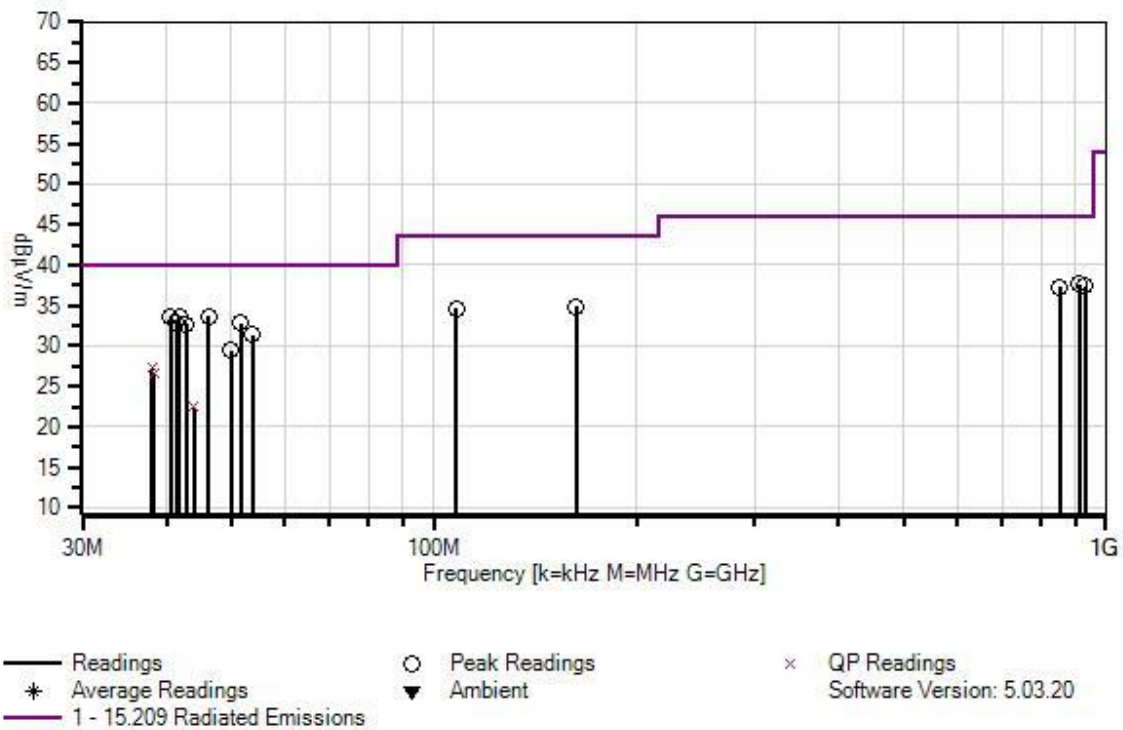
 Test Method: ANSI C63.10 (2020)

 Test set up:
 Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.

 X, Y & Z axes investigated worst case reported

 Note: Investigated a modified unit with resistor load to draw maximum power, as well as an unmodified unit in various states of charge. Worst case was found using the resistor load, see appendix A section for additional data collected on unit with drained battery.

Medtronic MiniMed W/O#: 111245 Sequence#: 51 Date: 7/14/2025
15.209 Radiated Emissions Test Distance: 3 Meters Vert



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	AN02307	Preamp	8447D	4/25/2025	4/25/2027
T2	AN03863	Biconilog Antenna	3142E	1/15/2025	1/15/2027
T3	ANP08256	Attenuator	WA1/6-6-0403	3/18/2025	3/18/2027
T4	ANP05333	Cable	Heliac	1/8/2025	1/8/2027
T5	ANP05360	Cable	RG214	1/7/2025	1/7/2027
T6	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 T6 dB	T3 dB	T4 dB	Dist Table	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	41.868M	45.4	-28.0 +0.3	+9.4 +0.2	+6.1	+0.3	+0.0	33.7	40.0	-6.3	Vert
2	40.647M	44.8	-28.0 +0.3	+10.0 +0.2	+6.1	+0.3	+0.0	33.7	40.0	-6.3	Vert
3	46.202M	46.9	-28.0 +0.4	+7.7 +0.2	+6.1	+0.3	+0.0	33.6	40.0	-6.4	Vert
4	51.547M	47.2	-28.0 +0.4	+6.6 +0.2	+6.1	+0.3	+0.0	32.8	40.0	-7.2	Vert
5	41.363M	44.3	-28.0 +0.3	+9.6 +0.2	+6.1	+0.3	+0.0	32.8	40.0	-7.2	Vert
6	42.878M	44.8	-28.0 +0.3	+9.0 +0.2	+6.1	+0.3	+0.0	32.7	40.0	-7.3	Vert
7	913.011M	29.5	-27.6 +2.5	+24.9 +0.7	+6.1	+1.5	+0.0	37.6	46.0	-8.4	Vert
8	53.693M	45.9	-28.0 +0.4	+6.5 +0.2	+6.1	+0.3	+0.0	31.4	40.0	-8.6	Vert
9	162.992M	44.7	-27.5 +0.8	+9.8 +0.4	+6.1	+0.6	+0.0	34.9	43.5	-8.6	Vert
10	930.525M	28.4	-27.5 +2.5	+25.7 +0.7	+6.1	+1.5	+0.0	37.4	46.0	-8.6	Vert
11	853.461M	30.5	-27.8 +2.6	+23.7 +0.8	+6.1	+1.4	+0.0	37.3	46.0	-8.7	Vert
12	107.881M	46.6	-27.8 +0.6	+8.3 +0.3	+6.1	+0.5	+0.0	34.6	43.5	-8.9	Vert
13	49.890M	43.7	-28.0 +0.4	+6.8 +0.2	+6.1	+0.3	+0.0	29.5	40.0	-10.5	Vert
14	38.122M	37.1	-28.0 +0.3	+11.3 +0.2	+6.1	+0.3	+0.0	27.3	40.0	-12.7	Vert
^	38.122M	47.4	-28.0 +0.3	+11.3 +0.2	+6.1	+0.3	+0.0	37.6	40.0	-2.4	Vert
16	38.375M	36.6	-28.0 +0.3	+11.1 +0.2	+6.1	+0.3	+0.0	26.6	40.0	-13.4	Vert
^	38.375M	47.9	-28.0 +0.3	+11.1 +0.2	+6.1	+0.3	+0.0	37.9	40.0	-2.1	Vert
18	43.930M	35.0	-28.0 +0.3	+8.5 +0.2	+6.1	+0.3	+0.0	22.4	40.0	-17.6	Vert
^	43.930M	46.6	-28.0 +0.3	+8.5 +0.2	+6.1	+0.3	+0.0	34.0	40.0	-6.0	Vert

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions - Average**
 Work Order #: **111245** Date: 7/14/2025
 Test Type: **Radiated Scan** Time: 09:25:19
 Tested By: M. Atkinson Sequence#: 50
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 42%
 Temperature: 24°C
 Pressure: 101.2kPa

 Frequency: 1-13GHz

 Test Method: ANSI C63.10 (2020)

 Test set up:
 Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.

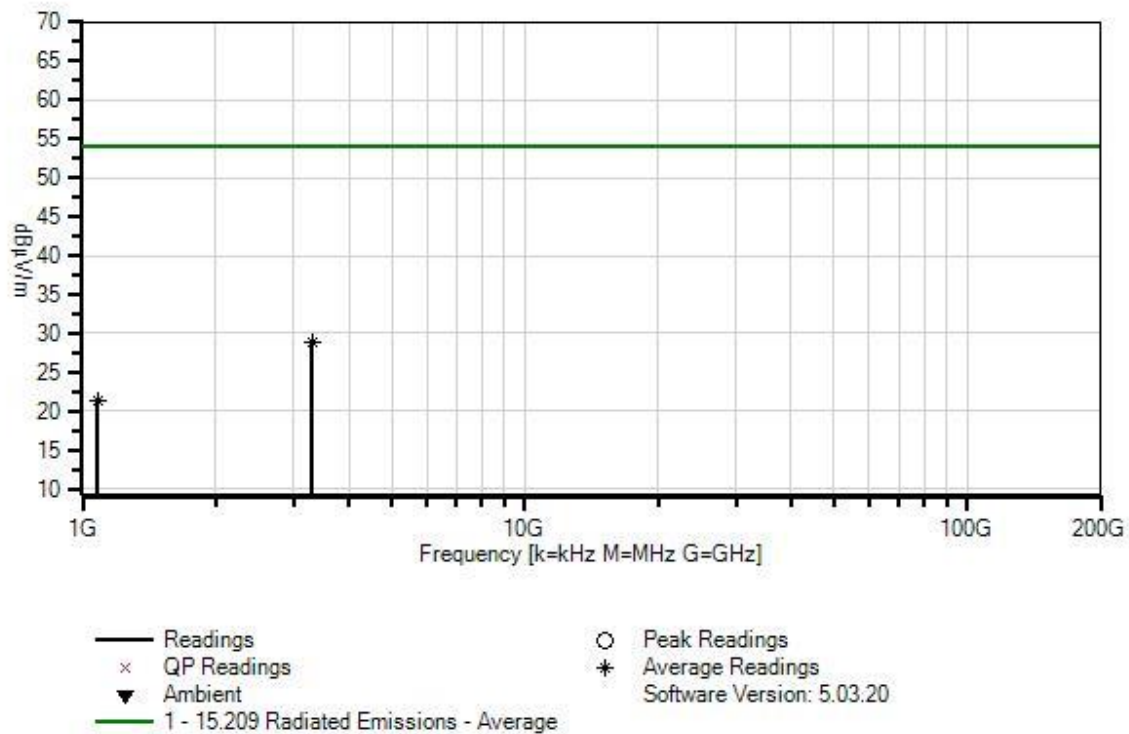
 X, Y & Z axes investigated worst case reported.

 Horizontal and Vertical antenna polarities investigated, worst case reported.

 No emissions observed above 10GHz within 10dB of the limit.

 Note: Investigated a modified unit with resistor load to draw maximum power, as well as an unmodified unit in various states of charge. Worst case was found using the resistor load, see appendix A section for additional data collected on unit with drained battery.

Medtronic MiniMed WO#: 111245 Sequence#: 50 Date: 7/14/2025
15.209 Radiated Emissions - Average Test Distance: 3 Meters Horiz



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
	AN02307	Preamp	8447D	4/25/2025	4/25/2027
	AN03863	Biconilog Antenna	3142E	1/15/2025	1/15/2027
	ANP08256	Attenuator	WA1/6-6-0403	3/18/2025	3/18/2027
	ANP05333	Cable	Heliac	1/8/2025	1/8/2027
	ANP05360	Cable	RG214	1/7/2025	1/7/2027
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	AN03540	Preamp	83017A	1/7/2025	1/7/2027
T3	AN02374ANSI	Horn Antenna	RGA-60	1/8/2025	1/8/2027
T4	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T5	ANP07504	Cable	CLU40-KMKM-02.00F	1/7/2025	1/7/2027

Measurement Data:

Reading listed by margin.

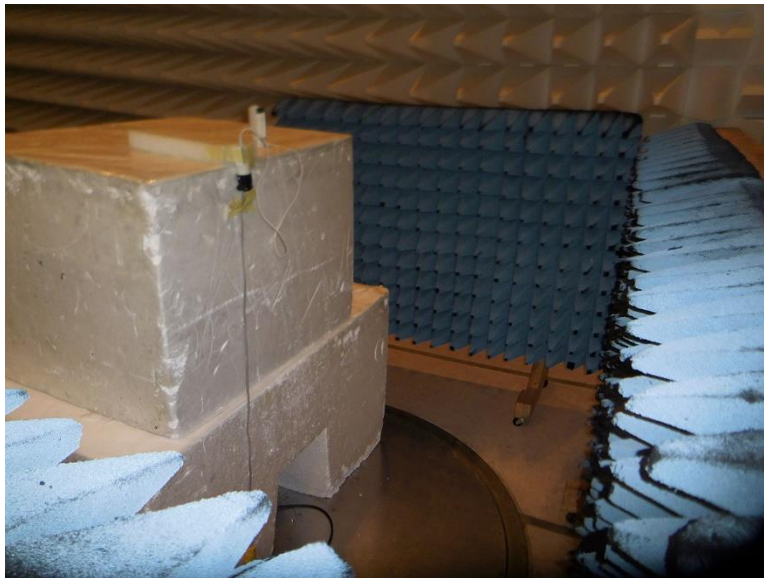
Test Distance: 3 Meters

#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV/m	dBμV/m	dB	Ant
1	3304.000M	28.0	+1.3	-34.3	+30.5	+2.6	+0.0	28.9	54.0	-25.1	Horiz
	Ave		+0.8								
^	3304.000M	42.0	+1.3	-34.3	+30.5	+2.6	+0.0	42.9	54.0	-11.1	Horiz
			+0.8								
3	1081.000M	31.5	+0.6	-37.1	+24.4	+1.4	+0.0	21.2	54.0	-32.8	Horiz
	Ave		+0.4								
^	1081.000M	45.0	+0.6	-37.1	+24.4	+1.4	+0.0	34.7	54.0	-19.3	Horiz
			+0.4								

Test Setup Photo(s)



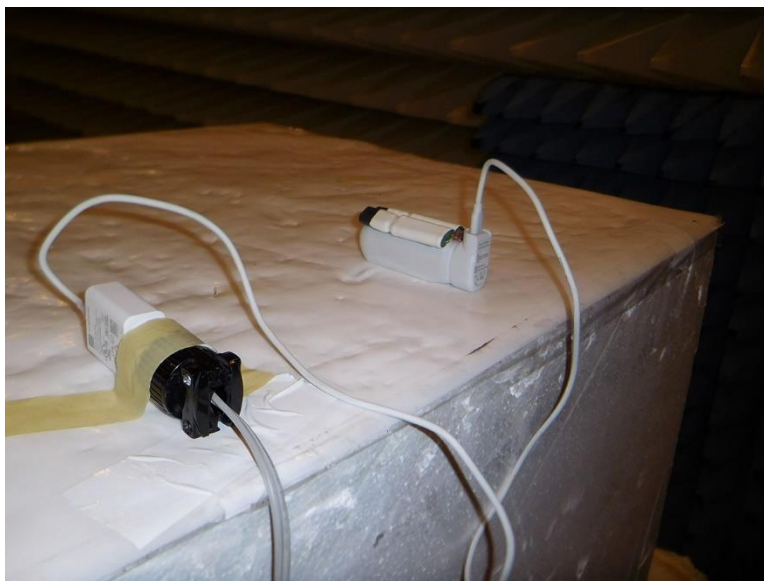
Charger with Load, Below 1GHz, 0.8m



Charger with Load, Above 1GHz, 1.5m



X (With Load)



Y (With Load)



Z (With Load)

15.207 AC Conducted Emissions

Test Setup/Conditions

Test Location:	Bothell Lab C3	Test Engineer:	C. Plumadore
Test Method:	ANSI C63.10 (2020)	Test Date(s):	7/9/2025
Configuration:	1		

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **111618** Date: 7/9/2025
 Test Type: **Conducted Emissions** Time: 11:28:10
 Tested By: C. Plumadore Sequence#: 37
 Software: EMITest 5.03.20 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 1			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 1			

Test Conditions / Notes:

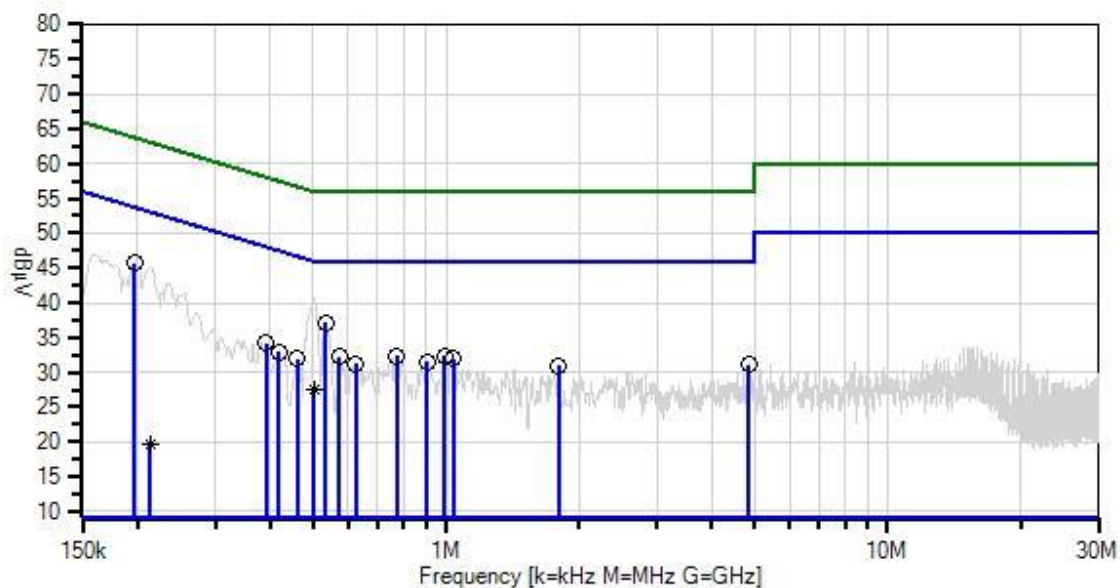
Environmental Test Conditions:
 Humidity: 43.3%
 Temperature: 23.4° C
 Pressure: 101.4kPa

 Frequency: 150kHz-30MHz

 Test Method: ANSI C63.10 (2020)

 Test set up:
 Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.

Medtronic MiniMed WO#: 111618 Sequence#: 37 Date: 7/9/2025
15.207 AC Mains - Average Test Lead: 120V 60Hz line



— Sweep Data
× QP Readings
Software Version: 5.03.20
— Readings
* Average Readings
— 1 - 15.207 AC Mains - Average
○ Peak Readings
▼ Ambient
— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06219	Attenuator	768-10	3/25/2024	3/25/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T4	AN02611	High Pass Filter	HE9615-150K-50-720B	1/10/2025	1/10/2027
T5	AN01311	50uH LISN-Line1 (L)	3816/2	2/9/2024	2/9/2026
	AN01311	50uH LISN-Line2 (N)	3816/2	2/9/2024	2/9/2026

Measurement Data:			Reading listed by margin.					Test Lead: line			
#	Freq	Rdng	T1 T5	T2	T3	T4	Dist	Corr	Spec	Margin	Polar
	MHz	dBμV	dB	dB	dB	dB	Table	dBμV	dBμV	dB	Ant
1	197.267k	36.5	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	45.7	53.7	-8.0	line
2	533.236k	28.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	37.2	46.0	-8.8	line
3	773.941k	23.2	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	32.4	46.0	-13.6	line
4	992.028k	23.0	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	32.3	46.0	-13.7	line
5	390.704k	25.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	34.2	48.0	-13.8	line
6	573.232k	23.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	32.2	46.0	-13.8	line
7	1.039M	22.6	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	31.9	46.0	-14.1	line
8	906.974k	22.2	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	31.5	46.0	-14.5	line
9	418.338k	23.7	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	32.9	47.5	-14.6	line
10	459.788k	22.8	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	32.0	46.7	-14.7	line
11	623.410k	22.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	31.2	46.0	-14.8	line
12	4.858M	21.8	+9.1 +0.0	+0.1	+0.0	+0.1	+0.0	31.1	46.0	-14.9	line
13	1.800M	21.6	+9.1 +0.0	+0.1	+0.0	+0.2	+0.0	31.0	46.0	-15.0	line
14	501.967k	18.4	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	27.6	46.0	-18.4	line
^	501.966k	31.4	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	40.6	46.0	-5.4	line
16	213.993k	10.3	+9.0 +0.0	+0.0	+0.0	+0.3	+0.0	19.6	53.0	-33.4	line
^	213.993k	35.8	+9.0 +0.0	+0.0	+0.0	+0.3	+0.0	45.1	53.0	-7.9	line

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive SE, Suite A • Bothell, WA 98021 • (425) 402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.207 AC Mains - Average**
 Work Order #: **111618** Date: 7/9/2025
 Test Type: **Conducted Emissions** Time: 11:32:17
 Tested By: C. Plumadore Sequence#: 38
 Software: EMITest 5.03.20 120V 60Hz

Equipment Tested:

Device	Manufacturer	Model #	S/N
Config 5			

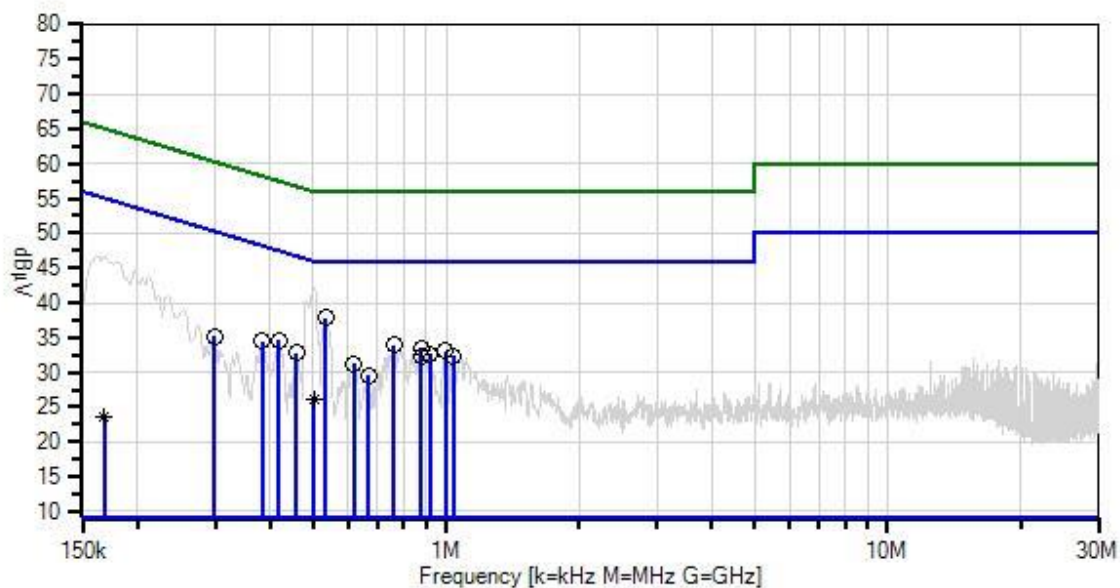
Support Equipment:

Device	Manufacturer	Model #	S/N
Config 5			

Test Conditions / Notes:

Environmental Test Conditions: Humidity: 43.3% Temperature: 23.4° C Pressure: 101.4kPa Frequency: 150kHz-30MHz Test Method: ANSI C63.10 (2020) Test set up: Continuously transmitting with a dummy load that forces maximum charging current. The load is aligned with magnets.
--

Medtronic MiniMed WO#: 111618 Sequence#: 38 Date: 7/9/2025
15.207 AC Mains - Average Test Lead: 120V 60Hz neutral



— Sweep Data
× QP Readings
Software Version: 5.03.20
— Readings
* Average Readings
— 1 - 15.207 AC Mains - Average
○ Peak Readings
▼ Ambient
— 2 - 15.207 AC Mains - Quasi-peak

Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP06219	Attenuator	768-10	3/25/2024	3/25/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T4	AN02611	High Pass Filter	HE9615-150K-50-720B	1/10/2025	1/10/2027
	AN01311	50uH LISN-Line1 (L)	3816/2	2/9/2024	2/9/2026
T5	AN01311	50uH LISN-Line2 (N)	3816/2	2/9/2024	2/9/2026

Measurement Data:

Reading listed by margin.

Test Lead: neutral

#	Freq MHz	Rdng dBμV	T1 T5 dB	T2 dB	T3 dB	T4 dB	Dist Table	Corr dBμV	Spec dBμV	Margin dB	Polar Ant
1	533.236k	28.6	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	37.8	46.0	-8.2	neutr
2	762.306k	24.7	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	33.9	46.0	-12.1	neutr
3	876.477k	24.3	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	33.5	46.0	-12.5	neutr
4	417.610k	25.4	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	34.6	47.5	-12.9	neutr
5	996.281k	23.7	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	33.0	46.0	-13.0	neutr
6	919.732k	23.4	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	32.7	46.0	-13.3	neutr
7	877.205k	23.2	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	32.4	46.0	-13.6	neutr
8	383.432k	25.3	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	34.5	48.2	-13.7	neutr
9	1.039M	23.0	+9.1 +0.0	+0.0	+0.0	+0.2	+0.0	32.3	46.0	-13.7	neutr
10	458.334k	23.6	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	32.8	46.7	-13.9	neutr
11	619.046k	22.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	31.2	46.0	-14.8	neutr
12	298.349k	26.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	35.2	50.3	-15.1	neutr
13	668.496k	20.4	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	29.6	46.0	-16.4	neutr
14	502.694k Ave	17.0	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	26.2	46.0	-19.8	neutr
^	502.693k	32.8	+9.0 +0.0	+0.0	+0.0	+0.2	+0.0	42.0	46.0	-4.0	neutr
16	168.179k Ave	14.1	+9.0 +0.0	+0.0	+0.0	+0.4	+0.0	23.5	55.0	-31.5	neutr
^	168.179k	37.2	+9.0 +0.0	+0.0	+0.0	+0.4	+0.0	46.6	55.0	-8.4	neutr

Test Setup Photo(s)



CE Wireless Charger with Max Load

Appendix A: Configuration 2 Test Data

Test Setup/Conditions			
Test Location:	Bothell Lab C3	Test Engineer:	M. Atkinson
Test Method:	ANSI C63.10 (2020)	Test Date(s):	9/23/2025
Configuration:	2		

Test Data

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive S.E., Suite A • Bothell WA 98021 • 425-402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **111245** Date: 9/23/2025
 Test Type: **Radiated Scan** Time: 13:35:44
 Tested By: M. Atkinson Sequence#: 90
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 43.3%
 Temperature: 23.4°C
 Pressure: 101.4

Frequency: Fundamental

Test Method: ANSI C63.10 (2020)

Test set up:

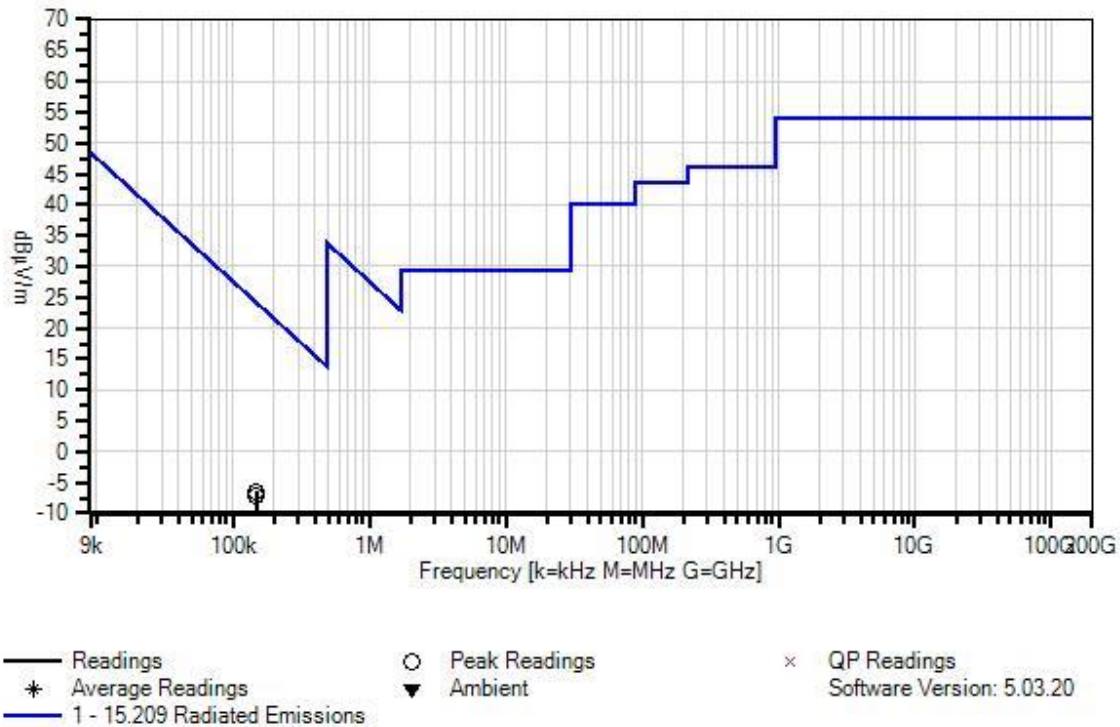
Continuously transmitting with a normal unit with a drained battery. An investigation was performed at various states of charge and found the worst case amplitude with a completely drained battery.

X, Y & Z axes investigated, worst case reported

3 x orthogonal antenna polarities investigated, worst case reported.

The pump is aligned to the charger with magnets.

Medtronic MiniMed W/O#: 111245 Sequence#: 90 Date: 9/23/2025
15.209 Radiated Emissions Test Distance: 3 Meters Various



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	AN00052	Loop Antenna	6502	4/21/2025	4/21/2027
	AN03807	Spectrum Analyzer	E4440A	4/29/2025	4/29/2027

Measurement Data:

Reading listed by margin.

Test Distance: 3 Meters

#	Freq MHz	Rdng dBμV	T1 dB	T2 dB	T3 dB	Dist dB	Corr dBμV/m	Spec dBμV/m	Margin dB	Polar Ant
1	148.018k	64.0	+0.0	+0.0	+9.5	-80.0	-6.5	24.2	-30.7	Para
2	148.003k	63.9	+0.0	+0.0	+9.5	-80.0	-6.6	24.2	-30.8	Para
3	148.068k	63.4	+0.0	+0.0	+9.5	-80.0	-7.1	24.2	-31.3	Para

Test Location: CKC Laboratories, Inc. • 22116 23rd Drive S.E., Suite A • Bothell WA 98021 • 425-402-1717
 Customer: **Medtronic MiniMed**
 Specification: **15.209 Radiated Emissions**
 Work Order #: **111245** Date: 9/23/2025
 Test Type: **Radiated Scan** Time: 14:06:59
 Tested By: M. Atkinson Sequence#: 91
 Software: EMITest 5.03.20

Equipment Tested:

Device	Manufacturer	Model #	S/N
Configuration 2			

Support Equipment:

Device	Manufacturer	Model #	S/N
Configuration 2			

Test Conditions / Notes:

Environmental Test Conditions:
 Humidity: 43.3%
 Temperature: 23.4°C
 Pressure: 101.4

 Frequency: 9kHz-30MHz

 Test Method: ANSI C63.10

 Test set up:

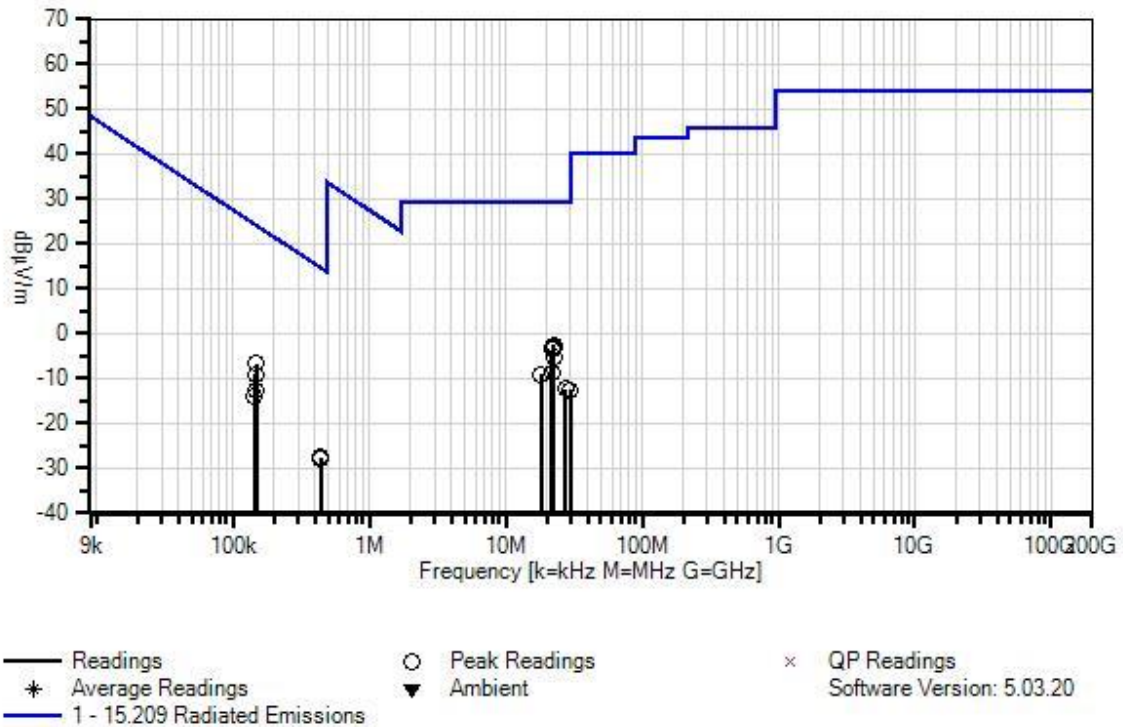
 Continuously transmitting with a normal unit with a drained battery. An investigation was performed at various states of charge and found the worst case amplitude with a completely drained battery.

 X, Y & Z axes investigated, worst case reported

 3 x orthogonal antenna polarities investigated, worst case reported.

 The pump is aligned to the charger with magnets.

Medtronic MiniMed W/O#: 111245 Sequence#: 91 Date: 9/23/2025
15.209 Radiated Emissions Test Distance: 3 Meters Various



Test Equipment:

ID	Asset #	Description	Model	Calibration Date	Cal Due Date
T1	ANP08205	Cable	CBL-6FT-NMNM+	1/22/2025	1/22/2027
	AN02871	Spectrum Analyzer	E4440A	9/19/2024	9/19/2026
T2	ANP07485	Cable	FSJ1	1/29/2025	1/29/2027
T3	AN00052	Loop Antenna	6502	4/21/2025	4/21/2027

Measurement Data:

Reading listed by margin.

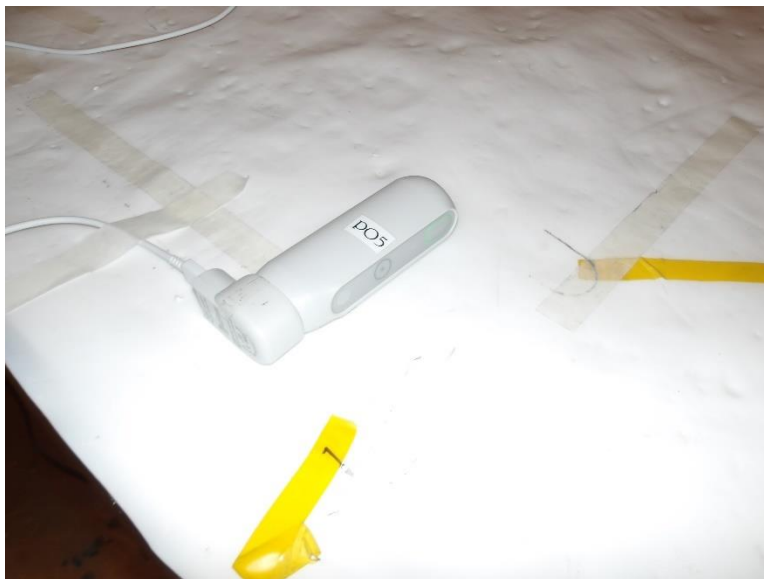
Test Distance: 3 Meters

#	Freq MHz	Rdng dB μ V	T1 dB	T2 dB	T3 dB		Dist Table	Corr dB μ V/m	Spec dB μ V/m	Margin dB	Polar Ant
1	147.890k	63.8	+0.0	+0.0	+9.5		-80.0	-6.7	24.2	-30.9	Para
2	22.344M	29.3	+0.0	+0.2	+8.1		-40.0	-2.4	29.5	-31.9	GndPa
3	22.344M	28.7	+0.0	+0.2	+8.1		-40.0	-3.0	29.5	-32.5	Para
4	22.025M	28.5	+0.0	+0.2	+8.1		-40.0	-3.2	29.5	-32.7	GndPa
5	21.735M	28.1	+0.0	+0.2	+8.1		-40.0	-3.6	29.5	-33.1	Para
6	145.911k	61.4	+0.0	+0.0	+9.5		-80.0	-9.1	24.3	-33.4	Perp
7	22.634M	26.6	+0.0	+0.2	+8.1		-40.0	-5.1	29.5	-34.6	GndPa
8	146.898k	57.7	+0.0	+0.0	+9.5		-80.0	-12.8	24.3	-37.1	GndPa
9	144.501k	56.6	+0.0	+0.0	+9.5		-80.0	-13.9	24.4	-38.3	GndPa
10	22.025M	22.8	+0.0	+0.2	+8.1		-40.0	-8.9	29.5	-38.4	Perp
11	18.197M	22.2	+0.1	+0.1	+8.6		-40.0	-9.0	29.5	-38.5	Perp
12	27.651M	20.5	+0.1	+0.2	+7.0		-40.0	-12.2	29.5	-41.7	Perp
13	29.739M	20.9	+0.1	+0.2	+6.4		-40.0	-12.4	29.5	-41.9	Perp
14	443.930k	42.8	+0.0	+0.0	+9.6		-80.0	-27.6	14.7	-42.3	Para
15	439.610k	42.5	+0.0	+0.0	+9.6		-80.0	-27.9	14.7	-42.6	Perp
16	145.911k	29.6	+0.0	+0.0	+9.5		-80.0	-40.9	24.3	-65.2	GndPa

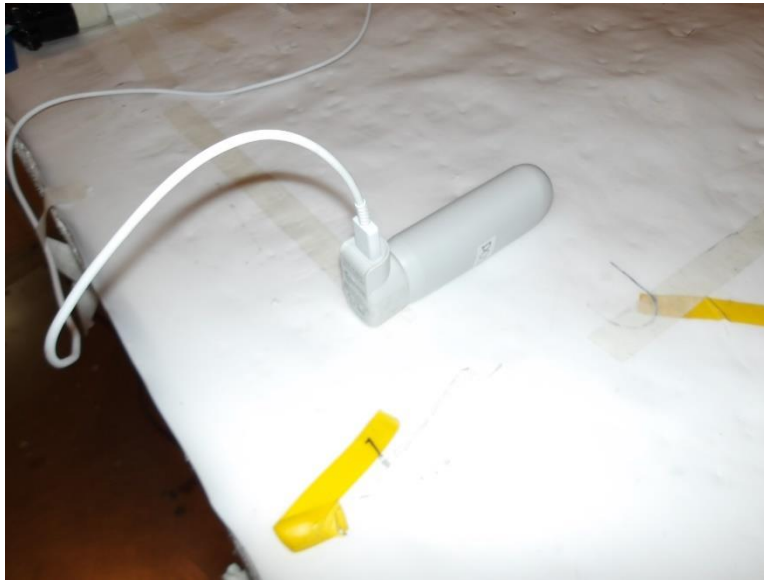
Test Setup Photo(s)



Drained Battery, Setup



X-Axis (Drained Battery)



Y-Axis (Drained Battery)



Z-Axis (Drained Battery)

Appendix B: Manufacturer Declaration

The following models have been tested by CKC Laboratories:

M065019C001

M065019C001 represents the hardware of our MiniMed Flex Insulin Pump Platform which may include a variety of different brand names and model numbers that offer different therapies. Users will be able to upgrade their pump to a more comprehensive model via a firmware update. This update will enable the user to access more therapy options without having to purchase a different pump. The firmware updates will not impact RF, EMC and Safety characteristics.

The manufacturer declares that the following additional models are identical electrically or any differences between them do not affect their RF and EMC characteristics and therefore meets the level of testing equivalent to the tested models.

Insulin Pump	Brand Name	Configuration
RF: M065019C001	Instinct	MMT-8001
	MiniMed Flex	MMT-8062
		MMT-8063
	MiniMed Flex 2 (NMX8)	MMT-8162
		MMT-8163

Note: The products identified in the table above differ in software/firmware related to automated insulin delivery features and associated algorithms. The software and firmware do not affect product radio or electromagnetic compatibility performance or compliance. Hardware documentation such as RF schematics, RF block diagram, and RF component layouts are identical between these insulin pump models. Additional configuration identifiers (e.g., K) may be added to the base configuration number for inventory management purposes. NMX8 is the internal name for the MiniMed Flex 2 system and will be used for clinical trials. Instinct model was used for device verification testing purposes.

Supplemental Information

Measurement Uncertainty

Uncertainty Value	Parameter
5.77 dB	Radiated Emissions
0.673 dB	RF Conducted Measurements
5.77×10^{-10}	Frequency Deviation
0.00005 s	Time Deviation
3.18 dB	Mains Conducted Emissions

Uncertainties reported are worst case for all CKC Laboratories' sites and represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Compliance is deemed to occur provided measurements are below the specified limits.

Emissions Test Details

TESTING PARAMETERS

Unless otherwise indicated, the following configuration parameters are used for equipment setup: The cables were routed consistent with the typical application by varying the configuration of the test sample. Interface cables were connected to the available ports of the test unit. The effect of varying the position of the cables was investigated to find the configuration that produced maximum emissions. Cables were of the type and length specified in the individual requirements. The length of cable that produced maximum emissions was selected.

The equipment under test (EUT) was set up in a manner that represented its normal use, as shown in the setup photographs. Any special conditions required for the EUT to operate normally are identified in the comments that accompany the emissions tables.

The emissions data was taken with a spectrum analyzer or receiver. Incorporating the applicable correction factors for distance, antenna, cable loss and amplifier gain, the data was reduced as shown in the table below. The corrected data was then compared to the applicable emission limits. Preliminary and final measurements were taken in order to ensure that all emissions from the EUT were found and maximized.

CORRECTION FACTORS

The basic spectrum analyzer reading was converted using correction factors as shown in the highest emissions readings in the tables. For radiated emissions in $\text{dB}\mu\text{V}/\text{m}$, the spectrum analyzer reading in $\text{dB}\mu\text{V}$ was corrected by using the following formula. This reading was then compared to the applicable specification limit. Individual measurements were compared with the displayed limit value in the margin column. The margin was calculated based on subtracting the limit value from the corrected measurement value; a positive margin represents a measurement exceeding the limit, while a negative margin represents a measurement less than the limit.

SAMPLE CALCULATIONS		
	Meter reading	($\text{dB}\mu\text{V}$)
+	Antenna Factor	(dB/m)
+	Cable Loss	(dB)
-	Distance Correction	(dB)
-	Preamplifier Gain	(dB)
=	Corrected Reading	($\text{dB}\mu\text{V}/\text{m}$)

TEST INSTRUMENTATION AND ANALYZER SETTINGS

The test instrumentation and equipment listed were used to collect the emissions data. A spectrum analyzer or receiver was used for all measurements. Unless otherwise specified, the following table shows the measuring equipment bandwidth settings that were used in designated frequency bands. For testing emissions, an appropriate reference level and a vertical scale size of 10 dB per division were used.

MEASURING EQUIPMENT BANDWIDTH SETTINGS PER FREQUENCY RANGE			
TEST	BEGINNING FREQUENCY	ENDING FREQUENCY	BANDWIDTH SETTING
CONDUCTED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	9 kHz	150 kHz	200 Hz
RADIATED EMISSIONS	150 kHz	30 MHz	9 kHz
RADIATED EMISSIONS	30 MHz	1000 MHz	120 kHz
RADIATED EMISSIONS	1000 MHz	>1 GHz	1 MHz

SPECTRUM ANALYZER/RECEIVER DETECTOR FUNCTIONS

The notes that accompany the measurements contained in the emissions tables indicate the type of detector function used to obtain the given readings. Unless otherwise noted, all readings were made in the "positive peak" detector mode. Whenever a "quasi-peak" or "average" reading was recorded, the measurement was annotated with a "QP" or an "Ave" on the appropriate rows of the data sheets. In cases where quasi-peak or average limits were employed and data exists for multiple measurement types for the same frequency then the peak measurement was retained in the report for reference, however the numbering for the affected row was removed and an arrow or caret ("^") was placed in the far left-hand column indicating that the row above takes precedence for comparison to the limit. The following paragraphs describe in more detail the detector functions and when they were used to obtain the emissions data.

Peak

In this mode, the spectrum analyzer or receiver recorded all emissions at their peak value as the frequency band selected was scanned. By combining this function with another feature called "peak hold," the measurement device had the ability to measure intermittent or low duty cycle transient emission peak levels. In this mode the measuring device made a slow scan across the frequency band selected and measured the peak emission value found at each frequency across the band.

Quasi-Peak

Quasi-peak measurements were taken using the quasi-peak detector when the true peak values exceeded or were within 2 dB of a quasi-peak specification limit. Additional QP measurements may have been taken at the discretion of the operator.

Average

Average measurements were taken using the average detector when the true peak values exceeded or were within 2 dB of an average specification limit. Additional average measurements may have been taken at the discretion of the operator. If the specification or test procedure requires trace averaging, then the averaging was performed using 100 samples or as required by the specification. All other average measurements are performed using video bandwidth averaging. To make these measurements, the test engineer reduces the video bandwidth on the measuring device until the modulation of the signal is filtered out. At this point, the measuring device is set into the linear mode and the scan time is reduced.

End of Report